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2020 PROSPECTING REPORT
– Drill Holes: 20Swill-1 and 2

CLAIMS#104769,105577,105578,105579,109049,110968,110969,111534,111535,111589,112279,
112280,113567,120809,120810,124353,124354,125977,125978,125979,125980,127905,
135753,135754,137212,137963,137964,137965,139365,139366,139367,141017,142329,
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172642,172643,176416,177458,183730,184320,184321,187051,188381,188382,191374,
191375,194516,194517,201041,201042,201904,207066,207882,207883,213692,213693,
213694,213781,213782,220674,224709,224710,231364,238527,240786,243566,245122,
246321,248084,248085,248086,250481,251609,255686,256630,257433,262469,263125,
265206,266361,266362,267164,267165,267678,269243,269244,269285,271929,275381,
277882,280120,281514,281515,281516,285805,292880,292881,298702,299657,302945,
305200,306014,312500,315217,315218,317036,317037,317655,317656,319123,322527,
325111,328015,329185,333019,336634,339030,339031,341737,341738,345446

Swill Diamond Drill Project

THUNDER BAY MINING DISTRICT

Prepared By: Martin Drennan, P. Eng
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Ben Goldman, BSc

August 19, 2020

(Updated – M. Drennan, 2022/2023)

Contents

List of Figures:

1. Work Summary

Work during Spring and Summer 2020 was based on a surface anomaly identified during 2016/2017 as well as drilling completed in 2019. Three drill holes were planned for this program. Two of the three holes were completed with the third hole collared and partially drilled. No core logging or assays were completed as the core is being logged and anticipated to be logged by next week as well as assay samples prepared. Work was performed by Martin Drennan, Christopher Bottomley, Riley Olsen, Raymond Osawamick, Brenden Anderson, and Dustin Danis. Work, specific to this drilling, began June 29th and finished August 16, 2020; Days in field 42 (1 week off). Core logging was July 15th through August 20th.

2. Introduction

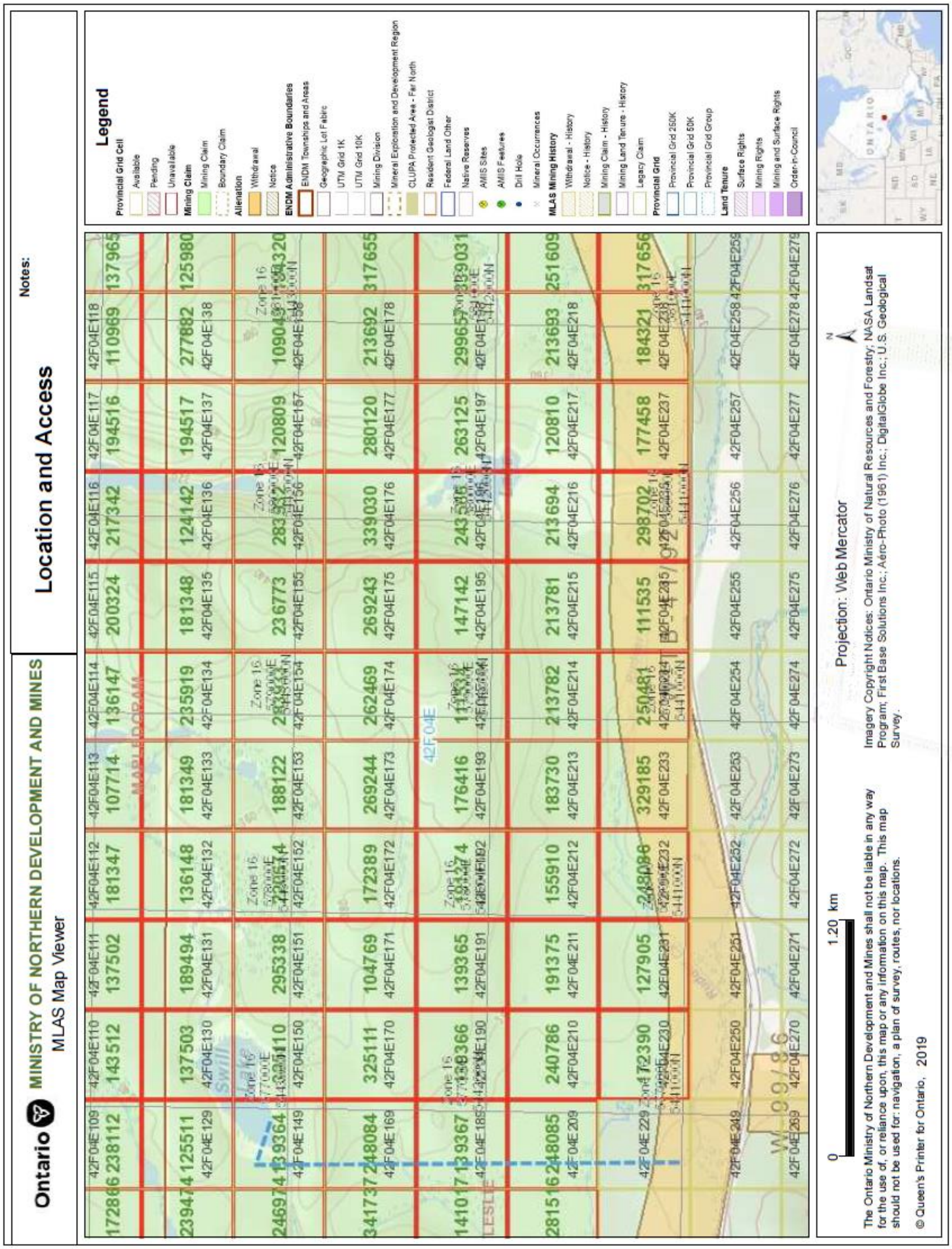
This report is a description of the drilling completed on claim 139364 which is a claim in the Leslie Townships in the Thunder Bay Mining District. The claims can be described as being located in the Manitouwadge mining camp (as defined by previous copper producers – Wilroy and Geco Mines).

The work in this report has been reviewed by the author and determined to be accurate. These claims are held by the author.

3. Location and Access

Leslie Township is located south east of Thunder Bay. Access is via Regional Road 614 to Caramat Industrial road. Caramat Industrial leads to the access road – Swill Lake Road. Swill Lake road was used to access the work area. See Figure 1 – Location and Access (work areas are highlighted with blue lines). No area organize was established to define "working areas" as the initial work was to establish anomaly locations. Once anomaly locations are established – a reference will be defined.

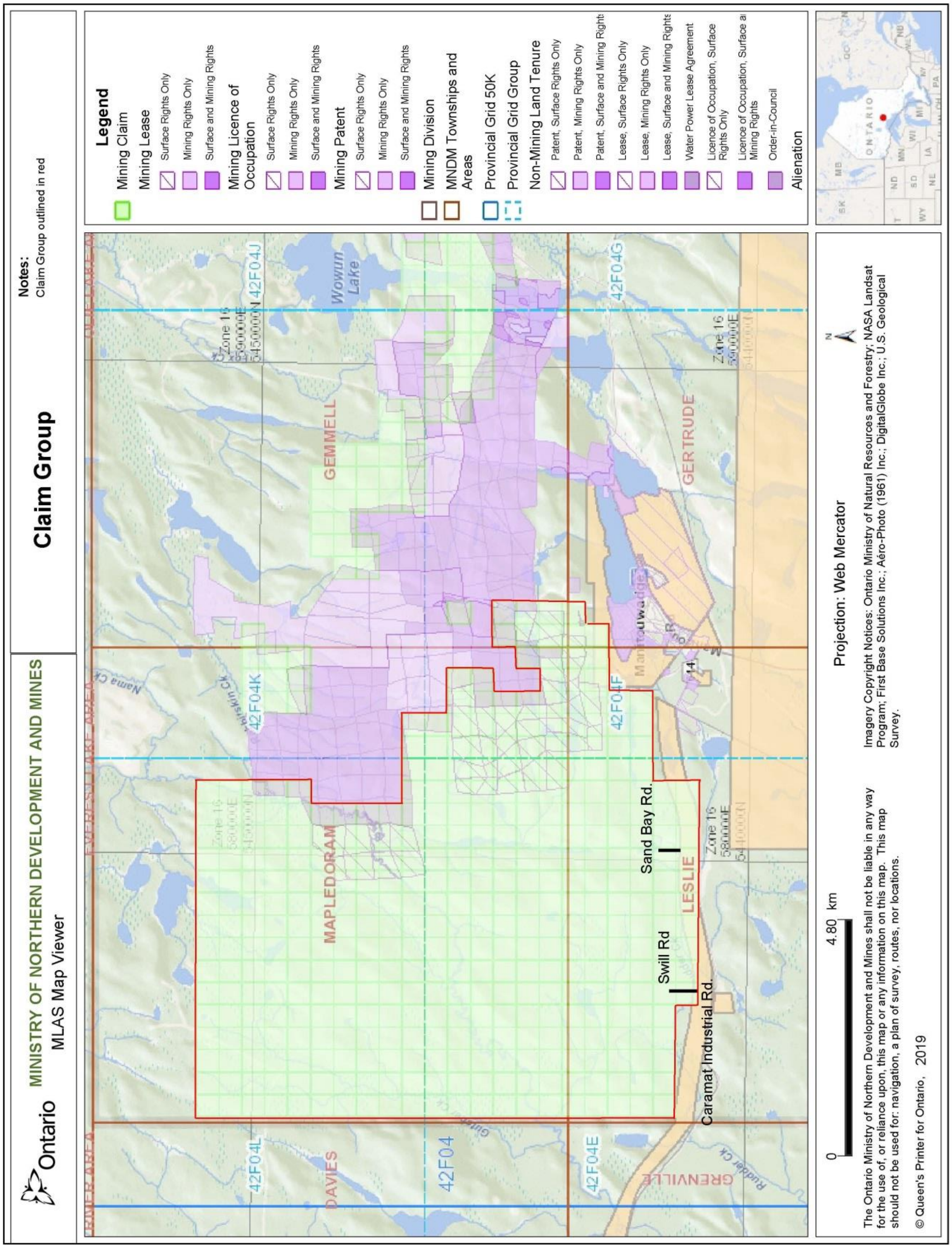
Figure 1 – Location and Access



4. Property Description

The claim group consists of 381 claims in Manitouwadge area within the Thunder Bay Mining District. See Figure 2 –Claim Group Map. The claims are a continuous package (outlined in red) with the eastern claims adjacent to the patented Geco Mine claims and some surface property lots. The claims are:
103541,103542,103543,103544,103545,104022,104769,105000,105001,105002,105003,105372,105577,105578,105579,105806,106894,107714,107882,109020,109049,110611,110968,110969,111534,111535,111589,111905,112279,112280,113567,114381,118817,119279,120809,120810,122552,124142,124353,124354,125281,125282,125283,125511,125977,125978,125979,125980,127905,128642,130474,130899,130900,131647,132424,135753,135754,136147,136148,136739,136815,137212,137502,137503,137963,137964,137965,139364,139365,139366,139367,140126,140127,140128,140129,140676,141017,142329,142466,143191,143512,144292,146080,146081,147142,147327,147328,147989,148331,148332,153306,155261,155262,155910,156587,157779,159618,161056,161363,162601,162602,165736,165737,166690,167188,167189,167190,170517,170518,170519,170520,171733,171734,171913,172389,172390,172642,172643,172866,172867,172888,173398,175305,175306,175340,176208,176209,176210,176211,176416,176970,177458,179158,180515,181347,181348,181349,181588,182040,182310,183730,183771,183772,184320,184321,184670,185112,186579,187051,188122,188381,188382,188807,189022,189265,189494,189749,190721,190810,191374,191375,192647,192684,193704,194516,194517,196452,196453,196648,200324,200982,201003,201041,201042,201904,202442,202932,207066,207882,207883,208546,209592,209609,209754,212925,212926,212927,213160,213659,213692,213693,213694,213781,213782,213822,214677,215523,215853,217342,220513,220514,220515,220674,221930,224709,224710,226561,229860,229901,231364,232503,232504,232704,234403,234404,234405,234406,235919,236773,238112,238388,238527,238691,239474,240124,240125,240786,241811,242068,242479,243566,245122,246321,246570,246571,246959,246974,247422,248084,248085,248086,249235,249884,250317,250318,250481,251577,251578,251579,251609,252729,255686,256365,256630,257076,257433,260356,260357,260358,260359,261983,262374,262469,263125,263872,265206,266361,266362,267164,267165,267678,268654,268655,268656,269243,269244,269285,269701,269702,269703,271781,271929,275130,275381,277882,278851,280092,280120,281514,281515,281516,281865,281866,283932,283933,285805,286538,286539,288462,288463,288464,289938,292647,292648,292649,292661,292880,292881,294115,295338,296566,296567,296568,297451,297452,297453,297454,298702,299162,299657,299924,300526,300527,302945,304782,304820,304821,304822,305200,305314,305315,305491,306014,308719,309864,310185,312232,312500,315217,315218,316891,317035,317036,317037,317655,317656,319123,321819,321820,322527,323846,323847,323885,324447,325110,325111,327733,327734,327735,328015,329185,329385,329386,329656,329657,330570,332376,332541,332542,333019,336634,336838,337292,337931,338494,339030,339031,341516,341737,341738,345446

Figure 2 –Claim Group Map



5. Regional Geography

Topography in the area is a mix of low areas with water and hills/ridges with a general east-west orientation. Outcrops are common of hillsides with numerous fragmented rocks buried in soil.

Vegetation is principally coniferous, and deciduous trees as well as numerous alder bush. In low lying areas, grass and cedars are predominant.

Wildlife activity is principally moose, bear, wolves, and beaver. Numerous bird species are present including grouse, and crows.

6. Regional Geology

The property is located within the Manitouwadge greenstone belt, which is located within the Wawa subprovince of the Archean Superior province. The Manitouwadge greenstone belt is located south of a tectonic boundary between the volcano-plutonic Wawa subprovince and the metasedimentary-migmatitic Quetico subprovince to the north (Zaleski and Peterson 1995). The Manitouwadge greenstone belt consists of bimodal felsic-mafic volcanic rocks, greywacke, iron-formation, and intrusive rocks that have all been metamorphosed to upper amphibolite facies and subject to four episodes of deformation (Zaleski and Peterson 1995). The Manitouwadge synform is the major structure present in the Swill Lake area. It is part of a group of regional Z-shaped D3 folds formed in response to dextral transpression (Zaleski and Peterson 1995). The Manitouwadge synform consists of an inner and outer volcanic belt which mantle a synvolcanic trondhjemite (Lodge 2013). The inner and outer belt are separated on the southern limb of the synform by metasedimentary rocks. Previously mined volcanogenic massive sulfide deposits are located on the southern limb of the Manitouwadge synform and have all been hosted in the inner volcanic belt (Lodge 2013).

7. Property Geology

The Swill Lake claims cover the hinge and the upper limbs of the Manitouwadge synform and have previously been interpreted to be stratigraphically above the Geco Mine Horizon (Degagne 1989). The metavolcanic rocks on this property belong to the outer volcanic belt of the Manitouwadge synform. The surficial geology of the claims from the southern limb to the core consists of mafic metavolcanics rocks including amphibolites, mafic schists and gneisses as well as foliated gabbroic units. Thin bands of felsic metavolcanics rocks including felsic gneisses and felsic schists are interlaid within the main mafic component. North of these units are felsic to intermediate metavolcanics rocks generally as muscovite-garnet to amph-muscovite-garnet schists and gneisses. Metasedimentary rocks, predominantly metagreywacke overlay the felsic to intermediate metavolcanics and are mainly located in the eastern claims. A massive tonalite is present in the core. In the northeastern portion of the claims granodiorite-monzadiorite of the Nama Creek pluton is present. NE-SW trending and NW-SE trending diabase dikes cut through the previously described units. A minor orthoamphibole-garnet ± cordierite gneiss outcrops SW of Swill Lake. Quartz veining observed on outcrop consists of thin 1-15 cm veins with occasional minor pyrite mineralization.

8. Mineral deposit types-model-reasons

Exploration in the Swill Lake mining claims has targeted volcanogenic massive sulfide mineralization- Cu, Zn ± Au, Ag.

The Swill Lake mining claims lie east of four past producing volcanogenic massive sulfide deposits: Geco (55 Mt at 2.3% Cu, 8.2 Zn, 74 g/t Ag), Willroy (4.6 Mt at 1.3% Cu, 5.7% Zn, 48 g/t Ag), Willecho (3.8 Mt at 0.6% Cu, 3.9% Zn, 53 g/t Ag) and Nama Creek (0.3 Mt at 0.8% Cu, 3.9 % Zn, 28 g/t Ag) (Lodge 2012 and ref. within).

Although all known economic mineralization occurs in the inner volcanic belt, Zaleski and Peterson, 1995 correlated the inner and outer volcanic belts of the Manitouwadge synform as a product of D2 fold repetition. This is significant as, barring removal from erosion or faulting, altered and/or mineralized zones from the Wilroy-Geco area should be repeated (Zaleski and Peterson 1995).

9. Drill Hole Summary Tables:

Drill hole number:	Swill2020DH1
Collar Location (UTM Zone 16N)	577830 E, 5443040 N
Azimuth:	165^{o}
Dip:	-80
Hole length:	428m
Number of Samples:	X
Number of Assays:	X

Drill hole number:	Swill2020DH2
Collar Location (UTM Zone 16N)	578036 E, 5442984 N
Azimuth:	165^{o}
Dip:	-80
Hole length:	510m
Number of Samples:	X
Number of Assays:	X

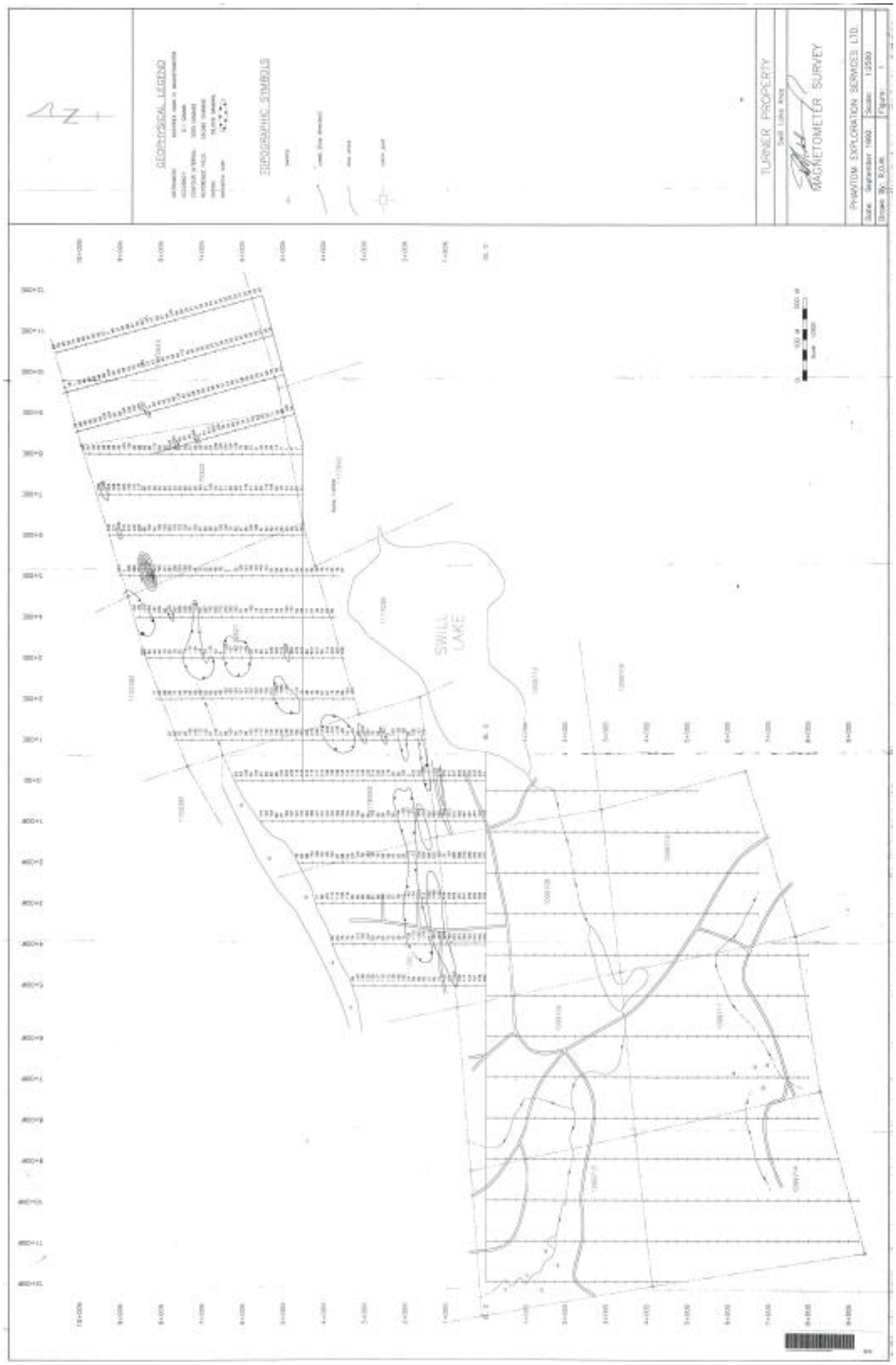
10. Work History

Work has been completed by Noranda which included magnetometer, followed by diamond drilling in any anomalous areas.[2] Other companies such as OKLECO, OKLEND, Delmico Mines and C.H.I.P. Mines performed magnetometer and geological surveys.[3] Anomalies appear to have been followed up with additional work including diamond drill. Unfortunately, no details on diamond drill results have been found by this author. Previous authors elude to finding results and reference to "G.D.I.F. 190 for further information".[4]

Further research was performed and work of interest was identified. Claims in this area were held in the early 1990's by Albert Turner. Mr. Turner drilled several shallow (less than 30m) drill holes. No significant assay data was recorded. Assays were for Ag, Au, Cu, Zn.[5] Additionally, Mr. Turner employed Phantom Exploration Services Ltd. (Phantom) of Thunder Bay to perform a geophysics study. The study consisted of VLF and proton magnetometer surveys. The surveys were conducted as per Figure 3.[6]

The results were summarized as a local magnetic high was noted as a diabase dyke. The next notable magnet anomaly was noted as iron rich mafic volcanics. Additionally, the results were cautioned as the topography and the soil clay content made all trends to be "considered superficial in nature"[7]

Figure 3 – Phantom Geophysics Testing



11. Work this Period

a. April, 2020

Period Summary

Work during this period was focused on getting a new geologist hired and to site. Robert Meek was hired April 10, 2020 and arrived in Manitouwadge shortly there after. We organized office space and Robert took the initiative to familiarize himself with the geology in the area.

Robert had 2 key tasks at hand. Firstly, the work required for this year's drill program and secondly, logging over a 1000m of core that was logged but not documented.

Additionally, trips were taken to the claims of interest. Roads were snow covered so some ATV challenges were encountered. By the end of April, trails were established to the 2019 drill area and efforts turned to access routes for 2020/2021 drill targets.

b. May, 2020

Period Summary

Tasks were happening in the background for preparation for this season's drilling efforts. There was core logging in place for cleaning up some outstanding work that had been contracted out. The first key element of this year's work is establishing a trail/access for the drill that is in around 900m. Clearing has been completed for approximately 450m using machete, bush axe and a Stihl bush cutter (FS91). Personnel completing this work were Martin Drennan, Robert Meek, Chris Bottomley, Riley Olsenand Bruce Baziuk. Personnel maintained a 2m distance for this work with access being truck and ATV.

May was a busy month as another report was completed (Work Report 3440) and trail development during Spring melt in a swamp made for some exciting times! Doing trail development through a swamp – including beaver dam areas – resulted in numerous situations of ATVs stuck, dozers stuck and later in June even excavators stuck. Fun times. Everyone put long hours in and after almost 2 months a very reasonable trail was developed.

Figure 4 - Trail Clearing for 2020 Drill Season (Start of Trail)

Figure 5 - Initial Trail Clearing

c. June, 2020

Trail work continued in June. Words like "impossible" were tossed around by numerous persons that operated equipment in the forestry industry. We were able to find some of a corduroy road that had been made years ago to harvest trees in the area. A significant bonus plus we were able to have our dozer work areas that were nested with fine and large tree cuttings from the trail. These started to hold solids and as the sun got warmer, the access Spring runoff reduced, ground water levels dropped and finally mud and ooze turned to branches and dirt.

Figure 6 - Second Load of Plywood and wafer for Trail Development

June saw the drill get from 2019 Swill-2 staging area to half way in on the trail. But all was not that easy sadly. The track drill had hydraulic and electric lines that were noticed as we walked in to be catching on branches used to raise the trail. We stopped the tram of the drill before any damage occurred and re-routed electrical for the lights and hydraulic lines that were low (specifically the track hydraulic lines) so they were out of harm's way. A week later and a trip to Thunder Bay for hydraulic fittings and the drill was tramming past some pretty water soaked ground like a champ. Finally, the drill was at the first hole site. Work was performed by Martin Drennan, Robert Meek, Chris Bottomley, Riley Olsen and Raymond Osawamick.

Figure 7 - Moving Plywood for Trail Development in Swanp

Figure 8 - Trail around Beaver Dam

Figure 9 - Trail around Beaver Dam (Part 2)

d. July , 2020

Work in July was focused on 2 fronts – getting to Hole 1 and establishing access for water, Hole 2 and Hole 3. Access to Hole 1 was accomplished in early July with the drill pad constructed and water access developed. Some delays from the DEF system were encountered but Itech2000 personnel identified issue and we were back up and running. Subsequently, it was determined a heat valve had failed. Cummins personnel will be onsite at a later date and the component will be changed under warranty. Drilling on Hole 1 was completed and the drill relocated to Hole 2.

Figure 10 - Pump Access Trail through Swamp

428m were drilled at Hole 1. Access development to Hole 2 and Hole 3 were ongoing while drilling on Hole 1.

Figure 11 - Hole 1 after Teardown and Move

Figure 12 - Drill Hole 2 Setup

e. August , 2020

Drilling on Hole 2 was going well. There were a few access challenges , specifically related to low areas and water collection. More plywood and wafer board were added which greatly helped access. Water on top of plywood wood evapourate in the sun and low areas were filled with branches cut locally. Large holes slowly filled as water percolation deposited fine mud in the road bed increasing the road bed height above the ground water table. Rain was the only nemesis in time.

Figure 13 - Drill Access Road

The move to Hole 3 occurred around mid-August. Hole 2 was drilled to in around 510m. Hole 3 is not reported in this report as it is incomplete and planned to be completed in November under a new Diamond Drill Permit.

Figure 14 - Planview Hole #1 and Hole#2

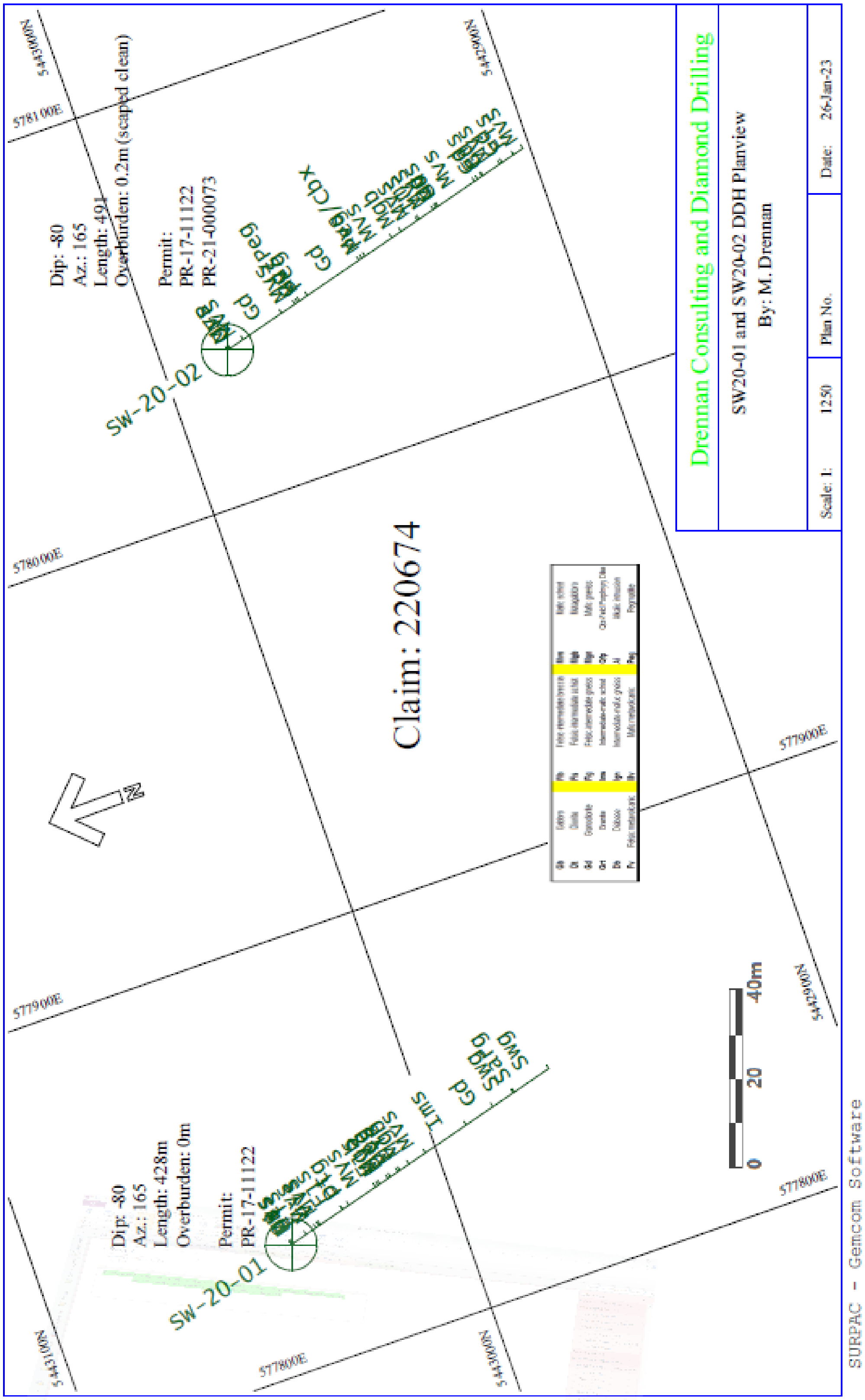
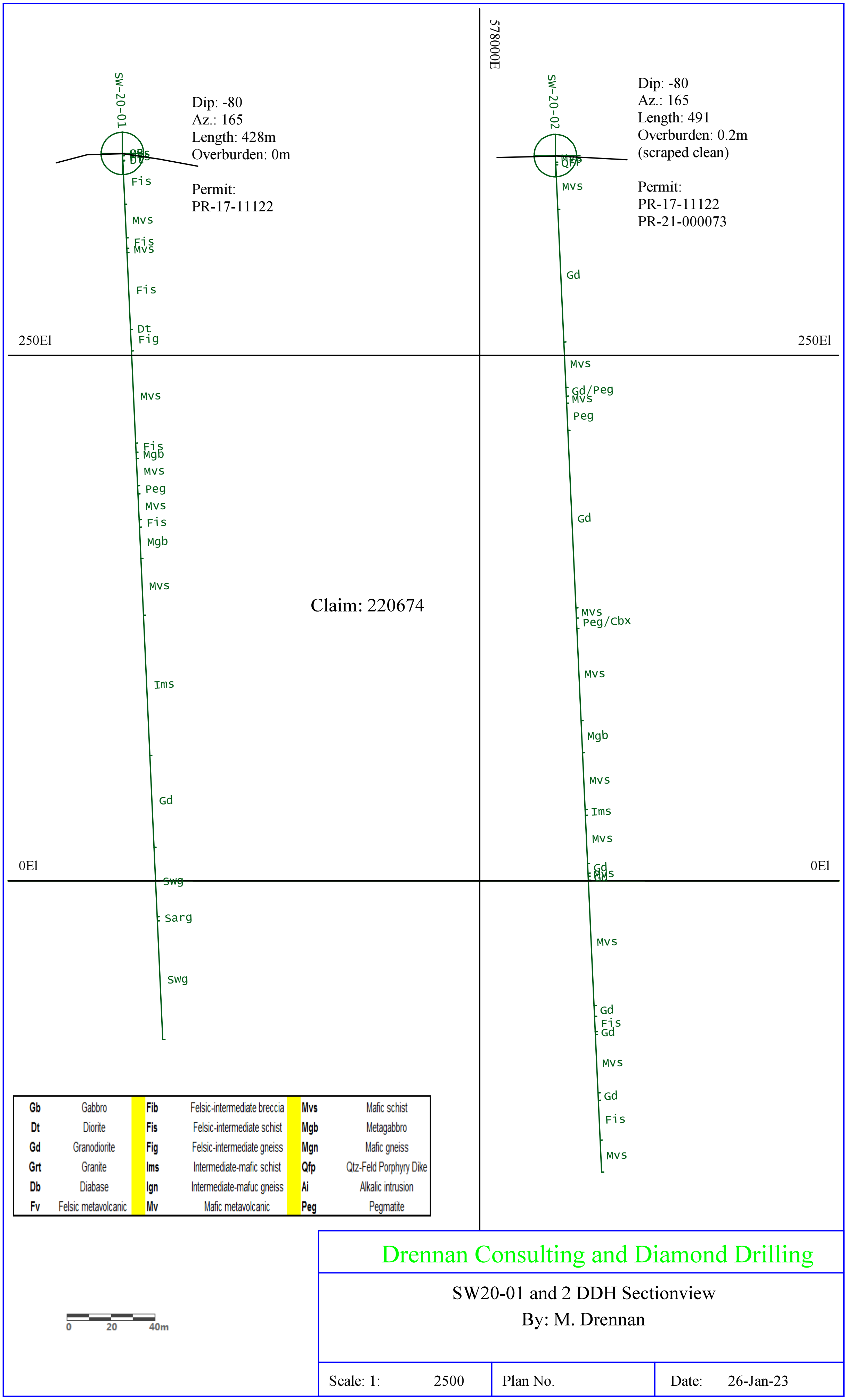


Figure 15 - Cross Section Hole#1 and Hole#2

Swill Project



SURPAC - Gemcom Software

sw20-01_and_2_ddh_section_view2

12. Conclusion and Recommendations

The work performed in 2020 was reasonable with respect to obtaining this drill hole data. The presence of granite and chloritized zones was noted in the drill core. The metres drilled were in the range for the program though having 2 of the planned 3 holes completed is a minor disappointment. Further drilling, specifically the completion of all or a significant part of the planned 9 hole program is the only recommendation at this time. The anticipated cost to complete this work is remaining holes (as of August 10, 2020) are 7 holes at a minimum of 400m per hole. Based on current projections the cost for this work is in around 7 holes x 400m/hole x $105/m = $294,000. This excludes logging, and assay work which may be warranted as results are evaluated. Other factors may impact this projection such as labour rates, equipment and fuel costs but as a rough working number this would be the projected "claimed" value.

13. References

1. GRANGES INC., MAN PROJECT, GEMMEL, GERTRUDE, MAPLEDORAM AND LESLIE TOWNSHIPS CENTRAL AND NORTH CENTRAL GRID GEOLOGY REPORT, Warren Bates, B.Se., Hons. Geol August 6, 1993 (Page 2)
2. GRANGES INC., MAN PROJECT, GEMMEL, GERTRUDE, MAPLEDORAM AND LESLIE TOWNSHIPS CENTRAL AND NORTH CENTRAL GRID GEOLOGY REPORT, Warren Bates, B.Se., Hons. Geol August 6, 1993 (Page 3)
3. GRANGES INC., MAN PROJECT, GEMMEL, GERTRUDE, MAPLEDORAM AND LESLIE TOWNSHIPS CENTRAL AND NORTH CENTRAL GRID GEOLOGY REPORT, Warren Bates, B.Se., Hons. Geol August 6, 1993 (Page 3)
4. GRANGES INC., MAN PROJECT, GEMMEL, GERTRUDE, MAPLEDORAM AND LESLIE TOWNSHIPS CENTRAL AND NORTH CENTRAL GRID GEOLOGY REPORT, Warren Bates, B.Se., Hons. Geol August 6, 1993 (Page 3)
5. 42F04NW0001-Turner – Assessment work after staking a claim – work report number 1
6. 42F04NW0033-Turner-Maps - Geological and Geophysical Reports – Phantom Exploration Services Ltd. September 1992
7. 42F04NW0033-Turner – Geological and Geophysical Reports – Phantom Exploration Services Ltd. September 1992 (Page 5)

14. Appendices

14.1 Logging codes

Dt	Diorite	**Grt**	Granite
Gt	Granodiorite	**Db**	Diabase
Fis	Felsic-intermediate schist	**Fig**	Felsic-intermediate gneiss
Mvs	Mafic schist	**Mgb**	Metagabbro
Mgn	Mafic gneiss	**Peg**	Pegmatite
Sgw	Metagreywacke		

ALTERATION CODES				
Unalt	Unaltered		**Dol**	Dolomite
Chl	Chlorite		**Cc**	Calcite
Qtz	Quartz		**Ank**	Ankerite
Ser	Sericite		**K**	Potassic
Bt	Biotite		**Msc**	Muscovite
Fch	Fuchsite			
Sp	Serpentine		**ALTERATION INTENSITY**	
Tc	Talc		**Wk**	Weak
Ep	Epidote		**Md**	Moderate
Ab	Albite		**Str**	Strong

14.2 Drill hole Swill 2020DH1

Project: Swill 2019

Logged by: Ben Goldman

Hole ID: Swill 2020DH1

UTM E (survey): 577830 **UTM N** (survey): 5443040

UTM zone 16 N
Azimuth: 165 **Dip**: 80
Collar Elev.: 346 **Depth**: 428
Overburden: 0.3 **Dip srvy mthd**:
Cell Number: 42F04E151 **Mining claim**: 295338
Lease Numbers:
Drilled by: Drennan Consulting and Diamond Drilling
Core size: BQ

INTERVAL		LITHOLOGY CODE	DESCRIPTIVE LOG
From	To		
0.00	0.20	OB	Overburden
0.20	1.15	Mvs	Fine grained hornblende chlorite mafic schist. Foliation defined by alignment of chlorite and elongation of hbl 50 deg TCA. Minor Pervasive chlorite alteration. Trace pyrite proximal to 10 cm qz-carb vein at 60 cm. Lower contact is gradational over 10 cm.
1.15	3.35	Fis	Medium grained felsic intermediate chlorite magnetite schist pervasive weak chlorite alteration. Foliation defined by alignment of chlorite grains 50 deg TCA. Upper contact gradational over 10 cm. lower contact sharp and irregular. Magnetite throughout. Trace pyrite veinlets parallel to foliation. Minor qz-carb veining parallel to foliation.
3.35	3.65	Dt	Medium grained light grey bt hbl diorite with moderate potassic alteration proximal to contacts.
3.65	24.55	Fis	Medium grained felsic intermediate chlorite magnetite schist pervasive weak chlorite alteration. Foliation defined by alignment of chlorite grains 50 deg TCA. Upper contact gradational over 10 cm. lower contact sharp and irregular. Magnetite throughout. Trace pyrite veinlets parallel to foliation. Minor qz-carb veining parallel to foliation.

24.55	40.80	Mvs	Fine to medium grained hornblende chlorite mafic schist. Foliation defined by alignment of chlorite and elongation of hbl 45- 50 deg TCA. Minor Pervasive chlorite alteration. Trace pyrite along edges of small (<5 cm wide) quartz veins. Intercalated with Fis, Lower contact is where Fis begins to become predominant.
40.80	45.80	Fis	Medium grained felsic intermediate chlorite magnetite schist pervasive weak chlorite alteration. Foliation defined by alignment of chlorite grains 50 deg TCA. Upper contact gradational over 50 cm. Moderate secricitization with minor potassic alteration associated with one another. Intercalated with Mvs, lower contact is gradational over 10 cm.
45.80	47.85	Mvs	Fine grained hornblende chlorite mafic schist. Foliation defined by alignment of chlorite and elongation of hbl 50 deg TCA. Minor pervasive chlorite alteration, sericitization along fractures. Sharp lower contact.
47.85	85.05	Fis	Medium grained felsic intermediate chlorite magnetite schist pervasive weak chlorite alteration. Foliation defined by alignment of chlorite grains 50 deg TCA. Areas of strong sericitization and moderate chloritization, epidote and potassic alteration. Moderate sericitization occurs throughout the interval as haloes around fractures that range from parallel to foliation to 30 degrees TCA. Minor pyrite observed in the larger qz veins and 3% disseminated from 74 -76 m. Sharp lower contact with garnet bearing rock ~70 degrees tca
85.05	95.45	Fig	Medium to coarse grained felsic intermediate garnet amphibole gneiss, banding defined by alternating grain size parallel to foliation. Lighter bands consist of coarser grained plagioclase and amphibole rich. Darker bands are finer grained dark green. Both bands have eu to subhedral garnets present 10 mm diameter, which help easily identify this unit, prismatic amphibole is also easily identifiable. The upper contact is sharp and ~70 degrees tca. Weak sericite alteration present as haloes around fractures. ~1% 0.5 mm euhedral pyrite, locally the pyrite forms stringers parallel to the foliation ~45 degrees tca. Lower contact determined by the disappearance of large garnets.
95.45	138.75	Fis	Medium grained felsic intermediate chlorite schist pervasive weak chlorite alteration. Foliation defined by alignment of chlorite grains 50 deg TCA. Pervasive, weak potassic alteration with epidote in veins from 99 m to 104 m. 115 m to 138.5 m has strong potassic alteration associated with felsic intrusions <70 cm wide. The alteration in these sections appears as a reddish rock. Hydrothermal vein breccia 40 cm wide at 130.3 m, no sulfides associated, the vein is qz-carb fault breccia 10 cm wide at 136.6 m, with strong sericite and carbonate alteration, appearing bleached and very soft follows 45-50 degrees tca foliation. Gradational lower contact over 20 cm. 2 mm euhedral pyrite grains present throughout, <1%. Poor to moderate core recovery between 101 m to 128 m.
138.75	139.90	Mvs	Fine to medium grained hornblende chlorite mafic schist. Foliation defined by alignment of chlorite and elongation of hbl 50 deg TCA. Minor pervasive chlorite alteration, potassic alteration. Intercalated with the unit below. Gradational upper contact over 5 cm, parallel to foliation. Sharp lower contact, parallel to foliation.

139.90	144.30	Fv	Fine grained light grey felsic metavolcanics (possibly a tuff unit). Hard, silica rich, with minor potassic alteration associated with the upper contact and weak sericite alteration haloes around fractures. Sharp lower contact 40 degrees tca.
144.30	147.40	Mgb	Coarse grained dark green metagabbro. Unit defined by 1.5 cm rounded pyroxenes. Sharp contacts parallel to foliation. Intercalated with the felsic volcanic above.
147.40	160.55	Mvs	Fine grained hornblende chlorite mafic schist. Foliation defined by alignment of chlorite and elongation of hbl 50 deg TCA. Minor Pervasive chlorite alteration. Coarse grained felsic intrusion with irregular contact <40 cm wide at 151.8 m, 156.6 m and, 158.8 m Gradational upper contact over 5 cm. Lower contact is sharp, 80 degrees tca.
160.55	164.50	Peg	Reddish, pink muscovite pegmatite. Large kspar crystals up to 5 cm, 2% muscovite up to 5 mm, sharp upper and lower contacts 80 degrees tca. The reddish colour is likely due to moderate potassic alteration.
164.50	176.90	Mvs	Fine to medium grained hornblende chlorite mafic schist. Foliation defined by alignment of chlorite and elongation of hbl 50 deg TCA. Minor Pervasive chlorite alteration, minor sericitization at upper contact. Some variation in grain size on the m scale, possibly defining different flows.
176.90	180.55	Fis	Fine grained light grey felsic metavolcanics (possibly a tuff unit). Hard, silica rich, with sericite alteration haloes around fractures. Sharp upper and lower contacts 40 degrees tca. Foliation is weak.
180.55	195.65	Mgb	Coarse grained dark green metagabbro. Unit defined by 1.5 cm rounded pyroxenes, foliation 40 deg tca defined by elongation of pyroxenes and amphiboles. Minor qz veining parallel to foliation <1 cm wide, 2 larger qz veins at 195.2 -195.4 and 196.15 - 196.25 associated with moderate sericite alteration Sharp contacts parallel to foliation. Intercalated with the Mafic volcanic unit below. Feldspar porphyry intrusion at 185.7 - 188.1 with irregular contacts seen to crosscut foliation f Mgb unit, 2 cm wide chill margin at both contacts. Fp unit has 3 mm porphyritic feldspar within pink matrix, 1% 1 mm platy biotite grains.

195.65	223.05	Fis	Fine to medium grained light grey felsic to intermediate schist with 5 mm rounded brown garnets present throughout, intercalated with mvs unit large 2 cm anhedral red garnets associated with strong sericite alteration. Mineralization of pyrite and cpy between 206 and 207 associated with gt and sericite alteration. Fis unit at 197.6 - 198.5 with hematite alteration associated with contacts, contacts are sharp and parallel to foliation. Foliation defined by alignment of chlorite and elongation of hbl 40 deg TCA. Minor Pervasive chlorite alteration, minor sericitization at upper contact. Some variation in grain size on the m scale, possibly defining different flows.
223.05	241.30	Sgw	Fine grained grey metagreywacke, very weakly foliated to non-foliated, qz carb veins near upper contact ~ 5 cm wide. Weak sericite alteration associated with fractures up to 8 cm wide.
241.30	298.75	Fis	Fine to medium grained light grey felsic to intermediate schist, intercalated with Sgw unit near upper contact, large 2 cm anhedral red garnets associated with strong sericite alteration. Strong potassic alteration 284.25 - 286 m. Mineralization of pyrite associated with gt and sericite alteration. Foliation defined by alignment of chlorite and elongation of hbl 40 deg TCA. box 44 was measured backwards after the dropped box (dropped box was left unlabeled and should be box 43).
298.75	309.30	Gd	Pink-grey to light red eqigranular granodiorite, non-foliated, sharp contacts
309.30	335.15	Mvs	Fine to medium grained hornblende chlorite mafic schist. Foliation defined by alignment of chlorite and elongation of hbl 40 deg TCA. Strong epidote alteration associated with upper contact (wit Gd unit), likely a contact breccia with minor chlorite alteration and potassic alteration of feldspars. Below the epidote alteration is weak sericitization for ~5m. Trace pyrite is visible throughout this unit as veinlets <2 mm wide parallel to foliation. Granitoid intrusion for 30 cm at 317.3.
335.15	428.00	Sgw	Fine grained to very fine grained dark grey garnet metagreywacke, this unit is defined by the appearance of brown garnets 0.2 - 0.5 cm in diameter, reddish garnets are associated with veining. Garnet concentration varies between 1% to 45%. The garnets are stretched parallel to foliation ~40 degrees tca between 338.15 - 342.3 and 355 - 376. Molybdenite grains visible in blue quartz vein at 355.25, py and po mineralization is concentrated between 365.55 and 370.75. Upper contact is inferred based on reduction in grain size of the groundmass and appearance of garnets. Granodiorite to pegmatitic intrusion from 350 - 351 anastomosing contact. Graphitic subunit between 369.3 and 369.7. Bx 57 does not exist, only 15 cm between blocks 344 and 347.
ALTERATION			

From	To	Chl	Ser	K	Ep	Cc	Comments
0.2	1.15	Md					Pervasive chlorite alteration
1.15	3.35	Wk					Pervasive chlorite alteration
3.35	3.65			Md			Patchy pink alteration of diorite, concentrated at the contacts of this dyke
3.65	24.55	Md	Md	Wk	Md		Pervasive weak Chlorite alteration throughout unit, pervasive moderate sericite alteration 12 m - 15 m followed by weak sericite alteration 15 m - 19.7 m. Minor amounts of potassic alteration around veinlets. Veins 5 cm wide of moderate epidote and chlorite alteration occur 15.8 - 22.8 m
24.55	40.80	Wk		Wk			Weak potassic and chlorite alteration
40.80	45.80	Wk	Wk			Wk	Weak sericitization along fractures forming halo of 1 cm around fractures. Pervasive chloritization with diffuse edges to areas of moderate chloritization. Very weak potassic alteration.
45.80	47.85	Wk	Wk				Weak pervasive chloritization, concentrated in some areas to moderate 2 cm chlorite alteration. Sercitization concentrated along fractures
47.85	85.05	Wk	Str	Md	Wk	Wk	Moderate sericitization throughout the interval, concentrated in haloes around fractures. Pervasive seriticization from 52.4 - 58 m, and 64 - 67 m. Moderate potassic alteration and minor epidote alteration seen in zones of high sericitization. Moderate chlorite, potassic alteration from 66.5 - 68 m
85.05	95.45	Wk	Wk				Pervasive weak chloritization. Sericite alteration present as 2 mm haloes around fractures
95.45	138.75	Wk		Md	Wk		Moderate to strong potassic alteration concentrated between 115 and 137 m associated with felsic granitic intrusions appearing as a red rock, little to no sulfides associated with this alteration. Similar style of alteration appears from 99 m to 104 m, lacking the associated intrusions but accompanies weak to moderate epidote alteration.
138.75	139.90	Wk					Weak pervasive chloritization, some minor potassic alteration.
139.90	144.30		Wk	Wk			Weak potassic alteration proximal to upper contact
144.30	147.40	Wk	Wk				Weak, pervasive chloritization
147.40	160.55	Wk					Weak, pervasive chloritization
160.55	164.50			Md			Pervasive
164.50	166.00	Wk	Wk				Minor sericitization at upper contact
180.55	195.65		Wk				Weak to moderate sericitization as haloes around fractures and veins up to 5 cm wide.
195.65	223.05	Wk	Md		Wk		Garnets associated with stronger sericite alteration
223.05	241.3		Wk				Weak sericite alteration associated with fractures up to 8 cm wide.
241.3	257.65		Md				Garnets associated with stronger sericite alteration pervasive through this unit

284.25	286			Str			Areas of biotite alteration 1 - 8 mm subhedral platy crystals, 2% amphiboles associated, appear shiny in core, light grey and show the foliation 40 deg tca strongly
299	309.3			Wk			Weak potassic alteration near the lower contact, alteration is gradual over 25 cm making the granodiorite appear reddish
309.3	310	Md		Wk	Str		Strong epidote alteration below granodiorite unit in the mafic volcanics.
310	313		Wk				sericite alteration associated with upper contact of mvs unit.
373	374.5	Md					Moderate chlorite alteration associated with abundant garnets

MINERALIZATION

Interval		Py	Po	Cpy	Comments & Textures
From	To	%	%	%	
0.2	1.15	<1			minor amounts of anhedral py 1 - 3 mm long, surrounding 10 cm wide qz vein at 0.6 m.
1.15	3.35	<1			Veinlets of py following the foliation at 1.8 m. Pervasive anhedral magnetite 2 mm in size.
3.35	3.65				None
3.65	24.55	1	<1		Magnetite throughout the unit, 1 - 3 mm anhedral. Pyrite veinlets associated with areas of moderate epidote alteration, also seen as disseminated throughout the moderate and weak sericite altered zones. Po associated with Py blebs in qz veins at 21.15
24.55	40.8	<1			Check Mag and Po again. Pyrite is concentrated along the margins of some quartz veins
40.8	45.8				None
45.8	47.85	1			minor amounts of anhedral py 1 - 3 mm long, within areas of moderate chloritization and along edges of quartz veins
47.85	85.05	2			Pyrite concentrated in qz veins as well as 3 from 74 - 76 m
85.05	95.45	1			Euhedral pyrite mineralization follows foliation
95.45	138.75	<1			py
138.75	139.90	<1			Pyrite concentrated at lower contact ~3%
206	207	3		1	Py and Cpy associated with sericite alteration, large 2 cm anhedral garnets. Cpy may be oxidized py. Pyrite is present throughout this unit but cpy seems to be associated with higher amounts of pyrite between 206 and 207 m.
241.3	257.7	1			Pyrite associated with strong sericite alteration and red garnets
298	298.8	<1			Trace pyrite associated with lower contact with granitoid unit
315.6	335.2	<1			Trace pyrite throughout Mvs unit, concentrated in veinlets <2 mm wide.
355.3	355.3				Molybdenite grains visible in blu quartz vein at 355.25
365.6	370.8	2	2		py and po mineralization is concentrated between 365.55 and 370.75, hosted in veins parallel to foliation (~60 deg tca), locally areas <5 cm of semi massive po.

14.3 Drill hole Swill 2020DH2

Project: Swill 2019

Logged by: Ben Goldman

Hole ID: Swill 2020DH2

UTM E (survey): 578036 **UTM N** (survey): 5442984

UTM zone 16 N

Azimuth: 165 **Dip**: 80

15. **Collar Elev.**: 345 **Depth**: 510
16. **Overburden**: 0.2 **Dip srvy mthd**:
17. **Cell Number**: 42F04E151 **Mining claim**: 220674
18. **Lease Numbers**:
19. **Drilled by**: Drennan Consulting and Diamond Drilling
20. **Core size**: BQ

INTERVAL		LITHOLOGY CODE	DESCRIPTIVE LOG
From	To		
0.00	3.20	Mvs	Garnet amphibole mafic volcanic schist. Dark green in color, the garnets are sporadic between 2 mm and 8 mm in size, typically elongate parallel to foliation. Amphibole is likely hornblende, between 1 and 3 mm long.
3.20	4.50	Fis	Felsic to intermediate schist, light grey in colour, feldspars u to 3 mm round are easily visible in this unit, the unit appears pitted, which may be a result of silicification. Pits are ~1 mm round. Sericite alteration appears lighter along fractures~ 35 deg tca.
4.50	26.05	Mvs	Garnet amphibole mafic volcanic schist. Dark green in color, the garnets are sporadic between 2 mm and 8 mm in size, typically elongate parallel to foliation. Amphibole is likely hornblende, between 1 and 3 mm long. Felsic pegmatitic intrusion with irregular contacts at 11.95 - 12.7. Trace py and po present as veinlets parallel to foliation
26.05	90.10	Gd	White to light pink biotite granodiorite non foliated, medium to coarse grained. Upper contact has 5 cm of weak potassic alteration. Relatively monotonous, cut by some pegmatitic dykes < 10 cm wide.
90.10	112.05	Mvs	Amphibole mafic volcanic schist. Dark green in colour, amphibole is likely hornblende, disseminated trace pyrite. 0.8 m of sedimentary unite at 107. Contacts are sharp and regular.

112.05	116.20	Peg	Complex pegmatite unit held within a granodiorite, the pegmatite intrusions are typically between 0.4 and 1 m in width. There are granitoid pegmatites with large ksap crystals and quartz, and another style with ab rich feldspars, a graphic texture and large biotite blades up to 3 cm long.
116.20	119.6	Mvs	Amphibole mafic volcanic schist. Dark green in colour, amphibole is likely hornblende, disseminated trace pyrite. 0.8 m of sedimentary unite at 107. Contacts are sharp and regular.
119.60	132.70	Peg	Complex pegmatite unit held within a granodiorite, the pegmatite intrusions are typically between 0.4 and 1 m in width. There are granitoid pegmatites with large ksap crystals and quartz, and another style with ab rich feldspars, a graphic texture and large biotite blades up to 3 cm long.
132.70	218.50	Gd	light grey granodiorite non foliated, medium to coarse grained. Relatively monotonous, cut by some pegmatitic dykes near the upper contact.
218.50	223.40	Mvs	Amphibole mafic volcanic schist. Dark green in colour, amphibole is likely hornblende, could be a large raft within the contact breccia unit, upper contact is ~ 40 deg tca, contacts are broken and hard to observe, the contact with the contact breccia unit is determined by the reappearance of granitoid material.
223.40	228.45	Cbx	Contact breccia between the Gd unit and Mvs, the overlying Mvs unit is thought to be a large raft held int the breccia. From 225 - 228.45 the breccia is predominantly gd breccia with ha jigsaw fit and very little Mvs included in it. The contacts for this unit are broken and unobservable.
228.45	270.00	Mvs	Amphibole mafic volcanic schist, this unit is intercalated with minor amounts of sgw and mgb all <0.7 m width. 245 - 248 m has minor sericite and epidote alteration associated with some fractures in the rock, minor py and po at 247 - 248. 251 - 252.3 m has chlorite veinlets with trace po in them, these veinlets are <5 cm wide.
270.00	510.00	Unk	Unknown/Not yet logged

14.5 Certificate of Analysis

Not completed at this time.

Drennan Consulting and Diamond Drilling

GEOLOGICAL DRILL LOG - SWILL PROJECT

Project:	Swill Lake 2020	Core Size = BQ	
Logged by:	Robert Meek/Ben Goldman/Rob Reukl		
Hole ID:	Swill 2020-1		
UTM 16 N (ideal):	577864	Start:	6-Jul-20
UTM 16 N (ideal):	5443077	End:	10-Aug-20
UTM 16 E (survey):	577830	Azimuth:	165
UTM 16 N (survey):	5443040	Dip:	80
Collar Elev.:	346	Depth:	428
Overburden:	0	Dip srvy mthd:	Not Inspected
Sample By:	M. Drennan	Rob Reukl	Core Storage Location
Cut By:	M. Drennan	Rob Reukl	10 Kingfisher, Manitouwadge

Collar Status: No casing (collared in outcrop); No cap (rock covered)

Water Status: No water encountered. Hole not making water.

LITHOLOGY CODES					
Gb	Gabbro	Fib	Felsic-intermediate breccia	Mvs	Mafic schist
Dt	Diorite	Fis	Felsic-intermediate schist	Mgb	Metagabbro
Gd	Granodiorite	Fig	Felsic-intermediate gneiss	Mgn	Mafic gneiss
Grt	Granite	Ims	Intermediate-mafic schist		
Db	Diabase	Ign	Intermediate-mafuc gneiss	Ai	Alkalic intrusion
Fv	Felsic metavolcanic	Mv	Mafic metavolcanic	Peg	Pegmatite
Sedimentary Rock					
Sarg	Graphitic Argillite	If	Iron formation	Sms	
		Sgw	Metagreywacke		

ALTERATION CODES			
Unalt	Unaltered	Dol	Dolomite
Chl	Chlorite	Cc	Calcite
Qtz	Quartz	Ank	Ankerite
Ser	Sericite	K	Potassic
Bt	Biotite	Msc	Muscovite
Fch	Fuchsite		
Sp	Serpentine	**ALTERATION INTENSITY**	
Tc	Talc	Wk	Weak
Ep	Epidote	Md	Moderate
Ab	Albite	Str	Strong

MINERALIZATION CODES			
Py	Pyrite	Vg	Gold
Po	Pyrrhotite	Hm	Hematite
Cpy	Chalcopyrite	Mg	Magnetite
Pn	Pentlandite	Sph	Sphalerite
Bn	Bornite	Gn	Galena
STRUCTURE CODE			
D	Dike	S0	Bedding
F	Fault	C	Contact
Vn	Vein	J	Joint
Vnlt	Veinlets	Vsk	Stockwork

SAMPLE TYPES	
C	Core
St	Standard
Bl	Blank
Dup	Duplicate
P Dup	Pulp Duplicate
C Dup	Coarse Duplicate
Met	Metallics
Fol	Foliation
Fr	Fracture
Vst	Stringers

INTERVAL / LITHOLOGY / ALTERATION

INTERVAL From	INTERVAL To	LITHOLOGY CODE	ALT. CODE	ALT. INTENSITY	Alteration Interval From	Alteration Interval To	Unalt Int	Chl Int	Qrtz Int	Ser Int	K Int	Fu Int	Sp Int	Tc Int	Ep Int	Ab Int	Dol Int	Cc Int	Ank Int	Comments
0.00	0.20	OB																		
0.20	1.15	Mvs	Chl	Md	0.2	1.15		Md												pervasive
1.15	3.35	Fis	Chl	Wk	1.15	3.35		Wk												pervasive
3.35	3.65	Dt	K	Md	3.35	3.65					Md									alteration of
3.65	24.55	Fis	Ep	Md	3.65	24.55		Md		Md	Wk				Md					weak Chlorite
24.55	40.80	Mvs	Chl	Md	24.55	40.8		Md												pervasive
40.80	45.80	Fis	Chl	Md	40.8	45.8		Md												pervasive
45.80	47.85	Mvs	Chl	Md	45.8	47.85		Md												pervasive
47.85	85.05	Fis	Ep	Md	47.85	85.05		Md												pervasive
		Dt																		
85.05	95.45	Fig	Chl	Md	85.05	95.45		Md			Md									pervasive
95.45	139.90	Mvs	Chl	Md	95.45	139.9		Md												pervasive
139.90	144.30	Fis	Qtz	Md	139.9	144.3			Md											pervasive
144.30	147.40	Mgb	Chl	Str	144.3	147.4		Str												pervasive
147.40	160.55	Mvs	Chl	Str	147.40	160.55		Str												pervasive
160.55	164.50	Peg	K	Md	160.55	164.50					Md									pervasive
164.50	176.90	Mvs	Chl	Md	164.50	176.90		Md												pervasive
176.90	180.55	Fis	Chl	Md	176.90	180.55		Md												pervasive
180.55	195.65	Mgb	Chl	Md	180.55	195.65		Md												pervasive
195.65	223.05	Mvs	Chl	Md	195.65	223.05		Md												pervasive
223.05	241.30	Ims	Chl	Md	223.05	241.30		Md												pervasive
241.30	290.80	Ims	Chl	Md	241.30	290.80		Md												pervasive
290.80	335.15	Gd	K	Wk	290.80	309.30		Wk			Wk									pervasive
309.30	334.90	Mvs	Chl	Md	309.30	334.90		Md												pervasive
335.15	368.69	Swg	Chl	Md	335.15	368.69		Md												pervasive
368.69	370.70	Sarg	Cc	Md	368.69	370.70			Md									Md		veining
370.70	428.00	Swg	Chl	Md	370.70	428.00		Md												pervasive

MINERALIZATION

INTERVAL From	INTERVAL To	Mineralization Interval From	Mineralization Interval To	Py %	Po %	Cpy %	Pnt %	Bo %	Gd %	Hm %	Mg %	Sph %	Ga %	Comments & Textures
0.00	0.20													
0.20	1.15	0.2	1.15	<1										amounts of
1.15	3.35	1.15	3.35	<1							5			py following
3.35	3.65	3.35	3.65											None
3.65	24.55	3.65	24.55	1	<1						5			thoughout
24.55	40.80	24.55	40.8	tr										disseminate
40.80	45.80	40.8	45.8	0										None
45.80	47.85	45.8	47.85	tr-1										disseminate
47.85	85.05	47.85	85.05	tr										disseminate
		67.85	69.34	0										None
85.05	95.45	85.05	95.45	tr										disseminate
95.45	139.90	95.45	139.9	tr										disseminate
139.90	144.30	139.9	144.3	tr										present
144.30	147.40	144.3	147.4	0										None
147.40	160.55	147.40	160.55	tr	tr									locally noted
160.55	164.50	160.55	164.50	0										None
164.50	176.90	164.50	176.90	tr										Py locally
176.90	180.55	176.90	180.55	tr										Py locally
180.55	195.65	180.55	195.65	tr										Py locally
195.65	223.05	195.65	223.05	tr										Py locally
223.05	241.30	223.05	241.30	1	tr									Diss Py, and lesser Po
241.30	290.80	241.30	290.80	tr										Py locally
290.80	335.15	298.75	309.30	0										None
309.30	334.90	309.30	334.90	<1	tr									throughout
335.15	368.69	335.15	368.69	<1	tr									throughout
368.69	370.70	368.69	370.70	1-2										bands
370.70	428.00	370.70	428.00	<1										throughout

STRUCTURE / DESCRIPTIVE LOG / SAMPLES

INTERVAL From	INTERVAL To	Structure Interval From	Structure Interval To	Code	Core angle	Comments	DESCRIPTIVE LOG	Samples Interval From	Samples Interval To	Sample #	Type
0.00	0.20										
0.20	1.15	0.20	1.15	Fol	50	n defined by alig	Fine grained hornblende chlorite mafic schist. Foliation defined by alignment of chlorite and elongation of hbl 50 deg				
1.15	3.35	1.15	3.35	Fol	50	n defined by alig	Medium grained felsic intermediate chlorite magnetite schist pervasive weak chlorite alteration. Foliation defined by a				
3.35	3.65	3.35	3.65	C	90	. Lower contact	Medium grained light grey bt hbl diortie with moderate potassic alteration proximal to contacts.				
3.65	24.55	3.65	24.55	Fol	50	zones of moder	Medium grained felsic intermediate chlorite magnetite schist pervasive weak chlorite alteration. Foliation defined by a				
24.55	40.80	24.55	40.80	Fol	56-43	ttening towards	Fine to med grained hornblende chlorite mafic schist. Foliation defined by alignment of chlorite and elongation of hb				
40.80	45.80	40.80	45.80	Fol	57-59	foliation	Medium grained felsic intermediate qtz-feld-chl-mag schist pervasive weak chlorite alteration. Foliation defined by al				
45.80	47.85	45.80	47.85	Fol	50	ment of chlorite	Fine to med grained qtz-feld-hbl-chl mafic schist. Foliation defined by alignment of chlorite and elongation of hbl/chl				
47.85	85.05	47.85	85.05	Fol	20-50	foliation	Medium grained felsic intermediate chlorite +/- magnetite schist pervasive weak chlorite alteration. Foliation defined				
		67.85	69.34	D		no preferred ori	Med grained, med to dk green, intermediate intrusive at low angle (<20) to c/a. Upper contact 17, lower contact 13				
85.05	95.45	85.05	95.45	Fol	40-45	ly foliated to ma	Med-crs grained qtz-feld-amph-grt gniess, banding defined by alternating grain size parallel to foliation. Lighter band				
95.45	139.90	95.45	139.90	Fol	47-51	liation, locally m	Medium grained mafic intermediate chlorite schist pervasive weak chlorite alteration. Foliation defined by alignment				
139.90	144.30	139.90	144.30	Fol	35-48	moderately well	Fn/med grained light grey-buff felsic-intermediate metavolcanic, possibly tuffaceous(?). Siliceous, with minor potass				
144.30	147.40	144.30	147.44	Fol/Sh	15-40	eveloped fol'n/s	Coarse grained dark green metagabbro, exhgibiting 0.4-0.7 cm rounded pyroxenes. Sharp contacts parallel to foliat				
147.40	160.55	147.40	160.55	Fol	40-50	locally	Fine grained hornblende chlorite mafic schist. Foliation defined by alignment of chlorite and elongation of hbl 50 deg				
160.55	164.50	160.55	164.50			Massive	Pale red to pink, coarse grained, qtz-feld-musc pegmatite. Large kspar crystals up to 5 cm, 2% muscivite up to 5 m				
164.50	176.90	164.50	176.90	Fol	45-55	dev'd,	Fine to medium grained qtz-feld- hbl-chl mafic schist. Foliation defined by alignment of chlorite and elongation of hb				
176.90	180.55	176.90	180.55	Fol	38-47	Weak, pervasive	Fn/med grained light grey-buff felsic-intermediate metavolcanic, possibly tuffaceous(?). Siliceous, with sericite altera				
180.55	195.65	180.55	195.65	Fol	50-62	veloped, throug	Coarse grained dark green metagabbro. Unit defined by 0.3-0.6 cm rounded pyroxenes, folation 38-44 tca defined				
195.65	223.05	195.65	223.05	Fol	50-60	veloped, throug	Fine to medium grained light grey to rey-green mafic to intermediate schist with 2-5 mm rounded brown garnets loc				
223.05	241.30	223.05	241.30	Fol	50-65	to moderate, pe	Fine grained, grey-grey-green ash tuff, weak to moderately well developed foliation, white peg veins near upper con				
241.30	290.80	241.30	290.80	Fol	50-60	veloped, throug	Fine to medium grained light grey to grey-green, mafic to intermediate schist, short sections of metagabbro locally n				
290.80	335.15	298.75	309.30			Massive	Pink-grey to light red, medium grained, eqigranular granodiorite, massive, sharp contacts				
309.30	334.90	309.30	334.90	Fol	60-70	to moderate, pe	Fine to medium grained hornblende chlorite mafic schist. Foliation defined by alignment of chlorite and elongation o				
335.15	368.69	335.15	368.69	SO	65-75	hickly bedded/fo	Fine grained to very fine grained dark grey garnet metagreywacke, this unit is defined by the appearance of red-pale				
368.69	370.70	368.69	370.70	SO	65-70	thinly bedded	Fine grained, to very fine grained meta-argillitte, locally graphitic with narrow (2-6 mm) Py rich qtz-cc bands locally c				
370.70	428.00	370.70	428.00	SO	60-70	hickly bedded/fo	Fine grained to very fine grained dark grey garnet metagreywacke, this unit is defined by the appearance of red-pale				

INTERVAL		LITHOLOGY CODE	ALT. CODE	ALT. INTENSITY	ALTERATION															MINERALIZATION													STRUCTURE					DESCRIPTIVE LOG	SAMPLES			
					Interval		Unalt	Chl	Qrtz	Ser	K	Fu	Sp	Tc	Ep	Ab	Dol	Cc	Ank	Comments	Interval		Py	Po	Cpy	Pnt	Bo	Gd	Hm	Mg	Sph	Ga	Comments & Textures	Interval		Code	Core angle	Comments		Interval		Sample #	Type
From	To				From	To	Int	Int	Int	Int	Int	Int	Int	Int	Int	Int	Int	Int	Int		From	To	%	%	%	%	%	%	%	%	%	%		From	To					From	To		

INTERVAL		LITHOLOGY CODE	ALT. CODE	ALT. INTENSITY	ALTERATION																MINERALIZATION													STRUCTURE					DESCRIPTIVE LOG	SAMPLES			
					Interval		Unalt	Chl	Qrtz	Ser	K	Fu	Sp	Tc	Ep	Ab	Dol	Cc	Ank	Comments	Interval		Py	Po	Cpy	Pnt	Bo	Gd	Hm	Mg	Sph	Ga	Comments & Textures	Interval		Code	Core angle	Comments		Interval		Sample #	Type
From	To				From	To	Int	Int	Int	Int	Int	Int	Int	Int	Int	Int	Int	Int	Int		From	To	%	%	%	%	%	%	%	%	%	%		From	To					From	To		

Drennan Consulting and Diamond Drilling

GEOLOGICAL DRILL LOG - SWILL PROJECT

Project:	Swill Lake 2020	Core Size = BQ	Collar Status: No casing (collared in outcrop); No cap (rock covered)
Water Status:	No water encountered. Hole not making water.		
Logged by:	Ben Goldman/Rob Reukl		
Hole ID:	Swill 2020-2		
UTM 16 N (ideal):	578026	Start:	11-Aug-20
UTM 16 N (ideal):	5442985	End:	20-Sep-20
UTM 16 E (survey):	578036	Azimuth:	165
UTM 16 N (survey):	5442984	Dip:	80
Collar Elev.:	345	Depth:	491
Overburden:	0	Dip srvy mthd:	
Sample By:	M. Drennan	Rob Reukl	Core Storage Location
Cut By:	M. Drennan	Rob Reukl	10 Kingfisher, Manitouwadge

LITHOLOGY CODES

Gb	Gabbro	Fib	Felsic-intermediate breccia	Mvs	Mafic schist
Dt	Diorite	Fis	Felsic-intermediate schist	Mgb	Metagabbro
Gd	Granodiorite	Fig	Felsic-intermediate gneiss	Mgn	Mafic gneiss
Grt	Granite	Ims	Intermediate-mafic schist	QFP	Qtz-Feld Porphyry Dike
Db	Diabase	Ign	Intermediate-mafuc gneiss	Ai	Alkalic intrusion
Fv	Felsic metavolcanic	Mv	Mafic metavolcanic	Peg	Pegmatite

Sedimentary Rock

Sarg	Graphitic Argillite	If	Iron formation	Sms	
		Sgw	Metagreywacke		

ALTERATION CODES

Unalt	Unaltered	Dol	Dolomite
Chl	Chlorite	Cc	Calcite
Qtz	Quartz	Ank	Ankerite
Ser	Sericite	K	Potassic
K	Potassic	Msc	Muscovite
Bt	Biotite		
Sp	Serpentine		
Gar	Garnet		
Ep	Epidote		
Ab	Albite		

ALTERATION INTENSITY

Wk	Weak
Md	Moderate
Str	Strong

MINERALIZATION CODES

Py	Pyrite	Vg	Gold
Po	Pyrrhotite	Hm	Hematite
Cpy	Chalcopyrite	Mg	Magnetite
Pn	Pentlandite	Sph	Sphalerite
Bn	Bornite	Gn	Galena

STRUCTURE CODE

D	Dike	S0	Bedding
F	Fault	C	Contact
Vn	Vein	J	Joint
Vnlt	Veinlets	Vsk	Stockwork

SAMPLE TYPES

Code	Type
C	Core
St	Standard
Bl	Blank
Dup	Duplicate
P Dup	Pulp Duplicate
C Dup	Coarse Duplicate
Met	Metallics
Fol	Foliation
Fr	Fracture
Vst	Stringers

INTERVAL / ALTERATION

From	To	LITHOLOGY CODE	ALT. CODE	ALT. INTENSITY	Interval From	Interval To	Unalt Int	Chl Int	Qrtz Int	Ser Int	K Int	Bt Int	Sp Int	Gar Int	Ep Int	Ab Int	Dol Int	Cc Int	Ank Int	Comments
0.00	3.20	Mvs	Chl	Md	0.00	3.20		Md				Wk								e, local biotite
3.20	4.50	QFP	Ser	Wk	3.20	4.50				Wk										sericitic along
4.50	26.05	Mvs	Chl	Wk	4.50	26.05		Md												and silica
26.05	90.10	Gd	chl	Wk	26.05	90.10		Wk												alteration
90.10	112.05	Mvs	Bi	Md	90.10	112.05		Wk				Md								alteration
112.05	116.20	Gd/Peg	K	Wk	112.05	116.20					Wk									pervasive
116.20	119.60	Mvs	Qrtz	Str	116.20	119.60			Str											chlorite, local
119.60	132.70	Peg	K	Wk	119.60	132.70					Wk									pervasive
132.70	218.50	Gd	chl	Wk	132.70	218.50		Wk												chlorite, local
218.50	223.40	Mvs	Chl	Md	218.50	223.40		Md												chlorite,
223.40	228.45	Peg/Cbx	Chl	Md	223.40	228.45		Md										Wk		breccia,
228.45	273.00	Mvs	Chl	Md	228.45	273.00		Md												chlorite, local
273.00	288.50	Mgb	Chl	Md	273.00	288.50		Md												chlorite
288.50	315.85	Mvs	Chl	Md	288.50	315.85		Md												chlorite, local
315.85	318.70	Ims	Chl	Md	315.85	318.70		Md						Md						chlorite,
318.70	331.40	Mvs	Chl	Md	318.70	331.40		Md												chlorite, local
331.40	342.00	Mvs	Chl	Md	331.40	342.00		Md						Md						chlorite,
342.00	346.62	Gd	Chl	Wk	342.00	346.62		Wk												pervasive in
346.62	348.16	Mvs	Qrtz	Md	346.62	348.16			Md											pervasive
348.16	350.00	Gd	Chl	Wk	348.16	350.00		Wk												pervasive in
350.00	410.56	Mvs	Chl	Md	350.00	410.56		Md												chlorite, local
410.56	415.75	Gd	Chl	Wk	410.56	415.75		Wk												alteration of
415.75	423.22	Fis	Ser	Md	415.75	423.22		Wk		Md				Wk						alteration in
423.22	424.58	Gd	Chl	Wk	423.22	424.58		Wk												alteration of
424.58	452.77	Mvs	Chl	Md	424.58	452.77		Md												chlorite, local
452.77	456.37	Gd	Chl	Wk	452.77	456.37		Wk												alteration of
456.37	475.56	Fis	Chl	Md	456.37	475.56		Md												chlorite, local
475.56	491.00	Mvs	Chl	Md	475.56	491.00		Md												chlorite, local

MINERALIZATION

From	To	Interval From	Interval To	Py %	Po %	Cpy %	Pnt %	Bo %	Gd %	Hm %	Mg %	Sph %	Ga %	Comments & Textures
0.00	3.20	0.00	3.20	tr										py locally visi
3.20	4.50	3.20	4.50	0										None
4.50	26.05	4.50	26.05	tr										py locally visi
26.05	90.10	26.05	90.10	0										None
90.10	112.05	90.10	112.05	tr										of diss Py
112.05	116.20	112.05	116.20	0										None
116.20	119.60	116.20	119.60	tr-1										locally noted
119.60	132.70	119.60	132.70	0										None
132.70	218.50	132.70	218.50	0										None
218.50	223.40	218.50	223.40	tr										locally
223.40	228.45	223.40	228.45	0										None
228.45	273.00	228.45	273.00	tr										locally
273.00	288.50	273.00	288.50	tr										locally
288.50	315.85	288.50	315.85	tr										locally
315.85	318.70	315.85	318.70	0										None
318.70	331.40	318.70	331.40	tr										locally
331.40	342.00	331.40	342.00	tr										locally
342.00	346.62	342.00	346.62	0										None
346.62	348.16	346.62	348.16	3-5										and stringer
348.16	350.00	348.16	350.00	0										None
350.00	410.56	350.00	410.56	tr										locally
410.56	415.75	410.56	415.75	0										none
415.75	423.22	415.75	423.22	tr										Py locally
423.22	424.58	423.22	424.58	0										none
424.58	452.77	424.58	452.77	tr										Py locally
452.77	456.37	452.77	456.37	0										none
456.37	475.56	456.37	475.56	tr										Py locally
475.56	491.00	475.56	491.00	tr										Py locally

STRUCTURE / DESCRIPTIVE LOG / SAMPLES

From	To	Structure Interval From	Structure Interval To	Code	Core angle	Comments	DESCRIPTIVE LOG	Sample Interval From	Sample Interval To	Sample #	Type
0.00	3.20	0.00	3.20	Fol	40-45	y devekoped pe	Qtz-feld-hbl-chl-bio, gar bearing, mafic volcanic schist. Dark green to grey-green, occaisional garnet clusters betwe				
3.20	4.50	3.20	4.50	Fol	34-36	rp upper (26 tca	Qtz-feld-chl intrusive, with chlorite alteration defining foliation in sheared margins				
4.50	26.05	4.50	26.05	Fol	35-55	ion of chlorite b	Qtz-feld-hbl-chl-bio mafic volcanic schist. Dark grey-green, with well developed foliation. Hbl laths 1 and 3 mm long				
26.05	90.10	26.05	90.10	Massiv			Pale pink-grey to grey-white biotite granodiorite non foliated, meduim to coarse grained. Upper contact has 5 cm of				
90.10	112.05	90.10	112.05	Fol	60	ely well develope	Qtz-feld-hbl-bio-chl mafic volcanic gneiss. Dark grey to grey-green, with moderately developed foliation. Hbl laths 1				
112.05	116.20	112.05	116.20	Massiv		rite, with branch	Granodiorite exhibiting frequent sections of peg, the pegmatite intrusions are typically between 0.4 and 1 m in width				
116.20	119.60	116.20	119.60	Fol	40-50	well dev'd	Amphibole rich mafic schist. Dark green in colour,amphiblole is likely honblende, disseminated trace pyrite. 0.8 m of				
119.60	132.70	119.60	132.70	Massiv			Granodiorite exhibiting frequent patches and veining of peg, the pegmatite intrusions are typically between 0.4 and				
132.70	218.50	132.70	218.50	Massiv			Pale pink-grey to grey-white biotite granodiorite non foliated, meduim to coarse grained. Upper contact has 5 cm of				
218.50	223.40	218.50	223.40	Fol	50-55	ly well develope	Amphibole rich mafic volcanic schist. Dark green in colour,amphiblole is likely honblende, could be a large raft withi				
223.40	228.45	223.40	228.45	k brec		Irregular	Pegmatite breccia, coarse grained, pink to pale red with large ksap crystals and quartz, and another style with ab ric				
228.45	273.00	228.45	273.00	fol	50-65	ell developed fo	Amhibole mafic volcanic schist, this unit is intercalated with minor amounts of sgw and mgb all <0.7 m width. Garne				
273.00	288.50	273.00	288.50	fol	60-65	ell developed fo	Metagabbro unit defined by the presence of large pyroxene augen between 0.3 cm and 0.8 cm in size. The elongat				
288.50	315.85	288.50	315.85	fol	60-65	ell developed fo	Qtz-feld-amp-bio mafic volcanic schist. Dark grey-green, with well developed foliation. Hbl laths 1 and 3 mm long ar				
315.85	318.70	315.85	318.70	/bandi	55-65	ped fol'n/bandin	Qtz-feld-amp-gar mafic to intermediate volcanic schist. Dark grey-green, with well developed foliation. Hbl laths 1 an				
318.70	331.40	318.70	331.40	Fol	60-65	ell developed fo	Qtz-feld-amp-bio mafic volcanic schist. Dark grey-green, with well developed foliation. Hbl laths 1 and 3 mm long ar				
331.40	342.00	331.40	342.00	Fol	55-60	developed	Qtz-feld-amp-gar mafic volcanic schist. Dark grey-green, with well developed foliation. Hbl laths 1 and 3 mm long ar				
342.00	346.62	342.00	346.62	Mass		assive granodio	Pale pink-grey to grey-white biotite granodiorite non foliated, meduim to coarse grained. Massive texture, chl comm				
346.62	348.16	346.62	348.16	SO	30-40	de banding alon	Qtz-feld-amp-chl mafic volcanic schist. Dark grey-green, well developed foliation/shearing. Pervasively silicified with	346.62	347.4	185772	half core
348.16	350.00	348.16	350.00	Mass		assive granodio	Pale pink-grey to grey-white biotite granodiorite non foliated, meduim to coarse grained. Massive texture, chl comm	347.4	348.16	185773	half core
350.00	410.56	350.00	410.56	Fol	55-65	l developed folia	Qtz-feld-amp-bio mafic volcanic schist. Fine to medium grained, dark grey-green, with well developed foliation. Hbl l				
410.56	415.75	410.56	415.75	Mass		assive granodio	Grey-white to white biotite granodiorite non foliated, meduim grained, massive. Upper (66 tca) and lower (90 tca) co				
415.75	423.22	415.75	423.22	Fol	55-65	eloped foliation	Qtz-feld-amp-gar mafic to intermediate volcanic schist. Ligft grey-green, with well developed foliation and banded ap				
423.22	424.58	423.22	424.58	Mass		assive granodio	Grey-white to white biotite granodiorite non foliated, meduim grained, massive. Upper contact irregular (50 tca) and				
424.58	452.77	424.58	452.77	Fol	60-70	ly well develope	Qtz-feld-amp-bio mafic volcanic schist. Fine to medium grained, dark grey-green, with well developed foliation. Hbl l				
452.77	456.37	452.77	456.37	Mass		assive granodio	Grey-white to white biotite, with occaisional pink pink-white patches, granodiorite non foliated, meduim grained, mas				
456.37	475.56	456.37	475.56	Fol	65-75	ly well develope	Qtz-feld-chl-bio mafic to intermediate volcanic schist. green to grey-green, with well developed foliation and banded				
475.56	491.00	475.56	491.00	Fol	75-80	ly well develope	Qtz-feld-amp-bio mafic volcanic schist. Fine to medium grained, dark grey-green, with well developed foliation. Hbl a				

INTERVAL		LITHOLOGY CODE	ALT. CODE	ALT. INTENSITY	ALTERATION																MINERALIZATION													STRUCTURE					DESCRIPTIVE LOG	SAMPLES			
					Interval		Unalt	Chl	Qrtz	Ser	K	Bt	Sp	Gar	Ep	Ab	Dol	Cc	Ank	Comments	Interval		Py	Po	Cpy	Pnt	Bo	Gd	Hm	Mg	Sph	Ga	Comments & Textures	Interval		Code	Core angle	Comments		Interval		Sample #	Type
From	To				From	To	Int	Int	Int	Int	Int	Int	Int	Int	Int	Int	Int	Int	Int		From	To	%	%	%	%	%	%	%	%	%	%		From	To					From	To		

INTERVAL		LITHOLOGY CODE	ALT. CODE	ALT. INTENSITY	ALTERATION																MINERALIZATION													STRUCTURE					DESCRIPTIVE LOG	SAMPLES			
					Interval		Unalt	Chl	Qrtz	Ser	K	Bt	Sp	Gar	Ep	Ab	Dol	Cc	Ank	Comments	Interval		Py	Po	Cpy	Pnt	Bo	Gd	Hm	Mg	Sph	Ga	Comments & Textures	Interval		Code	Core angle	Comments		Interval		Sample #	Type
From	To				From	To	Int	Int	Int	Int	Int	Int	Int	Int	Int	Int	Int	Int	Int		From	To	%	%	%	%	%	%	%	%	%	%		From	To					From	To		

Ontario

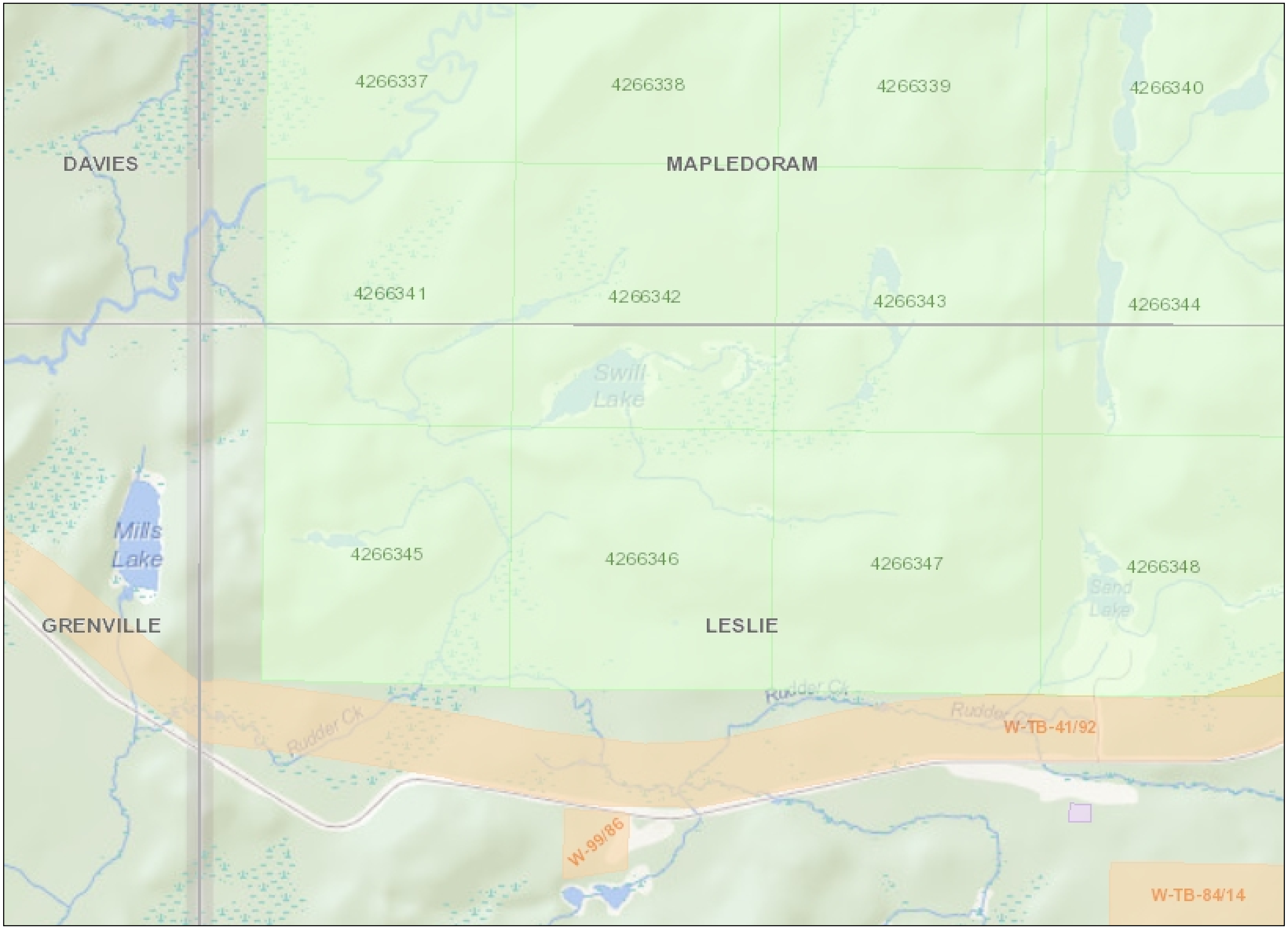
MINISTRY OF NORTHERN DEVELOPMENT AND MINES

CLAIMaps

Location and Access

Notes:

Work Areas outlined in red lines



Legend

Administration Boundaries
- Mining Divisions
- Resident Geologist District
- Townships and Areas
- UTM Grid
- Geographic Lot Fabric
- Other Federal Land

Mineral Tenure Grid
- OMTG Tenure Grid

Alienations
- Withdrawal
- Notice

Unpatented Claim
- Active
- Reconciled
- Pending

Disposition
- Disposition

Disposition Symbols
- Camp
- Disposition Unknown/Pending
- Freehold Patent Mining Rights Only
- Freehold Patent Surface Rights Only
- Freehold Patent Surface and Mining Rights
- Land Use Permit
- Leasehold Patent Mining Rights Only
- Leasehold Patent Surface Rights Only
- Leasehold Patent Surface and Mining Rights
- License of Occupation Mining Use Only
- License of Occupation Surface Use Only
- License of Occupation Surface and Mining Rights
- License of Occupation Uses Not Specified
- Order in Council
- Tower
- WPLA

Geology Layers
- AMIS Sites
- AMIS Features
- Drill Holes
- Mineral Occurrences

0 1.84 km

Projection: Web Mercator

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