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SUMMARY REPORT ON THE  
2018 WINTER DRILL PROGRAM

Sturgeon Lake Zinc Project

Patricia Mining Division  
Northwest Ontario  
NTS sheet **052G15**  
NAD 83, Zone 15

October 21, 2018

Prepared for

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## 1. Summary

Gossan Resources Limited (Gossan) completed diamond (core) drilling of four holes totalling 741 m on their Sturgeon Lake Zinc property in the Glitter Lake area of northwestern Ontario (roughly 49° 50'N, 90° 45'W, NTS sheet **052G15**; maps in NAD83, Zone 15). Gossan is targeting Zn-Cu-Pb-Ag mineralization in volcanic-hosted massive sulphides (VMS) similar to that exploited in the Lyon Lake-Sturgeon Lake mine district located less than 5 km west and along strike of the property. The drill program, completed between February 9 and March 24, 2018, was managed for Gossan by Scot Halladay, PGeo. The drill program was successful at intersecting abundant semi-massive and massive sulphides, albeit with low metal values.

Three hundred and fifty-one samples of half-core were collected and analysed by ICP OES/MS techniques for over fifty elements. Multi-meter wide intervals of semi-massive to massive sulphides, along with associated graphitic rocks, appear to explain the VTEM conductors targeted by each hole. The best sulphide interval includes 4.5 meters of massive (>50 modal %) sulphides with a pyrrhotite base and pyrite cap, and a strong geochemical signature. Anomalies from surficial geochemical survey methods (soil enzyme leach, soil gas hydrocarbon (SGH), and biogeochemical (alder) contributed to definition of the multi-parameter target areas. The geochemical metal anomalies are validated by near surface Zn enrichment in two drill holes. Base metal content is generally low in the sulphidic intervals with the best intersection from the 2018 program of 2.05 m at 0.3% Zn in hole SLG-18-04.

Three of four target areas (A, B, D) were incompletely tested by the program. All drill holes failed to test the full extent of target zones, and two holes were collared in sulphide-rich rocks with weak Zn mineralization. Additional drilling is recommended to determine if economic VMS-style base metal mineralization is present, particularly target areas A and D due to their size (+1 km strike, 200 m width) and limited previous drilling. In addition, target B is not fully tested and C remains untested by Gossan.

## 2. Introduction and Terms of Reference

Gossan Resources Limited (Gossan) completed diamond (core) drilling for volcanic-hosted massive sulphide mineralization on their Sturgeon Lake Zinc project in early 2018. The program was managed by Scot Halladay, PGeo. Weather, staffing and drilling operational problems resulted in four holes in February and March 2018 totaling 741 m of the planned ca. 2000 m program. The first author was requested by Hamid Mumin, Director of Gossan, to prepare the assessment report for credits resulting from the 2018 drilling campaign and previous exploration activity that defined the drill targets (modelling of VTEM airborne anomalies, compilation of surface geochemical surveys; A.H. Mumin and A. Mumin, 2017).

## 3. Property Description and Location

The Sturgeon Lake Zinc property is situated in north-western Ontario on NTS 1:50,000 scale map sheet **052G15** about 80 km northeast of the town of Ignace and the TransCanada Highway. The property envelopes northern Glitter Lake in the Patricia Mining Division east of the former Matabi, Lyon Lake and Sturgeon Lake Zn-Cu-Pb-Ag mines (Figure 1). The property consisted of 14 ground staked mining claims totaling 2944 hectares before the recent modernization of the Ontario Mining Act. Upon the commencement of online (paper) staking of mining claims on April 10, 2018, existing (“legacy”) claims were converted to mining cell claims. Each mining cell claim is based on the UTM Provincial Grid with 400 uniquely identified cells in each of 12 groups that comprise a 1:50,000 scale topographic map sheet. Mining cell claims vary from 17.7 hectares (ha) in the north to 24 ha in southern Ontario ([https://www.mndm.gov.on.ca/sites/default/files/claim\\_holders\\_guide\\_to\\_conversion\\_en.pdf](https://www.mndm.gov.on.ca/sites/default/files/claim_holders_guide_to_conversion_en.pdf)). Where a legacy claim had open land (no legacy mining claim) on a claim boundary, full size claim cells were created on April 10, 2018 that cover the legacy claims and adjacent area to fill full size claim cells. If adjacent land had legacy mining claims belonging to a different owner on April 10, 2018, “boundary” claims are created and assigned to each owner based the legacy claim borders within each full size claim cell.

The Sturgeon Lake Zinc property consists of 190 mining claims that contiguously cover an area of roughly 3688 hectares (Table 1). The property extends almost 11 km east from the western shore of Claw Lake, spans up to 6.5 km north-south and envelopes northeastern Glitter Lake (Figure 2). All mining claims are 100% owned by Gossan Resources Ltd.

### 3.1 Adjacent Properties

Glencore, successor of Noranda, and Evandale Minerals Inc., a subsidiary of Australian-listed junior explorer Odin Metals, share boundary mining claims along the westernmost margins of the Sturgeon Lake Zinc property (Figure 2). Canadian junior explorer Benton Resources owns a small block of claims to the northeast of the property.

## 4. Accessibility, Climate, Local Resources, Infrastructure and Physiography

The Sturgeon Lake Zinc property is accessible by 4\*4 truck and all terrane vehicle (ATV) from both east and west routes. The 2010 summer drill program (Mumin and Moody, 2011) and 2016 biogeochemical survey (A. Mumin and A.H. Mumin, 2017) accessed the property from the east via Graham and Brightsand roads. Access to the property for 2018 drilling was provided from the west by Highway 599.

Paved Highway 599 leads north toward Sturgeon Lake from the TransCanada Highway at the town of Ignace. A paved road to Mattabi and other former mine sites turns east off Highway 599 about 60 km north of Ignace, about 0.5 km north of the junction of Highways 599 and 642 (Figure 1B). Permission and an access pass from Glencore, owner of the mining leases and former mine sites, are required to proceed on the mine road past 13.5 km, where a locked gate is unmanned and computer monitored. The road passes the former Mattabi mine about 18 km from Highway 599 and reaches the Lyon Lake mine site at ca. 27 km. The road is gravel from the Mattabi mine onwards.

The Catfish Lake and Willett Lake logging roads continue north and east respectively beyond the Lyon Lake mine. The Willett Lake road ends north of Hump Lake, about 6.5 km east of the turnoff from the Catfish Lake road. From this point, a 4x4 ATV accessible trail continues east of Glitter Lake to the drill platforms used in the 2018 drilling campaign (Figure 3).



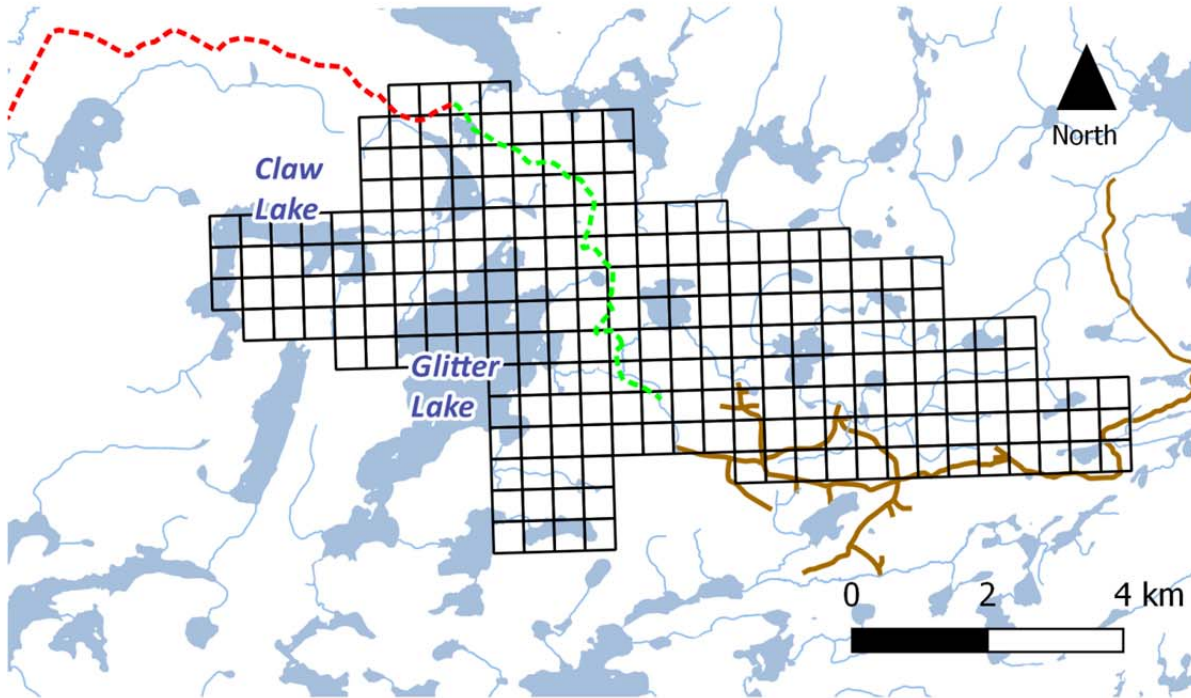
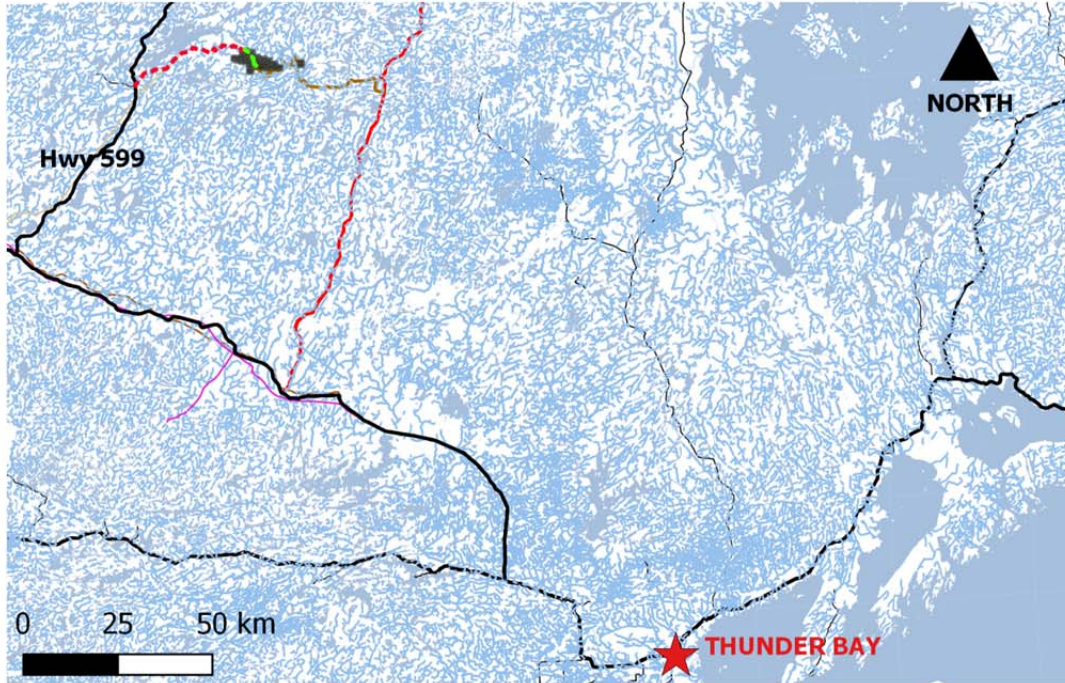


Figure 1. Location and access to Sturgeon Lake Zinc project in Patricia Mining Division of northwest Ontario: A, top) project east of former Sturgeon Lake district mines; B, bottom) access route from the northwest and southeast.

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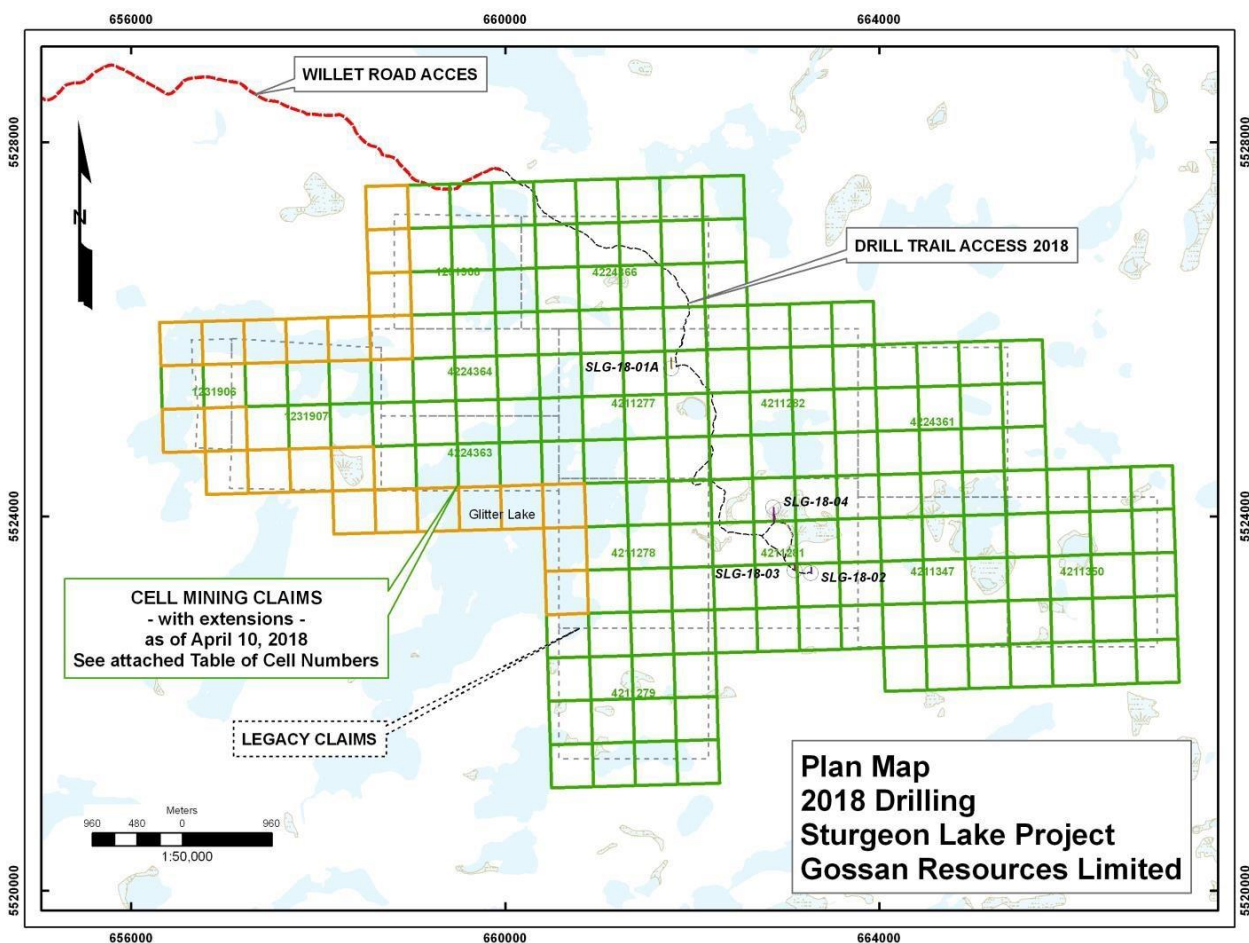


Figure 2. Map showing Sturgeon Lake Zinc mining cell claims (solid green) and boundary cell claims (brown lines); underlying dashed lines show previous “legacy” claims with original numbers) and access trails to 2018 drill hole locations.

Table 1. Mining cell claims comprising the Sturgeon Lake Zinc project after April 10, 2018.

Claim Number	Registration Date	Anniversary Date	size (ha)*	Cell Claim Type
113791	2018-04-10	2020-07-25	20.8	Mining
113802	2018-04-10	2020-07-25	20.8	Mining
113803	2018-04-10	2018-12-01	20.8	Mining
113804	2018-04-10	2020-07-25	20.8	Mining
113805	2018-04-10	2020-07-25	20.8	Mining
113927	2018-04-10	2020-07-25	2.58	Boundary
113929	2018-04-10	2021-03-13	20.8	Mining
114623	2018-04-10	2019-04-02	20.8	Mining
114624	2018-04-10	2019-04-02	20.8	Mining
114625	2018-04-10	2020-04-02	20.8	Mining
114774	2018-04-10	2021-03-13	20.8	Mining
115130	2018-04-10	2021-03-13	20.8	Mining
122450	2018-04-10	2018-12-01	20.8	Mining
122451	2018-04-10	2018-12-01	20.8	Mining

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<b>Claim Number</b>	<b>Registration Date</b>	<b>Anniversary Date</b>	<b>size (ha)*</b>	<b>Cell Claim Type</b>
132616	2018-04-10	2018-12-01	6.8	Boundary
132617	2018-04-10	2018-12-01	20.8	Mining
132624	2018-04-10	2018-12-01	7.33	Boundary
132625	2018-04-10	2019-07-25	20.8	Mining
132639	2018-04-10	2020-04-02	20.8	Mining
133961	2018-04-10	2020-07-25	20.8	Mining
134013	2018-04-10	2020-07-25	20.8	Mining
134015	2018-04-10	2020-04-02	20.8	Mining
134016	2018-04-10	2020-04-02	20.8	Mining
134657	2018-04-10	2021-03-13	20.8	Mining
139859	2018-04-10	2021-03-13	20.8	Mining
139860	2018-04-10	2021-03-13	20.8	Mining
139861	2018-04-10	2021-03-13	20.8	Mining
144661	2018-04-10	2019-04-02	20.8	Mining
148719	2018-04-10	2018-12-01	8.64	Boundary
149243	2018-04-10	2019-07-25	20.8	Mining
149378	2018-04-10	2021-03-13	20.8	Mining
150632	2018-04-10	2020-03-13	20.8	Mining
151491	2018-04-10	2021-03-13	20.8	Mining
151513	2018-04-10	2018-12-01	20.8	Mining
152155	2018-04-10	2020-07-25	20.8	Mining
152216	2018-04-10	2020-07-25	20.8	Mining
152217	2018-04-10	2020-07-25	20.8	Mining
152218	2018-04-10	2020-07-25	20.8	Mining
152219	2018-04-10	2020-07-25	20.8	Mining
152222	2018-04-10	2020-04-02	20.8	Mining
152865	2018-04-10	2020-03-13	20.8	Mining
152866	2018-04-10	2020-03-13	20.8	Mining
152867	2018-04-10	2020-03-13	20.8	Mining
159349	2018-04-10	2021-03-13	20.8	Mining
164028	2018-04-10	2020-04-02	20.8	Mining
164671	2018-04-10	2021-03-13	20.8	Mining
164682	2018-04-10	2021-03-13	20.8	Mining
168061	2018-04-10	2021-03-13	20.8	Mining
168062	2018-04-10	2021-03-13	20.8	Mining
168081	2018-04-10	2018-12-01	20.8	Boundary
168089	2018-04-10	2018-12-01	20.8	Mining
168730	2018-04-10	2021-03-13	20.8	Mining
168744	2018-04-10	2021-03-13	20.8	Mining
168745	2018-04-10	2021-03-13	20.8	Mining
168746	2018-04-10	2021-03-13	14.24	Boundary
196305	2018-04-10	2018-12-01	3.49	Boundary

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<b>Claim Number</b>	<b>Registration Date</b>	<b>Anniversary Date</b>	<b>size (ha)*</b>	<b>Cell Claim Type</b>
196814	2018-04-10	2021-03-13	20.8	Mining
196815	2018-04-10	2021-03-13	20.8	Mining
197339	2018-04-10	2018-12-01	20.8	Mining
197486	2018-04-10	2020-07-25	20.8	Mining
197501	2018-04-10	2021-03-13	20.8	Mining
204849	2018-04-10	2018-12-01	20.8	Mining
204850	2018-04-10	2018-12-01	19.9	Boundary
204856	2018-04-10	2018-12-01	20.8	Mining
204857	2018-04-10	2019-07-25	20.8	Mining
204858	2018-04-10	2019-07-25	20.8	Mining
206062	2018-04-10	2020-04-02	20.8	Mining
206198	2018-04-10	2020-03-13	20.8	Mining
206199	2018-04-10	2020-03-13	20.8	Mining
206200	2018-04-10	2021-03-13	20.8	Mining
211377	2018-04-10	2019-04-02	20.8	Mining
212011	2018-04-10	2021-03-13	20.8	Mining
212012	2018-04-10	2021-03-13	20.8	Mining
212026	2018-04-10	2021-03-13	20.8	Mining
215755	2018-04-10	2018-12-01	11.9	Boundary
216932	2018-04-10	2021-03-13	20.8	Mining
216933	2018-04-10	2021-03-13	20.8	Mining
216949	2018-04-10	2018-12-01	10.48	Boundary
216962	2018-04-10	2018-12-01	2.25	Boundary
216963	2018-04-10	2018-12-01	8.04	Boundary
216965	2018-04-10	2019-07-25	20.8	Mining
217638	2018-04-10	2021-03-13	20.8	Mining
217639	2018-04-10	2021-03-13	20.8	Mining
218183	2018-04-10	2020-04-02	20.8	Mining
218184	2018-04-10	2020-04-02	20.8	Mining
218331	2018-04-10	2020-03-13	20.8	Mining
218838	2018-04-10	2020-03-13	20.8	Mining
223444	2018-04-10	2019-04-02	20.8	Mining
224077	2018-04-10	2021-03-13	20.8	Mining
230726	2018-04-10	2021-03-13	20.8	Mining
230727	2018-04-10	2021-03-13	20.8	Mining
234096	2018-04-10	2021-03-13	20.8	Mining
234097	2018-04-10	2021-03-13	20.8	Mining
234112	2018-04-10	2020-07-25	20.8	Mining
234120	2018-04-10	2020-07-25	20.8	Mining
234121	2018-04-10	2018-12-01	20.8	Mining
234143	2018-04-10	2019-07-25	20.8	Mining
234144	2018-04-10	2019-07-25	20.8	Mining

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<b>Claim Number</b>	<b>Registration Date</b>	<b>Anniversary Date</b>	<b>size (ha)*</b>	<b>Cell Claim Type</b>
234145	2018-04-10	2020-04-02	20.8	Mining
234773	2018-04-10	2021-03-13	14.13	Boundary
234821	2018-04-10	2020-07-25	20.8	Mining
234822	2018-04-10	2020-07-25	20.8	Mining
234825	2018-04-10	2020-04-02	20.8	Mining
239176	2018-04-10	2020-04-02	20.8	Mining
239177	2018-04-10	2019-04-02	20.8	Mining
239178	2018-04-10	2020-04-02	20.8	Mining
239179	2018-04-10	2019-04-02	20.8	Mining
247911	2018-04-10	2019-04-02	20.8	Mining
247912	2018-04-10	2019-04-02	20.8	Mining
259395	2018-04-10	2019-04-02	20.8	Mining
260021	2018-04-10	2021-03-13	20.8	Mining
263356	2018-04-10	2021-03-13	20.8	Mining
263386	2018-04-10	2019-07-25	20.8	Mining
264060	2018-04-10	2020-07-25	20.8	Mining
264061	2018-04-10	2020-07-25	1.98	Boundary
264067	2018-04-10	2021-03-13	20.8	Mining
264112	2018-04-10	2020-07-25	20.8	Mining
264113	2018-04-10	2020-07-25	20.8	Mining
264114	2018-04-10	2021-03-13	20.8	Mining
264115	2018-04-10	2021-03-13	20.8	Mining
264777	2018-04-10	2020-03-13	20.8	Mining
264778	2018-04-10	2020-03-13	20.8	Mining
270834	2018-04-10	2021-03-13	20.8	Mining
270835	2018-04-10	2021-03-13	20.8	Mining
270847	2018-04-10	2020-07-25	16.74	Boundary
271369	2018-04-10	2018-12-01	20.76	Mining
271370	2018-04-10	2020-07-25	20.8	Mining
272069	2018-04-10	2020-07-25	20.8	Mining
277360	2018-04-10	2020-04-02	20.8	Mining
283475	2018-04-10	2020-07-25	20.8	Mining
283476	2018-04-10	2018-12-01	7.44	Boundary
284121	2018-04-10	2020-07-25	20.8	Mining
284182	2018-04-10	2020-07-25	20.8	Mining
284854	2018-04-10	2020-03-13	20.8	Mining
290375	2018-04-10	2018-12-01	20.06	Boundary
300664	2018-04-10	2021-03-13	20.8	Mining
300665	2018-04-10	2021-03-13	20.8	Mining
300680	2018-04-10	2020-07-25	0.76	Boundary
300685	2018-04-10	2020-07-25	20.8	Mining
300702	2018-04-10	2020-04-02	20.8	Mining

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<b>Claim Number</b>	<b>Registration Date</b>	<b>Anniversary Date</b>	<b>size (ha)*</b>	<b>Cell Claim Type</b>
301336	2018-04-10	2021-03-13	20.8	Mining
301353	2018-04-10	2021-03-13	20.8	Mining
301354	2018-04-10	2021-03-13	20.8	Mining
301355	2018-04-10	2021-03-13	20.8	Mining
301356	2018-04-10	2021-03-13	13.6	Boundary
301916	2018-04-10	2020-07-25	20.8	Mining
301917	2018-04-10	2020-07-25	20.8	Mining
307199	2018-04-10	2019-04-02	20.8	Mining
307200	2018-04-10	2019-04-02	20.8	Mining
307201	2018-04-10	2019-04-02	20.8	Mining
307202	2018-04-10	2019-04-02	20.8	Mining
307830	2018-04-10	2021-03-13	20.8	Mining
307831	2018-04-10	2021-03-13	20.8	Mining
307832	2018-04-10	2021-03-13	20.8	Mining
307850	2018-04-10	2021-03-13	20.8	Mining
317922	2018-04-10	2021-03-13	20.8	Mining
317950	2018-04-10	2018-12-01	20.8	Mining
317954	2018-04-10	2019-07-25	20.8	Mining
317955	2018-04-10	2019-07-25	20.8	Mining
317965	2018-04-10	2019-07-25	20.8	Mining
318587	2018-04-10	2020-07-25	20.8	Mining
318605	2018-04-10	2020-07-25	1.38	Boundary
318606	2018-04-10	2021-03-13	20.8	Mining
318650	2018-04-10	2020-04-02	20.8	Mining
319291	2018-04-10	2020-03-13	20.8	Mining
319292	2018-04-10	2021-03-13	20.8	Mining
320733	2018-04-10	2020-07-25	20.8	Mining
320734	2018-04-10	2020-07-25	20.8	Mining
320746	2018-04-10	2020-07-25	20.8	Mining
320751	2018-04-10	2021-03-13	20.8	Mining
320796	2018-04-10	2020-07-25	20.8	Mining
320797	2018-04-10	2020-07-25	20.8	Mining
326708	2018-04-10	2019-04-02	20.8	Mining
326709	2018-04-10	2020-04-02	20.8	Mining
327344	2018-04-10	2021-03-13	20.8	Mining
327345	2018-04-10	2021-03-13	20.8	Mining
327366	2018-04-10	2021-03-13	20.8	Mining
330141	2018-04-10	2018-12-01	3.04	Boundary
331296	2018-04-10	2021-03-13	20.8	Mining
331323	2018-04-10	2018-12-01	20.8	Mining
331324	2018-04-10	2018-12-01	18.99	Boundary
331737	2018-04-10	2019-04-02	20.8	Mining

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Claim Number	Registration Date	Anniversary Date	size (ha)*	Cell Claim Type
331738	2018-04-10	2019-04-02	20.8	Mining
331874	2018-04-10	2021-03-13	20.8	Mining
332923	2018-04-10	2018-12-01	20.8	Mining
332924	2018-04-10	2018-12-01	0.1	Boundary
332940	2018-04-10	2019-07-25	20.8	Mining
333292	2018-04-10	2020-04-02	20.8	Mining
333595	2018-04-10	2021-03-13	20.8	Mining
333596	2018-04-10	2021-03-13	20.8	Mining
<i>Mining claim cells</i>		167	3474	hectares
<i>Boundary claim cells</i>		23	214.7	hectares
<i>Total claims and estimated area*</i>		190	3688	hectares

\* area of individual mining cell claims is approximated at 20.8 ha; boundary claim areas have been measured on Mining Lands Administration System (MLAS) website viewer.

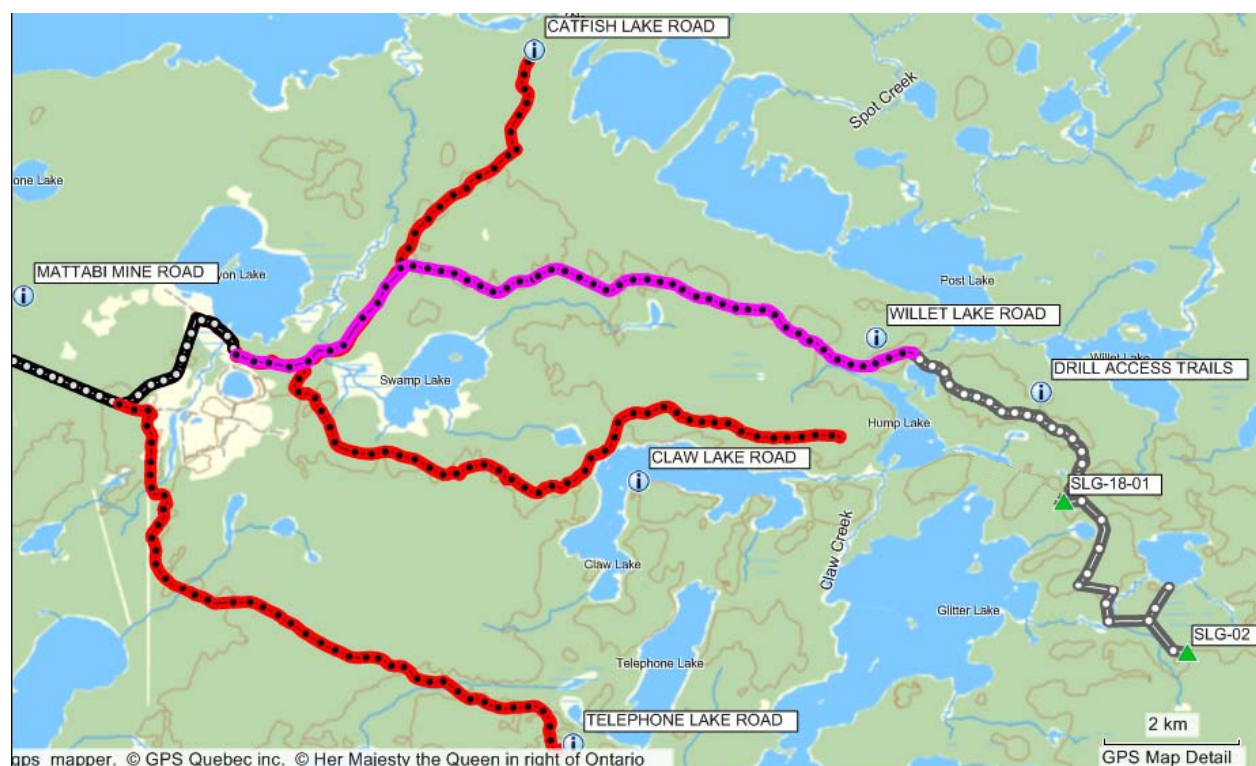


Figure 3. Access to 2018 drill platforms from the Mattabi mine road

The northwestern Ontario climate has monthly average temperatures of 10 to 18° C from May to September. Monthly averages are below zero from November to March. Precipitation in NW Ontario averages roughly 700 mm/year (Environment Canada. Meteorological Service of Canada. [1981-2010 Climate Normals & Averages](#)).

Sioux Lookout, on Highway 642 about 70 km east of Highway 599, is serviced daily by commercial airlines. The community of Savant Lake (Ojibway Nation of the Saugeen reserve) is situated at the intersection of Highway 599 with the Canadian National Railway line about 60 km northeast of the Highway 599/642 junction (Figure 1). Mining supplies and personnel can be sourced locally across NW Ontario (e.g. Ignace, Sioux Lookout, Thunder Bay, Dryden, Red Lake). Most former mine buildings have been demolished and removed with current site activity limited primarily to environmental work on tailings effluent. Hydroelectrical service to the Mattabi mine ends about 15 km west of the Sturgeon Lake Zinc property.

Fishing/hunting lodges along Hwy 599 offer rooms and meals. The local community of Savant Lake has a population of roughly one hundred people.

The Sturgeon Lake Zinc property is within the physiographic region of the Canadian Shield. Sturgeon Lake is about 400 m above sea level and bedrock elevations to the east are limited to 60 m above this elevation. The region is forested by jack pine, poplar, spruce, and birch with cedar common in swampy areas. Logging has occurred intermittently in the district. Trowell (1974b, p. 3) describes the Glitter Lake area: “Outcrop density is quite low due to the thick cover of overburden. The outcrop exposures are generally small and moss covered. The outcrop exposures on lake shores are generally bare, but these also, are not abundant.”

## 5. History

### 5.1 Sturgeon Lake VMS district

The discovery of the Mattabi, Lyon Lake, Sturgeon Lake, Creek Zone, and F-Group deposits between 1969 and 1972 led to rapid development and metal production in the Sturgeon Lake mining district by companies related to Noranda Inc. and Falconbridge. The methods of discovery for the largest deposits in the district reported by Franklin et al. (1977) are summarized by Trowell (1983, p. 5):

The Mattabi deposit was first located by ground geophysical follow-up to an anomaly indicated on an airborne Input Survey. Subsequent diamond-drilling outlined a massive sulphide deposit with a length of 1800 feet and a maximum width of 300 feet. The deposit has a distinctive EM and magnetic anomaly. The pre-production ore reserves were 13 665 800 tons with an average grade of 7.5 percent zinc, 0.8 percent copper, 0.77 percent lead, and 3.10 ounces per ton of silver. Since 1972 the deposit has been mined from an open pit. Underground development work began in 1975.



## Report 2018 Drilling, Sturgeon Lake Zinc Project

In 1970, Falconbridge Nickel Mines Limited, testing an induced polarization anomaly, discovered a massive sulphide orebody on claims optioned from New Brunswick Uranium Metals and Mining Limited. Sturgeon Lake Mines Limited is a joint venture company involving Falconbridge Copper Limited, N.B.U. Mines Limited, and Sturgeon Lake Mines Limited. Pre-production ore reserves were 2 110 584 tons grading 2.98 percent Cu, 10.64 percent Zn, 1.47 percent Pb, 6.14 ounces of Ag per ton, and 0.021 ounce of Au per ton. The mine (open pit) started production in March, 1974 and production was stockpiled near the crusher until milling commenced in September, 1974. The mill is currently operating at a rate of 1200 tons per day.

During 1971 and 1972, the Lyon Lake and Creek Zone deposits, containing 4 029 500 tons of ore grading 6.66 percent zinc, 1.15 percent copper, 0.63 percent lead, and 3.30 ounces of Ag per ton, were discovered. The deposits mentioned have a poor geophysical expression and were located by drilling after determining stratigraphic controls.

*Table 2. Historic production (1972-1991) in the Sturgeon Lake VMS district (from Franklin, 1995)*

Deposit	Grade					Metric Tonnes
	Zn (wt.%)	Cu (wt.%)	Pb (wt.%)	Ag (g/t)	Au (g/t)	
F Group	9.51	0.64	0.64	60.4	–	340 000
Mattabi	8.28	0.74	0.85	104.0	–	11 400 000
Lyon Lake and SubCreek Zone	6.53	1.24	0.63	141.5	0.5	3 945 000
Creek Zone	8.80	1.66	0.76	141.5	0.5	908 000
Sturgeon Lake	9.17	2.55	1.21	164.2	0.5	2 070 000

Exploration programs in the district, particularly on properties with limited outcrop such as those in the Glitter Lake area, consisted typically of airborne geophysical (EM, mag) surveys followed by ground geophysical surveys with or without complementary geological and geochemical surveys to refine drill targeting. The discovery of Mattabi and other deposits stimulated bedrock mapping programs by the Ontario Geological Survey to determine the mineral potential and to stimulate exploration in the new mining district (Trowell, 1974a,b, 1976, 1983). Exploration targeting was influenced by presumed stratigraphic control of felsic volcanic rocks on VMS ore deposition within a cyclical mafic and felsic volcanic series (Trowell, 1983). However, U/Pb zircon dating show felsic volcanic rocks scattered across the greenstone belt at different stratigraphic positions have nearly identical zircon ages of ca. 2735 Ma (Davis and Trowell, 1982; Davis et al., 1985). Critically to ore formation and exploration, the felsic host strata to the VMS deposits were recognized to be products of an explosive, submarine felsic caldera (Groves et al., 1988; Morton et al., 1991a,b). The ore hosting sequence consists of pre-caldera basaltic flows in the south overlain by early caldera felsic pyroclastics and breccias with

minor intermediate flows, and late caldera felsic to andesitic flows and volcanoclastic and sedimentary rocks. Mattabi ores are hosted in early caldera felsic units while Sturgeon Lake and Lyon Lake ores occur in stratigraphically higher level caldera felsic volcanic strata (Morton et al., 1999).

M. Sanborn-Barrie, T. Skulski and others compiled and mapped the Savant-Sturgeon greenstone belt as part of the Western Superior NATMAP project (Sanborn-Barrie et al., 2002; Sanborn-Barrie and Skulski, 2005, 2006; Figure 4A). The ca. 2735 Ma Sturgeon Lake caldera complex is the predominant ore related component of the South Sturgeon assemblage of the greenstone belt (see Section 6). Detailed structural geology investigations near the end of mining in the district led to an improved appreciation of the potential influence of post-volcanic and syn-volcanic deformation on the form and distribution of the VMS ores (Koopman et al., 1991 and Mumin et al., 2007, respectively).

## 5.2 Glitter Lake area

Noranda, Falconbridge and smaller, affiliated and unaffiliated companies explored the Glitter Lake area since the early 1970s. “Except for those areas underlain by felsic intrusive rocks, almost the entire Glitter Lake Area has been staked.” Trowell reported (1974b, p.2), referring to the Winnipeg River intrusive terrane that bounds the Sturgeon Lake greenstone belt to the south (Figure 4).

The pre-1990s exploration history of mainly Noranda-owned claims east of the Sturgeon Lake mine is summarized from Gingerich (1992). The district was first flown in 1969 by Questor Surveys Limited for Mattagami Lake Mines with an airborne INPUT survey. Exploration focused initially on airborne EM conductors, magnetic anomalies and tracing the ore-hosting felsic volcanic strata to the east. Ground geophysical surveying (mag, various EM methods, radem, VLF, IP) was conducted intermittently east of the mines and west of Glitter Lake from 1969 to 1986. Thirty-eight holes are reported between the Sturgeon Lake-Lyon Lake mines and Claw Lake, primarily by Mattagami Lake Exploration, which later merged with Noranda, and Falconbridge Copper which later became Minnova. Drilling tested several EM conductor-related targets in altered felsic volcanic rocks of the upper caldera near the contact with barren mafic/ and intermediate volcanic rocks to the north. Graphitic sedimentary rocks with disseminations and semi-massive to massive bands of barren pyrite-pyrrhotite were interpreted to explain the geophysical anomalies. Belts of conductive strata are proximal to both Lyon Lake (Koopman et

al., 1991) and Sturgeon Lake ores (Sanborn-Barrie and Skulski, 2005). Best Noranda drill results from the mafic/felsic contact zone target are in holes about 900 m west of Claw Lake: 0.11% Zn, 1.77% Cu over 1.4 m and 1.45% Zn over 6.5 m in holes 51-14 and 51-15, respectively. The best Falconbridge intersection was 0.64% Zn, 2.62% Cu over 4.2 m in hole LLM-17 from south of this contact (Gingerich, 1992, Map 3).

Newconex Canadian Exploration Ltd (1970) and Amax Exploration Inc. (1972) drilled east of Glitter Lake on the current Sturgeon Lake Zinc property; reporting one 20 m hole and five holes totaling 632 m, respectively. Assays are not available. Louvicourt Goldfields Corp. Ltd. drilled six holes totaling 768 m that tested over 1.5 km of an east-west EM conductor south of Glitter Lake. No assays are provided for thin bands (<1m) of pyrite-pyrrhotite sampled in these holes (Cunningham, 1971).

The OGS flew the Sturgeon Lake-Savant Lake belt with the Aerodat HEM system in 1991 and later released reprocessed airborne magnetic data for the province (OGS, 2003). The airborne surveys delineate strong subparallel magnetic anomalies that trend east and southeasterly through the Sturgeon Lake-Lyon Lake mine toward Glitter Lake (Figure 4B).

Noranda drilled holes >1 km deep west of Claw Lake in both 1992 and 1993 to test EM anomalies and the mafic/felsic contact at depth, and to better understand the volcanic stratigraphy east of Sturgeon Lake mine and its relationship to ore deposition. The prospective sequence of altered felsic volcanic rocks (known as NBU rhyolite on the Sturgeon Lake mine property), which commonly has blue quartz phenocrysts, tuffaceous and coarse fragmental textures, was a few hundreds of meters thick and locally contained semi-massive to massive bands of pyrite-pyrrhotite and as stringers/veinlets. Metal values were generally low including in some strongly sulphidic rocks. Best results for the deep Noranda holes are 1.14% Cu and 1.23% Zn over 2.05 m at ca. 378 m in hole C-92-1 (Gingerich, 1992) and 1.86% Zn over 0.3 m at 1045 m in hole 93-51-30 (Smith, 1995).

Noranda conducted mapping, rock sampling, and IP surveying south of Claw Lake in 1993. Three volcanic cycles were identified. Boulders with up to 15% pyrite-pyrrhotite ±chalcopyrite were discovered, but comparable sulphide concentrations were not located in outcrop (Smith, 1994).

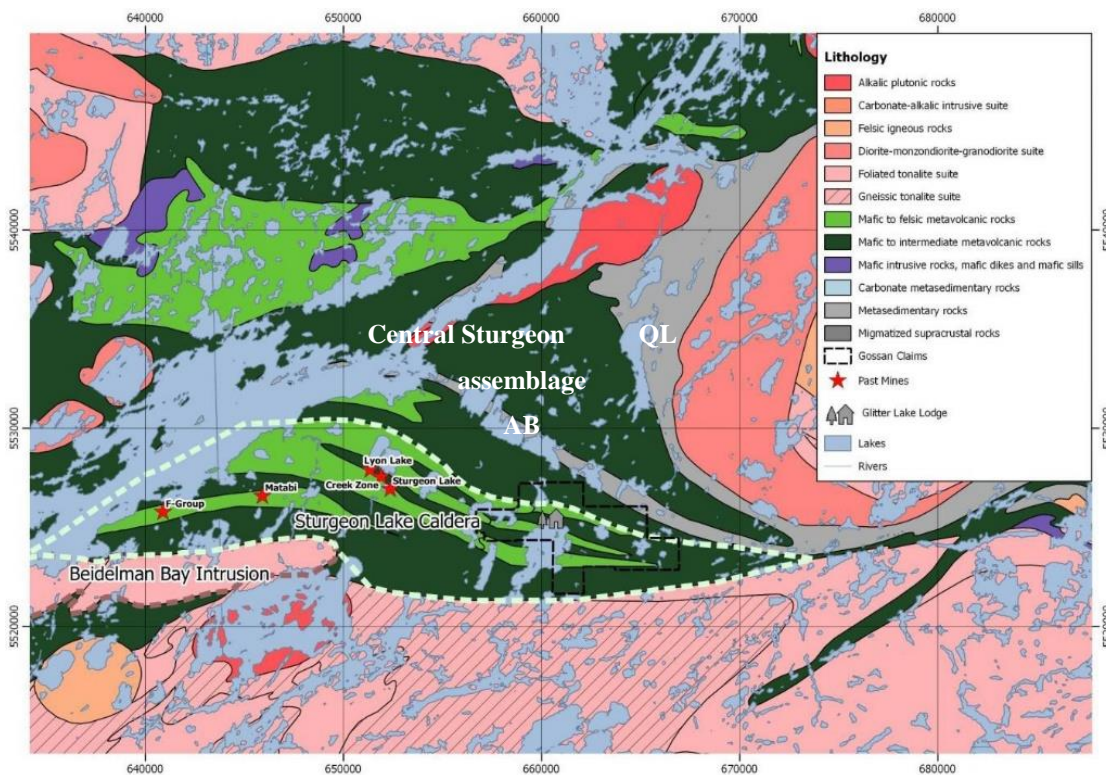
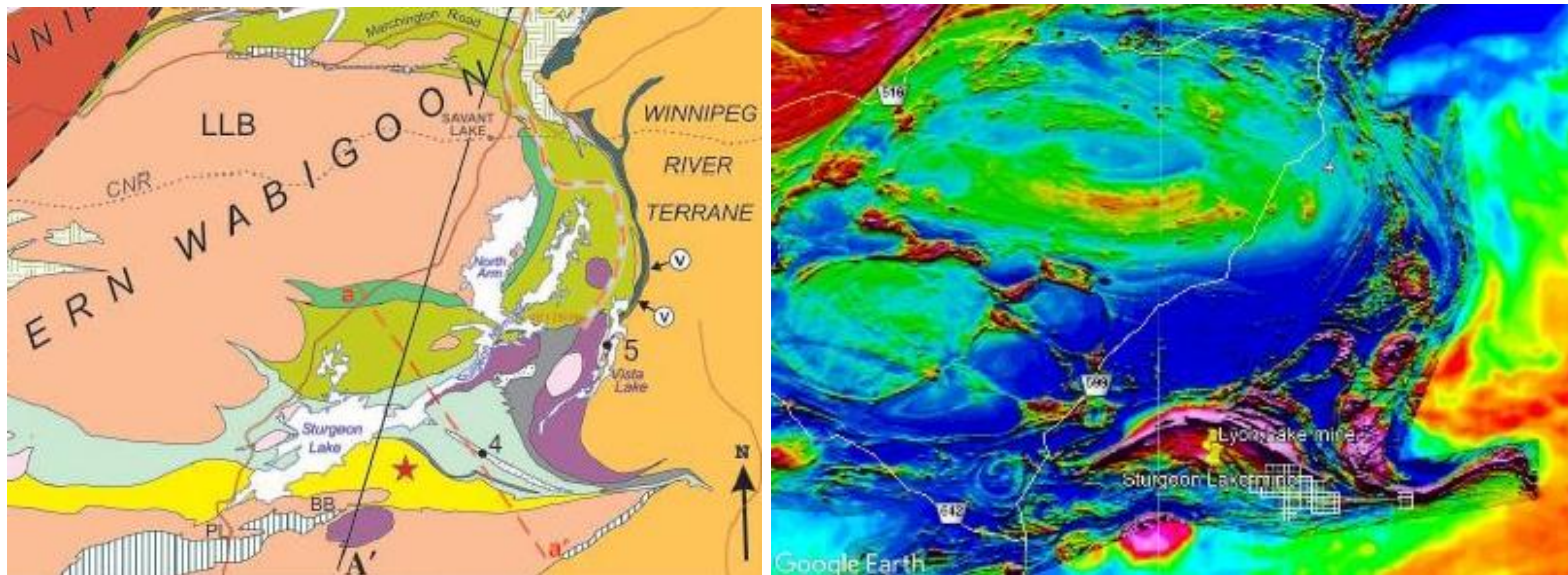


Figure 4: A, above left) Savant-Sturgeon greenstone belt assemblages (Sanborn-Barrie and Skulski, 2005, 2006): South Sturgeon (yellow), Central Sturgeon (pale blue) with Ament Bay (narrow white band), Handy Lake (yellow-green), Quest Lake (grey). Star marks the Sturgeon Lake mine; B, above right) Aeromagnetic map of roughly same area as A (total intensity, OGS, 2003) with Gossan claims as open white boxes; C, left) Geological setting of the Sturgeon Lake Zinc property (legacy claims outlined by dashed black line). White dashed lines outline the South Sturgeon assemblage with the felsic caldera complex in pale green; AB = Ament Bay assemblage, QL = Quest Lake assemblage (from A.H. Mumin and A. Mumin, 2017).

Unitronix Corp. commissioned an airborne, transient domain MEGATEM and magnetic survey on north-south flight lines over the width of the greenstone belt between Sturgeon Lake mine and Glitter Lake in 2003 in conjunction with Noranda Mining and Exploration (Fugro, 2003). The survey delineated conductive features better than previous airborne surveys in the area (Gingerich letter; Appendix, Fugro, 2003). Three main conductive belts were found; the central and northern belts also having coincident positive magnetic anomalies. The northern conductive belt coincides with the SE-trending belt of sedimentary rocks underlying Post and Willet Lakes. The southern conductive belt lacks an associated magnetic anomaly and coincides roughly with the contact of pre-caldera mafic volcanic rocks against the felsic intrusive/gneiss terrane to the south. The roughly 1 km wide central conductive belt coincides with felsic volcanic strata in the Sturgeon Lake mine area and includes a narrow, strongly magnetic band that coincides with iron formation north of Lyon and Sturgeon Lake mines. This conductive and magnetic band is traceable eastward to the Gossan property. Short strike length conductors, with or without coincident mag, outside the larger formational geophysical features were the desired exploration targets. The property west of Glitter Lake was flown again on northeast-trending flight lines in 2006 by Unitronix (now Unitronix Mining and Exploration) with a Terraquest high resolution magnetometer and XDS-VLF-EM instrument (Barrie, 2006). The survey found several <1 to 3 km long, narrow, positive mag anomalies west of Glitter Lake in the central conductive belt.

Xstrata (successor to Noranda, now Glencore) completed a short program of prospecting and rock sampling on claims at the south end of Claw Lake in 2010 (Siemieniuk, 2010). The 12 collected rock samples were interpreted to support the possible continuation of favourable felsic caldera-related strata from the Sturgeon Lake mine area.

Excalibur Resources Ltd. (Excalibur) commissioned an airborne geophysical survey (versatile transient domain EM (VTEM) plus magnetometer) in 2009 over their Glitter Lake and Gridiron Lake projects that targeted Cu-Zn VMS and iron formation-hosted gold respectively in the continuation of the Sturgeon Lake greenstone belt to the east (Geotech Ltd., 2010). The Excalibur property spanned ca. 27 km from Claw Lake to Dunne Lake in the east. The 1069 line-km survey identified three roughly subparallel conductive bands (north, south, central) in the western half of the property (Figure 5) similar to the adjoining Unitronix survey to the west. Excalibur followed up with a 48 line-km, enzyme leach soil and soil gas hydrocarbon (SGH)

geochemical surveys to refine drill targets within the extensive VTEM anomalies (Geofine, 2010; Mumin and Moody, 2011). Excalibur commissioned Maxwell modelling of select anomalies and interpretation of geophysical, geochemical and geological data from previous surveys and drilling. *“The west sheet (Glitter Lake project area) is well populated with bands of formational conductors that appear to be largely made up of strong, shallow, steeply dipping zones of graphite and iron sulphides. These are powerful EM features that could overpower responses from any nearby VMS deposit.”* (Geofine, 2010, p.20).

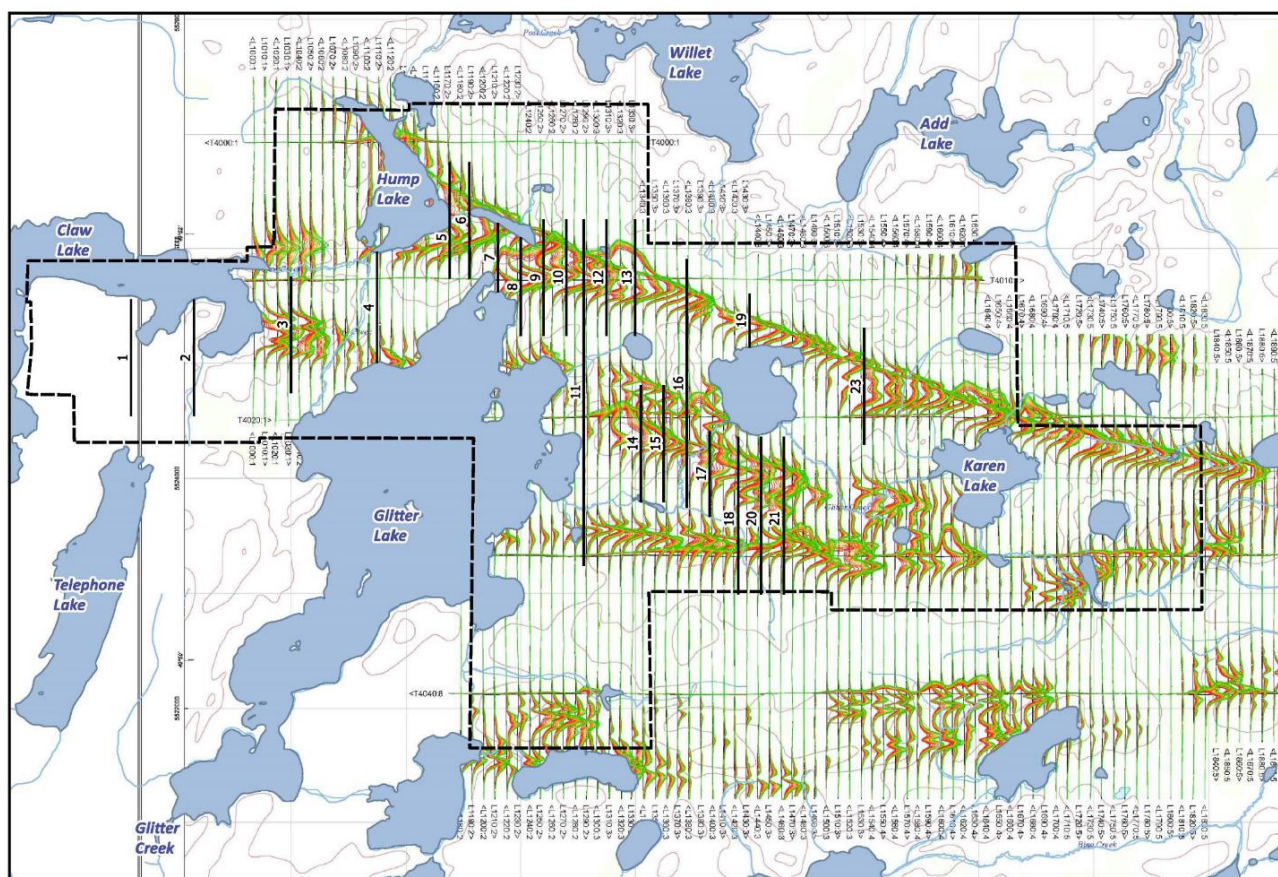


Figure 5. West sheet of 2009 VTEM airborne survey with coloured B-field profiles on flight lines showing EM conductors and the outline (black dashed line) of legacy claims for the Sturgeon Lake Zinc project (from A.H. Mumin and A. Mumin, 2017). Profile is in the 0.818 – 3.286 ms time channels.

Excalibur cored 21 holes totalling 3784 m in August - October 2010 (Mumin and Moody, 2011). The majority (15) targeted anomalies in the central and southern conductive bands, south of Karen Lake, ca. 4 km east of Glitter Lake, as summer access to the northern band north of Glitter Lake was hindered by intervening swampy ground. Conductors drilled in the Dunne Lake area, east of the current Sturgeon Lake Zinc property (6 holes), intersected magnetite iron formation with low gold and base metal contents. Excalibur drilling south of Karen Lake

intercepted iron sulphide rich horizons in intermediate to felsic volcanic/sedimentary stratigraphy that are generally barren of base metals. Best intercepts occurred in holes southwest of Karen Lake that tested the central conductive band. A 12-14 m wide, subvertical band of sulphidic tuff with graphite returned 0.15% Zn over 9.4 m in hole SL-10-11, and 0.1% Zn over 8.4 m about 50 m below in hole SL-10-12A (Mumin and Moody, 2011).

3936499 Canada Inc. commissioned an SGH survey on former Noranda claims west of Claw Lake in 2011. The survey by the developer of the technique, ActLabs, collected 82 soil samples which identified anomalous base metal targets with potential for copper mineralization (Bulatovich, 2011).

Aur Lake Exploration Ltd. conducted rock sampling south of Claw Lake and around Telephone Lake in 2012 on their Mattabi Claim Group which now included the numbered company claims and was partially bordered by the current Gossan claims to the east. Ten samples were collected from outcrops on the southern and eastern shores of Claw Lake, as well as along the west shore of Telephone Lake (Newton et al., 2012). The prospecting program encountered low metal values ranging from 4 – 228 ppm Cu, 5 – 111 ppm Ni, 17- 129 ppm Zn, and 0.3 - 1.2 ppm Ag. The report mentions collection of 39 samples of core from deep Noranda drill hole S-92-01 stored on the claims, however no assays are provided. The best intersection from this historic hole was 1.14% Cu and 1.23% Zn over 2.05m (Gingerich, 1992).

## 6. Geological Setting

The Sturgeon Lake Zinc property is located near the eastern end of the Savant-Sturgeon greenstone belt in the Archean Superior Province (Blackburn et al., 1992; Sanborn-Barrie and Skulski, 2005, 2006). The Neoproterozoic (ca. 2.8-2.7 Ga) greenstone belt lines the western margin of the Mesoproterozoic Winnipeg River terrane that divides the Wabigoon subprovince (Figure 4A). The Sturgeon Lake portion of the belt consists of mafic to felsic metavolcanic rocks with intercalated clastic and chemical metasedimentary sequences. Pre-caldera mafic volcanic rocks in the south and the 2.735 Ga Sturgeon Lake caldera complex (Davis et al., 1985; Morton et al., 1991a,b, 1999) form the South Sturgeon assemblage (Sanborn-Barrie et al., 2002). The steeply north dipping, north-facing, roughly east-west homocline occupies the southeastern limb of the regional northeast-trending synform centered on Sturgeon Lake (Figure 4). The 2.745 Ga Handy Lake volcanic assemblage forms the north limb. The South Sturgeon assemblage is succeeded to

the north by tholeiitic and calc-alkaline basalts of the 2.72 Ga Central Sturgeon assemblage which are unconformably overlain by clastic sedimentary rocks of the Ament Bay assemblage that include magnetite iron formation. The mainly sedimentary ca. 2.72 Ga Quest Lake assemblage occupies the core of the synform further northeast. The Southern and Central Sturgeon, Ament Bay and Quest Lake assemblages converge eastward. The Gossan property spans the contact of the narrowing and converging Southern and Central Sturgeon assemblages (Figure 4C). The mainly basaltic rocks and overlying Ament Bay magnetite iron formation give the Central Sturgeon assemblage a stronger positive magnetic signature than the South Sturgeon volcanic rocks (Figure 4B).

Metamorphic grade increases generally from lower greenschist facies in the west in the synform core to higher metamorphic grades to the south and east (Sanborn-Barrie and Skulski, 2005). Andalusite/kyanite, cordierite and other amphibolite facies minerals are reported from alteration zones in Mattabi-type deposits (Morton and Franklin, 1987).

The felsic to intermediate, subaerial to submarine (“shallow subaqueous”) Sturgeon Lake caldera complex hosts the past producing VMS mines in the district (Morton et al., 1991a,b, 1999; Mumin et al., 2007) (Figure 6). Sturgeon Lake district is the type locality for Mattabi-style Archean volcanogenic massive sulphide (VMS) which are distinguished by iron carbonate-enriched, semiconformable alteration zones underlying the massive sulphide deposits, in contrast with cross-cutting, Mg-enriched alteration within the larger sericite-quartz alteration zone under Noranda-style VMS deposits (Morton and Franklin, 1987). Sturgeon Lake deposits are hosted by blue-quartz crystal bearing rhyolite within the series of rhyolitic/dacitic volcanic horizons and subvolcanic domes with lesser sedimentary strata and generally conformable mafic intrusions that comprise the caldera complex. The exact stratigraphic position of the Lyon Lake and Sturgeon Lake orebodies remains debatable but the ore horizons appear to occur at or very near the top of the shallow subaqueous caldera complex (Morton et al., 1999). The caldera complex is cut by a series of roughly orthogonal synvolcanic faults that probably provided critical channel ways for the mineralizing hydrothermal fluids (Mumin et al, 2007). The Sturgeon Lake deposit is underlain by a well-developed semiconformable alteration zone (Morton et al., 1991b). The lack of a similar alteration zone underlying Lyon Lake deposit suggested to Morton et al. (1991b) that there had been tectonic movement on this contact. In contrast, Mumin et al. (2007) describe iron-rich semiconformable alteration immediately underlying the Lyon Lake, Creek Zone and Sub-



Creek deposits. The semiconformable alteration at both Lyon Lake and Sturgeon Lake deposits is underlain by extensive discordant fracture stockworks infilled by quartz, Fe-carbonate, magnetite, tourmaline, and sulphides. Mumin et al. (2007) interpret this extensive semiconformable alteration and stockwork system as the feeder zone to the deposits.

The Lyon Lake and Sturgeon Lake deposits are succeeded northward by late caldera rhyolite, dacite and andesite and ultimately by postcaldera basalts of the overlying Central Sturgeon assemblage (Morton et al., 1999; Sanborn-Barrie and Skulski, 2005). The mafic volcanic rocks have strong, km-long aeromagnetic lineaments and airborne EM conductors that are associated with graphitic sedimentary or tuffaceous rocks with pyrrhotite-pyrite-rich bands (Sanborn-Barrie and Skulski, 2005). The geophysical features, the caldera complex and mafic volcanic rocks converge to the east with felsic volcanic rocks thinning significantly, in part at the expense of intermediate rocks in the Glitter Lake area (Figure 6).

The mainly fine-grained, well bedded wacke of the Quest Lake assemblage borders the gneissic Vista Lake complex and includes conglomerate with pebbles of basalt and andesite from the underlying Central Sturgeon Lake assemblage. The Quest lake assemblage also swings easterly into the zone of converging assemblages at Dunne Lake (Sanborn-Barrie et. al, 2002; Sanborn-Barrie and Skulski, 2005) (Figure 4C).

## 7. Mineral Deposit Type

Volcanogenic massive sulphide (VMS) deposits are comprised of lenses of massive (>80 volume percent) sulphide that are commonly polymetallic (e.g., Zn-Cu ±Pb±Ag±Au). The deposits form by sulphide deposition at or near the seafloor from metal-bearing hydrothermal fluids circulating in the subsurface (Franklin et al., 2005; Piercey et al., 2015). VMS classification schemes are typically derived from the lithostratigraphy of the volcanic and sedimentary strata that host the base metal-rich sulphide mineralization, the tectonic environment and the metal content (e.g., Barrie and Hannington, 1999; Franklin et al., 2005).

Morton and Franklin (1987) divided Archean Cu-Zn deposits into Noranda-type and Mattabi-type based on the VMS deposits mined in the Noranda, QU and Sturgeon Lake, ON districts respectively. The distinguishing features of Mattabi-type deposits are the greater abundance of felsic volcanic rocks, especially fragmental units, in the footwall and the prevalence of semiconformable carbonate-rich, alteration zones underlying the deposits. These

contrast with well-defined subvertical chloritic alteration pipes that cross-cut the volcanic stratigraphy in the footwall of Noranda type deposits. Mattabi-type alteration zones typically have abundant siderite, and other Fe-rich minerals whereas Noranda-type lack abundant carbonate minerals and alteration pipes are typically defined by Mg-enriched chlorite. Both deposit types typically show sodium depletion in the underlying altered volcanic rocks.

Archean VMS deposits are typically hosted by felsic and mafic volcanic and subvolcanic rocks within typical bimodal tholeiitic volcanic sequences. The felsic volcanic rocks directly associated with deposits have geochemical characteristics characterized mainly as Type FII and FIII rhyolites (Leshner et al., 1986). Type FIII rhyolites generally have flat rare earth element (REE) patterns and negative Europium anomalies on chondrite normalized plots and intermediately to strongly elevated high field strength elements (HFSE; heavy REE, Y, Zr, Hf) (Hart et al., 2004). The Sturgeon Lake district deposits are hosted by type FII rhyolites and rhyodacites with gently sloping REE patterns and moderately elevated HFSE.

Exploration of the Sturgeon Lake Zinc project area by Gossan is targeting zinc-enriched, Mattabi-type Archean VMS mineralization in the easternmost Sturgeon Lake caldera complex (Figure 6). This style of mineralization conforms with characteristics of the felsic siliciclastic VMS style, which includes an association of the ore horizons with graphitic sedimentary rocks and iron formation (Piercey et al., 2015).

# Report 2018 Drilling, Sturgeon Lake Zinc Project

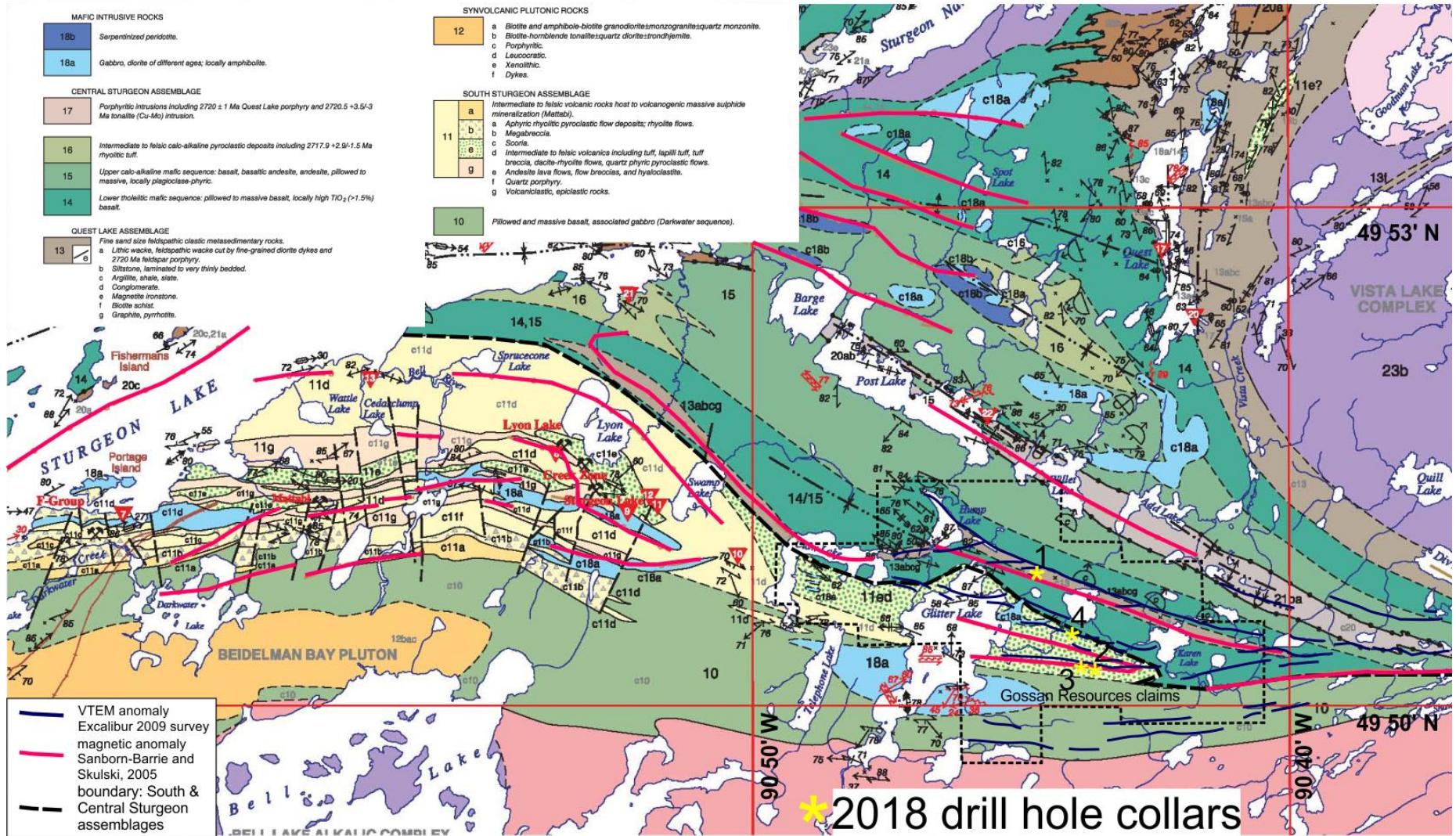


Figure 6. Geology of the Sturgeon Lake mine district (Sanborn-Barrie and Skulski, 2005) with Sturgeon Lake Zinc property of Gossan Resources outlined by dashed black lines.

## 8. Exploration

### 8.1 History

Gossan staked three claims east of Glitter Lake in November 2015 and acquired the adjoining 12 legacy claims to the east from Excalibur in July 2016. The acquisition included the significant exploration data produced by Excalibur including the property-wide VTEM airborne survey (see Section 5.2).

Gossan conducted a biogeochemical survey in the fall of 2016 across high priority airborne conductors selected from the VTEM survey as the 2010 Excalibur enzyme leach soil survey lacked samples over several targets due to the high water table and lack of defined soil horizons (A. Mumin and A.H. Mumin, 2017). The biogeochemical survey collected 444 samples of two alder species (Speckled and Green Alder) from 22 grid lines across these gaps. Sample spacing increased from 100 m to 25 m as the VTEM conductor axis was approached on each line. Analyses were conducted by ACME Labs, Vancouver. The survey identified Zn-Au-Ag anomalies that are coincident with VTEM conductors, high ranking SGH anomalies suggestive of VMS mineralization, and zinc and copper anomalies from the enzyme leach soil survey (A.H. Mumin and A. Mumin, 2017).

Geotech Ltd., operator of the 2009 airborne survey, was commissioned to conduct a second round of Maxwell modelling of the selected EM anomalies in 2017 to best define targets to be drilled in the 2018 winter campaign (Geotech, 2017 in A.H. Mumin and A. Mumin, 2017; see Appendix C this report). The compilation of exploration data identified four target areas on the property that coincide, at least in part, with zones of felsic volcanic rocks, including some blue quartz-crystal rhyolite, and fine-grained sedimentary or tuffaceous rocks with hydrothermal alteration and sulfide mineralization similar to those hosting the Sturgeon Lake and Lyon Lake deposits (Figure 7). Eighteen holes were proposed to drill test the four target areas. Maxwell modelling indicated that about half of the holes would target flat-lying ( $<35^\circ$  dip) near-surface ( $<100$  m depth) conductors (Table 2 in A.H. Mumin and A. Mumin, 2017). The EM conductors are in part coincident with relatively broad surficial geochemical anomalies (200 m wide,  $>1$  km long) and similarly broad intervals of prospective felsic volcanic and sedimentary rocks (Figure 7).

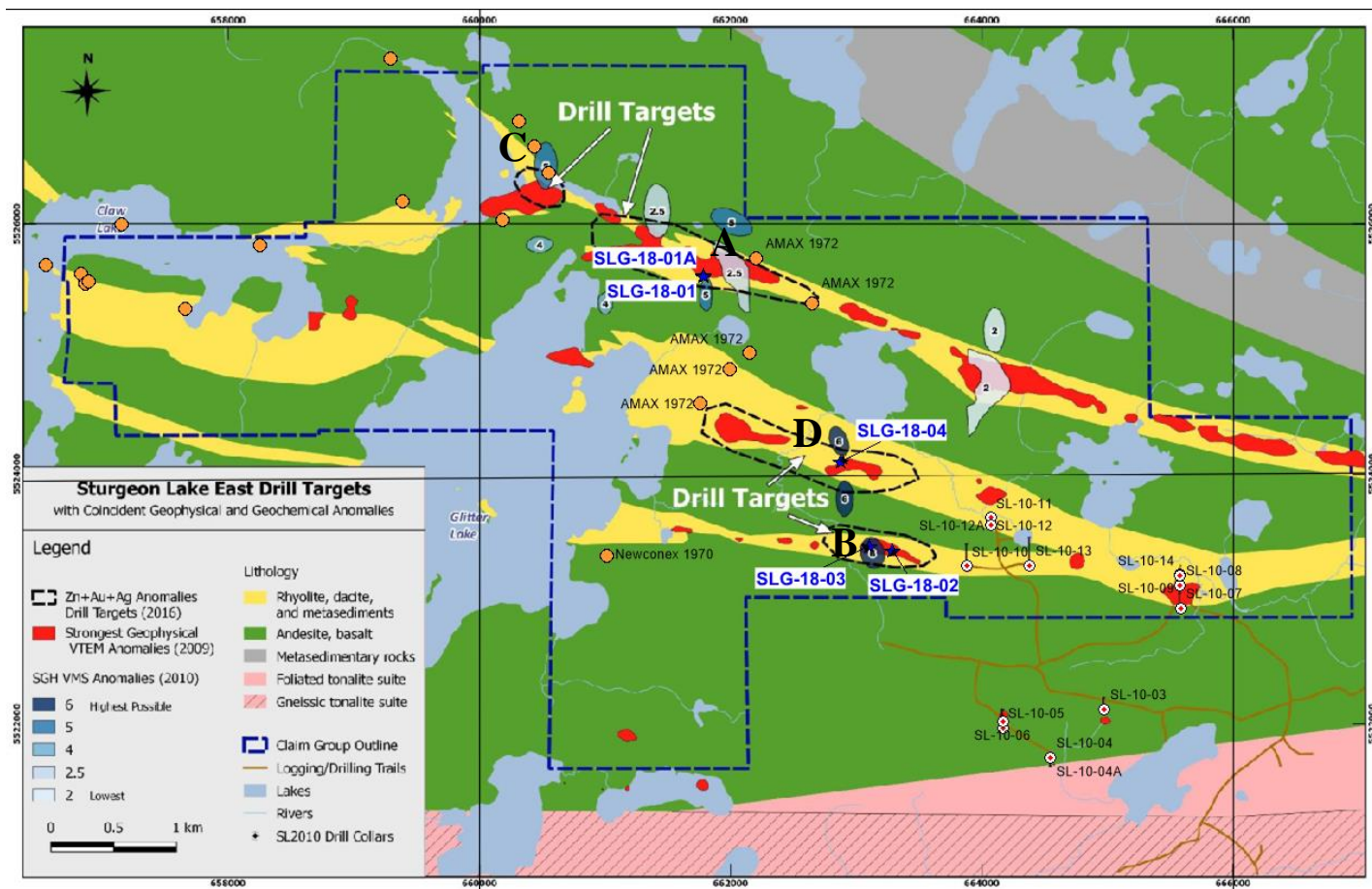


Figure 7. Geology map of Glitter Lake area showing multi-parameter drill target areas A, B, C and D (black dashed lines), 2018 Gossan drill collars (stars) and previous collars in the MDMN drill hole database (circles) on and near the Sturgeon Lake Zinc property (pre-2018 legacy claims outlined with black dashed line). Numbered collars to east are 2010 Excalibur drilling; non-labeled collars to west are holes drilled by Noranda and affiliated companies. Map modified from A.H. Mumin and A. Mumin (2017).

## 8.2 Operation of Feb-Mar 2018 Drill Campaign

The intent of the winter 2018 program was to drill targets defined by VTEM geophysical anomalies coincident with geochemical (biogeochemical, SGH, enzyme leach soil) anomalies and prospective geology with up to 2000 m in 15-18 holes (A.H. Mumin and A. Mumin, 2017). Gossan was issued exploration permit, PR-16-11016, on February 3, 2017, valid to February 2, 2020, which allows for mechanized drilling with equipment >150 kg on the property.

Orbit Garant Drilling of Thunder Bay and Rouyn-Noranda, QC was contracted for the program to produce NQ size core (47 mm internal diameter). Drill access and rig positioning was provided by an Orbit Garant skidder. The program was supervised for Gossan by Halladay Geological Consultants and Services (HGCS) of Sudbury, Ontario. Core was logged and sampled by Scot Halladay, P.Geo and Jim Laidlaw.

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Four of the nine highest priority targets within areas A, B and D east of Glitter Lake were tested (Figure 6; Figure 7). Five holes totaling 741.05 m were completed from February 9 to March 24, 2018 (Table 3). Hole SLG-18-01 encountered drilling problems, was aborted at 21.3 m and redrilled nearby as hole SLG-18-01A. Overburden ranges from 2.7 m in SLG-18-01A to 10.6 m in hole SLG-18-04 with casing inserted into bedrock followed by core drilling.

Drill logs are provided for each hole in Appendix A. Core samples were assayed by multi-element ICP lithochemistry with lab certificates in Appendix B. Three hundred and fifty-one collected samples of sawn half-core represent about 365 m of core. Twenty-nine blanks and standards (QAQC samples) were inserted in the sample stream during the program (see Section 11).

*Table 3. Collar information for 2018 drilling*

Drill Hole ID	Northing	Easting	Elevation (masl)	Azimuth	Dip	Length (m)	# of assayed samples	Claim ID
SLG-18-01	5525584	661776	458	360	-45	21.3	17	319292
SLG-18-01A	5525576	661777	458	360	-55	201	104	319292
SLG-18-02	5523394	663279	446	360	-65	150	78	260021
SLG-18-03	5523422	663097	446	360	-60	120	36	307832
SLG-18-04	5524099	662870	450	180	-50	249	116	230726
Total						741	351	

### 8.3 Results of 2018 drill campaign

Base and precious metal values are generally low in the four holes. Maximum base metal assays are 600 ppm Cu, 108 ppm Pb and 4570 ppm Zn. Geological cross sections at 1:1000 scale include histograms showing Zn content (Figure 8, 9, 10, 11). The maximum length of histograms on the cross sections reflects the maximum Zn assay from the program. The best base metal intersection is in hole SLG-18-04 which tested target D and the central conductive band, 2.05 m grading 0.3% Zn from 77.2-79.25 m occurs within a broader zone of 12.35 m grading 0.13% Zn (Table 4). Histograms of Fe and S (maximum histogram length corresponds with maximums of 39.2% Fe and 35.6% S) allow intervals of semi-massive to massive pyrrhotite and/or pyrite with

elevated Fe and S to be distinguished from magnetite iron formation with high Fe but low S contents, e.g. SLG-18-02 at ca. 45 m and ca. 75 m (Figure 9).

Massive and semi-massive iron sulphides (combinations of pyrite and pyrrhotite make up to 80% by volume) in holes SLG-18-01A, 02 and 03 explain part of the EM anomalies in target areas A and B. The multimetre-scale sulphidic rocks are flanked by graphitic sedimentary or tuffaceous intervals in SLG-18-01A and 02 (Figure 8, 9). Although not noted in the drill log, similar graphitic intervals are presumed to occur in SLG-18-03. Near surface graphitic, and variably sulphide- and magnetite-rich sedimentary and tuffaceous intervals spanning the upper ca. 100 m of SLG-18-04 (Figure 11) appear to explain the EM conductor targeted in area D.

Overall, the sulphide-rich bands in all three conductive trends occur in variable sequences of sedimentary and felsic to intermediate volcanic rocks over the upper roughly 100 m core lengths. Fine grained and thinly laminated sedimentary and/or tuffaceous rocks are interbedded with felsic and intermediate volcanic rocks. This composite sequence is underlain by fine and medium-grained mafic rocks in holes SLG-18-01A and 04. Semi-massive to massive pyrite-pyrrhotite, in widths of about 5 m, are intersected at about 50 m depth in the northern (SLG-18-01A) and southern (SLG-18-02, 03) target areas. The most sulphidic intervals in the central conductive trend occur at roughly 100 m depth beneath the Zn-rich interval in SLG-18-04 (Figure 11). Felsic intervals with blue quartz phenocrysts and fragmental textures are similar to host rocks of the ore horizons at the Sturgeon Lake and Lyon Lake mines (Morton et al., 1999; A.H. Mumin et al., 2007). Hydrothermal alteration consists principally of variable silicification, sericite, chlorite, biotite, amphibole, magnetite, tourmaline, pyrrhotite and Fe-carbonates. Elevated Fe with highly variable S content in SLG-18-04 may indicate bands of iron sulphide within a broad zone of iron carbonate alteration (Figure 11). Collectively, the 2018 drilling suggests the probable continuation of Sturgeon Lake caldera stratigraphy to east of Glitter Lake, most clearly in SLG-18-04 in the central conductive band at target D.

It is important to note drill targets were based on the Maxwell modelling, which indicated that conductors targeted by holes SLG-18-01A and 04 were modelled as near-surface, flat-lying bodies with those in area B moderate to steeply dipping (Geotech, 2017). Although the general attitude of the drilled strata is poorly defined, the drill cores suggest that steeply dipping conductive (sulphides  $\pm$  graphite) strata are intersected rather than flat or shallow dipping strata. A.H. Mumin and Prikhodko (2018) discuss the problem of the determination of dip of conductive bodies by EM surveys. The surficial geochemical anomalies in target areas B and D

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are confirmed by near surface intervals with >1000 ppm Zn in holes SLG-18-03 and 04 (Figure 10, Figure 11 respectively). This suggests the collars are within the surficial geochemical anomaly and therefore the holes incompletely test the full width of the altered rocks in these target areas.

*Table 4. Best Zn results from 2018 drill campaign*

<b>Drill Hole</b>	<b>From</b>	<b>To</b>	<b>Length (m)</b>	<b>Zn (ppm)</b>	<b>Target</b>
SLG-18-01A	35	37	2	500	A
SLG-18-02	42.5	46.6	4.1	1617	B
including	44	44.7	0.7	2840	
and	66.85	67.85	1	1050	
SLG-18-03	4.3	12.5	8.2	735	B
SLG-18-04	10.6	13.7	3.1	1445	D
and	40	42	2	1055	
and	77.2	89.55	12.35	1306	
including	77.2	79.25	2.05	3160	



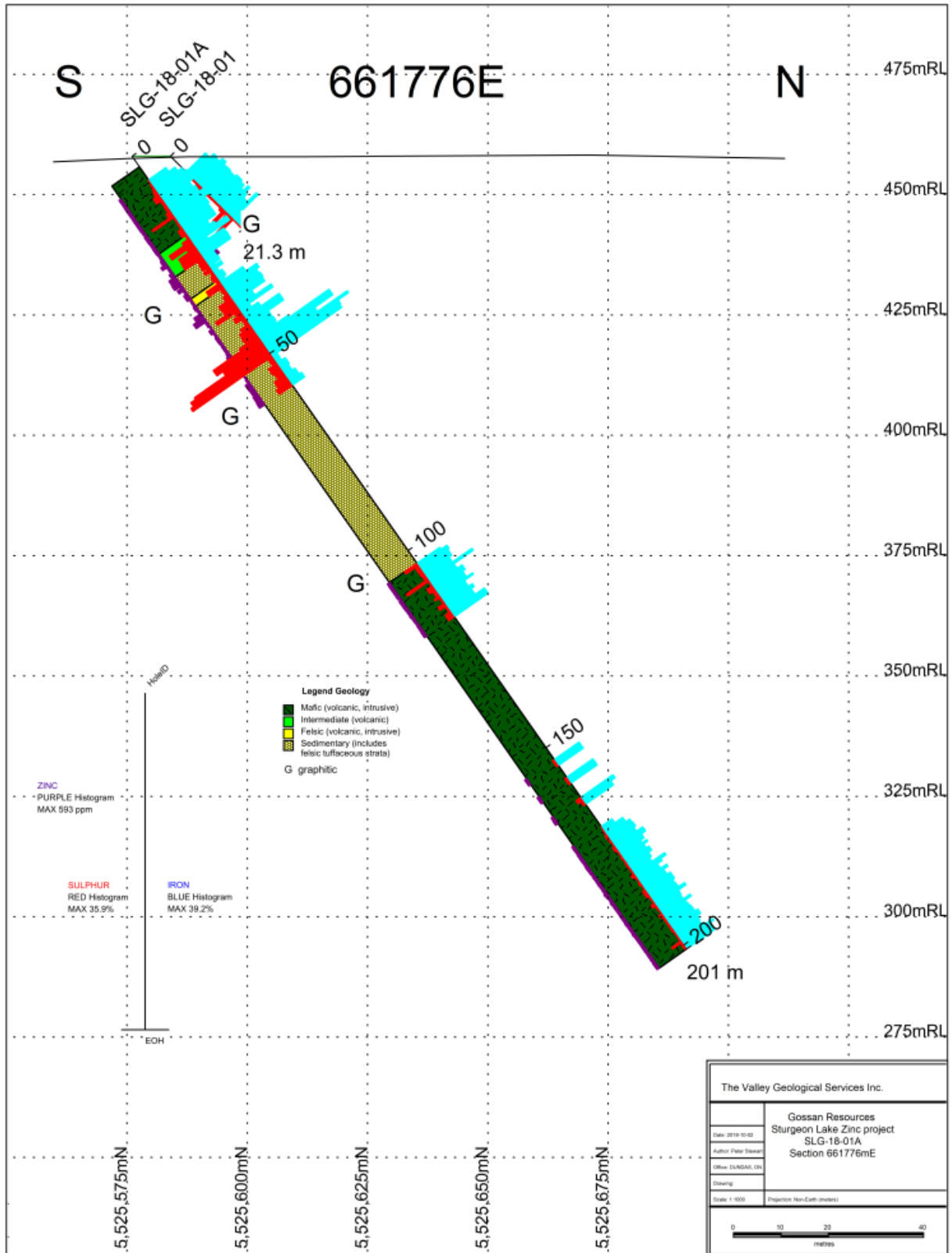


Figure 8. Cross section 661776E for drill hole SLG-18-01, 1A

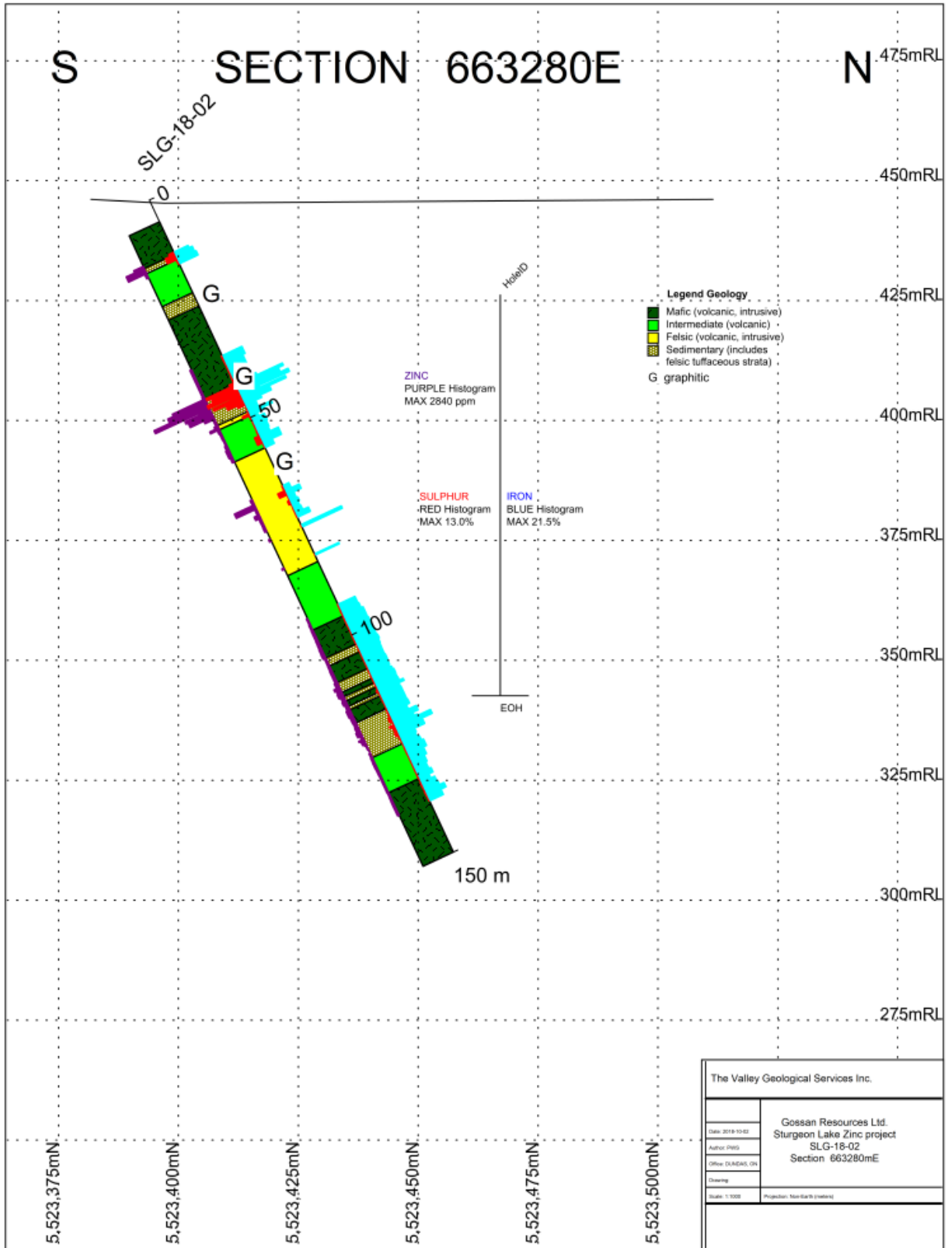


Figure 9. Cross section 663280mE for drill hole SLG-18-02

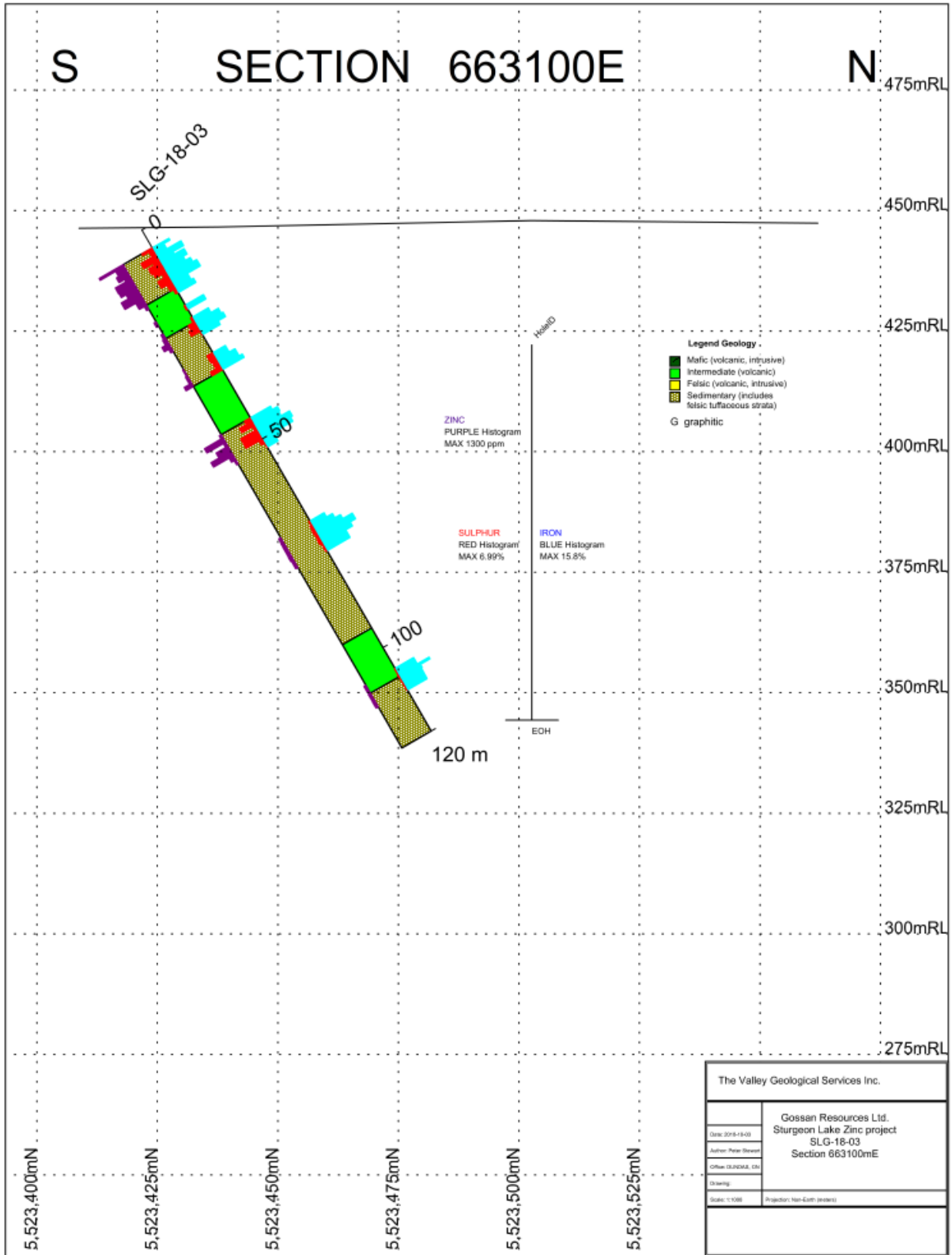


Figure 10. Cross section 663100mE for drill hole SLG-18-03

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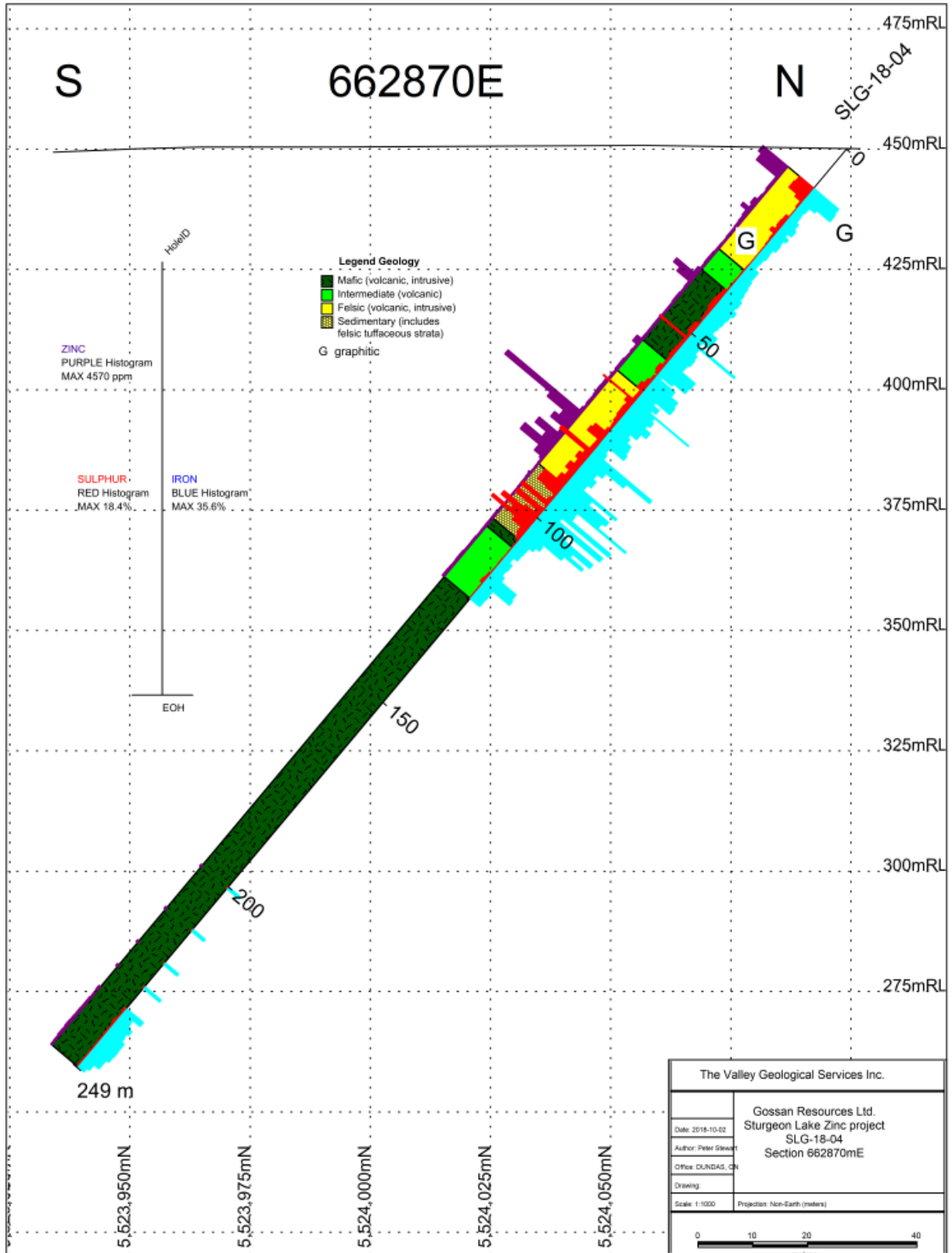


Figure 11. Cross section 662870mE for drill hole SLG-18-04

## 9. Sampling Method and Approach

Core was placed in in core boxes at the end of each 10 foot rod run by drilling staff. Wooden blocks marking the end of each run were converted to metric lengths and intervals marked on each core box. Drill core was logged with consideration of lithology, expressions of sulphide mineralization and hydrothermal alteration. Sample intervals were based on visual estimates of sulphide minerals, and degree or type of hydrothermal alteration while respecting lithologic contacts with sample intervals marked on the core during logging. Rock perceived to be unaltered and barren of Zn-Cu minerals was not sampled. Core was sawn in half, generally perpendicular to visible sedimentary or volcanic banding. One half of the core from each interval was placed into clean plastic bags labelled with the enclosed sample tag and then sealed with a single use plastic tie. The remaining half core was returned to the core box after sampling. Ultimately, 6-12 sample bags (including QAQC sample powders) were placed in a larger rice bag which was also sealed and labelled. Samples were kept in a secure location (locked shipping container) until one or more large bags could be delivered during and following the program to AGAT Laboratories sample preparation facility in Thunder Bay, Ontario. After sampling and logging, lids were secured to boxes and the core boxes are stored on the property.

## 10. Sample Preparation, Analyses and Security

A total of 380 analyses were performed by AGAT, including 29 QAQC samples (blanks, standards). After log-in and weighing at AGAT Laboratories, samples were crushed (>75% sub-2 mm), pulverized (>95% sub75 micron) and pellets of sodium peroxide fused powder analysed by ICP with either optical emission spectroscopy (OES) or mass spectrometry (MS) finish. The method determines the concentration of 58 elements (Appendix B). Gold has been determined by fire assay at AGAT Laboratories for some sample submissions with generally low to very low abundance, maximum 154 ppb Au. Certificates of all analyses are provided in Appendix B.

Throughout the drill program, sampled drill core was kept in a secure facility. Sealed sample bags were transported from the property by HGCS personnel directly to AGAT preparation facility in Thunder Bay, and assay results were provided directly and exclusively to authorized Gossan personnel.

## 11. Data Verification

The accuracy and precision of ICP data by AGAT Labs for the 2018 core samples are checked by the periodic insertion of reference materials of known base metal and gold composition in the sample stream of drill core. Accredited standards used in the program were, Cu, Pb, Zn-rich standard ME-17, moderate Zn-rich standard ME-1603 and Cu-Au standard CGS-30; all obtained from CDN Resource Laboratories of Langley, BC ([www.cdnlab.com](http://www.cdnlab.com)).

Material known from previous drill campaigns managed by site geologist S. Halladay to contain very low metal abundances (Sudbury quartzite) was inserted periodically as a blank into the sample stream to determine if crushing and pulverizing apparatus were cleaned properly to avoid intra-sample contamination during sample preparation at AGAT Labs.

The AGAT results for standards and blank samples during the 2018 drill campaign are provided along with the recommended values for the three standards (Table 5). The low metal content of assays of blanks shows that there has not been between-sample contamination. Low to moderate Zn concentrations, such as those obtained in the 2018 drill campaign, are reliably reported for standard ME-1603. Greater abundances of Zn, Pb and Ag in ME-17 appear to be less reliably determined by AGAT Labs with over 50% of assays outside the  $2\delta$  (standard deviation) errors permitted for these standards. Given the generally low concentrations of Zn and other metals in current and previous core samples and lack of incentive to estimate mineral resources, the relatively poor verification of metal-rich standards is not considered to be problematic for Gossan at this time. If future drilling merits resource estimation, utilization of data from winter 2018 drilling is not recommended.

## 12. Mineral Processing and Metallurgical Testing

No mineral processing or metallurgical testing has been conducted on the property.

## 13. Mineral Resource and Mineral Reserve Estimates

No mineral resources have been estimated on the Sturgeon Lake Zinc property.

## 14. Other Relevant Data and Information

None.

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Table 5. Data verification samples

Inserted in Hole:	Sample	detection limit COMMENTS		Ag 1 ppm	Cu 5 ppm	Pb 5 ppm	Zn 5 ppm	Au 1 ppb
SLG-18-01	5553275	BLANK	Sudbury quartzite	<1	<5	15	<5	40
SLG-18-01A	5553380	BLANK		<1	<5	<5	<5	
SLG-18-01A	5553409	BLANK		<1	<5	<5	<5	
SLG-18-01A	5553421	BLANK		<1	<5	<5	<5	
SLG-18-01A	5553445	BLANK		<1	<5	<5	<5	120
SLG-18-02	5553483	BLANK		2	<5	<5	16	40
SLG-18-02	5553291	BLANK		<1	5	<5	12	
SLG-18-02	5553514	BLANK		<1	7	<5	<5	2
SLG-18-03	5553549	BLANK		<1	<5	<5	11	
SLG-18-04	5553590	BLANK		<1	<5	<5	5	3
SLG-18-04	5553714	BLANK		<1	<5	8	<5	
SLG-18-04	5553741	BLANK		<1	5	7	35	
SLG-18-04	5553762	BLANK		<1	6	<5	6	
SLG-18-01	5553269	<b>CGS-30</b>			7	1510	1180	4420
SLG-18-02	5553507	<b>CGS-30</b>		7	1570	1020	4690	299
SLG-18-03	5553575	<b>CGS-30</b>		7	1590	1120	4670	321
SLG-18-04	5553720	<b>CGS-30; originally recorded as ME-1603</b>		8	1560	1020	4700	
SLG-18-01A	5553375	<b>ME-1603</b>		108	2920	14400	4790	
SLG-18-01A	5553424	<b>ME-1603</b>		101	2920	14100	4760	
SLG-18-01A	5553436	<b>ME-1603</b>		90	2620	14700	4500	610
SLG-18-02	5553488	<b>ME-1603</b>		84	2640	14400	4370	510
SLG-18-03	5553556	<b>ME-1603</b>		85	2680	13900	4420	1020
SLG-18-04	5553605	<b>ME-1603</b>		90	2810	13200	4750	
SLG-18-04	5553793	<b>ME-1603</b>		81	2510	12400	5340	530
SLG-18-01A	5553400	<b>ME-17</b>		38	12600	6710	65800	496
SLG-18-01A	5553462	<b>ME-17</b>		42	12700	7370	83400	210
SLG-18-02	5553288	<b>ME-17</b>		40	13145	6585	75509	
SLG-18-02	5553524	<b>ME-17</b>		38	13000	6417	72400	436
SLG-18-04	5553760	<b>ME-17</b>		36	13300	6570	63500	130
<b>RECOMMENDED VALUES</b>				<b>Ag</b>	<b>Cu</b>	<b>Pb</b>	<b>Zn</b>	<b>Au</b>
CDN Resource Laboratories Ltd.				ppm	ppm	ppm	ppm	ppb
<b>CDN-CGS-30</b>				na	<b>1540</b>	na	na	<b>338</b>
				+/-	70			48
<b>CDN-ME-1603</b>				<b>86</b>	<b>2790</b>	<b>13400</b>	<b>4500</b>	<b>995</b>
				+/-	3	140	300	66
<b>CDN-ME-17</b>				<b>38.2</b>	<b>13600</b>	<b>6760</b>	<b>73400</b>	<b>452</b>
				+/-	3.3	1000	3700	58

na=not reported

results in RED are outside (+/-) 2 standard deviations of the recommended values

## 15. Interpretation and Conclusions

The 2018 drill program of four holes incompletely tested three of four multi-parameter (geophysical, geochemical) targets (A.H. Mumin and A. Mumin, 2017). The three VTEM conductive bands (north, south, central; Figure 5) were tested by one hole into each of areas A and D and two holes into area B (Figure 12). The fourth target area C was not tested. Conductive rocks identified by the VTEM survey have been confirmed in all three bands. The conductors in each band appear to be explained by intervals of semi-massive to massive pyrrhotite/pyrite with and without associated graphitic strata. The best Zn-enrichment found by the program (Table 4) occurs in hole SLG-18-04 with multiple iron sulphide-rich intervals in felsic volcanic rocks (Figure 11) in target area D in the central conductive band. The intervals of massive and semi-massive pyrrhotite/pyrite in holes SLG-18-01A, 03 and 04 have very low base metals. Very weak Zn enrichment correlates with massive pyrrhotite/pyrite in SLG-18-02 (Figure 9). Low grade Zn mineralization in hole SLG-18-04 at target D is intersected between bands of barren massive and semi-massive pyrrhotite/pyrite (Figure 11). Volcanic and sedimentary rocks in holes SLG-18-01A and 04 are extensively veined and hydrothermally altered.

Two holes that were collared in weak Zn-enriched rock (SLG-18-03 and 04) support utilization of surficial geochemical data in drill targeting for underlying VMS mineralization.

Targets A and D are each >1 km long and each have been tested by only one Gossan drill hole to date. The mineralogy and geochemistry from these drill holes indicate pervasive hydrothermal alteration superimposed on the mafic and felsic rocks. The most intensely altered and sulphide-rich zones are associated with intervals of brecciated and fractured rocks, and locally with probable fragmental volcanic rocks. Target area D extends 1 km to the west of hole SLG-18-04 (best Zn intersection in current program) with only a single historic hole (Amax 1972) across the trend of the geophysical and geochemical anomalies further to the west (Figure 12).

The long strike length VTEM anomaly appears to bifurcate into two conductors, the NW-SE trending main regional conductor and a shorter length east-west feature at target A (and elsewhere along strike of the regional conductor) (Figure 5). The altered felsic rocks and sulphidic conductor intersected in hole SLG-18-01A are interpreted to represent a geologically separate conductive horizon responsible for the east-west conductor which is terminated eastward by the regional conductor that is roughly coincident with the apparent unconformity at



the contact between the South Sturgeon to Central Sturgeon assemblages (Figure 6). Two historic Amax drill holes tested the regional conductor to the east of hole SLG-18-01A and the nearest historic Noranda drill tests of the regional or east-west conductors are about 1.5 km to the west (Figure 12).

The southern conductive band in area B appears to correspond with generally barren massive and semi-massive pyrrhotite/pyrite with low Zn values in variably altered volcanic and sedimentary rocks in holes SLG-18-02 and 03. While alteration is not as intense or as widely developed as in holes SLG-18-01A and 04, the intervals include blue quartz-crystal and variably graphitic tuffaceous material. This conductive band was tested to the east by Excalibur drill holes (Figure 7) with minor sulphides and low Zn content in narrow, less strongly altered material, a relationship that suggests alteration increases westward within this band. Hole SLG-18-03 was collared in Zn-mineralized volcanic rocks, and therefore only tested approximately half the width of the conductive and geochemically anomalous zone. The alteration, sulphides and geochemistry of holes SLG-18-03 and 02 are consistent with footwall-type VMS alteration. Target area B has not yet been tested conclusively.

Preliminary analysis of the geochemistry for 2018 core samples indicates that the volcanic and sedimentary rocks intersected by the 4 drill holes have been subjected to varying degrees and types of hydrothermal alteration. The presumed hydrothermal sediments in hole SLG-18-01A are associated with strong and pervasive positive Eu anomalies, high Fe/Mn ratios, and other geochemical features suggest that this is a potentially proximal horizon to VMS type mineralization. The geochemical and petrographic analyses are ongoing and will be reported separately when complete.

The weather and operational problems prevented complete testing of four target areas in the three conductive bands. The broad width of each conductive band and associated surficial geochemical anomalies contribute to each target area being roughly 200 m wide or more. As a result, one inclined hole does not comprehensively test the targets, especially by holes collared near the centre of each conductive and geochemically anomalous band. The possibility that metal-rich massive sulphide concentrations occur elsewhere in the altered felsic to intermediate volcanic and sedimentary sequences that hosts the relatively barren massive to semi-massive pyrrhotite/pyrite intersected cannot be discounted. Area D has the known Zn mineralization within favourable felsic volcanic units that include multiple bands of semi-massive to massive iron sulphides and graphitic sedimentary rocks. Holes SLG-18-01A and 04 show strong and

widespread hydrothermal alteration that is similar to that observed in the Lyon Lake-Sturgeon Lake mine areas, and favourable geochemical indicators of high-temperature exhalative activity potentially associated with VMS base metal mineralization. Consequently, both areas A and D should receive further priority drill testing. Area B requires step-back drilling to test the full width of the zone, and area C remains untested by Gossan or since the 1970s.

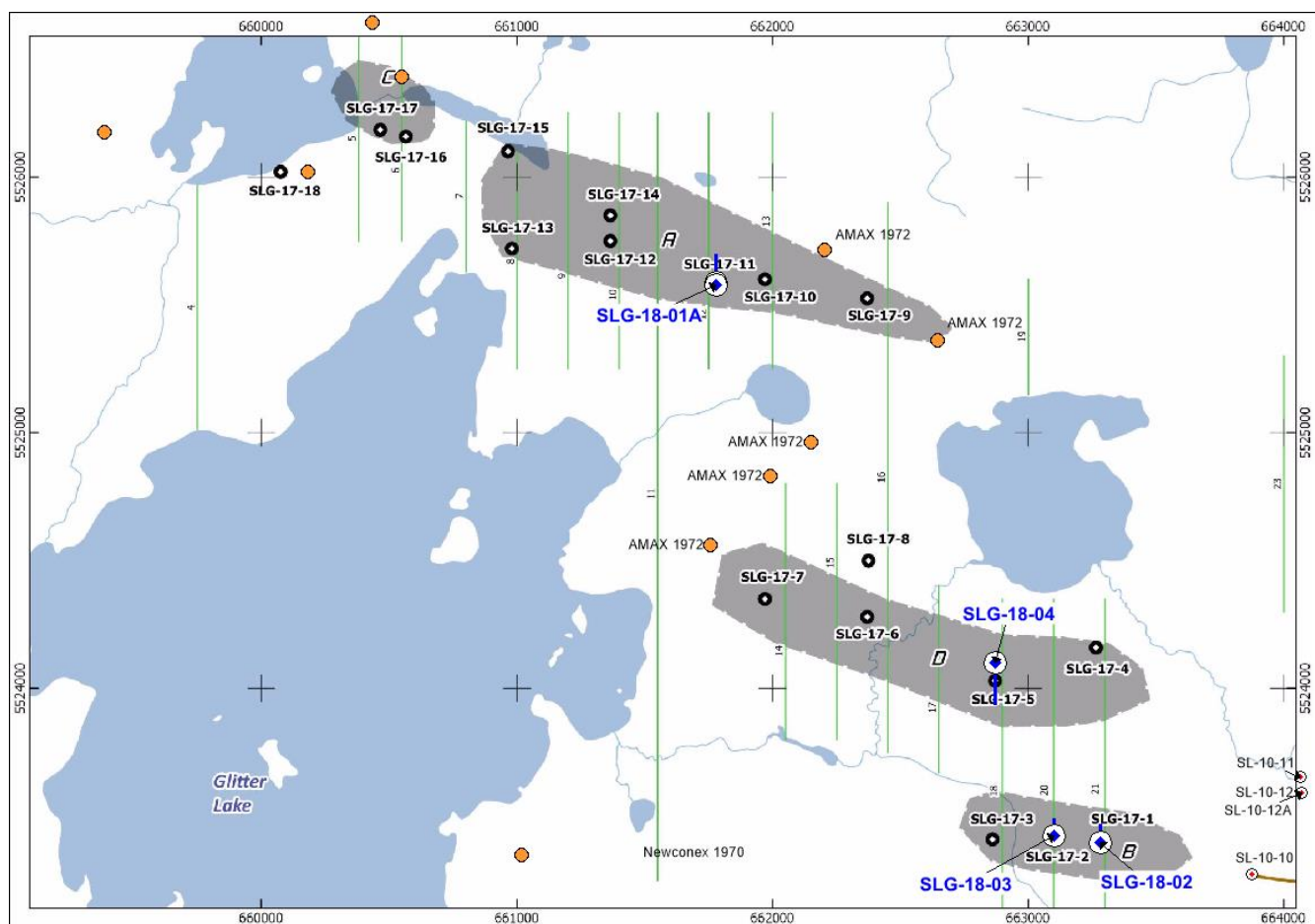


Figure 12. Multi-parameter (geophysical, geochemical, geological) target areas with proposed drill collars (black) (A.H. Mumin and A. Mumin, 2017) plus 2018 and historic drill holes.

## 16. Recommendations

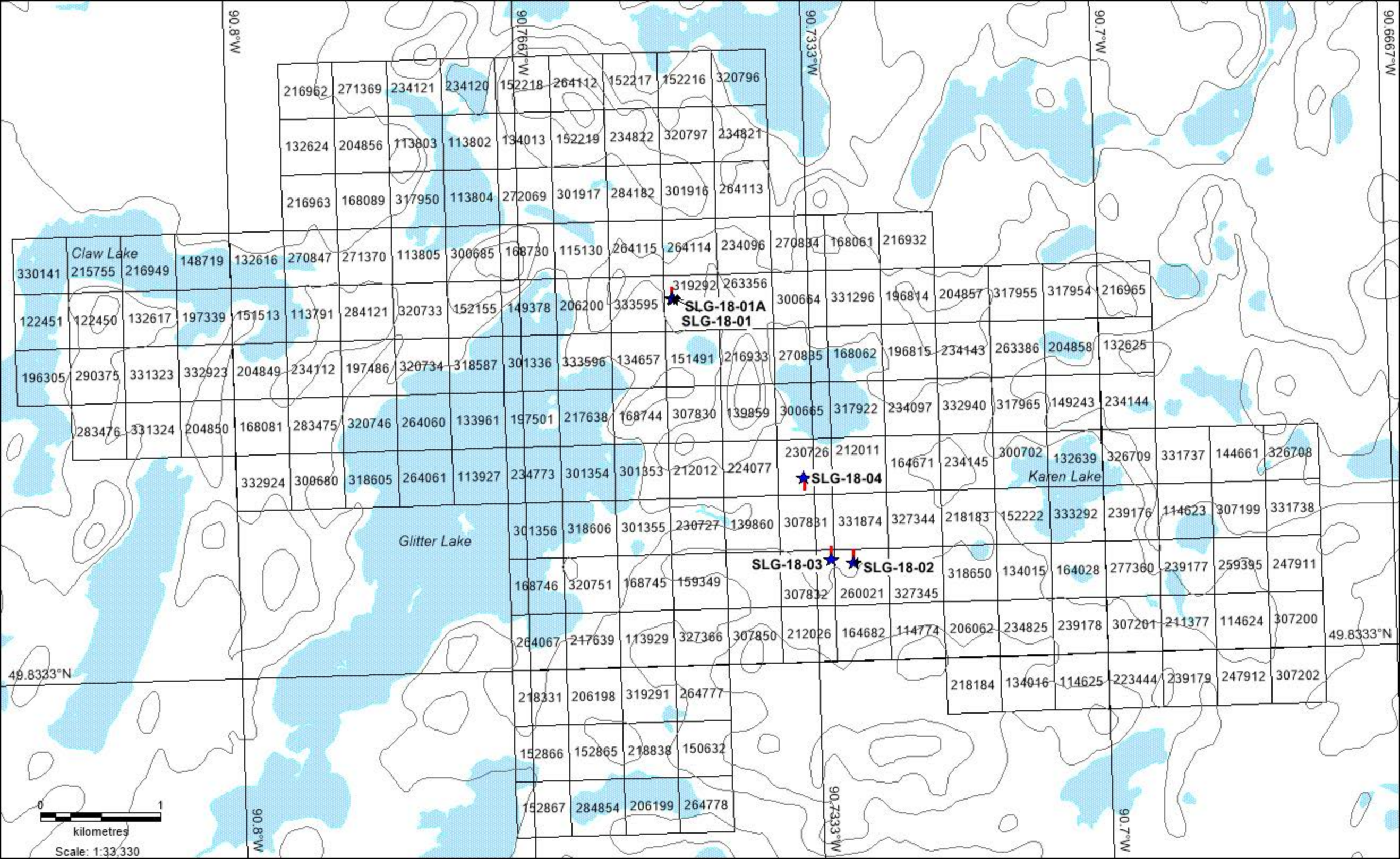
It is recommended that Gossan drill up to 12 holes comprising up to ~2000 m to complete the testing of target areas A and D with a further 2-4 holes (~600 meters) on targets B and C. The recommended program assumes all-in drilling costs (setup, logging, sampling, reporting) of \$300/m, requiring a budget of \$600,000 to \$800,000.

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- Trowell, N.F. 1983. Geology of the Sturgeon Lake Area, Districts of Thunder Bay and Kenora; Ontario Geological Survey Report 221,97p. Accompanied by Maps 2456,2457, and 2458, scale 1:50 000 (R221.PDF).



S

661776E

N

475mRL

450mRL

425mRL

400mRL

375mRL

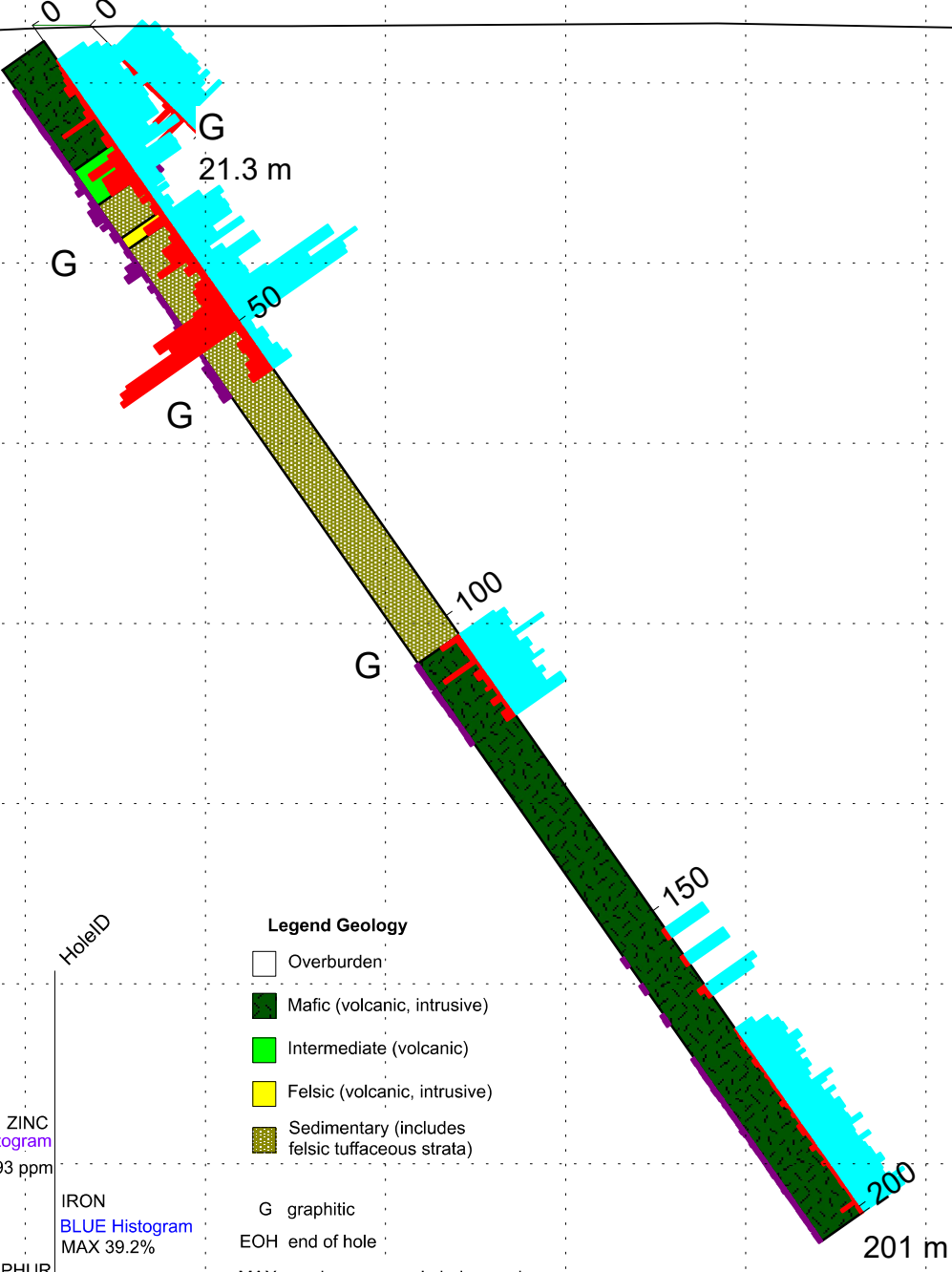
350mRL

325mRL

300mRL

275mRL

SLG-18-01A  
SLG-18-01



HoleID

**Legend Geology**

- Overburden
- Mafic (volcanic, intrusive)
- Intermediate (volcanic)
- Felsic (volcanic, intrusive)
- Sedimentary (includes felsic tuffaceous strata)

G graphitic

EOH end of hole

MAX maximum assay in hole equals maximum length of histogram; individual assays have histogram lengths proportional to the MAX value.

ZINC  
PURPLE Histogram  
MAX 593 ppm

IRON  
BLUE Histogram  
MAX 39.2%

SULPHUR  
RED Histogram  
MAX 35.9%

Assay sampling is non-continuous  
(no histogram = no sample)

EOH

5,525.575mN

5,525.600mN

5,525.625mN

5,525.650mN

5,525.675mN

<b>The Valley Geological Services Inc.</b>	
Date: 2018-10-02 Author: Peter Stewart Office: DUNDAS, ON Drawing: Scale: 1:1000	<b>Gossan Resources</b> <b>Sturgeon Lake Zinc project</b> <b>SLG-18-01,1A</b> azimuth: 000, dip: -55 Section 661776mE CLAIM CELL 319292
Projection: Non-Earth (meters)	

S

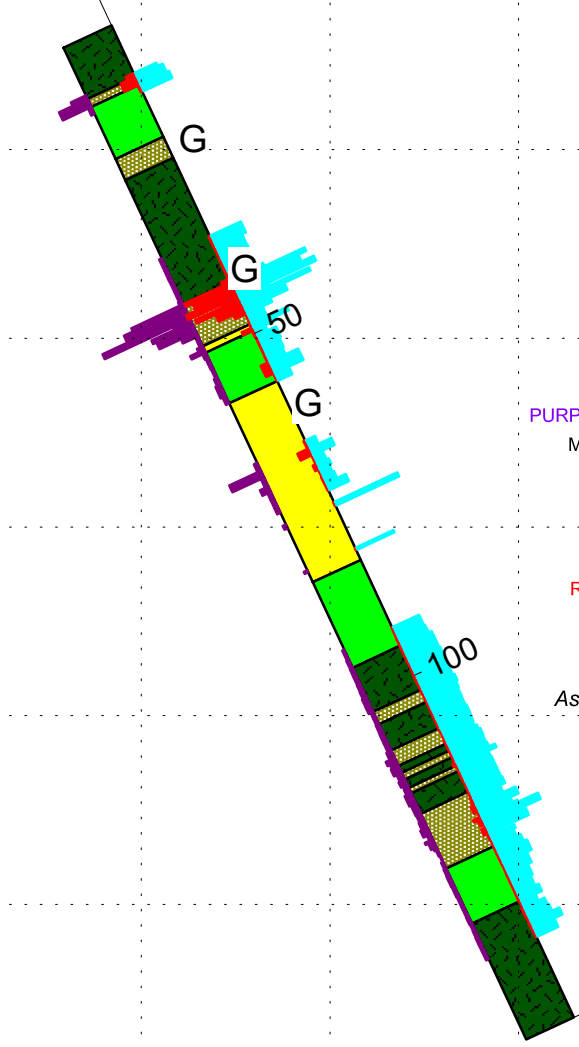
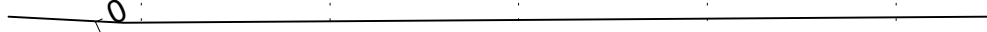
# SECTION 663280E

N

475mRL

SLG-18-02

450mRL



HoleID

425mRL

### Legend Geology

- Overburden
- Mafic (volcanic, intrusive)
- Intermediate (volcanic)
- Felsic (volcanic, intrusive)
- Sedimentary (includes felsic tuffaceous strata)

G graphitic

EOH end of hole

MAX maximum assay in hole equals maximum length of histogram; individual histogram lengths are proportional to the MAX value

400mRL

ZINC  
PURPLE Histogram  
MAX 2840 ppm

IRON  
BLUE Histogram  
MAX 21.5%

SULPHUR  
RED Histogram  
MAX 13.0%

375mRL

Assay sampling is non-continuous  
(no histogram = no sample)

350mRL

EOH

325mRL

150 m

300mRL

275mRL

5,523,375mN

5,523,400mN

5,523,425mN

5,523,450mN

5,523,475mN

5,523,500mN

The Valley Geological Services Inc.	
Gossan Resources Ltd. Sturgeon Lake Zinc project SLG-18-02	
Date: 2018-10-02	azimuth: 000, dip: -65
Author: PWS	Section 663280mE
Office: DUNDAS, ON	CLAIM CELL 260021
Drawing:	
Scale: 1:1000	Projection: Non-Earth (meters)



S

# SECTION 663100E

N

475mRL

SLG-18-03

0

450mRL

425mRL

50

400mRL

HoleID

375mRL

100

350mRL

120 m

325mRL

ZINC  
PURPLE Histogram  
MAX 1300 ppm

IRON  
BLUE Histogram  
MAX 15.8%

SULPHUR  
RED Histogram  
MAX 6.99%






Assay sampling is non-continuous  
(no histogram = no sample)

EOH

300mRL

275mRL

### Legend Geology

-  Overburden
-  Mafic (volcanic, intrusive)
-  Intermediate (volcanic)
-  Felsic (volcanic, intrusive)
-  Sedimentary (includes felsic tuffaceous strata)

G graphitic

EOH end of hole

MAX maximum assay in hole equals maximum length of histogram; individual histogram lengths are proportional to the MAX value

5,523,400mN

5,523,425mN

5,523,450mN

5,523,475mN

5,523,500mN

5,523,525mN

The Valley Geological Services Inc.	
Gossan Resources Ltd. Sturgeon Lake Zinc project SLG-18-03 azimuth: 000, dip: -60 Section 663100mE CLAIM CELL 307832	
Date: 2018-10-03	
Author: Peter Stewart	
Office: DUNDAS, ON	
Drawing:	
Scale: 1:1000	Projection: Non-Earth (meters)

S

662870E

N

SLG-18-04

475mRL

450mRL

425mRL

400mRL

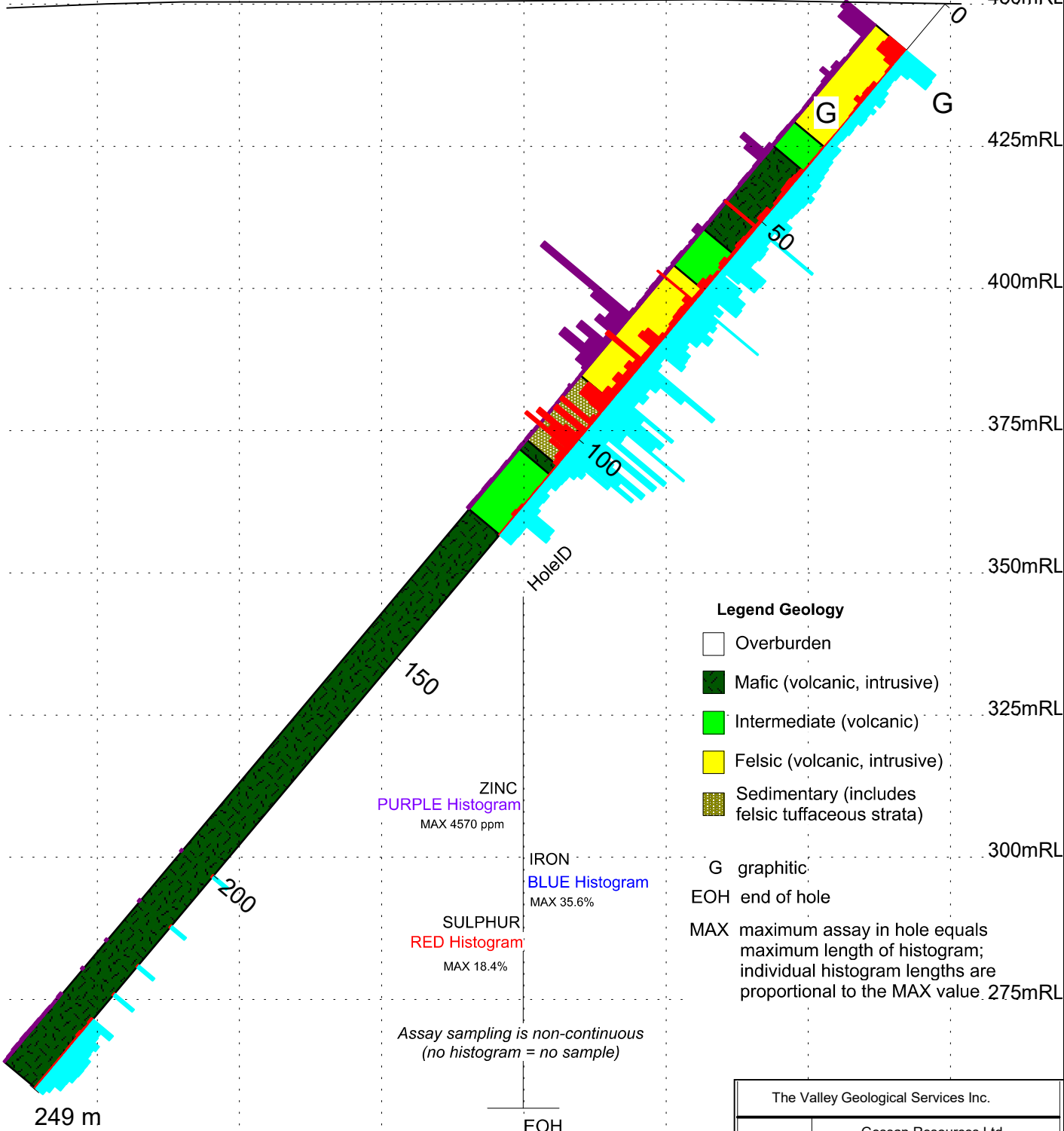
375mRL

350mRL

325mRL

300mRL

275mRL



**Legend Geology**

- Overburden
- Mafic (volcanic, intrusive)
- Intermediate (volcanic)
- Felsic (volcanic, intrusive)
- Sedimentary (includes felsic tuffaceous strata)

G graphitic

EOH end of hole

MAX maximum assay in hole equals maximum length of histogram; individual histogram lengths are proportional to the MAX value.

Assay sampling is non-continuous  
(no histogram = no sample)

The Valley Geological Services Inc.

Gossan Resources Ltd. Sturgeon Lake Zinc project SLG-18-04	
Date: 2018-10-02	azimuth: 180, dip: -50
Author: Peter Stewart	Section 662870mE
Office: DUNDAS, ON	CLAIM CELL 230726
Drawing:	
Scale: 1:1000	Projection: Non-Earth (meters)

249 m

5,523,950mN

5,523,975mN

5,524,000mN

5,524,025mN

5,524,050mN

150

200

50

100

HoleID

ZINC

PURPLE Histogram  
MAX 4570 ppm

IRON

BLUE Histogram  
MAX 35.6%

SULPHUR

RED Histogram  
MAX 18.4%

EOH

Appendix A      Drill logs (53 pages)

HOLE: SLG-18-01 AZIMUTH: 360  
 CLAIM: 319292 DIP: -45  
 EASTING: 661776 NORTHING: 5525584

STARTED: 15 Feb 2018  
 ABANDONED: 21 Feb 2018  
 NAD83, Zone 15

LOGGED BY:  
 Scot Halladay

## LITHOLOGY REPORT - Detailed -

Hole Number **SLG-18-01**

Project: **GOSSAN RESOURCES LIMITE**

From (m)	To (m)	Lithology	Sample #	From	To	Length
0.00	4.60	<p><b>CAS Casing</b></p> <p>O/B to 2m then dark green cg-mg massive mafic volcanic MVOL. Many problems in the drilling of this hole - originally drilled to 9m, a knife got dropped down hole, burnt bits and ceased rods, had to then ream NW casing to 10.5 or 11m and pull out rods, then drilled a couple more metres w redrilled core at 11.2m, drill footclamp problems - no production - then drilled to 21m - someone dropped "hardened steel jaw of pipe wrench down hole" 4 more bits burnt. They could not drill it out. Decided to steepen hole to -55 to get past casing as ORBIT has to get other bits to possible drill out the steel. Time wasted and spring coming soon. Therefore decided not to go back onto this hole.</p> <p><b>Alteration Maj:            Type/Style/Intensity    Comment</b></p> <p>0.00 - 4.60                Carb FF W                seen in Casing core</p> <p><b>Mineralization Maj. :    Type/Style/%Mineral    Comment</b></p> <p>0.00 - 4.60                Po F 1                    tr</p>				
4.60	16.80	<p><b>V3 Mafic volcanic rocks</b></p> <p>60-80% dark green cg anhedral -euhedral amphibole grains 2-5mm in width and up to 15mm in length, porphyritic grains, in 10-25% vfg whitish- grey fsp- qtz-carb matrix, locally altered to light greenish white and increasing from 7.8m weak pervasive (reactive to acid) carbonate to moderate (mod) intensity below 15m. 1st Complete BOX of core was tossed and broke open in ski-doo sleigh on delivery out to truck, and geo-tech Jim L put it back together. Overall 3 -5% mm-5cm vfg-fg qtz-carb fracture- fillings (ff's) CA 20-60 dtca (degrees to core axis- shortened to CA onwards) sub-parallel to weak (wk) foliation (foln) and elongation of amphibole grains. Occas 1% cg qtz-carb ff's crosscuts fabric CA 40. Both Q-C ff's have trace to 1% Po grains, clots and micro-stringer Po, up to 2cm spashy PO stringers at 10.9m. Minz'n consists of up to 2% Po, Tr Py and very trace CPY as possible specks. (see core pictures).</p> <p><b>Alteration Maj:            Type/Style/Intensity    Comment</b></p> <p>4.60 - 16.80              Qtz VN WM              5% a/w carb, up to 10cm width, gen'y &lt;3cm CA 40-80 w patchy Po</p> <p>4.60 - 16.80              Carb FF WM              5% late carb-qtz gash veins w/wo Po,</p> <p>4.60 - 16.80              SA Dis W                fg altered fsp matrix</p> <p>4.60 - 16.80              Sil FF WM                increases downhole</p>				

HOLE: SLG-18-01 AZIMUTH: 360  
 CLAIM: 319292 DIP: -45  
 EASTING: 661776 NORTHING: 5525584

STARTED: 15 Feb 2018  
 ABANDONED: 21 Feb 2018  
 NAD83, Zone 15

LOGGED BY:  
 Scot Halladay

## LITHOLOGY REPORT - Detailed -

Hole Number **SLG-18-01**

Project: **GOSSAN RESOURCES LIMITE**

From (m)	To (m)	Lithology	Sample #	From	To	Length
		<b>Mineralization Maj. :</b>	<b>Type/Style/%Mineral</b>	<b>Comment</b>		
	4.60 - 16.80	Py F 1		tr-1% with Po		
	4.60 - 16.80	Cp Rim 1		tr cpy as thin rims on po margins in Q-C vns		
	4.60 - 16.80	Po DIS 3		fg in diss along lower contact		
	4.60 - 16.80	Po F 5		2-15% po is diss and Q-C vein, blebs, clots and gashes.		
		<b>Structure Maj.:</b>	<b>Type/Core Angle</b>	<b>Comment</b>		
	4.60 - 6.30	Ftb 35		at 6.3-6.4m 1cm intact bx fault gouge w light greenish soft matrix, w 40% angular dark greenish hard pyrox?		
	4.60 - 6.30	Fol 35		weak - mod		
		<b>Minor Interval:</b>				
	15.00 15.75	V3		<i>Mafic volcanic rocks</i> Altered bleached and increased fg perv carb, light greenish vfg sercite? And moderate foliatin CA 45-50 w sub-parallel and CC Q-C ff's w tr PO. Grad'al upper ct, sharp curvy far ct CA 35. Very Weakly Magnetic, tr po.		
		<b>Minor Interval:</b>				
	15.75 16.30	T1D		<i>Dacitic tuff</i> Fragment of vfg light grey felsic ash tuff? (named Dacitic Tuff because no pick list Felsic tuff) Unit is weak to moderately magnetic. 3-5% wispy dark brown barren-barren looking Po stringer sulphides in q-c ff's		
		<b>Minor Interval:</b>				
	16.30 16.80	V3		<i>Mafic volcanic rocks</i> as at 15-15.75m sharp lower ct CA55-60. minor po		
16.80	18.50	<b>T1D</b>		<i>Dacitic tuff</i> very fine grained light grey FELSIC ASH TUFF, altered w vfg biotite and 5% q-c ff's CA 30-50 w tr-5% wispy Po, also appears to have 1% vfg to aphanitic "soaked" in Po (poss Biotite?).		

HOLE: SLG-18-01 AZIMUTH: 360  
 CLAIM: 319292 DIP: -45  
 EASTING: 661776 NORTHING: 5525584

STARTED: 15 Feb 2018  
 ABANDONED: 21 Feb 2018  
 NAD83, Zone 15

LOGGED BY:  
 Scot Halladay

## LITHOLOGY REPORT - Detailed -

Hole Number **SLG-18-01**

Project: **GOSSAN RESOURCES LIMITE**

<i>From</i> (m)	<i>To</i> (m)	<i>Lithology</i>	<i>Sample #</i>	<i>From</i>	<i>To</i>	<i>Length</i>
		<b>Alteration Maj:</b>				
		<i>Type/Style/Intensity</i>	<i>Comment</i>			
		16.80 - 18.50 Qtz FF WM	CA 35-60 mm-cm scale w patchy wispy po grains, tr py			
		16.80 - 18.50 BIO P W				
		16.80 - 18.50 Carb P WM				
		<b>Mineralization Maj. :</b>				
		<i>Type/Style/%Mineral</i>	<i>Comment</i>			
		16.80 - 18.00 Po STR 10	ALONG LAST 15CM W 1% VFG PY			
		16.80 - 18.00 Po FF 1				
		16.80 - 18.00 Po DIS 1				
		<b>Structure Maj.:</b>				
		<i>Type/Core Angle</i>	<i>Comment</i>			
		16.80 - 18.50 Cnt 55	FAR CT 45			
18.50	21.30	<b>S6C Graphitic Argillite</b>				
		Black, aphanitic bedded and mod - strongly foliated CA 45-55 w hairline - mm carb ff's along bedding with 2-8% vfg po and py as wispy mm elongated lensoidal grains. Unit is moderately magnetic.				
		<b>Alteration Maj:</b>				
		<i>Type/Style/Intensity</i>	<i>Comment</i>			
		18.50 - 21.30 GRPH P M	throughout			
		18.50 - 21.30 Carb FF W	1% very thin discontinuous micro bx'd			
		<b>Mineralization Maj. :</b>				
		<i>Type/Style/%Mineral</i>	<i>Comment</i>			
		18.50 - 21.30 Py DIS 0.5	a/w po			
		18.50 - 21.30 Po INT 2	along bedding and foln w carb			
		<b>Structure Maj.:</b>				
		<i>Type/Core Angle</i>	<i>Comment</i>			
		18.50 - 21.30 Stc 50				
		18.50 - 21.30 Fol 50	mm scale locally			

HOLE: SLG-18-01      AZIMUTH: 360  
CLAIM: 319292      DIP: -45  
EASTING: 661776      NORTHING: 5525584

STARTED: 15 Feb 2018  
ABANDONED: 21 Feb 2018  
NAD83, Zone 15

LOGGED BY:  
Scot Halladay

## LITHOLOGY REPORT - Detailed -

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Hole Number **SLG-18-01**

Project: **GOSSAN RESOURCES LIMITE**

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<i>From</i> <i>(m)</i>	<i>To</i> <i>(m)</i>	<i>Lithology</i>	<i>Sample #</i>	<i>From</i>	<i>To</i>	<i>Length</i>
	18.50 - 21.30	Bed 50				
21.30	0.00	end - METAL JAW FELL INTO HOLE. 5 BITS BURNT TRYING TO EXTRACT IT.				

HOLE: SLG-18-01A AZIMUTH: 360  
 CLAIM: 319292 DIP: -55  
 EASTING: 661777 NORTHING: 5525576

STARTED: 21-FEB-2018  
 COMPLETED: 25-FEB-2018  
 NAD83, Zone 15

LOGGED BY:  
 Scot Halladay

## LITHOLOGY REPORT - Detailed -

Hole Number: **SLG-18-01A**

Project: **GOSSAN RESOURCES LIMITE**

Project Numb

<i>From</i> (m)	<i>To</i> (m)	<i>Lithology</i>	<i>Sample #</i>	<i>From</i>	<i>To</i>	<i>Length</i>
0.00	2.70	<b>CAS Casing</b> NO casing core observed  <b>Alteration Maj:</b> <b>Type/Style/Intensity</b> <b>Comment</b> 0.00 - 2.70              NO ALT				
2.70	3.30	<b>I3M Gabbro with magnetite</b> dark green 60 % mg amphibole grains in 20% q-c vfg partially altered matrix, 10-20% 1-3cm white Q-C ff's and 10cm altered fg bands foliations CA 25-30, tr po, not sampled, sharp far ct CA 55  <b>Alteration Maj:</b> <b>Type/Style/Intensity</b> <b>Comment</b> 2.70 - 2.80              Carb FF S              3cm CA 25  <b>Mineralization Maj. :</b> <b>Type/Style/%Mineral</b> <b>Comment</b> 2.70 - 3.30              chl INT 5 2.70 - 3.30              Po FF 0.1              NIL PO  <b>Structure Maj.:</b> <b>Type/Core Angle</b> <b>Comment</b> 3.29 - 3.30              Cnt 55              SHARP				
3.30	7.00	<b>V3 Mafic volcanic rocks</b> Mod - strong perv altn in Mafic Volc (?) with grain size of amphiboles nearing complete altn (almost looks like felsic tuff from first hole but not as altered) Also the felsic or dacitic tuff may not be the correct term after seeing this hole. Unit is strongly foliated CA 30-40 w 2-3% thin sub-parallel <1cm width Q-C ff's CA 15-50 w tr Po, tr py. Occas brownish rusty Fe- stained and coated jnts CA 35-45. Grad'al far ct at 7m over 15-20cm.				



HOLE: SLG-18-01A AZIMUTH: 360  
 CLAIM: 319292 DIP: -55  
 EASTING: 661777 NORTHING: 5525576

STARTED: 21-FEB-2018  
 COMPLETED: 25-FEB-2018  
 NAD83, Zone 15

LOGGED BY:  
 Scot Halladay

## LITHOLOGY REPORT - Detailed -

Hole Number: **SLG-18-01A**

Project: **GOSSAN RESOURCES LIMITE**

Project Numb

From (m)	To (m)	Lithology	Sample #	From	To	Length
		<b>Alteration Maj:</b>	<b>Type/Style/Intensity</b>	<b>Comment</b>		
	3.30 - 7.00		CHL P WM			
	3.30 - 7.00		EP P W			
	3.30 - 7.00		Qtz F WM			
	3.30 - 7.00		Carb FF WM			
		<b>Mineralization Maj. :</b>	<b>Type/Style/%Mineral</b>	<b>Comment</b>		
	3.30 - 7.00		Po DIS 0.1	tr		
		<b>Structure Maj.:</b>	<b>Type/Core Angle</b>	<b>Comment</b>		
	3.30 - 7.00		Cnt 55	upper ct, lower grad'al		
7.00	19.85	<b>I3E Gabbro with quartz</b>				
		<p>60-80% dark green cg anhedral -euhedral amphibole grains 2-5mm in width and up to 15mm in length, porphyritic grains, in 10-25% vfg whitish- grey fsp- qtz-carb matrix, locally altered to light greenish white and increasing from weak pervasive (reactive to acid) carbonate to moderate (mod) intensity below 20.85m. Overall 3 -5% mm-5cm vfg-fg qtz-carb fracture- fillings (ff's) CA 20-60 sub-parallel to weak (wk) foliation (foln) and elongation of amphibole grains CA 40-50. Occas 1% cg qtz-carb ff's crosscuts fabric CA 60. Both Q-C ff's have trace to 1% Po grains, clots and micro-stringer Po, up to 10cm spashy PO stringers at 15.0 - 15.40m. Avg Minz'n consists of up to 2% Po, Tr Py and very trace CPY as possible specks. (see core pictures). ALTn 10-15% sheared Q-C-ff's and bx'd 5-20cm zones with local strong light green chlorite 2cm rims containing black angular to euhedral to fibrous tourmaline? Grains to 3mm by 10mm in length. The core of these altn sections have the PO-PY-tr CP-Tr Ag?, Tr vfg rare speck of reddish brown sphalerite?</p>				
		<b>Alteration Maj:</b>	<b>Type/Style/Intensity</b>	<b>Comment</b>		
	7.00 - 19.85		Mus P W			
	7.00 - 19.85		CHL F M			
	7.00 - 19.85		Carb P W	also weak to mod ff's w qtz		
	7.00 - 19.85		Qtz FF WM			

HOLE: SLG-18-01A AZIMUTH: 360  
 CLAIM: 319292 DIP: -55  
 EASTING: 661777 NORTHING: 5525576

STARTED: 21-FEB-2018  
 COMPLETED: 25-FEB-2018  
 NAD83, Zone 15

LOGGED BY:  
 Scot Halladay

## LITHOLOGY REPORT

### - Detailed -

Hole Number: **SLG-18-01A**

Project: **GOSSAN RESOURCES LIMITE**

Project Numb

<i>From</i> (m)	<i>To</i> (m)	<i>Lithology</i>	<i>Sample #</i>	<i>From</i>	<i>To</i>	<i>Length</i>
	31.30 - 0.00	Ser P M				
	31.30 - 0.00	Mus P M				
	31.30 - 0.00	Carb P W				
	31.43 - 0.00	Ser P M				
	31.43 - 0.00	CHL P WM				
	31.43 - 0.00	Carb P W				
		<b>Mineralization Maj. :</b>				
	7.00 - 15.00	Po pydis/str 1				a/w Q-C ffs
	15.00 - 15.40	Cp DIS 0.1				
	15.00 - 15.40	Py DIS 0.5				
	15.00 - 15.40	Po STR 15				sms - str Po in altered Q-C- Chl-Tourmaline FF
	15.40 - 19.85	Po DIS 0.5				
	25.70 - 0.00	Mt DIS 0.5				vfg
	25.70 - 0.00	Py 2				
	25.70 - 0.00	Po 5				<10
	31.30 - 0.00	Py DIS 0.5				
	31.30 - 0.00	Po DIS 1				
		<b>Structure Maj.:</b>				
	8.50 - 8.55	Flt 30				intact - possible just a strongly altered CHL-Tourmaline FF
	8.55 - 19.85	Fol 40				variable 30-50, weak to mod mainly
	31.30 - 0.00	Cnt 35				

19.85 25.70 **V2/V3 Mafic to intermediate Volc rocks**  
 Patchy sections of ?Felsic Tuff?, fg-vfg similar to SLG-18-01 intermixed with altered finer grained Mvolc ?

HOLE: SLG-18-01A AZIMUTH: 360  
 CLAIM: 319292 DIP: -55  
 EASTING: 661777 NORTHING: 5525576

STARTED: 21-FEB-2018  
 COMPLETED: 25-FEB-2018  
 NAD83, Zone 15

LOGGED BY:  
 Scot Halladay

## LITHOLOGY REPORT

### - Detailed -

Hole Number: **SLG-18-01A**

Project: **GOSSAN RESOURCES LIMITE**

Project Numb

From (m)	To (m)	Lithology	Sample #	From	To	Length
To 21.45 m, then unit has increased sulphides to 22.45m and it is slightly darker grey when dry, but almost black when wet. Variable sulphides from tr vfg po to 20.85, then <1% to 5% vfg "pervasively soaked" po, py to 21.45m. Sharp cts CA 22.45 and 23.15m at CA 35-40 with graphitic Argillite. Sulphides increase downhole to 20% in last sample.						
<b>Alteration Maj:</b>						
		<b>Type/Style/Intensity</b>	<b>Comment</b>			
19.85 - 20.85		Ser PCH WM				
19.85 - 20.85		Sil P W				
19.85 - 20.85		CHL FF W				
19.85 - 20.85		Carb P W				
20.85 - 21.45		CHL PCH W				
20.85 - 21.45		BL P W				
20.85 - 21.45		Carb P M	vfg			
21.45 - 22.45		GRPH P W	minor frags that got digested to dark core?			
21.45 - 22.45		Sil P W				
21.45 - 22.45		Carb FF W				
21.45 - 22.45		Qtz FF M	a/w carb			
22.45 - 25.70		Ser P W				
22.45 - 25.70		CHL P W				
<b>Mineralization Maj. :</b>						
		<b>Type/Style/%Mineral</b>	<b>Comment</b>			
19.85 - 20.85		Po DIS 0.1				
20.85 - 21.45		Po DIS 5	1-5% VFG SOAKED PO, tr py			
21.45 - 22.45		Po PYTSTR 15	10-15% bx'd ff's w minor darken Q-C ff's and tr py			
22.45 - 23.15		Py DIS 1				
22.45 - 23.15		Po ws 3	vfg with carb-qtz ff's and bedding planes			
23.15 - 24.70		Py DIS 1	a/w po			
23.15 - 24.70		Po DIS 2	vfg			

HOLE: SLG-18-01A AZIMUTH: 360  
 CLAIM: 319292 DIP: -55  
 EASTING: 661777 NORTHING: 5525576

STARTED: 21-FEB-2018  
 COMPLETED: 25-FEB-2018  
 NAD83, Zone 15

LOGGED BY:  
 Scot Halladay

## LITHOLOGY REPORT

### - Detailed -

Hole Number: **SLG-18-01A**

Project: **GOSSAN RESOURCES LIMITE**

Project Numb

<i>From</i> (m)	<i>To</i> (m)	<i>Lithology</i>	<i>Sample #</i>	<i>From</i>	<i>To</i>	<i>Length</i>
	23.15 - 24.70	Po STR 8				wispy strs along upper 50cm of contact then dissn
	24.70 - 25.70	Cp DIS 0.1				tr specks
	24.70 - 25.70	Py DIS 2				within po minzn
	24.70 - 25.70	Po BX 20				fg sheared and bx'd strs in strongly altered zone
		<b>Structure Maj.:</b>				
	19.85 - 22.45	Cnt 35				w Graphitic MSEDs at 22.45, jagged.
	19.85 - 22.45	Fol 55				weak
		<b>Minor Interval:</b>				
	22.45	23.15	S6C			<i>Graphitic Argillite</i> Black, aphanitic weakly laminated in mm along upper 30cm with py - po nodules in Q-Cfilled lenses and wispy bedding planes. Sharp cts CA 30-35 deg, possible fragment. 3-4% po-py overall.
25.70	31.30	<b>S6C</b>				<b>Graphitic Argillite</b> 65-70% Graphitic MSEDs are previous described, foln and bedding CA 40-45 cts sharp with internal fg grey thinly laminated to massive vfg sandstone and mainly siltstone layers (27.95-28.4m, 29.05-30.0m CA 30). Local flame - structures at 29.95m have argillitic flames pointing UP-HOLE. AT 31.3m sharp far ct CA
		<b>Alteration Maj:</b>				
	25.70 - 27.95	GRPH P W				and from 28.4 - 29.05m, 30.5 - 31.3m
	25.70 - 27.95	Qtz FF W				
	25.70 - 27.95	Carb FF WM				
	52.55 - 0.00	Carb FF W				
	52.55 - 0.00	GRPH P MS				
		<b>Mineralization Maj. :</b>				
	52.55 - 0.00	Py F 1				
	52.55 - 0.00	Po DIS 2				

HOLE: SLG-18-01A AZIMUTH: 360  
 CLAIM: 319292 DIP: -55  
 EASTING: 661777 NORTHING: 5525576

STARTED: 21-FEB-2018  
 COMPLETED: 25-FEB-2018  
 NAD83, Zone 15

LOGGED BY:  
 Scot Halladay

## LITHOLOGY REPORT - Detailed -

Hole Number: **SLG-18-01A**

Project: **GOSSAN RESOURCES LIMITE**

Project Numb

<i>From</i> (m)	<i>To</i> (m)	<i>Lithology</i>	<i>Sample #</i>	<i>From</i>	<i>To</i>	<i>Length</i>
		<b>Structure Maj.:</b>				
		<b>Type/Core Angle</b>				
		<b>Comment</b>				
	25.70 - 29.95	Bed 35				35-45, locally thinly laminated.
	29.95 - 30.00	UH 35				flame structures
	52.55 - 0.00	Jnt 55				cross-cutting beds
	52.55 - 0.00	Bed 45				35-50 variable mm to decimeter beds
31.30	31.43	<b>T1BF Rhyolitic fine tuff</b>				
		FELSIC TUFF - altered muscovite - sericite, with minor light greenish chl or epd? Tr -1 % vfg diss py-po. Sharp cts CA 30-35. This is a distinct unit. Different from what is below (previously named Felsic tuff, but more like a bleached altered MVOLC w relict amphibole grains and weak foln CA 40.				
31.43	33.10	<b>TL Lapilli Tuff Undetermined/mixed</b>				
		light grey when dry, vfg w 5% po-py-tr cpy sulphides and with slight darkening in colour downhole frm 32 - 33.1m with increase vfg diss po to 10%. Rock is same as dacitic tuff called in hole SLG-18-01. Sharp far ct CA 40.				
		<b>Mineralization Maj. :</b>				
		<b>Type/Style/%Mineral</b>				
		<b>Comment</b>				
	31.43 - 33.10	Py DIS 3				
	31.43 - 33.10	Po DIS 5				5-10% vfg diss to fg blebs
33.10	36.00	<b>I3E Gabbro with quartz</b>				
		GARNET-Amphibolite-Magnetite -Chlorite -biotite strongly ALTERED Breccia Unit, 25% rounded 3-5mm				

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## LITHOLOGY REPORT

### - Detailed -

Hole Number: **SLG-18-01A**

Project: **GOSSAN RESOURCES LIMITE**

Project Numb

From (m)	To (m)	Lithology	Sample #	From	To	Length
		Garnet grains "spotted" throughout in vfg med green chloritic altered amphibole grains to 35m, then decreasing garnet grains to 10% to 36m. Unit is mod - strongly magnetic with diss magnetite grains varying from 1- 5% w 1-3% Po, Tr py, Tr CP, rare specks blebs of Ag?				
		<b>Alteration Maj:</b>				
		<b>Type/Style/Intensity</b>				
		<b>Comment</b>				
		33.10 - 35.00 Sil P W				
		33.10 - 35.00 CHL FF W				
		33.10 - 35.00 GAR SP S 20-25% to 5mm grains				
		35.00 - 36.00 GAR SP M 5-10%				
		<b>Mineralization Maj. :</b>				
		<b>Type/Style/%Mineral</b>				
		<b>Comment</b>				
		33.10 - 36.00 Ag TR				
		33.10 - 36.00 Cp TR				
		33.10 - 36.00 Py DIS 1				
		33.10 - 36.00 Po DIS 2 1-5% locally blebby				
		33.10 - 36.00 Mt EX 5 to diss				
		<b>Structure Maj.:</b>				
		<b>Type/Core Angle</b>				
		<b>Comment</b>				
		33.10 - 36.00 QTV 40 w po				
36.00	46.15	<b>TChT cherty tuff</b>				
		Volcanic coarse Breccia w Increasing silicification down hole, BRECCIATED mixed unit of Mvolc, GABBRO, to bleached light buff greyish very hard silicified Rhyolitic and Cherty zones 37-41 and 42.5 - 45.65m with variable stringer po sulphides 1-5%, 3-10% magnetite in first metre (36-37m and may be strongly altered Gabbro above), tr -2% py, tr -0.5% cp. Numerous irreg anhedral to euhedral mafic and felsic fragments mm to decimetre within siliceous finer grained matrix with sulphides. FRAGMENT of Garnet altered Gabbro from 40.9 - 42.6m, lower ct CA 20 w 5cm QV w wispy fresh bright po, tr AG? And tr py-cp. H. Mumin had commented there is local minor sections of silicified Qtz - Crystal Tuff units that are similar to F-Group and Mattabi mines ore lithology.				

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## LITHOLOGY REPORT - Detailed -

Hole Number: **SLG-18-01A**

Project: **GOSSAN RESOURCES LIMITE**

Project Numb

From (m)	To (m)	Lithology	Sample #	From	To	Length
		<b>Alteration Maj:</b>	<b>Type/Style/Intensity</b>	<b>Comment</b>		
	36.00 - 46.15		GAR SP S	41.0-42.6m		
	36.00 - 46.15		Sil P M			
	36.00 - 46.15		BL PCH M			
	76.80 - 0.00		GRPH P W	over last 5 m		
	76.80 - 0.00		Carb FF W	thin <2mm, mostly wisps and Bx infillings		
		<b>Mineralization Maj. :</b>	<b>Type/Style/%Mineral</b>	<b>Comment</b>		
	36.00 - 45.00		Ag TR 0.1			
	36.00 - 45.00		Cp TR 0.1			
	36.00 - 45.00		Mt DIS 5			
	36.00 - 45.00		Py F 2			
	36.00 - 45.00		Po PYTSTR 5			
	45.00 - 46.15		Po INT			
	45.00 - 46.15		Po DIS 5	BXS PO dominated, 5% as fg dissn and narrow discontinuous gashes in last 10cm to 45.65m, and 20% Po in sample to 46.15m. Tr py, cp.		
	76.80 - 0.00		Po DIS 0.01	tr		
		<b>Structure Maj.:</b>	<b>Type/Core Angle</b>	<b>Comment</b>		
	36.00 - 45.00		Sch 25	locally mod foliated to schistose, patchy in all units CA 20-35, ie at 39m, 40.5m, 42.9-44m.		
	36.00 - 45.00		B			
46.15	50.70	<b>MS</b>	<b>Massive Sulphides (&gt;75%)</b>			
				75% MS PO dominated, dark brownish in colour with a 10-15cm brecciated top section composed of both anhedral to euhedral felsic, then mafic frags, then primarily black graphitic argillite frags (mm-4cm) from 46.25-47.2m, then felsic frags <2cm. Section has wavy digested upper into the brecciated unit above, then		

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## LITHOLOGY REPORT

### - Detailed -

Hole Number: **SLG-18-01A**

Project: **GOSSAN RESOURCES LIMITE**

Project Numb

From (m)	To (m)	Lithology	Sample #	From	To	Length
		sharp contact at 47.7m CA 40. 47.5 - 48.55m MS PO-Py w 35% fragments as in above unit. 48.55 - 49m MS PO. 49-50.7m MS PY. Far ct is cumulate and wavy ~ 80 dtca.				
		<b>Alteration Maj:</b>				
		<b>Type/Style/Intensity</b>				
		<b>Comment</b>				
		99.00 - 0.00				wk from 99-101m
		<b>Mineralization Maj. :</b>				
		<b>Type/Style/%Mineral</b>				
		<b>Comment</b>				
		46.15 - 47.50				Py INT 10
		46.15 - 47.50				Po BX 75
		47.50 - 48.55				Cp TR 0.5
		47.50 - 48.55				tr
		47.50 - 48.55				Py ICU 10
		47.50 - 48.55				Po CG 50
						Po is ms strs to bx bands, to diss w py, tr cp
		48.55 - 49.00				Py Mass 5
		48.55 - 49.00				Po Mass 85
		49.00 - 50.00				Py Mass 5
		49.00 - 50.00				Po Mass 5
		49.00 - 50.00				Py Mass 80
						5% felsic to altered gab? Frags
		50.00 - 50.70				Po Mass 10
		50.00 - 50.70				Py Mass 80
		99.00 - 0.00				Py Pydis 0.1
		99.00 - 0.00				Po FG 0.1
50.70	52.55	<b>S5D Polygenic breccia</b>				
		Mixed Bx of altered siliceous frags from above MS to MSED to Graphitic ARG or Tuff? As main blocks, each bx'd within or ff'd w Tr-2% Po-Py sulphides, no Cpy observed. Sharp far ct CA 40.				



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## LITHOLOGY REPORT - Detailed -

Hole Number: **SLG-18-01A**

Project: **GOSSAN RESOURCES LIMITE**

Project Numb

<i>From</i> (m)	<i>To</i> (m)	<i>Lithology</i>	<i>Sample #</i>	<i>From</i>	<i>To</i>	<i>Length</i>
		<b>Minor Interval:</b>				
	50.70	52.70	S6B			<i>Argillite</i>
52.55	74.70	<b>S6C</b> <b>Graphitic Argillite</b>				
		8% Black vfg to aphanitic beds of GRAPHITIC Argillite w 10% dark grey argillite, and 5% vfg wacke mm to 15cm, with 2-5% py po as vfg dissn and thin wispy ff's along bedding planes and carb filled elongated lenses to 60.05m, Flame structures at 54.65m appear to point up hole (Tops South) and local graded bedding gets finer grained up hole, with the fg wacke on top of argillite and unit fines up hole. 60 - 66.5m has approx. 65% wacke beds and 35% argillite to graphitic argillite. Some turbulent beds with ripped up frags of MSEDs (ie. 63-66m). Poss 5cm sheared FZ at ~59.3m in sheared strongly graphitic ARG, cts CA 50? 66.5 - 74.7m section is ~ 50% Graphitic ARG, 30% Arg and 20% wacke. Whole unit is blocky core, numerous jnts CA 45-55 cross-cutting bedding and open bedding planes, py - coated. At 74.7m sharp far ct CA 45.				
74.70	76.80	<b>S10C</b> <b>Silicate chert</b>				
		greyish cherty, hard silicate altered siltstone with relict bedding CA 45 with brecciated micro fragments = Silicate Chert or Rhyolitic fine to lapilli tuff? Several samples sent to Hamid Mumin at Brandon Univ, MB of mineral ID from 75.5 - 75.65m, and 76.5m . Generally nil sulphides. Last meter is sheared CA 35-45 and broken blocky throughout.				
76.80	99.00	<b>S</b> <b>Undifferentiated Seds</b>				
		H.Mumin comments unit may be all Tuffaceous Sediments. Interbedded wacke, argillite and minor Graphitic				

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## LITHOLOGY REPORT

### - Detailed -

Hole Number: **SLG-18-01A**

Project: **GOSSAN RESOURCES LIMITE**

Project Numb

<i>From</i> (m)	<i>To</i> (m)	<i>Lithology</i>	<i>Sample #</i>	<i>From</i>	<i>To</i>	<i>Length</i>
		ARG with approx. 20% silicious quartzite(?) 5-20cm beds (ie. 87.45-88.0m, 89.3-89.7m, 90.05-90.65m, 92.05-92.85m ) similar to above unit. Minor pyritic sulphide and jnt coatings. Blocky core. This is not a quite sedimentary basin, as bedding varies 30 - 60 deg, has disrupted beds (ie.79.9-82) and sections of micro-faulting (ie. 77.5m) and locally angular fragments (82 - 83.2m). Piece for WRA at 79.36m and pcs for Hamid 84.8 - 85.17m. A major blocky Fault Zone occurs from 92.6-93.5m w blocky core and strongest intact bx'n CA 50-55° at 93.13-93.18 in Quartzitic bed? Bedding CA 35 - 50 w flames point up-hole and patchy bx'n occurs below FZ to 99m. MSEDs are becoming darker grey below 95m. Far ct grad'al over 20cm with into of thin wisps of po along bedding planes in more graphitic sediments.				
		<b>Structure Maj.:</b>				
		<b>Type/Core Angle</b>				
		<b>Comment</b>				
		76.80 - 93.13	BLC 35			patchy blocky core leading down to FZ at 93.15m
		93.13 - 93.18	Flt 50			CA 50-55 intact insitu bx'd w micro shards of dk buff greyish quartzitic beds in vfg carbonate qtz matrix, reactive to acid.
		93.18 - 94.00	Frc 45			RQD= 0 basically from 91.8-94
		94.00 - 99.00	Jnt 35			crosscutting
		94.00 - 99.00	Bed 40			35 - 50CA
99.00	103.25	<b>S6C Graphitic Argillite</b>				
		Again, H. Mumin comments this may be Tuffaceous Sediments, deposited deep under the water, not MSEDs on surface or shallow water. First 2 m are wk - mod graphitic altered black interbedded wackes and Argillite with bedding CA 30-40, and from 101.0 to 103.25m strong to intense black graphitic altn of argillite beds 35-50CA obscured by fracturing and shearing. Upper contact defined by darken core when wet and also introduction of po sulphides totally <0.5%. RQD of unit from 101-103.2 is 15. STRONG FAULT GOUGE 103.0-103.1m far ct CA 25.				
		<b>Structure Maj.:</b>				
		<b>Type/Core Angle</b>				
		<b>Comment</b>				
		99.00 - 101.00	Bed 35			
		101.00 - 103.00	Sch 30			30-40

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## LITHOLOGY REPORT - Detailed -

Hole Number: **SLG-18-01A**

Project: **GOSSAN RESOURCES LIMITE**

Project Numb

<i>From</i> (m)	<i>To</i> (m)	<i>Lithology</i>	<i>Sample #</i>	<i>From</i>	<i>To</i>	<i>Length</i>
	103.00 - 103.10	Ftg 25				10cm graphitic gouge, far ct 25
103.25	103.75	<b>V3B Basalt</b> fg, altered yellow dark grey to black due to graphitic coating - possible thin pillow selvages at 103.5m, sampled to get the geochemistry. Upper cts appears sharp w graphitic Arg CA 40, lower ct grad'al into the unit below (Basalt or Andesite??)				
103.75	116.80	<b>I3E Gabbro with quartz</b> Mineralized, fg - cg, med green to dark green grey when dry with wk-mod foliation CA 40-50 looking similar to gabbro unit above at 7-20m with approx 50% m-cg patches of amphibole rich grains in vfg carb-qtz matrix, and ~30 % altered fg -vfg chloritic altered sections, 10-15% qtz-carb stringers and veinlets 2-10cm in width ALL subparallel to foliation CA 40-50, with or without MS -BXS Po stringer to 4cm in width ie 107.55m CA 50. Tr py and or wispy speck of Cp. Whole unit is sampled. Unmineralized Gabbro is non mag to weakly magnetic. Contacts of above graphite not sample nor is unmineralized Gabbro or (a V2J -Andesite ?) below.				
116.80	126.00	<b>I3E Gabbro with quartz</b> As above unit 103.75-116.8m as a rock unit, although unmineralized and 50-60% altered with a patchy vfg to fg buff brownish grey irregular sharp wavy to digested contacts with the m-cg gabbro. WRA sample taken at 123.1-123.2m in fg altered Chlorite - biotite. Refer to pictures. ALTERED ANDESITE?				

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## LITHOLOGY REPORT - Detailed -

Hole Number: **SLG-18-01A**

Project: **GOSSAN RESOURCES LIMITE**

Project Numb

<i>From</i> (m)	<i>To</i> (m)	<i>Lithology</i>	<i>Sample #</i>	<i>From</i>	<i>To</i>	<i>Length</i>
126.00	132.65	<p><b>V2J/I2J      Andesite/diorite</b></p> <p>Used rock name to differentiate from unit at 116.8m. Mg-cg, green with white carb ff's CA40-50 ° with 2-10cm altered vfg chloritic halos with "phenocrysts" of dark green euhedral Tourmaline(?) or amphibole grains, trace Po. This unit is very similar to the one 103.75 -116.8m above the brownish altered section, with grad'al upper ct. Unit also contains several vfg - mg dark greenish grey Lapilli Tuff bands CA 45 (ie. 127.8 - 128.05m, and along far ct for 10cm. Not samples except for WRA 128.9-129.0m in mg Gabbro or Andesite? 132.4-132.65m flow bx ct CA 45 w sub-angular to sub rounded elongated altered gabbro(?) frags in fg chl'c matrix.</p>				
132.65	138.30	<p><b>T3BL      Mafic (basaltic) lapilli tuff</b></p> <p>Dark green grey with 50-70% massive vfg to fg tuff sections with 5-10% lapilli quartz- carb xtals to mm-sized and 2-3% larger cm-dm sized Q-C angular to rounded fragments (ie. 133.1m). 30-40% very well foliated more felsic bands cts sharp CA 30-40 locally w mafic and felsic shards and fragments, tr po, py, sections displaying brecciation, insitu bx'n and locally biotite altered fragments. Upper flow brecciated ct CA45.</p>				
138.30	156.30	<p><b>V3D      Trachybasalt</b></p> <p>Unit is composed of approx 40-60% vfg - fg greenish grey BRECCIATED Basalt(?) displaying strong "flow" and foliation CA mainly 40-50° although variable in CA 20 to 60 bands. Upper section to 144m (~6m) has strong to intense flow and foliation along with mod patchy dk brownish biotite altn in the strongest foliated Q-C - Bio altered bands 10-50cm in with and biotite prominent to 146.4m. At 156.3m sharp ct w felsic frag in this unit, whereas Gab below is darker green and coarser grained.</p>				

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## LITHOLOGY REPORT - Detailed -

Hole Number: **SLG-18-01A**

Project: **GOSSAN RESOURCES LIMITE**

Project Numb

<i>From</i> (m)	<i>To</i> (m)	<i>Lithology</i>	<i>Sample #</i>	<i>From</i>	<i>To</i>	<i>Length</i>
156.30	163.35	<b>I3E      <i>Gabbro with quartz</i></b> Massive to moderately foliated CA 40-45, mg gabbro w up to 10% quartz- feldspar-carbonate bands to 5cm subparallel to foliation and tr to <1% po as wispy dissn, tr speck py or cpy. 100% RQD stik core. Grad'al far ct over 30cm.				
163.35	201.00	<b>I3A      <i>Gabbro</i></b> mg, to fg amphibole grains in a vfg - fg green chl'c to brownish altered matrix, also w 1-8% fg granular Qtz-Carb ff's mm - 2cm in width CA 35-55, locally insitu brecciated to brecciated with other chaotic felsic fragments hosting Po fragments within the "cores" or along the margins (ie. 192.3 -192.5m !% po).				
201.00	201.01	End of hole				

HOLE: SLG-18-02 AZIMUTH: 360  
 CLAIM: 260021 DIP: -65  
 EASTING: 663279 NORTHING: 5523394

STARTED: 26-FEB-2018  
 COMPLETED: 6-MAR-2018  
 NAD83, Zone 15

LOGGED BY:  
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## LITHOLOGY REPORT - Detailed -

Hole Number: **SLG-18-02**

Project: **GOSSAN RESOURCES LIMITE**

Project Numb

<i>From</i> <i>(m)</i>	<i>To</i> <i>(m)</i>	<i>Lithology</i>	<i>Sample #</i>	<i>From</i>	<i>To</i>	<i>Length</i>
0.00	5.00	<b>CAS</b> <b>Casing</b> few green fragments 10cm.				
5.00	12.50	<b>V3</b> <b>Mafic volcanic rocks</b> fg to vfg, dark greenish to greyish black foliated Mafic Volcanics CA 35-40 w 2-5% white to greyish hairline Q-C ffs up to 5mm subparallel to foliation and bedding throughout unit and 5% Metasedimentary beds (MSEDs). From 7.0m -11.8m is 20% INSITU BX'N as 20-50cm sections with white reactive (to 10-15% HCL) and minor Qtz ff and as matrix. The core alteratin is a buff brownish tan silicified Carbonate?, weakly reactive. From 10m- 12.25m these bx'd zones become more intensely bx'd and cross cut the foliation fabric at CA 60-70 deg, ALL non - mineralized. The latter bx'd zone at 12.15-12.25 m is micro-faulted CA 45. Refer to the numerous pictures. 12.25 - 12.5m mineralized 2% vfg PO in weakly Graphitic MSEDs. Far ct CA 50.  <b>Alteration Maj:</b> <b>Type/Style/Intensity</b> <b>Comment</b> 5.00 - 12.50      Carb F WM 5.00 - 12.50      Carb P W      mod in the insitu bx'n sections 5.00 - 12.50      Ank FF M      INSitu Bx'd 10-40cm sections 5.00 - 12.50      Qtz F W      <2% as 1-5mm ff's with carb parallel to foln CA 45  <b>Mineralization Maj. :</b> <b>Type/Style/%Mineral</b> <b>Comment</b> 5.00 - 12.50      Po DIS 1      last 30cm, otherwise tr speck  <b>Structure Maj.:</b> <b>Type/Core Angle</b> <b>Comment</b> 7.00 - 11.80      Bre 45      parallal to foln down to 10m, then XCUT ca 60-80.				
12.50	13.70	<b>TL</b> <b>Lapilli Tuff Undetermined/mixed</b>				

HOLE: SLG-18-02 AZIMUTH: 360  
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 EASTING: 663279 NORTHING: 5523394

STARTED: 26-FEB-2018  
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## LITHOLOGY REPORT - Detailed -

Hole Number: **SLG-18-02**

Project: **GOSSAN RESOURCES LIMITE**

Project Number: \_\_\_\_\_

From (m)	To (m)	Lithology	Sample #	From	To	Length
		renamed as Graphitic Tuffs by H. Mumin April 23. SH logged as Mixed finely laminated Argillaceous Metasediments , bedding and mod foln CA 40° w mm - 3mm wispy semi-continuous stringers along 10% graphitic bands parallel to sub-parallel to bedding 3-10cm and locally siliceous with breccia sulphide Po (ie.13.3-13.5m). Unit appears to have sharp cts CA 40.				
		<b>Alteration Maj:</b>	<b>Type/Style/Intensity</b>	<b>Comment</b>		
		12.50 - 13.70	GRPH P W	as 2-5cm bands CA 35-45 along bedding		
13.70	21.30	<b>T2BL Andesitic lapilli tuff</b>				
		Renamed as either Andesitic Tuff or Basaltic Tuffs by H. Mumin April 23. SH logged as VFG to fg foliated MSEds w CA 35 -40 and strongly altered - patchy greenish perv chlorite and wk speckled increasing to strong perv. Biotite (16.7-17.35m) then mod to 18m 10% possible fg dark greenish lapilli Tuff cm layers... not sure? Tr specks and wispy PO mainly along bedding along occas jnt or open fracture CA 0. Last 30cm is weak to moderate graphitic altn in last 10cm, strongly magnetic and PO rich 5-10%. 21.3m far ct CA 40.				
		<b>Alteration Maj:</b>	<b>Type/Style/Intensity</b>	<b>Comment</b>		
		13.70 - 21.30	Sil P W	m-str between 18-19m.		
		13.70 - 21.30	BIO INT M	and in bands mm to cm parallel to bedding		
		13.70 - 21.30	CHL P M	patchy		
		<b>Structure Maj.:</b>	<b>Type/Core Angle</b>	<b>Comment</b>		
		15.50 - 16.80	Frc 0	0-5 deg rough open jagged fracture		
		16.80 - 18.00	Fol 45	strong		
		16.80 - 18.00	Bed 45	thinly mm bedded, almost shistose with biotite		
		18.00 - 19.10	BLC 45	local redrilled sections		
		19.10 - 20.40	BLC 5	actual GROUND CORE????POSS Graphite but more like a water seam or a section of gravel from surface casing, poss WATER SEAM		

HOLE: SLG-18-02 AZIMUTH: 360  
 CLAIM: 260021 DIP: -65  
 EASTING: 663279 NORTHING: 5523394

STARTED: 26-FEB-2018  
 COMPLETED: 6-MAR-2018  
 NAD83, Zone 15

LOGGED BY:  
 Scot Halladay

## LITHOLOGY REPORT

### - Detailed -

Hole Number: **SLG-18-02**

Project: **GOSSAN RESOURCES LIMITE**

Project Numb

<i>From</i> (m)	<i>To</i> (m)	<i>Lithology</i>	<i>Sample #</i>	<i>From</i>	<i>To</i>	<i>Length</i>
<b>Minor Interval:</b>						
	19.10	20.40	LC			<i>Lost Core</i>
21.30	24.40	<b>M2</b> <b>Banded gneiss</b> 50-70% biotite chlorite altered MSED bands CA 25-35 with 5-20% carb - Qtz - Chl altered coarser bands. Unit has minor po sulphides and local cg bx'd amphibole and felsic frags CA 35-40 at 21.5 -21.55cm and is 1cm in width.				
24.40	42.50	<b>V3</b> <b>Mafic volcanic rocks</b> H.Mumin agreed on unit name and description. Unit is relatively consistent in mm grain size, consistently moderate to strongly foliated CA 35-45 with generally mod perv dark brown biotite altn and patchy dark green Chloritic altn pervasive throughout, although strong to intense as mm - cm halos about 5% carb-qtz stringers CA 30-40 w biot rims, locally insitu brecciated, tr po. It could be an altered wacke MSED but it does not look like it. Brass smears from the landing ring have been rubbed off on the qtz str locally. From 35.8 - 42.5m unit has same colour although texture is massive, tr po. This latter section is sampled due to the fact that the core saw guy cut the box and it will probably be lost in the pile if not sampled.				
<b>Alteration Maj:</b>						
		<b>Type/Style/Intensity</b>	<b>Comment</b>			
	24.40 - 42.50	BIO P WM	variable to locally strong over 10 cm sections			
	24.40 - 42.50	CHL P M	patchy perv and strong in rims of Qtz str.			
	41.00 - 42.50	CHL P W	altered MSEDs w Chl and biot, tr po.			
<b>Mineralization Maj. :</b>						
		<b>Type/Style/%Mineral</b>	<b>Comment</b>			
	24.50 - 42.50	Po DIS 0.5	rare in ffs			
<b>Structure Maj.:</b>						
		<b>Type/Core Angle</b>	<b>Comment</b>			
	24.40 - 42.50	Fol 40	40-50° to CA - wk below 36m			



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## LITHOLOGY REPORT - Detailed -

Hole Number: **SLG-18-02**

Project: **GOSSAN RESOURCES LIMITE**

Project Numb

<i>From</i> (m)	<i>To</i> (m)	<i>Lithology</i>	<i>Sample #</i>	<i>From</i>	<i>To</i>	<i>Length</i>
42.50	46.60	<p><b>ST/VN Stringer/Vein Sulphides</b>            vfg, black Graphitic (SH- logged -Argillite) (HM renamed Tuff and Tuffaceous Sediments) and mixed Metasediments with 3 - 30% ragged diss to breccia to stringer sulphides and local diss sections in thinly laminated argillite to wack MSEDs bedding CA 30-60. Cts appear relatively sharp CA 35 and 60 with non-mineralized MetaSediments.</p> <p><b>Alteration Maj: Type/Style/Intensity Comment</b>            42.50 - 46.60 GRPH P M</p>				
46.60	48.65	<p><b>T2 Intermediate</b>            H. Mumin renamed Intermediate Tuff (SH had logged -METASEDIMENTS) vfg grey to dark grey with 5-10 greenish black altered bands 2-5cm in with CA subparallel to foln CA 45, locally with partially developed pinkish garnets displaying a speckled texture. le. 48 - 48.5m. Tr po.</p>				
48.65	49.60	<p><b>T..X crystal tuff</b>            H.Mumin renamed this unit to a BLUE QTZ CRYSTAL TUFF with sulphides. 48.65-48.8m Altered Tuff - buff pinkish grey with quartz mm phenocrysts replace with carbonate and strongly magnetic magnetite, foliated CA 35-40 and sharp cts CA 35. 48.8 - 49.6m Grey black to altered siliceous buff brown highly sheared with blue quartz eyes, altered with yellowish green anastomosing vfg sericite altn. MINZ - 5% vfg PO, 3% PY dissn and foliation plane parallel stringers, 1-5mm in width with tr-0.5% vfg reddish brown sphalerite SH wrote -Similar as above 46.6 - 48.6m trace &lt;5% vfg PO-Py sulphides, bedded and foliation CA 40-45.</p>				

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## LITHOLOGY REPORT

### - Detailed -

Hole Number: **SLG-18-02**

Project: **GOSSAN RESOURCES LIMITE**

Project Numb

<i>From</i> (m)	<i>To</i> (m)	<i>Lithology</i>	<i>Sample #</i>	<i>From</i>	<i>To</i>	<i>Length</i>
		<b>Alteration Maj:</b>	<b>Type/Style/Intensity</b>	<b>Comment</b>		
	48.80 - 49.60	Ser B WM		vfg, yellowish green anastomosing sercite altn		
	48.80 - 49.60	Sil P WM		buff brown		
		<b>Mineralization Maj. :</b>	<b>Type/Style/%Mineral</b>	<b>Comment</b>		
	48.80 - 49.60	Sp ws 0.5		vfg or micro wisps of sphalerite, reddish brown		
	48.80 - 49.60	Py DIS 3		vfg		
	48.80 - 49.60	Po DIS 5		vfg		
		<b>Structure Maj.:</b>	<b>Type/Core Angle</b>	<b>Comment</b>		
	48.80 - 49.60	Shr 45		HM writes highly sheared w BLUE Qtz eyes /xtals		
49.60	53.35	<b>T3 Mafic</b>		H.M. rename to MAFIC TUFF (no lapilli-size) dark vfg green with speckled white carb - qtz filled specks and ff's CA 25 and locally as tension gash fillings 51-53m. Nil sulphides. Sharp upper ct CA 50.4m CA 25 and Sharp insitu brecciated light buff greenish siliceous altered last 30cm ct CA 40. 49.6-50.4m fg Mafic Tuff, then mg to end of unit.		
53.35	57.00	<b>T2 Intermediate</b>		H.M. renamed to T2 - Intermediate Tuff and sampled from 53.25 -57m. (SH logged unit 53.35-58.15m as S1B - Feldspathic SST) similar to core section from 40.5 - 42.6, mod - strongly bedded, thinly laminated and mod - strongly foliated CA 35 with <3% Po shiny mm wispy ff's and along bedding planes. There is a 1cm MS PO band from 55.25-.28 CA 40. (left off here editing)		

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## LITHOLOGY REPORT

### - Detailed -

Hole Number: **SLG-18-02**

Project: **GOSSAN RESOURCES LIMITE**

Project Numb

From (m)	To (m)	Lithology	Sample #	From	To	Length			
		<b>Alteration Maj:</b>							
		<b>Type/Style/Intensity</b>							
		55.00 - 56.80				patchy			
57.00	83.15	<b>VS</b>							
		<b>Volcanosedimentary</b>							
		Whole unit is a volcano sedimentary pile composed of approx 50% wacke 20-30% dk grey vfg argillaceous beds mm to 60cm, and 10-40% vfg ash tuff, lapilli tuff to xtal tuff bands mainly from 66.85 to 74m ALL thinly laminated beds CA 45 down to CA 30 at 66.5m, decreasing to CA 25 at 69.5m, then increasing to CA30 at 70.4m to end of unit. AT 58.15m sharp ct CA 45 into a light greyish dacitic lapilli TUFF for 50cm then into mixed Metasediments (fg wacke to vfg garnet rich altered darker grey more argillaceous sections. Variable altn (garnet, silicification, biotite, sericite, carbonate, qtz and chlorite mainly) refer to Major Altn tab. Tr Po py in mm smears along local bedding planes, best mineralized section 66.85 - 67.65m of 5-10% bedded po, 3%py, nil cpy or mag., in 25 cm fg wacke beds (not sampled).							
		<b>Mineralization Maj. :</b>							
		<b>Type/Style/%Mineral</b>							
		58.15 - 74.00							
		58.15 - 74.00				tr - 5% in garnet rich zone			
		58.15 - 74.00							
		74.00 - 83.15				occas bleb w po			
		74.00 - 83.15				a/w mt			
		74.00 - 83.15				Tr-3% as mm euhedral grains in 10% of the garnet - chl'c rich argillitic(?) beds or bands CA 35			
		74.00 - 83.15				Tr in MSEDs and Tuff			
		<b>Minor Interval:</b>							
		58.15		66.85					
		S6B				Argillite			
		Approx 35-50% argillite							
		<b>Alteration Min:</b>							
		<b>Type/Style/Intensity</b>							
		58.15 - 61.25				95% in argillaceous chloritic beds 10-60cm, ie. 59.25-			

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## LITHOLOGY REPORT - Detailed -

Hole Number: **SLG-18-02**

Project: **GOSSAN RESOURCES LIMITE**

Project Numb

<i>From</i> (m)	<i>To</i> (m)	<i>Lithology</i>	<i>Sample #</i>	<i>From</i>	<i>To</i>	<i>Length</i>
	61.25 - 66.85	Sil P S 59.85m, 60.5-60.8m and 61.15-61.25m mod - strong throughout MSEDs, no sulphides, no garnets				
<b>Minor Interval:</b>						
	66.85 - 74.00	T1D <i>Dacitic tuff</i> Increased tuff section to 35-40% or more, minor argillites				
<b>Alteration Min:</b>						
	66.85 - 74.00	Ser P M local from 70.0-72.0m				
	66.85 - 74.00	Carb INT WM				
<b>Mineralization Min:</b>						
	66.85 - 67.65	Po FF 10 along wacke beds w tuff, 2% py no CPY				
<b>Minor Interval:</b>						
	74.00 - 83.15	S6B <i>Argillite</i> darker grey section, increased argillite bands w STRONG to INTENSE GARNET porphroblasts to 1cm w elongated foliated and ragged lensoidal cts, with pervasive matrix chlorite, minor carb and local 5% of the garnet rich beds (bands) have diss fg magnetite, strongly magnetic, tr po-py. 81.9-83.15m Lt grey vfg to fg with TUFF and wack plus 20% low angle curvy white Qtz- minor carb, 10% green mafic and 3% cg garnets. 83.15m sharp far cta CA 25.				
<b>Alteration Min:</b>						
	74.00 - 83.15	Qtz F W <1% w carb				
	74.00 - 83.15	CHL P M in argillite w garnets				
	74.00 - 83.15	Carb PCH WM in garnet altered sections				
	74.00 - 83.15	GAR PCH MS Mainly isolated to chloritic altered dark green to black ARGILLITE beds 1cm to 60cm, avg 5-20cm.				
<b>Mineralization Min:</b>						
	74.00 - 83.15	Py FG 0.1 trace speck w po				
	74.00 - 83.15	Mt DIS 5 tr-5% fg black euhedral magnetite grains to 2mm.				
	74.00 - 83.15	Po DIS 0.2 trace smear.				

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## LITHOLOGY REPORT

### - Detailed -

Hole Number: **SLG-18-02**

Project: **GOSSAN RESOURCES LIMITE**

Project Numb

<i>From</i> (m)	<i>To</i> (m)	<i>Lithology</i>	<i>Sample #</i>	<i>From</i>	<i>To</i>	<i>Length</i>
83.15	95.65	<b>V2J Andesite</b> Generally massive green to green -grey vfg chilled cts, grading into fg at 85m and mg at 86.5m, non-magnetic equigranular unit the contains up to 20% white irreg (folded, jagged, brecciated, and at various angles to CA in both directions, tr po, py and vfg speck, interstitial to the spotted green mafic (amphibole) grains in a grain vfg matrix. Unit may be a GABBRO(?) that is heavily fractured.				
		<b>Alteration Maj:</b>	<b>Type/Style/Intensity</b>	<b>Comment</b>		
		83.15 - 84.00	BIO P S	strong increasing to far ct.		
		84.00 - 95.65	Qtz FF M	w carb at all angles to CA		
		84.00 - 95.65	Carb FF M	w qtz at all angles to CA, Tr po locally		
		<b>Mineralization Maj. :</b>	<b>Type/Style/%Mineral</b>	<b>Comment</b>		
		83.15 - 91.00	Sp F 0.1	tr		
		83.15 - 91.00	Mt DIS 0.1	tr		
		83.15 - 91.00	Py DIS 0.1	tr		
		83.15 - 91.00	Po DIS 0.4	patchy		
		91.00 - 91.80	Sp DIS 0.5	not sure, poss biotite rich band fractured w 30% Q-C CA 30		
		91.80 - 93.00	Sp F 0.6	possible thin layers mm-5mm parallel to bedding in MSEDs and Andesite, not sampled		
		93.00 - 95.65	Py TR 0.1			
		93.00 - 95.65	Po DIS 0.2	in local q-c ffs		
		93.00 - 95.65	Sp ws 1	wispy and diss patches in mafic portion of andesite, not in Q-C ffs		
		<b>Structure Maj.:</b>	<b>Type/Core Angle</b>	<b>Comment</b>		
		83.15 - 95.65	Frc 30	30 -40° filled w white q-carb, bx'd and at many angles to CA		

HOLE: SLG-18-02 AZIMUTH: 360  
 CLAIM: 260021 DIP: -65  
 EASTING: 663279 NORTHING: 5523394

STARTED: 26-FEB-2018  
 COMPLETED: 6-MAR-2018  
 NAD83, Zone 15

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## LITHOLOGY REPORT - Detailed -

Hole Number: **SLG-18-02**

Project: **GOSSAN RESOURCES LIMITE**

Project Numb

<i>From</i> (m)	<i>To</i> (m)	<i>Lithology</i>	<i>Sample #</i>	<i>From</i>	<i>To</i>	<i>Length</i>						
95.65	102.10	<b>I3A Gabbro</b> AS above 83.15-95.65m without the Qtz-carb fracture filling, similar colour and grain size, tr po, py as speck throughout. Sampled for chemistry and due to mineralization below. Unit has been sampled.										
102.10	103.90	<b>S Undifferentiated Seds</b> Mixed MSEDs (dark grey, vfg Argillite with 70% wacke) with local Po-py sulphides to 1%, few specks and smears of CPY rimming Po mm thin layers, minor magnetic magnetite, possible Sphalerite in thin layers. Foliation and bedding at CA 45 mainly, locally CA30. Sharp cts CA 35 and 30°. Unit has been sampled.										
103.90	109.40	<b>I3A Gabbro</b> as directly above MSEDs. Good core recovery except in last 1.5m, core appears twisted (mechanical - driller induced). Whole unit has been sampled. Weak diss PO-PY tr speck cp, possible SP along hazy fractures CA 30-40.  <table border="0" style="width: 100%;"> <tr> <td style="width: 20%;"><b>Alteration Maj:</b></td> <td style="width: 20%;"><b>Type/Style/Intensity</b></td> <td style="width: 60%;"><b>Comment</b></td> </tr> <tr> <td>103.90 - 109.40</td> <td>Carb F W</td> <td>&lt;2%</td> </tr> </table>	<b>Alteration Maj:</b>	<b>Type/Style/Intensity</b>	<b>Comment</b>	103.90 - 109.40	Carb F W	<2%				
<b>Alteration Maj:</b>	<b>Type/Style/Intensity</b>	<b>Comment</b>										
103.90 - 109.40	Carb F W	<2%										
109.40	117.00	<b>I3A Gabbro</b> fg, massive to locally strongly foliated almost shistose over 10-30cm CA 55-70 (ie. 113.3-113.65m), MINERALIZED, TR - 3% DISS PO, minor specks of CPY and tr Py, also weak patchy vfg magnetite. Unit contains less than 5 % Q-C ff's CA mainly CA15-25 and 45-55, with PO, PY and tr occ CPY.										

HOLE: SLG-18-02 AZIMUTH: 360  
 CLAIM: 260021 DIP: -65  
 EASTING: 663279 NORTHING: 5523394

STARTED: 26-FEB-2018  
 COMPLETED: 6-MAR-2018  
 NAD83, Zone 15

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## LITHOLOGY REPORT - Detailed -

Hole Number: **SLG-18-02**

Project: **GOSSAN RESOURCES LIMITE**

Project Numb

<i>From</i> (m)	<i>To</i> (m)	<i>Lithology</i>	<i>Sample #</i>	<i>From</i>	<i>To</i>	<i>Length</i>
		<b>Minor Interval:</b>				
	112.25	113.20	S3			
		<p><i>Wacke</i></p> <p>grey to dark grey, fg w wk foln and bedding CA 45, with 5% overall, as 3 qtz-carb ff's CA 45 from 112.85-113.15m about a mafic - UMAF? Fragment with 5% sulphides of po, tr py and cp speck? Blank(5553514) inserted just after this sample.</p>				
117.00	125.00	<b>VS</b>				
		<p><b><i>Volcanosedimentary</i></b></p> <p>MINERALIZED ZONE WITH BANDED BEDDED MSEDs , TUFF, CRYSTAL TUFF AND GABBRO. With approx 30% gabbro frags/ blocks. BLACK TO BROWNISH SPHALERITE VARIES A S DISS TO FOLIATED CLOTTY BANDS MM-CM OVER THE WHOLE UNIT, VARIABLE, 5-8% WITH SOME ZONES RICHER, CPY AS SPECKS AND SPEARS FROM 109.8 TO 125, POSSIBLE Ag AT 121.5M, LOCAL GALENA GRAINS TO 1CM, GEN'Y &lt;1%, PATCHY AND DISS MAGNETITE IN GARNET RICH ARGILLACEOUS SECTIONS, GN UP TO 2CM IN DIAMETER, ALSO MM- SIZED GARNETS FROM 119-119.5M.</p>				
		<b>Alteration Maj:</b>	<b>Type/Style/Intensity</b>	<b>Comment</b>		
	117.00 - 125.00		GAR PCH M	fg to coarse xtal to 2 cm with sulphides w mt		
	117.00 - 125.00		Qtz FF WM	2-10% as mm - cm ff's CA 55-70		
		<b>Structure Maj.:</b>	<b>Type/Core Angle</b>	<b>Comment</b>		
	117.00 - 125.00		Jnt 70	occ CA 35		
125.00	133.05	<b>TL</b>				
		<p><b><i>Lapilli Tuff Undetermined/mixed</i></b></p> <p>light grey to brownish STRONGLY altered with pervasive Carbonate throughout, 5-10% thin mm -1cm qtz-carb ff's mainly 50-60 but varibly w &lt;10% Ch'l'c MVOL frags w tr po, cp. Unit appears to have interstitial Sphalerite throughout.</p>				

HOLE: SLG-18-02 AZIMUTH: 360  
 CLAIM: 260021 DIP: -65  
 EASTING: 663279 NORTHING: 5523394

STARTED: 26-FEB-2018  
 COMPLETED: 6-MAR-2018  
 NAD83, Zone 15

LOGGED BY:  
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## LITHOLOGY REPORT - Detailed -

Hole Number: **SLG-18-02**

Project: **GOSSAN RESOURCES LIMITE**

Project Numb

<i>From</i> <i>(m)</i>	<i>To</i> <i>(m)</i>	<i>Lithology</i>		<i>Sample #</i>	<i>From</i>	<i>To</i>	<i>Length</i>
		<b><i>Alteration Maj:</i></b>	<b><i>Type/Style/Intensity</i></b>	<b><i>Comment</i></b>			
	125.00 - 133.05	CHL PCH W		~5% overall			
	125.00 - 133.05	Qtz FF W		w carb CA50-70			
	125.00 - 133.05	Carb FF M		w qtz			
	125.00 - 133.05	Carb P S		strong throughout			
		<b><i>Mineralization Maj. :</i></b>	<b><i>Type/Style/%Mineral</i></b>	<b><i>Comment</i></b>			
	125.00 - 133.05	Cp TR 0.1					
	125.00 - 133.05	Po TR 0.3		Mainly in Q-C ff's with chl'c altered bands to 10cm ie. @126.75m			
133.05	150.00	<b>VS</b>	<b><i>Volcanosedimentary</i></b>				
		with 20% Gabbro and 20% andesite sections, minor sulphides to 138.2m w sp as above, then weak to nil below 138.2m.					
150.00	150.01						
		end oh hole					



HOLE: SLG-18-03 AZIMUTH: 360  
 CLAIM: 307832 DIP: -60  
 EASTING: 663097 NORTHING: 5523422

STARTED: 16-MAR-2018  
 COMPLETED: 18-MAR-2018  
 NAD83, Zone 15

LOGGED BY:  
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## LITHOLOGY REPORT

### - Detailed -

Hole Number: **SLG-18-03**

Project: **GOSSAN RESOURCES LIMITE**

Project Numb

<i>From</i> <i>(m)</i>	<i>To</i> <i>(m)</i>	<i>Lithology</i>		<i>Sample #</i>	<i>From</i>	<i>To</i>	<i>Length</i>
0.00	4.30	<b>OVB</b>	<b>Overburden/detritus</b>				
4.30	14.00	<b>S</b>	<b>Undifferentiated Seds</b>				
		Mixed, 70% light grey fg wacke and 20% dark grey to black, vfg argillite beds, 10% fg light grey Tuff? All thinly bedded mm-cm with strong foliation and or shistose CA 45-50 in sections w garnets (Gn), Magnetite (Mt), +/- bedded PO and PY, with average Total sulphides (TS) 5-10%. Unit is magnetic and has been sampled. Core is somewhat blocky					
		<b>Alteration Maj:</b>	<b>Type/Style/Intensity</b>	<b>Comment</b>			
		4.30 - 14.00	Sil FF WM	along bedding planes			
		4.30 - 14.00	Sil PCH W				
		4.30 - 14.00	GAR SP M	in argillite beds w Mt			
		<b>Mineralization Maj. :</b>	<b>Type/Style/%Mineral</b>	<b>Comment</b>			
		4.30 - 14.00	Mt DIS 2	in garnet rich zones			
		4.30 - 14.00	Cp DIS 0.1	speck?			
		4.30 - 14.00	Po MG 10	tr - 20% ragged diss to bedded to banded.			
		4.30 - 14.00	Py DIS 3	diss to banded			
		<b>Structure Maj.:</b>	<b>Type/Core Angle</b>	<b>Comment</b>			
		4.30 - 14.00	Bed 45				
		<b>Minor Interval:</b>					
		9.20	9.40	S6B	Argillite		
				with 5% diss PO-PY CA 40			
14.00	22.00	<b>V2J</b>	<b>Andesite</b>				

HOLE: SLG-18-03 AZIMUTH: 360  
 CLAIM: 307832 DIP: -60  
 EASTING: 663097 NORTHING: 5523422

STARTED: 16-MAR-2018  
 COMPLETED: 18-MAR-2018  
 NAD83, Zone 15

LOGGED BY:  
 Scot Halladay

## LITHOLOGY REPORT

### - Detailed -

Hole Number: **SLG-18-03**

Project: **GOSSAN RESOURCES LIMITE**

Project Numb

From (m)	To (m)	Lithology	Sample #	From	To	Length
		greenish grey to greenish black, fg, massive to fractured w up to 10% white q-c FF's mm - CM CA 35-70 w 50% bx'd irreg cts, tr po, blocky core. Hard and non - magnetic. Sharp upper ct CA 45. Grad'al lower ct. Tr po.				
		<b>Alteration Maj:</b>				
		<b>Type/Style/Intensity</b>				
		<b>Comment</b>				
		14.00 - 22.00				20.9 - 22m
		14.00 - 22.00				Carb FF M
		14.00 - 22.00				Qtz FF M ca 35-40
22.00	33.45	<b>S Undifferentiated Seds</b>				
		Similar to above 4.3 - 14m with several sections of mineralized PO bedded wacke and Argillites, local sections of fg garnet rich argillite beds with or w/o fg magnetite grains to 2mm, locally magnetic. Rhythmic thinly bedded and schistose in Gn rich sections of 10% of core CA 35. Core is blocky 27-45m.				
		<b>Alteration Maj:</b>				
		<b>Type/Style/Intensity</b>				
		<b>Comment</b>				
		22.00 - 33.45				Carb P W and ffd 2%
		<b>Structure Maj.:</b>				
		<b>Type/Core Angle</b>				
		<b>Comment</b>				
		22.00 - 33.45				Jnt 55 xcut 1-3/m
		<b>Minor Interval:</b>				
		29.60 30.50				S Undifferentiated Seds STRONG PERV SILICIFICATION
33.45	45.00	<b>V2J Andesite</b>				
		Consistent massive fg foliated CA30-35 unit, medium green grey to brownish grey, non - magnetic w tr rare po. Unit has 3-5% Q-C ff's locally brecciated,95% parallel to foliation. Unit is blocky, with last 3 m display				

HOLE: SLG-18-03 AZIMUTH: 360  
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 EASTING: 663097 NORTHING: 5523422

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 NAD83, Zone 15

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## LITHOLOGY REPORT

### - Detailed -

Hole Number: **SLG-18-03**

Project: **GOSSAN RESOURCES LIMITE**

Project Numb

<i>From</i> (m)	<i>To</i> (m)	<i>Lithology</i>	<i>Sample #</i>	<i>From</i>	<i>To</i>	<i>Length</i>
		RQD=0. TENSION bands CA35 occur as 1cm INSITU BX'N from 35.5m every metre or so downhole, Q-C filled.				
		<b>Alteration Maj:</b>	<b>Type/Style/Intensity</b>	<b>Comment</b>		
		33.45 - 45.00	Carb FF W	w QTZ		
		33.45 - 45.00	Qtz FF W	CA 30-40 locally insitu BX'D		
45.00	51.00	<b>SMS</b> <b>Semi-Massive Sulphides (35-75%)</b> 5-35% Banded Breccia to diss PO, minor PY sulphides in siliceous Metasediments thinly bedded CA 50-55 deg. Po is semi-massive over short 10-20cm intervals (48.8-49.0m). Used SMS to have it plotted on section. Basically the same unit as below with sulphides.				
51.00	55.00	<b>S</b> <b>Undifferentiated Seds</b> as above, becoming lighter grey downhole, w a few tuffaceous? 2 cm bands ie. 54.5m, trace po. Unit has several distinct 1-3cm INSITU BX'D bands parallel to foln (vent nearby - seds are shook up) grad'al cts				
		<b>Alteration Maj:</b>	<b>Type/Style/Intensity</b>	<b>Comment</b>		
		51.15 - 51.40	Qtz VN I	Solid milky white u/c CA 40, L/c CA 15, tr carb, no sulphides		
55.00	57.80	<b>TL</b> <b>Lapilli Tuff Undetermined/mixed</b>				

HOLE: SLG-18-03      AZIMUTH: 360  
 CLAIM: 307832      DIP: -60  
 EASTING: 663097      NORTHING: 5523422

STARTED: 16-MAR-2018  
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 NAD83, Zone 15

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## LITHOLOGY REPORT

### - Detailed -

Hole Number: **SLG-18-03**

Project: **GOSSAN RESOURCES LIMITE**

Project Number: \_\_\_\_\_

From (m)	To (m)	Lithology	Sample #	From	To	Length
		80% vfg to mm lensoidal qtz lapilli in Grey to light grey strongly foliated CA 45-55 Tuff (Felsic to interm) interlayer with argillite and vfg darker grey MSEDs 20%, with minor garnets within last metre. Nil to tr po. Sharp far ct CA 50.				
57.80	63.30	<p><b>S                    Undifferentiated Seds</b></p> <p>as above from 51-55m with 5% Q-C ffs parallel to bed CA 45-50, and up to 10% garnet rich dark green black beds, tr MT and or PO.</p> <p><b>Alteration Maj:                    Type/Style/Intensity                    Comment</b></p> <p>57.80 - 59.20                    BIO P M                    w minor garnets</p>				
63.30	95.30	<p><b>M2                    Banded gneiss</b></p> <p>Essentially the mixed metasedimentary unit with STRONG to INTENSE GARNET -CHLORITE ALTERED Gneissic to Schistose bands 5cm to 2m in width with variable mm Gn bands, then CM cg Gn bands. Most INTENSE zone with large GARNETS is 72.7 - 79.4m. Sharp upper ct at 63.3 CA 60°. Poss 5% Tuff units and one Biotite Schist BSCH 10cm band at 82.1-82.1 CA 50. Minor sulphide mineral from 70.7 - 76.8m, &lt;2% Mt, &lt;1% PO and its sampled.</p>				
95.30	106.90	<p><b>V2J                    Andesite</b></p> <p>Barren, med green grey heavily fractured and infilled w 10-15% white Q-C ffs CA 30-50 locally brecciated and occas clot or vesicle(?) (ie. 100-100.2m). Non magnetic and fg to 101m, becoming f-mg to 106.6m then appears to be silified for last 50cm with tr po and a few splashy mm CPY grains, best visible ones</p>				

HOLE: SLG-18-03      AZIMUTH: 360  
CLAIM: 307832      DIP: -60  
EASTING: 663097      NORTHING: 5523422

STARTED: 16-MAR-2018  
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NAD83, Zone 15

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Scot Halladay

## LITHOLOGY REPORT - Detailed -

Hole Number: **SLG-18-03**

Project: **GOSSAN RESOURCES LIMITE**

Project Numb

<i>From</i> (m)	<i>To</i> (m)	<i>Lithology</i>	<i>Sample #</i>	<i>From</i>	<i>To</i>	<i>Length</i>
		yet. Far ct at 106.9m is sharp with a diabase? Or muscovite altered Mafic dyke?				
106.90	120.00	<b>I3A      Gabbro</b> fg upper 8m becoming mg downhole, dark green to blackish non-magnetic massive unit w tr speck of cpy to 108.5, only sampled to 107.65m. <2% Q-C ff's CA 20, 1-2cm in width. Redrilled core from 115.7 - 117.0m. End of hole at 120m. WRA at 118.4-118.5m in Gabbro.				

HOLE: SLG-18-04 AZIMUTH: 180  
 CLAIM: 230726 DIP: -50  
 EASTING: 662870 NORTHING: 5524099

STARTED: 18-MAR-2018  
 COMPLETED: 23-MAR-2018  
 NAD83, Zone 15

LOGGED BY:  
 Scot Halladay

## LITHOLOGY REPORT

### - Detailed -

Hole Number **SLG-18-04** Project: **GOSSAN RESOURCES LIMITE** Project Numb

<i>From</i> <i>(m)</i>	<i>To</i> <i>(m)</i>	<i>Lithology</i>	<i>Sample #</i>	<i>From</i>	<i>To</i>	<i>Length</i>
0.00	10.60	<b>CAS</b> <b>Casing</b> 20cm of mixed overburden boulders of fg mafic volc, MSEDs and cg white green GABBRO. NOTE 1st 12 boxes completely sampled.				
10.60	13.70	<b>NET</b> <b>Net-textured Sulphides (15-35%)</b> Appears as a thinly bedded CA 25-35° graphitic(?) argillaceous Metasediment (MSED), with possibly more carbonaceous altn than graphite, dark grey to black with 10% lighter grey vfg foliated tuff bands as mm-cm formational units. The rock may be mostly tuff with minor MSED bands. 5-30% fg diss to wispy to blebby elongated bedded PO bands throughout unit, <2% PY, Trace SPH in vfg wispy localized patches ,CPY nor MT observed. AT 13.7m sharp far ct CA 35. Unit is sampled.  <b>Alteration Maj:</b> <b>Type/Style/Intensity</b> <b>Comment</b> 10.60 - 13.70      GRPH P W      in MSEDs, poss carbonaceous  <b>Mineralization Maj. :</b> <b>Type/Style/%Mineral</b> <b>Comment</b> 10.60 - 13.70      Py DIS 1      trace generally 10.60 - 13.70      Po DIS 15      variable 5-25%  <b>Structure Maj.:</b> <b>Type/Core Angle</b> <b>Comment</b> 10.60 - 13.70      Jnt 65      Xcut 10.60 - 13.70      Bed 30      CA20-35 increasing downhole.				
13.70	18.50	<b>I1(P)</b> <b>Felsic Porphyry trace qtz eyes</b> BLUE QTZ CRYSTAL TUFF. Mixed units of 35% felsic light grey vfg TUFF, 30% fg grey wacke, 25% vfg darker grey MSEDs, <10% Qtz as Q-C ff's along bedding / foliation planes CA 35-40 deg, and as several 2-3cm veins crosscutting foln CA 75. Strong foln CA 35-40. Unit may be a "intermediate volc. Fragmental?? Unit has <1% PO-PY as fg diss with MSEDs, not observed in Tuff sections. Mod - strong pervasive brown beige creamy sericite altn. Unit is sampled.				

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## LITHOLOGY REPORT

### - Detailed -

Hole Number **SLG-18-04** Project: **GOSSAN RESOURCES LIMITE** Project Numb

From (m)	To (m)	Lithology	Sample #	From	To	Length
		<b>Alteration Maj:</b>	<b>Type/Style/Intensity</b>	<b>Comment</b>		
		13.70 - 18.50	Qtz FF WM	<10% mm - cm in width CA 35-40, nil sulphides		
		<b>Mineralization Maj. :</b>	<b>Type/Style/%Mineral</b>	<b>Comment</b>		
		13.70 - 18.50	Po DIS 0.5	tr		
		<b>Structure Maj.:</b>	<b>Type/Core Angle</b>	<b>Comment</b>		
		13.70 - 18.50	Jnt 45	crosscutting bedding		
18.50	27.30	<b>T1C Rhyodacitic tuff</b>				
		Felsic fragmental unit, 40% felsic to bleached (21.3 - 23.1m) containing numerous mafic elongated shards mm-cm width by mm-cm discontinuous around the core to fully continuous, with many variable cts from sharp to digested. 25% vfg Tuff, 35% MSEDs. Strong foln of all units CA 35-55 deg. Local pink garnets as 1-5mm porphroblasts in the vfg mafic rich bands, tr po and associated fg magnetite (Mt). Gen'y <2% total sulphides. Sharp upper ct CA 35, Sharp ct at 21.3m at CA 55 at start of bleaching, sharp lower ct CA 40. Last sample to 23m based on sulphides. Blank at 23m #3590.				
		<b>Alteration Maj:</b>	<b>Type/Style/Intensity</b>	<b>Comment</b>		
		21.30 - 23.10	Qtz FF W	rare and a/w Carb.		
		21.30 - 23.10	BL P MS	patchy		
		<b>Mineralization Maj. :</b>	<b>Type/Style/%Mineral</b>	<b>Comment</b>		
		18.50 - 23.10	Mt DIS 0.2	<1% Mt		
		18.50 - 23.10	Po DIS 1	tr py, <1% Mt		
		<b>Structure Maj.:</b>	<b>Type/Core Angle</b>	<b>Comment</b>		
		18.50 - 23.10	Jnt 55	rare		
		<b>Minor Interval:</b>				
		23.10 27.30	T1BF-L	Rhyolitic fine to lapilli tuff		
				Similar to above unit in texture and appearance with increase darker		

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## LITHOLOGY REPORT

### - Detailed -

Hole Number **SLG-18-04**

Project: **GOSSAN RESOURCES LIMITE**

Project Numb

From (m)	To (m)	Lithology	Sample #	From	To	Length
		sections. Frags and MSED units/beds/bands with increase pink garnets to 5 -30% within that individual unit or band., local brecciation within the felsic bands, <2% Q-C ff's, tr-1% PO but increased from the unit above. "Qtz xtal Tuff, 1-10% most ghost Xtals, many destroyed by shearing and altn.				
27.30	32.90	<b>T1C Rhyodacitic tuff</b> 75% lighter grey and with a carbonaceous black hue to 30m, strongly foliated CA 40-55, with the felsic rhyolitic(?) bands displaying numerous sub mm by mm diss vesicles throughout elongated slightly parallel to foliation, separated by 25% mm black carbonaceous argillite? Beds. Bother units have rare trace dissn of PO-PY. <5% garnet rich MSED band . Sampled. Sharp far ct CA 40.				
32.90	38.50	<b>V2J Andesite</b> Induction of Andesite with muscovite along upper 10cm of ct CA 40. Unit is ALTERED with weak - mod perv biotite and carb, unit is brownish white dry color, patchy muscovite w 10-15% Qtz-carb ff's, jagged, tension-gash fillings locally brecciated and most sub-parallel mod - strong foliatin CA 40-45°. Tr speck of PO. <5 % Tuffaceous bands or MSEDs. AT 38.5m sharp far ct CA 60. Sampled.				
		<b>Alteration Maj:</b>	<b>Type/Style/Intensity</b>	<b>Comment</b>		
		32.90 - 38.50	Carb P W			
		32.90 - 38.50	Carb FF MS	w qtz		
		32.90 - 38.50	Qtz FF MS	w carb		
		32.90 - 38.50	Mus PCH W	w Q-C veinlets		
		32.90 - 38.50	BIO P M			
		<b>Mineralization Maj. :</b>	<b>Type/Style/%Mineral</b>	<b>Comment</b>		
		32.90 - 38.50	Po DIS 0.1			



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## LITHOLOGY REPORT

### - Detailed -

Hole Number **SLG-18-04** Project: **GOSSAN RESOURCES LIMITE** Project Numb

From (m)	To (m)	Lithology	Sample #	From	To	Length
38.50	65.80	<p><b>T3BL Mafic (basaltic) lapilli tuff</b></p> <p>Similar to unit at 23.1m darker grey to black fragmental with increased garnet alteration content to 20% as mm- 5mm porphyroblasts in the darker vfg biotite? Or carbonaceous bands w vfg diss magnetite (mt) and trace pyrite starting at 43.5m. Strong foliation in all units CA 40-50. Occas microfracture / jnt carb - filled 1mm CA 20 Xcuts foln. &lt;2% Q-C ff's parallel foln. Up to 3% diss and blebby PO along bedding.</p> <p><b>Alteration Maj: Type/Style/Intensity Comment</b></p> <p>38.50 - 61.00 GAR Dis M 2-5mm mainly</p> <p><b>Minor Interval:</b></p> <p>38.50 46.20 VS <i>Volcanosedimentary</i> as in mafic fragmental description</p> <p><b>Minor Interval:</b></p> <p>46.20 47.50 T3BL <i>Mafic (basaltic) lapilli tuff</i> Mafic tuff or mafic dyke with vfg 10cm sharp cts, upper broken ct and lower ct CA 35, unit is massive with a fg core, rare q-C ff or jnt coating CA 40, non-magnetic and nil sulphides.</p> <p><b>Minor Interval:</b></p> <p>47.50 50.20 I2PysFrag <i>Interm. Porphyry fragmental</i> Approx 20% quartz sweats, fracture-fills and within wavy contorted MSED(?) beds, locally folded</p> <p><b>Minor Interval:</b></p> <p>50.20 52.20 V2 <i>Intermediate volc. rocks</i> Strongly foliated CA 45-55, light grey mm-dm width shards and fragments of interm volc. Rocks, &lt;3% Q-C ffs sub-parallel and &lt;2% overall diss PO, 1-2% vfg diss Mt, and sample 5553713 one 10cm MS PO-PY band at 51.2m cts CA 60 and 90, and appears to be "replacement" of bed? Sample 5553714 is blank after the MS.</p>				

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## LITHOLOGY REPORT - Detailed -

Hole Number **SLG-18-04**

Project: **GOSSAN RESOURCES LIMITE**

Project Number

From (m)	To (m)	Lithology	Sample #	From	To	Length
		<b>Minor Interval:</b>				
	52.20	57.50	V2			
		<i>Intermediate volc. rocks</i> as above, wk-mod foliated in sections, but fragment size is somewhat coarser up to 30cm but mainly dm or less in width. Unit is similar in colour but slightly darker grey. Tr -2% PO mm bands and cm - ffs CA 60, locally w several 1cm CPY grains w PO ie. At 55.65m. At 56.2m is sample 5553719, then standard CGS-30 at 5553720, a low grade Cu-Au std.				
		<b>Minor Interval:</b>				
	57.50	65.80	M2			
		<i>Banded gneiss</i> This is the same banded garnet -rich- amphibole - chlorite altered, magnetite, locally biotite altered mafic units as previously described. Strong foliations CA 40-55. <0.5% PO as fragments or clasts within Fragmental (ie. At 57.7m), 1% vfg diss Mt. 60.4 - 61m is Mafic volc? 61.0 -61.65m is A CHERTY 20CM CAP TO FELSIC FRAGMENTAL, Bx'd with vesicles, nil sulphides.				
65.80	66.65	<b>T1B</b>				
		<i>Rhyolitic tuff</i> TUFF - Felsic? Rhyolitic? Fg massive with vfg 10cm lower contact. Possibe vfg qtz crystal tuff with mm rounded white to grey quartz in a vfg-fg felsic altered to 10% biotite, sericite and slight tinge of greenish chlorite. Tr speck of cpy with py.. 65.9m - 66.0m WRA sample 1/2 core taken.				
		<b>Alteration Maj:</b>	<b>Type/Style/Intensity</b>	<b>Comment</b>		
	65.80 - 66.65	CHL	INT W	tr		
	65.80 - 66.65	Ser	P W	2%		
	65.80 - 66.65	BIO	P W	<10% vfg		
		<b>Mineralization Maj. :</b>	<b>Type/Style/%Mineral</b>	<b>Comment</b>		
	65.80 - 66.65	Cp	TR			
	65.80 - 66.65	Py	DIS 0.1	tr		
		<b>Structure Maj.:</b>	<b>Type/Core Angle</b>	<b>Comment</b>		
	66.07 - 66.30	Fol	70	and bxd mafic frag section		

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## LITHOLOGY REPORT - Detailed -

Hole Number **SLG-18-04** Project: **GOSSAN RESOURCES LIMITE** Project Numb

<i>From</i> (m)	<i>To</i> (m)	<i>Lithology</i>	<i>Sample #</i>	<i>From</i>	<i>To</i>	<i>Length</i>																		
66.65	77.20	<p><b>V1D Dacite</b></p> <p>Field name is a Felsic - Mafic Fragmental (light in colour and composition than the T3BL unit above at 38.5 - 65.8m but similar in textures. Whole unit sampled. Sharp upper ct CA 90. Various shaped fragments: fg felsics volc 40%, f-mg interm 20% , mg mafic 20% w cg pink garnets 2-10mm in width in a finer grained matrix. Tr-5% vfg diss magnetite (mt) and patchy Po lenses to 3cm by 3mm elongated subparallel to foln CA 40-50, also local diss and local clots up to 3% in interval 70.5-74.25m.</p> <p><b>Mineralization Maj. :</b></p> <table border="1"> <thead> <tr> <th style="text-align: left;"><i>Type/Style/%Mineral</i></th> <th style="text-align: left;"><i>Comment</i></th> </tr> </thead> <tbody> <tr> <td>66.65 - 68.30 Mt DIS 1</td> <td></td> </tr> <tr> <td>66.65 - 68.30 Po DIS 1</td> <td>tr -1%</td> </tr> <tr> <td>68.30 - 68.45 Po Mass 75</td> <td>MS Po over 8cm in interm - mafic band</td> </tr> <tr> <td>68.45 - 70.50 Po pydis/str 1</td> <td>tr-2%</td> </tr> <tr> <td>70.50 - 74.25 Po Frag</td> <td>1-3% over short 5-10cm intervals, &lt;2% overall</td> </tr> <tr> <td>70.50 - 74.25 Po DIS 0.5</td> <td>tr-1</td> </tr> <tr> <td>74.25 - 77.20 Mt DIS 1</td> <td></td> </tr> <tr> <td>74.25 - 77.20 Po PCH 1</td> <td></td> </tr> </tbody> </table>	<i>Type/Style/%Mineral</i>	<i>Comment</i>	66.65 - 68.30 Mt DIS 1		66.65 - 68.30 Po DIS 1	tr -1%	68.30 - 68.45 Po Mass 75	MS Po over 8cm in interm - mafic band	68.45 - 70.50 Po pydis/str 1	tr-2%	70.50 - 74.25 Po Frag	1-3% over short 5-10cm intervals, <2% overall	70.50 - 74.25 Po DIS 0.5	tr-1	74.25 - 77.20 Mt DIS 1		74.25 - 77.20 Po PCH 1					
<i>Type/Style/%Mineral</i>	<i>Comment</i>																							
66.65 - 68.30 Mt DIS 1																								
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70.50 - 74.25 Po DIS 0.5	tr-1																							
74.25 - 77.20 Mt DIS 1																								
74.25 - 77.20 Po PCH 1																								
77.20	79.00	<p><b>T1BF Rhyolitic fine tuff</b></p> <p>Fg, Felsic Tuff with strong silica and strong Sericite altn. Finely laminated and bonded with 10-20% sulphide laminations. Cherty greyish white siliceous wavy contorted unit with diss up to 5% MAGNETITE as fg pinpoint replacements in amygdules(?) and assoc. with hairline to mm- width darker up to 20% Pyrrhotite rich banded sections throughout unit. Tr &lt;1% Arsenopyrite. 77.2m sharp upper ct CA 35-40. Brecciation and foliation angles similar to the fragmental unit above at CA35- increasing to CA 55° downhole. Last metre of unit is darkening towards a sulphide - PO -PY rich MS section within Mafic volc - Garnet rich zone. @82m grad'al ct over 20cm.</p>																						

HOLE: SLG-18-04 AZIMUTH: 180  
 CLAIM: 230726 DIP: -50  
 EASTING: 662870 NORTHING: 5524099

STARTED: 18-MAR-2018  
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 NAD83, Zone 15

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 Scot Halladay

## LITHOLOGY REPORT - Detailed -

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Hole Number **SLG-18-04** Project: **GOSSAN RESOURCES LIMITE** Project Numb

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<i>From</i> (m)	<i>To</i> (m)	<i>Lithology</i>	<i>Sample #</i>	<i>From</i>	<i>To</i>	<i>Length</i>
79.00	82.00	<b>T1BF</b> <b><i>Rhyolitic fine tuff</i></b> fg-vfg, strongly silicified felsic tuff with weak - moderate sercite altn. Localized wispy bands and dissn of 0.1-0.5% Po, <0.1% Sph overall.				
82.00	96.00	<b>ST/VN</b> <b><i>Stringer/Vein Sulphides</i></b> Boxes 17-20. 75% dark grey to black Mafic Volcanic, Gabbro (Garnet rich) and poss Greywacke brecciated fragmental with 25% light -medium grey vfg, hard, brecciated felsic fragments (fragmental), both units foliated CA 45-55 with diss magnetite (1-2mm grains, locally banded ( ie. 91.95 - 92m and 93.6-93.85m Magnetite) injected with BXS and MS PO stringers 2-50cm in width. Variable pervasive silicification and patchy chlorite altn, with distinct pick garnets throughout the gabbro to mafic rich sections. Refer to individual samples (in sample tag book) for specific sample description.				
96.00	102.55	<b>SMS</b> <b><i>Semi-Massive Sulphides (35-75%)</i></b> Unit starts off with a BXS breccia sulphide band 70cm in width (sample 5553758), sharp cts CA 50-55 composed of vfg-fg 25-35% Po, <5% vfg pyrite, 1-3% magnetite and 35% carb-qtz fg matrix between the "milled" mm-cm sized angular to subrounded mafic fragments aligned with a preferred orientation CA 50-55. Then a fg Mafic Dyke or MSEDs fragment with 5% vfg diss magnetite (Mt).to 97.75m, then 50% BXS PO band to 98.65m similar to start of unit. 98.65-99.5m a vfg greywacke metasediment w 10% pinpoint vfg MT, ,1% Po. 99.5 - 100.1m similar rock unit as previous (MSED?) w MT with introduction of PY (10%)- PO (15%) rich siliceous Qtz- Carb (mod-strongly reactive to 15% HCL). 100.1m Hamid Mumin as 13cm of half core MS PY-PO that continues to 100.65m and 30% PO-PY to 101m. 101.0 - 102m 30-35% BXS PY-PO with dark black carbonaceous(?) Mvolc, then 102.0-102.55m MS PYRITE - RICH (50%),10-				

HOLE: SLG-18-04 AZIMUTH: 180  
 CLAIM: 230726 DIP: -50  
 EASTING: 662870 NORTHING: 5524099

STARTED: 18-MAR-2018  
 COMPLETED: 23-MAR-2018  
 NAD83, Zone 15

LOGGED BY:  
 Scot Halladay

## LITHOLOGY REPORT

### - Detailed -

Hole Number **SLG-18-04**

Project: **GOSSAN RESOURCES LIMITE**

Project Numb

<i>From</i> (m)	<i>To</i> (m)	<i>Lithology</i>	<i>Sample #</i>	<i>From</i>	<i>To</i>	<i>Length</i>
		15% PO, 5-10% MAG, displays sharp but wavy cts CA 35-45. Unit has ~15% Siliceous qVs w minor carbonate between 100.2-105.95m. 102.55 - 105.95m, variable diss to banded to BXS Po-PY throughout siliceous - Mt rich zone - whole SMS unit -mod - strongly magnetitic. Foliation varies CA 30-60 and locally mm-scale to wavy bands (beds?). At 105.95m Sharp far ct CA 70.				
		<b>Mineralization Maj. :</b>				
		<b>Type/Style/%Mineral</b>				
		<b>Comment</b>				
		96.00 - 99.50 Mt MG 5 5-10%				
		96.00 - 99.50 Py DIS 5 1-6%				
		96.00 - 99.50 Po BX 25 1-40%				
		99.50 - 102.55 Mt DIS 10				
		99.50 - 102.55 Py BX 40				
		99.50 - 102.55 Po BX 30				
102.55	105.95	<b>S9D Silicate iron formation</b> 40-60% siliceous massive to foliated and fluidal with dark grey appearance, 10% vfg dark grey to black wispy to stringery as carbonaceous material to 40% ghosty gabbroic fragments w garnets all silicified, hosting 3-10% fg to pinpoint magnetite (MT) grains (<2mm), 3-5% vfg diss to BXS PO, tr-3% PY, tr CP. Unit is mod - strongly magnetic. Fohn varies CA 30-60 wavy in patches ie 103.6m. At 105.95m sharp far ct CA 70. Rock is hard. Unit is sampled.				
		<b>Mineralization Maj. :</b>				
		<b>Type/Style/%Mineral</b>				
		<b>Comment</b>				
		102.55 - 105.95 Mt DIS 3 1-10%				
		102.55 - 105.95 Py DIS 5 3-10%				
		102.55 - 105.95 Po DIS 10 variable 3-15%, local BXS sections				
105.95	108.00	<b>V3 Mafic volcanic rocks</b> Med to dark greyish black, fg foliated CA 55 w up to 10% granular white carb-qtz str to 3cm CA 50 and				

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## LITHOLOGY REPORT

### - Detailed -

Hole Number **SLG-18-04** Project: **GOSSAN RESOURCES LIMITE** Project Numb

From (m)	To (m)	Lithology	Sample #	From	To	Length
		thin mm ff's CA 40-60. Tr diss Po- Py. Grad'al lower contact. Unit is non-magnetic, and somewhat softer than above unit.				
		<b>Alteration Maj:</b>	<b>Type/Style/Intensity</b>	<b>Comment</b>		
		105.95 - 108.00	Carb FF M			
		105.95 - 108.00	Qtz FF M	3-10% w carb		
		<b>Mineralization Maj. :</b>	<b>Type/Style/%Mineral</b>	<b>Comment</b>		
		105.95 - 108.00	Po DIS 0.3			
		<b>Structure Maj.:</b>	<b>Type/Core Angle</b>	<b>Comment</b>		
		105.95 - 108.00	Rac 45	Qtz-carb ff's up to 10% as mm-cm str's parallel foln		
108.00	121.80	<b>T1D Dacitic tuff</b>				
		Biotitic - chloritic altered fg-mg foliated intermediate TUFF Along upper 5m then has mafic volcanic appearance with minor sections of mg Gabbro? With mod foln CA 45-55. 1% q-c ff's ca 45-70, nil to tr sulphides. Unit contains 2% pinpoint size to mm white carb-filled or replaced lapilli(?) or spotting elongation in plane of the foliation. Tr po. (unit is sampled to obtain altn halo beyond BXS above). Unit can be described as a disaggregation of Amphibolite - chlorite veins with Q-C rims. Orthogonal faulting and the shearing and hydrothermal plumbing. 109.05 - 109.15m WRA whole piece taken by (HM). 112.5 - 115.1m and 117.6 - 121.8m mg-cg Lapilli Dacitic TUFF(?) with cg Q-C irreg shaped clots 5-20mm with an amphibole grain partially altered to chl - biotite within the core, (altn surrounding the Gabbro fragment or dyke?). " H.M. comments this is similar to F group and Mattabi Mine deposits as these clots are resulting from orthogonal faulting and the shearing causing the original amphibole - chlorite veinlets rimmed with carb-qtz to have a disaggregation and rolling into a ball -shaped clot. Some of these clots have trace sulphides, especially near sulphide deposits." Excellent core recovery and RQD =95.				
		<b>Minor Interval:</b>				
		115.10	117.60	I4	Ultramafic/ultrabasic	
					M-cg, massive, dark green UMAF fragment or dyke(?) with 50-65%	

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## LITHOLOGY REPORT

### - Detailed -

Hole Number **SLG-18-04**

Project: **GOSSAN RESOURCES LIMITE**

Project Numb

<i>From</i> (m)	<i>To</i> (m)	<i>Lithology</i>	<i>Sample #</i>	<i>From</i>	<i>To</i>	<i>Length</i>
		Pyroxene -Amphibole grains to 3mm 5-20% dark grey Fsp grains, minor fg biotite, 5% Qtz- Carb ff's and Bx infills (lower ct). Gen'y trace Po. Sharp foliated (sheared?) upper ct CA 30° and bx'd qtz-carb infilled lower ct CA 30.				
		<b>Alteration Min:</b>	<b>Type/Style/Intensity</b>	<b>Comment</b>		
		115.10 - 117.60	BIO Dis W	trace		
		115.10 - 117.60	Carb FF W	5% with qtz		
		115.10 - 117.60	Qtz FF W	5% with carb		
		<b>Mineralization Min:</b>	<b>Type/Style/%Mineral</b>	<b>Comment</b>		
		115.10 - 117.60	Po DIS 0.2			
		<b>Structure Min.:</b>	<b>Type/Core Angle</b>	<b>Comment</b>		
		115.10 - 117.60	Cnt 30	sheared and bx'd		
121.80	249.00	<b>V3 Mafic volcanic rocks</b>				
		Possibly bordering on Andesite - Dacite OR a fg-mg GABBRO, as f-mg massive to weakly foliated CA 35-50 and when dry core observed has 25-35% med green 1-3mm irreg shaped amphibole grains, 55-60% grey white fsp-qtz-carb granular matrix hosting 5-10% vfg biotite wisps, 1mm. Rock looks somewhat similar to above unit and upper contact is not distinct even over 3m. Unit has 3-10% hairline - mm width Qtz-Carb ff's CA 35-70 and locally CA20 from 160-164m, 2% as 3-5cm veinlets CA same 35-70, locally bx'd w mafic fragments. Tr speck or bleb Po-py. (Note - black sections of core are driller grease.). 158-160m the greenish amphibole grains appear more bladey in texture than sub-rounded irreg grains above and within a light greenish chl'c patchy altn. Jnts 1-3/m CA 45 or 80 deg. 173 -183m local redrilled core and drillers grease on core, - they had problems w core springs. FROM 202 - 249m unit appears as mg massive gabbro with similar 2-5% white Q-C ff's 1-15mm mainly CA 35-70 w rare trace speck po, py and locally chlorite rimmed. Also a distinct 1-10mm width chloritic filled jnts or healed fractures CA 30-35, parallel to Q-C ffs. 246.4-248.5m finer grained core leading back into mg gabbro at 249m. End of Hole.				
		<b>Alteration Maj:</b>	<b>Type/Style/Intensity</b>	<b>Comment</b>		
		108.00 - 150.00	CHL FF W	124.5-128.0m 2% chl'c-qtz-carb ffs CA 25-40 w <1% Po-Py-Cp		
		108.00 - 150.00	Carb SP M	1-5% throughout		
		108.00 - 150.00	Qtz FF W	mm- sized 2-4 per metre, nil to trace PO sulphides		

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## LITHOLOGY REPORT

### - Detailed -

Hole Number **SLG-18-04**

Project: **GOSSAN RESOURCES LIMITE**

Project Numb

<i>From</i> (m)	<i>To</i> (m)	<i>Lithology</i>			<i>Sample #</i>	<i>From</i>	<i>To</i>	<i>Length</i>
	121.80 - 199.00	Qtz	VN	M				185.6-196.5m has 3 15cm veins w 25% mafic frags, nil sulph.
	121.80 - 199.00	Carb	FF	M				3-10% as above
	121.80 - 199.00	Qtz	FF	M				3-10% as mm to 5cm ff's and veinlets CA 35-70.
	199.00 - 234.00	Carb	FF	W				
	199.00 - 234.00	Qtz	FF	W				2-5 ff's 1-3mm in width CA 30-60 ° mainly
	234.00 - 236.00	Ank	FF	M				yellowish brown assoc w carb above
	234.00 - 236.00	Carb	FF	M				5-10% over the interval, although 50% from 234.1-234.5m
	236.00 - 249.00	Carb	FF	W				<5%
	236.00 - 249.00	Qtz	FF	W				<5%
		<b>Mineralization Maj. :</b>	<b>Type/Style/%Mineral</b>	<b>Comment</b>				
	108.00 - 150.00	Cp	FF	0.1				tr speck 124.5-128m
	108.00 - 150.00	Py	FF	0.2				124.5-128m
	108.00 - 150.00	Po	FF	0.3				124.5 -128.0m 2% chl-c Q-C ff CA 25-40 w tr sulphides po-py-cp
	108.00 - 150.00	Po	DIS	0.1				
	121.80 - 199.00	Cp	DIS	0.1				
	121.80 - 199.00	Py	DIS	0.2				eg. 182.7m,189.6m
	121.80 - 199.00	Po	DIS	0.3				trace a/w q-c ffs with chl'c rims, eg. 182.7m,
		<b>Structure Maj.:</b>	<b>Type/Core Angle</b>	<b>Comment</b>				
	108.00 - 150.00	Fol	50					mod-strong foln to 109.5m then wk overall, several mod foln patches.
	121.80 - 199.00	Shr	45					siliceous and locally bx'd 190.6 -191m.
	121.80 - 199.00	Jnt	80					1-2 per m
	121.80 - 199.00	Jnt	45					1-3 per m
	199.00 - 227.50	Jnt	40					xcut Q-C ffs



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## LITHOLOGY REPORT - Detailed -

Hole Number **SLG-18-04**

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Project Numb

From (m)	To (m)	Lithology	Sample #	From	To	Length
	227.50 - 235.00	Rac 40 micro-faulting in Q-C ff's , section is slightly blocky core RQD- 70.				
	<b>Minor Interval:</b> 146.50 147.20	V3 Mafic volcanic rocks sharp cts CA 40 and 60° respectively, sheared w granular Q-C veining for 2-5cm. Mg, foliated Mafic volc or possible Gabbro?? W elongated shards parallel foln CA 40-60 w tr vfg diss pyrite. Unit is non-magnetic, distinctively brown - biotite > than above or below this fragment. Not sampled.				
	<b>Alteration Min:</b> 146.50 - 147.20	Carb FF M a/w qtz				
	146.50 - 147.20	Qtz FF M 10%				
	<b>Mineralization Min:</b> 146.50 - 147.20	Py DIS 1 gen'y trace				
	<b>Minor Interval:</b> 121.80 146.50	T1D Dacitic tuff				
	<b>Minor Interval:</b> 147.20 170.60	T1D Dacitic tuff				
	<b>Minor Interval:</b> 170.60 181.80	V2J Andesite				
	<b>Minor Interval:</b> 181.80 246.25	V3 Mafic volcanic rocks				
	<b>Minor Interval:</b> 246.25 248.75	T1D Dacitic tuff fg, light grey w 5-8% white Qtz- Carb 2-5mm ff's CA 55-70. nil sulphides . Local wavy and contorted late -C ff's and veinlets w chlorite, nil sulph.				
	<b>Minor Interval:</b> 248.75 249.00	V3 Mafic volcanic rocks last piece is different. 249m end of hoel.				

HOLE: SLG-18-04      AZIMUTH: 180  
CLAIM: 230726      DIP: -50  
EASTING: 662870      NORTHING: 5524099

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## LITHOLOGY REPORT

- Detailed -

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Hole Number **SLG-18-04**      Project: **GOSSAN RESOURCES LIMITE**      Project Numb

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<i>From</i> <i>(m)</i>	<i>To</i> <i>(m)</i>	<i>Lithology</i>	<i>Sample #</i>	<i>From</i>	<i>To</i>	<i>Length</i>
249.00	249.01	end of hole				

## Magmic Rocks

ABBREVIATIONS IN DRILL LOGS

(source - all Data from NAN & the N. Richardson team, 2014)

### Felsic Composition

#### Intrusive Rocks

I1	Felsic intr. Rocks
I1B	Granite
I1C	Granodiorite
I1D	Tonalite
I1F	Aplite
I1G	Pegmatite
I1H	Granophyre
I1P	Felsic porphyry

#### Effusive Rocks

V1	Felsic volcanic rocks
V1B	Ryolite
V1C	Rhyodacite
V1D	Dacite

### Intermediate Composition

#### Intrusive Rocks

I2	Intermediate (undef.)
I2C	Quartz syenite
I2D	Syenite
I2E	Quartz monzonite
I2F	Monzonite
I2G	Quartz Monzodorite
I2H	Monzodorite
I2I	Quartz Diorite
I2J	Diorite
I2K	Monzosyenite
I2P	Interm. Porphyry

#### Effusive Rocks

V2	Intermediate volc. rocks
V2C	Quartz trachyte
V2D	Trachyte
V2E	Quartz latite
V2F	Latite
V2J	Andesite

### Mafic Composition

#### Intrusive Rocks

I3	Mafic intrusive rocks
I3A	Gabbro
I3B	Diabase
I3C	Monzogabbro
I3D	Ferrogabbro
I3E	Gabbro with quartz
I3F	Diabase with quartz
I3G	Anorthosite
I3H	Gabbroic anorthosite
I3I	Anorthositic gabbro
I3J	Norite
I3K	Gabbro with olivine
I3L	Norite with olivine
I3O	Mafic lamprophyre
I3P	Mafic porphyry

#### Effusive Rocks

V3	Mafic volcanic rocks
V3A	Andesitic Basalt
V3B	Basalt
V3C	Basalt with quartz
V3D	Trachybasalt
V3E	Basalt with olivine
V3F	Magnesian basalt
V3G	Picrite
<<<<	Leucogabbro

### Ultramafic/Ultrabasic Composition

#### Intrusive Rocks

I4	Ultramafic/ultrabasic
I4A	Homblendite
I4B	Pyroxenite
I4C	Clinopyroxenite
I4E	Orthopyroxenite
I4F	Clinopyr w olivine
I4H	Orthopyr w olivine
I4I	Peridotite
I4M	Dunite
I4N	Serpentinite
I4O	Ultramafic lamproph.
I4P	Kimberlite
I4Q	Carbonatite

#### Effusive Rocks

V4	Volcanic
V4A	Komatite
V4B	Pyroxenitic komatite
V4C	Peridotitic komatite
V4D	Dunitic komatite

ABBREVIATIONS IN DRILL LOGS

**SEDIMENTARY ROCKS**

S	Undifferentiated Seds	S6	Mudrock
S1	Sandstone	S6A	Siltstone
S1A	Quartzitic sandstone	S6B	Argillite
S1B	Feldspathic sandstone	S6C	Graphitic Argillite
S1C	Arkose	S6D	Mudstone
S1D	Arkosic sandstone	S7	Limestone
S1E	Lithic sandstone	S7A	Calclutite (clay)
S2	Arenite	S7B	Calcisiltite (silt)
S2A	Quartzitic arenite	S7C	Calcarenite (sand)
S2B	Feldspathic arenite	S7D	Calcirudite (pebble)
S2C	Arkose	S8	Dolomite
S2D	Arkosic arenite	S8A	Dololutite
S2E	Lithic arenite	S8B	Dolosiltite
S3	Wacke	S8C	Dolarenite
S3A	Quartzitic wacke	S8D	Dolorudite
S3B	Feldspathic wacke	S9	Iron formation
S3C	Arkose	S9B	Oxide iron formation
S3D	Arkosic wacke	S9C	Carbonate iron formation
S3E	Lithic wacke	S9D	Silicate iron formation
S4	Conglomerate	S9E	Sulphide iron formation
S4A	Monogenic conglomer.	S10	Chert
S4B	Mono. 'clast supp' cong	S10A	Oxide chert
S4C	Mono. 'matrix sup' cong	S10B	Carbonate chert
S5A	Monogenic breccia	S10C	Silicate chert
S5B	Mono 'clast supp' brec	S10D	Sulphide chert
S5C	Mono 'matrix sup' brec	S10E	Carbon/graphitic chert
S5D	Polygenic breccia	S10F	Chert ferruginous
S5E	Poly. 'clast supp' breccia	S11	Exhalite
S5F	Poly. 'matrix sup' breccia	S12	Evaporite

**MIXED CLASTIC ROCKS**

VS	Volcanosedimentary
VS1	VS of felsic compos.
VS2	VS of intermediate c
VS3	VS of mafic comp.

**PYROCLASTIC ROCKS**

T	Undetermined/mixed
T1	felsic
T1B	Rhyolitic tuff
T1C	Rhyodacitic tuff
T1D	Dacitic tuff
T2	Intermediate
T3	Mafic
T4	Ultramafic/ultrabasic

**QUALIFYING SUFFIXES**

T1BF	Rhyolitic fine tuff
T1BC	Rhyolitic coarse tuff
T1BL	Rhyolitic lapilli tuff
T1BF-C	Rhyolitic fine to course tuff
T1BF-L	Rhyolitic fine to lapilli tuff
T1BC-L	Rhyolitic coarse to lapilli tuff
T.X	crystal tuff
TChT	cherty tuff

**METAMORPHIC & TECTONIC**

M	Metamorph/tectonic	
M1	Gneiss	PT
M2	Banded gneiss	
M3	Othogneiss	(Intermediate Gneiss)
M4	Paragneiss	
M5	Quartzofelds. gneiss	
M6	Granitic gneiss	
M7	Granulite	(Felsic Gneiss)

M8	Schist			
M8A	Amphibole Schist			ABBREVIATIONS IN DRILL LOGS
M8B	Biotite Schist			
M8C	Chlorite Schist			
M8S	Sericite Schist			
M9	Orthoschist			
M10	Paraschist			
M11	Phyllite			
M12	Quartzite			
M13	Marble			
M14	Calco-silicated rock			
M15	Metasomatic rock			
M16	Amphibolite			
M17	Eclogite			
M18	Homfels			
M19	(Mafic Gneiss)		(Mafic Gneiss)	
M20	Metatextite			
M21	Diatextite			
M22	Migmatite			
M24	Cataclasite			
M25	Mylonite			
M26	Tectonic breccia			
<b>OTHER</b>				
MS	Massive Sulphides (>75% sulphides)			
SMS	Semi-Massive Sulphides (35-75% sulphides)			
ST/VN	Stringer/Vein Sulphides			
NET	Net-textured Sulphides (15-35% Sulphides)			
DIS	Disseminated Sulphides (5-15%)			
CAS	Casing			
OB	Overburden			
LC	Lost Core			
GC	Ground Core			
ARC	Arc cutting for wedge			
ATZ	Alteration Zone			
SHR	Shear Zone			
FLT	Fault			
BXR	Breccia Zone			
HBX	Hydrothermal Breccia			
SWK	Stockwork Zone			
MDS	Mud Seam			
DYK	Dyke			
REG	Regolith			
SAP	Saprolite			

**ELEMENTS AND MINERALS**

ABBREVIATIONS IN DRILL LOGS

economic minerals

<b>Arsenopyrite</b>	<b>As</b>	<b>Magnesium</b>	<b>Mg</b>
Barium	Ba	<b>Magnetite</b>	<b>Mt</b>
Bismuth	Bi	Malachite	Mc
Bornite	Bo	Marcasite	Ma
<b>Chalcopyrite</b>	<b>Cp</b>	Molybdenite	Mo
Cobalt	Co	Visible Gold	vg
<b>Galena</b>	<b>Gn</b>	Pentlandite	Pn
<b>Graphite</b>	<b>Gp</b>	<b>Pyrite</b>	<b>Py</b>
<b>Hematite</b>	<b>Hm</b>	<b>Pyrrhotite</b>	<b>Po</b>
<b>Ilmenite</b>	<b>Im</b>	<b>Sphalerite</b>	<b>Sp</b>

MINERALS

Albite	ab	<b>Homblende</b>	<b>hb</b>
<b>Actinolite</b>	<b>ac</b>	Limonite	lm
Allanite	all	Leucoxene	lx
<b>Amphibole</b>	<b>amp</b>	<b>Mica</b>	<b>mc</b>
<b>Andalusite</b>	<b>ad</b>	Microcline	ml
<b>Ankerite</b>	<b>ak</b>	<b>Muscovite</b>	<b>mv</b>
Anorthite	ant	Nepheline	ne
<b>Anthophyllite</b>	<b>ath</b>	Olivine	ol
Antigorite	an	Orthose	or
Apatite	ap	Orthopyroxene	opx
Augite	at	Paragonite	pa
Barytine	ba	Perthite	pe
Beryl	be	<b>Phlogophite</b>	<b>ph</b>
<b>Biotite</b>	<b>bt</b>	Prehnite	pn
<b>Calcite</b>	<b>cc</b>	Pyrophyllite	pr
<b>Carbonate</b>	<b>cb</b>	Pyroxene	px
Chert-jaspe	cht	Pumpellyte	pu
<b>Chlorite</b>	<b>chl</b>	<b>Quartz</b>	<b>qz</b>
Chloritoide	chd	Rhodocrosite	rd
Clinopyroxene	cpx	Sanidine	sa
<b>Cordierite</b>	<b>cd</b>	Scheelite	sh
Corindon	co	<b>Sericite</b>	<b>ser</b>
Cummingtonite	cg	<b>Serpentine</b>	<b>spt</b>
Cyanite	cy	Siderose	sd
Diopside	di	Silice	si
Dolomite	do	<b>Sillimanite</b>	<b>sl</b>
Enstatite	en	Sphene	spn
<b>Epidote</b>	<b>ep</b>	Spodumene	so
<b>Feldspath</b>	<b>f</b>	<b>Staurolite</b>	<b>st</b>
<b>Feldspath plagioclase</b>	<b>fp</b>	<b>Talc</b>	<b>tc</b>
<b>Feldspath potassique</b>	<b>fx</b>	Tantalite	ta
Fluorite	fl	<b>Tourmaline</b>	<b>tm</b>
Forsterite	fo	<b>Tremolite</b>	<b>tre</b>
<b>Fuchsite</b>	<b>fu</b>	Wolframite	wf
Glaucophane	gl	Wollastonite	wo
<b>Garnet</b>	<b>gt</b>	Zeolite	ze
Gypsum	gy	Zircon	zr
		Zoisite	zo

ABBREVIATIONS IN DRILL LOGS  
other economic minerals & elements

Arsenic	Asc
Aluminium	Al
Antimoine	Sb
Argent	Ag
Argentite	Agt
Beryllium	Be
Brome	Br
Cadmium	Cd
Cerium	Ce
Cesium	Cs
Chalcosine	Cc
Chromite	Cr
Chrysotile	Chy
Coveline	Cv
Cuivre	Cu
Cuprite	Cup
Etain	Sn
Europium	Eu
Fer	Fe
Goethite	Goe
Hafnium	Hf
Iridium	Ir
Lanthane	La
Lithium	Li
Lutecium	Lu
Manganese	Mn
Mercure	Hg
Niobium	Nb
Nickel	Ni
Gold	Au
Pechblende	Pc
Platine	Pt
Platinum group	Pge
Rubidium	Rb
Ruthenium	Rh
Samarium	Sm
Scandium	Sc
Selenium	Se
Sodium	Na
Specularite	Hs
Strontium	Sr
Sulfure	Su
Tellure	Te
Therbium	Tb
Thorium	Th
Titane	Ti
Tungstene ou scheelite	W
Uraninite	Ur
Zinc	Zn
Zirconium	Zr
Yttrium	Y
Ytterbium	Yb
Vanadium	Va

**Appendix B      Assay Certificates – AGAT Laboratories (208+7 pages)**

Includes table relating sample numbers to drill hole intervals.





CLIENT NAME: MISC AGAT CLIENT ON, ON

ATTENTION TO: Scott Halladay

PROJECT: Gossan RUSH

AGAT WORK ORDER: 18B314890

SOLID ANALYSIS REVIEWED BY: Sherin Moussa, Senior Technician

DATE REPORTED: Mar 01, 2018

PAGES (INCLUDING COVER): 16

Should you require any information regarding this analysis please contact your client services representative at (905) 501-9998

\*NOTES

All samples are stored at no charge for 90 days. Please contact the lab if you require additional sample storage time.



## Certificate of Analysis

AGAT WORK ORDER: 18B314890

PROJECT: Gossan RUSH

5623 McADAM ROAD  
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CLIENT NAME: MISC AGAT CLIENT ON

ATTENTION TO: Scott Halladay

### (200-) Sample Login Weight

DATE SAMPLED: Feb 25, 2018      DATE RECEIVED: Feb 26, 2018      DATE REPORTED: Mar 01, 2018      SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte:	Sample Login Weight
	Unit:	kg
	RDL:	0.01
5553393 (9088089)		2.90
5553394 (9088090)		1.92
5553395 (9088091)		2.02
5553396 (9088092)		2.08
5553397 (9088093)		3.60
5553398 (9088094)		1.66
5553399 (9088095)		2.34
5553400 (9088096)		0.12
5553401 (9088097)		1.68
5553402 (9088098)		1.48
5553403 (9088099)		1.16
5553404 (9088100)		3.64
5553405 (9088101)		2.78
5553406 (9088102)		1.36
5553407 (9088103)		3.38
5553408 (9088104)		2.18
5553409 (9088105)		0.38
5553410 (9088106)		1.86

Comments: RDL - Reported Detection Limit

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18B314890

PROJECT: Gossan RUSH

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CLIENT NAME: MISC AGAT CLIENT ON

ATTENTION TO: Scott Halladay

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Feb 25, 2018

DATE RECEIVED: Feb 26, 2018

DATE REPORTED: Mar 01, 2018

SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte: Unit: RDL:	Ag ppm 1	Al % 0.01	As ppm 5	B ppm 20	Ba ppm 0.5	Be ppm 5	Bi ppm 0.1	Ca % 0.05	Cd ppm 0.2	Ce ppm 0.1	Co ppm 0.5	Cr % 0.005	Cs ppm 0.1	Cu ppm 5
5553393 (9088089)		<1	7.13	53	61	267	<5	<0.1	2.60	<0.2	19.4	24.5	<0.005	1.3	19
5553394 (9088090)		<1	4.68	15	83	161	<5	<0.1	1.52	<0.2	11.7	4.2	<0.005	0.8	40
5553395 (9088091)		<1	7.66	12	22	258	<5	<0.1	3.24	0.2	17.1	4.8	<0.005	1.5	10
5553396 (9088092)		<1	6.26	16	37	308	<5	<0.1	4.96	<0.2	19.1	8.7	<0.005	3.6	12
5553397 (9088093)		<1	5.70	7	73	12.0	<5	<0.1	3.70	<0.2	22.8	11.5	<0.005	0.5	18
5553398 (9088094)		<1	5.17	24	37	82.9	<5	<0.1	3.84	<0.2	17.1	6.2	<0.005	5.4	17
5553399 (9088095)		<1	6.56	14	43	258	<5	<0.1	3.79	<0.2	18.6	4.9	<0.005	2.5	23
5553400 (9088096)		38	3.19	150	114	558	<5	50.6	0.93	233	33.3	221	0.008	1.3	12600
5553401 (9088097)		<1	6.04	10	39	49.4	<5	0.6	3.68	<0.2	18.9	4.4	<0.005	2.0	25
5553402 (9088098)		<1	5.84	20	36	18.1	<5	0.1	4.83	<0.2	20.3	4.1	<0.005	0.4	22
5553403 (9088099)		<1	4.61	<5	69	32.2	<5	<0.1	5.77	0.3	16.4	1.9	<0.005	0.7	35
5553404 (9088100)		<1	2.05	193	155	34.7	<5	0.2	2.41	0.2	9.0	26.0	<0.005	0.8	83
5553405 (9088101)		<1	2.75	127	115	75.8	<5	<0.1	3.88	0.2	12.6	30.8	<0.005	2.5	53
5553406 (9088102)		<1	0.99	572	173	24.1	<5	0.3	0.47	<0.2	5.2	99.2	<0.005	1.6	70
5553407 (9088103)		<1	0.87	746	153	27.3	<5	0.2	1.50	<0.2	4.6	123	<0.005	1.2	20
5553408 (9088104)		<1	1.27	813	160	25.1	<5	0.2	1.12	0.2	4.1	54.5	<0.005	0.6	13
5553409 (9088105)		<1	1.80	6	<20	36.6	<5	<0.1	<0.05	<0.2	38.2	1.9	0.007	<0.1	<5
5553410 (9088106)		<1	8.15	49	<20	230	<5	<0.1	2.78	<0.2	20.4	8.9	<0.005	1.6	<5

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18B314890

PROJECT: Gossan RUSH

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 FAX (905)501-0589  
<http://www.agatlabs.com>

CLIENT NAME: MISC AGAT CLIENT ON

ATTENTION TO: Scott Halladay

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Feb 25, 2018	DATE RECEIVED: Feb 26, 2018					DATE REPORTED: Mar 01, 2018					SAMPLE TYPE: Drill Core				
Analyte:	Dy	Er	Eu	Fe	Ga	Gd	Ge	Hf	Ho	In	K	La	Li	Lu	
Unit:	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	
RDL:	0.05	0.05	0.05	0.01	0.01	0.05	1	1	0.05	0.2	0.05	0.1	10	0.05	
5553393 (9088089)	1.10	0.57	0.57	8.01	19.1	1.58	<1	3	0.21	<0.2	1.07	10.4	14	0.09	
5553394 (9088090)	0.68	0.33	0.37	15.8	12.2	0.88	<1	1	0.13	<0.2	0.59	6.4	11	0.06	
5553395 (9088091)	1.14	0.62	0.58	4.21	19.0	1.48	<1	2	0.22	<0.2	0.75	9.2	13	0.09	
5553396 (9088092)	1.55	0.99	0.71	7.46	16.4	1.72	<1	2	0.34	<0.2	0.88	10.0	21	0.18	
5553397 (9088093)	2.28	1.38	0.79	16.3	16.8	2.10	2	2	0.51	<0.2	0.05	11.7	27	0.28	
5553398 (9088094)	1.65	1.12	0.64	8.78	15.6	1.74	1	2	0.38	<0.2	0.51	9.0	17	0.19	
5553399 (9088095)	1.32	0.67	0.66	8.74	19.7	1.69	<1	3	0.27	<0.2	0.85	9.6	13	0.11	
5553400 (9088096)	2.81	1.56	0.63	16.6	24.8	3.34	5	2	0.58	13.3	0.87	16.7	13	0.25	
5553401 (9088097)	1.63	0.94	0.66	9.08	16.7	1.75	1	2	0.32	<0.2	0.41	10.2	13	0.16	
5553402 (9088098)	1.68	1.11	0.77	8.79	15.0	1.84	1	2	0.37	<0.2	<0.05	10.8	<10	0.18	
5553403 (9088099)	1.46	1.09	0.84	13.9	13.2	1.60	1	2	0.34	<0.2	0.15	8.9	<10	0.18	
5553404 (9088100)	0.73	0.41	0.41	33.6	6.10	0.78	<1	<1	0.15	<0.2	0.13	4.7	<10	0.08	
5553405 (9088101)	1.37	0.86	0.73	24.7	8.84	1.22	1	1	0.29	<0.2	0.52	6.4	<10	0.17	
5553406 (9088102)	0.43	0.30	0.30	39.2	3.43	0.47	<1	<1	0.10	<0.2	0.19	2.8	<10	0.07	
5553407 (9088103)	0.53	0.37	0.24	34.1	3.25	0.47	<1	<1	0.14	<0.2	0.15	2.5	<10	0.07	
5553408 (9088104)	0.26	0.15	0.20	33.6	4.02	0.30	<1	<1	0.07	<0.2	<0.05	2.3	<10	<0.05	
5553409 (9088105)	1.87	0.95	0.50	1.40	4.97	2.39	<1	4	0.37	<0.2	<0.05	19.2	16	0.17	
5553410 (9088106)	1.25	0.56	0.87	1.95	21.4	1.67	1	3	0.25	<0.2	0.86	10.3	11	0.09	

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18B314890

PROJECT: Gossan RUSH

5623 McADAM ROAD  
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 CANADA L4Z 1N9  
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<http://www.agatlabs.com>

CLIENT NAME: MISC AGAT CLIENT ON

ATTENTION TO: Scott Halladay

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Feb 25, 2018	DATE RECEIVED: Feb 26, 2018					DATE REPORTED: Mar 01, 2018					SAMPLE TYPE: Drill Core				
Analyte:	Mg	Mn	Mo	Nb	Nd	Ni	P	Pb	Pr	Rb	S	Sb	Sc	Si	
Unit:	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	%	
RDL:	0.01	10	2	1	0.1	5	0.01	5	0.05	0.2	0.01	0.1	5	0.01	
5553393 (9088089)	0.35	1260	2	2	7.9	28	0.03	6	2.23	40.0	5.55	0.3	6	26.7	
5553394 (9088090)	0.20	557	3	<1	4.8	42	0.02	<5	1.30	23.1	10.0	0.3	<5	24.1	
5553395 (9088091)	0.49	1640	2	<1	7.3	12	0.03	<5	1.98	31.0	2.31	0.3	<5	28.7	
5553396 (9088092)	1.14	4590	<2	1	8.0	7	0.03	<5	2.21	38.5	3.91	0.2	8	25.7	
5553397 (9088093)	1.89	9560	<2	<1	10.0	17	0.03	<5	2.61	1.3	1.48	0.6	10	24.6	
5553398 (9088094)	1.69	7330	5	<1	7.3	40	0.02	<5	1.93	26.2	3.96	0.2	8	26.4	
5553399 (9088095)	0.91	4320	5	2	8.1	51	0.03	7	2.15	37.7	5.26	0.5	6	25.2	
5553400 (9088096)	0.84	923	49	5	15.2	64	0.03	6710	4.10	32.1	17.6	31.7	<5	16.7	
5553401 (9088097)	1.47	5570	5	<1	8.2	48	0.03	<5	2.20	19.1	5.54	0.6	7	25.7	
5553402 (9088098)	1.44	7230	4	1	8.9	47	0.02	6	2.33	2.5	5.25	0.6	6	24.6	
5553403 (9088099)	1.71	9720	3	<1	7.1	50	0.02	<5	1.88	8.8	8.43	0.5	<5	19.7	
5553404 (9088100)	0.61	1970	3	<1	3.9	91	0.01	9	1.04	10.9	21.0	3.9	<5	11.4	
5553405 (9088101)	1.62	2930	4	<1	5.7	69	0.02	8	1.44	27.8	18.3	4.6	<5	13.9	
5553406 (9088102)	0.60	602	4	<1	2.3	83	0.01	18	0.60	14.8	32.5	23.3	<5	5.08	
5553407 (9088103)	0.66	1110	4	<1	2.1	68	0.02	13	0.52	11.7	34.7	20.5	<5	5.23	
5553408 (9088104)	0.18	479	5	<1	1.7	54	0.02	20	0.46	3.5	35.9	32.6	<5	5.88	
5553409 (9088105)	0.01	40	14	3	16.1	106	<0.01	<5	4.36	2.7	0.07	0.3	<5	43.9	
5553410 (9088106)	0.37	524	7	3	8.9	54	0.04	<5	2.35	35.7	1.91	0.5	<5	31.5	

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18B314890

PROJECT: Gossan RUSH

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CLIENT NAME: MISC AGAT CLIENT ON

ATTENTION TO: Scott Halladay

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Feb 25, 2018	DATE RECEIVED: Feb 26, 2018					DATE REPORTED: Mar 01, 2018					SAMPLE TYPE: Drill Core				
Analyte:	Sm	Sn	Sr	Ta	Tb	Th	Ti	Tl	Tm	U	V	W	Y	Yb	
Unit:	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
RDL:	0.1	1	0.1	0.5	0.05	0.1	0.01	0.5	0.05	0.05	5	1	0.5	0.1	
Sample ID (AGAT ID)															
5553393 (9088089)	1.7	1	197	<0.5	0.21	2.0	0.20	2.0	0.09	0.68	33	<1	5.6	0.6	
5553394 (9088090)	0.9	2	139	<0.5	0.12	1.4	0.12	1.2	0.05	0.39	24	<1	3.6	0.3	
5553395 (9088091)	1.4	3	217	<0.5	0.22	2.0	0.21	1.8	0.09	0.71	41	<1	6.5	0.6	
5553396 (9088092)	1.6	1	253	<0.5	0.26	2.2	0.18	2.7	0.15	0.76	46	<1	9.7	1.1	
5553397 (9088093)	1.9	2	46.1	<0.5	0.36	2.6	0.16	<0.5	0.24	0.89	48	<1	14.4	1.6	
5553398 (9088094)	1.5	1	169	<0.5	0.26	2.3	0.14	1.8	0.17	0.73	51	<1	11.0	1.3	
5553399 (9088095)	1.6	2	173	<0.5	0.24	2.0	0.21	2.0	0.12	0.66	50	<1	7.8	0.7	
5553400 (9088096)	3.2	98	78.9	<0.5	0.50	6.2	0.11	5.6	0.24	3.28	42	7	15.1	1.4	
5553401 (9088097)	1.6	2	122	<0.5	0.26	2.3	0.17	1.4	0.16	0.86	56	<1	10.0	1.0	
5553402 (9088098)	1.8	9	145	<0.5	0.28	2.5	0.17	<0.5	0.18	0.93	57	<1	11.4	1.1	
5553403 (9088099)	1.3	1	194	<0.5	0.24	1.8	0.14	0.7	0.16	0.71	36	<1	11.2	1.0	
5553404 (9088100)	0.8	<1	86.2	<0.5	0.13	1.0	0.07	0.7	0.08	0.31	23	<1	4.7	0.4	
5553405 (9088101)	1.2	1	122	<0.5	0.20	1.1	0.07	1.9	0.16	0.62	24	<1	9.1	1.0	
5553406 (9088102)	0.4	1	32.6	<0.5	0.08	0.5	0.03	1.4	<0.05	0.26	16	<1	3.0	0.4	
5553407 (9088103)	0.4	<1	32.2	<0.5	0.07	0.4	0.03	1.2	0.07	0.19	14	<1	3.8	0.4	
5553408 (9088104)	0.3	1	39.1	<0.5	0.06	0.6	0.04	1.2	<0.05	0.19	11	<1	1.6	0.2	
5553409 (9088105)	2.6	1	18.7	<0.5	0.33	5.8	0.10	<0.5	0.16	0.73	20	<1	10.1	1.1	
5553410 (9088106)	1.6	1	271	<0.5	0.26	1.8	0.23	1.3	0.10	0.87	41	<1	6.3	0.6	

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18B314890

PROJECT: Gossan RUSH

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CLIENT NAME: MISC AGAT CLIENT ON

ATTENTION TO: Scott Halladay

(201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Feb 25, 2018      DATE RECEIVED: Feb 26, 2018      DATE REPORTED: Mar 01, 2018      SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte:	Zn	Zr
	Unit:	ppm	ppm
	RDL:	5	0.5
5553393 (9088089)		99	112
5553394 (9088090)		37	55.8
5553395 (9088091)		174	83.7
5553396 (9088092)		75	89.6
5553397 (9088093)		123	86.1
5553398 (9088094)		95	75.9
5553399 (9088095)		113	115
5553400 (9088096)		65800	83.2
5553401 (9088097)		113	78.0
5553402 (9088098)		138	87.7
5553403 (9088099)		224	66.3
5553404 (9088100)		142	34.7
5553405 (9088101)		107	39.0
5553406 (9088102)		30	18.0
5553407 (9088103)		60	13.9
5553408 (9088104)		53	25.0
5553409 (9088105)		<5	143
5553410 (9088106)		61	136

Comments: RDL - Reported Detection Limit

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18B314890

PROJECT: Gossan RUSH

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<http://www.agatlabs.com>

CLIENT NAME: MISC AGAT CLIENT ON

ATTENTION TO: Scott Halladay

(202-555) Fire Assay - Au, Pt, Pd Trace Levels, ICP-OES finish (50g charge)

DATE SAMPLED: Feb 25, 2018      DATE RECEIVED: Feb 26, 2018      DATE REPORTED: Mar 01, 2018      SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte: Unit: RDL:	Au ppm 0.001	Pd ppm 0.001	Pt ppm 0.005
5553393 (9088089)		0.004	<0.001	<0.005
5553394 (9088090)		0.007	0.001	<0.005
5553395 (9088091)		<0.001	<0.001	<0.005
5553396 (9088092)		0.001	<0.001	<0.005
5553397 (9088093)		<0.001	<0.001	<0.005
5553398 (9088094)		<0.001	<0.001	<0.005
5553399 (9088095)		<0.001	<0.001	<0.005
5553400 (9088096)		0.496	0.006	<0.005
5553401 (9088097)		0.002	<0.001	<0.005
5553402 (9088098)		<0.001	<0.001	<0.005
5553403 (9088099)		<0.001	<0.001	<0.005
5553404 (9088100)		0.004	0.003	<0.005
5553405 (9088101)		0.007	0.002	<0.005
5553406 (9088102)		0.019	<0.001	<0.005
5553407 (9088103)		0.023	<0.001	<0.005
5553408 (9088104)		0.046	<0.001	<0.005
5553409 (9088105)		<0.001	<0.001	<0.005
5553410 (9088106)		<0.001	<0.001	<0.005

Comments: RDL - Reported Detection Limit

Certified By:





# Certificate of Analysis

AGAT WORK ORDER: 18B314890

PROJECT: Gossan RUSH

5623 McADAM ROAD  
 MISSISSAUGA, ONTARIO  
 CANADA L4Z 1N9  
 TEL (905)501-9998  
 FAX (905)501-0589  
<http://www.agatlabs.com>

CLIENT NAME: MISC AGAT CLIENT ON

ATTENTION TO: Scott Halladay

## Sieving - % Passing (Crushing)

DATE SAMPLED: Feb 25, 2018      DATE RECEIVED: Feb 26, 2018      DATE REPORTED: Mar 01, 2018      SAMPLE TYPE: Drill Core

Analyte:	Over 2mm	Under 2mm	Total	Pass %
Unit:	g	g	g	%
Sample ID (AGAT ID)	RDL:	0.01	0.01	0.01
5553393 (9088089)		172.8	591.3	764.1
				77.39

Comments: RDL - Reported Detection Limit

Certified By:



**AGAT** Laboratories

# Certificate of Analysis

AGAT WORK ORDER: 18B314890

PROJECT: Gossan RUSH

5623 McADAM ROAD  
MISSISSAUGA, ONTARIO  
CANADA L4Z 1N9  
TEL (905)501-9998  
FAX (905)501-0589  
<http://www.agatlabs.com>

CLIENT NAME: MISC AGAT CLIENT ON

ATTENTION TO: Scott Halladay

## Sieving - % Passing (Pulverizing)

DATE SAMPLED: Feb 25, 2018

DATE RECEIVED: Feb 26, 2018

DATE REPORTED: Mar 01, 2018

SAMPLE TYPE: Drill Core

Analyte:	Over 75um	Under 75um	Total	Pass %
Unit:	g	g	g	%
Sample ID (AGAT ID)	RDL:	0.01	0.01	0.01
5553393 (9088089)		6.7	93.3	100
				93.3

Comments: RDL - Reported Detection Limit

Certified By:



CLIENT NAME: MISC AGAT CLIENT ON

ATTENTION TO: Scott Halladay

(201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

Parameter	REPLICATE #1				REPLICATE #2											
	Sample ID	Original	Replicate	RPD	Sample ID	Original	Replicate	RPD								
Ag	9088089	< 1	< 1	0.0%	9088101	< 1	< 1	0.0%								
Al	9088089	7.13	6.79	4.9%	9088101	2.75	2.77	0.7%								
As	9088089	53	49	7.8%	9088101	127	125	1.6%								
B	9088089	61	63	3.2%	9088101	115	122	5.9%								
Ba	9088089	267	239	11.1%	9088101	75.8	73.0	3.8%								
Be	9088089	< 5	< 5	0.0%	9088101	< 5	< 5	0.0%								
Bi	9088089	< 0.1	< 0.1	0.0%	9088101	< 0.1	< 0.1	0.0%								
Ca	9088089	2.60	2.74	5.2%	9088101	3.88	3.81	1.8%								
Cd	9088089	< 0.2	< 0.2	0.0%	9088101	0.2	0.2	0.0%								
Ce	9088089	19.4	18.8	3.1%	9088101	12.6	14.0	10.5%								
Co	9088089	24.5	26.5	7.8%	9088101	30.8	31.2	1.3%								
Cr	9088089	< 0.005	< 0.005	0.0%	9088101	< 0.005	< 0.005	0.0%								
Cs	9088089	1.3	1.3	0.0%	9088101	2.5	2.5	0.0%								
Cu	9088089	19	19	0.0%	9088101	53	53	0.0%								
Dy	9088089	1.10	1.11	0.9%	9088101	1.37	1.33	3.0%								
Er	9088089	0.570	0.533	6.7%	9088101	0.863	0.929	7.4%								
Eu	9088089	0.57	0.61	6.8%	9088101	0.733	0.760	3.6%								
Fe	9088089	8.01	8.30	3.6%	9088101	24.7	25.4	2.8%								
Ga	9088089	19.1	18.8	1.6%	9088101	8.84	9.09	2.8%								
Gd	9088089	1.58	1.40	12.1%	9088101	1.22	1.53	22.5%								
Ge	9088089	< 1	< 1	0.0%	9088101	1	< 1									
Hf	9088089	3	3	0.0%	9088101	1	1	0.0%								
Ho	9088089	0.21	0.21	0.0%	9088101	0.293	0.312	6.3%								
In	9088089	< 0.2	< 0.2	0.0%	9088101	< 0.2	< 0.2	0.0%								
K	9088089	1.07	0.99	7.8%	9088101	0.52	0.51	1.9%								
La	9088089	10.4	10.2	1.9%	9088101	6.43	7.36	13.5%								
Li	9088089	14	13	7.4%	9088101	< 10	< 10	0.0%								
Lu	9088089	0.09	0.09	0.0%	9088101	0.174	0.181	3.9%								
Mg	9088089	0.35	0.35	0.0%	9088101	1.62	1.62	0.0%								
Mn	9088089	1260	1380	9.1%	9088101	2930	2880	1.7%								
Mo	9088089	2	3		9088101	4	4	0.0%								



CLIENT NAME: MISC AGAT CLIENT ON

ATTENTION TO: Scott Halladay

Nb	9088089	2	2	0.0%	9088101	< 1	< 1	0.0%									
Nd	9088089	7.9	7.6	3.9%	9088101	5.7	6.3	10.0%									
Ni	9088089	28	22	24.0%	9088101	69	63	9.1%									
P	9088089	0.03	0.03	0.0%	9088101	0.02	< 0.01										
Pb	9088089	6	6	0.0%	9088101	8	6	28.6%									
Pr	9088089	2.23	2.11	5.5%	9088101	1.44	1.56	8.0%									
Rb	9088089	40.0	39.1	2.3%	9088101	27.8	28.8	3.5%									
S	9088089	5.55	5.85	5.3%	9088101	18.3	18.2	0.5%									
Sb	9088089	0.32	0.35	9.0%	9088101	4.64	4.85	4.4%									
Sc	9088089	6	5	18.2%	9088101	< 5	< 5	0.0%									
Si	9088089	26.7	26.6	0.4%	9088101	13.9	13.8	0.7%									
Sm	9088089	1.7	1.5	12.5%	9088101	1.2	1.2	0.0%									
Sn	9088089	1	1	0.0%	9088101	1	1	0.0%									
Sr	9088089	197	191	3.1%	9088101	122	122	0.0%									
Ta	9088089	< 0.5	< 0.5	0.0%	9088101	< 0.5	< 0.5	0.0%									
Tb	9088089	0.210	0.217	3.3%	9088101	0.201	0.229	13.0%									
Th	9088089	2.0	2.0	0.0%	9088101	1.12	1.22	8.5%									
Ti	9088089	0.20	0.19	5.1%	9088101	0.07	0.07	0.0%									
Tl	9088089	2.02	2.06	2.0%	9088101	1.91	1.82	4.8%									
Tm	9088089	0.09	0.09	0.0%	9088101	0.159	0.155	2.5%									
U	9088089	0.68	0.68	0.0%	9088101	0.62	0.66	6.3%									
V	9088089	33	37	11.4%	9088101	24	27	11.8%									
W	9088089	< 1	< 1	0.0%	9088101	< 1	< 1	0.0%									
Y	9088089	5.6	6.0	6.9%	9088101	9.08	9.55	5.0%									
Yb	9088089	0.55	0.52	5.6%	9088101	1.00	1.07	6.8%									
Zn	9088089	99	100	1.0%	9088101	107	103	3.8%									
Zr	9088089	112	111	0.9%	9088101	39.0	38.8	0.5%									

(202-555) Fire Assay - Au, Pt, Pd Trace Levels, ICP-OES finish (50g charge)

Parameter	REPLICATE #1				REPLICATE #2												
	Sample ID	Original	Replicate	RPD	Sample ID	Original	Replicate	RPD									
Au	9088089	0.004	0.002		9088101	0.007	0.003										
Pd	9088089	< 0.001	0.001		9088101	0.002	0.004										
Pt	9088089	< 0.005	< 0.005	0.0%	9088101	< 0.005	< 0.005	0.0%									



CLIENT NAME: MISC AGAT CLIENT ON

ATTENTION TO: Scott Halladay

(201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

Parameter	CRM #1 (ref.Till-2)				CRM #2 (ref.SY-4)											
	Expect	Actual	Recovery	Limits	Expect	Actual	Recovery	Limits								
Al	8.47	8.2	97%	90% - 110%	10.95	10.48	96%	90% - 110%								
As	26	28	107%	90% - 110%												
Ba	540	520	96%	90% - 110%	340	340	100%	90% - 110%								
Be	4.0	3.5	88%	90% - 110%	2.6	3	114%	90% - 110%								
Ca	0.907	0.897	99%	90% - 110%	5.72	5.45	95%	90% - 110%								
Ce	98	98	100%	90% - 110%	122	111	91%	90% - 110%								
Co	15	17	112%	90% - 110%	2.8	2.5	90%	90% - 110%								
Cs					1.5	1.6	106%	90% - 110%								
Cu	150	147	98%	90% - 110%												
Dy					18.2	18.6	102%	90% - 110%								
Er	3.7	3.8	101%	90% - 110%	14.2	14	98%	90% - 110%								
Eu					2.0	1.80	90%	90% - 110%								
Fe	3.77	3.85	102%	90% - 110%	4.34	4.02	93%	90% - 110%								
Ga					35	36	104%	90% - 110%								
Gd					14	14	102%	90% - 110%								
Hf	11	10	94%	90% - 110%	10.6	10.4	99%	90% - 110%								
Ho					4.3	4.6	107%	90% - 110%								
K	2.55	2.41	94%	90% - 110%	1.37	1.29	94%	90% - 110%								
La	44	43	97%	90% - 110%	58	52	90%	90% - 110%								
Li	47	45	96%	90% - 110%	37	35	94%	90% - 110%								
Lu	0.6	0.6	108%	90% - 110%	2.1	2.3	110%	90% - 110%								
Mg	1.1	1	95%	90% - 110%	0.325	0.303	93%	90% - 110%								
Mn	780	767	98%	90% - 110%	836	859	103%	90% - 110%								
Mo	14	13	93%	90% - 110%												
Nb	20	17	87%	90% - 110%	13	12	94%	90% - 110%								
Nd					57	54	95%	90% - 110%								
Ni	32	37	115%	90% - 110%	9	9	99%	90% - 110%								
Pb	31	33	106%	90% - 110%	10	10	98%	90% - 110%								
Pr					15.0	14	93%	90% - 110%								
Rb	144	158	110%	90% - 110%	55	56	102%	90% - 110%								
Sb	0.8	0.6	79%	90% - 110%												



CLIENT NAME: MISC AGAT CLIENT ON

ATTENTION TO: Scott Halladay

Sc	12	12	101%	90% - 110%												
Si	28.4	28.4	100%	90% - 110%	23.3	22.6	97%	90% - 110%								
Sm	7.4	7.4	99%	90% - 110%	12.7	12.3	97%	90% - 110%								
Sn					7.1	8	113%	90% - 110%								
Sr	144	143	99%	90% - 110%	1191	1287	108%	90% - 110%								
Tb	1.2	1.3	106%	90% - 110%	2.6	2.7	102%	90% - 110%								
Th	18.4	18.5	100%	90% - 110%	1.4	1.2	84%	90% - 110%								
Ti	0.527	0.535	102%	90% - 110%	0.172	0.172	100%	90% - 110%								
Tm					2.3	2.4	105%	90% - 110%								
U	5.7	5.7	100%	90% - 110%	0.8	0.8	101%	90% - 110%								
V	77	81	105%	90% - 110%	8	9	110%	90% - 110%								
W	5	5	104%	90% - 110%												
Y	40	38	94%	90% - 110%	119	119	100%	90% - 110%								
Yb					14.8	15.1	102%	90% - 110%								
Zn	130	118	91%	90% - 110%	93	87	93%	90% - 110%								
Zr	390	376	97%	90% - 110%	517	533	103%	90% - 110%								

(202-555) Fire Assay - Au, Pt, Pd Trace Levels, ICP-OES finish (50g charge)

Parameter	CRM #1 (ref.PG129)				CRM #2 (ref.PG129)											
	Expect	Actual	Recovery	Limits	Expect	Actual	Recovery	Limits								
Au	1.1	1.2	105%	90% - 110%	1.1	1.1	100%	90% - 110%								
Pd	0.115	0.122	106%	90% - 110%	0.115	0.118	103%	90% - 110%								
Pt	0.239	0.238	99%	90% - 110%	0.239	0.24	100%	90% - 110%								



## Method Summary

CLIENT NAME: MISC AGAT CLIENT ON  
 PROJECT: Gossan RUSH  
 SAMPLING SITE:

AGAT WORK ORDER: 18B314890  
 ATTENTION TO: Scott Halladay  
 SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Solid Analysis			
Sample Login Weight	MIN-12009		BALANCE
Ag			ICP/MS
Al	MIN-200-12001		ICP/OES
As	MIN-200-12001		ICP/MS
B	MIN-200-12001		ICP/OES
Ba	MIN-200-12001		ICP/OES
Be	MIN-200-12001		ICP/OES
Bi	MIN-200-12001		ICP-MS
Ca	MIN-200-12001		ICP/OES
Cd	MIN-200-12001		ICP-MS
Ce	MIN-200-12001		ICP-MS
Co	MIN-200-12001		ICP/MS
Cr	MIN-200-12001		ICP/OES
Cs	MIN-200-12001		ICP-MS
Cu	MIN-200-12001		ICP/OES
Dy	MIN-200-12001		ICP-MS
Er	MIN-200-12001		ICP-MS
Eu	MIN-200-12001		ICP-MS
Fe	MIN-200-12001		ICP/OES
Ga	MIN-200-12001		ICP-MS
Gd	MIN-200-12001		ICP-MS
Ge	MIN-200-12001		ICP-MS
Hf	MIN-200-12001		ICP-MS
Ho	MIN-200-12001		ICP-MS
In	MIN-200-12001		ICP-MS
K	MIN-200-12001		ICP/OES
La	MIN-200-12001		ICP-MS
Li	MIN-200-12001		ICP/OES
Lu	MIN-200-12001		ICP-MS
Mg	MIN-200-12001		ICP/OES
Mn	MIN-200-12001		ICP/OES
Mo	MIN-200-12001		ICP/MS
Nb	MIN-200-12001		ICP-MS
Nd	MIN-200-12001		ICP-MS
Ni	MIN-200-12001		ICP/OES
P			ICP/OES
Pb	MIN-200-12001		ICP/MS
Pr	MIN-200-12001		ICP-MS
Rb	MIN-200-12001		ICP/MS
S	MIN-200-12001		ICP/OES
Sb	MIN-200-12001		ICP-MS
Sc	MIN-200-12001		ICP/OES
Si	MIN-200-12001		ICP/OES
Sm	MIN-200-12001		ICP-MS
Sn	MIN-200-12001		ICP/MS
Sr	MIN-200-12001		ICP-OES
Ta	MIN-200-12001		ICP-MS
Tb	MIN-200-12001		ICP-MS
Th	MIN-200-12001		ICP-MS



## Method Summary

CLIENT NAME: MISC AGAT CLIENT ON  
 PROJECT: Gossan RUSH  
 SAMPLING SITE:

AGAT WORK ORDER: 18B314890  
 ATTENTION TO: Scott Halladay  
 SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Ti	MIN-200-12001		ICP/OES
Tl	MIN-200-12001		ICP-MS
Tm	MIN-200-12001		ICP-MS
U	MIN-200-12001		ICP-MS
V	MIN-200-12001		ICP/OES
W	MIN-200-12001		ICP-MS
Y	MIN-200-12001		ICP-MS
Yb	MIN-200-12001		ICP-MS
Zn	MIN-200-12001		ICP/OES
Zr	MIN-200-12001		ICP-MS
Au	MIN-200-12006	BUGBEE, E: A Textbook of Fire Assaying	ICP/OES
Pd	MIN-200-12006	BUGBEE, E: A Textbook of Fire Assaying	ICP/OES
Pt	MIN-200-12006	BUGBEE, E: A Textbook of Fire Assaying	ICP/OES
Over 2mm			BALANCE
Under 2mm			BALANCE
Total			BALANCE
Pass %			BALANCE
Over 75um			BALANCE
Under 75um			BALANCE





CLIENT NAME: GOSSAN RESOURCES LIMITED  
404-171 DONALD STREET  
WINNIPEG, MB R3C 1M4  
204-943-1990

ATTENTION TO: Scot Halladay, A Hamid Mumin

PROJECT: Gossan Resources

AGAT WORK ORDER: 18B316284

SOLID ANALYSIS REVIEWED BY: Adel Mina, Mining Chief Chemist

DATE REPORTED: May 09, 2018

PAGES (INCLUDING COVER): 14

Should you require any information regarding this analysis please contact your client services representative at (905) 501-9998

\*NOTES

All samples are stored at no charge for 90 days. Please contact the lab if you require additional sample storage time.



## Certificate of Analysis

AGAT WORK ORDER: 18B316284

PROJECT: Gossan Resources

5623 McADAM ROAD  
 MISSISSAUGA, ONTARIO  
 CANADA L4Z 1N9  
 TEL (905)501-9998  
 FAX (905)501-0589  
<http://www.agatlabs.com>

CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay, A Hamid Mumin

### (200-) Sample Login Weight

DATE SAMPLED: Mar 01, 2018      DATE RECEIVED: Feb 27, 2018      DATE REPORTED: May 09, 2018      SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte:	Sample Login Weight
	Unit:	kg
	RDL:	0.01
5553260 (9096857)		2.80
5553261 (9096858)		2.68
5553262 (9096859)		1.44
5553263 (9096860)		2.46
5553264 (9096861)		2.42
5553265 (9096862)		2.22
5553266 (9096863)		3.14
5553267 (9096864)		3.46
5553268 (9096865)		2.40
5553269 (9096866)		0.10
5553270 (9096867)		1.74
5553271 (9096868)		1.22
5553272 (9096869)		0.98
5553273 (9096870)		2.64
5553274 (9096871)		1.18
5553275 (9096872)		0.64
5553276 (9096873)		1.78
5553277 (9096874)		2.14
5553278 (9096875)		1.84

Comments: RDL - Reported Detection Limit  
 Please note: Gold Results are not representative due to the sample size

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18B316284

PROJECT: Gossan Resources

5623 McADAM ROAD  
MISSISSAUGA, ONTARIO  
CANADA L4Z 1N9  
TEL (905)501-9998  
FAX (905)501-0589  
<http://www.agatlabs.com>

CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay, A Hamid Mumin

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Mar 01, 2018

DATE RECEIVED: Feb 27, 2018

DATE REPORTED: May 09, 2018

SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte: Unit: RDL:	Ag ppm 1	Al % 0.01	As ppm 5	B ppm 20	Ba ppm 0.5	Be ppm 5	Bi ppm 0.1	Ca % 0.05	Cd ppm 0.2	Ce ppm 0.1	Co ppm 0.5	Cr % 0.005	Cs ppm 0.1	Cu ppm 5
5553260 (9096857)		<1	7.02	9	292	271	<5	<0.1	5.64	0.3	15.7	59.1	0.009	1.1	94
5553261 (9096858)		<1	6.91	11	228	149	<5	<0.1	6.79	<0.2	14.3	55.0	0.009	0.4	50
5553262 (9096859)		<1	7.29	8	305	218	<5	<0.1	5.49	<0.2	14.1	64.3	0.011	1.3	111
5553263 (9096860)		<1	6.19	15	180	107	<5	<0.1	7.07	<0.2	15.4	69.0	0.008	0.5	202
5553264 (9096861)		<1	6.86	7	159	181	<5	<0.1	6.54	<0.2	16.9	61.0	0.009	0.5	72
5553265 (9096862)		<1	6.11	5	85	215	<5	<0.1	6.95	<0.2	15.0	70.3	0.008	0.8	157
5553266 (9096863)		<1	6.55	<5	84	142	<5	<0.1	7.90	<0.2	13.8	50.6	0.009	0.4	47
5553267 (9096864)		<1	6.82	10	144	43.8	<5	<0.1	6.39	<0.2	15.4	54.8	0.009	0.2	67
5553268 (9096865)		<1	6.88	10	199	46.5	<5	<0.1	6.41	<0.2	16.5	59.8	0.009	<0.1	33
5553269 (9096866)		7	6.53	20	68	246	<5	15.0	2.32	11.5	56.0	26.7	0.005	1.3	1510
5553270 (9096867)		<1	5.76	<5	58	25.1	<5	<0.1	7.43	<0.2	13.5	44.8	0.008	0.1	37
5553271 (9096868)		<1	6.41	<5	71	121	<5	<0.1	6.41	0.4	15.0	52.3	0.008	1.0	124
5553272 (9096869)		<1	7.65	<5	51	122	<5	<0.1	5.40	<0.2	17.5	55.3	0.010	0.8	56
5553273 (9096870)		<1	5.93	68	43	86.9	<5	<0.1	7.21	<0.2	17.5	42.1	0.007	1.2	84
5553274 (9096871)		<1	6.60	<5	122	249	<5	0.5	5.34	0.3	16.8	143	0.007	1.9	121
5553275 (9096872)		<1	1.29	<5	<20	14.4	<5	<0.1	0.07	<0.2	31.5	1.4	<0.005	<0.1	<5
5553276 (9096873)		<1	8.14	64	516	592	<5	0.4	0.88	0.8	42.3	45.9	0.006	2.3	45
5553277 (9096874)		<1	8.72	27	560	551	<5	0.3	1.01	0.7	49.3	51.3	0.007	2.4	52
5553278 (9096875)		<1	8.44	34	647	543	<5	0.4	1.10	0.6	49.2	58.2	0.007	2.3	55

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## Certificate of Analysis

AGAT WORK ORDER: 18B316284

PROJECT: Gossan Resources

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay, A Hamid Mumin

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Mar 01, 2018

DATE RECEIVED: Feb 27, 2018

DATE REPORTED: May 09, 2018

SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte: Unit: RDL:	Dy ppm 0.05	Er ppm 0.05	Eu ppm 0.05	Fe % 0.01	Ga ppm 0.01	Gd ppm 0.05	Ge ppm 1	Hf ppm 1	Ho ppm 0.05	In ppm 0.2	K % 0.05	La ppm 0.1	Li ppm 10	Lu ppm 0.05
5553260 (9096857)		3.87	2.50	0.93	10.3	17.4	3.57	1	2	0.76	<0.2	0.60	7.0	10	0.34
5553261 (9096858)		3.90	2.50	0.91	12.5	17.7	3.22	2	2	0.76	<0.2	0.29	6.2	12	0.35
5553262 (9096859)		3.84	2.58	0.87	12.0	19.2	3.43	2	2	0.79	<0.2	0.55	6.1	12	0.37
5553263 (9096860)		3.68	2.55	0.99	13.6	17.2	3.33	2	2	0.73	<0.2	0.23	7.0	13	0.35
5553264 (9096861)		4.13	2.61	1.02	12.4	18.4	3.69	2	2	0.77	<0.2	0.31	7.5	13	0.35
5553265 (9096862)		3.76	2.40	0.94	12.5	16.7	3.27	2	2	0.71	<0.2	0.35	6.8	<10	0.35
5553266 (9096863)		3.71	2.38	0.91	12.1	16.3	3.21	2	2	0.73	<0.2	0.23	6.1	13	0.33
5553267 (9096864)		3.88	2.54	0.99	13.0	18.1	3.43	2	2	0.74	<0.2	0.15	6.9	13	0.36
5553268 (9096865)		4.19	2.68	1.02	12.2	19.0	3.76	2	2	0.82	<0.2	0.14	7.1	11	0.37
5553269 (9096866)		4.76	2.77	1.10	8.01	18.5	5.24	2	4	0.83	0.5	1.63	26.7	23	0.38
5553270 (9096867)		3.58	2.34	0.92	10.5	15.3	3.10	2	2	0.72	<0.2	0.11	6.0	<10	0.31
5553271 (9096868)		3.85	2.55	0.95	13.1	17.3	3.30	2	2	0.74	<0.2	0.37	6.6	15	0.35
5553272 (9096869)		4.38	2.83	1.00	10.3	20.0	3.98	2	2	0.85	<0.2	0.27	7.4	<10	0.39
5553273 (9096870)		3.62	2.25	1.32	8.42	15.0	3.39	2	2	0.70	<0.2	0.36	6.6	<10	0.32
5553274 (9096871)		3.55	2.32	1.32	13.5	18.7	3.39	1	2	0.70	<0.2	0.68	7.6	<10	0.33
5553275 (9096872)		1.43	0.80	0.39	0.90	3.09	1.87	<1	3	0.26	<0.2	0.07	15.0	<10	0.12
5553276 (9096873)		2.75	1.59	1.27	3.82	22.1	3.37	2	3	0.49	<0.2	2.60	20.6	<10	0.24
5553277 (9096874)		2.89	1.59	1.52	3.84	23.5	3.83	2	3	0.52	<0.2	2.69	24.3	11	0.24
5553278 (9096875)		3.13	1.78	1.49	4.44	24.1	3.88	2	3	0.54	<0.2	2.42	24.5	<10	0.24

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AGAT WORK ORDER: 18B316284

PROJECT: Gossan Resources

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay, A Hamid Mumin

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Mar 01, 2018

DATE RECEIVED: Feb 27, 2018

DATE REPORTED: May 09, 2018

SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte: Unit: RDL:	Mg %	Mn ppm	Mo ppm	Nb ppm	Nd ppm	Ni ppm	P %	Pb ppm	Pr ppm	Rb ppm	S %	Sb ppm	Sc ppm	Si %
5553260 (9096857)		1.97	2800	<2	3	11.0	77	0.05	19	2.14	22.1	0.71	0.4	35	23.3
5553261 (9096858)		2.21	3580	2	3	9.8	77	0.05	13	1.97	8.0	0.51	0.4	35	21.8
5553262 (9096859)		2.21	2910	2	3	9.7	98	0.05	10	1.96	23.4	0.55	0.4	38	23.5
5553263 (9096860)		1.87	3890	2	3	10.3	75	0.04	8	2.06	6.3	2.13	0.5	31	19.8
5553264 (9096861)		1.95	3340	2	3	11.4	75	0.05	11	2.28	9.8	1.10	0.5	35	21.0
5553265 (9096862)		1.79	3350	3	3	10.3	74	0.04	10	2.04	13.7	1.39	0.3	33	22.3
5553266 (9096863)		2.11	3690	2	3	9.8	68	0.04	<5	1.90	6.3	0.68	0.3	34	22.0
5553267 (9096864)		2.24	3510	2	3	10.7	71	0.04	8	2.05	1.0	0.59	0.4	35	21.1
5553268 (9096865)		2.31	3440	2	3	11.1	69	0.04	13	2.29	1.2	0.54	0.5	36	20.0
5553269 (9096866)		2.16	856	13	10	27.8	48	0.04	1180	6.67	43.4	3.62	6.4	11	26.0
5553270 (9096867)		2.07	3460	3	3	9.0	65	0.04	18	1.81	0.9	1.34	0.4	30	21.8
5553271 (9096868)		2.47	2510	2	3	10.4	69	0.04	21	2.07	15.3	6.04	0.3	32	18.0
5553272 (9096869)		2.35	2600	<2	3	12.5	77	0.05	20	2.47	10.6	1.01	0.3	41	22.8
5553273 (9096870)		2.01	2660	<2	2	10.5	51	0.04	27	2.07	16.1	4.57	3.0	30	21.6
5553274 (9096871)		2.19	2460	2	3	10.5	82	0.04	26	2.15	31.7	8.22	0.7	29	18.7
5553275 (9096872)		0.02	23	4	3	13.7	<5	<0.01	15	3.53	1.4	0.02	0.4	<5	43.2
5553276 (9096873)		0.44	123	7	5	21.2	103	0.03	24	4.83	98.0	0.23	1.1	15	27.2
5553277 (9096874)		0.61	196	6	6	23.7	115	0.03	19	5.72	102	0.28	1.0	16	27.1
5553278 (9096875)		0.53	167	7	6	24.3	132	0.03	18	5.65	86.3	0.30	1.1	15	26.5

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AGAT WORK ORDER: 18B316284

PROJECT: Gossan Resources

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay, A Hamid Mumin

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Mar 01, 2018

DATE RECEIVED: Feb 27, 2018

DATE REPORTED: May 09, 2018

SAMPLE TYPE: Drill Core

Analyte:	Sm	Sn	Sr	Ta	Tb	Th	Ti	Tl	Tm	U	V	W	Y	Yb
Unit:	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
RDL:	0.1	1	0.1	0.5	0.05	0.1	0.01	0.5	0.05	0.05	5	1	0.5	0.1
Sample ID (AGAT ID)														
5553260 (9096857)	2.8	<1	108	<0.5	0.55	1.2	0.73	<0.5	0.34	0.35	306	<1	18.2	2.2
5553261 (9096858)	2.8	<1	99.4	<0.5	0.54	1.2	0.71	<0.5	0.34	0.33	298	<1	19.3	2.3
5553262 (9096859)	2.7	<1	110	<0.5	0.54	1.3	0.75	<0.5	0.35	0.33	317	<1	19.9	2.2
5553263 (9096860)	2.7	<1	119	<0.5	0.52	1.1	0.64	<0.5	0.33	0.34	272	<1	20.7	2.2
5553264 (9096861)	3.1	2	129	<0.5	0.58	1.3	0.70	<0.5	0.35	0.33	294	3	21.2	2.3
5553265 (9096862)	2.6	<1	116	<0.5	0.53	1.1	0.63	<0.5	0.34	0.32	265	2	19.7	2.1
5553266 (9096863)	2.5	<1	124	<0.5	0.49	1.1	0.67	<0.5	0.32	0.29	283	2	19.3	2.1
5553267 (9096864)	2.8	<1	130	<0.5	0.53	1.3	0.71	<0.5	0.35	0.33	297	1	20.6	2.3
5553268 (9096865)	3.1	<1	105	<0.5	0.59	1.3	0.71	<0.5	0.36	0.35	300	<1	21.4	2.5
5553269 (9096866)	5.5	8	86.2	0.9	0.69	8.7	0.30	5.2	0.38	2.35	89	3	21.8	2.4
5553270 (9096867)	2.6	<1	123	<0.5	0.48	1.0	0.61	<0.5	0.32	0.30	251	<1	19.3	2.1
5553271 (9096868)	2.8	<1	169	<0.5	0.51	1.2	0.71	0.8	0.33	0.33	280	2	19.9	2.2
5553272 (9096869)	3.3	<1	91.8	<0.5	0.58	1.4	0.86	0.6	0.36	0.33	333	<1	21.2	2.5
5553273 (9096870)	2.8	<1	180	<0.5	0.52	1.1	0.66	1.4	0.30	0.29	247	1	18.0	2.0
5553274 (9096871)	2.7	<1	168	<0.5	0.52	2.0	0.64	3.2	0.30	0.55	247	2	18.7	2.0
5553275 (9096872)	2.4	<1	11.0	<0.5	0.25	6.0	0.09	<0.5	0.11	0.62	7	<1	7.1	0.7
5553276 (9096873)	4.0	1	113	0.5	0.44	6.1	0.35	6.5	0.20	1.49	99	2	13.1	1.4
5553277 (9096874)	4.3	<1	133	0.6	0.49	6.1	0.38	6.4	0.21	1.56	107	2	14.2	1.4
5553278 (9096875)	4.6	64	138	0.6	0.51	6.5	0.37	5.9	0.22	1.56	107	1	14.7	1.5

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18B316284

PROJECT: Gossan Resources

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay, A Hamid Mumin

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Mar 01, 2018      DATE RECEIVED: Feb 27, 2018      DATE REPORTED: May 09, 2018      SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte: Unit: RDL:	Zn ppm 5	Zr ppm 0.5	Au ppm 0.01
5553260 (9096857)		104	62.9	0.08
5553261 (9096858)		116	65.6	0.10
5553262 (9096859)		125	70.3	0.04
5553263 (9096860)		100	60.9	0.09
5553264 (9096861)		117	67.6	<0.01
5553265 (9096862)		105	59.9	0.09
5553266 (9096863)		111	60.7	0.07
5553267 (9096864)		110	67.1	0.05
5553268 (9096865)		119	68.3	0.11
5553269 (9096866)		4420	141	0.19
5553270 (9096867)		120	57.4	0.05
5553271 (9096868)		219	61.5	0.09
5553272 (9096869)		130	75.5	0.06
5553273 (9096870)		96	66.3	0.09
5553274 (9096871)		144	74.0	0.01
5553275 (9096872)		<5	96.9	0.04
5553276 (9096873)		332	113	0.05
5553277 (9096874)		319	119	0.15
5553278 (9096875)		291	109	0.11

Comments: RDL - Reported Detection Limit  
 Please note: Gold Results are not representative due to the sample size

Certified By:



# Certificate of Analysis

AGAT WORK ORDER: 18B316284

PROJECT: Gossan Resources

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay, A Hamid Mumin

## Sieving - % Passing (Crushing)

DATE SAMPLED: Mar 01, 2018

DATE RECEIVED: Feb 27, 2018

DATE REPORTED: May 09, 2018

SAMPLE TYPE: Drill Core

Analyte:	Over 2mm	Under 2mm	Total	Pass %
Unit:	g	g	g	%
Sample ID (AGAT ID)	RDL:	0.01	0.01	0.01
5553260 (9096857)		135	490.6	625.6
				78.5

Comments: RDL - Reported Detection Limit  
Please note: Gold Results are not representative due to the sample size

Certified By:





CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay, A Hamid Mumin

(201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

Parameter	REPLICATE #1				REPLICATE #2											
	Sample ID	Original	Replicate	RPD	Sample ID	Original	Replicate	RPD								
Ag	9096857	< 1	< 1	0.0%	9096869	< 1	< 1	0.0%								
Al	9096857	7.02	7.21	2.7%	9096869	7.65	7.70	0.7%								
As	9096857	9	14		9096869	< 5	< 5	0.0%								
B	9096857	292	244	17.9%	9096869	51	46	10.3%								
Ba	9096857	271	268	1.1%	9096869	122	123	0.8%								
Be	9096857	< 5	< 5	0.0%	9096869	< 5	< 5	0.0%								
Bi	9096857	< 0.1	< 0.1	0.0%	9096869	< 0.1	< 0.1	0.0%								
Ca	9096857	5.64	5.61	0.5%	9096869	5.40	5.45	0.9%								
Cd	9096857	0.3	< 0.2		9096869	< 0.2	< 0.2	0.0%								
Ce	9096857	15.7	16.3	3.8%	9096869	17.5	17.9	2.3%								
Co	9096857	59.1	63.5	7.2%	9096869	55.3	53.2	3.9%								
Cr	9096857	0.009	0.009	0.0%	9096869	0.010	0.010	0.0%								
Cs	9096857	1.1	1.1	0.0%	9096869	0.8	0.8	0.0%								
Cu	9096857	94	77	19.9%	9096869	56	56	0.0%								
Dy	9096857	3.87	4.04	4.3%	9096869	4.38	4.39	0.2%								
Er	9096857	2.50	2.54	1.6%	9096869	2.83	2.81	0.7%								
Eu	9096857	0.931	0.957	2.8%	9096869	1.00	1.05	4.9%								
Fe	9096857	10.3	10.3	0.0%	9096869	10.3	10.3	0.0%								
Ga	9096857	17.4	19.5	11.4%	9096869	20.0	19.0	5.1%								
Gd	9096857	3.57	3.47	2.8%	9096869	3.98	4.03	1.2%								
Ge	9096857	1	1	0.0%	9096869	2	2	0.0%								
Hf	9096857	2	2	0.0%	9096869	2	2	0.0%								
Ho	9096857	0.76	0.79	3.9%	9096869	0.852	0.842	1.2%								
In	9096857	< 0.2	< 0.2	0.0%	9096869	< 0.2	< 0.2	0.0%								
K	9096857	0.602	0.636	5.5%	9096869	0.270	0.286	5.8%								
La	9096857	7.04	7.11	1.0%	9096869	7.4	7.6	2.7%								
Li	9096857	10	11	9.5%	9096869	< 10	< 10	0.0%								
Lu	9096857	0.34	0.35	2.9%	9096869	0.392	0.374	4.7%								
Mg	9096857	1.97	1.92	2.6%	9096869	2.35	2.30	2.2%								
Mn	9096857	2800	2660	5.1%	9096869	2600	2610	0.4%								
Mo	9096857	2	2	0.0%	9096869	< 2	< 2	0.0%								



CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay, A Hamid Mumin

Nb	9096857	3	3	0.0%	9096869	3	3	0.0%								
Nd	9096857	11.0	11.0	0.0%	9096869	12.5	12.7	1.6%								
Ni	9096857	77	74	4.0%	9096869	77	78	1.3%								
P	9096857	0.05	0.05	0.0%	9096869	0.05	0.05	0.0%								
Pb	9096857	19	18	5.4%	9096869	20	25	22.2%								
Pr	9096857	2.14	2.22	3.7%	9096869	2.47	2.54	2.8%								
Rb	9096857	22.1	24.3	9.5%	9096869	10.6	10.7	0.9%								
S	9096857	0.71	0.50		9096869	1.01	1.02	1.0%								
Sb	9096857	0.4	0.4	0.0%	9096869	0.3	0.3	0.0%								
Sc	9096857	35	36	2.8%	9096869	41	41	0.0%								
Si	9096857	23.3	24.1	3.4%	9096869	22.8	23.0	0.9%								
Sm	9096857	2.83	3.06	7.8%	9096869	3.33	3.56	6.7%								
Sn	9096857	< 1	< 1	0.0%	9096869	< 1	1									
Sr	9096857	108	110	1.8%	9096869	91.8	93.5	1.8%								
Ta	9096857	< 0.5	< 0.5	0.0%	9096869	< 0.5	< 0.5	0.0%								
Tb	9096857	0.555	0.558	0.5%	9096869	0.584	0.602	3.0%								
Th	9096857	1.25	1.32	5.4%	9096869	1.41	1.46	3.5%								
Ti	9096857	0.73	0.75	2.7%	9096869	0.86	0.86	0.0%								
Tl	9096857	< 0.5	< 0.5	0.0%	9096869	0.6	0.6	0.0%								
Tm	9096857	0.341	0.348	2.0%	9096869	0.364	0.381	4.6%								
U	9096857	0.35	0.35	0.0%	9096869	0.33	0.33	0.0%								
V	9096857	306	312	1.9%	9096869	333	331	0.6%								
W	9096857	< 1	< 1	0.0%	9096869	< 1	< 1	0.0%								
Y	9096857	18.2	20.7	12.9%	9096869	21.2	22.3	5.1%								
Yb	9096857	2.24	2.31	3.1%	9096869	2.5	2.5	0.0%								
Zn	9096857	104	104	0.0%	9096869	130	135	3.8%								
Zr	9096857	62.9	69.8	10.4%	9096869	75.5	76.6	1.4%								
Au	9096857	0.079	0.079	0.0%	9096869	0.06	0.02									



CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay, A Hamid Mumin

(201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

Parameter	CRM #1 (ref.SY-4)																	
	Expect	Actual	Recovery	Limits														
Al	10.95	10.29	94%	90% - 110%														
Ba	340	327	96%	90% - 110%														
Be	2.6	2.9	113%	90% - 110%														
Ca	5.72	5.54	97%	90% - 110%														
Ce	122	115	95%	90% - 110%														
Co	2.8	2.5	90%	90% - 110%														
Cs	1.5	1.5	99%	90% - 110%														
Cu	7	6	83%	90% - 110%														
Dy	18.2	18.5	102%	90% - 110%														
Er	14.2	14.4	101%	90% - 110%														
Eu	2.0	1.8	90%	90% - 110%														
Fe	4.34	4.13	95%	90% - 110%														
Ga	35	39	110%	90% - 110%														
Gd	14	15	105%	90% - 110%														
Hf	10.6	9.5	90%	90% - 110%														
Ho	4.3	3.9	90%	90% - 110%														
K	1.37	1.34	98%	90% - 110%														
La	58	54	93%	90% - 110%														
Li	37	36	97%	90% - 110%														
Lu	2.1	1.9	90%	90% - 110%														
Mg	0.325	0.304	94%	90% - 110%														
Mn	836	783	94%	90% - 110%														
Nb	13	12	90%	90% - 110%														
Nd	57	60	105%	90% - 110%														
Ni	9	9	97%	90% - 110%														
Pb	10	10	101%	90% - 110%														
Pr	15.0	14	93%	90% - 110%														
Rb	55	50	90%	90% - 110%														
Si	23.3	22	94%	90% - 110%														
Sm	12.7	13.2	104%	90% - 110%														
Sn	7.1	7.4	104%	90% - 110%														



CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay, A Hamid Mumin

Sr	1191	1165	98%	90% - 110%													
Ta	0.9	0.8	85%	90% - 110%													
Tb	2.6	2.4	93%	90% - 110%													
Th	1.4	1.2	82%	90% - 110%													
Ti	0.172	0.175	102%	90% - 110%													
Tm	2.3	2.1	90%	90% - 110%													
U	0.8	0.7	91%	90% - 110%													
V	8	6	71%	90% - 110%													
Y	119	107	90%	90% - 110%													
Yb	14.8	13.4	90%	90% - 110%													
Zn	93	90	97%	90% - 110%													
Zr	517	523	101%	90% - 110%													

## Method Summary

CLIENT NAME: GOSSAN RESOURCES LIMITED

AGAT WORK ORDER: 18B316284

PROJECT: Gossan Resources

ATTENTION TO: Scot Halladay, A Hamid Mumin

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Solid Analysis			
Sample Login Weight	MIN-12009		BALANCE
Ag			ICP/MS
Al	MIN-200-12001		ICP/OES
As	MIN-200-12001		ICP/MS
B	MIN-200-12001		ICP/OES
Ba	MIN-200-12001		ICP/OES
Be	MIN-200-12001		ICP/OES
Bi	MIN-200-12001		ICP-MS
Ca	MIN-200-12001		ICP/OES
Cd	MIN-200-12001		ICP-MS
Ce	MIN-200-12001		ICP-MS
Co	MIN-200-12001		ICP/MS
Cr	MIN-200-12001		ICP/OES
Cs	MIN-200-12001		ICP-MS
Cu	MIN-200-12001		ICP/OES
Dy	MIN-200-12001		ICP-MS
Er	MIN-200-12001		ICP-MS
Eu	MIN-200-12001		ICP-MS
Fe	MIN-200-12001		ICP/OES
Ga	MIN-200-12001		ICP-MS
Gd	MIN-200-12001		ICP-MS
Ge	MIN-200-12001		ICP-MS
Hf	MIN-200-12001		ICP-MS
Ho	MIN-200-12001		ICP-MS
In	MIN-200-12001		ICP-MS
K	MIN-200-12001		ICP/OES
La	MIN-200-12001		ICP-MS
Li	MIN-200-12001		ICP/OES
Lu	MIN-200-12001		ICP-MS
Mg	MIN-200-12001		ICP/OES
Mn	MIN-200-12001		ICP/OES
Mo	MIN-200-12001		ICP/MS
Nb	MIN-200-12001		ICP-MS
Nd	MIN-200-12001		ICP-MS
Ni	MIN-200-12001		ICP/OES
P			ICP/OES
Pb	MIN-200-12001		ICP/MS
Pr	MIN-200-12001		ICP-MS
Rb	MIN-200-12001		ICP/MS
S	MIN-200-12001		ICP/OES
Sb	MIN-200-12001		ICP-MS
Sc	MIN-200-12001		ICP/OES
Si	MIN-200-12001		ICP/OES
Sm	MIN-200-12001		ICP-MS
Sn	MIN-200-12001		ICP/MS
Sr	MIN-200-12001		ICP-OES
Ta	MIN-200-12001		ICP-MS
Tb	MIN-200-12001		ICP-MS
Th	MIN-200-12001		ICP-MS



## Method Summary

CLIENT NAME: GOSSAN RESOURCES LIMITED

AGAT WORK ORDER: 18B316284

PROJECT: Gossan Resources

ATTENTION TO: Scot Halladay, A Hamid Mumin

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Ti	MIN-200-12001		ICP/OES
Tl	MIN-200-12001		ICP-MS
Tm	MIN-200-12001		ICP-MS
U	MIN-200-12001		ICP-MS
V	MIN-200-12001		ICP/OES
W	MIN-200-12001		ICP-MS
Y	MIN-200-12001		ICP-MS
Yb	MIN-200-12001		ICP-MS
Zn	MIN-200-12001		ICP/OES
Zr	MIN-200-12001		ICP-MS
Au			ICP-MS
Over 2mm			BALANCE
Under 2mm			BALANCE
Total			BALANCE
Pass %			BALANCE



CLIENT NAME: GOSSAN RESOURCES LIMITED  
404-171 DONALD STREET  
WINNIPEG, MB R3C 1M4  
204-943-1990

ATTENTION TO: Scot Halladay

PROJECT: SLG-2018

AGAT WORK ORDER: 18B317285

SOLID ANALYSIS REVIEWED BY: Adel Mina, Mining Chief Chemist

DATE REPORTED: Jun 04, 2018

PAGES (INCLUDING COVER): 24

Should you require any information regarding this analysis please contact your client services representative at (905) 501-9998

\*NOTES

All samples are stored at no charge for 90 days. Please contact the lab if you require additional sample storage time.



## Certificate of Analysis

AGAT WORK ORDER: 18B317285

PROJECT: SLG-2018

5623 McADAM ROAD  
 MISSISSAUGA, ONTARIO  
 CANADA L4Z 1N9  
 TEL (905)501-9998  
 FAX (905)501-0589  
<http://www.agatlabs.com>

CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

### (200-) Sample Login Weight

DATE SAMPLED: Mar 05, 2018

DATE RECEIVED: Mar 05, 2018

DATE REPORTED: Jun 04, 2018

SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte: Unit: RDL:	Sample Login Weight kg 0.01
5553360 (9104192)		2.14
5553361 (9104193)		2.22
5553362 (9104194)		1.78
5553363 (9104195)		2.62
5553364 (9104196)		2.86
5553365 (9104197)		3.14
5553366 (9104198)		3.40
5553367 (9104199)		2.50
5553368 (9104200)		0.90
5553369 (9104201)		3.70
5553370 (9104202)		3.28
5553371 (9104203)		3.92
5553372 (9104204)		2.14
5553373 (9104205)		1.34
5553374 (9104206)		2.32
5553375 (9104207)		0.10
5553376 (9104208)		1.72
5553377 (9104209)		2.14
5553378 (9104210)		1.26
5553379 (9104211)		2.66
5553380 (9104212)		0.62
5553381 (9104213)		2.52
5553382 (9104214)		1.98
5553383 (9104215)		0.92
5553384 (9104216)		1.44
5553385 (9104217)		1.98
5553386 (9104218)		2.88
5553387 (9104219)		1.76
5553388 (9104220)		2.52
5553389 (9104221)		2.26
5553390 (9104222)		2.10

Certified By:





## Certificate of Analysis

AGAT WORK ORDER: 18B317285

PROJECT: SLG-2018

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 CANADA L4Z 1N9  
 TEL (905)501-9998  
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<http://www.agatlabs.com>

CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

### (200-) Sample Login Weight

DATE SAMPLED: Mar 05, 2018

DATE RECEIVED: Mar 05, 2018

DATE REPORTED: Jun 04, 2018

SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte: Unit: RDL:	Sample Login Weight kg 0.01
5553391 (9104223)		2.40
5553392 (9104224)		2.56
5553411 (9104225)		1.78
5553412 (9104226)		2.86
5553413 (9104227)		2.70
5553414 (9104228)		3.32
5553415 (9104229)		2.46
5553416 (9104230)		1.30
5553417 (9104231)		1.88
5553418 (9104232)		3.20
5553419 (9104233)		2.92
5553420 (9104234)		1.12
5553421 (9104235)		0.52
5553422 (9104236)		2.62
5553423 (9104237)		2.72
5553424 (9104238)		0.08
5553425 (9104239)		3.80
5553426 (9104240)		0.70
5553427 (9104241)		3.40
5553428 (9104242)		1.68
5553429 (9104243)		3.26
5553430 (9104244)		3.30

Comments: RDL - Reported Detection Limit

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18B317285

PROJECT: SLG-2018

5623 McADAM ROAD  
MISSISSAUGA, ONTARIO  
CANADA L4Z 1N9  
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<http://www.agatlabs.com>

CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Mar 05, 2018

DATE RECEIVED: Mar 05, 2018

DATE REPORTED: Jun 04, 2018

SAMPLE TYPE: Drill Core

Analyte:	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm
RDL:	1	0.01	5	20	0.5	5	0.1	0.05	0.2	0.1	0.5	0.005	0.1	5
5553360 (9104192)	<1	8.30	13	113	472	<5	<0.1	5.27	<0.2	17.0	73.1	0.012	1.5	75
5553361 (9104193)	<1	6.82	11	160	204	<5	<0.1	5.95	<0.2	13.6	58.5	0.011	1.6	75
5553362 (9104194)	<1	6.74	23	343	206	<5	<0.1	6.99	<0.2	14.8	63.9	0.010	1.0	73
5553363 (9104195)	<1	6.97	7	173	149	<5	<0.1	7.02	0.2	14.6	61.9	0.010	0.3	76
5553364 (9104196)	<1	7.03	21	202	122	<5	0.1	7.57	<0.2	15.4	78.4	0.010	0.5	167
5553365 (9104197)	<1	7.73	8	151	204	<5	<0.1	6.95	<0.2	16.4	55.9	0.011	1.0	65
5553366 (9104198)	<1	7.32	<5	224	171	<5	<0.1	6.80	<0.2	15.6	56.8	0.011	0.6	107
5553367 (9104199)	<1	6.14	<5	140	24.9	<5	<0.1	8.02	<0.2	15.5	54.0	0.009	<0.1	129
5553368 (9104200)	<1	1.90	<5	141	4.7	<5	0.2	6.23	0.7	11.4	102	<0.005	<0.1	600
5553369 (9104201)	<1	7.67	7	146	37.0	<5	<0.1	6.68	<0.2	15.9	52.9	0.011	<0.1	34
5553370 (9104202)	<1	7.00	<5	99	31.5	<5	<0.1	6.86	<0.2	15.8	51.1	0.010	<0.1	37
5553371 (9104203)	<1	6.98	<5	79	70.4	<5	<0.1	6.72	<0.2	17.5	52.5	0.011	0.4	124
5553372 (9104204)	<1	7.81	12	49	228	<5	<0.1	4.21	<0.2	17.9	62.0	0.011	1.5	73
5553373 (9104205)	<1	7.12	<5	63	135	<5	<0.1	7.00	<0.2	16.1	55.3	0.010	0.8	123
5553374 (9104206)	<1	5.68	187	160	79.0	<5	0.9	2.55	0.4	17.8	83.3	0.008	0.7	161
5553375 (9104207)	90	6.54	133	84	307	<5	15.6	2.58	30.6	55.2	30.7	0.005	1.2	2820
5553376 (9104208)	<1	8.50	84	743	572	<5	0.6	1.62	0.9	47.6	51.9	0.007	2.2	57
5553377 (9104209)	<1	5.47	7	71	111	<5	0.4	5.95	<0.2	13.1	57.4	0.009	1.6	145
5553378 (9104210)	<1	6.11	<5	75	122	<5	0.4	5.16	<0.2	12.6	59.1	0.009	2.1	152
5553379 (9104211)	<1	6.98	252	197	238	<5	0.8	2.80	0.6	28.3	75.5	0.009	1.2	143
5553380 (9104212)	<1	1.27	<5	<20	18.0	<5	<0.1	<0.05	<0.2	28.1	1.5	0.005	<0.1	<5
5553381 (9104213)	<1	9.19	68	507	797	<5	0.5	0.80	0.9	52.7	63.3	0.008	3.4	40
5553382 (9104214)	<1	9.62	29	454	644	<5	0.5	1.15	0.9	50.1	57.5	0.008	2.8	55
5553383 (9104215)	<1	10.3	90	21	496	<5	0.1	2.12	0.3	25.8	11.8	<0.005	1.8	23
5553384 (9104216)	<1	7.96	20	268	559	<5	0.6	1.09	0.7	51.8	37.7	0.006	2.4	60
5553385 (9104217)	<1	8.47	16	28	563	<5	0.1	1.70	<0.2	42.9	7.1	<0.005	2.0	20
5553386 (9104218)	<1	7.95	58	141	602	<5	0.3	1.27	0.5	55.6	21.8	<0.005	2.3	33
5553387 (9104219)	<1	8.65	7	37	425	<5	0.1	3.26	<0.2	32.0	12.6	0.016	2.7	20
5553388 (9104220)	<1	6.70	180	62	264	<5	0.1	4.12	<0.2	22.6	8.0	<0.005	2.2	28
5553389 (9104221)	<1	6.47	7	91	62.9	<5	<0.1	3.84	<0.2	25.1	9.6	<0.005	0.2	19
5553390 (9104222)	<1	6.77	6	83	155	<5	<0.1	4.04	<0.2	23.9	8.1	<0.005	0.7	20
5553391 (9104223)	<1	6.27	<5	83	70.1	<5	<0.1	4.23	0.4	22.8	13.4	<0.005	1.2	23

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18B317285

PROJECT: SLG-2018

5623 McADAM ROAD  
MISSISSAUGA, ONTARIO  
CANADA L4Z 1N9  
TEL (905)501-9998  
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<http://www.agatlabs.com>

CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Mar 05, 2018

DATE RECEIVED: Mar 05, 2018

DATE REPORTED: Jun 04, 2018

SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte: Unit: RDL:	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr %	Cs ppm	Cu ppm
5553392 (9104224)	<1	5.53	12	85	62.1	<5	<0.1	3.99	0.6	23.2	10.4	<0.005	4.3	25	
5553411 (9104225)	<1	8.80	43	27	313	<5	0.1	2.24	<0.2	27.1	7.4	<0.005	2.1	10	
5553412 (9104226)	<1	7.67	160	285	366	<5	0.5	1.48	0.8	41.4	28.1	0.005	2.8	38	
5553413 (9104227)	<1	7.39	202	96	392	<5	0.6	1.11	0.7	45.7	20.3	<0.005	3.4	31	
5553414 (9104228)	<1	7.85	251	289	449	<5	1.0	1.10	0.8	48.3	32.6	0.006	4.4	47	
5553415 (9104229)	<1	8.20	260	356	435	<5	0.9	1.29	0.9	54.7	42.5	0.008	4.8	56	
5553416 (9104230)	<1	6.44	604	58	146	<5	0.1	7.80	<0.2	21.6	35.0	0.022	4.0	98	
5553417 (9104231)	<1	7.09	13	78	44.0	<5	<0.1	7.41	<0.2	21.8	52.5	0.017	0.5	48	
5553418 (9104232)	<1	7.35	19	68	215	<5	<0.1	7.59	<0.2	46.4	59.9	0.021	4.3	57	
5553419 (9104233)	<1	7.45	<5	60	88.6	<5	<0.1	6.85	<0.2	31.1	51.9	0.031	0.9	58	
5553420 (9104234)	<1	5.64	7	121	122	<5	0.4	5.14	<0.2	15.1	119	0.009	1.4	170	
5553421 (9104235)	<1	1.85	<5	<20	17.3	<5	<0.1	0.05	<0.2	39.1	2.2	0.006	<0.1	<5	
5553422 (9104236)	<1	7.44	40	64	103	<5	<0.1	6.41	0.2	24.5	53.0	0.023	1.0	33	
5553423 (9104237)	<1	6.24	88	78	62.8	<5	<0.1	9.35	0.3	36.4	61.2	0.039	0.3	65	
5553424 (9104238)	90	6.55	127	82	301	<5	15.9	2.62	34.3	56.1	29.5	0.005	1.2	2820	
5553425 (9104239)	<1	7.72	<5	72	111	<5	<0.1	6.71	<0.2	18.3	61.2	0.011	1.0	69	
5553426 (9104240)	<1	6.68	<5	93	40.5	<5	<0.1	7.85	0.2	16.5	49.2	0.011	0.2	132	
5553427 (9104241)	<1	7.41	<5	59	140	<5	<0.1	6.66	<0.2	16.4	54.0	0.012	1.3	55	
5553428 (9104242)	<1	5.66	<5	82	92.8	<5	<0.1	9.11	<0.2	14.8	60.2	0.009	1.0	253	
5553429 (9104243)	<1	7.43	<5	65	140	<5	<0.1	6.31	<0.2	16.3	53.8	0.011	1.1	112	
5553430 (9104244)	<1	6.09	<5	109	29.4	<5	<0.1	8.63	0.2	14.7	64.4	0.010	0.2	175	

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18B317285

PROJECT: SLG-2018

5623 McADAM ROAD  
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<http://www.agatlabs.com>

CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Mar 05, 2018	DATE RECEIVED: Mar 05, 2018					DATE REPORTED: Jun 04, 2018					SAMPLE TYPE: Drill Core				
Analyte:	Dy	Er	Eu	Fe	Ga	Gd	Ge	Hf	Ho	In	K	La	Li	Lu	
Unit:	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	
RDL:	0.05	0.05	0.05	0.01	0.01	0.05	1	1	0.05	0.2	0.05	0.1	10	0.05	
5553360 (9104192)	3.89	2.67	0.87	8.04	24.4	3.47	2	3	0.88	<0.2	0.92	7.2	10	0.43	
5553361 (9104193)	3.34	2.20	0.79	11.1	16.0	2.82	2	2	0.74	<0.2	0.55	5.9	13	0.36	
5553362 (9104194)	3.41	2.36	0.89	13.2	14.3	2.99	2	2	0.78	<0.2	0.39	6.5	13	0.39	
5553363 (9104195)	3.39	2.36	0.86	14.5	14.6	2.98	2	2	0.79	<0.2	0.23	6.6	11	0.36	
5553364 (9104196)	3.51	2.38	0.97	15.3	21.0	3.10	2	2	0.80	<0.2	0.18	7.0	14	0.40	
5553365 (9104197)	3.92	2.57	0.92	12.5	17.0	3.43	2	2	0.87	<0.2	0.37	7.2	15	0.42	
5553366 (9104198)	3.64	2.50	0.91	13.6	16.7	3.26	2	2	0.82	<0.2	0.25	7.0	14	0.41	
5553367 (9104199)	3.46	2.40	0.95	16.2	13.5	3.03	2	2	0.77	<0.2	0.11	7.1	11	0.38	
5553368 (9104200)	2.15	1.62	0.76	22.0	5.01	1.94	1	<1	0.50	<0.2	<0.05	6.1	<10	0.28	
5553369 (9104201)	3.84	2.53	0.95	14.2	16.8	3.32	2	2	0.88	<0.2	0.13	6.9	13	0.43	
5553370 (9104202)	3.74	2.51	0.90	13.6	15.8	3.30	2	2	0.85	<0.2	0.11	7.1	12	0.40	
5553371 (9104203)	3.80	2.58	1.05	13.7	19.8	3.47	3	2	0.82	<0.2	0.18	7.6	13	0.43	
5553372 (9104204)	3.90	2.53	0.91	9.36	21.1	3.42	3	2	0.86	<0.2	0.50	7.9	12	0.40	
5553373 (9104205)	3.77	2.48	1.13	11.5	19.5	3.38	2	2	0.84	<0.2	0.29	7.4	24	0.40	
5553374 (9104206)	2.87	1.79	0.99	16.9	12.2	2.86	2	2	0.62	<0.2	0.23	8.3	20	0.28	
5553375 (9104207)	4.05	2.38	1.18	8.09	20.3	4.59	2	5	0.84	2.8	1.74	26.2	24	0.39	
5553376 (9104208)	2.56	1.56	1.38	5.52	21.5	3.24	2	4	0.51	<0.2	2.27	22.9	<10	0.24	
5553377 (9104209)	2.98	1.90	1.09	13.1	16.7	2.74	2	2	0.65	<0.2	0.36	5.9	<10	0.30	
5553378 (9104210)	3.09	2.16	1.13	13.3	18.0	2.75	2	2	0.71	<0.2	0.35	5.4	12	0.34	
5553379 (9104211)	3.20	1.91	1.32	13.1	21.1	3.28	2	3	0.64	<0.2	0.77	13.4	10	0.32	
5553380 (9104212)	1.19	0.61	0.32	1.02	3.76	1.57	1	3	0.22	<0.2	0.05	13.4	11	0.10	
5553381 (9104213)	3.48	2.07	1.39	4.52	29.9	4.00	2	4	0.71	<0.2	3.34	25.2	10	0.32	
5553382 (9104214)	2.38	1.44	1.57	4.86	24.1	3.54	2	4	0.50	<0.2	3.02	24.5	12	0.25	
5553383 (9104215)	1.67	0.83	1.08	1.94	26.3	2.36	2	5	0.30	<0.2	2.06	12.9	15	0.13	
5553384 (9104216)	2.73	1.61	1.18	4.74	21.3	3.47	2	4	0.56	<0.2	2.43	25.5	<10	0.30	
5553385 (9104217)	1.70	0.89	1.04	1.82	21.3	2.65	2	5	0.34	<0.2	2.08	22.7	11	0.13	
5553386 (9104218)	2.05	1.11	0.91	3.18	22.4	2.97	2	4	0.41	<0.2	2.35	28.5	10	0.21	
5553387 (9104219)	1.38	0.77	0.79	2.15	21.1	2.01	2	3	0.28	<0.2	1.73	16.4	13	0.12	
5553388 (9104220)	1.77	1.19	0.72	10.5	15.9	1.95	2	3	0.40	<0.2	0.70	11.8	15	0.22	
5553389 (9104221)	2.20	1.45	0.80	15.8	16.0	2.20	2	3	0.46	<0.2	0.12	13.0	31	0.25	
5553390 (9104222)	1.72	1.09	1.73	14.4	17.4	1.86	2	3	0.38	<0.2	0.13	12.8	36	0.19	
5553391 (9104223)	1.78	1.18	0.71	14.9	15.5	1.86	2	2	0.39	<0.2	0.09	12.2	25	0.21	

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18B317285

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Mar 05, 2018

DATE RECEIVED: Mar 05, 2018

DATE REPORTED: Jun 04, 2018

SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte: Unit: RDL:	Dy ppm 0.05	Er ppm 0.05	Eu ppm 0.05	Fe % 0.01	Ga ppm 0.01	Gd ppm 0.05	Ge ppm 1	Hf ppm 1	Ho ppm 0.05	In ppm 0.2	K % 0.05	La ppm 0.1	Li ppm 10	Lu ppm 0.05
5553392 (9104224)		1.80	1.24	0.83	14.5	13.8	1.86	1	2	0.40	<0.2	0.30	12.0	14	0.21
5553411 (9104225)		1.28	0.64	0.84	1.81	19.7	1.75	2	3	0.23	<0.2	1.57	13.8	10	0.09
5553412 (9104226)		1.88	1.08	1.09	3.60	20.9	2.64	2	4	0.39	<0.2	1.97	20.4	11	0.19
5553413 (9104227)		2.54	1.41	1.48	2.95	27.1	3.09	2	5	0.53	<0.2	2.14	22.9	<10	0.24
5553414 (9104228)		2.19	1.22	1.21	4.40	24.0	3.15	2	4	0.43	<0.2	2.39	23.5	11	0.25
5553415 (9104229)		3.52	2.05	1.54	5.53	24.2	4.00	2	4	0.71	<0.2	2.36	26.5	14	0.34
5553416 (9104230)		3.76	2.46	1.26	10.7	19.7	3.65	3	2	0.84	<0.2	1.16	9.6	13	0.41
5553417 (9104231)		4.23	2.77	1.18	13.5	19.2	3.89	3	3	0.93	<0.2	0.16	9.5	14	0.44
5553418 (9104232)		4.02	2.55	1.95	12.8	23.4	4.40	3	3	0.85	<0.2	0.59	20.1	17	0.40
5553419 (9104233)		3.83	2.42	1.32	11.5	21.1	4.18	2	3	0.82	<0.2	0.19	14.1	14	0.37
5553420 (9104234)		3.38	2.14	0.73	21.0	15.0	3.12	2	2	0.73	<0.2	0.25	6.7	12	0.35
5553421 (9104235)		1.69	1.00	0.40	1.51	4.99	2.25	1	3	0.35	<0.2	<0.05	18.6	15	0.16
5553422 (9104236)		3.87	2.49	0.98	11.6	19.3	3.91	2	3	0.84	<0.2	0.20	10.7	12	0.41
5553423 (9104237)		3.53	2.12	1.31	14.0	16.3	3.99	2	2	0.73	<0.2	0.11	16.4	15	0.31
5553424 (9104238)		4.37	2.55	1.01	8.02	19.4	4.65	2	5	0.86	2.8	1.67	26.1	24	0.39
5553425 (9104239)		4.34	2.86	1.05	12.7	20.1	3.58	2	3	0.95	<0.2	0.27	7.9	12	0.47
5553426 (9104240)		3.85	2.46	1.02	15.6	20.4	3.31	2	2	0.87	<0.2	0.16	7.3	13	0.40
5553427 (9104241)		3.96	2.68	0.90	11.2	17.8	3.36	2	2	0.90	<0.2	0.34	7.0	15	0.42
5553428 (9104242)		3.19	2.05	0.94	13.0	13.8	2.88	2	2	0.70	<0.2	0.28	6.7	14	0.33
5553429 (9104243)		3.62	2.44	0.91	11.5	17.1	3.20	2	2	0.78	<0.2	0.37	7.0	17	0.39
5553430 (9104244)		3.68	2.49	0.89	16.0	14.3	3.19	2	2	0.81	<0.2	0.15	6.6	14	0.40

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18B317285

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Mar 05, 2018	DATE RECEIVED: Mar 05, 2018					DATE REPORTED: Jun 04, 2018					SAMPLE TYPE: Drill Core				
Analyte:	Mg	Mn	Mo	Nb	Nd	Ni	P	Pb	Pr	Rb	S	Sb	Sc	Si	
Unit:	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	%	
RDL:	0.01	10	2	1	0.1	5	0.01	5	0.05	0.2	0.01	0.1	5	0.01	
5553360 (9104192)	1.77	2410	3	4	11.1	86	0.06	<5	2.31	40.7	0.17	0.2	45	27.0	
5553361 (9104193)	2.05	2910	5	3	8.9	87	0.05	<5	1.83	29.8	0.54	0.3	40	24.5	
5553362 (9104194)	2.21	3780	3	3	9.5	86	0.05	<5	2.03	19.6	0.87	0.4	39	22.8	
5553363 (9104195)	2.24	4520	3	3	9.5	89	0.05	<5	1.96	6.4	1.42	0.3	38	22.3	
5553364 (9104196)	2.32	4280	2	3	10.5	94	0.05	6	2.12	6.9	2.63	0.3	39	17.9	
5553365 (9104197)	2.27	3350	2	4	11.0	89	0.06	<5	2.24	19.3	0.91	0.3	44	21.7	
5553366 (9104198)	2.38	3770	3	3	10.5	88	0.05	<5	2.13	13.5	1.06	0.2	41	21.3	
5553367 (9104199)	2.51	4990	3	3	9.9	75	0.05	<5	2.08	0.8	2.05	0.4	35	20.4	
5553368 (9104200)	1.70	6450	3	<1	6.6	102	0.01	<5	1.41	0.2	9.62	0.2	11	21.0	
5553369 (9104201)	2.62	3880	2	4	10.6	84	0.06	<5	2.20	1.1	0.50	0.4	43	22.4	
5553370 (9104202)	2.48	3680	2	3	10.4	85	0.05	<5	2.19	0.7	0.65	0.3	39	23.9	
5553371 (9104203)	2.50	4240	2	3	11.4	75	0.05	<5	2.36	7.6	2.02	0.3	40	21.1	
5553372 (9104204)	1.86	2250	<2	3	12.0	84	0.06	<5	2.48	25.4	0.77	0.1	39	26.4	
5553373 (9104205)	2.17	3940	2	3	10.5	67	0.05	<5	2.19	15.0	3.31	0.4	39	22.0	
5553374 (9104206)	1.47	1050	5	3	10.5	101	0.04	13	2.31	13.3	9.93	0.9	28	24.9	
5553375 (9104207)	2.37	2270	23	9	26.5	45	0.06	13560	6.65	50.3	3.56	92.3	12	26.3	
5553376 (9104208)	0.43	289	7	6	21.7	113	0.03	24	5.50	92.9	3.28	1.1	17	29.6	
5553377 (9104209)	2.34	3610	5	3	8.7	75	0.03	9	1.79	20.8	7.80	0.6	30	23.0	
5553378 (9104210)	2.89	3260	2	3	8.7	81	0.04	11	1.77	26.7	7.87	0.5	33	23.4	
5553379 (9104211)	1.12	784	6	4	15.0	102	0.04	15	3.53	36.3	8.06	1.0	30	25.1	
5553380 (9104212)	0.01	21	6	3	11.9	9	<0.01	<5	3.20	1.8	0.04	0.2	<5	43.1	
5553381 (9104213)	0.44	127	8	8	24.2	124	0.03	15	6.02	149	2.69	1.4	18	28.5	
5553382 (9104214)	0.57	209	7	7	23.2	137	0.04	16	5.78	125	2.82	1.4	18	30.5	
5553383 (9104215)	1.24	511	3	6	13.3	18	0.06	18	3.15	84.4	0.96	0.4	9	31.3	
5553384 (9104216)	0.39	189	8	7	23.9	123	0.03	21	5.98	105	2.92	1.6	14	30.3	
5553385 (9104217)	0.88	432	4	8	18.1	17	0.07	11	4.85	91.5	1.02	0.5	6	33.2	
5553386 (9104218)	0.61	267	6	8	23.0	76	0.04	12	6.07	97.8	1.92	1.1	9	33.3	
5553387 (9104219)	1.47	1050	3	4	14.6	35	0.05	8	3.66	80.1	1.21	0.3	8	32.1	
5553388 (9104220)	1.76	6000	3	3	10.1	20	0.03	8	2.61	34.2	6.34	0.3	9	26.6	
5553389 (9104221)	1.80	8590	5	3	11.5	24	0.03	<5	2.87	1.9	1.63	0.4	13	25.5	
5553390 (9104222)	1.50	7920	5	4	10.8	20	0.03	<5	2.76	5.4	1.37	0.4	5	27.4	
5553391 (9104223)	1.61	7660	4	3	10.4	28	0.03	<5	2.63	3.9	2.46	0.2	9	24.2	

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18B317285

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Mar 05, 2018

DATE RECEIVED: Mar 05, 2018

DATE REPORTED: Jun 04, 2018

SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte: Unit: RDL:	Mg %	Mn ppm	Mo ppm	Nb ppm	Nd ppm	Ni ppm	P %	Pb ppm	Pr ppm	Rb ppm	S %	Sb ppm	Sc ppm	Si %
5553392 (9104224)		1.46	7390	4	3	10.4	23	0.03	5	2.53	13.4	5.71	0.4	7	24.0
5553411 (9104225)		0.40	478	4	4	11.7	23	0.03	8	3.00	56.3	1.81	0.5	5	31.9
5553412 (9104226)		0.51	306	8	6	18.7	88	0.03	13	4.81	71.3	3.77	1.5	9	31.4
5553413 (9104227)		0.57	234	7	7	20.5	71	0.04	18	5.25	80.9	3.13	1.8	7	33.0
5553414 (9104228)		0.81	289	9	6	22.3	95	0.05	18	5.70	96.9	4.88	2.7	13	28.8
5553415 (9104229)		0.97	350	11	6	25.9	112	0.05	18	6.54	96.3	5.88	2.6	16	27.7
5553416 (9104230)		3.95	4170	4	4	14.1	80	0.05	9	2.95	61.0	5.63	0.4	38	19.7
5553417 (9104231)		3.12	3670	5	4	13.9	80	0.05	<5	2.92	4.4	1.52	0.4	38	23.2
5553418 (9104232)		3.39	3320	3	7	26.3	216	0.09	<5	5.97	33.9	1.48	0.3	35	21.8
5553419 (9104233)		3.65	3040	3	4	18.8	101	0.09	<5	4.15	10.1	1.24	0.3	36	21.3
5553420 (9104234)		1.51	2590	3	3	10.2	145	0.04	5	2.10	16.6	9.78	0.4	33	19.4
5553421 (9104235)		0.02	51	10	5	17.0	11	<0.01	<5	4.55	1.6	0.07	0.4	<5	46.1
5553422 (9104236)		3.24	3220	6	5	15.1	136	0.07	<5	3.32	11.3	0.47	0.5	41	24.9
5553423 (9104237)		4.00	4030	3	4	20.7	232	0.08	<5	4.79	3.8	2.55	0.5	32	20.6
5553424 (9104238)		2.35	2240	24	10	27.1	49	0.06	13300	6.55	52.4	3.52	89.6	12	26.2
5553425 (9104239)		2.24	3210	3	4	12.4	87	0.05	<5	2.53	12.0	1.25	0.4	44	23.9
5553426 (9104240)		2.54	4000	4	4	11.0	75	0.05	<5	2.29	4.9	2.36	0.4	38	20.7
5553427 (9104241)		1.78	3080	3	4	11.0	88	0.05	<5	2.26	15.2	0.61	0.3	41	25.6
5553428 (9104242)		1.73	3460	3	3	9.8	84	0.04	<5	2.01	14.0	2.98	0.3	33	22.8
5553429 (9104243)		2.04	2860	2	4	10.9	86	0.05	<5	2.21	16.6	0.71	0.4	42	25.0
5553430 (9104244)		1.97	4310	3	3	9.9	88	0.04	<5	2.03	1.6	2.50	0.5	40	22.0

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18B317285

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Mar 05, 2018

DATE RECEIVED: Mar 05, 2018

DATE REPORTED: Jun 04, 2018

SAMPLE TYPE: Drill Core

Analyte:	Sm	Sn	Sr	Ta	Tb	Th	Ti	Tl	Tm	U	V	W	Y	Yb
Unit:	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
RDL:	0.1	1	0.1	0.5	0.05	0.1	0.01	0.5	0.05	0.05	5	1	0.5	0.1
Sample ID (AGAT ID)														
5553360 (9104192)	3.0	3	131	<0.5	0.61	1.6	0.80	<0.5	0.40	0.48	342	<1	27.2	2.7
5553361 (9104193)	2.4	2	108	<0.5	0.51	1.2	0.65	<0.5	0.33	0.38	294	<1	23.4	2.3
5553362 (9104194)	2.6	5	115	<0.5	0.54	1.2	0.65	<0.5	0.36	0.42	290	<1	24.3	2.4
5553363 (9104195)	2.5	2	133	<0.5	0.53	1.2	0.66	<0.5	0.38	0.39	295	<1	25.7	2.5
5553364 (9104196)	2.8	2	125	<0.5	0.56	1.3	0.67	<0.5	0.37	0.45	320	<1	25.8	2.5
5553365 (9104197)	2.9	2	145	<0.5	0.60	1.4	0.74	<0.5	0.40	0.41	323	<1	27.4	2.8
5553366 (9104198)	2.8	3	129	<0.5	0.56	1.3	0.69	<0.5	0.38	0.43	310	<1	26.2	2.6
5553367 (9104199)	2.6	2	106	<0.5	0.52	1.1	0.58	<0.5	0.37	0.43	260	<1	25.1	2.5
5553368 (9104200)	1.6	2	51.2	<0.5	0.31	0.3	0.16	<0.5	0.25	0.52	110	1	19.4	1.7
5553369 (9104201)	2.8	3	123	<0.5	0.59	1.4	0.73	<0.5	0.40	0.44	323	<1	27.2	2.8
5553370 (9104202)	2.7	4	112	<0.5	0.56	1.3	0.66	<0.5	0.38	0.39	289	<1	26.4	2.6
5553371 (9104203)	3.0	2	122	<0.5	0.59	1.5	0.66	<0.5	0.39	0.45	297	<1	27.2	2.6
5553372 (9104204)	3.2	3	100	<0.5	0.63	1.5	0.74	1.1	0.39	0.48	305	<1	26.9	2.6
5553373 (9104205)	2.8	3	129	<0.5	0.60	1.3	0.67	0.8	0.38	0.44	294	<1	26.9	2.6
5553374 (9104206)	2.6	2	131	<0.5	0.47	1.6	0.49	1.1	0.27	0.46	216	2	19.9	1.8
5553375 (9104207)	5.0	19	95.1	0.8	0.71	7.5	0.30	4.7	0.38	2.44	93	4	22.3	2.6
5553376 (9104208)	3.9	3	162	0.5	0.46	6.3	0.32	5.5	0.23	1.80	106	1	16.5	1.5
5553377 (9104209)	2.3	2	143	<0.5	0.48	1.1	0.51	2.3	0.28	0.36	227	2	20.5	2.0
5553378 (9104210)	2.3	3	157	<0.5	0.50	1.2	0.57	3.1	0.32	0.38	252	2	22.6	2.2
5553379 (9104211)	3.3	3	183	<0.5	0.53	3.3	0.48	2.5	0.30	0.98	206	2	20.8	2.0
5553380 (9104212)	2.1	2	11.5	<0.5	0.23	5.7	0.06	<0.5	0.09	0.65	7	<1	7.5	0.7
5553381 (9104213)	4.4	4	116	0.6	0.62	7.1	0.34	8.6	0.30	2.06	110	1	24.3	2.0
5553382 (9104214)	4.2	3	154	0.6	0.49	6.5	0.35	7.2	0.23	1.92	109	1	16.3	1.5
5553383 (9104215)	2.7	4	231	<0.5	0.32	2.2	0.41	4.9	0.12	0.81	78	<1	9.9	0.8
5553384 (9104216)	4.2	4	138	0.6	0.52	7.4	0.27	6.3	0.25	2.15	87	1	17.5	1.7
5553385 (9104217)	3.1	3	152	0.7	0.34	7.1	0.26	5.6	0.14	2.13	41	1	11.1	0.9
5553386 (9104218)	3.8	5	142	0.7	0.39	11.9	0.22	5.6	0.18	3.62	53	1	12.9	1.3
5553387 (9104219)	2.6	2	150	<0.5	0.27	4.0	0.27	4.9	0.11	1.24	63	1	9.4	0.8
5553388 (9104220)	2.0	3	143	<0.5	0.29	2.7	0.18	2.5	0.17	0.98	54	<1	12.4	1.3
5553389 (9104221)	2.3	2	54.9	<0.5	0.34	2.8	0.18	<0.5	0.23	1.09	67	<1	16.0	1.6
5553390 (9104222)	2.0	3	105	<0.5	0.29	2.8	0.18	<0.5	0.17	1.04	47	<1	13.4	1.2
5553391 (9104223)	2.1	2	89.1	<0.5	0.31	2.8	0.17	<0.5	0.18	1.11	69	<1	14.0	1.3

Certified By:





## Certificate of Analysis

AGAT WORK ORDER: 18B317285

PROJECT: SLG-2018

5623 McADAM ROAD  
 MISSISSAUGA, ONTARIO  
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 TEL (905)501-9998  
 FAX (905)501-0589  
<http://www.agatlabs.com>

CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Mar 05, 2018

DATE RECEIVED: Mar 05, 2018

DATE REPORTED: Jun 04, 2018

SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte: Unit: RDL:	Sm ppm	Sn ppm	Sr ppm	Ta ppm	Tb ppm	Th ppm	Ti %	Tl ppm	Tm ppm	U ppm	V ppm	W ppm	Y ppm	Yb ppm
		0.1	1	0.1	0.5	0.05	0.1	0.01	0.5	0.05	0.05	5	1	0.5	0.1
5553392 (9104224)		2.0	2	145	<0.5	0.29	2.6	0.15	1.3	0.20	1.11	55	<1	13.7	1.3
5553411 (9104225)		2.1	3	229	<0.5	0.26	3.1	0.19	2.2	0.10	1.08	33	<1	8.2	0.6
5553412 (9104226)		3.4	3	156	0.5	0.37	5.2	0.22	3.0	0.17	1.70	60	<1	12.3	1.2
5553413 (9104227)		3.7	4	133	0.6	0.48	6.5	0.19	3.8	0.22	2.10	47	<1	14.8	1.5
5553414 (9104228)		3.9	4	138	0.5	0.44	6.8	0.24	4.7	0.20	2.10	78	1	12.0	1.5
5553415 (9104229)		4.8	4	165	<0.5	0.62	8.1	0.27	4.5	0.31	2.33	95	1	19.7	2.1
5553416 (9104230)		3.5	3	250	<0.5	0.61	1.7	0.58	1.6	0.37	0.58	264	1	22.1	2.6
5553417 (9104231)		3.5	2	172	<0.5	0.68	1.9	0.63	<0.5	0.42	0.55	277	<1	24.4	2.9
5553418 (9104232)		5.0	2	454	<0.5	0.69	2.9	0.61	0.8	0.37	0.84	256	<1	23.7	2.5
5553419 (9104233)		4.3	2	269	<0.5	0.67	2.9	0.59	<0.5	0.37	0.79	264	<1	22.0	2.4
5553420 (9104234)		2.7	4	170	<0.5	0.54	1.1	0.53	<0.5	0.34	0.34	255	<1	20.0	2.3
5553421 (9104235)		2.9	3	11.3	<0.5	0.32	7.4	0.09	<0.5	0.16	0.83	9	<1	10.0	1.1
5553422 (9104236)		3.6	3	193	<0.5	0.62	2.1	0.68	<0.5	0.38	0.53	297	<1	22.8	2.6
5553423 (9104237)		4.4	6	202	<0.5	0.61	2.6	0.49	<0.5	0.31	0.72	218	<1	21.2	2.1
5553424 (9104238)		5.2	19	92.1	0.8	0.73	7.3	0.30	4.6	0.40	2.40	93	3	21.6	2.7
5553425 (9104239)		3.2	2	216	<0.5	0.65	1.5	0.73	<0.5	0.45	0.44	318	<1	25.7	3.0
5553426 (9104240)		2.9	2	130	<0.5	0.58	1.3	0.63	<0.5	0.39	0.42	290	<1	23.1	2.6
5553427 (9104241)		2.9	2	208	<0.5	0.62	1.3	0.70	<0.5	0.40	0.35	307	<1	24.4	2.8
5553428 (9104242)		2.6	2	192	<0.5	0.51	1.0	0.54	<0.5	0.31	0.31	242	<1	19.5	2.1
5553429 (9104243)		2.9	2	185	<0.5	0.57	1.3	0.70	<0.5	0.37	0.36	316	<1	21.6	2.5
5553430 (9104244)		2.7	5	83.3	<0.5	0.55	1.0	0.57	<0.5	0.38	0.38	271	<1	22.9	2.5

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18B317285

PROJECT: SLG-2018

5623 McADAM ROAD  
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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Mar 05, 2018      DATE RECEIVED: Mar 05, 2018      DATE REPORTED: Jun 04, 2018      SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte: Unit: RDL:	Zn ppm 5	Zr ppm 0.5
5553360 (9104192)		112	95.4
5553361 (9104193)		111	75.0
5553362 (9104194)		118	70.9
5553363 (9104195)		122	75.5
5553364 (9104196)		119	75.6
5553365 (9104197)		120	84.9
5553366 (9104198)		128	79.0
5553367 (9104199)		113	63.6
5553368 (9104200)		77	19.2
5553369 (9104201)		133	84.1
5553370 (9104202)		121	76.6
5553371 (9104203)		132	80.9
5553372 (9104204)		105	87.1
5553373 (9104205)		126	82.4
5553374 (9104206)		181	65.3
5553375 (9104207)		4877	171
5553376 (9104208)		321	134
5553377 (9104209)		93	58.0
5553378 (9104210)		90	69.7
5553379 (9104211)		194	99.5
5553380 (9104212)		<5	100
5553381 (9104213)		368	166
5553382 (9104214)		391	147
5553383 (9104215)		127	225
5553384 (9104216)		308	154
5553385 (9104217)		93	190
5553386 (9104218)		204	153
5553387 (9104219)		80	110
5553388 (9104220)		96	95.7
5553389 (9104221)		143	105
5553390 (9104222)		93	101
5553391 (9104223)		406	87.7

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18B317285

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

(201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Mar 05, 2018      DATE RECEIVED: Mar 05, 2018      DATE REPORTED: Jun 04, 2018      SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte: Unit: RDL:	Zn ppm 5	Zr ppm 0.5
5553392 (9104224)		593	84.8
5553411 (9104225)		88	124
5553412 (9104226)		237	151
5553413 (9104227)		217	176
5553414 (9104228)		266	150
5553415 (9104229)		293	140
5553416 (9104230)		119	84.7
5553417 (9104231)		126	90.8
5553418 (9104232)		124	101
5553419 (9104233)		129	97.5
5553420 (9104234)		76	67.6
5553421 (9104235)		<5	129
5553422 (9104236)		138	97.7
5553423 (9104237)		138	90.9
5553424 (9104238)		4826	172
5553425 (9104239)		121	93.1
5553426 (9104240)		136	81.9
5553427 (9104241)		110	84.4
5553428 (9104242)		94	61.3
5553429 (9104243)		114	78.6
5553430 (9104244)		129	64.9

Comments: RDL - Reported Detection Limit

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18B317285

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

(202-052) Fire Assay - Trace Au, ICP-OES finish (ppm)

DATE SAMPLED: Mar 05, 2018      DATE RECEIVED: Mar 05, 2018      DATE REPORTED: Jun 04, 2018      SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte:	Unit:	RDL:	Value
	Au	ppm	0.001	
5553360 (9104192)				0.004
5553361 (9104193)				<0.001
5553362 (9104194)				<0.001
5553363 (9104195)				<0.001
5553364 (9104196)				0.001
5553365 (9104197)				<0.001
5553366 (9104198)				0.001
5553367 (9104199)				<0.001
5553368 (9104200)				0.002
5553369 (9104201)				<0.001
5553370 (9104202)				<0.001
5553371 (9104203)				<0.001
5553372 (9104204)				<0.001
5553373 (9104205)				<0.001
5553374 (9104206)				0.004
5553375 (9104207)				0.983
5553376 (9104208)				0.002
5553377 (9104209)				0.002
5553378 (9104210)				0.001
5553379 (9104211)				0.004
5553380 (9104212)				<0.001
5553381 (9104213)				<0.001
5553382 (9104214)				0.001
5553383 (9104215)				0.005
5553384 (9104216)				<0.001
5553385 (9104217)				<0.001
5553386 (9104218)				0.010
5553387 (9104219)				<0.001
5553388 (9104220)				<0.001
5553389 (9104221)				0.007
5553390 (9104222)				0.003
5553391 (9104223)				0.012

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18B317285

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

(202-052) Fire Assay - Trace Au, ICP-OES finish (ppm)

DATE SAMPLED: Mar 05, 2018      DATE RECEIVED: Mar 05, 2018      DATE REPORTED: Jun 04, 2018      SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte:	Unit:	RDL:
	Au	ppm	0.001
5553392 (9104224)			<0.001
5553411 (9104225)			<0.001
5553412 (9104226)			0.001
5553413 (9104227)			<0.001
5553414 (9104228)			0.003
5553415 (9104229)			0.016
5553416 (9104230)			0.001
5553417 (9104231)			0.006
5553418 (9104232)			<0.001
5553419 (9104233)			<0.001
5553420 (9104234)			0.004
5553421 (9104235)			<0.001
5553422 (9104236)			<0.001
5553423 (9104237)			0.001
5553424 (9104238)			1.13
5553425 (9104239)			<0.001
5553426 (9104240)			0.001
5553427 (9104241)			<0.001
5553428 (9104242)			<0.001
5553429 (9104243)			0.001
5553430 (9104244)			0.022

Comments: RDL - Reported Detection Limit

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18B317285

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

### Sieving - % Passing (Pulverizing)

DATE SAMPLED: Mar 05, 2018

DATE RECEIVED: Mar 05, 2018

DATE REPORTED: Jun 04, 2018

SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte:		Total	Pass %
	Over 75um	Under 75um		
	Unit:	g	g	%
	RDL:	0.01	0.01	0.01
5553360 (9104192)		3.2	96.8	100
5553361 (9104193)		11.1	88.9	100

Comments: RDL - Reported Detection Limit

Certified By:



CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

(201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

Parameter	REPLICATE #1				REPLICATE #2				REPLICATE #3				REPLICATE #4			
	Sample ID	Original	Replicate	RPD	Sample ID	Original	Replicate	RPD	Sample ID	Original	Replicate	RPD	Sample ID	Original	Replicate	RPD
Ag	9104192	< 1	< 1	0.0%	9104202	< 1	< 1	0.0%	9104217	< 1	< 1	0.0%	9104227	< 1	< 1	0.0%
Al	9104192	8.30	8.13	2.1%	9104202	7.00	6.91	1.3%	9104217	8.47	8.62	1.8%	9104227	7.39	7.63	3.2%
As	9104192	13	10	26.1%	9104202	< 5	< 5	0.0%	9104217	16	13	20.7%	9104227	202	197	2.5%
B	9104192	113	107	5.5%	9104202	99	95	4.1%	9104217	28	33	16.4%	9104227	96	97	1.0%
Ba	9104192	472	449	5.0%	9104202	31.5	31.8	0.9%	9104217	563	558	0.9%	9104227	392	385	1.8%
Be	9104192	< 5	< 5	0.0%	9104202	< 5	< 5	0.0%	9104217	< 5	< 5	0.0%	9104227	< 5	< 5	0.0%
Bi	9104192	< 0.1	< 0.1	0.0%	9104202	< 0.1	< 0.1	0.0%	9104217	0.1	0.1	0.0%	9104227	0.6	0.6	0.0%
Ca	9104192	5.27	5.24	0.6%	9104202	6.86	6.71	2.2%	9104217	1.70	1.72	1.2%	9104227	1.11	1.15	3.5%
Cd	9104192	< 0.2	< 0.2	0.0%	9104202	< 0.2	< 0.2	0.0%	9104217	< 0.2	0.1		9104227	0.7	0.9	25.0%
Ce	9104192	17.0	16.4	3.6%	9104202	15.8	14.7	7.2%	9104217	42.9	48.3	11.8%	9104227	45.7	44.8	2.0%
Co	9104192	73.1	59.6	20.3%	9104202	51.1	50.3	1.6%	9104217	7.1	7.2	1.4%	9104227	20.3	18.9	7.1%
Cr	9104192	0.012	0.012	0.0%	9104202	0.010	0.010	0.0%	9104217	< 0.005	< 0.005	0.0%	9104227	< 0.005	< 0.005	0.0%
Cs	9104192	1.49	1.45	2.7%	9104202	< 0.1	< 0.1	0.0%	9104217	2.0	2.0	0.0%	9104227	3.43	3.47	1.2%
Cu	9104192	75	77	2.6%	9104202	37	39	5.3%	9104217	20	22	9.5%	9104227	31	33	6.3%
Dy	9104192	3.89	3.84	1.3%	9104202	3.74	3.43	8.6%	9104217	1.70	1.78	4.6%	9104227	2.54	2.22	13.4%
Er	9104192	2.67	2.58	3.4%	9104202	2.51	2.36	6.2%	9104217	0.892	0.950	6.3%	9104227	1.41	1.31	7.4%
Eu	9104192	0.867	0.849	2.1%	9104202	0.899	0.855	5.0%	9104217	1.04	1.05	1.0%	9104227	1.48	1.23	18.5%
Fe	9104192	8.04	8.10	0.7%	9104202	13.6	13.3	2.2%	9104217	1.82	1.81	0.6%	9104227	2.95	3.08	4.3%
Ga	9104192	24.4	20.3	18.3%	9104202	15.8	15.0	5.2%	9104217	21.3	21.0	1.4%	9104227	27.1	24.0	12.1%
Gd	9104192	3.47	3.41	1.7%	9104202	3.30	3.03	8.5%	9104217	2.65	2.77	4.4%	9104227	3.09	2.96	4.3%
Ge	9104192	2	2	0.0%	9104202	2	2	0.0%	9104217	2	2	0.0%	9104227	2	2	0.0%
Hf	9104192	3	3	0.0%	9104202	2	2	0.0%	9104217	5	5	0.0%	9104227	5	5	0.0%
Ho	9104192	0.88	0.87	1.1%	9104202	0.849	0.775	9.1%	9104217	0.34	0.34	0.0%	9104227	0.534	0.434	20.7%
In	9104192	< 0.2	< 0.2	0.0%	9104202	< 0.2	< 0.2	0.0%	9104217	< 0.2	< 0.2	0.0%	9104227	< 0.2	< 0.2	0.0%
K	9104192	0.916	0.887	3.2%	9104202	0.109	0.105	3.7%	9104217	2.08	2.15	3.3%	9104227	2.14	2.22	3.7%
La	9104192	7.2	7.2	0.0%	9104202	7.09	6.41	10.1%	9104217	22.7	24.7	8.4%	9104227	22.9	22.7	0.9%
Li	9104192	10	11	9.5%	9104202	12	14	15.4%	9104217	11	12	8.7%	9104227	< 10	< 10	0.0%
Lu	9104192	0.433	0.415	4.2%	9104202	0.402	0.373	7.5%	9104217	0.134	0.142	5.8%	9104227	0.235	0.223	5.2%
Mg	9104192	1.77	1.77	0.0%	9104202	2.48	2.50	0.8%	9104217	0.876	0.850	3.0%	9104227	0.57	0.57	0.0%
Mn	9104192	2410	2450	1.6%	9104202	3680	3680	0.0%	9104217	432	430	0.5%	9104227	234	235	0.4%
Mo	9104192	3	3	0.0%	9104202	2	2	0.0%	9104217	4	4	0.0%	9104227	7	8	13.3%



CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

Nb	9104192	4	4	0.0%	9104202	3	3	0.0%	9104217	8	8	0.0%	9104227	7	7	0.0%
Nd	9104192	11.1	11.0	0.9%	9104202	10.4	9.9	4.9%	9104217	18.1	20.4	11.9%	9104227	20.5	19.7	4.0%
Ni	9104192	86	90	4.5%	9104202	85	83	2.4%	9104217	17	21	21.1%	9104227	71	71	0.0%
P	9104192	0.06	0.06	0.0%	9104202	0.05	0.05	0.0%	9104217	0.07	0.07	0.0%	9104227	0.04	0.04	0.0%
Pb	9104192	< 5	< 5	0.0%	9104202	< 5	< 5	0.0%	9104217	11	11	0.0%	9104227	18	15	18.2%
Pr	9104192	2.31	2.25	2.6%	9104202	2.19	1.98	10.1%	9104217	4.85	5.28	8.5%	9104227	5.25	5.10	2.9%
Rb	9104192	40.7	37.9	7.1%	9104202	0.73	0.78	6.6%	9104217	91.5	91.1	0.4%	9104227	80.9	84.2	4.0%
S	9104192	0.17	0.17	0.0%	9104202	0.65	0.65	0.0%	9104217	1.02	1.01	1.0%	9104227	3.13	3.08	1.6%
Sb	9104192	0.2	0.2	0.0%	9104202	0.3	0.3	0.0%	9104217	0.5	0.5	0.0%	9104227	1.84	1.96	6.3%
Sc	9104192	45	44	2.2%	9104202	39	39	0.0%	9104217	6	6	0.0%	9104227	7	7	0.0%
Si	9104192	27.0	26.0	3.8%	9104202	23.9	23.4	2.1%	9104217	33.2	34.2	3.0%	9104227	33.0	32.6	1.2%
Sm	9104192	2.97	2.91	2.0%	9104202	2.7	2.6	3.8%	9104217	3.13	3.43	9.1%	9104227	3.7	3.6	2.7%
Sn	9104192	3	3	0.0%	9104202	4	3	28.6%	9104217	3	4	28.6%	9104227	4	6	40.0%
Sr	9104192	131	128	2.3%	9104202	112	113	0.9%	9104217	152	145	4.7%	9104227	133	131	1.5%
Ta	9104192	< 0.5	< 0.5	0.0%	9104202	< 0.5	< 0.5	0.0%	9104217	0.7	0.7	0.0%	9104227	0.6	0.6	0.0%
Tb	9104192	0.612	0.618	1.0%	9104202	0.562	0.545	3.1%	9104217	0.34	0.38	11.1%	9104227	0.48	0.41	15.7%
Th	9104192	1.57	1.53	2.6%	9104202	1.3	1.3	0.0%	9104217	7.10	7.68	7.8%	9104227	6.5	6.2	4.7%
Ti	9104192	0.80	0.79	1.3%	9104202	0.659	0.655	0.6%	9104217	0.263	0.270	2.6%	9104227	0.194	0.202	4.0%
Tl	9104192	< 0.5	< 0.5	0.0%	9104202	< 0.5	< 0.5	0.0%	9104217	5.6	5.6	0.0%	9104227	3.75	3.71	1.1%
Tm	9104192	0.40	0.40	0.0%	9104202	0.381	0.362	5.1%	9104217	0.14	0.14	0.0%	9104227	0.22	0.20	9.5%
U	9104192	0.48	0.45	6.5%	9104202	0.39	0.38	2.6%	9104217	2.13	2.15	0.9%	9104227	2.10	1.98	5.9%
V	9104192	342	337	1.5%	9104202	289	286	1.0%	9104217	41	41	0.0%	9104227	47	47	0.0%
W	9104192	< 1	< 1	0.0%	9104202	< 1	< 1	0.0%	9104217	1	1	0.0%	9104227	< 1	< 1	0.0%
Y	9104192	27.2	26.7	1.9%	9104202	26.4	24.7	6.7%	9104217	11.1	11.9	7.0%	9104227	14.8	12.8	14.5%
Yb	9104192	2.72	2.64	3.0%	9104202	2.6	2.5	3.9%	9104217	0.9	0.9	0.0%	9104227	1.5	1.4	6.9%
Zn	9104192	112	110	1.8%	9104202	121	122	0.8%	9104217	93	99	6.3%	9104227	217	225	3.6%
Zr	9104192	95.4	90.6	5.2%	9104202	76.6	74.4	2.9%	9104217	190	182	4.3%	9104227	176	189	7.1%

REPLICATE #5																
Parameter	Sample ID	Original	Replicate	RPD												
Ag	9104242	< 1	< 1	0.0%												
Al	9104242	5.66	5.69	0.5%												
As	9104242	< 5	< 5	0.0%												
B	9104242	82	83	1.2%												
Ba	9104242	92.8	91.5	1.4%												





CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

Be	9104242	< 5	< 5	0.0%																
Bi	9104242	< 0.1	< 0.1	0.0%																
Ca	9104242	9.11	9.26	1.6%																
Cd	9104242	< 0.2	0.2																	
Ce	9104242	14.8	14.0	5.6%																
Co	9104242	60.2	62.9	4.4%																
Cr	9104242	0.009	0.009	0.0%																
Cs	9104242	1.03	1.10	6.6%																
Cu	9104242	253	237	6.5%																
Dy	9104242	3.19	3.23	1.2%																
Er	9104242	2.05	2.17	5.7%																
Eu	9104242	0.935	0.921	1.5%																
Fe	9104242	13.0	13.3	2.3%																
Ga	9104242	13.8	13.7	0.7%																
Gd	9104242	2.88	2.87	0.3%																
Ge	9104242	2	2	0.0%																
Hf	9104242	2	2	0.0%																
Ho	9104242	0.70	0.72	2.8%																
In	9104242	< 0.2	< 0.2	0.0%																
K	9104242	0.28	0.30	6.9%																
La	9104242	6.66	6.53	2.0%																
Li	9104242	14	15	6.9%																
Lu	9104242	0.331	0.336	1.5%																
Mg	9104242	1.73	1.71	1.2%																
Mn	9104242	3460	3420	1.2%																
Mo	9104242	3	3	0.0%																
Nb	9104242	3	3	0.0%																
Nd	9104242	9.8	9.6	2.1%																
Ni	9104242	84	84	0.0%																
P	9104242	0.04	0.04	0.0%																
Pb	9104242	< 5	< 5	0.0%																
Pr	9104242	2.01	1.94	3.5%																
Rb	9104242	14.0	14.2	1.4%																
S	9104242	2.98	3.06	2.6%																



CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

Sb	9104242	0.3	0.3	0.0%												
Sc	9104242	33	33	0.0%												
Si	9104242	22.8	23.0	0.9%												
Sm	9104242	2.59	2.43	6.4%												
Sn	9104242	2	2	0.0%												
Sr	9104242	192	190	1.0%												
Ta	9104242	< 0.5	< 0.5	0.0%												
Tb	9104242	0.508	0.481	5.5%												
Th	9104242	1.0	1.0	0.0%												
Ti	9104242	0.54	0.54	0.0%												
Tl	9104242	< 0.5	< 0.5	0.0%												
Tm	9104242	0.312	0.319	2.2%												
U	9104242	0.31	0.31	0.0%												
V	9104242	242	242	0.0%												
W	9104242	< 1	< 1	0.0%												
Y	9104242	19.5	19.6	0.5%												
Yb	9104242	2.14	2.23	4.1%												
Zn	9104242	94	94	0.0%												
Zr	9104242	61.3	62.3	1.6%												

(202-052) Fire Assay - Trace Au, ICP-OES finish (ppm)

Parameter	REPLICATE #1				REPLICATE #2				REPLICATE #3				REPLICATE #4			
	Sample ID	Original	Replicate	RPD	Sample ID	Original	Replicate	RPD	Sample ID	Original	Replicate	RPD	Sample ID	Original	Replicate	RPD
Au	9104192	0.004	< 0.001		9104202	< 0.001	< 0.001	0.0%	9104217	< 0.001	< 0.001	0.0%	9104227	< 0.001	0.009	
Parameter	REPLICATE #5															
	Sample ID	Original	Replicate	RPD												
Au	9104242	< 0.001	< 0.001	0.0%												



CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

(201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

Parameter	CRM #1 (ref.Till-2)				CRM #2 (ref.1P5Q)				CRM #3 (ref.SY-4)							
	Expect	Actual	Recovery	Limits	Expect	Actual	Recovery	Limits	Expect	Actual	Recovery	Limits				
Al	8.47	8.45	100%	90% - 110%					10.95	11.14	102%	90% - 110%				
As	26	26.4	102%	90% - 110%	25	28	110%	90% - 110%								
Ba	540	549	102%	90% - 110%					340	367	108%	90% - 110%				
Be	4.0	4.1	102%	90% - 110%					2.6	2.9	111%	90% - 110%				
Ca	0.907	0.913	101%	90% - 110%					5.72	6.07	106%	90% - 110%				
Ce	98	97	99%	90% - 110%					122	140	115%	90% - 110%				
Co	15	15.5	104%	90% - 110%	1202	1380	115%	90% - 110%	2.8	2.5	90%	90% - 110%				
Cs									1.5	1.9	124%	90% - 110%				
Cu	150	161	107%	90% - 110%	15414	16065	104%	90% - 110%	7	6	82%	90% - 110%				
Dy									18.2	21.4	118%	90% - 110%				
Er	3.7	3.8	102%	90% - 110%					14.2	16.8	118%	90% - 110%				
Eu	1.0	1.13	113%	90% - 110%					2.0	2.14	107%	90% - 110%				
Fe	3.77	4.09	108%	90% - 110%					4.34	4.73	109%	90% - 110%				
Ga									35	39	110%	90% - 110%				
Gd									14	17	120%	90% - 110%				
Hf	11	10	90%	90% - 110%												
Ho									4.3	5.1	119%	90% - 110%				
K	2.55	2.62	103%	90% - 110%					1.37	1.49	109%	90% - 110%				
La	44	43	97%	90% - 110%					58	66	113%	90% - 110%				
Li	47	47	101%	90% - 110%					37	39	105%	90% - 110%				
Lu	0.6	0.6	99%	90% - 110%					2.1	2.6	126%	90% - 110%				
Mg	1.1	1.1	102%	90% - 110%					0.325	0.333	103%	90% - 110%				
Mn	780	785	101%	90% - 110%					836	909	109%	90% - 110%				
Mo	14	15	110%	90% - 110%												
Nb	20	19	97%	90% - 110%					13	17	128%	90% - 110%				
Nd									57	72	126%	90% - 110%				
Ni	32	41	127%	90% - 110%	23610	24600	104%	90% - 110%	9	8	91%	90% - 110%				
Pb	31	37	119%	90% - 110%	41	49	120%	90% - 110%								
Pr									15.0	17.4	116%	90% - 110%				
Rb	144	150	104%	90% - 110%					55	67	122%	90% - 110%				
Sb	0.8	0.9	116%	90% - 110%												



CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

Sc	12	13	109%	90% - 110%					1.1	0.8	77%	90% - 110%				
Si	28.4	29.2	103%	90% - 110%					23.3	24.3	104%	90% - 110%				
Sm	7.4	7.7	104%	90% - 110%					12.7	15.5	122%	90% - 110%				
Sn									7.1	7.8	110%	90% - 110%				
Sr	144	145	100%	90% - 110%					1191	1309	110%	90% - 110%				
Ta	1.9	1.7	90%	90% - 110%					0.9	1	106%	90% - 110%				
Tb	1.2	1.1	90%	90% - 110%					2.6	3.12	120%	90% - 110%				
Th	18.4	21.5	117%	90% - 110%					1.4	1.6	115%	90% - 110%				
Ti	0.527	0.533	101%	90% - 110%					0.172	0.175	102%	90% - 110%				
Tm									2.3	2.8	122%	90% - 110%				
U	5.7	6.3	111%	90% - 110%												
V	77	83	108%	90% - 110%					8	10	120%	90% - 110%				
W	5	6	111%	90% - 110%												
Y	40	41	102%	90% - 110%					119	131	110%	90% - 110%				
Yb									14.8	18.3	124%	90% - 110%				
Zn	130	127	98%	90% - 110%	90	96	107%	90% - 110%	93	103	111%	90% - 110%				
Zr	390	380	97%	90% - 110%												

(202-052) Fire Assay - Trace Au, ICP-OES finish (ppm)

Parameter	CRM #1 (ref.GS6E)				CRM #2 (ref.1P5Q)				CRM #3 (ref.GSP7L)							
	Expect	Actual	Recovery	Limits	Expect	Actual	Recovery	Limits	Expect	Actual	Recovery	Limits				
Au	6.06	5.87	97%	90% - 110%	1.329	1.45	109%	90% - 110%	0.709	0.768	108%	90% - 110%				



## Method Summary

CLIENT NAME: GOSSAN RESOURCES LIMITED

AGAT WORK ORDER: 18B317285

PROJECT: SLG-2018

ATTENTION TO: Scot Halladay

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Solid Analysis			
Sample Login Weight	MIN-12009		BALANCE
Ag			ICP/MS
Al	MIN-200-12001		ICP/OES
As	MIN-200-12001		ICP/MS
B	MIN-200-12001		ICP/OES
Ba	MIN-200-12001		ICP/OES
Be	MIN-200-12001		ICP/OES
Bi	MIN-200-12001		ICP-MS
Ca	MIN-200-12001		ICP/OES
Cd	MIN-200-12001		ICP-MS
Ce	MIN-200-12001		ICP-MS
Co	MIN-200-12001		ICP/MS
Cr	MIN-200-12001		ICP/OES
Cs	MIN-200-12001		ICP-MS
Cu	MIN-200-12001		ICP/OES
Dy	MIN-200-12001		ICP-MS
Er	MIN-200-12001		ICP-MS
Eu	MIN-200-12001		ICP-MS
Fe	MIN-200-12001		ICP/OES
Ga	MIN-200-12001		ICP-MS
Gd	MIN-200-12001		ICP-MS
Ge	MIN-200-12001		ICP-MS
Hf	MIN-200-12001		ICP-MS
Ho	MIN-200-12001		ICP-MS
In	MIN-200-12001		ICP-MS
K	MIN-200-12001		ICP/OES
La	MIN-200-12001		ICP-MS
Li	MIN-200-12001		ICP/OES
Lu	MIN-200-12001		ICP-MS
Mg	MIN-200-12001		ICP/OES
Mn	MIN-200-12001		ICP/OES
Mo	MIN-200-12001		ICP/MS
Nb	MIN-200-12001		ICP-MS
Nd	MIN-200-12001		ICP-MS
Ni	MIN-200-12001		ICP/OES
P			ICP/OES
Pb	MIN-200-12001		ICP/MS
Pr	MIN-200-12001		ICP-MS
Rb	MIN-200-12001		ICP/MS
S	MIN-200-12001		ICP/OES
Sb	MIN-200-12001		ICP-MS
Sc	MIN-200-12001		ICP/OES
Si	MIN-200-12001		ICP/OES
Sm	MIN-200-12001		ICP-MS
Sn	MIN-200-12001		ICP/MS
Sr	MIN-200-12001		ICP-OES
Ta	MIN-200-12001		ICP-MS
Tb	MIN-200-12001		ICP-MS
Th	MIN-200-12001		ICP-MS



## Method Summary

CLIENT NAME: GOSSAN RESOURCES LIMITED  
 PROJECT: SLG-2018  
 SAMPLING SITE:

AGAT WORK ORDER: 18B317285  
 ATTENTION TO: Scot Halladay  
 SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Ti	MIN-200-12001		ICP/OES
Tl	MIN-200-12001		ICP-MS
Tm	MIN-200-12001		ICP-MS
U	MIN-200-12001		ICP-MS
V	MIN-200-12001		ICP/OES
W	MIN-200-12001		ICP-MS
Y	MIN-200-12001		ICP-MS
Yb	MIN-200-12001		ICP-MS
Zn	MIN-200-12001		ICP/OES
Zr	MIN-200-12001		ICP-MS
Au	MIN-200-12006	BUGBEE, E: A Textbook of Fire Assaying	ICP-OES
Over 75um			BALANCE
Under 75um			BALANCE
Total			BALANCE
Pass %			BALANCE



CLIENT NAME: GOSSAN RESOURCES LIMITED  
404-171 DONALD STREET  
WINNIPEG, MB R3C 1M4  
204-943-1990

ATTENTION TO: Douglas Reeson

PROJECT: SLG-2018

AGAT WORK ORDER: 18B322387

SOLID ANALYSIS REVIEWED BY: Adel Mina, Mining Chief Chemist

DATE REPORTED: May 09, 2018

PAGES (INCLUDING COVER): 21

Should you require any information regarding this analysis please contact your client services representative at (905) 501-9998

\*NOTES

All samples are stored at no charge for 90 days. Please contact the lab if you require additional sample storage time.



## Certificate of Analysis

AGAT WORK ORDER: 18B322387

PROJECT: SLG-2018

5623 McADAM ROAD  
 MISSISSAUGA, ONTARIO  
 CANADA L4Z 1N9  
 TEL (905)501-9998  
 FAX (905)501-0589  
<http://www.agatlabs.com>

CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Douglas Reeson

### (200-) Sample Login Weight

DATE SAMPLED: Mar 21, 2018      DATE RECEIVED: Mar 20, 2018      DATE REPORTED: May 09, 2018      SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte: Unit: RDL:	Sample Login Weight kg 0.01
5553431 (9142534)		3.80
5553432 (9142535)		3.72
5553433 (9142536)		1.88
5553434 (9142537)		2.10
5553435 (9142538)		2.36
5553436 (9142539)		0.08
5553437 (9142540)		2.50
5553438 (9142541)		2.04
5553439 (9142542)		2.36
5553440 (9142543)		2.58
5553441 (9142544)		2.28
5553442 (9142545)		2.64
5553443 (9142546)		1.56
5553444 (9142547)		0.86
5553445 (9142548)		0.66
5553446 (9142549)		2.80
5553447 (9142550)		2.34
5553448 (9142551)		2.34
5553449 (9142552)		2.62
5553450 (9142553)		1.22
5553451 (9142554)		1.28
5553452 (9142555)		2.80
5553453 (9142556)		1.28
5553454 (9142557)		3.26
5553455 (9142558)		3.62
5553456 (9142559)		2.52
5553457 (9142560)		2.54
5553458 (9142561)		1.38
5553459 (9142562)		2.40
5553460 (9142563)		2.66
5553461 (9142564)		1.16

Certified By:





## Certificate of Analysis

AGAT WORK ORDER: 18B322387

PROJECT: SLG-2018

5623 McADAM ROAD  
 MISSISSAUGA, ONTARIO  
 CANADA L4Z 1N9  
 TEL (905)501-9998  
 FAX (905)501-0589  
<http://www.agatlabs.com>

CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Douglas Reeson

### (200-) Sample Login Weight

DATE SAMPLED: Mar 21, 2018      DATE RECEIVED: Mar 20, 2018      DATE REPORTED: May 09, 2018      SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte:	Sample Login Weight
	Unit:	kg
	RDL:	0.01
5553462 (9142565)		.012
5553463 (9142566)		1.48
5553473 (9142567)		1.36
5553474 (9142568)		2.42
5553475 (9142569)		2.56
5553476 (9142570)		4.12
5553477 (9142571)		3.66
5553478 (9142572)		3.48
5553479 (9142573)		3.10
5553480 (9142574)		1.12
5553481 (9142575)		1.04
5553482 (9142576)		2.54
5553483 (9142577)		0.70
5553484 (9142578)		1.82
5553485 (9142579)		0.92
5553486 (9142580)		1.44
5553487 (9142581)		2.42
5553488 (9142582)		0.08
5553489 (9142583)		1.58
5553490 (9142584)		2.96

Comments: RDL - Reported Detection Limit  
 Please note: Gold Results are not representative due to the sample size

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18B322387

PROJECT: SLG-2018

5623 McADAM ROAD  
MISSISSAUGA, ONTARIO  
CANADA L4Z 1N9  
TEL (905)501-9998  
FAX (905)501-0589  
<http://www.agatlabs.com>

CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Douglas Reeson

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Mar 21, 2018

DATE RECEIVED: Mar 20, 2018

DATE REPORTED: May 09, 2018

SAMPLE TYPE: Drill Core

Analyte:	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm
RDL:	1	0.01	5	20	0.5	5	0.1	0.05	0.2	0.1	0.5	0.005	0.1	5
5553431 (9142534)	<1	6.49	9	62	25.4	<5	<0.1	7.18	<0.2	15.5	55.6	0.009	<0.1	127
5553432 (9142535)	<1	6.91	8	76	249	<5	<0.1	6.62	<0.2	16.3	65.4	0.010	2.1	178
5553433 (9142536)	<1	5.81	<5	75	66.9	<5	<0.1	9.69	<0.2	15.6	60.3	0.008	0.3	237
5553434 (9142537)	<1	7.43	<5	61	131	<5	<0.1	5.86	<0.2	17.5	62.6	0.011	0.9	122
5553435 (9142538)	<1	6.92	<5	20	387	<5	<0.1	7.54	<0.2	90.6	39.5	0.053	4.2	41
5553436 (9142539)	90	6.28	119	64	286	<5	15.0	2.37	30.8	51.4	29.2	<0.005	1.0	2620
5553437 (9142540)	<1	7.61	<5	40	198	<5	<0.1	6.15	0.2	18.1	55.4	0.011	1.9	75
5553438 (9142541)	<1	6.89	<5	48	85.2	<5	<0.1	6.76	<0.2	17.0	62.0	0.009	0.6	127
5553439 (9142542)	<1	7.18	<5	50	145	<5	<0.1	6.32	<0.2	16.6	64.1	0.010	0.7	80
5553440 (9142543)	<1	7.25	7	48	167	<5	<0.1	6.51	<0.2	17.0	64.9	0.009	0.7	49
5553441 (9142544)	<1	7.24	<5	65	92.6	<5	<0.1	6.81	<0.2	16.6	68.3	0.010	0.3	184
5553442 (9142545)	<1	7.11	<5	49	123	<5	<0.1	5.46	<0.2	15.6	57.4	0.010	0.5	86
5553443 (9142546)	<1	7.41	<5	39	232	<5	<0.1	6.49	<0.2	16.4	62.2	0.010	0.8	41
5553444 (9142547)	<1	6.85	<5	52	92.6	<5	<0.1	6.35	<0.2	16.3	54.2	0.010	0.3	244
5553445 (9142548)	<1	1.25	<5	<20	9.3	<5	<0.1	0.06	<0.2	27.1	1.4	0.007	<0.1	<5
5553446 (9142549)	<1	7.23	6	39	238	<5	<0.1	6.35	<0.2	16.1	66.0	0.010	0.9	85
5553447 (9142550)	<1	7.13	18	45	174	<5	<0.1	6.07	<0.2	17.3	70.9	0.010	0.7	90
5553448 (9142551)	<1	7.41	12	40	321	<5	<0.1	5.84	<0.2	16.4	62.5	0.010	0.7	66
5553449 (9142552)	<1	7.32	<5	35	342	<5	<0.1	5.88	<0.2	18.2	54.9	0.009	0.8	74
5553450 (9142553)	<1	7.35	<5	67	80.9	<5	<0.1	6.78	<0.2	14.5	53.4	0.010	0.2	123
5553451 (9142554)	<1	7.41	<5	59	92.9	<5	<0.1	6.45	<0.2	16.1	53.7	0.010	0.4	92
5553452 (9142555)	<1	7.52	6	41	221	<5	<0.1	6.22	<0.2	17.1	60.5	0.010	0.6	79
5553453 (9142556)	<1	6.99	<5	59	155	<5	<0.1	6.99	<0.2	16.9	61.3	0.009	0.5	129
5553454 (9142557)	<1	7.50	<5	46	183	<5	<0.1	6.21	0.3	17.2	60.7	0.010	0.5	46
5553455 (9142558)	<1	7.07	<5	59	152	<5	<0.1	7.10	<0.2	16.7	69.0	0.009	0.5	78
5553456 (9142559)	<1	7.25	<5	50	117	<5	<0.1	6.62	<0.2	16.9	66.6	0.009	0.4	68
5553457 (9142560)	<1	7.41	<5	52	135	<5	<0.1	7.16	<0.2	16.3	57.5	0.010	0.3	42
5553458 (9142561)	<1	6.67	<5	69	116	<5	<0.1	7.50	<0.2	17.3	60.8	0.009	0.5	91
5553459 (9142562)	<1	6.96	<5	48	220	<5	<0.1	6.65	<0.2	16.8	64.3	0.009	0.7	80
5553460 (9142563)	<1	7.36	5	43	237	<5	<0.1	6.34	<0.2	16.9	61.4	0.010	0.7	59
5553461 (9142564)	<1	6.20	<5	62	125	<5	0.1	8.07	0.5	15.4	64.1	0.008	0.3	268
5553462 (9142565)	42	3.33	142	116	548	<5	49.4	0.97	227	39.7	192	0.009	1.2	12700

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18B322387

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Douglas Reeson

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Mar 21, 2018

DATE RECEIVED: Mar 20, 2018

DATE REPORTED: May 09, 2018

SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte: Unit: RDL:	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr %	Cs ppm	Cu ppm
5553463 (9142566)		<1	6.32	<5	48	114	<5	<0.1	7.44	0.2	15.7	58.4	0.009	0.4	121
5553473 (9142567)		<1	5.51	<5	118	215	<5	0.5	6.35	1.3	19.9	34.0	0.020	1.2	113
5553474 (9142568)		<1	5.15	<5	207	287	<5	0.8	3.56	2.3	25.8	43.0	0.008	1.2	206
5553475 (9142569)		<1	6.66	<5	113	327	<5	0.1	7.83	<0.2	8.9	73.8	0.022	0.8	110
5553476 (9142570)		<1	6.84	<5	71	757	<5	<0.1	7.10	0.2	8.3	82.3	0.023	0.3	93
5553477 (9142571)		<1	6.82	<5	85	1280	<5	<0.1	7.07	<0.2	7.8	87.0	0.022	0.7	60
5553478 (9142572)		<1	7.05	<5	164	824	<5	<0.1	7.55	<0.2	8.7	74.1	0.020	0.5	76
5553479 (9142573)		<1	7.25	8	171	1330	<5	<0.1	9.05	<0.2	9.5	55.3	0.019	1.2	98
5553480 (9142574)		<1	6.85	7	126	894	<5	0.2	8.15	<0.2	11.8	49.9	0.016	1.8	119
5553481 (9142575)		1	4.93	144	168	441	<5	0.9	3.03	3.8	19.9	153	0.008	1.2	563
5553482 (9142576)		<1	5.41	281	181	236	<5	1.0	1.62	4.0	29.6	62.1	0.008	1.1	316
5553483 (9142577)		2	1.99	<5	<20	16.2	<5	<0.1	<0.05	<0.2	33.4	1.2	0.007	<0.1	<5
5553484 (9142578)		4	4.42	5	169	156	<5	1.4	1.39	6.6	32.5	78.3	0.008	1.2	279
5553485 (9142579)		1	7.17	44	47	318	<5	0.6	7.13	1.1	16.1	40.6	0.015	2.3	172
5553486 (9142580)		1	4.49	11	113	238	<5	0.9	2.83	3.1	21.8	102	0.007	1.2	322
5553487 (9142581)		1	6.11	119	190	360	<5	0.8	3.62	3.0	32.2	60.9	0.012	1.5	260
5553488 (9142582)		84	6.22	115	66	281	<5	15.4	2.38	29.8	52.1	28.7	<0.005	1.1	2640
5553489 (9142583)		<1	5.90	32	122	536	<5	0.3	1.77	1.1	62.8	22.0	<0.005	1.9	125
5553490 (9142584)		<1	5.57	<5	39	535	<5	<0.1	1.43	<0.2	82.5	1.4	<0.005	2.3	16

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18B322387

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Douglas Reeson

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Mar 21, 2018

DATE RECEIVED: Mar 20, 2018

DATE REPORTED: May 09, 2018

SAMPLE TYPE: Drill Core

Analyte:	Dy	Er	Eu	Fe	Ga	Gd	Ge	Hf	Ho	In	K	La	Li	Lu
Unit:	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
RDL:	0.05	0.05	0.05	0.01	0.01	0.05	1	1	0.05	0.2	0.05	0.1	10	0.05
5553431 (9142534)	4.10	2.66	0.94	11.7	16.3	3.53	1	2	0.79	<0.2	0.09	6.8	<10	0.40
5553432 (9142535)	4.21	2.51	0.95	12.4	18.8	3.79	1	2	0.80	<0.2	0.35	7.3	<10	0.39
5553433 (9142536)	3.63	2.30	0.85	15.3	16.4	3.37	2	2	0.71	0.9	0.13	7.4	<10	0.36
5553434 (9142537)	4.55	2.78	1.10	13.2	19.6	4.21	2	2	0.85	<0.2	0.28	7.6	11	0.42
5553435 (9142538)	2.62	1.08	1.59	4.92	16.4	5.64	1	4	0.39	<0.2	1.15	41.3	12	0.13
5553436 (9142539)	4.16	2.46	0.94	7.69	17.7	4.52	1	4	0.74	2.1	1.45	24.7	23	0.36
5553437 (9142540)	3.94	2.47	1.03	8.68	18.9	3.71	2	2	0.75	<0.2	0.43	8.1	10	0.37
5553438 (9142541)	4.13	2.58	0.97	10.6	17.5	3.62	1	2	0.80	<0.2	0.20	7.3	<10	0.40
5553439 (9142542)	4.20	2.71	0.92	11.0	19.9	3.83	2	2	0.81	<0.2	0.27	7.1	<10	0.39
5553440 (9142543)	4.33	2.72	0.93	10.1	19.6	3.83	2	2	0.84	<0.2	0.27	7.3	<10	0.41
5553441 (9142544)	4.26	2.69	1.01	13.1	18.7	3.92	2	2	0.83	<0.2	0.17	7.2	<10	0.42
5553442 (9142545)	3.89	2.41	0.93	11.1	19.3	3.44	2	2	0.72	<0.2	0.22	6.6	10	0.38
5553443 (9142546)	4.15	2.74	0.86	9.22	18.9	3.79	2	2	0.81	<0.2	0.33	6.9	<10	0.37
5553444 (9142547)	3.98	2.59	0.97	11.5	17.9	3.72	2	2	0.78	<0.2	0.17	7.3	<10	0.39
5553445 (9142548)	1.24	0.72	0.30	0.96	2.99	1.61	<1	2	0.24	<0.2	<0.05	12.9	11	0.11
5553446 (9142549)	4.23	2.63	0.89	9.41	19.6	3.61	2	2	0.82	<0.2	0.40	6.9	11	0.39
5553447 (9142550)	4.17	2.66	1.08	10.7	19.5	3.88	2	2	0.82	<0.2	0.26	7.6	<10	0.38
5553448 (9142551)	4.13	2.68	0.93	9.15	18.6	3.84	2	2	0.81	<0.2	0.47	7.0	<10	0.40
5553449 (9142552)	4.30	2.74	1.08	8.20	19.3	4.14	2	2	0.83	<0.2	0.52	7.9	12	0.41
5553450 (9142553)	3.78	2.40	1.01	14.3	19.8	3.45	2	2	0.74	<0.2	0.18	6.3	10	0.36
5553451 (9142554)	4.28	2.74	1.00	11.8	18.2	3.56	2	2	0.80	<0.2	0.23	7.1	10	0.39
5553452 (9142555)	4.16	2.75	1.01	9.44	19.1	4.05	2	2	0.78	<0.2	0.35	7.4	<10	0.38
5553453 (9142556)	4.19	2.62	1.02	12.4	19.6	3.69	2	2	0.84	<0.2	0.29	7.5	<10	0.41
5553454 (9142557)	4.22	2.69	1.03	10.2	19.5	4.00	2	2	0.85	<0.2	0.27	7.5	<10	0.40
5553455 (9142558)	4.13	2.74	1.05	11.8	18.6	3.64	2	2	0.81	<0.2	0.26	7.3	<10	0.40
5553456 (9142559)	4.22	2.58	0.96	10.8	19.8	3.87	2	2	0.82	<0.2	0.21	7.2	10	0.39
5553457 (9142560)	4.26	2.64	0.96	11.1	19.2	3.76	2	2	0.80	<0.2	0.19	6.9	<10	0.40
5553458 (9142561)	4.25	2.70	0.98	14.0	17.6	3.73	2	2	0.77	<0.2	0.23	7.8	<10	0.40
5553459 (9142562)	4.09	2.58	0.94	10.3	20.2	3.67	2	2	0.80	<0.2	0.31	7.3	<10	0.38
5553460 (9142563)	4.25	2.67	0.95	9.89	18.8	3.70	2	2	0.83	<0.2	0.36	7.4	<10	0.41
5553461 (9142564)	3.71	2.41	0.89	13.2	18.1	3.52	2	2	0.74	<0.2	0.19	7.1	<10	0.37
5553462 (9142565)	3.04	1.72	0.62	16.9	25.2	3.48	5	2	0.54	12.5	0.86	19.1	14	0.23

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18B322387

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Douglas Reeson

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Mar 21, 2018

DATE RECEIVED: Mar 20, 2018

DATE REPORTED: May 09, 2018

SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte: Unit: RDL:	Dy ppm 0.05	Er ppm 0.05	Eu ppm 0.05	Fe % 0.01	Ga ppm 0.01	Gd ppm 0.05	Ge ppm 1	Hf ppm 1	Ho ppm 0.05	In ppm 0.2	K % 0.05	La ppm 0.1	Li ppm 10	Lu ppm 0.05
5553463 (9142566)		3.89	2.48	0.96	10.1	17.3	3.52	2	2	0.72	<0.2	0.19	7.0	<10	0.37
5553473 (9142567)		2.24	1.31	0.60	5.93	14.1	2.36	3	2	0.40	<0.2	0.85	9.5	14	0.20
5553474 (9142568)		1.94	1.13	0.62	7.31	14.2	2.21	4	2	0.36	0.3	1.03	12.5	12	0.17
5553475 (9142569)		2.43	1.55	0.52	8.00	13.3	2.07	2	1	0.46	<0.2	0.43	4.0	11	0.21
5553476 (9142570)		2.26	1.48	0.44	8.38	12.6	2.01	2	1	0.46	<0.2	0.24	3.5	11	0.22
5553477 (9142571)		2.43	1.56	0.38	7.32	14.6	2.03	2	1	0.44	<0.2	0.44	3.3	10	0.22
5553478 (9142572)		2.39	1.48	0.44	7.34	15.6	2.17	2	1	0.46	<0.2	0.42	3.8	11	0.22
5553479 (9142573)		2.49	1.66	0.47	6.52	14.9	2.38	1	1	0.48	<0.2	1.17	4.2	16	0.24
5553480 (9142574)		2.74	1.75	0.55	9.04	15.2	2.50	2	1	0.54	<0.2	1.62	5.3	14	0.26
5553481 (9142575)		1.78	1.05	0.59	20.3	12.2	1.98	2	2	0.33	0.4	1.16	9.4	11	0.16
5553482 (9142576)		1.92	1.14	0.77	18.1	15.4	2.38	3	2	0.34	0.5	1.48	14.1	<10	0.20
5553483 (9142577)		1.54	0.92	0.37	1.22	4.08	2.03	<1	3	0.25	<0.2	<0.05	16.2	16	0.13
5553484 (9142578)		2.15	1.09	0.81	21.5	16.5	2.55	3	2	0.36	0.7	1.20	15.3	<10	0.20
5553485 (9142579)		2.72	1.60	0.77	7.95	16.9	2.65	4	2	0.52	<0.2	1.89	7.7	12	0.25
5553486 (9142580)		1.71	1.00	0.72	19.2	13.3	1.99	3	2	0.31	0.4	1.44	10.2	<10	0.18
5553487 (9142581)		2.69	1.48	0.83	11.8	16.0	3.04	3	2	0.47	0.3	2.12	15.2	<10	0.21
5553488 (9142582)		4.02	2.38	1.00	7.59	17.7	4.67	1	4	0.73	2.0	1.45	24.6	22	0.35
5553489 (9142583)		6.15	3.78	1.32	6.97	18.4	6.59	2	7	1.15	<0.2	2.05	28.2	<10	0.56
5553490 (9142584)		8.30	4.97	1.35	4.23	19.2	8.89	2	9	1.58	<0.2	1.63	36.4	12	0.75

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18B322387

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Douglas Reeson

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Mar 21, 2018	DATE RECEIVED: Mar 20, 2018					DATE REPORTED: May 09, 2018					SAMPLE TYPE: Drill Core				
Analyte:	Mg	Mn	Mo	Nb	Nd	Ni	P	Pb	Pr	Rb	S	Sb	Sc	Si	
Unit:	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	%	
RDL:	0.01	10	2	1	0.1	5	0.01	5	0.05	0.2	0.01	0.1	5	0.01	
5553431 (9142534)	2.24	3770	2	3	10.5	77	0.04	<5	2.09	0.3	0.87	0.2	36	20.1	
5553432 (9142535)	2.29	3890	<2	3	11.3	74	0.04	<5	2.17	24.0	0.96	0.4	38	20.1	
5553433 (9142536)	2.32	5960	<2	2	10.3	67	0.04	<5	2.10	3.7	2.17	0.4	31	16.0	
5553434 (9142537)	2.47	3550	<2	3	12.0	118	0.05	<5	2.39	11.8	0.92	0.4	41	20.2	
5553435 (9142538)	5.97	1640	<2	6	47.0	262	0.16	6	10.9	57.1	0.16	0.1	20	21.2	
5553436 (9142539)	2.19	2140	18	8	25.2	39	0.05	14700	6.06	40.7	2.92	81.8	11	25.1	
5553437 (9142540)	2.01	2290	<2	4	11.9	81	0.05	7	2.41	20.7	0.37	0.2	37	22.7	
5553438 (9142541)	2.04	3160	<2	3	11.2	77	0.04	<5	2.21	7.9	0.86	0.3	36	21.3	
5553439 (9142542)	2.24	3130	<2	3	11.0	75	0.05	6	2.28	11.5	0.56	0.4	38	20.9	
5553440 (9142543)	1.95	3090	<2	3	11.6	78	0.05	<5	2.29	13.0	0.33	0.3	38	21.1	
5553441 (9142544)	2.62	3390	<2	3	10.9	79	0.05	<5	2.29	5.1	1.05	0.4	40	19.6	
5553442 (9142545)	2.39	2760	<2	3	10.5	79	0.05	<5	2.11	9.0	0.47	0.4	37	22.2	
5553443 (9142546)	2.09	2710	<2	3	11.0	78	0.05	<5	2.19	16.0	0.21	0.2	39	22.4	
5553444 (9142547)	2.21	3260	<2	3	11.1	72	0.04	<5	2.18	5.1	0.65	0.3	37	20.9	
5553445 (9142548)	0.02	47	6	3	11.6	12	<0.01	<5	2.88	0.7	<0.01	0.3	<5	41.7	
5553446 (9142549)	1.91	2690	<2	3	10.6	75	0.05	<5	2.15	18.7	0.36	0.2	37	22.1	
5553447 (9142550)	2.02	3120	<2	3	11.7	78	0.05	<5	2.28	12.9	0.57	0.3	38	21.9	
5553448 (9142551)	1.94	2560	<2	3	11.4	76	0.05	<5	2.22	18.9	0.49	0.2	39	22.3	
5553449 (9142552)	1.85	2430	<2	4	12.7	71	0.05	<5	2.46	22.0	0.40	0.2	37	22.1	
5553450 (9142553)	2.73	3370	<2	3	10.1	75	0.04	<5	2.00	4.4	1.44	0.2	37	18.1	
5553451 (9142554)	2.27	3120	<2	3	11.2	76	0.05	5	2.23	9.0	0.76	0.2	38	19.9	
5553452 (9142555)	2.02	2740	<2	3	12.1	78	0.05	<5	2.35	13.8	0.32	0.2	36	21.7	
5553453 (9142556)	2.32	3540	<2	3	11.5	73	0.05	<5	2.28	10.7	0.79	0.4	36	19.7	
5553454 (9142557)	2.07	3140	<2	3	11.4	74	0.05	<5	2.32	11.0	0.29	0.4	38	21.9	
5553455 (9142558)	2.26	3150	<2	2	10.9	82	0.05	<5	2.25	10.7	1.29	0.2	36	19.1	
5553456 (9142559)	2.30	2780	<2	3	11.3	77	0.05	<5	2.28	8.8	0.55	0.3	38	21.0	
5553457 (9142560)	2.08	3030	<2	3	11.1	73	0.05	<5	2.23	6.6	0.39	0.2	38	20.5	
5553458 (9142561)	2.32	3460	<2	3	11.8	80	0.04	<5	2.28	9.0	1.67	0.3	36	18.7	
5553459 (9142562)	1.99	2950	<2	3	11.5	74	0.04	<5	2.14	14.8	0.50	0.2	36	21.1	
5553460 (9142563)	2.08	2850	<2	3	11.8	79	0.05	<5	2.27	15.5	0.28	0.2	39	20.2	
5553461 (9142564)	2.31	3710	<2	3	10.4	71	0.04	<5	2.10	6.3	1.49	0.2	33	19.2	
5553462 (9142565)	0.87	889	44	6	19.5	65	0.03	7370	4.56	27.3	17.3	32.5	<5	16.1	

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18B322387

PROJECT: SLG-2018

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<http://www.agatlabs.com>

CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Douglas Reeson

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Mar 21, 2018

DATE RECEIVED: Mar 20, 2018

DATE REPORTED: May 09, 2018

SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte: Unit: RDL:	Mg %	Mn ppm	Mo ppm	Nb ppm	Nd ppm	Ni ppm	P %	Pb ppm	Pr ppm	Rb ppm	S %	Sb ppm	Sc ppm	Si %
		0.01	10	2	1	0.1	5	0.01	5	0.05	0.2	0.01	0.1	5	0.01
5553463 (9142566)		1.92	3180	<2	3	10.4	74	0.04	<5	2.08	8.0	0.70	0.2	33	21.4
5553473 (9142567)		2.67	1480	3	4	10.6	83	0.04	10	2.45	24.9	2.14	0.5	17	25.1
5553474 (9142568)		1.97	962	4	4	12.3	94	0.05	14	3.03	29.6	3.92	1.3	10	27.9
5553475 (9142569)		6.28	1410	<2	2	6.2	269	0.02	<5	1.21	13.4	0.42	0.4	34	21.4
5553476 (9142570)		5.52	2190	<2	2	5.8	341	0.03	<5	1.15	7.4	0.32	0.3	36	22.2
5553477 (9142571)		5.32	1700	3	2	5.6	306	0.03	<5	1.07	17.0	0.23	0.3	37	22.1
5553478 (9142572)		4.88	1930	<2	2	6.0	226	0.03	<5	1.20	15.2	0.27	0.3	36	21.3
5553479 (9142573)		3.77	2210	2	2	6.6	133	0.03	<5	1.26	48.2	0.42	0.3	37	19.0
5553480 (9142574)		3.85	3920	<2	2	7.7	100	0.03	10	1.54	61.6	2.25	0.7	35	18.1
5553481 (9142575)		1.52	2960	3	3	10.1	124	0.03	33	2.36	47.0	12.2	3.4	15	17.1
5553482 (9142576)		0.96	1180	5	4	14.9	113	0.03	41	3.48	58.4	10.5	5.6	12	20.1
5553483 (9142577)		0.01	33	7	4	14.6	10	<0.01	<5	3.68	1.1	0.04	0.3	<5	42.6
5553484 (9142578)		1.02	1270	7	4	15.8	129	0.03	61	3.72	55.0	13.0	8.0	10	18.7
5553485 (9142579)		3.02	4530	4	3	9.4	65	0.04	40	2.01	93.9	4.38	4.7	31	20.1
5553486 (9142580)		1.46	2300	5	3	10.9	124	0.03	47	2.57	54.7	11.5	5.5	12	19.0
5553487 (9142581)		1.90	2040	4	4	16.2	99	0.04	36	3.77	81.1	6.62	4.1	17	22.0
5553488 (9142582)		2.13	2130	18	7	25.3	43	0.05	14400	6.14	41.0	2.93	76.3	11	24.2
5553489 (9142583)		0.98	1250	5	13	32.5	31	0.02	17	7.64	89.7	2.89	1.5	10	27.5
5553490 (9142584)		0.59	1650	4	17	42.4	10	0.01	6	9.98	93.9	0.11	0.4	7	30.5

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18B322387

PROJECT: SLG-2018

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<http://www.agatlabs.com>

CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Douglas Reeson

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Mar 21, 2018

DATE RECEIVED: Mar 20, 2018

DATE REPORTED: May 09, 2018

SAMPLE TYPE: Drill Core

Analyte:	Sm	Sn	Sr	Ta	Tb	Th	Ti	Tl	Tm	U	V	W	Y	Yb
Unit:	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
RDL:	0.1	1	0.1	0.5	0.05	0.1	0.01	0.5	0.05	0.05	5	1	0.5	0.1
5553431 (9142534)	2.9	<1	194	0.9	0.61	1.1	0.58	<0.5	0.36	0.36	269	<1	22.7	2.4
5553432 (9142535)	2.9	<1	126	0.6	0.61	1.2	0.62	<0.5	0.37	0.38	285	<1	22.9	2.3
5553433 (9142536)	2.8	<1	116	<0.5	0.55	1.0	0.52	<0.5	0.33	0.33	239	1	21.8	2.1
5553434 (9142537)	3.3	<1	169	0.5	0.66	1.2	0.67	<0.5	0.37	0.37	301	<1	23.4	2.4
5553435 (9142538)	7.4	1	446	0.5	0.64	5.4	0.32	<0.5	0.13	1.15	127	<1	12.1	0.8
5553436 (9142539)	4.6	14	82.3	1.0	0.69	6.8	0.26	4.0	0.33	2.07	83	3	20.8	2.2
5553437 (9142540)	3.0	<1	391	0.5	0.58	1.3	0.67	<0.5	0.35	0.33	281	<1	21.9	2.2
5553438 (9142541)	2.9	<1	204	<0.5	0.58	1.2	0.61	<0.5	0.36	0.32	268	<1	22.3	2.3
5553439 (9142542)	2.9	<1	141	<0.5	0.61	1.2	0.64	<0.5	0.37	0.33	286	<1	24.6	2.4
5553440 (9142543)	3.0	3	140	0.6	0.62	1.2	0.64	<0.5	0.37	0.34	286	<1	24.5	2.5
5553441 (9142544)	2.9	<1	120	<0.5	0.66	1.2	0.65	<0.5	0.37	0.35	296	<1	24.0	2.5
5553442 (9142545)	2.7	2	137	0.5	0.58	1.2	0.63	<0.5	0.34	0.33	280	<1	21.7	2.2
5553443 (9142546)	2.9	<1	144	<0.5	0.62	1.2	0.65	<0.5	0.37	0.32	286	<1	22.8	2.3
5553444 (9142547)	2.9	<1	121	0.6	0.59	1.1	0.62	<0.5	0.33	0.32	272	<1	22.8	2.3
5553445 (9142548)	1.8	<1	3.3	1.0	0.23	4.6	0.06	<0.5	0.10	0.49	6	<1	6.9	0.7
5553446 (9142549)	2.9	3	127	0.5	0.58	1.2	0.64	<0.5	0.35	0.31	283	<1	22.8	2.4
5553447 (9142550)	3.0	<1	132	0.9	0.60	1.2	0.64	<0.5	0.34	0.33	280	<1	22.9	2.4
5553448 (9142551)	3.0	<1	124	0.5	0.63	1.2	0.65	<0.5	0.36	0.34	288	<1	23.5	2.4
5553449 (9142552)	3.2	<1	130	0.5	0.64	1.3	0.67	<0.5	0.37	0.37	280	<1	23.5	2.4
5553450 (9142553)	2.8	<1	91.2	0.6	0.58	1.2	0.64	<0.5	0.34	0.37	286	<1	22.7	2.2
5553451 (9142554)	2.9	2	133	0.5	0.58	1.3	0.65	<0.5	0.36	0.37	285	<1	23.2	2.4
5553452 (9142555)	3.0	<1	138	<0.5	0.63	1.3	0.67	<0.5	0.34	0.33	288	<1	23.4	2.4
5553453 (9142556)	2.9	<1	106	<0.5	0.60	1.2	0.62	<0.5	0.36	0.34	276	<1	23.1	2.3
5553454 (9142557)	3.0	<1	151	1.5	0.63	1.2	0.67	<0.5	0.36	0.32	289	<1	23.0	2.4
5553455 (9142558)	2.9	<1	152	<0.5	0.63	1.2	0.63	<0.5	0.35	0.35	279	1	23.6	2.4
5553456 (9142559)	3.0	<1	142	<0.5	0.64	1.2	0.65	<0.5	0.34	0.31	287	<1	22.5	2.3
5553457 (9142560)	3.0	1	146	0.5	0.61	1.2	0.65	<0.5	0.35	0.31	289	<1	23.4	2.5
5553458 (9142561)	3.0	<1	108	0.6	0.59	1.1	0.59	<0.5	0.35	0.34	268	<1	22.7	2.4
5553459 (9142562)	2.8	1	135	0.8	0.58	1.1	0.62	<0.5	0.34	0.30	274	<1	23.7	2.3
5553460 (9142563)	2.8	2	149	0.8	0.62	1.2	0.66	<0.5	0.36	0.31	291	<1	22.2	2.4
5553461 (9142564)	2.7	<1	86.7	<0.5	0.56	1.0	0.55	<0.5	0.31	0.33	250	<1	21.8	2.1
5553462 (9142565)	3.8	108	77.9	0.8	0.51	5.2	0.10	5.4	0.23	2.92	51	6	14.1	1.5

Certified By:





## Certificate of Analysis

AGAT WORK ORDER: 18B322387

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Douglas Reeson

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Mar 21, 2018

DATE RECEIVED: Mar 20, 2018

DATE REPORTED: May 09, 2018

SAMPLE TYPE: Drill Core

Analyte:	Sm	Sn	Sr	Ta	Tb	Th	Ti	Tl	Tm	U	V	W	Y	Yb
Unit:	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
RDL:	0.1	1	0.1	0.5	0.05	0.1	0.01	0.5	0.05	0.05	5	1	0.5	0.1
Sample ID (AGAT ID)														
5553463 (9142566)	2.6	<1	122	0.5	0.57	1.1	0.55	<0.5	0.33	0.32	250	<1	21.9	2.2
5553473 (9142567)	2.2	2	117	0.5	0.34	1.8	0.26	<0.5	0.18	0.51	95	2	12.0	1.1
5553474 (9142568)	2.4	4	91.7	0.6	0.32	2.5	0.21	0.6	0.15	0.73	67	<1	10.8	1.0
5553475 (9142569)	1.7	<1	121	<0.5	0.36	0.7	0.34	<0.5	0.20	0.23	194	<1	13.9	1.3
5553476 (9142570)	1.6	4	119	<0.5	0.36	0.7	0.36	<0.5	0.20	0.18	203	<1	13.0	1.3
5553477 (9142571)	1.6	<1	141	<0.5	0.35	0.7	0.35	<0.5	0.21	0.19	206	<1	13.2	1.3
5553478 (9142572)	1.7	4	137	<0.5	0.36	0.7	0.36	<0.5	0.20	0.20	206	<1	13.0	1.3
5553479 (9142573)	1.8	<1	140	0.9	0.38	0.8	0.38	0.6	0.21	0.21	218	<1	14.8	1.4
5553480 (9142574)	2.1	<1	124	<0.5	0.39	0.9	0.35	0.8	0.24	0.27	204	1	15.5	1.5
5553481 (9142575)	1.9	2	77.9	<0.5	0.29	1.8	0.22	1.0	0.14	0.51	103	1	9.4	0.9
5553482 (9142576)	2.7	6	70.4	<0.5	0.35	2.7	0.23	1.2	0.15	0.77	82	1	9.8	1.0
5553483 (9142577)	2.4	<1	9.5	<0.5	0.27	5.5	0.08	<0.5	0.12	0.47	6	<1	8.0	0.8
5553484 (9142578)	2.8	6	53.9	<0.5	0.37	3.6	0.19	1.3	0.15	1.03	72	1	10.6	1.1
5553485 (9142579)	2.2	5	134	<0.5	0.42	1.5	0.36	2.4	0.20	0.44	183	2	14.3	1.4
5553486 (9142580)	2.1	3	83.9	0.7	0.29	2.2	0.19	1.1	0.13	0.67	83	2	9.1	1.0
5553487 (9142581)	3.0	5	132	0.5	0.42	3.0	0.29	1.0	0.20	0.77	116	3	13.6	1.3
5553488 (9142582)	4.9	12	82.7	0.7	0.67	6.7	0.26	3.8	0.32	2.00	84	3	21.3	2.2
5553489 (9142583)	6.9	5	100	0.8	0.98	5.6	0.18	0.6	0.52	1.36	42	2	33.3	3.4
5553490 (9142584)	8.4	1	87.1	1.4	1.32	6.9	0.12	<0.5	0.67	1.62	5	1	45.6	4.5

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18B322387

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Douglas Reeson

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Mar 21, 2018

DATE RECEIVED: Mar 20, 2018

DATE REPORTED: May 09, 2018

SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte: Unit: RDL:	Zn ppm 5	Zr ppm 0.5	Au ppm 0.01
5553431 (9142534)		111	66.2	0.04
5553432 (9142535)		118	71.2	0.05
5553433 (9142536)		115	57.1	0.06
5553434 (9142537)		134	72.5	0.06
5553435 (9142538)		106	133	0.10
5553436 (9142539)		4500	138	0.61
5553437 (9142540)		101	78.3	0.03
5553438 (9142541)		116	67.6	0.09
5553439 (9142542)		119	74.6	0.10
5553440 (9142543)		109	73.9	0.03
5553441 (9142544)		133	69.5	<0.01
5553442 (9142545)		122	72.2	0.06
5553443 (9142546)		102	69.2	0.08
5553444 (9142547)		119	66.4	0.10
5553445 (9142548)		<5	83.7	0.12
5553446 (9142549)		107	71.7	0.10
5553447 (9142550)		113	70.7	0.07
5553448 (9142551)		104	78.3	0.07
5553449 (9142552)		110	80.6	0.12
5553450 (9142553)		151	78.0	0.05
5553451 (9142554)		130	76.6	0.11
5553452 (9142555)		107	75.2	0.01
5553453 (9142556)		134	71.2	0.15
5553454 (9142557)		116	73.1	0.09
5553455 (9142558)		114	69.6	0.04
5553456 (9142559)		118	70.3	0.09
5553457 (9142560)		120	71.1	0.02
5553458 (9142561)		134	65.1	0.02
5553459 (9142562)		116	71.9	0.12
5553460 (9142563)		115	72.3	0.04
5553461 (9142564)		138	60.6	0.07
5553462 (9142565)		83400	72.1	0.21

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18B322387

PROJECT: SLG-2018

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<http://www.agatlabs.com>

CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Douglas Reeson

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Mar 21, 2018      DATE RECEIVED: Mar 20, 2018      DATE REPORTED: May 09, 2018      SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte: Unit: RDL:	Zn ppm 5	Zr ppm 0.5	Au ppm 0.01
5553463 (9142566)		113	64.1	0.01
5553473 (9142567)		502	82.3	0.03
5553474 (9142568)		950	86.3	0.03
5553475 (9142569)		108	41.9	0.04
5553476 (9142570)		90	38.0	0.01
5553477 (9142571)		91	39.3	0.04
5553478 (9142572)		90	40.3	0.05
5553479 (9142573)		88	46.5	0.09
5553480 (9142574)		120	44.4	0.06
5553481 (9142575)		1720	58.3	0.11
5553482 (9142576)		2020	90.8	0.14
5553483 (9142577)		16	84.9	0.04
5553484 (9142578)		2840	88.0	0.11
5553485 (9142579)		574	60.5	0.03
5553486 (9142580)		1330	66.7	0.07
5553487 (9142581)		1220	85.4	0.09
5553488 (9142582)		4370	139	0.51
5553489 (9142583)		506	239	0.13
5553490 (9142584)		94	336	0.13

Comments: RDL - Reported Detection Limit  
 Please note: Gold Results are not representative due to the sample size

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18B322387

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Douglas Reeson

### Sieving - % Passing (Crushing)

DATE SAMPLED: Mar 21, 2018      DATE RECEIVED: Mar 20, 2018      DATE REPORTED: May 09, 2018      SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte:	Over 2mm	Under 2mm	Total	Pass %
	Unit:	g	g	g	%
	RDL:	0.01	0.01	0.01	0.01
5553431 (9142534)		73.1	334.6	407.7	82.07
5553443 (9142546)		184.5	582.5	767	75.95
5553461 (9142564)		73.4	462.6	536	86.31
5553489 (9142583)		47.7	295.8	343.5	86.11

Comments: RDL - Reported Detection Limit  
Please note: Gold Results are not representative due to the sample size

Certified By:



# Certificate of Analysis

AGAT WORK ORDER: 18B322387

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Douglas Reeson

## Sieving - % Passing (Pulverizing)

DATE SAMPLED: Mar 21, 2018      DATE RECEIVED: Mar 20, 2018      DATE REPORTED: May 09, 2018      SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte:		Total	Pass %
	Over 75um	Under 75um		
	Unit:	g	g	%
	RDL:	0.01	0.01	0.01
5553431 (9142534)		3.5	96.5	100
5553460 (9142563)		7.3	92.7	100

Comments: RDL - Reported Detection Limit  
 Please note: Gold Results are not representative due to the sample size

Certified By:



CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Douglas Reeson

(201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

Parameter	REPLICATE #1				REPLICATE #2				REPLICATE #3				REPLICATE #4			
	Sample ID	Original	Replicate	RPD	Sample ID	Original	Replicate	RPD	Sample ID	Original	Replicate	RPD	Sample ID	Original	Replicate	RPD
Ag	9142534	< 1	< 1	0.0%	9142545	< 1	< 1	0.0%	9142560	< 1	< 1	0.0%	9142571	< 1	< 1	0.0%
Al	9142534	6.49	6.33	2.5%	9142545	7.11	7.18	1.0%	9142560	7.41	7.20	2.9%	9142571	6.82	6.90	1.2%
As	9142534	9	< 5		9142545	< 5	< 5	0.0%	9142560	< 5	< 5	0.0%	9142571	< 5	< 5	0.0%
B	9142534	62	63	1.6%	9142545	49	54	9.7%	9142560	52	53	1.9%	9142571	85	79	7.3%
Ba	9142534	25.4	22.6	11.7%	9142545	123	122	0.8%	9142560	135	118	13.4%	9142571	1280	1250	2.4%
Be	9142534	< 5	< 5	0.0%	9142545	< 5	< 5	0.0%	9142560	< 5	< 5	0.0%	9142571	< 5	< 5	0.0%
Bi	9142534	< 0.1	< 0.1	0.0%	9142545	< 0.1	< 0.1	0.0%	9142560	< 0.1	< 0.1	0.0%	9142571	< 0.1	< 0.1	0.0%
Ca	9142534	7.18	7.48	4.1%	9142545	5.46	5.49	0.5%	9142560	7.16	7.03	1.8%	9142571	7.07	7.18	1.5%
Cd	9142534	< 0.2	< 0.2	0.0%	9142545	< 0.2	< 0.2	0.0%	9142560	< 0.2	< 0.2	0.0%	9142571	< 0.2	< 0.2	0.0%
Ce	9142534	15.5	15.6	0.6%	9142545	15.6	16.1	3.2%	9142560	16.3	16.6	1.8%	9142571	7.8	8.4	7.4%
Co	9142534	55.6	57.7	3.7%	9142545	57.4	58.8	2.4%	9142560	57.5	60.2	4.6%	9142571	87.0	89.4	2.7%
Cr	9142534	0.009	0.009	0.0%	9142545	0.010	0.010	0.0%	9142560	0.0098	0.0095	3.1%	9142571	0.0218	0.0211	3.3%
Cs	9142534	< 0.1	< 0.1	0.0%	9142545	0.54	0.55	1.8%	9142560	0.3	0.3	0.0%	9142571	0.7	0.7	0.0%
Cu	9142534	127	127	0.0%	9142545	86	84	2.4%	9142560	42	48	13.3%	9142571	60	58	3.4%
Dy	9142534	4.10	4.02	2.0%	9142545	3.89	3.95	1.5%	9142560	4.26	4.11	3.6%	9142571	2.43	2.39	1.7%
Er	9142534	2.66	2.59	2.7%	9142545	2.41	2.49	3.3%	9142560	2.64	2.58	2.3%	9142571	1.56	1.50	3.9%
Eu	9142534	0.94	0.94	0.0%	9142545	0.926	0.861	7.3%	9142560	0.964	0.973	0.9%	9142571	0.38	0.36	5.4%
Fe	9142534	11.7	11.7	0.0%	9142545	11.1	11.2	0.9%	9142560	11.1	11.6	4.4%	9142571	7.32	7.36	0.5%
Ga	9142534	16.3	15.9	2.5%	9142545	19.3	19.3	0.0%	9142560	19.2	19.6	2.1%	9142571	14.6	14.7	0.7%
Gd	9142534	3.53	3.52	0.3%	9142545	3.44	3.65	5.9%	9142560	3.76	3.87	2.9%	9142571	2.03	2.10	3.4%
Ge	9142534	1	1	0.0%	9142545	2	2	0.0%	9142560	2	2	0.0%	9142571	2	2	0.0%
Hf	9142534	2	2	0.0%	9142545	2	2	0.0%	9142560	2	2	0.0%	9142571	1	1	0.0%
Ho	9142534	0.79	0.79	0.0%	9142545	0.718	0.757	5.3%	9142560	0.800	0.783	2.1%	9142571	0.44	0.47	6.6%
In	9142534	< 0.2	< 0.2	0.0%	9142545	< 0.2	< 0.2	0.0%	9142560	< 0.2	< 0.2	0.0%	9142571	< 0.2	< 0.2	0.0%
K	9142534	0.093	0.085	9.0%	9142545	0.216	0.225	4.1%	9142560	0.195	0.175	10.8%	9142571	0.44	0.44	0.0%
La	9142534	6.80	6.88	1.2%	9142545	6.65	6.80	2.2%	9142560	6.9	7.1	2.9%	9142571	3.3	3.5	5.9%
Li	9142534	< 10	< 10	0.0%	9142545	10	10	0.0%	9142560	< 10	< 10	0.0%	9142571	10	11	9.5%
Lu	9142534	0.401	0.372	7.5%	9142545	0.38	0.38	0.0%	9142560	0.40	0.40	0.0%	9142571	0.22	0.22	0.0%
Mg	9142534	2.24	2.14	4.6%	9142545	2.39	2.36	1.3%	9142560	2.08	2.20	5.6%	9142571	5.32	5.24	1.5%
Mn	9142534	3770	3780	0.3%	9142545	2760	2730	1.1%	9142560	3030	3090	2.0%	9142571	1700	1690	0.6%
Mo	9142534	2	2	0.0%	9142545	< 2	< 2	0.0%	9142560	< 2	< 2	0.0%	9142571	3	2	



CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Douglas Reeson

Nb	9142534	3	2		9142545	3	3	0.0%	9142560	3	3	0.0%	9142571	2	2	0.0%
Nd	9142534	10.5	10.4	1.0%	9142545	10.5	11.0	4.7%	9142560	11.1	12.0	7.8%	9142571	5.6	5.9	5.2%
Ni	9142534	77	73	5.3%	9142545	79	76	3.9%	9142560	73	70	4.2%	9142571	306	304	0.7%
P	9142534	0.04	0.04	0.0%	9142545	0.05	0.05	0.0%	9142560	0.05	0.05	0.0%	9142571	0.026	0.025	3.9%
Pb	9142534	5	5	0.0%	9142545	< 5	< 5	0.0%	9142560	< 5	< 5	0.0%	9142571	< 5	< 5	0.0%
Pr	9142534	2.09	2.16	3.3%	9142545	2.11	2.23	5.5%	9142560	2.23	2.27	1.8%	9142571	1.07	1.13	5.5%
Rb	9142534	0.3	< 0.2		9142545	9.0	8.7	3.4%	9142560	6.59	5.90	11.0%	9142571	17.0	17.2	1.2%
S	9142534	0.875	0.905	3.4%	9142545	0.47	0.47	0.0%	9142560	0.39	0.53		9142571	0.23	0.23	0.0%
Sb	9142534	0.2	0.2	0.0%	9142545	0.4	0.4	0.0%	9142560	0.2	0.3		9142571	0.3	0.3	0.0%
Sc	9142534	36	35	2.8%	9142545	37	37	0.0%	9142560	38	37	2.7%	9142571	37	37	0.0%
Si	9142534	20.1	19.0	5.6%	9142545	22.2	22.7	2.2%	9142560	20.5	18.5	10.3%	9142571	22.1	22.3	0.9%
Sm	9142534	2.90	2.84	2.1%	9142545	2.74	2.93	6.7%	9142560	3.0	3.0	0.0%	9142571	1.6	1.6	0.0%
Sn	9142534	< 1	< 1	0.0%	9142545	2	1		9142560	1	< 1		9142571	< 1	< 1	0.0%
Sr	9142534	194	190	2.1%	9142545	137	138	0.7%	9142560	146	131	10.8%	9142571	141	139	1.4%
Ta	9142534	0.9	0.6		9142545	0.5	0.5	0.0%	9142560	0.5	0.5	0.0%	9142571	< 0.5	< 0.5	0.0%
Tb	9142534	0.61	0.57	6.8%	9142545	0.58	0.57	1.7%	9142560	0.610	0.627	2.7%	9142571	0.347	0.339	2.3%
Th	9142534	1.1	1.1	0.0%	9142545	1.2	1.2	0.0%	9142560	1.2	1.2	0.0%	9142571	0.7	0.7	0.0%
Ti	9142534	0.578	0.561	3.0%	9142545	0.632	0.637	0.8%	9142560	0.654	0.634	3.1%	9142571	0.351	0.356	1.4%
Tl	9142534	< 0.5	< 0.5	0.0%	9142545	< 0.5	< 0.5	0.0%	9142560	< 0.5	< 0.5	0.0%	9142571	< 0.5	< 0.5	0.0%
Tm	9142534	0.362	0.352	2.8%	9142545	0.345	0.315	9.1%	9142560	0.35	0.35	0.0%	9142571	0.21	0.19	10.0%
U	9142534	0.359	0.343	4.6%	9142545	0.33	0.33	0.0%	9142560	0.31	0.31	0.0%	9142571	0.19	0.18	5.4%
V	9142534	269	257	4.6%	9142545	280	277	1.1%	9142560	289	286	1.0%	9142571	206	202	2.0%
W	9142534	< 1	< 1	0.0%	9142545	< 1	1		9142560	< 1	< 1	0.0%	9142571	< 1	< 1	0.0%
Y	9142534	22.7	23.1	1.7%	9142545	21.7	22.0	1.4%	9142560	23.4	22.8	2.6%	9142571	13.2	13.5	2.2%
Yb	9142534	2.39	2.23	6.9%	9142545	2.20	2.28	3.6%	9142560	2.46	2.35	4.6%	9142571	1.3	1.3	0.0%
Zn	9142534	111	104	6.5%	9142545	122	115	5.9%	9142560	120	124	3.3%	9142571	91	88	3.4%
Zr	9142534	66.2	61.7	7.0%	9142545	72.2	72.6	0.6%	9142560	71.1	69.0	3.0%	9142571	39.3	41.5	5.4%
Au	9142534	0.036	0.024		9142545	0.06	0.04		9142560	0.02	0.11		9142571	0.04	0.08	



CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Douglas Reeson

## (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

Parameter	CRM #1 (ref.SU-1b)				CRM #2 (ref.Till-2)				CRM #3 (ref.GBM998-10)				CRM #4 (ref.SY-4)			
	Expect	Actual	Recovery	Limits	Expect	Actual	Recovery	Limits	Expect	Actual	Recovery	Limits	Expect	Actual	Recovery	Limits
Al					8.47	8.26	98%	90% - 110%					10.95	10.9	99%	90% - 110%
As					26	25.8	99%	90% - 110%	25	28	110%	90% - 110%				
Ba					540	526	97%	90% - 110%					340	337	99%	90% - 110%
Be					4.0	3.8	96%	90% - 110%					2.6	2.8	107%	90% - 110%
Ca					0.907	0.867	96%	90% - 110%					5.72	5.78	101%	90% - 110%
Ce					98	100	102%	90% - 110%					122	122	100%	90% - 110%
Co					15	14.0	93%	90% - 110%	1202	1322	110%	90% - 110%	2.8	2.54	91%	90% - 110%
Cr	0.032	0.035	110%	90% - 110%												
Cs													1.5	1.6	106%	90% - 110%
Cu					150	150	100%	90% - 110%	15414	14705	95%	90% - 110%	7	5	74%	90% - 110%
Dy													18.2	19.3	106%	90% - 110%
Er					3.7	3.8	103%	90% - 110%					14.2	15.3	107%	90% - 110%
Eu					1.0	1.09	109%	90% - 110%					2.0	1.8	90%	90% - 110%
Fe					3.77	3.63	96%	90% - 110%					4.34	4.11	95%	90% - 110%
Ga													35	39	110%	90% - 110%
Gd													14	15	110%	90% - 110%
Hf					11	10	90%	90% - 110%					10.6	10.9	102%	90% - 110%
Ho													4.3	4.1	96%	90% - 110%
K					2.55	2.32	91%	90% - 110%					1.37	1.31	95%	90% - 110%
La					44	43	99%	90% - 110%					58	57	99%	90% - 110%
Li					47	46	98%	90% - 110%					37	38	104%	90% - 110%
Lu					0.6	0.5	90%	90% - 110%					2.1	2.20	105%	90% - 110%
Mg					1.1	1.1	99%	90% - 110%					0.325	0.303	93%	90% - 110%
Mn					780	756	97%	90% - 110%					836	803	96%	90% - 110%
Mo					14	15	110%	90% - 110%								
Nb					20	18	90%	90% - 110%					13	12.7	97%	90% - 110%
Nd													57	63	110%	90% - 110%
Ni					32	37.1	116%	90% - 110%	23610	21700	92%	90% - 110%	9	10.6	117%	90% - 110%
Pb					31	31	100%	90% - 110%	41	41	99%	90% - 110%				
Pr													15.0	14.9	100%	90% - 110%
Rb					144	140	97%	90% - 110%					55	52	94%	90% - 110%





CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Douglas Reeson

S	14.14	13.69	97%	90% - 110%												
Sb					0.8	0.8	104%	90% - 110%								
Sc					12	12	101%	90% - 110%								
Si					28.4	26.4	93%	90% - 110%				23.3	21.9	94%	90% - 110%	
Sm					7.4	8.1	110%	90% - 110%				12.7	13.0	103%	90% - 110%	
Sn												7.1	7.3	102%	90% - 110%	
Sr					144	135	94%	90% - 110%				1191	1140	96%	90% - 110%	
Ta					1.9	1.7	90%	90% - 110%				0.9	0.872	97%	90% - 110%	
Tb					1.2	1.1	90%	90% - 110%				2.6	2.67	103%	90% - 110%	
Th					18.4	18.6	101%	90% - 110%				1.4	1.3	93%	90% - 110%	
Ti					0.527	0.485	92%	90% - 110%				0.172	0.159	93%	90% - 110%	
Tm												2.3	2.2	95%	90% - 110%	
U					5.7	5.1	90%	90% - 110%				0.8	0.886	110%	90% - 110%	
V					77	77	100%	90% - 110%				8	10	124%	90% - 110%	
W					5	5	99%	90% - 110%								
Y					40	36	90%	90% - 110%				119	119	100%	90% - 110%	
Yb												14.8	14.1	95%	90% - 110%	
Zn					130	117	90%	90% - 110%	90	87	97%	90% - 110%	93	95	102%	90% - 110%
Zr					390	361	93%	90% - 110%				517	532	103%	90% - 110%	



## Method Summary

CLIENT NAME: GOSSAN RESOURCES LIMITED

AGAT WORK ORDER: 18B322387

PROJECT: SLG-2018

ATTENTION TO: Douglas Reeson

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Solid Analysis			
Sample Login Weight	MIN-12009		BALANCE
Ag			ICP/MS
Al	MIN-200-12001		ICP/OES
As	MIN-200-12001		ICP/MS
B	MIN-200-12001		ICP/OES
Ba	MIN-200-12001		ICP/OES
Be	MIN-200-12001		ICP/OES
Bi	MIN-200-12001		ICP-MS
Ca	MIN-200-12001		ICP/OES
Cd	MIN-200-12001		ICP-MS
Ce	MIN-200-12001		ICP-MS
Co	MIN-200-12001		ICP/MS
Cr	MIN-200-12001		ICP/OES
Cs	MIN-200-12001		ICP-MS
Cu	MIN-200-12001		ICP/OES
Dy	MIN-200-12001		ICP-MS
Er	MIN-200-12001		ICP-MS
Eu	MIN-200-12001		ICP-MS
Fe	MIN-200-12001		ICP/OES
Ga	MIN-200-12001		ICP-MS
Gd	MIN-200-12001		ICP-MS
Ge	MIN-200-12001		ICP-MS
Hf	MIN-200-12001		ICP-MS
Ho	MIN-200-12001		ICP-MS
In	MIN-200-12001		ICP-MS
K	MIN-200-12001		ICP/OES
La	MIN-200-12001		ICP-MS
Li	MIN-200-12001		ICP/OES
Lu	MIN-200-12001		ICP-MS
Mg	MIN-200-12001		ICP/OES
Mn	MIN-200-12001		ICP/OES
Mo	MIN-200-12001		ICP/MS
Nb	MIN-200-12001		ICP-MS
Nd	MIN-200-12001		ICP-MS
Ni	MIN-200-12001		ICP/OES
P			ICP/OES
Pb	MIN-200-12001		ICP/MS
Pr	MIN-200-12001		ICP-MS
Rb	MIN-200-12001		ICP/MS
S	MIN-200-12001		ICP/OES
Sb	MIN-200-12001		ICP-MS
Sc	MIN-200-12001		ICP/OES
Si	MIN-200-12001		ICP/OES
Sm	MIN-200-12001		ICP-MS
Sn	MIN-200-12001		ICP/MS
Sr	MIN-200-12001		ICP-OES
Ta	MIN-200-12001		ICP-MS
Tb	MIN-200-12001		ICP-MS
Th	MIN-200-12001		ICP-MS



## Method Summary

CLIENT NAME: GOSSAN RESOURCES LIMITED

AGAT WORK ORDER: 18B322387

PROJECT: SLG-2018

ATTENTION TO: Douglas Reeson

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Ti	MIN-200-12001		ICP/OES
Tl	MIN-200-12001		ICP-MS
Tm	MIN-200-12001		ICP-MS
U	MIN-200-12001		ICP-MS
V	MIN-200-12001		ICP/OES
W	MIN-200-12001		ICP-MS
Y	MIN-200-12001		ICP-MS
Yb	MIN-200-12001		ICP-MS
Zn	MIN-200-12001		ICP/OES
Zr	MIN-200-12001		ICP-MS
Au			ICP-MS
Over 2mm			BALANCE
Under 2mm			BALANCE
Total			BALANCE
Pass %			BALANCE
Over 75um			BALANCE
Under 75um			BALANCE



CLIENT NAME: GOSSAN RESOURCES LIMITED  
404-171 DONALD STREET  
WINNIPEG, MB R3C 1M4  
204-943-1990

ATTENTION TO: Scot Halladay, Hamid Mumin

PROJECT: SLG-2018

AGAT WORK ORDER: 18T324062

SOLID ANALYSIS REVIEWED BY: Adel Mina, Mining Chief Chemist

DATE REPORTED: Jun 04, 2018

PAGES (INCLUDING COVER): 23

Should you require any information regarding this analysis please contact your client services representative at (905) 501-9998

\*NOTES

All samples are stored at no charge for 90 days. Please contact the lab if you require additional sample storage time.



## Certificate of Analysis

AGAT WORK ORDER: 18T324062

PROJECT: SLG-2018

5623 McADAM ROAD  
 MISSISSAUGA, ONTARIO  
 CANADA L4Z 1N9  
 TEL (905)501-9998  
 FAX (905)501-0589  
<http://www.agatlabs.com>

CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay, Hamid Mumin

### (200-) Sample Login Weight

DATE SAMPLED: Mar 27, 2018      DATE RECEIVED: Mar 28, 2018      DATE REPORTED: Jun 04, 2018      SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte: Unit: RDL:	Sample Login Weight kg 0.01
5553541 (9152874)		0.90
5553542 (9152875)		2.84
5553543 (9152876)		2.44
5553544 (9152877)		1.48
5553545 (9152878)		3.14
5553546 (9152879)		2.22
5553547 (9152880)		2.42
5553548 (9152881)		3.30
5553549 (9152882)		0.64
5553550 (9152883)		3.30
5553551 (9152884)		2.38
5553552 (9152885)		2.30
5553553 (9152886)		2.62
5553554 (9152887)		2.90
5553555 (9152888)		2.44
5553556 (9152889)		0.08
5553557 (9152890)		2.20
5553558 (9152891)		3.60
5553559 (9152892)		3.30
5553560 (9152893)		1.70
5553561 (9152894)		1.92
5553562 (9152895)		2.30
5553563 (9152896)		2.16
5553564 (9152897)		2.96
5553565 (9152898)		2.62
5553566 (9152899)		2.06
5553567 (9152900)		2.20
5553568 (9152901)		2.34
5553569 (9152902)		2.10
5553570 (9152903)		2.26
5553571 (9152904)		2.60

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18T324062

PROJECT: SLG-2018

5623 McADAM ROAD  
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<http://www.agatlabs.com>

CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay, Hamid Mumin

### (200-) Sample Login Weight

DATE SAMPLED: Mar 27, 2018      DATE RECEIVED: Mar 28, 2018      DATE REPORTED: Jun 04, 2018      SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte:	Sample Login Weight
	Unit:	kg
	RDL:	0.01
5553572 (9152905)		2.08
5553573 (9152906)		3.90
5553574 (9152907)		3.50
5553575 (9152908)		0.14
5553576 (9152909)		1.02
5553577 (9152910)		1.80
5553578 (9152911)		2.26
5553579 (9152912)		3.40

Comments: RDL - Reported Detection Limit

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18T324062

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay, Hamid Mumin

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Mar 27, 2018	DATE RECEIVED: Mar 28, 2018					DATE REPORTED: Jun 04, 2018					SAMPLE TYPE: Drill Core				
Analyte:	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	
RDL:	1	0.01	5	20	0.5	5	0.1	0.05	0.2	0.1	0.5	0.005	0.1	5	
5553541 (9152874)	<1	7.11	7	179	239	<5	0.7	2.23	3.3	46.9	61.1	0.005	1.6	252	
5553542 (9152875)	<1	7.65	<5	84	223	<5	0.4	2.35	0.8	59.1	18.0	<0.005	2.5	82	
5553543 (9152876)	<1	6.94	<5	129	219	<5	0.7	2.45	1.1	38.1	54.4	0.005	1.6	256	
5553544 (9152877)	<1	7.33	<5	131	203	<5	0.3	2.52	0.4	70.5	16.1	<0.005	2.0	76	
5553545 (9152878)	<1	6.16	23	93	268	<5	0.5	1.87	1.8	47.4	30.2	<0.005	1.9	137	
5553546 (9152879)	<1	5.96	47	94	282	<5	0.5	2.39	1.8	45.1	61.4	<0.005	1.7	133	
5553547 (9152880)	<1	6.29	<5	36	265	<5	0.2	2.61	1.0	48.2	10.9	<0.005	1.8	47	
5553548 (9152881)	<1	6.10	<5	83	264	<5	0.4	2.89	4.8	36.8	25.2	<0.005	1.8	90	
5553549 (9152882)	<1	2.22	<5	23	50.4	<5	<0.1	0.10	<0.2	41.8	2.7	0.005	0.2	<5	
5553550 (9152883)	<1	5.72	14	39	355	<5	0.2	6.56	0.6	39.9	41.2	0.016	1.5	56	
5553551 (9152884)	<1	5.77	<5	20	277	<5	0.1	9.85	<0.2	7.4	86.8	0.019	0.9	119	
5553552 (9152885)	<1	6.35	5	30	99.5	<5	<0.1	8.25	<0.2	8.3	84.1	0.021	0.5	109	
5553553 (9152886)	<1	6.80	<5	68	342	<5	<0.1	8.95	<0.2	10.5	56.3	0.014	1.1	83	
5553554 (9152887)	<1	6.08	<5	115	427	<5	0.2	3.97	<0.2	39.3	22.8	<0.005	1.1	108	
5553555 (9152888)	<1	6.34	<5	135	589	<5	0.4	3.98	0.8	35.7	41.6	0.006	1.5	155	
5553556 (9152889)	85	6.13	130	53	276	<5	12.8	2.40	30.3	56.3	31.9	<0.005	1.1	2680	
5553557 (9152890)	1	5.49	<5	49	283	<5	0.3	8.46	<0.2	6.6	75.4	0.022	1.0	14	
5553558 (9152891)	<1	6.45	22	109	592	<5	0.1	3.34	<0.2	51.3	43.4	<0.005	1.8	206	
5553559 (9152892)	<1	7.45	104	70	567	<5	<0.1	8.06	<0.2	19.5	48.2	0.016	1.9	298	
5553560 (9152893)	<1	6.76	<5	307	1510	<5	0.3	7.16	0.7	15.0	50.3	0.015	1.2	226	
5553561 (9152894)	<1	7.49	52	29	509	<5	0.2	7.37	<0.2	10.7	48.1	0.016	1.2	141	
5553562 (9152895)	<1	6.38	16	24	366	<5	0.8	6.98	2.2	15.7	53.0	0.012	1.4	269	
5553563 (9152896)	<1	6.99	6	<20	208	<5	0.1	8.77	<0.2	10.4	45.2	0.015	1.0	54	
5553564 (9152897)	<1	5.32	59	213	381	<5	0.7	4.07	3.2	24.2	55.3	0.007	1.3	336	
5553565 (9152898)	<1	5.58	75	910	285	<5	0.7	2.92	2.7	40.3	55.3	0.009	1.1	292	
5553566 (9152899)	<1	6.22	22	41	377	<5	0.2	4.80	0.5	45.7	37.4	0.005	2.3	92	
5553567 (9152900)	<1	5.65	<5	<20	703	<5	<0.1	4.09	<0.2	39.9	26.0	0.014	4.7	100	
5553568 (9152901)	<1	6.14	<5	36	463	<5	0.1	2.67	<0.2	66.3	18.3	<0.005	3.3	50	
5553569 (9152902)	<1	5.44	<5	94	431	<5	0.2	1.40	<0.2	84.1	5.8	<0.005	3.7	48	
5553570 (9152903)	1	5.39	<5	39	544	<5	0.2	1.87	0.6	78.8	7.7	<0.005	3.0	54	
5553571 (9152904)	<1	4.47	<5	35	227	<5	0.2	2.24	<0.2	67.8	7.1	<0.005	1.8	43	
5553572 (9152905)	<1	4.97	<5	26	366	<5	0.2	1.97	<0.2	74.2	7.8	<0.005	2.9	61	

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## Certificate of Analysis

AGAT WORK ORDER: 18T324062

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay, Hamid Mumin

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Mar 27, 2018

DATE RECEIVED: Mar 28, 2018

DATE REPORTED: Jun 04, 2018

SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte: Unit: RDL:	Ag ppm 1	Al % 0.01	As ppm 5	B ppm 20	Ba ppm 0.5	Be ppm 5	Bi ppm 0.1	Ca % 0.05	Cd ppm 0.2	Ce ppm 0.1	Co ppm 0.5	Cr % 0.005	Cs ppm 0.1	Cu ppm 5
5553573 (9152906)		<1	5.69	<5	<20	437	<5	0.1	1.64	<0.2	79.2	6.8	<0.005	2.4	24
5553574 (9152907)		<1	7.62	<5	<20	194	<5	<0.1	7.86	1.3	19.6	54.4	0.009	1.5	74
5553575 (9152908)		7	7.24	20	56	254	<5	13.9	2.45	12.1	64.5	28.9	0.006	1.4	1590
5553576 (9152909)		<1	5.78	<5	<20	117	<5	<0.1	3.82	<0.2	68.7	19.4	0.014	5.9	122
5553577 (9152910)		<1	8.10	<5	<20	290	<5	<0.1	5.52	<0.2	14.0	51.6	<0.005	5.7	65
5553578 (9152911)		<1	8.00	<5	<20	143	<5	0.1	5.42	<0.2	14.4	50.8	<0.005	4.4	83
5553579 (9152912)		<1	7.86	<5	<20	131	<5	0.1	5.86	<0.2	13.9	50.2	<0.005	2.7	90

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay, Hamid Mumin

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Mar 27, 2018

DATE RECEIVED: Mar 28, 2018

DATE REPORTED: Jun 04, 2018

SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte: Unit: RDL:	Dy ppm 0.05	Er ppm 0.05	Eu ppm 0.05	Fe % 0.01	Ga ppm 0.01	Gd ppm 0.05	Ge ppm 1	Hf ppm 1	Ho ppm 0.05	In ppm 0.2	K % 0.05	La ppm 0.1	Li ppm 10	Lu ppm 0.05
5553541 (9152874)		4.32	2.25	0.99	7.25	18.6	4.71	5	5	0.86	0.3	1.76	21.7	<10	0.37
5553542 (9152875)		5.47	2.87	0.99	4.40	19.0	5.98	3	5	1.09	<0.2	1.71	28.2	19	0.47
5553543 (9152876)		3.19	1.58	0.79	10.9	16.5	3.39	3	4	0.62	<0.2	1.32	18.0	12	0.27
5553544 (9152877)		5.64	2.91	1.18	5.97	17.8	6.59	2	5	1.14	<0.2	1.37	33.4	16	0.49
5553545 (9152878)		4.26	2.19	0.90	10.4	15.9	4.46	3	5	0.86	0.3	1.34	22.3	14	0.36
5553546 (9152879)		3.84	2.06	0.95	8.57	15.7	4.26	3	5	0.78	0.3	1.33	21.3	11	0.32
5553547 (9152880)		4.79	2.68	0.84	10.8	16.1	4.95	2	4	0.98	0.2	1.38	22.6	20	0.43
5553548 (9152881)		3.41	1.87	0.77	12.6	16.3	3.67	2	4	0.68	0.4	1.30	17.7	19	0.30
5553549 (9152882)		1.92	0.98	0.46	1.49	5.26	2.48	<1	3	0.37	<0.2	0.23	19.7	21	0.17
5553550 (9152883)		4.39	2.34	0.72	6.66	14.4	4.63	2	3	0.89	<0.2	1.12	18.0	13	0.38
5553551 (9152884)		2.03	1.13	0.43	7.74	11.0	1.82	2	1	0.43	<0.2	0.54	3.2	13	0.18
5553552 (9152885)		2.20	1.26	0.47	7.93	12.7	1.86	2	1	0.45	<0.2	0.30	3.6	11	0.20
5553553 (9152886)		2.54	1.42	0.50	6.98	13.6	2.14	1	1	0.55	<0.2	1.03	4.5	17	0.22
5553554 (9152887)		3.19	1.69	0.71	10.4	14.0	3.42	2	4	0.67	<0.2	1.07	18.6	18	0.28
5553555 (9152888)		3.36	1.78	0.74	11.2	15.0	3.44	2	4	0.66	<0.2	1.40	17.1	17	0.28
5553556 (9152889)		4.43	2.34	0.89	7.79	16.9	4.84	1	5	0.91	2.2	1.53	26.5	23	0.39
5553557 (9152890)		1.95	1.05	0.36	7.82	10.3	1.68	2	1	0.43	<0.2	0.57	2.6	10	0.18
5553558 (9152891)		4.29	2.38	0.74	5.38	15.2	4.68	3	5	0.87	<0.2	2.82	23.7	13	0.39
5553559 (9152892)		2.75	1.52	0.64	8.05	13.3	2.69	2	2	0.57	<0.2	2.60	9.5	20	0.24
5553560 (9152893)		2.33	1.30	0.51	9.50	13.4	2.27	2	2	0.52	<0.2	1.98	7.1	17	0.22
5553561 (9152894)		2.68	1.50	0.53	8.80	13.8	2.28	2	1	0.57	<0.2	1.53	4.5	15	0.25
5553562 (9152895)		2.34	1.25	0.66	11.2	14.2	2.21	2	2	0.49	0.3	1.42	7.3	12	0.23
5553563 (9152896)		2.69	1.56	0.59	10.6	13.1	2.32	1	1	0.58	<0.2	1.01	4.6	13	0.25
5553564 (9152897)		2.75	1.44	0.71	14.5	13.0	2.57	2	3	0.55	<0.2	1.71	11.3	11	0.24
5553565 (9152898)		2.74	1.42	0.96	13.6	14.5	3.31	2	3	0.56	0.3	1.78	19.3	<10	0.25
5553566 (9152899)		5.27	2.89	1.03	7.11	14.9	5.25	2	5	1.13	<0.2	2.36	20.7	14	0.51
5553567 (9152900)		2.58	1.18	0.99	4.55	12.6	3.62	1	3	0.46	<0.2	1.17	19.1	<10	0.17
5553568 (9152901)		6.67	3.73	1.10	6.07	15.5	6.98	1	7	1.39	<0.2	2.12	29.6	13	0.64
5553569 (9152902)		8.22	4.59	1.32	8.84	17.2	8.87	1	10	1.77	<0.2	1.96	37.8	14	0.79
5553570 (9152903)		7.60	4.15	1.36	11.4	16.1	8.28	1	9	1.61	<0.2	1.81	36.0	10	0.71
5553571 (9152904)		6.34	3.47	1.09	15.8	13.1	6.84	1	7	1.35	<0.2	1.30	31.2	<10	0.61
5553572 (9152905)		7.30	3.98	1.16	13.3	15.8	7.59	1	9	1.49	<0.2	1.85	34.0	12	0.67

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay, Hamid Mumin

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Mar 27, 2018	DATE RECEIVED: Mar 28, 2018					DATE REPORTED: Jun 04, 2018					SAMPLE TYPE: Drill Core				
Analyte:	Dy	Er	Eu	Fe	Ga	Gd	Ge	Hf	Ho	In	K	La	Li	Lu	
Unit:	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	
RDL:	0.05	0.05	0.05	0.01	0.01	0.05	1	1	0.05	0.2	0.05	0.1	10	0.05	
5553573 (9152906)	7.56	4.20	1.32	10.2	16.5	8.42	1	9	1.55	<0.2	2.02	36.0	10	0.71	
5553574 (9152907)	3.24	1.85	0.73	8.19	15.3	3.10	1	2	0.67	<0.2	0.54	9.0	11	0.30	
5553575 (9152908)	4.98	2.62	1.18	8.66	17.8	5.41	2	5	0.99	0.6	1.73	29.9	26	0.41	
5553576 (9152909)	6.23	3.29	1.11	13.6	16.8	7.20	2	7	1.28	<0.2	1.12	31.4	23	0.56	
5553577 (9152910)	3.15	1.76	0.71	9.18	16.1	2.83	2	2	0.69	<0.2	1.29	6.1	24	0.29	
5553578 (9152911)	3.15	1.76	0.70	8.74	15.9	2.86	2	2	0.68	<0.2	0.96	6.5	20	0.30	
5553579 (9152912)	3.07	1.75	0.77	8.68	15.7	2.84	2	2	0.66	<0.2	0.61	6.2	16	0.28	

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay, Hamid Mumin

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Mar 27, 2018	DATE RECEIVED: Mar 28, 2018					DATE REPORTED: Jun 04, 2018					SAMPLE TYPE: Drill Core				
Analyte:	Mg	Mn	Mo	Nb	Nd	Ni	P	Pb	Pr	Rb	S	Sb	Sc	Si	
Unit:	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	%	
RDL:	0.01	10	2	1	0.1	5	0.01	5	0.05	0.2	0.01	0.1	5	0.01	
5553541 (9152874)	1.35	1250	5	7	21.7	57	0.04	21	5.43	73.4	4.44	1.3	13	26.6	
5553542 (9152875)	1.61	656	4	9	26.5	25	0.04	11	7.13	80.9	1.81	0.2	11	29.9	
5553543 (9152876)	1.47	982	6	6	17.1	60	0.04	17	4.43	63.3	6.51	1.0	12	25.6	
5553544 (9152877)	1.74	1370	4	10	33.2	22	0.06	15	8.39	68.4	2.58	0.5	9	28.4	
5553545 (9152878)	1.45	1860	4	8	21.9	49	0.05	20	5.65	63.6	5.13	1.8	11	26.0	
5553546 (9152879)	1.38	1520	5	7	19.9	37	0.05	28	5.26	60.1	4.43	1.5	11	27.9	
5553547 (9152880)	2.14	5180	4	8	21.8	16	0.04	13	5.67	50.0	1.73	0.5	7	26.7	
5553548 (9152881)	2.23	5460	4	6	17.1	24	0.05	16	4.27	52.3	4.47	0.6	10	25.0	
5553549 (9152882)	0.12	60	6	4	17.2	9	0.03	<5	4.67	5.0	0.02	0.2	<5	41.0	
5553550 (9152883)	3.48	2610	3	6	19.4	114	0.02	7	4.77	46.0	2.18	0.5	21	23.3	
5553551 (9152884)	5.66	1790	<2	<1	4.7	356	0.02	<5	1.01	20.2	0.95	0.4	30	20.2	
5553552 (9152885)	6.14	1550	<2	<1	5.0	277	0.03	<5	1.15	9.4	0.53	0.7	34	22.1	
5553553 (9152886)	4.03	1590	<2	1	6.1	95	0.03	<5	1.36	34.3	0.75	0.3	35	20.5	
5553554 (9152887)	2.12	2870	<2	6	17.2	34	0.04	<5	4.50	31.2	2.75	0.3	12	24.5	
5553555 (9152888)	2.52	2670	2	5	16.4	54	0.04	12	4.17	43.0	3.76	0.8	14	23.0	
5553556 (9152889)	2.17	2110	20	8	24.7	41	0.05	13900	6.54	44.3	2.87	80.9	11	26.0	
5553557 (9152890)	7.66	1680	<2	1	4.5	358	0.02	<5	0.93	15.9	0.24	0.4	29	21.9	
5553558 (9152891)	1.71	381	4	8	23.2	43	0.03	5	5.89	55.6	2.42	0.8	10	29.0	
5553559 (9152892)	4.00	1410	2	2	9.6	96	0.04	<5	2.33	57.3	1.94	1.0	35	23.4	
5553560 (9152893)	3.30	2550	2	2	7.8	73	0.02	18	1.87	49.3	4.37	2.4	29	23.1	
5553561 (9152894)	3.47	2310	2	1	6.6	80	0.03	12	1.42	59.8	2.52	1.0	39	22.0	
5553562 (9152895)	3.04	3520	3	2	8.3	79	0.03	39	1.93	53.9	5.49	4.1	29	20.0	
5553563 (9152896)	3.72	3990	<2	1	6.6	83	0.03	8	1.40	35.2	0.98	2.3	37	20.0	
5553564 (9152897)	1.93	2430	4	4	11.6	77	0.03	108	2.89	61.0	6.99	2.9	15	21.3	
5553565 (9152898)	1.57	1850	5	5	18.4	78	0.04	31	4.79	67.1	6.98	3.9	13	22.8	
5553566 (9152899)	2.29	1450	2	9	22.3	47	0.03	11	5.52	88.2	1.48	0.7	21	25.4	
5553567 (9152900)	2.71	844	2	4	20.3	30	0.10	5	5.01	56.3	0.17	0.2	20	28.4	
5553568 (9152901)	1.18	1850	3	14	31.7	24	0.02	<5	8.03	114	0.43	0.2	15	29.2	
5553569 (9152902)	1.26	3230	3	18	40.0	7	0.01	5	10.2	108	0.94	0.3	6	28.5	
5553570 (9152903)	1.37	4550	6	18	38.8	11	0.01	6	9.74	105	1.11	0.4	6	27.9	
5553571 (9152904)	1.68	8220	4	14	32.2	11	0.02	5	8.18	68.2	0.92	0.4	5	24.0	
5553572 (9152905)	1.34	5740	4	17	35.6	9	0.01	8	9.08	109	1.13	0.4	5	27.3	

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## Certificate of Analysis

AGAT WORK ORDER: 18T324062

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay, Hamid Mumin

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Mar 27, 2018	DATE RECEIVED: Mar 28, 2018					DATE REPORTED: Jun 04, 2018					SAMPLE TYPE: Drill Core				
Analyte:	Mg	Mn	Mo	Nb	Nd	Ni	P	Pb	Pr	Rb	S	Sb	Sc	Si	
Unit:	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	%	
Sample ID (AGAT ID)	RDL:														
5553573 (9152906)	0.01	10	2	1	0.1	5	0.01	5	0.05	0.2	0.01	0.1	5	0.01	
5553573 (9152906)	1.05	5000	6	18	38.0	9	0.02	7	9.73	110	0.50	0.3	6	28.7	
5553574 (9152907)	3.79	1950	3	2	10.8	65	0.04	<5	2.46	17.7	0.21	0.1	38	24.1	
5553575 (9152908)	2.32	952	13	10	28.6	54	0.05	1120	7.66	51.5	3.60	6.8	13	28.0	
5553576 (9152909)	4.47	1550	4	12	33.1	66	0.04	<5	8.38	40.6	0.46	0.1	21	25.9	
5553577 (9152910)	4.62	1490	2	2	8.1	57	0.03	<5	1.82	50.8	0.13	<0.1	41	24.7	
5553578 (9152911)	4.44	1520	<2	2	8.5	55	0.03	<5	1.94	31.9	0.20	0.1	40	24.2	
5553579 (9152912)	4.26	1580	3	2	8.3	62	0.04	<5	1.81	19.7	0.18	<0.1	39	23.8	

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AGAT WORK ORDER: 18T324062

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay, Hamid Mumin

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Mar 27, 2018

DATE RECEIVED: Mar 28, 2018

DATE REPORTED: Jun 04, 2018

SAMPLE TYPE: Drill Core

Analyte:	Sm	Sn	Sr	Ta	Tb	Th	Ti	Tl	Tm	U	V	W	Y	Yb
Unit:	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
RDL:	0.1	1	0.1	0.5	0.05	0.1	0.01	0.5	0.05	0.05	5	1	0.5	0.1
5553541 (9152874)	4.3	8	120	<0.5	0.76	4.8	0.33	2.2	0.38	1.27	87	2	21.4	2.4
5553542 (9152875)	5.4	3	124	<0.5	0.91	5.5	0.26	2.2	0.44	1.49	67	1	28.4	3.0
5553543 (9152876)	3.2	3	154	<0.5	0.53	4.1	0.28	1.9	0.27	1.05	84	1	16.5	1.7
5553544 (9152877)	6.5	2	155	<0.5	0.96	5.8	0.29	2.2	0.50	1.56	74	<1	29.6	3.1
5553545 (9152878)	4.3	4	120	<0.5	0.71	4.4	0.33	2.0	0.36	1.17	65	<1	21.6	2.3
5553546 (9152879)	4.0	4	127	<0.5	0.65	4.1	0.30	1.8	0.33	1.09	63	2	19.5	2.1
5553547 (9152880)	4.3	3	119	<0.5	0.77	4.6	0.23	1.4	0.45	1.28	57	<1	26.1	2.7
5553548 (9152881)	3.4	6	119	<0.5	0.56	3.7	0.27	1.6	0.29	1.00	75	<1	18.8	1.9
5553549 (9152882)	3.0	<1	25.3	<0.5	0.35	5.3	0.14	<0.5	0.16	0.64	16	<1	9.8	1.1
5553550 (9152883)	4.1	3	122	<0.5	0.72	3.7	0.23	1.5	0.37	0.91	119	<1	21.6	2.4
5553551 (9152884)	1.3	<1	133	<0.5	0.31	0.7	0.30	0.6	0.20	0.16	180	<1	10.8	1.3
5553552 (9152885)	1.5	<1	141	<0.5	0.34	0.7	0.33	<0.5	0.19	0.17	198	<1	11.8	1.3
5553553 (9152886)	1.8	<1	147	<0.5	0.38	0.9	0.38	0.7	0.24	0.23	221	<1	13.2	1.5
5553554 (9152887)	3.4	<1	82.3	<0.5	0.54	3.6	0.27	0.6	0.29	0.96	81	2	16.4	1.8
5553555 (9152888)	3.3	2	97.3	<0.5	0.56	3.4	0.28	0.6	0.29	0.96	91	<1	17.8	1.8
5553556 (9152889)	4.9	14	93.3	<0.5	0.78	6.9	0.27	4.0	0.39	2.43	89	3	22.3	2.5
5553557 (9152890)	1.3	1	144	<0.5	0.30	0.6	0.29	<0.5	0.19	0.11	172	<1	10.2	1.2
5553558 (9152891)	4.4	<1	87.8	<0.5	0.66	4.2	0.20	0.6	0.38	1.29	49	<1	22.7	2.5
5553559 (9152892)	2.2	<1	118	<0.5	0.38	1.2	0.40	0.9	0.25	0.33	214	<1	13.8	1.5
5553560 (9152893)	1.8	3	124	<0.5	0.35	1.7	0.35	0.9	0.21	0.46	177	<1	12.5	1.4
5553561 (9152894)	1.7	3	134	<0.5	0.38	1.0	0.42	0.9	0.23	0.25	247	1	13.8	1.6
5553562 (9152895)	1.9	4	139	<0.5	0.33	1.6	0.33	0.9	0.22	0.48	178	<1	12.5	1.4
5553563 (9152896)	1.8	5	115	<0.5	0.38	0.9	0.39	0.6	0.26	0.26	229	<1	15.2	1.6
5553564 (9152897)	2.4	5	98.3	<0.5	0.40	2.6	0.25	0.9	0.26	0.73	104	2	14.0	1.5
5553565 (9152898)	3.5	4	124	<0.5	0.44	3.9	0.25	0.8	0.23	0.99	92	1	14.4	1.5
5553566 (9152899)	4.7	1	153	<0.5	0.76	4.1	0.28	0.7	0.48	1.07	127	<1	26.6	3.0
5553567 (9152900)	3.9	<1	404	<0.5	0.45	2.8	0.29	<0.5	0.17	0.78	122	<1	12.0	1.2
5553568 (9152901)	6.6	2	118	<0.5	1.05	5.2	0.21	<0.5	0.63	1.42	78	<1	35.2	4.0
5553569 (9152902)	8.2	2	82.6	0.7	1.26	7.1	0.12	<0.5	0.74	1.73	7	<1	44.1	4.9
5553570 (9152903)	7.9	2	136	0.6	1.18	6.8	0.12	<0.5	0.71	1.68	10	<1	41.3	4.4
5553571 (9152904)	6.5	4	136	<0.5	0.96	5.8	0.11	<0.5	0.58	1.39	14	<1	36.1	3.7
5553572 (9152905)	7.3	2	99.6	0.5	1.13	6.3	0.11	<0.5	0.65	1.55	8	<1	40.5	4.3

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AGAT WORK ORDER: 18T324062

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay, Hamid Mumin

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Mar 27, 2018

DATE RECEIVED: Mar 28, 2018

DATE REPORTED: Jun 04, 2018

SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte: Unit: RDL:	Sm ppm	Sn ppm	Sr ppm	Ta ppm	Tb ppm	Th ppm	Ti %	Tl ppm	Tm ppm	U ppm	V ppm	W ppm	Y ppm	Yb ppm
		0.1	1	0.1	0.5	0.05	0.1	0.01	0.5	0.05	0.05	5	1	0.5	0.1
5553573 (9152906)		7.8	2	134	0.6	1.16	6.4	0.15	<0.5	0.69	1.66	21	<1	40.7	4.4
5553574 (9152907)		2.6	15	118	<0.5	0.46	1.6	0.43	<0.5	0.31	0.44	244	<1	16.7	1.8
5553575 (9152908)		5.6	8	93.8	<0.5	0.80	8.6	0.29	5.4	0.44	2.62	92	4	23.9	2.8
5553576 (9152909)		6.7	<1	40.2	<0.5	1.01	5.2	0.21	<0.5	0.55	1.36	71	<1	33.4	3.6
5553577 (9152910)		2.1	<1	128	<0.5	0.44	1.3	0.46	<0.5	0.29	0.33	260	<1	17.1	1.9
5553578 (9152911)		2.2	<1	162	<0.5	0.46	1.3	0.45	<0.5	0.31	0.34	254	<1	16.4	1.9
5553579 (9152912)		2.1	<1	150	<0.5	0.42	1.3	0.45	<0.5	0.30	0.34	249	<1	15.9	1.8

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay, Hamid Mumin

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Mar 27, 2018

DATE RECEIVED: Mar 28, 2018

DATE REPORTED: Jun 04, 2018

SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte:	Zn	Zr
	Unit:	ppm	ppm
	RDL:	5	0.5
5553541 (9152874)		1300	178
5553542 (9152875)		457	188
5553543 (9152876)		578	154
5553544 (9152877)		286	186
5553545 (9152878)		866	188
5553546 (9152879)		841	174
5553547 (9152880)		584	163
5553548 (9152881)		966	139
5553549 (9152882)		11	136
5553550 (9152883)		389	98.2
5553551 (9152884)		114	38.1
5553552 (9152885)		109	41.3
5553553 (9152886)		105	49.0
5553554 (9152887)		163	140
5553555 (9152888)		357	142
5553556 (9152889)		4420	165
5553557 (9152890)		126	36.8
5553558 (9152891)		41	184
5553559 (9152892)		97	55.9
5553560 (9152893)		394	51.1
5553561 (9152894)		105	46.3
5553562 (9152895)		1010	59.5
5553563 (9152896)		110	42.8
5553564 (9152897)		636	87.1
5553565 (9152898)		1070	101
5553566 (9152899)		225	157
5553567 (9152900)		76	90.7
5553568 (9152901)		104	255
5553569 (9152902)		126	342
5553570 (9152903)		128	333
5553571 (9152904)		135	258
5553572 (9152905)		139	312

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AGAT WORK ORDER: 18T324062

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay, Hamid Mumin

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Mar 27, 2018      DATE RECEIVED: Mar 28, 2018      DATE REPORTED: Jun 04, 2018      SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte:	Zn	Zr
	Unit:	ppm	ppm
	RDL:	5	0.5
5553573 (9152906)		110	302
5553574 (9152907)		98	61.0
5553575 (9152908)		4670	163
5553576 (9152909)		82	232
5553577 (9152910)		112	58.4
5553578 (9152911)		105	55.0
5553579 (9152912)		112	53.8

Comments: RDL - Reported Detection Limit

Certified By:





## Certificate of Analysis

AGAT WORK ORDER: 18T324062

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay, Hamid Mumin

(202-052) Fire Assay - Trace Au, ICP-OES finish (ppm)

DATE SAMPLED: Mar 27, 2018      DATE RECEIVED: Mar 28, 2018      DATE REPORTED: Jun 04, 2018      SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte: Au	Unit: ppm	RDL: 0.001
5553541 (9152874)		0.013	
5553542 (9152875)		0.006	
5553543 (9152876)		0.010	
5553544 (9152877)		0.003	
5553545 (9152878)		0.010	
5553546 (9152879)		0.013	
5553547 (9152880)		0.001	
5553548 (9152881)		<0.001	
5553549 (9152882)		<0.001	
5553550 (9152883)		0.004	
5553551 (9152884)		0.001	
5553552 (9152885)		0.002	
5553553 (9152886)		<0.001	
5553554 (9152887)		0.005	
5553555 (9152888)		0.009	
5553556 (9152889)		1.02	
5553557 (9152890)		<0.001	
5553558 (9152891)		0.004	
5553559 (9152892)		0.001	
5553560 (9152893)		0.004	
5553561 (9152894)		0.007	
5553562 (9152895)		0.154	
5553563 (9152896)		0.001	
5553564 (9152897)		0.034	
5553565 (9152898)		0.039	
5553566 (9152899)		0.004	
5553567 (9152900)		0.004	
5553568 (9152901)		<0.001	
5553569 (9152902)		<0.001	
5553570 (9152903)		0.010	
5553571 (9152904)		<0.001	
5553572 (9152905)		0.001	

Certified By:



# Certificate of Analysis

AGAT WORK ORDER: 18T324062

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay, Hamid Mumin

(202-052) Fire Assay - Trace Au, ICP-OES finish (ppm)

DATE SAMPLED: Mar 27, 2018

DATE RECEIVED: Mar 28, 2018

DATE REPORTED: Jun 04, 2018

SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte:	Unit:	RDL:
	Au	ppm	0.001
5553573 (9152906)			<0.001
5553574 (9152907)			0.002
5553575 (9152908)			0.321
5553576 (9152909)			<0.001
5553577 (9152910)			0.001
5553578 (9152911)			<0.001
5553579 (9152912)			0.004

Comments: RDL - Reported Detection Limit

Certified By:



# Certificate of Analysis

AGAT WORK ORDER: 18T324062

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay, Hamid Mumin

## Sieving - % Passing (Crushing)

DATE SAMPLED: Mar 27, 2018	DATE RECEIVED: Mar 28, 2018	DATE REPORTED: Jun 04, 2018	SAMPLE TYPE: Drill Core
----------------------------	-----------------------------	-----------------------------	-------------------------

Sample ID (AGAT ID)	Analyte:	Pass %
	Unit:	%
	RDL:	0.01
5553541 (9152874)		79.8
5553559 (9152892)		83
5553577 (9152910)		89

Comments: RDL - Reported Detection Limit

Certified By:



# Certificate of Analysis

AGAT WORK ORDER: 18T324062

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay, Hamid Mumin

## Sieving - % Passing (Pulverizing)

DATE SAMPLED: Mar 27, 2018      DATE RECEIVED: Mar 28, 2018      DATE REPORTED: Jun 04, 2018      SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte:	Pass %
	Unit:	%
	RDL:	0.01
5553541 (9152874)		95.6
5553570 (9152903)		88.7

Comments: RDL - Reported Detection Limit

Certified By:



CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay, Hamid Mumin

(201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

Parameter	REPLICATE #1				REPLICATE #2				REPLICATE #3				REPLICATE #4			
	Sample ID	Original	Replicate	RPD	Sample ID	Original	Replicate	RPD	Sample ID	Original	Replicate	RPD	Sample ID	Original	Replicate	RPD
Ag	9152874	< 1	< 1	0.0%	9152885	< 1	< 1	0.0%	9152898	< 1	< 1	0.0%	9152909	< 1	< 1	0.0%
Al	9152874	7.11	7.30	2.6%	9152885	6.35	6.27	1.3%	9152898	5.58	5.52	1.1%	9152909	5.78	5.87	1.5%
As	9152874	7	7	0.0%	9152885	5	4	22.2%	9152898	75	57	27.3%	9152909	< 5	< 5	0.0%
B	9152874	179	191	6.5%	9152885	30	32	6.5%	9152898	910	902	0.9%	9152909	< 20	< 20	0.0%
Ba	9152874	239	259	8.0%	9152885	99.5	99.0	0.5%	9152898	285	273	4.3%	9152909	117	120	2.5%
Be	9152874	< 5	< 5	0.0%	9152885	< 5	< 5	0.0%	9152898	< 5	< 5	0.0%	9152909	< 5	< 5	0.0%
Bi	9152874	0.73	0.76	4.0%	9152885	< 0.1	< 0.1	0.0%	9152898	0.7	0.7	0.0%	9152909	< 0.1	0.1	
Ca	9152874	2.23	2.21	0.9%	9152885	8.25	8.19	0.7%	9152898	2.92	2.97	1.7%	9152909	3.82	3.81	0.3%
Cd	9152874	3.3	3.6	8.7%	9152885	< 0.2	< 0.2	0.0%	9152898	2.7	2.5	7.7%	9152909	< 0.2	< 0.2	0.0%
Ce	9152874	46.9	45.3	3.5%	9152885	8.3	8.3	0.0%	9152898	40.3	37.8	6.4%	9152909	68.7	69.7	1.4%
Co	9152874	61.1	61.2	0.2%	9152885	84.1	78.5	6.9%	9152898	55.3	55.2	0.2%	9152909	19.4	18.8	3.1%
Cr	9152874	0.0054	0.0063	15.4%	9152885	0.021	0.021	0.0%	9152898	0.0088	0.0083	5.8%	9152909	0.014	0.016	13.3%
Cs	9152874	1.6	1.7	6.1%	9152885	0.5	0.5	0.0%	9152898	1.09	1.18	7.9%	9152909	5.87	5.62	4.4%
Cu	9152874	252	249	1.2%	9152885	109	110	0.9%	9152898	292	284	2.8%	9152909	122	118	3.3%
Dy	9152874	4.32	4.23	2.1%	9152885	2.20	2.12	3.7%	9152898	2.74	2.75	0.4%	9152909	6.23	6.39	2.5%
Er	9152874	2.25	2.23	0.9%	9152885	1.26	1.18	6.6%	9152898	1.42	1.45	2.1%	9152909	3.29	3.25	1.2%
Eu	9152874	0.995	1.01	1.5%	9152885	0.469	0.444	5.5%	9152898	0.96	0.83	14.5%	9152909	1.11	1.05	5.6%
Fe	9152874	7.25	7.18	1.0%	9152885	7.93	7.84	1.1%	9152898	13.6	13.9	2.2%	9152909	13.6	13.3	2.2%
Ga	9152874	18.6	19.0	2.1%	9152885	12.7	12.2	4.0%	9152898	14.5	14.1	2.8%	9152909	16.8	16.4	2.4%
Gd	9152874	4.71	4.58	2.8%	9152885	1.86	1.81	2.7%	9152898	3.31	3.17	4.3%	9152909	7.20	7.06	2.0%
Ge	9152874	5	5	0.0%	9152885	2	2	0.0%	9152898	2	2	0.0%	9152909	2	2	0.0%
Hf	9152874	5	5	0.0%	9152885	1	1	0.0%	9152898	3	3	0.0%	9152909	7	7	0.0%
Ho	9152874	0.86	0.86	0.0%	9152885	0.453	0.480	5.8%	9152898	0.56	0.53	5.5%	9152909	1.28	1.26	1.6%
In	9152874	0.33	0.39	16.7%	9152885	< 0.2	< 0.2	0.0%	9152898	0.3	0.3	0.0%	9152909	< 0.2	< 0.2	0.0%
K	9152874	1.76	1.88	6.6%	9152885	0.301	0.292	3.0%	9152898	1.78	1.79	0.6%	9152909	1.12	1.13	0.9%
La	9152874	21.7	21.4	1.4%	9152885	3.61	3.43	5.1%	9152898	19.3	17.9	7.5%	9152909	31.4	31.5	0.3%
Li	9152874	< 10	< 10	0.0%	9152885	11	11	0.0%	9152898	9	10	10.5%	9152909	23	24	4.3%
Lu	9152874	0.37	0.37	0.0%	9152885	0.196	0.192	2.1%	9152898	0.248	0.231	7.1%	9152909	0.563	0.570	1.2%
Mg	9152874	1.35	1.36	0.7%	9152885	6.14	6.23	1.5%	9152898	1.57	1.56	0.6%	9152909	4.47	4.59	2.6%
Mn	9152874	1250	1220	2.4%	9152885	1550	1520	2.0%	9152898	1850	1930	4.2%	9152909	1550	1520	2.0%
Mo	9152874	5	6	18.2%	9152885	< 2	< 2	0.0%	9152898	5	4	22.2%	9152909	4	5	22.2%



CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay, Hamid Mumin

Nb	9152874	7	8	13.3%	9152885	< 1	< 1	0.0%	9152898	5	5	0.0%	9152909	12	12	0.0%
Nd	9152874	21.7	20.9	3.8%	9152885	5.0	5.0	0.0%	9152898	18.4	17.0	7.9%	9152909	33.1	34.5	4.1%
Ni	9152874	57	57	0.0%	9152885	277	274	1.1%	9152898	78	77	1.3%	9152909	70	90	25.0%
P	9152874	0.045	0.052	14.4%	9152885	0.026	0.023	12.2%	9152898	0.04	0.04	0.0%	9152909	0.04	0.04	0.0%
Pb	9152874	21	20	4.9%	9152885	< 5	< 5	0.0%	9152898	31	30	3.3%	9152909	< 5	< 5	0.0%
Pr	9152874	5.43	5.31	2.2%	9152885	1.15	1.08	6.3%	9152898	4.79	4.44	7.6%	9152909	8.38	8.60	2.6%
Rb	9152874	73.4	75.1	2.3%	9152885	9.36	9.03	3.6%	9152898	67.1	66.6	0.7%	9152909	40.6	40.7	0.2%
S	9152874	4.44	4.36	1.8%	9152885	0.53	0.53	0.0%	9152898	6.98	7.03	0.7%	9152909	0.458	0.467	1.9%
Sb	9152874	1.3	1.3	0.0%	9152885	0.7	0.7	0.0%	9152898	3.9	3.9	0.0%	9152909	0.1	0.1	0.0%
Sc	9152874	13	14	7.4%	9152885	34	33	3.0%	9152898	13	13	0.0%	9152909	21	20	4.9%
Si	9152874	26.6	27.2	2.2%	9152885	22.1	21.8	1.4%	9152898	22.8	22.6	0.9%	9152909	25.9	26.1	0.8%
Sm	9152874	4.29	4.14	3.6%	9152885	1.5	1.5	0.0%	9152898	3.49	3.11	11.5%	9152909	6.7	6.8	1.5%
Sn	9152874	8	7	13.3%	9152885	< 1	< 1	0.0%	9152898	4	3	28.6%	9152909	< 1	1	
Sr	9152874	120	120	0.0%	9152885	141	136	3.6%	9152898	124	123	0.8%	9152909	40.2	38.5	4.3%
Ta	9152874	< 0.5	< 0.5	0.0%	9152885	< 0.5	< 0.5	0.0%	9152898	< 0.5	< 0.5	0.0%	9152909	< 0.5	< 0.5	0.0%
Tb	9152874	0.76	0.73	4.0%	9152885	0.34	0.34	0.0%	9152898	0.438	0.433	1.1%	9152909	1.01	1.00	1.0%
Th	9152874	4.8	4.7	2.1%	9152885	0.66	0.60	9.5%	9152898	3.87	3.71	4.2%	9152909	5.2	5.1	1.9%
Ti	9152874	0.33	0.34	3.0%	9152885	0.327	0.320	2.2%	9152898	0.25	0.25	0.0%	9152909	0.21	0.21	0.0%
Tl	9152874	2.19	2.26	3.1%	9152885	< 0.5	< 0.5	0.0%	9152898	0.8	0.8	0.0%	9152909	< 0.5	< 0.5	0.0%
Tm	9152874	0.38	0.37	2.7%	9152885	0.194	0.196	1.0%	9152898	0.23	0.24	4.3%	9152909	0.549	0.543	1.1%
U	9152874	1.27	1.28	0.8%	9152885	0.17	0.18	5.7%	9152898	0.991	1.02	2.9%	9152909	1.36	1.35	0.7%
V	9152874	87	90	3.4%	9152885	198	197	0.5%	9152898	92	91	1.1%	9152909	71	72	1.4%
W	9152874	2	1		9152885	< 1	< 1	0.0%	9152898	1	1	0.0%	9152909	< 1	< 1	0.0%
Y	9152874	21.4	21.7	1.4%	9152885	11.8	11.6	1.7%	9152898	14.4	14.2	1.4%	9152909	33.4	32.7	2.1%
Yb	9152874	2.4	2.3	4.3%	9152885	1.3	1.3	0.0%	9152898	1.5	1.5	0.0%	9152909	3.6	3.6	0.0%
Zn	9152874	1300	1400	7.4%	9152885	109	111	1.8%	9152898	1070	1030	3.8%	9152909	82	79	3.7%
Zr	9152874	178	184	3.3%	9152885	41.3	39.3	5.0%	9152898	101	99.8	1.2%	9152909	232	227	2.2%

(202-052) Fire Assay - Trace Au, ICP-OES finish (ppm)

Parameter	REPLICATE #1				REPLICATE #2				REPLICATE #3				REPLICATE #4			
	Sample ID	Original	Replicate	RPD	Sample ID	Original	Replicate	RPD	Sample ID	Original	Replicate	RPD	Sample ID	Original	Replicate	RPD
Au	9152874	0.013	0.057		9152885	0.002	< 0.001		9152898	0.0391	0.0411	5.0%	9152909	< 0.001	< 0.001	0.0%



CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay, Hamid Mumin

(201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

Parameter	CRM #1 (ref.Till-2)				CRM #2 (ref.SY-4)				CRM #3 (ref.GSP4G)							
	Expect	Actual	Recovery	Limits	Expect	Actual	Recovery	Limits	Expect	Actual	Recovery	Limits				
Al	8.47	7.97	94%	90% - 110%	10.95	10.75	98%	90% - 110%								
As	26	26	100%	90% - 110%					25	27.4	110%	90% - 110%				
Ba	540	511	95%	90% - 110%	340	324	95%	90% - 110%								
Be	4.0	3.6	90%	90% - 110%	2.6	2.9	111%	90% - 110%								
Ca	0.907	0.89	98%	90% - 110%	5.72	5.43	95%	90% - 110%								
Ce	98	107	109%	90% - 110%	122	131	107%	90% - 110%								
Co	15	15	102%	90% - 110%	2.8	2.6	91%	90% - 110%	1202	1264	105%	90% - 110%				
Cs					1.5	1.6	105%	90% - 110%								
Cu	150	145	97%	90% - 110%	7	9	128%	90% - 110%	15414	15468	100%	90% - 110%				
Dy					18.2	19.9	109%	90% - 110%								
Er	3.7	3.8	103%	90% - 110%	14.2	13.3	94%	90% - 110%								
Eu	1.0	1.06	106%	90% - 110%	2.0	1.97	99%	90% - 110%								
Fe	3.77	3.7	98%	90% - 110%	4.34	4.27	98%	90% - 110%								
Ga					35	35	100%	90% - 110%								
Gd					14	15	110%	90% - 110%								
Hf	11	10	95%	90% - 110%	10.6	11.2	105%	90% - 110%								
Ho					4.3	4.6	106%	90% - 110%								
K	2.55	2.35	92%	90% - 110%	1.37	1.34	98%	90% - 110%								
La	44	47	107%	90% - 110%	58	61	105%	90% - 110%								
Li	47	45	96%	90% - 110%	37	37	101%	90% - 110%								
Lu	0.6	0.6	98%	90% - 110%	2.1	2.1	102%	90% - 110%								
Mg	1.1	1.1	96%	90% - 110%	0.325	0.311	96%	90% - 110%								
Mn	780	715	92%	90% - 110%	836	820	98%	90% - 110%								
Mo	14	14	101%	90% - 110%												
Nb	20	18	91%	90% - 110%	13	13	103%	90% - 110%								
Nd					57	62	109%	90% - 110%								
Ni	32	34	108%	90% - 110%	9	8	89%	90% - 110%	23610	22304	94%	90% - 110%				
Pb	31	31	100%	90% - 110%	10	9	94%	90% - 110%	41	44	107%	90% - 110%				
Pr					15.0	16	107%	90% - 110%								
Rb	144	147	102%	90% - 110%	55	54	99%	90% - 110%								
Sb	0.8	0.8	97%	90% - 110%												



CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay, Hamid Mumin

Sc	12	12	97%	90% - 110%												
Si	28.4	27	95%	90% - 110%	23.3	22.4	96%	90% - 110%								
Sm	7.4	8.1	110%	90% - 110%	12.7	13.1	103%	90% - 110%								
Sn					7.1	8.0	112%	90% - 110%								
Sr	144	140	97%	90% - 110%	1191	1176	99%	90% - 110%								
Ta	1.9	1.69	89%	90% - 110%												
Tb	1.2	1.2	103%	90% - 110%	2.6	2.6	101%	90% - 110%								
Th	18.4	17.6	96%	90% - 110%	1.4	1.1	81%	90% - 110%								
Ti	0.527	0.492	93%	90% - 110%	0.172	0.166	96%	90% - 110%								
Tm					2.3	2.4	104%	90% - 110%								
U	5.7	5.4	94%	90% - 110%	0.8	0.9	107%	90% - 110%								
V	77	80	104%	90% - 110%	8	9	109%	90% - 110%								
W	5	4.60	92%	90% - 110%												
Y	40	37	93%	90% - 110%	119	114	96%	90% - 110%								
Yb					14.8	15	101%	90% - 110%								
Zn	130	119	92%	90% - 110%	93	95	102%	90% - 110%	90	92	103%	90% - 110%				
Zr	390	391	100%	90% - 110%	517	527	102%	90% - 110%								

(202-052) Fire Assay - Trace Au, ICP-OES finish (ppm)

Parameter	CRM #1 (ref.GS5R)				CRM #2 (ref.GSP7L)				CRM #3 (ref.GSP4G)							
	Expect	Actual	Recovery	Limits	Expect	Actual	Recovery	Limits	Expect	Actual	Recovery	Limits				
Au	5.29	5.27	100%	90% - 110%	0.709	0.692	98%	90% - 110%	0.468	0.451	96%	90% - 110%				



## Method Summary

CLIENT NAME: GOSSAN RESOURCES LIMITED

AGAT WORK ORDER: 18T324062

PROJECT: SLG-2018

ATTENTION TO: Scot Halladay, Hamid Mumin

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Solid Analysis			
Sample Login Weight	MIN-12009		BALANCE
Ag			ICP/MS
Al	MIN-200-12001		ICP/OES
As	MIN-200-12001		ICP/MS
B	MIN-200-12001		ICP/OES
Ba	MIN-200-12001		ICP/OES
Be	MIN-200-12001		ICP/OES
Bi	MIN-200-12001		ICP-MS
Ca	MIN-200-12001		ICP/OES
Cd	MIN-200-12001		ICP-MS
Ce	MIN-200-12001		ICP-MS
Co	MIN-200-12001		ICP/MS
Cr	MIN-200-12001		ICP/OES
Cs	MIN-200-12001		ICP-MS
Cu	MIN-200-12001		ICP/OES
Dy	MIN-200-12001		ICP-MS
Er	MIN-200-12001		ICP-MS
Eu	MIN-200-12001		ICP-MS
Fe	MIN-200-12001		ICP/OES
Ga	MIN-200-12001		ICP-MS
Gd	MIN-200-12001		ICP-MS
Ge	MIN-200-12001		ICP-MS
Hf	MIN-200-12001		ICP-MS
Ho	MIN-200-12001		ICP-MS
In	MIN-200-12001		ICP-MS
K	MIN-200-12001		ICP/OES
La	MIN-200-12001		ICP-MS
Li	MIN-200-12001		ICP/OES
Lu	MIN-200-12001		ICP-MS
Mg	MIN-200-12001		ICP/OES
Mn	MIN-200-12001		ICP/OES
Mo	MIN-200-12001		ICP/MS
Nb	MIN-200-12001		ICP-MS
Nd	MIN-200-12001		ICP-MS
Ni	MIN-200-12001		ICP/OES
P			ICP/OES
Pb	MIN-200-12001		ICP/MS
Pr	MIN-200-12001		ICP-MS
Rb	MIN-200-12001		ICP/MS
S	MIN-200-12001		ICP/OES
Sb	MIN-200-12001		ICP-MS
Sc	MIN-200-12001		ICP/OES
Si	MIN-200-12001		ICP/OES
Sm	MIN-200-12001		ICP-MS
Sn	MIN-200-12001		ICP/MS
Sr	MIN-200-12001		ICP-OES
Ta	MIN-200-12001		ICP-MS
Tb	MIN-200-12001		ICP-MS
Th	MIN-200-12001		ICP-MS



## Method Summary

CLIENT NAME: GOSSAN RESOURCES LIMITED  
 PROJECT: SLG-2018  
 SAMPLING SITE:

AGAT WORK ORDER: 18T324062  
 ATTENTION TO: Scot Halladay, Hamid Mumin  
 SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Ti	MIN-200-12001		ICP/OES
Tl	MIN-200-12001		ICP-MS
Tm	MIN-200-12001		ICP-MS
U	MIN-200-12001		ICP-MS
V	MIN-200-12001		ICP/OES
W	MIN-200-12001		ICP-MS
Y	MIN-200-12001		ICP-MS
Yb	MIN-200-12001		ICP-MS
Zn	MIN-200-12001		ICP/OES
Zr	MIN-200-12001		ICP-MS
Au	MIN-200-12006	BUGBEE, E: A Textbook of Fire Assaying	ICP-OES
Pass %			BALANCE



CLIENT NAME: GOSSAN RESOURCES LIMITED  
404-171 DONALD STREET  
WINNIPEG, MB R3C 1M4  
204-943-1990

ATTENTION TO: Scott Halladay, Hamid Mumin

PROJECT: SLG-2018

AGAT WORK ORDER: 18T324089

SOLID ANALYSIS REVIEWED BY: Adel Mina, Mining Chief Chemist

DATE REPORTED: Jun 05, 2018

PAGES (INCLUDING COVER): 23

Should you require any information regarding this analysis please contact your client services representative at (905) 501-9998

\*NOTES

All samples are stored at no charge for 90 days. Please contact the lab if you require additional sample storage time.



## Certificate of Analysis

AGAT WORK ORDER: 18T324089

PROJECT: SLG-2018

5623 McADAM ROAD  
 MISSISSAUGA, ONTARIO  
 CANADA L4Z 1N9  
 TEL (905)501-9998  
 FAX (905)501-0589  
<http://www.agatlabs.com>

CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scott Halladay, Hamid Mumin

### (200-) Sample Login Weight

DATE SAMPLED: Mar 27, 2018      DATE RECEIVED: Mar 28, 2018      DATE REPORTED: Jun 05, 2018      SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte: Unit: RDL:	Sample Login Weight kg 0.01
5553491 (9153034)		1.46
5553492 (9153035)		0.68
5553493 (9153036)		3.56
5553494 (9153037)		2.48
5553495 (9153038)		3.20
5553496 (9153039)		2.18
5553497 (9153040)		2.66
5553498 (9153041)		2.46
5553499 (9153042)		2.70
5553500 (9153043)		2.38
5553501 (9153044)		2.24
5553502 (9153045)		2.04
5553503 (9153046)		2.76
5553504 (9153047)		3.34
5553505 (9153048)		3.42
5553506 (9153049)		2.28
5553507 (9153050)		0.14
5553508 (9153051)		1.56
5553509 (9153052)		1.52
5553510 (9153053)		2.34
5553511 (9153054)		2.50
5553512 (9153055)		1.82
5553513 (9153056)		1.02
5553514 (9153057)		0.64
5553515 (9153058)		1.88
5553516 (9153059)		3.40
5553517 (9153060)		3.54
5553518 (9153061)		2.34
5553519 (9153062)		2.36
5553520 (9153063)		2.18
5553521 (9153064)		1.72

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18T324089

PROJECT: SLG-2018

5623 McADAM ROAD  
 MISSISSAUGA, ONTARIO  
 CANADA L4Z 1N9  
 TEL (905)501-9998  
 FAX (905)501-0589  
<http://www.agatlabs.com>

CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scott Halladay, Hamid Mumin

### (200-) Sample Login Weight

DATE SAMPLED: Mar 27, 2018      DATE RECEIVED: Mar 28, 2018      DATE REPORTED: Jun 05, 2018      SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte:	Sample Login Weight
	Unit:	kg
	RDL:	0.01
5553522 (9153065)		0.94
5553523 (9153066)		2.06
5553524 (9153067)		.16
5553525 (9153068)		0.92
5553526 (9153069)		2.28
5553527 (9153070)		0.84
5553528 (9153071)		0.84
5553529 (9153072)		2.82
5553530 (9153073)		2.12
5553531 (9153074)		3.64
5553532 (9153075)		3.50
5553533 (9153076)		3.50
5553534 (9153077)		3.70
5553535 (9153078)		2.50
5553536 (9153079)		2.30
5553537 (9153080)		2.44
5553538 (9153081)		2.32
5553539 (9153082)		2.54
5553540 (9153083)		2.86

Comments: RDL - Reported Detection Limit

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18T324089

PROJECT: SLG-2018

5623 McADAM ROAD  
MISSISSAUGA, ONTARIO  
CANADA L4Z 1N9  
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<http://www.agatlabs.com>

CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scott Halladay, Hamid Mumin

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Mar 27, 2018

DATE RECEIVED: Mar 28, 2018

DATE REPORTED: Jun 05, 2018

SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte: Unit: RDL:	Ag ppm 1	Al % 0.01	As ppm 5	B ppm 20	Ba ppm 0.5	Be ppm 5	Bi ppm 0.1	Ca % 0.05	Cd ppm 0.2	Ce ppm 0.1	Co ppm 0.5	Cr % 0.005	Cs ppm 0.1	Cu ppm 5
5553491 (9153034)	<1	4.38	<5	<20	266	<5	<0.1	2.11	0.2	65.8	2.7	<0.005	7.1	22	
5553492 (9153035)	<1	4.88	<5	<20	682	<5	<0.1	1.81	<0.2	72.4	1.4	<0.005	10.0	18	
5553493 (9153036)	<1	6.70	<5	<20	145	<5	<0.1	8.45	<0.2	12.4	46.5	<0.005	3.3	68	
5553494 (9153037)	<1	6.72	<5	<20	210	<5	<0.1	9.14	<0.2	11.8	49.4	<0.005	2.9	100	
5553495 (9153038)	<1	7.39	<5	<20	137	<5	<0.1	8.16	<0.2	13.2	49.7	0.005	1.2	109	
5553496 (9153039)	<1	7.40	<5	<20	186	<5	<0.1	8.84	<0.2	12.9	52.2	<0.005	1.9	96	
5553497 (9153040)	<1	7.53	<5	<20	72.7	<5	<0.1	7.55	<0.2	12.4	52.2	<0.005	0.5	60	
5553498 (9153041)	<1	7.47	<5	<20	113	<5	<0.1	6.71	<0.2	12.4	51.0	<0.005	1.3	61	
5553499 (9153042)	<1	7.45	<5	22	104	<5	<0.1	7.09	<0.2	12.9	51.7	<0.005	0.8	127	
5553500 (9153043)	<1	7.62	<5	<20	103	<5	<0.1	6.76	<0.2	13.1	53.6	<0.005	0.9	100	
5553501 (9153044)	<1	7.31	<5	<20	122	<5	<0.1	5.09	<0.2	21.8	45.0	<0.005	1.7	120	
5553502 (9153045)	<1	7.28	<5	<20	244	<5	<0.1	5.23	<0.2	19.2	46.2	<0.005	3.6	73	
5553503 (9153046)	<1	7.32	<5	<20	101	<5	<0.1	6.14	<0.2	12.6	49.4	<0.005	1.2	61	
5553504 (9153047)	<1	7.44	<5	<20	117	<5	<0.1	6.46	<0.2	13.3	51.8	<0.005	1.0	72	
5553505 (9153048)	<1	7.49	<5	<20	78.3	<5	<0.1	6.00	<0.2	12.7	53.1	<0.005	1.0	106	
5553506 (9153049)	<1	7.48	<5	<20	64.7	<5	<0.1	6.09	0.3	13.3	50.9	<0.005	0.9	81	
5553507 (9153050)	7	6.78	21	39	258	<5	13.3	2.43	12.7	59.5	26.7	0.006	1.5	1570	
5553508 (9153051)	<1	7.40	<5	<20	35.6	<5	<0.1	6.23	0.5	12.3	68.1	<0.005	0.5	98	
5553509 (9153052)	<1	7.65	<5	<20	55.6	<5	<0.1	6.50	0.5	13.1	61.9	<0.005	0.9	155	
5553510 (9153053)	<1	7.70	<5	<20	127	<5	<0.1	6.52	0.4	13.5	63.3	<0.005	2.1	165	
5553511 (9153054)	<1	7.84	<5	<20	171	<5	<0.1	7.41	0.4	12.6	58.1	<0.005	2.2	85	
5553512 (9153055)	<1	7.53	<5	<20	232	<5	<0.1	7.42	0.6	13.3	56.4	<0.005	2.1	33	
5553513 (9153056)	<1	4.64	<5	<20	70.4	<5	0.2	7.49	0.4	46.8	13.9	<0.005	2.0	204	
5553514 (9153057)	<1	2.19	<5	<20	14.8	<5	<0.1	0.08	<0.2	36.8	1.4	0.007	<0.1	7	
5553515 (9153058)	<1	6.23	<5	<20	294	<5	<0.1	4.12	<0.2	44.4	31.5	<0.005	3.7	40	
5553516 (9153059)	<1	7.38	<5	<20	126	<5	<0.1	6.66	0.5	12.5	63.5	<0.005	2.9	103	
5553517 (9153060)	<1	7.59	<5	<20	147	<5	<0.1	6.33	0.4	12.0	60.0	<0.005	4.3	96	
5553518 (9153061)	<1	7.29	<5	<20	268	<5	<0.1	6.57	0.3	15.9	63.2	<0.005	7.8	100	
5553519 (9153062)	<1	6.67	<5	<20	339	<5	<0.1	6.03	0.2	37.8	54.0	<0.005	4.3	82	
5553520 (9153063)	<1	6.26	<5	<20	478	<5	0.1	4.90	0.3	51.0	25.8	0.007	8.1	66	
5553521 (9153064)	<1	7.41	<5	<20	310	<5	<0.1	5.40	<0.2	41.2	48.4	0.010	5.7	80	
5553522 (9153065)	<1	6.54	<5	<20	466	<5	0.3	4.39	1.6	64.0	34.2	0.007	4.4	139	

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## Certificate of Analysis

AGAT WORK ORDER: 18T324089

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scott Halladay, Hamid Mumin

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Mar 27, 2018

DATE RECEIVED: Mar 28, 2018

DATE REPORTED: Jun 05, 2018

SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte: Unit: RDL:	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr %	Cs ppm	Cu ppm
5553523 (9153066)		<1	5.10	<5	<20	190	<5	0.2	3.32	0.5	77.6	9.6	<0.005	1.6	89
5553524 (9153067)		38	3.17	133	31	536	<5	46.7	1.00	231	37.7	194	0.009	1.3	13000
5553525 (9153068)		2	6.16	<5	<20	353	<5	0.8	4.89	0.4	54.2	33.3	0.007	4.0	20
5553526 (9153069)		<1	4.84	<5	<20	263	<5	0.2	1.92	<0.2	68.6	35.8	<0.005	4.3	76
5553527 (9153070)		<1	3.33	<5	<20	198	<5	<0.1	1.12	<0.2	54.1	14.7	<0.005	1.6	8
5553528 (9153071)		<1	4.26	<5	<20	166	<5	0.1	1.88	<0.2	72.3	18.6	<0.005	1.5	17
5553529 (9153072)		<1	6.81	<5	36	193	<5	<0.1	4.32	<0.2	34.1	39.7	<0.005	2.6	60
5553530 (9153073)		<1	7.93	<5	23	175	<5	<0.1	5.95	<0.2	14.1	53.1	0.005	1.7	95
5553531 (9153074)		<1	7.45	<5	<20	143	<5	<0.1	6.16	<0.2	14.9	52.3	0.005	1.0	97
5553532 (9153075)		<1	7.71	<5	42	150	<5	<0.1	6.30	<0.2	15.6	60.7	0.006	1.0	75
5553533 (9153076)		<1	7.96	<5	37	169	<5	<0.1	5.50	<0.2	14.6	53.6	0.006	0.8	85
5553534 (9153077)		<1	8.25	<5	32	196	<5	<0.1	4.01	<0.2	14.8	57.6	0.006	1.0	89
5553535 (9153078)		<1	8.16	<5	<20	221	<5	<0.1	4.86	<0.2	16.3	58.2	0.006	0.8	109
5553536 (9153079)		<1	8.49	<5	<20	82.1	<5	<0.1	4.63	<0.2	73.1	29.6	0.015	0.5	12
5553537 (9153080)		<1	7.85	<5	<20	132	<5	<0.1	6.48	<0.2	28.3	53.7	0.007	0.4	89
5553538 (9153081)		<1	7.87	<5	<20	174	<5	<0.1	6.59	<0.2	14.1	60.3	<0.005	0.4	58
5553539 (9153082)		<1	7.64	<5	<20	18.5	<5	<0.1	8.22	<0.2	14.9	54.0	<0.005	<0.1	98
5553540 (9153083)		<1	7.80	<5	<20	39.5	<5	<0.1	7.44	<0.2	15.1	59.4	<0.005	<0.1	82

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AGAT WORK ORDER: 18T324089

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scott Halladay, Hamid Mumin

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Mar 27, 2018	DATE RECEIVED: Mar 28, 2018					DATE REPORTED: Jun 05, 2018					SAMPLE TYPE: Drill Core				
Analyte:	Dy	Er	Eu	Fe	Ga	Gd	Ge	Hf	Ho	In	K	La	Li	Lu	
Unit:	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	
RDL:	0.05	0.05	0.05	0.01	0.01	0.05	1	1	0.05	0.2	0.05	0.1	10	0.05	
5553491 (9153034)	6.92	4.36	1.46	17.5	14.3	7.16	1	7	1.50	<0.2	1.87	29.6	<10	0.75	
5553492 (9153035)	7.67	4.67	1.53	10.4	17.4	7.90	2	8	1.58	<0.2	2.31	32.5	12	0.80	
5553493 (9153036)	2.66	1.75	0.69	7.19	14.8	2.42	1	2	0.61	<0.2	0.90	5.6	11	0.28	
5553494 (9153037)	2.63	1.62	0.69	7.48	14.8	2.30	1	2	0.59	<0.2	0.85	5.5	12	0.28	
5553495 (9153038)	2.93	1.95	0.75	8.34	15.9	2.63	1	2	0.63	<0.2	0.40	6.0	12	0.33	
5553496 (9153039)	2.98	1.83	0.75	8.33	16.0	2.61	1	2	0.64	<0.2	0.53	5.7	12	0.31	
5553497 (9153040)	2.96	1.85	0.76	8.58	15.7	2.55	1	1	0.60	<0.2	0.25	5.7	<10	0.30	
5553498 (9153041)	2.88	1.71	0.69	8.45	15.0	2.41	2	2	0.59	<0.2	0.39	5.6	14	0.31	
5553499 (9153042)	2.98	1.97	0.74	8.49	16.0	2.67	2	2	0.65	<0.2	0.31	5.9	13	0.33	
5553500 (9153043)	2.88	1.94	0.71	8.58	16.3	2.55	2	2	0.65	<0.2	0.33	6.0	13	0.30	
5553501 (9153044)	3.48	2.12	0.81	8.98	16.0	3.30	2	3	0.74	<0.2	0.38	9.5	20	0.35	
5553502 (9153045)	3.05	2.02	0.78	8.54	15.4	2.92	1	2	0.68	<0.2	0.72	9.2	28	0.32	
5553503 (9153046)	2.80	1.78	0.71	8.25	14.8	2.50	2	2	0.60	<0.2	0.32	5.6	15	0.30	
5553504 (9153047)	3.02	1.93	0.76	8.20	16.3	2.64	2	2	0.65	<0.2	0.29	5.9	14	0.32	
5553505 (9153048)	2.74	1.76	0.75	8.43	16.3	2.47	2	2	0.62	<0.2	0.25	5.4	15	0.30	
5553506 (9153049)	2.70	1.72	0.80	8.29	15.7	2.49	2	2	0.59	<0.2	0.28	5.9	15	0.31	
5553507 (9153050)	4.55	2.70	1.18	8.52	18.5	4.97	2	5	0.90	0.6	1.74	28.4	25	0.43	
5553508 (9153051)	2.90	1.75	0.69	8.00	16.1	2.46	2	2	0.62	<0.2	0.20	5.4	<10	0.31	
5553509 (9153052)	2.97	1.78	0.71	8.67	15.9	2.57	2	2	0.63	<0.2	0.28	5.8	12	0.31	
5553510 (9153053)	3.06	1.94	0.69	9.07	15.8	2.58	2	2	0.67	<0.2	0.51	6.1	16	0.34	
5553511 (9153054)	2.79	1.83	0.66	8.92	15.9	2.47	2	2	0.62	<0.2	0.54	5.7	16	0.30	
5553512 (9153055)	2.74	1.79	0.66	9.12	15.7	2.52	1	2	0.62	<0.2	0.47	5.9	12	0.30	
5553513 (9153056)	5.10	3.16	1.07	10.8	13.7	5.15	2	5	1.04	<0.2	0.30	21.4	<10	0.54	
5553514 (9153057)	1.54	0.88	0.39	1.30	5.12	2.15	<1	3	0.33	<0.2	0.07	17.2	13	0.15	
5553515 (9153058)	5.40	3.27	0.99	8.50	16.0	5.19	2	5	1.14	<0.2	0.61	20.1	15	0.56	
5553516 (9153059)	2.73	1.81	0.65	8.68	15.7	2.46	2	2	0.59	<0.2	0.60	5.5	13	0.29	
5553517 (9153060)	2.68	1.67	0.67	8.67	15.8	2.34	2	2	0.59	<0.2	0.79	5.4	17	0.29	
5553518 (9153061)	3.27	1.98	0.76	8.91	16.6	2.82	2	2	0.69	<0.2	1.20	7.1	19	0.34	
5553519 (9153062)	4.56	2.78	0.91	7.48	17.2	4.47	1	4	0.94	<0.2	0.98	17.3	17	0.46	
5553520 (9153063)	5.85	3.82	0.98	10.9	15.5	5.97	2	5	1.25	<0.2	2.21	22.7	29	0.64	
5553521 (9153064)	3.94	2.37	0.98	8.59	16.5	4.06	2	3	0.83	<0.2	1.35	19.5	27	0.39	
5553522 (9153065)	6.18	3.73	1.09	9.92	17.4	6.40	2	7	1.29	<0.2	1.28	28.4	23	0.61	

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## Certificate of Analysis

AGAT WORK ORDER: 18T324089

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scott Halladay, Hamid Mumin

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Mar 27, 2018

DATE RECEIVED: Mar 28, 2018

DATE REPORTED: Jun 05, 2018

SAMPLE TYPE: Drill Core

Analyte:	Dy	Er	Eu	Fe	Ga	Gd	Ge	Hf	Ho	In	K	La	Li	Lu
Unit:	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
RDL:	0.05	0.05	0.05	0.01	0.01	0.05	1	1	0.05	0.2	0.05	0.1	10	0.05
5553523 (9153066)	8.11	4.97	1.16	15.4	16.6	8.50	2	8	1.67	<0.2	0.50	34.5	12	0.83
5553524 (9153067)	2.83	1.47	0.55	17.3	22.9	3.17	4	3	0.54	13.1	0.92	18.3	12	0.26
5553525 (9153068)	5.20	3.39	0.84	10.6	16.2	5.56	2	6	1.14	<0.2	1.51	23.4	17	0.60
5553526 (9153069)	6.34	3.84	1.68	11.0	13.8	6.76	2	7	1.30	<0.2	1.63	32.4	17	0.65
5553527 (9153070)	5.29	3.30	1.23	3.00	9.39	5.46	1	6	1.10	<0.2	1.16	25.8	12	0.52
5553528 (9153071)	6.51	3.99	1.72	6.51	13.1	6.63	2	7	1.35	<0.2	1.28	34.3	16	0.66
5553529 (9153072)	4.26	2.60	0.96	5.95	16.3	4.04	1	4	0.88	<0.2	2.19	15.8	26	0.43
5553530 (9153073)	2.88	1.84	0.67	7.01	16.6	2.53	1	2	0.64	<0.2	2.36	6.4	25	0.29
5553531 (9153074)	2.95	1.92	0.68	7.91	15.7	2.66	1	2	0.63	<0.2	1.65	6.9	14	0.33
5553532 (9153075)	3.00	1.82	0.84	6.56	17.2	2.66	1	2	0.62	<0.2	1.70	7.1	15	0.33
5553533 (9153076)	2.81	1.81	0.71	5.44	17.7	2.52	1	2	0.60	<0.2	1.61	6.8	15	0.30
5553534 (9153077)	2.84	1.78	0.76	4.84	17.7	2.58	1	2	0.61	<0.2	1.78	6.8	17	0.28
5553535 (9153078)	3.10	1.96	0.71	5.81	18.2	2.73	1	2	0.68	<0.2	1.41	7.5	17	0.34
5553536 (9153079)	1.66	0.79	1.24	3.98	20.5	3.04	2	4	0.32	<0.2	0.66	36.4	11	0.13
5553537 (9153080)	2.44	1.50	0.87	5.68	16.6	2.58	1	2	0.51	<0.2	0.41	13.6	<10	0.23
5553538 (9153081)	2.72	1.74	0.75	6.05	17.4	2.38	2	2	0.58	<0.2	0.37	6.5	<10	0.30
5553539 (9153082)	3.04	1.91	0.79	8.04	16.8	2.70	1	2	0.65	<0.2	0.08	6.8	<10	0.33
5553540 (9153083)	2.86	1.80	0.78	5.76	18.2	2.69	2	2	0.60	<0.2	0.08	6.9	<10	0.31

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## Certificate of Analysis

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PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scott Halladay, Hamid Mumin

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Mar 27, 2018	DATE RECEIVED: Mar 28, 2018							DATE REPORTED: Jun 05, 2018					SAMPLE TYPE: Drill Core		
Analyte:	Mg	Mn	Mo	Nb	Nd	Ni	P	Pb	Pr	Rb	S	Sb	Sc	Si	
Unit:	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	%	
RDL:	0.01	10	2	1	0.1	5	0.01	5	0.05	0.2	0.01	0.1	5	0.01	
5553491 (9153034)	1.45	9630	7	15	32.7	40	<0.01	5	8.05	89.9	0.14	0.5	10	25.0	
5553492 (9153035)	1.12	6050	5	18	35.6	29	0.01	5	8.76	112	0.07	<0.1	10	28.3	
5553493 (9153036)	3.09	1200	4	2	7.2	77	0.03	<5	1.61	37.2	0.20	<0.1	34	22.6	
5553494 (9153037)	2.76	1160	3	1	6.7	68	0.03	<5	1.51	39.7	0.24	0.1	35	21.3	
5553495 (9153038)	3.29	1160	5	2	7.8	81	0.03	<5	1.76	14.5	0.26	0.1	39	23.9	
5553496 (9153039)	3.92	1290	4	2	7.6	75	0.03	<5	1.70	21.3	0.24	0.1	39	22.4	
5553497 (9153040)	4.34	1310	3	2	7.2	71	0.03	<5	1.64	5.7	0.17	0.2	39	24.2	
5553498 (9153041)	4.80	1240	3	2	7.4	73	0.04	<5	1.63	12.2	0.17	0.2	39	23.7	
5553499 (9153042)	4.49	1520	3	2	7.4	77	0.03	6	1.68	9.0	0.28	0.2	38	23.8	
5553500 (9153043)	4.63	1380	3	2	7.6	77	0.03	5	1.75	9.7	0.21	0.2	40	23.6	
5553501 (9153044)	4.91	1090	3	4	11.6	67	0.03	<5	2.74	12.1	0.19	0.2	35	24.3	
5553502 (9153045)	4.89	1200	2	3	10.1	67	0.03	<5	2.48	25.8	0.13	0.1	35	24.1	
5553503 (9153046)	5.00	1200	<2	2	7.3	63	0.03	8	1.64	8.6	0.16	0.2	39	24.0	
5553504 (9153047)	4.59	1270	2	2	7.7	63	0.03	5	1.72	8.8	0.17	0.2	40	23.4	
5553505 (9153048)	4.86	1240	<2	2	7.4	62	0.03	6	1.59	7.0	0.18	0.2	39	23.9	
5553506 (9153049)	4.81	1310	<2	2	7.6	64	0.04	6	1.72	7.7	0.17	0.2	38	24.7	
5553507 (9153050)	2.23	913	14	11	26.6	52	0.05	1020	6.89	52.9	3.61	7.1	12	27.2	
5553508 (9153051)	4.40	1360	<2	2	7.2	66	0.03	9	1.62	3.9	0.15	0.2	39	23.3	
5553509 (9153052)	4.41	1600	4	2	8.0	81	0.03	9	1.72	6.2	0.20	0.2	40	24.3	
5553510 (9153053)	4.50	1770	3	2	8.0	75	0.03	8	1.73	15.0	0.22	0.2	46	23.9	
5553511 (9153054)	4.35	1820	2	2	7.2	75	0.04	6	1.68	17.7	0.19	0.1	40	24.9	
5553512 (9153055)	3.85	2560	4	2	7.8	75	0.04	5	1.71	15.6	0.18	0.1	39	23.9	
5553513 (9153056)	1.60	4650	9	10	23.5	45	0.02	10	5.80	11.8	0.76	0.2	15	24.2	
5553514 (9153057)	0.02	60	12	4	14.5	70	<0.01	<5	4.03	1.3	<0.01	0.3	<5	42.6	
5553515 (9153058)	2.80	1840	5	10	22.5	54	0.02	8	5.54	25.3	0.12	0.1	24	27.1	
5553516 (9153059)	4.19	1570	4	2	7.2	79	0.03	<5	1.58	21.5	0.20	0.2	38	23.8	
5553517 (9153060)	4.15	1460	3	2	7.0	75	0.03	5	1.58	29.5	0.15	0.2	40	23.8	
5553518 (9153061)	3.35	1450	3	3	9.1	62	0.03	6	2.07	48.7	0.26	0.1	37	23.6	
5553519 (9153062)	2.06	2180	4	9	19.0	53	0.02	9	4.81	29.9	0.48	0.1	25	25.4	
5553520 (9153063)	2.24	4550	6	12	25.2	41	0.03	7	6.38	62.9	1.08	<0.1	17	28.5	
5553521 (9153064)	4.33	1860	4	6	20.8	80	0.05	7	5.08	42.3	0.22	<0.1	31	26.2	
5553522 (9153065)	2.52	1680	4	14	31.0	44	0.03	7	7.89	39.5	1.98	<0.1	19	27.6	

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18T324089

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scott Halladay, Hamid Mumin

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Mar 27, 2018

DATE RECEIVED: Mar 28, 2018

DATE REPORTED: Jun 05, 2018

SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte: Unit: RDL:	Mg %	Mn ppm	Mo ppm	Nb ppm	Nd ppm	Ni ppm	P %	Pb ppm	Pr ppm	Rb ppm	S %	Sb ppm	Sc ppm	Si %
5553523 (9153066)		2.78	3940	5	21	38.8	13	0.01	<5	9.72	14.0	0.99	0.1	5	26.0
5553524 (9153067)		0.87	881	53	6	17.4	64	0.03	6417	4.45	30.6	17.0	32.1	<5	16.6
5553525 (9153068)		2.80	2200	4	12	26.2	61	0.03	6	6.67	48.1	0.18	<0.1	17	24.7
5553526 (9153069)		1.30	3050	5	13	32.6	28	0.02	<5	8.21	53.3	1.14	<0.1	6	31.2
5553527 (9153070)		0.45	680	8	11	26.0	9	<0.01	<5	6.69	40.4	0.12	<0.1	<5	38.0
5553528 (9153071)		0.91	2170	6	14	33.6	12	0.01	<5	8.56	35.7	0.36	<0.1	6	33.5
5553529 (9153072)		1.30	2010	4	6	17.0	49	0.03	<5	4.16	71.1	0.17	<0.1	29	26.7
5553530 (9153073)		1.82	2270	2	2	8.0	59	0.03	<5	1.82	65.2	0.22	<0.1	40	25.1
5553531 (9153074)		1.94	2620	3	2	8.4	59	0.03	<5	1.89	45.4	0.27	<0.1	39	24.9
5553532 (9153075)		2.01	2030	3	2	8.8	77	0.04	<5	2.04	49.2	0.20	<0.1	40	24.9
5553533 (9153076)		1.66	1540	3	2	8.2	55	0.04	<5	1.90	48.9	0.21	<0.1	42	26.0
5553534 (9153077)		1.25	1240	3	2	8.2	58	0.04	<5	1.94	56.6	0.23	<0.1	43	27.4
5553535 (9153078)		1.82	1480	2	2	9.0	56	0.04	<5	2.09	46.7	0.26	<0.1	45	25.4
5553536 (9153079)		2.84	815	4	4	30.0	129	0.08	8	8.33	21.3	0.10	0.1	13	27.5
5553537 (9153080)		2.50	1140	<2	2	13.4	74	0.04	<5	3.44	13.5	0.36	0.1	35	26.5
5553538 (9153081)		3.00	1390	<2	2	7.9	64	0.04	<5	1.87	13.7	0.24	0.1	43	26.0
5553539 (9153082)		3.41	1440	<2	2	8.5	47	0.04	<5	1.96	0.5	0.32	0.2	42	24.6
5553540 (9153083)		2.75	1290	<2	2	8.7	58	0.04	<5	1.94	0.7	0.21	0.2	43	25.4

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scott Halladay, Hamid Mumin

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Mar 27, 2018

DATE RECEIVED: Mar 28, 2018

DATE REPORTED: Jun 05, 2018

SAMPLE TYPE: Drill Core

Analyte:	Sm	Sn	Sr	Ta	Tb	Th	Ti	Tl	Tm	U	V	W	Y	Yb
Unit:	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
RDL:	0.1	1	0.1	0.5	0.05	0.1	0.01	0.5	0.05	0.05	5	1	0.5	0.1
5553491 (9153034)	6.8	1	84.0	<0.5	1.16	5.8	0.10	<0.5	0.66	1.30	17	<1	42.5	4.9
5553492 (9153035)	7.3	1	70.4	<0.5	1.23	6.3	0.10	<0.5	0.67	1.43	10	<1	45.7	5.2
5553493 (9153036)	1.8	<1	84.1	<0.5	0.42	1.3	0.40	<0.5	0.25	0.31	227	<1	16.3	1.8
5553494 (9153037)	1.8	<1	95.3	<0.5	0.42	1.2	0.40	<0.5	0.26	0.24	228	<1	15.0	1.8
5553495 (9153038)	2.0	<1	105	<0.5	0.45	1.3	0.45	<0.5	0.28	0.29	254	<1	17.2	2.0
5553496 (9153039)	2.0	2	113	<0.5	0.44	1.2	0.44	<0.5	0.27	0.31	252	<1	17.3	2.0
5553497 (9153040)	2.0	<1	127	<0.5	0.44	1.2	0.45	<0.5	0.27	0.29	263	<1	16.6	2.0
5553498 (9153041)	2.0	<1	144	<0.5	0.44	1.2	0.44	<0.5	0.25	0.27	256	<1	16.2	1.9
5553499 (9153042)	1.9	<1	175	<0.5	0.45	1.3	0.44	<0.5	0.28	0.33	250	<1	17.3	2.1
5553500 (9153043)	2.0	<1	184	<0.5	0.43	1.3	0.45	<0.5	0.26	0.31	260	<1	16.8	2.0
5553501 (9153044)	2.7	1	137	<0.5	0.54	2.0	0.41	<0.5	0.32	0.47	225	<1	19.9	2.3
5553502 (9153045)	2.4	<1	113	<0.5	0.49	1.7	0.41	<0.5	0.28	0.40	226	<1	18.0	2.1
5553503 (9153046)	1.9	<1	148	<0.5	0.43	1.3	0.45	<0.5	0.26	0.29	248	<1	16.8	1.9
5553504 (9153047)	2.0	<1	159	<0.5	0.44	1.3	0.44	<0.5	0.29	0.31	256	<1	17.8	2.0
5553505 (9153048)	2.0	<1	156	<0.5	0.42	1.3	0.44	<0.5	0.27	0.29	252	<1	16.8	1.9
5553506 (9153049)	2.0	<1	143	<0.5	0.42	1.3	0.44	<0.5	0.26	0.31	252	<1	16.4	1.8
5553507 (9153050)	5.1	10	91.9	<0.5	0.80	8.7	0.28	5.5	0.40	2.39	91	3	25.7	2.8
5553508 (9153051)	1.9	<1	178	<0.5	0.43	1.3	0.43	<0.5	0.28	0.31	247	<1	16.6	2.0
5553509 (9153052)	2.1	<1	205	<0.5	0.44	1.3	0.45	<0.5	0.29	0.31	285	<1	17.3	2.0
5553510 (9153053)	2.0	4	195	<0.5	0.46	1.3	0.46	<0.5	0.30	0.30	300	<1	18.3	2.1
5553511 (9153054)	1.9	4	209	<0.5	0.42	1.3	0.46	<0.5	0.26	0.28	258	<1	17.3	1.9
5553512 (9153055)	2.0	<1	218	<0.5	0.42	1.3	0.44	<0.5	0.28	0.30	252	<1	17.9	2.0
5553513 (9153056)	4.8	<1	274	<0.5	0.82	4.0	0.17	<0.5	0.47	0.97	76	<1	33.3	3.2
5553514 (9153057)	2.6	<1	12.4	<0.5	0.31	5.3	0.09	<0.5	0.13	0.70	13	<1	9.0	0.9
5553515 (9153058)	4.8	4	209	<0.5	0.87	4.2	0.28	<0.5	0.50	0.94	140	<1	32.0	3.6
5553516 (9153059)	2.0	1	289	<0.5	0.43	1.3	0.43	<0.5	0.26	0.33	250	<1	17.3	1.9
5553517 (9153060)	1.9	1	301	<0.5	0.40	1.2	0.42	<0.5	0.25	0.31	255	<1	16.8	1.8
5553518 (9153061)	2.3	2	280	<0.5	0.48	1.5	0.47	<0.5	0.33	0.38	264	<1	20.5	2.1
5553519 (9153062)	4.2	5	201	<0.5	0.75	3.4	0.31	<0.5	0.42	0.81	156	<1	28.4	3.0
5553520 (9153063)	5.2	2	115	<0.5	0.96	4.4	0.29	<0.5	0.59	1.05	105	<1	39.0	4.0
5553521 (9153064)	4.0	<1	208	<0.5	0.66	3.6	0.41	<0.5	0.36	0.78	203	<1	23.8	2.4
5553522 (9153065)	6.2	2	228	<0.5	1.03	5.7	0.27	<0.5	0.55	1.31	113	<1	38.4	4.1

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18T324089

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scott Halladay, Hamid Mumin

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Mar 27, 2018

DATE RECEIVED: Mar 28, 2018

DATE REPORTED: Jun 05, 2018

SAMPLE TYPE: Drill Core

Analyte:	Sm	Sn	Sr	Ta	Tb	Th	Ti	Tl	Tm	U	V	W	Y	Yb
Unit:	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
RDL:	0.1	1	0.1	0.5	0.05	0.1	0.01	0.5	0.05	0.05	5	1	0.5	0.1
Sample ID (AGAT ID)														
5553523 (9153066)	8.0	2	62.9	0.6	1.35	7.5	0.12	<0.5	0.72	1.63	15	<1	50.1	5.3
5553524 (9153067)	3.4	91	85.7	<0.5	0.48	5.9	0.10	5.6	0.23	3.06	49	6	15.4	1.7
5553525 (9153068)	5.4	2	130	<0.5	0.87	5.1	0.28	<0.5	0.51	1.21	103	<1	32.4	3.7
5553526 (9153069)	6.6	2	58.5	<0.5	1.02	5.5	0.14	<0.5	0.57	1.26	30	<1	38.8	4.2
5553527 (9153070)	5.3	<1	41.0	<0.5	0.87	3.9	0.09	<0.5	0.48	0.95	10	<1	32.8	3.3
5553528 (9153071)	6.7	4	40.3	<0.5	1.09	5.1	0.12	<0.5	0.60	1.14	15	1	41.1	4.3
5553529 (9153072)	3.7	2	114	<0.5	0.69	2.8	0.34	<0.5	0.40	0.65	183	<1	24.3	2.7
5553530 (9153073)	2.0	2	110	<0.5	0.43	1.4	0.46	<0.5	0.27	0.35	250	<1	17.3	2.0
5553531 (9153074)	2.2	<1	88.9	<0.5	0.46	1.4	0.44	<0.5	0.30	0.34	245	<1	17.0	2.1
5553532 (9153075)	2.2	<1	86.4	<0.5	0.45	1.5	0.46	<0.5	0.29	0.37	259	<1	17.4	2.1
5553533 (9153076)	2.1	<1	90.8	<0.5	0.40	1.5	0.48	<0.5	0.26	0.37	273	<1	17.3	1.9
5553534 (9153077)	2.1	<1	82.2	<0.5	0.43	1.5	0.49	<0.5	0.27	0.40	280	<1	16.7	1.9
5553535 (9153078)	2.3	1	105	<0.5	0.47	1.7	0.51	<0.5	0.30	0.41	295	1	17.8	2.1
5553536 (9153079)	4.3	<1	326	<0.5	0.39	6.5	0.30	<0.5	0.13	1.50	113	<1	9.0	0.8
5553537 (9153080)	2.6	<1	236	<0.5	0.38	2.8	0.43	<0.5	0.21	0.65	225	<1	13.9	1.6
5553538 (9153081)	2.0	<1	163	<0.5	0.41	1.6	0.50	<0.5	0.25	0.39	279	<1	16.4	1.9
5553539 (9153082)	2.1	<1	210	<0.5	0.48	1.6	0.48	<0.5	0.30	0.38	273	<1	18.3	2.1
5553540 (9153083)	2.1	7	164	<0.5	0.43	1.6	0.49	<0.5	0.27	0.40	278	<1	17.1	1.9

Certified By:



## Certificate of Analysis

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scott Halladay, Hamid Mumin

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Mar 27, 2018

DATE RECEIVED: Mar 28, 2018

DATE REPORTED: Jun 05, 2018

SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte:	Zn	Zr
	Unit: RDL:	ppm 5	ppm 0.5
5553491 (9153034)		102	303
5553492 (9153035)		117	368
5553493 (9153036)		65	63.4
5553494 (9153037)		87	62.1
5553495 (9153038)		98	65.4
5553496 (9153039)		103	61.5
5553497 (9153040)		107	61.3
5553498 (9153041)		122	60.8
5553499 (9153042)		146	62.4
5553500 (9153043)		152	62.9
5553501 (9153044)		89	105
5553502 (9153045)		86	83.1
5553503 (9153046)		103	62.5
5553504 (9153047)		115	64.5
5553505 (9153048)		118	64.8
5553506 (9153049)		165	64.2
5553507 (9153050)		4690	186
5553508 (9153051)		297	63.5
5553509 (9153052)		219	61.9
5553510 (9153053)		258	63.5
5553511 (9153054)		167	61.7
5553512 (9153055)		210	60.8
5553513 (9153056)		145	232
5553514 (9153057)		<5	141
5553515 (9153058)		152	208
5553516 (9153059)		217	59.4
5553517 (9153060)		165	59.8
5553518 (9153061)		149	80.2
5553519 (9153062)		177	175
5553520 (9153063)		234	221
5553521 (9153064)		110	135
5553522 (9153065)		264	277

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18T324089

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scott Halladay, Hamid Mumin

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Mar 27, 2018      DATE RECEIVED: Mar 28, 2018      DATE REPORTED: Jun 05, 2018      SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte:	Zn	Zr
	Unit:	ppm	ppm
	RDL:	5	0.5
5553523 (9153066)		177	372
5553524 (9153067)		72400	86.9
5553525 (9153068)		99	248
5553526 (9153069)		52	272
5553527 (9153070)		18	216
5553528 (9153071)		21	282
5553529 (9153072)		69	137
5553530 (9153073)		92	62.5
5553531 (9153074)		101	57.7
5553532 (9153075)		92	65.2
5553533 (9153076)		79	64.3
5553534 (9153077)		76	64.1
5553535 (9153078)		82	69.2
5553536 (9153079)		70	147
5553537 (9153080)		75	82.5
5553538 (9153081)		84	69.6
5553539 (9153082)		84	65.2
5553540 (9153083)		82	67.5

Comments: RDL - Reported Detection Limit

Certified By: \_\_\_\_\_



## Certificate of Analysis

AGAT WORK ORDER: 18T324089

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scott Halladay, Hamid Mumin

(202-052) Fire Assay - Trace Au, ICP-OES finish (ppm)

DATE SAMPLED: Mar 27, 2018      DATE RECEIVED: Mar 28, 2018      DATE REPORTED: Jun 05, 2018      SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte:	Unit:	RDL:	Value
	Au	ppm	0.001	
5553491 (9153034)				0.018
5553492 (9153035)				0.011
5553493 (9153036)				0.030
5553494 (9153037)				0.008
5553495 (9153038)				0.005
5553496 (9153039)				0.009
5553497 (9153040)				0.004
5553498 (9153041)				0.004
5553499 (9153042)				0.002
5553500 (9153043)				0.003
5553501 (9153044)				0.003
5553502 (9153045)				0.004
5553503 (9153046)				0.004
5553504 (9153047)				0.003
5553505 (9153048)				0.005
5553506 (9153049)				0.003
5553507 (9153050)				0.299
5553508 (9153051)				0.005
5553509 (9153052)				0.007
5553510 (9153053)				0.009
5553511 (9153054)				0.005
5553512 (9153055)				0.009
5553513 (9153056)				0.003
5553514 (9153057)				0.002
5553515 (9153058)				0.002
5553516 (9153059)				0.006
5553517 (9153060)				0.027
5553518 (9153061)				0.004
5553519 (9153062)				0.004
5553520 (9153063)				0.010
5553521 (9153064)				0.005
5553522 (9153065)				0.004

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## Certificate of Analysis

AGAT WORK ORDER: 18T324089

PROJECT: SLG-2018

5623 McADAM ROAD  
 MISSISSAUGA, ONTARIO  
 CANADA L4Z 1N9  
 TEL (905)501-9998  
 FAX (905)501-0589  
<http://www.agatlabs.com>

CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scott Halladay, Hamid Mumin

(202-052) Fire Assay - Trace Au, ICP-OES finish (ppm)

DATE SAMPLED: Mar 27, 2018      DATE RECEIVED: Mar 28, 2018      DATE REPORTED: Jun 05, 2018      SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte:	Unit:	RDL:
	Au	ppm	0.001
5553523 (9153066)			0.003
5553524 (9153067)			0.436
5553525 (9153068)			0.004
5553526 (9153069)			0.004
5553527 (9153070)			0.002
5553528 (9153071)			0.002
5553529 (9153072)			0.002
5553530 (9153073)			0.002
5553531 (9153074)			0.003
5553532 (9153075)			0.003
5553533 (9153076)			0.003
5553534 (9153077)			0.002
5553535 (9153078)			0.002
5553536 (9153079)			0.002
5553537 (9153080)			0.001
5553538 (9153081)			0.001
5553539 (9153082)			0.002
5553540 (9153083)			0.002

Comments: RDL - Reported Detection Limit

Certified By:



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### Sieving - % Passing (Crushing)

DATE SAMPLED: Mar 27, 2018

DATE RECEIVED: Mar 28, 2018

DATE REPORTED: Jun 05, 2018

SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte:	Pass %
	Unit:	%
	RDL:	0.01
5553491 (9153034)		82.1
5553510 (9153053)		83.1
5553529 (9153072)		80.5

Comments: RDL - Reported Detection Limit

Certified By:



**AGAT** Laboratories

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PROJECT: SLG-2018

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## Sieving - % Passing (Pulverizing)

DATE SAMPLED: Mar 27, 2018	DATE RECEIVED: Mar 28, 2018	DATE REPORTED: Jun 05, 2018	SAMPLE TYPE: Drill Core
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Sample ID (AGAT ID)	Analyte:	Pass %
	Unit:	%
	RDL:	0.01
5553491 (9153034)		94.3
5553520 (9153063)		92.5

Comments: RDL - Reported Detection Limit

Certified By:



CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scott Halladay, Hamid Mumin

(201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

Parameter	REPLICATE #1				REPLICATE #2				REPLICATE #3				REPLICATE #4			
	Sample ID	Original	Replicate	RPD	Sample ID	Original	Replicate	RPD	Sample ID	Original	Replicate	RPD	Sample ID	Original	Replicate	RPD
Ag	9153034	< 1	< 1	0.0%	9153045	< 1	< 1	0.0%	9153058	< 1	< 1	0.0%	9153069	< 1	2	
Al	9153034	4.38	4.33	1.1%	9153045	7.28	7.35	1.0%	9153058	6.23	6.42	3.0%	9153069	4.84	4.69	3.1%
As	9153034	< 5	< 5	0.0%	9153045	< 5	< 5	0.0%	9153058	< 5	< 5	0.0%	9153069	< 5	< 5	0.0%
B	9153034	< 20	< 20	0.0%	9153045	< 20	< 20	0.0%	9153058	< 20	< 20	0.0%	9153069	< 20	< 20	0.0%
Ba	9153034	266	268	0.7%	9153045	244	242	0.8%	9153058	294	282	4.2%	9153069	263	263	0.0%
Be	9153034	< 5	< 5	0.0%	9153045	< 5	< 5	0.0%	9153058	< 5	< 5	0.0%	9153069	< 5	< 5	0.0%
Bi	9153034	< 0.1	< 0.1	0.0%	9153045	< 0.1	< 0.1	0.0%	9153058	< 0.1	< 0.1	0.0%	9153069	0.20	0.25	22.2%
Ca	9153034	2.11	2.16	2.3%	9153045	5.23	5.28	1.0%	9153058	4.12	4.24	2.9%	9153069	1.92	1.85	3.7%
Cd	9153034	0.2	0.2	0.0%	9153045	< 0.2	< 0.2	0.0%	9153058	< 0.2	0.2		9153069	< 0.2	< 0.2	0.0%
Ce	9153034	65.8	69.2	5.0%	9153045	19.2	19.5	1.6%	9153058	44.4	45.2	1.8%	9153069	68.6	67.5	1.6%
Co	9153034	2.68	2.42	10.2%	9153045	46.2	47.6	3.0%	9153058	31.5	32.7	3.7%	9153069	35.8	35.4	1.1%
Cr	9153034	< 0.005	< 0.005	0.0%	9153045	< 0.005	< 0.005	0.0%	9153058	< 0.005	< 0.005	0.0%	9153069	< 0.005	< 0.005	0.0%
Cs	9153034	7.1	7.2	1.4%	9153045	3.6	3.6	0.0%	9153058	3.65	3.63	0.5%	9153069	4.26	4.14	2.9%
Cu	9153034	22	21	4.7%	9153045	73	67	8.6%	9153058	40	40	0.0%	9153069	76	72	5.4%
Dy	9153034	6.92	7.30	5.3%	9153045	3.05	3.22	5.4%	9153058	5.40	5.39	0.2%	9153069	6.34	6.10	3.9%
Er	9153034	4.36	4.53	3.8%	9153045	2.02	1.90	6.1%	9153058	3.27	3.12	4.7%	9153069	3.84	3.82	0.5%
Eu	9153034	1.46	1.56	6.6%	9153045	0.781	0.774	0.9%	9153058	0.993	1.08	8.4%	9153069	1.68	1.65	1.8%
Fe	9153034	17.5	17.3	1.1%	9153045	8.54	8.68	1.6%	9153058	8.50	8.89	4.5%	9153069	11.0	10.9	0.9%
Ga	9153034	14.3	14.9	4.1%	9153045	15.4	15.7	1.9%	9153058	16.0	16.7	4.3%	9153069	13.8	13.3	3.7%
Gd	9153034	7.16	7.62	6.2%	9153045	2.92	3.00	2.7%	9153058	5.19	5.24	1.0%	9153069	6.76	6.69	1.0%
Ge	9153034	1	1	0.0%	9153045	1	2		9153058	2	2	0.0%	9153069	2	2	0.0%
Hf	9153034	7	7	0.0%	9153045	2	2	0.0%	9153058	5	5	0.0%	9153069	7	7	0.0%
Ho	9153034	1.50	1.52	1.3%	9153045	0.68	0.69	1.5%	9153058	1.14	1.10	3.6%	9153069	1.30	1.30	0.0%
In	9153034	< 0.2	< 0.2	0.0%	9153045	< 0.2	< 0.2	0.0%	9153058	< 0.2	< 0.2	0.0%	9153069	< 0.2	< 0.2	0.0%
K	9153034	1.87	1.83	2.2%	9153045	0.72	0.72	0.0%	9153058	0.61	0.61	0.0%	9153069	1.63	1.55	5.0%
La	9153034	29.6	31.0	4.6%	9153045	9.16	9.25	1.0%	9153058	20.1	20.7	2.9%	9153069	32.4	31.6	2.5%
Li	9153034	< 10	< 10	0.0%	9153045	28	28	0.0%	9153058	15	15	0.0%	9153069	17	18	5.7%
Lu	9153034	0.75	0.77	2.6%	9153045	0.32	0.32	0.0%	9153058	0.56	0.55	1.8%	9153069	0.652	0.644	1.2%
Mg	9153034	1.45	1.48	2.0%	9153045	4.89	4.90	0.2%	9153058	2.80	2.89	3.2%	9153069	1.30	1.30	0.0%
Mn	9153034	9630	9790	1.6%	9153045	1200	1180	1.7%	9153058	1840	1880	2.2%	9153069	3050	3060	0.3%
Mo	9153034	7	6	15.4%	9153045	2	2	0.0%	9153058	5	4	22.2%	9153069	5	5	0.0%



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Nb	9153034	15	15	0.0%	9153045	3	3	0.0%	9153058	10	10	0.0%	9153069	13	13	0.0%
Nd	9153034	32.7	34.6	5.6%	9153045	10.1	10.3	2.0%	9153058	22.5	23.0	2.2%	9153069	32.6	32.0	1.9%
Ni	9153034	40	35	13.3%	9153045	67	68	1.5%	9153058	54	49	9.7%	9153069	28	25	11.3%
P	9153034	< 0.01	0.01		9153045	0.03	0.03	0.0%	9153058	0.02	0.02	0.0%	9153069	0.02	0.02	0.0%
Pb	9153034	5	5	0.0%	9153045	< 5	< 5	0.0%	9153058	8	7	13.3%	9153069	< 5	< 5	0.0%
Pr	9153034	8.05	8.49	5.3%	9153045	2.48	2.77	11.0%	9153058	5.54	5.56	0.4%	9153069	8.21	8.01	2.5%
Rb	9153034	89.9	93.2	3.6%	9153045	25.8	26.9	4.2%	9153058	25.3	24.7	2.4%	9153069	53.3	51.0	4.4%
S	9153034	0.140	0.146	4.2%	9153045	0.13	0.13	0.0%	9153058	0.12	0.12	0.0%	9153069	1.14	1.10	3.6%
Sb	9153034	0.5	0.5	0.0%	9153045	0.13	0.16	20.7%	9153058	0.1	0.1	0.0%	9153069	< 0.1	< 0.1	0.0%
Sc	9153034	10	10	0.0%	9153045	35	35	0.0%	9153058	24	25	4.1%	9153069	6	6	0.0%
Si	9153034	25.0	24.6	1.6%	9153045	24.1	24.5	1.6%	9153058	27.1	27.7	2.2%	9153069	31.2	30.2	3.3%
Sm	9153034	6.78	6.97	2.8%	9153045	2.4	2.4	0.0%	9153058	4.8	4.8	0.0%	9153069	6.57	6.51	0.9%
Sn	9153034	1	1	0.0%	9153045	< 1	< 1	0.0%	9153058	4	3	28.6%	9153069	2	3	
Sr	9153034	84.0	85.5	1.8%	9153045	113	111	1.8%	9153058	209	214	2.4%	9153069	58.5	56.9	2.8%
Ta	9153034	< 0.5	< 0.5	0.0%	9153045	< 0.5	< 0.5	0.0%	9153058	< 0.5	< 0.5	0.0%	9153069	< 0.5	< 0.5	0.0%
Tb	9153034	1.16	1.21	4.2%	9153045	0.494	0.520	5.1%	9153058	0.873	0.886	1.5%	9153069	1.02	1.04	1.9%
Th	9153034	5.8	6.0	3.4%	9153045	1.7	1.7	0.0%	9153058	4.2	4.1	2.4%	9153069	5.46	5.42	0.7%
Ti	9153034	0.10	0.10	0.0%	9153045	0.411	0.415	1.0%	9153058	0.28	0.28	0.0%	9153069	0.136	0.132	3.0%
Tl	9153034	< 0.5	< 0.5	0.0%	9153045	< 0.5	< 0.5	0.0%	9153058	< 0.5	< 0.5	0.0%	9153069	< 0.5	< 0.5	0.0%
Tm	9153034	0.659	0.687	4.2%	9153045	0.284	0.289	1.7%	9153058	0.497	0.488	1.8%	9153069	0.571	0.555	2.8%
U	9153034	1.30	1.38	6.0%	9153045	0.40	0.43	7.2%	9153058	0.94	0.93	1.1%	9153069	1.26	1.23	2.4%
V	9153034	17	15	12.5%	9153045	226	227	0.4%	9153058	140	143	2.1%	9153069	30	30	0.0%
W	9153034	< 1	< 1	0.0%	9153045	< 1	< 1	0.0%	9153058	< 1	< 1	0.0%	9153069	< 1	1	
Y	9153034	42.5	43.9	3.2%	9153045	18.0	18.9	4.9%	9153058	32.0	33.5	4.6%	9153069	38.8	37.9	2.3%
Yb	9153034	4.9	4.9	0.0%	9153045	2.1	2.1	0.0%	9153058	3.6	3.6	0.0%	9153069	4.2	4.0	4.9%
Zn	9153034	102	104	1.9%	9153045	86	87	1.2%	9153058	152	158	3.9%	9153069	52	53	1.9%
Zr	9153034	303	309	2.0%	9153045	83.1	86.1	3.5%	9153058	208	221	6.1%	9153069	272	267	1.9%

(202-052) Fire Assay - Trace Au, ICP-OES finish (ppm)

Parameter	REPLICATE #1				REPLICATE #2				REPLICATE #3				REPLICATE #4			
	Sample ID	Original	Replicate	RPD	Sample ID	Original	Replicate	RPD	Sample ID	Original	Replicate	RPD	Sample ID	Original	Replicate	RPD
Au	9153067	0.436	0.515	16.6%	9153045	0.004	0.003	28.6%	9153058	0.002	0.035		9153069	0.004	0.004	0.0%



CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scott Halladay, Hamid Mumin

## (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

Parameter	CRM #1 (ref.GS6E)				CRM #2 (ref.Till-2)				CRM #3 (ref.SY-4)							
	Expect	Actual	Recovery	Limits	Expect	Actual	Recovery	Limits	Expect	Actual	Recovery	Limits				
Al					8.47	7.86	93%	90% - 110%	10.95	11.16	102%	90% - 110%				
As	25	25	100%	90% - 110%	26	25	96%	90% - 110%								
Ba					540	520	96%	90% - 110%	340	338	99%	90% - 110%				
Be					4.0	3.9	98%	90% - 110%	2.6	3.3	127%	90% - 110%				
Ca					0.907	0.886	98%	90% - 110%	5.72	5.73	100%	90% - 110%				
Ce					98	103	105%	90% - 110%	122	127	104%	90% - 110%				
Co	1202	1290	107%	90% - 110%	15	15	103%	90% - 110%	2.8	2.5	90%	90% - 110%				
Cs									1.5	1.6	105%	90% - 110%				
Cu	15414	15652	102%	90% - 110%	150	155	104%	90% - 110%	7	7	94%	90% - 110%				
Dy									18.2	18.4	101%	90% - 110%				
Er					3.7	3.6	98%	90% - 110%	14.2	13.8	97%	90% - 110%				
Eu					1.0	1.19	119%	90% - 110%	2.0	1.98	99%	90% - 110%				
Fe					3.77	3.71	98%	90% - 110%	4.34	4.51	104%	90% - 110%				
Ga									35	36	104%	90% - 110%				
Gd									14	14	101%	90% - 110%				
Hf					11	10	90%	90% - 110%	10.6	11	104%	90% - 110%				
Ho									4.3	4.3	100%	90% - 110%				
K					2.55	2.42	95%	90% - 110%	1.37	1.4	102%	90% - 110%				
La					44	46	104%	90% - 110%	58	58	100%	90% - 110%				
Li					47	46	99%	90% - 110%	37	39	104%	90% - 110%				
Lu					0.6	0.6	99%	90% - 110%	2.1	2.2	106%	90% - 110%				
Mg					1.1	1.1	97%	90% - 110%	0.325	0.319	98%	90% - 110%				
Mn					780	759	97%	90% - 110%	836	827	99%	90% - 110%				
Mo					14	14	98%	90% - 110%								
Nb					20	19	96%	90% - 110%	13	13	97%	90% - 110%				
Nd									57	60	105%	90% - 110%				
Ni	23610	23916	101%	90% - 110%	32	37	115%	90% - 110%	9	12	129%	90% - 110%				
Pb	41	42	103%	90% - 110%	31	33	107%	90% - 110%	10	10	95%	90% - 110%				
Pr									15.0	15.3	102%	90% - 110%				
Rb					144	152	106%	90% - 110%	55	55	101%	90% - 110%				
Sb					0.8	0.8	102%	90% - 110%								



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Sc					12	12	100%	90% - 110%								
Si					28.4	27	95%	90% - 110%	23.3	23.5	101%	90% - 110%				
Sm					7.4	7.6	103%	90% - 110%	12.7	12.5	99%	90% - 110%				
Sn									7.1	7.1	100%	90% - 110%				
Sr					144	146	102%	90% - 110%	1191	1242	104%	90% - 110%				
Ta					1.9	1.4	73%	90% - 110%								
Tb					1.2	1.2	98%	90% - 110%	2.6	2.7	102%	90% - 110%				
Th					18.4	18.9	103%	90% - 110%	1.4	1.2	85%	90% - 110%				
Ti					0.527	0.493	94%	90% - 110%	0.172	0.173	101%	90% - 110%				
Tm									2.3	2.2	97%	90% - 110%				
U					5.7	5.3	93%	90% - 110%	0.8	0.7	91%	90% - 110%				
V					77	84	109%	90% - 110%	8	9	114%	90% - 110%				
W					5	5.21	104%	90% - 110%								
Y					40	36	90%	90% - 110%	119	119	100%	90% - 110%				
Yb									14.8	15.8	107%	90% - 110%				
Zn	90	94	104%	90% - 110%	130	122	94%	90% - 110%	93	99	107%	90% - 110%				
Zr					390	405	104%	90% - 110%	517	566	109%	90% - 110%				

(202-052) Fire Assay - Trace Au, ICP-OES finish (ppm)

Parameter	CRM #1 (ref.GS6E)				CRM #2 (ref.1P5Q)				CRM #3 (ref.GSP7L)							
	Expect	Actual	Recovery	Limits	Expect	Actual	Recovery	Limits	Expect	Actual	Recovery	Limits				
Au	6.06	5.51	91%	90% - 110%	1.329	1.343	101%	90% - 110%	0.709	0.692	98%	90% - 110%				



## Method Summary

CLIENT NAME: GOSSAN RESOURCES LIMITED  
 PROJECT: SLG-2018  
 SAMPLING SITE:

AGAT WORK ORDER: 18T324089  
 ATTENTION TO: Scott Halladay, Hamid Mumin  
 SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Solid Analysis			
Sample Login Weight	MIN-12009		BALANCE
Ag			ICP/MS
Al	MIN-200-12001		ICP/OES
As	MIN-200-12001		ICP/MS
B	MIN-200-12001		ICP/OES
Ba	MIN-200-12001		ICP/OES
Be	MIN-200-12001		ICP/OES
Bi	MIN-200-12001		ICP-MS
Ca	MIN-200-12001		ICP/OES
Cd	MIN-200-12001		ICP-MS
Ce	MIN-200-12001		ICP-MS
Co	MIN-200-12001		ICP/MS
Cr	MIN-200-12001		ICP/OES
Cs	MIN-200-12001		ICP-MS
Cu	MIN-200-12001		ICP/OES
Dy	MIN-200-12001		ICP-MS
Er	MIN-200-12001		ICP-MS
Eu	MIN-200-12001		ICP-MS
Fe	MIN-200-12001		ICP/OES
Ga	MIN-200-12001		ICP-MS
Gd	MIN-200-12001		ICP-MS
Ge	MIN-200-12001		ICP-MS
Hf	MIN-200-12001		ICP-MS
Ho	MIN-200-12001		ICP-MS
In	MIN-200-12001		ICP-MS
K	MIN-200-12001		ICP/OES
La	MIN-200-12001		ICP-MS
Li	MIN-200-12001		ICP/OES
Lu	MIN-200-12001		ICP-MS
Mg	MIN-200-12001		ICP/OES
Mn	MIN-200-12001		ICP/OES
Mo	MIN-200-12001		ICP/MS
Nb	MIN-200-12001		ICP-MS
Nd	MIN-200-12001		ICP-MS
Ni	MIN-200-12001		ICP/OES
P			ICP/OES
Pb	MIN-200-12001		ICP/MS
Pr	MIN-200-12001		ICP-MS
Rb	MIN-200-12001		ICP/MS
S	MIN-200-12001		ICP/OES
Sb	MIN-200-12001		ICP-MS
Sc	MIN-200-12001		ICP/OES
Si	MIN-200-12001		ICP/OES
Sm	MIN-200-12001		ICP-MS
Sn	MIN-200-12001		ICP/MS
Sr	MIN-200-12001		ICP-OES
Ta	MIN-200-12001		ICP-MS
Tb	MIN-200-12001		ICP-MS
Th	MIN-200-12001		ICP-MS



## Method Summary

CLIENT NAME: GOSSAN RESOURCES LIMITED

AGAT WORK ORDER: 18T324089

PROJECT: SLG-2018

ATTENTION TO: Scott Halladay, Hamid Mumin

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Ti	MIN-200-12001		ICP/OES
Tl	MIN-200-12001		ICP-MS
Tm	MIN-200-12001		ICP-MS
U	MIN-200-12001		ICP-MS
V	MIN-200-12001		ICP/OES
W	MIN-200-12001		ICP-MS
Y	MIN-200-12001		ICP-MS
Yb	MIN-200-12001		ICP-MS
Zn	MIN-200-12001		ICP/OES
Zr	MIN-200-12001		ICP-MS
Au	MIN-200-12006	BUGBEE, E: A Textbook of Fire Assaying	ICP-OES
Pass %			BALANCE



CLIENT NAME: GOSSAN RESOURCES LIMITED  
404-171 DONALD STREET  
WINNIPEG, MB R3C 1M4  
204-943-1990

ATTENTION TO: Scot Halladay

PROJECT: SLG-2018

AGAT WORK ORDER: 18T325981

SOLID ANALYSIS REVIEWED BY: Adel Mina, Mining Chief Chemist

DATE REPORTED: Jun 05, 2018

PAGES (INCLUDING COVER): 12

Should you require any information regarding this analysis please contact your client services representative at (905) 501-9998

\*NOTES

All samples are stored at no charge for 90 days. Please contact the lab if you require additional sample storage time.



## Certificate of Analysis

AGAT WORK ORDER: 18T325981

PROJECT: SLG-2018

5623 McADAM ROAD  
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<http://www.agatlabs.com>

CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

### (200-) Sample Login Weight

DATE SAMPLED: Apr 03, 2018      DATE RECEIVED: Mar 29, 2018      DATE REPORTED: Jun 05, 2018      SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte:	Sample Login Weight
	Unit:	kg
	RDL:	0.01
5553580 (9162548)		3.02
5553581 (9162549)		4.12
5553582 (9162550)		1.30
5553583 (9162551)		3.40
5553584 (9162552)		2.38
5553585 (9162553)		3.32
5553586 (9162554)		3.00
5553587 (9162555)		2.98
5553588 (9162556)		1.96
5553589 (9162557)		1.68
5553590 (9162558)		0.58
5553591 (9162559)		2.88

Comments: RDL - Reported Detection Limit

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18T325981

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Apr 03, 2018

DATE RECEIVED: Mar 29, 2018

DATE REPORTED: Jun 05, 2018

SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte:	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm
	RDL:	1	0.01	5	20	0.5	5	0.1	0.05	0.2	0.1	0.5	0.005	0.1	5
5553580 (9162548)		1	6.22	12	39	463	<5	0.9	1.57	4.6	36.6	57.0	0.009	0.8	304
5553581 (9162549)		<1	5.42	77	38	349	<5	0.6	2.64	3.4	28.8	45.9	0.007	0.8	332
5553582 (9162550)		<1	5.66	<5	47	424	<5	<0.1	3.33	0.4	77.4	32.6	<0.005	1.2	114
5553583 (9162551)		1	6.11	<5	37	488	<5	<0.1	2.53	0.3	85.7	2.3	<0.005	2.5	29
5553584 (9162552)		<1	5.92	<5	44	432	<5	<0.1	2.80	0.2	82.2	1.2	<0.005	2.7	18
5553585 (9162553)		<1	5.93	<5	36	401	<5	<0.1	2.26	<0.2	83.0	0.9	<0.005	3.2	19
5553586 (9162554)		<1	6.39	84	46	713	<5	<0.1	2.49	<0.2	51.8	9.4	<0.005	3.2	38
5553587 (9162555)		<1	6.40	388	32	978	<5	0.1	1.83	0.5	43.9	20.1	<0.005	3.6	108
5553588 (9162556)		<1	7.47	30	37	1020	<5	<0.1	2.14	0.4	37.3	15.2	<0.005	2.6	40
5553589 (9162557)		4	7.50	10	161	628	<5	0.1	3.78	1.2	51.1	11.8	<0.005	1.6	109
5553590 (9162558)		<1	1.73	<5	<20	19.6	<5	<0.1	<0.05	<0.2	34.3	1.5	0.007	<0.1	<5
5553591 (9162559)		1	5.50	<5	43	389	<5	<0.1	2.33	0.4	73.7	4.3	<0.005	3.2	42
Sample ID (AGAT ID)	Analyte:	Dy	Er	Eu	Fe	Ga	Gd	Ge	Hf	Ho	In	K	La	Li	Lu
	Unit:	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
	RDL:	0.05	0.05	0.05	0.01	0.01	0.05	1	1	0.05	0.2	0.05	0.1	10	0.05
5553580 (9162548)		2.60	1.38	0.83	12.6	16.5	2.79	2	3	0.51	0.5	2.73	17.6	<10	0.20
5553581 (9162549)		2.45	1.46	0.70	13.1	14.7	2.53	2	3	0.46	0.3	2.44	13.6	<10	0.21
5553582 (9162550)		7.85	5.13	1.57	6.21	17.2	7.77	2	9	1.75	<0.2	3.59	35.9	<10	0.73
5553583 (9162551)		8.72	5.51	1.72	3.37	18.3	8.45	2	10	1.81	<0.2	2.95	40.3	<10	0.77
5553584 (9162552)		8.12	5.07	1.59	2.90	18.3	7.96	2	9	1.68	<0.2	3.05	38.0	<10	0.71
5553585 (9162553)		8.23	5.26	1.65	3.16	18.4	8.69	2	10	1.74	<0.2	2.95	39.3	<10	0.75
5553586 (9162554)		4.84	2.74	1.11	4.31	16.5	5.02	2	6	0.97	<0.2	3.40	24.7	<10	0.40
5553587 (9162555)		4.26	2.65	0.93	5.26	16.2	4.05	2	5	0.89	<0.2	4.07	20.9	<10	0.39
5553588 (9162556)		3.20	1.85	0.81	3.36	17.4	3.63	2	4	0.67	<0.2	4.96	17.9	<10	0.26
5553589 (9162557)		4.59	2.70	1.06	5.04	18.2	4.84	2	5	0.93	<0.2	2.93	24.7	<10	0.37
5553590 (9162558)		1.88	1.09	0.35	1.18	4.00	2.05	<1	3	0.35	<0.2	0.08	17.2	12	0.16
5553591 (9162559)		7.69	4.56	1.45	3.99	16.7	7.41	2	9	1.60	<0.2	2.86	34.3	<10	0.65

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18T325981

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Apr 03, 2018

DATE RECEIVED: Mar 29, 2018

DATE REPORTED: Jun 05, 2018

SAMPLE TYPE: Drill Core

Analyte:	Mg	Mn	Mo	Nb	Nd	Ni	P	Pb	Pr	Rb	S	Sb	Sc	Si
Unit:	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	%
RDL:	0.01	10	2	1	0.1	5	0.01	5	0.05	0.2	0.01	0.1	5	0.01
5553580 (9162548)	0.63	786	9	3	16.6	111	0.04	68	4.27	67.3	6.82	6.1	13	25.6
5553581 (9162549)	0.75	1490	9	3	13.5	108	0.03	43	3.33	64.8	7.27	4.5	13	25.4
5553582 (9162550)	0.59	2230	10	18	39.3	52	<0.01	15	9.40	103	3.39	0.7	7	28.1
5553583 (9162551)	0.48	872	7	19	42.9	39	<0.01	8	10.5	101	0.64	0.4	7	32.2
5553584 (9162552)	0.46	757	6	20	42.0	34	<0.01	<5	10.4	103	0.10	0.1	7	31.8
5553585 (9162553)	0.55	746	6	20	43.0	30	<0.01	<5	10.5	104	0.12	<0.1	7	32.7
5553586 (9162554)	0.55	1100	5	10	25.0	38	0.03	9	6.43	111	1.41	0.5	9	29.1
5553587 (9162555)	0.47	1030	6	9	21.1	43	0.03	9	5.33	107	1.67	0.6	10	29.6
5553588 (9162556)	0.38	692	3	6	17.2	38	0.05	15	4.29	130	1.26	0.4	12	28.5
5553589 (9162557)	0.54	886	6	9	23.7	64	0.04	21	6.12	89.8	2.59	1.0	10	27.5
5553590 (9162558)	0.01	40	13	<1	14.3	88	<0.01	<5	3.78	1.7	<0.01	0.2	<5	40.2
5553591 (9162559)	0.54	1540	8	17	36.2	36	0.01	9	9.10	135	0.66	0.3	8	31.0

Analyte:	Sm	Sn	Sr	Ta	Tb	Th	Ti	Tl	Tm	U	V	W	Y	Yb
Unit:	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
RDL:	0.1	1	0.1	0.5	0.05	0.1	0.01	0.5	0.05	0.05	5	1	0.5	0.1
5553580 (9162548)	3.1	4	78.8	<0.5	0.43	3.5	0.26	<0.5	0.20	0.83	93	<1	12.9	1.4
5553581 (9162549)	2.5	3	87.1	<0.5	0.38	2.9	0.25	<0.5	0.22	0.70	98	<1	13.4	1.4
5553582 (9162550)	8.0	<1	110	0.9	1.28	6.7	0.15	<0.5	0.73	1.45	22	<1	46.4	5.1
5553583 (9162551)	8.4	1	94.8	1.1	1.37	7.3	0.13	<0.5	0.85	1.56	9	<1	47.7	5.4
5553584 (9162552)	8.3	1	97.7	1.0	1.26	7.2	0.13	<0.5	0.75	1.52	8	<1	46.7	5.1
5553585 (9162553)	8.5	1	79.9	1.0	1.32	7.5	0.13	<0.5	0.77	1.56	7	<1	49.0	5.2
5553586 (9162554)	5.0	<1	95.1	<0.5	0.75	5.0	0.23	<0.5	0.43	1.06	56	<1	27.1	2.9
5553587 (9162555)	4.3	<1	87.9	<0.5	0.67	4.6	0.23	<0.5	0.39	1.01	59	<1	23.9	2.8
5553588 (9162556)	3.4	<1	87.8	<0.5	0.53	4.1	0.30	<0.5	0.29	0.90	81	<1	18.5	2.0
5553589 (9162557)	4.7	2	147	<0.5	0.76	4.6	0.33	<0.5	0.39	0.97	77	<1	26.1	2.7
5553590 (9162558)	2.3	<1	21.0	<0.5	0.28	5.1	0.07	<0.5	0.18	0.48	14	<1	9.9	1.1
5553591 (9162559)	7.6	1	102	0.8	1.13	6.3	0.15	<0.5	0.67	1.30	22	<1	42.6	4.7

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18T325981

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

(201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Apr 03, 2018      DATE RECEIVED: Mar 29, 2018      DATE REPORTED: Jun 05, 2018      SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte:	Zn	Zr
	Unit:	ppm	ppm
	RDL:	5	0.5
5553580 (9162548)		1540	113
5553581 (9162549)		1350	102
5553582 (9162550)		118	316
5553583 (9162551)		117	347
5553584 (9162552)		117	344
5553585 (9162553)		67	355
5553586 (9162554)		107	204
5553587 (9162555)		264	195
5553588 (9162556)		169	153
5553589 (9162557)		531	180
5553590 (9162558)		5	99.0
5553591 (9162559)		196	308

Comments: RDL - Reported Detection Limit

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18T325981

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

(202-052) Fire Assay - Trace Au, ICP-OES finish (ppm)

DATE SAMPLED: Apr 03, 2018      DATE RECEIVED: Mar 29, 2018      DATE REPORTED: Jun 05, 2018      SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte:	Unit:	RDL:
	Au	ppm	0.001
5553580 (9162548)			0.142
5553581 (9162549)			0.059
5553582 (9162550)			0.023
5553583 (9162551)			0.003
5553584 (9162552)			0.002
5553585 (9162553)			<0.001
5553586 (9162554)			0.007
5553587 (9162555)			0.009
5553588 (9162556)			0.013
5553589 (9162557)			0.012
5553590 (9162558)			0.003
5553591 (9162559)			0.003

Comments: RDL - Reported Detection Limit

Certified By:



CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

(201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

Parameter	REPLICATE #1				REPLICATE #2											
	Sample ID	Original	Replicate	RPD	Sample ID	Original	Replicate	RPD								
Ag	9162548	1	1	0.0%	9162559	1	2									
Al	9162548	6.22	6.16	1.0%	9162559	5.50	5.63	2.3%								
As	9162548	8	8	0.0%	9162559	< 5	< 5	0.0%								
B	9162548	39	38	2.6%	9162559	43	44	2.3%								
Ba	9162548	463	466	0.6%	9162559	389	397	2.0%								
Be	9162548	< 5	< 5	0.0%	9162559	< 5	< 5	0.0%								
Bi	9162548	0.9	0.9	0.0%	9162559	< 0.1	< 0.1	0.0%								
Ca	9162548	1.57	1.68	6.8%	9162559	2.33	2.38	2.1%								
Cd	9162548	4.6	3.9	16.5%	9162559	0.4	0.4	0.0%								
Ce	9162548	36.6	33.4	9.1%	9162559	73.7	77.2	4.6%								
Co	9162548	57.0	57.3	0.5%	9162559	4.31	4.23	1.9%								
Cr	9162548	0.009	0.009	0.0%	9162559	< 0.005	< 0.005	0.0%								
Cs	9162548	0.75	0.67	11.3%	9162559	3.23	3.40	5.1%								
Cu	9162548	304	306	0.7%	9162559	42	44	4.7%								
Dy	9162548	2.60	2.38	8.8%	9162559	7.69	7.30	5.2%								
Er	9162548	1.38	1.29	6.7%	9162559	4.56	4.57	0.2%								
Eu	9162548	0.83	0.78	6.2%	9162559	1.45	1.49	2.7%								
Fe	9162548	12.6	12.2	3.2%	9162559	3.99	4.08	2.2%								
Ga	9162548	16.5	17.4	5.3%	9162559	16.7	16.5	1.2%								
Gd	9162548	2.79	2.68	4.0%	9162559	7.41	7.73	4.2%								
Ge	9162548	2	2	0.0%	9162559	2	2	0.0%								
Hf	9162548	3	3	0.0%	9162559	9	9	0.0%								
Ho	9162548	0.508	0.479	5.9%	9162559	1.60	1.54	3.8%								
In	9162548	0.50	0.43	15.1%	9162559	< 0.2	< 0.2	0.0%								
K	9162548	2.73	2.68	1.8%	9162559	2.86	2.90	1.4%								
La	9162548	17.6	16.7	5.2%	9162559	34.3	35.9	4.6%								
Li	9162548	< 10	< 10	0.0%	9162559	< 10	< 10	0.0%								
Lu	9162548	0.20	0.19	5.1%	9162559	0.65	0.62	4.7%								
Mg	9162548	0.635	0.671	5.5%	9162559	0.54	0.55	1.8%								
Mn	9162548	786	806	2.5%	9162559	1540	1560	1.3%								
Mo	9162548	9	9	0.0%	9162559	8	8	0.0%								





CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

Nb	9162548	3	3	0.0%	9162559	17	17	0.0%								
Nd	9162548	16.6	15.5	6.9%	9162559	36.2	37.3	3.0%								
Ni	9162548	111	107	3.7%	9162559	36	37	2.7%								
P	9162548	0.038	0.032	17.1%	9162559	0.01	0.01	0.0%								
Pb	9162548	68	69	1.5%	9162559	9	9	0.0%								
Pr	9162548	4.27	3.90	9.1%	9162559	9.10	9.38	3.0%								
Rb	9162548	67.3	67.2	0.1%	9162559	135	136	0.7%								
S	9162548	6.82	6.80	0.3%	9162559	0.66	0.66	0.0%								
Sb	9162548	6.1	6.1	0.0%	9162559	0.3	0.3	0.0%								
Sc	9162548	13	13	0.0%	9162559	8	8	0.0%								
Si	9162548	25.6	25.3	1.2%	9162559	31.0	31.7	2.2%								
Sm	9162548	3.1	2.7	13.8%	9162559	7.61	7.70	1.2%								
Sn	9162548	4	4	0.0%	9162559	1	1	0.0%								
Sr	9162548	78.8	83.6	5.9%	9162559	102	104	1.9%								
Ta	9162548	< 0.5	< 0.5	0.0%	9162559	0.78	0.75	3.9%								
Tb	9162548	0.43	0.38	12.3%	9162559	1.13	1.16	2.6%								
Th	9162548	3.5	3.5	0.0%	9162559	6.30	6.22	1.3%								
Ti	9162548	0.26	0.26	0.0%	9162559	0.15	0.15	0.0%								
Tl	9162548	< 0.5	< 0.5	0.0%	9162559	< 0.5	< 0.5	0.0%								
Tm	9162548	0.20	0.20	0.0%	9162559	0.67	0.70	4.4%								
U	9162548	0.83	0.84	1.2%	9162559	1.30	1.30	0.0%								
V	9162548	93	93	0.0%	9162559	22	21	4.7%								
W	9162548	< 1	< 1	0.0%	9162559	< 1	< 1	0.0%								
Y	9162548	12.9	12.9	0.0%	9162559	42.6	41.7	2.1%								
Yb	9162548	1.38	1.33	3.7%	9162559	4.72	4.63	1.9%								
Zn	9162548	1540	1460	5.3%	9162559	196	199	1.5%								
Zr	9162548	113	115	1.8%	9162559	308	304	1.3%								

(202-052) Fire Assay - Trace Au, ICP-OES finish (ppm)

Parameter	REPLICATE #1				REPLICATE #2											
	Sample ID	Original	Replicate	RPD	Sample ID	Original	Replicate	RPD								
Au	9162548	0.142	0.300	71.5%	9162559	0.003	0.003	0.0%								



CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

(201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

Parameter	CRM #1 (ref.SY-4)																	
	Expect	Actual	Recovery	Limits														
Al	10.95	10.82	99%	90% - 110%														
Ba	340	334	98%	90% - 110%														
Be	2.6	2.6	98%	90% - 110%														
Ca	5.72	5.67	99%	90% - 110%														
Ce	122	118	97%	90% - 110%														
Co	2.8	2.7	97%	90% - 110%														
Cs	1.5	1.5	103%	90% - 110%														
Cu	7	6	91%	90% - 110%														
Dy	18.2	18.6	102%	90% - 110%														
Er	14.2	14.6	103%	90% - 110%														
Eu	2.0	1.81	90%	90% - 110%														
Fe	4.34	4.48	103%	90% - 110%														
Ga	35	35	99%	90% - 110%														
Gd	14	14	101%	90% - 110%														
Hf	10.6	10.7	101%	90% - 110%														
Ho	4.3	4.4	102%	90% - 110%														
K	1.37	1.38	100%	90% - 110%														
La	58	54	94%	90% - 110%														
Li	37	36	98%	90% - 110%														
Lu	2.1	2	96%	90% - 110%														
Mg	0.325	0.327	101%	90% - 110%														
Mn	836	809	97%	90% - 110%														
Nb	13	12	95%	90% - 110%														
Nd	57	57	100%	90% - 110%														
Ni	9	8	85%	90% - 110%														
Pb	10	9	93%	90% - 110%														
Pr	15.0	14.4	96%	90% - 110%														
Rb	55	56	102%	90% - 110%														
Si	23.3	21.9	94%	90% - 110%														
Sm	12.7	12.3	97%	90% - 110%														
Sn	7.1	6.8	96%	90% - 110%														



CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

Sr	1191	1256	105%	90% - 110%												
Tb	2.6	2.5	96%	90% - 110%												
Th	1.4	1.4	100%	90% - 110%												
Ti	0.172	0.168	98%	90% - 110%												
Tm	2.3	2.3	102%	90% - 110%												
U	0.8	0.8	101%	90% - 110%												
Y	119	118	99%	90% - 110%												
Yb	14.8	15.1	102%	90% - 110%												
Zn	93	105	113%	90% - 110%												
Zr	517	511	99%	90% - 110%												
<b>(202-052) Fire Assay - Trace Au, ICP-OES finish (ppm)</b>																
CRM #1 (ref.GSP4G)																
Parameter	Expect	Actual	Recovery	Limits												
Au	0.468	0.458	98%	90% - 110%												

## Method Summary

CLIENT NAME: GOSSAN RESOURCES LIMITED

AGAT WORK ORDER: 18T325981

PROJECT: SLG-2018

ATTENTION TO: Scot Halladay

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Solid Analysis			
Sample Login Weight	MIN-12009		BALANCE
Ag			ICP/MS
Al	MIN-200-12001		ICP/OES
As	MIN-200-12001		ICP/MS
B	MIN-200-12001		ICP/OES
Ba	MIN-200-12001		ICP/OES
Be	MIN-200-12001		ICP/OES
Bi	MIN-200-12001		ICP-MS
Ca	MIN-200-12001		ICP/OES
Cd	MIN-200-12001		ICP-MS
Ce	MIN-200-12001		ICP-MS
Co	MIN-200-12001		ICP/MS
Cr	MIN-200-12001		ICP/OES
Cs	MIN-200-12001		ICP-MS
Cu	MIN-200-12001		ICP/OES
Dy	MIN-200-12001		ICP-MS
Er	MIN-200-12001		ICP-MS
Eu	MIN-200-12001		ICP-MS
Fe	MIN-200-12001		ICP/OES
Ga	MIN-200-12001		ICP-MS
Gd	MIN-200-12001		ICP-MS
Ge	MIN-200-12001		ICP-MS
Hf	MIN-200-12001		ICP-MS
Ho	MIN-200-12001		ICP-MS
In	MIN-200-12001		ICP-MS
K	MIN-200-12001		ICP/OES
La	MIN-200-12001		ICP-MS
Li	MIN-200-12001		ICP/OES
Lu	MIN-200-12001		ICP-MS
Mg	MIN-200-12001		ICP/OES
Mn	MIN-200-12001		ICP/OES
Mo	MIN-200-12001		ICP/MS
Nb	MIN-200-12001		ICP-MS
Nd	MIN-200-12001		ICP-MS
Ni	MIN-200-12001		ICP/OES
P			ICP/OES
Pb	MIN-200-12001		ICP/MS
Pr	MIN-200-12001		ICP-MS
Rb	MIN-200-12001		ICP/MS
S	MIN-200-12001		ICP/OES
Sb	MIN-200-12001		ICP-MS
Sc	MIN-200-12001		ICP/OES
Si	MIN-200-12001		ICP/OES
Sm	MIN-200-12001		ICP-MS
Sn	MIN-200-12001		ICP/MS
Sr	MIN-200-12001		ICP-OES
Ta	MIN-200-12001		ICP-MS
Tb	MIN-200-12001		ICP-MS
Th	MIN-200-12001		ICP-MS



## Method Summary

CLIENT NAME: GOSSAN RESOURCES LIMITED  
PROJECT: SLG-2018  
SAMPLING SITE:

AGAT WORK ORDER: 18T325981  
ATTENTION TO: Scot Halladay  
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Ti	MIN-200-12001		ICP/OES
Tl	MIN-200-12001		ICP-MS
Tm	MIN-200-12001		ICP-MS
U	MIN-200-12001		ICP-MS
V	MIN-200-12001		ICP/OES
W	MIN-200-12001		ICP-MS
Y	MIN-200-12001		ICP-MS
Yb	MIN-200-12001		ICP-MS
Zn	MIN-200-12001		ICP/OES
Zr	MIN-200-12001		ICP-MS
Au	MIN-200-12006	BUGBEE, E: A Textbook of Fire Assaying	ICP-OES



CLIENT NAME: GOSSAN RESOURCES LIMITED  
404-171 DONALD STREET  
WINNIPEG, MB R3C 1M4  
204-943-1990

ATTENTION TO: Scot Halladay

PROJECT: SLG-2018

AGAT WORK ORDER: 18T332706

SOLID ANALYSIS REVIEWED BY: Adel Mina, Mining Chief Chemist

DATE REPORTED: Jun 05, 2018

PAGES (INCLUDING COVER): 15

Should you require any information regarding this analysis please contact your client services representative at (905) 501-9998

\*NOTES

All samples are stored at no charge for 90 days. Please contact the lab if you require additional sample storage time.



## Certificate of Analysis

AGAT WORK ORDER: 18T332706

PROJECT: SLG-2018

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<http://www.agatlabs.com>

CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

### (200-) Sample Login Weight

DATE SAMPLED: Apr 25, 2018      DATE RECEIVED: Apr 26, 2018      DATE REPORTED: Jun 05, 2018      SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte: Unit: RDL:	Sample Login Weight kg 0.01
55533280 (9203223)		1.14
55533281 (9203224)		0.88
55533282 (9203225)		1.74
55533283 (9203226)		3.38
55533284 (9203227)		2.80
55533285 (9203228)		2.12
55533286 (9203229)		3.20
55533287 (9203230)		2.32
55533288 (9203231)		0.14
55533289 (9203232)		2.48
55533290 (9203233)		1.68
55533291 (9203234)		0.52
55533292 (9203235)		3.30
55533293 (9203236)		1.98
55533294 (9203237)		1.96
55533295 (9203238)		2.22
55533296 (9203239)		2.12

Comments: RDL - Reported Detection Limit

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18T332706

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Apr 25, 2018

DATE RECEIVED: Apr 26, 2018

DATE REPORTED: Jun 05, 2018

SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte: Unit: RDL:	Ag ppm 1	Al % 0.01	As ppm 5	B ppm 20	Ba ppm 0.5	Be ppm 5	Bi ppm 0.1	Ca % 0.05	Cd ppm 0.2	Ce ppm 0.1	Co ppm 0.5	Cr % 0.005	Cs ppm 0.1	Cu ppm 5
55533280 (9203223)		<1	5.20	<5	68	441	<5	<0.1	1.89	0.4	76.9	3.7	<0.005	1.4	23
55533281 (9203224)		5	6.44	<5	57	528	<5	0.3	1.41	1.2	52.9	19.6	0.007	0.8	76
55533282 (9203225)		<1	5.90	<5	30	663	<5	<0.1	0.82	<0.2	85.0	3.5	<0.005	1.8	28
55533283 (9203226)		<1	6.55	<5	<20	771	<5	<0.1	6.17	<0.2	94.7	35.9	0.055	15.6	36
55533284 (9203227)		<1	5.84	<5	<20	761	<5	0.1	5.76	<0.2	90.9	35.9	0.053	11.4	39
55533285 (9203228)		<1	5.65	<5	51	658	<5	<0.1	2.27	<0.2	82.0	5.8	<0.005	2.7	21
55533286 (9203229)		<1	6.30	<5	82	596	<5	0.1	6.69	0.3	28.3	41.3	<0.005	1.8	84
55533287 (9203230)		<1	5.82	<5	<20	590	<5	<0.1	1.25	0.2	87.3	1.8	<0.005	2.9	13
55533288 (9203231)		40	3.27	139	135	537	<5	52.1	1.02	253	39.7	217	0.009	1.2	13145
55533289 (9203232)		1	5.07	6	<20	381	<5	0.9	0.77	0.2	75.2	2.1	<0.005	1.0	28
55533290 (9203233)		<1	5.74	9	76	420	<5	0.5	0.97	2.6	69.8	22.5	0.005	0.9	99
55533291 (9203234)		<1	2.24	<5	<20	18.3	<5	0.1	<0.05	<0.2	56.0	1.9	0.010	<0.1	5
55533292 (9203235)		<1	5.55	<5	<20	454	<5	<0.1	0.71	<0.2	86.2	1.4	<0.005	1.9	14
55533293 (9203236)		<1	5.75	<5	<20	447	<5	0.1	0.71	0.6	82.6	7.3	<0.005	1.3	48
55533294 (9203237)		<1	5.94	<5	<20	345	<5	<0.1	0.44	<0.2	94.0	1.5	<0.005	2.0	19
55533295 (9203238)		<1	5.60	<5	<20	312	<5	0.1	0.83	0.3	90.2	2.9	<0.005	2.4	22
55533296 (9203239)		<1	5.45	<5	46	368	<5	0.1	1.91	0.4	90.2	2.0	<0.005	3.8	17

Certified By:





## Certificate of Analysis

AGAT WORK ORDER: 18T332706

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Apr 25, 2018

DATE RECEIVED: Apr 26, 2018

DATE REPORTED: Jun 05, 2018

SAMPLE TYPE: Drill Core

Analyte:	Dy	Er	Eu	Fe	Ga	Gd	Ge	Hf	Ho	In	K	La	Li	Lu
Unit:	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
RDL:	0.05	0.05	0.05	0.01	0.01	0.05	1	1	0.05	0.2	0.05	0.1	10	0.05
Sample ID (AGAT ID)														
55533280 (9203223)	7.49	4.56	1.39	9.90	17.6	7.98	2	9	1.57	<0.2	1.34	35.5	11	0.77
55533281 (9203224)	5.71	3.48	1.35	5.99	16.4	5.91	2	6	1.20	<0.2	1.64	24.9	12	0.53
55533282 (9203225)	7.82	4.78	1.50	2.83	19.7	8.85	2	10	1.66	<0.2	1.84	38.8	15	0.79
55533283 (9203226)	3.54	1.69	1.81	5.19	16.7	6.60	1	4	0.64	<0.2	3.18	45.0	35	0.22
55533284 (9203227)	3.84	1.77	1.78	4.74	16.5	6.65	1	4	0.70	<0.2	3.01	43.0	30	0.26
55533285 (9203228)	8.24	4.99	1.54	4.40	18.5	8.67	2	10	1.70	<0.2	1.73	37.9	23	0.88
55533286 (9203229)	3.54	2.22	0.76	7.95	15.9	3.52	1	3	0.74	<0.2	1.85	12.9	24	0.36
55533287 (9203230)	8.52	4.98	1.55	3.80	18.3	8.97	2	10	1.76	<0.2	1.44	39.1	15	0.89
55533288 (9203231)	3.12	1.81	0.64	17.9	24.7	3.48	5	3	0.61	14.6	0.92	19.4	16	0.29
55533289 (9203232)	7.69	4.82	1.40	2.42	16.1	8.20	2	10	1.63	<0.2	1.84	34.2	<10	0.78
55533290 (9203233)	6.66	4.24	1.37	5.94	19.0	7.08	2	9	1.41	0.4	2.27	32.1	<10	0.69
55533291 (9203234)	2.30	1.32	0.60	1.55	5.83	3.22	<1	4	0.45	<0.2	0.08	27.1	16	0.21
55533292 (9203235)	8.27	5.11	1.48	2.58	18.7	8.95	1	10	1.75	<0.2	2.52	39.2	<10	0.86
55533293 (9203236)	7.77	4.95	1.53	3.23	18.1	8.32	2	9	1.62	<0.2	1.99	37.6	<10	0.81
55533294 (9203237)	8.66	5.32	1.64	2.62	20.6	9.21	2	11	1.82	<0.2	2.39	42.3	<10	0.92
55533295 (9203238)	8.55	5.30	1.58	2.96	20.8	9.18	2	11	1.77	<0.2	2.24	40.7	<10	0.90
55533296 (9203239)	8.19	5.12	1.57	5.38	19.0	9.04	2	11	1.72	<0.2	2.74	40.6	11	0.92

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18T332706

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Apr 25, 2018

DATE RECEIVED: Apr 26, 2018

DATE REPORTED: Jun 05, 2018

SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte: Unit: RDL:	Mg %	Mn ppm	Mo ppm	Nb ppm	Nd ppm	Ni ppm	P %	Pb ppm	Pr ppm	Rb ppm	S %	Sb ppm	Sc ppm	Si %
55533280 (9203223)		1.15	5600	11	17	39.5	55	0.01	7	9.84	67.5	0.30	0.5	7	29.4
55533281 (9203224)		0.36	584	14	12	27.7	94	0.04	22	6.78	70.2	2.76	0.6	10	31.8
55533282 (9203225)		0.41	405	12	21	43.4	66	0.01	7	10.9	87.3	0.41	0.3	7	35.2
55533283 (9203226)		4.98	1060	3	6	48.2	131	0.14	11	12.0	170	0.24	0.3	21	21.9
55533284 (9203227)		4.36	1290	4	7	45.8	137	0.12	11	11.7	181	0.26	0.3	20	22.3
55533285 (9203228)		0.82	1570	9	19	41.9	55	0.02	9	10.6	103	0.35	0.3	9	30.6
55533286 (9203229)		2.07	1890	6	6	14.5	68	0.03	15	3.68	92.2	2.04	0.3	24	23.4
55533287 (9203230)		0.50	1270	9	21	44.3	49	0.01	10	11.1	106	0.10	0.3	8	33.8
55533288 (9203231)		0.89	880	51	6	18.9	65	0.03	6585	4.88	32.9	18.2	34.7	<5	16.9
55533289 (9203232)		0.08	546	10	19	39.6	60	<0.01	11	9.87	83.9	0.39	0.4	7	35.6
55533290 (9203233)		0.19	495	14	17	35.8	88	0.02	23	8.65	97.3	2.97	0.9	7	31.4
55533291 (9203234)		0.01	48	18	7	23.6	110	<0.01	<5	6.39	2.1	0.02	0.3	<5	41.6
55533292 (9203235)		0.07	599	10	21	43.9	63	<0.01	7	11.1	94.8	0.07	0.2	7	35.1
55533293 (9203236)		0.14	545	11	19	41.9	72	0.02	12	10.4	85.1	0.85	0.4	7	34.1
55533294 (9203237)		0.09	469	8	22	47.6	48	<0.01	7	12.1	100	0.09	0.2	7	35.3
55533295 (9203238)		0.12	670	12	23	45.9	58	<0.01	9	11.5	99.9	0.19	0.2	7	35.0
55533296 (9203239)		0.34	2070	11	21	45.2	48	<0.01	11	11.5	114	0.16	0.2	8	32.2

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## Certificate of Analysis

AGAT WORK ORDER: 18T332706

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Apr 25, 2018

DATE RECEIVED: Apr 26, 2018

DATE REPORTED: Jun 05, 2018

SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte: Unit: RDL:	Sm ppm	Sn ppm	Sr ppm	Ta ppm	Tb ppm	Th ppm	Ti %	Tl ppm	Tm ppm	U ppm	V ppm	W ppm	Y ppm	Yb ppm
		0.1	1	0.1	0.5	0.05	0.1	0.01	0.5	0.05	0.05	5	1	0.5	0.1
55533280 (9203223)		8.1	1	120	1.1	1.30	6.7	0.13	<0.5	0.68	1.64	20	<1	43.1	4.6
55533281 (9203224)		5.7	1	172	<0.5	0.95	4.3	0.26	<0.5	0.51	1.13	67	1	32.3	3.4
55533282 (9203225)		8.9	2	113	1.1	1.36	6.8	0.14	<0.5	0.70	1.84	18	<1	46.1	4.7
55533283 (9203226)		8.6	<1	1090	<0.5	0.80	7.2	0.37	0.8	0.21	2.07	149	<1	17.3	1.4
55533284 (9203227)		8.4	<1	928	<0.5	0.83	6.9	0.33	0.8	0.24	2.09	135	<1	18.6	1.5
55533285 (9203228)		8.6	2	164	1.2	1.44	7.1	0.15	<0.5	0.75	1.80	26	<1	47.8	5.0
55533286 (9203229)		3.1	<1	243	<0.5	0.58	2.8	0.32	<0.5	0.31	0.72	157	2	20.8	2.2
55533287 (9203230)		9.1	2	128	1.3	1.43	7.3	0.12	<0.5	0.74	1.90	10	<1	49.1	5.1
55533288 (9203231)		3.8	101	87.1	<0.5	0.55	6.3	0.11	6.3	0.27	3.30	52	3	16.3	1.8
55533289 (9203232)		8.1	2	64.1	1.1	1.29	6.3	0.11	<0.5	0.69	1.75	10	2	43.5	4.7
55533290 (9203233)		7.4	4	62.3	0.9	1.16	6.5	0.16	0.6	0.61	1.67	33	2	38.3	4.2
55533291 (9203234)		4.1	<1	14.7	<0.5	0.46	7.8	0.11	<0.5	0.19	0.99	21	<1	12.5	1.3
55533292 (9203235)		8.9	2	65.7	1.2	1.38	7.2	0.12	<0.5	0.78	1.88	9	<1	48.7	5.0
55533293 (9203236)		8.5	5	62.2	1.0	1.34	7.0	0.15	<0.5	0.72	1.82	22	<1	44.6	4.8
55533294 (9203237)		9.6	2	37.1	1.3	1.50	7.6	0.13	<0.5	0.80	2.02	9	1	50.6	5.2
55533295 (9203238)		9.2	2	53.3	1.2	1.52	7.4	0.12	<0.5	0.80	1.90	10	<1	51.5	5.2
55533296 (9203239)		9.2	2	86.1	1.2	1.39	7.5	0.11	<0.5	0.76	1.91	11	<1	45.8	5.2

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18T332706

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Apr 25, 2018

DATE RECEIVED: Apr 26, 2018

DATE REPORTED: Jun 05, 2018

SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte:	Zn	Zr
	Unit:	ppm	ppm
	RDL:	5	0.5
55533280 (9203223)		192	328
55533281 (9203224)		467	247
55533282 (9203225)		114	383
55533283 (9203226)		86	151
55533284 (9203227)		67	161
55533285 (9203228)		121	369
55533286 (9203229)		175	120
55533287 (9203230)		114	389
55533288 (9203231)		75509	81.7
55533289 (9203232)		109	348
55533290 (9203233)		1050	309
55533291 (9203234)		12	151
55533292 (9203235)		100	388
55533293 (9203236)		270	356
55533294 (9203237)		107	410
55533295 (9203238)		103	420
55533296 (9203239)		111	384

Comments: RDL - Reported Detection Limit

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18T332706

PROJECT: SLG-2018

5623 McADAM ROAD  
 MISSISSAUGA, ONTARIO  
 CANADA L4Z 1N9  
 TEL (905)501-9998  
 FAX (905)501-0589  
<http://www.agatlabs.com>

CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

(202-052) Fire Assay - Trace Au, ICP-OES finish (ppm)

DATE SAMPLED: Apr 25, 2018      DATE RECEIVED: Apr 26, 2018      DATE REPORTED: Jun 05, 2018      SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte:	Unit:	RDL:	Value
	Au	ppm	0.001	
55533280 (9203223)				0.005
55533281 (9203224)				0.007
55533282 (9203225)				0.002
55533283 (9203226)				0.002
55533284 (9203227)				0.003
55533285 (9203228)				<0.001
55533286 (9203229)				0.003
55533287 (9203230)				0.001
55533288 (9203231)				0.425
55533289 (9203232)				0.002
55533290 (9203233)				0.004
55533291 (9203234)				<0.001
55533292 (9203235)				<0.001
55533293 (9203236)				0.002
55533294 (9203237)				0.001
55533295 (9203238)				<0.001
55533296 (9203239)				<0.001

Comments: RDL - Reported Detection Limit

Certified By:



**AGAT** Laboratories

# Certificate of Analysis

AGAT WORK ORDER: 18T332706

PROJECT: SLG-2018

5623 McADAM ROAD  
MISSISSAUGA, ONTARIO  
CANADA L4Z 1N9  
TEL (905)501-9998  
FAX (905)501-0589  
<http://www.agatlabs.com>

CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

## Sieving - % Passing (Pulverizing)

DATE SAMPLED: Apr 25, 2018

DATE RECEIVED: Apr 26, 2018

DATE REPORTED: Jun 05, 2018

SAMPLE TYPE: Drill Core

Analyte:	Pass %
Unit:	%
Sample ID (AGAT ID)	RDL:
55533280 (9203223)	97.1

Comments: RDL - Reported Detection Limit

Certified By:



CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

(201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

Parameter	REPLICATE #1				REPLICATE #2											
	Sample ID	Original	Replicate	RPD	Sample ID	Original	Replicate	RPD								
Ag	9203223	< 1	< 1	0.0%	9203234	< 1	< 1	0.0%								
Al	9203223	5.20	5.27	1.3%	9203234	2.24	2.27	1.3%								
As	9203223	< 5	< 5	0.0%	9203234	< 5	< 5	0.0%								
B	9203223	68	56	19.4%	9203234	< 20	< 20	0.0%								
Ba	9203223	441	453	2.7%	9203234	18.3	17.6	3.9%								
Be	9203223	< 5	< 5	0.0%	9203234	< 5	< 5	0.0%								
Bi	9203223	< 0.1	< 0.1	0.0%	9203234	0.1	< 0.1									
Ca	9203223	1.89	1.66	13.0%	9203234	< 0.05	< 0.05	0.0%								
Cd	9203223	0.4	0.4	0.0%	9203234	< 0.2	< 0.2	0.0%								
Ce	9203223	76.9	77.1	0.3%	9203234	56.0	52.9	5.7%								
Co	9203223	3.66	3.39	7.7%	9203234	1.9	1.8	5.4%								
Cr	9203223	0.0045	0.0053	16.3%	9203234	0.0095	0.0092	3.2%								
Cs	9203223	1.4	1.5	6.9%	9203234	< 0.1	< 0.1	0.0%								
Cu	9203223	23	20	14.0%	9203234	5	5	0.0%								
Dy	9203223	7.49	7.39	1.3%	9203234	2.30	2.44	5.9%								
Er	9203223	4.56	4.58	0.4%	9203234	1.32	1.49	12.1%								
Eu	9203223	1.39	1.37	1.4%	9203234	0.60	1.0	50.0%								
Fe	9203223	9.90	8.86	11.1%	9203234	1.55	1.57	1.3%								
Ga	9203223	17.6	17.4	1.1%	9203234	5.83	5.61	3.8%								
Gd	9203223	7.98	8.05	0.9%	9203234	3.22	3.00	7.1%								
Ge	9203223	2	2	0.0%	9203234	< 1	< 1	0.0%								
Hf	9203223	9	9	0.0%	9203234	4	5	22.2%								
Ho	9203223	1.57	1.57	0.0%	9203234	0.45	0.49	8.5%								
In	9203223	< 0.2	< 0.2	0.0%	9203234	< 0.2	< 0.2	0.0%								
K	9203223	1.34	1.39	3.7%	9203234	0.076	0.061	21.9%								
La	9203223	35.5	35.5	0.0%	9203234	27.1	25.9	4.5%								
Li	9203223	11	11	0.0%	9203234	16	17	6.1%								
Lu	9203223	0.773	0.803	3.8%	9203234	0.213	0.245	14.0%								
Mg	9203223	1.15	1.00	14.0%	9203234	0.01	< 0.01									
Mn	9203223	5600	4880	13.7%	9203234	48	48	0.0%								
Mo	9203223	11	14	24.0%	9203234	18	17	5.7%								



CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

Nb	9203223	17	18	5.7%	9203234	7	6	15.4%								
Nd	9203223	39.5	39.7	0.5%	9203234	23.6	22.2	6.1%								
Ni	9203223	55	74	29.5%	9203234	110	104	5.6%								
P	9203223	0.01	0.01	0.0%	9203234	< 0.01	< 0.01	0.0%								
Pb	9203223	7	7	0.0%	9203234	< 5	< 5	0.0%								
Pr	9203223	9.84	9.93	0.9%	9203234	6.39	6.08	5.0%								
Rb	9203223	67.5	75.6	11.3%	9203234	2.06	1.93	6.5%								
S	9203223	0.30	0.25	18.2%	9203234	0.02	0.02	0.0%								
Sb	9203223	0.47	0.43	8.9%	9203234	0.28	0.24	15.4%								
Sc	9203223	7	7	0.0%	9203234	< 5	< 5	0.0%								
Si	9203223	29.4	30.8	4.7%	9203234	41.6	42.2	1.4%								
Sm	9203223	8.1	8.1	0.0%	9203234	4.1	3.7	10.3%								
Sn	9203223	1	1	0.0%	9203234	< 1	< 1	0.0%								
Sr	9203223	120	118	1.7%	9203234	14.7	13.2	10.8%								
Ta	9203223	1.08	1.00	7.7%	9203234	< 0.5	< 0.5	0.0%								
Tb	9203223	1.30	1.28	1.6%	9203234	0.455	0.444	2.4%								
Th	9203223	6.66	6.65	0.2%	9203234	7.77	7.21	7.5%								
Ti	9203223	0.13	0.13	0.0%	9203234	0.11	0.11	0.0%								
Tl	9203223	< 0.5	< 0.5	0.0%	9203234	< 0.5	< 0.5	0.0%								
Tm	9203223	0.68	0.68	0.0%	9203234	0.19	0.23	19.0%								
U	9203223	1.64	1.69	3.0%	9203234	0.99	0.99	0.0%								
V	9203223	20	19	5.1%	9203234	21	20	4.9%								
W	9203223	< 1	< 1	0.0%	9203234	< 1	< 1	0.0%								
Y	9203223	43.1	42.8	0.7%	9203234	12.5	13.7	9.2%								
Yb	9203223	4.6	4.6	0.0%	9203234	1.3	1.5	14.3%								
Zn	9203223	192	170	12.2%	9203234	12	14	15.4%								
Zr	9203223	328	332	1.2%	9203234	151	156	3.3%								

(202-052) Fire Assay - Trace Au, ICP-OES finish (ppm)

Parameter	REPLICATE #1				REPLICATE #2											
	Sample ID	Original	Replicate	RPD	Sample ID	Original	Replicate	RPD								
Au	9203223	0.005	0.007	33.3%	9203234	< 0.001	0.001									





CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

(201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

Parameter	CRM #1 (ref. Till-2)																	
	Expect	Actual	Recovery	Limits														
Al	8.47	8.25	97%	90% - 110%														
As	26	26	98%	90% - 110%														
Ba	540	512	95%	90% - 110%														
Be	4.0	4.2	104%	90% - 110%														
Ca	0.907	0.918	101%	90% - 110%														
Ce	98	107	109%	90% - 110%														
Co	15	16	108%	90% - 110%														
Cu	150	151	101%	90% - 110%														
Er	3.7	3.8	103%	90% - 110%														
Eu	1.0	1.24	124%	90% - 110%														
Fe	3.77	3.81	101%	90% - 110%														
Hf	11	11	100%	90% - 110%														
K	2.55	2.44	96%	90% - 110%														
La	44	48.0	109%	90% - 110%														
Li	47	47.1	100%	90% - 110%														
Lu	0.6	0.6	103%	90% - 110%														
Mg	1.1	1.1	103%	90% - 110%														
Mn	780	726	93%	90% - 110%														
Mo	14	14	103%	90% - 110%														
Nb	20	19	94%	90% - 110%														
Ni	32	36	112%	90% - 110%														
Pb	31	31	99%	90% - 110%														
Rb	144	157	109%	90% - 110%														
Sb	0.8	0.8	96%	90% - 110%														
Sc	12	12	99%	90% - 110%														
Si	28.4	27.1	96%	90% - 110%														
Sm	7.4	8.0	108%	90% - 110%														
Sr	144	145	100%	90% - 110%														
Ta	1.9	1.9	98%	90% - 110%														
Tb	1.2	1.2	100%	90% - 110%														
Th	18.4	18.5	100%	90% - 110%														



CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

Ti	0.527	0.504	96%	90% - 110%													
U	5.7	5.7	100%	90% - 110%													
V	77	82	107%	90% - 110%													
W	5	5	96%	90% - 110%													
Y	40	38	94%	90% - 110%													
Zn	130	123	95%	90% - 110%													
Zr	390	399	102%	90% - 110%													
(202-052) Fire Assay - Trace Au, ICP-OES finish (ppm)																	
	CRM #1																
Parameter	Expect	Actual	Recovery	Limits													
Au	0.468	0.430	91%	90% - 110%													



## Method Summary

CLIENT NAME: GOSSAN RESOURCES LIMITED

AGAT WORK ORDER: 18T332706

PROJECT: SLG-2018

ATTENTION TO: Scot Halladay

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Solid Analysis			
Sample Login Weight	MIN-12009		BALANCE
Ag			ICP/MS
Al	MIN-200-12001		ICP/OES
As	MIN-200-12001		ICP/MS
B	MIN-200-12001		ICP/OES
Ba	MIN-200-12001		ICP/OES
Be	MIN-200-12001		ICP/OES
Bi	MIN-200-12001		ICP-MS
Ca	MIN-200-12001		ICP/OES
Cd	MIN-200-12001		ICP-MS
Ce	MIN-200-12001		ICP-MS
Co	MIN-200-12001		ICP/MS
Cr	MIN-200-12001		ICP/OES
Cs	MIN-200-12001		ICP-MS
Cu	MIN-200-12001		ICP/OES
Dy	MIN-200-12001		ICP-MS
Er	MIN-200-12001		ICP-MS
Eu	MIN-200-12001		ICP-MS
Fe	MIN-200-12001		ICP/OES
Ga	MIN-200-12001		ICP-MS
Gd	MIN-200-12001		ICP-MS
Ge	MIN-200-12001		ICP-MS
Hf	MIN-200-12001		ICP-MS
Ho	MIN-200-12001		ICP-MS
In	MIN-200-12001		ICP-MS
K	MIN-200-12001		ICP/OES
La	MIN-200-12001		ICP-MS
Li	MIN-200-12001		ICP/OES
Lu	MIN-200-12001		ICP-MS
Mg	MIN-200-12001		ICP/OES
Mn	MIN-200-12001		ICP/OES
Mo	MIN-200-12001		ICP/MS
Nb	MIN-200-12001		ICP-MS
Nd	MIN-200-12001		ICP-MS
Ni	MIN-200-12001		ICP/OES
P			ICP/OES
Pb	MIN-200-12001		ICP/MS
Pr	MIN-200-12001		ICP-MS
Rb	MIN-200-12001		ICP/MS
S	MIN-200-12001		ICP/OES
Sb	MIN-200-12001		ICP-MS
Sc	MIN-200-12001		ICP/OES
Si	MIN-200-12001		ICP/OES
Sm	MIN-200-12001		ICP-MS
Sn	MIN-200-12001		ICP/MS
Sr	MIN-200-12001		ICP-OES
Ta	MIN-200-12001		ICP-MS
Tb	MIN-200-12001		ICP-MS
Th	MIN-200-12001		ICP-MS



## Method Summary

CLIENT NAME: GOSSAN RESOURCES LIMITED  
 PROJECT: SLG-2018  
 SAMPLING SITE:

AGAT WORK ORDER: 18T332706  
 ATTENTION TO: Scot Halladay  
 SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Ti	MIN-200-12001		ICP/OES
Tl	MIN-200-12001		ICP-MS
Tm	MIN-200-12001		ICP-MS
U	MIN-200-12001		ICP-MS
V	MIN-200-12001		ICP/OES
W	MIN-200-12001		ICP-MS
Y	MIN-200-12001		ICP-MS
Yb	MIN-200-12001		ICP-MS
Zn	MIN-200-12001		ICP/OES
Zr	MIN-200-12001		ICP-MS
Au	MIN-200-12006	BUGBEE, E: A Textbook of Fire Assaying	ICP-OES
Pass %			BALANCE



CLIENT NAME: GOSSAN RESOURCES LIMITED  
404-171 DONALD STREET  
WINNIPEG, MB R3C 1M4  
204-943-1990

ATTENTION TO: Scot Halladay

PROJECT: SLG-2018

AGAT WORK ORDER: 18T332729

SOLID ANALYSIS REVIEWED BY: Adel Mina, Mining Chief Chemist

DATE REPORTED: Jun 05, 2018

PAGES (INCLUDING COVER): 13

Should you require any information regarding this analysis please contact your client services representative at (905) 501-9998

\*NOTES

All samples are stored at no charge for 90 days. Please contact the lab if you require additional sample storage time.



## Certificate of Analysis

AGAT WORK ORDER: 18T332729

PROJECT: SLG-2018

5623 McADAM ROAD  
 MISSISSAUGA, ONTARIO  
 CANADA L4Z 1N9  
 TEL (905)501-9998  
 FAX (905)501-0589  
<http://www.agatlabs.com>

CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

### (200-) Sample Login Weight

DATE SAMPLED: Apr 25, 2018      DATE RECEIVED: Apr 26, 2018      DATE REPORTED: Jun 05, 2018      SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte:	Sample Login Weight
	Unit:	kg
	RDL:	0.01
55533464 (9203257)		2.58
55533465 (9203258)		3.38
55533466 (9203259)		1.00
55533467 (9203260)		2.18
55533468 (9203261)		2.38
55533469 (9203262)		1.32
55533470 (9203263)		0.68
55533471 (9203264)		1.20
55533472 (9203265)		3.12

Comments: RDL - Reported Detection Limit

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18T332729

PROJECT: SLG-2018

5623 McADAM ROAD  
MISSISSAUGA, ONTARIO  
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<http://www.agatlabs.com>

CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Apr 25, 2018

DATE RECEIVED: Apr 26, 2018

DATE REPORTED: Jun 05, 2018

SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte:	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm
	RDL:	1	0.01	5	20	0.5	5	0.1	0.05	0.2	0.1	0.5	0.005	0.1	5
55533464 (9203257)		<1	6.53	<5	51	101	<5	<0.1	7.04	<0.2	17.1	62.6	0.014	0.4	104
55533465 (9203258)		2	7.03	<5	50	201	<5	<0.1	6.53	<0.2	19.1	69.6	0.013	0.9	81
55533466 (9203259)		7	6.68	<5	60	131	<5	<0.1	6.42	<0.2	18.8	57.1	0.011	0.4	142
55533467 (9203260)		6	7.17	<5	56	207	<5	<0.1	6.92	<0.2	18.8	67.8	0.012	0.8	75
55533468 (9203261)		<1	7.14	<5	43	262	<5	<0.1	7.02	0.2	18.4	68.0	0.011	0.9	100
55533469 (9203262)		<1	7.14	<5	42	181	<5	<0.1	7.00	0.2	19.1	67.1	0.012	0.7	70
55533470 (9203263)		<1	4.44	<5	93	36.4	<5	<0.1	10.4	<0.2	14.9	107	0.008	0.1	161
55533471 (9203264)		<1	7.25	<5	61	121	<5	<0.1	5.63	<0.2	17.1	68.0	0.012	0.6	76
55533472 (9203265)		<1	7.05	<5	68	117	<5	<0.1	6.84	<0.2	18.7	62.2	0.010	0.4	88
Sample ID (AGAT ID)	Analyte:	Dy	Er	Eu	Fe	Ga	Gd	Ge	Hf	Ho	In	K	La	Li	Lu
	Unit:	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
	RDL:	0.05	0.05	0.05	0.01	0.01	0.05	1	1	0.05	0.2	0.05	0.1	10	0.05
55533464 (9203257)		4.07	2.78	0.89	10.5	17.6	3.46	2	2	0.92	<0.2	0.24	7.5	<10	0.44
55533465 (9203258)		4.21	2.89	1.06	10.9	19.6	3.83	2	2	0.93	<0.2	0.40	8.2	10	0.43
55533466 (9203259)		4.01	2.70	1.08	12.3	18.0	3.90	2	2	0.90	<0.2	0.28	8.2	10	0.41
55533467 (9203260)		4.29	2.89	1.03	10.6	19.1	3.96	2	2	0.97	<0.2	0.43	8.1	<10	0.44
55533468 (9203261)		4.38	2.94	0.99	10.1	19.4	3.92	2	2	0.98	<0.2	0.52	7.8	<10	0.42
55533469 (9203262)		4.15	2.95	0.95	11.3	19.3	3.99	2	2	0.98	<0.2	0.38	7.9	<10	0.44
55533470 (9203263)		3.37	2.44	0.82	15.0	12.4	3.10	1	2	0.80	<0.2	0.12	6.6	<10	0.39
55533471 (9203264)		4.11	2.66	0.96	12.1	19.9	3.59	2	2	0.85	<0.2	0.27	7.1	11	0.41
55533472 (9203265)		4.21	2.82	1.04	12.9	20.2	3.89	2	2	0.94	<0.2	0.27	8.2	11	0.43

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18T332729

PROJECT: SLG-2018

5623 McADAM ROAD  
MISSISSAUGA, ONTARIO  
CANADA L4Z 1N9  
TEL (905)501-9998  
FAX (905)501-0589  
<http://www.agatlabs.com>

CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Apr 25, 2018

DATE RECEIVED: Apr 26, 2018

DATE REPORTED: Jun 05, 2018

SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte:	Mg	Mn	Mo	Nb	Nd	Ni	P	Pb	Pr	Rb	S	Sb	Sc	Si
	Unit:	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	%
	RDL:	0.01	10	2	1	0.1	5	0.01	5	0.05	0.2	0.01	0.1	5	0.01
55533464 (9203257)		1.99	2990	19	4	11.0	160	0.05	<5	2.32	8.6	0.62	<0.1	34	22.2
55533465 (9203258)		1.89	2830	16	4	11.8	142	0.05	5	2.60	20.6	0.61	<0.1	36	22.0
55533466 (9203259)		1.94	3130	12	4	11.7	129	0.05	<5	2.47	10.3	0.65	0.1	35	21.9
55533467 (9203260)		1.94	2840	11	3	12.1	130	0.05	<5	2.57	19.5	0.37	<0.1	38	22.0
55533468 (9203261)		1.88	2610	9	3	11.9	118	0.05	<5	2.63	22.8	0.38	<0.1	38	22.3
55533469 (9203262)		1.96	2990	10	3	12.2	120	0.05	<5	2.62	15.8	0.49	<0.1	37	21.1
55533470 (9203263)		1.58	4000	8	2	9.4	133	0.03	<5	2.06	2.1	4.29	0.3	29	17.8
55533471 (9203264)		2.17	3210	10	4	11.0	128	0.05	<5	2.31	13.4	0.56	0.8	38	22.0
55533472 (9203265)		2.26	3700	7	3	12.3	100	0.05	<5	2.60	9.7	0.78	0.4	38	20.5
Sample ID (AGAT ID)	Analyte:	Sm	Sn	Sr	Ta	Tb	Th	Ti	Tl	Tm	U	V	W	Y	Yb
	Unit:	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	RDL:	0.1	1	0.1	0.5	0.05	0.1	0.01	0.5	0.05	0.05	5	1	0.5	0.1
55533464 (9203257)		2.9	<1	144	<0.5	0.62	1.3	0.61	<0.5	0.39	0.38	287	<1	23.9	2.7
55533465 (9203258)		3.4	<1	163	<0.5	0.67	1.3	0.65	<0.5	0.42	0.39	303	<1	25.2	2.7
55533466 (9203259)		3.2	<1	136	<0.5	0.65	1.3	0.63	<0.5	0.43	0.39	298	<1	24.5	2.8
55533467 (9203260)		3.2	<1	163	<0.5	0.66	1.4	0.67	<0.5	0.43	0.37	322	<1	26.0	2.9
55533468 (9203261)		3.3	<1	155	<0.5	0.67	1.3	0.68	<0.5	0.44	0.37	317	<1	26.4	2.8
55533469 (9203262)		3.2	<1	149	<0.5	0.65	1.3	0.66	<0.5	0.44	0.35	314	<1	25.7	2.8
55533470 (9203263)		2.6	<1	104	<0.5	0.51	0.8	0.40	<0.5	0.37	0.38	216	<1	22.7	2.4
55533471 (9203264)		3.2	<1	164	<0.5	0.67	1.4	0.68	<0.5	0.41	0.38	316	<1	25.4	2.7
55533472 (9203265)		3.4	1	129	<0.5	0.68	1.3	0.66	<0.5	0.41	0.38	311	1	27.0	2.9

Certified By:





## Certificate of Analysis

AGAT WORK ORDER: 18T332729

PROJECT: SLG-2018

5623 McADAM ROAD  
 MISSISSAUGA, ONTARIO  
 CANADA L4Z 1N9  
 TEL (905)501-9998  
 FAX (905)501-0589  
<http://www.agatlabs.com>

CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

(201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Apr 25, 2018      DATE RECEIVED: Apr 26, 2018      DATE REPORTED: Jun 05, 2018      SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte:	Zn	Zr
	Unit:	ppm	ppm
	RDL:	5	0.5
55533464 (9203257)		112	77.8
55533465 (9203258)		109	84.7
55533466 (9203259)		115	82.0
55533467 (9203260)		110	87.2
55533468 (9203261)		111	84.2
55533469 (9203262)		121	83.6
55533470 (9203263)		85	55.0
55533471 (9203264)		122	92.7
55533472 (9203265)		124	88.3

Comments: RDL - Reported Detection Limit

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18T332729

PROJECT: SLG-2018

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 CANADA L4Z 1N9  
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<http://www.agatlabs.com>

CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

(202-052) Fire Assay - Trace Au, ICP-OES finish (ppm)

DATE SAMPLED: Apr 25, 2018      DATE RECEIVED: Apr 26, 2018      DATE REPORTED: Jun 05, 2018      SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte:	Unit:	RDL:
	Au	ppm	0.001
55533464 (9203257)			0.004
55533465 (9203258)			0.003
55533466 (9203259)			0.001
55533467 (9203260)			0.012
55533468 (9203261)			0.001
55533469 (9203262)			0.001
55533470 (9203263)			0.004
55533471 (9203264)			0.002
55533472 (9203265)			0.017

Comments: RDL - Reported Detection Limit

Certified By:



**AGAT** Laboratories

# Certificate of Analysis

AGAT WORK ORDER: 18T332729

PROJECT: SLG-2018

5623 McADAM ROAD  
MISSISSAUGA, ONTARIO  
CANADA L4Z 1N9  
TEL (905)501-9998  
FAX (905)501-0589  
<http://www.agatlabs.com>

CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

## Sieving - % Passing (Pulverizing)

DATE SAMPLED: Apr 25, 2018

DATE RECEIVED: Apr 26, 2018

DATE REPORTED: Jun 05, 2018

SAMPLE TYPE: Drill Core

Analyte:	Pass %
Unit:	%
Sample ID (AGAT ID)	RDL:
55533464 (9203257)	87.4

Comments: RDL - Reported Detection Limit

Certified By:



CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

(201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

Parameter	REPLICATE #1				RPD													
	Sample ID	Original	Replicate	RPD														
Ag	9203257	< 1	< 1	0.0%														
Al	9203257	6.53	6.70	2.6%														
As	9203257	< 5	< 5	0.0%														
B	9203257	51	46	10.3%														
Ba	9203257	101	101	0.0%														
Be	9203257	< 5	< 5	0.0%														
Bi	9203257	< 0.1	< 0.1	0.0%														
Ca	9203257	7.04	6.99	0.7%														
Cd	9203257	< 0.2	< 0.2	0.0%														
Ce	9203257	17.1	17.5	2.3%														
Co	9203257	62.6	64.3	2.7%														
Cr	9203257	0.014	0.013	7.4%														
Cs	9203257	0.4	0.4	0.0%														
Cu	9203257	104	95	9.0%														
Dy	9203257	4.07	4.23	3.9%														
Er	9203257	2.78	2.74	1.4%														
Eu	9203257	0.89	0.91	2.2%														
Fe	9203257	10.5	10.5	0.0%														
Ga	9203257	17.6	18.1	2.8%														
Gd	9203257	3.46	3.58	3.4%														
Ge	9203257	2	2	0.0%														
Hf	9203257	2	2	0.0%														
Ho	9203257	0.92	0.92	0.0%														
In	9203257	< 0.2	< 0.2	0.0%														
K	9203257	0.238	0.234	1.7%														
La	9203257	7.51	7.77	3.4%														
Li	9203257	< 10	< 10	0.0%														
Lu	9203257	0.436	0.412	5.7%														
Mg	9203257	1.99	1.98	0.5%														
Mn	9203257	2990	2960	1.0%														
Mo	9203257	19	15	23.5%														



CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

Nb	9203257	4	4	0.0%															
Nd	9203257	11.0	10.9	0.9%															
Ni	9203257	160	140	13.3%															
P	9203257	0.046	0.043	6.7%															
Pb	9203257	< 5	< 5	0.0%															
Pr	9203257	2.32	2.42	4.2%															
Rb	9203257	8.56	8.53	0.4%															
S	9203257	0.618	0.572	7.7%															
Sb	9203257	< 0.1	0.1																
Sc	9203257	34	35	2.9%															
Si	9203257	22.2	22.6	1.8%															
Sm	9203257	2.9	3.1	6.7%															
Sn	9203257	< 1	< 1	0.0%															
Sr	9203257	144	148	2.7%															
Ta	9203257	< 0.5	< 0.5	0.0%															
Tb	9203257	0.62	0.63	1.6%															
Th	9203257	1.27	1.22	4.0%															
Ti	9203257	0.61	0.62	1.6%															
Tl	9203257	< 0.5	< 0.5	0.0%															
Tm	9203257	0.394	0.414	5.0%															
U	9203257	0.38	0.38	0.0%															
V	9203257	287	287	0.0%															
W	9203257	< 1	< 1	0.0%															
Y	9203257	23.9	24.7	3.3%															
Yb	9203257	2.7	2.7	0.0%															
Zn	9203257	112	106	5.5%															
Zr	9203257	77.8	80.3	3.2%															

(202-052) Fire Assay - Trace Au, ICP-OES finish (ppm)

Parameter	REPLICATE #1				RPD														
	Sample ID	Original	Replicate	RPD															
Au	9203257	0.004	0.001																



CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

(201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

Parameter	CRM #1 (ref.SY-4)																	
	Expect	Actual	Recovery	Limits														
Al	10.95	10.78	98%	90% - 110%														
Ba	340	331	97%	90% - 110%														
Be	2.6	3.2	123%	90% - 110%														
Ca	5.72	5.83	102%	90% - 110%														
Ce	122	134	109%	90% - 110%														
Co	2.8	2.6	92%	90% - 110%														
Cs	1.5	1.6	109%	90% - 110%														
Cu	7	7	96%	90% - 110%														
Dy	18.2	19.8	109%	90% - 110%														
Er	14.2	15.5	109%	90% - 110%														
Eu	2.0	2.01	100%	90% - 110%														
Fe	4.34	4.29	99%	90% - 110%														
Ga	35	37	106%	90% - 110%														
Gd	14	15.4	110%	90% - 110%														
Hf	10.6	10.7	100%	90% - 110%														
Ho	4.3	4.7	109%	90% - 110%														
K	1.37	1.38	101%	90% - 110%														
La	58	63.4	109%	90% - 110%														
Li	37	38.9	105%	90% - 110%														
Lu	2.1	2.3	109%	90% - 110%														
Mg	0.325	0.319	98%	90% - 110%														
Mn	836	800	96%	90% - 110%														
Nb	13	14	106%	90% - 110%														
Nd	57	63	110%	90% - 110%														
Ni	9	8	86%	90% - 110%														
Pb	10	10	104%	90% - 110%														
Pr	15.0	16.2	108%	90% - 110%														
Rb	55	58	106%	90% - 110%														
Si	23.3	22.8	98%	90% - 110%														
Sm	12.7	13.7	107%	90% - 110%														
Sn	7.1	7	99%	90% - 110%														



CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

Sr	1191	1244	104%	90% - 110%															
Ta	0.9	0.8	85%	90% - 110%															
Tb	2.6	2.8	107%	90% - 110%															
Th	1.4	1.4	101%	90% - 110%															
Ti	0.172	0.164	96%	90% - 110%															
Tm	2.3	2.5	109%	90% - 110%															
U	0.8	0.9	108%	90% - 110%															
V	8	10	126%	90% - 110%															
Y	119	128	108%	90% - 110%															
Yb	14.8	16.1	109%	90% - 110%															
Zn	93	92	99%	90% - 110%															
Zr	517	563	109%	90% - 110%															
<b>(202-052) Fire Assay - Trace Au, ICP-OES finish (ppm)</b>																			
GRM #1 (ref.1P5Q)																			
Parameter	Expect	Actual	Recovery	Limits															
Au	1.329	1.278	96%	90% - 110%															



## Method Summary

CLIENT NAME: GOSSAN RESOURCES LIMITED

AGAT WORK ORDER: 18T332729

PROJECT: SLG-2018

ATTENTION TO: Scot Halladay

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Solid Analysis			
Sample Login Weight	MIN-12009		BALANCE
Ag			ICP/MS
Al	MIN-200-12001		ICP/OES
As	MIN-200-12001		ICP/MS
B	MIN-200-12001		ICP/OES
Ba	MIN-200-12001		ICP/OES
Be	MIN-200-12001		ICP/OES
Bi	MIN-200-12001		ICP-MS
Ca	MIN-200-12001		ICP/OES
Cd	MIN-200-12001		ICP-MS
Ce	MIN-200-12001		ICP-MS
Co	MIN-200-12001		ICP/MS
Cr	MIN-200-12001		ICP/OES
Cs	MIN-200-12001		ICP-MS
Cu	MIN-200-12001		ICP/OES
Dy	MIN-200-12001		ICP-MS
Er	MIN-200-12001		ICP-MS
Eu	MIN-200-12001		ICP-MS
Fe	MIN-200-12001		ICP/OES
Ga	MIN-200-12001		ICP-MS
Gd	MIN-200-12001		ICP-MS
Ge	MIN-200-12001		ICP-MS
Hf	MIN-200-12001		ICP-MS
Ho	MIN-200-12001		ICP-MS
In	MIN-200-12001		ICP-MS
K	MIN-200-12001		ICP/OES
La	MIN-200-12001		ICP-MS
Li	MIN-200-12001		ICP/OES
Lu	MIN-200-12001		ICP-MS
Mg	MIN-200-12001		ICP/OES
Mn	MIN-200-12001		ICP/OES
Mo	MIN-200-12001		ICP/MS
Nb	MIN-200-12001		ICP-MS
Nd	MIN-200-12001		ICP-MS
Ni	MIN-200-12001		ICP/OES
P			ICP/OES
Pb	MIN-200-12001		ICP/MS
Pr	MIN-200-12001		ICP-MS
Rb	MIN-200-12001		ICP/MS
S	MIN-200-12001		ICP/OES
Sb	MIN-200-12001		ICP-MS
Sc	MIN-200-12001		ICP/OES
Si	MIN-200-12001		ICP/OES
Sm	MIN-200-12001		ICP-MS
Sn	MIN-200-12001		ICP/MS
Sr	MIN-200-12001		ICP-OES
Ta	MIN-200-12001		ICP-MS
Tb	MIN-200-12001		ICP-MS
Th	MIN-200-12001		ICP-MS





## Method Summary

CLIENT NAME: GOSSAN RESOURCES LIMITED

AGAT WORK ORDER: 18T332729

PROJECT: SLG-2018

ATTENTION TO: Scot Halladay

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Ti	MIN-200-12001		ICP/OES
Tl	MIN-200-12001		ICP-MS
Tm	MIN-200-12001		ICP-MS
U	MIN-200-12001		ICP-MS
V	MIN-200-12001		ICP/OES
W	MIN-200-12001		ICP-MS
Y	MIN-200-12001		ICP-MS
Yb	MIN-200-12001		ICP-MS
Zn	MIN-200-12001		ICP/OES
Zr	MIN-200-12001		ICP-MS
Au	MIN-200-12006	BUGBEE, E: A Textbook of Fire Assaying	ICP-OES
Pass %			BALANCE



CLIENT NAME: GOSSAN RESOURCES LIMITED  
404-171 DONALD STREET  
WINNIPEG, MB R3C 1M4  
204-943-1990

ATTENTION TO: Scot Halladay

PROJECT: SLG-2018

AGAT WORK ORDER: 18T332737

SOLID ANALYSIS REVIEWED BY: Sherin Moussa, Senior Technician

DATE REPORTED: Jun 11, 2018

PAGES (INCLUDING COVER): 22

Should you require any information regarding this analysis please contact your client services representative at (905) 501-9998

\*NOTES

All samples are stored at no charge for 90 days. Please contact the lab if you require additional sample storage time.



## Certificate of Analysis

AGAT WORK ORDER: 18T332737

PROJECT: SLG-2018

5623 McADAM ROAD  
 MISSISSAUGA, ONTARIO  
 CANADA L4Z 1N9  
 TEL (905)501-9998  
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<http://www.agatlabs.com>

CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

### (200-) Sample Login Weight

DATE SAMPLED: Apr 25, 2018

DATE RECEIVED: Apr 26, 2018

DATE REPORTED: Jun 11, 2018

SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte: Unit: RDL:	Sample Login Weight kg 0.01
5553592 (9203482)		3.30
5553593 (9203483)		1.98
5553594 (9203484)		1.96
5553595 (9203485)		2.22
5553596 (9203486)		2.12
5553597 (9203487)		3.12
5553598 (9203488)		2.26
5553599 (9203489)		3.20
5553600 (9203490)		3.26
5553601 (9203491)		3.24
5553602 (9203492)		3.00
5553603 (9203493)		2.04
5553604 (9203494)		2.04
5553605 (9203495)		0.06
5553606 (9203496)		3.34
5553607 (9203497)		2.96
5553608 (9203498)		2.72
5553609 (9203499)		2.78
5553710 (9203500)		3.40
5553711 (9203501)		2.08
5553712 (9203502)		2.70
5553713 (9203503)		0.86
5553714 (9203504)		0.52
5553715 (9203505)		3.04
5553716 (9203506)		2.22
5553717 (9203507)		3.34
5553718 (9203508)		1.56
5553719 (9203509)		3.20
5553720 (9203510)		0.14
5553721 (9203511)		3.38
5553722 (9203512)		3.04

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18T332737

PROJECT: SLG-2018

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MISSISSAUGA, ONTARIO  
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<http://www.agatlabs.com>

CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

### (200-) Sample Login Weight

DATE SAMPLED: Apr 25, 2018

DATE RECEIVED: Apr 26, 2018

DATE REPORTED: Jun 11, 2018

SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte: Unit: RDL:	Sample Login Weight kg 0.01
5553723 (9203513)		1.30
5553724 (9203514)		1.34
5553725 (9203515)		2.94
5553726 (9203516)		2.90
5553727 (9203517)		3.32
5553728 (9203518)		1.62
5553729 (9203519)		2.34
5553730 (9203520)		1.30
5553731 (9203521)		0.36
5553732 (9203522)		2.34
5553733 (9203523)		2.28
5553734 (9203524)		2.30
5553735 (9203525)		3.10
5553736 (9203526)		3.24
5553737 (9203527)		2.12
5553738 (9203528)		2.10
5553739 (9203529)		2.16
5553740 (9203530)		2.06
5553741 (9203531)		0.56
5553742 (9203532)		2.18

Comments: RDL - Reported Detection Limit

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18T332737

PROJECT: SLG-2018

5623 McADAM ROAD  
MISSISSAUGA, ONTARIO  
CANADA L4Z 1N9  
TEL (905)501-9998  
FAX (905)501-0589  
<http://www.agatlabs.com>

CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Apr 25, 2018

DATE RECEIVED: Apr 26, 2018

DATE REPORTED: Jun 11, 2018

SAMPLE TYPE: Drill Core

Analyte:	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm
RDL:	1	0.01	5	20	0.5	5	0.1	0.05	0.2	0.1	0.5	0.005	0.1	5
5553592 (9203482)	<1	5.99	<5	75	449	<5	0.2	2.74	0.3	87.0	3.1	<0.005	3.5	33
5553593 (9203483)	<1	6.24	<5	42	529	<5	<0.1	1.71	<0.2	95.7	0.7	<0.005	2.5	19
5553594 (9203484)	<1	5.89	<5	29	532	<5	<0.1	1.86	<0.2	89.3	<0.5	<0.005	2.3	18
5553595 (9203485)	<1	5.85	<5	20	452	<5	0.1	1.76	0.2	88.8	<0.5	<0.005	2.0	21
5553596 (9203486)	<1	5.51	<5	<20	434	<5	<0.1	1.45	<0.2	83.5	0.6	<0.005	2.0	30
5553597 (9203487)	<1	6.26	<5	35	640	<5	<0.1	2.33	<0.2	99.2	3.3	<0.005	4.3	42
5553598 (9203488)	<1	8.46	27	73	812	<5	0.1	5.53	<0.2	15.9	49.2	0.006	2.5	110
5553599 (9203489)	<1	7.56	28	66	646	<5	<0.1	5.95	0.2	16.2	57.6	0.006	2.2	94
5553600 (9203490)	<1	7.45	16	47	506	<5	<0.1	5.92	0.2	13.3	55.5	0.005	1.5	97
5553601 (9203491)	<1	7.34	20	59	515	<5	<0.1	6.13	<0.2	14.3	58.5	<0.005	1.7	83
5553602 (9203492)	<1	7.09	17	254	520	<5	0.2	3.45	0.7	29.0	32.4	<0.005	1.4	69
5553603 (9203493)	<1	7.00	7	440	711	<5	0.6	2.38	3.5	36.8	40.2	<0.005	1.6	92
5553604 (9203494)	<1	6.20	8	191	533	<5	0.7	2.93	2.8	37.0	53.4	<0.005	1.3	102
5553605 (9203495)	90	6.33	119	62	295	<5	13.8	2.50	34.0	55.6	29.9	<0.005	1.0	2722
5553606 (9203496)	2	6.13	<5	50	425	<5	0.5	2.80	0.2	33.0	36.9	<0.005	1.9	65
5553607 (9203497)	<1	6.17	<5	63	340	<5	0.1	2.80	<0.2	37.8	21.7	<0.005	1.8	47
5553608 (9203498)	<1	5.62	<5	50	282	<5	0.2	3.23	<0.2	32.3	11.2	<0.005	1.9	43
5553609 (9203499)	<1	8.21	<5	20	868	<5	0.1	5.44	<0.2	146	21.2	0.006	3.0	22
5553710 (9203500)	<1	6.50	<5	146	415	<5	0.5	5.63	<0.2	34.0	20.3	<0.005	2.2	81
5553711 (9203501)	<1	7.40	<5	108	329	<5	0.4	4.10	<0.2	36.4	23.0	<0.005	1.9	72
5553712 (9203502)	<1	7.08	<5	60	338	<5	0.1	4.28	<0.2	36.5	17.5	<0.005	1.6	28
5553713 (9203503)	<1	4.35	<5	218	171	<5	0.6	4.23	0.3	20.3	14.8	<0.005	0.9	137
5553714 (9203504)	<1	1.38	<5	<20	28.0	<5	<0.1	0.05	<0.2	36.8	1.2	0.005	<0.1	<5
5553715 (9203505)	<1	7.40	<5	76	259	<5	<0.1	3.23	<0.2	36.2	18.5	0.005	1.3	41
5553716 (9203506)	<1	7.50	<5	78	248	<5	<0.1	3.76	<0.2	37.2	23.5	0.006	1.2	43
5553717 (9203507)	<1	7.50	<5	74	221	<5	0.2	4.08	<0.2	36.0	23.2	<0.005	1.1	62
5553718 (9203508)	<1	7.88	<5	66	285	<5	0.2	3.57	<0.2	34.6	35.1	0.006	1.1	82
5553719 (9203509)	<1	7.84	<5	64	300	<5	<0.1	3.43	<0.2	40.1	18.9	<0.005	1.4	41
5553720 (9203510)	8	6.84	21	67	256	<5	14.1	2.46	12.6	62.6	30.6	0.006	1.3	1518
5553721 (9203511)	<1	6.91	<5	97	270	<5	0.4	4.25	1.6	38.7	17.7	<0.005	1.2	63
5553722 (9203512)	<1	6.27	<5	90	280	<5	0.2	4.94	<0.2	32.0	17.9	<0.005	1.0	49
5553723 (9203513)	<1	8.33	<5	49	436	<5	0.2	3.16	<0.2	35.1	24.4	0.006	1.7	54

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18T332737

PROJECT: SLG-2018

5623 McADAM ROAD  
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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Apr 25, 2018

DATE RECEIVED: Apr 26, 2018

DATE REPORTED: Jun 11, 2018

SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte: Unit: RDL:	Ag ppm 1	Al % 0.01	As ppm 5	B ppm 20	Ba ppm 0.5	Be ppm 5	Bi ppm 0.1	Ca % 0.05	Cd ppm 0.2	Ce ppm 0.1	Co ppm 0.5	Cr % 0.005	Cs ppm 0.1	Cu ppm 5
5553724 (9203514)		<1	7.21	<5	24	880	<5	<0.1	1.70	<0.2	55.6	4.2	<0.005	1.2	10
5553725 (9203515)		<1	6.97	<5	57	320	<5	0.1	3.96	<0.2	36.0	14.3	<0.005	1.1	36
5553726 (9203516)		<1	6.88	<5	120	228	<5	0.1	4.20	<0.2	33.7	17.1	<0.005	1.1	52
5553727 (9203517)		<1	7.10	<5	108	203	<5	0.1	4.18	0.2	32.2	23.0	0.006	1.2	61
5553728 (9203518)		<1	7.20	<5	26	776	<5	0.1	6.78	0.3	188	22.1	0.009	2.8	54
5553729 (9203519)		<1	7.31	<5	71	223	<5	0.1	4.03	<0.2	37.4	20.7	<0.005	1.0	46
5553730 (9203520)		<1	7.73	<5	59	295	<5	0.2	3.46	<0.2	39.7	26.0	<0.005	1.5	49
5553731 (9203521)		<1	3.36	<5	199	148	<5	2.3	3.42	0.2	18.6	70.4	<0.005	2.3	257
5553732 (9203522)		<1	6.24	<5	73	275	<5	0.5	4.68	0.4	31.0	20.7	<0.005	1.8	91
5553733 (9203523)		<1	5.98	<5	85	134	<5	0.2	3.34	0.3	31.6	23.8	<0.005	1.0	52
5553734 (9203524)		<1	6.89	<5	55	202	<5	0.2	3.57	0.3	34.1	17.5	<0.005	0.9	51
5553735 (9203525)		<1	6.71	<5	74	160	<5	0.1	4.34	0.3	32.6	17.9	<0.005	0.6	51
5553736 (9203526)		<1	7.22	<5	71	196	<5	<0.1	4.35	<0.2	35.9	29.5	<0.005	1.0	57
5553737 (9203527)		<1	8.16	<5	42	310	<5	0.1	3.41	<0.2	45.9	24.1	<0.005	2.0	59
5553738 (9203528)		<1	8.04	<5	50	255	<5	<0.1	3.74	<0.2	40.8	21.9	<0.005	1.8	44
5553739 (9203529)		<1	6.59	<5	58	207	<5	0.1	4.19	<0.2	38.4	17.6	<0.005	1.0	59
5553740 (9203530)		1	6.25	208	222	275	<5	0.9	2.06	11.9	42.0	45.6	<0.005	0.9	264
5553741 (9203531)		<1	2.20	<5	<20	14.1	<5	<0.1	<0.05	<0.2	47.4	1.7	0.009	<0.1	5
5553742 (9203532)		1	6.02	78	146	338	<5	0.8	1.55	4.1	57.0	65.6	<0.005	0.9	350

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18T332737

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Apr 25, 2018

DATE RECEIVED: Apr 26, 2018

DATE REPORTED: Jun 11, 2018

SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte: Unit: RDL:	Dy ppm 0.05	Er ppm 0.05	Eu ppm 0.05	Fe % 0.01	Ga ppm 0.01	Gd ppm 0.05	Ge ppm 1	Hf ppm 1	Ho ppm 0.05	In ppm 0.2	K % 0.05	La ppm 0.1	Li ppm 10	Lu ppm 0.05
5553592 (9203482)		8.01	4.94	1.56	4.33	18.4	8.58	2	10	1.71	<0.2	2.75	38.8	15	0.85
5553593 (9203483)		8.41	5.34	1.66	3.01	19.9	9.27	2	11	1.77	<0.2	2.78	42.0	12	0.86
5553594 (9203484)		8.15	4.95	1.52	3.29	19.3	8.77	2	10	1.72	<0.2	2.44	39.4	11	0.89
5553595 (9203485)		7.94	5.00	1.49	2.72	17.3	8.73	2	10	1.70	<0.2	1.84	40.0	<10	0.82
5553596 (9203486)		7.58	4.64	1.41	2.41	16.7	8.02	2	9	1.59	<0.2	1.90	37.1	10	0.78
5553597 (9203487)		7.37	4.49	1.63	4.38	18.3	8.73	2	9	1.54	<0.2	2.43	44.1	13	0.76
5553598 (9203488)		2.67	1.79	0.59	4.23	18.5	2.46	1	2	0.56	<0.2	3.08	7.3	13	0.30
5553599 (9203489)		2.86	1.85	0.70	4.93	16.9	2.52	1	2	0.62	<0.2	2.38	7.5	16	0.29
5553600 (9203490)		2.53	1.65	0.67	5.39	15.7	2.42	1	2	0.56	<0.2	1.76	6.1	11	0.26
5553601 (9203491)		2.68	1.73	0.72	5.90	15.6	2.56	1	2	0.57	<0.2	1.74	6.4	17	0.28
5553602 (9203492)		2.87	1.76	0.73	6.91	15.6	2.97	1	3	0.62	<0.2	1.64	14.0	<10	0.30
5553603 (9203493)		3.05	1.90	0.83	6.47	18.8	3.56	2	4	0.62	0.6	2.23	17.6	<10	0.30
5553604 (9203494)		3.01	1.93	0.82	8.08	16.0	3.46	2	4	0.66	0.4	1.80	18.2	<10	0.33
5553605 (9203495)		3.81	2.37	0.96	8.06	18.1	4.69	1	5	0.80	2.5	1.65	26.4	23	0.40
5553606 (9203496)		3.04	1.79	0.83	7.16	14.4	3.26	1	3	0.63	<0.2	1.16	16.2	<10	0.31
5553607 (9203497)		3.56	2.12	0.92	6.72	14.4	3.72	1	4	0.71	<0.2	1.40	18.1	10	0.37
5553608 (9203498)		2.87	1.69	0.79	6.39	13.4	3.29	1	3	0.56	<0.2	1.40	15.9	12	0.28
5553609 (9203499)		4.27	1.82	2.60	5.89	20.0	8.39	1	5	0.72	<0.2	2.72	65.0	22	0.24
5553710 (9203500)		2.90	1.69	0.86	8.61	16.4	3.09	1	3	0.59	<0.2	1.72	16.5	12	0.26
5553711 (9203501)		3.03	1.93	0.86	8.18	16.8	3.25	1	4	0.63	<0.2	1.86	17.5	14	0.29
5553712 (9203502)		2.90	1.89	0.77	5.17	17.2	3.31	1	4	0.61	<0.2	1.80	17.2	11	0.26
5553713 (9203503)		1.75	1.13	0.49	24.0	10.9	2.01	1	2	0.38	<0.2	0.88	10.4	<10	0.17
5553714 (9203504)		1.52	0.98	0.40	1.33	3.46	2.13	<1	4	0.33	<0.2	0.13	17.1	17	0.15
5553715 (9203505)		2.86	1.78	0.82	5.92	17.3	3.18	1	4	0.58	<0.2	1.67	17.6	13	0.26
5553716 (9203506)		3.18	1.91	0.86	7.05	18.1	3.36	1	4	0.65	<0.2	1.37	17.8	15	0.26
5553717 (9203507)		3.04	1.79	0.87	7.42	17.6	3.31	1	3	0.63	<0.2	1.35	17.3	11	0.27
5553718 (9203508)		3.08	1.90	0.92	6.63	17.5	3.33	1	3	0.63	<0.2	1.39	16.5	11	0.27
5553719 (9203509)		3.27	1.95	0.92	6.42	18.9	3.48	1	4	0.65	<0.2	1.59	19.5	<10	0.29
5553720 (9203510)		4.55	2.66	1.08	8.45	19.4	5.23	2	4	0.92	0.6	1.74	29.4	26	0.41
5553721 (9203511)		3.28	2.06	0.89	13.4	18.0	3.54	2	4	0.67	<0.2	1.21	19.0	<10	0.30
5553722 (9203512)		2.83	1.82	0.75	12.9	15.2	2.96	1	3	0.59	<0.2	1.00	15.6	<10	0.27
5553723 (9203513)		3.12	1.95	0.90	6.90	19.6	3.55	1	3	0.67	<0.2	1.50	16.7	14	0.29

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18T332737

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Apr 25, 2018

DATE RECEIVED: Apr 26, 2018

DATE REPORTED: Jun 11, 2018

SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte: Unit: RDL:	Dy ppm 0.05	Er ppm 0.05	Eu ppm 0.05	Fe % 0.01	Ga ppm 0.01	Gd ppm 0.05	Ge ppm 1	Hf ppm 1	Ho ppm 0.05	In ppm 0.2	K % 0.05	La ppm 0.1	Li ppm 10	Lu ppm 0.05
5553724 (9203514)		3.93	2.39	0.90	1.69	18.6	4.61	1	6	0.80	<0.2	2.11	27.5	<10	0.35
5553725 (9203515)		2.86	1.84	0.80	9.44	15.9	3.31	1	3	0.63	<0.2	1.11	17.5	13	0.26
5553726 (9203516)		2.84	1.71	0.77	13.0	15.4	3.08	1	3	0.60	<0.2	0.89	16.4	15	0.26
5553727 (9203517)		2.81	1.63	0.85	13.6	17.3	3.11	1	3	0.59	<0.2	0.89	15.7	12	0.28
5553728 (9203518)		3.98	1.52	2.89	6.12	18.8	9.34	1	6	0.65	<0.2	1.99	82.5	18	0.20
5553729 (9203519)		3.04	1.77	0.87	9.22	17.8	3.49	1	4	0.64	<0.2	0.96	18.1	12	0.31
5553730 (9203520)		3.39	2.01	0.98	7.15	18.3	3.72	1	4	0.71	<0.2	1.46	19.0	15	0.35
5553731 (9203521)		2.02	1.27	0.49	27.4	8.04	2.14	<1	2	0.42	<0.2	0.91	9.1	<10	0.23
5553732 (9203522)		2.59	1.63	0.85	9.82	15.8	2.97	1	3	0.54	<0.2	1.13	14.9	<10	0.27
5553733 (9203523)		2.75	1.70	0.76	10.9	17.3	3.13	1	4	0.59	<0.2	0.58	15.1	<10	0.29
5553734 (9203524)		2.84	1.71	0.79	9.51	16.9	3.07	1	4	0.58	<0.2	0.69	16.3	<10	0.26
5553735 (9203525)		2.89	1.72	0.78	12.5	15.6	3.07	1	3	0.60	<0.2	0.58	15.9	<10	0.29
5553736 (9203526)		3.03	1.81	0.94	9.86	17.9	3.30	1	4	0.64	<0.2	0.90	17.3	<10	0.29
5553737 (9203527)		3.26	1.85	0.98	6.73	18.0	3.72	1	4	0.67	<0.2	1.43	21.6	14	0.31
5553738 (9203528)		3.31	1.92	0.97	7.78	19.1	3.80	1	4	0.70	<0.2	1.30	19.4	13	0.34
5553739 (9203529)		3.14	1.94	0.85	10.1	15.9	3.50	2	4	0.66	<0.2	0.85	18.0	10	0.31
5553740 (9203530)		3.35	2.03	0.74	10.4	24.0	3.63	3	4	0.71	2.1	1.39	19.5	<10	0.37
5553741 (9203531)		1.87	1.08	0.51	1.56	5.41	2.68	<1	4	0.37	<0.2	0.06	22.5	14	0.19
5553742 (9203532)		3.04	1.86	0.69	11.2	19.5	3.78	3	4	0.64	1.0	1.69	27.9	<10	0.31

Certified By:





## Certificate of Analysis

AGAT WORK ORDER: 18T332737

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Apr 25, 2018

DATE RECEIVED: Apr 26, 2018

DATE REPORTED: Jun 11, 2018

SAMPLE TYPE: Drill Core

Analyte:	Mg	Mn	Mo	Nb	Nd	Ni	P	Pb	Pr	Rb	S	Sb	Sc	Si
Unit:	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	%
RDL:	0.01	10	2	1	0.1	5	0.01	5	0.05	0.2	0.01	0.1	5	0.01
5553592 (9203482)	0.44	1650	8	20	41.3	7	0.01	13	10.7	164	0.37	0.5	8	33.5
5553593 (9203483)	0.32	798	7	23	46.4	<5	0.01	13	11.7	155	0.09	0.2	8	35.9
5553594 (9203484)	0.32	1070	6	22	43.0	<5	<0.01	11	11.0	139	0.06	0.2	8	34.1
5553595 (9203485)	0.24	650	8	20	42.9	<5	<0.01	11	11.0	109	0.07	0.2	7	35.4
5553596 (9203486)	0.25	588	9	20	40.8	<5	<0.01	9	10.2	106	0.14	0.3	7	35.7
5553597 (9203487)	0.75	1230	9	20	47.4	14	0.04	9	12.0	121	0.24	0.2	8	36.5
5553598 (9203488)	1.12	1210	6	4	8.6	63	0.03	8	2.07	141	0.35	0.3	43	26.6
5553599 (9203489)	1.86	1440	6	3	9.1	65	0.03	7	2.16	114	0.28	0.2	37	26.2
5553600 (9203490)	2.36	1730	4	2	7.4	68	0.03	8	1.72	75.8	0.37	0.2	38	25.3
5553601 (9203491)	2.45	1870	4	2	7.9	76	0.03	11	1.86	75.9	0.35	0.4	38	25.5
5553602 (9203492)	1.90	1820	5	5	13.6	67	0.04	12	3.51	61.5	1.31	0.3	14	28.9
5553603 (9203493)	0.88	2140	7	6	17.2	52	0.05	15	4.48	85.9	1.63	0.5	13	30.5
5553604 (9203494)	0.69	2920	9	7	16.9	66	0.05	14	4.47	63.7	1.95	0.6	12	31.2
5553605 (9203495)	2.17	2170	23	8	25.4	46	0.04	13300	6.55	47.2	3.06	94.5	11	26.9
5553606 (9203496)	0.58	2150	7	6	15.3	55	0.04	19	3.91	43.9	1.81	0.3	12	30.1
5553607 (9203497)	0.60	2500	6	7	17.3	37	0.04	10	4.54	53.3	1.06	0.2	11	31.5
5553608 (9203498)	0.68	2640	6	6	14.7	22	0.04	9	3.81	52.2	0.91	0.2	11	32.1
5553609 (9203499)	1.96	1240	6	11	69.7	30	0.25	9	18.7	100	0.24	0.3	13	25.3
5553710 (9203500)	1.04	3830	8	7	15.2	25	0.04	14	4.13	68.6	1.69	0.2	10	26.2
5553711 (9203501)	0.99	2600	6	6	15.7	32	0.05	13	4.28	65.1	1.83	0.2	13	26.4
5553712 (9203502)	0.95	1920	5	7	15.9	25	0.05	16	4.31	73.0	0.81	0.3	10	29.1
5553713 (9203503)	0.92	2630	10	3	9.0	49	0.03	21	2.40	29.9	13.1	0.4	8	16.5
5553714 (9203504)	0.02	51	9	4	14.0	10	<0.01	8	4.11	2.7	0.08	0.3	<5	45.4
5553715 (9203505)	0.93	1610	7	6	15.8	32	0.06	13	4.29	59.6	1.07	0.3	12	27.8
5553716 (9203506)	1.02	2220	6	7	16.3	46	0.06	11	4.38	52.9	1.03	0.3	15	26.8
5553717 (9203507)	1.05	2590	5	7	15.7	32	0.06	12	4.26	50.1	1.35	0.2	13	26.4
5553718 (9203508)	0.87	1790	5	6	15.3	46	0.06	12	4.16	53.2	1.49	0.2	13	28.2
5553719 (9203509)	0.88	2000	5	7	17.5	31	0.06	10	4.75	61.4	0.84	0.2	14	27.8
5553720 (9203510)	2.26	902	15	11	27.0	50	0.05	1032	7.54	55.5	3.80	7.8	12	27.4
5553721 (9203511)	1.73	6270	7	7	17.1	24	0.06	14	4.65	44.7	0.82	0.5	11	24.4
5553722 (9203512)	1.53	5540	6	6	13.8	22	0.05	12	3.82	37.8	1.83	0.6	10	24.1
5553723 (9203513)	1.02	1980	6	7	15.9	36	0.07	13	4.16	63.2	1.17	0.1	15	26.9

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18T332737

PROJECT: SLG-2018

5623 McADAM ROAD  
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<http://www.agatlabs.com>

CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Apr 25, 2018

DATE RECEIVED: Apr 26, 2018

DATE REPORTED: Jun 11, 2018

SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte: Unit: RDL:	Mg %	Mn ppm	Mo ppm	Nb ppm	Nd ppm	Ni ppm	P %	Pb ppm	Pr ppm	Rb ppm	S %	Sb ppm	Sc ppm	Si %
		0.01	10	2	1	0.1	5	0.01	5	0.05	0.2	0.01	0.1	5	0.01
5553724 (9203514)		0.46	502	6	10	23.0	8	0.05	11	6.34	84.6	0.08	0.2	7	34.8
5553725 (9203515)		1.29	4110	6	6	15.7	21	0.05	10	4.28	44.5	0.79	0.3	11	27.5
5553726 (9203516)		1.66	5700	5	6	14.4	43	0.05	11	3.97	32.8	1.68	0.3	11	24.6
5553727 (9203517)		1.43	5000	7	6	14.8	38	0.06	15	3.76	33.8	2.78	0.3	12	23.0
5553728 (9203518)		1.75	1850	4	14	90.9	61	0.30	16	23.6	73.2	1.17	0.5	9	23.5
5553729 (9203519)		1.22	3200	5	7	17.0	31	0.06	11	4.34	36.0	1.18	0.3	12	26.5
5553730 (9203520)		1.03	1830	3	7	18.4	37	0.06	22	4.71	56.1	1.28	0.2	13	28.2
5553731 (9203521)		0.90	2300	7	3	9.1	96	0.04	19	2.25	36.3	15.3	0.2	8	16.3
5553732 (9203522)		1.02	3780	4	6	14.3	31	0.05	25	3.69	47.6	3.33	0.1	12	23.8
5553733 (9203523)		1.33	4840	4	6	14.8	34	0.05	20	3.73	28.2	1.99	0.4	13	19.8
5553734 (9203524)		1.08	3680	6	7	15.5	29	0.06	19	3.98	31.0	2.24	0.3	11	25.4
5553735 (9203525)		1.54	5660	5	6	15.0	30	0.06	21	3.90	23.1	2.12	0.3	12	23.5
5553736 (9203526)		1.30	3590	5	6	16.7	34	0.06	16	4.24	37.8	1.63	0.3	12	24.7
5553737 (9203527)		1.21	1340	5	7	21.8	39	0.07	15	5.58	55.3	1.06	0.2	14	27.2
5553738 (9203528)		1.12	2630	5	7	18.9	34	0.07	16	4.81	54.2	0.81	0.4	14	26.6
5553739 (9203529)		1.20	4460	4	7	17.6	25	0.05	21	4.44	36.5	1.49	0.7	12	26.1
5553740 (9203530)		0.65	1520	9	7	19.7	45	0.04	37	5.10	60.5	5.94	0.7	12	27.3
5553741 (9203531)		0.01	40	13	5	20.1	10	<0.01	7	5.44	1.5	0.04	0.4	<5	42.4
5553742 (9203532)		0.50	747	8	7	22.5	48	0.03	31	6.33	67.4	6.72	0.7	7	26.4

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18T332737

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Apr 25, 2018

DATE RECEIVED: Apr 26, 2018

DATE REPORTED: Jun 11, 2018

SAMPLE TYPE: Drill Core

Analyte:	Sm	Sn	Sr	Ta	Tb	Th	Ti	Tl	Tm	U	V	W	Y	Yb
Unit:	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
RDL:	0.1	1	0.1	0.5	0.05	0.1	0.01	0.5	0.05	0.05	5	1	0.5	0.1
5553592 (9203482)	8.5	2	148	0.6	1.34	6.8	0.14	0.5	0.75	1.77	11	<1	48.8	5.5
5553593 (9203483)	9.3	3	109	0.7	1.46	7.7	0.13	<0.5	0.79	1.90	<5	<1	51.4	5.8
5553594 (9203484)	8.7	3	103	0.5	1.41	7.1	0.12	<0.5	0.75	1.83	<5	<1	49.7	5.5
5553595 (9203485)	8.9	2	126	0.5	1.39	7.1	0.12	<0.5	0.74	1.83	<5	<1	47.6	5.4
5553596 (9203486)	8.2	3	68.2	<0.5	1.31	6.5	0.12	<0.5	0.67	1.71	<5	<1	46.7	5.1
5553597 (9203487)	9.5	3	208	<0.5	1.33	7.0	0.18	<0.5	0.67	1.68	15	<1	45.6	5.0
5553598 (9203488)	2.1	<1	205	<0.5	0.43	1.6	0.50	0.5	0.27	0.44	280	1	16.8	1.8
5553599 (9203489)	2.3	<1	165	<0.5	0.48	1.6	0.45	<0.5	0.26	0.54	245	<1	17.4	2.0
5553600 (9203490)	2.0	<1	168	<0.5	0.40	1.3	0.44	<0.5	0.23	0.38	246	<1	15.5	1.8
5553601 (9203491)	2.0	<1	149	<0.5	0.43	1.2	0.43	<0.5	0.25	0.37	241	2	16.0	1.9
5553602 (9203492)	2.8	1	110	<0.5	0.48	3.1	0.29	<0.5	0.26	0.84	97	<1	17.8	2.0
5553603 (9203493)	3.8	4	92.7	<0.5	0.53	3.5	0.31	0.6	0.26	1.06	94	<1	17.7	1.9
5553604 (9203494)	3.5	4	99.4	<0.5	0.55	3.6	0.27	<0.5	0.27	1.12	80	<1	19.9	2.1
5553605 (9203495)	4.8	18	92.4	<0.5	0.71	7.1	0.29	4.4	0.35	2.26	92	3	22.7	2.6
5553606 (9203496)	3.2	1	108	<0.5	0.51	3.2	0.24	<0.5	0.26	0.87	81	<1	17.9	2.0
5553607 (9203497)	3.5	3	112	<0.5	0.60	3.8	0.24	0.6	0.32	1.00	73	<1	20.7	2.3
5553608 (9203498)	3.1	<1	122	<0.5	0.49	3.1	0.22	<0.5	0.24	0.87	66	<1	16.9	1.8
5553609 (9203499)	11.6	2	1110	<0.5	1.01	6.1	0.60	0.6	0.27	1.46	130	<1	20.9	1.6
5553710 (9203500)	3.2	<1	198	<0.5	0.49	3.5	0.28	<0.5	0.24	0.94	80	<1	18.2	1.7
5553711 (9203501)	3.4	<1	169	<0.5	0.54	3.7	0.35	<0.5	0.28	0.99	102	2	17.5	1.8
5553712 (9203502)	3.2	<1	130	<0.5	0.52	3.7	0.31	<0.5	0.25	1.06	87	1	18.5	1.8
5553713 (9203503)	1.8	2	122	<0.5	0.32	1.9	0.23	<0.5	0.17	0.49	87	1	11.9	1.1
5553714 (9203504)	2.4	<1	25.1	<0.5	0.29	5.7	0.09	<0.5	0.15	0.68	8	<1	8.8	1.0
5553715 (9203505)	3.2	<1	136	<0.5	0.50	3.6	0.37	<0.5	0.25	0.96	103	<1	16.8	1.7
5553716 (9203506)	3.6	3	151	<0.5	0.53	3.5	0.37	<0.5	0.28	0.93	117	<1	19.1	2.0
5553717 (9203507)	3.3	<1	184	<0.5	0.52	3.3	0.37	<0.5	0.27	0.93	108	1	18.1	1.8
5553718 (9203508)	3.3	<1	193	<0.5	0.52	3.1	0.42	<0.5	0.26	0.93	123	<1	17.6	1.7
5553719 (9203509)	3.5	<1	191	<0.5	0.55	3.7	0.38	<0.5	0.28	1.01	112	<1	19.6	1.9
5553720 (9203510)	5.6	13	94.8	<0.5	0.80	8.7	0.28	5.7	0.40	2.57	89	3	26.6	2.7
5553721 (9203511)	3.5	1	185	<0.5	0.54	3.8	0.32	<0.5	0.31	0.97	97	1	20.2	2.1
5553722 (9203512)	2.9	<1	240	<0.5	0.47	3.3	0.28	<0.5	0.27	0.85	82	2	17.6	1.7
5553723 (9203513)	3.3	1	224	<0.5	0.56	2.9	0.44	<0.5	0.28	0.81	120	1	19.5	2.0

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18T332737

PROJECT: SLG-2018

5623 McADAM ROAD  
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<http://www.agatlabs.com>

CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Apr 25, 2018

DATE RECEIVED: Apr 26, 2018

DATE REPORTED: Jun 11, 2018

SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte: Unit: RDL:	Sm ppm	Sn ppm	Sr ppm	Ta ppm	Tb ppm	Th ppm	Ti %	Tl ppm	Tm ppm	U ppm	V ppm	W ppm	Y ppm	Yb ppm
		0.1	1	0.1	0.5	0.05	0.1	0.01	0.5	0.05	0.05	5	1	0.5	0.1
5553724 (9203514)		4.6	2	140	<0.5	0.69	6.3	0.24	<0.5	0.35	1.83	23	<1	23.5	2.3
5553725 (9203515)		3.2	<1	179	<0.5	0.49	3.7	0.32	<0.5	0.26	0.96	85	<1	17.2	1.8
5553726 (9203516)		3.1	2	193	<0.5	0.47	3.3	0.32	<0.5	0.25	0.85	98	<1	16.7	1.7
5553727 (9203517)		3.1	1	180	<0.5	0.48	3.2	0.37	<0.5	0.24	0.79	112	<1	18.1	1.8
5553728 (9203518)		13.4	1	1220	<0.5	1.03	6.2	0.55	<0.5	0.19	1.30	79	2	20.7	1.4
5553729 (9203519)		3.4	1	174	<0.5	0.52	3.6	0.34	<0.5	0.29	0.91	104	<1	20.3	2.0
5553730 (9203520)		3.6	1	180	<0.5	0.59	3.9	0.37	<0.5	0.32	1.10	118	1	20.6	2.3
5553731 (9203521)		1.9	<1	122	<0.5	0.34	1.5	0.19	<0.5	0.19	0.46	84	2	13.8	1.5
5553732 (9203522)		2.9	1	231	<0.5	0.47	2.8	0.30	<0.5	0.24	0.76	97	2	17.1	1.8
5553733 (9203523)		2.9	1	201	<0.5	0.46	3.0	0.30	<0.5	0.26	0.80	111	<1	18.6	2.0
5553734 (9203524)		3.1	1	172	<0.5	0.51	3.2	0.34	<0.5	0.25	0.87	95	<1	18.5	1.8
5553735 (9203525)		3.2	<1	163	<0.5	0.50	3.0	0.34	<0.5	0.25	0.81	98	<1	18.9	2.0
5553736 (9203526)		3.5	<1	177	<0.5	0.51	3.2	0.36	<0.5	0.27	0.84	105	<1	20.4	1.9
5553737 (9203527)		4.3	<1	242	<0.5	0.56	4.0	0.39	<0.5	0.27	1.07	112	<1	19.9	1.9
5553738 (9203528)		3.6	1	181	<0.5	0.57	3.5	0.40	<0.5	0.27	0.91	113	<1	21.5	2.1
5553739 (9203529)		3.5	<1	155	<0.5	0.56	4.3	0.30	<0.5	0.30	1.09	90	<1	19.7	2.2
5553740 (9203530)		3.9	17	166	<0.5	0.58	4.9	0.24	<0.5	0.32	1.29	69	2	22.2	2.2
5553741 (9203531)		3.3	<1	17.5	<0.5	0.36	6.2	0.10	<0.5	0.17	1.03	10	<1	11.4	1.2
5553742 (9203532)		3.9	9	139	<0.5	0.55	8.2	0.18	0.6	0.27	1.80	50	2	20.1	2.0

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18T332737

PROJECT: SLG-2018

5623 McADAM ROAD  
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<http://www.agatlabs.com>

CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Apr 25, 2018

DATE RECEIVED: Apr 26, 2018

DATE REPORTED: Jun 11, 2018

SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte:	Zn	Zr
	Unit: RDL:	ppm 5	ppm 0.5
5553592 (9203482)		140	374
5553593 (9203483)		121	429
5553594 (9203484)		97	403
5553595 (9203485)		96	377
5553596 (9203486)		71	372
5553597 (9203487)		90	371
5553598 (9203488)		89	74.4
5553599 (9203489)		114	74.3
5553600 (9203490)		124	59.0
5553601 (9203491)		95	59.1
5553602 (9203492)		212	130
5553603 (9203493)		1250	138
5553604 (9203494)		860	146
5553605 (9203495)		4938	164
5553606 (9203496)		114	127
5553607 (9203497)		86	145
5553608 (9203498)		111	124
5553609 (9203499)		110	223
5553710 (9203500)		77	145
5553711 (9203501)		74	146
5553712 (9203502)		71	157
5553713 (9203503)		123	84.2
5553714 (9203504)		<5	149
5553715 (9203505)		90	145
5553716 (9203506)		91	152
5553717 (9203507)		82	151
5553718 (9203508)		72	136
5553719 (9203509)		88	164
5553720 (9203510)		4840	178
5553721 (9203511)		337	159
5553722 (9203512)		91	132
5553723 (9203513)		116	151

Certified By:





## Certificate of Analysis

AGAT WORK ORDER: 18T332737

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Apr 25, 2018

DATE RECEIVED: Apr 26, 2018

DATE REPORTED: Jun 11, 2018

SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte:	Zn	Zr
	Unit:	ppm	ppm
	RDL:	5	0.5
5553724 (9203514)		69	245
5553725 (9203515)		89	140
5553726 (9203516)		131	134
5553727 (9203517)		125	128
5553728 (9203518)		81	244
5553729 (9203519)		103	152
5553730 (9203520)		92	159
5553731 (9203521)		89	59.9
5553732 (9203522)		157	126
5553733 (9203523)		146	137
5553734 (9203524)		162	141
5553735 (9203525)		139	125
5553736 (9203526)		110	142
5553737 (9203527)		124	152
5553738 (9203528)		85	159
5553739 (9203529)		147	145
5553740 (9203530)		4570	164
5553741 (9203531)		35	125
5553742 (9203532)		1750	145

Comments: RDL - Reported Detection Limit

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18T332737

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

(202-052) Fire Assay - Trace Au, ICP-OES finish (ppm)

DATE SAMPLED: Apr 25, 2018      DATE RECEIVED: Apr 26, 2018      DATE REPORTED: Jun 11, 2018      SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte:	Unit:	RDL:	Value
	Au	ppm	0.001	
5553592 (9203482)				0.005
5553593 (9203483)				0.002
5553594 (9203484)				0.001
5553595 (9203485)				0.001
5553596 (9203486)				0.004
5553597 (9203487)				0.002
5553598 (9203488)				0.003
5553599 (9203489)				0.004
5553600 (9203490)				0.002
5553601 (9203491)				0.003
5553602 (9203492)				0.003
5553603 (9203493)				0.021
5553604 (9203494)				0.060
5553605 (9203495)				0.903
5553606 (9203496)				0.004
5553607 (9203497)				0.009
5553608 (9203498)				0.004
5553609 (9203499)				0.002
5553710 (9203500)				0.015
5553711 (9203501)				0.016
5553712 (9203502)				0.005
5553713 (9203503)				0.029
5553714 (9203504)				0.001
5553715 (9203505)				0.005
5553716 (9203506)				0.003
5553717 (9203507)				0.005
5553718 (9203508)				0.003
5553719 (9203509)				0.028
5553720 (9203510)				0.298
5553721 (9203511)				0.006
5553722 (9203512)				0.006
5553723 (9203513)				0.004

Certified By:





## Certificate of Analysis

AGAT WORK ORDER: 18T332737

PROJECT: SLG-2018

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<http://www.agatlabs.com>

CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

(202-052) Fire Assay - Trace Au, ICP-OES finish (ppm)

DATE SAMPLED: Apr 25, 2018      DATE RECEIVED: Apr 26, 2018      DATE REPORTED: Jun 11, 2018      SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte:	Unit:	RDL:
	Au	ppm	0.001
5553724 (9203514)			0.002
5553725 (9203515)			0.025
5553726 (9203516)			0.009
5553727 (9203517)			0.012
5553728 (9203518)			0.006
5553729 (9203519)			0.006
5553730 (9203520)			0.015
5553731 (9203521)			0.037
5553732 (9203522)			0.015
5553733 (9203523)			0.007
5553734 (9203524)			0.007
5553735 (9203525)			0.005
5553736 (9203526)			0.004
5553737 (9203527)			0.004
5553738 (9203528)			0.002
5553739 (9203529)			0.005
5553740 (9203530)			0.028
5553741 (9203531)			0.002
5553742 (9203532)			0.022

Comments: RDL - Reported Detection Limit

Certified By:





# Certificate of Analysis

AGAT WORK ORDER: 18T332737

PROJECT: SLG-2018

5623 McADAM ROAD  
MISSISSAUGA, ONTARIO  
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<http://www.agatlabs.com>

CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

## Sieving - % Passing (Pulverizing)

DATE SAMPLED: Apr 25, 2018

DATE RECEIVED: Apr 26, 2018

DATE REPORTED: Jun 11, 2018

SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte:	Pass %
	Unit:	%
	RDL:	0.01
5553592 (9203482)		95.5
5553721 (9203511)		99

Comments: RDL - Reported Detection Limit

Certified By:



CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

(201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

Parameter	REPLICATE #1				REPLICATE #2				REPLICATE #3				REPLICATE #4			
	Sample ID	Original	Replicate	RPD	Sample ID	Original	Replicate	RPD	Sample ID	Original	Replicate	RPD	Sample ID	Original	Replicate	RPD
Ag	9203482	< 1	< 1	0.0%	9203493	< 1	< 1	0.0%	9203506	< 1	< 1	0.0%	9203517	< 1	< 1	0.0%
Al	9203482	5.99	5.95	0.7%	9203493	7.00	7.00	0.0%	9203506	7.50	7.45	0.7%	9203517	7.10	7.26	2.2%
As	9203482	< 5	< 5	0.0%	9203493	7	10	35.3%	9203506	< 5	< 5	0.0%	9203517	< 5	< 5	0.0%
B	9203482	75	84	11.3%	9203493	440	492	11.2%	9203506	78	72	8.0%	9203517	108	100	7.7%
Ba	9203482	449	451	0.4%	9203493	711	715	0.6%	9203506	248	244	1.6%	9203517	203	220	8.0%
Be	9203482	< 5	< 5	0.0%	9203493	< 5	< 5	0.0%	9203506	< 5	< 5	0.0%	9203517	< 5	< 5	0.0%
Bi	9203482	0.2	0.2	0.0%	9203493	0.6	0.6	0.0%	9203506	< 0.1	< 0.1	0.0%	9203517	0.15	0.16	6.5%
Ca	9203482	2.74	2.71	1.1%	9203493	2.38	2.26	5.2%	9203506	3.76	3.96	5.2%	9203517	4.18	4.01	4.2%
Cd	9203482	0.3	0.2		9203493	3.52	3.67	4.2%	9203506	< 0.2	< 0.2	0.0%	9203517	0.2	0.2	0.0%
Ce	9203482	87.0	82.9	4.8%	9203493	36.8	37.6	2.2%	9203506	37.2	35.0	6.1%	9203517	32.2	31.0	3.8%
Co	9203482	3.1	2.5	21.4%	9203493	40.2	40.4	0.5%	9203506	23.5	23.3	0.9%	9203517	23.0	22.2	3.5%
Cr	9203482	< 0.005	< 0.005	0.0%	9203493	< 0.005	< 0.005	0.0%	9203506	0.006	0.006	0.0%	9203517	0.0058	0.0051	12.8%
Cs	9203482	3.5	3.4	2.9%	9203493	1.6	1.6	0.0%	9203506	1.2	1.1	8.7%	9203517	1.2	1.2	0.0%
Cu	9203482	33	31	6.3%	9203493	92	93	1.1%	9203506	43	46	6.7%	9203517	61	59	3.3%
Dy	9203482	8.01	7.71	3.8%	9203493	3.05	3.00	1.7%	9203506	3.18	2.95	7.5%	9203517	2.81	2.79	0.7%
Er	9203482	4.94	4.84	2.0%	9203493	1.90	1.70	11.1%	9203506	1.91	1.81	5.4%	9203517	1.63	1.74	6.5%
Eu	9203482	1.56	1.49	4.6%	9203493	0.83	0.82	1.2%	9203506	0.86	0.81	6.0%	9203517	0.846	0.808	4.6%
Fe	9203482	4.33	4.30	0.7%	9203493	6.47	6.49	0.3%	9203506	7.05	7.02	0.4%	9203517	13.6	12.9	5.3%
Ga	9203482	18.4	17.9	2.8%	9203493	18.8	18.0	4.3%	9203506	18.1	17.2	5.1%	9203517	17.3	16.9	2.3%
Gd	9203482	8.58	8.44	1.6%	9203493	3.56	3.67	3.0%	9203506	3.36	3.40	1.2%	9203517	3.11	3.13	0.6%
Ge	9203482	2	2	0.0%	9203493	2	2	0.0%	9203506	1	1	0.0%	9203517	1	1	0.0%
Hf	9203482	10	9	10.5%	9203493	4	4	0.0%	9203506	4	3	28.6%	9203517	3	3	0.0%
Ho	9203482	1.71	1.61	6.0%	9203493	0.62	0.60	3.3%	9203506	0.654	0.624	4.7%	9203517	0.589	0.582	1.2%
In	9203482	< 0.2	< 0.2	0.0%	9203493	0.6	0.6	0.0%	9203506	< 0.2	< 0.2	0.0%	9203517	< 0.2	< 0.2	0.0%
K	9203482	2.75	2.72	1.1%	9203493	2.23	2.29	2.7%	9203506	1.37	1.37	0.0%	9203517	0.891	0.937	5.0%
La	9203482	38.8	37.3	3.9%	9203493	17.6	17.9	1.7%	9203506	17.8	17.1	4.0%	9203517	15.7	14.7	6.6%
Li	9203482	15	13	14.3%	9203493	< 10	< 10	0.0%	9203506	15	15	0.0%	9203517	12	13	8.0%
Lu	9203482	0.85	0.85	0.0%	9203493	0.30	0.28	6.9%	9203506	0.26	0.26	0.0%	9203517	0.278	0.287	3.2%
Mg	9203482	0.44	0.44	0.0%	9203493	0.881	0.761	14.6%	9203506	1.02	1.03	1.0%	9203517	1.43	1.45	1.4%
Mn	9203482	1650	1680	1.8%	9203493	2140	2130	0.5%	9203506	2220	2270	2.2%	9203517	5000	4890	2.2%
Mo	9203482	8	8	0.0%	9203493	7	8	13.3%	9203506	6	6	0.0%	9203517	7	6	15.4%



CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

Nb	9203482	20	20	0.0%	9203493	6	6	0.0%	9203506	7	6	15.4%	9203517	6	6	0.0%
Nd	9203482	41.3	40.2	2.7%	9203493	17.2	17.3	0.6%	9203506	16.3	15.6	4.4%	9203517	14.8	14.4	2.7%
Ni	9203482	7	6	15.4%	9203493	52	48	8.0%	9203506	46	36	24.4%	9203517	38	39	2.6%
P	9203482	0.01	0.01	0.0%	9203493	0.05	0.05	0.0%	9203506	0.06	0.06	0.0%	9203517	0.06	0.06	0.0%
Pb	9203482	13	13	0.0%	9203493	15	14	6.9%	9203506	11	13	16.7%	9203517	15	16	6.5%
Pr	9203482	10.7	10.2	4.8%	9203493	4.48	4.44	0.9%	9203506	4.38	4.16	5.2%	9203517	3.76	3.73	0.8%
Rb	9203482	164	156	5.0%	9203493	85.9	82.1	4.5%	9203506	52.9	51.0	3.7%	9203517	33.8	34.4	1.8%
S	9203482	0.37	0.38	2.7%	9203493	1.63	1.70	4.2%	9203506	1.03	1.05	1.9%	9203517	2.78	2.67	4.0%
Sb	9203482	0.5	0.6	18.2%	9203493	0.5	0.4	22.2%	9203506	0.28	0.24	15.4%	9203517	0.26	0.20	26.1%
Sc	9203482	8	8	0.0%	9203493	13	13	0.0%	9203506	15	15	0.0%	9203517	12	12	0.0%
Si	9203482	33.5	32.9	1.8%	9203493	30.5	31.0	1.6%	9203506	26.8	26.8	0.0%	9203517	23.0	22.9	0.4%
Sm	9203482	8.5	8.0	6.1%	9203493	3.76	3.38	10.6%	9203506	3.62	3.23	11.4%	9203517	3.1	2.9	6.7%
Sn	9203482	2	3		9203493	4	4	0.0%	9203506	3	2	40.0%	9203517	1	1	0.0%
Sr	9203482	148	151	2.0%	9203493	92.7	89.4	3.6%	9203506	151	151	0.0%	9203517	180	182	1.1%
Ta	9203482	0.6	0.5	18.2%	9203493	< 0.5	< 0.5	0.0%	9203506	< 0.5	< 0.5	0.0%	9203517	< 0.5	< 0.5	0.0%
Tb	9203482	1.34	1.35	0.7%	9203493	0.53	0.53	0.0%	9203506	0.529	0.538	1.7%	9203517	0.480	0.473	1.5%
Th	9203482	6.78	6.50	4.2%	9203493	3.45	3.31	4.1%	9203506	3.5	3.3	5.9%	9203517	3.24	2.85	12.8%
Ti	9203482	0.14	0.14	0.0%	9203493	0.31	0.31	0.0%	9203506	0.37	0.37	0.0%	9203517	0.37	0.38	2.7%
Tl	9203482	0.50	0.42	17.4%	9203493	0.6	0.6	0.0%	9203506	< 0.5	< 0.5	0.0%	9203517	< 0.5	< 0.5	0.0%
Tm	9203482	0.75	0.71	5.5%	9203493	0.26	0.25	3.9%	9203506	0.276	0.262	5.2%	9203517	0.245	0.264	7.5%
U	9203482	1.77	1.70	4.0%	9203493	1.06	1.04	1.9%	9203506	0.93	0.85	9.0%	9203517	0.789	0.750	5.1%
V	9203482	11	11	0.0%	9203493	94	94	0.0%	9203506	117	116	0.9%	9203517	112	113	0.9%
W	9203482	< 1	< 1	0.0%	9203493	< 1	< 1	0.0%	9203506	< 1	< 1	0.0%	9203517	< 1	1	
Y	9203482	48.8	48.0	1.7%	9203493	17.7	17.3	2.3%	9203506	19.1	18.4	3.7%	9203517	18.1	17.9	1.1%
Yb	9203482	5.5	5.4	1.8%	9203493	1.9	1.9	0.0%	9203506	1.96	1.68	15.4%	9203517	1.83	1.91	4.3%
Zn	9203482	140	137	2.2%	9203493	1250	1340	6.9%	9203506	91	93	2.2%	9203517	125	120	4.1%
Zr	9203482	374	365	2.4%	9203493	138	134	2.9%	9203506	152	145	4.7%	9203517	128	123	4.0%

(202-052) Fire Assay - Trace Au, ICP-OES finish (ppm)

Parameter	REPLICATE #1				REPLICATE #2				REPLICATE #3				REPLICATE #4			
	Sample ID	Original	Replicate	RPD	Sample ID	Original	Replicate	RPD	Sample ID	Original	Replicate	RPD	Sample ID	Original	Replicate	RPD
Au	9203482	0.005	0.003		9203493	0.0211	0.0238	12.0%	9203506	0.0033	0.0041	21.6%	9203517	0.0123	0.0137	10.8%



CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

(201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

Parameter	CRM #1 (ref.GS5R)				CRM #2 (ref.SY-4)				CRM #3 (ref.Till-2)							
	Expect	Actual	Recovery	Limits	Expect	Actual	Recovery	Limits	Expect	Actual	Recovery	Limits				
Al					10.95	11.11	101%	90% - 110%	8.47	8.6	102%	90% - 110%				
As	25	27.5	110%	90% - 110%					26	24	94%	90% - 110%				
Ba					340	346	102%	90% - 110%	540	519	96%	90% - 110%				
Be					2.6	3.3	127%	90% - 110%	4.0	3.9	97%	90% - 110%				
Ca					5.72	5.71	100%	90% - 110%	0.907	0.946	104%	90% - 110%				
Ce					122	133	109%	90% - 110%	98	107	109%	90% - 110%				
Co	1202	1320	110%	90% - 110%	2.8	2.9	102%	90% - 110%	15	15	101%	90% - 110%				
Cs					1.5	1.6	109%	90% - 110%								
Cu	15414	15588	101%	90% - 110%	7	6	87%	90% - 110%	150	151	101%	90% - 110%				
Dy					18.2	19.4	106%	90% - 110%								
Er					14.2	15.1	107%	90% - 110%	3.7	3.5	95%	90% - 110%				
Eu					2.0	1.97	98%	90% - 110%	1.0	1.08	108%	90% - 110%				
Fe					4.34	4.41	102%	90% - 110%	3.77	3.99	106%	90% - 110%				
Ga					35	38.4	110%	90% - 110%								
Gd					14	15.3	109%	90% - 110%								
Hf					10.6	11.6	110%	90% - 110%	11	11	96%	90% - 110%				
Ho					4.3	4.7	108%	90% - 110%								
K					1.37	1.45	106%	90% - 110%	2.55	2.5	98%	90% - 110%				
La					58	62	107%	90% - 110%	44	47	108%	90% - 110%				
Li					37	39.1	106%	90% - 110%	47	47.3	101%	90% - 110%				
Lu					2.1	2.2	104%	90% - 110%	0.6	0.6	96%	90% - 110%				
Mg					0.325	0.318	98%	90% - 110%	1.1	1.1	102%	90% - 110%				
Mn					836	852	102%	90% - 110%	780	742	95%	90% - 110%				
Mo									14	14	97%	90% - 110%				
Nb					13	14	110%	90% - 110%	20	18	92%	90% - 110%				
Nd					57	62.1	109%	90% - 110%								
Ni	23610	24075	102%	90% - 110%	9	11	117%	90% - 110%	32	35	108%	90% - 110%				
Pb	41	44.9	110%	90% - 110%	10	11	110%	90% - 110%	31	32	104%	90% - 110%				
Pr					15.0	16.4	109%	90% - 110%								
Rb					55	60.1	109%	90% - 110%	144	147	102%	90% - 110%				
Sb									0.8	0.7	90%	90% - 110%				



CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

Sc									12	12	100%	90% - 110%				
Si					23.3	23.4	101%	90% - 110%	28.4	29.1	102%	90% - 110%				
Sm					12.7	13.8	109%	90% - 110%	7.4	8	108%	90% - 110%				
Sn					7.1	8.0	112%	90% - 110%								
Sr					1191	1220	103%	90% - 110%	144	143	99%	90% - 110%				
Tb					2.6	2.9	110%	90% - 110%	1.2	1.1	95%	90% - 110%				
Th					1.4	1.3	90%	90% - 110%	18.4	18.7	101%	90% - 110%				
Ti					0.172	0.175	102%	90% - 110%	0.527	0.524	99%	90% - 110%				
Tm					2.3	2.3	102%	90% - 110%								
U					0.8	0.9	108%	90% - 110%	5.7	5.5	97%	90% - 110%				
V									77	83	108%	90% - 110%				
W									5	5	101%	90% - 110%				
Y					119	129	109%	90% - 110%	40	36	91%	90% - 110%				
Yb					14.8	16.2	109%	90% - 110%								
Zn	90	91	101%	90% - 110%	93	97	104%	90% - 110%	130	128	98%	90% - 110%				
Zr					517	570	110%	90% - 110%	390	377	97%	90% - 110%				

(202-052) Fire Assay - Trace Au, ICP-OES finish (ppm)

Parameter	CRM #1 (ref.GS5R)				CRM #2 (ref.1P5Q)				CRM #3 (ref.GSP7L)							
	Expect	Actual	Recovery	Limits	Expect	Actual	Recovery	Limits	Expect	Actual	Recovery	Limits				
Au	5.29	5.04	95%	90% - 110%	1.329	1.371	103%	90% - 110%	0.709	0.674	95%	90% - 110%				



## Method Summary

CLIENT NAME: GOSSAN RESOURCES LIMITED

AGAT WORK ORDER: 18T332737

PROJECT: SLG-2018

ATTENTION TO: Scot Halladay

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Solid Analysis			
Sample Login Weight	MIN-12009		BALANCE
Ag			ICP/MS
Al	MIN-200-12001		ICP/OES
As	MIN-200-12001		ICP/MS
B	MIN-200-12001		ICP/OES
Ba	MIN-200-12001		ICP/OES
Be	MIN-200-12001		ICP/OES
Bi	MIN-200-12001		ICP-MS
Ca	MIN-200-12001		ICP/OES
Cd	MIN-200-12001		ICP-MS
Ce	MIN-200-12001		ICP-MS
Co	MIN-200-12001		ICP/MS
Cr	MIN-200-12001		ICP/OES
Cs	MIN-200-12001		ICP-MS
Cu	MIN-200-12001		ICP/OES
Dy	MIN-200-12001		ICP-MS
Er	MIN-200-12001		ICP-MS
Eu	MIN-200-12001		ICP-MS
Fe	MIN-200-12001		ICP/OES
Ga	MIN-200-12001		ICP-MS
Gd	MIN-200-12001		ICP-MS
Ge	MIN-200-12001		ICP-MS
Hf	MIN-200-12001		ICP-MS
Ho	MIN-200-12001		ICP-MS
In	MIN-200-12001		ICP-MS
K	MIN-200-12001		ICP/OES
La	MIN-200-12001		ICP-MS
Li	MIN-200-12001		ICP/OES
Lu	MIN-200-12001		ICP-MS
Mg	MIN-200-12001		ICP/OES
Mn	MIN-200-12001		ICP/OES
Mo	MIN-200-12001		ICP/MS
Nb	MIN-200-12001		ICP-MS
Nd	MIN-200-12001		ICP-MS
Ni	MIN-200-12001		ICP/OES
P			ICP/OES
Pb	MIN-200-12001		ICP/MS
Pr	MIN-200-12001		ICP-MS
Rb	MIN-200-12001		ICP/MS
S	MIN-200-12001		ICP/OES
Sb	MIN-200-12001		ICP-MS
Sc	MIN-200-12001		ICP/OES
Si	MIN-200-12001		ICP/OES
Sm	MIN-200-12001		ICP-MS
Sn	MIN-200-12001		ICP/MS
Sr	MIN-200-12001		ICP-OES
Ta	MIN-200-12001		ICP-MS
Tb	MIN-200-12001		ICP-MS
Th	MIN-200-12001		ICP-MS



## Method Summary

CLIENT NAME: GOSSAN RESOURCES LIMITED

AGAT WORK ORDER: 18T332737

PROJECT: SLG-2018

ATTENTION TO: Scot Halladay

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Ti	MIN-200-12001		ICP/OES
Tl	MIN-200-12001		ICP-MS
Tm	MIN-200-12001		ICP-MS
U	MIN-200-12001		ICP-MS
V	MIN-200-12001		ICP/OES
W	MIN-200-12001		ICP-MS
Y	MIN-200-12001		ICP-MS
Yb	MIN-200-12001		ICP-MS
Zn	MIN-200-12001		ICP/OES
Zr	MIN-200-12001		ICP-MS
Au	MIN-200-12006	BUGBEE, E: A Textbook of Fire Assaying	ICP-OES
Pass %			BALANCE



CLIENT NAME: GOSSAN RESOURCES LIMITED  
404-171 DONALD STREET  
WINNIPEG, MB R3C 1M4  
204-943-1990

ATTENTION TO: Scot Halladay

PROJECT: SLG-2018

AGAT WORK ORDER: 18T333545

SOLID ANALYSIS REVIEWED BY: Sherin Moussa, Senior Technician

DATE REPORTED: Jul 19, 2018

PAGES (INCLUDING COVER): 25

Should you require any information regarding this analysis please contact your client services representative at (905) 501-9998

\*NOTES

All samples are stored at no charge for 90 days. Please contact the lab if you require additional sample storage time.





## Certificate of Analysis

AGAT WORK ORDER: 18T333545

PROJECT: SLG-2018

5623 McADAM ROAD  
 MISSISSAUGA, ONTARIO  
 CANADA L4Z 1N9  
 TEL (905)501-9998  
 FAX (905)501-0589  
<http://www.agatlabs.com>

CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

### (200-) Sample Login Weight

DATE SAMPLED: Apr 27, 2018

DATE RECEIVED: Apr 27, 2018

DATE REPORTED: Jul 19, 2018

SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte: Unit: RDL:	Sample Login Weight kg 0.01
5553743 (9207947)		2.54
5553744 (9207948)		2.82
5553745 (9207949)		1.71
5553746 (9207950)		2.46
5553747 (9207951)		2.81
5553748 (9207952)		3.08
5553749 (9207953)		3.25
5553750 (9207954)		3.30
5553751 (9207955)		0.97
5553752 (9207956)		2.83
5553753 (9207957)		3.08
5553754 (9207958)		3.30
5553755 (9207959)		0.78
5553756 (9207960)		2.34
5553757 (9207961)		20.4
5553758 (9207962)		1.92
5553759 (9207963)		2.07
5553760 (9207964)		0.30
5553761 (9207965)		2.30
5553762 (9207966)		0.75
5553763 (9207967)		1.89
5553764 (9207968)		1.36
5553765 (9207969)		2.21
5553766 (9207970)		2.13
5553767 (9207971)		0.90
5553768 (9207972)		0.57
5553769 (9207973)		1.60
5553770 (9207974)		1.04
5553771 (9207975)		2.32
5553772 (9207976)		2.11
5553773 (9207977)		2.13

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18T333545

PROJECT: SLG-2018

5623 McADAM ROAD  
 MISSISSAUGA, ONTARIO  
 CANADA L4Z 1N9  
 TEL (905)501-9998  
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<http://www.agatlabs.com>

CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

### (200-) Sample Login Weight

DATE SAMPLED: Apr 27, 2018

DATE RECEIVED: Apr 27, 2018

DATE REPORTED: Jul 19, 2018

SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte: Unit: RDL:	Sample Login Weight kg 0.01
5553774 (9207978)		1.91
5553775 (9207979)		3.22
5553776 (9207980)		3.02
5553777 (9207981)		3.16
5553778 (9207982)		3.14
5553779 (9207983)		1.63
5553780 (9207984)		3.11
5553781 (9207985)		1.80
5553782 (9207986)		3.14
5553783 (9207987)		2.08
5553784 (9207988)		3.87
5553785 (9207989)		1.10
5553786 (9207990)		1.18
5553787 (9207991)		1.19
5553788 (9207992)		1.22
5553789 (9207993)		2.14
5553790 (9207994)		1.88
5553791 (9207995)		2.39
5553792 (9207996)		2.38
5553793 (9207997)		0.06
5553794 (9207998)		2.40
5553795 (9207999)		2.42
5553796 (9208000)		2.31
5553797 (9208001)		2.40
5553798 (9208002)		3.37
5553799 (9208003)		2.39
5553800 (9208004)		1.79
5553801 (9208005)		3.60
5553802 (9208006)		3.28
5553803 (9208007)		2.31

Certified By:



**AGAT** Laboratories

# Certificate of Analysis

AGAT WORK ORDER: 18T333545

PROJECT: SLG-2018

5623 McADAM ROAD  
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<http://www.agatlabs.com>

CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

(200-) Sample Login Weight

DATE SAMPLED: Apr 27, 2018

DATE RECEIVED: Apr 27, 2018

DATE REPORTED: Jul 19, 2018

SAMPLE TYPE: Drill Core

Comments: RDL - Reported Detection Limit  
Please note: Gold Results are not representative due to the sample size

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18T333545

PROJECT: SLG-2018

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<http://www.agatlabs.com>

CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Apr 27, 2018

DATE RECEIVED: Apr 27, 2018

DATE REPORTED: Jul 19, 2018

SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte: Unit: RDL:	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr %	Cs ppm	Cu ppm
5553743 (9207947)	<1	5.93	11	85	478	<5	0.2	1.82	1.4	70.0	13.1	<0.005	1.2	97	
5553744 (9207948)	<1	6.01	<5	95	420	<5	<0.1	1.89	1.8	52.5	12.5	<0.005	1.4	91	
5553745 (9207949)	<1	5.33	<5	<20	201	<5	0.1	5.32	0.2	18.4	32.4	0.006	1.6	353	
5553746 (9207950)	<1	9.37	<5	34	364	<5	<0.1	6.19	0.2	32.2	13.2	0.007	1.1	92	
5553747 (9207951)	<1	7.00	<5	107	390	<5	0.3	2.27	2.9	45.4	22.5	<0.005	2.0	185	
5553748 (9207952)	<1	6.88	<5	101	436	<5	0.2	2.94	1.5	47.3	20.4	<0.005	3.0	114	
5553749 (9207953)	<1	6.48	<5	150	384	<5	0.5	4.58	4.1	43.7	34.3	<0.005	3.2	155	
5553750 (9207954)	<1	7.13	<5	98	532	<5	<0.1	3.28	1.2	37.9	15.8	<0.005	4.0	66	
5553751 (9207955)	<1	3.12	<5	<20	49.0	<5	<0.1	4.18	0.2	35.7	12.3	<0.005	1.1	93	
5553752 (9207956)	<1	4.73	<5	49	385	<5	<0.1	2.62	<0.2	70.4	12.6	<0.005	1.9	79	
5553753 (9207957)	<1	3.66	<5	43	138	<5	<0.1	4.24	0.2	31.5	63.5	<0.005	1.2	123	
5553754 (9207958)	<1	5.19	<5	20	179	<5	<0.1	4.51	<0.2	23.7	26.7	0.006	1.5	116	
5553755 (9207959)	<1	2.08	<5	<20	<0.5	<5	<0.1	3.79	0.3	19.6	6.2	<0.005	0.1	92	
5553756 (9207960)	<1	4.79	<5	65	229	<5	<0.1	2.78	<0.2	70.0	4.7	<0.005	0.5	14	
5553757 (9207961)	<1	5.99	<5	54	215	<5	<0.1	6.06	<0.2	30.6	14.0	0.006	1.7	27	
5553758 (9207962)	<1	2.58	<5	32	40.5	<5	<0.1	4.84	3.7	17.2	25.9	<0.005	0.4	141	
5553759 (9207963)	<1	8.41	<5	71	510	<5	<0.1	4.06	<0.2	34.2	19.4	0.006	3.5	24	
5553760 (9207964)	36	3.24	143	51	569	<5	43.4	1.03	213	36.0	202	0.008	1.2	13300	
5553761 (9207965)	1	2.37	<5	<20	96.8	<5	1.0	4.92	0.4	13.5	8.0	<0.005	0.4	123	
5553762 (9207966)	<1	2.06	<5	50	23.7	<5	<0.1	0.10	<0.2	41.6	1.4	0.008	<0.1	6	
5553763 (9207967)	<1	7.71	<5	61	315	<5	<0.1	4.09	<0.2	29.3	22.1	0.008	2.2	24	
5553764 (9207968)	<1	7.47	7	78	302	<5	<0.1	3.72	<0.2	28.5	43.0	0.008	2.4	29	
5553765 (9207969)	<1	2.49	15	24	76.4	<5	<0.1	4.92	0.2	13.7	87.3	<0.005	0.6	65	
5553766 (9207970)	<1	4.54	8	32	188	<5	<0.1	6.17	0.4	19.9	45.5	0.006	1.3	49	
5553767 (9207971)	<1	2.12	19	<20	77.9	<5	<0.1	2.81	<0.2	20.0	112	<0.005	0.6	71	
5553768 (9207972)	<1	3.14	<5	40	120	<5	<0.1	1.73	<0.2	47.1	6.0	<0.005	0.7	18	
5553769 (9207973)	<1	3.77	<5	41	271	<5	<0.1	2.63	<0.2	57.5	29.0	<0.005	1.8	52	
5553770 (9207974)	<1	4.68	<5	55	499	<5	<0.1	2.95	<0.2	69.1	5.1	<0.005	2.1	21	
5553771 (9207975)	<1	5.69	<5	76	638	<5	<0.1	2.22	<0.2	86.6	5.2	<0.005	2.7	22	
5553772 (9207976)	<1	4.92	<5	139	461	<5	<0.1	3.60	<0.2	76.2	7.2	<0.005	2.2	15	
5553773 (9207977)	<1	8.21	<5	135	448	<5	<0.1	7.70	<0.2	14.4	42.9	0.007	2.4	99	
5553774 (9207978)	<1	8.30	<5	51	345	<5	<0.1	6.82	<0.2	13.4	45.3	0.006	2.0	101	

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18T333545

PROJECT: SLG-2018

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FAX (905)501-0589  
<http://www.agatlabs.com>

CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Apr 27, 2018

DATE RECEIVED: Apr 27, 2018

DATE REPORTED: Jul 19, 2018

SAMPLE TYPE: Drill Core

Analyte:	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm
RDL:	1	0.01	5	20	0.5	5	0.1	0.05	0.2	0.1	0.5	0.005	0.1	5
5553775 (9207979)	<1	8.44	<5	91	283	<5	<0.1	6.51	<0.2	14.5	61.7	0.006	1.9	100
5553776 (9207980)	<1	9.01	20	127	335	<5	<0.1	4.55	<0.2	15.1	74.7	0.006	2.3	101
5553777 (9207981)	<1	8.39	<5	96	295	<5	<0.1	5.75	<0.2	14.8	61.5	0.006	2.5	100
5553778 (9207982)	<1	8.89	19	72	317	<5	<0.1	5.71	<0.2	15.5	76.6	0.006	2.3	112
5553779 (9207983)	<1	8.65	<5	51	314	<5	<0.1	6.08	<0.2	15.4	62.5	0.006	2.3	78
5553780 (9207984)	<1	7.23	<5	91	72.2	<5	<0.1	7.89	<0.2	28.6	28.7	0.007	0.7	59
5553781 (9207985)	<1	7.14	<5	59	56.5	<5	<0.1	7.55	<0.2	28.9	25.3	0.007	0.3	107
5553782 (9207986)	<1	9.02	<5	50	308	<5	<0.1	5.64	<0.2	16.3	56.7	0.006	2.4	98
5553783 (9207987)	<1	8.76	<5	50	264	<5	<0.1	5.89	0.2	14.5	51.4	0.006	2.0	99
5553784 (9207988)	<1	8.88	<5	47	308	<5	<0.1	6.24	<0.2	15.0	58.7	0.006	2.2	99
5553785 (9207989)	<1	8.61	<5	73	330	<5	<0.1	4.94	<0.2	15.6	30.2	0.006	2.9	111
5553786 (9207990)	<1	8.25	<5	61	384	<5	<0.1	6.14	<0.2	15.0	64.0	0.006	2.2	107
5553787 (9207991)	<1	8.42	<5	38	241	<5	<0.1	5.40	<0.2	15.3	62.3	0.006	1.6	65
5553788 (9207992)	<1	7.60	<5	33	19.9	<5	<0.1	8.69	<0.2	13.1	47.6	0.005	<0.1	46
5553789 (9207993)	<1	8.44	<5	34	247	<5	<0.1	5.61	<0.2	26.9	71.6	0.010	1.8	178
5553790 (9207994)	<1	8.71	<5	39	474	<5	<0.1	5.78	<0.2	33.4	52.7	0.010	2.0	67
5553791 (9207995)	<1	8.64	<5	38	482	<5	<0.1	5.98	<0.2	64.8	54.1	0.008	2.0	50
5553792 (9207996)	<1	8.11	<5	35	270	<5	<0.1	7.11	<0.2	13.9	72.1	0.006	1.1	288
5553793 (9207997)	81	7.11	112	63	290	<5	12.2	2.78	27.3	53.0	26.6	<0.005	1.0	2510
5553794 (9207998)	<1	8.86	<5	38	141	<5	0.1	6.77	<0.2	14.8	54.6	0.008	0.4	76
5553795 (9207999)	<1	8.03	<5	35	31.1	<5	<0.1	8.68	<0.2	13.5	52.5	0.006	<0.1	114
5553796 (9208000)	<1	7.42	<5	39	14.9	<5	<0.1	9.53	<0.2	12.5	49.0	<0.005	<0.1	121
5553797 (9208001)	<1	7.88	<5	32	17.0	<5	<0.1	9.05	<0.2	12.5	50.2	<0.005	<0.1	44
5553798 (9208002)	<1	7.78	<5	31	12.9	<5	<0.1	8.90	<0.2	12.2	49.7	<0.005	<0.1	74
5553799 (9208003)	<1	7.89	<5	35	12.9	<5	<0.1	9.18	<0.2	11.9	52.5	<0.005	<0.1	87
5553800 (9208004)	<1	8.03	<5	39	18.2	<5	<0.1	9.59	<0.2	12.8	50.8	<0.005	<0.1	75
5553801 (9208005)	<1	8.64	<5	34	92.6	<5	<0.1	8.97	<0.2	13.7	55.1	0.005	0.3	142
5553802 (9208006)	<1	10.0	<5	40	350	<5	<0.1	3.91	<0.2	16.4	83.5	0.006	1.6	98
5553803 (9208007)	<1	9.50	<5	43	329	<5	<0.1	5.41	<0.2	15.1	68.1	0.005	1.1	91

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18T333545

PROJECT: SLG-2018

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<http://www.agatlabs.com>

CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Apr 27, 2018

DATE RECEIVED: Apr 27, 2018

DATE REPORTED: Jul 19, 2018

SAMPLE TYPE: Drill Core

Analyte:	Dy	Er	Eu	Fe	Ga	Gd	Ge	Hf	Ho	In	K	La	Li	Lu
Unit:	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
RDL:	0.05	0.05	0.05	0.01	0.01	0.05	1	1	0.05	0.2	0.05	0.1	10	0.05
5553743 (9207947)	4.16	2.41	0.49	3.87	18.5	4.77	2	5	0.85	0.3	1.77	34.1	<10	0.39
5553744 (9207948)	3.62	2.14	0.40	4.85	16.0	4.11	2	4	0.71	0.3	1.90	24.8	10	0.31
5553745 (9207949)	1.83	1.17	0.25	30.2	10.9	2.05	2	2	0.42	<0.2	1.27	9.0	11	0.19
5553746 (9207950)	2.97	1.77	0.72	18.2	16.4	3.30	2	3	0.66	<0.2	1.03	15.6	19	0.27
5553747 (9207951)	3.56	2.17	0.52	9.16	19.1	4.12	2	4	0.78	0.4	1.98	21.1	15	0.34
5553748 (9207952)	3.97	2.19	0.81	6.67	19.4	4.61	2	5	0.80	0.2	1.82	22.0	19	0.34
5553749 (9207953)	4.16	2.29	0.87	8.34	18.6	4.43	2	5	0.84	0.6	1.46	20.3	15	0.39
5553750 (9207954)	4.39	2.52	1.08	6.53	20.3	4.49	1	5	0.90	<0.2	1.93	16.5	23	0.41
5553751 (9207955)	4.61	2.91	0.62	24.2	10.5	4.70	2	3	1.01	<0.2	0.59	15.9	11	0.48
5553752 (9207956)	7.20	4.40	1.27	12.0	15.5	7.80	1	7	1.58	<0.2	1.38	31.2	17	0.72
5553753 (9207957)	3.31	2.07	0.41	22.6	9.68	3.49	1	3	0.70	<0.2	0.64	14.2	11	0.37
5553754 (9207958)	2.34	1.46	0.32	20.8	12.0	2.59	<1	2	0.53	<0.2	0.80	11.0	17	0.23
5553755 (9207959)	3.08	1.99	0.37	35.6	6.68	2.78	<1	2	0.67	<0.2	<0.05	9.1	<10	0.37
5553756 (9207960)	7.20	4.35	1.24	10.7	15.7	7.36	1	8	1.46	<0.2	0.36	30.9	14	0.71
5553757 (9207961)	3.34	1.99	0.67	10.9	14.4	3.59	1	3	0.70	<0.2	0.97	13.9	21	0.31
5553758 (9207962)	2.47	1.55	0.33	31.5	7.61	2.38	1	1	0.58	<0.2	0.20	8.1	<10	0.30
5553759 (9207963)	3.24	1.84	0.71	7.20	19.3	3.59	1	3	0.69	<0.2	1.52	15.7	32	0.30
5553760 (9207964)	2.78	1.65	0.65	17.3	24.7	3.51	5	2	0.57	11.9	0.95	16.9	15	0.26
5553761 (9207965)	1.84	1.22	0.28	29.9	6.27	1.84	<1	<1	0.41	<0.2	0.26	6.5	<10	0.23
5553762 (9207966)	1.76	0.91	0.48	1.41	4.92	2.47	<1	3	0.33	<0.2	0.10	19.8	20	0.13
5553763 (9207967)	2.52	1.57	0.69	10.9	18.7	2.83	1	3	0.52	<0.2	1.35	13.6	26	0.26
5553764 (9207968)	2.58	1.54	0.73	13.9	16.7	2.78	1	3	0.52	<0.2	1.44	13.1	28	0.27
5553765 (9207969)	1.87	1.20	0.36	28.6	6.80	1.72	<1	<1	0.39	<0.2	0.29	6.8	<10	0.23
5553766 (9207970)	2.20	1.34	0.45	19.6	10.4	2.17	<1	5	0.51	<0.2	0.76	9.3	17	0.25
5553767 (9207971)	2.44	1.64	0.35	26.7	6.08	2.49	<1	2	0.53	<0.2	0.28	9.1	<10	0.27
5553768 (9207972)	5.06	2.89	0.89	8.66	10.5	5.33	1	5	1.02	<0.2	0.46	20.5	10	0.43
5553769 (9207973)	5.95	3.68	0.99	17.7	13.0	6.33	1	6	1.30	<0.2	1.08	25.5	12	0.61
5553770 (9207974)	7.86	4.73	1.25	8.13	15.2	8.03	1	7	1.65	<0.2	1.50	30.3	17	0.76
5553771 (9207975)	8.57	5.05	1.50	8.73	19.5	9.00	1	9	1.76	<0.2	2.01	38.4	20	0.78
5553772 (9207976)	7.97	4.55	1.41	6.82	16.8	8.31	1	8	1.59	<0.2	1.55	33.2	16	0.74
5553773 (9207977)	2.42	1.49	0.63	4.88	18.3	2.36	1	2	0.51	<0.2	1.98	6.5	26	0.21
5553774 (9207978)	2.39	1.40	0.65	4.71	18.6	2.31	1	2	0.51	<0.2	1.61	6.1	17	0.19

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18T333545

PROJECT: SLG-2018

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<http://www.agatlabs.com>

CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Apr 27, 2018

DATE RECEIVED: Apr 27, 2018

DATE REPORTED: Jul 19, 2018

SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte: Unit: RDL:	Dy ppm 0.05	Er ppm 0.05	Eu ppm 0.05	Fe % 0.01	Ga ppm 0.01	Gd ppm 0.05	Ge ppm 1	Hf ppm 1	Ho ppm 0.05	In ppm 0.2	K % 0.05	La ppm 0.1	Li ppm 10	Lu ppm 0.05
5553775 (9207979)		2.58	1.66	0.64	4.45	18.6	2.50	1	2	0.56	<0.2	1.33	6.5	15	0.22
5553776 (9207980)		2.68	1.60	0.56	2.58	19.7	2.50	<1	2	0.59	<0.2	1.51	6.8	17	0.23
5553777 (9207981)		2.95	1.73	1.05	4.01	18.6	2.75	1	2	0.63	<0.2	1.62	6.6	15	0.27
5553778 (9207982)		2.87	1.89	0.48	3.62	19.3	2.83	1	2	0.63	<0.2	1.79	6.9	23	0.27
5553779 (9207983)		2.82	1.75	0.53	4.89	19.0	2.78	1	2	0.61	<0.2	1.77	6.9	19	0.25
5553780 (9207984)		3.12	1.92	0.89	12.8	17.4	3.31	1	2	0.72	<0.2	0.62	13.7	15	0.32
5553781 (9207985)		3.25	2.00	0.87	13.4	16.9	3.50	2	3	0.70	<0.2	0.41	13.4	14	0.32
5553782 (9207986)		2.78	1.61	0.53	4.78	19.3	2.68	1	2	0.60	<0.2	1.72	7.3	21	0.22
5553783 (9207987)		2.77	1.72	0.53	4.89	19.4	2.62	1	2	0.60	<0.2	1.36	6.4	16	0.24
5553784 (9207988)		2.74	1.58	0.57	4.70	19.4	2.63	1	2	0.60	<0.2	1.49	6.8	19	0.24
5553785 (9207989)		2.89	1.92	0.59	5.98	18.8	2.71	1	2	0.67	<0.2	1.24	7.0	22	0.31
5553786 (9207990)		2.92	1.89	0.56	6.01	18.7	2.73	1	2	0.63	<0.2	1.51	6.7	16	0.28
5553787 (9207991)		3.02	1.82	0.53	6.71	19.3	2.75	2	2	0.65	<0.2	0.50	7.0	10	0.29
5553788 (9207992)		2.77	1.85	0.50	8.14	17.2	2.69	2	2	0.64	<0.2	0.14	5.8	<10	0.28
5553789 (9207993)		3.64	2.42	0.63	8.46	20.3	3.26	2	2	0.82	<0.2	0.85	12.8	16	0.39
5553790 (9207994)		2.57	1.67	0.69	4.66	18.7	3.09	1	2	0.59	<0.2	0.96	16.1	21	0.25
5553791 (9207995)		2.78	1.48	1.03	4.99	19.1	3.88	1	2	0.58	<0.2	1.09	31.5	20	0.23
5553792 (9207996)		3.08	2.14	0.50	7.20	16.7	2.71	1	2	0.72	<0.2	0.58	6.5	12	0.32
5553793 (9207997)		3.91	2.33	0.88	8.63	17.6	4.51	1	4	0.84	2.0	1.76	24.8	27	0.35
5553794 (9207998)		3.05	1.81	0.57	6.33	18.2	2.77	1	2	0.66	<0.2	0.20	6.6	10	0.29
5553795 (9207999)		2.99	1.88	0.53	6.67	16.9	2.70	1	2	0.68	<0.2	0.09	5.9	<10	0.31
5553796 (9208000)		2.81	1.75	0.48	8.10	16.4	2.46	2	1	0.59	<0.2	0.10	5.5	<10	0.26
5553797 (9208001)		2.68	1.72	0.49	8.15	16.3	2.34	2	1	0.61	<0.2	0.11	5.6	<10	0.25
5553798 (9208002)		2.66	1.63	0.50	8.27	16.2	2.36	2	1	0.58	<0.2	0.09	5.4	<10	0.27
5553799 (9208003)		2.63	1.69	0.48	7.99	16.5	2.34	2	1	0.59	<0.2	0.10	5.4	<10	0.26
5553800 (9208004)		2.73	1.70	0.50	6.77	17.1	2.51	1	1	0.59	<0.2	0.10	5.8	<10	0.27
5553801 (9208005)		2.90	1.82	0.55	6.68	17.6	2.53	1	2	0.61	<0.2	0.30	6.1	<10	0.28
5553802 (9208006)		3.20	1.94	0.57	4.18	18.6	2.95	1	2	0.68	<0.2	1.15	7.4	14	0.28
5553803 (9208007)		2.74	1.71	0.57	2.92	19.7	2.68	1	2	0.60	<0.2	0.65	6.8	12	0.26

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18T333545

PROJECT: SLG-2018

5623 McADAM ROAD  
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<http://www.agatlabs.com>

CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Apr 27, 2018

DATE RECEIVED: Apr 27, 2018

DATE REPORTED: Jul 19, 2018

SAMPLE TYPE: Drill Core

Analyte:	Mg	Mn	Mo	Nb	Nd	Ni	P	Pb	Pr	Rb	S	Sb	Sc	Si
Unit:	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	%
RDL:	0.01	10	2	1	0.1	5	0.01	5	0.05	0.2	0.01	0.1	5	0.01
5553743 (9207947)	0.58	887	8	6	28.1	47	0.01	15	7.67	72.6	1.57	<0.1	7	32.3
5553744 (9207948)	0.71	1500	7	6	23.0	46	0.02	13	5.98	64.8	1.65	<0.1	7	33.6
5553745 (9207949)	1.66	10100	7	<1	9.1	129	0.05	16	2.22	33.6	15.1	<0.1	9	24.4
5553746 (9207950)	2.15	8700	5	2	16.0	80	0.08	15	3.74	29.5	2.48	<0.1	16	33.7
5553747 (9207951)	0.74	2100	7	5	20.3	57	0.03	17	5.22	70.2	3.86	<0.1	9	32.4
5553748 (9207952)	0.93	1910	7	7	22.8	43	0.06	17	5.55	73.5	2.38	<0.1	9	30.2
5553749 (9207953)	1.09	2400	9	6	22.3	54	0.04	27	5.32	64.1	4.19	<0.1	15	26.7
5553750 (9207954)	0.96	1640	6	6	20.8	51	0.05	15	4.77	89.8	2.30	<0.1	15	29.6
5553751 (9207955)	2.31	12000	5	2	19.3	38	0.03	<5	4.40	22.5	3.81	<0.1	5	19.9
5553752 (9207956)	1.14	4010	7	12	37.1	51	<0.01	8	8.68	60.7	3.84	<0.1	<5	28.1
5553753 (9207957)	1.68	5630	10	<1	15.7	66	0.02	<5	3.79	28.3	9.37	<0.1	10	20.2
5553754 (9207958)	1.36	4340	5	<1	11.4	93	0.04	<5	2.83	38.4	9.33	<0.1	14	19.4
5553755 (9207959)	3.77	19700	9	<1	11.2	46	0.02	<5	2.41	0.7	5.09	<0.1	10	12.1
5553756 (9207960)	1.48	5300	5	12	36.7	36	0.01	<5	8.66	14.7	0.72	<0.1	14	30.4
5553757 (9207961)	1.94	5060	6	2	16.0	47	0.04	<5	3.69	46.3	1.61	<0.1	20	24.3
5553758 (9207962)	2.01	10300	6	<1	8.8	91	0.03	<5	2.11	11.1	12.8	<0.1	13	12.9
5553759 (9207963)	1.66	2150	6	4	16.9	53	0.07	<5	4.10	77.5	0.49	<0.1	19	26.7
5553760 (9207964)	0.88	938	48	3	17.4	63	0.03	6570	4.28	32.6	18.1	31.4	<5	17.4
5553761 (9207965)	1.59	8310	5	<1	6.9	94	0.02	7	1.58	13.0	12.5	<0.1	10	13.6
5553762 (9207966)	0.02	117	12	<1	18.2	54	<0.01	<5	4.71	2.1	0.10	<0.1	<5	44.0
5553763 (9207967)	1.75	3210	5	2	14.1	58	0.05	5	3.44	70.1	2.30	<0.1	19	24.9
5553764 (9207968)	1.49	3560	5	2	14.5	61	0.05	7	3.41	72.9	6.37	<0.1	17	21.7
5553765 (9207969)	1.55	7220	5	<1	7.7	57	0.02	<5	1.68	15.4	16.0	<0.1	11	13.3
5553766 (9207970)	1.58	6390	4	<1	10.2	64	0.03	<5	2.36	39.4	9.71	<0.1	13	17.7
5553767 (9207971)	1.21	5800	7	<1	11.2	69	0.01	<5	2.46	16.2	18.4	<0.1	10	16.1
5553768 (9207972)	1.00	2750	6	6	24.7	38	<0.01	<5	5.92	21.5	1.86	<0.1	12	33.8
5553769 (9207973)	1.46	7600	5	5	29.1	45	<0.01	<5	7.01	61.8	6.85	<0.1	8	25.4
5553770 (9207974)	0.96	3720	5	14	36.5	28	<0.01	<5	8.44	88.3	2.31	<0.1	<5	31.1
5553771 (9207975)	1.04	3490	3	17	44.8	24	<0.01	<5	10.8	114	2.41	<0.1	<5	30.6
5553772 (9207976)	1.12	2650	7	13	38.0	25	<0.01	<5	9.10	90.3	1.55	<0.1	6	31.7
5553773 (9207977)	1.89	2150	6	<1	8.2	64	0.04	<5	1.82	90.6	0.23	<0.1	31	24.6
5553774 (9207978)	2.32	1510	4	<1	8.2	59	0.03	<5	1.71	76.6	0.17	<0.1	30	26.0

Certified By:





## Certificate of Analysis

AGAT WORK ORDER: 18T333545

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Apr 27, 2018

DATE RECEIVED: Apr 27, 2018

DATE REPORTED: Jul 19, 2018

SAMPLE TYPE: Drill Core

Analyte:	Mg	Mn	Mo	Nb	Nd	Ni	P	Pb	Pr	Rb	S	Sb	Sc	Si
Unit:	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	%
RDL:	0.01	10	2	1	0.1	5	0.01	5	0.05	0.2	0.01	0.1	5	0.01
5553775 (9207979)	2.24	1360	4	<1	8.1	81	0.04	<5	1.85	60.9	0.20	<0.1	31	26.4
5553776 (9207980)	1.29	681	5	<1	8.7	92	0.03	<5	1.89	75.9	0.10	<0.1	31	30.5
5553777 (9207981)	1.75	1330	4	6	9.0	82	0.04	<5	1.94	72.7	0.29	<0.1	36	26.7
5553778 (9207982)	1.79	1450	5	1	9.2	104	0.04	<5	1.95	81.7	0.14	<0.1	37	29.2
5553779 (9207983)	1.57	2290	5	<1	9.2	92	0.04	<5	2.01	79.7	0.19	<0.1	35	27.0
5553780 (9207984)	2.32	5070	4	2	14.7	53	0.05	<5	3.39	22.2	0.71	0.2	28	21.1
5553781 (9207985)	2.22	5120	2	2	14.9	53	0.05	<5	3.54	10.6	1.18	0.2	29	22.1
5553782 (9207986)	1.74	1860	3	1	9.6	85	0.04	<5	2.11	73.3	0.19	<0.1	31	26.0
5553783 (9207987)	1.86	1760	4	<1	8.8	77	0.04	<5	1.84	58.2	0.18	<0.1	33	26.4
5553784 (9207988)	1.72	1820	4	<1	8.9	88	0.04	<5	1.92	63.5	0.15	<0.1	35	26.3
5553785 (9207989)	1.58	1570	4	<1	9.5	47	0.04	<5	2.03	48.4	0.27	<0.1	37	26.6
5553786 (9207990)	2.45	1620	5	<1	9.0	93	0.04	<5	1.86	53.2	0.15	<0.1	49	26.4
5553787 (9207991)	2.02	1530	4	<1	9.3	82	0.04	<5	1.92	22.9	0.15	<0.1	48	27.3
5553788 (9207992)	3.02	1840	4	<1	7.9	61	0.03	<5	1.72	0.9	0.19	<0.1	37	24.2
5553789 (9207993)	3.43	1650	3	<1	14.3	101	0.05	<5	3.31	27.5	0.63	<0.1	66	24.9
5553790 (9207994)	2.20	1260	4	1	16.8	81	0.05	5	4.04	36.9	0.24	<0.1	31	27.2
5553791 (9207995)	2.41	1230	3	1	29.3	79	0.07	<5	7.41	41.8	0.38	<0.1	29	26.6
5553792 (9207996)	2.34	2010	4	<1	8.4	81	0.03	<5	1.76	22.3	0.83	<0.1	35	25.7
5553793 (9207997)	2.32	2500	19	6	25.7	38	0.05	12400	6.23	45.3	3.04	84.2	10	30.1
5553794 (9207998)	2.05	1520	8	<1	9.1	111	0.03	6	1.92	12.4	0.29	<0.1	44	26.9
5553795 (9207999)	2.50	1780	4	<1	8.5	85	0.03	<5	1.77	1.1	0.34	<0.1	36	24.3
5553796 (9208000)	3.16	1960	2	<1	7.7	76	0.03	<5	1.65	0.6	0.36	<0.1	33	22.9
5553797 (9208001)	3.54	1750	<2	<1	8.0	73	0.03	<5	1.62	1.1	0.20	<0.1	35	23.9
5553798 (9208002)	3.63	1640	<2	<1	7.6	77	0.03	<5	1.59	0.4	0.25	<0.1	38	24.0
5553799 (9208003)	3.35	1570	<2	<1	7.4	79	0.03	<5	1.60	0.6	0.24	<0.1	39	23.9
5553800 (9208004)	2.66	1660	<2	<1	8.0	73	0.03	<5	1.68	1.0	0.23	<0.1	35	24.2
5553801 (9208005)	2.52	1900	<2	<1	8.4	77	0.03	<5	1.75	10.1	0.26	<0.1	37	24.8
5553802 (9208006)	1.58	1060	<2	1	9.9	118	0.04	<5	2.17	42.8	0.24	<0.1	45	28.2
5553803 (9208007)	1.14	1140	<2	1	8.9	86	0.04	<5	1.96	27.6	0.23	<0.1	35	28.4

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18T333545

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Apr 27, 2018

DATE RECEIVED: Apr 27, 2018

DATE REPORTED: Jul 19, 2018

SAMPLE TYPE: Drill Core

Analyte:	Sm	Sn	Sr	Ta	Tb	Th	Ti	Tl	Tm	U	V	W	Y	Yb
Unit:	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
RDL:	0.1	1	0.1	0.5	0.05	0.1	0.01	0.5	0.05	0.05	5	1	0.5	0.1
Sample ID (AGAT ID)														
5553743 (9207947)	4.7	5	126	1.6	0.71	12.3	0.10	0.8	0.39	3.05	27	<1	22.9	2.5
5553744 (9207948)	4.1	4	144	<0.5	0.60	9.9	0.12	0.6	0.32	2.53	35	<1	18.8	2.2
5553745 (9207949)	1.9	<1	167	<0.5	0.30	2.1	0.27	<0.5	0.16	0.44	103	<1	11.1	1.2
5553746 (9207950)	3.1	<1	245	<0.5	0.48	3.0	0.46	<0.5	0.28	0.81	143	<1	16.8	1.8
5553747 (9207951)	3.9	5	172	<0.5	0.62	8.6	0.21	0.6	0.33	2.23	56	<1	20.1	2.2
5553748 (9207952)	4.4	4	177	<0.5	0.65	5.8	0.31	0.8	0.33	1.59	66	<1	22.0	2.2
5553749 (9207953)	4.3	7	210	0.8	0.66	4.5	0.30	0.8	0.36	1.18	94	<1	21.0	2.4
5553750 (9207954)	4.2	2	171	0.7	0.71	2.7	0.40	0.9	0.39	0.77	104	<1	22.7	2.6
5553751 (9207955)	4.0	<1	39.2	0.8	0.72	2.4	0.17	<0.5	0.46	0.66	47	<1	28.1	3.0
5553752 (9207956)	7.4	2	82.8	<0.5	1.18	5.1	0.12	0.6	0.68	1.26	24	<1	39.6	4.5
5553753 (9207957)	3.2	<1	88.0	<0.5	0.53	2.4	0.15	<0.5	0.33	0.57	71	<1	19.5	2.2
5553754 (9207958)	2.5	<1	114	1.9	0.38	1.8	0.25	<0.5	0.26	0.46	103	<1	13.2	1.5
5553755 (9207959)	2.3	<1	29.7	<0.5	0.44	1.5	0.10	<0.5	0.33	0.39	66	<1	19.6	2.2
5553756 (9207960)	7.0	2	91.9	<0.5	1.12	5.6	0.14	<0.5	0.68	1.34	48	<1	39.8	4.5
5553757 (9207961)	3.1	<1	141	0.6	0.54	2.4	0.32	0.5	0.30	0.59	119	<1	17.8	1.9
5553758 (9207962)	2.0	<1	75.5	<0.5	0.37	1.1	0.14	<0.5	0.26	0.30	81	<1	14.9	1.8
5553759 (9207963)	3.3	<1	172	0.7	0.53	2.7	0.44	0.8	0.30	0.70	133	<1	16.8	2.0
5553760 (9207964)	3.3	94	89.7	1.1	0.49	5.2	0.11	5.7	0.26	3.01	49	6	14.4	1.7
5553761 (9207965)	1.4	<1	90.7	1.5	0.27	1.0	0.12	<0.5	0.20	0.25	77	<1	11.3	1.3
5553762 (9207966)	2.9	<1	33.1	<0.5	0.34	5.0	0.09	<0.5	0.14	0.79	19	<1	8.2	0.9
5553763 (9207967)	2.8	<1	154	<0.5	0.43	2.8	0.38	0.9	0.25	0.63	135	<1	14.2	1.6
5553764 (9207968)	2.6	<1	163	1.1	0.44	2.7	0.36	0.9	0.24	0.65	127	<1	13.6	1.5
5553765 (9207969)	1.4	<1	98.2	1.4	0.28	1.1	0.13	<0.5	0.21	0.20	86	<1	11.1	1.2
5553766 (9207970)	1.8	<1	137	<0.5	0.33	1.7	0.35	<0.5	0.23	0.52	102	<1	13.1	1.5
5553767 (9207971)	2.0	<1	60.2	<0.5	0.39	1.3	0.09	<0.5	0.25	0.34	63	<1	14.4	1.7
5553768 (9207972)	5.0	<1	75.7	0.9	0.82	3.5	0.08	<0.5	0.46	0.87	35	<1	27.2	3.0
5553769 (9207973)	5.7	<1	78.2	<0.5	1.00	4.3	0.08	<0.5	0.61	1.11	29	<1	33.2	3.9
5553770 (9207974)	7.1	<1	88.7	<0.5	1.25	5.2	0.13	<0.5	0.74	1.29	17	<1	42.6	4.8
5553771 (9207975)	8.7	2	84.5	<0.5	1.37	6.3	0.12	<0.5	0.77	1.65	13	<1	45.4	5.1
5553772 (9207976)	7.7	<1	83.8	<0.5	1.27	5.7	0.11	<0.5	0.69	1.44	18	<1	39.1	4.8
5553773 (9207977)	2.0	<1	176	<0.5	0.38	1.3	0.49	<0.5	0.22	0.39	242	<1	13.2	1.4
5553774 (9207978)	1.8	<1	157	<0.5	0.37	1.3	0.49	<0.5	0.21	0.36	240	<1	13.3	1.4

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18T333545

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Apr 27, 2018

DATE RECEIVED: Apr 27, 2018

DATE REPORTED: Jul 19, 2018

SAMPLE TYPE: Drill Core

Analyte:	Sm	Sn	Sr	Ta	Tb	Th	Ti	Tl	Tm	U	V	W	Y	Yb
Unit:	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
RDL:	0.1	1	0.1	0.5	0.05	0.1	0.01	0.5	0.05	0.05	5	1	0.5	0.1
5553775 (9207979)	2.0	<1	160	<0.5	0.41	1.3	0.52	<0.5	0.25	0.38	236	<1	14.3	1.6
5553776 (9207980)	2.0	<1	161	<0.5	0.39	1.4	0.54	<0.5	0.26	0.42	229	<1	14.1	1.5
5553777 (9207981)	2.3	<1	131	41.3	0.44	1.3	0.52	<0.5	0.28	0.38	251	<1	15.5	1.8
5553778 (9207982)	2.3	<1	139	0.9	0.47	1.4	0.54	0.6	0.27	0.39	253	<1	15.8	1.8
5553779 (9207983)	2.2	<1	135	<0.5	0.44	1.4	0.53	<0.5	0.27	0.41	247	<1	14.8	1.7
5553780 (9207984)	2.8	<1	58.3	<0.5	0.49	2.3	0.37	<0.5	0.30	0.58	168	<1	17.7	2.1
5553781 (9207985)	3.2	<1	45.6	<0.5	0.52	2.2	0.36	<0.5	0.31	0.58	171	<1	17.8	2.0
5553782 (9207986)	2.3	<1	126	0.7	0.44	1.5	0.54	<0.5	0.25	0.41	250	<1	14.3	1.6
5553783 (9207987)	2.1	<1	118	<0.5	0.43	1.5	0.54	0.5	0.24	0.39	251	<1	14.9	1.6
5553784 (9207988)	2.1	<1	126	<0.5	0.42	1.4	0.54	<0.5	0.25	0.37	257	<1	14.4	1.6
5553785 (9207989)	2.2	<1	115	<0.5	0.44	1.5	0.55	<0.5	0.30	0.43	269	<1	15.8	2.0
5553786 (9207990)	2.2	<1	104	0.6	0.47	1.4	0.52	<0.5	0.29	0.32	288	<1	15.6	1.9
5553787 (9207991)	2.2	<1	194	<0.5	0.44	1.5	0.56	<0.5	0.29	0.39	268	<1	16.1	1.8
5553788 (9207992)	2.1	<1	274	<0.5	0.44	1.2	0.48	<0.5	0.29	0.30	243	<1	15.5	1.8
5553789 (9207993)	3.0	<1	419	1.1	0.54	2.5	0.47	<0.5	0.38	0.58	315	<1	19.2	2.5
5553790 (9207994)	2.9	<1	452	0.6	0.44	3.0	0.49	<0.5	0.25	0.69	222	<1	13.8	1.6
5553791 (9207995)	4.4	<1	623	<0.5	0.48	6.6	0.45	<0.5	0.23	1.45	206	<1	14.0	1.5
5553792 (9207996)	1.9	<1	195	0.5	0.43	1.2	0.46	<0.5	0.33	0.31	225	<1	16.8	2.2
5553793 (9207997)	4.8	15	111	<0.5	0.68	6.2	0.33	3.9	0.36	2.14	84	3	20.0	2.3
5553794 (9207998)	2.1	<1	194	<0.5	0.44	1.4	0.51	<0.5	0.29	0.36	267	<1	15.7	1.9
5553795 (9207999)	2.0	<1	160	<0.5	0.43	1.2	0.44	<0.5	0.29	0.33	220	<1	16.4	1.9
5553796 (9208000)	1.8	<1	136	<0.5	0.41	1.2	0.44	<0.5	0.27	0.31	220	<1	14.1	1.8
5553797 (9208001)	1.9	<1	151	<0.5	0.43	1.1	0.44	<0.5	0.27	0.28	226	<1	14.6	1.8
5553798 (9208002)	1.8	<1	167	<0.5	0.40	1.1	0.44	<0.5	0.26	0.28	226	<1	14.0	1.6
5553799 (9208003)	1.7	3	193	<0.5	0.41	1.1	0.45	<0.5	0.27	0.31	232	<1	13.9	1.7
5553800 (9208004)	2.0	<1	206	<0.5	0.42	1.2	0.46	<0.5	0.27	0.27	226	<1	15.0	1.7
5553801 (9208005)	2.1	<1	208	<0.5	0.42	1.2	0.50	<0.5	0.28	0.31	242	<1	15.0	1.9
5553802 (9208006)	2.3	<1	185	<0.5	0.49	1.5	0.61	<0.5	0.30	0.41	273	<1	16.0	1.9
5553803 (9208007)	2.1	<1	242	<0.5	0.43	1.3	0.56	<0.5	0.24	0.39	263	<1	14.3	1.6

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 18T333545

PROJECT: SLG-2018

5623 McADAM ROAD  
 MISSISSAUGA, ONTARIO  
 CANADA L4Z 1N9  
 TEL (905)501-9998  
 FAX (905)501-0589  
<http://www.agatlabs.com>

CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Apr 27, 2018

DATE RECEIVED: Apr 27, 2018

DATE REPORTED: Jul 19, 2018

SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte: Unit: RDL:	Zn ppm 5	Zr ppm 0.5	Au ppm 0.01
5553743 (9207947)		732	138	<0.01
5553744 (9207948)		1010	116	<0.01
5553745 (9207949)		310	76.6	<0.01
5553746 (9207950)		266	121	<0.01
5553747 (9207951)		1400	132	<0.01
5553748 (9207952)		703	212	<0.01
5553749 (9207953)		1740	190	<0.01
5553750 (9207954)		579	188	<0.01
5553751 (9207955)		187	142	0.05
5553752 (9207956)		79	273	<0.01
5553753 (9207957)		66	105	<0.01
5553754 (9207958)		55	78.3	0.05
5553755 (9207959)		145	74.0	<0.01
5553756 (9207960)		97	312	<0.01
5553757 (9207961)		77	113	0.02
5553758 (9207962)		79	51.6	<0.01
5553759 (9207963)		75	128	0.01
5553760 (9207964)		63500	73.8	0.13
5553761 (9207965)		62	42.8	0.04
5553762 (9207966)		6	88.1	<0.01
5553763 (9207967)		68	110	<0.01
5553764 (9207968)		62	106	0.03
5553765 (9207969)		51	39.1	0.16
5553766 (9207970)		53	233	<0.01
5553767 (9207971)		51	64.7	<0.01
5553768 (9207972)		60	186	0.06
5553769 (9207973)		81	235	<0.01
5553770 (9207974)		72	276	<0.01
5553771 (9207975)		96	348	<0.01
5553772 (9207976)		95	307	<0.01
5553773 (9207977)		80	63.4	<0.01
5553774 (9207978)		90	59.3	0.06

Certified By:





## Certificate of Analysis

AGAT WORK ORDER: 18T333545

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

### (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

DATE SAMPLED: Apr 27, 2018

DATE RECEIVED: Apr 27, 2018

DATE REPORTED: Jul 19, 2018

SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte: Unit: RDL:	Zn ppm 5	Zr ppm 0.5	Au ppm 0.01
5553775 (9207979)		84	66.7	<0.01
5553776 (9207980)		67	70.8	<0.01
5553777 (9207981)		94	65.8	0.02
5553778 (9207982)		80	68.4	0.04
5553779 (9207983)		82	66.5	<0.01
5553780 (9207984)		114	95.8	<0.01
5553781 (9207985)		112	99.8	<0.01
5553782 (9207986)		95	68.1	<0.01
5553783 (9207987)		107	63.5	<0.01
5553784 (9207988)		113	64.4	<0.01
5553785 (9207989)		75	64.1	<0.01
5553786 (9207990)		80	64.3	0.06
5553787 (9207991)		84	66.4	<0.01
5553788 (9207992)		89	54.7	<0.01
5553789 (9207993)		97	69.0	0.08
5553790 (9207994)		68	67.5	0.07
5553791 (9207995)		63	76.4	0.03
5553792 (9207996)		88	54.3	0.07
5553793 (9207997)		5340	142	0.53
5553794 (9207998)		87	59.1	<0.01
5553795 (9207999)		84	56.6	<0.01
5553796 (9208000)		99	50.7	<0.01
5553797 (9208001)		99	53.1	<0.01
5553798 (9208002)		105	50.9	<0.01
5553799 (9208003)		121	50.7	<0.01
5553800 (9208004)		97	53.0	<0.01
5553801 (9208005)		111	54.1	<0.01
5553802 (9208006)		80	70.5	<0.01
5553803 (9208007)		62	62.7	<0.01

Comments: RDL - Reported Detection Limit  
 Please note: Gold Results are not representative due to the sample size

Certified By:





# Certificate of Analysis

AGAT WORK ORDER: 18T333545

PROJECT: SLG-2018

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CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

(202-052) Fire Assay - Trace Au, ICP-OES finish (ppm)

DATE SAMPLED: Apr 27, 2018

DATE RECEIVED: Apr 27, 2018

DATE REPORTED: Jul 19, 2018

SAMPLE TYPE: Drill Core

Analyte:	Au
Unit:	ppm
Sample ID (AGAT ID)	RDL: 0.001
5553777 (9207981)	0.007

Comments: RDL - Reported Detection Limit  
Please note: Gold Results are not representative due to the sample size

Certified By:



**AGAT** Laboratories

# Certificate of Analysis

AGAT WORK ORDER: 18T333545

PROJECT: SLG-2018

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<http://www.agatlabs.com>

CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

(202-052) Fire Assay - Trace Au, ICP-OES finish (ppm) - NEW SPLIT

DATE SAMPLED: Apr 27, 2018

DATE RECEIVED: Apr 27, 2018

DATE REPORTED: Jul 19, 2018

SAMPLE TYPE: Drill Core

Analyte:	Au
Unit:	ppm
Sample ID (AGAT ID)	RDL: 0.001
5553777 (9207981)	0.019

Comments: RDL - Reported Detection Limit  
Please note: Gold Results are not representative due to the sample size

Certified By:



# Certificate of Analysis

AGAT WORK ORDER: 18T333545

PROJECT: SLG-2018

5623 McADAM ROAD  
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TEL (905)501-9998  
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<http://www.agatlabs.com>

CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

## Sieving - % Passing (Pulverizing)

DATE SAMPLED: Apr 27, 2018

DATE RECEIVED: Apr 27, 2018

DATE REPORTED: Jul 19, 2018

SAMPLE TYPE: Drill Core

Sample ID (AGAT ID)	Analyte:	Pass %
	Unit:	%
	RDL:	0.01
5553743 (9207947)		93
5553772 (9207976)		92

Comments: RDL - Reported Detection Limit  
Please note: Gold Results are not representative due to the sample size

Certified By:





CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

## (201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

Parameter	REPLICATE #1				REPLICATE #2				REPLICATE #3				REPLICATE #4			
	Sample ID	Original	Replicate	RPD	Sample ID	Original	Replicate	RPD	Sample ID	Original	Replicate	RPD	Sample ID	Original	Replicate	RPD
Ag	9207947	< 1	< 1	0.0%	9207958	< 1	< 1	0.0%	9207971	< 1	< 1	0.0%	9207982	< 1	< 1	0.0%
Al	9207947	5.93	6.03	1.7%	9207958	5.19	5.23	0.8%	9207971	2.12	2.44	14.0%	9207982	8.89	8.60	3.3%
As	9207947	11	9	20.0%	9207958	< 5	< 5	0.0%	9207971	19	20	5.1%	9207982	19	15	23.5%
B	9207947	85	82	3.6%	9207958	20	30		9207971	< 20	< 20	0.0%	9207982	72	71	1.4%
Ba	9207947	478	491	2.7%	9207958	179	179	0.0%	9207971	77.9	96.4	21.2%	9207982	317	307	3.2%
Be	9207947	< 5	< 5	0.0%	9207958	< 5	< 5	0.0%	9207971	< 5	< 5	0.0%	9207982	< 5	< 5	0.0%
Bi	9207947	0.2	0.2	0.0%	9207958	< 0.1	< 0.1	0.0%	9207971	< 0.1	< 0.1	0.0%	9207982	< 0.1	< 0.1	0.0%
Ca	9207947	1.82	1.82	0.0%	9207958	4.51	4.48	0.7%	9207971	2.81	2.83	0.7%	9207982	5.71	5.53	3.2%
Cd	9207947	1.44	1.48	2.7%	9207958	< 0.2	< 0.2	0.0%	9207971	< 0.2	< 0.2	0.0%	9207982	< 0.2	< 0.2	0.0%
Ce	9207947	70.0	71.3	1.8%	9207958	23.7	23.5	0.8%	9207971	20.0	20.5	2.5%	9207982	15.5	15.3	1.3%
Co	9207947	13.1	13.1	0.0%	9207958	26.7	27.0	1.1%	9207971	112	109	2.7%	9207982	76.6	71.4	7.0%
Cr	9207947	< 0.005	< 0.005	0.0%	9207958	0.0064	0.0068	6.1%	9207971	< 0.005	< 0.005	0.0%	9207982	0.006	0.006	0.0%
Cs	9207947	1.2	1.2	0.0%	9207958	1.53	1.67	8.8%	9207971	0.6	0.9		9207982	2.3	2.3	0.0%
Cu	9207947	97	94	3.1%	9207958	116	118	1.7%	9207971	71	65	8.8%	9207982	112	111	0.9%
Dy	9207947	4.16	4.25	2.1%	9207958	2.34	2.58	9.8%	9207971	2.44	2.62	7.1%	9207982	2.87	2.87	0.0%
Er	9207947	2.41	2.54	5.3%	9207958	1.46	1.50	2.7%	9207971	1.64	1.50	8.9%	9207982	1.89	1.65	13.6%
Eu	9207981	1.05	1.06	0.9%	9207958	0.32	0.50		9207971	0.354	0.409	14.4%	9207982	0.48	0.47	2.1%
Fe	9207947	3.87	3.82	1.3%	9207958	20.8	20.4	1.9%	9207971	26.7	26.1	2.3%	9207982	3.62	3.52	2.8%
Ga	9207947	18.5	18.7	1.1%	9207958	12.0	12.1	0.8%	9207971	6.08	7.15	16.2%	9207982	19.3	19.4	0.5%
Gd	9207947	4.77	4.69	1.7%	9207958	2.59	2.62	1.2%	9207971	2.49	2.51	0.8%	9207982	2.83	2.69	5.1%
Ge	9207947	2	2	0.0%	9207958	< 1	< 1	0.0%	9207971	< 1	< 1	0.0%	9207982	1	1	0.0%
Hf	9207947	5	5	0.0%	9207958	2	5		9207971	2	2	0.0%	9207982	2	2	0.0%
Ho	9207947	0.854	0.880	3.0%	9207958	0.53	0.54	1.9%	9207971	0.529	0.521	1.5%	9207982	0.63	0.63	0.0%
In	9207947	0.3	0.3	0.0%	9207958	< 0.2	< 0.2	0.0%	9207971	< 0.2	< 0.2	0.0%	9207982	< 0.2	< 0.2	0.0%
K	9207947	1.77	1.82	2.8%	9207958	0.804	0.812	1.0%	9207971	0.28	0.31	10.2%	9207982	1.79	1.74	2.8%
La	9207947	34.1	34.3	0.6%	9207958	11.0	11.1	0.9%	9207971	9.1	9.3	2.2%	9207982	6.93	6.97	0.6%
Li	9207947	< 10	< 10	0.0%	9207958	17	17	0.0%	9207971	< 10	< 10	0.0%	9207982	23	19	19.0%
Lu	9207947	0.39	0.39	0.0%	9207958	0.234	0.282	18.6%	9207971	0.266	0.253	5.0%	9207982	0.265	0.263	0.8%
Mg	9207947	0.581	0.586	0.9%	9207958	1.36	1.37	0.7%	9207971	1.21	1.20	0.8%	9207982	1.79	1.70	5.2%
Mn	9207947	887	874	1.5%	9207958	4340	4680	7.5%	9207971	5800	5720	1.4%	9207982	1450	1410	2.8%
Mo	9207947	8	8	0.0%	9207958	5	5	0.0%	9207971	7	6	15.4%	9207982	5	5	0.0%



CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

Nb	9207947	6	7	15.4%	9207958	< 1	4		9207971	< 1	< 1	0.0%	9207982	1	< 1	
Nd	9207947	28.1	28.7	2.1%	9207958	11.4	11.9	4.3%	9207971	11.2	10.9	2.7%	9207982	9.2	9.0	2.2%
Ni	9207947	47	39	18.6%	9207958	93	84	10.2%	9207971	69	66	4.4%	9207982	104	102	1.9%
P	9207947	0.01	0.01	0.0%	9207958	0.04	0.04	0.0%	9207971	0.015	0.019	23.5%	9207982	0.04	0.04	0.0%
Pb	9207947	15	19	23.5%	9207958	< 5	< 5	0.0%	9207971	< 5	< 5	0.0%	9207982	< 5	< 5	0.0%
Pr	9207947	7.67	7.65	0.3%	9207958	2.83	2.84	0.4%	9207971	2.46	2.53	2.8%	9207982	1.95	1.97	1.0%
Rb	9207947	72.6	73.4	1.1%	9207958	38.4	39.3	2.3%	9207971	16.2	18.8	14.9%	9207982	81.7	78.2	4.4%
S	9207947	1.57	1.55	1.3%	9207958	9.33	9.37	0.4%	9207971	18.4	17.2	6.7%	9207982	0.136	0.131	3.7%
Sb	9207947	< 0.1	< 0.1	0.0%	9207958	< 0.1	< 0.1	0.0%	9207971	< 0.1	< 0.1	0.0%	9207982	< 0.1	< 0.1	0.0%
Sc	9207947	7	7	0.0%	9207958	14	14	0.0%	9207971	10	10	0.0%	9207982	37	36	2.7%
Si	9207947	32.3	34.5	6.6%	9207958	19.4	19.4	0.0%	9207971	16.1	17.1	6.0%	9207982	29.2	28.3	3.1%
Sm	9207947	4.70	5.06	7.4%	9207958	2.46	2.39	2.9%	9207971	2.03	2.15	5.7%	9207982	2.27	2.08	8.7%
Sn	9207947	5	10		9207958	< 1	< 1	0.0%	9207971	< 1	< 1	0.0%	9207982	< 1	< 1	0.0%
Sr	9207947	126	125	0.8%	9207958	114	115	0.9%	9207971	60.2	63.2	4.9%	9207982	139	135	2.9%
Ta	9207947	1.60	1.51	5.8%	9207958	1.9	1.0		9207971	< 0.5	1.3		9207982	0.9	< 0.5	
Tb	9207947	0.71	0.71	0.0%	9207958	0.382	0.389	1.8%	9207971	0.390	0.397	1.8%	9207982	0.47	0.43	8.9%
Th	9207947	12.3	12.5	1.6%	9207958	1.8	1.9	5.4%	9207971	1.32	1.42	7.3%	9207982	1.35	1.31	3.0%
Ti	9207947	0.10	0.10	0.0%	9207958	0.25	0.35		9207971	0.094	0.112	17.5%	9207982	0.54	0.53	1.9%
Tl	9207947	0.77	0.73	5.3%	9207958	< 0.5	< 0.5	0.0%	9207971	< 0.5	< 0.5	0.0%	9207982	0.6	0.5	18.2%
Tm	9207947	0.39	0.40	2.5%	9207958	0.26	0.26	0.0%	9207971	0.25	0.25	0.0%	9207982	0.275	0.283	2.9%
U	9207947	3.05	3.07	0.7%	9207958	0.46	0.56	19.6%	9207971	0.34	0.39	13.7%	9207982	0.39	0.39	0.0%
V	9207947	27	26	3.8%	9207958	103	107	3.8%	9207971	63	64	1.6%	9207982	253	247	2.4%
W	9207947	< 1	< 1	0.0%	9207958	< 1	< 1	0.0%	9207971	< 1	< 1	0.0%	9207982	< 1	< 1	0.0%
Y	9207947	22.9	22.8	0.4%	9207958	13.2	13.8	4.4%	9207971	14.4	14.8	2.7%	9207982	15.8	15.0	5.2%
Yb	9207947	2.5	2.5	0.0%	9207958	1.55	1.71	9.8%	9207971	1.7	1.7	0.0%	9207982	1.80	1.62	10.5%
Zn	9207947	732	756	3.2%	9207958	55	54	1.8%	9207971	51	48	6.1%	9207982	80	81	1.2%
Zr	9207947	138	144	4.3%	9207958	78.3	81.8	4.4%	9207971	64.7	70.7	8.9%	9207982	68.4	65.1	4.9%
Au	9207981	0.0188	0.0206	9.1%	9207958	0.0531	0.0480	10.1%	9207971	-0.153	0.102		9207982	0.0353	-0.0333	
REPLICATE #5																
Parameter	Sample ID	Original	Replicate	RPD												
Ag	9207998	< 1	< 1	0.0%												
Al	9207998	8.86	8.80	0.7%												
As	9207998	< 5	< 5	0.0%												
B	9207998	38	37	2.7%												



CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

Ba	9207998	141	141	0.0%															
Be	9207998	< 5	< 5	0.0%															
Bi	9207998	0.1	< 0.1																
Ca	9207998	6.77	6.48	4.4%															
Cd	9207998	< 0.2	< 0.2	0.0%															
Ce	9207998	14.8	14.4	2.7%															
Co	9207998	54.6	53.2	2.6%															
Cr	9207998	0.008	0.008	0.0%															
Cs	9207998	0.35	0.34	2.9%															
Cu	9207998	76	74	2.7%															
Dy	9207998	3.05	3.01	1.3%															
Er	9207998	1.81	1.85	2.2%															
Eu	9207998	0.57	0.58	1.7%															
Fe	9207998	6.33	6.25	1.3%															
Ga	9207998	18.2	18.5	1.6%															
Gd	9207998	2.77	2.65	4.4%															
Ge	9207998	1	1	0.0%															
Hf	9207998	2	2	0.0%															
Ho	9207998	0.66	0.66	0.0%															
In	9207998	< 0.2	< 0.2	0.0%															
K	9207998	0.20	0.20	0.0%															
La	9207998	6.6	6.4	3.1%															
Li	9207998	10	9	10.5%															
Lu	9207998	0.29	0.30	3.4%															
Mg	9207998	2.05	2.21	7.5%															
Mn	9207998	1520	1500	1.3%															
Mo	9207998	8	7	13.3%															
Nb	9207998	< 1	< 1	0.0%															
Nd	9207998	9.06	8.58	5.4%															
Ni	9207998	111	98	12.4%															
P	9207998	0.035	0.037	5.6%															
Pb	9207998	6	5	18.2%															
Pr	9207998	1.92	1.80	6.5%															
Rb	9207998	12.4	12.1	2.4%															



CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

S	9207998	0.285	0.284	0.4%																
Sb	9207998	< 0.1	0.2																	
Sc	9207998	44	46	4.4%																
Si	9207998	26.9	26.6	1.1%																
Sm	9207998	2.1	2.1	0.0%																
Sn	9207998	< 1	< 1	0.0%																
Sr	9207998	194	192	1.0%																
Ta	9207998	< 0.5	< 0.5	0.0%																
Tb	9207998	0.437	0.423	3.3%																
Th	9207998	1.39	1.31	5.9%																
Ti	9207998	0.51	0.51	0.0%																
Tl	9207998	< 0.5	< 0.5	0.0%																
Tm	9207998	0.29	0.29	0.0%																
U	9207998	0.36	0.38	5.4%																
V	9207998	267	271	1.5%																
W	9207998	< 1	< 1	0.0%																
Y	9207998	15.7	15.5	1.3%																
Yb	9207998	1.9	1.9	0.0%																
Zn	9207998	87	86	1.2%																
Zr	9207998	59.1	59.7	1.0%																
Au	9207998	-0.0624	-0.0651	4.2%																

(202-052) Fire Assay - Trace Au, ICP-OES finish (ppm)

REPLICATE #1																				
Parameter	Sample ID	Original	Replicate	RPD																
Au	9207981	0.007	0.003																	

(202-052) Fire Assay - Trace Au, ICP-OES finish (ppm) - NEW SPLIT

REPLICATE #1																				
Parameter	Sample ID	Original	Replicate	RPD																
Au	9207981	0.0188	0.0206	9.1%																



CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

(201-378) Sodium Peroxide Fusion - ICP-OES/ICP-MS Finish

Parameter	CRM #1 (ref.GBM998-10)				CRM #2 (ref.GSP4G)				CRM #3 (ref.SY-4)				CRM #4 (ref.Till-2)			
	Expect	Actual	Recovery	Limits	Expect	Actual	Recovery	Limits	Expect	Actual	Recovery	Limits	Expect	Actual	Recovery	Limits
Al									10.95	10.76	98%	90% - 110%	8.47	8.35	99%	90% - 110%
As	25	27.5	110%	90% - 110%									26	23	90%	90% - 110%
Ba									340	345	102%	90% - 110%	540	558	103%	90% - 110%
Be									2.6	3.1	121%	90% - 110%	4.0	3.7	93%	90% - 110%
Ca									5.72	5.74	100%	90% - 110%	0.907	0.949	105%	90% - 110%
Ce									122	123	101%	90% - 110%	98	108	110%	90% - 110%
Co	1202	1230	102%	90% - 110%					2.8	2.6	93%	90% - 110%	15	14	96%	90% - 110%
Cs									1.5	1.6	106%	90% - 110%				
Cu	15414	15764	102%	90% - 110%					7	7	97%	90% - 110%	150	154	103%	90% - 110%
Dy									18.2	19	105%	90% - 110%				
Er									14.2	14.3	101%	90% - 110%	3.7	4.1	110%	90% - 110%
Eu									2.0	1.82	91%	90% - 110%	1.0	1.13	112%	90% - 110%
Fe									4.34	4.25	98%	90% - 110%	3.77	3.82	101%	90% - 110%
Ga									35	38	108%	90% - 110%				
Gd									14	15	110%	90% - 110%				
Hf									10.6	10.7	101%	90% - 110%	11	10	91%	90% - 110%
Ho									4.3	4.7	108%	90% - 110%				
K									1.37	1.43	104%	90% - 110%	2.55	2.53	99%	90% - 110%
La									58	56	96%	90% - 110%	44	47	106%	90% - 110%
Li									37	41	112%	90% - 110%	47	53	112%	90% - 110%
Lu									2.1	2.2	103%	90% - 110%	0.6	0.6	97%	90% - 110%
Mg									0.325	0.315	97%	90% - 110%	1.1	1.2	107%	90% - 110%
Mn									836	842	101%	90% - 110%	780	850	109%	90% - 110%
Mo													14	13	95%	90% - 110%
Nb									13	11	84%	90% - 110%	20	18	88%	90% - 110%
Nd									57	61	108%	90% - 110%				
Ni	23610	24780	105%	90% - 110%					9	10	110%	90% - 110%	32	36	114%	90% - 110%
Pb	41	44	107%	90% - 110%					10	9	93%	90% - 110%	31	32	103%	90% - 110%
Pr									15.0	15.1	100%	90% - 110%				
Rb									55	58	105%	90% - 110%	144	154	107%	90% - 110%
Sb													0.8	0.8	96%	90% - 110%



CLIENT NAME: GOSSAN RESOURCES LIMITED

ATTENTION TO: Scot Halladay

Sc													12	12	97%	90% - 110%
Si								23.3	23.5	101%	90% - 110%		28.4	28.3	100%	90% - 110%
Sm								12.7	12.7	100%	90% - 110%		7.4	8.1	110%	90% - 110%
Sn								7.1	6.4	91%	90% - 110%					
Sr								1191	1207	101%	90% - 110%		144	159	110%	90% - 110%
Tb								2.6	2.8	107%	90% - 110%		1.2	1.2	100%	90% - 110%
Th								1.4	1.3	93%	90% - 110%		18.4	17.5	95%	90% - 110%
Ti								0.172	0.171	99%	90% - 110%		0.527	0.547	104%	90% - 110%
Tm								2.3	2.4	104%	90% - 110%					
U								0.8	0.8	101%	90% - 110%		5.7	5.3	93%	90% - 110%
V								8	9	118%	90% - 110%		77	82	106%	90% - 110%
W													5	5	101%	90% - 110%
Y								119	115	97%	90% - 110%		40	37	92%	90% - 110%
Yb								14.8	15.6	105%	90% - 110%					
Zn	90	93	104%	90% - 110%				93	89	95%	90% - 110%		130	129	99%	90% - 110%
Zr								517	554	107%	90% - 110%		390	369	95%	90% - 110%
Au						0.468	0.6	128%	100% - 100%							

CRM #5 (ref.GBM998-10)

Parameter	Expect	Actual	Recovery	Limits												
As	25	28	112%	90% - 110%												
Co	1202	1210	101%	90% - 110%												
Cu	15414	14550	94%	90% - 110%												
Ni	23610	22163	94%	90% - 110%												
Pb	41	43	104%	90% - 110%												
Zn	90	90	101%	90% - 110%												

(202-052) Fire Assay - Trace Au, ICP-OES finish (ppm)

CRM #1 (ref.GSP7L)

Parameter	Expect	Actual	Recovery	Limits												
Au	0.709	0.739	104%	90% - 110%												

(202-052) Fire Assay - Trace Au, ICP-OES finish (ppm) - NEW SPLIT

CRM #1 (ref.GSP4G)

Parameter	Expect	Actual	Recovery	Limits												
Au	0.468	0.6	128%	90% - 110%												



## Method Summary

CLIENT NAME: GOSSAN RESOURCES LIMITED  
 PROJECT: SLG-2018  
 SAMPLING SITE:

AGAT WORK ORDER: 18T333545  
 ATTENTION TO: Scot Halladay  
 SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Solid Analysis			
Sample Login Weight	MIN-12009		BALANCE
Ag			ICP/MS
Al	MIN-200-12001		ICP/OES
As	MIN-200-12001		ICP/MS
B	MIN-200-12001		ICP/OES
Ba	MIN-200-12001		ICP/OES
Be	MIN-200-12001		ICP/OES
Bi	MIN-200-12001		ICP-MS
Ca	MIN-200-12001		ICP/OES
Cd	MIN-200-12001		ICP-MS
Ce	MIN-200-12001		ICP-MS
Co	MIN-200-12001		ICP/MS
Cr	MIN-200-12001		ICP/OES
Cs	MIN-200-12001		ICP-MS
Cu	MIN-200-12001		ICP/OES
Dy	MIN-200-12001		ICP-MS
Er	MIN-200-12001		ICP-MS
Eu	MIN-200-12001		ICP-MS
Fe	MIN-200-12001		ICP/OES
Ga	MIN-200-12001		ICP-MS
Gd	MIN-200-12001		ICP-MS
Ge	MIN-200-12001		ICP-MS
Hf	MIN-200-12001		ICP-MS
Ho	MIN-200-12001		ICP-MS
In	MIN-200-12001		ICP-MS
K	MIN-200-12001		ICP/OES
La	MIN-200-12001		ICP-MS
Li	MIN-200-12001		ICP/OES
Lu	MIN-200-12001		ICP-MS
Mg	MIN-200-12001		ICP/OES
Mn	MIN-200-12001		ICP/OES
Mo	MIN-200-12001		ICP/MS
Nb	MIN-200-12001		ICP-MS
Nd	MIN-200-12001		ICP-MS
Ni	MIN-200-12001		ICP/OES
P			ICP/OES
Pb	MIN-200-12001		ICP/MS
Pr	MIN-200-12001		ICP-MS
Rb	MIN-200-12001		ICP/MS
S	MIN-200-12001		ICP/OES
Sb	MIN-200-12001		ICP-MS
Sc	MIN-200-12001		ICP/OES
Si	MIN-200-12001		ICP/OES
Sm	MIN-200-12001		ICP-MS
Sn	MIN-200-12001		ICP/MS
Sr	MIN-200-12001		ICP-OES
Ta	MIN-200-12001		ICP-MS
Tb	MIN-200-12001		ICP-MS
Th	MIN-200-12001		ICP-MS



## Method Summary

CLIENT NAME: GOSSAN RESOURCES LIMITED  
 PROJECT: SLG-2018  
 SAMPLING SITE:

AGAT WORK ORDER: 18T333545  
 ATTENTION TO: Scot Halladay  
 SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Ti	MIN-200-12001		ICP/OES
Tl	MIN-200-12001		ICP-MS
Tm	MIN-200-12001		ICP-MS
U	MIN-200-12001		ICP-MS
V	MIN-200-12001		ICP/OES
W	MIN-200-12001		ICP-MS
Y	MIN-200-12001		ICP-MS
Yb	MIN-200-12001		ICP-MS
Zn	MIN-200-12001		ICP/OES
Zr	MIN-200-12001		ICP-MS
Au			ICP-MS
Au	MIN-200-12006	BUGBEE, E: A Textbook of Fire Assaying	ICP-OES
Pass %			BALANCE



<b>Drill Hole ID</b>	<b>FROM</b>	<b>TO</b>	<b>LENGTH</b>	<b>Sample No.</b>	<b>Lab certificate</b>
SLG-18-01	4.65	6.00	1.35	5553260	18B316284
SLG-18-01	6.00	7.00	1.00	5553261	18B316284
SLG-18-01	7.00	8.00	1.00	5553262	18B316284
SLG-18-01	8.00	9.00	1.00	5553263	18B316284
SLG-18-01	9.00	10.00	1.00	5553264	18B316284
SLG-18-01	10.00	11.00	1.00	5553265	18B316284
SLG-18-01	11.00	12.50	1.50	5553266	18B316284
SLG-18-01	12.50	14.00	1.50	5553267	18B316284
SLG-18-01	14.00	15.00	1.00	5553268	18B316284
SLG-18-01	15.00	15.75	0.75	5553270	18B316284
SLG-18-01	15.75	16.30	0.55	5553271	18B316284
SLG-18-01	16.30	16.80	0.50	5553272	18B316284
SLG-18-01	16.80	18.00	1.20	5553273	18B316284
SLG-18-01	18.00	18.50	0.50	5553274	18B316284
SLG-18-01	18.50	19.30	0.80	5553276	18B316284
SLG-18-01	19.30	20.30	1.00	5553277	18B316284
SLG-18-01	20.30	21.30	1.00	5553278	18B316284
SLG-18-01A	6.00	7.00	1.00	5553360	18B317285
SLG-18-01A	7.00	8.00	1.00	5553361	18B317285
SLG-18-01A	8.00	8.80	0.80	5553362	18B317285
SLG-18-01A	8.80	9.80	1.00	5553363	18B317285
SLG-18-01A	9.80	11.10	1.30	5553364	18B317285
SLG-18-01A	11.10	12.50	1.40	5553365	18B317285
SLG-18-01A	12.50	14.00	1.50	5553366	18B317285
SLG-18-01A	14.00	15.00	1.00	5553367	18B317285
SLG-18-01A	15.00	15.40	0.40	5553368	18B317285
SLG-18-01A	15.40	17.00	1.60	5553369	18B317285
SLG-18-01A	17.00	18.35	1.35	5553370	18B317285
SLG-18-01A	18.35	19.85	1.50	5553371	18B317285
SLG-18-01A	19.85	20.85	1.00	5553372	18B317285
SLG-18-01A	20.85	21.45	0.60	5553373	18B317285
SLG-18-01A	21.45	22.45	1.00	5553374	18B317285
SLG-18-01A	22.45	23.15	0.70	5553376	18B317285
SLG-18-01A	23.15	24.15	1.00	5553377	18B317285
SLG-18-01A	24.15	24.70	0.55	5553378	18B317285
SLG-18-01A	24.70	25.70	1.00	5553379	18B317285
SLG-18-01A	25.70	27.00	1.30	5553381	18B317285
SLG-18-01A	27.00	27.95	0.95	5553382	18B317285
SLG-18-01A	27.95	28.40	0.45	5553383	18B317285
SLG-18-01A	28.40	29.05	0.65	5553384	18B317285
SLG-18-01A	29.05	30.00	0.95	5553385	18B317285
SLG-18-01A	30.00	31.30	1.30	5553386	18B317285
SLG-18-01A	31.30	32.00	0.70	5553387	18B317285
SLG-18-01A	32.00	33.10	1.10	5553388	18B317285
SLG-18-01A	33.10	34.00	0.90	5553389	18B317285
SLG-18-01A	34.00	35.00	1.00	5553390	18B317285
SLG-18-01A	35.00	36.00	1.00	5553391	18B317285
SLG-18-01A	36.00	37.00	1.00	5553392	18B317285
SLG-18-01A	37.00	38.30	1.30	5553393	18B314890
SLG-18-01A	38.30	39.00	0.70	5553394	18B314890
SLG-18-01A	39.00	39.90	0.90	5553395	18B314890
SLG-18-01A	39.90	40.90	1.00	5553396	18B314890
SLG-18-01A	40.90	42.50	1.60	5553397	18B314890
SLG-18-01A	42.50	43.20	0.70	5553398	18B314890
SLG-18-01A	43.20	44.20	1.00	5553399	18B314890

<b>Drill Hole ID</b>	<b>FROM</b>	<b>TO</b>	<b>LENGTH</b>	<b>Sample No.</b>	<b>Lab certificate</b>
SLG-18-01A	44.20	45.00	0.80	5553401	18B314890
SLG-18-01A	45.00	45.65	0.65	5553402	18B314890
SLG-18-01A	45.65	46.15	0.50	5553403	18B314890
SLG-18-01A	46.15	47.50	1.35	5553404	18B314890
SLG-18-01A	47.50	48.55	1.05	5553405	18B314890
SLG-18-01A	48.55	49.00	1.50	5553406	18B314890
SLG-18-01A	49.00	50.00	1.00	5553407	18B314890
SLG-18-01A	50.00	50.70	0.70	5553408	18B314890
SLG-18-01A	50.70	51.70	1.00	5553410	18B314890
SLG-18-01A	51.70	52.55	0.85	5553411	18B317285
SLG-18-01A	52.55	54.00	1.45	5553412	18B317285
SLG-18-01A	54.00	55.50	1.50	5553413	18B317285
SLG-18-01A	55.50	57.00	1.50	5553414	18B317285
SLG-18-01A	57.00	58.10	1.10	5553415	18B317285
SLG-18-01A	103.25	103.75	0.50	5553416	18B317285
SLG-18-01A	103.75	104.50	0.75	5553417	18B317285
SLG-18-01A	104.50	106.00	1.50	5553418	18B317285
SLG-18-01A	106.00	107.25	1.25	5553419	18B317285
SLG-18-01A	107.25	107.70	0.45	5553420	18B317285
SLG-18-01A	107.70	108.90	1.20	5553422	18B317285
SLG-18-01A	108.90	110.00	1.10	5553423	18B317285
SLG-18-01A	110.00	111.50	1.50	5553425	18B317285
SLG-18-01A	111.50	111.80	0.30	5553426	18B317285
SLG-18-01A	111.80	113.30	1.50	5553427	18B317285
SLG-18-01A	113.30	114.00	0.70	5553428	18B317285
SLG-18-01A	114.00	115.50	1.50	5553429	18B317285
SLG-18-01A	115.50	116.80	1.30	5553430	18B317285
SLG-18-01A	153.00	154.50	1.50	5553431	18B322387
SLG-18-01A	157.50	159.00	1.50	5553432	18B322387
SLG-18-01A	162.60	163.35	0.75	5553433	18B322387
SLG-18-01A	163.35	164.35	1.00	5553434	18B322387
SLG-18-01A	170.00	171.00	1.00	5553435	18B322387
SLG-18-01A	171.00	172.10	1.10	5553437	18B322387
SLG-18-01A	172.10	173.00	0.90	5553438	18B322387
SLG-18-01A	173.00	174.00	1.00	5553439	18B322387
SLG-18-01A	174.00	175.00	1.00	5553440	18B322387
SLG-18-01A	175.00	176.00	1.00	5553441	18B322387
SLG-18-01A	176.00	177.00	1.00	5553442	18B322387
SLG-18-01A	177.00	177.65	0.65	5553443	18B322387
SLG-18-01A	177.65	178.00	0.35	5553444	18B322387
SLG-18-01A	178.00	179.00	1.00	5553446	18B322387
SLG-18-01A	179.00	180.00	1.00	5553447	18B322387
SLG-18-01A	180.00	181.00	1.00	5553448	18B322387
SLG-18-01A	181.00	182.00	1.00	5553449	18B322387
SLG-18-01A	182.00	182.50	0.50	5553450	18B322387
SLG-18-01A	182.50	183.00	0.50	5553451	18B322387
SLG-18-01A	183.00	184.20	1.20	5553452	18B322387
SLG-18-01A	184.20	184.70	0.50	5553453	18B322387
SLG-18-01A	184.70	186.00	1.30	5553454	18B322387
SLG-18-01A	186.00	187.50	1.50	5553455	18B322387
SLG-18-01A	187.50	188.45	0.95	5553456	18B322387
SLG-18-01A	188.45	189.45	1.00	5553457	18B322387
SLG-18-01A	189.45	190.00	0.55	5553458	18B322387
SLG-18-01A	190.00	191.00	1.00	5553459	18B322387
SLG-18-01A	191.00	192.10	1.10	5553460	18B322387
SLG-18-01A	192.10	192.55	0.45	5553461	18B322387

<b>Drill Hole ID</b>	<b>FROM</b>	<b>TO</b>	<b>LENGTH</b>	<b>Sample No.</b>	<b>Lab certificate</b>
SLG-18-01A	192.55	193.15	0.60	5553463	18B322387
SLG-18-01A	193.15	194.15	1.00	5553464	18T332729
SLG-18-01A	194.15	195.60	1.45	5553465	18T332729
SLG-18-01A	195.60	196.60	1.00	5553466	18T332729
SLG-18-01A	196.60	197.50	0.90	5553467	18T332729
SLG-18-01A	197.50	198.50	1.00	5553468	18T332729
SLG-18-01A	198.50	199.00	0.50	5553469	18T332729
SLG-18-01A	199.00	199.35	0.35	5553470	18T332729
SLG-18-01A	199.35	199.80	0.45	5553471	18T332729
SLG-18-01A	199.80	201.00	1.20	5553472	18T332729
SLG-18-02	12.00	12.50	0.50	5553473	18B322387
SLG-18-02	12.50	13.70	1.20	5553474	18B322387
SLG-18-02	13.70	14.70	1.00	5553475	18B322387
SLG-18-02	35.80	37.40	1.60	5553476	18B322387
SLG-18-02	37.40	39.00	1.60	5553477	18B322387
SLG-18-02	39.00	40.50	1.50	5553478	18B322387
SLG-18-02	40.50	42.00	1.50	5553479	18B322387
SLG-18-02	42.00	42.50	0.50	5553480	18B322387
SLG-18-02	42.50	43.00	0.50	5553481	18B322387
SLG-18-02	43.00	44.00	1.00	5553482	18B322387
SLG-18-02	44.00	44.70	0.70	5553484	18B322387
SLG-18-02	44.70	45.10	0.40	5553485	18B322387
SLG-18-02	45.10	45.60	0.50	5553486	18B322387
SLG-18-02	45.60	46.60	1.00	5553487	18B322387
SLG-18-02	46.60	47.20	1.45	5553489	18B322387
SLG-18-02	47.20	48.65	1.45	5553490	18B322387
SLG-18-02	48.65	49.15	0.50	5553280	18T332706
SLG-18-02	49.15	49.60	0.45	5553281	18T332706
SLG-18-02	49.60	50.40	0.80	5553282	18T332706
SLG-18-02	50.40	51.90	1.50	5553283	18T332706
SLG-18-02	51.90	53.25	1.35	5553284	18T332706
SLG-18-02	53.25	54.25	1.00	5553285	18T332706
SLG-18-02	54.25	55.90	1.65	5553286	18T332706
SLG-18-02	55.90	57.00	1.10	5553287	18T332706
SLG-18-02	65.70	66.85	1.15	5553289	18T332706
SLG-18-02	66.85	67.85	1.00	5553290	18T332706
SLG-18-02	67.85	69.15	1.30	5553292	18T332706
SLG-18-02	69.15	69.95	0.80	5553293	18T332706
SLG-18-02	69.95	71.00	1.05	5553294	18T332706
SLG-18-02	71.00	72.00	1.00	5553295	18T332706
SLG-18-02	72.00	73.00	1.00	5553296	18T332706
SLG-18-02	74.70	75.25	0.55	5553491	18T324089
SLG-18-02	81.40	81.70	0.30	5553492	18T324089
SLG-18-02	93.00	94.50	1.50	5553493	18T324089
SLG-18-02	94.50	95.65	1.15	5553494	18T324089
SLG-18-02	95.65	97.00	1.35	5553495	18T324089
SLG-18-02	97.00	98.00	1.00	5553496	18T324089
SLG-18-02	98.00	99.00	1.00	5553497	18T324089
SLG-18-02	99.00	100.00	1.00	5553498	18T324089
SLG-18-02	100.00	101.00	1.00	5553499	18T324089
SLG-18-02	101.00	102.10	1.10	5553500	18T324089
SLG-18-02	102.10	103.00	0.90	5553501	18T324089
SLG-18-02	103.00	103.90	0.90	5553502	18T324089
SLG-18-02	103.90	105.00	1.10	5553503	18T324089
SLG-18-02	105.00	106.50	1.50	5553504	18T324089

<b>Drill Hole ID</b>	<b>FROM</b>	<b>TO</b>	<b>LENGTH</b>	<b>Sample No.</b>	<b>Lab certificate</b>
SLG-18-02	106.50	107.75	1.25	5553505	18T324089
SLG-18-02	107.75	108.80	1.05	5553506	18T324089
SLG-18-02	108.80	109.40	0.60	5553508	18T324089
SLG-18-02	109.40	110.00	0.60	5553509	18T324089
SLG-18-02	110.00	111.00	1.00	5553510	18T324089
SLG-18-02	111.00	112.00	1.00	5553511	18T324089
SLG-18-02	112.00	112.75	0.75	5553512	18T324089
SLG-18-02	112.75	113.20	0.45	5553513	18T324089
SLG-18-02	113.20	114.00	0.80	5553515	18T324089
SLG-18-02	114.00	115.50	1.50	5553516	18T324089
SLG-18-02	115.50	117.00	1.50	5553517	18T324089
SLG-18-02	117.00	118.00	1.00	5553518	18T324089
SLG-18-02	118.00	119.00	1.00	5553519	18T324089
SLG-18-02	119.00	120.00	1.00	5553520	18T324089
SLG-18-02	120.00	120.70	0.70	5553521	18T324089
SLG-18-02	120.70	121.00	0.30	5553522	18T324089
SLG-18-02	121.00	121.90	0.90	5553523	18T324089
SLG-18-02	121.90	122.25	0.35	5553525	18T324089
SLG-18-02	122.25	123.15	0.90	5553526	18T324089
SLG-18-02	123.15	123.50	0.35	5553527	18T324089
SLG-18-02	123.50	124.00	0.50	5553528	18T324089
SLG-18-02	124.00	125.00	1.00	5553529	18T324089
SLG-18-02	125.00	126.00	1.00	5553530	18T324089
SLG-18-02	126.00	127.50	1.50	5553531	18T324089
SLG-18-02	127.50	129.00	1.50	5553532	18T324089
SLG-18-02	129.00	130.50	1.50	5553533	18T324089
SLG-18-02	130.50	132.00	1.50	5553534	18T324089
SLG-18-02	132.00	133.05	1.05	5553535	18T324089
SLG-18-02	133.05	134.00	0.95	5553536	18T324089
SLG-18-02	134.00	135.00	1.00	5553537	18T324089
SLG-18-02	135.00	136.00	1.00	5553538	18T324089
SLG-18-02	136.00	137.00	1.00	5553539	18T324089
SLG-18-02	137.00	138.25	1.25	5553540	18T324089
SLG-18-03	4.30	4.70	0.40	5553541	18T324062
SLG-18-03	4.70	6.00	1.30	5553542	18T324062
SLG-18-03	6.00	7.10	1.10	5553543	18T324062
SLG-18-03	7.10	7.70	0.60	5553544	18T324062
SLG-18-03	7.70	9.00	1.30	5553545	18T324062
SLG-18-03	9.00	10.00	1.00	5553546	18T324062
SLG-18-03	10.00	11.00	1.00	5553547	18T324062
SLG-18-03	11.00	12.50	1.50	5553548	18T324062
SLG-18-03	12.50	14.00	1.50	5553550	18T324062
SLG-18-03	14.00	15.00	1.00	5553551	18T324062
SLG-18-03	18.00	19.00	1.00	5553552	18T324062
SLG-18-03	20.90	22.00	1.10	5553553	18T324062
SLG-18-03	22.00	23.20	1.20	5553554	18T324062
SLG-18-03	23.20	24.20	1.00	5553555	18T324062
SLG-18-03	24.20	25.10	0.90	5553557	18T324062
SLG-18-03	29.40	31.00	1.60	5553558	18T324062
SLG-18-03	31.00	32.70	1.70	5553559	18T324062
SLG-18-03	32.70	33.45	0.75	5553560	18T324062
SLG-18-03	45.00	45.80	0.80	5553561	18T324062
SLG-18-03	45.80	46.80	1.00	5553562	18T324062
SLG-18-03	46.80	47.80	1.00	5553563	18T324062
SLG-18-03	47.80	49.00	1.20	5553564	18T324062

<b>Drill Hole ID</b>	<b>FROM</b>	<b>TO</b>	<b>LENGTH</b>	<b>Sample No.</b>	<b>Lab certificate</b>
SLG-18-03	49.00	50.00	1.00	5553565	18T324062
SLG-18-03	50.00	51.00	1.00	5553566	18T324062
SLG-18-03	51.00	52.00	1.00	5553567	18T324062
SLG-18-03	69.70	70.70	1.00	5553568	18T324062
SLG-18-03	70.70	71.70	1.00	5553569	18T324062
SLG-18-03	71.70	72.70	1.00	5553570	18T324062
SLG-18-03	72.70	74.00	1.30	5553571	18T324062
SLG-18-03	74.00	75.00	1.00	5553572	18T324062
SLG-18-03	75.00	76.80	1.80	5553573	18T324062
SLG-18-03	105.00	106.50	1.50	5553574	18T324062
SLG-18-03	106.50	106.90	0.40	5553576	18T324062
SLG-18-03	106.90	107.65	0.75	5553577	18T324062
SLG-18-03	107.65	108.65	1.00	5553578	18T324062
SLG-18-03	108.65	110.15	1.50	5553579	18T324062
SLG-18-04	10.60	12.00	1.40	5553580	18T325981
SLG-18-04	12.00	13.70	1.70	5553581	18T325981
SLG-18-04	13.70	14.35	0.65	5553582	18T325981
SLG-18-04	14.35	15.85	1.50	5553583	18T325981
SLG-18-04	15.85	17.00	1.15	5553584	18T325981
SLG-18-04	17.00	18.50	1.50	5553585	18T325981
SLG-18-04	18.50	19.90	1.40	5553586	18T325981
SLG-18-04	19.90	21.30	1.40	5553587	18T325981
SLG-18-04	21.30	22.25	0.95	5553588	18T325981
SLG-18-04	22.25	23.00	0.75	5553589	18T325981
SLG-18-04	23.00	24.35	1.35	5553591	18T325981
SLG-18-04	24.35	25.85	1.50	5553592	18T332737
SLG-18-04	25.85	27.30	1.45	5553593	18T332737
SLG-18-04	27.30	28.50	1.20	5553594	18T332737
SLG-18-04	28.50	30.00	1.50	5553595	18T332737
SLG-18-04	30.00	31.50	1.50	5553596	18T332737
SLG-18-04	31.50	32.90	1.40	5553597	18T332737
SLG-18-04	32.90	34.00	1.10	5553598	18T332737
SLG-18-04	34.00	35.50	1.50	5553599	18T332737
SLG-18-04	35.50	37.00	1.50	5553600	18T332737
SLG-18-04	37.00	38.50	1.50	5553601	18T332737
SLG-18-04	38.50	40.00	1.50	5553602	18T332737
SLG-18-04	40.00	41.00	1.00	5553603	18T332737
SLG-18-04	41.00	42.00	1.00	5553604	18T332737
SLG-18-04	42.00	43.50	1.50	5553606	18T332737
SLG-18-04	43.50	45.00	1.50	5553607	18T332737
SLG-18-04	45.00	46.20	1.20	5553608	18T332737
SLG-18-04	46.20	47.50	1.30	5553609	18T332737
SLG-18-04	47.50	49.00	1.50	5553710	18T332737
SLG-18-04	49.00	50.00	1.00	5553711	18T332737
SLG-18-04	50.00	51.20	1.20	5553712	18T332737
SLG-18-04	51.20	51.50	0.30	5553713	18T332737
SLG-18-04	51.50	53.00	1.50	5553715	18T332737
SLG-18-04	53.00	54.00	1.00	5553716	18T332737
SLG-18-04	54.00	55.50	1.50	5553717	18T332737
SLG-18-04	55.50	56.20	0.70	5553718	18T332737
SLG-18-04	56.20	57.55	1.35	5553719	18T332737
SLG-18-04	57.55	59.00	1.45	5553721	18T332737
SLG-18-04	59.00	60.40	1.40	5553722	18T332737
SLG-18-04	60.40	61.00	0.60	5553723	18T332737
SLG-18-04	61.00	61.65	0.65	5553724	18T332737

<b>Drill Hole ID</b>	<b>FROM</b>	<b>TO</b>	<b>LENGTH</b>	<b>Sample No.</b>	<b>Lab certificate</b>
SLG-18-04	61.65	63.00	1.35	5553725	18T332737
SLG-18-04	63.00	64.30	1.30	5553726	18T332737
SLG-18-04	64.30	65.80	1.50	5553727	18T332737
SLG-18-04	65.80	66.65	0.85	5553728	18T332737
SLG-18-04	66.65	67.65	1.00	5553729	18T332737
SLG-18-04	67.65	68.30	0.65	5553730	18T332737
SLG-18-04	68.30	68.45	0.15	5553731	18T332737
SLG-18-04	68.45	69.50	1.05	5553732	18T332737
SLG-18-04	69.50	70.50	1.00	5553733	18T332737
SLG-18-04	70.50	71.50	1.00	5553734	18T332737
SLG-18-04	71.50	72.80	1.30	5553735	18T332737
SLG-18-04	72.80	74.25	1.45	5553736	18T332737
SLG-18-04	74.25	75.20	0.95	5553737	18T332737
SLG-18-04	75.20	76.20	1.00	5553738	18T332737
SLG-18-04	76.20	77.20	1.00	5553739	18T332737
SLG-18-04	77.20	78.20	1.00	5553740	18T332737
SLG-18-04	78.20	79.25	1.05	5553742	18T332737
SLG-18-04	79.25	80.75	1.50	5553743	18T333545
SLG-18-04	80.75	82.00	1.25	5553744	18T333545
SLG-18-04	82.00	82.70	0.70	5553745	18T333545
SLG-18-04	82.70	83.70	1.00	5553746	18T333545
SLG-18-04	83.70	85.00	1.30	5553747	18T333545
SLG-18-04	85.00	86.50	1.50	5553748	18T333545
SLG-18-04	86.50	88.00	1.50	5553749	18T333545
SLG-18-04	88.00	89.55	1.55	5553750	18T333545
SLG-18-04	89.55	90.00	0.45	5553751	18T333545
SLG-18-04	90.00	91.20	1.20	5553752	18T333545
SLG-18-04	91.20	92.20	1.00	5553753	18T333545
SLG-18-04	92.20	93.60	1.40	5553754	18T333545
SLG-18-04	93.60	93.85	0.25	5553755	18T333545
SLG-18-04	93.85	95.00	1.15	5553756	18T333545
SLG-18-04	95.00	96.00	1.00	5553757	18T333545
SLG-18-04	96.00	96.70	0.70	5553758	18T333545
SLG-18-04	96.70	97.75	1.05	5553759	18T333545
SLG-18-04	97.75	98.65	0.90	5553761	18T333545
SLG-18-04	98.65	99.50	0.85	5553763	18T333545
SLG-18-04	99.50	100.10	0.60	5553764	18T333545
SLG-18-04	100.10	101.00	0.90	5553765	18T333545
SLG-18-04	101.00	102.00	1.00	5553766	18T333545
SLG-18-04	102.00	102.55	0.55	5553767	18T333545
SLG-18-04	102.55	102.85	0.30	5553768	18T333545
SLG-18-04	102.85	103.50	0.65	5553769	18T333545
SLG-18-04	103.50	104.00	0.50	5553770	18T333545
SLG-18-04	104.00	105.00	1.00	5553771	18T333545
SLG-18-04	105.00	105.95	0.95	5553772	18T333545
SLG-18-04	105.95	107.00	1.05	5553773	18T333545
SLG-18-04	107.00	108.00	1.00	5553774	18T333545
SLG-18-04	108.00	109.50	1.50	5553775	18T333545
SLG-18-04	109.50	111.00	1.50	5553776	18T333545
SLG-18-04	111.00	112.50	1.50	5553777	18T333545
SLG-18-04	112.50	114.00	1.50	5553778	18T333545
SLG-18-04	114.00	115.10	1.10	5553779	18T333545
SLG-18-04	115.10	116.60	1.50	5553780	18T333545
SLG-18-04	116.60	117.60	1.00	5553781	18T333545
SLG-18-04	117.60	119.00	1.40	5553782	18T333545
SLG-18-04	119.00	119.95	0.95	5553783	18T333545

<b>Drill Hole ID</b>	<b>FROM</b>	<b>TO</b>	<b>LENGTH</b>	<b>Sample No.</b>	<b>Lab certificate</b>
SLG-18-04	119.95	121.80	1.85	5553784	18T333545
SLG-18-04	200.00	200.50	0.50	5553785	18T333545
SLG-18-04	211.50	212.00	0.50	5553786	18T333545
SLG-18-04	220.55	221.05	0.50	5553787	18T333545
SLG-18-04	227.05	227.55	0.50	5553788	18T333545
SLG-18-04	233.00	234.00	1.00	5553789	18T333545
SLG-18-04	234.00	235.00	1.00	5553790	18T333545
SLG-18-04	235.00	236.00	1.00	5553791	18T333545
SLG-18-04	236.00	237.00	1.00	5553792	18T333545
SLG-18-04	237.00	238.00	1.00	5553794	18T333545
SLG-18-04	238.00	239.00	1.00	5553795	18T333545
SLG-18-04	239.00	240.00	1.00	5553796	18T333545
SLG-18-04	240.00	241.00	1.00	5553797	18T333545
SLG-18-04	241.00	242.40	1.40	5553798	18T333545
SLG-18-04	242.40	243.90	1.50	5553799	18T333545
SLG-18-04	243.90	244.75	0.85	5553800	18T333545
SLG-18-04	244.75	246.25	1.50	5553801	18T333545
SLG-18-04	246.25	247.75	1.50	5553802	18T333545
SLG-18-04	247.75	248.75	1.00	5553803	18T333545

**Appendix C 2017 Exploration Report for Gossan Resources Ltd. by**

**A.H. Mumin and A. Mumin (297 pages)**

Includes Geotech Ltd., 2017. The Results of EMIT Maxwell Plate Modeling of selected VTEM anomalies *From* West Block, Glitter Lake Project and Grid Iron Lake Project, Ignace, Ontario. (see Appendix D)



**GOSSAN RESOURCES LTD.**

**STURGEON LAKE EAST EXPLORATION REPORT  
and  
RECOMMENDATIONS for DIAMOND DRILLING**

**September 2017**

THUNDER BAY MINING DIVISION  
NORTHWESTERN ONTARIO

**NTS: 052G15**

**SIX MILE LAKE, QUEST LAKE, BELL LAKE, DUNNE LAKE CLAIM AREA**

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## **Summary**

A diamond drilling program of 2000 meters in up to 15 drill holes is highly recommended to test a series of prospective drill targets defined along a corridor to the northeast of Glitter Lake, in the Sturgeon Lake VMS mining camp of Northwestern Ontario. The targets are defined by the coincidence of prospective geology with strong VTEM geophysical conductors and multiple geochemical indicators. Anomalous geochemistry includes the highest ranking for VMS deposits in SGH surveys, and Zn-Au-Ag (+ other metals) in alder geobotanical surveys. Four distinct multi-parameter targets have been identified that warrant testing by diamond drilling.

This report presents the results of a 2016 alder geobotanical survey and 2017 geophysical modeling of the target areas using Maxwell EMIT modeling techniques for VTEM. The report also summarizes the results of 2010 geochemical (SGH and Enzyme Leach) and VTEM geophysical surveys carried out over the property, and summarizes the geology of the Sturgeon Lake region and Glitter Lake area as presently understood.

The report concludes with a recommendation for a winter drilling program.

## **Location and Access**

The property is located in Northwestern Ontario about 195 km northwest of Thunder Bay (Figure 1). The eastern portion of the property is accessible by truck from the Trans-Canada Highway via Graham Rd ~90 km north to Brightsand Rd, 35 km west on Brightsand Rd and then by ATV's along forestry and bush roads to within 2.6 km of Glitter Lake. The western portion of the property is best accessed by flying into Glitter Lake from the Savant Lake aerodrome located at the north end of Sturgeon Lake. The area is scheduled for forestry harvest, which may improve access significantly in the near future.

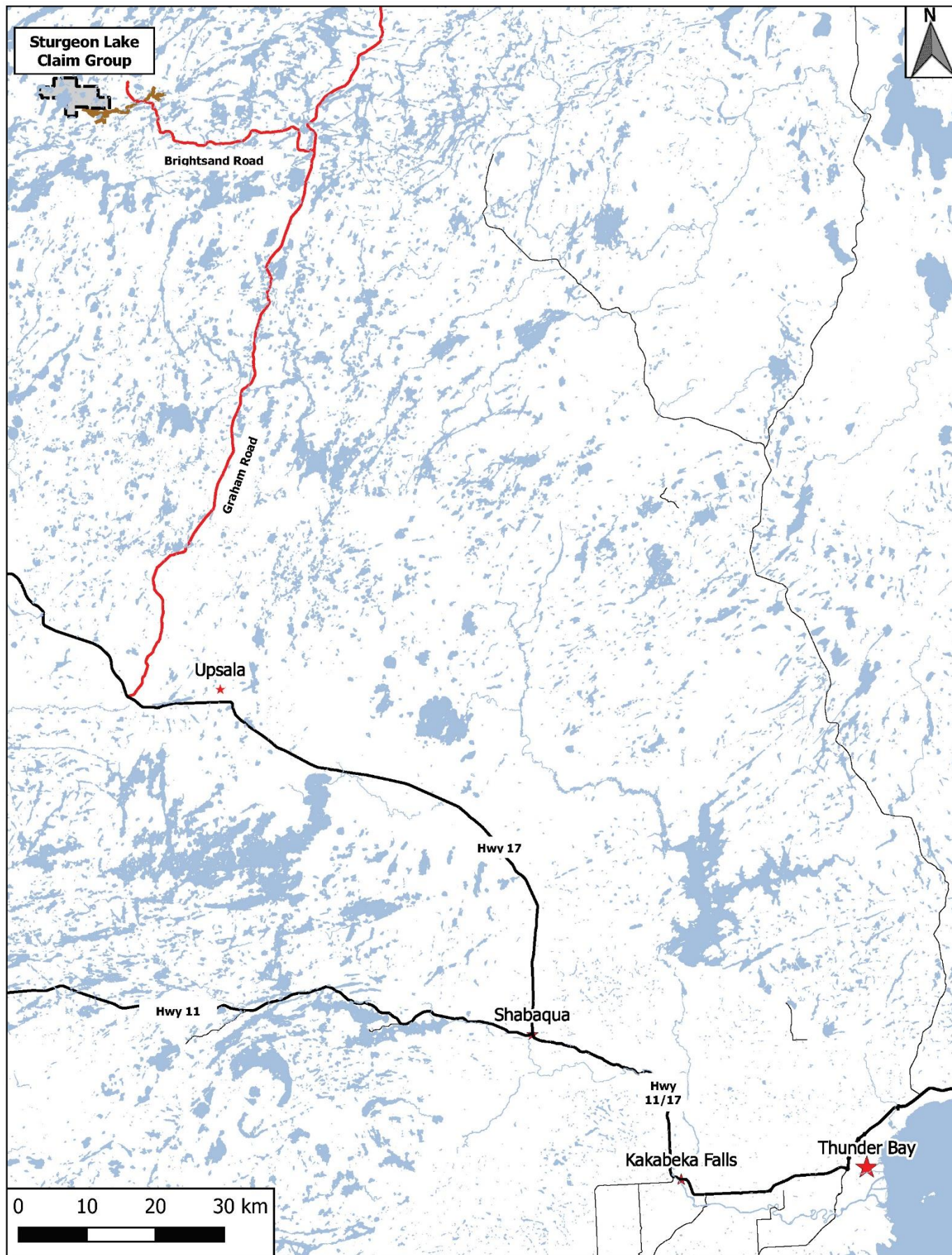


Figure 1: Sturgeon Lake property location map.

## Land Status

The Sturgeon Lake property consists of 14 claims totalling 193 claim units and 2944 hectares (Table 1, Figure 2). All claims are 100% owned by Gossan Resources Ltd.

Claim No	Township/Area	Owner	Claim Units	Area (Hectares)
1231906	Bell Lake Area	Gossan Resources Ltd (100%)	3	45.8
1231907	Bell Lake Area	Gossan Resources Ltd (100%)	16	257.1
1231908	Six Mile Lake Area	Gossan Resources Ltd (100%)	9	140.8
4211277	Dunne Lake Area	Gossan Resources Ltd (100%)	16	237.4
4211278	Dunne Lake Area	Gossan Resources Ltd (100%)	16	221.6
4211279	Dunne Lake Area	Gossan Resources Ltd (100%)	14	214.4
4211281	Dunne Lake Area	Gossan Resources Ltd (100%)	16	229.2
4211282	Dunne Lake Area	Gossan Resources Ltd (100%)	16	252.4
4211347	Dunne Lake Area	Gossan Resources Ltd (100%)	16	261.4
4211350	Dunne Lake Area	Gossan Resources Ltd (100%)	16	255.4
4224361	Dunne Lake Area	Gossan Resources Ltd (100%)	16	258.7
4224363	Bell Lake Area	Gossan Resources Ltd (100%)	10	160.0
4224364	Bell Lake Area	Gossan Resources Ltd (100%)	14	150.5
4224366	Quest Lake Area	Gossan Resources Ltd (100%)	15	259.3
<b>Totals:</b>			193	2944.0

Table 1: Claims list.

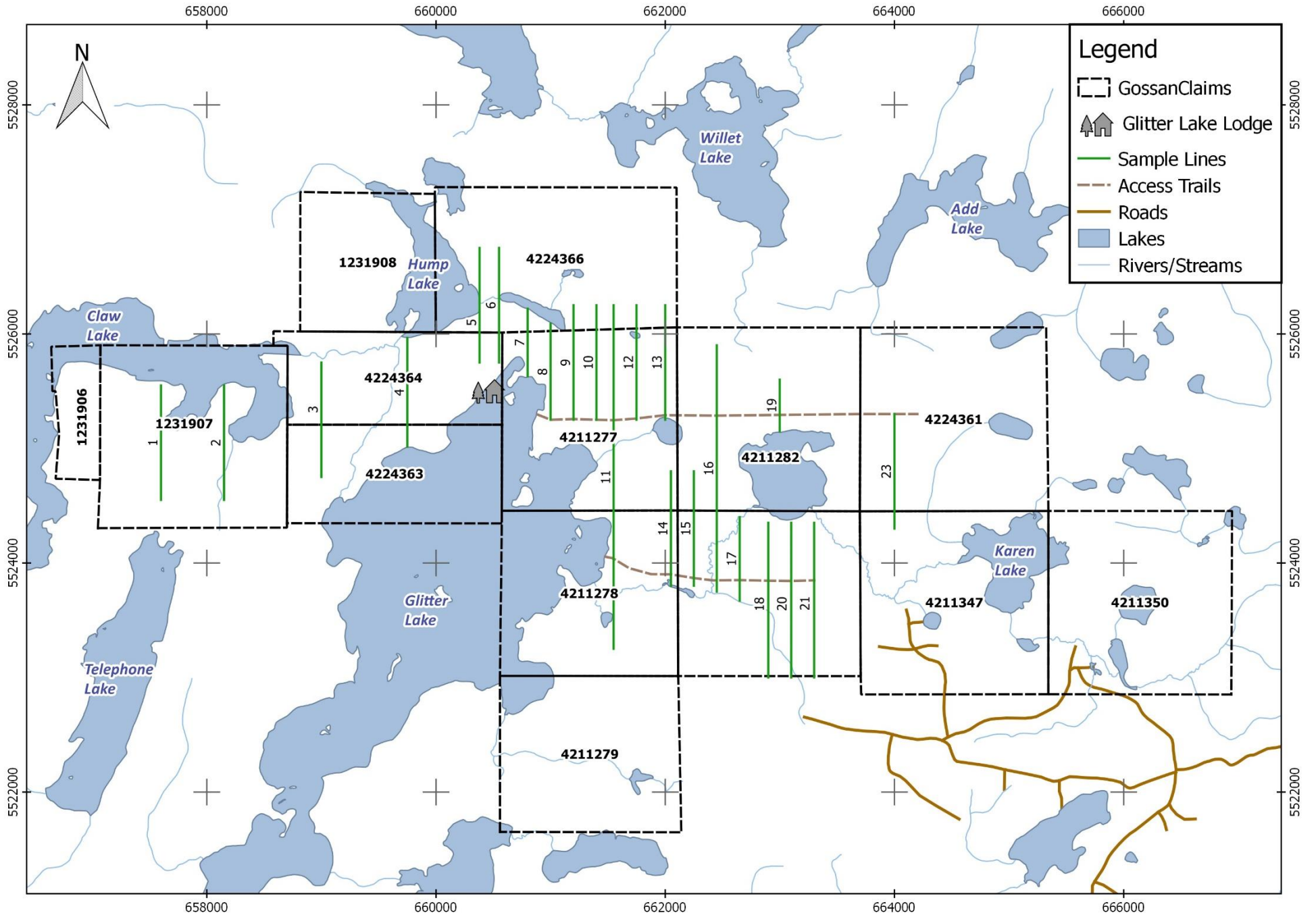


Figure 2: Sturgeon Lake property map.

## Exploration History

The Sturgeon Lake mining district is home to several historic VMS deposits, including the Mattabi, Lyon Lake, Sturgeon Lake, Creek Zone, and F-Group deposits. These were mined by Noranda Minerals from early 1972 to 1991. During this time, Noranda held much of the land that is currently part of the Gossan Resources Ltd. property. Several exploration holes were drilled in the Claw Lake and Hump Lake areas between 1970 and 1972 by Newconex Canadian Exploration Ltd, Mattagami Lake Mines Ltd, and Amax Exploration Ltd., some of which showed minor Zn+Cu±Pb mineralization in massive, semi-massive and stringer sulphides (Newconex Canadian Expl. Ltd, 1970a, 1970b; Mattagami Lake Mines Ltd, 1972; Amax Exploration Inc. 1972). However, these results were never followed up on during the life of the mines.

In 1990 the Ontario Geological Survey released airborne magnetic and EM survey data for the Sturgeon Lake-Savant Lake area (Ontario Geological Survey, 2003). The survey delineated extensive, subparallel conductive horizons in the Sturgeon Lake greenstone belt, as well as weak to moderate and local strong magnetic anomalies. The survey showed the conductive horizons continuing from the Noranda mines eastward past Glitter Lake and beyond.

In 1992 Noranda Exploration Company Ltd. along with Hemlo Gold Mines Ltd. conducted a geophysical and drilling program totalling 780 feet, targeting the Benderite showing at their Quill Lake property. The best drilling results were 1.65g/t Au over 1.7m and 2.05g/t Au over 1.2m (Gingerich, 1992).

In 1993 Noranda Exploration Company Ltd. undertook a mapping, sampling, and induced polarization survey program on their East Sturgeon Property, located south of Claw Lake. The mapping program identified at least three volcanic cycles which appear to be related to the volcanic cycles at the Sturgeon Lake complex. Several sulphide boulders containing up to 10-15% Py+Po±Cpy were discovered, but significant sulphide concentrations were not identified in outcrop (Smith, 1994).

In 2003, Unitronix Corp. in conjunction with Noranda Mining and Exploration commissioned a MEGATEM survey over an area that included a portion of Gossan's Sturgeon Lake claims west of Glitter Lake and extending eastward to the old Noranda Mine leases (now owned by Glencore). The survey produced a detailed airborne EM map along with a detailed airborne magnetic map that helps highlight some of the conductive structures in the area (Fugro, 2003).

Unitronix (Now called Unitronix Mining and Exploration) followed up on this survey in 2006 with a high resolution horizontal magnetic gradient and XDS-VLF-EM airborne survey focusing



on the Glitter Lake west, Claw Lake, and Telephone Lake areas (Barrie, 2006). The purpose of the survey was to identify additional magnetic and electromagnetic anomalies related to economic mineralization, and to provide additional structural and geological information in the area.

In 2010 Excalibur Resources Ltd. contracted Geotech Ltd. to conduct a VTEM survey over 1069 line kms over their Sturgeon Lake east property located between Claw Lake and Dunne Lake. The VTEM survey identified several parallel horizons with laterally extensive sulphide-bearing conductors that are located along the eastern extension of the Sturgeon Lake volcanic cycles. Excalibur followed up on these results with an enzyme leech soil geochemistry survey and a soil gas hydrocarbon survey to narrow the results in preparation of a diamond drilling program.

Between August 17<sup>th</sup> and October 22<sup>nd</sup> 2010, Excalibur Resources Ltd. drilled 21 holes totalling 3784m over their Sturgeon Lake properties. The holes followed up on several of the coincident SGH, enzyme leech, and VTEM anomalies identified earlier in the year. The drilling had mixed success, with favorable stratigraphy intercepted in several of the holes including several sulphide rich horizons, but minimal Cu-Zn mineralization with values up to 0.15% Zn over 9.4m and 0.1% Zn over 8.4m. In general, grades and stratigraphy became more favourable towards the west (towards the current Gossan property). However, the highest priority targets were not drilled due to summer access concerns, but these may be reached with a winter drill program.

In 2011 a soil gas hydrocarbon survey was undertaken by ActLabs for 3936499 Canada Inc. covering the ground just west of Claw Lake. 82 soil samples were collected and analyzed. The survey identified anomalous base metal targets with potential for copper mineralization (Bulatovich, 2011).

In 2012, Aur Lake Exploration Ltd. conducted a sampling assessment program on their Mattabi Claim Group covering the area south of Claw Lake and around Telephone Lake. A total of 10 samples were taken from outcrops along the south and east shores of Claw Lake, as well as along the west shore of Telephone Lake. The program encountered minimal mineralization in the outcrop samples, with values ranging from 4 – 228 ppm Cu, 5 – 111 ppm Ni, 17- 129 ppm Zn, and 0.3 - 1.2 ppm Ag. The program also located the core for S-92-01, which was a hole drilled west of Claw Lake by Noranda Exploration Company Ltd. in 1992. Aur Lake collected 39 samples from the drill core and sent them for assay to Accurassay Labs. Intersections of 1.14% Cu and 1.23% Zn over 2.05m were reported from the samples (Newton, 2012).

In 2016 Gossan Resources Ltd. carried out an alder geochemical survey with details presented in (Mumin, 2016) and in this report. The survey delineated several Zn-Au-Ag ( $\pm$  other metals) anomalous zones coincident with VTEM conductors and SGH anomalies.

## Regional Geology

The Sturgeon Lake property is located in the Wabigoon subprovince within the Superior geological province (Trowell, 1983). It is part of the Sturgeon Lake greenstone belt which is comprised of Neo-Archean mafic to felsic volcanic rocks, along with clastic and chemical metasediments. The Southern Sturgeon Lake greenstone belt hosts the Sturgeon Lake caldera complex, which is a 2.735 Ga mafic to intermediate to felsic submarine volcanic complex, (Franklin et al, 1977; Morton and Franklin, 1987; Morton et al, 1999; Mumin et al, 2007). To the south of the southern Sturgeon Lake belt are tonalite gneisses from the English River assemblage. The Beidelman Bay tonalite pluton intrudes the English River assemblage and the southern Sturgeon Lake greenstone belt stratigraphically below the caldera complex. To the east, the greenstone belt pinches out below the Vista Lake plutonic complex and the Quest Lake metasediments (Sanborn-Barrie et. al, 2002). Metamorphic grade varies across the region from greenschist to amphibolite facies (Figure 3).

The Sturgeon Lake caldera hosts several past producing VMS deposits, including the Mattabi, Sturgeon Lake, Lyon Lake, Creek Zone and F-group deposits. Production from these five deposits totalled 18,663,000 tonnes of ore averaging 8.5% Zn, 1.4% Cu, 0.8% Pb, and 122.3 g/t Ag. The deposits lie along an orthogonal series of synvolcanic faults that form grabens and fault scarps (Mumin et al, 2007). They are capped by or emplaced within a series of E-W trending rhyolitic/dacitic horizons at three discrete stratigraphic levels, and are directly hosted within blue-quartz crystal bearing rhyolites. The eastern and western extents of the caldera complex remain poorly defined.

## Property Geology

Gossan Resources' Sturgeon Lake property is located on the eastern limb of the Sturgeon Lake caldera complex. The lithology consists primarily of intermediate to mafic volcanic flows and tuffs. However, several rhyolitic to dacitic tuffs with volcanoclastic sedimentary layers are present along several distinct horizons that appear to be continuations of the felsic volcanic horizons that host the Lyon Lake, Sturgeon Lake and Mattabi deposits to the west. Drilling by Excalibur resources in 2010 shows that these horizons are comprised in part of hydrothermally altered blue quartz-eye rhyolites with varying degrees of hydrothermal alteration. Blue quartz-eye rhyolites are the key marker horizon for VMS deposits in the Lyon Lake and Sturgeon Lake mines a few km east of Gossan's property. The felsic horizons are also locally intercalated with metasedimentary rocks, including some graphitic beds, sulphides bearing layers, and minor Zn + Cu.

Historical EM (VLF, AEM) and current (2010) VTEM surveys show that several sub-parallel and laterally extensive conductive horizons transect the property. These conductors appear contiguous with the felsic horizons that host the Sturgeon Lake and Lyon Lake group of VMS deposits (Figure 4). Three main conductive horizons run through the property, with several important areas comprised of multiple stacked conductors. Some of the conductors were drilled at selected locations in the eastern part of the property by Excalibur Resources Ltd. in 2010, and found to be up to several meter thick pyrrhotite and pyrite bearing horizons with local graphitic sections and minor but notable amounts of Zn and Cu. This drilling showed increasing Zn, Cu, sulphides and coincident altered blue quartz-eye rhyolites progressing towards Gossan's property, where the best geophysical anomalies as identified in the 2010 survey are located, but not dill tested due to access issues at that time.

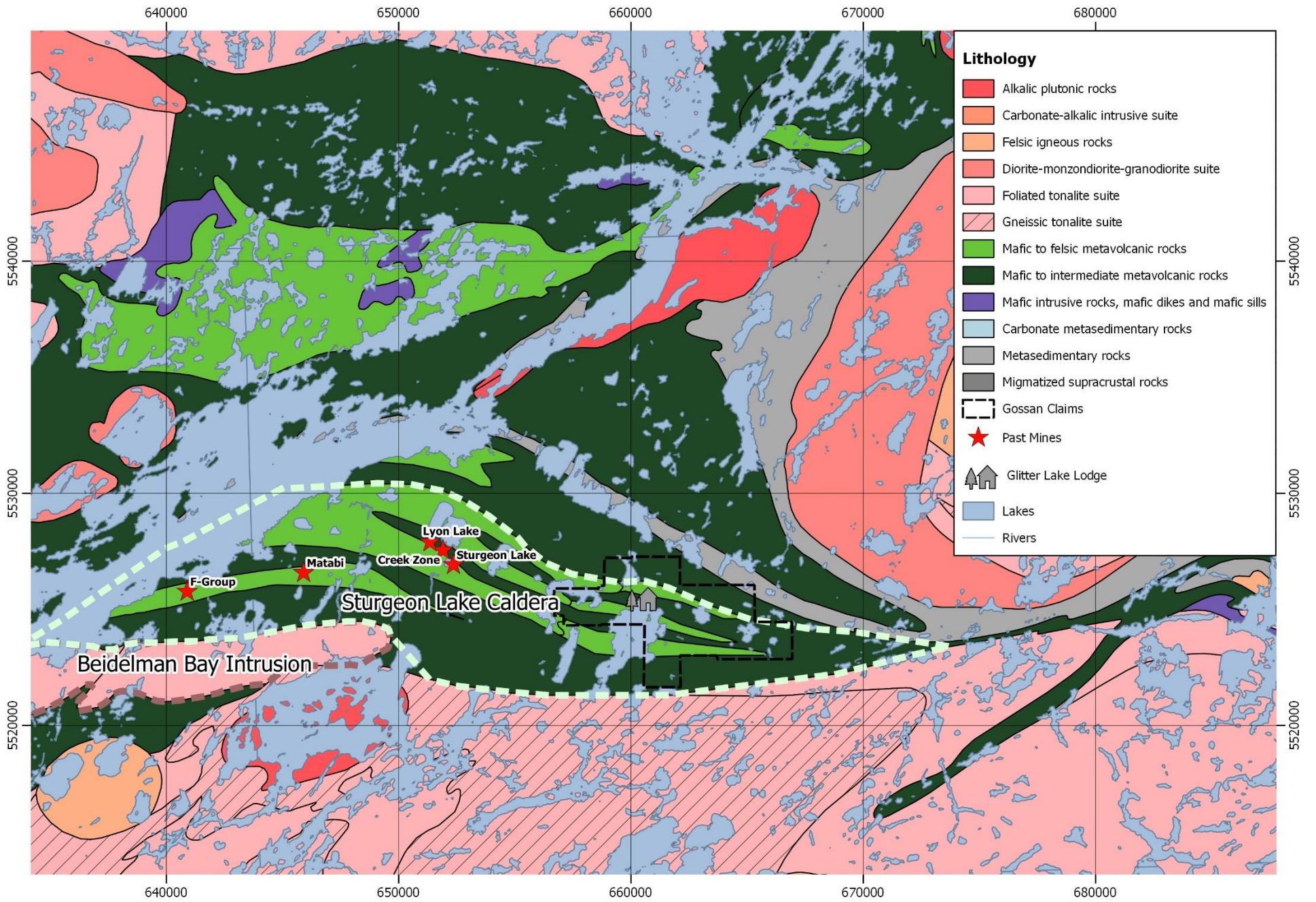


Figure 3: Regional Geology map. Modified from Ontario Geological Survey Bedrock Geology of Ontario, 2011.

## Summary of 2016 Alder Geobotanical Survey

Gossan Resources Ltd. conducted an alder geochemical survey between September 2<sup>nd</sup> and October 1<sup>st</sup>, 2016 (Mumin 2017). The purpose of the program was to assess the potential of the various geophysical targets identified in the 2010 VTEM survey, by testing for anomalous metals in the secondary environment (overburden). Geochemical profiling is also necessary because of the paucity of outcrop in the area. A total of 444 samples were taken across 23.4 line km run perpendicular to the geophysical conductors. Twenty-two sample lines were run N-S and are spaced approximately 150m to 300m apart, with the closer-spaced lines placed over areas that needed more detailed coverage (Figure 4). Sampling along the lines started at 100m spacing away from the target horizons, increasing to 50m approaching the VTEM geophysical targets, and 25m overtop of the projected geophysical target zones.

The alder species on the property included *Alnus Rugosa* (Speckled Alder, Figure 5) and *Alnus Viridis* (Green Alder, also known as *Alnus Crispa*, Figure 6). The two species were typically not found in the same terrain, with *Alnus Rugosa* preferring the wetter low-ground (swamps and muskegs) and *Alnus Viridis* preferring the drier high ground areas with good drainage (Figure 7). Because they do not co-exist in the same environment on the Sturgeon Lake Property, direct comparisons of metal concentrations between the two species were not possible. However, it has been suggested in past studies that the Zn and Au metal concentrations in *Alnus Rugosa* and *Alnus Viridis* are similar enough that data from the two species may be combined (Dunn, 1984). Therefore, both species were sampled to ensure adequate coverage of the property.

The samples consisted of bundles of 5-6 twigs, each ~15-30cm long and less than 1.5 cm in thickness (Figure 8). Younger branches between 2-5 years old were targeted. The small size of the samples will increase the background variability. Each bundle of twigs was secured with a cable tie with the sample tag wrapped around the bundle. The samples were allowed to dry indoors for at least one week, and then packaged into rice bags. At the end of the program the samples were brought to Thunder Bay and shipped to Acme Laboratories (Bureau Veritas Mineral Laboratories) in Vancouver, BC for analysis. The samples were thoroughly dried and then macerated, and finally analyzed using the VG101-EXT package which is an ICP-MS technique that provides analysis for 53 elements. The samples were not ashed in order to avoid metal volatilization and other possible analytical errors. Consequently, metal values and anomalies are expected to be subtle.

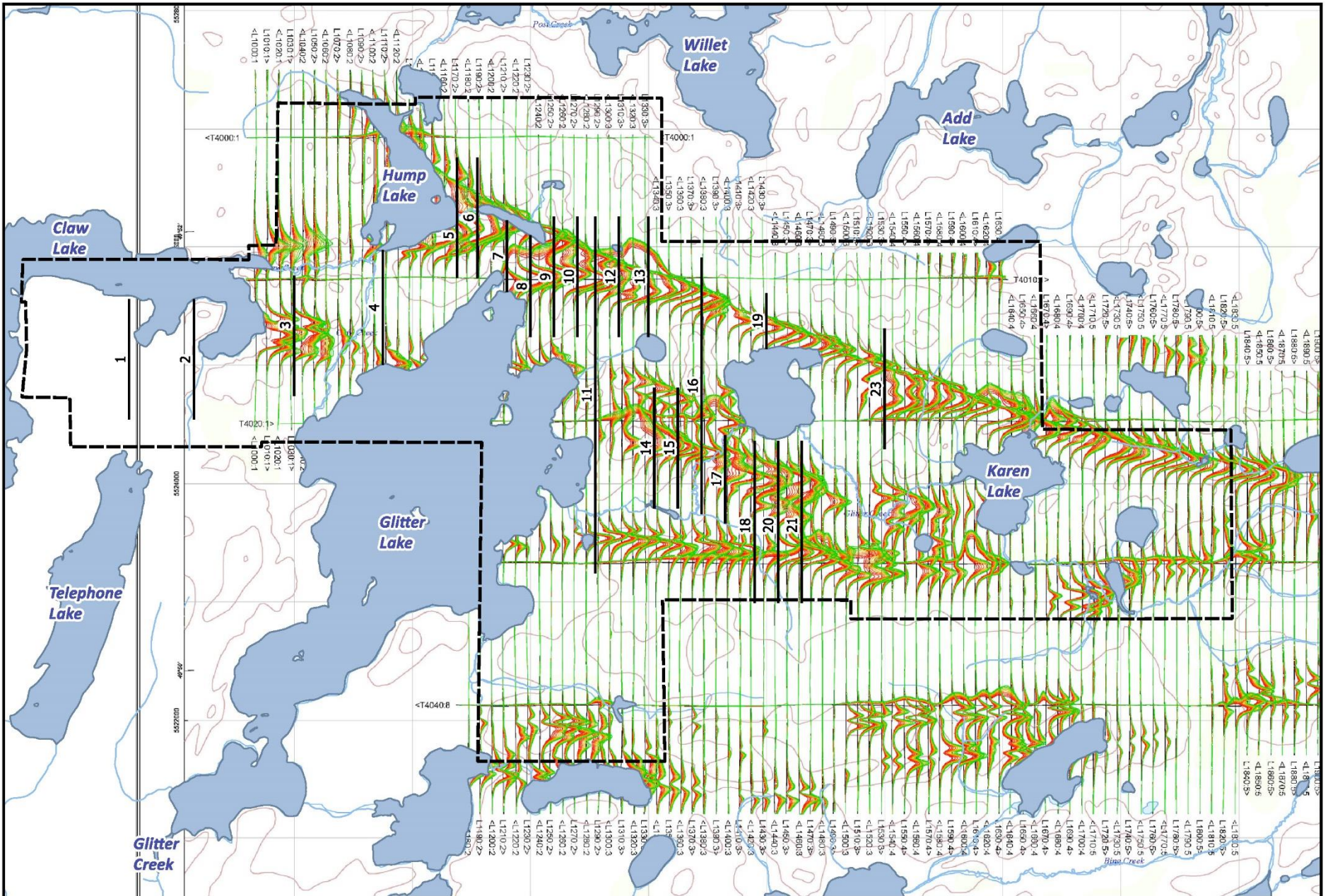


Figure 4: 2010 Sturgeon Lake VTEM B-Field profile with the alder survey shown as black N-S numbered lines (Geotech, 2010). Profile is in the 0.818 – 3.286 ms time channels.



Figure 5: *Alnus Rugosa*, found primarily in the wetter, low ground terrain.





Figure 6: *Alnus Crispa* (*A. Viridis*), found in higher, dry terrain.

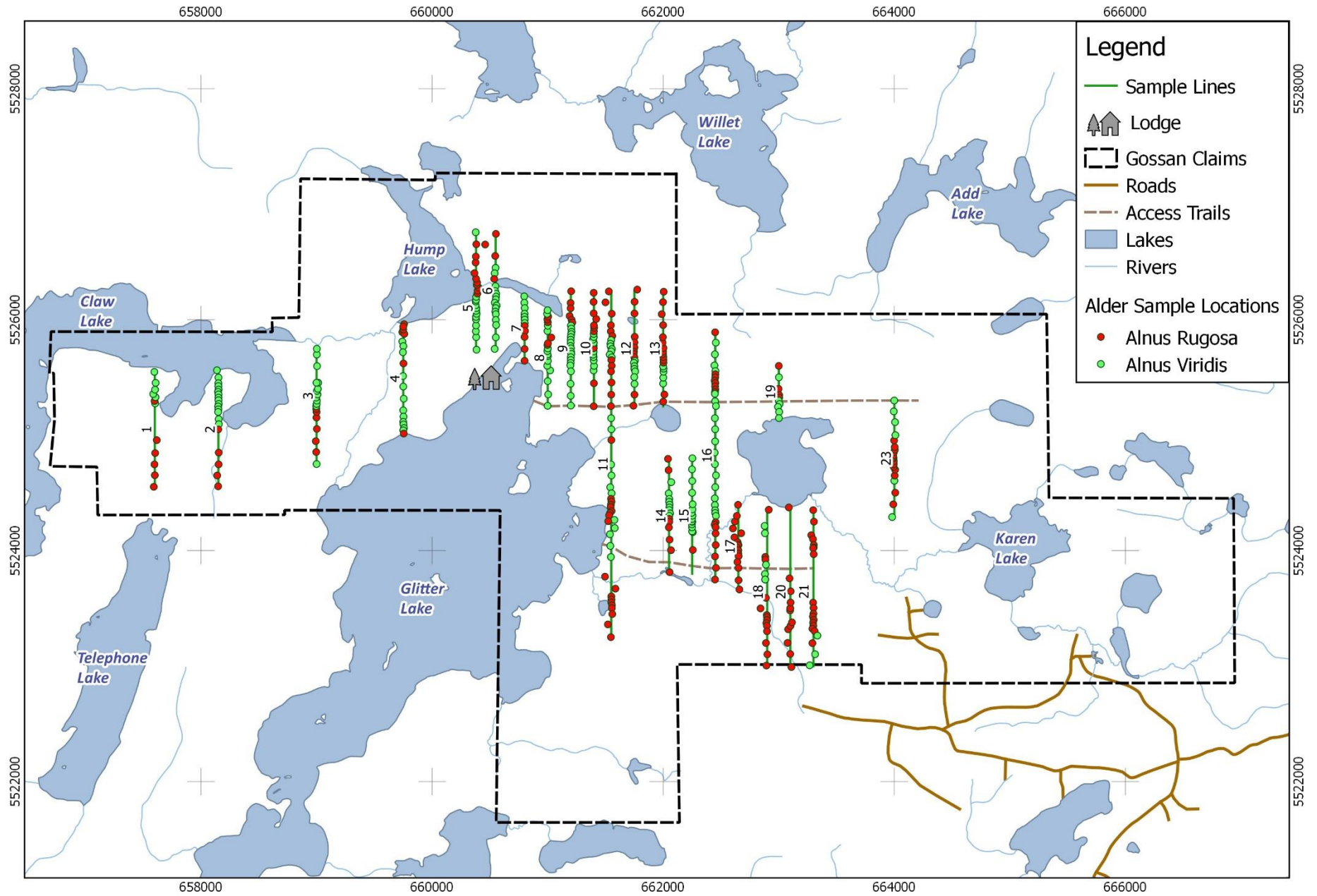


Figure 7: Alder species and sample distribution across the 22 sample lines.



Figure 8: Photograph showing a typical alder sample being taken.

## Results and Discussion

The 2016 Sturgeon Lake alder survey identified several anomalous metal zones coincident with strong VTEM conductors. The most important anomalous target metals in this survey are Zn, Ag, Au and Pb followed by Ni and Co. Copper values were too variable to interpret. Other important distinct anomalies are observed for As, K, Rb, Cs. The best results occur in a belt along a northwest-southeast trending corridor east and northeast of Glitter Lake, encompassing 4 distinct VTEM targets. These anomalous areas are considered highly prospective, and labelled "A", "B", "C" and "D" (Figure 9). The results are plotted as geochemical line profiles in Appendix A, and axial traces for anomalous Zn, Ag and Au are presented in Figures 10-12.

### Interpretation of Geobotanical Results

Geochemical surveys are difficult to interpret, as many factors affect the results. Assuming consistent and reliable analytic results are provided by a reputable lab, which in this case is Bureau Veritas Vancouver (ACME), and consistent sampling as described above, survey results will vary according to environmental factors. These factors include the ability of plants to uptake, store and redistribute some metals versus their tendency to reject others. Consequently, not all metals are useful in any geobotanical survey. In this survey, good metal uptake by the alders appears to occur for Zn, Ag, Au, Ni, Co, K and Rb, and to a lesser extent Pb, As, Cd and Cs. Cu did not show a good response in the alders, even though it is known to be present in the rocks and is associated with the sulphides in the area of the survey. The survey results are strongly influenced by the pH and Eh of the soils (Dunn, 2007). This affects metal mobility in groundwater solution and the distribution of anomalous metal values across a survey area. This also affects the ability of plants to take up metals, notwithstanding the effectiveness of root tips to dissolve minerals and put metals in solution. However, in exploration, we are interested in the anomalous presence of metals (over and above normal plant metal uptake). Anomalous metal enrichments in the overburden that originate from a nearby bedrock source may be present due to hydromorphic transport, glacial dispersion, and/or ionic transport. In the present survey area, pH will vary according to depth and composition of overburden, as well as bedrock composition. The presence of carbonate minerals will drive pH to neutral or slightly alkaline conditions. Rocks without carbonate minerals, but having oxidizing sulphides support a lower pH, and in the case of oxidizing sulphides will generally drive the pH to acid conditions. Topography and ground water conditions (stagnant or flowing, above or below the water table), and the presence or absence of organic material strongly affect the Eh (oxidation state) and hence pH. Flowing water/groundwater and locations above the water table are generally oxidizing. Stagnant water and high organic contents (e.g. swampy environment) and locations below the water

table are generally reducing. Oxidized fluids will result in a redox cell above a weathering (oxidizing) sulphide bearing body, with ionic metal transport and low pH conditions (Cameron et al., 2004, Hamilton et al., 2004a, 2004b). Most base metals, with the exception of lead, will go into solution and are highly mobile at low pH, but revert to very low mobility at neutral to alkaline conditions. In contrast, gold and lead have low mobility from alkaline to neutral pH (Dunne, 2007), although Au might become mobile under sufficiently alkaline conditions. Simply stated, different metals have different mobilization characteristics. In addition to the above, glacial dispersion of bedrock material and ground water migration effects are probable in the survey area and appear to be reflected in the metal distribution observed in the present survey. The net result of all the above is a potentially broad geochemical halo emanating outward from a source, with varying metal responses, including proximal and distal anomalies, and apical vs peripheral or “rabbit ear” type anomalies, and also distal anomalies that are displaced from their bedrock source. For example, if conditions are oxidizing and acidic above a sulphide body, some metals may be driven to the periphery to produce “rabbit ear” or distal anomalies. If conditions above a similar body are reducing and higher pH, it may tend to produce more of an apical or proximal type anomaly, however, the response is different for different metals. In the Sturgeon Lake mining camp, carbonate mineral alteration is very common, which will have the tendency to increase pH in some locations, resulting in locally depressed metal mobility, and relatively weak anomalies. In particular, sulphide-rich ores that are underlain by carbonate-rich alteration zones, may result in acid conditions next to neutral or alkaline pH. For the present survey, zones of greatest interest are those where a metal anomaly persists over multiple lines, is comprised of multiple metals, and occurs in multiple samples along any particular line. Several zones in the current survey meet these criteria, and all appear coincident with and/or adjacent to strong VTEM conductors.

Zn, Ag, Au and Pb gave the most distinct responses associated with underlying conductive bodies, and may be the best indicators of VMS style mineralization. Ni and Co also gave strong responses in many locations, but this may be due to the presence of mafic intrusions and/or dikes, notwithstanding that these metals can also occur in anomalous amounts associated with VMS or magmatic Ni-Cu mineralization. Au background levels were generally below the detection limit of 0.2 ppb, but gold was detected in the 0.2-0.5 ppb range in multiple samples associated with several of the anomalous areas.

Cu response is fairly noisy and relatively low, which may be the result of the alder plant’s low affinity for Cu, or a lack of Cu in the environment. Sulphur locally displayed a counter-intuitive response with a distinct depletion anomaly associated with some of the conductive horizons. The mechanism behind this response is not fully understood, but upon release, sulphur may be recaptured as sulphate (gypsum, anhydrite or barite) in the overburden, and therefore not be available for uptake by plants.

In all geochemical line profile plots, the red bars represent the approximate location of the underlying VTEM conductive bodies. The VTEM locations provide are guides only due to the complex response caused in a number of locations by two or more conductive bodies, and the presence of both flat-lying and steeply dipping conductors. Red dashed boxes show the location of the anomalous zone being discussed. Refer to the section on geophysics and in particular the Maxwell modeling for the modelled orientation of conductors.

The linear trends of the most important Zn, Ag and Au anomalies are shown in Figures 10, 11 and 12. Geochemical plots are located in Appendix A.

### **Anomaly A**

Anomaly A is located along the northern VTEM anomaly north of Glitter Lake, and crosses lines 8 to 13 and line 16. The VTEM anomaly in this area appears to branch into two or more sub-parallel conductors, with possible unconformable zones extending for a few hundred meters southwest from the northwest trending conductive zone. This mimics the trend of feeder zone structures documented by Mumin et al. (2007) for the known ore bodies to the east, but may also represent a change in stratigraphy along an unconformity. Lines 8, 9, 10 and 12 show a broad Zn + Ag anomaly associated with the VTEM conductors. Line 16 shows a focused strong Zn + Ag anomaly directly over the interpreted location of the conductor, with possible associated peripheral Pb anomalies. Multi-sample subtle gold anomalies are also present on lines 8, 9, 10 11, 12, and 13 with the strongest Au response coming from lines 11 and 12. Gold appears also to be associated with the VTEM conductors. There is a distinct antithetic relationship between gold and Zn-Ag anomalies, which is likely the result of the contrasting mobility of Au vs Zn-Ag in the presence of oxidizing sulphide bodies. Metal distribution could also be affected by carbonate-rich zones underlying a sulphide body as is the case at the Lyon Lake, Sturgeon Lake, Mattabi and F-Group deposits (Mumin et al., 2007). The result is differential metal mobilization and contrasting anomalies

### **Anomaly B**

Anomaly B is located on the southernmost VTEM conductor of interest and is delineated by geobotanical surveys along lines 18, 20 and 21. Alder coverage along these lines is incomplete, however the area of anomaly B was reasonably well represented. The VTEM conductor of anomaly B is modeled as south dipping along its western extent, with the possibility of changing dip along strike. The Zn + Ag + Pb + Cu response is indistinct to subtle on lines 18 and 20, however, line 21 has a strong Zn + Pb + Ag anomaly. Most notably, the gold response is strong on all three lines and amongst the highest and most abundant on the property, making this an interesting target. However, there are gaps in sample collection above parts of the projected sulphide conductor, therefore part of the anomaly may have been missed.

### **Anomaly C**

Anomaly C is located immediately east (and possibly south) of the southeastern shore of Hump Lake on lines 5 and 6. The VTEM anomaly is very strong and complex in this location and appears to be the result of at least two subparallel sulphide zones. This zone may also be the continuation of the northern conductor from anomaly A. Anomaly C is distinguished mainly by a broad Zn + Ag + Pb anomaly associated with the VTEM conductor(s). However, there is no detected corresponding Au anomaly in this area. Historic drilling conducted around the shores of Hump Lake in 1972 intersected trace to minor amounts of Cu+Zn in disseminated to massive sulphides (Mattagami, 1972),.

### **Anomaly D**

Anomaly D is loosely defined by lines 15, 17 and 21, with a significant gap in sampling coincident with the projected VTEM conductor along lines 18, 20 and 21. The area is associated with moderate Zn and Ag anomalies and a strong gold anomaly associated with the projected VTEM conductors on line 21. However, isolated gold spikes occur also on lines 18 and 16 that may also be associated with the same zone. Alder coverage in this zone was particularly poor. The terrain was mostly muskeg comprised of spruce, sphagnum moss, and Labrador tea with little other vegetation, and alders were not present for sampling over a large portion of the conductive zone. The VTEM conductor of anomaly D is modelled as flat-lying to shallow dipping and may or may not have a bedrock expression. The flat-lying nature of the conductor may explain, at least in part, the dispersed nature of the geochemical signature.

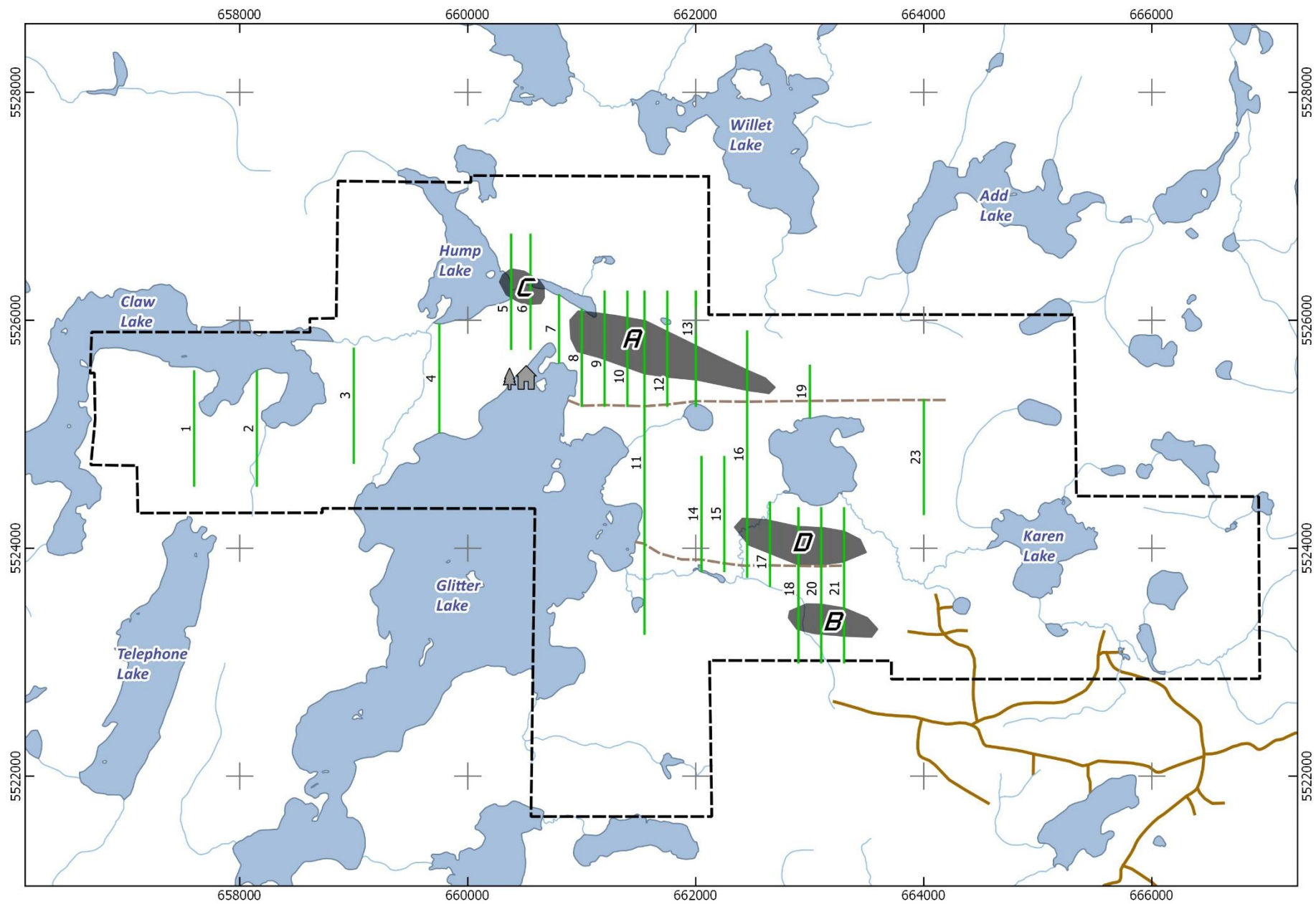


Figure 9: Priority targets with coincident strong VTEM response and anomalous metals in the secondary environment (overburden).



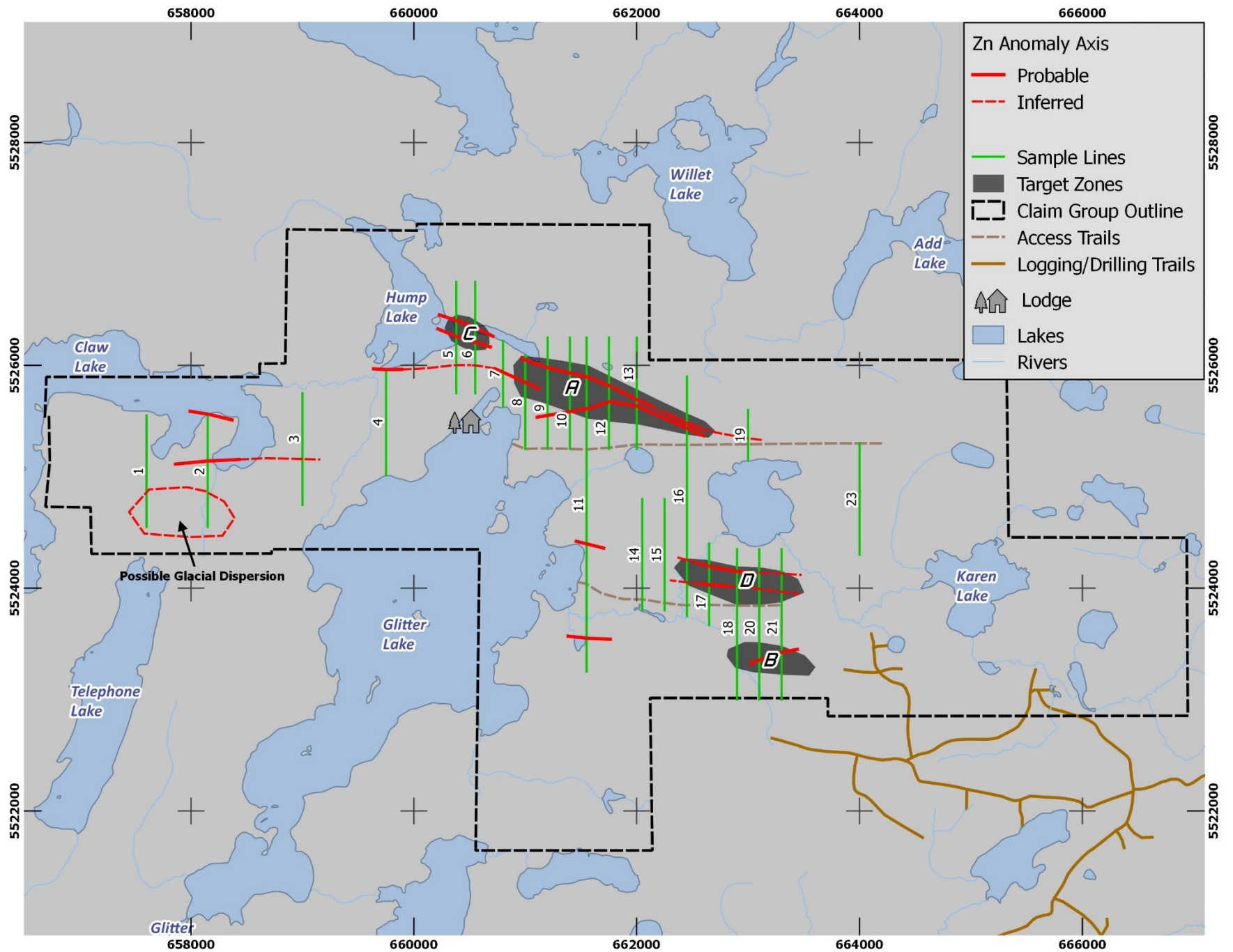


Figure 10: Zinc anomaly trends. Red lines are the axis of linear trends, and dashed areas may be related to glacial dispersion from adjacent sulphide conductors.

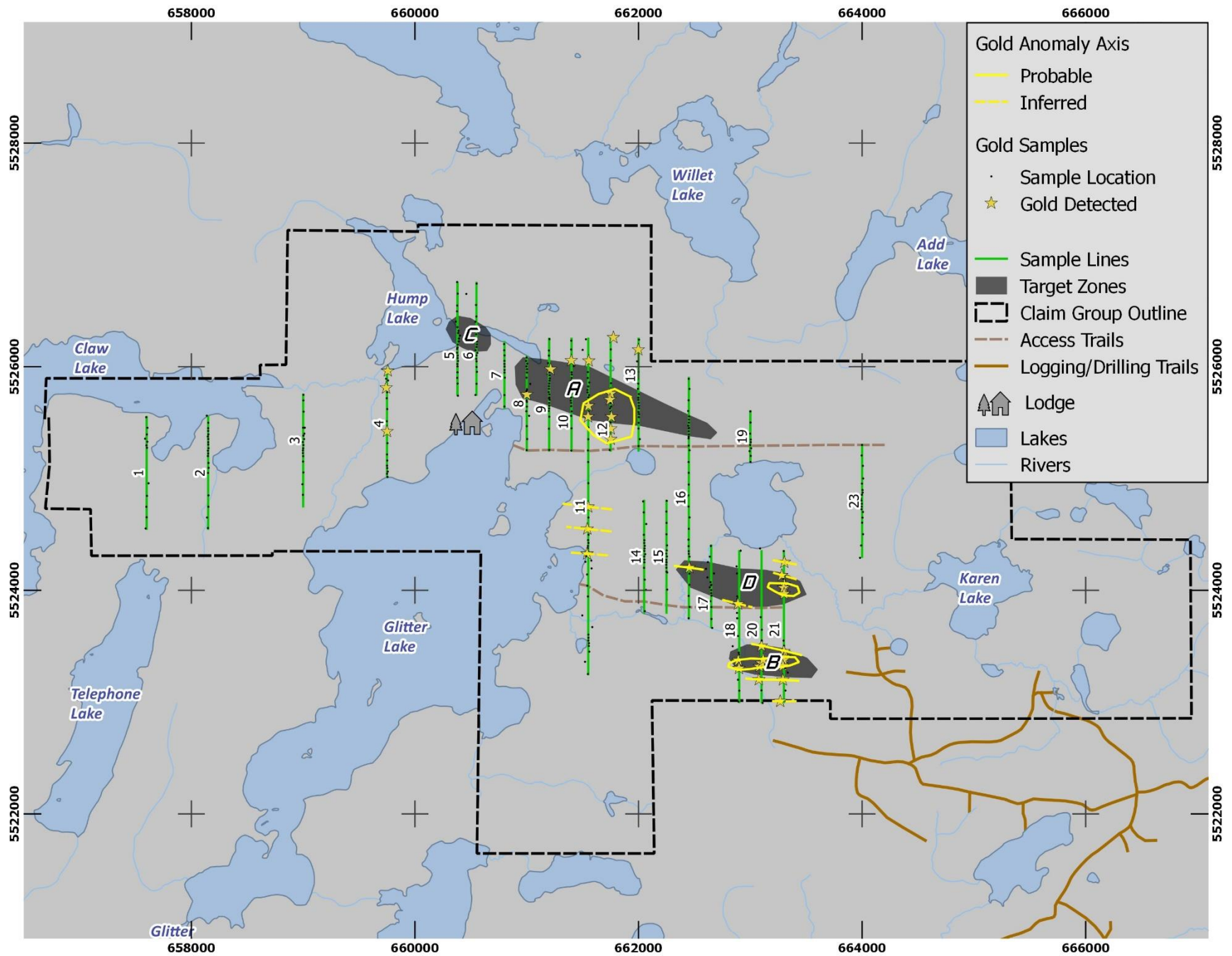


Figure 11: Gold anomaly trends. Yellow lines are the axis of linear trends, yellow stars are random or isolated anomalous samples that may be related to glacial dispersion, ground-water migration and/or other factors including possible structures.

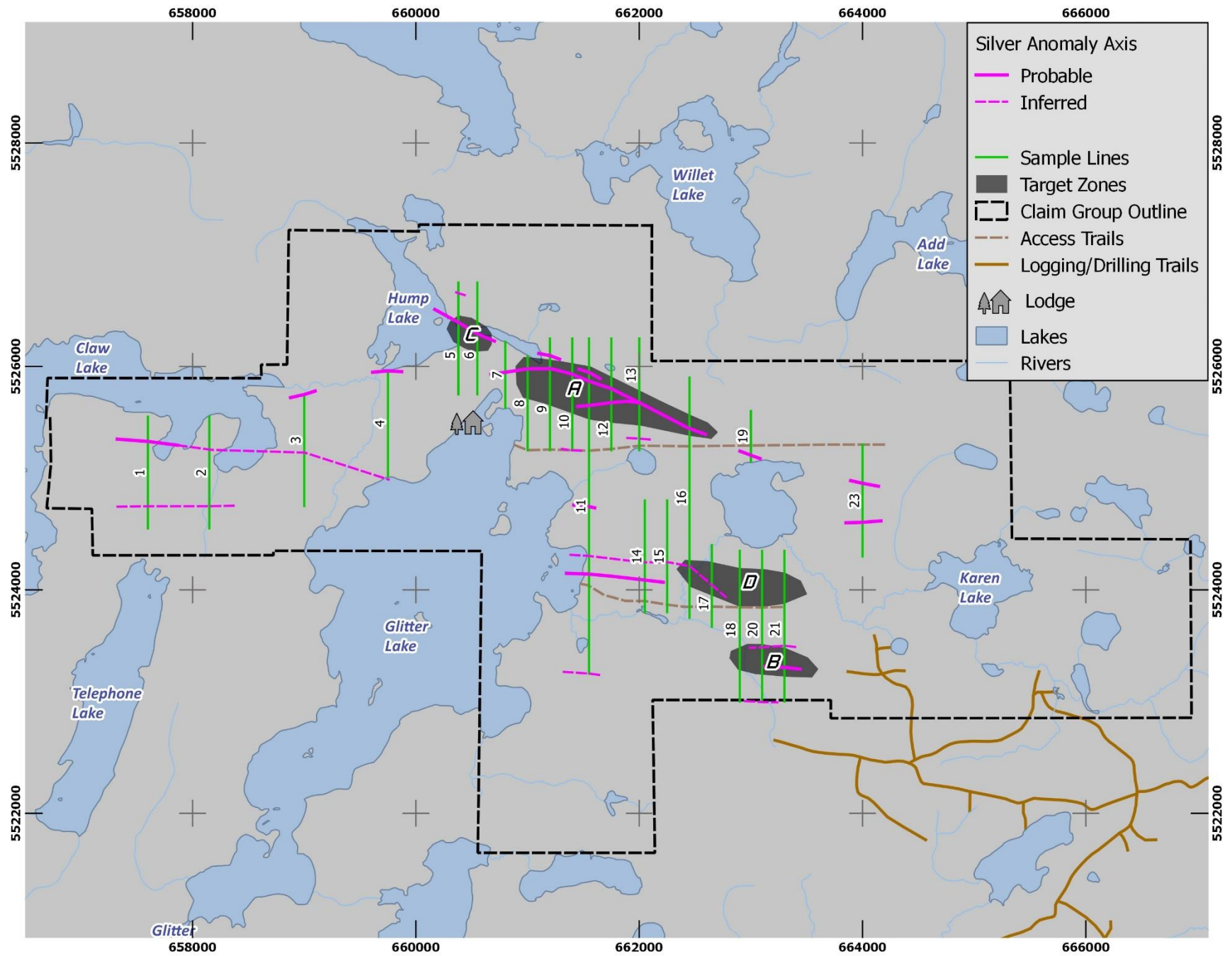


Figure 12: Silver anomaly trends. Purple lines are the axis of linear trends. Dashed lines are of the axis of poorly defined trends.

## **SGH and Enzyme Leach Geochemical Surveys**

SGH geochemical surveys were carried out in 2010 by Excalibur Resources Ltd., and reported on by Dale Sutherland (Sutherland 2010). The survey was carried out at numerous locations within the current Gossan Sturgeon Lake property as well as east of the property. The SGH surveys from a broad area resulted in several distinct targets being identified with the highest possible ranking of 6 out of 6 for VMS deposits, along with some lower ranked targets. All the highly ranked targets occur within Gossans property along a corridor on the Northeast side of Glitter Lake (Figure 13). These SGH targets are also coincident with the best identified VTEM and Alder Zn-Au-Ag anomalies, described herein and shown in Figure 13.

An enzyme leach soil survey was also carried out at the same time as the SGH survey, and for the most part using the same materials. Although enzyme leach generated some anomalous results for Zn, Cu and other metals, the survey is not particularly helpful since suitable soil samples were not obtained over the VTEM targets of interest due to swampy conditions, which was one of the main reasons for carrying out the alder and SGH surveys. Nevertheless, some enzyme leach samples do show anomalous metals near the zones of interest.

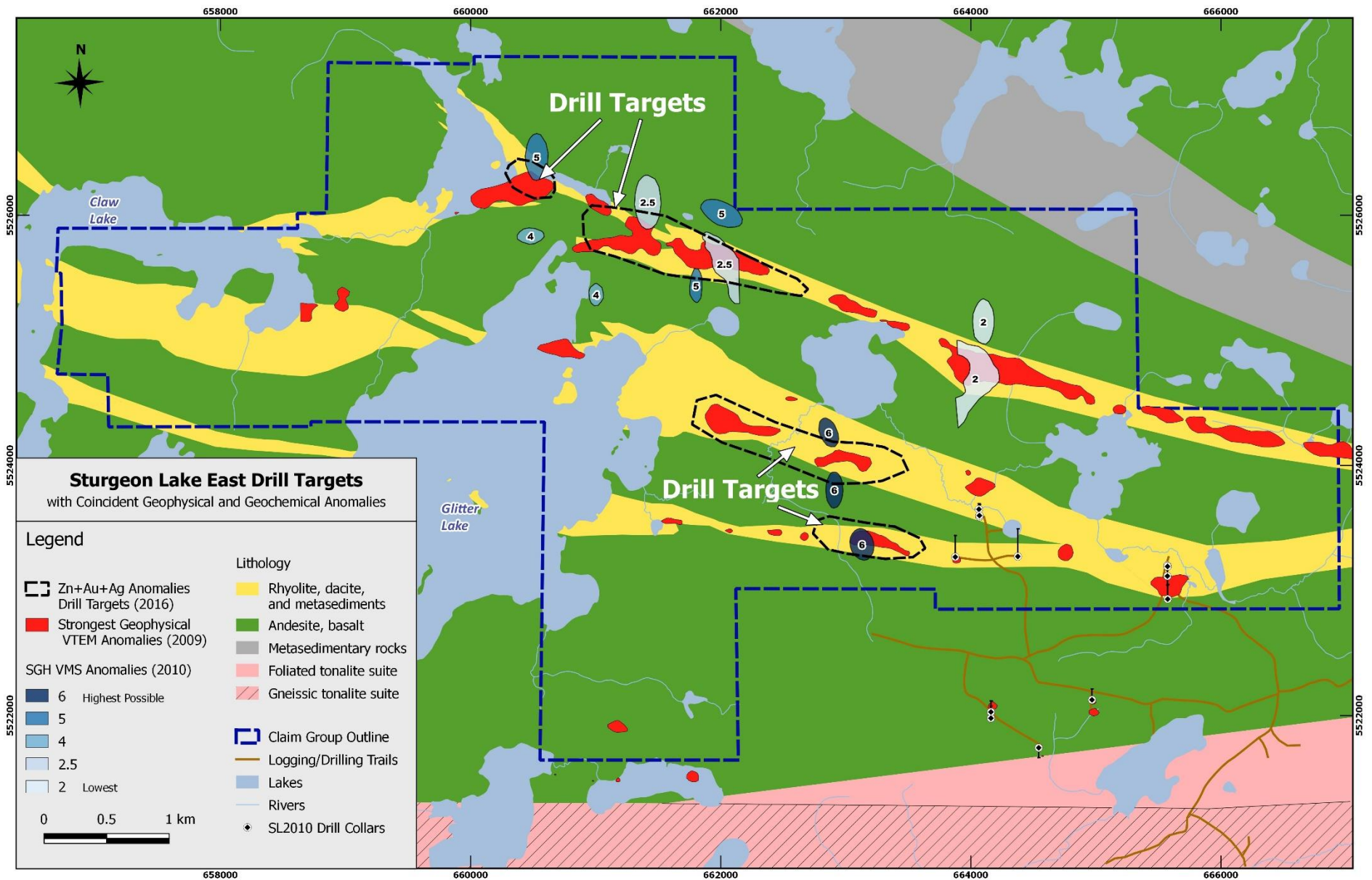


Figure 13: Coincident anomaly map including Zn+Au+Ag anomalies, strongest VTEM Tau anomalies, and the 2010 SGH anomalies.

## Geophysical Surveys

A VTEM plus magnetic survey was flown at 100 meter spaced lines over Gossan's Sturgeon Lake property in 2010 for Excalibur Resources (Geotech Ltd, 2010). This data is now the property of Gossan. A portion of the survey is shown in Figure 4 illustrating the VTEM B-Field mid-time data for the 0.818 to 3.286 ms time channels (Geotech Ltd, 2010). The 2010 VTEM survey shows extensive conductive zones that correlate with sulphide bearing horizons known to contain from minor to near massive sulphides. Of particular interest are the VTEM conductive bodies that straddle at least 3 sulphide-bearing horizons along the northeast side of Glitter Lake. These sulphide-bearing horizons correlate with the along-strike extend of the Lyon Lake and Sturgeon Lake massive sulphide ore deposits (Figure 3). In a corridor northeast of Glitter Lake, they form a series of strong modelled VTEM TAU anomalies (Figure 13; Geotech Ltd, 2017; Appendix D) that are coincident with strong and distinct Zn-Au-Ag ( $\pm$  other metals) alder geochemical anomalies (this report), as well as the highest VMS rankings for SGH surveys (Sutherland 2010), enzyme leach survey data, and highly prospective geology. Consequently, these anomalously conductive zones represent a series of highly prospect VMS targets that are believed to be the best untested coincident geophysical-geochemical-geological near-surface Zn-Cu-Ag-Au VMS targets in the Sturgeon Lake mining camp.

In 2010 Excalibur Resources contracted Geotech to analyse the results of the 2010 VTEM survey and use Maxwell EMIT modeling and RDI (resistivity-depth profiling) to determine the orientation and conductivity of the some of the best identified VTEM anomalies from that survey (Appendix E). In 2017 Gossan Resources contracted Geotech to further analyse the results of the VTEM survey and use Maxwell EMIT modeling and RDI (resistivity-depth profiling) to determine the orientation and conductivity of the VTEM anomalies that are coincident with the Alder and SGH geochemical anomalies (Appendix F). The modelling concentrated on the anomalous bodies to the northeast of Glitter Lake, which are labelled A, B, C and D in Figures 9 – 12 and 14. The results from the combined analyses reveal a series of highly conductive bodies that range from near-surface flat-lying conductors to steeply dipping. Also of interest are the bifurcating conductive bodies along the northern conductive zone that host targets A and C. There is an apparent steeply dipping regionally conductive body on the north side trending northwest, with more flat-lying conductors that appear to split off the northwest trending conductor in a west to west-southwest direction. The associated bifurcating conductive bodies may represent feeder zones for the northwest trending conductor, or may have different origins lying below an unconformity. Both aspects of these conductors need to be tested individually.

Historical drilling in the vicinity of these targets, but mostly to the west, and more recent drilling by Excalibur Resources (2010) to the east of the targets strongly suggests that all 4 anomalous bodies are sulphide-bearing. In particular Zn and Cu values and sulphide concentrations progressively increased towards Gossan's Property in the 2010 Excalibur drilling, and some historical drilling showed sulphides with anomalous Zn and Cu in the Lake zone and massive sulphides in Target zone C. There is no known drilling on targets A, B, and D.

## Conclusions and Recommendations

The geophysical VTEM survey, geobotanical alder survey, and SGH soil survey over the Sturgeon Lake east area (Glitter Lake area) reveal several strong coincident conductive bodies with anomalous metal zones in the overburden coincident with prospective geology. Four main target zones with additional sub-zones have been identified. All of these targets, and their sub-zones warrant testing by diamond drilling. In particular, anomalies A and B show promising base metal (Zn+Ag±Pb) anomalies with significant associated gold responses. Anomaly C shows a distinct Zn+Ag±Pb response in an area with known massive sulphides. Anomaly D has a strong gold response along a single line, as well as moderate Zn and Ag anomalies. It is difficult to rank the anomalies due to many variations in parameters. Some targets are characterized by buried (but near surface) flat-lying conductors. Consequently, there may be no direct geochemical connection to surface, which will prevent or subdue any geochemical response, and can also explain the dispersed nature of some of the geochemical responses.

It is highly recommended that several drill holes be placed into each of the 4 anomalous zones A through D, and any related sub-zones. Care must be taken as the zones appear complex with multiple conductive bodies with variable orientations from flat-lying to steeply dipping. The drill targets of interest are the sulphide-bearing conductors responsible for the VTEM anomalies in these areas. The geochemical surveys are not definitive with respect to the presence or absence of an economic metals, as many environmental factors are involved. Consequently, it is possible to miss detecting geochemical anomalies due either to environmental factors, gaps in coverage, or the sample spacing, and broad elevated but non-economic metal concentrations in underlying rocks may cause similar anomalies. Due to a variety of factors, selection of anomalies of interest is based on patterns, more than the gross metal values. In particular, selection is based on the coincidence of prospective geology with geophysical and geochemical anomalies, including, in the case of the alder survey, the presence of multiple anomalous metals from multiple lines and from multiple samples along those lines.

In summary, the area along the northeast side of Glitter Lake is highly prospective for VMS deposits. A program of ~2, 000 meters of drilling in up to 15 drill holes, averaging about 150 meters in depth each is highly recommended to test target areas A, B, C and D. Winter drilling is recommended for ease of access, and to minimize environmental impact. Table 2 lists the recommended drill holes along with prioritization. It is highly recommended that all 4 targets areas be tested in an initial phase of drilling prior to any detailed follow-up drilling. Estimated costs for the program are in the order of \$500,000 to \$700,000.



**Recommended Drill Holes**  
**Sturgeon Lake Project 2017-2018**  
**Gossan Resources Ltd**

Drill Hole Parameters						Target Parameters													
Drill Hole	Target Zone	Priority	Drill Collar Location UTM			Dip	Azimuth	Length	Depth to top	Dip	Dip Direction	Length	Depth Extent	Conductivity	Thickness Meters	Conductance Siemens	Survey Line	Analysis Year	Defining Parameters *
SLG-17-1	B	1	663270	5523390	451	65	360	150	31	73	180?	400	60	5	70	350	1460	2017	VTEM, Alder, SGH
SLG-17-2	B	1	663100	5523420	451	60	360	125	20	58	190	300	80	0	0	510	1450	2010	VTEM, Alder, SGH
SLG-17-3	B	4	662860	5523410	453	60	360	150	31	70	180	200	120	12	10	120	1420	2017	NA
SLG-17-4	D	3	663265	5524160	450	90	360	175	94	0	180	300	100		80	1460	2017	VTEM, Alder, SGH	
SLG-17-5	D	1	662870	5524030	447	60	180	170	70	5	13	350	180		80	1420	2010	VTEM, Alder, SGH	
SLG-17-6	D	2	662370	5524280	460	60	180	150	61	35	360	400	150	2	50	100	1370	2017	VTEM, Alder, SGH
SLG-17-7	D	1	661970	5524350	462	60	180	140	50	10	20	300	90		225	1330	2010	VTEM, Alder	
SLG-17-8	D	3	662375	5524500	480	60	180	150	66	45	360	400	150	2	50	100	1370	2017	VTEM, Alder, SGH
SLG-17-9	A	3	662370	5525525	451	90	360	150	60	0	180	400	160		50	1370	2017	VTEM, Alder	
SLG-17-10	A	2	661970	5525600	451	50	360	170	65	0	20	300	140		120	1330	2010	VTEM, Alder	
									15	75	195	400	80		100	1330	2010		
SLG-17-11	A	1	661770	5525580	451	45	360	200	60	2.5	20	400	110		190	1310	2010	VTEM, Alder	
									25	78	195	400	80		100	1310	2010		
SLG-17-12	A	2	661365	5525750	461	90	0	125	40	10	180	400	200		100	1270	2010	VTEM, Alder, SGH	
SLG-17-13	A	1	660980	5525720	441	60	325	150	57	78	144	280	75		220	1230	2010	VTEM, Alder, SGH	
SLG-17-14	A	1	661365	5525850	461	60	180	125	20	55	22	400	110		240	1270	2010	VTEM, Alder, SGH	
SLG-17-15	A	1	660965	5526100	440	90	0	150	37	85	198	400	75		260	1230	2010	VTEM, Alder, SGH	
SLG-17-16	C	1	660565	5526158	462	90	0	150	52	2.5	360	300	250	13	40	520	1190	2017	VTEM, Alder, SGH
SLG-17-17	C	3	660465	5526184	460	90	0	150	52	0	180	300	320	1.5	50	75	1180	2017	VTEM, Alder, SGH
SLG-17-18	C	3	660075	5526020	445	65	360	250	57	0	179	300	200	3	30	90	1140	2017	VTEM, Alder

\* Alder means anomalous Zn, Au, Ag +/- other metals in Alders

**Table 2: Recommended 2017-2018 Drilling.**

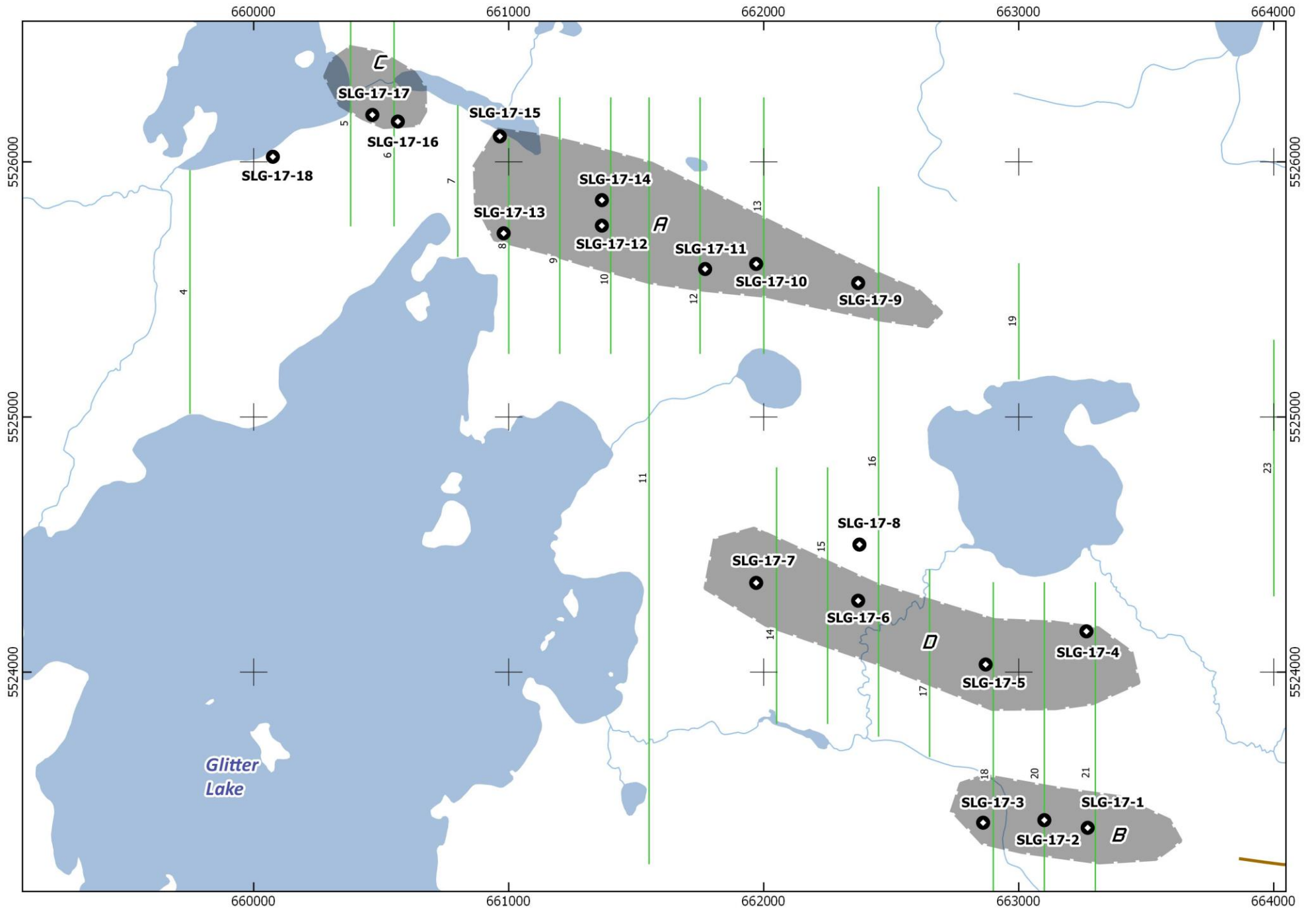


Figure 14: Proposed 2017 drilling.

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## **Certificate of author**

I Ahmad Mumin of 10 McCallum St., Hampton, Ontario, am a co-author of this report titled "STURGEON LAKE EAST EXPLORATION REPORT and RECOMMENDATIONS for DIAMOND DRILLING", dated September 2017 (the "Technical Report"), and certify the following:

- I am a contract geologist with a business address at 10 McCallum St., Hampton, Ontario.
- I am a graduate from Brandon University (B.Sc. in Geology, 2010).
- I have practiced my profession in mineral exploration continuously since graduation.
- I am a Geoscientist-in-Training and I am in good standing with the Association of Professional Geoscientists of Ontario.
- I have worked as an exploration geologist since 2010.
- I have worked on PGE deposits, VMS deposits, lode gold deposits, IOCG deposits, epithermal deposits, and on rare-metal-bearing carbonatite deposits.
- I am partially responsible for the preparation of this Technical Report.
- I have worked intermittently on the property during 2009, 2010 and 2016.
- That, as of the date of this certificate, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Signed and dated this 25th day of September, 2017, at Hampton, Ontario,

Ahmad Mumin, G.I.T.  
10 McCallum St.  
Hampton, Ontario  
LOB 1J0  
Tel: (905) 442-3260

## Certificate of author

I Dr. Hamid Mumin of RR1 Alexander, Manitoba R0K 0A0, am a co-author of this report "STURGEON LAKE EAST EXPLORATION REPORT and RECOMMENDATIONS for DIAMOND DRILLING", dated September 2017 (the "Technical Report"), and certify the following:

- I am a Professor of Economic Geology (since 1995) and Geological Consultant with a business address at RR1 Alexander, Manitoba R0K 0A0, and the Department of Geology, Brandon University, Brandon, Manitoba R7A 6A9.
- I am a graduate of the University of Western Ontario (Ph.D., 1994) and the University of Toronto (B.A.Sc., 1985; M.A.Sc. 1988).
- I have practiced my profession in mineral exploration continuously since graduation.
- I am a member in good standing of the Association of Professional Engineers and Geoscientists of Manitoba, and the Association of Professional Engineers of Ontario.
- I have worked as a mine and exploration geologist and project manager since 1981, and have worked as a consultant advising, executing and/or managing exploration and development projects for numerous clients since 1995.
- I have worked extensively on VMS deposits, lode gold deposits, IOCG and associated deposits, magmatic/hydrothermal deposits, epithermal deposits, and also on rare-metal-bearing carbonatite deposits. In addition to exploration work, I have published numerous technical, exploration and mineral deposit research reports and papers on all the above deposit types.
- I am partially responsible for the preparation of this Technical Report.
- I have worked intermittently on the property during 1986, 1990, 2009, and 2010. I have worked elsewhere in the Sturgeon Lake mining camp between 1981 and 1985.
- That, as of the date of this certificate, to the best of my knowledge, information and belief, this Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Signed and dated this 25th day of September, 2017, at Brandon, Manitoba,

A. Hamid Mumin Ph.D., P.Eng., P.Geo  
RR #1 Alexander  
Manitoba R0K 0A0.  
Tel: (204) 752-2324

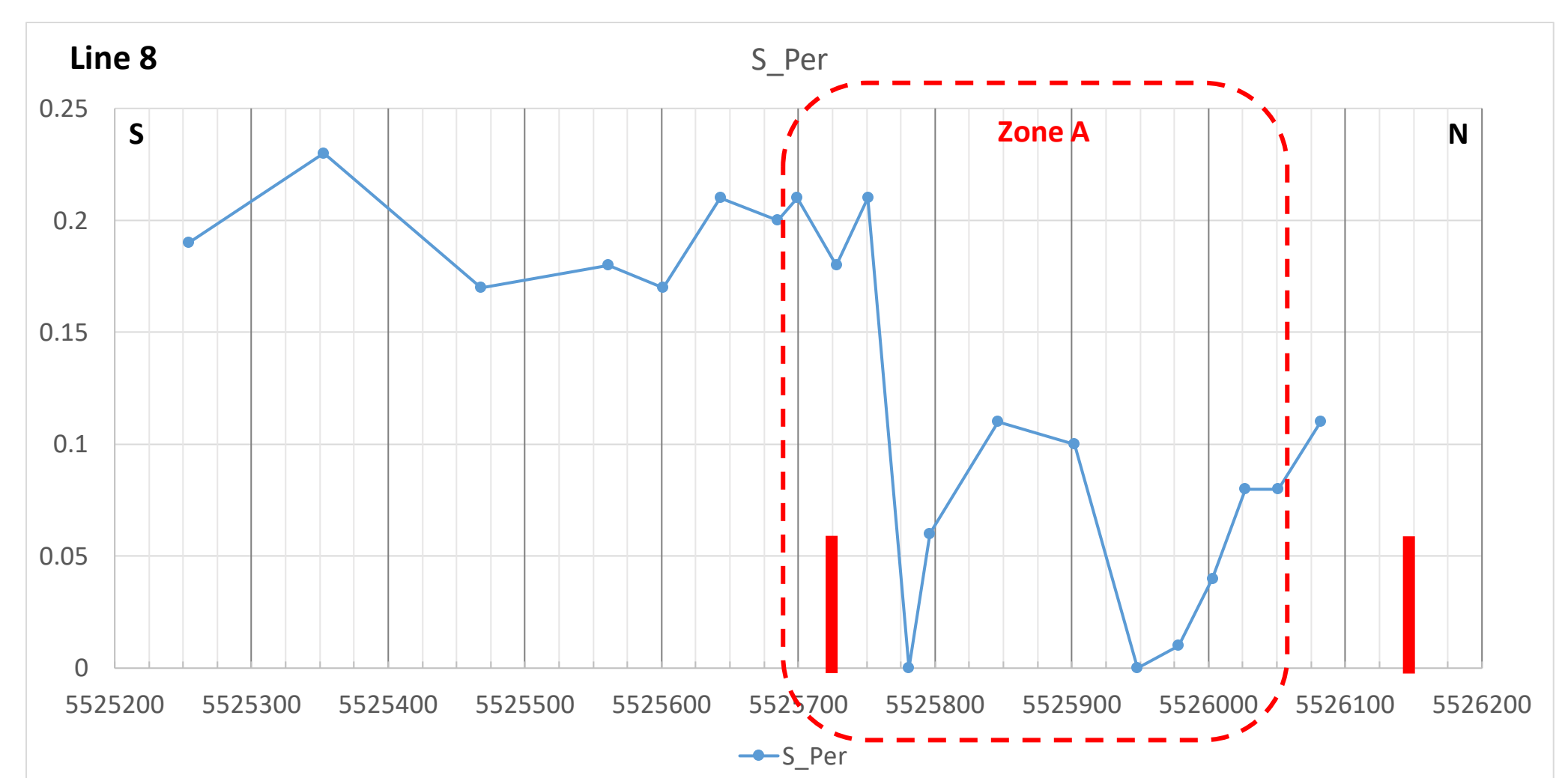
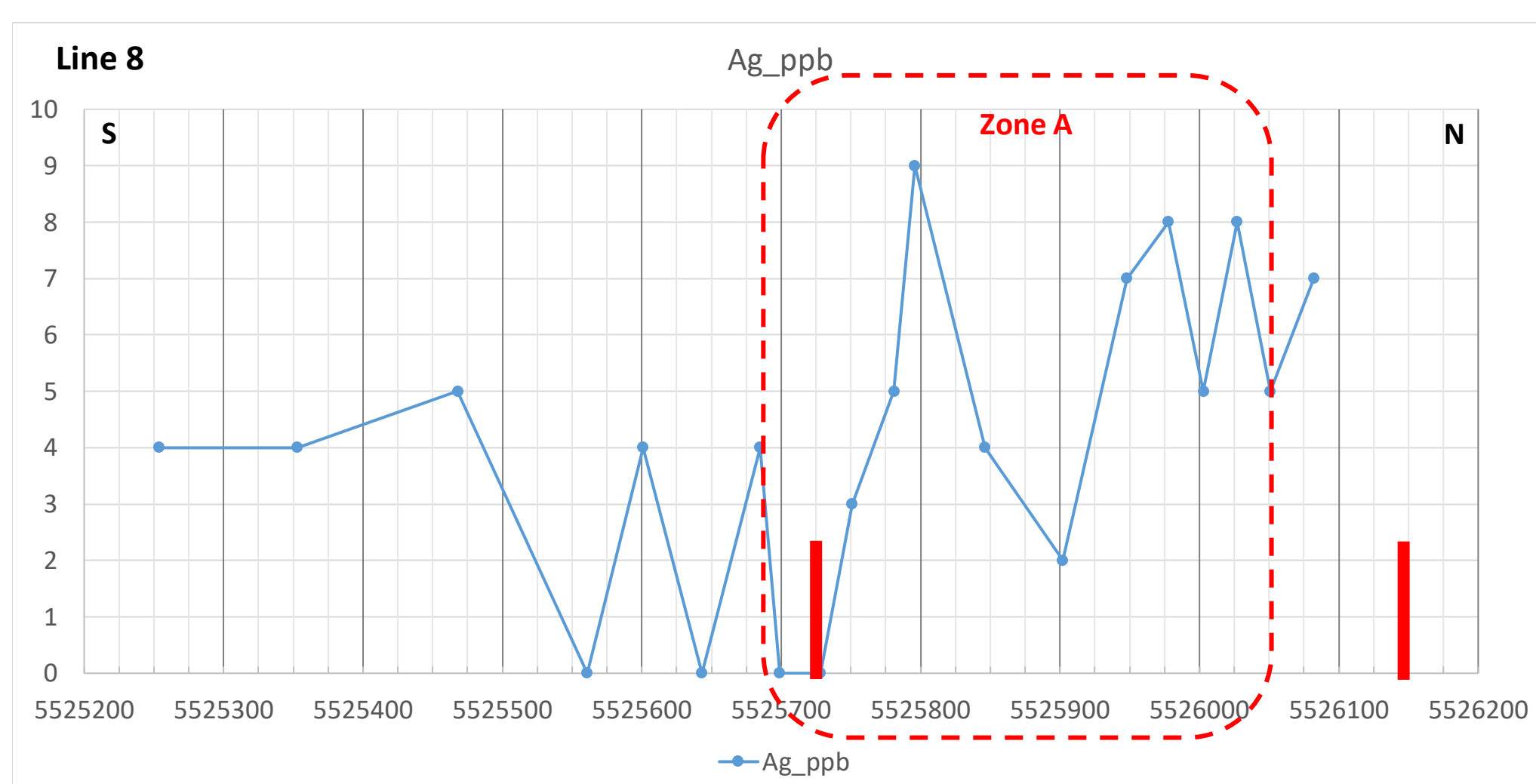
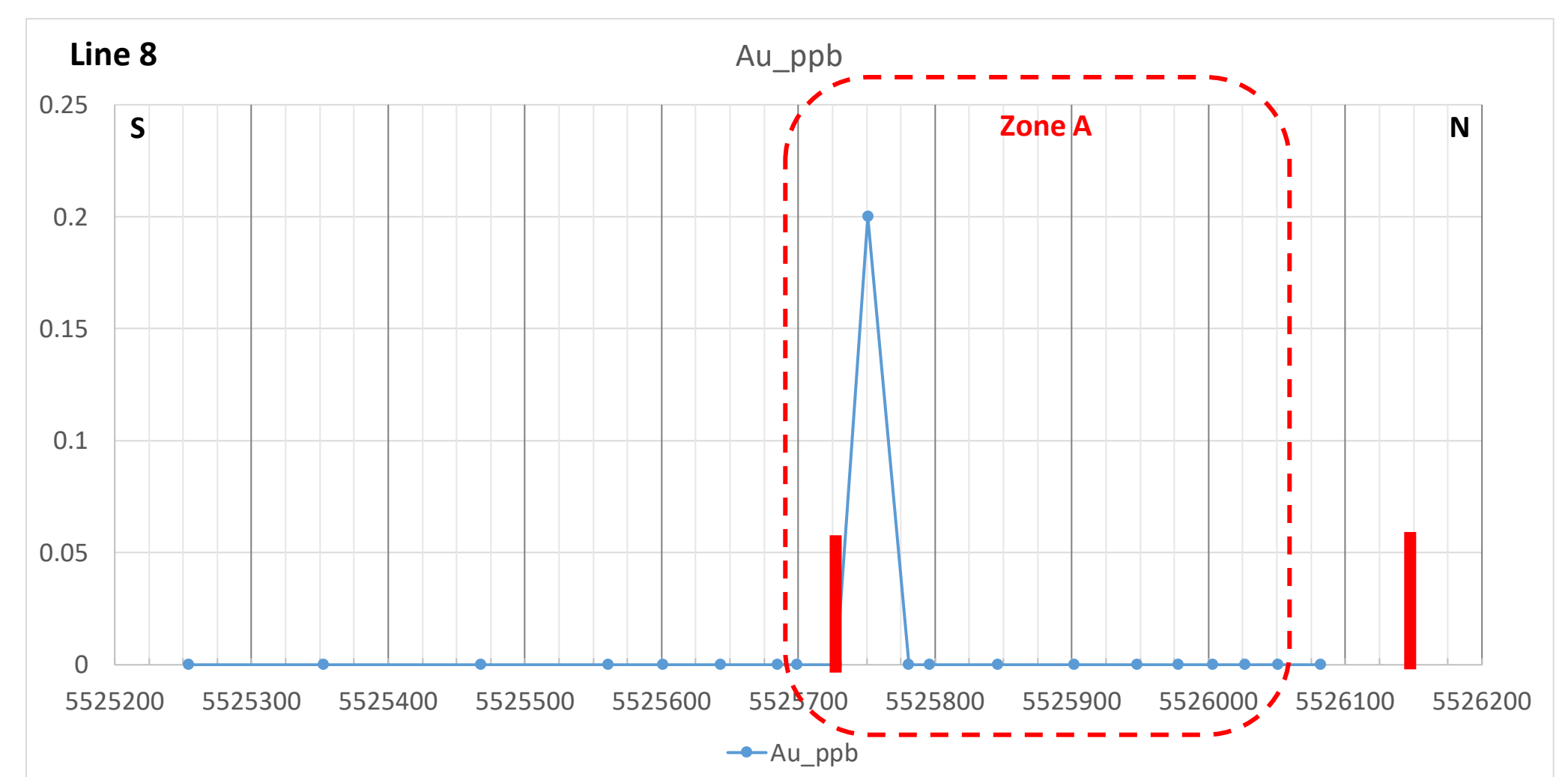
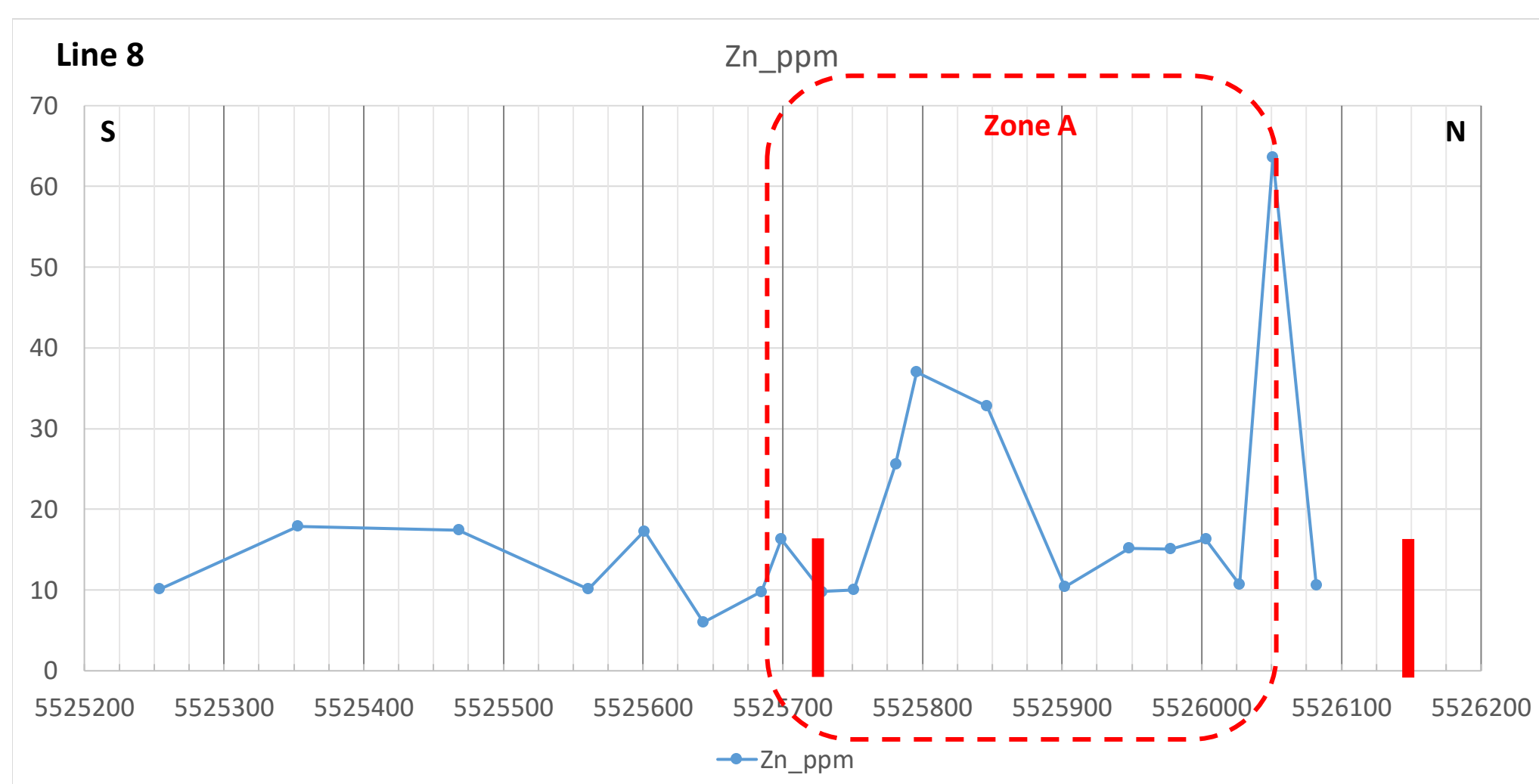
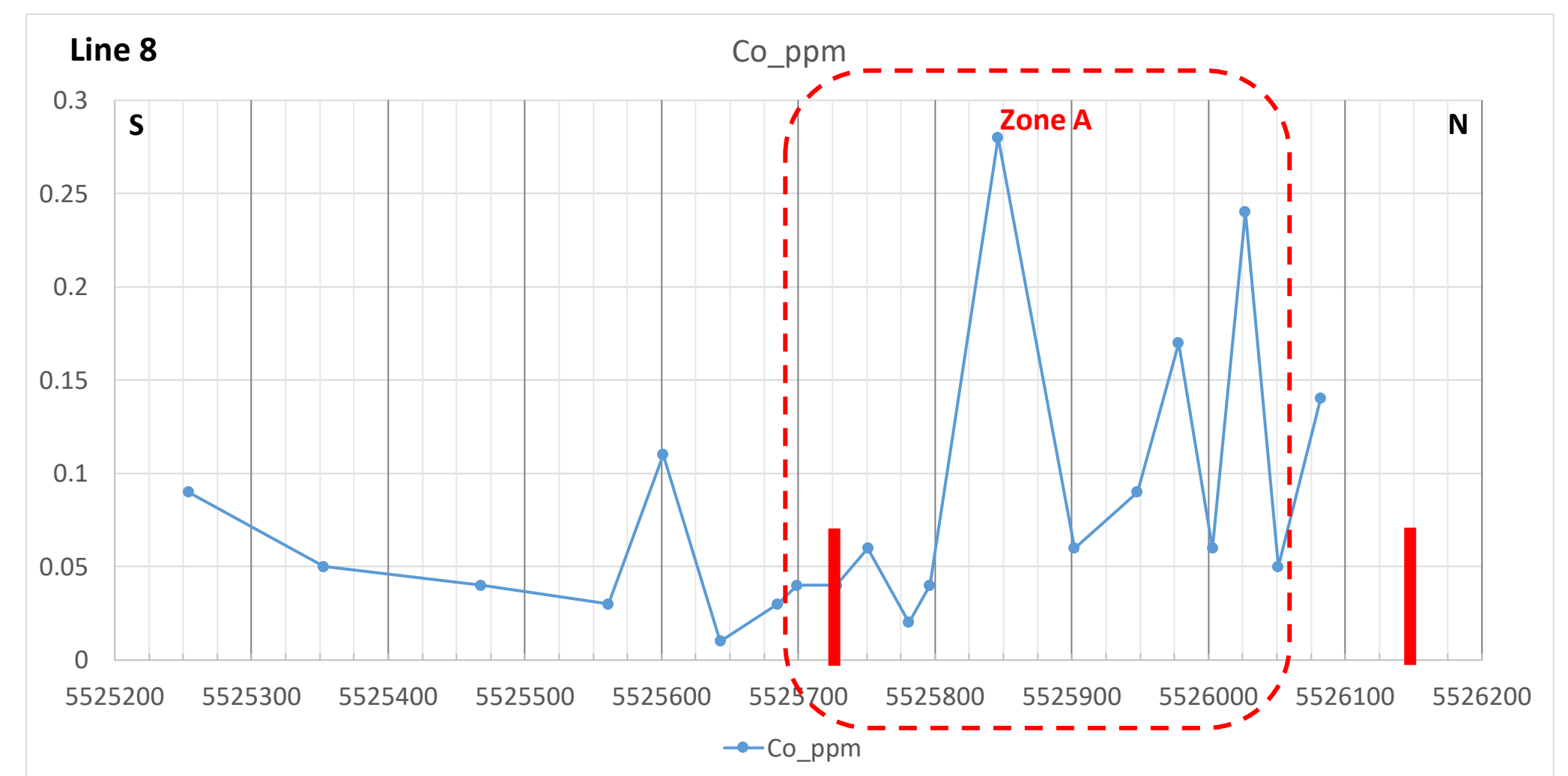
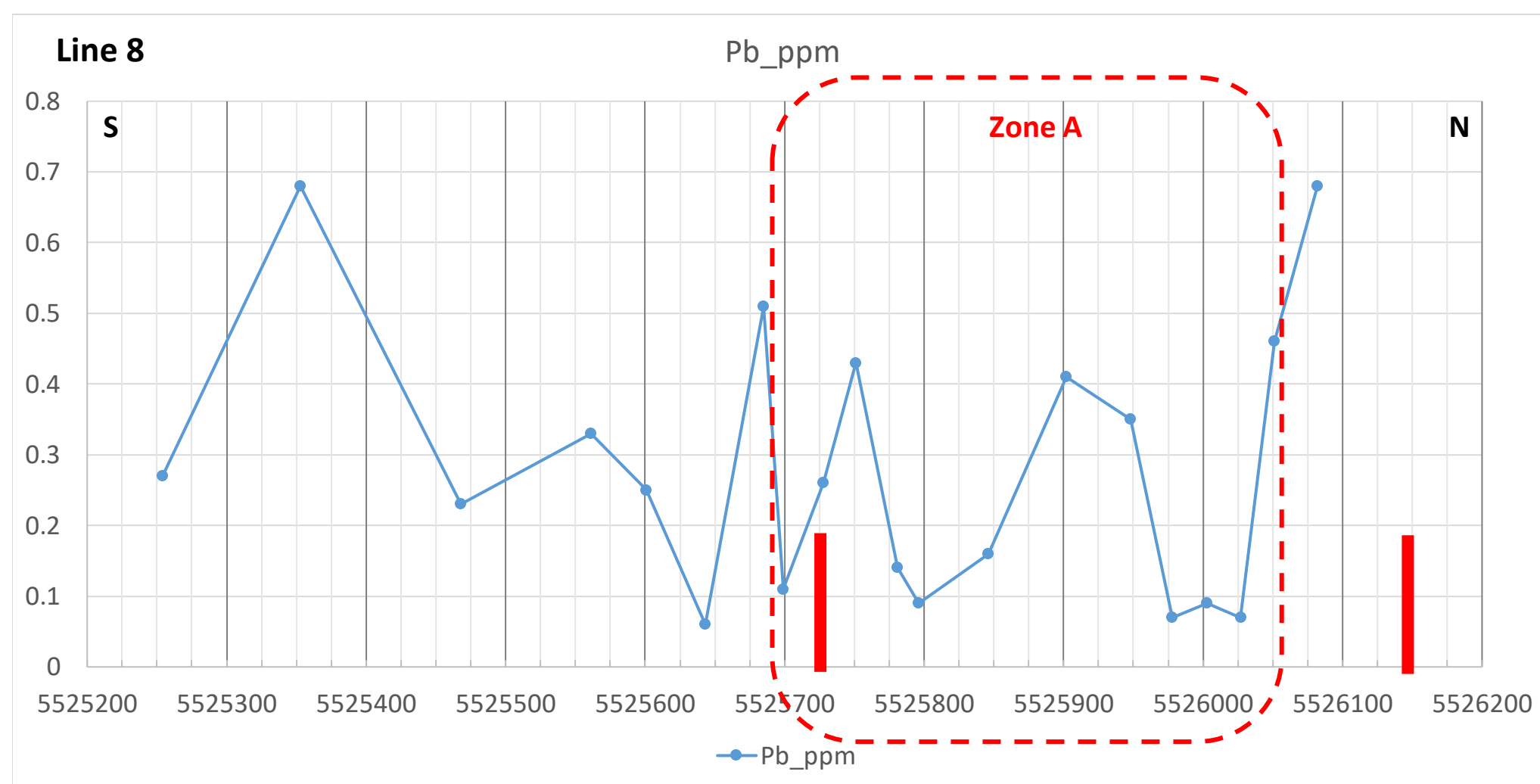
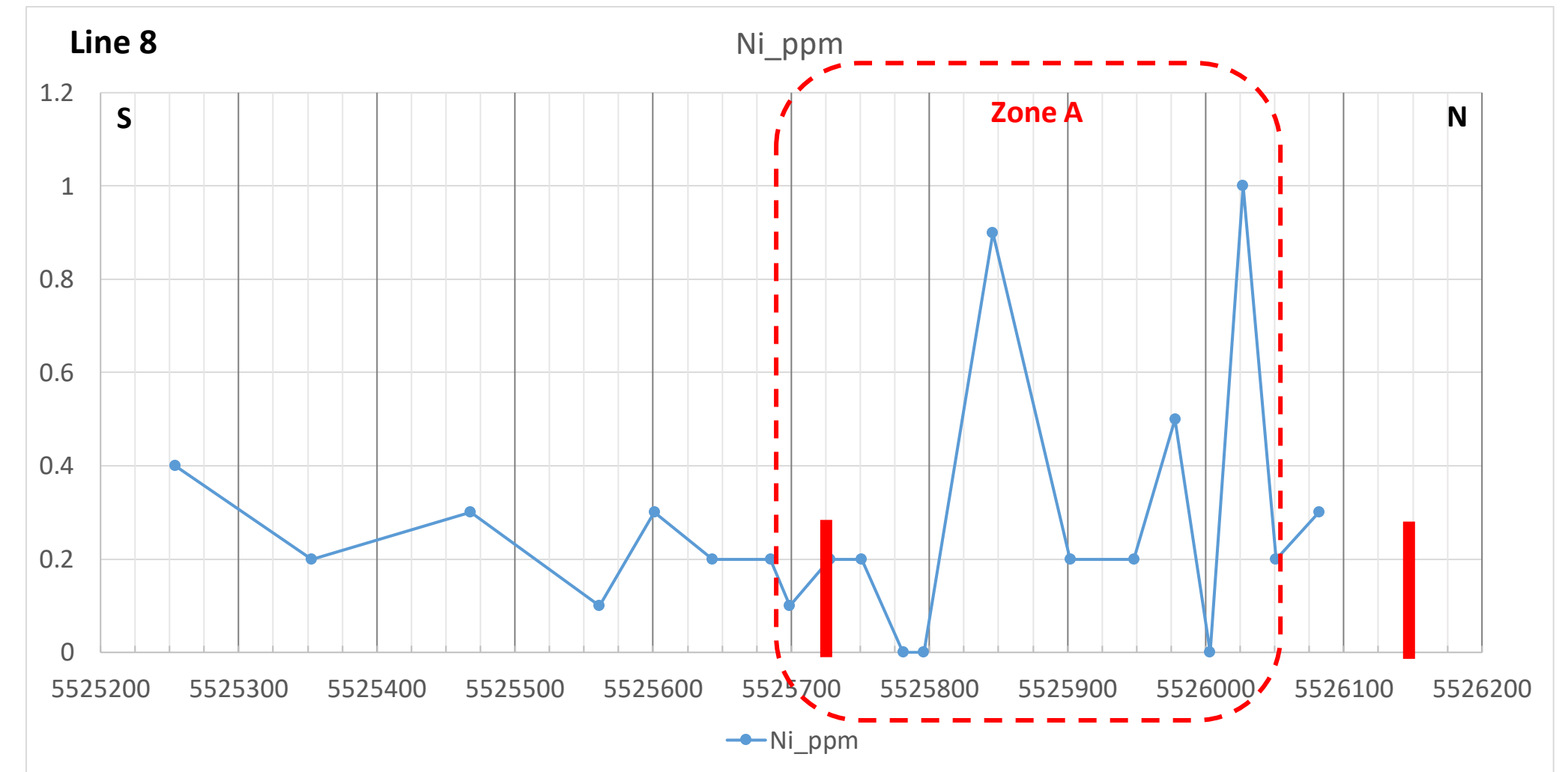
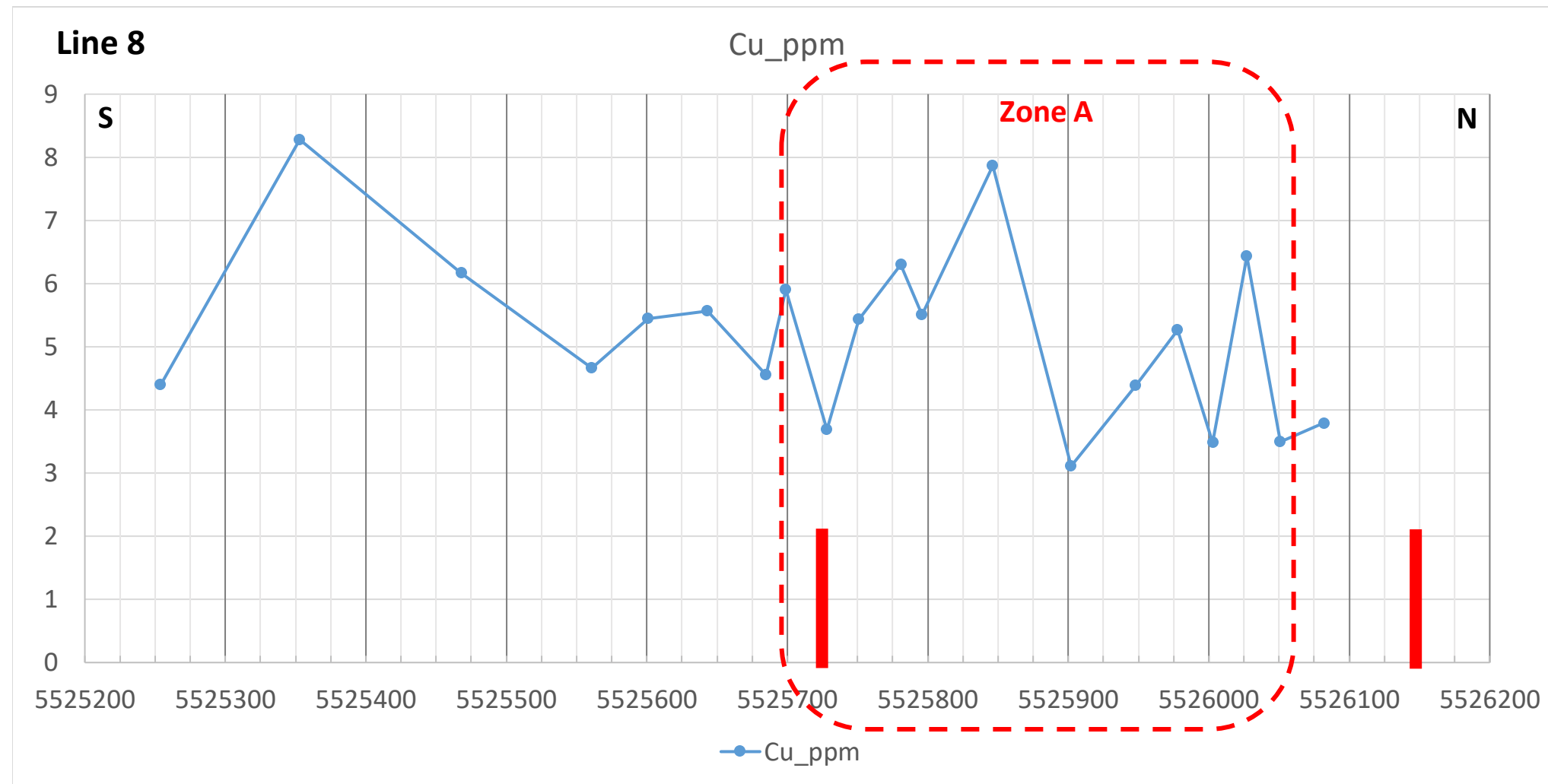
## Appendix A: Target Zone Geobotanical Plots



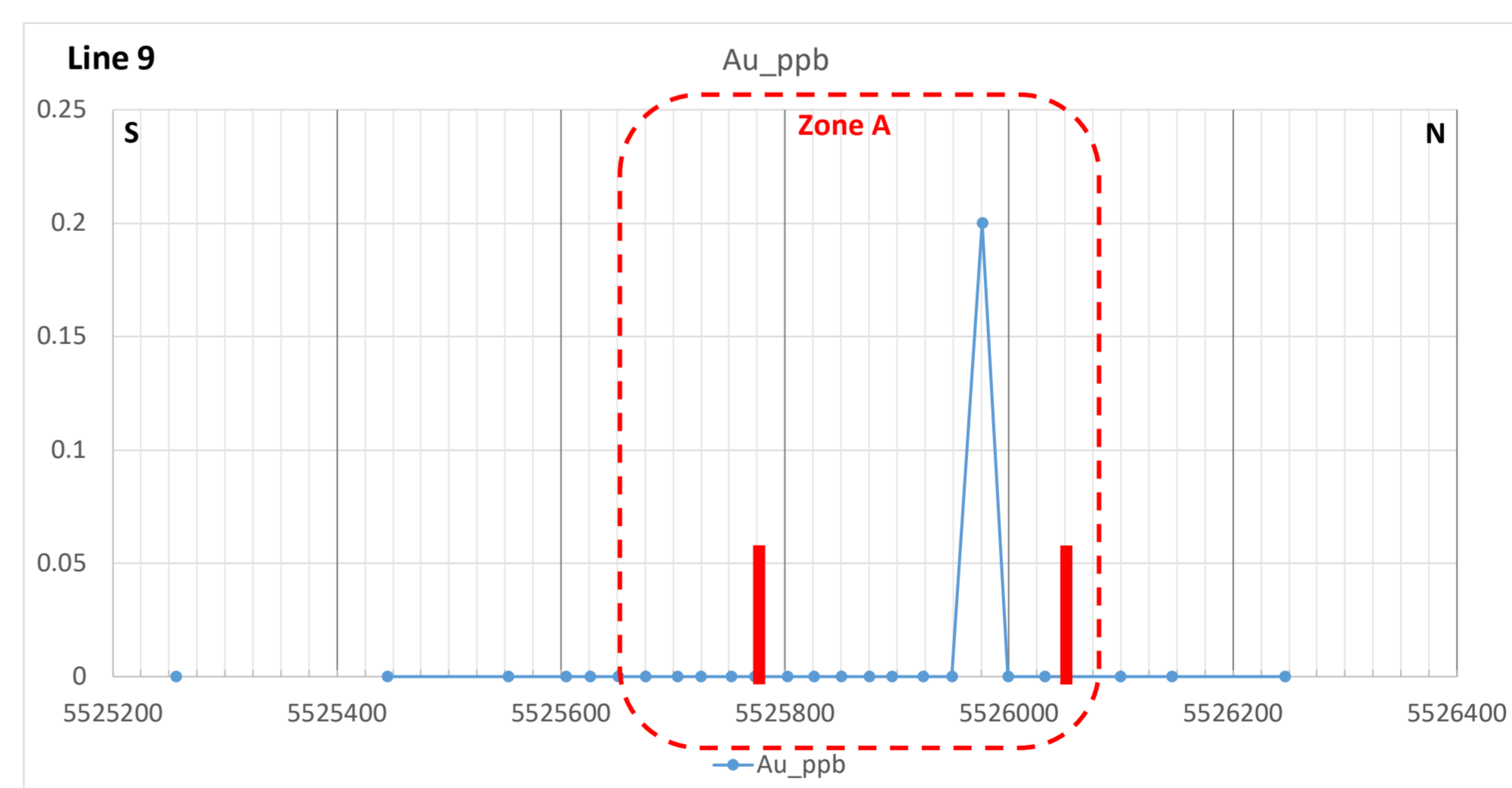
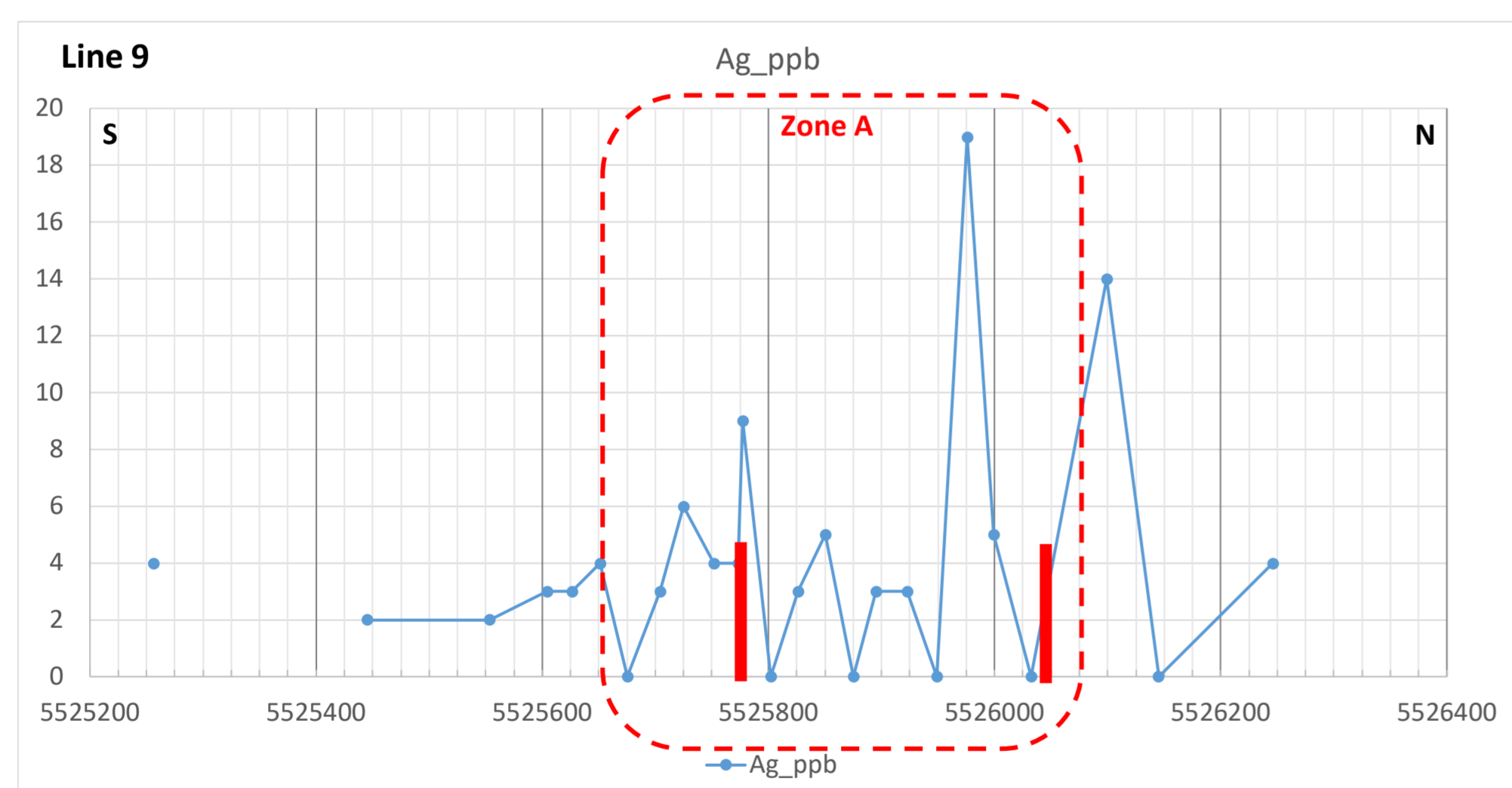
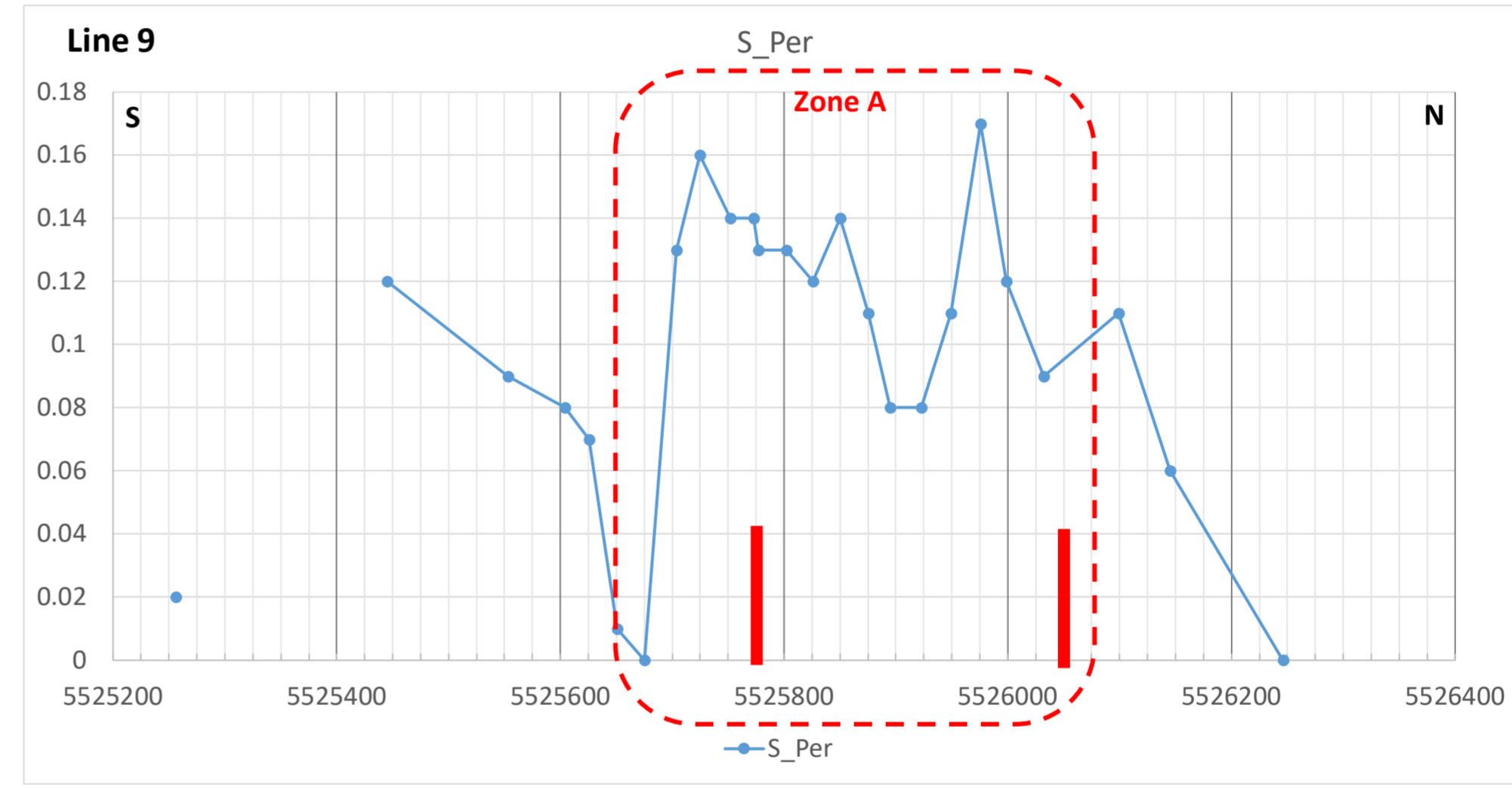
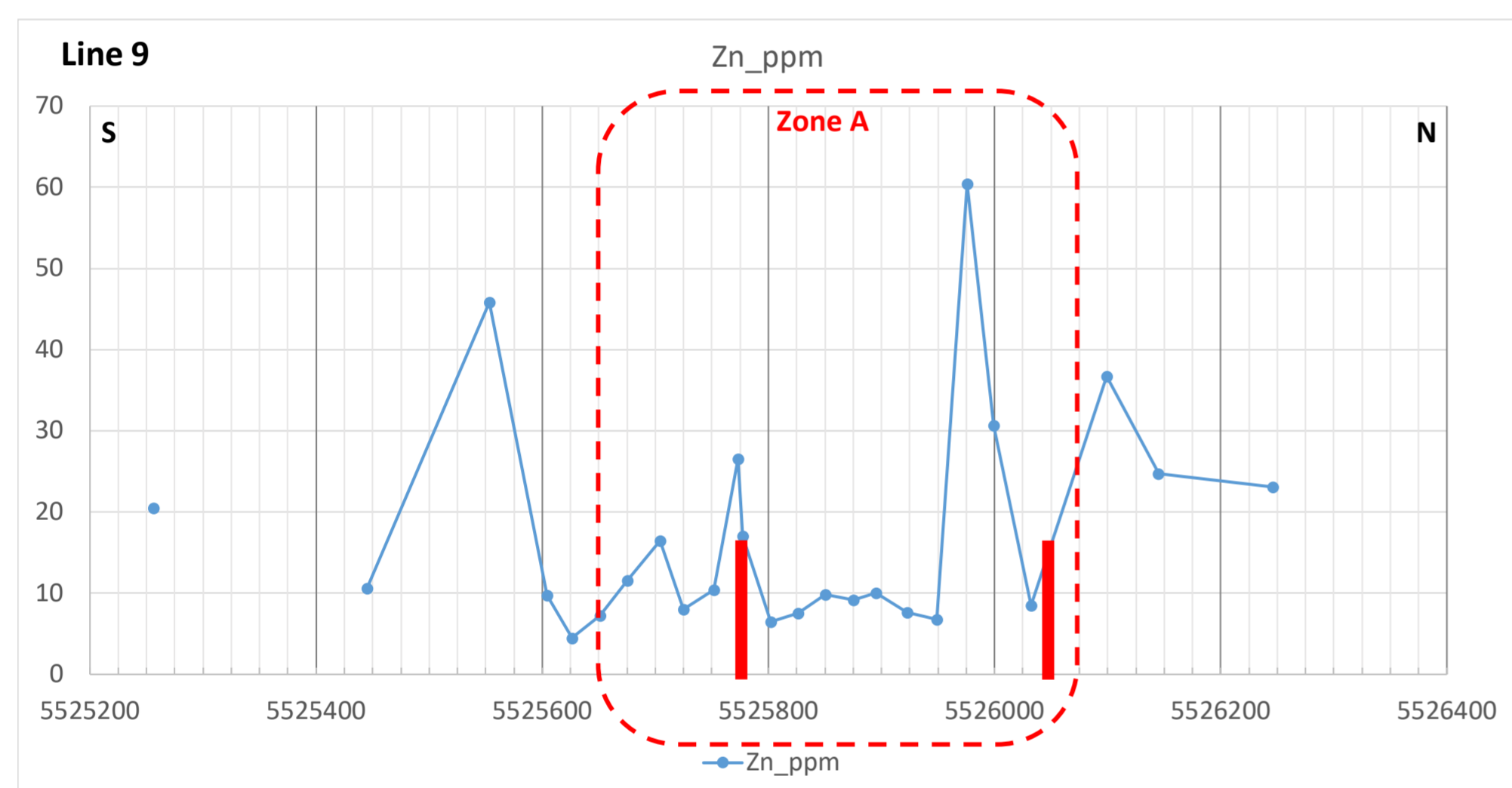
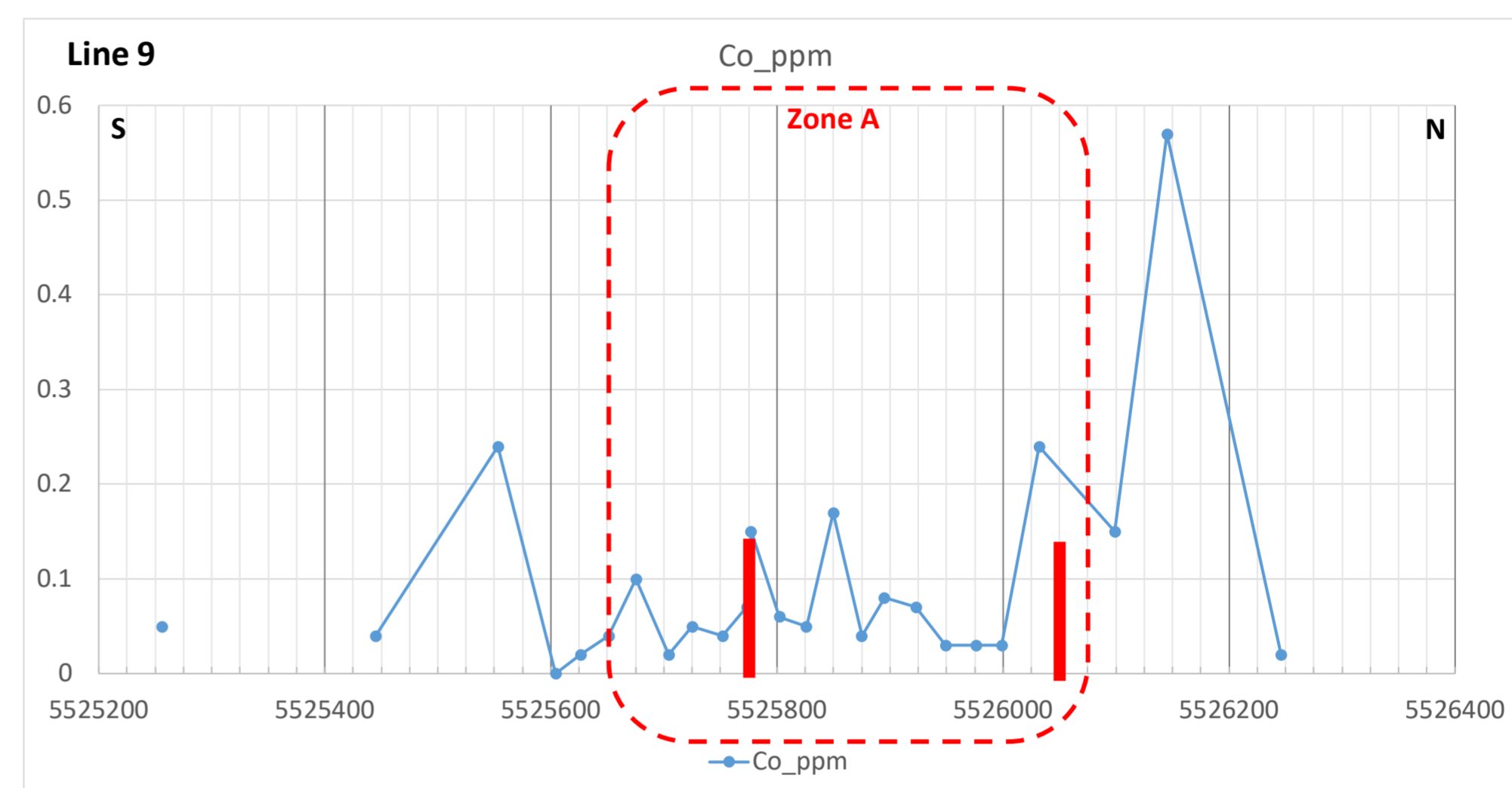
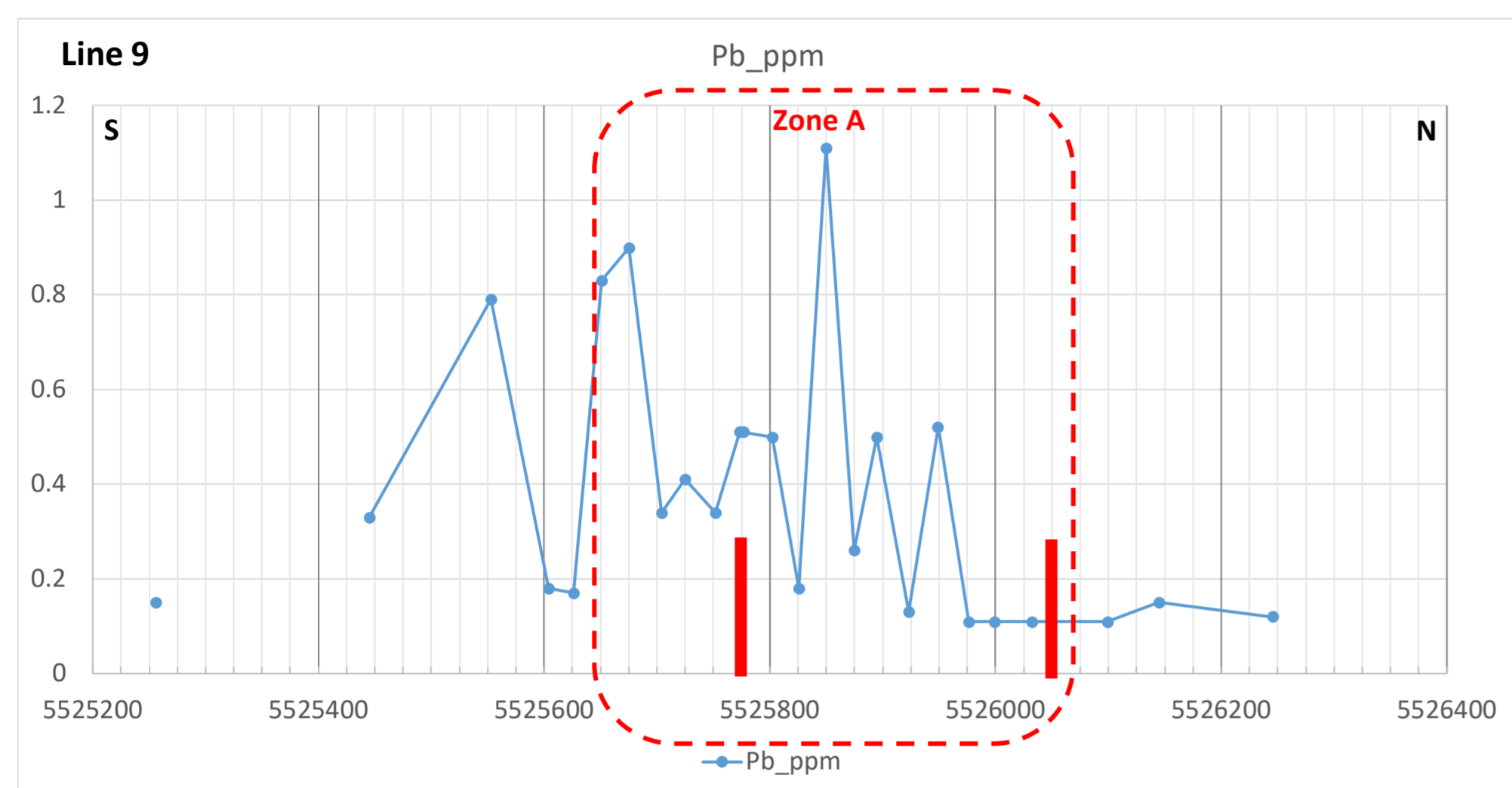
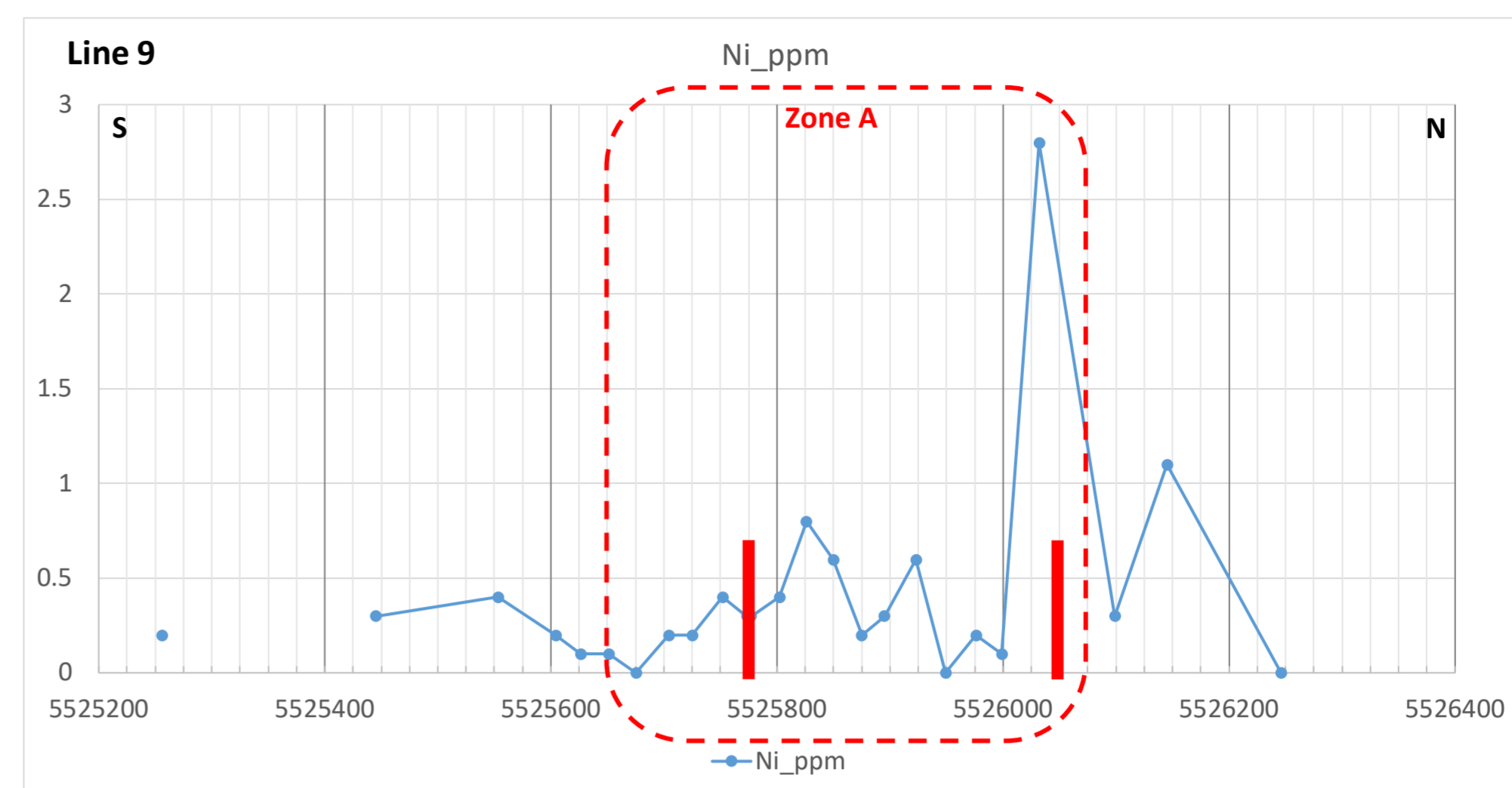
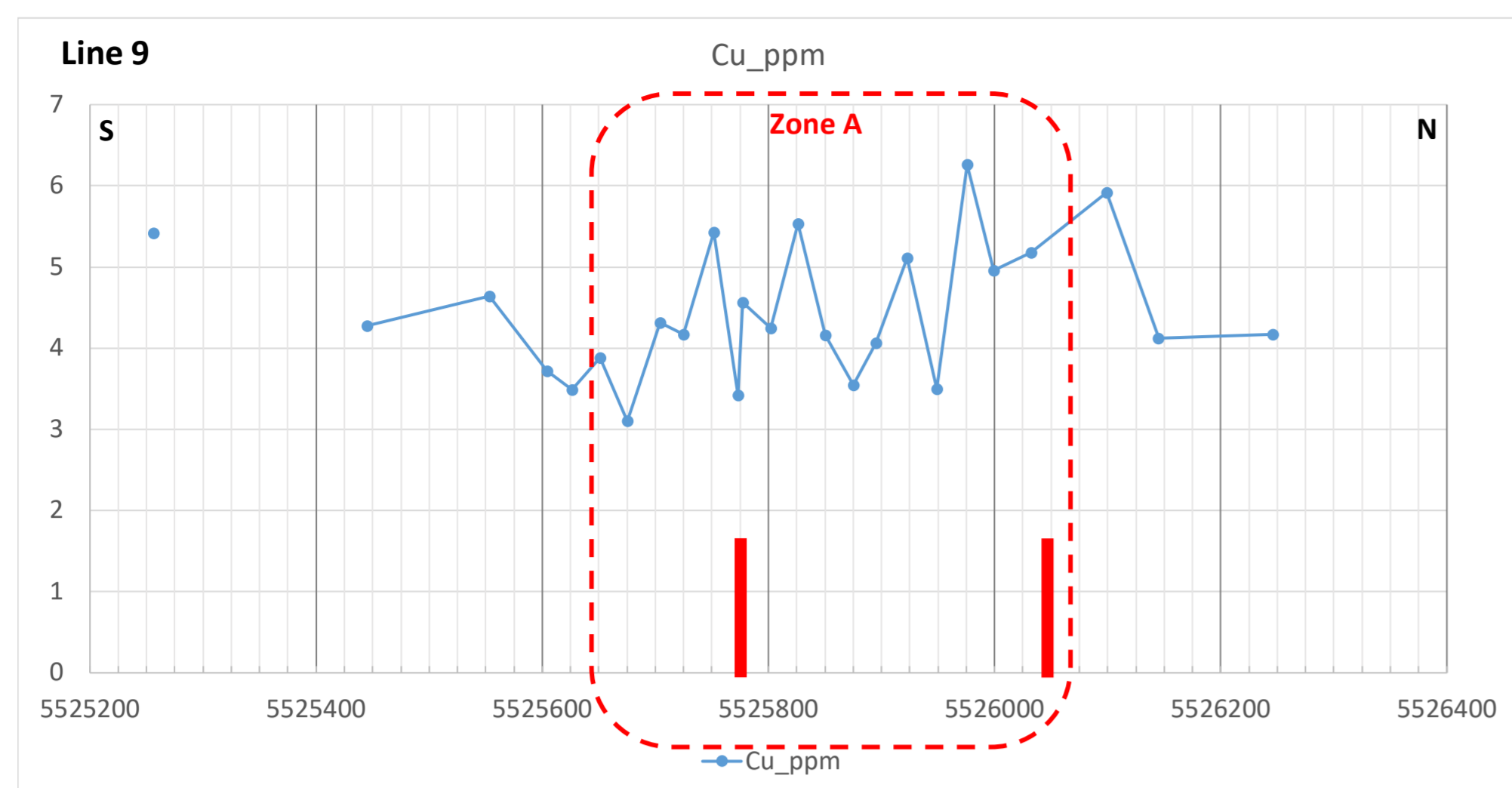
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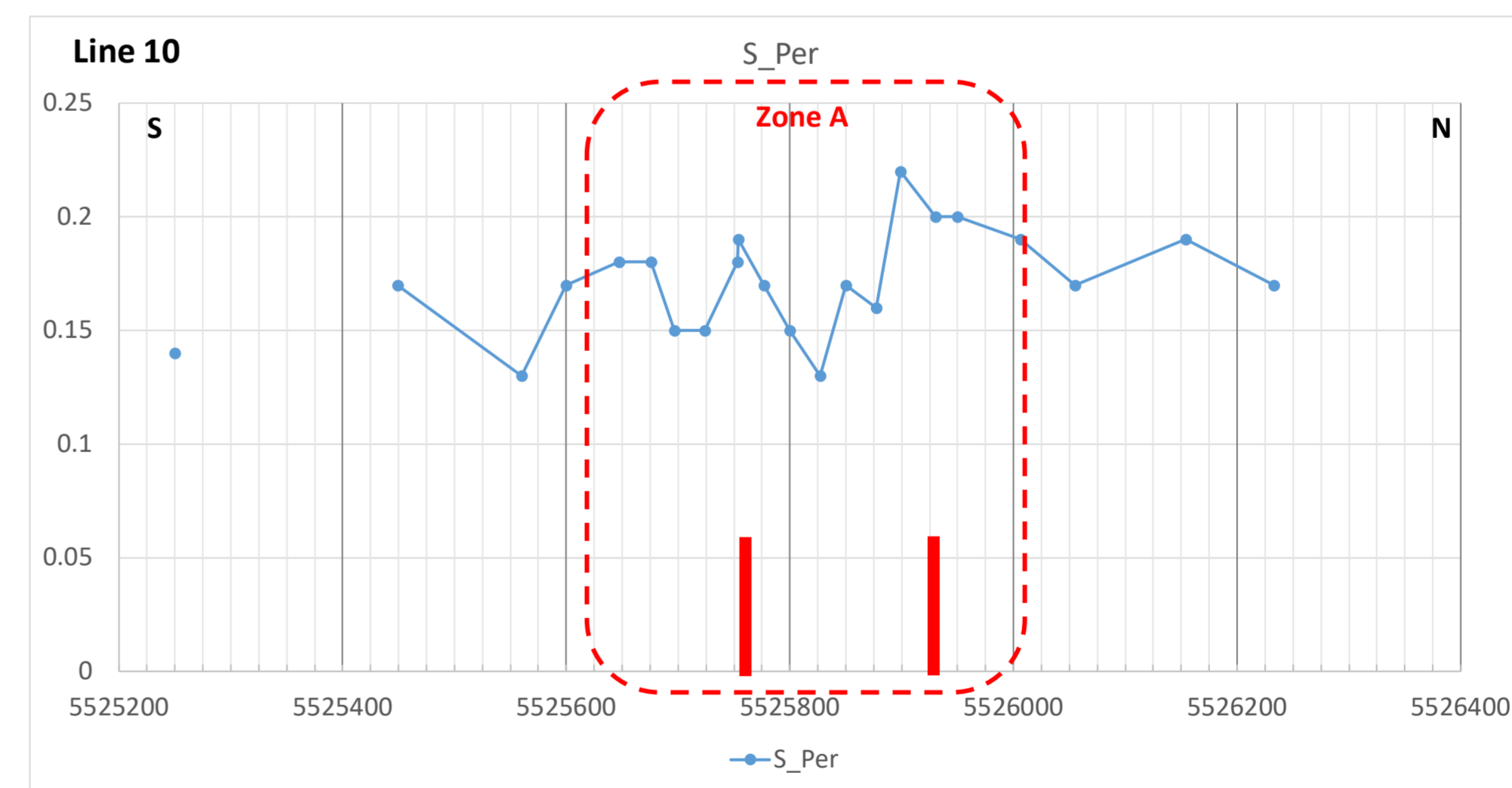
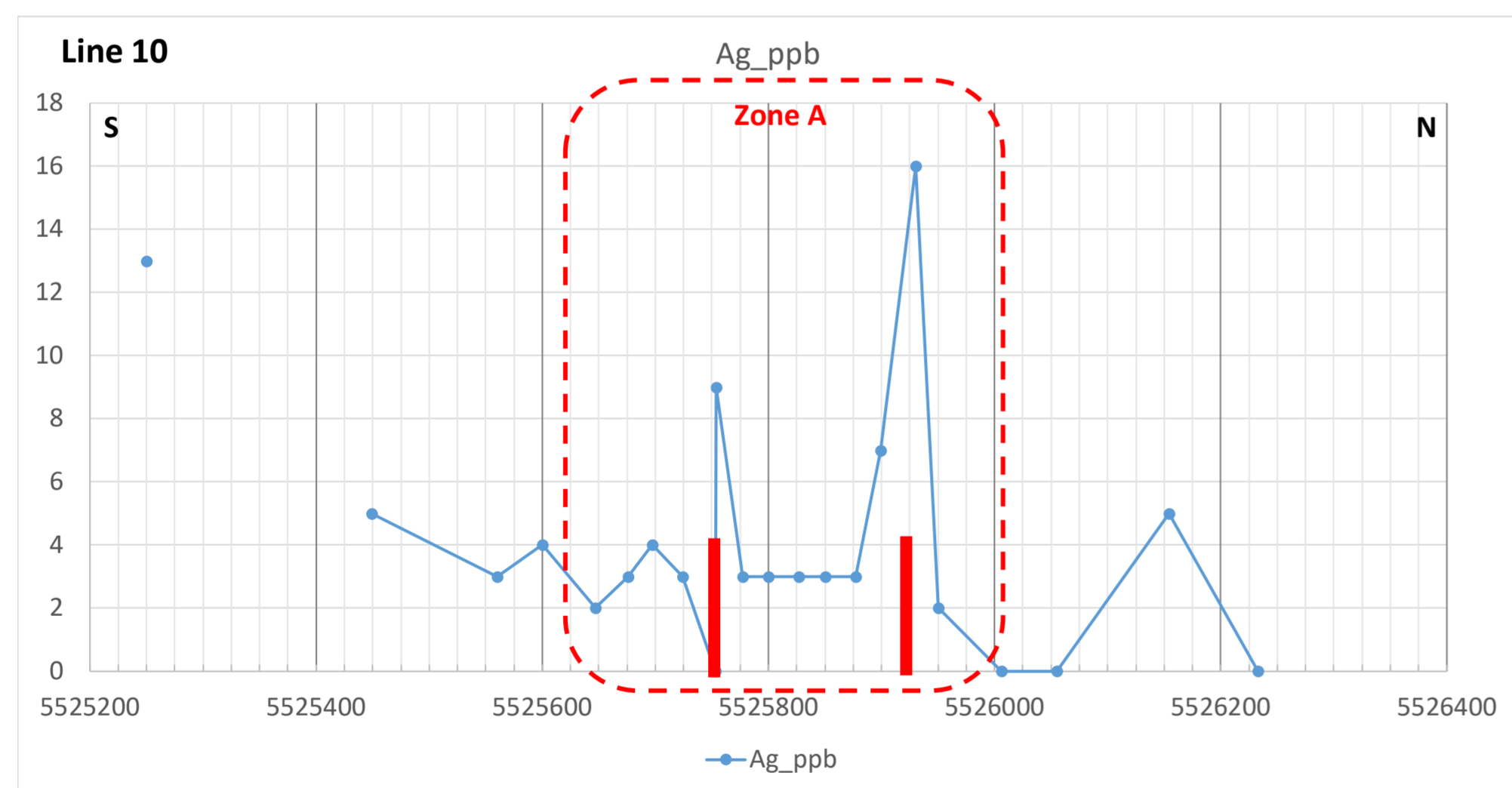
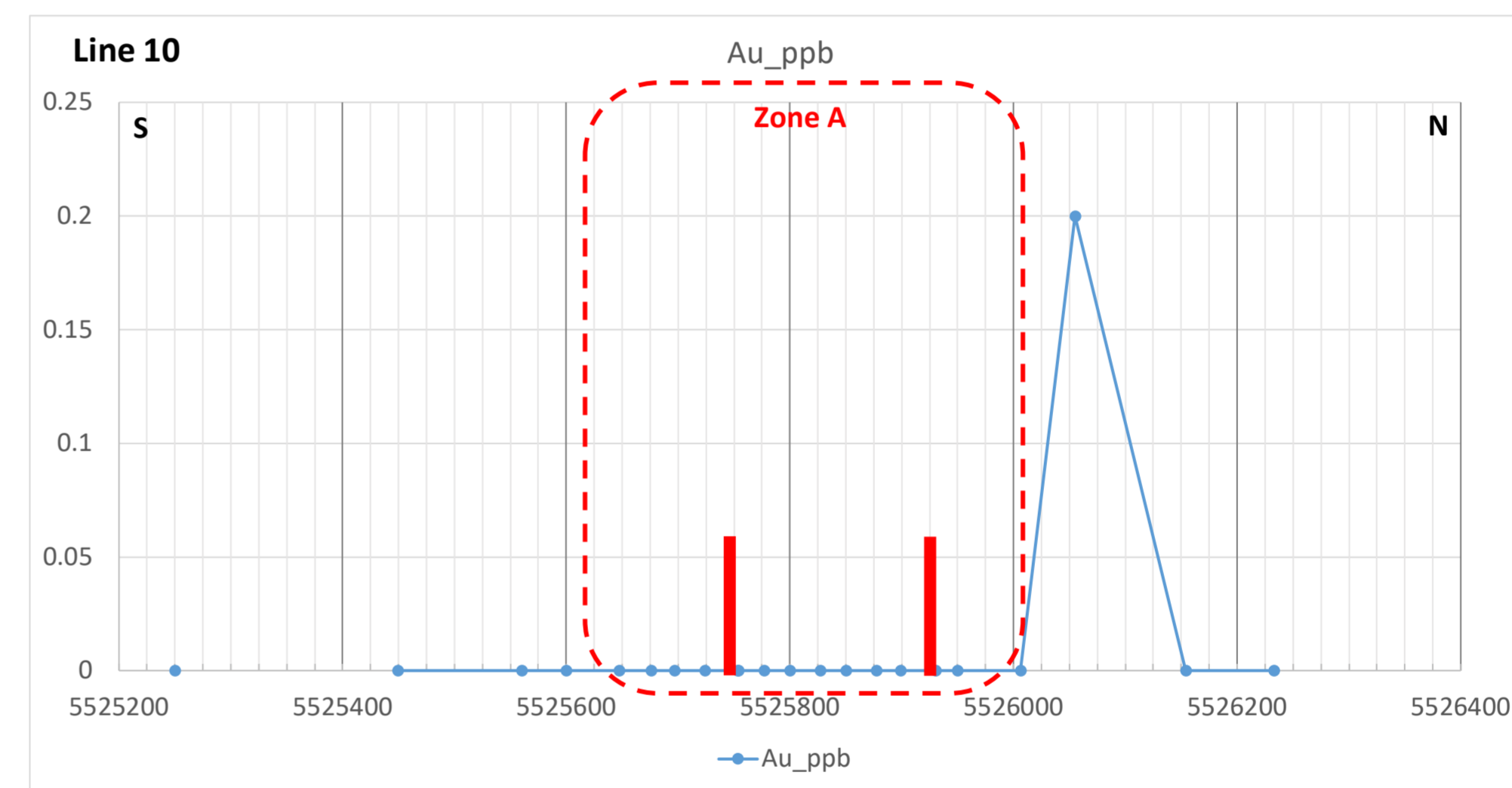
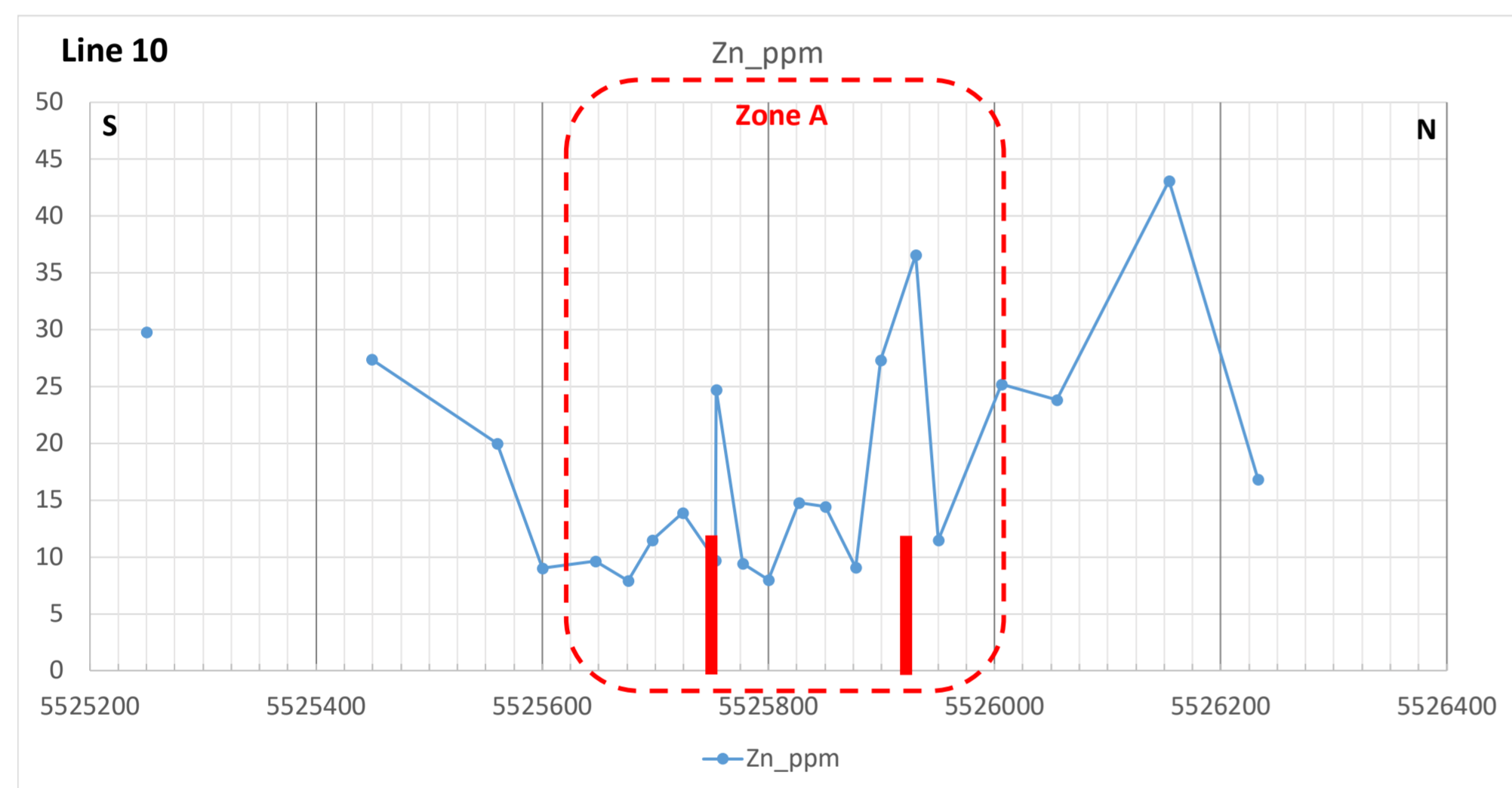
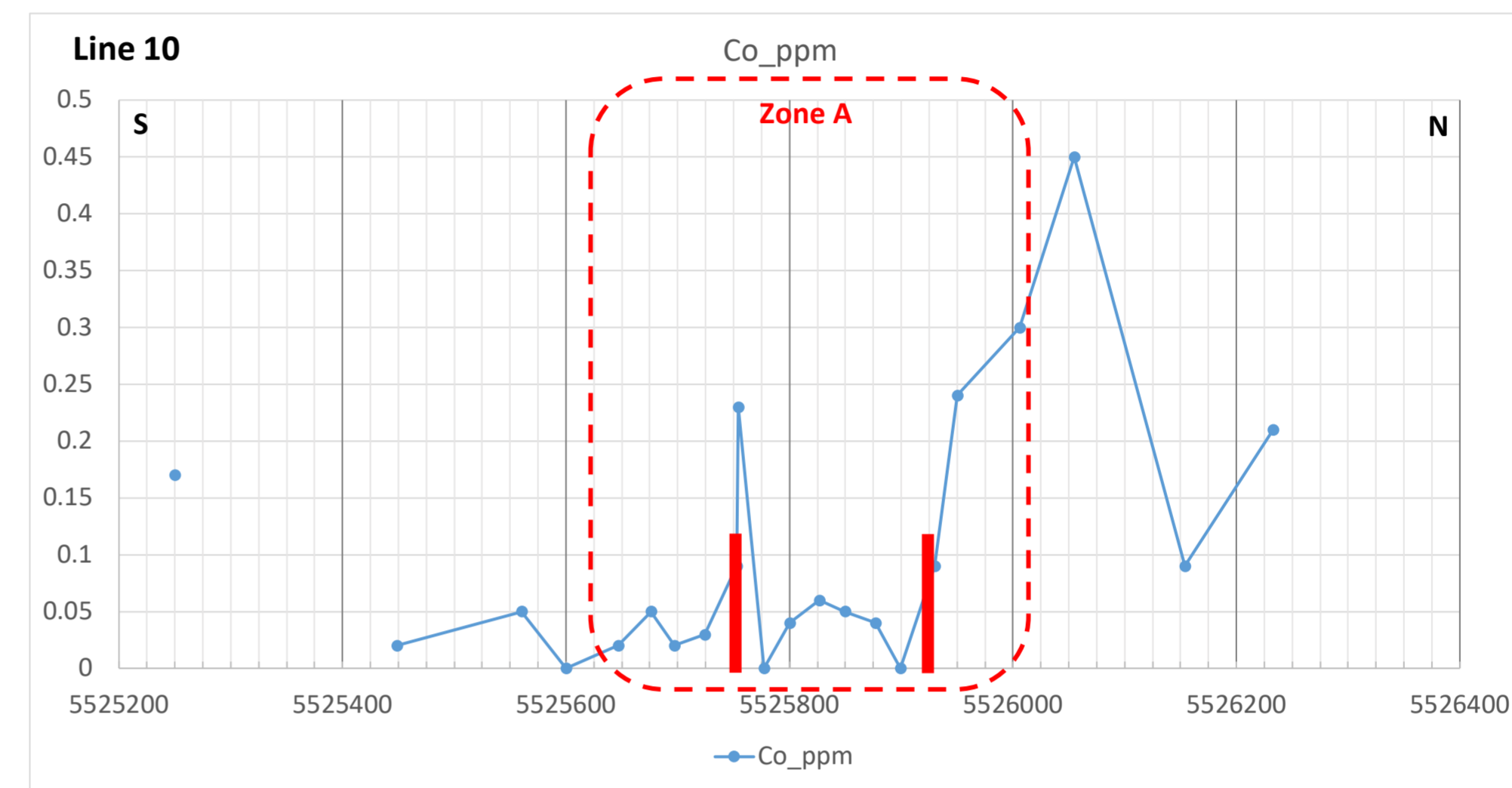
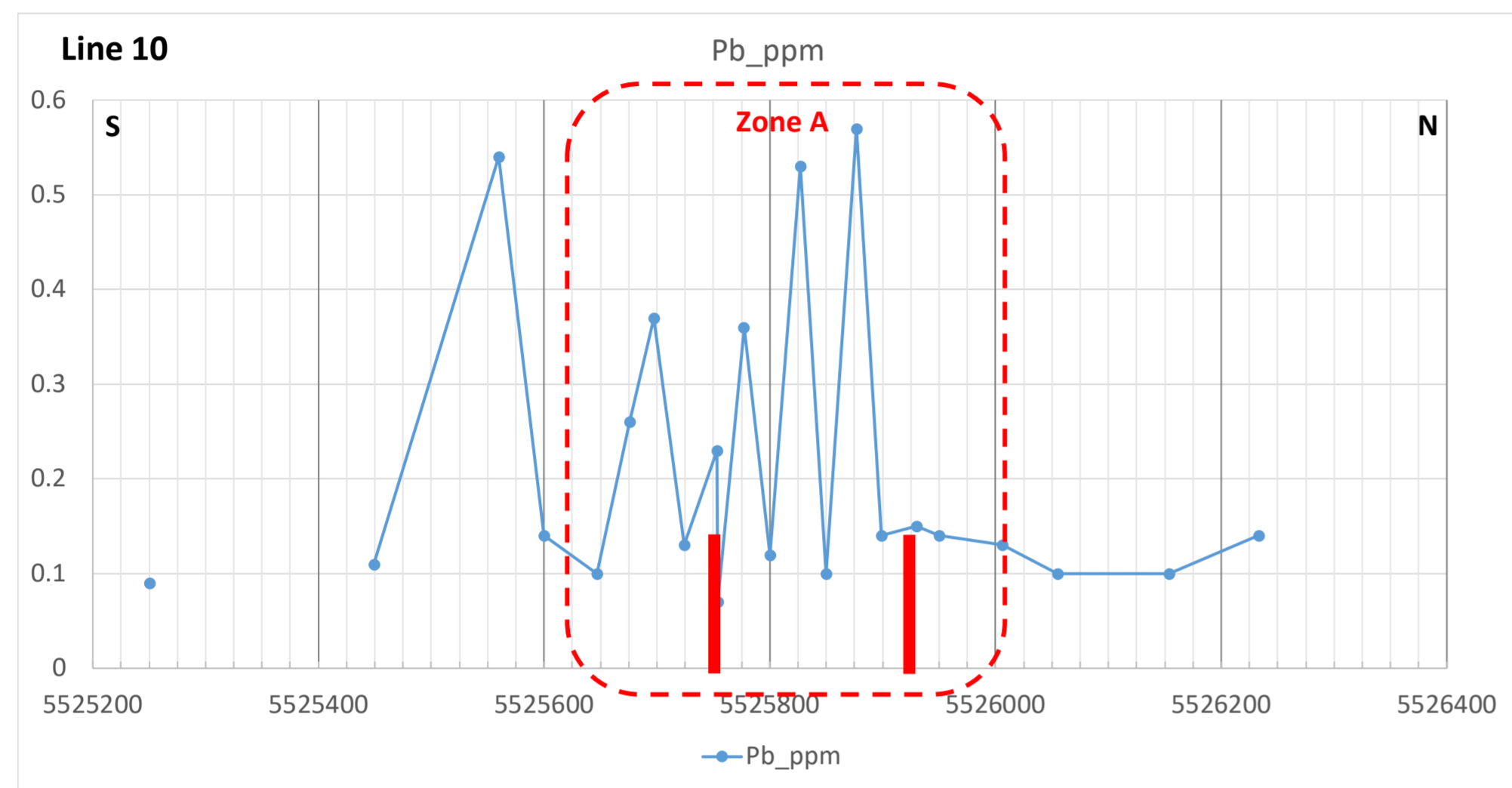
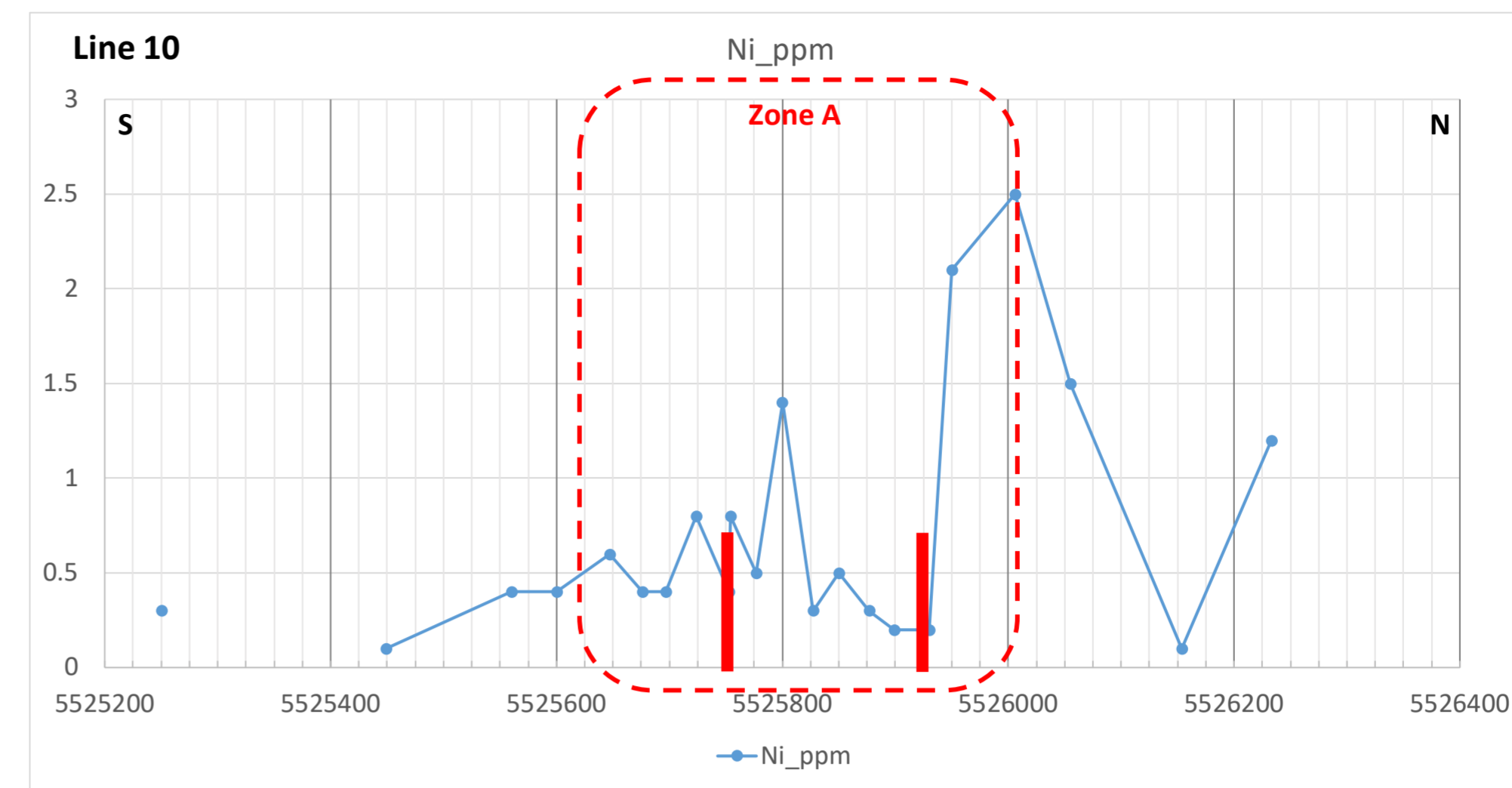
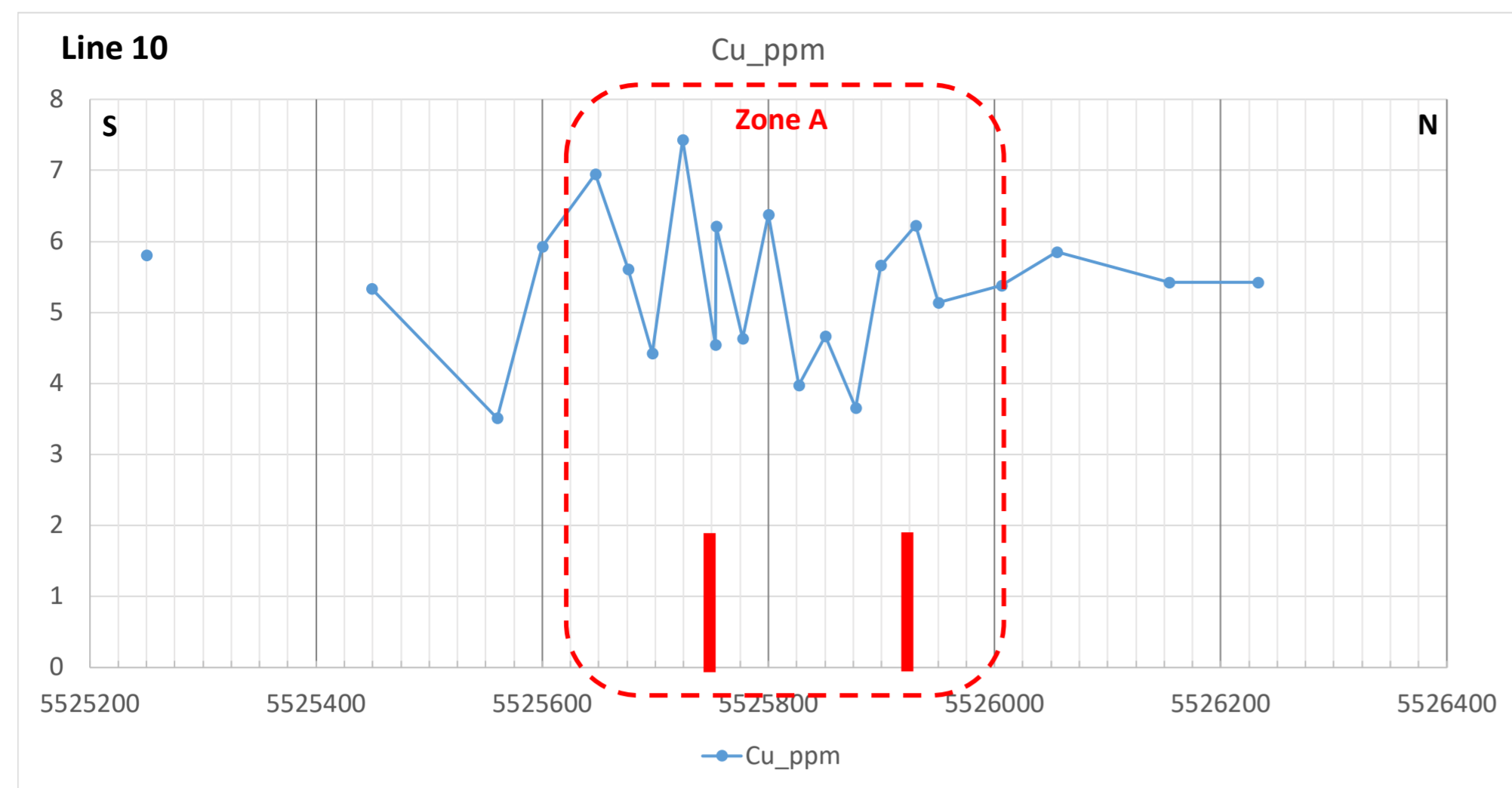
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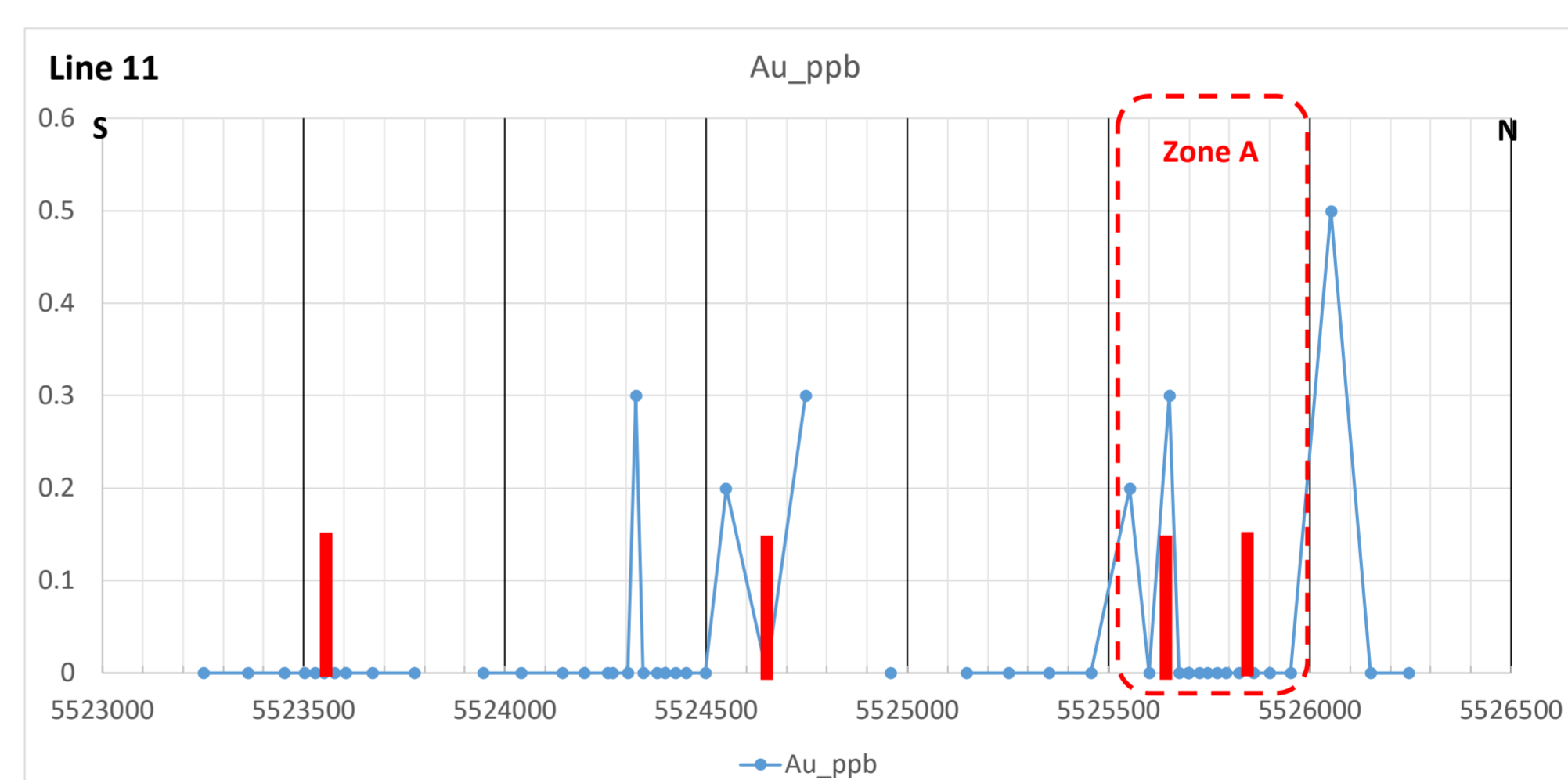
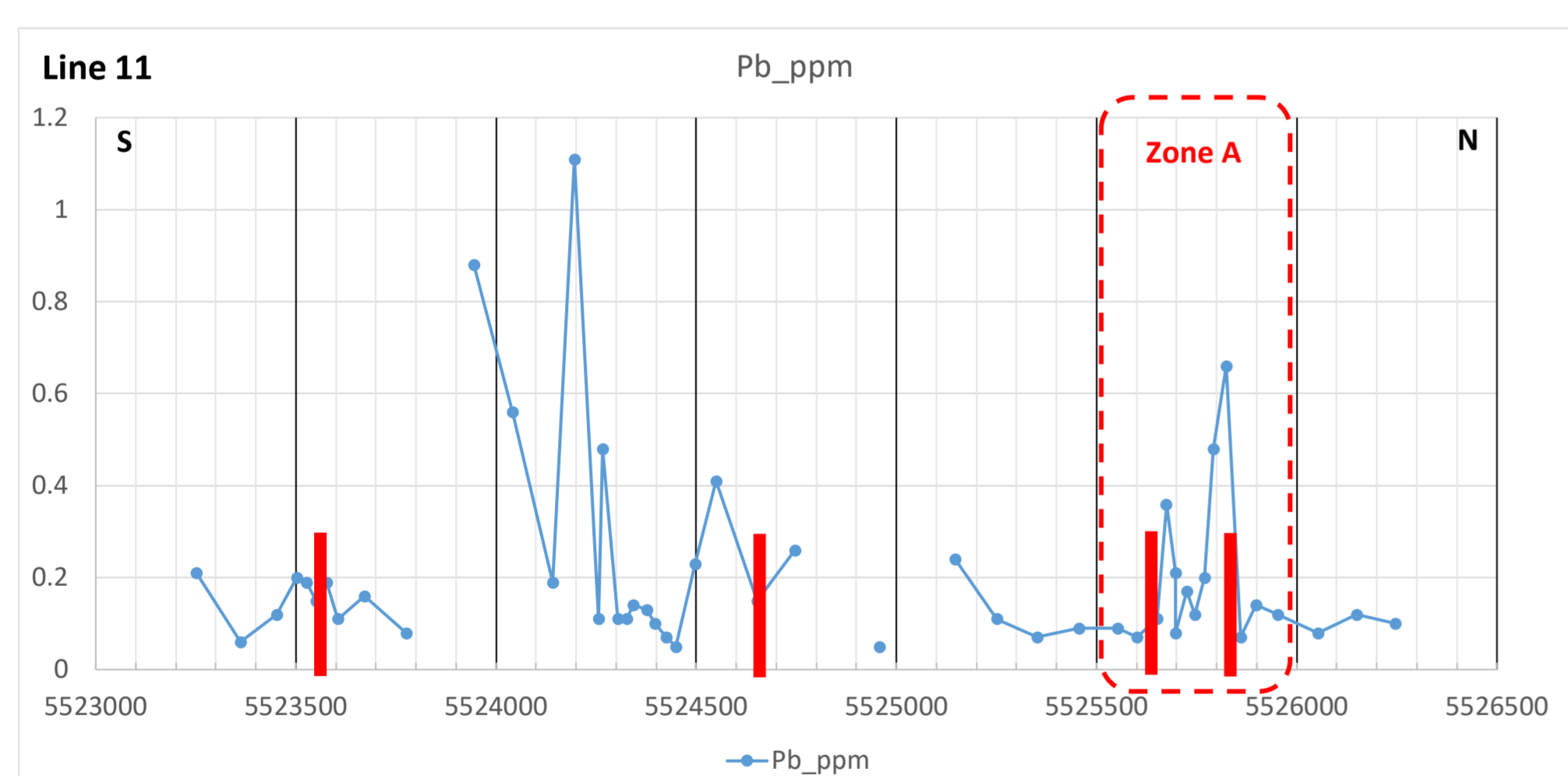
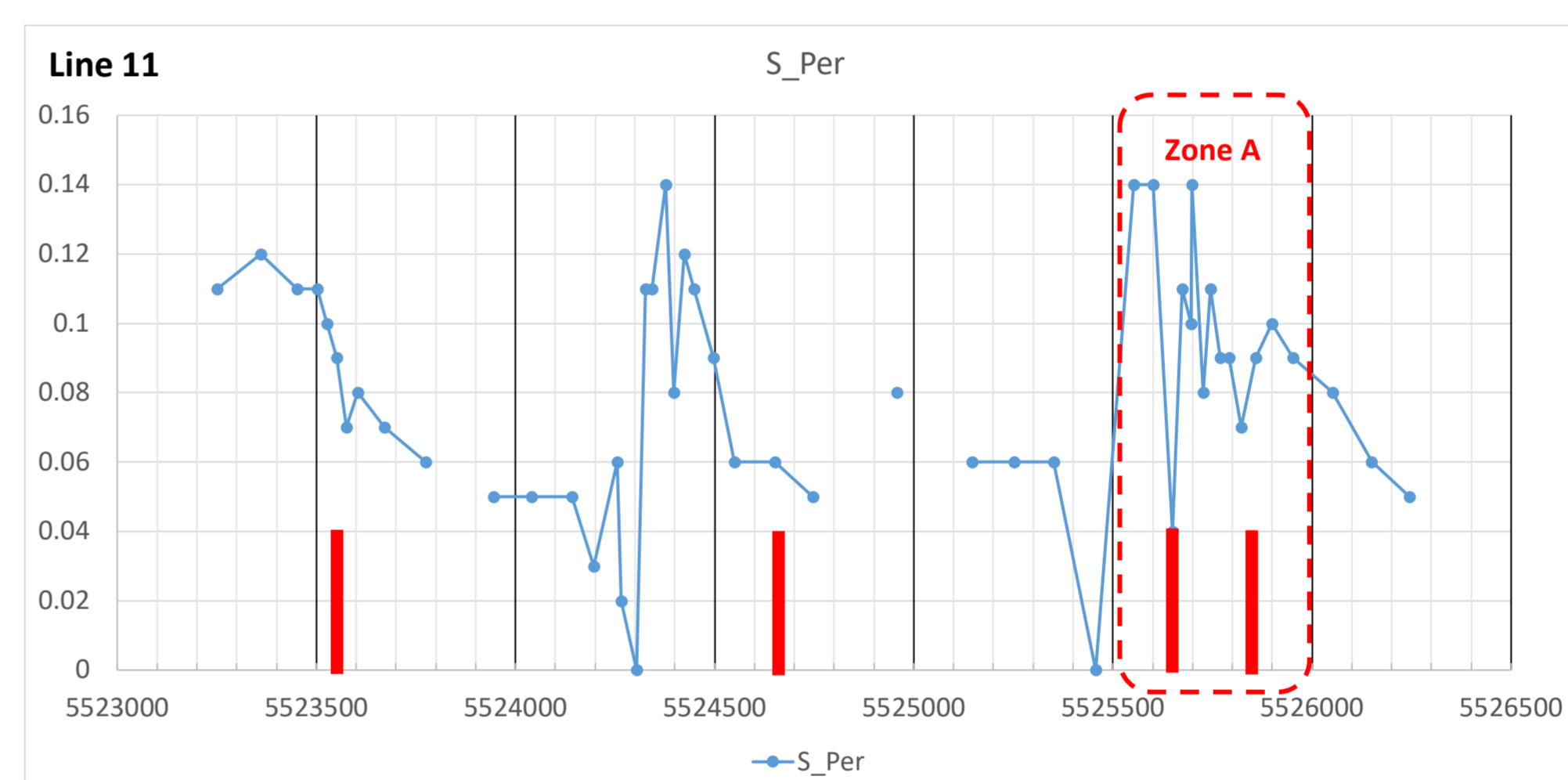
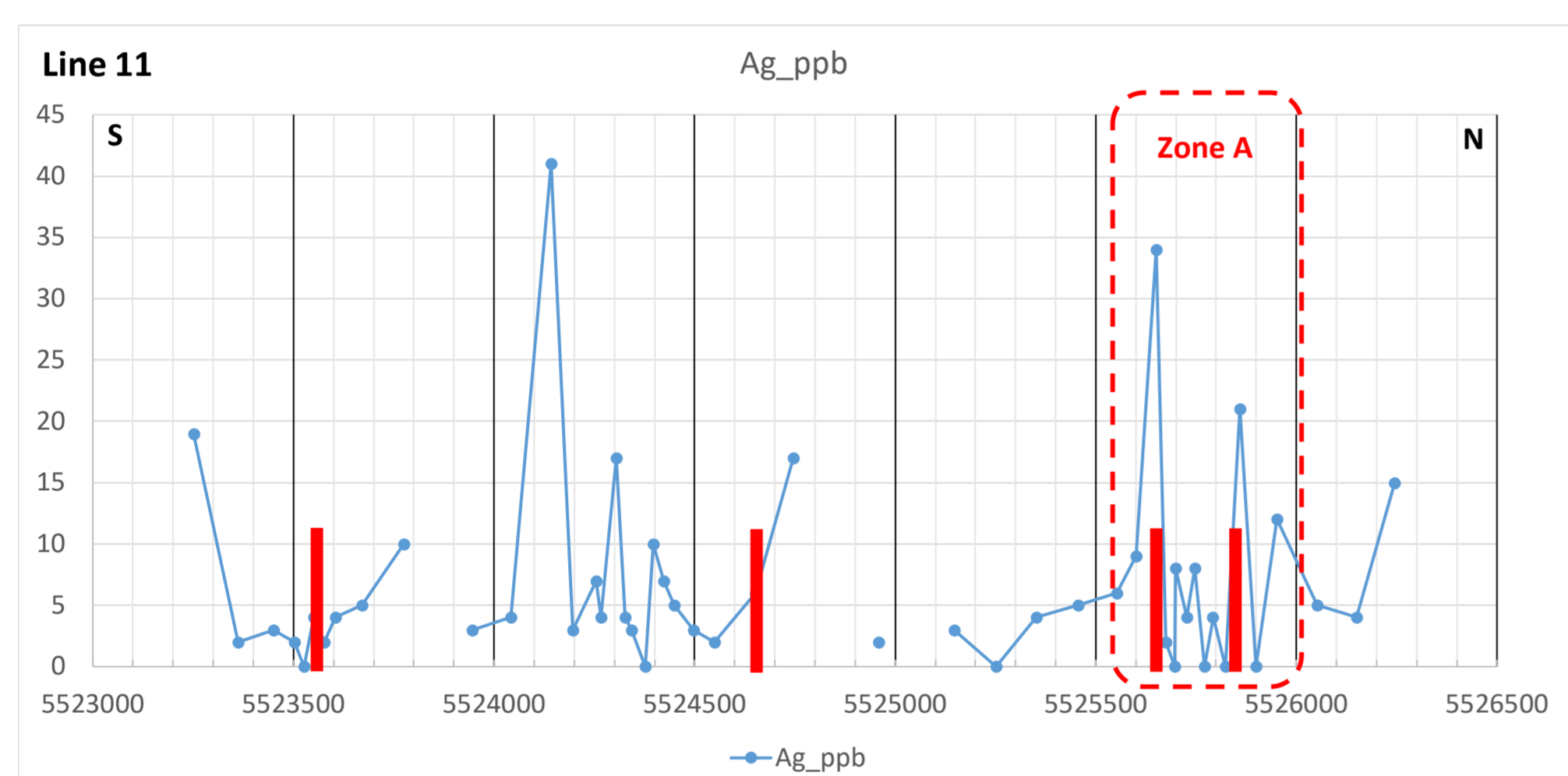
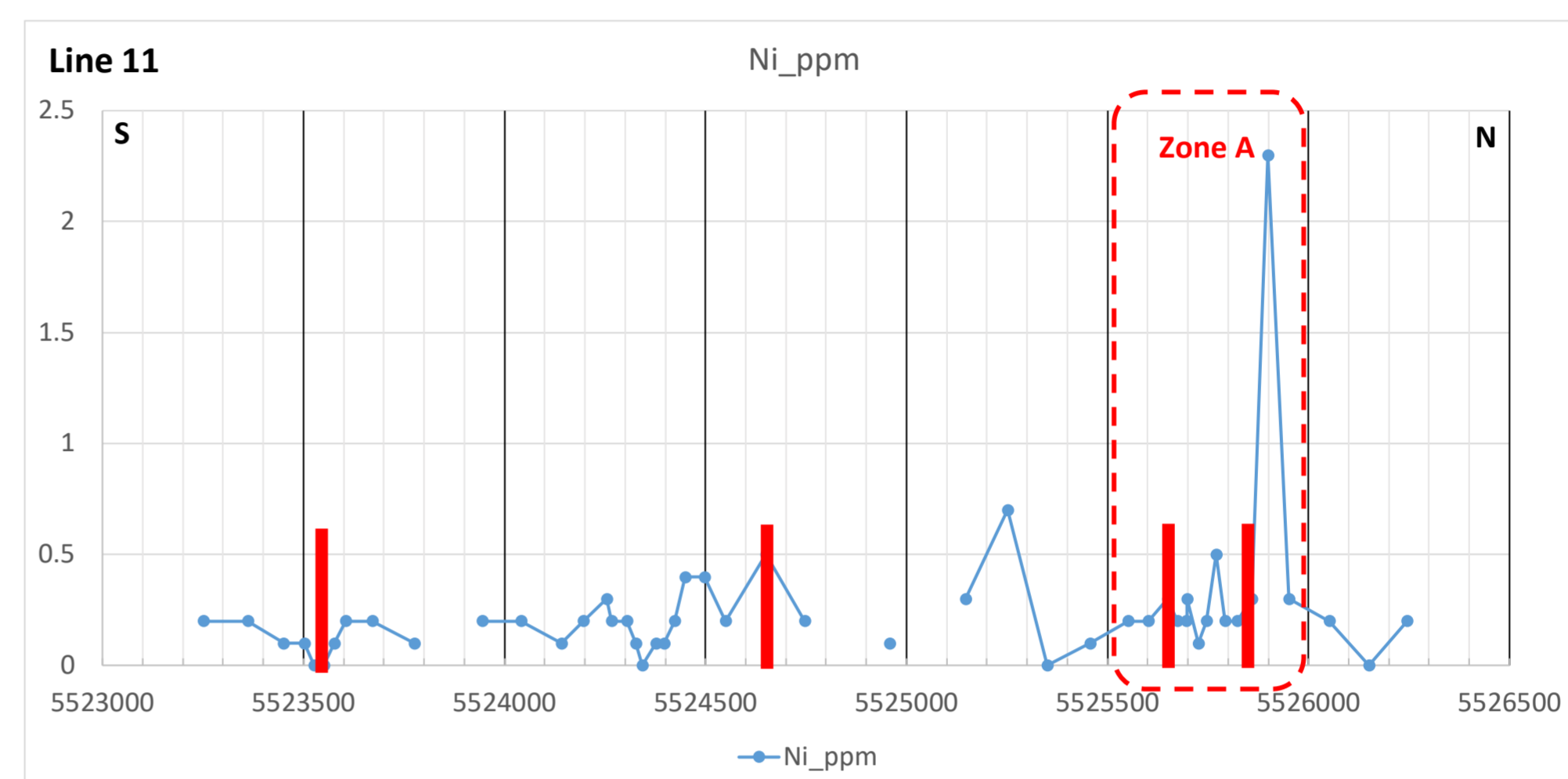
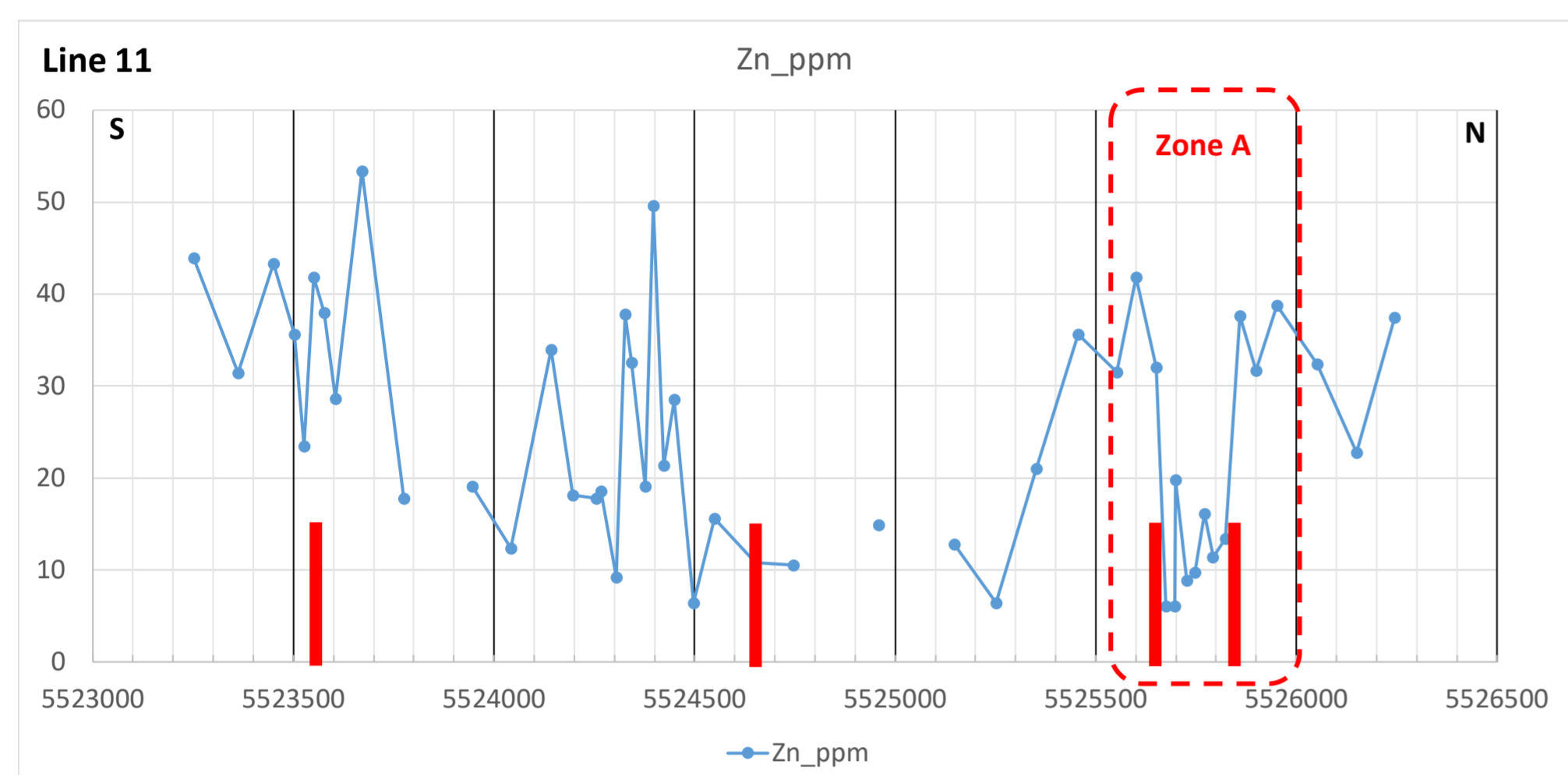
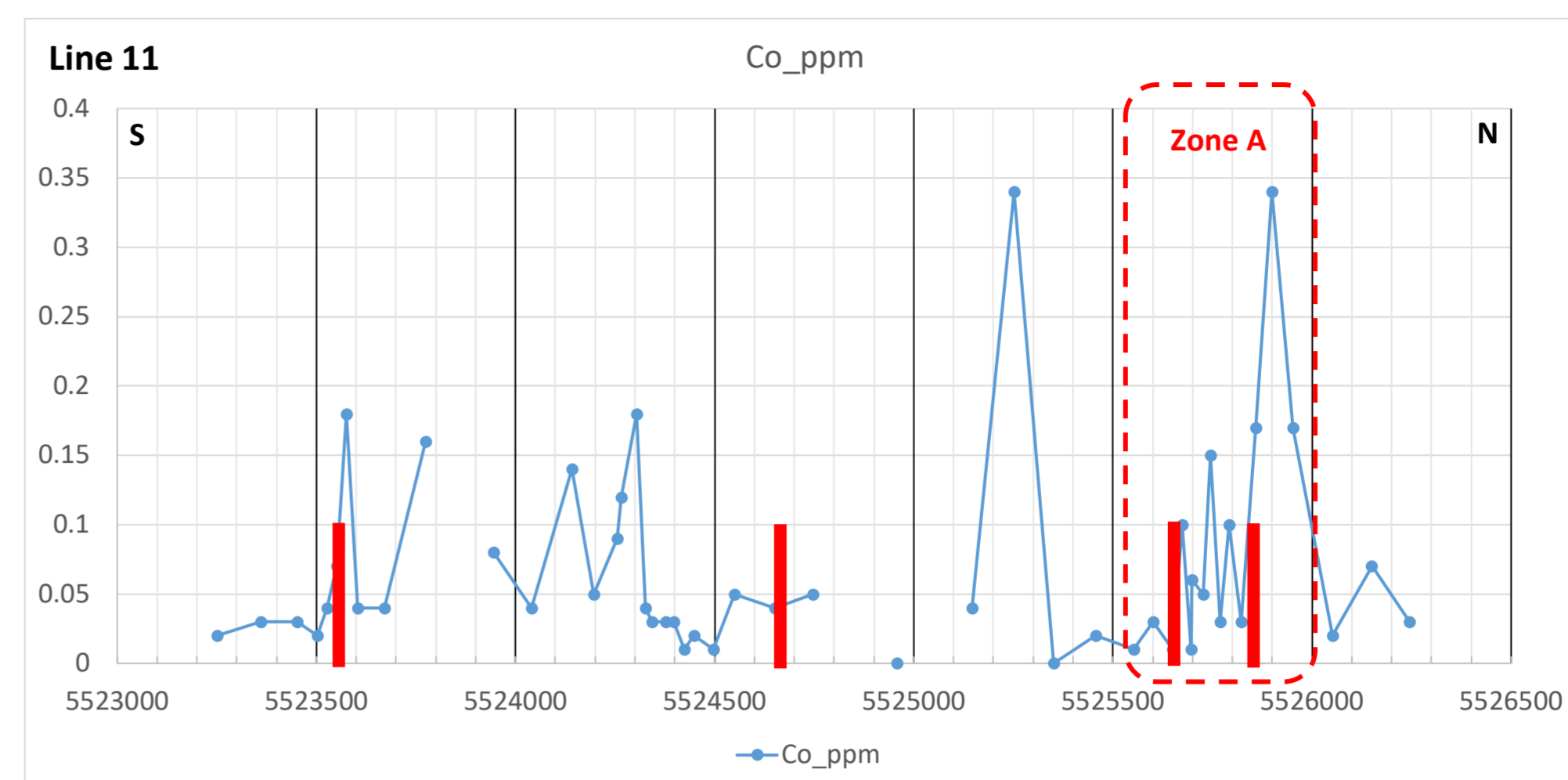
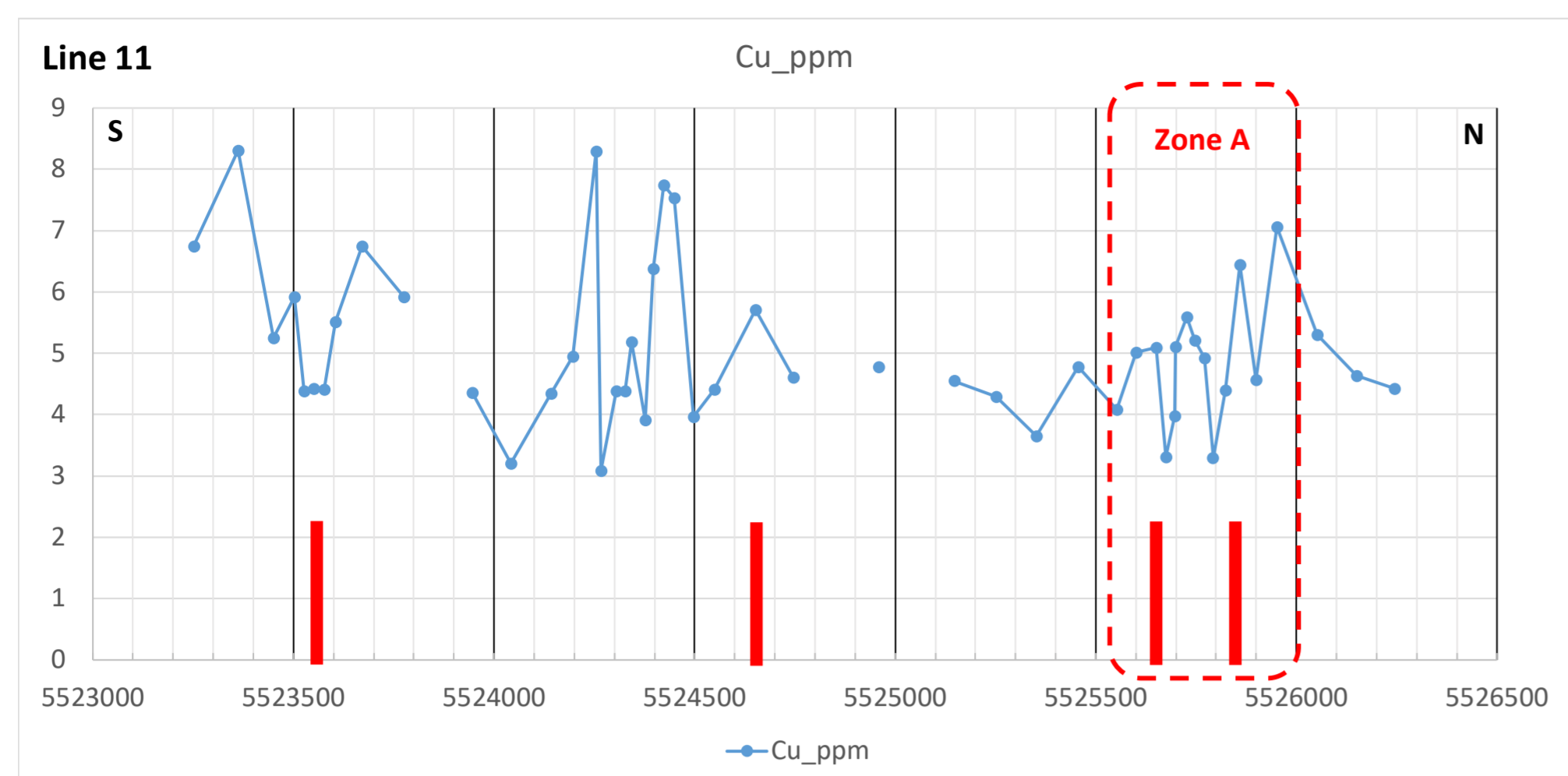
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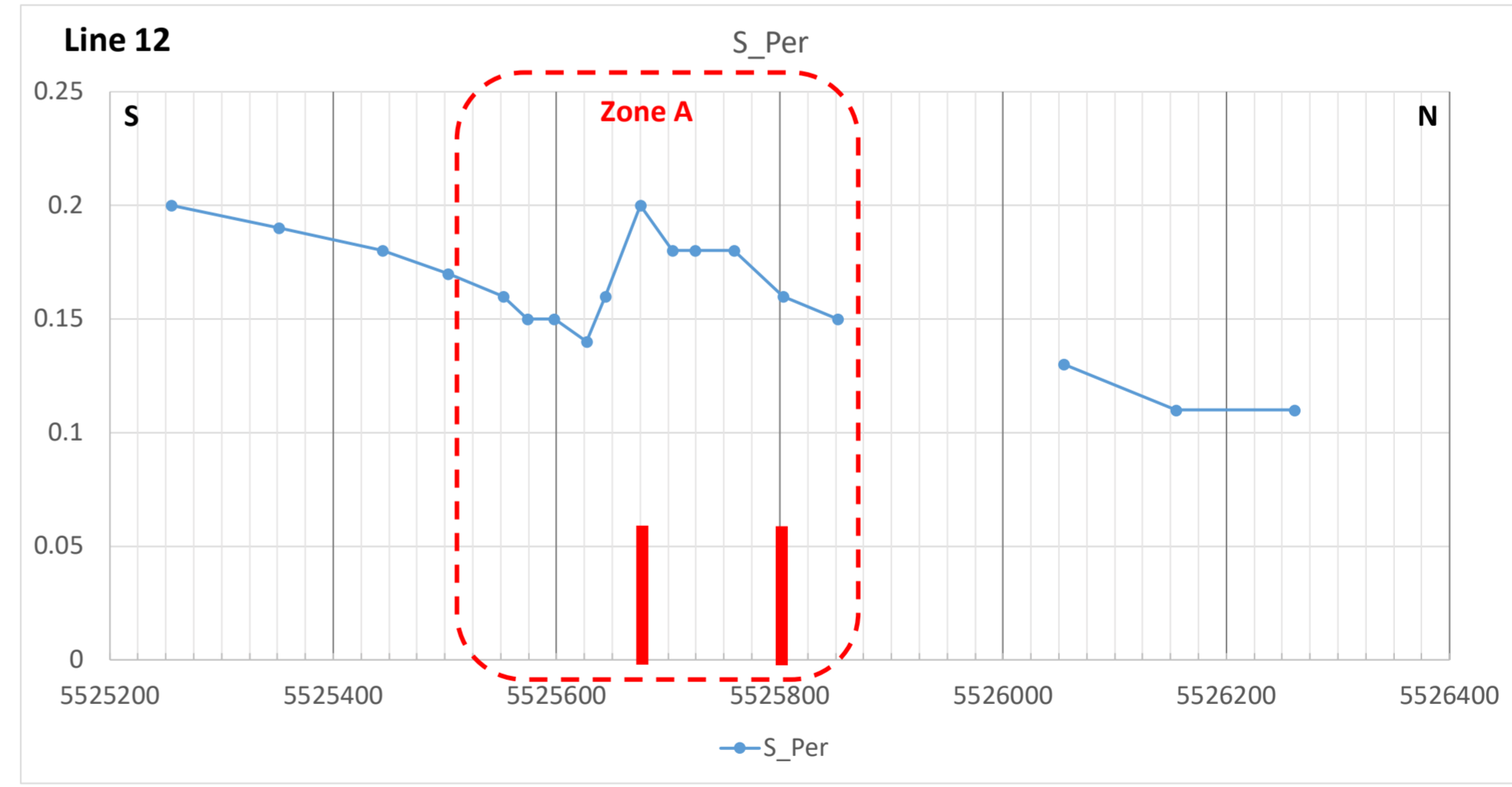
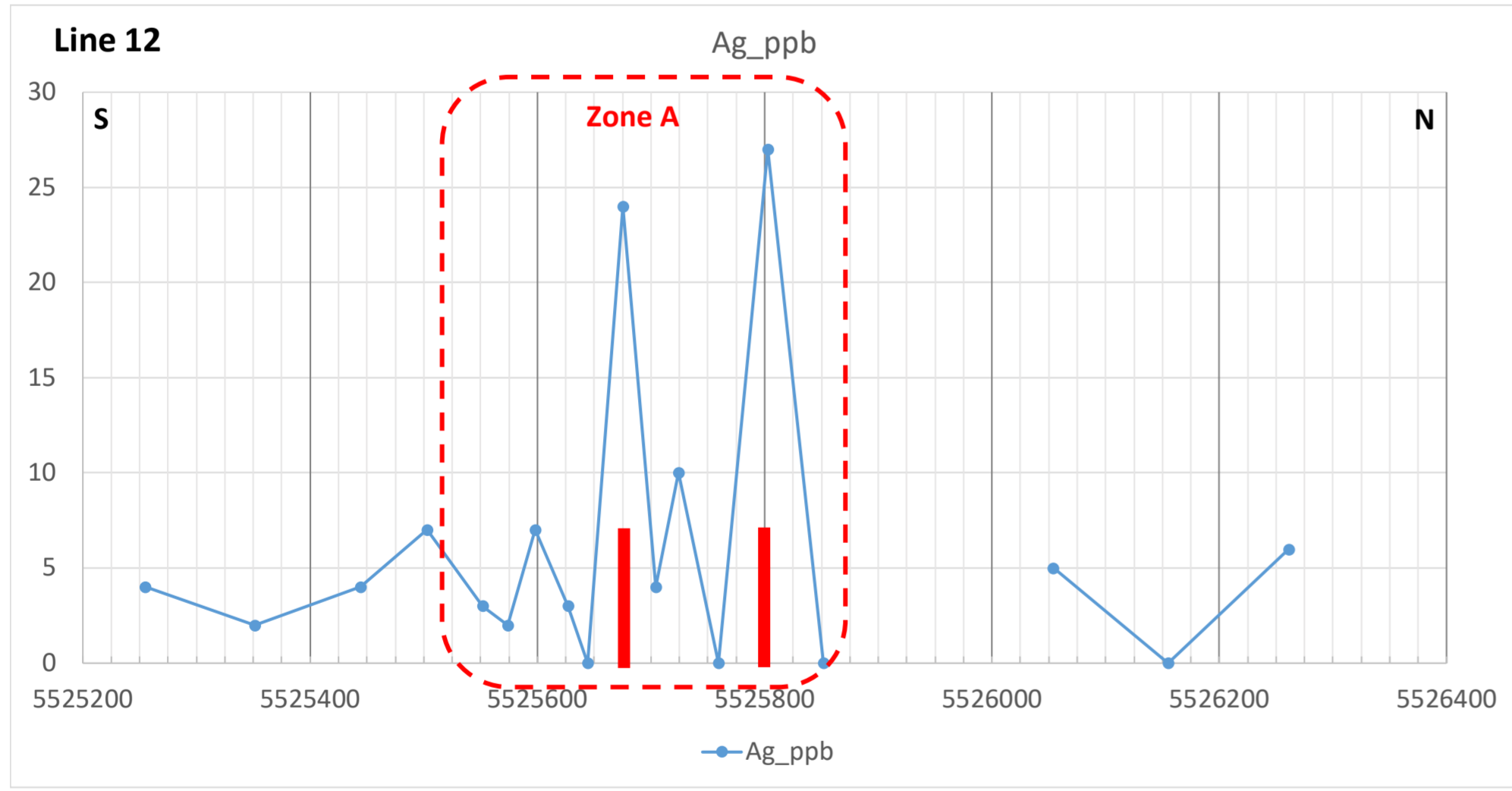
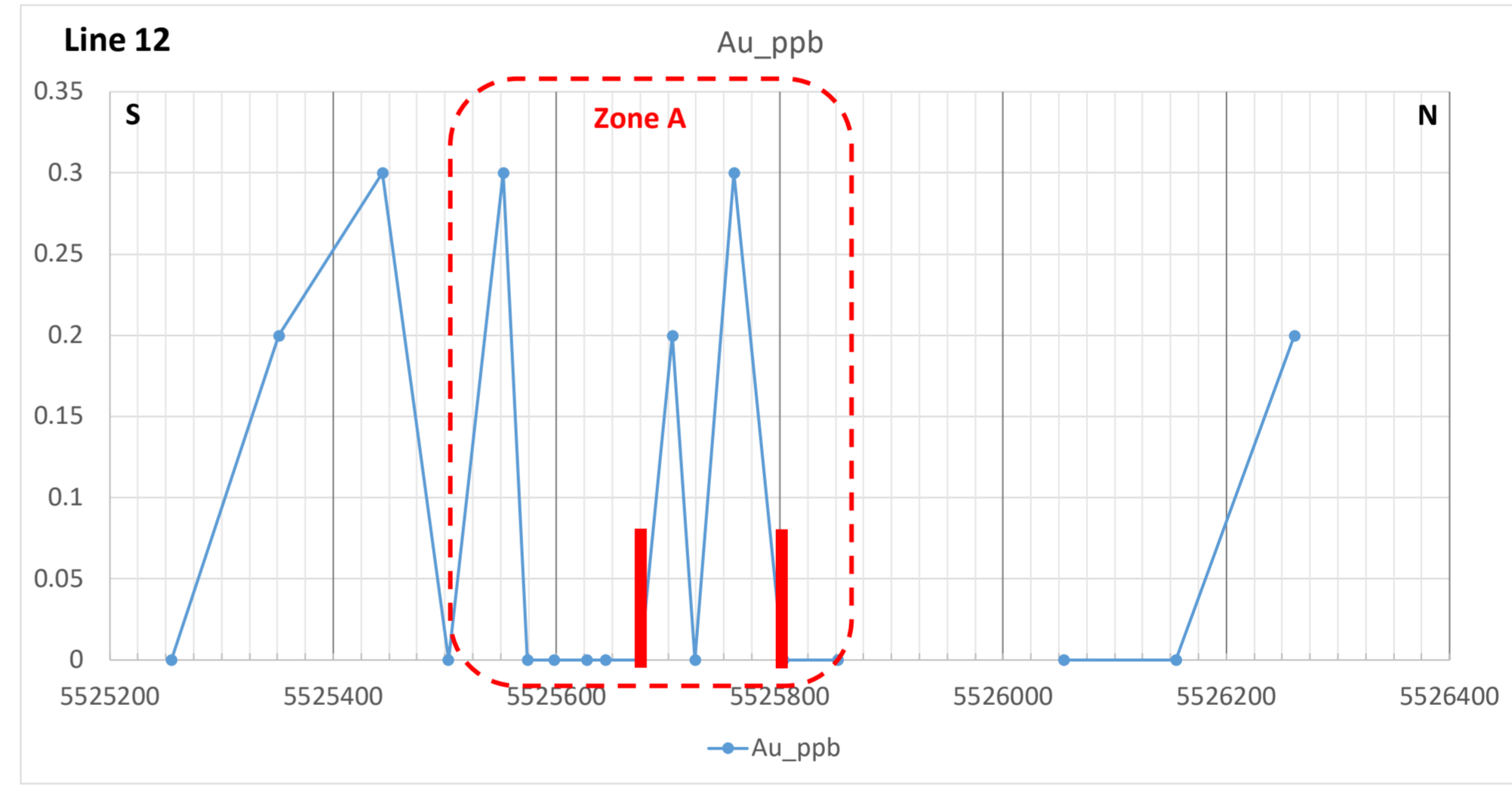
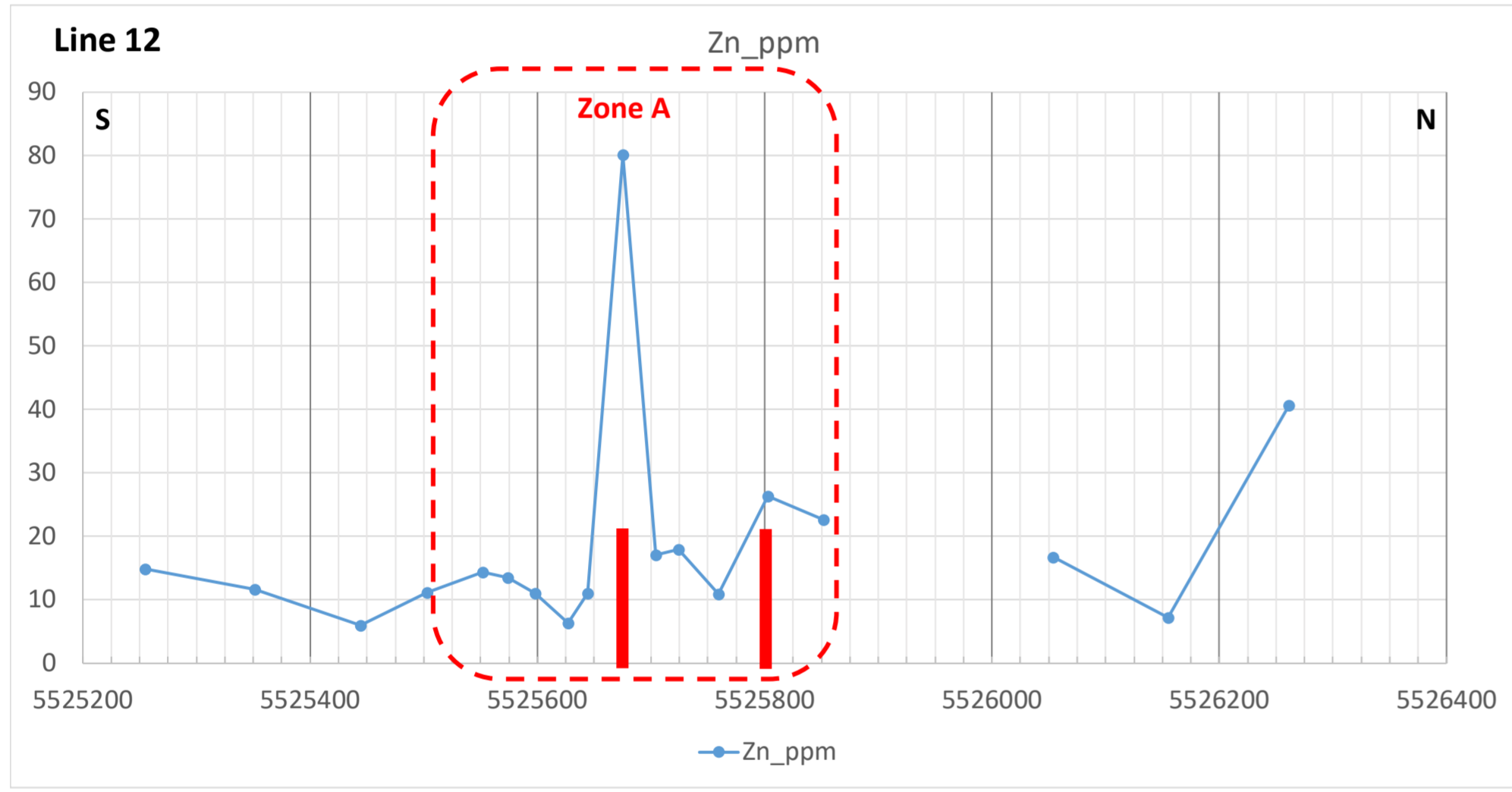
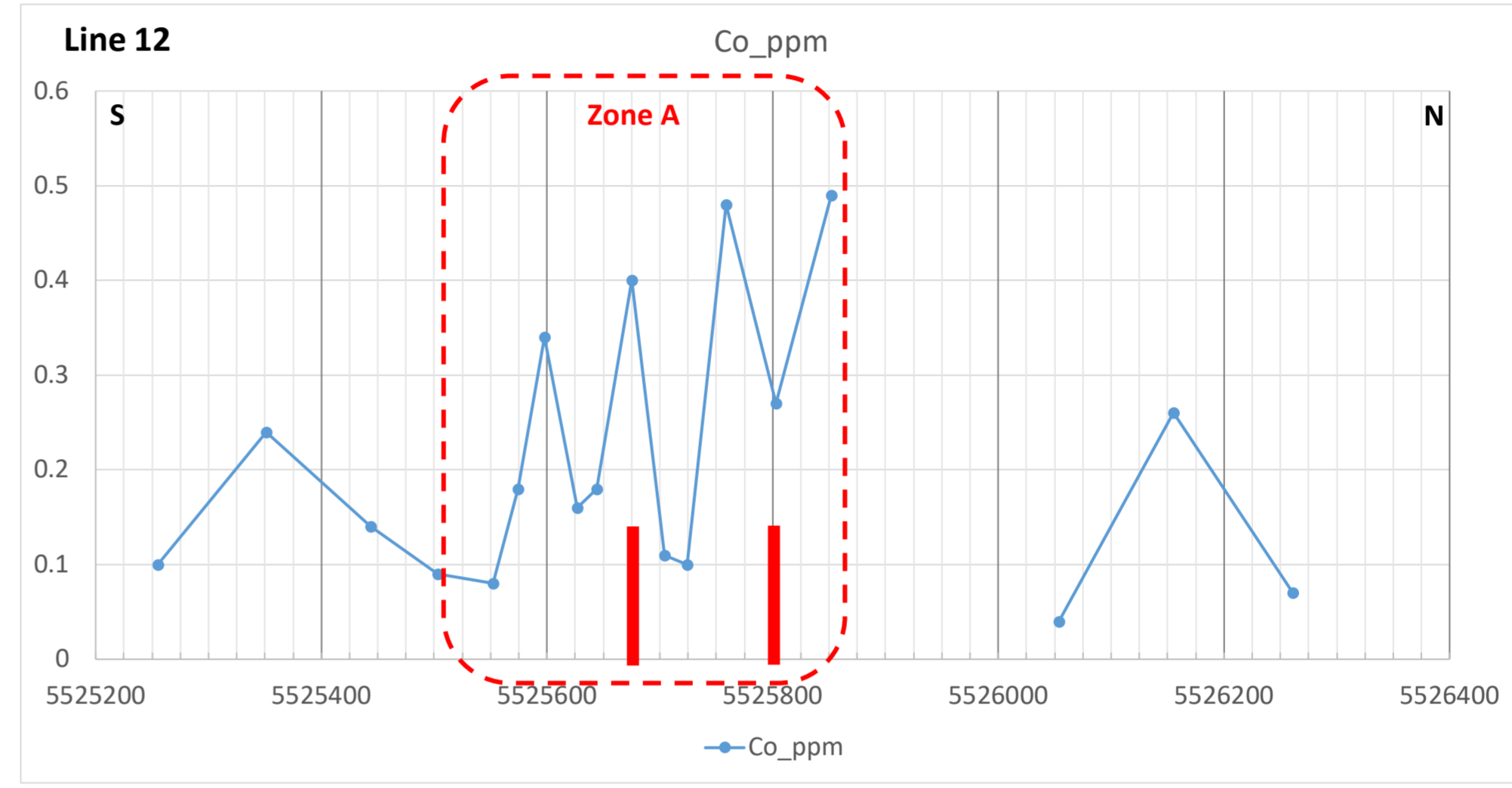
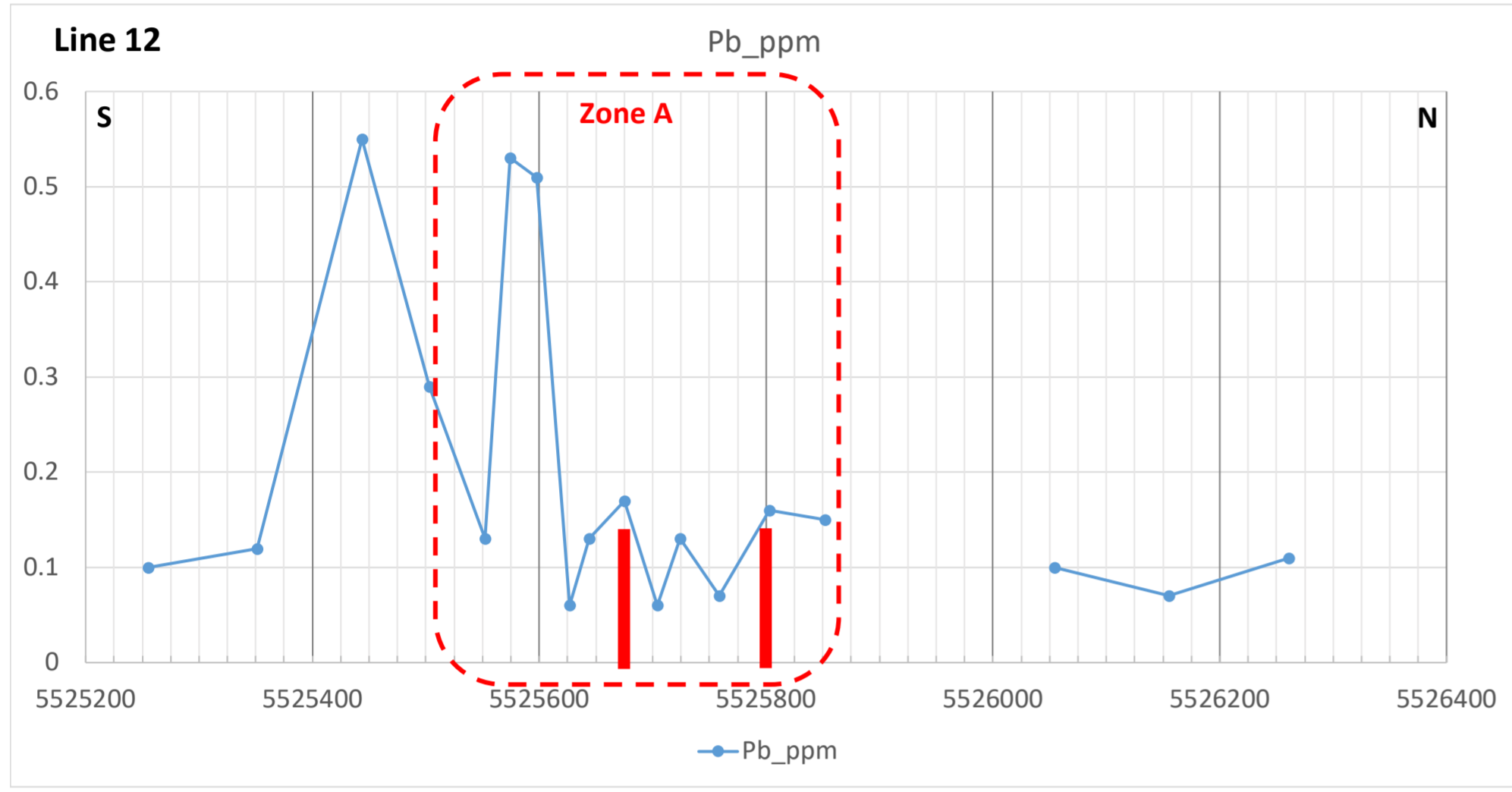
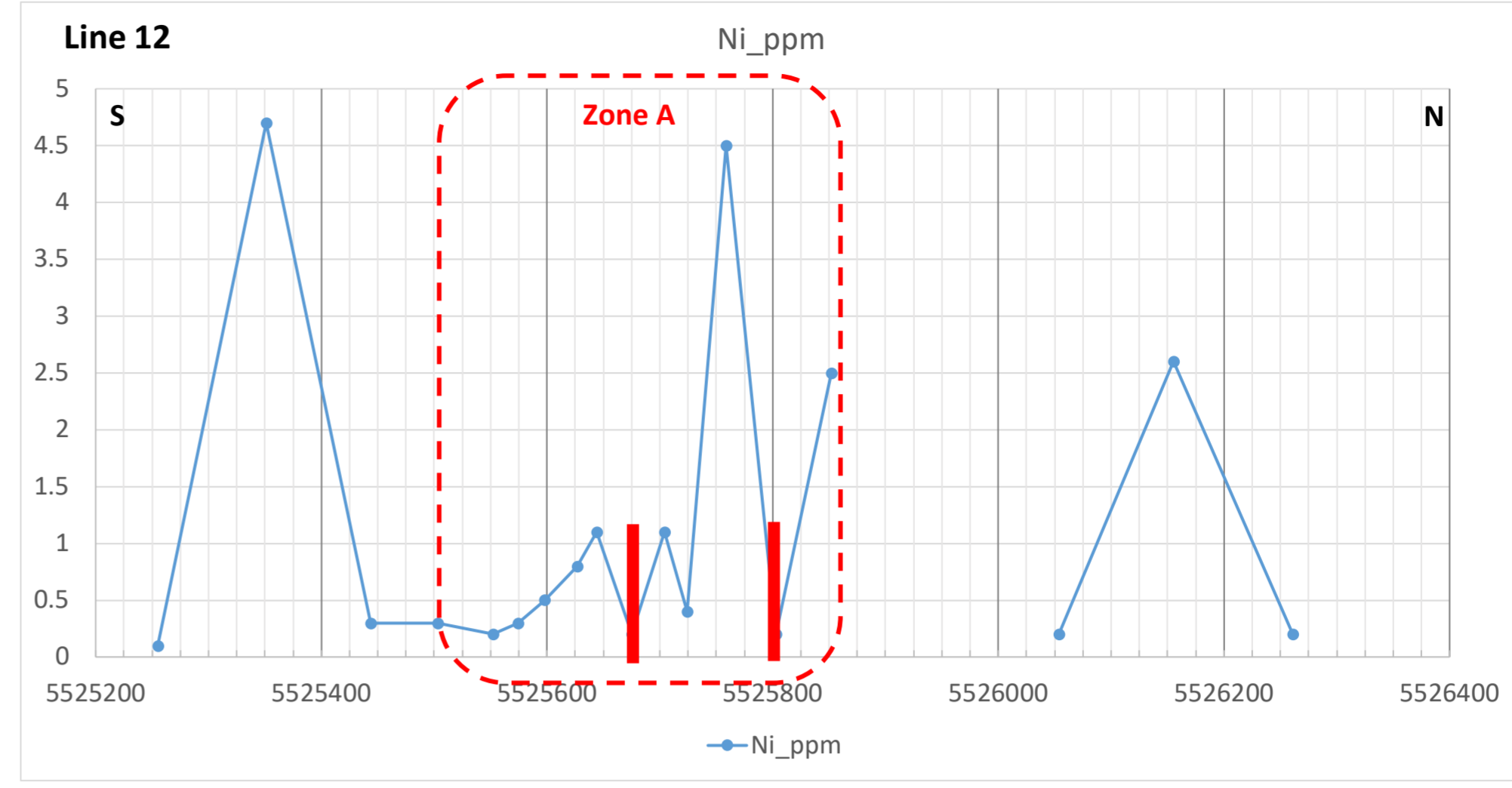
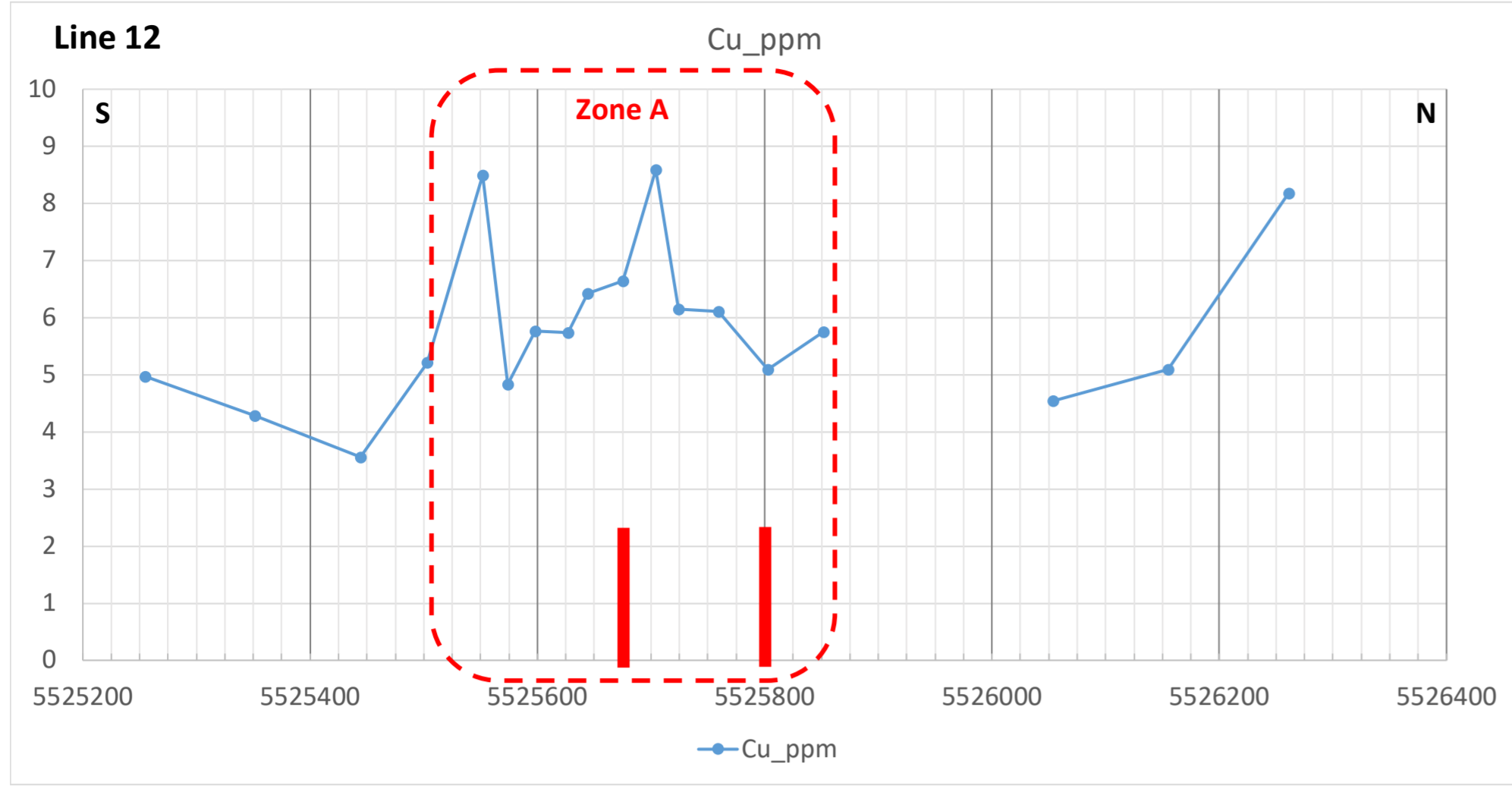
Zone A - Line 10



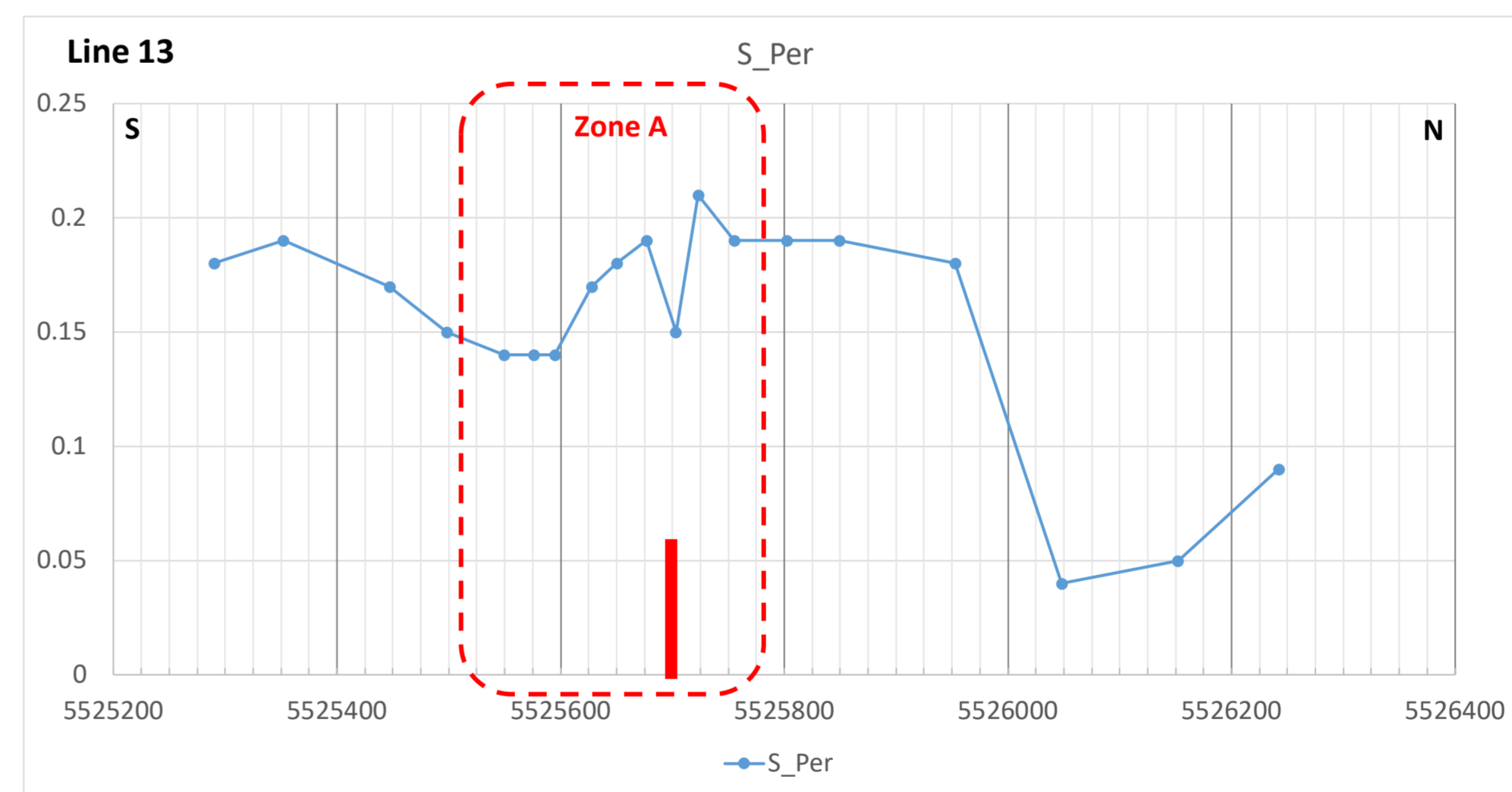
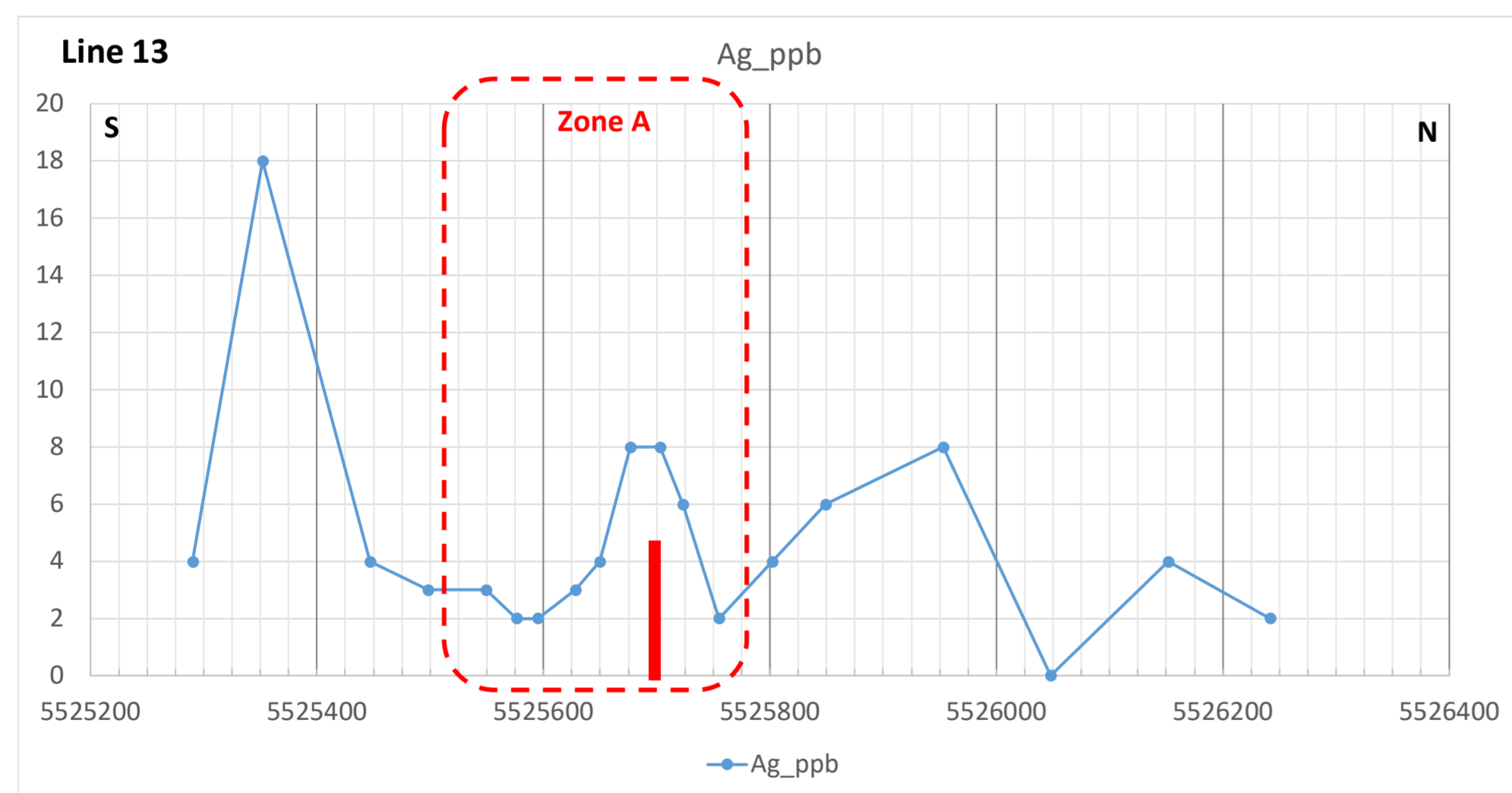
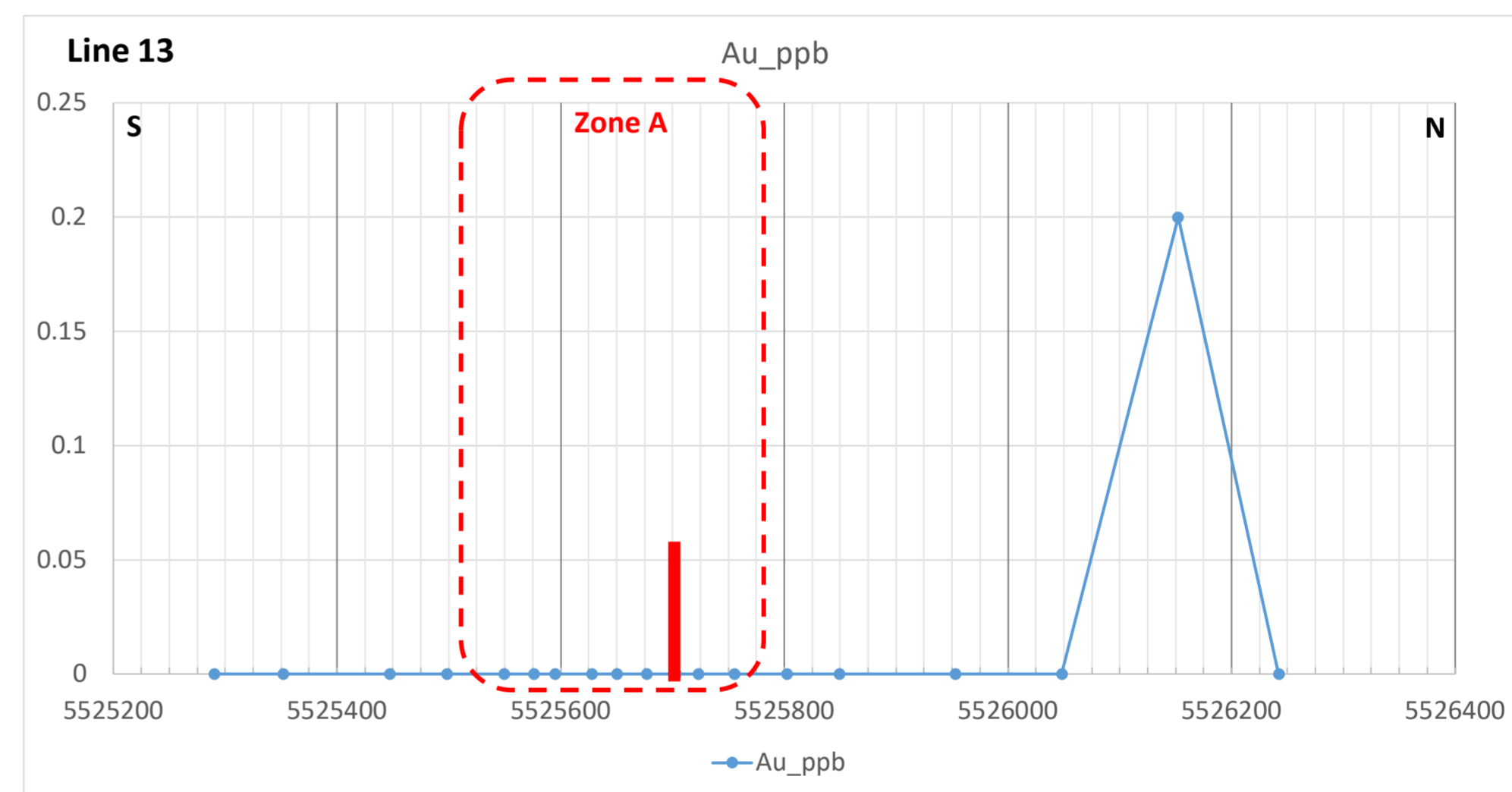
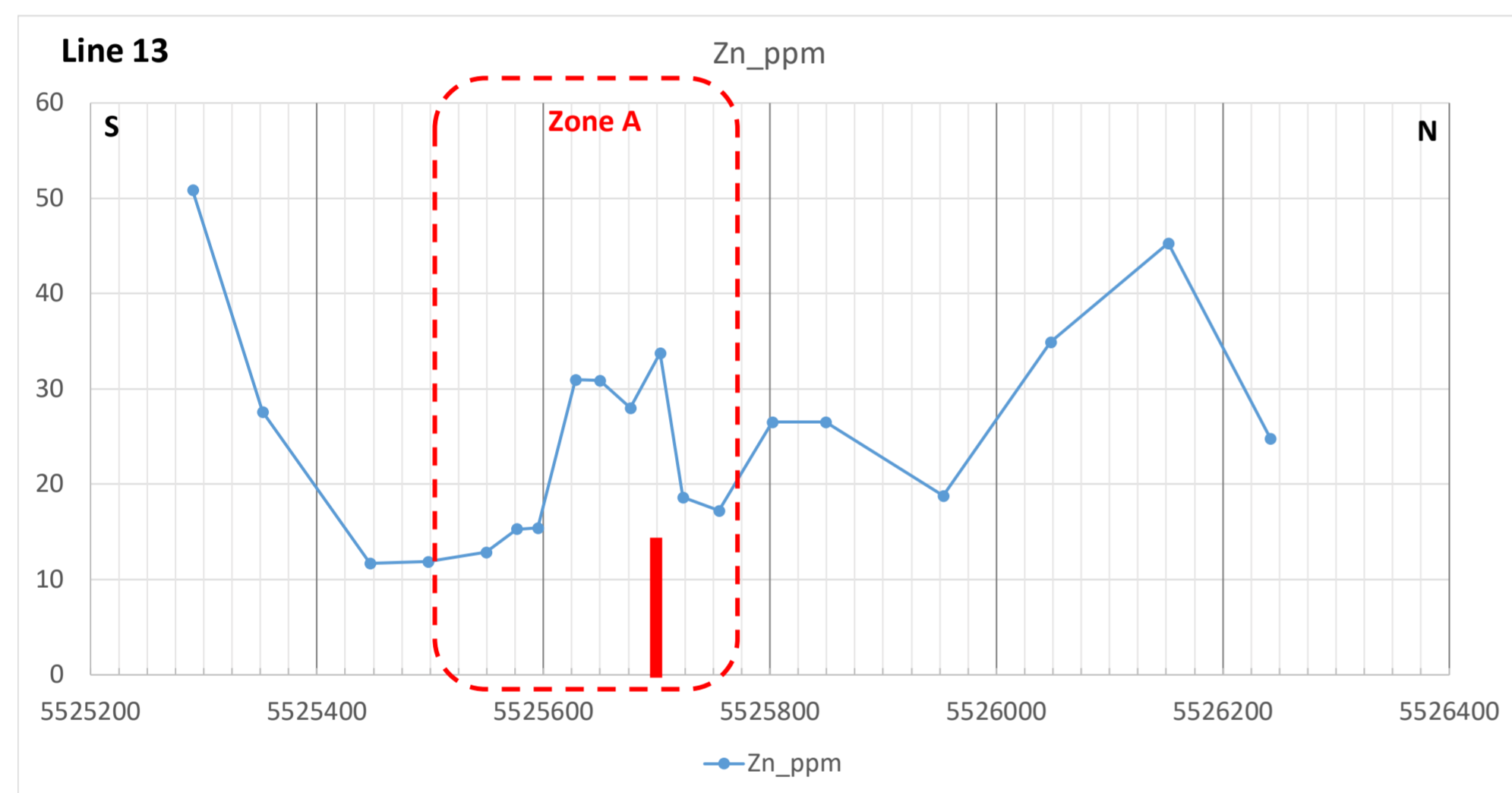
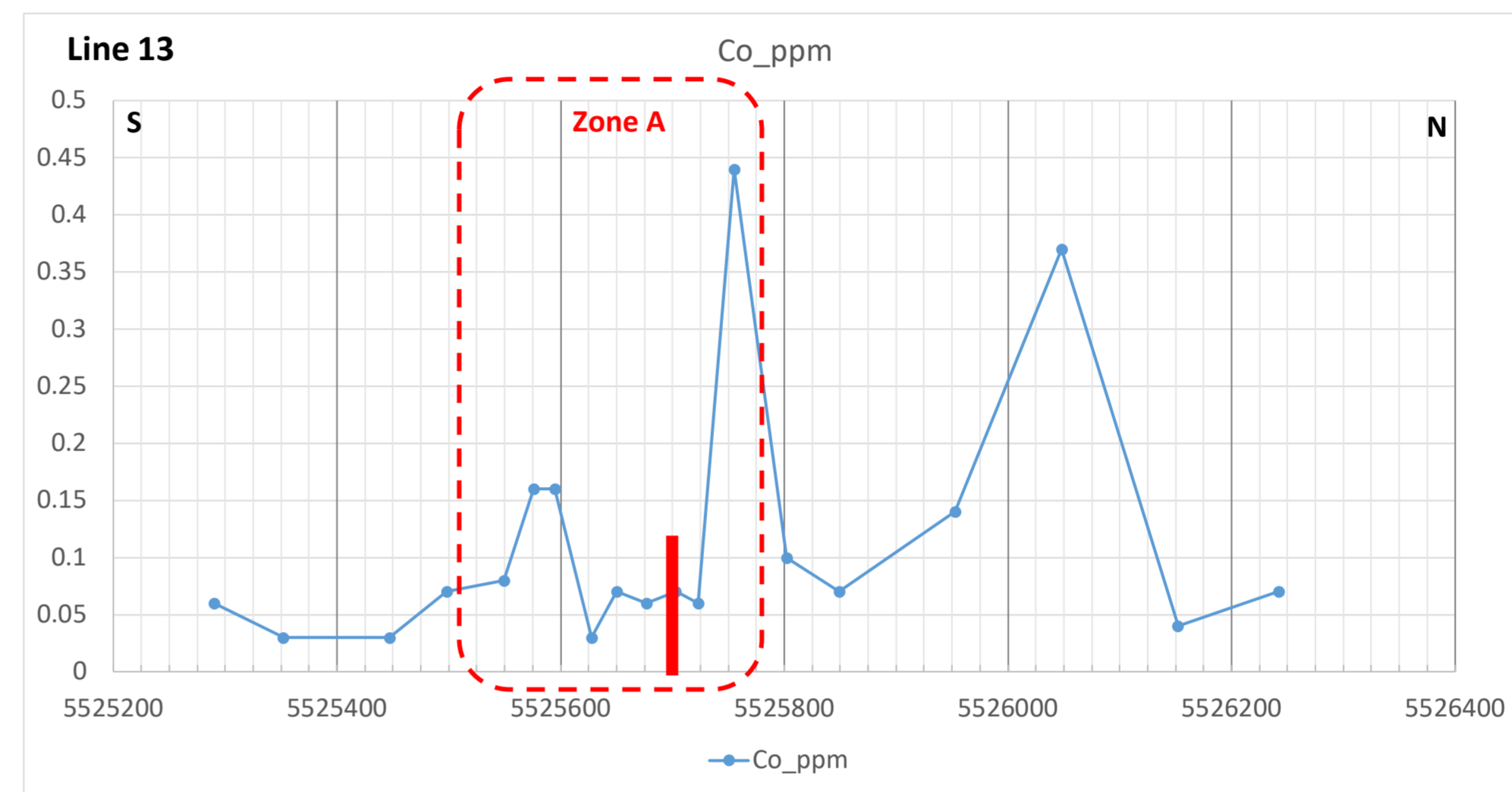
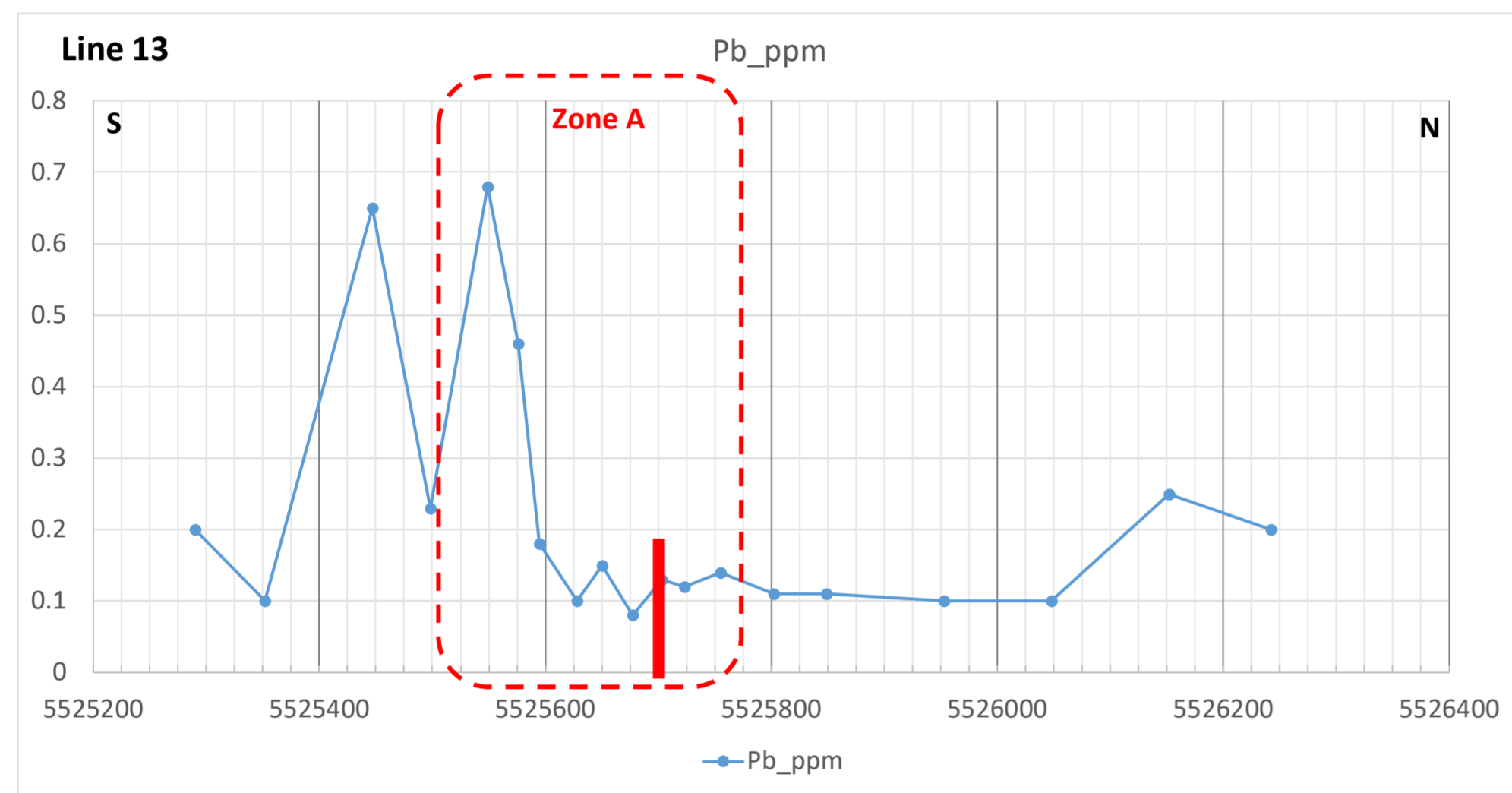
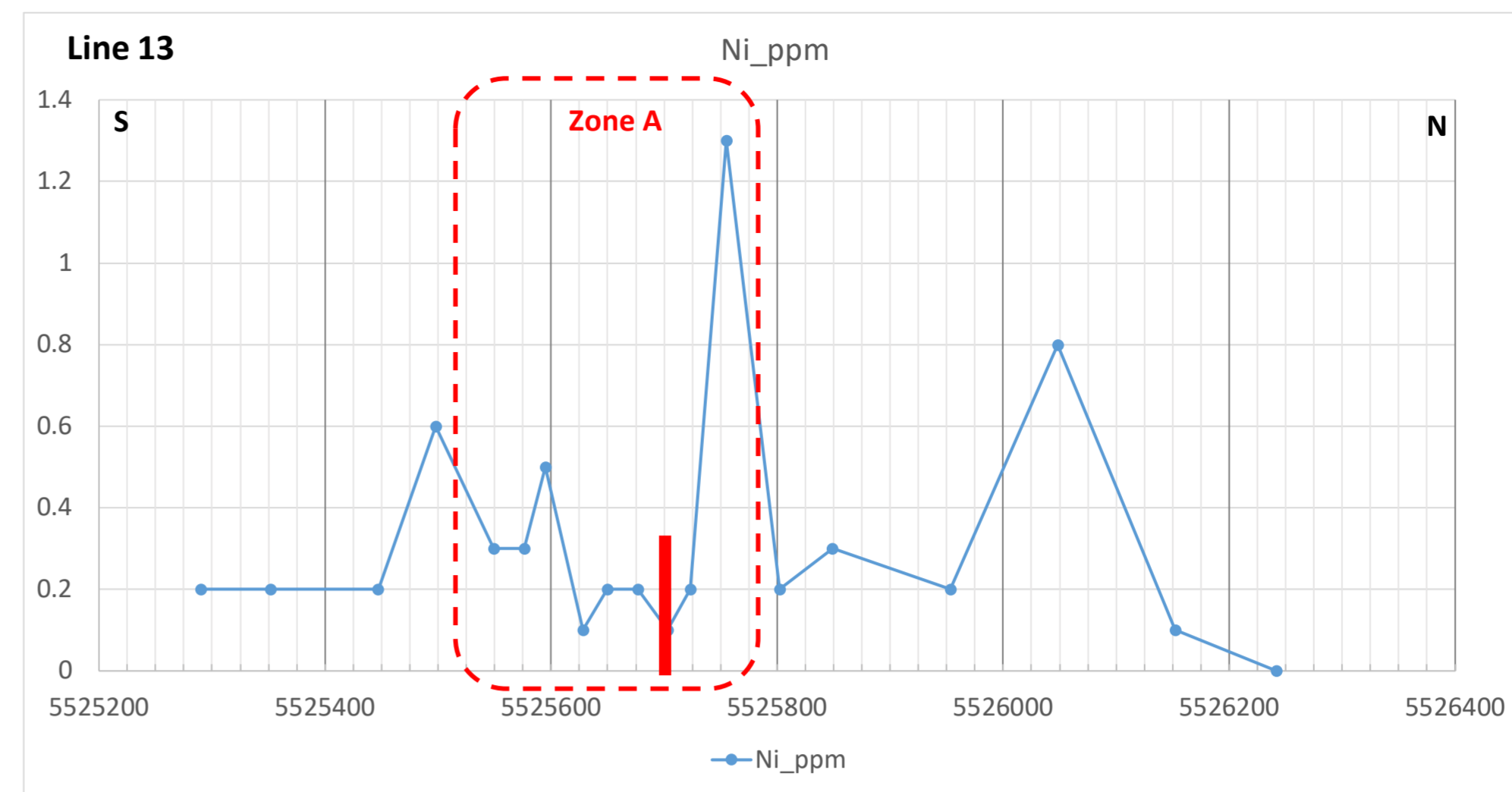
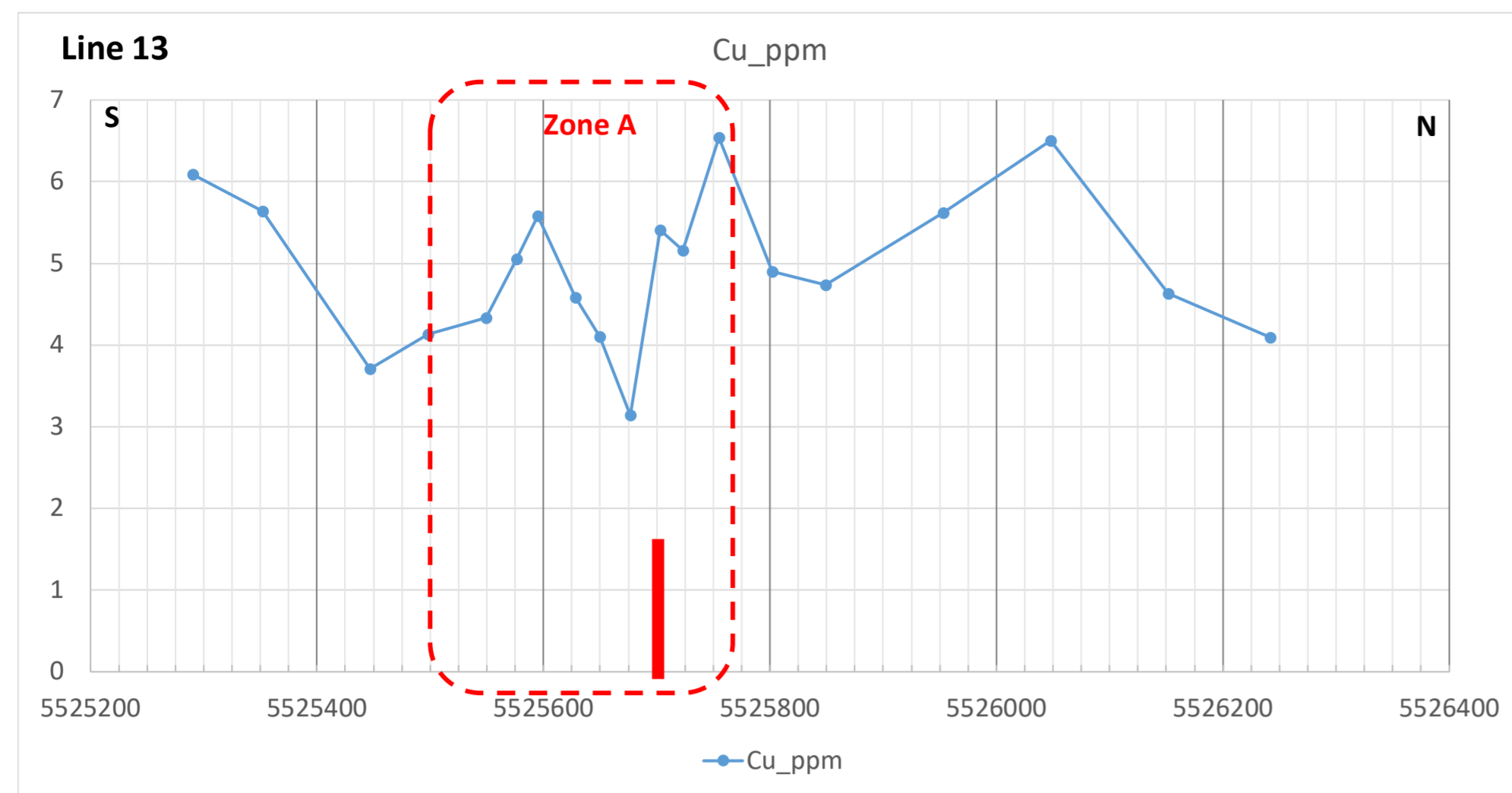
# Zone A - Line 11



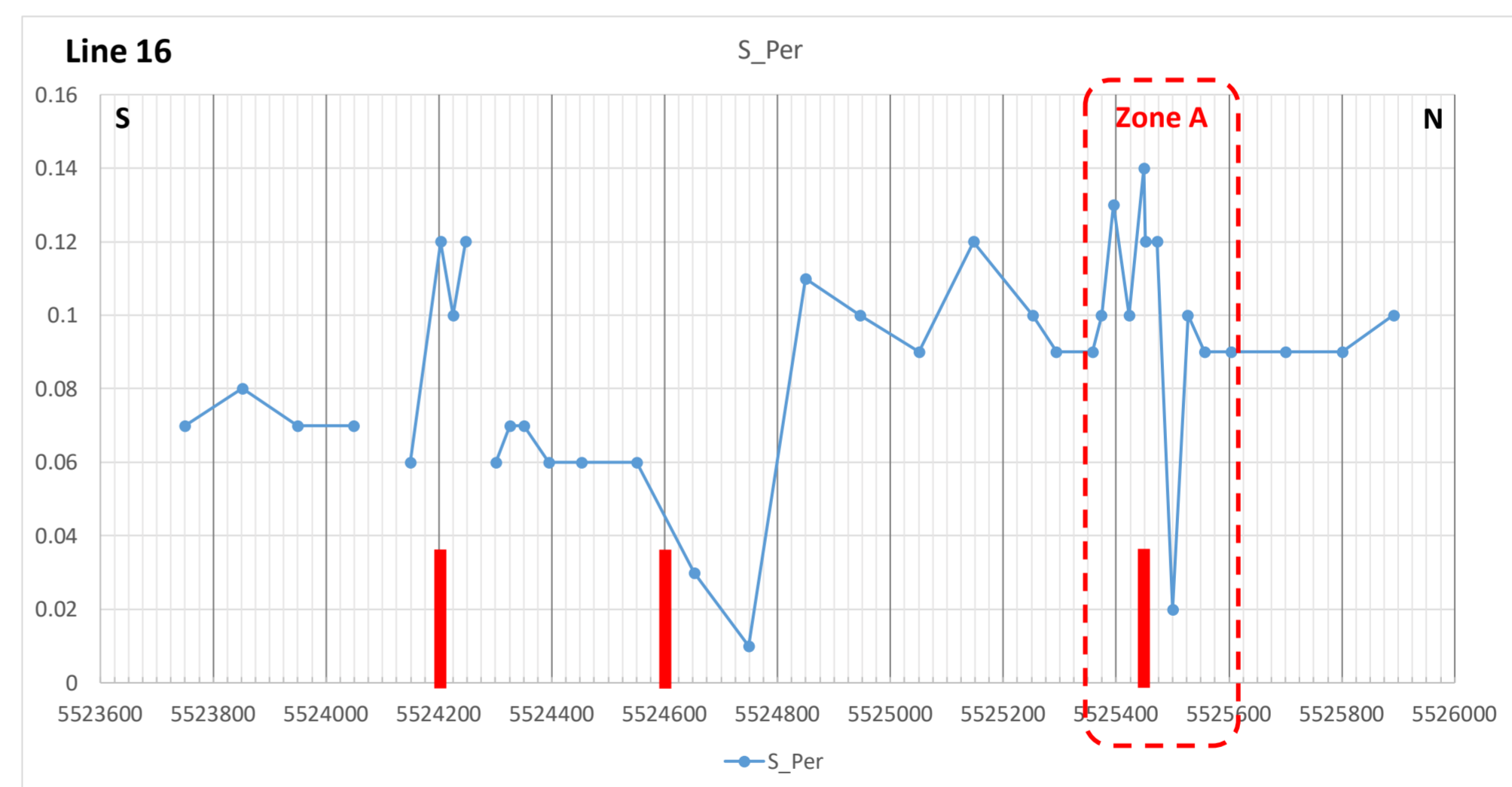
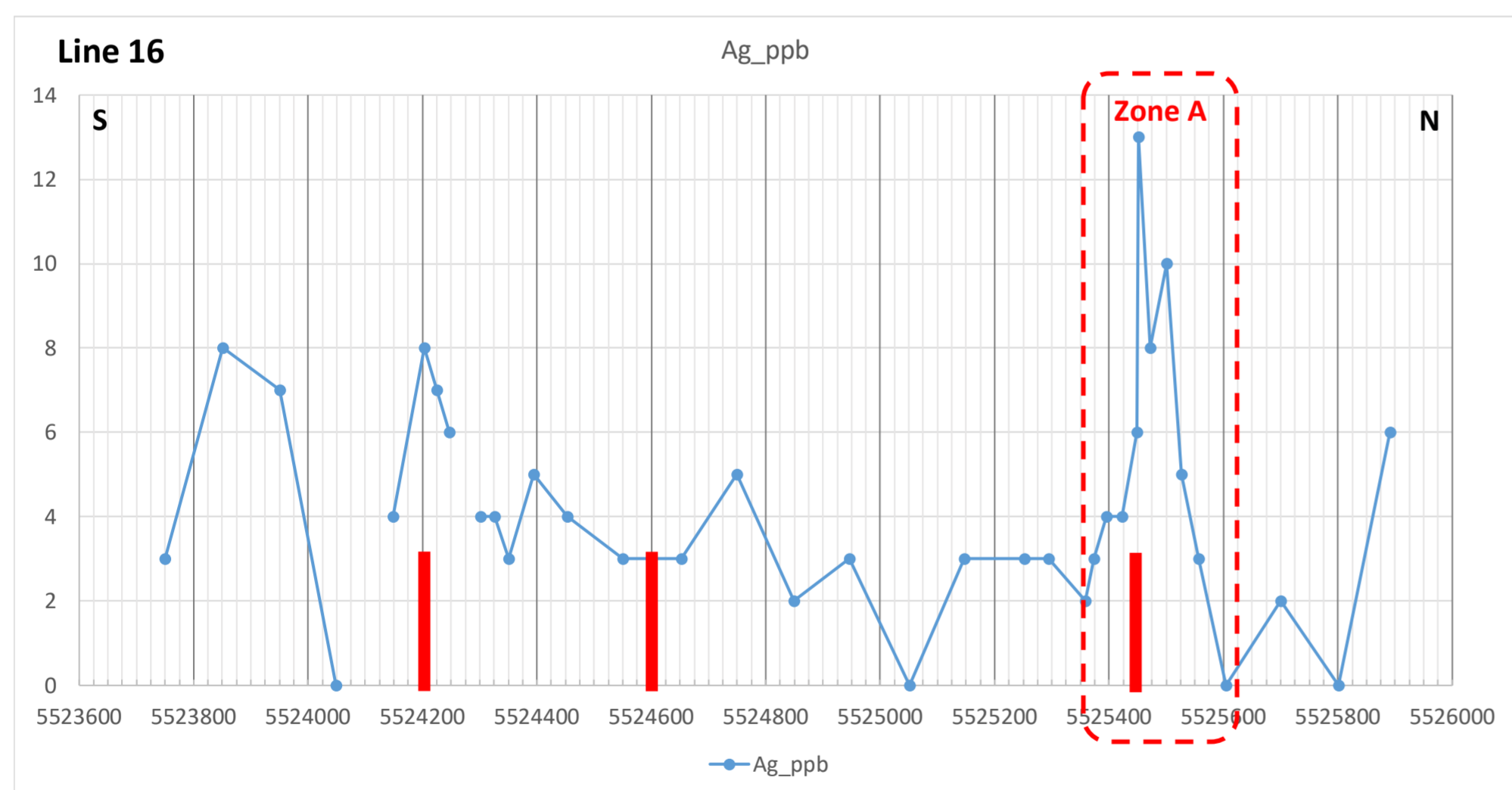
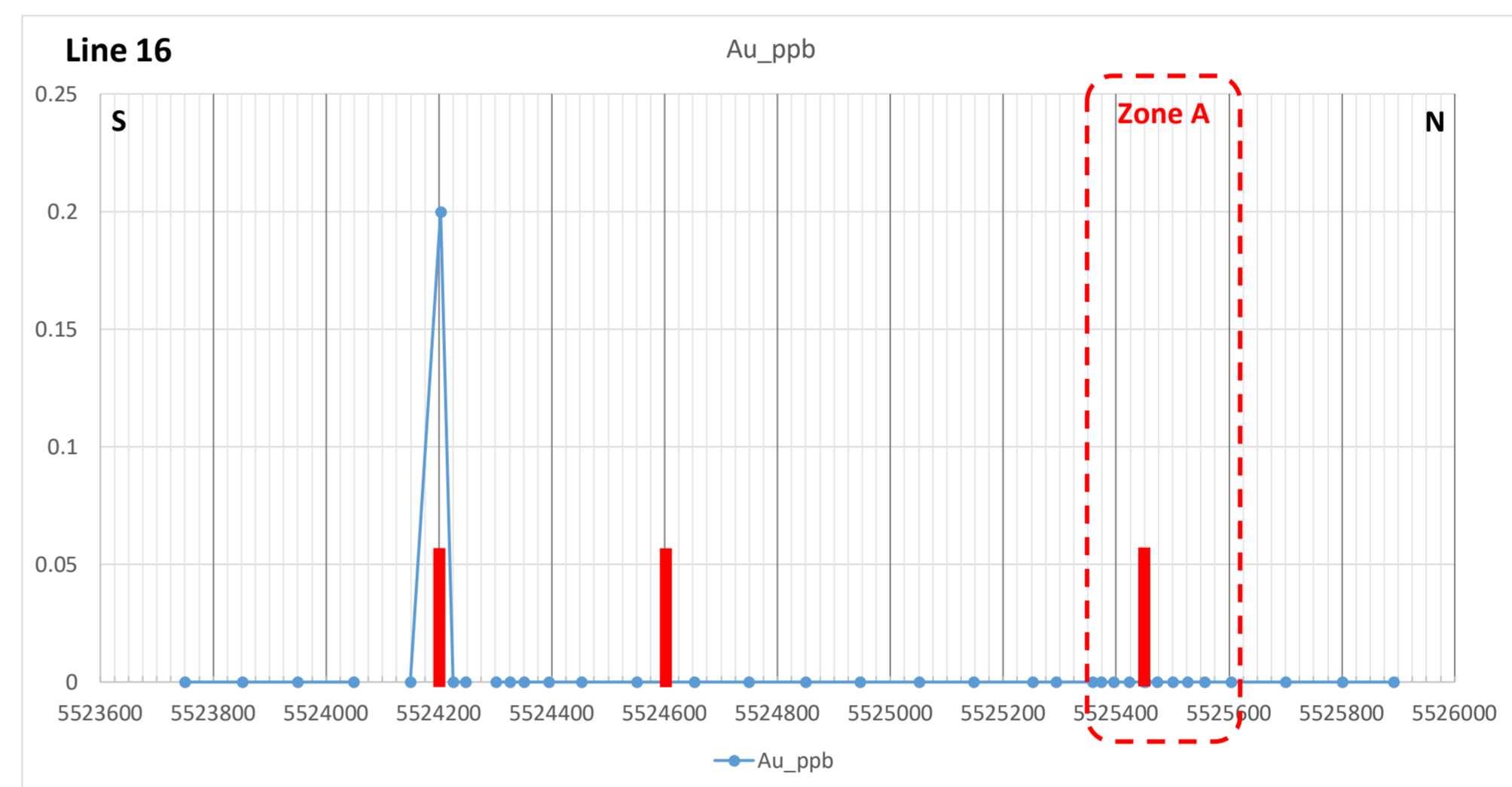
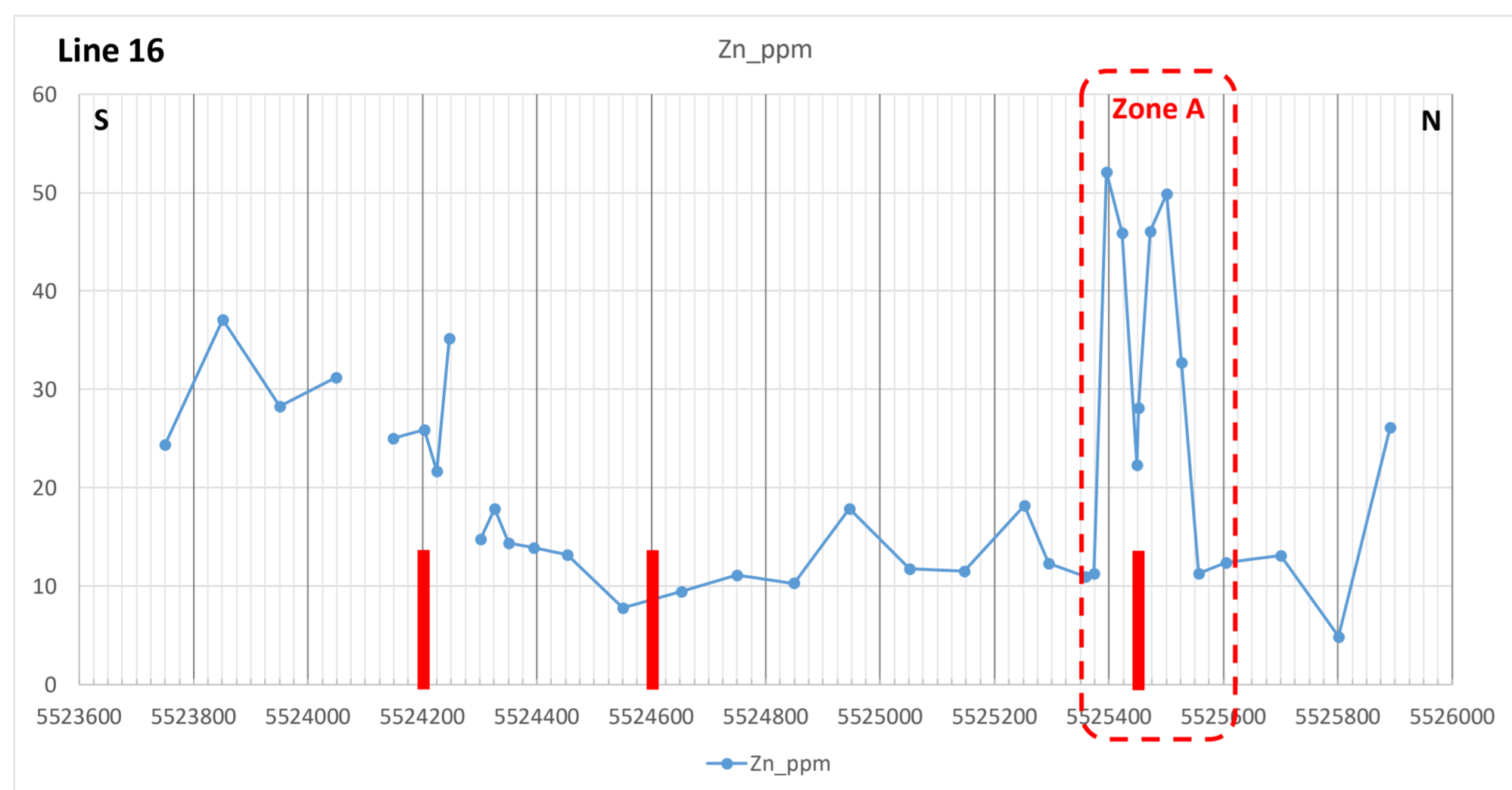
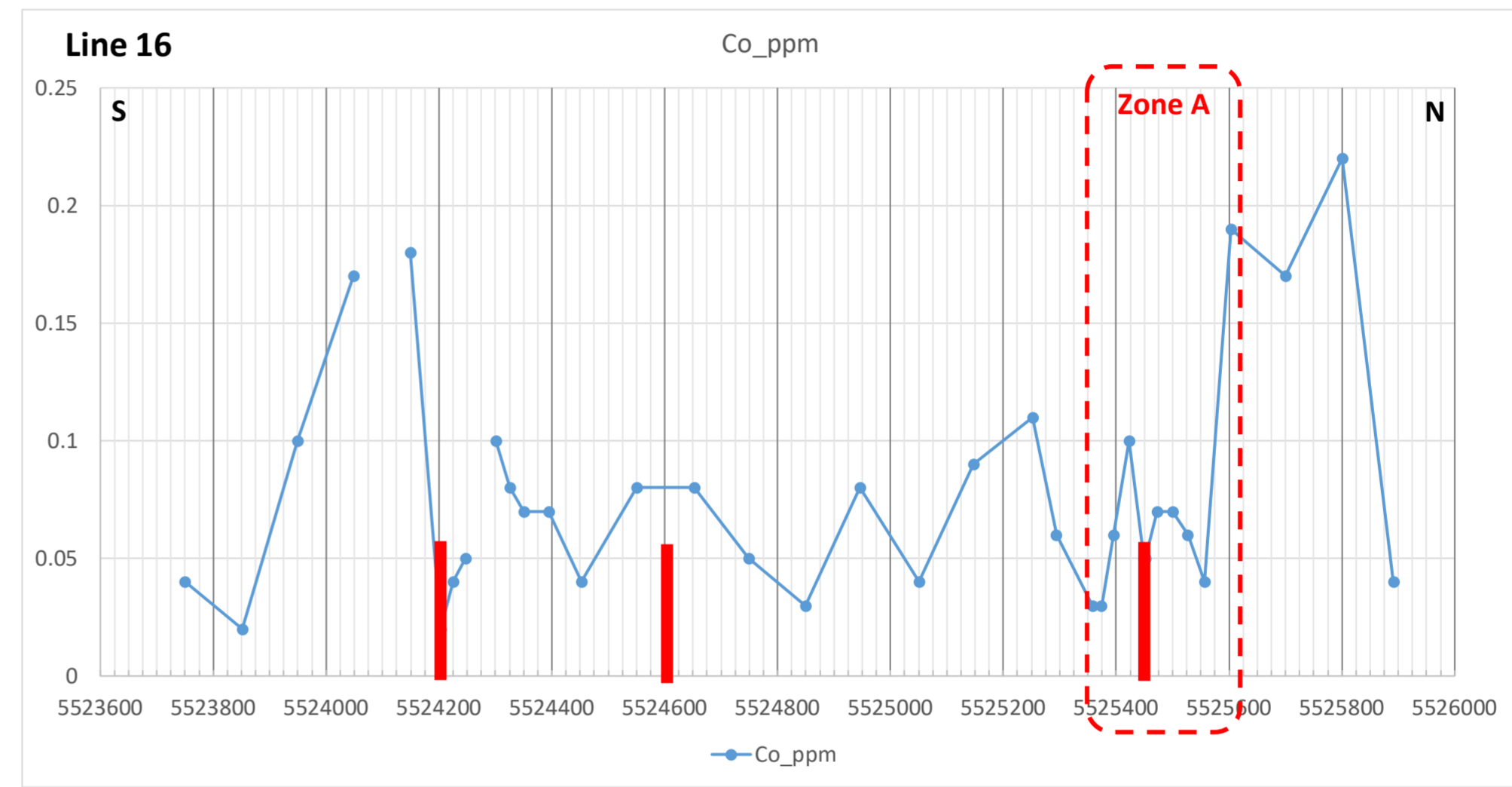
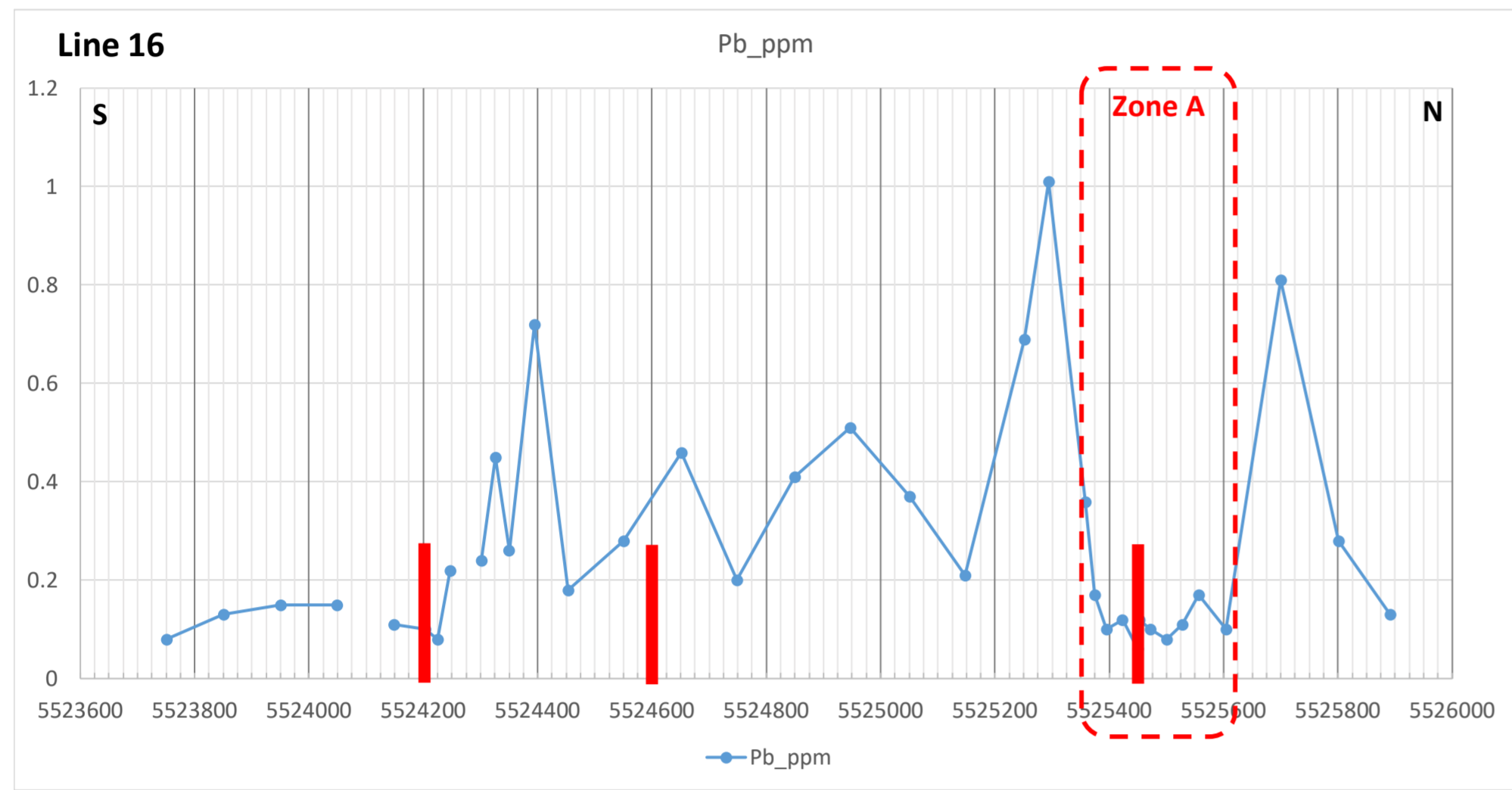
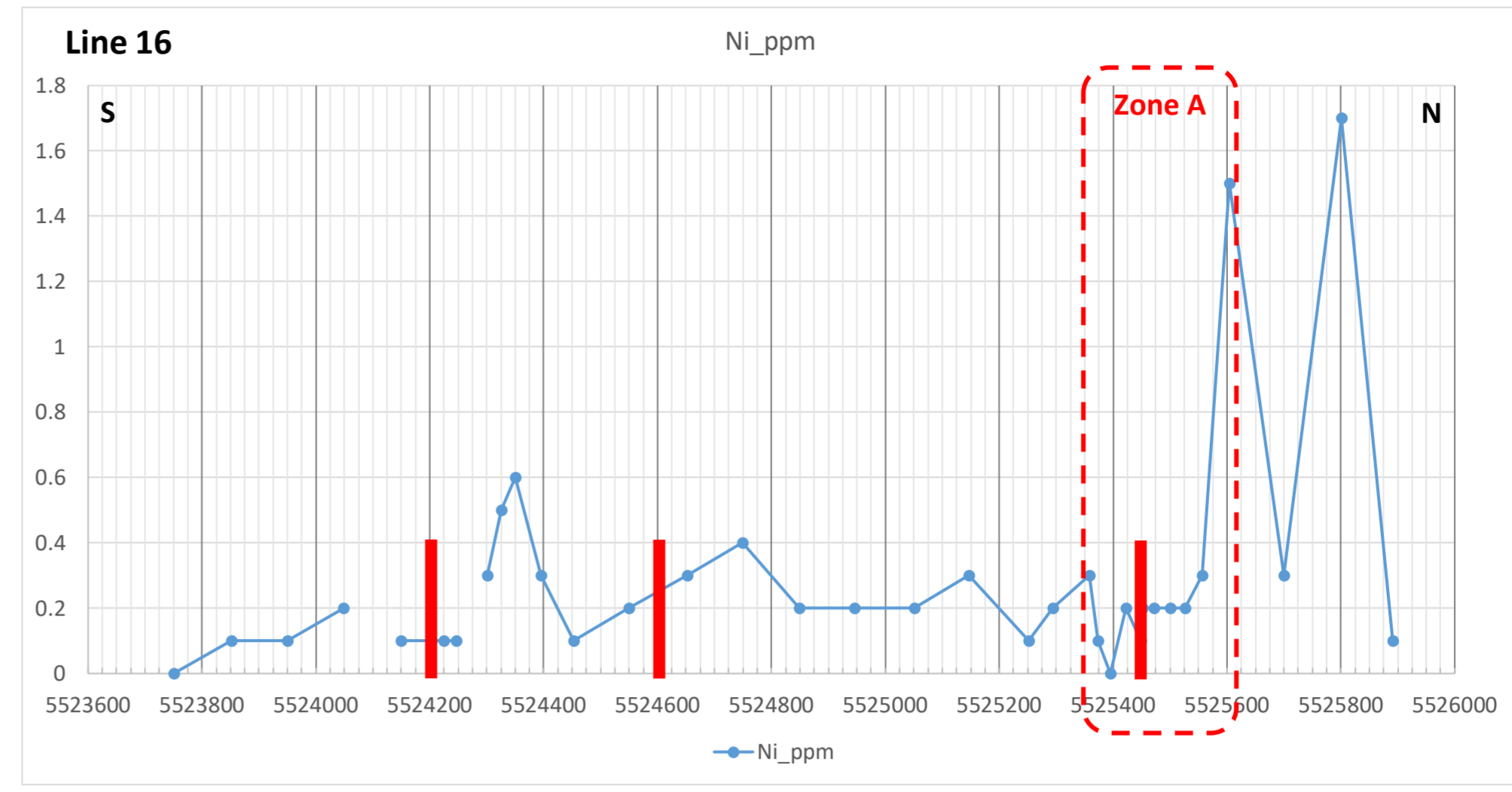
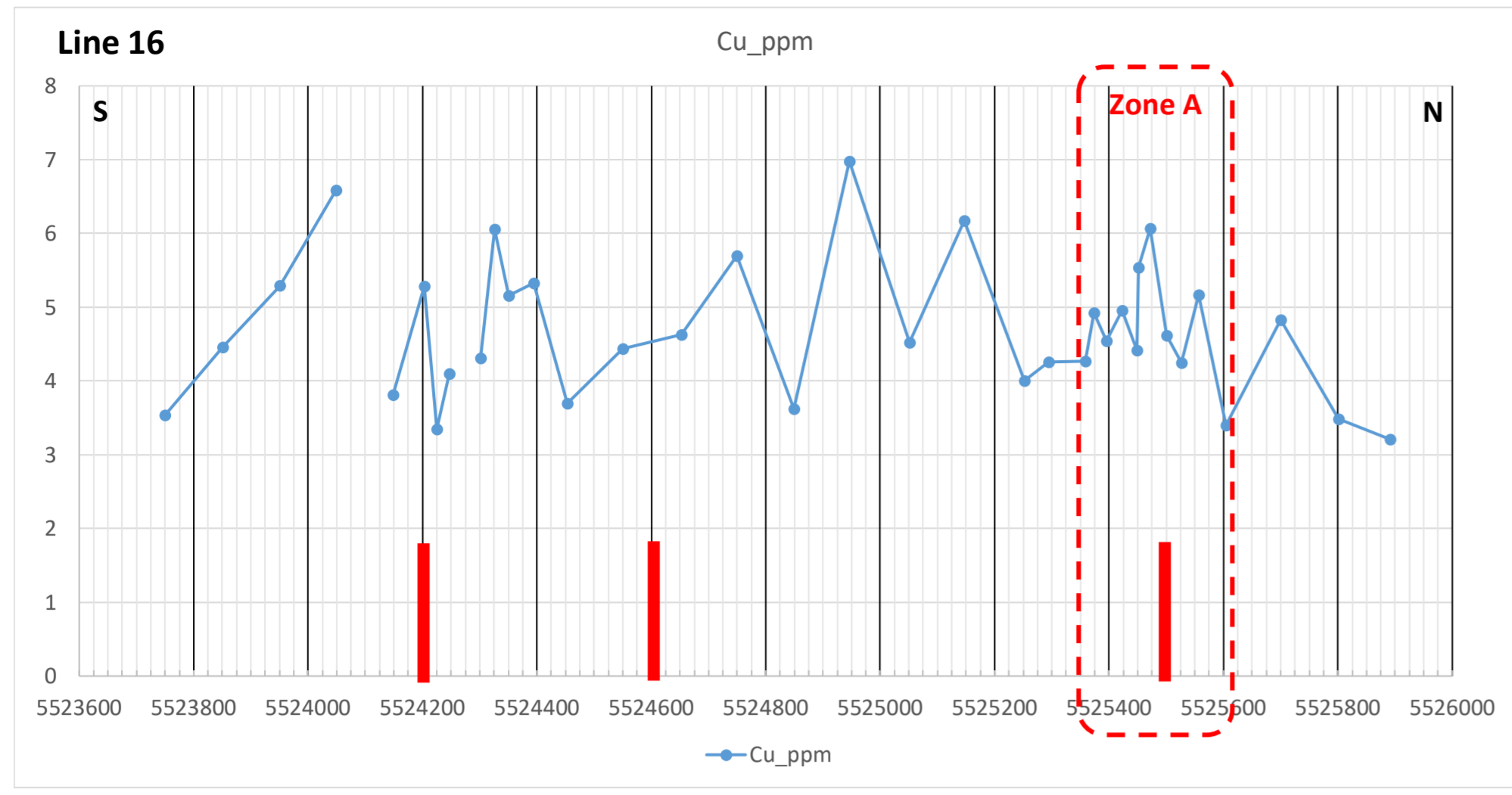
Zone A - Line 12



Zone A - Line 13



Zone A - Line 16

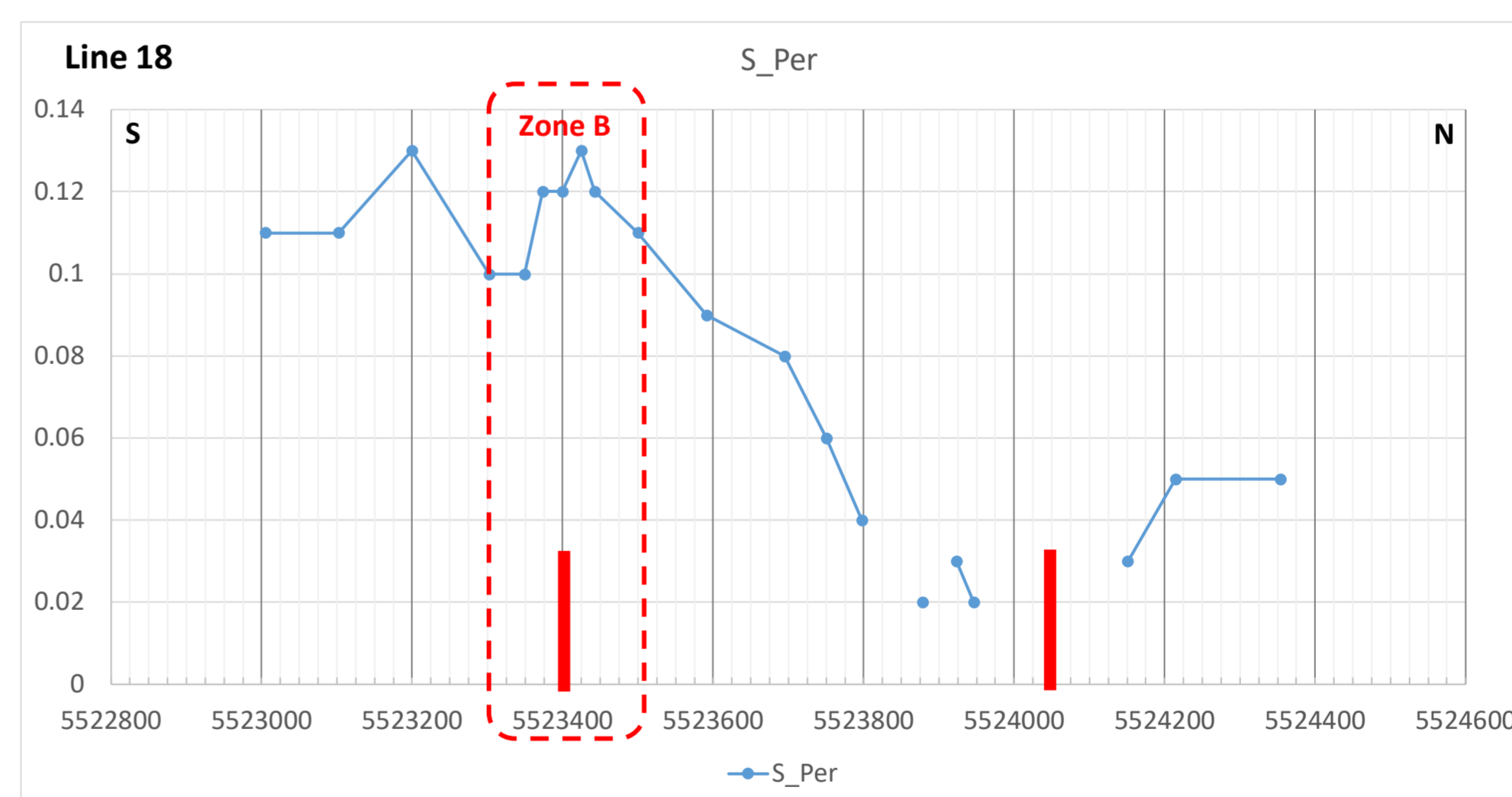
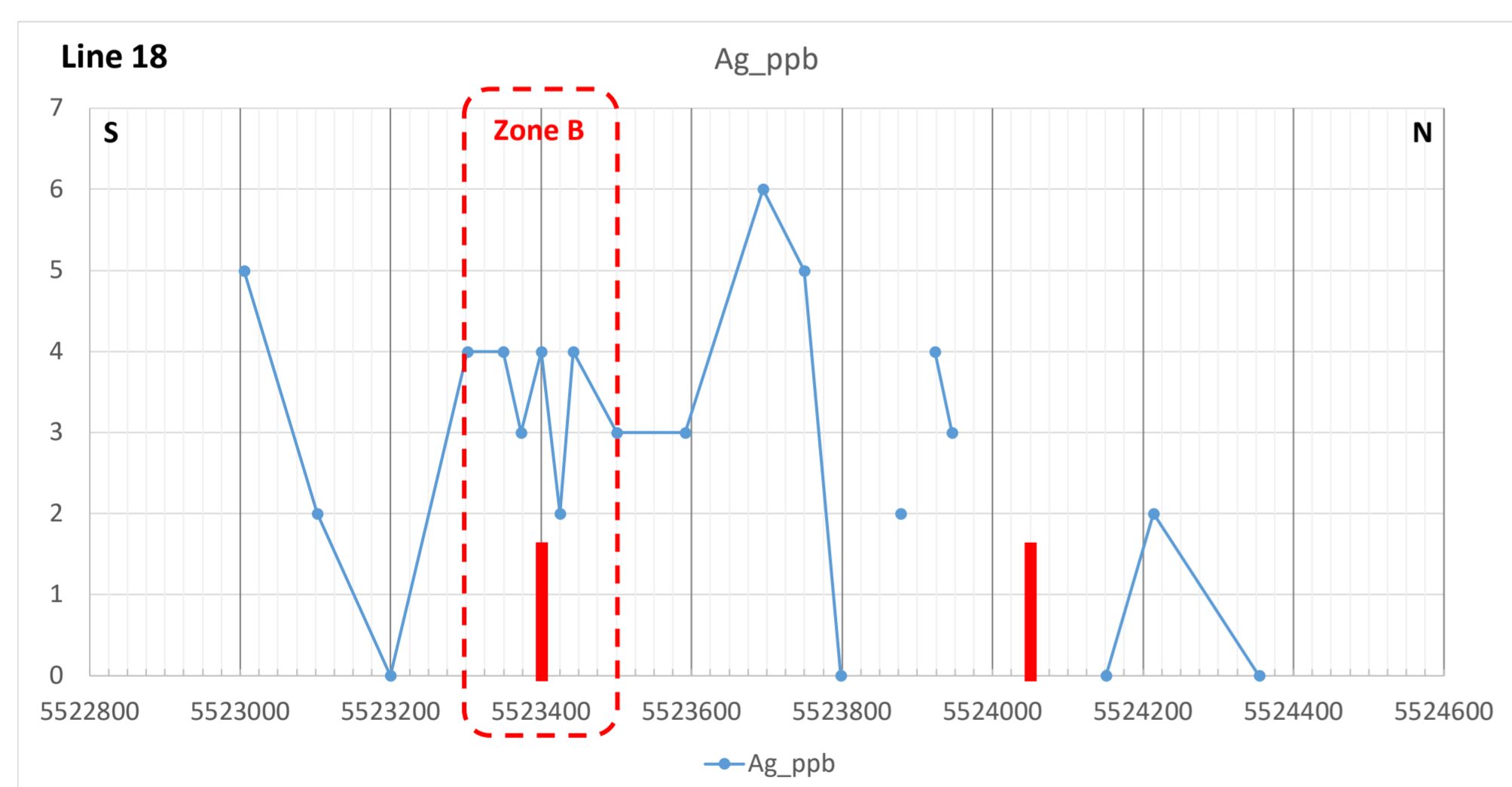
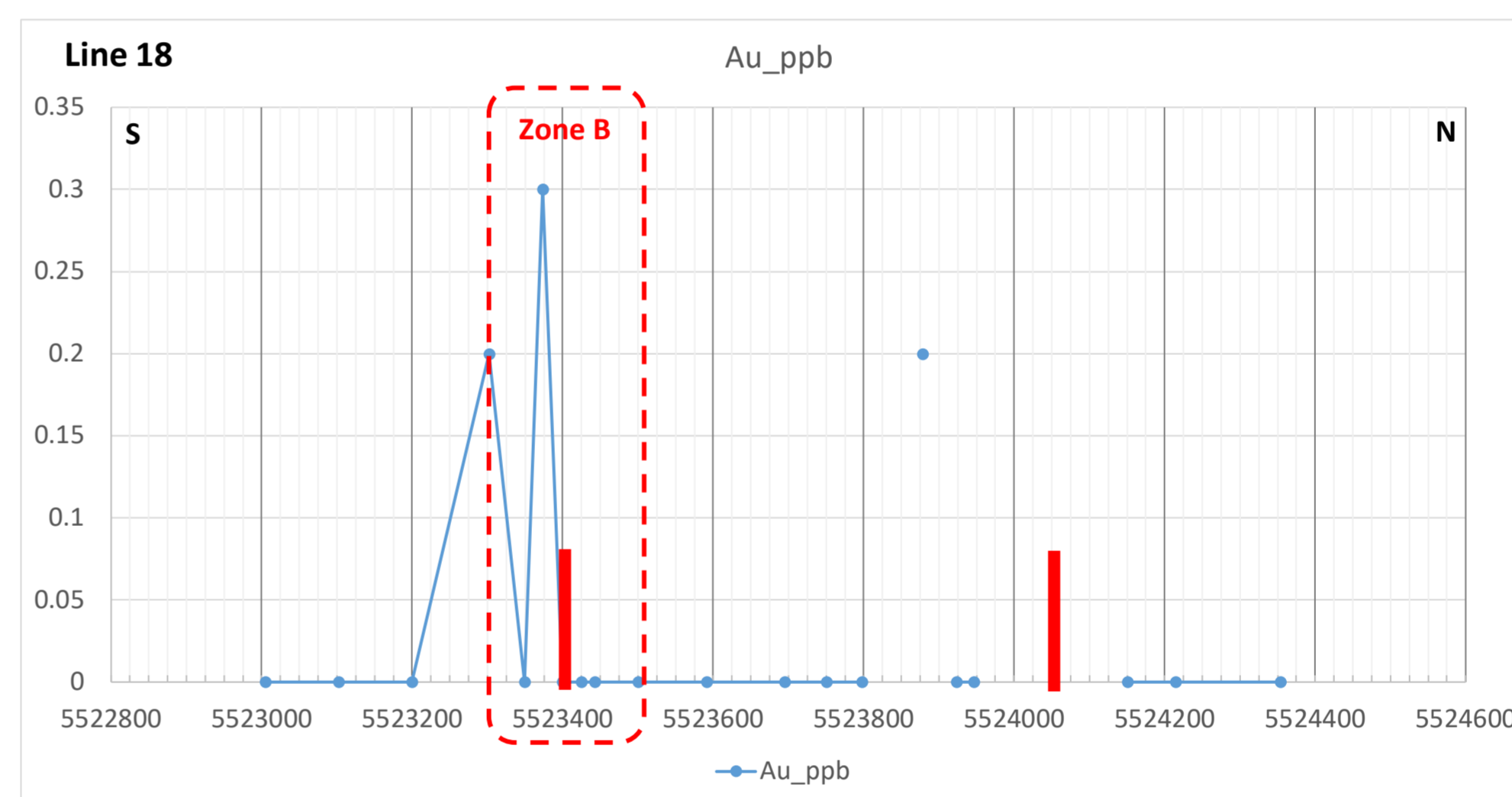
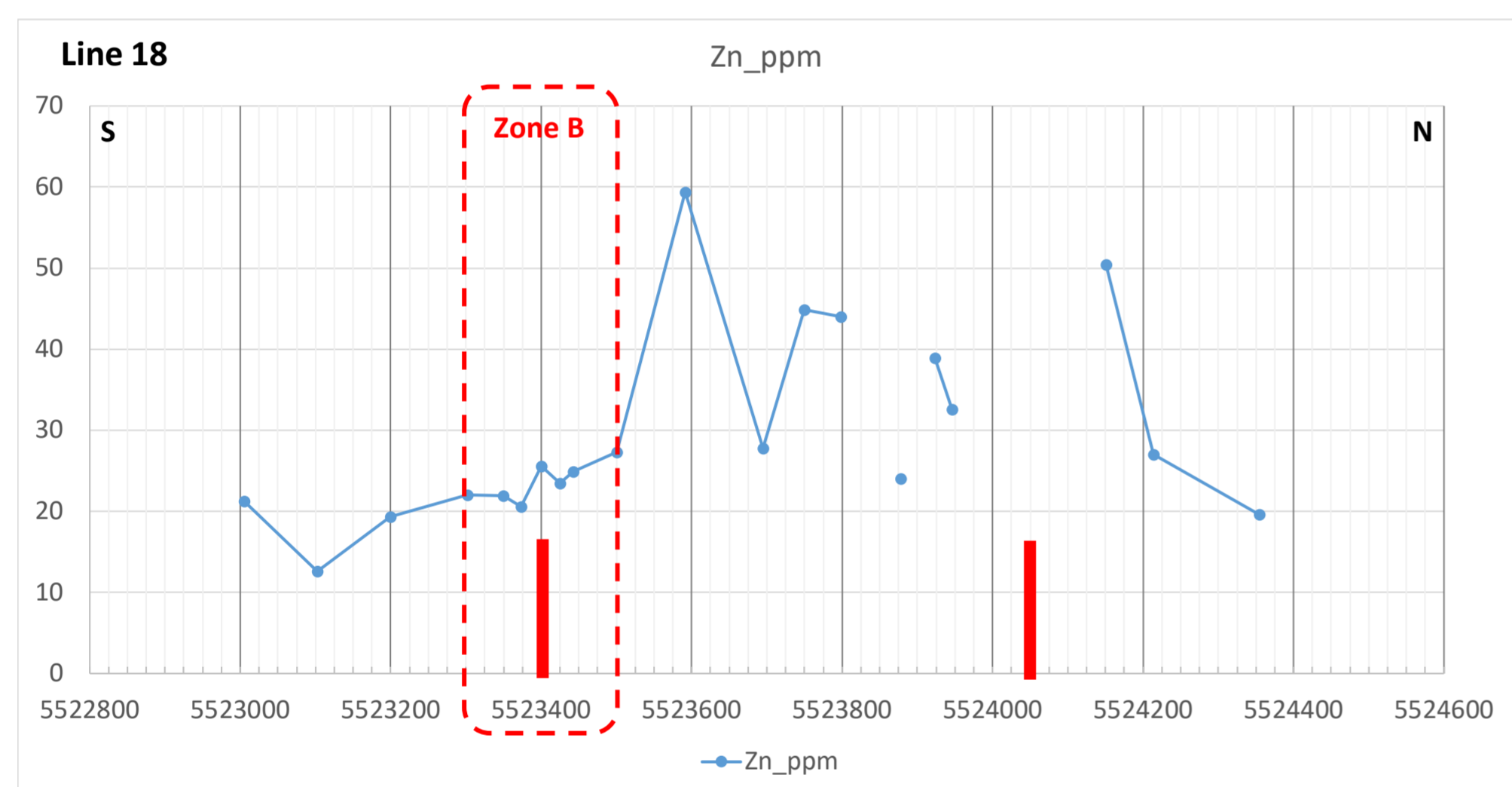
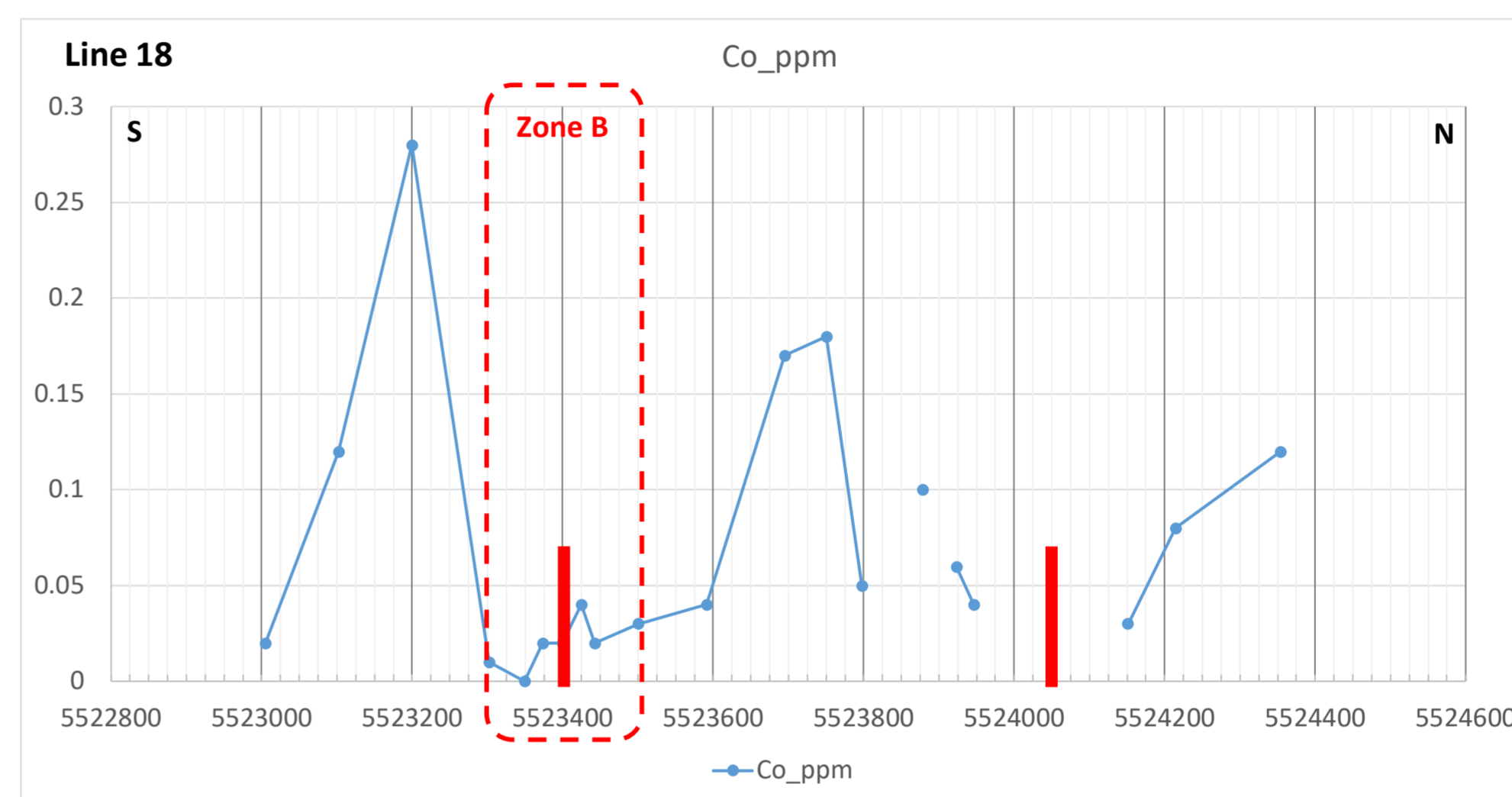
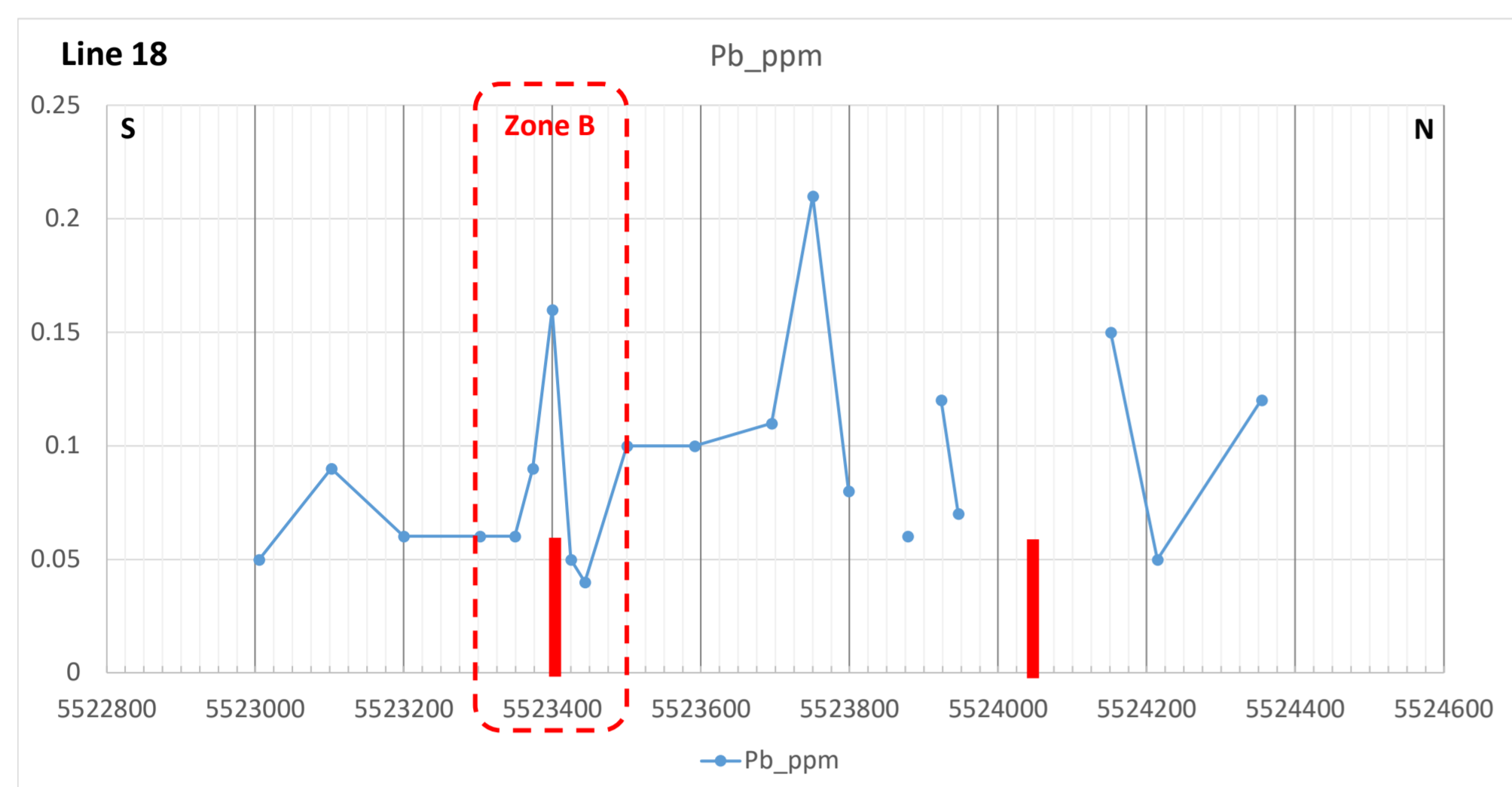
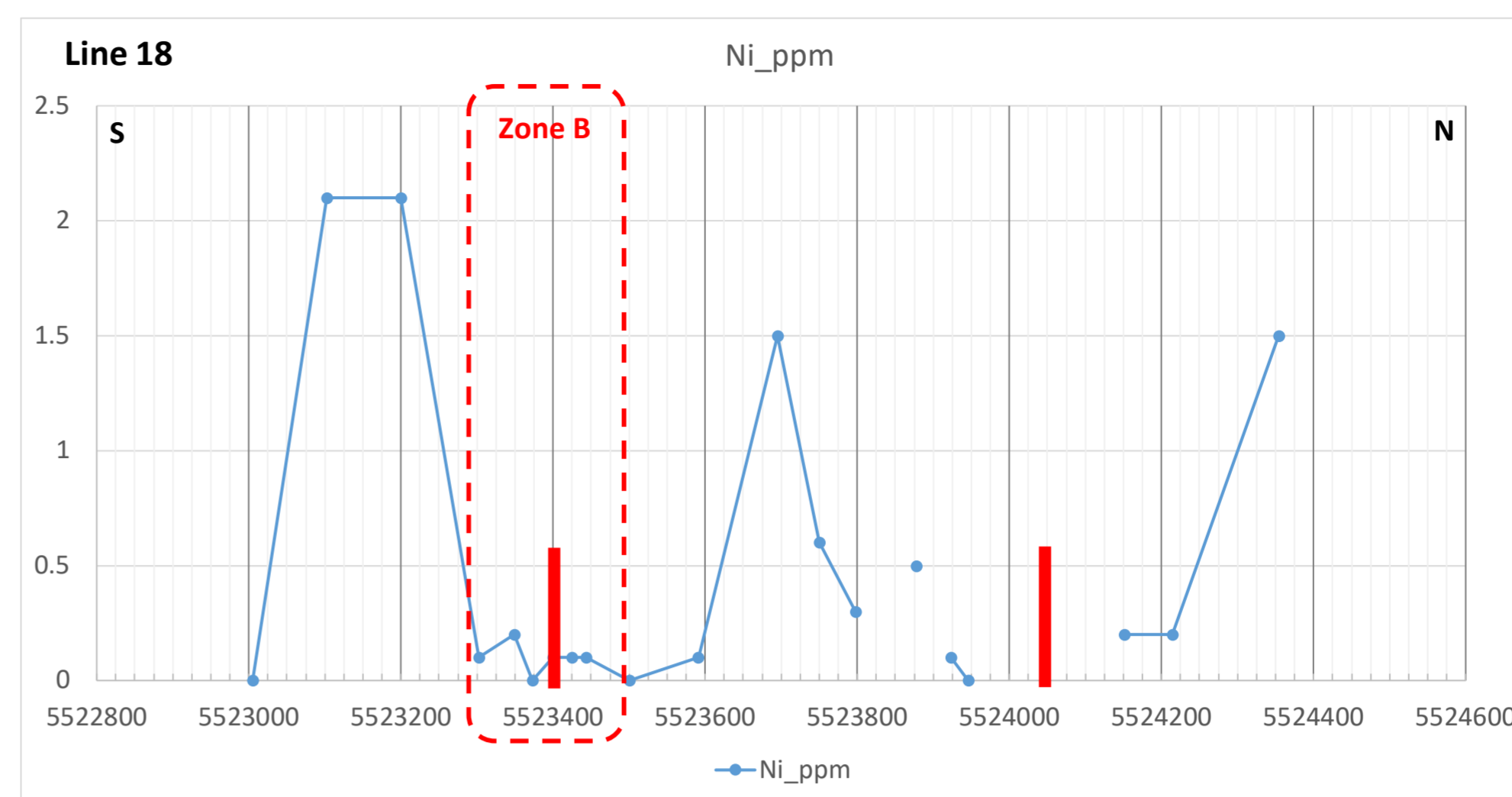
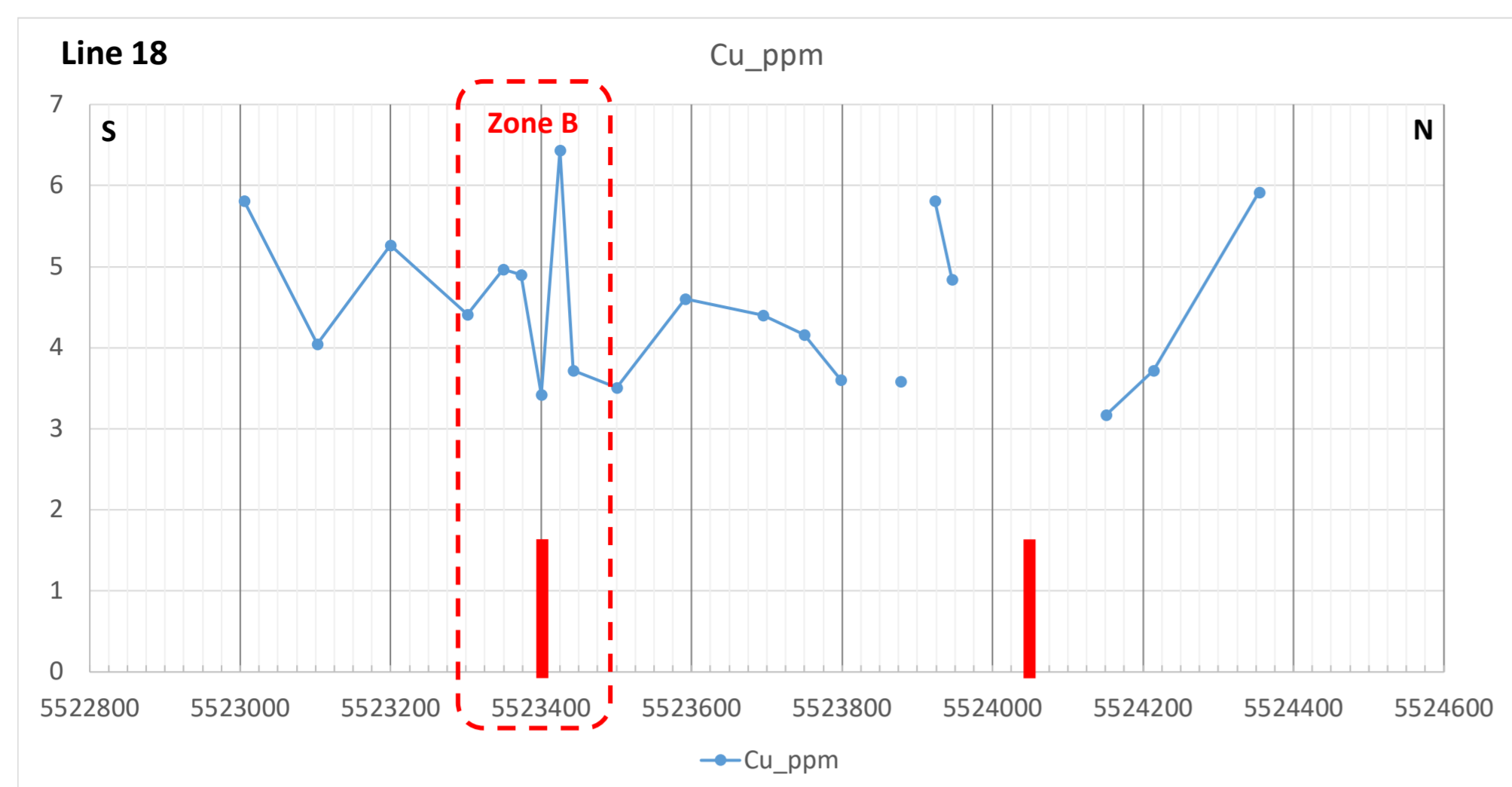




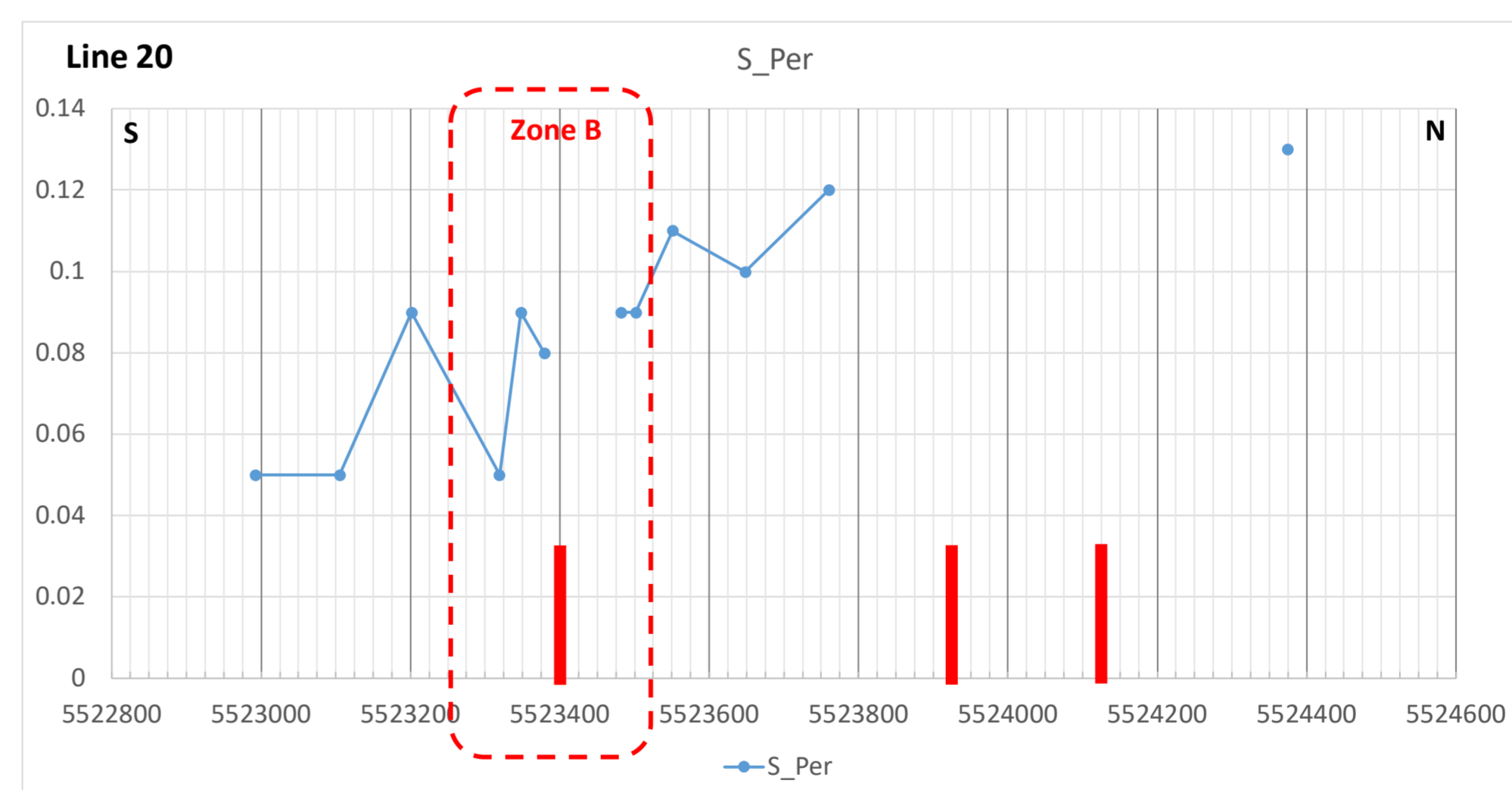
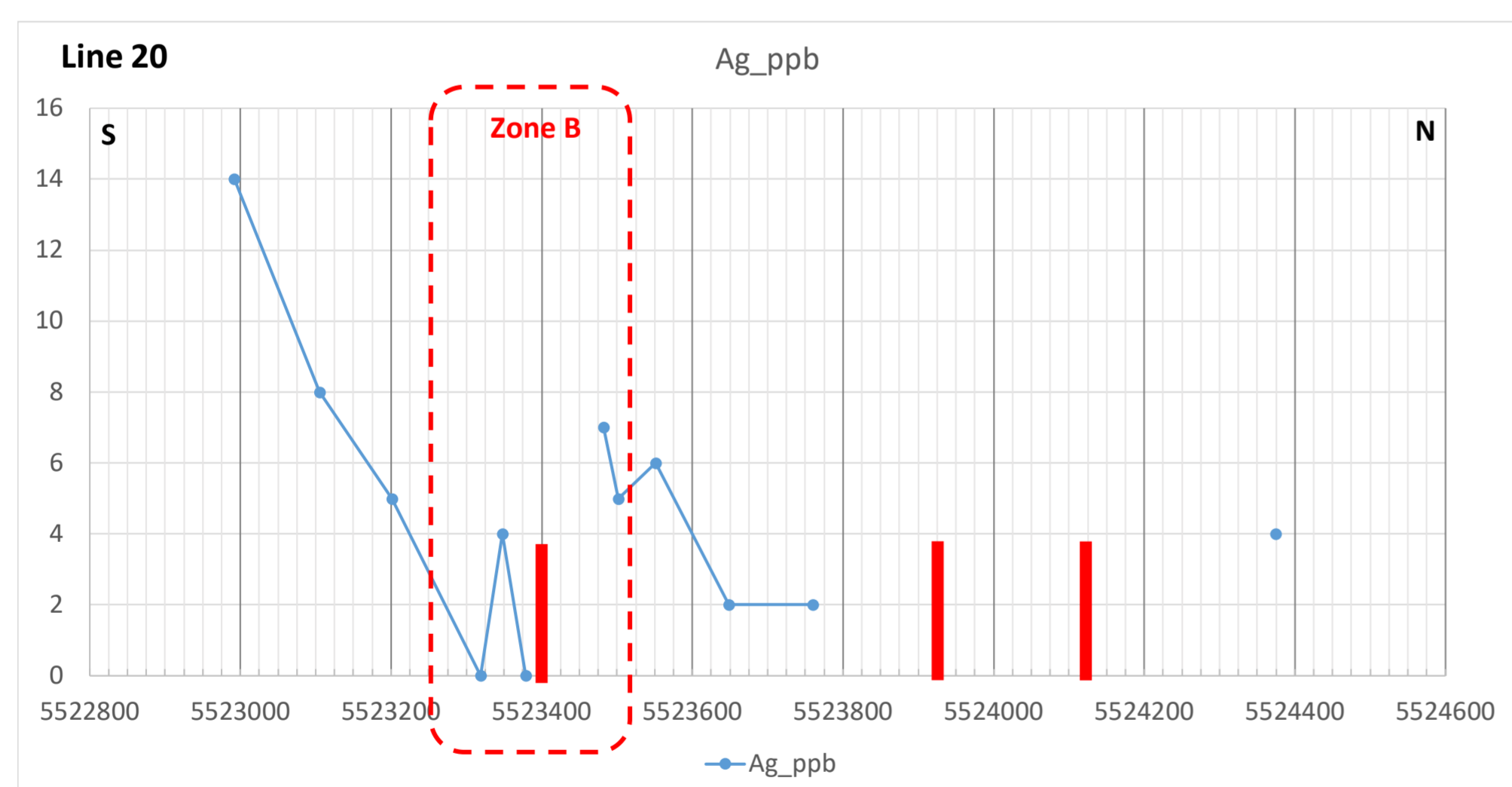
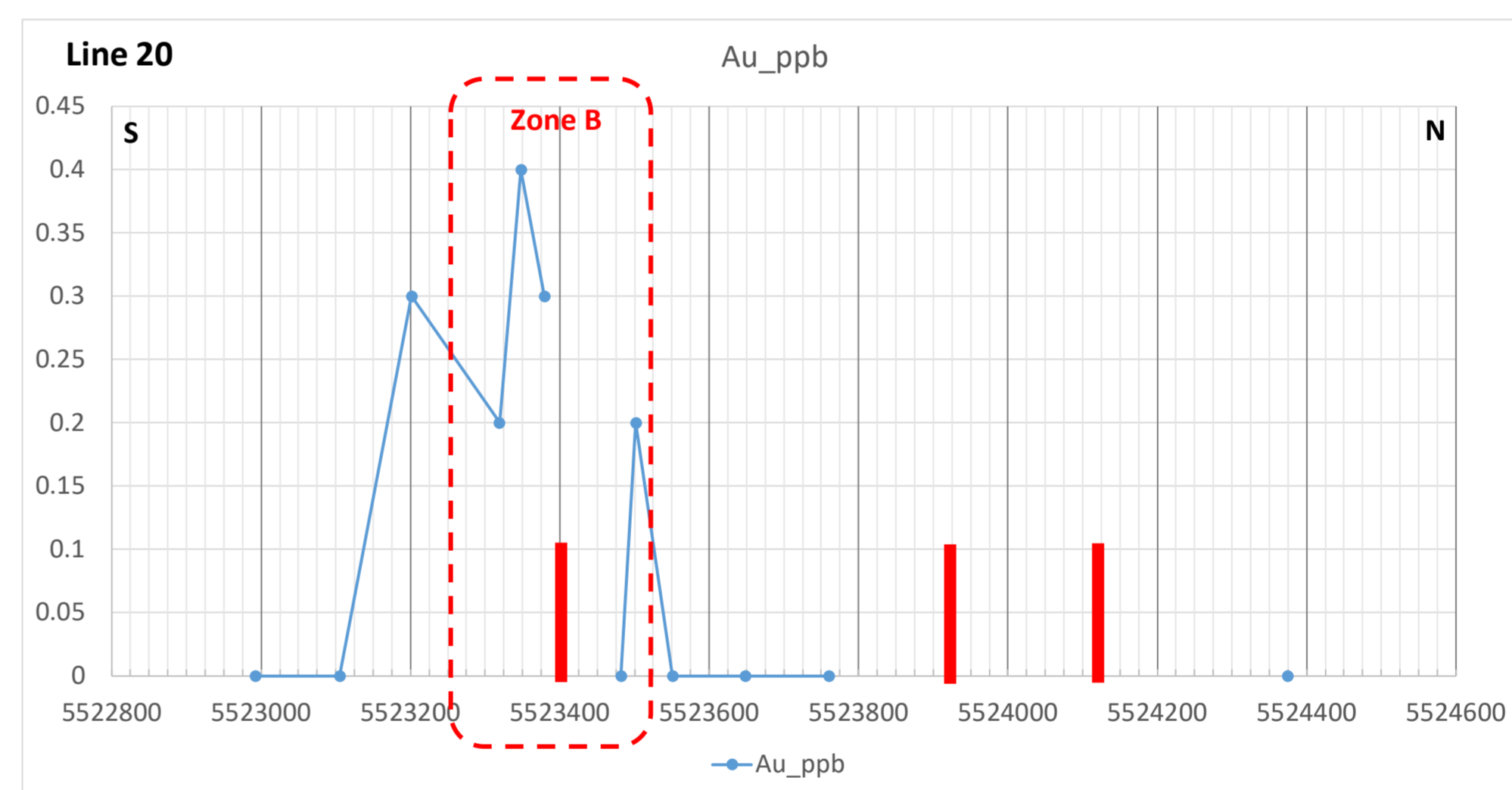
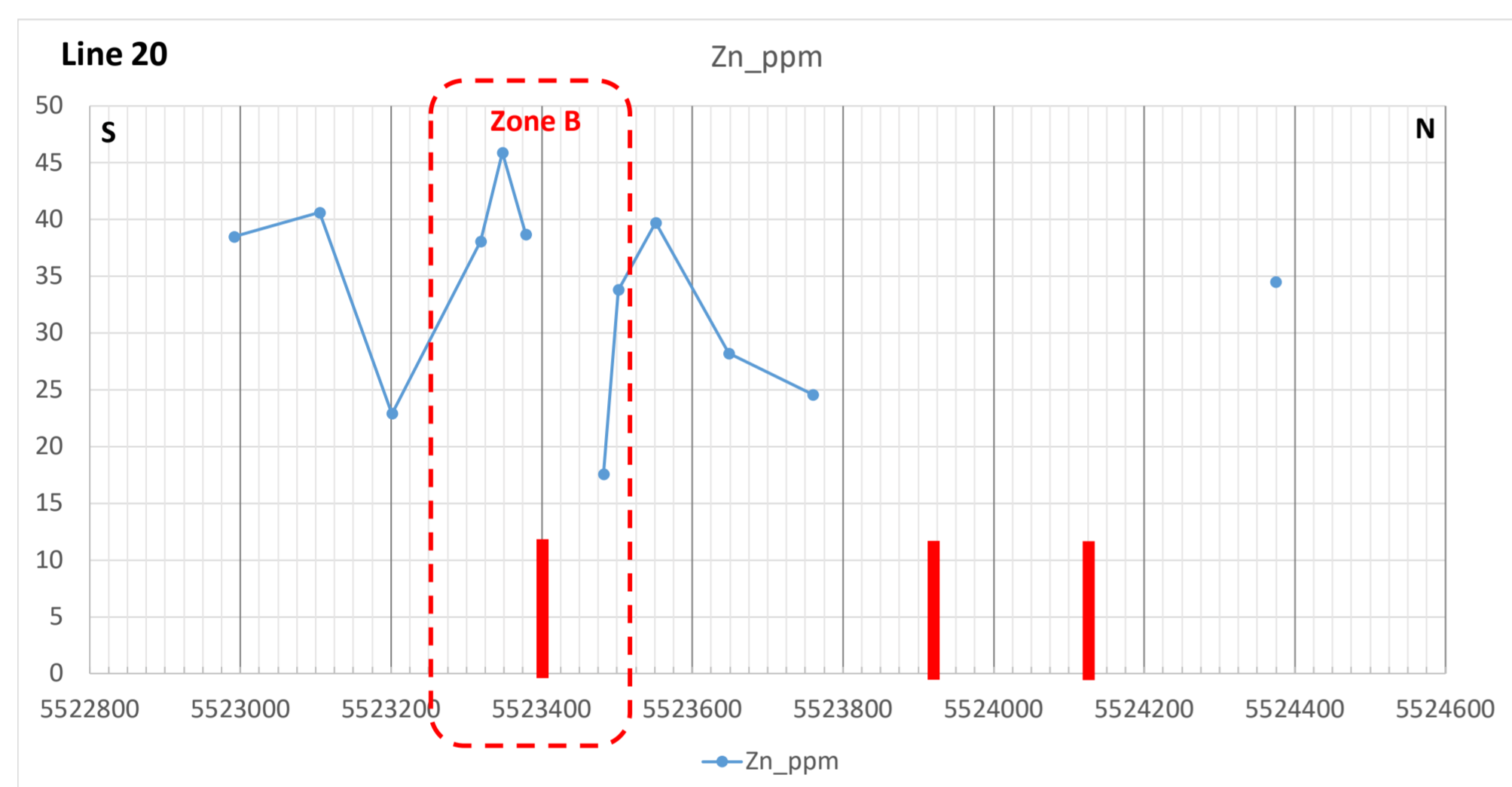
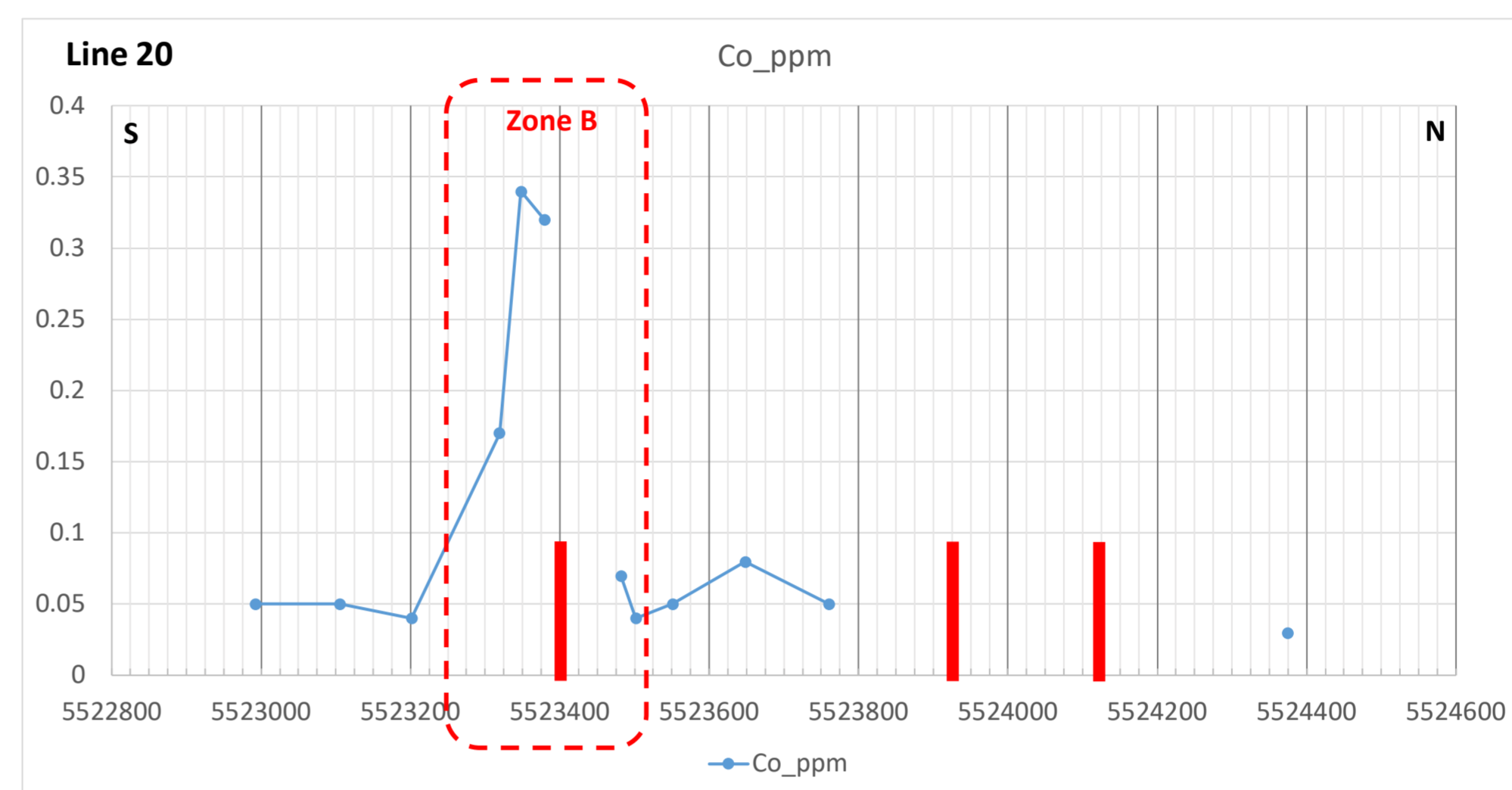
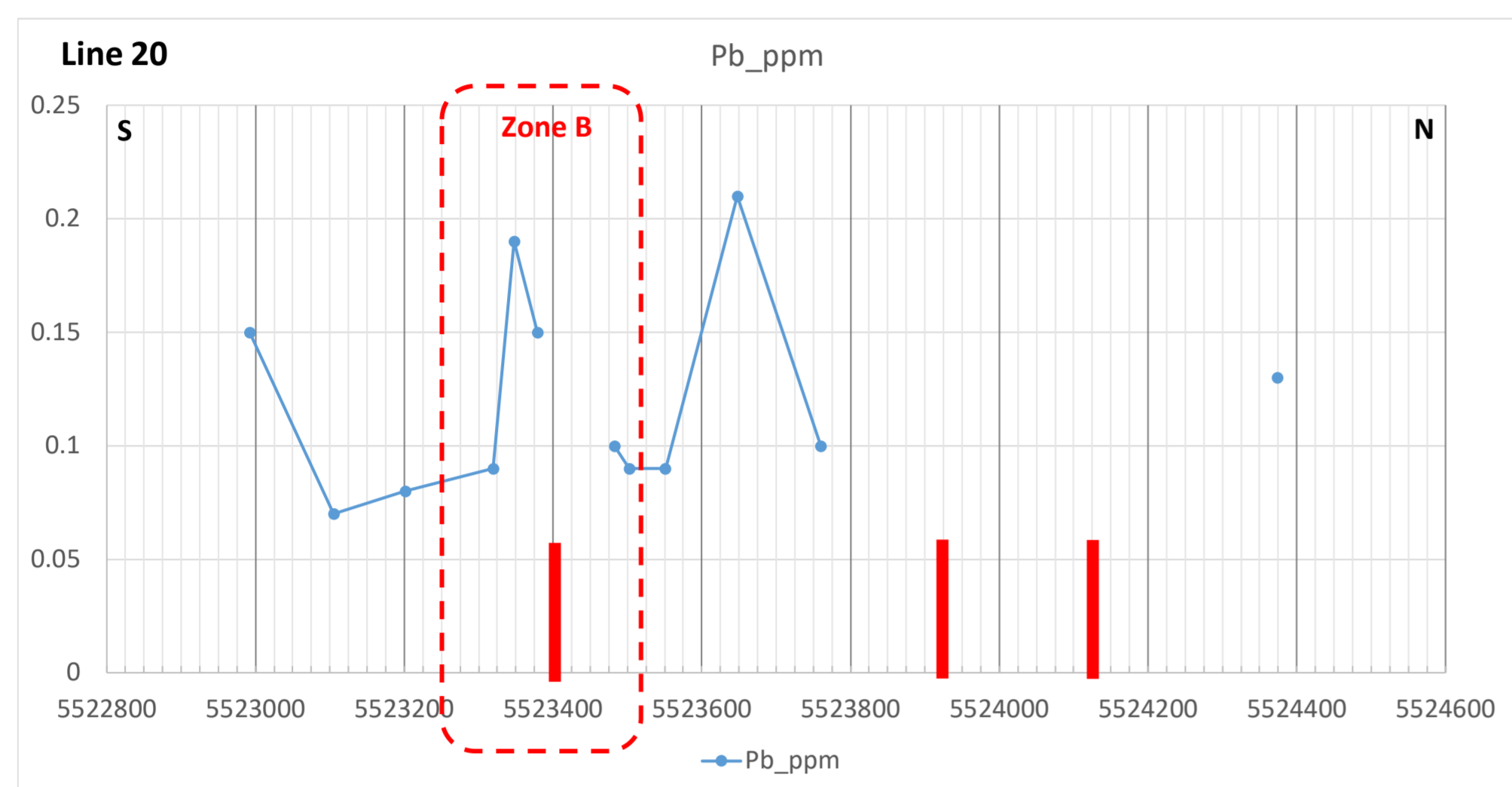
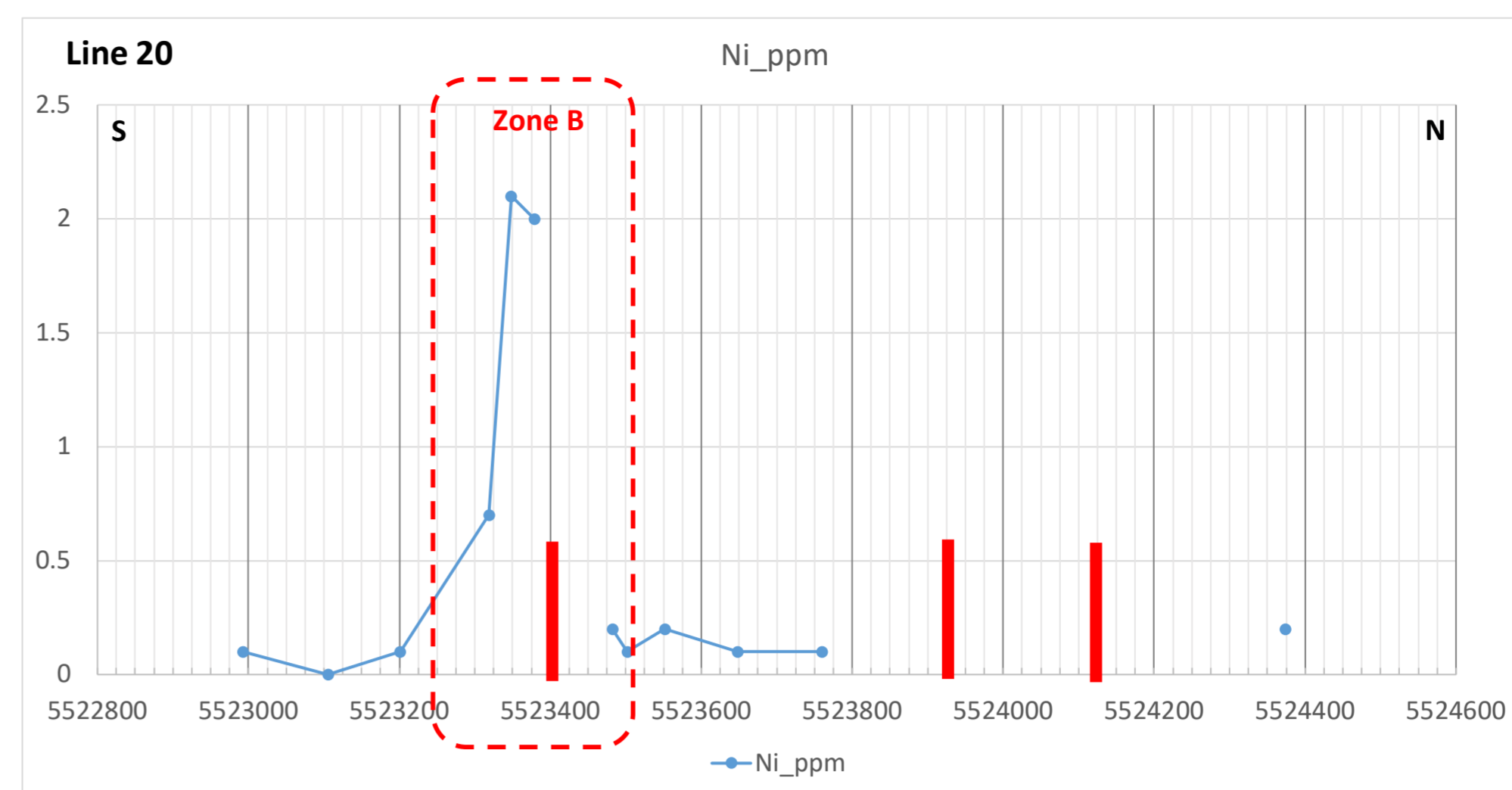
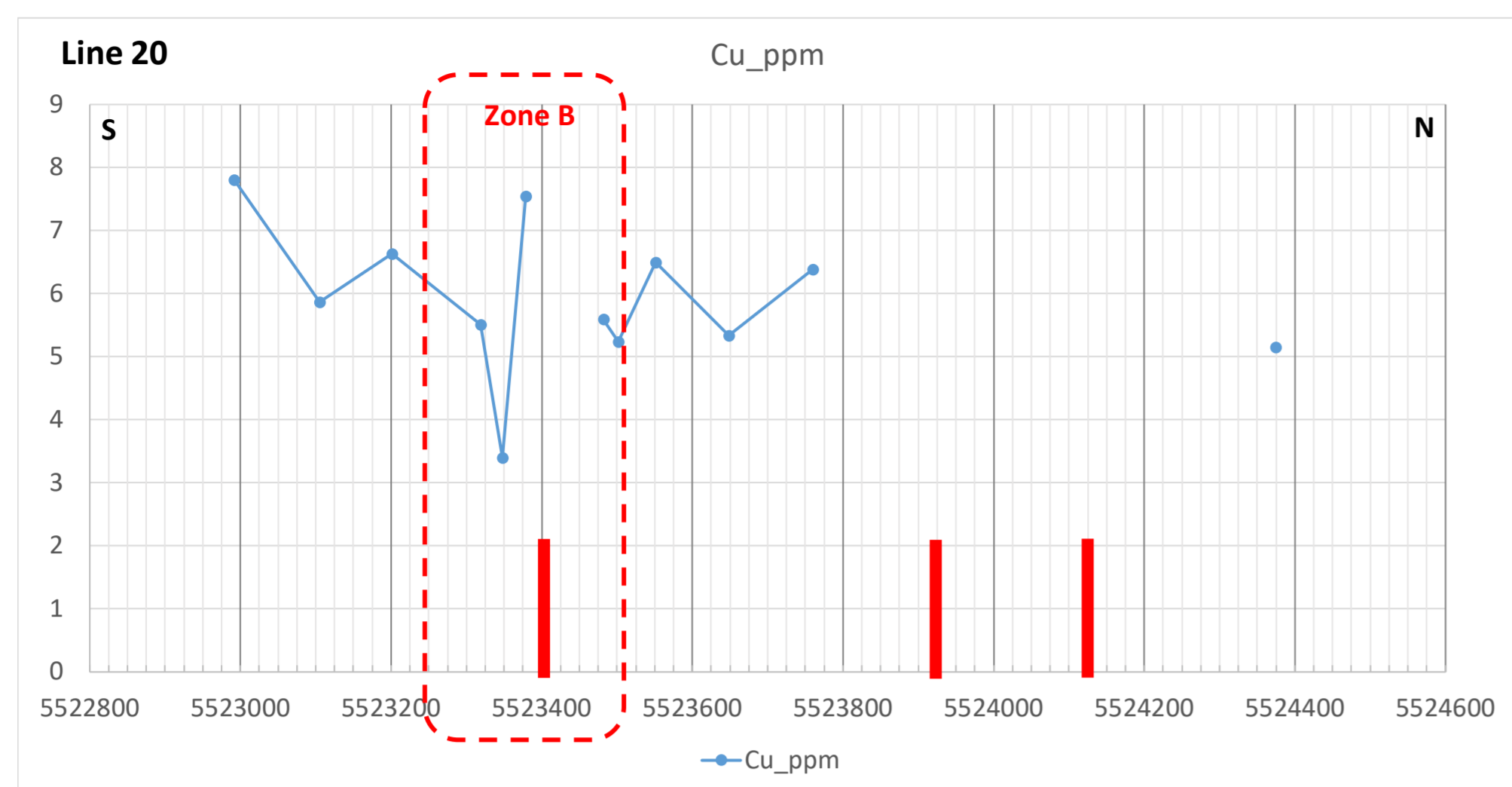
# Anomaly B

Lines 18, 20, 21

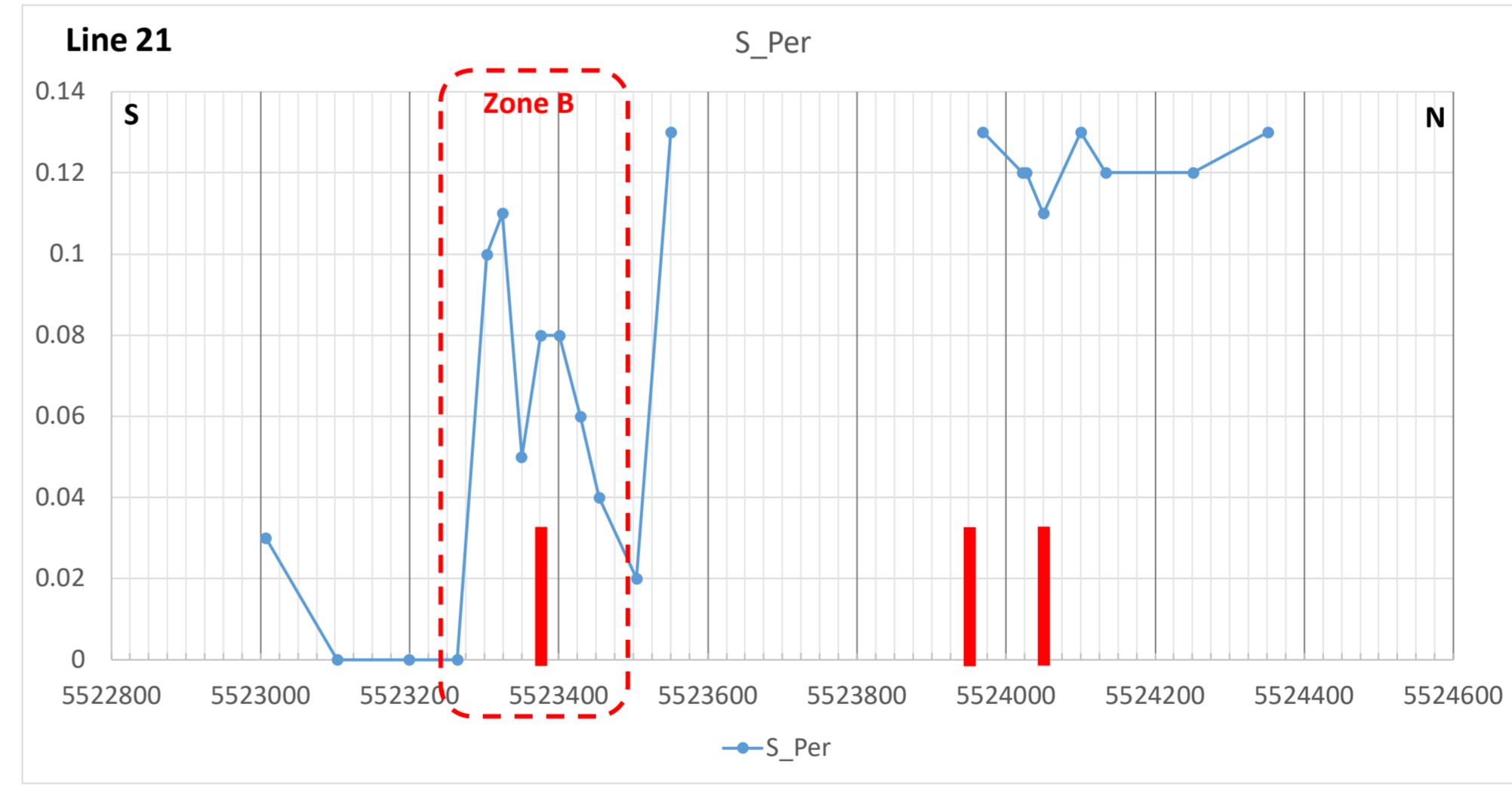
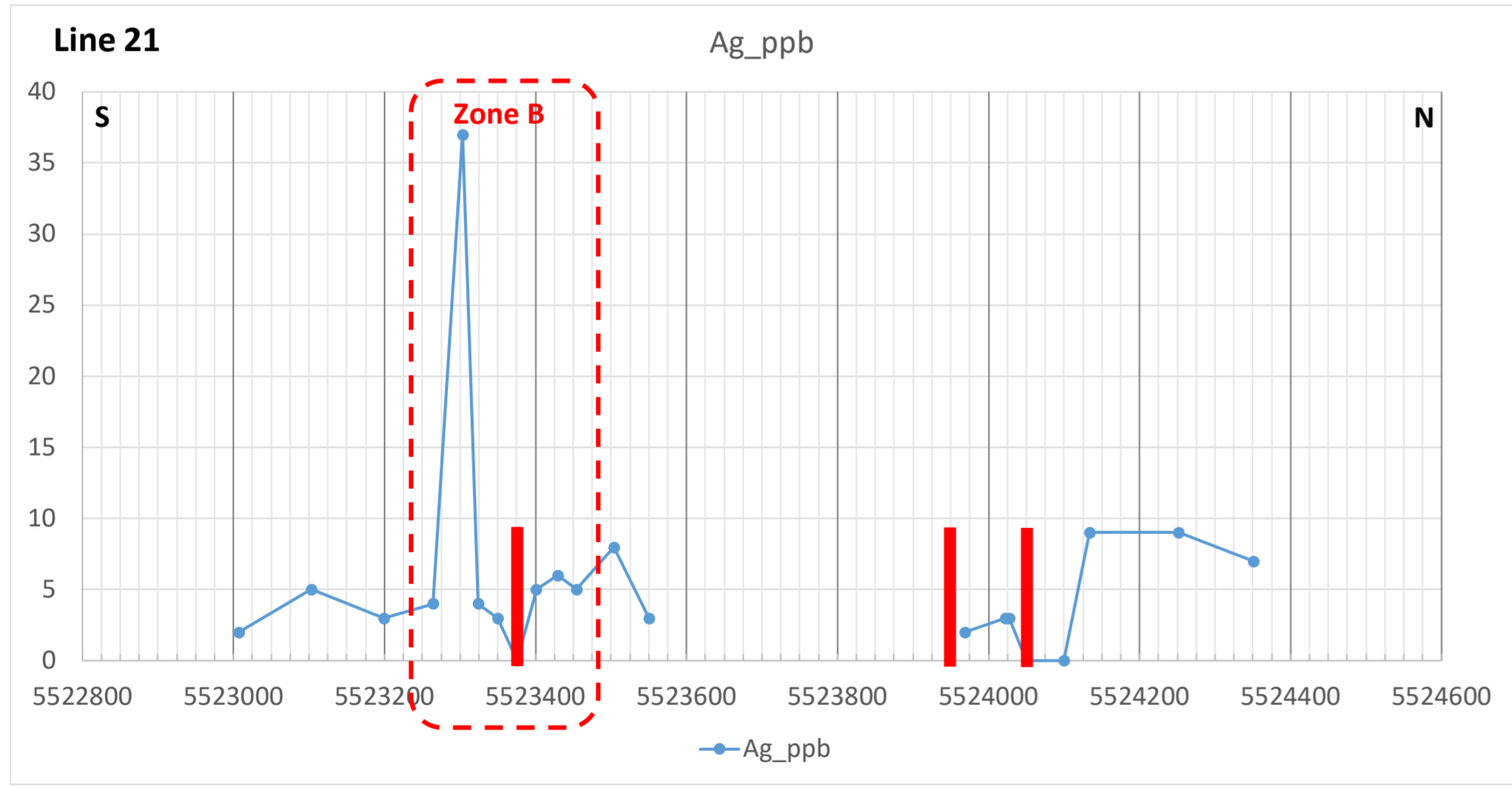
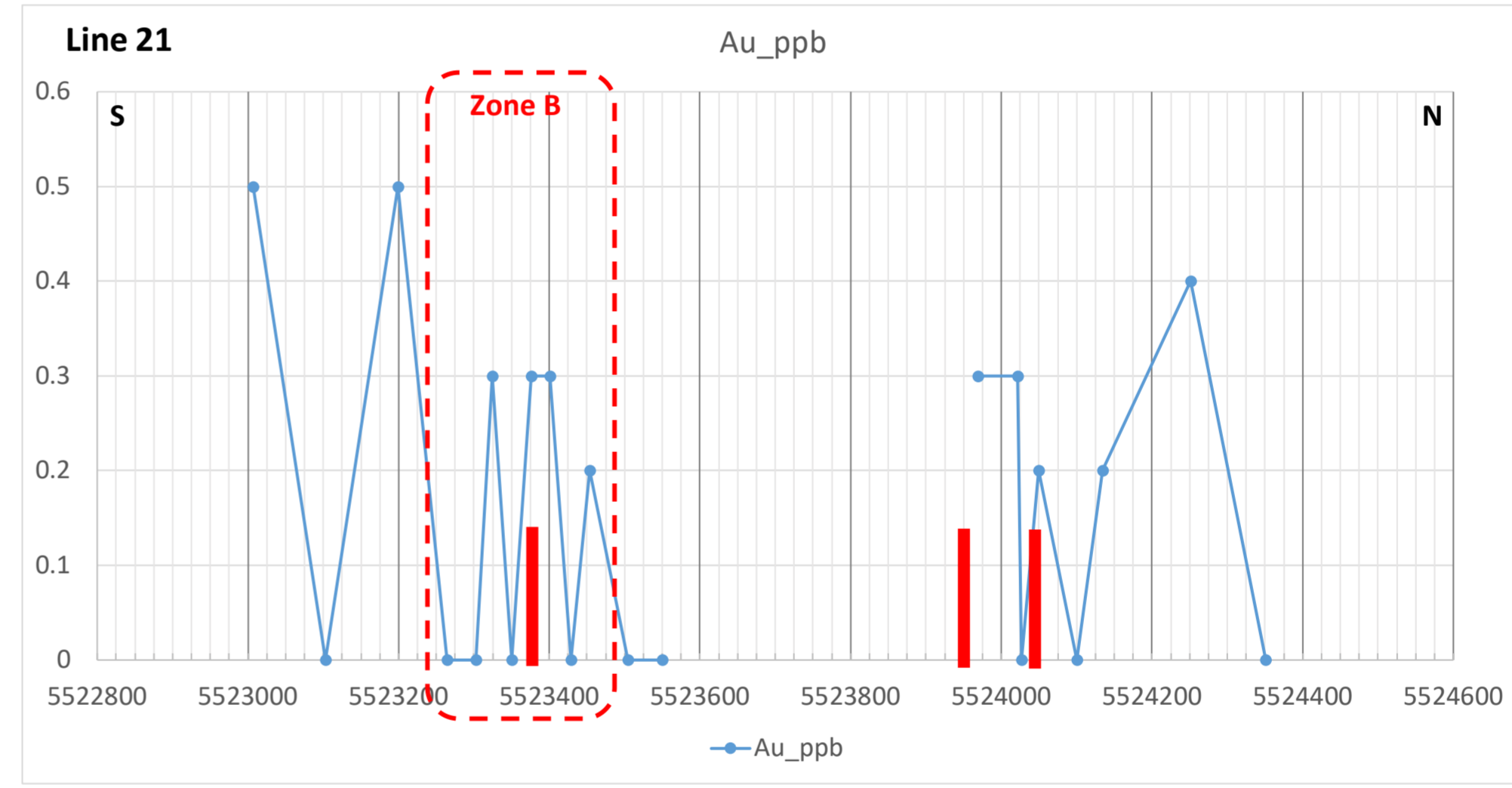
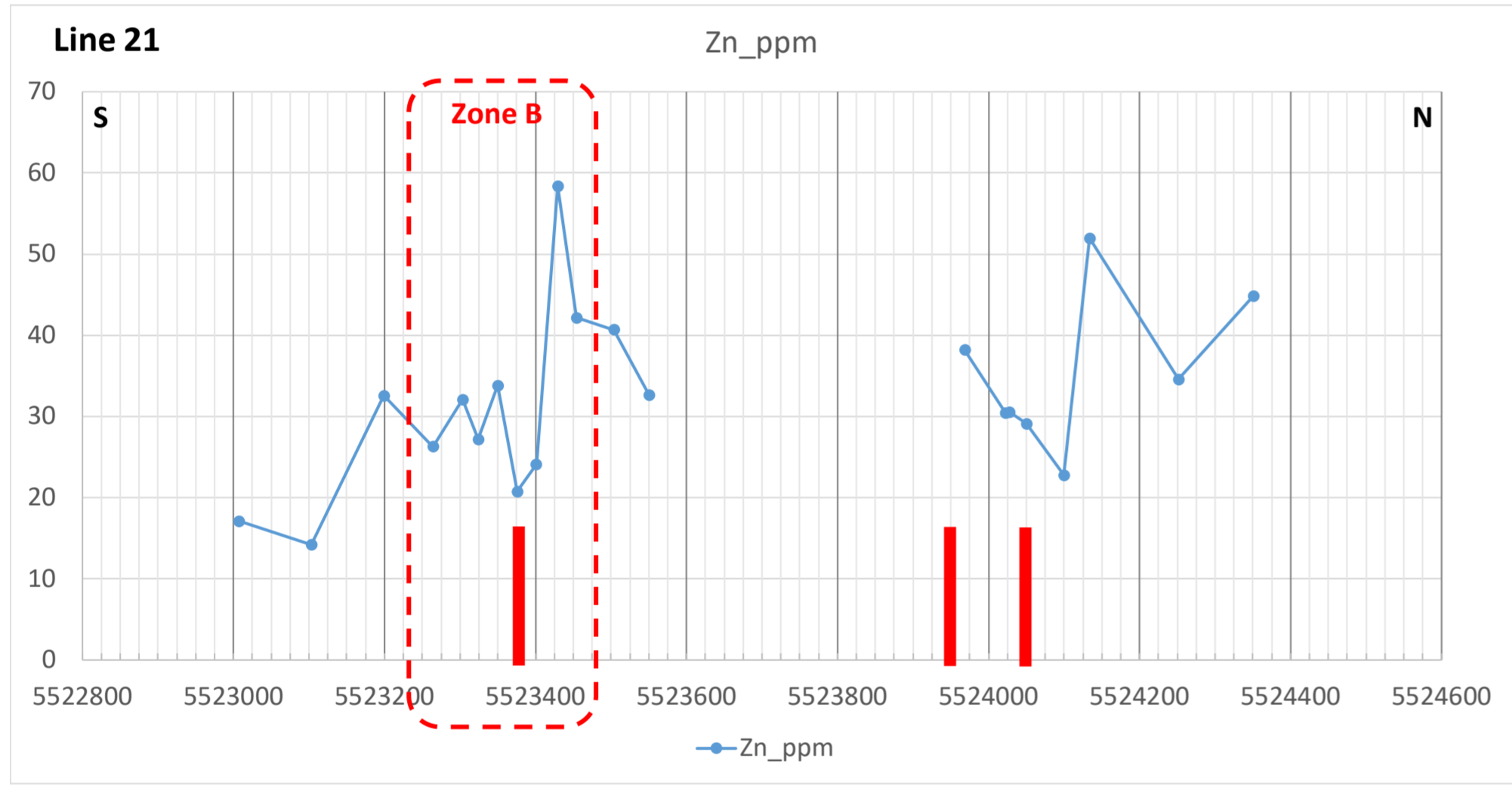
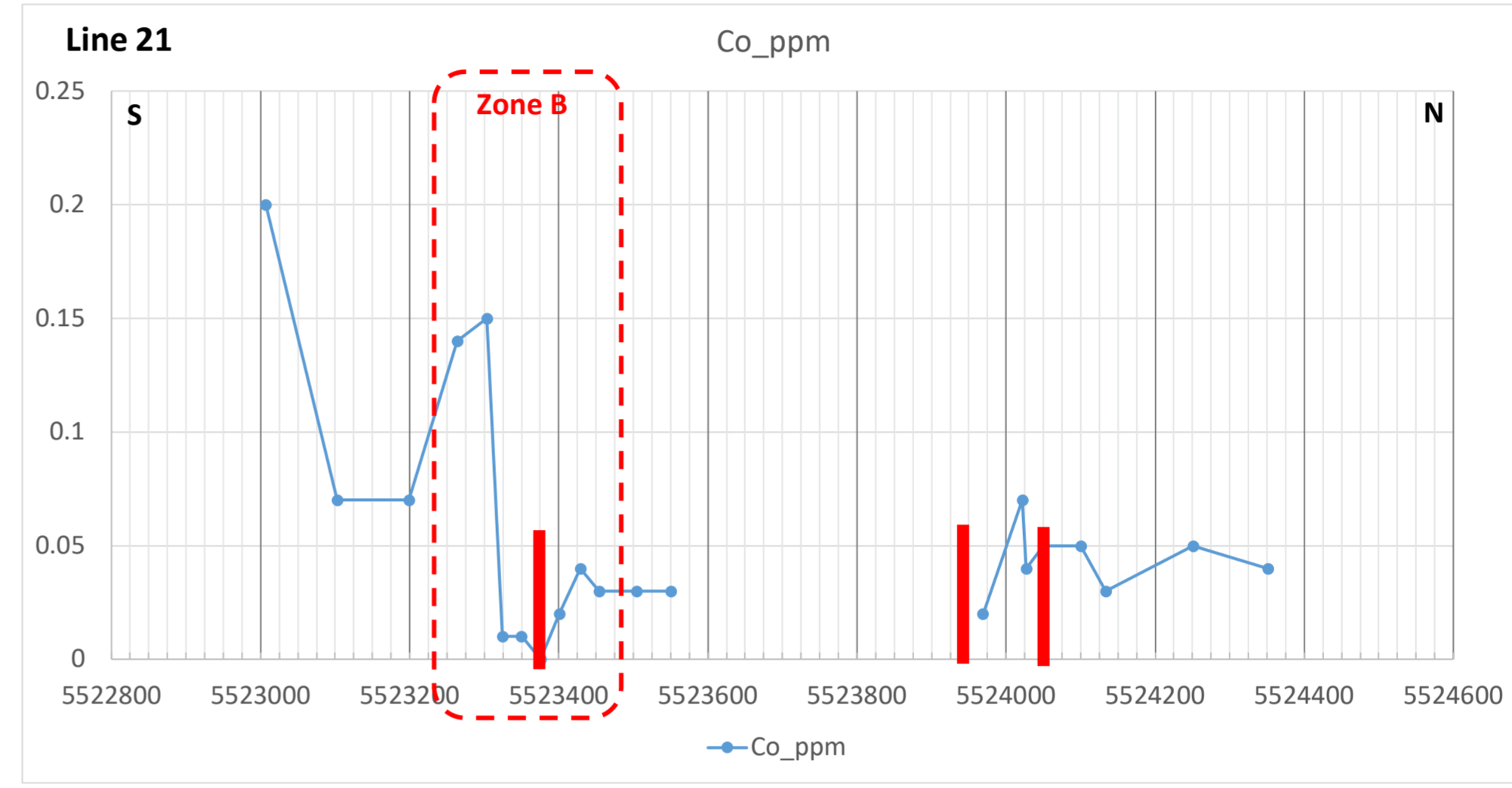
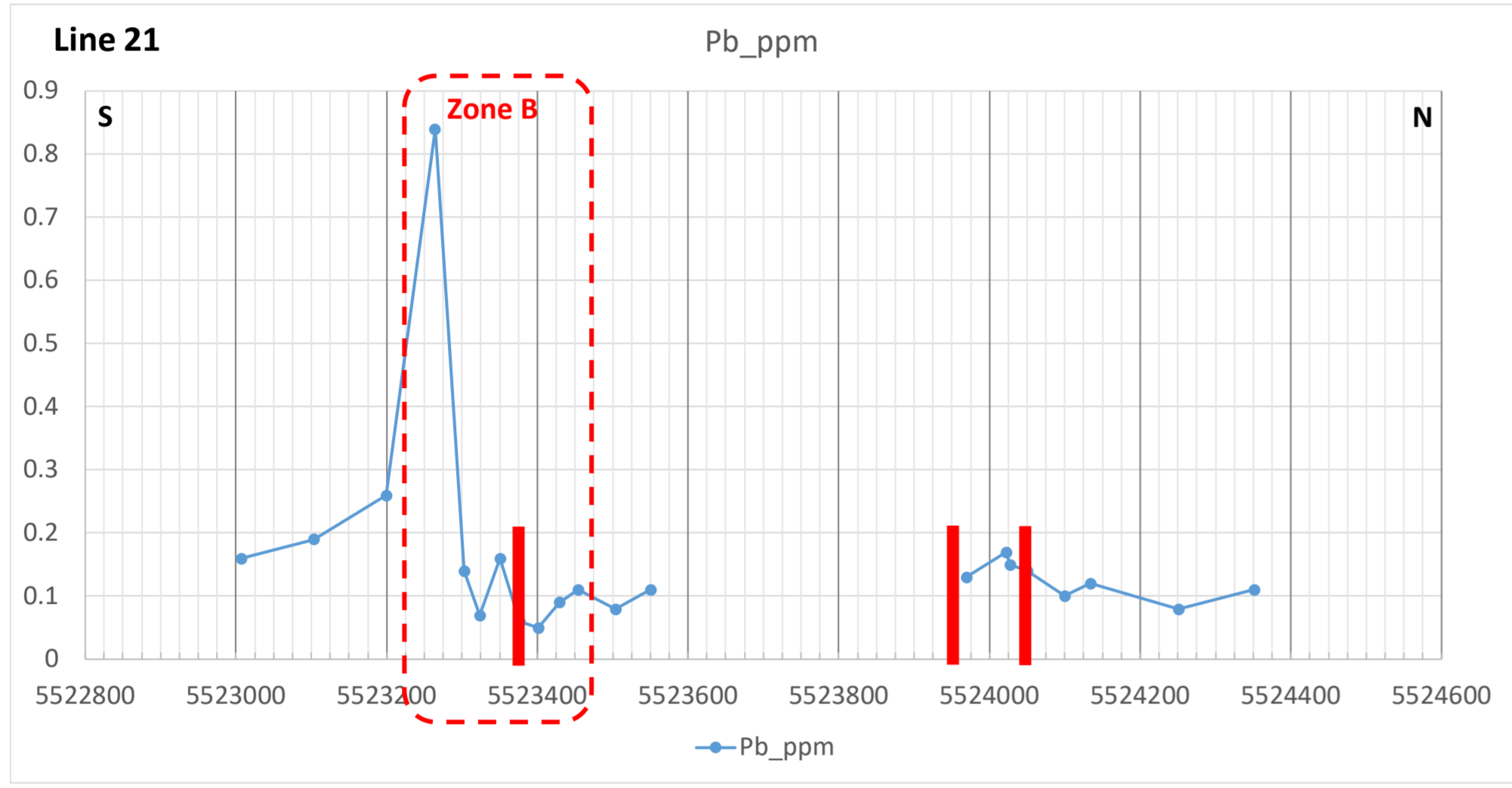
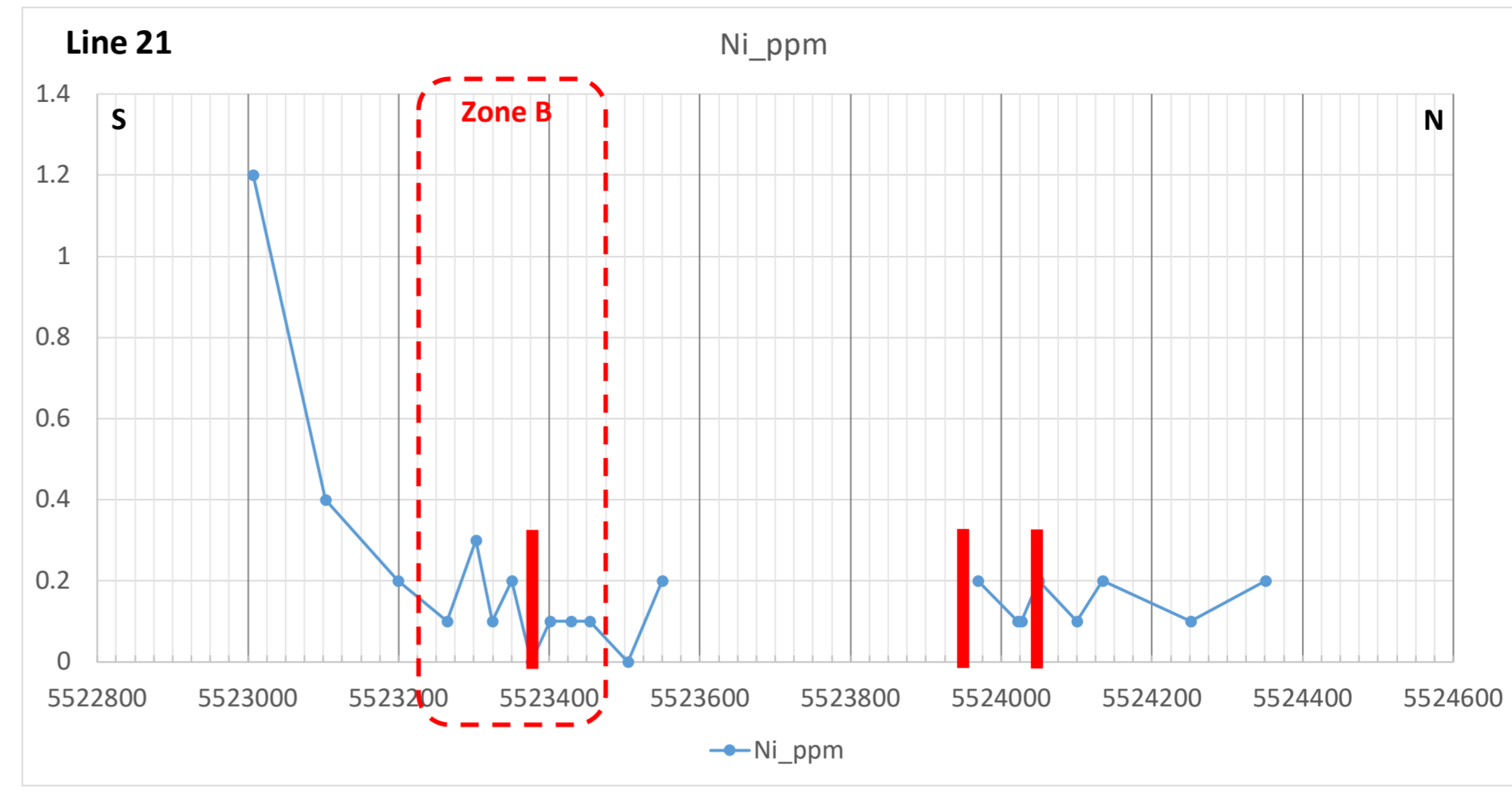
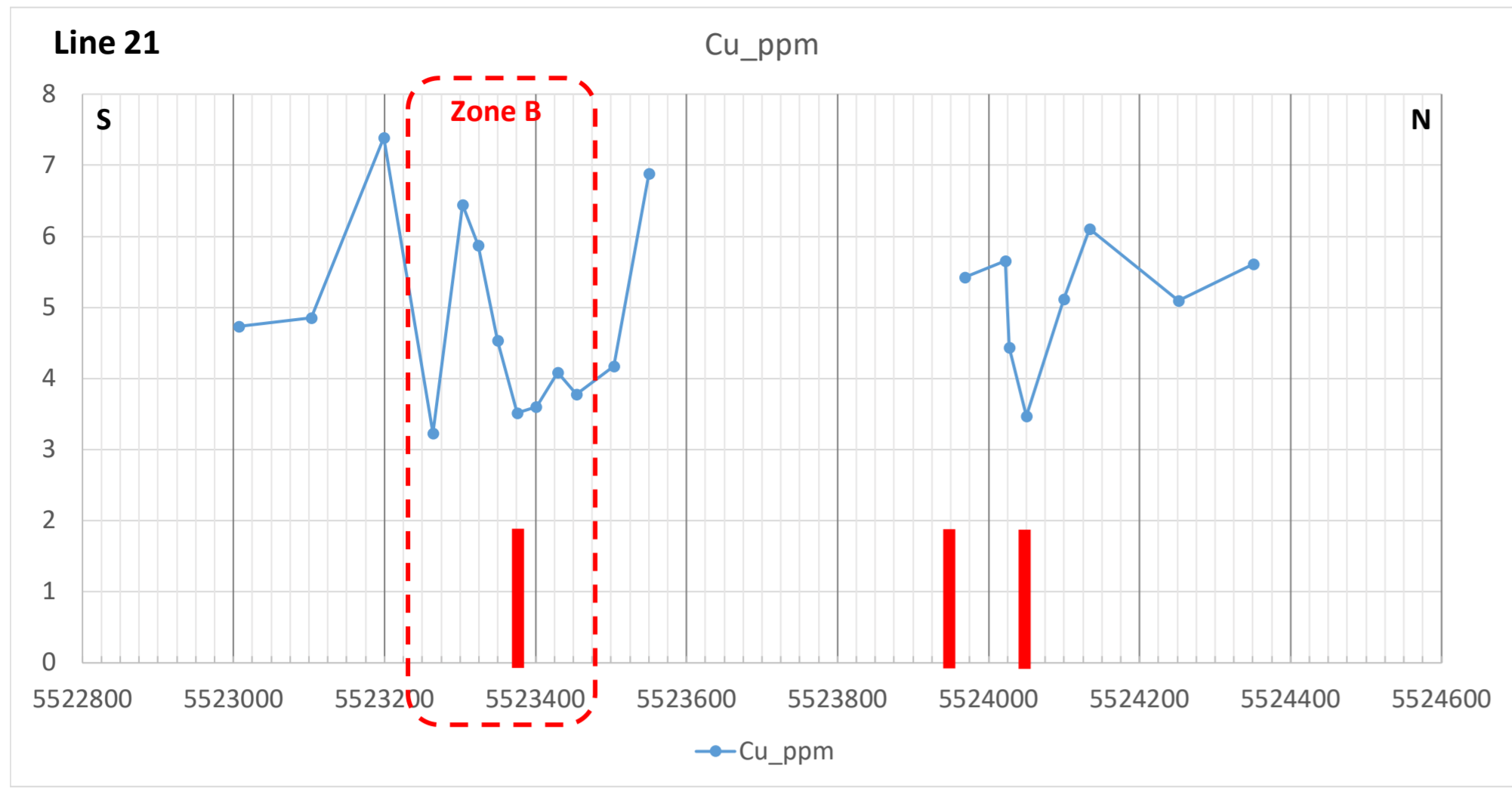
Zone B - Line 18



Zone B- Line 20



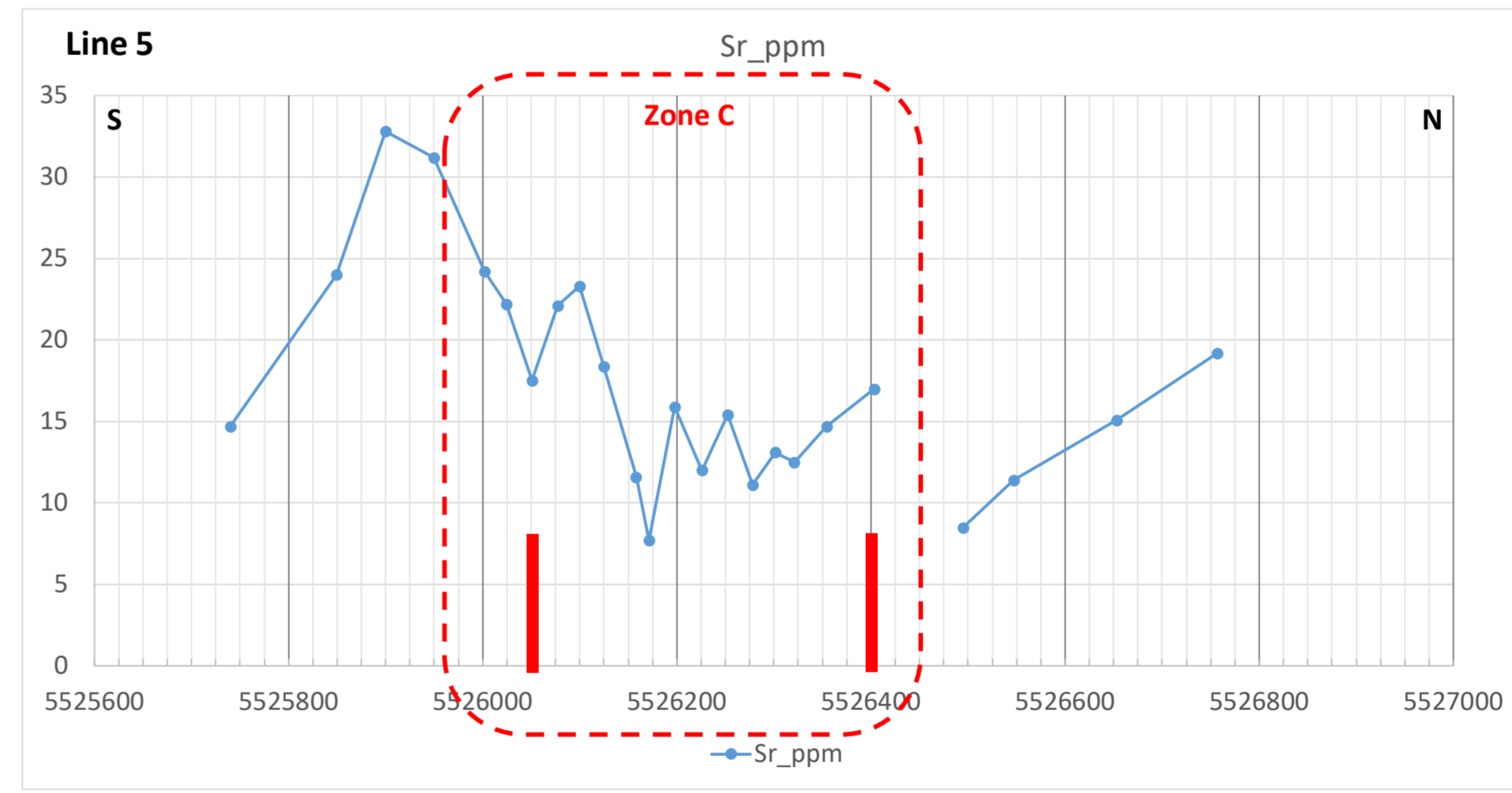
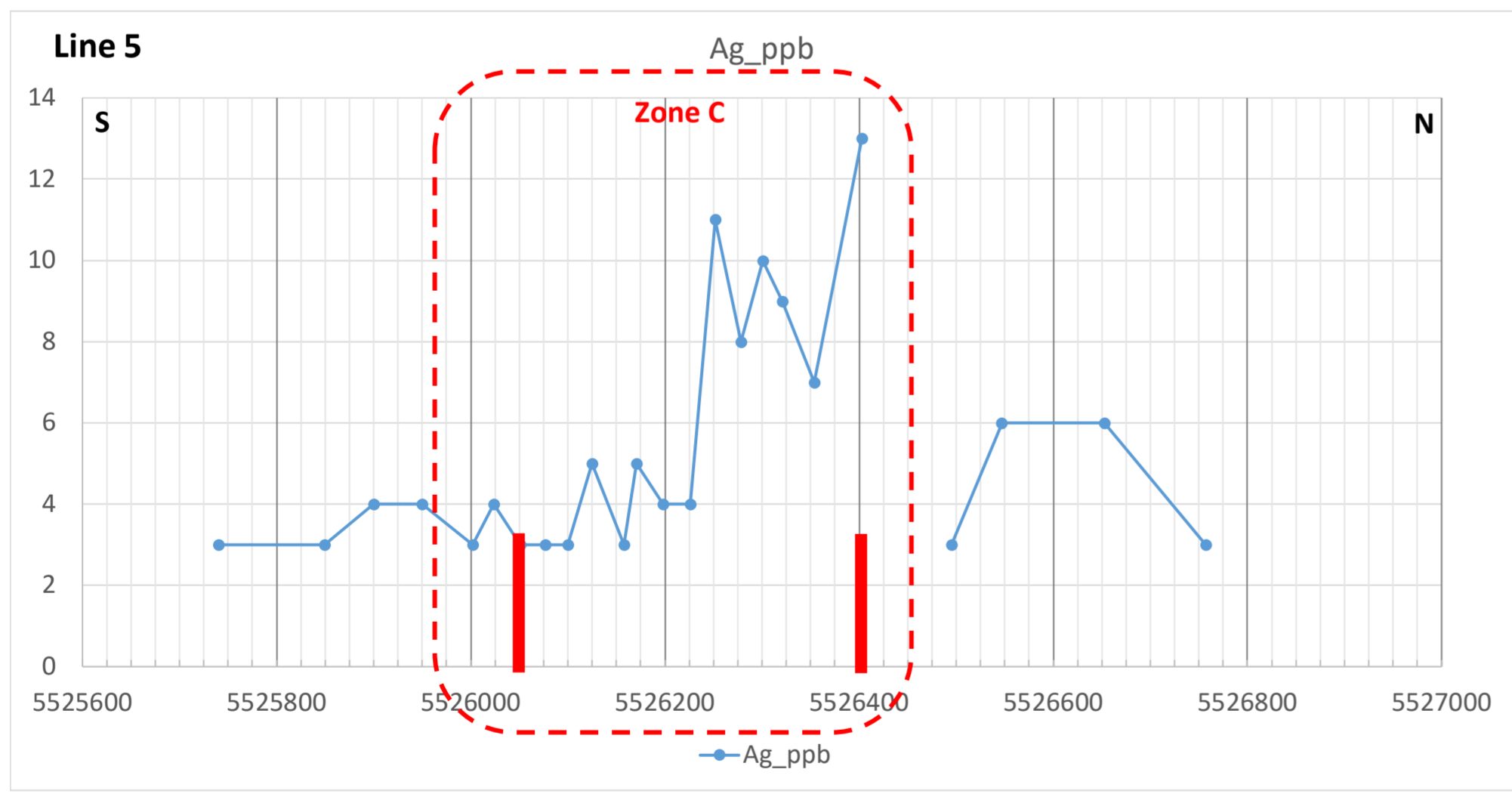
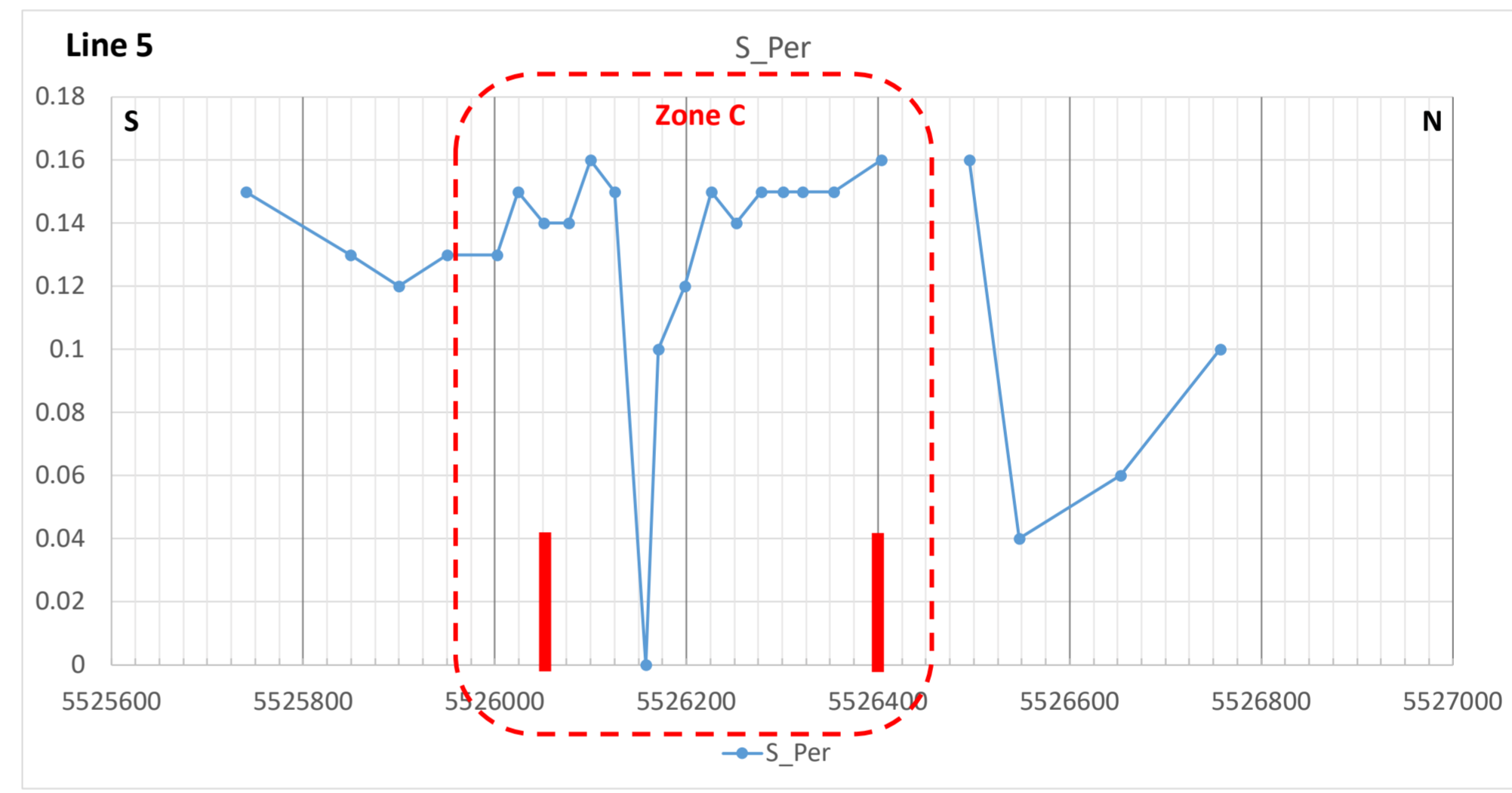
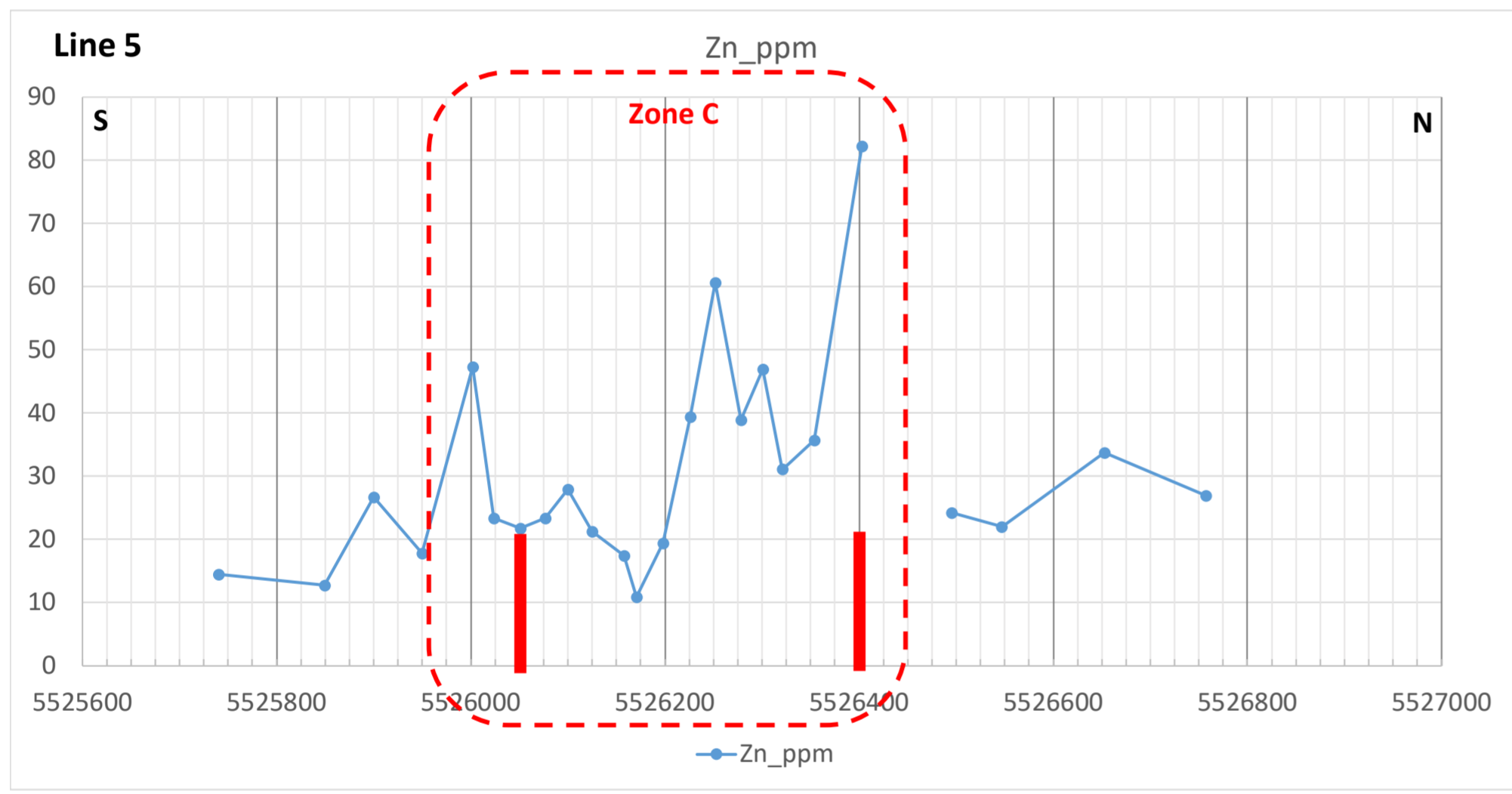
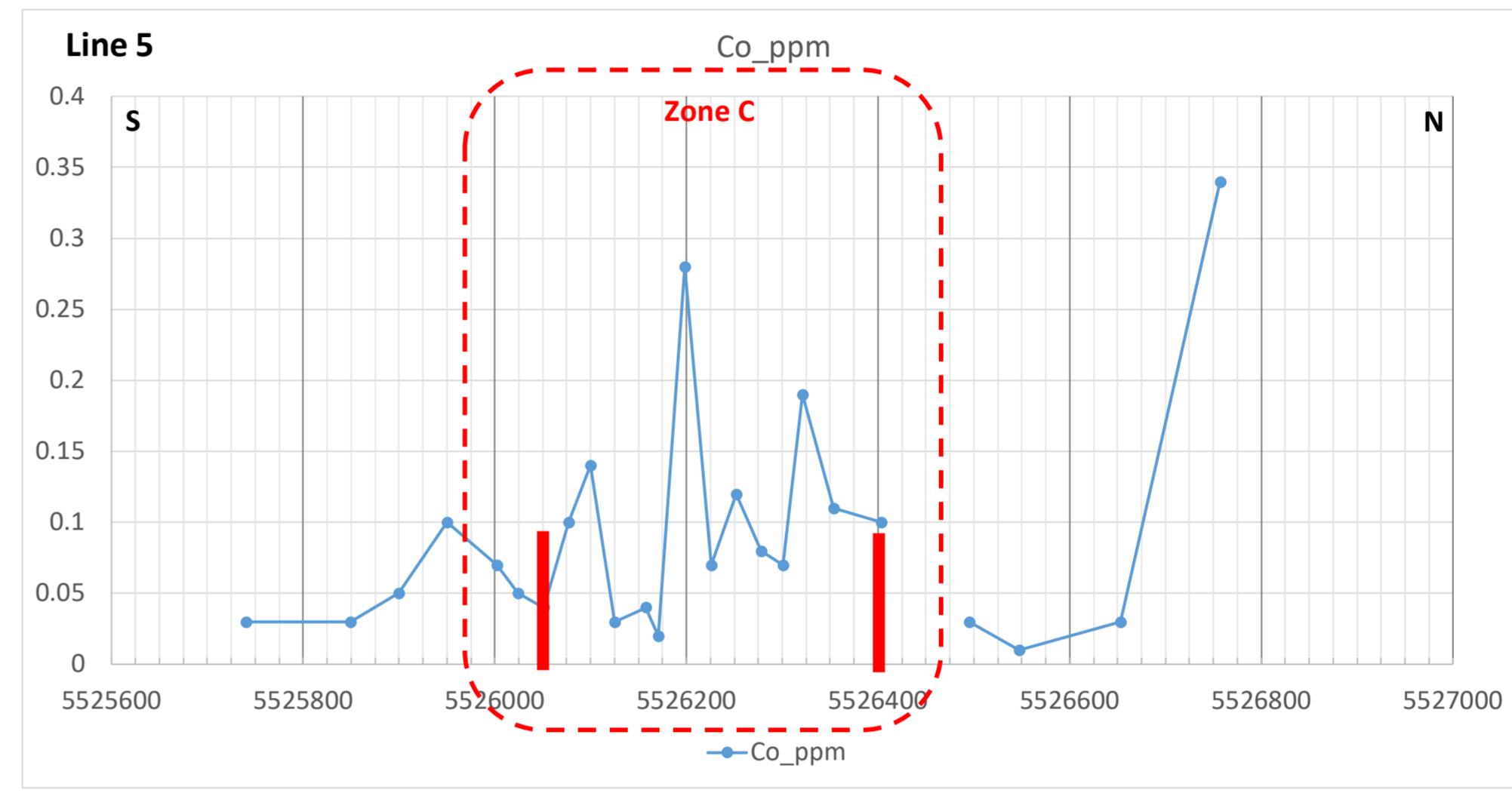
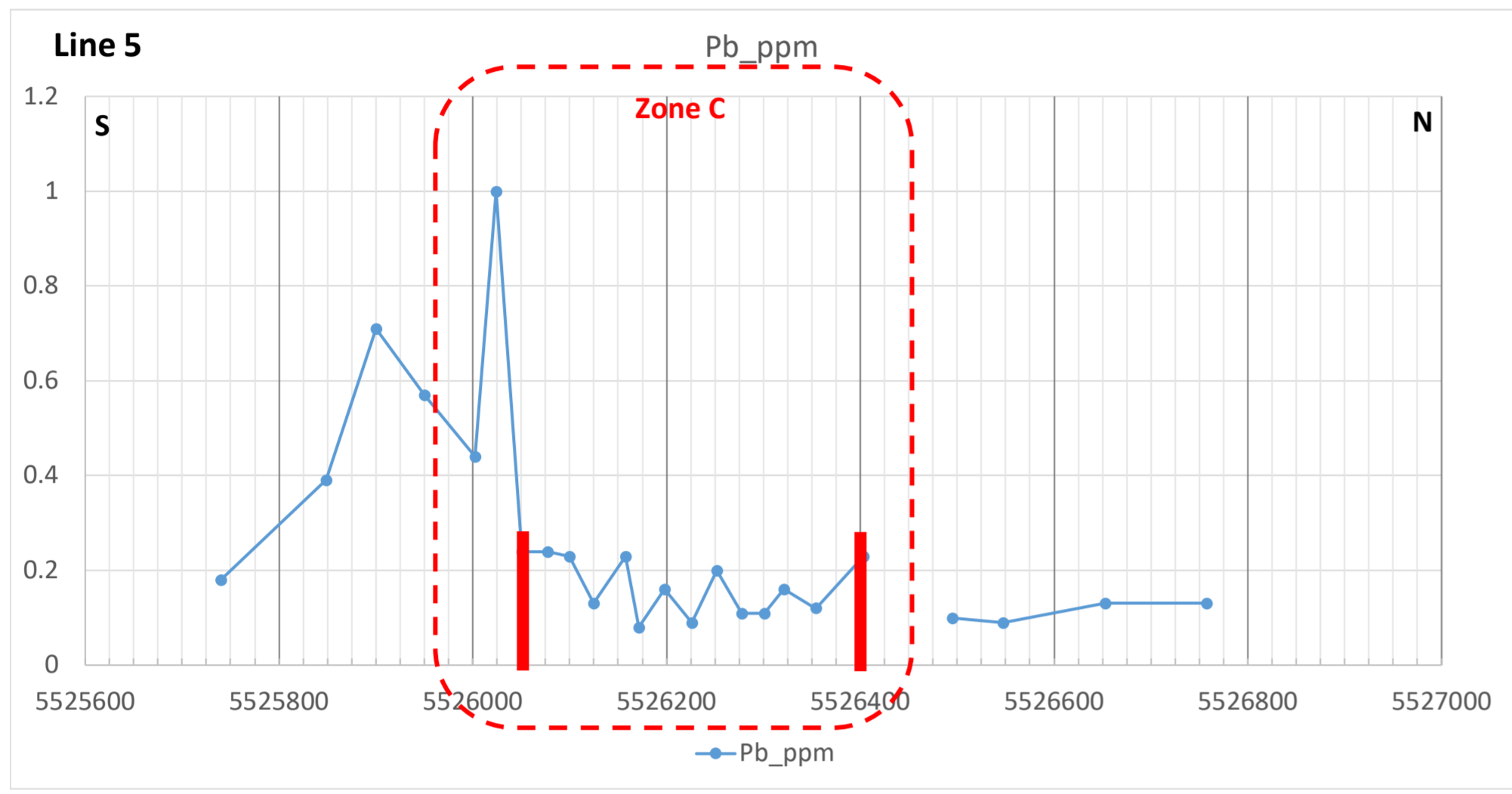
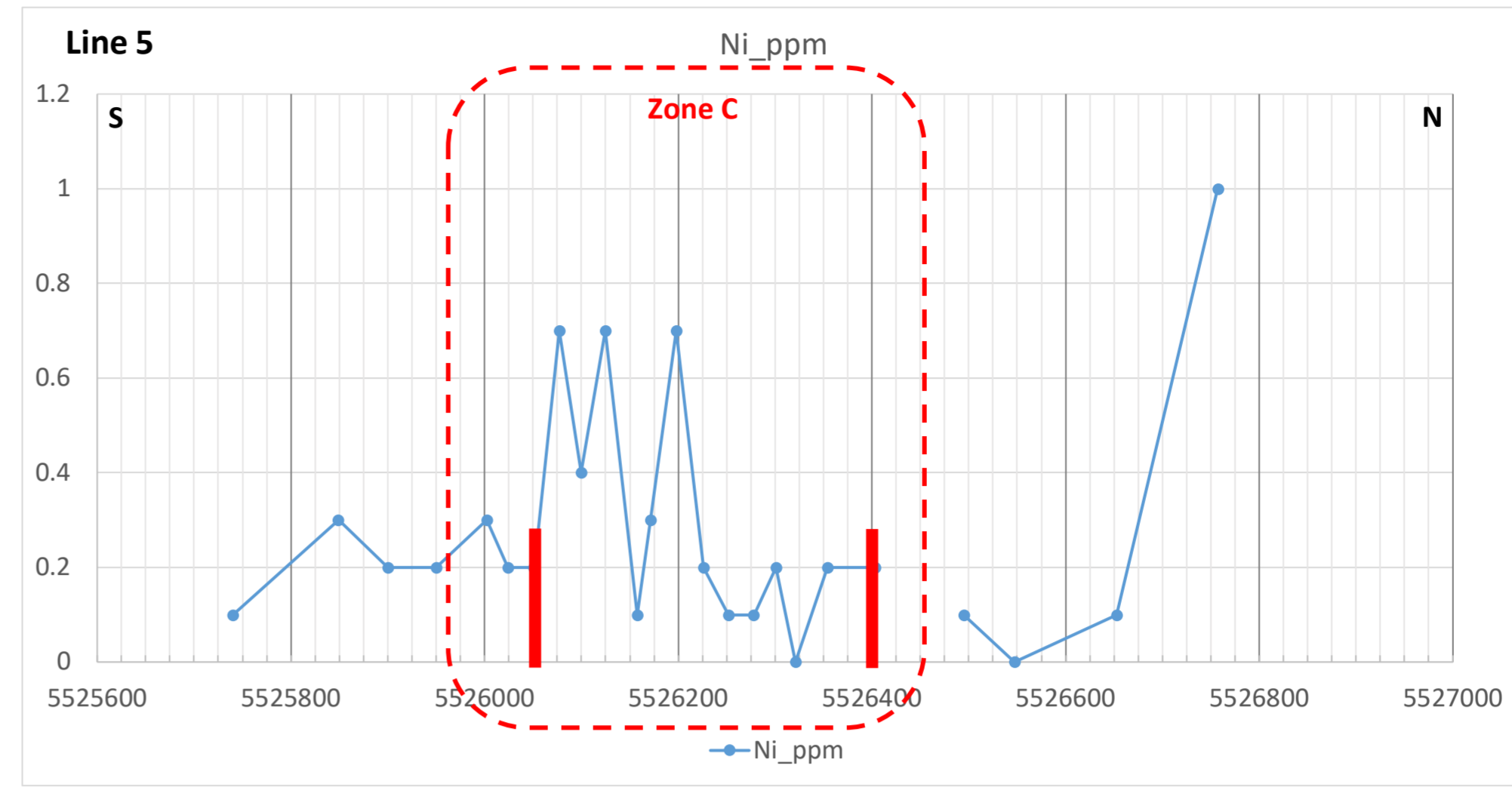
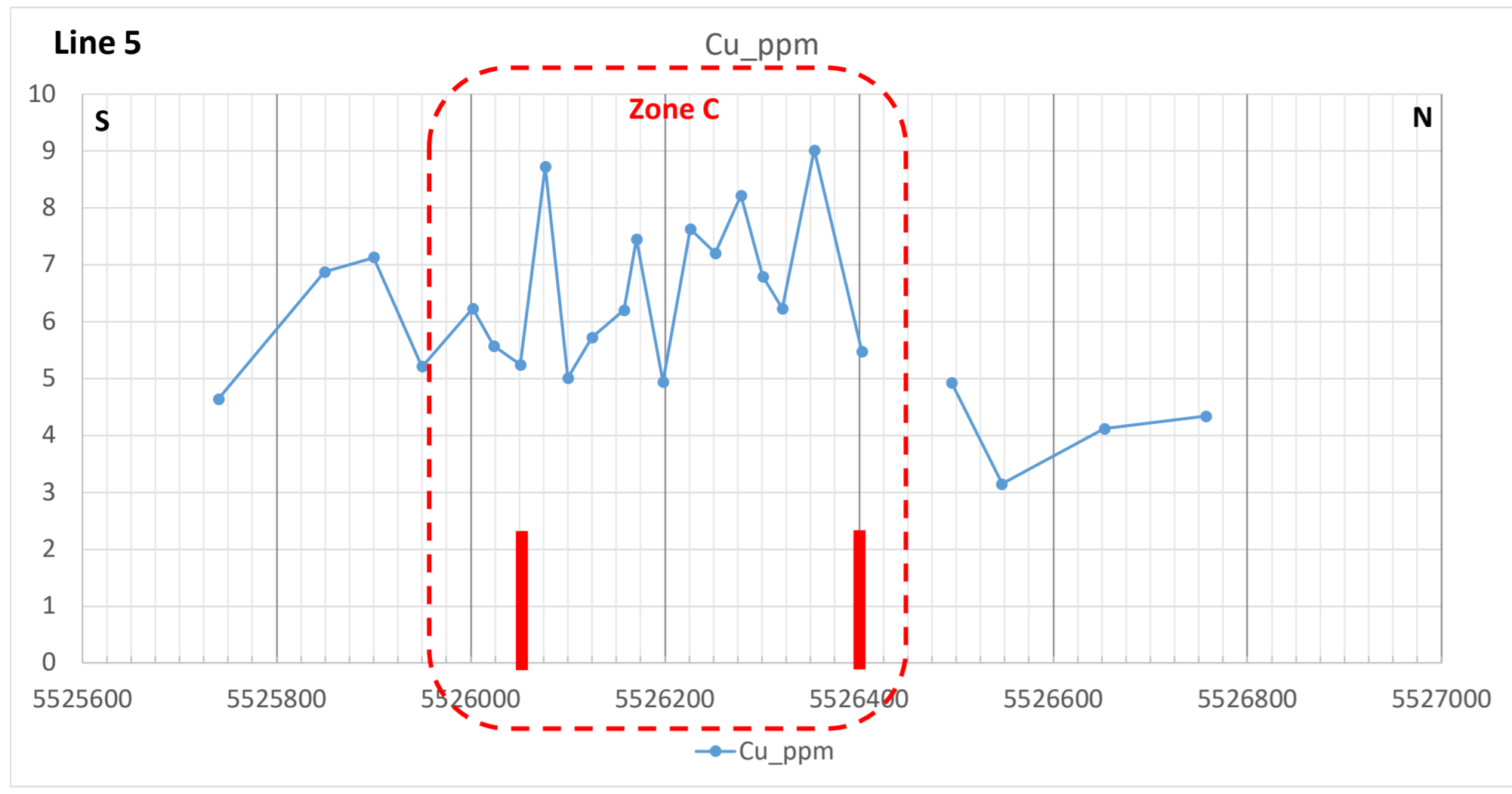
Zone B - Line 21



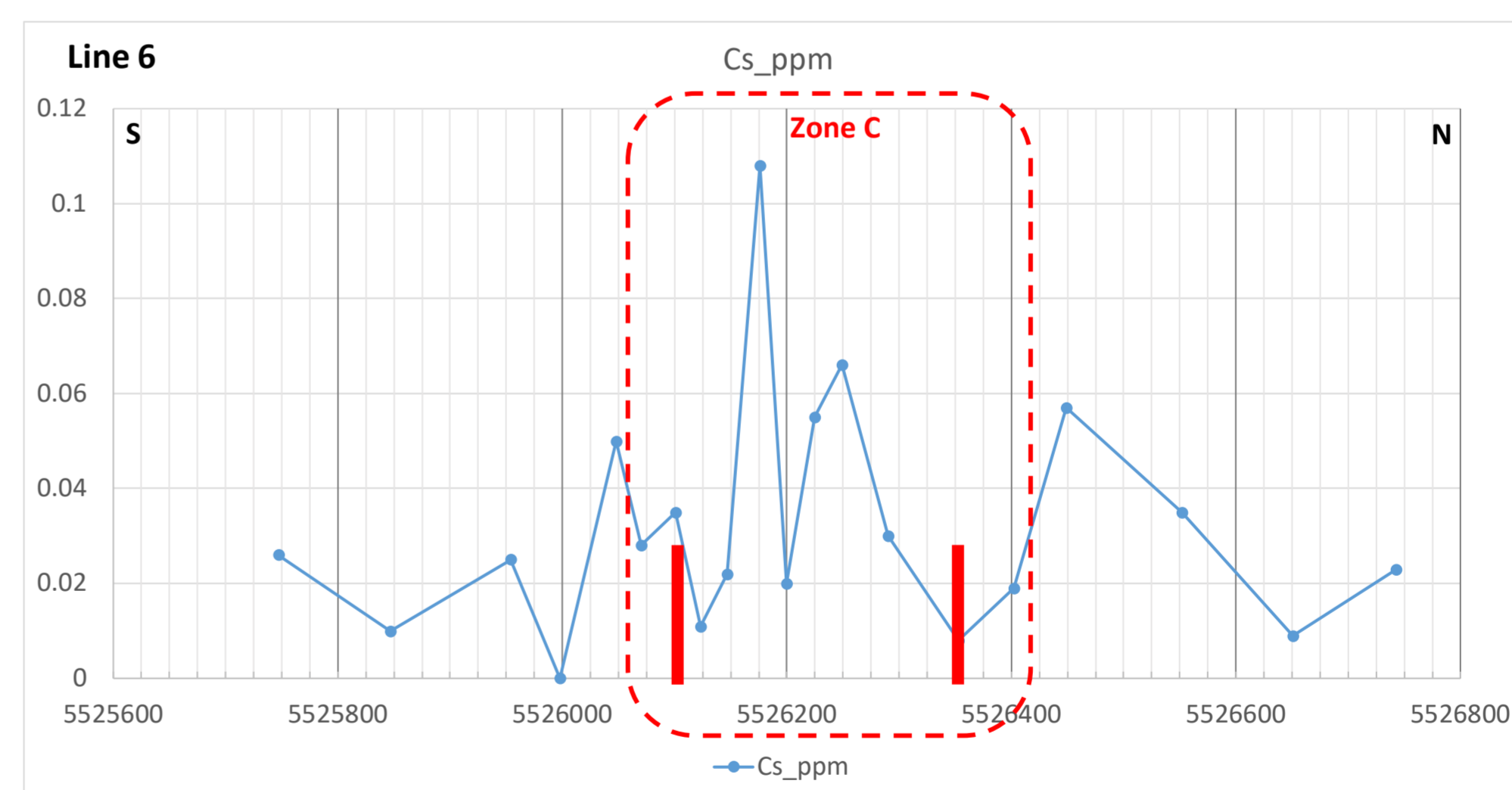
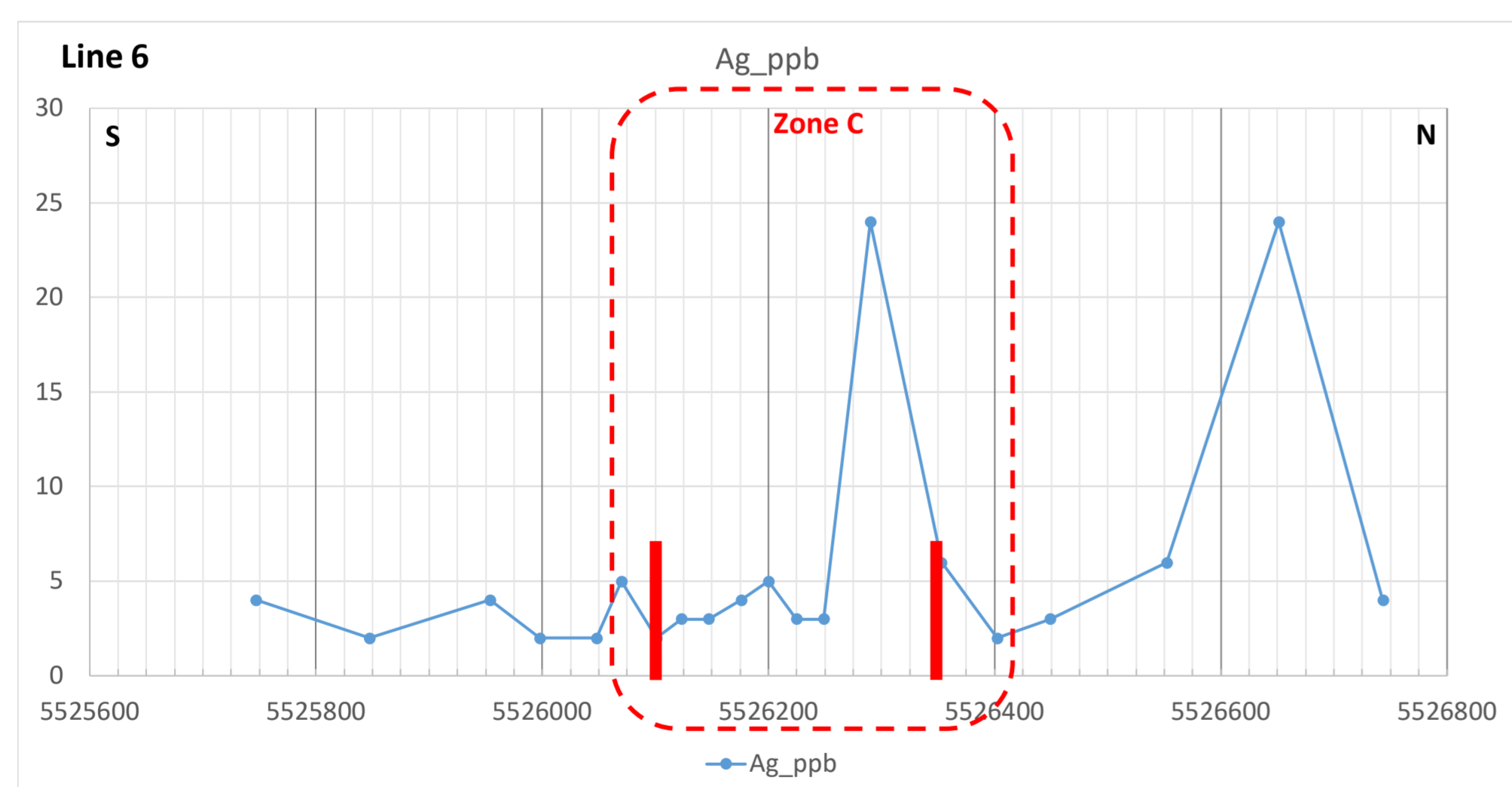
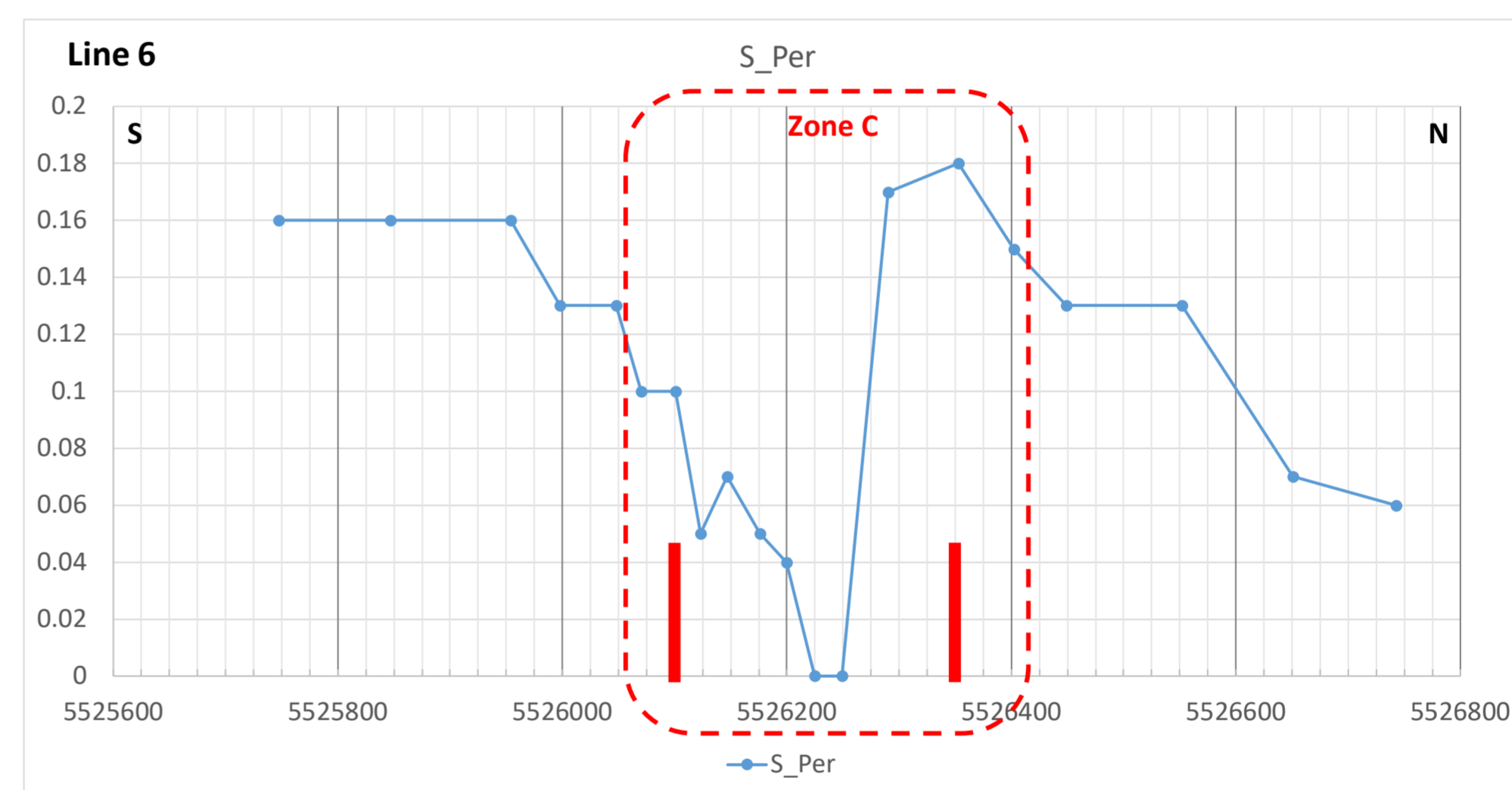
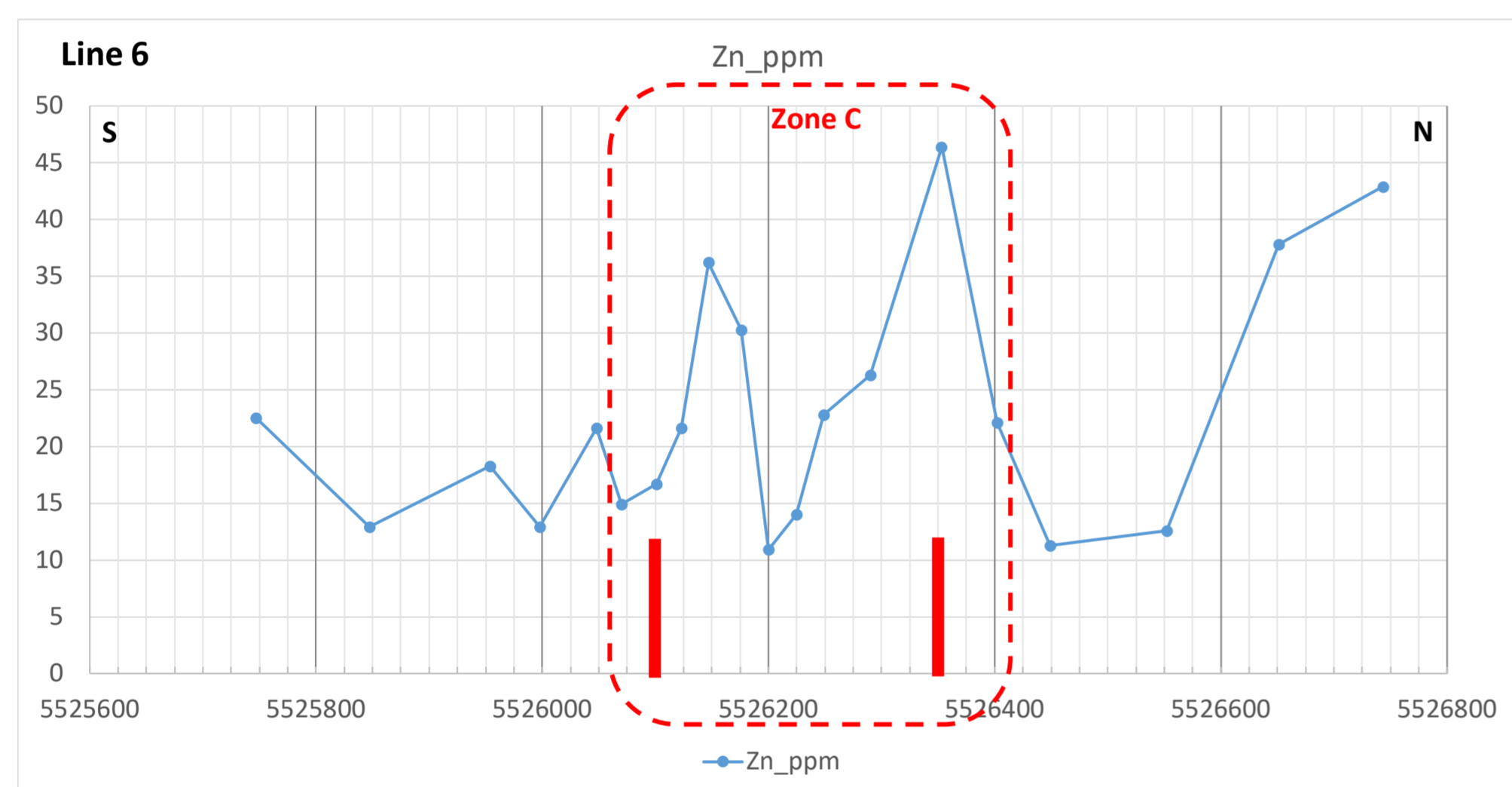
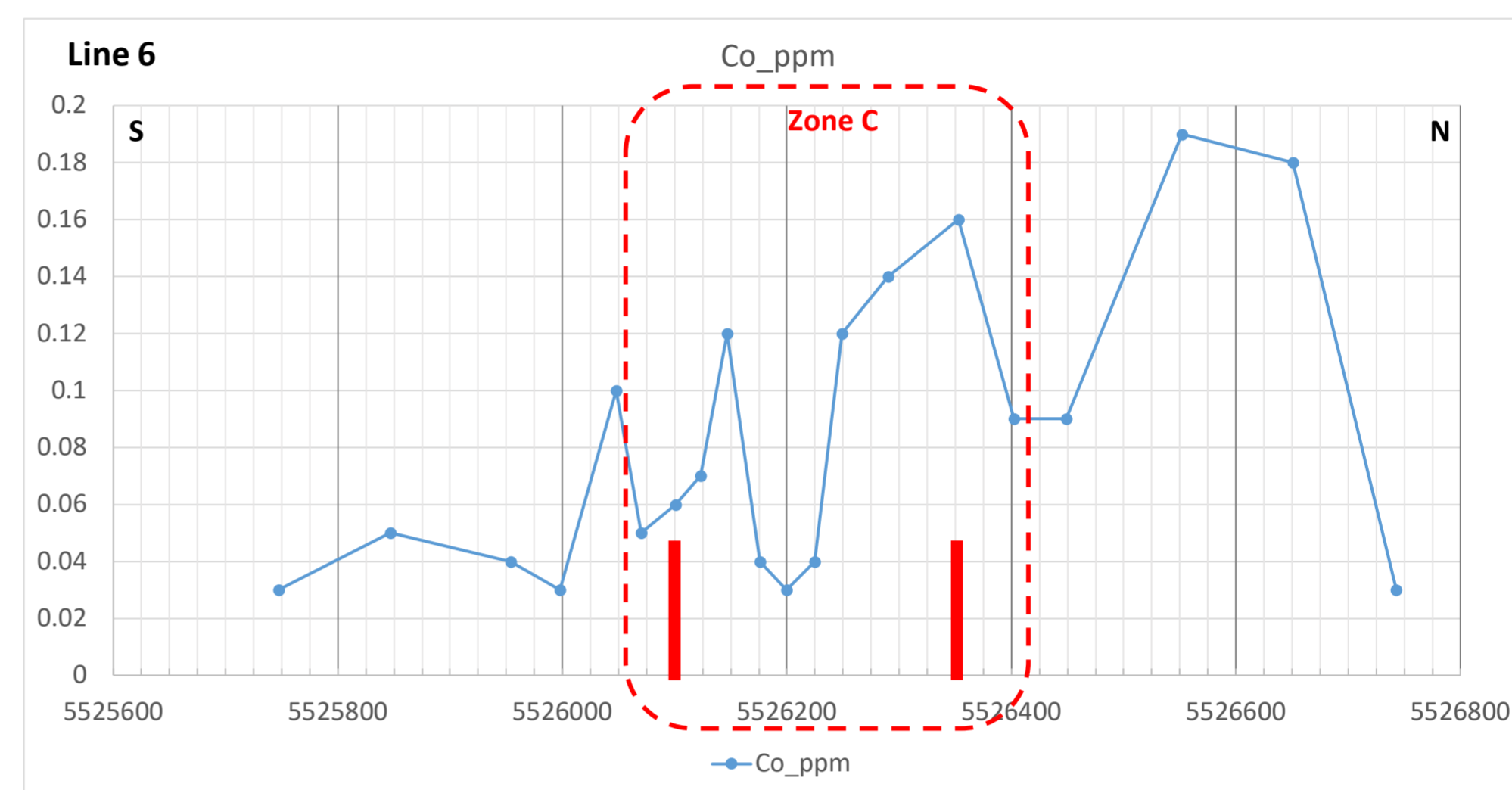
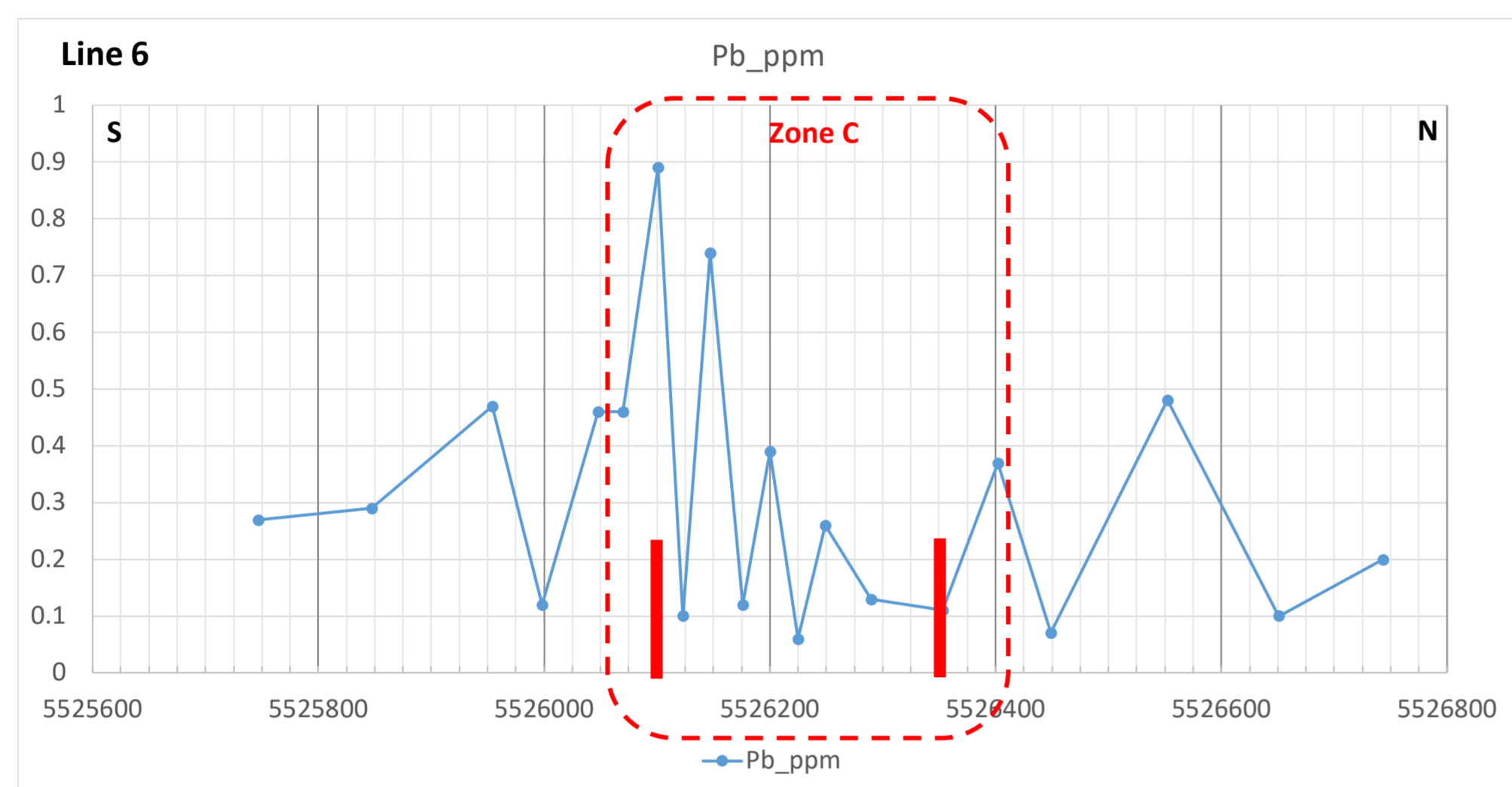
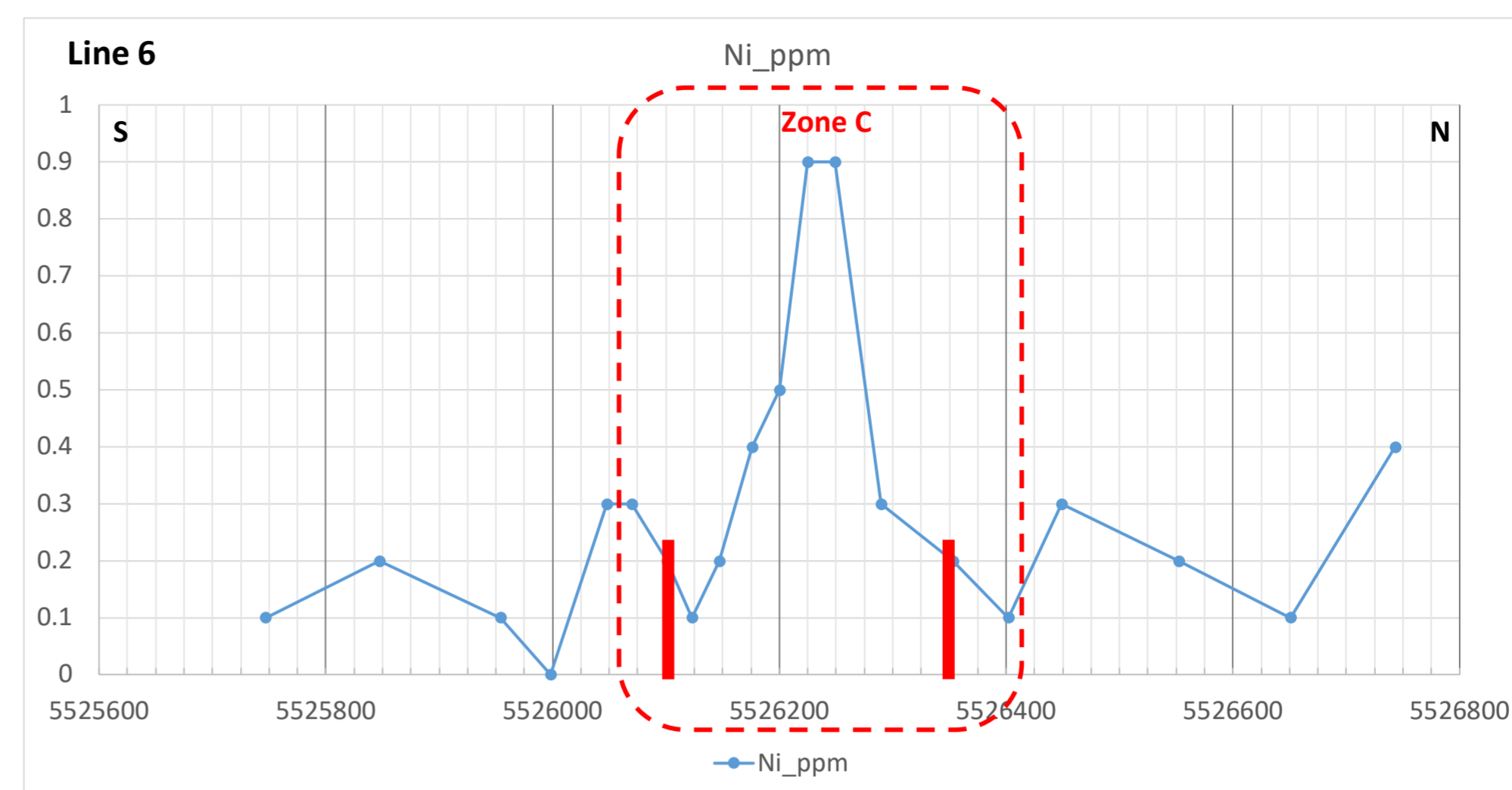
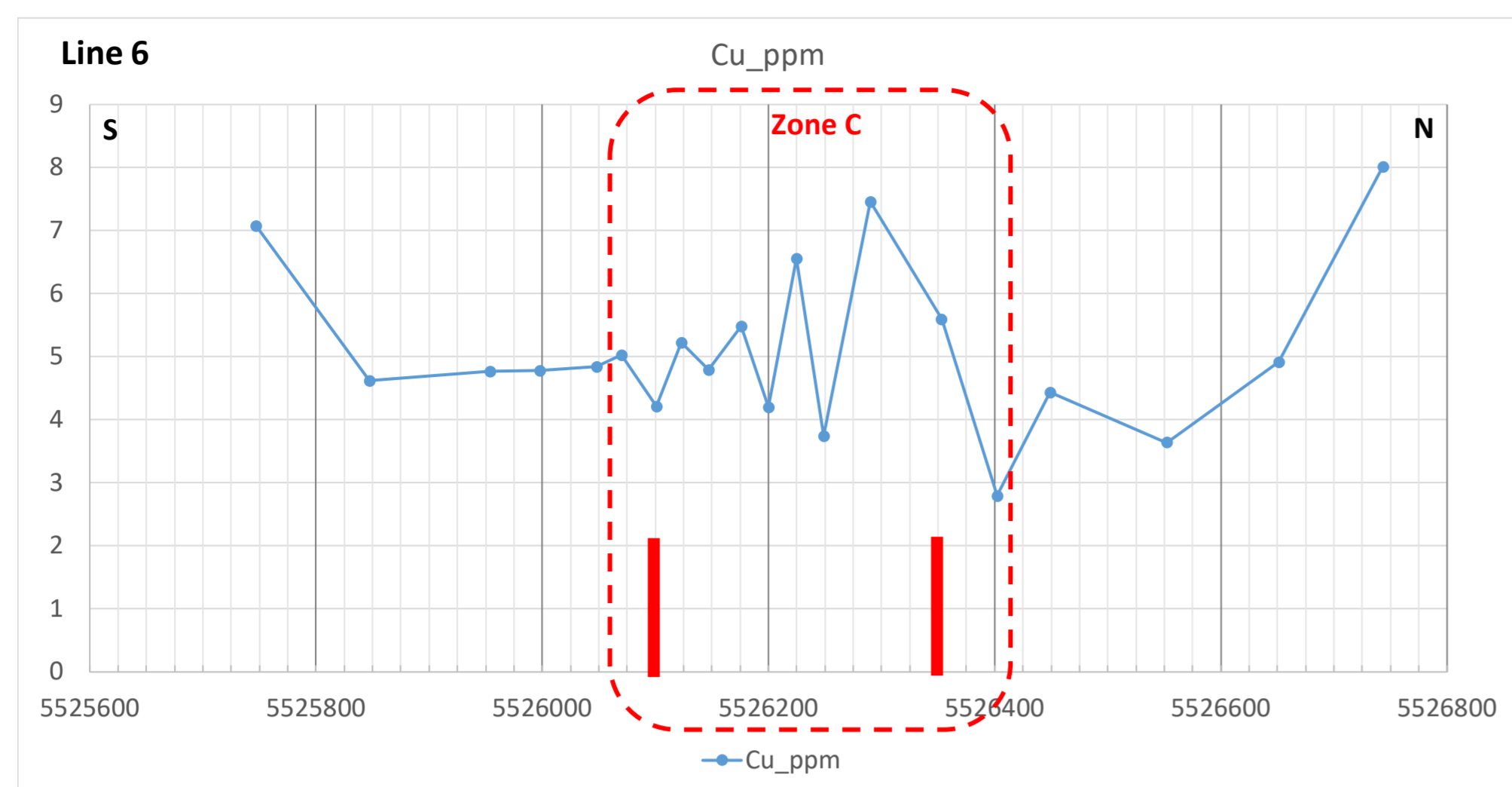
# Anomaly C

Lines 5, 6

Zone C - Line 5



Zone C - Line 6

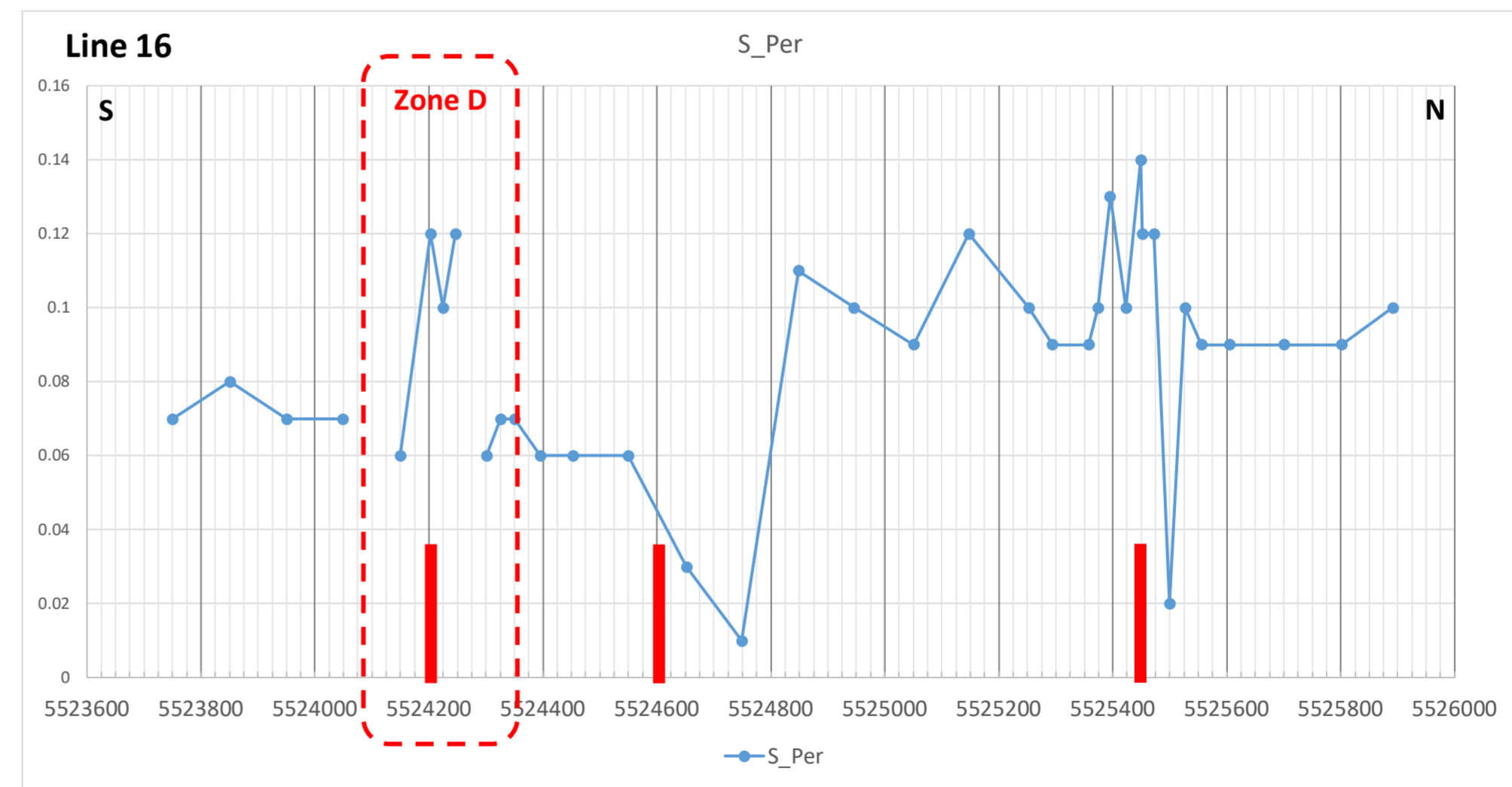
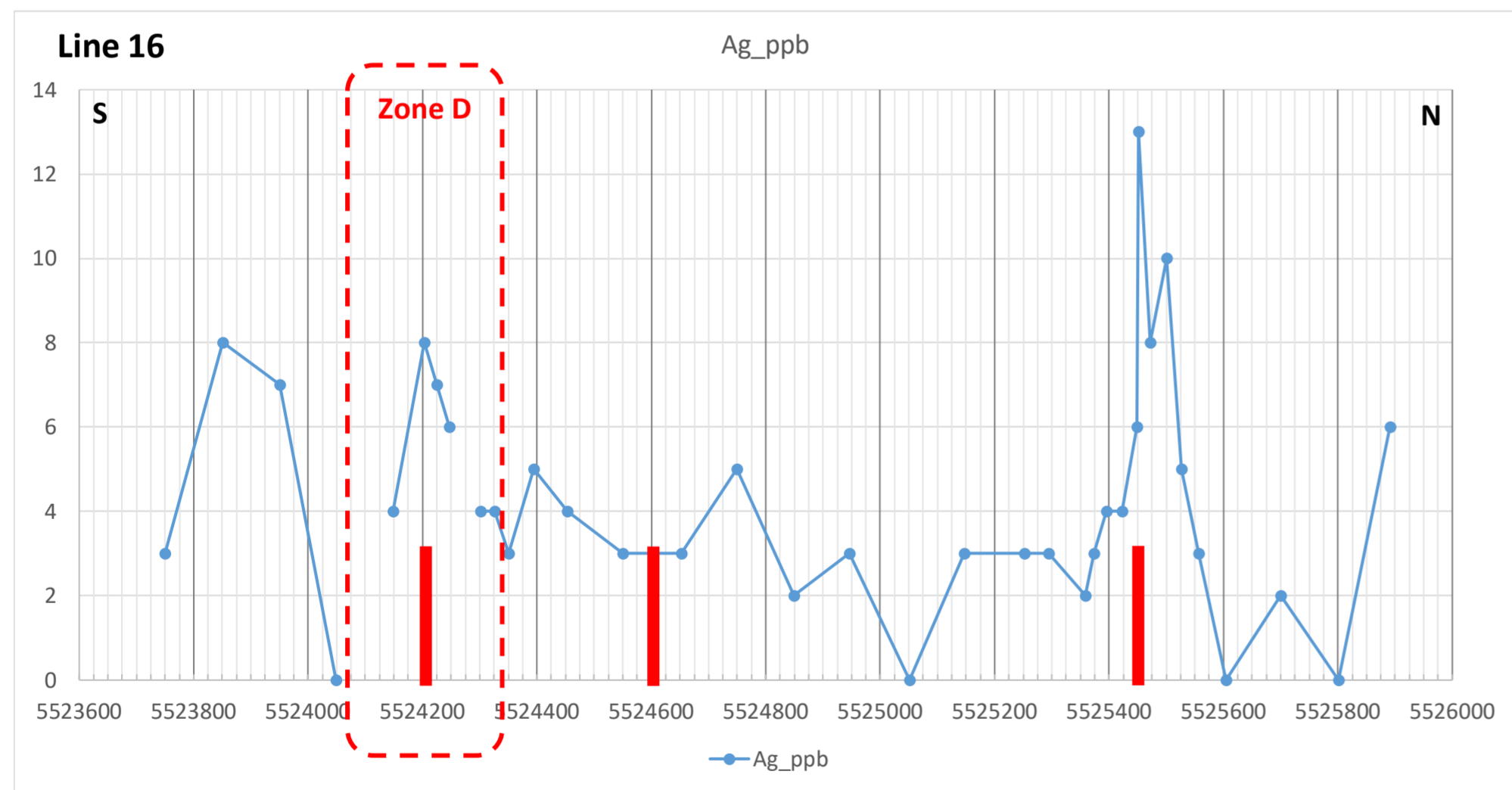
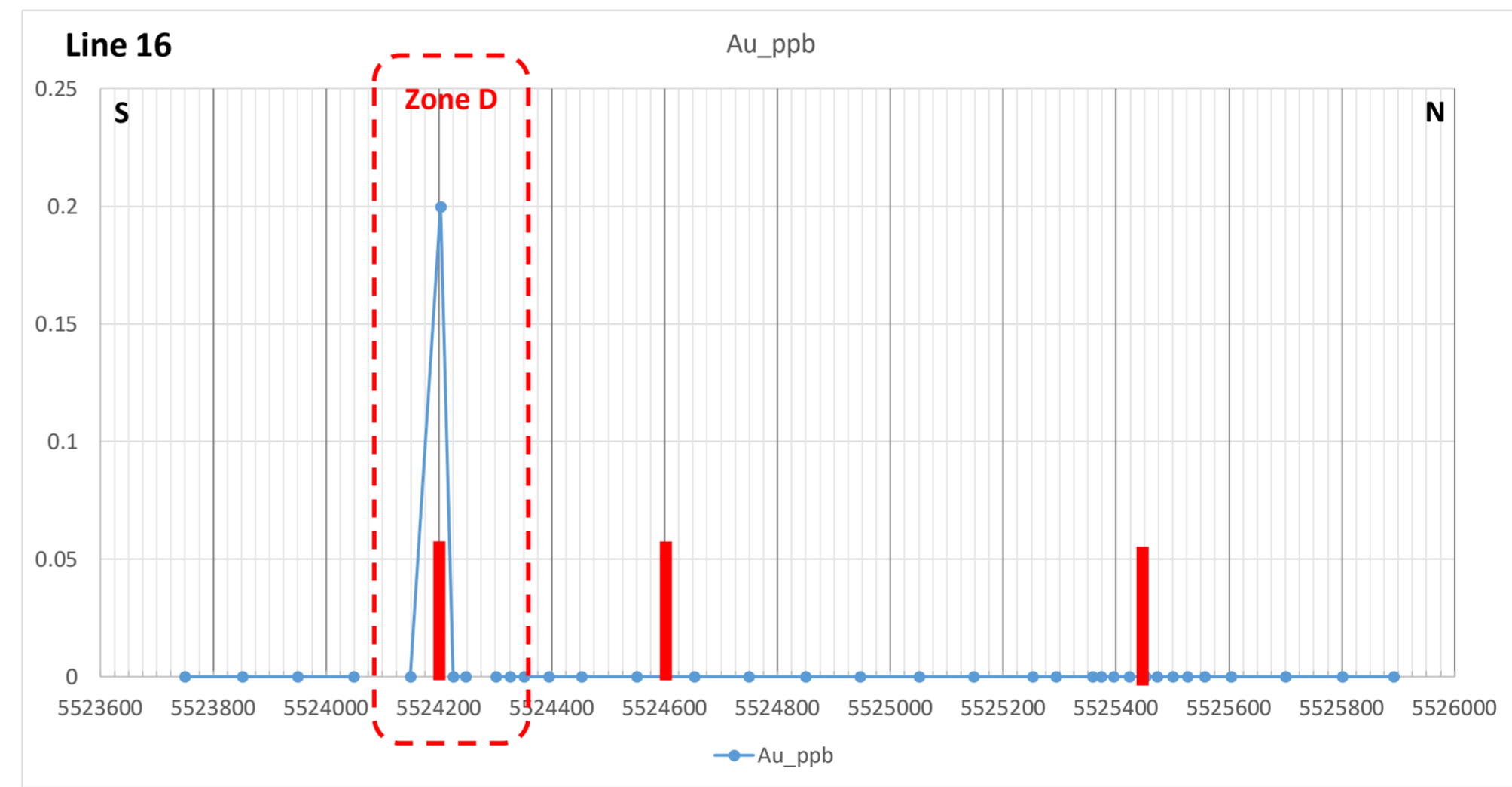
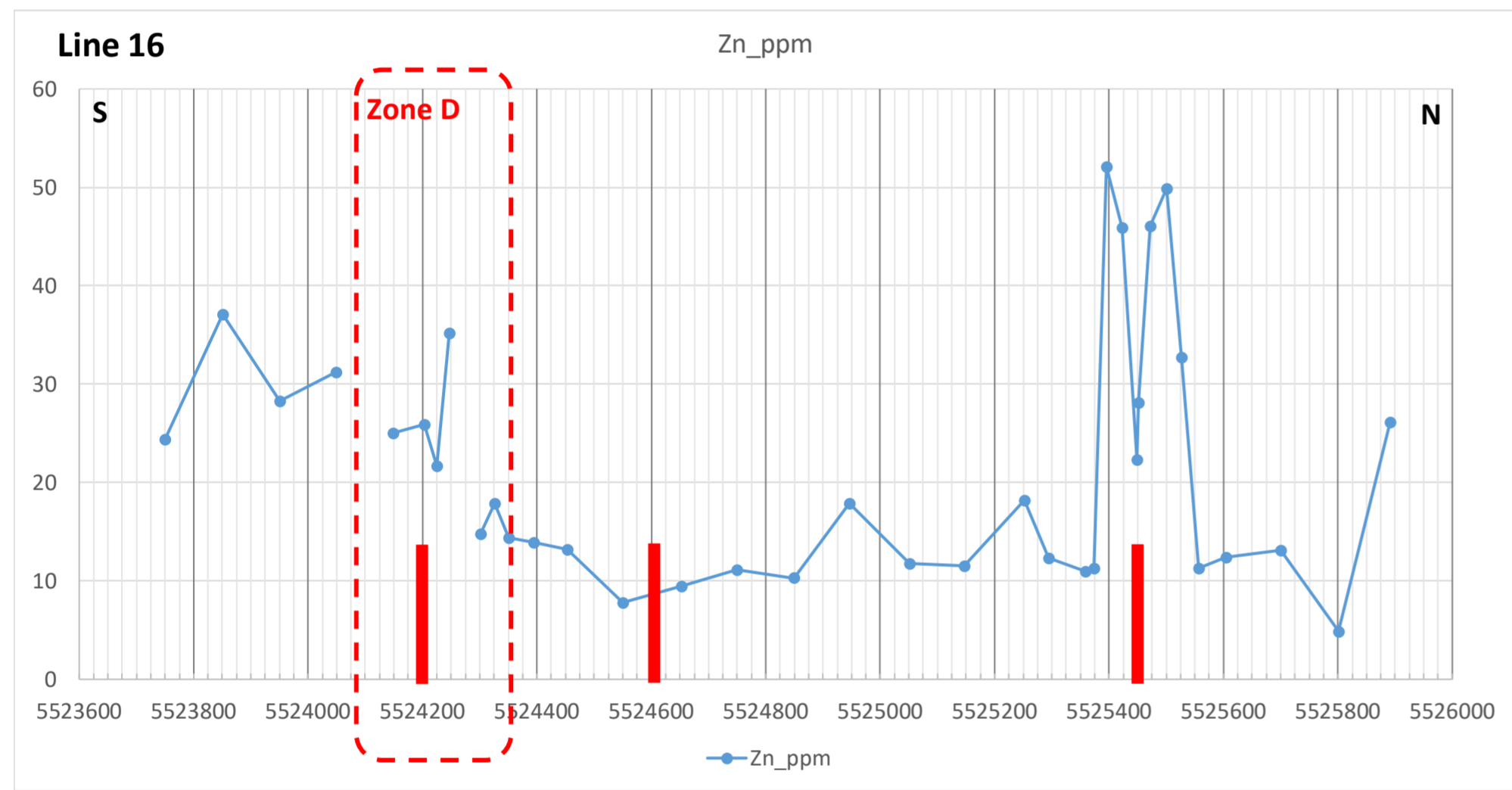
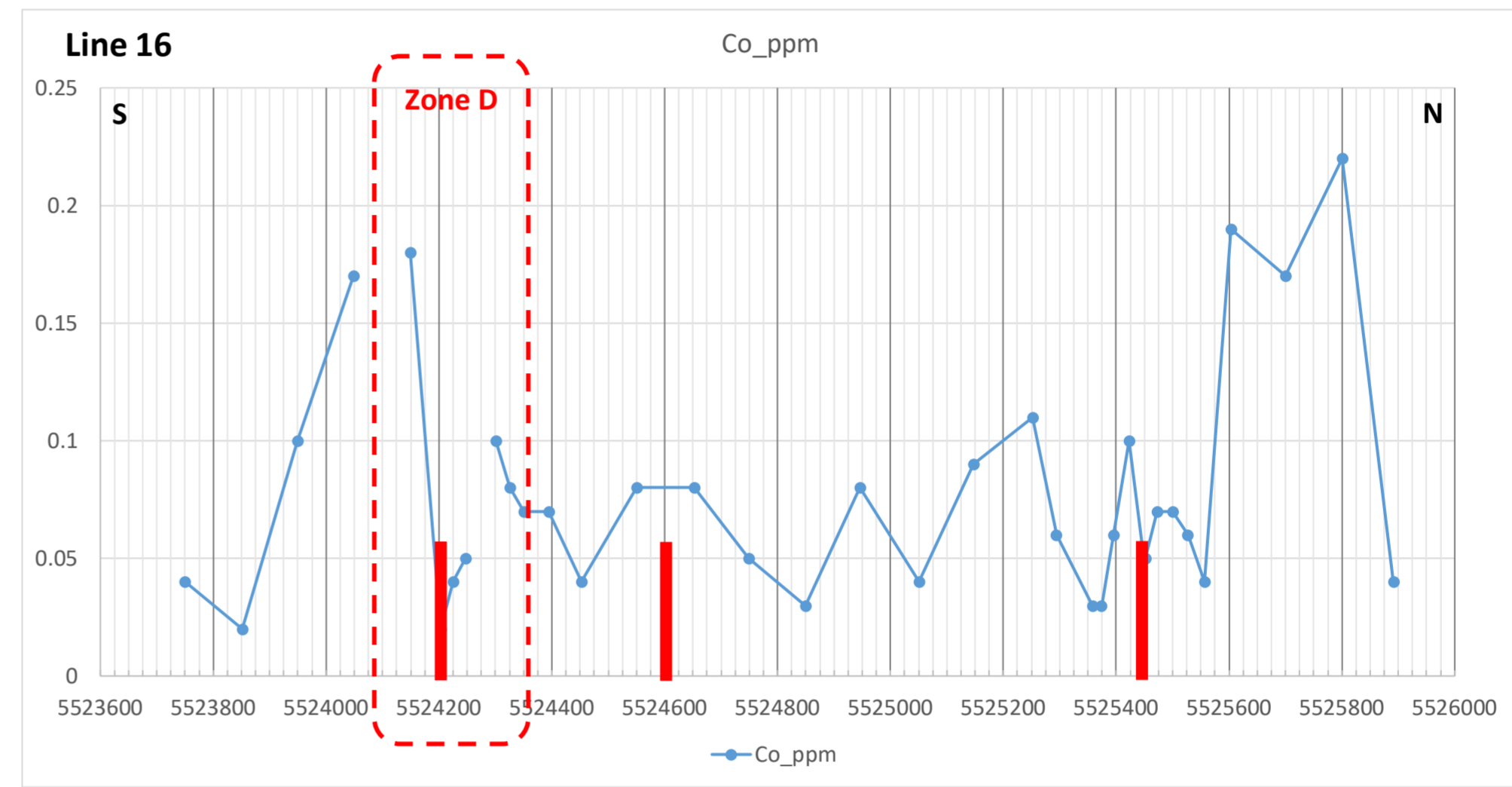
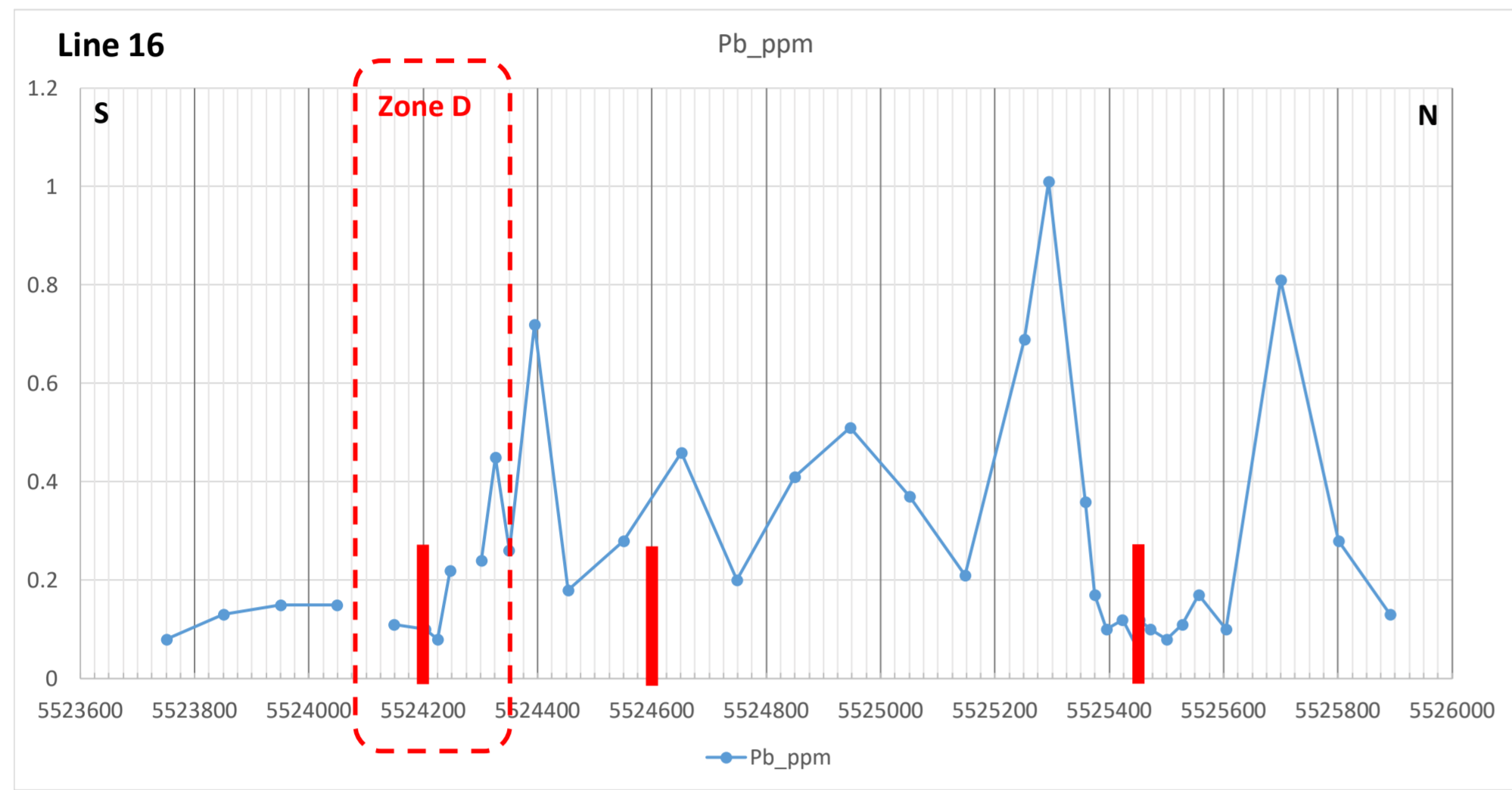
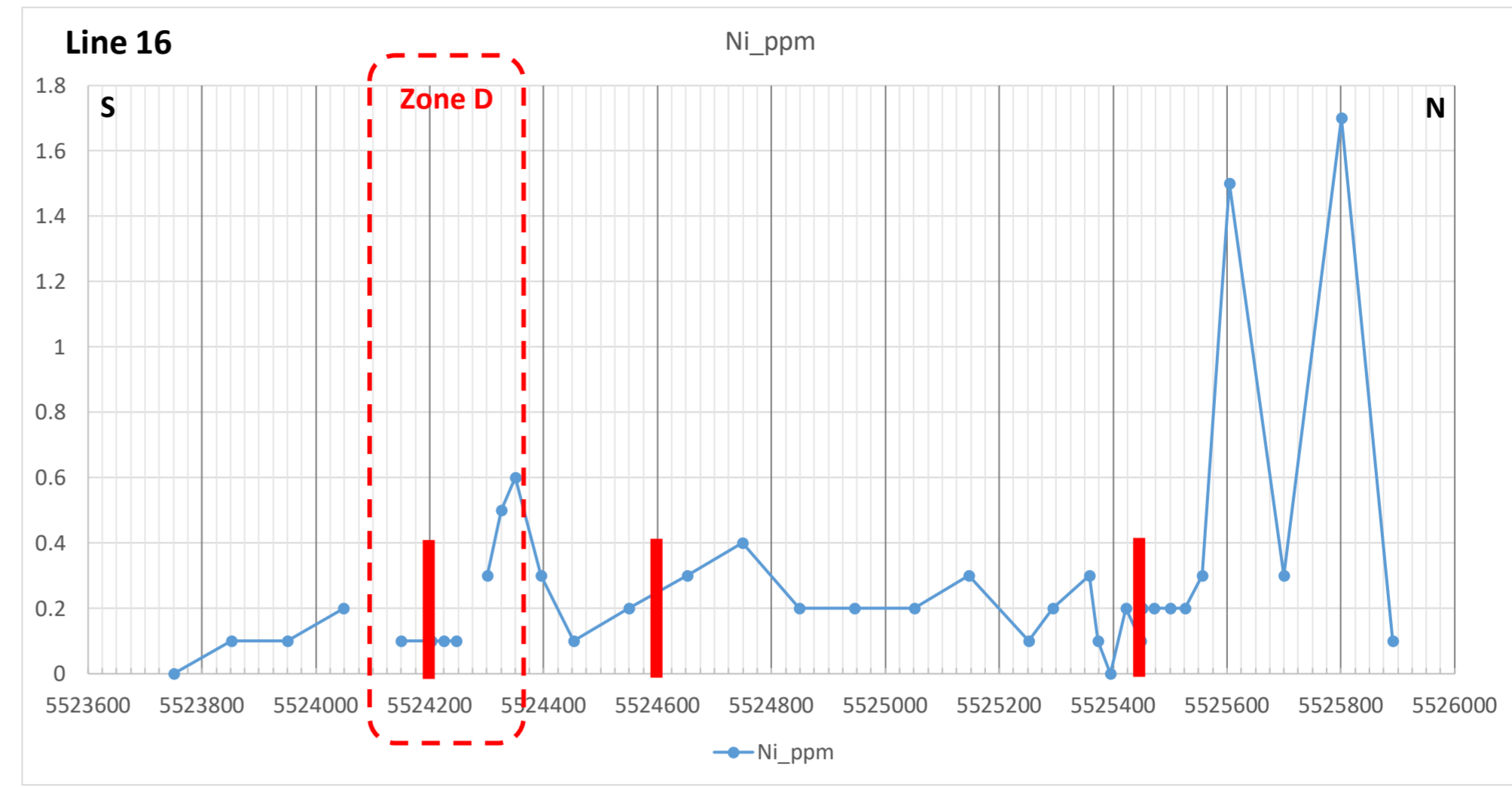
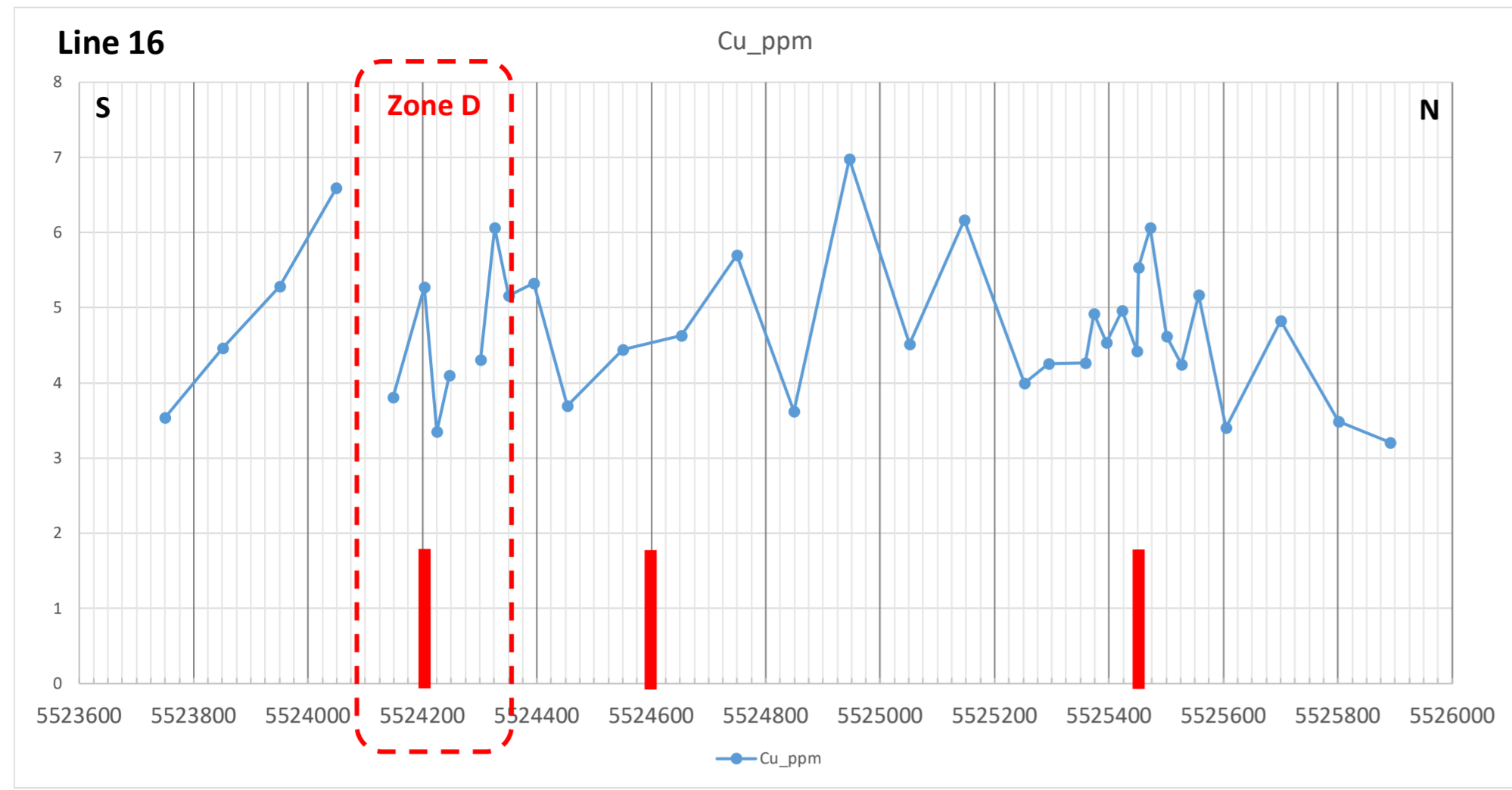


# Anomaly D

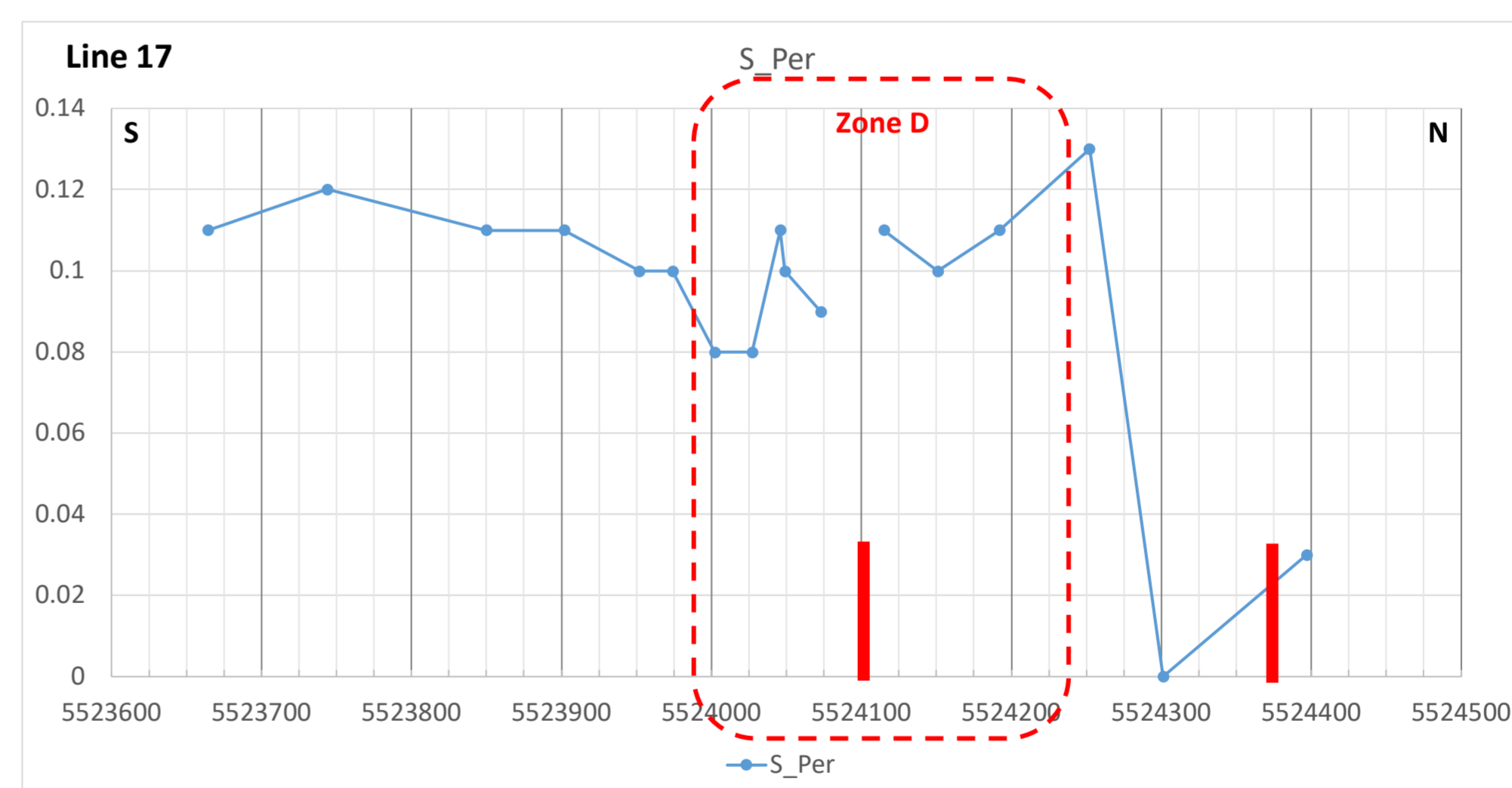
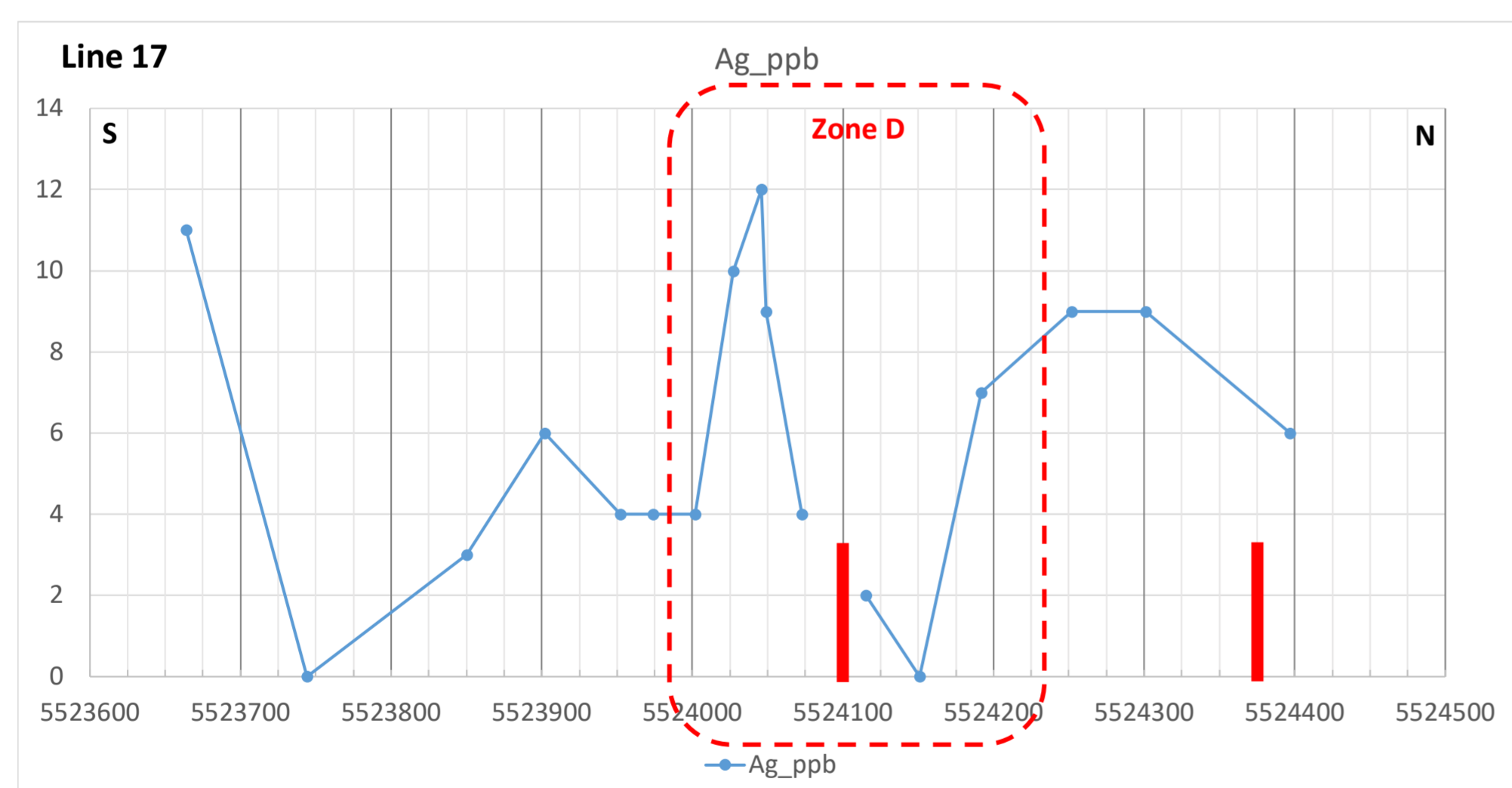
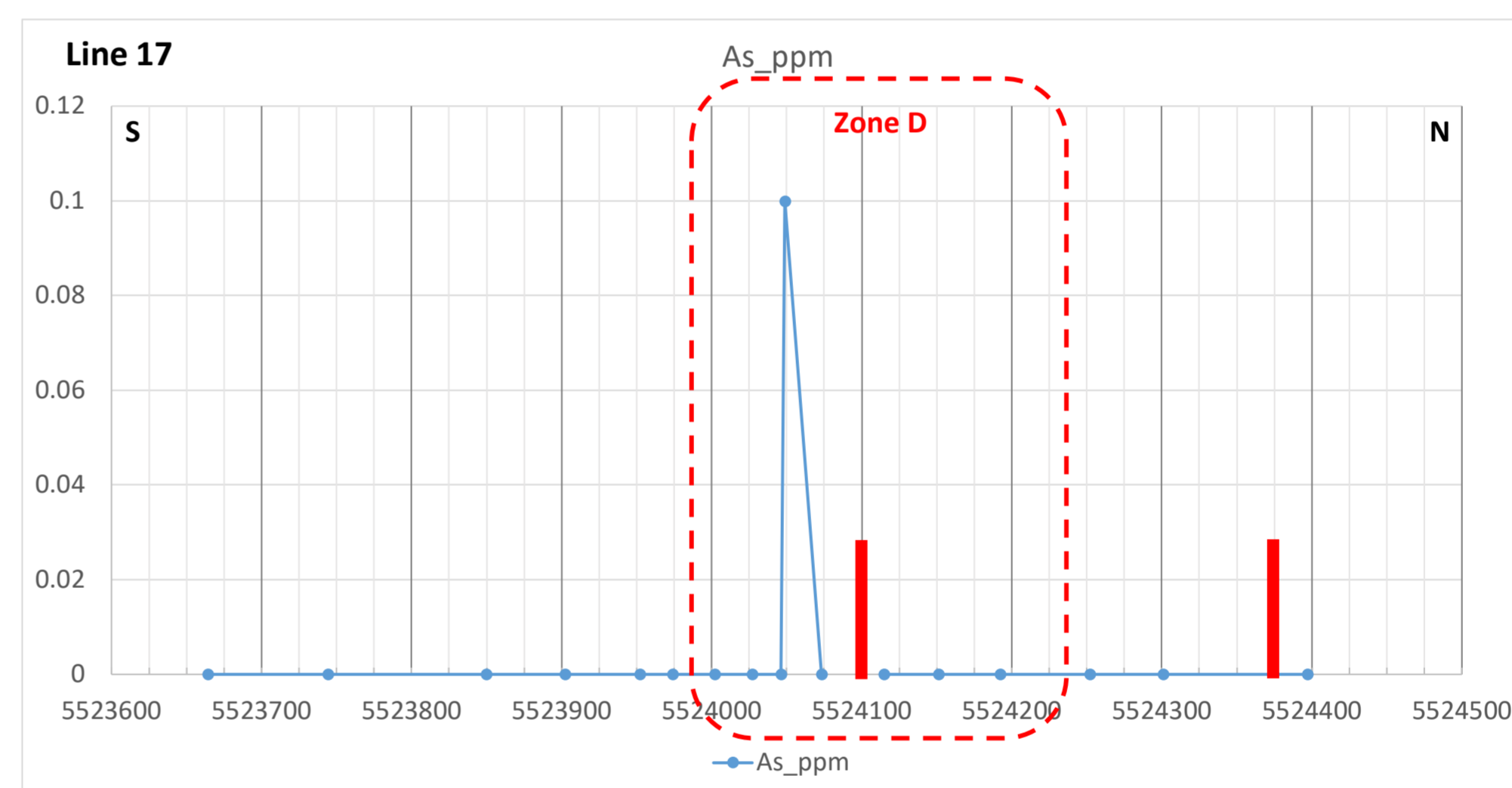
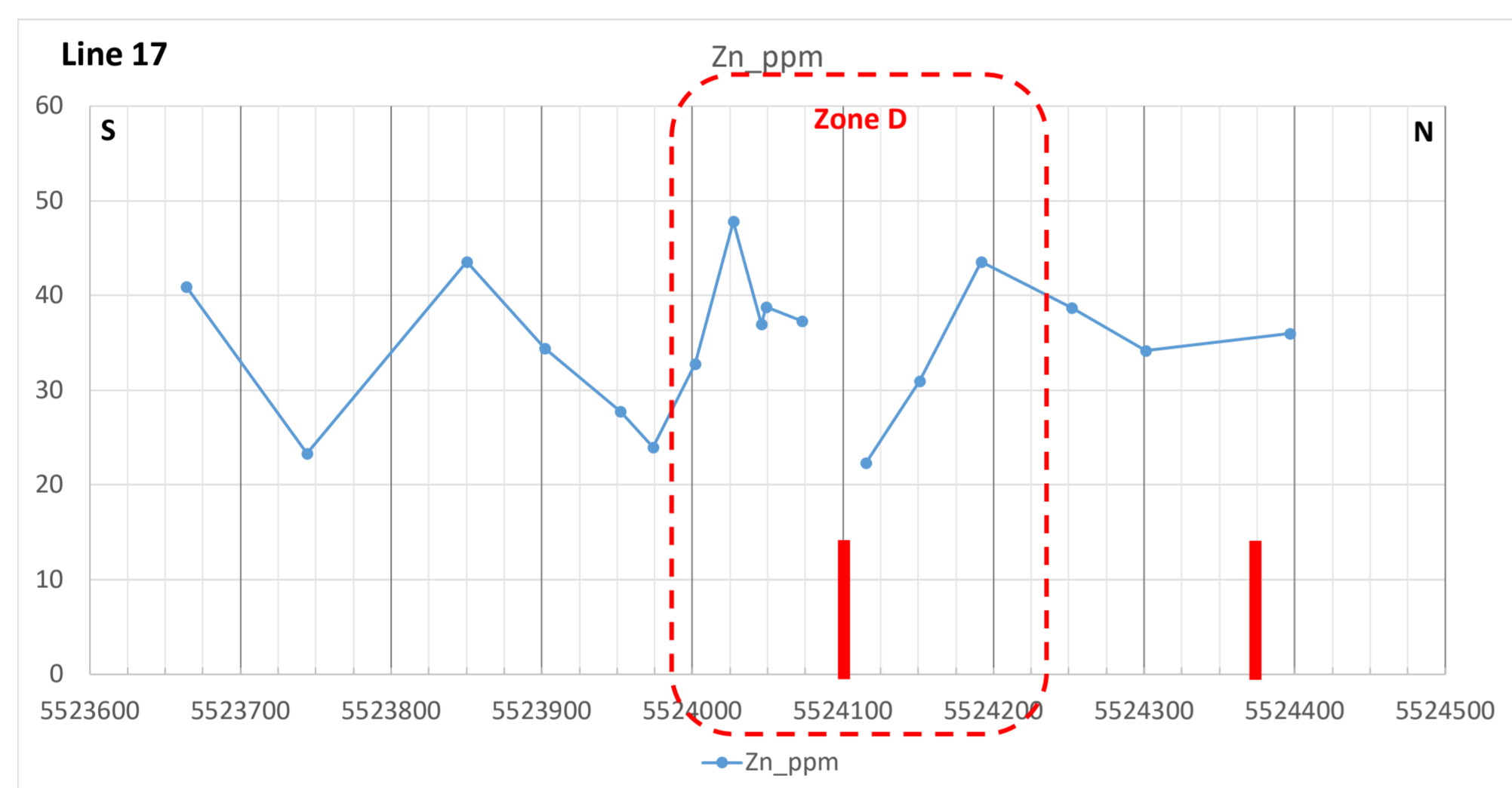
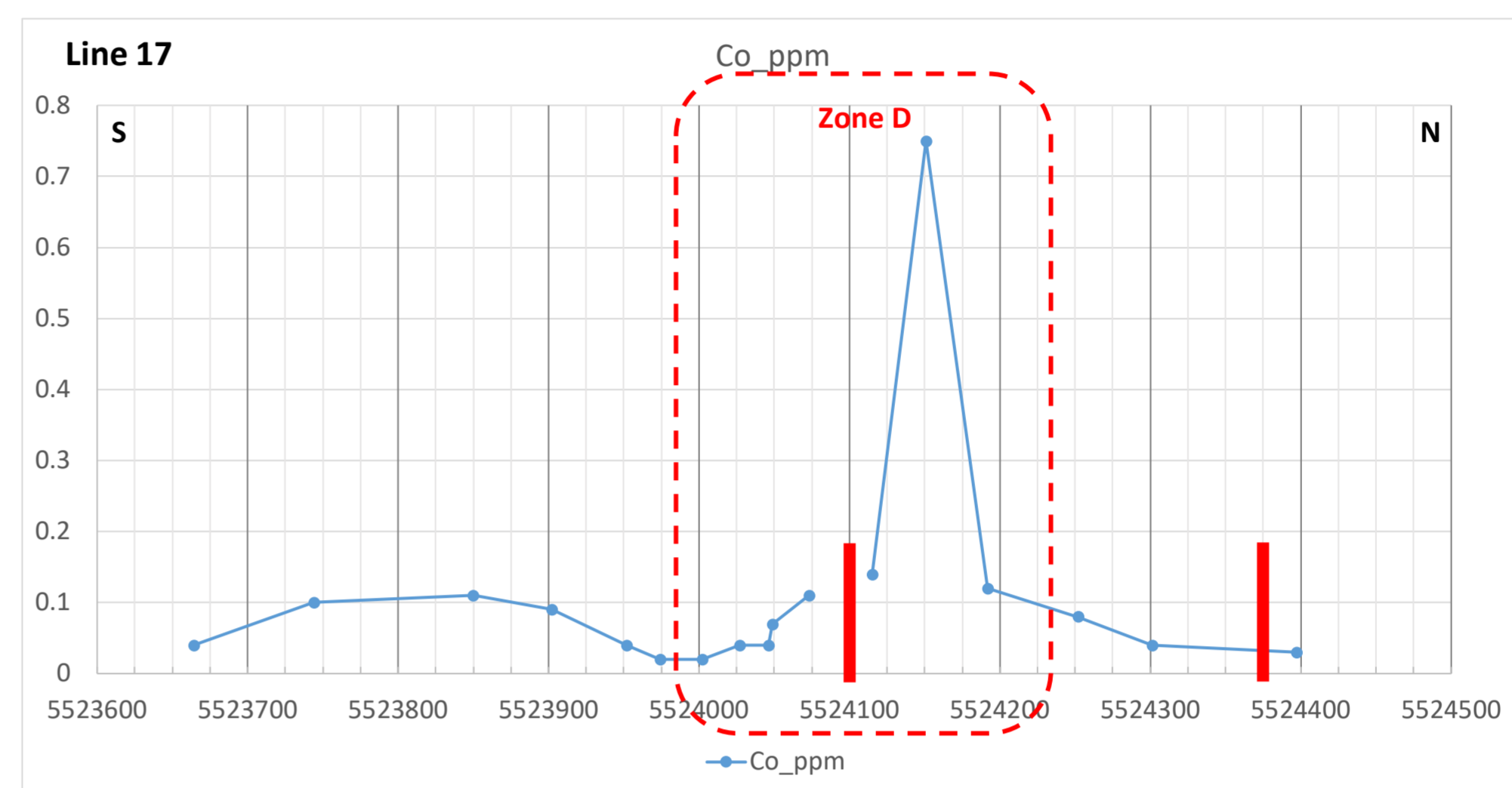
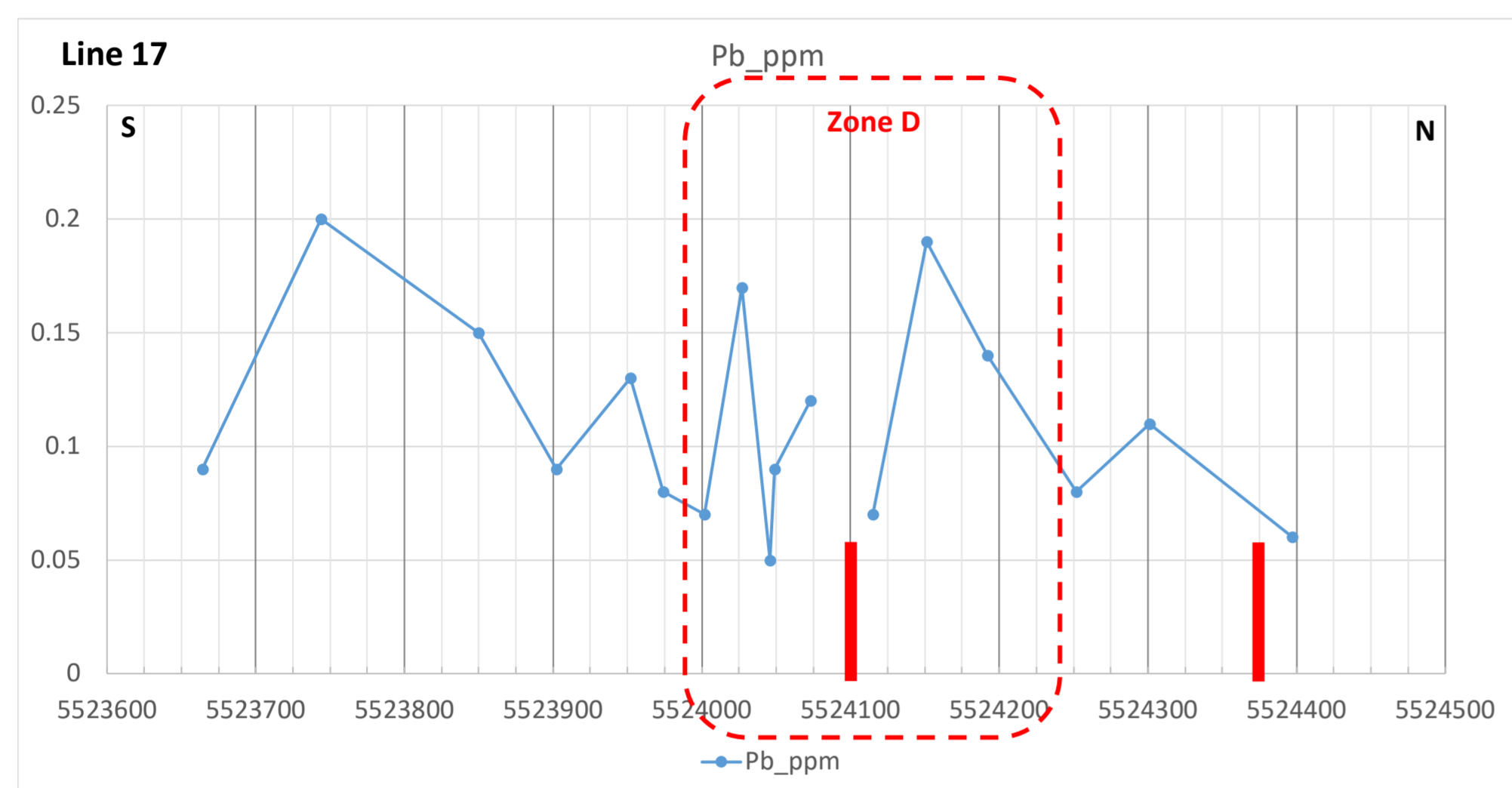
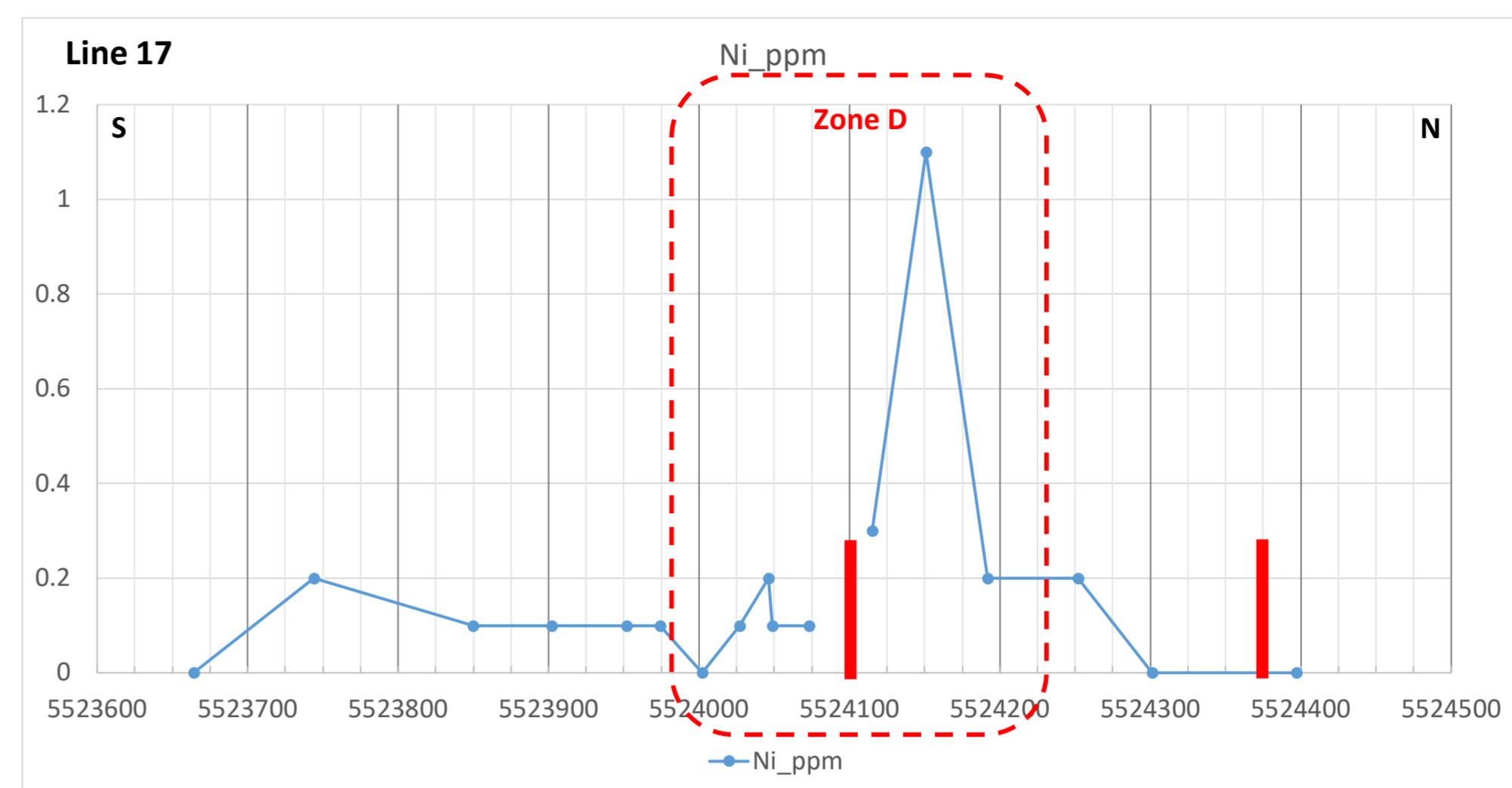
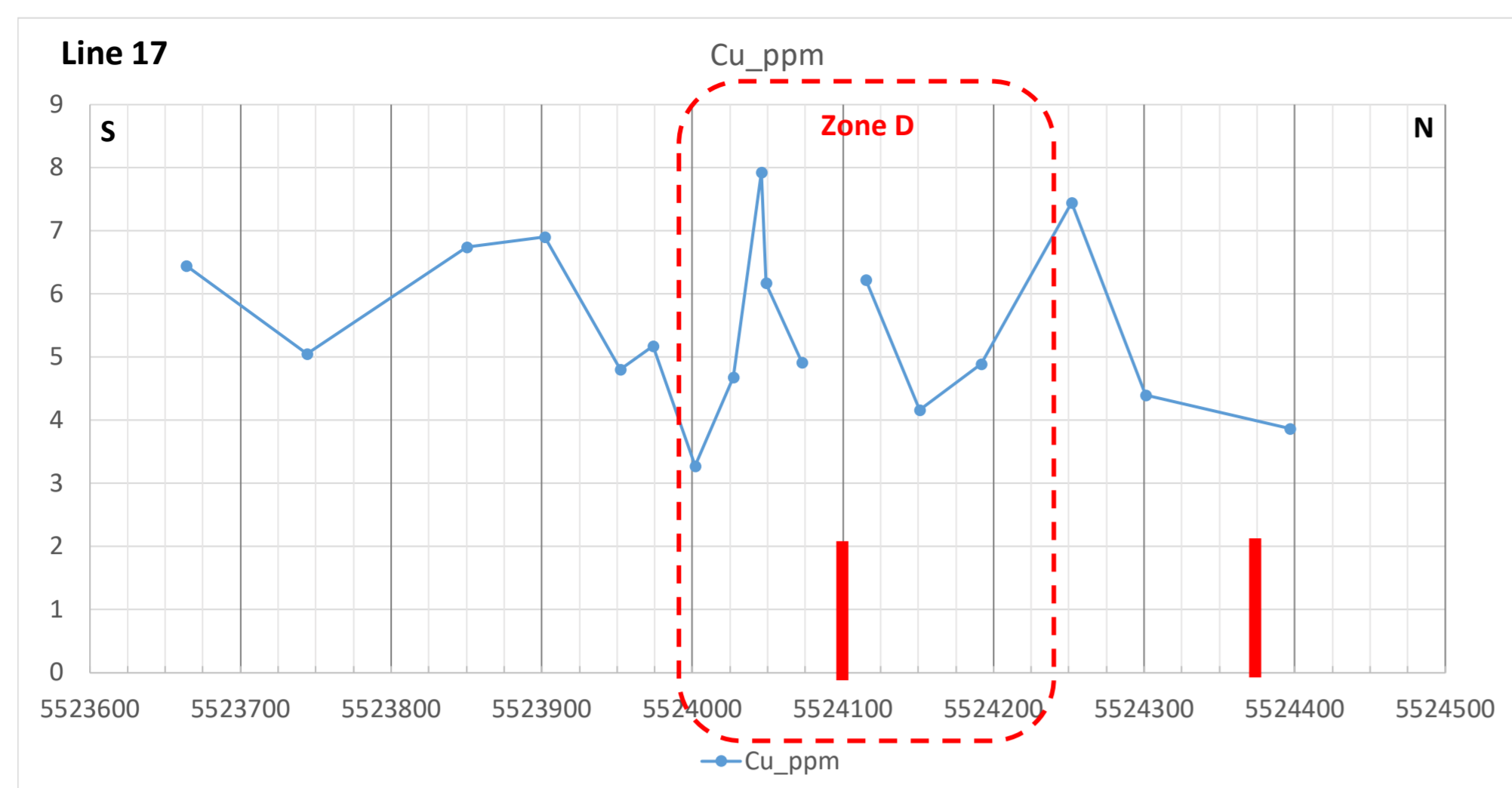
Lines 16, 17, 18, 20, 21



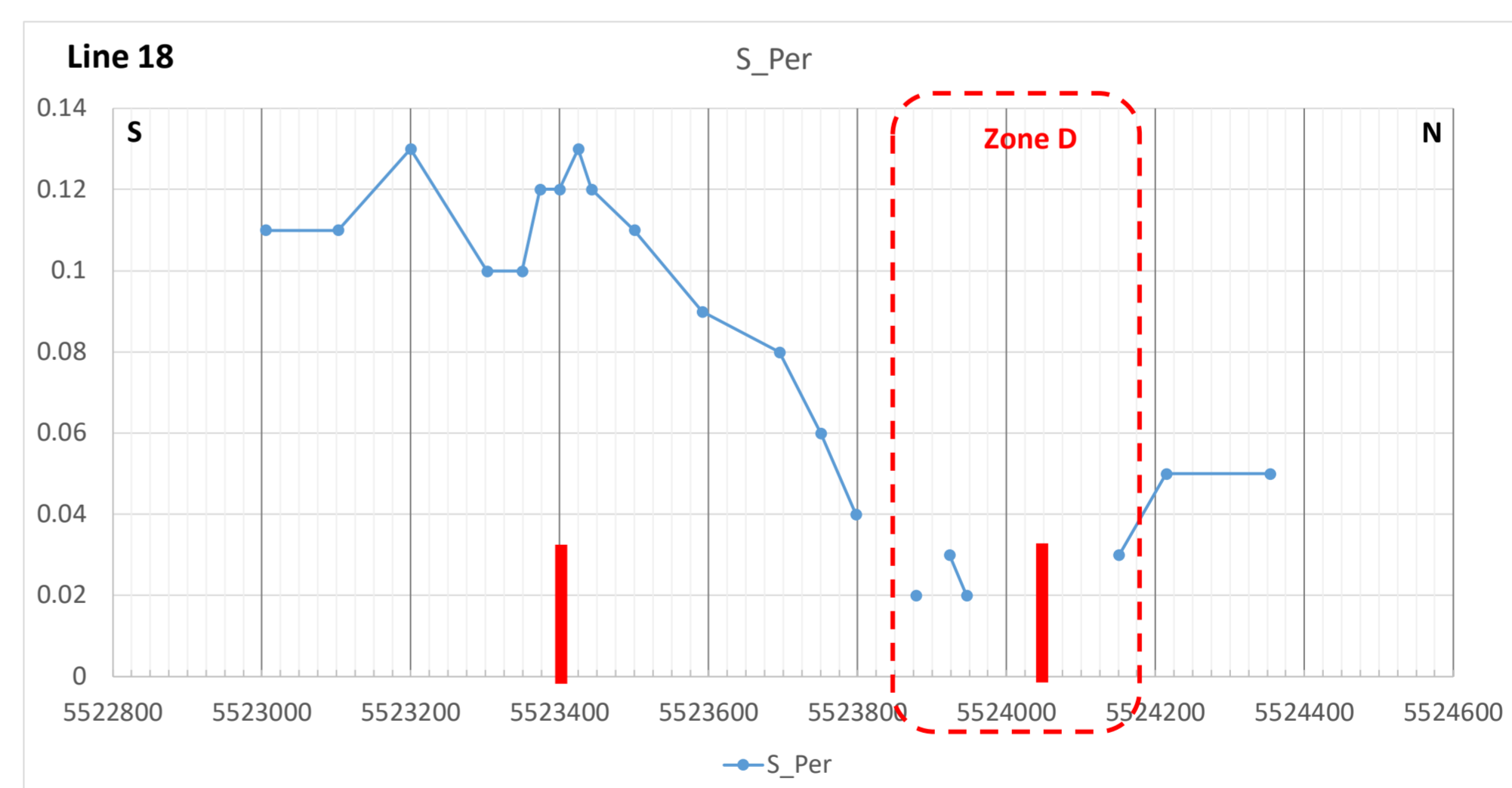
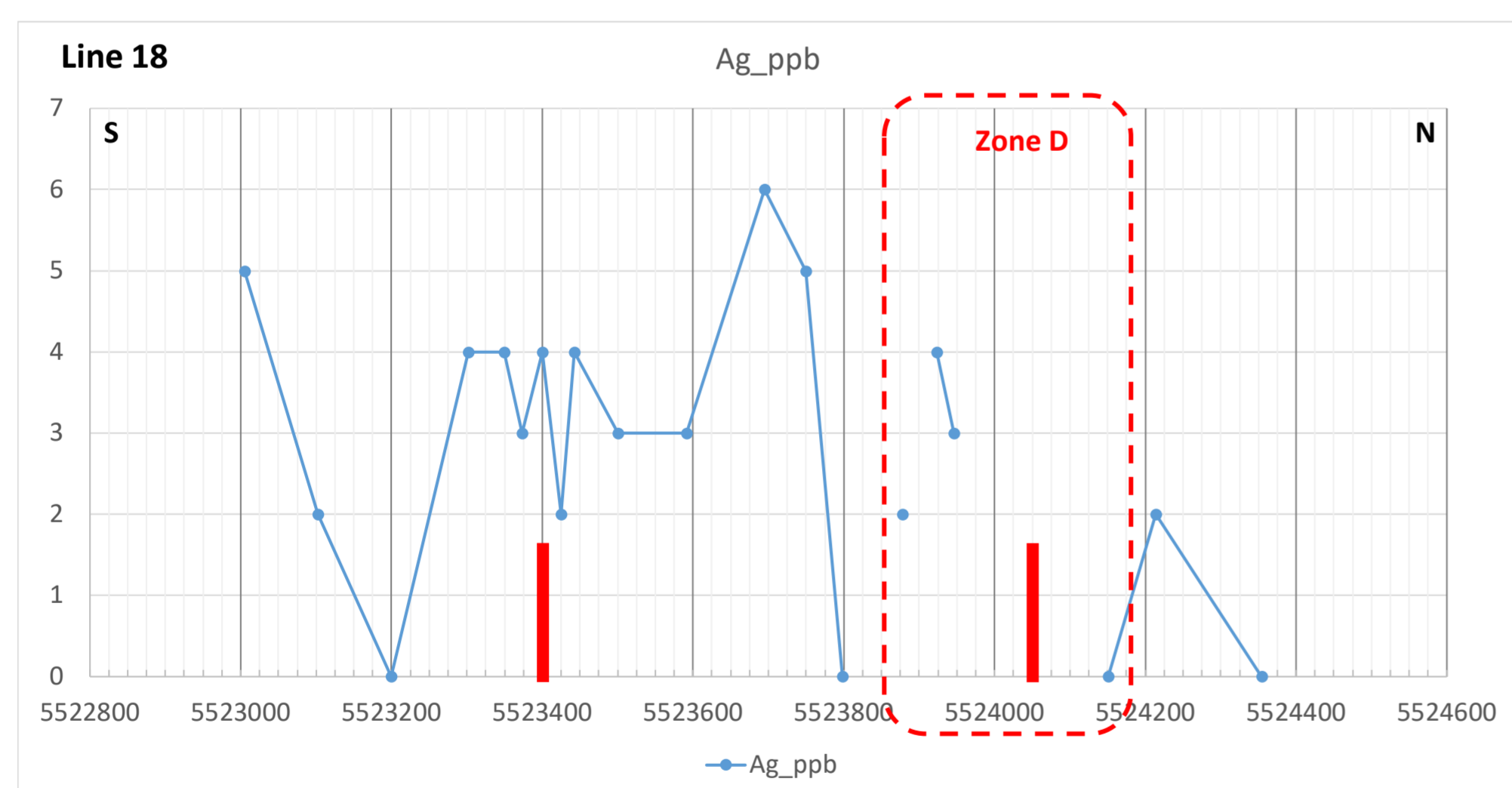
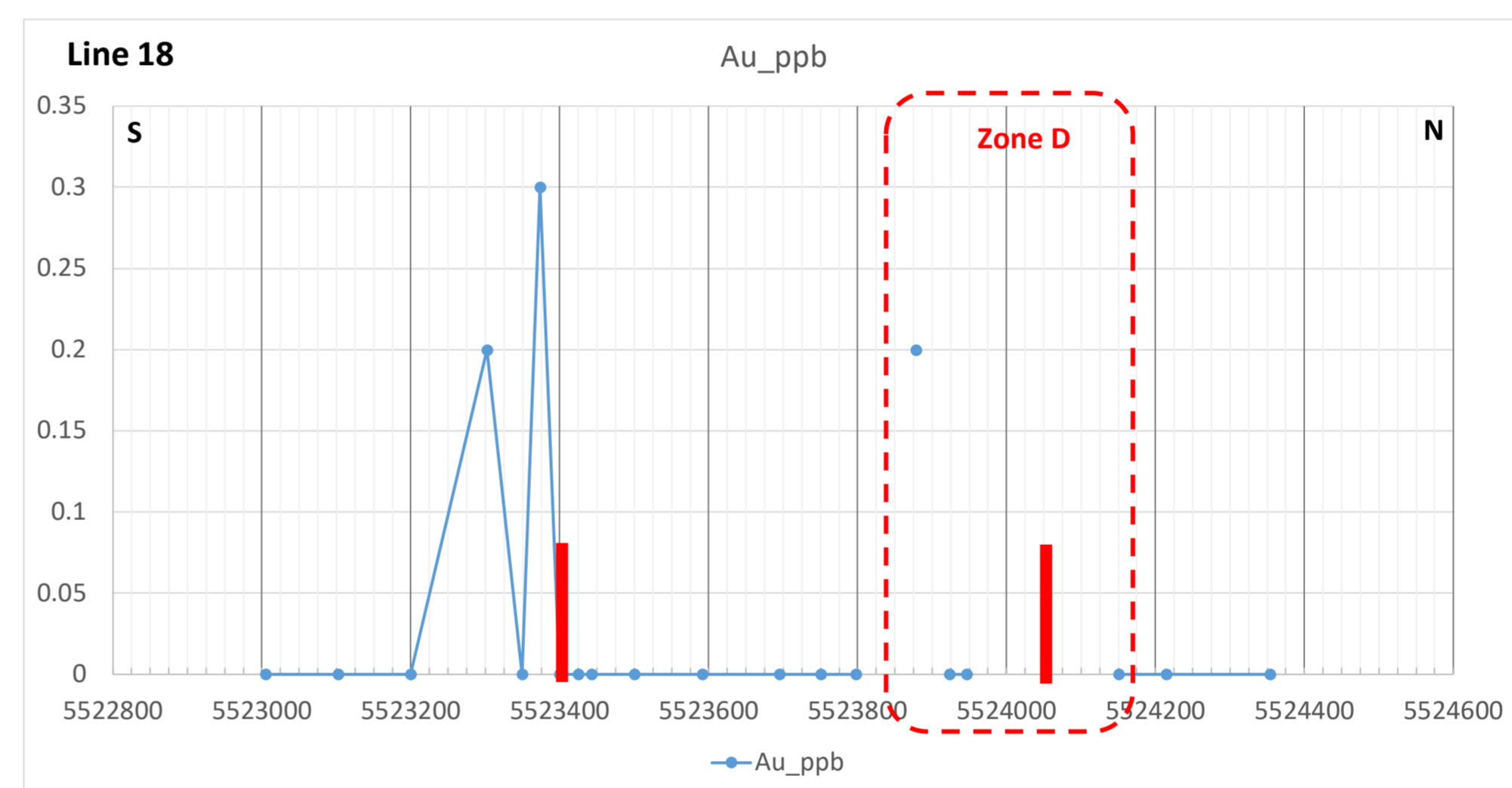
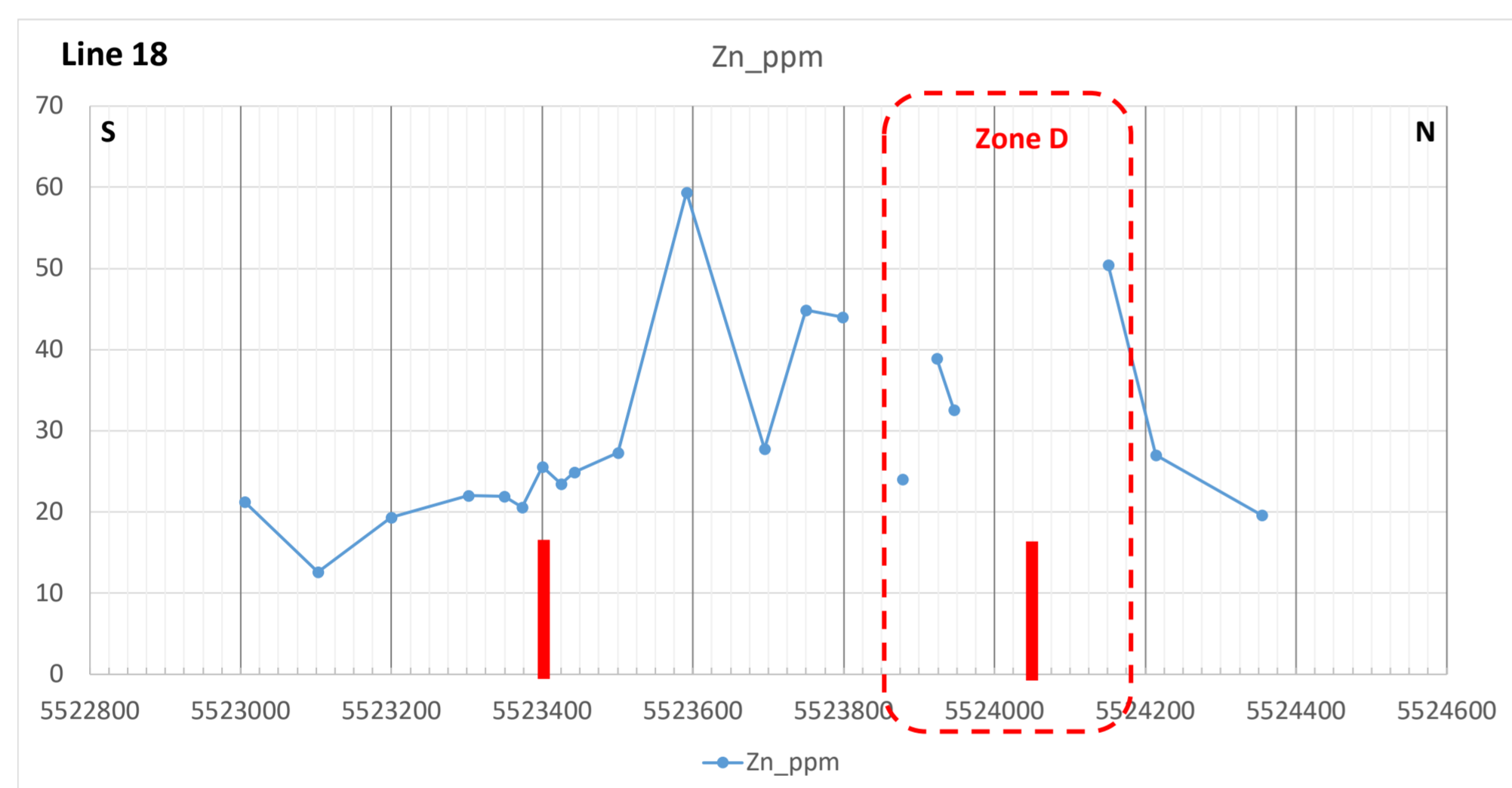
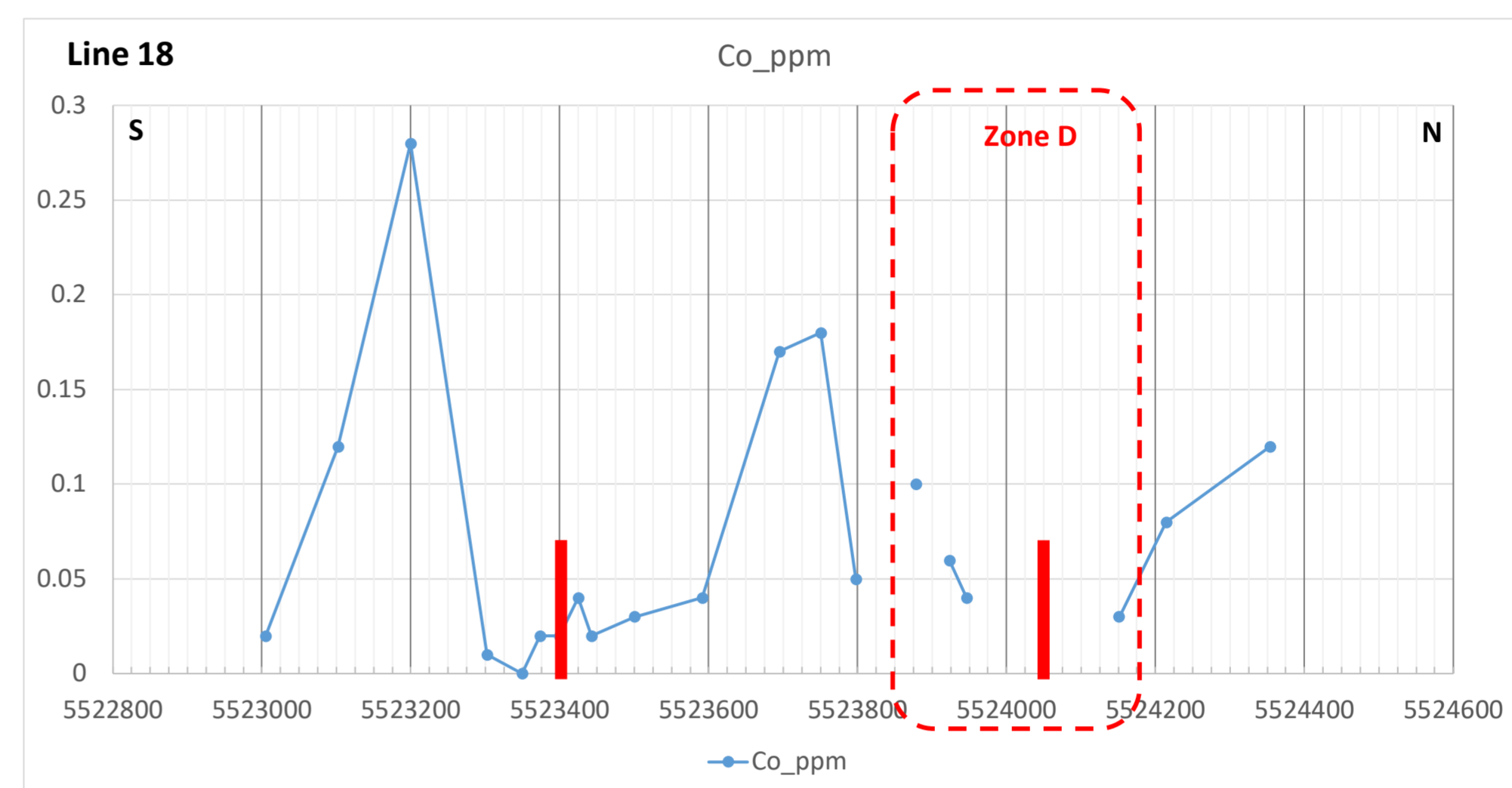
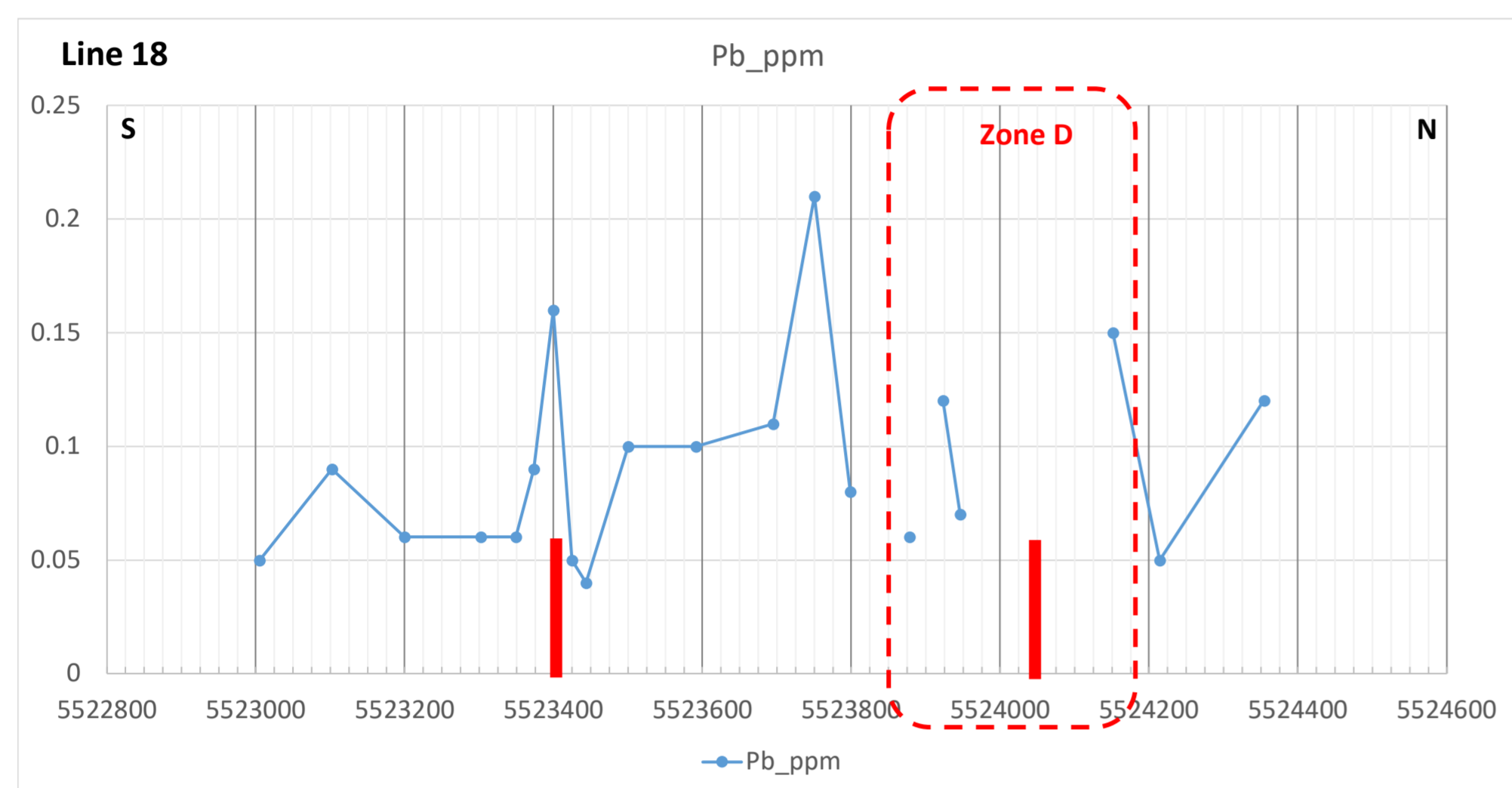
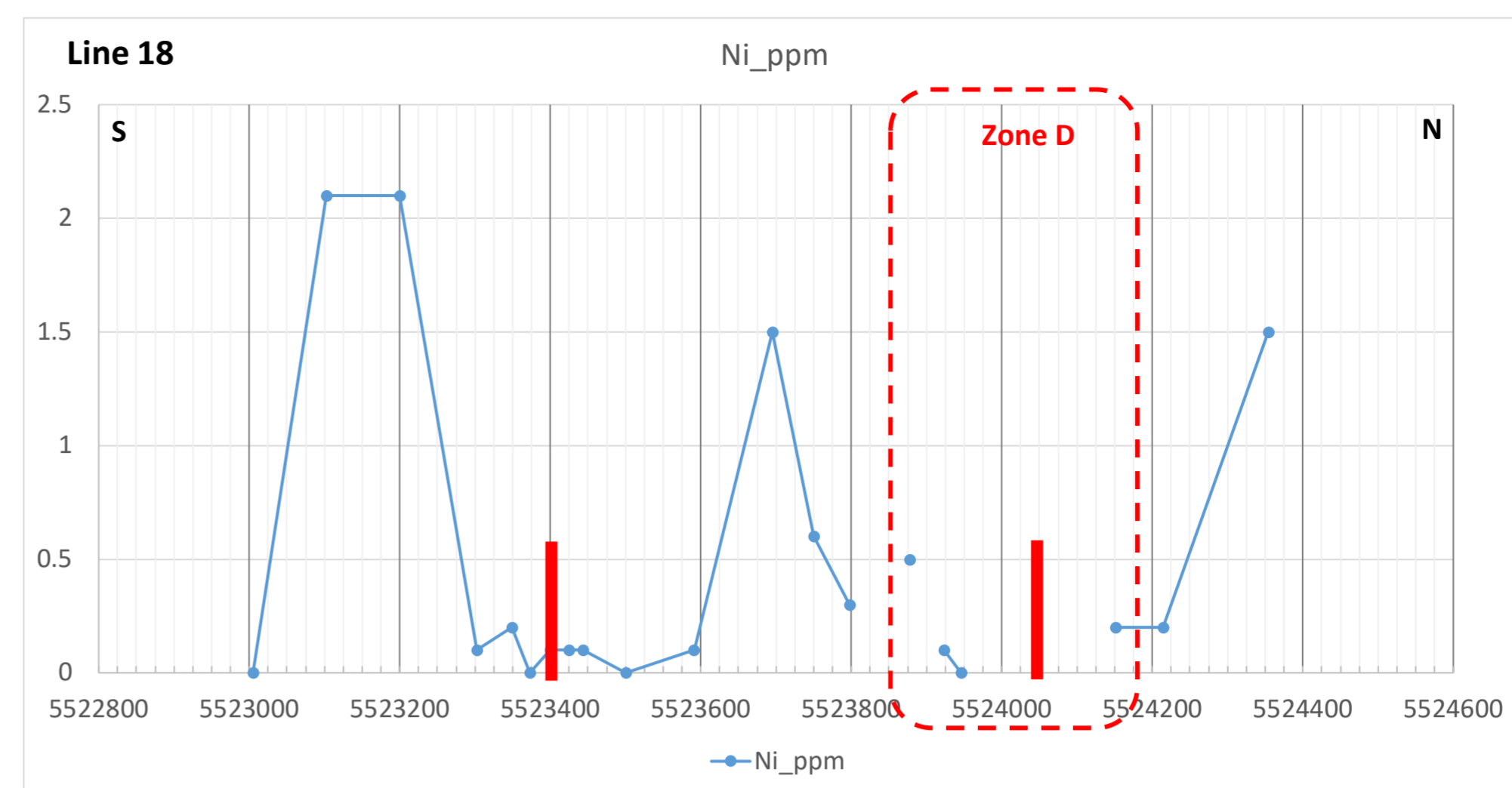
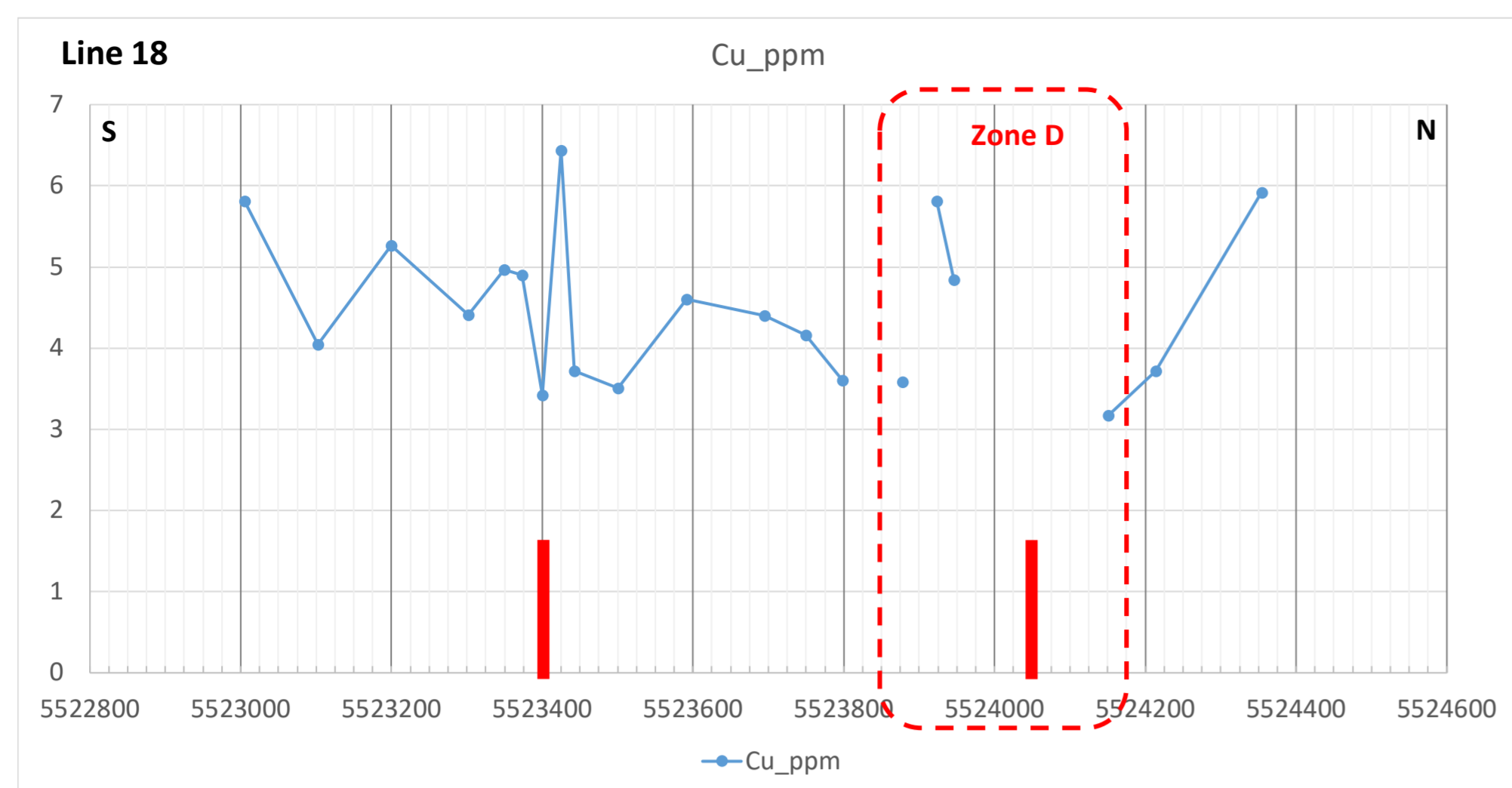
Zone D - Line 16



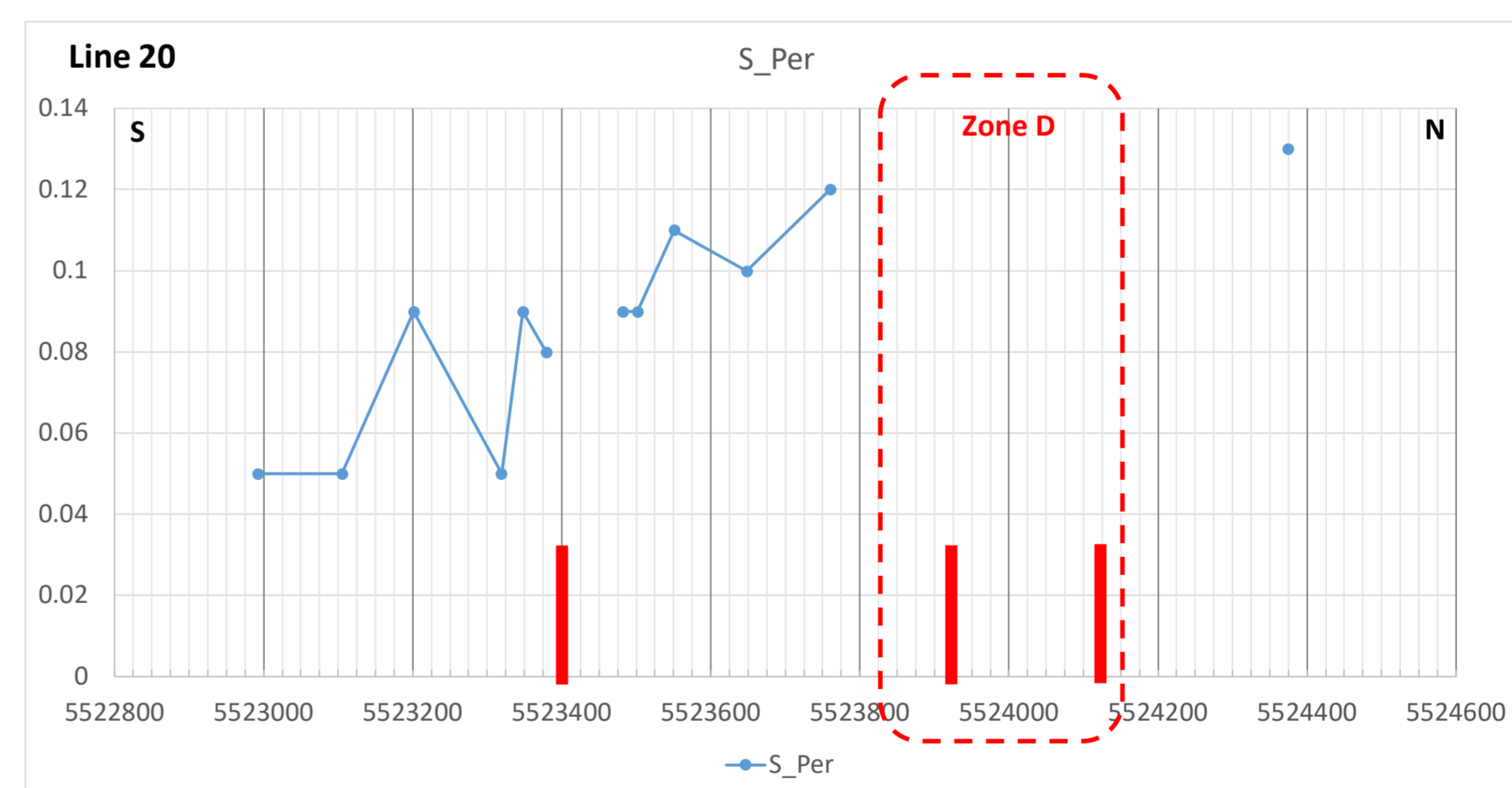
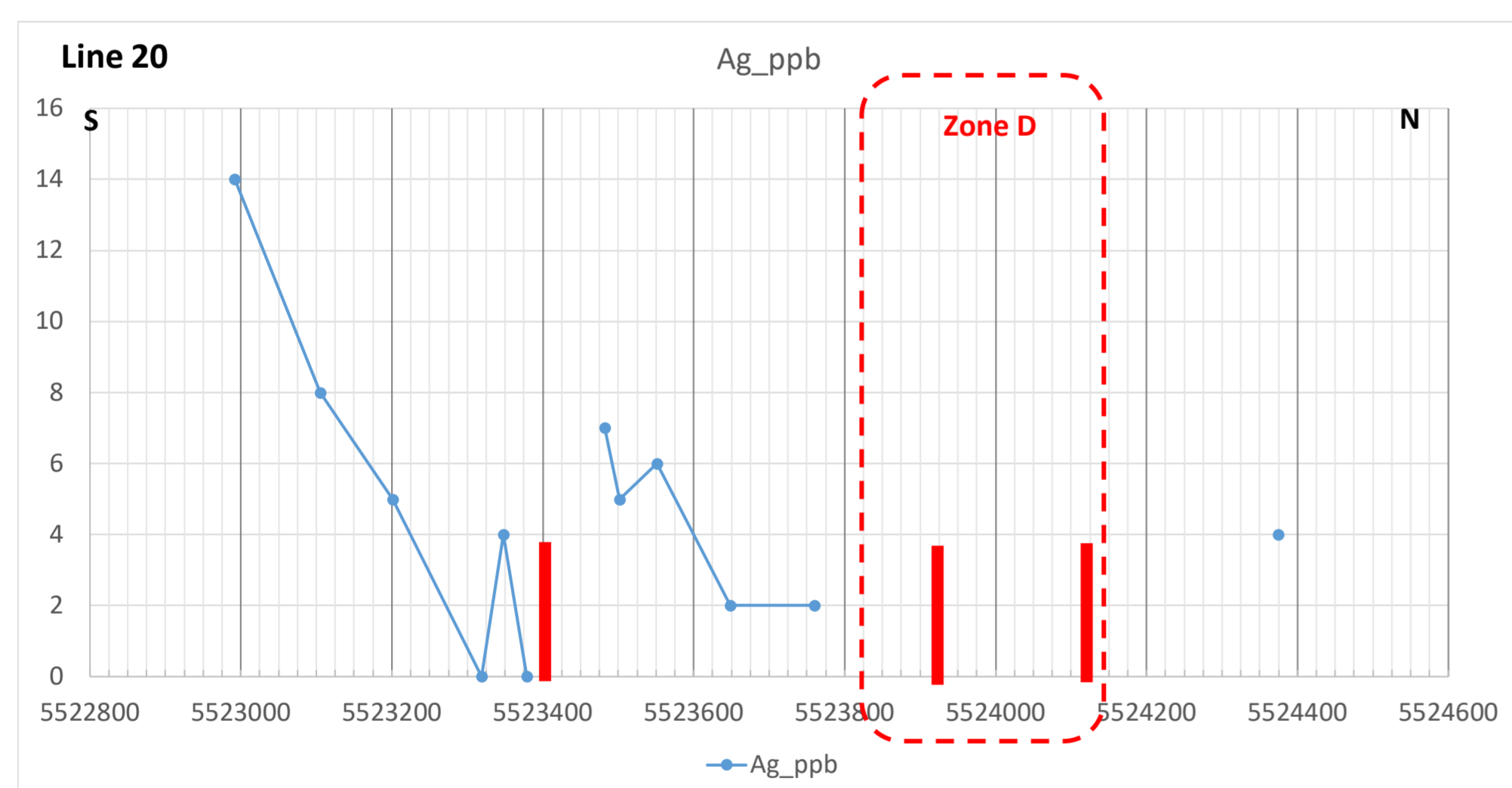
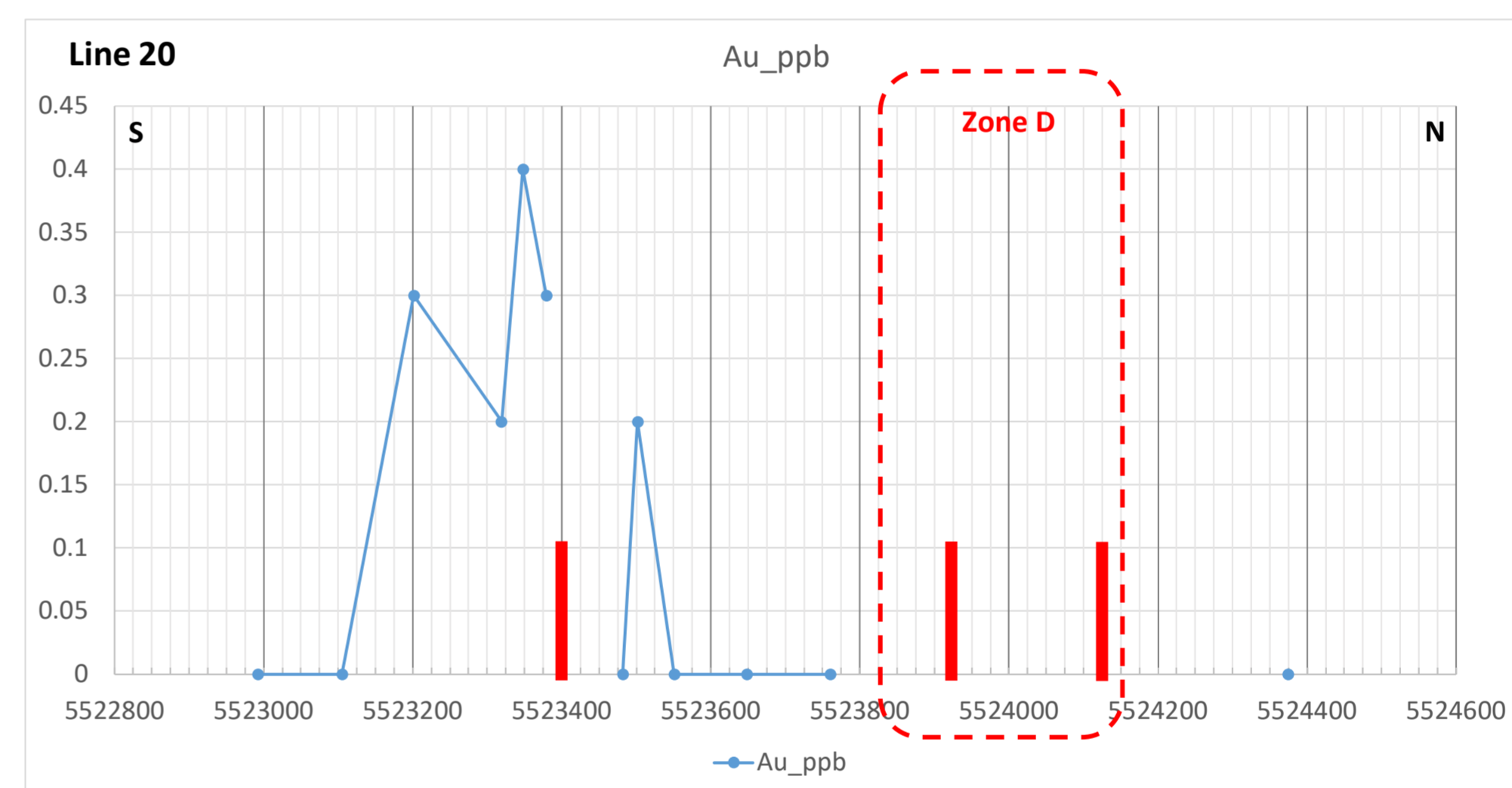
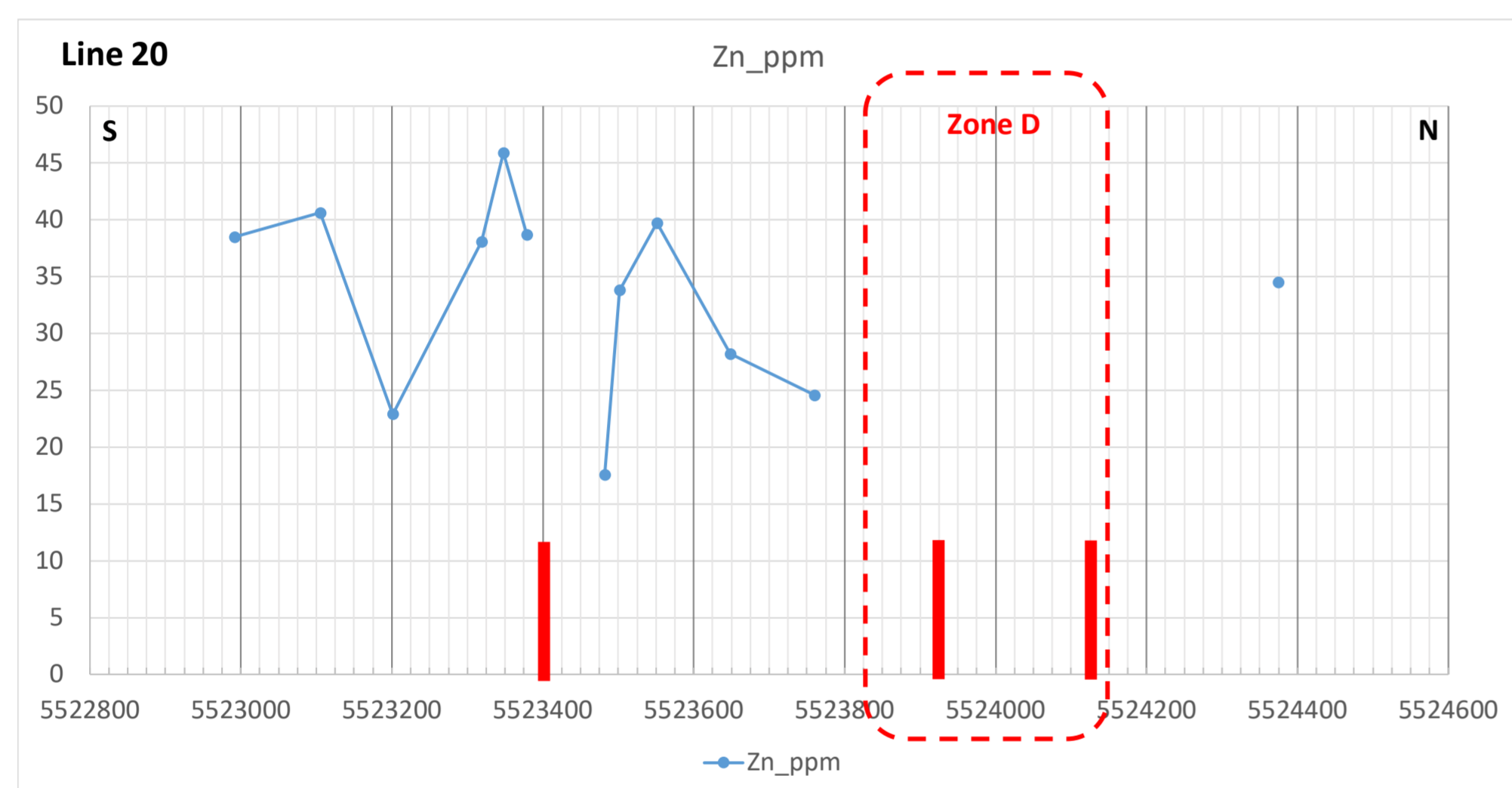
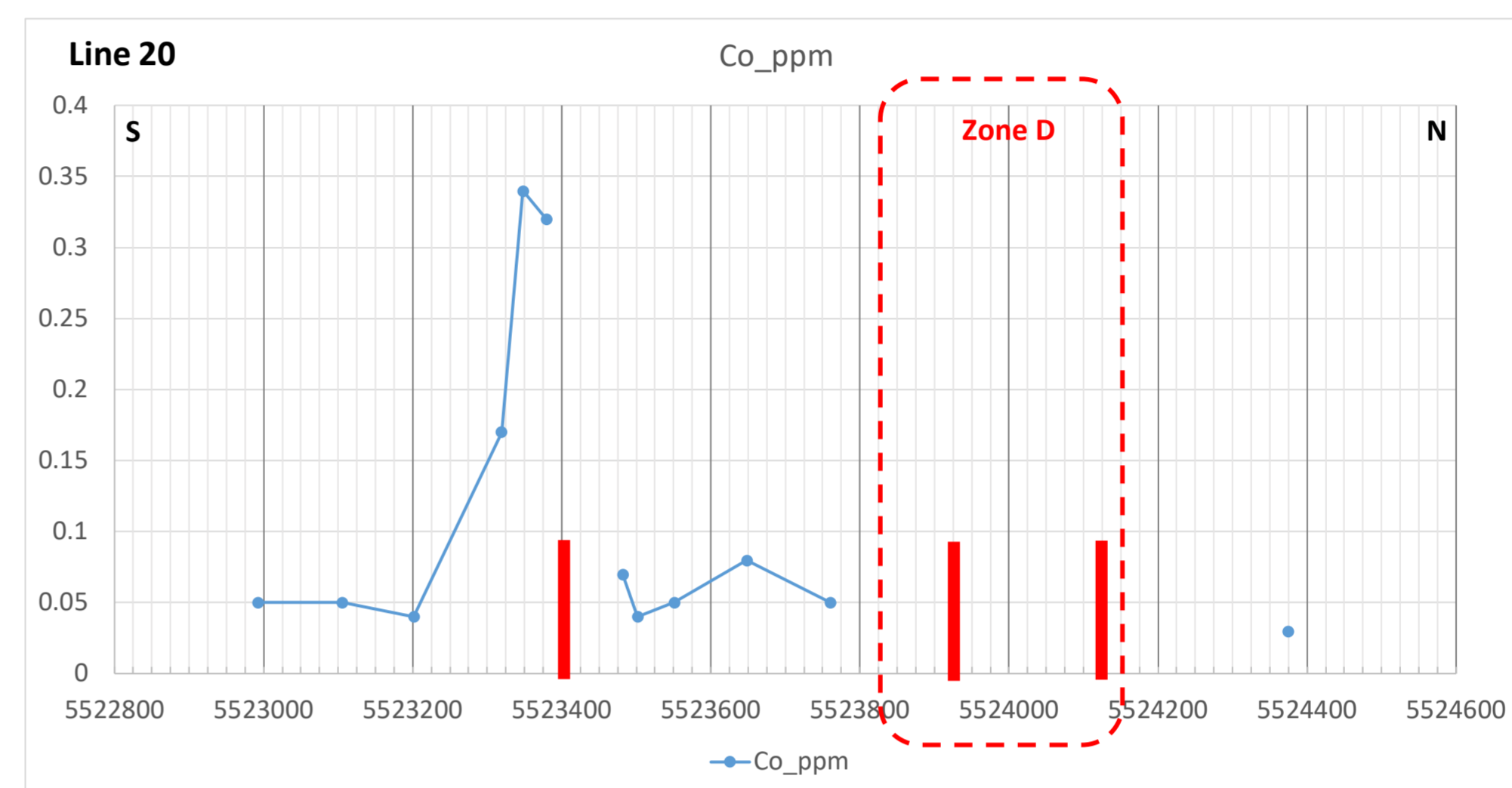
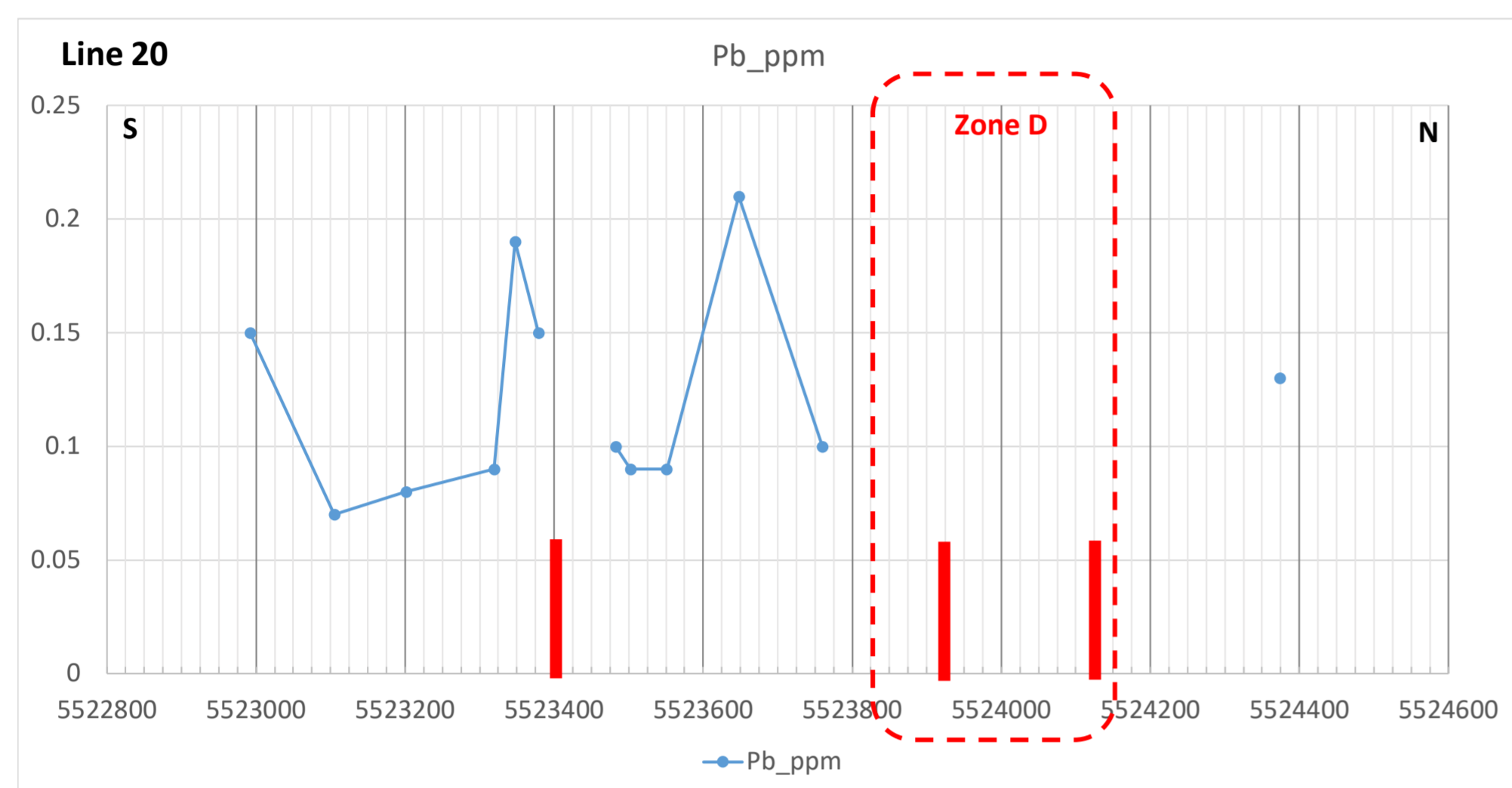
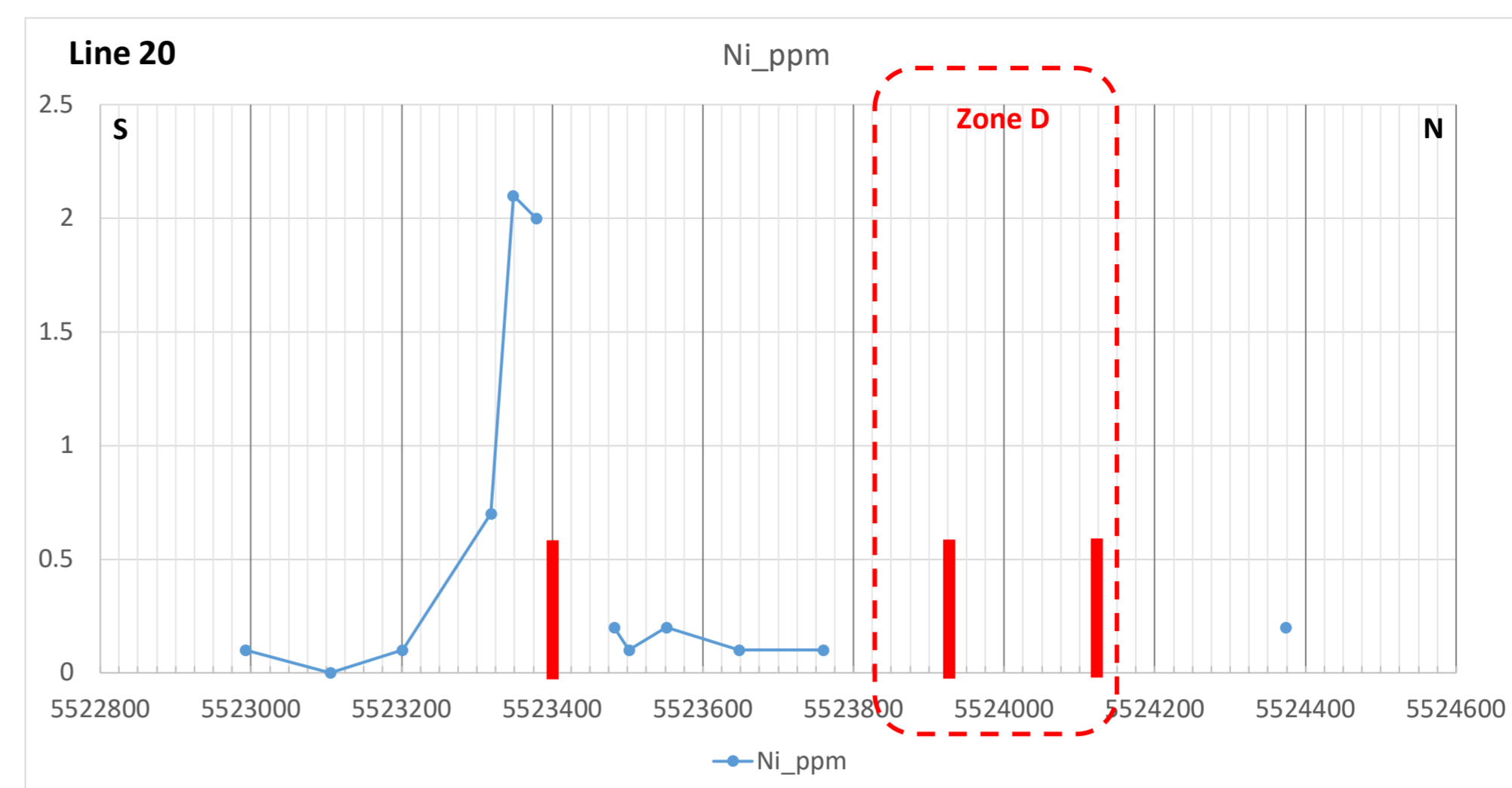
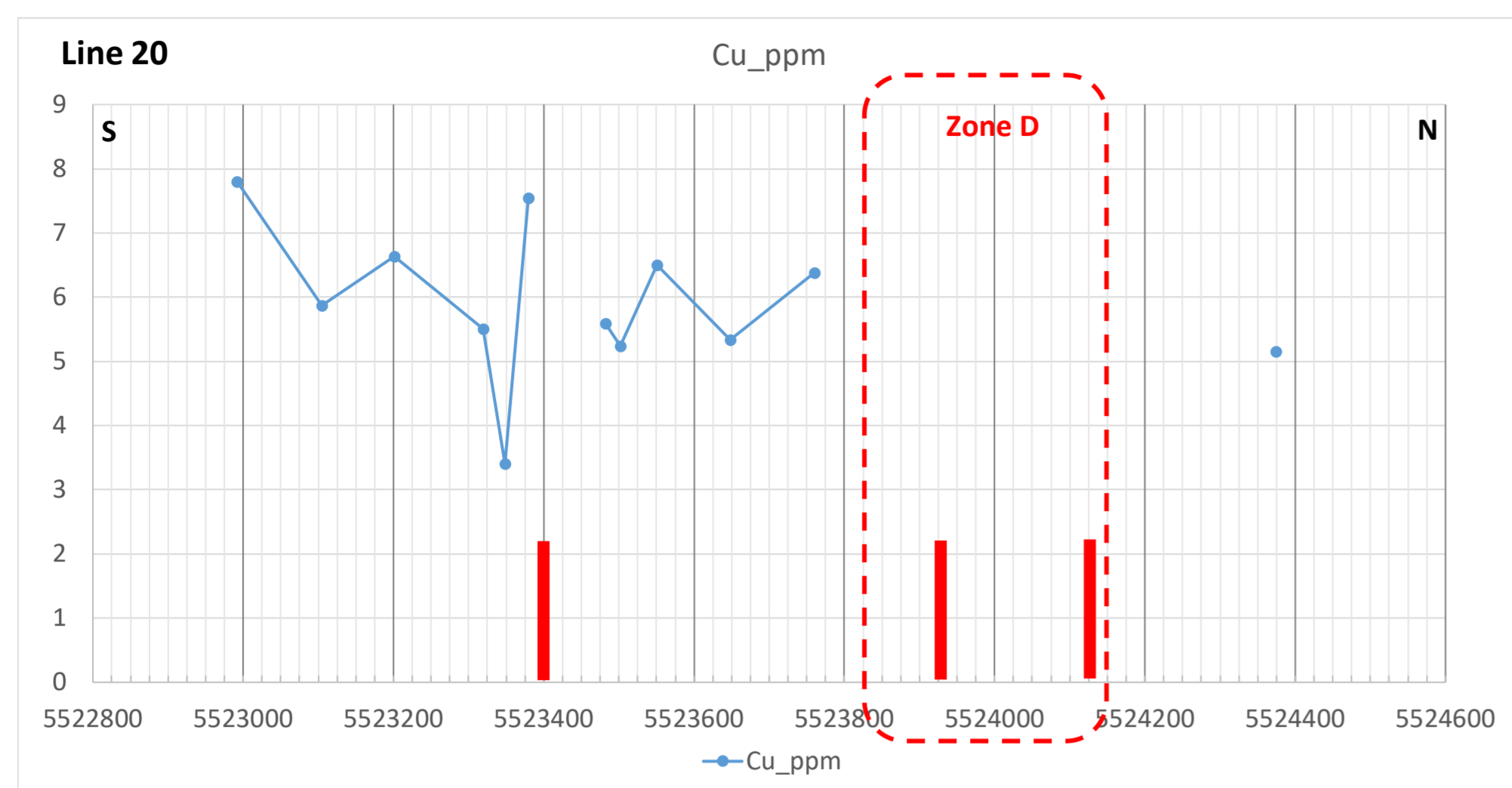
Zone D - Line 17



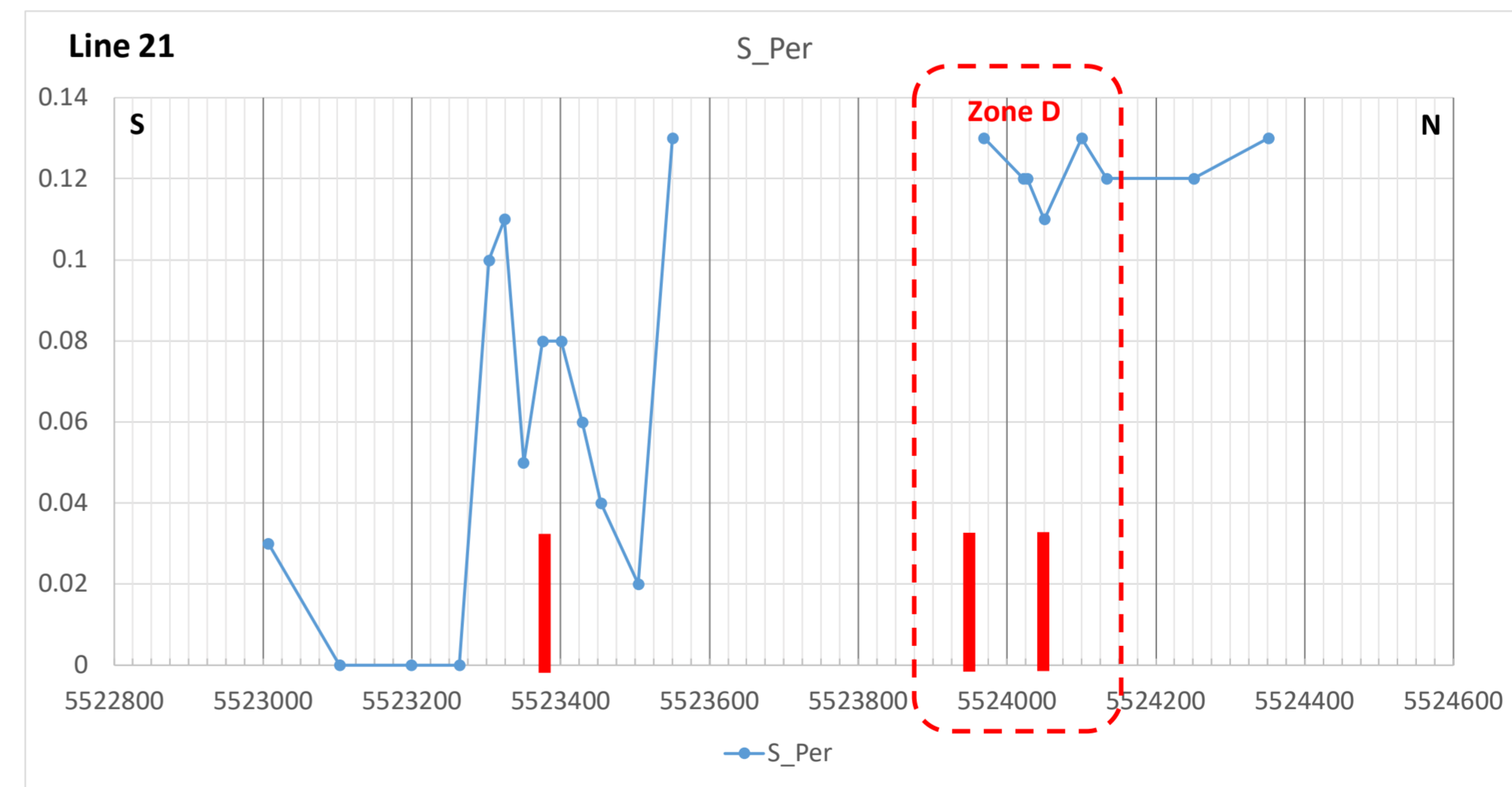
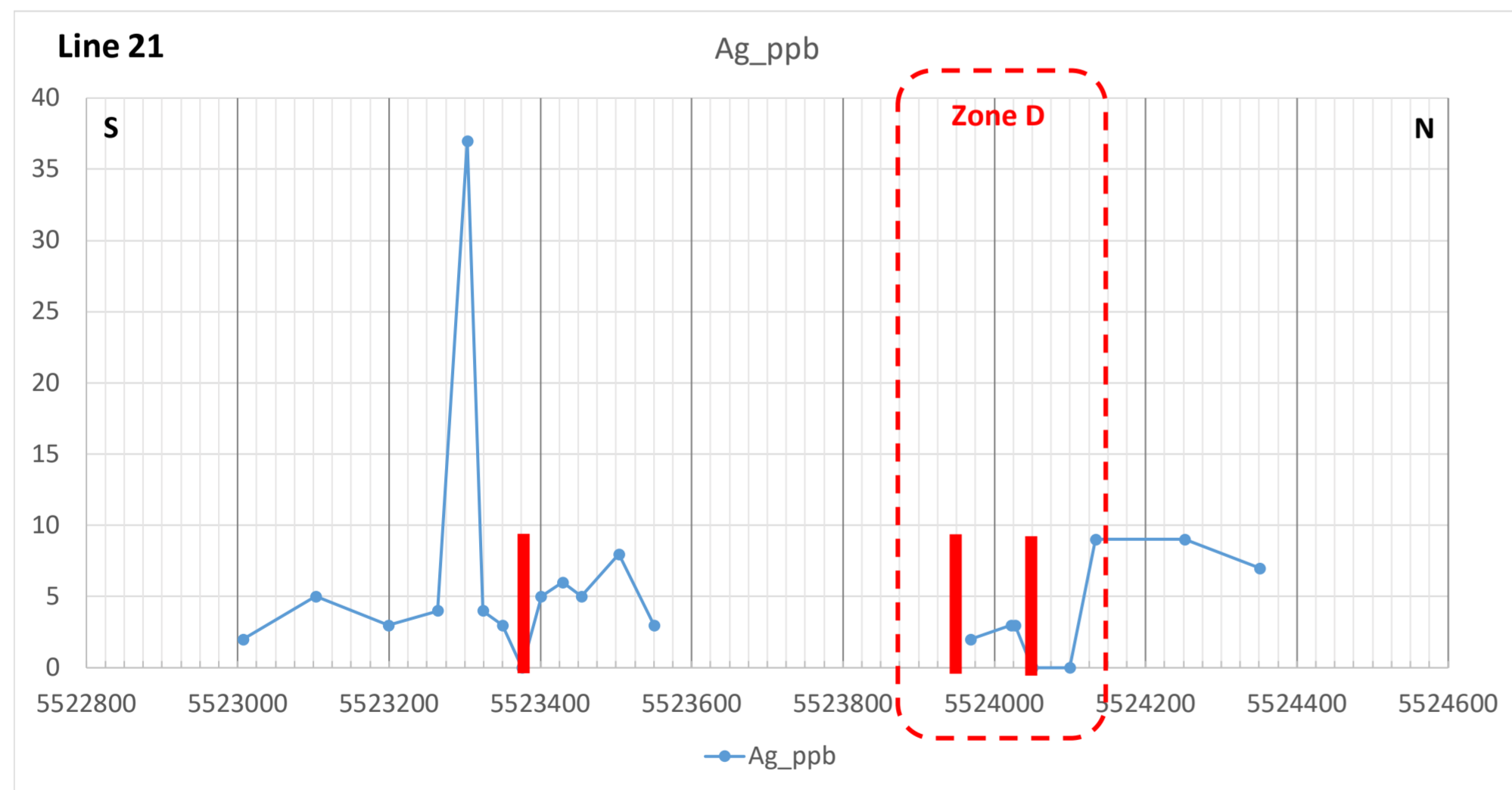
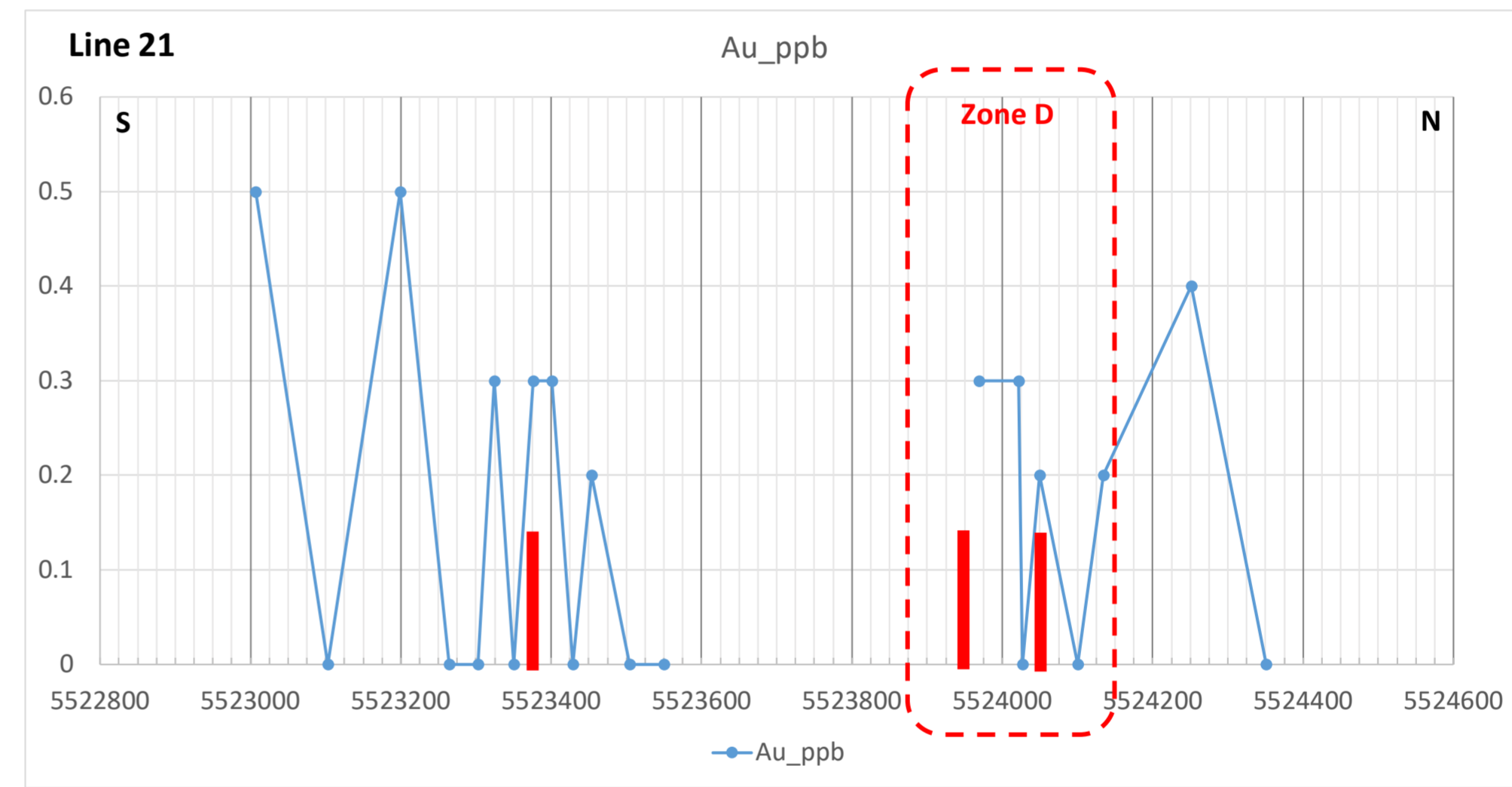
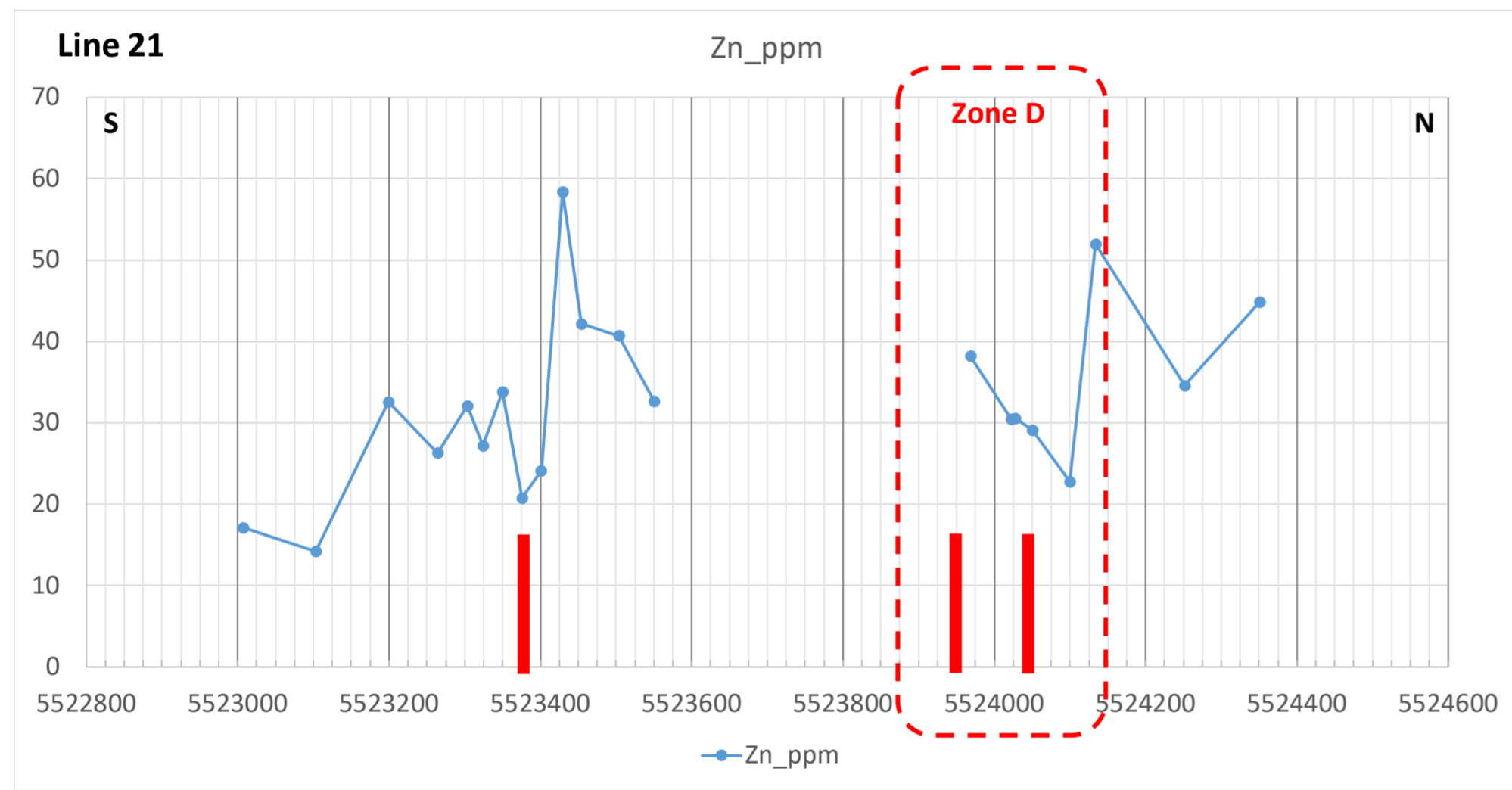
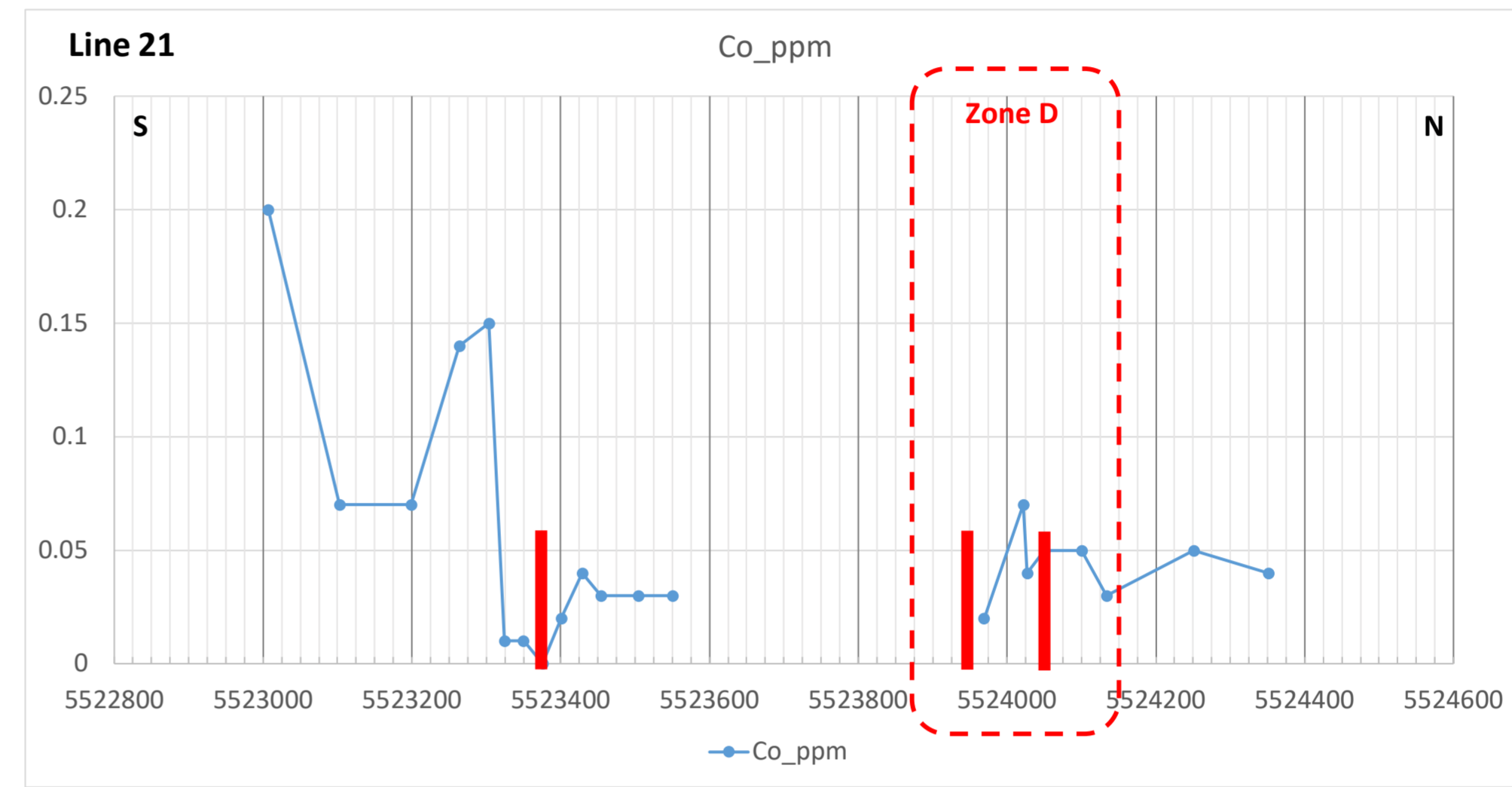
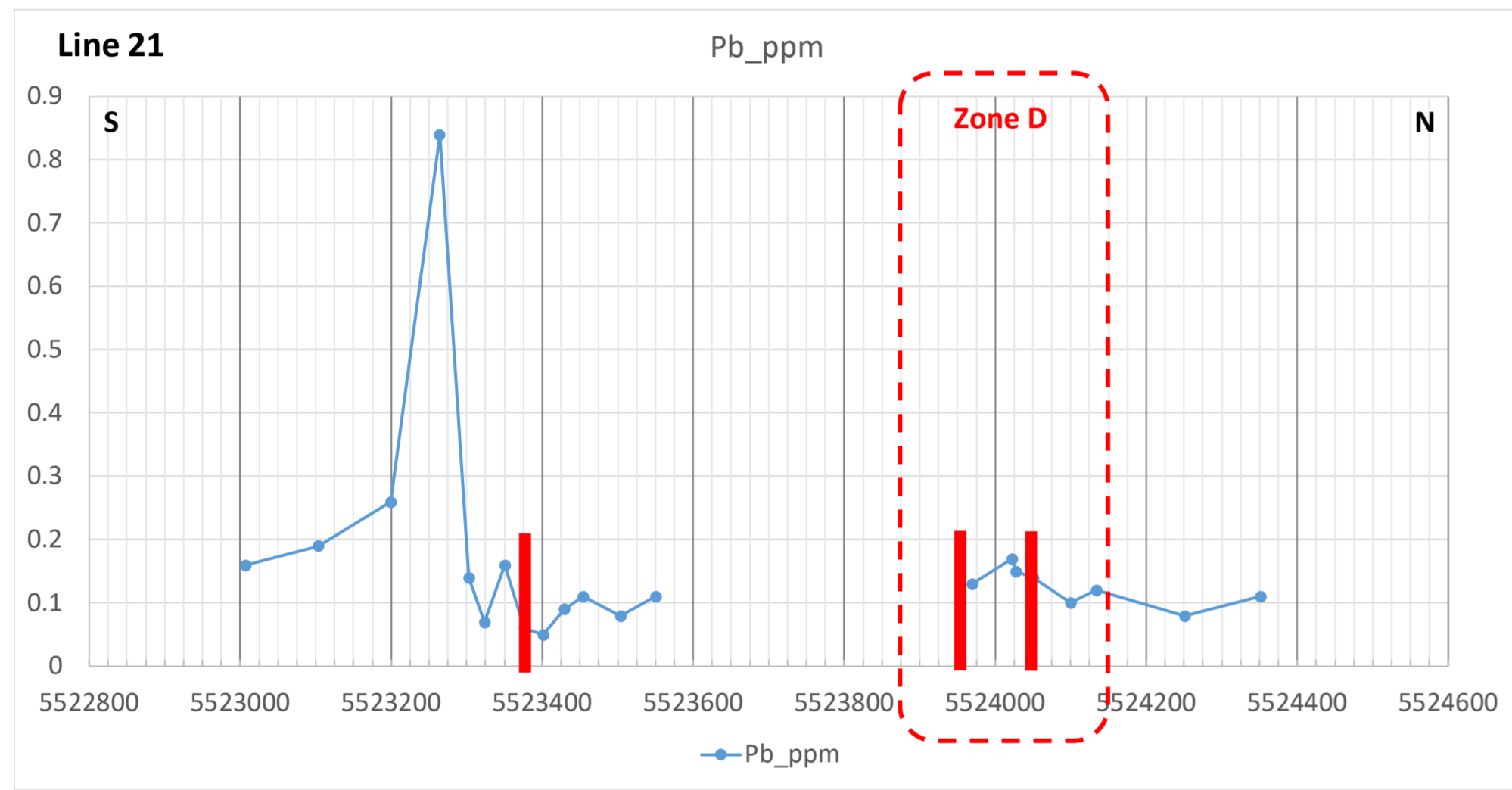
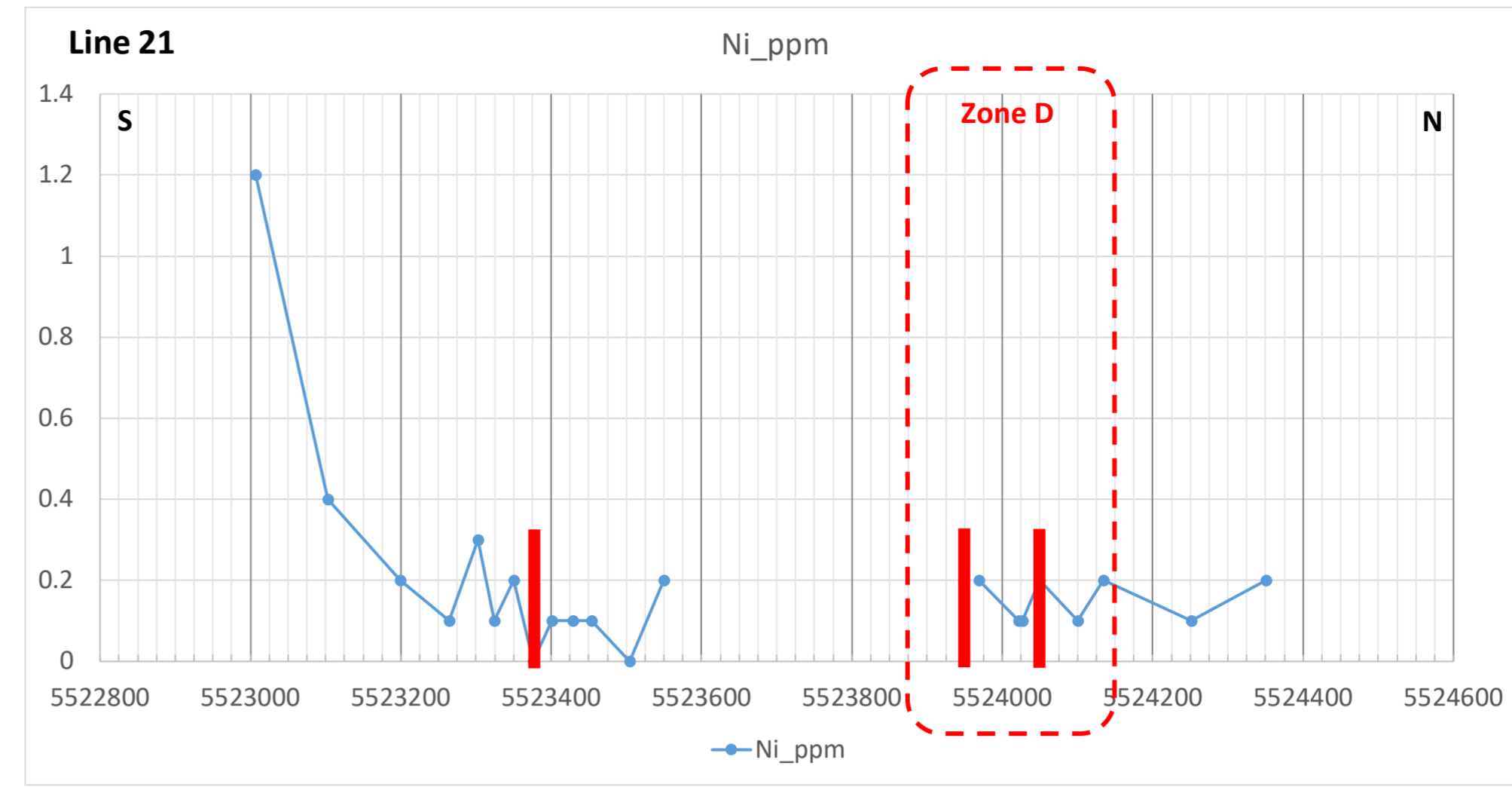
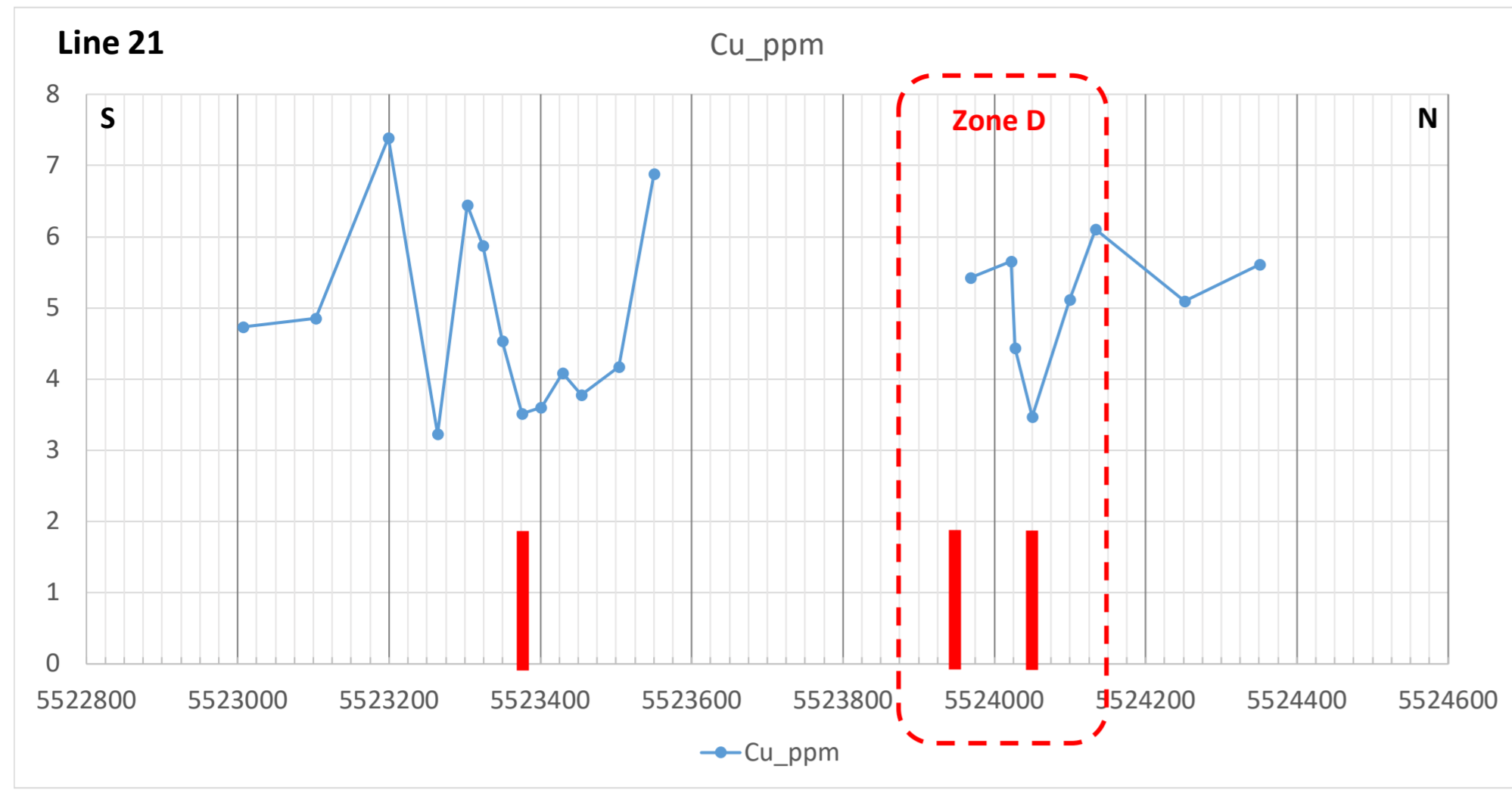
Zone D - Line 18



Zone D - Line 20



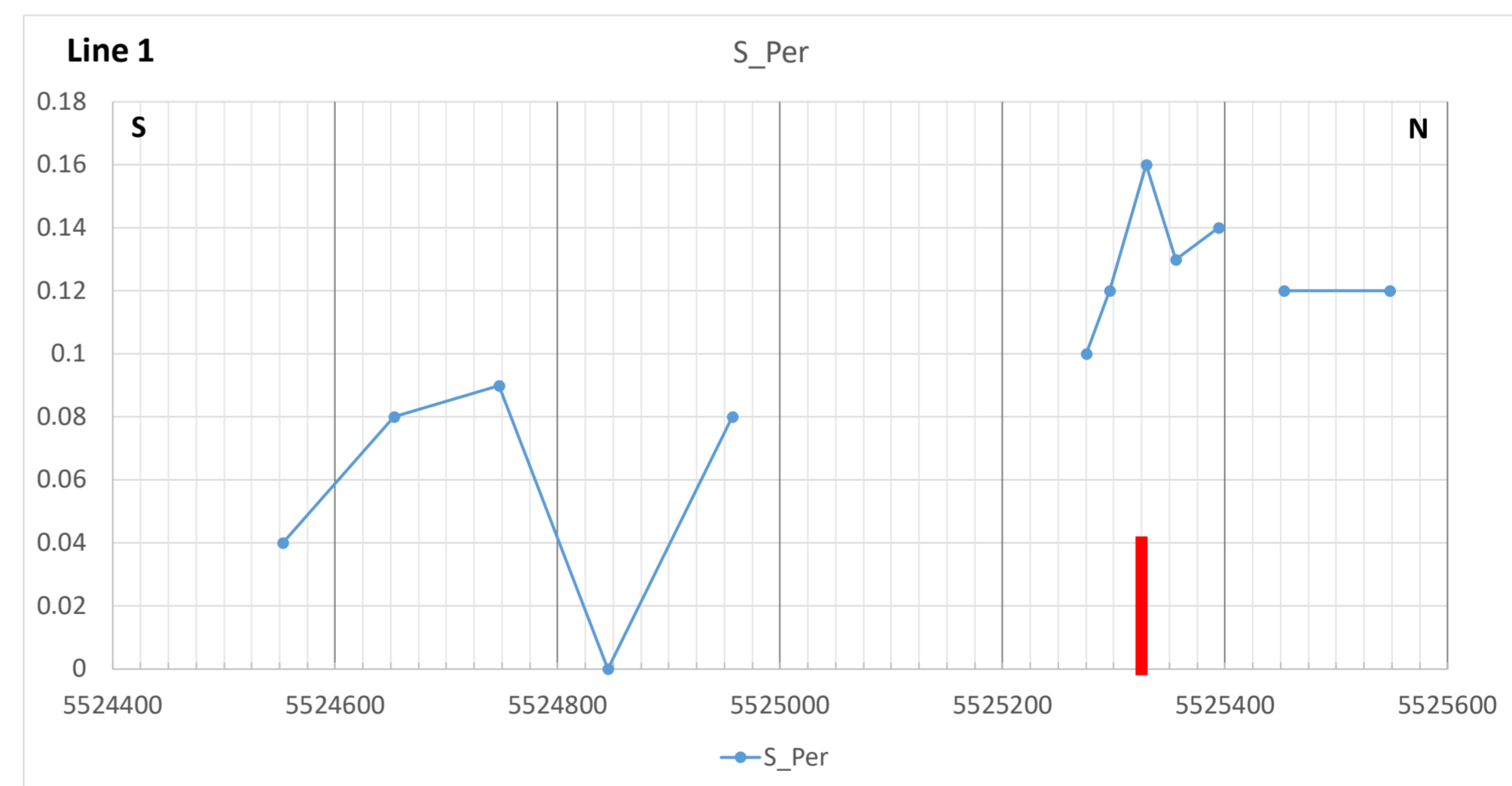
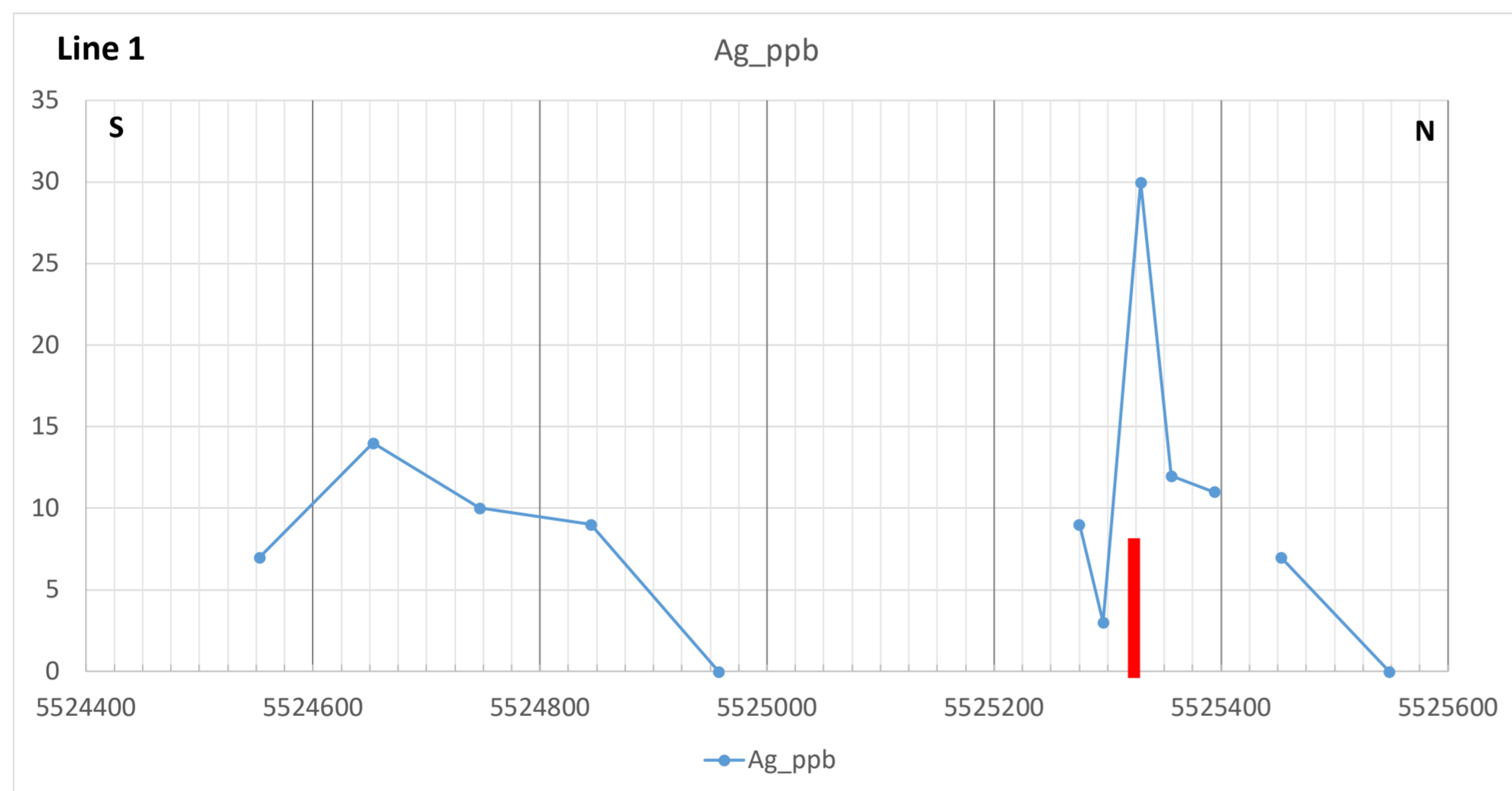
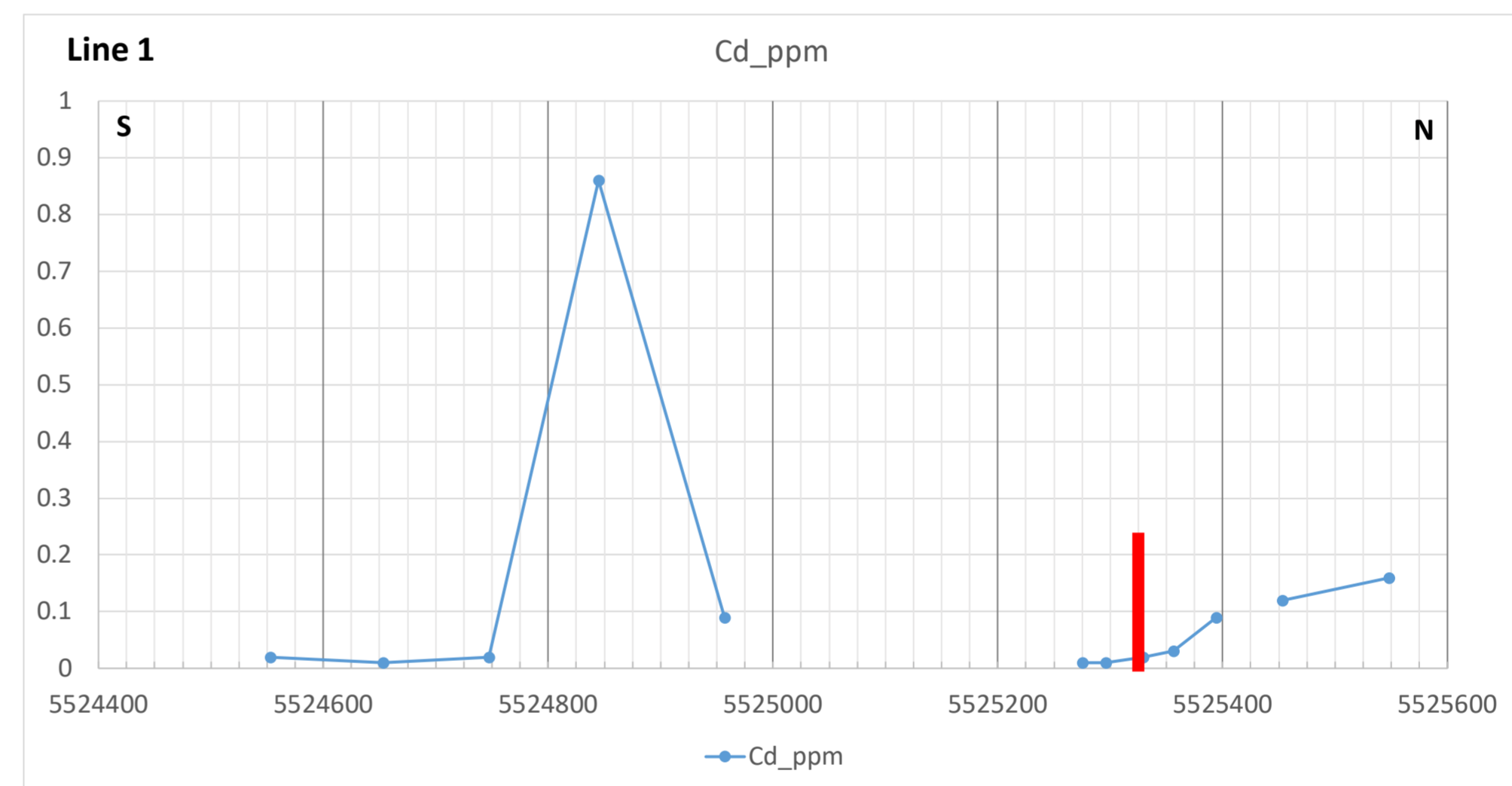
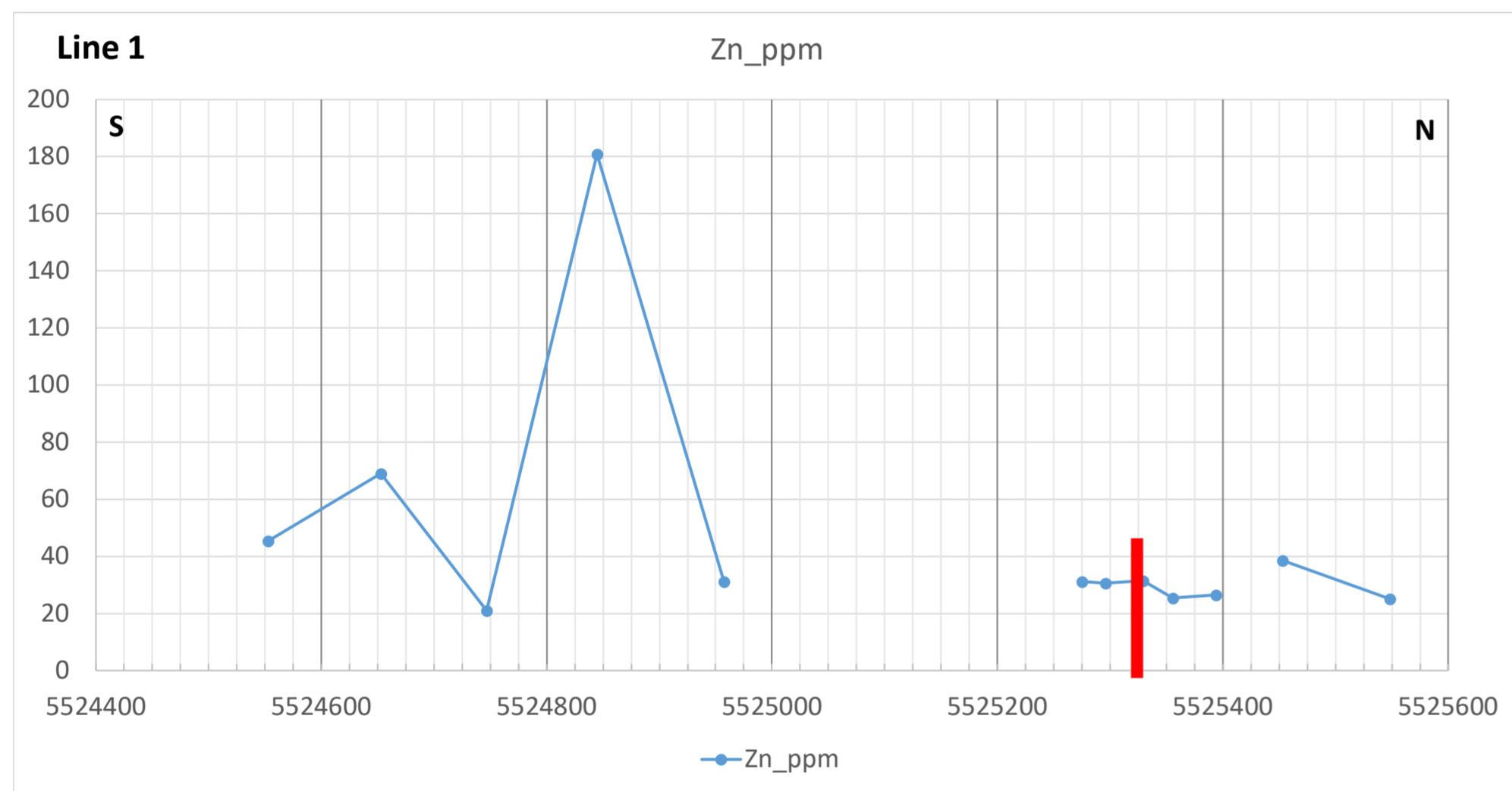
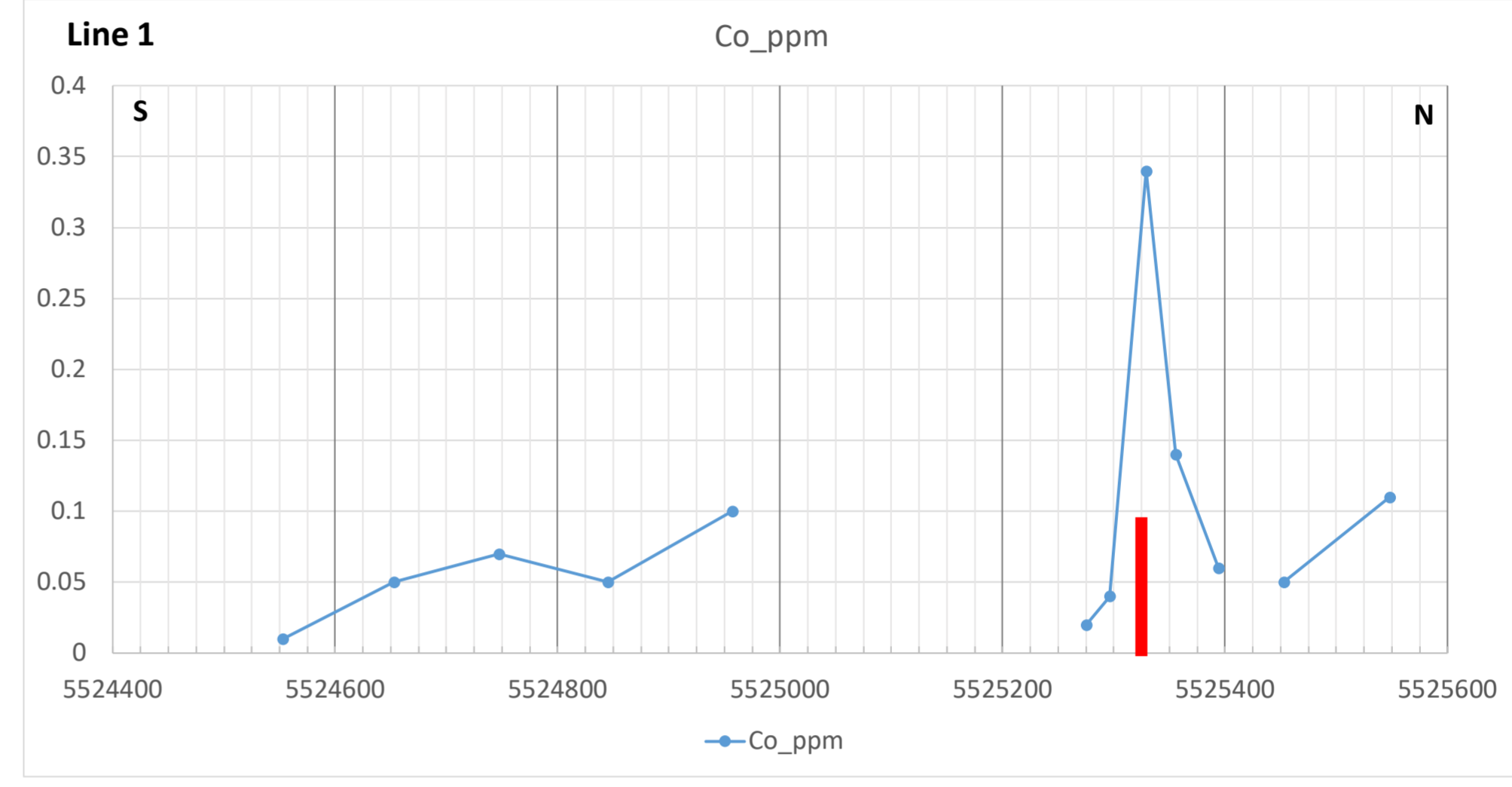
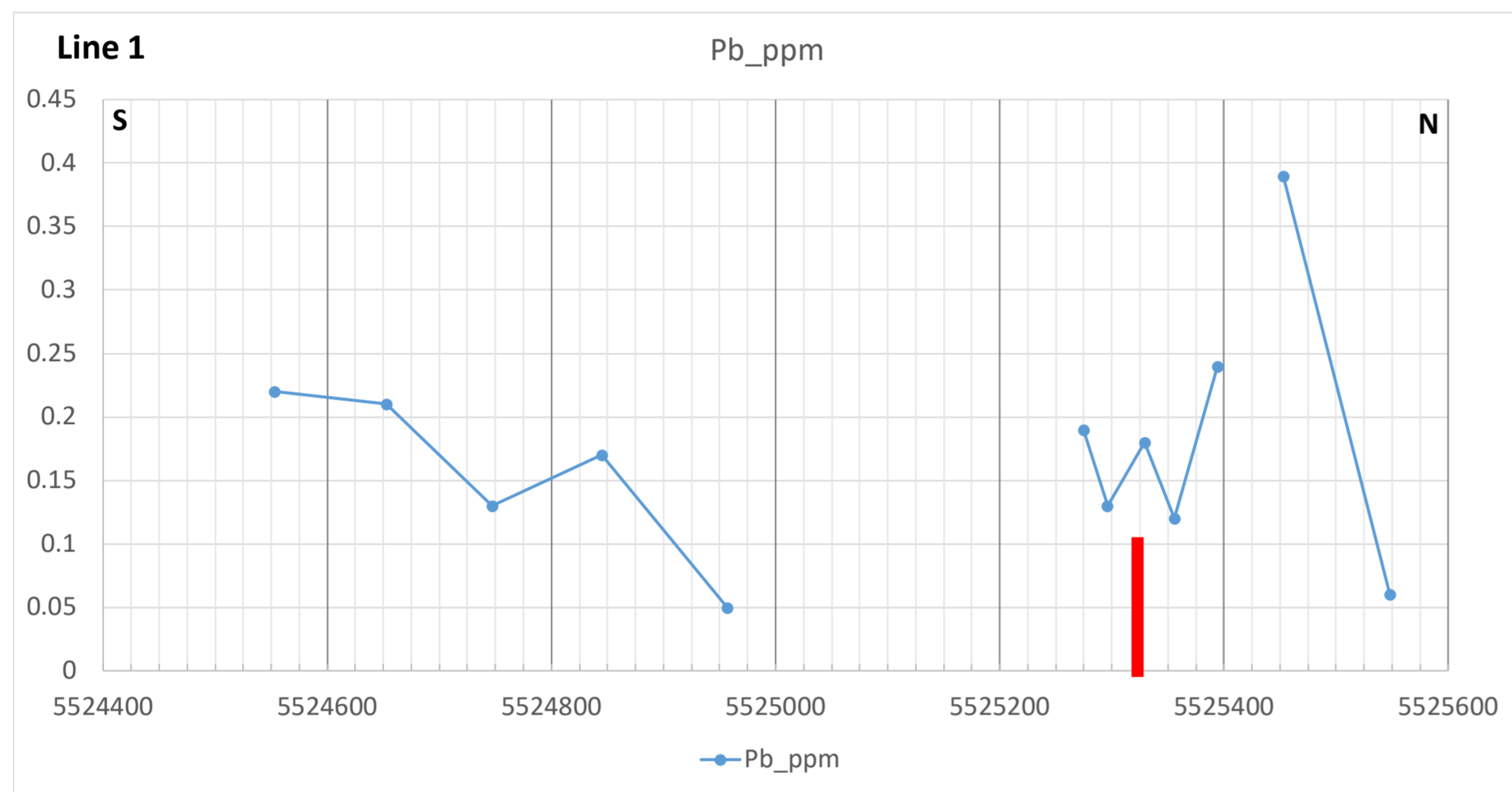
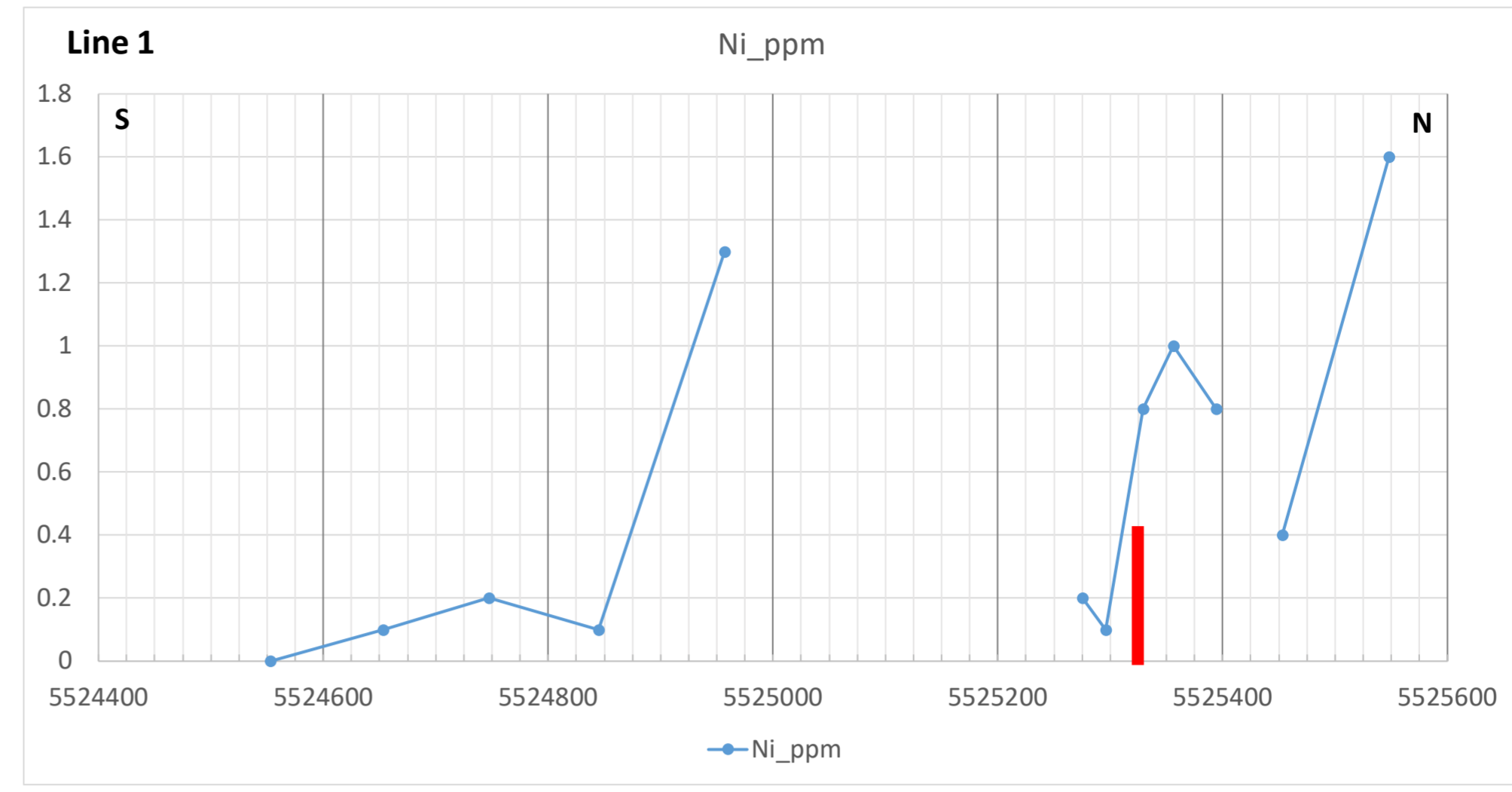
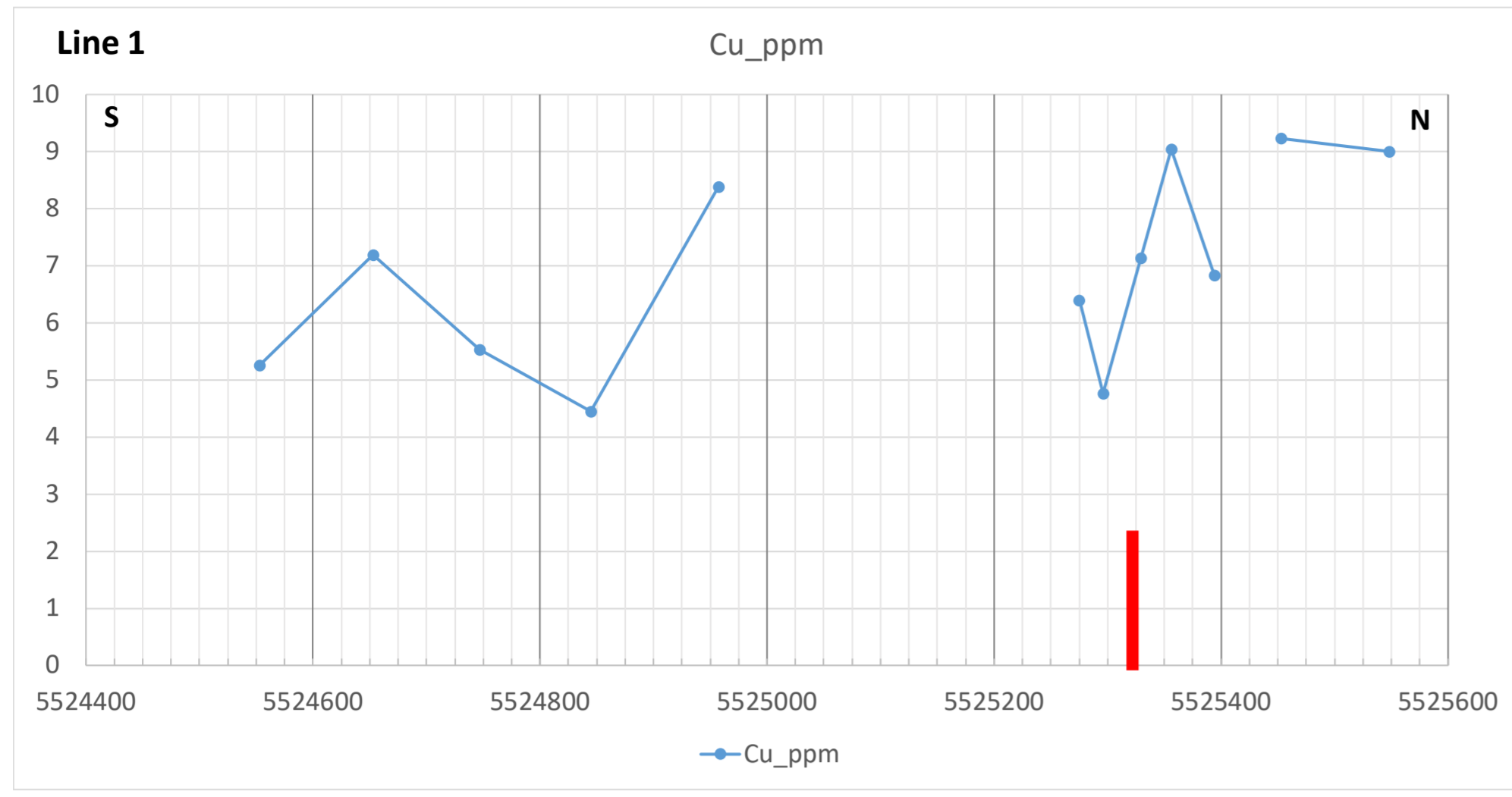
Zone D - Line 21



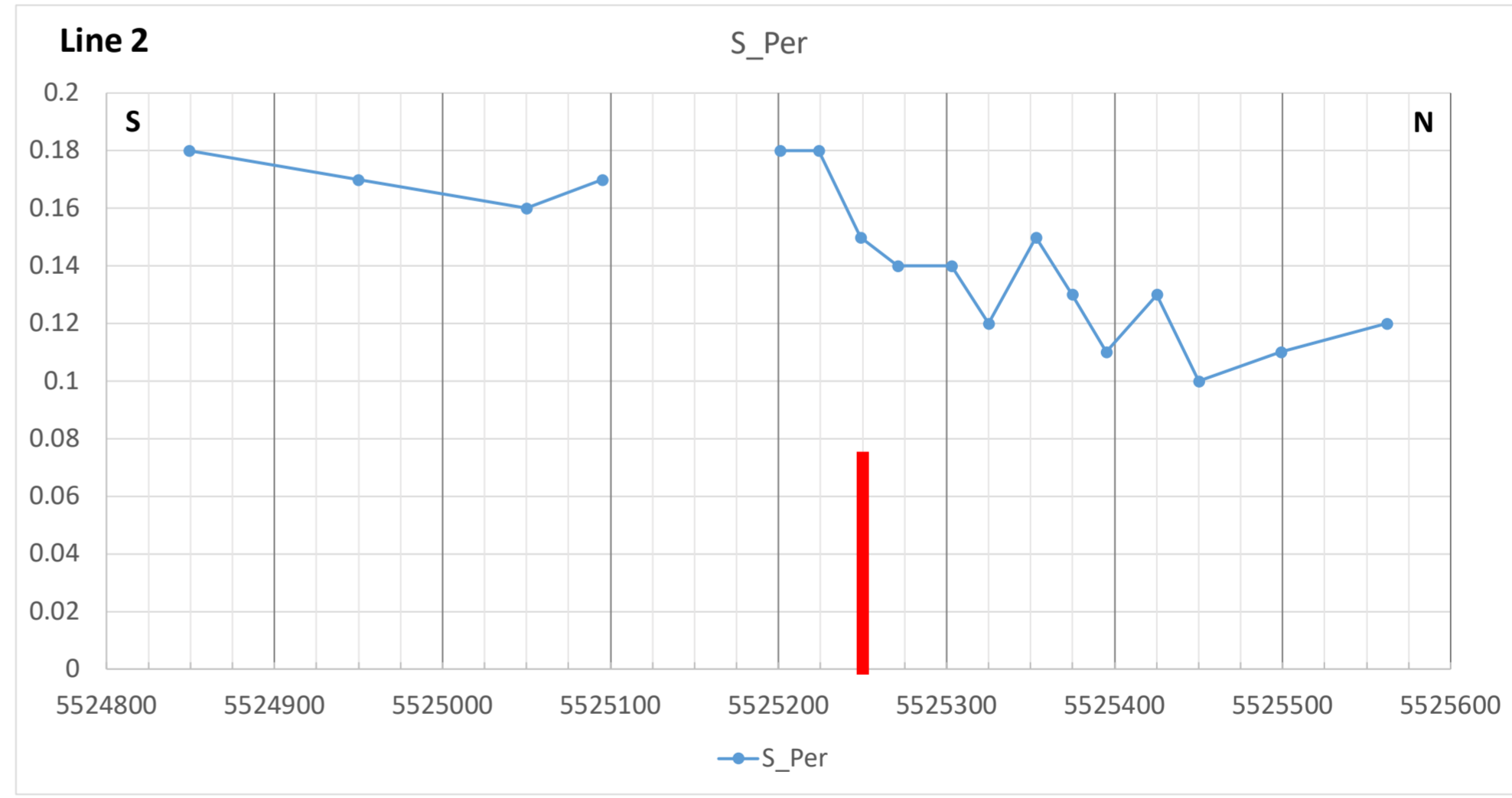
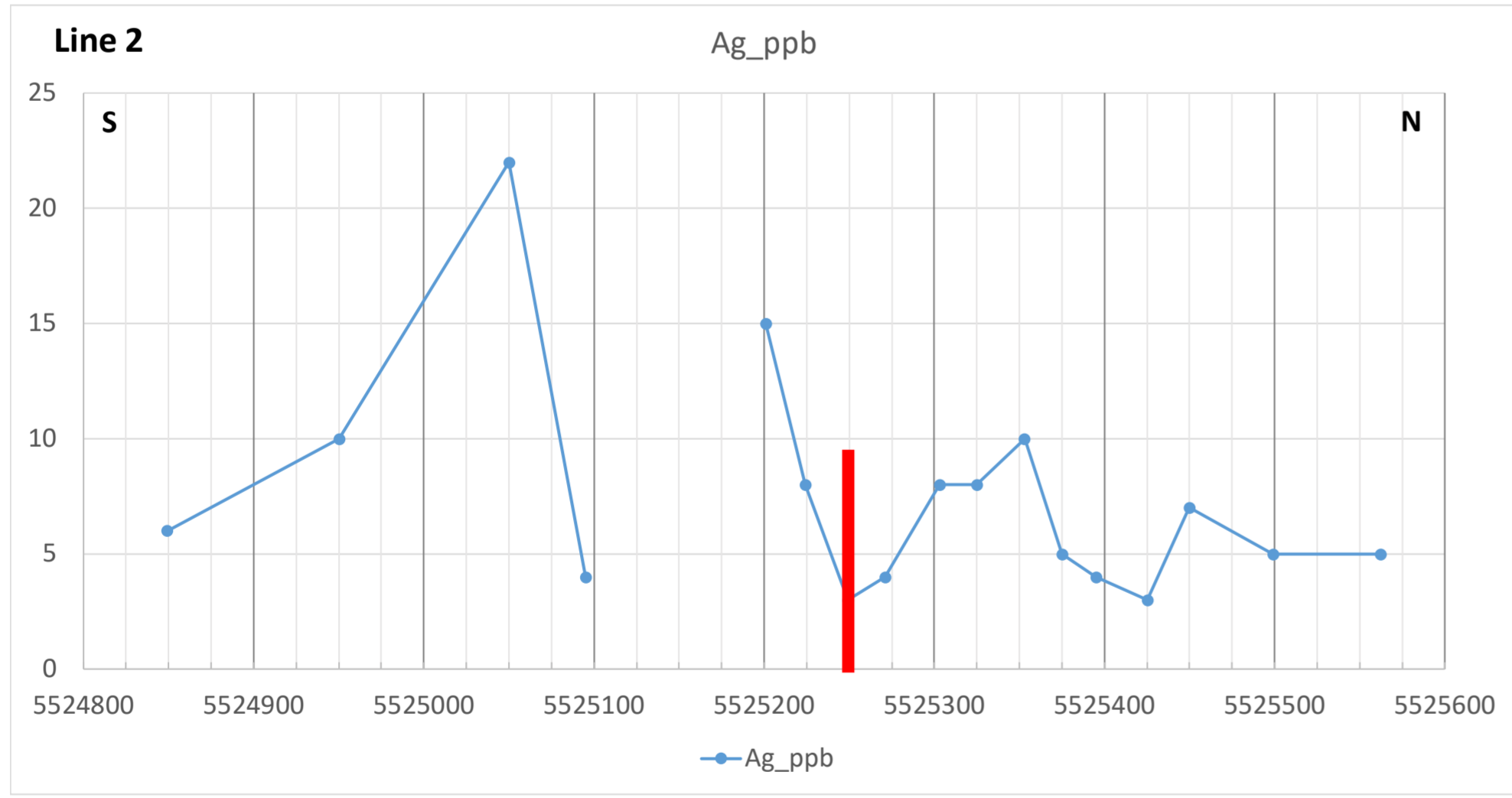
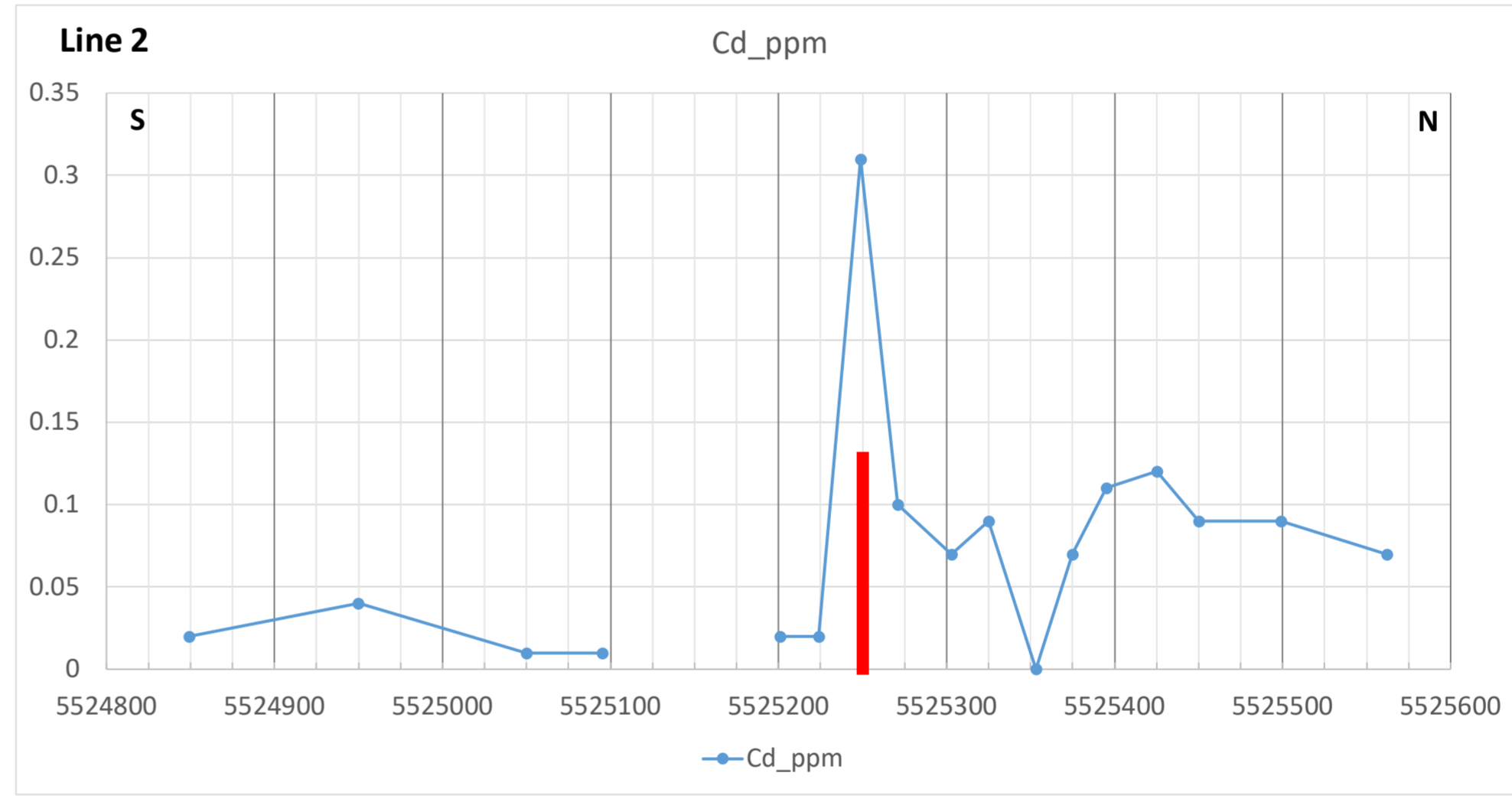
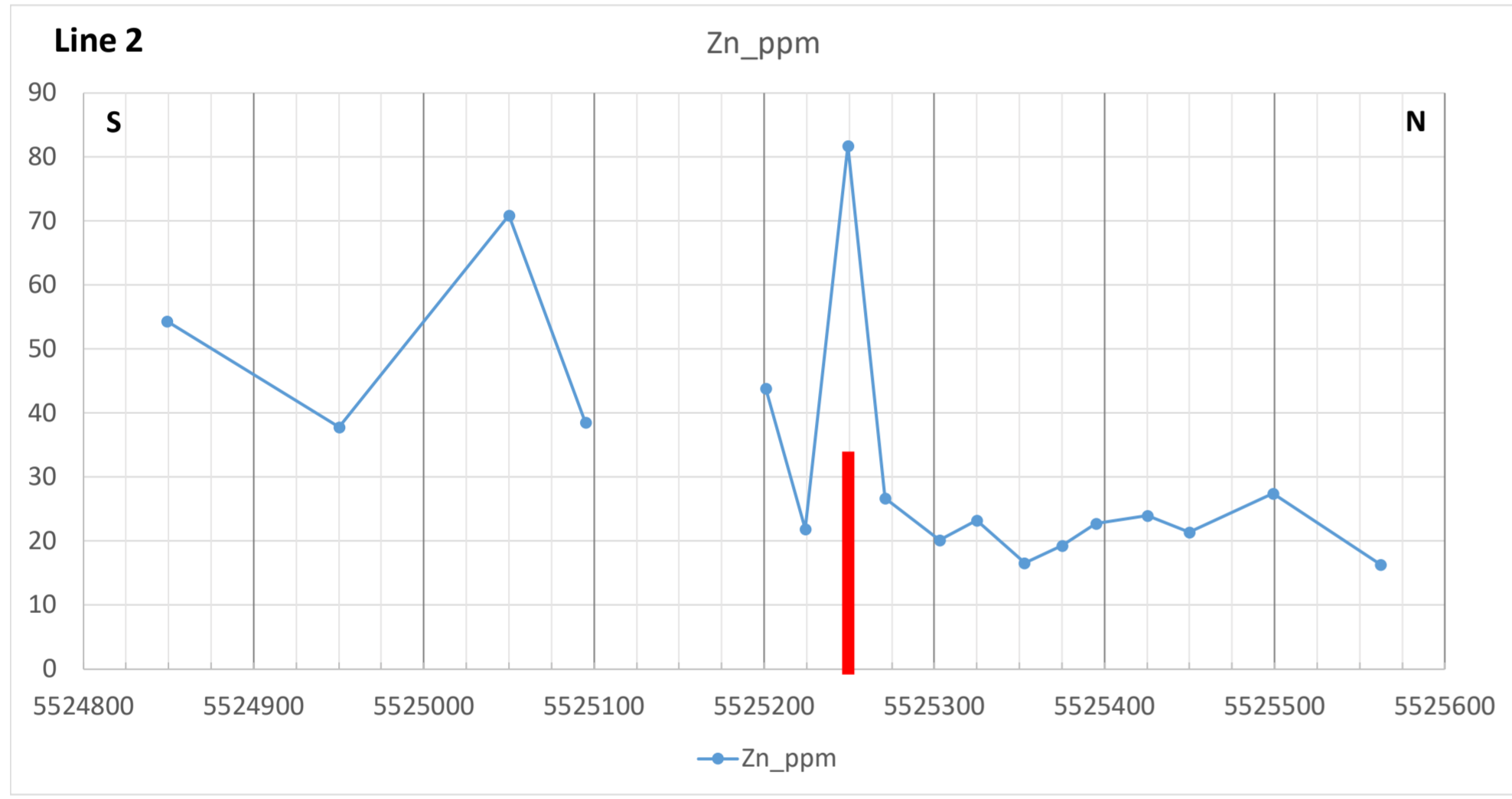
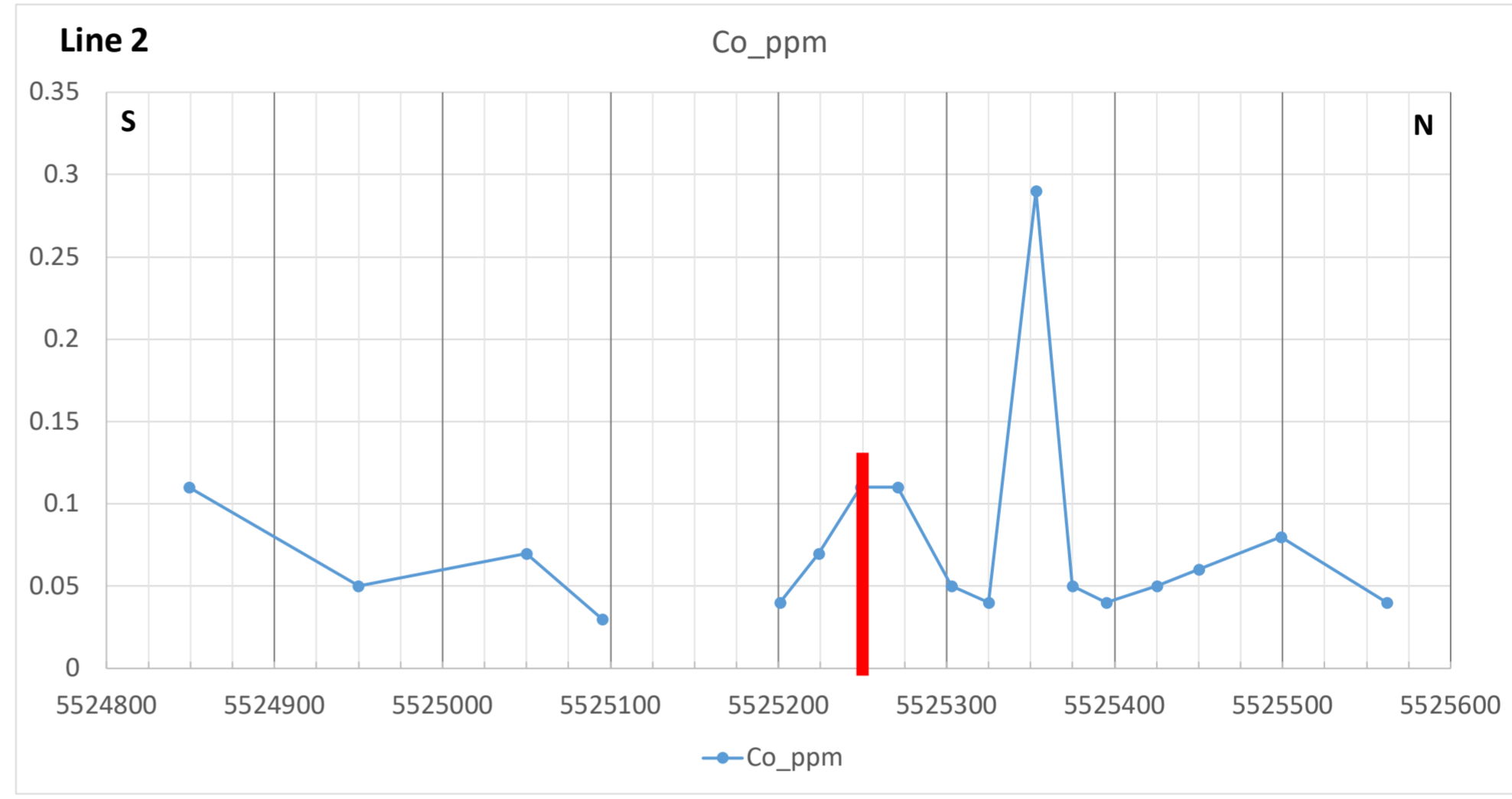
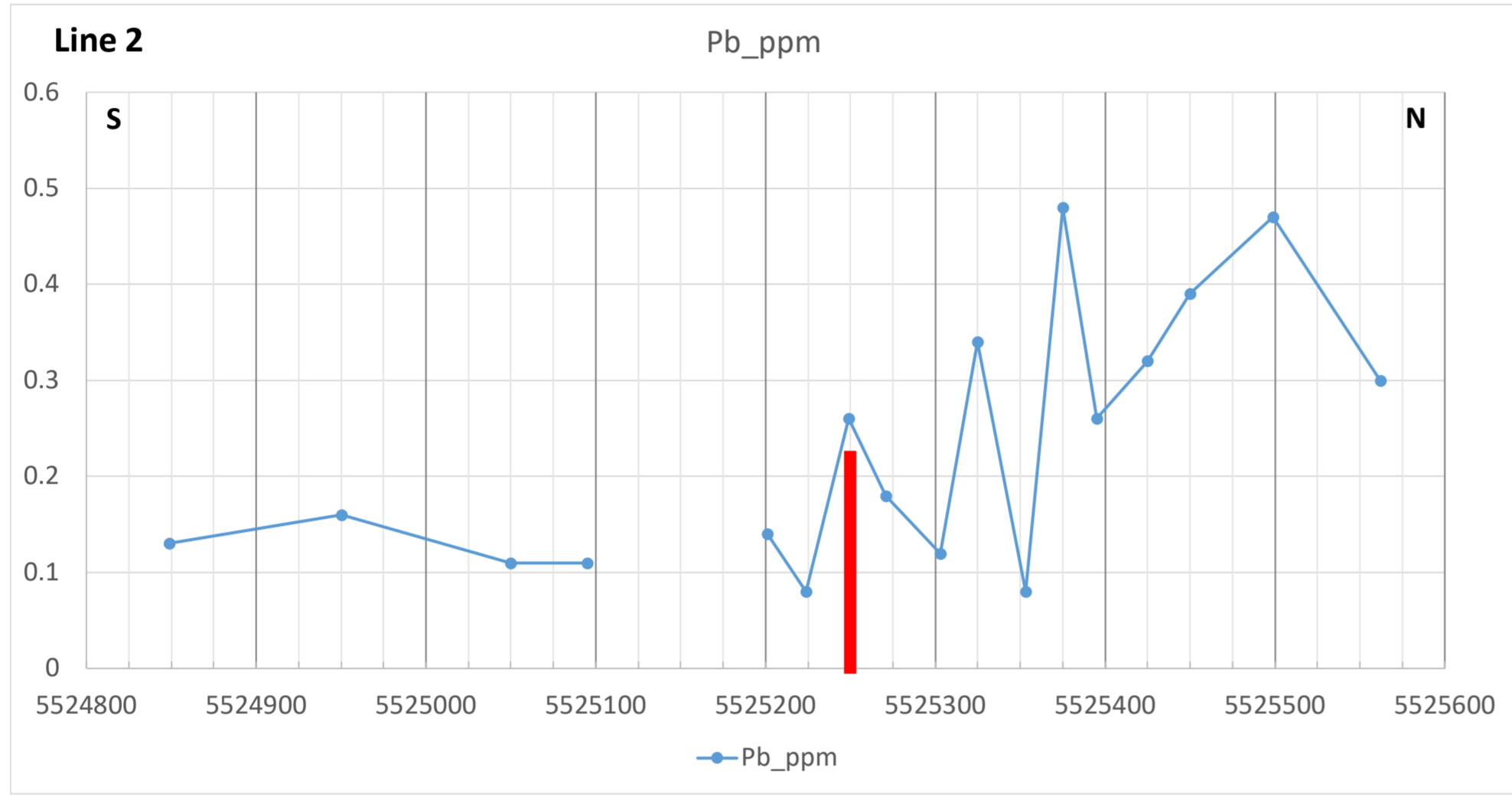
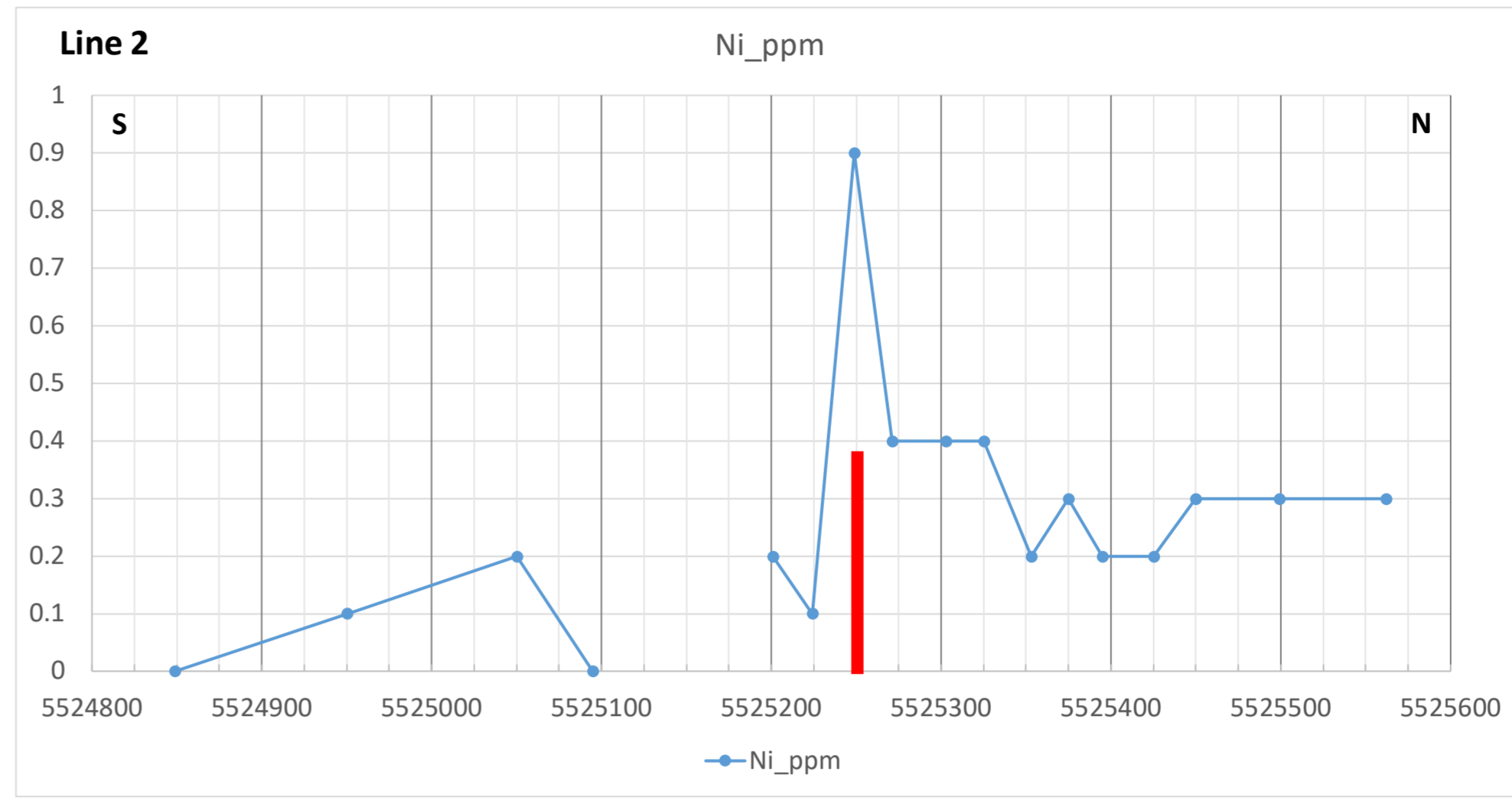
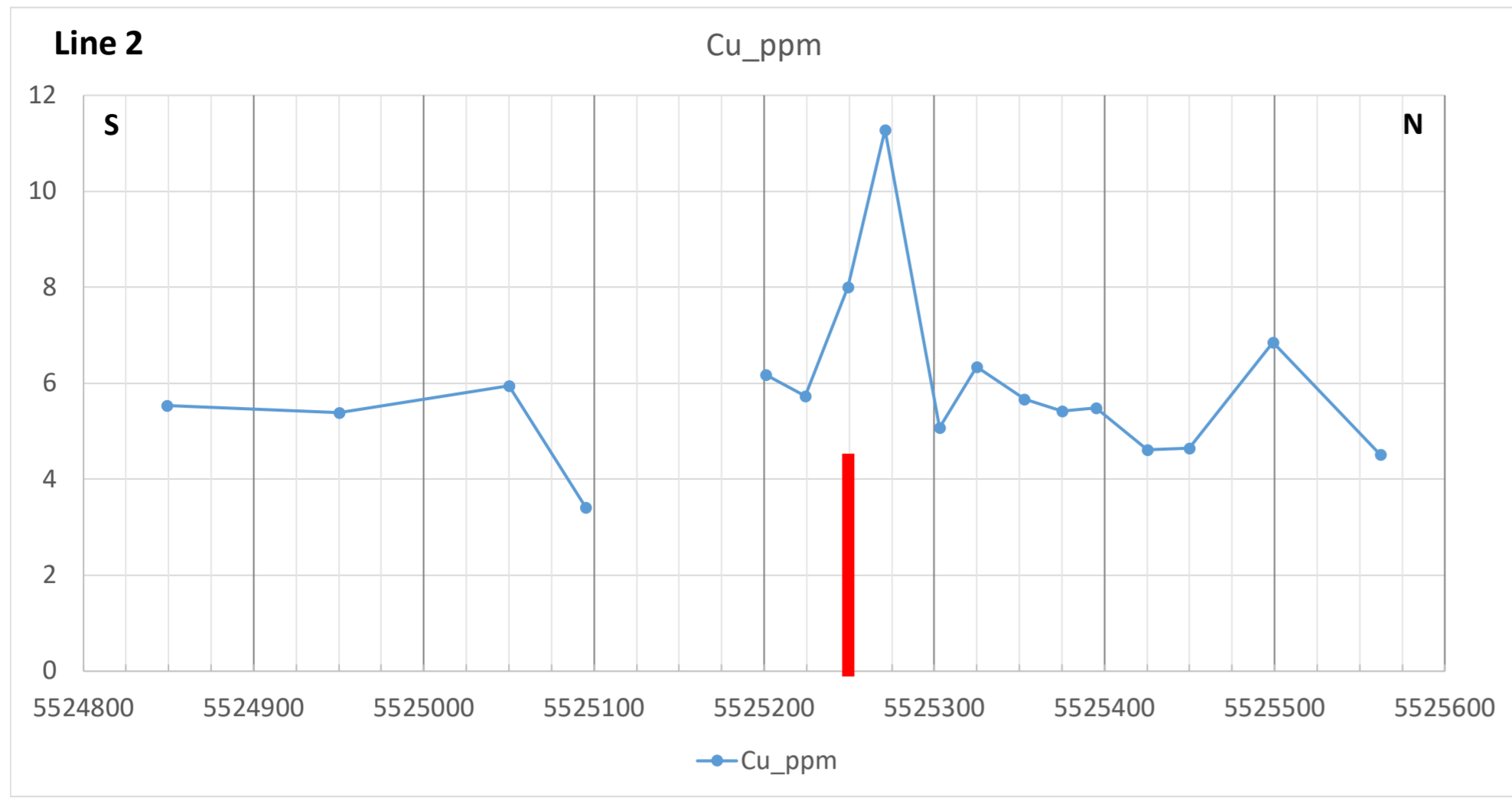
# Additional Lines

Lines 1, 2, 3, 4, 7, 14, 15, 19, 23

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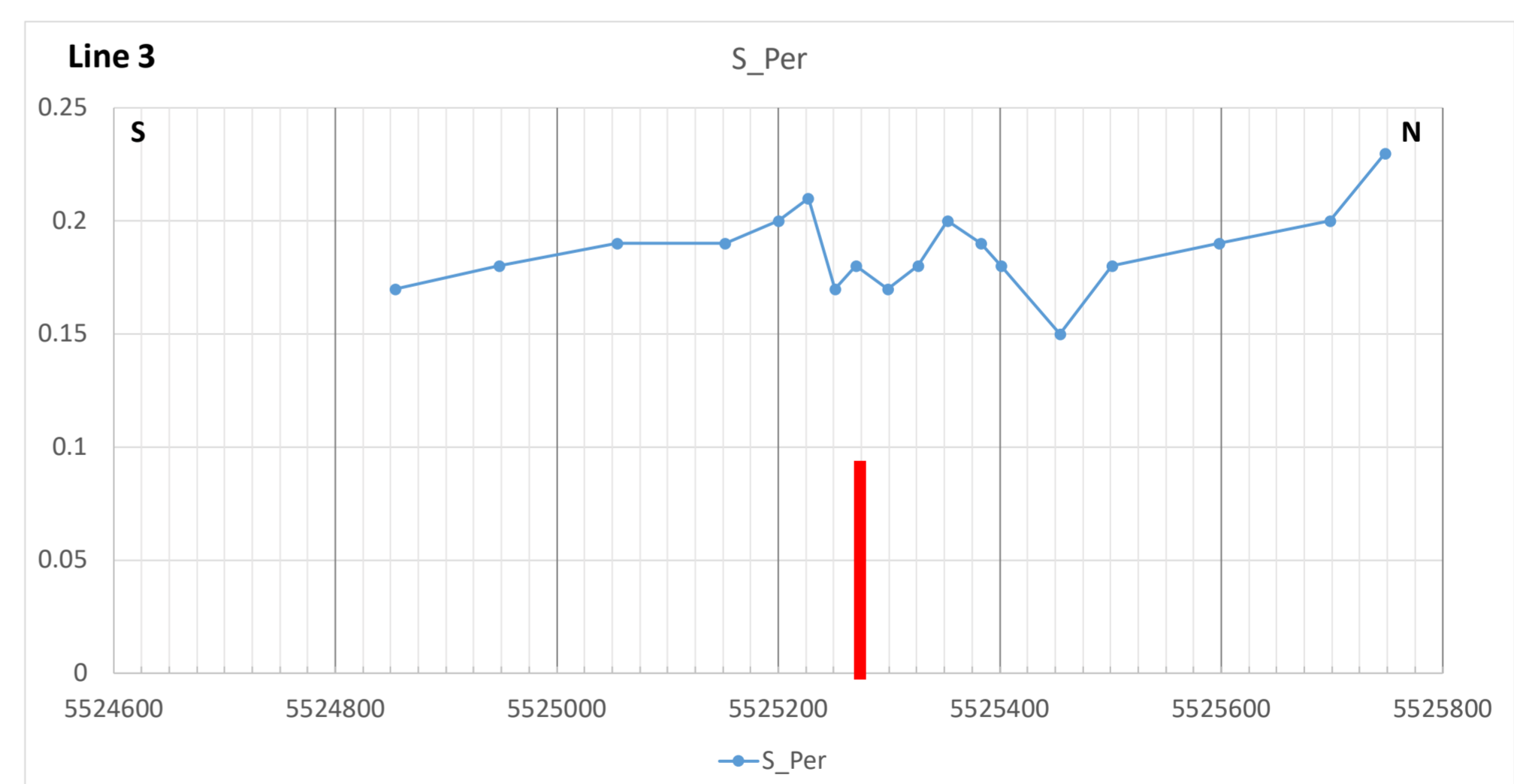
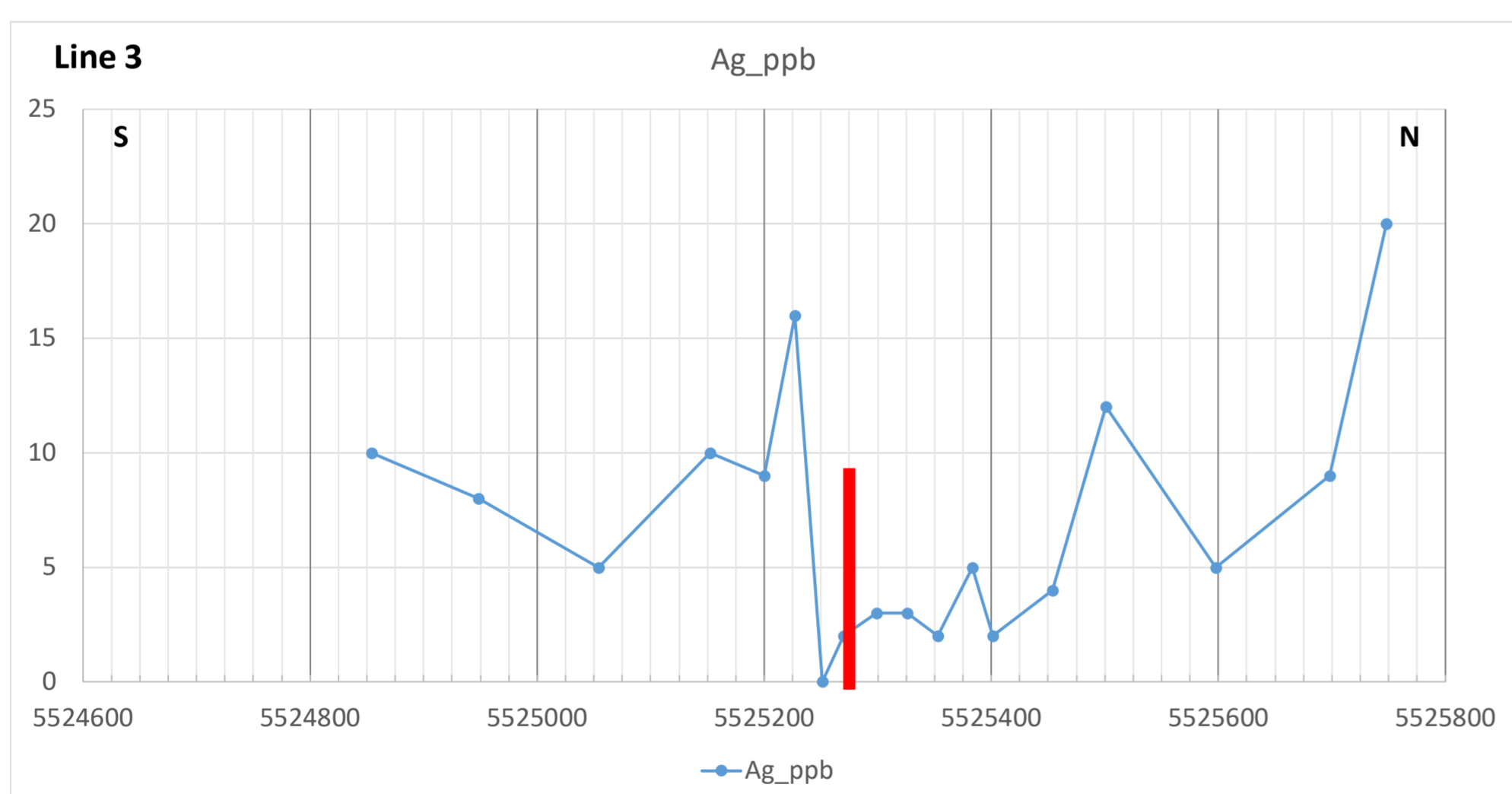
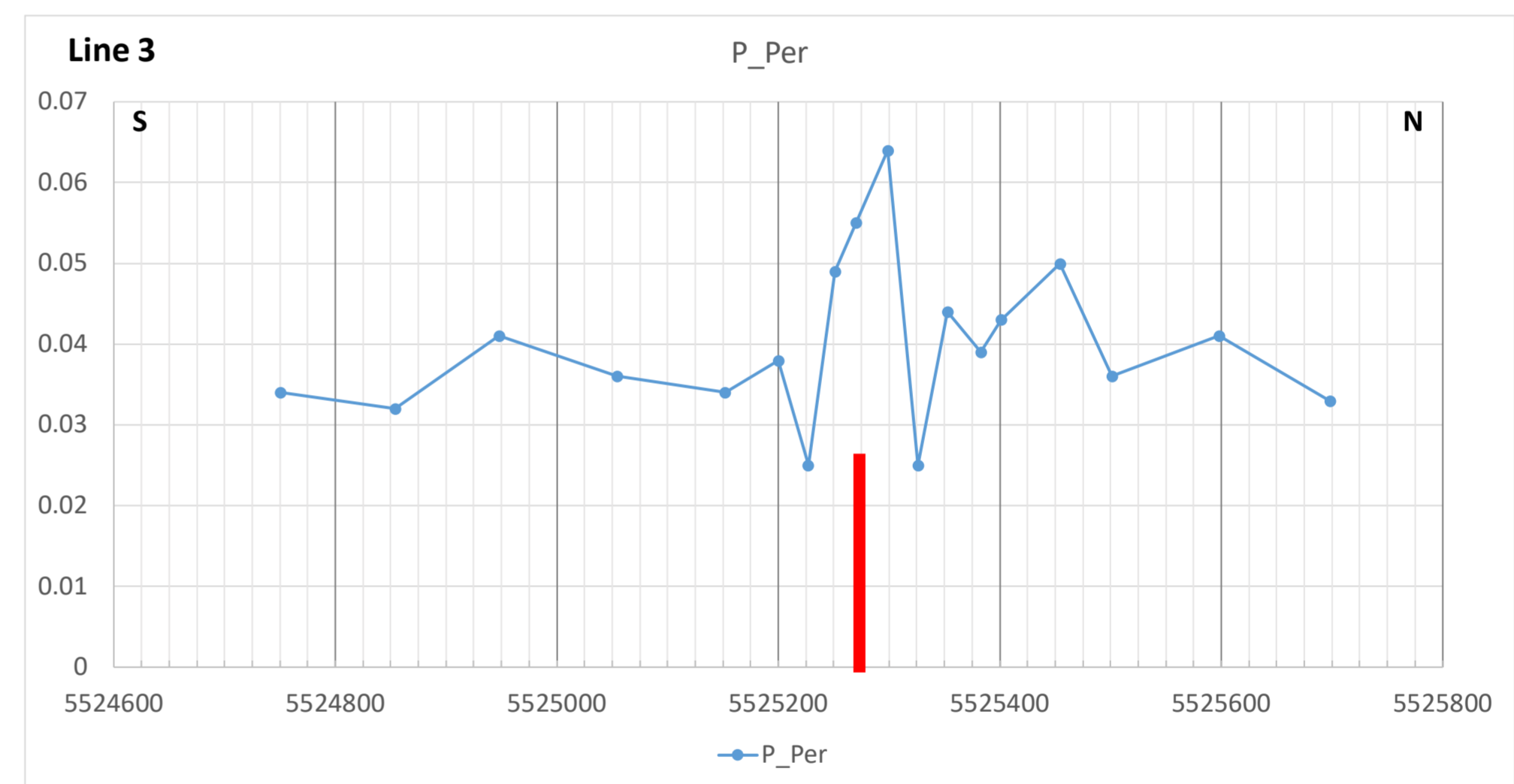
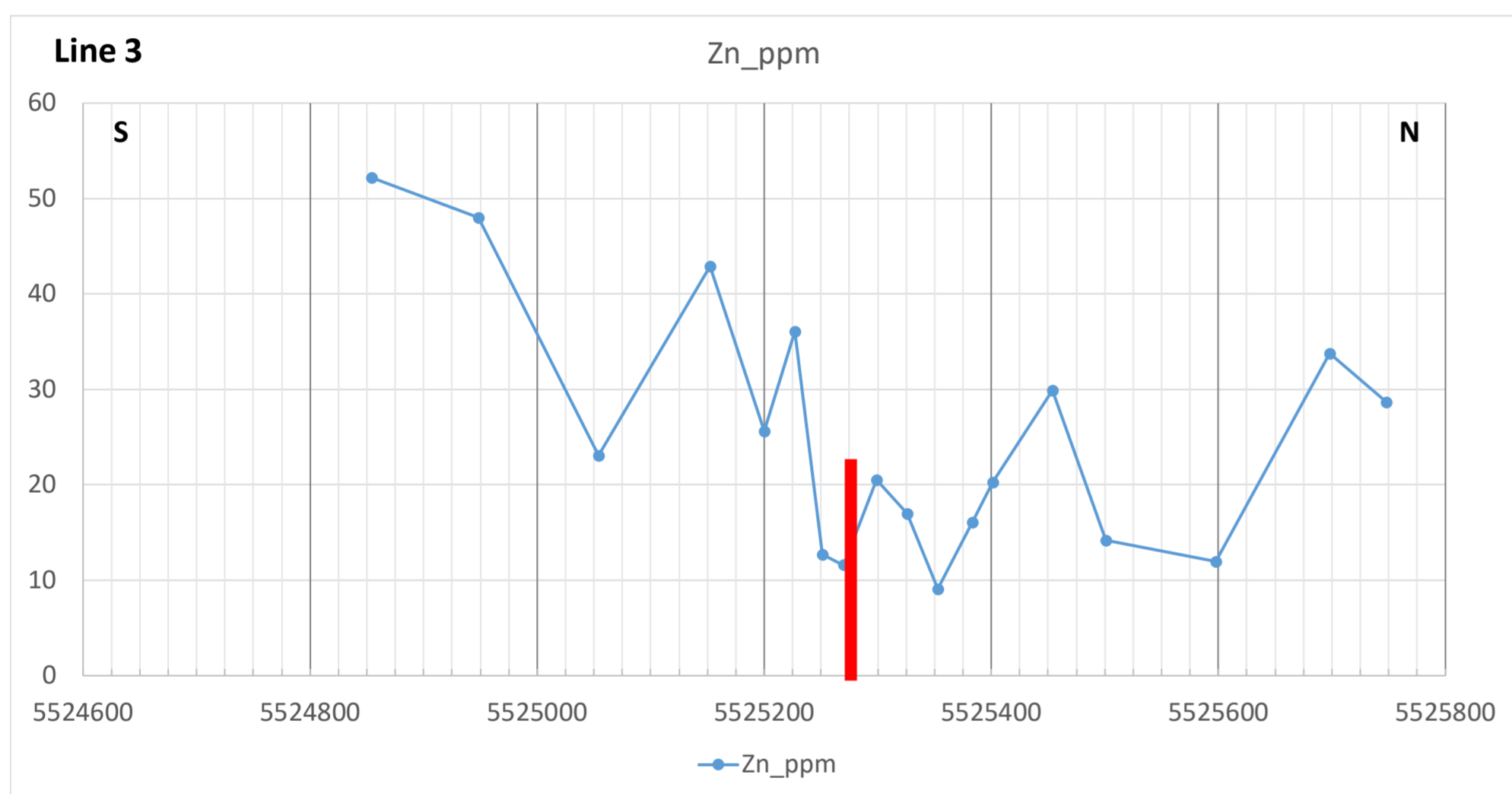
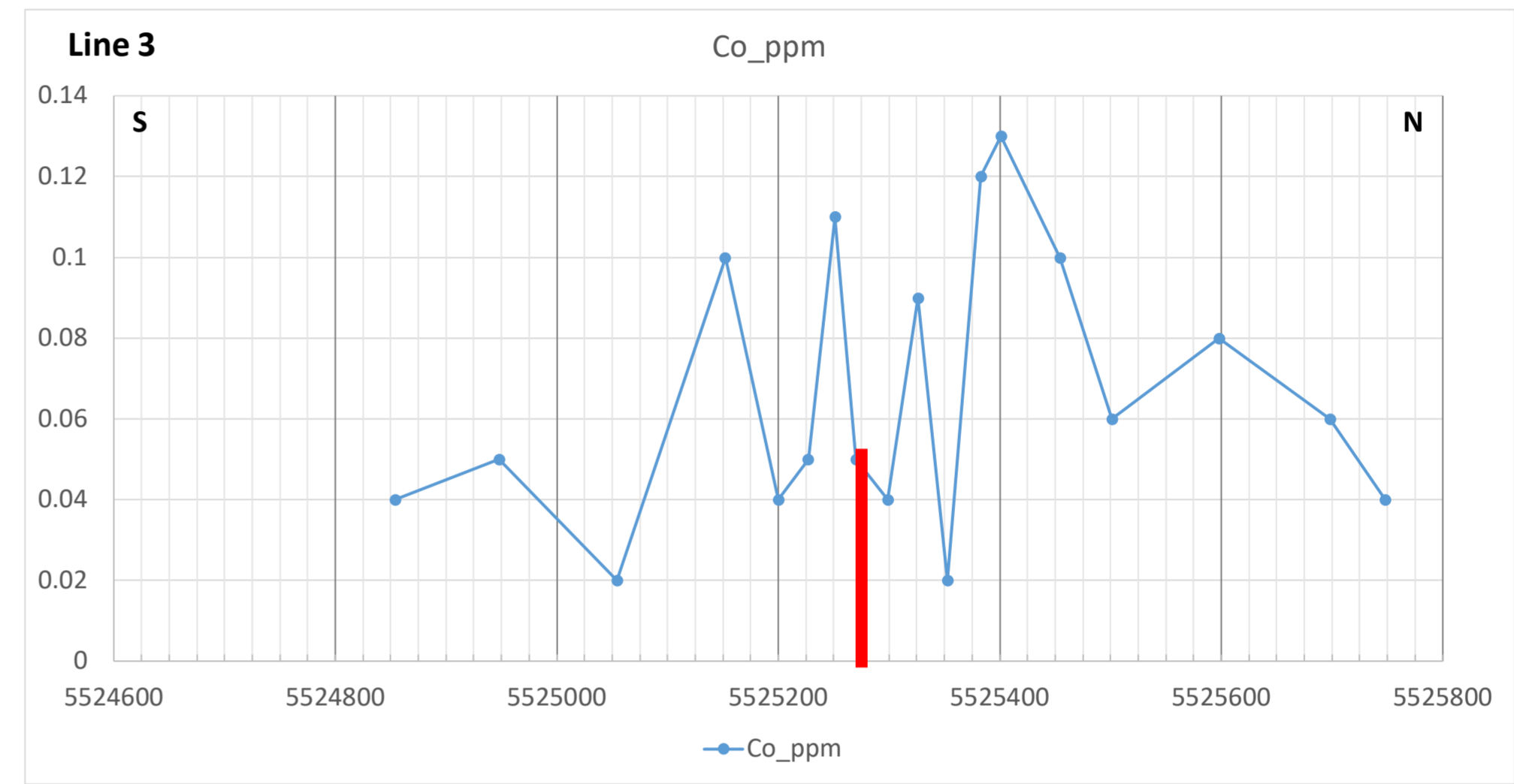
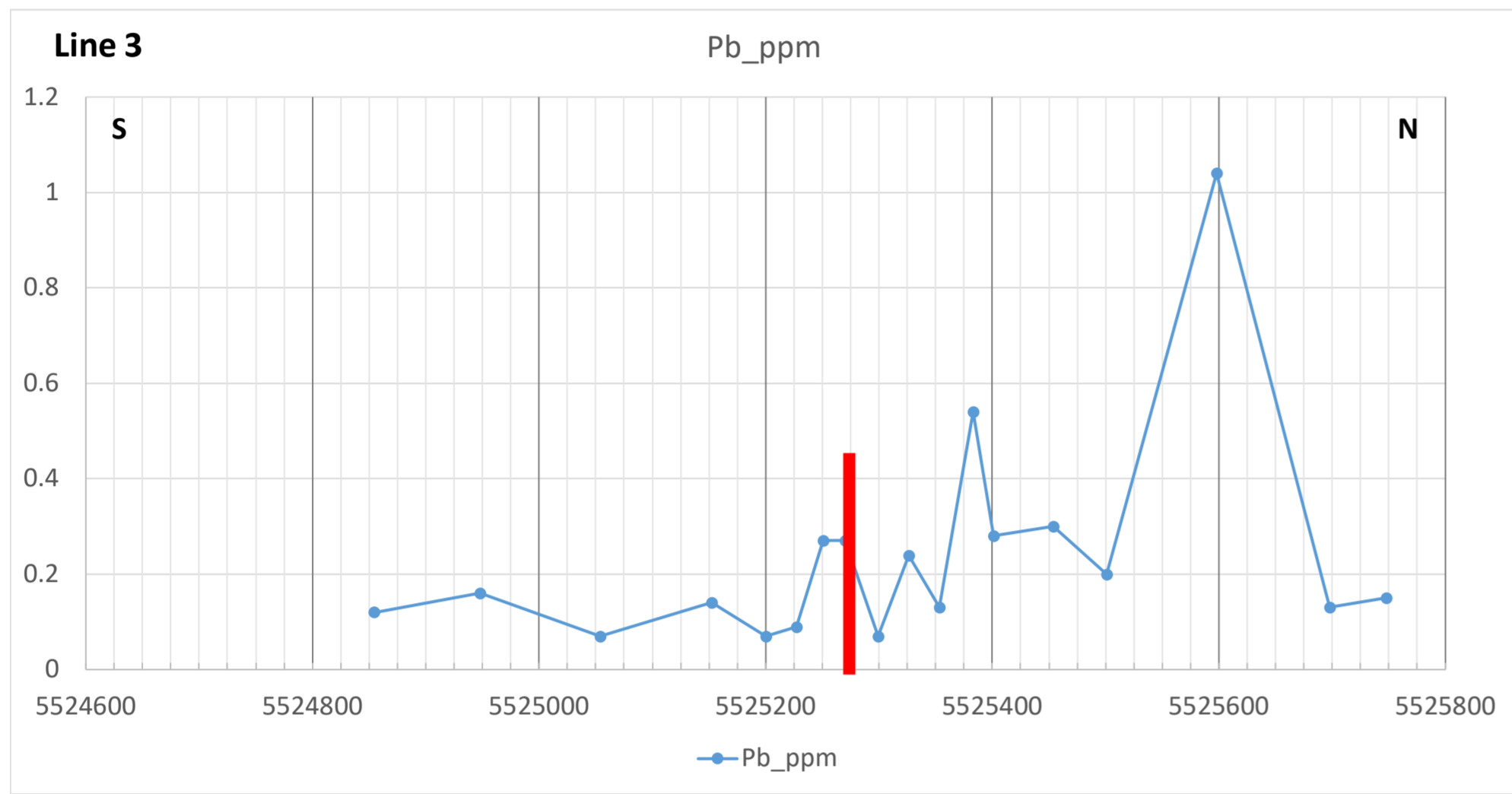
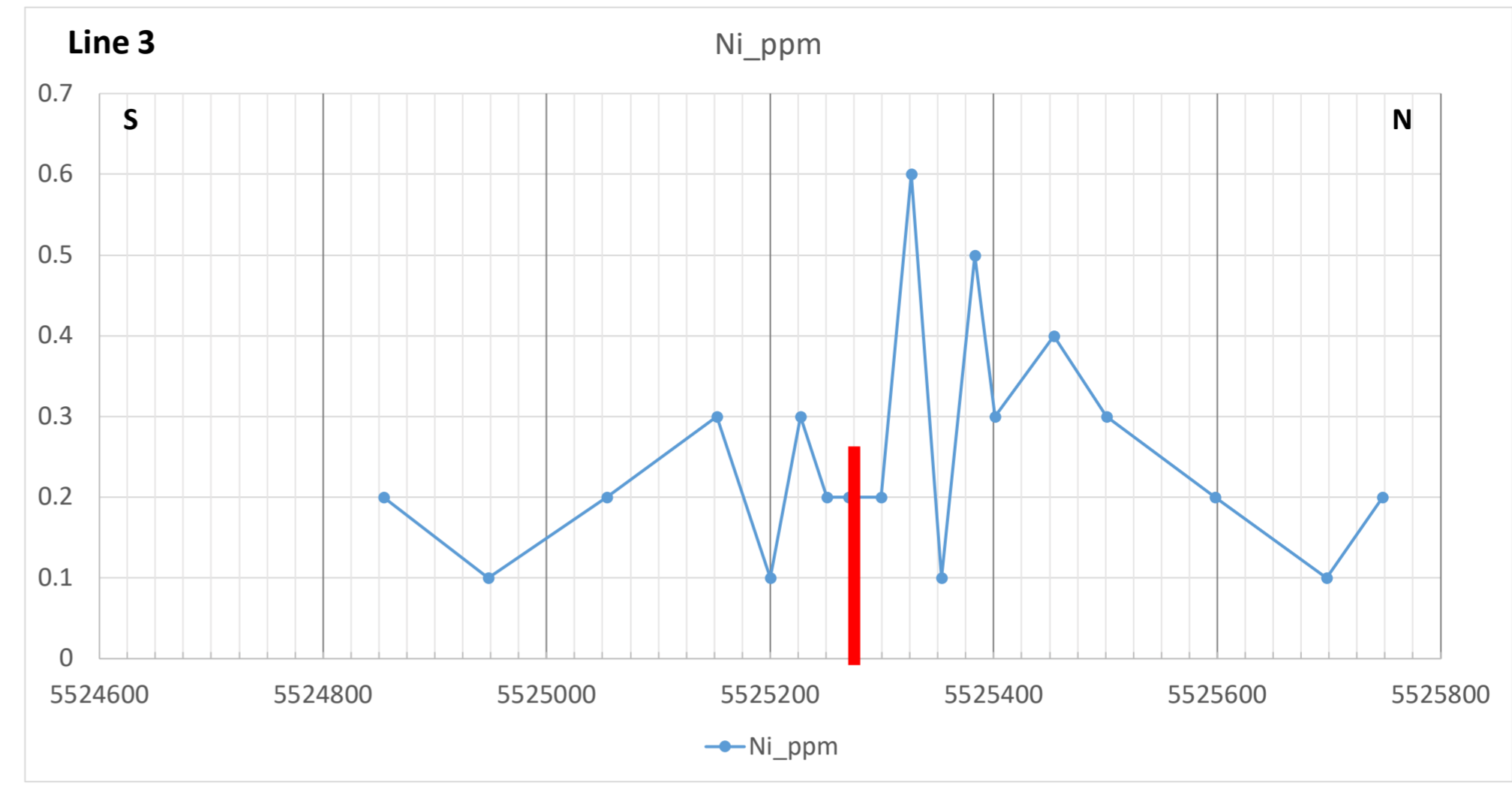
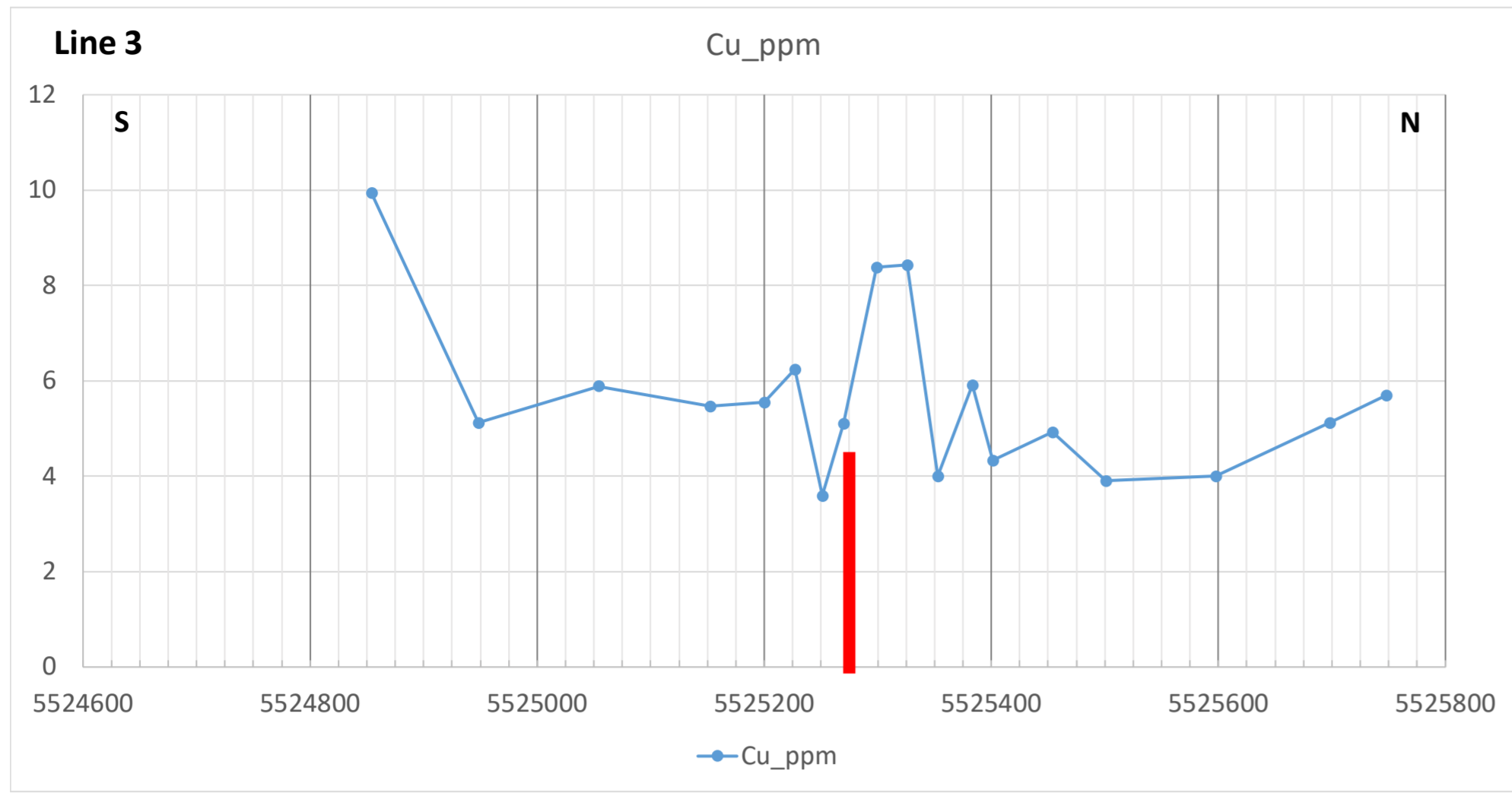


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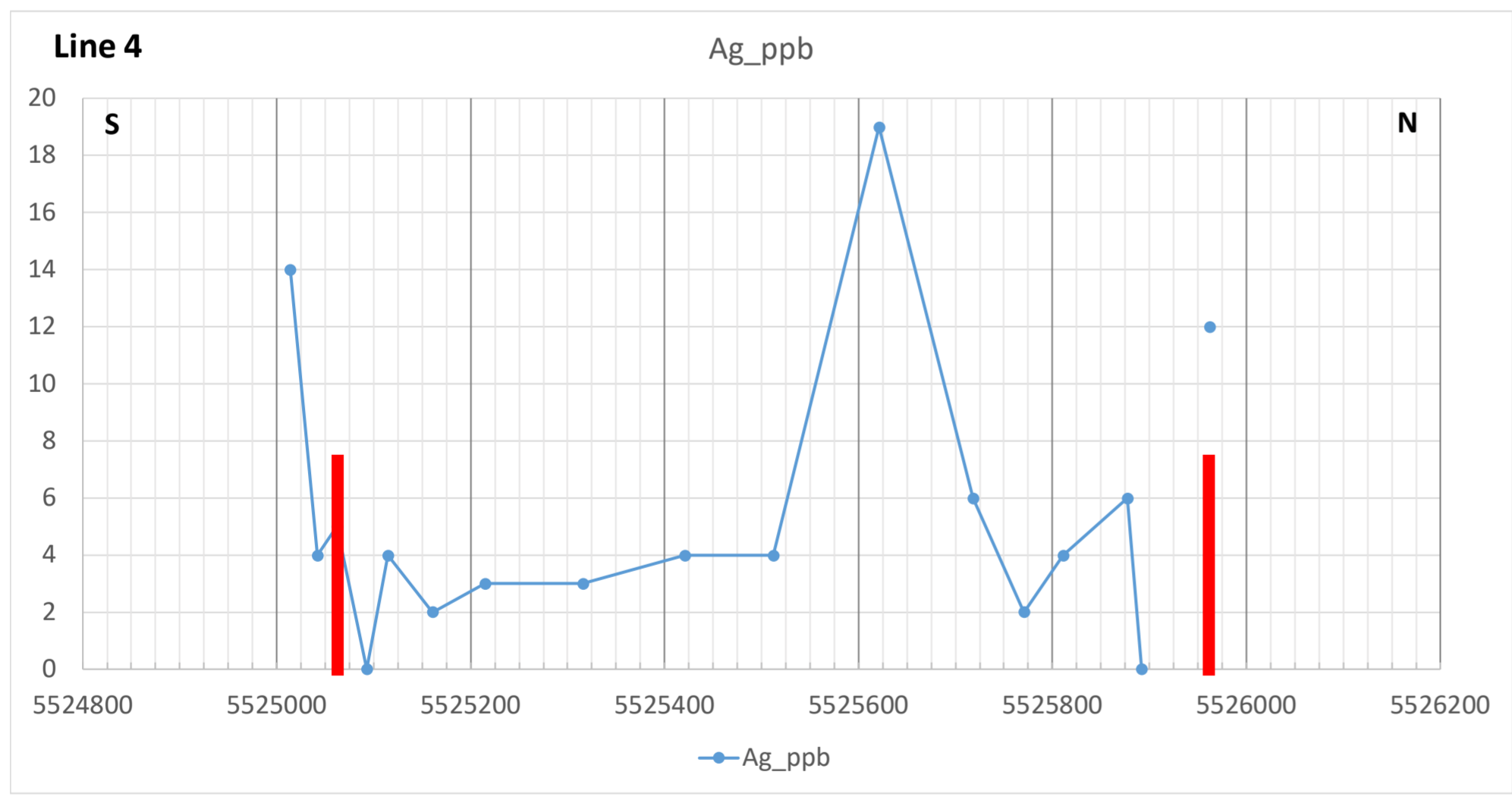
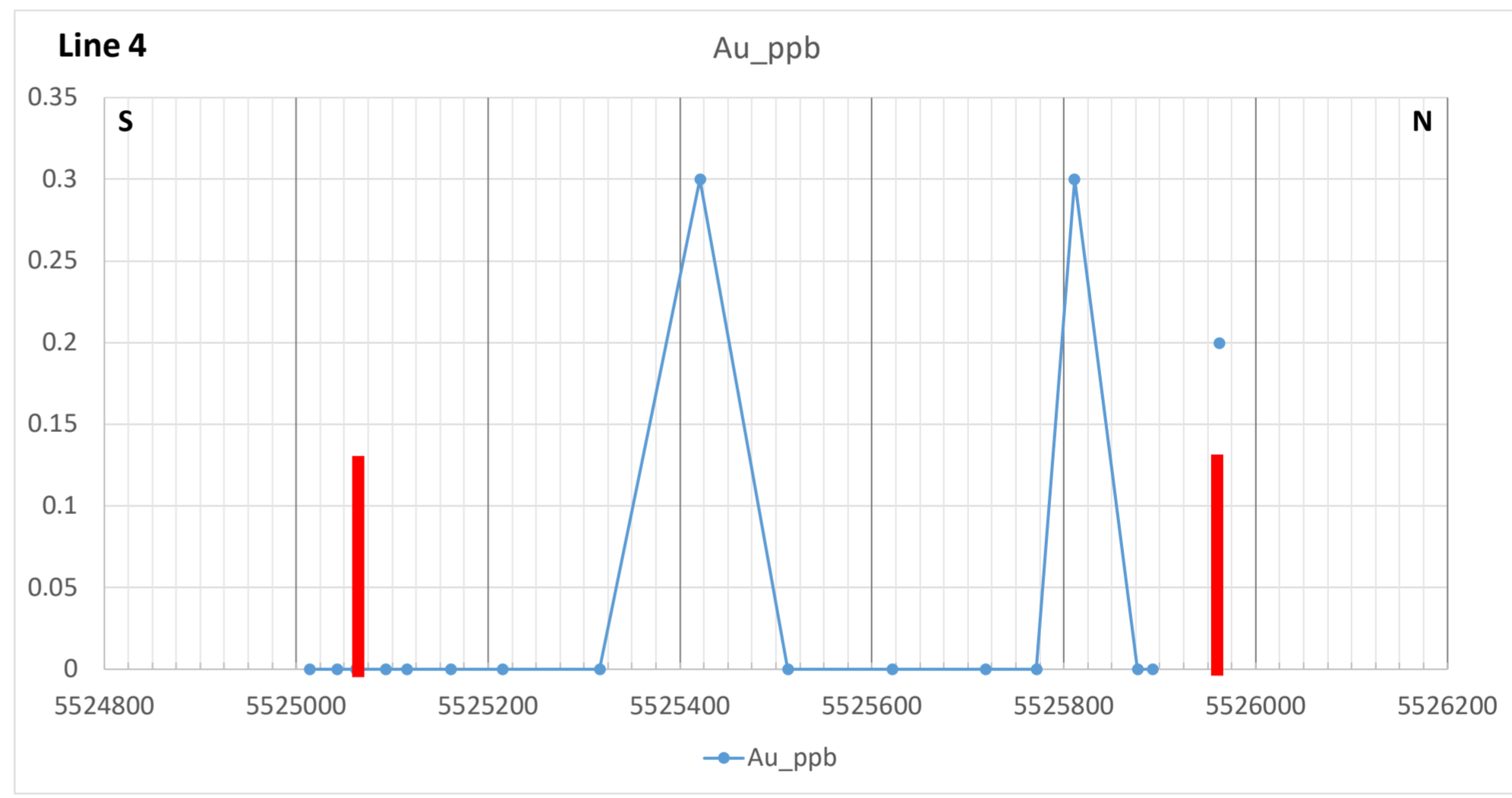
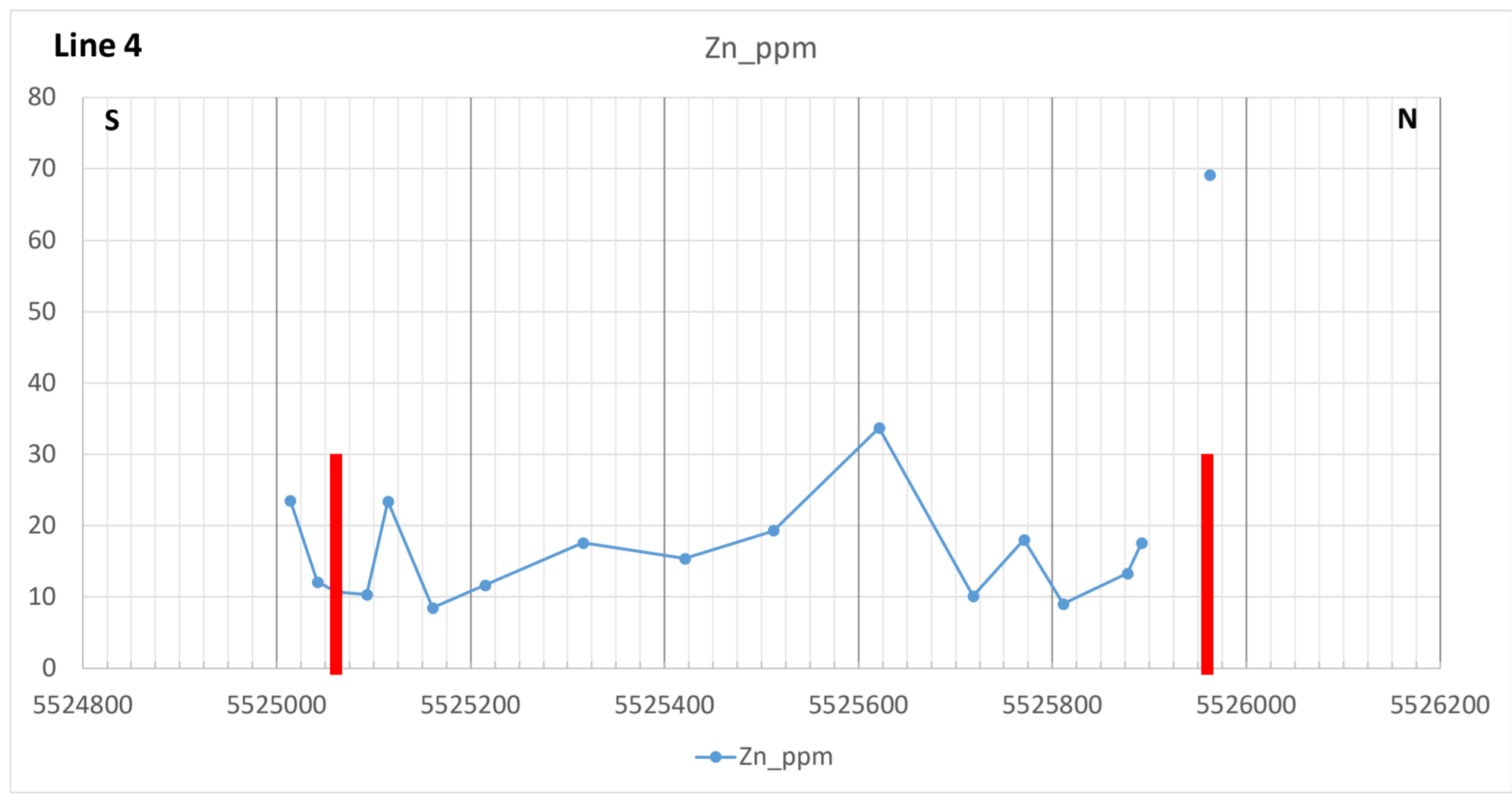
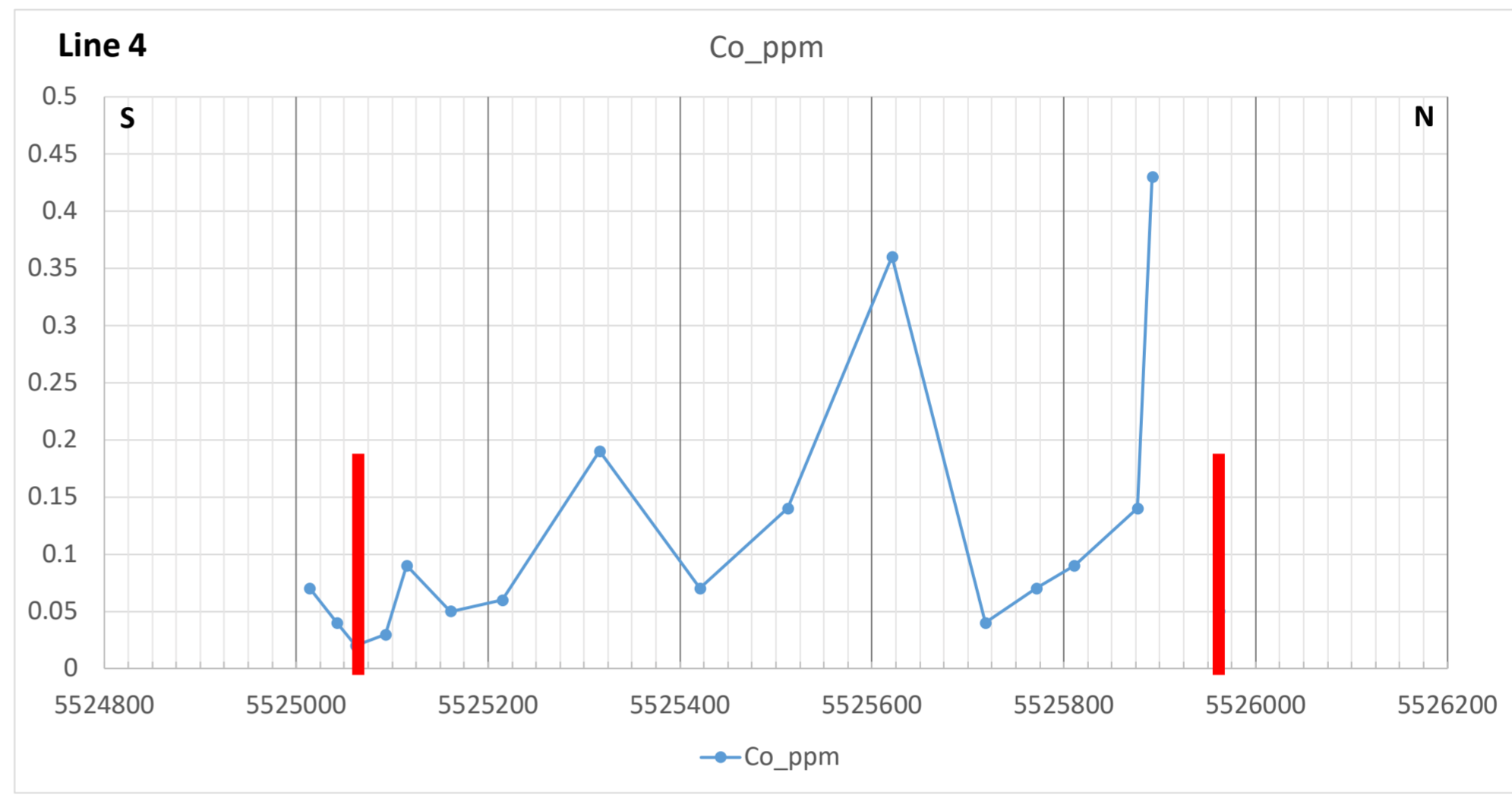
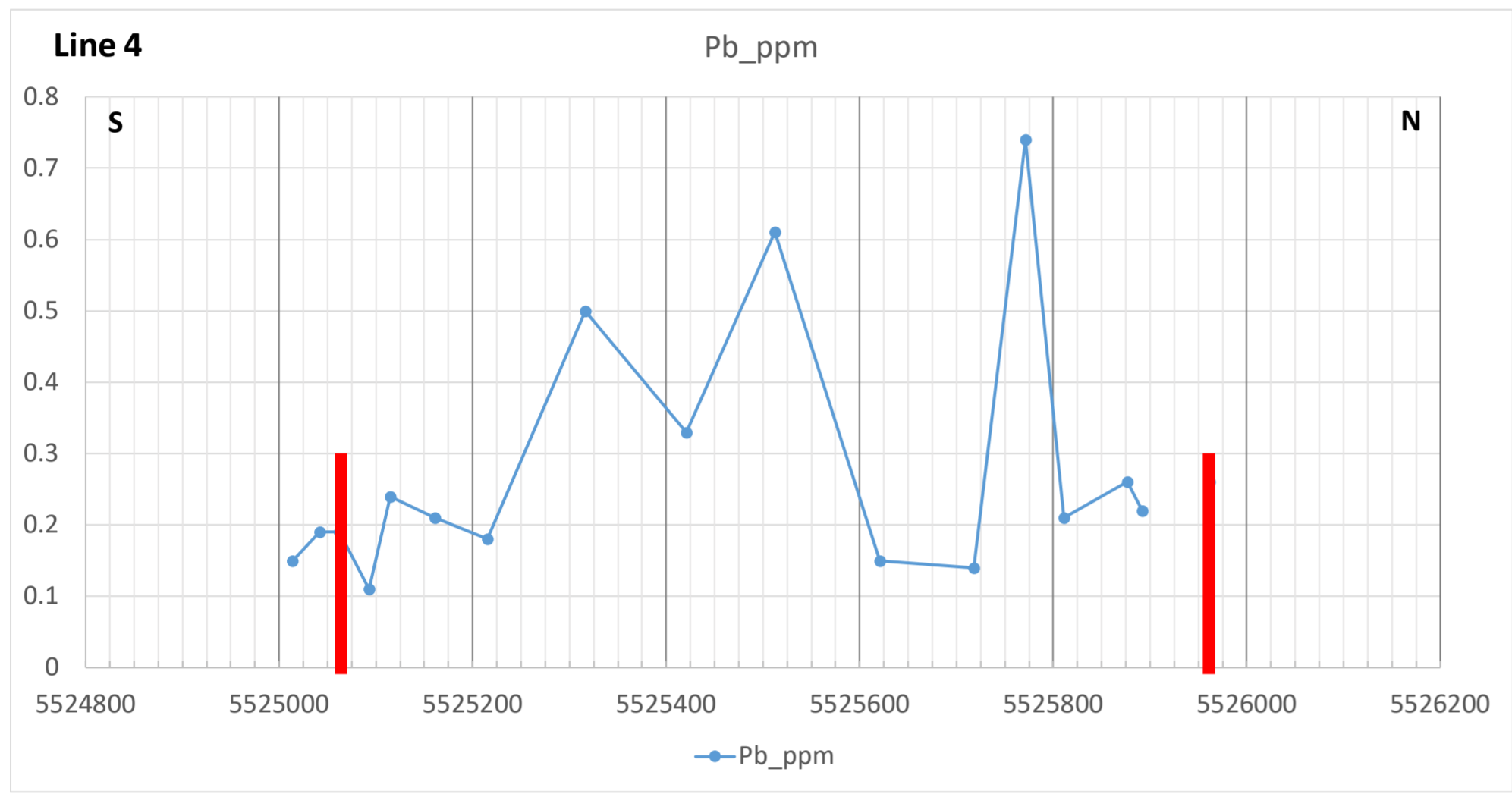
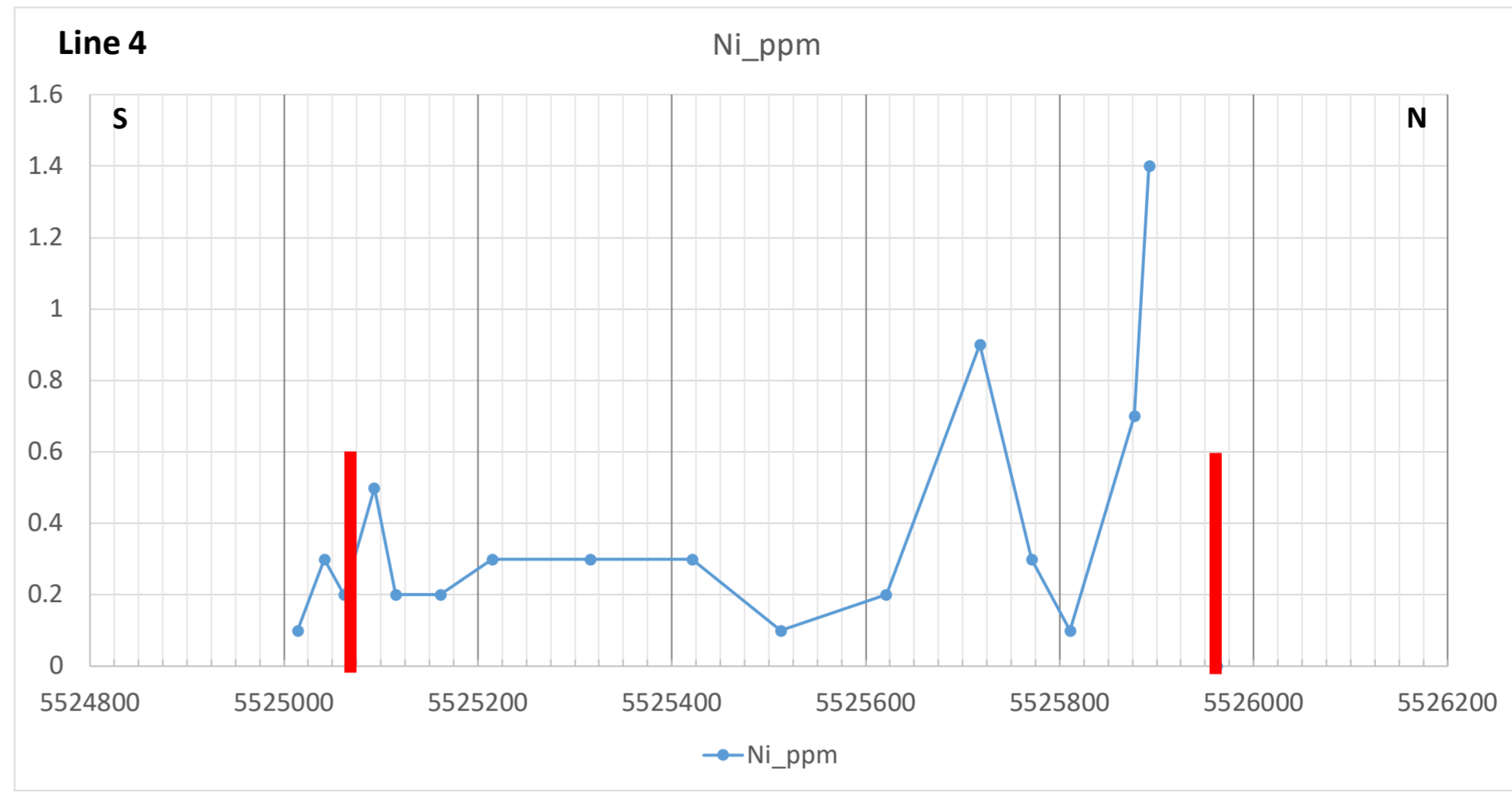
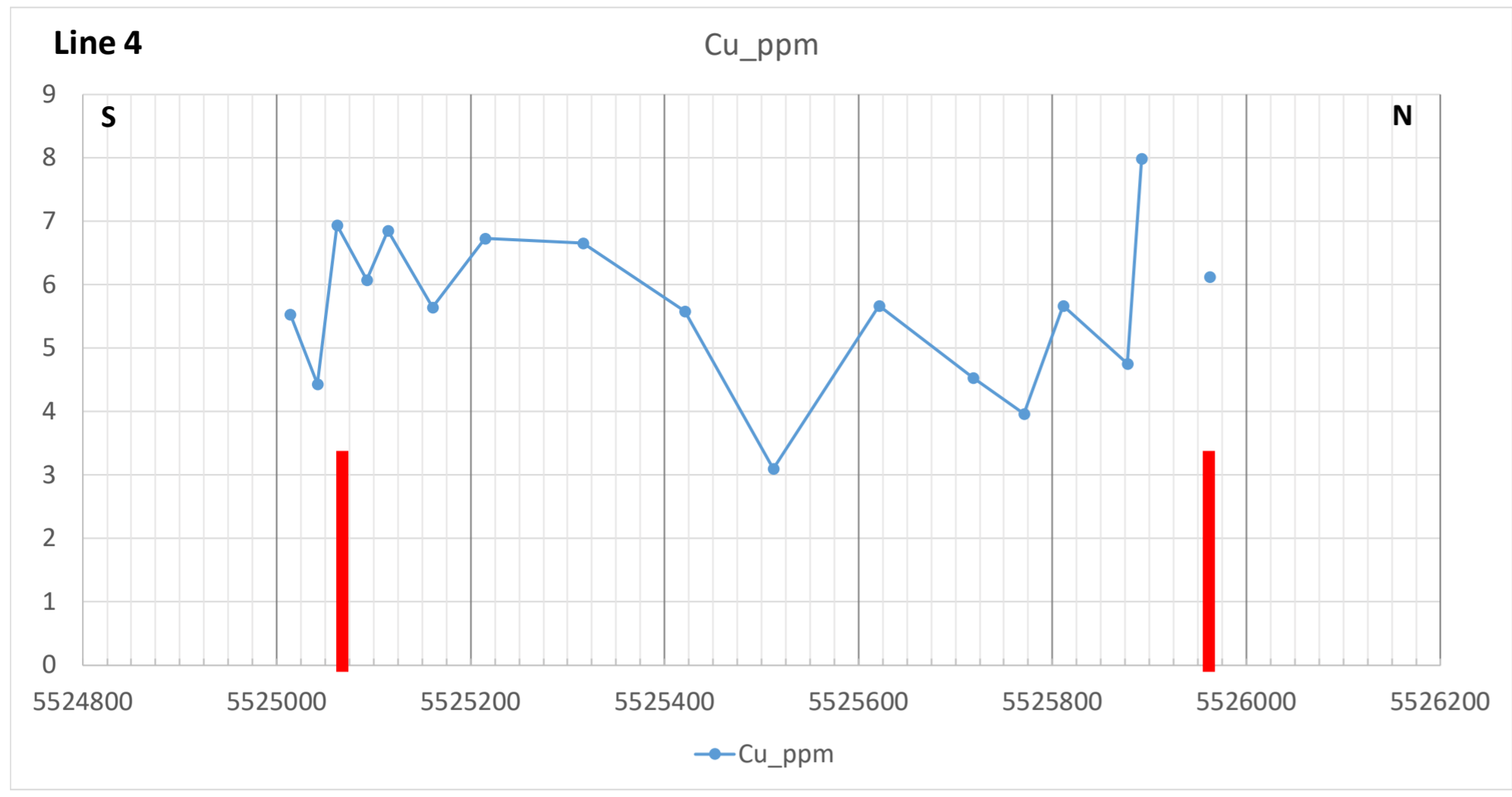




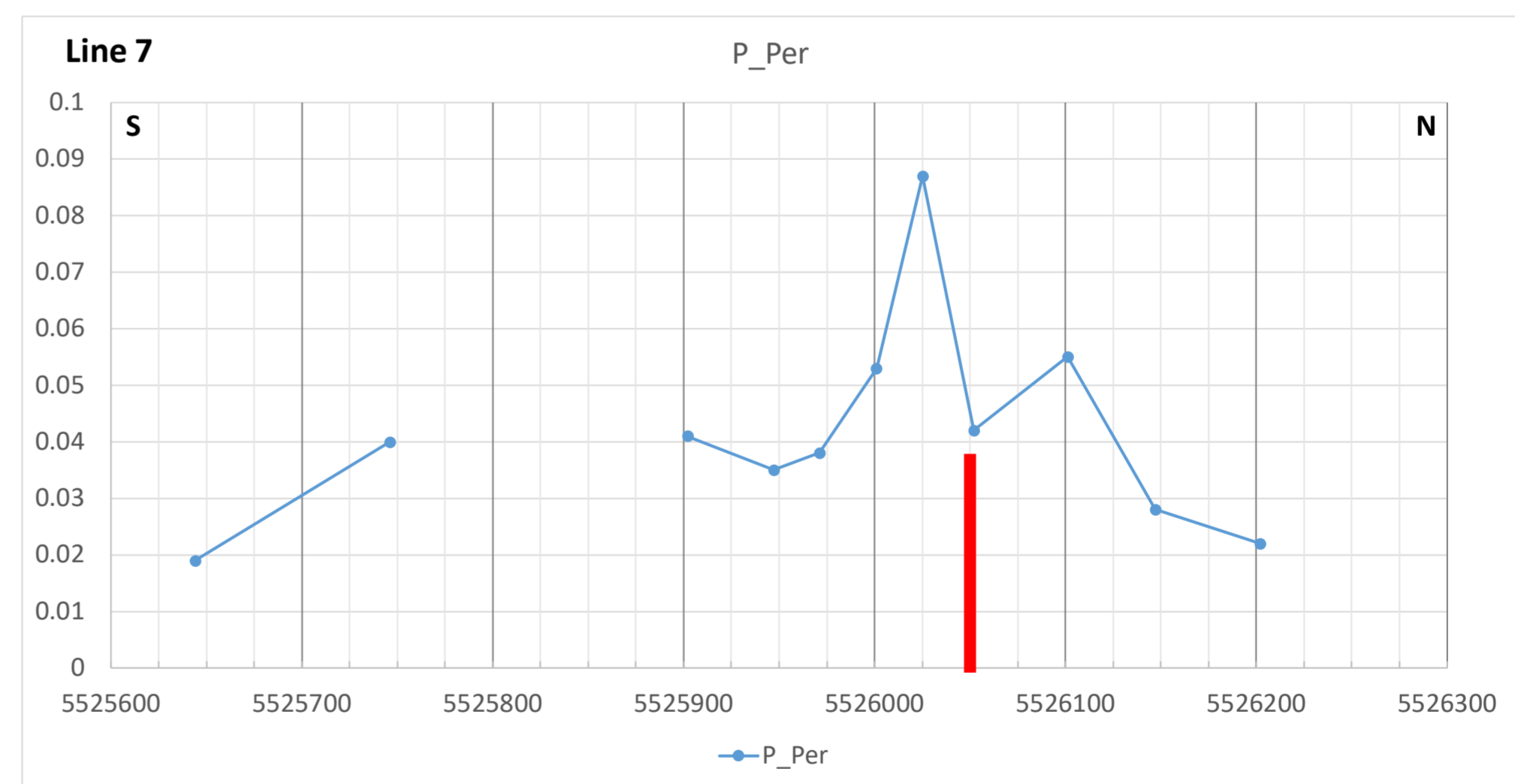
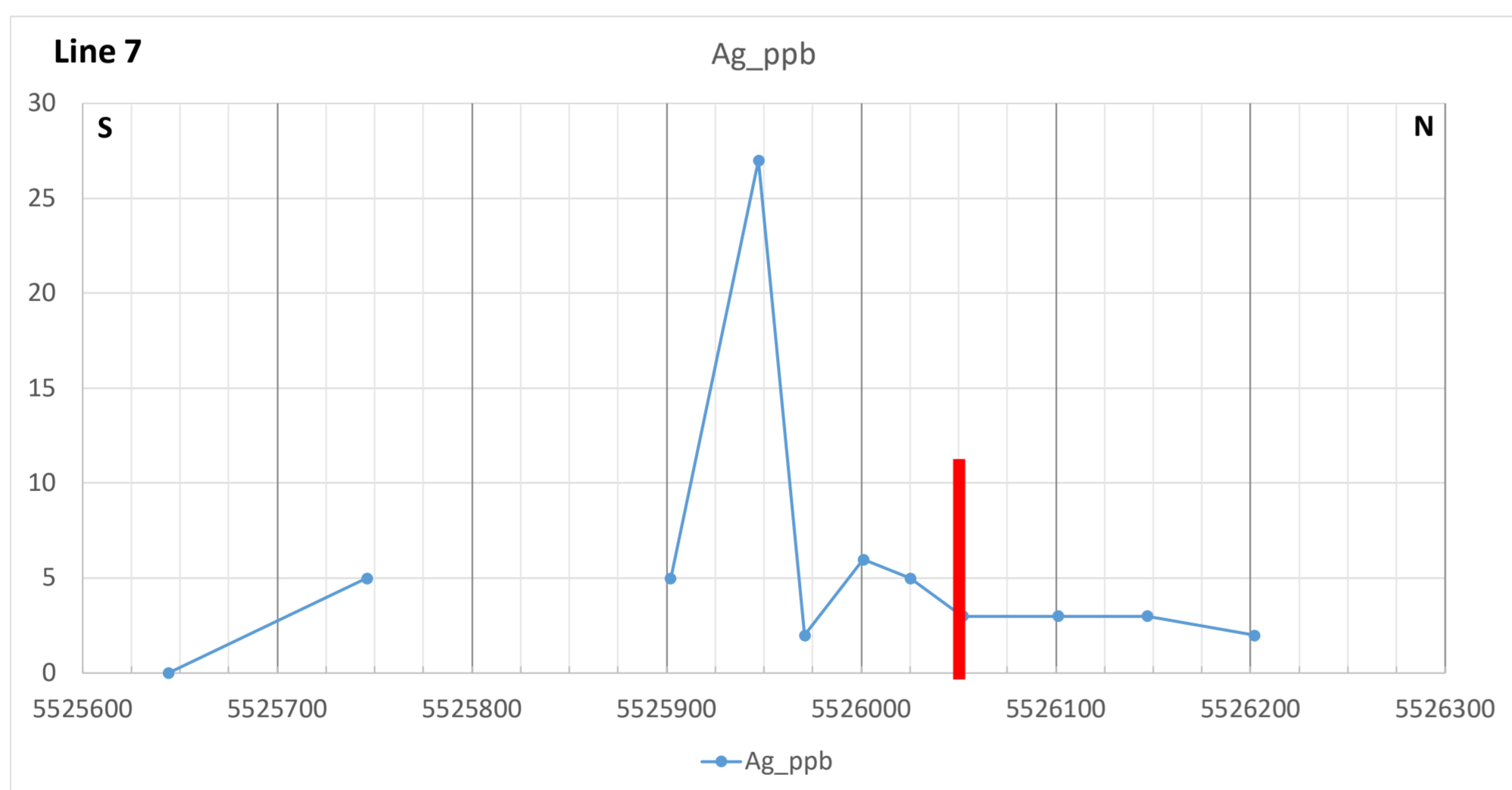
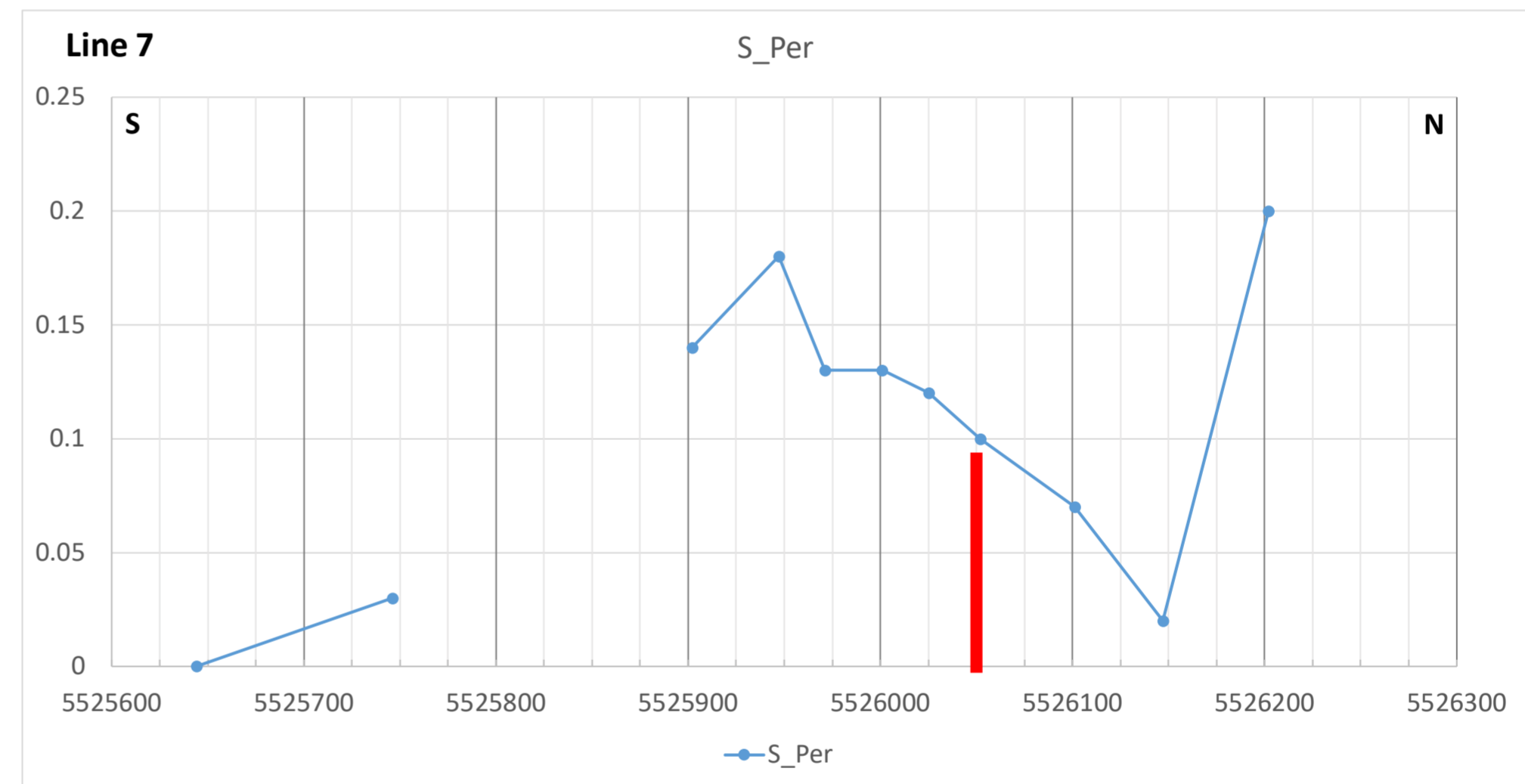
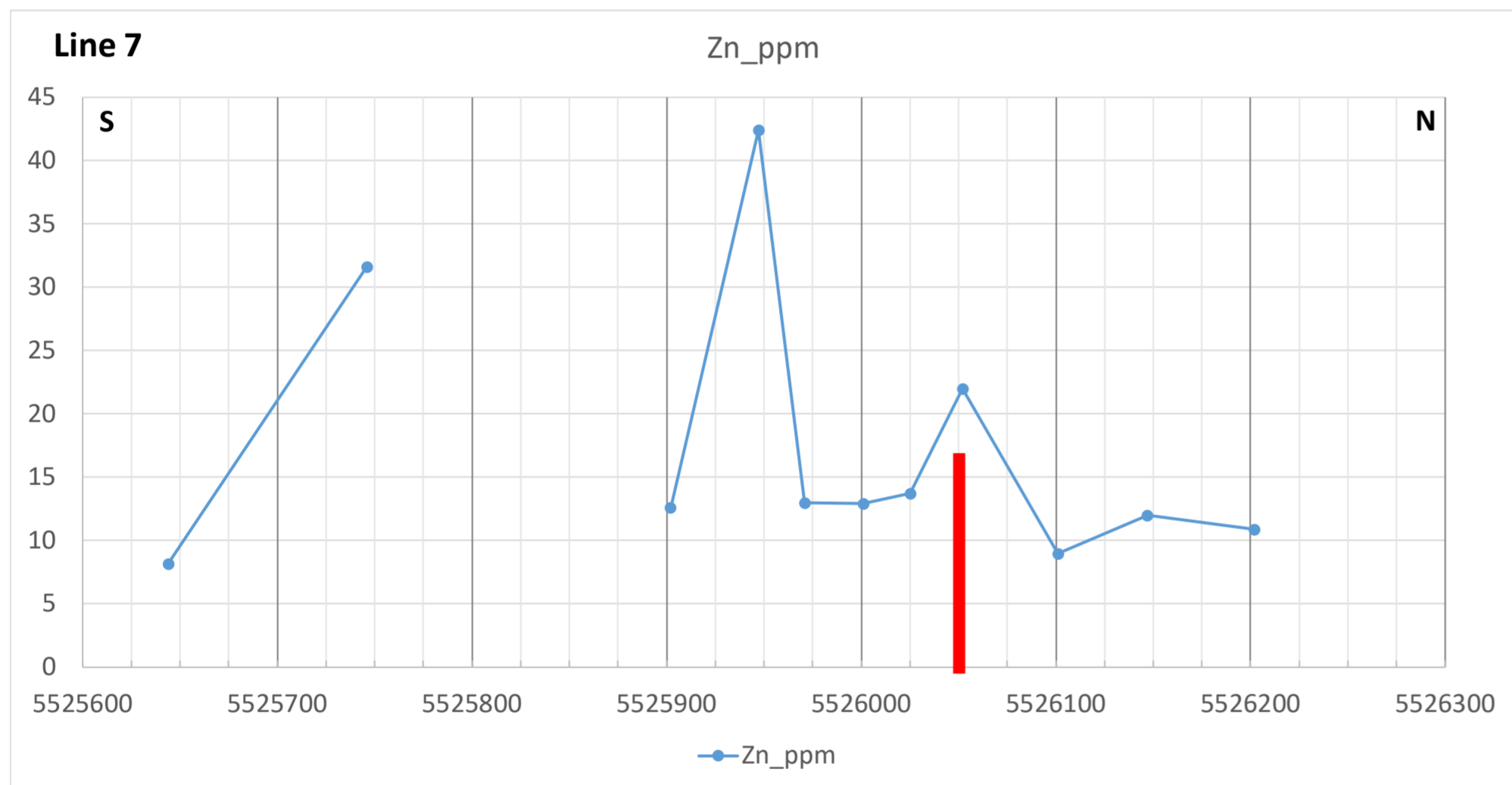
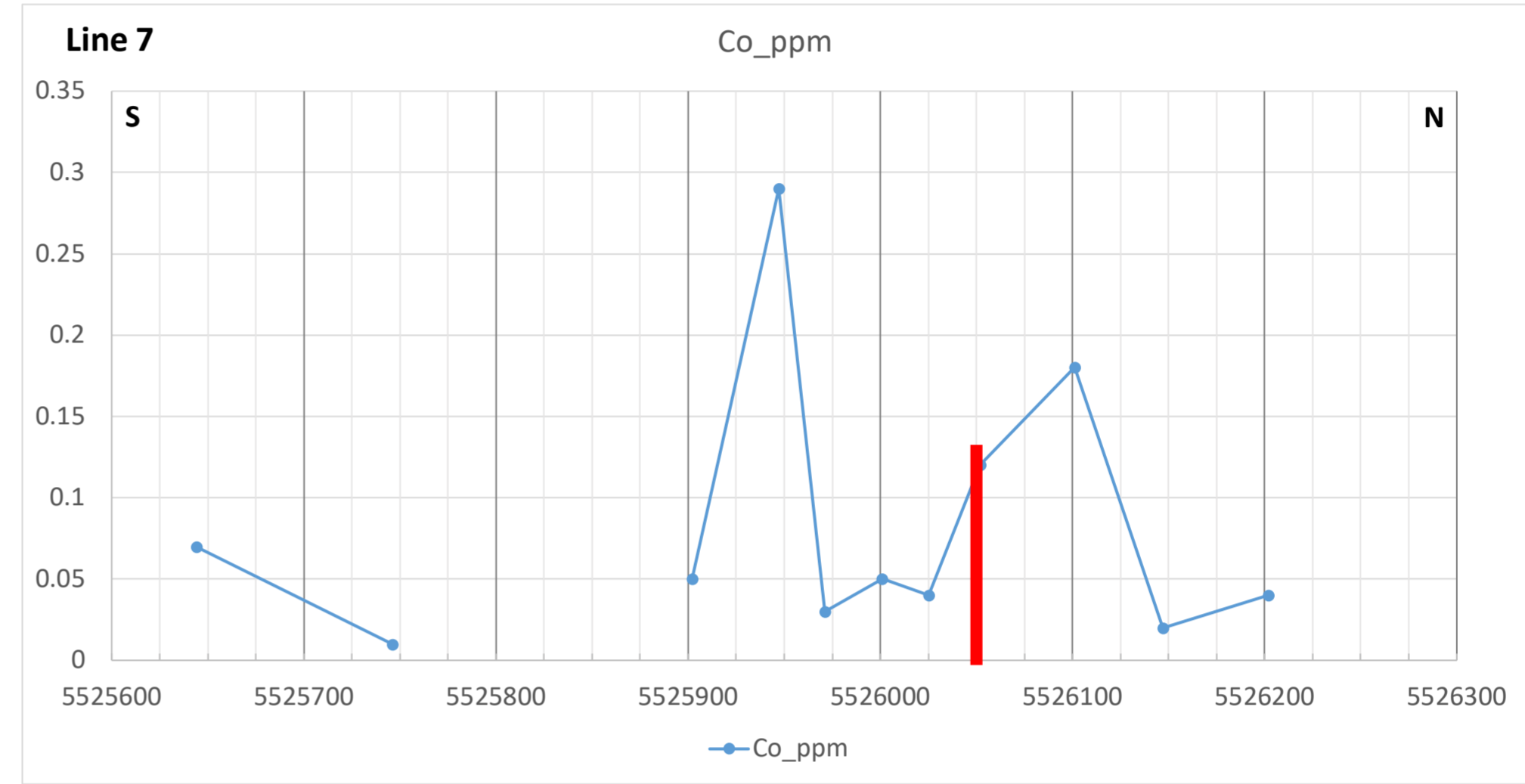
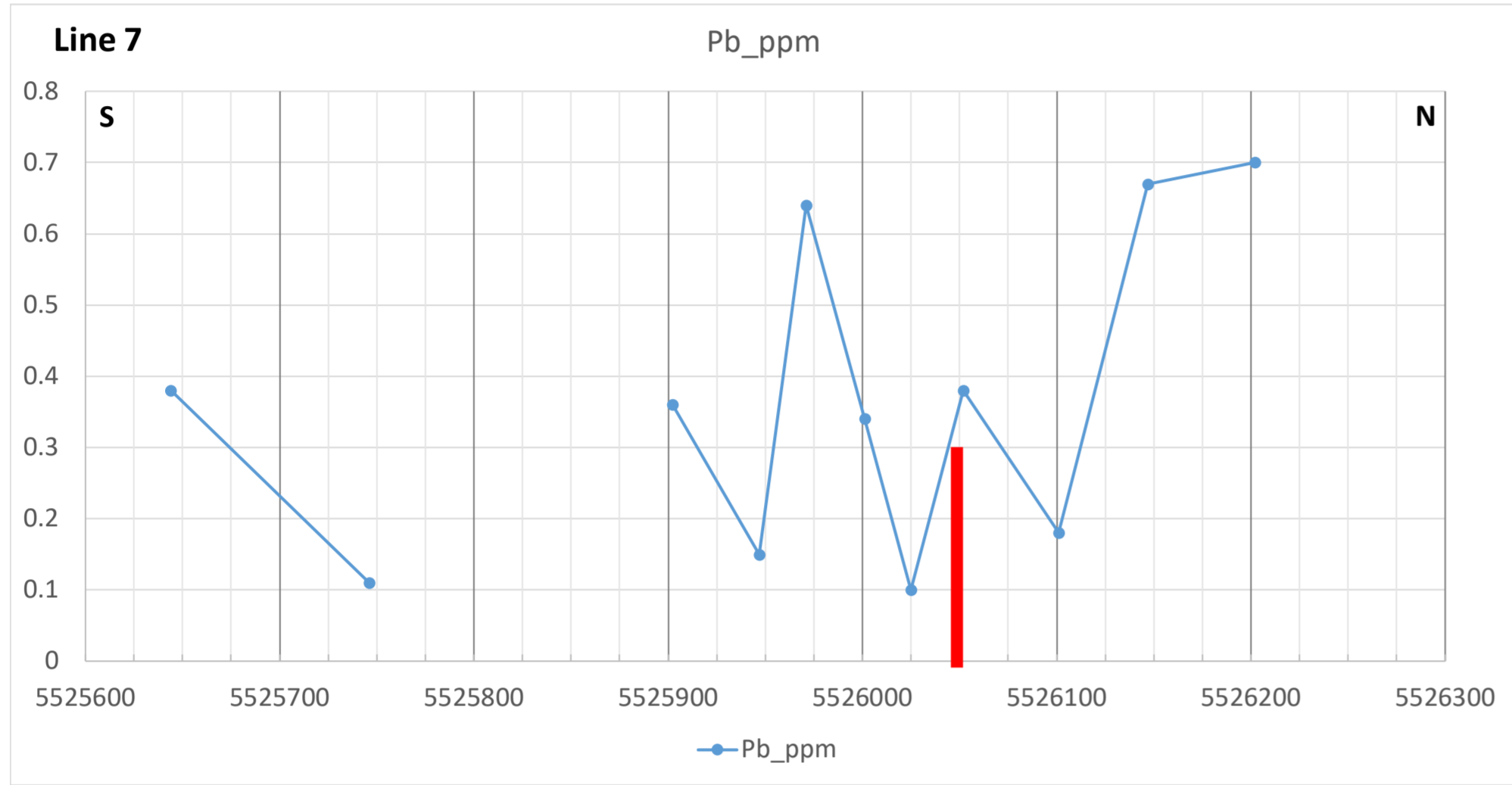
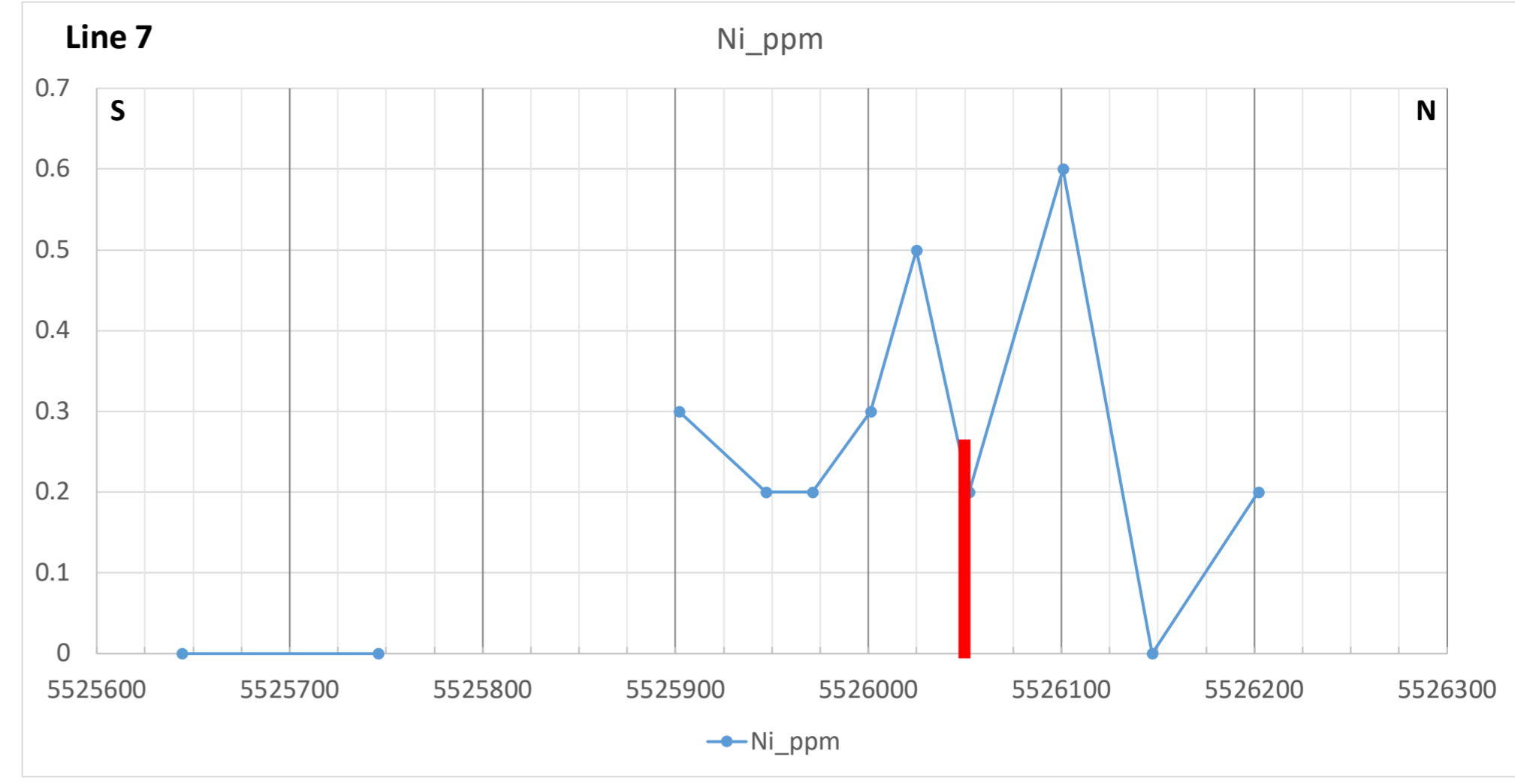
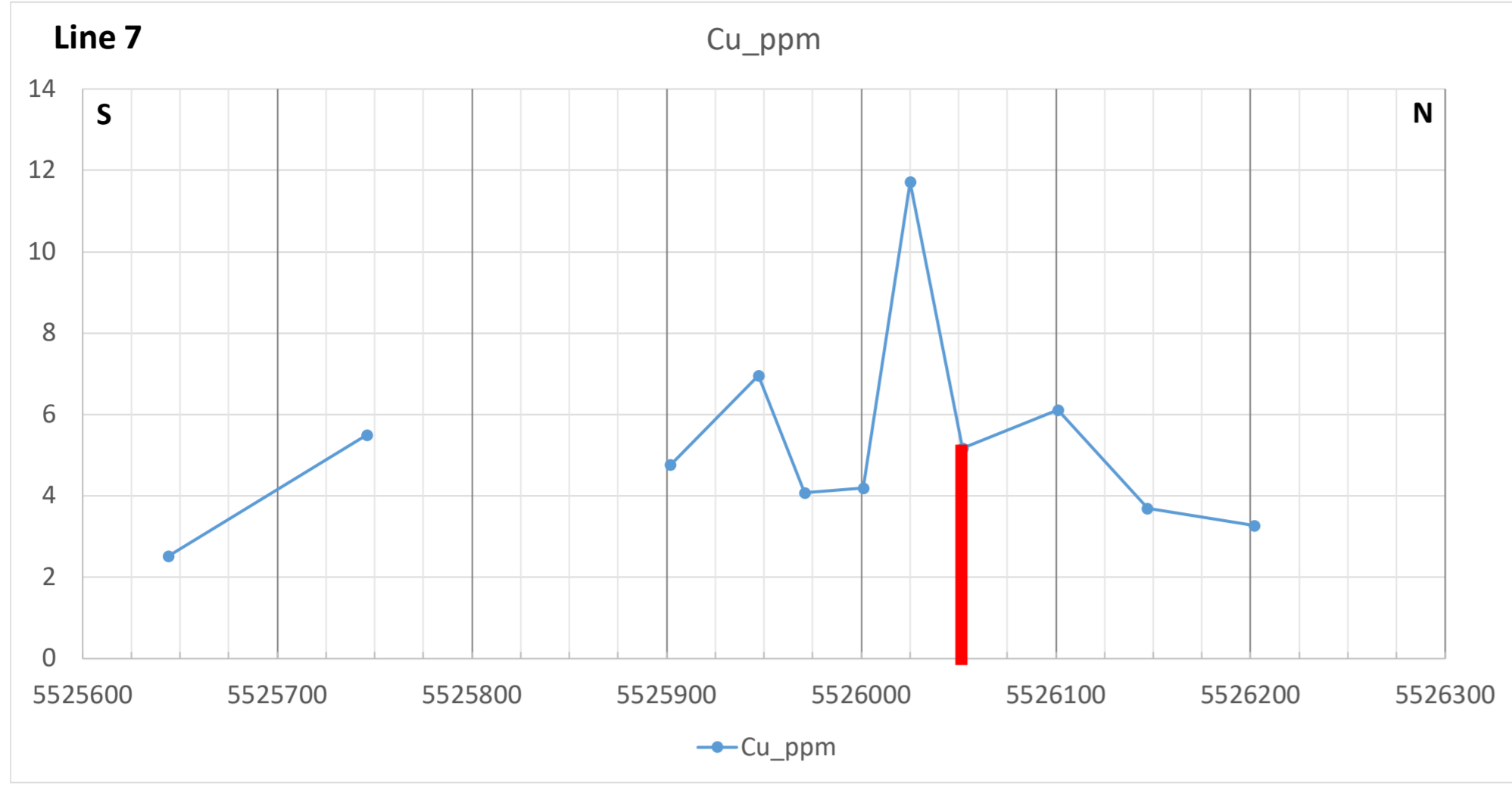
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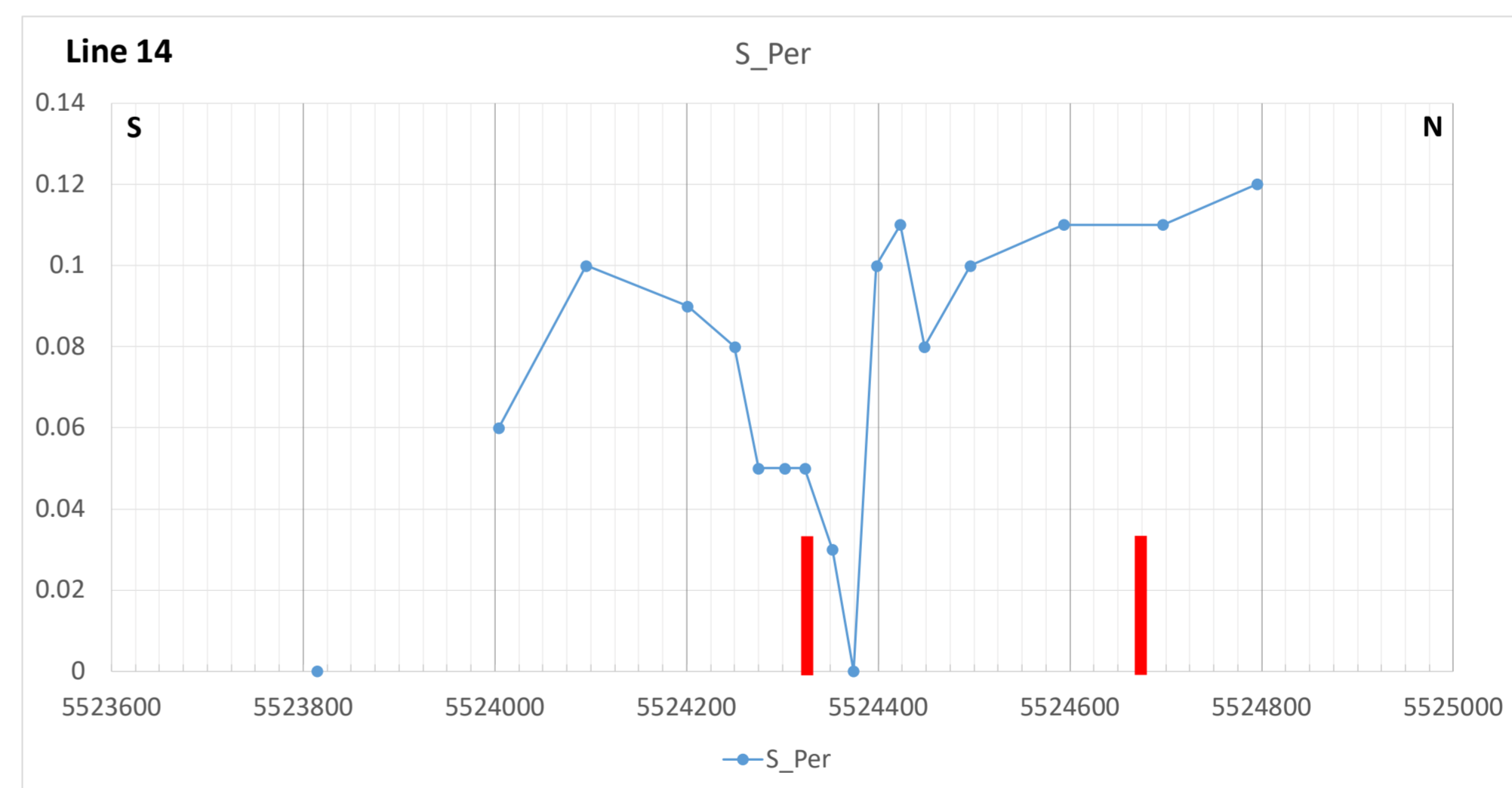
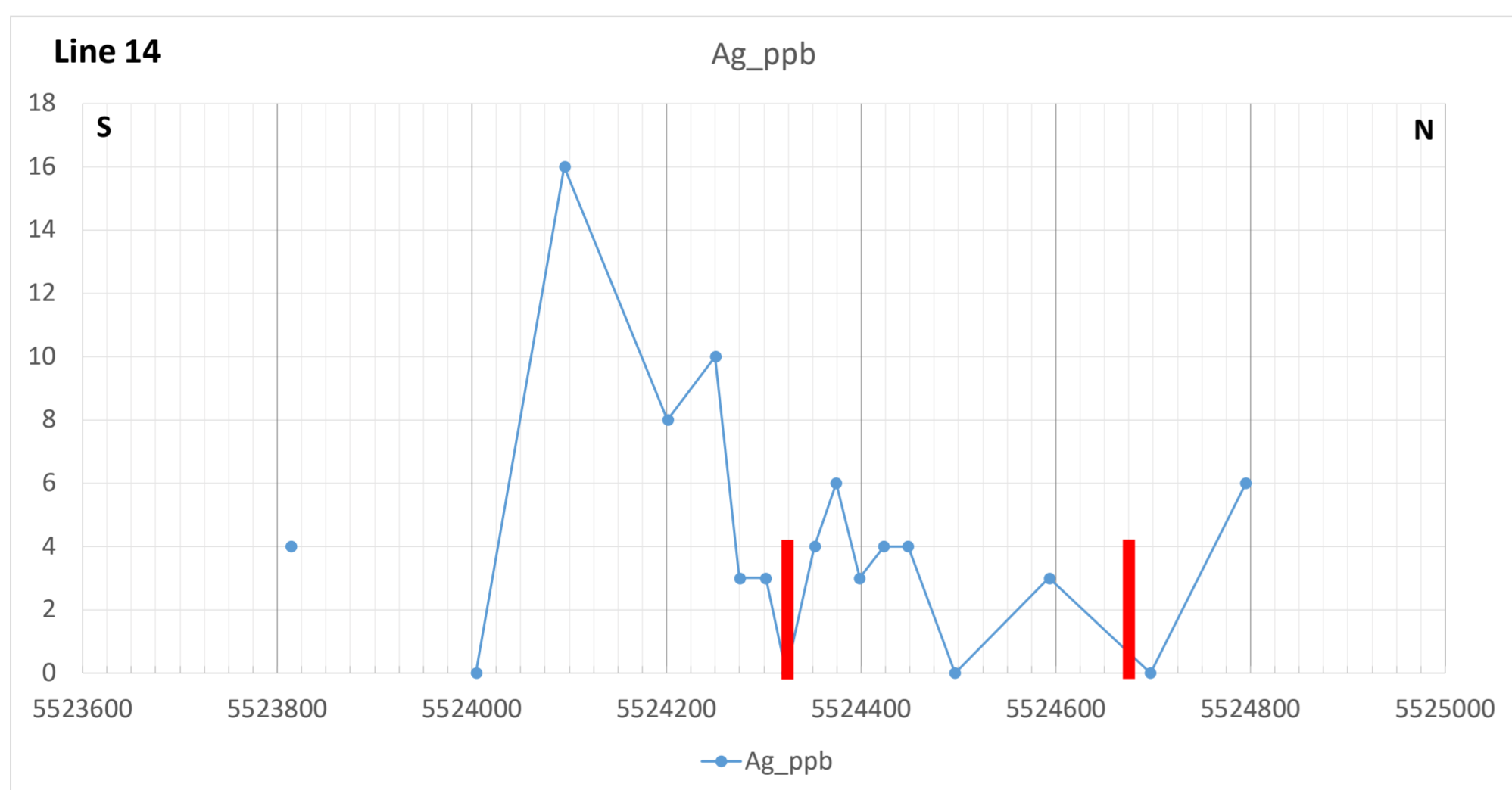
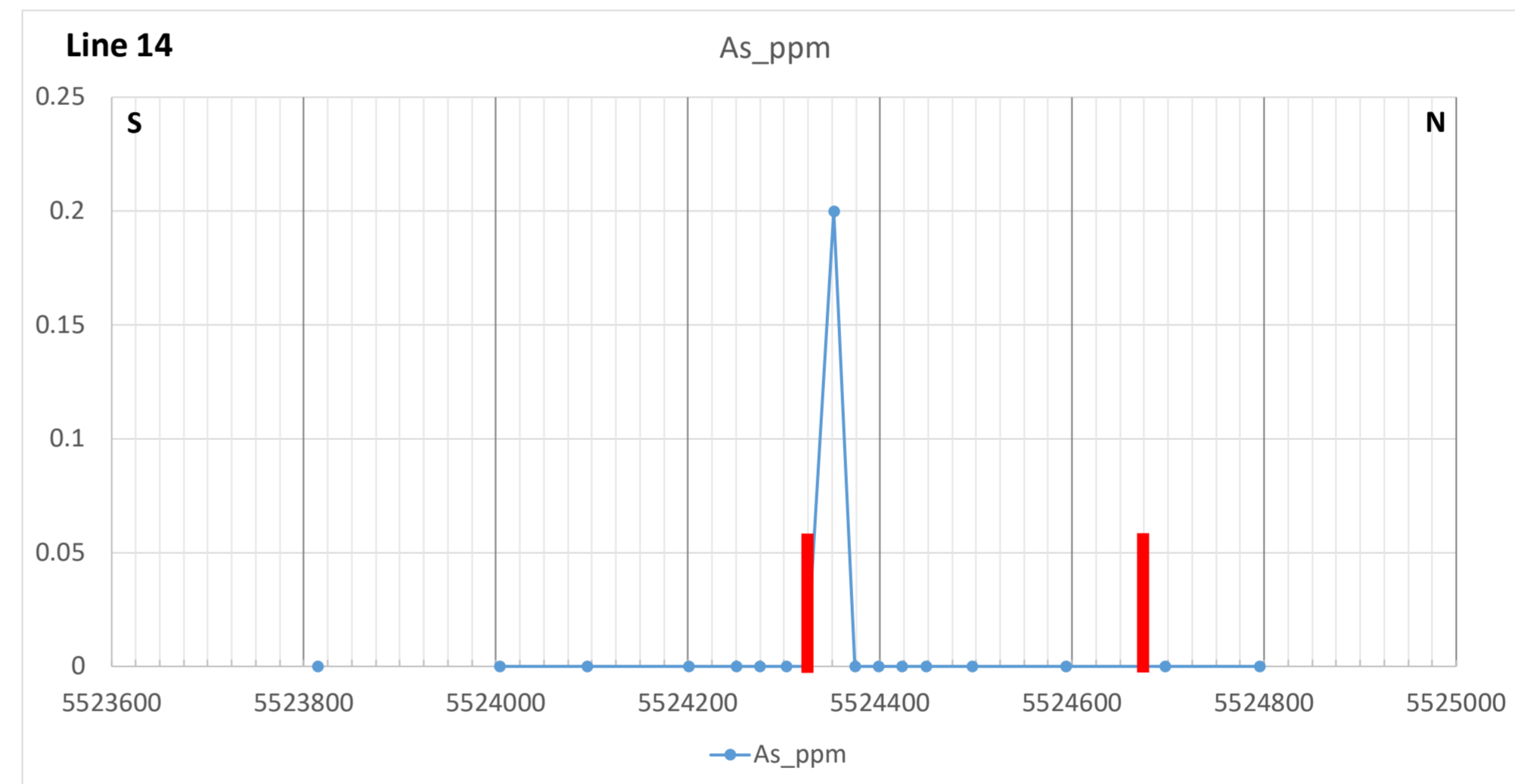
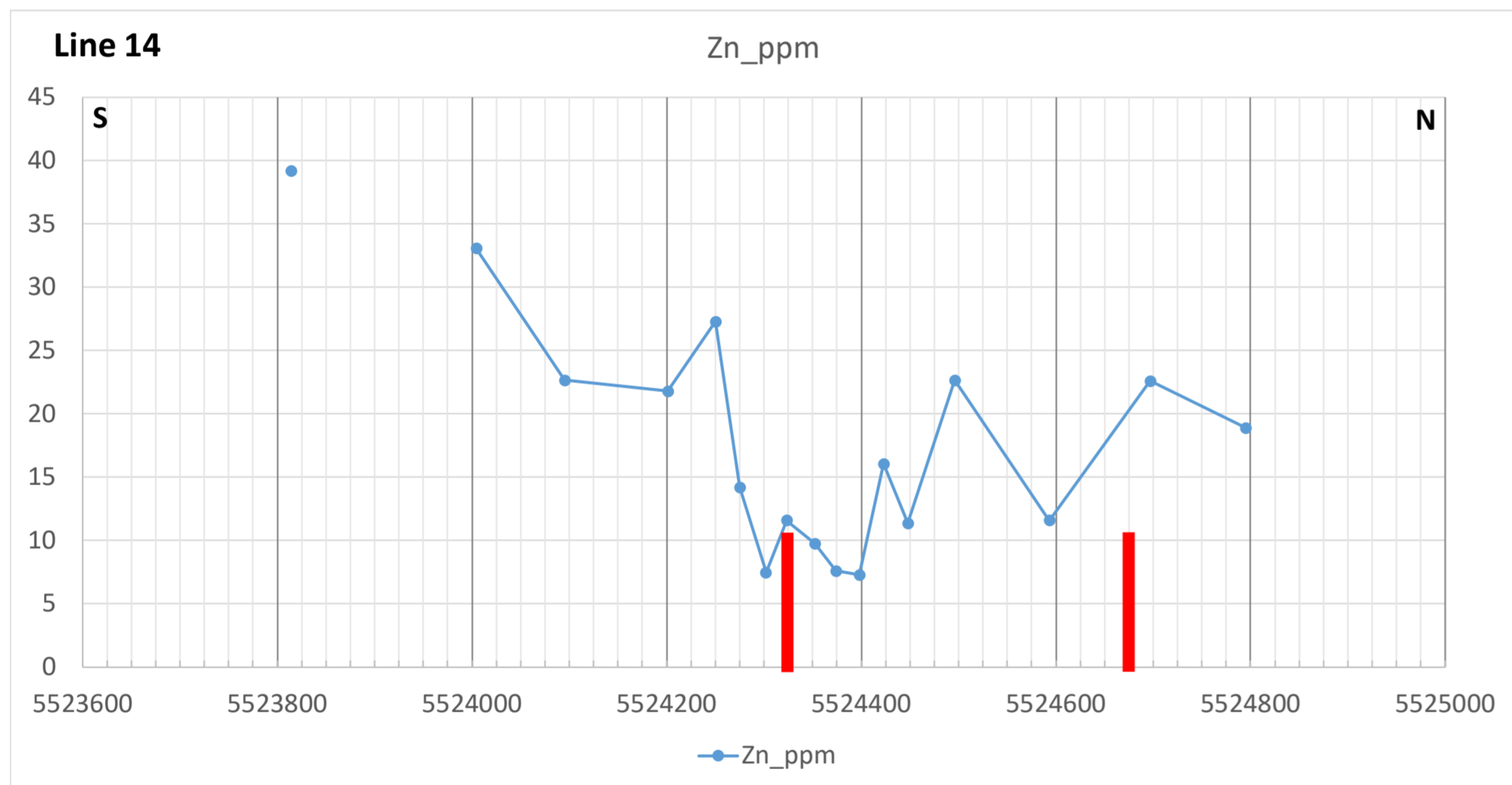
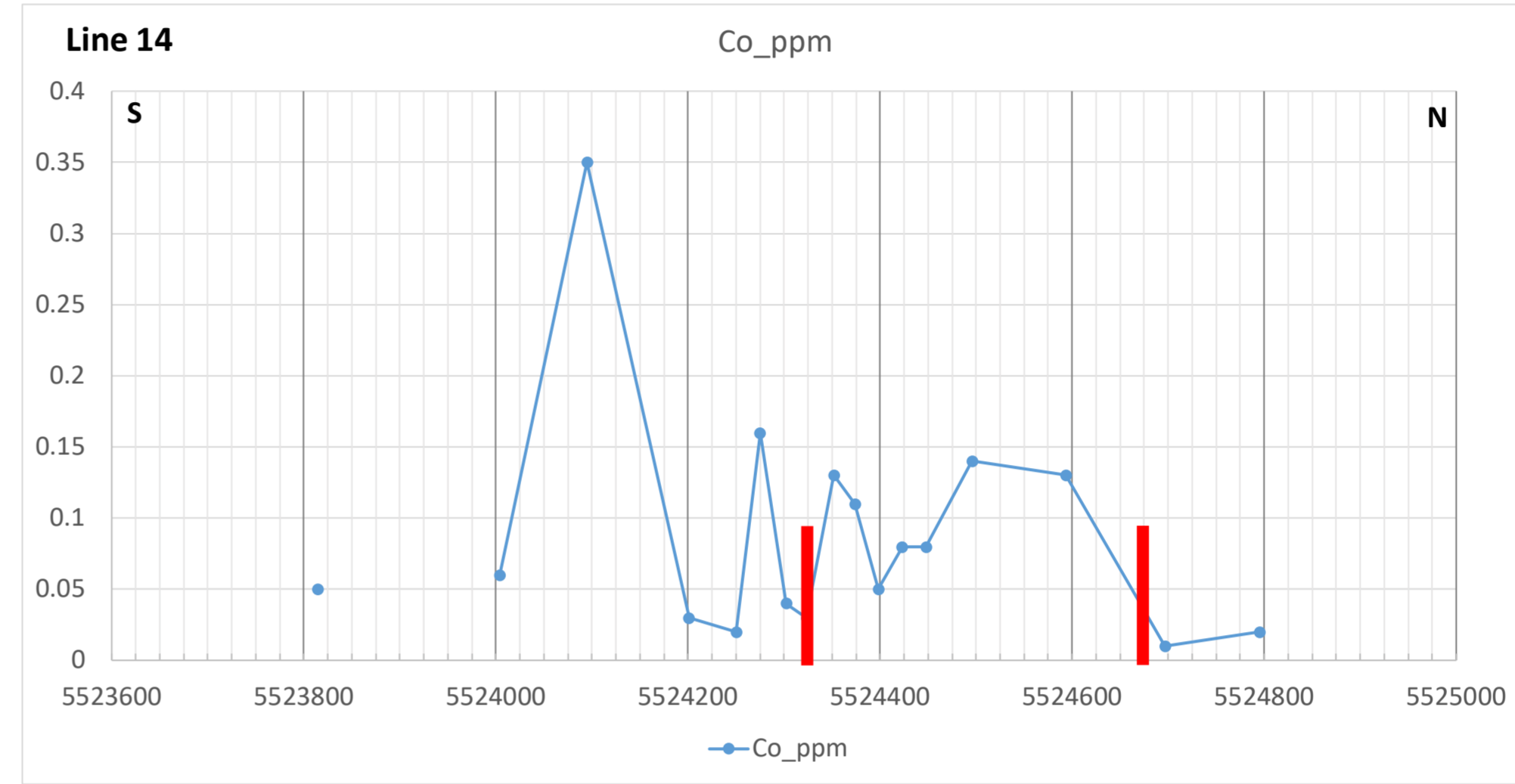
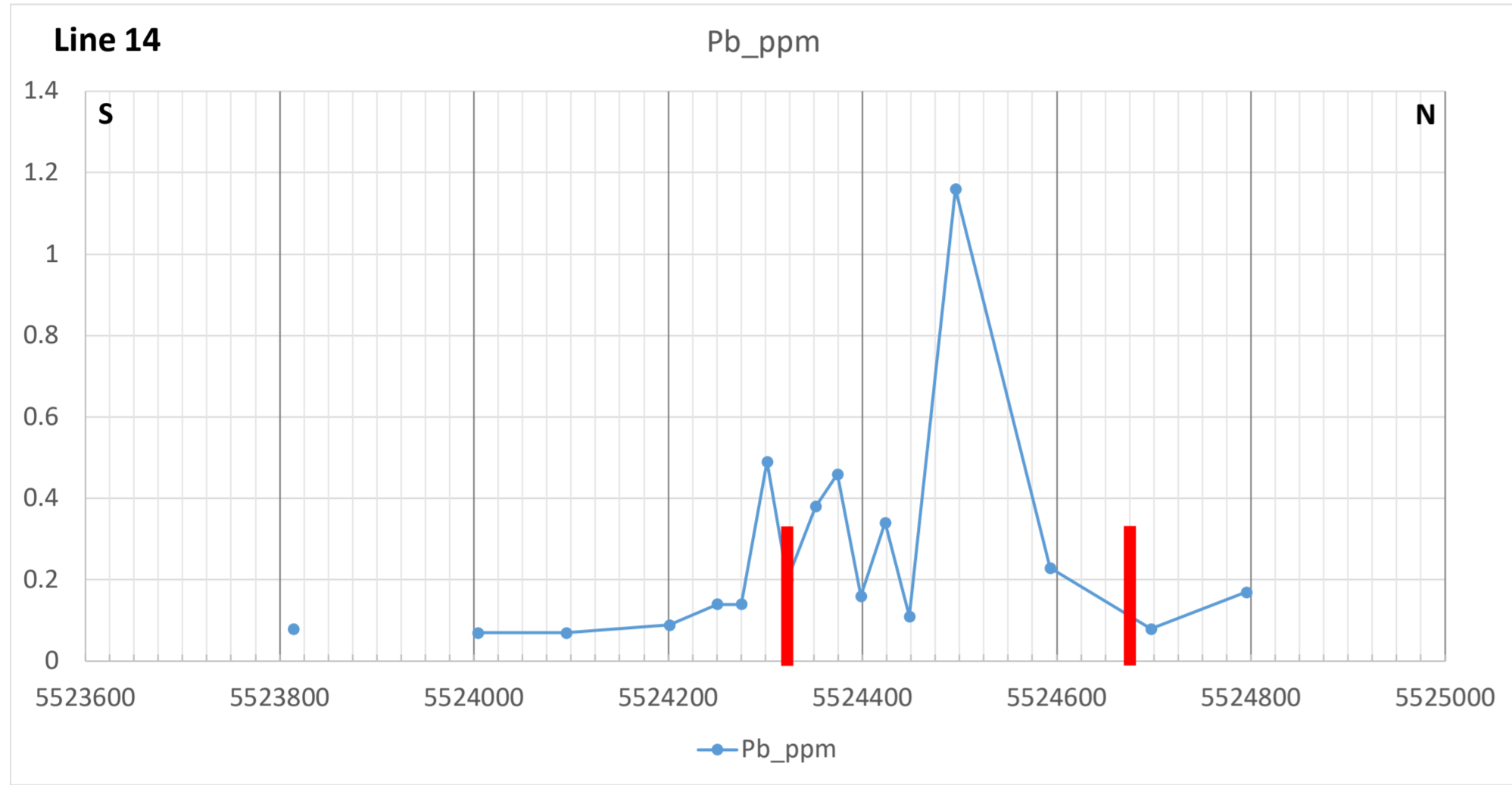
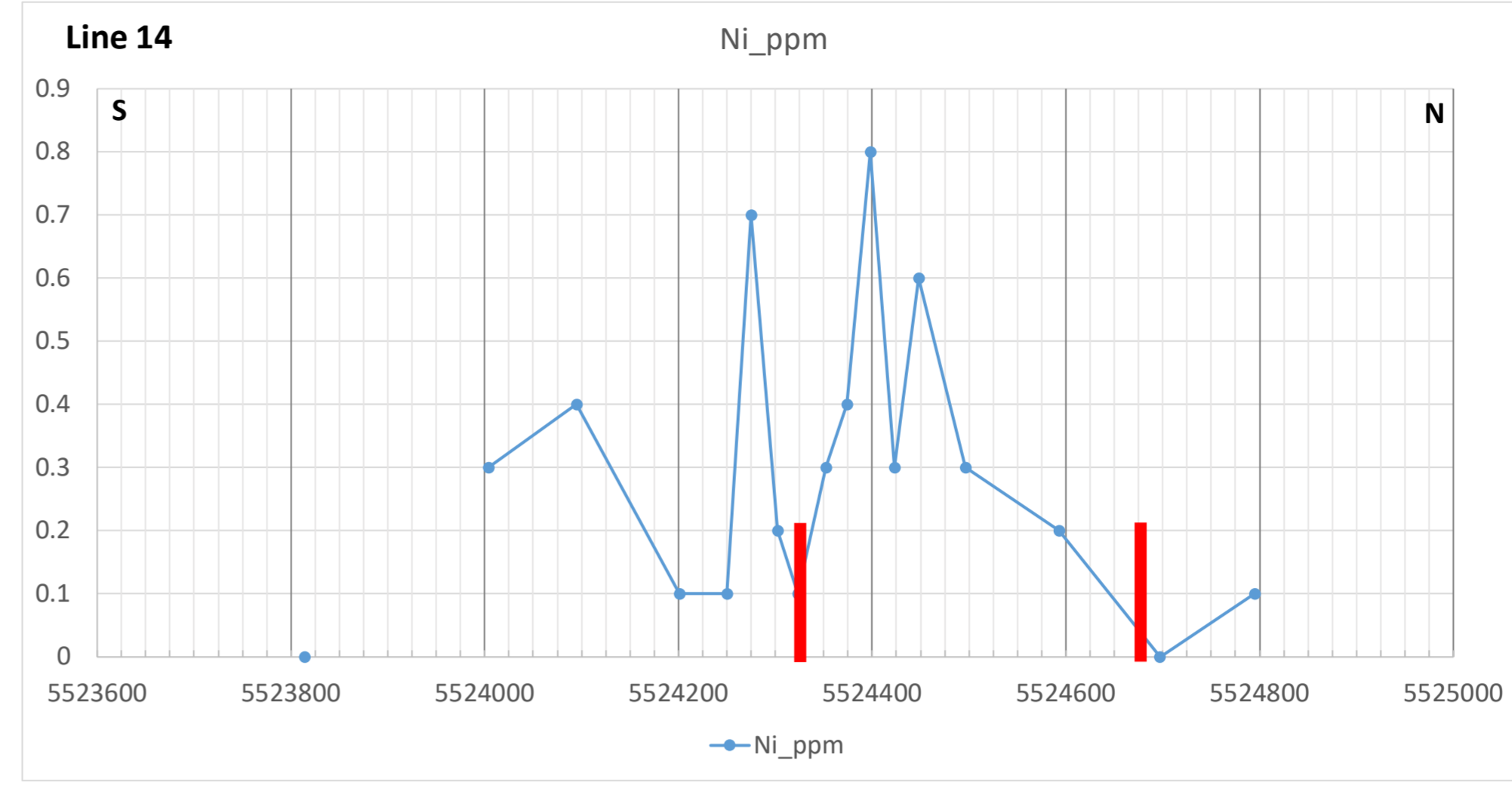
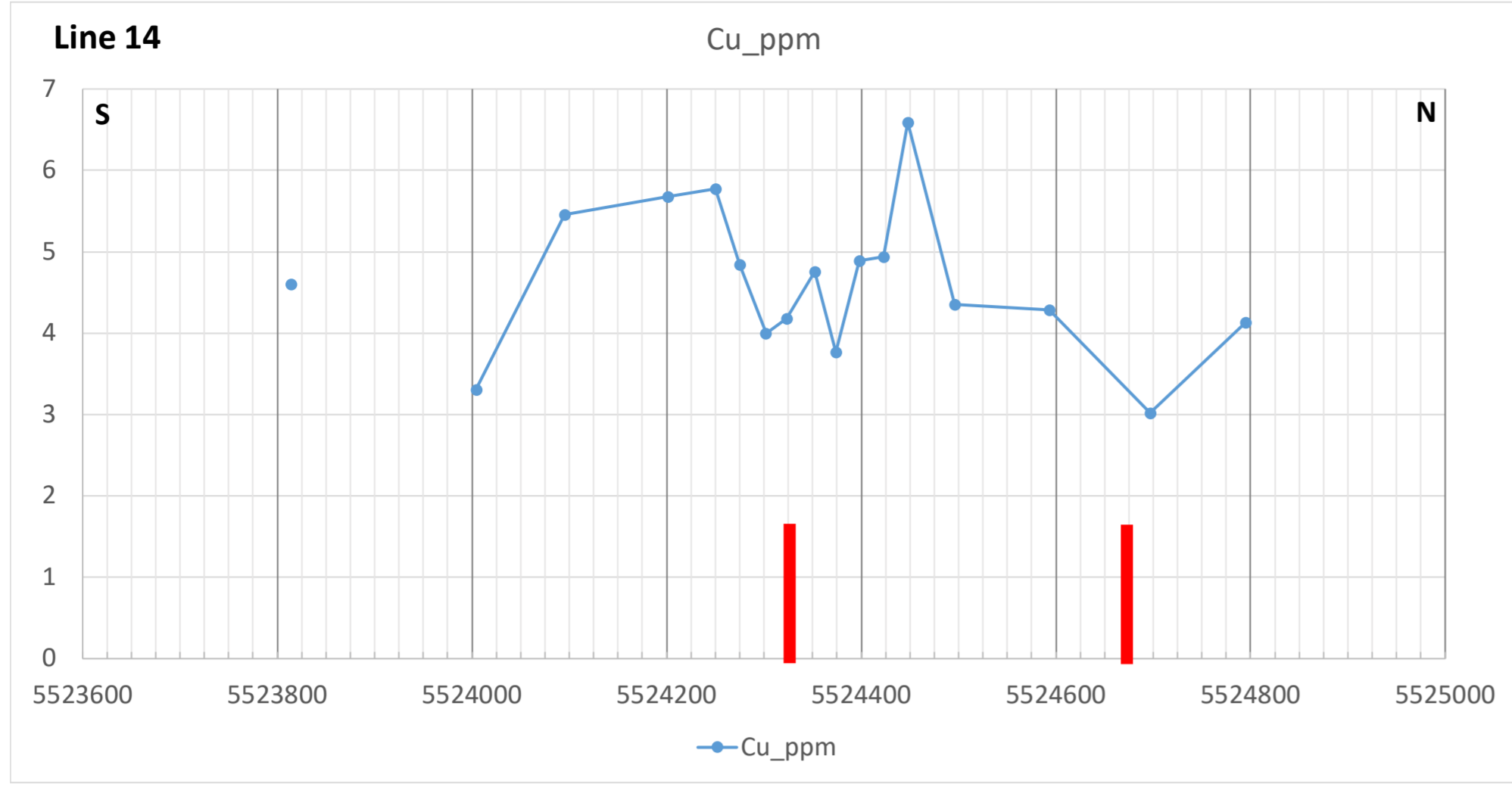
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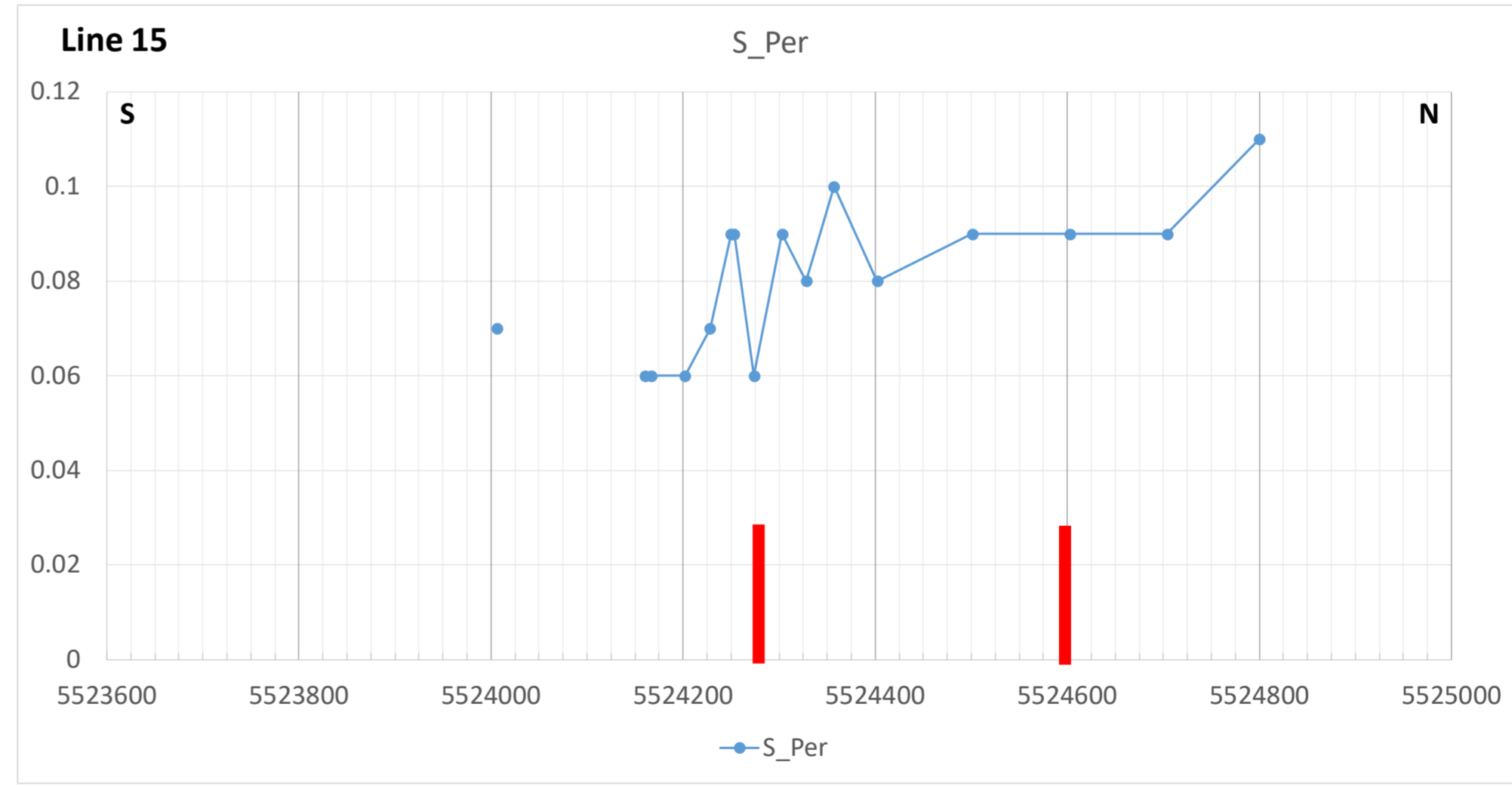
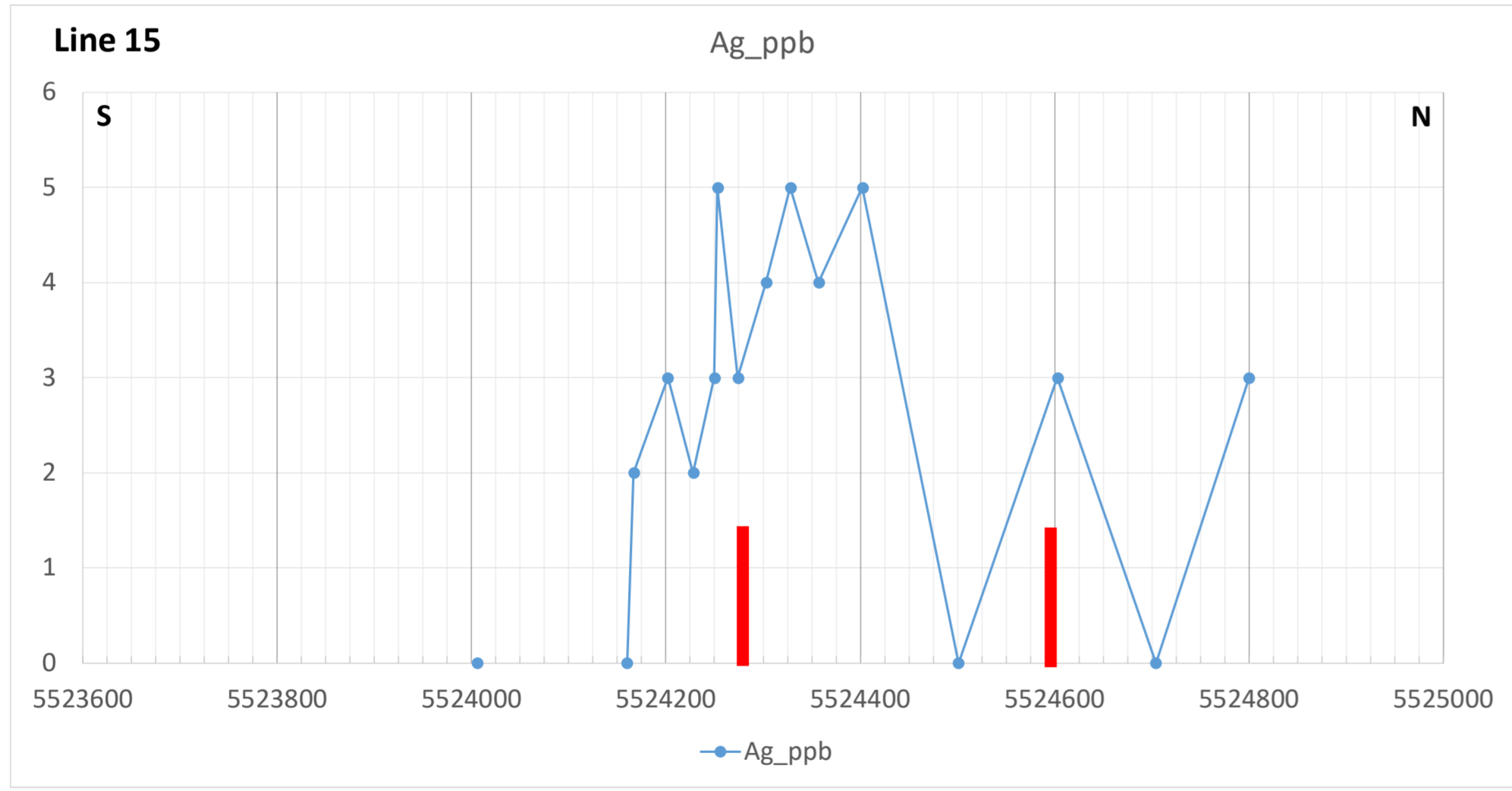
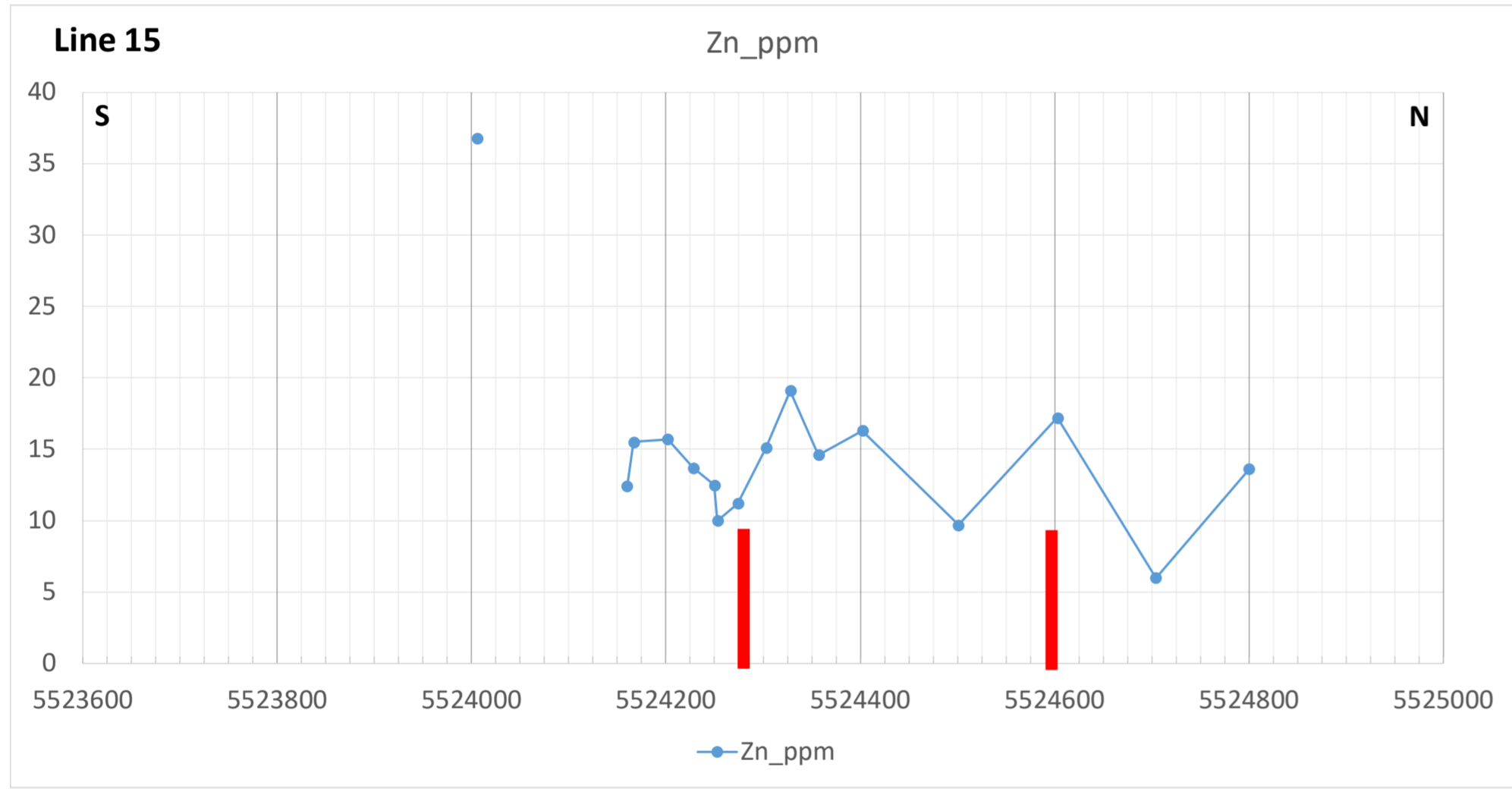
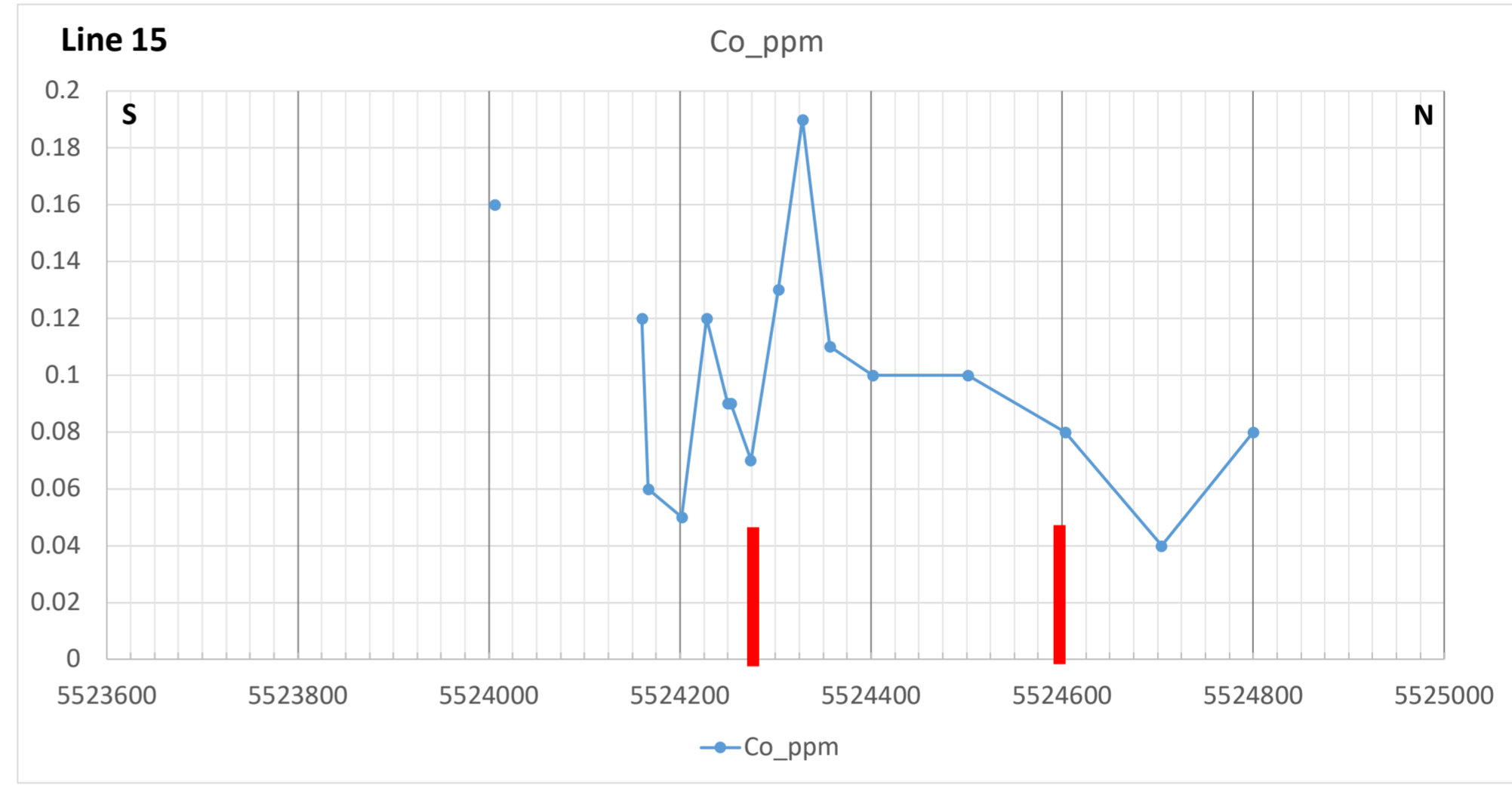
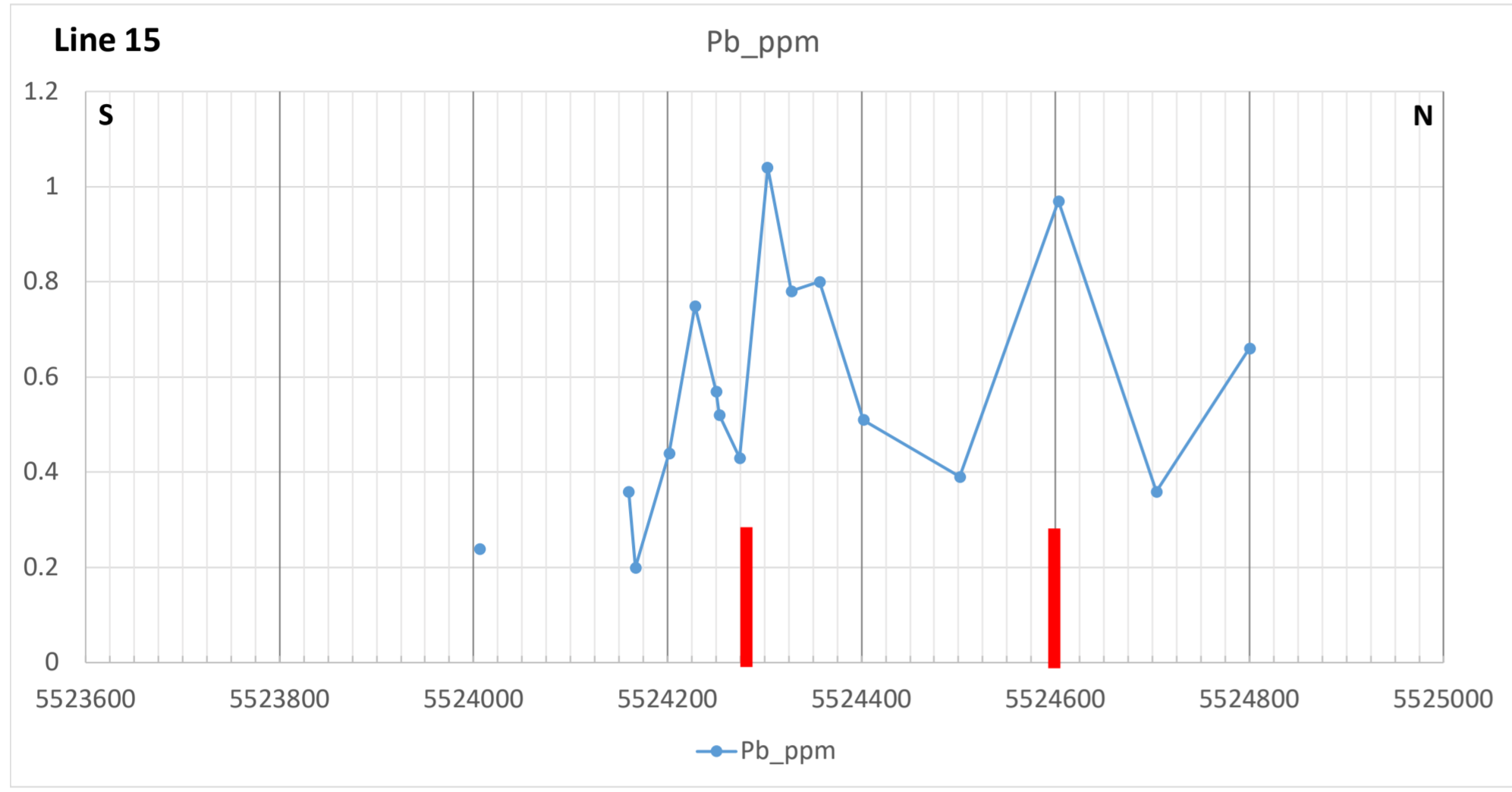
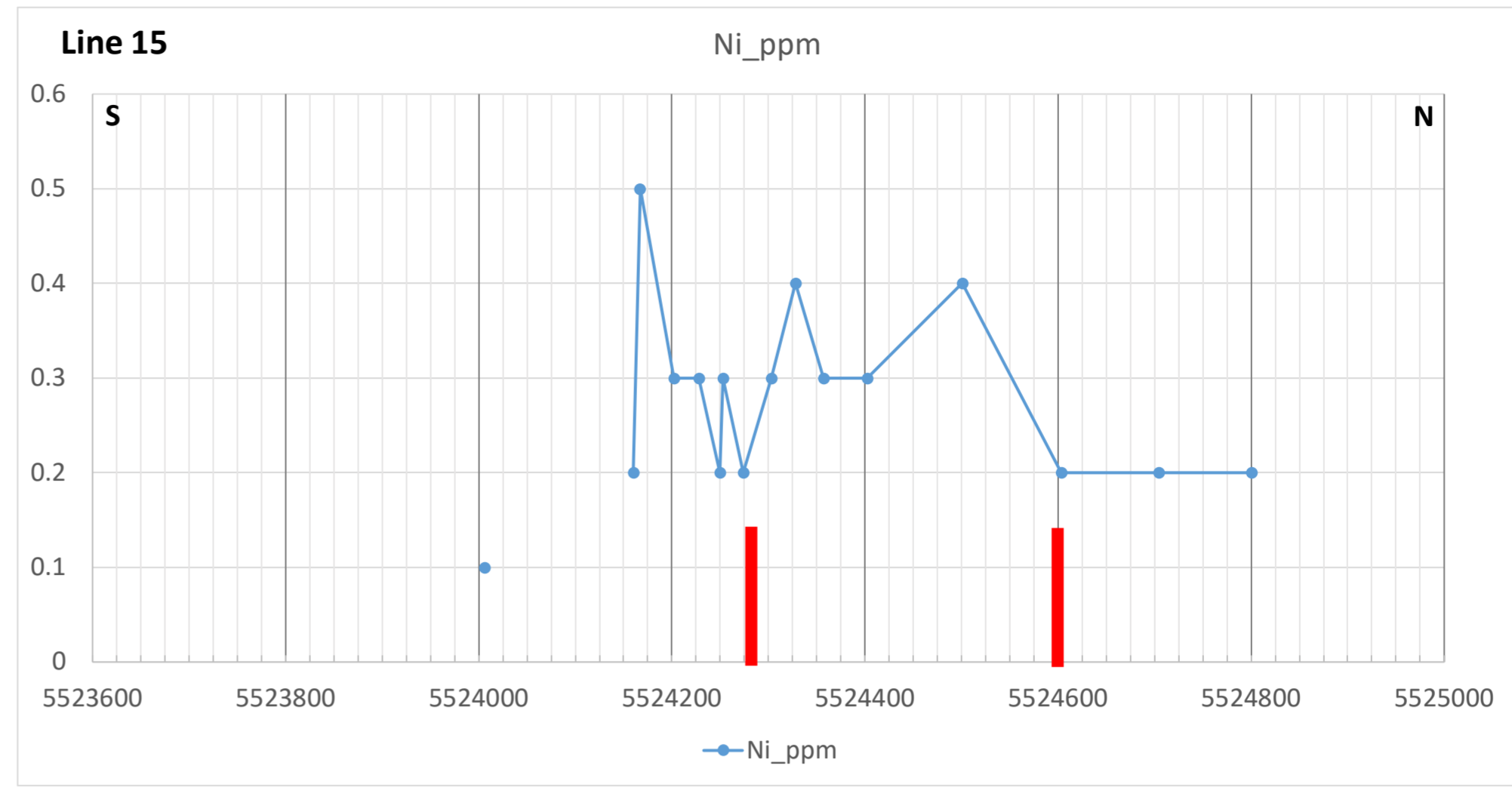
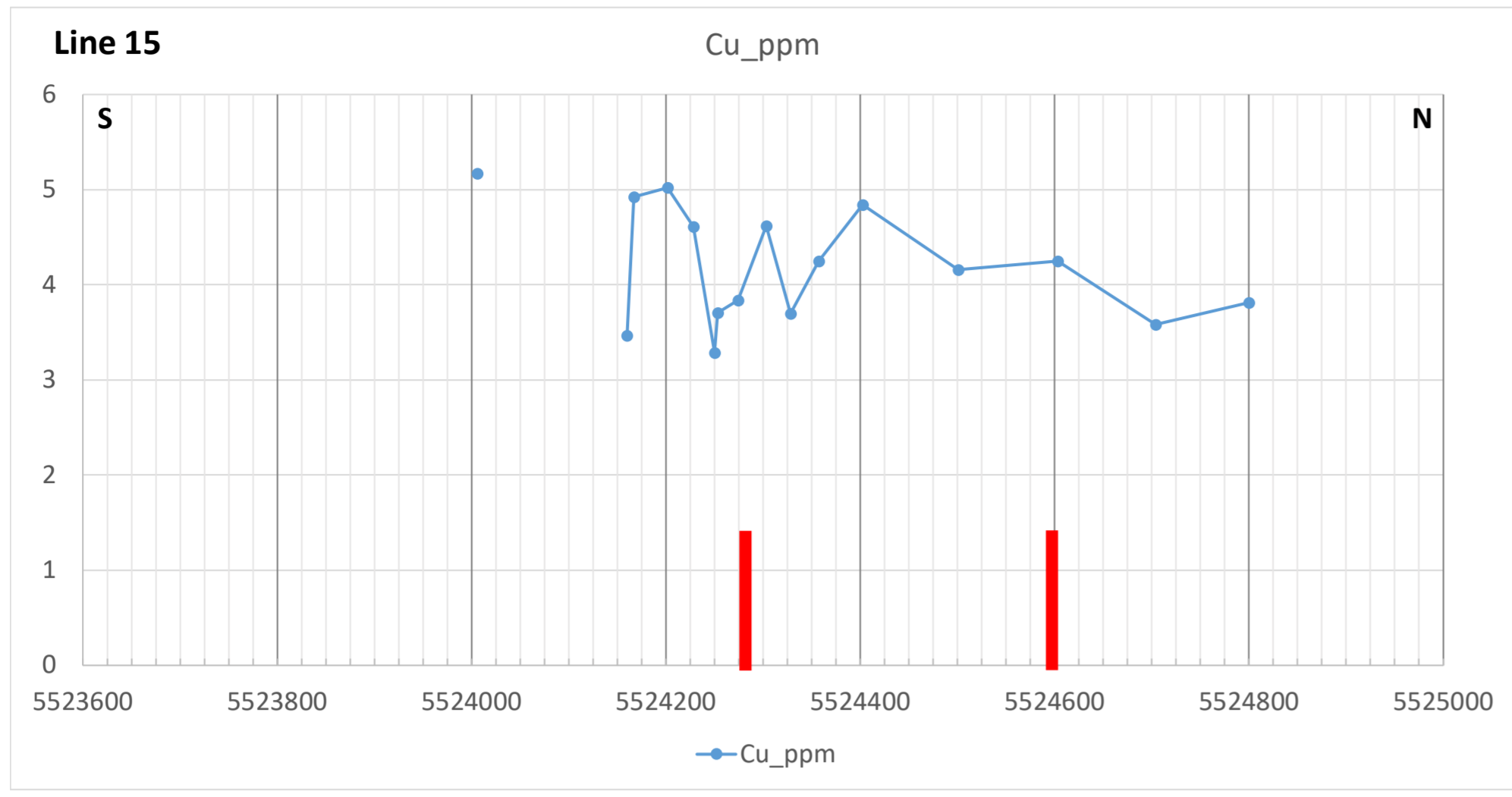
Line 7



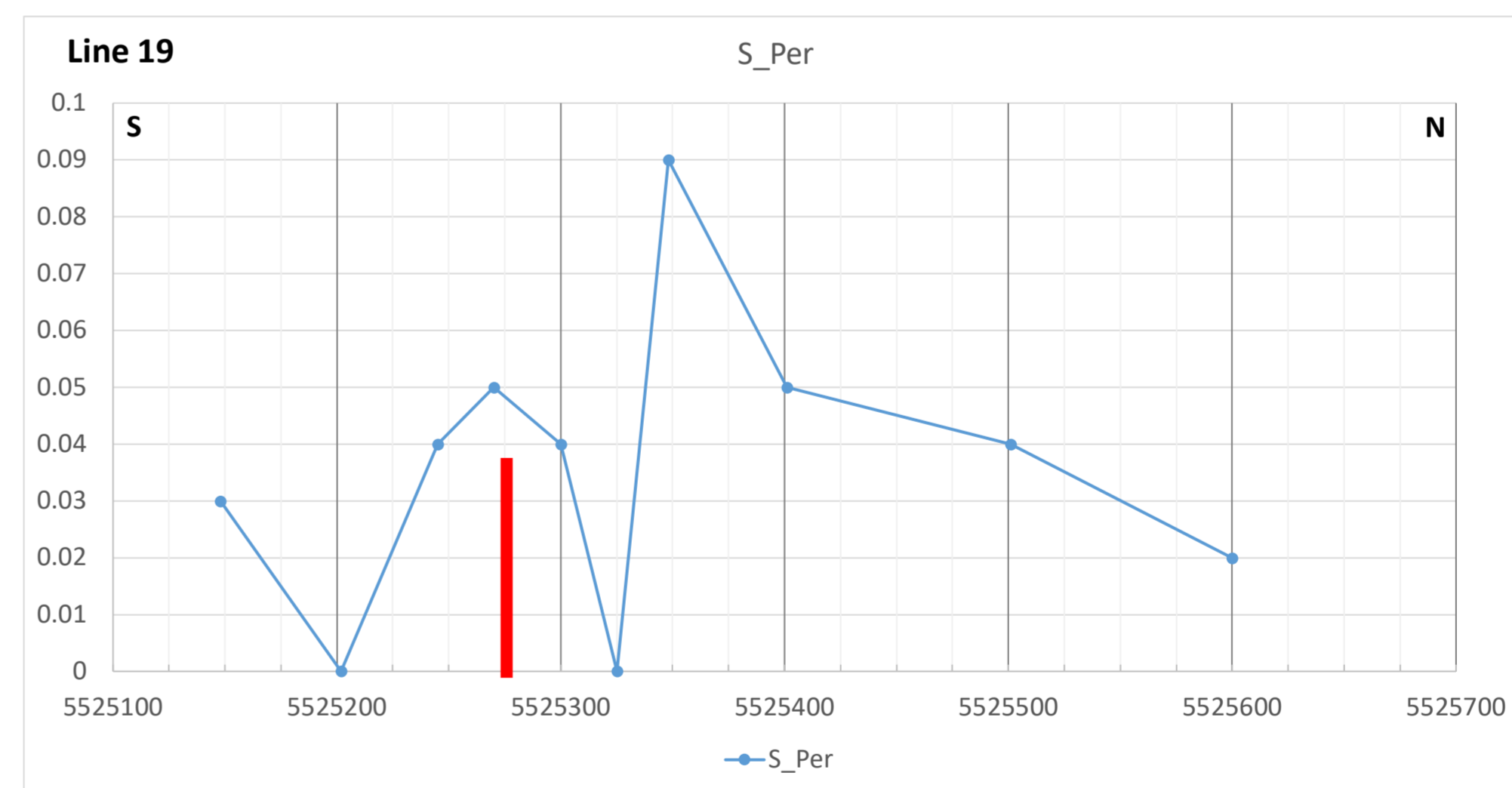
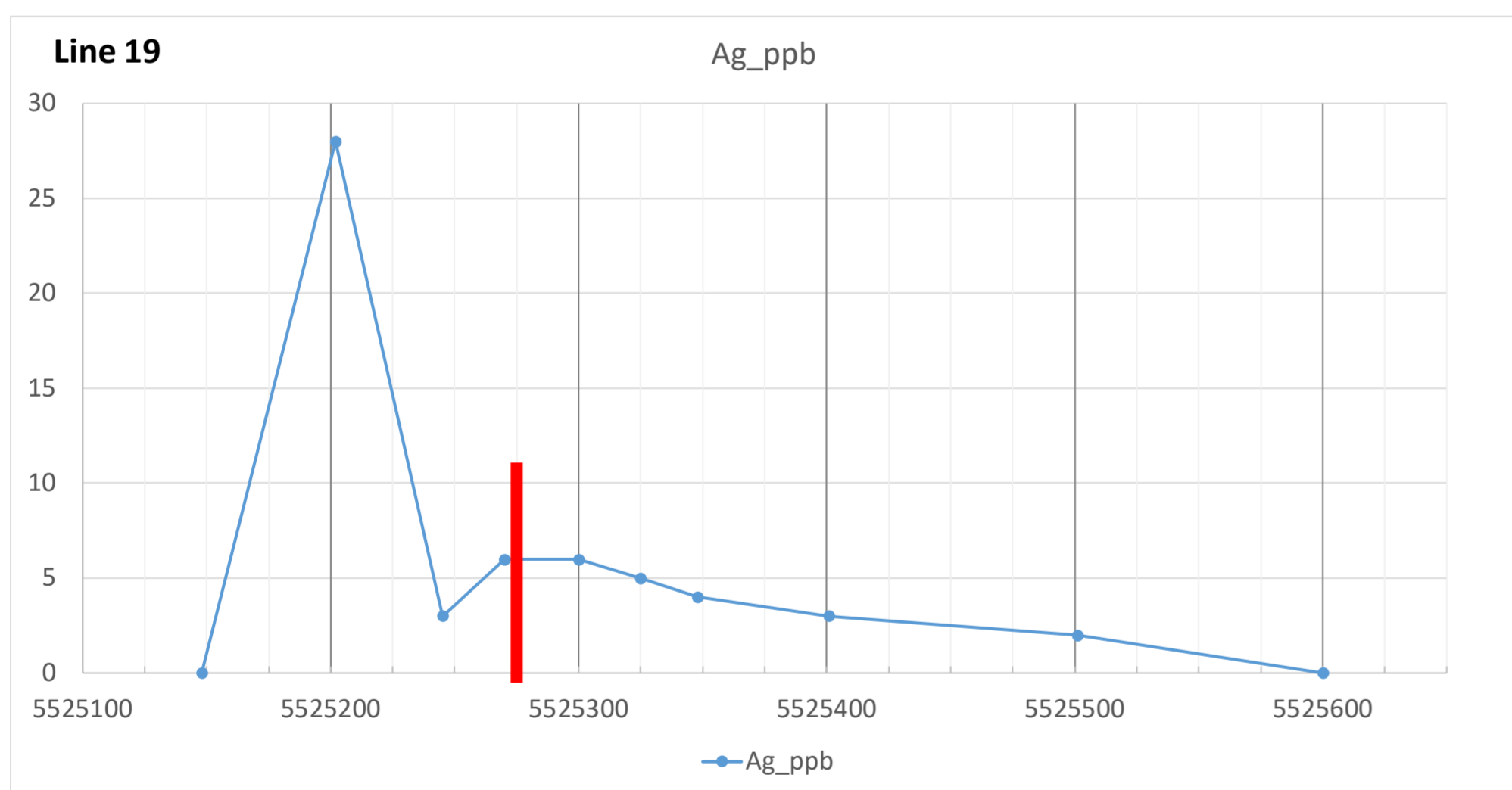
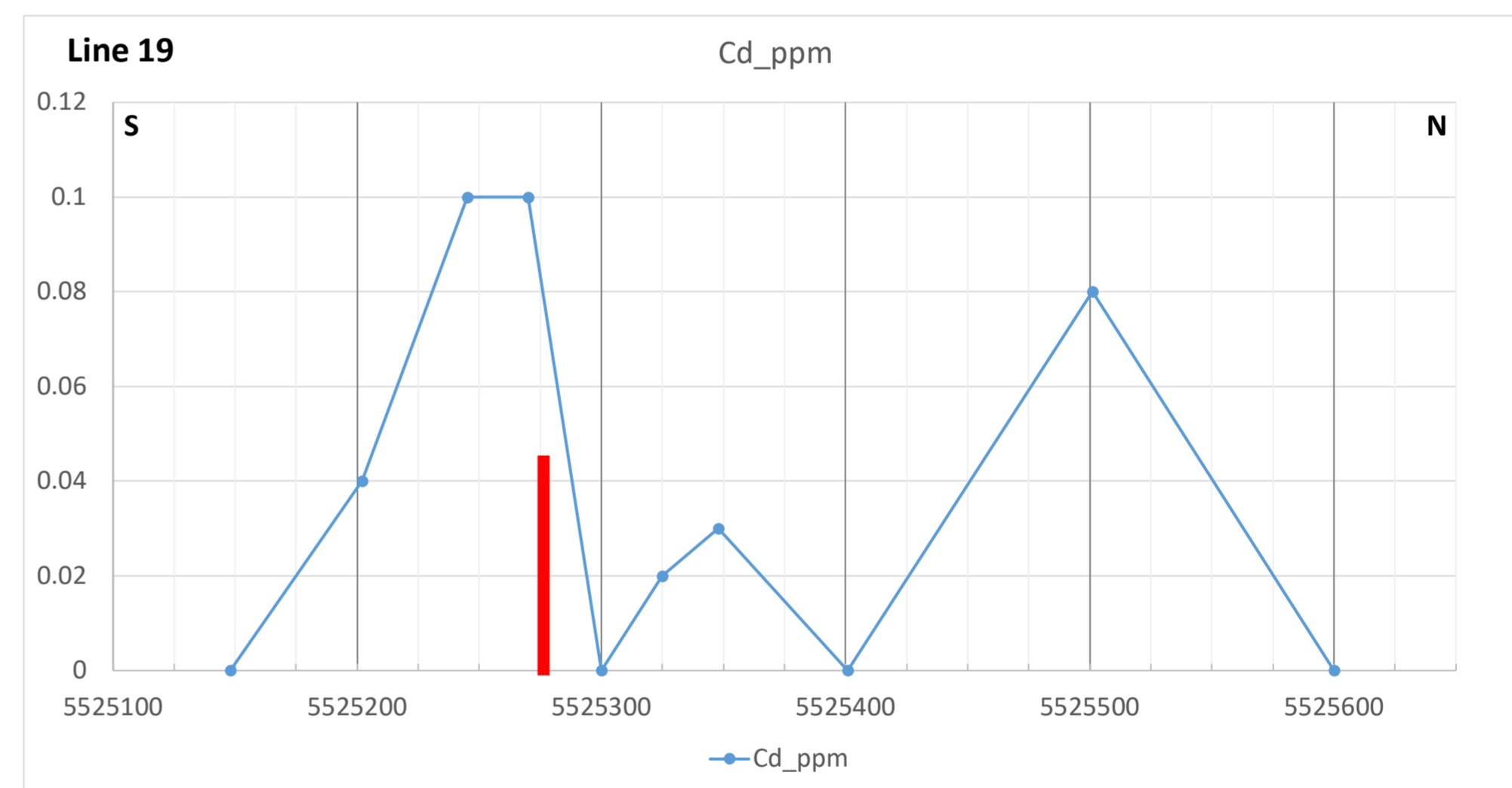
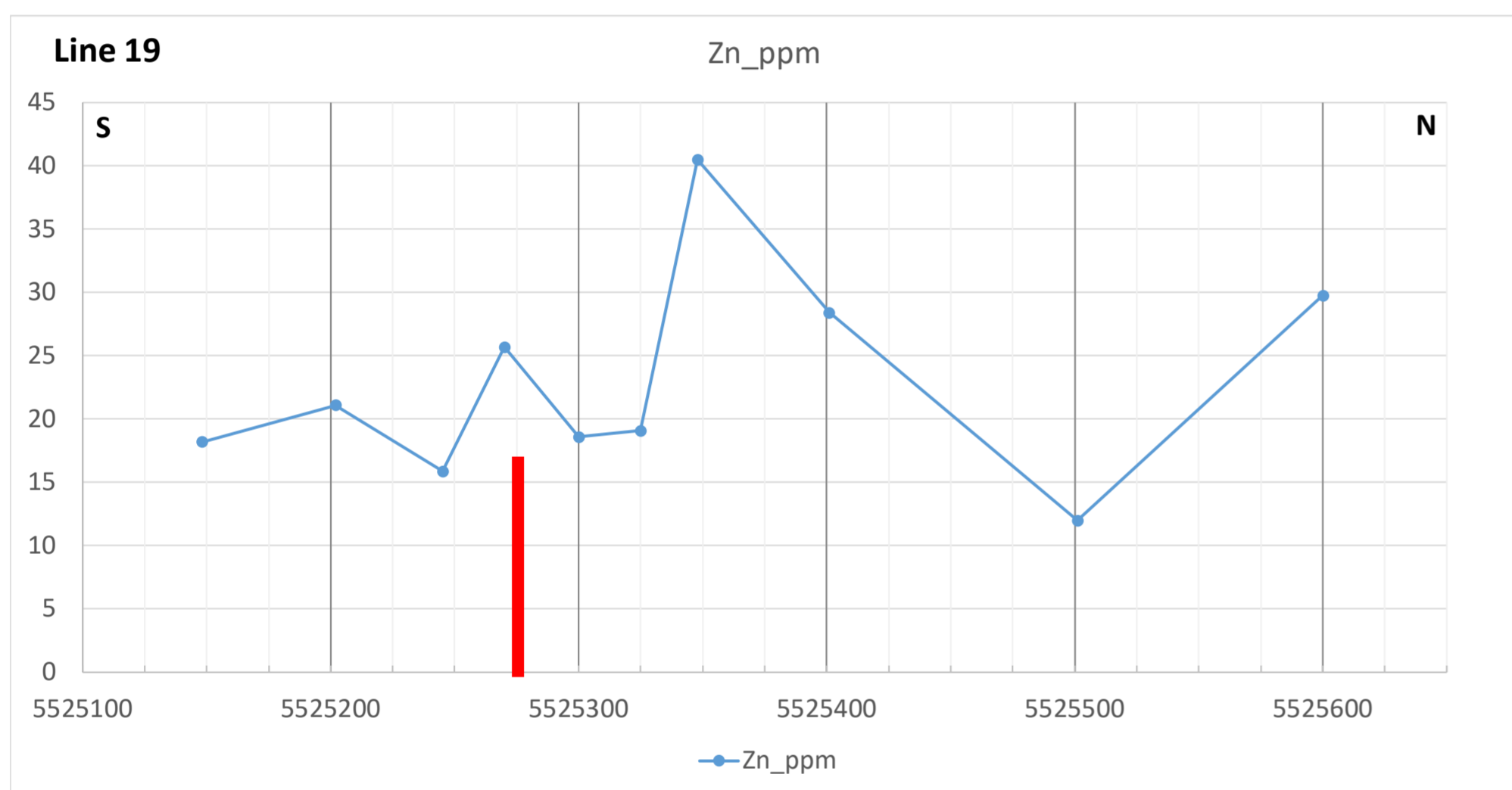
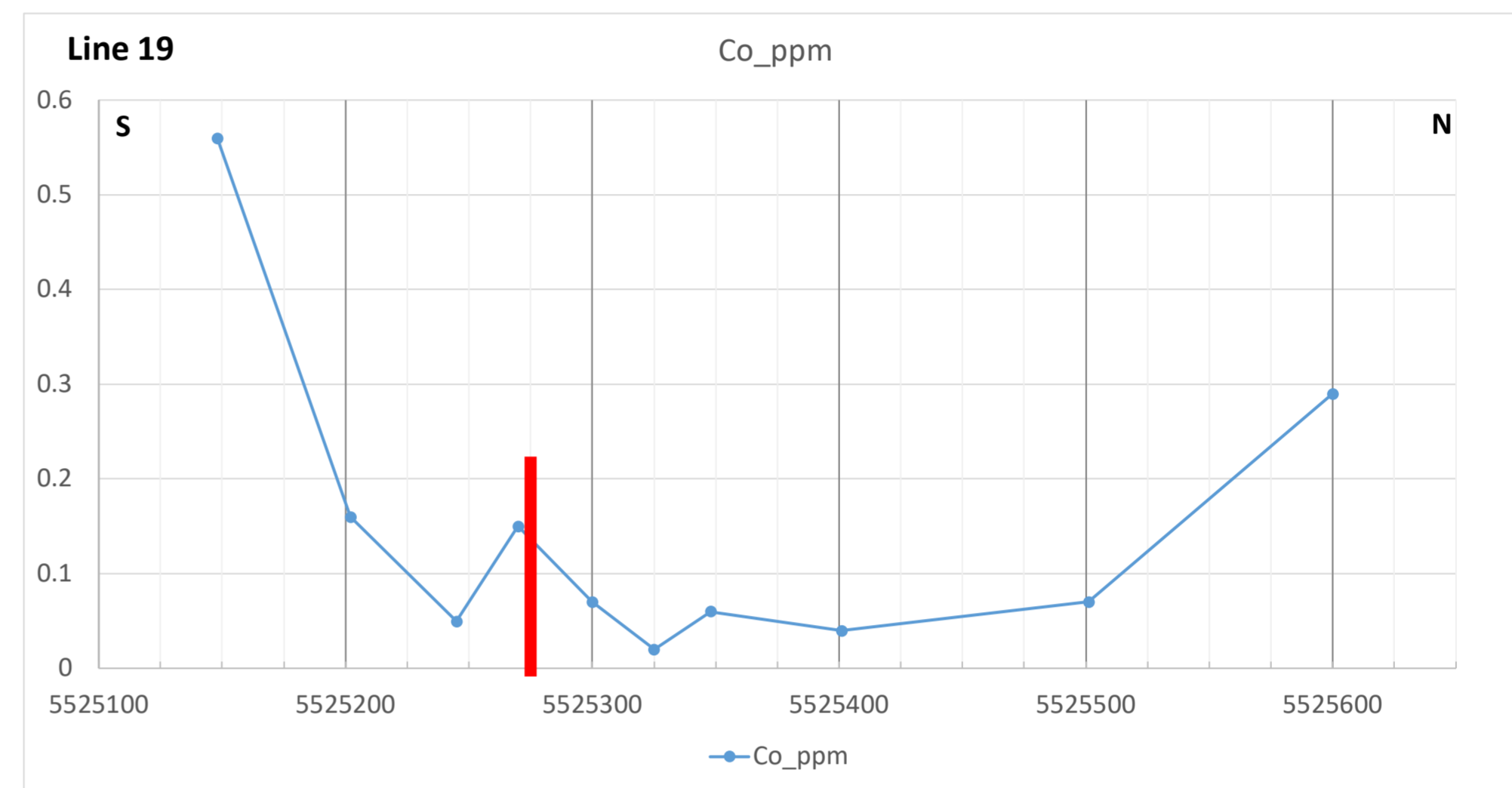
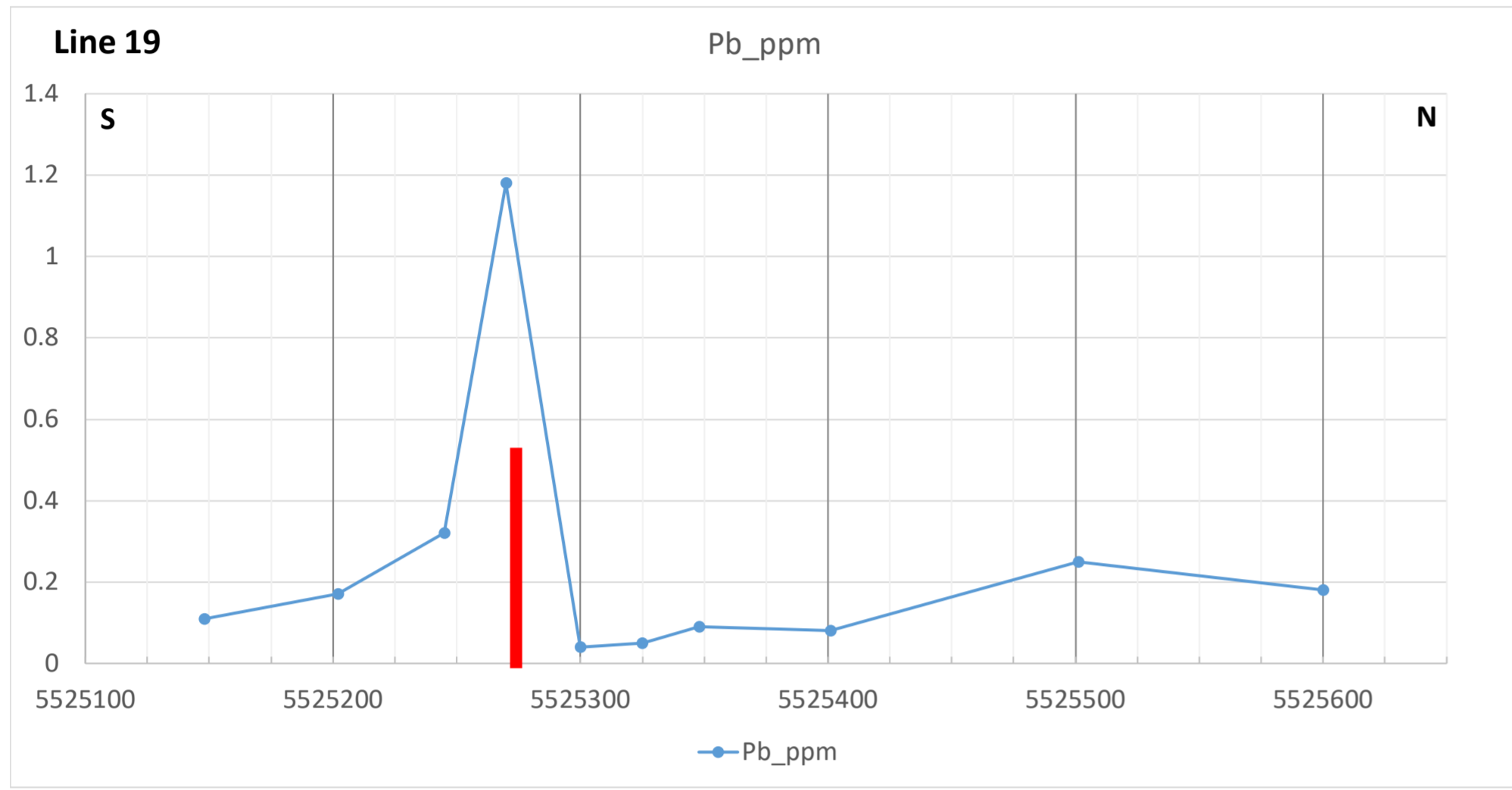
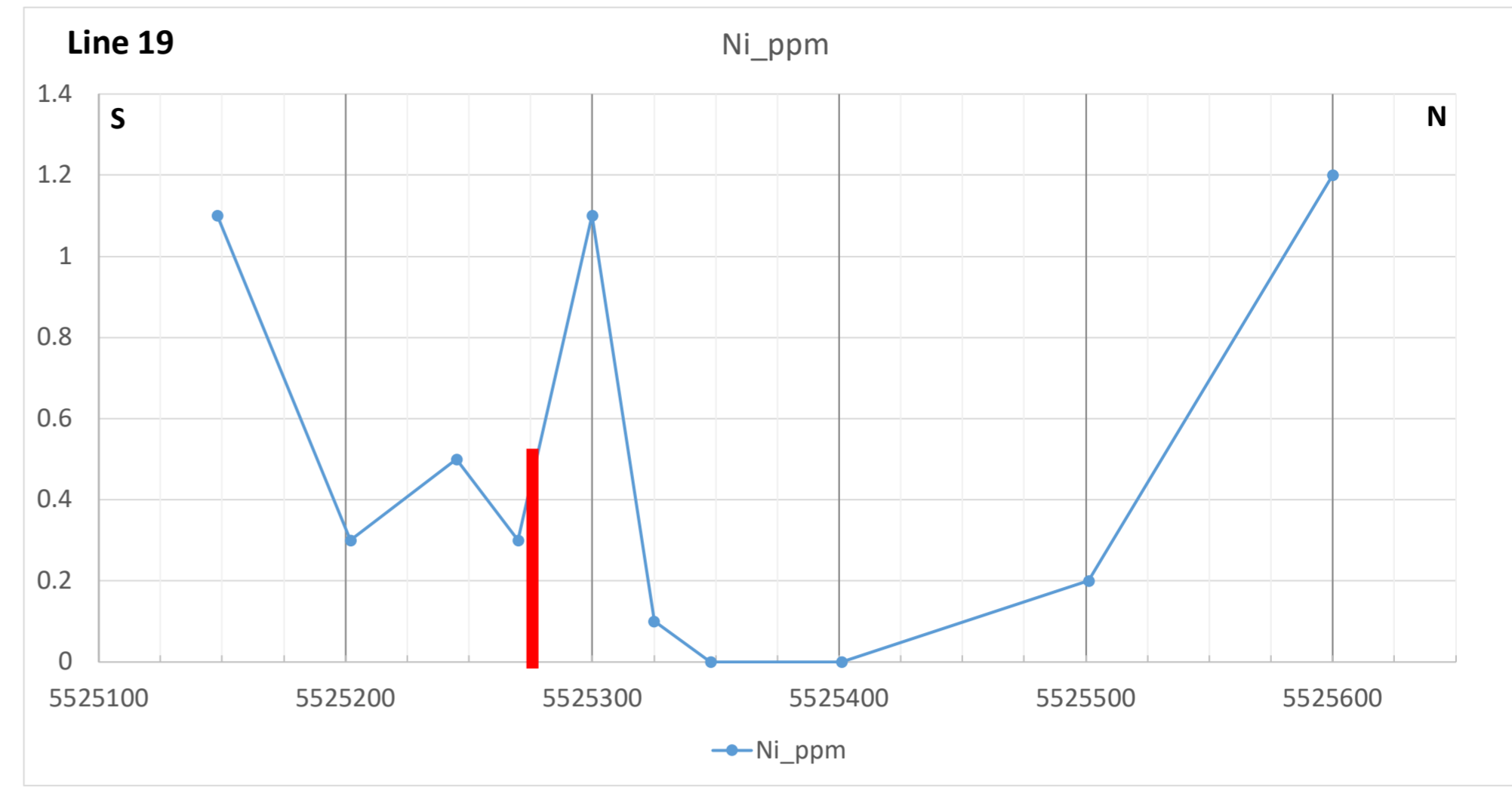
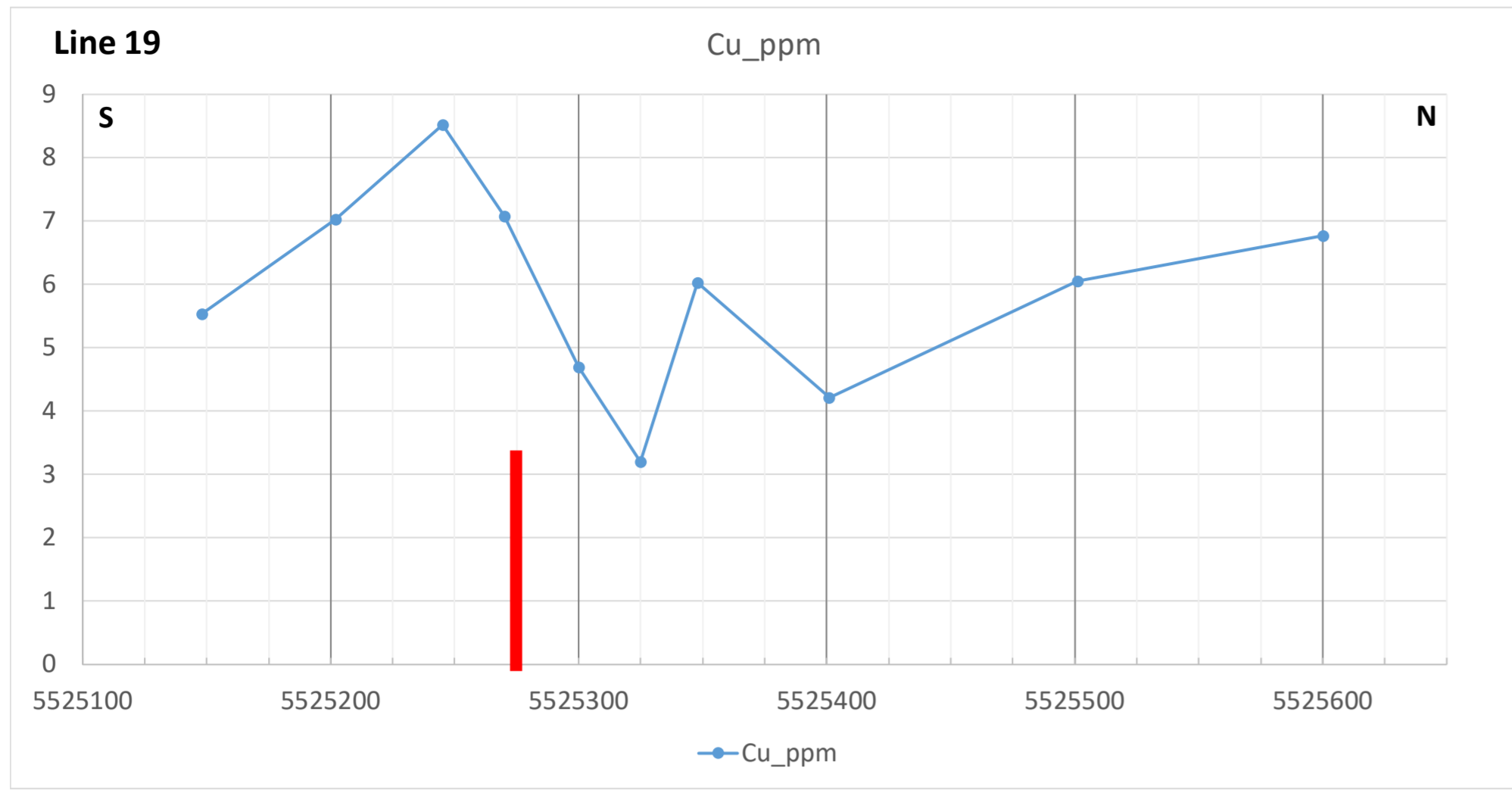
Line 14



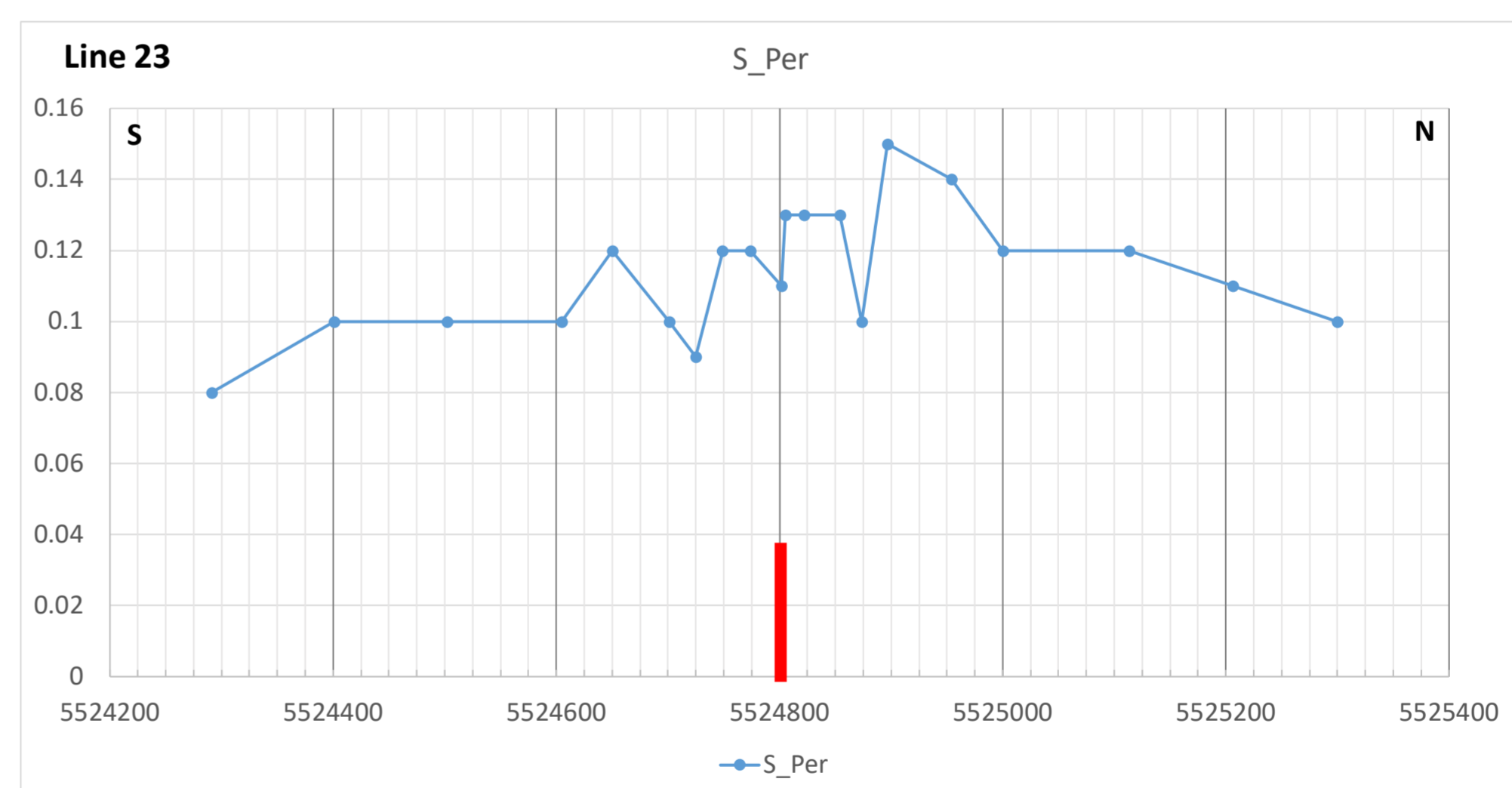
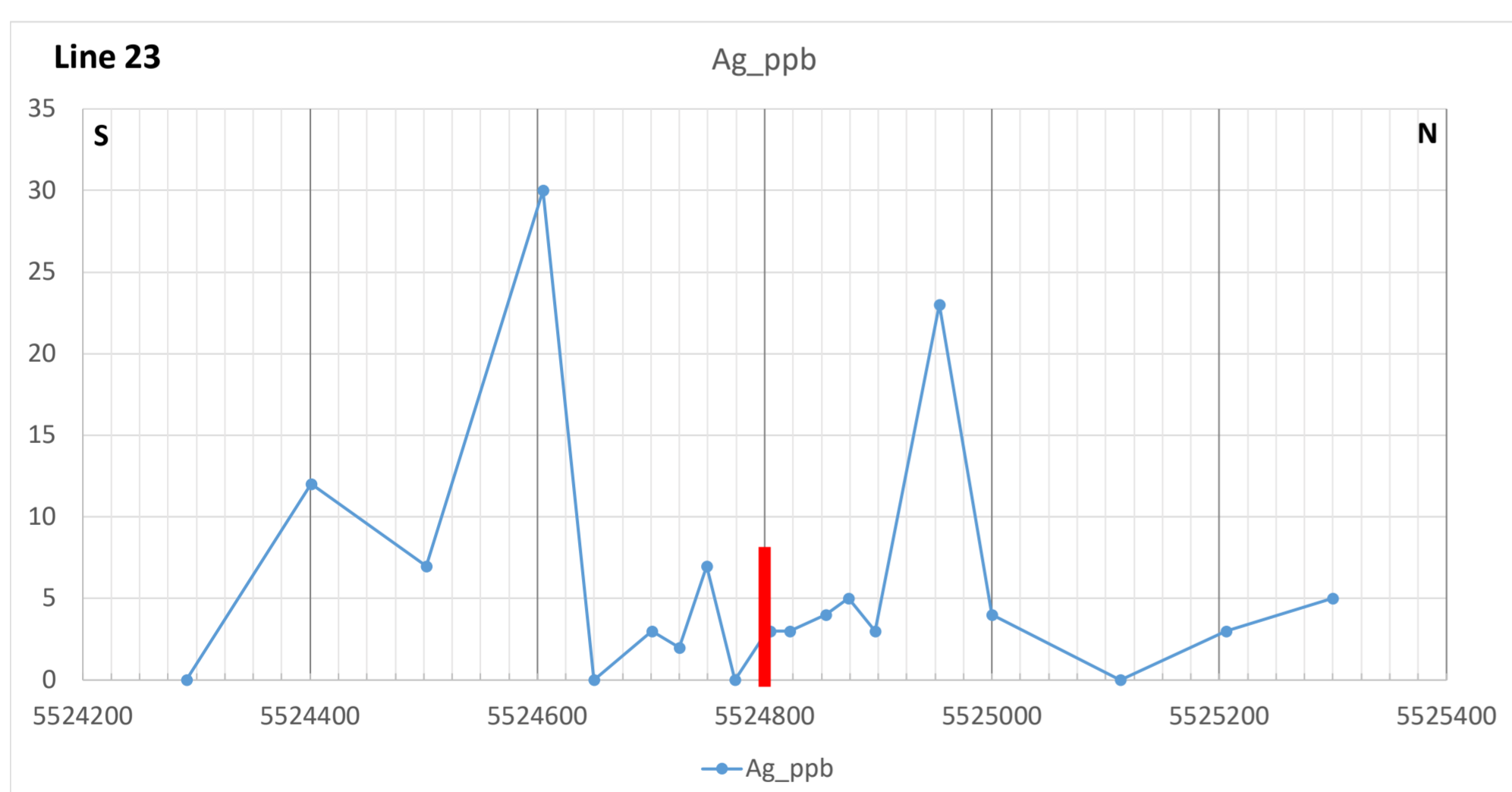
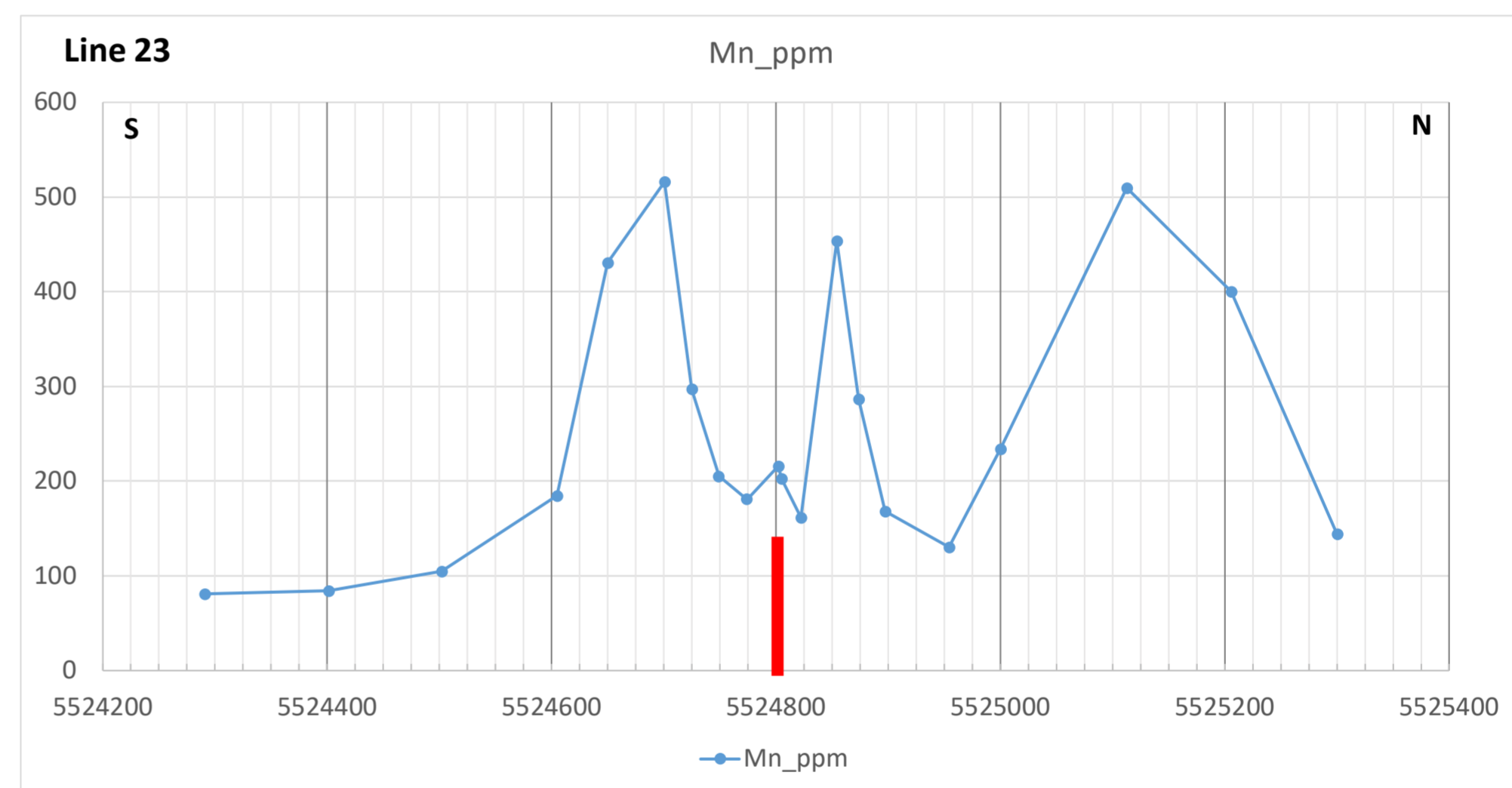
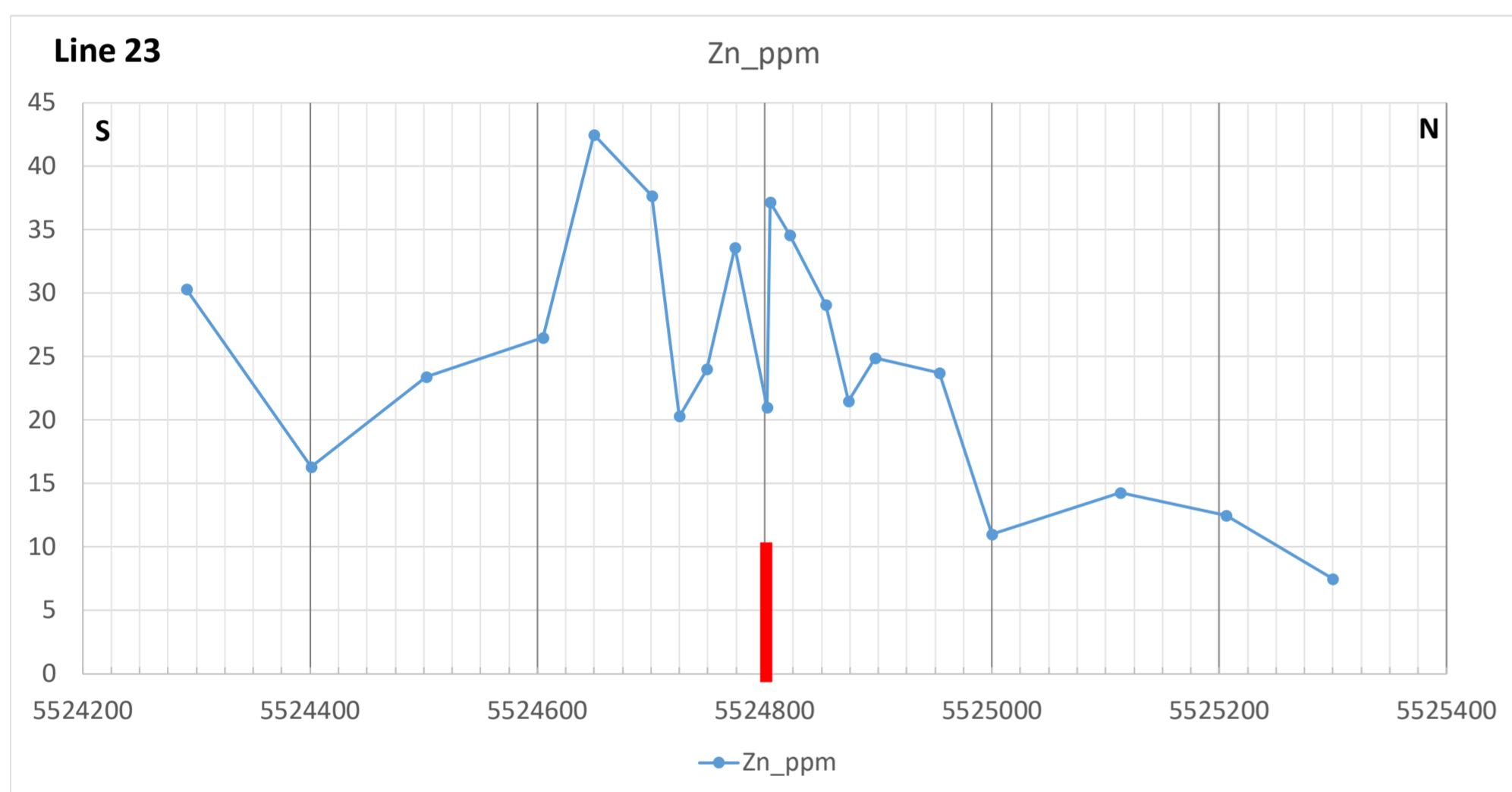
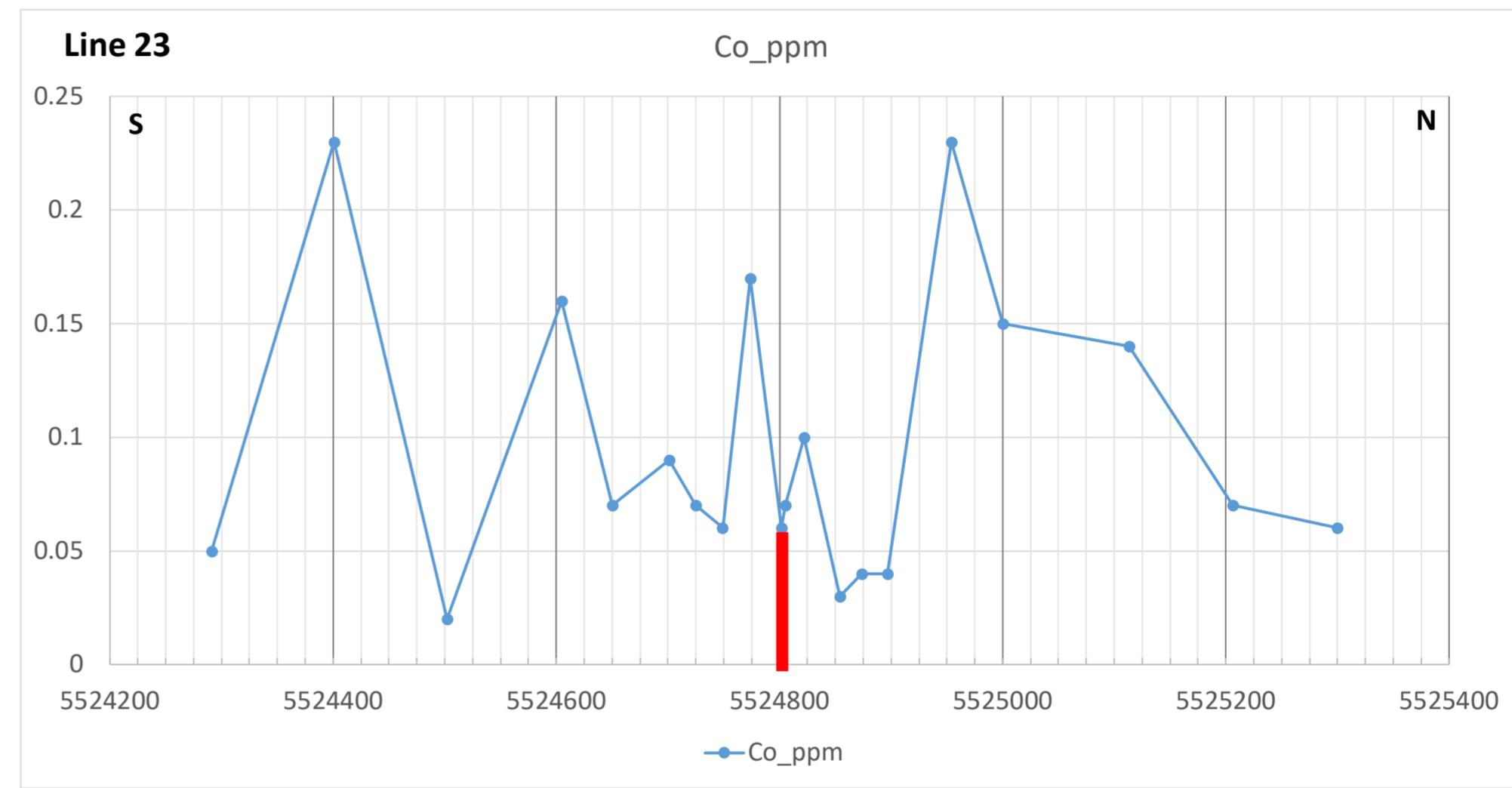
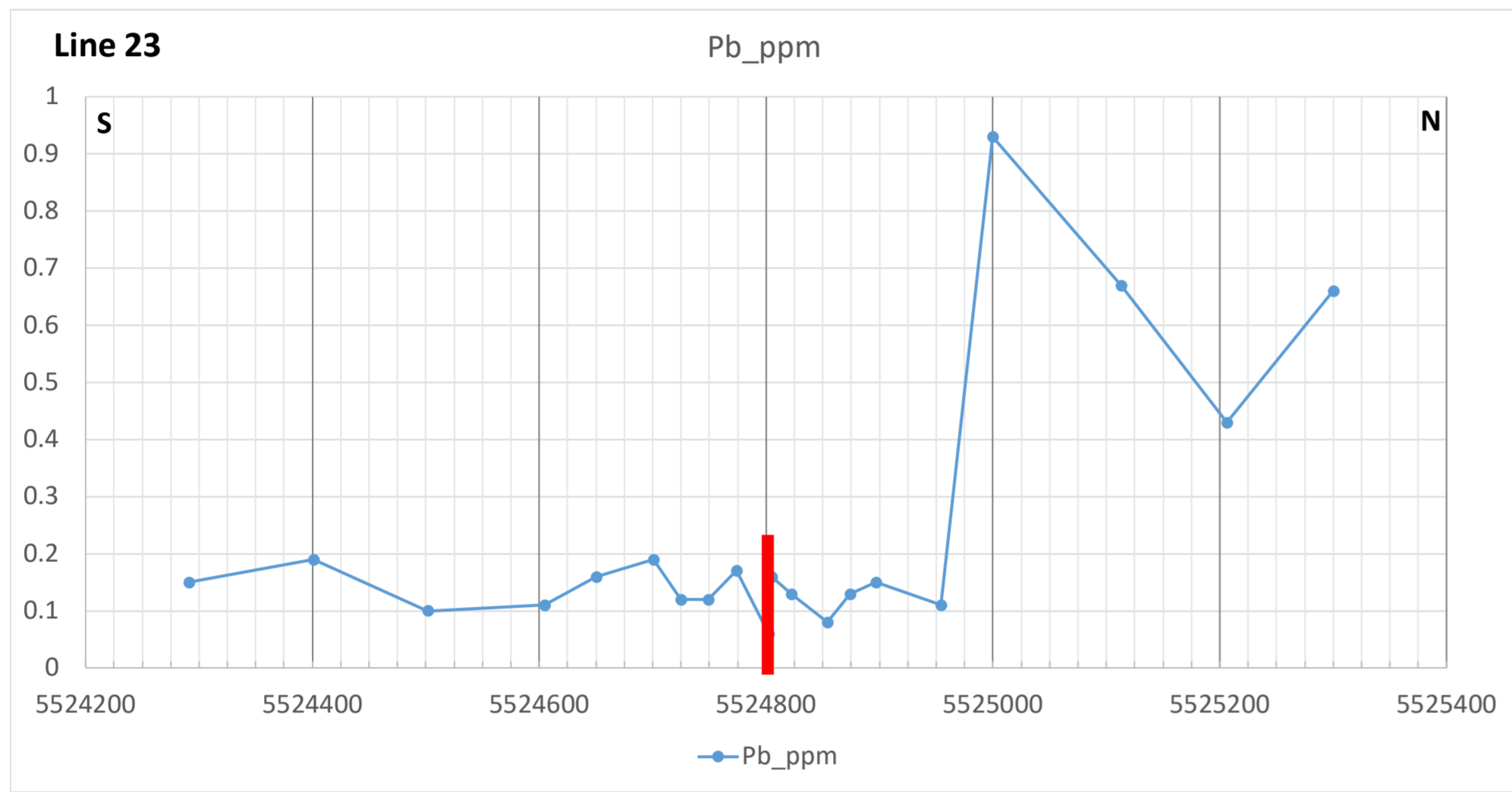
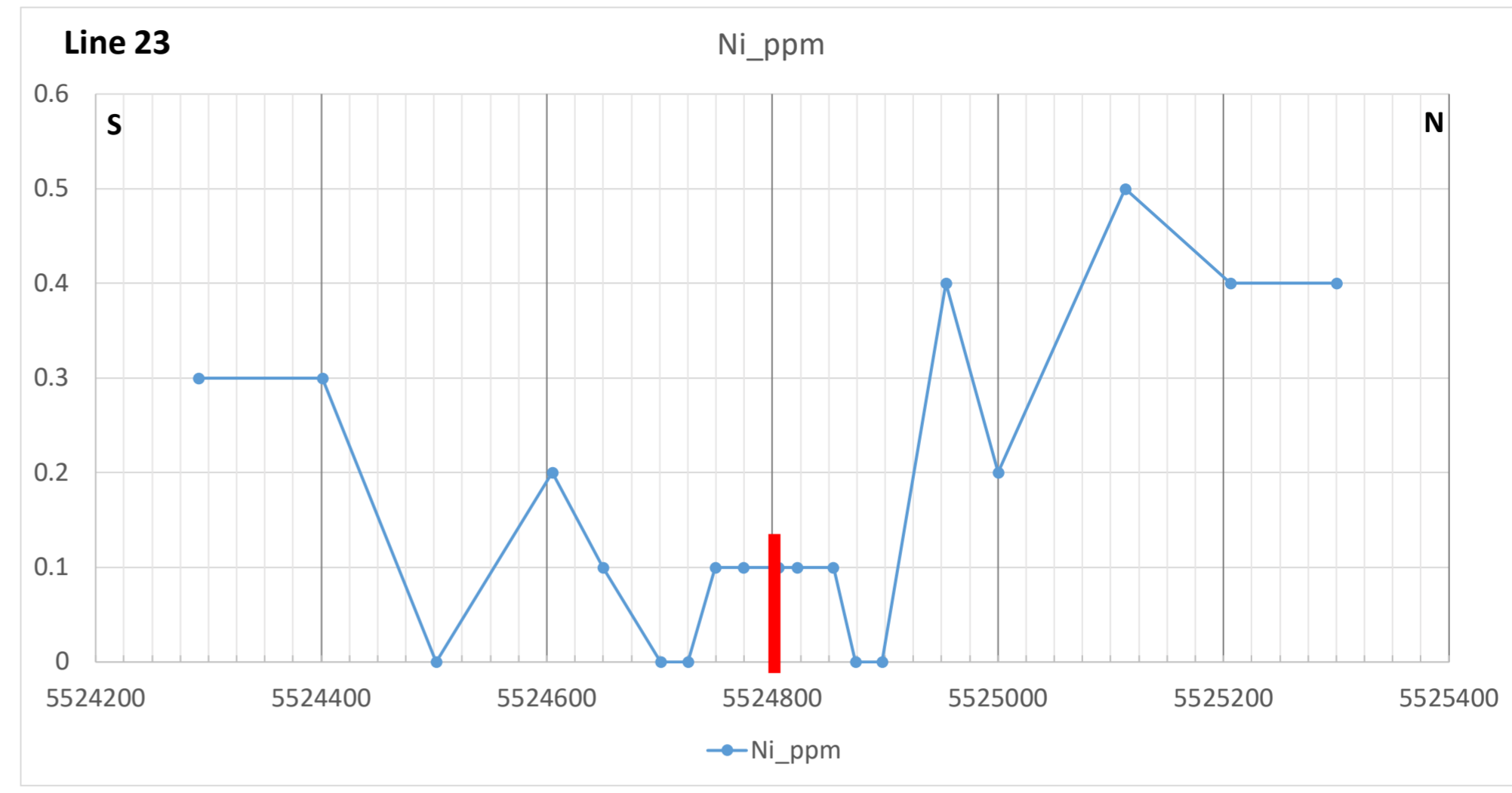
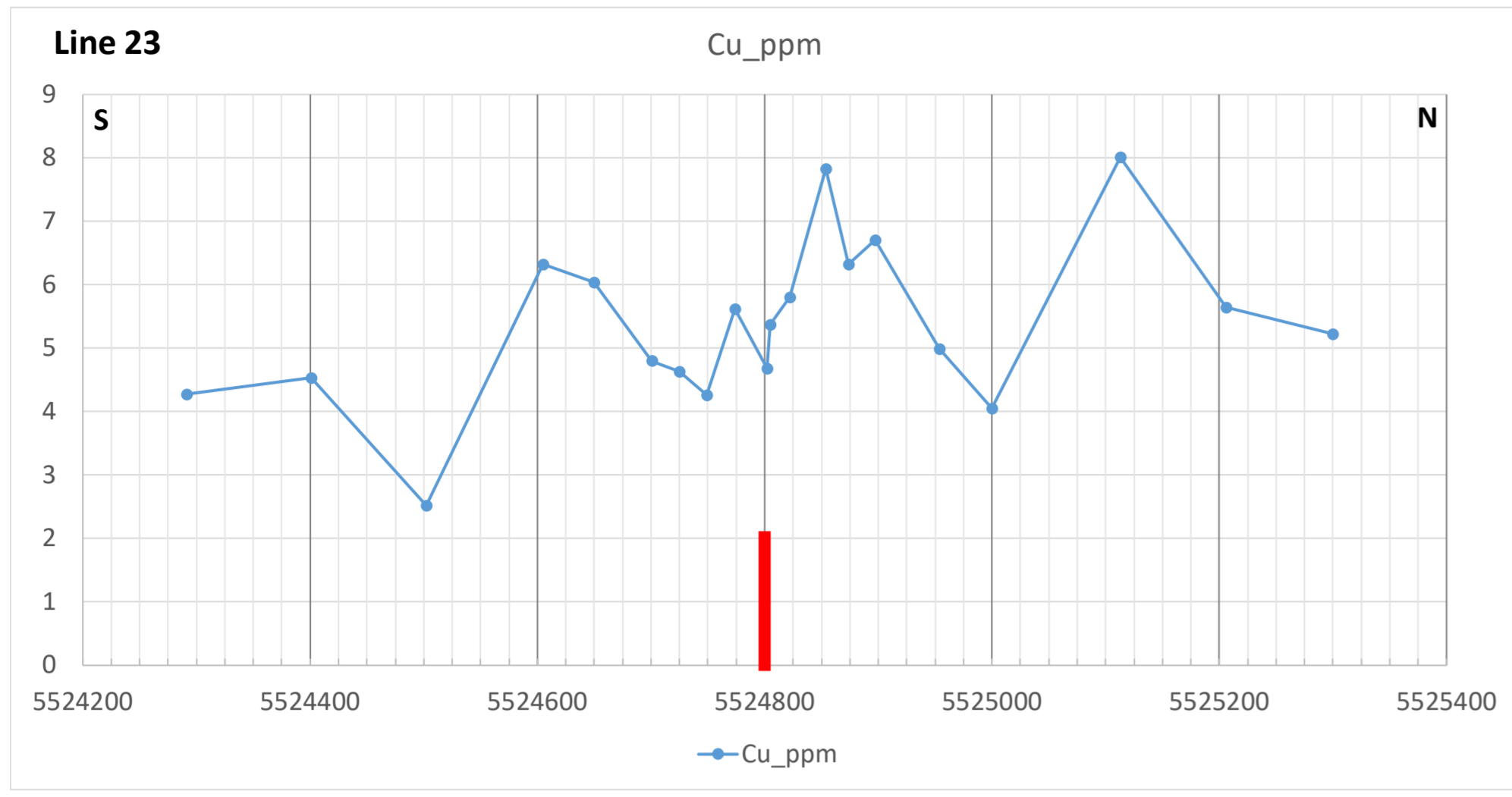
Line 15



Line 19



Line 23



**Appendix B: Sample Data**



SampleID	LineID	Date	UTM_E	UTM_N	Elev	Vegetation	AlderSpc	GndMoist	GndSlope	Comments
1124501	L01-0000	04-Sep-16	657591	5524553	443	Alders, birch, balsam, spruce, spagnum	G. Alder	Damp	Level	Soft damp level ground.
1124502	L01-0100	04-Sep-16	657600	5524653	441	Alders, black spruce, tamarack, maples, spagnum, labrador tea	G. Alder	Wet	Level	Soft wet level ground.
1124503	L01-0200	04-Sep-16	657597	5524747	443	Spruce, alders, spagnum, labrador tea, birch, balsam fir	G. Alder	Damp	Slight North	Soft damp level ground.
1124504	L01-0300	04-Sep-16	657603	5524845	440	Labrador tea, spruce, spagnum, alders, balsam	G. Alder	Damp	Slight North	Soft damp level ground
1124505	L01-0400	04-Sep-16	657617	5524957	438	Spruce, Labradore tea, spagnum, birch, alders, balsam	G. Alder	Damp	Slight North	Gentle slope uphill north, damp soft ground.
No Sample	L01-0500	04-Sep-16	657600	5525050		Spruce, birch, labradore tea, spagnum, willow	N/A	Dry	Moderate South	Esker, no Alders. Dry ground with moderate uphill slope to south.
No Sample	L01-0550	04-Sep-16	657600	5525100		Birch, balsam, maple, bunch berries	N/A	Dry	Moderate South	Esker, no Alders. Dry ground with moderate uphill slope to south.
No Sample	L01-0600	04-Sep-16	657600	5525150		Poplar, birch, white spruce, balsam, maple	N/A	Dry	Moderate South	Esker, no Alders. Dry ground sloping moderately downhill.
No Sample	L01-0650	04-Sep-16	657600	5525200		Birch, balsam, spruce	N/A	Dry	Moderate South	Esker, no Alders. Dry firm ground sloping moderately S.
No Sample	L01-0675	04-Sep-16	657600	5525225		Birch, spruce, maple	N/A	Dry	Slight Southwest	Esker, no Alders. Dry firm ground sloping slightly southwest.
1124506	L01-0700	04-Sep-16	657603	5525275	448	Birch, maple, spruce, tamarack, balsam, alder	R. Alder	Dry	Slightly North	Dry firm ground sloping moderately downhill south.
1124507	L01-0725	04-Sep-16	657598	5525296	447	Alder, maple, spagnum, spruce, balsam, birch	G. Alder	Wet	Slightly North	Soft wet swampy ground sloping slightly N.
1124508	L01-0750	04-Sep-16	657606	5525329	454	Birch, balsam, spruce, ferns, alders	R. Alder	Dry	Level	Dry firm level ground.
1124509	L01-0775	04-Sep-16	657586	5525356	449	Birch, spruce, maple, alder	R. Alder	Dry	Moderate South	Dry firm ground sloping gently SE.
1124510	L01-0800	04-Sep-16	657602	5525394	455	Birch, maple, alder, balsam	R. Alder	Dry	Moderate South	Hard dry ground moderately sloping south.
No Sample	L01-0850	04-Sep-16	657600	5525400		Birch, maple, spruce	N/A	Dry	Slight South	Esker, no Alders
1124511	L01-0900	04-Sep-16	657607	5525453	456	Birch, maple, balsam, alders	R. Alder	Dry	Slight East	Dry hard ground sloping gently east.
1124512	L01-1000	04-Sep-16	657596	5525548	452	Birch, maple, white spruce, balsam, alders	R. Alder	Dry	Slight North	Dry hard ground sloping gently north.
1124556	L02-0000	07-Sep-16	658148	5524557	445	Spruce, alder, birch, spagnum, labradore tea	G. Alder	Wet	Level	Wet soft level ground with open water.
1124555	L02-0100	07-Sep-16	658140	5524651	444	Spruce, alder, spagnum, labradore tea	G. Alder	Wet	Level	Muskeg. Level wet soft ground.
1124554	L02-0200	07-Sep-16	658152	5524747	445	Alder, spruce, labradore tea, spagnum, grass	G. Alder	Wet	Level	Soft wet level ground with open water.
1124553	L02-0300	07-Sep-16	658153	5524849	445	Balsam, spruce, maple, birch, alders, spagnum, labradore tea	G. Alder	Damp	Level	Soft damp level ground.
No Sample	L02-0400	07-Sep-16	658150	5524950		Birch, spruce, maple, balsam, spagnum, labradore tea	N/A	Damp	Level	Soft damp level ground. No alders.
1124552	L02-0500	07-Sep-16	658149	5525050	445	Spruce, birch, maple, alder, balsam, spagnum	G. Alder	Damp	Level	Soft damp level ground.
1124551	L02-0550	07-Sep-16	658154	5525095	443	Spruce, maple, birch, spagnum, few alders	R. Alder	Damp	Slight Southeast	Dry soft ground sloping gently southeast.
1124550	L02-0600	07-Sep-16	658153	5525139	448	Birch balsam, maple, spruce, few alders	R. Alder	Dry	Steeply East	Dry firm ground sloping steeply towards Claw Lake.
1124549	L02-0650	07-Sep-16	658148	5525201	443	Spruce, birch, maple, balsam, alders	R. Alder	Dry	Moderate West	Dry firm ground sloping west.
1124548	L02-0675	07-Sep-16	658150	5525224	451	Birch, balsam, alders, spruce, maple	R. Alder	Dry	Moderate Southeast	Dry firm ground sloping moderately northeast.
1124547	L02-0700	07-Sep-16	658148	5525249	451	Birch, maple, alder, balsam	R. Alder	Dry	Moderate Northwest	Dry firm ground sloping moderately northwest.
1124546	L02-0725	07-Sep-16	658153	5525271	448	Birch, alders, balsam, spruce, maple	R. Alder	Dry	Slight Northeast	Firm dry ground sloping northeast.
1124545	L02-0750	07-Sep-16	658151	5525303	447	Birch, balsam, spruce, maple, alders	R. Alder	Dry	Slight Southwest	Firm dry ground sloping gently southwest.
1124544	L02-0775	07-Sep-16	658151	5525325	452	Birch, balsam, maple, alders	R. Alder	Dry	Slight South	Firm dry ground sloping gently south.
1124543	L02-0800	07-Sep-16	658151	5525353	452	Birch, Maple, balsam, few alders	R. Alder	Dry	Slight South	Firm dry ground sloping gently south.
1124542	L02-0825	07-Sep-16	658147	5525375	453	Birch, balsam, maple, alders	R. Alder	Dry	Slight West	Firm dry ground sloping gently west.
1124541	L02-0850	07-Sep-16	658152	5525395	450	Birch, balsam, maple, alders	R. Alder	Dry	Slight Southwest	Firm dry ground sloping gently southwest
1124540	L02-0875	07-Sep-16	658150	5525425	448	Birch, maple, balsam, few alders	R. Alder	Dry	Moderate Southwest	Firm dry ground sloping moderately west.
1124539	L02-0900	07-Sep-16	658150	5525450	447	Balsam, birch, maple, alder	R. Alder	Dry	Slight West	Dry firm ground sloping gently west.
1124538	L02-0950	07-Sep-16	658151	5525499	444	Birch, balsam, maple, alder	R. Alder	Dry	Slight West	Dry firm ground sloping gently west.
1124537	L02-1000	07-Sep-16	658138	5525562	440	Balsam, spruce, spagnum, alder, birch	R. Alder	Damp	Moderate Northwest	Damp soft ground moderate slope northwest.
No Sample	L03-0000	09-Sep-16	659000	5524750		Birch, spruce, balsam, maple	R. Alder	Dry	Slight N	Firm dry ground sloping gently N. No alders.
1124577	L03-0100	09-Sep-16	658997	5524854	444	Birch, spruce, cedar, balsam, spagnum, labrador tea	G. Alder	Wet	Level	Cedar Swamp. Soft wet ground with standing water.
1124578	L03-0200	09-Sep-16	658993	5524948	444	Cedar, spruce, birch, alder, spagnum, labrador tea	G. Alder	Wet	Level	Cedar Swamp. Soft wet level ground.
1124579	L03-0300	09-Sep-16	659002	5525054	441	Cedar, alder, spruce, spagnum, labrador tea	G. Alder	Wet	Level	Cedar Swamp. Soft level wet ground with open water.
1124580	L03-0400	09-Sep-16	658999	5525152	449	Spruce, balsam, alders, spagnum	G. Alder	Damp	Slight SE	Soft damp ground sloping SE.
1124581	L03-0450	09-Sep-16	659000	5525200	449	Spruce, cedar, maple, alder	G. Alder	Wet	Level	Spruce, soft wet level ground.
1124582	L03-0475	09-Sep-16	658997	5525227	450	Spruce, birch, balsam, alders, wild rose	G. Alder	Damp	Level	Damp firm level ground.
1124583	L03-0500	09-Sep-16	658997	5525251	451	Spruce, balsam, birch, alders, maple	R. Alder	Dry	Slight	Firm dry ground sloping gently S.
1124584	L03-0525	09-Sep-16	659000	5525270	449	Spruce, balsam, birch, maple, alders	R. Alder	Dry	Slight SE	Firm dry ground sloping gently SE.
1124585	L03-0550	09-Sep-16	659002	5525299	449	Spruce, birch, mountain ash, alders	R. Alder	Dry	Slight S	Firm dry ground sloping gently S.
1124586	L03-0575	09-Sep-16	658996	5525326	451	Birch, poplar, balsam, spruce, wild rose, alders, maple	R. Alder	Dry	Level	Firm dry level ground.
1124587	L03-0600	09-Sep-16	659008	5525353	448	Balsam, spruce, maple, wild rose, spagnum, few small alders	R. Alder	Dry	Level	Firm dry level ground.
1124588	L03-0625	09-Sep-16	659002	5525383	451	Birch, balsam, maple, spruce, few small alders	R. Alder	Dry	Level	Firm dry level ground.
1124589	L03-0650	09-Sep-16	659011	5525401	448	Balsam, birch, maple spruce, few small alders	R. Alder	Dry	Level	Firm dry level ground.
1124590	L03-0700	09-Sep-16	659014	5525454	450	Balsam, birch, spruce, maple, spagnum, few small alders	R. Alder	Dry	Level	Firm dry level ground.
1124591	L03-0750	09-Sep-16	658999	5525454	450	Birch, balsam, maple, alders, spruce	R. Alder	Dry	Level	Firm dry level ground.
1124592	L03-0850	09-Sep-16	659004	5525598	451	Birch, balsam, maple, spruce, alders	R. Alder	Dry	Level	Firm dry level ground.
1124593	L03-0950	09-Sep-16	659002	5525698	445	Birch, balsam, maple, alder, ash	R. Alder	Dry	Level	Firm dry level ground.
1124594	L03-1000	09-Sep-16	659002	5525748	444	Birch, spruce, alder, balsam, maple	R. Alder	Dry	Slight N	Firm dry ground sloping gently N. No alders.
1124622	L04-0000	10-Sep-16	659754	5525014	434	Birch, spruce, G. Alder, R. Alder, maple	G. Alder	Dry	Slight S	Dry firm ground gently sloping S.
1124621	L04-0025	10-Sep-16	659750	5525042	444	Maple, birch, balsam, R. Alder	R. Alder	Dry	Slight S	Dry firm ground gently sloping S.
1124620	L04-0050	10-Sep-16	659756	5525062	436	Balsam, birch, maple, spruce, R. Alder	R. Alder	Dry	Slight SE	Dry firm ground gently sloping SE.
1124619	L04-0075	10-Sep-16	659752	5525093	437	Birch, balsam, spruce, maple, R. Alder	R. Alder	Dry	Slight SE	Dry firm ground gently sloping SE.
1124618	L04-0100	10-Sep-16	659750	5525115	437	Birch, balsam, maple, R. Alder, spruce	R. Alder	Dry	Slight SE	Dry firm ground gently sloping SE.
1124617	L04-0150	10-Sep-16	659752	5525161	436	Birch, maple, R. Alder, balsam	R. Alder	Dry	Slight SE	Dry firm ground gently sloping SE.
1124616	L04-0200	10-Sep-16	659750	5525215	438	Balsam, birch, spruce, maple, R. Alder	R. Alder	Dry	Slight SE	Firm dry ground gently sloping SE.
1124615	L04-0300	10-Sep-16	659754	5525316	441	Spruce, birch, R. Alder, maple, balsam	R. Alder	Dry	Slight E	Firm dry ground gently sloping E.
1124614	L04-0400	10-Sep-16	659750	5525421	441	Birch, R. Alder, balsam, mountain ash, spruce	R. Alder	Dry	Slight E	Firm dry ground gently sloping E.
1124613	L04-0500	10-Sep-16	659748	5525512	443	Spruce, birch, balsam, maple, R. Alder	R. Alder	Dry	Slight E	Dry firm ground gently sloping E.
1124612	L04-0600	10-Sep-16	659752	5525621	443	Spruce, birch, balsam, spagnum	G. Alder	Damp	Level	Soft damp level ground.
1124611	L04-0700	10-Sep-16	659747	5525718	443	Balsam, birch, spruce, R. Alder	R. Alder	Dry	Slight E	Dry firm ground sloping gently E.
1124610	L04-0750	10-Sep-16	659751	5525771	443	Birch, maple, R. Alder, spruce, balsam	R. Alder	Dry	Slight S	Dry firm ground sloping gently S.
1124609	L04-0800	10-Sep-16	659742	5525811	442	Birch, balsam, spruce, maple, R. Alder	R. Alder	Dry	Slight SE	Dry firm ground sloping gently SE.
1124608	L04-0850	10-Sep-16	659759	5525877	444	Birch, balsam, spruce, ash, maple, spagnum, few alders	G. Alder	Damp	Moderate SW	Firm damp ground moderately sloping SW.
1124607	L04-0875	10-Sep-16	659742	5525892	440	Spruce, balsam, birch, spagnum, labrador tea, few alders	G. Alder	Damp	Slight NW	Soft damp ground gently sloping NW.
No Sample	L04-0900	10-Sep-16	659750	5525915		Spruce, birch, balsam, saskatoons, spagnum, labrador tea	G. Alder	Damp	Moderate N	Soft damp ground, moderately sloping N. No alders.
No Sample	L04-0925	10-Sep-16	659750	5525940		Spruce, birch, balsam, spagnum	G. Alder	Damp	Moderate NW	Soft damp ground moderately sloping NW. No alders.
1124606	L04-0950	10-Sep-16	659757	5525962	441	Spruce, birch, grass, labrador tea, alder	G. Alder	Damp	Slight N	At shore of Hump Lake. Soft damp ground gently sloping N.
1124513	L05-0000	06-Sep-16	660384	5525740	456	Maple, balsam, spruce, alders, birch	R. Alder	Dry	Level	Firm dry level ground.
1124514	L05-0100	06-Sep-16	660381	5525849	466	Maples, birch, spruce, alder	R. Alder	Dry	Moderate Southwest	Firm dry ground sloping moderately southwest.
1124515	L05-0150	06-Sep-16	660378	5525900	467	Alder, spruce, maples	R. Alder	Dry	Moderate Southwest	Firm dry ground sloping moderately southwest.
1124516	L05-0200	06-Sep-16	660380	5525950	470	Maple, spruce, alder	R. Alder	Dry	Moderate Southwest	Firm dry ground sloping moderately southwest.
1124517	L05-0250	06-Sep-16	660380	5526002	475	Alder, spruce, maples	R. Alder	Dry	Moderate North	Hard dry ground sloping moderately north.
1124518	L05-0275	06-Sep-16	660379	5526024	463	Alder, maple, birch, balsam, spruce	R. Alder	Dry	Slight North	Firm dry ground sloping gently north.
1124519	L05-0300	06-Sep-16	660385	5526051	455	Alder, maple, birch, spruce, balsam	R. Alder	Dry	Slight Northwest	Firm dry ground sloping gently northwest.
1124520	L05-0325	06-Sep-16	660381	5526077	455	Maple, birch, alder, spruce, balsam	R. Alder	Dry	Moderate Northwest	Firm dry ground sloping moderately northwest
1124521	L05-0350	06-Sep-16	660382	5526100	453	Maple, alders, balsam, birch	R. Alder	Dry	Slight Northwest	Firm dry ground sloping gently northwest.
1124522	L05-0375	06-Sep-16	660377	5526125	445	Maple, balsam, birch, alder	R. Alder	Dry	Slight Northwest	Firm dry ground sloping gently northwest.
1124523	L05-0400	06-Sep-16	660377	5526158	445	Birch, spruce, maple, few alders	R. Alder	Dry	Moderate Northwest	Firm dry ground sloping gently northwest.

SampleID	LineID	Date	UTM_E	UTM_N	Elev	Vegetation	AlderSpc	GndMoist	GndSlope	Comments
1124524	L05-0425	06-Sep-16	660380	5526171	447	Birch, maples, alders, balsam, cedar	R. Alder	Dry	Steeply Northwest	Firm dry ground sloping steeply northwest.
1124525	L05-0450	06-Sep-16	660381	5526198	445	Spruce, birch, alders, maples	R. Alder	Dry	Moderate West	Firm dry ground sloping moderately west.
1124526	L05-0475	06-Sep-16	660391	5526226	441	Spruce, cedar, birch, few alders, spagnum	G. Alder	Dry	Slight West	Dry soft ground sloping west at shore of Hump Lake.
1124527	L05-0500	06-Sep-16	660393	5526252	436	Spruce, birch, cedar, spagnum, grass, few alders, unident1	G. Alder	Damp	Slight West	Damp soft ground sloping west at shore of Hump Lake.
1124528	L05-0525	06-Sep-16	660403	5526278	439	Alders, spruce, grass, mint, unident1	G. Alder	Wet	Level	Wet grassy ground with open water (in creek?)
1124529	L05-0550	06-Sep-16	660386	5526301	435	Cedar, grasss, spruce, birch, alders, unident1	G. Alder	Damp	Level	Level grassy damp ground @ shore of Hump Lake.
1124530	L05-0575	06-Sep-16	660389	5526321	443	Cedar, spruce, birch, unident1, grass, alder	G. Alder	Damp	Sight West	Damp soft ground at shore of Hump Lake.
1124531	L05-0600	06-Sep-16	660380	5526354	439	Cedar, spruce, birch, reindeer moss, bunch berries, alders	G. Alder	Dry	Slight West	Dry hard ground sloping west at Hump Lake.
1124532	L05-0650	06-Sep-16	660366	5526403	434	Spruce, birch, cedar, grass, spagnum	G. Alder	Damp	Slight West	Damp soft ground gently sloping west.
No Sample	L05-0700	06-Sep-16	660380	5526450		Maples, ceders, birch, spruce, balsam	N/A	Dry	Slight Northwest	Maple stand. Hard dry ground gently sloping northwest.
1124533	L05-0750	06-Sep-16	660376	5526495	440	Cedar, maple, alder, birch, spagnum	G. Alder	Wet	Level	Cedar swamp. Soft, wet ground with open water.
1124534	L05-0800	06-Sep-16	660378	5526547	442	Cedar, maple, alder, birch, spagnum	G. Alder	Wet	Level	Cedar swamp. Soft, wet ground with open water.
1124535	L05-0900	06-Sep-16	660382	5526653	441	Maple, alders, birch, cedar, bunchberries, spagnum	G. Alder	Wet	Level	Cedar swamp. Soft, wet ground with open water.
1124536	L05-1000	06-Sep-16	660377	5526757	444	Spruce, birch, alder	R. Alder	Dry	Slight Northwest	Hard dry ground sloping gently northwest.
1124576	L06-0000	08-Sep-16	660541	5525747	452	Balsam, birch, poplar, maple, alder	R. Alder	Dry	Slight SE	Firm dry ground sloping gently SE.
1124575	L06-0100	08-Sep-16	660551	5525847	450	Spruce, birch, maple, alders, balsam	R. Alder	Dry	Slight S	Firm dry ground sloping gently S.
1124574	L06-0200	08-Sep-16	660554	5525954	448	Spruce, maple, balsam, alders	R. Alder	Dry	Moderate NE	Firm dry ground sloping moderately NE.
1124573	L06-0250	08-Sep-16	660551	5525998	447	Balsam, birch, spruce, cedar, maple, alder	R. Alder	Dry	Slight SE	Firm dry ground sloping gently SE.
1124572	L06-0300	08-Sep-16	660551	5526048	451	Birch, balsam, alder, maple	R. Alder	Dry	Slight SE	Firm dry ground sloping gently SE.
1124571	L06-0325	08-Sep-16	660547	5526070	451	Balsam, spruce, maple, alders	R. Alder	Dry	Slight E	Firm dry ground gently sloping E.
1124570	L06-0350	08-Sep-16	660550	5526101	450	Birch, balsam, maple, alders	R. Alder	Dry	Slight SE	Firm dry ground sloping gently SE.
1124569	L06-0375	08-Sep-16	660558	5526123	450	Birch, maple, balsam, alders	R. Alder	Dry	Moderately SE	Firm dry ground moderately sloping SE.
1124568	L06-0400	08-Sep-16	660542	5526147	455	Balsam, birch, maple, alders	R. Alder	Dry	Slight SE	Firm dry ground gently sloping SE.
1124567	L06-0425	08-Sep-16	660551	5526176	451	Birch, spruce, balsam, maple, alders	R. Alder	Dry	Steeply N	Firm dry ground steeply dipping N.
1124566	L06-0450	08-Sep-16	660553	5526200	448	Balsam, birch, maple, alder, spruce	R. Alder	Dry	Moderately SE	Firm dry ground sloping moderately SE.
1124565	L06-0475	08-Sep-16	660554	5526225	446	Balsam, birch, alder, maple	R. Alder	Dry	Moderately N	Firm dry ground moderately sloping N.
1124564	L06-0500	08-Sep-16	660545	5526249	442	Balsam, birch, maple, spruce, alder	R. Alder	Dry	Steeply N	Firm dry ground steeply sloping N.
1124563	L06-0550	08-Sep-16	660548	5526290	433	Spruce, birch, grass, spagnum, alder	R. Alder	Damp	Slight N	Soft damp ground gently sloping N, near boggy, marshy creek @ unnamed lake.
1124562	L06-0600	08-Sep-16	660537	5526353	438	Alder, unident1, grass, odd spruce	G. Alder	Wet	Level	Level soft wet grassy marsh by unnamed lake.
1124561	L06-0650	08-Sep-16	660541	5526402	441	Spruce, birch, maple, alder	R. Alder	Dry	Moderate SSW	Firm dry ground sloping moderately south-southwest.
1124560	L06-0700	08-Sep-16	660549	5526449	440	Birch, balsam, spruce, maple, alder, spagnum	R. Alder	Dry	Slight S	Firm dry ground sloping gently south.
1124559	L06-0800	08-Sep-16	660546	5526552	447	Spruce, birch, balsam, maple, few alders	G. Alder	Dry	Slight N	Dry firm ground sloping gently north with few alders.
1124558	L06-0900	08-Sep-16	660459	5526651	446	Spruce, birch, alder, balsam, labradore tea, spagnum	G. Alder	Damp	Level	Level soft damp ground.
1124557	L06-1000	08-Sep-16	660552	5526743	450	Cedar, balsam, maple, birch, spagnum, grass	G. Alder	Wet	Level	Cedar swamp. Soft wet level ground with standing water.
1124605	L07-0050	09-Sep-16	660800	5525644	426	Spruce, cedar, balsam, birch, alder, spagnum	G. Alder	Damp	Slight S	Firm damp ground sloping gently south.
1124604	L07-0150	09-Sep-16	660800	5525746	436	Cedar, spruce, balsam, alder, spagnum	G. Alder	Wet	Level	Cedar Swamp. Soft wet ground with standing water, level.
No Sample	L07-0250	09-Sep-16	660800	5525850		Spruce, birch, balsam, maple, cedar	G. Alder	Damp	Level	Firm damp ground, level.
1124603	L07-0300	09-Sep-16	660804	5525902	436	Cedar, maple, alder, spagnum	G. Alder	Damp	Level	Firm damp ground, level.
1124602	L07-0350	09-Sep-16	660801	5525947	441	Cedar, maple, birch, alders, spagnum	G. Alder	Damp	Level	Firm damp ground, level.
1124601	L07-0375	09-Sep-16	660801	5525971	440	Spruce, cedar, balsam, birch, maple, alder, spagnum	R. Alder	Dry	Moderate SE	Firm dry ground sloping moderately SW.
1124600	L07-0400	09-Sep-16	660801	5526001	442	Birch, balsam, maple, spruce, alder	R. Alder	Dry	Moderate SW	Firm dry ground sloping moderately SW.
1124599	L07-0425	09-Sep-16	660800	5526025	441	Birch, balsam, maple, spruce, alder	R. Alder	Dry	Slight SW	Firm dry ground sloping gently SW.
1124598	L07-0450	09-Sep-16	660800	5526052	444	Birch, cedar, balsam, maple, alder	R. Alder	Dry	Level	Firm dry level ground.
1124597	L07-0500	09-Sep-16	660801	5526101	438	Birch, balsam, maple, alder	R. Alder	Dry	Slight N	Firm dry ground sloping gently N.
1124596	L07-0550	09-Sep-16	660798	5526147	441	Birch, balsam, spruce, maple, alder	R. Alder	Dry	Slight N	Firm dry ground sloping gently N.
1124595	L07-0590	09-Sep-16	660797	5526202	438	Birch, balsam, spruce, maple, alder	R. Alder	Dry	Slight N	Firm dry ground sloping gently N.
1124660	L08-0000	13-Sep-16	660999	5525254	439	Balsam, maple, birch, spruce, R. Alder	R. Alder	Dry	Moderately NW	Dry firm ground sloping moderately NW.
1124661	L08-0100	13-Sep-16	661004	5525353	446	Cedar, birch, balsam, ash, spruce, R. Alder	R. Alder	Dry	Slight WNW	Dry firm ground sloping gently WNW.
1124662	L08-0200	13-Sep-16	661000	5525468	440	Cedar, spruce, birch, balsam, maple, R. Alder	R. Alder	Dry	Moderately W	Dry firm ground sloping moderately W.
1124663	L08-0300	13-Sep-16	661021	5525561	440	Cedar, birch, balsam, maple, spruce, R. Alder	R. Alder	Dry	Moderately W	Dry firm ground sloping moderately W.
1124664	L08-0350	13-Sep-16	660996	5525601	449	Balsam, birch, cedar, spruce, maple, R. Alder	R. Alder	Dry	Moderately SW	Dry firm ground sloping moderately SW.
1124665	L08-0400	13-Sep-16	661001	5525643	448	Cedar, birch, maple, balsam, R. Alder	R. Alder	Dry	Slight SW	Dry firm ground sloping gently SW.
1124666	L08-0425	13-Sep-16	661001	5525685	452	Cedar, spruce, birch, maple, balsam, R. Alder	R. Alder	Dry	Slight SW	Dry firm ground sloping gently SW.
1124667	L08-0450	13-Sep-16	660999	5525699	448	Cedar, spruce, maple, balsam, R. Alder	R. Alder	Dry	Level	Dry firm level ground.
1124668	L08-0475	13-Sep-16	660997	5525728	447	Cedar, birch, spruce, poplar, maple, balsam, R. Alder	R. Alder	Dry	Slight N	Dry firm ground sloping gently N.
1124669	L08-0500	13-Sep-16	661001	5525751	447	Spruce, birch, maple, balsam, poplar, R. Alder	R. Alder	Dry	Slight N	Dry firm ground sloping gently N.
1124670	L08-0525	13-Sep-16	660998	5525781	449	Cedar, G. Alder, birch, spagnum	G. Alder	Wet	Level	Wet soft ground with standing water, alder swamp.
1124671	L08-0550	13-Sep-16	661002	5525796	444	G. Alders, cedar, birch, maple, spagnum	G. Alder	Wet	Level	Cedar swamp. Soft wet level ground with standing water.
1124672	L08-0600	13-Sep-16	661031	5525846	447	Spruce, birch, cedar, maple, G. Alder, spagnum	G. Alder	Damp	Slight S	Damp firm ground sloping gently S.
1124673	L08-0650	13-Sep-16	660998	5525902	446	Cedar, birch, maple, balsam, R. Alder	R. Alder	Dry	Slight SW	Firm dry ground sloping gently SW.
1124674	L08-0700	13-Sep-16	661001	5525948	449	Birch, balsam, spruce, maple, R. Alder	R. Alder	Dry	Slight E	Firm dry ground sloping gently E.
1124675	L08-0725	13-Sep-16	661001	5525978	449	Spruce, G. Alder, maple, birch	G. Alder	Dry	Slight NE	Firm dry ground sloping gently NE. Very large abundant G. Alders.
1124676	L08-0750	13-Sep-16	660997	5526003	448	Birch, spruce, balsam, G. Alder, spagnum	G. Alder	Damp	Level	Soft, hummucky, level, damp ground.
1124677	L08-0775	13-Sep-16	661004	5526027	449	Spruce, birch, balsam, maple, G. Alder	G. Alder	Dry	Slight NE	Firm dry ground gently sloping NE.
1124678	L08-0800	13-Sep-16	660995	5526051	446	Spruce, birch, maple, cedar, R. Alder	R. Alder	Dry	Slight SE	Firm dry ground sloping gently SE.
1124679	L08-0825	13-Sep-16	660999	5526082	449	Spruce, birch, balsam, maple, R. Alder	R. Alder	Dry	Steep N	Firm dry ground sloping steeply N.
1124727	L09-0000	14-Sep-16	661200	5525256	443	Birch, balsam, spruce, maple, R. Alder	R. Alder	Dry	Level	Firm dry level ground.
1124726	L09-0100	14-Sep-16	661199	5525341	454	Birch, spruce, maple, R. Alder, balsam	R. Alder	Dry	Steeply SE	Firm dry ground sloping very steeply SE.
1124725	L09-0200	14-Sep-16	661198	5525445	459	Spruce, balsam, birch, maple, R. Alder	R. Alder	Dry	Level	Firm dry level ground.
1124724	L09-0300	14-Sep-16	661201	5525553	459	Spruce, birch, R. Alder, maple, balsam	R. Alder	Dry	Moderate N	Dry firm ground sloping moderately N.
1124723	L09-0350	14-Sep-16	661196	5525604	454	Cedar, spruce, birch, maple, balsam, R. Alder	R. Alder	Dry	Moderate W	Dry firm ground sloping moderately W.
1124722	L09-0375	14-Sep-16	661199	5525626	455	Spruce, birch, balsam, maple, R. Alder	R. Alder	Dry	Moderate W	Dry firm ground sloping moderately W.
1124721	L09-0400	14-Sep-16	661200	5525651	458	Spruce, birch, maple, balsam, R. Alder	R. Alder	Dry	Moderate W	Dry firm ground sloping moderately W.
1124720	L09-0425	14-Sep-16	661200	5525675	459	Birch, spruce, maple, balsam, R. Alder	R. Alder	Dry	Moderate WSW	Dry firm ground sloping moderately WSW.
1124719	L09-0450	14-Sep-16	661204	5525704	460	Balsam, birch, maple, R. Alder	R. Alder	Dry	Moderate SW	Dry firm ground sloping moderately SW.
1124718	L09-0475	14-Sep-16	661201	5525725	463	Birch, spruce, balsam, maple, R. Alder	R. Alder	Dry	Slight NNW	Dry firm ground sloping gently NNW.
1124717	L09-0500	14-Sep-16	661201	5525752	464	Spruce, birch, balsam, maple, R. Alder	R. Alder	Dry	Slight NNW	Dry firm ground sloping gently NNW.
1124715	L09-0525	14-Sep-16	661197	5525773	461	Birch, balsam, maple, R. Alder	R. Alder	Dry	Slight NNW	Firm dry ground sloping gently NNW.
1124716	L09-0525DUP	14-Sep-16	661199	5525717	462	Birch, balsam, maple, R. Alder	R. Alder	Dry	Slight NNW	Firm dry ground sloping gently NNW.
1124714	L09-0550	14-Sep-16	661199	5525802	457	Birch, spruce, maple, balsam, R. Alder	R. Alder	Dry	Slight NW	Firm dry ground sloping gently NW.
1124713	L09-0575	14-Sep-16	661199	5525826	458	Birch, spruce, maple, balsam, R. Alder	R. Alder	Dry	Slight NW	Firm dry ground sloping gently NW.
1124712	L09-0600	14-Sep-16	661200	5525850	458	Birch, spruce, maple, balsam, R. Alder	R. Alder	Dry	Moderate WNW	Firm dry ground sloping WNW.
1124711	L09-0625	14-Sep-16	661203	5525875	454	Spruce, cedar, balsam, maple, birch, R. Alder	R. Alder	Dry	Moderate NW	Firm dry ground sloping moderately NW.
1124710	L09-0650	14-Sep-16	661206	5525895	449	Birch, spruce, balsam, R. Alder, Maple	R. Alder	Dry	Moderate NW	Firm dry ground sloping moderately NW.
1124709	L09-0675	14-Sep-16	661204	5525923	453	Birch, spruce, maple, balsam, R. Alder	R. Alder	Dry	Slight NE	Firm dry ground sloping gently NE.
1124708	L09-0700	14-Sep-16	661201	5525949	451	Birch, spruce, maple, R. Alder, balsam	R. Alder	Dry	Slight NE	Firm dry ground sloping gently NE.
1124707	L09-0725	14-Sep-16	661213	5525976	449	Spruce, maple, birch, mountain ash, G. Alder, spagnum	G. Alder	Damp	Slight N	Soft damp ground sloping N.
1124706	L09-0750	14-Sep-16	661207	5525999	448	Cedar, birch, mountain ash, G. Alder, spagnum	G. Alder	Wet	Level	Soft wet ground with standing water. Cedar swamp.

SampleID	LineID	Date	UTM_E	UTM_N	Elev	Vegetation	AlderSpc	GndMoist	GndSlope	Comments
1124705	L09-0800	14-Sep-16	661190	5526032	450	Spruce, birch, balsam, G. Alder, spagnum	G. Alder	Damp	Level	Soft damp level ground.
1124704	L09-0850	14-Sep-16	661198	5526099	445	Spruce, balsam, birch, G. Alder, spagnum, labrador tea	G. Alder	Damp	Slight W	Soft damp ground sloping gently W.
1124703	L09-0900	14-Sep-16	661198	5526145	439	Spruce, birch, mountain ash, G. Alder, spagnum, labrador tea	G. Alder	Damp	Level	Firm damp level ground.
1124702	L09-1000	14-Sep-16	661203	5526246	448	Spruce, birch, G. Alder, spagnum	G. Alder	Wet	Level	Very wet level ground with standing water. Alder swamp.
1124680	L10-0000	14-Sep-16	661398	5525250	447	Spruce, birch, balsam, mountain ash, G. Alder, spagnum, labrador tea.	G. Alder	Damp	Level	Soft damp level ground.
No Sample	L10-0100	14-Sep-16	661400	5525350	450	Spruce, birch, balsam, spagnum, labrador tea.	N/A	Damp	Slight S	Soft damp ground gently sloping S.
1124681	L10-0200	14-Sep-16	661400	5525449	449	Spruce, birch, balsam, cedar, G. Alder, spagnum, labrador tea.	G. Alder	Damp	Level	Soft damp level ground.
1124682	L10-0300	14-Sep-16	661397	5525560	448	Spruce, balsam, birch, maple, R. Alder	R. Alder	Dry	Moderate E	Firm dry ground sloping moderately E.
1124683	L10-0350	14-Sep-16	661401	5525600	450	Spruce, birch, maple, R. Alder	R. Alder	Dry	Moderate E	Firm dry ground sloping moderately E.
1124684	L10-0400	14-Sep-16	661398	5525647	459	Spruce, balsam birch, maple, R. Alder	R. Alder	Dry	Steeply SE	Firm dry ground sloping steeply SE.
1124685	L10-0425	14-Sep-16	661397	5525676	459	Spruce, balsam, birch, maple, R. Alder	R. Alder	Dry	Steeply SE	Firm dry ground sloping steeply SE.
1124686	L10-0450	14-Sep-16	661394	5525697	458	Spruce, birch, balsam, maple, R. Alder	R. Alder	Dry	Moderate SE	Firm dry ground moderately sloping SE.
1124687	L10-0475	14-Sep-16	661397	5525724	459	Spruce, balsam, birch, maple, R. Alder	R. Alder	Dry	Moderate N	Firm dry ground moderately sloping N.
1124688	L10-0500	14-Sep-16	661399	5525754	460	Birch, spruce, balsam, birch, maple, R. Alder	G. Alder	Dry	Slight E	Firm dry ground sloping gently E.
1124690	L10-0500DUP	14-Sep-16	661397	5525753	457	Birch, spruce, balsam, birch, maple, R. Alder	G. Alder	Dry	Slight E	Firm dry ground sloping gently E.
1124689	L10-0525	14-Sep-16	661398	5525777	457	Birch, spruce, maple, balsam, R. Alder	R. Alder	Dry	Slight E	Firm dry ground sloping gently E.
1124691	L10-0550	14-Sep-16	661399	5525800	458	Spruce, birch, maple, balsam, R. Alder	R. Alder	Dry	Moderate S	Firm dry ground sloping moderately S.
1124692	L10-0575	14-Sep-16	661392	5525827	460	Spruce, birch, mountain ash, maple, R. Alder	R. Alder	Dry	Slight E	Firm dry ground sloping moderately E.
1124693	L10-0600	14-Sep-16	661399	5525850	459	Spruce, birch, maple, R. Alder	R. Alder	Dry	Steep N	Firm dry ground sloping steeply N.
1124694	L10-0625	14-Sep-16	661398	5525877	455	Spruce, balsam, birch, maple, R. Alder	R. Alder	Dry	Steep N	Firm dry ground sloping steeply N.
1124695	L10-0650	14-Sep-16	661400	5525899	452	Spruce, birch, balsam, G. Alder, maple, spagnum, grass	G. Alder	Damp	Level	Soft damp level ground.
1124696	L10-0675	14-Sep-16	661402	5525930	454	Spruce, birch, balsam, maple, G. Alder	G. Alder	Damp	Level	Soft damp level ground.
1124697	L10-0700	14-Sep-16	661400	5525950	455	Spruce, birch, cedar, maple, G. Alder, spagnum	G. Alder	Damp	Slight N	Soft damp ground sloping gently N.
1124698	L10-0750	14-Sep-16	661420	5526006	451	Spruce, birch, balsam, G. Alder, spagnum	G. Alder	Damp	Slight N	Soft damp ground sloping moderately NE.
1124699	L10-0800	14-Sep-16	661398	5526055	448	Spruce, birch, spagnum, G. Alder	G. Alder	Damp	Steep N	Firm damp ground on top of small hill, sloping steeply N.
1124700	L10-0900	14-Sep-16	661397	5526154	448	Spruce, birch, spagnum, G. Alder, balsam	G. Alder	Wet	Level	Soft wet level ground with standing water.
1124701	L10-1000	14-Sep-16	661398	5526233	446	Balsam, spruce, birch, spagnum, G. Alder	G. Alder	Wet	Slight S	Damp soft ground sloping gently S.
1124810	L11-0000	21-Sep-16	661547	5523251	443	Spruce, balsam, G. Alder, mountain ash, spagnum, labrador tea, cedar	G. Alder	Damp	Level	Soft damp level ground. Muskeg.
1124809	L11-0100	21-Sep-16	661521	5523361	432	Spruce, balsam, cedar, G. Alder, labrador tea, spagnum	G. Alder	Damp	Level	Soft damp level ground. Muskeg.
1124808	L11-0200	21-Sep-16	661559	5523451	436	Spruce, balsam, G. Alder, spagnum, labrador tea	G. Alder	Damp	Level	Soft damp level ground. Muskeg.
1124807	L11-0250	21-Sep-16	661555	5523502	439	Spruce, G. Alder, labrador tea, spagnum	G. Alder	Wet	Level	Soft wet level ground at shore of small pond. Muskeg.
1124806	L11-0275	21-Sep-16	661556	5523527	437	Spruce, G. Alder, labrador tea, spagnum, grass	G. Alder	Wet	Level	Soft wet level ground at shore of small pond. Muskeg.
1124805	L11-0300	21-Sep-16	661551	5523551	439	Spruce, G. Alder, labrador tea, spagnum	G. Alder	Wet	Level	Soft wet level ground at shore of small pond. Muskeg.
1124804	L11-0325	21-Sep-16	661552	5523576	437	Spruce, balsam, G. Alder, spagnum, labrador tea	G. Alder	Wet	Level	Soft wet level ground. Muskeg.
1124803	L11-0350	21-Sep-16	661551	5523604	440	Spruce, birch, G. Alder, balsam, labrador tea, spagnum	G. Alder	Wet	Level	Soft wet level ground with standing water. Muskeg.
1124802	L11-0400	21-Sep-16	661586	5523671	434	Spruce, balsam, poplar, birch, G. Alder, spagnum, labrador tea	G. Alder	Damp	Level	Soft damp level ground. Muskeg.
1124801	L11-0500	21-Sep-16	661496	5523775	435	Balsam, birch, spruce, tamerack, spagnum, G. Alder	G. Alder	Wet	Level	Soft wet level ground at beaver pond. 58m from target point. Few alders due to beavers. Difficult beaver dam crossing.
No Sample	L11-0600	21-Sep-16	661550	5523850	437	Spruce, balsam, birch, maple, spagnum	N/A	Dry	Moderately SW	Dry firm ground sloping moderately SW. No alders.
1124800	L11-0700	21-Sep-16	661547	5523945	439	Poplar, balsam, spruce, maple, R. Alder	R. Alder	Dry	Steeply NW	Dry firm ground sloping steeply NW.
1124799	L11-0800	21-Sep-16	661542	5524041	423	Poplar, balsam, cedar, maple, spruce, R. Alder	R. Alder	Dry	Slight SW	Dry firm ground sloping gently SW.
1124798	L11-0900	21-Sep-16	661539	5524142	437	Cedar, birch, balsam, spruce, maple, R. Alder	R. Alder	Dry	Slight W	Dry firm ground sloping gently W.
1124797	L11-0950	21-Sep-16	661580	5524196	447	Poplar, birch, spruce, balsam, maple, R. Alder	R. Alder	Dry	Moderate W	Dry firm ground sloping moderately W.
1124763	L11-1000	18-Sep-16	661524	5524255	438	Cedar, spruce, spagnum, balsam, G. Alder	G. Alder	Damp	Gently W	Soft damp ground gently sloping W. At shore of Glitter Lake.
1124762	L11-1025	18-Sep-16	661577	5524266	438	Balsam, birch, maple, poplar, R. Alder	R. Alder	Dry	Slight W	Dry firm ground sloping gently W.
1124761	L11-1050	18-Sep-16	661531	5524305	434	Cedar, birch, balsam, spruce, spagnum, G. Alder	G. Alder	Damp	Mod W	Soft damp ground moderately sloping W.
1124760	L11-1075	18-Sep-16	661539	5524326	433	Cedar, spruce, birch, G. Alder, spagnum	G. Alder	Damp	Slight W	Soft damp ground sloping gently W.
1124759	L11-1100	18-Sep-16	661553	5524343	440	Spruce, cedar, birch, spagnum, G. Alder	G. Alder	Damp	Slight W	Soft damp ground sloping gently W.
1124758	L11-1125	18-Sep-16	661545	5524377	438	Spruce, cedar, balsam, spagnum, G. Alder	G. Alder	Damp	Slight SW	Soft damp ground sloping gently SW.
1124757	L11-1150	18-Sep-16	661547	5524397	439	Spruce, birch, cedar, maple, spagnum, G. Alder	G. Alder	Wet	Level	Soft wet level ground with open water.
1124756	L11-1175	18-Sep-16	661552	5524424	439	Spruce, birch, balsam, maple, G. Alder, spagnum	G. Alder	Damp	Level	Soft damp level ground.
1124755	L11-1200	18-Sep-16	661548	5524449	435	Cedar, maple, birch, G. Alder, spruce	G. Alder	Damp	Level	Dry firm level ground.
1124754	L11-1250	18-Sep-16	661553	5524497	438	Cedar, balsam, birch, maple, R. Alder	R. Alder	Dry	Level	Dry firm level ground.
1124753	L11-1300	18-Sep-16	661541	5524549	445	Cedar, spruce, birch, balsam, maple, R. Alder	R. Alder	Dry	Level	Dry firm level ground.
1124752	L11-1400	18-Sep-16	661552	5524651	454	Balsam, birch, R. Alder, maple	R. Alder	Dry	Steep ESE	Dry firm ground sloping steeply ESE.
1124751	L11-1500	18-Sep-16	661549	5524746	459	Balsam, spruce, birch, maple, R. Alder	R. Alder	Dry	Mod NE	Dry firm ground sloping moderately NE.
No Sample	L11-1600	18-Sep-16	661550	5524850		Spruce, spagnum, labrador tea, birch, maple	N/A	Dry	Steep N	Dry firm ground on side of steep hill sloping N steeply.
1124750	L11-1700	18-Sep-16	661551	5524958	444	Cedar, balsam, birch, G. Alder, spagnum	G. Alder	Wet	Level	Cedar swamp. Soft wet level ground with standing water.
1124749	L11-1800	18-Sep-16	661551	5525051	448	Balsam, spruce, maple, R. Alder	R. Alder	Dry	Level	Firm dry level ground.
1124748	L11-1900	18-Sep-16	661549	5525147	452	Spruce, maple, R. Alder, birch, balsam	R. Alder	Dry	Slight SSE	Dry firm ground gently sloping SSE.
1124747	L11-2000	18-Sep-16	661547	5525251	452	Balsam, spruce, birch, G. Alder, mountain ash, spagnum	G. Alder	Damp	Steep NNW	Damp firm ground sloping steeply NNW.
1124746	L11-2100	18-Sep-16	661550	5525351	449	Cedar, spruce, balsam, G. Alder, spagnum	G. Alder	Wet	Level	Cedar Swamp. Soft wet level ground with standing water.
1124745	L11-2200	18-Sep-16	661552	5525456	449	Cedar, spruce, birch, G. Alder, spagnum	G. Alder	Wet	Level	Cedar Swamp. Soft wet level ground with standing water.
1124744	L11-2300	18-Sep-16	661548	5525552	447	Cedar, spruce, G. Alder, spagnum, cranberries	G. Alder	Wet	Level	Cedar Swamp. Soft wet level ground with standing water.
1124743	L11-2350	18-Sep-16	661554	5525601	447	Cedar, spruce, G. Alder, spagnum	G. Alder	Wet	Level	Cedar Swamp. Soft wet level ground with standing water.
1124742	L11-2400	18-Sep-16	661551	5525650	455	Cedar, birch, balsam, spruce, G. Alder	G. Alder	Dry	Slight SSE	Dry firm ground sloping gently SSE.
1124741	L11-2425	18-Sep-16	661554	5525674	453	Spruce, birch, balsam, maple, R. Alder	R. Alder	Dry	Moderately S	Dry firm ground moderately sloping S.
1124739	L11-2450	18-Sep-16	661538	5525697	453	Spruce, birch, maple, G. Alder, R. Alder	R. Alder	Dry	Slight SSW	Dry firm ground sloping gently SSW.
1124740	L11-2450DUP	18-Sep-16	661537	5525698	455	Spruce, birch, maple, G. Alder, R. Alder	R. Alder	Dry	Slight SSW	Dry firm ground sloping gently SSW.
1124738	L11-2475	18-Sep-16	661550	5525726	455	Spruce, birch, maple, balsam, R. Alder	R. Alder	Dry	Slight S	Dry firm ground sloping gently S.
1124737	L11-2500	18-Sep-16	661556	5525746	457	Birch, spruce, maple, R. Alder, balsam, wild rose	R. Alder	Dry	Slight NE	Dry firm ground sloping gently NE.
1124736	L11-2525	18-Sep-16	661544	5525770	456	Birch, spruce, maple, balsam, R. Alder	R. Alder	Dry	Slight SE	Dry firm ground sloping gently SE.
1124735	L11-2550	18-Sep-16	661543	5525792	454	Birch, balsam, maple, spruce, R. Alder	R. Alder	Dry	Slight E	Dry firm ground sloping gently E.
1124734	L11-2575	18-Sep-16	661549	5525823	450	Spruce, birch, maple, balsam, R. Alder	R. Alder	Dry	Slight ESE	Firm dry ground sloping gently ESE.
1124733	L11-2600	18-Sep-16	661559	5525859	451	Spruce, birch, maple, balsam, G. Alder, spagnum	G. Alder	Damp	Level	Soft damp level ground.
1124732	L11-2650	18-Sep-16	661546	5525899	450	Spruce, birch, maple, G. Alder, spagnum	G. Alder	Dry	Moderate NW	Soft dry ground sloping moderately NW.
1124731	L11-2700	18-Sep-16	661547	5525952	443	Spruce, birch, balsam, maple, G. Alder, spagnum, labrador tea, tamerack	G. Alder	Damp	Level	Soft damp level ground.
1124730	L11-2800	18-Sep-16	661554	5526052	443	Spruce, birch, balsam, G. Alder, spagnum, labrador tea	G. Alder	Damp	Level	Soft damp level ground.
1124729	L11-2900	18-Sep-16	661500	5526150	441	Spruce, G. Alder, birch, spagnum, labrador tea, mountain ash, balsam	G. Alder	Wet	Level	Soft wet ground with standing water.
1124728	L11-3000	18-Sep-16	661529	5526245	442	Spruce, birch, balsam, G. Alder, spagnum, labrador tea	G. Alder	Wet	Level	Soft wet level ground with standing water.
1124659	L12-0000	12-Sep-16	661742	5525255	440	Spruce, birch, G. Alder, spagnum, labrador tea	G. Alder	Damp	Level	Soft damp level ground.
1124658	L12-0100	12-Sep-16	661751	5525351	447	Spruce, birch, balsam, G. Alder, spagnum	G. Alder	Dry	Slight S	Firm dry ground sloping gently S.
1124657	L12-0200	12-Sep-16	661751	5525444	449	Spruce, birch, balsam, maple, R. Alder, cedar	R. Alder	Dry	Slight SE	Dry firm ground sloping gently SE.
1124656	L12-0250	12-Sep-16	661749	5525503	454	Spruce, birch, maple, balsam, R. Alder	R. Alder	Dry	Moderated W	Dry firm ground sloping moderately W.
1124655	L12-0300	12-Sep-16	661757	5525552	458	Birch, balsam, spruce, maple, R. Alder	R. Alder	Dry	Moderately W	Dry firm ground sloping moderately W.
1124654	L12-0325	12-Sep-16	661750	5525574	458	Birch, spruce, R. Alder, Maple	R. Alder	Dry	Moderate NW	Dry firm ground sloping moderately NW.
1124653	L12-0350	12-Sep-16	661750	5525598	458	Spruce, birch, R. Alder, maple, balsam	R. Alder	Dry	Moderately N	Dry firm ground sloping moderately N.
1124652	L12-0375	12-Sep-16	661746	5525627	456	Birch spruce, R. Alder, balsam, maple	R. Alder	Dry	Slight NNW	Dry firm ground sloping gently NNW.
1124651	L12-0400	12-Sep-16	661754	5525644	453	Spruce, birch, balsam, maple, spagnum, few small R. Alders	R. Alder	Dry	Slight NE	Soft dry ground sloping gently NE.

SampleID	LineID	Date	UTM_E	UTM_N	Elev	Vegetation	AlderSpc	GndMoist	GndSlope	Comments
1124650	L12-0425	12-Sep-16	661750	5525675	454	Spruce, birch, balsam, mountain ash, spagnum, G. Alder, Maple	G. Alder	Damp	Level	Soft damp level ground.
1124649	L12-0450	12-Sep-16	661744	5525704	452	Spruce, birch, balsam, G. Alder, spagnum, labrador tea	G. Alder	Damp	Level	Soft damp level ground.
1124648	L12-0475	12-Sep-16	661746	5525724	452	Spruce, birch, G. Alder, cedar, maple, spagnum	G. Alder	Damp	Level	Soft damp level ground.
1124647	L12-0500	12-Sep-16	661751	5525759	453	Spruce, birch, balsam, maple, spagnum	G. Alder	Damp	Slight E	Soft damp ground sloping gently E.
1124646	L12-0550	12-Sep-16	661751	5525803	454	Spruce, birch, G. Alder, spagnum, maple	G. Alder	Damp	Level	Damp firm level ground.
1124645	L12-0600	12-Sep-16	661753	5525852	445	Spruce, balsam, birch, G. Alder, spagnum	G. Alder	Damp	Level	Damp firm level ground.
No Sample	L12-0700	12-Sep-16	661750	5525950		Spagnum, spruce, labrador tea, pitcher plants, tamerack	N/A	Wet	Level	Floating bog near pond. No Alder.
1124644	L12-0800	12-Sep-16	661751	5526054	453	Cedar, spruce, G. Alder, balsam, spagnum	G. Alder	Wet	Level	Cedar Swamp. Soft level wet ground with standing water.
1124643	L12-0900	12-Sep-16	661752	5526155	447	Spruce, birch, G. Alder, spagnum, cedar, labrador tea	G. Alder	Damp	Moderate S	Soft damp ground sloping moderately S.
1124642	L12-1000	12-Sep-16	661775	5526261	447	Spruce, birch, balsam, G. Alder, spagnum, labrador tea	G. Alder	Damp	Level	Soft damp level ground. No alders at sample location, had to walk 25m off line to alder swamp.
1124623	L13-0040	12-Sep-16	662000	5525290	447	Spruce, G. Alder, spagnum, grass, labrador tea	G. Alder	Wet	Level	Soft wet marshy ground @ shore of unnamed lake.
1124624	L13-0100	12-Sep-16	662010	5525352	452	Birch, spruce, balsam, G. Alder, spagnum	G. Alder	Damp	Slight S	Soft damp ground sloping gently S.
1124625	L13-0200	12-Sep-16	661999	5525447	456	Birch, balsam, spruce, R. Alder, maple	R. Alder	Dry	Slight S	Firm dry ground sloping gently S.
1124626	L13-0250	12-Sep-16	662000	5525498	464	Balsam, poplar, maple, birch, R. Alder	R. Alder	Dry	Slight S	Firm dry ground gently sloping S.
1124627	L13-0300	12-Sep-16	662002	5525549	461	Poplar, maple, balsam, birch, R. Alder	R. Alder	Dry	Slight N	Firm dry ground sloping gently N.
1124628	L13-0325	12-Sep-16	662003	5525576	457	Spruce, poplar, balsam, maple, R. Alder	R. Alder	Dry	Slight N	Firm dry ground sloping gently N.
1124629	L13-0350	12-Sep-16	661999	5525595	455	Poplar, birch, spruce, balsam maple, R. Alder	R. Alder	Dry	Steep N	Firm dry ground sloping gently N.
1124630	L13-0375	12-Sep-16	662002	5525628	453	Spruce, birch, balsam, G. Alder, maple spagnum, labrador tea	G. Alder	Damp	Level	Soft damp level ground.
1124631	L13-0400	12-Sep-16	662002	5525650	453	Spruce, birch, maple, balsam, G. Alder, spagnum	G. Alder	Wet	Level	Soft wet level ground.
1124632	L13-0425	12-Sep-16	662001	5525677	453	Cedar, birch, spruce, G. Alder, maple, spagnum	G. Alder	Wet	Level	Cedar Swamp. Soft wet level ground with open water.
1124633	L13-0450	12-Sep-16	661998	5525703	451	G. Alder, balsam, spagnum, spruce, grass	G. Alder	Wet	Level	Cedar Swamp. Soft wet level ground with open water.
1124634	L13-0475	12-Sep-16	661998	5525723	452	Spruce, balsam, G. Alder, spagnum, labrador tea	G. Alder	Damp	Slight S	Soft damp ground sloping gently S.
1124635	L13-0500	12-Sep-16	662002	5525755	452	Spruce, balsam, birch, poplar, G. Alder, spagnum, labrador tea	G. Alder	Damp	Slight SE	Soft damp ground sloping gently SE.
1124636	L13-0550	12-Sep-16	661994	5525802	445	Spruce, cedar, G. Alder, spagnum, labrador tea	G. Alder	Damp	Slight S	Soft damp ground sloping gently S.
1124637	L13-0600	12-Sep-16	661997	5525849	447	Spruce, birch, balsam, tamerack, G. Alder, spagnum, labrador tea	G. Alder	Damp	Slight SW	Soft damp ground sloping gently SW.
1124638	L13-0700	12-Sep-16	661999	5525953	449	Spruce, poplar, balsam, G. Alder, spagnum, labrador tea	G. Alder	Damp	Slight SSW	Soft damp ground sloping gently SSW.
1124639	L13-0800	12-Sep-16	661987	5526048	448	Spruce, balsam, birch, poplar, cedar, mountain ash, G. Alder, spagnum, labrador tea	G. Alder	Damp	Level	Soft damp level ground.
1124640	L13-0900	12-Sep-16	661998	5526152	442	Spruce, balsam, birch, G. Alder, spagnum, labrador tea	G. Alder	Damp	Moderate NNW	Soft damp ground sloping moderately NNW.
1124641	L13-1000	12-Sep-16	662004	5526242	436	Spruce, balsam, birch, G. Alder, spagnum, labrador tea	G. Alder	Damp	Level	Soft damp level ground.
1124796	L14-0000	20-Sep-16	662055	5523814	445	Spruce, labrador tea, spagnum, G. Alder	G. Alder	Wet	Level	Soft wet level ground at shore of beaver pond.
No Sample	L14-0100	20-Sep-16	662050	5523900	442	Spruce, balsam, spagnum, labrador tea, mountain ash	N/A	Damp	Level	Soft damp level ground. Muskeg, no alders.
1124795	L14-0200	20-Sep-16	662067	5524004	447	Spruce, balsam, birch, labrador tea, spagnum, G. Alder	G. Alder	Damp	Level	Soft damp level ground. Muskeg.
1124794	L14-0300	20-Sep-16	662055	5524095	441	Spruce, balsam, birch, spagnum, labrador tea, G. Alder	G. Alder	Damp	Level	Soft damp level ground. Muskeg.
1124793	L14-0400	20-Sep-16	662049	5524201	442	Spruce, maple, spagnum G. Alder	G. Alder	Damp	Level	Soft damp level ground.
1124792	L14-0450	20-Sep-16	662052	5524250	452	Spruce, balsam, birch, maple, G. Alder, spagnum, grass	G. Alder	Damp	Level	Soft damp level ground.
1124791	L14-0475	20-Sep-16	662052	5524275	453	Poplar, spruce, birch, balsam, maple, G. Alder	G. Alder	Dry	Moderate E	Firm dry ground sloping moderately E.
1124790	L14-0500	20-Sep-16	662051	5524302	453	Spruce, birch, poplar, maple, R. Alder	R. Alder	Dry	Moderate ESE	Firm dry ground sloping moderately ESE.
1124789	L14-0525	20-Sep-16	662059	5524323	457	Spruce, birch, maple, R. Alder	R. Alder	Dry	Moderate SE	Firm dry ground sloping moderately SE.
1124788	L14-0550	20-Sep-16	662052	5524352	458	Poplar, birch, spruce, balsam, maple, R. Alder	R. Alder	Dry	Steeply E	Firm dry ground sloping steeply E.
1124787	L14-0575	20-Sep-16	662053	5524374	458	Poplar, birch, balsam, maple, R. Alder	R. Alder	Dry	Steeply SE	Firm dry ground sloping steeply SE.
1124786	L14-0600	20-Sep-16	662055	5524398	462	Poplar, birch, spruce, maple, R. Alder	R. Alder	Dry	Slight SE	Firm dry ground sloping gently SE.
1124785	L14-0625	20-Sep-16	662051	5524423	459	Poplar, spruce, birch, maple, balsam, R. Alder	R. Alder	Dry	Moderate ESE	Firm dry ground sloping moderately ESE.
1124784	L14-0650	20-Sep-16	662052	5524448	459	Poplar, birch, spruce, maple, balsam, R. Alder	R. Alder	Dry	Slight E	Firm dry ground sloping gently E.
1124783	L14-0700	20-Sep-16	662047	5524496	457	Poplar, birch, maple, spruce, balsam, R. Alder	R. Alder	Dry	Slight N	Firm dry ground sloping gently N.
1124782	L14-0800	19-Sep-16	662069	5524593	452	Spruce, birch, maple, balsam, poplar, R. Alder	R. Alder	Dry	Moderate NW	Dry firm ground sloping moderately NW.
1124781	L14-0900	19-Sep-16	662046	5524697	447	Spruce, balsam, G. Alder, spagnum, labrador tea	G. Alder	Damp	Level	Muskeg. Soft damp level ground.
1124780	L14-1000	19-Sep-16	662041	5524795	447	Birch, spruce, balsam, maple, G. Alder, spagnum	G. Alder	Damp	Level	Soft damp level ground.
No Sample	L15-0000	19-Sep-16	662250	5523800	445	Spruce, spagnum, labrador tea, birch	N/A	Wet	Level	Muskeg. Soft wet level ground.
No Sample	L15-0100	19-Sep-16	662250	5523900	440	Spruce, spagnum, labrador tea	N/A	Wet	Level	Muskeg. Soft wet level ground with occasional standing water.
1124764	L15-0200	19-Sep-16	662256	5524006	440	Spruce, balsam, G. Alder, spagnum, labrador tea	G. Alder	Wet	Level	Alder stand in muskeg. Soft damp ground sloping gently SSE.
No Sample	L15-0300	19-Sep-16	662250	5524100	452	Spruce, balsam, birch, spagnum, labrador tea	N/A	Damp	Level	Muskeg. Soft damp ground sloping gently SSE.
1124765	L15-0350	19-Sep-16	662256	5524160	447	Spruce, balsam, birch, maple, R. Alder, spagnum	R. Alder	Dry	Moderate SE	Firm dry ground sloping moderately SE.
1124766	L15-0375	19-Sep-16	662250	5524167	446	Birch, spruce, balsam, poplar, maple, R. Alder	R. Alder	Dry	Moderate SE	Dry firm ground sloping moderately SE.
1124767	L15-0400	19-Sep-16	662249	5524202	453	Spruce, balsam, birch, poplar, mountain ash, R. Alder	R. Alder	Dry	Moderate SSE	Dry firm ground sloping moderately SSE.
1124768	L15-0425	19-Sep-16	662248	5524228	459	Spruce, balsam, birch, poplar, mountain ash, R. Alder	R. Alder	Dry	Slight SE	Dry firm ground sloping gently SE.
1124769	L15-0450	19-Sep-16	662251	5524250	453	Spruce, balsam, poplar, birch, mountain ash, R. Alder	R. Alder	Dry	Moderate W	Dry firm ground sloping moderately W.
1124770	L15-0450DUP	19-Sep-16	662248	5524253	453	Spruce, balsam, poplar, birch, mountain ash, R. Alder	R. Alder	Dry	Moderate W	Dry firm ground sloping moderately W.
1124771	L15-0475	19-Sep-16	662249	5524274	460	Poplar, spruce, balsam, maple, birch, R. Alder	R. Alder	Dry	Slight SE	Dry firm ground sloping gently SE.
1124772	L15-0500	19-Sep-16	662253	5524303	452	Poplar, spruce, birch, maple, balsam, R. Alder	R. Alder	Dry	Slight W	Dry firm ground sloping gently W.
1124773	L15-0525	19-Sep-16	662247	5524328	461	Poplar, spruce, balsam, maple, R. Alder	R. Alder	Dry	Slight S	Dry firm ground sloping gently S.
1124774	L15-0550	19-Sep-16	662252	5524357	461	Poplar, birch, spruce, maple, balsam, R. Alder	R. Alder	Dry	Moderate SSE	Dry firm ground, sloping moderately SSE.
1124775	L15-0600	19-Sep-16	662254	5524402	456	Balsam, maple, birch, few small R. Alders	R. Alder	Dry	Steeply NW	Dry firm ground sloping steeply NW.
1124776	L15-0700	19-Sep-16	662250	5524501	462	Spruce, birch, poplar, R. Alder, maple, balsam	R. Alder	Dry	Moderate SE	Dry firm ground sloping moderately SE.
1124777	L15-0800	19-Sep-16	662251	5524603	463	Poplar, spruce, birch, maple, R. Alder, balsam	R. Alder	Dry	Moderate NW	Dry firm ground sloping moderately NW.
1124778	L15-0900	19-Sep-16	662249	5524704	464	Poplar, balsam, maple, spruce, R. Alder	R. Alder	Dry	Moderate SW	Dry firm ground sloping moderately SW.
1124779	L15-1000	19-Sep-16	662252	5524800	454	Poplar, spruce, birch, balsam, maple, R. Alder	R. Alder	Dry	Steeply W	Dry firm ground sloping steeply W.
1124946	L16-0000	30-Sep-16	662448	5523750	442	Spruce, G. Alder, spagnum, labrador tea	G. Alder	Wet	Level	Soft wet level ground with standing water. Muskeg.
1124945	L16-0100	30-Sep-16	662456	5523851	444	Spruce, birch, tamerack, G. Alder, spagnum, labrador tea, grass	G. Alder	Wet	Level	Soft wet level ground with abundant standing water.
1124944	L16-0200	30-Sep-16	662448	5523950	441	Spruce, G. Alder, tamerack, spagnum	G. Alder	Wet	Level	Soft wet level ground with standing water. Alder swamp.
1124943	L16-0300	30-Sep-16	662454	5524049	442	Spruce, tamerack, G. Alder, birch, spagnum, labrador tea	G. Alder	Wet	Level	Soft wet level ground with occasional standing water. Muskeg at edge of alder swamp.
No Sample	L16-0350	30-Sep-16	662450	5524100	442	Spruce, tamerack, spagnum, labrador tea, birch	N/A	Damp	Level	Soft damp level ground. Muskeg with no alders.
1124942	L16-0400	30-Sep-16	662453	5524149	444	Spruce, G. Alder, spagnum, labrador tea, tamerack	G. Alder	Damp	Slight N	Soft damp ground sloping gently N. Near creek.
1124911	L16-0450	28-Sep-16	662453	5524203	437	Spruce, G. Alder, spagnum, labrador tea, grass	G. Alder	Damp	Slight S	Soft damp ground sloping gently S. Near creek.
1124910	L16-0475	28-Sep-16	662445	5524225	441	Spruce, balsam, G. Alder, spagnum, labrador tea, maple	G. Alder	Wet	Level	Soft wet ground, level with standing water. Alder swamp.
1124909	L16-0500	28-Sep-16	662453	5524247	436	Spruce, balsam, G. Alder, spagnum, labrador tea, birch	G. Alder	Damp	Level	Soft damp level ground. Muskeg.
No Sample	L16-0525	28-Sep-16	662450	5524275	439	Spruce, balsam, birch, spagnum, labrador tea	N/A	Damp	Level	Soft damp level ground. Muskeg with no alders.
1124908	L16-0550	28-Sep-16	662456	5524301	445	Poplar, balsam, spruce, R. Alder	R. Alder	Dry	Moderate SE	Firm dry ground sloping moderately SE.
1124907	L16-0575	28-Sep-16	662450	5524326	436	Poplar, balsam, spruce, maple, mountain ash, R. Alder	R. Alder	Dry	Moderate E	Firm dry ground sloping moderately E.
1124906	L16-0600	28-Sep-16	662449	5524350	436	Poplar, spruce, balsam, maple, R. Alder	R. Alder	Dry	Moderate E	Firm dry ground sloping moderately E.
1124905	L16-0650	28-Sep-16	662447	5524395	443	Poplar, birch, spruce, maple, R. Alder	R. Alder	Dry	Slight NE	Firm dry ground sloping gently NE.
1124904	L16-0700	28-Sep-16	662446	5524453	445	Poplar, birch, balsam, maple, R. Alder	R. Alder	Dry	Slight NW	Firm dry ground sloping gently NW.
1124903	L16-0800	28-Sep-16	662450	5524550	459	Poplar, balsam, spruce, maple, R. Alder	R. Alder	Dry	Steeply S	Firm dry ground sloping steeply S.
1124902	L16-0900	28-Sep-16	662456	5524652	476	Poplar, birch, spruce, maple, R. Alder, balsam	R. Alder	Dry	Steeply S	Firm dry ground sloping steeply S.
1124901	L16-1000	28-Sep-16	662447	5524749	480	Poplar, birch, spruce, R. Alder, balsam, maple	R. Alder	Dry	Slight S	Firm dry ground sloping gently S.
1124900	L16-1100	28-Sep-16	662445	5524849	487	Poplar, birch, R. Alder, maple, spruce	R. Alder	Dry	Moderate E	Firm dry ground sloping moderately E.
1124899	L16-1200	28-Sep-16	662449	5524946	480	Poplar, birch, maple, R. Alder	R. Alder	Dry	Moderate NE	Firm dry ground sloping moderately NE.
1124898	L16-1300	28-Sep-16	662449	5525051	476	Poplar, birch, maple, R. Alder	R. Alder	Dry	Moderate NE	Firm dry ground sloping moderately NE.
1124897	L16-1400	28-Sep-16	662447	5525147	477	Poplar, Balsam, birch, maple, R. Alder	R. Alder	Dry	Moderate S	Firm dry ground sloping moderately S.

SampleID	LineID	Date	UTM_E	UTM_N	Elev	Vegetation	AlderSpc	GndMoist	GndSlope	Comments
1124896	L16-1500	28-Sep-16	662456	5525252	471	Poplar, balsam, maple, spruce, R. Alder	R. Alder	Dry	Moderate SSW	Firm dry ground sloping moderately SSW.
1124895	L16-1550	28-Sep-16	662449	5525294	453	Poplar, birch, balsam, spruce, maple, R. Alder	R. Alder	Dry	Steeply N	Firm dry ground sloping steeply N.
1124894	L16-1600	28-Sep-16	662447	5525358	454	Poplar, birch, spruce, maple, mountain ash, R. Alder	R. Alder	Dry	Moderate N	Firm dry ground sloping moderately N.
1124893	L16-1625	28-Sep-16	662448	5525374	453	Birch, spruce, maple, G. Alder, balsam	G. Alder	Dry	Moderate NNE	Firm dry ground sloping moderately NNE.
1124892	L16-1650	28-Sep-16	662451	5525395	446	Spruce, birch, balsam, maple, G. Alder, spagnum	G. Alder	Damp	Slight N	Soft damp ground sloping gently N.
1124891	L16-1675	28-Sep-16	662449	5525423	450	Spruce, G. Alder, Spagnum, labrador tea	G. Alder	Wet	Level	Soft wet level ground with standing water. Alder swamp.
1124889	L16-1700	28-Sep-16	662449	5525449	449	Spruce, cedar, G. Alder, spagnum, labrador tea	G. Alder	Wet	Level	Soft wet level ground with standing water. Alder/Cedar swamp.
1124890	L16-1700DUP	28-Sep-16	662451	5525452	452	Spruce, cedar, G. Alder, spagnum, labrador tea	G. Alder	Wet	Level	Soft wet level ground with standing water. Alder/Cedar swamp.
1124888	L16-1725	28-Sep-16	662445	5525472	450	Spruce, birch, mountain ash, G. Alder, spagnum, labrador tea	G. Alder	Wet	Level	Soft wet level ground with standing water. Alder swamp.
1124887	L16-1750	28-Sep-16	662450	5525500	457	Spruce, G. Alder, mountain ash, birch, spagnum, labrador tea	G. Alder	Wet	Level	Soft wet level ground with standing water. Alder swamp.
1124886	L16-1775	28-Sep-16	662451	5525527	450	Spruce, G. Alder, spagnum, labrador tea	G. Alder	Wet	Level	Soft wet level ground with standing water. Alder swamp.
1124885	L16-1800	28-Sep-16	662452	5525556	454	Birch, poplar, balsam, spruce, maple, R. Alder	R. Alder	Dry	Moderate SW	Firm dry ground sloping moderately SW.
1124884	L16-1850	28-Sep-16	662443	5525604	454	Poplar, birch, spruce, balsam, maple, R. Alder	R. Alder	Dry	Steeply SSE	Firm dry ground sloping steeply SSE.
1124883	L16-1950	28-Sep-16	662447	5525700	457	Poplar, balsam, spruce, birch, maple, R. Alder	R. Alder	Dry	Steeply SE	Firm dry ground sloping steeply SE.
1124882	L16-2050	28-Sep-16	662455	5525801	455	Poplar, spruce, birch, balsam, maple, R. Alder	R. Alder	Dry	Moderate E	Firm dry ground sloping moderately east.
1124881	L16-2150	28-Sep-16	662449	5525891	454	Tamarack, spruce, Birch, G. Alder, Spagnum	G. Alder	Wet	Level	Soft wet level ground with standing water. Alder Swamp.
1124824	L17-0000	22-Sep-16	662659	5523664	437	Spruce, cedar, G. Alder, balsam, spagnum	G. Alder	Wet	Level	Soft wet level ground @ edge of cedar swamp.
1124825	L17-0100	22-Sep-16	662652	5523744	445	Spruce, G. Alder, spagnum, labrador tea	G. Alder	Damp	Level	Soft damp level ground. Muskeg.
1124823	L17-0200	21-Sep-16	662651	5523850	440	Spruce, G. Alder, spagnum, labrador tea	G. Alder	Damp	Level	Soft damp level ground. Muskeg.
1124822	L17-0250	21-Sep-16	662642	5523902	439	Spruce, spagnum, labrador tea, G. Alder	G. Alder	Damp	Level	Soft damp level ground. Muskeg.
1124821	L17-0300	21-Sep-16	662652	5523952	441	Spruce, G. Alder, labrador tea, spagnum	G. Alder	Wet	Level	Soft wet level ground. At edge of alder swamp.
1124820	L17-0325	21-Sep-16	662650	5523974	442	Spruce, G. Alder, birch, labrador tea, spagnum	G. Alder	Wet	Level	Soft wet level ground with standing water. Alder swamp.
1124819	L17-0350	21-Sep-16	662650	5524002	438	Spruce, balsam, G. Alder, birch, spagnum, labrador tea	G. Alder	Wet	Level	Soft wet ground, level with occasional standing water. Muskeg.
1124818	L17-0375	21-Sep-16	662637	5524027	441	Spruce, G. Alder, birch, spagnum, labrador tea	G. Alder	Damp	Level	Soft damp level ground. Isolated alder stand in muskeg.
1124816	L17-0400	21-Sep-16	662651	5524049	437	Spruce, G. Alder, spagnum, labrador tea, birch	G. Alder	Damp	Level	Soft damp level ground. Alder stand in muskeg.
1124817	L17-0400DUP	21-Sep-16	662649	5524046	437	Spruce, G. Alder, spagnum, labrador tea, birch	G. Alder	Damp	Level	Soft damp level ground. Alder stand in muskeg.
1124815	L17-0425	21-Sep-16	662644	5524073	439	Spruce, G. Alder, spagnum, labrador tea	G. Alder	Damp	Level	Soft damp level ground. Alder stand in muskeg.
No Sample	L17-0450	21-Sep-16	662650	5524100	442	Spruce, spagnum, labrador tea, birch	N/A	Damp	Level	Soft damp level ground. Muskeg with no alders.
1124814	L17-0475	21-Sep-16	662616	5524115	435	Spruce, spagnum, labrador tea, G. Alders	G. Alder	Damp	Level	Soft damp level ground. Muskeg with sparse G. Alders.
1124813	L17-0500	21-Sep-16	662675	5524151	444	Spruce, balsam, birch, spagnum, labrador tea, G. Alder	G. Alder	Damp	Level	Soft damp level ground. Muskeg with sparse G. Alders.
1124812	L17-0550	21-Sep-16	662603	5524192	443	Spruce, spagnum, labrador tea, G. Alders.	G. Alder	Damp	Level	Soft damp level ground. Isolated alder stand in muskeg.
1124811	L17-0600	21-Sep-16	662620	5524252	450	Spruce, G. Alder, spagnum, labrador tea.	G. Alder	Damp	Level	Soft damp level ground at creek. Muskeg.
1124826	L17-0650	22-Sep-16	662637	5524301	447	Spruce, G. Alder, labrador tea, spagnum	G. Alder	Damp	Slight W	Soft damp ground sloping gently west. Muskeg at bank of creek.
1124827	L17-0750	22-Sep-16	662647	5524397	444	Spruce, grass, G. Alder, tamarack	G. Alder	Wet	Slight N	Soft wet ground sloping gently north. At bank of creek.
1124847	L18-0000	22-Sep-16	662893	5523005	447	Spruce, G. Alder, labrador tea, tamarack, spagnum	G. Alder	Damp	Level	Soft damp level ground. Muskeg.
1124846	L18-0100	22-Sep-16	662901	5523102	451	Spruce, birch, tamarack, spagnum, labrador tea, G. Alder	G. Alder	Damp	Slight N	Soft damp ground sloping gently north. Muskeg.
1124845	L18-0200	22-Sep-16	662889	5523200	439	Spruce, birch, willow, G. Alder, spagnum, labrador tea	G. Alder	Damp	Slight N	Soft damp ground sloping gently north. Muskeg.
1124844	L18-0300	22-Sep-16	662898	5523302	447	Mature tamarack, spruce, cedar, G. Alder, birch, spagnum	G. Alder	Wet	Level	Soft wet level ground with standing water. Alder/Cedar swamp.
1124843	L18-0350	22-Sep-16	662897	5523349	450	Mature tamarack, spruce, G. Alder, mountain ash, spagnum, maple, grass.	G. Alder	Wet	Level	Soft wet level ground with standing water. Alder/tamarack swamp.
1124842	L18-0375	22-Sep-16	662892	5523373	449	Mature tamarack, spruce, G. Alder, spagnum, labrador tea, maple	G. Alder	Wet	Level	Soft wet level ground with occasional standing water. Alder swamp.
1124841	L18-0400	22-Sep-16	662898	5523400	450	Mature tamarack, spruce, G. Alder, spagnum, maple	G. Alder	Wet	Level	Soft wet level ground with standing water. Alder swamp.
1124840	L18-0425	22-Sep-16	662898	5523425	449	Spruce, G. Alder, maple, spagnum	G. Alder	Wet	Level	Soft wet level ground with standing water. Alder swamp.
1124839	L18-0450	22-Sep-16	662896	5523443	447	Spruce, cedar, G. Alder, spagnum, labrador tea	G. Alder	Wet	Level	Soft wet level ground with abundant standing water. Alder/Cedar swamp.
1124838	L18-0500	22-Sep-16	662842	5523500	437	Spruce, cedar, G. Alder	G. Alder	Wet	Level	Soft wet level ground with abundant standing water. Alder swamp ~ 30m S of creek.
1124837	L18-0600	22-Sep-16	662889	5523591	445	Spruce, cedar, willow, G. Alder, grass	G. Alder	Wet	Level	Soft wet level ground with abundant standing water. Alder swamp.
1124836	L18-0700	22-Sep-16	662882	5523750	452	Spruce, poplar, willow, R. Alder, spagnum	R. Alder	Dry	Moderate S	Firm dry ground sloping moderately S.
1124835	L18-0750	22-Sep-16	662882	5523750	452	Spruce, willow, poplar, spagnum, reindeer moss, R. Alder	R. Alder	Dry	Slight S	Soft dry ground sloping gently S.
1124834	L18-0800	22-Sep-16	662880	5523798	450	Spruce, spagnum, labrador tea, tamarack, R. Alder	R. Alder	Dry	Slight S	Soft dry ground sloping gently S. Muskeg with sparse small alders.
No Sample	L18-0825	22-Sep-16	662900	5523825	448	Spruce, willow, spagnum, labrador tea	N/A	Dry	Moderate N	Firm dry ground sloping moderately north.
No Sample	L18-0850	22-Sep-16	662900	5523850	448	Spruce, willow, labrador tea, spagnum, poplar.	N/A	Dry	Moderate N	Soft dry ground sloping moderately north. Muskeg.
1124833	L18-0875	22-Sep-16	662889	5523878	446	Spruce, balsam, willow(?), spagnum, labrador tea, R. Alder, reindeer moss	R. Alder	Dry	Slight S	Firm dry ground sloping gently south. Rocky.
No Sample	L18-0900	22-Sep-16	662900	5523900	442	Spruce, spagnum, labrador tea	N/A	Dry	Level	Soft damp level ground. No alders.
1124832	L18-0925	22-Sep-16	662884	5523923	448	Spruce, G. Alder, spagnum, labrador tea	G. Alder	Wet	Level	Soft wet level ground with standing water. At edge of alder swamp and muskeg.
1124831	L18-0950	22-Sep-16	662883	5523946	450	Spruce, G. Alder, spagnum, labrador tea	G. Alder	Wet	Level	Soft wet level ground with standing water. Alder swamp.
No Sample	L18-1000	22-Sep-16	662900	5524000	443	Spruce, tamarack, labrador tea, spagnum	N/A	Wet	Level	Soft wet level ground. Muskeg with no alders.
No Sample	L18-1050	22-Sep-16	662900	5524050	442	Spruce, tamarack, labrador tea, spagnum	N/A	Wet	Level	Soft wet level ground. Muskeg with no alders.
No Sample	L18-1100	22-Sep-16	662900	5524100	442	Spruce, tamarack, labrador tea, spagnum	N/A	Wet	Level	Soft wet level ground. Muskeg with no alders.
1124830	L18-1150	22-Sep-16	662880	5524151	448	Spruce, mountain ash, R. Alder, spagnum, labrador tea	R. Alder	Dry	Moderate E	Soft dry ground sloping moderately E. Muskeg.
1124829	L18-1250	22-Sep-16	662877	5524214	453	Spruce, poplar, birch, balsam, labrador tea, spagnum, R. Alder	R. Alder	Dry	Moderate SW	Soft dry ground sloping moderately SW.
1124828	L18-1350	22-Sep-16	662913	5524354	454	Birch, poplar, balsam, G. Alder, mountain ash	G. Alder	Dry	Moderate SE	Firm dry ground sloping moderately SE.
1124941	L19-0000	29-Sep-16	663001	5525148	436	Spruce, R. Alder, birch, grass	R. Alder	Dry	Moderate S	Firm dry ground sloping moderately S. At shore of small unnamed lake.
1124940	L19-0050	29-Sep-16	663003	5525202	441	Poplar, birch, spruce, maple, R. Alder	R. Alder	Dry	Slight S	Firm dry ground sloping gently S.
1124939	L19-0100	29-Sep-16	662993	5525245	447	Poplar, spruce, birch, R. Alder, Maple	R. Alder	Dry	Slight SE	Firm dry ground sloping gently SE.
1124938	L19-0125	29-Sep-16	663007	5525270	445	Poplar, birch, balsam, maple, R. Alder	R. Alder	Dry	Slight SE	Firm dry ground sloping gently SE.
1124937	L19-0150	29-Sep-16	662999	5525300	445	Poplar, birch, spruce, maple, R. Alder	R. Alder	Dry	Moderately ESE	Firm dry ground sloping moderately ESE.
1124936	L19-0175	29-Sep-16	663003	5525325	443	Spruce, birch, maple, balsam, G. Alder	G. Alder	Dry	Level	Firm dry level ground.
1124935	L19-0200	29-Sep-16	663003	5525348	444	Spruce, poplar, birch, G. Alder, spagnum, balsam.	G. Alder	Damp	Level	Soft damp level ground.
1124934	L19-0250	29-Sep-16	662998	5525401	439	Spruce, birch, G. Alder, balsam, spagnum, grass	G. Alder	Wet	Level	Soft wet level ground with standing water. Alder swamp.
1124933	L19-0350	29-Sep-16	663001	5525501	449	Poplar, balsam, R. Alder, maple	R. Alder	Dry	Steep S	Firm dry ground sloping steeply S.
1124932	L19-0450	29-Sep-16	663000	5525600	450	Spruce, birch, balsam, spagnum, labrador tea.	G. Alder	Damp	Slight NW	Soft damp ground sloping gently NW.
1124870	L20-0000	24-Sep-16	663109	5522992	448	Spruce, birch, tamarack, G. Alder	G. Alder	Dry	Slight N	Firm dry ground sloping gently N.
1124871	L20-0100	24-Sep-16	663099	5523105	446	Tamarack, spruce, G. Alder, mountain ash, spagnum, grass	G. Alder	Wet	Level	Soft wet level ground with standing water. Alder/tamarack swamp.
1124872	L20-0200	24-Sep-16	663076	5523201	445	Spruce, spagnum, labrador tea, G. Alder	G. Alder	Wet	Level	Soft wet level ground at edge of muskeg and alder swamp.
1124873	L20-0300	24-Sep-16	663081	5523319	429	Spruce, poplar, willow, G. Alder, spagnum, labrador tea	G. Alder	Damp	Level	Soft damp level ground. Muskeg.
1124874	L20-0350	24-Sep-16	663101	5523348	447	Spruce, poplar, tamarack, G. Alder, labrador tea, spagnum	G. Alder	Damp	Level	Soft damp level ground. Muskeg.
1124875	L20-0375	24-Sep-16	663114	5523379	449	Spruce, birch, willow, tamarack, G. Alder, spagnum, labrador tea	G. Alder	Damp	Moderate NW	Soft damp ground sloping gently NW. Muskeg.
No Sample	L20-0400	24-Sep-16	663100	5523400	449	Spruce, birch, poplar, willow, spagnum, labrador tea	N/A	Damp	Slight NW	Soft damp ground sloping gently NW. Muskeg.
No Sample	L20-0425	24-Sep-16	663100	5523425	449	Spruce, birch, poplar, willow, spagnum, labrador tea	N/A	Damp	Slight NW	Soft damp ground sloping gently NW. Muskeg.
No Sample	L20-0450	24-Sep-16	663100	5523450	449	Spruce, birch, poplar, willow, spagnum, labrador tea	N/A	Damp	Slight NW	Soft damp ground sloping gently NW. Muskeg.
1124876	L20-0475	24-Sep-16	663098	5523482	449	Spruce, G. Alder, willow, poplar, spagnum, labrador tea	G. Alder	Damp	Slight N	Soft damp ground sloping gently N. At edge of muskeg and alder swamp.
1124877	L20-0500	24-Sep-16	663099	5523502	452	Spruce, G. Alder, spagnum, grass, willow	G. Alder	Wet	Level	Soft wet level ground with standing water. Alder swamp.
1124878	L20-0550	24-Sep-16	663102	5523551	444	Spruce, G. Alder, mountain ash, tamarack, spagnum, labrador tea	G. Alder	Wet	Level	Soft wet level ground with standing water. Alder swamp.
1124879	L20-0650	24-Sep-16	663103	5523648	443	Spruce, spagnum, labrador tea, G. Alder	G. Alder	Wet	Level	Soft wet level ground. Muskeg.
1124880	L20-0750	24-Sep-16	663093	5523760	439	Spruce, spagnum, labrador tea, sparse G. Alder	G. Alder	Wet	Level	Soft wet level ground. Muskeg with few alders.
No Sample	L20-0850	24-Sep-16	663100	5523850	445	Spruce, spagnum, labrador tea	N/A	Damp	Level	Soft damp level ground. Muskeg with no alders.
No Sample	L20-0900	24-Sep-16	663100	5523900	442	Spruce, spagnum, labrador tea, tamarack	N/A	Damp	Level	Soft damp level ground. Muskeg with no alders.
No Sample	L20-0925	24-Sep-16	663100	5523925	443	S				

SampleID	LineID	Date	UTM_E	UTM_N	Elev	Vegetation	AlderSpc	GndMoist	GndSlope	Comments
No Sample	L20-0975	24-Sep-16	663100	5523975	445	Spruce, spagnum, labrador tea	N/A	Damp	Level	Soft damp level ground. Muskeg with no alders.
No Sample	L20-1000	24-Sep-16	663100	5524000	449	Spruce, spagnum, labrador tea	N/A	Wet	Level	Soft wet level ground. Muskeg with no alders.
No Sample	L20-1025	24-Sep-16	663100	5524025	447	Spruce, spagnum, labrador tea	N/A	Wet	Level	Soft wet level ground. Muskeg with no alders.
No Sample	L20-1050	24-Sep-16	663100	5524050	447	Spruce, spagnum, labrador tea	N/A	Wet	Level	Soft wet level ground. Muskeg with no alders.
No Sample	L20-1075	24-Sep-16	663100	5524075	445	Spruce, spagnum, labrador tea	N/A	Wet	Level	Soft wet level ground. Muskeg with no alders.
No Sample	L20-1100	24-Sep-16	663100	5524100	447	Spruce, tamerack, labrador tea, spagnum	N/A	Damp	Level	Soft damp level ground. Muskeg with no alders.
No Sample	L20-1150	24-Sep-16	663100	5524150	442	Spruce, spagnum, labrador tea	N/A	Wet	Level	Soft wet level ground. Muskeg with no alders.
No Sample	L20-1250	24-Sep-16	663100	5524250	447	Spruce, spagnum, labrador tea	N/A	Wet	Level	Soft wet level ground with occasional standing water. Muskeg with no alders.
1124848	L20-1350	24-Sep-16	663087	5524374	433	Spruce, spagnum, labrador tea, birch, G. Alder	G. Alder	Dry	Slight N	Soft dry ground sloping gently N. Muskeg at shore of lake.
1124869	L21-0000	24-Sep-16	663267	5523007	451	Spruce, birch, tamerack, willow, mountain ash, R. Alder, spagnum, labrador tea	R. Alder	Dry	Slight SE	Soft dry ground sloping gently SE.
1124868	L21-0100	24-Sep-16	663314	5523103	452	Poplar, spruce, birch, maple, mountain ash, R. Alder, labrador tea	R. Alder	Dry	Slight WNW	Firm dry ground sloping gently WNW.
1124867	L21-0200	24-Sep-16	663291	5523199	450	Spruce, G. Alder, mountain ash, spagnum, labrador tea	G. Alder	Damp	Slight E	Soft damp ground sloping gently E. Muskeg.
1124866	L21-0250	24-Sep-16	663334	5523264	462	Poplar, spruce, birch, mountain ash, tamerack, spagnum, labrador tea, R. Alder	R. Alder	Dry	Moderate SW	Firm dry ground sloping moderately SW. Poplar stand at edge of muskeg.
1124865	L21-0300	24-Sep-16	663310	5523303	458	Spuce, spagnum, labrador tea, G. Alder, willow	G. Alder	Damp	Slight WNW	Soft damp ground sloping gently WNW. Muskeg.
1124864	L21-0325	24-Sep-16	663291	5523324	454	Spruce, G. Alder, spagnum, labrador tea	G. Alder	Damp	Level	Soft damp level ground. Muskeg.
1124863	L21-0350	24-Sep-16	663299	5523350	455	Spruce, spagnum, labrador tea, G. Alder	G. Alder	Damp	Level	Soft damp level ground. Muskeg.
1124862	L21-0375	24-Sep-16	663297	5523376	453	Spruce, G. Alder, maple, spagnum, Labrador tea, wild rose	G. Alder	Wet	Level	Soft wet level ground. At edge of alder swamp and muskeg.
1124861	L21-0400	24-Sep-16	663302	5523401	454	Tamerack, spruce, G. Alder, willow, spagnum, labrador tea, wild rose	G. Alder	Wet	Level	Soft wet level ground with standing water. Alder swamp. Rusty swamp water.
1124860	L21-0425	24-Sep-16	663295	5523429	452	Tamerack, spruce, G. Alder, willow, spagnum, labrador tea	G. Alder	Wet	Level	Soft wet level ground with standing water. Alder swamp. Rusty swamp water.
1124859	L21-0450	24-Sep-16	663300	5523454	449	Spruce, tamerack, ceder, G. Alder, spagnum, labrador tea	G. Alder	Wet	Level	Soft wet level ground with standing water. Alder/Ceder swamp.
1124858	L21-0500	24-Sep-16	663301	5523504	449	Spruce, tamerack, G. Alder, spagnum, labrador tea, grass	G. Alder	Wet	Level	Soft wet level ground with standing water. Alder/tamerack swamp.
1124857	L21-0550	24-Sep-16	663297	5523550	443	Spruce, G. Alder, spagnum, labrador tea	G. Alder	Wet	Level	Soft wet level ground. At edge of alder swamp and muskeg.
No Sample	L21-0650	24-Sep-16	663300	5523650	442	Spruce, spagnum, labrador tea, occasional tamerack	N/A	Wet	Level	Soft wet level ground. Muskeg with no alders.
No Sample	L21-0750	24-Sep-16	663300	5523750	442	Spruce, spagnum, labrador tea, occasional tamerack	N/A	Wet	Level	Soft wet level ground. Muskeg with no alders.
No Sample	L21-0800	24-Sep-16	663300	5523800	442	Spruce, spagnum, labrador tea, occasional tamerack	N/A	Wet	Level	Soft wet level ground. Muskeg with no alders.
No Sample	L21-0850	24-Sep-16	663300	5523850	442	Spruce, spagnum, labrador tea, occasional tamerack	N/A	Wet	Level	Soft wet level ground. Muskeg with no alders.
No Sample	L21-0875	24-Sep-16	663300	5523875	442	Spruce, spagnum, labrador tea, occasional tamerack	N/A	Wet	Level	Soft wet level ground. Muskeg with no alders.
No Sample	L21-0900	24-Sep-16	663300	5523900	442	Spruce, spagnum, labrador tea, occasional tamerack	N/A	Wet	Level	Soft wet level ground. Muskeg with no alders.
No Sample	L21-0925	24-Sep-16	663300	5523925	442	Spruce, spagnum, labrador tea, occasional tamerack	N/A	Wet	Level	Soft wet level ground. Muskeg with no alders.
No Sample	L21-0950	24-Sep-16	663300	5523950	442	Spruce, spagnum, labrador tea, occasional tamerack	N/A	Wet	Level	Soft wet level ground. Muskeg with no alders.
1124856	L21-0975	24-Sep-16	663302	5523969	449	Spruce, G. Alder, spagnum, labrador tea, willows	G. Alder	Wet	Level	Soft wet level ground, alder stand in muskeg.
1124855	L21-1000	24-Sep-16	663297	5524022	446	Spruce, G. Alder, spagnum, labrador tea	G. Alder	Wet	Level	Soft wet level ground with standing water. Alder stand in muskeg.
1124854	L21-1025	24-Sep-16	663302	5524027	447	Spruce, G. Alder, spagnum, labrador tea	G. Alder	Wet	Level	Soft wet level ground with occasional standing water. Alder stand in muskeg.
1124853	L21-1050	24-Sep-16	663303	5524050	445	Spruce, G. Alder, spagnum, labrador tea	G. Alder	Wet	Level	Soft wet level ground with standing water. Alder stand in muskeg.
1124852	L21-1100	24-Sep-16	663296	5524100	445	Spruce, balsam, G. Alder, spagnum, labrador tea, tamerack.	G. Alder	Wet	Level	Soft wet level with occasional standing water. Alder stand in muskeg.
1124851	L21-1150	24-Sep-16	663281	5524134	447	Spruce, birch, labrador tea, spangum, G. Alder	G. Alder	Wet	Level	Soft wet level ground with standing water. Muskeg.
1124850	L21-1250	24-Sep-16	663304	5524251	441	Spruce, birch, spagnum, labrador tea, G. Alder	G. Alder	Wet	Level	Soft wet level ground with standing water.
1124849	L21-1350	24-Sep-16	663298	5524351	441	Spruce, birch, spagnum, labrador tea, G. Alder	G. Alder	Damp	Level	Soft damp level ground. Muskeg.
1124912	L23-0000	29-Sep-16	663981	5524291	461	Spruce, birch, spagnum, R. Alder	R. Alder	Dry	Moderate NW	Soft dry ground sloping moderately NW.
1124913	L23-0100	29-Sep-16	663991	5524401	450	Spruce, G. Alder, spagnum, labrador tea	G. Alder	Wet	Level	Soft wet level ground @ edge of alder swamp/creek.
1124914	L23-0200	29-Sep-16	664008	5524502	448	Tamerack, spruce, G. Alder, spagnum, grass	G. Alder	Wet	Level	Soft wet level ground with abundant standing water. Alder swamp.
1124915	L23-0300	29-Sep-16	664000	5524605	453	Spruce, birch, willow, spagnum, labrador tea, R. Alder	R. Alder	Wet	Level	Soft wet level ground. Muskeg.
1124916	L23-0350	29-Sep-16	664003	5524650	452	Spruce, birch, G. Alder, spagnum, labrador tea	G. Alder	Wet	Level	Soft wet level ground with occasional standing water. Muskeg.
1124917	L23-0400	29-Sep-16	664007	5524701	450	Spruce, birch, spagnum, labrador tea, G. Alder	G. Alder	Damp	Slight SE	Soft damp ground sloping gently SE. Muskeg.
1124918	L23-0425	29-Sep-16	663994	5524725	455	Spruce, birch, G. Alder, spagnum, labrador tea	G. Alder	Wet	Level	Soft wet level ground with standing water. At edge of alder swamp and muskeg.
1124919	L23-0450	29-Sep-16	663995	5524749	457	Spruce, birch, balsam, G. Alder, spagnum, labrador tea	G. Alder	Wet	Level	Soft wet level ground with standing water. At edge of muskeg and alder swamp.
1124920	L23-0475	29-Sep-16	663996	5524774	453	Spruce, birch, balsam, G. Alder, labrador tea, spagnum	G. Alder	Damp	Level	Soft damp level ground. Muskeg.
1124921	L23-0500	29-Sep-16	663993	5524802	452	Spruce, birch, G. Alder, mountain ash, balsam, spagnum, labrador tea.	G. Alder	Wet	Level	Soft wet level ground with occasional standing water at edge of muskeg and alder swamp.
1124922	L23-0500DUP	29-Sep-16	663989	5524805	453	Spruce, birch, G. Alder, mountain ash, balsam, spagnum, labrador tea.	G. Alder	Wet	Level	Soft wet level ground with occasional standing water. At edge of muskeg and alder swamp.
1124923	L23-0525	29-Sep-16	663990	5524822	452	Spruce, birch, tarmack, G. Alder, balsam, spagnum, labrador tea.	G. Alder	Wet	Level	Soft wet level ground with occasional standing water. At edge of muskeg and alder swamp.
1124924	L23-0550	29-Sep-16	663997	5524854	456	Spruce, G. Alder, labrador tea, spagnum	G. Alder	Damp	Level	Soft damp level ground. Muskeg.
1124925	L23-0575	29-Sep-16	664004	5524874	458	Spruce, balsam, G. Alder, birch, spagnum, labrador tea	G. Alder	Damp	Level	Soft damp level ground. Muskeg.
1124926	L23-0600	29-Sep-16	664003	5524897	457	Spruce, balsam, G. Alder, birch, spagnum, labrador tea	G. Alder	Damp	Level	Soft damp level ground. Muskeg.
1124927	L23-0650	29-Sep-16	663998	5524954	447	Spruce, poplar, maple, mountain ash, G. Alder	G. Alder	Damp	Level	Firm damp ground sloping gently south.
1124928	L23-0700	29-Sep-16	664009	5525000	452	Poplar, spruce, birch, R. Alder, Maple	R. Alder	Dry	Moderate SSW	Firm dry ground sloping moderately SSW.
1124929	L23-0800	29-Sep-16	664006	5525113	462	Poplar, spruce, birch, maple, R. Alder	R. Alder	Dry	Slight SE	Firm dry ground gently sloping SE.
1124930	L23-0900	29-Sep-16	663995	5525206	463	Poplar, spruce, maple, birch, R. Alder	R. Alder	Dry	Moderate E	Firm dry ground sloping moderately E.
1124931	L23-1000	29-Sep-16	663999	5525300	473	Poplar, spruce, birch, R. Alder	R. Alder	Dry	Slight SE	Firm dry ground sloping gently SE.

## **Appendix C: Assay Certificates**



**BUREAU VERITAS** MINERAL LABORATORIES  
Canada

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PHONE (604) 253-3158

**Client:** **Gossan Resources Ltd.**  
404 - 171 Donald Street  
Winnipeg Manitoba R3C 1M4 Canada

Submitted By: Kathy Ringland  
Receiving Lab: Canada-Vancouver  
Received: October 07, 2016  
Report Date: November 24, 2016  
Page: 1 of 9

# CERTIFICATE OF ANALYSIS

VAN16001902.1

## CLIENT JOB INFORMATION

Project: None Given  
Shipment ID:  
P.O. Number  
Number of Samples: 225

## SAMPLE DISPOSAL

DISP-PLP Dispose of Pulp After 90 days

Bureau Veritas does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.


Invoice To: Gossan Resources Ltd.  
404 - 171 Donald Street  
Winnipeg Manitoba R3C 1M4  
Canada

CC:

## SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
VGMAS	225	Plant Maceration to 1mm			VAN
VG101_EXT	225	Aqua Regia digestion ICP-MS analysis	1	Completed	VAN
DRPLP	225	Warehouse handling / disposition of pulps			VAN

## ADDITIONAL COMMENTS

  
JEFFREY CANNON  
Geochemistry Department Supervisor

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only. All results are considered the confidential property of the client. Bureau Veritas assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.  
\*\*\* asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.





Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

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**Part:** 1 of 3

# CERTIFICATE OF ANALYSIS

# VAN16001902.1

Method Analyte	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101
	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	
Unit	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	
MDL	0.01	0.01	0.01	0.1	2	0.1	0.01	1	0.001	0.1	0.01	0.2	0.01	0.5	0.01	0.02	0.02	2	0.01	0.001	
1124501	Vegetation	0.20	5.26	0.22	45.5	7	<0.1	0.01	299	0.007	<0.1	<0.01	<0.2	<0.01	14.4	0.02	<0.02	<0.02	<2	0.60	0.053
1124502	Vegetation	0.54	7.19	0.21	69.1	14	0.1	0.05	192	0.009	<0.1	<0.01	<0.2	<0.01	23.7	0.01	<0.02	<0.02	<2	0.91	0.044
1124503	Vegetation	0.18	5.53	0.13	21.0	10	0.2	0.07	280	0.006	<0.1	<0.01	<0.2	<0.01	16.8	0.02	0.02	<0.02	<2	0.55	0.049
1124504	Vegetation	0.02	4.45	0.17	180.9	9	0.1	0.05	502	0.004	<0.1	<0.01	<0.2	<0.01	2.9	0.86	<0.02	<0.02	<2	0.30	0.040
1124505	Vegetation	0.03	8.38	0.05	31.1	<2	1.3	0.10	73	0.004	<0.1	<0.01	<0.2	<0.01	25.4	0.09	<0.02	<0.02	<2	0.26	0.080
1124506	Vegetation	0.26	6.39	0.19	31.1	9	0.2	0.02	141	0.006	<0.1	<0.01	<0.2	<0.01	12.4	0.01	<0.02	<0.02	<2	0.47	0.052
1124507	Vegetation	0.23	4.77	0.13	30.6	3	0.1	0.04	83	0.007	<0.1	<0.01	<0.2	<0.01	12.2	0.01	<0.02	<0.02	<2	0.71	0.035
1124508	Vegetation	0.05	7.13	0.18	31.4	30	0.8	0.34	43	0.007	<0.1	<0.01	<0.2	<0.01	14.8	0.02	<0.02	<0.02	<2	0.50	0.050
1124509	Vegetation	0.03	9.04	0.12	25.5	12	1.0	0.14	256	0.007	<0.1	<0.01	<0.2	<0.01	21.9	0.03	<0.02	<0.02	<2	0.48	0.074
1124510	Vegetation	0.01	6.83	0.24	26.5	11	0.8	0.06	291	0.008	<0.1	<0.01	<0.2	<0.01	29.1	0.09	<0.02	<0.02	<2	0.87	0.061
1124511	Vegetation	0.01	9.23	0.39	38.6	7	0.4	0.05	682	0.008	<0.1	<0.01	<0.2	<0.01	31.1	0.12	<0.02	<0.02	<2	0.79	0.059
1124512	Vegetation	0.04	9.00	0.06	25.2	<2	1.6	0.11	120	0.004	0.2	<0.01	<0.2	<0.01	8.7	0.16	<0.02	<0.02	<2	0.30	0.082
1124513	Vegetation	0.03	4.64	0.18	14.5	3	0.1	0.03	40	0.009	<0.1	<0.01	<0.2	<0.01	14.7	0.03	<0.02	<0.02	<2	0.94	0.031
1124514	Vegetation	0.01	6.87	0.39	12.8	3	0.3	0.03	479	0.006	<0.1	<0.01	<0.2	<0.01	24.0	0.05	<0.02	<0.02	<2	0.58	0.074
1124515	Vegetation	0.01	7.13	0.71	26.7	4	0.2	0.05	833	0.007	0.1	<0.01	<0.2	<0.01	32.8	0.12	<0.02	<0.02	<2	0.70	0.061
1124516	Vegetation	0.02	5.21	0.57	17.8	4	0.2	0.10	347	0.007	<0.1	<0.01	<0.2	<0.01	31.2	0.05	<0.02	<0.02	<2	0.68	0.052
1124517	Vegetation	<0.01	6.23	0.44	47.3	3	0.3	0.07	503	0.007	0.3	<0.01	<0.2	<0.01	24.2	0.17	<0.02	<0.02	<2	0.63	0.068
1124518	Vegetation	0.01	5.58	1.00	23.4	4	0.2	0.05	495	0.007	<0.1	<0.01	<0.2	<0.01	22.2	0.11	<0.02	<0.02	<2	0.70	0.046
1124519	Vegetation	<0.01	5.25	0.24	21.8	3	0.2	0.04	86	0.009	<0.1	<0.01	<0.2	<0.01	17.5	0.04	<0.02	<0.02	<2	0.90	0.043
1124520	Vegetation	<0.01	8.73	0.24	23.4	3	0.7	0.10	250	0.008	0.1	<0.01	<0.2	<0.01	22.1	0.07	<0.02	<0.02	<2	0.86	0.075
1124521	Vegetation	<0.01	5.01	0.23	28.0	3	0.4	0.14	496	0.008	<0.1	<0.01	<0.2	<0.01	23.3	0.09	<0.02	<0.02	<2	0.93	0.057
1124522	Vegetation	<0.01	5.73	0.13	21.3	5	0.7	0.03	704	0.007	0.2	<0.01	<0.2	<0.01	18.4	0.07	<0.02	<0.02	<2	0.55	0.049
1124523	Vegetation	0.02	6.20	0.23	17.5	3	0.1	0.04	142	0.006	<0.1	<0.01	<0.2	<0.01	11.6	0.03	<0.02	<0.02	<2	0.67	0.031
1124524	Vegetation	0.03	7.45	0.08	10.9	5	0.3	0.02	102	0.006	<0.1	<0.01	<0.2	<0.01	7.7	0.02	<0.02	<0.02	<2	0.46	0.034
1124525	Vegetation	0.03	4.94	0.16	19.4	4	0.7	0.28	43	0.008	0.2	<0.01	<0.2	<0.01	15.9	<0.01	<0.02	<0.02	<2	0.84	0.040
1124526	Vegetation	<0.01	7.63	0.09	39.4	4	0.2	0.07	55	0.006	<0.1	<0.01	<0.2	<0.01	12.0	0.01	<0.02	<0.02	<2	0.62	0.033
1124527	Vegetation	<0.01	7.20	0.20	60.7	11	0.1	0.12	104	0.008	0.1	<0.01	<0.2	<0.01	15.4	0.02	<0.02	<0.02	<2	0.82	0.037
1124528	Vegetation	<0.01	8.22	0.11	38.9	8	0.1	0.08	181	0.007	0.2	<0.01	<0.2	<0.01	11.1	0.01	<0.02	<0.02	<2	0.75	0.042
1124529	Vegetation	0.36	6.80	0.11	47.0	10	0.2	0.07	103	0.009	0.1	<0.01	<0.2	<0.01	13.1	0.02	<0.02	<0.02	<2	0.91	0.034
1124530	Vegetation	0.52	6.23	0.16	31.1	9	<0.1	0.19	143	0.007	0.4	<0.01	<0.2	<0.01	12.5	0.02	<0.02	<0.02	<2	0.67	0.031



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# CERTIFICATE OF ANALYSIS

# VAN16001902.1

Method	Analyte	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf	
Unit		ppm	ppm	%	ppm	ppm	ppm	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
MDL		0.01	0.1	0.001	0.1	1	1	0.01	0.001	0.01	0.1	0.1	0.01	1	0.1	0.02	0.01	1	0.1	0.005	0.01	0.001
1124501	Vegetation	0.01	1.3	0.046	6.7	2	6	<0.01	0.002	0.18	<0.1	0.2	<0.02	0.04	1	0.3	<0.02	<0.1	0.050	<0.01	0.002	
1124502	Vegetation	0.01	1.4	0.036	8.6	2	6	<0.01	0.002	0.19	<0.1	0.2	<0.02	0.08	3	0.4	<0.02	<0.1	0.056	<0.01	<0.001	
1124503	Vegetation	<0.01	1.6	0.046	8.1	2	4	<0.01	0.002	0.16	<0.1	0.3	<0.02	0.09	3	0.4	<0.02	<0.1	0.121	<0.01	<0.001	
1124504	Vegetation	0.02	1.3	0.049	12.9	2	7	<0.01	0.002	0.14	<0.1	0.3	<0.02	<0.01	2	0.3	<0.02	<0.1	0.012	<0.01	<0.001	
1124505	Vegetation	0.07	1.5	0.070	30.9	3	11	<0.01	0.002	0.42	<0.1	0.3	<0.02	0.08	<1	0.2	<0.02	<0.1	0.078	0.03	0.001	
1124506	Vegetation	<0.01	1.6	0.047	6.7	2	5	<0.01	0.002	0.17	<0.1	0.3	<0.02	0.10	2	0.4	<0.02	<0.1	0.029	<0.01	0.001	
1124507	Vegetation	<0.01	1.7	0.032	6.4	2	5	<0.01	0.002	0.19	<0.1	0.3	<0.02	0.12	1	0.4	<0.02	<0.1	0.012	<0.01	<0.001	
1124508	Vegetation	0.03	1.6	0.053	14.6	3	5	<0.01	0.003	0.16	<0.1	0.3	<0.02	0.16	2	0.3	<0.02	<0.1	0.060	0.01	0.001	
1124509	Vegetation	0.03	1.4	0.067	29.9	3	7	<0.01	0.002	0.19	<0.1	0.3	<0.02	0.13	5	0.3	<0.02	<0.1	0.116	0.01	0.002	
1124510	Vegetation	0.05	1.7	0.050	92.2	3	10	<0.01	0.001	0.24	<0.1	0.4	<0.02	0.14	2	0.3	<0.02	<0.1	0.039	0.03	0.002	
1124511	Vegetation	0.02	1.4	0.062	131.9	3	10	<0.01	0.002	0.32	<0.1	0.2	<0.02	0.12	6	0.3	<0.02	<0.1	0.023	0.02	0.001	
1124512	Vegetation	<0.01	1.6	0.054	55.7	3	11	<0.01	0.002	0.37	<0.1	0.4	<0.02	0.12	1	0.3	<0.02	<0.1	0.114	0.04	0.001	
1124513	Vegetation	<0.01	1.7	0.034	26.8	2	8	<0.01	0.003	0.23	<0.1	0.3	<0.02	0.15	2	0.3	<0.02	<0.1	<0.005	0.02	0.002	
1124514	Vegetation	<0.01	1.4	0.055	98.6	3	9	<0.01	0.002	0.21	<0.1	0.3	<0.02	0.13	3	0.2	<0.02	<0.1	0.049	<0.01	<0.001	
1124515	Vegetation	0.01	1.4	0.077	124.0	3	8	<0.01	0.003	0.29	<0.1	0.3	<0.02	0.12	3	0.3	<0.02	<0.1	0.033	0.03	<0.001	
1124516	Vegetation	0.02	1.5	0.048	82.4	3	7	<0.01	0.003	0.17	<0.1	0.3	<0.02	0.13	3	0.3	<0.02	<0.1	0.015	<0.01	0.003	
1124517	Vegetation	0.01	1.4	0.065	122.2	3	8	<0.01	0.002	0.22	<0.1	0.3	<0.02	0.13	3	0.4	<0.02	<0.1	0.012	<0.01	<0.001	
1124518	Vegetation	<0.01	1.4	0.044	108.5	2	6	<0.01	<0.001	0.19	<0.1	0.2	<0.02	0.15	9	0.3	<0.02	<0.1	0.017	0.01	0.001	
1124519	Vegetation	0.02	1.6	0.034	51.0	3	7	<0.01	0.001	0.18	<0.1	0.3	<0.02	0.14	3	0.3	<0.02	<0.1	<0.005	0.02	0.002	
1124520	Vegetation	<0.01	1.5	0.075	109.1	3	12	<0.01	0.001	0.30	<0.1	0.2	<0.02	0.14	2	0.2	<0.02	<0.1	0.027	0.05	<0.001	
1124521	Vegetation	0.01	1.5	0.059	104.3	3	7	<0.01	0.001	0.23	<0.1	0.3	<0.02	0.16	3	0.3	<0.02	<0.1	0.046	<0.01	<0.001	
1124522	Vegetation	0.05	1.5	0.041	54.6	3	8	<0.01	0.001	0.23	<0.1	0.3	<0.02	0.15	4	0.3	<0.02	<0.1	0.054	<0.01	0.001	
1124523	Vegetation	<0.01	1.3	0.032	17.6	2	7	<0.01	0.001	0.18	<0.1	0.2	<0.02	<0.01	8	0.3	<0.02	<0.1	0.015	<0.01	0.001	
1124524	Vegetation	<0.01	1.4	0.040	12.6	2	8	<0.01	<0.001	0.25	<0.1	0.3	<0.02	0.10	4	0.3	<0.02	<0.1	0.030	0.01	<0.001	
1124525	Vegetation	0.04	1.5	0.049	12.5	2	5	<0.01	<0.001	0.14	<0.1	0.3	<0.02	0.12	5	0.3	<0.02	<0.1	0.089	<0.01	<0.001	
1124526	Vegetation	<0.01	1.6	0.036	7.4	2	5	<0.01	0.001	0.14	<0.1	0.3	<0.02	0.15	<1	0.3	<0.02	<0.1	0.026	<0.01	<0.001	
1124527	Vegetation	<0.01	1.6	0.028	9.5	2	5	<0.01	<0.001	0.18	<0.1	0.3	<0.02	0.14	3	0.3	<0.02	<0.1	0.044	0.03	<0.001	
1124528	Vegetation	<0.01	1.5	0.035	11.0	2	6	<0.01	<0.001	0.20	<0.1	0.3	<0.02	0.15	2	0.2	<0.02	<0.1	0.076	<0.01	0.002	
1124529	Vegetation	<0.01	1.6	0.036	9.4	2	6	<0.01	0.001	0.17	<0.1	0.3	<0.02	0.15	2	0.3	<0.02	<0.1	0.036	0.03	0.001	
1124530	Vegetation	<0.01	1.5	0.035	6.2	2	5	<0.01	<0.001	0.14	<0.1	0.3	<0.02	0.15	1	0.3	<0.02	<0.1	0.094	0.02	<0.001	



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**Project:** None Given  
**Report Date:** November 24, 2016

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# CERTIFICATE OF ANALYSIS

VAN16001902.1

Method	Analyte	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt
Unit		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppb	ppb	ppb
MDL		0.01	0.1	0.02	0.001	0.01	0.001	0.01	0.02	1	0.1	0.01	2	1
1124501	Vegetation	<0.01	4.8	<0.02	<0.001	0.04	0.006	0.03	<0.02	<1	<0.1	<0.01	<2	<1
1124502	Vegetation	<0.01	6.2	<0.02	<0.001	0.03	0.004	0.04	<0.02	<1	<0.1	0.02	<2	<1
1124503	Vegetation	<0.01	6.0	<0.02	<0.001	0.03	0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124504	Vegetation	<0.01	3.0	<0.02	<0.001	0.02	0.011	0.03	<0.02	<1	<0.1	<0.01	<2	<1
1124505	Vegetation	<0.01	29.4	<0.02	<0.001	0.03	0.002	0.02	<0.02	<1	<0.1	0.02	<2	<1
1124506	Vegetation	<0.01	6.5	<0.02	<0.001	0.02	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124507	Vegetation	<0.01	5.6	<0.02	<0.001	0.03	0.002	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124508	Vegetation	<0.01	5.3	<0.02	<0.001	0.05	0.006	0.04	<0.02	<1	<0.1	<0.01	<2	<1
1124509	Vegetation	<0.01	12.7	<0.02	<0.001	0.02	0.002	0.04	<0.02	<1	<0.1	<0.01	<2	<1
1124510	Vegetation	<0.01	11.1	<0.02	<0.001	0.01	0.012	0.03	<0.02	<1	<0.1	0.01	<2	<1
1124511	Vegetation	<0.01	5.9	<0.02	<0.001	0.02	0.005	0.03	<0.02	<1	<0.1	0.01	<2	<1
1124512	Vegetation	<0.01	23.1	<0.02	<0.001	0.01	<0.001	0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124513	Vegetation	<0.01	3.7	<0.02	<0.001	0.04	0.010	0.03	<0.02	<1	<0.1	0.01	<2	<1
1124514	Vegetation	<0.01	6.5	<0.02	<0.001	0.03	0.001	0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124515	Vegetation	<0.01	8.0	<0.02	<0.001	0.03	<0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124516	Vegetation	<0.01	3.1	<0.02	<0.001	0.04	0.002	0.03	<0.02	<1	<0.1	0.01	<2	<1
1124517	Vegetation	<0.01	3.3	<0.02	<0.001	0.04	0.006	0.02	<0.02	<1	<0.1	0.02	<2	<1
1124518	Vegetation	<0.01	3.9	<0.02	<0.001	0.04	<0.001	0.02	<0.02	<1	<0.1	0.01	<2	<1
1124519	Vegetation	<0.01	2.0	<0.02	<0.001	0.03	0.007	0.03	<0.02	<1	<0.1	0.02	<2	<1
1124520	Vegetation	<0.01	4.8	<0.02	<0.001	0.02	<0.001	0.02	<0.02	<1	<0.1	0.05	<2	<1
1124521	Vegetation	<0.01	6.1	<0.02	<0.001	0.02	0.006	0.03	<0.02	<1	<0.1	<0.01	<2	<1
1124522	Vegetation	<0.01	3.8	<0.02	<0.001	0.01	0.004	0.08	<0.02	<1	<0.1	0.02	<2	<1
1124523	Vegetation	<0.01	3.7	<0.02	<0.001	0.02	0.001	0.03	<0.02	<1	<0.1	<0.01	<2	<1
1124524	Vegetation	<0.01	6.5	<0.02	<0.001	0.01	<0.001	0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124525	Vegetation	<0.01	4.4	<0.02	<0.001	0.03	0.007	0.06	<0.02	<1	<0.1	<0.01	<2	<1
1124526	Vegetation	<0.01	4.2	<0.02	<0.001	0.03	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124527	Vegetation	<0.01	3.9	<0.02	<0.001	0.02	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124528	Vegetation	<0.01	4.4	<0.02	<0.001	0.02	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124529	Vegetation	<0.01	4.9	<0.02	<0.001	0.01	<0.001	0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124530	Vegetation	<0.01	5.0	<0.02	<0.001	0.02	<0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1



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**Project:** None Given  
**Report Date:** November 24, 2016

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# CERTIFICATE OF ANALYSIS

# VAN16001902.1

Method Analyte	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101
	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	
Unit	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	
MDL	0.01	0.01	0.01	0.1	2	0.1	0.01	1	0.001	0.1	0.01	0.2	0.01	0.5	0.01	0.02	0.02	2	0.01	0.001	
1124531	Vegetation	0.14	9.02	0.12	35.7	7	0.2	0.11	122	0.009	0.3	<0.01	<0.2	<0.01	14.7	0.02	<0.02	<0.02	<2	0.80	0.037
1124532	Vegetation	0.14	5.48	0.23	82.2	13	0.2	0.10	168	0.009	0.2	<0.01	<0.2	<0.01	17.0	0.02	<0.02	<0.02	<2	0.79	0.026
1124533	Vegetation	0.16	4.93	0.10	24.2	3	0.1	0.03	66	0.008	0.2	<0.01	<0.2	<0.01	8.5	<0.01	<0.02	<0.02	<2	0.71	0.045
1124534	Vegetation	0.67	3.15	0.09	22.0	6	<0.1	0.01	115	0.005	0.3	<0.01	<0.2	<0.01	11.4	0.03	<0.02	<0.02	<2	0.56	0.041
1124535	Vegetation	0.62	4.12	0.13	33.7	6	0.1	0.03	122	0.008	0.2	<0.01	<0.2	<0.01	15.1	0.02	<0.02	<0.02	<2	0.86	0.032
1124536	Vegetation	0.02	4.34	0.13	27.0	3	1.0	0.34	25	0.005	0.2	<0.01	<0.2	<0.01	19.2	0.01	<0.02	<0.02	<2	0.38	0.046
1124537	Vegetation	<0.01	3.70	0.32	71.3	7	0.2	0.05	58	0.004	0.3	<0.01	<0.2	<0.01	7.9	0.20	<0.02	<0.02	<2	0.37	0.030
1124538	Vegetation	<0.01	5.07	0.26	16.9	6	0.1	0.03	101	0.006	0.3	<0.01	<0.2	<0.01	16.8	0.04	<0.02	<0.02	<2	0.67	0.037
1124539	Vegetation	<0.01	4.61	0.28	26.4	5	0.2	0.04	262	0.007	0.3	<0.01	<0.2	<0.01	21.3	0.08	<0.02	<0.02	<2	0.79	0.042
1124540	Vegetation	0.02	4.52	0.30	16.4	5	0.3	0.04	362	0.006	0.3	<0.01	<0.2	<0.01	24.9	0.07	<0.02	<0.02	<2	0.47	0.059
1124541	Vegetation	<0.01	6.85	0.47	27.4	5	0.3	0.08	405	0.007	0.1	<0.01	<0.2	<0.01	30.5	0.09	<0.02	<0.02	<2	0.65	0.048
1124542	Vegetation	0.01	4.65	0.39	21.4	7	0.3	0.06	484	0.005	0.2	<0.01	<0.2	<0.01	24.2	0.09	<0.02	<0.02	<2	0.49	0.052
1124543	Vegetation	<0.01	4.62	0.32	24.0	3	0.2	0.05	474	0.006	0.2	<0.01	<0.2	<0.01	31.4	0.12	<0.02	<0.02	<2	0.69	0.058
1124544	Vegetation	<0.01	5.48	0.26	22.8	4	0.2	0.04	524	0.006	0.2	<0.01	<0.2	<0.01	39.6	0.11	<0.02	<0.02	<2	0.72	0.050
1124545	Vegetation	0.01	5.42	0.48	19.3	5	0.3	0.05	675	0.005	<0.1	<0.01	<0.2	<0.01	27.8	0.07	<0.02	<0.02	<2	0.44	0.043
1124546	Vegetation	0.02	5.66	0.08	16.6	10	0.2	0.29	133	0.005	0.1	<0.01	<0.2	<0.01	18.8	<0.01	<0.02	<0.02	<2	0.30	0.044
1124547	Vegetation	<0.01	6.35	0.34	23.3	8	0.4	0.04	778	0.006	0.2	<0.01	<0.2	<0.01	24.7	0.09	<0.02	<0.02	<2	0.49	0.055
1124548	Vegetation	0.02	5.08	0.12	20.2	8	0.4	0.05	327	0.008	0.4	<0.01	<0.2	<0.01	34.9	0.07	<0.02	<0.02	<2	0.64	0.052
1124549	Vegetation	<0.01	11.28	0.18	26.7	4	0.4	0.11	452	0.007	0.2	<0.01	<0.2	<0.01	27.9	0.10	<0.02	<0.02	<2	0.62	0.054
1124550	Vegetation	0.02	8.00	0.26	81.8	3	0.9	0.11	187	0.003	0.1	<0.01	<0.2	<0.01	11.7	0.31	<0.02	<0.02	<2	0.25	0.037
1124551	Vegetation	0.24	5.73	0.08	21.9	8	0.1	0.07	119	0.007	<0.1	<0.01	<0.2	<0.01	7.7	0.02	<0.02	<0.02	<2	0.67	0.038
1124552	Vegetation	0.09	6.17	0.14	43.9	15	0.2	0.04	210	0.008	0.2	<0.01	<0.2	<0.01	9.5	0.02	<0.02	<0.02	<2	0.90	0.036
1124553	Vegetation	0.04	3.42	0.11	38.5	4	<0.1	0.03	116	0.006	0.2	<0.01	<0.2	<0.01	14.9	0.01	<0.02	<0.02	<2	0.64	0.041
1124554	Vegetation	0.02	5.94	0.11	70.9	22	0.2	0.07	305	0.007	0.3	<0.01	<0.2	<0.01	15.7	0.01	<0.02	<0.02	<2	0.62	0.041
1124555	Vegetation	<0.01	5.39	0.16	37.8	10	0.1	0.05	248	0.005	0.2	<0.01	<0.2	<0.01	11.9	0.04	<0.02	<0.02	<2	0.45	0.042
1124556	Vegetation	0.33	5.53	0.13	54.4	6	<0.1	0.11	361	0.007	<0.1	<0.01	<0.2	<0.01	17.2	0.02	<0.02	<0.02	<2	0.67	0.038
1124557	Vegetation	0.71	8.01	0.20	42.9	4	0.4	0.03	159	0.007	<0.1	<0.01	<0.2	<0.01	13.4	0.03	<0.02	<0.02	<2	0.74	0.053
1124558	Vegetation	0.02	4.92	0.10	37.8	24	0.1	0.18	282	0.005	<0.1	<0.01	<0.2	<0.01	7.2	<0.01	<0.02	<0.02	<2	0.41	0.031
1124559	Vegetation	<0.01	3.64	0.48	12.6	6	0.2	0.19	427	0.006	0.2	<0.01	<0.2	<0.01	22.9	0.07	<0.02	<0.02	<2	0.51	0.032
1124560	Vegetation	<0.01	4.43	0.07	11.3	3	0.3	0.09	596	0.005	0.2	<0.01	<0.2	<0.01	18.3	0.05	<0.02	<0.02	<2	0.32	0.066



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**Project:** None Given  
**Report Date:** November 24, 2016

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# CERTIFICATE OF ANALYSIS

# VAN16001902.1

Method	Analyte	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf	
Unit		ppm	ppm	%	ppm	ppm	ppm	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
MDL		0.01	0.1	0.001	0.1	1	1	0.01	0.001	0.01	0.1	0.1	0.01	1	0.1	0.02	0.01	1	0.1	0.02	0.01	0.001
1124531	Vegetation	<0.01	1.6	0.035	9.5	2	5	<0.01	0.001	0.17	<0.1	0.3	<0.02	0.15	2	0.3	<0.02	<0.1	0.090	0.03	<0.001	
1124532	Vegetation	<0.01	1.6	0.036	11.3	2	7	<0.01	0.001	0.19	<0.1	0.3	<0.02	0.16	2	0.4	<0.02	<0.1	0.109	0.02	<0.001	
1124533	Vegetation	<0.01	1.6	0.035	8.5	3	6	<0.01	0.001	0.18	<0.1	0.3	<0.02	0.16	3	0.3	<0.02	<0.1	0.008	<0.01	<0.001	
1124534	Vegetation	<0.01	1.3	0.033	9.1	2	5	<0.01	0.001	0.17	<0.1	0.2	<0.02	0.04	2	0.3	<0.02	<0.1	0.010	0.01	<0.001	
1124535	Vegetation	<0.01	1.5	0.032	8.6	2	6	<0.01	0.001	0.14	<0.1	0.2	<0.02	0.06	<1	0.4	<0.02	<0.1	0.008	0.02	0.001	
1124536	Vegetation	0.02	1.5	0.045	21.8	2	5	<0.01	0.001	0.16	<0.1	0.4	<0.02	0.10	3	0.2	<0.02	<0.1	0.318	0.04	<0.001	
1124537	Vegetation	<0.01	1.5	0.050	28.6	2	4	<0.01	0.001	0.10	<0.1	0.2	<0.02	0.09	<1	0.2	<0.02	<0.1	0.013	<0.01	<0.001	
1124538	Vegetation	<0.01	1.5	0.043	28.6	2	6	<0.01	<0.001	0.17	<0.1	0.3	<0.02	0.09	1	0.3	<0.02	<0.1	0.015	<0.01	0.002	
1124539	Vegetation	0.01	1.6	0.040	63.6	2	8	<0.01	0.001	0.18	<0.1	0.4	<0.02	0.10	2	0.2	<0.02	<0.1	0.045	0.01	<0.001	
1124540	Vegetation	<0.01	1.4	0.044	77.7	3	7	<0.01	0.001	0.18	<0.1	0.3	<0.02	0.12	3	0.3	<0.02	<0.1	0.015	<0.01	0.001	
1124541	Vegetation	0.02	1.3	0.046	113.4	2	8	<0.01	0.001	0.16	<0.1	0.2	<0.02	0.11	3	0.3	<0.02	<0.1	0.018	0.02	0.001	
1124542	Vegetation	<0.01	1.4	0.042	89.2	2	6	<0.01	0.001	0.21	<0.1	0.2	<0.02	0.10	2	0.2	<0.02	<0.1	0.019	<0.01	0.002	
1124543	Vegetation	0.01	1.4	0.039	120.6	2	8	<0.01	0.001	0.25	<0.1	0.3	<0.02	0.13	4	0.3	<0.02	<0.1	0.008	0.02	<0.001	
1124544	Vegetation	0.02	1.4	0.050	118.4	3	7	<0.01	0.001	0.20	<0.1	0.3	<0.02	0.11	3	0.3	<0.02	<0.1	0.030	0.02	<0.001	
1124545	Vegetation	0.02	1.4	0.047	74.7	2	6	<0.01	0.001	0.21	<0.1	0.3	<0.02	0.13	3	0.2	<0.02	<0.1	0.017	0.01	0.002	
1124546	Vegetation	0.01	1.5	0.040	13.7	2	5	<0.01	0.001	0.20	<0.1	0.4	<0.02	0.15	3	0.4	<0.02	<0.1	0.047	0.01	0.002	
1124547	Vegetation	<0.01	1.3	0.041	93.1	3	8	<0.01	0.001	0.21	<0.1	0.3	<0.02	0.12	3	0.3	<0.02	<0.1	0.071	<0.01	<0.001	
1124548	Vegetation	<0.01	1.4	0.044	94.6	3	6	<0.01	0.001	0.16	<0.1	0.2	<0.02	0.14	3	0.3	<0.02	<0.1	0.035	0.01	<0.001	
1124549	Vegetation	<0.01	1.5	0.049	65.6	3	8	<0.01	0.001	0.19	<0.1	0.3	<0.02	0.14	6	0.3	<0.02	<0.1	0.047	0.02	<0.001	
1124550	Vegetation	<0.01	1.6	0.052	68.7	2	5	<0.01	0.001	0.10	<0.1	0.4	<0.02	0.15	3	0.2	<0.02	<0.1	0.029	<0.01	<0.001	
1124551	Vegetation	<0.01	1.7	0.033	12.1	2	5	<0.01	0.001	0.15	<0.1	0.3	<0.02	0.18	<1	0.3	<0.02	<0.1	0.018	0.03	<0.001	
1124552	Vegetation	0.01	1.5	0.027	33.2	2	6	<0.01	0.001	0.17	<0.1	0.3	<0.02	0.18	3	0.3	<0.02	<0.1	0.023	<0.01	0.002	
1124553	Vegetation	<0.01	1.6	0.034	5.7	2	6	<0.01	0.001	0.18	<0.1	0.3	<0.02	0.17	3	0.3	<0.02	<0.1	0.019	0.03	<0.001	
1124554	Vegetation	<0.01	1.5	0.032	8.7	2	5	<0.01	0.001	0.17	<0.1	0.3	<0.02	0.16	<1	0.3	<0.02	<0.1	0.030	0.03	0.001	
1124555	Vegetation	<0.01	1.6	0.041	9.6	2	5	<0.01	<0.001	0.16	<0.1	0.3	<0.02	0.17	<1	0.3	<0.02	<0.1	0.036	0.01	0.001	
1124556	Vegetation	<0.01	1.6	0.027	11.0	2	6	<0.01	<0.001	0.18	<0.1	0.4	<0.02	0.18	5	0.3	<0.02	<0.1	0.009	0.03	<0.001	
1124557	Vegetation	<0.01	1.3	0.044	8.7	2	5	<0.01	<0.001	0.16	<0.1	0.2	<0.02	0.06	2	0.3	<0.02	<0.1	0.023	<0.01	<0.001	
1124558	Vegetation	<0.01	1.3	0.033	12.7	1	5	<0.01	<0.001	0.13	<0.1	0.3	<0.02	0.07	1	0.3	<0.02	<0.1	0.009	<0.01	<0.001	
1124559	Vegetation	<0.01	1.5	0.038	53.7	2	5	<0.01	<0.001	0.13	<0.1	0.3	<0.02	0.13	5	0.3	<0.02	<0.1	0.035	<0.01	<0.001	
1124560	Vegetation	<0.01	1.4	0.033	47.3	3	8	<0.01	<0.001	0.22	<0.1	0.3	<0.02	0.13	3	0.3	<0.02	<0.1	0.057	0.02	<0.001	



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**Project:** None Given  
**Report Date:** November 24, 2016

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# CERTIFICATE OF ANALYSIS

VAN16001902.1

Method	Analyte	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt
Unit		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppb	ppb
MDL		0.01	0.1	0.02	0.001	0.01	0.001	0.01	0.02	1	0.1	0.01	2	1
1124531	Vegetation	<0.01	5.9	<0.02	<0.001	0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124532	Vegetation	<0.01	7.2	<0.02	<0.001	0.02	0.003	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124533	Vegetation	<0.01	2.4	<0.02	<0.001	0.02	0.004	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124534	Vegetation	<0.01	4.6	<0.02	<0.001	0.02	0.001	0.03	<0.02	<1	<0.1	<0.01	<2	<1
1124535	Vegetation	<0.01	3.2	<0.02	<0.001	0.03	0.002	0.03	<0.02	<1	<0.1	0.01	<2	<1
1124536	Vegetation	<0.01	9.3	<0.02	<0.001	0.02	<0.001	0.03	<0.02	<1	<0.1	0.01	<2	<1
1124537	Vegetation	<0.01	2.5	<0.02	<0.001	0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124538	Vegetation	<0.01	3.3	<0.02	<0.001	0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124539	Vegetation	<0.01	6.3	<0.02	<0.001	0.01	0.001	0.03	<0.02	<1	<0.1	0.02	<2	<1
1124540	Vegetation	<0.01	4.4	<0.02	<0.001	0.02	<0.001	0.02	<0.02	<1	<0.1	0.01	<2	<1
1124541	Vegetation	<0.01	4.8	<0.02	<0.001	0.02	0.008	0.05	<0.02	<1	<0.1	0.02	<2	<1
1124542	Vegetation	<0.01	5.2	<0.02	<0.001	0.02	<0.001	0.02	<0.02	<1	<0.1	0.01	<2	<1
1124543	Vegetation	<0.01	5.0	<0.02	<0.001	0.01	<0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124544	Vegetation	<0.01	5.8	<0.02	<0.001	0.02	0.003	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124545	Vegetation	<0.01	6.4	<0.02	<0.001	0.03	<0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124546	Vegetation	<0.01	10.0	<0.02	<0.001	0.02	0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124547	Vegetation	<0.01	11.6	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	0.01	<2	<1
1124548	Vegetation	<0.01	9.4	<0.02	<0.001	0.02	0.001	0.02	<0.02	<1	<0.1	0.02	<2	<1
1124549	Vegetation	<0.01	7.5	<0.02	<0.001	0.01	<0.001	<0.01	<0.02	<1	<0.1	0.03	<2	<1
1124550	Vegetation	<0.01	5.4	<0.02	<0.001	0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124551	Vegetation	<0.01	3.5	<0.02	<0.001	0.02	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124552	Vegetation	<0.01	5.3	<0.02	<0.001	0.03	<0.001	0.03	<0.02	<1	<0.1	<0.01	<2	<1
1124553	Vegetation	<0.01	3.4	<0.02	<0.001	0.02	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124554	Vegetation	<0.01	4.0	<0.02	<0.001	0.03	0.002	0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124555	Vegetation	<0.01	4.2	<0.02	<0.001	0.02	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124556	Vegetation	<0.01	3.4	<0.02	<0.001	0.02	0.002	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124557	Vegetation	<0.01	4.8	<0.02	<0.001	0.02	0.003	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124558	Vegetation	<0.01	2.6	<0.02	<0.001	0.02	0.006	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124559	Vegetation	<0.01	4.8	<0.02	<0.001	<0.01	<0.001	0.02	<0.02	<1	<0.1	0.02	<2	<1
1124560	Vegetation	<0.01	10.1	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1



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**Project:** None Given  
**Report Date:** November 24, 2016

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**Part:** 1 of 3

# CERTIFICATE OF ANALYSIS

# VAN16001902.1

Method Analyte	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101
	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	
Unit	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	
MDL	0.01	0.01	0.01	0.1	2	0.1	0.01	1	0.001	0.1	0.01	0.2	0.01	0.5	0.01	0.02	0.02	2	0.01	0.001	
1124561	Vegetation	<0.01	2.80	0.37	22.1	2	0.1	0.09	427	0.006	<0.1	<0.01	<0.2	<0.01	32.8	0.06	<0.02	<0.02	<2	0.60	0.030
1124562	Vegetation	0.03	5.60	0.11	46.4	6	0.2	0.16	120	0.007	<0.1	<0.01	<0.2	<0.01	25.4	0.01	<0.02	<0.02	<2	0.63	0.038
1124563	Vegetation	0.06	7.46	0.13	26.3	24	0.3	0.14	62	0.006	<0.1	<0.01	<0.2	<0.01	9.2	0.02	<0.02	<0.02	<2	0.47	0.041
1124564	Vegetation	<0.01	3.74	0.26	22.8	3	0.9	0.12	615	0.006	<0.1	<0.01	<0.2	<0.01	15.2	0.07	<0.02	<0.02	<2	0.59	0.034
1124565	Vegetation	<0.01	6.56	0.06	14.0	3	0.9	0.04	386	0.004	0.2	<0.01	<0.2	<0.01	10.7	0.06	<0.02	<0.02	<2	0.44	0.073
1124566	Vegetation	<0.01	4.20	0.39	10.9	5	0.5	0.03	226	0.006	<0.1	<0.01	<0.2	<0.01	23.0	0.09	<0.02	<0.02	<2	0.59	0.044
1124567	Vegetation	<0.01	5.48	0.12	30.3	4	0.4	0.04	816	0.006	<0.1	<0.01	<0.2	<0.01	13.8	0.08	<0.02	<0.02	<2	0.56	0.045
1124568	Vegetation	<0.01	4.79	0.74	36.2	3	0.2	0.12	465	0.007	<0.1	<0.01	<0.2	<0.01	22.1	0.09	<0.02	<0.02	<2	0.77	0.047
1124569	Vegetation	<0.01	5.23	0.10	21.6	3	0.1	0.07	220	0.008	<0.1	<0.01	<0.2	<0.01	20.8	0.08	<0.02	<0.02	<2	0.98	0.064
1124570	Vegetation	<0.01	4.21	0.89	16.7	2	0.2	0.06	716	0.006	<0.1	<0.01	<0.2	<0.01	14.6	0.07	<0.02	<0.02	<2	0.63	0.065
1124571	Vegetation	<0.01	5.03	0.46	14.9	5	0.3	0.05	190	0.006	0.1	<0.01	<0.2	<0.01	15.1	0.06	<0.02	<0.02	<2	0.63	0.049
1124572	Vegetation	<0.01	4.84	0.46	21.6	2	0.3	0.10	513	0.005	<0.1	<0.01	<0.2	<0.01	14.8	0.13	<0.02	<0.02	<2	0.52	0.044
1124573	Vegetation	<0.01	4.78	0.12	12.9	2	<0.1	0.03	29	0.008	<0.1	<0.01	<0.2	<0.01	18.7	0.02	<0.02	<0.02	<2	0.85	0.043
1124574	Vegetation	<0.01	4.77	0.47	18.3	4	0.1	0.04	177	0.007	<0.1	<0.01	<0.2	<0.01	15.1	0.06	<0.02	<0.02	<2	0.83	0.045
1124575	Vegetation	0.02	4.62	0.29	12.9	2	0.2	0.05	92	0.010	<0.1	<0.01	<0.2	<0.01	19.1	0.04	<0.02	<0.02	<2	1.07	0.048
1124576	Vegetation	<0.01	7.08	0.27	22.5	4	0.1	0.03	201	0.008	<0.1	<0.01	<0.2	<0.01	16.5	0.05	<0.02	<0.02	<2	0.86	0.061
1124577	Vegetation	0.02	9.94	0.12	52.2	10	0.2	0.04	109	0.008	<0.1	<0.01	<0.2	<0.01	22.4	<0.01	<0.02	<0.02	<2	0.82	0.034
1124578	Vegetation	<0.01	5.12	0.16	48.0	8	0.1	0.05	82	0.010	<0.1	<0.01	<0.2	<0.01	14.7	0.01	<0.02	<0.02	<2	0.87	0.032
1124579	Vegetation	0.26	5.89	0.07	23.1	5	0.2	0.02	53	0.007	<0.1	<0.01	<0.2	<0.01	7.1	0.01	<0.02	<0.02	<2	0.57	0.041
1124580	Vegetation	0.01	5.47	0.14	42.9	10	0.3	0.10	142	0.007	0.1	<0.01	<0.2	<0.01	16.1	0.02	<0.02	<0.02	<2	0.60	0.036
1124581	Vegetation	0.05	5.56	0.07	25.6	9	0.1	0.04	35	0.008	<0.1	<0.01	<0.2	<0.01	9.3	<0.01	<0.02	<0.02	<2	0.81	0.034
1124582	Vegetation	0.07	6.25	0.09	36.1	16	0.3	0.05	37	0.008	<0.1	<0.01	<0.2	<0.01	8.4	<0.01	<0.02	<0.02	<2	0.74	0.038
1124583	Vegetation	<0.01	3.60	0.27	12.7	<2	0.2	0.11	130	0.006	<0.1	<0.01	<0.2	<0.01	12.4	0.07	<0.02	<0.02	<2	0.66	0.025
1124584	Vegetation	<0.01	5.11	0.27	11.6	2	0.2	0.05	194	0.008	0.2	<0.01	<0.2	<0.01	13.3	0.04	<0.02	<0.02	<2	0.89	0.049
1124585	Vegetation	<0.01	8.38	0.07	20.5	3	0.2	0.04	116	0.007	<0.1	<0.01	<0.2	<0.01	13.6	0.06	<0.02	<0.02	<2	0.66	0.055
1124586	Vegetation	<0.01	8.43	0.24	17.0	3	0.6	0.09	113	0.007	<0.1	<0.01	<0.2	<0.01	11.9	0.05	<0.02	<0.02	<2	0.67	0.064
1124587	Vegetation	0.01	4.01	0.13	9.1	2	0.1	0.02	96	0.008	<0.1	<0.01	<0.2	<0.01	9.4	0.02	<0.02	<0.02	<2	0.88	0.025
1124588	Vegetation	<0.01	5.91	0.54	16.1	5	0.5	0.12	703	0.005	<0.1	<0.01	<0.2	<0.01	15.5	0.07	<0.02	<0.02	<2	0.47	0.044
1124589	Vegetation	<0.01	4.34	0.28	20.3	2	0.3	0.13	487	0.007	<0.1	<0.01	<0.2	<0.01	13.7	0.09	<0.02	<0.02	<2	0.58	0.039
1124590	Vegetation	<0.01	4.93	0.30	29.9	4	0.4	0.10	1039	0.007	<0.1	<0.01	<0.2	<0.01	15.8	0.16	<0.02	<0.02	<2	0.59	0.043



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**Project:** None Given  
**Report Date:** November 24, 2016

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# CERTIFICATE OF ANALYSIS

# VAN16001902.1

Method Analyte Unit MDL	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101
	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf	
	ppm	ppm	%	ppm	ppm	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	0.01	0.1	0.001	0.1	1	1	0.01	0.001	0.01	0.01	0.1	0.1	0.02	0.01	1	0.1	0.02	0.1	0.005	0.01	0.001
1124561	Vegetation	0.03	1.4	0.028	59.7	2	5	<0.01	<0.001	0.14	<0.1	0.2	<0.02	0.15	2	0.3	<0.02	<0.1	0.019	<0.01	<0.001
1124562	Vegetation	0.01	1.6	0.042	28.0	2	6	<0.01	<0.001	0.21	<0.1	0.3	<0.02	0.18	1	0.3	<0.02	<0.1	0.008	0.03	<0.001
1124563	Vegetation	<0.01	1.7	0.042	10.7	2	4	<0.01	<0.001	0.16	<0.1	0.3	<0.02	0.17	<1	0.3	<0.02	<0.1	0.030	0.03	0.002
1124564	Vegetation	0.04	1.2	0.031	79.6	2	6	<0.01	<0.001	0.14	<0.1	0.2	<0.02	<0.01	11	0.3	<0.02	<0.1	0.066	<0.01	<0.001
1124565	Vegetation	<0.01	1.2	0.047	68.1	3	7	<0.01	<0.001	0.20	<0.1	0.1	<0.02	<0.01	2	0.3	<0.02	<0.1	0.055	<0.01	0.001
1124566	Vegetation	0.02	1.3	0.043	54.6	2	6	<0.01	<0.001	0.16	<0.1	0.3	<0.02	0.04	6	0.3	<0.02	<0.1	0.020	<0.01	0.001
1124567	Vegetation	<0.01	1.2	0.039	68.6	2	6	<0.01	<0.001	0.16	<0.1	0.2	<0.02	0.05	5	0.3	<0.02	<0.1	0.108	0.01	0.001
1124568	Vegetation	0.02	1.3	0.042	119.1	3	7	<0.01	<0.001	0.20	<0.1	0.3	<0.02	0.07	8	0.3	<0.02	<0.1	0.022	0.02	0.001
1124569	Vegetation	0.01	1.4	0.049	94.3	2	9	<0.01	<0.001	0.22	<0.1	0.3	<0.02	0.05	2	0.4	<0.02	<0.1	0.011	<0.01	<0.001
1124570	Vegetation	<0.01	1.3	0.041	76.5	2	6	<0.01	<0.001	0.21	<0.1	0.3	<0.02	0.10	<1	0.4	<0.02	<0.1	0.035	0.02	<0.001
1124571	Vegetation	<0.01	1.4	0.049	69.1	2	6	<0.01	<0.001	0.15	<0.1	0.4	<0.02	0.10	2	0.4	<0.02	<0.1	0.028	<0.01	<0.001
1124572	Vegetation	0.04	1.5	0.056	84.9	2	7	<0.01	<0.001	0.18	<0.1	0.3	<0.02	0.13	5	0.3	<0.02	<0.1	0.050	0.02	<0.001
1124573	Vegetation	<0.01	1.6	0.041	25.9	2	7	<0.01	0.001	0.19	<0.1	0.3	<0.02	0.13	2	0.4	<0.02	<0.1	<0.005	0.03	<0.001
1124574	Vegetation	<0.01	1.7	0.042	76.7	2	7	<0.01	<0.001	0.19	<0.1	0.3	<0.02	0.16	<1	0.4	<0.02	<0.1	0.025	0.01	<0.001
1124575	Vegetation	0.07	1.6	0.039	26.4	3	8	<0.01	<0.001	0.19	<0.1	0.2	<0.02	0.16	4	0.4	<0.02	<0.1	0.010	0.03	<0.001
1124576	Vegetation	<0.01	1.6	0.049	62.0	3	7	<0.01	<0.001	0.21	<0.1	0.3	<0.02	0.16	3	0.4	<0.02	<0.1	0.026	0.03	<0.001
1124577	Vegetation	<0.01	1.8	0.028	11.9	2	5	<0.01	0.001	0.18	<0.1	0.4	<0.02	0.17	<1	0.5	<0.02	<0.1	0.017	<0.01	0.001
1124578	Vegetation	0.02	1.7	0.037	13.7	2	7	<0.01	0.001	0.15	<0.1	0.3	<0.02	0.18	<1	0.4	<0.02	<0.1	0.010	<0.01	<0.001
1124579	Vegetation	<0.01	1.8	0.032	10.7	2	5	<0.01	<0.001	0.14	<0.1	0.4	<0.02	0.19	<1	0.4	<0.02	<0.1	0.022	0.02	<0.001
1124580	Vegetation	0.01	1.7	0.040	11.8	2	6	<0.01	0.001	0.22	<0.1	0.3	<0.02	0.19	<1	0.5	<0.02	<0.1	0.016	0.04	0.002
1124581	Vegetation	<0.01	1.8	0.023	19.0	2	5	<0.01	0.001	0.15	<0.1	0.3	<0.02	0.20	1	0.4	<0.02	<0.1	0.007	0.02	<0.001
1124582	Vegetation	<0.01	1.8	0.030	15.2	2	5	<0.01	<0.001	0.20	<0.1	0.3	<0.02	0.21	2	0.4	<0.02	<0.1	0.015	0.02	<0.001
1124583	Vegetation	<0.01	1.7	0.030	40.7	1	6	<0.01	0.001	0.17	<0.1	0.3	<0.02	0.17	2	0.4	<0.02	<0.1	0.013	0.02	<0.001
1124584	Vegetation	<0.01	1.6	0.056	63.8	2	7	<0.01	0.001	0.23	<0.1	0.3	<0.02	0.18	<1	0.5	<0.02	<0.1	0.030	0.05	<0.001
1124585	Vegetation	<0.01	1.7	0.044	54.9	2	7	<0.01	<0.001	0.26	<0.1	0.3	<0.02	0.17	4	0.4	<0.02	<0.1	0.017	0.04	<0.001
1124586	Vegetation	<0.01	1.7	0.056	31.4	3	8	<0.01	0.001	0.25	<0.1	0.3	<0.02	0.18	6	0.4	<0.02	<0.1	0.048	0.05	<0.001
1124587	Vegetation	<0.01	1.8	0.034	15.3	2	7	<0.01	0.002	0.14	<0.1	0.4	<0.02	0.20	4	0.5	<0.02	<0.1	<0.005	0.03	<0.001
1124588	Vegetation	<0.01	1.5	0.042	85.9	2	7	<0.01	<0.001	0.18	<0.1	0.3	<0.02	0.19	2	0.4	<0.02	<0.1	0.053	0.02	<0.001
1124589	Vegetation	<0.01	1.6	0.051	53.9	2	6	<0.01	<0.001	0.18	<0.1	0.2	<0.02	0.18	3	0.5	<0.02	<0.1	0.076	0.01	<0.001
1124590	Vegetation	<0.01	1.5	0.064	79.1	2	9	<0.01	<0.001	0.20	<0.1	0.3	<0.02	0.15	<1	0.5	<0.02	<0.1	0.114	0.02	<0.001





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**Project:** None Given  
**Report Date:** November 24, 2016

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# CERTIFICATE OF ANALYSIS

VAN16001902.1

Method	Analyte	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt
Unit		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppb	ppb	ppb
MDL		0.01	0.1	0.02	0.001	0.01	0.001	0.01	0.02	1	0.1	0.01	2	1
1124561	Vegetation	<0.01	5.1	<0.02	<0.001	0.01	<0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124562	Vegetation	<0.01	3.9	<0.02	<0.001	0.02	<0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124563	Vegetation	<0.01	4.6	<0.02	<0.001	0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124564	Vegetation	<0.01	6.3	<0.02	<0.001	0.01	0.026	0.04	<0.02	<1	<0.1	0.01	<2	<1
1124565	Vegetation	<0.01	6.6	<0.02	<0.001	0.01	<0.001	<0.01	<0.02	<1	<0.1	0.02	<2	<1
1124566	Vegetation	<0.01	3.4	<0.02	<0.001	0.01	0.003	0.03	<0.02	<1	<0.1	0.02	<2	<1
1124567	Vegetation	<0.01	6.3	<0.02	<0.001	0.01	<0.001	0.02	<0.02	<1	<0.1	0.03	<2	<1
1124568	Vegetation	<0.01	4.0	<0.02	<0.001	0.02	<0.001	0.02	<0.02	<1	<0.1	0.01	<2	<1
1124569	Vegetation	<0.01	3.8	<0.02	<0.001	0.02	0.004	0.02	<0.02	<1	<0.1	0.01	<2	<1
1124570	Vegetation	<0.01	4.0	<0.02	<0.001	<0.01	<0.001	0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124571	Vegetation	<0.01	3.6	<0.02	<0.001	<0.01	0.002	0.01	<0.02	<1	<0.1	0.03	<2	<1
1124572	Vegetation	<0.01	5.5	<0.02	<0.001	0.02	0.006	0.04	<0.02	<1	<0.1	0.01	<2	<1
1124573	Vegetation	<0.01	3.2	<0.02	<0.001	0.02	<0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124574	Vegetation	<0.01	4.6	<0.02	<0.001	0.02	0.003	0.02	<0.02	<1	<0.1	0.02	<2	<1
1124575	Vegetation	<0.01	3.4	<0.02	<0.001	0.02	0.017	0.03	<0.02	<1	<0.1	0.01	<2	<1
1124576	Vegetation	<0.01	4.5	<0.02	<0.001	<0.01	0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124577	Vegetation	<0.01	5.4	<0.02	<0.001	0.02	0.003	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124578	Vegetation	<0.01	3.7	<0.02	<0.001	0.04	0.007	0.04	<0.02	<1	<0.1	<0.01	<2	<1
1124579	Vegetation	<0.01	5.9	<0.02	<0.001	0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124580	Vegetation	<0.01	7.0	<0.02	<0.001	0.03	0.004	0.02	<0.02	<1	<0.1	0.01	<2	<1
1124581	Vegetation	<0.01	3.2	<0.02	<0.001	0.01	<0.001	<0.01	<0.02	<1	<0.1	0.01	<2	<1
1124582	Vegetation	<0.01	4.7	<0.02	<0.001	0.01	<0.001	0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124583	Vegetation	<0.01	5.3	<0.02	<0.001	0.02	<0.001	<0.01	<0.02	<1	<0.1	0.02	<2	<1
1124584	Vegetation	<0.01	7.7	<0.02	<0.001	0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124585	Vegetation	<0.01	6.5	<0.02	<0.001	0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124586	Vegetation	<0.01	6.8	<0.02	<0.001	0.02	<0.001	<0.01	<0.02	<1	<0.1	0.01	<2	<1
1124587	Vegetation	<0.01	2.1	<0.02	<0.001	0.03	<0.001	0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124588	Vegetation	<0.01	7.7	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124589	Vegetation	<0.01	6.3	<0.02	<0.001	0.01	<0.001	<0.01	<0.02	<1	<0.1	0.01	<2	<1
1124590	Vegetation	<0.01	8.0	<0.02	<0.001	<0.01	<0.001	0.01	<0.02	<1	<0.1	<0.01	<2	<1



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**Project:** None Given  
**Report Date:** November 24, 2016

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# CERTIFICATE OF ANALYSIS

# VAN16001902.1

Method Analyte	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101
	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	%
Unit	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%
MDL	0.01	0.01	0.01	0.1	2	0.1	0.01	1	0.001	0.1	0.01	0.2	0.01	0.5	0.01	0.02	0.02	2	0.01	0.001	0.001
1124591	Vegetation	<0.01	3.90	0.20	14.2	12	0.3	0.06	597	0.006	<0.1	<0.01	<0.2	<0.01	24.6	0.08	<0.02	<0.02	<2	0.53	0.050
1124592	Vegetation	<0.01	4.01	1.04	12.0	5	0.2	0.08	493	0.007	0.1	<0.01	<0.2	<0.01	35.1	0.08	<0.02	<0.02	<2	0.58	0.036
1124593	Vegetation	0.06	5.12	0.13	33.8	9	0.1	0.06	44	0.008	<0.1	<0.01	<0.2	<0.01	7.4	<0.01	<0.02	<0.02	<2	0.62	0.041
1124594	Vegetation	<0.01	5.70	0.15	28.7	20	0.2	0.04	56	0.009	<0.1	<0.01	<0.2	<0.01	12.7	0.02	<0.02	<0.02	<2	0.89	0.033
1124595	Vegetation	<0.01	3.28	0.70	10.9	2	0.2	0.04	153	0.009	<0.1	<0.01	<0.2	<0.01	20.5	0.02	<0.02	<0.02	<2	1.01	0.022
1124596	Vegetation	<0.01	3.70	0.67	12.0	3	<0.1	0.02	131	0.008	<0.1	<0.01	<0.2	<0.01	21.2	0.03	<0.02	<0.02	<2	0.95	0.028
1124597	Vegetation	<0.01	6.11	0.18	9.0	3	0.6	0.18	261	0.005	<0.1	<0.01	<0.2	<0.01	19.6	0.07	<0.02	<0.02	<2	0.30	0.055
1124598	Vegetation	<0.01	5.18	0.38	22.0	3	0.2	0.12	616	0.007	<0.1	<0.01	<0.2	<0.01	27.6	0.10	<0.02	<0.02	<2	0.69	0.042
1124599	Vegetation	0.02	11.71	0.10	13.7	5	0.5	0.04	314	0.005	<0.1	<0.01	<0.2	<0.01	20.8	0.06	<0.02	<0.02	<2	0.48	0.087
1124600	Vegetation	<0.01	4.20	0.34	12.9	6	0.3	0.05	486	0.007	<0.1	<0.01	<0.2	<0.01	19.1	0.04	<0.02	<0.02	<2	0.62	0.053
1124601	Vegetation	<0.01	4.07	0.64	13.0	2	0.2	0.03	491	0.005	<0.1	<0.01	<0.2	<0.01	28.5	0.08	<0.02	<0.02	<2	0.54	0.038
1124602	Vegetation	0.14	6.96	0.15	42.4	27	0.2	0.29	136	0.008	<0.1	<0.01	<0.2	<0.01	18.2	0.03	<0.02	<0.02	<2	0.89	0.035
1124603	Vegetation	<0.01	4.76	0.36	12.6	5	0.3	0.05	377	0.006	<0.1	<0.01	<0.2	<0.01	19.1	0.05	<0.02	<0.02	<2	0.63	0.041
1124604	Vegetation	0.10	5.49	0.11	31.6	5	<0.1	0.01	112	0.007	<0.1	<0.01	<0.2	<0.01	11.0	0.03	<0.02	<0.02	<2	0.85	0.040
1124605	Vegetation	0.03	2.52	0.38	8.2	<2	<0.1	0.07	268	0.004	<0.1	<0.01	<0.2	<0.01	10.9	0.05	<0.02	<0.02	<2	0.49	0.019
1124606	Vegetation	0.01	6.13	0.26	69.2	12	<0.1	0.05	212	0.008	<0.1	<0.01	0.2	<0.01	16.6	0.02	<0.02	<0.02	<2	0.96	0.038
1124607	Vegetation	0.22	7.99	0.22	17.6	<2	1.4	0.43	39	0.005	<0.1	<0.01	<0.2	<0.01	29.7	<0.01	<0.02	<0.02	<2	0.47	0.069
1124608	Vegetation	0.01	4.76	0.26	13.3	6	0.7	0.14	40	0.007	<0.1	<0.01	<0.2	<0.01	31.4	0.01	<0.02	<0.02	<2	0.57	0.061
1124609	Vegetation	<0.01	5.67	0.21	9.0	4	0.1	0.09	311	0.005	<0.1	<0.01	0.3	<0.01	17.0	0.05	<0.02	<0.02	<2	0.48	0.028
1124610	Vegetation	<0.01	3.97	0.74	18.0	2	0.3	0.07	545	0.004	<0.1	<0.01	<0.2	<0.01	22.2	0.10	<0.02	<0.02	<2	0.47	0.044
1124611	Vegetation	<0.01	4.53	0.14	10.1	6	0.9	0.04	509	0.004	<0.1	<0.01	<0.2	<0.01	19.4	0.09	<0.02	<0.02	<2	0.32	0.047
1124612	Vegetation	0.05	5.67	0.15	33.7	19	0.2	0.36	108	0.006	<0.1	<0.01	<0.2	<0.01	13.6	<0.01	<0.02	<0.02	<2	0.55	0.034
1124613	Vegetation	<0.01	3.10	0.61	19.3	4	0.1	0.14	1009	0.005	<0.1	<0.01	<0.2	<0.01	19.5	0.14	<0.02	<0.02	<2	0.38	0.035
1124614	Vegetation	<0.01	5.58	0.33	15.4	4	0.3	0.07	620	0.004	<0.1	<0.01	0.3	<0.01	15.5	0.08	<0.02	<0.02	<2	0.32	0.050
1124615	Vegetation	<0.01	6.66	0.50	17.6	3	0.3	0.19	378	0.005	<0.1	<0.01	<0.2	<0.01	27.5	0.10	<0.02	<0.02	<2	0.49	0.046
1124616	Vegetation	0.01	6.73	0.18	11.7	3	0.3	0.06	446	0.006	<0.1	<0.01	<0.2	<0.01	16.6	0.05	<0.02	<0.02	<2	0.52	0.073
1124617	Vegetation	<0.01	5.64	0.21	8.5	2	0.2	0.05	256	0.007	<0.1	<0.01	<0.2	<0.01	15.2	0.04	<0.02	<0.02	<2	0.62	0.057
1124618	Vegetation	<0.01	6.85	0.24	23.4	4	0.2	0.09	431	0.006	<0.1	<0.01	<0.2	<0.01	21.1	0.12	<0.02	<0.02	<2	0.46	0.040
1124619	Vegetation	0.02	6.08	0.11	10.4	<2	0.5	0.03	547	0.005	<0.1	<0.01	<0.2	<0.01	17.5	0.05	<0.02	<0.02	<2	0.40	0.066
1124620	Vegetation	<0.01	6.94	0.19	10.7	5	0.2	0.02	223	0.006	<0.1	<0.01	<0.2	<0.01	15.2	0.04	<0.02	<0.02	<2	0.70	0.050



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**Project:** None Given  
**Report Date:** November 24, 2016

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# CERTIFICATE OF ANALYSIS

# VAN16001902.1

Method	Analyte	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
Unit		ppm	ppm	%	ppm	ppm	ppm	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL		0.01	0.1	0.001	0.1	1	1	0.01	0.001	0.01	0.1	0.1	0.02	0.01	1	0.1	0.02	0.1	0.005	0.01	0.001
1124591	Vegetation	<0.01	1.6	0.033	102.2	2	7	<0.01	<0.001	0.19	<0.1	0.3	<0.02	0.18	6	0.4	<0.02	<0.1	0.078	0.02	<0.001
1124592	Vegetation	<0.01	1.6	0.039	95.6	2	6	<0.01	<0.001	0.14	<0.1	0.3	<0.02	0.19	2	0.4	<0.02	<0.1	0.058	0.02	<0.001
1124593	Vegetation	<0.01	1.8	0.024	10.6	2	6	<0.01	0.001	0.15	<0.1	0.3	<0.02	0.20	4	0.4	<0.02	<0.1	0.022	0.01	<0.001
1124594	Vegetation	<0.01	1.8	0.028	16.1	2	6	<0.01	<0.001	0.17	<0.1	0.4	<0.02	0.23	<1	0.4	<0.02	<0.1	0.017	0.05	<0.001
1124595	Vegetation	<0.01	1.7	0.027	21.3	2	7	<0.01	<0.001	0.16	<0.1	0.3	<0.02	0.20	6	0.4	<0.02	<0.1	0.016	0.02	<0.001
1124596	Vegetation	<0.01	1.4	0.029	19.6	2	6	<0.01	<0.001	0.13	<0.1	0.3	<0.02	0.02	5	0.4	<0.02	<0.1	0.006	<0.01	0.001
1124597	Vegetation	<0.01	1.4	0.049	53.6	2	8	<0.01	<0.001	0.24	<0.1	0.3	<0.02	0.07	3	0.4	<0.02	<0.1	0.098	0.01	<0.001
1124598	Vegetation	0.01	1.3	0.039	89.3	2	8	<0.01	<0.001	0.19	<0.1	0.2	<0.02	0.10	4	0.4	<0.02	<0.1	0.032	0.03	<0.001
1124599	Vegetation	<0.01	1.4	0.049	85.7	3	12	<0.01	<0.001	0.32	<0.1	0.3	<0.02	0.12	1	0.4	<0.02	<0.1	0.048	0.02	<0.001
1124600	Vegetation	<0.01	1.3	0.054	82.4	2	8	<0.01	<0.001	0.20	<0.1	0.4	<0.02	0.13	4	0.3	<0.02	<0.1	0.020	<0.01	<0.001
1124601	Vegetation	0.07	1.4	0.036	54.7	2	6	<0.01	<0.001	0.15	<0.1	0.3	<0.02	0.13	3	0.4	<0.02	<0.1	0.018	<0.01	<0.001
1124602	Vegetation	<0.01	1.6	0.037	15.5	2	6	<0.01	0.002	0.16	<0.1	0.3	<0.02	0.18	3	0.4	<0.02	<0.1	0.029	0.02	<0.001
1124603	Vegetation	<0.01	1.5	0.036	29.8	2	6	<0.01	<0.001	0.17	<0.1	0.3	<0.02	0.14	2	0.3	<0.02	<0.1	0.027	0.02	<0.001
1124604	Vegetation	<0.01	1.4	0.029	11.0	2	5	<0.01	<0.001	0.14	<0.1	0.2	<0.02	0.03	3	0.3	<0.02	<0.1	0.008	<0.01	<0.001
1124605	Vegetation	0.02	1.3	0.020	31.2	1	5	<0.01	<0.001	0.13	<0.1	0.1	<0.02	<0.01	2	0.2	<0.02	<0.1	0.040	<0.01	<0.001
1124606	Vegetation	<0.01	1.4	0.024	11.4	2	4	<0.01	<0.001	0.15	<0.1	0.3	<0.02	0.03	3	0.3	<0.02	<0.1	0.015	<0.01	<0.001
1124607	Vegetation	0.18	1.5	0.057	44.0	3	6	<0.01	<0.001	0.15	<0.1	0.2	<0.02	0.09	8	0.3	<0.02	<0.1	0.029	<0.01	<0.001
1124608	Vegetation	0.09	1.6	0.054	33.7	2	3	<0.01	<0.001	0.14	<0.1	0.3	<0.02	0.10	<1	0.3	<0.02	<0.1	0.603	<0.01	<0.001
1124609	Vegetation	<0.01	1.5	0.036	26.9	2	5	<0.01	<0.001	0.15	<0.1	0.2	<0.02	0.10	3	0.4	<0.02	<0.1	0.028	<0.01	<0.001
1124610	Vegetation	<0.01	1.5	0.053	58.2	2	6	<0.01	<0.001	0.19	<0.1	0.3	<0.02	0.11	5	0.2	<0.02	<0.1	0.033	<0.01	<0.001
1124611	Vegetation	<0.01	1.4	0.037	51.8	2	6	<0.01	<0.001	0.22	<0.1	0.2	<0.02	0.10	2	0.3	<0.02	<0.1	0.058	<0.01	<0.001
1124612	Vegetation	0.01	1.6	0.047	10.7	2	6	<0.01	<0.001	0.13	<0.1	0.3	<0.02	0.13	7	0.3	<0.02	<0.1	0.034	<0.01	<0.001
1124613	Vegetation	0.01	1.4	0.034	50.5	2	5	<0.01	<0.001	0.13	<0.1	0.4	<0.02	0.09	2	0.3	<0.02	<0.1	0.044	<0.01	<0.001
1124614	Vegetation	<0.01	1.4	0.036	40.7	2	8	<0.01	<0.001	0.21	<0.1	0.2	<0.02	0.09	4	0.3	<0.02	<0.1	0.049	0.01	0.001
1124615	Vegetation	0.01	1.5	0.046	62.6	2	7	<0.01	<0.001	0.17	<0.1	0.2	<0.02	0.12	5	0.3	<0.02	<0.1	0.025	<0.01	0.001
1124616	Vegetation	<0.01	1.5	0.059	70.3	3	8	<0.01	<0.001	0.22	<0.1	0.3	<0.02	0.15	4	0.3	<0.02	<0.1	0.061	0.02	<0.001
1124617	Vegetation	0.01	1.6	0.047	52.5	2	8	<0.01	<0.001	0.22	<0.1	0.5	<0.02	0.15	4	0.3	<0.02	<0.1	0.036	0.01	<0.001
1124618	Vegetation	<0.01	1.5	0.044	80.3	2	6	<0.01	<0.001	0.16	<0.1	0.2	<0.02	0.13	4	0.3	<0.02	<0.1	0.028	0.02	<0.001
1124619	Vegetation	<0.01	1.5	0.050	59.0	2	7	<0.01	<0.001	0.30	<0.1	0.2	<0.02	0.13	5	0.3	<0.02	<0.1	0.045	<0.01	<0.001
1124620	Vegetation	<0.01	1.6	0.050	22.0	2	5	<0.01	<0.001	0.17	<0.1	0.3	<0.02	0.16	4	0.2	<0.02	<0.1	0.065	<0.01	<0.001



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**Project:** None Given  
**Report Date:** November 24, 2016

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# CERTIFICATE OF ANALYSIS

VAN16001902.1

Method Analyte Unit MDL	VG101 Nb	VG101 Rb	VG101 Sn	VG101 Ta	VG101 Zr	VG101 Y	VG101 Ce	VG101 In	VG101 Re	VG101 Be	VG101 Li	VG101 Pd	VG101 Pt													
														ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppb	ppb	
														0.01	0.1	0.02	0.001	0.01	0.001	0.01	0.02	1	0.1	0.01	2	1
1124591	Vegetation	<0.01	11.4	<0.02	<0.001	0.01	<0.001	0.01	<0.02	<1	<0.1	<0.01	<2	<1												
1124592	Vegetation	<0.01	5.9	<0.02	<0.001	0.02	0.001	0.02	<0.02	<1	<0.1	0.02	<2	<1												
1124593	Vegetation	<0.01	3.7	<0.02	<0.001	0.02	0.005	0.02	<0.02	<1	<0.1	<0.01	<2	<1												
1124594	Vegetation	<0.01	4.6	<0.02	<0.001	0.02	0.003	0.02	<0.02	<1	<0.1	<0.01	<2	<1												
1124595	Vegetation	<0.01	2.5	<0.02	<0.001	0.02	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1												
1124596	Vegetation	<0.01	2.8	<0.02	<0.001	0.02	0.002	0.02	<0.02	<1	<0.1	0.02	<2	<1												
1124597	Vegetation	<0.01	7.6	<0.02	<0.001	0.01	<0.001	<0.01	<0.02	<1	<0.1	0.02	<2	<1												
1124598	Vegetation	<0.01	4.9	<0.02	<0.001	0.02	0.005	0.02	<0.02	<1	<0.1	0.01	<2	<1												
1124599	Vegetation	<0.01	7.3	<0.02	<0.001	0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1												
1124600	Vegetation	<0.01	6.2	<0.02	<0.001	0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1												
1124601	Vegetation	<0.01	5.6	<0.02	<0.001	<0.01	0.021	0.05	<0.02	<1	<0.1	<0.01	<2	<1												
1124602	Vegetation	<0.01	3.0	<0.02	<0.001	0.02	0.006	0.02	<0.02	<1	<0.1	<0.01	<2	<1												
1124603	Vegetation	<0.01	5.7	<0.02	<0.001	0.01	<0.001	0.01	<0.02	<1	<0.1	0.01	<2	<1												
1124604	Vegetation	<0.01	3.6	<0.02	<0.001	0.02	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1												
1124605	Vegetation	<0.01	4.9	<0.02	<0.001	<0.01	0.003	0.03	<0.02	<1	<0.1	0.01	<2	<1												
1124606	Vegetation	<0.01	2.6	<0.02	<0.001	0.01	<0.001	0.01	<0.02	<1	<0.1	<0.01	<2	<1												
1124607	Vegetation	<0.01	9.2	<0.02	<0.001	0.02	0.014	0.09	<0.02	<1	<0.1	<0.01	<2	<1												
1124608	Vegetation	<0.01	12.8	<0.02	<0.001	0.02	0.011	0.09	<0.02	<1	<0.1	<0.01	<2	<1												
1124609	Vegetation	<0.01	7.1	<0.02	<0.001	<0.01	<0.001	0.01	<0.02	<1	<0.1	0.02	<2	<1												
1124610	Vegetation	<0.01	6.2	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	0.02	<2	<1												
1124611	Vegetation	<0.01	16.4	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1												
1124612	Vegetation	<0.01	5.2	<0.02	<0.001	0.02	0.007	0.03	<0.02	<1	<0.1	<0.01	<2	<1												
1124613	Vegetation	<0.01	6.3	<0.02	<0.001	0.01	0.004	0.03	<0.02	<1	<0.1	0.02	<2	<1												
1124614	Vegetation	<0.01	9.8	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1												
1124615	Vegetation	<0.01	6.3	<0.02	<0.001	<0.01	<0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1												
1124616	Vegetation	<0.01	7.1	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1												
1124617	Vegetation	<0.01	5.0	<0.02	<0.001	0.01	<0.001	0.02	<0.02	<1	<0.1	0.03	<2	<1												
1124618	Vegetation	<0.01	5.2	<0.02	<0.001	0.01	0.003	0.02	<0.02	<1	<0.1	0.02	<2	<1												
1124619	Vegetation	<0.01	10.7	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1												
1124620	Vegetation	<0.01	8.1	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1												



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**Project:** None Given  
**Report Date:** November 24, 2016

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**Part:** 1 of 3

# CERTIFICATE OF ANALYSIS

## VAN16001902.1

	Method Analyte Unit MDL	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.01	1	0.001	0.1	0.01	0.2	0.01	0.5	0.01	0.02	0.02	2	0.01	0.001
1124621	Vegetation	<0.01	4.43	0.19	12.1	4	0.3	0.04	113	0.007	<0.1	<0.01	<0.2	<0.01	24.1	0.06	<0.02	<0.02	<2	0.64	0.039
1124622	Vegetation	0.25	5.53	0.15	23.5	14	0.1	0.07	56	0.008	<0.1	<0.01	<0.2	<0.01	18.4	0.01	<0.02	<0.02	<2	0.69	0.042
1124623	Vegetation	0.03	6.09	0.20	50.9	4	0.2	0.06	157	0.010	<0.1	<0.01	<0.2	<0.01	17.8	0.02	<0.02	<0.02	<2	0.93	0.046
1124624	Vegetation	0.08	5.64	0.10	27.6	18	0.2	0.03	98	0.007	<0.1	<0.01	<0.2	<0.01	10.2	0.01	<0.02	<0.02	<2	0.61	0.042
1124625	Vegetation	<0.01	3.71	0.65	11.7	4	0.2	0.03	289	0.006	<0.1	<0.01	<0.2	<0.01	16.0	0.07	<0.02	<0.02	<2	0.63	0.035
1124626	Vegetation	<0.01	4.13	0.23	11.9	3	0.6	0.07	462	0.004	<0.1	<0.01	<0.2	<0.01	21.1	0.04	<0.02	<0.02	<2	0.41	0.050
1124627	Vegetation	<0.01	4.33	0.68	12.9	3	0.3	0.08	326	0.006	<0.1	<0.01	<0.2	<0.01	32.9	0.06	<0.02	<0.02	<2	0.63	0.049
1124628	Vegetation	<0.01	5.05	0.46	15.3	2	0.3	0.16	749	0.006	<0.1	<0.01	<0.2	<0.01	26.5	0.08	<0.02	<0.02	<2	0.61	0.049
1124629	Vegetation	<0.01	5.58	0.18	15.4	2	0.5	0.16	532	0.005	<0.1	<0.01	<0.2	<0.01	21.9	0.07	<0.02	<0.02	<2	0.50	0.044
1124630	Vegetation	0.04	4.58	0.10	31.0	3	0.1	0.03	176	0.006	<0.1	<0.01	<0.2	<0.01	9.8	0.02	<0.02	<0.02	<2	0.65	0.046
1124631	Vegetation	<0.01	4.10	0.15	30.9	4	0.2	0.07	205	0.011	<0.1	<0.01	<0.2	<0.01	14.1	0.05	<0.02	<0.02	<2	1.09	0.038
1124632	Vegetation	<0.01	3.14	0.08	28.0	8	0.2	0.06	264	0.008	<0.1	<0.01	<0.2	<0.01	9.6	0.03	<0.02	<0.02	<2	0.83	0.044
1124633	Vegetation	<0.01	5.41	0.13	33.8	8	0.1	0.07	304	0.006	<0.1	<0.01	<0.2	<0.01	7.4	0.02	<0.02	<0.02	<2	0.46	0.066
1124634	Vegetation	0.09	5.16	0.12	18.6	6	0.2	0.06	183	0.006	0.1	<0.01	<0.2	<0.01	10.5	0.01	<0.02	<0.02	<2	0.69	0.037
1124635	Vegetation	0.01	6.54	0.14	17.2	2	1.3	0.44	102	0.005	0.2	<0.01	<0.2	<0.01	19.6	0.02	<0.02	<0.02	<2	0.34	0.060
1124636	Vegetation	0.20	4.90	0.11	26.5	4	0.2	0.10	174	0.007	<0.1	<0.01	<0.2	<0.01	12.1	<0.01	<0.02	<0.02	<2	0.73	0.036
1124637	Vegetation	0.06	4.74	0.11	26.5	6	0.3	0.07	266	0.006	<0.1	<0.01	<0.2	<0.01	10.0	0.02	<0.02	<0.02	<2	0.51	0.034
1124638	Vegetation	0.08	5.62	0.10	18.8	8	0.2	0.14	331	0.007	<0.1	<0.01	<0.2	<0.01	8.2	0.02	<0.02	<0.02	<2	0.65	0.031
1124639	Vegetation	0.04	6.50	0.10	34.9	<2	0.8	0.37	275	0.004	<0.1	<0.01	<0.2	<0.01	8.7	0.03	<0.02	<0.02	<2	0.42	0.054
1124640	Vegetation	0.10	4.63	0.25	45.3	4	0.1	0.04	175	0.005	<0.1	<0.01	0.2	<0.01	10.3	0.02	<0.02	<0.02	<2	0.69	0.029
1124641	Vegetation	0.06	4.09	0.20	24.8	2	<0.1	0.07	91	0.005	<0.1	<0.01	<0.2	<0.01	14.4	<0.01	<0.02	<0.02	<2	0.47	0.042
1124642	Vegetation	1.16	8.18	0.11	40.6	6	0.2	0.07	296	0.005	<0.1	<0.01	0.2	<0.01	11.2	0.02	<0.02	<0.02	<2	0.47	0.070
1124643	Vegetation	<0.01	5.09	0.07	7.2	<2	2.6	0.26	22	0.004	<0.1	<0.01	<0.2	<0.01	26.7	<0.01	<0.02	<0.02	<2	0.30	0.055
1124644	Vegetation	<0.01	4.55	0.10	16.7	5	0.2	0.04	224	0.008	<0.1	<0.01	<0.2	<0.01	12.3	0.01	<0.02	<0.02	<2	0.82	0.042
1124645	Vegetation	0.02	5.75	0.15	22.6	<2	2.5	0.49	69	0.005	<0.1	<0.01	<0.2	<0.01	21.9	0.01	<0.02	<0.02	<2	0.40	0.049
1124646	Vegetation	0.02	5.09	0.16	26.3	27	0.2	0.27	243	0.006	<0.1	<0.01	<0.2	<0.01	12.9	0.02	<0.02	<0.02	<2	0.57	0.040
1124647	Vegetation	0.10	6.11	0.07	10.9	<2	4.5	0.48	38	0.004	<0.1	<0.01	0.3	<0.01	11.4	<0.01	<0.02	<0.02	<2	0.25	0.052
1124648	Vegetation	0.20	6.15	0.13	17.9	10	0.4	0.10	102	0.004	<0.1	<0.01	<0.2	<0.01	5.7	<0.01	<0.02	<0.02	<2	0.31	0.036
1124649	Vegetation	0.20	8.59	0.06	17.1	4	1.1	0.11	21	0.004	<0.1	<0.01	0.2	<0.01	12.9	<0.01	<0.02	<0.02	<2	0.21	0.049
1124650	Vegetation	0.03	6.64	0.17	80.1	24	0.2	0.40	177	0.007	<0.1	<0.01	<0.2	<0.01	13.1	0.02	<0.02	<0.02	<2	0.62	0.036



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**Project:** None Given  
**Report Date:** November 24, 2016

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# CERTIFICATE OF ANALYSIS

# VAN16001902.1

Method Analyte Unit MDL	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101
	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf	
	ppm	ppm	%	ppm	ppm	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	0.01	0.1	0.001	0.1	1	1	0.01	0.001	0.01	0.01	0.1	0.1	0.02	0.01	1	0.1	0.02	0.1	0.005	0.01	0.001
1124621	Vegetation	0.03	1.7	0.035	33.8	2	6	<0.01	<0.001	0.17	<0.1	0.4	<0.02	0.15	4	0.3	<0.02	<0.1	0.048	0.02	<0.001
1124622	Vegetation	<0.01	1.7	0.036	14.3	2	6	<0.01	0.001	0.14	<0.1	0.3	<0.02	0.18	7	0.4	<0.02	<0.1	0.014	0.03	0.001
1124623	Vegetation	<0.01	1.7	0.037	20.5	2	5	<0.01	0.002	0.19	<0.1	0.2	<0.02	0.18	5	0.4	<0.02	<0.1	0.024	0.02	<0.001
1124624	Vegetation	<0.01	1.7	0.036	13.2	2	5	<0.01	0.002	0.18	<0.1	0.4	<0.02	0.19	1	0.3	<0.02	<0.1	0.018	<0.01	<0.001
1124625	Vegetation	<0.01	1.6	0.034	62.3	2	5	<0.01	0.001	0.15	<0.1	0.3	<0.02	0.17	3	0.3	<0.02	<0.1	0.029	0.03	0.004
1124626	Vegetation	<0.01	1.5	0.046	60.2	2	5	<0.01	0.001	0.16	<0.1	0.2	<0.02	0.15	4	0.2	<0.02	<0.1	0.095	0.03	<0.001
1124627	Vegetation	<0.01	1.6	0.053	83.9	2	6	<0.01	<0.001	0.24	<0.1	0.3	<0.02	0.14	<1	0.3	<0.02	<0.1	0.075	0.01	<0.001
1124628	Vegetation	<0.01	1.5	0.054	82.1	2	5	<0.01	<0.001	0.17	<0.1	0.2	<0.02	0.14	2	0.3	<0.02	<0.1	0.126	0.02	0.001
1124629	Vegetation	<0.01	1.5	0.040	48.0	2	7	<0.01	0.001	0.23	<0.1	0.4	<0.02	0.14	1	0.3	<0.02	<0.1	0.053	<0.01	<0.001
1124630	Vegetation	<0.01	1.7	0.023	13.2	2	4	<0.01	0.001	0.15	<0.1	0.3	<0.02	0.17	3	0.3	<0.02	<0.1	0.039	0.02	<0.001
1124631	Vegetation	<0.01	1.8	0.025	15.0	2	5	<0.01	0.001	0.17	<0.1	0.3	<0.02	0.18	3	0.3	<0.02	<0.1	0.019	0.03	<0.001
1124632	Vegetation	<0.01	1.7	0.030	8.9	2	5	<0.01	<0.001	0.15	<0.1	0.4	<0.02	0.19	1	0.3	<0.02	<0.1	0.039	<0.01	<0.001
1124633	Vegetation	<0.01	1.6	0.036	9.0	3	4	<0.01	<0.001	0.16	<0.1	0.3	<0.02	0.15	<1	0.3	<0.02	<0.1	0.051	0.02	0.001
1124634	Vegetation	<0.01	1.8	0.029	8.4	2	5	<0.01	0.001	0.15	<0.1	0.3	<0.02	0.21	1	0.3	<0.02	<0.1	0.034	0.02	<0.001
1124635	Vegetation	0.07	1.8	0.065	57.4	3	5	<0.01	0.001	0.16	<0.1	0.5	<0.02	0.19	2	0.3	<0.02	<0.1	0.191	0.05	0.001
1124636	Vegetation	<0.01	1.9	0.023	8.8	2	5	<0.01	0.001	0.16	<0.1	0.3	<0.02	0.19	3	0.3	<0.02	<0.1	0.018	0.02	<0.001
1124637	Vegetation	<0.01	1.7	0.029	11.6	2	4	<0.01	<0.001	0.16	<0.1	0.4	<0.02	0.19	3	0.3	<0.02	<0.1	0.021	0.03	0.001
1124638	Vegetation	<0.01	1.7	0.022	15.4	2	5	<0.01	0.001	0.13	<0.1	0.3	<0.02	0.18	<1	0.3	<0.02	<0.1	0.067	0.02	0.002
1124639	Vegetation	<0.01	1.4	0.044	11.4	2	5	<0.01	<0.001	0.17	<0.1	0.3	<0.02	0.04	3	0.4	<0.02	<0.1	0.905	0.02	0.001
1124640	Vegetation	<0.01	1.4	0.025	10.5	1	4	<0.01	<0.001	0.15	<0.1	0.2	<0.02	0.05	2	0.4	<0.02	<0.1	0.038	<0.01	<0.001
1124641	Vegetation	<0.01	1.5	0.036	6.4	2	5	<0.01	0.001	0.18	<0.1	0.2	<0.02	0.09	5	0.4	0.03	<0.1	0.011	<0.01	<0.001
1124642	Vegetation	<0.01	1.6	0.043	17.1	2	6	<0.01	<0.001	0.27	<0.1	0.3	<0.02	0.11	4	0.4	<0.02	<0.1	0.050	0.01	<0.001
1124643	Vegetation	0.02	1.6	0.054	31.8	2	5	<0.01	<0.001	0.17	<0.1	0.2	<0.02	0.11	2	0.4	<0.02	<0.1	0.217	0.05	0.002
1124644	Vegetation	<0.01	1.6	0.027	11.6	2	5	<0.01	0.001	0.15	<0.1	0.2	<0.02	0.13	2	0.4	<0.02	<0.1	0.018	0.02	0.002
1124645	Vegetation	0.02	1.6	0.053	22.2	2	5	<0.01	0.001	0.14	<0.1	0.3	<0.02	0.15	8	0.4	<0.02	<0.1	0.300	0.02	<0.001
1124646	Vegetation	<0.01	1.8	0.039	30.3	2	4	<0.01	0.001	0.16	<0.1	0.3	<0.02	0.16	3	0.3	<0.02	<0.1	0.049	0.02	<0.001
1124647	Vegetation	0.02	1.8	0.053	12.9	3	4	<0.01	<0.001	0.25	<0.1	0.6	<0.02	0.18	7	0.4	<0.02	<0.1	0.225	0.02	0.002
1124648	Vegetation	<0.01	1.7	0.022	9.5	2	4	<0.01	0.001	0.19	<0.1	0.5	<0.02	0.18	3	0.4	<0.02	<0.1	0.028	0.01	<0.001
1124649	Vegetation	<0.01	1.7	0.050	18.2	2	4	<0.01	0.001	0.16	<0.1	0.5	<0.02	0.18	8	0.4	<0.02	<0.1	0.062	0.03	<0.001
1124650	Vegetation	<0.01	1.7	0.032	15.6	2	5	<0.01	<0.001	0.15	<0.1	0.4	0.02	0.20	3	0.3	<0.02	<0.1	0.035	0.02	<0.001



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**Project:** None Given  
**Report Date:** November 24, 2016

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# CERTIFICATE OF ANALYSIS

VAN16001902.1

Method Analyte Unit MDL		VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppb	ppb
		0.01	0.1	0.02	0.001	0.01	0.001	0.01	0.02	1	0.1	0.01	2	1
1124621	Vegetation	<0.01	3.8	<0.02	<0.001	0.02	0.002	0.04	<0.02	<1	<0.1	0.02	<2	<1
1124622	Vegetation	<0.01	4.2	<0.02	<0.001	0.03	0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124623	Vegetation	<0.01	6.1	<0.02	<0.001	0.02	<0.001	0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124624	Vegetation	<0.01	6.9	<0.02	<0.001	0.02	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124625	Vegetation	<0.01	7.8	<0.02	<0.001	0.02	0.003	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124626	Vegetation	<0.01	9.3	<0.02	<0.001	0.01	<0.001	<0.01	<0.02	<1	<0.1	0.01	<2	<1
1124627	Vegetation	<0.01	10.6	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	0.03	<2	<1
1124628	Vegetation	<0.01	8.8	<0.02	<0.001	0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124629	Vegetation	<0.01	11.0	<0.02	<0.001	0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124630	Vegetation	<0.01	4.1	<0.02	<0.001	0.02	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124631	Vegetation	<0.01	3.3	<0.02	<0.001	0.02	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124632	Vegetation	<0.01	3.6	<0.02	<0.001	0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124633	Vegetation	<0.01	5.1	<0.02	<0.001	0.02	<0.001	0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124634	Vegetation	<0.01	4.2	<0.02	<0.001	<0.01	<0.001	0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124635	Vegetation	<0.01	9.0	<0.02	<0.001	0.02	0.006	0.09	<0.02	<1	<0.1	<0.01	<2	<1
1124636	Vegetation	<0.01	4.6	<0.02	<0.001	<0.01	<0.001	0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124637	Vegetation	<0.01	4.3	<0.02	<0.001	0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124638	Vegetation	<0.01	5.4	<0.02	<0.001	0.02	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124639	Vegetation	<0.01	16.7	<0.02	<0.001	<0.01	0.002	0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124640	Vegetation	<0.01	4.3	<0.02	<0.001	0.02	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124641	Vegetation	<0.01	3.9	<0.02	<0.001	<0.01	0.002	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124642	Vegetation	<0.01	8.3	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124643	Vegetation	<0.01	12.4	<0.02	<0.001	0.02	0.001	0.01	<0.02	<1	<0.1	0.02	<2	<1
1124644	Vegetation	<0.01	4.4	<0.02	<0.001	0.01	<0.001	<0.01	<0.02	<1	<0.1	0.01	<2	<1
1124645	Vegetation	<0.01	9.7	<0.02	<0.001	0.02	<0.001	0.03	<0.02	<1	<0.1	<0.01	<2	<1
1124646	Vegetation	<0.01	5.4	<0.02	<0.001	0.01	<0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124647	Vegetation	<0.01	11.0	<0.02	<0.001	0.02	<0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124648	Vegetation	<0.01	6.7	<0.02	<0.001	0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124649	Vegetation	<0.01	9.6	<0.02	<0.001	0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124650	Vegetation	<0.01	5.9	<0.02	<0.001	0.02	0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1



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# CERTIFICATE OF ANALYSIS

# VAN16001902.1

	Method Analyte Unit MDL	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.01	1	0.001	0.1	0.01	0.2	0.01	0.5	0.01	0.02	0.02	2	0.01	0.001	
1124651	Vegetation	<0.01	6.43	0.13	11.0	<2	1.1	0.18	219	0.006	<0.1	<0.01	<0.2	<0.01	24.0	0.03	<0.02	<0.02	<2	0.58	0.022	
1124652	Vegetation	0.02	5.74	0.06	6.3	3	0.8	0.16	296	0.003	<0.1	<0.01	<0.2	<0.01	9.2	0.03	<0.02	<0.02	<2	0.21	0.034	
1124653	Vegetation	<0.01	5.76	0.51	11.0	7	0.5	0.34	688	0.005	<0.1	<0.01	<0.2	<0.01	15.6	0.05	<0.02	<0.02	<2	0.45	0.039	
1124654	Vegetation	<0.01	4.83	0.53	13.5	2	0.3	0.18	531	0.005	<0.1	<0.01	<0.2	<0.01	14.2	0.12	<0.02	<0.02	<2	0.50	0.038	
1124655	Vegetation	<0.01	8.49	0.13	14.4	3	0.2	0.08	336	0.006	<0.1	<0.01	0.3	<0.01	17.3	0.04	<0.02	<0.02	<2	0.67	0.055	
1124656	Vegetation	<0.01	5.21	0.29	11.2	7	0.3	0.09	311	0.006	<0.1	<0.01	<0.2	<0.01	28.6	0.07	<0.02	<0.02	<2	0.60	0.040	
1124657	Vegetation	<0.01	3.56	0.55	6.0	4	0.3	0.14	497	0.006	<0.1	<0.01	0.3	<0.01	23.9	0.05	<0.02	<0.02	<2	0.56	0.039	
1124658	Vegetation	0.02	4.28	0.12	11.7	2	4.7	0.24	44	0.005	<0.1	<0.01	0.2	<0.01	20.6	<0.01	<0.02	<0.02	<2	0.35	0.064	
1124659	Vegetation	0.30	4.97	0.10	14.9	4	0.1	0.10	172	0.007	0.2	<0.01	<0.2	<0.01	12.8	<0.01	<0.02	<0.02	<2	0.59	0.048	
1124660	Vegetation	<0.01	4.40	0.27	10.1	4	0.4	0.09	326	0.005	<0.1	<0.01	<0.2	<0.01	17.2	0.06	<0.02	<0.02	<2	0.40	0.047	
1124661	Vegetation	0.03	8.28	0.68	17.9	4	0.2	0.05	271	0.009	<0.1	<0.01	<0.2	<0.01	17.5	0.04	<0.02	<0.02	<2	0.95	0.031	
1124662	Vegetation	<0.01	6.17	0.23	17.4	5	0.3	0.04	460	0.007	<0.1	<0.01	<0.2	<0.01	27.9	0.08	<0.02	<0.02	<2	0.71	0.037	
1124663	Vegetation	0.01	4.66	0.33	10.1	<2	0.1	0.03	48	0.007	<0.1	<0.01	<0.2	<0.01	13.8	0.02	<0.02	<0.02	<2	0.66	0.031	
1124664	Vegetation	<0.01	5.45	0.25	17.3	4	0.3	0.11	392	0.005	0.2	<0.01	<0.2	<0.01	18.9	0.08	<0.02	<0.02	<2	0.54	0.043	
1124665	Vegetation	0.02	5.57	0.06	6.0	<2	0.2	0.01	17	0.006	0.2	<0.01	<0.2	<0.01	10.3	<0.01	<0.02	<0.02	<2	0.52	0.042	
1124666	Vegetation	<0.01	4.55	0.51	9.8	4	0.2	0.03	134	0.007	<0.1	<0.01	<0.2	<0.01	16.5	0.03	<0.02	<0.02	<2	0.70	0.037	
1124667	Vegetation	<0.01	5.90	0.11	16.3	<2	0.1	0.04	18	0.008	<0.1	<0.01	<0.2	<0.01	13.1	0.02	<0.02	<0.02	<2	0.78	0.036	
1124668	Vegetation	<0.01	3.69	0.26	9.8	<2	0.2	0.04	496	0.007	<0.1	<0.01	<0.2	<0.01	18.0	0.04	<0.02	<0.02	<2	0.64	0.029	
1124669	Vegetation	<0.01	5.43	0.43	10.0	3	0.2	0.06	195	0.007	<0.1	<0.01	0.2	<0.01	16.9	0.04	<0.02	<0.02	<2	0.77	0.027	
1124670	Vegetation	0.08	6.30	0.14	25.6	5	<0.1	0.02	46	0.005	0.1	<0.01	<0.2	<0.01	7.2	<0.01	<0.02	<0.02	<2	0.43	0.025	
1124671	Vegetation	0.01	5.50	0.09	37.0	9	<0.1	0.04	44	0.005	<0.1	<0.01	<0.2	<0.01	8.7	<0.01	<0.02	<0.02	<2	0.56	0.037	
1124672	Vegetation	0.01	7.87	0.16	32.8	4	0.9	0.28	67	0.007	0.1	<0.01	<0.2	<0.01	22.4	0.01	<0.02	<0.02	<2	0.67	0.058	
1124673	Vegetation	<0.01	3.11	0.41	10.4	2	0.2	0.06	282	0.005	<0.1	<0.01	<0.2	<0.01	19.8	0.08	<0.02	<0.02	<2	0.49	0.032	
1124674	Vegetation	<0.01	4.39	0.35	15.2	7	0.2	0.09	431	0.005	<0.1	<0.01	<0.2	<0.01	21.5	0.10	<0.02	<0.02	<2	0.52	0.038	
1124675	Vegetation	<0.01	5.26	0.07	15.1	8	0.5	0.17	54	0.003	<0.1	<0.01	<0.2	<0.01	21.8	<0.01	<0.02	<0.02	<2	0.32	0.037	
1124676	Vegetation	<0.01	3.48	0.09	16.3	5	<0.1	0.06	260	0.004	<0.1	<0.01	<0.2	<0.01	7.2	0.02	<0.02	<0.02	<2	0.40	0.030	
1124677	Vegetation	0.07	6.43	0.07	10.7	8	1.0	0.24	52	0.004	<0.1	<0.01	<0.2	<0.01	20.1	<0.01	<0.02	<0.02	<2	0.21	0.060	
1124678	Vegetation	<0.01	3.50	0.46	63.6	5	0.2	0.05	450	0.006	<0.1	<0.01	<0.2	<0.01	33.9	0.23	<0.02	<0.02	<2	0.64	0.031	
1124679	Vegetation	0.01	3.79	0.68	10.6	7	0.3	0.14	460	0.005	<0.1	<0.01	<0.2	<0.01	21.4	0.07	<0.02	<0.02	<2	0.34	0.024	
1124680	Vegetation	0.14	5.81	0.09	29.8	13	0.3	0.17	236	0.005	<0.1	<0.01	<0.2	<0.01	10.4	0.05	<0.02	<0.02	<2	0.31	0.042	





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**Part:** 2 of 3

# CERTIFICATE OF ANALYSIS

# VAN16001902.1

Method	Analyte	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf	
Unit		ppm	ppm	%	ppm	ppm	ppm	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
MDL		0.01	0.1	0.001	0.1	1	1	0.01	0.001	0.01	0.1	0.1	0.01	1	0.1	0.02	0.01	1	0.1	0.02	0.01	0.001
1124651	Vegetation	0.03	1.6	0.049	69.7	1	4	<0.01	0.001	0.19	<0.1	0.4	<0.02	0.16	6	0.4	<0.02	<0.1	0.016	0.02	<0.001	
1124652	Vegetation	<0.01	1.5	0.038	22.8	2	7	<0.01	<0.001	0.21	<0.1	0.3	<0.02	0.14	5	0.4	<0.02	<0.1	0.055	0.03	<0.001	
1124653	Vegetation	0.01	1.5	0.044	74.9	2	6	<0.01	<0.001	0.17	<0.1	0.4	0.07	0.15	7	0.3	<0.02	<0.1	0.082	0.04	<0.001	
1124654	Vegetation	0.01	1.5	0.040	63.3	2	6	<0.01	<0.001	0.17	<0.1	0.4	<0.02	0.15	6	0.3	<0.02	<0.1	0.053	0.02	0.001	
1124655	Vegetation	<0.01	1.7	0.040	84.1	2	7	<0.01	<0.001	0.22	<0.1	0.3	<0.02	0.16	2	0.3	<0.02	<0.1	0.161	0.02	<0.001	
1124656	Vegetation	<0.01	1.7	0.037	93.0	2	6	<0.01	<0.001	0.15	<0.1	0.3	<0.02	0.17	4	0.4	0.03	<0.1	0.020	0.02	<0.001	
1124657	Vegetation	0.01	1.7	0.042	69.0	2	6	<0.01	<0.001	0.16	<0.1	0.3	<0.02	0.18	4	0.5	<0.02	<0.1	0.041	0.01	<0.001	
1124658	Vegetation	0.04	1.8	0.054	34.0	3	4	<0.01	<0.001	0.14	<0.1	0.3	<0.02	0.19	5	0.4	<0.02	<0.1	0.077	0.02	<0.001	
1124659	Vegetation	<0.01	1.8	0.034	12.1	2	5	<0.01	0.001	0.17	<0.1	0.4	<0.02	0.20	7	0.4	<0.02	<0.1	0.025	0.01	0.002	
1124660	Vegetation	<0.01	1.7	0.047	82.2	2	6	<0.01	0.001	0.15	<0.1	0.3	<0.02	0.19	7	0.5	<0.02	<0.1	0.033	0.04	<0.001	
1124661	Vegetation	<0.01	1.8	0.037	43.9	2	9	<0.01	0.001	0.19	<0.1	0.4	<0.02	0.23	9	0.4	<0.02	<0.1	0.024	0.02	<0.001	
1124662	Vegetation	0.05	1.8	0.042	93.8	2	7	<0.01	0.001	0.22	<0.1	0.3	<0.02	0.17	11	0.4	<0.02	<0.1	0.015	0.03	<0.001	
1124663	Vegetation	<0.01	1.9	0.029	19.4	2	7	<0.01	<0.001	0.18	<0.1	0.4	<0.02	0.18	7	0.4	<0.02	<0.1	<0.005	0.01	<0.001	
1124664	Vegetation	<0.01	1.7	0.042	78.6	2	6	<0.01	<0.001	0.19	<0.1	0.4	<0.02	0.17	4	0.4	<0.02	<0.1	0.030	0.01	<0.001	
1124665	Vegetation	<0.01	1.8	0.034	6.9	2	7	<0.01	<0.001	0.27	<0.1	0.5	<0.02	0.21	7	0.4	0.03	<0.1	<0.005	0.04	0.002	
1124666	Vegetation	<0.01	1.7	0.033	18.1	2	7	<0.01	<0.001	0.20	<0.1	0.3	<0.02	0.20	9	0.4	<0.02	<0.1	0.036	0.03	<0.001	
1124667	Vegetation	<0.01	2.0	0.032	7.0	2	5	<0.01	<0.001	0.16	<0.1	0.3	<0.02	0.21	3	0.3	<0.02	<0.1	0.016	0.03	<0.001	
1124668	Vegetation	<0.01	1.7	0.034	39.9	2	5	<0.01	<0.001	0.16	<0.1	0.3	<0.02	0.18	<1	0.2	<0.02	<0.1	0.030	0.04	0.002	
1124669	Vegetation	<0.01	1.7	0.038	22.8	2	5	<0.01	0.001	0.14	<0.1	0.4	<0.02	0.21	1	0.3	<0.02	<0.1	0.028	0.02	<0.001	
1124670	Vegetation	<0.01	1.5	0.023	5.7	2	5	<0.01	<0.001	0.14	<0.1	0.3	<0.02	<0.01	3	0.3	<0.02	<0.1	0.007	0.02	0.002	
1124671	Vegetation	<0.01	1.5	0.030	5.5	2	5	<0.01	0.001	0.16	<0.1	0.3	<0.02	0.06	5	0.4	<0.02	<0.1	<0.005	0.01	<0.001	
1124672	Vegetation	0.01	1.5	0.051	20.7	3	5	<0.01	0.001	0.17	<0.1	0.3	<0.02	0.11	3	0.3	<0.02	<0.1	0.008	0.02	0.002	
1124673	Vegetation	<0.01	1.4	0.031	62.4	2	5	<0.01	<0.001	0.14	<0.1	0.3	<0.02	0.10	5	0.3	<0.02	<0.1	0.009	0.02	<0.001	
1124674	Vegetation	<0.01	1.2	0.038	83.9	2	5	<0.01	<0.001	0.21	<0.1	0.1	<0.02	<0.01	1	0.3	<0.02	<0.1	0.021	<0.01	<0.001	
1124675	Vegetation	0.04	1.5	0.046	31.1	2	4	<0.01	0.001	0.13	<0.1	0.1	<0.02	0.01	6	0.3	<0.02	<0.1	0.051	<0.01	<0.001	
1124676	Vegetation	<0.01	1.4	0.040	9.2	2	4	<0.01	<0.001	0.12	<0.1	0.2	<0.02	0.04	<1	0.4	<0.02	<0.1	0.017	0.02	<0.001	
1124677	Vegetation	0.01	1.6	0.078	18.4	2	5	<0.01	0.001	0.17	<0.1	0.2	<0.02	0.08	1	0.4	<0.02	<0.1	0.241	<0.01	<0.001	
1124678	Vegetation	0.02	1.5	0.038	63.7	2	5	<0.01	<0.001	0.12	<0.1	0.2	<0.02	0.08	<1	0.4	<0.02	<0.1	0.026	<0.01	<0.001	
1124679	Vegetation	0.04	1.5	0.035	48.7	1	4	<0.01	0.001	0.12	<0.1	0.3	<0.02	0.11	5	0.3	<0.02	<0.1	0.030	<0.01	<0.001	
1124680	Vegetation	<0.01	1.5	0.057	18.1	2	6	<0.01	0.001	0.13	<0.1	0.4	0.03	0.14	<1	0.3	<0.02	<0.1	0.048	0.02	0.001	



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**Project:** None Given  
**Report Date:** November 24, 2016

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# CERTIFICATE OF ANALYSIS

VAN16001902.1

Method	Analyte	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt
Unit		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppb	ppb	ppb
MDL		0.01	0.1	0.02	0.001	0.01	0.001	0.01	0.02	1	0.1	0.01	2	1
1124651	Vegetation	<0.01	5.6	<0.02	<0.001	0.02	0.002	0.05	<0.02	<1	<0.1	0.02	<2	<1
1124652	Vegetation	<0.01	8.5	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	0.01	<2	<1
1124653	Vegetation	<0.01	7.4	<0.02	<0.001	0.01	<0.001	0.02	<0.02	<1	<0.1	0.03	<2	<1
1124654	Vegetation	<0.01	6.5	0.02	<0.001	0.01	0.001	0.01	<0.02	<1	<0.1	0.01	<2	<1
1124655	Vegetation	<0.01	11.8	<0.02	<0.001	0.02	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124656	Vegetation	<0.01	5.1	<0.02	<0.001	0.01	<0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124657	Vegetation	<0.01	8.9	<0.02	<0.001	0.01	0.006	0.02	<0.02	<1	<0.1	0.02	<2	<1
1124658	Vegetation	<0.01	5.7	<0.02	<0.001	0.01	0.005	0.05	<0.02	<1	<0.1	<0.01	<2	<1
1124659	Vegetation	<0.01	5.9	<0.02	<0.001	0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124660	Vegetation	<0.01	11.4	<0.02	<0.001	0.01	0.001	<0.01	<0.02	<1	<0.1	0.01	<2	<1
1124661	Vegetation	<0.01	3.1	<0.02	<0.001	0.02	0.002	0.01	<0.02	<1	<0.1	0.01	<2	<1
1124662	Vegetation	<0.01	7.7	<0.02	<0.001	0.02	0.013	0.05	<0.02	<1	<0.1	0.01	<2	<1
1124663	Vegetation	<0.01	3.4	<0.02	<0.001	0.01	<0.001	0.01	<0.02	<1	<0.1	0.01	<2	<1
1124664	Vegetation	<0.01	5.0	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	0.02	<2	<1
1124665	Vegetation	<0.01	4.8	<0.02	<0.001	0.02	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124666	Vegetation	<0.01	3.7	<0.02	<0.001	0.01	<0.001	0.01	<0.02	<1	<0.1	0.01	<2	<1
1124667	Vegetation	<0.01	3.2	<0.02	<0.001	<0.01	<0.001	0.01	<0.02	<1	<0.1	0.02	<2	<1
1124668	Vegetation	<0.01	6.3	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124669	Vegetation	<0.01	4.5	<0.02	<0.001	0.01	<0.001	0.01	<0.02	<1	<0.1	0.02	<2	<1
1124670	Vegetation	<0.01	3.2	<0.02	<0.001	0.03	<0.001	0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124671	Vegetation	<0.01	2.8	<0.02	<0.001	0.02	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124672	Vegetation	<0.01	4.0	<0.02	<0.001	0.02	0.002	0.03	<0.02	<1	<0.1	<0.01	<2	<1
1124673	Vegetation	<0.01	4.2	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	0.02	<2	<1
1124674	Vegetation	<0.01	5.1	<0.02	<0.001	<0.01	<0.001	0.01	<0.02	<1	<0.1	0.01	<2	<1
1124675	Vegetation	<0.01	6.3	<0.02	<0.001	0.02	<0.001	0.03	<0.02	<1	<0.1	0.01	<2	<1
1124676	Vegetation	<0.01	3.2	<0.02	<0.001	0.01	<0.001	0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124677	Vegetation	<0.01	16.1	<0.02	<0.001	0.01	<0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124678	Vegetation	<0.01	4.9	<0.02	<0.001	0.01	0.002	0.02	<0.02	<1	<0.1	0.02	<2	<1
1124679	Vegetation	<0.01	6.3	<0.02	<0.001	0.01	0.004	0.03	<0.02	<1	<0.1	0.02	<2	<1
1124680	Vegetation	<0.01	7.5	<0.02	<0.001	<0.01	<0.001	0.01	<0.02	<1	<0.1	<0.01	<2	<1



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**Project:** None Given  
**Report Date:** November 24, 2016

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# CERTIFICATE OF ANALYSIS

# VAN16001902.1

Method Analyte	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101
	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	
Unit	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	
MDL	0.01	0.01	0.01	0.1	2	0.1	0.01	1	0.001	0.1	0.01	0.2	0.01	0.5	0.01	0.02	0.02	2	0.01	0.001	
1124681	Vegetation	0.03	5.34	0.11	27.4	5	0.1	0.02	196	0.008	0.2	<0.01	<0.2	<0.01	8.9	0.03	<0.02	<0.02	<2	0.78	0.044
1124682	Vegetation	<0.01	3.51	0.54	20.0	3	0.4	0.05	668	0.006	<0.1	<0.01	<0.2	<0.01	25.2	0.12	<0.02	<0.02	<2	0.41	0.027
1124683	Vegetation	0.01	5.93	0.14	9.0	4	0.4	<0.01	243	0.005	<0.1	<0.01	<0.2	<0.01	14.0	0.03	<0.02	<0.02	<2	0.50	0.053
1124684	Vegetation	<0.01	6.95	0.10	9.6	2	0.6	0.02	103	0.006	0.1	<0.01	<0.2	<0.01	11.4	0.01	<0.02	<0.02	<2	0.52	0.054
1124685	Vegetation	<0.01	5.61	0.26	7.9	3	0.4	0.05	408	0.004	0.5	<0.01	<0.2	<0.01	10.0	0.04	<0.02	<0.02	<2	0.34	0.055
1124686	Vegetation	<0.01	4.43	0.37	11.5	4	0.4	0.02	305	0.007	0.1	<0.01	<0.2	<0.01	18.1	0.05	<0.02	<0.02	<2	0.70	0.038
1124687	Vegetation	<0.01	7.43	0.13	13.9	3	0.8	0.03	379	0.005	0.1	<0.01	<0.2	<0.01	11.1	0.04	<0.02	<0.02	<2	0.42	0.046
1124688	Vegetation	0.01	6.21	0.07	24.7	9	0.8	0.23	195	0.006	<0.1	<0.01	<0.2	<0.01	8.4	0.02	<0.02	<0.02	<2	0.47	0.067
1124689	Vegetation	<0.01	4.63	0.36	9.4	3	0.5	<0.01	387	0.004	0.3	<0.01	<0.2	<0.01	7.6	0.03	<0.02	<0.02	<2	0.34	0.039
1124690	Vegetation	0.01	4.55	0.23	9.7	<2	0.4	0.09	165	0.028	0.2	<0.01	<0.2	<0.01	10.8	0.02	<0.02	<0.02	<2	0.60	0.044
1124691	Vegetation	<0.01	6.38	0.12	8.0	3	1.4	0.04	277	0.004	<0.1	<0.01	<0.2	<0.01	10.3	0.04	<0.02	<0.02	<2	0.29	0.054
1124692	Vegetation	<0.01	3.98	0.53	14.8	3	0.3	0.06	696	0.006	<0.1	<0.01	<0.2	<0.01	17.5	0.07	<0.02	<0.02	<2	0.56	0.038
1124693	Vegetation	<0.01	4.67	0.10	14.4	3	0.5	0.05	299	0.006	0.2	<0.01	<0.2	<0.01	17.7	0.07	<0.02	<0.02	<2	0.63	0.045
1124694	Vegetation	<0.01	3.66	0.57	9.1	3	0.3	0.04	272	0.005	0.2	<0.01	<0.2	<0.01	10.3	0.06	<0.02	<0.02	<2	0.43	0.022
1124695	Vegetation	0.09	5.66	0.14	27.3	7	0.2	<0.01	82	0.008	0.3	<0.01	<0.2	<0.01	7.8	0.02	<0.02	<0.02	<2	0.79	0.047
1124696	Vegetation	0.03	6.22	0.15	36.6	16	0.2	0.09	72	0.008	0.2	<0.01	<0.2	<0.01	12.3	0.01	<0.02	<0.02	<2	0.79	0.035
1124697	Vegetation	0.03	5.14	0.14	11.5	2	2.1	0.24	44	0.005	<0.1	<0.01	<0.2	<0.01	17.7	<0.01	<0.02	<0.02	<2	0.38	0.067
1124698	Vegetation	0.03	5.38	0.13	25.2	<2	2.5	0.30	36	0.005	<0.1	<0.01	<0.2	<0.01	15.1	0.01	<0.02	<0.02	<2	0.39	0.070
1124699	Vegetation	0.07	5.85	0.10	23.8	<2	1.5	0.45	78	0.005	<0.1	<0.01	0.2	<0.01	7.8	<0.01	<0.02	<0.02	<2	0.31	0.061
1124700	Vegetation	0.28	5.42	0.10	43.1	5	0.1	0.09	328	0.006	<0.1	<0.01	<0.2	<0.01	8.7	0.01	<0.02	<0.02	<2	0.53	0.039
1124701	Vegetation	<0.01	5.42	0.14	16.8	<2	1.2	0.21	83	0.004	<0.1	<0.01	<0.2	<0.01	28.1	0.01	<0.02	<0.02	<2	0.26	0.061
1124702	Vegetation	<0.01	4.17	0.12	23.1	4	<0.1	0.02	115	0.007	<0.1	<0.01	<0.2	<0.01	10.0	0.01	<0.02	<0.02	<2	0.66	0.041
1124703	Vegetation	<0.01	4.12	0.15	24.7	<2	1.1	0.57	49	0.005	<0.1	<0.01	<0.2	<0.01	17.7	0.01	<0.02	<0.02	<2	0.51	0.054
1124704	Vegetation	0.01	5.92	0.11	36.7	14	0.3	0.15	349	0.005	<0.1	<0.01	<0.2	<0.01	10.4	0.02	<0.02	<0.02	<2	0.41	0.039
1124705	Vegetation	<0.01	5.18	0.11	8.5	<2	2.8	0.24	28	0.005	<0.1	<0.01	<0.2	<0.01	30.5	<0.01	<0.02	<0.02	<2	0.44	0.066
1124706	Vegetation	0.09	4.96	0.11	30.7	5	0.1	0.03	84	0.008	<0.1	<0.01	<0.2	<0.01	11.6	<0.01	<0.02	<0.02	<2	0.84	0.025
1124707	Vegetation	0.04	6.26	0.11	60.4	19	0.2	0.03	111	0.006	<0.1	<0.01	0.2	<0.01	10.4	0.03	<0.02	<0.02	<2	0.66	0.035
1124708	Vegetation	<0.01	3.50	0.52	6.8	<2	<0.1	0.03	378	0.008	<0.1	<0.01	<0.2	<0.01	11.8	0.04	<0.02	<0.02	<2	0.65	0.022
1124709	Vegetation	<0.01	5.11	0.13	7.6	3	0.6	0.07	335	0.005	0.1	<0.01	<0.2	<0.01	11.0	0.03	<0.02	<0.02	<2	0.38	0.037
1124710	Vegetation	<0.01	4.06	0.50	10.0	3	0.3	0.08	371	0.005	<0.1	<0.01	<0.2	<0.01	16.0	0.04	<0.02	<0.02	<2	0.54	0.037



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# CERTIFICATE OF ANALYSIS

# VAN16001902.1

Method	Analyte	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf	
		ppm	ppm	%	ppm	ppm	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		MDL	0.1	0.001	0.1	1	1	0.01	0.001	0.01	0.01	0.1	0.1	0.02	0.01	1	0.1	0.02	0.1	0.005	0.01	0.001
1124681	Vegetation	<0.01	1.6	0.023	7.7	2	4	<0.01	0.002	0.15	<0.1	0.4	<0.02	0.17	1	0.3	<0.02	<0.1	<0.005	<0.01	<0.001	
1124682	Vegetation	0.02	1.6	0.040	93.1	2	5	<0.01	0.001	0.11	<0.1	0.3	<0.02	0.13	8	0.3	<0.02	<0.1	0.026	<0.01	<0.001	
1124683	Vegetation	<0.01	1.6	0.044	48.7	2	7	<0.01	<0.001	0.20	<0.1	0.3	<0.02	0.17	5	0.4	<0.02	<0.1	0.107	<0.01	0.001	
1124684	Vegetation	<0.01	1.8	0.042	40.5	3	7	<0.01	0.001	0.23	<0.1	0.3	<0.02	0.18	4	0.3	<0.02	<0.1	0.057	<0.01	<0.001	
1124685	Vegetation	<0.01	1.8	0.041	56.6	3	7	<0.01	0.001	0.24	<0.1	0.4	<0.02	0.18	<1	0.5	<0.02	<0.1	0.071	<0.01	0.001	
1124686	Vegetation	0.01	1.5	0.052	54.3	2	7	<0.01	0.001	0.15	<0.1	0.2	<0.02	0.15	1	0.3	<0.02	<0.1	0.025	<0.01	<0.001	
1124687	Vegetation	<0.01	1.5	0.043	55.6	2	8	<0.01	<0.001	0.21	<0.1	0.2	<0.02	0.15	4	0.3	<0.02	<0.1	0.059	0.01	<0.001	
1124688	Vegetation	<0.01	1.7	0.036	14.3	3	5	<0.01	<0.001	0.18	<0.1	0.3	0.02	0.19	<1	0.4	<0.02	<0.1	0.081	<0.01	0.001	
1124689	Vegetation	<0.01	1.7	0.030	26.7	2	5	<0.01	<0.001	0.15	<0.1	0.4	<0.02	0.17	3	0.3	<0.02	<0.1	0.034	<0.01	<0.001	
1124690	Vegetation	<0.01	1.8	0.042	11.7	2	6	<0.01	<0.001	0.17	<0.1	0.4	<0.02	0.18	<1	0.4	<0.02	<0.1	0.044	<0.01	<0.001	
1124691	Vegetation	<0.01	1.7	0.043	68.4	2	7	<0.01	<0.001	0.20	<0.1	0.3	<0.02	0.15	5	0.4	<0.02	<0.1	0.026	<0.01	<0.001	
1124692	Vegetation	0.02	1.5	0.038	112.9	2	6	<0.01	<0.001	0.15	<0.1	0.3	<0.02	0.13	3	0.3	<0.02	<0.1	0.014	<0.01	0.003	
1124693	Vegetation	<0.01	1.6	0.040	101.9	2	7	<0.01	<0.001	0.24	<0.1	0.5	<0.02	0.17	2	0.3	<0.02	<0.1	0.076	0.02	<0.001	
1124694	Vegetation	<0.01	1.7	0.030	62.3	1	5	<0.01	<0.001	0.14	<0.1	0.3	<0.02	0.16	4	0.4	<0.02	<0.1	0.016	0.01	0.001	
1124695	Vegetation	<0.01	1.8	0.032	13.5	2	4	<0.01	<0.001	0.18	<0.1	0.3	<0.02	0.22	3	0.4	<0.02	<0.1	0.023	0.01	<0.001	
1124696	Vegetation	0.01	2.0	0.028	12.1	2	6	<0.01	<0.001	0.17	<0.1	0.4	<0.02	0.20	4	0.3	<0.02	<0.1	0.038	0.04	<0.001	
1124697	Vegetation	0.04	1.8	0.058	24.1	3	4	<0.01	<0.001	0.14	<0.1	0.5	<0.02	0.20	<1	0.5	<0.02	<0.1	0.140	0.02	<0.001	
1124698	Vegetation	0.02	1.9	0.056	36.5	3	5	<0.01	<0.001	0.13	<0.1	0.4	<0.02	0.19	1	0.4	<0.02	<0.1	0.055	<0.01	<0.001	
1124699	Vegetation	<0.01	1.7	0.051	19.0	3	3	<0.01	<0.001	0.17	<0.1	0.4	<0.02	0.17	2	0.3	<0.02	<0.1	0.584	0.02	0.002	
1124700	Vegetation	<0.01	1.7	0.028	8.9	2	5	<0.01	<0.001	0.17	<0.1	0.2	<0.02	0.19	6	0.4	<0.02	<0.1	0.032	0.05	0.001	
1124701	Vegetation	0.03	1.6	0.061	31.9	2	4	<0.01	<0.001	0.14	<0.1	0.4	<0.02	0.17	1	0.4	<0.02	<0.1	0.354	0.01	<0.001	
1124702	Vegetation	<0.01	1.5	0.041	8.6	2	4	<0.01	<0.001	0.15	<0.1	0.1	<0.02	<0.01	2	0.4	<0.02	<0.1	0.012	<0.01	<0.001	
1124703	Vegetation	0.05	1.4	0.040	21.9	2	4	<0.01	<0.001	0.12	<0.1	0.3	<0.02	0.06	1	0.3	<0.02	<0.1	0.095	<0.01	0.001	
1124704	Vegetation	<0.01	1.4	0.037	21.8	2	5	<0.01	0.001	0.16	<0.1	0.4	<0.02	0.11	3	0.3	<0.02	<0.1	0.066	<0.01	<0.001	
1124705	Vegetation	0.05	1.5	0.064	35.9	2	3	<0.01	<0.001	0.12	<0.1	0.3	<0.02	0.09	2	0.3	<0.02	<0.1	0.153	<0.01	<0.001	
1124706	Vegetation	<0.01	1.5	0.023	10.4	1	6	<0.01	<0.001	0.15	<0.1	0.3	<0.02	0.12	<1	0.3	<0.02	<0.1	0.007	<0.01	<0.001	
1124707	Vegetation	<0.01	1.7	0.028	12.1	2	5	<0.01	0.001	0.17	<0.1	0.2	<0.02	0.17	2	0.4	<0.02	<0.1	0.027	<0.01	0.001	
1124708	Vegetation	0.01	1.5	0.023	34.3	2	6	<0.01	<0.001	0.11	<0.1	0.3	<0.02	0.11	3	0.2	<0.02	<0.1	0.019	<0.01	<0.001	
1124709	Vegetation	<0.01	1.3	0.032	67.9	1	6	<0.01	<0.001	0.23	<0.1	0.3	<0.02	0.08	1	0.2	<0.02	<0.1	0.105	<0.01	<0.001	
1124710	Vegetation	<0.01	1.5	0.034	64.2	2	6	<0.01	<0.001	0.18	<0.1	0.4	<0.02	0.08	4	0.3	<0.02	<0.1	0.021	<0.01	<0.001	



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**Project:** None Given  
**Report Date:** November 24, 2016

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**Part:** 3 of 3

# CERTIFICATE OF ANALYSIS

VAN16001902.1

Method		VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101
Analyte		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt
Unit		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppb	ppb
MDL		0.01	0.1	0.02	0.001	0.01	0.001	0.01	0.02	1	0.1	0.01	2	1
1124681	Vegetation	<0.01	1.3	<0.02	<0.001	0.02	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124682	Vegetation	<0.01	6.4	<0.02	<0.001	0.02	0.003	0.04	<0.02	<1	<0.1	0.04	<2	<1
1124683	Vegetation	<0.01	11.8	<0.02	<0.001	0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124684	Vegetation	<0.01	10.4	<0.02	<0.001	0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124685	Vegetation	<0.01	8.8	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124686	Vegetation	<0.01	5.2	<0.02	<0.001	0.03	<0.001	0.02	<0.02	<1	<0.1	0.02	<2	<1
1124687	Vegetation	<0.01	8.4	<0.02	<0.001	0.01	<0.001	<0.01	<0.02	<1	<0.1	0.01	<2	<1
1124688	Vegetation	<0.01	6.2	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124689	Vegetation	<0.01	4.6	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124690	Vegetation	<0.01	5.9	0.05	<0.001	0.01	<0.001	0.01	<0.02	<1	<0.1	0.02	<2	<1
1124691	Vegetation	<0.01	7.2	<0.02	<0.001	0.01	<0.001	0.01	<0.02	<1	<0.1	0.01	<2	<1
1124692	Vegetation	<0.01	3.4	<0.02	<0.001	0.02	0.003	0.03	<0.02	<1	<0.1	0.01	<2	<1
1124693	Vegetation	<0.01	8.9	<0.02	<0.001	0.01	<0.001	<0.01	<0.02	<1	<0.1	0.01	<2	<1
1124694	Vegetation	<0.01	3.7	<0.02	<0.001	<0.01	<0.001	0.01	<0.02	<1	<0.1	0.02	<2	<1
1124695	Vegetation	<0.01	5.0	<0.02	<0.001	0.02	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124696	Vegetation	<0.01	4.3	<0.02	<0.001	0.02	0.005	0.02	<0.02	<1	<0.1	0.01	<2	<1
1124697	Vegetation	<0.01	7.9	<0.02	<0.001	0.03	0.002	0.06	<0.02	<1	<0.1	<0.01	<2	<1
1124698	Vegetation	<0.01	6.3	<0.02	<0.001	0.02	<0.001	0.02	<0.02	<1	<0.1	0.02	<2	<1
1124699	Vegetation	<0.01	12.6	<0.02	<0.001	0.02	<0.001	0.01	<0.02	<1	<0.1	0.02	<2	<1
1124700	Vegetation	<0.01	5.8	<0.02	<0.001	0.01	<0.001	0.01	<0.02	<1	<0.1	0.01	<2	<1
1124701	Vegetation	<0.01	13.1	<0.02	<0.001	0.01	0.002	0.03	<0.02	<1	<0.1	<0.01	<2	<1
1124702	Vegetation	<0.01	4.4	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124703	Vegetation	<0.01	7.4	<0.02	<0.001	0.02	0.004	0.06	<0.02	<1	<0.1	<0.01	<2	<1
1124704	Vegetation	<0.01	7.0	<0.02	<0.001	0.01	<0.001	0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124705	Vegetation	<0.01	9.2	<0.02	<0.001	0.02	0.002	0.05	<0.02	<1	<0.1	<0.01	<2	<1
1124706	Vegetation	<0.01	2.8	<0.02	<0.001	0.02	0.002	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124707	Vegetation	<0.01	4.1	<0.02	<0.001	0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124708	Vegetation	<0.01	3.3	<0.02	<0.001	0.01	0.002	0.02	<0.02	<1	<0.1	0.02	<2	<1
1124709	Vegetation	<0.01	13.2	<0.02	<0.001	<0.01	0.001	<0.01	<0.02	<1	<0.1	0.02	<2	<1
1124710	Vegetation	<0.01	5.5	<0.02	<0.001	<0.01	<0.001	0.01	<0.02	<1	<0.1	<0.01	<2	<1



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**Project:** None Given  
**Report Date:** November 24, 2016

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**Part:** 1 of 3

# CERTIFICATE OF ANALYSIS

## VAN16001902.1

Method	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101
Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	
Unit	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	
MDL	0.01	0.01	0.01	0.1	2	0.1	0.01	1	0.001	0.1	0.01	0.2	0.01	0.5	0.01	0.02	0.02	2	0.01	0.001	
1124711	Vegetation	<0.01	3.55	0.26	9.2	<2	0.2	0.04	316	0.004	<0.1	<0.01	<0.2	<0.01	13.7	0.04	<0.02	<0.02	<2	0.40	0.045
1124712	Vegetation	0.02	4.16	1.11	9.8	5	0.6	0.17	435	0.006	<0.1	<0.01	<0.2	<0.01	20.7	0.10	<0.02	<0.02	<2	0.50	0.041
1124713	Vegetation	<0.01	5.53	0.18	7.5	3	0.8	0.05	108	0.005	<0.1	<0.01	<0.2	<0.01	15.1	0.03	<0.02	<0.02	<2	0.41	0.049
1124714	Vegetation	<0.01	4.25	0.50	6.5	<2	0.4	0.06	288	0.006	<0.1	<0.01	<0.2	<0.01	25.5	0.05	<0.02	<0.02	<2	0.61	0.031
1124715	Vegetation	<0.01	3.42	0.51	26.5	4	0.3	0.07	518	0.008	0.2	<0.01	<0.2	<0.01	34.1	0.09	<0.02	<0.02	<2	0.78	0.042
1124716	Vegetation	<0.01	4.56	0.51	17.0	9	0.3	0.15	467	0.006	0.2	<0.01	<0.2	<0.01	25.9	0.07	<0.02	<0.02	<2	0.50	0.051
1124717	Vegetation	<0.01	5.43	0.34	10.4	4	0.4	0.04	590	0.006	<0.1	<0.01	<0.2	<0.01	20.2	0.08	<0.02	<0.02	<2	0.47	0.072
1124718	Vegetation	<0.01	4.17	0.41	8.0	6	0.2	0.05	417	0.006	<0.1	<0.01	<0.2	<0.01	21.6	0.04	<0.02	<0.02	<2	0.54	0.054
1124719	Vegetation	<0.01	4.31	0.34	16.5	3	0.2	0.02	403	0.006	<0.1	<0.01	<0.2	<0.01	24.2	0.06	<0.02	<0.02	<2	0.58	0.058
1124720	Vegetation	<0.01	3.10	0.90	11.6	<2	<0.1	0.10	456	0.005	0.1	<0.01	<0.2	<0.01	21.8	0.12	<0.02	<0.02	<2	0.53	0.028
1124721	Vegetation	<0.01	3.88	0.83	7.2	4	0.1	0.04	239	0.007	<0.1	<0.01	<0.2	<0.01	23.7	0.05	<0.02	<0.02	<2	0.61	0.036
1124722	Vegetation	<0.01	3.49	0.17	4.5	3	0.1	0.02	127	0.004	<0.1	<0.01	<0.2	<0.01	9.7	0.01	<0.02	<0.02	<2	0.45	0.031
1124723	Vegetation	0.01	3.72	0.18	9.7	3	0.2	<0.01	71	0.007	<0.1	<0.01	<0.2	<0.01	16.8	0.02	0.02	<0.02	<2	0.70	0.028
1124724	Vegetation	<0.01	4.64	0.79	45.8	2	0.4	0.24	1051	0.006	<0.1	<0.01	<0.2	<0.01	19.6	0.22	<0.02	<0.02	<2	0.49	0.052
1124725	Vegetation	<0.01	4.28	0.33	10.6	2	0.3	0.04	311	0.005	<0.1	<0.01	<0.2	<0.01	20.9	0.05	<0.02	<0.02	<2	0.50	0.043



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**Project:** None Given  
**Report Date:** November 24, 2016

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**Part:** 2 of 3

# CERTIFICATE OF ANALYSIS

VAN16001902.1

	Method Analyte Unit MDL	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf	
		ppm	ppm	%	ppm	ppm	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.01	0.1	0.001	0.1	1	1	0.01	0.001	0.01	0.1	0.1	0.02	0.01	1	0.1	0.02	0.1	0.005	0.01	0.001	0.001
1124711	Vegetation	<0.01	1.5	0.030	51.4	2	5	<0.01	<0.001	0.19	<0.1	0.4	<0.02	0.11	1	0.3	<0.02	<0.1	0.019	<0.01	<0.001	
1124712	Vegetation	0.02	1.5	0.037	116.8	2	7	<0.01	<0.001	0.15	<0.1	0.4	<0.02	0.14	3	0.2	<0.02	<0.1	0.024	<0.01	<0.001	
1124713	Vegetation	<0.01	1.6	0.031	28.8	2	7	<0.01	<0.001	0.20	<0.1	0.3	<0.02	0.12	2	0.2	<0.02	<0.1	0.025	<0.01	<0.001	
1124714	Vegetation	0.03	1.5	0.033	46.4	2	5	<0.01	<0.001	0.13	<0.1	0.4	<0.02	0.13	3	0.2	<0.02	<0.1	0.025	<0.01	<0.001	
1124715	Vegetation	0.03	1.5	0.039	106.5	2	7	<0.01	0.001	0.15	<0.1	0.5	<0.02	0.14	6	0.2	<0.02	<0.1	0.022	<0.01	<0.001	
1124716	Vegetation	0.02	1.4	0.043	107.8	2	7	<0.01	<0.001	0.17	<0.1	0.3	<0.02	0.13	6	0.3	<0.02	<0.1	0.045	<0.01	<0.001	
1124717	Vegetation	<0.01	1.4	0.038	101.5	3	7	<0.01	<0.001	0.21	<0.1	0.3	<0.02	0.14	5	0.2	<0.02	<0.1	0.043	<0.01	<0.001	
1124718	Vegetation	<0.01	1.5	0.042	85.4	2	7	<0.01	<0.001	0.21	<0.1	0.3	<0.02	0.16	4	0.3	<0.02	<0.1	0.021	<0.01	<0.001	
1124719	Vegetation	<0.01	1.6	0.052	81.5	2	6	<0.01	<0.001	0.21	<0.1	0.3	<0.02	0.13	2	0.2	<0.02	<0.1	0.021	0.02	<0.001	
1124720	Vegetation	0.01	1.3	0.033	62.7	1	6	<0.01	<0.001	0.12	<0.1	0.2	<0.02	<0.01	4	0.2	<0.02	<0.1	0.017	<0.01	<0.001	
1124721	Vegetation	0.01	1.4	0.042	83.2	2	6	<0.01	<0.001	0.15	<0.1	0.2	<0.02	0.01	3	0.2	<0.02	<0.1	0.025	<0.01	<0.001	
1124722	Vegetation	<0.01	1.4	0.037	36.6	1	7	<0.01	<0.001	0.18	<0.1	0.3	<0.02	0.07	2	0.2	<0.02	<0.1	0.016	<0.01	<0.001	
1124723	Vegetation	<0.01	1.5	0.028	21.0	1	7	<0.01	<0.001	0.16	<0.1	0.2	<0.02	0.08	<1	0.2	<0.02	<0.1	0.005	<0.01	<0.001	
1124724	Vegetation	0.02	1.3	0.054	94.5	2	7	<0.01	0.001	0.16	<0.1	0.3	<0.02	0.09	5	0.2	<0.02	<0.1	0.113	<0.01	0.001	
1124725	Vegetation	0.01	1.4	0.031	83.2	2	7	<0.01	<0.001	0.14	<0.1	0.3	<0.02	0.12	3	0.2	<0.02	<0.1	0.008	<0.01	<0.001	



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Project: None Given  
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# CERTIFICATE OF ANALYSIS

VAN16001902.1

Method	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	
Analyte	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt	
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppb	ppb	
MDL	0.01	0.1	0.02	0.001	0.01	0.001	0.01	0.02	1	0.1	0.01	2	1	
1124711	Vegetation	<0.01	4.2	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124712	Vegetation	<0.01	6.3	<0.02	<0.001	0.02	0.007	0.02	<0.02	<1	<0.1	0.03	<2	<1
1124713	Vegetation	<0.01	5.0	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	0.01	<2	<1
1124714	Vegetation	<0.01	4.1	<0.02	<0.001	0.01	0.006	0.03	<0.02	<1	<0.1	0.01	<2	<1
1124715	Vegetation	<0.01	3.7	<0.02	<0.001	0.02	0.006	0.04	<0.02	<1	<0.1	0.02	<2	<1
1124716	Vegetation	<0.01	5.6	<0.02	<0.001	0.02	0.007	0.02	<0.02	<1	<0.1	0.03	<2	<1
1124717	Vegetation	<0.01	8.3	<0.02	<0.001	<0.01	0.002	<0.01	<0.02	<1	<0.1	0.01	<2	<1
1124718	Vegetation	<0.01	4.7	<0.02	<0.001	0.01	0.001	<0.01	<0.02	<1	<0.1	0.01	<2	<1
1124719	Vegetation	<0.01	7.1	<0.02	<0.001	0.02	<0.001	0.01	<0.02	<1	<0.1	0.01	<2	<1
1124720	Vegetation	<0.01	5.3	<0.02	<0.001	0.02	0.002	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124721	Vegetation	<0.01	5.9	<0.02	<0.001	0.02	0.004	0.01	<0.02	<1	<0.1	0.01	<2	<1
1124722	Vegetation	<0.01	5.6	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124723	Vegetation	<0.01	4.2	<0.02	<0.001	0.01	0.001	0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124724	Vegetation	<0.01	7.7	<0.02	<0.001	0.02	0.005	0.05	<0.02	<1	<0.1	0.01	<2	<1
1124725	Vegetation	<0.01	3.9	<0.02	<0.001	<0.01	0.003	0.02	<0.02	<1	<0.1	<0.01	<2	<1





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Project: None Given  
Report Date: November 24, 2016

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# QUALITY CONTROL REPORT

## VAN16001902.1

Method		VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101
Analyte		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
Unit		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
MDL		0.01	0.01	0.01	0.1	2	0.1	0.01	1	0.001	0.1	0.01	0.2	0.01	0.5	0.01	0.02	0.02	2	0.01	0.001
Pulp Duplicates																					
1124523	Vegetation	0.02	6.20	0.23	17.5	3	0.1	0.04	142	0.006	<0.1	<0.01	<0.2	<0.01	11.6	0.03	<0.02	<0.02	<2	0.67	0.031
REP 1124523	QC	0.02	4.75	0.22	16.8	3	0.2	0.05	133	0.007	<0.1	<0.01	<0.2	<0.01	11.0	0.04	<0.02	<0.02	<2	0.63	0.031
1124592	Vegetation	<0.01	4.01	1.04	12.0	5	0.2	0.08	493	0.007	0.1	<0.01	<0.2	<0.01	35.1	0.08	<0.02	<0.02	<2	0.58	0.036
REP 1124592	QC	<0.01	4.19	1.08	11.4	5	0.2	0.09	495	0.007	<0.1	<0.01	<0.2	<0.01	35.4	0.07	<0.02	<0.02	<2	0.59	0.037
1124627	Vegetation	<0.01	4.33	0.68	12.9	3	0.3	0.08	326	0.006	<0.1	<0.01	<0.2	<0.01	32.9	0.06	<0.02	<0.02	<2	0.63	0.049
REP 1124627	QC	<0.01	4.36	0.66	12.4	<2	0.4	0.09	321	0.007	<0.1	<0.01	<0.2	<0.01	32.6	0.07	<0.02	<0.02	<2	0.64	0.050
1124662	Vegetation	<0.01	6.17	0.23	17.4	5	0.3	0.04	460	0.007	<0.1	<0.01	<0.2	<0.01	27.9	0.08	<0.02	<0.02	<2	0.71	0.037
REP 1124662	QC	<0.01	5.70	0.20	15.8	4	0.2	0.02	471	0.008	0.3	<0.01	<0.2	<0.01	26.2	0.08	<0.02	<0.02	<2	0.69	0.036
1124697	Vegetation	0.03	5.14	0.14	11.5	2	2.1	0.24	44	0.005	<0.1	<0.01	<0.2	<0.01	17.7	<0.01	<0.02	<0.02	<2	0.38	0.067
REP 1124697	QC	0.03	5.23	0.14	11.4	2	2.2	0.24	44	0.005	0.1	<0.01	<0.2	<0.01	17.3	<0.01	<0.02	<0.02	<2	0.37	0.063
1124725	Vegetation	<0.01	4.28	0.33	10.6	2	0.3	0.04	311	0.005	<0.1	<0.01	<0.2	<0.01	20.9	0.05	<0.02	<0.02	<2	0.50	0.043
REP 1124725	QC	<0.01	4.45	0.35	10.6	4	0.2	0.06	326	0.006	<0.1	<0.01	<0.2	<0.01	21.4	0.06	<0.02	<0.02	<2	0.52	0.044
Reference Materials																					
STD CDV-1	Standard	0.16	7.90	0.91	21.6	9	6.0	1.79	378	0.266	0.9	0.16	1.5	0.59	118.1	0.04	0.03	<0.02	9	2.01	0.037
STD CDV-1	Standard	0.16	8.03	0.87	21.9	9	6.1	1.74	382	0.242	0.9	0.14	1.3	0.56	106.1	0.03	0.02	<0.02	8	2.00	0.038
STD CDV-1	Standard	0.21	8.30	1.06	22.2	10	6.2	1.84	384	0.305	1.2	0.17	1.7	0.72	108.2	0.04	0.03	<0.02	10	1.98	0.039
STD CDV-1	Standard	0.18	8.10	1.03	22.3	14	6.0	1.81	380	0.251	1.1	0.17	4.0	0.90	116.7	0.04	0.03	<0.02	9	1.87	0.037
STD CDV-1	Standard	0.20	8.23	1.04	22.5	10	6.4	2.08	393	0.310	1.3	0.18	1.7	0.69	109.8	0.04	0.04	<0.02	10	1.93	0.038
STD CDV-1	Standard	0.20	8.10	1.08	21.8	9	7.1	1.94	377	0.303	1.3	0.19	1.8	0.74	112.8	0.05	0.04	<0.02	10	1.95	0.038
STD CDV-1	Standard	0.20	8.10	1.01	21.1	8	6.2	1.93	381	0.277	1.3	0.17	3.9	0.62	110.8	0.03	0.02	<0.02	9	1.88	0.038
STD V16	Standard	1.81	6.17	2.98	35.8	34	7.2	0.93	693	0.401	1.3	<0.01	1.2	<0.01	10.8	0.07	0.07	<0.02	133	0.32	0.047
STD V16	Standard	1.74	7.02	2.82	37.1	35	7.5	0.90	683	0.398	1.4	<0.01	0.4	<0.01	10.1	0.08	0.06	<0.02	151	0.29	0.048
STD V16	Standard	1.40	6.28	2.81	35.4	31	6.8	1.02	685	0.421	1.5	<0.01	1.0	<0.01	10.2	0.08	0.06	<0.02	145	0.30	0.046
STD V16	Standard	1.55	6.41	2.92	37.4	34	7.0	0.98	680	0.380	1.5	<0.01	0.5	<0.01	10.5	0.06	0.06	<0.02	128	0.31	0.043
STD V16	Standard	1.30	5.72	2.73	37.4	34	5.9	0.91	661	0.333	1.5	<0.01	0.6	<0.01	10.4	0.08	0.06	<0.02	117	0.32	0.046
STD V16	Standard	1.42	7.93	2.87	36.4	34	8.4	1.09	677	0.470	1.6	<0.01	1.0	<0.01	9.8	0.08	0.07	<0.02	153	0.31	0.045
STD V16	Standard	1.52	6.24	2.93	39.6	34	7.9	1.15	727	0.446	1.3	<0.01	0.3	<0.01	10.3	0.07	0.07	<0.02	154	0.31	0.047
STD V16 Expected		1.6	6.69	2.8	39.2	40	7.48	1.11	720	0.4035	1.6		1		11	0.086	0.07			0.3	0.0488



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Project: None Given  
Report Date: November 24, 2016

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# QUALITY CONTROL REPORT

VAN16001902.1

Method	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	
Analyte	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf	
Unit	ppm	ppm	%	ppm	ppm	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm	
MDL	0.01	0.1	0.001	0.1	1	1	0.01	0.001	0.01	0.1	0.1	0.02	0.01	1	0.1	0.02	0.1	0.005	0.01	0.001	
Pulp Duplicates																					
1124523	Vegetation	<0.01	1.3	0.032	17.6	2	7	<0.01	0.001	0.18	<0.1	0.2	<0.02	<0.01	8	0.3	<0.02	<0.1	0.015	<0.01	0.001
REP 1124523	QC	0.01	1.3	0.033	15.8	2	7	<0.01	0.001	0.17	<0.1	0.3	<0.02	0.05	6	0.3	<0.02	<0.1	0.014	<0.01	0.001
1124592	Vegetation	<0.01	1.6	0.039	95.6	2	6	<0.01	<0.001	0.14	<0.1	0.3	<0.02	0.19	2	0.4	<0.02	<0.1	0.058	0.02	<0.001
REP 1124592	QC	0.01	1.6	0.040	98.3	2	7	<0.01	<0.001	0.15	<0.1	0.3	<0.02	0.18	6	0.4	<0.02	<0.1	0.062	0.02	0.002
1124627	Vegetation	<0.01	1.6	0.053	83.9	2	6	<0.01	<0.001	0.24	<0.1	0.3	<0.02	0.14	<1	0.3	<0.02	<0.1	0.075	0.01	<0.001
REP 1124627	QC	<0.01	1.7	0.054	81.6	2	6	<0.01	<0.001	0.24	<0.1	0.3	<0.02	0.15	7	0.3	<0.02	<0.1	0.075	<0.01	<0.001
1124662	Vegetation	0.05	1.8	0.042	93.8	2	7	<0.01	0.001	0.22	<0.1	0.3	<0.02	0.17	11	0.4	<0.02	<0.1	0.015	0.03	<0.001
REP 1124662	QC	0.04	1.7	0.040	92.0	2	6	<0.01	0.001	0.22	<0.1	0.4	<0.02	0.18	9	0.3	<0.02	<0.1	0.017	0.01	<0.001
1124697	Vegetation	0.04	1.8	0.058	24.1	3	4	<0.01	<0.001	0.14	<0.1	0.5	<0.02	0.20	<1	0.5	<0.02	<0.1	0.140	0.02	<0.001
REP 1124697	QC	0.04	1.8	0.057	24.4	3	4	<0.01	<0.001	0.14	<0.1	0.3	<0.02	0.19	2	0.3	<0.02	<0.1	0.139	0.01	<0.001
1124725	Vegetation	0.01	1.4	0.031	83.2	2	7	<0.01	<0.001	0.14	<0.1	0.3	<0.02	0.12	3	0.2	<0.02	<0.1	0.008	<0.01	<0.001
REP 1124725	QC	<0.01	1.5	0.031	86.8	2	7	<0.01	<0.001	0.15	<0.1	0.2	<0.02	0.12	<1	0.2	<0.02	<0.1	0.009	<0.01	<0.001
Reference Materials																					
STD CDV-1	Standard	2.25	12.4	0.123	8.5	28	12	0.13	0.006	0.17	<0.1	0.9	<0.02	0.12	46	0.7	<0.02	0.5	0.106	0.05	0.043
STD CDV-1	Standard	2.23	11.5	0.122	8.4	28	11	0.13	0.005	0.16	<0.1	0.8	<0.02	0.14	44	0.6	0.03	0.5	0.106	0.03	0.048
STD CDV-1	Standard	2.54	13.8	0.117	8.7	32	12	0.14	0.005	0.17	<0.1	1.0	<0.02	0.11	45	0.6	<0.02	0.5	0.119	0.03	0.060
STD CDV-1	Standard	2.64	11.9	0.122	8.4	30	11	0.13	0.005	0.16	<0.1	0.9	<0.02	0.08	50	0.5	<0.02	0.5	0.105	0.04	0.036
STD CDV-1	Standard	2.57	13.3	0.122	9.2	33	12	0.16	0.006	0.17	<0.1	1.0	<0.02	0.13	40	0.5	<0.02	0.6	0.132	<0.01	0.054
STD CDV-1	Standard	2.48	15.5	0.120	9.3	33	11	0.16	0.006	0.16	0.1	1.1	<0.02	0.10	47	0.5	<0.02	0.6	0.133	0.05	0.043
STD CDV-1	Standard	2.46	12.2	0.118	9.3	28	13	0.13	0.005	0.16	<0.1	1.0	<0.02	0.12	40	0.5	<0.02	0.5	0.122	0.03	0.040
STD V16	Standard	0.05	281.9	0.055	2.1	11	4	0.04	0.001	0.21	<0.1	0.2	<0.02	0.02	44	0.4	<0.02	<0.1	0.036	0.05	0.006
STD V16	Standard	0.05	301.8	0.054	2.0	11	5	0.04	0.001	0.20	<0.1	0.3	<0.02	<0.01	54	0.3	<0.02	0.1	0.035	0.04	0.002
STD V16	Standard	0.04	300.6	0.055	1.9	11	4	0.04	0.002	0.20	<0.1	0.3	<0.02	0.02	50	0.3	0.02	0.1	0.037	0.03	0.006
STD V16	Standard	0.04	267.6	0.058	2.1	11	4	0.05	0.001	0.20	<0.1	0.2	<0.02	<0.01	43	0.3	0.03	<0.1	0.039	0.06	0.004
STD V16	Standard	0.05	239.4	0.057	2.3	11	5	0.04	0.002	0.23	<0.1	0.3	<0.02	<0.01	48	0.3	<0.02	0.1	0.036	0.06	0.004
STD V16	Standard	0.05	315.6	0.056	2.1	11	5	0.04	0.001	0.22	<0.1	0.4	<0.02	<0.01	50	0.4	<0.02	<0.1	0.035	0.07	0.006
STD V16	Standard	0.04	326.2	0.056	2.0	11	5	0.04	0.001	0.22	<0.1	0.3	<0.02	<0.01	47	0.2	<0.02	0.1	0.035	0.06	0.005
STD V16 Expected		0.05	323.1	0.0525	2.2	10.9	5	0.0454	0.0015	0.22				0.0232	50			0.16	0.036	0.05	0.006



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Project: None Given  
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# QUALITY CONTROL REPORT

VAN16001902.1

Method	Analyte	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt
Unit		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppb	ppb
MDL		0.01	0.1	0.02	0.001	0.01	0.001	0.01	0.02	1	0.1	0.01	2	1
Pulp Duplicates														
1124523	Vegetation	<0.01	3.7	<0.02	<0.001	0.02	0.001	0.03	<0.02	<1	<0.1	<0.01	<2	<1
REP 1124523	QC	<0.01	3.6	<0.02	<0.001	0.02	0.004	0.03	<0.02	<1	<0.1	0.01	<2	<1
1124592	Vegetation	<0.01	5.9	<0.02	<0.001	0.02	0.001	0.02	<0.02	<1	<0.1	0.02	<2	<1
REP 1124592	QC	<0.01	6.2	<0.02	<0.001	0.02	0.003	0.02	<0.02	<1	<0.1	0.02	<2	<1
1124627	Vegetation	<0.01	10.6	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	0.03	<2	<1
REP 1124627	QC	<0.01	10.8	<0.02	<0.001	0.01	<0.001	<0.01	<0.02	<1	<0.1	0.03	<2	<1
1124662	Vegetation	<0.01	7.7	<0.02	<0.001	0.02	0.013	0.05	<0.02	<1	<0.1	0.01	<2	<1
REP 1124662	QC	<0.01	7.2	<0.02	<0.001	0.02	0.009	0.05	<0.02	<1	<0.1	<0.01	<2	<1
1124697	Vegetation	<0.01	7.9	<0.02	<0.001	0.03	0.002	0.06	<0.02	<1	<0.1	<0.01	<2	<1
REP 1124697	QC	<0.01	7.6	<0.02	<0.001	0.02	0.003	0.05	<0.02	<1	<0.1	<0.01	<2	<1
1124725	Vegetation	<0.01	3.9	<0.02	<0.001	<0.01	0.003	0.02	<0.02	<1	<0.1	<0.01	<2	<1
REP 1124725	QC	<0.01	4.0	<0.02	<0.001	<0.01	0.003	<0.01	<0.02	<1	<0.1	0.01	<2	<1
Reference Materials														
STD CDV-1	Standard	0.04	2.3	0.05	<0.001	1.15	1.450	4.70	<0.02	<1	<0.1	0.49	<2	<1
STD CDV-1	Standard	0.04	2.2	0.07	<0.001	1.10	1.411	4.63	<0.02	<1	<0.1	0.45	2	<1
STD CDV-1	Standard	0.05	2.6	0.10	<0.001	1.32	1.488	5.17	<0.02	<1	<0.1	0.61	<2	<1
STD CDV-1	Standard	0.04	2.4	0.08	0.001	1.13	1.520	6.03	<0.02	<1	<0.1	0.55	<2	<1
STD CDV-1	Standard	0.06	2.6	0.08	0.001	1.33	1.543	5.29	<0.02	<1	<0.1	0.59	<2	<1
STD CDV-1	Standard	0.06	2.6	0.08	0.001	1.50	1.596	5.45	<0.02	<1	<0.1	0.62	<2	<1
STD CDV-1	Standard	0.05	2.6	0.08	<0.001	1.20	1.516	4.97	<0.02	<1	<0.1	0.52	<2	<1
STD V16	Standard	0.09	1.6	0.20	0.001	0.13	0.039	0.11	<0.02	<1	<0.1	0.07	<2	<1
STD V16	Standard	0.09	1.6	0.18	<0.001	0.14	0.042	0.10	<0.02	<1	<0.1	0.06	<2	<1
STD V16	Standard	0.09	1.6	0.17	<0.001	0.16	0.048	0.12	<0.02	<1	<0.1	0.07	<2	<1
STD V16	Standard	0.08	1.6	0.22	<0.001	0.13	0.037	0.10	<0.02	<1	<0.1	0.06	<2	<1
STD V16	Standard	0.08	1.6	0.16	<0.001	0.14	0.040	0.10	<0.02	<1	<0.1	0.06	<2	<1
STD V16	Standard	0.10	1.5	0.21	0.001	0.15	0.039	0.11	<0.02	<1	<0.1	0.06	<2	<1
STD V16	Standard	0.09	1.6	0.17	0.001	0.13	0.041	0.10	<0.02	<1	<0.1	0.06	<2	<1
STD V16 Expected		0.11	1.7	0.23		0.17	0.05	0.11				0.06		



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# QUALITY CONTROL REPORT

VAN16001902.1

		VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppb	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.01	1	0.001	0.1	0.01	0.2	0.01	0.5	0.01	0.02	0.02	2	0.01	0.001
STD CDV-1 Expected		0.2	8.61	1	23.3	9	6.4	2	385	0.256	1.3	0.17	2.3	0.61	112	0.04	0.03	0.02	8.7	1.94	0.038
FLOUR	Blank	0.58	3.65	0.03	26.4	<2	0.2	0.01	34	0.005	<0.1	<0.01	<0.2	<0.01	1.3	0.03	<0.02	0.02	<2	0.03	0.366
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.01	<1	<0.001	<0.1	<0.01	<0.2	<0.01	<0.5	<0.01	<0.02	<0.02	<2	<0.01	<0.001
FLOUR	Blank	0.57	3.40	0.06	26.2	<2	0.2	<0.01	32	0.004	<0.1	<0.01	<0.2	<0.01	1.3	0.03	<0.02	0.02	<2	0.03	0.340
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.01	<1	<0.001	<0.1	<0.01	<0.2	<0.01	<0.5	<0.01	<0.02	<0.02	<2	<0.01	<0.001
FLOUR	Blank	0.58	3.65	0.02	26.7	<2	0.2	0.01	33	0.004	<0.1	<0.01	<0.2	<0.01	1.3	0.03	<0.02	<0.02	<2	0.03	0.320
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.01	<1	<0.001	<0.1	<0.01	<0.2	<0.01	<0.5	<0.01	<0.02	<0.02	<2	<0.01	<0.001
FLOUR	Blank	0.58	3.57	0.04	26.8	<2	0.2	<0.01	32	0.004	<0.1	<0.01	0.4	<0.01	1.2	0.03	<0.02	0.03	<2	0.03	0.326
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.01	<1	<0.001	0.2	<0.01	<0.2	<0.01	<0.5	<0.01	<0.02	<0.02	<2	<0.01	<0.001
FLOUR	Blank	0.58	3.67	0.02	29.5	<2	0.2	<0.01	36	0.005	<0.1	<0.01	<0.2	<0.01	1.3	0.03	<0.02	<0.02	<2	0.04	0.371
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.01	<1	0.001	<0.1	<0.01	<0.2	<0.01	<0.5	<0.01	<0.02	<0.02	<2	<0.01	0.001
FLOUR	Blank	0.57	3.49	0.03	25.4	<2	0.2	0.01	31	0.004	0.3	<0.01	<0.2	<0.01	1.2	0.04	<0.02	<0.02	<2	0.03	0.320
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.01	<1	<0.001	0.3	<0.01	<0.2	<0.01	<0.5	<0.01	<0.02	<0.02	<2	<0.01	<0.001
FLOUR	Blank	0.58	3.93	0.04	27.1	<2	0.2	0.01	32	0.004	<0.1	<0.01	<0.2	<0.01	1.2	0.03	<0.02	<0.02	<2	0.04	0.354
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.01	<1	<0.001	<0.1	<0.01	<0.2	<0.01	<0.5	<0.01	<0.02	<0.02	<2	<0.01	0.001
Prep Wash																					
RICE-1	Prep Blank	0.34	1.30	<0.01	18.2	<2	0.2	0.02	9	<0.001	<0.1	<0.01	<0.2	<0.01	<0.5	<0.01	<0.02	<0.02	<2	<0.01	0.068
RICE-1	Prep Blank	0.34	1.26	<0.01	17.2	<2	0.2	0.03	9	<0.001	<0.1	<0.01	<0.2	<0.01	<0.5	<0.01	<0.02	<0.02	<2	<0.01	0.065



Bureau Veritas Commodities Canada Ltd.  
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada  
PHONE (604) 253-3158

**Client:** Gossan Resources Ltd.  
404 - 171 Donald Street  
Winnipeg Manitoba R3C 1M4 Canada

Project: None Given  
Report Date: November 24, 2016

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Part: 2 of 3

# QUALITY CONTROL REPORT

VAN16001902.1

		VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	ppm	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.01	0.1	0.001	0.1	1	1	0.01	0.001	0.01	0.1	0.1	0.02	0.01	1	0.1	0.02	0.1	0.005	0.01	0.001
STD CDV-1 Expected		2.31	12.1	0.12	9	30	12	0.15	0.0052	0.18		0.8		0.1	41	0.3		0.5	0.121	0.03	0.046
FLOUR	Blank	<0.01	1.6	0.140	3.2	10	<1	<0.01	0.001	0.34	<0.1	0.4	<0.02	0.16	<1	1.1	<0.02	<0.1	<0.005	0.03	<0.001
BLK	Blank	<0.01	0.4	<0.001	0.2	<1	<1	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	0.03	<1	0.2	<0.02	<0.1	<0.005	<0.01	<0.001
FLOUR	Blank	<0.01	1.6	0.134	3.2	10	<1	<0.01	0.001	0.33	<0.1	0.2	<0.02	0.20	<1	1.0	<0.02	<0.1	<0.005	<0.01	<0.001
BLK	Blank	<0.01	0.2	<0.001	<0.1	<1	<1	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	0.01	<1	0.1	<0.02	<0.1	<0.005	<0.01	<0.001
FLOUR	Blank	<0.01	1.6	0.149	3.1	11	<1	<0.01	0.001	0.33	<0.1	0.2	<0.02	0.19	<1	1.0	<0.02	<0.1	<0.005	0.02	<0.001
BLK	Blank	<0.01	0.2	<0.001	<0.1	<1	<1	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	0.02	<1	0.1	<0.02	<0.1	<0.005	<0.01	<0.001
FLOUR	Blank	<0.01	1.6	0.135	2.8	10	<1	<0.01	0.001	0.33	<0.1	0.5	<0.02	0.14	3	1.1	<0.02	<0.1	<0.005	0.02	<0.001
BLK	Blank	<0.01	0.2	<0.001	<0.1	<1	<1	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.01	1	<0.1	<0.02	<0.1	<0.005	<0.01	<0.001
FLOUR	Blank	<0.01	1.6	0.138	3.2	11	<1	<0.01	0.001	0.35	<0.1	0.3	<0.02	0.18	2	1.1	<0.02	<0.1	<0.005	<0.01	0.001
BLK	Blank	<0.01	0.3	<0.001	<0.1	<1	<1	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.01	<1	<0.1	<0.02	<0.1	<0.005	<0.01	0.002
FLOUR	Blank	<0.01	1.6	0.137	3.0	11	<1	<0.01	0.001	0.34	<0.1	0.3	<0.02	0.20	<1	1.0	<0.02	<0.1	<0.005	<0.01	<0.001
BLK	Blank	<0.01	<0.1	<0.001	0.1	<1	<1	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	0.01	2	<0.1	<0.02	<0.1	<0.005	<0.01	<0.001
FLOUR	Blank	<0.01	1.5	0.140	3.0	11	<1	<0.01	0.001	0.35	0.1	0.3	<0.02	0.18	<1	0.9	<0.02	<0.1	<0.005	0.03	<0.001
BLK	Blank	<0.01	0.3	<0.001	0.2	<1	<1	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	0.03	<1	<0.1	<0.02	<0.1	<0.005	<0.01	<0.001
Prep Wash																					
RICE-1	Prep Blank	<0.01	1.5	0.012	0.4	3	<1	<0.01	<0.001	0.06	<0.1	0.2	<0.02	0.05	2	0.3	<0.02	<0.1	0.059	<0.01	<0.001
RICE-1	Prep Blank	<0.01	1.5	0.011	0.3	2	<1	<0.01	<0.001	0.06	<0.1	0.2	<0.02	0.07	<1	0.4	<0.02	<0.1	0.057	<0.01	<0.001



Bureau Veritas Commodities Canada Ltd.  
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada  
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**Client:** Gossan Resources Ltd.  
404 - 171 Donald Street  
Winnipeg Manitoba R3C 1M4 Canada

Project: None Given  
Report Date: November 24, 2016

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Part: 3 of 3

# QUALITY CONTROL REPORT

VAN16001902.1

		VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppb
		0.01	0.1	0.02	0.001	0.01	0.001	0.01	0.02	1	0.1	0.01	2
STD CDV-1 Expected		0.05	2.3	0.08		1.2	1.41	4.9				0.56	
FLOUR	Blank	<0.01	2.6	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	0.10	<2
BLK	Blank	<0.01	<0.1	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2
FLOUR	Blank	<0.01	2.4	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	0.08	<2
BLK	Blank	<0.01	<0.1	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2
FLOUR	Blank	<0.01	2.6	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	1	<0.1	0.08	<2
BLK	Blank	<0.01	<0.1	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	0.01	<2
FLOUR	Blank	<0.01	2.5	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	0.09	<2
BLK	Blank	<0.01	<0.1	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2
FLOUR	Blank	<0.01	2.7	<0.02	<0.001	<0.01	0.001	<0.01	<0.02	2	<0.1	0.09	<2
BLK	Blank	<0.01	<0.1	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2
FLOUR	Blank	<0.01	2.5	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	0.09	<2
BLK	Blank	<0.01	<0.1	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2
FLOUR	Blank	<0.01	2.5	<0.02	<0.001	<0.01	0.001	<0.01	<0.02	<1	<0.1	0.09	<2
BLK	Blank	<0.01	<0.1	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2
Prep Wash													
RICE-1	Prep Blank	<0.01	2.6	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2
RICE-1	Prep Blank	<0.01	2.6	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2



**BUREAU VERITAS** MINERAL LABORATORIES  
Canada

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Bureau Veritas Commodities Canada Ltd.  
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PHONE (604) 253-3158

**Client:** **Gossan Resources Ltd.**  
404 - 171 Donald Street  
Winnipeg Manitoba R3C 1M4 Canada

Submitted By: Kathy Ringland  
Receiving Lab: Canada-Vancouver  
Received: October 07, 2016  
Report Date: November 21, 2016  
Page: 1 of 9

# CERTIFICATE OF ANALYSIS

VAN16001903.1

## CLIENT JOB INFORMATION

Project: None Given  
Shipment ID:  
P.O. Number  
Number of Samples: 219

## SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
VGMAS	219	Plant Maceration to 1mm			VAN
VG101_EXT	219	Aqua Regia digestion ICP-MS analysis	1	Completed	VAN
DRPLP	219	Warehouse handling / disposition of pulps			VAN

## SAMPLE DISPOSAL


DISP-PLP Dispose of Pulp After 90 days

## ADDITIONAL COMMENTS

Bureau Veritas does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

Invoice To: Gossan Resources Ltd.  
404 - 171 Donald Street  
Winnipeg Manitoba R3C 1M4  
Canada

CC:

  
JEFFREY CANNON  
Geochemistry Department Supervisor

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only. All results are considered the confidential property of the client. Bureau Veritas assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.  
\*\*\* asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

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**Client:** **Gossan Resources Ltd.**  
404 - 171 Donald Street  
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**Project:** None Given  
**Report Date:** November 21, 2016

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**Part:** 1 of 3

# CERTIFICATE OF ANALYSIS

# VAN16001903.1

Method Analyte	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101
	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	
Unit	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	
MDL	0.01	0.01	0.01	0.1	2	0.1	0.01	1	0.001	0.1	0.01	0.2	0.01	0.5	0.01	0.02	0.02	2	0.01	0.001	
1124727	Vegetation	<0.01	5.42	0.15	20.5	4	0.2	0.05	685	0.005	0.1	<0.01	<0.2	<0.01	27.4	0.09	<0.02	<0.02	<2	0.55	0.059
1124728	Vegetation	0.37	4.43	0.10	37.5	15	0.2	0.03	291	0.005	0.2	<0.01	<0.2	<0.01	10.6	0.01	<0.02	<0.02	<2	0.51	0.031
1124729	Vegetation	<0.01	4.63	0.12	22.8	4	<0.1	0.07	337	0.006	<0.1	<0.01	<0.2	<0.01	10.5	0.02	<0.02	<0.02	<2	0.72	0.034
1124730	Vegetation	<0.01	5.30	0.08	32.4	5	0.2	0.02	542	0.005	<0.1	<0.01	0.5	<0.01	4.7	0.03	<0.02	<0.02	<2	0.43	0.044
1124731	Vegetation	0.07	7.06	0.12	38.8	12	0.3	0.17	39	0.005	<0.1	<0.01	<0.2	<0.01	13.8	<0.01	<0.02	<0.02	<2	0.47	0.048
1124732	Vegetation	<0.01	4.57	0.14	31.7	<2	2.3	0.34	31	0.004	<0.1	<0.01	<0.2	<0.01	27.9	<0.01	<0.02	<0.02	<2	0.39	0.060
1124733	Vegetation	<0.01	6.45	0.07	37.6	21	0.3	0.17	308	0.004	0.3	<0.01	<0.2	<0.01	12.2	0.03	<0.02	<0.02	<2	0.29	0.047
1124734	Vegetation	<0.01	4.40	0.66	13.4	<2	0.2	0.03	527	0.006	0.1	<0.01	<0.2	<0.01	13.0	0.04	<0.02	<0.02	<2	0.64	0.036
1124735	Vegetation	<0.01	3.30	0.48	11.4	4	0.2	0.10	430	0.005	<0.1	<0.01	<0.2	<0.01	21.4	0.06	<0.02	<0.02	<2	0.55	0.032
1124736	Vegetation	<0.01	4.92	0.20	16.1	<2	0.5	0.03	622	0.004	0.1	<0.01	<0.2	<0.01	18.8	0.08	<0.02	<0.02	<2	0.52	0.057
1124737	Vegetation	<0.01	5.21	0.12	9.7	8	0.2	0.15	81	0.005	<0.1	<0.01	<0.2	<0.01	9.7	0.01	<0.02	<0.02	<2	0.54	0.043
1124738	Vegetation	<0.01	5.59	0.17	8.9	4	0.1	0.05	183	0.005	<0.1	<0.01	<0.2	<0.01	11.2	0.04	<0.02	<0.02	<2	0.57	0.027
1124739	Vegetation	<0.01	3.98	0.21	6.1	<2	0.2	0.01	53	0.005	0.1	<0.01	<0.2	<0.01	11.6	0.01	<0.02	<0.02	<2	0.69	0.023
1124740	Vegetation	0.11	5.11	0.08	19.8	8	0.3	0.06	53	0.006	0.1	<0.01	<0.2	<0.01	11.3	<0.01	<0.02	<0.02	<2	0.68	0.030
1124741	Vegetation	<0.01	3.31	0.36	6.1	2	0.2	0.10	168	0.005	<0.1	<0.01	<0.2	<0.01	13.2	0.04	<0.02	<0.02	<2	0.48	0.020
1124742	Vegetation	<0.01	5.09	0.11	32.0	34	0.3	0.01	43	0.005	<0.1	<0.01	0.3	<0.01	12.0	0.01	<0.02	<0.02	<2	0.65	0.031
1124743	Vegetation	<0.01	5.02	0.07	41.8	9	0.2	0.03	126	0.008	<0.1	<0.01	<0.2	<0.01	12.3	<0.01	<0.02	<0.02	<2	0.93	0.032
1124744	Vegetation	<0.01	4.08	0.09	31.5	6	0.2	0.01	141	0.008	<0.1	<0.01	0.2	<0.01	13.2	0.01	<0.02	<0.02	<2	0.82	0.037
1124745	Vegetation	<0.01	4.78	0.09	35.6	5	0.1	0.02	135	0.009	<0.1	<0.01	<0.2	<0.01	15.4	0.02	<0.02	<0.02	<2	1.06	0.030
1124746	Vegetation	<0.01	3.65	0.07	21.0	4	<0.1	<0.01	116	0.005	<0.1	<0.01	<0.2	<0.01	7.3	0.01	<0.02	<0.02	<2	0.53	0.040
1124747	Vegetation	0.17	4.30	0.11	6.4	<2	0.7	0.34	61	0.006	<0.1	<0.01	<0.2	<0.01	22.2	<0.01	<0.02	<0.02	<2	0.75	0.061
1124748	Vegetation	<0.01	4.55	0.24	12.8	3	0.3	0.04	440	0.005	<0.1	<0.01	<0.2	<0.01	19.0	0.07	<0.02	<0.02	<2	0.56	0.051
1124750	Vegetation	0.15	4.78	0.05	14.9	2	0.1	<0.01	182	0.005	0.1	<0.01	<0.2	<0.01	6.8	<0.01	<0.02	<0.02	<2	0.41	0.077
1124751	Vegetation	<0.01	4.61	0.26	10.5	17	0.2	0.05	503	0.004	<0.1	<0.01	0.3	<0.01	18.3	0.06	<0.02	<0.02	<2	0.38	0.048
1124752	Vegetation	0.05	5.71	0.15	10.8	6	0.5	0.04	206	0.005	<0.1	<0.01	<0.2	<0.01	18.1	0.04	<0.02	<0.02	<2	0.42	0.071
1124753	Vegetation	<0.01	4.41	0.41	15.6	2	0.2	0.05	465	0.005	<0.1	<0.01	0.2	<0.01	16.8	0.05	<0.02	<0.02	<2	0.58	0.032
1124754	Vegetation	<0.01	3.97	0.23	6.4	3	0.4	0.01	122	0.006	<0.1	<0.01	<0.2	<0.01	13.0	0.01	<0.02	<0.02	<2	0.72	0.034
1124755	Vegetation	0.06	7.53	0.05	28.5	5	0.4	0.02	111	0.005	<0.1	<0.01	<0.2	<0.01	12.1	0.01	<0.02	<0.02	<2	0.62	0.040
1124756	Vegetation	1.27	7.75	0.07	21.4	7	0.2	0.01	70	0.004	<0.1	<0.01	<0.2	<0.01	6.7	<0.01	<0.02	<0.02	<2	0.31	0.058
1124757	Vegetation	0.13	6.38	0.10	49.6	10	0.1	0.03	202	0.008	<0.1	<0.01	<0.2	<0.01	13.5	0.03	<0.02	<0.02	<2	0.79	0.049





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**Project:** None Given  
**Report Date:** November 21, 2016

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# CERTIFICATE OF ANALYSIS

# VAN16001903.1

Method	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101
Analyte	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf	
Unit	ppm	ppm	%	ppm	ppm	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm	
MDL	0.01	0.1	0.001	0.1	1	1	0.01	0.001	0.01	0.1	0.1	0.02	0.01	1	0.1	0.02	0.1	0.005	0.01	0.001	
1124727	Vegetation	<0.01	1.1	0.046	102.2	1	6	<0.01	<0.001	0.21	<0.1	<0.1	<0.02	0.02	5	0.2	<0.02	<0.1	0.058	<0.01	<0.001
1124728	Vegetation	<0.01	1.2	0.024	11.1	1	5	<0.01	0.002	0.16	<0.1	0.2	<0.02	0.05	5	0.2	<0.02	<0.1	0.010	<0.01	<0.001
1124729	Vegetation	<0.01	1.2	0.024	9.9	1	5	<0.01	0.002	0.17	<0.1	0.1	<0.02	0.06	4	0.2	<0.02	<0.1	0.026	<0.01	<0.001
1124730	Vegetation	<0.01	1.2	0.028	11.4	1	6	<0.01	0.001	0.18	<0.1	0.1	<0.02	0.08	5	0.3	<0.02	<0.1	0.019	<0.01	<0.001
1124731	Vegetation	<0.01	1.4	0.039	8.5	1	5	<0.01	<0.001	0.20	<0.1	0.2	<0.02	0.09	4	0.2	<0.02	<0.1	0.047	0.02	<0.001
1124732	Vegetation	0.06	1.4	0.067	31.3	2	5	<0.01	<0.001	0.14	<0.1	0.2	<0.02	0.10	6	0.2	<0.02	<0.1	0.157	0.01	<0.001
1124733	Vegetation	<0.01	1.3	0.049	21.0	1	6	<0.01	0.001	0.16	<0.1	0.1	<0.02	0.09	4	0.2	<0.02	<0.1	0.070	<0.01	<0.001
1124734	Vegetation	<0.01	1.3	0.032	23.1	1	8	<0.01	<0.001	0.17	<0.1	0.1	<0.02	0.07	5	0.2	<0.02	<0.1	0.048	<0.01	<0.001
1124735	Vegetation	0.09	1.2	0.048	40.8	1	6	<0.01	<0.001	0.17	<0.1	0.2	<0.02	0.09	5	0.2	<0.02	<0.1	0.053	<0.01	<0.001
1124736	Vegetation	<0.01	1.2	0.053	80.2	2	7	<0.01	<0.001	0.17	<0.1	0.1	<0.02	0.09	5	0.2	<0.02	<0.1	0.026	<0.01	<0.001
1124737	Vegetation	<0.01	1.3	0.031	14.7	1	3	<0.01	<0.001	0.13	<0.1	0.2	<0.02	0.11	5	0.2	<0.02	<0.1	0.070	<0.01	<0.001
1124738	Vegetation	<0.01	1.3	0.023	30.7	<1	6	<0.01	<0.001	0.18	<0.1	0.2	<0.02	0.08	4	0.3	<0.02	<0.1	0.014	0.02	<0.001
1124739	Vegetation	<0.01	1.4	0.026	14.6	<1	6	<0.01	<0.001	0.17	<0.1	0.2	<0.02	0.10	8	0.2	<0.02	<0.1	0.019	0.01	<0.001
1124740	Vegetation	<0.01	1.4	0.023	14.0	<1	4	<0.01	0.001	0.15	<0.1	0.2	<0.02	0.14	5	0.3	<0.02	<0.1	0.035	<0.01	<0.001
1124741	Vegetation	<0.01	1.4	0.036	24.9	<1	6	<0.01	<0.001	0.16	<0.1	0.1	<0.02	0.11	4	0.2	<0.02	<0.1	0.019	0.02	<0.001
1124742	Vegetation	<0.01	1.3	0.033	13.6	1	5	<0.01	<0.001	0.12	<0.1	0.3	<0.02	0.04	2	0.2	<0.02	<0.1	0.020	<0.01	<0.001
1124743	Vegetation	<0.01	1.4	0.019	10.6	1	5	<0.01	0.001	0.17	<0.1	0.2	<0.02	0.14	4	0.3	<0.02	<0.1	0.008	<0.01	<0.001
1124744	Vegetation	<0.01	1.5	0.028	12.4	1	6	<0.01	0.002	0.17	<0.1	0.2	<0.02	0.14	5	0.2	<0.02	<0.1	0.014	<0.01	<0.001
1124745	Vegetation	<0.01	1.4	0.023	12.5	<1	5	<0.01	<0.001	0.15	<0.1	<0.1	<0.02	<0.01	2	0.3	<0.02	<0.1	0.009	<0.01	<0.001
1124746	Vegetation	<0.01	1.2	0.025	6.3	1	4	<0.01	<0.001	0.16	<0.1	0.2	<0.02	0.06	5	0.2	<0.02	<0.1	0.016	<0.01	<0.001
1124747	Vegetation	0.24	1.2	0.043	81.5	2	4	<0.01	0.001	0.14	<0.1	0.2	<0.02	0.06	5	0.2	<0.02	<0.1	0.393	0.02	<0.001
1124748	Vegetation	<0.01	1.2	0.034	133.5	2	7	<0.01	<0.001	0.17	<0.1	0.1	<0.02	0.06	6	0.2	<0.02	<0.1	0.032	0.02	<0.001
1124750	Vegetation	<0.01	1.2	0.042	8.7	2	7	<0.01	<0.001	0.25	<0.1	0.2	<0.02	0.08	4	0.3	<0.02	<0.1	0.044	<0.01	<0.001
1124751	Vegetation	<0.01	1.1	0.041	68.0	1	7	<0.01	<0.001	0.19	<0.1	0.2	<0.02	0.05	7	0.3	<0.02	<0.1	0.060	<0.01	<0.001
1124752	Vegetation	<0.01	1.2	0.053	59.2	2	9	<0.01	0.001	0.25	<0.1	0.2	<0.02	0.06	6	0.2	<0.02	<0.1	0.026	<0.01	<0.001
1124753	Vegetation	<0.01	1.2	0.044	55.0	1	5	<0.01	0.001	0.13	<0.1	0.2	<0.02	0.06	7	0.2	<0.02	<0.1	0.022	0.02	<0.001
1124754	Vegetation	<0.01	1.3	0.043	17.4	1	6	<0.01	<0.001	0.20	<0.1	0.2	<0.02	0.09	2	0.3	<0.02	<0.1	0.041	0.02	<0.001
1124755	Vegetation	<0.01	1.4	0.031	12.2	1	6	<0.01	0.001	0.15	<0.1	0.2	<0.02	0.11	4	0.2	<0.02	<0.1	0.018	<0.01	<0.001
1124756	Vegetation	<0.01	1.3	0.030	8.9	2	6	<0.01	<0.001	0.27	<0.1	0.2	<0.02	0.12	1	0.3	<0.02	<0.1	0.045	<0.01	<0.001
1124757	Vegetation	<0.01	1.2	0.049	22.6	2	5	<0.01	<0.001	0.19	<0.1	0.2	<0.02	0.08	3	0.3	<0.02	<0.1	0.038	0.01	0.001



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**Project:** None Given  
**Report Date:** November 21, 2016

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# CERTIFICATE OF ANALYSIS

VAN16001903.1

Method	Analyte	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt
Unit		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppb	ppb	ppb
MDL		0.01	0.1	0.02	0.001	0.01	0.001	0.01	0.02	1	0.1	0.01	2	1
1124727	Vegetation	<0.01	8.5	<0.02	<0.001	0.01	<0.001	0.01	<0.02	1	<0.1	<0.01	<2	<1
1124728	Vegetation	<0.01	4.0	<0.02	<0.001	0.02	<0.001	0.02	<0.02	<1	<0.1	0.01	<2	<1
1124729	Vegetation	<0.01	4.7	<0.02	<0.001	0.03	<0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124730	Vegetation	<0.01	4.6	<0.02	<0.001	0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124731	Vegetation	<0.01	8.1	<0.02	<0.001	<0.01	<0.001	0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124732	Vegetation	<0.01	8.7	<0.02	<0.001	0.02	<0.001	0.05	<0.02	<1	<0.1	<0.01	<2	<1
1124733	Vegetation	<0.01	7.6	<0.02	<0.001	<0.01	<0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124734	Vegetation	<0.01	6.0	<0.02	<0.001	0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124735	Vegetation	<0.01	6.2	<0.02	<0.001	0.01	<0.001	0.11	<0.02	<1	<0.1	0.04	<2	<1
1124736	Vegetation	<0.01	5.5	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124737	Vegetation	<0.01	4.6	<0.02	<0.001	0.02	<0.001	0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124738	Vegetation	<0.01	4.3	<0.02	<0.001	0.02	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124739	Vegetation	<0.01	5.5	<0.02	<0.001	0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124740	Vegetation	<0.01	5.4	<0.02	<0.001	0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124741	Vegetation	<0.01	5.1	<0.02	<0.001	0.01	<0.001	0.02	<0.02	<1	<0.1	0.02	<2	<1
1124742	Vegetation	<0.01	4.5	<0.02	<0.001	0.02	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124743	Vegetation	<0.01	4.4	<0.02	<0.001	0.02	<0.001	<0.01	<0.02	<1	<0.1	0.01	<2	<1
1124744	Vegetation	<0.01	4.4	<0.02	<0.001	0.03	<0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124745	Vegetation	<0.01	3.3	<0.02	<0.001	0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124746	Vegetation	<0.01	3.9	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124747	Vegetation	<0.01	8.5	<0.02	<0.001	0.01	0.021	0.35	<0.02	<1	<0.1	0.02	<2	<1
1124748	Vegetation	<0.01	7.5	<0.02	<0.001	0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124750	Vegetation	<0.01	6.2	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124751	Vegetation	<0.01	8.3	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	0.02	<2	<1
1124752	Vegetation	<0.01	9.9	<0.02	<0.001	0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124753	Vegetation	<0.01	6.4	<0.02	<0.001	0.02	<0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124754	Vegetation	<0.01	6.2	<0.02	<0.001	0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124755	Vegetation	<0.01	4.4	<0.02	<0.001	0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124756	Vegetation	<0.01	12.7	<0.02	<0.001	0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124757	Vegetation	<0.01	5.0	<0.02	<0.001	0.02	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1



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**Project:** None Given  
**Report Date:** November 21, 2016

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**Part:** 1 of 3

# CERTIFICATE OF ANALYSIS

# VAN16001903.1

Method Analyte	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101
	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	
Unit	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	
MDL	0.01	0.01	0.01	0.1	2	0.1	0.01	1	0.001	0.1	0.01	0.2	0.01	0.5	0.01	0.02	0.02	2	0.01	0.001	
1124758	Vegetation	1.51	3.92	0.13	19.1	<2	0.1	0.03	44	0.005	0.1	<0.01	<0.2	<0.01	7.5	0.03	<0.02	<0.02	<2	0.43	0.042
1124759	Vegetation	0.64	5.19	0.14	32.6	3	<0.1	0.03	29	0.006	<0.1	<0.01	<0.2	<0.01	11.1	0.01	<0.02	<0.02	<2	0.82	0.042
1124760	Vegetation	0.13	4.39	0.11	37.8	4	0.1	0.04	61	0.006	<0.1	<0.01	0.3	<0.01	10.3	<0.01	<0.02	<0.02	<2	0.61	0.022
1124761	Vegetation	0.12	4.39	0.11	9.2	17	0.2	0.18	34	0.005	<0.1	<0.01	<0.2	<0.01	14.3	0.01	<0.02	<0.02	<2	0.56	0.029
1124762	Vegetation	<0.01	3.09	0.48	18.6	4	0.2	0.12	341	0.006	<0.1	<0.01	<0.2	<0.01	29.0	0.09	<0.02	<0.02	<2	0.75	0.040
1124763	Vegetation	0.09	8.30	0.11	17.8	7	0.3	0.09	66	0.005	<0.1	<0.01	<0.2	<0.01	8.8	<0.01	<0.02	<0.02	<2	0.48	0.038
1124764	Vegetation	0.57	5.17	0.24	36.8	<2	0.1	0.16	426	0.006	<0.1	<0.01	<0.2	<0.01	14.9	0.05	<0.02	<0.02	<2	0.72	0.043
1124765	Vegetation	<0.01	3.47	0.36	12.4	<2	0.2	0.12	339	0.005	<0.1	<0.01	<0.2	<0.01	41.1	0.08	<0.02	<0.02	<2	0.55	0.050
1124766	Vegetation	<0.01	4.92	0.20	15.5	2	0.5	0.06	339	0.006	<0.1	<0.01	<0.2	<0.01	48.4	0.12	<0.02	<0.02	<2	0.63	0.078
1124767	Vegetation	<0.01	5.02	0.44	15.7	3	0.3	0.05	314	0.005	<0.1	<0.01	<0.2	<0.01	41.4	0.06	<0.02	<0.02	<2	0.49	0.080
1124768	Vegetation	<0.01	4.61	0.75	13.7	2	0.3	0.12	412	0.007	<0.1	<0.01	<0.2	<0.01	55.3	0.10	<0.02	<0.02	<2	0.67	0.067
1124769	Vegetation	<0.01	3.29	0.57	12.5	3	0.2	0.09	268	0.005	<0.1	<0.01	<0.2	<0.01	45.4	0.05	<0.02	<0.02	<2	0.59	0.045
1124770	Vegetation	<0.01	3.71	0.52	10.0	5	0.3	0.09	262	0.006	<0.1	<0.01	<0.2	<0.01	44.4	0.06	<0.02	<0.02	<2	0.53	0.055
1124771	Vegetation	<0.01	3.84	0.43	11.2	3	0.2	0.07	420	0.005	<0.1	<0.01	<0.2	<0.01	40.9	0.07	<0.02	<0.02	<2	0.52	0.057
1124772	Vegetation	<0.01	4.62	1.04	15.1	4	0.3	0.13	607	0.007	<0.1	<0.01	<0.2	<0.01	56.0	0.11	<0.02	<0.02	<2	0.82	0.068
1124773	Vegetation	<0.01	3.70	0.78	19.1	5	0.4	0.19	719	0.006	<0.1	<0.01	<0.2	<0.01	47.4	0.11	<0.02	<0.02	<2	0.59	0.046
1124774	Vegetation	<0.01	4.25	0.80	14.6	4	0.3	0.11	597	0.005	<0.1	<0.01	<0.2	<0.01	41.9	0.07	<0.02	<0.02	<2	0.53	0.066
1124775	Vegetation	<0.01	4.84	0.51	16.3	5	0.3	0.10	395	0.007	<0.1	<0.01	<0.2	<0.01	41.4	0.10	<0.02	<0.02	<2	0.62	0.032
1124776	Vegetation	<0.01	4.16	0.39	9.7	<2	0.4	0.10	458	0.005	<0.1	<0.01	<0.2	<0.01	28.7	0.07	<0.02	<0.02	<2	0.47	0.051
1124777	Vegetation	<0.01	4.25	0.97	17.2	3	0.2	0.08	769	0.005	<0.1	<0.01	<0.2	<0.01	31.0	0.10	<0.02	<0.02	<2	0.43	0.051
1124778	Vegetation	<0.01	3.58	0.36	6.0	<2	0.2	0.04	203	0.006	<0.1	<0.01	<0.2	<0.01	47.2	0.03	<0.02	<0.02	<2	0.84	0.056
1124779	Vegetation	<0.01	3.81	0.66	13.6	3	0.2	0.08	692	0.004	<0.1	<0.01	<0.2	<0.01	28.7	0.10	<0.02	<0.02	<2	0.51	0.042
1124780	Vegetation	<0.01	4.13	0.17	18.9	6	0.1	0.02	218	0.007	<0.1	<0.01	<0.2	<0.01	6.8	0.03	<0.02	<0.02	<2	0.60	0.051
1124781	Vegetation	0.02	3.02	0.08	22.6	<2	<0.1	0.01	62	0.005	<0.1	<0.01	<0.2	<0.01	8.2	<0.01	<0.02	<0.02	<2	0.54	0.037
1124782	Vegetation	<0.01	4.29	0.23	11.6	3	0.2	0.13	682	0.005	<0.1	<0.01	<0.2	<0.01	21.3	0.06	<0.02	<0.02	<2	0.54	0.040
1124783	Vegetation	<0.01	4.35	1.16	22.7	<2	0.3	0.14	658	0.005	<0.1	<0.01	<0.2	<0.01	27.5	0.07	<0.02	<0.02	<2	0.51	0.050
1124784	Vegetation	<0.01	6.59	0.11	11.4	4	0.6	0.08	490	0.005	<0.1	<0.01	<0.2	<0.01	22.9	0.04	<0.02	<0.02	<2	0.48	0.080
1124785	Vegetation	<0.01	4.94	0.34	16.1	4	0.3	0.08	191	0.005	<0.1	<0.01	<0.2	<0.01	23.7	0.04	<0.02	<0.02	<2	0.52	0.059
1124786	Vegetation	<0.01	4.89	0.16	7.3	3	0.8	0.05	311	0.004	<0.1	<0.01	<0.2	<0.01	15.2	0.03	<0.02	<0.02	<2	0.42	0.052
1124787	Vegetation	<0.01	3.77	0.46	7.6	6	0.4	0.11	129	0.005	<0.1	<0.01	<0.2	<0.01	21.6	0.09	<0.02	<0.02	<2	0.51	0.040



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**Project:** None Given  
**Report Date:** November 21, 2016

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# CERTIFICATE OF ANALYSIS

## VAN16001903.1

Method	Analyte	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
Unit		ppm	ppm	%	ppm	ppm	ppm	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL		0.01	0.1	0.001	0.1	1	1	0.01	0.001	0.01	0.1	0.1	0.02	0.01	1	0.02	0.1	0.005	0.01	0.001	0.001
1124758	Vegetation	<0.01	1.5	0.034	20.3	1	7	<0.01	0.001	0.22	<0.1	0.2	<0.02	0.14	2	0.2	<0.02	<0.1	0.011	<0.01	<0.001
1124759	Vegetation	<0.01	1.4	0.038	15.7	2	5	<0.01	0.001	0.19	<0.1	0.2	<0.02	0.11	5	0.3	<0.02	<0.1	0.005	0.02	<0.001
1124760	Vegetation	<0.01	1.5	0.021	12.9	<1	5	<0.01	<0.001	0.17	<0.1	0.1	<0.02	0.11	2	0.3	<0.02	<0.1	0.020	0.01	<0.001
1124761	Vegetation	0.04	1.2	0.029	73.4	1	3	<0.01	0.002	0.12	<0.1	0.2	<0.02	<0.01	6	0.2	<0.02	<0.1	0.216	<0.01	0.003
1124762	Vegetation	0.02	1.2	0.036	74.7	1	7	<0.01	0.001	0.17	<0.1	0.1	<0.02	0.02	<1	0.2	<0.02	<0.1	0.008	<0.01	0.002
1124763	Vegetation	<0.01	1.3	0.034	20.5	1	5	<0.01	0.002	0.13	<0.1	0.2	<0.02	0.06	<1	0.2	<0.02	<0.1	0.063	<0.01	<0.001
1124764	Vegetation	0.01	1.2	0.036	13.8	2	5	<0.01	0.002	0.17	<0.1	0.3	<0.02	0.07	2	0.2	<0.02	<0.1	0.013	<0.01	0.004
1124765	Vegetation	0.03	1.3	0.053	72.2	1	6	<0.01	0.001	0.19	<0.1	0.2	<0.02	0.06	6	0.3	<0.02	<0.1	0.032	<0.01	0.002
1124766	Vegetation	<0.01	1.2	0.069	74.4	2	7	<0.01	0.001	0.23	<0.1	0.2	<0.02	0.06	<1	0.2	<0.02	<0.1	0.093	<0.01	<0.001
1124767	Vegetation	0.01	1.2	0.051	84.0	2	7	<0.01	0.002	0.25	<0.1	0.1	<0.02	0.06	<1	0.1	<0.02	<0.1	0.028	<0.01	<0.001
1124768	Vegetation	0.02	1.1	0.067	80.0	2	8	<0.01	0.001	0.20	<0.1	0.2	<0.02	0.07	<1	0.2	<0.02	<0.1	0.057	<0.01	<0.001
1124769	Vegetation	0.01	1.2	0.050	65.7	2	7	<0.01	0.001	0.13	<0.1	0.2	<0.02	0.09	<1	0.2	<0.02	<0.1	0.054	<0.01	<0.001
1124770	Vegetation	0.01	1.2	0.047	60.9	2	6	<0.01	0.001	0.15	<0.1	0.2	<0.02	0.09	<1	0.2	<0.02	<0.1	0.047	<0.01	0.001
1124771	Vegetation	<0.01	1.2	0.054	85.8	2	8	<0.01	<0.001	0.20	<0.1	0.2	<0.02	0.06	<1	0.2	<0.02	<0.1	0.034	<0.01	<0.001
1124772	Vegetation	0.02	1.2	0.059	89.5	2	7	<0.01	<0.001	0.16	<0.1	0.2	<0.02	0.09	2	0.2	<0.02	<0.1	0.071	<0.01	0.001
1124773	Vegetation	0.05	1.2	0.052	96.3	1	6	<0.01	<0.001	0.18	<0.1	0.1	<0.02	0.08	<1	0.2	<0.02	<0.1	0.075	<0.01	<0.001
1124774	Vegetation	0.02	1.1	0.049	97.4	2	7	<0.01	0.001	0.22	<0.1	0.2	<0.02	0.10	<1	0.2	<0.02	<0.1	0.104	<0.01	<0.001
1124775	Vegetation	0.04	1.2	0.049	50.3	2	6	<0.01	0.002	0.13	<0.1	0.2	<0.02	0.08	7	0.1	<0.02	<0.1	0.083	<0.01	<0.001
1124776	Vegetation	<0.01	1.2	0.043	79.4	2	7	<0.01	0.002	0.21	<0.1	0.3	<0.02	0.09	<1	0.1	<0.02	<0.1	0.062	0.02	<0.001
1124777	Vegetation	0.01	1.1	0.046	95.9	2	5	<0.01	0.002	0.15	<0.1	<0.1	<0.02	0.09	1	0.3	<0.02	<0.1	0.059	<0.01	<0.001
1124778	Vegetation	0.02	1.3	0.038	117.4	2	6	<0.01	0.001	0.17	<0.1	0.2	<0.02	0.09	<1	0.2	<0.02	<0.1	<0.005	0.01	0.003
1124779	Vegetation	0.03	1.2	0.037	105.2	1	5	<0.01	<0.001	0.14	<0.1	0.2	<0.02	0.11	5	0.2	<0.02	<0.1	0.040	<0.01	<0.001
1124780	Vegetation	<0.01	1.3	0.035	7.9	2	5	<0.01	0.001	0.19	<0.1	0.2	<0.02	0.12	3	0.2	<0.02	<0.1	0.041	0.01	<0.001
1124781	Vegetation	<0.01	1.3	0.023	5.9	1	4	<0.01	0.001	0.14	<0.1	0.2	<0.02	0.11	<1	0.2	<0.02	<0.1	0.006	<0.01	<0.001
1124782	Vegetation	0.01	1.2	0.034	50.4	1	5	<0.01	0.002	0.22	<0.1	0.2	<0.02	0.11	<1	0.2	<0.02	<0.1	0.112	<0.01	<0.001
1124783	Vegetation	0.01	1.2	0.052	72.6	2	7	<0.01	0.001	0.21	<0.1	0.2	<0.02	0.10	4	0.2	<0.02	<0.1	0.030	<0.01	0.001
1124784	Vegetation	<0.01	1.3	0.060	71.3	3	7	<0.01	<0.001	0.29	<0.1	0.1	<0.02	0.08	<1	0.2	<0.02	<0.1	0.063	0.02	<0.001
1124785	Vegetation	<0.01	1.3	0.053	53.8	2	8	<0.01	0.001	0.21	<0.1	0.2	<0.02	0.11	<1	0.3	<0.02	<0.1	0.015	<0.01	<0.001
1124786	Vegetation	<0.01	1.1	0.047	77.9	2	8	<0.01	<0.001	0.29	<0.1	0.2	<0.02	0.10	4	0.3	<0.02	<0.1	0.080	0.01	0.001
1124787	Vegetation	0.01	1.2	0.047	56.5	1	6	<0.01	0.001	0.18	<0.1	0.1	<0.02	<0.01	<1	0.2	<0.02	<0.1	0.031	<0.01	<0.001



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**Project:** None Given  
**Report Date:** November 21, 2016

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# CERTIFICATE OF ANALYSIS

VAN16001903.1

Method Analyte Unit MDL	VG101 Nb	VG101 Rb	VG101 Sn	VG101 Ta	VG101 Zr	VG101 Y	VG101 Ce	VG101 In	VG101 Re	VG101 Be	VG101 Li	VG101 Pd	VG101 Pt													
														ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppb	ppb	
														0.01	0.1	0.02	0.001	0.01	0.001	0.01	0.02	1	0.1	0.01	2	1
1124758	Vegetation	<0.01	6.8	<0.02	<0.001	0.02	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1												
1124759	Vegetation	<0.01	2.4	<0.02	<0.001	0.02	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1												
1124760	Vegetation	<0.01	2.6	<0.02	<0.001	0.02	<0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1												
1124761	Vegetation	0.05	4.7	<0.02	0.003	0.03	0.002	0.04	<0.02	<1	<0.1	<0.01	<2	<1												
1124762	Vegetation	0.02	6.4	<0.02	0.001	0.01	<0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1												
1124763	Vegetation	0.01	4.9	<0.02	0.002	0.02	<0.001	0.01	<0.02	<1	<0.1	<0.01	<2	<1												
1124764	Vegetation	<0.01	4.5	<0.02	<0.001	0.03	<0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1												
1124765	Vegetation	<0.01	10.0	<0.02	0.002	0.01	<0.001	0.03	<0.02	<1	<0.1	<0.01	<2	<1												
1124766	Vegetation	<0.01	16.9	<0.02	<0.001	0.02	<0.001	<0.01	<0.02	<1	<0.1	0.01	<2	<1												
1124767	Vegetation	<0.01	12.5	<0.02	<0.001	0.02	<0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1												
1124768	Vegetation	<0.01	13.0	<0.02	<0.001	0.02	<0.001	0.04	<0.02	<1	<0.1	0.03	<2	<1												
1124769	Vegetation	<0.01	11.3	<0.02	<0.001	0.02	<0.001	0.02	<0.02	<1	<0.1	0.01	<2	<1												
1124770	Vegetation	<0.01	10.7	<0.02	<0.001	0.02	<0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1												
1124771	Vegetation	<0.01	11.1	<0.02	<0.001	0.01	<0.001	0.01	<0.02	<1	<0.1	<0.01	<2	<1												
1124772	Vegetation	<0.01	13.0	<0.02	<0.001	0.02	0.006	0.03	<0.02	<1	<0.1	0.02	<2	<1												
1124773	Vegetation	<0.01	12.0	<0.02	<0.001	0.02	<0.001	0.04	<0.02	<1	<0.1	0.01	<2	<1												
1124774	Vegetation	<0.01	13.5	<0.02	<0.001	0.02	<0.001	0.02	<0.02	<1	<0.1	0.01	<2	<1												
1124775	Vegetation	<0.01	9.1	<0.02	<0.001	0.03	0.006	0.06	<0.02	<1	<0.1	0.03	<2	<1												
1124776	Vegetation	<0.01	11.6	<0.02	<0.001	0.02	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1												
1124777	Vegetation	<0.01	8.7	<0.02	<0.001	0.02	<0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1												
1124778	Vegetation	<0.01	4.1	<0.02	<0.001	0.02	<0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1												
1124779	Vegetation	<0.01	7.9	<0.02	<0.001	0.01	0.003	0.04	<0.02	<1	<0.1	<0.01	<2	<1												
1124780	Vegetation	<0.01	3.7	<0.02	<0.001	0.02	<0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1												
1124781	Vegetation	<0.01	2.5	<0.02	<0.001	0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1												
1124782	Vegetation	<0.01	10.0	<0.02	<0.001	0.02	<0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1												
1124783	Vegetation	<0.01	6.3	<0.02	<0.001	0.02	<0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1												
1124784	Vegetation	<0.01	10.0	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1												
1124785	Vegetation	<0.01	5.1	<0.02	<0.001	0.01	<0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1												
1124786	Vegetation	<0.01	12.0	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1												
1124787	Vegetation	<0.01	5.9	<0.02	<0.001	0.01	<0.001	0.03	<0.02	<1	<0.1	0.04	<2	<1												



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Project: None Given  
Report Date: November 21, 2016

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# CERTIFICATE OF ANALYSIS

# VAN16001903.1

	Method Analyte Unit MDL	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.01	1	0.001	0.1	0.01	0.2	0.01	0.5	0.01	0.02	0.02	2	0.01	0.001
1124788	Vegetation	<0.01	4.76	0.38	9.8	4	0.3	0.13	211	0.004	0.2	<0.01	<0.2	<0.01	19.3	0.06	<0.02	<0.02	<2	0.53	0.045
1124789	Vegetation	<0.01	4.18	0.20	11.6	<2	0.1	0.03	73	0.006	<0.1	<0.01	<0.2	<0.01	11.9	0.04	<0.02	<0.02	<2	0.64	0.034
1124790	Vegetation	<0.01	4.00	0.49	7.5	3	0.2	0.04	117	0.006	<0.1	<0.01	<0.2	<0.01	14.6	0.04	<0.02	<0.02	<2	0.66	0.028
1124791	Vegetation	<0.01	4.84	0.14	14.2	3	0.7	0.16	74	0.005	<0.1	<0.01	<0.2	<0.01	14.7	<0.01	<0.02	<0.02	<2	0.38	0.070
1124792	Vegetation	0.06	5.77	0.14	27.3	10	0.1	0.02	35	0.007	<0.1	<0.01	<0.2	<0.01	10.3	0.02	<0.02	<0.02	<2	0.75	0.032
1124793	Vegetation	0.49	5.68	0.09	21.8	8	0.1	0.03	36	0.008	<0.1	<0.01	<0.2	<0.01	12.2	0.02	<0.02	<0.02	<2	0.85	0.037
1124794	Vegetation	0.42	5.46	0.07	22.7	16	0.4	0.35	445	0.004	<0.1	<0.01	<0.2	<0.01	10.9	0.03	<0.02	<0.02	<2	0.33	0.045
1124795	Vegetation	<0.01	3.31	0.07	33.1	<2	0.3	0.06	80	0.004	<0.1	<0.01	<0.2	<0.01	60.2	0.10	<0.02	<0.02	<2	0.41	0.061
1124796	Vegetation	<0.01	4.60	0.08	39.2	4	<0.1	0.05	84	0.006	<0.1	<0.01	<0.2	<0.01	14.5	<0.01	<0.02	<0.02	<2	0.84	0.032
1124797	Vegetation	<0.01	4.95	1.11	18.1	3	0.2	0.05	422	0.006	<0.1	<0.01	<0.2	<0.01	34.0	0.08	<0.02	<0.02	<2	0.74	0.036
1124798	Vegetation	0.06	4.35	0.19	34.0	41	0.1	0.14	35	0.004	<0.1	<0.01	<0.2	<0.01	11.7	<0.01	<0.02	<0.02	<2	0.45	0.025
1124799	Vegetation	<0.01	3.20	0.56	12.4	4	0.2	0.04	270	0.004	<0.1	<0.01	<0.2	<0.01	23.5	0.06	<0.02	<0.02	<2	0.50	0.034
1124800	Vegetation	<0.01	4.36	0.88	19.1	3	0.2	0.08	383	0.005	<0.1	<0.01	<0.2	<0.01	34.6	0.07	<0.02	<0.02	<2	0.60	0.033
1124801	Vegetation	0.29	5.92	0.08	17.8	10	0.1	0.16	208	0.006	<0.1	<0.01	<0.2	<0.01	11.1	0.03	<0.02	<0.02	<2	0.51	0.057
1124802	Vegetation	0.13	6.75	0.16	53.4	5	0.2	0.04	229	0.006	<0.1	<0.01	<0.2	<0.01	10.3	<0.01	<0.02	<0.02	<2	0.63	0.029
1124803	Vegetation	0.05	5.52	0.11	28.6	4	0.2	0.04	212	0.005	<0.1	<0.01	<0.2	<0.01	11.7	0.01	<0.02	<0.02	<2	0.43	0.039
1124804	Vegetation	<0.01	4.41	0.19	38.0	2	0.1	0.18	429	0.005	<0.1	<0.01	<0.2	<0.01	11.4	0.03	<0.02	<0.02	<2	0.46	0.037
1124805	Vegetation	<0.01	4.43	0.15	41.8	4	<0.1	0.07	133	0.006	<0.1	<0.01	<0.2	<0.01	11.1	<0.01	<0.02	<0.02	<2	0.69	0.037
1124806	Vegetation	<0.01	4.38	0.19	23.5	<2	<0.1	0.04	31	0.008	<0.1	<0.01	<0.2	<0.01	12.2	<0.01	<0.02	<0.02	<2	0.94	0.032
1124807	Vegetation	0.79	5.92	0.20	35.6	2	0.1	0.02	6	0.007	<0.1	<0.01	<0.2	<0.01	10.2	<0.01	<0.02	<0.02	<2	0.91	0.044
1124808	Vegetation	0.60	5.25	0.12	43.3	3	0.1	0.03	14	0.007	<0.1	<0.01	<0.2	<0.01	11.8	<0.01	<0.02	<0.02	<2	0.77	0.044
1124809	Vegetation	0.70	8.31	0.06	31.4	2	0.2	0.03	45	0.005	<0.1	<0.01	<0.2	<0.01	9.9	<0.01	<0.02	<0.02	<2	0.58	0.050
1124810	Vegetation	0.05	6.75	0.21	43.9	19	0.2	0.02	390	0.007	<0.1	<0.01	<0.2	<0.01	13.9	0.02	<0.02	<0.02	<2	0.72	0.050
1124811	Vegetation	0.05	7.45	0.08	38.7	9	0.2	0.08	95	0.005	<0.1	<0.01	<0.2	<0.01	10.3	<0.01	<0.02	<0.02	<2	0.51	0.034
1124812	Vegetation	0.05	4.89	0.14	43.6	7	0.2	0.12	325	0.005	<0.1	<0.01	<0.2	<0.01	10.7	0.05	<0.02	<0.02	<2	0.38	0.049
1124813	Vegetation	<0.01	4.16	0.19	31.0	<2	1.1	0.75	208	0.004	<0.1	<0.01	<0.2	<0.01	15.0	0.03	<0.02	<0.02	<2	0.26	0.054
1124814	Vegetation	0.03	6.22	0.07	22.3	2	0.3	0.14	459	0.006	<0.1	<0.01	<0.2	<0.01	7.3	0.04	0.02	<0.02	<2	0.32	0.056
1124815	Vegetation	0.06	4.92	0.12	37.3	4	0.1	0.11	234	0.005	<0.1	<0.01	<0.2	<0.01	11.0	0.02	<0.02	<0.02	<2	0.41	0.038
1124816	Vegetation	0.04	6.17	0.09	38.8	9	0.1	0.07	397	0.006	0.1	<0.01	<0.2	<0.01	9.6	0.02	<0.02	<0.02	<2	0.40	0.051
1124817	Vegetation	0.12	7.93	0.05	37.0	12	0.2	0.04	356	0.006	<0.1	<0.01	<0.2	<0.01	8.4	0.03	<0.02	<0.02	<2	0.41	0.069



**BUREAU** MINERAL LABORATORIES  
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**Client:** **Gossan Resources Ltd.**  
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**Project:** None Given  
**Report Date:** November 21, 2016

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**Part:** 2 of 3

# CERTIFICATE OF ANALYSIS

VAN16001903.1

Method	Analyte	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
Unit		ppm	ppm	%	ppm	ppm	ppm	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL		0.01	0.1	0.001	0.1	1	1	0.01	0.001	0.01	0.1	0.1	0.02	0.01	1	0.1	0.02	0.1	0.005	0.01	0.001
1124788	Vegetation	<0.01	1.2	0.040	55.6	1	7	<0.01	<0.001	0.20	<0.1	0.2	<0.02	0.03	<1	0.3	<0.02	<0.1	0.020	0.03	<0.001
1124789	Vegetation	<0.01	1.2	0.038	15.2	1	6	<0.01	0.002	0.20	<0.1	0.1	<0.02	0.05	<1	0.3	<0.02	<0.1	0.011	<0.01	<0.001
1124790	Vegetation	<0.01	1.2	0.028	28.8	1	6	<0.01	0.002	0.18	<0.1	0.3	<0.02	0.05	6	0.2	<0.02	<0.1	0.017	<0.01	0.001
1124791	Vegetation	<0.01	1.2	0.055	72.9	2	4	<0.01	0.001	0.19	<0.1	0.2	<0.02	0.05	2	0.3	<0.02	<0.1	0.030	0.02	<0.001
1124792	Vegetation	<0.01	1.3	0.018	11.3	1	5	<0.01	0.001	0.24	<0.1	0.1	<0.02	0.08	<1	0.2	<0.02	<0.1	0.036	<0.01	<0.001
1124793	Vegetation	<0.01	1.3	0.024	11.8	1	5	<0.01	0.001	0.20	<0.1	0.2	<0.02	0.09	<1	0.2	<0.02	<0.1	0.011	<0.01	<0.001
1124794	Vegetation	0.01	1.2	0.053	13.4	1	5	<0.01	0.001	0.16	<0.1	0.2	<0.02	0.10	<1	0.3	<0.02	<0.1	0.021	0.02	<0.001
1124795	Vegetation	0.43	1.2	0.073	157.2	2	8	<0.01	<0.001	0.22	<0.1	0.3	<0.02	0.06	2	0.2	<0.02	<0.1	0.007	0.03	<0.001
1124796	Vegetation	<0.01	1.3	0.035	9.2	<1	4	<0.01	0.001	0.13	<0.1	0.1	<0.02	<0.01	2	0.3	<0.02	<0.1	0.015	0.02	<0.001
1124797	Vegetation	0.02	1.1	0.040	106.5	1	5	<0.01	0.002	0.17	<0.1	0.2	<0.02	0.03	1	0.3	<0.02	<0.1	0.013	<0.01	<0.001
1124798	Vegetation	<0.01	1.2	0.037	19.2	<1	5	<0.01	0.001	0.12	<0.1	0.2	<0.02	0.05	5	0.3	<0.02	<0.1	0.012	<0.01	<0.001
1124799	Vegetation	0.01	1.2	0.034	75.5	1	7	<0.01	<0.001	0.14	<0.1	0.2	<0.02	0.05	2	0.3	<0.02	<0.1	0.011	0.03	<0.001
1124800	Vegetation	0.02	1.2	0.035	76.5	1	7	<0.01	0.001	0.15	<0.1	0.2	<0.02	0.05	4	0.1	<0.02	<0.1	0.047	<0.01	<0.001
1124801	Vegetation	<0.01	1.2	0.069	9.0	2	6	<0.01	0.001	0.21	<0.1	0.2	0.02	0.06	4	0.2	<0.02	<0.1	0.216	<0.01	<0.001
1124802	Vegetation	<0.01	1.2	0.057	6.7	1	6	<0.01	0.001	0.15	<0.1	0.2	<0.02	0.07	6	0.3	<0.02	<0.1	0.032	0.02	<0.001
1124803	Vegetation	<0.01	1.2	0.042	9.2	1	5	<0.01	0.001	0.17	<0.1	0.1	<0.02	0.08	<1	0.3	<0.02	<0.1	0.014	<0.01	<0.001
1124804	Vegetation	<0.01	1.2	0.029	11.0	1	5	<0.01	0.001	0.15	<0.1	0.2	0.02	0.07	3	0.2	<0.02	<0.1	0.027	0.02	<0.001
1124805	Vegetation	<0.01	1.3	0.032	6.8	1	5	<0.01	<0.001	0.17	<0.1	<0.1	<0.02	0.09	<1	0.2	<0.02	<0.1	0.019	<0.01	<0.001
1124806	Vegetation	<0.01	1.5	0.027	5.3	1	5	<0.01	<0.001	0.18	<0.1	0.3	<0.02	0.10	<1	0.2	<0.02	<0.1	0.014	<0.01	<0.001
1124807	Vegetation	<0.01	1.3	0.028	5.3	1	5	<0.01	<0.001	0.18	<0.1	0.2	<0.02	0.11	2	0.3	<0.02	<0.1	0.008	<0.01	<0.001
1124808	Vegetation	<0.01	1.5	0.025	9.1	1	6	<0.01	<0.001	0.15	<0.1	0.1	<0.02	0.11	1	0.3	<0.02	<0.1	<0.005	0.01	<0.001
1124809	Vegetation	<0.01	1.4	0.033	9.1	1	7	<0.01	<0.001	0.26	<0.1	0.1	<0.02	0.12	<1	0.3	<0.02	<0.1	0.034	0.02	<0.001
1124810	Vegetation	<0.01	1.4	0.028	15.7	1	6	<0.01	<0.001	0.21	<0.1	0.2	<0.02	0.11	<1	0.3	<0.02	<0.1	0.075	0.02	<0.001
1124811	Vegetation	<0.01	1.3	0.024	8.1	1	6	<0.01	0.001	0.19	<0.1	0.2	<0.02	0.13	<1	0.3	<0.02	<0.1	0.070	<0.01	<0.001
1124812	Vegetation	<0.01	1.3	0.049	13.1	2	5	<0.01	<0.001	0.18	<0.1	0.2	<0.02	0.11	<1	0.3	<0.02	<0.1	0.057	<0.01	<0.001
1124813	Vegetation	0.06	1.3	0.080	32.2	2	5	<0.01	<0.001	0.16	<0.1	0.1	<0.02	0.10	4	0.2	<0.02	<0.1	0.551	0.02	<0.001
1124814	Vegetation	<0.01	1.2	0.055	20.1	2	6	<0.01	0.002	0.19	<0.1	0.1	<0.02	0.11	3	0.3	<0.02	<0.1	0.038	0.03	<0.001
1124815	Vegetation	<0.01	1.2	0.041	10.4	1	5	<0.01	0.001	0.18	<0.1	0.2	<0.02	0.09	<1	0.4	<0.02	<0.1	0.027	<0.01	<0.001
1124816	Vegetation	<0.01	1.3	0.038	12.0	2	5	<0.01	<0.001	0.19	<0.1	0.2	<0.02	0.10	2	0.3	<0.02	<0.1	0.048	0.02	<0.001
1124817	Vegetation	<0.01	1.2	0.038	14.4	2	6	<0.01	<0.001	0.22	<0.1	0.3	<0.02	0.11	<1	0.3	<0.02	<0.1	0.075	0.02	<0.001

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only.



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**Project:** None Given  
**Report Date:** November 21, 2016

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**Part:** 3 of 3

# CERTIFICATE OF ANALYSIS

VAN16001903.1

Method Analyte	Unit	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt
MDL		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppb	ppb	ppb
		0.01	0.1	0.02	0.001	0.01	0.001	0.01	0.02	1	0.1	0.01	2	1
1124788	Vegetation	<0.01	6.3	<0.02	<0.001	<0.01	<0.001	0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124789	Vegetation	<0.01	7.3	<0.02	<0.001	0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124790	Vegetation	<0.01	5.6	<0.02	<0.001	0.02	<0.001	0.01	<0.02	<1	<0.1	0.01	<2	<1
1124791	Vegetation	<0.01	11.1	<0.02	<0.001	0.02	<0.001	0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124792	Vegetation	<0.01	8.4	<0.02	<0.001	0.02	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124793	Vegetation	<0.01	6.6	<0.02	<0.001	0.02	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124794	Vegetation	<0.01	5.8	<0.02	<0.001	0.02	<0.001	0.04	<0.02	<1	<0.1	<0.01	<2	<1
1124795	Vegetation	<0.01	6.6	<0.02	<0.001	0.01	0.028	0.22	<0.02	<1	<0.1	0.02	<2	<1
1124796	Vegetation	0.03	3.2	<0.02	0.003	0.03	0.003	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124797	Vegetation	0.02	6.7	<0.02	0.002	0.02	0.003	0.04	<0.02	<1	<0.1	<0.01	<2	<1
1124798	Vegetation	0.01	4.6	<0.02	0.002	0.02	0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124799	Vegetation	<0.01	8.3	<0.02	<0.001	0.02	<0.001	0.03	<0.02	<1	<0.1	<0.01	<2	<1
1124800	Vegetation	<0.01	10.6	<0.02	0.001	0.02	0.006	0.03	<0.02	<1	<0.1	0.01	<2	<1
1124801	Vegetation	<0.01	10.5	<0.02	<0.001	0.02	<0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124802	Vegetation	<0.01	4.4	<0.02	0.001	0.03	0.003	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124803	Vegetation	<0.01	5.2	<0.02	<0.001	0.02	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124804	Vegetation	<0.01	5.3	<0.02	<0.001	0.03	<0.001	0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124805	Vegetation	<0.01	6.1	<0.02	0.001	0.02	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124806	Vegetation	<0.01	4.6	<0.02	0.001	0.02	<0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124807	Vegetation	<0.01	4.7	<0.02	0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124808	Vegetation	<0.01	4.3	<0.02	0.001	0.02	<0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124809	Vegetation	<0.01	11.5	<0.02	<0.001	0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124810	Vegetation	<0.01	5.5	<0.02	<0.001	0.03	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124811	Vegetation	<0.01	5.6	<0.02	0.001	0.02	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124812	Vegetation	<0.01	5.9	<0.02	<0.001	0.02	<0.001	0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124813	Vegetation	<0.01	12.3	<0.02	<0.001	0.03	0.004	0.08	<0.02	<1	<0.1	<0.01	<2	<1
1124814	Vegetation	<0.01	7.9	<0.02	<0.001	0.01	<0.001	0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124815	Vegetation	<0.01	5.8	<0.02	<0.001	0.02	<0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124816	Vegetation	<0.01	6.0	<0.02	<0.001	0.03	<0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124817	Vegetation	<0.01	8.1	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1





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**Project:** None Given  
**Report Date:** November 21, 2016

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**Part:** 1 of 3

# CERTIFICATE OF ANALYSIS

# VAN16001903.1

Method Analyte	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101
	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	
Unit	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	
MDL	0.01	0.01	0.01	0.1	2	0.1	0.01	1	0.001	0.1	0.01	0.2	0.01	0.5	0.01	0.02	0.02	2	0.01	0.001	
1124818	Vegetation	0.15	4.68	0.17	47.8	10	0.1	0.04	549	0.007	<0.1	<0.01	<0.2	<0.01	8.4	0.06	<0.02	<0.02	<2	0.50	0.054
1124819	Vegetation	0.02	3.28	0.07	32.8	4	<0.1	0.02	227	0.004	<0.1	<0.01	<0.2	<0.01	8.2	0.02	<0.02	<0.02	<2	0.35	0.032
1124820	Vegetation	0.14	5.18	0.08	24.0	4	0.1	0.02	244	0.005	<0.1	<0.01	<0.2	<0.01	9.0	0.01	<0.02	<0.02	<2	0.41	0.038
1124821	Vegetation	0.13	4.81	0.13	27.8	4	0.1	0.04	150	0.007	<0.1	<0.01	<0.2	<0.01	12.6	0.01	<0.02	<0.02	<2	0.72	0.033
1124822	Vegetation	0.08	6.91	0.09	34.4	6	0.1	0.09	93	0.006	<0.1	<0.01	<0.2	<0.01	11.3	<0.01	<0.02	<0.02	<2	0.59	0.051
1124823	Vegetation	0.05	6.74	0.15	43.6	3	0.1	0.11	472	0.007	<0.1	<0.01	<0.2	<0.01	13.9	0.04	<0.02	<0.02	<2	0.65	0.050
1124824	Vegetation	0.02	6.45	0.09	40.9	11	<0.1	0.04	103	0.008	<0.1	<0.01	<0.2	<0.01	17.2	0.01	<0.02	<0.02	<2	0.98	0.034
1124825	Vegetation	0.16	5.05	0.20	23.3	<2	0.2	0.10	126	0.006	<0.1	<0.01	<0.2	<0.01	11.3	0.01	<0.02	<0.02	<2	0.60	0.030
1124826	Vegetation	<0.01	4.40	0.11	34.2	9	<0.1	0.04	194	0.007	<0.1	<0.01	<0.2	<0.01	16.0	0.02	<0.02	<0.02	<2	0.82	0.034
1124827	Vegetation	<0.01	3.87	0.06	36.0	6	<0.1	0.03	86	0.007	<0.1	<0.01	<0.2	<0.01	15.7	0.01	<0.02	<0.02	<2	0.80	0.023
1124828	Vegetation	<0.01	5.92	0.12	19.6	<2	1.5	0.12	167	0.003	<0.1	<0.01	<0.2	<0.01	10.5	0.02	<0.02	<0.02	<2	0.31	0.067
1124829	Vegetation	<0.01	3.72	0.05	27.0	2	0.2	0.08	13	0.004	<0.1	<0.01	<0.2	<0.01	30.1	0.03	<0.02	<0.02	<2	0.32	0.054
1124830	Vegetation	<0.01	3.17	0.15	50.4	<2	0.2	0.03	189	0.005	<0.1	<0.01	<0.2	<0.01	42.8	0.24	<0.02	<0.02	<2	0.62	0.047
1124831	Vegetation	0.06	4.84	0.07	32.6	3	<0.1	0.04	347	0.005	0.2	<0.01	<0.2	<0.01	9.8	0.03	<0.02	<0.02	<2	0.49	0.052
1124832	Vegetation	0.07	5.81	0.12	38.9	4	0.1	0.06	334	0.005	0.1	<0.01	<0.2	<0.01	11.3	0.02	<0.02	<0.02	<2	0.51	0.047
1124833	Vegetation	<0.01	3.58	0.06	24.0	2	0.5	0.10	44	0.004	0.1	<0.01	0.2	<0.01	34.7	0.12	<0.02	<0.02	<2	0.44	0.054
1124834	Vegetation	<0.01	3.60	0.08	44.0	<2	0.3	0.05	119	0.005	0.2	<0.01	<0.2	<0.01	42.6	0.15	<0.02	<0.02	<2	0.47	0.046
1124835	Vegetation	<0.01	4.16	0.21	44.9	5	0.6	0.18	51	0.004	0.2	<0.01	<0.2	<0.01	35.1	<0.01	<0.02	<0.02	<2	0.37	0.058
1124836	Vegetation	<0.01	4.40	0.11	27.8	6	1.5	0.17	74	0.004	<0.1	<0.01	<0.2	<0.01	40.9	0.01	<0.02	<0.02	<2	0.42	0.086
1124837	Vegetation	0.07	4.60	0.10	59.4	3	0.1	0.04	234	0.007	0.1	<0.01	<0.2	<0.01	17.1	0.01	<0.02	<0.02	<2	1.18	0.024
1124838	Vegetation	0.10	3.51	0.10	27.3	3	<0.1	0.03	59	0.006	<0.1	<0.01	<0.2	<0.01	10.9	<0.01	<0.02	<0.02	<2	0.80	0.036
1124839	Vegetation	0.18	3.72	0.04	24.9	4	0.1	0.02	81	0.006	0.3	<0.01	<0.2	<0.01	9.4	<0.01	<0.02	<0.02	<2	0.72	0.038
1124840	Vegetation	0.13	6.44	0.05	23.5	2	0.1	0.04	240	0.005	<0.1	<0.01	<0.2	<0.01	9.0	<0.01	<0.02	<0.02	<2	0.64	0.048
1124841	Vegetation	0.07	3.42	0.16	25.6	4	0.1	0.02	177	0.005	<0.1	<0.01	<0.2	<0.01	9.2	0.01	<0.02	<0.02	<2	0.63	0.039
1124842	Vegetation	0.07	4.90	0.09	20.6	3	<0.1	0.02	163	0.005	<0.1	<0.01	0.3	<0.01	9.2	<0.01	<0.02	<0.02	<2	0.60	0.052
1124843	Vegetation	0.07	4.97	0.06	21.9	4	0.2	<0.01	157	0.006	<0.1	<0.01	<0.2	<0.01	7.1	<0.01	<0.02	<0.02	<2	0.56	0.055
1124844	Vegetation	0.41	4.41	0.06	22.0	4	0.1	0.01	138	0.004	0.3	<0.01	0.2	<0.01	7.2	<0.01	<0.02	<0.02	<2	0.48	0.033
1124845	Vegetation	<0.01	5.26	0.06	19.3	<2	2.1	0.28	61	0.004	0.2	<0.01	<0.2	<0.01	26.8	0.01	<0.02	<0.02	<2	0.32	0.073
1124846	Vegetation	<0.01	4.05	0.09	12.6	2	2.1	0.12	61	0.003	0.2	<0.01	<0.2	<0.01	31.9	<0.01	<0.02	<0.02	<2	0.24	0.069
1124847	Vegetation	0.14	5.81	0.05	21.3	5	<0.1	0.02	121	0.005	<0.1	<0.01	<0.2	<0.01	7.5	<0.01	<0.02	<0.02	<2	0.58	0.052



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# CERTIFICATE OF ANALYSIS

# VAN16001903.1

Method	Analyte	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
Unit		ppm	ppm	%	ppm	ppm	ppm	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL		0.01	0.1	0.001	0.1	1	1	0.01	0.001	0.01	0.1	0.1	0.02	0.01	1	0.1	0.02	0.1	0.005	0.01	0.001
1124818	Vegetation	0.01	1.2	0.030	16.1	2	6	<0.01	<0.001	0.22	<0.1	0.2	<0.02	0.08	4	0.2	<0.02	<0.1	0.079	0.02	0.004
1124819	Vegetation	<0.01	1.4	0.033	10.3	1	5	<0.01	<0.001	0.17	<0.1	0.2	<0.02	0.08	<1	0.3	<0.02	<0.1	0.037	<0.01	<0.001
1124820	Vegetation	<0.01	1.2	0.022	9.2	1	5	<0.01	<0.001	0.16	<0.1	0.2	<0.02	0.10	<1	0.3	<0.02	<0.1	0.041	<0.01	<0.001
1124821	Vegetation	<0.01	1.3	0.025	7.5	1	4	<0.01	<0.001	0.15	<0.1	0.2	<0.02	0.10	2	0.3	<0.02	<0.1	0.007	0.02	<0.001
1124822	Vegetation	<0.01	1.4	0.037	5.2	2	5	<0.01	<0.001	0.22	<0.1	0.1	<0.02	0.11	2	0.2	<0.02	<0.1	0.016	0.01	<0.001
1124823	Vegetation	<0.01	1.2	0.032	13.1	1	5	<0.01	<0.001	0.20	<0.1	0.2	<0.02	0.11	<1	0.3	<0.02	<0.1	0.019	0.02	<0.001
1124824	Vegetation	<0.01	1.3	0.020	10.4	1	5	<0.01	0.001	0.15	<0.1	0.1	<0.02	0.11	5	0.3	<0.02	<0.1	0.035	0.01	<0.001
1124825	Vegetation	<0.01	1.3	0.031	6.6	1	5	<0.01	0.001	0.20	<0.1	0.1	<0.02	0.12	<1	0.2	<0.02	<0.1	0.022	0.04	<0.001
1124826	Vegetation	<0.01	1.3	0.028	11.3	1	5	<0.01	0.001	0.17	<0.1	<0.1	<0.02	<0.01	4	0.2	<0.02	<0.1	0.062	0.01	0.001
1124827	Vegetation	0.01	1.3	0.022	14.1	<1	5	<0.01	0.001	0.16	<0.1	0.2	<0.02	0.03	2	0.2	<0.02	<0.1	0.014	<0.01	<0.001
1124828	Vegetation	0.01	1.3	0.049	45.0	2	5	<0.01	<0.001	0.16	<0.1	0.2	<0.02	0.05	<1	0.2	<0.02	<0.1	0.111	<0.01	<0.001
1124829	Vegetation	0.17	1.1	0.047	72.6	1	6	<0.01	<0.001	0.14	<0.1	0.2	<0.02	0.05	3	0.1	<0.02	<0.1	0.011	0.02	0.001
1124830	Vegetation	0.21	1.2	0.073	164.4	1	8	<0.01	<0.001	0.18	<0.1	0.1	<0.02	0.03	<1	0.2	<0.02	<0.1	0.039	0.01	<0.001
1124831	Vegetation	<0.01	1.2	0.038	14.4	1	5	<0.01	0.001	0.18	<0.1	<0.1	<0.02	0.02	<1	0.2	<0.02	<0.1	0.051	<0.01	<0.001
1124832	Vegetation	<0.01	1.3	0.035	11.1	1	4	<0.01	0.001	0.18	<0.1	0.2	<0.02	0.03	3	0.2	<0.02	<0.1	0.026	0.01	<0.001
1124833	Vegetation	1.83	1.3	0.068	91.7	1	8	<0.01	0.001	0.22	<0.1	0.2	<0.02	0.02	2	0.3	<0.02	<0.1	0.018	<0.01	<0.001
1124834	Vegetation	0.41	1.4	0.054	175.9	2	5	<0.01	<0.001	0.16	<0.1	0.3	<0.02	0.04	5	0.3	<0.02	<0.1	0.014	0.03	<0.001
1124835	Vegetation	0.50	1.5	0.066	76.1	2	4	<0.01	<0.001	0.11	<0.1	0.2	<0.02	0.06	3	0.3	<0.02	<0.1	0.057	<0.01	<0.001
1124836	Vegetation	0.14	1.5	0.082	100.7	2	6	<0.01	<0.001	0.18	<0.1	0.2	<0.02	0.08	4	0.3	<0.02	<0.1	0.068	<0.01	<0.001
1124837	Vegetation	<0.01	1.4	0.012	12.0	<1	5	<0.01	<0.001	0.17	<0.1	0.2	<0.02	0.09	2	0.2	<0.02	<0.1	0.015	<0.01	<0.001
1124838	Vegetation	<0.01	1.4	0.028	7.4	1	5	<0.01	<0.001	0.20	<0.1	0.2	<0.02	0.11	4	0.2	<0.02	<0.1	0.005	<0.01	<0.001
1124839	Vegetation	<0.01	1.5	0.025	6.2	1	4	<0.01	<0.001	0.17	<0.1	0.3	<0.02	0.12	<1	0.2	<0.02	<0.1	0.009	<0.01	<0.001
1124840	Vegetation	<0.01	1.3	0.031	7.0	2	4	<0.01	<0.001	0.17	<0.1	0.1	<0.02	0.13	2	0.1	<0.02	<0.1	0.016	0.02	<0.001
1124841	Vegetation	<0.01	1.4	0.024	6.8	1	4	<0.01	0.001	0.17	<0.1	0.2	<0.02	0.12	2	0.3	<0.02	<0.1	0.015	0.01	<0.001
1124842	Vegetation	<0.01	1.5	0.033	8.6	2	5	<0.01	0.001	0.21	<0.1	0.2	<0.02	0.12	<1	0.2	<0.02	<0.1	0.012	0.02	<0.001
1124843	Vegetation	<0.01	1.4	0.036	5.1	2	5	<0.01	0.001	0.20	<0.1	0.2	<0.02	0.10	<1	0.1	<0.02	<0.1	0.033	0.02	<0.001
1124844	Vegetation	<0.01	1.5	0.021	5.4	1	5	<0.01	<0.001	0.18	<0.1	0.2	<0.02	0.10	<1	0.2	<0.02	<0.1	0.016	<0.01	<0.001
1124845	Vegetation	0.03	1.2	0.061	43.7	2	6	<0.01	<0.001	0.20	<0.1	0.1	<0.02	0.13	1	0.2	<0.02	<0.1	0.304	<0.01	<0.001
1124846	Vegetation	0.09	1.4	0.059	76.5	2	4	<0.01	<0.001	0.17	<0.1	0.2	<0.02	0.11	<1	0.2	<0.02	<0.1	0.142	<0.01	<0.001
1124847	Vegetation	<0.01	1.5	0.030	12.3	1	6	<0.01	<0.001	0.19	<0.1	0.2	<0.02	0.11	<1	0.2	<0.02	<0.1	0.027	<0.01	<0.001



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**Project:** None Given  
**Report Date:** November 21, 2016

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# CERTIFICATE OF ANALYSIS

VAN16001903.1

Method	Analyte	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt
Unit		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppb	ppb
MDL		0.01	0.1	0.02	0.001	0.01	0.001	0.01	0.02	1	0.1	0.01	2	1
1124818	Vegetation	<0.01	7.4	<0.02	<0.001	0.03	<0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124819	Vegetation	<0.01	5.2	<0.02	<0.001	0.02	<0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124820	Vegetation	<0.01	5.3	<0.02	<0.001	0.01	<0.001	0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124821	Vegetation	<0.01	3.2	<0.02	<0.001	0.02	<0.001	0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124822	Vegetation	<0.01	5.6	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124823	Vegetation	<0.01	5.2	<0.02	<0.001	0.02	<0.001	0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124824	Vegetation	<0.01	6.0	<0.02	<0.001	0.03	<0.001	0.03	<0.02	<1	<0.1	0.01	<2	<1
1124825	Vegetation	<0.01	6.9	<0.02	<0.001	0.02	<0.001	0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124826	Vegetation	<0.01	4.5	<0.02	<0.001	0.02	<0.001	0.02	<0.02	<1	<0.1	0.02	<2	<1
1124827	Vegetation	<0.01	3.2	<0.02	<0.001	0.02	<0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124828	Vegetation	<0.01	10.3	<0.02	<0.001	0.01	<0.001	0.03	<0.02	<1	<0.1	<0.01	<2	<1
1124829	Vegetation	<0.01	7.5	<0.02	<0.001	0.01	0.005	0.14	<0.02	<1	<0.1	<0.01	<2	<1
1124830	Vegetation	<0.01	8.4	<0.02	<0.001	0.02	0.004	0.13	<0.02	<1	<0.1	0.10	<2	<1
1124831	Vegetation	<0.01	6.3	<0.02	<0.001	0.02	<0.001	0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124832	Vegetation	<0.01	6.7	<0.02	<0.001	0.01	<0.001	0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124833	Vegetation	<0.01	6.9	<0.02	<0.001	0.02	0.155	0.72	<0.02	<1	<0.1	<0.01	<2	<1
1124834	Vegetation	<0.01	4.9	<0.02	<0.001	0.02	0.025	0.26	<0.02	<1	<0.1	0.04	<2	<1
1124835	Vegetation	<0.01	6.9	<0.02	<0.001	0.02	0.040	0.38	<0.02	<1	<0.1	<0.01	<2	<1
1124836	Vegetation	<0.01	9.0	<0.02	<0.001	0.02	0.012	0.13	<0.02	<1	<0.1	<0.01	<2	<1
1124837	Vegetation	<0.01	5.7	<0.02	<0.001	0.02	<0.001	0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124838	Vegetation	<0.01	6.9	<0.02	<0.001	0.03	<0.001	0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124839	Vegetation	<0.01	6.4	<0.02	<0.001	0.01	0.003	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124840	Vegetation	<0.01	6.1	<0.02	<0.001	0.02	0.002	0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124841	Vegetation	<0.01	5.6	<0.02	<0.001	0.02	0.004	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124842	Vegetation	<0.01	5.6	<0.02	<0.001	0.01	0.003	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124843	Vegetation	<0.01	9.0	<0.02	<0.001	0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124844	Vegetation	<0.01	6.5	<0.02	<0.001	0.01	0.004	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124845	Vegetation	<0.01	13.2	<0.02	<0.001	0.01	<0.001	0.03	<0.02	<1	<0.1	<0.01	<2	<1
1124846	Vegetation	<0.01	10.8	<0.02	<0.001	0.01	<0.001	0.04	<0.02	<1	<0.1	<0.01	<2	<1
1124847	Vegetation	<0.01	5.6	<0.02	<0.001	<0.01	0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1



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# CERTIFICATE OF ANALYSIS

# VAN16001903.1

Method Analyte Unit MDL	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	
	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	
	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	
	0.01	0.01	0.01	0.1	2	0.1	0.01	1	0.001	0.1	0.01	0.2	0.01	0.5	0.01	0.02	0.02	2	0.01	0.001	
1124848	Vegetation	0.10	5.15	0.13	34.5	4	0.2	0.03	148	0.006	<0.1	<0.01	<0.2	<0.01	13.8	<0.01	<0.02	<0.02	<2	0.65	0.045
1124849	Vegetation	0.11	5.61	0.11	44.9	7	0.2	0.04	469	0.005	0.3	<0.01	<0.2	<0.01	9.8	0.03	<0.02	<0.02	<2	0.53	0.037
1124850	Vegetation	0.24	5.09	0.08	34.6	9	0.1	0.05	444	0.007	<0.1	<0.01	0.4	<0.01	12.0	0.03	<0.02	<0.02	<2	0.76	0.034
1124851	Vegetation	0.02	6.10	0.12	52.0	9	0.2	0.03	171	0.006	<0.1	<0.01	0.2	<0.01	13.0	0.02	<0.02	<0.02	<2	0.78	0.035
1124852	Vegetation	0.05	5.12	0.10	22.8	<2	0.1	0.05	371	0.005	<0.1	<0.01	<0.2	<0.01	10.4	0.02	<0.02	<0.02	<2	0.55	0.029
1124853	Vegetation	0.04	3.47	0.14	29.1	<2	0.2	0.05	279	0.005	0.2	<0.01	0.2	<0.01	10.2	0.02	<0.02	<0.02	<2	0.61	0.037
1124854	Vegetation	0.02	4.44	0.15	30.6	3	0.1	0.04	124	0.005	<0.1	<0.01	<0.2	<0.01	10.1	0.01	<0.02	<0.02	<2	0.65	0.039
1124855	Vegetation	0.06	5.65	0.17	30.5	3	0.1	0.07	230	0.007	<0.1	<0.01	0.3	<0.01	11.7	0.02	<0.02	<0.02	<2	0.79	0.045
1124856	Vegetation	0.12	5.42	0.13	38.2	2	0.2	0.02	124	0.007	<0.1	<0.01	0.3	<0.01	8.9	0.02	<0.02	<0.02	<2	0.71	0.050
1124857	Vegetation	0.04	6.88	0.11	32.7	3	0.2	0.03	199	0.008	0.1	<0.01	<0.2	<0.01	13.9	0.01	<0.02	<0.02	<2	1.01	0.046
1124858	Vegetation	0.06	4.17	0.08	40.7	8	<0.1	0.03	96	0.006	<0.1	<0.01	<0.2	<0.01	10.8	<0.01	<0.02	<0.02	<2	0.77	0.033
1124859	Vegetation	0.07	3.78	0.11	42.2	5	0.1	0.03	120	0.007	<0.1	<0.01	0.2	<0.01	14.5	<0.01	<0.02	<0.02	<2	1.00	0.026
1124860	Vegetation	0.12	4.09	0.09	58.4	6	0.1	0.04	73	0.008	<0.1	<0.01	<0.2	<0.01	17.7	<0.01	0.02	<0.02	<2	1.20	0.027
1124861	Vegetation	0.20	3.60	0.05	24.1	5	0.1	0.02	72	0.004	0.1	<0.01	0.3	<0.01	9.8	0.01	<0.02	<0.02	<2	0.61	0.029
1124862	Vegetation	0.25	3.51	0.06	20.8	<2	<0.1	<0.01	58	0.006	<0.1	<0.01	0.3	<0.01	7.9	0.02	0.02	<0.02	<2	0.66	0.036
1124863	Vegetation	<0.01	4.53	0.16	33.8	3	0.2	0.01	146	0.007	<0.1	<0.01	<0.2	<0.01	11.6	0.02	0.02	<0.02	<2	1.21	0.039
1124864	Vegetation	0.48	5.87	0.07	27.2	4	0.1	0.01	20	0.005	0.1	<0.01	0.3	<0.01	7.7	<0.01	0.02	<0.02	<2	0.63	0.060
1124865	Vegetation	<0.01	6.44	0.14	32.1	37	0.3	0.15	59	0.007	<0.1	<0.01	<0.2	<0.01	16.7	0.01	<0.02	<0.02	<2	0.81	0.036
1124866	Vegetation	<0.01	3.23	0.84	26.3	4	0.1	0.14	436	0.006	<0.1	<0.01	<0.2	<0.01	44.8	0.07	<0.02	<0.02	<2	0.90	0.029
1124867	Vegetation	0.89	7.39	0.26	32.6	3	0.2	0.07	119	0.006	<0.1	<0.01	0.5	<0.01	12.1	0.01	<0.02	<0.02	<2	0.56	0.053
1124868	Vegetation	<0.01	4.85	0.19	14.2	5	0.4	0.07	518	0.004	<0.1	<0.01	<0.2	<0.01	21.7	0.05	<0.02	<0.02	<2	0.51	0.044
1124869	Vegetation	0.05	4.73	0.16	17.1	2	1.2	0.20	20	0.005	<0.1	<0.01	0.5	<0.01	37.7	<0.01	<0.02	<0.02	<2	0.52	0.058
1124870	Vegetation	0.03	7.80	0.15	38.5	14	0.1	0.05	171	0.005	<0.1	<0.01	<0.2	<0.01	12.4	<0.01	<0.02	<0.02	<2	0.64	0.049
1124871	Vegetation	0.46	5.87	0.07	40.6	8	<0.1	0.05	126	0.006	<0.1	<0.01	<0.2	<0.01	13.0	<0.01	0.02	<0.02	<2	0.82	0.036
1124872	Vegetation	0.57	6.63	0.08	22.9	5	0.1	0.04	101	0.004	<0.1	<0.01	0.3	<0.01	8.9	0.02	<0.02	<0.02	<2	0.47	0.052
1124873	Vegetation	<0.01	5.51	0.09	38.1	<2	0.7	0.17	209	0.003	<0.1	<0.01	0.2	<0.01	17.1	0.02	<0.02	<0.02	<2	0.29	0.072
1124874	Vegetation	<0.01	3.40	0.19	45.9	4	2.1	0.34	168	0.005	<0.1	<0.01	0.4	<0.01	41.9	0.02	<0.02	<0.02	<2	0.61	0.048
1124875	Vegetation	<0.01	7.55	0.15	38.7	<2	2.0	0.32	28	0.006	<0.1	<0.01	0.3	<0.01	40.5	0.02	<0.02	<0.02	<2	0.70	0.059
1124876	Vegetation	0.02	5.59	0.10	17.6	7	0.2	0.07	183	0.005	<0.1	<0.01	<0.2	<0.01	12.6	<0.01	<0.02	<0.02	<2	0.63	0.038
1124877	Vegetation	0.07	5.24	0.09	33.8	5	0.1	0.04	48	0.007	<0.1	<0.01	0.2	<0.01	13.7	0.02	<0.02	<0.02	<2	0.87	0.028



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**Project:** None Given  
**Report Date:** November 21, 2016

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**Part:** 2 of 3

# CERTIFICATE OF ANALYSIS

# VAN16001903.1

Method Analyte Unit MDL	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	
	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf	
	ppm	ppm	%	ppm	ppm	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	0.01	0.1	0.001	0.1	1	1	0.01	0.001	0.01	0.01	0.1	0.1	0.02	0.01	1	0.1	0.02	0.1	0.005	0.01	0.001
1124848	Vegetation	<0.01	1.4	0.035	8.3	1	5	<0.01	0.001	0.14	<0.1	0.4	<0.02	0.13	2	0.2	<0.02	<0.1	0.084	<0.01	<0.001
1124849	Vegetation	<0.01	1.4	0.037	15.2	1	5	<0.01	0.003	0.19	<0.1	0.2	<0.02	0.13	4	0.2	<0.02	<0.1	0.044	<0.01	0.002
1124850	Vegetation	<0.01	1.3	0.027	14.2	1	5	<0.01	0.002	0.18	<0.1	0.1	<0.02	0.12	<1	0.3	<0.02	<0.1	0.033	<0.01	<0.001
1124851	Vegetation	<0.01	1.4	0.029	16.7	1	5	<0.01	0.002	0.19	<0.1	0.3	<0.02	0.12	<1	0.2	<0.02	<0.1	0.038	<0.01	<0.001
1124852	Vegetation	<0.01	1.4	0.028	10.6	<1	4	<0.01	0.005	0.15	<0.1	0.3	<0.02	0.13	2	0.2	<0.02	<0.1	0.042	<0.01	<0.001
1124853	Vegetation	<0.01	1.4	0.029	11.9	2	5	<0.01	0.003	0.17	<0.1	0.2	<0.02	0.11	<1	0.2	<0.02	<0.1	0.018	<0.01	<0.001
1124854	Vegetation	<0.01	1.4	0.039	8.7	1	4	<0.01	0.003	0.18	<0.1	0.2	<0.02	0.12	3	0.3	<0.02	<0.1	0.026	<0.01	<0.001
1124855	Vegetation	<0.01	1.4	0.037	12.6	2	5	<0.01	0.004	0.21	<0.1	0.2	<0.02	0.12	<1	0.3	<0.02	<0.1	0.036	<0.01	<0.001
1124856	Vegetation	<0.01	1.4	0.042	6.1	2	5	<0.01	0.002	0.20	<0.1	0.3	<0.02	0.13	1	0.2	<0.02	<0.1	0.026	<0.01	<0.001
1124857	Vegetation	<0.01	1.4	0.023	7.5	1	6	<0.01	0.002	0.19	<0.1	0.1	<0.02	0.13	1	0.2	<0.02	<0.1	0.023	<0.01	<0.001
1124858	Vegetation	<0.01	1.4	0.025	8.3	<1	4	<0.01	0.003	0.17	<0.1	0.2	<0.02	0.02	<1	0.3	<0.02	<0.1	0.010	<0.01	<0.001
1124859	Vegetation	<0.01	1.4	0.017	9.7	1	5	<0.01	0.002	0.16	<0.1	0.1	<0.02	0.04	<1	0.3	<0.02	<0.1	0.014	0.01	<0.001
1124860	Vegetation	<0.01	1.3	0.024	9.7	1	5	<0.01	0.002	0.17	<0.1	0.3	<0.02	0.06	<1	0.2	<0.02	<0.1	0.025	<0.01	<0.001
1124861	Vegetation	<0.01	1.3	0.017	7.8	<1	5	<0.01	0.001	0.18	<0.1	0.1	<0.02	0.08	<1	0.3	<0.02	<0.1	0.024	<0.01	<0.001
1124862	Vegetation	<0.01	1.3	0.031	5.4	1	4	<0.01	0.001	0.16	<0.1	0.1	<0.02	0.08	<1	0.2	<0.02	<0.1	0.034	<0.01	<0.001
1124863	Vegetation	<0.01	1.3	0.026	10.3	1	4	<0.01	0.001	0.16	<0.1	0.1	<0.02	0.05	<1	0.2	<0.02	<0.1	0.019	<0.01	0.002
1124864	Vegetation	<0.01	1.4	0.027	5.9	2	6	<0.01	0.001	0.20	<0.1	0.2	<0.02	0.11	<1	0.2	<0.02	<0.1	0.041	<0.01	0.002
1124865	Vegetation	<0.01	1.4	0.026	8.0	1	6	<0.01	0.003	0.18	<0.1	0.2	<0.02	0.10	<1	0.2	<0.02	<0.1	0.010	<0.01	<0.001
1124866	Vegetation	0.04	1.1	0.034	46.9	1	5	<0.01	<0.001	0.14	<0.1	0.1	<0.02	<0.01	4	0.3	<0.02	<0.1	0.037	<0.01	<0.001
1124867	Vegetation	<0.01	1.4	0.029	11.0	1	5	<0.01	<0.001	0.19	<0.1	0.2	<0.02	<0.01	5	0.2	<0.02	<0.1	0.022	<0.01	<0.001
1124868	Vegetation	<0.01	1.1	0.045	35.4	1	7	<0.01	<0.001	0.20	<0.1	0.2	<0.02	<0.01	4	0.2	<0.02	<0.1	0.154	<0.01	<0.001
1124869	Vegetation	0.14	1.2	0.041	36.4	2	3	<0.01	<0.001	0.13	<0.1	0.1	<0.02	0.03	6	0.2	<0.02	<0.1	0.329	<0.01	<0.001
1124870	Vegetation	<0.01	1.2	0.043	10.6	1	5	<0.01	0.002	0.18	<0.1	0.2	<0.02	0.05	7	0.2	<0.02	<0.1	0.122	<0.01	<0.001
1124871	Vegetation	<0.01	1.3	0.022	8.0	1	6	<0.01	<0.001	0.21	<0.1	0.2	<0.02	0.05	5	0.2	<0.02	<0.1	0.022	<0.01	<0.001
1124872	Vegetation	<0.01	1.3	0.026	6.7	1	5	<0.01	<0.001	0.18	<0.1	<0.1	<0.02	0.09	2	0.2	<0.02	<0.1	0.038	<0.01	<0.001
1124873	Vegetation	0.32	1.2	0.059	30.4	2	5	<0.01	<0.001	0.17	<0.1	0.2	<0.02	0.05	3	0.2	<0.02	<0.1	0.202	<0.01	<0.001
1124874	Vegetation	0.61	1.2	0.054	61.0	2	6	<0.01	<0.001	0.14	<0.1	0.1	<0.02	0.09	2	0.2	<0.02	<0.1	0.182	<0.01	0.002
1124875	Vegetation	0.35	1.4	0.059	38.5	2	6	<0.01	<0.001	0.14	<0.1	0.3	<0.02	0.08	4	0.3	<0.02	<0.1	0.282	<0.01	<0.001
1124876	Vegetation	<0.01	1.2	0.022	9.7	1	4	<0.01	<0.001	0.18	<0.1	0.1	<0.02	0.09	8	0.2	<0.02	<0.1	0.021	<0.01	0.002
1124877	Vegetation	<0.01	1.4	0.024	7.9	1	5	<0.01	<0.001	0.20	<0.1	0.1	<0.02	0.09	6	0.2	<0.02	<0.1	0.021	0.01	<0.001



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**Project:** None Given  
**Report Date:** November 21, 2016

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# CERTIFICATE OF ANALYSIS

## VAN16001903.1

Method Analyte	Unit	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt
MDL		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppb	ppb
		0.01	0.1	0.02	0.001	0.01	0.001	0.01	0.02	1	0.1	0.01	2	1
1124848	Vegetation	<0.01	4.0	<0.02	<0.001	0.01	0.003	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124849	Vegetation	<0.01	6.7	<0.02	<0.001	0.05	0.004	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124850	Vegetation	<0.01	6.4	<0.02	<0.001	0.04	<0.001	0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124851	Vegetation	<0.01	7.5	<0.02	<0.001	0.03	0.004	0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124852	Vegetation	<0.01	5.4	<0.02	<0.001	0.03	<0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124853	Vegetation	<0.01	5.0	<0.02	<0.001	0.03	<0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124854	Vegetation	<0.01	4.7	<0.02	<0.001	0.04	<0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124855	Vegetation	<0.01	5.9	<0.02	<0.001	0.05	<0.001	0.03	<0.02	<1	<0.1	<0.01	<2	<1
1124856	Vegetation	<0.01	7.0	<0.02	<0.001	0.04	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124857	Vegetation	<0.01	6.0	<0.02	<0.001	0.05	0.002	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124858	Vegetation	<0.01	5.1	<0.02	<0.001	0.04	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124859	Vegetation	<0.01	5.3	<0.02	<0.001	0.03	<0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124860	Vegetation	<0.01	5.3	<0.02	<0.001	0.06	<0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124861	Vegetation	<0.01	7.2	<0.02	<0.001	0.03	0.003	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124862	Vegetation	<0.01	6.5	<0.02	<0.001	0.02	0.002	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124863	Vegetation	<0.01	4.2	<0.02	<0.001	0.03	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124864	Vegetation	<0.01	11.4	<0.02	<0.001	0.01	0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124865	Vegetation	<0.01	7.0	<0.02	<0.001	0.05	<0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124866	Vegetation	<0.01	8.7	<0.02	<0.001	0.02	0.003	0.04	<0.02	<1	<0.1	0.03	<2	<1
1124867	Vegetation	<0.01	6.3	<0.02	<0.001	0.02	0.003	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124868	Vegetation	<0.01	10.6	<0.02	<0.001	0.02	0.004	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124869	Vegetation	<0.01	9.3	<0.02	<0.001	0.04	0.002	0.09	<0.02	<1	<0.1	<0.01	<2	<1
1124870	Vegetation	<0.01	10.3	<0.02	<0.001	0.02	0.003	0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124871	Vegetation	<0.01	7.5	<0.02	<0.001	0.02	0.003	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124872	Vegetation	<0.01	8.1	<0.02	<0.001	0.01	0.003	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124873	Vegetation	<0.01	8.5	<0.02	<0.001	0.02	0.028	0.20	<0.02	<1	<0.1	<0.01	<2	<1
1124874	Vegetation	<0.01	10.4	<0.02	<0.001	0.02	0.048	0.31	<0.02	<1	<0.1	<0.01	<2	<1
1124875	Vegetation	<0.01	9.2	<0.02	<0.001	0.03	0.011	0.30	<0.02	<1	<0.1	<0.01	<2	<1
1124876	Vegetation	<0.01	5.1	<0.02	<0.001	0.02	0.004	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124877	Vegetation	<0.01	7.5	<0.02	<0.001	0.02	0.004	0.02	<0.02	<1	<0.1	<0.01	<2	<1



Bureau Veritas Commodities Canada Ltd.

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**Project:** None Given  
**Report Date:** November 21, 2016

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# CERTIFICATE OF ANALYSIS

## VAN16001903.1

Method Analyte	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101
	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	
	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	%	%	
Unit MDL	0.01	0.01	0.01	0.1	2	0.1	0.01	1	0.001	0.1	0.01	0.2	0.01	0.5	0.01	0.02	0.02	2	0.01	0.001	
1124878	Vegetation	0.10	6.50	0.09	39.7	6	0.2	0.05	63	0.005	<0.1	<0.01	<0.2	<0.01	11.7	<0.01	<0.02	<0.02	<2	0.71	0.036
1124879	Vegetation	<0.01	5.34	0.21	28.2	2	0.1	0.08	75	0.006	<0.1	<0.01	<0.2	<0.01	10.8	0.03	<0.02	<0.02	<2	0.72	0.060
1124880	Vegetation	0.06	6.38	0.10	24.6	2	0.1	0.05	259	0.006	<0.1	<0.01	<0.2	<0.01	6.7	<0.01	<0.02	<0.02	<2	0.45	0.055
1124881	Vegetation	0.94	3.21	0.13	26.1	6	0.1	0.04	163	0.005	0.1	<0.01	<0.2	<0.01	7.8	0.02	<0.02	<0.02	<2	0.62	0.030
1124882	Vegetation	<0.01	3.49	0.28	4.9	<2	1.7	0.22	37	0.004	<0.1	<0.01	<0.2	<0.01	15.0	<0.01	<0.02	<0.02	<2	0.39	0.053
1124883	Vegetation	<0.01	4.83	0.81	13.1	2	0.3	0.17	435	0.004	<0.1	<0.01	<0.2	<0.01	19.2	0.08	<0.02	<0.02	<2	0.47	0.039
1124884	Vegetation	<0.01	3.40	0.10	12.4	<2	1.5	0.19	82	0.004	<0.1	<0.01	<0.2	<0.01	18.9	0.01	<0.02	<0.02	<2	0.31	0.056
1124885	Vegetation	<0.01	5.17	0.17	11.3	3	0.3	0.04	248	0.005	<0.1	<0.01	<0.2	<0.01	13.3	0.05	<0.02	<0.02	<2	0.54	0.045
1124886	Vegetation	<0.01	4.25	0.11	32.7	5	0.2	0.06	158	0.007	0.1	<0.01	<0.2	<0.01	12.7	0.01	<0.02	<0.02	<2	0.82	0.023
1124887	Vegetation	<0.01	4.62	0.08	49.9	10	0.2	0.07	248	0.008	<0.1	<0.01	<0.2	<0.01	14.4	0.01	<0.02	<0.02	<2	0.94	0.035
1124888	Vegetation	<0.01	6.07	0.10	46.1	8	0.2	0.07	133	0.008	0.1	<0.01	<0.2	<0.01	13.6	<0.01	<0.02	<0.02	<2	1.01	0.036
1124889	Vegetation	<0.01	4.42	0.06	22.3	6	0.1	0.05	219	0.006	0.1	<0.01	<0.2	<0.01	8.9	<0.01	<0.02	<0.02	<2	0.60	0.042
1124890	Vegetation	<0.01	5.54	0.12	28.1	13	0.2	0.05	181	0.008	0.2	<0.01	<0.2	<0.01	13.7	<0.01	<0.02	<0.02	<2	0.95	0.041
1124891	Vegetation	<0.01	4.96	0.12	45.9	4	0.2	0.10	199	0.006	<0.1	<0.01	<0.2	<0.01	12.4	<0.01	0.02	<0.02	<2	0.72	0.051
1124892	Vegetation	<0.01	4.54	0.10	52.1	4	<0.1	0.06	128	0.007	<0.1	<0.01	<0.2	<0.01	9.4	0.01	<0.02	<0.02	<2	0.86	0.026
1124893	Vegetation	<0.01	4.92	0.17	11.3	3	0.1	0.03	138	0.008	<0.1	<0.01	<0.2	<0.01	19.5	0.02	<0.02	<0.02	<2	1.01	0.043
1124894	Vegetation	<0.01	4.27	0.36	11.0	2	0.3	0.03	313	0.005	<0.1	<0.01	<0.2	<0.01	21.7	0.05	0.02	<0.02	<2	0.58	0.056
1124895	Vegetation	<0.01	4.26	1.01	12.3	3	0.2	0.06	507	0.005	0.1	<0.01	<0.2	<0.01	14.0	0.07	0.03	<0.02	<2	0.50	0.045
1124896	Vegetation	<0.01	4.00	0.69	18.2	3	0.1	0.11	372	0.006	0.2	<0.01	<0.2	<0.01	26.9	0.07	<0.02	<0.02	<2	0.71	0.051
1124897	Vegetation	<0.01	6.17	0.21	11.5	3	0.3	0.09	430	0.004	<0.1	<0.01	<0.2	<0.01	14.4	0.09	<0.02	<0.02	<2	0.40	0.052
1124898	Vegetation	<0.01	4.52	0.37	11.8	<2	0.2	0.04	99	0.005	<0.1	<0.01	<0.2	<0.01	17.6	0.04	<0.02	<0.02	<2	0.79	0.064
1124899	Vegetation	<0.01	6.98	0.51	17.9	3	0.2	0.08	332	0.005	<0.1	<0.01	<0.2	<0.01	20.8	0.06	0.02	<0.02	<2	0.62	0.053
1124900	Vegetation	<0.01	3.62	0.41	10.3	2	0.2	0.03	111	0.004	<0.1	<0.01	<0.2	<0.01	15.1	0.03	0.02	<0.02	<2	0.42	0.059
1124901	Vegetation	<0.01	5.70	0.20	11.1	5	0.4	0.05	287	0.005	<0.1	<0.01	<0.2	<0.01	23.2	0.08	0.02	<0.02	<2	0.80	0.054
1124902	Vegetation	<0.01	4.63	0.46	9.5	3	0.3	0.08	354	0.004	<0.1	<0.01	<0.2	<0.01	15.0	0.07	<0.02	<0.02	<2	0.58	0.067
1124903	Vegetation	<0.01	4.44	0.28	7.8	3	0.2	0.08	124	0.004	<0.1	<0.01	<0.2	<0.01	18.0	0.04	<0.02	<0.02	<2	0.63	0.046
1124904	Vegetation	<0.01	3.70	0.18	13.2	4	0.1	0.04	425	0.004	<0.1	<0.01	<0.2	<0.01	18.6	0.08	<0.02	<0.02	<2	0.41	0.035
1124905	Vegetation	0.03	5.33	0.72	13.9	5	0.3	0.07	386	0.005	<0.1	<0.01	<0.2	<0.01	41.3	0.07	<0.02	<0.02	<2	0.62	0.065
1124906	Vegetation	<0.01	5.16	0.26	14.4	3	0.6	0.07	522	0.004	<0.1	<0.01	<0.2	<0.01	42.4	0.07	<0.02	<0.02	<2	0.57	0.071
1124907	Vegetation	<0.01	6.06	0.45	17.9	4	0.5	0.08	553	0.005	<0.1	<0.01	<0.2	<0.01	34.8	0.06	0.02	<0.02	<2	0.43	0.077



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**Project:** None Given  
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# CERTIFICATE OF ANALYSIS

**VAN16001903.1**

Method	Analyte	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
Unit		ppm	ppm	%	ppm	ppm	ppm	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm	
MDL		0.01	0.1	0.001	0.1	1	1	0.01	0.001	0.01	0.1	0.1	0.01	1	0.1	0.02	0.1	0.005	0.01	0.001	
1124878	Vegetation	<0.01	1.5	0.026	7.3	1	5	<0.01	<0.001	0.19	<0.1	0.2	<0.02	0.11	3	0.2	<0.02	<0.1	0.029	<0.01	<0.001
1124879	Vegetation	<0.01	1.4	0.034	6.7	2	6	<0.01	<0.001	0.15	<0.1	0.3	<0.02	0.10	6	0.2	<0.02	<0.1	0.019	0.02	<0.001
1124880	Vegetation	<0.01	1.4	0.040	12.3	2	6	<0.01	<0.001	0.18	<0.1	0.2	<0.02	0.12	2	0.3	<0.02	<0.1	0.055	<0.01	<0.001
1124881	Vegetation	<0.01	1.3	0.025	8.7	1	4	<0.01	<0.001	0.15	<0.1	0.1	<0.02	0.10	3	0.2	<0.02	<0.1	0.011	<0.01	0.002
1124882	Vegetation	0.05	1.4	0.050	22.1	2	4	<0.01	<0.001	0.13	<0.1	0.2	0.02	0.09	2	0.2	<0.02	<0.1	0.330	<0.01	<0.001
1124883	Vegetation	0.01	1.3	0.049	64.1	1	5	<0.01	<0.001	0.15	<0.1	0.3	<0.02	0.09	4	0.3	<0.02	<0.1	0.167	<0.01	0.002
1124884	Vegetation	0.07	1.4	0.060	55.4	2	4	<0.01	<0.001	0.15	<0.1	0.2	<0.02	0.09	5	0.2	<0.02	<0.1	0.034	<0.01	<0.001
1124885	Vegetation	<0.01	1.3	0.048	41.8	1	6	<0.01	<0.001	0.22	<0.1	0.2	<0.02	0.09	6	0.2	<0.02	<0.1	0.034	<0.01	<0.001
1124886	Vegetation	<0.01	1.4	0.017	12.4	1	5	<0.01	<0.001	0.20	<0.1	0.2	<0.02	0.10	3	0.3	<0.02	<0.1	0.019	<0.01	<0.001
1124887	Vegetation	<0.01	1.3	0.018	13.3	1	4	<0.01	<0.001	0.16	<0.1	0.2	<0.02	0.02	1	0.2	<0.02	<0.1	0.006	<0.01	<0.001
1124888	Vegetation	<0.01	1.4	0.021	12.0	1	5	<0.01	0.001	0.17	<0.1	0.2	<0.02	0.12	4	0.2	<0.02	<0.1	0.008	0.02	<0.001
1124889	Vegetation	<0.01	1.3	0.038	7.3	1	4	<0.01	<0.001	0.18	<0.1	0.3	<0.02	0.14	5	0.1	<0.02	<0.1	0.012	<0.01	<0.001
1124890	Vegetation	<0.01	1.4	0.039	10.9	2	5	<0.01	<0.001	0.20	<0.1	0.2	<0.02	0.12	<1	0.2	<0.02	<0.1	0.035	<0.01	0.002
1124891	Vegetation	<0.01	1.3	0.033	12.4	2	5	<0.01	<0.001	0.20	<0.1	0.2	<0.02	0.10	6	0.3	<0.02	<0.1	0.023	<0.01	<0.001
1124892	Vegetation	<0.01	1.4	0.025	21.3	1	4	<0.01	<0.001	0.17	<0.1	0.2	<0.02	0.13	4	0.2	<0.02	<0.1	0.009	<0.01	<0.001
1124893	Vegetation	<0.01	1.4	0.043	26.9	1	5	<0.01	<0.001	0.20	<0.1	0.2	<0.02	0.10	<1	0.3	<0.02	<0.1	0.011	<0.01	<0.001
1124894	Vegetation	0.01	1.2	0.048	76.3	2	6	<0.01	<0.001	0.17	<0.1	0.2	<0.02	0.09	5	0.2	<0.02	<0.1	0.015	<0.01	<0.001
1124895	Vegetation	<0.01	1.3	0.036	91.4	2	5	<0.01	<0.001	0.15	<0.1	0.1	<0.02	0.09	6	0.1	<0.02	<0.1	0.025	<0.01	<0.001
1124896	Vegetation	<0.01	1.4	0.032	62.2	2	5	<0.01	<0.001	0.16	<0.1	0.2	<0.02	0.10	5	0.2	<0.02	<0.1	0.037	0.02	<0.001
1124897	Vegetation	<0.01	1.3	0.040	84.5	2	5	<0.01	<0.001	0.18	<0.1	0.2	<0.02	0.12	6	0.1	<0.02	<0.1	0.117	<0.01	<0.001
1124898	Vegetation	<0.01	1.3	0.042	36.9	2	6	<0.01	<0.001	0.19	<0.1	0.2	<0.02	0.09	8	0.2	<0.02	<0.1	0.028	<0.01	<0.001
1124899	Vegetation	<0.01	1.3	0.038	61.8	2	6	<0.01	<0.001	0.19	<0.1	0.2	<0.02	0.10	3	0.1	<0.02	<0.1	0.103	<0.01	0.002
1124900	Vegetation	<0.01	1.4	0.031	49.8	2	5	<0.01	<0.001	0.18	<0.1	0.2	<0.02	0.11	<1	0.2	<0.02	<0.1	0.011	<0.01	<0.001
1124901	Vegetation	<0.01	1.1	0.048	116.2	1	6	<0.01	0.001	0.19	<0.1	<0.1	<0.02	0.01	<1	0.2	<0.02	<0.1	0.060	<0.01	<0.001
1124902	Vegetation	0.01	1.1	0.041	118.2	2	5	<0.01	<0.001	0.19	<0.1	0.2	<0.02	0.03	<1	0.3	<0.02	<0.1	0.022	<0.01	<0.001
1124903	Vegetation	<0.01	1.2	0.038	90.5	2	6	<0.01	<0.001	0.19	<0.1	0.2	<0.02	0.06	<1	0.2	<0.02	<0.1	0.016	<0.01	<0.001
1124904	Vegetation	<0.01	1.2	0.047	45.6	1	6	<0.01	<0.001	0.13	<0.1	0.1	<0.02	0.06	3	0.2	<0.02	<0.1	0.041	<0.01	<0.001
1124905	Vegetation	0.01	1.2	0.057	78.3	2	7	<0.01	0.002	0.21	<0.1	0.2	<0.02	0.06	1	0.3	<0.02	<0.1	0.025	<0.01	<0.001
1124906	Vegetation	<0.01	1.2	0.051	97.1	2	7	<0.01	<0.001	0.24	<0.1	<0.1	<0.02	0.07	<1	0.3	<0.02	<0.1	0.079	<0.01	0.002
1124907	Vegetation	<0.01	1.2	0.058	92.2	2	7	<0.01	<0.001	0.24	<0.1	<0.1	<0.02	0.07	<1	0.3	<0.02	<0.1	0.087	0.01	0.002





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**Project:** None Given  
**Report Date:** November 21, 2016

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# CERTIFICATE OF ANALYSIS

VAN16001903.1

Method	Analyte	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt
Unit		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppb	ppb
MDL		0.01	0.1	0.02	0.001	0.01	0.001	0.01	0.02	1	0.1	0.01	2	1
1124878	Vegetation	<0.01	6.9	<0.02	<0.001	0.01	0.003	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124879	Vegetation	<0.01	5.6	<0.02	<0.001	0.01	0.002	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124880	Vegetation	<0.01	7.0	<0.02	<0.001	<0.01	0.003	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124881	Vegetation	<0.01	4.8	<0.02	<0.001	0.01	0.003	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124882	Vegetation	<0.01	11.8	<0.02	<0.001	0.02	<0.001	0.06	<0.02	<1	<0.1	<0.01	<2	<1
1124883	Vegetation	<0.01	11.1	<0.02	<0.001	0.02	0.004	0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124884	Vegetation	<0.01	6.8	<0.02	<0.001	0.02	<0.001	0.07	<0.02	<1	<0.1	<0.01	<2	<1
1124885	Vegetation	<0.01	11.2	<0.02	<0.001	0.02	0.003	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124886	Vegetation	<0.01	5.0	<0.02	<0.001	0.04	0.005	0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124887	Vegetation	<0.01	4.3	<0.02	<0.001	0.02	0.002	0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124888	Vegetation	<0.01	4.9	<0.02	<0.001	0.03	0.005	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124889	Vegetation	<0.01	5.3	<0.02	<0.001	0.02	0.003	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124890	Vegetation	<0.01	7.3	<0.02	<0.001	0.07	<0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124891	Vegetation	<0.01	5.9	0.21	<0.001	0.03	0.003	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124892	Vegetation	<0.01	2.8	<0.02	<0.001	0.03	0.002	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124893	Vegetation	<0.01	6.0	<0.02	<0.001	0.02	0.004	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124894	Vegetation	<0.01	6.3	<0.02	<0.001	0.02	0.005	0.03	<0.02	<1	<0.1	<0.01	<2	<1
1124895	Vegetation	<0.01	6.0	<0.02	<0.001	0.02	0.005	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124896	Vegetation	<0.01	6.5	<0.02	<0.001	0.02	0.004	0.02	<0.02	<1	<0.1	0.03	<2	<1
1124897	Vegetation	<0.01	13.6	<0.02	<0.001	0.02	0.005	0.01	<0.02	<1	<0.1	0.01	<2	<1
1124898	Vegetation	<0.01	6.4	<0.02	<0.001	0.02	0.004	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124899	Vegetation	<0.01	11.4	<0.02	<0.001	0.02	0.005	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124900	Vegetation	<0.01	5.5	<0.02	<0.001	0.03	0.002	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124901	Vegetation	<0.01	9.1	<0.02	<0.001	0.03	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124902	Vegetation	<0.01	6.7	<0.02	<0.001	0.03	<0.001	0.02	<0.02	<1	<0.1	0.01	<2	<1
1124903	Vegetation	<0.01	8.7	<0.02	<0.001	0.03	<0.001	<0.01	<0.02	<1	<0.1	0.01	<2	<1
1124904	Vegetation	<0.01	7.3	0.04	<0.001	0.03	<0.001	0.01	<0.02	<1	<0.1	0.01	<2	<1
1124905	Vegetation	<0.01	12.0	<0.02	<0.001	0.02	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124906	Vegetation	<0.01	19.7	<0.02	<0.001	0.01	0.004	<0.01	<0.02	<1	<0.1	0.01	<2	<1
1124907	Vegetation	<0.01	14.7	<0.02	<0.001	0.01	0.004	<0.01	<0.02	<1	<0.1	<0.01	<2	<1



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**Project:** None Given  
**Report Date:** November 21, 2016

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# CERTIFICATE OF ANALYSIS

## VAN16001903.1

Method Analyte Unit MDL	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101
	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	
	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	%	%	%
	0.01	0.01	0.01	0.1	2	0.1	0.01	1	0.001	0.1	0.01	0.2	0.01	0.5	0.01	0.02	0.02	2	0.01	0.001	
1124908	Vegetation	<0.01	4.31	0.24	14.8	4	0.3	0.10	352	0.005	<0.1	<0.01	<0.2	<0.01	37.5	0.07	<0.02	<0.02	<2	0.52	0.040
1124909	Vegetation	0.28	4.10	0.22	35.2	6	0.1	0.05	357	0.006	<0.1	<0.01	<0.2	<0.01	13.8	0.02	0.02	<0.02	<2	0.68	0.039
1124910	Vegetation	0.71	3.35	0.08	21.7	7	0.1	0.04	156	0.004	<0.1	<0.01	<0.2	<0.01	8.2	0.01	<0.02	<0.02	<2	0.33	0.034
1124911	Vegetation	1.03	5.28	0.10	25.9	8	0.1	0.02	155	0.004	<0.1	<0.01	0.2	<0.01	8.0	<0.01	<0.02	<0.02	<2	0.38	0.049
1124912	Vegetation	<0.01	4.27	0.15	30.3	<2	0.3	0.05	81	0.003	<0.1	<0.01	<0.2	<0.01	45.3	0.11	<0.02	<0.02	<2	0.41	0.039
1124913	Vegetation	0.06	4.53	0.19	16.3	12	0.3	0.23	84	0.003	<0.1	<0.01	<0.2	<0.01	32.1	0.01	<0.02	<0.02	<2	0.44	0.023
1124914	Vegetation	<0.01	2.52	0.10	23.4	7	<0.1	0.02	105	0.006	<0.1	<0.01	<0.2	<0.01	11.6	<0.01	<0.02	<0.02	<2	0.65	0.031
1124915	Vegetation	<0.01	6.33	0.11	26.5	30	0.2	0.16	185	0.004	<0.1	<0.01	<0.2	<0.01	27.9	0.04	<0.02	<0.02	<2	0.43	0.059
1124916	Vegetation	<0.01	6.04	0.16	42.5	<2	0.1	0.07	431	0.005	<0.1	<0.01	<0.2	<0.01	9.6	0.05	<0.02	<0.02	<2	0.50	0.042
1124917	Vegetation	<0.01	4.80	0.19	37.7	3	<0.1	0.09	516	0.005	<0.1	<0.01	<0.2	<0.01	9.7	0.04	0.03	<0.02	<2	0.49	0.040
1124918	Vegetation	0.20	4.63	0.12	20.3	2	<0.1	0.07	297	0.005	<0.1	<0.01	<0.2	<0.01	12.1	0.01	0.03	<0.02	<2	0.56	0.043
1124919	Vegetation	0.31	4.26	0.12	24.0	7	0.1	0.06	205	0.004	0.2	<0.01	<0.2	<0.01	9.4	0.01	<0.02	<0.02	<2	0.46	0.036
1124920	Vegetation	0.01	5.62	0.17	33.6	<2	0.1	0.17	181	0.005	<0.1	<0.01	<0.2	<0.01	9.2	0.03	<0.02	<0.02	<2	0.43	0.044
1124921	Vegetation	0.05	4.68	0.06	21.0	3	0.1	0.06	216	0.005	<0.1	<0.01	<0.2	<0.01	10.4	0.01	<0.02	<0.02	<2	0.42	0.039
1124922	Vegetation	0.07	5.38	0.16	37.2	3	0.1	0.07	203	0.006	0.1	<0.01	<0.2	<0.01	14.6	0.02	0.02	<0.02	<2	0.67	0.037
1124923	Vegetation	0.13	5.80	0.13	34.6	3	0.1	0.10	162	0.006	<0.1	<0.01	<0.2	<0.01	14.4	<0.01	<0.02	<0.02	<2	0.78	0.050
1124924	Vegetation	0.04	7.83	0.08	29.1	4	0.1	0.03	454	0.005	0.1	<0.01	<0.2	<0.01	8.7	0.02	<0.02	<0.02	<2	0.50	0.051
1124925	Vegetation	<0.01	6.32	0.13	21.5	5	<0.1	0.04	287	0.006	<0.1	<0.01	<0.2	<0.01	8.7	0.04	<0.02	<0.02	<2	0.57	0.050
1124926	Vegetation	<0.01	6.71	0.15	24.9	3	<0.1	0.04	168	0.006	<0.1	<0.01	<0.2	<0.01	8.4	0.02	0.02	<0.02	<2	0.59	0.064
1124927	Vegetation	<0.01	4.99	0.11	23.7	23	0.4	0.23	130	0.006	<0.1	<0.01	<0.2	<0.01	19.5	0.01	<0.02	<0.02	<2	0.48	0.039
1124928	Vegetation	<0.01	4.05	0.93	11.0	4	0.2	0.15	234	0.006	<0.1	<0.01	<0.2	<0.01	32.3	0.05	<0.02	<0.02	<2	0.87	0.051
1124929	Vegetation	<0.01	8.01	0.67	14.3	<2	0.5	0.14	510	0.005	<0.1	<0.01	<0.2	<0.01	31.1	0.07	<0.02	<0.02	<2	0.54	0.074
1124930	Vegetation	<0.01	5.64	0.43	12.5	3	0.4	0.07	400	0.004	0.1	<0.01	<0.2	<0.01	32.2	0.06	<0.02	<0.02	<2	0.54	0.090
1124931	Vegetation	<0.01	5.23	0.66	7.5	5	0.4	0.06	144	0.004	<0.1	<0.01	<0.2	<0.01	24.4	0.04	0.03	<0.02	<2	0.36	0.058
1124932	Vegetation	0.01	6.77	0.18	29.8	<2	1.2	0.29	37	0.004	<0.1	<0.01	<0.2	<0.01	20.7	<0.01	<0.02	<0.02	<2	0.37	0.059
1124933	Vegetation	<0.01	6.05	0.25	12.0	2	0.2	0.07	197	0.006	<0.1	<0.01	<0.2	<0.01	33.9	0.08	<0.02	<0.02	<2	0.75	0.064
1124934	Vegetation	0.10	4.21	0.08	28.4	3	<0.1	0.04	141	0.006	<0.1	<0.01	<0.2	<0.01	8.0	<0.01	<0.02	<0.02	<2	0.73	0.025
1124935	Vegetation	0.21	6.03	0.09	40.5	4	<0.1	0.06	163	0.009	<0.1	<0.01	<0.2	<0.01	11.0	0.03	0.02	<0.02	<2	1.21	0.045
1124936	Vegetation	0.23	3.20	0.05	19.1	5	0.1	0.02	94	0.005	<0.1	<0.01	<0.2	<0.01	9.3	0.02	0.03	<0.02	<2	0.56	0.034
1124937	Vegetation	<0.01	4.69	0.04	18.6	6	1.1	0.07	101	0.005	<0.1	<0.01	<0.2	<0.01	8.6	<0.01	<0.02	<0.02	<2	0.51	0.035



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**Project:** None Given  
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# CERTIFICATE OF ANALYSIS

## VAN16001903.1

Method	Analyte	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf	
Unit		ppm	ppm	%	ppm	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
MDL		0.01	0.1	0.001	0.1	1	0.01	0.001	0.01	0.1	0.1	0.02	0.01	1	0.1	0.02	0.1	0.005	0.01	0.001		
1124908	Vegetation	0.01	1.2	0.051	58.8	1	5	<0.01	0.001	0.13	<0.1	0.2	<0.02	0.06	2	0.3	<0.02	<0.1	0.068	<0.01	<0.001	
1124909	Vegetation	<0.01	1.2	0.036	16.5	2	5	<0.01	0.001	0.17	<0.1	0.1	<0.02	0.12	<1	0.2	<0.02	<0.1	0.026	<0.01	<0.001	
1124910	Vegetation	<0.01	1.3	0.029	8.1	1	3	<0.01	<0.001	0.17	<0.1	0.1	<0.02	0.10	<1	0.2	<0.02	<0.1	0.025	<0.01	<0.001	
1124911	Vegetation	<0.01	1.4	0.037	6.8	1	5	<0.01	<0.001	0.18	<0.1	0.2	<0.02	0.12	2	0.2	<0.02	<0.1	0.013	0.02	<0.001	
1124912	Vegetation	0.10	1.4	0.055	130.0	1	4	<0.01	0.001	0.16	<0.1	0.1	<0.02	0.08	2	0.2	<0.02	<0.1	0.026	0.01	<0.001	
1124913	Vegetation	<0.01	1.4	0.024	19.5	<1	4	<0.01	0.001	0.13	<0.1	0.1	<0.02	0.10	<1	0.3	<0.02	<0.1	0.010	<0.01	<0.001	
1124914	Vegetation	<0.01	1.4	0.023	7.0	1	4	<0.01	0.001	0.16	<0.1	0.2	<0.02	0.10	3	0.2	<0.02	<0.1	0.006	<0.01	0.002	
1124915	Vegetation	<0.01	1.3	0.068	22.7	2	5	<0.01	0.001	0.16	<0.1	0.2	<0.02	0.10	<1	0.2	<0.02	<0.1	0.062	<0.01	<0.001	
1124916	Vegetation	<0.01	1.2	0.032	7.5	2	4	<0.01	0.001	0.19	<0.1	0.2	<0.02	0.12	5	0.3	<0.02	<0.1	0.042	<0.01	0.002	
1124917	Vegetation	<0.01	1.3	0.027	10.1	1	5	<0.01	<0.001	0.19	<0.1	0.2	<0.02	0.10	3	0.3	<0.02	<0.1	0.030	<0.01	<0.001	
1124918	Vegetation	<0.01	1.3	0.025	6.1	1	5	<0.01	0.001	0.18	<0.1	0.2	<0.02	0.09	<1	0.2	<0.02	<0.1	0.046	<0.01	<0.001	
1124919	Vegetation	<0.01	1.3	0.020	4.8	1	5	<0.01	<0.001	0.15	<0.1	0.2	<0.02	0.12	<1	0.2	<0.02	<0.1	0.046	<0.01	0.002	
1124920	Vegetation	<0.01	1.3	0.035	6.4	1	4	<0.01	0.001	0.20	<0.1	0.1	<0.02	0.12	3	0.2	<0.02	<0.1	0.031	<0.01	<0.001	
1124921	Vegetation	<0.01	1.3	0.035	6.8	1	5	<0.01	<0.001	0.18	<0.1	0.3	0.03	0.11	<1	0.2	<0.02	<0.1	0.040	<0.01	0.002	
1124922	Vegetation	<0.01	1.3	0.035	8.2	1	5	<0.01	<0.001	0.18	<0.1	0.2	0.03	0.13	2	0.2	<0.02	<0.1	0.038	<0.01	<0.001	
1124923	Vegetation	<0.01	1.4	0.025	5.9	2	5	<0.01	<0.001	0.23	<0.1	0.2	<0.02	0.13	1	0.3	<0.02	<0.1	0.038	<0.01	0.002	
1124924	Vegetation	<0.01	1.4	0.027	10.7	2	6	<0.01	<0.001	0.19	<0.1	0.1	<0.02	0.13	1	0.3	<0.02	<0.1	0.034	<0.01	<0.001	
1124925	Vegetation	<0.01	1.3	0.031	4.8	2	5	<0.01	0.001	0.19	<0.1	0.2	<0.02	0.10	<1	0.2	<0.02	<0.1	0.020	<0.01	<0.001	
1124926	Vegetation	<0.01	1.3	0.045	5.4	2	5	<0.01	0.001	0.17	<0.1	0.2	<0.02	0.15	<1	0.3	<0.02	<0.1	0.052	<0.01	<0.001	
1124927	Vegetation	<0.01	1.4	0.030	17.6	1	5	<0.01	<0.001	0.20	<0.1	0.2	<0.02	0.14	<1	0.2	<0.02	<0.1	0.016	<0.01	<0.001	
1124928	Vegetation	<0.01	1.3	0.051	42.3	2	5	<0.01	0.001	0.18	<0.1	0.2	<0.02	0.12	<1	0.3	<0.02	<0.1	0.122	<0.01	<0.001	
1124929	Vegetation	<0.01	1.3	0.049	62.1	2	5	<0.01	<0.001	0.18	<0.1	0.2	<0.02	0.12	4	0.2	<0.02	<0.1	0.117	<0.01	<0.001	
1124930	Vegetation	<0.01	1.3	0.044	68.3	3	6	<0.01	<0.001	0.21	<0.1	0.2	<0.02	0.11	3	0.3	<0.02	<0.1	0.028	<0.01	<0.001	
1124931	Vegetation	<0.01	1.3	0.036	62.1	2	4	<0.01	<0.001	0.17	<0.1	0.2	<0.02	0.10	<1	0.3	<0.02	<0.1	0.125	<0.01	<0.001	
1124932	Vegetation	0.04	1.4	0.059	31.8	2	6	<0.01	0.002	0.17	<0.1	<0.1	<0.02	0.02	<1	0.2	<0.02	<0.1	0.112	<0.01	<0.001	
1124933	Vegetation	<0.01	1.3	0.052	52.6	2	6	<0.01	0.001	0.21	<0.1	<0.1	<0.02	0.04	3	0.3	<0.02	<0.1	0.034	<0.01	<0.001	
1124934	Vegetation	<0.01	1.2	0.014	12.4	<1	5	<0.01	<0.001	0.16	<0.1	0.2	<0.02	0.05	5	0.3	<0.02	<0.1	0.009	<0.01	<0.001	
1124935	Vegetation	<0.01	1.2	0.030	15.7	1	4	<0.01	<0.001	0.17	<0.1	0.2	<0.02	0.09	5	0.4	<0.02	<0.1	0.007	<0.01	<0.001	
1124936	Vegetation	<0.01	1.3	0.023	5.2	<1	3	<0.01	0.001	0.14	<0.1	<0.1	<0.02	<0.01	2	0.3	<0.02	<0.1	0.009	0.02	<0.001	
1124937	Vegetation	<0.01	1.3	0.023	6.3	1	3	<0.01	<0.001	0.15	<0.1	0.2	<0.02	0.04	2	0.3	<0.02	<0.1	0.079	0.01	<0.001	



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**Project:** None Given  
**Report Date:** November 21, 2016

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# CERTIFICATE OF ANALYSIS

# VAN16001903.1

Method Analyte Unit MDL	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	
	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt	
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppb	ppb	
	0.01	0.1	0.02	0.001	0.01	0.001	0.01	0.02	1	0.1	0.01	2	1	
1124908	Vegetation	<0.01	10.1	<0.02	<0.001	0.02	<0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124909	Vegetation	<0.01	5.0	<0.02	<0.001	0.03	<0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124910	Vegetation	<0.01	5.7	<0.02	<0.001	0.01	0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124911	Vegetation	<0.01	6.4	<0.02	<0.001	0.01	0.002	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124912	Vegetation	<0.01	10.3	<0.02	<0.001	0.03	0.001	0.09	<0.02	<1	<0.1	0.05	<2	<1
1124913	Vegetation	<0.01	3.8	<0.02	<0.001	0.03	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124914	Vegetation	<0.01	3.1	<0.02	<0.001	0.04	<0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124915	Vegetation	<0.01	8.2	<0.02	<0.001	0.02	0.003	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124916	Vegetation	<0.01	5.8	<0.02	<0.001	0.02	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124917	Vegetation	<0.01	5.4	<0.02	<0.001	0.02	0.003	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124918	Vegetation	<0.01	7.7	<0.02	<0.001	0.02	0.003	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124919	Vegetation	<0.01	6.3	<0.02	<0.001	0.02	0.002	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124920	Vegetation	<0.01	6.5	<0.02	<0.001	0.02	0.003	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124921	Vegetation	<0.01	7.1	<0.02	<0.001	0.02	0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124922	Vegetation	<0.01	6.6	<0.02	<0.001	0.02	<0.001	0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124923	Vegetation	<0.01	9.6	<0.02	<0.001	0.02	0.004	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124924	Vegetation	<0.01	6.3	<0.02	<0.001	<0.01	0.002	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124925	Vegetation	<0.01	5.2	<0.02	<0.001	0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124926	Vegetation	<0.01	7.1	<0.02	<0.001	0.01	0.002	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124927	Vegetation	<0.01	8.9	<0.02	<0.001	0.02	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124928	Vegetation	<0.01	15.5	<0.02	<0.001	0.02	<0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124929	Vegetation	<0.01	12.3	<0.02	<0.001	0.02	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124930	Vegetation	<0.01	10.4	<0.02	<0.001	0.02	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124931	Vegetation	<0.01	11.8	<0.02	<0.001	<0.01	0.002	<0.01	<0.02	<1	<0.1	0.01	<2	<1
1124932	Vegetation	<0.01	11.4	<0.02	<0.001	0.02	<0.001	0.05	<0.02	<1	<0.1	<0.01	<2	<1
1124933	Vegetation	<0.01	10.8	<0.02	<0.001	0.02	0.004	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124934	Vegetation	<0.01	3.6	<0.02	<0.001	0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124935	Vegetation	<0.01	2.5	<0.02	<0.001	0.02	0.003	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124936	Vegetation	<0.01	3.1	<0.02	<0.001	0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124937	Vegetation	<0.01	7.0	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1



**BUREAU VERITAS** MINERAL LABORATORIES  
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**Client:** **Gossan Resources Ltd.**  
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**Project:** None Given  
**Report Date:** November 21, 2016

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# CERTIFICATE OF ANALYSIS

**VAN16001903.1**

Method	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101
Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	
Unit	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	
MDL	0.01	0.01	0.01	0.1	2	0.1	0.01	1	0.001	0.1	0.01	0.2	0.01	0.5	0.01	0.02	0.02	2	0.01	0.001	
1124938	Vegetation	<0.01	7.08	1.18	25.7	6	0.3	0.15	1351	0.006	<0.1	<0.01	<0.2	<0.01	25.0	0.10	<0.02	<0.02	<2	0.56	0.061
1124939	Vegetation	<0.01	8.52	0.32	15.9	3	0.5	0.05	655	0.005	<0.1	<0.01	<0.2	<0.01	19.7	0.10	<0.02	<0.02	<2	0.56	0.051
1124940	Vegetation	<0.01	7.03	0.17	21.1	28	0.3	0.16	348	0.004	0.1	<0.01	<0.2	<0.01	12.2	0.04	<0.02	<0.02	<2	0.32	0.050
1124941	Vegetation	<0.01	5.54	0.11	18.2	<2	1.1	0.56	35	0.007	<0.1	<0.01	<0.2	<0.01	32.0	<0.01	0.03	<0.02	<2	0.89	0.046
1124942	Vegetation	0.73	3.81	0.11	25.0	4	0.1	0.18	116	0.005	<0.1	<0.01	<0.2	<0.01	10.4	0.02	<0.02	<0.02	<2	0.47	0.049
1124943	Vegetation	0.62	6.59	0.15	31.2	<2	0.2	0.17	362	0.006	0.1	<0.01	<0.2	<0.01	10.7	0.07	<0.02	<0.02	<2	0.49	0.059
1124944	Vegetation	0.20	5.29	0.15	28.3	7	0.1	0.10	283	0.004	<0.1	<0.01	<0.2	<0.01	10.3	0.03	<0.02	<0.02	<2	0.37	0.031
1124945	Vegetation	0.13	4.46	0.13	37.1	8	0.1	0.02	362	0.008	<0.1	<0.01	<0.2	<0.01	15.8	0.01	0.02	<0.02	<2	0.87	0.028
1124946	Vegetation	0.13	3.54	0.08	24.4	3	<0.1	0.04	326	0.005	<0.1	<0.01	<0.2	<0.01	9.4	0.01	<0.02	<0.02	<2	0.43	0.027



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Project: None Given  
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# CERTIFICATE OF ANALYSIS

## VAN16001903.1

Method	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101
Analyte	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf	
Unit	ppm	ppm	%	ppm	ppm	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm	
MDL	0.01	0.1	0.001	0.1	1	1	0.01	0.001	0.01	0.1	0.1	0.02	0.01	1	0.1	0.02	0.1	0.005	0.01	0.001	
1124938	Vegetation	0.03	1.1	0.051	54.7	2	5	<0.01	<0.001	0.20	<0.1	<0.1	<0.02	0.05	2	0.3	<0.02	<0.1	0.056	0.04	<0.001
1124939	Vegetation	<0.01	1.2	0.053	36.5	2	7	<0.01	<0.001	0.18	<0.1	0.1	<0.02	0.04	5	0.3	<0.02	<0.1	0.045	<0.01	<0.001
1124940	Vegetation	<0.01	1.5	0.049	18.8	1	4	<0.01	0.001	0.15	<0.1	0.1	<0.02	<0.01	4	0.3	<0.02	<0.1	0.092	<0.01	<0.001
1124941	Vegetation	0.62	1.3	0.056	12.3	2	4	<0.01	0.001	0.17	<0.1	0.2	<0.02	0.03	<1	0.2	<0.02	<0.1	0.723	0.01	<0.001
1124942	Vegetation	<0.01	1.2	0.044	7.2	1	3	<0.01	0.001	0.16	<0.1	0.2	<0.02	0.06	2	0.3	<0.02	<0.1	0.021	0.01	0.002
1124943	Vegetation	<0.01	1.3	0.043	12.8	2	5	<0.01	0.001	0.18	<0.1	<0.1	0.02	0.07	3	0.3	<0.02	<0.1	0.032	0.01	<0.001
1124944	Vegetation	<0.01	1.4	0.027	8.8	1	4	<0.01	<0.001	0.13	<0.1	0.1	<0.02	0.07	5	0.2	<0.02	<0.1	0.039	<0.01	<0.001
1124945	Vegetation	<0.01	1.4	0.044	10.2	1	5	<0.01	0.001	0.15	<0.1	0.1	<0.02	0.08	4	0.3	<0.02	<0.1	0.058	<0.01	0.003
1124946	Vegetation	<0.01	1.3	0.019	6.7	<1	3	<0.01	<0.001	0.14	<0.1	0.3	<0.02	0.07	10	0.3	<0.02	<0.1	0.011	0.02	<0.001



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Project: None Given  
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# CERTIFICATE OF ANALYSIS

**VAN16001903.1**

Method	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101
Analyte	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt	
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppb	ppb	
MDL	0.01	0.1	0.02	0.001	0.01	0.001	0.01	0.02	1	0.1	0.01	2	1	
1124938	Vegetation	<0.01	10.3	<0.02	<0.001	<0.01	0.005	0.04	<0.02	<1	<0.1	0.01	<2	<1
1124939	Vegetation	<0.01	10.1	<0.02	<0.001	0.01	<0.001	0.01	<0.02	<1	<0.1	0.01	<2	<1
1124940	Vegetation	<0.01	10.7	<0.02	<0.001	0.02	<0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1
1124941	Vegetation	<0.01	18.3	<0.02	<0.001	0.03	0.043	0.55	<0.02	<1	<0.1	0.02	<2	<1
1124942	Vegetation	<0.01	3.7	<0.02	<0.001	0.03	<0.001	0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124943	Vegetation	<0.01	6.9	<0.02	<0.001	0.02	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124944	Vegetation	<0.01	5.6	<0.02	<0.001	0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124945	Vegetation	<0.01	5.4	<0.02	<0.001	0.02	<0.001	0.03	<0.02	<1	<0.1	<0.01	<2	<1
1124946	Vegetation	<0.01	3.7	<0.02	<0.001	0.02	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1



# QUALITY CONTROL REPORT

VAN16001903.1

Method	Analyte	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
Unit		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
MDL		0.01	0.01	0.01	0.1	2	0.1	0.01	1	0.001	0.1	0.01	0.2	0.01	0.5	0.01	0.02	0.02	2	0.01	0.001
Pulp Duplicates																					
1124742	Vegetation	<0.01	5.09	0.11	32.0	34	0.3	0.01	43	0.005	<0.1	<0.01	0.3	<0.01	12.0	0.01	<0.02	<0.02	<2	0.65	0.031
REP 1124742	QC	<0.01	4.33	0.11	33.3	32	0.2	0.05	42	0.005	<0.1	<0.01	0.2	<0.01	11.6	0.01	<0.02	<0.02	<2	0.66	0.030
1124777	Vegetation	<0.01	4.25	0.97	17.2	3	0.2	0.08	769	0.005	<0.1	<0.01	<0.2	<0.01	31.0	0.10	<0.02	<0.02	<2	0.43	0.051
REP 1124777	QC	<0.01	4.50	0.98	15.8	2	0.3	0.10	724	0.004	<0.1	<0.01	<0.2	<0.01	29.2	0.10	<0.02	<0.02	<2	0.44	0.051
1124812	Vegetation	0.05	4.89	0.14	43.6	7	0.2	0.12	325	0.005	<0.1	<0.01	<0.2	<0.01	10.7	0.05	<0.02	<0.02	<2	0.38	0.049
REP 1124812	QC	0.06	4.65	0.14	39.4	6	0.1	0.10	309	0.005	<0.1	<0.01	<0.2	<0.01	9.9	0.06	<0.02	<0.02	<2	0.34	0.043
1124847	Vegetation	0.14	5.81	0.05	21.3	5	<0.1	0.02	121	0.005	<0.1	<0.01	<0.2	<0.01	7.5	<0.01	<0.02	<0.02	<2	0.58	0.052
REP 1124847	QC	0.14	5.88	0.04	22.2	5	0.1	0.01	120	0.005	0.3	<0.01	<0.2	<0.01	8.0	0.01	<0.02	<0.02	<2	0.61	0.056
1124882	Vegetation	<0.01	3.49	0.28	4.9	<2	1.7	0.22	37	0.004	<0.1	<0.01	<0.2	<0.01	15.0	<0.01	<0.02	<0.02	<2	0.39	0.053
REP 1124882	QC	<0.01	3.45	0.29	5.3	<2	1.8	0.21	39	0.004	<0.1	<0.01	<0.2	<0.01	14.9	0.01	<0.02	<0.02	<2	0.41	0.054
1124887	Vegetation	<0.01	4.62	0.08	49.9	10	0.2	0.07	248	0.008	<0.1	<0.01	<0.2	<0.01	14.4	0.01	<0.02	<0.02	<2	0.94	0.035
REP 1124887	QC	<0.01	4.12	0.07	45.7	13	<0.1	0.04	240	0.007	<0.1	<0.01	<0.2	<0.01	13.4	<0.01	<0.02	<0.02	<2	0.92	0.036
1124917	Vegetation	<0.01	4.80	0.19	37.7	3	<0.1	0.09	516	0.005	<0.1	<0.01	<0.2	<0.01	9.7	0.04	0.03	<0.02	<2	0.49	0.040
REP 1124917	QC	<0.01	4.55	0.19	35.1	3	<0.1	0.09	465	0.005	<0.1	<0.01	<0.2	<0.01	9.3	0.04	0.02	<0.02	<2	0.47	0.040
1124941	Vegetation	<0.01	5.54	0.11	18.2	<2	1.1	0.56	35	0.007	<0.1	<0.01	<0.2	<0.01	32.0	<0.01	0.03	<0.02	<2	0.89	0.046
REP 1124941	QC	<0.01	5.65	0.10	19.0	3	1.1	0.62	39	0.007	<0.1	<0.01	<0.2	<0.01	30.5	<0.01	<0.02	<0.02	<2	0.91	0.047
Reference Materials																					
STD CDV-1	Standard	0.20	8.43	0.92	21.6	10	6.1	2.02	391	0.264	1.2	0.16	2.6	0.60	114.8	0.04	0.04	0.03	8	1.99	0.040
STD CDV-1	Standard	0.16	8.18	0.93	24.9	8	6.3	2.01	413	0.282	1.1	0.17	4.7	0.65	116.9	0.04	0.03	<0.02	9	2.06	0.041
STD CDV-1	Standard	0.17	8.77	1.03	22.9	9	6.4	1.87	385	0.293	1.2	0.17	1.6	0.68	119.7	0.05	0.04	<0.02	10	1.95	0.041
STD CDV-1	Standard	0.15	8.38	0.94	22.4	9	6.4	1.98	383	0.280	1.2	0.16	3.2	0.58	106.5	0.04	0.05	<0.02	9	2.05	0.036
STD CDV-1	Standard	0.18	8.18	0.89	22.4	10	6.2	1.92	394	0.266	1.1	0.16	1.8	0.61	111.3	0.03	0.03	<0.02	8	2.10	0.035
STD CDV-1	Standard	0.15	7.60	0.87	20.7	7	6.0	1.65	375	0.247	1.1	0.14	1.6	0.54	108.0	0.04	0.04	<0.02	8	1.92	0.037
STD CDV-1	Standard	0.16	8.10	0.89	21.9	12	6.0	1.87	390	0.261	1.3	0.16	3.5	0.55	109.8	0.04	0.04	<0.02	8	2.05	0.036
STD CDV-1	Standard	0.17	8.28	0.93	22.7	9	5.8	1.77	392	0.266	1.3	0.16	2.5	0.59	112.0	0.03	0.05	<0.02	9	2.01	0.037
STD V16	Standard	1.73	6.59	3.06	35.5	34	7.9	1.15	701	0.445	1.7	<0.01	2.0	<0.01	11.1	0.08	0.07	0.02	156	0.31	0.052
STD V16	Standard	1.59	6.45	2.91	38.1	32	7.2	1.07	743	0.431	1.5	<0.01	1.1	<0.01	10.7	0.08	0.07	<0.02	134	0.31	0.050
STD V16	Standard	1.61	7.16	2.85	37.7	32	8.2	1.16	683	0.500	1.4	<0.01	0.8	<0.01	10.6	0.07	0.07	<0.02	162	0.32	0.046





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Project: None Given  
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# QUALITY CONTROL REPORT

## VAN16001903.1

Method	Analyte	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
Unit		ppm	ppm	%	ppm	ppm	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
MDL		0.01	0.1	0.001	0.1	1	1	0.01	0.001	0.01	0.1	0.1	0.02	0.01	1	0.1	0.02	0.1	0.005	0.01	0.001
Pulp Duplicates																					
1124742	Vegetation	<0.01	1.3	0.033	13.6	1	5	<0.01	<0.001	0.12	<0.1	0.3	<0.02	0.04	2	0.2	<0.02	<0.1	0.020	<0.01	<0.001
REP 1124742	QC	<0.01	1.2	0.032	13.1	1	5	<0.01	<0.001	0.12	<0.1	0.1	<0.02	0.05	<1	0.4	<0.02	<0.1	0.021	<0.01	<0.001
1124777	Vegetation	0.01	1.1	0.046	95.9	2	5	<0.01	0.002	0.15	<0.1	<0.1	<0.02	0.09	1	0.3	<0.02	<0.1	0.059	<0.01	<0.001
REP 1124777	QC	<0.01	1.2	0.040	89.2	2	4	<0.01	0.001	0.16	<0.1	0.2	<0.02	0.08	2	0.2	<0.02	<0.1	0.062	0.02	<0.001
1124812	Vegetation	<0.01	1.3	0.049	13.1	2	5	<0.01	<0.001	0.18	<0.1	0.2	<0.02	0.11	<1	0.3	<0.02	<0.1	0.057	<0.01	<0.001
REP 1124812	QC	<0.01	1.2	0.048	12.8	1	5	<0.01	0.001	0.17	<0.1	0.1	<0.02	0.10	2	0.4	<0.02	<0.1	0.054	0.03	0.001
1124847	Vegetation	<0.01	1.5	0.030	12.3	1	6	<0.01	<0.001	0.19	<0.1	0.2	<0.02	0.11	<1	0.2	<0.02	<0.1	0.027	<0.01	<0.001
REP 1124847	QC	<0.01	1.5	0.030	12.1	1	6	<0.01	<0.001	0.19	<0.1	0.2	<0.02	0.14	<1	0.2	<0.02	<0.1	0.025	<0.01	<0.001
1124882	Vegetation	0.05	1.4	0.050	22.1	2	4	<0.01	<0.001	0.13	<0.1	0.2	0.02	0.09	2	0.2	<0.02	<0.1	0.330	<0.01	<0.001
REP 1124882	QC	0.04	1.4	0.053	22.1	2	4	<0.01	<0.001	0.14	<0.1	0.2	0.03	0.10	4	0.3	<0.02	<0.1	0.329	<0.01	<0.001
1124887	Vegetation	<0.01	1.3	0.018	13.3	1	4	<0.01	<0.001	0.16	<0.1	0.2	<0.02	0.02	1	0.2	<0.02	<0.1	0.006	<0.01	<0.001
REP 1124887	QC	<0.01	1.3	0.017	12.3	1	5	<0.01	0.001	0.16	<0.1	0.1	<0.02	0.05	1	0.2	<0.02	<0.1	0.007	<0.01	<0.001
1124917	Vegetation	<0.01	1.3	0.027	10.1	1	5	<0.01	<0.001	0.19	<0.1	0.2	<0.02	0.10	3	0.3	<0.02	<0.1	0.030	<0.01	<0.001
REP 1124917	QC	<0.01	1.3	0.027	9.8	1	4	<0.01	<0.001	0.17	<0.1	0.2	<0.02	0.11	2	0.2	<0.02	<0.1	0.029	<0.01	<0.001
1124941	Vegetation	0.62	1.3	0.056	12.3	2	4	<0.01	0.001	0.17	<0.1	0.2	<0.02	0.03	<1	0.2	<0.02	<0.1	0.723	0.01	<0.001
REP 1124941	QC	0.66	1.4	0.055	12.7	1	5	<0.01	<0.001	0.18	<0.1	0.2	<0.02	0.05	<1	0.3	<0.02	<0.1	0.752	<0.01	0.002
Reference Materials																					
STD CDV-1	Standard	2.47	11.5	0.115	9.0	26	12	0.12	0.006	0.16	<0.1	0.8	<0.02	0.10	49	0.4	<0.02	0.5	0.110	0.03	0.053
STD CDV-1	Standard	2.42	11.8	0.117	9.9	28	11	0.15	0.005	0.17	<0.1	0.9	<0.02	0.11	48	0.5	<0.02	0.5	0.118	0.03	0.046
STD CDV-1	Standard	2.51	13.9	0.127	9.3	28	12	0.16	0.006	0.17	<0.1	0.9	<0.02	0.08	37	0.5	<0.02	0.6	0.124	0.03	0.044
STD CDV-1	Standard	2.24	12.1	0.120	8.9	28	11	0.14	0.006	0.17	<0.1	0.8	<0.02	0.09	38	0.4	<0.02	0.5	0.116	<0.01	0.046
STD CDV-1	Standard	2.32	12.0	0.128	8.9	27	13	0.13	0.005	0.18	<0.1	0.9	<0.02	0.13	46	0.4	0.02	0.5	0.119	0.05	0.043
STD CDV-1	Standard	2.25	11.2	0.116	8.4	25	10	0.12	0.005	0.17	<0.1	0.8	<0.02	0.11	43	0.5	<0.02	0.5	0.107	0.02	0.034
STD CDV-1	Standard	2.30	11.7	0.130	9.4	27	11	0.14	0.005	0.17	<0.1	0.7	<0.02	0.11	42	0.5	<0.02	0.5	0.117	<0.01	0.030
STD CDV-1	Standard	2.39	12.5	0.121	9.1	26	11	0.13	0.006	0.17	<0.1	0.7	<0.02	0.11	42	0.5	<0.02	0.5	0.109	0.02	0.037
STD V16	Standard	0.05	325.5	0.058	2.0	10	5	0.04	0.002	0.21	<0.1	0.2	<0.02	<0.01	55	0.3	0.02	0.2	0.039	0.07	0.004
STD V16	Standard	0.04	287.7	0.059	2.3	11	5	0.05	0.002	0.21	<0.1	0.3	<0.02	0.02	42	0.3	<0.02	0.2	0.036	0.05	0.005
STD V16	Standard	0.05	342.7	0.055	1.9	11	5	0.04	0.001	0.21	<0.1	0.2	<0.02	<0.01	56	0.3	<0.02	0.2	0.038	0.10	0.005



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Method Analyte	Unit	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt
MDL	MDL	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppb	ppb
Pulp Duplicates														
1124742	Vegetation	<0.01	4.5	<0.02	<0.001	0.02	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
REP 1124742	QC	<0.01	4.5	<0.02	<0.001	0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124777	Vegetation	<0.01	8.7	<0.02	<0.001	0.02	<0.001	0.02	<0.02	<1	<0.1	<0.01	<2	<1
REP 1124777	QC	<0.01	8.4	<0.02	<0.001	0.01	<0.001	0.02	<0.02	<1	<0.1	0.01	<2	<1
1124812	Vegetation	<0.01	5.9	<0.02	<0.001	0.02	<0.001	0.01	<0.02	<1	<0.1	<0.01	<2	<1
REP 1124812	QC	<0.01	5.8	<0.02	<0.001	0.02	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124847	Vegetation	<0.01	5.6	<0.02	<0.001	<0.01	0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
REP 1124847	QC	<0.01	6.1	<0.02	<0.001	0.01	0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124882	Vegetation	<0.01	11.8	<0.02	<0.001	0.02	<0.001	0.06	<0.02	<1	<0.1	<0.01	<2	<1
REP 1124882	QC	<0.01	11.6	<0.02	<0.001	0.02	<0.001	0.06	<0.02	<1	<0.1	<0.01	<2	<1
1124887	Vegetation	<0.01	4.3	<0.02	<0.001	0.02	0.002	0.01	<0.02	<1	<0.1	<0.01	<2	<1
REP 1124887	QC	<0.01	4.2	<0.02	<0.001	0.01	0.003	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124917	Vegetation	<0.01	5.4	<0.02	<0.001	0.02	0.003	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
REP 1124917	QC	<0.01	5.2	<0.02	<0.001	0.01	0.002	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
1124941	Vegetation	<0.01	18.3	<0.02	<0.001	0.03	0.043	0.55	<0.02	<1	<0.1	0.02	<2	<1
REP 1124941	QC	<0.01	18.8	<0.02	<0.001	0.04	0.048	0.55	<0.02	<1	<0.1	0.01	<2	<1
Reference Materials														
STD CDV-1	Standard	0.05	2.6	0.10	0.001	1.22	1.558	5.05	<0.02	<1	<0.1	0.51	<2	<1
STD CDV-1	Standard	0.04	2.5	0.06	<0.001	1.23	1.515	5.07	<0.02	<1	<0.1	0.54	<2	<1
STD CDV-1	Standard	0.05	2.7	0.07	<0.001	1.29	1.495	5.26	<0.02	<1	<0.1	0.61	<2	<1
STD CDV-1	Standard	0.04	2.4	0.09	<0.001	1.13	1.470	4.94	<0.02	<1	<0.1	0.53	<2	<1
STD CDV-1	Standard	0.04	2.5	0.07	<0.001	1.22	1.454	4.75	<0.02	1	<0.1	0.50	<2	<1
STD CDV-1	Standard	0.05	2.3	0.05	<0.001	1.12	1.428	4.72	<0.02	<1	<0.1	0.47	<2	<1
STD CDV-1	Standard	0.05	2.3	0.06	<0.001	1.19	1.464	4.85	<0.02	<1	<0.1	0.52	<2	<1
STD CDV-1	Standard	0.05	2.3	0.08	<0.001	1.21	1.398	4.93	<0.02	<1	<0.1	0.51	<2	<1
STD V16	Standard	0.10	1.6	0.19	<0.001	0.14	0.043	0.11	<0.02	<1	<0.1	0.07	<2	<1
STD V16	Standard	0.10	1.7	0.17	<0.001	0.16	0.035	0.10	<0.02	<1	<0.1	0.05	<2	<1
STD V16	Standard	0.10	1.6	0.20	0.001	0.16	0.043	0.10	<0.02	<1	<0.1	0.06	<2	<1



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**Project:** None Given  
**Report Date:** November 21, 2016

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# QUALITY CONTROL REPORT

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		VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.01	1	0.001	0.1	0.01	0.2	0.01	0.5	0.01	0.02	0.02	2	0.01	0.001
STD V16	Standard	1.64	6.36	2.78	37.3	35	7.6	1.06	690	0.419	1.4	<0.01	1.0	<0.01	10.3	0.07	0.07	<0.02	146	0.32	0.048
STD V16	Standard	2.25	7.19	2.87	40.2	37	9.4	1.23	736	0.531	1.6	<0.01	0.6	<0.01	10.7	0.07	0.08	<0.02	168	0.33	0.049
STD V16	Standard	2.12	7.07	2.75	34.1	34	9.2	1.23	684	0.506	1.5	<0.01	0.7	<0.01	10.6	0.09	0.08	<0.02	176	0.30	0.045
STD V16	Standard	1.50	6.44	2.70	35.4	36	8.3	1.12	668	0.486	1.3	<0.01	1.0	<0.01	10.4	0.08	0.07	<0.02	171	0.31	0.047
STD V16	Standard	1.94	7.00	2.80	38.3	35	9.2	1.30	687	0.502	1.3	<0.01	0.6	<0.01	10.3	0.08	0.07	<0.02	178	0.33	0.049
STD V16 Expected		1.6	6.69	2.8	39.2	40	7.48	1.11	720	0.4035	1.6		1		11	0.086	0.07			0.3	0.0488
STD CDV-1 Expected		0.2	8.61	1	23.3	9	6.4	2	385	0.256	1.3	0.17	2.3	0.61	112	0.04	0.03	0.02	8.7	1.94	0.038
FLOUR	Blank	0.61	3.70	0.05	26.0	<2	0.2	0.01	33	0.005	<0.1	<0.01	0.3	<0.01	1.7	0.04	<0.02	<0.02	<2	0.04	0.351
BLK	Blank	<0.01	<0.01	0.05	0.2	<2	<0.1	<0.01	<1	<0.001	<0.1	<0.01	<0.2	<0.01	<0.5	<0.01	<0.02	<0.02	<2	<0.01	<0.001
FLOUR	Blank	0.58	3.75	0.02	27.5	<2	0.2	0.03	33	0.004	<0.1	<0.01	<0.2	<0.01	1.4	0.02	<0.02	0.02	<2	0.04	0.329
BLK	Blank	<0.01	<0.01	<0.01	0.1	<2	<0.1	<0.01	<1	<0.001	<0.1	<0.01	<0.2	<0.01	<0.5	<0.01	<0.02	<0.02	<2	<0.01	<0.001
FLOUR	Blank	0.57	3.58	0.02	28.5	<2	0.2	<0.01	34	0.004	<0.1	<0.01	<0.2	<0.01	1.3	0.03	<0.02	0.02	<2	0.03	0.317
BLK	Blank	<0.01	<0.01	<0.01	0.2	<2	<0.1	0.01	<1	<0.001	<0.1	<0.01	<0.2	<0.01	<0.5	<0.01	<0.02	<0.02	<2	<0.01	0.001
FLOUR	Blank	0.59	3.34	<0.01	27.1	2	0.2	0.04	32	0.004	0.3	<0.01	0.4	<0.01	1.2	0.03	<0.02	0.03	<2	0.04	0.342
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.01	<1	<0.001	<0.1	<0.01	<0.2	<0.01	<0.5	<0.01	<0.02	<0.02	<2	<0.01	<0.001
FLOUR	Blank	0.59	3.67	0.02	27.1	<2	0.2	<0.01	35	0.005	<0.1	<0.01	<0.2	<0.01	1.3	0.04	<0.02	0.03	<2	0.04	0.342
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.01	<1	<0.001	<0.1	<0.01	<0.2	<0.01	<0.5	<0.01	<0.02	<0.02	<2	<0.01	<0.001
FLOUR	Blank	0.60	3.79	0.02	29.0	<2	0.2	<0.01	34	0.004	<0.1	<0.01	<0.2	<0.01	1.3	0.03	0.02	0.02	<2	0.04	0.365
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.01	<1	<0.001	<0.1	<0.01	<0.2	<0.01	<0.5	<0.01	<0.02	<0.02	<2	<0.01	<0.001
FLOUR	Blank	0.60	3.48	0.02	26.3	<2	0.2	0.02	32	0.004	<0.1	<0.01	0.2	<0.01	1.3	0.03	<0.02	0.02	<2	0.03	0.359
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	0.01	<1	<0.001	<0.1	<0.01	<0.2	<0.01	<0.5	<0.01	<0.02	<0.02	<2	<0.01	<0.001
FLOUR	Blank	0.58	3.41	<0.01	27.9	<2	0.2	<0.01	34	0.005	<0.1	<0.01	0.2	<0.01	1.3	0.03	<0.02	<0.02	<2	0.04	0.334
BLK	Blank	<0.01	<0.01	<0.01	0.1	<2	<0.1	<0.01	<1	<0.001	<0.1	<0.01	<0.2	<0.01	<0.5	<0.01	<0.02	<0.02	<2	<0.01	<0.001
Prep Wash																					
RICE-1	Prep Blank	0.43	2.17	0.01	20.1	2	0.3	0.03	10	0.001	0.1	<0.01	<0.2	<0.01	<0.5	0.01	<0.02	<0.02	<2	<0.01	0.075
RICE-1	Prep Blank	0.38	2.26	0.02	18.4	<2	0.3	0.04	10	<0.001	0.2	<0.01	<0.2	<0.01	<0.5	0.01	<0.02	<0.02	<2	<0.01	0.070



# QUALITY CONTROL REPORT

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		VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101	VG101
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	ppm	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.01	0.1	0.001	0.1	1	1	0.01	0.001	0.01	0.1	0.1	0.02	0.01	1	0.1	0.02	0.1	0.005	0.01	0.001
STD V16	Standard	0.04	301.7	0.056	1.8	11	5	0.05	0.002	0.22	<0.1	0.1	<0.02	<0.01	53	0.2	0.02	0.1	0.039	0.08	0.001
STD V16	Standard	0.05	365.2	0.058	2.0	11	5	0.04	0.002	0.22	<0.1	0.2	<0.02	<0.01	47	0.2	<0.02	0.1	0.034	0.05	0.007
STD V16	Standard	0.04	367.4	0.059	1.9	11	4	0.05	0.002	0.21	<0.1	0.2	<0.02	0.02	49	0.3	<0.02	0.2	0.036	0.06	0.002
STD V16	Standard	0.04	359.6	0.054	2.0	10	4	0.04	<0.001	0.22	<0.1	0.3	<0.02	<0.01	46	0.2	<0.02	0.1	0.036	0.08	0.006
STD V16	Standard	0.04	375.8	0.057	1.9	10	4	0.04	0.002	0.21	<0.1	0.2	<0.02	<0.01	58	0.3	<0.02	0.2	0.036	0.10	0.006
STD V16 Expected		0.05	323.1	0.0525	2.2	10.9	5	0.0454	0.0015	0.22				0.0232	50			0.16	0.036	0.05	0.006
STD CDV-1 Expected		2.31	12.1	0.12	9	30	12	0.15	0.0052	0.18		0.8		0.1	41	0.3		0.5	0.121	0.03	0.046
FLOUR	Blank	<0.01	1.6	0.132	3.2	8	1	<0.01	0.001	0.30	<0.1	0.2	<0.02	0.18	2	1.1	<0.02	<0.1	<0.005	0.01	<0.001
BLK	Blank	<0.01	0.2	<0.001	0.1	<1	<1	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.01	2	<0.1	<0.02	<0.1	<0.005	<0.01	<0.001
FLOUR	Blank	<0.01	1.3	0.138	3.2	9	<1	<0.01	0.002	0.34	<0.1	0.2	<0.02	0.18	<1	0.8	<0.02	<0.1	<0.005	<0.01	0.001
BLK	Blank	<0.01	0.1	<0.001	0.2	<1	<1	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	0.01	<1	<0.1	<0.02	<0.1	<0.005	<0.01	<0.001
FLOUR	Blank	<0.01	1.4	0.128	3.5	9	<1	<0.01	0.001	0.32	<0.1	0.3	<0.02	0.18	<1	0.9	<0.02	<0.1	<0.005	0.01	<0.001
BLK	Blank	<0.01	0.2	<0.001	0.2	<1	<1	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.01	<1	<0.1	<0.02	<0.1	<0.005	0.01	<0.001
FLOUR	Blank	<0.01	1.6	0.130	2.8	9	<1	<0.01	0.001	0.34	<0.1	0.3	<0.02	0.18	<1	0.9	<0.02	<0.1	<0.005	0.04	<0.001
BLK	Blank	<0.01	0.2	<0.001	0.2	<1	<1	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	0.04	<1	0.1	<0.02	<0.1	<0.005	<0.01	<0.001
FLOUR	Blank	<0.01	1.5	0.140	3.2	9	<1	<0.01	0.001	0.35	<0.1	0.1	<0.02	0.17	2	0.8	<0.02	<0.1	<0.005	0.03	<0.001
BLK	Blank	<0.01	0.1	<0.001	<0.1	<1	<1	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.01	<1	<0.1	<0.02	<0.1	<0.005	0.01	<0.001
FLOUR	Blank	<0.01	1.3	0.147	3.7	9	<1	<0.01	0.001	0.36	<0.1	<0.1	<0.02	0.17	<1	0.8	<0.02	<0.1	<0.005	<0.01	<0.001
BLK	Blank	<0.01	0.3	<0.001	0.2	<1	<1	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.01	<1	0.1	<0.02	<0.1	<0.005	<0.01	<0.001
FLOUR	Blank	<0.01	1.4	0.137	3.1	9	<1	<0.01	<0.001	0.33	<0.1	0.2	<0.02	0.16	2	0.8	<0.02	<0.1	<0.005	<0.01	<0.001
BLK	Blank	<0.01	0.3	0.001	0.2	<1	<1	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	0.01	1	0.1	<0.02	<0.1	<0.005	<0.01	<0.001
FLOUR	Blank	<0.01	1.4	0.147	3.7	9	<1	<0.01	0.002	0.36	<0.1	0.1	<0.02	0.16	<1	1.0	<0.02	<0.1	<0.005	0.04	<0.001
BLK	Blank	<0.01	0.1	<0.001	<0.1	<1	<1	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.01	1	<0.1	<0.02	<0.1	<0.005	<0.01	<0.001
Prep Wash																					
RICE-1	Prep Blank	<0.01	1.6	0.018	0.5	2	<1	<0.01	<0.001	0.06	<0.1	0.3	<0.02	0.06	3	0.2	<0.02	<0.1	0.063	0.01	<0.001
RICE-1	Prep Blank	<0.01	1.7	0.014	0.4	2	<1	<0.01	<0.001	0.06	<0.1	0.2	<0.02	0.08	7	0.2	<0.02	<0.1	0.064	<0.01	<0.001



Bureau Veritas Commodities Canada Ltd.  
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada  
PHONE (604) 253-3158

Project: None Given  
Report Date: November 21, 2016

Page: 2 of 2

Part: 3 of 3

# QUALITY CONTROL REPORT

VAN16001903.1

		VG101 Nb ppm 0.01	VG101 Rb ppm 0.1	VG101 Sn ppm 0.02	VG101 Ta ppm 0.001	VG101 Zr ppm 0.01	VG101 Y ppm 0.001	VG101 Ce ppm 0.01	VG101 In ppm 0.02	VG101 Re ppb 1	VG101 Be ppm 0.1	VG101 Li ppm 0.01	VG101 Pd ppb 2	VG101 Pt ppb 1
STD V16	Standard	0.08	1.6	0.19	<0.001	0.14	0.042	0.10	<0.02	<1	<0.1	0.06	<2	<1
STD V16	Standard	0.12	1.7	0.19	<0.001	0.25	0.042	0.10	<0.02	<1	<0.1	0.07	<2	<1
STD V16	Standard	0.12	1.7	0.22	<0.001	0.15	0.036	0.12	<0.02	<1	<0.1	0.05	<2	<1
STD V16	Standard	0.12	1.6	0.21	<0.001	0.15	0.039	0.09	<0.02	<1	<0.1	0.04	<2	<1
STD V16	Standard	0.13	1.6	0.21	<0.001	0.16	0.043	0.09	<0.02	1	<0.1	0.06	<2	<1
STD V16 Expected		0.11	1.7	0.23		0.17	0.05	0.11				0.06		
STD CDV-1 Expected		0.05	2.3	0.08		1.2	1.41	4.9				0.56		
FLOUR	Blank	<0.01	2.4	<0.02	<0.001	0.01	0.005	0.01	<0.02	<1	<0.1	0.09	<2	<1
BLK	Blank	<0.01	<0.1	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
FLOUR	Blank	0.13	2.8	0.05	0.005	<0.01	<0.001	<0.01	<0.02	1	<0.1	0.08	<2	<1
BLK	Blank	<0.01	<0.1	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
FLOUR	Blank	0.10	2.5	0.05	0.005	<0.01	<0.001	<0.01	<0.02	<1	<0.1	0.08	<2	<1
BLK	Blank	<0.01	<0.1	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
FLOUR	Blank	<0.01	2.6	0.04	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	0.07	<2	<1
BLK	Blank	<0.01	<0.1	<0.02	<0.001	<0.01	0.003	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
FLOUR	Blank	<0.01	2.7	0.03	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	0.10	<2	<1
BLK	Blank	<0.01	<0.1	<0.02	<0.001	<0.01	0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
FLOUR	Blank	<0.01	2.8	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	1	<0.1	0.10	<2	<1
BLK	Blank	<0.01	<0.1	<0.02	<0.001	<0.01	0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
FLOUR	Blank	<0.01	2.7	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	1	<0.1	0.07	<2	<1
BLK	Blank	<0.01	<0.1	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
FLOUR	Blank	<0.01	2.6	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	0.08	<2	<1
BLK	Blank	<0.01	<0.1	<0.02	<0.001	<0.01	0.002	<0.01	<0.02	<1	<0.1	<0.01	<2	<1
Prep Wash														
RICE-1	Prep Blank	<0.01	3.0	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	0.01	<2	<1
RICE-1	Prep Blank	<0.01	2.9	<0.02	<0.001	<0.01	<0.001	<0.01	<0.02	<1	<0.1	<0.01	<2	<1

## **Appendix D: VTEM Maxwell Plate Modeling, GEOTECH, April 2017**

The Results of EMIT Maxwell Plate Modeling of selected VTEM anomalies from West Block Glitter Lake Project and Grid Iron Lake Project, Ignace, Ontario for Excalibur Resources Ltd, GEOTECH, April 2017

# The Results of EMIT Maxwell® Plate Modeling of selected VTEM anomalies

*From*

West Block  
Glitter Lake Project and Grid Iron Lake Project  
Ignace, Ontario

*For*

**EXCALIBUR RESOURCES LTD.**

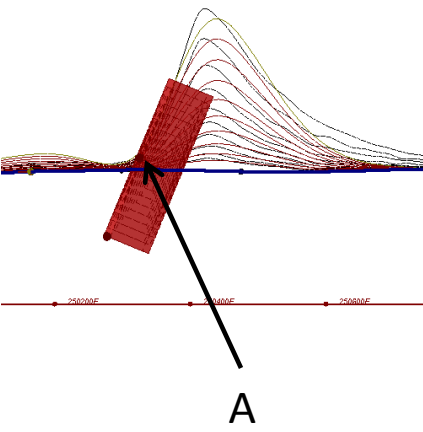
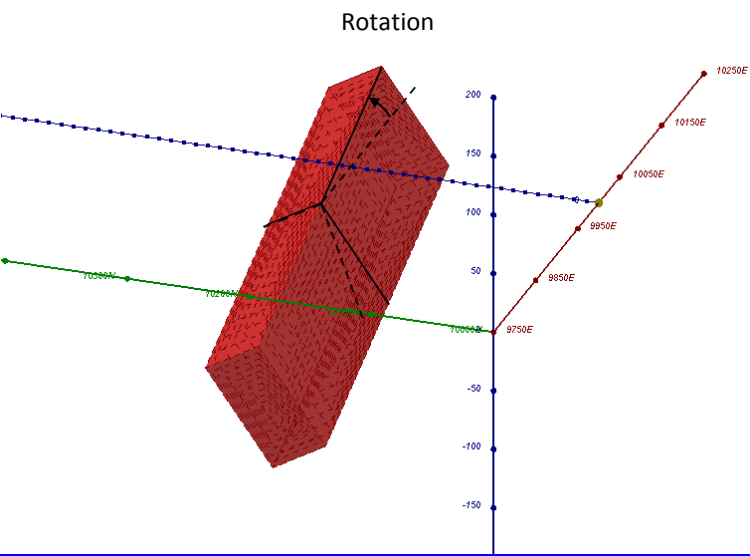
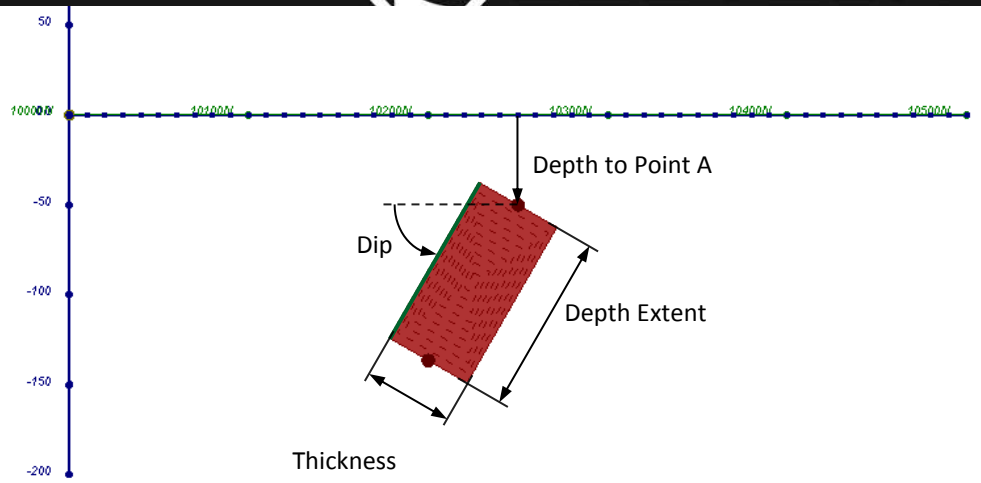
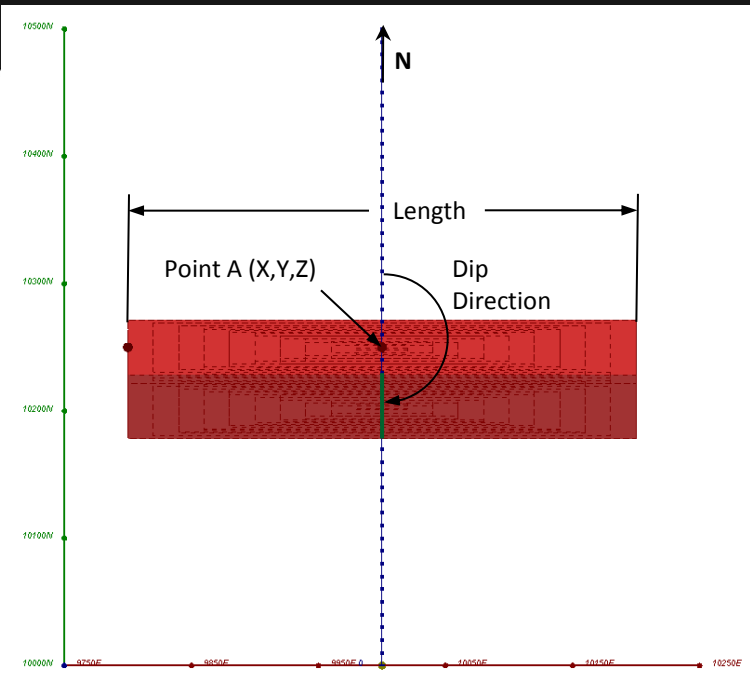
*VTEM Project: 9053  
Flown Jan 2010*

*Modeled in April, 2017*



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# Maxwell Model Parameters conventional terms

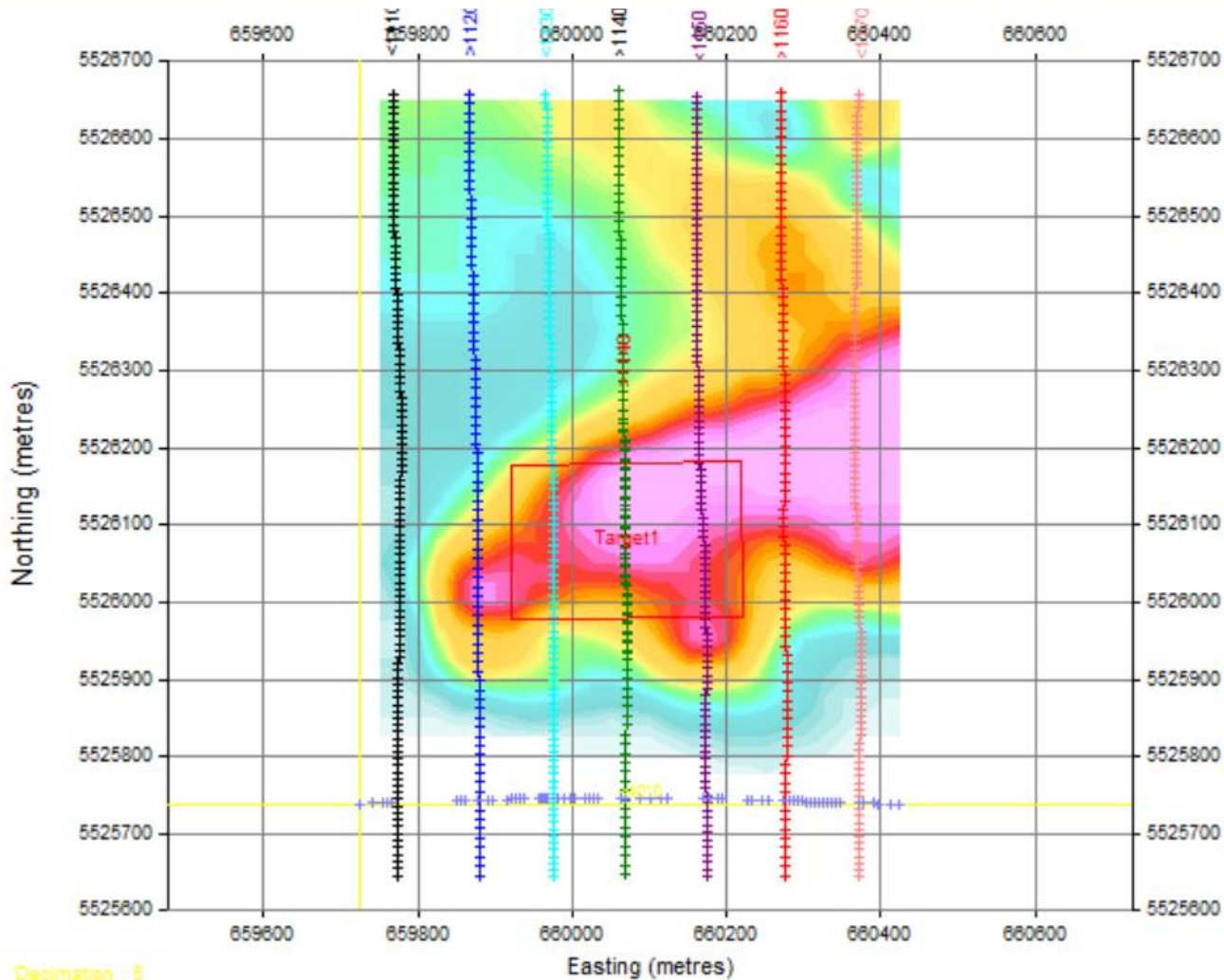


(X, Y) refers to Center Top of the Plate projected to surface, i.e. point A.

Target Plate Parameters		
Parameter		Units
X		Meters
Y		Meters
Z		Meters
Depth to Point A		Meters
Dip		Degrees
Dip Direction		Degrees
Rotation		Degrees
Length		Meters
Depth Extent		Meters
Conductivity-Thickness		Siemens
Conductivity		Siemens/Meter
Thickness		Meters

All X and Y Coordinates are projected using NAD83 UTM ZONE 15N





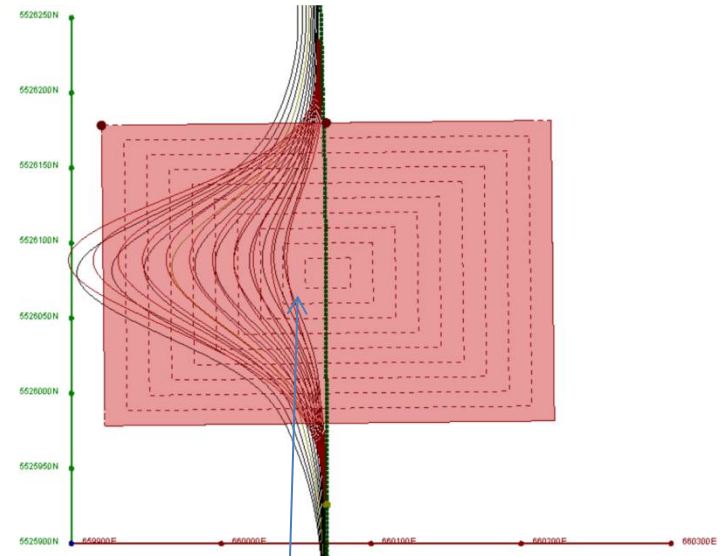
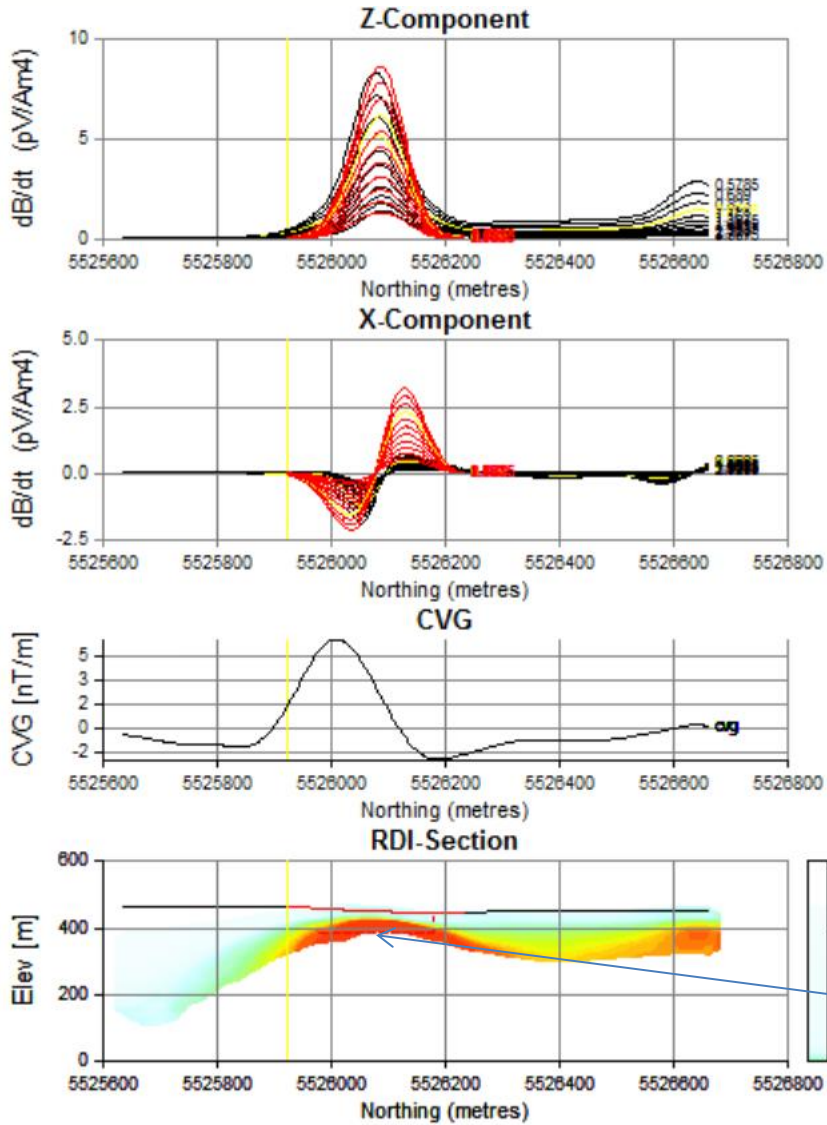
Modelled targets areas on TAU map (LEFT).

Three lines over two anomalous areas were selected for modeling. Drill holes with appropriate parameters were suggested for these modelled plates.

NAD83 UTM ZONE 15N

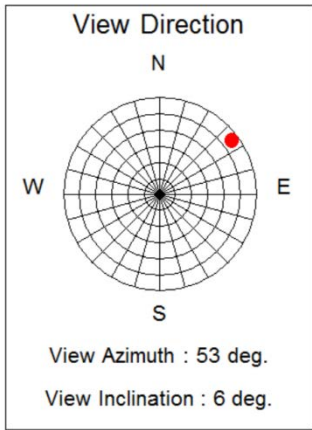
# West Block L1140 Target1

## Plan View



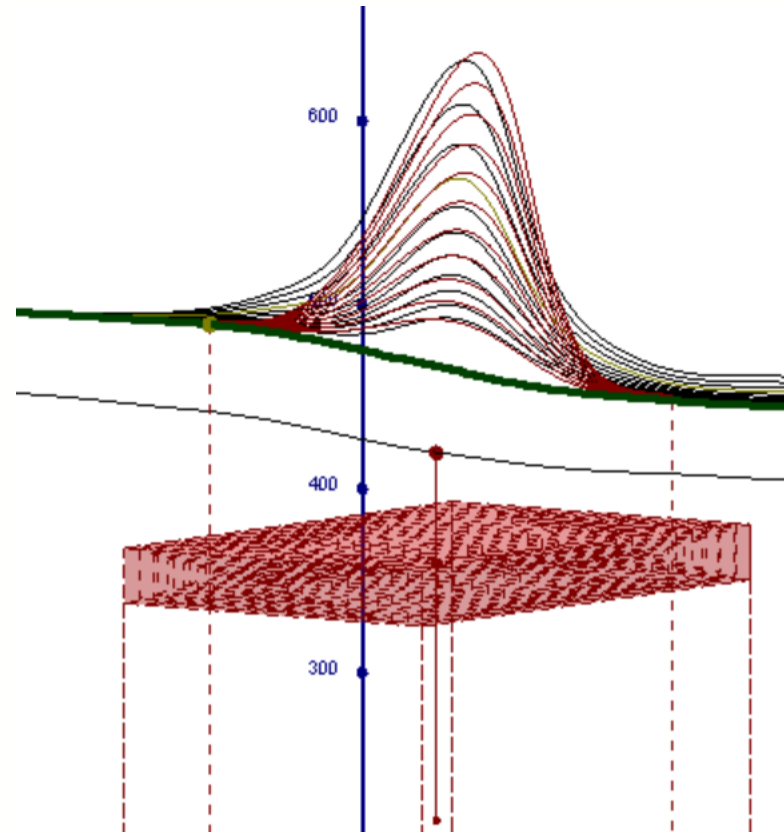
Modeled Plates

# West Block L1140 Target 1



## PLATE PARAMETERS

Name	1
X	660070
Y	5526180
Z	385
Length	300
Depth Extent	200
Dip	0
Dip Dir.	179.35
Plunge	0
Cond-Th.	90



**3D View of the plate and data**

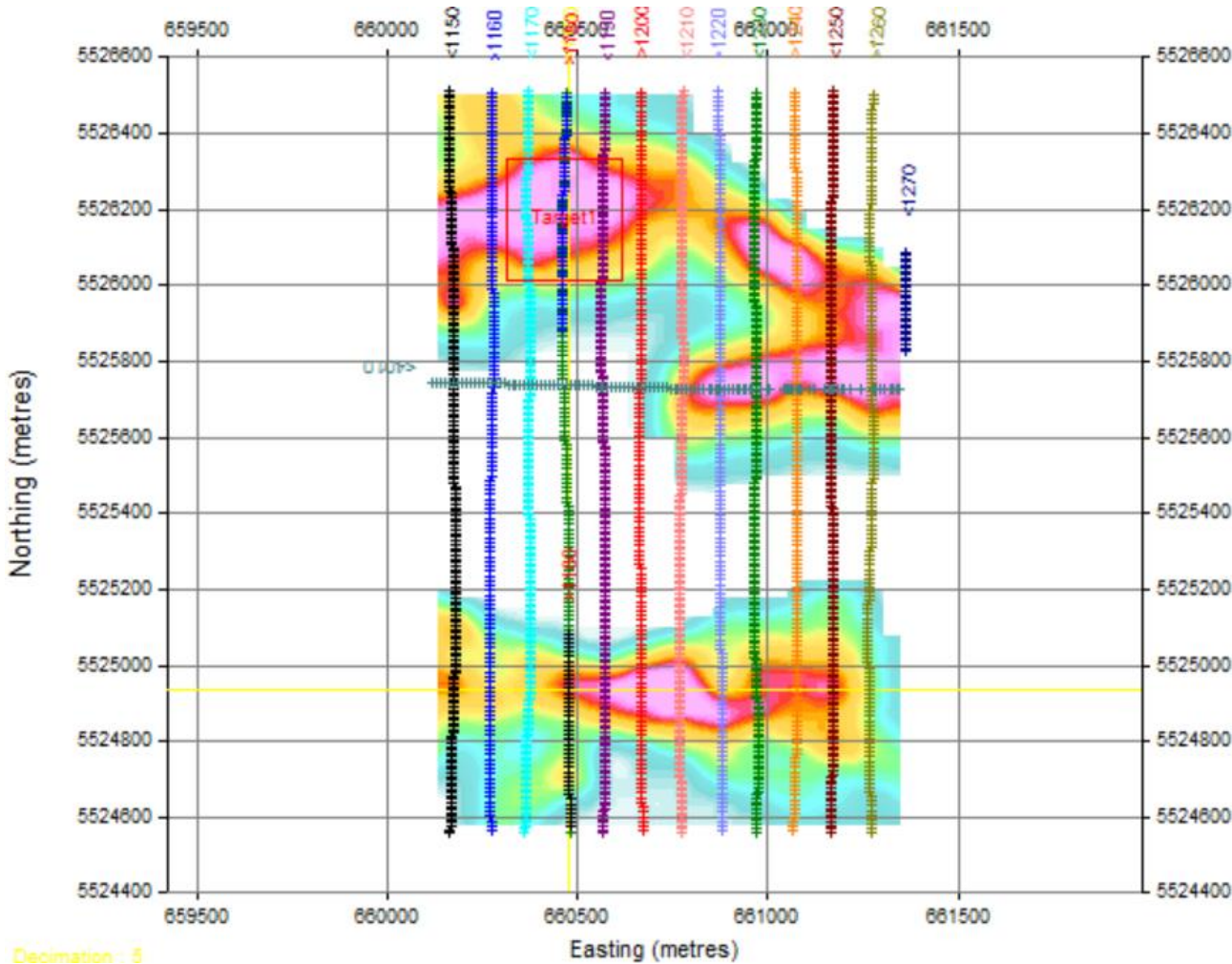


# West Block L1140 Target1

Target Plate Parameters	
Parameter	Target1
X	660070
Y	5526180
Z	385
Depth	-57
Dip	0
Dip Direction	179
Rotation	0
Length	300
Depth Extent	200
Conductivity-Thickness	90
Conductivity	3
Thickness	30
x,y,z-- coordinates of top-center point of the plate depth—depth from surface to top-center of the plate	

Drill-hole Parameters Appropriate for the Model						
Target_Line	X (m)	Y (m)	Z (m)	Dip (deg)	Azimuth (deg)	Length (m)
Drillhole 1	660068.7	5526077	445	90	0	200





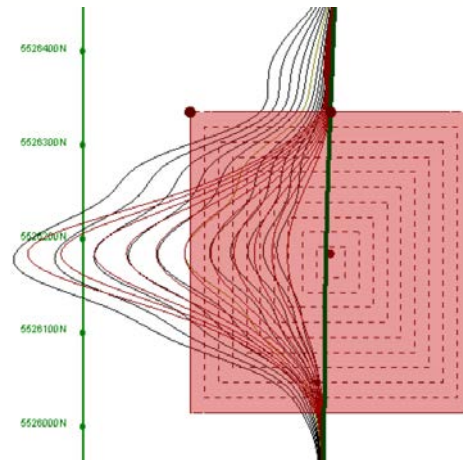
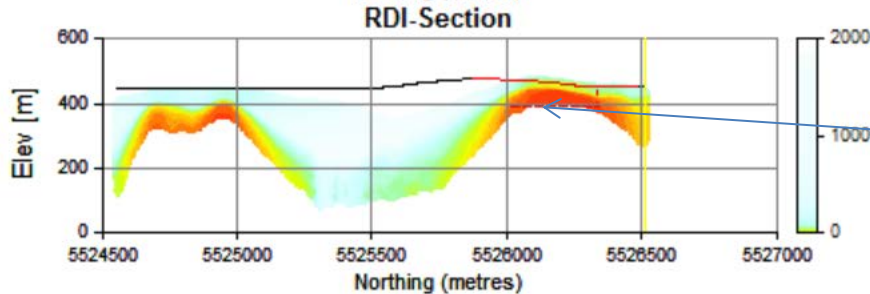
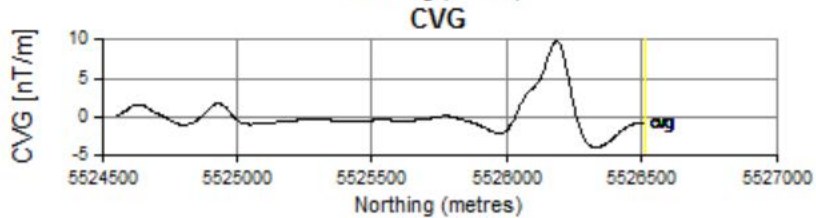
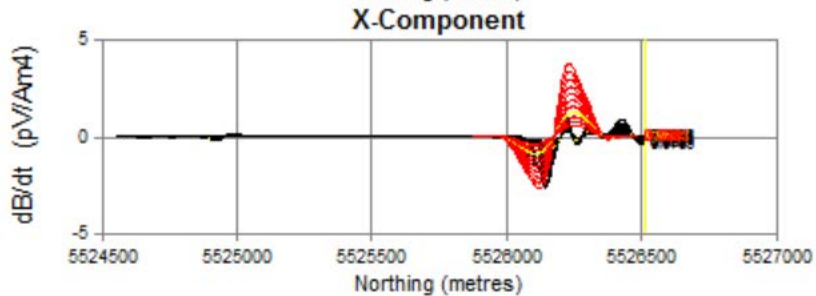
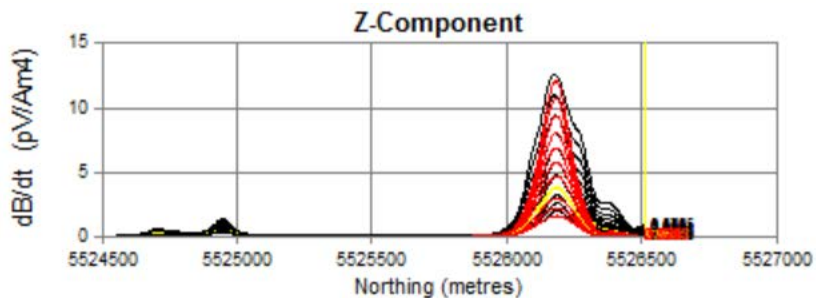
Modelled target areas on TAU map (LEFT).

Three lines over two anomalous areas were selected for modeling. Drill holes with appropriate parameters were suggested for these modelled plates.

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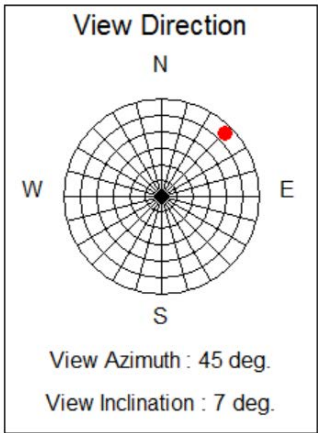
# West Block L1180 Target1

Plan View



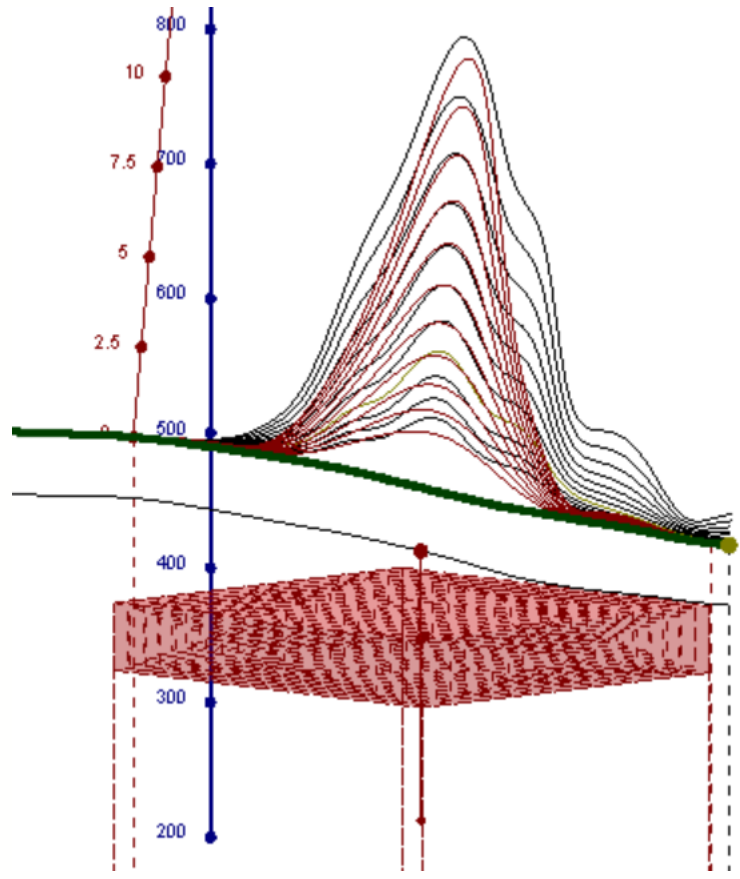
Modeled Plates

# West Block L1180 Target 1



## PLATE PARAMETERS

Name	Target1
X	660465
Y	5526335
Z	395
Length	300
Depth Extent	320
Dip	0
Dip Dir.	180
Plunge	0
Cond-Th.	75



**3D View of the plate and data**

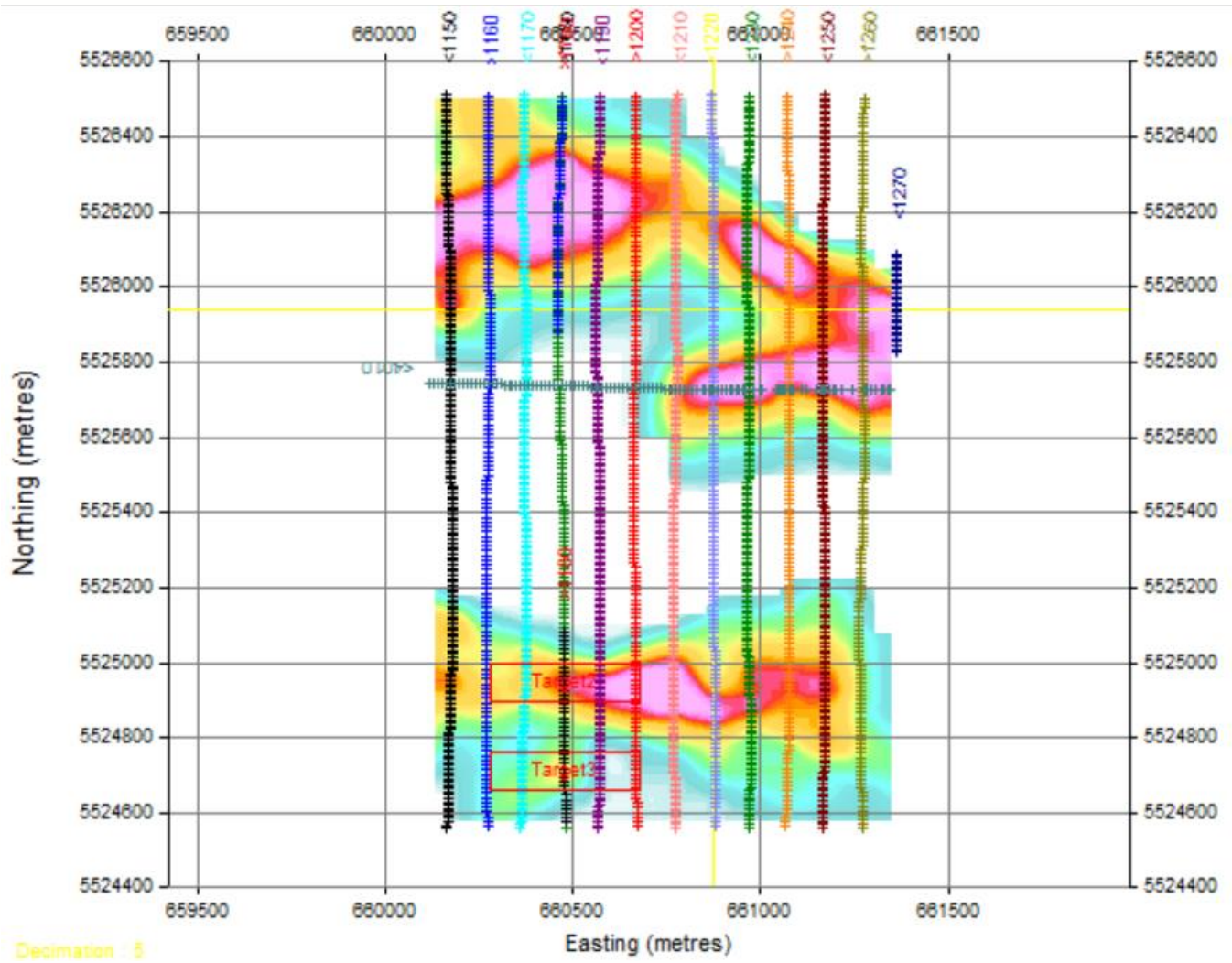
# West Block L1180 Target1

Target Plate Parameters	
Parameter	Target1
X	660465
Y	5526335
Z	395
Depth	-52
Dip	0
Dip Direction	180
Rotation	0
Length	300
Depth Extent	320
Conductivity-Thickness	75
Conductivity	1.5
Thickness	50
x,y,z-- coordinates of top-center point of the plate depth—depth from surface to top-center of the plate	

Drill-hole Parameters Appropriate for the Model						
Target_Line	X (m)	Y (m)	Z (m)	Dip (deg)	Azimuth (deg)	Length (m)
Drillhole 1	660464.5	5526184	460	90	0	200







Modelled targets areas on TAU map (LEFT).

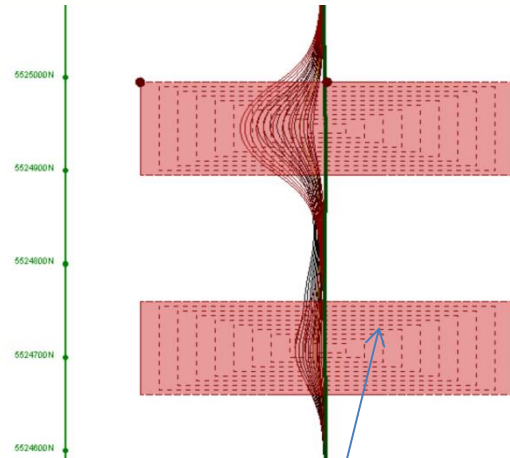
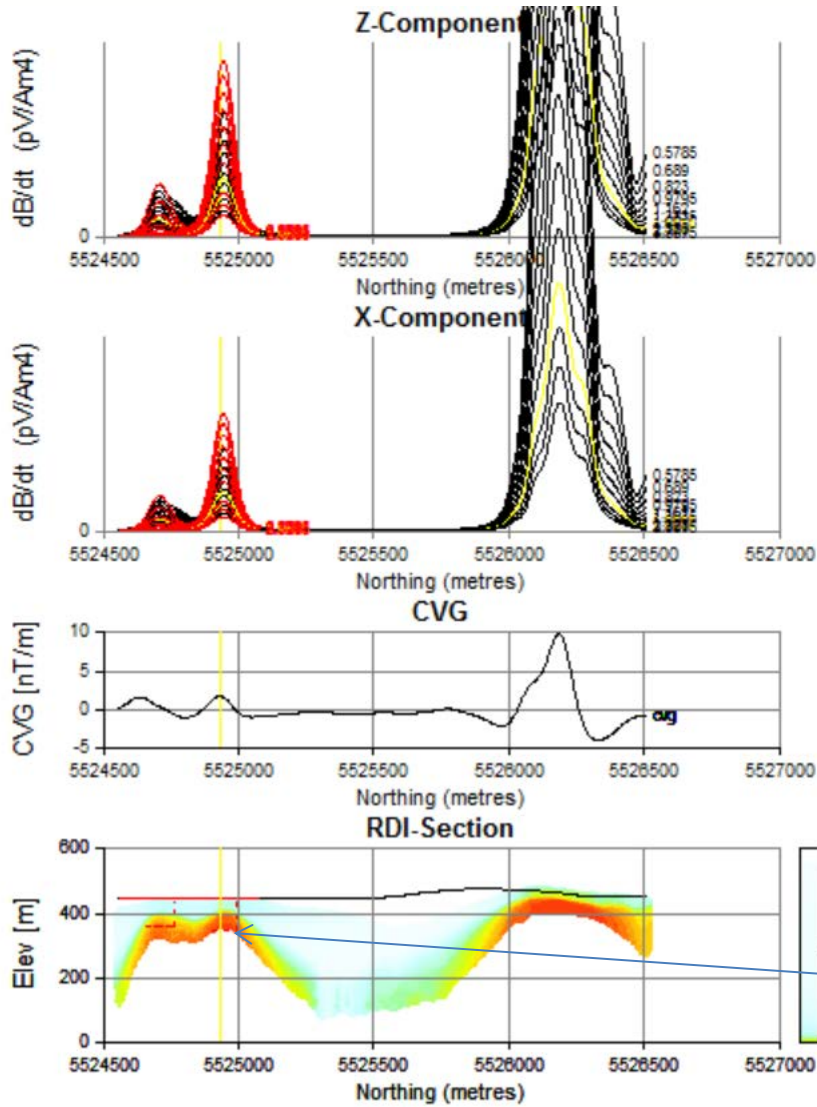
Three lines over two anomalous areas were selected for modeling. Drill holes with appropriate parameters were suggested for these modelled plates.

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# West Block L1180 Target2&3

## Plan View

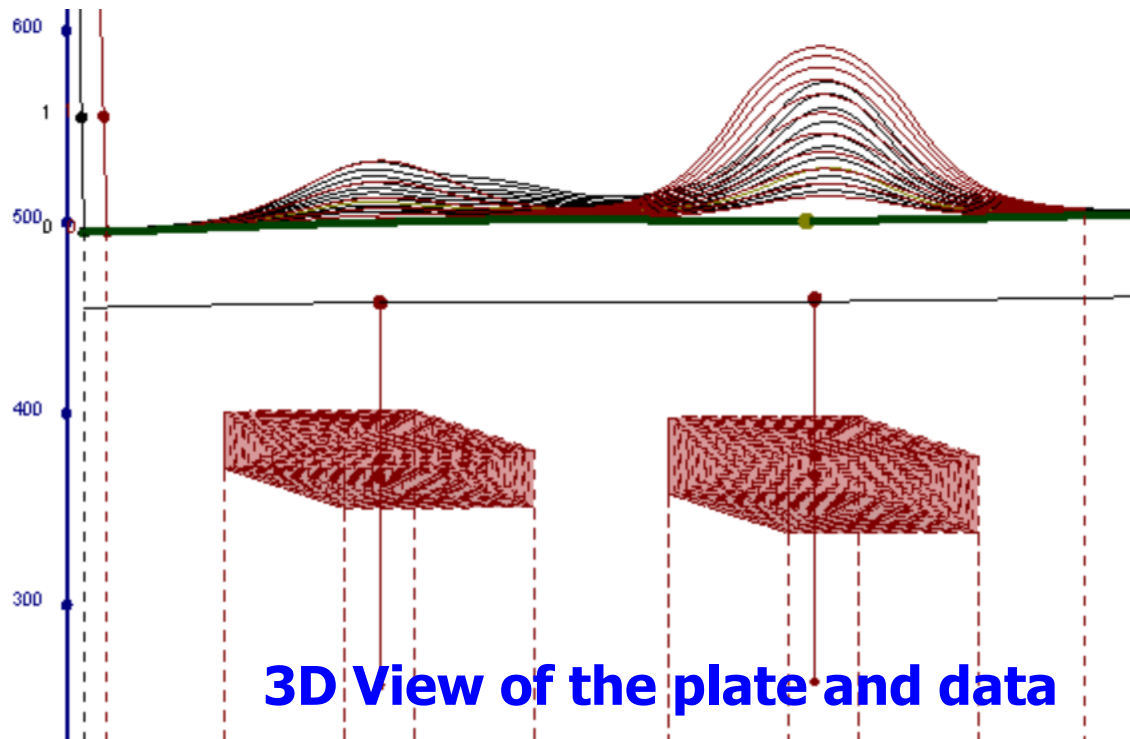
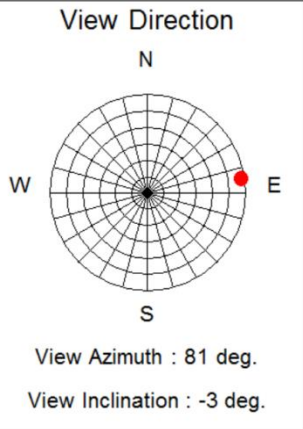


Modeled Plates

# West Block L1180 Target 2&3

## PLATE PARAMETERS

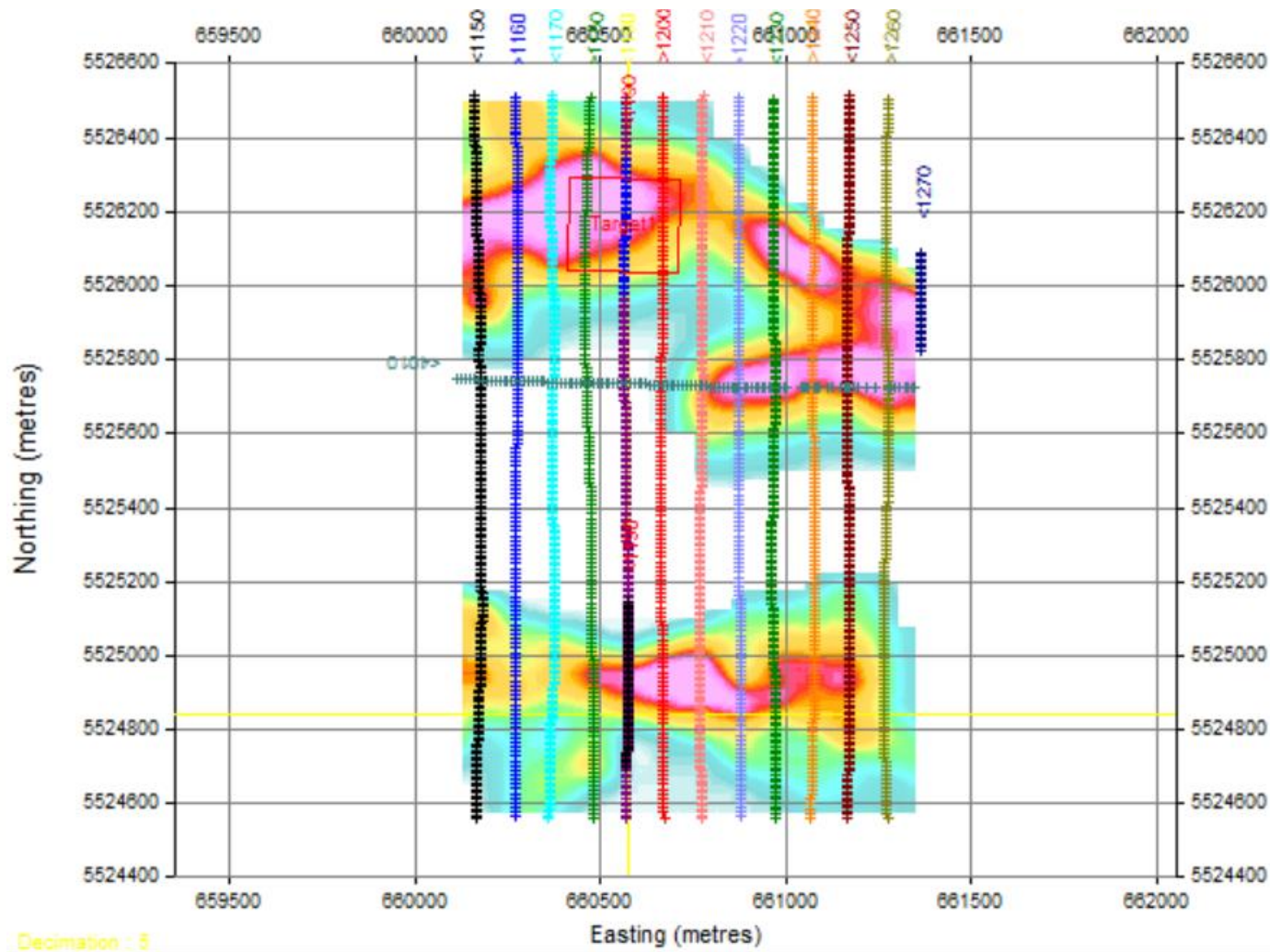
Name	Target3	Target2
X	660480	660480
Y	5524760	5524995
Z	360	350
Length	400	400
Depth Extent	100	100
Dip	0	0
Dip Dir.	180	180
Plunge	0	0
Cond-Th.	45	160



# West Block L1180 Target2&3

Target Plate Parameters		
Parameter	Target2	Target3
X	660480	660480
Y	5524995	5524760
Z	350	360
Depth	-91	-82
Dip	0	0
Dip Direction	180	180
Rotation	0	0
Length	400	400
Depth Extent	100	100
Conductivity-Thickness	160	45
Conductivity	4	1.5
Thickness	40	30
x,y,z-- coordinates of top-center point of the plate depth—depth from surface to top-center of the plate		

Drill-hole Parameters Appropriate for the Model						
Target_Line	X (m)	Y (m)	Z (m)	Dip (deg)	Azimuth (deg)	Length (m)
Drillhole 2	660477.677	5524710	442	90	0	200
Drillhole 3	660477.677	5524940	442	90	0	200



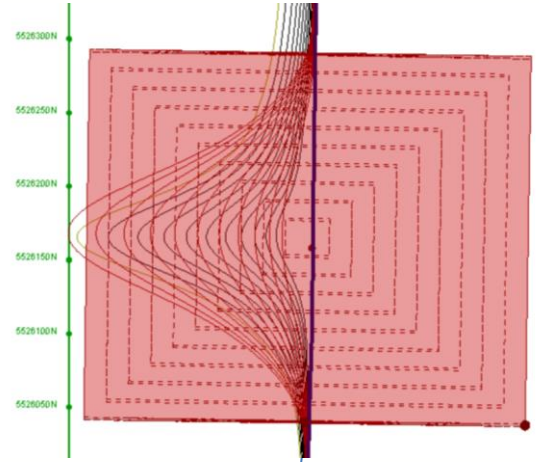
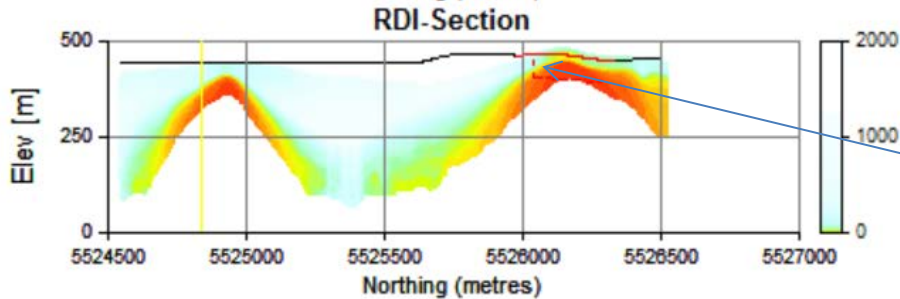
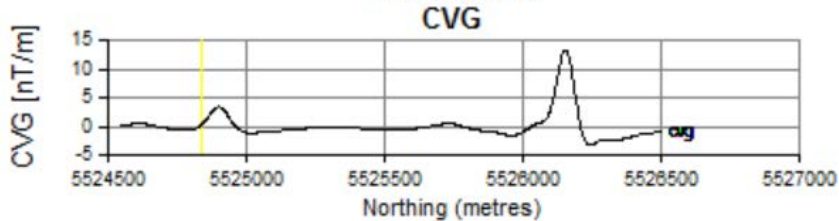
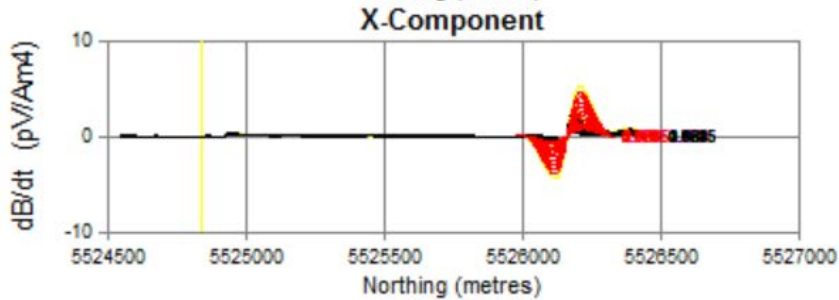
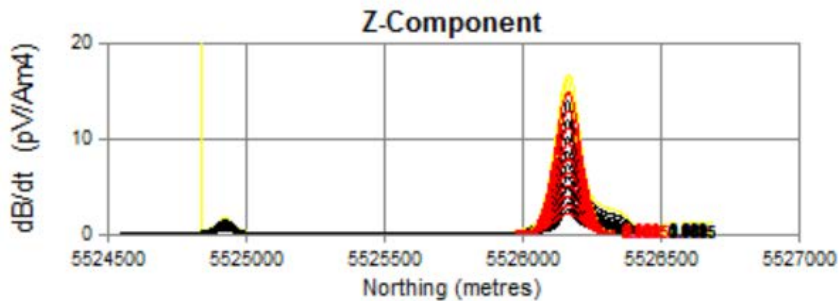
Modelled targets areas on TAU map (LEFT).

Three lines over two anomalous areas were selected for modeling. Drill holes with appropriate parameters were suggested for these modelled plates.

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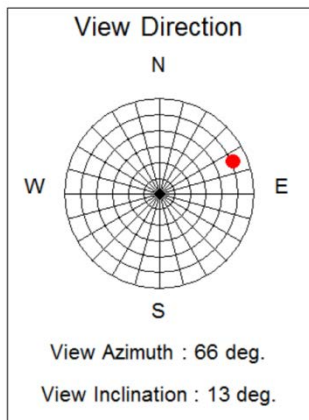


# West Block L1190 Target1 Plan View



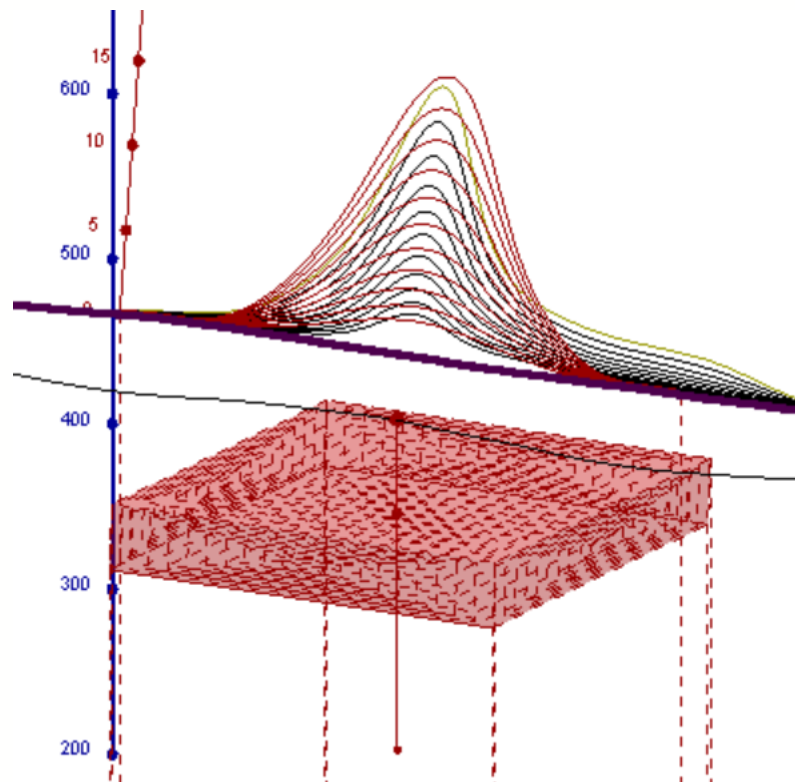
Modeled Plates

# West Block L1190 Target1



## PLATE PARAMETERS

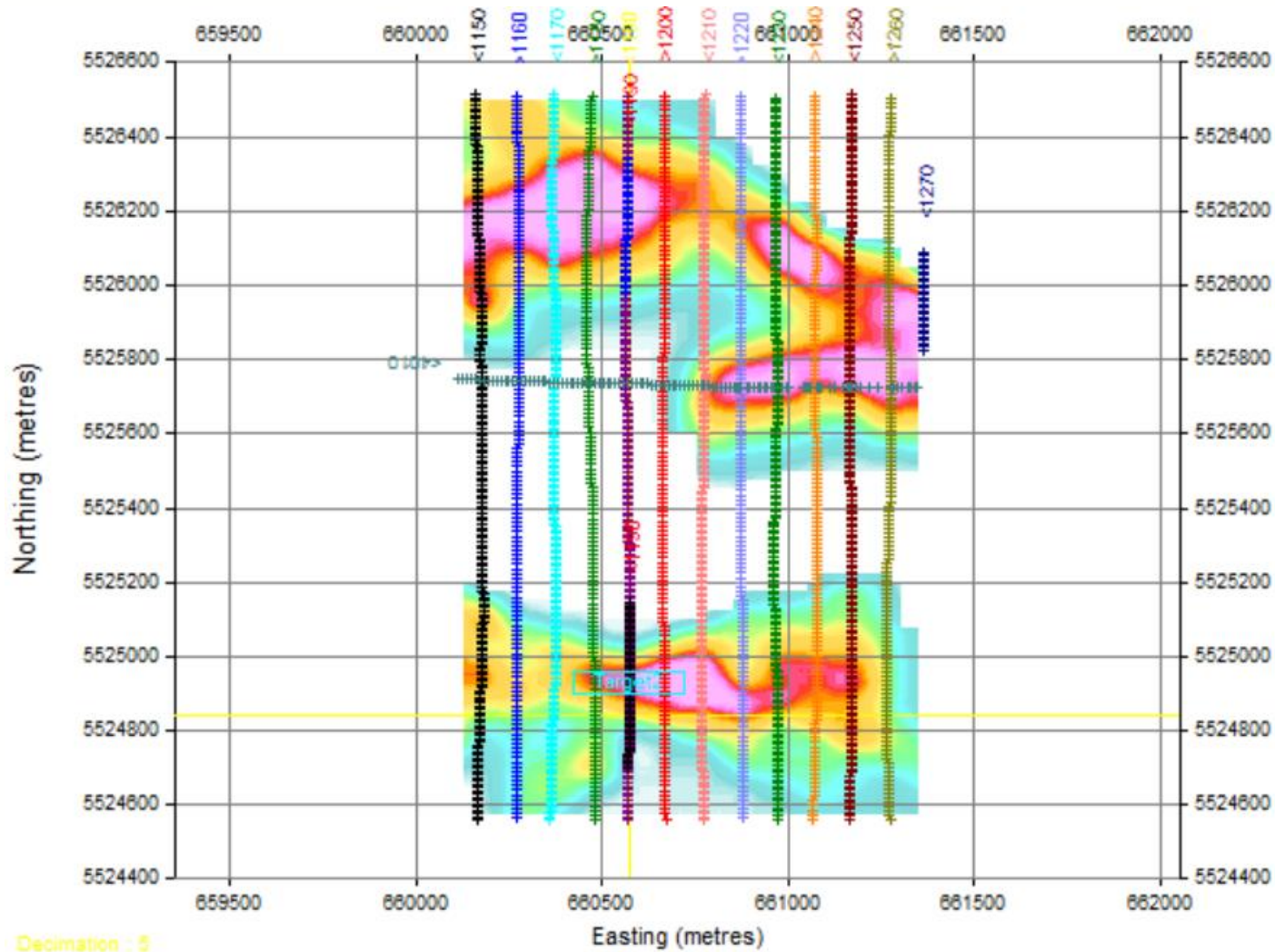
Name	Target1
X	660560
Y	5526040
Z	410
Length	300
Depth Extent	250
Dip	2.5
Dip Dir.	0.91
Plunge	0
Cond-Th.	520



**3D View of the plate and data**



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Modelled targets areas on TAU map (LEFT).

Three lines over two anomalous areas were selected for modeling. Drill holes with appropriate parameters were suggested for these modelled plates.

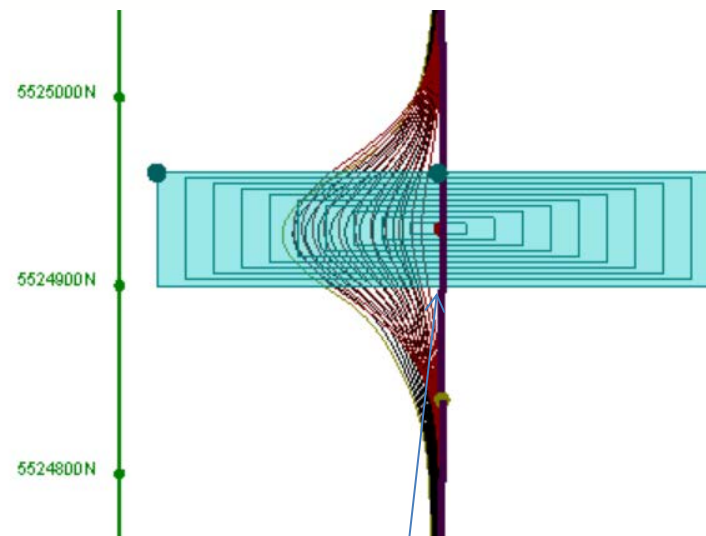
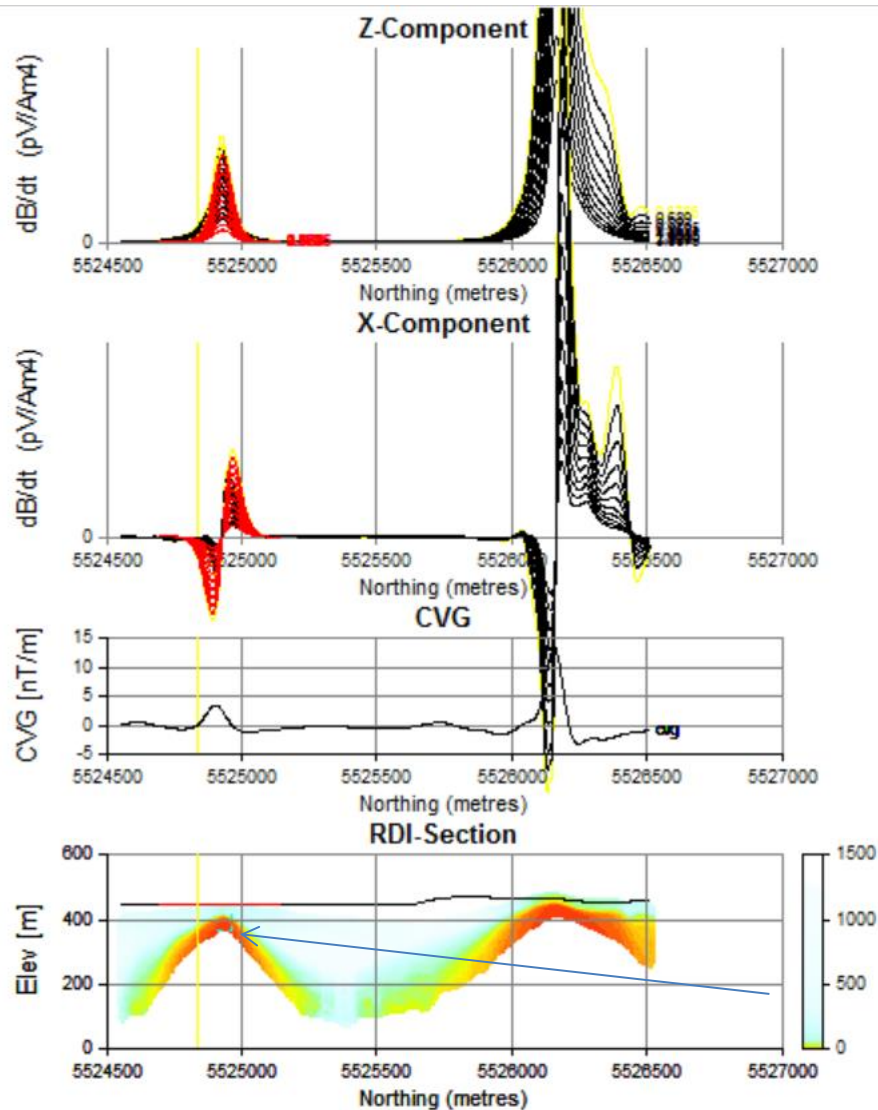
NAD83 UTM ZONE 15N





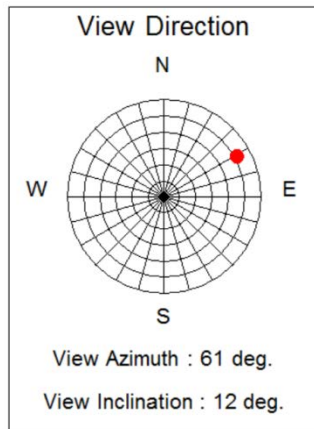
# West Block L1190 Target2

Plan View



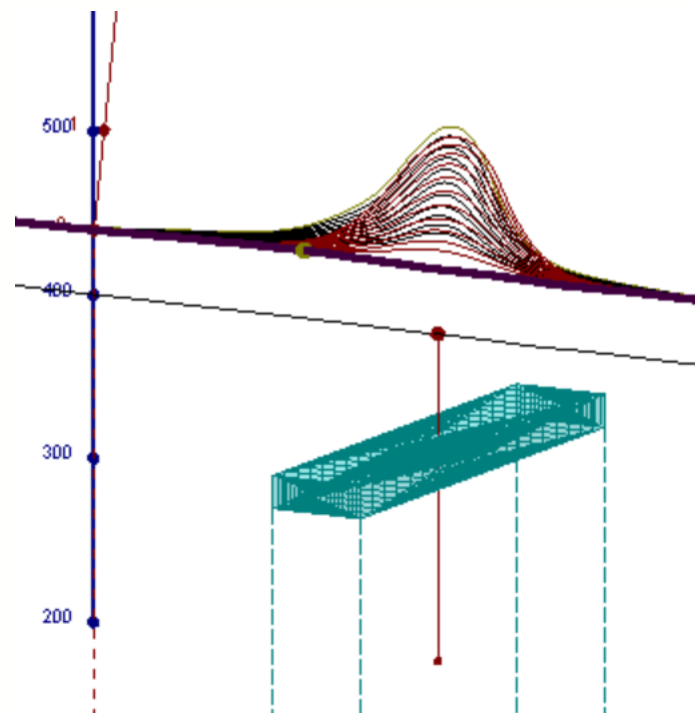
Modeled Plates

# West Block L1190 Target2



## PLATE PARAMETERS

Name	Target2
X	660570
Y	5524960
Z	370
Length	300
Depth Extent	60
Dip	0
Dip Dir.	180
Plunge	0
Cond-Th.	260



**3D View of the plate and data**



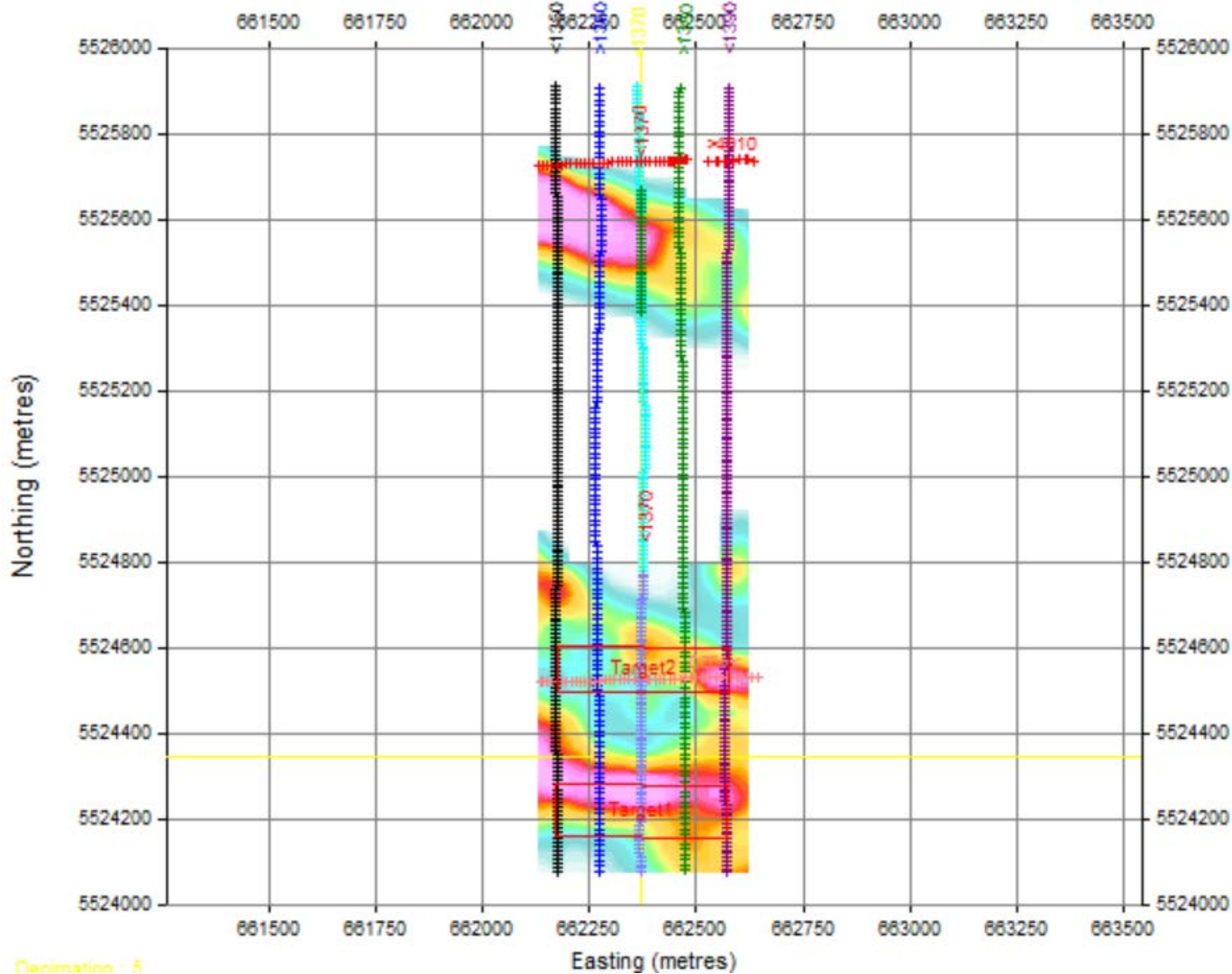
# West Block L1190 Target1&2

Target Plate Parameters		
Parameter	Target1	Target2
X	660560	660570
Y	5526040	5524960
Z	410	370
Depth	-52	-72
Dip	2.5	0
Dip Direction	0.91	180
Rotation	0	0
Length	300	300
Depth Extent	250	60
Conductivity-Thickness	520	260
Conductivity	13	13
Thickness	40	20

x,y,z— coordinates of top-center point of the plate  
depth—depth from surface to top-center of the plate

Drill-hole Parameters Appropriate for the Model						
Target_Line	X (m)	Y (m)	Z (m)	Dip (deg)	Azimuth (deg)	Length (m)
Drillhole 1_Target1	660565.1	5526158	462	90	0	200
Drillhole 2_Target2	660571	5524930	442	90	0	200





Modelled targets areas on TAU map (LEFT).

Three lines over two anomalous areas were selected for modeling. Drill holes with appropriate parameters were suggested for these modelled plates.

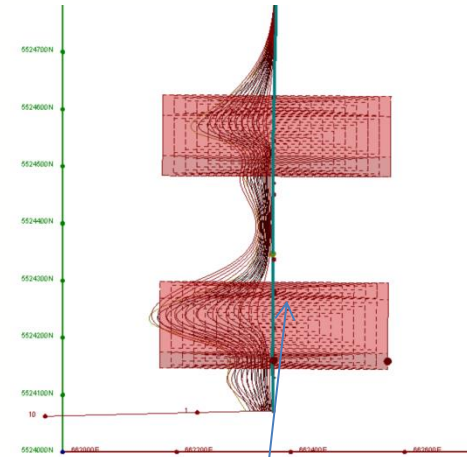
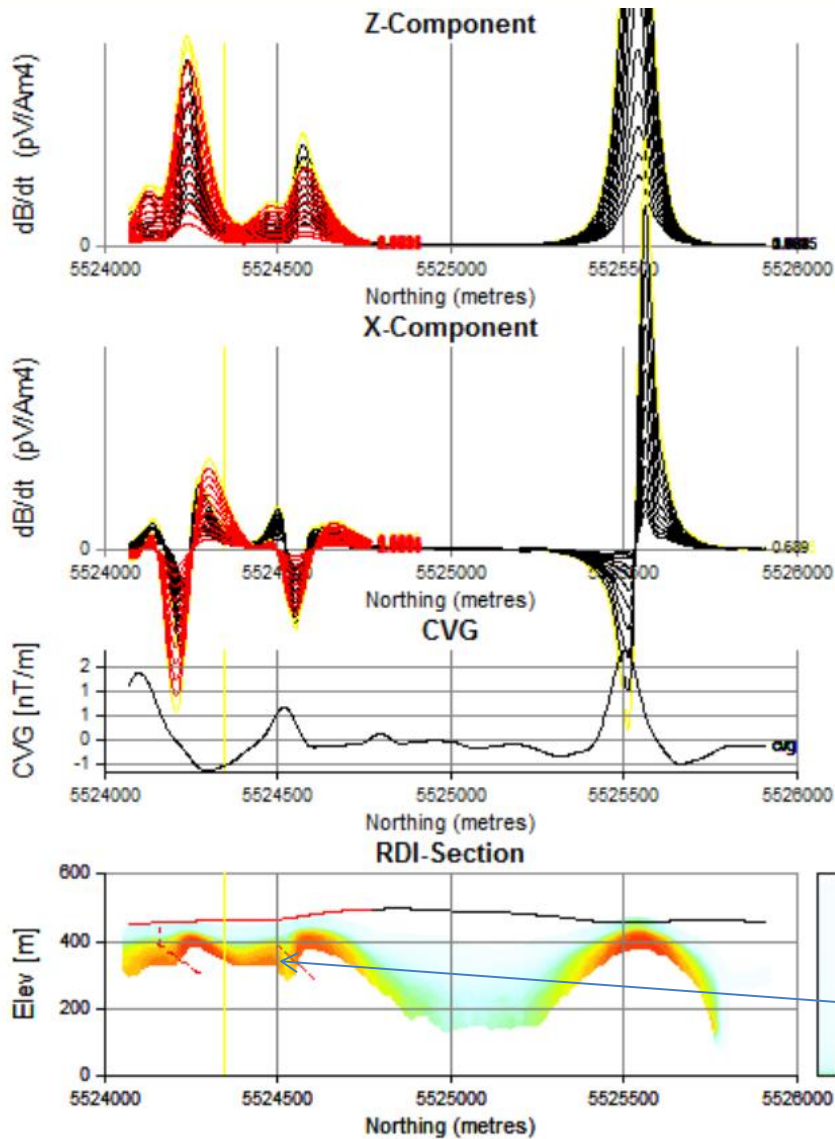
NAD83 UTM ZONE 15N



**GEOTECH**  
AIRBORNE GEOPHYSICAL SURVEYS

# West Block L1370 Target1&2

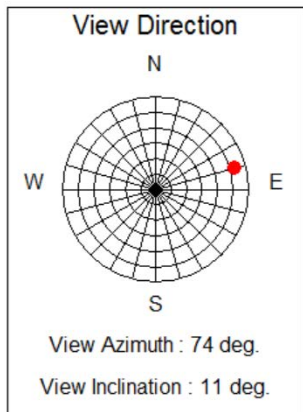
Plan View



Modeled Plates

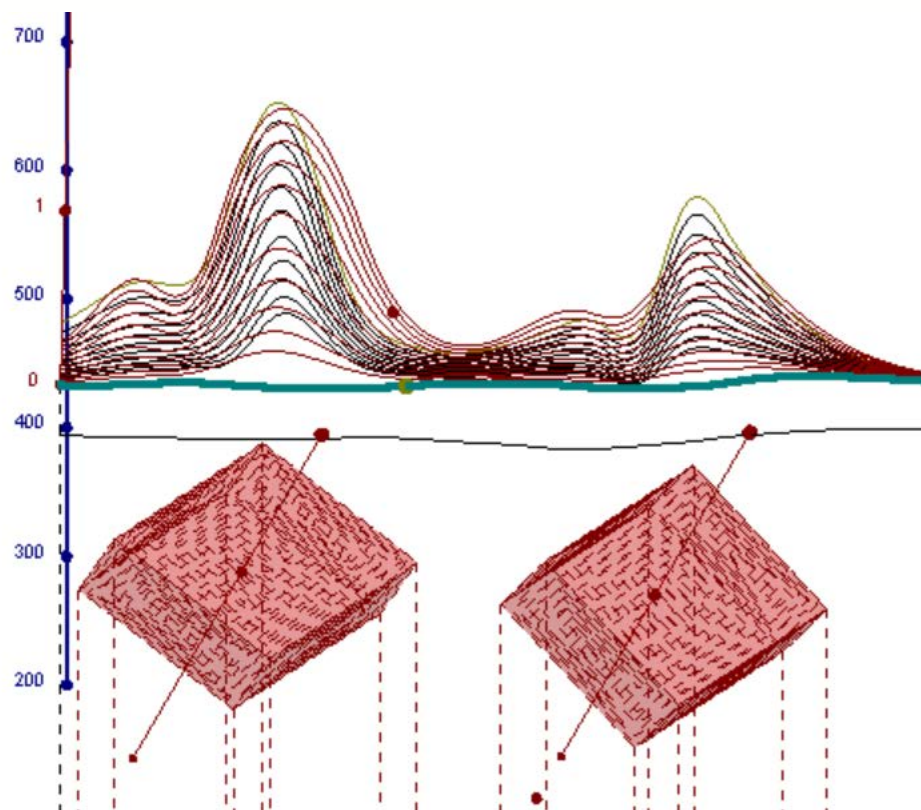


# West Block L1370 Target1&2



## PLATE PARAMETERS

Name	Target1	Target2
X	662370	662375
Y	5524160	5524500
Z	390	395
Length	400	400
Depth Extent	150	150
Dip	35	45
Dip Dir.	0.3898	0.3898
Plunge	0	0
Cond-Th.	100	100



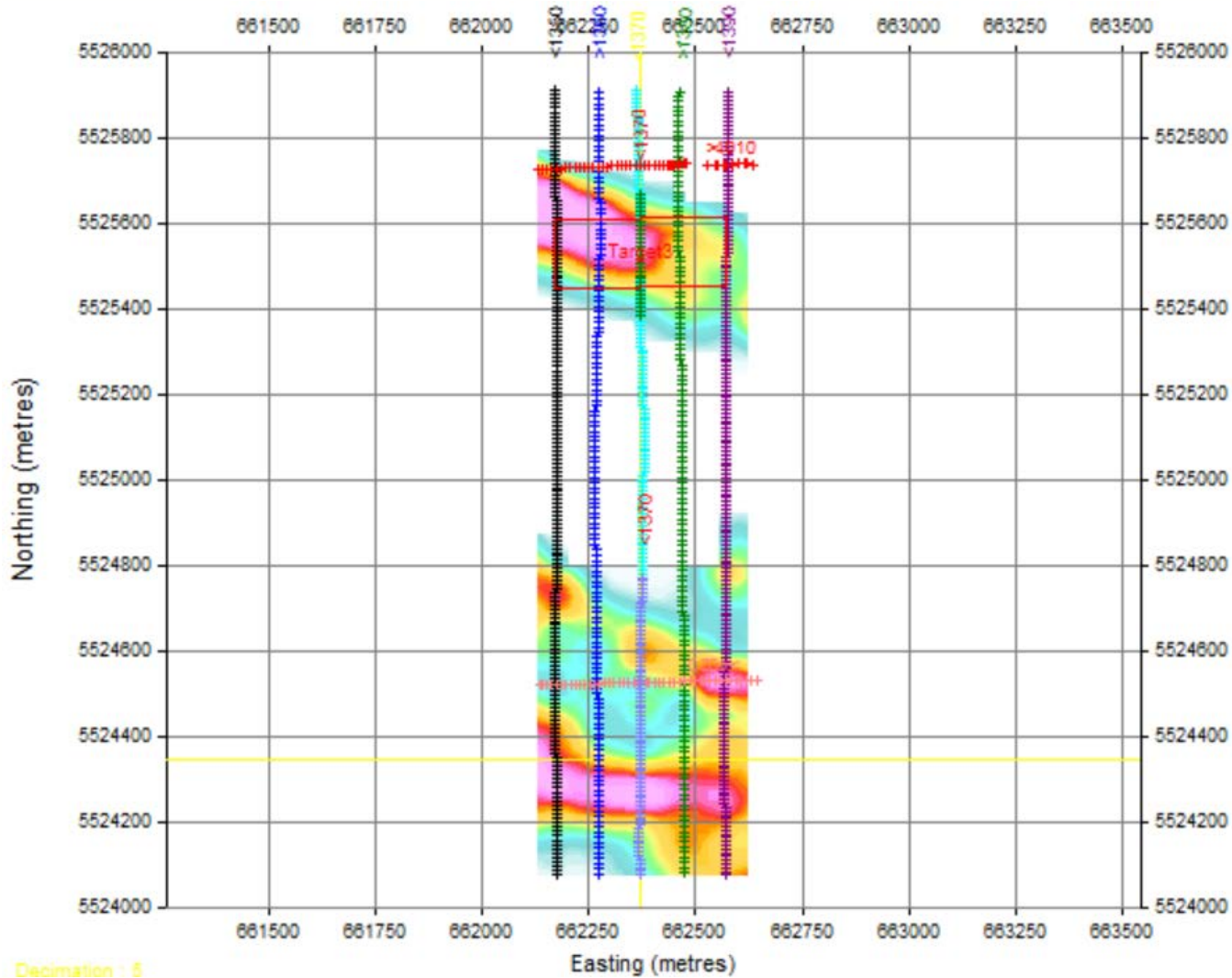
**3D View of the plate and data**



# West Block L1370 Target1&2

Target Plate Parameters		
Parameter	Target1	Target2
X	662370	662375
Y	5524160	5524500
Z	390	395
Depth	-61	-66
Dip	35	45
Dip Direction	0.39	0.39
Rotation	0	0
Length	400	400
Depth Extent	150	150
Conductivity-Thickness	100	100
Conductivity	2	2
Thickness	50	50
x,y,z— coordinates of top-center point of the plate depth—depth from surface to top-center of the plate		

Drill-hole Parameters Appropriate for the Model						
Target_Line	X (m)	Y (m)	Z (m)	Dip (deg)	Azimuth (deg)	Length (m)
Drillhole 1	662370.8	5524280	460	60	180	200
Drillhole 2	662370.8	5524620	480	60	180	200



Modelled targets areas on TAU map (LEFT).

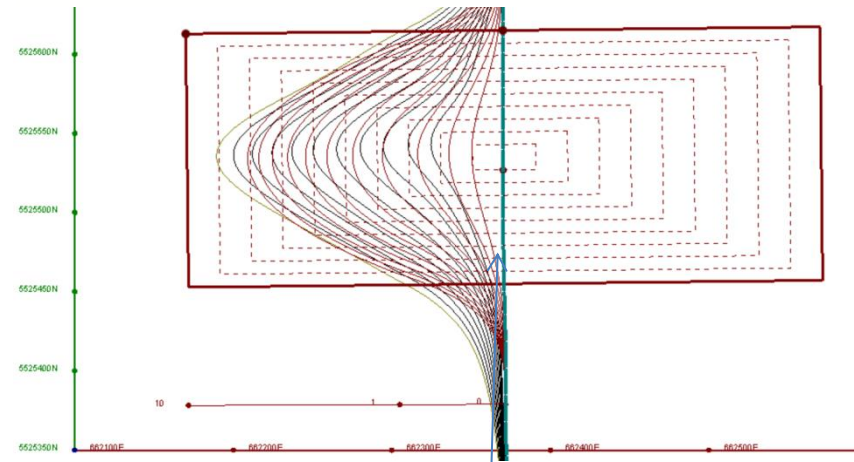
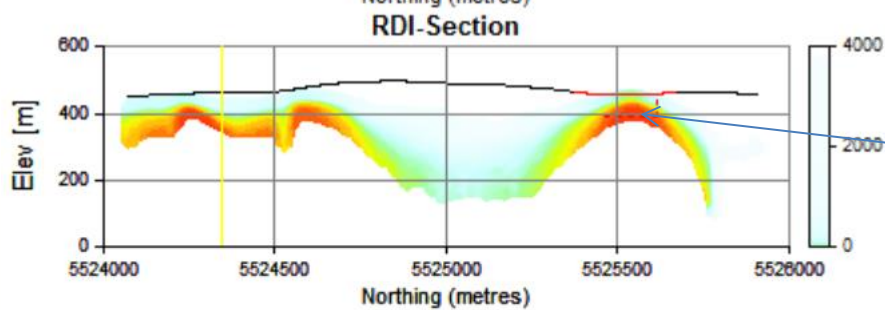
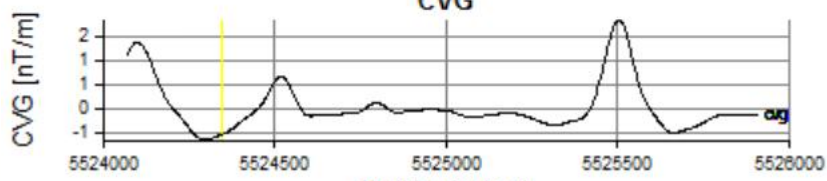
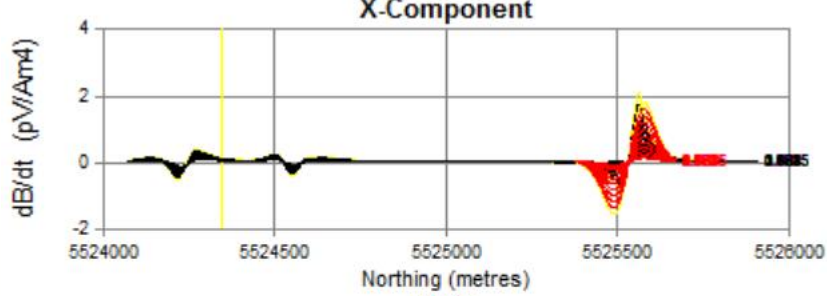
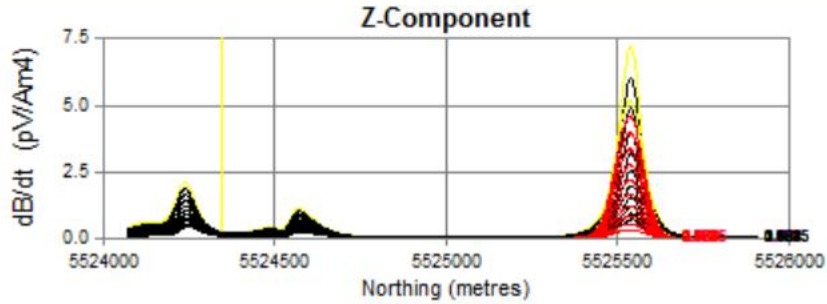
Three lines over two anomalous areas were selected for modeling. Drill holes with appropriate parameters were suggested for these modelled plates.

NAD83 UTM ZONE 15N



# West Block L1370 Target3

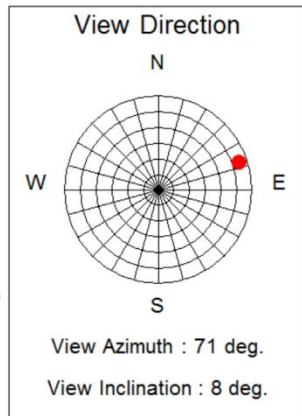
Plan View



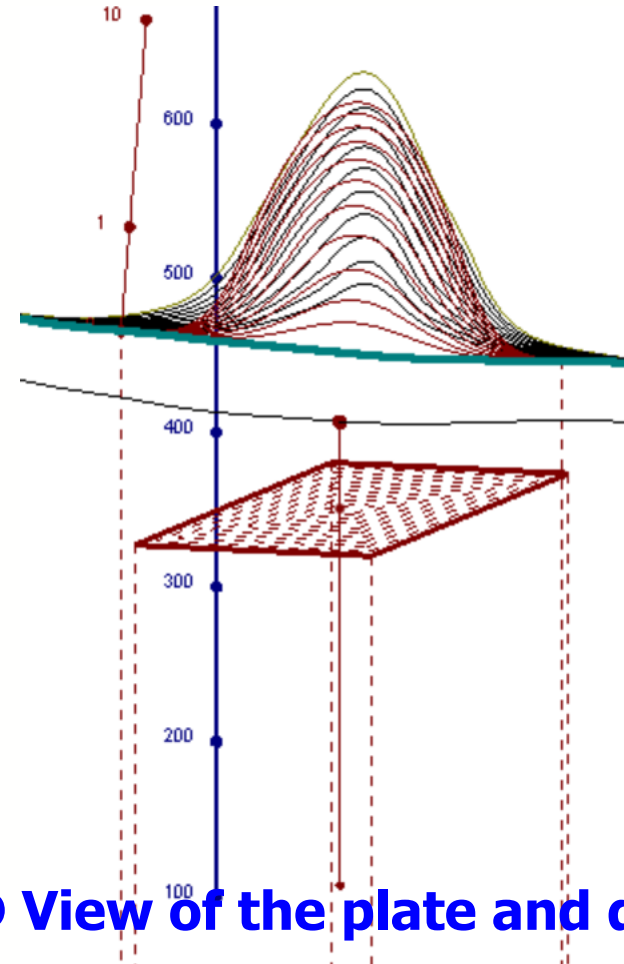
Modeled Plates

### PLATE PARAMETERS

Name	Target3
X	662370
Y	5525615
Z	395
Length	400
Depth Extent	160
Dip	0
Dip Dir.	179.3705
Plunge	0
Cond-Th.	50



## West Block L1370 Target 3



**3D View of the plate and data**

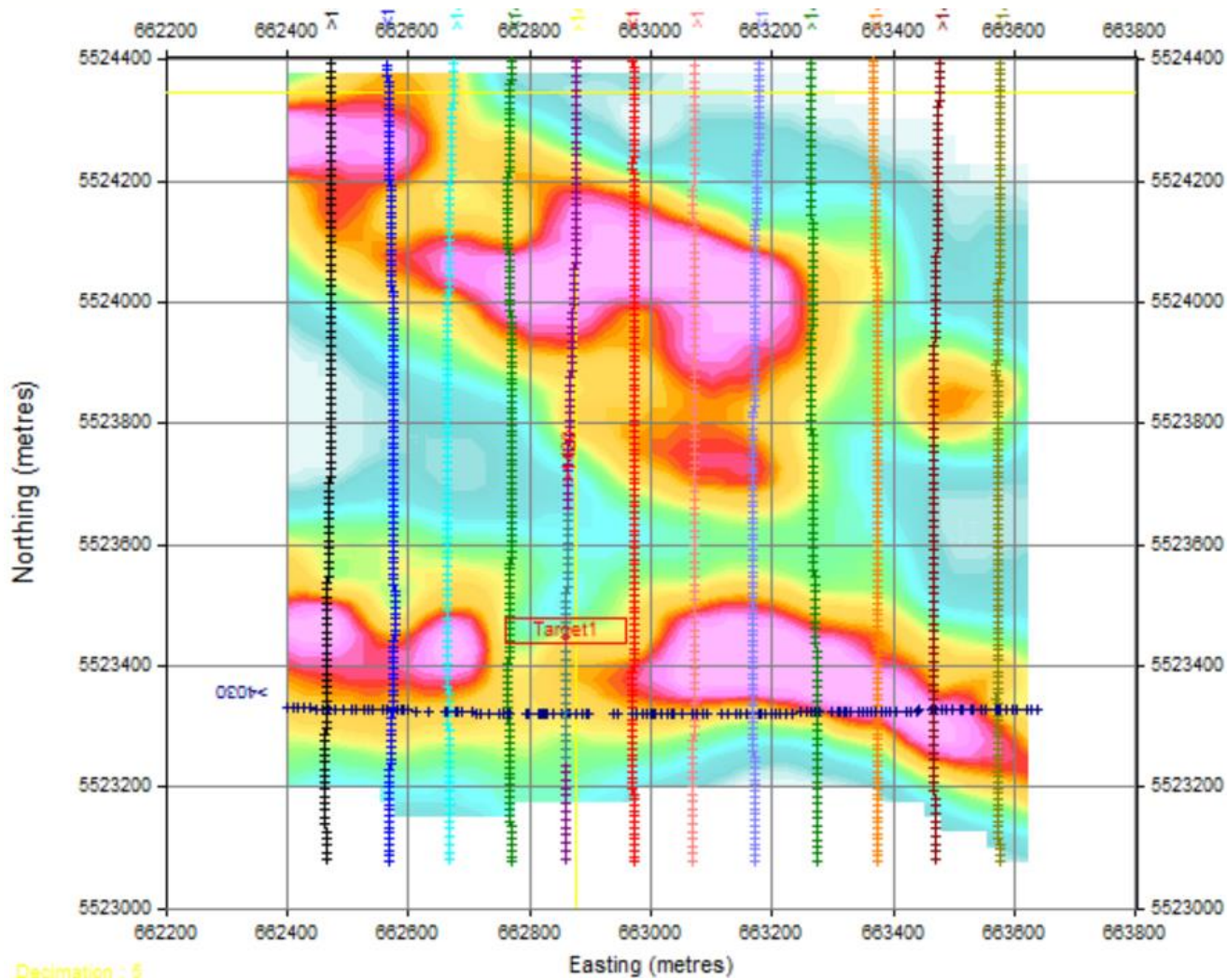


# West Block L1370 Target3

Target Plate Parameters	
Parameter	Target3
X	662370
Y	5525615
Z	395
Depth	-60
Dip	0
Dip Direction	179
Rotation	0
Length	400
Depth Extent	160
Conductivity-Thickness	50
Conductivity	-
Thickness	-
x,y,z-- coordinates of top-center point of the plate depth—depth from surface to top-center of the plate	

Drill-hole Parameters Appropriate for the Model						
Target_Line	X (m)	Y (m)	Z (m)	Dip (deg)	Azimuth (deg)	Length (m)
Drillhole 3	662370.1	5525527	451	90	0	200





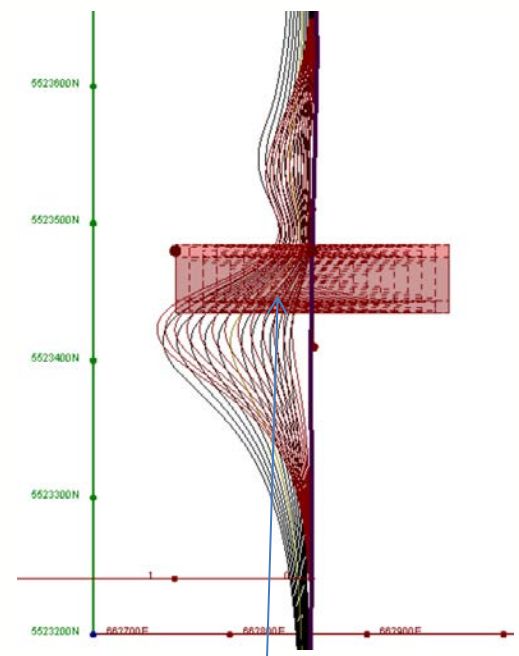
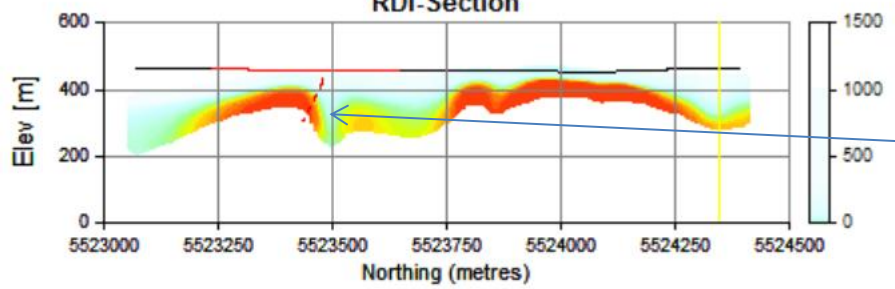
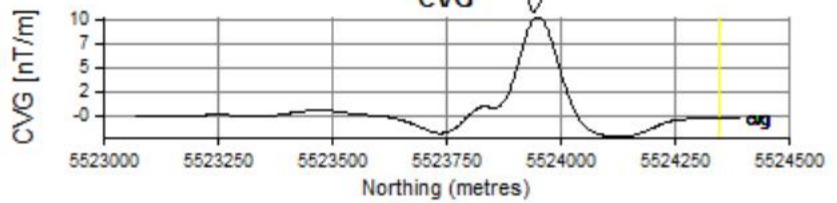
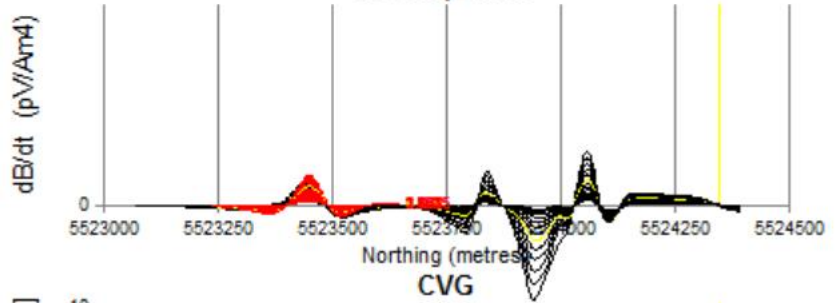
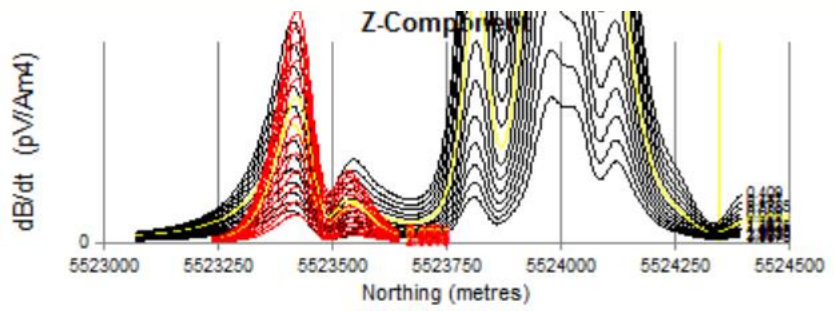
Modelled targets areas on TAU map (LEFT).

Three lines over two anomalous areas were selected for modeling. Drill holes with appropriate parameters were suggested for these modelled plates.

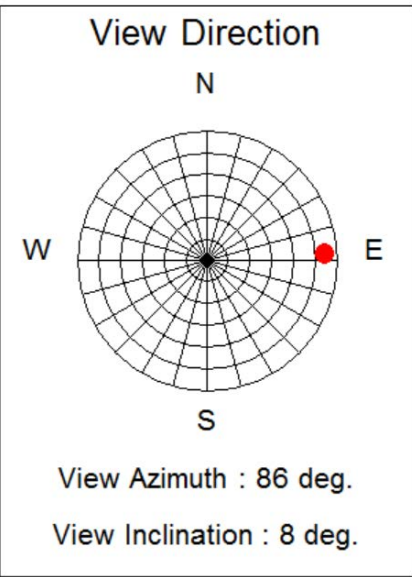
NAD83 UTM ZONE 15N

# West Block L1420 Target1

Plan View



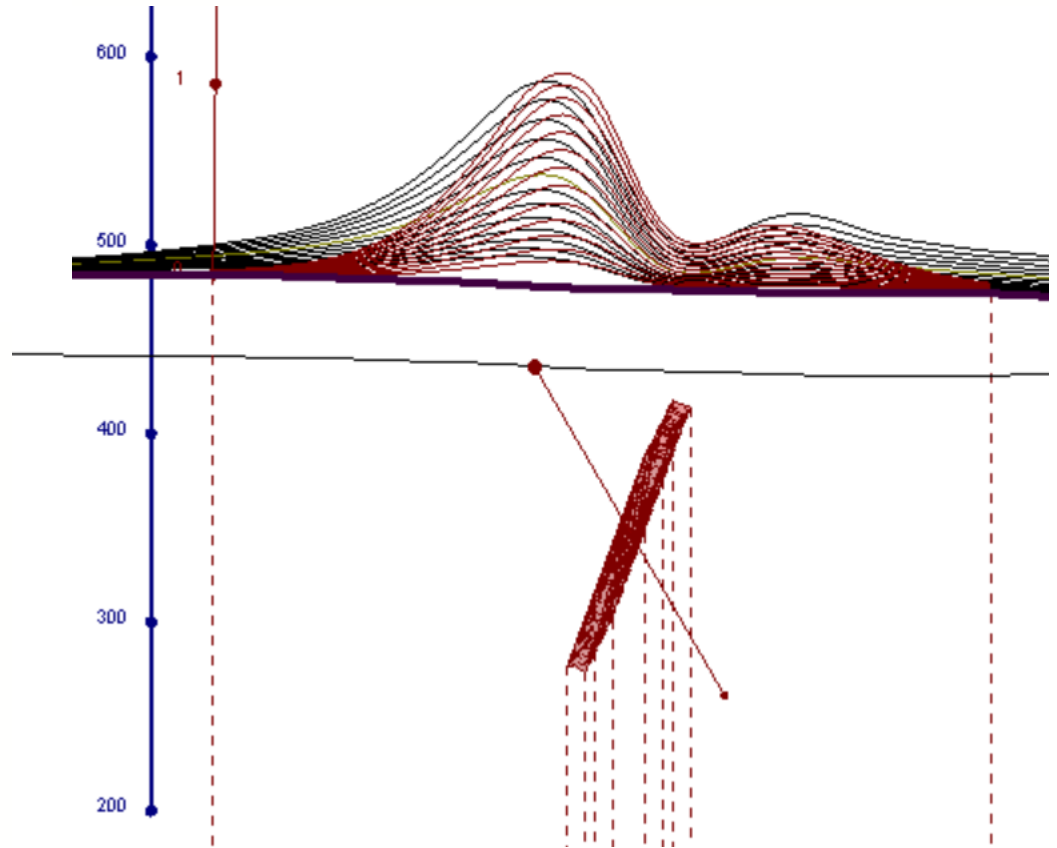
Modeled Plates



### PLATE PARAMETERS

Name	Target1
X	662860
Y	5523480
Z	420
Length	200
Depth Extent	120
Dip	70
Dip Dir.	180
Plunge	0
Cond-Th.	120

## West Block L1420 Target 1



**3D View of the plate and data**

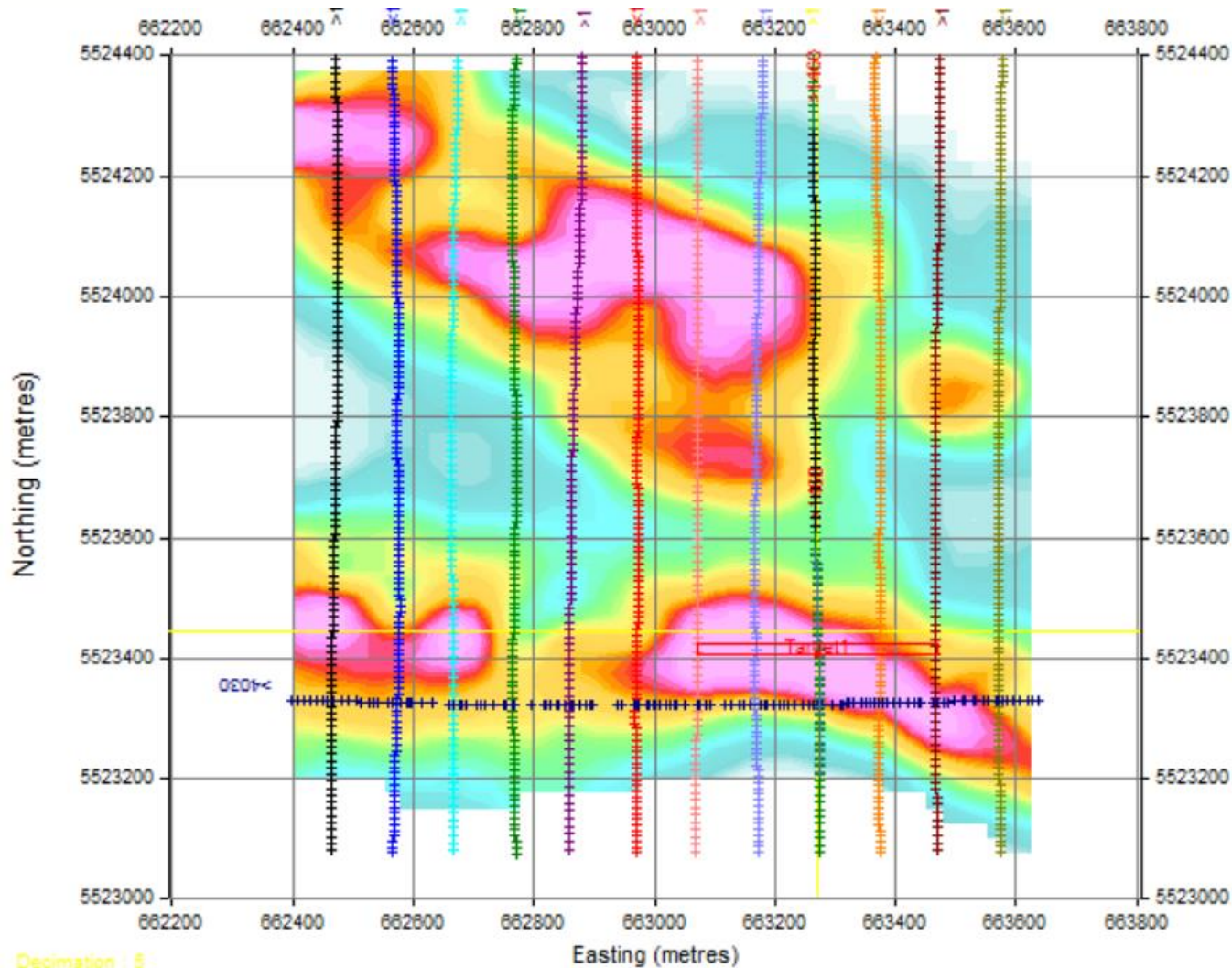


# West Block L1420 Target1

Target Plate Parameters	
Parameter	Target1
X	662860
Y	5523480
Z	420
Depth	-31
Dip	70
Dip Direction	180
Rotation	0
Length	200
Depth Extent	120
Conductivity-Thickness	120
Conductivity	12
Thickness	10
x,y,z-- coordinates of top-center point of the plate depth—depth from surface to top-center of the plate	

Drill-hole Parameters Appropriate for the Model						
Target_Line	X (m)	Y (m)	Z (m)	Dip (deg)	Azimuth (deg)	Length (m)
Drillhole 1	662861.3	5523410	453	60	0	200





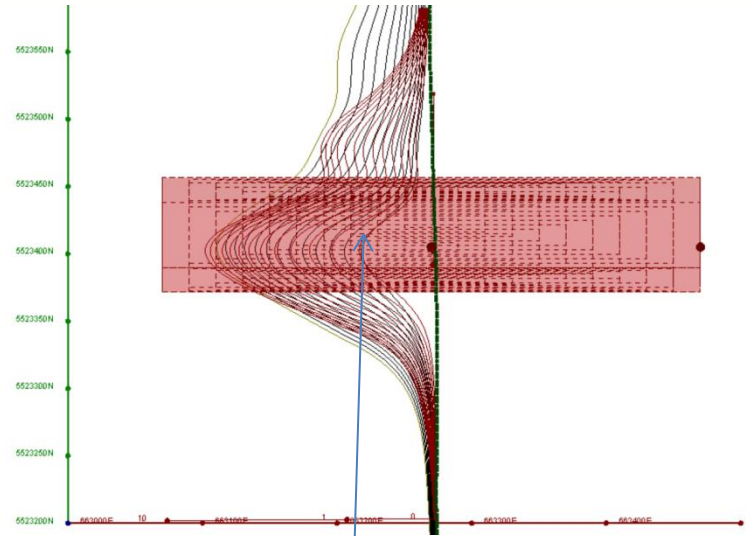
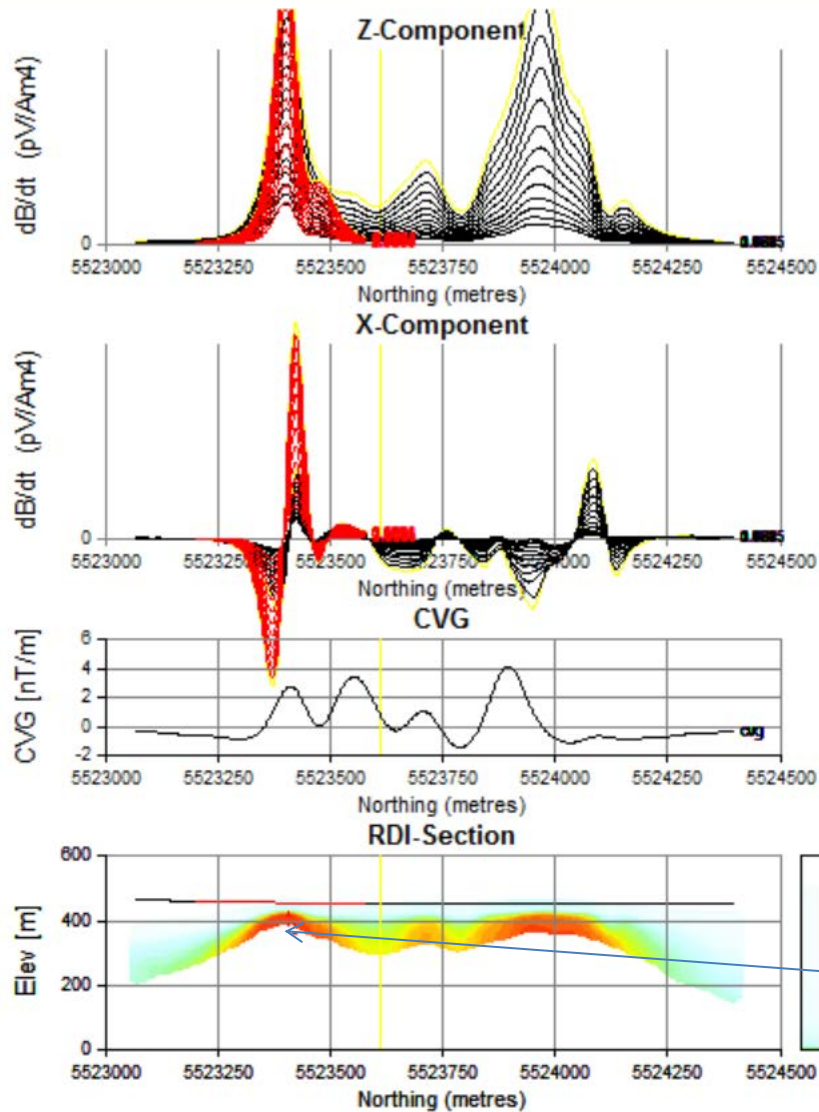
Modelled targets areas on TAU map (LEFT).

Three lines over two anomalous areas were selected for modeling. Drill holes with appropriate parameters were suggested for these modelled plates.

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# West Block L1460 Target1 Plan View

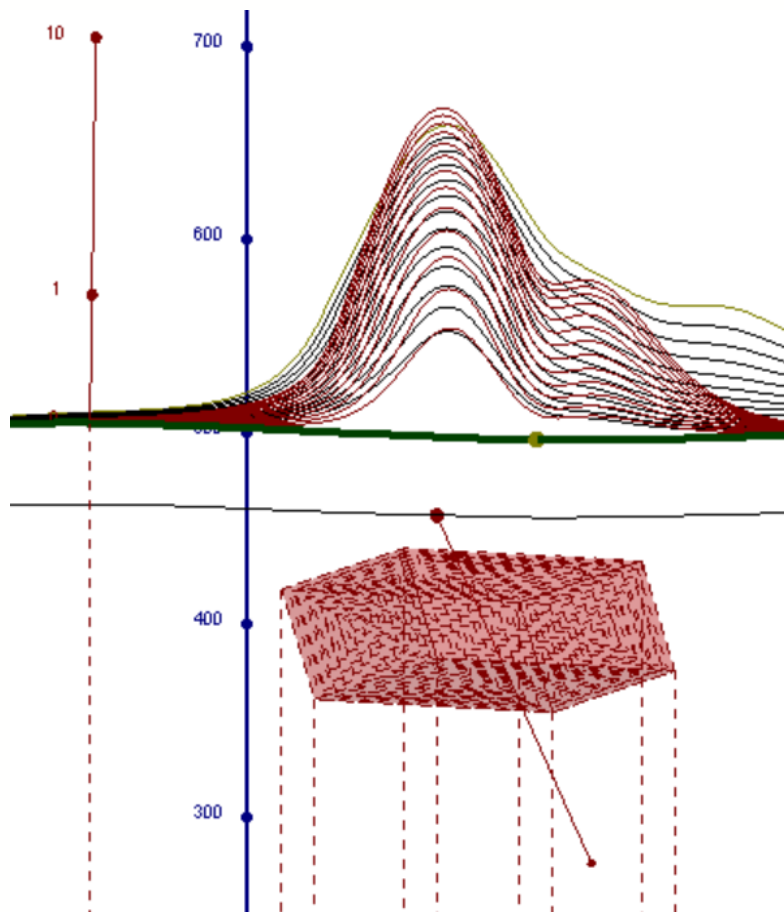
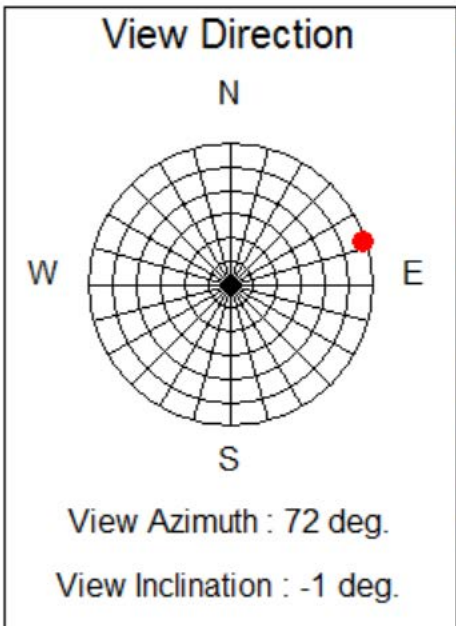


Modeled Plates

# West Block L1460 Target1

## PLATE PARAMETERS

Name	Target1
X	663270
Y	5523405
Z	420
Length	400
Depth Extent	60
Dip	72.5
Dip Dir.	0
Plunge	0
Cond-Th.	350



**3D View of the plate and data**

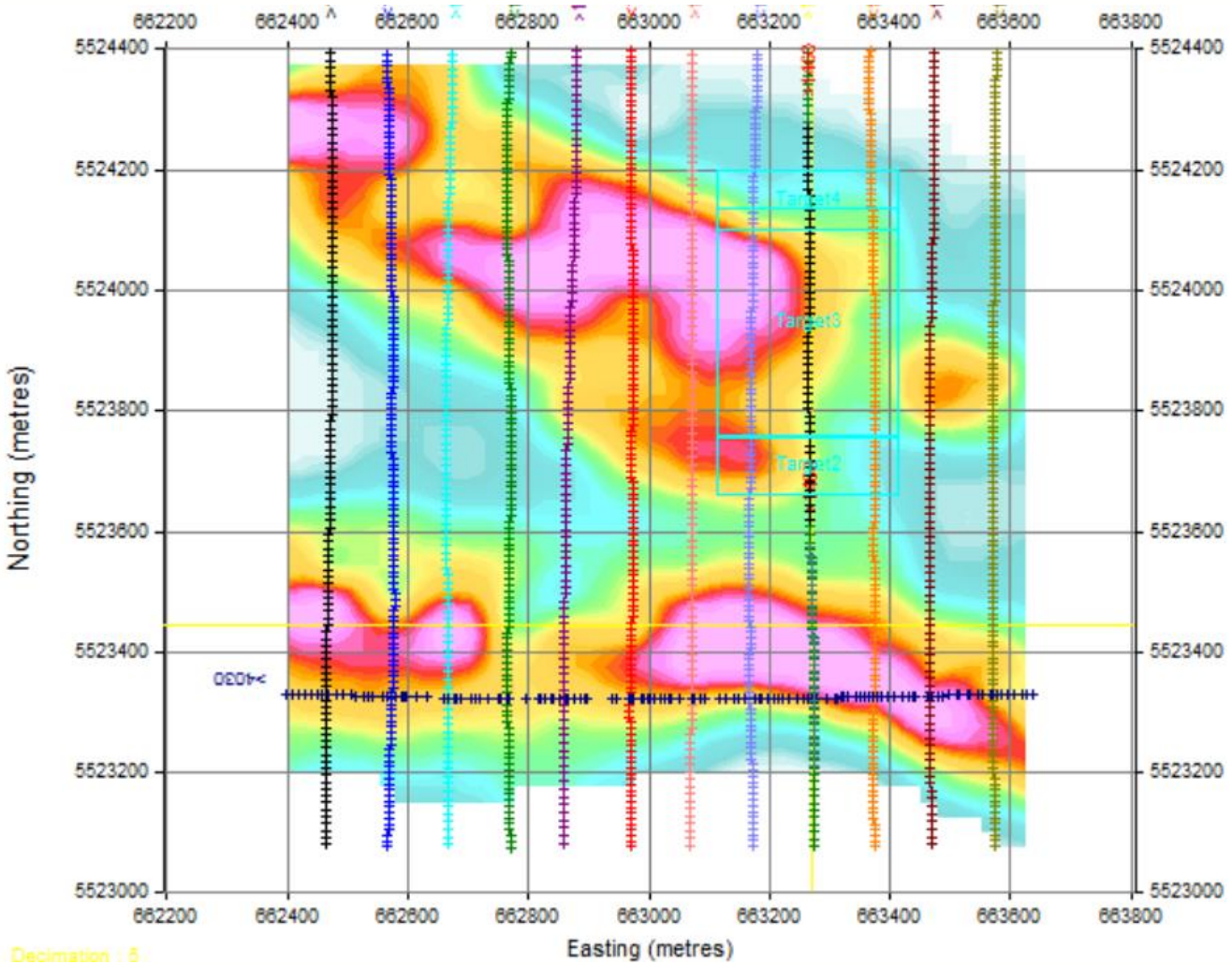


# West Block L1460 Target1

Target Plate Parameters	
Parameter	Target1
X	663270
Y	5523405
Z	420
Depth	-30.875
Dip	73
Dip Direction	0
Rotation	0
Length	400
Depth Extent	60
Conductivity-Thickness	350
Conductivity	5
Thickness	70
x,y,z-- coordinates of top-center point of the plate depth—depth from surface to top-center of the plate	

Drill-hole Parameters Appropriate for the Model						
Target_Line	X (m)	Y (m)	Z (m)	Dip (deg)	Azimuth (deg)	Length (m)
Drillhole 1	663271.6	5523392	451	65	0	200





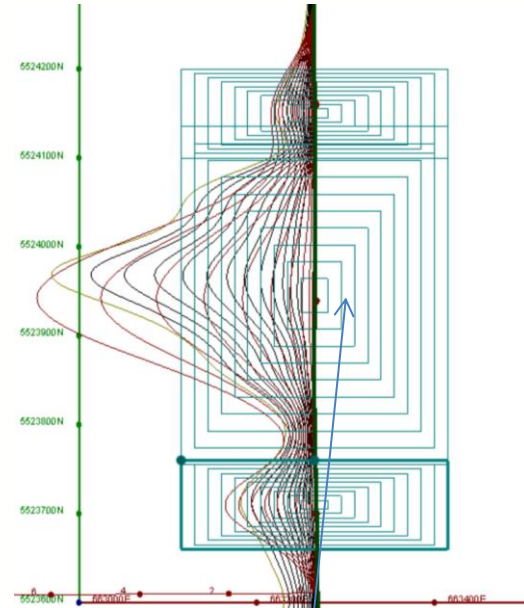
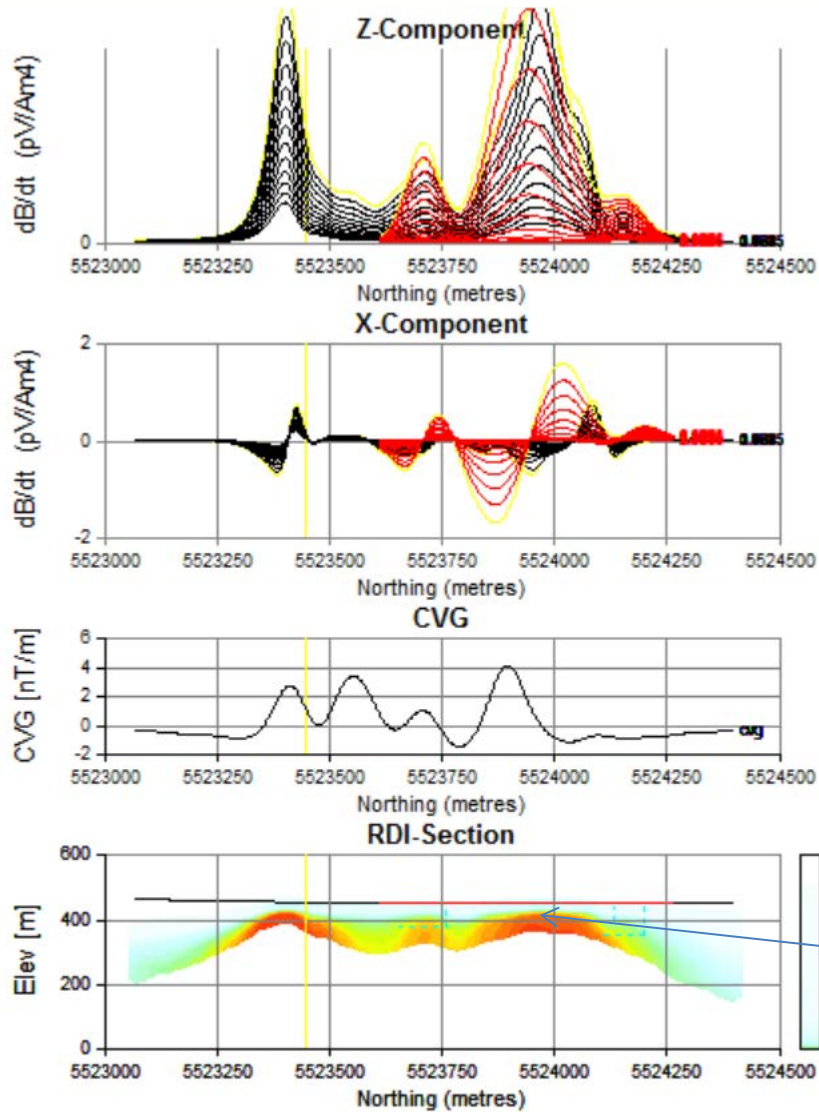
Modelled targets areas on TAU map (LEFT).

Three lines over two anomalous areas were selected for modeling. Drill holes with appropriate parameters were suggested for these modelled plates.

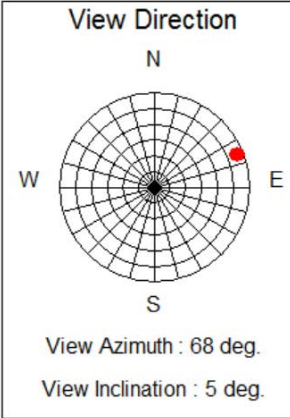
NAD83 UTM ZONE 15N

# West Block L1460 Target2&3&4

Plan View



Modeled Plates

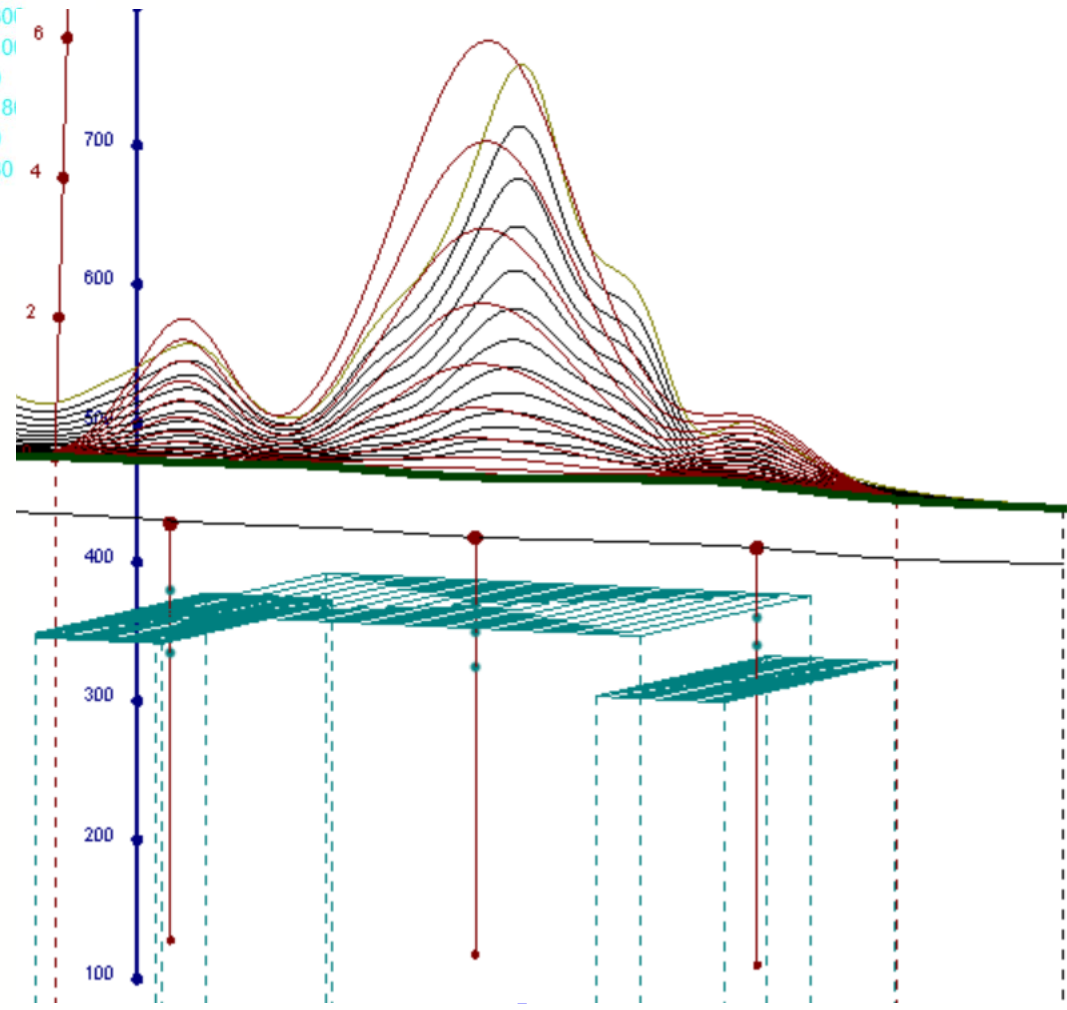


**PLATE PARAMETERS**

Name	Target3	Target2	Target4
X	663265	663265	663265
Y	5524135	5523760	5524200
Z	400	380	355
Length	300	300	300
Depth Extent	380	100	100
Dip	0	0	0
Dip Dir.	180	180	180
Plunge	0	0	0
Cond-Th.	10	40	80

# West Block

## L1460 Target 2&3&4



# West Block L1460 Target1

Target Plate Parameters			
Parameter	Target3	Target2	Target4
X	663265	663265	663265
Y	5524135	5523760	5524200
Z	400	380	355
Depth	-50	-70	-94
Dip	0	0	0
Dip Direction	180	180	180
Rotation	0	0	0
Length	300	300	300
Depth Extent	380	100	100
Conductivity-Thickness	10	40	80
Conductivity	-	-	-
Thickness	-	-	-
x,y,z-- coordinates of top-center point of the plate depth—depth from surface to top-center of the plate			

Drill-hole Parameters Appropriate for the Model						
Target_Line	X (m)	Y (m)	Z (m)	Dip (deg)	Azimuth (deg)	Length (m)
Drillhole 3	663266.6	5523939	448	90	0	200
Drillhole 4	663266.6	5524160	450	90	0	200
Drillhole 2	663266.6	5523700	448	90	0	200



## Summary:

1. The modeling was based on the interpreter's understanding of the data without geological data constrains. If any additional geological information for the targets is available, the models might be revised for more accurate results.





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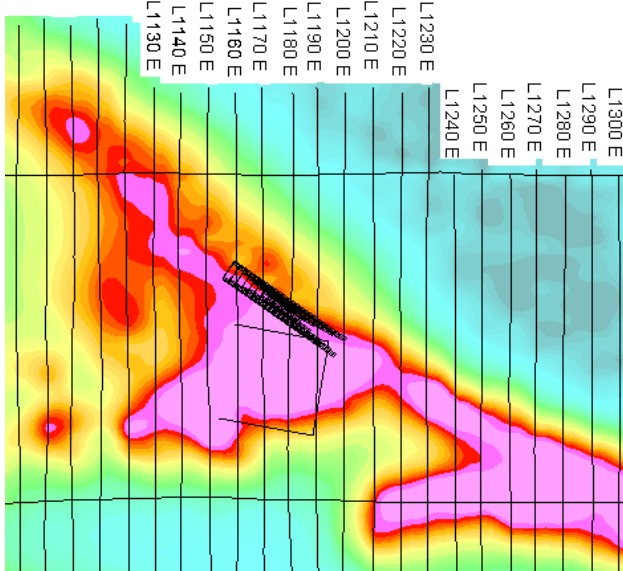
## **Appendix E: VTEM Maxwell Plate Modeling, GEOTECH, June 2010**

Report on a Helicopter-Borne Time Domain Electromagnetic (survey), Additional Geophysical Interpretation, Glitter Lake and Grid Iron Lake Projects, Ontario Canada.

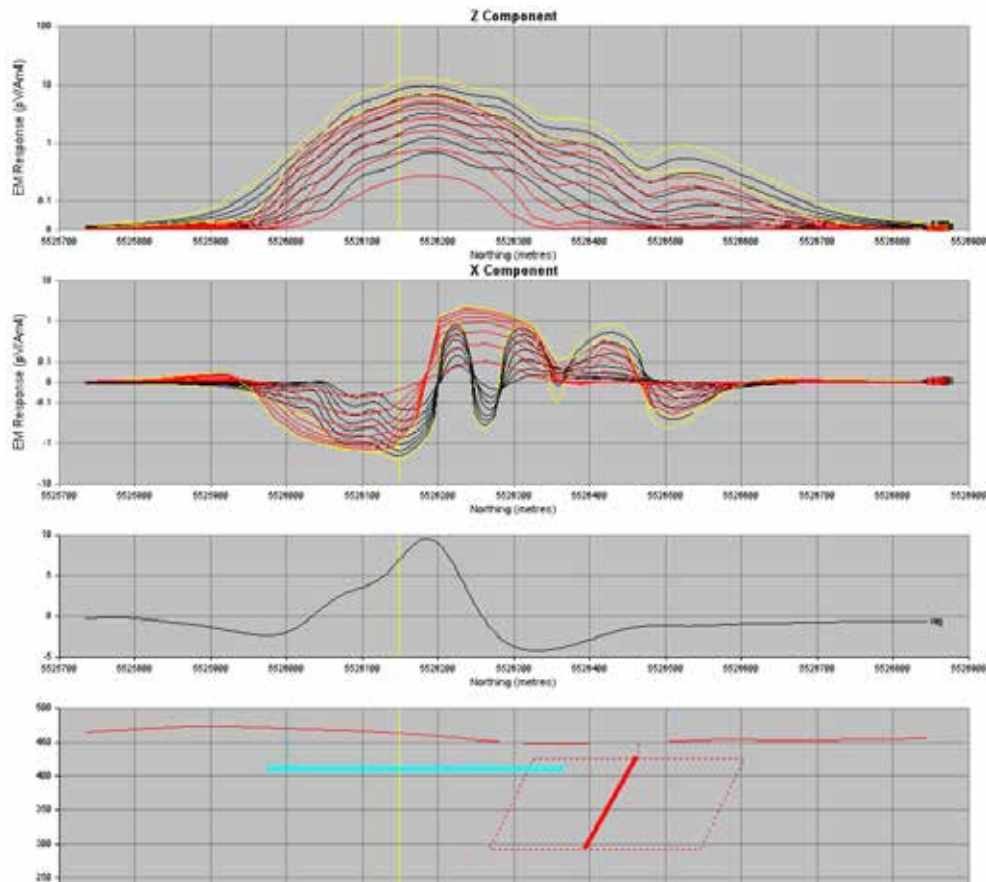
# EMIT Maxwell plate modeling

## Line 1180

Projection of the models on the surface:



Section with the models:



Parameters of the models:

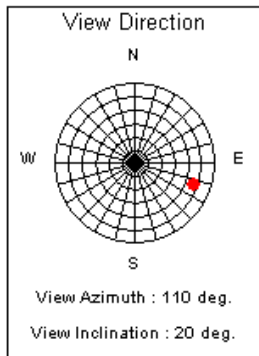
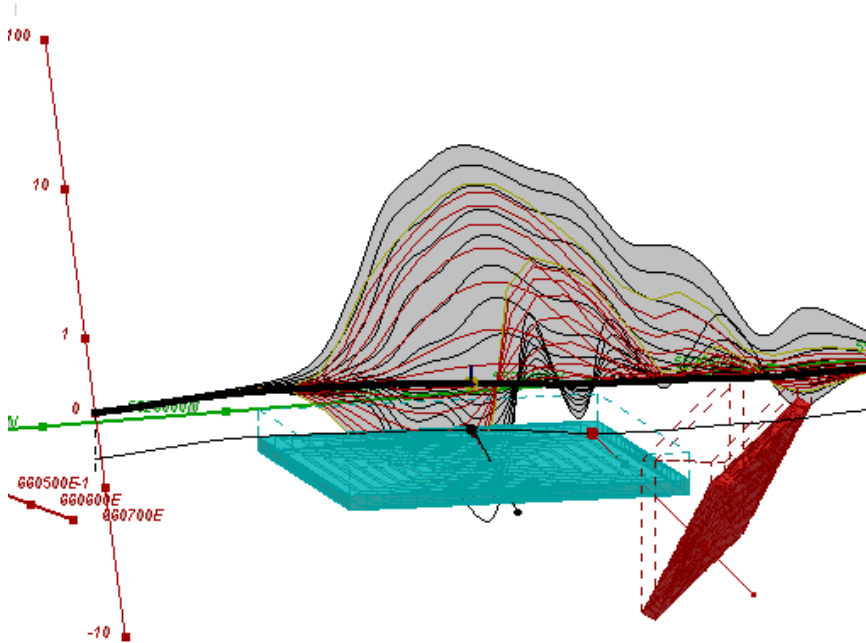


PLATE PARAMETERS

Name	1	2
X	660465	660375
Y	5526465	5526005
Z	425	415
Length	500	350
Dip	62.5	0
Dip Dir.	215	10
Plunge	0	0
Cond-Th. , S	60	60



Z- sea level of the upper edges of the targets. Corresponded depths are 25 (red target) and 45 m (blue target).

Possible parameters of the test drilling:

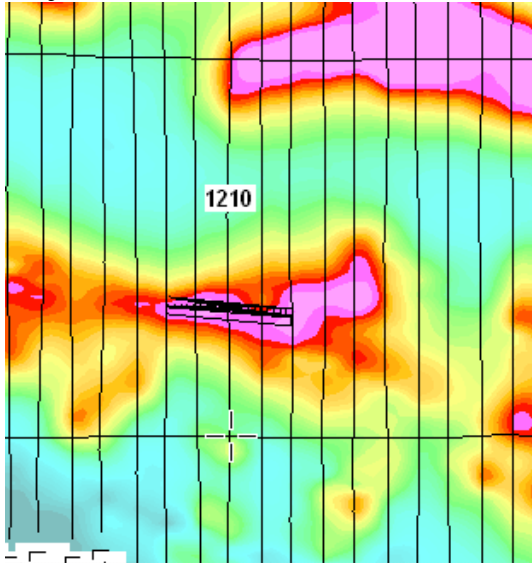
**DH1.** 660464E 5526280N, Dip of the DH 45, Az 0, Length 250 m.

**DH2.** 660462E 5526150N, Dip of the DH 60, Az 0, Length 100 m.

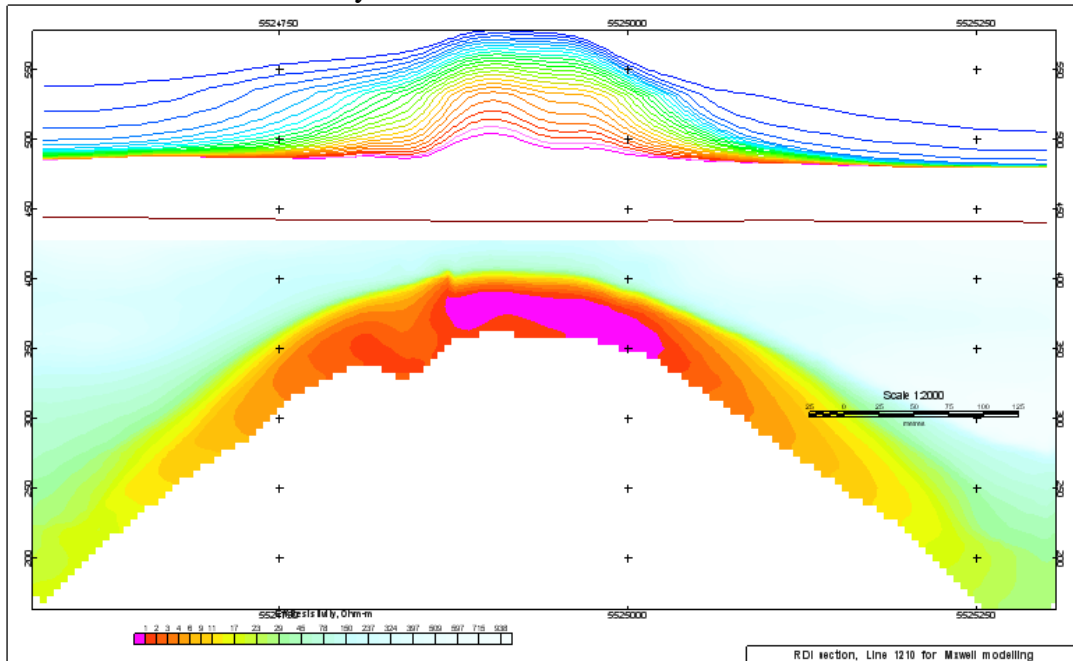
# EMIT Maxwell plate modeling

## Line 1210

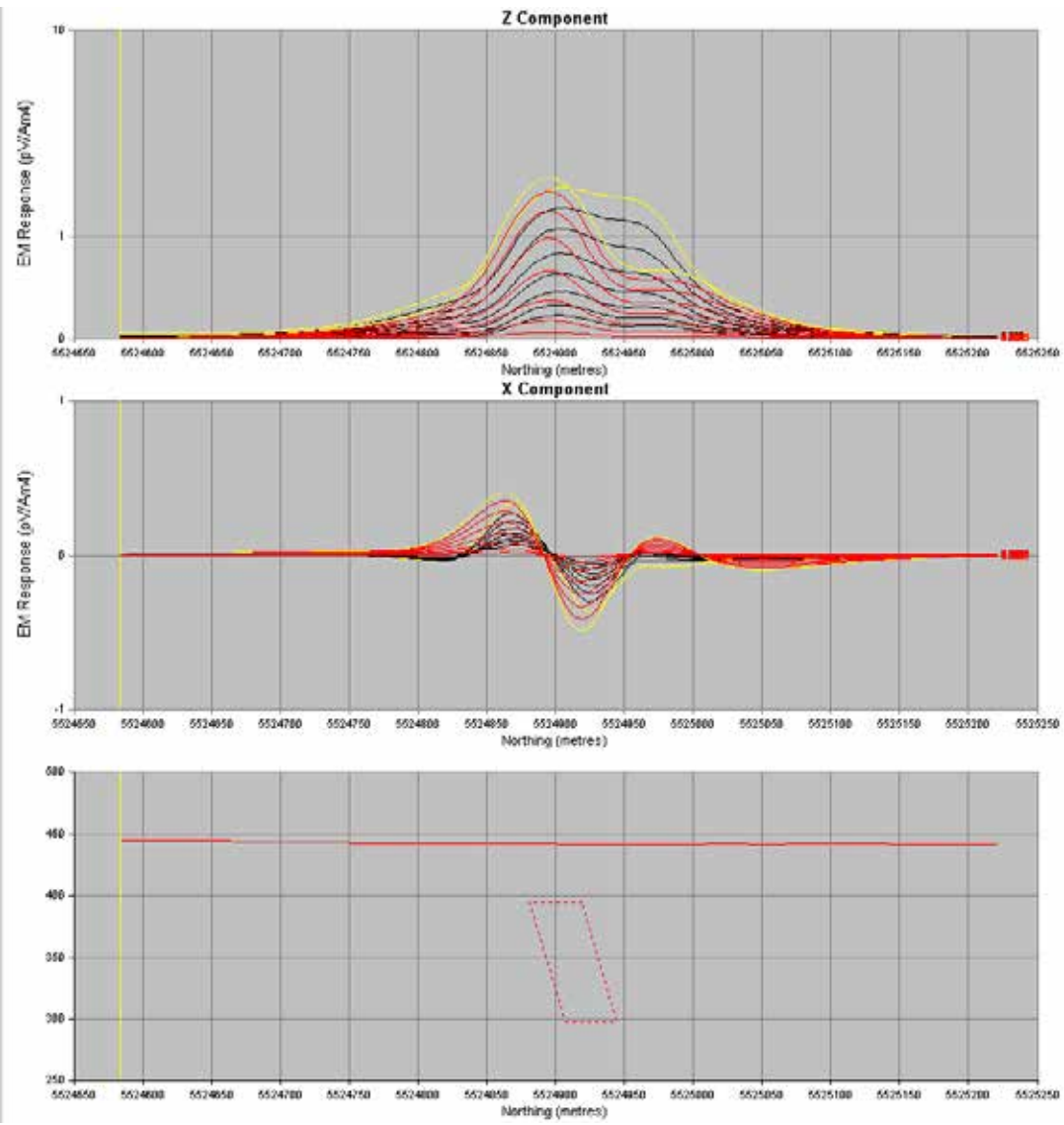
Projection of the model on the surface:



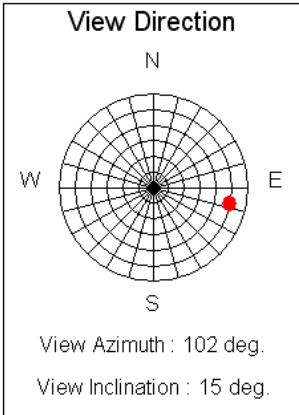
RDI section for the anomaly:



Section with the model:

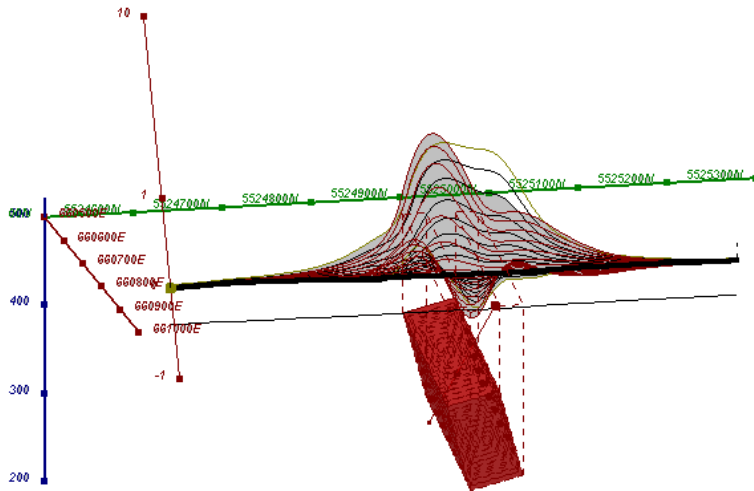


Parameters of the model:



### PLATE PARAMETERS

Name	1
X	660770
Y	5524900
Z	395
Length	400
Depth Extent	100
Dip	75
Dip Dir.	5
Plunge	0
Cond-Th. , s	240



Z- sea level of the upper edge of the target. Corresponded depth is 45 m.

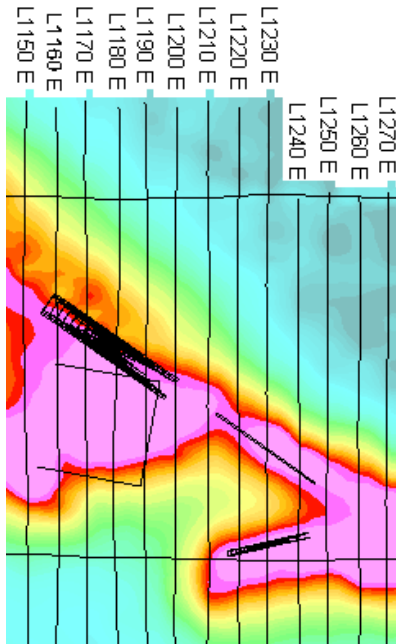
Possible parameters of the test drilling:

**DH1.** 660768E 5524950N, Dip of the DH 60, Az 180, Length 150 m.

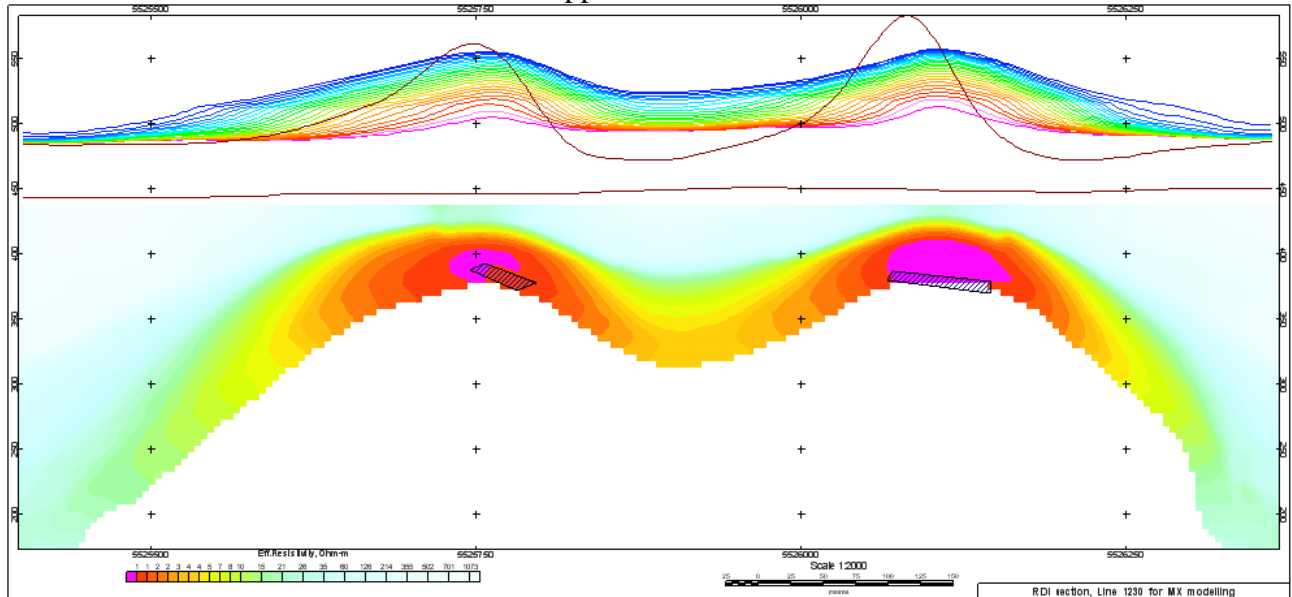
# EMIT Maxwell plate modeling

## Line 1230

Projection of the model on the surface:

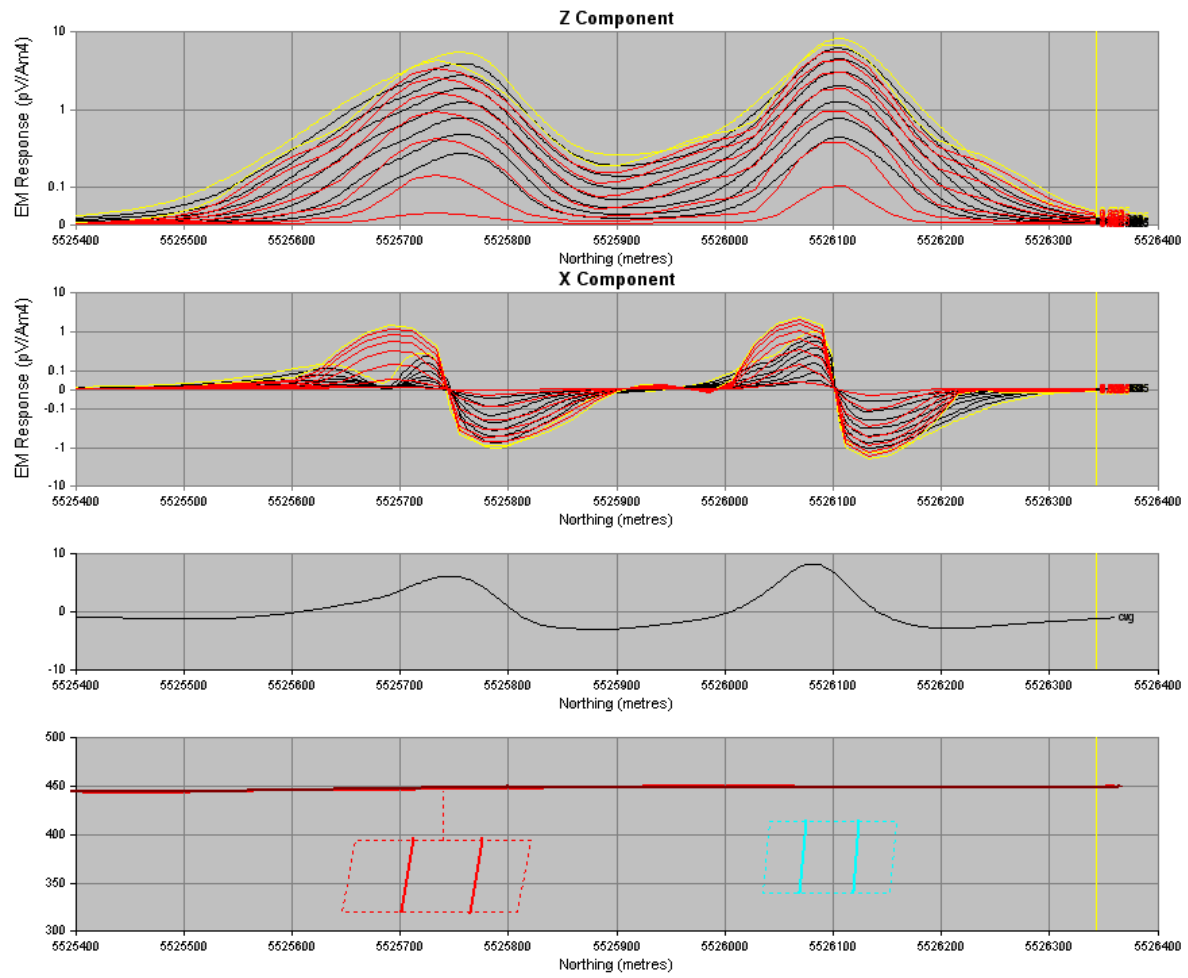


RDI section for the anomalies for the first approximation:

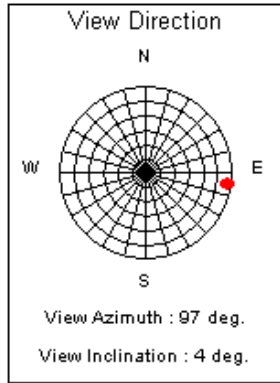




Section with the model:

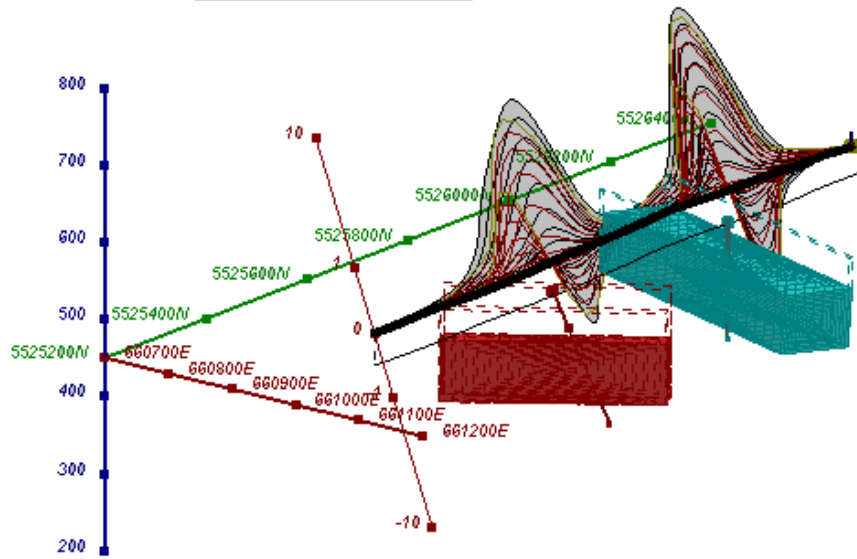


Parameters of the models:



**PLATE PARAMETERS**

Name	1	2
X	660980	660965
Y	5525740	5526100
Z	393.7142	413.8805
Length	280	400
Depth Extent	75	75
Dip	77.5	85
Dip Dir.	144.3813	197.5
Plunge	0	0
Cond-Th.	220	260



Z- sea level of the upper edge of the targets. Corresponded depth is 57 m for red model, 37 m for the blue model.

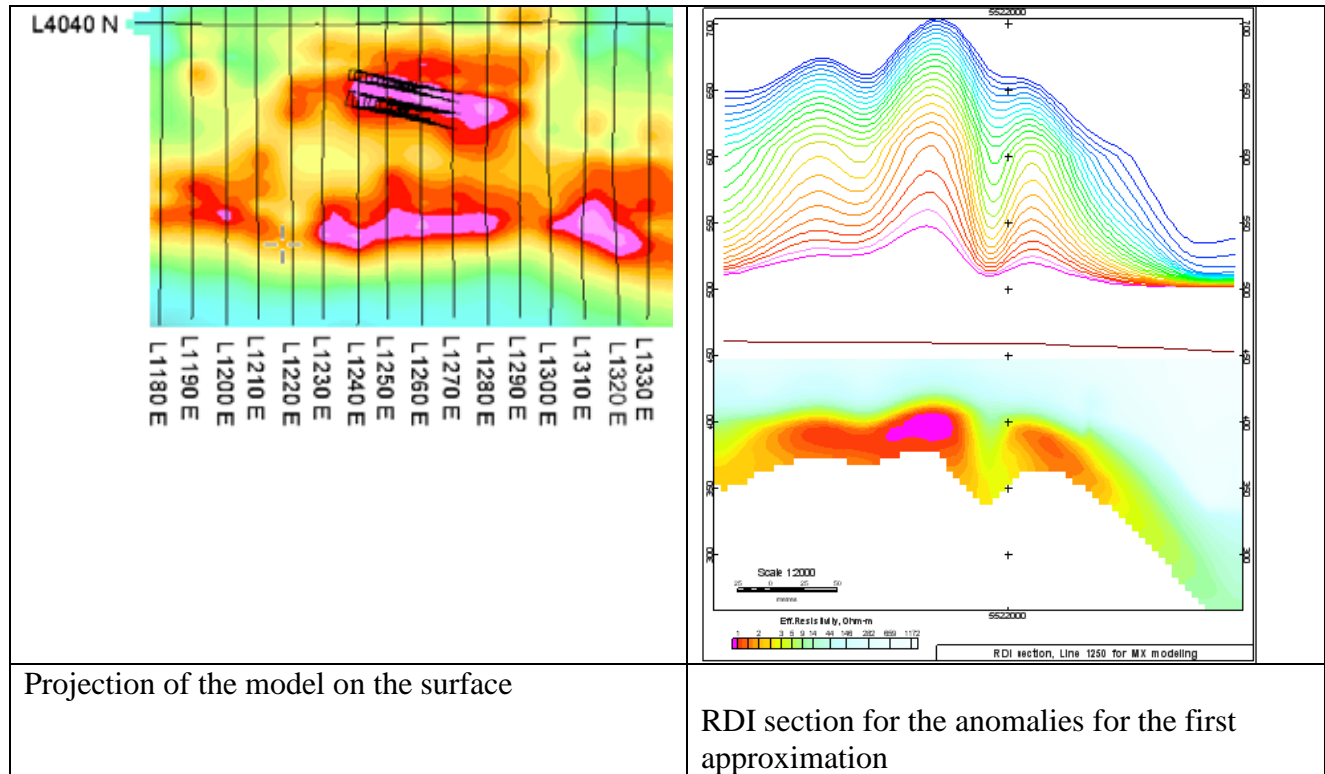
Possible parameters of the test drilling:

**DH1.** 660966E 5525751N, Dip of the DH 60, Az 90, Length 180 m.

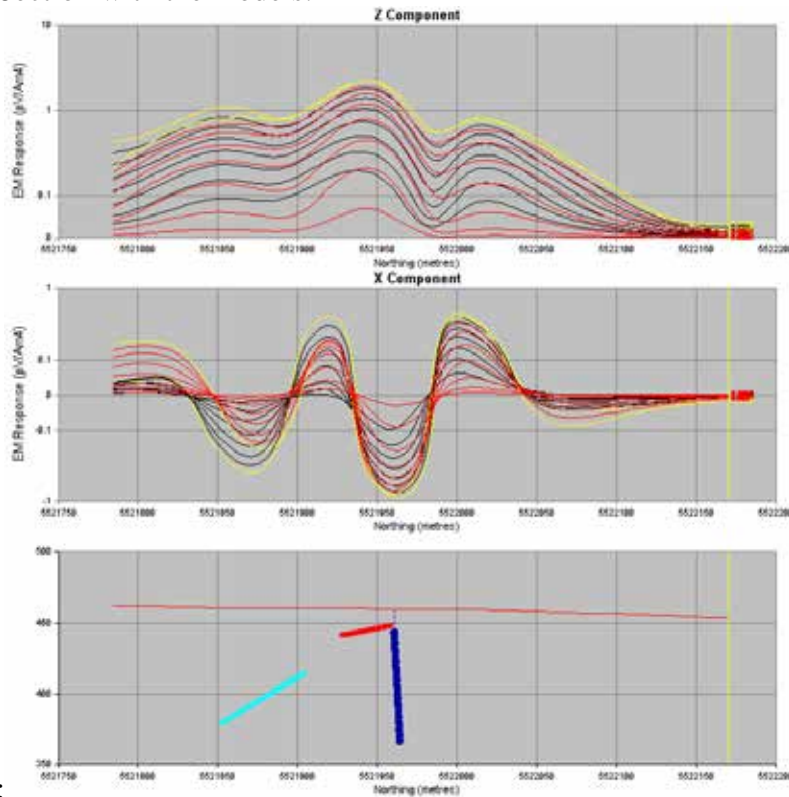
**DH2.** 660965E 5526100N, Dip of the DH 90, Az 90, Length 150 m.

# EMIT Maxwell plate modeling

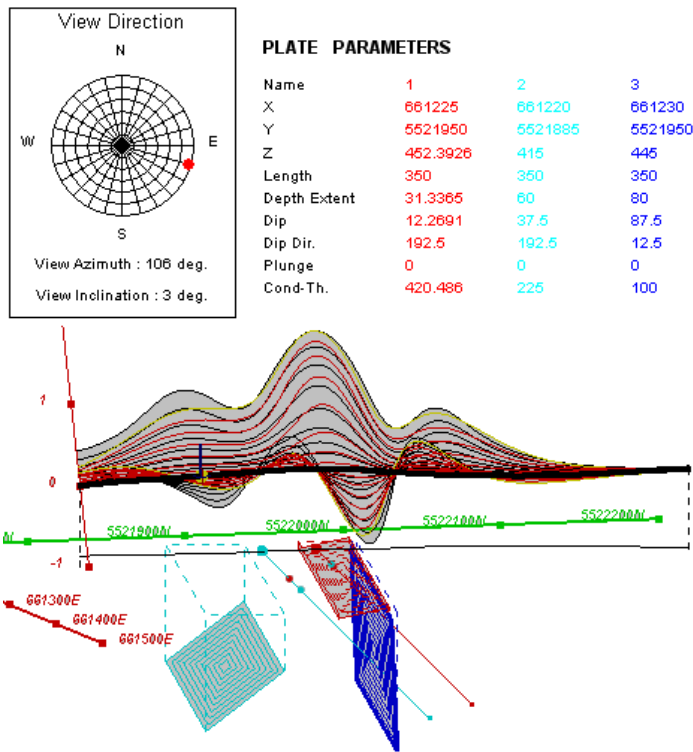
## Line 1250



## Section with the models:



Parameters of the models:



Z- sea level of the upper edge of the targets. Corresponded depth is 10 m for red model, 45m for the light blue model and 15m for the blue.

Possible parameters of test drilling for the most conductive (red) target:

**DH1.** 661162E 5521935N, Dip of the DH 45, Az 0, Length 140 m.

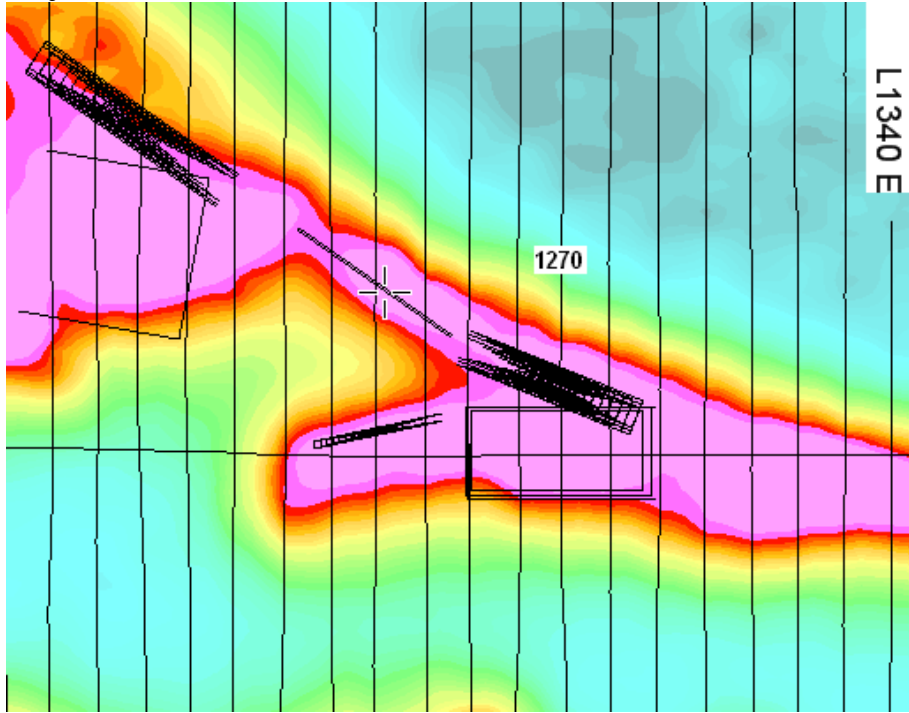
But there is some difference between depth of the target estimated on base of RDI and Maxwell modeling. To check this it is recommended to drill the second DH:

**DH2.** 661165E 5521900N, Dip of the DH 45, Az 0, Length 150 m.

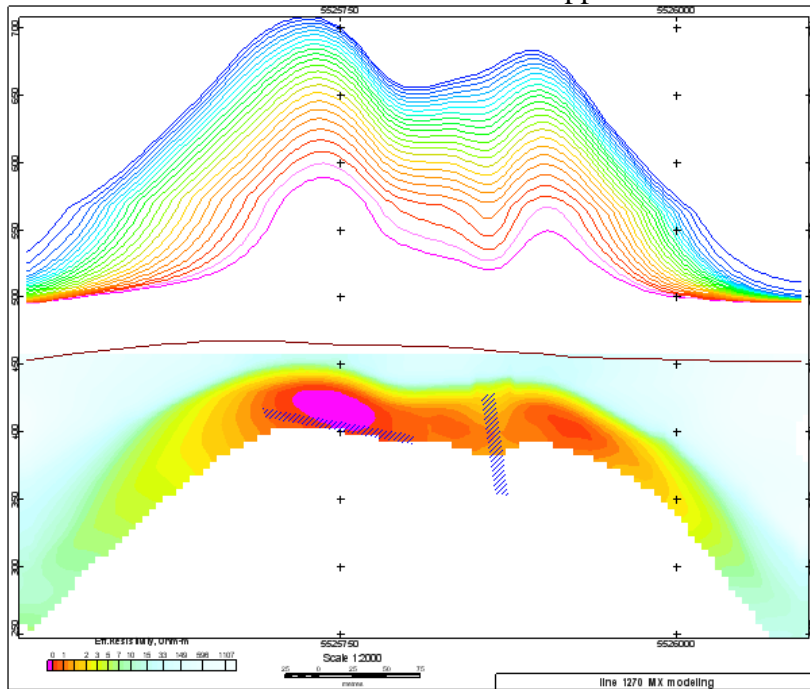
# EMIT Maxwell plate modeling

## Line 1270

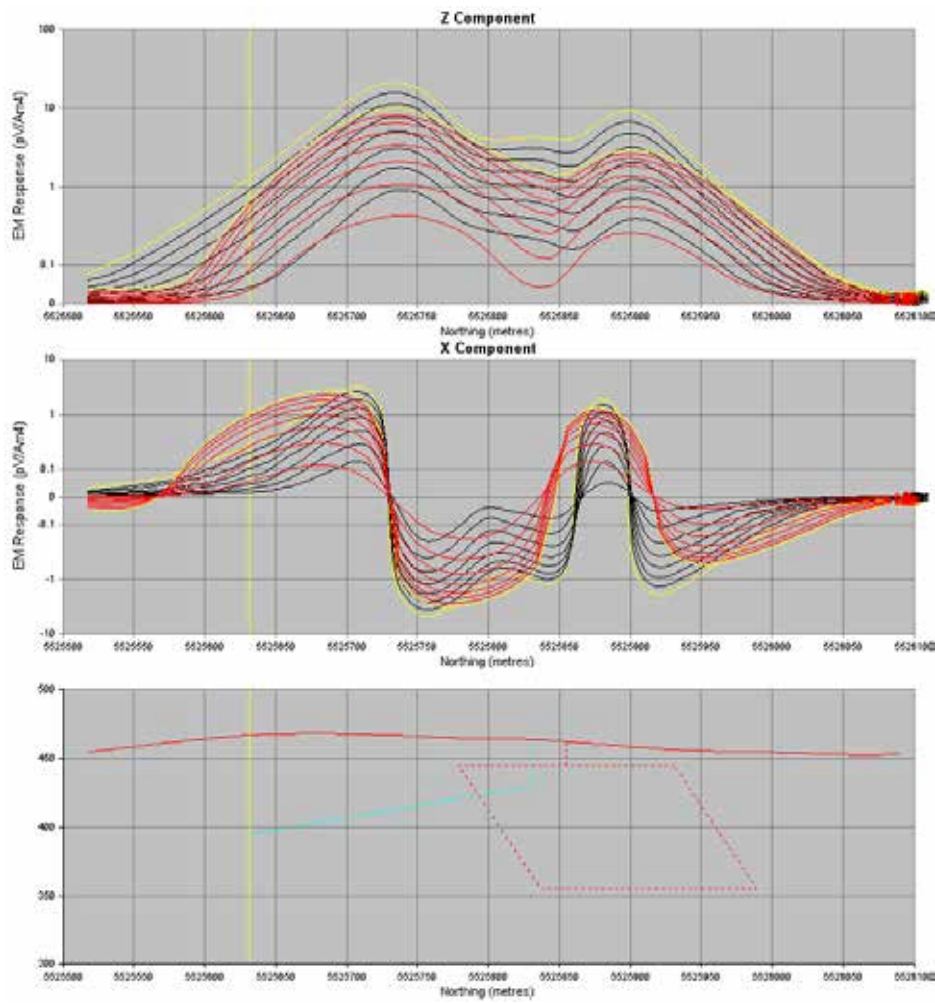
Projection of the model on the surface:



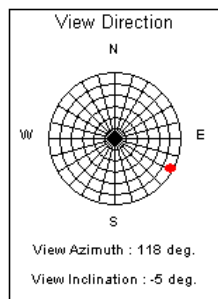
RDI section for the anomalies for the first approximation:



Section with the model:

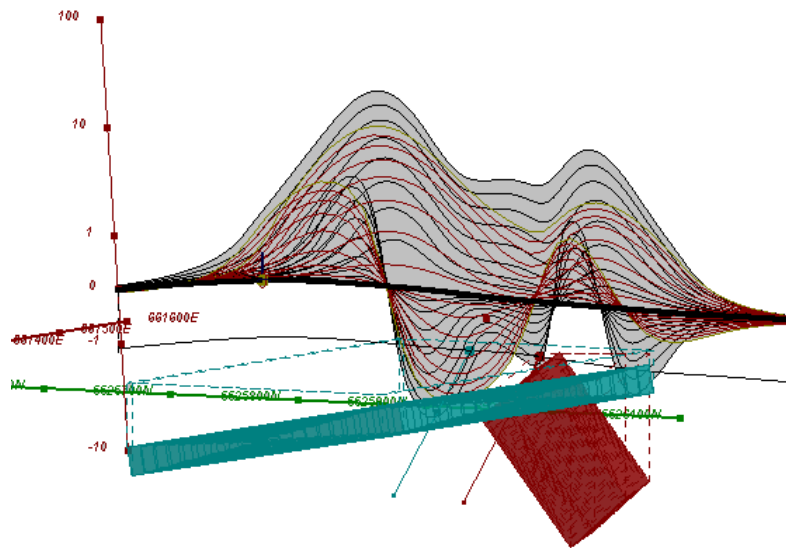


## Parameters of the models:



### PLATE PARAMETERS

Name	1	2
X	661325	661365
Y	5525855	5525830
Z	445	430
Length	400	400
Depth Extent	108.9787	200
Dip	55	10
Dip Dir.	22.5	179.9128
Plunge	0	0
Cond-Th.	240	100



Z- sea level of the upper edge of the targets. Corresponded depth is 35 m for blue model, 17 m for the red model.

Possible parameters of the test drilling:

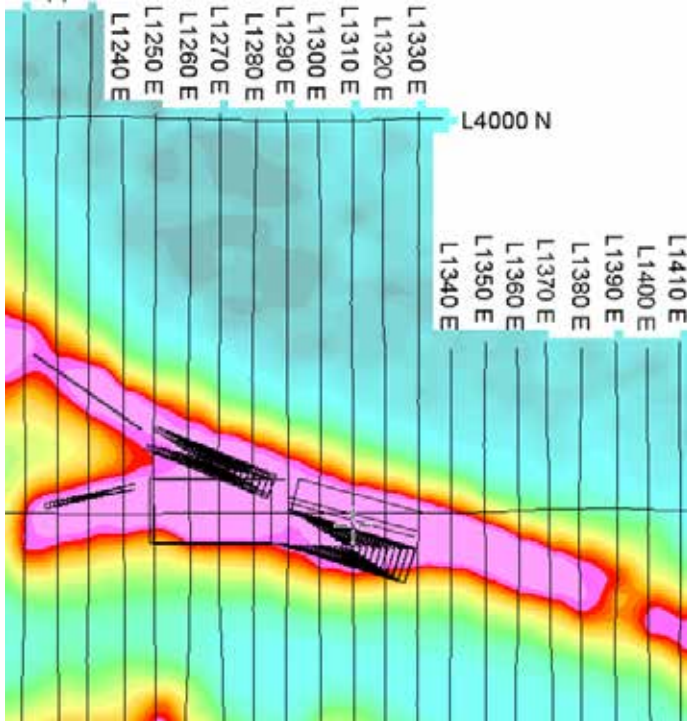
**DH1.** 661363E 5525850N, Dip of the DH 60, Az 180, Length 120 m.

**DH2.** 661363E 5525795N, Dip of the DH 60, Az 180, Length 120 m.

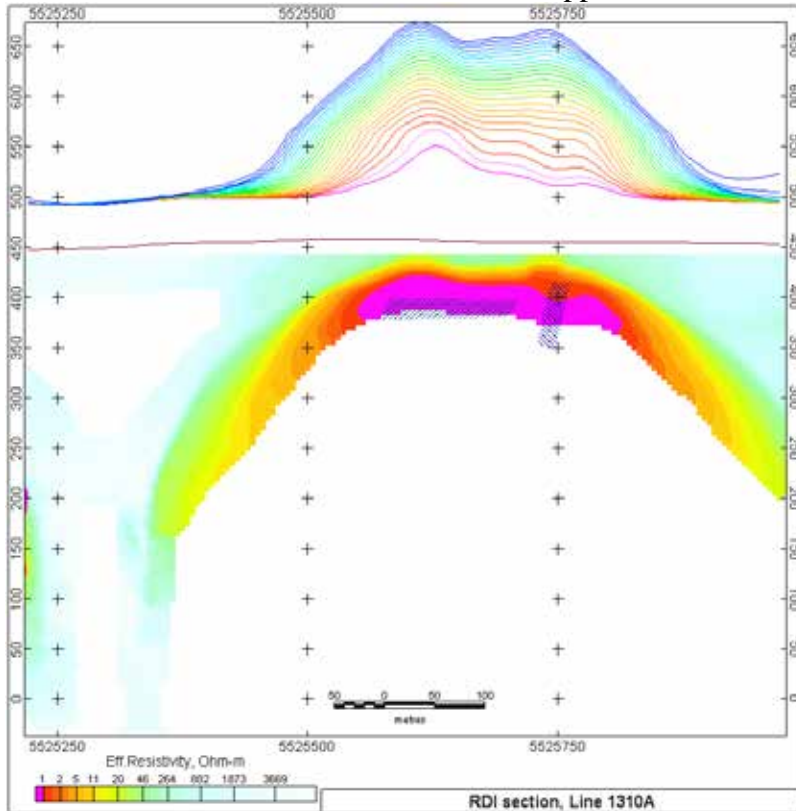
# EMIT Maxwell plate modeling

## Line 1310A

Projection of the model on the surface:

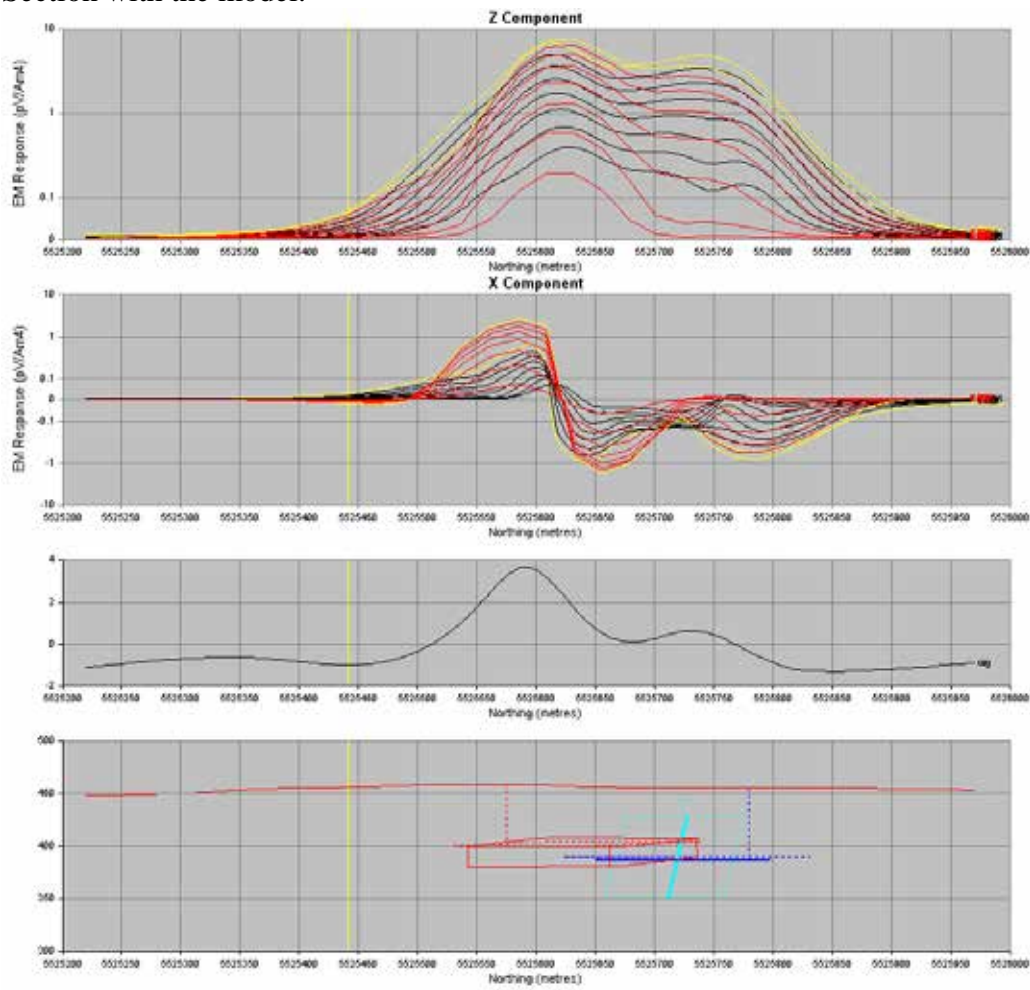


RDI section for the anomalies for the first approximation:

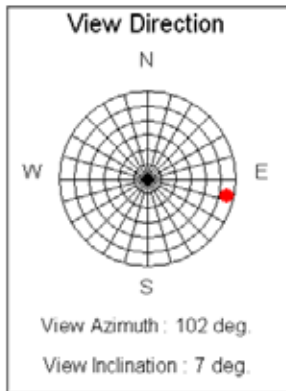




Section with the model:

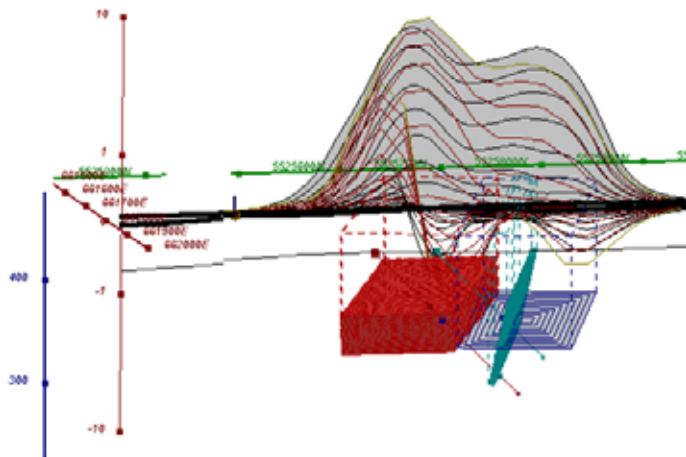


Parameters of the models:



**PLATE PARAMETERS**

Name	1	2	3
X	661735	661770	661800
Y	5525575	5525725	5525780
Z	400	430	390
Length	400	400	400
Depth Extent	110	80	110
Dip	-2.5	77.5	0
Dip Dir.	17.5	195	195
Plunge	0	0	0
Cond-Th.	190	100	75
<b>Depth to the top</b>	<b>58</b>	<b>25</b>	<b>65 m</b>



Z- sea level of the upper edge of the targets. Corresponded depth is 58 m for red model, 25 m for light blue and 65m for blue model.

Possible parameters of the test drilling:

/ Name,X,Y,Dip,Az,Length

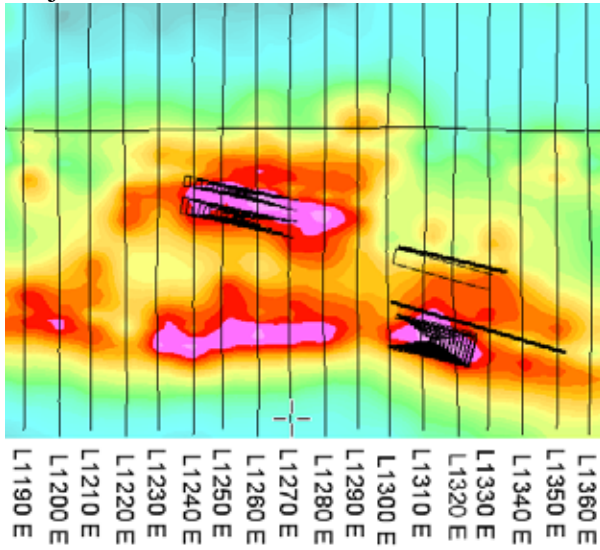
**Drillhole 1,661770,5525580,45,0,200**

**Drillhole 2,661770,5525640,45,0,150**

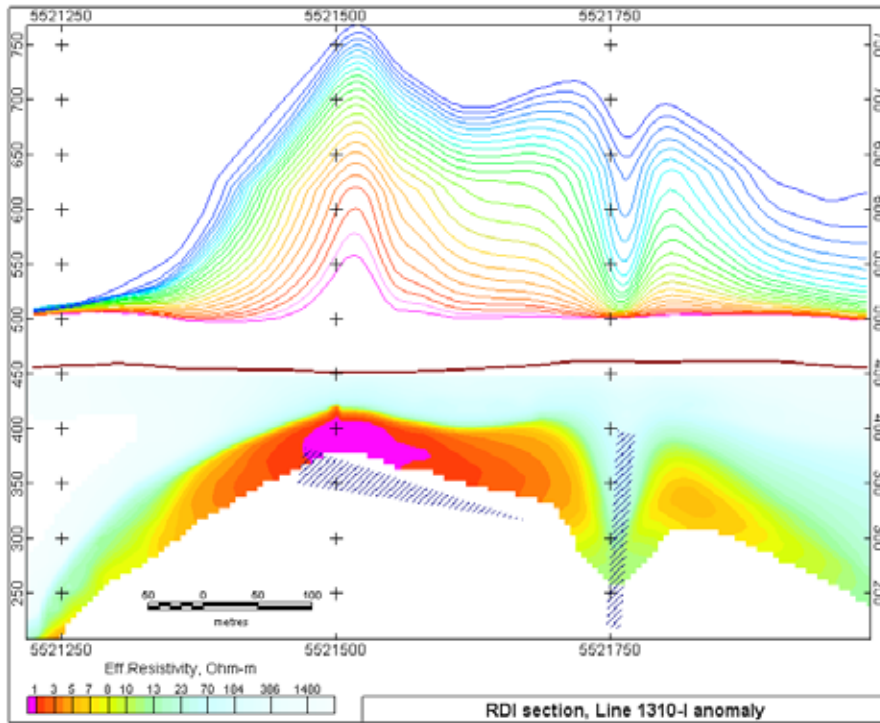
# EMIT Maxwell plate modeling

## Line 1310-I

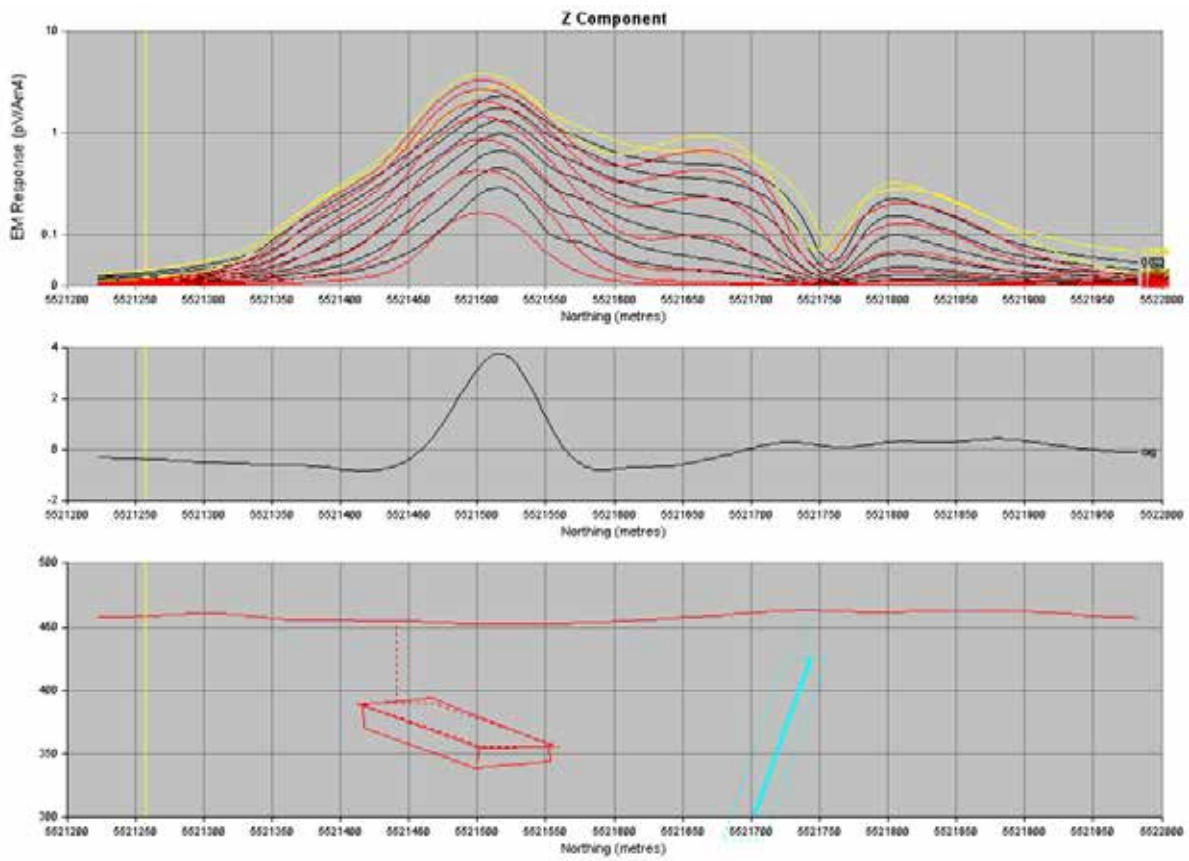
Projection of the model on the surface



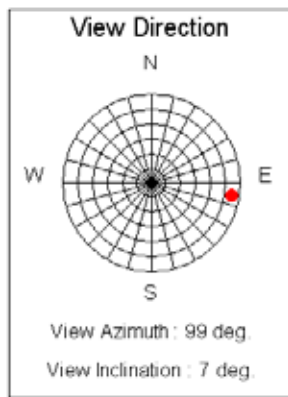
RDI section for the anomalies for the first approximation:



Section with the models:

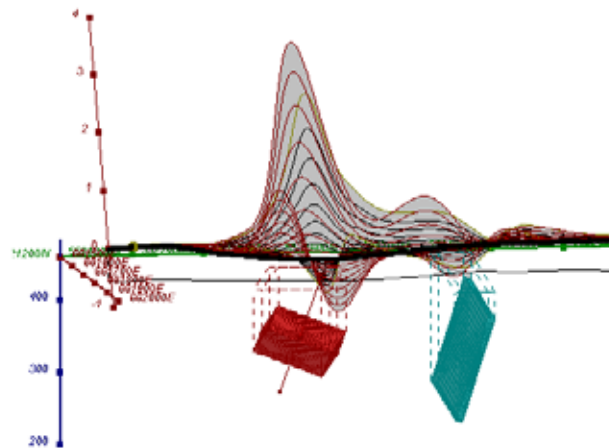


Parameters of the models:



#### PLATE PARAMETERS

Name	1	2
X	661785	661770
Y	5521440	5521740
Z	390	425
Length	250	450
Depth Extent	100	150
Dip	20	72.5
Dip Dir.	14.2084	185
Plunge	0	0
Cond-Th.	245	45



Z- sea level of the upper edge of the targets. Corresponded depth is 70 m for red model, 37m for the blue model.

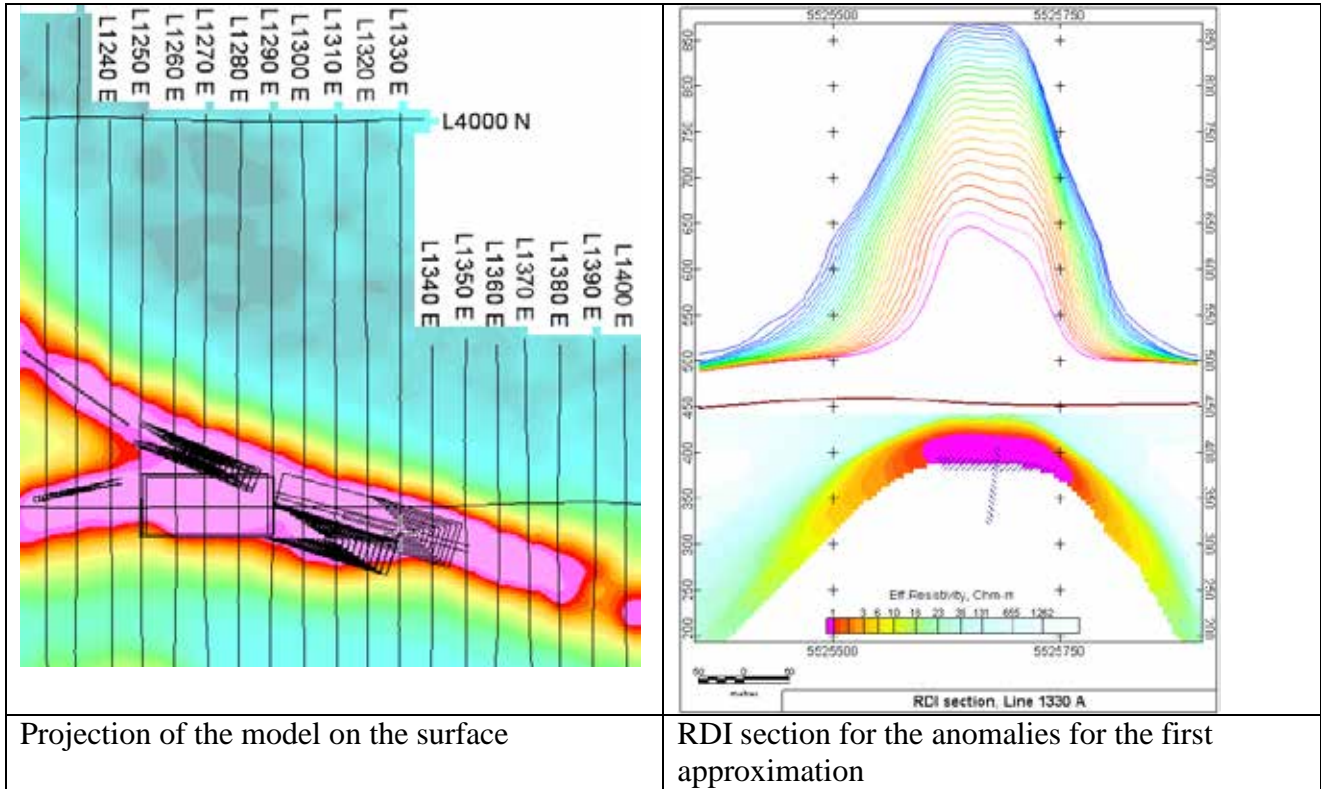
Possible parameters of test drilling for the most conductive (red) target:

**Name,X,Y,Dip,Az,Length**

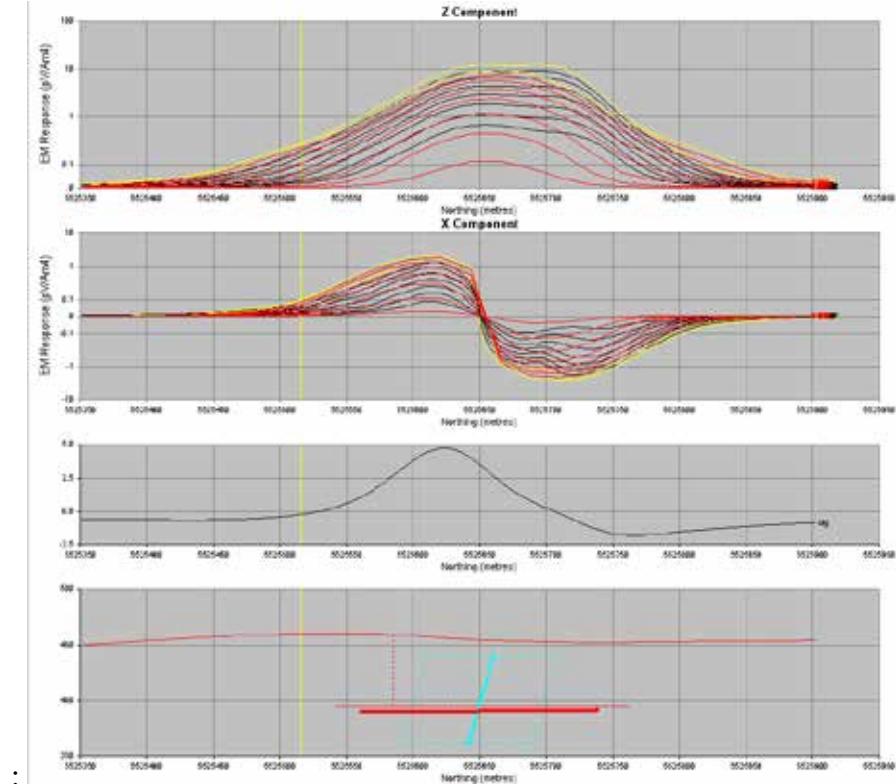
**Drillhole 1, 661772, 5521520, 70, 180, 170**

# EMIT Maxwell plate modeling

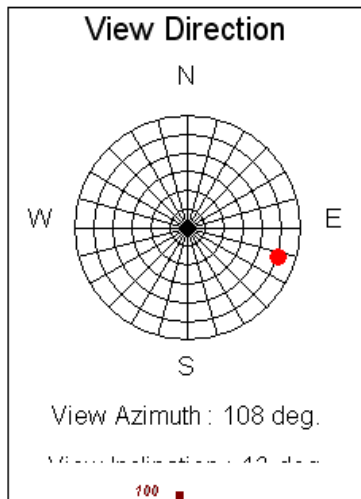
## Line 1330-A



## Section with the models:

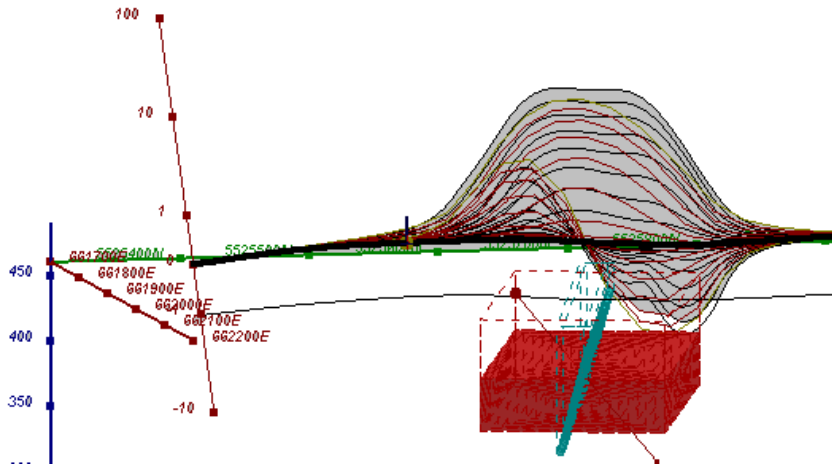


Parameters of the models:



**PLATE PARAMETERS**

Name	1	2
X	661975	661990
Y	5525585	5525660
Z	395	440
Length	300	400
Depth Extent	140	80
Dip	0	75
Dip Dir.	17.5	195
Plunge	0	0
Cond-Th.	120	100



Z- sea level of the upper edge of the targets. Corresponded depth is 64 m for red model, 14m for the blue model.

Possible parameters of test drilling for the most conductive (red) target:

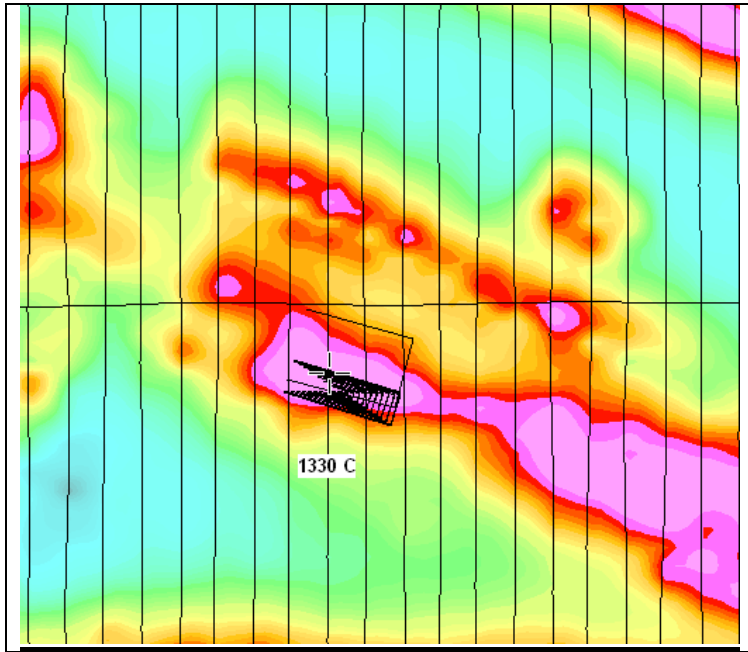
**Name,X,Y,Dip,Az,Length**

**Drillhole 1, 661970, 5525600, 50, 0, 170**

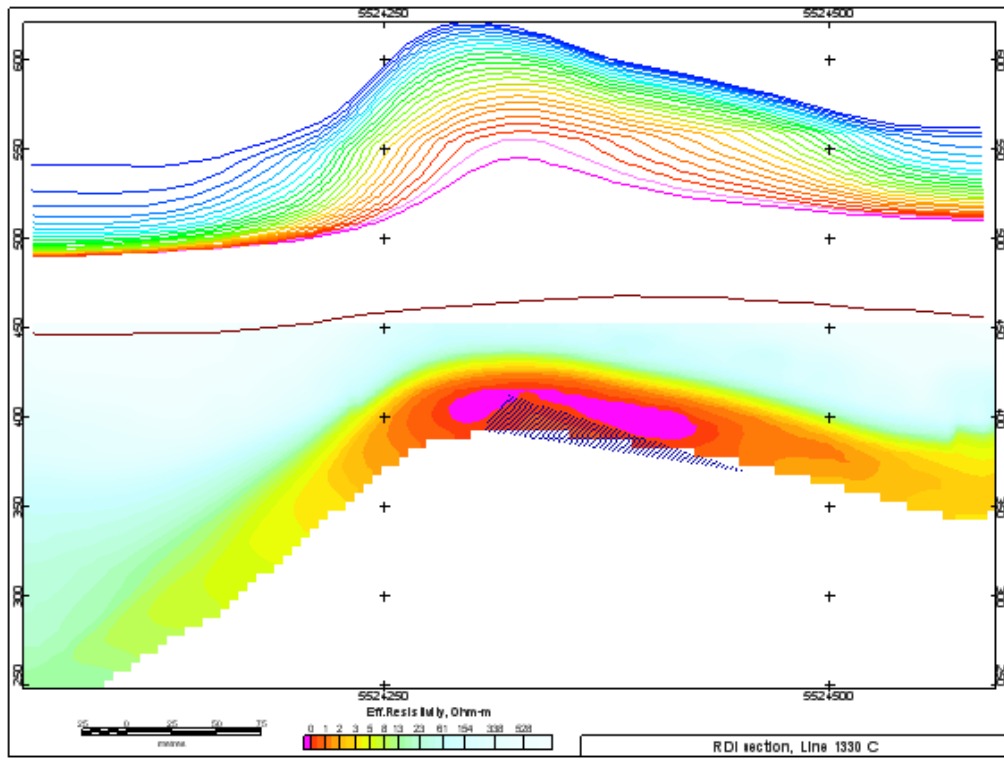
# EMIT Maxwell plate modeling

## Line 1330-C

Projection of the model on the surface

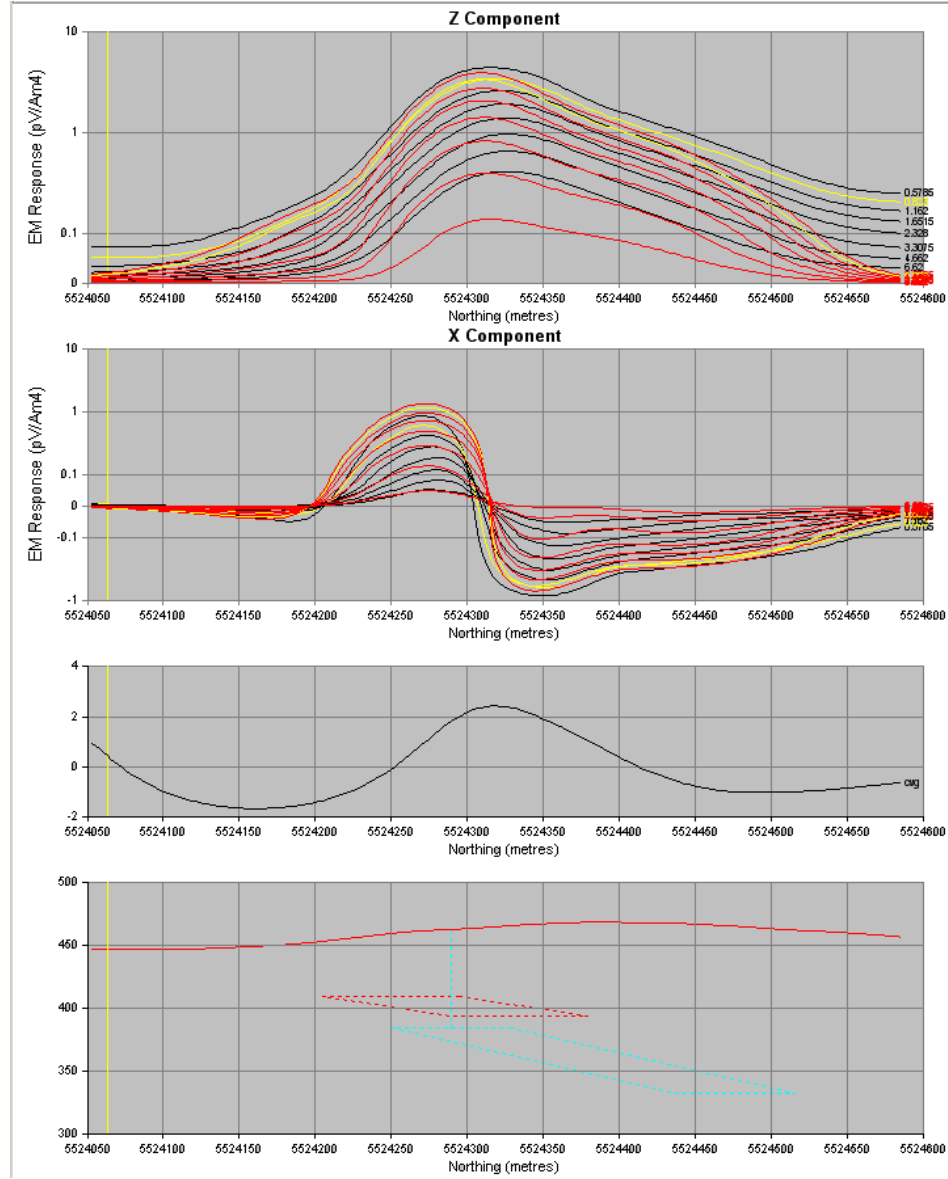


RDI section for the anomalies for the first approximation

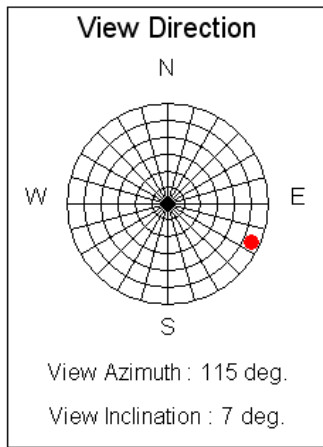




Section with the models:

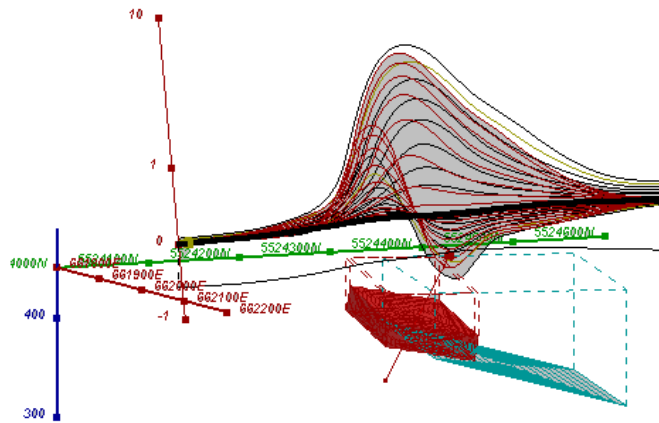


Parameters of the models:



**PLATE PARAMETERS**

Name	1	2
X	661995	662005
Y	5524250	5524290
Z	410	385
Length	300	300
Depth Extent	90	200
Dip	10	15
Dip Dir.	17.5	15
Plunge	0	0
Cond-Th.	225	120



Z- sea level of the upper closest edge of the targets. Corresponded depth is 50 m for red model, 80 m for the blue model.

Possible parameters of test drilling for the most conductive (red) target:

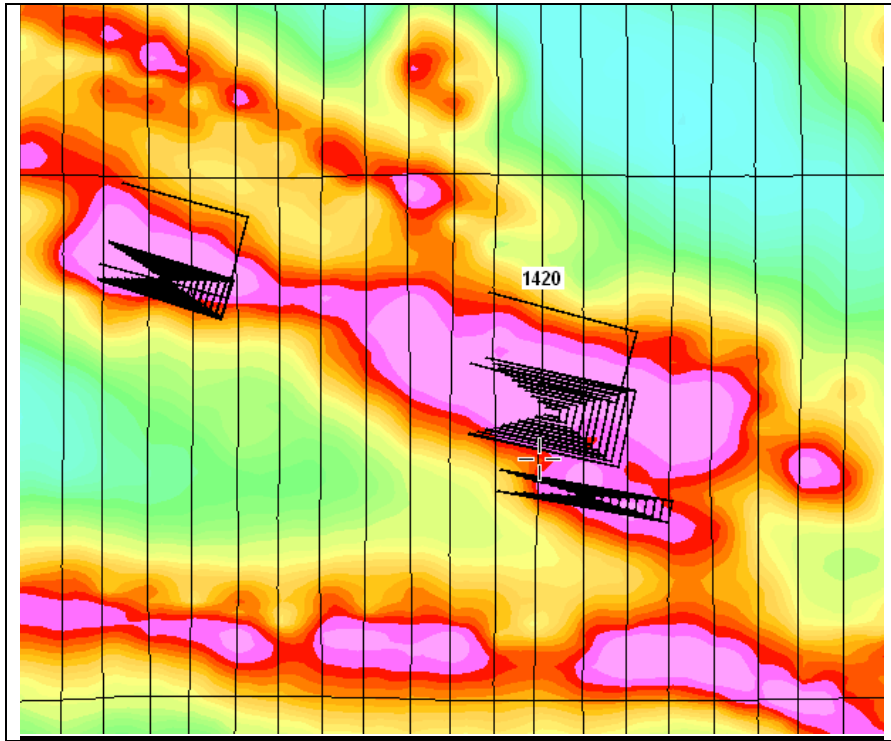
**Name,X,Y,Dip,Az,Length**

**Drillhole 1, 661971, 5524350, 60, 180, 140 m**

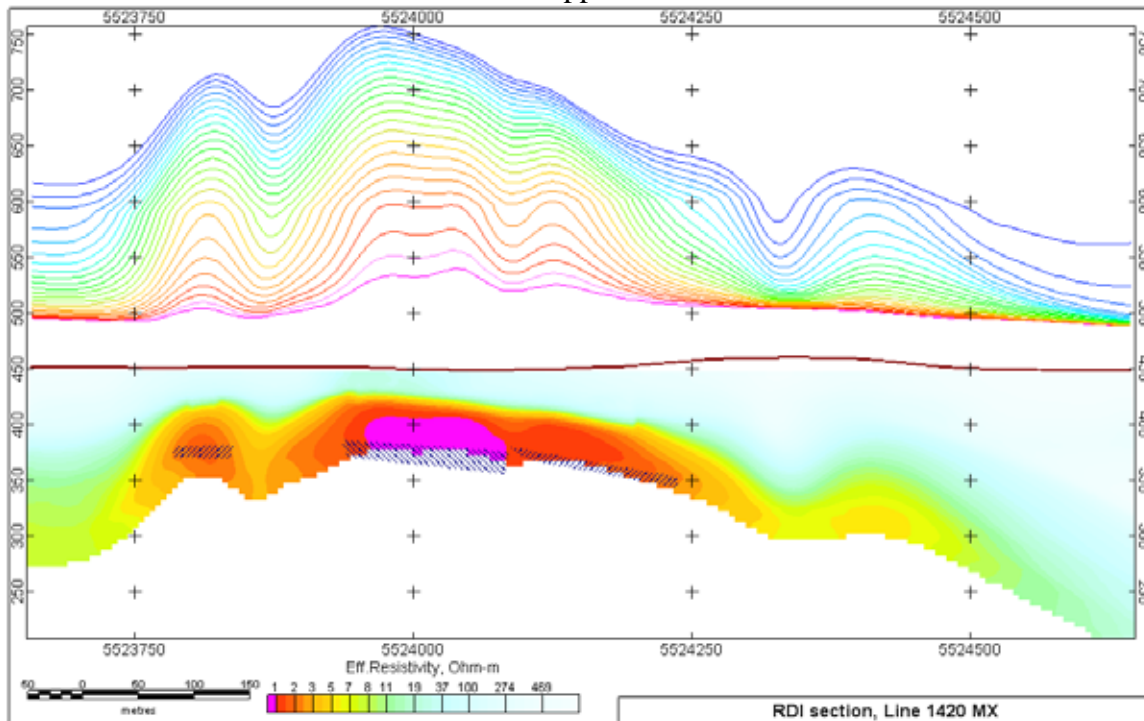
# EMIT Maxwell plate modeling

## Line 1420

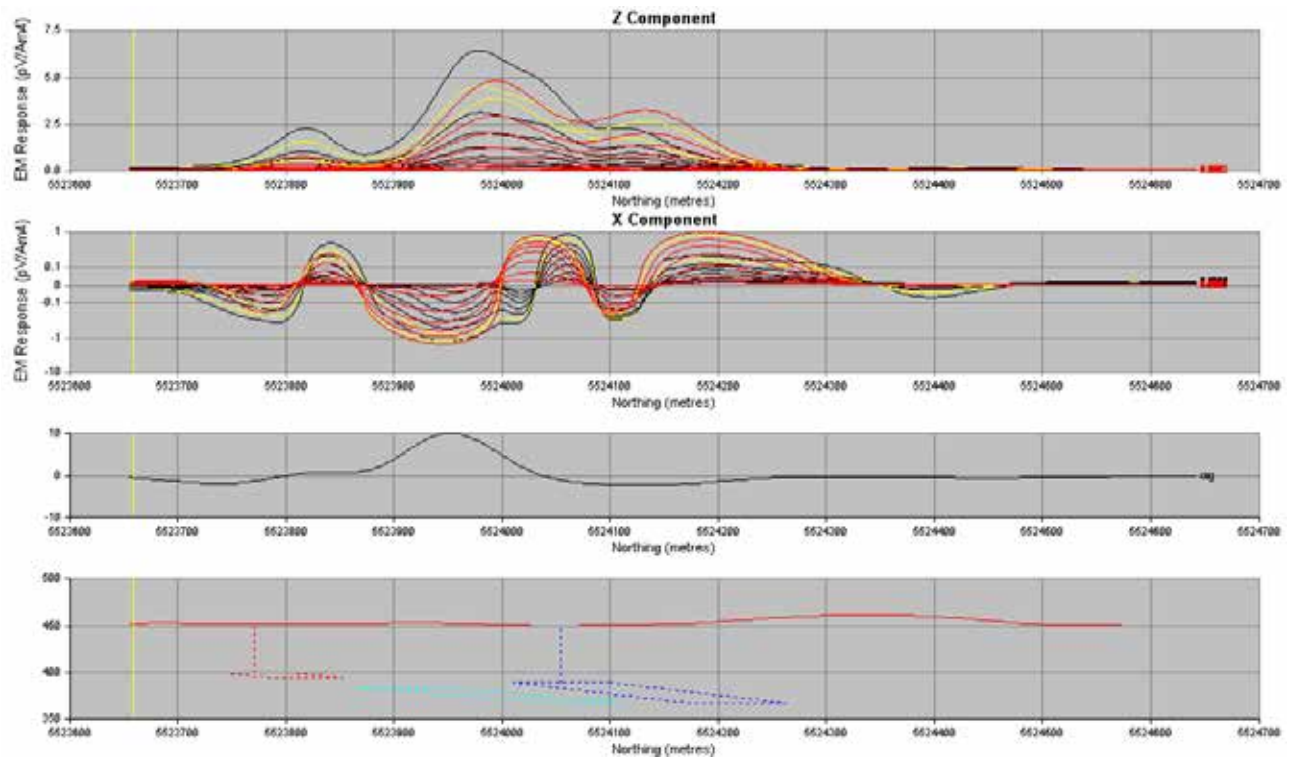
Projection of the model on the surface



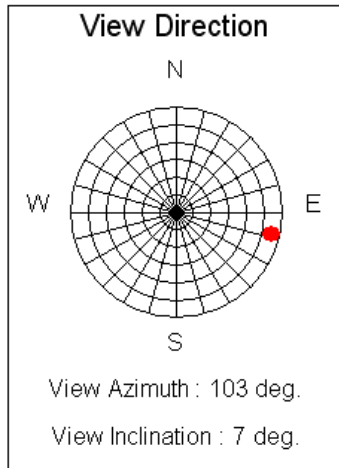
RDI section for the anomalies for the first approximation



Section with the models:

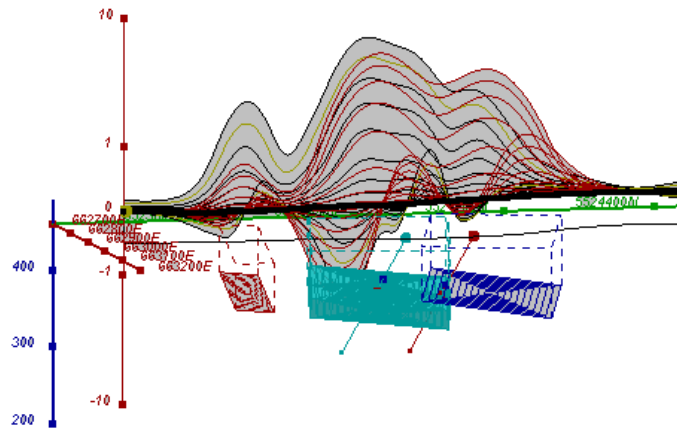


Parameters of the models:



**PLATE PARAMETERS**

Name	1	2	3
X	662970	662880	662880
Y	5523770	5523900	5524055
Z	400	385	390
Length	400	350	350
Depth Extent	50	180	170
Dip	5	5	7.5
Dip Dir.	10	12.5	15
Plunge	0	0	0
Cond-Th.	160	80	70



Z- sea level of the upper closest edge of the targets. Corresponded depth is 67 m for light blue model, 60 m for blue model.

Possible parameters of test drilling for the target:

**Name,X,Y,Dip,Az,Length**

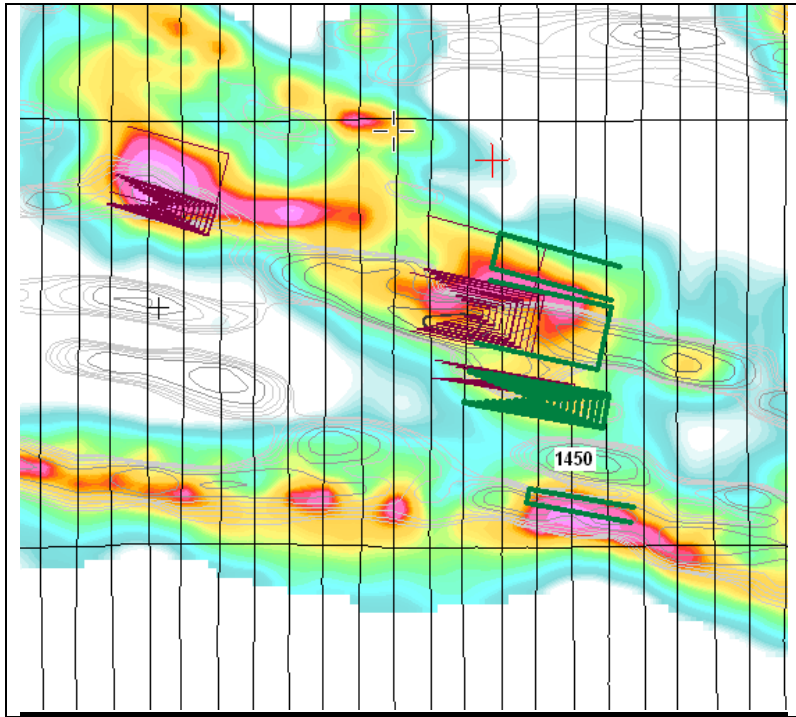
**Drillhole 1, 662871, 5524120, 60, 180, 170**

**Drillhole 2, 662870, 5524030, 60, 180, 170**

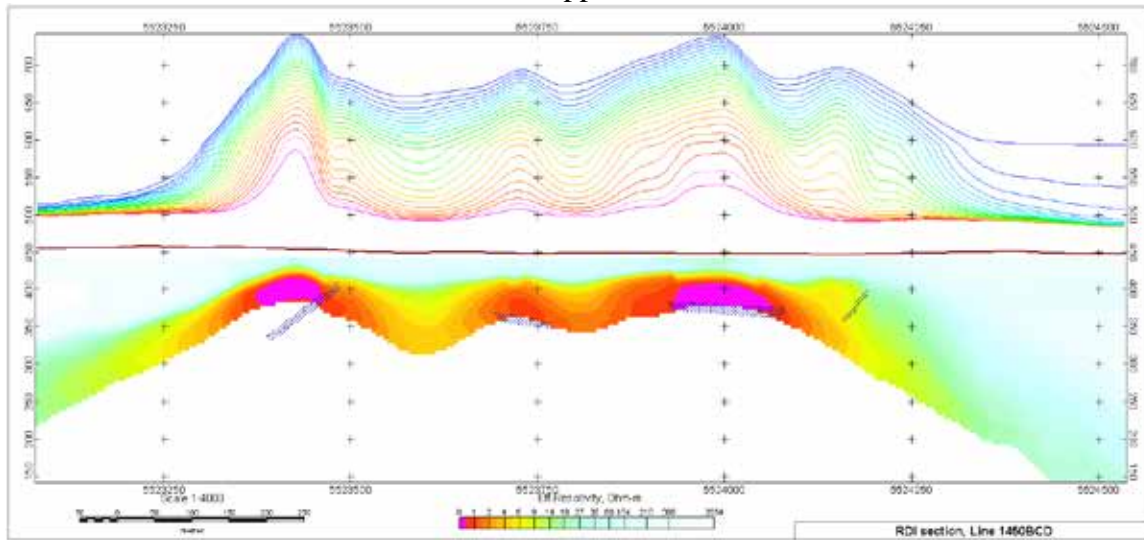
# EMIT Maxwell plate modeling

## Line 1450 BCD

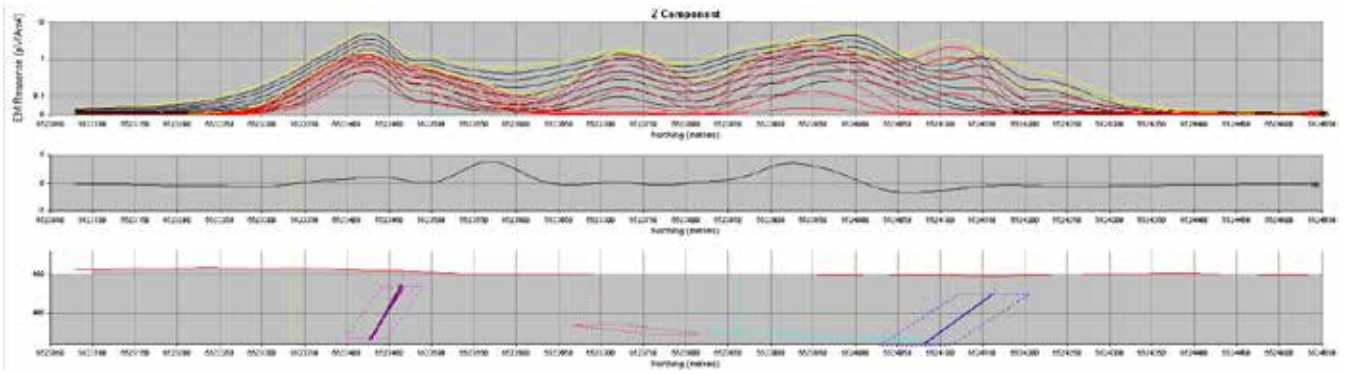
Projection of the model on the surface



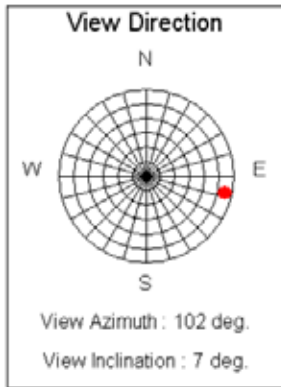
RDI section for the anomalies for the first approximation



Section with the models:

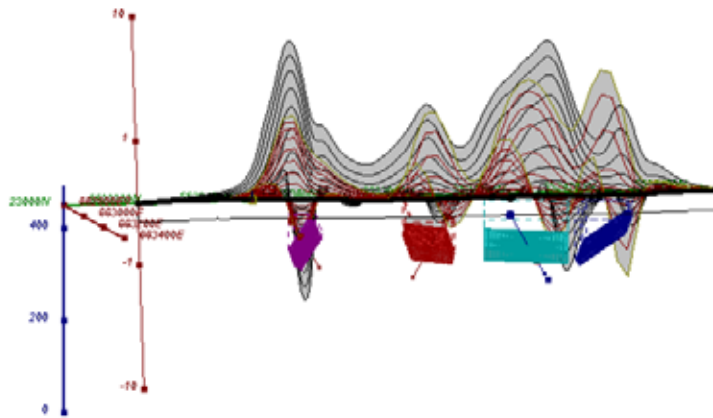


Parameters of the models:



**PLATE PARAMETERS**

Name	1	2	3	4
X	663060	663070	663135	663195
Y	5523700	5523865	5524165	5523465
Z	385	375	425	435
Length	400	350	350	300
Depth Extent	90	180	120	80
Dip	7.5	2.5	35	57.5
Dip Dir.	10	12.5	195	190
Plunge	0	0	0	0
Cond-Th.	96	80	42	510



Z- sea level of the upper closest edge of the targets. Corresponded depth is 20 m for pink model, 65 m for red model, 75 m for blue model.

Possible parameters of test drilling for the target:

**Name,X,Y,Z,Dip,Az,Length**

**Drillhole 1 663174, 5523420, 60, 0, 120**

**Drillhole 2 663174, 5523760, 60, 180, 150**

**Drillhole 3 663174, 5523900, 60, 0, 150**

## **Appendix F: Soil Gas Hydrocarbon Predictive Geochemistry Results**

SGH – Soil Gas Hydrocarbon Predictive Geochemistry for Excalibur Resources Ltd “Sturgeon Lake Survey”  
“Lines 3-7, 10-14, 16, 18”, “Lines 19 – 23”, and “Lines 24-27”



**SGH – SOIL GAS HYDROCARBON  
Predictive Geochemistry**

*for*

***EXCALIBUR RESOURCES LTD.  
"STURGEON LAKE SURVEY"  
"LINES 3-7, 10-14, 16, 18"***

*October 7, 2010*

*\* Dale Sutherland, Eric Hoffman*

*Activation Laboratories Ltd*

*(\* - author)*

**EVALUATION OF SGH "SOIL SAMPLE" DATA**

**EXPLORATION FOR: "VMS" TARGETS**

***Workorder: A10-4206***

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## **SOIL GAS HYDROCARBON (SGH) GEOCHEMISTRY - OVERVIEW**

SGH is a deep penetrating geochemistry that involves the analysis of surficial samples from over potential mineral or petroleum targets. The analysis involves the testing for 162 hydrocarbon compounds in the C5-C17 carbon series range applicable to a wide variety of sample types. SGH has been successful for delineating targets found at over 500 metres in depth. Samples of various media have been successfully analyzed such as soil (any horizon), drill core, rock, peat, lake-bottom sediments and even snow. The SGH analysis incorporates a very weak leach, essentially aqueous, that only extracts the surficial bound hydrocarbon compounds and those compounds in interstitial spaces around the sample particles. These are the hydrocarbons that have been mobilized from the target depth. SGH is unique and should not be confused with other hydrocarbon tests or traditional analyses that measure C1 (Methane) to C5 (Pentane) or other gases. SGH is also different from soil hydrocarbon tests that thermally extract or desorb all of the hydrocarbons from the whole soil sample. This test is less specific as it does not separate the hydrocarbons and thus does not identify or measure the responses as precisely. These tests also do not use a forensic approach to identification. The hydrocarbons in the SGH extract are separated by high resolution capillary column gas chromatography to isolate, confirm, and measure the presence of only the individual hydrocarbons that have been found to be of interest from initial research and development and from performance testing in two Canadian Mining Industry Research Organization (CAMIRO) projects (97E04 and 01E02).

Over the past 14 years of research, Activation Laboratories Ltd. has developed an in-depth understanding of the unique SGH signatures associated with different commodity targets. Using a forensic approach we have developed target signatures or templates for identification, and the understanding of the expected geochromatography that is exhibited by each class of SGH compounds. In 2004 we began to include an SGH interpretation report delivered with the data to enable our clients to realize the complete value and understanding of the SGH results in the shortest time frame and provide the benefit from past research sponsored by Actlabs, CAMIRO, OMET and other projects.

SGH has attracted the attention of a large number of Exploration companies. In the above mentioned research projects the sponsors have included (in no order): Western Mining Corporation, BHP-Billiton, Inco, Noranda, Outokumpu, Xstrata, Cameco, Cominco, Rio Algom, Alberta Geological Survey, Ontario Geological Survey, Manitoba Geological Survey and OMET. Further, beyond this research, Activation Laboratories Ltd. has interpreted the SGH data for over 400 targets from clients since January of 2004. In both CAMIRO research projects over known mineralization and in exploration projects over unknown targets, SGH has performed exceptionally well. As an example, in the first CAMIRO research project that commenced in 1997 (Project 97E04), there were 10 study areas that were submitted blindly to Actlabs. These study sites were selected since other inorganic geochemistries were unsuccessful at illustrating anomalies related to the target.

## **SOIL GAS HYDROCARBONS (SGH) GEOCHEMISTRY – OVERVIEW**

Although Actlabs was only provided with the samples and their coordinates, SGH was able to locate the blind mineralization with exceptional accuracy in 9 of the 10 surveys. SGH has recently been very successful in exploration and discovery of unknown targets e.g. Golden Band Resources drilled an SGH anomaly and discovered a significant vein containing “visible” gold. ([www.goldenbandresources.com](http://www.goldenbandresources.com))

**Sample Type and Survey Design:** It is highly recommended that a *minimum* of 50 sample “locations” is preferred to obtain enough samples into background areas on both sides of small suspected targets (wet gas plays, Kimberlite pipes, Uranium Breccia pipes, veins, etc.). SGH is not interpreted in the same way as inorganic based geochemistries. SGH must have enough samples over both the target and background areas in order to fully study the dispersion patterns or geochromatography of the SGH classes of compounds. Based on our minimum recommendation of at least 50 sample locations we further suggest that all samples be evenly spaced with about one-third of the samples over the target and one-third on each side of the target in order for SGH to be used for exploration. Targets other than gas plays, pipes, dykes or veins usually require additional samples to represent both the target and background areas.

SGH has been shown to be very robust to the use of different sample types even “within” the same survey or transect. Research has illustrated that it is far more important to the ultimate interpretation of the results to take a complete sample transect or grid than to skip samples due to different sample media. The most ideal natural sample is still believed to be soil from the “Upper B-Horizon”, however excellent results can also be obtained from other soil horizons, humus, peat, lake-bottom sediments, and even snow. The sampling design is suggested to use evenly spaced samples from 15 metres to 200 metres and line spacing from 50 metres to 500 metres depending on the size and type of target. A 4:1 ratio is suggested, however, larger orientation surveys have also been successful. Ideally even large grids should have one-third of the samples over the target and two-thirds of the samples into anticipated background areas. This will allow the proper assessment of the SGH geochromatographic vectoring and background site signature levels with minimal bias. Individual samples taken at significant distances from the main survey area to represent background are not of value in the SGH interpretation as SGH results are not background subtracted. Samples can be drip dried in the field and do not need special preservation for shipping and has been specifically designed to avoid common contaminants from sample handling and shipping. SGH has also been shown to be robust to cultural activities even to the point that successful results and interpretation has been obtained from roadside right-of-ways.

## **SOIL GAS HYDROCARBONS (SGH) GEOCHEMISTRY – OVERVIEW**

**Sample Preparation and Analysis:** Upon receipt at Activation Laboratories the samples are air-dried in isolated and dedicated environmentally controlled rooms set to 40°C. The dried samples are then sieved. In the sieving process, it is important that compressed air is not used to clean the sieves between samples as trace amounts of compressor oils "may" poison the samples and significantly affect some target signatures. At Activation Laboratories a vacuum is used to clean the sieve between each sample. The -60 mesh sieve fraction (<250 microns, although different mesh sizes can be used at the preference of the exploration geologist) is collected and packaged in a Kraft paper envelope and transported from our sample preparation building to our analytical building on the same street in Ancaster Ontario. Each sample is then extracted, separated by gas chromatography and analyzed by mass spectrometry using customized parameters enabling the highly specific detection of the 162 targeted hydrocarbons at a reporting limit of one part-per-trillion (ppt). This trace level limit of reporting is critical to the detection of these hydrocarbons that, through research, have been found to be related at least in part to the breakdown and release of hydrocarbons from the death phase of microbes directly interacting with a deposit at depth. The hydrocarbon signatures are directly linked to the deposit type which is used as a food source. The hydrocarbons that are mobilized and metabolized by the microbes are released in the death phase of each successive generation. Very few of the hydrocarbons measured are actually due to microbe cell structure, or hydrocarbons present or formed in the genesis of the deposit or from anthropogenic contamination. The results of the SGH analysis is reported in raw data form in an Excel spreadsheet as "semi-quantitative" concentrations without any additional statistical modification.

**Mobilized Inorganic Geochemical Anomalies:** It is important to note that SGH is essentially "blind" to any inorganic content in samples as only organic compounds as hydrocarbons are measured. Thus inorganic geochemical surface anomalies that have migrated away from the mineral source, and thus may be interpreted and found to be a false target location, is not detected and does not affect SGH results. This fact is of great advantage when comparing the SGH results to inorganic geochemical results. If there is agreement in the location of the anomalies between the organic and inorganic technique, such as Actlabs' Enzyme Leach, a significant increase in confidence in the target location can be realized. If there is no agreement or a shift in the location of the anomalies between the techniques, the inorganic anomaly may have been mobilized in the surficial environment.

**The Nugget Effect:** As SGH is "blind" to the inorganic content in the survey samples, any concern of a "nugget effect" will not be encountered with SGH data. A "nugget effect" may be of a concern for inorganic geochemistries from surveys over copper, gold, lead, nickel, etc. type targets.

## **SOIL GAS HYDROCARBONS (SGH) GEOCHEMISTRY – OVERVIEW**

**SGH Interpretation Report:** All SGH submissions must be accompanied by relative or UTM coordinates so that we may ensure that the sample survey design is appropriate for use with SGH, and to provide an SGH interpretation with the results. In our interpretation procedure, we separate the results into 19 SGH sub-classes. These classes include specific alkanes, alkenes, thiophenes, aromatic, and polyaromatic compounds. Note that none of the SGH hydrocarbons are “gaseous” at room temperature and pressure. The classes are then evaluated in terms of their geochromatography and for coincident compound class anomalies that are unique to different types of mineralization. Actlabs uses a six point scale in assigning a subjective rating of similarity of the SGH signatures found in the submitted survey to signatures previously reviewed and researched from known case studies over the same commodity type. Also factored into this rating is the appropriateness of the survey and amount of data/sample locations that is available for interpretation. This rating scale is described in detail in the following section.

## **SGH RATING SYSTEM - DESCRIPTION**

To date SGH has been found to be successful in the depiction of buried mineralization for Gold, Nickel, VMS, SEDEX, Uranium, Polymetallic, and Copper, as well as for Kimberlites. SGH data has developed into a dual exploration tool. From the interpretation, a vertical projection of the predicted location of the target can be made as well as a statement on the rating of the comparability of the identification of the anticipated target type to that from known case studies, e.g. if the client anticipates the target to be a Gold deposit, what is the rating or comparability that the target is similar to the SGH results over a Gold deposit in Nunavut, shear hosted and sediment hosted deposits in Nevada, or Paleochannel Gold mineralization in Western Australia.

- A rating of “6” is the highest or best rating, and means that the SGH classes most important to describing a Gold related hydrocarbon signature are all present and consistently vector to the same location with well defined anomalies. To obtain this rating there also needs to be other SGH classes that when mapped lend support to the predicted location.
- A rating of “5” means that the SGH classes most important to describing a Gold signature are all present and consistently describe the same location with well defined anomalies. The SGH signatures may not be strong enough to also develop additional supporting classes.
- A rating of “4” means that the SGH classes most important to describing a Gold signature are mostly present describing the location with well defined anomalies. Supporting classes may also be present.

## **SGH RATING SYSTEM - DESCRIPTION** (continued)

- A rating of "3" means that the SGH classes most important to describing a Gold signature are mostly present and describe the same location with fairly well defined anomalies. Some supporting classes may or may not be present.
- A rating of "2" means that some of the SGH classes most important to describing a Gold signature are present but a predicted location is difficult to determine. Some supporting classes may be present
- A rating of "1" is the lowest rating, and means that one of the SGH classes most important to describing a Gold signature is present but a predicted location is difficult to determine. Supporting classes are also not helpful.
- The SGH rating is directly and significantly affected by the survey design. Small data sets, especially if significantly <50 sample locations, or transects/surveys that are geographically too short will automatically receive a lower rating no matter how impressive an SGH anomaly might be. When there is not enough sample locations to adequately review the SGH class geochromatography, or when the sample spacing is inadequate, or if the spacing is highly variable such that it biases the interpretation of the results, then the confidence in the interpretation of any geochemistry is adversely affected. The SGH rating is not just a rating of the agreement between the SGH pathfinder classes for a particular target type; it is a rating of the overall confidence in the SGH results from this particular survey. The interpretation is only based on the SGH results without any information from other geochemical, geological or geophysical information unless otherwise specified.

## **SGH RATING SYSTEM – HISTORY & UNDERSTANDING**

The subjective SGH rating system has been used since 2004 when Activation Laboratories started providing an SGH Interpretation Report with every submission for SGH analysis to aid our clients in understanding this organic geochemistry and ensuring that they obtain the best results for their surveys. As explained in the previous section, the SGH rating is not just a rating of how definitive an SGH anomaly is, and is not based just on the map(s) provided in this report. It is a rating of "confidence in the interpreted anomaly" from the combination of (i) are the expected SGH Pathfinder Classes of compounds present from the template for this target type (one Pathfinder Class map is shown in the report, at least three must be present to adequately describe the correct signature for a particular target), (ii) how well do these SGH Pathfinder Classes agree in describing an particular area, (iii) how well does this agreement compare to SGH case studies over known targets of that type, (iv) how well is the interpreted anomaly defined by the survey (i.e. a single

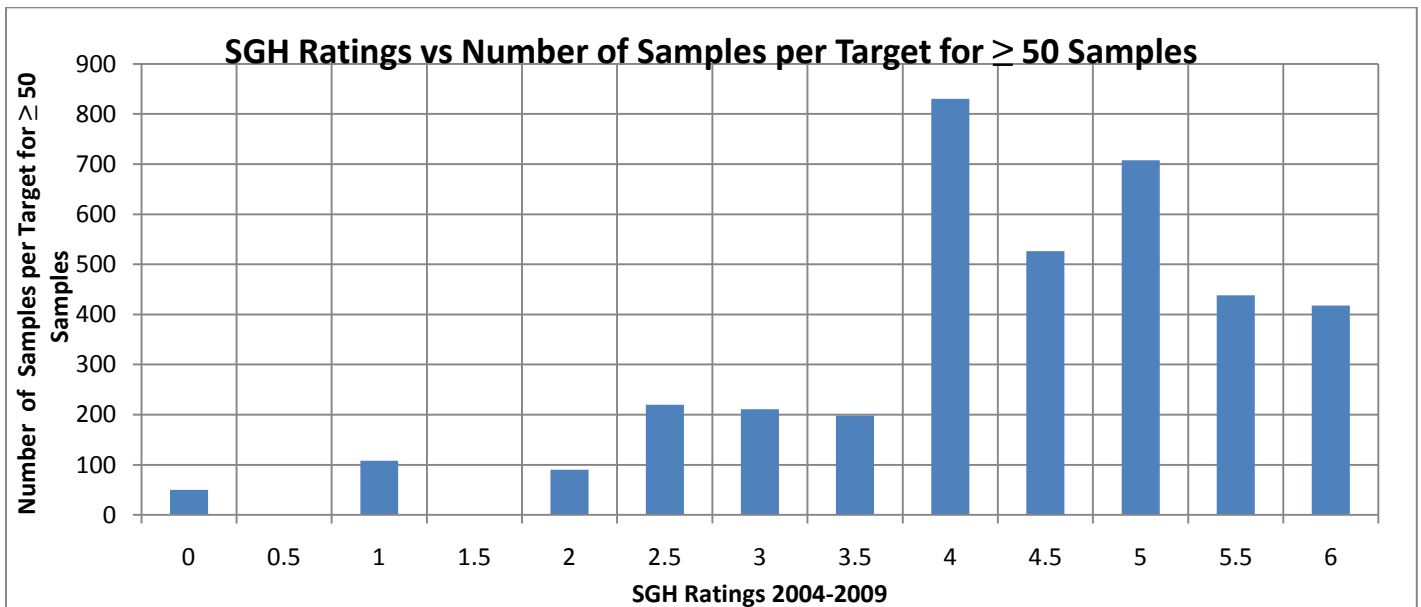
## **SGH RATING SYSTEM – HISTORY & UNDERSTANDING (cont.)**

transect does not provide the same confidence as a complete grid of samples), and (v) is there at least a minimum of 50 sample locations in the survey so that there may be an adequate amount of data to observe the geochromatography of the different SGH Pathfinder Class of compounds.

The question often arises by clients as to the frequency of a rating, e.g. “how often is a rating of 5.0 given in an interpretation”. To better understand this we present this review of the history of the SGH rating program since 2004 and some of the underlying situations that can affect the historical rating charts.

Originally it was recommended that a minimum of 35 sample location be used for small target exploration, however it was quite quickly realized that this is often insufficient and at least 50 sample locations were required. In 2007, the rating scale was refined to include increments of 0.5 units rather than just integer values from 0 to 6.

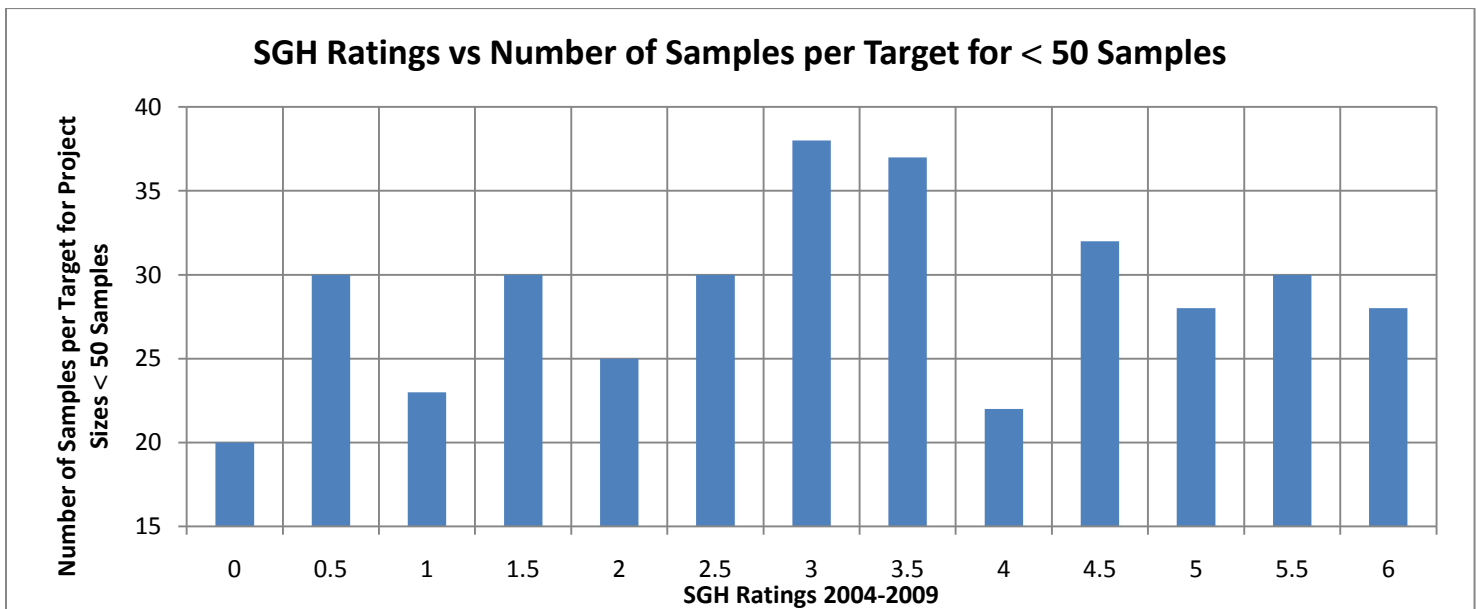
A rating frequency may be biased high as most clients conduct an orientation study over a known target, thus several of these projects result in high ratings. Note that, at this time, the rating is not said to be linked to grade of a deposit or depth to the target. Even in exploration surveys clients tend to submit samples over more promising targets due to knowledge of the geology and prior geochemical or geophysical results. As shown in the following chart, projects with SGH data from 200 or more sample locations have a higher level of confidence in the interpretation as the geochromatography of the SGH Pathfinder Classes of compounds can be more completely observed and reviewed.



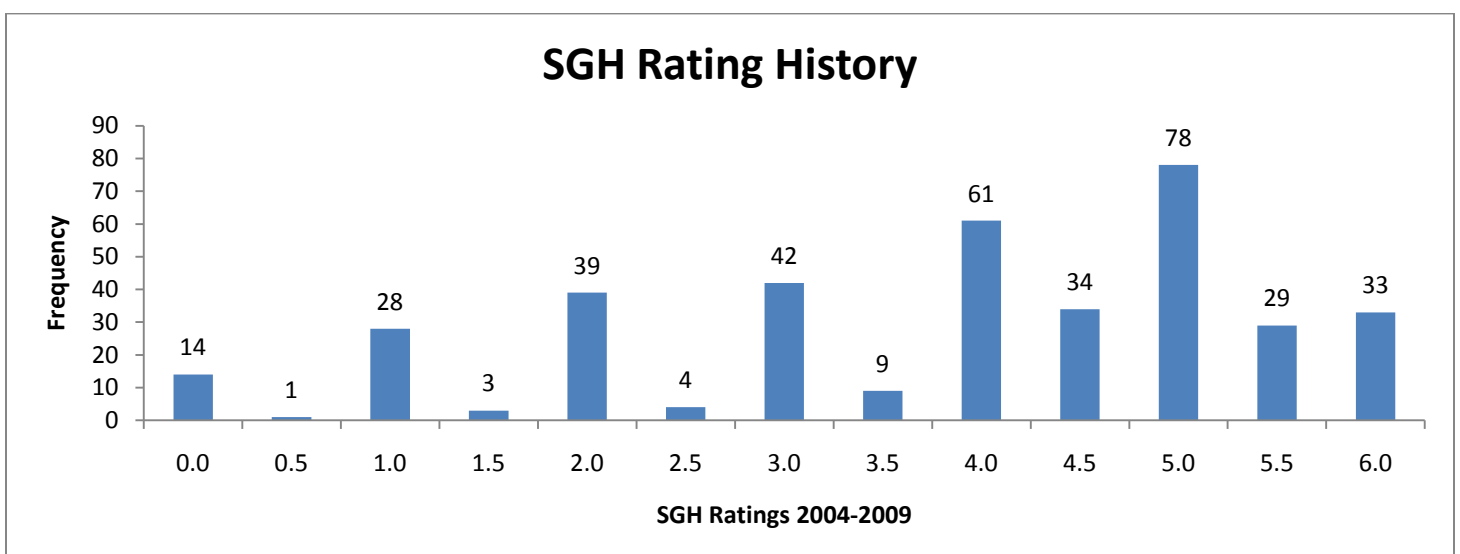


## **SGH RATING SYSTEM – HISTORY & UNDERSTANDING (cont.)**

The rating frequency may be biased low as research projects often include a bare minimum of samples to reduce costs. Research projects may also be over targets known to be difficult to depict with geochemistry. Multiple targets in close vicinity in a survey may result in a low bias as the Pathfinder Class geochromatography is more difficult to deconvolute. Ratings may also be biased low if less than the recommended 50 sample locations is submitted as indicated by the following chart. This chart also illustrates that there is no interpretation bias to a particular rating value.



The overall rating frequency for over 400 targets from January 2004 to December 2009 is shown in the chart below illustrating that surveys over more promising targets are most often submitted for best use of research or exploration dollars. It also indicates that the 0.5 increments were less frequent as they started in 2007.



## **SGH DATA QUALITY**

- **Reporting Limit:** The SGH Excel spreadsheet of results contains the raw unaltered concentrations of the individual SGH compounds in units of "part-per-trillion" (ppt). The reporting of these ultra low levels is vital to the measurement of the small amounts of hydrocarbons now known to be leached/metabolized and subsequently released by dead bacteria that have been interacting with the ore at depth. To ensure that the data has a high level of confidence, a "reporting limit" is used. The reporting limit of 1 ppt actually represents a level of confidence of approximately 5 standard deviations where SGH data is assured to be "real" and non-zero. Thus in SGH the use of a reporting limit automatically removes site variability and there is no need to further background subtract any data as the reporting limit has already filtered out any site background effects. Thus we recommend that all data that is equal to or greater than 2 ppt should be used in any data review. It is important to review all SGH data as low values that may be the centre of halo anomalies and higher values as apical anomalies or as halo ridges are all important.
- **Laboratory Replicate Analysis:** A laboratory replicate is a sample taken randomly from the submitted survey being analyzed and are not unrelated samples taken from some large stockpile of bulk material. In the Organics laboratory an equal portion of this sieved sample, or pulp, is taken and analyzed in the same manner using the Gas Chromatography/Mass Spectrometer. The comparison of laboratory replicate and field duplicate results for chemical tests in the parts-per-million or even parts-per-billion range has typically been done using an absolute "relative percent difference (RPD)" statistic which is an easy proxy for error estimation rather than a more complete analysis of precision as specified by Thompson and Howarth. An RPD statistic is not appropriate for SGH results as the reporting limit for SGH is 1 part-per-trillion. Further, SGH is a semi-quantitative technique and was not designed to have the same level of precision as other less sensitive geochemistry's as it is only used as an exploration tool and not for any assay work. SGH is also designed to cover a wide range of organic compounds with an unprecedented 162 compounds being measured for each sample. In order to analyze such a wide molecular weight range of compounds, sacrifices were made to the variability especially in the low molecular weight range of the SGH analysis. The result is that the first fifteen SGH compounds in the Excel spreadsheet is expected to exhibit more imprecision than the other 147 compounds. An SGH laboratory replicate is a large set of data for comparison even for just a few pairs of analyses. Precision calculations using a Thompson and Howarth approach should only be used for estimating error in individual measurements, and not for describing the average error in a larger data set. In geochemical exploration geochemists seek concentration patterns to interpret and thus rigorous precision in individual samples is not required because the concentrations of many samples are interpreted collectively. For these reasons recent and independent research at Acadia

## **SGH DATA QUALITY** (continued)

University in Canada promote that a percent Coefficient of Variation (%CV) should be used as a universal measurement of relative error in all geochemical applications. As SGH results are a relatively large data set for nearly all submissions, %CV is a better statistic for use with SGH. By using %CV, the concentration of duplicate pairs is irrelevant because the units of concentration cancel out in the formation of the coefficient of variation ratio. For SGH, the %CV is calculated on all values  $\geq 2$  ppt. These values are averaged and represent a value for each pair of replicate analysis of the sample. All of the %CV values for the replicates are then averaged to report one %CV value to represent the overall estimate of the relative error in the laboratory sub-sampling from the prepared samples, and any instrumental variability, in the SGH data set for the survey. Actlabs' has successfully addressed the analytical challenge to minimize analytical variability for such a large list of compounds. Thus as SGH is also interpreted as a signature and is solely used for exploration and not assay measurement, the data from SGH is "**fit for purpose**" as a geochemical exploration tool.

- **Historical SGH Precision:** In the general history of geochemistry, studies indicate that a large component of total measurement error is introduced during the collection of the initial sample and in sub-sampling, and that only a subordinate amount of error in the result is introduced during preparation and analysis. A historical record encompassing many projects for SGH, including a wide variety of sample types, geology and geography, shows that the consistency and precision for the analysis of SGH is excellent with an overall precision of 6.8% Coefficient of Variation (%CV). When last calculated, this number has a range having a maximum of 12.4% CV, a minimum of 3.0% CV, with a standard deviation of 1.6%, in a population made up of over 400 targets (over 45,000 samples) interpreted since June of 2004. Again the precision of 6.8% CV included all of the sample types as soil from different horizons, peat, till, humus, lake-bottom sediments, ocean-bottom sediments, and even snow. When field duplicates have been revealed to us, we have found that the precision of the field duplicates are in the range of about 9 to 12 %CV. As SGH is interpreted using a combination of compounds as a chemical "class" or signature, the affect of a few concentrations that may be imprecise in a direct comparison of duplicates is not significant. Further, projects that have been re-sampled at different times or seasons are expected to have different SGH concentrations. The SGH anomalies may not be in exactly the same position or of the same intensity due to variable conditions that may have affected the dispersion of different pathfinder classes. However, the SGH "signature" as to the presence of the specific mix of SGH pathfinder classes will definitely still exist, and will retain the ability to identify the deposit type and vector to the same target location.

- **LABORATORY MATERIALS BLANK – QUALITY ASSURANCE (LMB-QA):**

The Laboratory Materials Blank Quality Assurance measurements (LMB-QA) shown in the SGH spreadsheet of results are matrix free blanks analyzed for SGH. These blanks are not standard laboratory blanks as they do not accurately reflect an amount expected to be from laboratory handling or laboratory conditions that may be present and affect the sample analysis result. The LMB-QA measurements are a pre-warning system to only detect any contamination originating from laboratory glassware, vials or caps. As there is no substrate to emulate the sample matrix, the full solvating power of the SGH leaching solution, effectively a water leach, is fully directed at the small surface area of the glassware, vials or caps. In a sample analysis the solvating power of the SGH leaching solution is distributed between the large sample surface area (from soil, humus, sediments, peat, till, etc.) and the relatively small contribution from the laboratory materials surfaces. The sample matrix also buffers the solvating or leaching effect in the sample versus the more vigorous leaching of the laboratory materials which do not experience this buffering effect. Thus the level of the LMB-QA reported is biased high relative to the sample concentration and the actual contribution of the laboratory reagents, equipment, handling, etc. to the values in samples is significantly lower. This situation in organic laboratory analysis only occurs at such extremely low part-per-trillion (ppt) measurement levels. This is one of the reasons that SGH uses a reporting limit and not a detection limit. The 1 ppt reporting limit used in the SGH spreadsheet of raw concentration data is 3 to 5 times greater than a detection limit. The reporting limit automatically filters out analytical noise, the actual LMB-QA, and most of the sample survey site background. This has been proven as SGH values of 1 to 3 parts-per-trillion (ppt) have very often illustrated the outline of anomalies directly related to mineral targets. Thus all SGH values greater than or equal to 1 or 2 ppt should be used as reliable values for interpretations.

The LMB-QA values thus should not be used to background subtract any SGH data. The LMB-QA values are only an early warning as a quality assurance procedure to indicate the relative cleanliness of laboratory glassware, vials, caps, and the laboratory water supply at the ppt concentration level. Do not subtract the LMB-QA values from SGH sample data.

## **SGH DATA INTERPRETATION**

- **GEOCHEMICAL ANOMALY THRESHOLD VALUE:**

In the interpretation of "inorganic" geochemical data one of the determinations to be made is to calculate a "Threshold" value above which data is considered anomalous. This is done on an element by element basis. In the interpretation of this "organic" geochemical data this determination is done differently. The determination of a threshold value is not calculated for each hydrocarbon compound. The determination of a threshold value is also a concentration below which geochemical data is considered as "noise" for the purposes of geochemical interpretation. As discussed on page 10, SGH uses a "Reporting Limit" instead of some type of Detection Limit. The amount of noise that is already eliminated in the data, as below the Reporting Limit of 1 part-per-trillion (shown in the data spreadsheet as "-1" as "not-detected at a Reporting Limit of 1 ppt") is equivalent to approximately 5 standard deviations of variability. To thus calculate an additional Threshold Value is a loss of real and valuable data. Further, in the interpretation of SGH data, individual compounds are not considered (unless explicitly mentioned in the report). The interpretation of SGH data is exclusively conducted by "compound chemical class" which is the sum of four to fourteen individual hydrocarbons in the same organic chemical class as these compounds naturally have the same chemical properties that ultimately define their spatial dispersion characteristics in their rise from a mineral target through the overburden. This combined class is more reliable than the measurement of any one compound. SGH also eliminates the need for a Threshold value determination above the Reporting Limit due to the "high specificity" of the specific hydrocarbons and the classes they form. Each of the hydrocarbons has been hand selected due to their lower probability of being found in general surface soils. Further, only those classes where the majority of the compounds are detected above the Reporting Limit are considered in the interpretation. This defines the SGH geochemistry as having less geochemical noise due to the use of a reporting limit and as having higher confidence in the use of groups (classes) of data instead of individual compounds. However the most important aspect of interpretation is the use of a forensic signature. At least three specific "Pathfinder" classes, based on the combinations or template of classes we have developed, must be present to define the hydrocarbon signature to confidently predict the presence of a specific type of mineral target. Do not calculate another Threshold value. **FACT:** It has been proven many times that important chemical anomalies can exist even at 5 ppt.

- **SGH PATHFINDER CLASS MAGNITUDE:**

The magnitude of any individual concentration or that of a hydrocarbon class does not imply that the data is of more importance or that mineralization is of higher quantity or grade. SGH interpretation must use the review of the combination of specific hydrocarbon classes to make any interpretation.

## **SGH DATA INTERPRETATION** (continued)

- **SGH DATA LEVELING:**

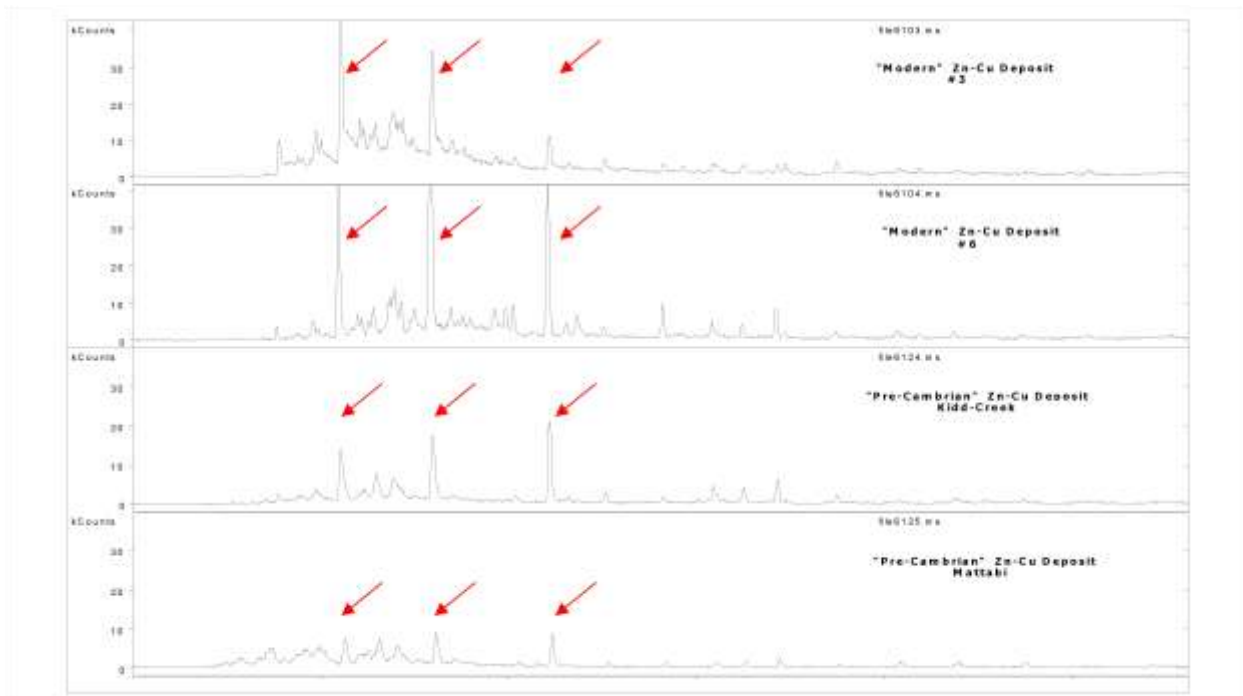
The combination of SGH data from different field sampling events has rarely required leveling in order to combine survey grids. The only circumstances that have occasionally required leveling has been the combination of samples that are very fine in texture, thus having a combined large surface area to samples of peat that may be in nearby areas. Even after maceration of the peat and in using the maximum size of sample amenable to this test method, peat samples have a significantly lower surface area. Peat samples have only required leveling in one survey in the last 500 SGH interpretations.

In only the last year it has been observed that SGH data **may** require leveling when different field sampling events have significantly different soil temperature. It has been documented that only when "soil" samples are taken from "frozen" ground that data leveling may be required as frozen sample act as a frozen cap to the hydrocarbon flux and may collect a higher concentration of hydrocarbon compounds compared to sampling during seasons where the samples are not frozen. Only two surveys have required leveling in the last 500 SGH interpretations.

The author has taken introductory training in the leveling of geochemical data. If leveling is required, both data sets are reviewed in terms of maximum, minimum and average values for each SGH Pathfinder Class intended for use in the interpretation. Data is sectioned into quartiles and each section is assigned specific leveling factors that is then applied to one data set. It should be noted that any type of data leveling is an approximation.

## **SGH – FORENSIC GEOCHEMICAL SIGNATURES**

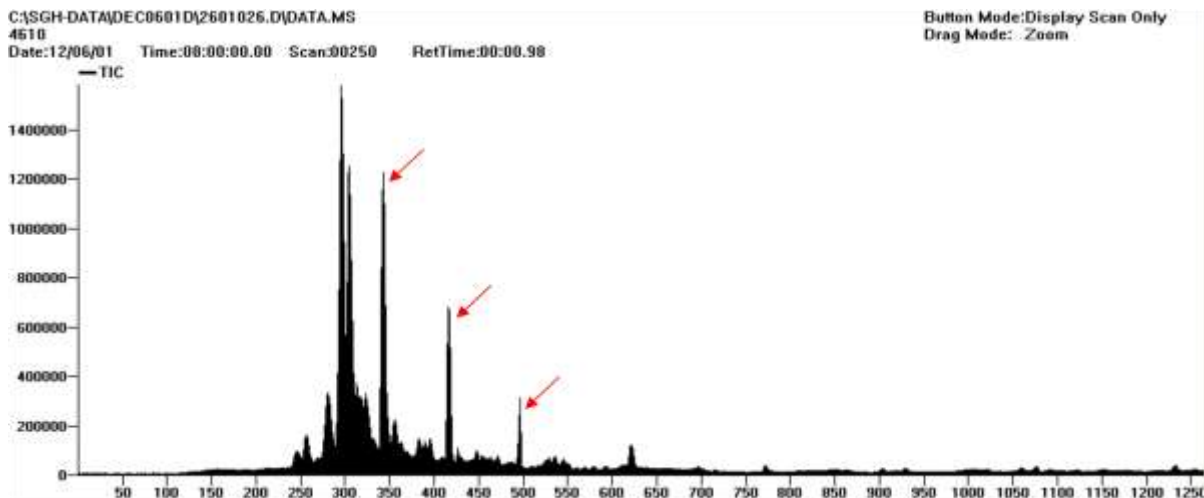
- One of the first experiments in 1996 in the development of the SGH analysis was to observe if an SGH response could be obtained directly from an ore sample. From office shelf specimens, small rock chips were obtained which were then crushed and milled. The fine pulp obtained was then subjected to the SGH analysis. These shelf specimen samples were from well known Volcanic Massive Sulphide deposits of the Mattabi deposit from the Archean Sturgeon Lake Camp in Northwestern Ontario and from the Kidd Creek Archean volcanic-hosted copper-zinc deposit. Even these specimen samples contain a geochemical record of the hydrocarbons produced by the bacteria that had been feeding on these deposits at depth. As a comparison, SGH analysis were similarly conducted on modern-day VMS ore samples taken from a “black smoker” hydrothermal volcanic vent from the deep sea bed of the Juan de Fuca Ridge where high concentrations of microbial growth was also known to exist. The raw data profiles as GC/MS Total Ion Chromatograms are shown below to illustrate the “visible” portion of the VMS signature obtained from the SGH analysis.



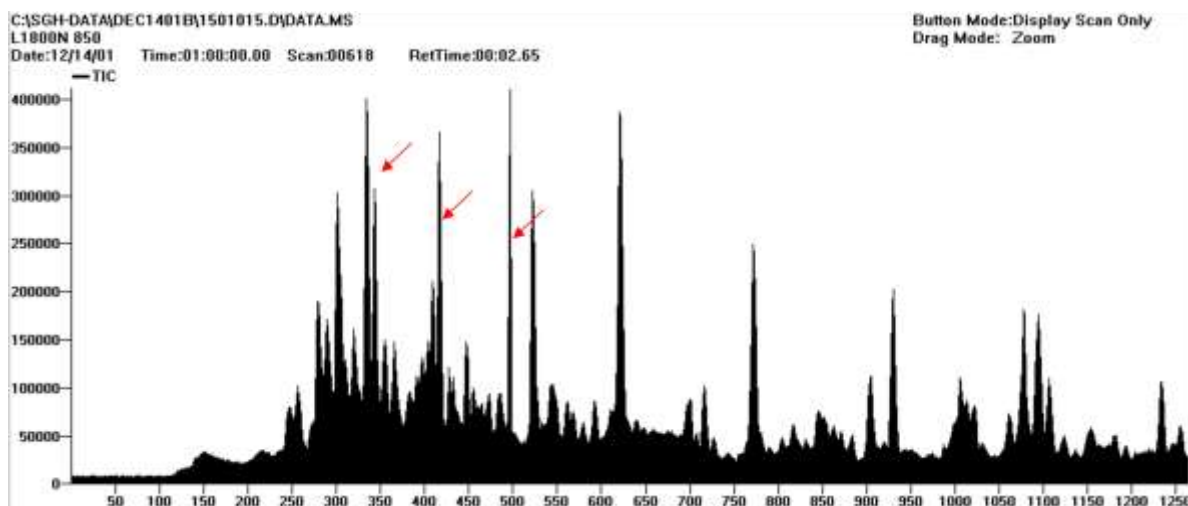
The top two profiles were obtained from two samples of the modern day “black smokers”. The third and fourth chromatograms in the above image were obtained from the Pre-Cambrian Zn-Cu Kidd Creek and Mattabi deposits. The red arrows point to three compounds that are a portion of the SGH signature for VMS type deposits. This visible portion of the VMS signature of hydrocarbons can easily be seen in the analysis of each of these four samples.

## **SGH – FORENSIC GEOCHEMICAL SIGNATURES** (cont.)

The next question in our early objectives was to see if this SGH signature could also be observed in surficial soil samples that had been taken over VMS deposits. Through our research projects, soil samples were obtained from over the Ruttan Cu-Zn VMS deposit near Leaf Rapids, Manitoba and located in the Paleoproterozoic Rusty Lake greenstone belt. The profile obtained, as observed in the raw GC/MS chromatogram, is shown in this next image below:



The three compounds indicated by the red arrows represent the same visible portion of the VMS signature observed from the modern day black smoker samples and the ore samples taken from the Mattabi and Kidd Creek, even though this soil was taken from over a different VMS deposit in a geographically different area. Is this coincidence? Another soil sample was obtained from Noranda's Gilmour South base-metal occurrence in the Bathurst Mining camp in northern New Brunswick. As shown below, this sample contained a very complex SGH signature, however the visible portion of the VMS signature as indicated by the red arrows is still observed as in the black smoker, Mattabi and Kidd Creek ore samples.

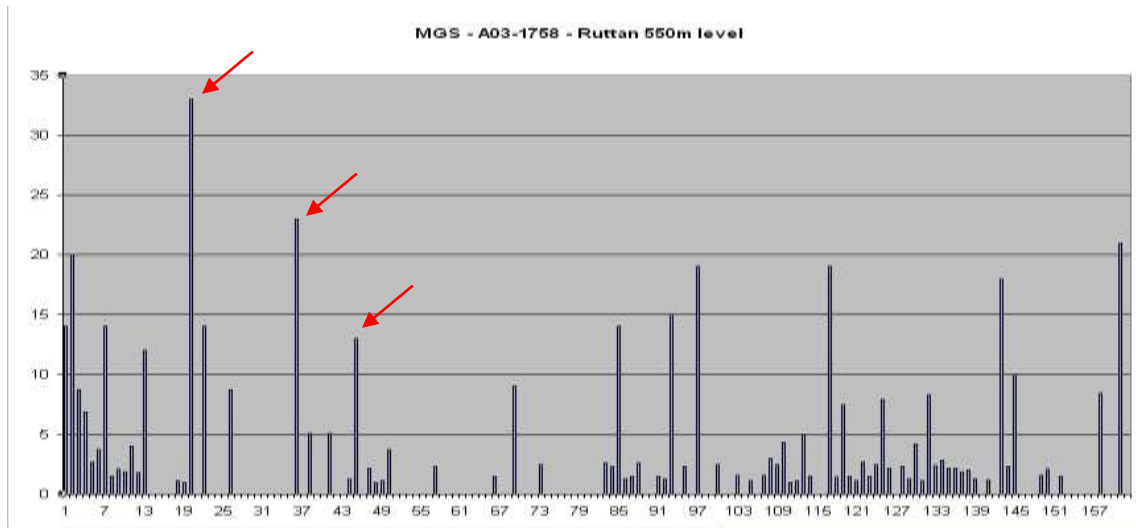




## **SGH – FORENSIC GEOCHEMICAL SIGNATURES** (cont.)

In research conducted by the Ontario Geological Survey, this same portion of the SGH signature was also observed over the VMS deposit at Cross Lake in Ontario. Note that the visible signature shown as the three compounds indicated by the red arrows is only a small portion of the complete SGH VMS signature. The full VMS signature is made up of at least three groups, as three organic chemical classes, that together contain at least 35 of the individual SGH hydrocarbons.

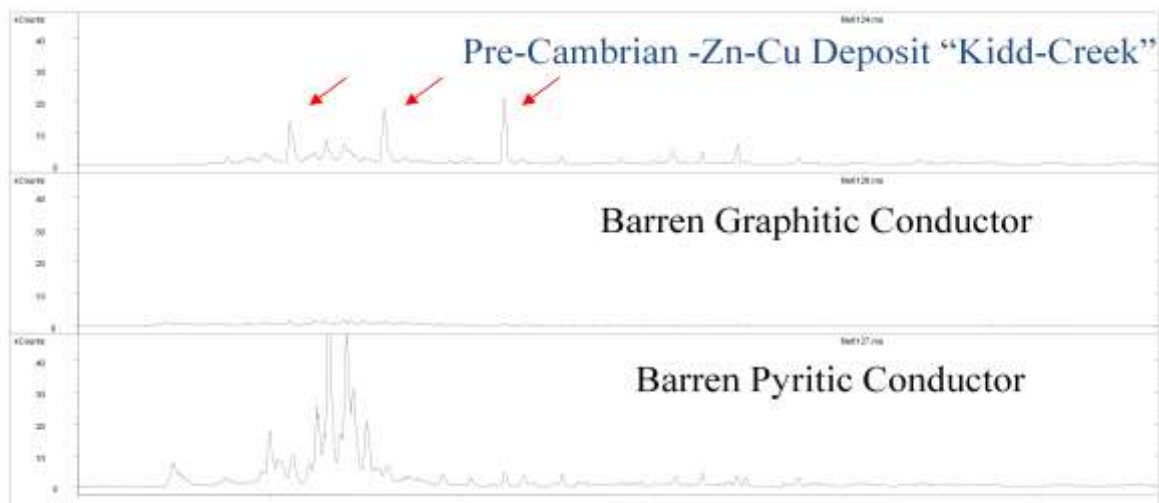
The chromatograms shown on the preceding page from the GC/MS analysis are not used directly in the interpretation of SGH data. As we are only interested in a specific list of 162 hydrocarbons, the mass spectrometer and associated software programs specifically identifies the hydrocarbons of interest, runs calculations using relative responses to a short list of hydrocarbons used as standards, and develops an Excel spreadsheet of semi-quantitative concentration data to represent the sample. Thus the SGH results for a sample, like that observed in ore from the Ruttan, are filtered to obtain the concentrations for the specific 162 hydrocarbons. A simple bar graph drawn from the Excel spreadsheet of the hydrocarbons and their concentrations results in a DNA like **forensic SGH signature** as shown below. The portion discussed here as the “visible” SGH VMS signature in the GC/MS chromatograms, is again shown by the red arrows.



Through the work done in the SGH CAMIRO research projects, it was observed that the hydrocarbon signature produced by the SGH technique appeared to also be able to be used to differentiate barren from ore-bearing conductors. This was explored further through the submission and analysis of specific specimen samples that represented a barren pyritic conductor and a barren graphitic conductor.

## **SGH – FORENSIC GEOCHEMICAL SIGNATURES** (cont.)

The GC/MS chromatograms from these two specimens are compared to that obtained from the Kidd-Creek ore as shown below. This diagram conclusively shows that the SGH signatures obtained from the two types of barren conductors are completely different than that obtained by SGH over VMS type ore. SGH is thus able to differentiate between ore-bearing conductors and barren conductors as the Forensic SGH Geochemical signature is different.



- SGH has been described by the Ontario Geological Survey of Canada (OGS) as a “REDOX cell locator”. Many SGH surveys for Gold and other mineral targets can result in multiple types of anomalies, depending on the class of SGH compounds, even over the same target and in the same set of samples. Thus “Apical”, “Nested-Halo”, and “Rabbit-Ear” or “Halo” type SGH anomalies are all typically observed from the effect of REDOX cells that have developed over deposits. REDOX cells are also related to the presence of bacteriological activity.
- The VMS template of SGH Pathfinder Classes uses low and medium weight classes of hydrocarbon compounds. Again, at least three Pathfinder Class group maps, associated with the SGH signature for VMS, must be present to begin to be considered for assignment of a good rating. The Pathfinder Class anomalies in these maps must logically concur and support a consistent interpretation in relation to the expected geochromatographic characteristics of the Pathfinder Class, for a specific area. The SGH Pathfinder Class map(s) shown in this report is usually the most diagnostic for the presence of Volcanic Massive Sulphide based mineralization.

## **SGH DATA INTERPRETATION**

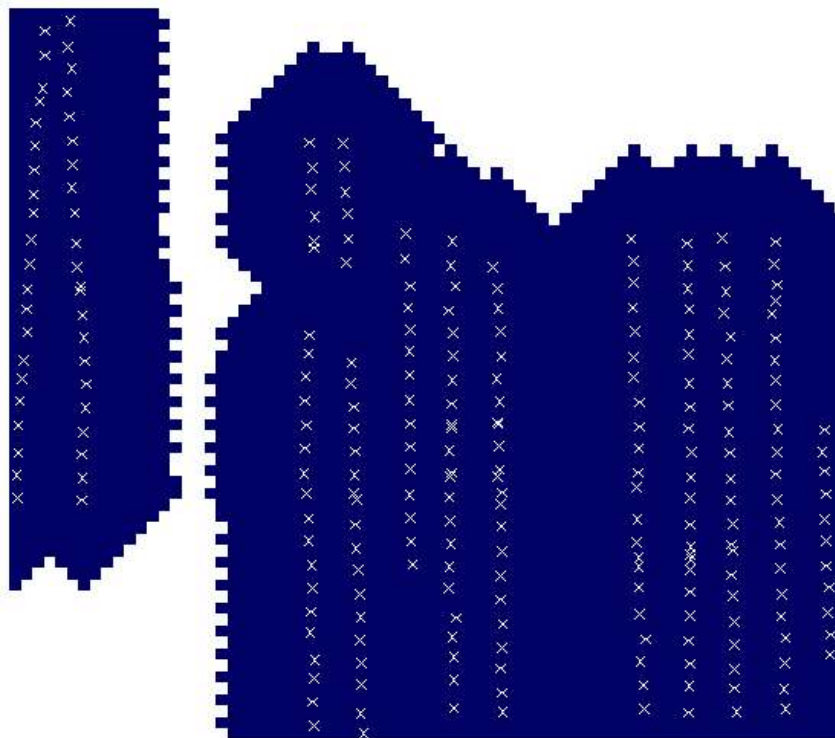
### **DISCLAIMER:**

- This "SGH Interpretation Report" has been prepared to assist the user in understanding the development and capabilities of this Organic based Geochemistry. The interpretation of the Soil Gas Hydrocarbon (SGH) data is in reference to a template or group of SGH classes of compounds specific to a type of mineralization or target that is chosen by the client (i.e. the template for gold, copper, VMS, uranium, etc.). Although the template of SGH Pathfinder Classes that has been developed through research and review of case studies has proven to be able to address many lithologies, Activation Laboratories Ltd. cannot guarantee that the template is applicable to every type of target in every type of environment. The interpretation in this report attempts to identify an anomaly that has the best SGH signature in the survey for the type of mineralization or target chosen by the client. However, this interpretation is not exhaustive and there may be additional SGH anomalies that may warrant interest. It should not be viewed due to the generation of this SGH report, that Activation Laboratories Ltd. has the expertise or is in the business of interpreting geochemical data as a general service. As the author is the originator of the SGH geochemistry, has researched and developed this exploration tool since 1996, and has produced similar interpretations using SGH data for over 500 surveys, he is perhaps the best qualified to prepare this interpretation as assistance to clients wishing to use SGH. Activation Laboratories Ltd. can offer assistance in general suggestions for sampling protocols and in sample grid location design; however we accept no responsibility to the appropriateness of the samples taken. Activation Laboratories Ltd. has made every attempt to ensure the accuracy and reliability of the information provided in this report. Activation Laboratories Ltd. or its employees, does not accept any responsibility or liability for the accuracy, content, completeness, legality, or reliability of the information or description of processes contained in this report. The information is provided "as is" without a guarantee of any kind in the interpretation or use of the results of the SGH geochemistry. The client or user accepts all risks and responsibility for losses, damages, costs and other consequences resulting directly or indirectly from using any information or material contained in this report or using data from the associated spreadsheet of results.

**INTERPRETION OF SGH RESULTS – A10-4206**  
**EXCALIBUR RESOURCES LTD. – STURGEON LAKE SURVEY**

**SGH SURVEY INTERPRETATION – Lines 3-7, 10-14, 16, 18**

- This report is based on the SGH results from the analysis of a total of 259 soil samples from these submissions for this survey area. This report specifically pertains to just those sample results from Lines 3-7, 10-14, 16, and 18. These 12 north-south trending transects in the Sturgeon Lake survey area are shown in the map below. These transects are in 3 groups. Within each group transects are 100 metres apart with samples spaced at 50 metres. UTM coordinates were provided for mapping of the SGH results. These samples were received by our Thunder Bay lab facility and then shipped to our head Ancaster laboratory where they were subsequently dried and sieved as per the procedure on page 5 of this report.



- The number of samples submitted for this project is adequate to use SGH as an exploration tool for Lines 3-7, 10-14, 16 and 18. Note that the SGH data is only reviewed for the particular target deposit type requested, in this case for the presence of a VMS based deposit. It is also assumed that there is only one potential target. To obtain the best interpretation the client should indicate if there are possible multiple targets, say from geophysical data. The possibility of multiple targets in "close proximity" should be known due to potential overlap and increased complexity of resulting geochromatographic anomalies which could alter the interpretation. Based on the size of the narrow targets expected in this Sturgeon Lake project, "close proximity" would mean "within 400 metres".

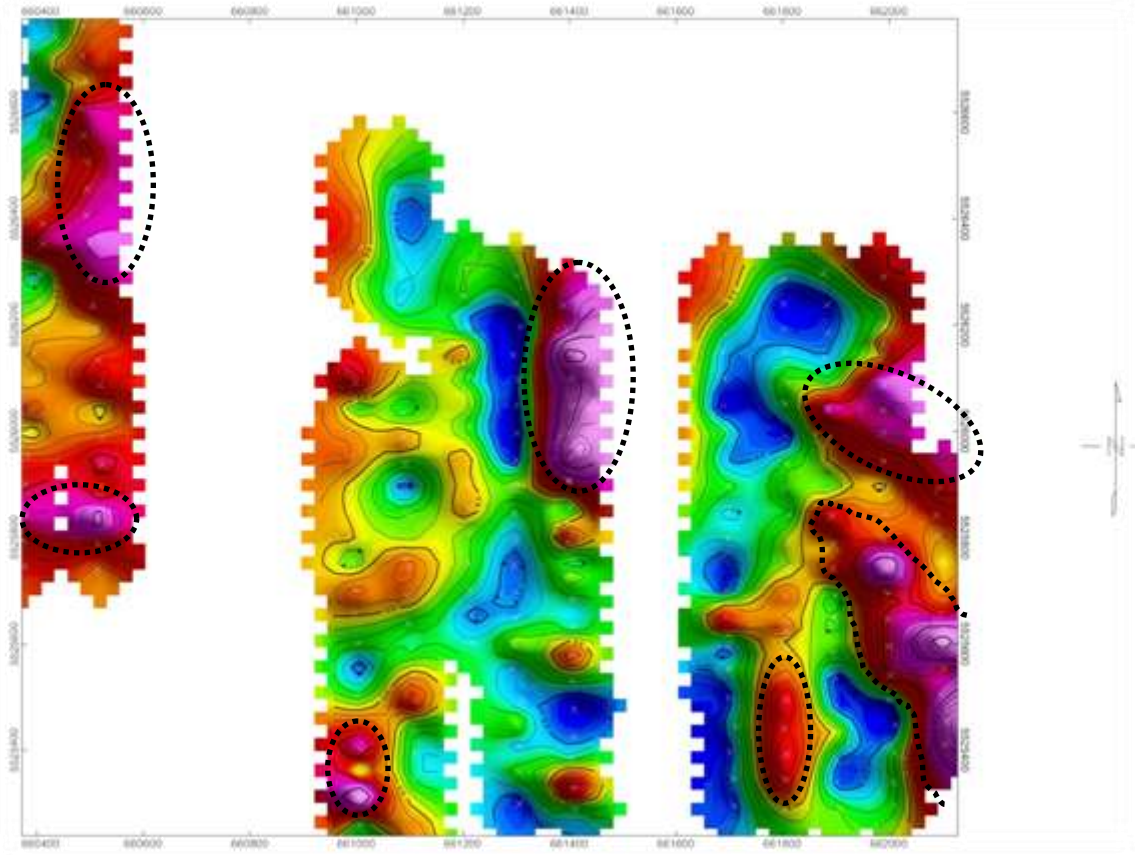
**INTERPRETION OF SGH RESULTS – A10-4206**  
**EXCALIBUR RESOURCES LTD. – STURGEON LAKE SURVEY**

**SGH SURVEY INTERPRETATION – Lines 3-7, 10-14, 16, 18**

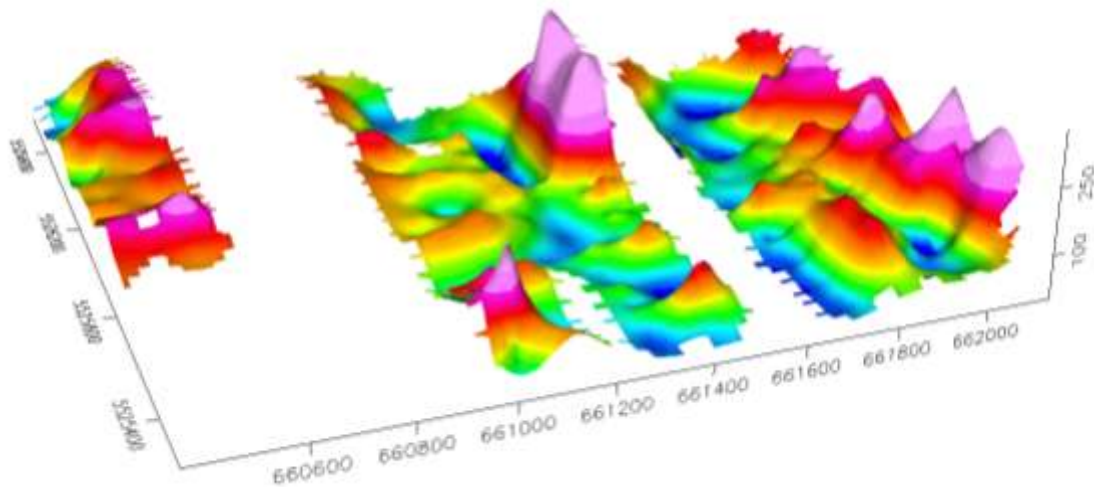
- Note that the associated SGH results are presented in a separate Excel spreadsheet. This raw data is semi-quantitative and is presented in units of pg/g or **parts-per-trillion** (ppt).
- **The overall precision of the SGH analysis for the samples in this SGH survey was excellent** as demonstrated by 17 samples taken from this survey area which were used for laboratory replicate analysis. The average Coefficient of Variation (%CV) of the replicate results for the project samples from this survey area was 7.3% which represents an excellent level of analytical performance.
- The plan view and 3D view maps shown on page 22 and 23 are both SGH "Pathfinder Class maps" for targeting VMS mineralization and are the same classes previously used for Lines 39 & 40. Each map represents the simple summation of several individual hydrocarbon compound concentrations that are grouped from within the same organic chemical class. SGH Pathfinder Class maps have been shown to be robust as they are each described using from 4 to 14 (unless otherwise stated) chemically related SGH compounds which are simply summed to create each class map. Thus each map has a higher level of confidence as it is "not" illustrating just one compound response. A legend of the SGH classes appears in the SGH data spreadsheet. The overall SGH interpretation rating (page 24) has even a higher level of confidence as it further relies on the consensus between at least three SGH Pathfinder Classes (other classes not shown) that together make the signature of the target at depth.
- On the SGH Pathfinder Class plan view map on page 22, seven dotted black outlines have been applied as the interpretation around areas having an apical response which is expected for this SGH Pathfinder Class over areas that potentially have VMS mineralization. These same ovals have been applied to another SGH Pathfinder Class map related to VMS mineralization on page 23. On this page the seven zones have been broken up and labeled as zones "A", "B" and "C".
- These interpretations are based only on this survey and on these SGH results.

**INTERPRETION OF SGH RESULTS – A10-4206**  
**EXCALIBUR RESOURCES LTD. – STURGEON LAKE SURVEY**

**SGH "VMS" PATHFINDER CLASS MAP – Lines 3-7, 10-14, 16, 18**



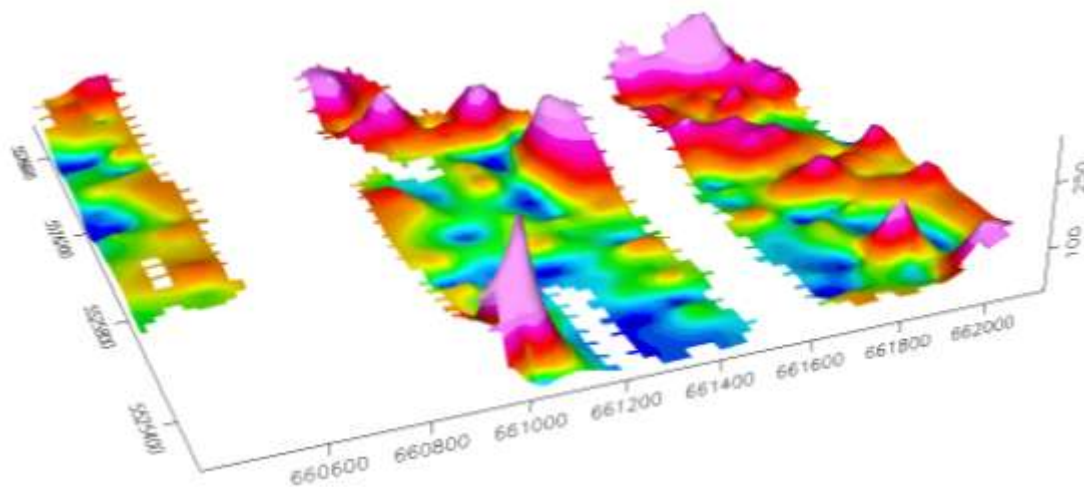
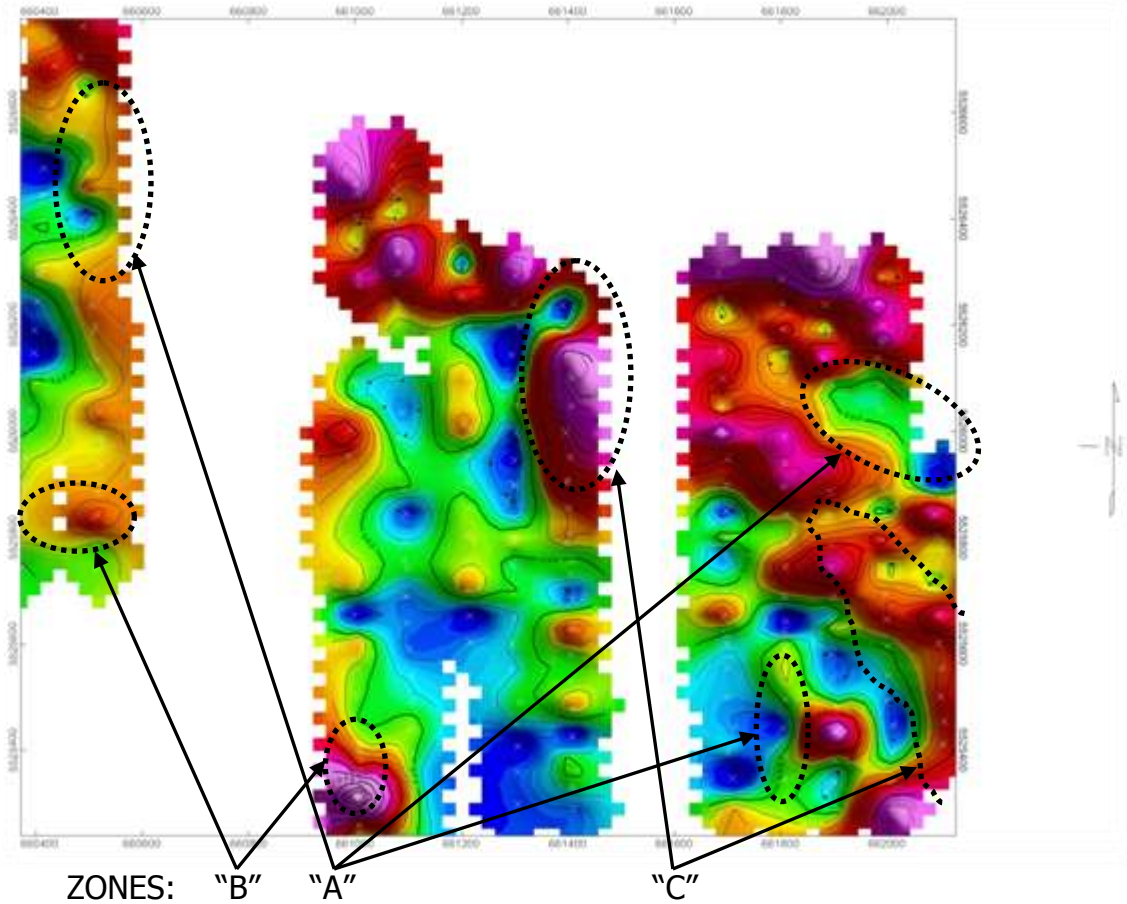
SEVEN APICAL ANOMALIES WITHIN DOTTED OUTLINES



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**INTERPRETION OF SGH RESULTS – A10-4206**  
**EXCALIBUR RESOURCES LTD. – STURGEON LAKE SURVEY**

**SGH "VMS" CONFIRMATORY PATHFINDER CLASS MAP – Lines 3-7, 10-14, 16, 18**



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**INTERPRETION OF SGH RESULTS – A10-4206**  
**EXCALIBUR RESOURCES LTD. – STURGEON LAKE SURVEY.**

**SGH SURVEY INTERPRETATION RATING – Lines 3-7, 10-14, 16, 18**

- The seven outlined zones have been applied to the map on page 23. This SGH Pathfinder Class map is expected to have areas of low response or halo type anomalies that correspond to the areas of high response or apical anomalies that occur in the SGH Pathfinder Class map on page 22 when over VMS mineralization. The seven anomalous areas identified have been divided into 3 sets labeled "A", "B", and "C". Again, confirmation between these two classes is expected as part of the SGH signature from over VMS type mineralization. Such confirmation is also a very good indication of the presence of REDOX conditions in the overburden and to the presence of buried mineralization and bacteriological activity. Other SGH Pathfinder Class maps (not shown at this price point) are also used to confirm the interpretation, add confidence, and help in assignment of a rating. The zones designated as "A" appear to have the expected corresponding low response zones to the apical anomalies on page 22 and thus will have a higher rating. Zones designated as "B" have a portion that is low in response and a portion that is not on page 23 and will have a lower rating. Area designated as "C" may appear to have substantial apical anomalies but these do not match the signature in the SGH template as this pathfinder class on page 23 is expected to have a low response when over VMS type mineralization and thus is rated low.
- After review of all of the SGH Pathfinder Class maps, the SGH results from these soil samples suggest a **"rating of 5.0"** for the three "A" zones, a **"rating of 4.0"** for the two "B" zones, and a **"rating of 2.5"** for the two "C" zones that are within the black dotted oval interpretations on the plan view maps for Lines 3-7, 10-14, 16 and 18 as illustrated on page 22 and 23. SGH best predicts that VMS mineralization exists directly beneath these "A" zones as a vertical projection. These ratings are based on a scale of 6.0 in 0.5 increments, with a value of 6.0 being the best. The rating represents the similarity of these SGH results with case studies over a Volcanic Massive Sulphide (VMS) type target, to the SGH case studies conducted at the Hanson Lake VMS deposit in Saskatchewan, the South Gilmour VMS deposit in New Brunswick and the Cross Lake VMS deposit in Ontario. The degree of confidence in the rating only starts to be "good" at a level of 4.0.
- Potential drill targets are most likely to be in the centre of the black dotted oval interpretations at the "A" zones as the centre of the REDOX cells formed in the overburden. The SGH VMS template used has been shown to be robust to a wide range of VMS lithology including Kidd Creek, Irish and Kuroko style deposits.
- The client should use a combination of these SGH results and its report with additional geochemical, geophysical, and geological information to possibly obtain a more confident and precise target location.



## **IN-FILL SAMPLE RECOMMENDATIONS FOR SGH ANALYSIS**

- Based on the results of this report and/or other information, the client may decide that infill sampling may be warranted. To obtain the best results from additional sampling for SGH it is recommended that sample locations within, or bordering, the area of interest be re-sampled rather than combining new results with the sample data from the initial survey. Although several SGH surveys have previously been easily and directly, combined without data leveling, it cannot be guaranteed that data leveling will not be required. It has been found that data leveling is more apt to be required should the new samples be collected under significantly different environmental conditions than during the initial sample survey, i.e. summer collection versus winter collection. The process of data leveling adds a minimum of 3 to 5 days of work to conduct the additional data evaluation, develop additional plots of the results, conduct new interpretations, and in additional report descriptions. Results from data leveling is also always considered "an approximation" thus having a lower level of confidence that newly re-sampled locations would have. As of September 2010, an additional cost will be invoiced should data leveling operations be required if the client requests that two SGH data sets be interpreted and reported together. Thus re-sampling locations will provide a faster turnaround time for results and provide more accurate and confident surveys for evaluation and aid in deciding specific drill targets.

## Cautionary Note Regarding Assumptions and Forward Looking Statements

The statements and target rating made in the Soil Gas Hydrocarbon (SGH) interpretive report or in other communications may contain certain forward-looking information related to a target or SGH anomaly.

Statements related to the rating of a target are based on comparison of the SGH signatures derived by Activation Laboratories Ltd. through previous research on known case studies. The rating is not derived from any statistics or other formula. The rating is a subjective value on a scale of 0 to 6 relative to the similarity of the SGH signature reviewed compared to the results of previous scientific research and case studies based on the analysis of surficial samples over known ore bodies. No information on other geochemistries, geophysics, or geology is usually available as additional information for the interpretation and assignment of a rating value unless otherwise stated. The rating does not imply ore grade and is not to be used in mineral resource estimate calculations. References to the rating should be viewed as forward-looking statements to the extent that it involves a subjective comparison to known SGH case studies. As with other geochemistries, the implied rating and anticipated target characteristics may be different than that actually encountered if the target is drilled or the property developed.

Activation Laboratories Ltd. may also make a scientifically based reference in this interpretive report to an area that might be used as a drill target. Usually the nearest sample is identified as an approximation to a "possible drill target" location. This is based only on SGH results and is to be regarded as a guide based on the current state of this science.

Unless stated, Activation Laboratories Ltd. has not physically observed the exploration site and has no prior knowledge of any site description or details. Actlabs makes general recommendations for sampling and shipping of samples. Unless stated, the laboratory does not witness sampling, does not take into consideration the specific sampling procedures used, season, handling, packaging, or shipping methods. The majority of the time, Activation Laboratories Ltd. has had no input into sampling survey design. Where specified Activation Laboratories Ltd. may not have conducted sample preparation procedures as it may have been conducted at the client's assigned laboratory. Although the Company has attempted to identify important factors that could cause actual actions, events or results to differ scientifically which may impact the associated interpretation and target rating from those described in forward-looking statements, there may be other factors that cause actions, events or results not to be as anticipated, estimated or intended.

In general, any statements that express or involve discussions with respect to predictions, expectations, beliefs, plans, projections, objectives, assumptions, future events or performance are not statements of historical fact. These "scientifically based educated theories" should be viewed as "forward-looking statements".

Readers of this interpretive report are cautioned not to place undue reliance on forward-looking information. Forward looking statements are made based on scientific beliefs, estimates and opinions on the date the statements are made and the interpretive report issued. The Company undertakes no obligation to update forward-looking statements or otherwise revise previous reports if these beliefs, estimates and opinions, future scientific developments, other new information, or other circumstances should change that may affect the analytical results, rating, or interpretation.

Actlabs nor its employees shall be liable for any claims or damages as a result of this report,  
any interpretation, omissions in preparation, or in the test conducted.  
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Date Submitted: July 21, 2010

Date Analyzed: August 17, 2010  
Data Processed: August 27, 2010

Interpretation Report: October 7, 2010

## Excalibur Resources Ltd.

Excalibur Resources Ltd.,  
20 Adelaide St. E., Suite 400,  
Toronto, Ontario, Canada. M5C 2T6

Attention: Dr. Jim Kendall, President & CEO

RE: Your Reference: Sturgeon Lake Survey – Lines 3-7, 10-14, 16, 18

## CERTIFICATE OF ANALYSIS

259 Soil samples were submitted for analysis via the Actlabs Thunder Bay facility.

These samples were prepared according to our Code S4 procedure.

The following analytical package was requested: Code SGH – Soil Gas Hydrocarbon Geochemistry

REPORT/WORKORDER: A10-4206

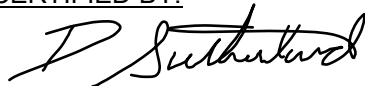
This report may be reproduced without our consent. If only selected portions of the report are reproduced, permission must be obtained. If no instructions were given at the time of sample submittal regarding excess material, it will be discarded within 90 days of this report. Our liability is limited solely to the analytical cost of these analyses. Test results are representative only of the material submitted for analysis.

### Notes:

The SGH – Soil Gas Hydrocarbon Geochemistry is a semi-quantitative analytical procedure to detect and measure 162 hydrocarbon compounds as the organic signature in the sample material collected from a survey area. It is not an assay of mineralization but is a predictive geochemical tool used for exploration. This certificate pertains only to the SGH data presented in the associated Microsoft Excel spreadsheet of results.

The author of this SGH Interpretation Report, Mr. Dale Sutherland, is the creator of the SGH organic geochemistry. He is a Chartered Chemist (C.Chem.) and Forensic Scientist specializing in organic chemistry. He is not a professional geologist or geochemist.

CERTIFIED BY:



Dale Sutherland, B.Sc., B.Sc., B.Ed., C.Chem.  
Forensic Scientist, Organics Manager,  
Director of Research  
Activation Laboratories Ltd.



**SGH – SOIL GAS HYDROCARBON  
Predictive Geochemistry**

*for*

***EXCALIBUR RESOURCES LTD.  
"STURGEON LAKE SURVEY"  
"LINES 19-23"***

*October 6, 2010*

*\* Dale Sutherland, Eric Hoffman*

*Activation Laboratories Ltd*

(\* - author)

**EVALUATION OF SGH "SOIL SAMPLE" DATA**

**EXPLORATION FOR: "VMS" TARGETS**

***Workorder: A10-3506 / A10-3543 / A10-4206***

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## **SOIL GAS HYDROCARBON (SGH) GEOCHEMISTRY - OVERVIEW**

SGH is a deep penetrating geochemistry that involves the analysis of surficial samples from over potential mineral or petroleum targets. The analysis involves the testing for 162 hydrocarbon compounds in the C5-C17 carbon series range applicable to a wide variety of sample types. SGH has been successful for delineating targets found at over 500 metres in depth. Samples of various media have been successfully analyzed such as soil (any horizon), drill core, rock, peat, lake-bottom sediments and even snow. The SGH analysis incorporates a very weak leach, essentially aqueous, that only extracts the surficial bound hydrocarbon compounds and those compounds in interstitial spaces around the sample particles. These are the hydrocarbons that have been mobilized from the target depth. SGH is unique and should not be confused with other hydrocarbon tests or traditional analyses that measure C1 (Methane) to C5 (Pentane) or other gases. SGH is also different from soil hydrocarbon tests that thermally extract or desorb all of the hydrocarbons from the whole soil sample. This test is less specific as it does not separate the hydrocarbons and thus does not identify or measure the responses as precisely. These tests also do not use a forensic approach to identification. The hydrocarbons in the SGH extract are separated by high resolution capillary column gas chromatography to isolate, confirm, and measure the presence of only the individual hydrocarbons that have been found to be of interest from initial research and development and from performance testing in two Canadian Mining Industry Research Organization (CAMIRO) projects (97E04 and 01E02).

Over the past 14 years of research, Activation Laboratories Ltd. has developed an in-depth understanding of the unique SGH signatures associated with different commodity targets. Using a forensic approach we have developed target signatures or templates for identification, and the understanding of the expected geochromatography that is exhibited by each class of SGH compounds. In 2004 we began to include an SGH interpretation report delivered with the data to enable our clients to realize the complete value and understanding of the SGH results in the shortest time frame and provide the benefit from past research sponsored by Actlabs, CAMIRO, OMET and other projects.

SGH has attracted the attention of a large number of Exploration companies. In the above mentioned research projects the sponsors have included (in no order): Western Mining Corporation, BHP-Billiton, Inco, Noranda, Outokumpu, Xstrata, Cameco, Cominco, Rio Algom, Alberta Geological Survey, Ontario Geological Survey, Manitoba Geological Survey and OMET. Further, beyond this research, Activation Laboratories Ltd. has interpreted the SGH data for over 400 targets from clients since January of 2004. In both CAMIRO research projects over known mineralization and in exploration projects over unknown targets, SGH has performed exceptionally well. As an example, in the first CAMIRO research project that commenced in 1997 (Project 97E04), there were 10 study areas that were submitted blindly to Actlabs. These study sites were selected since other inorganic geochemistries were unsuccessful at illustrating anomalies related to the target.

## **SOIL GAS HYDROCARBONS (SGH) GEOCHEMISTRY – OVERVIEW**

Although Actlabs was only provided with the samples and their coordinates, SGH was able to locate the blind mineralization with exceptional accuracy in 9 of the 10 surveys. SGH has recently been very successful in exploration and discovery of unknown targets e.g. Golden Band Resources drilled an SGH anomaly and discovered a significant vein containing “visible” gold. ([www.goldenbandresources.com](http://www.goldenbandresources.com))

**Sample Type and Survey Design:** It is highly recommended that a *minimum* of 50 sample “locations” is preferred to obtain enough samples into background areas on both sides of small suspected targets (wet gas plays, Kimberlite pipes, Uranium Breccia pipes, veins, etc.). SGH is not interpreted in the same way as inorganic based geochemistries. SGH must have enough samples over both the target and background areas in order to fully study the dispersion patterns or geochromatography of the SGH classes of compounds. Based on our minimum recommendation of at least 50 sample locations we further suggest that all samples be evenly spaced with about one-third of the samples over the target and one-third on each side of the target in order for SGH to be used for exploration. Targets other than gas plays, pipes, dykes or veins usually require additional samples to represent both the target and background areas.

SGH has been shown to be very robust to the use of different sample types even “within” the same survey or transect. Research has illustrated that it is far more important to the ultimate interpretation of the results to take a complete sample transect or grid than to skip samples due to different sample media. The most ideal natural sample is still believed to be soil from the “Upper B-Horizon”, however excellent results can also be obtained from other soil horizons, humus, peat, lake-bottom sediments, and even snow. The sampling design is suggested to use evenly spaced samples from 15 metres to 200 metres and line spacing from 50 metres to 500 metres depending on the size and type of target. A 4:1 ratio is suggested, however, larger orientation surveys have also been successful. Ideally even large grids should have one-third of the samples over the target and two-thirds of the samples into anticipated background areas. This will allow the proper assessment of the SGH geochromatographic vectoring and background site signature levels with minimal bias. Individual samples taken at significant distances from the main survey area to represent background are not of value in the SGH interpretation as SGH results are not background subtracted. Samples can be drip dried in the field and do not need special preservation for shipping and has been specifically designed to avoid common contaminants from sample handling and shipping. SGH has also been shown to be robust to cultural activities even to the point that successful results and interpretation has been obtained from roadside right-of-ways.

## **SOIL GAS HYDROCARBONS (SGH) GEOCHEMISTRY – OVERVIEW**

**Sample Preparation and Analysis:** Upon receipt at Activation Laboratories the samples are air-dried in isolated and dedicated environmentally controlled rooms set to 40°C. The dried samples are then sieved. In the sieving process, it is important that compressed air is not used to clean the sieves between samples as trace amounts of compressor oils "may" poison the samples and significantly affect some target signatures. At Activation Laboratories a vacuum is used to clean the sieve between each sample. The -60 mesh sieve fraction (<250 microns, although different mesh sizes can be used at the preference of the exploration geologist) is collected and packaged in a Kraft paper envelope and transported from our sample preparation building to our analytical building on the same street in Ancaster Ontario. Each sample is then extracted, separated by gas chromatography and analyzed by mass spectrometry using customized parameters enabling the highly specific detection of the 162 targeted hydrocarbons at a reporting limit of one part-per-trillion (ppt). This trace level limit of reporting is critical to the detection of these hydrocarbons that, through research, have been found to be related at least in part to the breakdown and release of hydrocarbons from the death phase of microbes directly interacting with a deposit at depth. The hydrocarbon signatures are directly linked to the deposit type which is used as a food source. The hydrocarbons that are mobilized and metabolized by the microbes are released in the death phase of each successive generation. Very few of the hydrocarbons measured are actually due to microbe cell structure, or hydrocarbons present or formed in the genesis of the deposit or from anthropogenic contamination. The results of the SGH analysis is reported in raw data form in an Excel spreadsheet as "semi-quantitative" concentrations without any additional statistical modification.

**Mobilized Inorganic Geochemical Anomalies:** It is important to note that SGH is essentially "blind" to any inorganic content in samples as only organic compounds as hydrocarbons are measured. Thus inorganic geochemical surface anomalies that have migrated away from the mineral source, and thus may be interpreted and found to be a false target location, is not detected and does not affect SGH results. This fact is of great advantage when comparing the SGH results to inorganic geochemical results. If there is agreement in the location of the anomalies between the organic and inorganic technique, such as Actlabs' Enzyme Leach, a significant increase in confidence in the target location can be realized. If there is no agreement or a shift in the location of the anomalies between the techniques, the inorganic anomaly may have been mobilized in the surficial environment.

**The Nugget Effect:** As SGH is "blind" to the inorganic content in the survey samples, any concern of a "nugget effect" will not be encountered with SGH data. A "nugget effect" may be of a concern for inorganic geochemistries from surveys over copper, gold, lead, nickel, etc. type targets.



## **SOIL GAS HYDROCARBONS (SGH) GEOCHEMISTRY – OVERVIEW**

**SGH Interpretation Report:** All SGH submissions must be accompanied by relative or UTM coordinates so that we may ensure that the sample survey design is appropriate for use with SGH, and to provide an SGH interpretation with the results. In our interpretation procedure, we separate the results into 19 SGH sub-classes. These classes include specific alkanes, alkenes, thiophenes, aromatic, and polyaromatic compounds. Note that none of the SGH hydrocarbons are “gaseous” at room temperature and pressure. The classes are then evaluated in terms of their geochromatography and for coincident compound class anomalies that are unique to different types of mineralization. Actlabs uses a six point scale in assigning a subjective rating of similarity of the SGH signatures found in the submitted survey to signatures previously reviewed and researched from known case studies over the same commodity type. Also factored into this rating is the appropriateness of the survey and amount of data/sample locations that is available for interpretation. This rating scale is described in detail in the following section.

## **SGH RATING SYSTEM - DESCRIPTION**

To date SGH has been found to be successful in the depiction of buried mineralization for Gold, Nickel, VMS, SEDEX, Uranium, Polymetallic, and Copper, as well as for Kimberlites. SGH data has developed into a dual exploration tool. From the interpretation, a vertical projection of the predicted location of the target can be made as well as a statement on the rating of the comparability of the identification of the anticipated target type to that from known case studies, e.g. if the client anticipates the target to be a Gold deposit, what is the rating or comparability that the target is similar to the SGH results over a Gold deposit in Nunavut, shear hosted and sediment hosted deposits in Nevada, or Paleochannel Gold mineralization in Western Australia.

- A rating of “6” is the highest or best rating, and means that the SGH classes most important to describing a Gold related hydrocarbon signature are all present and consistently vector to the same location with well defined anomalies. To obtain this rating there also needs to be other SGH classes that when mapped lend support to the predicted location.
- A rating of “5” means that the SGH classes most important to describing a Gold signature are all present and consistently describe the same location with well defined anomalies. The SGH signatures may not be strong enough to also develop additional supporting classes.
- A rating of “4” means that the SGH classes most important to describing a Gold signature are mostly present describing the location with well defined anomalies. Supporting classes may also be present.

## **SGH RATING SYSTEM - DESCRIPTION** (continued)

- A rating of "3" means that the SGH classes most important to describing a Gold signature are mostly present and describe the same location with fairly well defined anomalies. Some supporting classes may or may not be present.
- A rating of "2" means that some of the SGH classes most important to describing a Gold signature are present but a predicted location is difficult to determine. Some supporting classes may be present
- A rating of "1" is the lowest rating, and means that one of the SGH classes most important to describing a Gold signature is present but a predicted location is difficult to determine. Supporting classes are also not helpful.
- The SGH rating is directly and significantly affected by the survey design. Small data sets, especially if significantly <50 sample locations, or transects/surveys that are geographically too short will automatically receive a lower rating no matter how impressive an SGH anomaly might be. When there is not enough sample locations to adequately review the SGH class geochromatography, or when the sample spacing is inadequate, or if the spacing is highly variable such that it biases the interpretation of the results, then the confidence in the interpretation of any geochemistry is adversely affected. The SGH rating is not just a rating of the agreement between the SGH pathfinder classes for a particular target type; it is a rating of the overall confidence in the SGH results from this particular survey. The interpretation is only based on the SGH results without any information from other geochemical, geological or geophysical information unless otherwise specified.

## **SGH RATING SYSTEM – HISTORY & UNDERSTANDING**

The subjective SGH rating system has been used since 2004 when Activation Laboratories started providing an SGH Interpretation Report with every submission for SGH analysis to aid our clients in understanding this organic geochemistry and ensuring that they obtain the best results for their surveys. As explained in the previous section, the SGH rating is not just a rating of how definitive an SGH anomaly is, and is not based just on the map(s) provided in this report. It is a rating of "confidence in the interpreted anomaly" from the combination of (i) are the expected SGH Pathfinder Classes of compounds present from the template for this target type (one Pathfinder Class map is shown in the report, at least three must be present to adequately describe the correct signature for a particular target), (ii) how well do these SGH Pathfinder Classes agree in describing an particular area, (iii) how well does this agreement compare to SGH case studies over known targets of that type, (iv) how well is the interpreted anomaly defined by the survey (i.e. a single

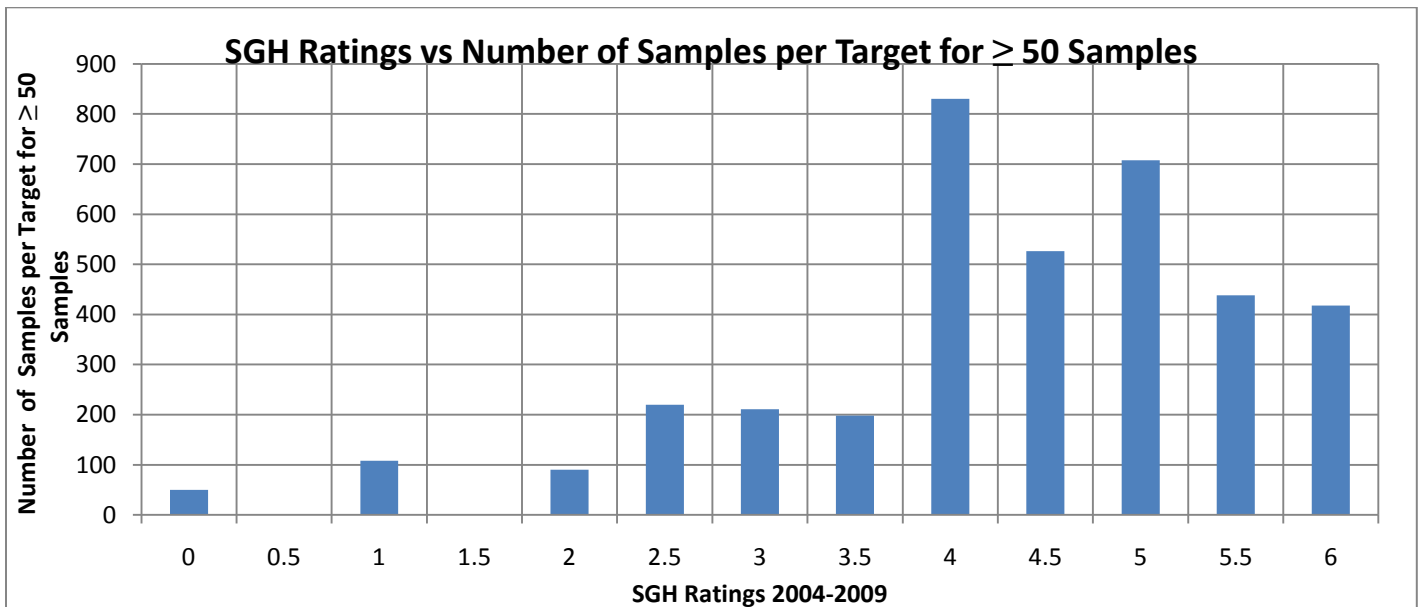
## **SGH RATING SYSTEM – HISTORY & UNDERSTANDING (cont.)**

transect does not provide the same confidence as a complete grid of samples), and (v) is there at least a minimum of 50 sample locations in the survey so that there may be an adequate amount of data to observe the geochromatography of the different SGH Pathfinder Class of compounds.

The question often arises by clients as to the frequency of a rating, e.g. “how often is a rating of 5.0 given in an interpretation”. To better understand this we present this review of the history of the SGH rating program since 2004 and some of the underlying situations that can affect the historical rating charts.

Originally it was recommended that a minimum of 35 sample location be used for small target exploration, however it was quite quickly realized that this is often insufficient and at least 50 sample locations were required. In 2007, the rating scale was refined to include increments of 0.5 units rather than just integer values from 0 to 6.

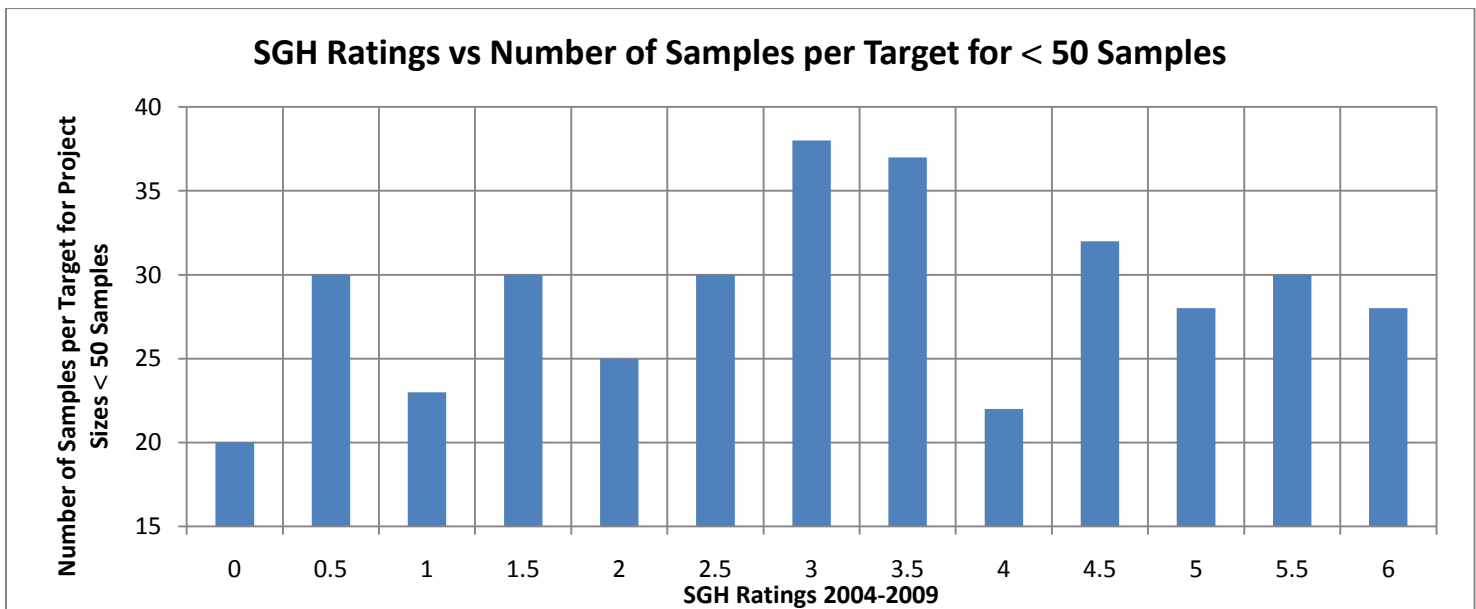
A rating frequency may be biased high as most clients conduct an orientation study over a known target, thus several of these projects result in high ratings. Note that, at this time, the rating is not said to be linked to grade of a deposit or depth to the target. Even in exploration surveys clients tend to submit samples over more promising targets due to knowledge of the geology and prior geochemical or geophysical results. As shown in the following chart, projects with SGH data from 200 or more sample locations have a higher level of confidence in the interpretation as the geochromatography of the SGH Pathfinder Classes of compounds can be more completely observed and reviewed.



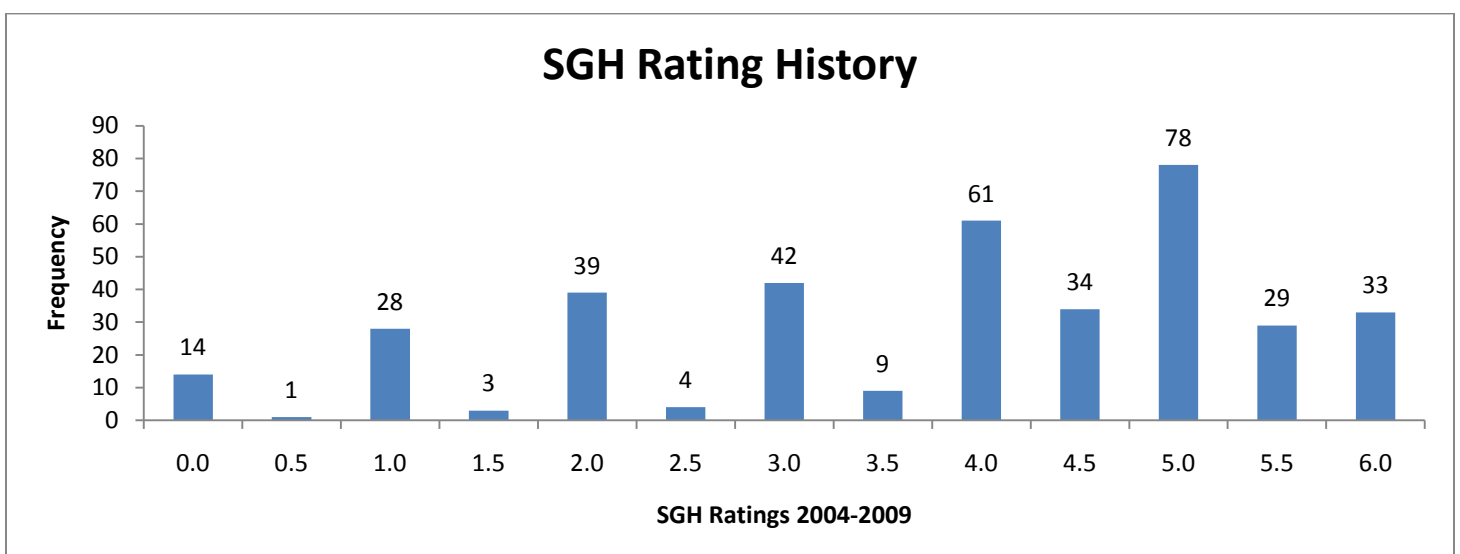


## **SGH RATING SYSTEM – HISTORY & UNDERSTANDING (cont.)**

The rating frequency may be biased low as research projects often include a bare minimum of samples to reduce costs. Research projects may also be over targets known to be difficult to depict with geochemistry. Multiple targets in close vicinity in a survey may result in a low bias as the Pathfinder Class geochromatography is more difficult to deconvolute. Ratings may also be biased low if less than the recommended 50 sample locations is submitted as indicated by the following chart. This chart also illustrates that there is no interpretation bias to a particular rating value.



The overall rating frequency for over 400 targets from January 2004 to December 2009 is shown in the chart below illustrating that surveys over more promising targets are most often submitted for best use of research or exploration dollars. It also indicates that the 0.5 increments were less frequent as they started in 2007.



## **SGH DATA QUALITY**

- **Reporting Limit:** The SGH Excel spreadsheet of results contains the raw unaltered concentrations of the individual SGH compounds in units of "part-per-trillion" (ppt). The reporting of these ultra low levels is vital to the measurement of the small amounts of hydrocarbons now known to be leached/metabolized and subsequently released by dead bacteria that have been interacting with the ore at depth. To ensure that the data has a high level of confidence, a "reporting limit" is used. The reporting limit of 1 ppt actually represents a level of confidence of approximately 5 standard deviations where SGH data is assured to be "real" and non-zero. Thus in SGH the use of a reporting limit automatically removes site variability and there is no need to further background subtract any data as the reporting limit has already filtered out any site background effects. Thus we recommend that all data that is equal to or greater than 2 ppt should be used in any data review. It is important to review all SGH data as low values that may be the centre of halo anomalies and higher values as apical anomalies or as halo ridges are all important.
- **Laboratory Replicate Analysis:** A laboratory replicate is a sample taken randomly from the submitted survey being analyzed and are not unrelated samples taken from some large stockpile of bulk material. In the Organics laboratory an equal portion of this sieved sample, or pulp, is taken and analyzed in the same manner using the Gas Chromatography/Mass Spectrometer. The comparison of laboratory replicate and field duplicate results for chemical tests in the parts-per-million or even parts-per-billion range has typically been done using an absolute "relative percent difference (RPD)" statistic which is an easy proxy for error estimation rather than a more complete analysis of precision as specified by Thompson and Howarth. An RPD statistic is not appropriate for SGH results as the reporting limit for SGH is 1 part-per-trillion. Further, SGH is a semi-quantitative technique and was not designed to have the same level of precision as other less sensitive geochemistry's as it is only used as an exploration tool and not for any assay work. SGH is also designed to cover a wide range of organic compounds with an unprecedented 162 compounds being measured for each sample. In order to analyze such a wide molecular weight range of compounds, sacrifices were made to the variability especially in the low molecular weight range of the SGH analysis. The result is that the first fifteen SGH compounds in the Excel spreadsheet is expected to exhibit more imprecision than the other 147 compounds. An SGH laboratory replicate is a large set of data for comparison even for just a few pairs of analyses. Precision calculations using a Thompson and Howarth approach should only be used for estimating error in individual measurements, and not for describing the average error in a larger data set. In geochemical exploration geochemists seek concentration patterns to interpret and thus rigorous precision in individual samples is not required because the concentrations of many samples are interpreted collectively. For these reasons recent and independent research at Acadia

## **SGH DATA QUALITY** (continued)

University in Canada promote that a percent Coefficient of Variation (%CV) should be used as a universal measurement of relative error in all geochemical applications. As SGH results are a relatively large data set for nearly all submissions, %CV is a better statistic for use with SGH. By using %CV, the concentration of duplicate pairs is irrelevant because the units of concentration cancel out in the formation of the coefficient of variation ratio. For SGH, the %CV is calculated on all values  $\geq 2$  ppt. These values are averaged and represent a value for each pair of replicate analysis of the sample. All of the %CV values for the replicates are then averaged to report one %CV value to represent the overall estimate of the relative error in the laboratory sub-sampling from the prepared samples, and any instrumental variability, in the SGH data set for the survey. Actlabs' has successfully addressed the analytical challenge to minimize analytical variability for such a large list of compounds. Thus as SGH is also interpreted as a signature and is solely used for exploration and not assay measurement, the data from SGH is "**fit for purpose**" as a geochemical exploration tool.

- **Historical SGH Precision:** In the general history of geochemistry, studies indicate that a large component of total measurement error is introduced during the collection of the initial sample and in sub-sampling, and that only a subordinate amount of error in the result is introduced during preparation and analysis. A historical record encompassing many projects for SGH, including a wide variety of sample types, geology and geography, shows that the consistency and precision for the analysis of SGH is excellent with an overall precision of 6.8% Coefficient of Variation (%CV). When last calculated, this number has a range having a maximum of 12.4% CV, a minimum of 3.0% CV, with a standard deviation of 1.6%, in a population made up of over 400 targets (over 45,000 samples) interpreted since June of 2004. Again the precision of 6.8% CV included all of the sample types as soil from different horizons, peat, till, humus, lake-bottom sediments, ocean-bottom sediments, and even snow. When field duplicates have been revealed to us, we have found that the precision of the field duplicates are in the range of about 9 to 12 %CV. As SGH is interpreted using a combination of compounds as a chemical "class" or signature, the affect of a few concentrations that may be imprecise in a direct comparison of duplicates is not significant. Further, projects that have been re-sampled at different times or seasons are expected to have different SGH concentrations. The SGH anomalies may not be in exactly the same position or of the same intensity due to variable conditions that may have affected the dispersion of different pathfinder classes. However, the SGH "signature" as to the presence of the specific mix of SGH pathfinder classes will definitely still exist, and will retain the ability to identify the deposit type and vector to the same target location.

- **LABORATORY MATERIALS BLANK – QUALITY ASSURANCE (LMB-QA):**

The Laboratory Materials Blank Quality Assurance measurements (LMB-QA) shown in the SGH spreadsheet of results are matrix free blanks analyzed for SGH. These blanks are not standard laboratory blanks as they do not accurately reflect an amount expected to be from laboratory handling or laboratory conditions that may be present and affect the sample analysis result. The LMB-QA measurements are a pre-warning system to only detect any contamination originating from laboratory glassware, vials or caps. As there is no substrate to emulate the sample matrix, the full solvating power of the SGH leaching solution, effectively a water leach, is fully directed at the small surface area of the glassware, vials or caps. In a sample analysis the solvating power of the SGH leaching solution is distributed between the large sample surface area (from soil, humus, sediments, peat, till, etc.) and the relatively small contribution from the laboratory materials surfaces. The sample matrix also buffers the solvating or leaching effect in the sample versus the more vigorous leaching of the laboratory materials which do not experience this buffering effect. Thus the level of the LMB-QA reported is biased high relative to the sample concentration and the actual contribution of the laboratory reagents, equipment, handling, etc. to the values in samples is significantly lower. This situation in organic laboratory analysis only occurs at such extremely low part-per-trillion (ppt) measurement levels. This is one of the reasons that SGH uses a reporting limit and not a detection limit. The 1 ppt reporting limit used in the SGH spreadsheet of raw concentration data is 3 to 5 times greater than a detection limit. The reporting limit automatically filters out analytical noise, the actual LMB-QA, and most of the sample survey site background. This has been proven as SGH values of 1 to 3 parts-per-trillion (ppt) have very often illustrated the outline of anomalies directly related to mineral targets. Thus all SGH values greater than or equal to 1 or 2 ppt should be used as reliable values for interpretations.

The LMB-QA values thus should not be used to background subtract any SGH data. The LMB-QA values are only an early warning as a quality assurance procedure to indicate the relative cleanliness of laboratory glassware, vials, caps, and the laboratory water supply at the ppt concentration level. Do not subtract the LMB-QA values from SGH sample data.

## **SGH DATA INTERPRETATION**

- **GEOCHEMICAL ANOMALY THRESHOLD VALUE:**

In the interpretation of "inorganic" geochemical data one of the determinations to be made is to calculate a "Threshold" value above which data is considered anomalous. This is done on an element by element basis. In the interpretation of this "organic" geochemical data this determination is done differently. The determination of a threshold value is not calculated for each hydrocarbon compound. The determination of a threshold value is also a concentration below which geochemical data is considered as "noise" for the purposes of geochemical interpretation. As discussed on page 10, SGH uses a "Reporting Limit" instead of some type of Detection Limit. The amount of noise that is already eliminated in the data, as below the Reporting Limit of 1 part-per-trillion (shown in the data spreadsheet as "-1" as "not-detected at a Reporting Limit of 1 ppt") is equivalent to approximately 5 standard deviations of variability. To thus calculate an additional Threshold Value is a loss of real and valuable data. Further, in the interpretation of SGH data, individual compounds are not considered (unless explicitly mentioned in the report). The interpretation of SGH data is exclusively conducted by "compound chemical class" which is the sum of four to fourteen individual hydrocarbons in the same organic chemical class as these compounds naturally have the same chemical properties that ultimately define their spatial dispersion characteristics in their rise from a mineral target through the overburden. This combined class is more reliable than the measurement of any one compound. SGH also eliminates the need for a Threshold value determination above the Reporting Limit due to the "high specificity" of the specific hydrocarbons and the classes they form. Each of the hydrocarbons has been hand selected due to their lower probability of being found in general surface soils. Further, only those classes where the majority of the compounds are detected above the Reporting Limit are considered in the interpretation. This defines the SGH geochemistry as having less geochemical noise due to the use of a reporting limit and as having higher confidence in the use of groups (classes) of data instead of individual compounds. However the most important aspect of interpretation is the use of a forensic signature. At least three specific "Pathfinder" classes, based on the combinations or template of classes we have developed, must be present to define the hydrocarbon signature to confidently predict the presence of a specific type of mineral target. Do not calculate another Threshold value. **FACT:** It has been proven many times that important chemical anomalies can exist even at 5 ppt.

- **SGH PATHFINDER CLASS MAGNITUDE:**

The magnitude of any individual concentration or that of a hydrocarbon class does not imply that the data is of more importance or that mineralization is of higher quantity or grade. SGH interpretation must use the review of the combination of specific hydrocarbon classes to make any interpretation.



## **SGH DATA INTERPRETATION** (continued)

- **SGH DATA LEVELING:**

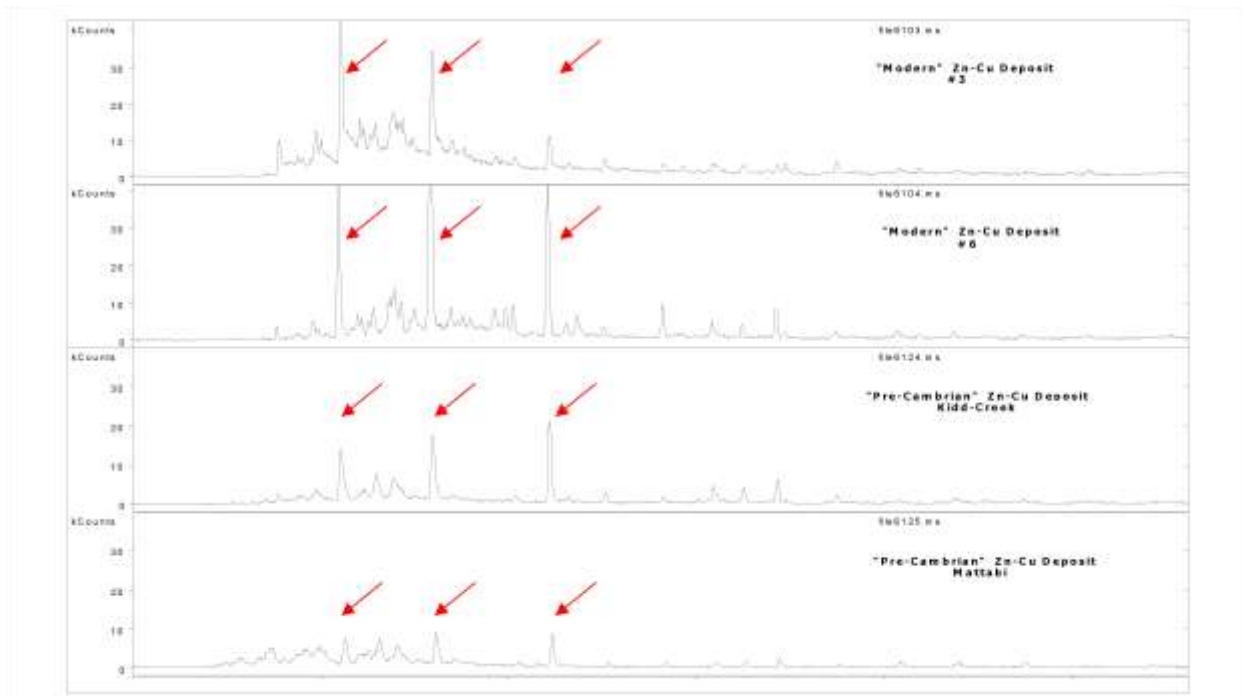
The combination of SGH data from different field sampling events has rarely required leveling in order to combine survey grids. The only circumstances that have occasionally required leveling has been the combination of samples that are very fine in texture, thus having a combined large surface area to samples of peat that may be in nearby areas. Even after maceration of the peat and in using the maximum size of sample amenable to this test method, peat samples have a significantly lower surface area. Peat samples have only required leveling in one survey in the last 500 SGH interpretations.

In only the last year it has been observed that SGH data **may** require leveling when different field sampling events have significantly different soil temperature. It has been documented that only when "soil" samples are taken from "frozen" ground that data leveling may be required as frozen sample act as a frozen cap to the hydrocarbon flux and may collect a higher concentration of hydrocarbon compounds compared to sampling during seasons where the samples are not frozen. Only two surveys have required leveling in the last 500 SGH interpretations.

The author has taken introductory training in the leveling of geochemical data. If leveling is required, both data sets are reviewed in terms of maximum, minimum and average values for each SGH Pathfinder Class intended for use in the interpretation. Data is sectioned into quartiles and each section is assigned specific leveling factors that is then applied to one data set. It should be noted that any type of data leveling is an approximation.

## **SGH – FORENSIC GEOCHEMICAL SIGNATURES**

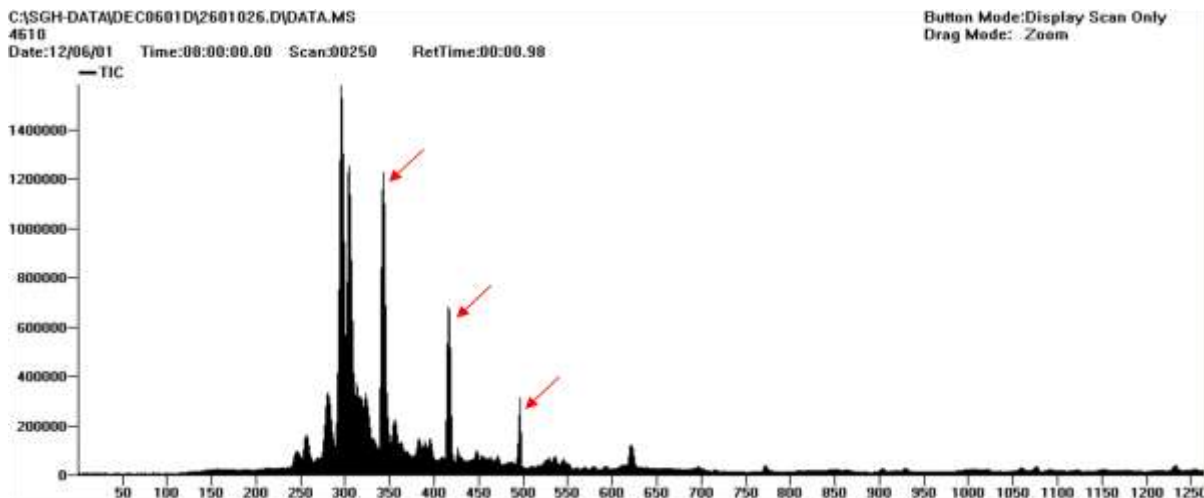
- One of the first experiments in 1996 in the development of the SGH analysis was to observe if an SGH response could be obtained directly from an ore sample. From office shelf specimens, small rock chips were obtained which were then crushed and milled. The fine pulp obtained was then subjected to the SGH analysis. These shelf specimen samples were from well known Volcanic Massive Sulphide deposits of the Mattabi deposit from the Archean Sturgeon Lake Camp in Northwestern Ontario and from the Kidd Creek Archean volcanic-hosted copper-zinc deposit. Even these specimen samples contain a geochemical record of the hydrocarbons produced by the bacteria that had been feeding on these deposits at depth. As a comparison, SGH analysis were similarly conducted on modern-day VMS ore samples taken from a “black smoker” hydrothermal volcanic vent from the deep sea bed of the Juan de Fuca Ridge where high concentrations of microbial growth was also known to exist. The raw data profiles as GC/MS Total Ion Chromatograms are shown below to illustrate the “visible” portion of the VMS signature obtained from the SGH analysis.



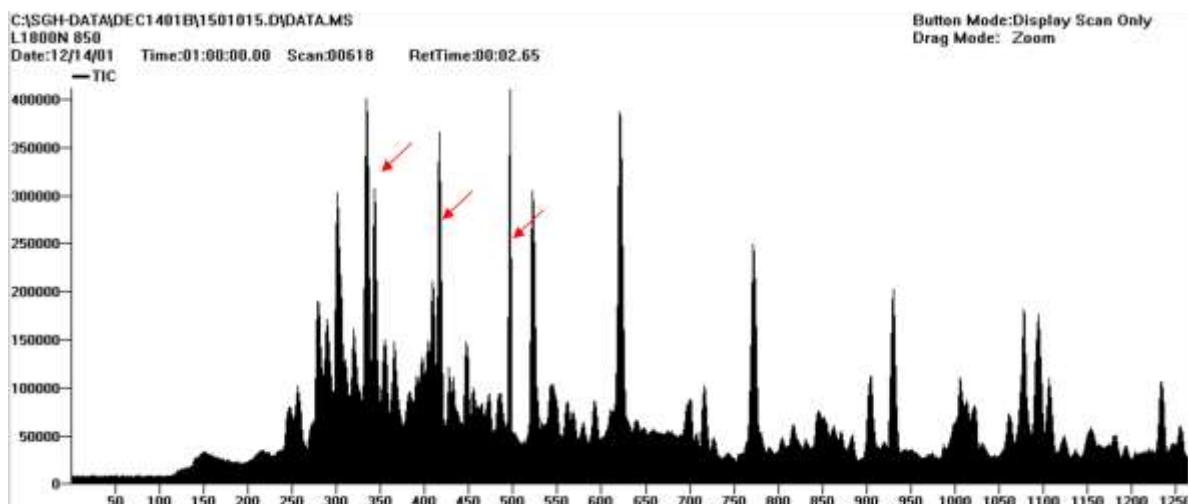
The top two profiles were obtained from two samples of the modern day “black smokers”. The third and fourth chromatograms in the above image were obtained from the Pre-Cambrian Zn-Cu Kidd Creek and Mattabi deposits. The red arrows point to three compounds that are a portion of the SGH signature for VMS type deposits. This visible portion of the VMS signature of hydrocarbons can easily be seen in the analysis of each of these four samples.

## **SGH – FORENSIC GEOCHEMICAL SIGNATURES** (cont.)

The next question in our early objectives was to see if this SGH signature could also be observed in surficial soil samples that had been taken over VMS deposits. Through our research projects, soil samples were obtained from over the Ruttan Cu-Zn VMS deposit near Leaf Rapids, Manitoba and located in the Paleoproterozoic Rusty Lake greenstone belt. The profile obtained, as observed in the raw GC/MS chromatogram, is shown in this next image below:



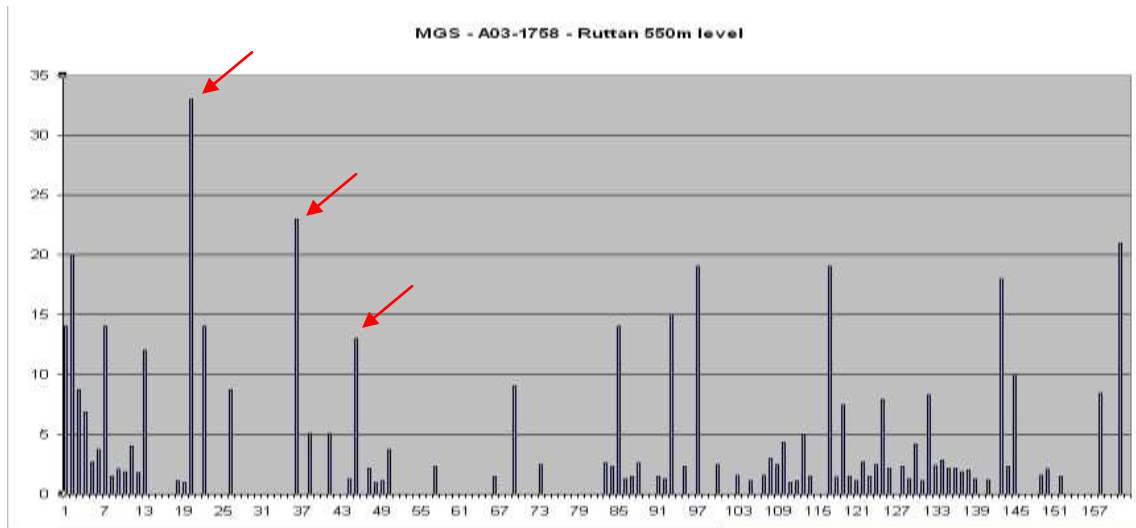
The three compounds indicated by the red arrows represent the same visible portion of the VMS signature observed from the modern day black smoker samples and the ore samples taken from the Mattabi and Kidd Creek, even though this soil was taken from over a different VMS deposit in a geographically different area. Is this coincidence? Another soil sample was obtained from Noranda's Gilmour South base-metal occurrence in the Bathurst Mining camp in northern New Brunswick. As shown below, this sample contained a very complex SGH signature, however the visible portion of the VMS signature as indicated by the red arrows is still observed as in the black smoker, Mattabi and Kidd Creek ore samples.



## **SGH – FORENSIC GEOCHEMICAL SIGNATURES** (cont.)

In research conducted by the Ontario Geological Survey, this same portion of the SGH signature was also observed over the VMS deposit at Cross Lake in Ontario. Note that the visible signature shown as the three compounds indicated by the red arrows is only a small portion of the complete SGH VMS signature. The full VMS signature is made up of at least three groups, as three organic chemical classes, that together contain at least 35 of the individual SGH hydrocarbons.

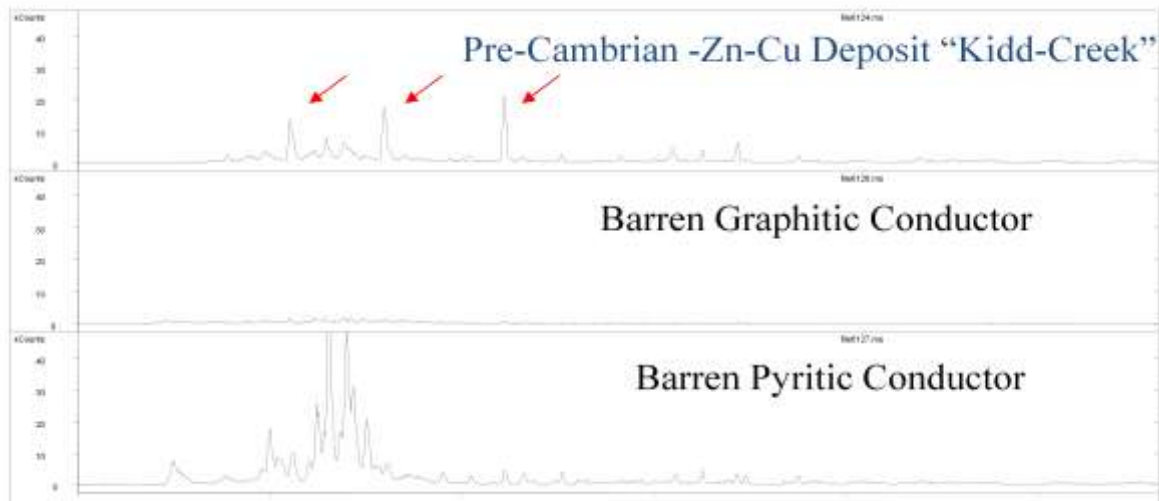
The chromatograms shown on the preceding page from the GC/MS analysis are not used directly in the interpretation of SGH data. As we are only interested in a specific list of 162 hydrocarbons, the mass spectrometer and associated software programs specifically identifies the hydrocarbons of interest, runs calculations using relative responses to a short list of hydrocarbons used as standards, and develops an Excel spreadsheet of semi-quantitative concentration data to represent the sample. Thus the SGH results for a sample, like that observed in ore from the Ruttan, are filtered to obtain the concentrations for the specific 162 hydrocarbons. A simple bar graph drawn from the Excel spreadsheet of the hydrocarbons and their concentrations results in a DNA like **forensic SGH signature** as shown below. The portion discussed here as the “visible” SGH VMS signature in the GC/MS chromatograms, is again shown by the red arrows.



Through the work done in the SGH CAMIRO research projects, it was observed that the hydrocarbon signature produced by the SGH technique appeared to also be able to be used to differentiate barren from ore-bearing conductors. This was explored further through the submission and analysis of specific specimen samples that represented a barren pyritic conductor and a barren graphitic conductor.

## **SGH – FORENSIC GEOCHEMICAL SIGNATURES** (cont.)

The GC/MS chromatograms from these two specimens are compared to that obtained from the Kidd-Creek ore as shown below. This diagram conclusively shows that the SGH signatures obtained from the two types of barren conductors are completely different than that obtained by SGH over VMS type ore. SGH is thus able to differentiate between ore-bearing conductors and barren conductors as the Forensic SGH Geochemical signature is different.



- SGH has been described by the Ontario Geological Survey of Canada (OGS) as a “REDOX cell locator”. Many SGH surveys for Gold and other mineral targets can result in multiple types of anomalies, depending on the class of SGH compounds, even over the same target and in the same set of samples. Thus “Apical”, “Nested-Halo”, and “Rabbit-Ear” or “Halo” type SGH anomalies are all typically observed from the effect of REDOX cells that have developed over deposits. REDOX cells are also related to the presence of bacteriological activity.
- The VMS template of SGH Pathfinder Classes uses low and medium weight classes of hydrocarbon compounds. Again, at least three Pathfinder Class group maps, associated with the SGH signature for VMS, must be present to begin to be considered for assignment of a good rating. The Pathfinder Class anomalies in these maps must logically concur and support a consistent interpretation in relation to the expected geochromatographic characteristics of the Pathfinder Class, for a specific area. The SGH Pathfinder Class map(s) shown in this report is usually the most diagnostic for the presence of Volcanic Massive Sulphide based mineralization.

## **SGH DATA INTERPRETATION**

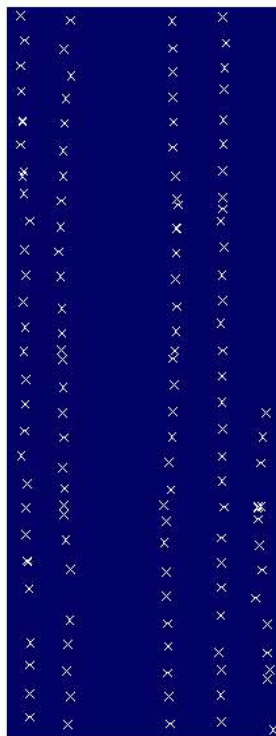
### **DISCLAIMER:**

- This "SGH Interpretation Report" has been prepared to assist the user in understanding the development and capabilities of this Organic based Geochemistry. The interpretation of the Soil Gas Hydrocarbon (SGH) data is in reference to a template or group of SGH classes of compounds specific to a type of mineralization or target that is chosen by the client (i.e. the template for gold, copper, VMS, uranium, etc.). Although the template of SGH Pathfinder Classes that has been developed through research and review of case studies has proven to be able to address many lithologies, Activation Laboratories Ltd. cannot guarantee that the template is applicable to every type of target in every type of environment. The interpretation in this report attempts to identify an anomaly that has the best SGH signature in the survey for the type of mineralization or target chosen by the client. However, this interpretation is not exhaustive and there may be additional SGH anomalies that may warrant interest. It should not be viewed due to the generation of this SGH report, that Activation Laboratories Ltd. has the expertise or is in the business of interpreting geochemical data as a general service. As the author is the originator of the SGH geochemistry, has researched and developed this exploration tool since 1996, and has produced similar interpretations using SGH data for over 500 surveys, he is perhaps the best qualified to prepare this interpretation as assistance to clients wishing to use SGH. Activation Laboratories Ltd. can offer assistance in general suggestions for sampling protocols and in sample grid location design; however we accept no responsibility to the appropriateness of the samples taken. Activation Laboratories Ltd. has made every attempt to ensure the accuracy and reliability of the information provided in this report. Activation Laboratories Ltd. or its employees, does not accept any responsibility or liability for the accuracy, content, completeness, legality, or reliability of the information or description of processes contained in this report. The information is provided "as is" without a guarantee of any kind in the interpretation or use of the results of the SGH geochemistry. The client or user accepts all risks and responsibility for losses, damages, costs and other consequences resulting directly or indirectly from using any information or material contained in this report or using data from the associated spreadsheet of results.

**INTERPRETION OF SGH RESULTS – A10-3206-3543-4206**  
**EXCALIBUR RESOURCES LTD. – STURGEON LAKE SURVEY**

**SGH SURVEY INTERPRETATION – Lines 19-23**

- This report is based on the SGH results from the analysis of a total of 138 soil samples from these submissions for this survey area. This report specifically pertains to just those sample results from Lines 19 through to 23. These five north-south trending transects in the Sturgeon Lake survey area are shown in the map below. The transects are about 100 metres apart with samples spaced at approximately 50 metres. UTM coordinates were provided for mapping of the SGH results for these soil samples. These samples were received by our Thunder Bay lab facility and then shipped to our head Ancaster laboratory where they were subsequently dried and sieved as per the procedure on page 5 of this report.



- The number of samples submitted for this project is adequate to use SGH as an exploration tool for Lines 19 through 23. Note that the SGH data is only reviewed for the particular target deposit type requested, in this case for the presence of a VMS based deposit. It is also assumed that there is only one potential target. To obtain the best interpretation the client should indicate if there are possible multiple targets, say from geophysical data. The possibility of multiple targets in "close proximity" should be known due to potential overlap and increased complexity of resulting geochromatographic anomalies which could alter the interpretation. Based on the size of the narrow targets expected in this Sturgeon Lake project, "close proximity" would mean "within 400 metres".

**INTERPRETION OF SGH RESULTS – A10-3206-3543-4206**  
**EXCALIBUR RESOURCES LTD. – STURGEON LAKE SURVEY**

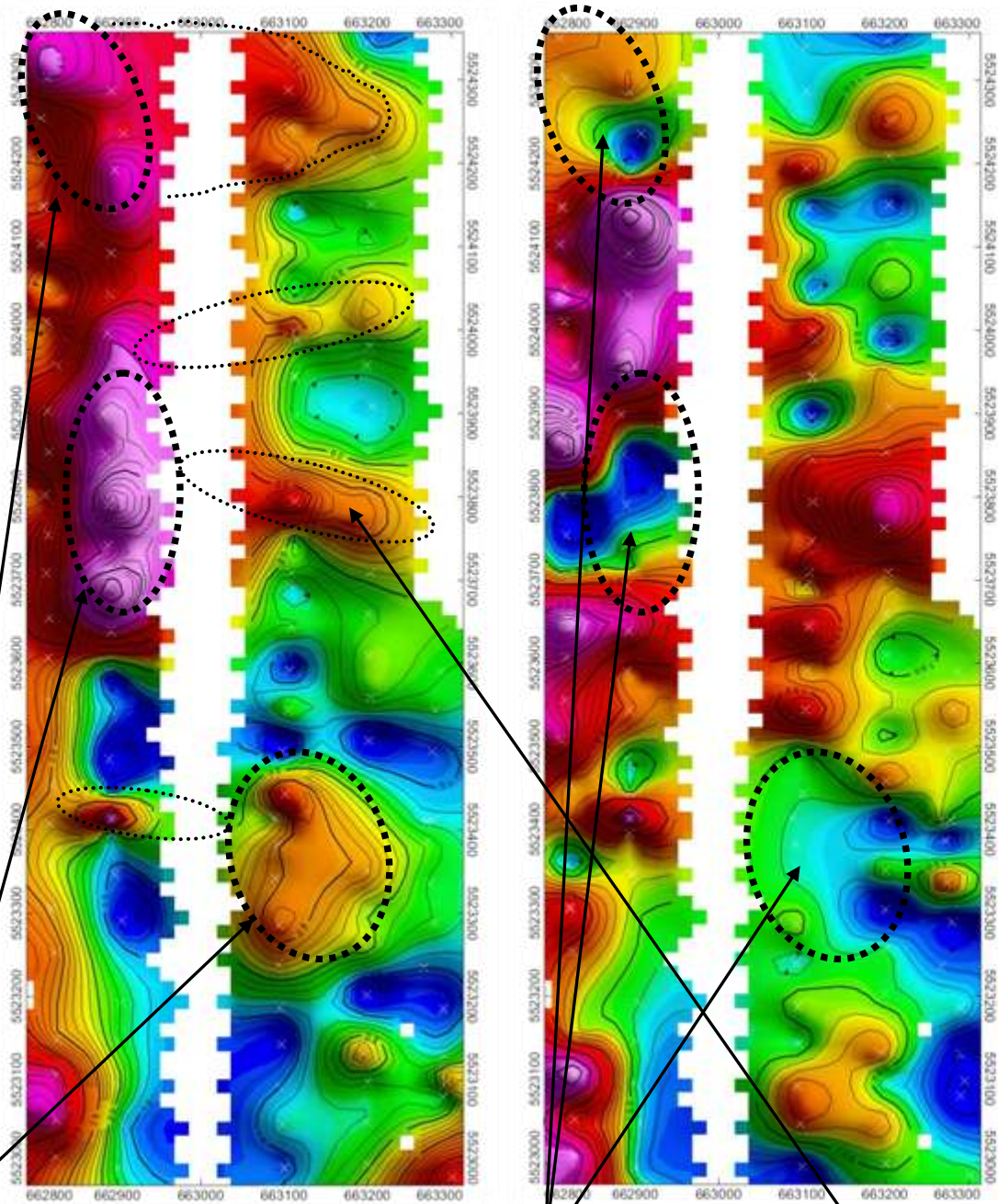
**SGH SURVEY INTERPRETATION – Lines 19-23**

- Note that the associated SGH results are presented in a separate Excel spreadsheet. This raw data is semi-quantitative and is presented in units of pg/g or **parts-per-trillion** (ppt).
- **The overall precision of the SGH analysis for the samples in this SGH survey was excellent** as demonstrated by 10 samples taken from this survey area which were used for laboratory replicate analysis. The average Coefficient of Variation (%CV) of the replicate results for the project samples from lines 19 through 23 was 7.2% which represents an excellent level of analytical performance.
- The plan view maps shown on page 22 (and on page 23 in 3D view) are both SGH “Pathfinder Class map” for targeting VMS mineralization and are the same classes previously used for Lines 39 & 40. Each map represents the simple summation of several individual hydrocarbon compound concentrations that are grouped from within the same organic chemical class. SGH Pathfinder Class maps have been shown to be robust as they are each described using from 4 to 14 (unless otherwise stated) chemically related SGH compounds which are simply summed to create each class map. Thus each map has a higher level of confidence as it is “not” illustrating just one compound response. A legend of the SGH classes appears in the SGH data spreadsheet. The overall SGH interpretation rating (page 24) has even a higher level of confidence as it further relies on the consensus between at least three SGH Pathfinder Classes (other classes not shown) that together make the signature of the target at depth.
- On the left hand SGH Pathfinder Class map on page 22, three dotted black ovals have been applied as the interpretation that outlines areas having an apical response which is expected over VMS mineralization. These same ovals have been applied to the right hand SGH Pathfinder Class map where corresponding halo or low responses are observed, also expected over VMS mineralization. This type of confirmation between these two classes is expected as part of the SGH signature from over VMS type mineralization. This is also very good confirmation of the interpretation of the presence of three REDOX cells which is also often indicative of the presence of buried mineralization and bacteriological activity. Other SGH Pathfinder Class maps (not shown at this price point) also agree on the assignment of the interpretations.
- Four smaller black lightly dotted outlines of zones have been applied to the left hand SGH Pathfinder Class map on page 22. These areas appear to be connected to the adjacent main apical anomaly and are at near right angles to them. These areas might be “mineralized ore shoots”.
- These interpretations are based only on this survey and on these SGH results.



**INTERPRETION OF SGH RESULTS – A10-3206-3543-4206**  
**EXCALIBUR RESOURCES LTD. – STURGEON LAKE SURVEY**

**SGH "VMS" PATHFINDER CLASS MAPS – Lines 19-23**



APICAL ANOMALIES OF REDOX CELLS WITHIN HALO ANOMALIES

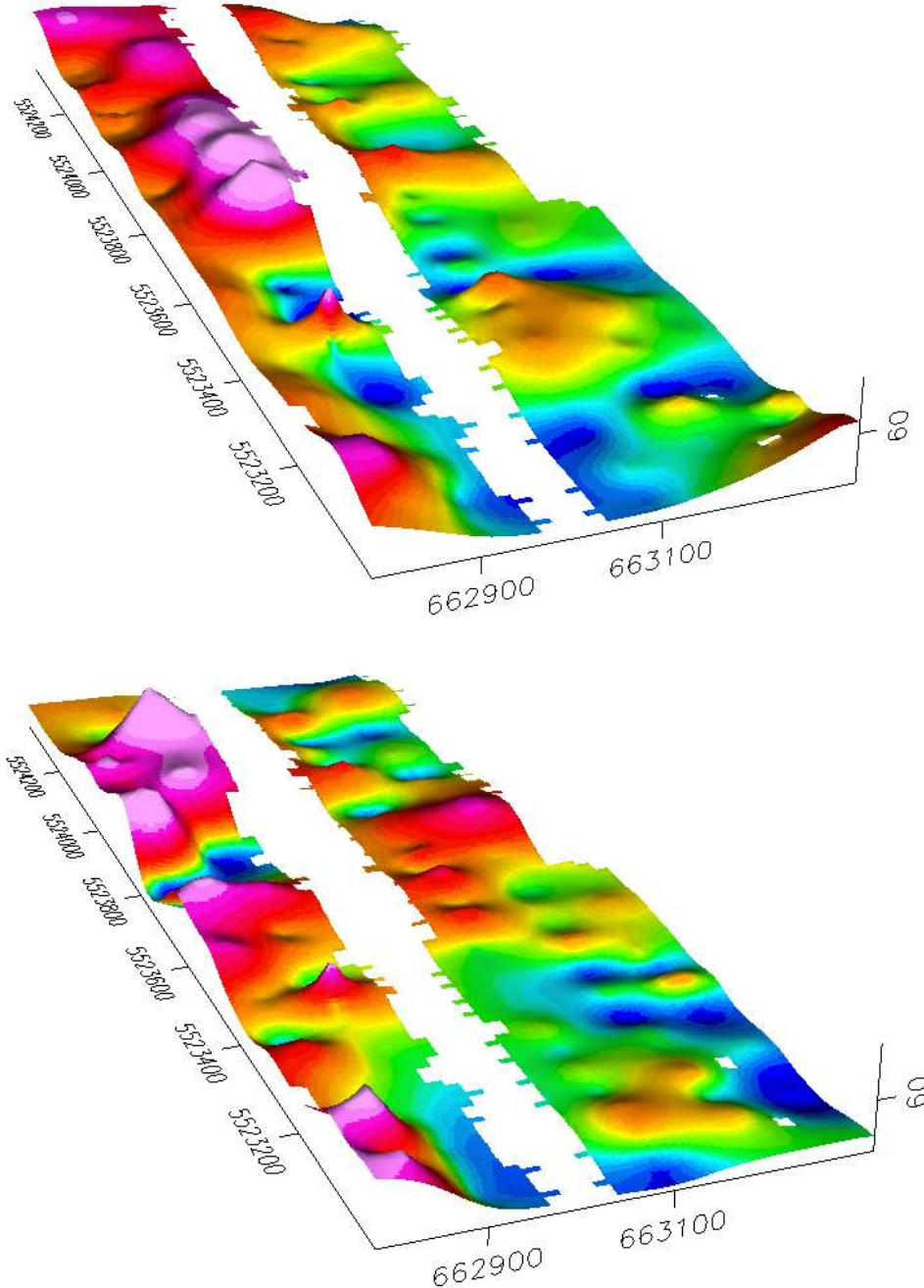
MINERALIZED ORE SHOOTS



Results represent only the material tested. Actlabs is not liable for any claim/damage from the use of this report in excess of the test cost. Samples are discarded in 90 days unless requested otherwise. This report is only to be reproduced in full.

**INTERPRETION OF SGH RESULTS – A10-3206-3543-4206**  
**EXCALIBUR RESOURCES LTD. – STURGEON LAKE SURVEY**

**SGH "VMS" PATHFINDER CLASS MAP – 3D VIEWS – Lines 19-23**



Results represent only the material tested. Actlabs is not liable for any claim/damage from the use of this report in excess of the test cost. Samples are discarded in 90 days unless requested otherwise. This report is only to be reproduced in full.

**INTERPRETION OF SGH RESULTS – A10-3206-3543-4206**  
**EXCALIBUR RESOURCES LTD. – STURGEON LAKE SURVEY.**

**SGH SURVEY INTERPRETATION RATING – Lines 19-23**

- After review of all of the SGH Pathfinder Class maps, the SGH results from these soil samples suggest a **"rating of 6.0"** for the areas within the black dotted oval interpretations that cover the three main apical anomalies on the plan view maps for Lines 19 through 23 on page 22. SGH predicts that VMS mineralization exists directly beneath these areas as a vertical projection. This rating is based on a scale of 6.0 in 0.5 increments, with a value of 6.0 being the best. This rating represents the similarity of these SGH results with case studies over a Volcanic Massive Sulphide (VMS) type target, to the SGH case studies conducted at the Hanson Lake VMS deposit in Saskatchewan, the South Gilmour VMS deposit in New Brunswick and the Cross Lake VMS deposit in Ontario. The degree of confidence in the rating only starts to be "good" at a level of 4.0.
- The SGH VMS template used has been shown to be robust to a wide range of VMS lithology including Kidd Creek, Irish and Kuroko style deposits.
- The area within the smaller black lightly dotted interpretations, as areas of potential mineralized ore shoots, are not rated.
- Potential drill targets are most likely to be in the centre of the three rated black dotted oval interpretations that encompass the apical type anomalies, as the centre of the REDOX cell formed in the overburden, rather than at the flanking apical anomalies contained within these ovals.
- The client should use a combination of these SGH results and its report with additional geochemical, geophysical, and geological information to possibly obtain a more confident and precise target location.

## **IN-FILL SAMPLE RECOMMENDATIONS FOR SGH ANALYSIS**

- Based on the results of this report and/or other information, the client may decide that infill sampling may be warranted. To obtain the best results from additional sampling for SGH it is recommended that sample locations within, or bordering, the area of interest be re-sampled rather than combining new results with the sample data from the initial survey. Although several SGH surveys have previously been easily and directly, combined without data leveling, it cannot be guaranteed that data leveling will not be required. It has been found that data leveling is more apt to be required should the new samples be collected under significantly different environmental conditions than during the initial sample survey, i.e. summer collection versus winter collection. The process of data leveling adds a minimum of 3 to 5 days of work to conduct the additional data evaluation, develop additional plots of the results, conduct new interpretations, and in additional report descriptions. Results from data leveling is also always considered "an approximation" thus having a lower level of confidence that newly re-sampled locations would have. As of September 2010, an additional cost will be invoiced should data leveling operations be required if the client requests that two SGH data sets be interpreted and reported together. Thus re-sampling locations will provide a faster turnaround time for results and provide more accurate and confident surveys for evaluation and aid in deciding specific drill targets.

## Cautionary Note Regarding Assumptions and Forward Looking Statements

The statements and target rating made in the Soil Gas Hydrocarbon (SGH) interpretive report or in other communications may contain certain forward-looking information related to a target or SGH anomaly.

Statements related to the rating of a target are based on comparison of the SGH signatures derived by Activation Laboratories Ltd. through previous research on known case studies. The rating is not derived from any statistics or other formula. The rating is a subjective value on a scale of 0 to 6 relative to the similarity of the SGH signature reviewed compared to the results of previous scientific research and case studies based on the analysis of surficial samples over known ore bodies. No information on other geochemistries, geophysics, or geology is usually available as additional information for the interpretation and assignment of a rating value unless otherwise stated. The rating does not imply ore grade and is not to be used in mineral resource estimate calculations. References to the rating should be viewed as forward-looking statements to the extent that it involves a subjective comparison to known SGH case studies. As with other geochemistries, the implied rating and anticipated target characteristics may be different than that actually encountered if the target is drilled or the property developed.

Activation Laboratories Ltd. may also make a scientifically based reference in this interpretive report to an area that might be used as a drill target. Usually the nearest sample is identified as an approximation to a "possible drill target" location. This is based only on SGH results and is to be regarded as a guide based on the current state of this science.

Unless stated, Activation Laboratories Ltd. has not physically observed the exploration site and has no prior knowledge of any site description or details. Actlabs makes general recommendations for sampling and shipping of samples. Unless stated, the laboratory does not witness sampling, does not take into consideration the specific sampling procedures used, season, handling, packaging, or shipping methods. The majority of the time, Activation Laboratories Ltd. has had no input into sampling survey design. Where specified Activation Laboratories Ltd. may not have conducted sample preparation procedures as it may have been conducted at the client's assigned laboratory. Although the Company has attempted to identify important factors that could cause actual actions, events or results to differ scientifically which may impact the associated interpretation and target rating from those described in forward-looking statements, there may be other factors that cause actions, events or results not to be as anticipated, estimated or intended.

In general, any statements that express or involve discussions with respect to predictions, expectations, beliefs, plans, projections, objectives, assumptions, future events or performance are not statements of historical fact. These "scientifically based educated theories" should be viewed as "forward-looking statements".

Readers of this interpretive report are cautioned not to place undue reliance on forward-looking information. Forward looking statements are made based on scientific beliefs, estimates and opinions on the date the statements are made and the interpretive report issued. The Company undertakes no obligation to update forward-looking statements or otherwise revise previous reports if these beliefs, estimates and opinions, future scientific developments, other new information, or other circumstances should change that may affect the analytical results, rating, or interpretation.

Actlabs nor its employees shall be liable for any claims or damages as a result of this report,  
any interpretation, omissions in preparation, or in the test conducted.  
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Date Submitted: June 30, July 2, July 21, 2010

Date Analyzed: July 15, July 16, August 17, 2010  
Data Processed: August 22, 2010

Interpretation Report: October 6, 2010

## Excalibur Resources Ltd.

Excalibur Resources Ltd.,  
20 Adelaide St. E., Suite 400,  
Toronto, Ontario, Canada. M5C 2T6

Attention: Dr. Jim Kendall, President & CEO

RE: Your Reference: **Sturgeon Lake Survey – Lines 19-23**

## CERTIFICATE OF ANALYSIS

138 Soil samples were submitted for analysis via the Actlabs Thunder Bay facility.

These samples were prepared according to our Code S4 procedure.

The following analytical package was requested: Code SGH – Soil Gas Hydrocarbon Geochemistry

**REPORT/WORKORDER: A10-3206 / A10-3543 / A10-4206**

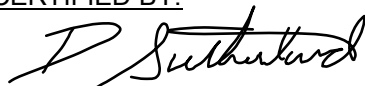
This report may be reproduced without our consent. If only selected portions of the report are reproduced, permission must be obtained. If no instructions were given at the time of sample submittal regarding excess material, it will be discarded within 90 days of this report. Our liability is limited solely to the analytical cost of these analyses. Test results are representative only of the material submitted for analysis.

### Notes:

The SGH – Soil Gas Hydrocarbon Geochemistry is a semi-quantitative analytical procedure to detect and measure 162 hydrocarbon compounds as the organic signature in the sample material collected from a survey area. It is not an assay of mineralization but is a predictive geochemical tool used for exploration. This certificate pertains only to the SGH data presented in the associated Microsoft Excel spreadsheet of results.

The author of this SGH Interpretation Report, Mr. Dale Sutherland, is the creator of the SGH organic geochemistry. He is a Chartered Chemist (C.Chem.) and Forensic Scientist specializing in organic chemistry. He is not a professional geologist or geochemist.

### CERTIFIED BY:



Dale Sutherland, B.Sc.,B.Sc.,B.Ed.,C.Chem.  
Forensic Scientist, Organics Manager,  
Director of Research  
Activation Laboratories Ltd.



**SGH – SOIL GAS HYDROCARBON  
Predictive Geochemistry**

*for*

***EXCALIBUR RESOURCES LTD.  
"STURGEON LAKE SURVEY"  
"LINES 24-27"***

*October 25, 2010*

*\* Dale Sutherland, Eric Hoffman*

*Activation Laboratories Ltd*

(\* - author)

**EVALUATION OF SGH "SOIL SAMPLE" DATA**

**EXPLORATION FOR: "VMS" TARGETS**

***Workorder: A10-3506 / A10-4206 / A10-4432 / A10-5183***

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## **SOIL GAS HYDROCARBON (SGH) GEOCHEMISTRY - OVERVIEW**

SGH is a deep penetrating geochemistry that involves the analysis of surficial samples from over potential mineral or petroleum targets. The analysis involves the testing for 162 hydrocarbon compounds in the C5-C17 carbon series range applicable to a wide variety of sample types. SGH has been successful for delineating targets found at over 500 metres in depth. Samples of various media have been successfully analyzed such as soil (any horizon), drill core, rock, peat, lake-bottom sediments and even snow. The SGH analysis incorporates a very weak leach, essentially aqueous, that only extracts the surficial bound hydrocarbon compounds and those compounds in interstitial spaces around the sample particles. These are the hydrocarbons that have been mobilized from the target depth. SGH is unique and should not be confused with other hydrocarbon tests or traditional analyses that measure C1 (Methane) to C5 (Pentane) or other gases. SGH is also different from soil hydrocarbon tests that thermally extract or desorb all of the hydrocarbons from the whole soil sample. This test is less specific as it does not separate the hydrocarbons and thus does not identify or measure the responses as precisely. These tests also do not use a forensic approach to identification. The hydrocarbons in the SGH extract are separated by high resolution capillary column gas chromatography to isolate, confirm, and measure the presence of only the individual hydrocarbons that have been found to be of interest from initial research and development and from performance testing in two Canadian Mining Industry Research Organization (CAMIRO) projects (97E04 and 01E02).

Over the past 14 years of research, Activation Laboratories Ltd. has developed an in-depth understanding of the unique SGH signatures associated with different commodity targets. Using a forensic approach we have developed target signatures or templates for identification, and the understanding of the expected geochromatography that is exhibited by each class of SGH compounds. In 2004 we began to include an SGH interpretation report delivered with the data to enable our clients to realize the complete value and understanding of the SGH results in the shortest time frame and provide the benefit from past research sponsored by Actlabs, CAMIRO, OMET and other projects.

SGH has attracted the attention of a large number of Exploration companies. In the above mentioned research projects the sponsors have included (in no order): Western Mining Corporation, BHP-Billiton, Inco, Noranda, Outokumpu, Xstrata, Cameco, Cominco, Rio Algom, Alberta Geological Survey, Ontario Geological Survey, Manitoba Geological Survey and OMET. Further, beyond this research, Activation Laboratories Ltd. has interpreted the SGH data for over 400 targets from clients since January of 2004. In both CAMIRO research projects over known mineralization and in exploration projects over unknown targets, SGH has performed exceptionally well. As an example, in the first CAMIRO research project that commenced in 1997 (Project 97E04), there were 10 study areas that were submitted blindly to Actlabs. These study sites were selected since other inorganic geochemistries were unsuccessful at illustrating anomalies related to the target.

## **SOIL GAS HYDROCARBONS (SGH) GEOCHEMISTRY – OVERVIEW**

Although Actlabs was only provided with the samples and their coordinates, SGH was able to locate the blind mineralization with exceptional accuracy in 9 of the 10 surveys. SGH has recently been very successful in exploration and discovery of unknown targets e.g. Golden Band Resources drilled an SGH anomaly and discovered a significant vein containing “visible” gold. ([www.goldenbandresources.com](http://www.goldenbandresources.com))

**Sample Type and Survey Design:** It is highly recommended that a *minimum* of 50 sample “locations” is preferred to obtain enough samples into background areas on both sides of small suspected targets (wet gas plays, Kimberlite pipes, Uranium Breccia pipes, veins, etc.). SGH is not interpreted in the same way as inorganic based geochemistries. SGH must have enough samples over both the target and background areas in order to fully study the dispersion patterns or geochromatography of the SGH classes of compounds. Based on our minimum recommendation of at least 50 sample locations we further suggest that all samples be evenly spaced with about one-third of the samples over the target and one-third on each side of the target in order for SGH to be used for exploration. Targets other than gas plays, pipes, dykes or veins usually require additional samples to represent both the target and background areas.

SGH has been shown to be very robust to the use of different sample types even “within” the same survey or transect. Research has illustrated that it is far more important to the ultimate interpretation of the results to take a complete sample transect or grid than to skip samples due to different sample media. The most ideal natural sample is still believed to be soil from the “Upper B-Horizon”, however excellent results can also be obtained from other soil horizons, humus, peat, lake-bottom sediments, and even snow. The sampling design is suggested to use evenly spaced samples from 15 metres to 200 metres and line spacing from 50 metres to 500 metres depending on the size and type of target. A 4:1 ratio is suggested, however, larger orientation surveys have also been successful. Ideally even large grids should have one-third of the samples over the target and two-thirds of the samples into anticipated background areas. This will allow the proper assessment of the SGH geochromatographic vectoring and background site signature levels with minimal bias. Individual samples taken at significant distances from the main survey area to represent background are not of value in the SGH interpretation as SGH results are not background subtracted. Samples can be drip dried in the field and do not need special preservation for shipping and has been specifically designed to avoid common contaminants from sample handling and shipping. SGH has also been shown to be robust to cultural activities even to the point that successful results and interpretation has been obtained from roadside right-of-ways.

## **SOIL GAS HYDROCARBONS (SGH) GEOCHEMISTRY – OVERVIEW**

**Sample Preparation and Analysis:** Upon receipt at Activation Laboratories the samples are air-dried in isolated and dedicated environmentally controlled rooms set to 40°C. The dried samples are then sieved. In the sieving process, it is important that compressed air is not used to clean the sieves between samples as trace amounts of compressor oils "may" poison the samples and significantly affect some target signatures. At Activation Laboratories a vacuum is used to clean the sieve between each sample. The -60 mesh sieve fraction (<250 microns, although different mesh sizes can be used at the preference of the exploration geologist) is collected and packaged in a Kraft paper envelope and transported from our sample preparation building to our analytical building on the same street in Ancaster Ontario. Each sample is then extracted, separated by gas chromatography and analyzed by mass spectrometry using customized parameters enabling the highly specific detection of the 162 targeted hydrocarbons at a reporting limit of one part-per-trillion (ppt). This trace level limit of reporting is critical to the detection of these hydrocarbons that, through research, have been found to be related at least in part to the breakdown and release of hydrocarbons from the death phase of microbes directly interacting with a deposit at depth. The hydrocarbon signatures are directly linked to the deposit type which is used as a food source. The hydrocarbons that are mobilized and metabolized by the microbes are released in the death phase of each successive generation. Very few of the hydrocarbons measured are actually due to microbe cell structure, or hydrocarbons present or formed in the genesis of the deposit or from anthropogenic contamination. The results of the SGH analysis is reported in raw data form in an Excel spreadsheet as "semi-quantitative" concentrations without any additional statistical modification.

**Mobilized Inorganic Geochemical Anomalies:** It is important to note that SGH is essentially "blind" to any inorganic content in samples as only organic compounds as hydrocarbons are measured. Thus inorganic geochemical surface anomalies that have migrated away from the mineral source, and thus may be interpreted and found to be a false target location, is not detected and does not affect SGH results. This fact is of great advantage when comparing the SGH results to inorganic geochemical results. If there is agreement in the location of the anomalies between the organic and inorganic technique, such as Actlabs' Enzyme Leach, a significant increase in confidence in the target location can be realized. If there is no agreement or a shift in the location of the anomalies between the techniques, the inorganic anomaly may have been mobilized in the surficial environment.

**The Nugget Effect:** As SGH is "blind" to the inorganic content in the survey samples, any concern of a "nugget effect" will not be encountered with SGH data. A "nugget effect" may be of a concern for inorganic geochemistries from surveys over copper, gold, lead, nickel, etc. type targets.

## **SOIL GAS HYDROCARBONS (SGH) GEOCHEMISTRY – OVERVIEW**

**SGH Interpretation Report:** All SGH submissions must be accompanied by relative or UTM coordinates so that we may ensure that the sample survey design is appropriate for use with SGH, and to provide an SGH interpretation with the results. In our interpretation procedure, we separate the results into 19 SGH sub-classes. These classes include specific alkanes, alkenes, thiophenes, aromatic, and polyaromatic compounds. Note that none of the SGH hydrocarbons are “gaseous” at room temperature and pressure. The classes are then evaluated in terms of their geochromatography and for coincident compound class anomalies that are unique to different types of mineralization. Actlabs uses a six point scale in assigning a subjective rating of similarity of the SGH signatures found in the submitted survey to signatures previously reviewed and researched from known case studies over the same commodity type. Also factored into this rating is the appropriateness of the survey and amount of data/sample locations that is available for interpretation. This rating scale is described in detail in the following section.

## **SGH RATING SYSTEM - DESCRIPTION**

To date SGH has been found to be successful in the depiction of buried mineralization for Gold, Nickel, VMS, SEDEX, Uranium, Polymetallic, and Copper, as well as for Kimberlites. SGH data has developed into a dual exploration tool. From the interpretation, a vertical projection of the predicted location of the target can be made as well as a statement on the rating of the comparability of the identification of the anticipated target type to that from known case studies, e.g. if the client anticipates the target to be a Gold deposit, what is the rating or comparability that the target is similar to the SGH results over a Gold deposit in Nunavut, shear hosted and sediment hosted deposits in Nevada, or Paleochannel Gold mineralization in Western Australia.

- A rating of “6” is the highest or best rating, and means that the SGH classes most important to describing a Gold related hydrocarbon signature are all present and consistently vector to the same location with well defined anomalies. To obtain this rating there also needs to be other SGH classes that when mapped lend support to the predicted location.
- A rating of “5” means that the SGH classes most important to describing a Gold signature are all present and consistently describe the same location with well defined anomalies. The SGH signatures may not be strong enough to also develop additional supporting classes.
- A rating of “4” means that the SGH classes most important to describing a Gold signature are mostly present describing the location with well defined anomalies. Supporting classes may also be present.

## **SGH RATING SYSTEM - DESCRIPTION** (continued)

- A rating of "3" means that the SGH classes most important to describing a Gold signature are mostly present and describe the same location with fairly well defined anomalies. Some supporting classes may or may not be present.
- A rating of "2" means that some of the SGH classes most important to describing a Gold signature are present but a predicted location is difficult to determine. Some supporting classes may be present
- A rating of "1" is the lowest rating, and means that one of the SGH classes most important to describing a Gold signature is present but a predicted location is difficult to determine. Supporting classes are also not helpful.
- The SGH rating is directly and significantly affected by the survey design. Small data sets, especially if significantly <50 sample locations, or transects/surveys that are geographically too short will automatically receive a lower rating no matter how impressive an SGH anomaly might be. When there is not enough sample locations to adequately review the SGH class geochromatography, or when the sample spacing is inadequate, or if the spacing is highly variable such that it biases the interpretation of the results, then the confidence in the interpretation of any geochemistry is adversely affected. The SGH rating is not just a rating of the agreement between the SGH pathfinder classes for a particular target type; it is a rating of the overall confidence in the SGH results from this particular survey. The interpretation is only based on the SGH results without any information from other geochemical, geological or geophysical information unless otherwise specified.

## **SGH RATING SYSTEM – HISTORY & UNDERSTANDING**

The subjective SGH rating system has been used since 2004 when Activation Laboratories started providing an SGH Interpretation Report with every submission for SGH analysis to aid our clients in understanding this organic geochemistry and ensuring that they obtain the best results for their surveys. As explained in the previous section, the SGH rating is not just a rating of how definitive an SGH anomaly is, and is not based just on the map(s) provided in this report. It is a rating of "confidence in the interpreted anomaly" from the combination of (i) are the expected SGH Pathfinder Classes of compounds present from the template for this target type (one Pathfinder Class map is shown in the report, at least three must be present to adequately describe the correct signature for a particular target), (ii) how well do these SGH Pathfinder Classes agree in describing an particular area, (iii) how well does this agreement compare to SGH case studies over known targets of that type, (iv) how well is the interpreted anomaly defined by the survey (i.e. a single

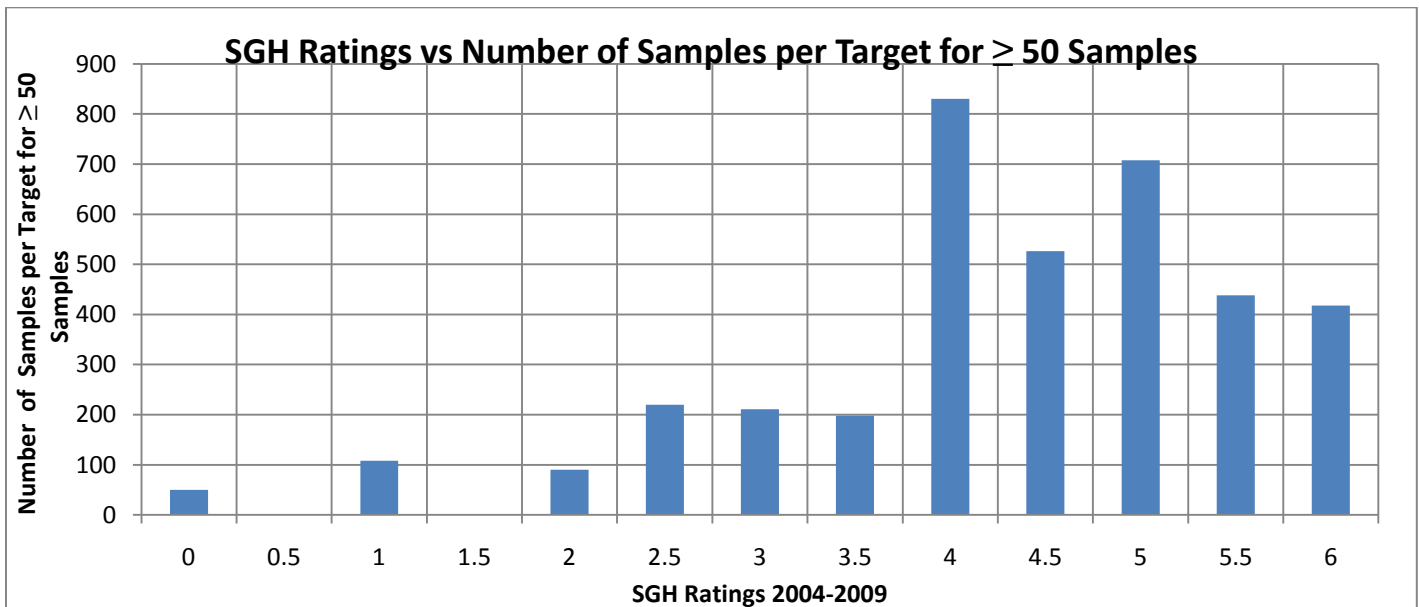
## **SGH RATING SYSTEM – HISTORY & UNDERSTANDING (cont.)**

transect does not provide the same confidence as a complete grid of samples), and (v) is there at least a minimum of 50 sample locations in the survey so that there may be an adequate amount of data to observe the geochromatography of the different SGH Pathfinder Class of compounds.

The question often arises by clients as to the frequency of a rating, e.g. “how often is a rating of 5.0 given in an interpretation”. To better understand this we present this review of the history of the SGH rating program since 2004 and some of the underlying situations that can affect the historical rating charts.

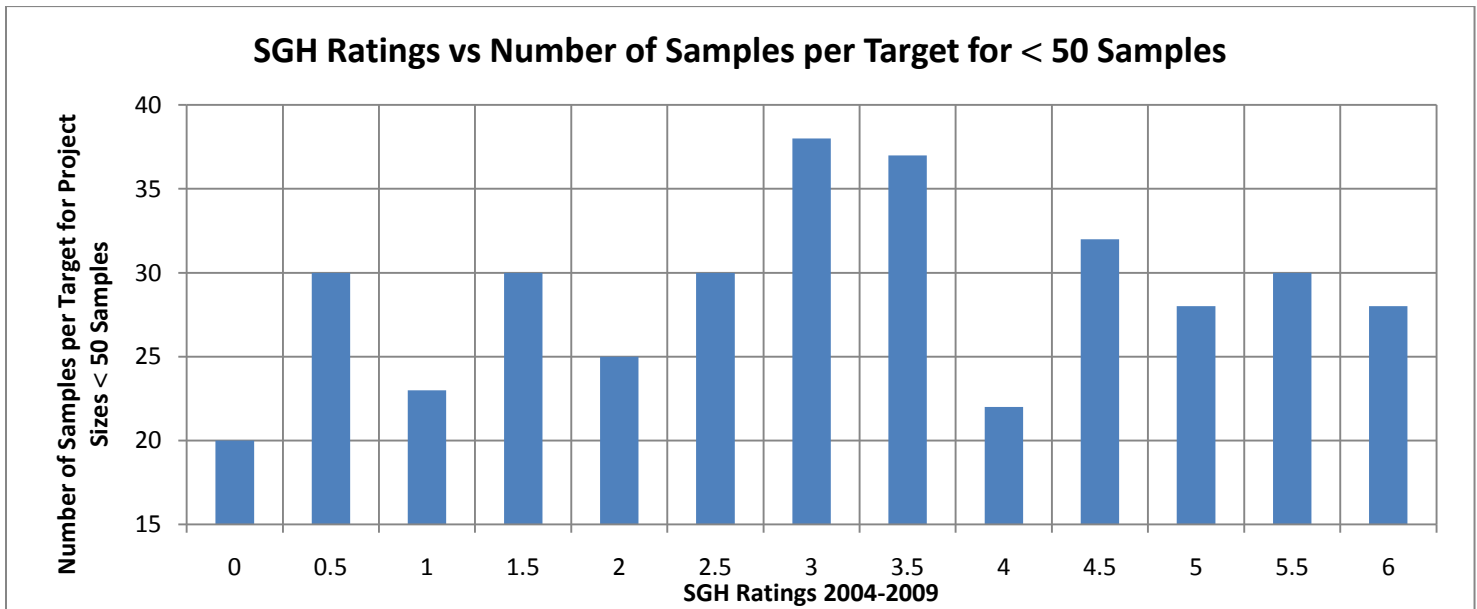
Originally it was recommended that a minimum of 35 sample location be used for small target exploration, however it was quite quickly realized that this is often insufficient and at least 50 sample locations were required. In 2007, the rating scale was refined to include increments of 0.5 units rather than just integer values from 0 to 6.

A rating frequency may be biased high as most clients conduct an orientation study over a known target, thus several of these projects result in high ratings. Note that, at this time, the rating is not said to be linked to grade of a deposit or depth to the target. Even in exploration surveys clients tend to submit samples over more promising targets due to knowledge of the geology and prior geochemical or geophysical results. As shown in the following chart, projects with SGH data from 200 or more sample locations have a higher level of confidence in the interpretation as the geochromatography of the SGH Pathfinder Classes of compounds can be more completely observed and reviewed.

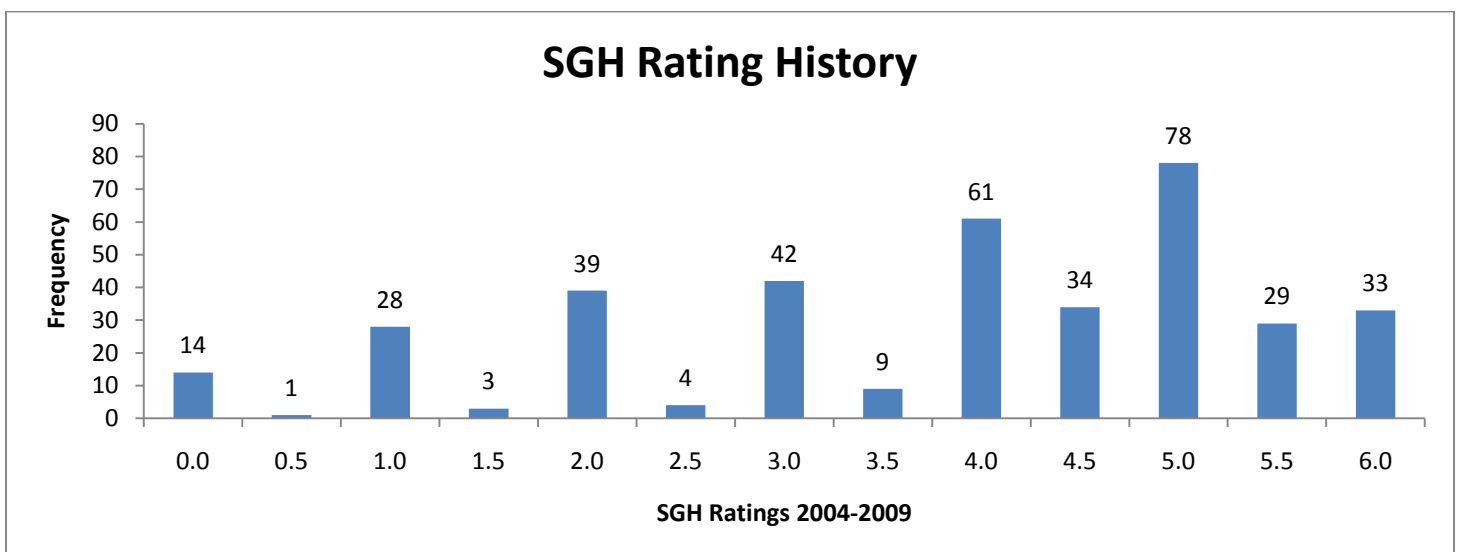


## **SGH RATING SYSTEM – HISTORY & UNDERSTANDING (cont.)**

The rating frequency may be biased low as research projects often include a bare minimum of samples to reduce costs. Research projects may also be over targets known to be difficult to depict with geochemistry. Multiple targets in close vicinity in a survey may result in a low bias as the Pathfinder Class geochromatography is more difficult to deconvolute. Ratings may also be biased low if less than the recommended 50 sample locations is submitted as indicated by the following chart. This chart also illustrates that there is no interpretation bias to a particular rating value.



The overall rating frequency for over 400 targets from January 2004 to December 2009 is shown in the chart below illustrating that surveys over more promising targets are most often submitted for best use of research or exploration dollars. It also indicates that the 0.5 increments were less frequent as they started in 2007.



## **SGH DATA QUALITY**

- **Reporting Limit:** The SGH Excel spreadsheet of results contains the raw unaltered concentrations of the individual SGH compounds in units of "part-per-trillion" (ppt). The reporting of these ultra low levels is vital to the measurement of the small amounts of hydrocarbons now known to be leached/metabolized and subsequently released by dead bacteria that have been interacting with the ore at depth. To ensure that the data has a high level of confidence, a "reporting limit" is used. The reporting limit of 1 ppt actually represents a level of confidence of approximately 5 standard deviations where SGH data is assured to be "real" and non-zero. Thus in SGH the use of a reporting limit automatically removes site variability and there is no need to further background subtract any data as the reporting limit has already filtered out any site background effects. Thus we recommend that all data that is equal to or greater than 2 ppt should be used in any data review. It is important to review all SGH data as low values that may be the centre of halo anomalies and higher values as apical anomalies or as halo ridges are all important.
- **Laboratory Replicate Analysis:** A laboratory replicate is a sample taken randomly from the submitted survey being analyzed and are not unrelated samples taken from some large stockpile of bulk material. In the Organics laboratory an equal portion of this sieved sample, or pulp, is taken and analyzed in the same manner using the Gas Chromatography/Mass Spectrometer. The comparison of laboratory replicate and field duplicate results for chemical tests in the parts-per-million or even parts-per-billion range has typically been done using an absolute "relative percent difference (RPD)" statistic which is an easy proxy for error estimation rather than a more complete analysis of precision as specified by Thompson and Howarth. An RPD statistic is not appropriate for SGH results as the reporting limit for SGH is 1 part-per-trillion. Further, SGH is a semi-quantitative technique and was not designed to have the same level of precision as other less sensitive geochemistry's as it is only used as an exploration tool and not for any assay work. SGH is also designed to cover a wide range of organic compounds with an unprecedented 162 compounds being measured for each sample. In order to analyze such a wide molecular weight range of compounds, sacrifices were made to the variability especially in the low molecular weight range of the SGH analysis. The result is that the first fifteen SGH compounds in the Excel spreadsheet is expected to exhibit more imprecision than the other 147 compounds. An SGH laboratory replicate is a large set of data for comparison even for just a few pairs of analyses. Precision calculations using a Thompson and Howarth approach should only be used for estimating error in individual measurements, and not for describing the average error in a larger data set. In geochemical exploration geochemists seek concentration patterns to interpret and thus rigorous precision in individual samples is not required because the concentrations of many samples are interpreted collectively. For these reasons recent and independent research at Acadia



## **SGH DATA QUALITY** (continued)

University in Canada promote that a percent Coefficient of Variation (%CV) should be used as a universal measurement of relative error in all geochemical applications. As SGH results are a relatively large data set for nearly all submissions, %CV is a better statistic for use with SGH. By using %CV, the concentration of duplicate pairs is irrelevant because the units of concentration cancel out in the formation of the coefficient of variation ratio. For SGH, the %CV is calculated on all values  $\geq 2$  ppt. These values are averaged and represent a value for each pair of replicate analysis of the sample. All of the %CV values for the replicates are then averaged to report one %CV value to represent the overall estimate of the relative error in the laboratory sub-sampling from the prepared samples, and any instrumental variability, in the SGH data set for the survey. Actlabs' has successfully addressed the analytical challenge to minimize analytical variability for such a large list of compounds. Thus as SGH is also interpreted as a signature and is solely used for exploration and not assay measurement, the data from SGH is "**fit for purpose**" as a geochemical exploration tool.

- **Historical SGH Precision:** In the general history of geochemistry, studies indicate that a large component of total measurement error is introduced during the collection of the initial sample and in sub-sampling, and that only a subordinate amount of error in the result is introduced during preparation and analysis. A historical record encompassing many projects for SGH, including a wide variety of sample types, geology and geography, shows that the consistency and precision for the analysis of SGH is excellent with an overall precision of 6.8% Coefficient of Variation (%CV). When last calculated, this number has a range having a maximum of 12.4% CV, a minimum of 3.0% CV, with a standard deviation of 1.6%, in a population made up of over 400 targets (over 45,000 samples) interpreted since June of 2004. Again the precision of 6.8% CV included all of the sample types as soil from different horizons, peat, till, humus, lake-bottom sediments, ocean-bottom sediments, and even snow. When field duplicates have been revealed to us, we have found that the precision of the field duplicates are in the range of about 9 to 12 %CV. As SGH is interpreted using a combination of compounds as a chemical "class" or signature, the affect of a few concentrations that may be imprecise in a direct comparison of duplicates is not significant. Further, projects that have been re-sampled at different times or seasons are expected to have different SGH concentrations. The SGH anomalies may not be in exactly the same position or of the same intensity due to variable conditions that may have affected the dispersion of different pathfinder classes. However, the SGH "signature" as to the presence of the specific mix of SGH pathfinder classes will definitely still exist, and will retain the ability to identify the deposit type and vector to the same target location.

- **LABORATORY MATERIALS BLANK – QUALITY ASSURANCE (LMB-QA):**

The Laboratory Materials Blank Quality Assurance measurements (LMB-QA) shown in the SGH spreadsheet of results are matrix free blanks analyzed for SGH. These blanks are not standard laboratory blanks as they do not accurately reflect an amount expected to be from laboratory handling or laboratory conditions that may be present and affect the sample analysis result. The LMB-QA measurements are a pre-warning system to only detect any contamination originating from laboratory glassware, vials or caps. As there is no substrate to emulate the sample matrix, the full solvating power of the SGH leaching solution, effectively a water leach, is fully directed at the small surface area of the glassware, vials or caps. In a sample analysis the solvating power of the SGH leaching solution is distributed between the large sample surface area (from soil, humus, sediments, peat, till, etc.) and the relatively small contribution from the laboratory materials surfaces. The sample matrix also buffers the solvating or leaching effect in the sample versus the more vigorous leaching of the laboratory materials which do not experience this buffering effect. Thus the level of the LMB-QA reported is biased high relative to the sample concentration and the actual contribution of the laboratory reagents, equipment, handling, etc. to the values in samples is significantly lower. This situation in organic laboratory analysis only occurs at such extremely low part-per-trillion (ppt) measurement levels. This is one of the reasons that SGH uses a reporting limit and not a detection limit. The 1 ppt reporting limit used in the SGH spreadsheet of raw concentration data is 3 to 5 times greater than a detection limit. The reporting limit automatically filters out analytical noise, the actual LMB-QA, and most of the sample survey site background. This has been proven as SGH values of 1 to 3 parts-per-trillion (ppt) have very often illustrated the outline of anomalies directly related to mineral targets. Thus all SGH values greater than or equal to 1 or 2 ppt should be used as reliable values for interpretations.

The LMB-QA values thus should not be used to background subtract any SGH data. The LMB-QA values are only an early warning as a quality assurance procedure to indicate the relative cleanliness of laboratory glassware, vials, caps, and the laboratory water supply at the ppt concentration level. Do not subtract the LMB-QA values from SGH sample data.

## **SGH DATA INTERPRETATION**

- **GEOCHEMICAL ANOMALY THRESHOLD VALUE:**

In the interpretation of "inorganic" geochemical data one of the determinations to be made is to calculate a "Threshold" value above which data is considered anomalous. This is done on an element by element basis. In the interpretation of this "organic" geochemical data this determination is done differently. The determination of a threshold value is not calculated for each hydrocarbon compound. The determination of a threshold value is also a concentration below which geochemical data is considered as "noise" for the purposes of geochemical interpretation. As discussed on page 10, SGH uses a "Reporting Limit" instead of some type of Detection Limit. The amount of noise that is already eliminated in the data, as below the Reporting Limit of 1 part-per-trillion (shown in the data spreadsheet as "-1" as "not-detected at a Reporting Limit of 1 ppt") is equivalent to approximately 5 standard deviations of variability. To thus calculate an additional Threshold Value is a loss of real and valuable data. Further, in the interpretation of SGH data, individual compounds are not considered (unless explicitly mentioned in the report). The interpretation of SGH data is exclusively conducted by "compound chemical class" which is the sum of four to fourteen individual hydrocarbons in the same organic chemical class as these compounds naturally have the same chemical properties that ultimately define their spatial dispersion characteristics in their rise from a mineral target through the overburden. This combined class is more reliable than the measurement of any one compound. SGH also eliminates the need for a Threshold value determination above the Reporting Limit due to the "high specificity" of the specific hydrocarbons and the classes they form. Each of the hydrocarbons has been hand selected due to their lower probability of being found in general surface soils. Further, only those classes where the majority of the compounds are detected above the Reporting Limit are considered in the interpretation. This defines the SGH geochemistry as having less geochemical noise due to the use of a reporting limit and as having higher confidence in the use of groups (classes) of data instead of individual compounds. However the most important aspect of interpretation is the use of a forensic signature. At least three specific "Pathfinder" classes, based on the combinations or template of classes we have developed, must be present to define the hydrocarbon signature to confidently predict the presence of a specific type of mineral target. Do not calculate another Threshold value. **FACT:** It has been proven many times that important chemical anomalies can exist even at 5 ppt.

- **SGH PATHFINDER CLASS MAGNITUDE:**

The magnitude of any individual concentration or that of a hydrocarbon class does not imply that the data is of more importance or that mineralization is of higher quantity or grade. SGH interpretation must use the review of the combination of specific hydrocarbon classes to make any interpretation.

## **SGH DATA INTERPRETATION** (continued)

- **SGH DATA LEVELING:**

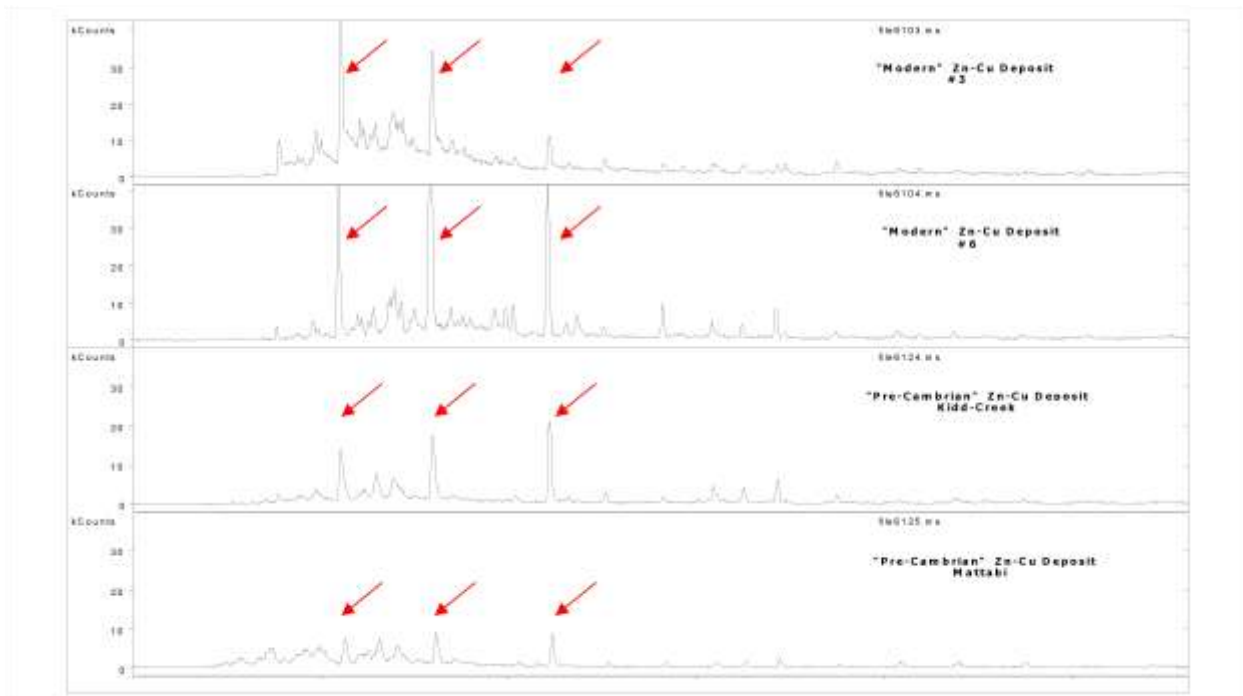
The combination of SGH data from different field sampling events has rarely required leveling in order to combine survey grids. The only circumstances that have occasionally required leveling has been the combination of samples that are very fine in texture, thus having a combined large surface area to samples of peat that may be in nearby areas. Even after maceration of the peat and in using the maximum size of sample amenable to this test method, peat samples have a significantly lower surface area. Peat samples have only required leveling in one survey in the last 500 SGH interpretations.

In only the last year it has been observed that SGH data **may** require leveling when different field sampling events have significantly different soil temperature. It has been documented that only when "soil" samples are taken from "frozen" ground that data leveling may be required as frozen sample act as a frozen cap to the hydrocarbon flux and may collect a higher concentration of hydrocarbon compounds compared to sampling during seasons where the samples are not frozen. Only two surveys have required leveling in the last 500 SGH interpretations.

The author has taken introductory training in the leveling of geochemical data. If leveling is required, both data sets are reviewed in terms of maximum, minimum and average values for each SGH Pathfinder Class intended for use in the interpretation. Data is sectioned into quartiles and each section is assigned specific leveling factors that is then applied to one data set. It should be noted that any type of data leveling is an approximation.

## **SGH – FORENSIC GEOCHEMICAL SIGNATURES**

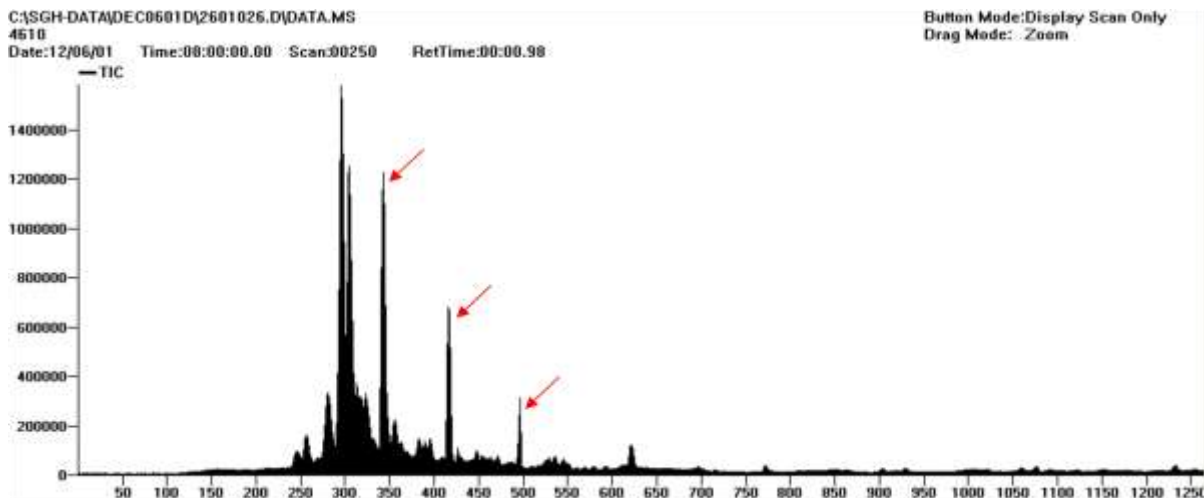
- One of the first experiments in 1996 in the development of the SGH analysis was to observe if an SGH response could be obtained directly from an ore sample. From office shelf specimens, small rock chips were obtained which were then crushed and milled. The fine pulp obtained was then subjected to the SGH analysis. These shelf specimen samples were from well known Volcanic Massive Sulphide deposits of the Mattabi deposit from the Archean Sturgeon Lake Camp in Northwestern Ontario and from the Kidd Creek Archean volcanic-hosted copper-zinc deposit. Even these specimen samples contain a geochemical record of the hydrocarbons produced by the bacteria that had been feeding on these deposits at depth. As a comparison, SGH analysis were similarly conducted on modern-day VMS ore samples taken from a “black smoker” hydrothermal volcanic vent from the deep sea bed of the Juan de Fuca Ridge where high concentrations of microbial growth was also known to exist. The raw data profiles as GC/MS Total Ion Chromatograms are shown below to illustrate the “visible” portion of the VMS signature obtained from the SGH analysis.



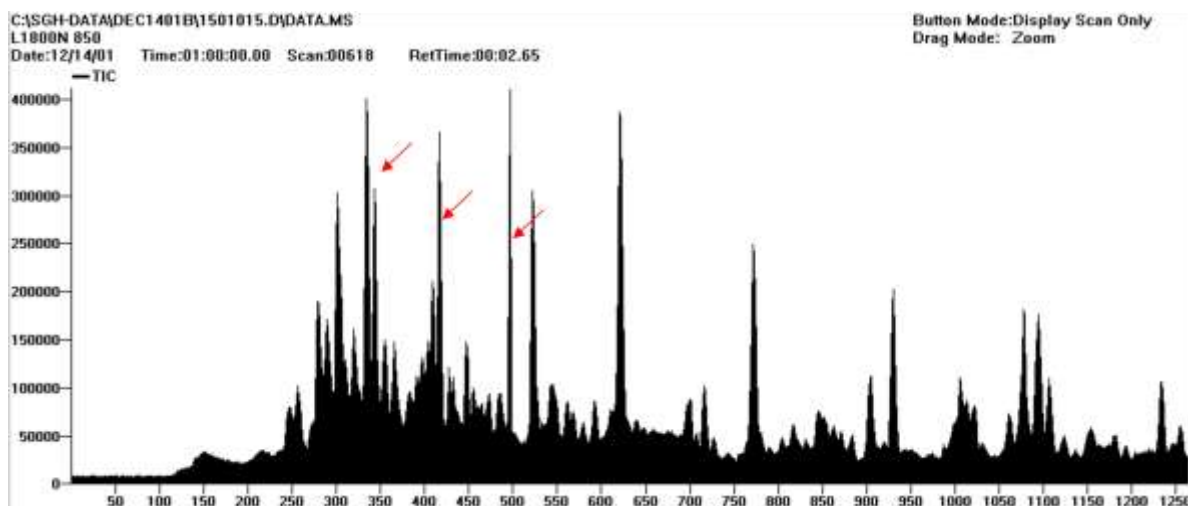
The top two profiles were obtained from two samples of the modern day “black smokers”. The third and fourth chromatograms in the above image were obtained from the Pre-Cambrian Zn-Cu Kidd Creek and Mattabi deposits. The red arrows point to three compounds that are a portion of the SGH signature for VMS type deposits. This visible portion of the VMS signature of hydrocarbons can easily be seen in the analysis of each of these four samples.

## **SGH – FORENSIC GEOCHEMICAL SIGNATURES** (cont.)

The next question in our early objectives was to see if this SGH signature could also be observed in surficial soil samples that had been taken over VMS deposits. Through our research projects, soil samples were obtained from over the Ruttan Cu-Zn VMS deposit near Leaf Rapids, Manitoba and located in the Paleoproterozoic Rusty Lake greenstone belt. The profile obtained, as observed in the raw GC/MS chromatogram, is shown in this next image below:



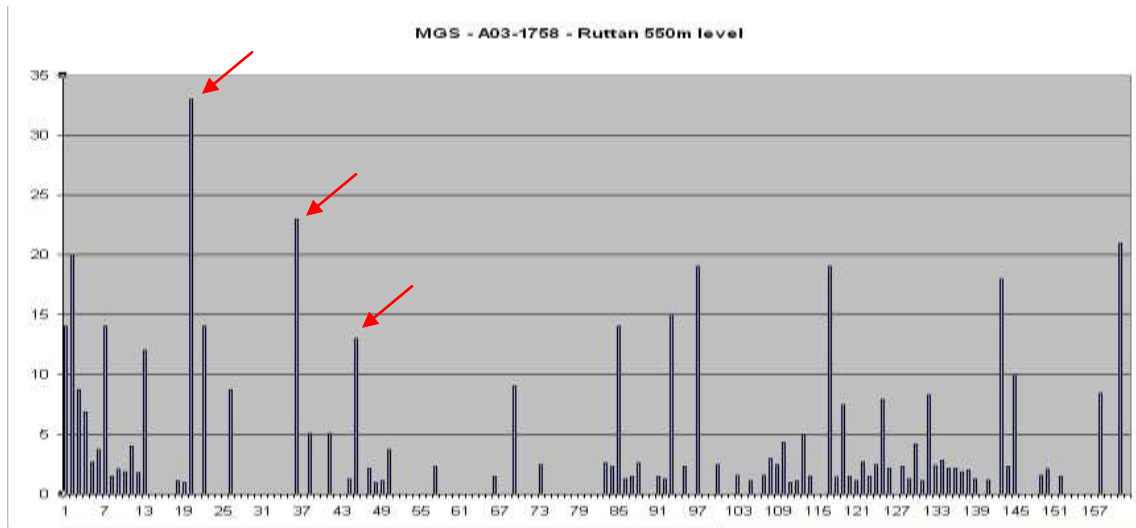
The three compounds indicated by the red arrows represent the same visible portion of the VMS signature observed from the modern day black smoker samples and the ore samples taken from the Mattabi and Kidd Creek, even though this soil was taken from over a different VMS deposit in a geographically different area. Is this coincidence? Another soil sample was obtained from Noranda's Gilmour South base-metal occurrence in the Bathurst Mining camp in northern New Brunswick. As shown below, this sample contained a very complex SGH signature, however the visible portion of the VMS signature as indicated by the red arrows is still observed as in the black smoker, Mattabi and Kidd Creek ore samples.



## **SGH – FORENSIC GEOCHEMICAL SIGNATURES** (cont.)

In research conducted by the Ontario Geological Survey, this same portion of the SGH signature was also observed over the VMS deposit at Cross Lake in Ontario. Note that the visible signature shown as the three compounds indicated by the red arrows is only a small portion of the complete SGH VMS signature. The full VMS signature is made up of at least three groups, as three organic chemical classes, that together contain at least 35 of the individual SGH hydrocarbons.

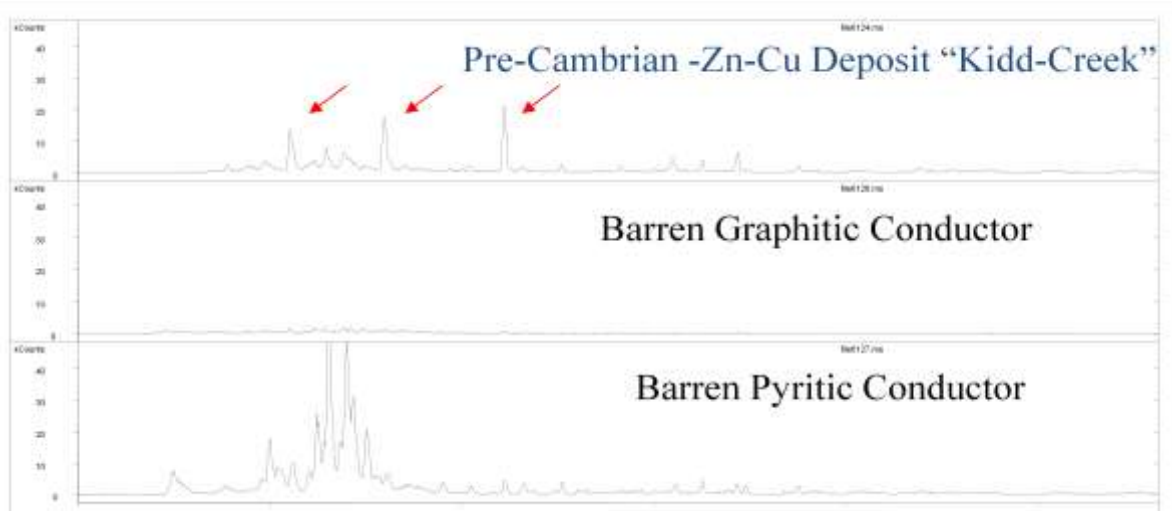
The chromatograms shown on the preceding page from the GC/MS analysis are not used directly in the interpretation of SGH data. As we are only interested in a specific list of 162 hydrocarbons, the mass spectrometer and associated software programs specifically identifies the hydrocarbons of interest, runs calculations using relative responses to a short list of hydrocarbons used as standards, and develops an Excel spreadsheet of semi-quantitative concentration data to represent the sample. Thus the SGH results for a sample, like that observed in ore from the Ruttan, are filtered to obtain the concentrations for the specific 162 hydrocarbons. A simple bar graph drawn from the Excel spreadsheet of the hydrocarbons and their concentrations results in a DNA like **forensic SGH signature** as shown below. The portion discussed here as the “visible” SGH VMS signature in the GC/MS chromatograms, is again shown by the red arrows.



Through the work done in the SGH CAMIRO research projects, it was observed that the hydrocarbon signature produced by the SGH technique appeared to also be able to be used to differentiate barren from ore-bearing conductors. This was explored further through the submission and analysis of specific specimen samples that represented a barren pyritic conductor and a barren graphitic conductor.

## **SGH – FORENSIC GEOCHEMICAL SIGNATURES** (cont.)

The GC/MS chromatograms from these two specimens are compared to that obtained from the Kidd-Creek ore as shown below. This diagram conclusively shows that the SGH signatures obtained from the two types of barren conductors are completely different than that obtained by SGH over VMS type ore. SGH is thus able to differentiate between ore-bearing conductors and barren conductors as the Forensic SGH Geochemical signature is different.



- SGH has been described by the Ontario Geological Survey of Canada (OGS) as a “REDOX cell locator”. Many SGH surveys for Gold and other mineral targets can result in multiple types of anomalies, depending on the class of SGH compounds, even over the same target and in the same set of samples. Thus “Apical”, “Nested-Halo”, and “Rabbit-Ear” or “Halo” type SGH anomalies are all typically observed from the effect of REDOX cells that have developed over deposits. REDOX cells are also related to the presence of bacteriological activity.
- The VMS template of SGH Pathfinder Classes uses low and medium weight classes of hydrocarbon compounds. Again, at least three Pathfinder Class group maps, associated with the SGH signature for VMS, must be present to begin to be considered for assignment of a good rating. The Pathfinder Class anomalies in these maps must logically concur and support a consistent interpretation in relation to the expected geochromatographic characteristics of the Pathfinder Class, for a specific area. The SGH Pathfinder Class map(s) shown in this report is usually the most diagnostic for the presence of Volcanic Massive Sulphide based mineralization.



## **SGH DATA INTERPRETATION**

### **DISCLAIMER:**

- This "SGH Interpretation Report" has been prepared to assist the user in understanding the development and capabilities of this Organic based Geochemistry. The interpretation of the Soil Gas Hydrocarbon (SGH) data is in reference to a template or group of SGH classes of compounds specific to a type of mineralization or target that is chosen by the client (i.e. the template for gold, copper, VMS, uranium, etc.). Although the template of SGH Pathfinder Classes that has been developed through research and review of case studies has proven to be able to address many lithologies, Activation Laboratories Ltd. cannot guarantee that the template is applicable to every type of target in every type of environment. The interpretation in this report attempts to identify an anomaly that has the best SGH signature in the survey for the type of mineralization or target chosen by the client. However, this interpretation is not exhaustive and there may be additional SGH anomalies that may warrant interest. It should not be viewed due to the generation of this SGH report, that Activation Laboratories Ltd. has the expertise or is in the business of interpreting geochemical data as a general service. As the author is the originator of the SGH geochemistry, has researched and developed this exploration tool since 1996, and has produced similar interpretations using SGH data for over 500 surveys, he is perhaps the best qualified to prepare this interpretation as assistance to clients wishing to use SGH. Activation Laboratories Ltd. can offer assistance in general suggestions for sampling protocols and in sample grid location design; however we accept no responsibility to the appropriateness of the samples taken. Activation Laboratories Ltd. has made every attempt to ensure the accuracy and reliability of the information provided in this report. Activation Laboratories Ltd. or its employees, does not accept any responsibility or liability for the accuracy, content, completeness, legality, or reliability of the information or description of processes contained in this report. The information is provided "as is" without a guarantee of any kind in the interpretation or use of the results of the SGH geochemistry. The client or user accepts all risks and responsibility for losses, damages, costs and other consequences resulting directly or indirectly from using any information or material contained in this report or using data from the associated spreadsheet of results.

**INTERPRETION OF SGH RESULTS – A10-3206-4206-4432-5183**  
**EXCALIBUR RESOURCES LTD. – STURGEON LAKE SURVEY**

**SGH SURVEY INTERPRETATION – Lines 24-27**

- This report is based on the SGH results from the analysis of a total of 106 soil samples from these submissions for this survey area. This report specifically pertains to just those sample results from Lines 24 through to 27. These four north-south trending transects in the Sturgeon Lake survey area are shown in the map below. The transects are about 100 metres apart with samples spaced at approximately 50 metres. UTM coordinates were provided for mapping of the SGH results for these soil samples. These samples were received by our Thunder Bay lab facility and then shipped to our head Ancaster laboratory where they were subsequently dried and sieved as per the procedure on page 5 of this report.



- The number of samples submitted for this project is adequate to use SGH as an exploration tool for Lines 24 through 27. Note that the SGH data is only reviewed for the particular target deposit type requested, in this case for the presence of a VMS based deposit. It is also assumed that there is only one potential target. To obtain the best interpretation the client should indicate if there are possible multiple targets, say from geophysical data. The possibility of multiple targets in "close proximity" should be known due to potential overlap and increased complexity of resulting geochromatographic anomalies which could alter the interpretation. Based on the size of the narrow targets expected in this Sturgeon Lake project, "close proximity" would mean "within 400 metres".

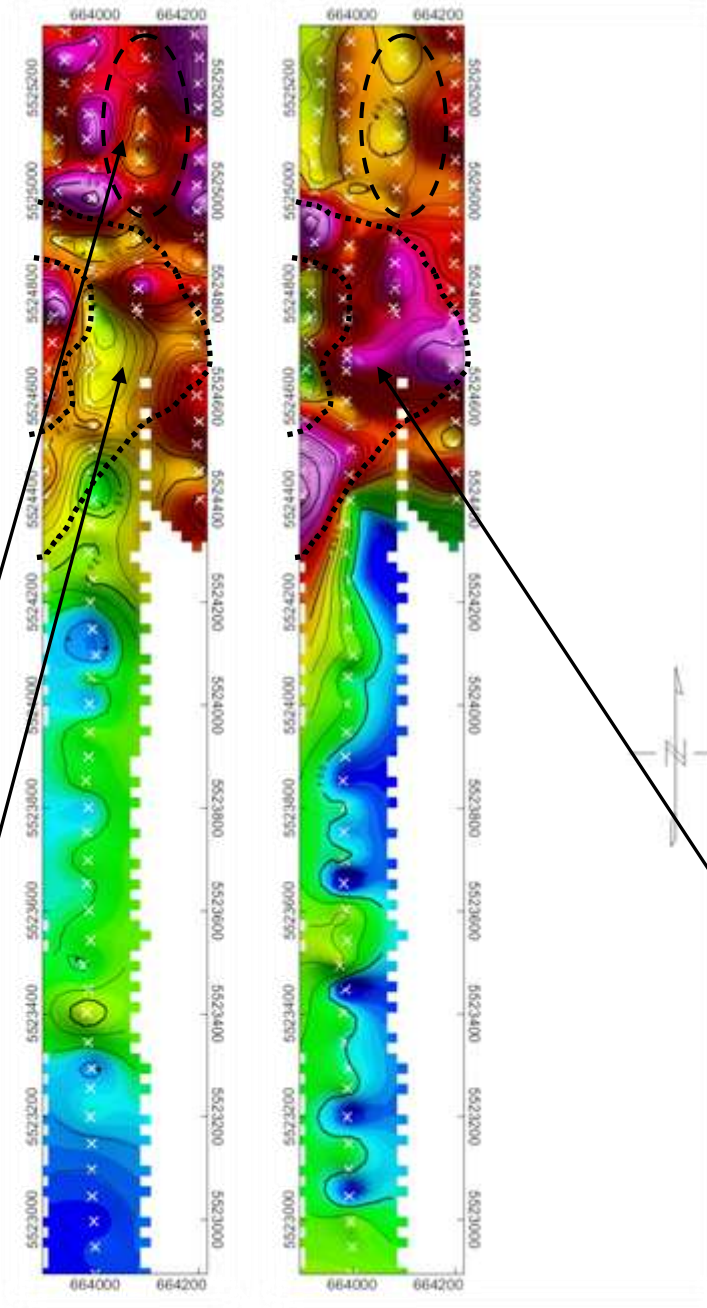
**INTERPRETION OF SGH RESULTS – A10-3206-4206-4432-5183**  
**EXCALIBUR RESOURCES LTD. – STURGEON LAKE SURVEY**

**SGH SURVEY INTERPRETATION – Lines 24-27**

- Note that the associated SGH results are presented in a separate Excel spreadsheet. This raw data is semi-quantitative and is presented in units of pg/g or **parts-per-trillion** (ppt).
- **The overall precision of the SGH analysis for the samples in this SGH survey was excellent** as demonstrated by 8 samples taken from this survey area which were used for laboratory replicate analysis. The average Coefficient of Variation (%CV) of the replicate results for the project samples from lines 24 through 27 was 6.42% which represents an excellent level of analytical performance especially at such low parts-per-trillion concentrations.
- The plan view maps shown on page 22 (and on page 23 in 3D view) are both SGH “Pathfinder Class map” for targeting VMS mineralization and are the same classes previously used for Lines 39 & 40. Each map represents the simple summation of several individual hydrocarbon compound concentrations that are grouped from within the same organic chemical class. SGH Pathfinder Class maps have been shown to be robust as they are each described using from 4 to 14 (unless otherwise stated) chemically related SGH compounds which are simply summed to create each class map. Thus each map has a higher level of confidence as it is “not” illustrating just one compound response. A legend of the SGH classes appears in the SGH data spreadsheet. The overall SGH interpretation rating (page 24) has even a higher level of confidence as it further relies on the consensus between at least three SGH Pathfinder Classes (the other classes are not shown in this report) that together make the signature of the target at depth.
- On the left hand SGH Pathfinder Class map on page 22, a dashed black oval has been applied as the interpretation that outlines a halo anomaly at the very northern extent of the grid designated as Zone “A”. A second area just to the south has been outlined using black dotted lines as Zone “B” which also appears to be a halo or low response type anomaly. These same outlines have been applied to the SGH Pathfinder Class map on the right hand side on page 22. These two Pathfinder Class maps are the same ones previously used in the interpretation for VMS mineralization of the Sturgeon Lake survey Lines 39 and 40. On the right hand map there is another similar halo anomaly for Zone “A” within the dashed oval outline. Zone “B” appears to have developed an apical anomaly within the corresponding low response area on the left hand side map. Both Zone “A” and Zone “B” do not have the same confirmation of a VMS signature as previously found for lines 39 and 40, although REDOX condition do appear to be present that is often indicative of the presence of buried mineralization and bacteriological activity.

**INTERPRETION OF SGH RESULTS – A10-3206-4206-4432-5183**  
**EXCALIBUR RESOURCES LTD. – STURGEON LAKE SURVEY**

**SGH "VMS" PATHFINDER CLASS MAPS – Lines 24-27**



ZONES "A" & "B" - HALO ANOMALIES FROM REDOX CONDITIONS

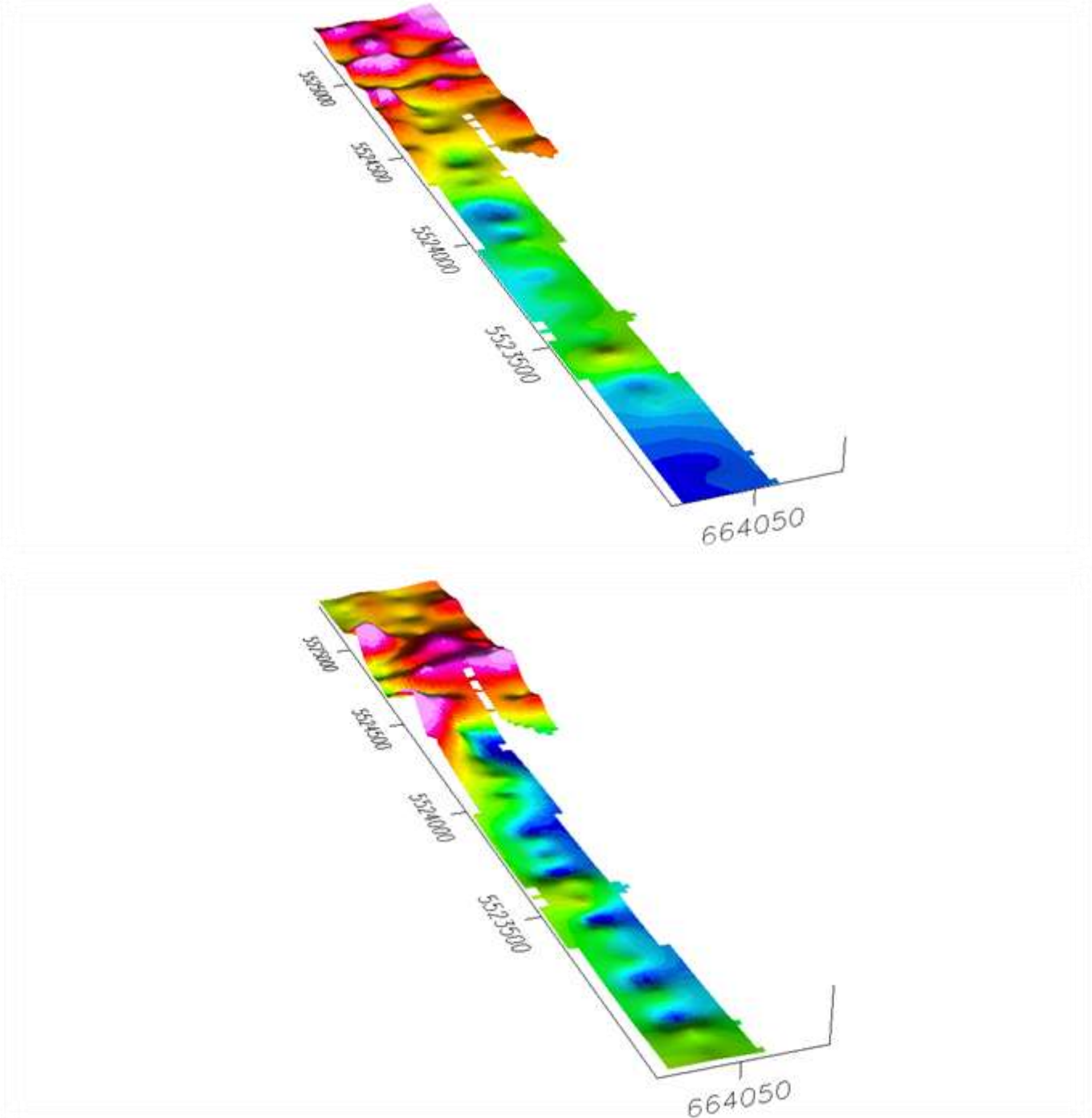
APICAL ANOMALY ZONE "B"



Results represent only the material tested. Actlabs is not liable for any claim/damage from the use of this report in excess of the test cost. Samples are discarded in 90 days unless requested otherwise. This report is only to be reproduced in full.

**INTERPRETION OF SGH RESULTS – A10-3206-4206-4432-5183**  
**EXCALIBUR RESOURCES LTD. – STURGEON LAKE SURVEY**

**SGH "VMS" PATHFINDER CLASS MAP – 3D VIEWS – Lines 24-27**



Results represent only the material tested. Actlabs is not liable for any claim/damage from the use of this report in excess of the test cost. Samples are discarded in 90 days unless requested otherwise. This report is only to be reproduced in full.

**INTERPRETION OF SGH RESULTS – A10-3206-4206-4432-5183**  
**EXCALIBUR RESOURCES LTD. – STURGEON LAKE SURVEY.**

**SGH SURVEY INTERPRETATION RATING – Lines 24-27**

- Other SGH Pathfinder Class maps (not shown at this price point) also agree on the assignment of the interpretations as the black dashed oval over Zone "A" and black dotted outline over Zone "B" on page 22. After review of all of the SGH Pathfinder Class maps, the SGH results from these soil samples suggest a **"rating of 2.0"** for each of the Zones "A" and "B" as shown on the plan view maps for Lines 24 through 27 on page 22. SGH predicts that mineralization may exist directly beneath these areas as a vertical projection but the SGH signature does not imply that this is VMS based mineralization. This rating is based on a scale of 6.0 in 0.5 increments, with a value of 6.0 being the best. This rating represents the similarity of these SGH results with case studies over a Volcanic Massive Sulphide (VMS) type target, to the SGH case studies conducted at the Hanson Lake VMS deposit in Saskatchewan, the South Gilmour VMS deposit in New Brunswick and the Cross Lake VMS deposit in Ontario. The degree of confidence in the rating only starts to be "good" at a level of 4.0.
- These interpretations are based only on this survey and on these SGH results. A value of 4.0 from a maximum rating of 6.0 was subtracted as the SGH signature present in the northern grid area of Lines 24-27 does not match that of an SGH based VMS signature.
- The SGH VMS template used has been shown to be robust to a wide range of VMS lithology including Kidd Creek, Irish and Kuroko style deposits.
- Potential drill targets are not designated relative to VMS type mineralization due to the low rating.
- It is recommended that this survey be re-interpreted using a different SGH signature template, using different SGH Pathfinder Class maps to potentially identify a different type of mineralization that may be present.
- The client should use a combination of these SGH results and its report with additional geochemical, geophysical, and geological information to possibly obtain a more confident and precise target location.

## **IN-FILL SAMPLE RECOMMENDATIONS FOR SGH ANALYSIS**

- Based on the results of this report and/or other information, the client may decide that infill sampling may be warranted. To obtain the best results from additional sampling for SGH it is recommended that sample locations within, or bordering, the area of interest be re-sampled rather than combining new results with the sample data from the initial survey. Although several SGH surveys have previously been easily and directly, combined without data leveling, it cannot be guaranteed that data leveling will not be required. It has been found that data leveling is more apt to be required should the new samples be collected under significantly different environmental conditions than during the initial sample survey, i.e. summer collection versus winter collection. The process of data leveling adds a minimum of 3 to 5 days of work to conduct the additional data evaluation, develop additional plots of the results, conduct new interpretations, and in additional report descriptions. Results from data leveling is also always considered "an approximation" thus having a lower level of confidence that newly re-sampled locations would have. As of September 2010, an additional cost will be invoiced should data leveling operations be required if the client requests that two SGH data sets be interpreted and reported together. Thus re-sampling locations will provide a faster turnaround time for results and provide more accurate and confident surveys for evaluation and aid in deciding specific drill targets.

## Cautionary Note Regarding Assumptions and Forward Looking Statements

The statements and target rating made in the Soil Gas Hydrocarbon (SGH) interpretive report or in other communications may contain certain forward-looking information related to a target or SGH anomaly.

Statements related to the rating of a target are based on comparison of the SGH signatures derived by Activation Laboratories Ltd. through previous research on known case studies. The rating is not derived from any statistics or other formula. The rating is a subjective value on a scale of 0 to 6 relative to the similarity of the SGH signature reviewed compared to the results of previous scientific research and case studies based on the analysis of surficial samples over known ore bodies. No information on other geochemistries, geophysics, or geology is usually available as additional information for the interpretation and assignment of a rating value unless otherwise stated. The rating does not imply ore grade and is not to be used in mineral resource estimate calculations. References to the rating should be viewed as forward-looking statements to the extent that it involves a subjective comparison to known SGH case studies. As with other geochemistries, the implied rating and anticipated target characteristics may be different than that actually encountered if the target is drilled or the property developed.

Activation Laboratories Ltd. may also make a scientifically based reference in this interpretive report to an area that might be used as a drill target. Usually the nearest sample is identified as an approximation to a "possible drill target" location. This is based only on SGH results and is to be regarded as a guide based on the current state of this science.

Unless stated, Activation Laboratories Ltd. has not physically observed the exploration site and has no prior knowledge of any site description or details. Actlabs makes general recommendations for sampling and shipping of samples. Unless stated, the laboratory does not witness sampling, does not take into consideration the specific sampling procedures used, season, handling, packaging, or shipping methods. The majority of the time, Activation Laboratories Ltd. has had no input into sampling survey design. Where specified Activation Laboratories Ltd. may not have conducted sample preparation procedures as it may have been conducted at the client's assigned laboratory. Although the Company has attempted to identify important factors that could cause actual actions, events or results to differ scientifically which may impact the associated interpretation and target rating from those described in forward-looking statements, there may be other factors that cause actions, events or results not to be as anticipated, estimated or intended.

In general, any statements that express or involve discussions with respect to predictions, expectations, beliefs, plans, projections, objectives, assumptions, future events or performance are not statements of historical fact. These "scientifically based educated theories" should be viewed as "forward-looking statements".

Readers of this interpretive report are cautioned not to place undue reliance on forward-looking information. Forward looking statements are made based on scientific beliefs, estimates and opinions on the date the statements are made and the interpretive report issued. The Company undertakes no obligation to update forward-looking statements or otherwise revise previous reports if these beliefs, estimates and opinions, future scientific developments, other new information, or other circumstances should change that may affect the analytical results, rating, or interpretation.

Actlabs nor its employees shall be liable for any claims or damages as a result of this report,  
any interpretation, omissions in preparation, or in the test conducted.  
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Date Submitted: August 23, 2010

Date Analyzed: September 20, 2010  
Data Processed: September 29, 2010

Interpretation Report: October 25, 2010

**Excalibur Resources Ltd.**Excalibur Resources Ltd.,  
20 Adelaide St. E., Suite 400,  
Toronto, Ontario, Canada. M5C 2T6**Attention: Dr. Jim Kendall, President & CEO****RE: Your Reference: Sturgeon Lake Survey – Lines 24 - 27****CERTIFICATE OF ANALYSIS**

106 Soil samples were received and then shipped to our Ancaster Laboratory for analysis via the Actlabs Thunder Bay facility. These samples were prepared at our Ancaster Laboratory according to our Code S4 procedure.

The following analytical package was requested: Code SGH – Soil Gas Hydrocarbon Geochemistry

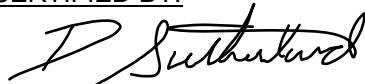
**REPORT/WORKORDER: A10-3506 / A10-4206 / A10-4432 / A10-5183**

This report may be reproduced without our consent. If only selected portions of the report are reproduced, permission must be obtained. If no instructions were given at the time of sample submittal regarding excess material, it will be discarded within 90 days of this report. Our liability is limited solely to the analytical cost of these analyses. Test results are representative only of the material submitted for analysis.

**Notes:**

The SGH – Soil Gas Hydrocarbon Geochemistry is a semi-quantitative analytical procedure to detect and measure 162 hydrocarbon compounds as the organic signature in the sample material collected from a survey area. It is not an assay of mineralization but is a predictive geochemical tool used for exploration. This certificate pertains only to the SGH data presented in the associated Microsoft Excel spreadsheet of results.

The author of this SGH Interpretation Report, Mr. Dale Sutherland, is the creator of the SGH organic geochemistry. He is a Chartered Chemist (C.Chem.) and Forensic Scientist specializing in organic chemistry. He is not a professional geologist or geochemist.

**CERTIFIED BY:**A handwritten signature in black ink, appearing to read "D Sutherland". The signature is written in a cursive, flowing style.

Dale Sutherland, B.Sc.,B.Sc.,B.Ed.,C.Chem.  
Forensic Scientist, Organics Manager,  
Director of Research  
Activation Laboratories Ltd.