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GLENCORE

GLENCORE CANADA CORPORATION

2019 DIAMOND DRILLING CAMPAIGN REPORT

STURGEON LAKE PROPERTY
ONTARIO, CANADA

Report completed on May 1st, 2020

Pascal Lessard, P.Geo.
Guillaume Ratthe, M. Sc., P.Geo.

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SUMMARY

A diamond drilling campaign has been completed over the Sturgeon Lake property owned by Glencore Canada Corporation. The drilling which consisted of 13 holes of a total length of 6,165 metres was performed by Orbit-Garant from July 7th, 2019 to November 4th, 2019 for Glencore Canada Corporation. Laboratory sample were analysed by SGS and QAQC were made by BRG ltd. The core logging was executed by Laurentia Exploration and the drilling campaign managed and supervised by Glencore Canada Corporation.

The objective of this campaign was to test the Abitibi mineralized zone as well as some regional VTEM and gravimetric targets looking for a new volcanic massive sulfide deposit. A total of ten holes (5,146 m) were completed from a barge on Sturgeon Lake and three holes (1,021 m) were drilled on land.

Drilling yielded encouraging results which may warrant follow-up work. Felsic rocks, pyroclastic textures and alteration packages were identified in multiple holes. Geochemistry is complex and whole rock data will require further analysis in order to properly identify fertile alteration trend.

Additional sampling, 3D modelling and compilation of lithogeochemical data is recommended to evaluate stratigraphic relationships and alteration trends in the new data before planning new drill holes.

1.0. INTRODUCTION

Sturgeon Lake property owned by Glencore Canada Corporation has been a prolific mining camp over the years hosting multiple producing base metal mines.

This technical report has been prepared by Glencore Canada Corporation in order to report assessment work under the provisions of the Mining Act of Ontario R.S.O. 1990. Work described in this report was executed under exploration permit no. PR-19-000113.

2.0. LOCALISATION

Sturgeon Lake property is located in the Ontario province at approximatively 70 kilometers north-northeast of Ignace town and approximatively 85 kilometers east-southeast of Sioux Lookout town (Figure 1). The property is located in NTS sheets 52G14 and 52G15.

From Thunder Bay, the property can be reached by travelling northwest on Trans-Canada Highway (17) to the town of Ignace then by driving northeast on road 599. The property can be accessed via a private partly paved and gravelled road located roughly 500 meters north of Silver Dollar lodge on road 599. This private and secure road leads to the old mine site of Mattabi which is roughly in the center of the Sturgeon Lake property (Figure 2).

The Sturgeon Lake property is located within the Bell Lake, Six Miles Lake, Valora Lake and Penassi Lake areas in the Patricia Mining Division of Ontario. It consist of 58 mining claims, 23 mining leases and 14 patents (See full list and full size map in Appendix G). The property is held by Glencore Canada Corporation.

The property exhibit minimal relief with elevation ranging from 404 to 495 meters above mean sea level. Various rivers and streams running though the survey area which connect various small lakes and wetlands. There are also several small roads and trails going though the property as well as power lines, railroad and mining areas (Figure 3).

The current report work have been completed on leases and patents listed in Table 1.

Table 1 – Drilled meters repartition

Lease/Patent/Claim	Drilled meters
LEA-108284	3294.0
LEA-108285	102.6
LEA-109649	1245.4
PAT-6512	870.0
PAT-17504	300.0
PAT-46376	355.0
TOTAL	**6167.0**

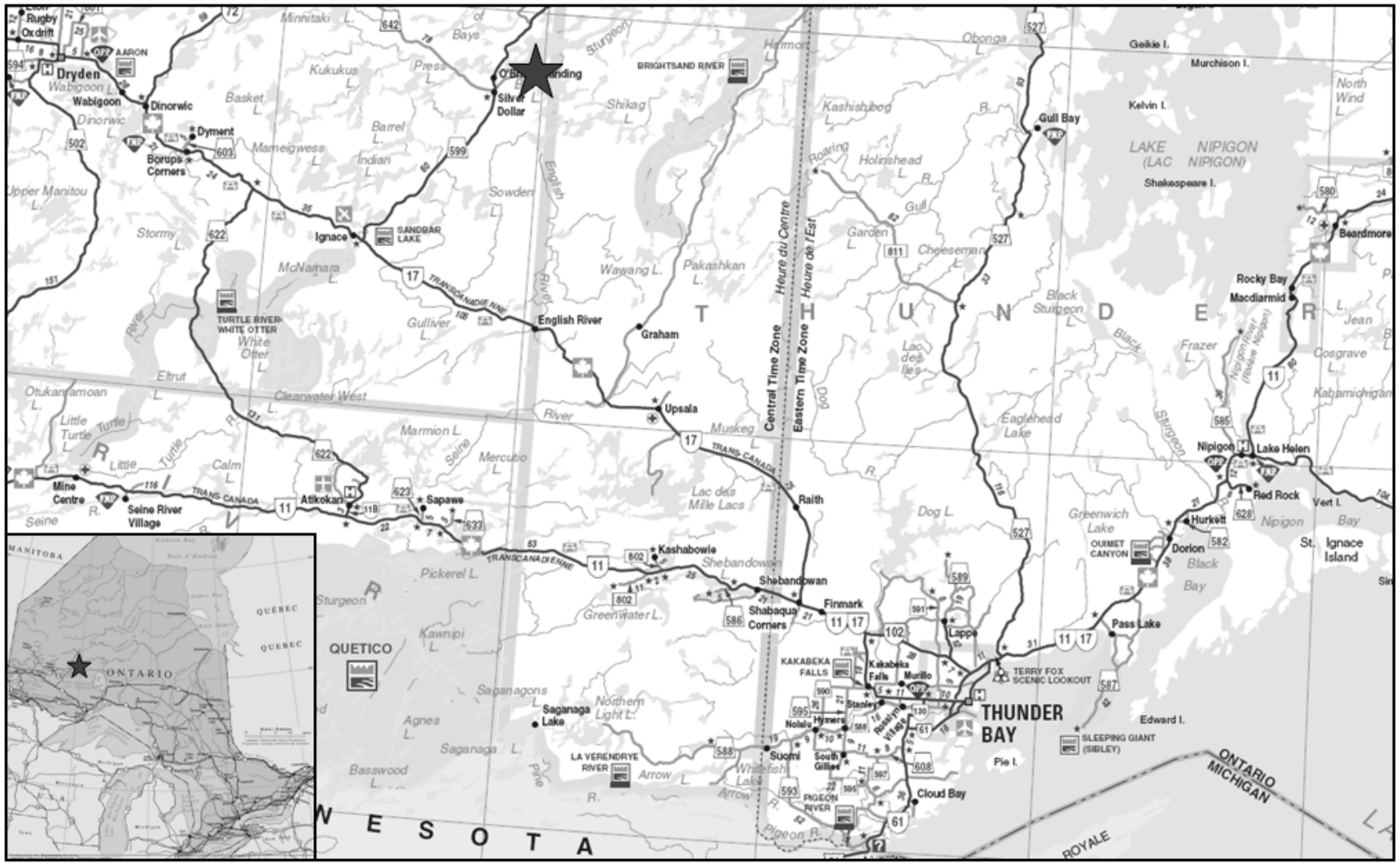

Figure 1 : Sturgeon Lake Property Provincial Location Map

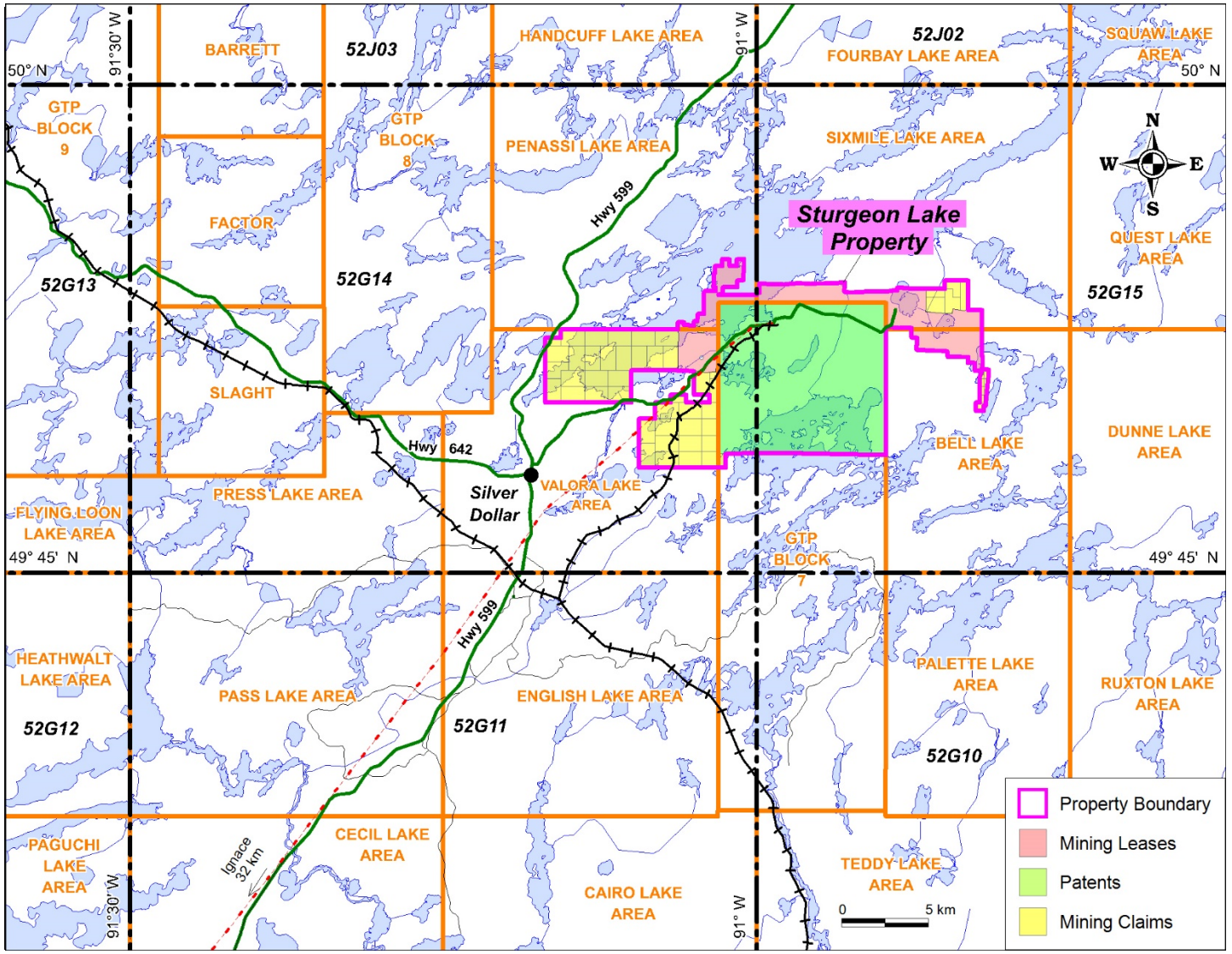

Figure 2 : Sturgeon Lake Property Regional Location Map (Long/Lat NAD 83)

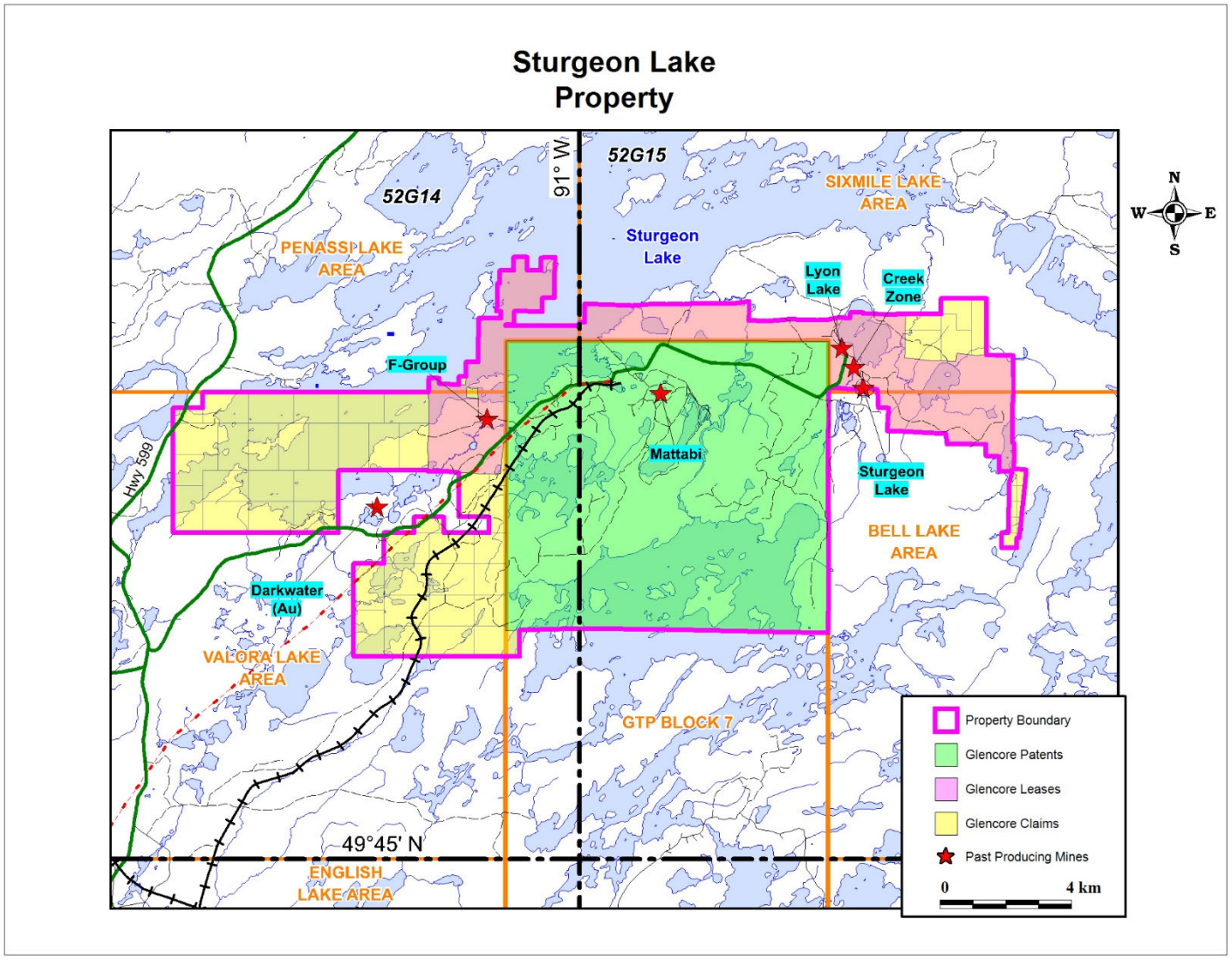

Figure 3 : Sturgeon Lake property map (Long/Lat NAD 83)

3.0. HISTORY OF THE PROPERTY

Sturgeon Lake property has been a prolific mining camp over the years hosting multiple producing base metal mines combining a total production of 19,8 millions tons at an average of 8.50% Zn, 1.06% Cu, 0.91% Pb and 119.7 g/t Ag (Table 2) (Franklin, 1996).

Table 2 – Historical production of the Sturgeon Lake Mining Camp (Franklin, 1996)

		Grade			
Deposit	**Metric Tons**	**Zn (wt. %)**	**Cu (wt. %)**	**Pb (wt. %)**	**Ag (g/t)**
F Group	340,000	9.51	0.64	0.64	60.4
Mattabi	12,550,000	8.28	0.74	0.85	104.0
Lyon Creek and SubCreek Zone	3,950,000	6.53	1.24	0.63	141.5
Creek Zone	910,000	8.80	1.66	0.76	141.5
Sturgeon Lake	2,070,000	9.17	2.55	1.21	164.2
TOTAL	19,820,000	8.50	1.06	0.91	119.7

Sturgeon Lake property has been acquired by Glencore Canada Corporation in 2013 during the acquisition of Xstrata. The property has a complex history which is the results of numerous company merging, company acquisition, joint venture, land acquisition and claim resignation over the years. Work completed since 2010 is listed in Table 3. A non exhaustive list of the work done on the claims and leases of the Sturgeon Lake property since 1966 according to the Mining Lands Administration System (MLAS) archives is also available in Appendix B.

Table 3 - Sturgeon Lake property work history since 2010

Year	Company	Work Type	Assessment file No.
2010	Xstrata Zinc Canada Corp	Geological Mapping/Sampling	20000005556
2010	Xstrata Zinc Canada Corp	Airborne Mag and EM	20000006888
2011	Xstrata Zinc Canada Corp	Drilling and BHEM	20000007677

2013	Xstrata Zinc Canada Corp	Drilling	20000013530
2013	Glencore Canada Corporation	Drilling	20000014747
2019	Glencore Canada Corporation	Airborne Mag and EM	Assessment report not published yet
2019	Glencore Canada Corporation	Drilling	Current report

4.0. REGIONAL GEOLOGY

The Archean Savant Lake-Sturgeon Lake greenstone belt is located within the Wabigoon volcano-sedimentary subprovince which is part of the Superior province. Covering most part of the property, the South Sturgeon Sequence in the south part of the Savant Lake-Sturgeon Lake belt is recognized to host the Sturgeon Lake Caldera Complex (Hudak et al., 2003).

The caldera is up to 25 km in strike length and is approximatively 3 kilometers thick with north-facing vertical to steep north dipping (55°) intracaldera felsic to mafic tholeiitic/calcalkalic volcanics rocks mixed with volcanoclastic units and sediments locally intruded by syn- to post-volcanic plutons sills and dykes (Morton et al. 1991; Morton et al, 1999)

The caldera host multiple volcanic massive sulfide occurrences which are interpreted to have formed within an evolved, continental margin oceanic arc (Sanborn-Barrie et al. 2001; Galley, 2002) that contained magmas derived from back-arc basalts (Galley, 2003) which haven't been contaminated to any large extent by the older Wabigoon Province continental crust (Bernier et al. 1999). Zircon ages of the ash flow tuff and late dome lavas had a age of 2,735 million years plus or minus 1,5 million year (Davis et al., 1985)

Pre-caldera mafic volcanic rocks at the base of the caldera complex are intruded by the sill-like syn-volcanic Beidelman Bay Intrusive Complex and by the Pike Lake Layered Complex. Those two intrusives units are interpreted to have provided the thermal energy required to drive the hydrothermal system that led to volcanic massive sulfide (VMS) generation in the mining camp

(Franklin et al., 1975; Campbell et al., 1981; Hudak, 1989; Jongewaard, 1989; Morton et al., 1991; Galley et al., 2000; Galley, 2002; Holk et al., 2002, Galley, 2003).

The stratigraphy is characterized by thirteen supracrustal successions that have been grouped in four stratigraphic sequences (Hudak, 1996): The Pre-caldera Sequence (PCS), the Early Caldera Sequence (ECS), the Late Caldera Sequence (LCS) and the Lyon Lake Fault Sequence (LLFS). Contact between those stratigraphic intervals host sub-seafloor replacement style volcanic massive sulfide (VMS) deposits (Doyle and Allen, 2003). Known copper molybdene porphyric style mineralisation in the area as described by Poulsen and Franklin (1981) are anterior to the caldera formation (Galley et al. 2000; Galley, 2002)

Three type of fault have been identified within the area: synvolcanic faults, post-volcanic high-angle faults and post-volcanic low angles shear zones which may represent thrust fault within the caldera (Gibson et al. 1999).

A full size regional geological map is available in Appendix H.

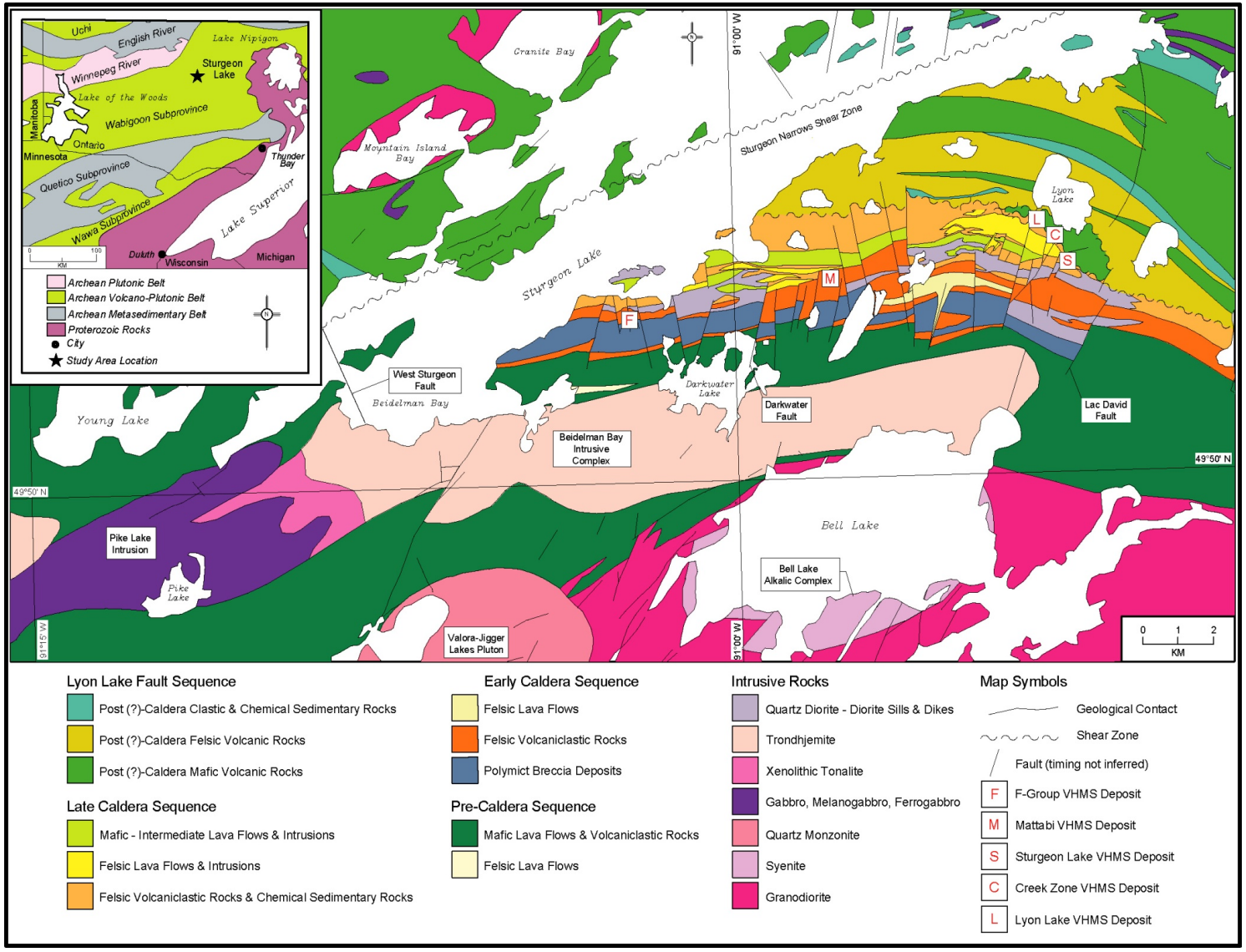

Figure 4 : Geology of the Sturgeon Lake caldera complex (Morton and al.,1991; Hudak and al., 2003) (Long/Lat NAD 83)

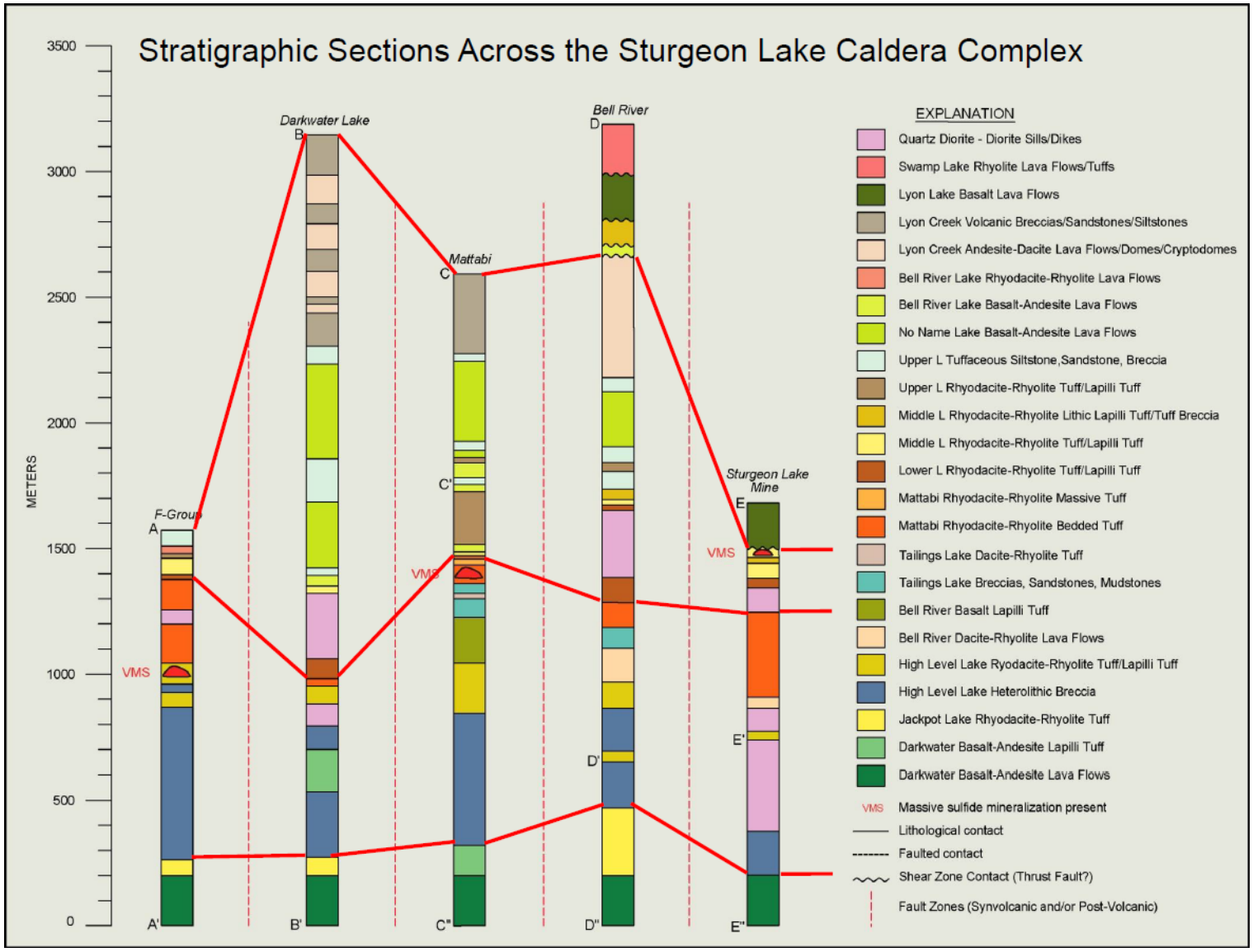

Figure 5 – Sturgeon Lake stratigraphic sequence (Hudak, Unpublished)

5.0. ABITIBI ZONE LOCAL GEOLOGY

The Abitibi zone is located north of the historical F-Group volcanic massive sulfide deposit which was discovered in 1969 and mined from 1981 to 1984 producing 377 564 tons of ore containing 0.64%Cu, 9.51% Zn, 0.64% Pb, and 60.4 grams/ton Ag (Franklin, 1996) (Figure 6). Local geology of the area include from north to south; the Lower L Succession that mostly consist of volcanoclastic strata (tuffs and lapilli tuffs) and their re-sedimented equivalents, the Mattabi Succession which correspond to interbedded aphyric to quartz phyric tuff and quartz-phyric tuff and lapilli tuff deposits and last the Bell River Lake Series which include coherent andesitic, dacitic and rhyodacitic lava flows. Locally, those units are intruded by coarse-grained, massive feldspar-phyric diorite and massive to amygdaloidal diorite with interstitial quartz plates intrusions (Hudak, 2011).

Abitibi zone is a polymetallic volcanic massive sulfide deposit which the mineralization is interpreted to be the results of synvolcanic sub-seafloor remplacement (Doyle and Allen, 2003). The Abitibi zone is interpreted to be hosted within the Mattabi Succession.

The deposit within the Sturgeon Lake mining camp including the Abitibi zone are closely associated with disconformable to semiconformable alteration zones including aluminium silicate, sericite, pyrophyllite with aluminium silicate, chloritoid, iron rich chloritoid and iron rich carbonate. Distal from the deposits, it is expected to find laterally extensive semiconformable zones including chloritoid, iron rich carbonate and iron rich chlorite or iron rich chlorite and iron rich carbonate packages (Hudak, 2011). The Abitibi zone is currently interpreted to contain three mineralized zones: the Lower zone (Main), the Middle zone and the Upper zone. So far, it is unclear if those three zones are the results of one lens dismembered by faults or stacking.

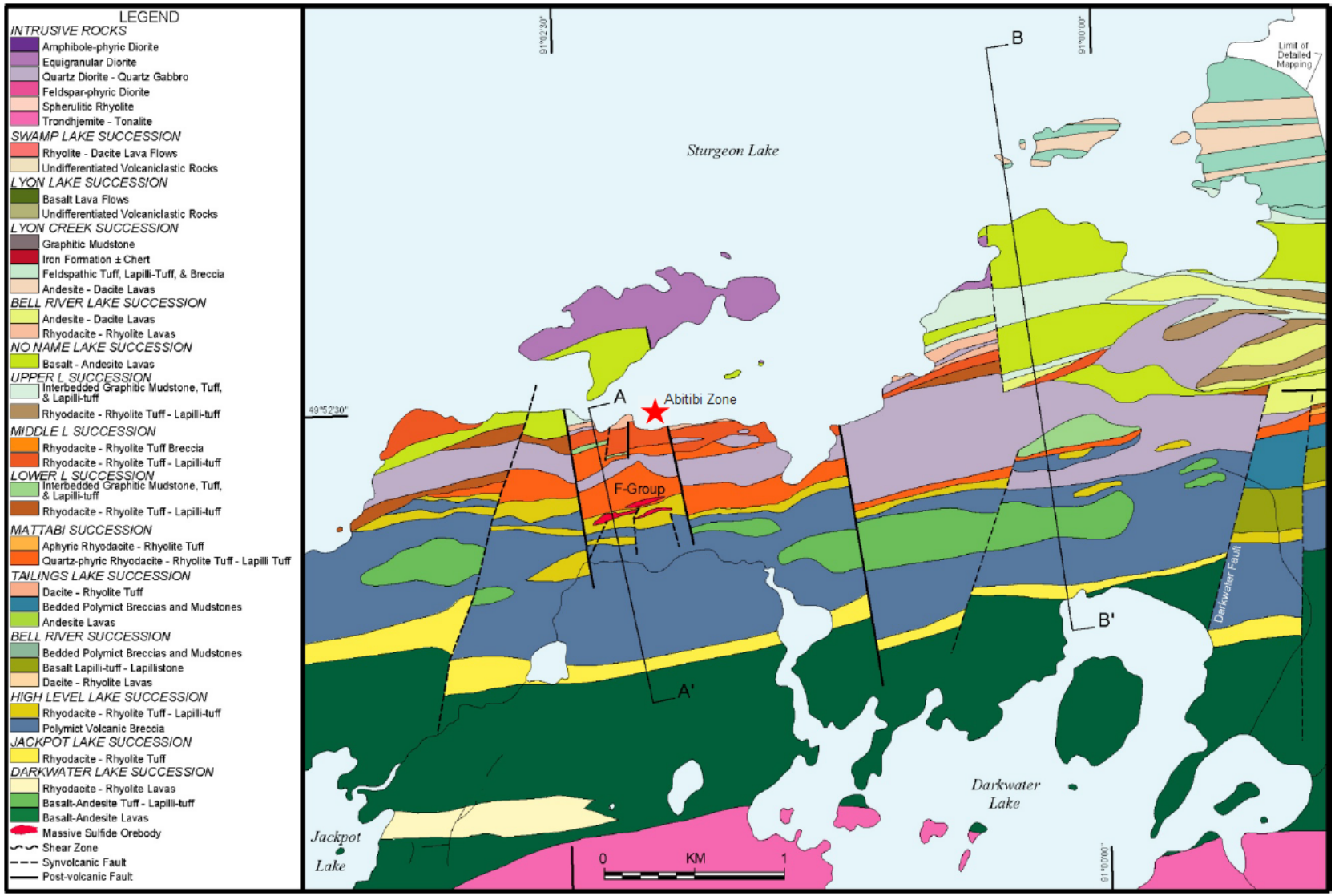

Figure 6 – Geological map of the western Sturgeon Lake Caldera Complex (Modified after Morton et al., 1999) (Long/Lat NAD 83)

6.0. EXPLORATION TARGETS

Nine diamond drill holes (4,642 m) targeting Abitibi deposit extensions, one hole targeting a gravimetric target (355 m) and three holes (1,170 m) testing regional VTEM targets were completed in 2019. According to the historical data, mineralization is likely to occur within felsic volcanic units at the upper contact of the pyroclastic felsic units (Mattabi Succession/early-syn caldera events) with volcanoclastic sediments (Lower L succession/late-caldera events).

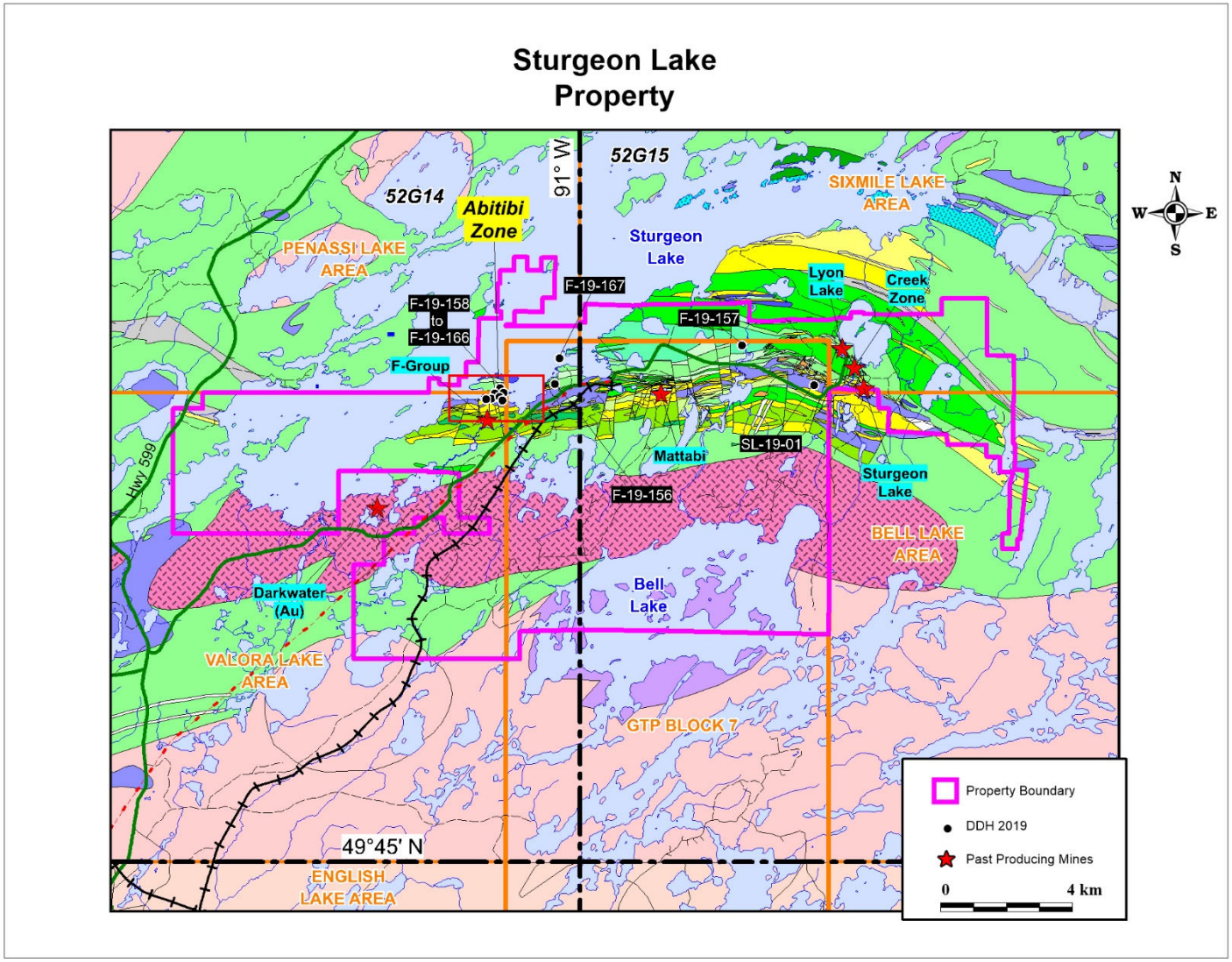

Figure 7 – Abitibi Zone location map (Long/Lat NAD 83)

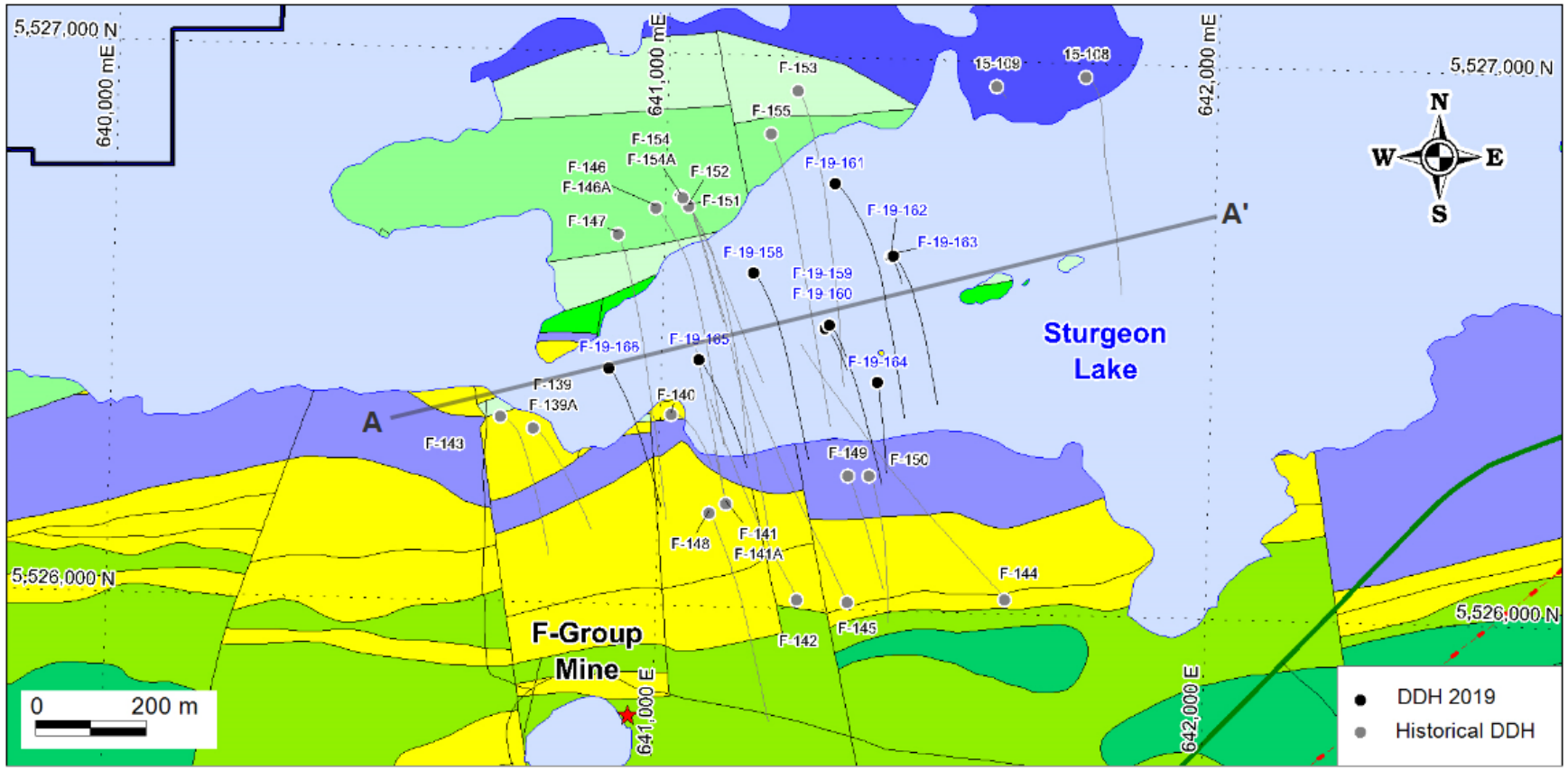

Figure 8 – Abitibi Zone Drill Hole location (Zoom in from Figure 7) (UTM NAD 83 Zone 15)

7.0. RESULTS

7.1. Scope of the work

The drilling which consisted of 13 holes for a total of 6,167 metres was performed by Orbit-Garant from July 7th, 2019 to November 4th, 2019 (51 days) for Glencore Canada Corporation. Ten holes (5,146 m) were completed from a barge on Sturgeon Lake and three holes (1,021 m) were drilled on land. Logging and sampling were carried out on site by professional geologists employed by Laurentia Exploration (logs available in Appendix C). The drilling campaign was managed and supervised by Glencore Canada Corporation.

Drill holes were surveyed using a Garmin GPSMAP 64s GPS device combined to a TN-14 and Ez-Gyro Reflex instruments. Reading were taken every 21 meters. Magnetic susceptibility measures were taken each 1.5 m with a KT-10 device. RQD (Rock Quality Designation) of selected zones have been estimated afterward based on core photos. The core boxes were identified by an aluminium tag on which was written the box number, the hole ID and the depth. The core boxes were stored at Mattabi site.

Rock were sampled for each interval containing more than 5% of non-economic sulphide mineral, more than 1% of economic sulphide (sphalerite or chalcopyrite) or at the discretion of the geologist. The sampled interval were cut on site and brought directly to Thunder Bay and send via courier to Lakefield SGS laboratory. The samples were digested by an Aqua Regia acid. Gold have been analysed by fire assay while zinc, copper, silver and lead were assayed by atomic absorption spectrometry.

Geochemistry analysis were systematically taken at each 30 meters or at each lithological change. Those analysis include major oxides, minor elements and a selection of rare earth. Minor elements and rare earths have been analysed by ICP-AES and ICP-MS after being dissolved by sodium peroxide fusion. Major elements have been dissolved by Borate fusion and analysed by XRF.

QAQC were overviewed by BRG Ltd. Laboratory certificates are available in Appendix D and E.

Table 4 – 2019 diamond drill holes summary table

Drill Hole Name	Target type	Location	Target Name	Azimuth	Dip	Depth	Started Date	Finish Date	Easting	Northing	Elevation	Log Author	Assays Analysis	Whole Rock Analysis
F-19-156	VTEM	On Land	VTEM-19-B1	178	-62	366	7/15/2019	7/20/2019	642949	5526949	418	J.Lalancette	39	18
F-19-157	VTEM	On Land	VTEM-19-C2	210	-65	300	7/24/2019	7/27/2019	648475	5528240	420	J.Lalancette	15	11
SL-19-01	Gravimetry	On Land	P-GR-19-01B	240	-65	355	7/29/2019	8/3/2019	650656	5527126	425	R.Clairet	20	15
F-19-158	Abitibi Zone	Barge drilling	AZ-19-A	148	-75	673	8/16/2019	8/28/2019	641163	5526610	394	R.Clairet; J.Lalancette	86	29
F-19-159	Abitibi Zone	Barge drilling	AZ-19-C	143	-68	168	8/29/2019	8/31/2019	641303	5526520	394	J.Lalancette	0	0
F-19-160	Abitibi Zone	Barge drilling	AZ-19-C	143	-75	696	8/31/2019	8/9/2019	641303	5526520	394	J.Lalancette	96	27
F-19-161	Abitibi Zone	Barge drilling	AZ-19-F	136	-71	774	9/11/2019	9/20/2019	641307	5526776	410	R.Clairet	79	40
F-19-162	Abitibi Zone	Barge drilling	AZ-19-G	148	-78	210	9/22/2019	9/24/2019	641411	5526646	408	R.Clairet	0	5
F-19-163	Abitibi Zone	Barge drilling	AZ-19-G	142.6	-72	600	9/25/2019	9/29/2019	641416	5526648	419	R.Clairet	106	27
F-19-164	Abitibi Zone	Barge drilling	AZ-19-A1(H)	167.8	-64.5	348	10/4/2019	10/6/2019	641394	5526418	409	R.Clairet	65	18
F-19-165	Abitibi Zone	Barge drilling	AZ-19-K	150	-72	552	10/8/2019	10/12/2019	641068	5526451	410	R.Clairet; J.Lalancette	90	14
F-19-166	Abitibi Zone	Barge drilling	AZ-19-J	149.5	-71.9	621	10/13/2019	10/19/2019	640905	5526432	409	J.Lalancette	83	20
F-19-167	VTEM	Barge drilling	VTEM-19-B2	173	-72	504	10/20/2019	10/25/2019	643063	5527715	409	J.Lalancette	10	16
Total						**6167**	**7/15/2019**	**10/25/2019**					**689**	**240**

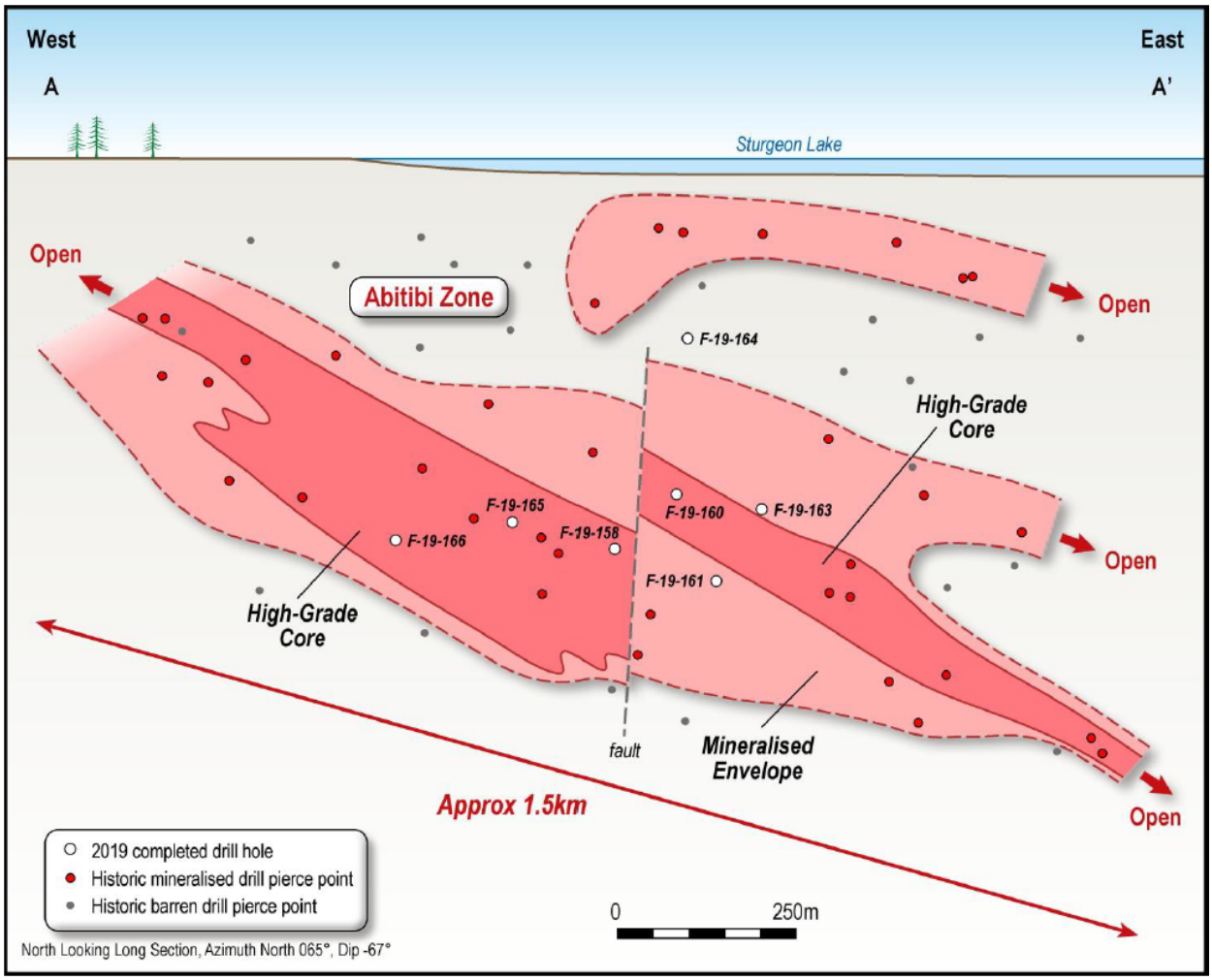

Figure 9 – Abitibi Zone Longitudinal section showing drill hole piercing points (Plan view showed in Figure 8)

7.2. Drilling

7.2.1. Drill hole summary

F-19-156 :

F-19-156 tested an on-land VTEM anomaly.

The F-19-156 drill hole collared at 3.0 m into massive andesite until 141.50 m. From there to 173.15 m, the hole intersect intermediate tuff (lapilli tuff from 141.50 m to 153.30 m and ash tuff from 153.30 m to 173.15 m). Between 173.15 m and 193.60 m a lapilli felsic tuff with some small intervals of semi-massive sulphide (Pyrite/Pyrrhotite) is present(from 173.35 m to 173.55 m, from 173.75 m to 174.0 m, from 174.50 m to 174.65 m and from 174.75 m to 174,95 m). Between 193.60 m and 202.70 m, the rock consist of intermediate to mafic volcanic (maybe intrusive). Further down, the hole intersect a rhyolite/rhyolitic tuff (from 202.70 m to 214.70 m) with 5-7% of Pyrite/Pyrrhotite stringers and chalcopyrite traces (from 202.90 m to 207.20 m). Between 214.70 m and 256.90 m, lapilli felsic tuff with small semi-massive sulphide intervals (Pyrite/Pyrrhotite) which could explain the VTEM anomaly was intersected. Presence of semi-massive sulphide intervals have from 217.40 m to 217.60 m and from 217.80 m to 218.40 m. Mafic tuff (or brecciated contact) from 256.90 m to 262.10 m and andesite were intersected from 262.10 m to 280.65 m before returning in lapilli felsic tuff from 280.65 m to 348.80 m. Within the lapilli felsic tuf unit, there is an intermediate intrusion (Diorite?) from 305.70 m to 314.50 m and an altered zone from 336.40 m to 340.60 m (chlotisation and probably andalousite(?)) with little mineralization (2-3% Pyrite/Pyrrhotite with Chalcopyrite/Spalerite trace). The hole ended in an intermediate intrusive (Diorite) at 366.00 m.

F-19-157:

Drill hole F-19-157 also targeting an on-land VTEM anomaly.

The hole collared at 15.0 m into felsic to intermediate tuff until 27.40 m. Between 27.40 m and 96.25 m, the rock consist of a lapilli mafic tuff. Between 96.25 m and 104.95 m,

mudstone/graphitic sediment interbedded with silicious beds was intersected and contain up to 3 to 5 percent of Pyrite/Pyrrhotite stringers. A fault is present from 96.25 m to 96.60 m. An intermediate to mafic volcanic unit (maybe intrusive) is observed from 104.95 m to 153.60 m. This unit intersects small intervals of felsic tuff, follow by small interval of mudstone/graphitic sediment interbedded with silicious beds (from 153.60 m to 155.90 m). From 155.90 m to 156.20 m, a small massive sulphide (70% pyrrhotite and 10% pyrite) is present, which could potentially explain the VTEM and magnetic anomalies. Presence on either side of the massive sulphide of between 7 to 10 percent of pyrrhotite/pyrite stringers. The massive sulphide is hosted in a felsic/intermediate lapilli tuff starting at 155.90 m and ending at 190.90 m. The hole intersected a mafic intrusion from 190.90 m to 210.75 m and ended in a felsic/intermediate lapilli tuff from 210.75 m to 300 m.

SL-19-01:

Drill hole SL-19-01 targeted a gravimetric anomaly located west of the historical Mattabi open pit mine.

The hole collared at 9.00 m in an alternating crystal and lapilli dominated ash supported felsic tuff ending at 98.95 m. From 98.95 m to 167.30 m, a succession of tuffs exhibits evidence of blocks and is interbedded with dacitic effusive to extrusive facies. From 167.30 m to 209.65 m, most of the rock is composed of intermediate to mafic massive amygdaloidal flows cut by a dioritic intrusive from 172.20 m to 188.80 m. From 209.65 m to 351.00 m (E.O.H), the diamond drill hole intersect a homogenous carbonated amphibole rich intermediate intrusion.

Volcanogenic alteration (patchy silica associated to yellow to brownish pervasive sericite) is observed between 9.00 m and 28.10 m in addition to pervasive and stringer black chlorite/chloritoid and possible andalusite. This interval is also the only mineralized section of the hole, with an overall 7 to 10% pyrite present as elongated cm aggregates, with rarer dm enrichment of up to 40% pyrite. The Bouger anomaly is probably linked to the overburden.

F-19-158:

Drill hole F-19-158 collared at 23.50 m in massive mafic flow (intrusive (?) from 23.50 m to 29.45 m). Between 29.45 m and 48.20 m, the hole intersected magnetite-calcite-silica eyes in lapilli tuff. From 48.20 m to 63.95 m, the diamond drill hole intersected brecciated (from 48.20 m to 56.30 m) to massive (from 56.30 m to 63.95 m) altered (sericitisation/fushite) dacite. From 63.95 m to 74.20 m, a small interval of felsic cristal tuff interbededed with amydaloidal andesite is present. Between 74.20 m and 116.00 m, a mafic to intermediate flow is observed, follow by hematized wacke from 116.00 to 128.20 m and massive sparsely amygadaloidal intermediate to mafic volcanites/tuff from 128.20 to 152.00 m. Between 152.00 m and 164.00 m, a quartz-feldspars phyric tuff strongly hematized is present, followed by gradual bedding volcanosediments (ash/crystal tuff with interbedded japse/oxide iron formation) from 164.00 to 166.00 m. Massive and sparsely amygadaloidal intermediate volcanites or tuff is next from 166.00 m to 234.50 m. Between 234.50 m and 384.50 m, a various locally reworked blockly, quartz-phyric locally graphitic sediments and ash tuffs (Upper L sediments (Figure 5)) was intersected. These previous units are crosscut by felsic tuff from 300.90 to 324.70 m. The Upper L sediments show some mineralized intersections such has 15 to 20% pyrite and 2 to 3% Pyrrhotite from 334.00 to 335.80 m, 7 to 10% pyrite with 2 to 3% pyrrhotite from 369.50 to 376.00 m and 15 to 20% pyrite with 2 to 3% pyrrhotite from 376.00 to 381.50 m . Between 384.50 m and 429.60 m, an intermediate intrusive (diorite?) is present, followed by felsic volcanics from 429.60 to 454.80 m and a brecciated chertic felsic volcanic tuff from 454.80 m to the end of the hole at 673.00 m.

Three massive to semi massive sulphide intervals were intersected:

- From 485.50 m to 488.40 m - 30 to 40% of red sphalerite, 30 to 40% pyrite and trace of chalcopyrite
- From 513.00 m to 519.50 m - 20 to 40% sphalerite, 35 to 55% pyrite and trace to 1% chalcopyrite
- From 574.35 m to 574.85 m - 40 to 50% chalcopyrite

F-19-159:

The drill hole collared at 27.00 m in andesite until 168.00 m. The hole was abandoned due to excessive deviation.

F-19-160:

Drill hole F-19-160 collared at 24.00 m in a massive mafic flow (intrusive?) until 139.70 m. Between 139.70 m and 147.00 m, the hole intersected some felsic crystal tuff. From 147.00 m to 237.60 m, a locally variable graphitic sediments, reworked blocky quartz-phyric ash tuffs and BIF (Upper L sediments (Figure 5)) was observed. The Upper L sediments show some weakly mineralized intersections with up to 5% magnetite, 5% pyrite, 5% pyrrhotite and 1% sphalerite locally in beddings or stringers. These were cross cut by intermediate flow or intrusive from 175.40 to 189.50 m. Between 237.60 m and 294.20 m, an intermediate intrusive (diorite?) is intersected, follow by felsic crystal tuff from 294.20 to 339.30 m and brecciated felsic lapilli/crystal tuff (locally chertic) from 339.30 to 387.10 m. An intermediate intrusive was observed (Feldspar phyric) between 387.10 m and 412.10 m with small interval of brecciated/chertic tuff between 391.30 m and 396.10 m. Between 5 to 10% pyrite is present from 391.30 m to 412.10 m. From 412.10 m until the end of the hole at 696.00 m, a crystal lapilli to blocky tuffs sequence is present with small interbedded pyrite rich semi-massive sulphides interval listed below:

- Massive sulphide from 412.10 m to 413.80 m – 35-40% red sphalerite, 30-35% pyrite and chalcopyrite trace
- Massive sulphide from 413.80 m to 414.40 m – 20-25% brown sphalerite, 30-40% pyrite and trace to 1% chalcopyrite
- Semi-massive sulphide from 414.40 m to 415.70 m – 15-20% brown sphalerite, 20-25% pyrite and 3-5% chalcopyrite
- Semi-massive sulphide from 543.70 m to 544.20 m – 45% pyrite, 5% sphalerite and 1% chalcopyrite

F-19-161:

The drill hole collared at 21.00 m in lapilli tuffs interbedded with dacite flow (Upper L volcano-sedimentary and dacitic succession (Figure 5)) until 103.90 m. Between 103.90 and 118.10 m, the diamond drill hole went through andesite flows. A large amphibole rich intrusive is intersected between 118.10 and 223.00 m. From 223.00 to 335.00 m, a second andesitic unit is observed. The hole went through various volcano-sedimentary units from 335.00 to 454.50 m. A second amphibole rich intrusive unit was intersected from 454.50 to 505.70 m. From 505.70 to the end of the hole at 774.00 m, the Mattabi Upper series has been intersected, alternating variably altered quartz-phyric or aphyric bedded tuff with massive lapilli tuffs.

One massive sulfide unit was intersected from 607.60 to 609.10 m and contains 60-65% pyrite with sphalerite trace.

F-19-162:

The hole collared at 16.50 m in a massive and locally amygdaloidal andesite (mafic intrusive?) until the end of the hole at 210.00 m. This unit was intersected by an intensely potassic altered mafic to intermediate volcanite unit from 123.40 to 140.70 m. A fault filled with gouge was observed from 140.70 to 141.00 m.

The hole was abandoned at 210.00 m due to excessive deviation.

F-19-163:

The drill hole collared at 12.70 m into bedrock. From 12.70 to 210.50, the hole went through some mafic (andesite?) lavas and/or intrusive (Upper L succession/No Name Lake series). Between 210.50 and 236.00 m, the hole intersected dacitic flow/tuff/scoria (Upper L succession/Bell River Lake series). From 236.00 to 404.00 m, the hole went through various locally graphitic volcano-sedimentary units (Upper L Succession/sedimentary and pyroclastics series). Between 404.00 and 504.65 m, the Mattabi Upper series has been intersected, alternating with variably altered quartz-phyric or aphyric bedded tuff with massive lapilli tuffs. From 504.65 to 542.30 m, a diorite unit

was intersected. From 542.30 to the end of the hole at 600.00 m, a massive lapilli rich to lapilli supported felsic tuffs is present.

Three small pyrite dominated mineralized zones were intersected in the Mattabi tuff:

- From 473.70 to 474.40 m containing up to 40-45% pyrite, 2% pyrrhotite and sphalerite trace (Upper Zone)
- From 489.65 to 491.00 m containing 60% pyrite, 5-7% galena, 3-5% honey sphalerite, 1% pyrrhotite and 0,5% chalcopyrite (Middle Zone)
- From 559.30 to 559.70 m containing 50% pyrite, 1% chalcopyrite and sphalerite trace in the form of fine grained layers in a sericitized felsic tuff (Lower Zone).

F-19-164:

The hole collared at 16.70 m. It went through alternating graphitic shales and minor graphitic ash volcano-sedimentary units from 16.70 to 141.20 m. A massive intermediate intrusion or flow is described from 141.20 to 154.40 m. From 154.20 to 158.40, pyritic cherts interbedded with a mafic dyke were intersected. Between 158.40 and 253.00 m, quartz and feldspars phyric tuffs/flow were observed. From 253.00 m and 279.20 m, bedded cherty and aphyric felsic tuff were intersected, containing upper zone up to 25% pyrite and 3% honey sphalerite in stringer from 265.90 to 266.80 m (0.90 m). Between 279.20 m and 284.95 m, a massive quartzite was observed. The Middle zone was described between 284.95 m and 285.55 m including mineralized cherts with 15% pyrite, 5 to 7% honey sphalerite and chalcopyrite trace. The hole stopped in ash and lapilli tuffs from 285.55 m to 301.40 m, followed by diorite from 301.40 m to 348.00 m.

F-19-165:

The drill hole collared at 15.50 m and went through mafic (andesitic?) lavas and/or intrusive through 64.00 m. A small semi-massive sulphide unit containing up to 50% pyrite was intersected between 64.00 m and 64.40 m. Between 64.40 and 83.20 m, a massive intermediate ash tuff wase observed. From 83.20 to 197.10 m, the hole went through various locally graphitic volcano-

sedimentary units (Upper L Succession/sedimentary and pyroclastics series), with small BIF intersections cut by a dioritic unit from 113.40 to 145.40 m. Between 197.10 and 382.20 m, felsic to intermediate tuffs were intersected, with a small mineralization zone from 197.20 to 200.00 m that contain 25% pyrite, 7% pyrrhotite and sphalerite trace. Between 382.20 m and 426.00 m, a weakly graphitic volcano-sediment unit was intersected. The upper zone is following these sediments from 426.00 to 427.80 m. A felsic to intermediate tuff follow the upper zone, with up to 5% chalcopyrite locally until the end of the hole at 552.00 m.

F-19-166:

The drill hole collared at 20.00 m in felsic tuff until 54.10 m down the hole followed by diorite from 54.10 to 63.90 m. Between 63.90 m and 159.10 m, a mix of intermediate tuff and intermediate volcanic were intersected. A diorite intrusive unit between 159.10 m and 209.10 m was observed. From 209.10 to 235.40 m, the hole went through various locally graphitic volcano sediments (Upper L Succession/sedimentary and pyroclastics series). Between 235.40 m and 359.15 m, the hole intersected intermediate tuff cut by diorite units from 270.30 to 292.20 m and from 308.00 to 359.15 m. Between 359.15 and 374.80 m, felsic tuff were described, followed by mineralization zones from 374.8 to 417.65 m (Upper zone):

- 374.80 – 377.80 m: Semi massive sulphide with 50-55% pyrite and sphalerite trace
- 389.50 – 391.90 m: Massive sulphide with 80% pyrite and 1-2% honey sphalerite in beddings
- 391.90 – 398.20 m: Semi massive sulphide with 30-35% pyrite, 10-15% honey sphalerite, 1% chalcopyrite and 1% galena
- 398.20 – 401.30 m: Massive sulphide with 40-45% pyrite, 25-30% honey sphalerite, 2-3% chalcopyrite and 1-2% galena
- 401.30 – 406.50 m: Semi massive sulphide with 25-30% pyrite, 10-15% honey sphalerite, 2% chalcopyrite and trace to 1% galena
- 406.50 – 417.65 m: 5-7% pyrite, 3-5% honey sphalerite, 1-2% chalcopyrite and trace to 1% galena

A felsic to intermediate tuff follow the upper zone from 417.65 to the end of the hole at 621 m.

F-19-167:

The drill hole collared at 10.50 m in intermediate crystal tuff alternating with interbedded dioritic intrusions until 66.05 m. From 66.05 to 280.70 m, a heterogeneous breccia / felsic blocky tuff sequence was observed. Between 280.70 and 378.65 m, a dacitic flow and tuffaceous complex was intersected, with two interbedded graphitic sediments: from 280.70 to 283.10 m and from 288.20 to 292.30 m. A mafic volcanite/breccia has been observed between and 378.65 and 427.00 m. The hole ended at 504.00 m in a massive gabbro-diorite.

7.2.2. Laboratory results

Complete laboratory certificate can be found in Appendix D and E while 2019 best results are summarised in the Table 5 below:

Table 5 – 2019 composites

Hole ID	From (m)	To (m)	Length (m)	Zn (%)	Cu (%)	Pb (%)	Au (g/t)	Ag (g/t)	Comments
F-19-156	-	-	-	-	-	-	-	-	No significant results
F-19-157	-	-	-	-	-	-	-	-	No significant results
SL-19-01	-	-	-	-	-	-	-	-	No significant results
F-19-158	485.50	494.00	**8.50**	**12.04**	0.21	0.45	0.26	**99.2**	
F-19-158	500.00	501.00	1.00	**8.25**	**0.58**	0.01	0.12	33.0	
F-19-158	508.50	521.50	**13.00**	**7.81**	0.47	0.57	0.14	**86.9**	
F-19-158	574.00	575.00	1.00	0.53	**9.66**	0.01	**0.43**	**130.0**	
F-19-159	-	-	-	-	-	-	-	-	Abandonned
F-19-160	412.10	415.85	3.75	**27.18**	0.37	**1.85**	**0.72**	**442.15**	
F-19-160	543.00	544.20	1.20	**4.65**	0.46	0.03	0.08	9.08	
F-19-161	603.3	603.6	0.3	3.45	0.22	0.07	0.067	25	
F-19-162	-	-	-	-	-	-	-	-	Abandonned
F-19-163	489.65	493.9	4.25	**4.40**	0.08	0.44	0.09	54.54	
F-19-164	284.95	285.55	0.60	**7.53**	0.02	0.38	0.08	48.00	
F-19-165	425.90	432.00	6.10	**6.12**	0.22	0.43	0.17	**65.30**	
F-19-165	425.90	426.65	0.75	**33.30**	**0.85**	**2.53**	**0.93**	**398.00**	Including
F-19-165	467.00	470.00	3.00	0.10	**2.47**	0.00	**0.39**	15.00	
F-19-166	389.50	418.50	**29.00**	**5.42**	0.05	0.89	0.22	**87.34**	
F-19-166	396.50	405.00	**8.50**	**10.99**	0.12	**1.56**	**0.43**	**142.12**	Including
F-19-166	398.00	401.25	**3.25**	**18.09**	0.27	**2.12**	**0.46**	**179.85**	Including
F-19-167	-	-	-	-	-	-	-	-	No significant results

8.0. INTERPRETATION AND RECOMMANDATIONS

Field work as described in this report was performed according to the highest standards of the industry except for the RQD measurements that were estimated based on photos and therefore should not be considered as very accurate data. Felsic rocks, pyroclastic textures and alteration packages were identified in multiple holes. Geochemistry is complex and whole rock data will require further analysis in order to identify fertile alteration trend.

The currently reported campaign met its original objectives which were to test some regional VTEM and gravimetric anomalies and to test possible mineralized extensions on the Abitibi zone.

More detailed compilation and 3D modelling is recommended to better evaluate the stratigraphic relationships and the alteration trends before generating new drill targets on the extension of the Sturgeon Lake Abitibi zone (Figure 9).

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10.0. CERTIFICATION AND SIGNATURES

I, Pascal Lessard, declare the following:

- I GRADUATED FROM L'UNIVERSITY DE MONTREAL IN B.SC. IN GEOLOGY IN 1994
- I AM A MEMBER OF THE ASSOCIATION OF PROFESSIONAL GEOSCIENTISTS OF ONTARIO (PGO) AS FULL PRACTICING MEMBER UNDER MEMBER NUMBER 3138
- I HAVE BEEN WORKING WITH GLENCORE CANADA CORPORATION SINCE APRIL 1994
- THIS REPORT IS BASED ON MY PERSONNAL KNOWLEDGE OF THE STURGEON LAKE PROPERTY
- I HAVE VISITED THE PROPERTY IN MULTIPLE OCCASIONS
- TO MY KNOWLEDGE, THE EXPENDITURES SUBMITTED ARE REASONABLE AND CONFORM TO THE WORK CARRIED OUT

Pascal Lessard, P. Geo.
PGO member no. : 3138
Glencore Canada Corporation
May 1st, 2020

CERTIFICATION AND SIGNATURE

I, Guillaume Ratthé, declare the following:

- I GRADUATED FROM L'UNIVERSITY DU QUEBEC A CHICOUTIMI (UQAC) IN ENGINEERING GEOLOGY IN 2014 AND COMPLETED A MASTER IN MINERAL EXPLORATION (UQAC) IN 2016
- I AM A MEMBER OF THE ASSOCIATION OF PROFESSIONAL GEOSCIENTISTS OF ONTARIO (PGO) AS FULL PRACTICING MEMBER UNDER MEMBER NUMBER 3136
- I HAVE BEEN WORKING WITH GLENCORE CANADA CORPORATION SINCE JANUARY 2017
- THIS REPORT IS BASED ON MY PERSONNAL KNOWLEDGE OF THE STURGEON LAKE PROPERTY
- I HAVE VISITED THE PROPERTY IN ONE OCCASION
- TO MY KNOWLEDGE, THE EXPENDITURES SUBMITTED ARE REASONABLE AND CONFORM TO THE WORK CARRIED OUT

Guillaume Ratthé, M. Sc., P. Geo
PGO member no. : 3136
Glencore Canada Corporation
May 1st, 2020