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**Technical Report**

**PERMIT : # PR-19-000147**

**Phase I Work Program**

**McLander Creek D-Zone Property**

**Sudbury Ontario Mining District**

**Dunlop Township**

**Mining Claims**

**510633,510634,510635,513833,513834,513835,517195,517196,517209,517210**

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Dunlop & Shibananing Twp.

Sudbury, Ontario Mining District

*1.0 Introduction:*

The McLander Creek project consists of 44 unpatented mining claims in 4 separate groups which were formerly known as the Pacific Northwest Capital [PFN], Agnew Lake Property A,B,C,&D zones. The property rated as a high potential advanced stage multi-phase 4 element PGE [platinum, palladium, rhodium, gold] + Cu, Ni mining exploration opportunity. All the original PFN property area was abandoned by Pacific Northwest Capital & South African partner Anglo American Platinum Corp in spite of four extensive stages of successful exploration results and a fifth-stage program planned and for reasons unknown was abandoned and it came open for staking in 2018. Currently, the most promising mineralization occurs along the marginal contact zones within the Paleoproterozoic Agnew Lake Intrusion [AGI] or Shakespeare Dunlop Intrusion, located approximately 70 kms South-west of Sudbury, Ontario. Historically, an aggregate of more than \$2.3 million of approved assessment expenditures have been invested into the project claims by three major contributors, BP Resources Canada [BP], New Millennium Metals Corp [NM] & Pacific Northwest Capitol [PFN]. Several promising PGE zones have been discovered along a distance estimated at 12 kms of strike in the northern and western contact marginal zones of the Agnew Lake mafic intrusive they are referred to as the A, B, C & D – zones respectively. At the D-Zone, as well as the other zones, the PGE host rocks are melagabbro/pyroxenite breccia unit and the “inclusion-bearing zone”. There is a easily recognizable distinct horizon of accessory minerals “blue quartz eyes and abundant brownish biotite” with variable amounts of disseminated sulphides chalcopyrite, pyrrhotite and pyrite which are the main target lithologies due to their high 3E and 4E values in platinum, palladium, rhodium and gold.

*Rationale:*

The objective is to potentially build upon previous exploration and prove-up the reality of future underground narrow- gauge robotic extraction mining methods of economic PGE mineralization. Mining engineering companies are already developing new robotic underground mining equipment for this purpose which will no doubt improve with time. A new generation of mining methods has already begun to appeal to future mining explorers and with public environmentalists support.

*D-Zone Historic Examples:*

Grab sample, # 12868 [Pt 4180ppb, Pd 432ppb, Rh 686ppb] 5.29 g/t 3E - current price for rhodium US \$2450/oz.

DDH 90-D-02, intersected 1.63 g/t 3E/ 1m @ 23 – 24m vertical horizon.- no assay value given for Rh.

DDH 90-D-07,intersected 5.9 g/t 3E/ 1m @ 179 – 180m vertical horizon - “ “

90-D-09, intersected 2.1 g/t 3E / 1.9m @ 208 – 209.9 vertical horizon. - “ “

DDH- AL 23 a 1570.5m vertical hole drilled by PFN in 2002 located some 2.8 kms southeast of the BP- D-zone drill program intersected 1.57 g/t 3E / 1m or 939 g/t 3E / 2m @ 425m-427m vertical horizon. Interestingly, this intersection was comprised of mineralization almost entirely of platinum, DDH core sample # AL03206 [Au 6ppb, Pt 1550 ppb, Pd 10ppb].

*2.0 WORK Objective*

The 2019 McLander Creek D-Zone work program proposed an orientation survey which would utilize mechanized power stripping, mapping to verify the extent of the previously discovered mineralization and thereby enhance the unknown surface horizon

geometry of the targeted drilling lithologies. The targeted horizon which hosts “blue quartz + biotite” could identify more accurately new drill targets of economically important 4E-PGE, Cu, Ni deposits. At the D-zone

*Comments:*

OPR 5849, a 1993 Ontario Geological Survey Report on East Bull Lake Intrusion based on field investigations suggests that:“ an unexpected feature of the EBLI [sampling] data is that they compare favourable in terms of their metal abundances to the J-M Reef of the Stillwater Complex, which is one of the most platinum-group-enriched reef- type deposits known....it suggests that the potential exists for extremely large tonnages of sulphide mineralization, perhaps even massive sulfides [along the floor of the intrusion] which have platinum group element enrichment level equating to reef-environments.” [Ontario Geological Survey Open File Report 5849 dated 1993].

Previous company explorers’ accumulated expenditures of [2.3 million dollars] associated with McLander Creek Project area and have produced a large database of high quality regional prospecting & sampling, geological mapping, geophysical surveys, geochemical surveys, borehole diamond drilling and thousands of trace element ICP multi-element scan analysis from channel samples and detailed sampling.

Of the 66 DDH in three separate McLander claim groups, approximately 60 holes [6 holes were from the ice surface & thus collars were removed] are accessible for “in-hole” geophysics because drill collars were left in all the other holes.

BP drilled 32 DDH [5100m], NM drilled 4 holes [428m], PFN drilled 30 DDH [5177m] for a total of [13,551m], or potentially 13.5 kms of newly accessible exposure to underground rock environment. There has been no “in-hole” geophysical surveys completed to-date, however it was highly recommended by PFN geologists for their phase III exploration program. The information is considered highly valuable exploration data and is a known proven method however, these DDH’s remain untested.

*Combined Historic Exploration Expenditures*

BP Resources Canada MLAS History

No. of DDH – metres of drilling, drill core assays, [no bore hole geophysics] regional surface samples collected for assay =, including rock descriptions & analytical data

Collective expenditures = \$ 525,000

Recommendations: Further work was recommended.

New Millennium Metals Corp. MLAS History

No. of DDH – metres of drilling, drill core assays [no borehole geophysics], regional surface samples collected for assay =, including rock descriptions & analytical data

Collective expenditures \$ 386,473

Recommendations: Further work was recommended.

Pacific Northwest Capital MLAS History

No. of DDH – metres of drilling, drill core assays,[no borehole geophysics], regional surface samples including rock descriptions & assays =

Collective data: = expenditures \$ 1,440,826

Recommendations: Further work was recommended.

*[3.0] WORK PLAN*

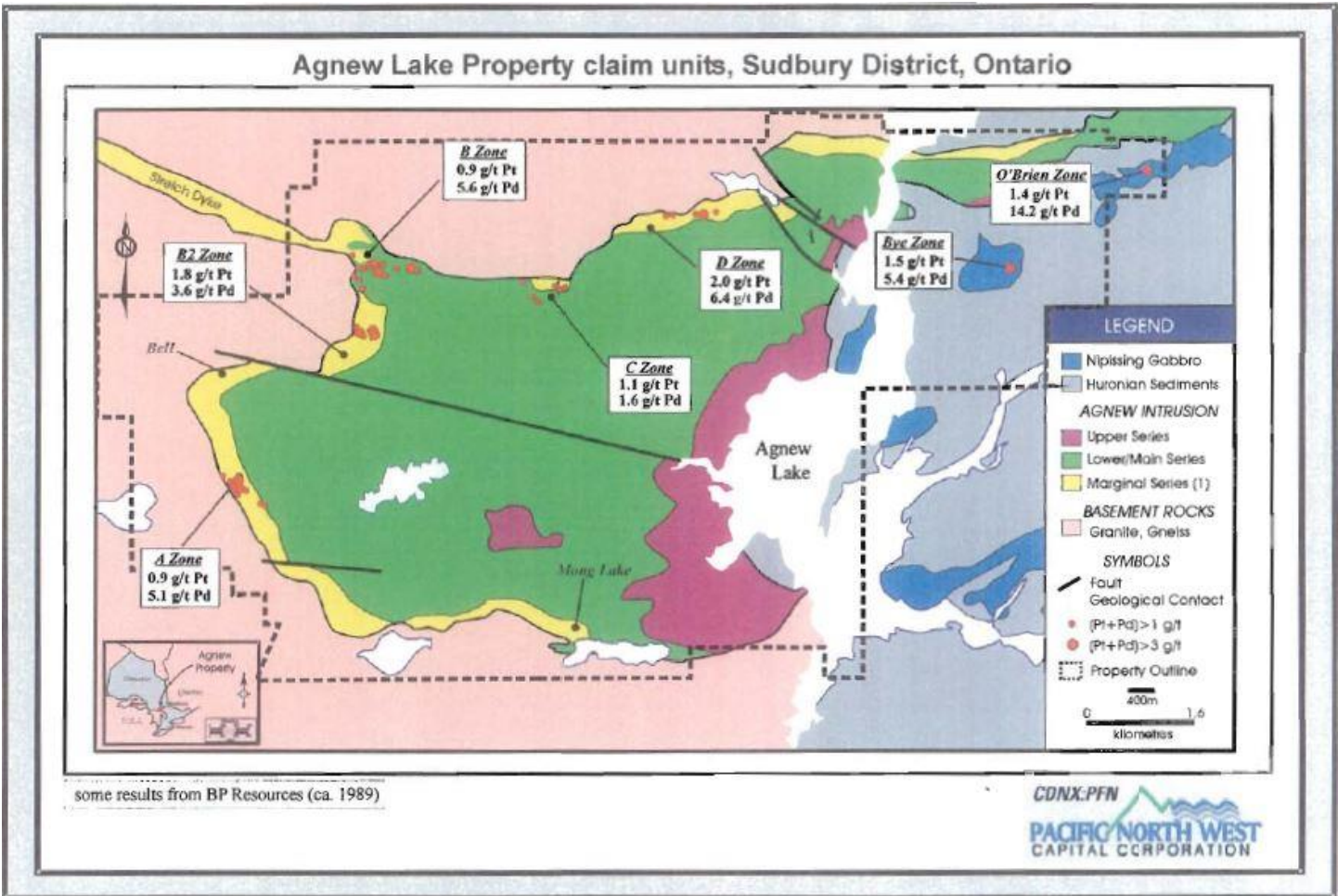
The 2019 McLander Creek work program utilized mechanical stripping locations that display evidence of the marker horizon “blue quartz + biotite”, HP- washing, basic site mapping and grab sampling where warranted. By closely adhering to these methods the targeted horizon of “blue quartz + biotite & sulphide mineralization” could then be more easily followed and hopefully would lead to several new drill targets and important 4E-PGE, Cu, Ni discoveries.

**Note:** The author who is the heavy equipment operator made a mistake while interpreting the stripping limits provided in the MLAS Technical Standards guide. The symbol [ > ] for greater, was somehow overlooked by the author resulting in greatly undersize trenches which after examining the bedrock had to be filled in as to not go over the limit of 100 sq. metres. Considerable time was wasted before learning of the error of the “greater” symbol.

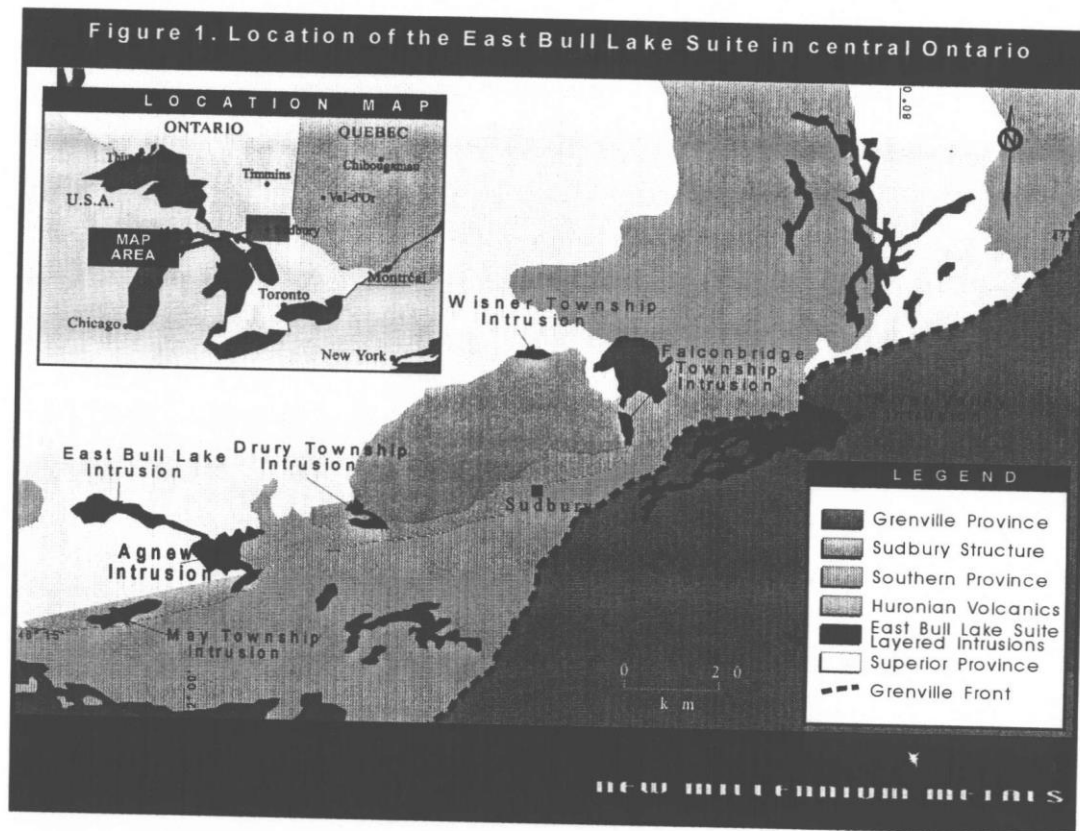
*[4.0] LIST of CLAIMS*

D-Zone Claim Numbers

510633	513833	517195	517210	
510634	513834	517196	550373	
510635	513835	517209		



**Figure 3.** Geological distribution of the mineralized zone of the Agnew Lake Intrusion.



**[4.0] Property Location and Access:**

The McLander Creek Project is located approximately 100 kms south-southwest and lies within the Sudbury District Mining Division in Dunlop Township [NTS sheet 411/5] The property is accessed by traveling west Hwy. 17 W from Sudbury to the town of Webbwood, then turning north [right] along a hardtop road Agnew lake Rd.] travelling approx. 6kms then turning left onto a heavy truck gravel logging road known as the West Branch road. From this point travel some 20 kms on the West Branch road to where it intersects the Hydro-One electrical transmission line. The project work area for this permit lies about 4-5 kms east [right] to the D-zone on claim #513833 or 517196 along the hydro corridor at the D-zone. The last part along the hydro corridor is recommended by ATV as it can be very rough due to washouts etc.

**[5.0] Previous Work:**

**1954:** Dominion Gulf Company completed 2 diamond drill holes in southwest corner of the intrusion. Results are unknown.

**1967:** Broulan Reef Mines Ltd completed airborne magnetometer, electromagnetic survey. Location and results are unknown.

**1968:** Broulan Reef Mines Ltd conducted a ground electromagnetic survey. Location and results are unknown.



**1969:** Falconbridge Nickel Mines Ltd completed a 380 foot diamond drill hole along the east-central edge of the AGI intrusion. The hole intersected 214 feet of Huronian metasediment and 62 feet of sheared and highly altered gabbro containing finely disseminated pyrite. Assay results are unknown.

**1974:** Inco Ltd conducted a two-day reconnaissance sampling program in Shakespeare Township... A total of 8 samples were collected, none of which were apparently assayed.

**1984:** Riocanex Inc carried out geological mapping, VLF and Magnetic surveys, and 141.9 m [7holes] of WInkie diamond drilling in the Fall of 1983 over the Bye Property for Rio Tinto. The Bye Property is located in the SE corner of Dunlop Twp. and is underlain by Huronian conglomerates intruded by a Nipissing Gabbro sill. Disseminated and massive pyrrhotite and pyrite occurring along the gabbro contact were found to be the source of magnetic and VLF anomalies detected by the surveys. Drilling results indicate Au mineralization [associated with sulphides at the eastern nose of the gabbro contact] was low grade and erratic. No further work was recommended.

**1986-1993:** BP Resources Canada looked at the Sudbury area as prospective for PGE mineralization. BP geologists felt that the bodies mapped as "Nipissing" are actually offshoots from the magmas that fed the Sudbury Irruptive. Consequently, BP staked as much of the available ground as it could which covered these prospective areas. Reconnaissance sampling in Shakespeare Twp during the field season in 1986 returned five samples with values in excess of 1 g/t combined Pt+Pd in the area subsequently termed the A-Zone. Fieldwork in the summers of 1987 and 1988 focussed on systematic sampling and traversing of BP claims. In 1987, a grid was established over the A-Zone and several lines of Induced Polarization survey were completed. 105 grab samples were taken during reconnaissance prospecting in areas of the contact zones. Assays included 5 samples with combined Pt+Pd greater than 1 g/t. See table 1 for selected results from BP Resources 1990 surface sampling program. BP also completed 28 diamond drill holes [4801.75 meters] over the B,C,& D Zones. Overall assay results were anomalous but not encouraging. Significant results are summarized in Table 2 [figure 2].

**1992-1993:** BP Resources Canada Ltd was disbanded and the Agnew Lake claims transferred to INCO Ltd. INCO conducted a bulk channel sampling program over the B and D zones. The one bulk sample results indicated average grades of 56 ppb Pt and 188 ppb Pd from the mineralization, and 634 ppb Pt and 163 ppb Pd from the D-Zone mineralization.

**1998:** Two local geologists, who staked additional ground including the Bye Zone, acquired the INCO claims over the Agnew Lake Intrusion. Prospecting of the latter area returned assay values up to 1.5g/t Pt, 5.4g/t Pd and 10.5 g/t Au.

**1999:** New Millennium Metals Corp. optioned the Agnew Lake property from the claim holders in 1999, and subsequently staked all of the remaining open ground on the intrusion. The field program implemented in May of that year targeted contact and stratabound PGE mineralization within the Agnew Lake Intrusion, and PGE-Au mineralization in nearby Nipissing gabbro sills.

A surface sampling program by New Millennium supported the earlier work by BP Canada , which indicated high –grade Pd+Pt mineralization associated with several zones along the contact of the Agnew Lake Intrusion. New Pd mineralization discoveries by New Millennium include a small sulphide showing at the west end of Mong Lake along the southern contact, and additional contact style mineralization north of the A-zone.

High grade Pd+Pt+Au mineralization was discovered within a Nipissing gabbro sill located east of the main part of the Agnew Lake body, on the east side of Agnew Lake. The Bye gabbro, intruded as a sill into Huronian sediments, now forms part of a northern limb of an east-southeast plunging syncline.

During the field season a total of 980 samples were collected, of which 110 assayed in excess of 0.5 g/t Pt+Pd. New Millennium also completed a detailed MMI soil-sampling program to evaluate the potential of the upper portion of the Agnew Lake intrusion to host "reef-style" PGE mineralization. The Pd results indicated a number of anomalies on the southern section of the east grid, and the strongest anomalies were coincidental with areas of limited overburden cover. From the results a trenching and diamond drilling program was implemented in the fall of 1999.

**Table 2.** Significant surface sample results from BP Resources Canada Ltd., 1990 field program. Results are reported in ppb.

<b>A Zone</b>				
Sample	Au	Pt	Pd	Rh
12153	198	869	5060	120
<b>B Zone</b>				
12294	388	1263	1777	37
12439	318	750	2440	55
<b>B2 Zone (Brunne Option)</b>				
12271	307	867	5600	129
12313	109	651	5410	95
12509	35	717	3860	119
<b>C Zone</b>				
12762	280	635	1653	41
12803	154	1079	1564	54
<b>D Zone</b>				
12574	396	2350	339	50
12576	206	3340	356	62
12859	306	4180	432	58
12860	68	3160	411	132
12868	229	2027	6440	686
<b>O'Brian Zone (V31)</b>				
13341	635	1439	14220	n/a

**Table 3.** Significant drill core sample results from BP Resources Canada Ltd., 1990 drilling program. Results are reported in ppb.

<b>B Zone</b>				
DDH #	Interval (m)	Au	Pt	Pd
90-B-15	30.0-31.0	23	552	2168
90-B-16	23.0-24.0	34	266	1620
90-B-17	7.0-8.0	6	326	1017
90-B-18	210.0-211.0	16	731	1749
<b>C Zone</b>				
90-C-01	83.95-85.0	14	174	903
<b>D Zone</b>				
90-D-02	46.0-47.0	15	524	1081
90-D-07	358.0-359.0	37	1321	4570
90-D-09	561.0-562.0	126	459	1518

**1998:** The INCO claims over the Agnew complex were acquired by two local geologists, who staked additional ground including the Bye Zone. Prospecting of the latter area returned values up to 1.5 g/t Pt, 5.4 g/t Pd and 10.5 g/t Au. An independent American prospector

Six trenches totalling 802 square metres were dug between August 22 and October 14, 1999. All six trenches were completed at the south end of the east grid. The trenches were dug by an excavator, and later washed, mapped and sampled at one metre intervals, generally in an east-west direction. Wagner viewed the results of the trenching as “disappointing”.

**2000:** A phase I work program was completed on the Agnew Lake Property between July 15, 2000 and December 30/2000. This initial program was aimed at confirming previously reported PGE-Cu-Ni values, data interpretation, and report writing. Fieldwork included the establishment of detailed and regional exploration grids, regional prospecting and sampling, stripping and cleaning of selected outcrop areas, and induced-polarization [IP] and ground magnetometer [Mag] geophysical surveys.

More than 400 surface samples, 202 grab s from regional prospecting, and 201 samples from detailed sampling were collected during the exploration program. Regional prospecting confirmed the presence of anomalous PGE mineralization in areas previously defined by BP Resources and New Millennium. The highest value from surface sampling was 5.61 g/t [Pt+Pd+Au] collected from the B-Zone.

More than 80% of the work during the Phase I surface program concentrated on the A,B, B2 and C-zones with balance of the work directed towards regional prospecting over the ALI, including the D-Zone and Mong Lake areas.

Approximately 113 line kms of exploration grid were completed with the following distribution; 30kms in the A-Zone[A Grid], 33kms in the C-Zone [B-Grid], and 53 kms in the B-Zone [B-Grid].

Mechanical Stripping was completed between October 23 and October 25, 2000 and Nov.6 and Nov.10, 2000. Two areas in the A-Zone totalling 0.24 hectares [0.59 acres] , were chosen as test areas for detailed mapping and sampling in order to determine the geological setting of high PGE concentrations from initial grab samples.

Induced polarization and Mag geophysical surveys were conducted in the fall of 2000 along selected areas of the intrusive contact in order to evaluate favourable lithological units within about 400 metres of the contact. JVX Geophysics Ltd completed the IP and Mag surveys over the A-Zone, B-Zone, and C-Zone grids., representing approximately 25% of the 10 kms prospective contact. Several areas with substantial chargeability values are delineated and some of the higher priority anomalies were ground truthed. However, to date many of the IP chargeability targets have not been reviewed or prospected.

### *Phase 2 Surface Exploration*

A phase two surface exploration program was completed on the property between June 1 and Dec 30, 2001. Approximately 70% of the work completed during this phase focused on the contact region within the A&B Zones, as well as the C&D-Zones, Mong Lake, Bye and O’Brien areas.

A total of 2,639 grab samples were collected during regional sampling and submitted for assay. An additional 17 kms of exploration grid were added onto the previously established A-Grid. The A-Zone grid extension provided complete coverage of the western contact of the Agnew Lake Intrusion.

Six areas located within the A-Zone and B-Zones and totalling 5914 sq. metres were chosen for detailed sampling and mapping. These areas were chosen in order to determine the geological setting of high PGE concentrations discovered during regional grab sampling [Phase 1 and 2] and to further the understanding of the areas of known PGE mineralization. A total of 1,886 samples were collected from the six stripped areas. Samples were collected on a 2.5m X 2.5m detailed grid and samples were collected using a cut-off saw.

IP and Mag geophysical surveys were completed on the 17 km A-Grid extension delineating several anomalies.

#### **Note:**

There are too many documents for the purpose of this application, so the titles only will be referred to from here on.

Phase I Diamond Drilling

Phase 3 Surface Exploration

Phase 2 Diamond Drilling

Phase 4 Surface Exploration.

### ***[6.0] Project Geology:***

The most important recognizable PGE sulphide lithological unit is the contact - type melagabbro / pyroxenite breccia which is distinctly marked by the presence of blue quartz eyes and an abundance of light brown biotite. The author believes that this unit represents a late phase high temperature vein type series of mafic intrusive feeder dykes generated by pulses of magma possibly from a second separate magma chamber than that which produced the anorthositic magmas, [a two chamber model] as proposed by Dr. David Peck, 1990 Ph. D program, Laurentian University, Sudbury Ontario.

### ***[7.0] REGIONAL GEOLOGY***

The Agnew Lake Intrusion, also known as the Shakespeare-Dunlop Intrusion, is a member of the Paleoproterozoic East Bull Lake Suite [EBLS] of intrusions, which include the East Bull Lake, River Valley, Drury, May, Falconbridge and Wisner intrusive complexes [Figure 1]. The intrusions are characterized by gabbroic to anorthositic lithologies, in which plagioclase is the dominant cumulus phase. The members of the suite share a number of common characteristics in addition to lithology, including typically sill like forms, igneous layering and anomalous PGE mineralization. They range in age from 2.49-2.48 Ga [Easton 1998] and are most likely coeval with the volcanic rocks of the Huronian Supergroup.

Members of the EBLS generally occur along the Superior / Southern Province boundary in central Ontario, although the River Valley Intrusion lies partially within the Grenville Province and within the Grenville Front Tectonic Zone. Recent geochemical and geochronological work indicates that the suite formed as part of a major magmatic event that was associated with, and may have initiated, Paleoproterozoic rifting along the margin of the Superior proto-continent. This rifting event gave rise to the volcano-sedimentary succession of the Huronian Supergroup, which defines the Southern Province in the Sudbury area. The igneous event is also manifested in the gabbroic rocks of the Hearst – Matachewan dyke. All of the mafic rocks exhibit geochemical characteristics consistent with derivation from fractionated tholeiitic or high –aluminum tholeiitic parent magma. Peck et al.,1993.

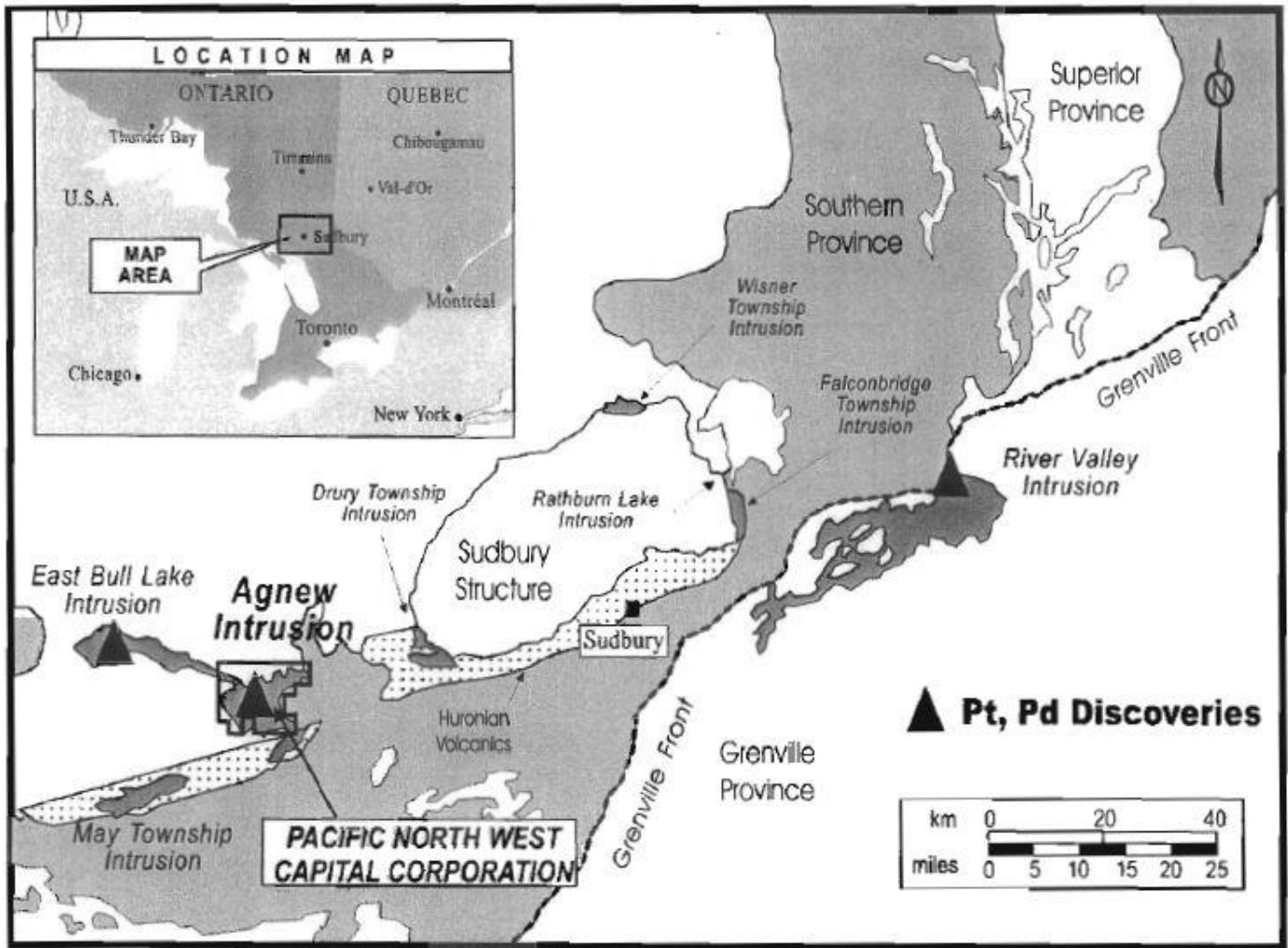


Figure 1. Location of the Agnew Lake Property within the Sudbury Mining Division, Ontario, Canada

### [8.0] PROPERTY GEOLOGY

The Agnew Lake Intrusion [ALI] is similar in age and size to the EBLI [2491 versus 2480 Ma] and 50 sq. km versus 43 sq. km respectively, and is linked on its northwest side to the Streich dike, a 200 – 300 m wide composite body with a strike length of approximately 10 kms. Pink to white, coarse grained, granites and orthogneisses of the Archean [2720-2660] Ma] Ramsey-Algoma Granitoid suite [Jackson and Fyon], 1991 form the footwall rocks to the intrusion around its north and west sides. Only rarely are there zones of footwall breccia at the intrusion's contact with these granite rocks equivalent to the Border Zone of the EBLI: more commonly there is an abundance of felsic dikes [thermal aureole partial melts] intruding older granite basement rock, particularly where mafic [feeder] dikes are abundant near the intrusion contact. The ALI is exposed as a crudely elliptical body measuring roughly 10 kms by 6 kms, with its long axis trending about 110degrees. The complex is hosted by sulphur-poor granitic rocks of the Ramsey-Algoma Granitoid Suite, and the intrusion is overlain by the Matinenda Formation conglomerate, which forms part of the lower sedimentary sequences in the Huronian Supergroup. Post- emplacement faulting and late emplacement of mafic dykes and / or sills generally obscure the contact relations at the base and along the exposed contact of the complex. In a few locations, mainly

along the northern contact, quenching of the Agnew magmas is evidenced by occasional exposures of highly altered and chilled marginal gabbros [Vogel et al., 1998]. Some degree of at least localized partial melting of the country rocks is evident with the rare occurrence of net-textured granitic veins within the chilled marginal rocks. At localities where the upper contact of the intrusion is exposed there is no evidence of melting or metamorphic effects within the overlying Matinenda Formation.

The Agnew Lake Intrusion is apparently connected to the East Bull Lake Complex by the Streich dyke, which is generally interpreted as the initial feeder to both intrusions [Vogel, 1996]. A recent structural analysis by Vogel [1996] suggests that the EBL, Agnew and May Township intrusions formed part of an originally continuous mafic sill that was folded giving the present rock distribution. However, a paucity of field evidence such as large and scale folding and foliated intrusive rocks suggest that the Agnew Lake Intrusion is in fact not folded to any large degree and that it has retained much of its original form.

## **[9.0] LITHOLOGIES**

The following is a brief summary of a few of the lithological characteristics of the Agnew Lake Intrusion. For detailed descriptions, the reader is referred to Vogel [1996] and Vogel et al. [1998]. Vogel [1996] grouped the exposed rock types of the Agnew Lake Intrusion into three main subdivisions; the Marginal, Main, [or lower] and Upper series [Figure 9 and 2]. In each grouping, gabbroic to anorthositic lithologies, derived from the fractional crystallization of relatively evolved tholeiitic magmas, are the principal rock types. The most significant compositional variations are found in the relatively thin and poorly exposed layers of olivine gabbro, which occur at the base of the upper series and in the syenitic to alkali granitic rocks, which occur at the top of the Upper Series. Lithological subdivisions within the three principal groups are thus largely based on textural features. Inclusions of footwall granite and rocks variably described as pyroxenite, amphibolite and melagabbro are ubiquitous features of the Marginal Series and overlying the Inclusion-bearing unit. In many instances there is a direct correlation between increasing inclusion content and increasing visible sulphide content.

**Breccia Zone [2];** Igneous breccia with an intrusive granitic matrix.

**Marginal Gabbronorite Zone [3]:** Massive, medium-grained leucogabbronorite with lesser dykes and/or sills that have intruded along the contact of the Agnew Lake Intrusion and the granitic footwall.

**Vari-textured Unit [4a]:** Vari-textured leucogabbro, leucogabbronorite with lesser Gabbronorite, anorthosite and melagabbronorite, with inclusions and pods of melagabbronorite and footwall granite are irregular banded and slumped and **locally** sulphide rich.

**Massive Unit [5b] :** Massive, medium to coarse-grained gabbronorite and leucogabbronorite. Rare melagabbro-norite inclusions and pods.

**Layered Unit [5c]:** Centimetre to metre-scale layering of medium to coarse-grained gabbronorite, leucogabbronorite and lesser melagabbro-norite, features a Vari-textured interval containing angular coarse-grained melagabbronorite inclusions.

**Olivine Gabbronorite Subzone [5d] :** Decimetre – scale layering of olivine gabbronorite and leucogabbronorite. Disseminated sulphide.

**Dendritic Unit [5e] :** Vari-textured gabbronorite and lesser leucogabbronorite with pegmatitic pyroxene dendrites. Local coarse-grained titanomagnetite and quartz crystals. Granophyre is common. The unit may occur at different stratigraphic levels from the base to the top of the Lower Series.

**Transition Unit I [6a] :** Heterogeneous lithological textural interval comprising Vari-textured poikilitic, and plagioclase-phyric gabbronorite and leucogabbronorite. Wave-like layering and abundant inclusions.

**Porphyritic Unit [6b]** : Plagioclase-glomerophyric gabbro, leucogabbro, and lesser melagabbro. Local decimetre- scale layering at the base and top with irregular decimetre-scale layering in main central sequence. Minor poikilitic leucogabbro and granophyric patches.

**Pod – Bearing Unit [6c]** : Disruptively layered and slumped plagioclase- glomerophyric gabbro and leucogabbro with distinct rounded pods of coarse-to very coarse- grained, strongly glomerophyric leucogabbro.

**Transition Unit II [6d]** : Texturally chaotic interval comprising intermingled porphyritic, poikilitic and massive leucogabbro [+/\_ norite]. Local gabbro with primary amphiboles.

**Leucogabbro Subzone [7a]**: Massive , coarse-grained to very coarse-grained leucogabbro [+/- norite] and “clotty” leucogabbro containing abundant titanomagnetite. Minor poikilitic leucogabbro and granopyre. Sphides, garnet and quartz.

**Ferrosyenite Subzone [7b]**: Fine- medium-grained, locally foliated, blue-grey ferrosyenite to cream-white alkali-feldspar granite with varying proportions of quartz, and Fe-Ti or magnetite.

**Massive Unit [5b]** : Massive, medium to coarse- grained gabbronorite and leucogabbronorite. Rare melagabbro-norite inclusions and pods.

**Layered Unit [5c]**: Centimetre to metre-scale layering of medium to coarse-grained gabbronorite, leucogabbronorite and lesser melagabbro-norite, features a Vari-textured interval containing angular coarse-grained melagabbronorite inclusions.

**Olivine Gabbronorite Subzone [5d]** : Decimetre – scale layering of olivine gabbronorite and leucogabbronorite. Disseminated sulphide.

**Dendritic Unit [5e]** : Vari-textured gabbronorite and lesser leucogabbronorite with pegmatitic pyroxene dendrites. Local coarse-grained titanomagnetite and quartz crystals. Granophyre is common. The unit may occur at different stratigraphic levels from the base to the top of the Lower Series.

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**Pod – Bearing Unit [6c]** :



**ABBREVIATIONS USED IN DRILL LOGS**

<b>ABBREVIATIONS USED IN DRILL LOGS</b>					
<b>Major Rock Types</b>		<b>Alteration Features</b>		<b>Misc. Features</b>	
anorthosite	anorth	chloritization	a-chl	magnetic	mag
leucogabbro	lgab	carbonate	a-carb	overburden	OB
gabbro	gab	hematite	a-hem	casing	CS
melagabbro	mgab	potassic feldspar	a-K fsp	contact	CT
pyroxenite	pyx	quartz flooding	a-qfd	core axis	CA
syenite	sy	amphibolitization	a-amp	drill hole	DH
diorite	dio	sericitization	a-ser	trench	Trench
quartz diorite	qd	biotite	a-bio	grab sample	GS
granite	gr	epidotization	a-ep	channel sample	CS
granodiorite	gd	sausseritized	a-saus	subcrop sample	SS
migmatite	mig	magnetite	a-mt	float sample	FS
footwall	fw			Upper	U
		<b>Mineralization/Silicates</b>		Lower	L
<b>Intrusives</b>		pyrrhotite	po	to core axis	TCA
mafic dyke	md	chalcopyrite	cp		
felsic dyke	fd	pyrite	py	<b>Textures</b>	
diabase	db	pendlandite	pn	aphanitic	aph
Sudbury Dyke: mt-ol-gab	SD	bornite	bn	fine-grained	fg
Matachewan Dyke	MD	sphalerite	sph	medium-grained	mg
aplite (dyke)	apl	galena	gn	coarse-grained	cg
quartz vein	qv	magnetite	mt	pegmatitic	peg
		chromite	cr	vari-textured	vt
		oxide	ox	massive	msv
<b>Footwall Rocks</b>		ilmenite	ilm	porphyritic	por
sediments	sed	malachite	ml	recrystallized	rc
wacke	wck			dendritic	dd
argillite	arg	<b>Silicates</b>		breccia	bx
footwall granite	fw-gr	olivine	ol	chilled margin	cm
footwall syenite	fw-sy	blue quartz	bqtz		
footwall (general)	fw	quartz eyes	qtz eyes	<b>Features</b>	
footwall gabbro	fwgab	plagioclase-phyric	plag-phyric	foliation	fol
sheared gabbro	sgab	glomerocrysts	glom	fault - linear	FT
Sudbury Breccia	sudbx	orthopyroxene	opx	shear zone	SZ
		clinopyroxene	cpx	broken core	BC
<b>Sulphide Textures</b>		garnet	gn	crenulated	cren
none visible	nv			folding	fld
trace Sulphides	tr			kink folding	k-fld
bleb	bs			preferred orientation	p-or
disseminated	ds			fault gouge	FT-g
ragged	rs			healed fault	h-FT
patchy	ps			igneous layering	IL
vein	vs				

### *Statement of Qualifications*

The undersigned, Danny Albert Brunne, hereby provides a statement of adequacies of qualification with respect to MNDM requirements for reporting geological and geochemical assessment of mining work under the mining act in the province of Ontario.

1. I am a graduate from Sudbury Mining and Technical School - year 1960.
2. I held the position of Research Technician with Atomic Energy of Canada, Deep River, Ontario Nuclear Facility from 1960 – 1965.
3. I became a professional prospector in 1979 and with the exception of one year have continued to earn my livelihood from mining exploration work until present date.
4. I held numerous contract positions as Geological Technician with both major and junior mining as well as mining consultant companies that include Derry Michener Booth and Wahl, MPH Consulting, BP Resources Canada and Cameco Gold Corp.
5. I am a member in good standing of the Ontario Prospectors Association, Sudbury Prospectors Association and the Sudbury Geological Discussion Group.
6. I have completed my duties to the satisfaction of my superiors for more than 37 years.
7. My duties include; regional prospecting as well as out-of-province [Quebec & Labrador] “far north” artic and sub-artic territories, line-cutting, claim staking, geochemical soil, humus and till sampling, lake bottom sediment sampling, regional till sampling, supervision of diamond drills, core logging, core splitting, field mapping, detailed trench mapping, channel sampling, percussion drilling [plugger] and blasting trench work, excavation and planning of trenches [owner operator of excavator] and airborne [helicopter] reconnaissance prospecting.
8. I have successfully completed several OPAP programs to the satisfaction of MNDM.
10. I have an honorary [lifetime] prospector`s licence.

Date: Feb 14, 2020

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**Table 1: Grab Samples: 2019/18, from Mc Lander Creek [ D Zone] Project, Dunlop Twp – Work Permit #PR-19-000147**

Note: Instrument used for UTM locations is a Garmin Rhino 650 GPS, NAD 83, Zone 17 T , centred on 431300E – 513800N

Samples: 2018

Sample	Northing	Easting	Rock	Grain	% Sulphide	Alt	Au	Pt	Pd	3E
849501	5138051	0431719	amp	cr	cpy 1%	bqtz, 5% bio 20%				
849502	5138051	0431719	amp	cr	cpy tr	bqtz +				
849503	5138051	0431719	amp	cr	cpy tr					
849504	5138051	0431719	amp	cr						
849505	5138051	0431719	amp	cr						
849506	8498051	0431719	amp	cr						
Samples:	2019									
849507	5138047	0431717	mgab	crg	5-6 %	Blu-qtz + 10% Bio				
849508	5138044	0431721	mgab	crg	nv	5% Bio				
849509	5138043	0431719	fw/bx	vcg	3% cpy	a-amp				
849510	5138041	0431721	fw/bx	vcg	1 % cpy	a-amp, 15% bio				
849511	5138039	0431720	mgab	vcg	1% cpy	a-amp+blu/qtz+bio				
849512	5138056	0431564	qd	mg	1 % cpy	lg xenolith				
849513	5137953	0431042	fw/bx	crg	nv	7 % bio				
849514	5138052	0431043	amp	crg	1 % cpy	10 % bio				
849515	5137948	0431049	lgab	mg	2 % cpy	25 % bio + 5% qtz				
849516	5138038	0431729	mgab	vcg	1% cpy	a-amp, a-chl				
849517	5138040	0431720	mgab	cg	nv	a-amp				
849601			lgab	cg	nv	bqtz				
849602	5136353	0426737	mgab	cg	1% cpy	a-amp, a-bio				
849603	5136333	0426806	mgab	cg	1% cpy	a-amp, a-bio				

849604	5135091	0424542	mgab	mg	1% cpy,6% py ds	Qtz vn				
849605	5135095	0424530	pyx	fg	1% ds py					

**Table 1: Grab Samples [cont]: 2019, Mc Lander Creek [D – Zone] Project, Dunlop Twp – Work Permit #PR-19-000147.**

**Note: Instrument used for UTM locations is a Garmin Rhino 650 GPS, NAD 83, Zone 17T, centred on 431300E – 513800N**

Sample	Northing	Easting	Rock	Grain	% Sulphide	Alt	Au	Pt	Pd	3E
719757			md	fg	30% py ds	Qtz vn				
719758			md	fg	1% ds cpy					
719759			md	fg	2% ds py bs					
						Total # samples 25				


**Table 1: Grab Samples: 2019, Mc Lander Creek A 5 - Zone Project, Dunlop Twp – Work Permit #PR-19-000234.**

**Note: Instrument used for UTM locations is a Garmin Rhino 650 GPS, NAD 83, Zone 17, centred on 432E – 51N**

Sample	Northing	Easting	Rock	Grain	% Sulphide	Alt	Au	Pt	Pd	3E


**Table 3: Daily Log – McLander Creek 2019 – D Zone**

**Work Permit - # PR-19-000-147**

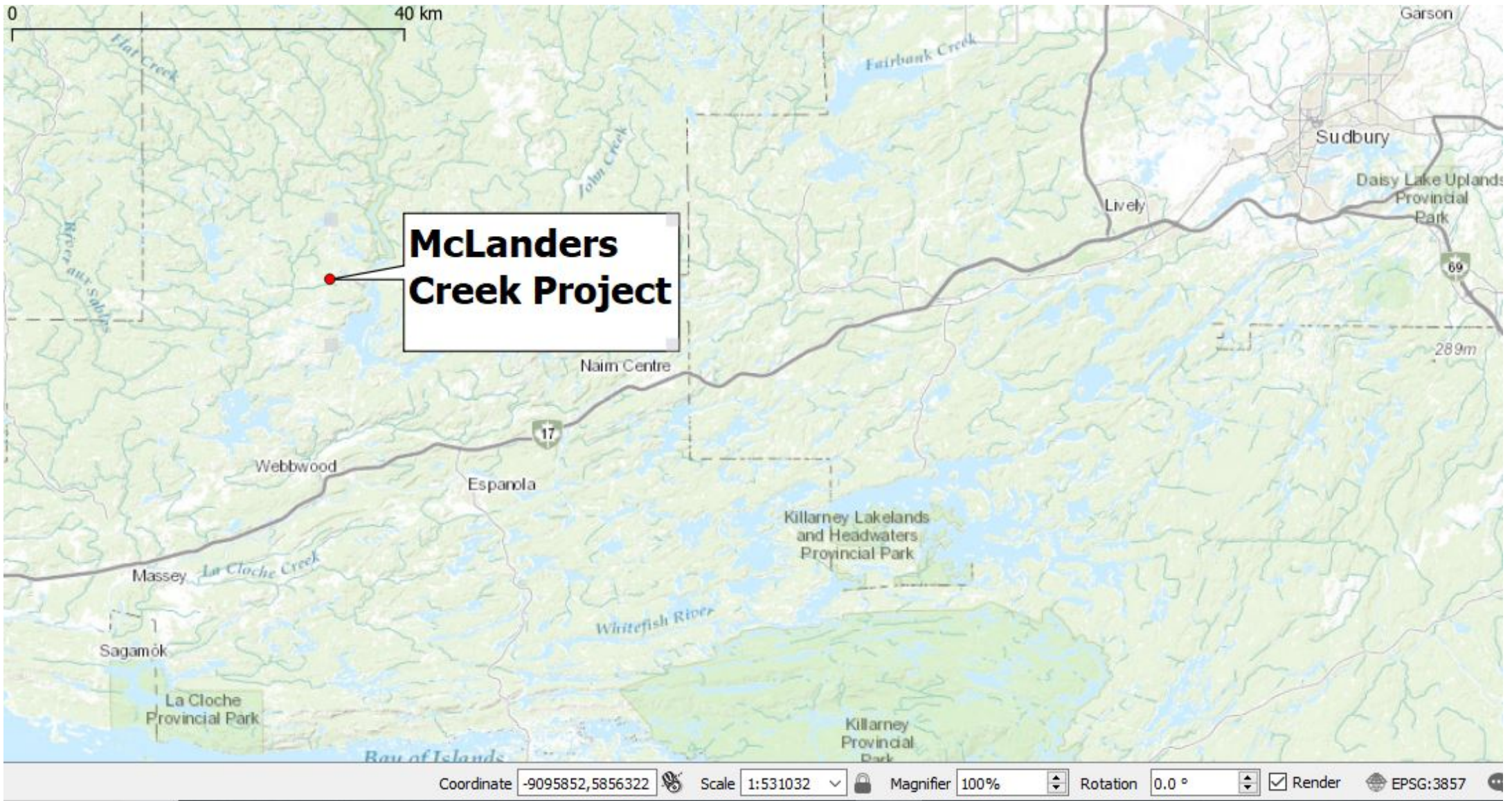
Date	Payee	Category	Description	Amount	Remarks				
Sept 2/19	Dave Brunne	Manual work	mobilize equipment 8hrs	\$300.00	T-Bell re: contract 50 ton float – re: transport exc. to site.				
Sept 3/19	Dan Brunne	Manual work	mobilize excavator to site	\$300.00	Transport exc.to drop-off site				
Sept 4/19	Dave Brunne	Exc. operator	walk excavator to D-zone 8rs @ \$150/h	\$1200.00	D-zone is 4-5 kms from drop off, route required mult. road repairs.				
Sept 5/19	Dan Brunne	Exc. operator	Stripping D-zone 6.5hrs @\$150/h	\$975.00	Digging under live power line – extreme caution adhered to.				
Sept 6/19	Dan Brunne	Exc. operator	clear trail to water source 8hrs@150/h	\$1200.00	Old trail to water source no longer visible must make new one 1.3 kms				
Sept 6/19	Dave Brunne	prospecting	Search for BP 1990 ddh collars re: in-hole IP	\$300.00	Not successful- nothing remains of the 30 year old grid				
Sept 7/19	Dan Brunne	Exc. maintenance	Clean tracks, grease exc. air-filters. 1h@\$150/h	\$150.00					
Sept 8/19	Dan Brunne	Exc. operator	Complete trail to water source strip D-zone. 8hrs @\$150/h	\$1200.00	UTM co-ordinates given for BP ddh do not correlate well with act. Loc.				

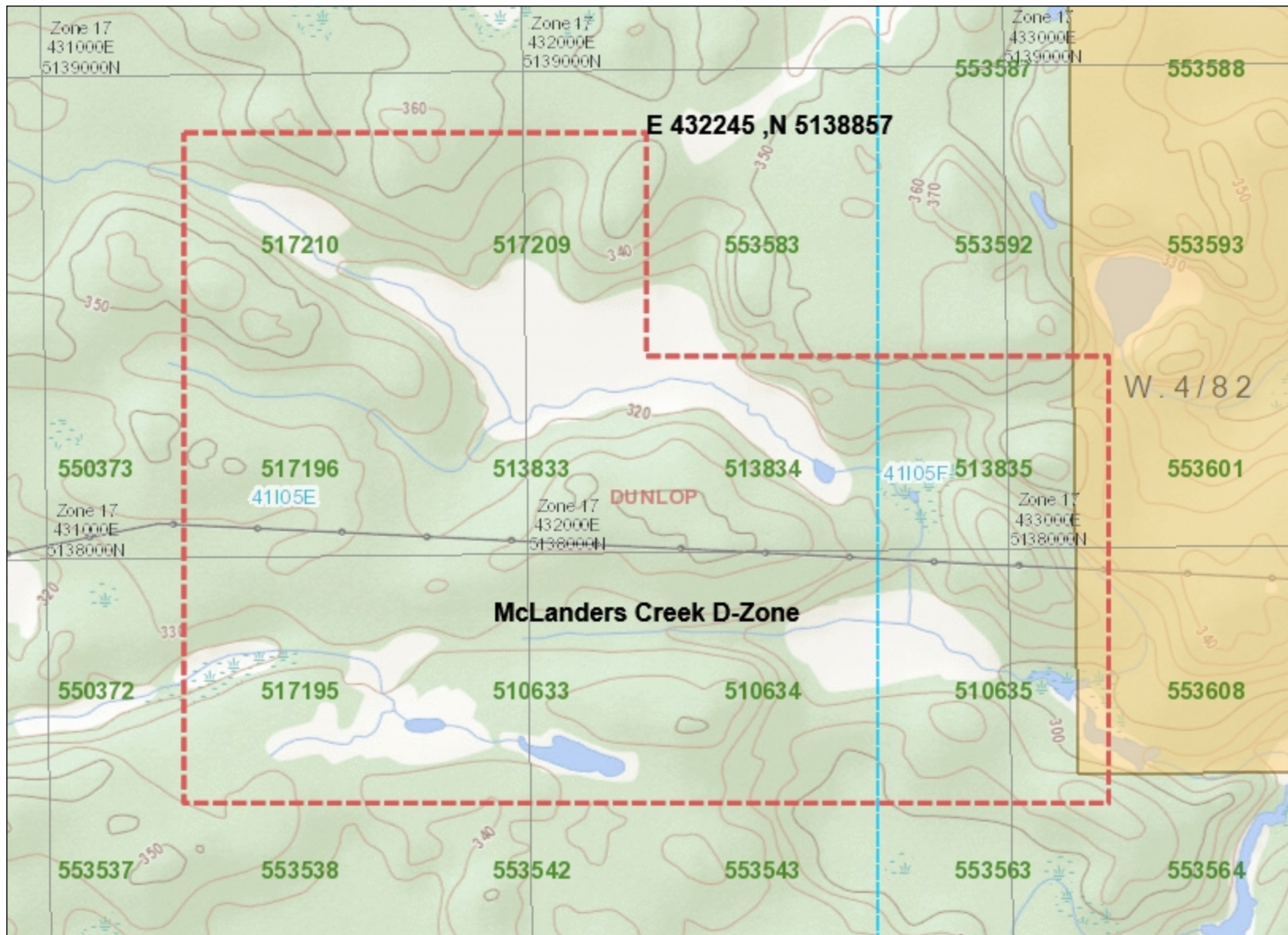
**Note: Charge rate is \$150/h for Samsung SE210LC Crawler Excavator with 1-cubic metre bucket [includes operator and fuel].**

Sept 10/19	Dan Brunne	Exc. operator	Stripping west tower zone 3hrs@\$150/h	\$450.00	Historic high grade PGE assay by BP, re: Lg qtz-diorite xenolith in leucogabbonorite				
Sept 11/19	Dave Brunne	Manual work	Lay-out D-zone water pump hose line 1300 m.	\$300.00	Rugged terrane – steep slope and dry marsh surrounding water source.				



Date	Payee	Category	Description	Amount	Remarks
Sept 12/19	Dave Brunne	Prospecting	Locate 90-D-02 BP ddh site	\$300.00	Search for BP , 90-D-02 projected upward extension of mineralization.
Sept 13/19	Dan Brunne	Exc. operator	Clear trail to above drill site, clear drill site no casing found. 5hrs@\$150/h	\$750.00	Search for drill collar not found – site had old oil cans large 45 gal barrel but could not find casing.
Sept 14/19	Dan Brunne	Exc. operator	Stripping new showing up-dip of 90-D- 02 ddh 8hrs@\$150/h	\$1200.00	New showing labelled “D-West”. DDH 90-D-02 assayed 5.79 g/t PGE over 1- metre. O/B up to 3.5m.
Sept 15/19	Dan Brunne	Exc. operator	Finish stripping new D-West showing. 8hrs@\$150.00/h	\$1200.00	Rehabilitate northern half of the trench, approx. 15m in length.
Sept 16/19	Dan Brunne	Exc. operator	Stripping extended Pt Hill showing 5hrs@\$150/h	\$900.00	Returned to Pt Hill after washing was completed to drain off build up of rainwater.
Sept 19/19	Dan Brunne	Prospecting	Layout samples & map stripped area. 8hrs	\$300.00	
Sept 19/19	Dave Brunne	Prospecting	Collect samples, GPS locations. 8hrs.	\$300.00	
<b>Completed</b>		<b>Finish</b>	<b>Total</b>	<b>\$11,325.00</b>	





### Legend

- Provincial Grid Cell**
  - Available
  - Pending
  - Unavailable
- Mining Claim**
  - Mining Claim
  - Boundary Claim
- Alienation**
  - Withdrawal
  - Notice
- ENDM Administrative Boundaries**
  - ENDM Townships and Areas
  - Geographic Lot Fabric
  - UTM Grid 1K
  - UTM Grid 10K
  - Mining Division
  - Mineral Exploration and Development Region
  - CLUPA Protected Area - Far North
  - Resident Geologist District
  - Federal Land Other
  - Native Reserves
- AMIS Sites**
  - AMIS Sites
  - AMIS Features
  - Drill Hole
  - Mineral Occurrences
- MLAS Mining History**
  - Withdrawal - History
  - Notice - History
  - Mining Claim - History
  - Mining Land Tenure - History
  - Legacy Claim
- Provincial Grid**
  - Provincial Grid 250K
  - Provincial Grid 50K
  - Provincial Grid Group
- Land Tenure**
  - Surface Rights
  - Mining Rights
  - Mining and Surface Rights
  - Order-in-Council



Projection: Web Mercator

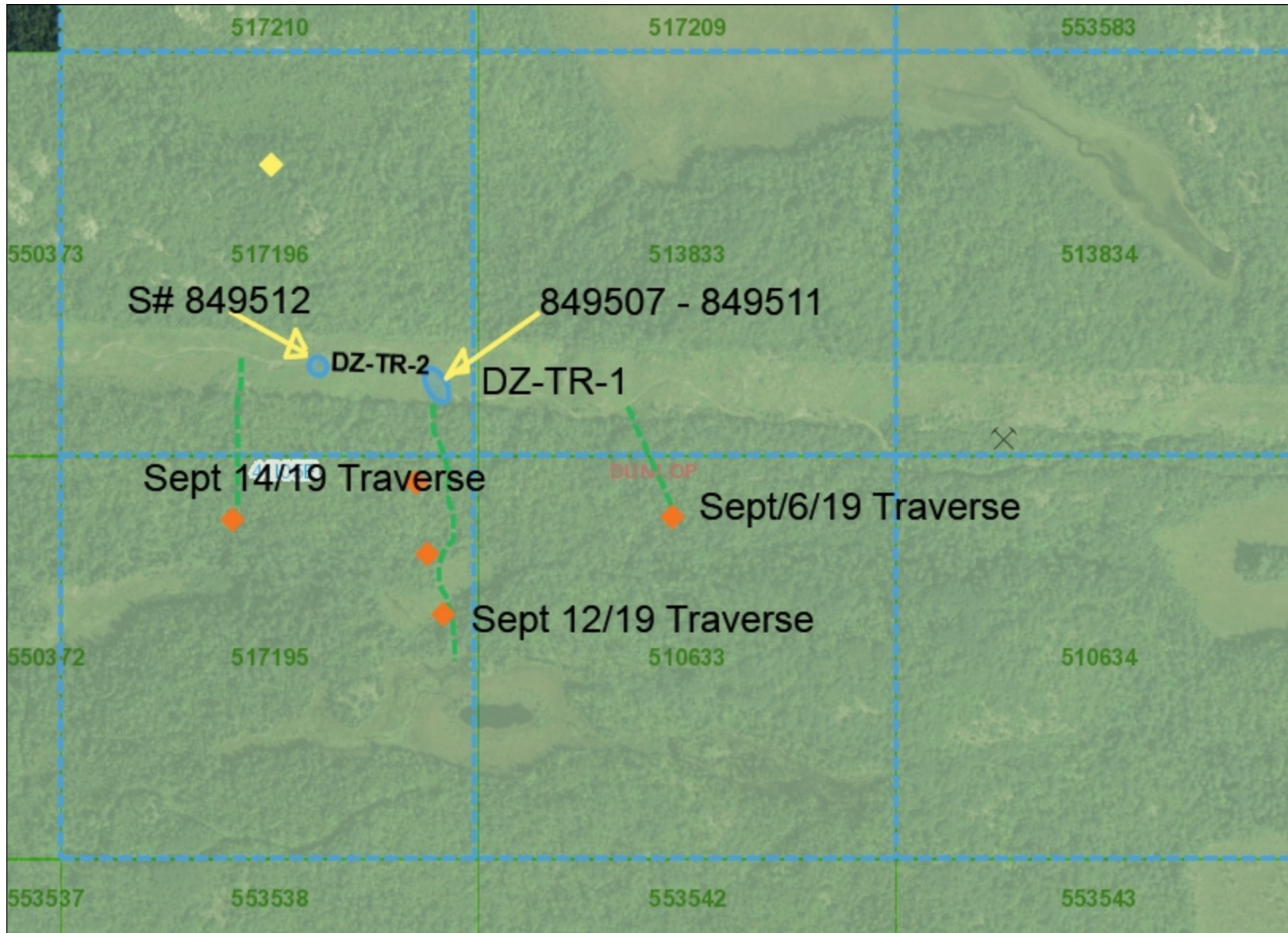


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### Legend

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  - Withdrawal - History
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Projection: Web Mercator



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McLanders Creek

D-Zone Trench 1

849507

849509

849510

849508

849511

849517

UTM E431725, N 5318045

849516



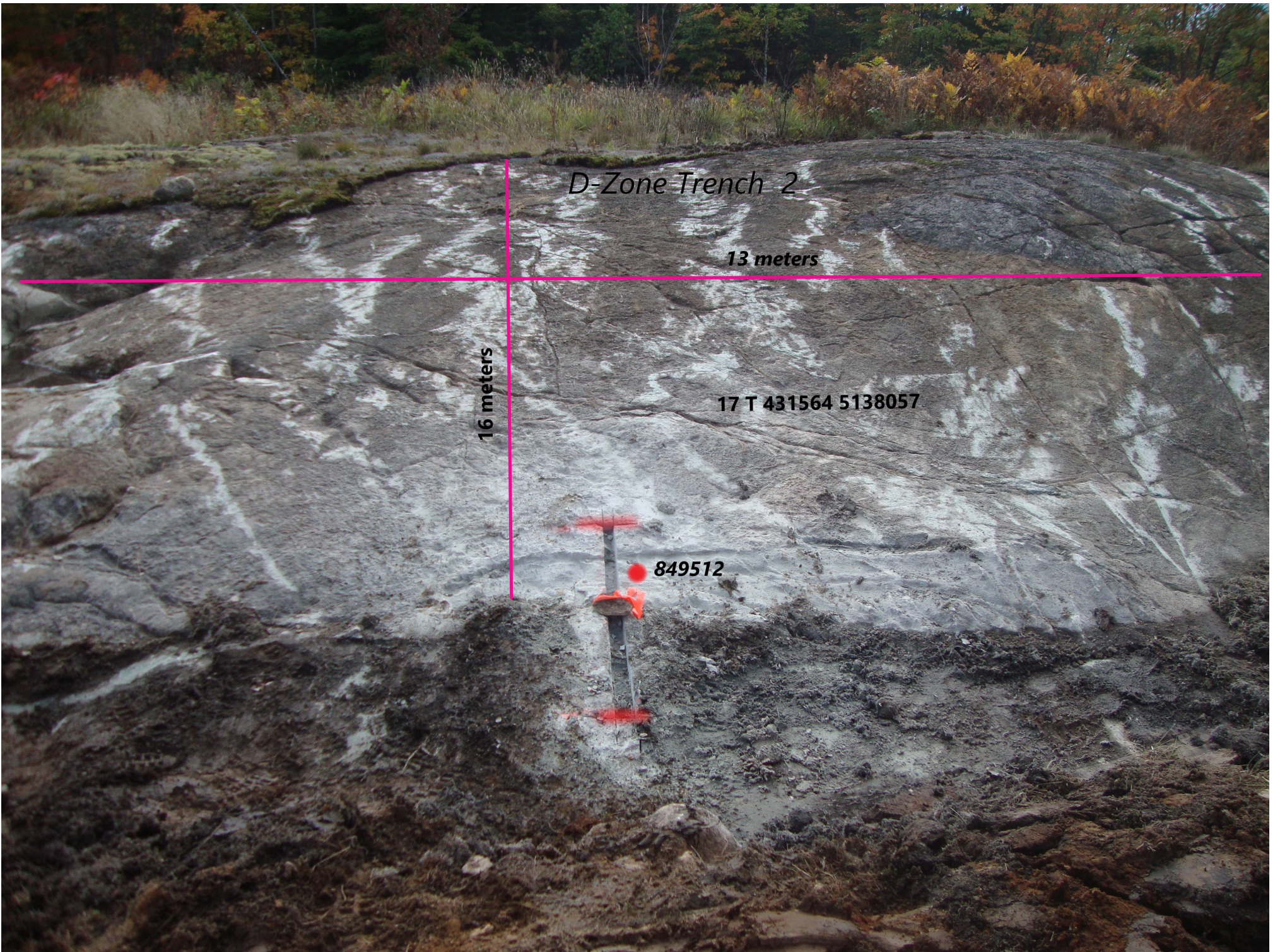
*D-Zone Trench 2*

*13 meters*

*16 meters*

**17 T 431564 5138057**

**849512**





SD20019366 - Finalized  
 CLIENT : DBQHCUN - Dan Brunne  
 # of Samples : 18  
 DATE RECEIVED : 2020-01-27 DATE FINALIZED : 2020-02-10  
 PROJECT : McLANDER CREEK  
 CERTIFICATE COMMENTS :  
 PO NUMBER :

SAMPLE DESCRIPTION	PGM-MS23	PGM-MS23	PGM-MS23	PGM-ICP27	PGM-ICP27	PGM-ICP27	CRU-QC	PUL-QC
	Au ppm	Pt ppm	Pd ppm	Au ppm	Pt ppm	Pd ppm	Pass2mm %	Pass75um %
849507	0.124	>1.00		0.304	0.2	1.4	0.32	76.2
849508	0.043		0.384	0.212				87.6
849509	0.049		0.381	0.15				93
849510	0.013		0.435	0.203				
849511	0.073		0.737	0.231				
849512	0.008		0.0061	0.006				
849513	<0.001		0.0036	0.004				
849514	0.019		0.239	0.134				
849515	0.02		0.0758	0.05				
849516	0.017		0.0967	0.069				
849517	0.014		0.349	0.618				
849602	0.148		0.402	0.594				
849603	0.036		0.463	0.329				
849604	0.003		0.0083	0.008				
849605	0.003		0.001	0.001				
719756	<0.001		0.0067	0.005				
719757	0.009		0.0006	0.001				
719758	<0.001	<0.0005	<0.001					



ALS Canada Ltd.  
 2103 Dollarton Hwy  
 North Vancouver BC V7H 0A7  
 Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218  
 www.alsglobal.com/geochemistry

To: **DAN BRUNNE**  
**BOX 35**  
**WHITEFISH FALLS ON POP 2H0**

Page: 1  
 Total # Pages: 2 (A)  
 Plus Appendix Pages  
 Finalized Date: 10-FEB-2020  
 Account: DBQOHCUN

**CERTIFICATE SD20019366**

Project: McLANDER CREEK

This report is for 18 Rock samples submitted to our lab in Sudbury, ON, Canada on 27-JAN-2020.

The following have access to data associated with this certificate:

DAN BRUNNE DAVE BRUNNE	DAVE BRUNNE	DAN BRUNNE
---------------------------	-------------	------------

SAMPLE PREPARATION	
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-22	Sample login - Rcd w/o BarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize up to 250g 85% <75 um

ANALYTICAL PROCEDURES		
ALS CODE	DESCRIPTION	INSTRUMENT
PGM-ICP27	Ore grade Pt, Pd and Au by ICP	ICP-AES
PGM-MS23	Pt, Pd, Au 30g FA ICP-MS	ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

\*\*\*\*\* See Appendix Page for comments regarding this certificate \*\*\*\*\*

**Signature:**   
 Saa Traxler, General Manager, North Vancouver



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Page: 2 - A  
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 Finalized Date: 10-FEB-2020  
 Account: DBQOHCUN

Project: McLANDER CREEK

<b>CERTIFICATE OF ANALYSIS SD20019366</b>
---

Sample Description	Method Analyte Units LOD	WEI-21 Recvd Wt. kg	PGM-MS23 Au ppm	PGM-MS23 Pt ppm	PGM-MS23 Pd ppm	PGM-ICP27 Au ppm	PGM-ICP27 Pt ppm	PGM-ICP27 Pd ppm	CRU-QC Pass2mm %	PUL-QC Pass75um %
		0.02	0.001	0.0005	0.001	0.01	0.01	0.01	0.01	0.01
849507		1.09	0.124	>1.00	0.304	0.20	1.40	0.32	76.2	87.6
849508		0.86	0.043	0.384	0.212					93.0
849509		0.97	0.049	0.381	0.150					
849510		0.99	0.013	0.435	0.203					
849511		1.47	0.073	0.737	0.231					
849512		1.06	0.008	0.0061	0.006					
849513		1.98	<0.001	0.0036	0.004					
849514		1.08	0.019	0.239	0.134					
849515		0.97	0.020	0.0758	0.050					
849516		1.57	0.017	0.0967	0.069					
849517		1.06	0.014	0.349	0.618					
849602		1.60	0.148	0.402	0.594					
849603		1.01	0.036	0.463	0.329					
849604		1.78	0.003	0.0083	0.008					
849605		1.89	0.003	0.0010	0.001					
719756		1.43	<0.001	0.0067	0.005					
719757		2.38	0.009	0.0006	0.001					
719758		1.58	<0.001	<0.0005	<0.001					



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To: **DAN BRUNNE**  
**BOX 35**  
**WHITEFISH FALLS ON POP 2H0**

Page: **Appendix 1**  
Total # Appendix Pages: **1**  
Finalized Date: **10-FEB-2020**  
Account: **DBQHCUN**

Project: McLANDER CREEK

**CERTIFICATE OF ANALYSIS SD20019366**

**CERTIFICATE COMMENTS**

**LABORATORY ADDRESSES**

Applies to Method:	Processed at ALS Sudbury located at 1351-B Kelly Lake Road, Unit #1, Sudbury, ON, Canada.		
	CRU-31	CRU-QC	LOG-22
	PUL-QC	SPL-21	WEI-21
			PUL-31
Applies to Method:	Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.		
	PGM-ICP27	PGM-MS23	