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ASSESSMENT REPORT

VALE CANADA LIMITED

TOTTEN DRILL PROGRAM

NTS: 41/I-06

DECEMBER 2021

Kristin Henry, P. Geo
December 20,2021

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EXECUTIVE SUMMARY

A drill program was completed in the Totten area during 2017 and 2018. There was a total of 8 drillholes completed which consisted of four parent holes and four branch holes. The total length drilled within the 2017-2018 program was 5735.2 meters. The objective of this program was to evaluate the extension of the Cu-Ni mineralization within Quartz Diorite dyke to the south of Totten Mine. There was no significant mineralization identified in the drill campaign along the main Worthington trend. However, large areas of open ground remain untested. While no immediate follow up targets were generated from the 2017-2018 exploration drill program, further exploration is recommended within the area.

INTRODUCTION

The Worthington offset is a radial Quartz Diorite offset dyke which extends outwards from the basal Sudbury Igneous Complex in the South Range of the basin. Totten Mine is located within the offset.

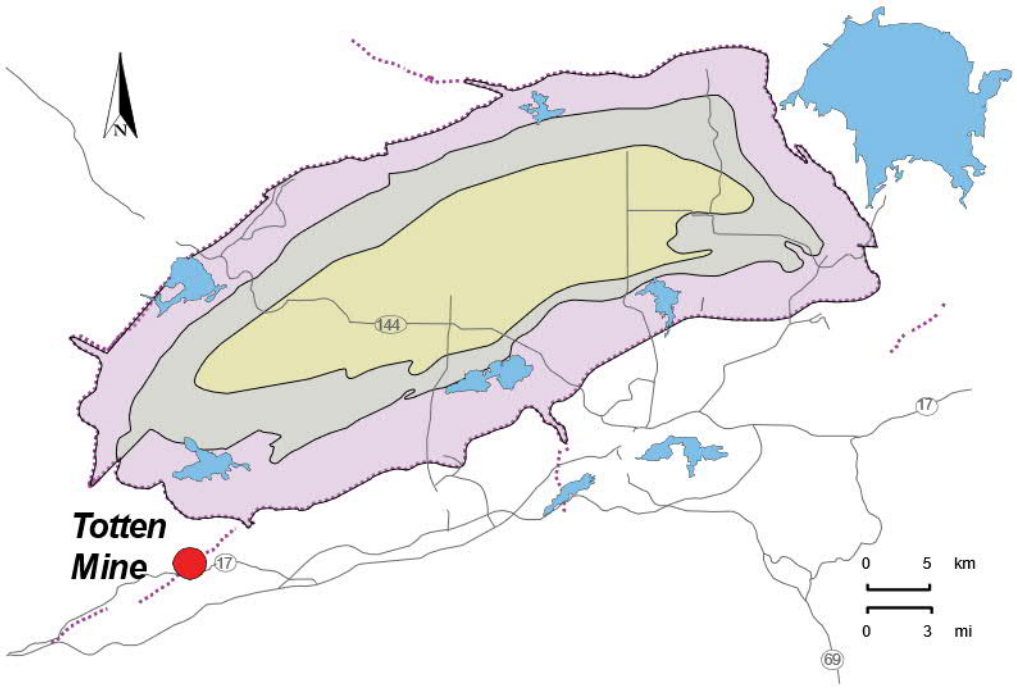


Figure 1: Location Map of Worthington Offset and the Totten Mine area.

Figures 1 through 3 illustrate the area where the 2017-2018 drill programs were conducted.

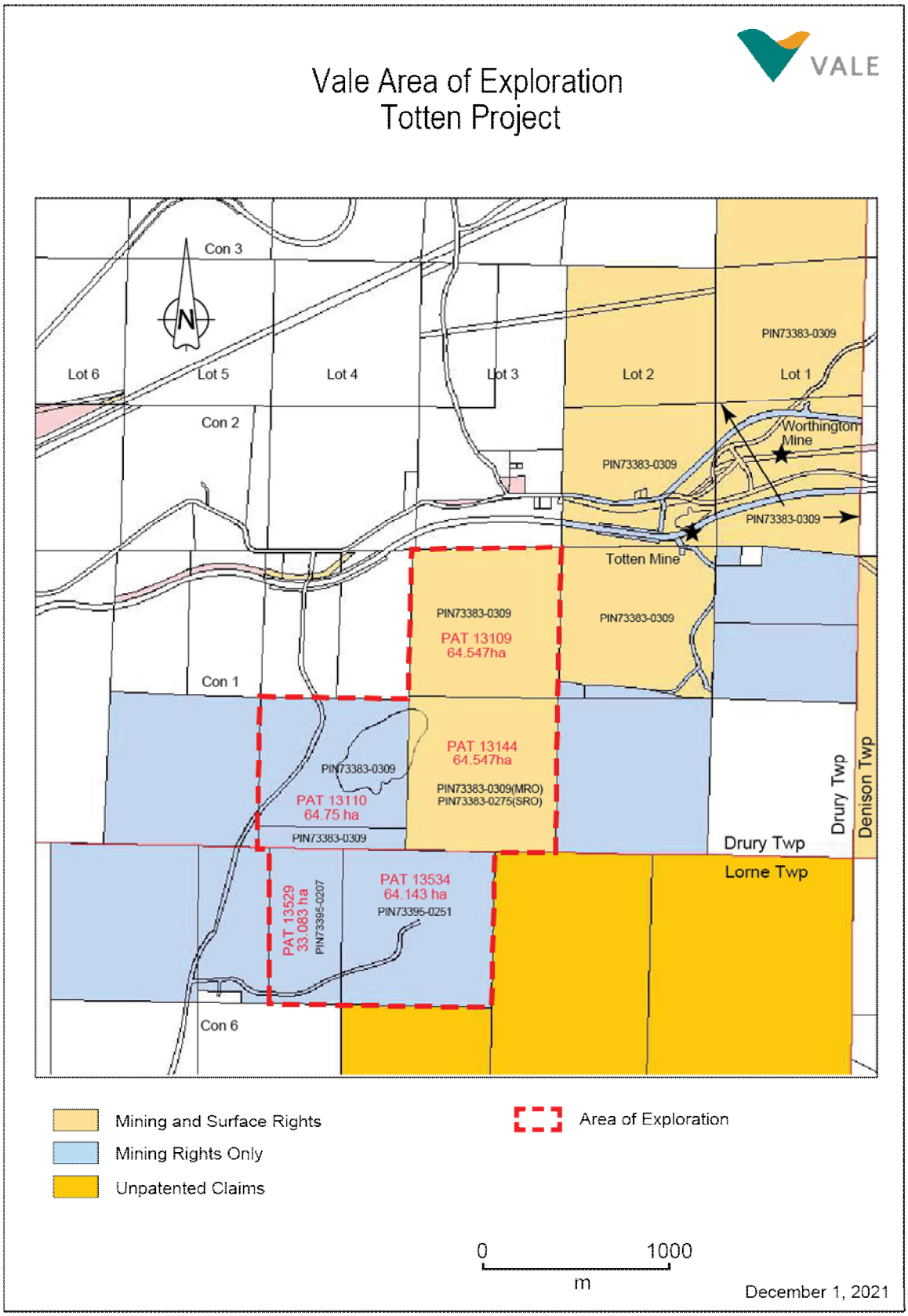


Figure 2: Vale Area of Exploration for the Totten Project.

PROPERTY

Location and Access

The Totten property is located approximately 40 kilometers west of the City of Sudbury on the Worthington Offset dyke in Lots 3 & 4 Concession 1 Drury Township and Lots 3 & 4 Concession 6 Lorne Township. Access to the property can be gained via regional road 658 from Hwy. 17 West or by C.P.R. railway line that runs east west through the property immediately north of the Totten No. 2 shaft.
The property is characterized by rolling topography of the Canadian Shield. Maximum relief is approximately 30 m. The topography is reflected to some degree by the bedrock lithology and structure. The mineral hosting quartz diorite dyke forms a high ridge that trends in a northeast – southwest direction through the property. Argillaceous metasedimentary rocks stand at lower elevations.

The area is drained by Victoria Creek, a small waterway that runs east-west through the property. The creek experiences highest flow rates during the spring during run-off and lowest flow rates during the summer. Numerous small swamps and marshes are present on the property. Vegetation consists of scrubby poplar, birch, maple, oak, red and white pine in areas of higher elevation and alder and spruce in areas of lower elevation.

The drill areas were accessed using 4x4 trucks on exploration drill trails.

Property Status

The Totten Exploration program was performed on several parcels of land in Drury and Lorne Townships with a total area of 291+/- ha (Figure 1). The exploration work was on several parcels being the South ½ of Lot 4 Con 1, all of Lot 3 Con 1, being part of PIN 73383-0309 (PAT-13110, PAT-13144, Pat-13109) in Drury Township, the North ½ of Lot 3 Con 6 being PIN 7395-0251 (PAT-13534), The East ½ of the North ½ of Lot 4 Con 6 being PIN 73395-0207 (PAT-13529) in Lorne Township. The property is a combination of mining and surface rights and mining rights only patented lands 100% owned by Vale Canada Limited.

Exploration History

The Totten property was operated intermittently by various companies from 1890 to 1970, including (from earliest to latest): the Dominion Mineral Company, the Mond Nickel Company, and the International Nickel Company.

Ore was first discovered in Worthington area in June 1884 during the construction of the Canadian Pacific Railway. The property was originally called the Crean property and was later named Worthington who was the manager of railway construction and the largest shareholder of the Dominion Mineral Company.

The properties encompassing the Totten/Worthington area have changed ownership several times. Current ownership is held by Vale Canada Limited. Several exploration campaigns have been conducted on the property, many of which have culminated in successful mining operations.

REGIONAL GEOLOGY

The Sudbury Impact Structure lies at the boundary of the Archean Superior Province with the Proterozoic Southern Province, immediately north of the Grenville Province. It formed at ~1850 Ma and consists of three members: the Whitewater Group; the Sudbury Igneous Complex (SIC) which underlies and rings the Whitewater Group (Figure 1); and an outer zone of locally brecciated country rocks (Sudbury breccia). The Whitewater Group contained within the central depression of the Sudbury Structure consists of four conformable formations generated from impact. These are, in ascending order, the Onaping, Vermilion, Onwatin, and Chelmsford formations. The Onaping Formation consists of a succession of upward-fining breccia units. The Vermilion Formation consists of carbonate, siltstone, and chert units. The Onwatin Formation is comprised of carbonaceous mudstones and siltstones. The Chelmsford Formation is dominated by greywackes.

The Sudbury Igneous Complex (SIC) lies structurally below the Whitewater Group and consists of four main units from base to top: contact sublayer norite, felsic and mafic norite, quartz gabbro, and granophyre. Concentric and radial quartz diorite offset dykes cut the footwall rocks along fracture zones. Footwall or granite breccia occurs as irregular zones varying in thickness from 20 to 225 ft between the SIC and the footwall rocks and is composed of fragments derived from both the SIC and the footwall rocks, contained in a quartz-rich breccia matrix. The granite breccia generally strikes parallel to the basal contact of the SIC but locally, upwellings or tongues project as far as 225 ft into the overlying SIC and underlying footwall rocks. The contact sublayer norite, offset dykes and granite breccia are the main hosts for the nickel-copper-precious metal sulphide ores.

Sudbury breccia represents impact shock features that occur as irregular bodies or dykes throughout the country rocks around the Sudbury structure. It is composed of subrounded fragments, mainly derived from the adjacent host rocks, set in a dark fine-grained matrix which may be fragmental, recrystallized, igneous textured or mylonitic.

Archean gneisses, migmatites, granites and volcanic rocks (>2500 Ma) of the Superior Province lie to the west, northwest and northeast of the SIC. Supracrustal rocks of the Huronian Supergroup are exposed in the Southern Province and lie to the south of the SIC. The Supergroup includes from oldest to youngest; the Elliot Lake Group volcanic and clastic sedimentary rocks; the Hough Lake, Quirke Lake and Cobalt groups consisting of a sequence of conglomerate, mudstone, siltstone and sandstone and the Flack Lake Group consisting of mudstone, siltstone, and sandstone.

Sills and dykes of Nipissing gabbro (approximately 2215 Ma) intrude the Huronian rocks of the Southern Province, and the Superior Province rocks.

Copper, nickel, PGE-Au mineralization occurs in five principal environments:

1. As massive to disseminated sulphides at the base of the main mass in the sublayer; These deposits typically occur on the South Range of the Sudbury Structure. They are situated at the contact between the Sudbury Igneous Complex and footwall supracrustal rocks of the Huronian Supergroup and the Creighton and Murray granites. These deposits are generally zoned from massive ore at the footwall to disseminated sulphide ore toward the hangingwall. The massive ores rest directly on the footwall rocks and contain locally derived inclusions consisting of mafic, felsic, and subordinate metasedimentary clasts as well as ultramafic fragments whose source is unknown. The PGE content of these deposits is variable.

2. As fine and blebby disseminations and massive stringers within breccias beneath the sublayer; This deposit type occurs on the North and East Ranges of the Sudbury Structure (e.g., Onaping-Levack and Victor areas). These deposits are spatially related to breccia filled embayment structures on the margins of the SIC. The mineralization occurs primarily within brecciated country rocks at the basal contact of the SIC and in fractures in country rocks underlying the breccias. The breccias consist of fragments of country rock, ultramafic inclusions, and rare sublayer and mafic norite in a quartzo-feldspathic matrix. Sulphides occur as fine and blebby disseminations and massive stringers within the breccias, as stringers in footwall fractures and occasionally as disseminations within overlying sublayer norite. The PGE-Au content of these deposits is generally low.

3. As veins and stockwork systems in the underlying footwall country rocks; These deposits occur up to 1,600 ft into the underlying footwall and are usually linked to a contact related deposit. Footwall mineralization is often hosted in thick zones of Sudbury Breccia. This breccia is composed of fragments of country rock ranging from microscopic (matrix) to more than 35 ft in diameter that occurs as dykes and irregular masses in all footwall rocks. The deposits are comprised of veins and stockwork systems that are primarily massive chalcopyrite that vary from millimeter scale to greater than 35 ft wide. The edges of the deposits are characterized by stringers that are <3 ft that consist of massive intergrown bornite/chalcopyrite/millerite. Alteration of the host footwall rocks immediately next to the deposits includes quartz carbonate, epidote and chlorite in seams and fractures. Significant PGE-Au mineralization occurs within the main portion of the deposits, but significant concentrations occur in the peripheral sulphide stringers and within altered host rocks.

4. Within quartz diorite offset dykes extending radically from the SIC; Deposits within “Offset Dykes” are spatially associated with inclusion rich quartz diorite and with local structural complexities of the dyke (e.g., folding, displacements etc.). Inclusion quartz diorite (IQD) is generally located within the central portion of the offset, but on occasion may occur to the dyke boundary. Up to 75% of the inclusions are derived from local sources. Inclusions vary in diameter from <1/2” to several feet and volumetrically ranges from a few percent to locally >80% of the IQD. The marginal areas of the dykes are characterized by fine-grained inclusion free quartz diorite (QD). Contacts between the QD and IQD are variable and may be diffuse to gradational in nature to extremely sharp. Mineralization consists of massive and semi-massive Cu-Ni bearing sulphides haloed by disseminated and blebby sulphides. The massive sulphide (>80 volume % sulphide) is dominantly pyrrhotite and pentlandite. The massive sulphide thins and splays into 1 inch to 3 ft thick copper-rich stringer zones within the disseminated sulphide halo. Semi-massive sulphides (50-80% volume sulphide) are also typically pyrrhotite and pentlandite rich but are spatially associated with chalcopyrite-rich patches. The PGE-Au minerals tend to occur at sulphide/silicate boundaries and are spatially associated with more Cu-rich sulphide.

5. Shear zones and related structural traps; These deposits occur within fault zones at the contact of the SIC and metasedimentary rock of the Stobie Formation of the Huronian Supergroup. Examples of this type of deposit include the East, Falconbridge, and Garson mines. The ore zones consist of two styles of mineralization including a contorted schist inclusion sulphide and an inclusion massive sulphide. Contorted schist inclusion sulphide is a sulphide breccia containing inclusions of norite and Huronian supracrustal rocks. The ore minerals are pyrrhotite, pentlandite and chalcopyrite. Inclusion massive sulphide contains inclusions of Huronian supracrustal rocks, quartz and jasperoid. This ore type is characterized by, silicified footwall rocks, strong deformation of the mineralization and late cross cutting quartz carbonate fractures with sphalerite, marcasite, and galena indicative of later hydrothermal activity.

PROPERTY GEOLOGY

Huronian-age metasediments, including conglomerate, sandstone, phyllite and argillite of the Ramsey Lake Formation, underlie the Totten Mine area. Intrusion of a Nipissing gabbro sill followed deposition of the sediments. The sill, approximately 1,200 ft in thickness, trends east west and dips approximately 65° to the southeast. The Nipissing gabbro consists predominantly of pyroxene gabbro and hornblende gabbro. In the Totten area, the gabbro is altered and takes on a waxy appearance. The Worthington Offset cuts both the metasedimentary rocks and the gabbro sill. Late quartz diabase and olivine diabase dykes crosscut all lithologies.

This quartz diorite offset dyke extends for 7.5 miles from the Sudbury Igneous Complex. The Worthington Offset attains a thickness of up to 150 ft in the Totten Mine area. The dyke strikes approximately 045° with steep variable dips.

Internal margins of the QD are often finer grained than the remainder of the QD and may be very biotitic in composition. Multiple pulses of QD may occur but are poorly documented in drill core.

Inclusion Quartz Diorite (IQD) is generally located within the central portion of the offset, but on occasion may occur at the dyke boundary. The quartz diorite intrusion "matrix" between inclusions in the IQD is commonly finer grained than in the inclusion-free QD. Up to 75% of the offset dyke (by area) consists of inclusions derived almost entirely from local sources. Inclusions vary in diameter from <1/2 inch to several feet. Inclusion volume ranges from a few percent to locally >80% of the IQD and consists dominantly of gabbroic fragments, with lesser amphibolite and rare metasedimentary inclusions. The proportion of metagabbro inclusions within the offset decreases away from the core of the offset and away from the gabbro metasediment contact.

The contact relationship between metagabbro and quartz diorite is characterized by a metagabbro metabreccia of 1 to 35 ft fragments that are separated by sulphide-bearing IQD. Locally the metagabbro is invaded by a stockwork of IQD veins and mineralized stringers. These breccia stockwork features are not developed in metasedimentary country rocks.

Contacts between the QD and IQD are variable and may be diffuse to gradational in nature to extremely sharp. Where contacts are sharp a cross cutting relationship is observed that suggests that the IQD is a later phase. Locally the IQD contains sub angular fragments of inclusion-free QD also suggesting the emplacement of QD prior to IQD. Inclusions of QD tend to be associated with more intense sulphide mineralization.

In areas where large metagabbro inclusions are present within the IQD, metal grades tended to be higher than in portions of the dyke which contain only amphibolite inclusions.

Where the dyke is in contact with metasediments the margin of the offset consists of 'spherulitic' textured quartz diorite and the QD becomes increasingly coarse-grained inwards towards the core of the offset dyke. Locally fragments of meta-greywacke are entrained in the QD. Contacts with the Huronian metasediments are generally sharp. Locally, metasediments may be altered by the intrusion.

Late quartz and olivine diabase dykes intersect all lithologies. Two prevalent quartz diabase dykes are present in the immediate vicinity of the Worthington Mine.

2017-2018 EXPLORATION PROGRAMS

Drill programs were completed in the Totten area during 2017 and 2018. The objective of these programs was to explore for the extension of the Cu-Ni mineralization within Quartz Diorite dyke to the south of Totten Mine. No significant mineralization was identified in the drill campaign along the main Worthington trend. However, large areas of open ground remain untested. While no immediate follow up targets were generated from the 2017-2018 exploration drill holes, further exploration is recommended in the area. The exploration strategy focused on several drillholes that were drilled perpendicular to Worthington offset to better understand the location and morphology of the Quartz Diorite dyke and to validate favorable lithologies.

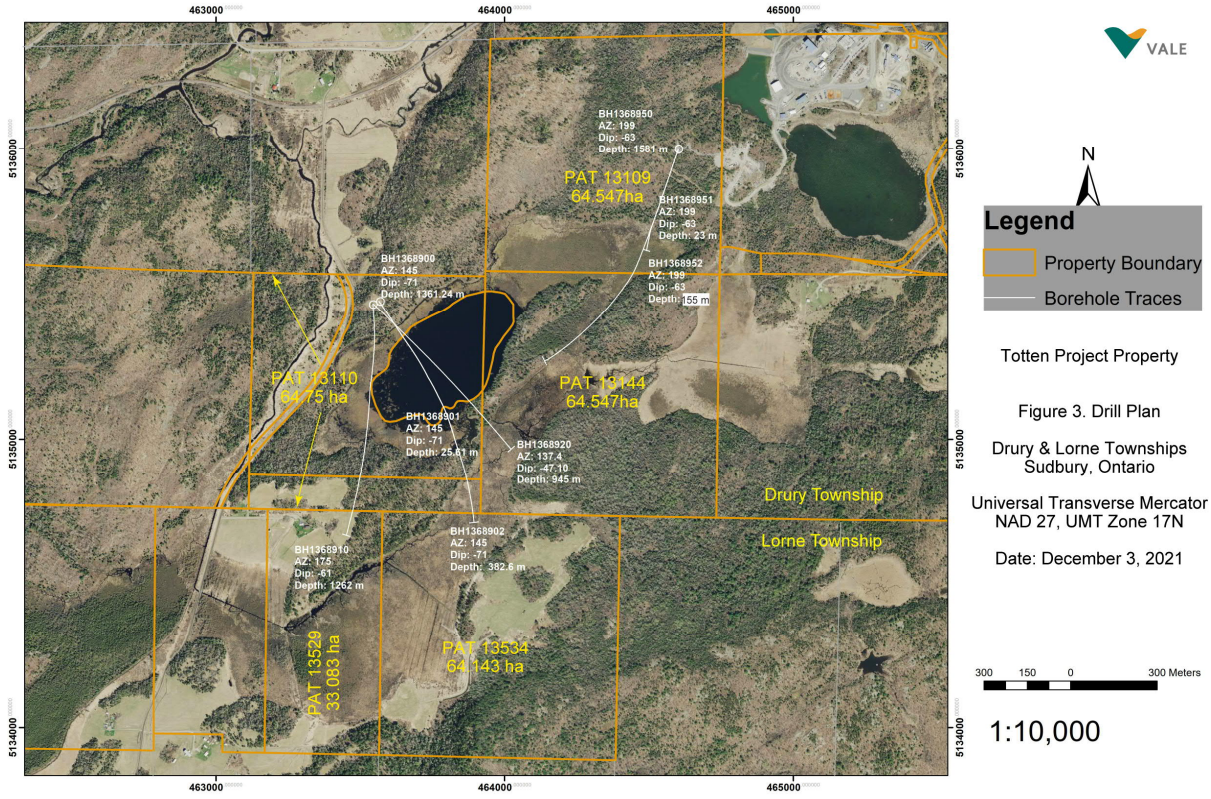


Figure 3: Plan View of the 2017-2018 Totten Drill holes.

DISCUSSION

Borehole 1368900 was drilled from surface to a depth of 4466 ft between August 24th to October 11th of 2017. The hole was drilled HQ core diameter by Major Drilling with a VD8000 drill rig. The location of the borehole trace with the property boundaries are presented within the drilling plan on (Figure 3 above). Quartz Diorite was intersected between 4394.3 ft to 4413 ft followed by Inclusion Quartz Diorite to 4466 ft. The main samples were taken from 4379.9 ft to 4465.2 ft. This hole was abandoned at 4459 ft when the rods became stuck in a fault. A steel wedge was set at 4383 ft to bypass the gear. The hole was then reduced from HQ to NQ core diameter at 1991 ft. There were Clappison wedges set at 2785 ft, 2844 ft, and at 2913ft and then the Continuous wedging tool was used at 3413 ft, 3451.1 ft, 3488.6 ft and at 3567.4 ft to direct the hole towards the target (See figure 4 below).

Borehole 1368901 was drilled from 4384 ft to 4468 ft between October 12th to the 15th of 2017. The hole was drilled NQ core diameter by Major Drilling with a VD8000 drill rig. This was a branch from the parent borehole 1368900. Quartz Diorite was intersected between 4396.7 ft to 4414.3 ft followed by Inclusion Quartz Diorite to 4444.5 ft. The main samples were taken from 4389.7 ft to 4467.9 ft. This hole was abandoned at 4465 ft after the rods got stuck in the same structure that borehole 1368900 became stuck in (See figure 5 below).

Borehole 1368902 was drilled from 4364 ft to 5612 ft between October 16th to November 5th of 2017. The hole was drilled by Major Drilling with a VD8000 drill rig. A steel wedge from borehole 1368900 was set at 4364 ft to drill this branch from the parent hole 1368900. Quartz Diorite was intersected between 4390.9 ft to 4415.9 ft followed by Inclusion Quartz Diorite to 4520.5 ft and then Quartz Diorite again to 4531.1 ft. The main samples were taken from 4383.9 ft to 4543.1 ft (See figure 6 below).

Borehole 1368910 was drilled from surface to 4140.9 ft between August 29th to October 4th of 2017. The hole was drilled HQ core diameter by Major Drilling with a VD8000 drill rig. This borehole was reduced from HQ to NQ core diameter at 1397.6 ft. The location of the borehole trace with the property boundaries are presented on the drilling plan on Figure 2. Quartz Diorite was intersected between 2342.9 ft to 2380.9 ft followed by Inclusion Quartz Diorite to 2582.8 ft and then Quartz Diorite to 2640.2 ft. The main samples were taken from 2332.7 ft to 2667.3 ft (See figure 7 below).

Borehole 1368920 was drilled from surface to 3100 ft between October 8th to November 2nd of 2017. The hole was drilled HQ core diameter by Major Drilling with a VD8000 drill rig. The location of the borehole trace with the property boundaries are presented within the drilling plan on Figure 2. Quartz Diorite was intersected between 1385.4 ft to 1399 ft followed by Inclusion Quartz Diorite to 1476 ft and then Quartz Diorite to 1482.9 ft. The main samples were taken from 1373 ft to 1496 ft (See figure 8 below).

Borehole 1368950 was drilled from surface to 5187 ft between March 7th to May 6th of 2018. The hole was drilled HQ core diameter by Foraco with a VD5000 drill rig. The location of the borehole trace with the property boundaries are presented within the drilling plan on Figure 2. Quartz Diorite was intersected between 1892.9 ft to 1957.7 ft followed by Inclusion Quartz Diorite to 2124.4 ft then Quartz Diorite to 2197.3 ft., followed by Inclusion Quartz Diorite to 2241.3 ft and then QD to 2282.2 ft. The main samples were taken from 1883.7 ft to 2332.5 ft (See figure 9 below).

Borehole 1368951 was drilled from 1981 ft to 2058 ft between June 12th to July 2nd of 2018. The hole was drilled HQ core diameter by Foraco with a VD5000 drill rig. The location of the borehole trace with the property boundaries are presented within the drilling plan on Figure 2. Inclusion Quartz Diorite was intersected between 1981.1 ft to 2058 ft. The main samples were taken from 1981.1 ft to 2058 ft (See figure 10 below).

Borehole 1368952 was drilled from 1952.9 ft to 2461 ft between June 12th to July 22nd of 2018. The hole was drilled HQ core diameter by Foraco with a VD5000 drill rig. The location of the borehole trace with

the property boundaries are presented within the drilling plan on Figure 2. Inclusion Quartz Diorite was intersected between 1952.9 ft to 22106.9 ft followed by Quartz Diorite to 2139.2 ft and then Inclusion Quartz Diorite to 2166.1 ft followed by more Quartz Diorite to 2195.4 ft. The main samples were taken from 1952.9 ft to 2209.8 ft (See figure 11 below).

The drilling programs (of 1368950, 1368951, and 1368952) were designed to test down plunge and along strike of the Worthington Offset. Exploring for an extension of the main Quartz Diorite Dyke. No significant mineralization was intersected though there was trace to weakly disseminated sulphides, typical to what is seen in the Worthington Offset. The target area tested over one kilometer strike length with the four parent drillholes and four branch holes.

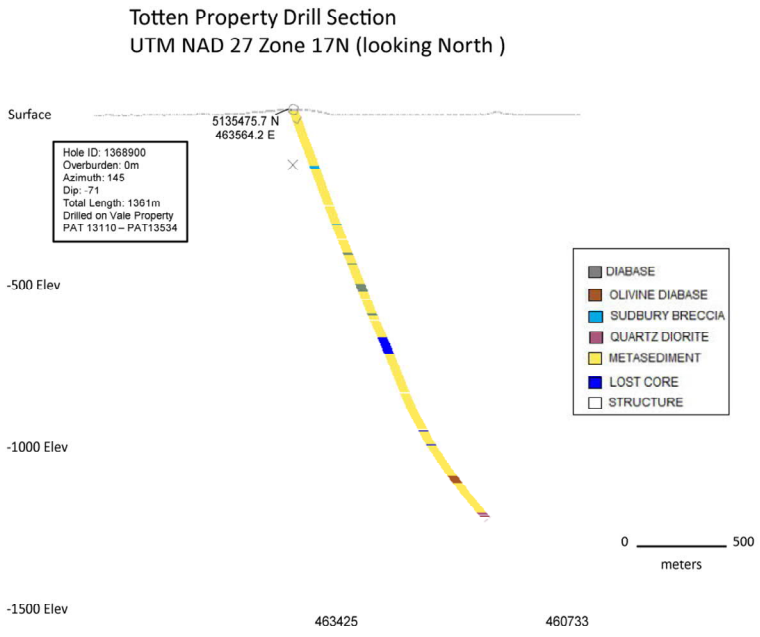


Figure 4: Section Looking North of borehole 1368900.

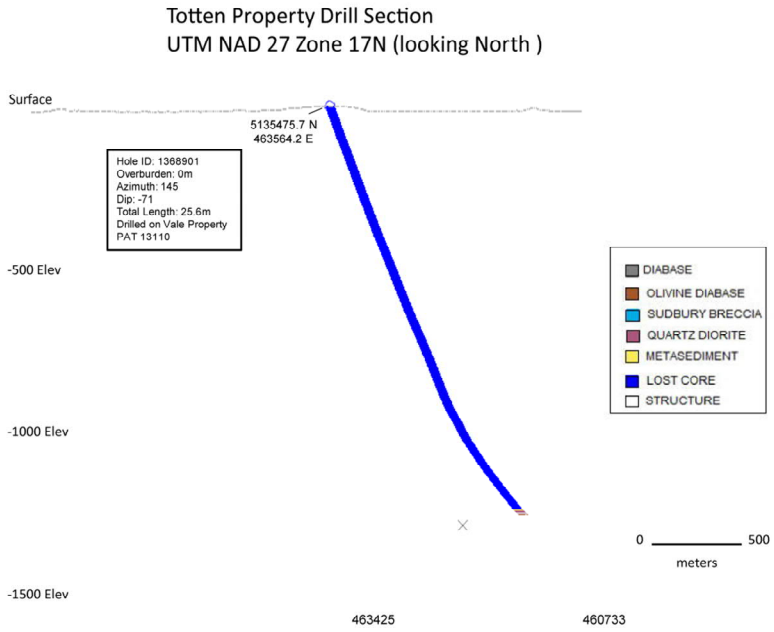


Figure 5: Section Looking North of borehole 1368901.

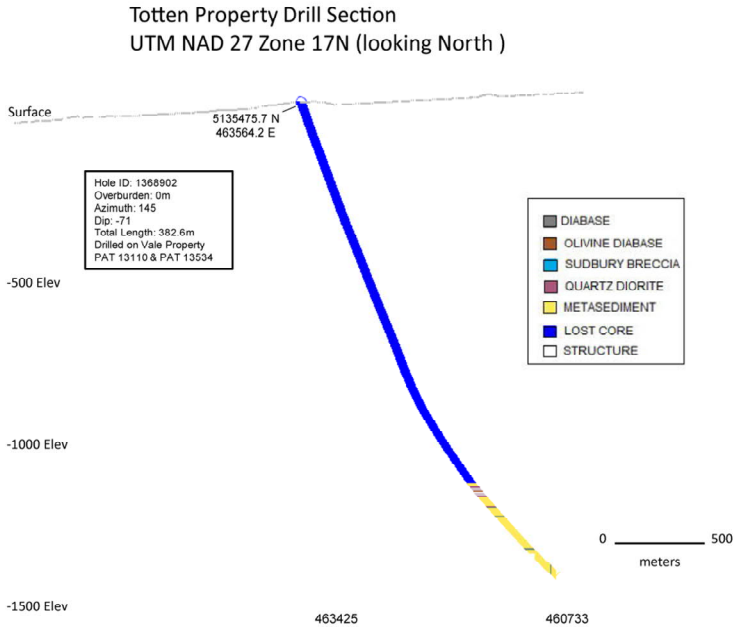


Figure 6: Section Looking North of borehole 1368902.

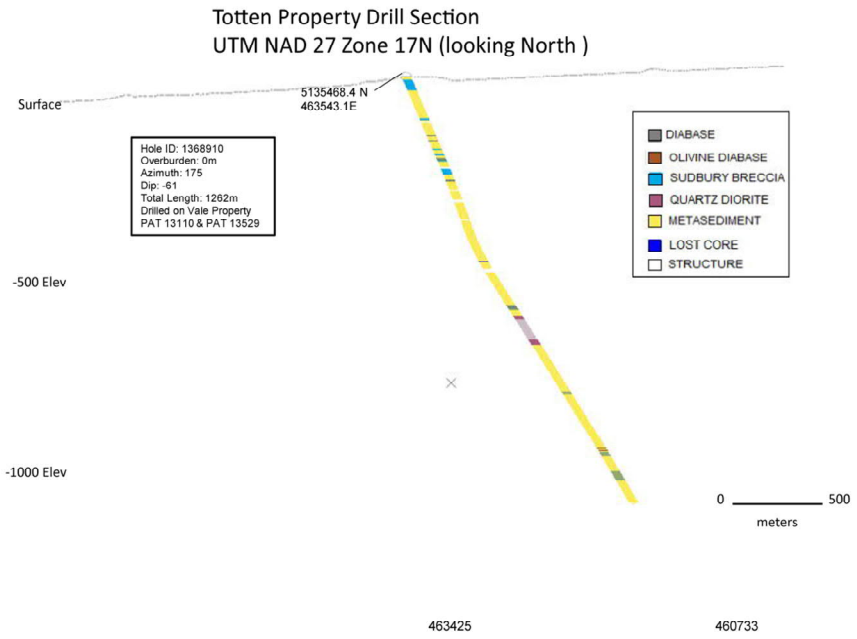


Figure 7: Section Looking North of borehole 1368910.

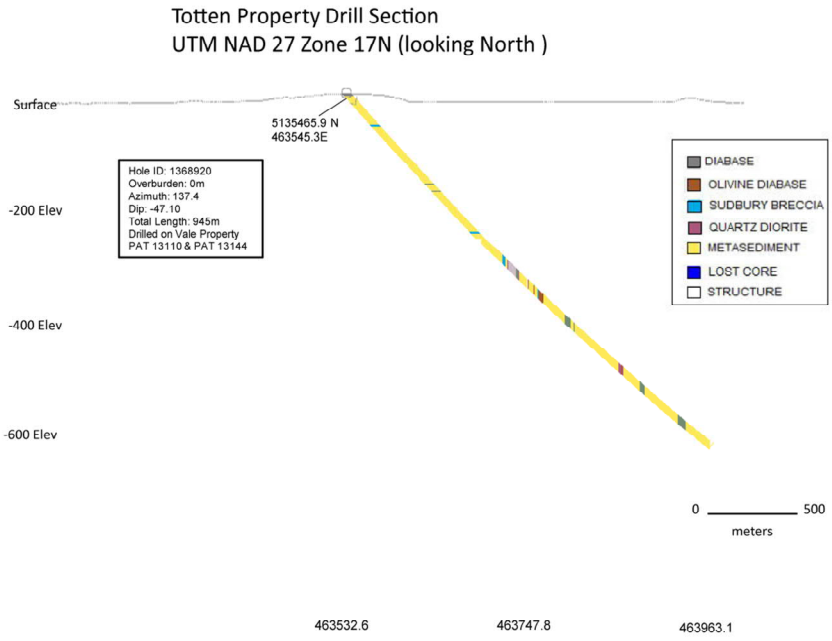


Figure 8: Section Looking North of borehole 1368920.

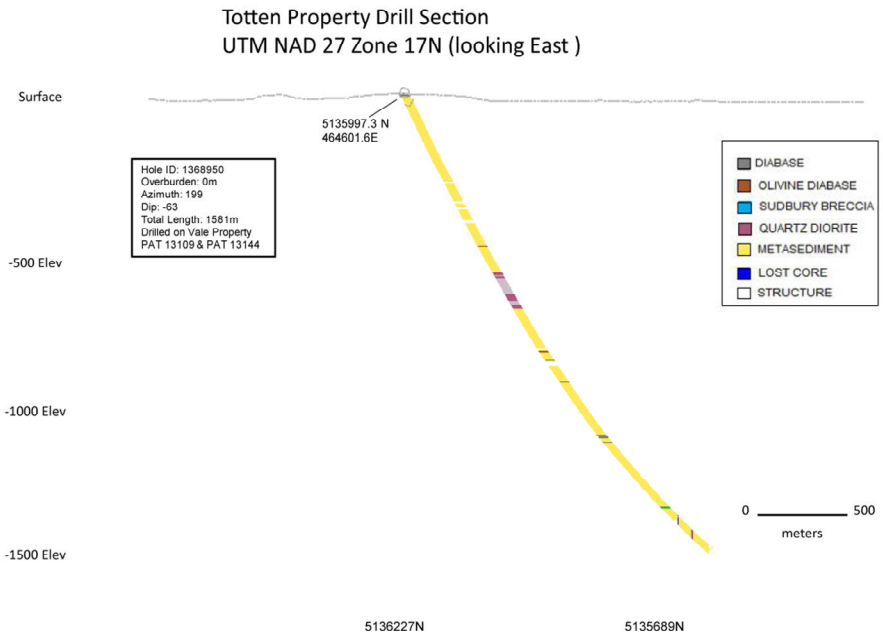


Figure 9: Section Looking East of borehole 1368950.

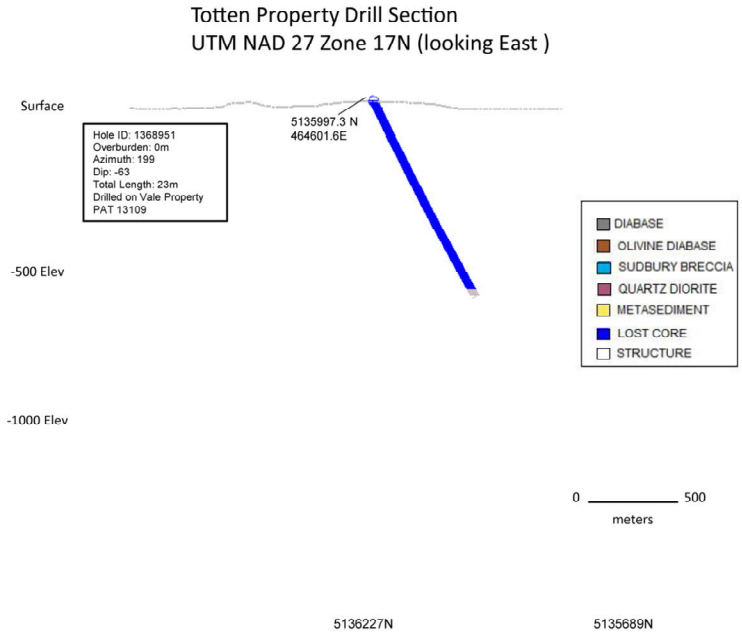


Figure 10: Section Looking East of borehole 1368951.

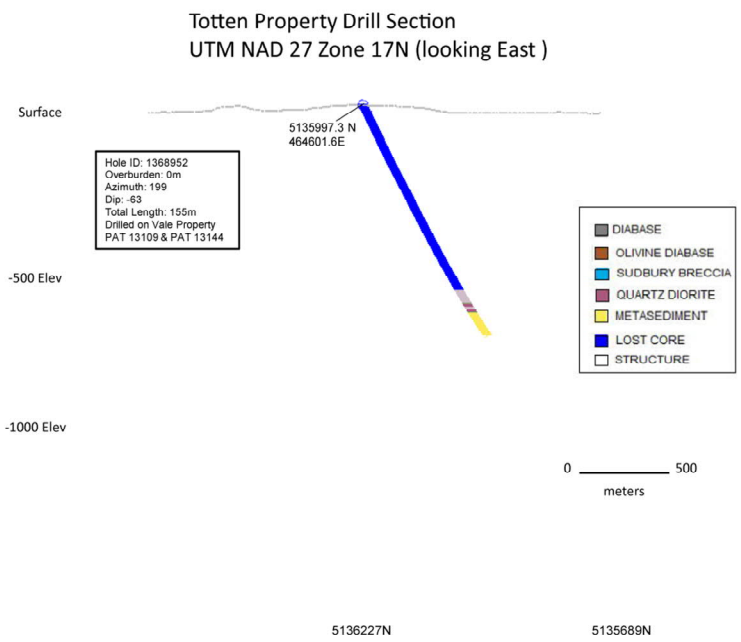


Figure 11: Section Looking East of borehole 1368952.

CONCLUSIONS AND RECOMMENDATIONS

The exploration diamond drill programs successfully intersected Quartz Diorite and the Inclusion Quartz Diorite dyke validating the continuation of the Worthington offset. No significant mineralization was identified during these drill programs. With untested and under explored areas remaining, opportunities continue to exist for potential mineralization within the Worthington Offset. It is recommended that future exploration continues to focus on untested areas to further understand and evaluate the prospective quartz diorite offset of the Sudbury Basin.

REFERENCES

Lloyd, T.R., 2001

Totten Project: Totten Cu-Ni-PGE-Au Project Drury Township, Sudbury District. Internal ITSL Memorandum, issued June 14, 2001.

Certificates of Author Qualifications

I, Kristin Henry of 321 Wembley Drive, Sudbury, Ontario, hereby certify that:

1. I am a 2013 graduate of Laurentian University of Sudbury with a Bachelor of Science (4-year) degree in Geology.

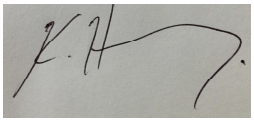
2. I am a professional Geoscientist registered in the province of Ontario with the practising member licence # 3078.

3. I have practised in my profession continuously since 2017.

4. I am currently employed as a Sr. Geologist, Project with Vale, 337 Power Street, Copper Cliff, Ontario, P0M 1N0.

5. The work documented in this report was conducted under my direct supervision.

6. I am the author of this report.



Kristin Henry
December 17, 2021

APPENDIX I
LIST OF PERSONNEL

Table 1: 2017 & 2018 Personnel Totten Project

Geology Personnel	Position	Work	Activity
Jason Letto	Area Geologist	2017 – 2018	Program Planning, Compilation & Logging
Tom Raskevicius	Project Geologist	2017	Logging Core
Kristin Henry	Geologist in Training II	2018	Logging Core
Geotechnical Personnel			
David Desbiens	Geological Technologist	2017 – 2018	Field work, borehole monitoring
Geophysics Personnel			
Krystal Kant	Project Geophysicist	2017 – 2018	Geophysical Support

APPENDIX II
LIST OF EXPENDITURES AND DRILL INVOICES

Expenditure Summary for 2017 & 2018

The total amount applied for this assessment report is $1,389,491.85. Costs applied for assessment are associated with the 2017 & 2018 Drilling Programs. The costs that will be applied for assessment credits correspond to drilling expenditures. Details for this category are provided below.

Table 2: Drilling Expenditure Summary 2017 & 2018

Period	Program	Drill#	Borehole #	Invoice#	Total (CDN$)
					sub-total
1-Sep-2017 to 15-Sep-2017	Totten	1545	1368910	SY-002424	$87,224.41
16-Sep-2017 to 30-Sep-2017	Totten	1545	1368910	SY-002429	$66,193.94
1-Oct-2017 to 15-Oct-2017	Totten	1545	1368920	SY-002435	$82,427.69
16-Oct-2017 to 31-Oct-2017	Totten	1545	1368920	SY-002436	$84,062.45
1-Nov-2017 to 14-Nov-2017	Totten	1545	1368920	SY-002443	$19,764.36
16-Aug-2017 to 31-Aug-2017	Totten	1544	1368900	SY-002416-A	$50,212.42
1-Sep-2017 to 15-Sep-2017	Totten	1544	1368900	SY-002423	$85,889.92
16-Sep-2017 to 30-Sep-2017	Totten	1544	1368900	SY-002428	$98,557.92
1-Oct-2017 to 15-Oct-2017	Totten	1544	1368900	SY-002434	$94,072.14
16-Oct-2017 to 31-Oct-2017	Totten	1544	1368902	SY-002437	$91,786.79
16-Oct-2017 to 31-Oct-2017	Totten	1544	1368902	SY-002441	$7,591.50
1-Nov-2017 to 14-Nov-2017	Totten	1544	1368902	SY-002444	$50,146.78
15-Nov-2017 to 30-Nov-2017	Totten	1544	1368902	SY-002451	$11,104.50
					$829,034.82
Feb-16-2018 to Feb-28-2018	Totten	27	1368950	1802074	$10,084.00
Mar-1-2018 to Mar-7-2018	Totten	27	1368950	1803089	$25,508.52
Mar-8-2018 to Mar-15-2018	Totten	27	1368950	1803097	$42,844.77
Mar-16-2018 to Mar-22-2018	Totten	27	1368950	1803119	$37,458.89
Mar-23-2018 to Mar-31-2018	Totten	27	1368950	1803127	$45,907.80
April-1-2018 to April-8-2018	Totten	27	1368950	1804153	$38,876.20
April-1-2018 to April-8-2018	Totten	27	1368950	1804176	$7,717.50
April-9-2018 to April-15-2018	Totten	27	1368950	1804167	$23,266.91
April-16-2018 to April-22-2018	Totten	27	1368950	1804185	$24,957.80
April-23-2018 to April-30-2018	Totten	27	1368950	1804194	$50,961.08
May-01-2018 to May-15-2018	Totten	27	1368950	1805217	$91,616.22
May-16-2018 to May-31-2018	Totten	27	1368951	1805255	$95,492.26
June-16-2018 to June-30-2018	Totten	27	1368952	1806299	$2,100.00
June-16-2018 to June-30-2018	Totten	27	1368952	1806303	$157.50
July-01-2018 to July-15-2018	Totten	27	1368952	1806274	$63,507.58
					$560,457.03

APPENDIX III
GEOLOGICAL BOREHOLE LOGS

BOREHOLE	PROPERTY	PROPERTY LEVEL		DEPTH	ACCT #	SYS		NORTHING	EASTING	ELEV	SIZE	START DATE	END DATE	FROM	TO	TYPE	RESOURCE	STATUS
1368900	Totten	180	0	1361.24	R000929.0		1	353514	291818	805	HQ	24/08/2017 10:32:41	11/10/2017 10:32:41			EXPLN	Yes	Complete

DEPTH	AZIMUTH	DIP
0	144.89	-70.82
9.14	144.794	-70.3397
18.29	145.1393	-70.1056
27.43	145.1049	-69.9377
36.58	145.2656	-69.8594
45.72	145.5574	-69.9004
54.86	145.5531	-69.8336
64.01	145.4942	-69.8896
73.15	145.8085	-69.8823
82.3	145.919	-69.8254
91.44	146.024	-69.7692
100.58	146.1624	-69.7593
109.73	146.133	-69.6976
118.87	146.0132	-69.6292
128.02	145.9168	-69.6662
137.16	145.9212	-69.6215
146.3	146.0596	-69.6687
155.45	145.8307	-69.4942
164.59	145.9551	-69.5465
173.74	145.924	-69.4923
182.88	146.12	-69.3091
192.02	146.3863	-69.2728
201.17	146.1942	-69.1938
210.31	146.4189	-69.2231
219.46	146.6609	-69.1391
228.6	146.7688	-69.2111
237.74	146.5229	-69.1969
246.89	146.8403	-69.1482
256.03	146.7387	-69.3351
265.18	146.6118	-69.2568
274.32	146.6075	-69.2799
283.46	146.7283	-69.3151
292.61	147.0975	-69.0896
301.75	147.0313	-69.0934
310.9	146.9421	-69.1229
320.04	146.921	-69.0508
329.18	146.8725	-68.9721
338.33	146.825	-69.0356
347.47	146.5302	-68.9063
356.62	146.4864	-68.9266
365.76	146.5534	-68.81
374.9	146.2514	-68.5825
384.05	145.8458	-68.5006
393.19	145.8211	-68.3447
402.34	145.8232	-68.2877
411.48	145.6414	-68.1881
420.62	145.404	-68.1016
429.77	145.2566	-68.0894
438.91	145.1825	-68.0718
448.06	145.1628	-68.032
457.2	145.0373	-68.0244
466.34	145.0903	-68.0061
475.49	145.2622	-68.0539
484.63	145.1305	-68.0293
493.78	145.1007	-68.0376
502.92	145.3103	-68.0041
512.06	145.3364	-67.9957
521.21	145.3773	-67.9793
530.35	145.4884	-68.0427
539.5	145.3804	-68.046
548.64	145.4513	-68.0246
557.78	145.4591	-67.9641
566.93	145.6326	-68.1019
576.07	145.5713	-68.0241
585.22	145.7895	-68.0832
594.36	146.0002	-68.0443
603.5	146.0909	-67.8744
612.65	146.1918	-67.684
621.79	146.5553	-67.6643
630.94	146.908	-67.6145
640.08	147.479	-67.4483

649.22	147.2551	-67.4566
658.37	147.7209	-67.2586
667.51	147.956	-67.1043
676.66	148.2624	-67.0776
685.8	148.4141	-67.0703
694.94	148.5292	-67.0023
704.09	148.9116	-67.0317
713.23	149.2362	-67.0608
722.38	149.4042	-67.0907
731.52	149.762	-67.1049
740.66	149.9323	-67.1382
749.81	150.141	-67.1761
758.95	150.5417	-67.1049
768.1	150.574	-67.2192
777.24	150.7462	-67.219
786.38	150.9188	-67.2308
795.53	151.215	-67.3069
804.67	151.4295	-67.3634
813.82	151.8444	-67.4014
822.96	152.1124	-67.4674
832.1	152.3972	-67.6988
841.25	152.4452	-67.8522
850.39	150.2534	-67.8378
859.54	150.4409	-68.1216
868.68	148.5758	-68.5566
877.82	148.514	-68.8343
886.97	149.0078	-68.7161
896.11	149.9254	-68.6987
905.26	150.5556	-68.3706
914.4	151.0855	-67.6744
923.54	150.3543	-66.4255
932.69	150.2855	-65.8786
941.83	150.5754	-65.7023
950.98	152.3778	-65.773
960.12	153.068	-66.0216
969.26	152.0815	-64.1148
978.41	152.1665	-63.1988
987.55	152.5792	-62.4303
996.7	152.7959	-62.4481
1005.84	153.3501	-62.5851
1014.98	153.408	-62.6119
1024.13	153.3302	-62.8931
1033.27	152.9467	-62.9342
1042.42	153.0879	-62.1008
1051.56	152.4174	-60.8863
1060.7	152.3506	-60.5425
1069.85	152.81	-59.8729
1078.99	153.7052	-58.4117
1088.14	153.5315	-56.9008
1097.28	153.7005	-57.1308
1106.42	154.4958	-56.9976
1115.57	155.2457	-56.6606
1124.71	156.0442	-56.3079
1133.86	156.5675	-56.0841
1143	157.1052	-55.5092
1152.14	157.8503	-54.8644
1161.29	158.5113	-54.4739
1170.43	159.1695	-53.9925
1179.58	159.927	-53.583
1188.72	160.4124	-52.6442
1197.86	160.508	-52.0686
1207.01	160.7146	-52.1486
1216.15	160.8942	-52.1307
1225.3	161.2857	-51.9436
1234.44	161.6413	-51.4651
1243.58	161.9472	-51.3356
1252.73	162.2281	-51.3117
1261.87	162.5287	-51.1229
1271.02	162.7939	-51.1457
1280.16	163.0344	-51.2315
1289.3	163.405	-51.0333
1298.45	163.614	-50.9154

1307.59	163.8867	-50.7869
1316.74	164.2172	-50.6489
1325.88	161.9616	-49.3939
1335.02	161.8952	-47.8969
1341.12	164.2	-50.2

DEPTH
2785
2844
2913
2982
3031
3071
3100
3192
3209
3406
3445
3484
3524
3563

METERS		SAMPLE INFO		PERCENT					GRAMS/TONNE						
DEPTH	LENGTH	SAMPLE	CODE	EST	CU	NI	CO	AS	TPM	RQD	ORE	MINOR ROCK	ROCK	MILLSTOR	DESCRIPTION
0	0														Collar
5.39	5.39									0			CASE		Casing. About 1ft of broken and blocky core/boulders. Boulders are Qtzt and possibly insitu.
71.87	66.48									90			QTZT		Quartzite, massive, hmgs, competent QTZT. Weak fabric present but not consistent throughout. Varies from 60-80deg tca. Does not fracture along this fabric plane. Color is drk grey and very silicious. Occasional small whisps of SUBX or small brecciated sections of core with a fg siliceous matrix. No significant sulphides although occasional pyrite along fracture planes. Overall this unit if very massive and hmgs with very little change.
73.3	1.43									90		QTZT	SUBX		QTZT as described above except there is veins of SUBX that cross cuts the interval in a chaotic non-preferred orientation. The matrix is fg, dark grey and host abundant local inclusions of qtzt. No sulphides associated with the SUBX or the QTZT.
87.08	13.78									90			QTZT		Quartzite, as described above with massive, hmgs, competent QTZT. Weak fabric present but not consistent throughout. Varies from 60-80deg tca. Does not fracture along this fabric plane. Color is drk to med drk grey and very silicious. No significant sulphides although occasional pyrite along fracture planes. Overall this unit if very massive and hmgs with very little change.
87.75	0.67									90		QTZT	SUBX		SUBX similar to what was described above. The QTZT interval is chaotic with a fg matrix that appears as a swirly fabric that host abundant local qtzt inclusions. Matrix is not black and appears to be similar to the QTZT mass. No sulphids present.

180.56	92.81		90		QTZT	Quartzite, massive, hmgs, competent QTZT. Weak fabric present but not consistent throughout. Varies from 50-70deg tca. Does not fracture along this fabric plane. Color is drk grey and very silicious. No significant sulphides although occasional pyrite along fracture planes. Overall this unit if very massive and hmgs with very little change and is the same continuation as above.
190.5	9.94		90	QTZT	SUBX	Qtzt as described above except the interval is brecciated with a fg gry-drk gry matrix, believed to be SUBX. Small local inclusions of QTZT within. No sulphides. It is possible this is the contact or transition from a qtzt to a MTSD that is defined as less qtz, drker grey and becomes more of a fg sandstone or slts as seen farther down the hole. The quartzite described above appears to have transitioned or changed at the brecciated interval above (possibly SUBX) into a unit that contains less qtz but is still fg, massive, hmgs, competent. It is darker in color and seems to be a sandstone or laminated siltstone MTSD. A fabric is present ranging from 15-30deg tca. Occasionally subpll tca. No significant sulphides although occasional pyrite along fracture planes or along laminations.
246.86	56.36		90		MTSD	
248.23	1.37		90	MTSD	SUBX	SUBX cross cutting the MTSD interval described above. Fg drker gry matrix that has ripped apart localized blocks of the MTSD. Appears to be SUBX, no sulphides.
251.58	3.35		90		MTSD	This interval is the same unit as the MTSD unit that was described above between 625.0-809.9ft. The subx above appears to have cross cut this MTSD sequence.

252.86	1.28		90	LAMP	MTSD	MTSD unit that is uniquely different from above and below. It has sharp upper and lower contacts both at 50deg tca. The composition consist of lathy needle like minerals, possibly storilite??. Hmgs throughout this entire interval. Some chloritic alteration throughout. Believed that this unit/interval is a cooked up MTSD. It appears to define a lithology change from MTSD above, back to massive QTZT as described at the top of the hole. Tr diss pyt sulphides throughout this interval.
286.18	33.31		90		QTZT	QTZT, very silicious and sugary txt with abundant qtz. The interval is very massive, hmgs and continuous throughout. There is a weak fabric occurring at 40-50deg tca throughout. No sulphides present. Minor Fractures present. Lower CT occurs at 50Deg tca.
288.1	1.92		90	LAMP	MTSD	MTSD exactly as described between 825.4-829.6ft. It has very sharp contacts upper at 50Deg tca and lower at 30deg tca. Non Magnetic, no sulphides. Similar color to the MTSDs. It is believed to be a cooked up MTSD. The contacts are slightly chilled, and some evidence of inclusions of the host Qtzt. This unit contains predominantly of a needly black lathy mineral that occurs in a radiating orientation. On a fresh surface it is flakey like biotite. Possibly a staurolite mineral recrystallized.
304.8	16.7		90		QTZT	QTZT, very silicious and sugary txt with abundant qtz. The interval is very massive, hmgs and continuous throughout. There is a weak fabric occurring at 40-50deg tca throughout. No sulphides present.

308.24	3.44		0	STRT	FLT	FLT. Large significant fault with gouge. Obvious movement with slicken slides and fault gouge. Qtz vns that are vuggy with qtz crystals. Qtz has abundant inclusions of qtzt within from the flt movement. The upper Ct is 30deg tca and the lower ct is 30-40deg tca, but may represent the weak qtzt fabric. The Flt it self appears to be subpll tca at about 5-10deg through the length of this interval.. No significant sulphides present just some minor pyt.
312.21	3.96		90		QTZT	QTZT, very silicious and sugary txt with abundant qtz. The interval is very massive, hmgs and continuous throughout. There is a weak fabric occurring at 40-50deg tca throughout. No sulphides present.
312.57	0.37		30	QTZT	STRT	QTZT as described above but there is a small structure or plane that has some movement that is likely related to the larger FLT above. Small qtz vns throughout, and a fracture plane of 40Deg tca. No sulphides.
364.48	51.91		90		QTZT	QTZT, very silicious and sugary txt with abundant qtz. The interval is very massive, hmgs and continuous throughout. There is a weak fabric occurring at 40-50deg tca throughout. No sulphides present.
365.94	1.46		90		SUBX	SUBX band that cross suts the Qtzt. No sulphides. The fg drk gry matrix host inclusions of the local Qtzt. The fabric of the SUBX is chaotic and swirly.
401.12	35.17		90		QTZT	QTZT, very silicious and sugary txt with abundant qtz. The interval is very massive, hmgs and continuous throughout. There is a weak fabric occurring at 40-50deg tca throughout. No sulphides present.
402	0.88		0	QTZT	FLT	Small flt within the Qtzt. Approaching a larger lower flt below. There is evidence of movement with slicken slides at this flt. Located at 1318.5ft is minor gouge. Broken and blocky pieces throughout. No sulphides.

414.38	12.37	70	QTZT	MTSD	QTZT unit appears to be transitioning into a darker grey MTSD. This interval is about 50/50 QTZT/MTSD. The upper portion appears to be mostly QTZT and more siliceous with a fabric at 40-50deg tca, than the low drker grey MTSD which has a fabric plan subpll tca (5-20deg tca). The QTZT often appears as small blocks/intervals as it transitions.
417.09	2.71	0	STRT	FLT	Large significant flt. At 1359.5 there is a strong flt plane about 2inches wide filled with gouge, qtz and qtz-carb. This flt occurs at about 30deg tca. This interval shows broken core that has created voids that has been infilled with perfect qtz crystal. Majority of this flt and fractures have been rehealed with QTZ and shows a breccia like txt of the host MTSD. No sulphides.
442.75	25.66	80	MTSD		MTSD unit from above continues. Drk grey fg MTSD. The MTSDs have a moderate fabric and laminations that occur subpll tca. Not strongly obvious in core but many fracture planes break along the fabric along the core axis. No sulphides present.
458.18	15.42	90	QTZT		QTZT as seen above in the hole. very siliceous and sugary txt with abundant qtz. Lt grey in colour. The interval is very massive, hmgs and continuous throughout. There is a weak fabric occurring at 40-50deg tca throughout. No sulphides present.
461.83	3.66	70	DIA		DIA, Fg Black magnetic diabase dyke. Contacts are chilled and upper ct is sharp at 20deg tca and lower ct is sharp at 30deg tca. Very massive and hmgs throughout some broken blocks but overall competent. No significant fracture planes.

471.43	9.6			80		MTSD	MTSD and possibly some QTZT. Difficult to tell but seems to transition back and forth. The QTZT is usually more felsic and siliceous while the MTSDs are typically slightly darker grey. Both are massive in txt and hmgs.
472.47	1.04			30		DIA	DIA, fg, blk, magnetic, dia dyke with sharp chill contacts both upper and lower at 20deg tca. Fg aphanitic with broken and blocky core but no major faults. No sulphides present.
492.16	19.69			80	QTZT	MTSD	MTSD and QTZT. Seems to transition back and forth. The QTZT is usually more felsic and siliceous while the MTSDs are typically slightly darker grey. Both are massive in txt and hmgs. It seems that the fg drker grey MTSD is more likely to occur near the DIA dykes contacts. Possibly the dia occupying the weaker MTSDs, or altering the QTZ to a drk MTSD. No sulphides present.
496.28	4.11			40		DIA	DIA, fg, blk, magnetic, dia dyke with sharp chill contacts, upper CT at 20Deg and lower at 25deg tca. Fg aphanitic with some broken and blocky core but no major faults. 1 subpll frac along core axis causing increase fractures. No sulphides present.
558.15	61.87			75		MTSD	MTSD with minor localized areas of QTZT near the top half of this interval. Dominantly a fg drk gry MTSD, relatively competent and hmgs. The QTZT is usually more felsic and siliceous while the MTSDs are typically slightly darker grey. No sulphides present.
584.55	26.4			80		DIA	Large fg black aphanitic DIA dyke. Sharp chill contacts. Upper at 25deg tca and lower at 30deg tca. The core of this interval is slightly lighter grey in color and coarsens a little to a fg-mg DIA. Interval is strongly magnetic and no sulphides. No significant structures in this DIA. Some fractures at the top ct and some in the middle of the interval but nothing significant.

606.8	22.25		90	MTSD	QTZT	QTZT with some MTSD at the upper CT near the DIA. Distinguishing between the 2 units can be difficult, but the unit does appear to be slightly more siliceous and qtz rich. Weak overprinting fabric occurring at 40deg tca. No sulphides present. Small structure occurring at 30deg tca. Slicken slides along a fracture plane. The plane consist of local brecciated QTZT with qtz and qtz-carb. No sulphides. Rehealed with qtz and qtz-carb. NOTE THAT AT 1991.9ft IS THE END OF THE HQ DRILLING. REDUCED TO NQ TO BEGIN DIRECTIONAL DRILLING.
607.13	0.34		20	QTZT	STRT	
652.76	45.63		80		QTZT	QTZT with a moderate fabric at 30deg tca. The unit does have localized areas of a slightly drker gry MTSD with weak laminations in some areas, but this interval is mostly QTZT. Uniform throughout, with only a slight change from no fabric to a weak fabric. No sulphides present. Competent, no significant structures.
656.51	3.75		40		DIA	DIA, blk-dark gry with sharp chilled CTs. Fg throughout. The contacts occur at 15Deg tca at the upper and 30deg at the lower. No sulphides.
670.99	14.48		80		QTZT	QTZT with a weak fabric at 30-40deg tca. The unit does have localized areas of a slightly drker gry MTSD with weak laminations in some areas, but this interval is dominantly QTZT. Uniform throughout. No sulphides present. Competent, no significant structures.
673.39	2.41		30	QTZT	STRT	STRT within the QTZT. Several fracture planes with movement occurring at 20-30deg tca. Also Qtz and Qtz-Carb brecciating along the core axis. No sulphides present. Moderate movement expected, no a Major Flt.

724.24	50.84	85	QTZT	QTZT with a weak fabric at 30-40deg tca and often no fabric present at all an more massive hmgs like a sandstone. The unit does have localized areas of a slightly drker gry MTSD with weak laminations in some areas, but this interval is dominantly QTZT. Uniform throughout. No sulphides present. Competent, no significant structures.
725.52	1.28	80	DIA	DIA, blk-dark gry with sharp chilled CTs. Fg throughout. The contacts occur at 10-20Deg tca at the upper and 20deg at the lower. No sulphides.
731.52	6	85	QTZT	QTZT with a weak fabric at 20-30deg tca and often no fabric present at all an more massive hmgs like a sandstone. The unit does have localized areas of a slightly drker gry MTSD with occasional weak laminations in some areas, but this interval is dominantly QTZT. Uniform throughout. No sulphides present. Competent, no significant structures....LOGGING CONTINUE AT BX260 AT 782m.
785.96	54.44	0	LC	CORE NOT FOUND IN YARD. IT SHOULD TURN UP THO. STARTED LOGGING @ BOX 280
837.71	51.76	96	QTZT	MG to FG grey to blush, weak bedding fabric thrt at 25 to 35 deg tca, local area near 2626' to 2638' with low-angle rough jts thin 1-5mm Chlorite-Muscovite anastomosing vnlts. rare spks of sulphide along Jt surfaces. local areas of fine laminations typically ~0.5cm thick typically more prevalent near bottom of interval.
865.97	28.25	78	MTSD	FG to MG, grey to dark grey, consistant bedding fabric thrt at 25 to 30 deg tca, Abundant smth jts parallel to bedding fabric. bedding is strongly laminated with beds ranging from ~2mm to 10cm. thin beds typically <1cm are chlorite rich. Thicker (>1cm) beds are more Qz-rich.

882	16.03		80		MTSD	MG to FG, grey to bluish, consistent bedding fabric thrt at 20 30 deg tca, beds range from <1cm to >10cm. occ smth jts thrt along bedding planes. rare Qz-Po vns thrt from 1cm to 10 cm.
907.82	25.82		80	QTZT	MTSD	FG to MG gry to bluish, thin to thick bedding thrt, local fine laminations <0.5cm thick to the occasional sandy >10cm beds. Local gradded bedding facing up hole. Bedding fabric typically at 20 to 30 deg tca. Bottom 5' of interval shows abundant jointing associated with fault below.
912.54	4.72		5	MTSD	FLT	FG to MG, Fine laminated beds thrt typically >1cm. Broken core thrt preferentially broken along bedding planes. Upper part of interval has abundant muddy gouge. and fine layers of gouge are found along Jt surfaces.
940.31	27.77		95		MTSD	FG, blue to grey, fine laminated (typically <1cm). and mud-rich beds thrt. bedding fabric is typically 40 to 45 deg tca, smth jts thrt, at 30 to 50 deg tca. local Qz-white mica and Po alteration and veinlts thrt.
965.55	25.24		90		MTSD	FG, blue to grey, fine laminated beds thrt typically >1cm. occ thin <1mm Qz vnlts that X-cut bedding. SMth jts thrt along bedding fabric. bedding typically at 35 to 45 deg tca.
976.09	10.55		35	MTSD	QTZT	FG to MG, grey to bluish, locally finely laminated, and apparently massive in the thicker, more Qz-rich layers. Bedding typically at 30 to 40 deg tca. Abundant smth and stepped jts thrt at 10 to 40 deg tca locally core is blocky and JT surfaces are coated with smth chlorite.
987	10.91		90		QTZT	MG to CG, thickly bedded from 2 to 10 cm with sandy, Qz-rich beds. occ thin and irregular 1-2mm Qz-vnlt thrt. occ smth jts thrt at 15 to 25 deg tca coated in carbonate and chlorite.

995.48	8.47	85	MTSD		FG to MG, grey to bluish, locally finely laminated, and apparently massive in the thicker, more Qz-rich layers. Bedding typically at 25 to 35 deg tca, Common and shallow jts thrt at 10 to 25 deg tca often coated with smth chlorite.
999.87	4.39	55	MTSD		FG to MG, grey to bluish, locally finely laminated, and apparently massive in the thicker, more Qz-rich layers. Bedding typically at 35 to 45 deg tca. Abundant smth and shallow jts from 5 to 30 deg tca often coated with glossy-chlorite. locally core looks mechanically ground and blocky.
1031.23	31.36	75	MTSD		FG to MG, grey to bluish, finely laminated beds thrt typically <1cm thick. Bedding foliation at 30 to 40 deg tca. Locally closely spaced jts creating blocky core. smth jts typically parallel to bedding.
1032.21	0.98	0	MTSD	STRT	FG to MG, grey to bluish, completely broken and blocky core, broken core looks drilling-induced. from a thin and low angle structure near the top of the interval.
1038	5.79	80		MTSD	FG to MG, grey to bluish, thin bedded with muddy beds typically <1cm thick. Smth and shallow jts thrt typically along bedding.
1040.28	2.29	0		WDG	Ground 7.5' for wedge. button is off center.
1050.01	9.72	75		MTSD	FG to MG, grey to bluish, thin to thick beds thrt. from muddy layers typically <1cm to more Qz-rich and sandy layers typically >3cm. smth and stepped and very shallow jts thrt typically along bedding.
1051.9	1.89	0		WDG	ground 6.2' for wedge. button off center
1055.98	4.08	60		MTSD	FG to MG, grey to bluish, thinly bedded with mud-rich beds typically <1cm thick. Smth and shallow jts thrt often along bedding surface or at shallow and oblique angles to the core axis.

1062.01	6.04		60		MTSD	FG to MG, grey to bluish, thinly bedded thrt with mud-rich beds typically <1cm. Bedding typically at 20 to 30 deg tca, Abundant Smth jts thrt at shallow angles often along bedding. Jts often X-eachother creating local intervals of blocky core.
1063.33	1.31		0		WDG	Ground core for wedge. button is off center.
1086	22.68		85	QTZT	MTSD	FG to MG, grey to bluish, thin to thick beds consisting of fine, mud-rich laminations <1cm. to thicker (>10cm) sandy and more Qz-rich beds. Smth jts thrt typically along the bedding fabric. And also at shallower angles oblique to bedding.
1087.34	1.34		0		WDG	Ground core for wedge. button is off center.
1099.57	12.22		85	QTZT	MTSD	FG to MG, grey to bluish, thin to thick beds consisting of fine, mud-rich laminations <1cm. to thicker (>10cm) sandy and more Qz-rich beds. Smth jts thrt typically along the bedding fabric. And also at shallower angles oblique to bedding. Rare, veinlt of Qz and Po.
1116.79	17.22		45		MTSD	FG to MG, grey to bluish, thin to thick beds of fine muddy laminations typically <1cm. to thicker beds >10cm. Abundant smth jts thrt at shallow oblique angles TCA. often X-ing eachother creating intervals of blocky, broken, core.
1131.45	14.66		55		MTSD	FG to MG, grey to bluish, thin to thick bedded with mud-rich beds ranging from <1cm to >5cm. Bedding is 15 to 25 deg tca, Common smth jts thrt at high angles TCA typically 10 to 20 deg tca. often jts X-eachother creating intervals of blocky core.
1141.57	10.12		75		MTSD	FG to MG, grey to bluish, thin to thick bedded with mud-rich beds ranging from <1cm to >5cm. Bedding is 15 to 25 deg tca, Common smth jts thrt at high angles TCA typically 10 to 20 deg tca.

1146.05	4.48		60	QTZT	MG to FG, grey to bluish, sandy, Qz0rich beds thrt at 30 to 40 deg tca. smth jts thrt at 30 to 40 deg tca. upper 2' and lower 1' of interval looks like mechanically broken and ground core.
1157.66	11.61		85	QTZT	MG to CG, grey to bluish, thickly bedded with Qz-rich and sandy beds. rare thin (<1cm) mud-rich beds. smth jts thrt typically at 30 to 40 deg tca. But also rarely at 10 to 15 deg tca.
1199.72	42.06		85	QTZT	MG to CG, grey to bluish weak bedding fabric thrt. beds are typically sandy and Qz-rich. smth jts thrt at 30 to 60 deg tca. rare thin (<1cm) Qz vns with Trace po thrt.
1202.62	2.9		85	OLDI	FG, dark grey, upper 8 inches is mechanically broken and blocky. upper half of interval is aphanitic and glassy. lower half is apilitic and sugary. rare thin (~1mm) Qz-vnlt thrt. Chill margine of OLDI
1219.38	16.76		85	OLDI	MG, dark grey, apilitic to phaneritic. smth and rough tjs trht mostly at 45 to 60 deg tca. Rough jts are typically Chlorite coated. unit is strongly magnetic.
1222.1	2.71		85	OLDI	FG, dark grey, aphanitic and glassy thrt. occ smth jt thrt at 45 to 60 deg tca. Chill margin of OLDI
1223.1	1.01		0	MTSD OLDI	FG, dark grey, completely blocky and broken core. Some broken core pieces are broken, some are not. looks like the contact of OLDI is broken.
1224.35	1.25		90	MTSD	FG grey to dark grey, none magnetic, apparently massive. Unit appears to be rextlized. and is distinguishable from OLDI in that it is non-magnetic.
1248.92	24.57		65	QTZT	MG to FG, grey to blue. weak bedding fabric thrt with typically thick, Qz-rich and sandy beds. smth jts thrt at 30 to 40 deg tca. Occasional rough jts at varous angles creating local areas of blocky core thrt. occ thin 1-2mm Qz vnlts thrt.

1284.73	35.81								85		MTSD	QTZT	MG to FG, grey to bluish, bedding fabric ranges from weak to strong. Thick, sandy, Qz-rich beds with local thin, mud-rich beds thrt show thin laminations. occ small Chl-vnlts show offsetting and x-cutting of beds. rare thin 1-2mm Qz vnlts thrt. Locally, QTZT looks sugary in appearance and may be rexrystalized.
1308.2	23.47								85			MTSD	MG to FG, grey to bluish, thin to think beds thrt, thinner beds (typically less than 1cm) are more mud-rich, while thinker beds are sandy and more Qz-rich. smth jts thrt 30 to 45 deg tca, often Jt surfaces are coated in Carbonate minerals. occ rough jt thrt with no dominant orientation. rare thin 1-5mm Qz- vnlt thrt.
1322.68	14.48								80			MTSD	FG to MG, grey to bluish, bedding fabric at 20 to 30 deg tca and is typically laminated thrt. smth jts thrt at shallow angles often X-ing bedding. rar thin Qz-vnlts thrt
1334.99	12.31								55			MTSD	FG to MG grey to bluish, weak bedding fabric at 20 to 30 deg tca thrt, Often MTSD looks sugary and rextlized. Abundant smth jts thrt at shallow angles (15 to 30 deg tca), often Xing rougher jts creating local blocky core.
1336.55	1.55	MX247020	2	0.1	0.01	0.01	0	0	0	90	NVS	MTSD	FG to MG, grey to bluish, thin bedding fabric thrt @ 25 to 30 deg tca, smth jts roughly parallel to bedding. Mineral grains are sugary in appearance and may be rextlized. NVS.
1338.01	1.46	MX247021	2	0.1	0.01	0.01	0	0	0	85	NVS	MTSD	FG to MG, grey to bluish, thin bedding fabric thrt @ 25 to 30 deg tca, smth jts thrt at 25 to 50 deg tca often oblique to bedding, Mineral grains are sugary in appearance and may be rextlized. NVS.

1339.38	1.37	MX247022	2	0.1	0.01	0	0	0	0	60	NVS		MTSD	MG to FG, grey to bluish, weak bedding fabric thrt at 30 to 40 deg tca, Smth jts thrt, often coated in Qz-Cb material, rare thin 2-3mm Qz Cb vnlt thrt, mechanically broken and blocky core thrt, Mineral grains are sugary in appearance and may be rextlized. NVS.
1340.54	1.16	MX247023	2	0.1	0.01	0.01	0	0	0	70	NVS	MTSD	QD	MG to FG dark grey to bluish, unit is strongly rextlized and has a lot of porphyroblastic Bt. appears to be a brecciated contact with Bt-rich clasts of MTSD in fine grained QD. Smth and ough jts thrt at 40 to 80 deg tca. Common thin 2-4mm Qz Cb vnlts thrt. NVS
1342.03	1.49	MX247024	2	0.1	0	0.01	0	0	0	85	NVS		QD	FG, bluish, apilitic, well formed amphiboles thrt, interstitial plag. smth and rough jts thrt, occ. coated with slicken lines @ 20 to 30 deg tca. occ 0.5 to 2cm Qz vnlt thrt. NVS.
1343.56	1.52	MX247025	2	0.1	0.01	0	0	0	0	85	NVS		QD	CG to MG grey to bluish, spherulitic /dendritic amph thrt. amphibole xtls can be up to 1.5 cm. interstitial plag. rough and smth jts thrt, thin (1-2mm) Cb vnlts thrt. NVS
1345.08	1.52	MX247026	2	0.5	0.01	0.01	0	0	0	65	TR		QD	CG to MG grey to bluish, spherulitic /dendritic amph thrt. amphibole xtls can be up to 1 cm. interstitial plag. Rare thin Qz-Cb vnlt thrt. smth jts thrt at 20 to 80 deg tca, locally jts x-eachother and create blocky core. One ~5cm Qz-sulphide vn with trace Po and Cp.
1346.33	1.25	MX247027	2	0.1	0.01	0	0	0	0	90	NVS		IQD	MG, grey to bluish. needle-like Amph thrt up to 0.5 cm. interstitial plag. rare rough jts thrt often along 1-2mm Qz-Cb vnlts. rare inclusions thrt, NVS
1348.68	2.35	MX247028	2	0.5	0.03	0.03	0	0.001	0.1	80	SPKS		IQD	MG, bluish, aphanitic, abundant angular inclusions thrt, rare thin 1-2mm Qz-Cb vnlt thrt. smth and rough jts thrt at 40 to 60 deg tca. rare speck of Po.
1349.72	1.04	MX247029	2	0.1	0.01	0.01	0	0	0.03	85	NVS		QD	CG to MG spherulitic amph xtls thrt up to 2cm long, interstitial plag thrt. thin 1-3mm Qz Cb vnlts thrt. May be an inclusion od QD in IQD.

1351.24	1.52	MX247030	2	0.6	0.03	0.02	0	0.001	0.07	85	SPKS		IQD	MG, bluish, aphanitic, abundant angular inclusions thrt, rare thin 1-2mm Qz-Cb vnlt thrt. smth and rough jts thrt at 30 to 60 deg tca. rare speck of Po.
1352.7	1.46	MX247031	2	1	0.03	0.02	0	0.001	0.1	85	SPKS		IQD	MG, bluish, aphanitic, abundant angular inclusions thrt, rare thin 1-2mm Qz-Cb vnlt thrt. smth and rough jts thrt at 30 to 60 deg tca. specks of Po thrt.
1353.34	0.64	MX247033	2	0.1	0.04	0.03	0.01	0.001	0.14	35	TR	STRT	QD	MG bluish grey, apilitic, abundant jts thrt and blocky core, Jt surfaces often coated with chlorite and carbonate material. small structure along contact with OLDI. ***LAST BOX LOGGED #478***
1356.33	2.99	MX247034	2	0	0	0	0	0	0	80	NVS		OLDI	FG, dark grey, aphanitic to apilitic, first 1.5 feet are blocky, faulted, and chilled, Broken surfaces are coated in Cb material. lower part of interval is apilitic, and sugary. NVS.
1358.46	2.13	MX247035	2	0.1	0.01	0.01	0	0	0.03	0	TR	OLDI	FLT	FG, dark grey, apilitic, strongly magnetic, completely blocky and broken core all broken chunks have waxy Chl coatings and slickenlines.
1360.51	2.04	MX247036	2	0.1	0.01	0	0.01	0	0	0	TR	OLDI	FLT	FG, dark grey, apilitic, strongly magnetic, completely blocky and broken core all broken chunks have waxy Chl coatings and slickenlines.
1360.99	0.49	MX247037	2	0.4	0.01	0.01	0	0	0	30	TR	ALTN	IQD	FG, grey to greenish blue, apilitic w/ occ angular clast thrt, greenish colour looks to be imparted by a weak Chl altn, trace spks of Po and Cp. ***LAST BOX. ENDED IN FAULT. BOX #481 @ 4465.2ft**
1361.24	0.24									30			IQD	FG, grey to greenish blue, apilitic w/ occ angular clast thrt, greenish colour looks to be imparted by a weak Chl altn, trace spks of Po and Cp. ***LAST BOX. ENDED IN FAULT. BOX #481 @ 4465.2ft**

BOREHOLE	PROPERTY	PROPERTY LEVEL		DEPTH	ACCT #	SYS		NORTHING	EASTING	ELEV	SIZE	START DATE	END DATE	FROM	TO	TYPE	RESOURCE	STATUS
1368901	Totten	180	0	1361.85	R000929.0		1	353514	291818	805	NQ	12/10/2017 12:46:11	15/10/2017 12:46:11			EXPLN	Yes	Complete

DEPTH	AZIMUTH	DIP
0	144.9	-70.8
9.14	144.8	-70.3
18.29	145.1	-70.1
27.43	145.1	-69.9
36.58	145.3	-69.9
45.72	145.6	-69.9
54.86	145.6	-69.8
64.01	145.5	-69.9
73.15	145.8	-69.9
82.3	145.9	-69.8
91.44	146	-69.8
100.58	146.2	-69.8
109.73	146.1	-69.7
118.87	146	-69.6
128.02	145.9	-69.7
137.16	145.9	-69.6
146.3	146.1	-69.7
155.45	145.8	-69.5
164.59	146	-69.5
173.74	145.9	-69.5
182.88	146.1	-69.3
192.02	146.4	-69.3
201.17	146.2	-69.2
210.31	146.4	-69.2
219.46	146.7	-69.1
228.6	146.8	-69.2
237.74	146.5	-69.2
246.89	146.8	-69.1
256.03	146.7	-69.3
265.18	146.6	-69.3
274.32	146.6	-69.3
283.46	146.7	-69.3
292.61	147.1	-69.1
301.75	147	-69.1
310.9	146.9	-69.1
320.04	146.9	-69.1
329.18	146.9	-69
338.33	146.8	-69
347.47	146.5	-68.9
356.62	146.5	-68.9
365.76	146.6	-68.8
374.9	146.3	-68.6
384.05	145.8	-68.5
393.19	145.8	-68.3
402.34	145.8	-68.3
411.48	145.6	-68.2

420.62	145.4	-68.1
429.77	145.3	-68.1
438.91	145.2	-68.1
448.06	145.2	-68
457.2	145	-68
466.34	145.1	-68
475.49	145.3	-68.1
484.63	145.1	-68
493.78	145.1	-68
502.92	145.3	-68
512.06	145.3	-68
521.21	145.4	-68
530.35	145.5	-68
539.5	145.4	-68
548.64	145.5	-68
557.78	145.5	-68
566.93	145.6	-68.1
576.07	145.6	-68
585.22	145.8	-68.1
594.36	146	-68
603.5	146.1	-67.9
612.65	146.2	-67.7
621.79	146.6	-67.7
630.94	146.9	-67.6
640.08	147.5	-67.4
649.22	147.3	-67.5
658.37	147.7	-67.3
667.51	148	-67.1
676.66	148.3	-67.1
685.8	148.4	-67.1
694.94	148.5	-67
704.09	148.9	-67
713.23	149.2	-67.1
722.38	149.4	-67.1
731.52	149.8	-67.1
740.66	149.9	-67.1
749.81	150.1	-67.2
758.95	150.5	-67.1
768.1	150.6	-67.2
777.24	150.7	-67.2
786.38	150.9	-67.2
795.53	151.2	-67.3
804.67	151.4	-67.4
813.82	151.8	-67.4
822.96	152.1	-67.5
832.1	152.4	-67.7
841.25	152.4	-67.9

850.39	150.3	-67.8
859.54	150.4	-68.1
868.68	148.6	-68.6
877.82	148.5	-68.8
886.97	149	-68.7
896.11	149.9	-68.7
905.26	150.6	-68.4
914.4	151.1	-67.7
923.54	150.4	-66.4
932.69	150.3	-65.9
941.83	150.6	-65.7
950.98	152.4	-65.8
960.12	153.1	-66
969.26	152.1	-64.1
978.41	152.2	-63.2
987.55	152.6	-62.4
996.7	152.8	-62.4
1005.84	153.4	-62.6
1014.98	153.4	-62.6
1024.13	153.3	-62.9
1033.27	152.9	-62.9
1042.42	153.1	-62.1
1051.56	152.4	-60.9
1060.7	152.4	-60.5
1069.85	152.8	-59.9
1078.99	153.7	-58.4
1088.14	153.5	-56.9
1097.28	153.7	-57.1
1106.42	154.5	-57
1115.57	155.2	-56.7
1124.71	156	-56.3
1133.86	156.6	-56.1
1143	157.1	-55.5
1152.14	157.9	-54.9
1161.29	158.5	-54.5
1170.43	159.2	-54
1179.58	159.9	-53.6
1188.72	160.4	-52.6
1197.86	160.5	-52.1
1207.01	160.7	-52.1
1216.15	160.9	-52.1
1225.3	161.3	-51.9
1234.44	161.6	-51.5
1243.58	161.9	-51.3
1252.73	162.2	-51.3
1261.87	162.5	-51.1
1271.02	162.8	-51.1

1280.16	163	-51.2
1289.3	163.4	-51
1298.45	163.6	-50.9
1307.59	163.9	-50.8
1316.74	164.2	-50.6
1325.88	162	-49.4
1335.02	161.9	-47.9
1344.17	160.9	-47.2
1353.31	160.1	-46.2

DEPTH
4383

METERS		SAMPLE INFO		PERCENT					GRAMS/TONNE						
DEPTH	LENGTH	SAMPLE	CODE	EST	CU	NI	CO	AS	TPM	RQD	ORE	MINOR ROC	ROCK	MILLSTOR	DESCRIPTION
0	0														Collar
1336.24	1336.24									0			LC		Wedge off off BHID: 1368900. Core starts at 4384'
1337.98	1.74									75			MTSD		FG to MG, grey to bluish, weak bedding fabric thrt at 30 to 40 deg tca. occ smth jts parallel to bedding, locally sugary grains may be rextlized. first 1.8' are cut from wedge.
1339.5	1.52	MX247039	2	0	0.01	0.01	0	0	0	85	NVS		MTSD		FG to MG, grey to bluish, local weak bedding fabric thrt, locally BT rich smth jts thrt at 40 to 60 deg tca. rare thin Qz-Cb vnlt.
1340.11	0.61	MX247040	2	0.1	0	0.01	0	0	0	70	TR		MTSD		FG to MG, grey to bluish, sugary, Porphyroblastic Bt thrt, common thin 2-5mm Qz-CB vnlts with trace ctrystals of pyrite/marcasite.
1341.64	1.52	MX247041	2	0.1	0.01	0.01	0	0	0	90	TR		QD		MG, grey to bluish, laths of Bt and Amph (up to 1-2mm) thrt with interstitial plag. occ thin Qz-Cb vnlts thrt. One Qz-Cb vnlt ~5cm wide at 4399.6'. Smth and rough jts thrt at shallow and steep angles (10 to 40 50 deg tca). Trace sulphides along Qz-vns.
1343.16	1.52	MX247042	2	0.1	0	0	0	0	0	80	TR		QD		MG to FG, grey to bluish, laths of Amph up to 0.5cm long. w/ interstitial plag. smth tjs thrt at 50 to 50 deg tca often coated in Cb. occ thin 1-2mm Qz-Cb vnlts thrt. Trace sulphide along JT surfaces.
1344.69	1.52	MX247043	2	0.5	0.01	0.01	0.01	0	0.03	75	TR		QD		MG to FG, grey to bluish, laths of Amph up to 0.5cm long. w/ interstitial plag. smth tjs thrt at 50 to 50 deg tca often coated in Cb. occ thin 1-2mm Qz-Cb vnlts thrt. Trace sulphide along JT surfaces.
1345.48	0.79	MX247044	2	0.1	0	0	0	0	0	90	TR		QD		MG to FG grey to bluish laths of amph up to 0.5 cm with interstitial plag. smth tjs thrt at 50 deg tca, occ rough jt along Qz-Cb vnlts. occ thin 1-5mm Qz-Cb vnlt thrt.
1347	1.52	MX247045	2	0.5	0.01	0.01	0	0	0	85	BLBS		IQD		MG to FG, grey to bluish, amph laths up to 0.5cm long with interstitial plag. smth jts thrt at 50 to 60 deg tca. rare Qz- Cb vnlt. Rare angular inclusion (~2% inclusions by volume). rare bleb of Po/Pn, and Cp thrt.
1348.47	1.46	MX247046	2	0.5	0.03	0.02	0	0.001	0.1	90	BLBS		IQD		FG to MG, amph laths up to 0.25cm with interstitial plag. smth jts thrt at 40 to 60 deg tca coated in Cb. Approx. 10% angular and mostly mafic inclusions thrt. approx. 0.5% blebby Po/Pn +-Cp thrt.
1349.99	1.52	MX247047	2	0.4	0.02	0.02	0	0	0.03	75	SPKS		IQD		MG to FG, grey to bluish amph laths thrt with interstitial plag. smth jts thrt at 25 to 40 deg tca. often X-ing eachother. Thin ~1mm Qz-Cb vntls thrt approx. 0.4% spks of po/pn and cp thrt. Sulph and clasts appear to have a weak fabric/foliation @ 30 to 40 deg tca.
1351.48	1.49	MX247048	2	0.1	0.03	0.02	0	0	0.07	90	TR		IQD		MG to FG, grey to bluish, small laths of amph (~2-3mm) w/ interstitial plag. occ thin 1-2mm Qz-Cb vnlt thrt. smth jts thrt @ 30 to 40 deg tca often coated by Qz-Cb. Trace spks of sulphide.
1353.01	1.52	MX247049	2	0.3	0.03	0.03	0	0	0.1	90	TR		IQD		MG to FG grey to bluish small laths of amph (~2-3mm). with interstitial plag. Rare thin <1mm Qz-Cb vnlts thrt. smth jts thrt at 50 to 60 deg tca. weak foliation is present defined by elongated sulphide spks and clasts at 30 to 40 deg tca.
1354.68	1.68	MX247051	2	0.4	0.03	0.03	0	0.002	0.1	85	TR		IQD		MG to FG, grey to bluish, small 1-2mm Amphiboles thrt with interstitial plagioclase. smth tjs thrt at 50 to 60 deg tca. often JT surfaces are coated with Cb material bottom 6 inches of interval is pervasively altered by chlorite and has irregular and anastomosing Qz-Cb vnlts.
1355.99	1.31	MX247052	2	0	0.01	0.01	0.01	0	0	30	NVS		OLDI		FG to VFG, dark grey, aphanitic and top 1-2feet is almost glassy, and chilled. abundant occ smth jt at 15 deg tca, occ rough jt at 50 to 60 deg tca. often jts are coated in chlorite andh X-each other creating locally blocky core zones. Upper contact to OLDI is at 55 deg tca.
1357.49	1.49	MX247053	2	0	0	0.01	0.01	0	0	15	NVS		OLDI		FG, dark grey, apilitic, and sugary, very abundant smth jts thrt at 50 to 70 deg tca approx. one every 2-3 inches. often coated with waxy chlorite. local infiling of Cb along fractures. NVS.
1359.01	1.52	MX247054	2	0	0	0.01	0.01	0	0	40	NVS		OLDI		FG, dark grey, apilitic, smth jts thrt at 45 to 60 deg tca, JT surfaces are coated in waxy chlorite, rare thin (<1mm) Qz-Cb vnlts thrt.

1360.54	1.52	MX247055	2	0	0	0	0.01	0	0	20	NVS	OLDI	STRT	FG, dark grey, apilitc, smth jts thrt often coated with waxy chlorite. first 1.5' is unbroken. bottom 4' of core is completely brocken and blocky broken core has many smth and waxy Jt surfaces thrt. NVS.
1361.82	1.28	MX247056	2	0	0	0	0	0	0	5	NVS	OLDI	STRT	FG, dark grey apilitic, smth jts thrt coated with waxy chlorite, Core is completely broken and blocky, Broken core pieces have abundant smth waxy jt surfaces. occ section that isn't broken up typically 4-6inches long. with thin 1-2mm irregular Qz-Cb vnlts.***Drill Rods Stuck and Cut. Hole was abandoned and restarted with 1368902*** EOH@4467.9ft***
1361.85	0.03									5	NVS	OLDI	STRT	FG, dark grey apilitic, smth jts thrt coated with waxy chlorite, Core is completely broken and blocky, Broken core pieces have abundant smth waxy jt surfaces. occ section that isn't broken up typically 4-6inches long. with thin 1-2mm irregular Qz-Cb vnlts.***Drill Rods Stuck and Cut. Hole was abandoned and restarted with 1368902*** EOH@4467.9ft***

BOREHOLE	PROPERTY	PROPERTY LEVEL		DEPTH	ACCT #	SYS		NORTHING	EASTING	ELEV	SIZE	START DATE	END DATE	FROM	TO	TYPE	RESOURCE	STATUS
1368902	Totten	180	0	1710.54	R000929.0		1	353514	291818	805	NQ	16/10/2017 09:44:42	05/11/2017 09:44:42			EXPLN	Yes	Complete

DEPTH	AZIMUTH	DIP
0	144.89	-70.82
9.14	144.79	-70.34
18.29	145.14	-70.11
27.43	145.1	-69.94
36.58	145.27	-69.86
45.72	145.56	-69.9
54.86	145.55	-69.83
64.01	145.49	-69.89
73.15	145.81	-69.88
82.3	145.92	-69.83
91.44	146.02	-69.77
100.58	146.16	-69.76
109.73	146.13	-69.7
118.87	146.01	-69.63
128.02	145.92	-69.67
137.16	145.92	-69.62
146.3	146.06	-69.67
155.45	145.83	-69.49
164.59	145.96	-69.55
173.74	145.92	-69.49
182.88	146.12	-69.31
192.02	146.39	-69.27
201.17	146.19	-69.19
210.31	146.42	-69.22
219.46	146.66	-69.14
228.6	146.77	-69.21
237.74	146.52	-69.2
246.89	146.84	-69.15
256.03	146.74	-69.34
265.18	146.61	-69.26
274.32	146.61	-69.28
283.46	146.73	-69.32
292.61	147.1	-69.09
301.75	147.03	-69.09
310.9	146.94	-69.12
320.04	146.92	-69.05
329.18	146.87	-68.97
338.33	146.83	-69.04
347.47	146.53	-68.91
356.62	146.49	-68.93
365.76	146.55	-68.81
374.9	146.25	-68.58
384.05	145.85	-68.5
393.19	145.82	-68.34
402.34	145.82	-68.29
411.48	145.64	-68.19

420.62	145.4	-68.1
429.77	145.26	-68.09
438.91	145.18	-68.07
448.06	145.16	-68.03
457.2	145.04	-68.02
466.34	145.09	-68.01
475.49	145.26	-68.05
484.63	145.13	-68.03
493.78	145.1	-68.04
502.92	145.31	-68
512.06	145.34	-68
521.21	145.38	-67.98
530.35	145.4884	-68.0427
539.5	145.3804	-68.046
548.64	145.4513	-68.0246
557.78	145.4591	-67.9641
566.93	145.6326	-68.1019
576.07	145.5713	-68.0241
585.22	145.7895	-68.0832
594.36	146.0002	-68.0443
603.5	146.0909	-67.8744
612.65	146.1918	-67.684
621.79	146.5553	-67.6643
630.94	146.908	-67.6145
640.08	147.479	-67.4483
649.22	147.2551	-67.4566
658.37	147.7209	-67.2586
667.51	147.956	-67.1043
676.66	148.2624	-67.0776
685.8	148.4141	-67.0703
694.94	148.5292	-67.0023
704.09	148.9116	-67.0317
713.23	149.2362	-67.0608
722.38	149.4042	-67.0907
731.52	149.762	-67.1049
740.66	149.9323	-67.1382
749.81	150.141	-67.1761
758.95	150.5417	-67.1049
768.1	150.574	-67.2192
777.24	150.7462	-67.219
786.38	150.9188	-67.2308
795.53	151.215	-67.3069
804.67	151.4295	-67.3634
813.82	151.8444	-67.4014
822.96	152.1124	-67.4674
832.1	152.3972	-67.6988
841.25	152.4452	-67.8522

850.39	150.2534	-67.8378
859.54	150.4409	-68.1216
868.68	148.5758	-68.5566
877.82	148.514	-68.8343
886.97	149.0078	-68.7161
896.11	149.9254	-68.6987
905.26	150.5556	-68.3706
914.4	151.0855	-67.6744
923.54	150.3543	-66.4255
932.69	150.2855	-65.8786
941.83	150.5754	-65.7023
950.98	152.3778	-65.773
960.12	153.068	-66.0216
969.26	152.0815	-64.1148
978.41	152.1665	-63.1988
987.55	152.5792	-62.4303
996.7	152.7959	-62.4481
1005.84	153.3501	-62.5851
1014.98	153.408	-62.6119
1024.13	153.3302	-62.8931
1033.27	152.9467	-62.9342
1042.42	153.0879	-62.1008
1051.56	152.4174	-60.8863
1060.7	152.3506	-60.5425
1069.85	152.81	-59.8729
1078.99	153.7052	-58.4117
1088.14	153.5315	-56.9008
1097.28	153.7005	-57.1308
1106.42	154.4958	-56.9976
1115.57	155.2457	-56.6606
1124.71	156.0442	-56.3079
1133.86	156.5675	-56.0841
1143	157.1052	-55.5092
1152.14	157.8503	-54.8644
1161.29	158.5113	-54.4739
1170.43	159.1695	-53.9925
1179.58	159.927	-53.583
1188.72	160.4124	-52.6442
1197.86	160.508	-52.0686
1207.01	160.7146	-52.1486
1216.15	160.8942	-52.1307
1225.3	161.2857	-51.9436
1234.44	161.6413	-51.4651
1243.58	161.9472	-51.3356
1252.73	162.2281	-51.3117
1261.87	162.5287	-51.1229
1271.02	162.7939	-51.1457

1280.16	163.0344	-51.2315
1289.3	163.405	-51.0333
1298.45	163.614	-50.9154
1307.59	163.8867	-50.7869
1316.74	164.2172	-50.6489
1325.88	161.9616	-49.3939
1335.02	161.8952	-47.8969
1344.17	161.6856	-47.0729
1353.31	161.674	-47.0441
1362.46	161.6158	-47.0279
1371.6	161.8277	-46.9439
1380.74	161.9581	-46.5126
1389.89	161.8952	-45.9482
1399.03	161.9755	-46.0457
1408.18	162.2191	-45.85
1417.32	162.5116	-45.7002
1426.46	162.9553	-45.227
1435.61	163.2356	-45.2126
1444.75	163.2532	-45.1198
1453.9	163.51	-44.7393
1463.04	163.9004	-44.3266
1472.18	164.3412	-44.1437
1481.33	164.7914	-43.6972
1490.47	165.2223	-43.5865
1499.62	165.6429	-43.1931
1508.76	166.1461	-42.6426
1517.9	166.6957	-42.6128
1527.05	167.0556	-42.0517
1536.19	167.426	-41.6428
1545.34	167.8141	-41.3649
1554.48	168.1624	-41.0192
1563.62	168.5298	-40.6026
1572.77	168.9683	-40.261
1581.91	169.2846	-39.8054
1591.06	169.6759	-39.4034
1600.2	170.0126	-39.0359
1609.34	170.279	-38.4499
1618.49	170.5445	-37.8843
1626.41	170.86	-37.42
1644.09	171.7	-36.7
1673.96	172.3	-35.1
1704.14	173.9	-33.6

DEPTH
4364

METERS		SAMPLE INFO		PERCENT					GRAMS/TONNE						
DEPTH	LENGTH	SAMPLE	CODE	EST	CU	NI	CO	AS	TPM	RQD	ORE	MINOR ROC	ROCK	MILLSTOR	DESCRIPTION
0	0														Collar
1327.4	1327.4									0			TOW		Top of Wedge
1331.67	4.27									45			MTSD		MG to FG, grey to bluish, weak bedding fabric @ 20 to 30 deg tca with beds typically 0.5 to 2 cm thick. Rough and smth jts thrt at various angles often Jt surfaces are coated w/ Chl or carbonate, Locally Core is blocky and broken. Common thin 1-2mm Carbonate vnlts thrt.
1336.21	4.54									85			MTSD		FG to MG, grey to bluish, weak bedding fabric thrt at 30 to 40 deg tca, smth jts thrt at 20 to 30 deg tca often along bedding surfaces. rare thin (<1mm) Qz-Cb vnlts thrt.
1337.74	1.52	MX247058	2	0	0.01	0.01	0	0.001	0	90	NVS		MTSD		MG light grey to bluish, local weak bedding laminations at 30 to 40 deg tca, beds are typically 1-2cm wide. sugary texture in some places may be rexrystalized by nearby dyke. rare thin (<1mm) Qz-Cb vnlts thrt. NVS.
1338.35	0.61	MX247059	2	0	0.01	0.02	0	0.002	0	95	NVS		MTSD		MG to FG, light grey, sugary appearance BT and plag rich, primary textures are obliterated by recrystallization. lower contact is sharp with FG, chilled QD at 40 deg tca.
1339.87	1.52	MX247060	2	0.1	0	0.01	0	0	0	90	TR		QD		FG to VFG, grey, aphanitic to apilitic, upper contact is at 40 deg tca, and chilled. lower part of interval is apilitic. rare thin 2-3mm Qz-Cb vnlt thrt with trace sulphides.
1341.39	1.52	MX247061	2	0.2	0	0.01	0	0	0	75	TR	QV	QD		FG to MG, grey, grainsize increases towards bottom of the interval. and displays laths of amphiboles up to 0.5cm long w/ interstitial plagioclase. smth and rough jts thrt at 20 to 50 deg tca. one 1 foot wide vein of Qz with ribbons of wall rock ripped up at 4396.9 to 4397.9 and one 3 inch Qz vein at 4399.6'. Trace sulphide associated with Qz-vns.
1342.92	1.52	MX247062	2	0.1	0.02	0.01	0	0	0.03	75	TR		QD		MG, grey to bluish, phaneritic, with laths of amphibole up to 1cm and interstitial plagioclase. smth jts thrt at 20 to 60 deg tca. thin 1-2mm Qz-Cb vnlts thrt. trace sulphide.
1344.44	1.52	MX247063	2	2.5	0.04	0.02	0.01	0	0.07	90	DISS		QD		MF, grey to bluish phaneritic with laths of amph and interstitial plag. smth and rough jts thrt at 15 to 60 deg tca, occ thin 1-2mm Qz-Vn thrt locally adjacent to thin Qz vns is sulphides as Cp > Po and Pn occurring as fine disseminations thrt the rock.
1345.97	1.52	MX247064	2	1.5	0.02	0.01	0	0	0	70	STRS		QD		MG, grey to bluish, phaneritic with smth jts thrt at 20 to 40 deg tca often coated with Cb material, rare thin 1-2mm Fine Chalcopyrite stringers.

1346.61	0.64	MX247065	2	0.5	0.03	0.02	0	0.001	0.07	100	SPKS	IQD	MG to FG, grey to bluish, small 1-5mm laths of amphibole and interstitial plag thrt matrix supporting angular mafic clasts thrt. approx. 0.5% spks of Po/Pn and Cp. one rough jt at 50 deg tca. Upper QD/IQD contact is sharp, but broken.
1348.13	1.52	MX247067	2	1.5	0.03	0.02	0	0	0.1	90	SPKS	IQD	FG to MG, grey to greenish, apilitic matrix of amph and plag interstitial to angular and mostly mafic clasts, approx. 1.5% Po and Pn spks. weak fol thrt defined by elongation of clasts and sulphides at 20 to 30 deg tca.
1349.68	1.55	MX247068	2	1	0.03	0.03	0	0	0.1	70	SPKS	IQD	FG to MG, grey to bluish, apilitic matrix of amph and plag interstitial to rare angular and mostly mafic clasts, approx. 1.5% Po and Pn spks. weak fol thrt defined by elongation of clasts and sulphides at 20 to 30 deg tca. Bottom 6 inches of interval has healed and brecciated Chl-veinlits interstitial to greenish-altered QD clasts.
1351.21	1.52	MX247069	2	0.8	0.03	0.03	0	0	0.1	85	SPKS	IQD	FG to MG, grey to bluish, apilitic matrix of amph and plag interstitial to rare (<3%) angular and mostly mafic clasts, approx. 0.8% Po and Pn spks. weak fol thrt defined by elongation of clasts and sulphides at 20 to 30 deg tca.
1352.7	1.49	MX247070	2	1	0.02	0.01	0	0	0.03	90	SPKS	IQD	FG to MG, grey to bluish, apilitic matrix of amph and plag interstitial to rare (<3%) angular and mostly mafic clasts, approx. 1% Po and Pn spks. weak fol thrt defined by elongation of clasts and sulphides at 20 to 30 deg tca.
1354.23	1.52	MX247071	2	0.5	0.02	0.02	0	0.002	0.1	85	SPKS	QD	FG to MG, grey to bluish, apilitic texture made up of amph and plag. Clasts are nolonger apparent. approx. 0.5% Po and Pn spks. weak fol thrt defined by elongation of sulphides at 20 to 30 deg tca. occ thin 1-2mm Qz-Cb vnlt with greenish alteration selvedge.
1355.2	0.98	MX247072	2	0.5	0.04	0.06	0.01	0.009	0.17	80	SPKS	QD	FG to MG, grey to bluish, apilitic texture made up of amph and plag. Clasts are nolonger apparent. approx. 0.5% Po and Pn spks. weak fol thrt defined by elongation of sulphides at 20 to 30 deg tca. occ thin 1-2mm Qz-Cb vnlt with greenish alteration selvedge.
1357.94	2.74	MX247073	2	2	0.04	0.03	0.01	0.003	0.14	80	SPKS	IQD	FG to MG, grey to bluish, first 1' has Chlorite/quartz, infill along structure. unit is apilitic with amphiboles and plag. and rare, angular mafic clasts (2-3% by volume). Approx 2% spks of Po an Pn. weak fol at 25 to 35 deg tca defined by elongation of sulphide spks. occasional thin 1-2mm Qz-Cb vnlt thrt. Box 11 has been dropped and the whole box was taken as a single sample.

1358.43	0.49	MX247074	2	0.1	0.03	0.02	0	0.001	0.1	70	TR		IQD
1359.13	0.7	MX247075	2	0.1	0.01	0.01	0	0	0	10	TR	IQD	OLDI
1359.29	0.15	MX247076	2	0	0.05	0.02	0	0.002	0.07	60	SPKS	STRT	QD
1360.32	1.04	MX247077	2	0	0	0	0.01	0	0	35	NVS		OLDI
1361.36	1.04	MX247079	2	0	0	0.01	0.01	0	0	60	NVS	OLDI	STRT
1363.22	1.86	MX247080	2	0	0	0.01	0	0	0	10	NVS	OLDI	FLT
1365.14	1.92	MX247081	2	0	0	0	0.01	0	0	70	NVS		OLDI
1366.66	1.52	MX247082	2	0.2	0.02	0.02	0	0.001	0.07	75	SPKS		QD
1368	1.34	MX247083	2	0.5	0.04	0.03	0	0.004	0.1	70	BLBS		IQD
1369.53	1.52	MX247084	2	0.5	0.04	0.03	0	0.004	0.14	80	BLBS		IQD
1370.99	1.46	MX247085	2	0.5	0.03	0.03	0	0.002	0.1	80	SPKS		IQD

FG to MG, grey to bluish, apilitic, amph up to 4mm. w/ interstitial plag. smth and rough jts thrt at 50 to 80 deg tca, occ mafic subangular incusion, Trace sulph. Unit May be a small sill coming off the main Dyke

VFG, dark grey, aphanitic, strongly magnetic blocky core thrt with angular, broken core pieces. upper and lower contact is ~5-10 deg tca, and irregular in shape. Contact essentially runs the length of the core axis. Unit is highly magnetic.

MG to FG, grey to bluish, apilitic w/ amph up to 3mm and interstitial plag. occ spks of sulph. Weak fabric thrt defn. by elongation of sulphides. lower contact is at 45 deg tca. Local Jt surfaces have small amounts of gouge material.

VFG, dark grey, aphanitic, smth tjs thrt at 40 to 50 deg tca, often Jts are coated with smth Chlorite, NVS

VFG, dark grey, aphanitic, abundant smth and rough jts at various angles from20 to 50 deg tca, occ Smth jts are coated with muddy gouge. Unit is highly magnetic.

VFG, dark grey aphanitic, smth chl-lined jts thrt localy blocky/pulverized core, local broken surfaces coated by muddy gouge material. rare thin 1-2mm Irregular shaped Cb vnlts thrt. nvs.

VFG, dark grey, aphanitic, smth jts thrt at 60 to 70 deg tca, irregular Chl vnlts thrt. NVS.

FG, grey to bluish, needle-like amph up to 1cm long with interstitial plagioclase. smth tjs thrt at 60 to 70 deg tca, rare smth jts at 10 to 15 deg tca. local thin band up to 4 inches of aphanitic, and magnetic OLDI. rare spks of sulphide.

FG, grey to bluish, needle-like amph up to 1cm long with interstitial plagioclase. smth tjs thrt at 60 to 70 deg tca, rare smth jts at 10 to 15 deg tca. Occ bleb of Po and Pn. rare subrounded mafic inclusion.

FG, grey to bluish, amphibole up to 0.5cm with interstitial plag. smth jts trht at 20 to 50 deg tca, occ jt surface coated with Cb. rare bleb of po/Pn, rare subrounded mafic inclusion.

FG, grey to bluish, amph up to 0.5mm long with interstitial plag. smth jts thrt at 30 to 50 deg tca, spks of Po and Pn thrt. occ smth jts thrt.

1372.51	1.52	MX247086	2	0.5	0.04	0.03	0	0.003	0.14	80	SPKS	IQD	FG, grey to bluish, amph up to 5mm long with interstitial plag. smth ths thrt at 30 to 50 deg tca, rare thin Qz-Cb vnlts thrt. rare spks of sulph, rare subrounded mafic clasts thrt.
1374.01	1.49	MX247087	2	1	0.04	0.03	0	0.005	0.17	85	BLBS	IQD	FG, grey to bluish, amph up to 5mm long, w/ interstitial plag. occ smth jts thrt at 30 to 50 deg tca, rare blebs of sulphide, occ rounded mafic clasts thrt.
1375.53	1.52	MX247088	2	0.5	0.08	0.04	0	0.009	0.24	75	SPKS	IQD	FG, grey to bluish, amph up to 5mm long, w/ interstitial plag. occ smth jts thrt at 30 to 50 deg tca, occ thin <1mm Cb vnlt thrt. rare spks of sulphide, occ rounded mafic clasts thrt.
1376.99	1.46	MX247089	2	0.5	0.03	0.03	0	0.001	0.14	90	SPKS	IQD	FG, grey to bluish, amph up to 5mm long, w/ interstitial plag thrt. occ shallow smth jt thrt at 5 to 10 deg tca. rare spks of sulphide, occ subrounded mafic clasts thrt.
1377.85	0.85	MX247090	2	0.2	0.03	0.02	0	0	0.1	80	TR	IQD	FG, grey to bluish, elongated amph up to 5mm long w/ interstitial plag thrt. occ smth jts thrt at 30 to 40 deg tca. trace sulph.
1379.37	1.52	MX247091	2	0.1	0.01	0.02	0	0.001	0.03	95	TR	QD	FG, grey to bluish, amph up to 5mm long w/ interstitial plag thrt. rare smth jts at 50 to 60 deg tca. no apparent clasts. trace spks sulphide.
1380.29	0.91	MX247092	2	0.1	0.02	0.03	0	0.01	0.07	70	TR	QD	FG, grey to bluish, amph to to 5mm long, increasing Biotite mineralogy component. smth and rough jts thrt at 60 to 80 deg tca. Trace sulphide.
1381.08	0.79	MX247093	2	0	0.02	0	0	0	0.03	80	NVS	MTSD	QD	FG, bluish, equigranular BT, amph and plag. irregular thin Cb vnlts thrt. smth jts thrt at 50 to 60 deg tca. apparent mixing zone between QD and MTSD. lower contact is sharp with MTSD.
1381.69	0.61	MX247094	2	0	0.01	0.01	0	0.001	0	40	NVS		MTSD	FG, light grey, thin laminated bedding texture thrt at 30 to 40 deg tca, smth jts thrt commonly along bedding fabric. NVS.
1383.21	1.52	MX247095	2	0	0.01	0.01	0	0	0	75	NVS		MTSD	FG, light grey, laminated bedding fabric thrt at 30 to 40 deg tca, occ smth jts thrt commonly along bedding fabric, occ rough jt oblique to bedding. NVS.
1384.74	1.52	MX247097	2	0	0.01	0.01	0	0	0	80	NVS		MTSD	FG, light grey, rare smth jt thrt typically along a weak bedding fabric at 30 to 40 deg tca, NVS.
1396.9	12.16									75		QTZT	MTSD	FG, light grey to grey, weak bedding thrt at 30 to 40 deg tca. localy areas of sandy-Qz rich domains. smth jts thrt at 40 to 60 deg tca. Mineralogy is Bt-rich. NVS.
1420.31	23.41									70		QTZT	MTSD	FG, light grey, local weak bedding fabric, at 20 to 30 deg tca, smth jts thrt often at shallow angels TCA from 5 to 10 deg. occ rough jts thrt at 40 to 60 deg tca, rare thin (<1mm Chl vnlts thrt). NVS.

1422.87	2.56	MX247098	2	0	0.01	0.01	0	0.001	0	80	NVS	MTSD	QD	FG, grey to bluish, sugary textured with porphyroblastic Biotite and amphibole??, upper contact is sharp at 20 deg tca with sheeted Chl vnlts parallel to contact. Rough and smth jts thrt. No clear and apparent bedding, smht and rough jts thrt at various angles. NVS. Unit may be transition or mixed Seds and QD or hornfelsed MTSD from the diabase below.
1423.05	0.18	MX247099	2	0	0.01	0.01	0	0	0	100	NVS		QD	FG, grey to bluish sugary amph and Bt thrt, apparently massive with no jts or bedding. sugary texture thrt. Unit as described above from 4659.8 to 4668.2 sending this interval for whole rock geochemical analysis.
1423.45	0.4	MG229902	5	0	0	0.01	0	0	0	100	NVS	DIA	QD	FG to VFG, grey to bluish, Irregular, and rounded potato-shaped inclusions of VFG bluish diabase with interstitial sugary, bluish QD? occ thin <1mm Qz-Cb vnlts thrt with grey alteration selvedges up to 3m wide. No jts thrt, NVS.
1424.09	0.64	MG229903	5	0	0	0.01	0	0	0	95	NVS		DIA	VFG to FG, grey to bluish green, apilitic, abundant Qz-CB vnlts mostly near top of interval. rare smth jts along Cb vnlts. NVS.
1424.48	0.4	MG229904	5	0	0.01	0.01	0	0	0	60	NVS	DIA	QD	FG to VFG, grey to bluish, irregular upper and lower contacts, and irregular potato-shaped inclusions of diabase as from 4670.1 to 4672.2 with interstitial and sugary possible QD.
1425.58	1.1	MG229905	5	0	0.01	0.01	0	0	0	85	NVS		DIA	VFG, grey to bluish green, apilitic, mostly amphibole and plagioclase.common Qz-Cb vnlts thrtocc smth jt thrt mostly along Cb vnlts. NVS.
1425.73	0.15	MG229906	5	0	0.01	0.01	0	0	0	100	NVS		DIA	VFG, grey to bluish, apilitic, dominantly VFG amph and plagioclase. Section selected for WHOLE ROCK analysis. Unit was selected to be vein free for analysis.
1426.43	0.7	MG229907	5	0	0.01	0.01	0	0	0	85	NVS		DIA	VFG, grey to bluish green, apilitic, mostly amphibole and plagioclase. common Qz-Cb vnlts thrt. occ smth jt thrt mostly along Cb vnlts. NVS.
1426.62	0.18	MG229908	5	0	0	0.01	0	0	0	90	NVS	DIA	QD	FG to VFG, grey to bluish, irregular upper and lower contacts, and irregular potato-shaped inclusions of diabase as from 4670.1 to 4672.2 with interstitial and sugary possible QD.
1427.38	0.76	MG229909	5	0	0.01	0.01	0	0	0	75	NVS		DIA	VFG, grey to bluish green, apilitic, mostly amphibole and plagioclase. common Qz-Cb vnlts thrt. Common smth jt thrt mostly along Cb vnlts. NVS.
1427.84	0.46	MG229910	5	0	0.01	0.01	0	0	0	100	NVS		DIA	VFG, grey to bluish green, apilitic, mostly amphibole and plagioclase. common Qz-Cb vnlts thrt. occ smth jt thrt mostly along Cb vnlts. NVS.

1428.38	0.55	MG229911	5	0	0.01	0.01	0	0	0	60	NVS		MTSD	FG, grey to bluish, weak bedding fabric thrt at 20 to 30 deg tca, Thin 1-2mm Qz-Cb vnlts thrt. occ smth jts thrt typically along Cb vnlts. NVS.
1429.21	0.82	MG229912	5	0	0.01	0.01	0	0	0	90	NVS		MTSD	FG, grey to bluish, bedding fabric is apparent thrt, typically at 20 to 30 deg tca, occ rough and smth jt thrt at 35 to 60 deg tca, rare thin <1mm Cb vnlt thrt. NVS.
1439.57	10.36									80			MTSD	FG, grey to bluish, local weak bedding fabric at 20 to 30 deg tca, common smth jts thrt often shallow at 15 to 25 deg tca, icc thin and irregular (<1mm) Qz-Cb vnlt thrt. occ irregular and thin (<1mm) Bt-Chl vnlt thrt. NVS.
1439.72	0.15	MG229913	5	0	0	0.01	0	0.001	0	100	NVS		MTSD	FG to MG, grey to bluish 6 inches of barren and vein-free MTSD taken for whole rock geochemical analysis.
1444.23	4.51									90			MTSD	FG to MG, grey to bluish, local weak bedding at 20 to 30 deg tca, occ rough and smth jts thrt at 20 to 60 deg tca, icc thin <1mm Qz-Cb vnlts thrt. NVS.
1460.48	16.25									80		QTZT	MTSD	FG to MG, grey to bluish, smth and rough jts thrt at 20 to 50 deg tca. Often jts are coated in Qb material. Thin <1mm Qz-Cb vnlts thrt. occ thin <1mm irregular Chl/Bt vnlts thrt. Unit alternated from sandy to muddy beds. Locall ybeddin fabric @ 25 to 35 deg tca. NVS.
1461.52	1.04									85			DIA	FG to VFG, grey to bluish green. aphanitic, smth jts thrt at 60 to 70 deg tca, OFten Jts are coated with Cb matrial. Abundant thin ~1mm Qb vnlts thrt. upper and lower contacts are diffuse and may be altered.
1484.99	23.47									90		MTSD	QTZT	FG, grey to bluish, local weak bedding fabric defined by alternating sandy and mud-rich layers typically at 30 to 40 deg tca. occ smth jts thrt at 45 to 50 deg tca, occ thin <1mm Qz-Cb vnlt thrt. rare thin <1mm and irregular shaped Chl-vnlt thrt.NVS
1497.33	12.34									75			MTSD	FG, grey to bluish, Local weak beddig fabric thrt at 40 to 50 deg tca. smth and rough jts thrt at 20 to 70 deg tca, often Jts are coated in Qz-Cb material. local weak Ep? and chl aleration.
1526.74	29.41									90		MTSD	QTZT	FG to MG, grey to bluish, local weak bedding fol at 35 to 45 deg tca, mostly sandy Qz-rich beds thrt. rare 0.5 to 1cm Qz-vnlts thrt. occ thin 1-2mm carbonate vnlts thrt. ocat irregular and anastomosing Chl vnlts thrt. occ smth jts thrt at 30 to 60 deg tca.

1551.43	24.69									80	QTZT	MTSD	FG to MG, grey to bluish, local thinly laminated beds on a centimeter scale. locally graded bed ing is apparent facing up the hole. smth jts thrt often along bedding fabric but also at oblique angles from 20 to 60 deg tca. occ thin 1-2mm Qz-Cb vnlts thrt.
1567.77	16.34									80	QTZT	MTSD	FG to CG, grey to bluish, smith and rough jts thrt at 30 to 70 deg tca, interbedded fine, muddy, thin beds with coarser sand and Qz rich beds thrt. bedding fabric at 40 to 50 deg tca, occ thin <1mm Cb vnlts thrt.
1580.42	12.65									75		MTSD	FG, grey to bluish, thinly laminated mud-rich beds thrt on a centimeter scale. smth jts thrt often along bedding fabric. occ thin <1mm Cb vnlts thrt.
1594.41	13.99									85		CONG	FG to CG, grey to bluish with white clasts, moderately well sorted. Clasts are dominantly sand to mud sized with occ small pebble (~1cm) with rare large pebbles (>5cm). muddy matrix is mica-rich. rare thin <1mm Cb vnlts.
1598.68	4.27									80		QDIA	FG to MG, grey to greenish, apilitic, mineralogy is dominantly Bt, Amph and Qz. smth and rough jts thrt at 50 to 60 deg tca, occ thin <1mm Qz-Cb vnlts thrt. upper contact is at 30 deg tca, and chilled.
1598.92	0.24	MG229915	5	0	0.01	0	0	0	0	100	NVS	QDIA	FG to MG, grey to greenish, apilitic, mineralogy is dominantly Bt, Amph and Qz. smth and rough. Small sample selected for whole rock analysis. Sample interval was chosen to be homogenous and free of veining. *****WHOLE ROCK ANALYSIS****
1601.42	2.5									80		QDIA	FG to MG, grey to greenish, apilitic, mineralogy is dominantly Bt, Amph and Qz. smth and rough jts thrt at 50 to 60 deg tca, occ thin <1mm Qz-Cb vnlts thrt. lower contact is at 30 deg tca, and chilled.
1608	6.58									75		CONG	FG to CG, grey to bluish with white clasts, moderately well sorted. smth jts thrt typically at 30 to 50 deg tca. Clasts are dominantly sand to mud sized with occ small pebble (~1cm) with rare large pebbles (>5cm). muddy matrix is mica-rich. rare thin <1mm Cb vnlts.
1619.62	11.61									90		CONG	FG to MG, grey to bluish whit local white clasts. poorly sorted with fine muddy to sandy material and large angular pebbles. occ rough and smth jts thrt at 30 to 80 deg tca. occ thin 1-3mm Qz-Cb vnlts thrt.

1664.21	44.59		90	QTZT	CONG	MG to CG, grey to blueish, moderately well sorted, clasts are rounded dominantly coarse sand to small pebbles (~2-5mm) occ larger white, rounded clasts typically 0.5 to 1cm wide. rare smth and rough jts thrt typically at 40 to 50 deg tca.
1685.39	21.18		80	QTZT	CONG	FG to CG, grey to bluish, smth and rough jts thrt at 45 to 50 deg tca. moderately well sorted dominantly coarse sand and small pebbles (~2-5mm). occ thin Qz-Cb vnlt thrt. locally mechanically ground core.
1689.69	4.3		65		QDIA	FG, grey, apilitic to aphanitic mafic dyke appears as from 5231' to 5254' abundant smth jts thrt typically at 45 to 50 deg tca, common thin 1-3mm Qz-Cb vntls thrt.
1695.15	5.46		60		CONG	FG to CG, grey to bluish, smth and rough jts thrt at 45 to 50 deg tca. moderately well sorted dominantly coarse sand and small pebbles (~2-5mm). occ thin Qz-Cb vnlt thrt. localy mechanically ground core.
1710.54	15.39		75		CONG	FG to CG, grey to bluish, moderately to poorly sorted dominantly coarse sand and pebbles from 2 mm to 5 cm. commin smth jts thrt often X-ing eachother. occ thin 1-3mm Qz-Cb vnlts thrt.

BOREHOLE	PROPERTY	PROPERTY LEVEL	DEPTH	ACCT #	SYS	NORTHING	EASTING	ELEV	SIZE	START DATE	END DATE	FROM	TO	TYPE	RESOURCE APPLIED	STATUS
1368910	Totten	180	0 1261.87	R000929.0	1	353490	291749	800	NQ	29/08/2017 13:03:17	04/10/2017 13:03:17			EXPLN	Yes	Complete

DEPTH	AZIMUTH	DIP
0	175.19	-60.48
9.14	175.4037	-60.4566
18.29	175.685	-60.2041
27.43	175.5462	-59.9419
36.58	175.5765	-59.9442
45.72	175.6037	-59.9448
54.86	175.6133	-59.9905
64.01	175.6784	-60.0769
73.15	175.9625	-60.0433
82.3	176.0721	-60.0683
91.44	176.3276	-60.0434
100.58	176.4307	-60.0944
109.73	176.6437	-60.1244
118.87	176.9565	-60.1477
128.02	177.0809	-60.1094
137.16	177.3777	-59.9806
146.3	177.8228	-59.7234
155.45	178.1703	-59.4781
164.59	178.0079	-59.0964
173.74	178.0305	-58.9214
182.88	178.3452	-59.0918
192.02	178.7935	-59.0401
201.17	179.0055	-59.2133
210.31	179.4145	-59.3096
219.46	179.5592	-59.2997
228.6	179.8285	-59.3238
237.74	180.0491	-59.2252
246.89	180.6308	-59.094
256.03	180.891	-59.1766
265.18	181.1502	-59.1625
274.32	181.5306	-59.0638
283.46	181.8915	-59.1402
292.61	182.1965	-59.0485
301.75	182.6379	-59.1039
310.9	182.9428	-59.238
320.04	182.9491	-59.1335
329.18	183.2341	-59.0981
338.33	183.4114	-59.1262
347.47	183.749	-59.1698
356.62	183.8632	-59.1576
365.76	184.2897	-59.3347
374.9	184.5795	-59.2227
384.05	184.725	-59.2361
393.19	184.9006	-59.3138
402.34	185.1439	-59.3242
411.48	185.4883	-59.3762

420.62	185.7746	-59.3881
429.77	185.8043	-59.4062
438.91	185.9283	-59.5497
448.06	186.5005	-59.4655
457.2	185.3812	-58.9324
466.34	185.281	-57.9614
475.49	185.8571	-55.6401
484.63	186.5061	-53.0565
493.78	187.7584	-50.0783
502.92	188.3956	-49.8423
512.06	188.7523	-49.5446
521.21	189.0707	-49.1386
530.35	189.3123	-49.0719
539.5	187.1589	-48.9504
548.64	185.2552	-48.033
557.78	184.6285	-47.7194
566.93	182.3416	-47.4064
576.07	182.4178	-46.4953
585.22	182.5634	-46.3566
594.36	182.8402	-46.1886
603.5	183.0011	-46.1478
612.65	183.2973	-45.8632
621.79	183.5204	-45.8277
630.94	183.7385	-45.5346
640.08	183.9407	-45.4109
649.22	184.1202	-45.2319
658.37	184.3058	-45.2945
667.51	184.2974	-44.9966
676.66	184.4521	-44.985
685.8	184.7358	-44.9717
694.94	184.8884	-44.7737
704.09	185.0894	-44.679
713.23	185.3587	-44.5081
722.38	185.615	-44.3901
731.52	185.7196	-44.1458
740.66	185.8918	-44.311
749.81	185.9931	-44.3904
758.95	186.1819	-44.3184
768.1	186.302	-44.2467
777.24	186.4421	-44.2538
786.38	186.5151	-44.3401
795.53	186.6807	-44.2224
804.67	186.8323	-44.1044
813.82	186.9541	-44.2065
822.96	187.0777	-44.2316
832.1	187.2017	-43.9939
841.25	187.2778	-44.083

850.39	187.509	-44.0037
859.54	187.6982	-43.7679
868.68	187.9183	-43.6308
877.82	188.1805	-43.3522
886.97	188.4015	-43.0223
896.11	188.6787	-43.0539
905.26	188.9796	-42.8382
914.4	189.3063	-42.4785
923.54	189.4309	-41.9871
932.69	189.6906	-42.0794
941.83	189.9971	-41.9832
950.98	190.0782	-41.6789
960.12	190.633	-41.7671
969.26	190.8851	-41.479
978.41	191.0844	-41.605
987.55	191.1938	-41.3771
996.7	191.2194	-41.5088
1005.84	191.2382	-41.4259
1014.98	191.8296	-41.4357
1024.13	191.69	-41.3014
1033.27	191.5503	-41.1672
1042.42	191.5646	-41.0772
1051.56	191.7872	-41.0471
1060.7	191.996	-40.9758
1069.85	192.1987	-40.903
1078.99	192.3852	-40.9331
1088.14	192.5875	-40.9289
1097.28	192.8101	-40.8808
1106.42	193.0047	-40.8607
1115.57	193.1734	-40.8418
1124.71	193.2035	-40.7696
1133.86	193.3395	-40.7164
1143	193.6042	-40.6863
1152.14	193.8926	-40.642
1161.29	194.1775	-40.5771
1170.43	194.3941	-40.3966
1179.58	194.5722	-40.3
1180.8	194.59	-40.3

DEPTH
1496
1762
1841

METERS		SAMPLE INFO		PERCENT					GRAMS/TONNE						
DEPTH	LENGTH	SAMPLE	CODE	EST	CU	NI	CO	AS	TPM	RQD	ORE	MINOR ROCK	ROCK	MILLSTOR	DESCRIPTION
0	0														Collar
3.17	3.17									0			OB		Overburden until 10.4ft. This is the first piece of QTZT.
9.36	6.19									70			QTZT		QTZT, lt gry with possibly a couple whisps of SUBX. No sulphides. A couple segments of this interval has fractures with oxidization (rusty brown) where ground water appears to have influenced it. The QTZ that is fractured appears to be broken further from mechanical drilling. Drillers reported this as a structure and cemented it but does not appear to be a major significant structure and just broken and blocky ground from drilling.
41.79	32.43									80		QTZT	SUBX		SUBX hosted with QTZT as described above. The QTZT is massive, competent, lt grey, non-Mag, with an occasional weak fabric visible at approx. 50deg tca. The SUBX occurs throughout approx. 40%-70% of this interval as whispy vns ranging from 1-2inches to bands as large as 1-2ft. It is possible this interval is up to 70% SUBX because of large blocks of QTZT that may not be insitu but may actually be boulders. Some of the blocks could be 2-3ft in length, and appear as very felsic qtz rich inclusions. Fg drk gry matrix with abundant inclusions of the host QTZT. No sulphides present.
122.99	81.2									90			QTZT		QTZT as described above, massive, competent, hmgs, lt gry throughout. Minor small stringers of SUBX can occasionally be seen within the top 40ft but nothing significant. No sulphides identified.

130.82	7.83		70	QTZT	SUBX
135.36	4.54		80		QTZT
137.22	1.86		0	QTZT	FLT
176.42	39.2		80	QTZT	
178.46	2.04		90	TRAP	
190.13	11.67		85	QTZT	

SUBX cross cutting the QTZT in a chaotic orientation with abundant inclusions of the QTZT. The SUBX can be seen cross cutting at 45deg tca, 60deg tca, and also subpll tca. Not consistent. Fg drk gry matrix hosting local QTZT inclusions. Larger interval of 2-3ft and small er vns of 2-3inches. About 30-40% of this total interval is SUBX. No sulphides present.

QTZT as described above, massive, competent, hmgs, lt gry throughout. No sulphides present.

Major flt with significant movement and gouge. Plane of gouge appears to occur at 40deg tca. Broken and blocky sections are also rehealed with qtz and qtz-carb. No sulphides present.

QTZT as described above, massive, competent, hmgs, lt gry throughout. A weak to moderate fabric is present occurring at about 20deg tca. No sulphides present.

TRAP dyke, sharp upper and lower contacts occurring at 30deg tca. Slight 1inch chill along the cts. The dyke is non-magnetic and massive/hmgs throughout with very little composition change. Gry in color, with a weak hue of green/brown. It has abundant small white phenocryst that speckle the entire unit. No sulphides present.

QTZT as described above, massive, competent, hmgs, lt gry throughout. No sulphides present. Note at the lower CT adjacent the Trap dyke below there is about 1ft of highly brecciated qtzt with Qtz-carb vnlts throughout.

192.05	1.92			70		TRAP	TRAP dyke, sharp upper and lower contacts occurring at 65deg tca. Slight 1 inch chill along the cts. The dyke is non-magnetic and massive/hmgs throughout with very little composition change. Gry in color, with a weak hue of green. Small white phenocryst that speckle the entire unit. No sulphides present.
214.58	22.52			80		QTZT	QTZT as described above, massive, competent, hmgs, lt gry throughout. A very weak fabric is present occurring at about 30deg tca. No sulphides present.
217.02	2.44			80	QTZT	SUBX	SUBX hosted within the QTZT, strong fabric at 60deg tca. Blocks and inclusions of local Qtzt. Bt present defining fabric with qtz/qtz-carb. No sulphides present.
226.59	9.57			80		QTZT	QTZT as described above, fg, grey competent, massive and hmgs texture. No sulphides present.
232.65	6.07			80	QTZT	SUBX	SUBX hosted within the QTZT, moderate fabric at random orientations. Blocks and inclusions of local Qtzt. Bt present defining fabric with qtz/qtz-carb. No sulphides present. Some blocks are fist sized or slightly larger.
241.92	9.27			80		QTZT	QTZT as described above, fg, grey competent, massive and hmgs texture. No sulphides present.
249.88	7.96			70		DIA	vFg Blk DIA with sharp chilled contacts at 30-40deg tca. Slight coarsening to a fg towards the middle of the dyke. No significant structures just a couple fractures that have been broken by drilling.
253.01	3.14			85	QTZT	SUBX	Subx hosted within the QTZT. Large fist sized QTZT blocks within the SUBX. This interval consist of about 60% SUBX and the rest QTZT. No sulphides. The subx matrix is lt gry and just slightly darker than the host. Fabric of the subx can be chaotic.

269.23	16.22		85		QTZT	QTZT as described above, fg, grey competent, massive and hmgs texture. No sulphides present.
273.92	4.69		0	STRT	FLT	Flt that is broken and blocky. Appears to have a subpll fracture plane at 0-5deg tca. Minor gouge along frac plane. No sulphides present.
291.18	17.25		80	QTZT	SUBX	SUBX throughout the qtzt. Significant subx in large bands over 20ft in continuous lengths. No sulphides. Large and small clast ranging from cm - 3-4inches in length or larger. SUBX consist of about 70% of this interval.
299.25	8.08		85	MTSD	QTZT	QTZTs as above except this interval is stressed and has a txt that is brecciated with rehealed fractures. The qtzt has a slightly darker appearance and looks more like a fg ss MTSD, but likely just appears this way because the qtzt is more stressed/metamorphosed. No sulphides present.
299.31	0.06		90		LAMP	LAMP
305.23	5.91		85	MTSD	QTZT	QTZTs as above between 955.3-981.8ft except this interval is divided by the Lamp dyke. This interval is stressed and has a txt that is brecciated with rehealed fractures. The qtzt has a slightly darker appearance and looks more like a fg ss MTSD, but likely just appears this way because the qtzt is more stressed/metamorphosed. No sulphides present.
310.07	4.85		85	DIA	LAMP	Lamprophyre dyke consisting of bt and amph. Is ver mafic and has a dark green color. Appears to be chloritic. Intrusive unit with sharp cts. Upper ct at 35deg tca and lower ct at 80deg tca. Contains abundant ~35% Bt flakes. The BT is aligned with a preferred orientation of 35-45deg tca. No sulphides, non magnetic. See BH1368900 for a similar unit. Likely a continuation.

333.85	23.77	90	MTSD	QTZT	QTZTs as above described as stressed and has a txt that is brecciated with rehealed fractures. The core is competent. The qtzt has a slightly darker appearance and looks more like a fg ss MTSD, but likely just appears this way because the qtzt is more stressed/metamorphosed. No sulphides present. FLT within the QTZT with minor gouge. The upper half of this interval is competent but has a chaotic fabric almost like SUBX cross cuts this interval. No sulphides present.
336.47	2.62	50	STRT	FLT	
342.84	6.37	85		QTZT	QTZT, massive competent QTZT, little to no fabric. No sulphides present.
344.82	1.98	90		LAMP	Lamprophyre dyke consisting of bt and amph. Colour is very mafic and is dark green. Appears to be chloritic. Intrusive unit with sharp cts. Upper ct is sharp but not measureable, lower ct at 40deg tca. Contains abundant ~35% Bt flakes. No sulphides, non magnetic. Similar LAMP dykes seen above.
362.29	17.47	85		QTZT	QTZT as described above, competent, massive, hmgs with very minor fract and joint sets occurring 30-40deg tca. No sulphides.
370.82	8.53	0	QTZT	FLT	FLT. Broken and blocky core with some gouge along fract planes. Minor gouge and lots of small bits and fragments of core throughout this interval.
386.76	15.94	75		QTZT	QTZT as described above except this interval becomes slightly darker towards the base of the interval where you can see a definite lithological contact between the sed layers. The lower part of this interval appears more like a MTSD and has a slight increase in fabric and laminations. As a result becoming more broken and blocky. No sulphides present.

418.83	32.06		85		QTZT	QTZT as described above as being competent, massive, hmgs with only minor fractures. No sulphides present. Small flt with evidence of movement and gouge present along fracture planes. Abundant broken and blocky fragments in this interval.
419.5	0.67		0	QTZT	FLT	
425.99	6.49		85		QTZT	QTZT as described above as being competent, massive, hmgs with only minor fractures. No sulphides present. NOTE THAT THERE WAS A BLOCK ERROR. WAS 432M BUT AFTER ROD COUNT IT IS 426M. THIS ALSO MARKS THE CHANGE FROM HQ TO NQ.
457.41	31.42		85		QTZT	QTZT as described above as being competent, massive, hmgs with only minor fractures. No sulphides present. Wedge at 1501.8ft, Button is centered in core.
457.75	0.34		0		WDG	
481.92	24.17		70	MTSD	QTZT	QTZT similar to above but becomes a bit more stressed with internal rehealed fractures. A lamination or weak-moderate fabric is present at 20-30deg tca. Appears more like what has been described as a MTSD with slightly less qtz and more of a fg unit slightly darker. Still classified as a fg qtzt. No sulphides. Possible small structure between 1574.8-1581.1ft (broken and blocky core, mostly mechanical drilling).
540.17	58.25		85		QTZT	QTZT, massive, hmgs, competent, no significant sulphides. Very few fracts.
542.42	2.26		0		WDG	WDG occurs between 1772.2 to 1779.6ft. There is a block that says correction, so rod count must be off. Correct footage is 1779.6ft. Looks like graphite plug may have been used and the button is centered.

561.38	18.96								85		QTZT	QTZT as described above as being competent, massive, hmgs with only minor fractures. No sulphides present.
562.84	1.46								0		WDG	WDG, button is centered.
563.58	0.73								85		QTZT	QTZT as described above as being competent, massive, hmgs with only minor fractures. No sulphides present.
576.32	12.74								30	QTZT	STRT	Structure with broken and blocky sections of core. Fracture planes occur as subpll tca which has increased the broken core via mechanical drilling process. Minor evidence of a gouge indicating some minor movement.
608.99	32.67								80		QTZT	QTZT as described above as being competent, massive, hmgs with only minor fractures. Very little different from the intervals above and below. This interval may have a slight increase in laminations or a weak fabric. No sulphides present.
680.83	71.84								90		QTZT	QTZT as described above as being competent, massive, hmgs with only minor fractures. No sulphides present.
695.22	14.39								70		TRAP	Fg mafic with minor (less than 5%)small white phenocrysts, non-magnetic, Trap Dyke. Contacts are weak and transitional over a 1-2inches. The upper CT is broken. No sulphides present. Minor-moderate qtz-carb vnlts cross cutting. Common joint sets and fractures. Overall, massive and hmgs fg drk grey dyke.
711.01	15.79								85		QTZT	QTZT as described above as being competent, massive, hmgs with only minor fractures. No sulphides present.
712.32	1.31	MG229551	5	0	0	0	0	0	0	85	NVS	QTZT	QTZT as above except this is a buffer sample above QD. No sulphides present.
713.48	1.16	MG229552	5	0	0.01	0	0	0	0	85	NVS	QTZT	QTZT as above except this is a buffer sample above QD. No sulphides present.

714.12	0.64	MG229553	5	0	0	0	0	0	0	85	NVS	QTZT	QTZT as above except this is a buffer sample above QD. No sulphides present.
715.49	1.37	MG229554	5	0	0.01	0.01	0	0	0	85	NVS	QD	QD with a transitional contact from QTZT into QD. Challenging to pin point exact Ct. However, slight increase in grain size, and an increase in qtz-carb vnlts throughout. Otherwise hmgs txt being relatively competent. No sulphides present.
717.22	1.74	MG229555	5	0	0.01	0.01	0	0	0.03	85	NVS	QD	QD with a mg, grey, qtz-carb vnlts cross cutting, relatively competent and hmgs. No significant sulphides.
720	2.77	MG229556	5	0	0.01	0.01	0	0.001	0	85	NVS	QD	QD with a mg, grey, qtz-carb vnlts cross cutting, relatively competent and hmgs. No significant sulphides.
722.99	2.99	MG229557	5	0	0.01	0.01	0	0.001	0	85	NVS	QD	QD with a mg, grey, qtz-carb vnlts cross cutting, relatively competent and hmgs. No significant sulphides.
724.81	1.83	MG229558	5	0	0.01	0.01	0	0.001	0	85	NVS	QD	QD with a mg, grey, qtz-carb vnlts cross cutting, relatively competent and hmgs. No significant sulphides.
725.7	0.88	MG229559	5	0	0.01	0.01	0	0	0.03	85	NVS	QD	QD with a mg, grey, qtz-carb vnlts cross cutting, relatively competent and hmgs. Very BT and feldspar rich. No significant sulphides. Lower CT with the IQD is poorly defined but occurs at about 30deg tca.
727.19	1.49	MG229560	5	0.5	0.03	0.02	0	0	0.07	85	TR	IQD	IQD. Matrix is similar to the QD above, grey, mg with cross cutting qtz-carb, except abundant inclusions of mtgb many of which have been mostly altered to amphibolite. Average size is less than 1 inch, but occasionally large 2-3 inches appear. Diss sulphides occur at less than 1% overall.
728.99	1.8	MG229562	5	0.5	0.03	0.02	0	0.001	0.07	85	TR	IQD	IQD as described above. Matrix is similar to the QD above, grey, mg with cross cutting qtz-carb, except abundant inclusions of mtgb many of which have been mostly altered to amphibolite. Average size is less than 1 inch, but occasionally large 2-3 inches appear. Diss sulphides occur at less than 1% overall.

732.01	3.02	MG229563	5	0.5	0.02	0.02	0	0	0.07	85	TR		IQD	IQD as described above. Matrix is similar to the QD above, grey, mg with cross cutting qtz-carb, except abundant inclusions of mtgb many of which have been mostly altered to amphibolite. Average size is less than 1 inch, but occasionally large 2-3 inches appear. Diss sulphides occur at less than 1% overall.
734.99	2.99	MG229564	5	0.5	0.02	0.01	0	0.001	0.03	85	TR		IQD	IQD as described above. Matrix is similar to the QD above, grey, mg with cross cutting qtz-carb, except abundant inclusions of mtgb many of which have been mostly altered to amphibolite. Average size is less than 1 inch, but occasionally large 2-3 inches appear. Diss sulphides occur at less than 1% overall.
738.01	3.02	MG229565	5	0.5	0.06	0.05	0	0.001	0.21	85	TR		IQD	IQD as described above. Matrix is similar to the QD above, grey, mg with cross cutting qtz-carb, except abundant inclusions of mtgb many of which have been mostly altered to amphibolite. Average size is less than 1 inch, but occasionally large 2-3 inches appear. Diss sulphides occur at less than 1% overall.
739.87	1.86	MG229566	5	0.5	0.02	0.01	0	0	0.03	85	TR		IQD	IQD as described above. Matrix is similar to the QD above, grey, mg with cross cutting qtz-carb, except abundant inclusions of mtgb many of which have been mostly altered to amphibolite. Average size is less than 1 inch, but occasionally large 2-3 inches appear. Diss sulphides occur at less than 1% overall.
741.27	1.4	MG229567	5	0.5	0.03	0.03	0	0	0.1	85	TR		IQD	IQD as described above. Matrix is similar to the QD above, grey, mg with cross cutting qtz-carb, except abundant inclusions of mtgb many of which have been mostly altered to amphibolite. Average size is less than 1 inch, but occasionally large 2-3 inches appear. Diss sulphides occur at less than 1% overall. A section of this interval has little to no inclusions and could be a QD block.

742.89	1.62	MG229568	5	0	0.01	0.01	0	0	0	0	NVS	DIA	DIA, fg, magnetic, black, chilled and very broken and blocky. Seems to be over torqued and broken mostly due to mechanical drilling. Chlorite coated fracture planes are present. No sulphides.
743.99	1.1	MG229569	5	0.5	0.02	0.02	0	0	0.07	85	TR	IQD	IQD as described above. Matrix is similar to the QD above, grey, mg with cross cutting qtz-carb, except abundant inclusions of mtgb many of which have been mostly altered to amphibolite. Sections of this interval have less inclusions than the IQD above and below. Average size is less than 1 inch, but occasionally large 2-3 inches appear. Diss sulphides occur at less than 1% overall.
747	3.02	MG229570	5	0.5	0.03	0.02	0	0	0.07	85	TR	IQD	IQD as described above. Matrix is similar to the QD above, grey, mg with cross cutting qtz-carb. A large section about 5ft in the middle has little to no inclusions. Possibly a large QD block. Diss sulphides occur at less than 1% overall.
749.99	2.99	MG229572	5	0.5	0.03	0.02	0	0.001	0.1	85	TR	IQD	IQD as described above. Matrix is similar to the QD above, grey, mg with cross cutting qtz-carb, except abundant inclusions of mtgb many of which have been mostly altered to amphibolite. Average size is less than 1 inch, but occasionally large 2-3 inches appear. Diss sulphides occur at less than 1% overall.
751.33	1.34	MG229573	5	0.5	0.02	0.01	0	0	0.03	85	TR	IQD	IQD as described above. Matrix is similar to the QD above, grey, mg with cross cutting qtz-carb, except abundant inclusions of mtgb many of which have been mostly altered to amphibolite. Average size is less than 1 inch, but occasionally large 2-3 inches appear. Diss sulphides occur at less than 1% overall.
751.58	0.24	MG229574	5	0	0	0	0	0.017	0	90	NVS	DIA	DIA, fg, Magnetic, chilled black with sharp cts upper and lower at 55-60deg tca. No sulphides present.

753.62	2.04	MG229575	5	0.5	0.03	0.03	0	0	0.1	85	TR		IQD	IQD as described above, grey, mg with cross cutting qtz-carb vnlts. Inclusions of mtgb many of which have been mostly altered to amphibolite. Average size is less than 0.5 inches, but occasionally large 2-3 inches appear. Diss sulphides occur at less than 1% overall.
756	2.38	MG229576	5	0.5	0.02	0.03	0	0.002	0.1	85	TR		IQD	IQD as described above, grey, mg with cross cutting qtz-carb vnlts. Inclusions of mtgb many of which have been mostly altered to amphibolite. Average size is less than 0.5 inches, but occasionally large 2-3 inches appear. Diss sulphides occur at less than 1% overall.
756.73	0.73	MG229577	5	0	0.01	0	0	0	0	90	NVS		DIA	DIA, fg, Magnetic, chilled black with sharp cts upper and lower at 55-60deg tca. No sulphides present.
757.49	0.76	MG229578	5	0.5	0.02	0.04	0.01	0.003	0.07	85	TR	MTGB	IQD	The top 5inches are IQD as described above with Tr diss sulphides. The remaining lower half is a larger MTGB block that is altered to amph and has a weak green chloritic hue. No sulphides present in this MTGB section.
757.85	0.37	MG229579	5	0	0	0	0	0	0	90	NVS		DIA	DIA, fg, Magnetic, chilled black with sharp cts upper and lower at 55-60deg tca. No sulphides present.
759.01	1.16	MG229580	5	0.5	0.01	0.04	0.01	0.002	0.07	85	TR	MTGB	IQD	IQD interval as described above except this is a large MTGB block that is altered to amph. A small section of the interval (~4inches) is IQD with small (<0.5inch) inclusions and Tr sulphides.
762	2.99	MG229581	5	0.5	0.03	0.03	0	0.001	0.1	85	TR		IQD	IQD as described above, grey, mg with cross cutting qtz-carb vnlts. Inclusions of mtgb many of which have been mostly altered to amphibolite. Average size is less than 0.5 inches, but occasionally large 2-3 inches appear. Diss sulphides occur at less than 1% overall.

764.99	2.99	MG229583	5	0.5	0.04	0.04	0	0.002	0.14	85	TR		IQD	IQD as described above, grey, mg with cross cutting qtz-carb vnlts. Inclusions of mtgb many of which have been mostly altered to amphibolite. Average size is less than 0.5 inches, but occasionally large 2-3 inches appear. Also 1 MTGB/AMPH block about 1ft. Diss sulphides occur at less than 1% overall.
768	3.02	MG229584	5	0.5	0.06	0.06	0	0	0.21	85	TR		IQD	IQD as described above, grey, mg with cross cutting qtz-carb vnlts. Inclusions of mtgb many of which have been mostly altered to amphibolite. Average size is less than 0.5 inches. Diss sulphides occur at less than 1% overall, but a couple occasional blebs. Sulphides are Po, Cpy, and very fg Pn.
770.99	2.99	MG229585	5	0.5	0.03	0.02	0	0	0.07	85	TR		IQD	IQD as described above, grey, mg with cross cutting qtz-carb vnlts. Inclusions of mtgb many of which have been mostly altered to amphibolite. Average size is less than 0.5 inches, but occasionally large 2-3 inches appear. Diss sulphides occur at less than 1% overall.
774.01	3.02	MG229586	5	0.5	0.02	0.02	0	0.001	0.03	85	TR		IQD	IQD as described above, grey, mg with cross cutting qtz-carb vnlts. Inclusions of mtgb many of which have been mostly altered to amphibolite. Average size is less than 0.5 inches, but occasionally large 2-3 inches appear. Diss sulphides occur at less than 1% overall.

777	2.99	MG229587	5	0.5	0.03	0.02	0	0.001	0.1	85	TR	IQD	IQD as described above, grey, mg with cross cutting qtz-carb vnlts. Inclusions of mtgb many of which have been mostly altered to amphibolite. Average size is less than 0.5 inches, but occasionally large 2-3 inches appear. Diss sulphides occur at less than 1% overall. A couple long streaks and blebs aligned with the chaotic fabric of the IQD inclusions.
780.01	3.02	MG229588	5	0.5	0.02	0.02	0	0	0.07	85	TR	IQD	IQD as described above, grey, mg with cross cutting qtz-carb vnlts. Inclusions of mtgb many of which have been mostly altered to amphibolite. Average size is less than 0.5 inches, but occasionally large 2-3 inches appear. Diss sulphides occur at less than 1% overall.
783	2.99	MG229589	5	1	0.02	0.02	0	0	0.03	85	DISS	IQD	IQD as described above, grey, mg with cross cutting qtz-carb vnlts. Inclusions of mtgb many of which have been mostly altered to amphibolite. Average size is less than 0.5 inches, but occasionally large 2-3 inches appear. Diss sulphides occur at ~1% overall.
785.99	2.99	MG229590	5	1	0.03	0.03	0	0.001	0.14	85	DISS	IQD	IQD as described above, grey, mg with cross cutting qtz-carb vnlts. Inclusions of mtgb many of which have been mostly altered to amphibolite. Average size is less than 0.5 inches, but occasionally large 2-3 inches appear. Diss sulphides ~1% overall.

786.6	0.61	MG229592	5	4	0.14	0.12	0.01	0.013	0.45	85	RGDI	IQD	IQD as described above, grey, mg with cross cutting qtz-carb vnlts. Inclusions of mtgb many of which have been mostly altered to amphibolite. Average size is less than 0.5 inches, but occasionally large 2-3 inches appear. Sulphides are Diss throughout but there are a couple sections that are slightly larger patches and blotches. One ragged blotch is about 3"x1" of Po minor Cp and fg Pn. Overall about 4% sulphides in this interval....CONTINUE LOGGING AT BX286..786m
787.24	0.64	MG229593	5	3	0.08	0.08	0.01	0.009	0.31	85	BLBS	IQD	IQD as described above, grey, mg with cross cutting qtz-carb vnlts. Inclusions of mtgb many of which have been mostly altered to amphibolite. Average size is less than 0.5 inches. Small blebs of sulphides occur with minor cp, pn and po. Approx 3% sulphides overall. This interval marks the end of the IQD and coincidentally these last couple samples at the back of the IQD dyke have the most sulphides.
789.01	1.77	MG229594	5	0.3	0	0.01	0	0.001	0	85	TR	QD	QD with rare inclusions. Poorly defined Ct that marks the end of the IQD and the start of the QD. However it is obviously QD mostly barren of inclusions. Grey, bt rich, massive and hmgs throughout. Spherulitic texture weakly apparent in some areas. Tr sulphides less than 0.5%. Significantly less than IQD above, also denoting the rock type change.
791.99	2.99	MG229595	5	0.3	0.01	0.01	0	0.002	0.03	90	TR	QD	QD barren of inclusions. Grey, bt rich, massive and hmgs throughout. Occasional spherulitic texture present in some areas. Tr sulphides less than 0.5%.

795.01	3.02	MG229596	5	0.3	0.01	0.01	0	0	0	90	TR	QD	QD barren of inclusions. Grey, bt rich, massive and hmgs throughout. Occasional spherulitic texture present in some areas. Tr sulphides less than 0.5%.
798	2.99	MG229597	5	0.3	0.01	0.01	0	0	0	90	TR	QD	QD barren of inclusions. Grey, bt rich, massive and hmgs throughout. Tr sulphides less than 0.5%.
801.01	3.02	MG229598	5	0.3	0.01	0.01	0	0	0	90	TR	QD	QD barren of inclusions. Grey, bt rich, massive and hmgs throughout. Tr sulphides less than 0.5%.
803.76	2.74	MG229599	5	0.3	0.02	0.01	0	0	0.03	90	TR	QD	QD barren of inclusions. Grey, bt rich, massive and hmgs throughout. Tr sulphides less than 0.5%. Note that the last 3inches of this interval is a white qtz vein. Tr Po and Cpy sulphides here. This vein could mark the contact of the QD, but difficult to determine because the lower dyke contact is transitional with the QTZT.
804.73	0.98	MG229600	5	0.3	0.01	0.01	0	0	0.07	90	TR	QD	QD barren of inclusions, but this interval seems to define a transitional contact between QTZT seds below. Very weak shadows appear as QTZT blocks have been engulfed in the QD. Very challenging to find the exact ct but this interval is the best representation of the lower QD contact. Sulphides less than 0.5%.
806.99	2.26	MG229602	5	0	0	0.01	0	0	0	90	NVS	QTZT	QTZT, gry, massive and hmgs throughout. No sulphides present. Very similar to QD above but within this transitional environment near the ct it appears more like a qtzt.
810.01	3.02	MG229603	5	0	0.01	0.01	0	0	0	90	NVS	QTZT	QTZT, gry, massive and hmgs throughout. No sulphides present. Buffer sample below the QD dyke above.
812.99	2.99	MG229604	5	0	0.01	0.01	0	0	0	90	NVS	QTZT	QTZT, gry, massive and hmgs throughout. No sulphides present. Buffer sample below the QD dyke above.

908.85	95.86	85		MTSD	MTSD, fg-mg, lt gry, very massive and competent and uniform throughout. No significant structures. No defined strong lamination only a couple small localized areas 1-2ft in length. This interval below the QD, appears to have less Qtz in the interval and slightly more mafic/darker in appearance than the qtzt above. Therefore this interval is now being described as a MTSD. No sulphides present.
913.03	4.18	85		QTZT	QTZT. Relatively defined upper (85deg) and lower contact(at ~30deg tca) with a couple small qtz-carb vnlts. Appears to define a lithological unit from MTSD to QTZT. Very fg lt gry qtzt. Trace specks of po and pyrite. No significant sulphides.
944.73	31.7	85	SS	MTSD	MTSD, fg-mg lt gry massive, competent and hmgs. No significant sulphides. Weakly defined fabric at 30deg tca.
953.38	8.66	85		MTBS	MTBS lt gry mg, with Amglys and mg amphs. Moderate-abundant qtz-carb vnlts. No significant sulphides. This interval represents a chaotic texture weak foliation at ~30deg but also hmgs equigranular patches. This interval is non-typical in this hole but other holes have identified small layers of MTBS within the FW environments. Some often seen as a brecciated unit. This does not seem luike a standard Metagabbro.
957.56	4.18	80		MTSD	MTSD, fg-mg lt gry massive, competent and hmgs. No significant sulphides. Weakly defined fabric at 30deg tca.
959.08	1.52	85	MTBS	MTSD	MTSD as described above, fg-mg massive and hmgs except abundant small 1-3mm amphibole inclusions throughout, possibly related to the MTBS flow describes above. No significant sulphides.

1050.01	90.92			85		MTSD	Massive MTSD, HMGS fg with minor qtz-carb vnlts throughout. No sulphides. Competent, no significant fractures along bedding.
1053.88	3.87			60	SLTS	MTSD	MTSD as described above except with an increase in laminations at 20deg tca. Minor Qtz present, and areas of abundant alteration. No sulphides present.
1099.54	45.66			85	SS	MTSD	MTSD as described above but slightly more competent and less laminations/bedding planes. More of a ss mtsd but still abundant bt. No significant sulphides.
1099.81	0.27			60		OLDI	OLDI, blk, fg, chilled small OLDI that has sharp contacts at 50-60deg tca. No sulphides present and strongly magnetic.
1114.14	14.33			75		MTSD	MTSD as described above. continuation except intervalis just broken by the OLDI vein.Laminations/bedding planes have occasional fabric at 20-35deg tca. No significant sulphides.
1114.68	0.55			80		OLDI	OLDI, mag, fg, black, chilled sharp contacts at 60-70deg tca. No sulphides.
1116.12	1.43			70		MTSD	MTSD as described above just divided by the OLDI above and below. No sulphides.
1119.99	3.87			85		OLDI	OLDI, mag, fg, black, chilled sharp contacts at 50deg tca at upper CT and 70deg tca at lower ct. No sulphides. Note that there is a MTSD block within the OLDI between 3664.3-3665.3ft.
1124.19	4.21			85		MTSD	MTSD as described above. SS with weak to moderate low angle laminations/bedding. No sulphides.

1134.98	10.79		85	MTBS	MTBS unit. Somewhat unique and uncommon in this stratigraphy based on earlier 2017 drilling in this area, but not rare for the footwall environment/Huronian. This is an interval of MTBS as is seen in some other holes. Lt green hue, and most common feature at cts is the brecciated inclusions of MTBS. Looks like IQD but not. Minor small amygls. Lower CT is a shr/flow ct. No sulphides.
1135.35	0.37		85	SHR	Described as a shear with qtz, but this could likely be the lower contact of a MTBS flow. Qtz mixed with MTSD at 40deg tca. No sulphides present.
1176.53	41.18		75	MTSD	MTSD, fg-mg, typically ss with occasional bedding planes at low angle tca representing the slightly lower RQD. No sulphides present. Very massive and continuous.
1203.02	26.49		70	MTBS	mtbs, mg, weak green chloritic hue, moderate to abundant qtz-carb vnlts. Variable grain size, bt rich patches, especially at lower CT. No sulphides present. It is possible that this could be a MTGB but it has been interpreted as a metabasalt because several areas have bt rich patches at low angle contacts and could represent flows(ie: pillows). Some evidence of MTBS logged above also.
1261.87	58.86		80	SS MTSD	MTSD, large interval of massive, hmgs, moderately competent with some fractures occurring along bedding at 10-25deg tca on average. No sulphides present. FOH at 1262m/4140.9ft

BOREHOLE	PROPERTY	PROPERTY LEVEL		DEPTH	ACCT #	SYS		NORTHING	EASTING	ELEV	SIZE	START DATE	END DATE	FROM	TO	TYPE	RESOURCE	STATUS
1368920	Totten	180	0	944.88	R000929.0		1	353482	291756	801	HQ	08/10/2017 10:56:57	02/11/2017 10:56:57			EXPLN	Yes	Complete

DEPTH	AZIMUTH	DIP
0	137.4	-47.1
9.14	134.406	-46.932
18.29	132.414	-46.814
27.43	132.426	-46.796
36.58	132.808	-46.76
45.72	133.375	-46.715
54.86	133.942	-46.67
64.01	134.332	-46.61
73.15	134.368	-46.52
82.3	134.404	-46.43
91.44	134.44	-46.34
100.58	134.326	-46.316
109.73	134.212	-46.292
118.87	134.098	-46.268
128.02	134.094	-46.252
137.16	134.145	-46.24
146.3	134.196	-46.228
155.45	134.261	-46.197
164.59	134.354	-46.128
173.74	134.447	-46.059
182.88	134.54	-45.99
192.02	134.507	-45.963
201.17	134.474	-45.936
210.31	134.441	-45.909
219.46	134.414	-45.844
228.6	134.39	-45.76
237.74	134.366	-45.676
246.89	134.366	-45.605
256.03	134.414	-45.56
265.18	134.462	-45.515
274.32	134.51	-45.47
283.46	134.57	-45.41
292.61	134.63	-45.35
301.75	134.69	-45.29
310.9	134.652	-45.096
320.04	134.565	-44.835
329.18	134.478	-44.574
338.33	134.44	-44.298
347.47	134.5	-43.992
356.62	134.56	-43.686
365.76	134.62	-43.38
374.9	134.86	-43.425
384.05	135.1	-43.47
393.19	135.34	-43.515
402.34	135.446	-43.43
411.48	135.485	-43.28

420.62	135.524	-43.13
429.77	135.587	-43.006
438.91	135.698	-42.934
448.06	135.809	-42.862
457.2	135.92	-42.79
466.34	135.932	-42.571
475.49	135.944	-42.352
484.63	135.956	-42.133
493.78	136.014	-42.026
502.92	136.095	-41.975
512.06	136.176	-41.924
521.21	136.25	-41.885
530.35	136.31	-41.87
539.5	136.37	-41.855
548.64	136.43	-41.84
557.78	136.589	-41.843
566.93	136.748	-41.846
576.07	136.907	-41.849
585.22	137.01	-41.814
594.36	137.085	-41.76
603.5	137.16	-41.706
612.65	137.223	-41.648
621.79	137.262	-41.582
630.94	137.301	-41.516
640.08	137.34	-41.45
649.22	137.4	-41.411
658.37	137.46	-41.372
667.51	137.52	-41.333
676.66	137.64	-41.242
685.8	137.79	-41.125
694.94	137.94	-41.008
704.09	138.028	-40.915
713.23	137.992	-40.87
722.38	137.956	-40.825
731.52	137.92	-40.78
740.66	138.061	-40.771
749.81	138.202	-40.762
758.95	138.343	-40.753
768.1	138.425	-40.656
777.24	138.4775	-40.515
786.38	138.53	-40.374
795.53	138.5825	-40.233
804.67	138.635	-40.092
813.82	138.6875	-39.951
822.96	138.74	-39.81
832.1	138.869	-39.741
841.25	138.998	-39.672

850.39	139.127	-39.603
859.54	139.244	-39.566
868.68	139.355	-39.545
877.82	139.466	-39.524
886.97	139.54	-39.415
896.11	139.54	-39.13
902.21	139.54	-38.94

DEPTH

METERS		SAMPLE INFO		PERCENT					GRAMS/TONNE						
DEPTH	LENGTH	SAMPLE	CODE	EST	CU	NI	CO	AS	TPM	RQD	ORE	MINOR ROC	ROCK	MILLSTOR	DESCRIPTION
0	0														Collar
7.92	7.92									0			CASE		Casing, Drill Core begins at 26'.
28.96	21.03									85		QTZT	MTSD		FG to MG, Bedding Fabric thrt. Grey to blueish. typically thin to thick beds @ 50 to 60 deg tca, rough jts thrt with no dominant orientation.
56.24	27.28									90		MTSD	QTZT		MG to FG, Light Grey to Bluish, Smth to rough jts thrt @ 60 to 80 deg tca. Localized weak Bedding Fabric @ 50 to 60 deg TCA. Beds are typically > 1cm and Qz rich.
57.33	1.1									5		QTZT	STRT		FG to MG grey to bluish, Smth Jtts thrt @ 40 to 50 DEG TCA. Locally blocky core, Jt surfaces are coated in Cb and trace Po. Occ Anastomosing Cb vnlts thrt.
60.96	3.63									70		BX	MTSD		FG to MG, grey to blueisg, weak bedding Fabric thrt @ 40 to 50 Deg tca. Rough Jts thrt no dominant orientation with Jt surfaces coated with Cb and minor Po. Occ thin 1-2cm Bx vnlt with very small (~ 1mm) clasts and a dark grey, aphanitic matrix. Breccia veinlits may be subx, or related to the local structure above.
62.91	1.95									90		MTSD	BX		VFG, Dark gry matrix weakly foliated at 30 to 40 deg tca, Clasts are rounded and are all MTSD. weak Bedding fabric MTSD intervals @ 50to 60 Deg TCA. Breccia may be SUBX or a fault breccia related to the above fault.
66.14	3.23									90			QTZT		FG to M<F gry to bluish, weak bedding fol @ 35 to 45 deg tca, smth to rough jts thrt at 20 to 80 deg tca often coated with Cb and minor Po. occ thin ~1m Chl vnlt thrt with light grey/white alteration selvedge.

74.13	7.99		90	MTSD	QTZT	FG to MG, grey to blue, local weak bedding fabric, common thicker (>5cm) Qz-rich, sandy beds, occ thin 2-3mm anastomosing Bt/Chl vnlts. smth to rough jts thrt commonly coated with Carbonate and trace Py and Galena.
78.79	4.66		90	MTSD	SUBX	MG to FG, grey to bluish, interval is up to 20% subx with subrounded clasts of MTSD in a FG, Bt-rich matrix. Matrix appears to have a marble-cake textured flow banding around clasts.
111.1	32.31		90	QTZT	MTSD	MG to FG, grey to bluish, thin to thick beds ranging from <1cm to >10 cm but typically 1-2 cm thick. Bedding fabric is oriented at 30 to 40 deg tca, Smth jts thrt are often along bedding fabric. occ smth and rough jts at 15 to 80 deg tca. Jts are often coated in Carbonate. Thin and straight 1-2mm Carbonate vnlts are occ. found thrt. thin and irregular shaped 1-2 mm Bt/chl vnlts are found thrt. Trace sulphides often along joint surfaces
151.61	40.51		85	MTSD	QTZT	FG to MG, grey to bluish, thin to thickly bedded. local domains with a weak bedding fabric characterized by thin laminated beds typically 1-1.5 cm thick. smth jts thrt at various angles from 15 to 50 deg tca. JT surfaces often coated with minor Pyrite, occ thin <1mm Qb vnlt thrt.

161.39	9.78		75	MTSD	FG to MG, grey to greenish, strong EP/Chl? alteration imparting a pale greenish colour. thin laminated bedding fabric is apparent with beds typically ~1cm thick. Abundant irregular Chl-Bt anastomosing veinlits thrt locally coalescing to small breccias. Occ thin 1-3mm Qz-Cb vnlts thrt. smth to rough jts thrt at 40 to 60 deg tca.
166.18	4.79		90	QTZT	MG to FG, grey to bluish, local weak bedding fabric at 40 deg tca, interval is Qz-rich and sandy. rought jts thrt at 60 to 80 deg tca, often JTs are coated in minor Pyrite.
189.01	22.83		85	QTZT	MG to FG, grey to bluish, weak bedding fabric thrt at 60 to 70 deg tca, when apparent, beds are 1-2cm think, sandy, and quartz rich. smth jts thrt at various angles often at 50 to 60 deg tca, but as shallow as 5 deg tca. Carbonate is often found coating Joint surfaces with minor pyrite. occ thin 1-2mm Cb vnlt thrt. occ 2-3 mm Chlorite vnlt thrt.
218.36	29.35		75	QTZT MTSD	FG to MG, grey to bluish, thin bedding is weak but thrt interval beds are typically <1cm. Smth an drough jts thrt often at shallow angles @ 30 to 50 deg tca. often coated with Carbonate. irregular 2-4mm think Chl vnlts thrt that are irregular in shape and locally forms breccias. lower contact with Quartz diabase is characterized by abundant Qz-Cb vnlts mostly parallel to contact.
219.61	1.25		80	QDIA	FG, dark grey, apilitic, equigranular Bt, Plag, and minor Qz. upper contact is at 65 deg tca. lower contact is at 65 deg tca. trace spks of Py.

227.08	7.47			75	QTZT	MG to FG, grey to bluish, weak bedding fabric thrt at 35 to 40 deg tca, smth jts thrt often parallel to bedding. Jt surfaces are commonly coated with carbonate. occ thin ~1mm Qz-Cb vnlt thrt. Common thin 1-4mm and irregular shaped Chlorite vnlts thrt.
234.03	6.95			75	QTZT	MG to FG, light grey, weak bedding fabric thrt at 40 to 50 deg tca, beds range from <1cm to >5cm and are typically sandy and Qz-rich. smth tjs thrt often X-cutting Bedding. JTs are typically 35 to 45 deg tca. occ thin <1mm Chl vnlts thrt.
236.89	2.87			65	QDIA	FG to MG, grey to greenish, apilitic with equigranular Bt, Fsp, and Qz. upper contact is sharp and at 70 deg tca. and is characterized by abundant Qz-Carb vnlts. Lowe contact is sharp, has no veinlits, and is at 35 deg tca.
242.59	5.7			85	QTZT	MG to FG, grey to light grey, light grey colour may be from rextlization close to the above dyke, weak bedding fabric thrt, at 40 to 50 deg tca, beds are sandy and Qz-rich. smth and rough jts thrt often cutting bedding. occ thin (<1mm) Qz0Cb vnlt thrt. Occ thin (<1mm) Chl vnlt thrt.
262.68	20.09			90	QTZT MTSD	FG to MG, grey to bluish, weak bedding fabric thrt, often bedding is thinly laminated, with thin Chl-rich veinlts along bedding planes. Local areas of thicker, sand-rich beds JT surfaces are often coated in Carbonate material .

267.58	4.91		60	STRT	QTZT	MG to FG, grey to bluish, local weak bedding fabric thrt at 30 to 40 deg tca, unit is sandy and dominantly Qz-rich, Smth and rough tjs thr often at hight angles TCA. (typically 60 to 70 deg tca). Local areas of blocky ground where core had abundant rough jts Broken core pieces have surfaces coated with Chlorite and slickenlines.
270.3	2.71		90	MTSD	QTZT	MG to FG, grey to bluish, local areas of thinly spaced beds (1-3cm) at 40 to 50 deg tca, mostly unit is sandy and Qz-rich. smth jts thrt at 30 to 40 deg tca, rare thin 1-2mm Qz-Cb vnlts thrt. Common thin <1mm Chl vnlts thrt unit.
294.44	24.14		80	MTSD	QTZT	MG to FG , grey to bluish, weak bedding fabric thrt at 30 to 40 deg tca, smth jts thrt often along bedding, but, occasionally oblique to bedding. rare thin and irregular Chl vnlts thrt. Rare trace sulphides and common Carbonate along Jt surfaces.
302.97	8.53		55		MTSD	FG to MG, grey to bluish, moderate bedding fabric thrt at 35 to 40 deg tca. Jt surfaces often coated with Carbonate. Rough and stepped Jts thrt at various angles from 40 to sub-parallel TCA. Common Chl-rich layers parallel to Bedding. Locallt blocky core where Jts coalesce.
313.82	10.85		75	QTZT	MTSD	FG to MG, grey to bluish, weak bedding fabric thrt at 35 to 45 deg tca, smth jts thrt often parallel to bedding, occ oblique to bedding rare thin and Irregular shaped Qz-Cb vnlts thrt. OFten Cb material is coating jt surfaces. occ Chl-rich surface along bedding planes.

336.13	22.31			75	SUBX	MTSD	FG, grey to bluish, weak bedding fabric thrt at 40 to 50 deg tca, occ thin 1-2mm Qz-Cb vnlt thrt. common smth jts, occasionally coated with Cb material. JTs are often parallel to bedding, Local areas (typically <1 foot) of SUBX with rounded MTSD clasts within a FG dark grey matrix.
341.19	5.06			60	MTSD	SUBX	VFG to MG, grey, aphanitic dark grey matrix interstitial to rounded light grey clasts of MTSD. smth and rough jts thrtat 45 to 60 deg tca. Jts are often coated with Cb material. Local areas of Blocky core due to abundant Jointing.
345.7	4.51			90		QTZT	FG, grey to bluish, apparently massive. Bedding is not apparent. occ smth jt coated with Cb material at 45 to 80 deg tca. Unit first appeared as a dyke. Inspection under binocular microscope shows the mineralogy is dominantly Qz with minor biotite. texturally, the unit is sugary, with rounded Qz grains. occ thin 1-2mm Qz-Cb vnlt thrt.
349.58	3.87			55	ALTN	MTSD	FG to MG, grey to greenish, local weak bedding fabric. Smth and rough jts thrt at various angles. locally, core is completely blocky and broken in areas of abundant jointing. irregular Chl-Ep vnlts thrt imparting a greenish colour. locally the MTSD is brecciated and Chlorite/epidote alteration is stronger.
353.87	4.3			65	QTZT	MTSD	FG, grey to bluish, local areas of weak bedding fabric at 30 to 40 deg tca, minor zones (typically <6 inches) of Sudbury breccia. Abundant rough jts thrt at 25 to 70 deg tca. occ. Jts are coated with Carbonate material.

358.81	4.94		70	BX	MTSD	FG to VFG, grey to bluish, local thin bedding laminations typically <1cm. smth and rough jts thrt at 40 to 50 deg tca, local Qz-Cb vnlts thrt locally creating vuggy-veins. local areas (typically <1foot) of brecciated MTSD.
361.77	2.96		45	BX	MTSD	FG to VFG, grey to bluish, local thin bedding typically less than 1cm. local interval of brecciated MTSD with rounded clasts and flow banding? encapsulating clasts. Abundant smth and rough jts thrt. blocky core thrt. occ broken surface is coated with Qz-Cb.
386.09	24.32		85		MTSD	FG, grey to bluish, local thin bedding laminations on a centimeter scale. Common thin 1-2mm Qz-CB vnlts often sheeted and parallel to eachother at 70 deg tca and a 1-2inch spacing. occ smth jts thrt at 60 to 70 deg tca, often along Qz-Cb vnlts. local band of SUBX? typically <6 inches with an aphanitic matrix and subrounded clasts.
387.68	1.58		85		LAMP	MG to CG, green, CG biotite thrt a matrix of plag? and carbonate? occ thin 1-2mm and irregular Qz-Cb vnlts thrt. occ smth jts thrt at 45 to 50 deg tca. upper and lower contacts are shap and chilled. upper contact is at 35 deg tca lower contact is at 40 deg tca. unit weakly effervesces with acid.
409.93	22.25		75	MTSD	QTZT	FG to MG, grey to bluish, apparently massive, local weak bedding fabric is apparent. rare interval typically 2 to 8 inches of breccia. Unit is typically massive and sand/quartz -rich. off rough jts at 40 to 50 deg tca. smth jts thrt at 10 to 80 deg tca. rare thin 2-3mm Qz-Cb vnlts thrt.

417.67	7.74									70		MTSD	SUBX	vfg to MG, dark grey to light grey, aphanitic matix with irregular to subangular clasts thrt. local thin laminations in clasts, commin thin 1-3mm Qz-Cb vnlts thrt. often Cb vnlts are irregular in shape and connected. local intervals of blocky core.
418.49	0.82									90			QTZT	FG, grey to light grey, occ smth jts thrt at 70 to 80 deg tca, smth jts often along breaks along thin 1-2mmQz-Cb vnlts. bedding fabric is weakly apparent at 70 deg tca.
420.01	1.52	MG229917	5	0	0.01	0.01	0	0.002	0	70	NVS		MTSD	FG to MG, grey to bluish, local weak bedding fabric. local domain (1-2 inches) of breccia. oss smth jts thrt at 60 to 70 deg tca. thin 1-2mm Qz-Cb vnlts thrt. NVS.
421.66	1.65	MG229918	5	0	0.01	0.01	0	0	0	75	NVS		MTSD	FG to MG, grey to bluish, Weak bedding fabric thrt at a centimeter scale. local thin to thick Qz vntls thrt from 3mm to 2cm. occ rough jts thrt at 40 to 50 deg tca. NVS.
422.27	0.61	MG229919	5	0	0.01	0.01	0	0	0	55	NVS	QD	MTSD	FG to MG grey to bluish, sugary and apilitic, thin 1-2mm Qz vnlts thrt. common rough jts at 40 to 50 deg tca. appears to be transition zone between MTSD and QD. appears similar to QD, but more sugary and rextlized in appearance.
423	0.73	MG229920	5	0	0.01	0.01	0	0	0	85	NVS		QD	FG to MG, upper contact gradational but appears chilled and finer grained that lower part of interval. sugary, and apilitic in texture. occ thin 1-2mm Qz-Cb vnlts thrt. Occ smth jts broken along Qz-Cb vnlts at 40 to 60 deg tca. Amph laths up to 0.5 cm thrt.
424.53	1.52	MG229921	5	0	0.01	0.01	0	0	0	95	NVS		QD	MG, grey to bluish, phaneritic with needle-like amph (up to 1cm) and interstitial plagioclase. occ smth jts thrt at 60 to 70 deg tca, icc thin 1-2mm Qz-Cb vnlts thrt. NVS.

426.42	1.89	MG229922	5	0	0.01	0.01	0	0	0	90	NVS	QD	MG, grey to bluish, phaneritic with needle-like amph (up to 1cm) and interstitial plagioclase. occ smth jts thrt at 60 to 70 deg tca, occ thin 1-2mm Qz-Cb vnlts thrt. NVS.
427.48	1.07	MG229923	5	1	0.02	0.02	0	0	0.03	70	SPKS	IQD	FG to MG, grey to blue, laths of amph up to 1cm with interstitial plag. commmin rough jts thrt at various angles. thin <1mm Qz-Cb vnlts thrt at no preferred orientation. Common sub angular mafic clasts thrt. Spks of Sulph as Po and Pn.
429.01	1.52	MG229924	5	0.5	0.02	0.02	0	0	0.07	75	SPKS	IQD	FG to MG, grey to blue, laths of amph up to 0.5cm with interstitial plag. occ smth jts thrt at 20 to 45 deg tca, rare thin <1mm Qz-Cb vnlts thrt. Common angular Mafic clasts up to 3cm. Spks of Po and Pn.
430.47	1.46	MG229925	5	0.5	0.02	0.02	0	0	0.07	75	SPKS	IQD	FG to MG, grey to blue, laths of amph up to 0.5cm with interstitial plag. occ smth jts thrt at 20 to 30 deg tca, rare thin <1mm Qz-Cb vnlts thrt. Common angular Mafic clasts up to 5cm. Spks of Po and Pn.
431.99	1.52	MG229926	5	2	0.04	0.03	0	0	0.14	75	SPKS	IQD	FG to MG, grey to blue, laths of amph up to 0.5cm with interstitial plag. smth and rough jts thrt at 20 to 60 deg tca. commin thin <1mm Qz-Cb vnlts thrt. Angular mafic inclusions up to 3cm.
433.3	1.31	MG229927	5	2.5	0.05	0.05	0	0	0.21	75	SPKS	IQD	FG to MG, grey to blue, laths of amph up to 0.5cm with interstitial plag. occ smth jts thrt at 20 to 45 deg tca. occ thin <1mm Qz-Cb vnlts thrt. mafic inclusions thrt up to 2cm. approx. 2.5% spks of Po and Pn.
433.97	0.67	MG229928	5	3	0.06	0.05	0	0.002	0.21	90	SPKS	IQD	FG to MG, grey to blue, laths of amph up to 0.5cm with interstitial plag. occ smth jts thrt often along Qz-Cb vnlts at 30 to 60 deg tca. angular mafic inclusion thrt up to 3cm wide.

434.4	0.43	MG229930	5	1.5	0.06	0.04	0	0	0.14	90	SPKS		IQD	FG to MG, grey to blue, laths of amph up to 0.5cm with interstitial plag. occ smth jts thrt at 30 to 40 deg tca. rare thin <1mm Qz-Cb vntls thrt. rare spks of Po and Pn.
435.71	1.31	MG229931	5	2.5	0.07	0.06	0	0	0.21	85	SPKS		IQD	FG to MG, grey to blue, laths of amph up to 0.5cm with interstitial plag. occ smth and rough jts at 60 to 70 deg tca, thin <1mm Qz-Cb vnlts thrt. angular mafic clasts thrt up to 3 cm. Spks of Po and Pn thrt.
436.81	1.1	MG229932	5	1.5	0.04	0.03	0	0	0.1	75	SPKS	LAMP	IQD	FG to MG, grey to blue, laths of amph up to 0.5cm with interstitial plag. occ smth jts thrt at 15 to 20 deg tca, often brokwn along Qz-Cb vnlts. Local 5inch interval of lamprophyre at top of interval. section has CG biotite within a matrix of green chlorite? and light green alteration selvedges.
437.72	0.91	MG229933	5	3.5	0.08	0.08	0.01	0.001	0.27	95	SPKS		IQD	FG to MG, grey to blue, laths of amph up to 0.5cm with interstitial plag. occ smth jts thrt at 30 to 40 deg tca. rare thin <1mm Qz-Cb vnlts thrt at no preferred orientation. subangular to angular mafic inclusion up to 10cm. spks of Po and Pn thrt.
438.67	0.94	MG229934	5	3.5	0.08	0.08	0.01	0	0.27	75	SPKS		IQD	FG to MG, grey to blue, laths of amph up to 0.5cm with interstitial plag. occ smth jts thrt at 30 to 45 deg tca. rare thin <1mm Qz-Cb vnlts thrt. approx. 3.5% spks of Po and pn.
440.44	1.77	MG229935	5	1.5	0.05	0.03	0	0	0.14	50	SPKS		IQD	FG to MG, grey to blue, laths of amph up to 0.5cm with interstitial plag. abundant rough jts thrt at 30 to 60 deg tca coming together to create intervals of blocky core. rare thin <1mm carbonate vnlts. spks of sulph as Po and Pn thrt.

441.02	0.58	MG229936	5	2	0.06	0.05	0	0	0.21	95	SPKS	IQD	FG to MG, grey to blue, laths of amph up to 0.5cm with interstitial plag. Rare rough jts thrt. weak fol. thrt defined by streaching of clasts and sulphide spks. approx. 2& sulph as spks of Po PN and minor Cp.
441.62	0.61	MG229937	5	2.5	0.07	0.08	0.01	0	0.24	90	SPKS	IQD	FG to MG, grey to blue, laths of amph up to 0.5cm with interstitial plag. occ smth jts thrt at 35 to 40 deg tca. occ thin <1mm Qz-Cb vnlts thrt. weak fol thrt defn. by streaching of clasts and sulphide blebs. approx. 2.5% spks of Pn, Pn and Cp.
442.57	0.94	MG229938	5	1	0.07	0.04	0	0	0.14	90	SPKS	IQD	FG to MG, grey to blue, laths of amph up to 0.5cm with interstitial plag. occ rough jts thrt at 30 to 40 deg tca. spks of Po and Pn with minor Cp thrt. weak fol defn. by streaching of sulphide spks and clasts. occ Qz-Cb vnlts thrt typically 2-3mm.
444	1.43	MG229939	5	0.5	0.07	0.07	0.01	0	0.24	95	SPKS	IQD	FG to MG, grey to blue, laths of amph up to 0.5cm with interstitial plag. occ rough jts thrt at 40 to 50 deg tca. weak fol at 40 to 50 deg tca. rare thin 2-3mm Qz-Cb vnlts thrt. rare spks of Po and Pn thrt.
445.4	1.4	MG229940	5	1.5	0.05	0.04	0	0	0.17	85	SPKS	IQD	FG to MG, grey to blue, laths of amph up to 0.5cm with interstitial plag. occ smth to rough jts thrt at 40 to 60 deg tca. thin (<2mm) Qz-Cb vnlts thrt. no strong foliation. Angular clasts thrt up to 3cm.
446.99	1.58	MG229941	5	0	0.02	0.01	0	0	0.03	45	NVS	LAMP	FG to CG, green, MG to CG biotite thrt within a chlorite-rich groundmass. unit effervesces weakly with acid. Dyke is very soft, and non magnetic. NVS. Upper contact is sharp at 25 deg tca.

448.51	1.52	MG229943	5	0	0.01	0.01	0	0	0	90	NVS	LAMP	FG to CG, green, MG to CG biotite thrt within a chlorite-rich groundmass. occ rough jts thrt at 30 to 45 deg tca. unit effervesces weakly with acid. Dyke is very soft, and non magnetic.occ. thin 1-3mm Chl vnlts thrt.NVS.
449.34	0.82	MG229944	5	0	0.01	0.01	0	0	0	95	NVS	LAMP	FG to CG, green, MG to CG biotite thrt within a chlorite-rich groundmass. occ rough jts thrt at 30 to 40 deg tca. Lower contact is sharp at 30 deg tca. unit effervesces weakly with acid. Dyke is very soft, and non magnetic. NVS.
449.88	0.55	MG229945	5	0.5	0.03	0.03	0	0.001	0.07	90	SPKS	IQD	FG to MG, grey to bluish, laths of amph thrt up to 1cm with interstitial plagioclase. occ smth jts thrt at 50 deg tca, occ thin 2-3mm Qz-Cb vnlts thrt. spks of Po and Pn thrt.
450.52	0.64	MG229946	5	0	0.01	0.01	0	0	0.03	90	NVS	QD	FG to MG, grey to bluish, laths of amph thrt with interstitial plag. weak fol. defn by orientation of amphiboles. occ thin 1-2mm Chl vnlts thrt. nvs.
451.99	1.46	MG229947	5	0	0	0.01	0	0	0	95	NVS	SHR QD	FG to MG, grey to bluish, laths of amph thrt with interstitial plagioclase. comm in smth and rough jts thrt at 20 to 40 deg tca often coated with chlorite. local interval at top of section with a strongly developed foliation at 60 deg tca, appears to be highly strained and sheared. lower contact of QD is sharp at 60 deg tca.
452.93	0.94	MG229948	5	0	0.02	0.01	0	0	0	80	NVS	SHR MTSD	FG, grey, apparently massive, appears mud-rich, locally, rough jts thrt at 60 to 70 deg tca. unit is strongly fol. at 70 deg tca, unit appears to be highly strained and sheared. shear zone is weakly choritized. NVS.

454.46	1.52	MG229949	5	0	0.01	0.01	0	0	0	75	NVS	MTSD	FG, grey, local weakly apparent thin beds on a cm scale. rough jts thrt at 70 to 80 deg tca. rare thin <1mm Qz-CB vnlts thrt. nvs.
455.98	1.52	MG229950	5	0	0	0	0	0	0	85	NVS	MTSD	FG, grey, local weakly apparent thin beds on a cm scale. rough and smth jts thrt at 70 to 80 deg tca. rare thin <1mm Qz-CB vnlts thrt. nvs.
473.2	17.22									85		MTSD	FG to MG, grey to dark grey, local clearly apparent laminated beds at a centimeter scale. smth jts thrt at 20 to 30 deg tca, occ rough jts thrt at 40 to 60 deg tca,. rare and irregular shaped (1-3mm) Qz0Cb vnlts thrt. local areas of chloritization. NVS.
473.99	0.79									55	STRT	OLDI	FG to VFG, dark grey, aphanitic, upper contact is chilled and very dark grey but is irregular and not a clearly defn. angle. local blocky core. Unit is highly magnetic. NVS.
474.76	0.76									0	OLDI	FLT	FG, dark grey, completely blocky and pulverized core, core blocks are often coated in chlorite. with slickenlines. Unit is highly magnetic.
477.5	2.74									80		OLDI	VFG to FG, dark grey, aphanitic, bottom of interval is chilled and contact is at 15 to 20 deg tca. unit is highly magnetic. NVS>
490.73	13.23									65		MTSD	FG to MG, grey to dark grey, local weakly apparent bedding at 30 to 40 deg tcam abundant smth jts thrt typically at shallow angles 10 to 20 deg tcam and coated with chlorite. occ rough jts thrt at 40 to 60 deg tca. local blocky core. NVS.

493.23	2.5			75	ALTN	OLDI	VFG to FG, grey to pale beige alteration imparted to dyke. aphanitc, abundant thin <1mm Qz-Cb vnlts. abundant anastomosing cracks in core. common rough jts thrt often coated with Qz-Cb material. When wet, a pervasive beige alteration is apparent. area is non magnetic. Upper contact is chilled and at 25 deg tca.
500.54	7.32			85		MTSD	FG to MG, grey to bluish, strongly apparent bedding fabric thrt typically thinly laminated beds at 60 to 70 deg tca, common smth jts parallel to bedding. occ rough jts oblique to bedding. nvs.
501.76	1.22			85		SUBX	FG to MG, grey to dark grey, abundant angular clasts of MTSD with a darker matrix. SUBX matrix is apparently rextlized and is somewhat sugary. matrix also displays flow banding? forming concentrically around clasts.
503.65	1.89			70		OLDI	FG, grey to dark grey, apilitic and sugary, smth and rough jts thrt at various angles, typically between 20 at 60 deg tca. often JT surfaces are coated in chlorite. rare thin Qz-Cb vnlts thrt. Unit is strongly magnetic.
507	3.35			50		OLDI	FG grey to dark grey, apilitic and sugary, abundant smth and rough jts thrt at 50 to 60 deg tca. often coalescing to form intervals of blocky core. blocks of core are often coated with Chlorit on broken surfaces. unit is strongly magnetic.
515.78	8.78			95		OLDI	FG to VFG, dark grey, apilitic to aphanitic, occ smth jts thrt at 20 to 70 deg tca, rare thin 1-2mm Chl vnlt. lower contact is chilled and at 45 deg tca.

551.29	35.51	95	QTZT	FG to MG, grey to bluish, local weakly developed bedding fabric thrt typically at 65 deg tca, typically massive and Qz/sand rich beds. rare shallow smth jts thrt at 5 to 10 deg tca. occ thin <1mm Qz-Cb vnlt thrt. NVS.
566.01	14.72	90	QTZT	FG to MG, grey to bluish, local weakly developed bedding fabric thrt typically at 65 deg tca, typically massive and Qz/sand rich beds. occ smth and rough jts thrt at 30 to 40 deg tca. rare thin <1mm Qz-Cb vnlts thrt. nvs.
571.35	5.33	70	QTZT	FG to MG, grey to bluish, apparently massive, occ local weak indication of bedding fabric. smth and rough jts thrt at 20 to 50 deg tca, ofent breaking along thin (1-2mm) Qz-Cb vntls. local blocky core broken core blocks often have coatings of Qz-Cb material. NVS.
586.95	15.61	80	QDIA	FG, grey to greenish, apilitic to aphanitic, contacts are chilled. Upper contact is 70 deg tca, and is typified by abundant Qz-Cb veining. lower contact is at 65 deg tca, and also has abundant Qz-Cb veining. thin (1-2mm Qz-Cb vnlts thrt). occ 1-3cm Qz vnlts thrt. NVS.
594.06	7.1	80	QTZT	FG, grey to bluish, apparently massive local weak indication of bedding fabric. common smth jts thrt at 50 to 80 degtca, common thin (<1mm) qz-Cb vnlts thrt. nvs.
595.67	1.62	75	QDIA	FG to VFG, grey to greenish, apilitic to aphanitic, upper and lower contacts are chilled and pale greenish, common thin 1-2mm Qz-Cb vnlts thrt. NVS.

617.22	21.55									85	QTZT	MTSD	FG to MG, grey to bluish, local thinly laminated beds typically <1cm, thrt local areas that are apparently massive, Qz-rich and sandy. smth, rough, and stepped, joints thrt at various angles. Often Jts are along bedding fabric. occ thin (<1mm) Qz-Cb vnlts thrt. NVS.
628.8	11.58									80	MTSD	QTZT	FG, grey to bluish, local weakly apparent bedding fabric at 45 to 50 deg tca, occ 1-3cm Qz vein thrt. Occ rough and smth jts thrt at 30 to 50 deg tca, occ, Jts are coated with chlorite, typically in areas of lower RQD. NVS.
629.2	0.4									100		QV	CG, white to translucent. abundant cracks thrt, no jointing. thick quartz vein upper and lower contact at 30 deg tca.
642.21	13.01									80		MTSD	FG, grey, thinly laminated beds thrt at 30 to 40 deg tca, typically <1cm wide. smth jts thrt often oblique to bedding. rare thin 1-2 mm Qz-Cb vnlts thrt. NVS.
678	35.78									85	QTZT	MTSD	FG, grey to bluish, thin beds are apparent thrt. local areas are apparently massive, bedding is apparent on the centimeter scale typically at 35 to 45 deg tca, smth jts thrt typically oblique to bedding. thin (<1mm) Qz-Cb vnlts thrt. NVS.
705.76	27.77									70		MTSD	FG, grey, thinly laminated beds thrt at 45 to 50 deg tca, common smth jts thrt often along bedding fabric, occasionally oblique to bedding. occ rough jts often coated with carbonate material. occ thin 1-2mm Qz-Cb vnlts thrt. NVS.
707.29	1.52	MG229952	5	0	0.01	0.01	0	0.001	0	75	NVS	MTSD	FG, grey, local thinly laminated beds thrt. Bedding fabric is at 40 to 45 deg tca, occ smth jts thrt typically along bedding fabric. rare rough jts oblique to bedding. NVS.

708.81	1.52	MG229953	5	0	0.01	0.01	0	0	0	70	NVS		MTSD	FG, grey, local thinly laminated beds thrt. Bedding fabric is at 40 to 45 deg tca, occ smth jts thrt typically along bedding fabric. rare rough jts oblique to bedding. NVS.
709.54	0.73	MG229954	5	0	0.01	0	0	0	0	60	NVS	ALTN	MTSD	FG, grey and weakly green, local weak bedding fabric typically at 40 to 50 deg tca, common smth jts thrt at 50 to 70 deg tca, thin 1-2mm Qz-Cb vnlts thrt, bottom of interval is greenish and is characterized by abundant Qz-Cb veining. NVS.
711.07	1.52	MG229955	5	0	0.01	0.01	0	0.001	0	85	NVS	ALTN	QD	FG to VFG, grey to greenish, aphanitic. abundant Qz-Cb vntls thrt. upper contact is sharp at 30 deg tca. unit is pervasively altered and chloritized? to a pale green colour.
712.07	1.01	MG229957	5	0	0.01	0.01	0	0.001	0	85	NVS	ALTN	QD	FG to MG, grey to greenish, apilitic, occ rough jts thrt often coated with Qz-Cb material. Unit is pervasively altered to a pale greenish colour.
712.68	0.61	MG229958	5	0	0.01	0.01	0	0.001	0	80	NVS		QD	FG, grey to bluish, laths of amphibole thrt up to 1cm with interstitial plagioclase. common thin 1-2mm Qz-Cb vnlts thrt. smth jts thrt often coated with Qz-Cb material.
712.87	0.18	MG229959	5	0	0.01	0.01	0	0.001	0	100	NVS		QD	FG, grey to bluish, laths of amphibole thrt up to 1cm with interstitial plagioclase. no natural joints. rare thin 1-2mm Qz-Cb vnlts thrt. ***Sample selected for whole rock geochemistry***
713.6	0.73	MG229960	5	0	0.01	0.01	0	0.001	0	85	NVS		QD	FG to MG grey to bluish, laths of amph thrt up to 1cm with interstitial plagioclase. common thin 1-2mm Qz-Cb vnlts thrt. occ smth jts thrt at 45 deg tca often coated with Qz-CB matrial. NVS.

714.42	0.82	MG229961	5	0.1	0.01	0.01	0	0.002	0	70	NVS	QD	FG to MG grey to bluish, thin laths of amphibole thrt up to 1cm. interstitial plag thrt. abundant Qz-Cb vnlts thrt. rare specks of Po and Pn thrt.
715.06	0.64	MG229962	5	0.1	0	0.01	0	0.002	0	100	TR	IQD	FG to MG, grey to bluish, Weakly apparent angular clasts within a MG matrix with laths of amphiboles and interstitial plagioclase. Common thin 1-2mm Qz-Cb vnlts thrt. trace spks of sulphide.
716.28	1.22	MG229963	5	0.1	0.01	0.01	0	0.002	0	90	TR	QD	FG to MG, grey to bluish, apilitic with laths of amphibole up to 1cm with interstitial plagioclase. common thin 1-3mm Qz-Cb vnlts thrt. common smth jts broken along Qz-Cb vnlts.
716.52	0.24	MG229964	5	0.1	0.01	0.01	0	0	0	100	SPKS	QD	FG, grey to bluish, apilitic with laths of amph up to 0.5cm, with interstitial plagioclase. rare thin <1mm Qz-cb vnlts. Section has been selected to be homogenous and as free from veins as possible for whole-rock geochemistry***
717.47	0.94	MG229965	5	0.1	0.01	0.01	0	0	0	80	NVS	QD	FG to MG, grey to bluish, laths of amphibole thrt up to 0.5cm with laths of plagioclase. common thin 1-5mm Qz-Cb vnlts thrt. occ smth and rough jts thrt often along Qz-Cb vnlts.
718.11	0.64	MG229966	5	0	0.01	0	0	0.001	0	85	NVS	OLDI	FG to VFG, dark grey, aphanitic, upper and lower contact sharp at 20 deg tcxa, unit is highly magnetic.
719.63	1.52	MG229967	5	0.1	0.01	0.01	0	0.001	0	85	TR	QD	FG to MG, grey to bluish, laths of amph up to 1cm with interstitial plagioclase. occ thin 1-4 mm Qz-Cb vnlts thrt. occ smth jts thrt often along Qz-Cb vnlts.
720.55	0.91	MG229968	5	0.1	0.01	0.01	0	0	0	75	TR	QD	FG to MG, grey to bluish, laths of amph up to 1cm with interstitial plagioclase. occ thin 1-2 mm Qz-Cb vnlts thrt. occ smth jts thrt often along Qz-Cb vnlts. rare trace speck of Po and Pn.

720.85	0.3	MG229969	5	0	0.01	0.01	0	0	0	75	NVS		QD	FG to MG, grey to bluish, apilitic, laths of amphibole are weakly apparent. occ thin 1-2mm Qz0Cb vnlts thrt. trace spks of sulphide.
721.86	1.01	MG229970	5	0	0.01	0.01	0	0.001	0	85	NVS		QD	FG, grey to blue, aphanitic, abundant thin 1-2mm Qz-Cb vnlts thrt. lower contact is chilled and irregular and cannot define a clear angle. NVS.
722.47	0.61	MG229971	5	0	0.01	0.01	0	0	0	100	NVS		QTZT	FG to MG, grey to bluish, apparently massive and sugary, one smth jt at 50 deg tca. occ thin 1-2mm Qz-Cb vnlts thrt. unit may be rextlized due to proximity to dyke.
723.9	1.43	MG229972	5	0	0.01	0.01	0	0	0	95	NVS	QTZT	MTSD	FG to MG, grey to bluish, local thinly laminated bedding fabric typically at a centimeter scale at 30 to 40 deg tca. occ smth jts thrt at 40 to 50 deg tca, rare thin 1-2mm Qz-Cb vnlts thrt.
725.42	1.52	MG229973	5	0	0	0.01	0	0	0	90	NVS		MTSD	FG to MG, grey to bluish, local thinly laminated bedding fabric typically at a centimeter scale. occ smth jts thrt at 40 to 50 deg tca, rare thin 1-2mm Qz-Cb vnlts thrt. NVS.
750.94	25.51									90		QTZT	MTSD	FG to MG, grey to bluish, local weak bedding fabric thrt at a centimeter scale. occ smth and rough jts thrt typically at 30 to 50 deg tca. occ Qz vnlt thrt 2-3cm wide. NVS.
757.12	6.19									40			QTZT	FG, grey to bluish, common thin 1-2mm Qz-Cb vnlts thrt. abundant smth jts thrt often along Qz-Cb breaks. local blocky core. Bedding fabric is weakly apparent. NVS.
764.19	7.07									80		MTSD	QTZT	FG to MG, grey to bluish, apparently massive, smth jts thrt at 40 to 50 deg tca, occ thin 1-2mm Qz-Cb vnlt thrt. often Jts are along vnlts. local blocky core. NVS.

770.72	6.52									80		QDIA	FG to VFG, grey to greenish, apilitic with upper contact that is chilled. smth and rough jts thrt. Common thin 1-2mm Qz-Cb vnlts with pale grey alteration selvedges. rough. upper contact is at 50 deg tca.
770.9	0.18	MG229974	5	0	0.01	0	0	0	0	100	NVS	QDIA	FG, grey to greenish blue. apilitic, and sugary textured. rare <1mm Qz-Cb vntls. sample has been selected for whole rock ID to identify the dyke.
777	6.1									85		QDIA	FG, grey to greenish blue, rough and smth jts thrt at 30 to 60 deg tca, occ 2-3cm Qz veins thrt. occ thin 1-2mm Qz-Cb vnlts thrt. local blocky core. Lower contact is broken and blocky NVS.
791.57	14.57									95		QTZT	FG, grey to bluish, apparently massive, occ smth jts thrt at 35 to 60 deg tca, rare thin 0.1 to 0.5 cm Qz-Cb vnlts thrt. NVS.
801.01	9.45									65		MTSD	FG, grey to bluish, thinly laminated bedding fabric thrt at 25 to 30 deg tca, shallow, smth jts thrt often along bedding. rough jts thrt oblique to bedding. occ thin 1-2mm Qz-Cb vnlts. NVS.
822.02	21									85		MTSD	FG, grey to bluish, local thinly laminated beds thrt at 20 to 30 deg tca, common smth jts thrt typically at 50 to 70 deg tca. rare thin <1mm Qz-Cb vnlts thrt. NVS.
851.52	29.5									30		QTZT	FG, grey to blue, apparently massive, abundant smth and rough jts thrt at various angles. blocky core thrt. often Jt surfaces and broken core is coated by carbonate material. common irregular carbonate veinlits thrt. NVS.

860.85	9.33		95		QTZT	FG, grey to bluish, local weak bedding is apparent. Typically massive, smth jts thrt from 15 to 60 deg tca, local rough jts, and one small (1 foot) interval of blocky core at 2746.1'. rare thin 1-2mm Qz-Cb vntls and rare thin 1-2mm Chl vnlts. Trace sulphides along some veinlits.
882.67	21.82		75	MTGB	DIA	FG to MG greenish to grey, phaneritic to aphanitic. common rough jts thrt at 30 to 50 deg tca. occ thin to thick from 1mm 8 inche Qz-Chl-tourmaline? veins thrt. upper contact is chilled at 30 deg tca lower contact is chilled and oriented at 45 deg tca.
886.97	4.3		80		QTZT	FG, grey to blue. apparently massive, no distinct bedding fabric, grains are rounded and unit is Qz/sand rich. occ rough jts thrt at 50 to 60 deg tca. NVS.
920.53	33.56		90		QTZT	FG, grey to bluish, local weak bedding fabric at 30 to 40 deg tca, occ smth jts thrt typically at 40 oto 50 deg tca. rare thin 1-2mm Qz-Cb vnlt thrt. occ Jt surfaces are coated with Carbonate material. NVS.
937.93	17.4		60		QTZT	FG, grey to bluish, local weak bedding fabric at 30 to 40 deg tca, abundant smth and rough jts at various angles from 5 deg tca to 60 deg tca. local interval ~1foot wide of breccia with rounded clasts ant a sugary, very fine grained matrix. rare thin 1-2mm Qz-Cb vnlt thrt. occ Jt surfaces are coated with Carbonate material. NVS.
944.88	6.95		90		MTSD	FG, grey to blue, local thinly laminated beds thrt typically at 25 to 30 deg tca, smth jts thrt often along bedding fol. Rough jts oblique to bedding. NVS.

BOREHOLE	PROPERTY	PROPERTY LEVEL	DEPTH	ACCT #	SYS	NORTHING	EASTING	ELEV	SIZE	START DATE	END DATE	FROM	TO	TYPE	RESOURCE APPLIED	STATUS
1368950	Totten	180	0 1581	R000929.0	1	355229	295222	836	HQ	07/03/2018 13:58:26	06/05/2018 13:58:26	2001	5187	EXPLN	Yes	Complete

DEPTH	AZIMUTH	DIP
0	198.75	-63.28
9.14	200.286	-63.3295
18.29	200.0041	-63.2389
27.43	199.9101	-63.2752
36.58	199.3986	-63.2581
45.72	199.2642	-63.2713
54.86	199.1381	-63.2685
64.01	199.0658	-63.2109
73.15	199.125	-63.2081
82.3	199.198	-63.2254
91.44	199.2518	-63.1877
100.58	199.0266	-63.1335
109.73	198.6587	-63.0007
118.87	198.461	-62.9308
128.02	198.4357	-62.9166
137.16	198.3708	-62.9062
146.3	198.2557	-62.8486
155.45	198.2597	-62.8198
164.59	198.2413	-62.6954
173.74	198.2248	-62.6916
182.88	198.3614	-62.6749
192.02	198.3791	-62.7139
201.17	198.4068	-62.6166
210.31	198.3246	-62.5069
219.46	198.4796	-62.5346
228.6	198.3964	-62.4681
237.74	198.4256	-62.4799
246.89	198.5863	-62.4086
256.03	198.7582	-62.4624
265.18	198.829	-62.347
274.32	198.8112	-62.1519
283.46	198.8214	-62.1527
292.61	198.8988	-61.8982
301.75	198.9901	-61.9249
310.9	198.9943	-61.8245
320.04	199.1312	-61.83
329.18	198.9891	-61.6061
338.33	198.9567	-61.6232
347.47	198.9595	-61.5682
356.62	199.0128	-61.5105
365.76	198.9791	-61.4425
374.9	198.9701	-61.3796
384.05	199.0131	-61.3727
393.19	199.052	-61.2258
402.34	198.9861	-61.2607
411.48	199.0119	-61.2148

420.62	199.1339	-61.1174
429.77	199.2197	-61.058
438.91	199.4447	-60.9814
448.06	199.5794	-60.9218
457.2	199.6263	-60.7263
466.34	199.4879	-60.7993
475.49	199.4106	-60.6973
484.63	199.2264	-60.6969
493.78	199.3731	-60.5858
502.92	199.4746	-60.4279
512.06	199.6787	-60.3891
521.21	199.7515	-60.2861
530.35	199.9365	-60.1856
539.5	199.8273	-60.1092
548.64	199.93	-60.16
557.78	199.9526	-60.0798
566.93	199.9128	-60.0491
576.07	199.979	-59.9325
585.22	199.9387	-59.8407
594.36	200.0545	-59.7276
603.5	200.0792	-59.7444
612.65	200.0337	-59.6987
621.79	200.0383	-59.6535
630.94	200.0521	-59.5548
640.08	200.3499	-59.4838
649.22	200.4531	-59.4593
658.37	200.5579	-59.4549
667.51	200.7138	-59.4363
676.66	200.8049	-59.3693
685.8	200.9132	-59.4008
694.94	200.9726	-59.3965
704.09	201.1518	-59.2096
713.23	201.0051	-59.0978
722.38	200.9541	-58.8607
731.52	201.0219	-58.6792
740.66	200.9196	-58.377
749.81	200.9334	-58.1663
758.95	201.1179	-58.2362
768.1	201.2385	-58.0175
777.24	201.4387	-57.8954
786.38	201.4754	-57.9779
795.53	201.6271	-57.7955
804.67	201.7875	-57.818
813.82	201.8448	-57.746
822.96	202.1193	-57.6011
832.1	202.487	-57.5633
841.25	202.7057	-57.1939

850.39	202.7614	-56.9431
859.54	202.9503	-56.7448
868.68	203.2855	-56.274
877.82	203.542	-56.0258
886.97	203.6214	-55.8463
896.11	204.7051	-55.8265
905.26	206.4188	-56.1752
914.4	207.2124	-56.0788
923.54	208.5657	-56.103
932.69	209.5846	-56.0907
941.83	210.6358	-55.964
950.98	211.3925	-55.9601
960.12	211.8086	-55.8455
969.26	212.5275	-55.7901
978.41	213.2909	-55.6611
987.55	213.8996	-55.2885
996.7	214.5587	-55.277
1005.84	215.2491	-55.0805
1014.98	215.627	-54.9182
1024.13	216.0668	-54.9066
1033.27	216.3025	-54.622
1042.42	216.774	-54.5117
1051.56	217.2475	-54.3046
1060.7	217.7603	-54.0882
1069.85	217.9409	-53.584
1078.99	218.1055	-53.5305
1088.14	218.2024	-53.5154
1097.28	218.4557	-53.4308
1106.42	218.4928	-53.1799
1115.57	218.8779	-53.1724
1124.71	219.2222	-52.9238
1133.86	219.578	-52.628
1143	219.703	-52.4751
1152.14	219.8353	-52.4465
1161.29	220.3062	-51.6098
1170.43	220.8228	-50.5819
1179.58	221.4049	-50.1139
1188.72	222.0503	-49.6539
1197.86	222.3697	-49.5271
1207.01	222.8129	-49.3298
1216.15	223.2017	-49.0578
1225.3	223.6577	-48.8475
1234.44	224.0354	-48.5819
1243.58	224.3034	-48.3297
1252.73	224.7216	-48.1156
1261.87	225.3305	-47.7736
1271.02	225.5266	-47.6056

1280.16	225.9674	-47.3275
1289.3	226.2705	-46.9711
1298.45	226.3788	-46.9517
1307.59	226.6678	-47.0248
1316.74	226.8104	-46.8828
1325.88	227.029	-46.7923
1335.02	227.2984	-46.766
1344.17	227.5153	-46.3579
1353.31	227.593	-46.3755
1362.46	227.7803	-45.9588
1371.6	228.1496	-45.6443
1380.74	228.6251	-45.2238
1389.89	229.0715	-45.0659
1399.03	229.4357	-44.8059
1408.18	229.6616	-44.6159
1417.32	229.9032	-44.3978
1426.46	230.1735	-44.0903
1435.61	230.3806	-43.7894
1444.75	230.717	-43.3827
1453.9	230.729	-43.385
1463.04	232.556	-42.8712
1472.18	233.2658	-42.572
1481.33	233.3247	-42.2447
1490.47	233.3774	-42.0578
1499.62	233.6257	-41.7494
1508.76	234.1282	-41.4324
1517.9	234.2101	-41.3806
1519.12	234.36	-41.22
1520.95	236	-41.1
1551.13	236	-40.78
1555.09	237.9	-40.3
1556	238.8	-40.2
1559.05	240.1	-40.1
1562.1	239.6	-39.8
1567.89	241.7	-38.9
1570.94	243.9	-39.5
1571.85	244.4	-39.5
1573.99	244.5	-39.4
1577.04	239.7	-40.2

DEPTH
2940
4802
5097
5144

METERS		SAMPLE INFO		PERCENT					GRAMS/TONNE						
DEPTH	LENGTH	SAMPLE	CODE	EST	CU	NI	CO	AS	TPM	RQD	ORE	MINOR ROC	ROCK	MILLSTOR	DESCRIPTION
0	0														Collar
8.23	8.23									0		OB	CASE		Casing/OB no core retrieved.
8.47	0.24									0		OB	CASE		Broken up pieces of rock (MTSD), GRAVEL SIZED overdrilled pieces of core.
24.99	16.52									75			MTSD		Fg, Dk grey MTSD, qtz rich beds and occasional thinly laminated beds (up to 1cm wide)(biotite rich), bedding is btw 25-30 deg tca, qtz vn @ 39 (approx. 0.5ft wide), qtz/carb vnlts btw 45-60 deg tca (up to 3cm wide), tr py, jnts btw 10-50 deg tca (chl and carb coated with a few intersecting jnt sets).
25.36	0.37									100			MTBS		Fg, dk grey, amygdaloidal basalt, amygdules are btw 1-3mm (carbonate-fizzes with HCL), nvs, no jnts.
44.01	18.65									80			MTSD		Fg, Dk grey MTSD, qtz and biotite rich beds and thinly laminated beds (up to 1cm wide)(biotite rich), bedding is btw 25-30 deg tca, qtz vn @ 131.4ft (approx. 0.5ft wide), qtz/carb vnlts btw 45-60 deg tca (up to 3cm wide), tr py, jnts btw 30-70 deg tca (chl and carb coated).
73.21	29.2									85		MTSD	SLTS		Fg, dk grey, qtz and biotite rich, commonly thinly laminated and btw 151-154.2ft (looks striped black (biotitic) to grey (more qtz rich), rare conglomerate bed (subrounded qtz rich incls up to 1cm), rare SUBX vnlts cross cutting bedding (2cm-20cm wide) vfg, dk grey with subangular qtz rich fragments, bedding is btw 20-25 deg tca, min qtz carb vnlts btw 55-75 deg tca, tr py, jnts btw 35-50 deg tca (chl coated).

94.31	21.09			80	SLTS	MTSD	Fg, Dk grey MTSD, qtz rich beds and occasional thinly laminated beds (up to 1cm wide)(biotite rich), bedding is btw 20-30 deg tca, qtz/carb vnlts btw 20-25 deg tca (1-2mm wide), tr py, jnts btw 20-50 deg tca (chl and carb coated with a few intersecting jnt sets).
123.78	29.47			80	SLTS	MTSD	Fg, Dk grey MTSD, qtz rich beds and thinly laminated beds (biotite rich), bedding is btw 20-30 deg tca, qtz/carb vnlts btw 15-30 deg tca (1-2mm wide) and rare brecciated qtz/carb vnlt @ 368.3ft (0.3ft wide @ 60 deg tca), tr py, jnts btw 20-30 and btw 50-70 deg tca (smooth chl coated).
124.79	1.01			100		LAMP	Fg, greenish grey, lamp dyke, chl altn hmgs throughout, hmgs throughout, very biotitic (flaky biotite), sharp contacts @ 15 (uct) and 60 (lct) deg tca, nvs, no jnts.
175.05	50.26			80	SLTS	MTSD	Fg, Dk grey MTSD, qtz rich beds and thinly laminated beds (biotite rich), bedding is btw 20-40 deg tca, qtz/carb vnlts btw 15-30 deg tca (1-2mm wide), tr py, jnts btw 20-30 and btw 50-60 deg tca (smooth chl coated).
200.01	24.96			90	SLTS	MTSD	Fg, Dk grey MTSD, qtz rich beds and occasional thinly laminated beds (up to 1cm wide)(biotite rich), bedding is btw 20-30 deg tca, qtz/carb vnlts btw 25-40 deg tca (1-2mm wide), tr py and cp, jnts btw 40-50 deg tca (chl and carb coated).
207.57	7.56			60	SLTS	MTSD	Fg, Dk grey MTSD, qtz rich beds and common thinly laminated beds (up to 1cm wide)(biotite rich), irregular wormy looking bedding is btw 5-30 deg tca, qtz/carb vnlts btw 20-30 deg tca (1-2mm wide), vuggy and chl healed fractures (core is blocky), tr py and tr speck of arseno pyrite, jnts btw 30-50 and btw 10-20 deg tca (chl and carb coated).

220.83	13.26		85	SLTS	MTSD	Fg, Dk grey MTSD, qtz rich beds and occasional thinly laminated beds (up to 1cm wide)(biotite rich), bedding is btw 20-30 deg tca, rare qtz/carb vnlts btw 25-30 deg tca (1-2mm wide), tr py, jnts btw 10-30 deg tca (chl and carb coated).
280.39	59.56		80	SLTS	MTSD	Continuation of MTSD unit above, fg, grey, competent, massive and hmgs throughout. Laminations are present throughout occurring at 10-25deg tca. Occasional more massive beds of little to no laminations but generally the same texturally. No significant sulphides, rare tr speck of Po or Pyt.
281.76	1.37		5	MTSD	FLT	MTSD as described above except a Flt with broken and blocky core. Minor 1-2inch gouge at the upper contact. No sulphides present.
341.5	59.74		75	SLTS	MTSD	Continuation of MTSD unit above, fg, grey, competent, massive and hmgs throughout. Laminations are abundant and occur subpll tca ranging from (10-15deg) tca. Qtz-carb vnlts are randomly orientated but often seen at 15Deg tca. Some fractures occur along the plane of the laminations. Texturally the core occasionally has a brecciated like appearance (rehealed). No significant sulphides, rare tr speck of Po or Pyt.
347.32	5.82		20	MTSD	STRT	MTSD as described above, continued. However, very broken and blocky (1-4inch pieces on average). No major gouge sections but abundant breaks along fracture plane with minor ground core/sand sized along some frac planes. No significant sulphides. Texturally the same with some randomly orientated qtz-carb vnlts.

362.89	15.58			85	SS	MTSD	Continuation of MTSD unit above, fg, grey, competent, massive and hmgs throughout. Laminations are less common and the MTSD appear as more of a SS MTSD. Qtz-carb vnlts are randomly orientated. Fractures occur at 40-60deg tca on average when no dominant laminations ar present. Texturally the core occasionally has a brecciated like appearance of micro fractures(rehealed). No significant sulphides, rare tr speck of Po or Pyt.
367.28	4.39			20	MTSD	STRT	MTSD as described above, continued. However, very broken and blocky (1-4inch pieces on average). No major gouge sections but abundant breaks along fracture planes with minor ground core/sand sized along some frac planes. Fracture planes are chlorite coated with minor ground core. Possibly minor graphite coating along the surface. No significant sulphides.
387.25	19.96			80	SS	MTSD	Continuation of MTSD unit above, fg, grey, competent, massive and hmgs throughout. Laminations are less common and the MTSD appear as more of a SS MTSD. Qtz-carb vnlts are randomly orientated. Fractures occur at 40-60deg tca on average when no dominant laminations ar3 present. Texturally the core occasionally has a brecciated like appearance of micro fractures(rehealed). No significant sulphides, rare tr speck of Po or Py.
387.64	0.4			100		DIA	Vfg to fg, dk grey (looks like OLDI but the dia is non-magnetic), visible plag phenocrysts(1mm) and larger porphryoblasts up to 2cm, sharp uct @ 50 and lct sharp @ 50 deg tca.

401.85	14.2		85	SS	MTSD	Fg, grey, competent MTSD, massive and mostly homogenous throughout, rare qtz carb vnlts btw 30-60 deg tca, spks py and po (<0.5%), jnts btw 25-50 deg tca (chl coated).
411.85	10		20	MTSD	STRT	MTSD as described above, continued. However, very broken and blocky (1-4inch pieces on average). No gouge sections but abundant breaks along fracture planes with minor ground core/pebble sized along some frac planes. @ 1330ft Carb healed fracture with qtz/carb crystals within the vug (@ 45 deg tca) Jnts are btw 5-40 deg tca (chlorite coated and smooth).
431.99	20.15		75	SLTS	MTSD	Continuation of MTSD unit above (qtz and biotite), Fg, grey, competent, massive and hmgs throughout. Laminations are present throughout occurring btw 15-30 deg tca. Occasional more massive beds of little to no laminations but generally the same texturally. No significant sulphides, rare tr spks py and po (0.5%); jnts btw 15-35 deg tca (chl coated and smooth).
432.79	0.79		50		OLDI	VFG to Fg, dk greyish black OLDI, Strongly magnetic, sharp uct @ 35 and lct @ 60 deg tca, blocky and broken into gravel to 4 inch pieces of core.
442.66	9.88		85	SLTS	MTSD	Biotite rich laminations are present throughout occurring btw 15-30 deg tca. Occasional more massive beds of little to no laminations but generally the same texturally. No significant sulphides, rare tr spks py and po (0.5%); jnts btw 15-35 deg tca (chl coated and smooth).
442.75	0.09		100		OLDI	VFG to Fg, dk greyish black OLDI, Strongly magnetic, sharp uct @ 60 and lct @ 65 deg tca, no jnts.

461.92	19.17									90		SLTS	MTSD	Fg, grey, qtz and biotite rich, commonly thinly laminated (biotite) (striped black (biotitic) to grey (more qtz rich), bedding is btw 15-25 deg tca, min irregular qtz carb vnlts btw 55-75 deg tca, tr po and py, jnts btw 15-30 deg tca (chl coated).
463.42	1.49	MG220601	5	0	0.01	0	0	0	0	90	NVS	SLTS	MTSD	MTSD as described above. This is just a bracket sample above the mineralized sample below.
464.88	1.46	MG220603	5	10	0.15	0.04	0.03	0	0	90	STRS		MTSD	MTSD with strong laminations and BT rich. Has a darker black-brown appearance compared to qtz rich mtsd above and below. Almost similar to a banded Fe formation. About 10% sulphides with 8%Po and 2%Cpy. Entire unit is non-magnetic including the sulphides. Upper and lower CTs are sharp at 10-15deg tca. Fracture planes perpendicular tca are sulphide filled and appear as if it is masu.
466.4	1.52	MG220604	5	0	0.01	0.01	0	0	0	90	NVS	SLTS	MTSD	MTSD as described (MG220601) and above. This is just a buffer sample.
475.49	9.08									90		SLTS	MTSD	Fg, grey, qtz and biotite rich, commonly thinly laminated (biotite) (striped black (biotitic) to grey (more qtz rich), bedding is btw 15-25 deg tca, min irregular qtz carb vnlts btw 55-75 deg tca, tr po and py, jnts btw 15-30 deg tca (chl coated).
476.49	1.01									90		DIA	OLDI	Black fg chilled magnetic aphanitic DIA dyke. Sharp upper ct at 55 and lower 50 deg tca. No sulphides present.
487.44	10.94									90		SLTS	MTSD	MTSD continued from above. Fg, grey, qtz and biotite rich, commonly thinly laminated (biotite) (striped black (biotitic) to grey (more qtz rich), bedding is btw 15-25 deg tca, min irregular qtz carb vnlts btw 55-75 deg tca, tr po and py, jnts btw 15-30 deg tca (chl coated).

488.35	0.91								80		DIA	OLDI	Black fg chilled magnetic massive and hmgs, aphanitic DIA dyke. Sharp upper ct at 50 and lower 30 deg tca. No sulphides present.
514.99	26.64								90		SLTS	MTSD	MTSD continued from above. Fg, grey, qtz and biotite rich, commonly thinly laminated (biotite) (striped black (biotitic) to grey (more qtz rich), bedding is btw 15-25 deg tca, min irregular qtz carb vnlts btw 55-75 deg tca, tr po and py, jnts btw 15-30 deg tca (chl coated).
574.15	59.16								90		SS	MTSD	MTSD continued from above. Fg, grey, qtz rich, but lacking the laminations and dominant bedding. The MTSD becomes a more massive hmgs sandstone with just small whispy qtz-carb vnlts randomly cross cutting the unit. Competent core. No significant sulphides.
575.49	1.34	MG220605	5	0	0.01	0.01	0	0	0	90	NVS	SS	MTSD as described above. This is a continuation of the MTSD and is sampled as just the buffer above the QD below. No sulphides.
576.96	1.46	MG220606	5	0	0	0.01	0	0	0	90	NVS	SS	MTSD	Continuation of MTSD above. This is a buffer sample above the QD. No sulphides. Minor qtz vnlts.
577.99	1.04	MG220607	5	0	0	0.01	0	0.001	0	90	NVS		QD	This is the beginning of the QD. This is a transitional zone with a very weak upper CT. Believed to be a mix of MTSD and QD but becoming more crystaline, equigranualr and igneous with depth. Relatively fg with a slight coarsening over this interval with depth. No significant sulphides.
579.39	1.4	MG220608	5	0	0.01	0.01	0	0	0	90	NVS		QD	Beginning of the true QD. Grey, mg, some spherulitic textures throughout. Relatively hmgs throughout. Minor qtz-carb vnlts cross cutting. No significant ulphides.

581.01	1.62	MG220609	5	0	0	0.01	0	0	0	90	NVS	QD	QD continued from above, Grey, mg, some spherulitic textures throughout. Relatively hmgs throughout. Minor qtz-carb vnlts cross cutting. No significant sulphides.
582.38	1.37	MG220611	5	0	0.01	0.01	0	0	0	90	NVS	QD	QD continued from above, Grey, mg, some spherulitic textures throughout. Relatively hmgs throughout. Minor qtz-carb vnlts cross cutting. No significant sulphides.
584	1.62	MG220612	5	0	0.02	0.01	0	0	0.03	90	NVS	QD	QD continued from above, Grey, mg, less spherulitic textures than above. Relatively hmgs throughout. Minor qtz-carb vnlts cross cutting. No significant sulphides.
585.12	1.13	MG220613	5	0	0.01	0.01	0	0	0.03	90	NVS	QD	QD continued from above, Grey, mg, some spherulitic textures throughout. Relatively hmgs throughout. Minor qtz-carb vnlts cross cutting. No significant sulphides.
587.23	2.1	MG220615	5	0	0.01	0.01	0	0	0.03	90	NVS	IQD	IQD with inclusions of MTGB now altered to amphibolites. fabric occurring at 30deg tca. Bt rich matrix hosting the inclusions. This appears to be a small interval/injection into the QD (above and Below this interval). No significant sulphides.
588.51	1.28	MG220616	5	0	0.01	0.01	0	0	0	90	NVS	QD	QD continued from above, Grey, mg. Relatively hmgs throughout. Minor qtz-carb vnlts cross cutting. No significant sulphides.
590	1.49	MG220617	5	0	0.01	0.01	0	0	0	90	NVS	QD	QD continued from above, Grey, mg. Relatively hmgs throughout. Minor qtz-carb vnlts cross cutting. No significant sulphides.
591.37	1.37	MG220618	5	0	0	0.01	0	0	0	90	NVS	QD	QD continued from above, Grey, mg. Relatively hmgs throughout. Minor qtz-carb vnlts cross cutting. No significant sulphides.
592.26	0.88	MG220620	5	0	0	0.01	0	0	0	90	NVS	QD	QD continued from above, Grey, mg. Relatively hmgs throughout. Minor qtz-carb vnlts cross cutting. No significant sulphides.

592.62	0.37	MG220621	5	1	0.1	0.05	0.01	0.003	0.1	90	NVS	QTZ	QTZ, white cross cutting vein. Tr Cpy sulphides along the CTs. Occur as specks. 1% or less.
594.15	1.52	MG220622	5	0	0.01	0.01	0	0	0	90	NVS	QD	QD continued from above, Grey, mg. Relatively hmgs throughout. Minor qtz-carb vnlts cross cutting. No significant sulphides.
595.27	1.13	MG220624	5	0	0.01	0.01	0	0	0	90	NVS	QD	QD continued from above, Grey, fg-mg. Relatively hmgs throughout. Minor qtz-carb vnlts cross cutting. No significant sulphides.
596.71	1.43	MG220625	5	0	0.01	0.01	0	0	0	90	NVS	QD	QD continued from above, Grey, fg-mg. Relatively hmgs throughout. Minor qtz-carb vnlts cross cutting. No significant sulphides.
597.77	1.07	MG220626	5	1	0.04	0.02	0	0.001	0.07	90	TR	IQD	IQD, beginning of a large IQD interval. DH has left the marginal QD and entered into the middle of the Worthington Dyke. The IQD contains abundant MTGB (Now altered to Amphibolite) inclusions ranging in size from 2mm to 6inches. Average size is 2-6mm with multiple larger ones from 2-3inches. TR diss specks and small discontinuous streaks are present. 1% or less overall. Usually CP and Po visible.
598.99	1.22	MG220627	5	1	0.03	0.02	0	0.001	0.07	90	TR	IQD	IQD contains abundant MTGB (Now altered to Amphibolite) inclusions ranging in size from 2mm to 6inches. Average size is 2-6mm with multiple larger ones from 2-3inches. TR diss specks and small discontinuous streaks are present. 1% or less overall. Usually CP and Po visible.
600.46	1.46	MG220628	5	1	0.04	0.05	0	0.001	0.14	90	TR	IQD	IQD contains abundant MTGB (Now altered to Amphibolite) inclusions ranging in size from 2mm to 6inches. Average size is 2-6mm with multiple larger ones from 2-3inches. TR diss specks and small discontinuous streaks are present. 1% or less overall. Usually CP and Po visible.

602.01	1.55	MG220629	5	1	0.04	0.04	0	0.001	0.14	90	TR	IQD	IQD contains abundant MTGB (Now altered to Amphibolite) inclusions ranging in size from 2mm to 6inches. Average size is 2-6mm with multiple larger ones from 2-3inches. TR diss specks and small discontinuous streaks are present. 1% or less overall. Usually CP and Po visible.
603.63	1.62	MG220631	5	1	0.05	0.04	0	0.002	0.14	90	TR	IQD	IQD contains abundant MTGB (Now altered to Amphibolite) inclusions ranging in size from 2mm to 6inches. Average size is 2-6mm with multiple larger ones from 2-3inches. TR diss specks and small discontinuous streaks are present. 1% or less overall. Usually CP and Po visible.
605	1.37	MG220632	5	1	0.05	0.05	0	0.002	0.21	90	TR	IQD	IQD contains abundant MTGB (Now altered to Amphibolite) inclusions ranging in size from 2mm to 6inches. Average size is 2-6mm with multiple larger ones from 2-3inches. TR diss specks and small discontinuous streaks are present. 1% or less overall. Usually CP and Po visible.
607.5	2.5	MG220633	5	1	0.07	0.1	0.01	0.008	0.27	90	TR	IQD	IQD as described above. Sulphide 1% or less.
608.56	1.07	MG220634	5	1	0.04	0.06	0.01	0.022	0.14	90	TR	IQD	IQD as described above. Sulphide 1% or less. A White cross cutting qtz vn representing 50% of this interval.
609.69	1.13	MG220635	5	1	0.03	0.04	0	0.005	0.17	90	TR	IQD	QD contains abundant MTGB (Now altered to Amphibolite) inclusions ranging in size from 2mm to 6inches. Average size is 2-6mm with multiple larger ones from 2-3inches. TR diss specks and small discontinuous streaks are present. 1% or less overall. Usually CP and Po visible.
611	1.31	MG220636	5	1	0.05	0.04	0	0.005	0.17	90	TR	IQD	IQD as described above. Sulphide 1% or less.
612.71	1.71	MG220638	5	1	0.05	0.05	0	0.007	0.21	90	TR	IQD	IQD as described above. Sulphide 1% or less.

613.99	1.28	MG220640	5	1	0.02	0.02	0	0.002	0.07	90	TR	IQD	IQD as described above. Sulphide 1% or less.
615.39	1.4	MG220641	5	1	0.04	0.04	0	0.008	0.17	90	TR	IQD	IQD as described above. Sulphide 1% or less.
617.01	1.62	MG220642	5	1	0.03	0.04	0	0.002	0.14	90	TR	IQD	IQD as described above. Sulphide 1% or less.
618.5	1.49	MG220643	5	1	0.05	0.04	0	0.001	0.14	90	TR	IQD	IQD as described above. Sulphide 1% or less.
619.99	1.49	MG220644	5	1	0.05	0.04	0	0.002	0.17	90	TR	IQD	IQD as described above. Sulphide 1% or less.
621.43	1.43	MG220645	5	1	0.04	0.03	0.01	0.002	0.07	90	TR	IQD	IQD as described above. Sulphide 1% or less.
622.1	0.67	MG220646	5	1	0.05	0.04	0.01	0.001	0.17	90	TR	IQD	IQD as described above. Sulphide 1% or less.
624.5	2.41	MG220647	5	1	0.09	0.03	0.01	0.004	0.14	90	TR	IQD	IQD as described above. Sulphide 1% or less.
626	1.49	MG220648	5	1	0.07	0.03	0	0.003	0.1	90	TR	IQD	IQD as described above. Sulphide 1% or less.
627.55	1.55	MG220650	5	1	0.02	0.04	0.01	0.013	0.17	90	TR	IQD	IQD as described above. Sulphide 1% or less.
628.99	1.43	MG220651	5	1	0.03	0.04	0.01	0.012	0.17	90	TR	IQD	IQD as described above. Sulphide 1% or less.
630.2	1.22	MG220653	5	1	0.05	0.04	0.01	0.011	0.21	90	TR	IQD	IQD as described above. Sulphide 1% or less.
631.21	1.01	MG220654	5	1	0.05	0.04	0.01	0.01	0.21	50	TR	IQD	IQD as described above with 1% sulphides or less. A couple larger(2-3inch) amph inclusions with BT halos. Broken and blocky pieces likely associated with a fracture plane, chlorite coated and minor movement. Some of the pieces are associated with the mechanical drilling.
632	0.79	MG220655	5	1	0.13	0.05	0.01	0.006	0.14	30	TR	IQD	IQD as described above with typically small inclusions and less than 1% sulphides overall seen as diss specks throughout.
633.59	1.58	MG220656	5	1	0.05	0.04	0	0.001	0.14	80	TR	IQD	IQD as described above with typically small inclusions and sulphides 1% or less, seen as diss specks throughout.

634.99	1.4	MG220657	5	1	0.02	0.04	0	0.001	0.21	70	TR	IQD	IQD as described above with typically small inclusions and sulphides 1% or less, seen as diss specks throughout. Minor fracture, chlorite coated surface and some broken pieces due to mechanical drilling.
636.54	1.55	MG220658	5	1	0.03	0.03	0	0.002	0.14	90	TR	IQD	IQD as described above with typically small inclusions and sulphides 1% or less, seen as diss specks throughout.
638.01	1.46	MG220659	5	1	0.02	0.03	0	0.003	0.1	90	TR	IQD	IQD as described above with inclusions and minor diss sulphides, 1% or less. Several large inclusions (2-3inches) of MTGB altered and BT halos.
639.68	1.68	MG220660	5	1	0.04	0.03	0	0	0.1	60	TR	IQD	IQD as described above with inclusions and minor diss sulphides, 1% or less. Several large inclusions (2-3inches) of MTGB altered and BT halos. Fracture also present subpll TCA that has caused some blocky core but no significant movement identified.
640.99	1.31	MG220661	5	1	0.05	0.04	0	0.001	0.17	90	TR	IQD	IQD as described above with inclusions and minor diss sulphides, 1% or less.
642.49	1.49	MG220663	5	1	0.04	0.04	0	0.002	0.14	90	TR	IQD	IQD as described above with inclusions and minor diss sulphides, 1% or less. Several large inclusions (2-3inches) of MTGB altered and BT halos.
644.01	1.52	MG220664	5	1	0.04	0.04	0	0.001	0.14	90	TR	IQD	IQD as described above with inclusions and minor diss sulphides, 1% or less. Several large inclusions (2-3inches) of MTGB altered and BT halos.
645.57	1.55	MG220665	5	1	0.04	0.04	0	0.001	0.17	90	TR	IQD	IQD as described above with inclusions and minor diss sulphides, 1% or less.
647.52	1.95	MG220666	5	1	0.06	0.04	0	0.003	0.17	90	TR	IQD	IQD as described above with inclusions and minor diss sulphides, 1% or less.

648.46	0.94	MG220667	5	0	0.03	0.02	0	0.001	0.03	95	NVS	QD	QD, grey, non-mag, some lathy minerals appearing as a spherulitic txt. This is a massive, competent, hmgs unit. No significant sulphides. The upper Ct of this interval with the IQD occurs at 15deg tca.
650.11	1.65	MG220668	5	0	0.03	0.01	0	0	0	95	NVS	QD	QD as described above. Grey, non-mag, some lathy minerals appearing as a spherulitic txt. This is a massive, competent, hmgs unit. No significant sulphides.
651.36	1.25	MG220669	5	0	0.01	0.01	0	0	0	95	NVS	QD	QD as described above with no significant sulphides. Very massive, uniform and hmgs throughtout.
653	1.65	MG220670	5	0	0.01	0.01	0	0	0	95	NVS	QD	QD as described above with no significant sulphides. Very massive, uniform and hmgs throughout.
654.5	1.49	MG220671	5	0	0.01	0.01	0	0	0	95	NVS	QD	QD as described above with no significant sulphides. Very massive, uniform and hmgs throughout.
655.99	1.49	MG220672	5	0	0.01	0.01	0	0	0	95	NVS	QD	QD as described above with no significant sulphides. Very massive, uniform and hmgs throughout.
657.45	1.46	MG220674	5	0	0.01	0.01	0	0	0	95	NVS	QD	QD as described above with no significant sulphides. Very massive, uniform and hmgs throughout.
659.01	1.55	MG220675	5	0	0.01	0.01	0	0	0	95	NVS	QD	QD as described above with no significant sulphides. Very massive, uniform and hmgs throughout.
660.47	1.46	MG220676	5	0	0.03	0.01	0	0	0	95	NVS	QD	QD as described above with no significant sulphides. Very massive, uniform and hmgs throughout.
662	1.52	MG220677	5	0	0.01	0.01	0	0	0	95	NVS	QD	QD as described above with no significant sulphides. Very massive, uniform and hmgs throughout.
662.91	0.91	MG220678	5	0	0.01	0.01	0	0	0	95	NVS	QD	QD as described above with no significant sulphides. Very massive, uniform and hmgs throughout.
665.01	2.1	MG220679	5	0	0.01	0.01	0	0	0	95	NVS	QD	QD as described above with no significant sulphides. Very massive, uniform and hmgs throughout.
666.02	1.01	MG220680	5	0	0.02	0.01	0	0	0	95	NVS	QD	QD as described above with no significant sulphides. Very massive, uniform and hmgs throughout.

666.93	0.91	MG220681	5	0	0.01	0.01	0.01	0	0	85	NVS	OLDI	DIA	very Fg Black, massive and hmgs throughout, chilled aphanitic dyke. Magnetic. Believed to be OLDI cross cutting QD. No sulphides present.
668	1.07	MG220682	5	0	0	0.01	0	0	0	95	NVS		QD	QD as described above with no significant sulphides. Very massive, uniform and hmgs throughout.
669.74	1.74	MG220683	5	0	0.02	0.03	0	0.006	0.1	95	NVS		QD	QD as described above with no significant sulphides. Very massive, uniform and hmgs throughout. Lower CT is somewhat irregular with a couple MTGB blocks included as it transitions into the IQD below.
670.99	1.25	MG220684	5	1	0.05	0.05	0.01	0.027	0.17	90	TR		IQD	Weakly developed IQD. Main mass is similar to the QD but slightly more fg and not as equigranular or hmgs. Diss sulphides present 1% or lss. (Po and Cpy primarily). Inclusions of MTGB/amph are present. Ranging on size from 2-3mm to 2inches on average. Sometimes very faint and difficult to see.
672.48	1.49	MG220685	5	1	0.05	0.05	0	0.003	0.21	95	TR		IQD	IQD as described above. 1% sulphides or less. Trace or weakly diss. Mod-abundant inclusions.
674	1.52	MG220686	5	1	0.03	0.02	0	0.001	0.07	95	TR		IQD	IQD as described above. 1% sulphides or less. Trace or weakly diss. Mod-abundant inclusions. Competent unit with rare fractures or structures.
675.22	1.22	MG220689	5	1	0.05	0.04	0	0.004	0.21	95	TR		IQD	IQD as described above. 1% sulphides or less. Trace or weakly diss. Mod-abundant inclusions.
676.99	1.77	MG220690	5	1	0.04	0.04	0	0.003	0.14	95	TR		IQD	IQD as described above. 1% sulphides or less. Trace or weakly diss. Mod-abundant amph inclusions, generally less than 1 inch.
678.76	1.77	MG220691	5	1	0.04	0.04	0	0.001	0.17	95	TR		IQD	IQD as described above. 1% sulphides or less. Trace or weakly diss. Mod-abundant amph inclusions, generally less than 1 inch.

680.04	1.28	MG220692	5	1	0.04	0.04	0	0.002	0.17	95	TR	IQD	IQD as described above. 1% sulphides or less. Trace or weakly diss. Mod-abundant amph inclusions, generally less than 1 inch.
681.75	1.71	MG220693	5	1	0.04	0.03	0	0	0.1	95	TR	IQD	IQD as described above. 1% sulphides or less. Trace or weakly diss. Mod-abundant amph inclusions, generally less than 1 inch.
683.15	1.4	MG220694	5	1	0.04	0.03	0	0.001	0.1	95	TR	IQD	IQD as described above. 1% sulphides or less. Trace or weakly diss. Mod-abundant amph inclusions, generally less than 1 inch. No defined sharp ct near the lower CT, more transitional loosing the inclusions and becoming more hmgs QD. Also slight increase of qtz-carb vnlts. near the ct.
684.37	1.22	MG220695	5	0	0.02	0.01	0	0	0	90	NVS	QD	QD, becoming very uniform, competent. Minor amph inclusions can randomly be identified throughout. Generally no sulphides but rare specks have been observed. Some Qtz-carb vnlts along upper ct possibly denoting the lithology contact.
686.01	1.65	MG220696	5	0	0.01	0.01	0	0	0.03	90	NVS	QD	QD as described above, no significant sulphides. Possibly rare trace specks. Rare inclusions. Massive and hmgs unit that is competent.
687.48	1.46	MG220697	5	0	0.03	0.03	0	0.001	0.1	90	NVS	QD	QD as described above, no significant sulphides. Possibly rare trace specks. Rare inclusions. Massive and hmgs unit that is competent.
689.09	1.62	MG220698	5	0	0.01	0.01	0	0	0.03	90	NVS	QD	QD as described above, no significant sulphides. Possibly rare trace specks. Rare inclusions. Massive and hmgs unit that is competent.
690.62	1.52	MG220700	5	0	0.01	0.01	0	0	0	90	NVS	QD	QD as described above, no significant sulphides. Possibly rare trace specks. Rare inclusions. Massive and hmgs unit that is competent.

691.99	1.37	MG229605	5	0	0.02	0.02	0	0	0.07	90	NVS	QD	QD as described above, no significant sulphides. Possibly rare trace specks. Massive and hmgs unit that is competent.
693.45	1.46	MG229606	5	0	0.03	0.02	0	0.002	0.07	90	NVS	QD	QD as described above, no significant sulphides. Possibly rare trace specks. Massive and hmgs unit that is competent throughout. Also a white brecciated rehealed qtz vn at 2276.1 occurring at 20deg tca with a true thickness of 3inches.
694.91	1.46	MG229608	5	0	0.02	0.01	0	0.001	0	90	NVS	QD	QD as described above, no significant sulphides. Possibly rare trace specks. Massive and hmgs unit that is competent.
695.61	0.7	MG229609	5	0	0.01	0.01	0	0	0	80	NVS	QD	QD as described above except it becomes slightly finer grained, and more bt rich. This interval is described as a transitional zone with mixing occurring with the MTSDs below. No immediate sharp ct identified. No sulphides present.
696.44	0.82	MG229610	5	0	0	0.01	0	0	0	90	NVS	MTSD	MTSD, but possible mixing and contamination with the QD above. Appears to be more BT rich and possibly a weak fabric/layering occurring. Relatively hmgs massive texture. No sulphides.
697.38	0.94	MG229611	5	0	0.01	0.01	0	0	0.03	90	NVS	MTSD	MTSD, but possible mixing and contamination with the QD above. Appears to be more BT rich and possibly a weak fabric/layering occurring. Relatively hmgs massive texture. No sulphides.
699.06	1.68	MG229612	5	0	0.01	0.01	0	0	0	90	NVS	MTSD	MTSD continued from above with little to no contamination from the QD. More qtz rich, lighter in color but also texturally it has been stressed with fractures that have been rehealed and infilled with qtz or has a slight halo of alteration from fluids along the fracture walls. No sulphides identified.

701.01	1.95	MG229613	5	0	0.01	0.01	0	0	0	80	NVS		MTSD	MTSD, qtz rich, lighter in color but also texturally it has been stressed with fractures that have been rehealed and infilled with qtz or has a slight halo of alteration from fluids along the fracture walls. No sulphides identified.
702.59	1.58	MG229614	5	0	0.02	0.01	0	0	0	80	NVS		MTSD	MTSD, qtz rich, lighter in color but also texturally it has been stressed with fractures that have been rehealed and infilled with qtz or has a slight halo of alteration from fluids along the fracture walls. No sulphides identified.Slightly less infill qtz vnlts than the above 2 intervals.
704	1.4	MG229615	5	0	0.01	0.01	0	0	0	80	NVS		MTSD	MTSD similar to above except less stressed and more competent and typical of the host MTSDs. Weak fabric beginning to develop. No sulphides.
704.7	0.7	MG229616	5	0	0.02	0.01	0	0	0	85	NVS	SS	MTSD	MTSD as described above. Weak fabric at 30-40deg tca. Relatively competent and hmgs. This is a buffer sample to the QD above. No sulphides identified.
706.16	1.46	MG229617	5	0	0.01	0.01	0	0	0	85	NVS	SS	MTSD	MTSD as described above. Weak fabric at 30-40deg tca. Relatively competent and hmgs. This is a buffer sample to the QD above. No sulphides identified.
707.01	0.85	MG229618	5	0	0.01	0.01	0	0.001	0	85	NVS	SS	MTSD	MTSD as described above. Weak fabric at 30-40deg tca. Relatively competent and hmgs. This is a buffer sample to the QD above. No sulphides identified.
708.54	1.52	MG229619	5	0	0.01	0.01	0	0	0	85	NVS		MTSD	MTSD as described above. Just a buffer sample for the MASU vn below.
708.72	0.18	MG229620	5	20	0.11	0.63	0.04	0	0.03	90	MASU	MTSD	MASU	MTSD as described above but there is a 1.5inch true thickness massive sulphide Po vein that cross cuts the MTSD at 70deg tca. Sharp contacts.
710	1.28	MG229621	5	0	0.01	0.01	0	0	0	90	NVS		MTSD	MTSD as described above. Just a buffer zone to the MASU Po vn above.

710.95	0.94	MG229622	5	0	0.01	0.01	0	0	0	90	NVS		MTSD	MTSD as described above. Just a buffer zone to the MASU Po vn above.
749.75	38.8									90		SLTS	MTSD	MTSD as described above. SLTS with strong laminations occurring at 30deg tca. Very consistent and uniform with minor fractures or structures. No sulphides present.
752.37	2.62									80		SLTS	MTSD	MTSD as described above except texturally the MTSD appear locally stressed and rehealed vnlts with qtz. Appears almost like infilled tension gashes. One fracture plane along the laminations with chlorite coating that indicates minor movement. No sulphides present.
756.3	3.93									90		SLTS	MTSD	MTSD as described above. SLTS with strong laminations occurring at 30deg tca. Very consistent and uniform with minor fractures or structures. No sulphides present.
759.01	2.71									75		SLTS	MTSD	MTSD as described above except texturally the MTSD appear locally stressed and rehealed vnlts with qtz. Appears almost like infilled tension gashes. One fracture plane along the laminations with chlorite coating that indicates minor movement. No sulphides present.
768.8	9.78									90		SLTS	MTSD	MTSD as described above. SLTS with strong laminations occurring at 30deg tca. Very consistent and uniform with minor fractures or structures. No sulphides present.
768.95	0.15									75		MTSD	FLT	MTSD as described above with laminations at 30deg tca. Small flt with minor movement along the laminated planes. Minor gouge present. No sulphides.

822.29	53.34		90		MTSD	MTSD as described above. SLTS with laminations occurring at 30deg tca. Very consistent and uniform with minor fractures or structures. Localized areas/intervals within do represent more hmgs sections that have little to no evidence of laminations and appear more competent and massive.
822.32	0.03		0		FLT	Small Fault filled with gouge. ABout 1 inch wide. Indications of movement. Angle at 50-60deg tca. No sulphides present.
830	7.68		70	SLTS	MTSD	FG SLTS MTSD unit with moderate to strong laminations. Moderate breaks and fractures along laminations. No sulphides. Unit is uniform throughout.
834.6	4.6		10	MTSD	STRT	MTSD as described above with intense lamination. This is a structural zone with broken pieces typically along laminations. Laminated surfaces are chlorite coated and smooth. Minor ground core and rock powder along some fractures. The broken nature of this zone is likely due to mechanical drilling as well. No sulphides present.
839.66	5.06		60	SLTS	MTSD	MTSD as described above continued with strong laminations. No major structures. Laminations occurring at 30deg tca.
845	5.33		90		OLDI	Fg OLDI. Blk chilled unit with upper ct occurring at about 10-20deg tca. Localized areas have small 2-4mm white phenocryst. Unit is magnetic. No sulphides present. Lower CT is subpll at 0-10deg tca.

873.83	28.83	20	STRT	MTSD	MTSD as above with strong laminations. Abundant broken and blocky core, typically along the lamination plane. Much of the spalling of the rock may be influenced by mechanical drilling. Possibly some structural movement along the fracture/lamination planes. Minor rock flour present on some planes. This could be considered the damage zone overlying some of the flt that will be described below. Minor tr Pyt and possibly specks of Galena in fracture/flt zones.
874.53	0.7	70		DIA	DIA (Non Mag) seen as a fine grained black dyke that crosscuts this interval. No sulphides.
875.45	0.91	0	MTSD	FLT	FLT within the MTSD. Gouge present along many fracture planes. No significant sulphides.
876.33	0.88	80		MTSD	MTSD with minor to rare laminations compared to above. Relatively massive SS that is more hmgs. No sulphides.
877.49	1.16	90	DIA	OLDI	OLDI that is fg, black with sharp contacts. Minor white phenocryst throughout. No sulphides. Lower CT is at 10deg tca.
881.73	4.24	60	SLTS	MTSD	MTSD with strong laminations occurring at 25deg tca. Some fractures in this damage zone due to the underlying flts in the next interval. No sulphides.
881.97	0.24	0	MTSD	FLT	Flt with gouge and broken pieces. Obvious signs of movement. Significant structure. No sulphides.
883.77	1.8	0	MTSD	STRT	MTSD strongly laminated at 50deg tca. Broken consistently along the laminated planes. Most pieces are about 1inch in length. Looks almost like discing core. No Sulphides.
883.89	0.12	0		FLT	Flt with gouge and broken pieces. Obvious signs of movement. Significant structure. No sulphides.

889.62	5.73		40	MTSD	SHR	MTSD as above but broken and blocky with small fractures and small structures with evidence of slicken slides. This appears to be the part of the damage zone from above.
890.87	1.25		40	MTSD	SHR	MTSD, broken and blocky and still within this structural zone. This interval also has a fabric that occurs at 40deg tca. This interval looks brecciated and has local inclusions, most appearing to be local MTSD. There is some question whether this is IQD. This flow fabric has a matrix and inclusions similar to the host rock. Note cross cutting rehealed fractures filled with alteration fluids/serpentine.
890.96	0.09		0		FLT	Flt with gouge and broken pieces. Obvious signs of movement. Significant structure. No sulphides.
894.65	3.69		70	MTSD	SHR	MTSD as described above with a strong fabric at 25Deg tca. Abundant small inclusions 1-2mm in size elongated to the fabric. The inclusions appear to be MTSD (grey)in origin and in a fine grain grey matrix. Similar to IQD in texture but not the typical MTGB inclusions. Believed to be related to a large (possibly regional) scale structure and the brecciated units/shears/serpentine/and fault gouge. No sulphides.
895.99	1.34		80		MTSD	Mtsd but med grained, slightly more competent without the strong fabric and sall inclusions. The upper CT at 2935.2 appears to be a lithology contact or a MTSD bedding. The MTSD in this interval appears bleached (possibly related to this structural zone) and as a result it also has a QD like appearance. All of this structural zone has been kept as a reference from 881m-899m.

897.54	1.55			0		WDG	WDG at 896m. Note that there is a large sliver where the wedge has been cut out. 4.6ft of core has been recovered of the cut out wedge.
901.39	3.84			70		MTSD	MTSD with laminations occurring at 30deg tca. No sulphides present. No significant structures. Small splay (1 inch) of DIA dyke from below.
901.99	0.61			80	DIA	OLDI	Fg DIA, chilled, aphanitic blk hmgs. The unit is magnetic with 1-3cm feldspar phenocryst. Most likely a OLDI. No sulphides.
914	12.01			80	SLTS	MTSD	MTSD with strong laminations occurring at 20deg tca. No significant sulphides and no significant structures. Breaks are along the MTSD laminations. This is the end of the HQ core. Switch to NQ.
949.06	35.05			85	SLTS	MTSD	MTSD as above, strongly laminated ranging from 20-35deg tca. No significant structures. Some broken and blocky core along laminations and sometimes subpll tca. Very hmgs and continuous. No sulphides.
950.21	1.16			60	OLDI	DIA	Fg blk chilled OLDI. Magnetic and no sulphides. About 40% of the interval has broken and blocky sections.
1091.03	140.82			75	SLTS	MTSD	MTSD as above, strongly laminated ranging from 20-35deg tca. No significant structures. Some broken and blocky core along laminations and sometimes subpll tca. Very hmgs and continuous. No significant sulphides.
1098.01	6.98			20	SLTS	MTSD	MTSD as described above but just broken and blocky along laminated surfaces. Both laminations and fracture planes occur at 35deg tca. No significant sulphides.

1131.63	33.62			80	SLTS	MTSD	MTSD as described above. Laminated, occurring at 35deg tca. More competent than the interval above but interval is very hmgs. Sharp lower CT with DIA. No sulphides present.
1133.22	1.58			80	OLDI	DIA	Fg black dia dyke. Strongly magnetic and white feldspar phenocryst can be observed. Believe to be OLDI. No sulphides present. Contacts are sharp but also several DIA veins within this interval.(Possibly a second injection of DIA within the DIA).
1135.47	2.26			80		MTSD	MTSD as described above but just separating the 2 DIA dykes.
1149.74	14.26			60	OLDI	DIA	DIA as above, fg, black DIA dyke that is magnetic. Broken and blocks and may due to the damage zone related to the fault below at the lower contact. Some slicken slides and minor serpentine coatings present. White feldspar phenocryst present as well.
1150.86	1.13			0	DIA	FLT	FLT at the lower contact of the DIA dyke. 0.5m of core was not recovered within this interval. Small gravel size pieces. No sulphides observed. Sharp lower contact, but not measurable.
1161.62	10.76			75		MTSD	MTSD as described above. Fg, grey, non-magnetic. Laminations becoming weak but still occurring at 40deg tca. MTSD have a massive hmgs txt. No sulphides present.
1161.84	0.21			20		DIA	FG Dia dyke, magnetic. Crosscutting the mtsd with sharp contacts occurring at 70deg tca. Broken and blocky but not a structure. No sulphides.
1165.13	3.29			80		MTSD	MTSD as described above. Fg, grey, non-magnetic. Laminations weak but still occurring at 40deg tca. MTSD have a massive hmgs txt. No sulphides present.

1165.8	0.67	90	DIA		FG Dia dyke, magnetic. Crosscutting the mtsd with very sharp contacts occurring at 70deg tca, at upper and lower Cts. Very competent. No sulphides.
1202.28	36.48	80	MTSD		MTSD as described above. Fg, grey, non-magnetic. Laminations weak but still occurring at 40deg tca. MTSD have a massive hmgs txt. No sulphides present. Continuation from above MTSDs.
1203.02	0.73	80	DIA		DIA as described above crosscutting at 60deg tca. Fg black, magnetic. No sulphides.
1294.76	91.74	80	MTSD		MTSD as described above. Fg, grey, non-magnetic. Laminations weak but still occurring at 40deg tca. MTSD have a massive hmgs txt. No sulphides present. Continuation from above MTSDs.
1391.32	96.56	85	SS	MTSD	MTSD similar to above, fg, grey but no laminations and more competent and massive in texture. No sulphides present. Rare local zones 1ft or less where the MTSD is brecciated hosting small local inclusions within an altered matrix. Not Sudbury breccia. Appears sedimentary related, not SIC related.
1407.29	15.97	85	MTSD	CONG	Conglomerate MTSD unit with areas of qtzt. Sharp upper contact where the ss Mtsds becomes slightly coarse grained. Occurs at 30deg tca. Abundant feldspar/qtzt inclusions and rounded fragments within a qtz rich ss matrix. Some grey MTSD inclusions. No significant sulphides. CONG continues but inclusions becoming less apparent.

1414.49	7.19		90		MTGB	MTGB Mg drk grey to green, non-magnetic, no significant sulphides rare traces of po or pyt. Massive texture with little variation and hmgs throughout. This appears to be an igneous unit/ MTGB. Possibly a metavolcanic. Does not have a strong chloritic green alteration. Only example of a igneous intrusive observed in this hole. Reps taken. Small alteration bands that host inclusions of the MTGB/Mvol in an alteration fluid. These little breccia bands are not IQD related.
1416.25	1.77		85	MTGB	BX	MTGB that has been brecciated with inclusions of the MTGB included within a green chloritic alteration fluid. This appears to be the lower contact of the MTGB unit that has been broken and brecciated along the margin with the MTSDs.
1454.99	38.74		80	MTSD	QTZT	QTZT metasediments, fg, grey, abundant qtz and has a sugary qtzt texture on a fresh broken surface. No significant sulphides. A couple local areas have broken sections but mostly due to mechanical drilling. No significant structures.
1461.52	6.52		80	MTSD	QTZT	Fg, light grey QTZT, qtz rich (sugary appearance), qtz/carb vnlts btw 40-60 deg tca (1mm wide), (soft, green) chl and qtz vn/vnlt @ 4784.4-4784.9ft btw 25-30 deg tca (tr po and cp within vnlt), jnts btw 30-65 deg tca (min carb on jnts).
1463.59	2.07		0		WDG	CWT (no core btw 4795-4801.8ft). The wedge button is fairly centered.
1492.51	28.93		80	MTSD	QTZT	Fg, light grey QTZT, qtz rich (sugary appearance), rare mm wide biotite rich beds (55- 60 tca), qtz/carb vnlts btw 40-60 deg tca (1mm wide), tr po (<0.5%), jnts btw 30-50 deg tca (min chl and carb on jnts).

1492.73	0.21									35		FLT	STRT	QTZT as above with the core broken into smaller angular fragments (Fault/STRT), jnts are chl coated with min silty/sandy (gouge) on jnt surfaces, jnts btw (15-40 deg tca), slicken lines visible on smooth jnt surface parallel tca.
1505.29	12.56									85		QTZT	MTSD	Fg, light grey QTZT, qtz rich (moderately sugary appearance) interbedded with Staurolite rich beds (1cm-5ft wide), irregular whispy chl vnlts with spks PO and cp (0.5%), irregular vnlt of SUBX?? (vfg mtx, with subrounded to subangular qtz rich incls (0.4ft wide), jnts btw 10-25 deg tca (chl and carb coated).
1506.66	1.37	MG229623	5	0	0.01	0.01	0	0	0	80	NVS		QTZT	A QTZT as above with several local examples of Staurolite rich beds. Weak fabric present within the QTZT. No significant sulphides.
1506.99	0.34	MG229624	5	0	0.01	0.01	0	0	0	90	NVS	QTZT	BX	MTSD/QTZT as described above except this interval is brecciated. Fg grey matrix similar to the host rock with small subangular fragments and inclusions 0.5inches or less. Uncertain if this is SUBX, could be just a MTSD feature. No sulphides present.
1507.82	0.82	MG229626	5	0.5	0	0.01	0	0	0	80	TR		QTZT	QTZT with minor trace stringer Po sulphides/ fracture filled and whispy. Less than 0.5% total sulphides. Also whispy chloritic alteration throughout. Possibly alteration and minor sulphides that has been remobilized due to the intrusive (QD) below.
1509	1.19	MG229627	5	0.5	0.01	0.01	0	0	0	80	TR		QTZT	QTZT, grey, fg, with microfractures and weak bedding planes. Sulphides are occasionally seen as whisps along these planes or alteration veinlets. Less than 0.5% total sulphides, primarily Po.

1509.86	0.85	MG229628	5	0.5	0	0.01	0	0	0	80	TR	QTZT	QTZT, grey, fg, with microfractures and weak bedding planes. Sulphides are occasionally seen as whisps along these planes or alteration veinlets. Less than 0.5% total sulphides, primarily Po.
1511.17	1.31	MG229629	5	0.5	0	0.01	0	0.001	0	80	TR	QTZT	QTZT, grey, fg, with microfractures and weak bedding planes. Sulphides are occasionally seen as whisps along these planes or alteration veinlets. Less than 0.5% total sulphides, primarily Po.
1511.47	0.3	MG229630	5	0	0	0	0	0	0	90	NVS	QTZT	**WHOLE ROCK** (A bracket sample representing the host rock to the potential QD samples below. Comparison of WRA to be complete on 4 samples for these QD/QTZT intervals). QTZT as above except a slightly more competent and uniform QTZT. Rare tr specks of Po and Rare fractures and veinlets. Very HMGS.
1512.69	1.22	MG229631	5	0	0	0	0	0	0	85	NVS	QTZT	QTZT as described above in the WRA interval. Very massive, hmgs and uniform. The lower 1/4 of this interval shows a slight alteration and microfractures as it approaches the contact.
1513.82	1.13	MG229632	5	0.5	0.01	0.01	0	0.001	0	75	TR	QD	QD. This QD unit is challenging and not a typical QD in the fact that it is only ~25ft wide and therefor the mineralogy appears to be represented by a fg material due to the quicker cooling in the host MTSD. It is interpreted to be a splay off of the main QD dyke, but at the time of logging the Main QD at this depth has not been located. No IQD. Upper CT shows altrn and a chilled gradational margin. Rare trace sulphides.

1514	0.18	MG229633	5	0	0.01	0.01	0	0	0	90	NVS	QD	**WHOLE ROCK SAMPLE** (representing a uniform piece of this igneous intrusive). QD continued from above becoming more granular and intrusive txt looking. Very hmgs, massive and consistent throughout. Fg-mg grain size and what appears to be slightly lathy pyrox/amphiboles, similar to what would be seen in typical QD at the margins. No significant sulphides.
1515.37	1.37	MG229635	5	0	0.01	0.01	0	0	0	80	NVS	QD	QD continued from above becoming more granular and intrusive txt looking. Very hmgs, massive and consistent throughout. Fg-mg grain size and what appears to be slightly lathy pyroxenes/amphiboles, similar to what would be seen in typical QD at the margins. No significant sulphides. Unit is Non-Mag.
1516.87	1.49	MG229636	5	0	0.01	0.01	0	0	0	80	NVS	QD	QD continued from above but becoming more granular, has a mg size and the pyroxenes/amph have become very lathy and illustrating a spherulitic texture. Overall, hmgs and uniform throughout. Slight increase in chlorite. No significant sulphides. Unit is Non-Mag.
1517.05	0.18	MG229637	5	0	0.01	0.01	0	0	0	80	NVS	QD	**WHOLE ROCK** (Second sample of QD for WRA) QD continued from above, mg size and the pyroxenes/amph have become very lathy and illustrating a spherulitic texture. Overall, hmgs and uniform throughout. Slight increase in chlorite. No significant sulphides. Unit is Non-Mag.
1518	0.94	MG229638	5	0	0.01	0.01	0	0	0	80	NVS	QD	QD continued from above, mg size and the pyroxenes/amph have become very lathy and illustrating a spherulitic texture. Overall, hmgs and uniform throughout. Slight increase in chlorite. No significant sulphides. Unit is Non-Mag.

1518.94	0.94	MG229639	5	1	0.01	0.01	0	0	0	80	DISS		QD	QD continued from above but the grain size decreases a little and there is an obvious txt change that the pyroxenes/amph are not lathy like above. More of a Hmgs equigranular texture. Overall, hmgs and uniform throughout. Sulphides are diss throughout in small specks 1% or less. Po sulphides mostly.
1520.62	1.68	MG229640	5	0	0.01	0.01	0	0.001	0	90	NVS		QD	QD as above (possibly MTSD), patches (1-2cm)subrounded (look bleached) with ALTN rims, irregular qtz /carb vnlts, tr py, jnts btw 20-45 (chl and carb coated); contact with seds is @ 30 deg and is undulating.
1521.56	0.94	MG229641	5	0	0	0.01	0	0	0	70	NVS	QTZT	MTSD	Fg, light grey, qtz rich MTSD, wk fabric visible (0.5ft) @ 25 deg tca (biotite rich), nvs, jnts btw 30-50 deg tca (chl coated with min carb).
1522.02	0.46	MG229642	5	0	0	0.01	0	0	0	100	NVS		MTSD	Fg, light grey, qtz rich MTSD, nvs, irregular biotite rich vnlts, no jnts; ***((WRA))***
1523.88	1.86	MG229644	5	0.5	0	0	0	0	0	95	NVS		MTSD	Fg, light grey MTSD, qtz rich, min qtz/carb vnlts with tr cp (approx. 0.5%), healed fractures chl filled, min jnts btw 35-45 deg tca (chl coated).
1524.27	0.4	MG229645	5	0	0	0	0	0	0	90	NVS		QTZT	QTZT, very siliceous, sugary texture and predominantly qtz. Lt grey in colour, no sulphides.
1525.8	1.52	MG229646	5	0.5	0.01	0.01	0	0	0	50	TR		MTSD	MTSD with a weak fabric, some fractures along bedding planes. Several rehealed fractures, but tr sulphides along these rehealed fractures. Primarily Po sulphides, less than 0.5%. Fg and grey.
1527.57	1.77									60			MTSD	MTSD, grey, fg with minor alterations throughout but relatively hmgs. No sulpides.
1530	2.44									90			QTZT	QTZT, competent, predominantly qtz with minor alteration throughout, seen as bleaching along healed fractures. No sulphides present.

1545.7	15.7			70		MTSD	Gry, fg MTSD with moderate laminations and fracture planes along bedding, occurring at about 30-50deg tca. No significant sulphides, only a couple rare blebs along rehealed fractures.
1548.57	2.87			80	MTSD	CONG	Conglomerate with inclusions of qtz. Some biotite patches. Inclusions are small pebbles typically only a few mm in size but can reach 1-2cm. No significant sulphides. This appears to be a layer within the main MTSD interval.
1555.24	6.68			80		MTSD	MTSD with some inclusions of qtz. Could be considered a qtz conglomerate. Some areas seem a bit more chaotic with the amount of inclusions. No significant sulphides.
1556.58	1.34			90	MTSD	CONG	Conglomerate layer as seen above with inclusions of qtz. Some biotite patches. Inclusions are small pebbles typically only a few mm in size but can reach 1-2cm. No significant sulphides. This appears to be a layer within the main MTSD interval at has a foliation and chaotic fabric present.
1566	9.42			90	CONG	MTSD	MTSD with some inclusions of qtz. Could be considered a MTSD qtz conglomerate. Some areas seem a bit more chaotic with the amount of inclusions. No significant sulphides.
1568.01	2.01			0		WDG	WEDGE Block here. This was a CWT cut.
1581	12.98			90		MTSD	Continuation from above the wedge. MTSD with some inclusions of qtz. Seems to be less qtz inclusions with depth and more hmgs fg grey mtsd. Generally competent. No significant sulphides.

BOREHOLE	PROPERTY	PROPERTY LEVEL	DEPTH	ACCT #	SYS	NORTHING	EASTING	ELEV	SIZE	START DATE	END DATE	FROM	TO	TYPE	RESOURCE APPLIED
1368951	Totten	180	0 627.28	R000929.0	1	355229	295222	836	HQ	12/06/2018 09:26:40	02/07/2018 09:26:40			EXPLN	Yes

STATUS
Complete

DEPTH	AZIMUTH	DIP
0	198.75	-63.28
9.14	200.286	-63.3295
18.29	200.0041	-63.2389
27.43	199.9101	-63.2752
36.58	199.3986	-63.2581
45.72	199.2642	-63.2713
54.86	199.1381	-63.2685
64.01	199.0658	-63.2109
73.15	199.125	-63.2081
82.3	199.198	-63.2254
91.44	199.2518	-63.1877
100.58	199.0266	-63.1335
109.73	198.6587	-63.0007
118.87	198.461	-62.9308
128.02	198.4357	-62.9166
137.16	198.3708	-62.9062
146.3	198.2557	-62.8486
155.45	198.2597	-62.8198
164.59	198.2413	-62.6954
173.74	198.2248	-62.6916
182.88	198.3614	-62.6749
192.02	198.3791	-62.7139
201.17	198.4068	-62.6166
210.31	198.3246	-62.5069
219.46	198.4796	-62.5346
228.6	198.3964	-62.4681
237.74	198.4256	-62.4799
246.89	198.5863	-62.4086
256.03	198.7582	-62.4624
265.18	198.829	-62.347
274.32	198.8112	-62.1519
283.46	198.8214	-62.1527
292.61	198.8988	-61.8982
301.75	198.9901	-61.9249
310.9	198.9943	-61.8245
320.04	199.1312	-61.83
329.18	198.9891	-61.6061
338.33	198.9567	-61.6232
347.47	198.9595	-61.5682
356.62	199.0128	-61.5105
365.76	198.9791	-61.4425
374.9	198.9701	-61.3796
384.05	199.0131	-61.3727
393.19	199.052	-61.2258
402.34	198.9861	-61.2607
411.48	199.0119	-61.2148

420.62	199.1339	-61.1174
429.77	199.2197	-61.058
438.91	199.4447	-60.9814
448.06	199.5794	-60.9218
457.2	199.6263	-60.7263
466.34	199.4879	-60.7993
475.49	199.4106	-60.6973
484.63	199.2264	-60.6969
493.78	199.3731	-60.5858
502.92	199.4746	-60.4279
512.06	199.6787	-60.3891
521.21	199.7515	-60.2861
530.35	199.9365	-60.1856
539.5	199.8273	-60.1092
548.64	199.93	-60.16
557.78	199.9526	-60.0798
566.93	199.9128	-60.0491
576.07	199.979	-59.9325
585.22	199.9387	-59.8407
602.89	200.0545	-59.7276
615.09	204	-61.2
623.93	203.9	-60.9

DEPTH
1978

METERS		SAMPLE INFO		PERCENT					GRAMS/TONNE						
DEPTH	LENGTH	SAMPLE	CODE	EST	CU	NI	CO	AS	TPM	RQD	ORE	MINOR ROCK	ROCK	MILLSTOR	DESCRIPTION
0	0														Collar
603.84	603.84									0			LC		Steel wedge set in hole at 1981.1ft. This section of the core is part of the parent logged in 1368950.
605.39	1.55	MX243169	2	0.5	0.05	0.05	0.01	0.003	0.21	0	DISS		WDG		This interval is IQD and is observed as part of the wedge cut with half missing and tapered out. Sampling weights will be off here. Same IQD as described below.
606	0.61	MX243171	2	0.5	0.05	0.04	0.01	0.002	0.17	75	DISS		IQD		IQD with diss and small blebs of sulphides (Po, Cp, and Pn). Less than 0.5% total sulphides. Inclusions of MTGB both rounded and angular, varying in size from 1-2mm to 2-3inches. Grey in color no significant structures. Note that the intervals below are continuous but are sampled in 5ft intervals due to the large core size and maximum weight per bag.
607.47	1.46	MX243172	2	0.5	0.05	0.05	0.01	0.002	0.14	75	DISS		IQD		As Above, IQD with diss and small blebs of sulphides (Po, Cp, and Pn). Less than 0.5% total sulphides. Inclusions of MTGB both rounded and angular, varying in size from 1-2mm to 2-3inches. Grey in colour no significant structures.
608.99	1.52	MX243173	2	0.5	0.05	0.05	0.01	0.007	0.14	80	DISS	QTZ	IQD		As above, IQD with diss and small blebs of sulphides (Po, Cp, and Pn). Less than 0.5% total sulphides. Inclusions of MTGB both rounded and angular, varying in size from 1-2mm to 2-3inches. Grey in color no significant structures. Also a subpll Qtz vn that has brecciated the IQD and host local fragments. Note that this QTZ vn can be observed in BH136895-2 at approx. the same depth.

610.51	1.52	MX243174	2	0.5	0.02	0.04	0.01	0.006	0.24	80	DISS		IQD	As above, IQD with diss and small blebs of sulphides (Po, Cp, and Pn). Less than 0.5% total sulphides. Inclusions of MTGB both rounded and angular, varying in size from 1-2mm to 2-3inches. Grey in color no significant structures. Continuation of the QTZ vein identified in the top of this interval.
612.01	1.49	MX243175	2	0.5	0.05	0.04	0.01	0.009	0.17	80	DISS		IQD	As above, IQD with diss and small blebs of sulphides (Po, Cp, and Pn). Less than 0.5% total sulphides. Inclusions of MTGB both rounded and angular, varying in size from 1-2mm to 2-3inches. Grey in color no significant structures.
613.47	1.46	MX243176	2	0.5	0.04	0.03	0	0.005	0.14	80	DISS		IQD	As above, IQD with diss and small blebs of sulphides (Po, Cp, and Pn). Less than 0.5% total sulphides. Inclusions of MTGB both rounded and angular, varying in size from 1-2mm to 2-3inches. Grey in color no significant structures. One larger 3-4inch fg MTGB block in the middle of the interval. Not altered to amphibolite as typically seen. FG than usual MTGB.
614.99	1.52	MX243177	2	0.5	0.04	0.03	0	0.003	0.14	80	DISS		IQD	As above, IQD with diss and small blebs of sulphides (Po, Cp, and Pn). Less than 0.5% total sulphides. Inclusions of MTGB both rounded and angular, varying in size from 1-2mm to 2-3inches. Grey in color no significant structures.
616.37	1.37	MX243178	2	0.5	0.04	0.04	0.01	0.007	0.17	80	DISS		IQD	As above, IQD with diss and small blebs of sulphides (Po, Cp, and Pn). Less than 0.5% total sulphides. Inclusions of MTGB both rounded and angular, varying in size from 1-2mm to 2-3inches. Grey in color no significant structures.

618.01	1.65	MX243179	2	0.5	0.04	0.04	0	0.005	0.17	80	DISS	IQD	As above, IQD with diss and small blebs of sulphides (Po, Cp, and Pn). Less than 0.5% total sulphides. Inclusions of MTGB both rounded and angular, varying in size from 1-2mm to 2-3inches. Grey in color no significant structures. Weak fabric present subpll to 40deg tca.
619.23	1.22	MX243180	2	0.5	0.04	0.03	0	0.001	0.14	80	DISS	IQD	As above, IQD with diss and small blebs of sulphides (Po, Cp, and Pn). Less than 0.5% total sulphides. Inclusions of MTGB both rounded and angular, varying in size from 1-2mm to 2-3inches. Grey in color no significant structures.
621	1.77	MX243181	2	0.5	0.04	0.04	0	0.001	0.14	80	DISS	IQD	As above, IQD with diss and small blebs of sulphides (Po, Cp, and Pn). Less than 0.5% total sulphides. Inclusions of MTGB both rounded and angular, varying in size from 1-2mm to 2-3inches. Grey in color no significant structures.
622.52	1.52	MX243182	2	0.5	0.05	0.04	0.01	0	0.17	80	DISS	IQD	As above, IQD with diss and small blebs of sulphides (Po, Cp, and Pn). Less than 0.5% total sulphides. Inclusions of MTGB both rounded and angular, varying in size from 1-2mm to 2-3inches. Grey in color no significant structures.
623.99	1.46	MX243183	2	0.5	0.04	0.04	0.01	0.001	0.14	80	DISS	IQD	As above, IQD with diss and small blebs of sulphides (Po, Cp, and Pn). Less than 0.5% total sulphides. Inclusions of MTGB both rounded and angular, varying in size from 1-2mm to 2-3inches. Grey in color no significant structures.
625.21	1.22	MX243184	2	0.5	0.04	0.05	0	0.004	0.17	80	DISS	IQD	As above, IQD with diss and small blebs of sulphides (Po, Cp, and Pn). Less than 0.5% total sulphides. Inclusions of MTGB both rounded and angular, varying in size from 1-2mm to 2-3inches. Grey in color no significant structures.

626.55	1.34	MX243185	2	0.5	0.04	0.05	0.01	0.005	0.17	80	DISS	IQD	As above, IQD with diss and small blebs of sulphides (Po, Cp, and Pn). Less than 0.5% total sulphides. Inclusions of MTGB both rounded and angular, varying in size from 1-2mm to 2-3inches. Grey in color no significant structures.
627.28	0.73	MX243187	2	0.5	0.07	0.05	0	0.008	0.14	80	DISS	IQD	As above, IQD with diss and small blebs of sulphides (Po, Cp, and Pn). Less than 0.5% total sulphides. Inclusions of MTGB both rounded and angular, varying in size from 1-2mm to 2-3inches. Grey in color no significant structures. FOH is at 2058.0ft - Steel wedge above shifts and this hole starts a new branch.

BOREHOLE	PROPERTY	PROPERTY LEVEL	DEPTH	ACCT #	SYS	NORTHING	EASTING	ELEV	SIZE	START DATE	END DATE	FROM	TO	TYPE	RESOURCE APPLIED	STATUS
1368952	Totten	180	0 750.11	R000929.0	1	355229	295222	836	HQ	12/06/2018 08:20:21	22/07/2018 08:20:21			EXPLN	Yes	Complete

DEPTH	AZIMUTH	DIP
0	198.75	-63.28
9.14	200.286	-63.3295
18.29	200.0041	-63.2389
27.43	199.9101	-63.2752
36.58	199.3986	-63.2581
45.72	199.2642	-63.2713
54.86	199.1381	-63.2685
64.01	199.0658	-63.2109
73.15	199.125	-63.2081
82.3	199.198	-63.2254
91.44	199.2518	-63.1877
100.58	199.0266	-63.1335
109.73	198.6587	-63.0007
118.87	198.461	-62.9308
128.02	198.4357	-62.9166
137.16	198.3708	-62.9062
146.3	198.2557	-62.8486
155.45	198.2597	-62.8198
164.59	198.2413	-62.6954
173.74	198.2248	-62.6916
182.88	198.3614	-62.6749
192.02	198.3791	-62.7139
201.17	198.4068	-62.6166
210.31	198.3246	-62.5069
219.46	198.4796	-62.5346
228.6	198.3964	-62.4681
237.74	198.4256	-62.4799
246.89	198.5863	-62.4086
256.03	198.7582	-62.4624
265.18	198.829	-62.347
274.32	198.8112	-62.1519
283.46	198.8214	-62.1527
292.61	198.8988	-61.8982
301.75	198.9901	-61.9249
310.9	198.9943	-61.8245
320.04	199.1312	-61.83
329.18	198.9891	-61.6061
338.33	198.9567	-61.6232
347.47	198.9595	-61.5682
356.62	199.0128	-61.5105
365.76	198.9791	-61.4425
374.9	198.9701	-61.3796
384.05	199.0131	-61.3727
393.19	199.052	-61.2258
402.34	198.9861	-61.2607
411.48	199.0119	-61.2148

420.62	199.1339	-61.1174
429.77	199.2197	-61.058
438.91	199.4447	-60.9814
448.06	199.5794	-60.9218
457.2	199.6263	-60.7263
466.34	199.4879	-60.7993
475.49	199.4106	-60.6973
484.63	199.2264	-60.6969
493.78	199.3731	-60.5858
502.92	199.4746	-60.4279
512.06	199.6787	-60.3891
521.21	199.7515	-60.2861
530.35	199.9365	-60.1856
539.5	199.8273	-60.1092
548.64	199.93	-60.16
557.78	199.9526	-60.0798
566.93	199.9128	-60.0491
576.07	199.979	-59.9325
585.22	199.9387	-59.8407
595.88	200.0545	-59.7276
603.5	196.3172	-58.5028
612.65	195.8342	-57.7798
621.79	194.5014	-57.7897
630.94	193.9355	-57.421
640.08	193.174	-56.3813
649.22	191.2137	-56.2742
658.37	190.9837	-56.081
667.51	191.0439	-56.0317
676.66	191.0616	-55.8194
685.8	191.041	-55.5432
694.94	191.1737	-55.3897
704.09	191.0132	-55.208
713.23	190.7727	-54.8754
722.38	190.695	-54.477
731.52	190.7791	-54.1102
740.66	190.758	-53.7737
741.88	190.74	-53.79

DEPTH
1955
2037
2116

METERS		SAMPLE INFO		PERCENT					GRAMS/TONNE						
DEPTH	LENGTH	SAMPLE	CODE	EST	CU	NI	CO	AS	TPM	RQD	ORE	MINOR ROCK	ROCK	MILLSTOR	DESCRIPTION
0	0														Collar
595.24	595.24									0			LC		Beginning of core and cut for the steel wedge. IQD rock unit similar to below and described in more detail below. Less than 0.5% total sulphides. This interval is shaved in half by the steel wedge cut, tapered at the top and thickening at the bottom to full HQ core thickness.
596.46	1.22	MX243188	2	0.5	0.01	0.01	0	0	0	0	TR	IQD	WDG		IQD continuous over the next several samples. A grey QD matrix hosting abundant incls of mtgb now altered to amph. Many AMPHs have reaction rims of bt. Some incls are completely bt. Incls and sulphide blebs can have a weak preferred orientation from 20-40deg tca. Incls range in size from 2-4" to less than 0.5". Larger AMPH blocks/incls are broken out into intervals. Sulphides are diss throughout Po, Cp & fg Pn. Hmgs and continuous IQD, below with minor change to sulphides.
597.29	0.82	MX243189	2	0.5	0.01	0	0	0	0.03	85	TR		IQD		
598.6	1.31	MX243191	2	0.5	0.03	0.01	0.01	0	0.07	85	TR		IQD		IQD as described above. A grey QD matrix hosting abundant inclusions of mtgb now altered to amph. Many AMPHs have reaction rims of biotite. Some inclusions are completely altrnd to bt. Incls of sulphide blebs can have a weak preferred orientation that range from 20-40deg tca. Incls range in size from 2-4inches to less than 0.5inches. Sulphides are diss throughout Po, Cp and fg Pn.

600.24	1.65	MX243192	2	0.5	0.03	0.03	0	0.001	0.14	85	DISS	IQD	IQD as described above. A grey QD matrix hosting abundant inclusions of mtgb now altered to amph. Many AMPHs have reaction rims of biotite or completely altrd to bt. Incls of sulphide blebs have a weak preferred orientation ranging from 20-40deg tca. Incls range in size from 2-4" to less than 0.5". Sulphides are diss throughout Po, Cp and fg Pn.
601.55	1.31	MX243193	2	1	0.03	0.02	0	0	0.1	85	DISS	IQD	IQD as described above. A grey QD matrix hosting abundant inclusions of mtgb now altered to amph. Many AMPHs have reaction rims of biotite or completely altrd to bt. Incls of sulphide blebs have a weak preferred orientation ranging from 20-40deg tca. Incls range in size from 2-4" to less than 0.5". Sulphides are diss throughout Po, Cp and fg Pn.
602.99	1.43	MX243194	2	1	0.05	0.05	0.01	0.002	0.17	85	DISS	IQD	IQD as described above. A grey QD matrix hosting abundant inclusions of mtgb now altered to amph. Many AMPHs have reaction rims of biotite or completely altrd to bt. Incls of sulphide blebs have a weak preferred orientation ranging from 20-40deg tca. Incls range in size from 2-4" to less than 0.5". Sulphides are diss throughout Po, Cp and fg Pn.
604.54	1.55	MX243195	2	1	0.08	0.05	0.01	0.003	0.24	85	DISS	IQD	IQD as described above. A grey QD matrix hosting abundant inclusions of mtgb now altered to amph. Many AMPHs have reaction rims of biotite or completely altrd to bt. Incls of sulphide blebs have a weak preferred orientation ranging from 20-40deg tca. Incls range in size from 2-4" to less than 0.5". Sulphides are diss throughout Po, Cp and fg Pn.

606	1.46	MX243196	2	2	0.07	0.07	0.01	0.008	0.27	85	DISS	IQD	IQD as described above. A grey QD matrix hosting abundant inclusions of mtgb now altered to amph. Many AMPHs have reaction rims of biotite or completely altrd to bt. Incls of sulphide blebs have a weak preferred orientation ranging from 20-40deg tca. Incls range in size from 2-4" to less than 0.5". Sulphides are diss throughout Po, Cp and fg Pn.
607.68	1.68	MX243197	2	2	0.04	0.04	0.01	0.002	0.21	85	DISS	IQD	IQD as described above except a slight increase in Qtz Vns. A grey QD matrix hosting abundant inclusions of mtgb now altered to amph. Many AMPHs have reaction rims of biotite or completely altrd to bt. Incls of sulphide blebs have a weak preferred orientation ranging from 20-40deg tca. Incls range in size from 2-4" to less than 0.5". Sulphides are diss throughout Po, Cp and fg Pn.
608.99	1.31	MX243198	2	1	0.02	0.04	0.01	0.003	0.21	85	DISS	IQD	IQD as described above, slight increase in Qtz vns. A grey QD matrix hosting abundant inclusions of mtgb now altered to amph. Many AMPHs have reaction rims of biotite or completely altrd to bt. Incls of sulphide blebs have a weak preferred orientation ranging from 20-40deg tca. Incls range in size from 2-4" to less than 0.5". Sulphides are diss throughout Po, Cp and fg Pn.
610.51	1.52	MX243199	2	1	0.03	0.04	0.01	0.006	0.14	85	DISS	IQD	IQD as described above with a couple larger qtz vns @ 25deg tca, seen in adjacent wedged BH. A grey QD matrix hosting abundant inclusions of mtgb now altered to amph with sometimes Bt rims. Diss sulphide (Po, Cp and fg Pn) with a weak preferred orientation ranging from 20-40deg tca. Incls range in size from 2-4" to less than 0.5".

612.01	1.49	MX243200	2	1	0.04	0.03	0	0.003	0.17	85	DISS	IQD	IQD as described above. A grey QD matrix hosting abundant inclusions of mtgb now altered to amph with sometimes Bt rims. Diss sulphide (Po, Cp and fg Pn) with a weak preferred orientation ranging from 20-40deg tca. Incls range in size from 2-4" to less than 0.5".
613.2	1.19	MX274101	2	1	0.04	0.03	0	0.005	0.17	85	DISS	IQD	IQD as described above. A grey QD matrix hosting abundant inclusions of mtgb now altered to amph with sometimes Bt rims. Diss sulphide (Po, Cp and fg Pn) with a weak preferred orientation ranging from 20-40deg tca. Incls range in size from 2-4" to less than 0.5".
614.39	1.19	MX274102	2	1	0.05	0.03	0.01	0.001	0.14	85	DISS	IQD	IQD as described above. A grey QD matrix hosting abundant inclusions of mtgb now altered to amph with sometimes Bt rims. Diss sulphide (Po, Cp and fg Pn) with a weak preferred orientation ranging from 20-40deg tca. Incls range in size from 2-4" to less than 0.5".
614.99	0.61	MX274103	2	1	0.05	0.04	0	0.005	0.17	20	DISS	IQD	FLT within the IQD (IQD as described above). Flt Plane at 15-20deg tca. minor gouge along plane IQD as above with grey QD matrix hosting abundant inclusions of mtgb now altered to amph with sometimes Bt rims. Diss sulphide (Po, Cp and fg Pn) with a weak preferred orientation ranging from 20-40deg tca. Incls range in size from 2-4" to less than 0.5".
616.28	1.28	MX274104	2	1	0.05	0.03	0.01	0.003	0.14	85	DISS	IQD	IQD as described above. A grey QD matrix hosting abundant inclusions of mtgb now altered to amph with sometimes Bt rims. Diss sulphide (Po, Cp and fg Pn) with a weak preferred orientation ranging from 20-40deg tca. Incls range in size from 2-4" to less than 0.5".

618.01	1.74	MX274105	2	1	0.03	0.03	0	0.004	0.1	85	DISS	IQD	IQD as described above (except with a subpll qtz vn running along the core axis). A grey QD matrix hosting abundant inclusions of mtgb now altered to amph with sometimes Bt rims. Diss sulphide (Po, Cp and fg Pn) with a weak preferred orientation ranging from 20-40deg tca. Incls range in size from 2-4" to less than 0.5".
619.75	1.74	MX274106	2	1	0.04	0.03	0.01	0.001	0.14	85	DISS	IQD	IQD as described above. A grey QD matrix hosting abundant inclusions of mtgb now altered to amph with sometimes Bt rims. Diss sulphide (Po, Cp and fg Pn) with a weak preferred orientation ranging from 20-40deg tca. Incls range in size from 2-4" to less than 0.5".
621	1.25	MX274107	2	1	0.03	0.02	0	0	0.1	85	DISS	IQD	IQD as described above. A grey QD matrix hosting abundant inclusions of mtgb now altered to amph with sometimes Bt rims. Diss sulphide (Po, Cp and fg Pn) with a weak preferred orientation ranging from 20-40deg tca. Incls range in size from 2-4" to less than 0.5".
622.37	1.37									0		WDG	CWT Wedge cut between 2037.4-2041.9ft.
623.99	1.62	MX274108	2	1	0.04	0.03	0.01	0.003	0.14	85	DISS	IQD	IQD as described above. A grey QD matrix hosting abundant inclusions of mtgb now altered to amph with sometimes Bt rims. Tr Diss sulphide (Po, Cp and fg Pn). A weak flow orientation of the inclusions, but often random or chaotic orientation. Incls range in size from 2-4" to less than 0.5".
625.66	1.68	MX274109	2	1	0.04	0.03	0.01	0.003	0.14	85	DISS	IQD	

627	1.34	MX274110	2	2	0.05	0.04	0.01	0.007	0.14	85	DISS	IQD	IQD as described above. A grey QD matrix hosting abundant inclusions of mtgb now altered to amph with sometimes Bt rims. Tr Diss sulphide (Po, Cp and fg Pn). A weak flow orientation of the inclusions, but often random or chaotic orientation. Incls range in size from 2-4" to less than 0.5".
628.28	1.28	MX274111	2	1	0.03	0.03	0.01	0.001	0.1	85	DISS	IQD	IQD as described above. A grey QD matrix hosting abundant inclusions of mtgb now altered to amph with sometimes Bt rims. Tr Diss sulphide (Po, Cp and fg Pn). A weak flow orientation of the inclusions, but often random or chaotic orientation. Incls range in size from 2-4" to less than 0.5".
628.95	0.67	MX274113	2	0	0.02	0.01	0	0.003	0.03	90	NVS	QTZT	QTZT inclusion, massive competent no sulphides. Minor IQD along the upper CT.
629.99	1.04	MX274114	2	1	0.04	0.03	0.01	0.001	0.14	85	DISS	IQD	IQD as described above. A grey QD matrix hosting abundant inclusions of mtgb now altered to amph with sometimes Bt rims. Tr Diss sulphide (Po, Cp and fg Pn). A weak flow orientation of the inclusions, but often random or chaotic orientation. Incls range in size from 2-4" to less than 0.5".
631.79	1.8	MX274115	2	1	0.02	0.01	0	0	0.03	85	DISS	IQD	IQD as described above. A grey QD matrix hosting abundant inclusions of mtgb now altered to amph with sometimes Bt rims. Tr Diss sulphide (Po, Cp and fg Pn). A weak flow orientation of the inclusions, but often random or chaotic orientation. Incls range in size from 2-4" to less than 0.5".
633.1	1.31	MX274144	2	1	0.04	0.04	0.01	0.014	0.17	85	TR	IQD	IQD continued from above. A grey QD matrix hosting minor inclusions and has become a more uniform fine grained QD with Diss sulphides.
634.38	1.28	MX274116	2	0	0	0.03	0.01	0.001	0.03	80	NVS	AMPH	Large amph inclusions, mg, hmgs and uniform. No sulphides present.

636	1.62	MX274117	2	1	0.04	0.04	0.01	0.021	0.17	85	DISS		IQD	IQD, A grey QD matrix hosting abundant inclusions of mtgb now altered to amph with sometimes Bt rims. Tr Diss sulphide (Po, Cp and fg Pn). A weak flow orientation of the inclusions, but often random or chaotic orientation. Incls range in size from 2-4" to less than 0.5".
637.58	1.58	MX274118	2	1	0.06	0.05	0.01	0.003	0.24	85	DISS		IQD	IQD as described above. A grey QD matrix hosting abundant inclusions of mtgb now altered to amph with sometimes Bt rims. Tr Diss sulphide (Po, Cp and fg Pn). A weak flow orientation of the inclusions, but often random or chaotic orientation. Incls range in size from 2-4" to less than 0.5".
639.2	1.62	MX274119	2	2	0.08	0.05	0.01	0.01	0.24	85	DISS		IQD	IQD as described above. A grey QD matrix hosting abundant inclusions of mtgb now altered to amph with sometimes Bt rims. Tr Diss sulphide (Po, Cp and fg Pn). A weak flow orientation of the inclusions, but often random or chaotic orientation. Incls range in size from 2-4" to less than 0.5".
640.84	1.65	MX274121	2	0	0	0.03	0.01	0.004	0.03	80	NVS		AMPH	Large Amph inclusions with chloritic green alteration and mg, massive, hmgs and no visible sulphides.
642.18	1.34	MX274122	2	1	0.13	0.08	0.01	0.021	0.21	85	TR	AMPH	IQD	IQD as described above. A grey QD matrix hosting inclusions of mtgb now altered to amph. Several large AMPH inclusions 0.5-1ft in length. Tr Diss sulphide (Po, Cp and fg Pn) in IQD.
643.59	1.4	MX274123	2	0	0.01	0.01	0	0	0.03	90	NVS		QD	QD, competent QD with mg equigranular texture hosting a spherulitic needle like textures. Minor alteration and minor qtz vns.
644.99	1.4	MX274124	2	0	0.01	0	0	0	0	90	NVS		QD	QD, continuation from above. Competent, hmgs with mg equigranular texture hosting a spherulitic needle like textures. Minor alteration and minor qtz vns.
646.54	1.55									0			WDG	WDG cut with CWT.

648	1.46	MX274125	2	0	0.01	0	0	0	0	90	NVS	QD	QD, continuation from above. Competent, hmgs with mg equigranular texture hosting a spherulitic needle like textures. Minor alteration and minor qtz vns.
649.68	1.68	MX274126	2	0	0.02	0	0	0	0	90	NVS	QD	QD, continuation from above. Competent, hmgs with mg equigranular texture hosting a spherulitic needle like textures. Minor alteration and minor qtz vns.
650.99	1.31	MX274127	2	0	0.01	0.01	0	0	0	90	NVS	QD	QD, continuation from above. Competent, hmgs with mg equigranular texture hosting a spherulitic needle like textures. Minor alteration and minor qtz vns.
652.03	1.04	MX274128	2	0	0.02	0.01	0	0.001	0.03	90	NVS	QD	QD, continuation from above. Competent, hmgs with mg equigranular texture hosting a spherulitic needle like textures. Minor alteration and minor qtz vns.
654.01	1.98	MX274130	2	1	0.05	0.03	0.01	0.003	0.14	90	NVS	IQD	IQD. A grey QD matrix hosting inclusions of mtgb now altered to amph. Several larger AMPH inclusions 2-4inches in length. Tr Diss sulphide (Po, Cp and fg Pn) in IQD.
655.78	1.77	MX274131	2	2	0.06	0.05	0.01	0.001	0.27	85	DISS	IQD	IQD as above. A grey QD matrix hosting inclusions of mtgb now altered to amph. Several larger AMPH inclusions ~2inches in length. Tr Diss sulphide (Po, Cp and fg Pn) in IQD.
657	1.22	MX274132	2	1	0.03	0.02	0	0.001	0.07	85	DISS	IQD	IQD. A grey QD matrix hosting abundant small 0.5-1inch or less inclusions of mtgb now altered to amph. Tr Diss sulphide (Po, Cp and fg Pn) in IQD.
657.94	0.94	MX274133	2	1	0.02	0.02	0	0.003	0.07	85	DISS	IQD	IQD. A grey QD matrix hosting abundant small 0.5-1inch or less inclusions of mtgb now altered to amph. Tr Diss sulphide (Po, Cp and fg Pn) in IQD.

660.23	2.29	MX274134	2	1	0.04	0.04	0.01	0.005	0.17	85	DISS	IQD	IQD. A grey QD matrix hosting abundant small 0.5-1inch inclusions of mtgb now altered to amph. Relatively defined contact with minor qtz-carb against the QD below. Tr Diss sulphide (Po, Cp and fg Pn) in IQD.
661.6	1.37	MX274135	2	0.5	0.01	0.02	0.01	0.002	0.03	90	TR	QD	Fg QD with a weak foliation and some alteration within small veins that cross cut the interval. Minor TR sulphides less than 1%
663	1.4	MX274136	2	2	0.02	0.02	0	0.001	0.07	90	BLBS	QD	Fg QD continued from above. Occasional small blebs of sulphide ~2% overall.
664.65	1.65	MX274137	2	1	0.02	0.01	0	0	0.03	90	TR	QD	QD, fg-mg 1% or less tr sulphides. Very uniform, hmgs and competent.
665.99	1.34	MX274138	2	0.5	0.03	0.01	0	0	0.03	90	TR	QD	QD, fg-mg 1% or less tr sulphides. Very uniform, hmgs and competent.
667.73	1.74	MX274139	2	0.5	0.02	0.01	0	0	0.03	90	TR	QD	QD, fg-mg 1% or less tr sulphides. Very uniform, hmgs and competent.
669.16	1.43	MX274140	2	2	0.04	0.02	0.01	0	0.1	90	TR	QD	QD, fg-mg 2% sulphides. Diss with a couple areas with local blebs and small stringers (Cp and Po)around qtz vns. QD is very uniform, hmgs and competent. Note that there is a qtz vn (~2inches) that defines the lower CT of the QD with the MTSD below.
670.22	1.07	MX274141	2	0	0.01	0	0.01	0	0	80	NVS	MTSD DIA	DIA dyke, black, strongly magnetic (fg OLDI) with shark contacts at 70deg tca. Massive and uniform with no sulphides. Note that there is 4inches at the upper CT that is MTSD. The QD CT is actually against MTSD but it switches to DIA within 4inches.
671.99	1.77	MX274142	2	0	0.01	0	0	0	0	90	NVS	MTSD	MTSD, fg, massive, competent and uniform with minor stringers of Qtz-carb vnlts. No visible sulphides.
673.55	1.55	MX274143	2	0	0.01	0.01	0	0	0	90	NVS	MTSD	MTSD, continued from above. Fg, massive, competent and uniform with minor stringers of Qtz-carb vnlts. No visible sulphides.
688.3	14.75									90		QTZT	QTZT, darker grey, siliceous and vg. Unit is very competent and hmgs. No sulphides present and no significant structures. Minor qtz-carb vnlts.

690.01	1.71		40	QTZT	STRT	QTZT as described above except several broken and blocky sections with fracture planes and very minor ground core along some fracture planes. Not a major structure but minor movement. Otherwise same QTZT as above.
708.48	18.47		90		QTZT	QTZT, darker grey, siliceous and vg. Unit is very competent and hmgs. No sulphides present and no significant structures. Minor qtz-carb vnlts.
726.77	18.29		75		MTSD	MTSD, unit becomes a lighter grey MTSD SS with laminations (from the QTZT above). The MTSD has a foliation of 30deg tca. More broken planes along the MTSD fabric but overall unit is hmgs throughout. No significant sulphides.
727.01	0.24		75		STRT	STRT within the MTSD as described above. Unit is a light grey MTSD SS with laminations. This structure has a minor-moderate fracture with minor gouge or frock flour smeared along the fracture plane. Evidence of movement, but not a major fault. No significant sulphides.
742.13	15.12		75		MTSD	MTSD unit is a lighter grey MTSD SS with minor/weak laminations. The MTSD has a foliation of 30deg tca but becomes weaker at depth. Broken planes along the MTSD fabric but overall unit is hmgs throughout with minor fractures. No significant sulphides.
750.11	7.99		50		MTSD	MTSD as described above except a slight increase in fracture planes. Breaks appears to be mostly along foliation. Not a significant structure. No significant sulphides. FOH at 2460.6ft/750m.

APPENDIX IV
SUMMARY TABLE FOR EACH DRILL HOLE

APPENDIX IV

Drill hole number	TYPE of hole drilled	Collar Location UTM coordinates with (Datum and Zone)	Drillhole Azimuth	Drillhole Dip	Drillhole Length (meters)	# Samples collected	# of samples assayed
1368900	Parent	5135475.7N, 463564.2E, UTM Nad 27, Zone 17N	145	-71	1361	17	17
1368901	Branch	5135475.7N, 463564.2E, UTM Nad 27, Zone 17N	145	-71	25.6	17	17
1368902	Branch	5135475.7N, 463564.2E, UTM Nad 27, Zone 17N	145	-71	382.6	52	52
1368910	Parent	5135468.4N, 463543.1E, UTM Nad 27, Zone 17N	175	-61	1262	49	49
1368920	Parent	5135465.9N, 463545.3E, UTM Nad 27, Zone 17N	137.4	-47.1	945	54	54
1368950	Parent	5135997.3N, 464601.6E, UTM Nad 27, Zone 17N	199	-63	1581	123	123
1368951	Branch	5135997.3N, 464601.6E, UTM Nad 27, Zone 17N	199	-63	23	17	17
1368952	Branch	5135997.3N, 464601.6E, UTM Nad 27, Zone 17N	199	-63	155	53	53

Total Meters drilled	Total # samples collected	Total # samples assayed
5735.2	382	382

There was a total of 8 drillholes completed which consisted of four parent holes and four branch holes.
The total length drilled within the 2017-2018 program was 5735.2 meters.