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GWYN LAKE GOLD PROSPECT, NORTH-WESTERN ONTARIO

REPORT ON THE 2021 ROCK GEOCHEMISTRY SURVEY

Thunder Bay Mining Division

McComber and Vincent Townships
(G-0166, G-0163)

NTS N49.63464 Latitude, W87.77830 Longitude
UTM (NAD83) Zone 16U
443800E and 5498300N

Prepared for

Empire Metals Corp.
702-889 West Pender Street
Vancouver, B.C., V6C 3B2
Canada

by

Bohumil B. Molak, Ph.D., P.Geo (BC) and Blaze Ettlinger, BSc.

Date: February 11, 2022

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SUMMARY

The Gwyn Lake Gold Prospect ("GLGP") is a greenstone-hosted gold mineralization target situated approximately 15 km east of Beardmore in North-western Ontario. It lies within the Beardmore-Geraldton Gold Camp ("BGGC"), a well-known gold mining district that hosts a strata-bound gold mineralization associated with banded iron formations ("BIF"), which has been mined since the early 20th century.

Buck Lake Ventures Ltd. ("Buck") optioned the GLGP in 2003 from the claim holder F. A. Houghton and conducted the rock geochemistry surveys in 2004 to 2006. During the period 2008 – 2010 the company conducted extensive road cutting, stripping and systematic channel and chip sampling. Two new claims adjoining the GLGP on the west were added to the claim block. In 2010, Buck's successor Ultra Uranium Corp. ("Ultra") optioned 70 % interest to Pierre Enterprises Ltd. Under a new name Empire Metals Corp. ("Empire") the company continues to operate the GLGP. In 2020 the claim block was extended by 23 new claims north of the HW11, which are connected to the main claim block by a "corridor" claim # 552560.

In 2020, Ontario Ministry of Northern Development and Mines granted a 12 months, COVID-19 related exclusion to Empire. In 2021, the fieldwork was resumed and the new results from southern BIF zone indicate that the previously located gold mineralization at the Historical Showing may extend farther eastwards. If confirmed, the southern mineralized BIF zone connecting the Dominion Showing - #12 Showing - Gwyn Lake West Extension - Gwyn Lake Showing – Gwyn Lake East Extension – Historical showing could be augmented to total approximately 3.6 kilometers in strike length. While most assays of the arsenopyrite-rich samples from the GLGP returned anomalous gold values, the arsenopyrite-rich samples from the easternmost portion of the GLGP did not return significant gold.

Further work on the GLGP is warranted and the writers recommend systematic outcrop mapping and sampling of the southern BIF zone eastwards of the Historical showing and the northern BIF zone east of the Orion, Blacksmith showings as well as east of the Camp Lake showing. Further prospecting of the northern claim block is also recommended.

1. INTRODUCTION

Empire retained the writers in September 2021 to conduct an outcrop mapping and sampling program on the GLGP and to prepare a report with recommendations for further work. The first writer is a consulting geologist and a Professional Geoscientist (BC) with over fifty years of experience in mineral prospecting, exploration and research. The first writer with two co-writers, both junior geologists and with three field assistants worked on the GLGP from September 28 to October 12, 2021. The fieldwork included September 28, 2021 mobilization and Octobr 12, 2021 demobilization. Two rental ATVs and two 4x4 trucks were used and the accommodation was provided from either Beardmore or Jellicoe. The fieldwork consisting of prospecting, outcrop mapping, chip and float sampling took place on the cell claims 220827, 303118, 191691, 191714, 207262, 314384, 199259, 291036, 107844, 283719, 283720, 145034, 247839 and 110057. After the fieldwork, the writers dispatched samples to Activation Laboratories Ltd. in Thunder Bay for analysis.

For parts of this report the writers relied on previous assessment reports written by B. Molak and F. Houghton and on the other experts' assessment reports available from the Ministry of Northern Development and Mines, Ontario ("MNDM") website. The information by other experts who are not qualified persons for this project is generally presented without comments, and is to the best of writer's knowledge and experience correct and suitable for inclusion in this report. The writers took steps to verify the previous exploration and assay results by re-examining and re-sampling some of the anomalous areas. The sources of all information not based on personal examination are quoted in the References item. The claims description provided herein relates to the status as of September 09, 2021.

1.1. Location and Access

The Gwyn Lake Gold Prospect lies approximately 200 km north-northeast of Thunder Bay in North-western Ontario, within the Thunder Bay Mining Division (Figs. 1, 2). The prospect is centered about 15 kilometers east of Beardmore at N49.63464 latitude and W87.77830 longitude (map sheet G-0166 and G-0163) and the UTM coordinates for the approximate center

Fig. 1: Gwyn Lake Gold Prospect, location map.

of the prospect are approximately 443800 E and 5498000 N (NAD83) on the NTS UTM zone 16U. The prospect lies in a previously under-explored area.and is comprised of 116 single cell claims, 15 boundary cell claims and one multi-cell claim covering approximately 2,590 hectares (25.9 sq km).

1.2. The Claims

Table 1: GLGP claim status as of August 31, 2021

No.	Tenure ID	Township / Area	Tenure Type	Anniversary Date
1	533850	VINCENT	Single Cell Mining Claim	2021-10-25
2	533851	VINCENT	Single Cell Mining Claim	2021-10-25
3	533852	VINCENT	Single Cell Mining Claim	2021-10-25
4	533853	VINCENT	Single Cell Mining Claim	2021-10-25
5	533854	VINCENT	Single Cell Mining Claim	2021-10-25
6	107844	MCCOMBER	Single Cell Mining Claim	2021-11-10
7	307665	VINCENT	Boundary Cell Mining Claim	2021-11-10
8	110057	MCCOMBER	Single Cell Mining Claim	2021-11-24
9	110215	MCCOMBER	Single Cell Mining Claim	2021-11-24
10	111057	MCCOMBER	Single Cell Mining Claim	2021-11-24
11	123123	MCCOMBER	Single Cell Mining Claim	2021-11-24
12	139036	MCCOMBER	Single Cell Mining Claim	2021-11-24
13	142303	MCCOMBER	Single Cell Mining Claim	2021-11-24
14	145034	MCCOMBER	Single Cell Mining Claim	2021-11-24
15	146487	MCCOMBER	Single Cell Mining Claim	2021-11-24
16	160594	MCCOMBER	Single Cell Mining Claim	2021-11-24
17	173602	MCCOMBER	Single Cell Mining Claim	2021-11-24
18	181492	MCCOMBER	Single Cell Mining Claim	2021-11-24
19	187631	MCCOMBER	Single Cell Mining Claim	2021-11-24
20	199843	MCCOMBER	Single Cell Mining Claim	2021-11-24
21	203847	MCCOMBER	Single Cell Mining Claim	2021-11-24
22	239779	MCCOMBER	Single Cell Mining Claim	2021-11-24
23	239780	MCCOMBER	Single Cell Mining Claim	2021-11-24
24	241776	MCCOMBER	Single Cell Mining Claim	2021-11-24
25	241777	MCCOMBER	Single Cell Mining Claim	2021-11-24
26	247839	MCCOMBER	Single Cell Mining Claim	2021-11-24
27	259853	MCCOMBER	Single Cell Mining Claim	2021-11-24
28	261813	MCCOMBER	Single Cell Mining Claim	2021-11-24
29	268594	MCCOMBER	Single Cell Mining Claim	2021-11-24
30	268595	MCCOMBER	Single Cell Mining Claim	2021-11-24
31	276527	MCCOMBER	Single Cell Mining Claim	2021-11-24
32	276528	MCCOMBER	Single Cell Mining Claim	2021-11-24
33	283720	MCCOMBER	Single Cell Mining Claim	2021-11-24
34	284065	MCCOMBER	Single Cell Mining Claim	2021-11-24
35	307085	MCCOMBER	Single Cell Mining Claim	2021-11-24
36	307086	MCCOMBER	Boundary Cell Mining Claim	2021-11-24

37	310369	MCCOMBER	Single Cell Mining Claim	2021-11-24
38	315802	MCCOMBER	Single Cell Mining Claim	2021-11-24
39	315803	MCCOMBER	Single Cell Mining Claim	2021-11-24
40	326525	MCCOMBER	Boundary Cell Mining Claim	2021-11-24
41	328519	MCCOMBER	Single Cell Mining Claim	2021-11-24
42	328520	MCCOMBER	Single Cell Mining Claim	2021-11-24
43	335238	MCCOMBER	Single Cell Mining Claim	2021-11-24
44	110877	VINCENT	Single Cell Mining Claim	2021-12-15
45	137117	VINCENT	Boundary Cell Mining Claim	2021-12-15
46	142570	VINCENT	Boundary Cell Mining Claim	2021-12-15
47	159179	VINCENT	Boundary Cell Mining Claim	2021-12-15
48	181056	MCCOMBER	Single Cell Mining Claim	2021-12-15
49	187748	MCCOMBER,VINCENT	Boundary Cell Mining Claim	2021-12-15
50	187749	VINCENT	Single Cell Mining Claim	2021-12-15
51	199258	VINCENT	Single Cell Mining Claim	2021-12-15
52	199259	VINCENT	Single Cell Mining Claim	2021-12-15
53	201271	VINCENT	Boundary Cell Mining Claim	2021-12-15
54	202457	VINCENT	Single Cell Mining Claim	2021-12-15
55	220826	VINCENT	Boundary Cell Mining Claim	2021-12-15
56	220827	VINCENT	Single Cell Mining Claim	2021-12-15
57	220828	VINCENT	Single Cell Mining Claim	2021-12-15
58	220829	VINCENT	Single Cell Mining Claim	2021-12-15
59	237886	VINCENT	Single Cell Mining Claim	2021-12-15
60	257340	VINCENT	Single Cell Mining Claim	2021-12-15
61	258485	VINCENT	Single Cell Mining Claim	2021-12-15
62	275260	VINCENT	Single Cell Mining Claim	2021-12-15
63	283719	MCCOMBER	Single Cell Mining Claim	2021-12-15
64	291037	MCCOMBER	Single Cell Mining Claim	2021-12-15
65	303118	VINCENT	Single Cell Mining Claim	2021-12-15
66	305674	VINCENT	Single Cell Mining Claim	2021-12-15
67	307664	VINCENT	Boundary Cell Mining Claim	2021-12-15
68	322634	VINCENT	Boundary Cell Mining Claim	2021-12-15
69	324613	VINCENT	Boundary Cell Mining Claim	2021-12-15
70	538458	IRWIN, MCCOMBER	Single Cell Mining Claim	2022-01-07
71	538459	IRWIN, MCCOMBER	Single Cell Mining Claim	2022-01-07
72	538460	IRWIN, MCCOMBER	Single Cell Mining Claim	2022-01-07
73	538461	IRWIN, MCCOMBER	Single Cell Mining Claim	2022-01-07
74	538462	IRWIN, MCCOMBER	Single Cell Mining Claim	2022-01-07
75	538463	IRWIN, MCCOMBER	Single Cell Mining Claim	2022-01-07
76	538464	IRWIN, MCCOMBER	Single Cell Mining Claim	2022-01-07
77	538465	IRWIN, MCCOMBER	Single Cell Mining Claim	2022-01-07

78	538466	MCCOMBER	Single Cell Mining Claim	2022-01-07
79	538467	MCCOMBER	Single Cell Mining Claim	2022-01-07
80	538468	MCCOMBER	Single Cell Mining Claim	2022-01-07
81	538469	MCCOMBER	Single Cell Mining Claim	2022-01-07
82	538470	MCCOMBER	Single Cell Mining Claim	2022-01-07
83	538471	MCCOMBER	Single Cell Mining Claim	2022-01-07
84	538472	MCCOMBER	Single Cell Mining Claim	2022-01-07
85	538473	MCCOMBER	Single Cell Mining Claim	2022-01-07
86	538474	MCCOMBER	Single Cell Mining Claim	2022-01-07
87	538475	MCCOMBER	Single Cell Mining Claim	2022-01-07
88	538476	MCCOMBER	Single Cell Mining Claim	2022-01-07
89	538477	MCCOMBER	Single Cell Mining Claim	2022-01-07
90	538478	MCCOMBER	Single Cell Mining Claim	2022-01-07
91	538479	MCCOMBER	Single Cell Mining Claim	2022-01-07
92	110216	MCCOMBER	Single Cell Mining Claim	2022-01-17
93	122218	MCCOMBER	Single Cell Mining Claim	2022-01-17
94	141088	MCCOMBER	Single Cell Mining Claim	2022-01-17
95	141089	MCCOMBER	Single Cell Mining Claim	2022-01-17
96	187632	MCCOMBER	Single Cell Mining Claim	2022-01-17
97	199844	MCCOMBER	Single Cell Mining Claim	2022-01-17
98	204381	VINCENT	Boundary Cell Mining Claim	2022-01-17
99	236283	MCCOMBER	Single Cell Mining Claim	2022-01-17
100	254954	MCCOMBER	Single Cell Mining Claim	2022-01-17
101	254955	MCCOMBER	Single Cell Mining Claim	2022-01-17
102	261282	MCCOMBER	Boundary Cell Mining Claim	2022-01-17
103	290953	MCCOMBER	Single Cell Mining Claim	2022-01-17
104	307639	VINCENT	Boundary Cell Mining Claim	2022-01-17
105	580143	VINCENT	Single Cell Mining Claim	2022-01-17
106	580369	VINCENT	Single Cell Mining Claim	2022-01-17
107	580370	VINCENT	Single Cell Mining Claim	2022-01-17
108	580371	VINCENT	Single Cell Mining Claim	2022-01-17
109	107843	MCCOMBER	Single Cell Mining Claim	2022-02-20
110	137627	VINCENT	Single Cell Mining Claim	2022-02-20
111	143670	VINCENT	Single Cell Mining Claim	2022-02-20
112	151132	MCCOMBER,VINCENT	Single Cell Mining Claim	2022-02-20
113	151532	MCCOMBER	Single Cell Mining Claim	2022-02-20
114	193665	MCCOMBER	Single Cell Mining Claim	2022-02-20
115	197351	MCCOMBER	Single Cell Mining Claim	2022-02-20
116	207263	MCCOMBER,VINCENT	Single Cell Mining Claim	2022-02-20
117	207264	MCCOMBER,VINCENT	Single Cell Mining Claim	2022-02-20
118	216435	MCCOMBER	Single Cell Mining Claim	2022-02-20

119	236043	MCCOMBER	Single Cell Mining Claim	2022-02-20
120	245163	MCCOMBER	Single Cell Mining Claim	2022-02-20
121	253197	MCCOMBER,VINCENT	Single Cell Mining Claim	2022-02-20
122	273250	MCCOMBER,VINCENT	Single Cell Mining Claim	2022-02-20
123	283721	MCCOMBER	Single Cell Mining Claim	2022-02-20
124	291036	MCCOMBER	Single Cell Mining Claim	2022-02-20
125	300694	MCCOMBER	Single Cell Mining Claim	2022-02-20
126	300695	MCCOMBER	Single Cell Mining Claim	2022-02-20
127	317960	MCCOMBER	Single Cell Mining Claim	2022-02-20
128	319166	MCCOMBER	Single Cell Mining Claim	2022-02-20
129	332933	MCCOMBER	Single Cell Mining Claim	2022-02-20
130	332934	MCCOMBER	Single Cell Mining Claim	2022-02-20
131	333063	MCCOMBER,VINCENT	Single Cell Mining Claim	2022-02-20
132	552560	MCCOMBER	Multi-cell Mining Claim	2022-06-24

Recorded holders of the adjacent claims are Maki, N. R. (legacy claims 1138900, 1197034, 603295, 603296 and 603297), TLC Explorations Inc. (legacy claims 4203994, 4210062 and 4215198) and Skalesky A. (legacy claim 862665). Adjoining to the east and west are active mining leases owned by Goldstone Resources Inc., Tombill Mines Ltd., and by other undisclosed holders.

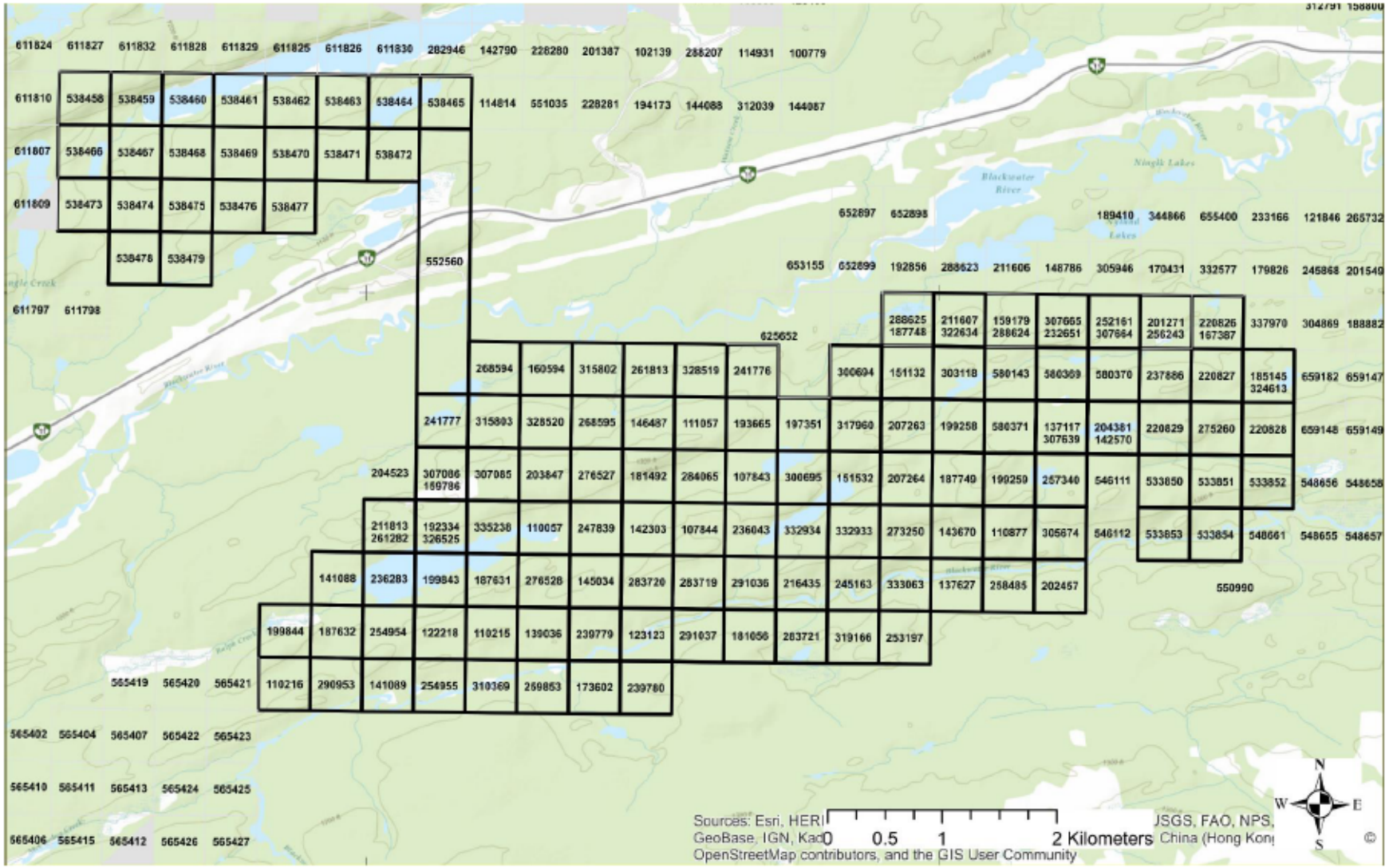

Fig. 2: Gwyn Lake Gold Prospect, claim map.

1.3. Topography, Vegetation and Local Resources

Topography of the GLGP area is flat to gently rolling with elongated hills aligned east-northeast, i. e. parallel to regional geological structure. The relief ranges from 320 to 400 meters above sea level. The bedrock is exposed in places in the form of elongated ridges and /or scarps of various lengths and heights.

Vegetation consists of mature stands of spruce, pine, balsam and birch with moss-covered regolith and some underbrush in the forested areas. Patchy areas of thick willow bushes are common. Swampy areas and lakes occupy much of the lower relief and often contain willow, dwarf cedar and labrador tooth vegetation. The climate in the area is typical of north-western Ontario. Warm summers and long, cold winters with average annual temperatures from – 37 to + 35 ºC, annual rainfall from 50 to 63 centimeters and snow precipitation from 13 to 25 centimeters (water equivalent). The prevailing wind direction is westerly, most of the year.

Power and gas are within two kilometers of the claim boundary and qualified manpower is available in Beardmore and nearby communities. The town of Thunder Bay is the closest industrial centre that provides most services needed for mineral exploration.

1.4. History

Early 1900's: the first production phase from the gold mines located within BGGC, which ranked among the top five in Canada with production of 4.1 million ounces (127.4 tonnes) of gold from 19.5 million tons of ore and a combined average grade 0.21 oz gold/ton (6.5 g/t), (Malouf, 2003).

Early 1930s: extensive exploration including trenching, drilling and geophysical surveys conducted on the Vega-Craskie claims east of Gwyn Lake.

1929: trenching on the former Colins, Webster Holmes and Humphries holdings (Langford, 1929). One trench uncovered a 10 feet (3.04 meters) wide iron band running along strike for

30 ft and the best gold assay returned $ 3.20 over five feet (1.52 meters). Minor exploration was conducted from the Gwyn Lake area including hand trenching and sampling. One of the MNDM reports describes a mineralization within the southern zone, comprised of several sub-parallel veins, the largest being 50 meters long, five meters thick and open in both directions. Chip sampling from the vein returned up to 1.23 oz/t (38.25 g/t) gold over two feet.

1985: an airborne magnetometer and VLF EM geophysical survey flown over the GLGP. Three prominent east – west trending geophysical anomalies were detected.

2003-2005: Buck Lake Ventures Ltd. ("Buck") optioned the GLGP from F. A. Houghton and conducted a reconnaissance program to map, trench and sample the geophysical anomalies. Grab and chip samples from the hand dug channels from the North and South zones included 4.56 ppm over 2.5 meters and 7.44 ppm gold over 0.27 meter in the former and up to 5.33 ppm gold over 2 meters in the latter zone (Brickner, 2005; Molak et al., 2006).

2007-2009: Buck changed its name to Ultra Uranium Corp. ("Ultra") and optioned the New Claims (13 units) adjoining the Extension Claims in the southwest. Ultra's work included an extensive trail cutting, stripping and systematic channel-sampling of the BIF exposures within the GLGP. More than 500 continuous channel, chip and grab samples were collected and many assays from the Gwyn Lake showing, Ralph Lake showing, Camp Lake showing, # 12 showing, Blacksmith – Orion and other showings returned ore-grade gold values (Molak, 2009).

2010: Ultra entered into an option agreement with Pierre Enterprises Ltd. ("Pierre") and the exploration continued by stripping and continuous channel sampling of the historical Orion – Blacksmith showing and the Gwyn Lake showing extensions (Molak, 2010).

2014 - 2017: Under a new name Ultra Resources Corp., and later Empire Rock Minerals Inc. ("Empire"), the company further explored the GLGP by chip, grab and channel sampling of the Dominion Showing, Ralph Lake Showing, Gwyn Lake Showing, # 11 Showing and the claims 3011477, 3011478, 3011488. Several continuous channel samples from Dominion,

Ralph and Gwyn Lake showings returned ore-grade gold values (Molak and Houghton, 2014, 2016, 2017, 2018).

1.5. Regional Geology

The Beardmore-Geraldton area lies along the southern margin of the Archean Wabigoon subprovince of the Superior Province within the Canadian Shield. It is flanked by the Quetico subprovince in the south and by the Wawa subprovince in the north. The region consists of shear-bounded, interleaved, meta-sedimentary and meta-volcanic units of Archean age, which are typically intruded by numerous bodies of various compositions. The units comprised in the area were imbricated between 2,696 and 2,691 Ma, during the thrusting and accretion of the Wabigoon, Quetico and Wawa sub-provinces. Subsequent deformation events following the accretion of these sub-provinces formed the regional BGGC.

The greenstone belts at the Central Zone of the central Wabigoon subprovince (~ 2.7 Ga) show evidence of an oceanic environment (Tomlinson et al., 1997). They are believed to be ancient volcanic arcs and/or adjacent submarine troughs. Comprised in them are banded iron formations ("BIF"), which are made up of repeated layers of iron oxides (magnetite, hematite) alternating with bands of iron-poor shale and chert. The BIFs may vary between carbonate-oxide iron-formation and arsenical sulphide-silicate iron-formation. Metamorphic grade ranges from lowest greenschist to upper amphibolite facies. Gold occurs as inclusions in massive sulphides or disseminations made of pyrite, pyrrhotite and arsenopyrite or in native form in altered and sheared zones, and conformable or crosscutting quartz veins and veinlets associated with BIFs.

Metallogenetically, the mineralization at Gwyn Lake can be classified as an iron (ironstone) formation-hosted gold mineralization. Related metallogenetic styles include mesothermal vein mineralization (McMillan, 1996a), gold-bearing quartz veins, also termed lode veins, greenstone gold, lode gold, mesothermal gold-quartz veins, shear-hosted lode gold or low-sulphide gold-quartz veins (Ash and Alldrick, 1996), lode gold banded iron-formations (Gross, 1996) and turbidite-hosted Au-quartz veins (McMillan, 1996b). Examples of iron formation-hosted gold mineralizations include Lupin and Cullaton Lake B-Zone (Northwest Territories,

Canada), Detour Lake, Madsen Red Lake, Pickle Crow, Musselwhite, Dona Lake, (Ontario, Canada), Homestake (South Dakota, USA), Mt. Morgans (Western Australia); Morro Velho and Raposos, Mineas Gerais (Brazil); Vubachikwe and Bar 20 (Zimbabwe); Mallappakoda, Kolar District (India) (Boyle, 1979, Fyon et al., 1992, Fripp,1976, Kerswill 1993, Padgham and Brophy 1986, Rye and Rye 1974), Siddaiah et al. 1994, Thorpe and Franklin 1984, Vielreicher et al. 1994).

Blackburn et al. (1991) described two types of gold mineralization within the BGGC, the first being shear-related quartz veining and the second being pyritized BIFs. Sulphide replacement of magnetite occurs within banded iron formations, which are interbedded in the meta-volcanic greenstone. The replacement of magnetite with pyrite in the BIF followed development of a late, regional cleavage along the Wabigoon - Quetico subprovince boundary and accompanied veining and gold deposition in shear zones.

Based on classification of the Canadian gold deposits (Poulsen et al., 2000), the Gwyn Lake prospect belongs to the family of Archean gold deposits in the Superior and Slave Provinces. The Archean terranes in Canada contain an estimated 8,122 tonnes of gold, accounting for approximately 80 per cent of the country's production and reserves. In both metallogenetic provinces, the gold deposits are hosted mainly by supracrustal sequences and coeval intrusions. The majority of them occur within, or immediately adjacent to greenstone belts, commonly in spatial association with crustal-scale fault zones marking lithological boundaries.

1.6. Local Geology and Mineralization

The Archean to Proterozoic greenstone belt formation on the GLGP hosts several parallel to sub-parallel, gold-bearing east-northeast-trending BIFs. Both, the greenstones and the BIFs are folded and deformed and the latter contains alteration and shear zones and conformable or cross-cutting quartz veins, which are the principal hosts for the gold mineralization. The principal ore minerals are pyrite, arsenopyrite, magnetite, pyrrhotite, and subordinate chalcopyrite, sphalerite, galena, stibnite, native gold and rare gold tellurides. Visible gold inclusions up to 0.5 millimeter in diameter in arsenopyrite from the Ralph Lake showing were

reported (Harris in: Molak, 2009). Gold occurs in a native form, but more commonly in association with disseminated, or massive sulphides, mainly arsenopyrite. The mineralization commonly occurs in the axial plane cleavage areas or in the fold hinges.

The most significant gold mineralization at GLGP is associated with southern magnetic anomaly, which extends in east-north-east direction throughout the property. The mineralized zone connects the Dominion Showing - # 12 showing – Gwyn Lake West – Gwyn Lake – Gwyn Lake East showings – Historical Showing and appears to be continuous albeit several swampy areas occur within the strip, which haven't been explored (Molak, 2009, Molak & Houghton, 2010, 2015a, 2015b, 2017, 2018). If combined the mineralized zone measures more than 3 kilometers along strike and our new (2021) results indicate that it extends further east based on the finding of an ore-grade gold outcrop about 600 meters east-north-east of the Historical Showing. This mineralized strip appears to be a suitable future drilling target.

Airborne magnetic and electromagnetic anomalies clearly delineate the BIFs and are suitable guides to mineralization. The gold-mineralized alteration and shear zones may also occur in the weakly-magnetic greenstone and/or BIF, such as those adjoining the GLGP to the north.

For more information on the regional and local geology we refer to previous reports by Molak et al. (2006), Molak (2009), Molak and Houghton (2010, 2015a, 2015b, 2017 and 2018).

2. 2021 ROCK GEOCHEMISTRY SURVEY

The writer aided by junior Geologists Blaze Ettlinger, BSc and Jordan Dahle, MSc and field assistants Robert Eyolfson, Michael Goodman and Philip Houghton conducted a rock geochemistry program on the GLGP from September 28 to October 12 2021. The work objective was to locate and sample the BIFs and/or quartz veins with a potential to host gold and/or platinum group mineralization. The samples were collected in 7 areas designated from A to G (blue rectangles in Fig. 3), which are situated on the cell claims 107843, 110877, 143670,185145, 187749, 199258, 199259, 220827, 258485, 283720, 300695, 538477, 538479,

580143 and 580371 in the main (southern) and the northwestern portions of the claim block. A total of 80 chip and/or float samples were collected and submitted for analysis to Activation Laboratories Ltd. in Thunder Bay.

2.1. Itinerary

September 28. 2021: B. Molak, PGeo, (BM) and R. Eyolfson (RE) arrive at Beardmore and together with field assistants M. Goodman (MG) and P. Houghton (PH) prepare for the fieldwork.

September 29, 2021: MG transports two ATVs toward the GLGP and together with BM and RE access the GLGP via logging roads from the northeast. MG, BM and RE remove the fallen trees and shrubs from the trails using a chain saw, then ride and walk to area C, traverse the claim 580143 to locate greenstone, BIF and/or gabbro outcrops. One chip sample 614551 taken from an outcrop located at a beaver dam (Figs. 7).

September 30, 2021: BM, RE and MG ride to area C, cell claims 580143, 580371 and 199258 to locate greenstone, BIF and/or gabbro outcrops and to collect rock samples for analysis (Fig. 7). Two chip samples 614552 and 614553 collected.

October 1, 2021: BM, RE, MG and PH ride to area C cell claims 580143, 580371 and 199258 to locate greenstone, BIF and/or gabbro outcrops. While MG and PH clean the ATV trail from fallen trees and shrubs, BM and RE locate and expose an outcrop with a quartz vein striking east – west on top of an elongated ridge and collect five rock samples 614554 to 614558 for analysis (Fig. 7).

October 2, 2021: BM, RE, MG and PH ride to area C cell claims 580371 and 199258 to locate greenstone, BIF and/or gabbro outcrops, expose an outcrop with a quartz vein striking east – west on top of an elongated ridge and to collect twelve rock samples for analysis (Figs. 7, 8). B. Ettlinger BSc (BE) and J. Dahle, MSc (JD) arrive from Vancouver to join the team and work the GLGP.

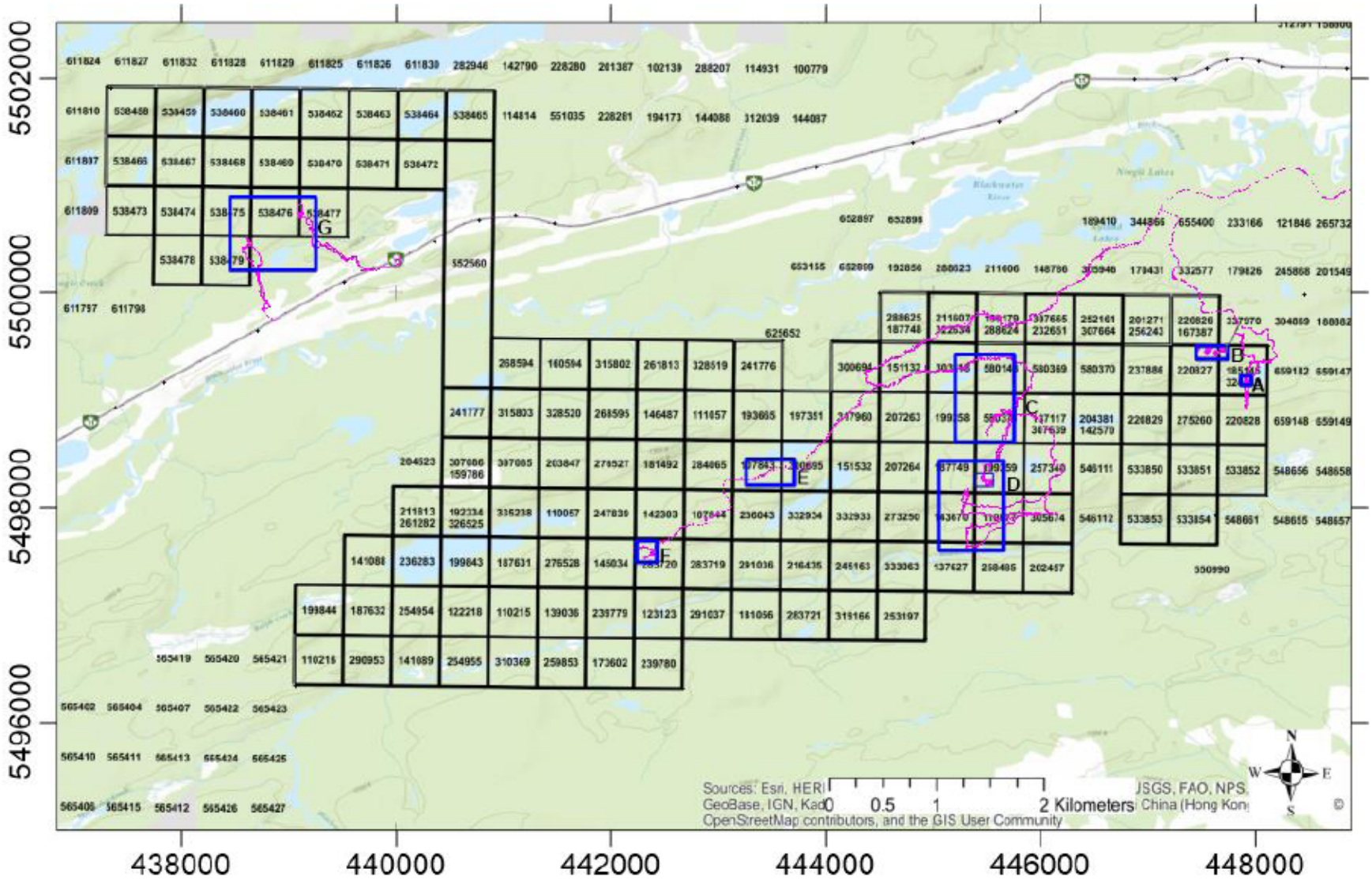

Fig. 3: GLGP claim map with areas A to G (blue rectangles) and access trails (purple).

October 3, 2021: BM and RE ride to area A, claim 185145 to prospect and sample the outcrops (Fig 4), samples 614567 to 614569 collected; MG and PH ride to area D, traverse the cell claims 110877, 143670, 187749 and 199259 and sample the outcrops (Figs. 8, 9). Chip samples 294137 to 297142 collected. BE and JD drive to area B, claims 185145 and 220827 to explore and sample the historical stripped area. Chip samples W075211 to W075215 collected.

October 4, 2021: BM, RE and MG ride to area D, traverse the cell claims 110877, 143670, 187749 and 199259 and collect samples 614570 to 614578 from the outcrops (Figs. 8, 9). BE and JD drive to area B to explore and sample the historical stripped area on the claims 185145 and 220827. Chip samples W075216 to W075220 collected.

October 5, 2021: BM, RE, BE and JD ride to areas E and F to prospect the cell claims107843, 300695 and 283720 map and to collect samples from outcrops (Figs. 10, 11). Chip samples 614579 to 614581 collected.

October 6, 2021: BM and RE drive to area G, then walk to claim 538479 to prospect the area. Chip samples 614582 and 614583 collected (Fig 12). BE and JD continue to traverse the area B. cell claims 185145 and 220287 (Figs. 5, 6). Chip samples W075221 to W075224 collected.

October 7, 2021: BM, RE, BE and JD traverse the area D, cell claims 110877, 143670, 187749 and 199259 to prospect for outcrops and collect samples (Figs. 8, 9). Chip samples 614584 to 614589 collected.

October 8, 2021: BM, RE, BE, JD and PH traverse the area D, cell claims 110877, 143670, 187749 and 199259 to prospect for outcrops and collect samples (Figs. 8, 9). Chip samples 614590, 614591 collected.

October 9, 2021: BM and PH drive to area G, then walk to claims 538476, 538477 to prospect for outcrops and collect samples (Fig. 12). Chip samples 614592 to 614595 collected. BE, JD and RE prospect the area B, claims 185145 and 220287 (Figs. 5, 6) and collect chip samples W075225 to W075230.

October 10, 2021: BM, BE, JD, RE and PH ride to area E, cell claims 107843 and 300695 to prospect the area for outcrops and to collect samples (Fig. 10). Chip samples 614596 to 614600 and W075231, W075232 collected.

October 11, 2021: BM, BE, JD, RE and PH ride to Area B to continue traversing, outcrop mapping and sampling (Figs. 5, 6). Chip samples W075231 and W075232 collected. After – sample packing, loading, requisition sheet preparation

October 12, 2021: BM, BE, JD and PH drive from Beardmore to Thunder Bay to submit samples to Activation Laboratories.

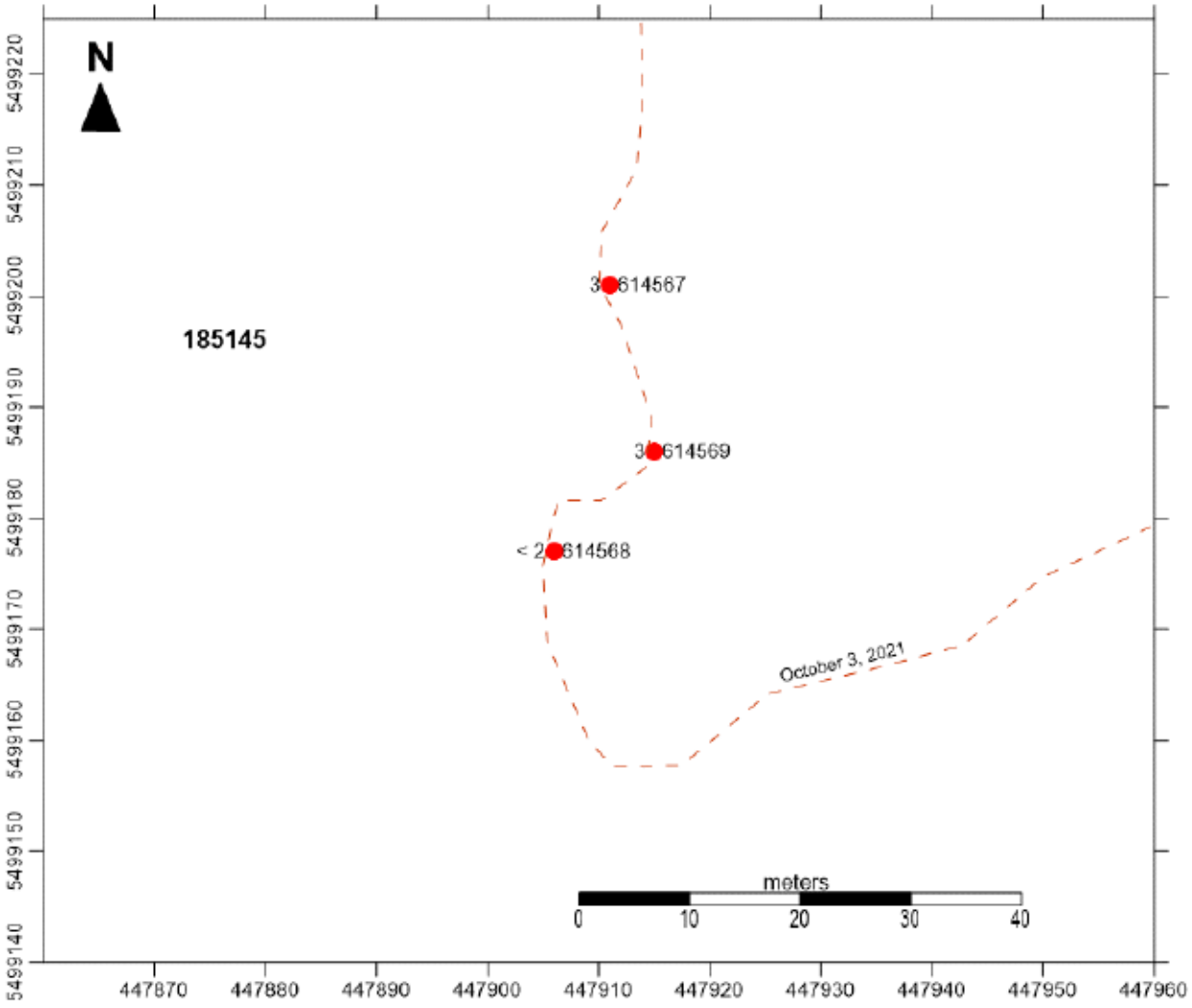

Fig. 4: Area A, sample locations (red circles), sample #s (on right), gold values (on left).

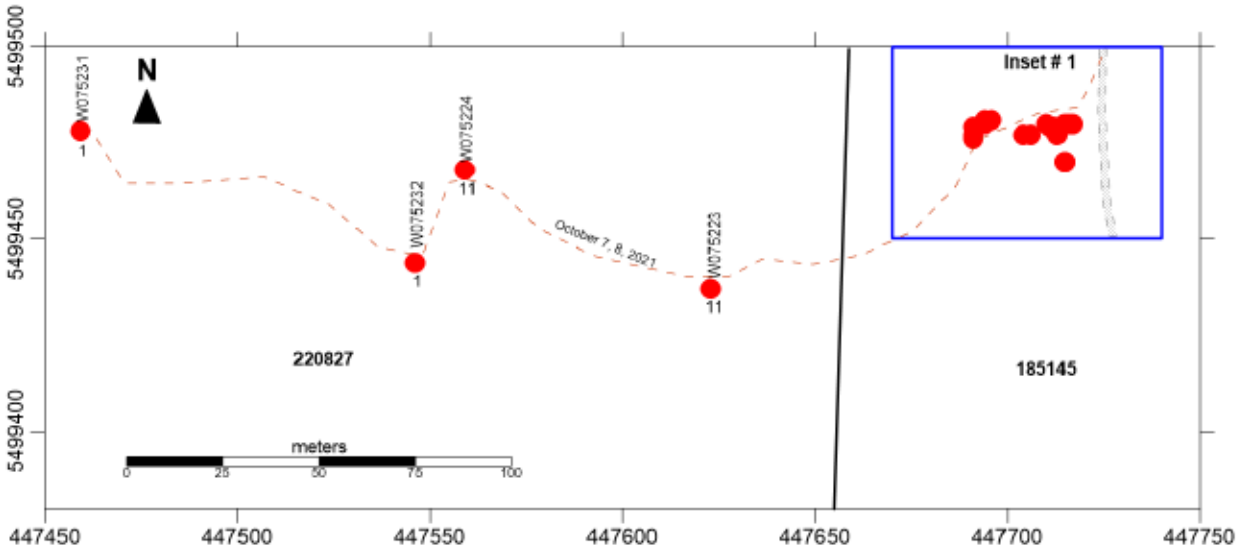

Fig. 5: Area B, sample locations (red circles), sample #s (above), gold values (below).

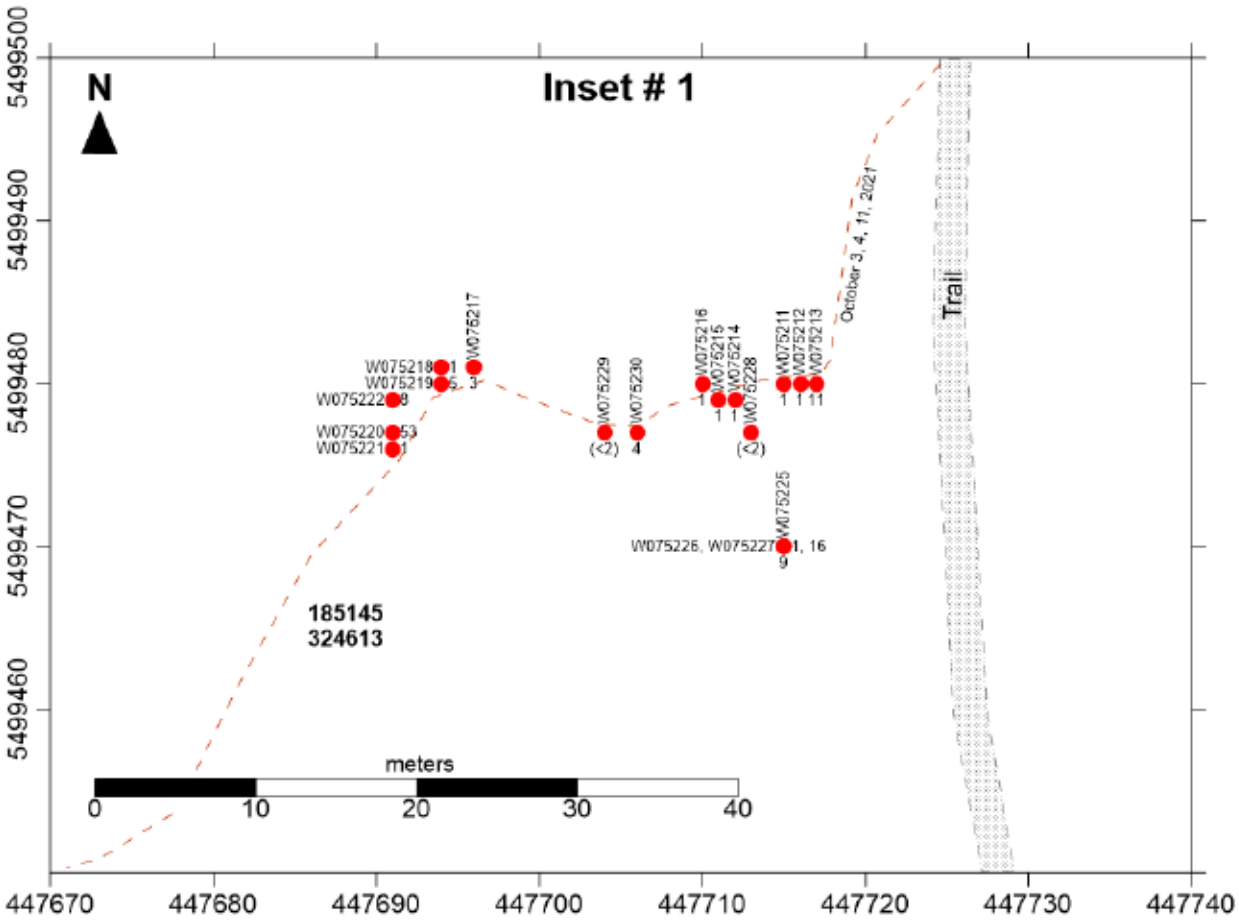

Fig. 6: Area B, Inset # 1, sample locations (red circles) with sample #s and gold values.

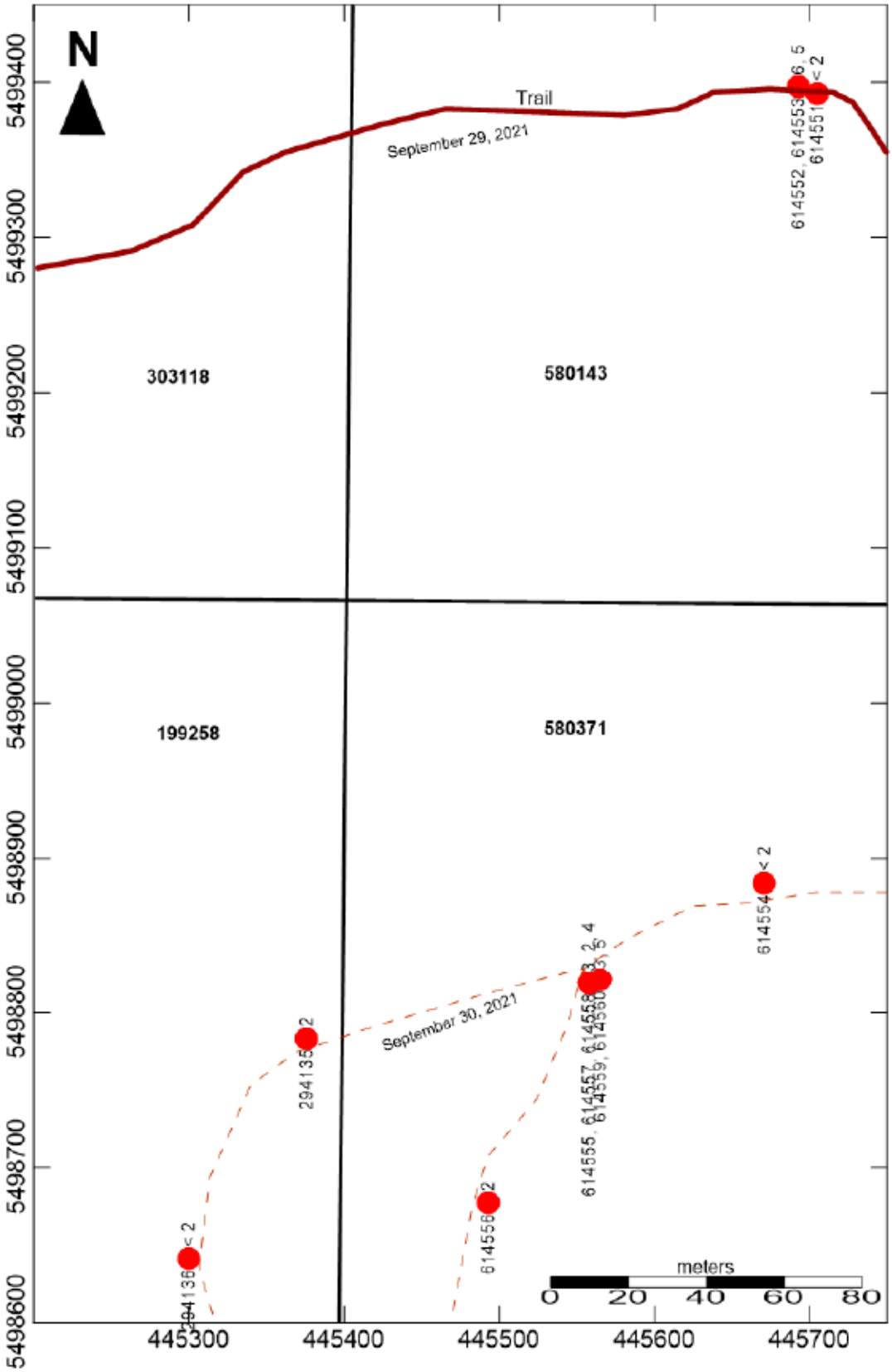

Fig. 7: Area C, sample locations (red circles), sample #s (below), gold values (above).

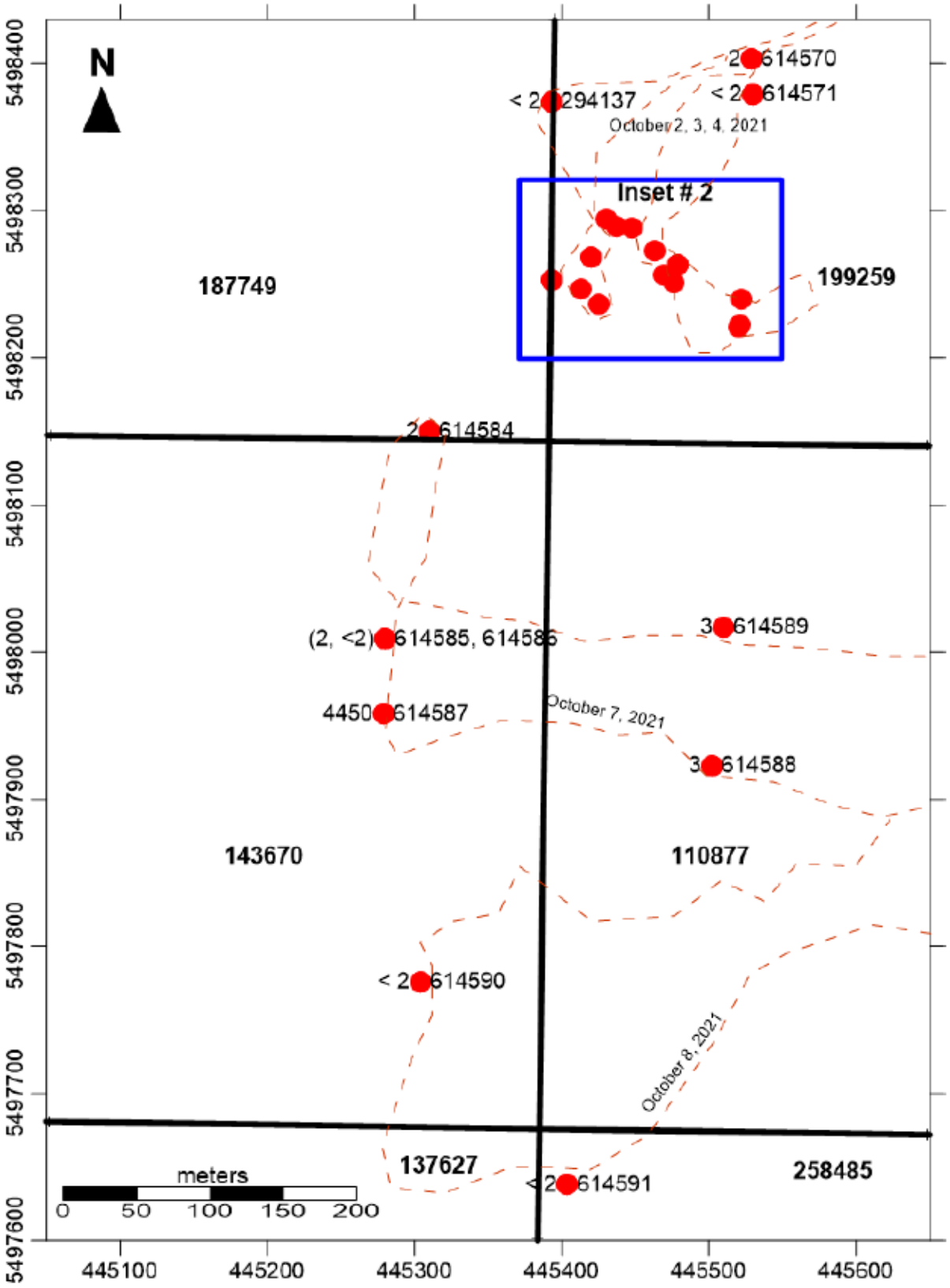

Fig. 8: Area D, sample locations (red circles), sample #s (on right), gold values (on left).

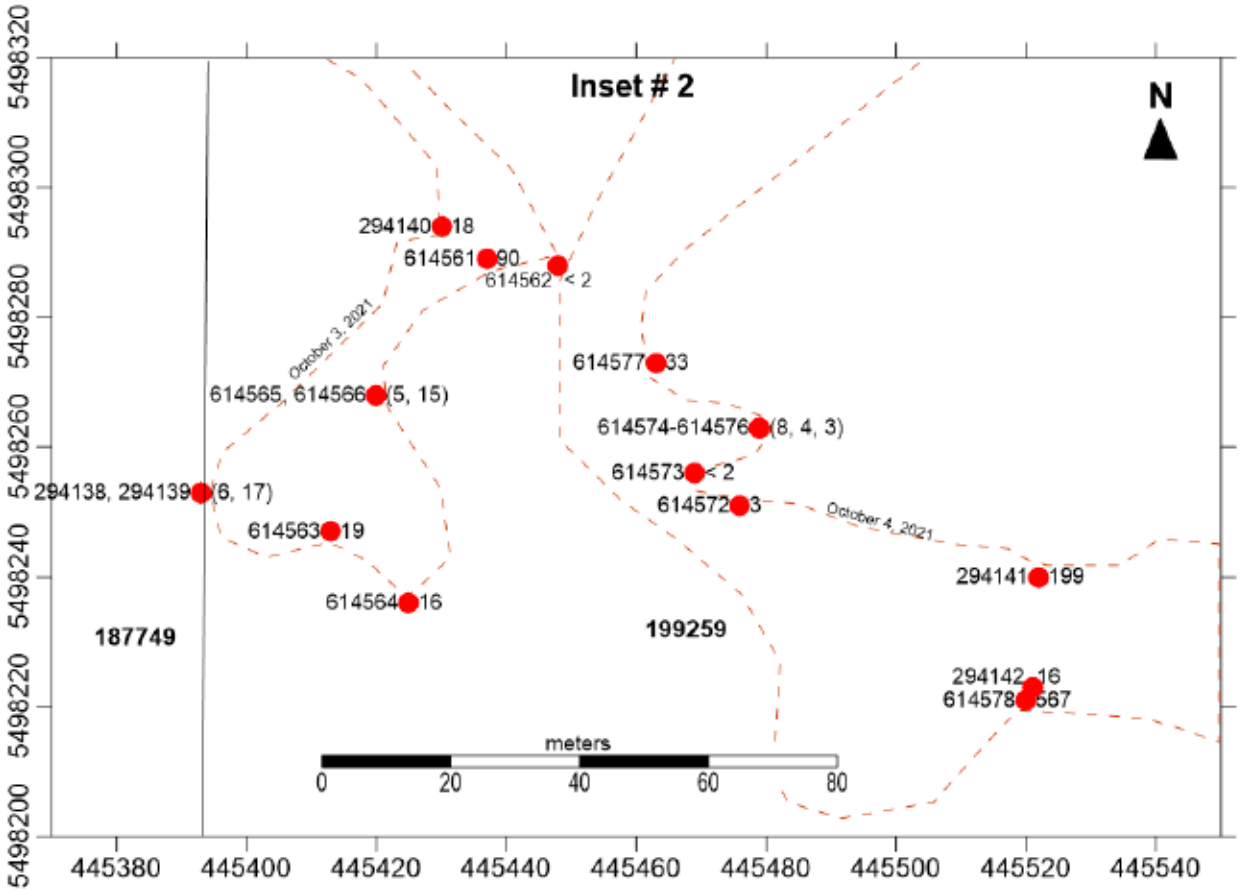

Fig. 9: Area D, Inset2, sample locations (red circles), sample #s (on left), gold values (on right).

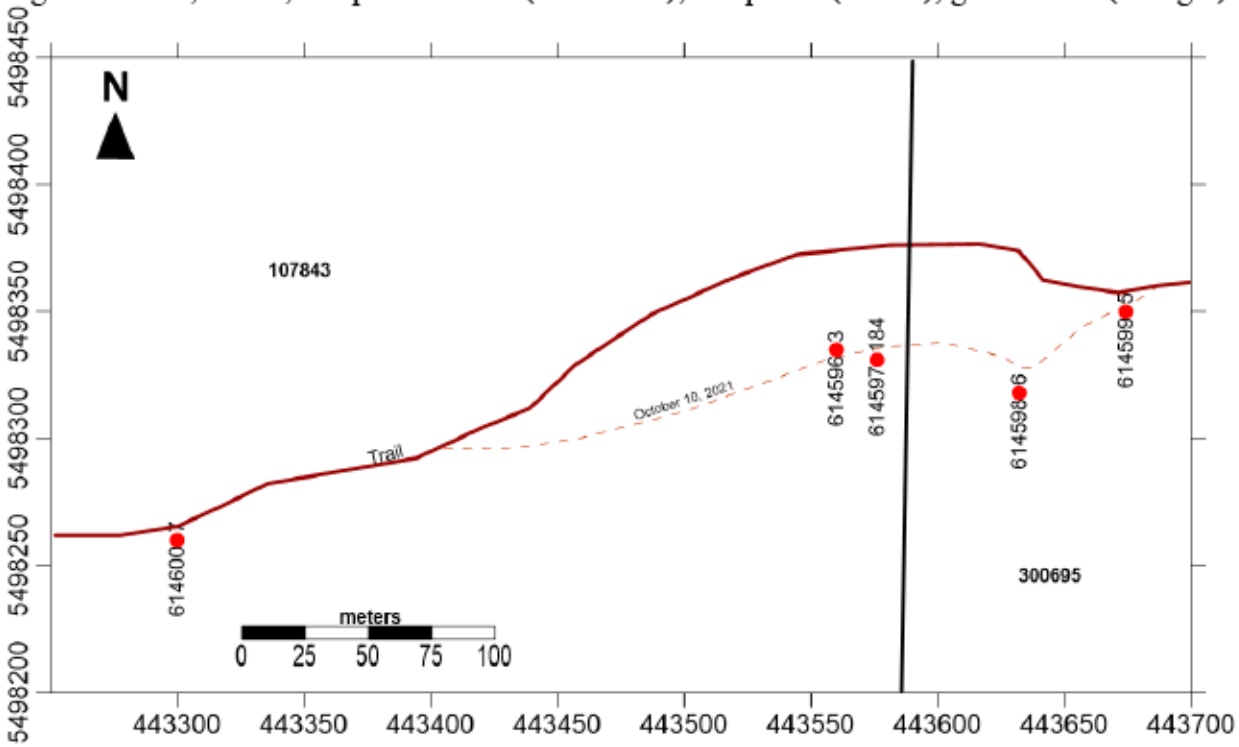

Fig. 10: Area E, sample locations (red dots), sample #s (below), gold values (above).

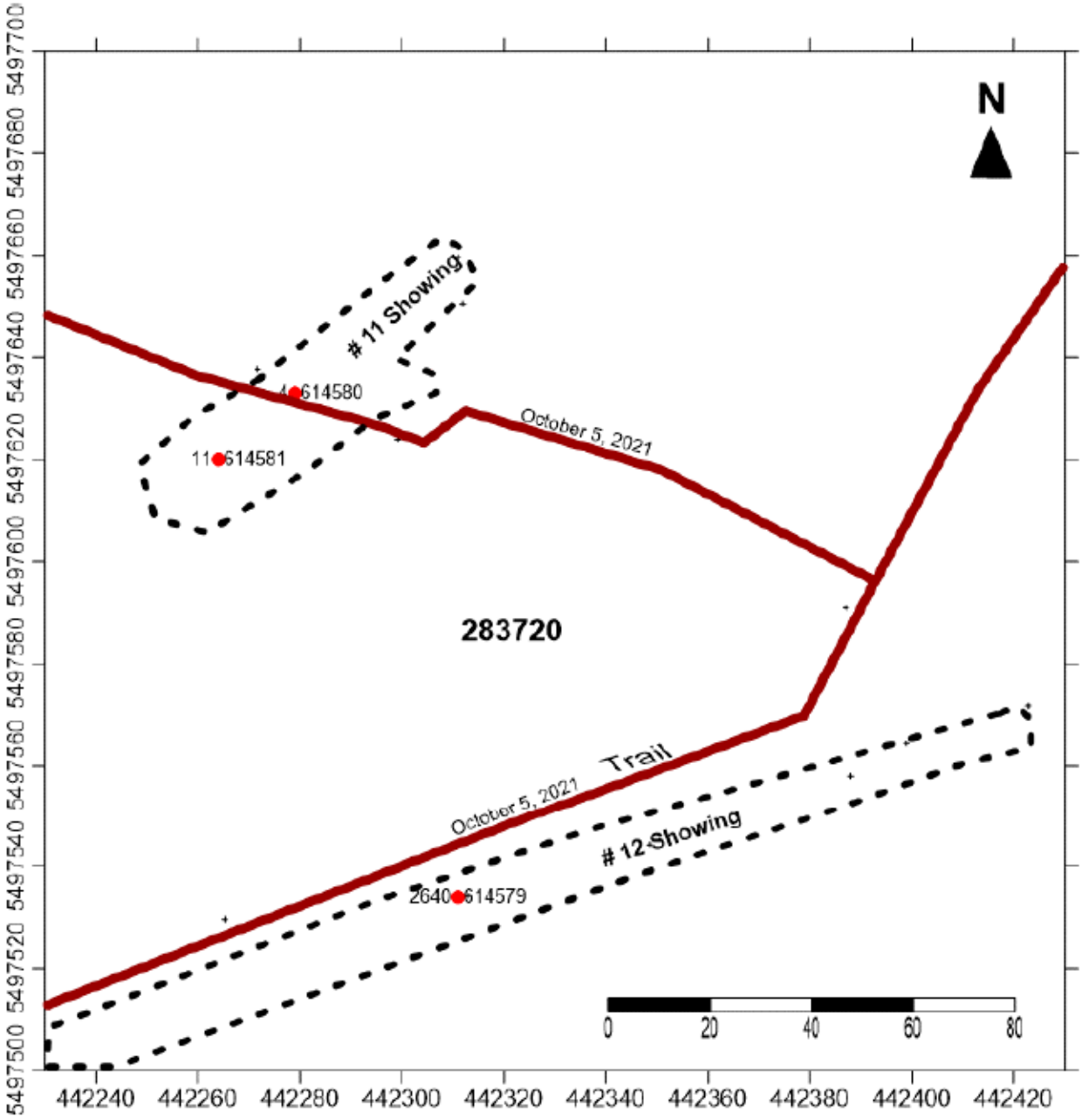

Fig. 11: Area F, sample locations (red dots), sample #s (on right), gold values (on left).

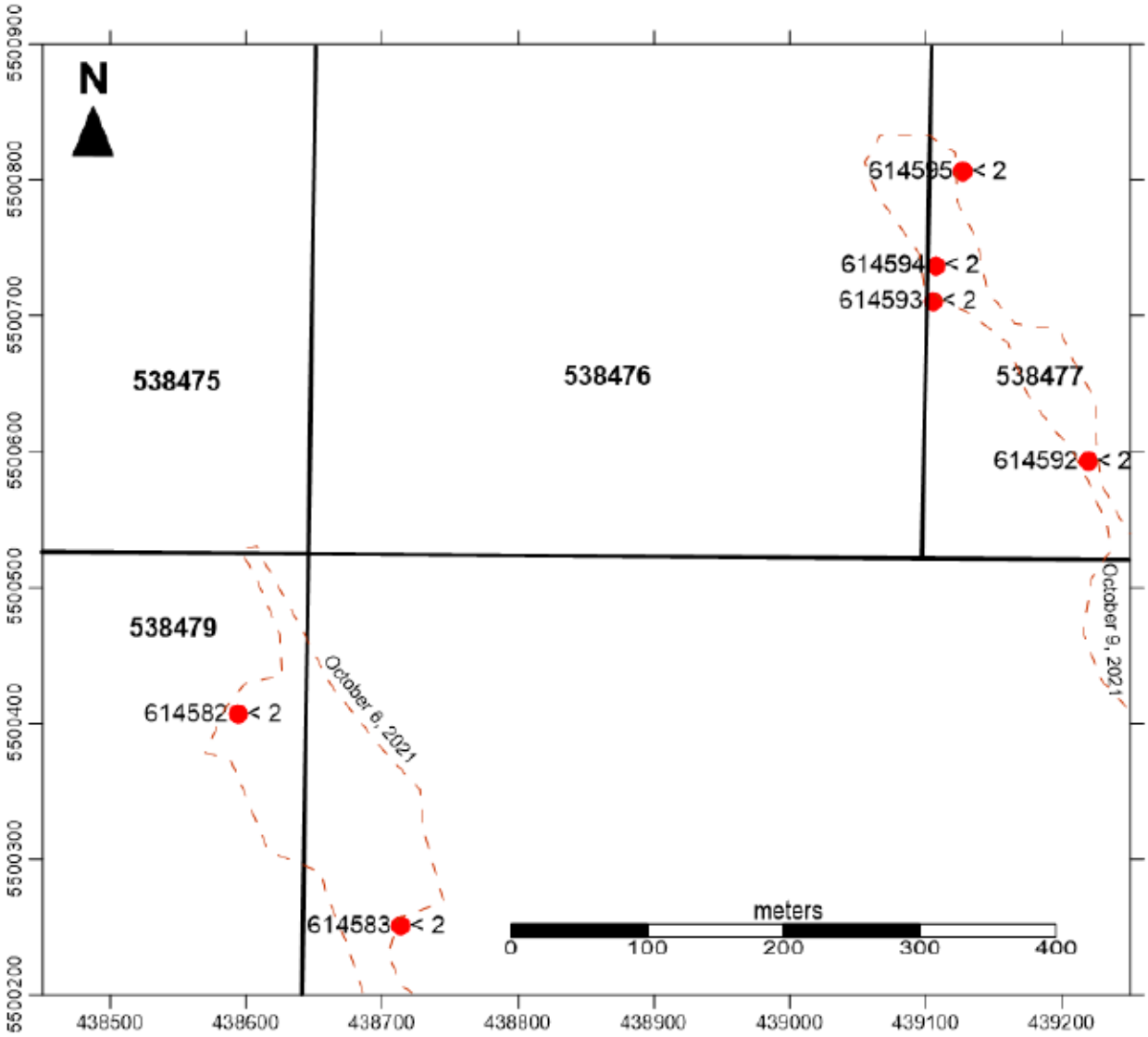

Fig. 12: Area G, sample locations (red dots), sample #s (on left), gold values (on right).

2.2. Sampling Method and Analysis

Traversing, outcrop mapping and sampling was conducted in areas A to G, which lie on the cell claims 107843, 110877, 143670, 185145, 199258, 220827, 258485, 580143, 80371, 538477 and 538479 (Figs. 4 to 12) with an objective to locate and sample the BIFs, quartz veins and gabbroic rock outcrops with a potential to host gold and/or PGM mineralization. Sample descriptions are listed in Appendix I and the assay certificates are attached as Appendix II.

Chip and/or float samples were collected using geological hammers and/or geotools. The samples were placed in standard, polypropylene bags, provided with tags with sample numbers

and closed with flagging tape. Sample locations were recorded using GPS in NAD 83 (zone 16U) projection. The samples were not modified after collection. The writers personally dispatched samples to Activation Laboratories Ltd. ("Actlabs") in Thunder Bay for analysis.

Actlabs is ISO 17025 accredited, with CAN-P-1579 for specific registered tests. The protocol for sample preparation involves crushing, splitting, pulverizing and matting. If necessary, the samples are placed in a drying oven prior to preparation (approximately 50 ° C) until dry. The entire samples are crushed to -10 mesh. Approximately 500 gram sub-sample is split and pulverized to 90 per cent - 150 mesh (105 microns). The bowls are cleaned with silica sand between each sample. Pulverized samples are matted to ensure homogeneity.

Actlabs use fire assay for determinations of platinum, palladium and gold an ICP/OES analysis and a suite of 38 elements by ICP/MS, the laboratory codes FA-ICP and AR-ICP, respectively. The protocol for fire assay involves weighing, fluxing, fusion and cupellation. A 30 gram sample mass is used. The sample weights may be changed to accommodate for the sample chemistry. A furnace load consists of 24 – 26 samples with a check of every 10^{th} sample along with a blank and quality control standard.

The samples submitted for this project did not require any preliminary treatment and could be mixed directly with the assay flux and fused. The fusing takes 75 minutes at 1000 ° C and 20 – 50 gram lead buttons are cupelled at 1000 ° C for 50 minutes, then digested using a nitric and hydrochloric acids and bulked up with distilled water. All samples have a final volume of 3 ml.

Calibration standards for gold, platinum, palladium, copper and nickel are made from 1000 ppm certified stock solution. Quality Control check solutions are made up from separately purchased 1000 ppm certified stock solutions and are read after the standards and periodically throughout the analysis.

Actlabs' reports are produced using a LIMS program. All duplicate assays are reported on the certificate of analysis. All data generated for Quality Control standards, blanks and duplicates are retained and used in the validation of results. Warning lines on the chart are set at ± 2

standard deviations, and control lines are set at ± 3 standard deviations. Any data that falls between the ± 2 or ± 3 lines requires 10 % of the samples in that batch to be re-assayed and have their values compared with the previous set of results. Results will be accepted as long as the standards for each batch of samples fall within the ± 2 standard deviation lines. Any data that falls outside the ± 3 standard deviation lines will result in rejection of all results and the re-assay of the entire batch.

In-house standards are used for platinum, palladium and gold analysis. They are made up from a rock source provided to AL by a third party. The Quality Assurance (QA) sample is made in the laboratory from certified stock solutions purchased from an ISO 9000 certified supplier. The solution is different from the solution used to make calibration standards. Although a standard or quality assurance standard may not be listed by job number on the control charts, a standard and quality assurance sample was run with each job.

2.3. Quality Control

Actlabs' analytical quality and accuracy control ("QC") included four repeats (samples 1408568, 1408596, 5560875 and 5560878), five standards (OREAS 520, 621, 904, 922 and 923 for 37 elements), PK2 standard for Au, Pt and Pd and three blanks. The QC also included two field duplicates (samples 5560874 and 5560876) to independently check the lab performance. The QC for whole rock analysis included five standards: NIST 694, DNC-1, W-2a, SV-4 and BR-1a and one blank. The QC graphs are in Figs. 14 to 21. Blanks are all below detection limit except one, where gold assayed 3 ppb.

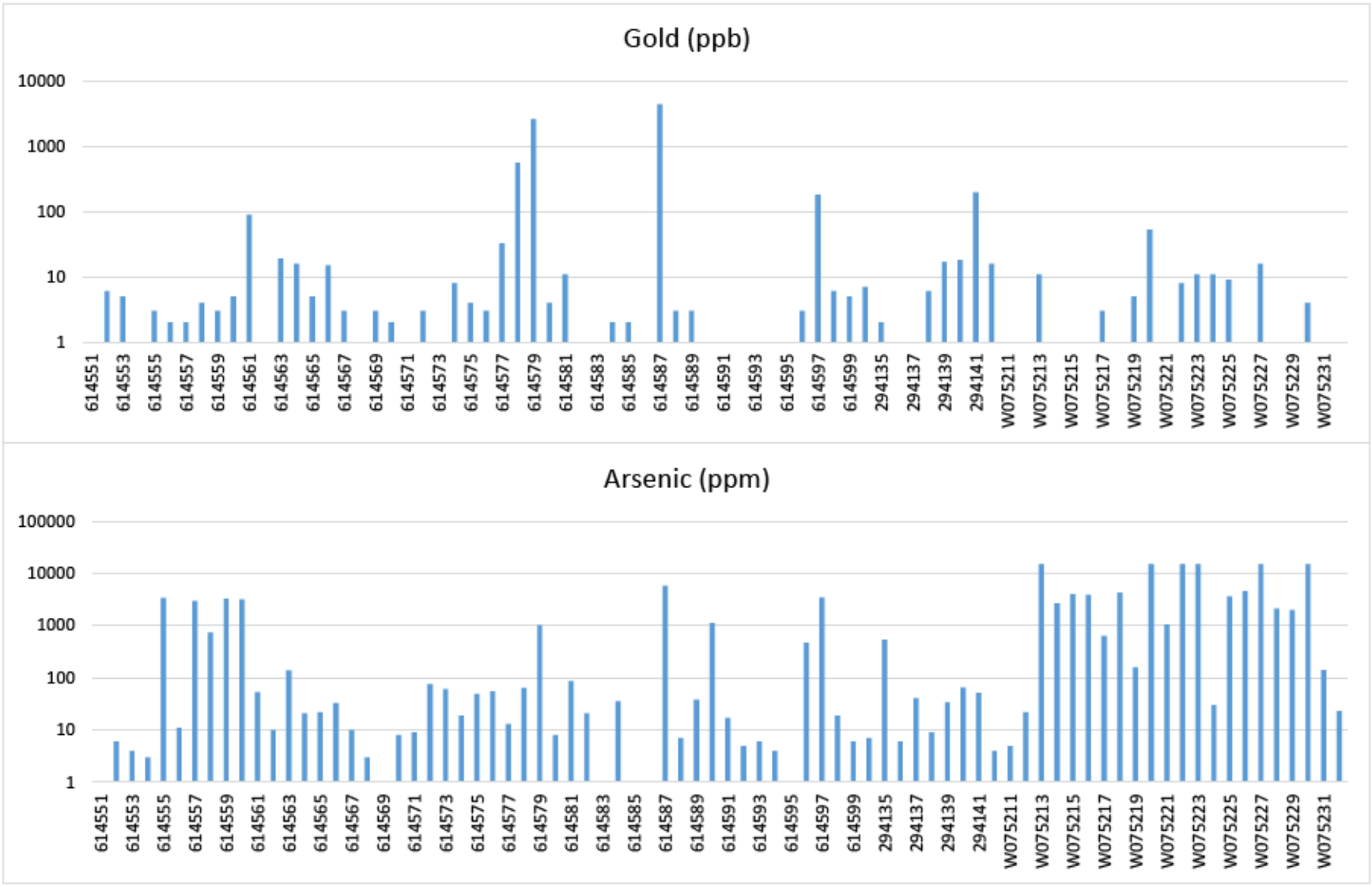

Fig. 13: Graphs for gold and arsenic (gold values < DL converted to 1, arsenic >10000 ppm converted to 15000).

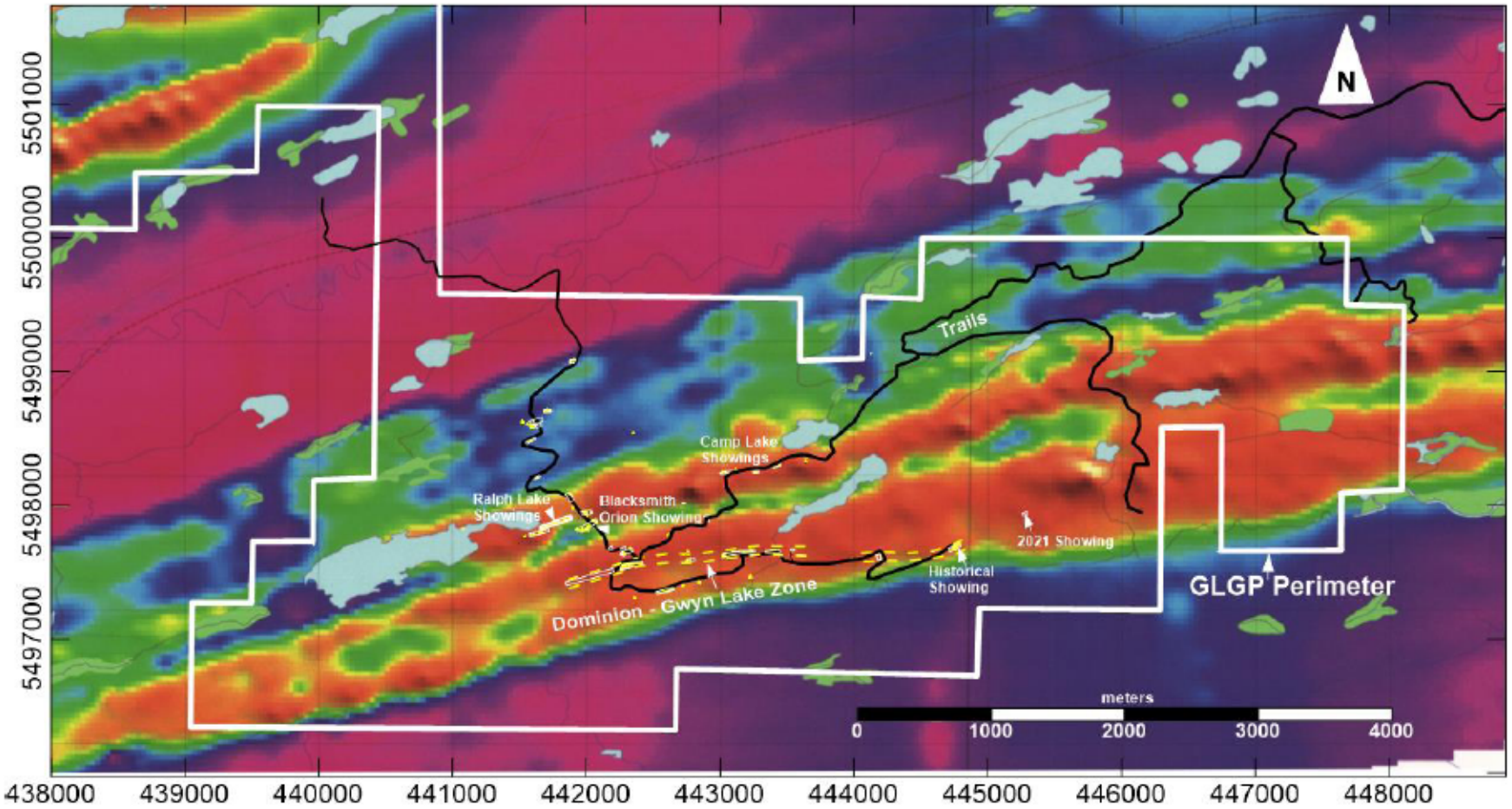

Fig. 14: Airborne magnetic map with showings (white rectangles) and Dominion-Gwyn Lake Zone.

Table 2: Descriptive statistics

	Au	*Pd*	*Pt*	*Cu*	*Zn*	*As*
Count	80	80	80	80	80	80
Mean	106.74	2.44	2.53	144.78	170.16	1829.10
St. Error	64.47	0.20	0.19	21.63	61.65	448.78
Median	3	2	2	77.5	55.5	39.5
Mode	1	2	2	23	10	1
St. Deviation	576.7	1.8	1.7	193.5	551.4	4014.0
S. Variance	332541.3	3.3	2.9	37442.5	304013.4	16112382.3
Kurtosis	45.9	17.3	11.0	7.1	30.6	6.4
Skewness	6.6	4.2	3.4	2.5	5.5	2.7
Range	4449	10	8	1008	3566	14999
Minimum	< 2	< 5	< 5	2	4	1
Maximum	4450	12	10	1010	3570	> 10000

Table 3: Correlation matrix (all assays)

	Au	*Pd*	*Pt*	*Cu*	*Zn*	*As*
Au	1.000					
Pd	-0.044	1.000				
Pt	-0.056	**0.919**	1.000			
Cu	0.019	-0.054	-0.043	1.000		
Zn	-0.037	0.349	0.355	0.041	1.000	
As	0.082	-0.111	-0.125	0.251	-0.093	1.000

Table 4: correlation matrix (22 assays from claim 185145 omitted)

	Au	*Pd*	*Pt*	*Cu*	*Zn*	*As*
Au	1.000					
Pd	-0.062	1.000				
Pt	-0.068	**0.954**	1.000			
Cu	0.049	-0.035	-0.002	1.000		
Zn	-0.039	0.368	0.391	-0.049	1.000	
As	0.561	-0.113	-0.126	-0.189	-0.089	1.000

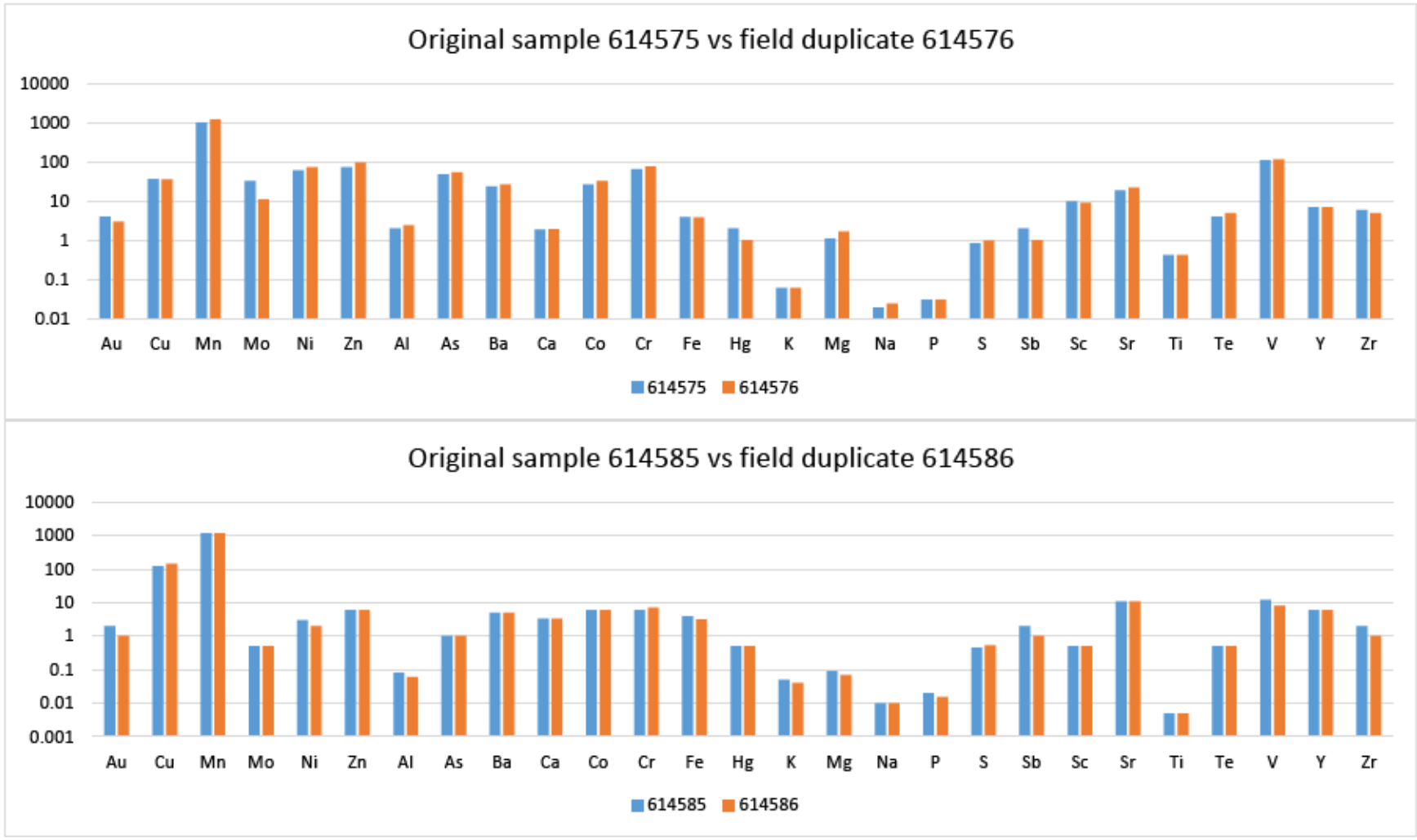

Fig. 15: Selected elements in original samples compared to field duplicates.

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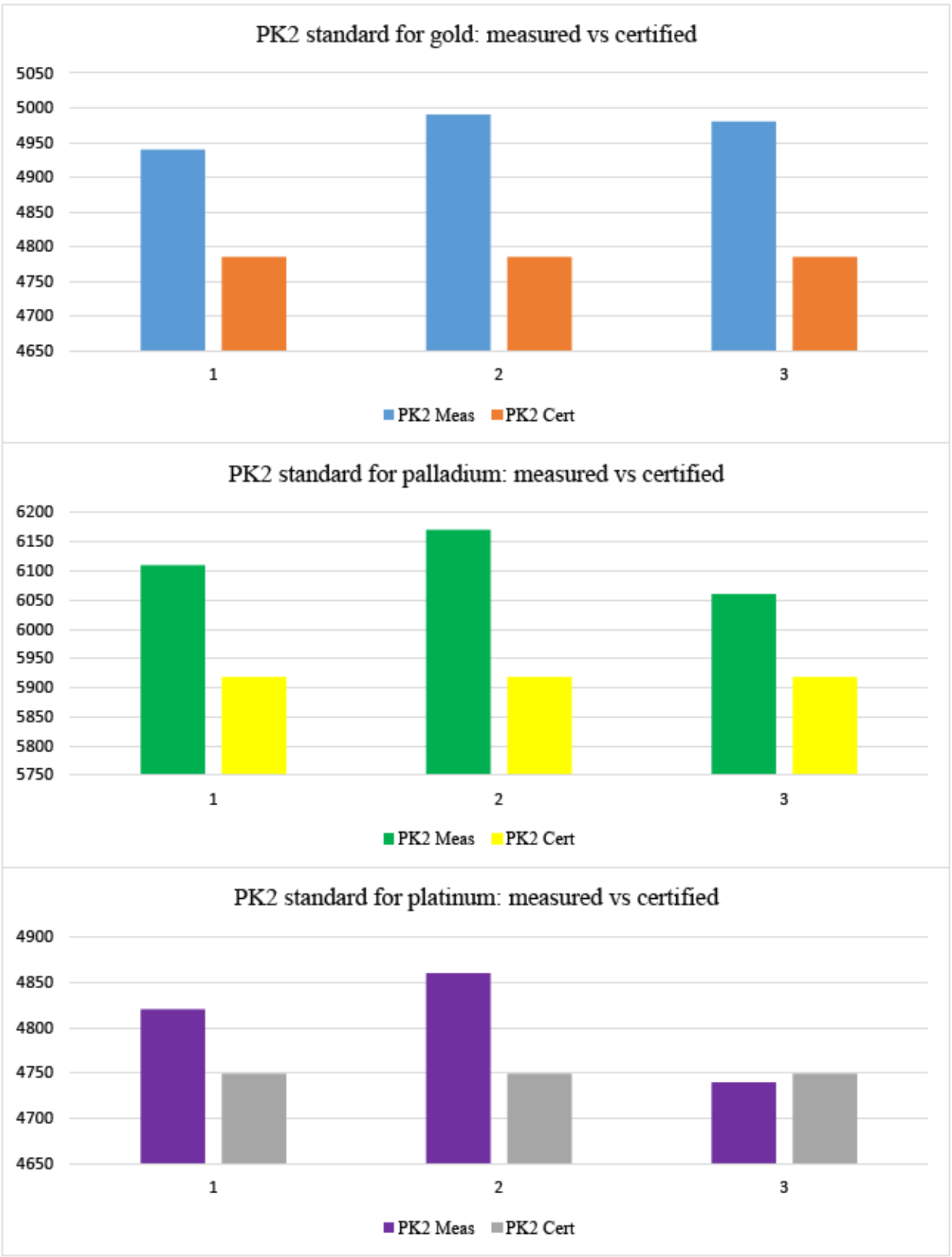

Fig. 16: PK2 standard for gold, palladium and platinum.

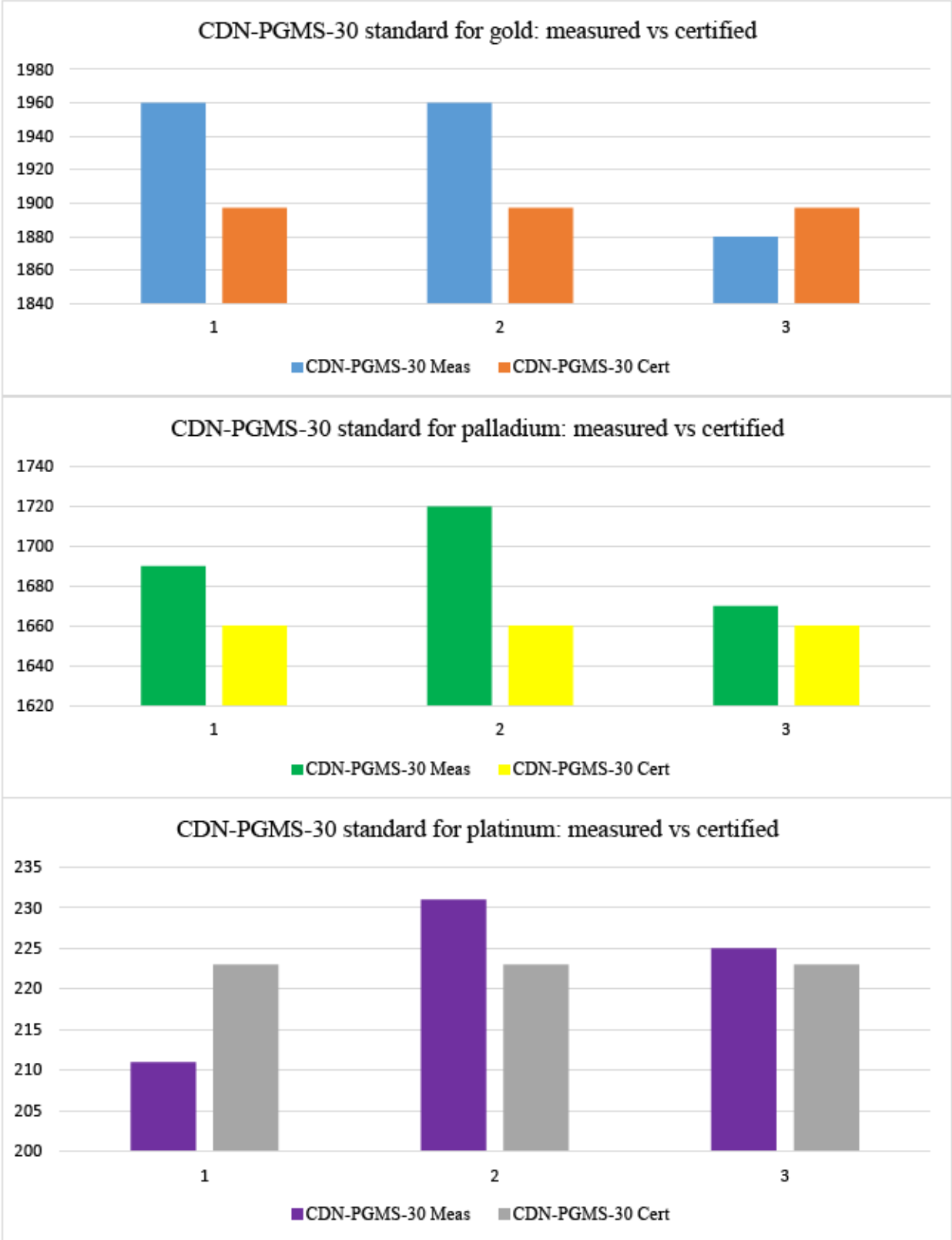

Fig. 17: standard CDN-PGMS-30 for gold, palladium and platinum.

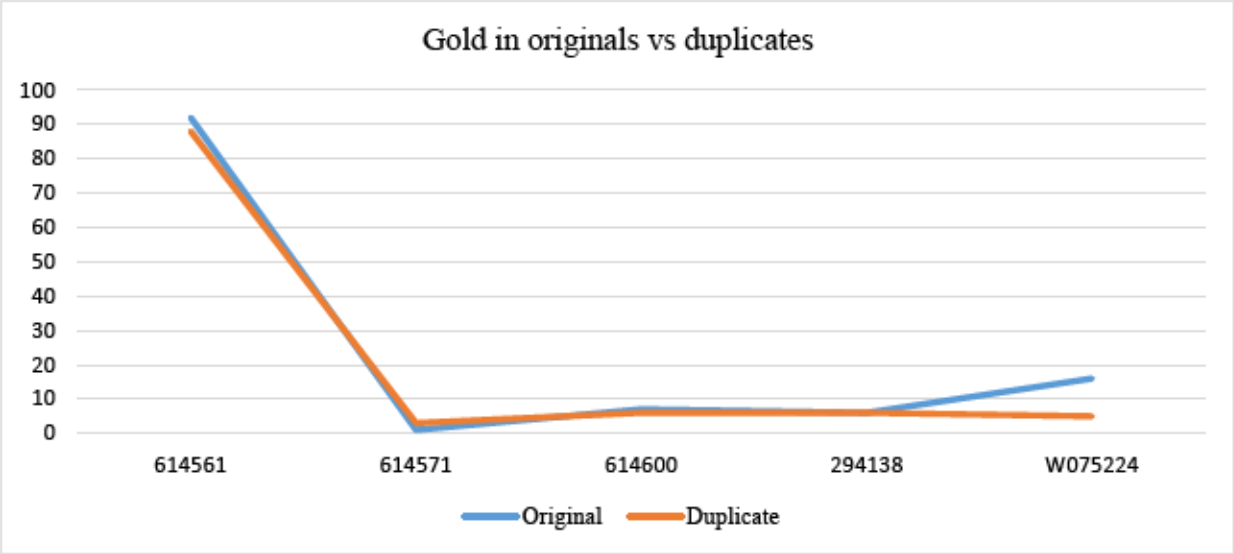

Fig. 18: Gold in originals vs duplicates.

Five blanks were measured for gold, platinum and palladium and all assayed values below detection limit.

In conclusion, the quality control made for this project indicates that the reproducibility and accuracy of the Actlab's assays of the samples taken from GLGP in 2021 meet the industry standards and are acceptable for this stage of the project.

3. CONCLUSIONS AND RECOMMENDATIONS

Empire's 2021 rock geochemistry program took place on the cell claims 107843, 110877, 143670,185145, 187749, 199258, 199259, 220827, 258485, 283720, 300695, 538477, 538479, 580143 and 580371. The focus was on hydrothermal alteration zones, shear zones and quartz veins associated with the BIF and the gabbroic rocks with a potential to host platinum group mineralization. A total of 80 chip and/or float samples were collected and their locations and gold assays are in Figs. 4 to 12 and in Appendix I. Most work was conducted in the central-eastern portion of the main claim block to find any evidence of the gold mineralization extending eastwards of the Historical showing. And indeed, one sample taken about 600 meters east and on strike of the Historical showing assayed 4450 ppb Au (Fig. 8) and several other

samples taken 200 – 300 m north of the former also returned anomalous gold ranging up to 567 ppb (Fig. 9). These results may indicate that the gold-mineralized zone extends in that direction.

While arsenopyrite may serve as a good indicator mineral for gold in most areas of the property, it does not hold true for the easternmost portion of the property (claim 185145) where most samples with abundant arsenopyrite (> 15000 pm As) returned only minor gold values and no correlation exists between gold and arsenic.

The platinum and palladium values in most BIFs and the gabbroic rocks are below detection limit ("DL"), with the maximum of 10 ppb for the former and 12 ppb for the latter. A strange garnetiferous rock was found on the claim 580143 near the beaver dam and needs more study to elucidate its origin.

Based on the recent fieldwork results further work on the GLGP is warranted and should focus on the mineralized shear zones and on the associated BIFs in the eastern extensions of the Historical showing, and eastern extensions of the Orion and Blacksmith showings. Further prospecting and sampling of the norther claim block should be conducted. The platinum group metal potential of the gabbroic rocks should be further tested.

Proposed budget for the recommended work is as follows:

Geologist (15 days @ $ 900/day)	13,500.00
Geologist (15 days @ $ 900/day)	13,500.00
Prospector (15 days @ $ 350/day)	5,250.00
Assistant (15 days @ $ 250/day)	3,750.00
Assistant (15 days @ $ 250/day)	3,750.00
Truck rental (15 days @ $ 75/day, 50 km/day @ 0.35/km)	1,387.50
ATV rental with trailer (2 ATVs 15 days)	4,500.00
Rock saws (2 x 10 days @ $ 40/day)	800.00
Accommodation and meals (5 x 15 x $ 150/day)	11,250.00
Assays (100 x $ 50)	5,000.00
Gas	800.00
Mob, demob (ON only)	400.00
Report (10 %)	6,388.75
Total	**70,276.25**

IN ACCOUNT WITH

XYQUEST MINING CORP.

Suite 702 - 889 West Pender Street • Vancouver BC • V6C 3B2 • Tel. 604.683.3266

Empire Metals Corp.
702-889 West Pender Street
Vancouver, BC V6C 3B2

28-Oct-21
Account #2021-020
GST#896269297

RE: Gwyn Lake Property Exploration 2021

	Days		Fees per Day		Amount
Senior Geologist, Dr. Bohumil B. Molak, PhD, PGeo					
September 2021 Field work - Sept 29, 30 / 2021	2	$	900.00	$	1,800.00
October 2021 Field work - Oct 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12/ 2021	12	$	900.00		10,800.00
Mobilization and demobilization	1	$	900.00		900.00
				$	13,500.00
Geologist, Blaze Ettlinger					
October 2021 Field work - Oct 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12/ 2021	11	$	800.00	$	8,800.00
Mobilization and demobilization	1	$	800.00		800.00
				$	9,600.00
Geologist, Jordan Dahle					
October 2021 Field work - Oct 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12/ 2021	11	$	800.00	$	8,800.00
Mobilization and demobilization	1	$	800.00		800.00
				$	9,600.00
Geological Assistant, Robert Eyolfson					
September 2021 Field work - Sept 29, 30 / 2021	2	$	350.00	$	700.00
October 2021 Field work - Oct 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12/ 2021	12	$	350.00		4,200.00
Mobilization and demobilization	1	$	350.00		350.00
				$	5,250.00
Geological Assistant, Michael Goodman					
September 2021 Field work - Sept 29, 30 / 2021	2	$	440.00	$	880.00
October 2021 Field work - Oct 1, 2, 3, 4/ 2021	4	$	440.00		1,760.00
				$	2,640.00
Geological Assistant, Philip Houghton					
October 2021 Field work - Oct 1, 2, 3, 8, 9, 10, 11, 12/ 2021	8	$	440.00		3,520.00
				$	3,520.00
Expenses:					
Airfare					1,100.51
Accommodation					3,061.86
Food (Meals, Groceries, etc.)					1,616.35
Fuel/ Transportation charges					869.71
ATV Rental 12 days (2 ATV's @ $88 / day each)					2,112.00
Trailer Rental (2 days @$55/day)					110.00
Truck Rental MC (6 days @ $100/day, 70km/day @ $0.35/Km)					747.00
Truck Rental PH (5 days @ $100/day, 85km/day @ $0.35/Km)					648.75
Truck Rental BM (14 days @ $75/day, 70km/day @ $0.35/Km)					1,393.00
Chainsaw Rental (8 days @ $33/day)					264.00
Other Miscellaneous Field Equipment Rental					95.00
Sample bags, markers, handling	80	$	4.00		320.00
Assays ActLabs (80 samples)					5,490.00
Equipment rental (Satellite Phone - 12 days)					96.00
Expense Administration Fee and Office Charge					2,688.63
Total Expenses				$	20,612.81
Digitization, Preliminary Exploration Report (at 10% of costs)				$	6,472.28
Subtotal				$	71,195.09
GST5%				$	3,559.75
Total				$	74,754.85

This is our account herein

XYQUEST MINING CORP.

PAID

• INTEREST OF 2% PER MONTH, COMPOUNDED MONTHLY,
OR 26.8% PER ANNUM CHARGED ON OVERDUE ACCOUNTS

5. REFERENCES

Ash, C. and Alldrick, D., 1996: Au-quartz Veins; in: Selected British Columbia Mineral Deposit Profiles, Volume 2 - Metallic Deposits, Lefebure, D. V. and Hõy, T., (Eds.), British Columbia Ministry of Employment and Investment, Open File 1996-13, p. 53-56.

Blackburn, C. E., John, G. W., Ayer, J., Davis, D. W., 1991: Wabigoon Subprovince; in Thurston, P. C., Williams, H. R., Sutcliffe, R. H., and Stott, G.M., (Eds.), Geology of Ontario: Ontario Geological Survey Special Volume 4, Part 1, p. 303 -381.

Brickner, R., 2005: Report of Exploration on Gwyn Lake Property, Beardmore – Geraldton Area, NW Ontario; for Buck Lake Ventures Ltd.

Boyle, R. W., 1979: The Geochemistry of Gold and its Deposits; Geological Survey of Canada, Bulletin 280, 584 p.

Fripp, R. E. P., 1976: Stratabound Gold Deposits in Archean Banded Iron-Formation, Rhodesia; Economic Geology, Vol. 71, p. 58-75.

Fyon, J. A., Breaks, F. W., Heather, K. B., Jackson, S. L., Muir, T. L., Stott, G. M. and Thurston, P. C., 1992: Metallogeny of Metallic Mineral Deposits in the Superior Province of Ontario; in Geology of Ontario, Ontario Geological Survey, Spec. Vol. 4, Part 2, p. 1091-1174.

Gross, G. A., 1996: Algoma-type Iron-formation, in Selected British Columbia Mineral Deposit Profiles, Volume 2 - Metallic Deposits, Lefebure, D.V. and Hõy, T, (Eds.), British Columbia Ministry of Employment and Investment, Open File 1996-13, p. 25-28.

Harris, J. F. 2008: Petrographic examination of polished sections from Gwyn Lake Prospect, Northwest Ontario; (in: Molak, 2009).

Kerswill, J.A., 1993: Models for Iron-formation-hosted Gold Deposits; in Mineral Deposit Modeling, Kirkham, R.V., Sinclair, W.D., Thorpe, R.I. and Duke, J.M., (Eds.), Geological Association of Canada, Special Paper 40, p. 171-200.

Langford, B., 1929: Geology of the Beardmore–Nezah Gold Area, Thunder Bay District. Ontario Dept. of Mines, 37th Annual Report.

Malouf, D., 2003: President's Letter to Shareholders. Roxmark Mines Ltd., 2003 Annual Report.

McMillan, R.H., 1996a: Iron formation-hosted Au, in Selected British Columbia Mineral Deposit Profiles, Volume 2 - Metallic Deposits, Lefebure, D.V. and Hõy, T., (Eds.), British Columbia Ministry of Employment and Investment, Open File 1996-13, p. 63-66.

Molak, B., Brickner, R. and Brown, E., 2006: Geological Report on the Gwyn Lake Property; Assess. Report for Pierre Enterprises Ltd.

http://www.geologyontario.mndmf.gov.on.ca/mndmfiles/afri/data/imaging/20000001696//20002841.pdf.

Molak, B., 2009: Geological Report on the Gwyn Lake Property; Technical Report for Ultra Uranium Corp. http://www.sedar.com/GetFile.do?lang=EN&docClass=24&issuerNo=00006157&fileName=/csfsprod/data97/filings/01409666/00000002/C%3A%5CGWREP240409.pdf

Molak, B and Houghton, F. A., 2010: Geological Report on the Gwyn Lake Property, Assess. Report 2.46688; for Ultra Uranium Corp. http://www.geologyontario.mndmf.gov.on.ca/mndmfiles/afri/data/imaging/20000005755//20008117.pdf.

Molak, B. and Houghton F. A. 2015a: Geological Report on the Gwyn Lake Property; for Ultra Resources Corp.

Molak B. and Houghton F. A. 2015b: Report of Exploration on the Gwyn Lake Gold Prospect; for Empire Rocks Minerals Inc.

Molak B. and Houghton F. A. 2017: Report of Exploration on the Gwyn Lake Gold Prospect; for Empire Metals Corp.

Molak B. 2019: Report of 2018 Exploration on the Gwyn Lake Gold Prospect, North-western Ontario, Canada; for Empire Metals Corp.

Padgham, W.A. and Brophy, J.A., 1986: Gold Deposits of the Northwest Territories; in Gold in the Western Shield, Canadian Institute of Mining and Metallurgy, Spec. Vol. 38, p. 2-25.

Poulsen, K. H., Robert F. and Dube, B., 2000: Geological Classification of Canadian Gold Deposits. Bull. 540, Geol. Surv. of Canada.

Rye, D. M. and Rye, R. O., 1974: Homestake Gold Mine, South Dakota: I. Stable Isotope Studies; Economic Geology, Vol. 69, p. 293-317.

Siddaiah, N. S., Hanson, G. N. and Rajamani, V., 1994: Rare Earth Element Evidence for Syngenetic Origin of an Archean Stratiform Gold Sulfide Deposit, Kolar Schist Belt, South India; Economic Geology, Vol. 89, p. 1552-1566.

Tomlinson, K. Y., Stevenson, R. K., Hughes D. J., Hall, R. P., Thurston, P. C. and Henry, P., 1998: The Red Lake Greenstone Belt, Superior Province: Evidence of Plume-related Magmatism at 3 Ga and Evidence of an Older Enriched Source; Precambrian Research, Vol. 89, p. 59 – 76.

Vielreicher, R. M., Groves, D. I., Ridley, J. R. and McNaughton, N. J., 1994: A Replacement Origin for the BIF-hosted Gold Deposit at Mt. Morgans, Yilgarn Block, W. A.; Ore Geology Reviews, Vol. 9, p. 325-347.

www.sedar.com, Empire's MD&A and Interim financial statements.

6. STATEMENT OF QUALIFICATIONS

I, Bohumil (Boris) Molak, Ph.D., P.Geo., do hereby certify that:

1. I am a self-employed Professional Geoscientist residing at 409, 9288 University Crescent, Burnaby, BC., V5A 4X7, Canada.

2. I am a member of the Association of Professional Engineers and Geoscientists of British Columbia (License No. 28600) in good standing.

3. I graduated from the Comenius University of Czechoslovakia in 1970 with a Bachelor of Science (Mgr.) in Economic Geology. From the same university I obtained in 1980 a title Master of Science in Economic Geology (RNDr.) and the degree Doctor of Philosophy (CSc.) in 1990. I have practiced my profession continuously since 1970.

4. My geoscientific practice includes geological mapping, mineral prospecting and exploration and research into precious, base, ferrous and other minerals in Slovakia, Zambia, Cuba, Guinea, Canada, Chile and Argentina.

5. Since July 2003 until present I am a self-employed, consulting geoscientist.

6. I conducted the field work and supervised the exploration programs on the Gwyn Lake Gold Prospect in 2005, 2007, 2008, 2010, 2014, 2015, 2016, 2017, 2018 and 2021. I am responsible for all items in this report except the item "In account with Xyquest Mining Corp.", which was prepared by Xyquest Mining Corp.

7. I am the Qualified Person for the purposes of this report.

8. The sources of all information not based on personal examination are quoted in the References item. As of the date of this Certificate I am not aware of any material fact or material change with respect to the subject matter of this report that is not reflected in this report, the omission of which would make the report misleading.

9. I am independent of Empire Metals Corp.

Dated at Vancouver, this 11th day of February, 2022.

7. STATEMENT OF QUALIFICATIONS

I, Blaze Ettlinger. BSc, GIT do hereby certify that:

I am a self-employed geoscientist currently living at 1227 Kenneth Street, Detroit Lakes, MN, 56501, USA

I graduated from the College of Science and Engineering at the University of Minnesota in 2019 with a Bachelor of Science in Earth and Environmental Science. I have worked in the field of exploration geology continuously since graduation in 2019, as well as during Summer breaks in University.

My experience in geoscience has included geologic mapping, coordinating and performing rock and soil sampling programs, coordinating and performing ground based magnetics surveys, data compilation and analytics and GIS applications. I have worked on projects in the Yukon, Ontario, British Columbia, California, Wyoming and South Dakota.

Since May 2019 until present I am a self employed consulting geologist.

I am a qualified person for the purposes of this report.

The sources of all information not based on personal examination are quoted in the References Item. As of the date of this Certificate I am not aware of any material fact or material change with respect to the subject mater of this report that is not reflected in this report, the omission of which would make the report misleading.

I am independent of Empire Metals Corp

Dated at Detroit Lakes, this 11th day of February 2022.

APPENDIX I

Samples, coordinates, descriptions, claim #s, gold, platinum and palladium assays

Easting	Northing	#	Description	Claim #	Au	Pd	Pt
445705	5499393	614551	White quartz and greenstone, brown Fe-ox infiltrations	580143	< 2	< 5	< 5
445699	5499397	614552	Dark garnetiferous igneous rock	580143	6	8	7
445705	5499393	614553	White quartz and greenstone, brown Fe-ox infiltrations	580143	5	5	6
445671	5498884	614554	Outcrop, faintly foliated grnst, qrtz veinlets, rare diss, sulph	580371	< 2	< 5	< 5
445558	5498819	614555	Vein quartz, arsprt with yellow inclusions (gold?), prt	580371	3	< 5	< 5
445493	5498677	614556	Outcrop, faintly foliated grnst, foliaforn qrtz veinlets, rare diss, sulph	580371	2	12	10
445558	5498819	614557	Vein quartz, arsprt with yellow inclusions (gold?), prt	580371	2	< 5	< 5
445558	5498819	614558	Outcrop, grnst, thin qrtz veinlets, brown Fe-ox infiltrations	580371	4	< 5	< 5
445565	5498821	614559	Vein quartz, 45 cm wide, arsprt with yellow inclusions (gold?), prt	580371	3	< 5	< 5
445565	5498821	614560	Silicified greenstone at contact with quartz vein	580371	5	< 5	< 5
445437	5498289	614561	Ledge outcrop, grnst, f-70/90° ± 10°, 10-20% disseminated sulphides	199259	90	< 5	< 5
445448	5498288	614562	Fine-grained, massive gabbro (?), pink mineral (?), diss sulph	199259	< 2	< 5	< 5
445413	5498247	614563	Outcrop, rusty grnst, some fresh disseminated sulphides	199259	19	< 5	< 5
445425	5498236	614564	Outcrop, massive grnst,beige porphyry, some disseminated sulphides	199259	16	< 5	< 5
445420	5498268	614565	Silicified rock grading to quartz, pink K-fldsp (?) quartz vein, diss sulph	199259	5	< 5	< 5
445420	5498268	614566	Foliated greenstone, scarce disseminated sulphides	199259	15	< 5	< 5
447911	5499201	614567	Outcrop, faintly foliated grnst, foliaforn qrtz veinlets, rare diss, sulph	185145	3	< 5	< 5
447906	5499177	614568	BIF, oxidized but fresh sulphides also seen, magnetic, old pit nearby	185145	< 2	< 5	< 5
447915	5499186	614569	BIF, oxidized but fresh sulphides also seen, magnetic, old pit nearby	185145	3	< 5	< 5
445529	5498403	614570	Shear zone in greenstone 0.5+ m thick,	199259	2	< 5	< 5
445530	5498379	614571	Scarp,sheared greenstone, disseminated and veinlets with sulphides	199259	< 2	10	9
445476	5498251	614572	Silicified greenstone with epidote and associated sulphides	199259	3	< 5	< 5
445469	5498256	614573	BIF, strongly magnetic, madnetite, saccaroidal quartz	199259	< 2	< 5	< 5
445479	5498263	614574	Shear zone in greenstone, rich in sulphides, graphite (!)	199259	8	< 5	< 5
445479	5498263	614575	Shear zone in greenstone, quartz, rich in sulphides, graphite (!)	199259	4	< 5	< 5

445479	5498263	614576	Field duplicate of 614575	199259	3	< 5	< 5
445463	5498273	614577	Outcrop, greenstone with quartz veinlets and/or nests, some diss sulph	199259	33	< 5	< 5
445541	5498221	614578	Greenstone outcrop, sulphides are disseminated or in thin veinlets	199259	567	< 5	< 5
442311	5497534	614579	BIF, magnetic bands and saccaroidal quartz, iron oxidic stains	283720	2640	< 5	< 5
442279	5497633	614580	BIF at contact greenstone-porphyry, 10 cm wide	283720	4	< 5	< 5
442264	5497620	614581	Sheared band in greenstone, sulphidic mineralization	283720	11	< 5	< 5
438594	5500407	614582	Ledge outcrop, slabby greenstone, foliaform veinlets, no sulphides	538479	< 2	< 5	< 5
438714	5500251	614583	Flat outcrop, quartzite (?), rare tiny isseminated sulphides	538479	< 2	< 5	< 5
445310	5498150	614584	Outcrop, grnst, rare disseminated prt, strike 70	187749	2	< 5	< 5
445280	5498009	614585	Small outcrop, BIF, magnetite, sugary qrtz, prt, chlorite inclusions	143670	2	< 5	< 5
445280	5498009	614586	Field duplicate of 614585	143670	< 2	< 5	< 5
445279	5497958	614587	Ridge top, brown-red vein qrtz, vuggy, magnetite bands, arsprt, tiny gold (?)	143670	4450	< 5	< 5
445502	5497923	614588	Small outcrop, grnst with qrtz vnlts, arsprt	110877	3	< 5	< 5
445510	5498017	614589	Outcrop, grst with qrtz vnlts, disseminated or vein-style sulphides	110877	3	< 5	< 5
445304	5497776	614590	Small ridge, porphyry (?) contacts greenstone, brown Fe-oxides	143670	< 2	< 5	< 5
445404	5497638	614591	Scarpy outcrop, greenstone with Fe-oxidic infiltrations	258485	< 2	< 5	< 5
439219	5500593	614592	Sub-crop, foliated greenstone, foliaform and xcutting qrtz veinlets	538477	< 2	< 5	< 5
439105	5500711	614593	Small grnst outcrop, conform and xcutting qrtz vnlts, vuggy, rare arsprt	538477	< 2	< 5	< 5
439107	5500737	614594	Grnst outcrop, x-cutting qrtz vnlts 2-3cm wide, rare arsprt	538477	< 2	< 5	< 5
439127	5500806	614595	Large outcrop, grnst quartz vein <0.5m wide, vuggy, rare arsenopyrite	538477	< 2	< 5	< 5
443560	5498335	614596	Small grnst outcrop, silicified, x-cutting qrtz vnlts, diss arsprt, prt	107843	3	< 5	< 5
443576	5498331	614597	Silicified, altered grnst outcrop, qrtz, carb vein, diss arsprt, prt at contacts	107843	184	< 5	< 5
443632	5498318	614598	Foliated greenstone, foliaform qtz vnlts, disseminated sulphides 1-2%	300695	6	< 5	< 5
443674	5498350	614599	BIF in grst outcrop, 0.2 m wide, magnetic, folded, sugary qtz, arsp, prt	300695	5	< 5	< 5
443300	5498260	614600	Stripped grst, BIF & qtz lense 0.3 m wide, diss and vein-style sulphides	107843	7	< 5	< 5
445376	5498783	294135	Quartz porphyry, at contact with greenstone, strike 72, traces of prt, arsprt	199258	2	< 5	< 5
445300	5498641	294136	BIF, rusty quartz, magnetite	199258	< 2	< 5	< 5
445393	5498374	294137	Rusty slightly sheared greenstone, trace of prt, chprt?	187749	< 2	10	10
445393	5498253	294138	Platy, silicified greenstone, quartz veinlets parallel to foliation, <1% tiny prt	187749	6	< 5	< 5

445393	5498253	294139	Rusty, fainty foliated greenstone, disseminated prt, chprt?	187749	17	< 5	6
445430	5498294	294140	Rusty greenstone, 20% disseminated prt, arsprt	199259	18	< 5	< 5
445522	5498240	294141	Strongly oxidized, rusty greenstone, 5% tiny disseminated prt, arsprt	199259	199	< 5	< 5
445521	5498223	294142	Rusty, massive porphyry (?), <1% disseminated prt	199259	16	< 5	< 5
447715	5499480	W075211	Sulph rich porphry decomposed within vein, fractured	185145	< 2	< 5	< 5
447716	5499480	W075212	qtz tourmaline vein in grnstn adjacent to shear. Diss sulph	185145	< 2	< 5	< 5
447717	5499480	W075213	Qtz vein with heavy iron ox and sulph	185145	11	< 5	< 5
447712	5499479	W075214	Decomposed sheared porphry from dyke. abundant 30-50% sulph	185145	< 2	< 5	5
447711	5499479	W075215	Heavy oxide stained porph and grnstn with abundant qtz + tourm vnlts	185145	< 2	< 5	< 5
447710	5499480	W075216	qtz tourm vvnlt in grnstn abundant oxides and sulfide.	185145	< 2	< 5	< 5
447696	5499481	W075217	sulfide and oxides in BIF. Black banding is 75-90% sulfide.. Remob sulph?	185145	3	< 5	< 5
447694	5499481	W075218	Porphry adjacent to w075217 appears bleached, sulfide may be remob.	185145	< 2	< 5	< 5
447694	5499480	W075219	Massive Sulfide with abundant asprt and chalco, bleached, Vein 0.3m wide	185145	5	< 5	< 5
447691	5499477	W075220	Porphry with abundant sub euhedral asprt conce. along feldspar clast in dike.	185145	53	< 5	< 5
447691	5499476	W075221	Sulfide rich shear banding contacting porphry. sulfide appears remob	185145	< 2	< 5	< 5
447691	5499479	W075222	Sulfide rich shear banding contacting porphry. sulfide appears remob	185145	8	< 5	< 5
447623	5499437	W075223	Sulfide rich shear banding contacting porphry. sulfide appears remob	220827	11	< 5	< 5
447559	5499468	W075224	qtz veined gs with minor sulph in some qtz. bladed voided.	220827	11	< 5	< 5
447715	5499470	W075225	BIF, abundant aspy. Sulph are pref to the black banding, 20% total sulfide	185145	9	< 5	< 5
447715	5499470	W075226	porph adj to shear in grnstn. euhedral asprt occurs, ox stockwork with sulph	185145	< 2	< 5	< 5
447715	5499470	W075227	mass sulph in shear adj to porph,.aspy, py. Visible gold as fracture fill aspy.	185145	16	< 5	< 5
447713	5499477	W075228	porph vein with aspy and py 25%. Tourmaline veins present in alt porph	185145	< 2	< 5	< 5
447704	5499477	W075229	Qtz + spar porph, abundant iron staining and sulfide. sulfide conc. shear.	185145	< 2	< 5	< 5
447706	5499477	W075230	Qtz + tourm vein in sheared grnstn adj to porph sulfide along porph sheared	185145	4	< 5	< 5
447459	5499478	W075231	Sheard grnstn with minor bleby aspy forming along foliations, fairly barren	220827	< 2	< 5	5
447546	5499444	W075232	Sheared barren gs with abundant quartz veining and crystals,	220827	< 2	< 5	< 5

Abbreviations: asprt – arsenopyrite ; BIF – banded iron formation; chprt – chalcopyrite; diss – disseminated; f – foliation; Fe-ox – iron oxides; flsp – feldspar; gr – grained; grnstn – greenstone; med – medium; lns – lense; prt – pyrite; sulph – sulphide; qtz – quartz; vnlt – veinlet; Au. Pd, Pt in ppb.

APPENDIX II

Assay Certificates

Quality Analysis ... *Innovative Technologies*

Report No.: A21-19170
Report Date: 17-Nov-21
Date Submitted: 12-Oct-21
Your Reference:

Xyquest Mining
702-889 W. Pender Street
Vancouver BC V5C 3B2
Canada

ATTN: Boris Molak

CERTIFICATE OF ANALYSIS

80 Rock samples were submitted for analysis.

The following analytical package(s) were requested:		Testing Date:
1C-OES-Tbay	QOP PGE-OES (Fire Assay ICPOES)	2021-10-18 10:18:04
1E3-Tbay	QOP AquaGeo (Aqua Regia ICPOES)	2021-11-04 22:56:00

REPORT **A21-19170**

Notes:

Values which exceed the upper limit should be assayed for accurate numbers.

SCC Accredited LAB
LAB Accrédité CCN
LabID: 673

CERTIFIED BY:

Emmanuel Eseme , Ph.D.
Quality Control Coordinator

ACTIVATION LABORATORIES LTD.
1201 Walsh Street West, Thunder Bay, Ontario, Canada, P7E 4X6
TELEPHONE +807 622-6707 or +1.888.228.5227 FAX +1.905.648.9613
E-MAIL Tbay@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

Analyte Symbol	Au	Pd	Pt	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg
Unit Symbol	ppb	ppb	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm
Lower Limit	2	5	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1
Method Code	FA-ICP	FA-ICP	FA-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
614551	< 2	< 5	< 5	< 0.2	< 0.5	165	176	3	3	5	35	0.21	< 2	< 10	< 10	< 0.5	< 2	0.07	7	29	1.87	< 10	< 1
614552	6	8	7	0.6	3.7	109	17600	< 1	50	< 2	3570	2.28	6	< 10	192	< 0.5	< 2	2.82	29	34	17.6	< 10	< 1
614553	5	5	6	0.6	3.6	23	21500	< 1	42	3	3270	1.65	4	< 10	190	< 0.5	< 2	> 10.0	20	23	13.0	< 10	< 1
614554	< 2	< 5	< 5	< 0.2	< 0.5	78	1480	< 1	89	< 2	83	3.87	3	< 10	18	< 0.5	3	3.55	43	199	7.22	< 10	1
614555	3	< 5	< 5	< 0.2	< 0.5	9	363	3	4	< 2	10	0.11	3410	< 10	11	< 0.5	< 2	0.24	3	27	1.00	< 10	< 1
614556	2	12	10	0.2	< 0.5	148	2520	< 1	70	< 2	101	6.03	11	< 10	< 10	< 0.5	< 2	1.27	39	83	16.1	10	< 1
614557	2	< 5	< 5	< 0.2	< 0.5	6	272	3	4	< 2	6	0.12	2950	< 10	< 10	< 0.5	< 2	0.40	4	25	0.94	< 10	< 1
614558	4	< 5	< 5	< 0.2	0.7	29	1840	2	108	< 2	131	2.65	736	< 10	33	< 0.5	3	2.12	39	92	9.50	< 10	2
614559	3	< 5	< 5	< 0.2	< 0.5	4	141	2	3	< 2	4	0.10	3280	< 10	< 10	< 0.5	< 2	0.04	2	22	0.74	< 10	< 1
614560	5	< 5	< 5	< 0.2	< 0.5	62	2340	< 1	59	8	70	1.19	3210	< 10	20	< 0.5	< 2	6.34	29	34	7.94	< 10	< 1
614561	90	< 5	< 5	1.1	< 0.5	1010	1250	7	49	< 2	106	2.91	53	< 10	< 10	< 0.5	< 2	0.77	43	56	11.9	< 10	< 1
614562	< 2	< 5	< 5	< 0.2	< 0.5	30	432	14	21	< 2	32	1.34	10	< 10	12	< 0.5	< 2	1.97	19	47	1.78	< 10	< 1
614563	19	< 5	< 5	0.2	< 0.5	56	156	5	6	14	6	0.05	139	< 10	31	< 0.5	< 2	0.10	5	13	4.98	< 10	< 1
614564	16	< 5	< 5	0.3	< 0.5	216	1800	< 1	51	< 2	71	3.01	21	< 10	17	< 0.5	< 2	3.04	34	96	9.31	< 10	2
614565	5	< 5	< 5	< 0.2	< 0.5	2	191	< 1	3	< 2	10	0.30	22	< 10	17	< 0.5	< 2	0.94	3	12	0.84	< 10	< 1
614566	15	< 5	< 5	< 0.2	< 0.5	23	1270	3	85	< 2	120	3.69	33	< 10	< 10	< 0.5	< 2	2.80	41	125	7.95	10	1
614567	3	< 5	< 5	0.2	< 0.5	100	1500	< 1	99	< 2	100	3.03	10	< 10	18	< 0.5	< 2	2.33	42	106	9.25	< 10	< 1
614568	< 2	< 5	< 5	< 0.2	< 0.5	77	3240	< 1	9	5	57	0.32	3	< 10	40	< 0.5	< 2	0.05	7	7	10.9	< 10	2
614569	3	< 5	< 5	0.2	< 0.5	219	3880	< 1	12	6	43	0.16	< 2	< 10	16	< 0.5	< 2	1.28	10	10	5.75	< 10	2
614570	2	< 5	< 5	0.2	< 0.5	236	817	2	3	4	16	0.25	8	< 10	12	< 0.5	< 2	0.15	14	11	4.49	< 10	1
614571	< 2	10	9	< 0.2	< 0.5	79	871	< 1	29	3	57	1.58	9	< 10	62	< 0.5	< 2	2.33	24	35	4.84	< 10	1
614572	3	< 5	< 5	< 0.2	< 0.5	140	1620	3	94	< 2	113	3.35	76	< 10	15	< 0.5	< 2	1.93	46	95	5.12	< 10	1
614573	< 2	< 5	< 5	0.5	< 0.5	14	217	< 1	64	< 2	66	0.14	61	< 10	11	< 0.5	3	0.02	2	4	> 30.0	50	< 1
614574	8	< 5	< 5	0.2	< 0.5	307	231	5	17	4	28	0.34	19	< 10	10	< 0.5	< 2	0.05	29	15	6.99	< 10	2
614575	4	< 5	< 5	< 0.2	< 0.5	37	1020	33	62	< 2	74	2.03	49	< 10	24	< 0.5	< 2	1.88	27	66	3.92	< 10	2
614576	3	< 5	< 5	< 0.2	< 0.5	36	1230	11	75	< 2	99	2.41	55	< 10	27	< 0.5	< 2	1.92	33	77	3.90	< 10	1
614577	33	< 5	< 5	< 0.2	< 0.5	118	507	2	33	3	40	1.19	13	< 10	16	< 0.5	< 2	1.28	46	50	5.20	< 10	2
614578	567	< 5	< 5	0.3	< 0.5	222	1210	< 1	71	< 2	53	2.04	64	< 10	21	< 0.5	< 2	3.08	45	50	10.5	10	< 1
614579	2640	< 5	< 5	0.5	0.7	340	2770	< 1	14	4	134	0.37	1020	< 10	11	< 0.5	< 2	0.02	12	8	14.8	< 10	< 1
614580	4	< 5	< 5	0.2	< 0.5	111	1530	1	22	8	98	1.92	8	< 10	12	< 0.5	3	0.55	28	56	14.0	< 10	< 1
614581	11	< 5	< 5	0.6	< 0.5	103	901	1	42	17	39	1.04	87	< 10	15	< 0.5	< 2	0.11	53	57	21.8	< 10	< 1
614582	< 2	< 5	< 5	< 0.2	< 0.5	49	745	< 1	179	8	76	2.75	21	< 10	35	< 0.5	< 2	0.79	29	391	4.98	< 10	< 1
614583	< 2	< 5	< 5	< 0.2	< 0.5	10	422	< 1	5	5	62	1.30	< 2	< 10	132	< 0.5	< 2	0.64	6	16	2.68	< 10	< 1
614584	2	< 5	< 5	< 0.2	< 0.5	46	1160	< 1	49	< 2	65	2.80	36	< 10	10	< 0.5	2	2.64	33	59	5.50	< 10	< 1
614585	2	< 5	< 5	< 0.2	< 0.5	122	1180	< 1	3	< 2	6	0.08	< 2	< 10	< 10	< 0.5	< 2	3.28	6	6	3.93	< 10	< 1
614586	< 2	< 5	< 5	< 0.2	< 0.5	144	1170	< 1	2	< 2	6	0.06	< 2	< 10	< 10	< 0.5	< 2	3.33	6	7	3.20	< 10	< 1
614587	4450	< 5	< 5	0.4	< 0.5	25	319	1	2	< 2	10	0.61	5760	< 10	121	< 0.5	< 2	0.04	2	15	5.36	< 10	< 1
614588	3	< 5	< 5	0.2	< 0.5	6	6620	< 1	3	3	24	0.02	7	< 10	< 10	< 0.5	3	1.05	1	8	12.8	< 10	< 1
614589	3	< 5	< 5	< 0.2	< 0.5	53	1000	< 1	54	< 2	62	1.90	38	< 10	14	< 0.5	< 2	2.24	33	82	3.93	< 10	< 1
614590	< 2	< 5	< 5	< 0.2	< 0.5	40	518	< 1	19	< 2	71	2.03	1120	< 10	55	< 0.5	< 2	0.26	24	18	4.47	< 10	< 1
614591	< 2	< 5	< 5	< 0.2	< 0.5	60	919	< 1	124	< 2	50	3.20	17	< 10	< 10	< 0.5	< 2	3.48	30	147	4.51	< 10	< 1
614592	< 2	< 5	< 5	< 0.2	< 0.5	39	586	1	85	17	68	2.05	5	< 10	41	< 0.5	< 2	0.84	21	98	3.62	< 10	< 1
614593	< 2	< 5	< 5	< 0.2	< 0.5	12	344	1	44	11	32	1.29	6	50	31	< 0.5	< 2	1.44	12	75	1.97	< 10	< 1
614594	< 2	< 5	< 5	0.2	< 0.5	21	348	< 1	37	10	32	1.47	4	28	19	< 0.5	< 2	1.85	9	88	1.95	< 10	< 1
614595	< 2	< 5	< 5	< 0.2	< 0.5	42	115	2	7	5	9	0.33	< 2	< 10	71	< 0.5	< 2	0.17	2	27	1.10	< 10	< 1
614596	3	< 5	< 5	< 0.2	0.5	78	1370	< 1	155	< 2	73	2.49	475	< 10	< 10	< 0.5	< 2	4.92	42	98	6.94	< 10	< 1
614597	184	< 5	< 5	< 0.2	1.1	55	1030	< 1	57	4	53	0.63	3460	< 10	24	< 0.5	< 2	4.39	25	52	4.50	< 10	< 1
614598	6	< 5	< 5	< 0.2	< 0.5	139	1430	< 1	48	< 2	67	2.54	19	< 10	< 10	< 0.5	< 2	2.96	42	89	6.33	< 10	< 1
614599	5	< 5	< 5	0.4	< 0.5	571	1410	< 1	30	< 2	48	1.06	6	< 10	< 10	< 0.5	< 2	0.07	41	23	19.9	< 10	2
614600	7	< 5	< 5	0.3	< 0.5	369	2910	< 1	29	< 2	145	2.49	7	< 10	28	< 0.5	< 2	0.04	47	62	13.9	< 10	< 1
294135	2	< 5	< 5	< 0.2	< 0.5	2	321	1	2	< 2	12	0.43	543	< 10	31	< 0.5	< 2	0.34	3	12	0.82	< 10	< 1

Analyte Symbol	Au	Pd	Pt	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg
Unit Symbol	ppb	ppb	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm
Lower Limit	2	5	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1
Method Code	FA-ICP	FA-ICP	FA-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
294136	< 2	< 5	< 5	0.2	< 0.5	9	3030	< 1	2	< 2	114	0.02	6	< 10	25	< 0.5	< 2	0.02	2	6	13.8	< 10	< 1
294137	< 2	10	10	< 0.2	< 0.5	94	836	4	33	< 2	85	1.84	41	< 10	24	< 0.5	< 2	2.18	25	37	4.85	< 10	< 1
294138	6	< 5	< 5	< 0.2	< 0.5	12	185	< 1	< 1	< 2	5	0.14	9	< 10	< 10	< 0.5	< 2	0.30	< 1	9	3.00	< 10	< 1
294139	17	< 5	6	0.4	< 0.5	314	449	< 1	24	< 2	10	0.17	34	< 10	< 10	< 0.5	3	0.68	22	9	13.4	< 10	< 1
294140	18	< 5	< 5	0.8	< 0.5	302	739	2	21	< 2	45	1.69	65	< 10	< 10	< 0.5	< 2	0.75	54	45	13.0	< 10	1
294141	199	< 5	< 5	0.4	< 0.5	346	753	< 1	45	< 2	44	0.81	52	< 10	< 10	< 0.5	< 2	0.68	41	52	16.8	< 10	< 1
294142	16	< 5	< 5	< 0.2	< 0.5	39	149	2	2	< 2	10	0.05	4	< 10	< 10	< 0.5	< 2	0.10	6	22	4.97	< 10	< 1
W075211	< 2	< 5	< 5	< 0.2	< 0.5	18	239	< 1	20	< 2	41	1.03	5	< 10	91	< 0.5	< 2	0.45	9	23	1.77	< 10	< 1
W075212	< 2	< 5	< 5	< 0.2	< 0.5	84	983	< 1	81	< 2	73	2.95	22	< 10	18	< 0.5	< 2	5.40	28	173	4.63	10	< 1
W075213	11	< 5	< 5	0.3	1.5	501	134	5	62	5	157	0.09	> 10000	< 10	18	< 0.5	4	0.37	105	10	7.93	< 10	< 1
W075214	< 2	< 5	5	< 0.2	< 0.5	135	1660	< 1	82	2	148	2.26	2680	< 10	45	< 0.5	3	0.21	49	110	8.02	10	1
W075215	< 2	< 5	< 5	< 0.2	< 0.5	22	497	1	17	< 2	23	0.26	4020	< 10	16	< 0.5	< 2	0.32	10	28	1.92	< 10	< 1
W075216	< 2	< 5	< 5	< 0.2	< 0.5	17	352	2	11	< 2	9	0.14	3920	< 10	10	< 0.5	< 2	1.07	6	19	1.37	< 10	< 1
W075217	3	< 5	< 5	0.4	6.0	662	652	4	86	4	738	0.34	637	< 10	13	< 0.5	< 2	0.44	30	17	12.0	< 10	< 1
W075218	< 2	< 5	< 5	< 0.2	< 0.5	26	437	1	13	< 2	22	0.13	4250	< 10	< 10	< 0.5	< 2	2.55	7	13	1.53	< 10	< 1
W075219	5	< 5	< 5	0.5	2.9	342	225	6	51	4	468	0.16	159	< 10	< 10	< 0.5	3	0.18	14	10	9.90	< 10	< 1
W075220	53	< 5	< 5	0.5	2.7	542	235	25	149	4	43	0.27	> 10000	< 10	< 10	< 0.5	4	0.69	123	29	14.5	< 10	< 1
W075221	< 2	< 5	< 5	< 0.2	1.5	88	321	3	26	< 2	171	0.13	1050	< 10	46	< 0.5	< 2	0.55	11	20	3.60	< 10	< 1
W075222	8	< 5	< 5	< 0.2	0.9	147	506	5	34	< 2	30	0.14	> 10000	< 10	< 10	< 0.5	< 2	2.47	25	10	3.62	< 10	< 1
W075223	11	< 5	< 5	< 0.2	1.5	33	771	4	100	< 2	55	2.99	> 10000	< 10	11	< 0.5	< 2	0.95	46	146	6.42	< 10	< 1
W075224	11	< 5	< 5	0.4	26.6	381	1340	< 1	87	< 2	1330	3.34	30	< 10	< 10	< 0.5	< 2	4.25	37	72	6.32	< 10	< 1
W075225	9	< 5	< 5	0.3	< 0.5	181	212	3	19	8	56	0.12	3610	< 10	26	< 0.5	7	0.07	17	10	7.42	< 10	< 1
W075226	< 2	< 5	< 5	< 0.2	0.9	114	330	1	18	< 2	34	0.36	4550	< 10	17	< 0.5	< 2	0.32	20	19	3.07	< 10	< 1
W075227	16	< 5	< 5	0.4	3.5	901	125	5	73	7	56	0.08	> 10000	< 10	15	< 0.5	4	0.49	173	10	10.7	< 10	< 1
W075228	< 2	< 5	< 5	< 0.2	< 0.5	30	742	1	56	< 2	31	0.96	2140	< 10	< 10	< 0.5	< 2	4.01	17	64	3.26	< 10	2
W075229	< 2	< 5	< 5	< 0.2	< 0.5	5	179	2	10	< 2	5	0.08	1980	< 10	< 10	< 0.5	< 2	0.35	3	21	0.90	< 10	< 1
W075230	4	< 5	< 5	< 0.2	0.7	70	1410	1	41	< 2	42	0.24	> 10000	< 10	15	< 0.5	< 2	5.66	22	17	5.31	< 10	< 1
W075231	< 2	< 5	5	< 0.2	< 0.5	57	1440	< 1	117	< 2	64	2.47	141	< 10	15	< 0.5	2	4.59	36	90	7.19	< 10	< 1
W075232	< 2	< 5	< 5	< 0.2	< 0.5	118	612	< 1	34	< 2	91	2.40	23	< 10	19	< 0.5	< 2	1.27	20	30	4.84	< 10	< 1

Analyte Symbol	K	La	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	ppm	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	10	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
614551	< 0.01	< 10	0.10	0.011	0.004	0.05	< 2	2	1	0.02	< 20	1	< 2	< 10	22	< 10	< 1	< 1
614552	0.46	< 10	0.60	0.066	0.018	0.25	4	5	43	0.11	< 20	2	< 2	< 10	100	< 10	5	4
614553	0.39	< 10	0.41	0.085	0.015	0.23	6	5	73	0.09	< 20	< 1	< 2	< 10	69	< 10	9	3
614554	0.01	< 10	2.72	0.013	0.019	0.17	4	8	30	0.28	< 20	1	< 2	< 10	102	< 10	5	3
614555	< 0.01	12	0.03	0.030	0.002	0.16	< 2	< 1	3	< 0.01	< 20	2	< 2	< 10	3	< 10	< 1	1
614556	< 0.01	< 10	3.13	0.009	0.023	0.10	4	29	11	0.14	< 20	< 1	< 2	< 10	234	< 10	4	5
614557	< 0.01	< 10	0.08	0.025	0.001	0.14	< 2	< 1	5	< 0.01	< 20	1	< 2	< 10	4	< 10	< 1	< 1
614558	0.08	< 10	1.68	0.029	0.019	0.09	3	16	29	0.03	< 20	< 1	< 2	< 10	116	< 10	3	3
614559	< 0.01	< 10	< 0.01	0.069	0.001	0.14	< 2	< 1	3	< 0.01	< 20	2	< 2	< 10	2	< 10	< 1	< 1
614560	0.07	< 10	1.85	0.023	0.006	0.35	3	11	86	< 0.01	< 20	< 1	< 2	< 10	45	< 10	5	3
614561	0.02	< 10	2.06	0.011	0.029	6.22	4	7	27	0.36	< 20	5	< 2	< 10	120	< 10	5	7
614562	0.03	< 10	0.56	0.044	0.024	0.13	< 2	8	42	0.48	< 20	7	< 2	< 10	88	< 10	8	5
614563	0.07	< 10	0.08	0.014	0.008	2.09	3	< 1	2	0.03	< 20	3	< 2	< 10	15	< 10	< 1	6
614564	0.01	< 10	2.30	0.055	0.030	1.09	4	15	67	0.41	< 20	4	< 2	< 10	188	< 10	8	6
614565	0.02	< 10	0.24	0.064	0.020	0.23	< 2	2	23	0.03	< 20	< 1	< 2	< 10	9	< 10	< 1	3
614566	< 0.01	< 10	3.86	0.029	0.037	1.27	3	33	24	0.38	< 20	3	< 2	< 10	260	< 10	10	6
614567	0.02	< 10	2.19	0.028	0.022	0.65	3	12	30	0.44	< 20	3	< 2	< 10	177	< 10	7	3
614568	0.08	< 10	0.26	0.012	0.006	0.07	4	< 1	4	0.01	< 20	2	< 2	< 10	11	< 10	2	7
614569	0.03	< 10	0.10	0.008	0.003	0.04	2	< 1	9	< 0.01	< 20	2	< 2	< 10	7	< 10	2	3
614570	< 0.01	< 10	0.14	0.011	0.006	0.07	< 2	< 1	6	< 0.01	< 20	1	< 2	< 10	17	< 10	1	1
614571	0.21	< 10	0.66	0.089	0.028	0.40	< 2	8	34	0.43	< 20	5	< 2	< 10	104	< 10	6	5
614572	0.03	< 10	2.89	0.009	0.032	1.38	3	11	14	0.40	< 20	4	< 2	< 10	144	< 10	7	5
614573	0.01	< 10	0.05	0.022	0.004	0.05	13	2	2	0.02	< 20	11	< 2	< 10	318	< 10	< 1	10
614574	0.03	< 10	0.23	0.014	0.012	3.16	3	1	4	0.03	< 20	< 1	< 2	< 10	23	< 10	< 1	10
614575	0.06	< 10	1.12	0.019	0.030	0.84	2	10	19	0.42	< 20	4	< 2	< 10	114	< 10	7	6
614576	0.06	< 10	1.70	0.024	0.030	0.99	< 2	9	22	0.42	< 20	5	< 2	< 10	117	< 10	7	5
614577	0.02	< 10	0.89	0.035	0.052	1.58	< 2	6	26	0.32	< 20	4	< 2	< 10	91	< 10	5	5
614578	0.01	< 10	1.42	0.037	0.059	3.89	< 2	14	29	0.15	< 20	1	< 2	< 10	227	< 10	11	10
614579	< 0.01	< 10	0.13	0.009	0.006	1.07	5	< 1	3	< 0.01	< 20	5	< 2	< 10	10	< 10	1	6
614580	< 0.01	< 10	1.21	0.015	0.014	1.55	4	10	4	0.17	< 20	< 1	< 2	< 10	118	< 10	5	6
614581	0.04	< 10	0.52	0.026	0.016	9.55	7	6	12	0.16	< 20	3	< 2	< 10	116	< 10	3	7
614582	0.12	18	2.80	0.059	0.081	0.28	4	7	52	0.35	< 20	4	4	< 10	78	< 10	10	20
614583	0.35	27	0.68	0.086	0.094	0.08	< 2	3	55	0.19	< 20	6	< 2	< 10	29	< 10	6	5
614584	0.03	< 10	1.75	0.100	0.036	0.18	3	11	65	0.44	< 20	4	< 2	< 10	134	< 10	9	4
614585	0.05	< 10	0.09	0.010	0.020	0.45	2	< 1	11	< 0.01	< 20	< 1	< 2	< 10	12	< 10	6	2
614586	0.04	< 10	0.07	0.010	0.015	0.53	< 2	< 1	11	< 0.01	< 20	< 1	< 2	< 10	8	< 10	6	1
614587	0.10	< 10	0.34	0.014	0.013	0.20	4	< 1	2	< 0.01	< 20	4	< 2	< 10	18	< 10	< 1	2
614588	< 0.01	< 10	0.62	0.009	0.004	0.07	6	< 1	8	< 0.01	< 20	5	< 2	< 10	3	< 10	3	4
614589	0.04	< 10	1.21	0.123	0.034	0.32	3	12	42	0.46	< 20	5	< 2	< 10	126	< 10	11	4
614590	0.17	< 10	1.32	0.050	0.025	0.05	3	5	6	< 0.01	< 20	3	< 2	< 10	44	< 10	2	5
614591	< 0.01	< 10	2.29	0.016	0.019	< 0.01	3	7	37	0.29	< 20	2	< 2	< 10	75	< 10	5	3
614592	0.14	23	1.70	0.049	0.058	0.06	3	9	61	0.27	< 20	5	< 2	< 10	56	< 10	8	14
614593	0.16	14	0.72	0.028	0.027	0.02	3	5	94	0.15	< 20	1	< 2	< 10	28	< 10	4	16
614594	0.10	12	0.84	0.037	0.029	0.04	< 2	4	70	0.14	< 20	2	< 2	< 10	35	< 10	4	12
614595	0.09	< 10	0.15	0.016	0.005	0.06	< 2	< 1	53	0.03	< 20	< 1	< 2	< 10	15	< 10	< 1	2
614596	0.04	< 10	4.57	0.031	0.016	0.09	4	18	76	0.01	< 20	< 1	< 2	< 10	141	< 10	2	3
614597	0.18	< 10	2.16	0.040	0.006	0.38	3	12	80	0.03	< 20	< 1	< 2	< 10	71	< 10	1	3
614598	0.04	< 10	1.98	0.060	0.031	0.72	4	8	27	0.45	< 20	10	< 2	< 10	139	< 10	7	4
614599	< 0.01	< 10	0.77	0.008	0.012	4.74	9	5	< 1	0.09	< 20	8	< 2	< 10	68	< 10	6	8
614600	0.02	< 10	1.64	0.011	0.017	1.30	5	16	< 1	0.10	< 20	< 1	< 2	< 10	133	< 10	9	7
294135	0.11	< 10	0.16	0.057	0.014	0.03	< 2	< 1	5	< 0.01	< 20	1	< 2	< 10	2	< 10	< 1	2

Analyte Symbol	K	La	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	ppm	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	10	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
294136	0.01	< 10	0.17	0.011	0.012	0.02	6	< 1	2	< 0.01	< 20	< 1	< 2	< 10	13	< 10	< 1	4
294137	0.10	< 10	1.21	0.195	0.026	0.16	2	10	18	0.40	< 20	8	< 2	< 10	109	< 10	7	4
294138	0.02	< 10	0.03	0.011	0.003	0.35	< 2	< 1	4	0.01	< 20	1	< 2	< 10	11	< 10	2	2
294139	< 0.01	< 10	0.04	0.009	0.026	9.97	5	< 1	6	0.02	< 20	6	< 2	< 10	30	< 10	3	6
294140	0.03	< 10	0.98	0.012	0.016	7.38	7	7	27	0.30	< 20	3	< 2	< 10	94	< 10	4	11
294141	0.04	< 10	0.53	0.043	0.075	4.11	6	15	15	0.15	< 20	< 1	< 2	< 10	214	< 10	5	17
294142	0.01	< 10	0.05	0.015	0.012	0.51	2	< 1	3	< 0.01	< 20	< 1	< 2	< 10	21	< 10	< 1	2
W075211	0.10	< 10	0.73	0.074	0.030	0.01	< 2	2	8	0.18	< 20	4	< 2	< 10	27	< 10	1	12
W075212	0.03	< 10	3.13	0.032	0.018	< 0.01	< 2	23	34	0.25	< 20	< 1	< 2	< 10	167	< 10	9	2
W075213	0.03	< 10	0.04	0.032	0.012	3.71	7	2	5	< 0.01	< 20	19	< 2	< 10	7	< 10	2	15
W075214	0.03	< 10	1.92	0.050	0.035	0.07	5	28	9	0.03	< 20	< 1	< 2	< 10	247	< 10	7	4
W075215	0.02	< 10	0.22	0.076	0.010	0.15	< 2	4	8	< 0.01	< 20	< 1	< 2	< 10	24	< 10	2	5
W075216	0.02	< 10	0.27	0.100	0.015	0.23	< 2	2	18	< 0.01	< 20	2	< 2	< 10	6	< 10	< 1	6
W075217	0.06	< 10	0.33	0.033	0.017	3.43	5	6	7	< 0.01	< 20	< 1	< 2	< 10	38	< 10	3	16
W075218	0.02	< 10	0.55	0.102	0.007	0.20	< 2	2	38	< 0.01	< 20	1	< 2	< 10	6	< 10	3	6
W075219	0.06	< 10	0.05	0.026	0.010	4.52	4	2	2	< 0.01	< 20	8	< 2	< 10	14	< 10	2	19
W075220	0.03	< 10	0.40	0.058	0.012	10.3	16	4	23	< 0.01	< 20	44	< 2	< 10	20	< 10	< 1	17
W075221	0.04	< 10	0.16	0.049	0.017	0.76	< 2	2	10	< 0.01	< 20	< 1	< 2	< 10	11	< 10	1	8
W075222	0.01	< 10	0.79	0.082	0.006	1.28	3	3	43	< 0.01	< 20	7	< 2	< 10	11	< 10	1	9
W075223	0.02	< 10	2.97	0.022	0.009	1.23	5	6	10	0.06	< 20	7	< 2	< 10	96	< 10	2	4
W075224	< 0.01	< 10	3.27	0.016	0.018	0.09	2	9	26	0.23	< 20	< 1	< 2	< 10	138	< 10	5	2
W075225	0.03	< 10	0.05	0.034	0.017	0.10	5	2	4	< 0.01	< 20	11	< 2	< 10	8	< 10	2	11
W075226	0.02	< 10	0.31	0.087	0.027	0.21	2	3	8	< 0.01	< 20	7	< 2	< 10	19	< 10	2	8
W075227	0.02	< 10	0.02	0.023	0.022	4.94	9	2	6	< 0.01	< 20	13	< 2	< 10	5	< 10	2	15
W075228	0.05	< 10	1.59	0.032	0.022	0.10	< 2	4	42	< 0.01	< 20	7	< 2	< 10	30	< 10	2	2
W075229	0.01	< 10	0.09	0.084	0.003	0.08	< 2	< 1	7	< 0.01	< 20	< 1	< 2	< 10	2	< 10	< 1	3
W075230	0.03	< 10	2.35	0.036	0.010	0.81	4	11	75	< 0.01	< 20	6	< 2	< 10	29	< 10	2	3
W075231	0.08	< 10	3.52	0.021	0.020	0.02	4	8	50	< 0.01	< 20	6	< 2	< 10	75	< 10	4	3
W075232	0.05	< 10	1.81	0.052	0.022	0.04	2	6	21	0.43	< 20	2	< 2	< 10	119	< 10	7	3

Analyte Symbol	Au	Pd	Pt	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg
Unit Symbol	ppb	ppb	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm
Lower Limit	2	5	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1
Method Code	FA-ICP	FA-ICP	FA-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
GXR-6 Meas				0.3	< 0.5	64	1010	< 1	22	88	120	6.34	212	< 10	858	0.8	< 2	0.16	12	69	5.06	20	< 1
GXR-6 Cert				1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680
GXR-6 Meas				0.4	< 0.5	70	1070	1	26	96	128	6.68	247	< 10	692	0.9	< 2	0.13	13	76	5.44	20	< 1
GXR-6 Cert				1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680
GXR-6 Meas				0.4	< 0.5	71	1010	< 1	26	93	123	6.68	220	< 10	620	0.8	3	0.11	13	77	5.55	10	< 1
GXR-6 Cert				1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680
GXR-6 Meas				0.4	< 0.5	74	1040	1	25	95	127	6.89	229	< 10	636	0.8	3	0.12	13	79	5.77	10	2
GXR-6 Cert				1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680
GXR-6 Meas				0.4	< 0.5	72	1050	1	25	96	129	6.90	236	< 10	639	0.8	2	0.12	14	80	5.65	10	< 1
GXR-6 Cert				1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680
OREAS 98 (Aqua Regia) Meas				41.2		> 10000				244	1140						31		102				
OREAS 98 (Aqua Regia) Cert				42.8		147000				343	1300						93		111				
OREAS 98 (Aqua Regia) Meas				42.7		> 10000				245	1170						14		105				
OREAS 98 (Aqua Regia) Cert				42.8		147000				343	1300						93		111				
OREAS 98 (Aqua Regia) Meas				43.0		> 10000				246	1180						58		106				
OREAS 98 (Aqua Regia) Cert				42.8		147000				343	1300						93		111				
PK2 Meas	4940	6110	4820																				
PK2 Cert	4785	5918	4749																				
PK2 Meas	4990	6170	4860																				
PK2 Cert	4785	5918	4749																				
PK2 Meas	4980	6060	4740																				
PK2 Cert	4785	5918	4749																				
OREAS 922 (AQUA REGIA) Meas				0.9	< 0.5	2160	771	< 1	33	57	259	2.73	9		74	0.7	9	0.39	18	42	4.87	< 10	
OREAS 922 (AQUA REGIA) Cert				0.851	0.28	2176	730	0.69	34.3	60	256	2.72	6.12		70	0.65	10.3	0.324	19.4	40.7	5.05	7.62	
OREAS 922 (AQUA REGIA) Meas				0.8	< 0.5	2340	806	< 1	38	63	272	2.87	5		78	0.8	13	0.42	19	44	5.11	< 10	
OREAS 922 (AQUA REGIA) Cert				0.851	0.28	2176	730	0.69	34.3	60	256	2.72	6.12		70	0.65	10.3	0.324	19.4	40.7	5.05	7.62	
OREAS 922 (AQUA REGIA) Meas				0.9	< 0.5	2340	765	< 1	36	60	269	2.90	8		72	0.7	10	0.38	20	46	5.28	< 10	
OREAS 922 (AQUA REGIA) Cert				0.851	0.28	2176	730	0.69	34.3	60	256	2.72	6.12		70	0.65	10.3	0.324	19.4	40.7	5.05	7.62	
OREAS 922 (AQUA REGIA) Meas				1.1	< 0.5	2220	771	< 1	34	63	267	2.83	7		72	0.7	8	0.39	20	46	4.99	< 10	
OREAS 922 (AQUA REGIA) Cert				0.851	0.28	2176	730	0.69	34.3	60	256	2.72	6.12		70	0.65	10.3	0.324	19.4	40.7	5.05	7.62	
OREAS 922 (AQUA REGIA) Meas				1.1	< 0.5	2220	766	< 1	36	60	277	2.76	8		68	0.7	10	0.38	20	47	4.98	< 10	
OREAS 922 (AQUA REGIA) Cert				0.851	0.28	2176	730	0.69	34.3	60	256	2.72	6.12		70	0.65	10.3	0.324	19.4	40.7	5.05	7.62	

Analyte Symbol	Au	Pd	Pt	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg
Unit Symbol	ppb	ppb	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm
Lower Limit	2	5	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1
Method Code	FA-ICP	FA-ICP	FA-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
OREAS 923 (AQUA REGIA) Meas				1.5	< 0.5	4300	885	< 1	33	79	332	2.79	9		60	0.7	20	0.40	21	40	5.68	< 10	
OREAS 923 (AQUA REGIA) Cert				1.62	0.40	4248	850	0.84	32.7	81	335	2.80	7.07		54	0.61	21.8	0.326	22.2	39.4	5.91	8.01	
OREAS 923 (AQUA REGIA) Meas				2.0	< 0.5	4180	865	< 1	33	82	329	2.71	9		60	0.7	13	0.40	21	40	5.52	< 10	
OREAS 923 (AQUA REGIA) Cert				1.62	0.40	4248	850	0.84	32.7	81	335	2.80	7.07		54	0.61	21.8	0.326	22.2	39.4	5.91	8.01	
OREAS 923 (AQUA REGIA) Meas				1.8	< 0.5	4440	849	< 1	33	84	345	2.79	8		52	0.6	22	0.37	22	42	5.83	< 10	
OREAS 923 (AQUA REGIA) Cert				1.62	0.40	4248	850	0.84	32.7	81	335	2.80	7.07		54	0.61	21.8	0.326	22.2	39.4	5.91	8.01	
OREAS 923 (AQUA REGIA) Meas				2.6	< 0.5	4520	874	< 1	34	83	349	2.88	7		56	0.7	22	0.39	22	44	5.96	< 10	
OREAS 923 (AQUA REGIA) Cert				1.62	0.40	4248	850	0.84	32.7	81	335	2.80	7.07		54	0.61	21.8	0.326	22.2	39.4	5.91	8.01	
OREAS 923 (AQUA REGIA) Meas				1.7	< 0.5	4470	874	< 1	34	81	351	2.85	7		54	0.6	22	0.39	23	44	5.92	< 10	
OREAS 923 (AQUA REGIA) Cert				1.62	0.40	4248	850	0.84	32.7	81	335	2.80	7.07		54	0.61	21.8	0.326	22.2	39.4	5.91	8.01	
Oreas 96 (Aqua Regia) Meas				10.7		> 10000				84	418						9		45				
Oreas 96 (Aqua Regia) Cert				11.50		39100.00				100	448						27.9		49.2				
Oreas 96 (Aqua Regia) Meas				10.8		> 10000				87	419						14		46				
Oreas 96 (Aqua Regia) Cert				11.50		39100.00				100	448						27.9		49.2				
Oreas 96 (Aqua Regia) Meas				11.2		> 10000				87	418						47		45				
Oreas 96 (Aqua Regia) Cert				11.50		39100.00				100	448						27.9		49.2				
Oreas 96 (Aqua Regia) Meas				11.6		> 10000				86	421						49		49				
Oreas 96 (Aqua Regia) Cert				11.50		39100.00				100	448						27.9		49.2				
Oreas 96 (Aqua Regia) Meas				11.2		> 10000				91	423						56		47				
Oreas 96 (Aqua Regia) Cert				11.50		39100.00				100	448						27.9		49.2				
Oreas 621 (Aqua Regia) Meas				68.8	280	3500	532	13	23	> 5000	> 10000	1.68	80			0.6	< 2	1.61	29	29	3.21	< 10	4
Oreas 621 (Aqua Regia) Cert				68.0	278	3660	520	13.3	25.8	13600	51700	1.60	75.0			0.530	3.85	1.65	27.9	31.3	3.43	9.29	3.93
Oreas 621 (Aqua Regia) Meas				67.4	279	3490	526	13	26	> 5000	> 10000	1.66	81			0.6	5	1.62	29	31	3.17	< 10	3
Oreas 621 (Aqua Regia) Cert				68.0	278	3660	520	13.3	25.8	13600	51700	1.60	75.0			0.530	3.85	1.65	27.9	31.3	3.43	9.29	3.93
Oreas 621 (Aqua Regia) Meas				64.9	258	3390	508	13	24	> 5000	> 10000	1.61	73			0.5	5	1.44	32	31	3.05	< 10	4

Analyte Symbol	Au	Pd	Pt	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg
Unit Symbol	ppb	ppb	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm
Lower Limit	2	5	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1
Method Code	FA-ICP	FA-ICP	FA-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
Oreas 621 (Aqua Regia) Cert				68.0	278	3660	520	13.3	25.8	13600	51700	1.60	75.0			0.530	3.85	1.65	27.9	31.3	3.43	9.29	3.93
Oreas 621 (Aqua Regia) Meas				72.3	282	3820	540	13	26	> 5000	> 10000	1.81	82			0.6	4	1.54	33	30	3.44	< 10	6
Oreas 621 (Aqua Regia) Cert				68.0	278	3660	520	13.3	25.8	13600	51700	1.60	75.0			0.530	3.85	1.65	27.9	31.3	3.43	9.29	3.93
Oreas 621 (Aqua Regia) Meas				71.3	284	3650	545	13	25	> 5000	> 10000	1.72	79			0.6	5	1.56	31	30	3.25	< 10	4
Oreas 621 (Aqua Regia) Cert				68.0	278	3660	520	13.3	25.8	13600	51700	1.60	75.0			0.530	3.85	1.65	27.9	31.3	3.43	9.29	3.93
CDN-PGMS-30 Meas	1960	1690	211																				
CDN-PGMS-30 Cert	1897.000	1660.000	223.000																				
CDN-PGMS-30 Meas	1960	1720	231																				
CDN-PGMS-30 Cert	1897.000	1660.000	223.000																				
CDN-PGMS-30 Meas	1880	1670	225																				
CDN-PGMS-30 Cert	1897.000	1660.000	223.000																				
OREAS 45f (Aqua Regia) Meas						352	172	2	231	6	32	6.97			129	1.0	< 2	0.07	38	328	13.4	20	< 1
OREAS 45f (Aqua Regia) Cert						336	150	1.19	192	12.4	22.2	4.81			158	0.980	0.170	0.0750	39.2	341	13.7	20.3	0.0310
OREAS 45f (Aqua Regia) Meas						370	164	< 1	245	10	27	7.08			117	0.9	7	0.06	37	338	14.0	20	< 1
OREAS 45f (Aqua Regia) Cert						336	150	1.19	192	12.4	22.2	4.81			158	0.980	0.170	0.0750	39.2	341	13.7	20.3	0.0310
OREAS 45f (Aqua Regia) Meas						374	169	< 1	251	11	32	7.33			121	0.9	5	0.06	39	349	14.5	20	< 1
OREAS 45f (Aqua Regia) Cert						336	150	1.19	192	12.4	22.2	4.81			158	0.980	0.170	0.0750	39.2	341	13.7	20.3	0.0310
OREAS 45f (Aqua Regia) Meas						363	170	< 1	249	9	27	7.24			119	1.0	3	0.06	39	348	14.0	20	< 1
OREAS 45f (Aqua Regia) Cert						336	150	1.19	192	12.4	22.2	4.81			158	0.980	0.170	0.0750	39.2	341	13.7	20.3	0.0310
614557 Orig				< 0.2	< 0.5	6	275	3	4	< 2	6	0.12	2980	< 10	< 10	< 0.5	< 2	0.40	3	26	0.96	< 10	< 1
614557 Dup				< 0.2	< 0.5	5	270	3	4	< 2	6	0.12	2930	< 10	< 10	< 0.5	< 2	0.40	4	24	0.92	< 10	< 1
614561 Orig	92	< 5	< 5																				
614561 Dup	88	< 5	< 5																				
614571 Orig	< 2	10	9	< 0.2	< 0.5	80	877	< 1	29	2	57	1.59	8	< 10	62	< 0.5	< 2	2.34	24	35	4.91	< 10	1
614571 Dup	3	10	10	< 0.2	< 0.5	78	866	< 1	28	3	57	1.57	9	< 10	62	< 0.5	< 2	2.33	24	34	4.77	< 10	1
614582 Orig	< 2	< 5	< 5																				
614582 Dup	< 2	< 5	< 5																				
614594 Orig				0.2	< 0.5	20	348	< 1	37	10	32	1.46	5	28	19	< 0.5	< 2	1.85	9	88	1.95	< 10	< 1
614594 Dup				0.2	< 0.5	21	349	1	38	9	32	1.47	3	28	19	< 0.5	< 2	1.85	9	89	1.95	< 10	< 1
614595 Orig	< 2	< 5	< 5																				
614595 Dup	< 2	< 5	< 5																				
614600 Orig	7	< 5	< 5	0.3	< 0.5	369	2910	< 1	29	< 2	145	2.49	7	< 10	28	< 0.5	< 2	0.04	47	62	13.9	< 10	< 1
614600 Split PREP DUP	6	< 5	< 5	0.3	< 0.5	361	2880	< 1	32	< 2	145	2.46	4	< 10	27	< 0.5	< 2	0.04	47	61	13.7	< 10	2
294138 Orig	6	< 5	< 5																				
294138 Dup	6	< 5	< 5																				
294141 Orig				0.4	< 0.5	347	753	< 1	45	< 2	45	0.81	50	< 10	10	< 0.5	< 2	0.68	41	52	16.9	< 10	< 1

Analyte Symbol	Au	Pd	Pt	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg
Unit Symbol	ppb	ppb	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm
Lower Limit	2	5	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1
Method Code	FA-ICP	FA-ICP	FA-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
294141 Dup				0.5	< 0.5	344	752	< 1	44	< 2	44	0.80	53	< 10	< 10	< 0.5	< 2	0.68	41	51	16.8	< 10	1
W075216 Orig	< 2	< 5	< 5																				
W075216 Dup	< 2	< 5	< 5																				
W075222 Orig				< 0.2	0.9	147	507	5	34	< 2	30	0.14	> 10000	< 10	< 10	< 0.5	< 2	2.47	25	10	3.62	< 10	< 1
W075222 Dup				< 0.2	0.8	147	505	5	34	< 2	31	0.14	> 10000	< 10	< 10	< 0.5	< 2	2.47	25	11	3.62	< 10	< 1
W075224 Orig	16	< 5	< 5																				
W075224 Dup	5	< 5	< 5																				
W075232 Orig	< 2	< 5	< 5	< 0.2	< 0.5	118	612	< 1	34	< 2	91	2.40	23	< 10	19	< 0.5	< 2	1.27	20	30	4.84	< 10	< 1
W075232 Split PREP DUP	< 2	< 5	< 5	< 0.2	< 0.5	113	599	< 1	36	< 2	87	2.34	20	< 10	20	< 0.5	2	1.24	19	29	4.69	< 10	< 1
Method Blank	< 2	< 5	< 5																				
Method Blank	< 2	< 5	< 5																				
Method Blank	< 2	< 5	< 5																				
Method Blank	< 2	< 5	< 5																				
Method Blank	< 2	< 5	< 5																				
Method Blank				< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1
Method Blank				< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1
Method Blank				< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1
Method Blank				< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1
Method Blank				< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1
Method Blank				< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1
Method Blank				< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1
Method Blank				< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1
Method Blank				< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1

Analyte Symbol	K	La	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	ppm	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	10	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
GXR-6 Meas	0.99	< 10	0.39	0.084	0.031	0.01	5	17	33		< 20	< 1	< 2	< 10	149	< 10	4	8
GXR-6 Cert	1.87	13.9	0.609	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110
GXR-6 Meas	1.01	10	0.41	0.072	0.034	0.01	3	18	27		< 20	< 1	< 2	< 10	159	< 10	4	8
GXR-6 Cert	1.87	13.9	0.609	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110
GXR-6 Meas	0.97	< 10	0.39	0.104	0.031	0.01	2	17	29		< 20	< 1	< 2	< 10	154	< 10	3	6
GXR-6 Cert	1.87	13.9	0.609	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110
GXR-6 Meas	1.01	< 10	0.40	0.104	0.034	0.01	4	18	30		< 20	< 1	< 2	< 10	160	< 10	4	7
GXR-6 Cert	1.87	13.9	0.609	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110
GXR-6 Meas	1.01	< 10	0.40	0.102	0.035	0.01	3	18	30		< 20	< 1	< 2	< 10	163	< 10	4	8
GXR-6 Cert	1.87	13.9	0.609	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110
OREAS 98 (Aqua Regia) Meas							16											
OREAS 98 (Aqua Regia) Cert							15											
OREAS 98 (Aqua Regia) Meas							17											
OREAS 98 (Aqua Regia) Cert							15											
OREAS 98 (Aqua Regia) Meas							18											
OREAS 98 (Aqua Regia) Cert							15											
PK2 Meas																		
PK2 Cert																		
PK2 Meas																		
PK2 Cert																		
PK2 Meas																		
PK2 Cert																		
OREAS 922 (AQUA REGIA) Meas	0.44	40	1.35	0.024	0.060	0.36	4	3	15		< 20		< 2	< 10	33	< 10	19	16
OREAS 922 (AQUA REGIA) Cert	0.376	32.5	1.33	0.021	0.063	0.386	0.57	3.15	15.0		14.5		0.14	1.98	29.4	1.12	16.0	22.3
OREAS 922 (AQUA REGIA) Meas	0.47	42	1.41	0.026	0.062	0.38	4	4	16		< 20		< 2	< 10	35	< 10	20	8
OREAS 922 (AQUA REGIA) Cert	0.376	32.5	1.33	0.021	0.063	0.386	0.57	3.15	15.0		14.5		0.14	1.98	29.4	1.12	16.0	22.3
OREAS 922 (AQUA REGIA) Meas	0.45	36	1.36	0.028	0.064	0.38	2	4	18		< 20		< 2	< 10	34	< 10	16	16
OREAS 922 (AQUA REGIA) Cert	0.376	32.5	1.33	0.021	0.063	0.386	0.57	3.15	15.0		14.5		0.14	1.98	29.4	1.12	16.0	22.3
OREAS 922 (AQUA REGIA) Meas	0.44	35	1.32	0.026	0.064	0.37	3	4	17		< 20		< 2	< 10	35	< 10	16	24
OREAS 922 (AQUA REGIA) Cert	0.376	32.5	1.33	0.021	0.063	0.386	0.57	3.15	15.0		14.5		0.14	1.98	29.4	1.12	16.0	22.3
OREAS 922 (AQUA REGIA) Meas	0.41	34	1.31	0.026	0.063	0.37	< 2	4	17		< 20		< 2	< 10	34	< 10	16	18
OREAS 922 (AQUA REGIA) Cert	0.376	32.5	1.33	0.021	0.063	0.386	0.57	3.15	15.0		14.5		0.14	1.98	29.4	1.12	16.0	22.3

Analyte Symbol	K	La	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	ppm	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	10	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
OREAS 923 (AQUA REGIA) Meas	0.39	37	1.45		0.058	0.66	4	3	14		< 20		< 2	< 10	33	< 10	18	12
OREAS 923 (AQUA REGIA) Cert	0.322	30.0	1.43		0.061	0.684	0.58	3.09	13.6		14.3		0.12	1.80	30.6	1.96	14.3	22.5
OREAS 923 (AQUA REGIA) Meas	0.38	36	1.41		0.055	0.65	2	3	13		< 20		< 2	< 10	32	< 10	17	9
OREAS 923 (AQUA REGIA) Cert	0.322	30.0	1.43		0.061	0.684	0.58	3.09	13.6		14.3		0.12	1.80	30.6	1.96	14.3	22.5
OREAS 923 (AQUA REGIA) Meas	0.36	32	1.40		0.060	0.67	2	3	15		< 20		< 2	< 10	33	< 10	14	26
OREAS 923 (AQUA REGIA) Cert	0.322	30.0	1.43		0.061	0.684	0.58	3.09	13.6		14.3		0.12	1.80	30.6	1.96	14.3	22.5
OREAS 923 (AQUA REGIA) Meas	0.38	33	1.43		0.062	0.67	5	4	16		< 20		< 2	< 10	34	< 10	15	30
OREAS 923 (AQUA REGIA) Cert	0.322	30.0	1.43		0.061	0.684	0.58	3.09	13.6		14.3		0.12	1.80	30.6	1.96	14.3	22.5
OREAS 923 (AQUA REGIA) Meas	0.37	32	1.43		0.062	0.69	3	4	16		< 20		< 2	< 10	34	< 10	15	27
OREAS 923 (AQUA REGIA) Cert	0.322	30.0	1.43		0.061	0.684	0.58	3.09	13.6		14.3		0.12	1.80	30.6	1.96	14.3	22.5
Oreas 96 (Aqua Regia) Meas						3.66	7											
Oreas 96 (Aqua Regia) Cert						4.38	4.53											
Oreas 96 (Aqua Regia) Meas						3.89	7											
Oreas 96 (Aqua Regia) Cert						4.38	4.53											
Oreas 96 (Aqua Regia) Meas						4.10	6											
Oreas 96 (Aqua Regia) Cert						4.38	4.53											
Oreas 96 (Aqua Regia) Meas						4.07	6											
Oreas 96 (Aqua Regia) Cert						4.38	4.53											
Oreas 96 (Aqua Regia) Meas						3.85	7											
Oreas 96 (Aqua Regia) Cert						4.38	4.53											
Oreas 621 (Aqua Regia) Meas	0.34	21	0.44	0.182	0.032	4.55	108	2	17		< 20		< 2	< 10	12	< 10	7	48
Oreas 621 (Aqua Regia) Cert	0.333	19.4	0.436	0.160	0.0335	4.50	107	2.20	18.9		5.91		0.770	1.63	10.9	1.00	6.87	55.0
Oreas 621 (Aqua Regia) Meas	0.34	21	0.44	0.180	0.032	4.51	109	2	17		< 20		< 2	< 10	12	< 10	7	53
Oreas 621 (Aqua Regia) Cert	0.333	19.4	0.436	0.160	0.0335	4.50	107	2.20	18.9		5.91		0.770	1.63	10.9	1.00	6.87	55.0
Oreas 621 (Aqua Regia) Meas	0.31	17	0.41	0.146	0.030	4.47	105	2	19		< 20		< 2	< 10	12	< 10	5	58

Analyte Symbol	K	La	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	ppm	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	10	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
Oreas 621 (Aqua Regia) Cert	0.333	19.4	0.436	0.160	0.0335	4.50	107	2.20	18.9		5.91		0.770	1.63	10.9	1.00	6.87	55.0
Oreas 621 (Aqua Regia) Meas	0.36	19	0.45	0.168	0.035	4.99	114	2	21		< 20		< 2	< 10	13	< 10	6	65
Oreas 621 (Aqua Regia) Cert	0.333	19.4	0.436	0.160	0.0335	4.50	107	2.20	18.9		5.91		0.770	1.63	10.9	1.00	6.87	55.0
Oreas 621 (Aqua Regia) Meas	0.33	18	0.44	0.154	0.034	4.79	105	2	19		< 20		< 2	< 10	12	< 10	6	60
Oreas 621 (Aqua Regia) Cert	0.333	19.4	0.436	0.160	0.0335	4.50	107	2.20	18.9		5.91		0.770	1.63	10.9	1.00	6.87	55.0
CDN-PGMS-30 Meas																		
CDN-PGMS-30 Cert																		
CDN-PGMS-30 Meas																		
CDN-PGMS-30 Cert																		
CDN-PGMS-30 Meas																		
CDN-PGMS-30 Cert																		
OREAS 45f (Aqua Regia) Meas	0.11	11	0.18	0.042	0.021	0.02		24	14	0.14	< 20		2	< 10	192		5	16
OREAS 45f (Aqua Regia) Cert	0.0820	10.7	0.152	0.0320	0.0220	0.0270		31.4	13.2	0.0970	7.67		0.120	1.09	217		6.74	30.0
OREAS 45f (Aqua Regia) Meas	0.09	< 10	0.18	0.040	0.020	0.02		24	15	0.12	< 20		< 2	< 10	191		4	14
OREAS 45f (Aqua Regia) Cert	0.0820	10.7	0.152	0.0320	0.0220	0.0270		31.4	13.2	0.0970	7.67		0.120	1.09	217		6.74	30.0
OREAS 45f (Aqua Regia) Meas	0.10	< 10	0.18	0.044	0.021	0.02		25	15	0.12	< 20		< 2	< 10	192		4	13
OREAS 45f (Aqua Regia) Cert	0.0820	10.7	0.152	0.0320	0.0220	0.0270		31.4	13.2	0.0970	7.67		0.120	1.09	217		6.74	30.0
OREAS 45f (Aqua Regia) Meas	0.10	< 10	0.18	0.043	0.021	0.02		25	15	0.13	< 20		< 2	< 10	194		4	16
OREAS 45f (Aqua Regia) Cert	0.0820	10.7	0.152	0.0320	0.0220	0.0270		31.4	13.2	0.0970	7.67		0.120	1.09	217		6.74	30.0
614557 Orig	< 0.01	< 10	0.08	0.027	0.001	0.14	< 2	< 1	5	< 0.01	< 20	1	< 2	< 10	4	< 10	< 1	< 1
614557 Dup	< 0.01	< 10	0.08	0.024	0.001	0.14	< 2	< 1	5	< 0.01	< 20	1	< 2	< 10	4	< 10	< 1	< 1
614561 Orig																		
614561 Dup																		
614571 Orig	0.21	< 10	0.67	0.090	0.028	0.40	< 2	8	34	0.43	< 20	5	3	< 10	104	< 10	6	5
614571 Dup	0.21	< 10	0.65	0.089	0.027	0.39	< 2	8	34	0.43	< 20	6	< 2	< 10	104	< 10	6	5
614582 Orig																		
614582 Dup																		
614594 Orig	0.10	12	0.84	0.037	0.029	0.04	< 2	4	70	0.14	< 20	2	< 2	< 10	35	< 10	4	12
614594 Dup	0.10	12	0.84	0.037	0.028	0.04	2	4	71	0.14	< 20	1	< 2	< 10	35	< 10	4	12
614595 Orig																		
614595 Dup																		
614600 Orig	0.02	< 10	1.64	0.011	0.017	1.30	5	16	< 1	0.10	< 20	< 1	< 2	< 10	133	< 10	9	7
614600 Split PREP DUP	0.02	< 10	1.62	0.010	0.016	1.29	6	15	< 1	0.10	< 20	8	< 2	< 10	133	< 10	8	7
294138 Orig																		
294138 Dup																		
294141 Orig	0.04	< 10	0.53	0.044	0.075	4.12	6	15	15	0.15	< 20	3	< 2	< 10	215	< 10	5	18

Analyte Symbol	K	La	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	ppm	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	10	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
294141 Dup	0.04	< 10	0.52	0.042	0.074	4.11	6	15	15	0.14	< 20	< 1	< 2	< 10	213	< 10	5	17
W075216 Orig																		
W075216 Dup																		
W075222 Orig	0.01	< 10	0.79	0.084	0.006	1.29	4	3	43	< 0.01	< 20	8	< 2	< 10	11	< 10	1	9
W075222 Dup	0.01	< 10	0.79	0.080	0.006	1.28	3	3	43	< 0.01	< 20	6	< 2	< 10	11	< 10	1	9
W075224 Orig																		
W075224 Dup																		
W075232 Orig	0.05	< 10	1.81	0.052	0.022	0.04	2	6	21	0.43	< 20	2	< 2	< 10	119	< 10	7	3
W075232 Split PREP DUP	0.05	< 10	1.77	0.049	0.021	0.04	< 2	6	21	0.43	< 20	2	< 2	< 10	116	< 10	7	3
Method Blank																		
Method Blank																		
Method Blank																		
Method Blank																		
Method Blank																		
Method Blank	< 0.01	< 10	< 0.01	0.006	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 0.01	< 10	< 0.01	0.006	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 0.01	< 10	< 0.01	0.008	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 0.01	< 10	< 0.01	0.006	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 0.01	< 10	< 0.01	0.008	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 0.01	< 10	< 0.01	0.006	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 0.01	< 10	< 0.01	0.006	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 0.01	< 10	< 0.01	0.007	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 0.01	< 10	< 0.01	0.007	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1

APPENDIX III

Gwyn Lake Gold Prospect, Claim Map at Scale 1:10,000

Gwyn Lake Prospect

538458	538459	538460	538461	538462	538463	538464	538465
538466	538467	538468	538469	538470	538471	538472	
538473	538474	538475	538476	538477			
	538478	538479					

							552560					187748	322634	159179	307665	307664	201271	220826
								268594	160594	315802	261813	328519	241776	300694	151132	303118	580143	580369	580370	237886	220827	324613
							241777	315803	328520	268595	146487	111057	193665	197351	317960	207263	199258	580371	307639 137117	142570 204381	220829	275260	220828
							307086	307085	203847	276527	181492	284065	107843	300695	151532	207264	187749	199259	257340		533850	533851	533852
						261282	326525	335238	110057	247839	142303	107844	236043	332934	332933	273250	143670	110877	305674		533853	533854	
					141088	236283	199843	187631	276528	145034	283720	283719	291036	216435	245163	333063	137627	258485	202457				
				199844	187632	254954	122218	110215	139036	239779	123123	291037	181056	283721	319166	253197							
				110216	290953	141089	254955	310369	259853	173602	239780												

Spatial Reference
Name: NAD 1983
UTM Zone 16N
PCS: NAD 1983
UTM Zone 16N
GCS: GCS North
American 1983
Scale: 1:10,000

N

0 0.5 1 2 3 4 Kilometers