# REPORT ON THE 2007 DIAMOND DRILLING PROGRAM, McCLARTY LAKE PROJECT, MANITOBA

# THE PAS MINING DISTRICT NTS 63-K-08

UTM ZONE 14 N NAD 83 415938 E; 6038968 N 54° 29' 28'' N Latitude 100° 17' 52'' W Longitude

#### FOR

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**McClarty Lake Property** 

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## 1.0 SUMMARY

Troymet Exploration Corp. (formerly Signet Minerals Inc.) of Comox, British Columbia contracted Aurora Geosciences Ltd. of Whitehorse, Yukon to conduct and manage an exploration program on its McClarty Lake property, located 47 km south west of Snow Lake, Manitoba. Diamond drilling, along with core logging and sampling, was conducted from February 11<sup>th</sup>, 2007 to March 23<sup>rd</sup>, 2007. A second visit to the property was conducted from May 25<sup>th</sup>, 2007 to May 29<sup>th</sup>, 2007 for the purpose of re-sampling and re-examining mineralized sections of the core.

The McClarty Lake property consists of 5 contiguous mineral claims totalling 596 ha. Three of the claims are owned 100% by Troymet Exploration Corp. while the other two are under option from Hudson Bay Exploration and Development (HBED).

The property is underlain by Ordovician dolomite that unconformably overlies felsic to intermediate volcanics and volcaniclastics of the Paleoproterozoic Flin Flon – Snow Lake greenstone belt. The Flin Flon – Snow Lake belt is one of the largest Paleoproterozoic volcanic-hosted massive sulphide (VMS) districts in the world, containing 27 Cu-Zn-(Au) deposits from which more than 183 million tonnes of sulphide have already been mined.

HBED conducted airborne electromagnetic (EM) and ground MaxMin EM geophysical surveys in 1996, followed by the drilling of two diamond drill holes in 1997. Marksmen Resources Ltd. optioned the property from HBED in February 2000 and drilled two holes in March of that year. Marksmen followed up with a Time Domain EM (TEM) survey in 2002, which identified a potential massive sulphide horizon at 170 to 250 metres depth over a strike length of approximately 600 metres. In October 2005, Marksmen's mineral properties were transferred to Signet Minerals Inc., and in August 2007, Signet's non-uranium properties were transferred to Troymet Exploration Corp.

All 4 holes drilled in 1997 and 2000 intersected a 3 to 5 m wide semi- to massive pyrite horizon in altered volcanics and volcaniclastics, tracing the horizon over a 50-m strike length and to 200 m depth. Significant gold and silver mineralization was reported in both the hangingwall and footwall of the main sulphide zone. Hole DYC016 drilled in 1997 reported 4.17 g/t gold and 8.48 g/t silver over 4 m. Hole DYC021, also drilled in 1997, reported 0.93 g/t gold and 6.51 g/t silver over 0.3 m. Hole MC01 drilled in 2000 reported 2.1 g/t silver over 4.5 m including a 0.5-m interval grading 1.38 g/t gold and 12 g/t silver. This hole also intersected 0.02 % copper and 0.6 silver over 1.0 m. Hole MC02, also drilled in 2000, intersected 0.48 g/t gold and 0.6 g/t silver over 0.5 m and 0.02 % copper over the subsequent 1.0 m.

The 2007 exploration program at McClarty Lake comprised five diamond drill holes for a cumulative total of 1444 m. The drilling program was designed to follow up on mineralization identified through previous diamond drilling and specifically target the deeper EM conductor delineated by TEM in 2002. The goal of the 2007 exploration program was to evaluate the potential of the property for hosting a base +/- precious metal-rich volcanogenic massive sulphide deposit.

The 2007 exploration drilling on the McClarty Lake property tested the conductor system over a 475-m strike length and intersected semi- to massive pyrite and local interstitial sphalerite and chalcopyrite over 0.3 to 7 m lengths in 4 of 5 holes. The program successfully extended the known strike and dip extension of the pyritic horizon to over 425 m (open) and to a vertical depth of 250 m (open). Significant zinc sulphide (sphalerite) mineralization was discovered in two holes collared 225 m south of the 1997 and 2000 drill holes. Up to 20% sphalerite within the semi- to massive pyrite horizon was intersected at 100 m and 165 m vertical depths. Along with the presence of copper sulphide (chalcopyrite), this marks the first discovery of significant base metal mineralization on the property.

The northernmost drill hole (SIG-05-07) targeted the TEM conductor approximately 200 m north of the previous drilling, and intersected a 0.86 m zone of 25% coarse pyrite and

stringer pyrrhotite that returned anomalous silver, copper and cobalt values. Approximately 100 m higher up in the hole, a narrow band of 15% chalcopyrite and 5% pyrite returned 2.43 % copper over 0.21 m.

Two hundred metres south, SIG-01-07 was drilled as a 50 m undercut to MC01 and intersected a 0.74 m wide semi-massive (up to 85%) pyrite horizon at a vertical depth of 250 m. The immediate hangingwall and footwall to the horizon hosts 2-20% pyrite in moderate to strongly silicified dacite, which including the horizon, assayed 1.76 g/t gold and 8.8 g/t silver over 2.24 m.

A two-hole fence drilled 225 m south of SIG-01-07 intersected a semi- to massive sulphide horizon containing up to 85% pyrite and locally up to 20% sphalerite and minor chalcopyrite. SIG-02-07 returned 2.94% zinc and 0.17% copper over 7.45 metres; including 4.78% zinc over 2.71 metres. SIG-04-07 was drilled as a 65 m undercut to SIG-02-07 and intersected 2.26% zinc and 0.12% copper over 5.07 metres; including 3.00% zinc over 3.57 metres. Anomalous silver, copper, zinc, arsenic and cadmium values, typical of a of feeder or stringer zone, extend up hole of the sulphide horizons in both holes, suggesting that the stratigraphy may be overturned. Within this stringer horizon, SIG-04-07 returned 2.85 g/t gold and anomalous copper and zinc over 1.0 m.

Drill hole SIG-03-07, a 50-m step to the south of SIG-02-07, did not intersect the massive sulphide horizon. Based on notable differences in host rock geochemistry and alteration, and geophysical data that suggest the massive sulphide horizon may be folded or faulted south of SIG-02-07, this hole is interpreted to have overshot the horizon.

The 2007 exploration drilling program successfully extended the strike length of the mineralized horizon(s) to over 425 m and resulted in the discovery of significant base metal mineralization. The sulphide horizon(s) remain open along strike and to depth. The success of the 2007 program warrants expanded geophysical coverage and a substantial diamond drilling campaign.

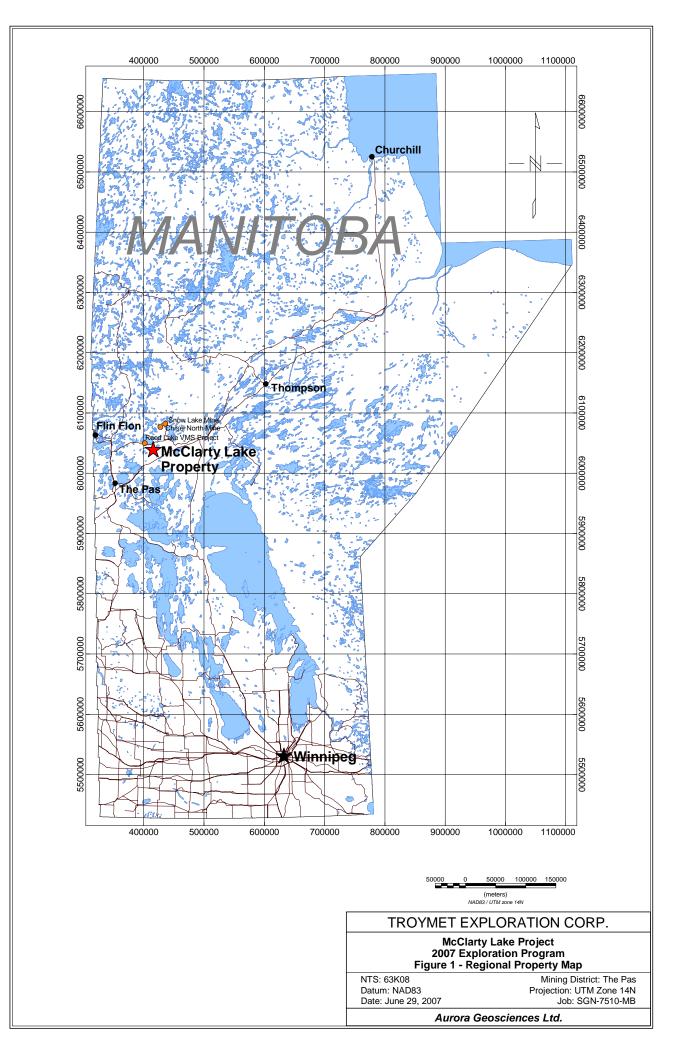
An airborne time-domain electromagnetic (VTEM) survey is recommended to obtain greater detail on the existing EM conductor(s), delineate any extension beyond the currently defined 600-m strike length and potentially identify other anomalies not previously detected. Based on the results, further ground based TEM may be warranted. A minimum 3000 m drilling program is proposed to follow up on the 2007 results and test any additional targets presented by the new geophysical survey(s). The overall cost of the program is estimated at \$535,000.

## 2.0 INTRODUCTION

Troymet Exploration Corp. (formerly Signet Minerals Inc.) of Comox, British Columbia, Canada contracted Aurora Geosciences Ltd. of Whitehorse, Yukon to conduct an exploration program on its McClarty Lake property, located 45 km southwest of Snow Lake, Manitoba (Figure 1). The exploration program involved diamond drilling on the frozen surface of McClarty Lake. The drilling program was conducted by Prospector Drilling of Ste. Rose du Lac, Manitoba.

The field program was conducted from February 11<sup>th</sup> to March 26<sup>th</sup>, 2007 and from May 25<sup>th</sup> to 29<sup>th</sup>, 2007. Ms. Tracy Hurley, P.Geo., of Troymet Exploration Corp. (then Signet Minerals Inc.) visited the property from June 5 to 7, 2007 to inspect the core and conduct additional sampling. Field staff from Aurora Geosciences Ltd. included Geotechnical Engineer, Ms. Kel Sax (B.Sc.) and geologists, Ms. Jessica Norris (B.Sc.) and Mr. Derek Torgerson (B.Sc.). The drilling was delayed due to problems with the drill contractor effectively mobilizing the drill to the site. Drilling commenced on February 23<sup>rd</sup>, 2007 and was ended on March 23<sup>rd</sup>, 2007 due to adverse weather conditions. A second visit at the end of May was undertaken to retrieve mineralized sections of the core from the property for re-logging and re-sampling. Mr. Brian Warren of Snow Lake, Manitoba was employed to assist in operating a core saw for sampling purposes.

This report includes a brief review of previous exploration work conducted on the property. The scope of this report was to report on the geological and geochemical data collected during the 2007 program and assess the mineral potential of the property. Based on the findings and analysis, future programs are recommended and included in this report.



# 3.0 PROPERTY DESCRIPTION AND LOCATION

The McClarty Lake Property is located within The Pas Mining District of Manitoba on NTS Sheet 63K08, approximately 47 km south west of Snow Lake, Manitoba and 10 km south of Provincial Highway 39 (Figure 1). The McClarty Lake property consists of five contiguous mineral claims; DYC3606, DOL78, MAC1, MAC2 and MAC3, totalling 596 ha (Table 4.1, Figure 2).

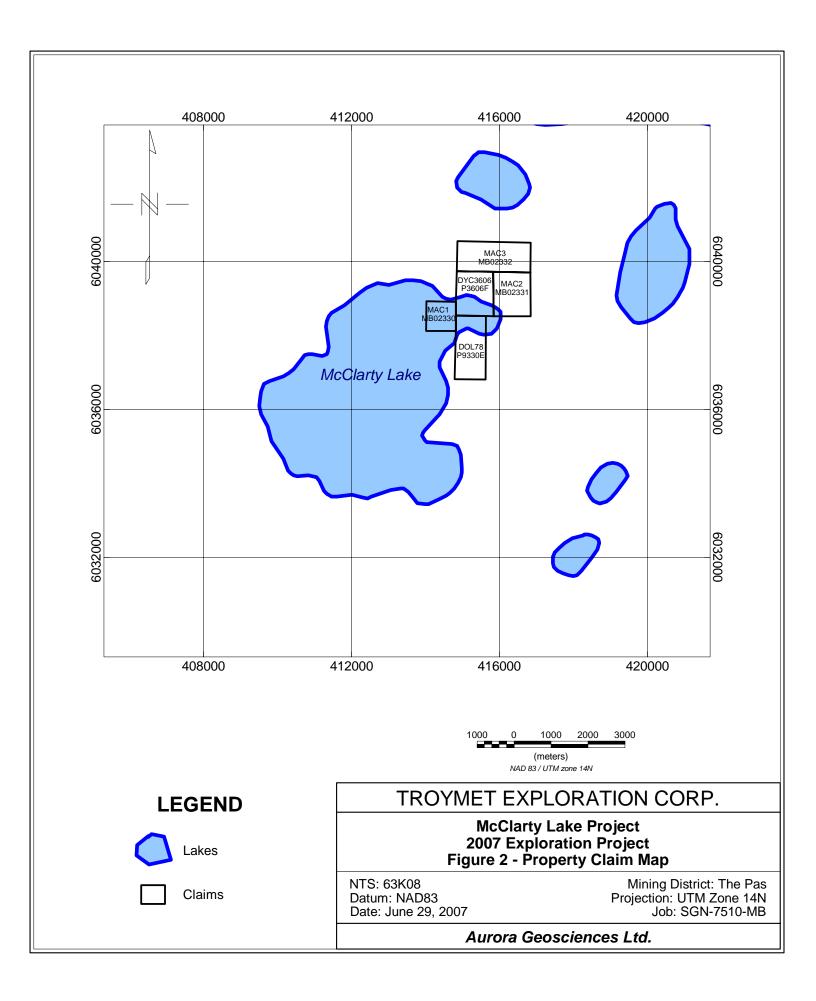
Troymet Exploration Corp. (previously Signet Minerals Inc.) owns 100% of three of the claims (MAC1, MAC2, MAC3) staked in 2000, and holds an option to obtain a 60% interest in DYC3606 and DOL78 from Hudson Bay Exploration and Development (HBED). Under the agreement dated June 28<sup>th</sup>, 2007 between HudBay Minerals Inc. (previously HBED) and Troymet Exploration Corp. (previously Signet Minerals Inc.), Troymet has until August 15, 2008 to expend \$800 000 on exploration. In addition, Troymet must also pay \$12,500 on or before August 15<sup>th</sup>, 2008.

Claim	Claim	Ownership	Expiry	Area
Name	Number		Date	(ha)
DYC3606	P3606F	60% Troymet Exploration Corp.*	4/15/2010	120
DOL78	P9330E	60% Troymet Exploration Corp.*	4/9/2010	132
MAC1	MB02330	100% Troymet Exploration Corp.	6/9/2010	64
MAC2	MB02331	100% Troymet Exploration Corp.	6/9/2010	120
MAC3	MB02332	100% Troymet Exploration Corp.	6/9/2010	160

**Table 3.1 - Property Claims** 

\* Conditional to agreement with HudBay Minerals Inc.

There are no known environmental liabilities to which the property is subject. A work permit for the 2007 program on the McClarty Lake property was obtained from the Snow Lake District office of Manitoba Conservation.



# 4.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRCTURE AND PHYSIOGRAPHY

The McClarty Lake Property and surrounding area is relatively flat in relief, with muskeg and numerous shallow lakes and ponds surrounding the lake. The property is roughly 285 m above sea level and the vegetation throughout the area is northern coniferous forest of mixed spruce forest and muskeg.

The property is accessible by a bush road leading off of Highway 39, approximately 47 km southwest of Snow Lake, Manitoba The bush road travels 13 km over a significant amount of muskeg to the lake, making current vehicle access to the property possible only in the winter months. Helicopter/fixed wing plane access is possible throughout the year. Diamond drilling on the property is most cost effective during the winter months, typically spanning December through March.

Lodging is available out of Snow Lake (year round) and Reed Lake (summer months). Grid power is available from Provincial Highway 39, and both water and any required land resources are available on or within reasonable proximity to the property. The Government of Manitoba holds the surface rights and land access to the property; permits may be obtained by standard processes. Experienced manpower is readily available from Snow Lake (population ~900) and other nearby communities.

## 5.0 HISTORY

Although the land was held from time to time by previous operators, effective exploration in the area was hampered by the lack of Precambrian outcrop due to overlying Phanerozoic sediment cover. Hudson Bay Exploration and Development (HBED) staked the initial claim of the present property in 1989. In 1996, a regional airborne EM survey by HBED, using the Anglo Spectrem system, detected two EM responses over McClarty Lake to the north of the existing claim. A second claim was added by HBED, followed by a horizontal loop (MaxMin) EM survey which detected an arcuate, north-south to northeast-trending conductor extending for 600 m within the northeastern bay of McClarty Lake.

HBED drilled two holes (DYC016 and DYC021) totalling 469 m on this target in 1997. Both holes intersected altered felsic volcanic rocks containing semi-massive pyrite with significant gold and silver mineralization. DYC016 returned assays of 4.17g/t gold and 8.48g/t silver over a core length of 4 m; DYC021 returned 0.93g/t gold and 6.51g/t silver over a core length of 0.3 m. no significant base metal mineralization was encountered, anomalous values of molybdenum, cobalt, arsenic and antimony and high cobalt/nickel ratios were obtained from the trace element geochemistry (Billard, 2002).

Marksmen Resources Ltd. optioned the McClarty Lake property (DYC3606 and DOL78 claims) from HBED in February 2000 and subsequently staked the MAC 1-3 claims and completed two diamond drill holes totalling 577 m. Hole MC01 was drilled as a 75-m undercut to DYC016 and intersected a semi-massive pyrite zone with an estimated true thickness of 3.2 m at 188 m vertical depth. The zone returned assays of 2.1 g/t silver over 4.5 m including 1.38 g/t gold and 12 g/t silver over a 0.5 m core length. MC01 also intersected 0.02 per cent copper and 0.6 g/t silver over 1.0 m at 227.5 m down hole.

Drill hole MC02 was collared 25 m north of DYC016 to test for a northeast plunge to the mineralization encountered in holes DYC016 and MC01. The hole intersected a semimassive pyrite horizon at 166 m vertical depth with an estimated true thickness of 3.8 m. An assay of 0.48 g/t gold and 0.6 g/t silver over 0.5 m was returned from the hanging wall to the massive sulphide horizon. The hole also intersected 0.02 per cent Cu over 1.0 m within the massive sulphide horizon.

Both MC01 and MC02 intersected hanging wall gold-silver mineralization in contrast to the footwall mineralization intersected in DYC016 and DYC021. Trace element geochemistry identified anomalous cobalt/nickel ratios and weakly anomalous arsenic and molybdenum in both holes (Billard, 2002). Interpretation of the drill core indicated

mineralization at this location strikes northerly and dips 65 degrees to the east. True width of the mineralization was estimated to be approximately 70% of core length.

In March, 2002, Marksmen contracted, Crone Geophysics to conduct a deeper penetrating fixed loop Time Domain EM (TEM) survey. The TEM survey successfully traced a north-south trending conductor system across the McClarty Lake grid for a strike length of 600 m (Robertshaw, 2002). The conductor was interpreted to lie at a depth of about 180 m below surface and was noted to deviate significantly from the arcuate conductor trace outlined by previous MaxMin survey. A significant discrepancy (70-m offset) in the drill-indicated location of the massive sulphide horizon on section 425 N (Figure 4) suggested that two separate massive sulphide horizons may be present within the central zone of the grid, or that the single horizon may be faulted or folded. In either case, Robertshaw (2002) postulated a high probability that a strongly conductive massive sulphide zone at depth remained to be tested.

Marksmen's attempts to test the TEM conductor by diamond drilling during the 2003 to 2005 winter seasons were unsuccessful due to lack of drill availability in 2003-2004 and adverse weather conditions in 2005 that did not allow for sufficient ice thickness on McClarty Lake.

In October 2005, Signet Minerals Inc. acquired the mineral properties of Marksmen Resources Ltd., including the 100% owned MAC 1-3 claims and DOL78 and DYC3606 claims under option from HBED. In August 2007, in conjunction with a takeover of Signet Minerals Inc. by Cash Minerals Inc., the non-uranium mineral properties of Signet were transferred to Troymet Exploration Corp.

The property is at an early stage of exploration and is under-explored. A mineral resource estimate has never been published and the property has never been in production.

### 6.0 GEOLOGICAL SETTING

## 6.1 Regional Geology

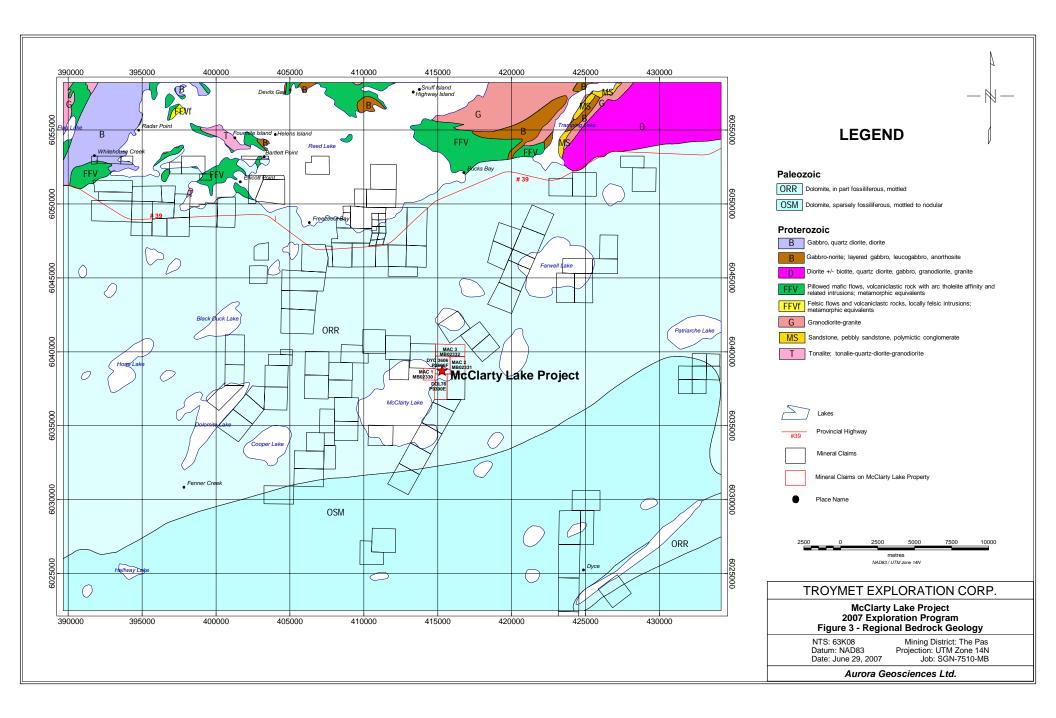
The regional geology of the McClarty Lake property was compiled from Billard (2002), Galley et al. (1990), and the Manitoba Geological Survey website (Figure 3). The property lies within the Early Proterozoic Trans-Hudson Orogeny, a 500-km-wide collisional zone of the historic Churchill Province. The southern part of the orogen is comprised of several juvenile lithotectonic zones, including the 250 km long by 75 km-wide Flin Flon – Snow Lake greenstone belt, which is exposed just north of the McClarty Lake property. The belt is bounded by metasedimentary gneisses and metavolcanics of the Kisseynew Domain to the north and extends to the south where it is unconformably overlain by Ordovician age dolomite.

The Flin Flon – Snow Lake greenstone belt is composed of structurally juxtaposed volcanic and sedimentary assemblages that were emplaced in a variety of tectonic environments. Researchers have recognized that the eastern and western portions of the belt have distinct tectonic histories. The Proterozoic stratigraphy of the Snow Lake area is dominated by metavolcanic rocks of the Amisk Group, overlain unconformably by coarse clastic sediments of the Missi Group. Synvolcanic mafic to felsic sills and dykes, as well as granitic plutons are found throughout the Amisk Group.

The Amisk Group in the Snow Lake area is composed of island-arc derived tholeiitic mafic to felsic volcanic rocks with intercalated volcanogenic sedimentary units. The metamorphic grade varies from lower to upper amphibolite facies and three major phases of folding have been identified.

A strong spatial relationship of volcanic-hosted massive sulphide (VMS) mineralization with felsic volcanic rocks and sediments has been noted for the Snow Lake area. The VMS deposits are typically highly deformed, semi- to massive sulphide horizons underlain by stringer zones that consist largely of discordant to semi-concordant stockwork veins and disseminated sulphides. The immediate host rocks are recrystallized and hydrothermally altered (silica-sericite-chlorite) and have a distinctive coarse-grained (porphyroblastic) metamorphic mineral assemblage characterized by such minerals as phlogopite, cordierite, anthophyllite, muscovite, staurolite, garnet, andalusite and kyanite.

The Flin Flon – Snow Lake belt is one of the largest Paleoproterozoic VMS districts in the world, containing 27 copper-zinc-(gold) deposits from which more than 183 million tonnes of sulphide have already been mined. There are currently three producing VMS copper-zinc deposits within the belt; the 777 and Trout Lake mines in the Flin Flon area and the Chisel North Mine in Snow Lake.



## 6.2 Property Geology

There is no outcrop exposure within the McClarty Lake property; however, drilling has shown it to be underlain by Ordovician dolomite that unconformably overlies intermediate to felsic volcanics and volcaniclastics of the Amisk Group. The unconformity lies at approximately 45 m below surface. In drill core, hydrothermal alteration of the volcanic package is evidenced by weak to pervasive silicification, sericitization and chlorititization. Locally abundant porphyroblasts, suspected to be relict "ghosts" of one or more of the aluminosilicates (andalusite, kyanite, staurolite or cordierite), are now largely altered to muscovite-chlorite and possibly gahnite (a zinc aluminum oxide). Smaller porphyroblasts of garnet occur locally throughout the volcanic sequence. This distinctive alteration assemblage is recognized in all of the VMS deposits in the Snow Lake area and reflects earlier hydrothermal event that has been overprinted by amphibolite grade regional metamorphism. The alteration assemblage is considered a highly important exploration vector to massive sulphide mineralization.

Four holes drilled in 1997 and 2000 intersected disseminated and stringer pyrite and pyrrhotite mineralization within the volcanic sequence. In addition, and a semi- to massive pyrite horizon of 3 to 5 m width was delineated over a 50 m strike length. The sulphide zone and host volcanic package strike northerly and dip moderately to steeply east.

The 2007 program extended the known strike and dip extension of the pyritic horizon to over 425 m (open) and to a vertical depth of 250 m (open). Significant sphalerite mineralization was discovered in two holes collared 225 m south of the 1997 and 2000 drill holes. Up to 20% sphalerite within the semi- to massive pyrite horizon was intersected at 75 m and 150 m vertical depths, which along with the local presence of chalcopyrite mineralization, marks the first discovery of base metal mineralization on the property.

## 7.0 DEPOSIT TYPES

The McClarty Lake exploration program investigated the potential of a base metal +/precious metal-rich volcanogenic-hosted massive sulphide (VMS) deposit. The following discussion was compiled from Galley et al. (1990; 2007).

VMS deposits are formed in extensional tectonic settings, including both oceanic seafloor spreading and arc environments. They typically occur as lenses of polymetallic massive sulphide that form at or near the seafloor through the focused discharge of hot, metal-rich hydrothermal fluids. The formation of all these types of deposits is generally considered to be dominated by the footwall stratigraphy, where the hydrothermal fluids leached ore metals, and by felsic magmatic systems, in the form of subvolcanic intrusions, that provided heat (temperatures up to 900°C). There is typically a mound-shaped to tabular, stratabound body composed principally of massive (>40%) sulphide underlain by discordant to semi-concordant stockwork veins and disseminated sulphides. The stockwork vein systems, or "pipes", are enveloped in distinctive alteration halos, which may extend into the hanging-wall strata above the VMS deposit.

Over 350 deposits and major VMS occurrences are known in Canada, of which only 13 are presently producing mines. There are 25 known deposits in the Paleoproterozoic Flin Flon – Snow Lake belt, eight of which are located in the Snow Lake district. The Chisel North Mine of HudBay Minerals Inc. is currently the only operating base metal mine in the Snow Lake area.

Historically, VMS deposits account for 27% of Canada's copper production, 49% of its zinc, 20% of its lead, 40% of its silver and 3% of its gold.

The distinctive alteration and sulphide mineral assemblages within the Paleoproterozoic volcanic sequence on the McClarty Lake property confirm its potential for hosting a significant base +/- precious metal-rich VMS deposit.

### 8.0 MINERALIZATION

Mineralization observed in drill core from the McClarty Lake property consists of disseminated and stringer pyrite and pyrrhotite and a distinct horizon(s) of semi- to massive pyrite +/- sphalerite and chalcopyrite. The massive sulphide horizon is hosted by a sequence of variably silicified, sericititized and chloritized felsic volcanics and volcaniclastics. A petrographic report on polished thin sections from selected samples from drill hole SIG-02-07 is presented in Appendix V.

The northernmost drill hole on the property (SIG-05-07) intersected a 0.86-m horizon of 25% coarse pyrite and stringer pyrrhotite at 150 m vertical depth. Two hundred metres south, SIG-01-07 intersected a 0.74 m horizon containing up to 85% coarse euhedral to subhedral pyrite at 250 m vertical depth. The host rock is moderate to strongly silicified for 1.5 m either side of the semi-massive zone and hosts 2-20% disseminated and stringer pyrite. Similar type mineralization was noted in the two previous drill holes (DYC016 and MC01) that SIG-01-07 undercut. All three holes returned significant gold and silver values in either or both of the hangingwall and footwall to the sulphide horizon.

A further 225 m south, drill hole SIG-02-07 intersected up to 85% pyrite and up to 20%) disseminated and interstitial sphalerite with minor chalcopyrite over an 8.8 m section at 100 m vertical depth. Anomalous silver, copper, zinc, arsenic and cadmium values typical of a feeder or stringer zone extend for about 9 m up hole and 2 m down hole of the sulphide horizon. This suggests that the stratigraphy may be overturned (tops to the west). An abrupt change from pyrite + sphalerite to pyrrhotite-dominated mineralization also occurs on the down hole side of the semi- to massive sulphide horizon.

Drill hole SIG-04-07 was drilled as a 65 m undercut to SIG-02-07 and intersected 3 m of 80-90% pyrite and up to 10% sphalerite. Similar to SIG-02-07, anomalous silver, copper, zinc, arsenic and cadmium extend for about 10 m up hole. In addition, there is a significant gold and lead enrichment within a 4 to 5 m section up hole of the massive

sulphide horizon. An abrupt change to pyrrhotite-dominated mineralization also occurs on the down hole side of the semi- to massive sulphide horizon.

Drill hole SIG-03-07, a 50-m step to the south of the SIG-02-07 – SIG-04-07 fence, did not intersect the massive sulphide horizon. The intermediate to felsic volcanic host rocks exhibit weaker alteration to that seen in all of the other holes. Pyrrhotite mineralization is more predominant with trace to 5% disseminated pyrite and pyrrhotite overall. No anomalous trace element geochemistry was noted. Based on the notable differences in host rock alteration and geochemistry, along with geophysical data that suggests the massive sulphide horizon may be folded or faulted south of SIG-02-07 (Figure 4), SIG-03-07 is interpreted to have overshot the horizon.

All intersections report down hole lengths with true width estimated to be approximately 70% of core length.

## 9.0 EXPLORATION

The 2007 exploration program on the McClarty Lake property consisted entirely of NQ diamond drilling under contract to Prospector Drilling of Ste. Rose du Lac, Manitoba. Site management of the program was contracted to Aurora Geosciences Ltd. of Whitehorse, Yukon under the overall supervision of qualified person, Tracy Hurley, P.Geo., of Troymet Exploration Corp. (then Signet Minerals Inc.). Drill hole locations (Figure 4) were based on ground EM anomalies previously identified on the property and on the results of previous drilling programs. Detailed results of the diamond drill program are outlined in the following section.

## 10.0 DRILLING

The diamond drilling program commenced on February 11, 2007. Five NQ sized drill holes totalling 1444 m were completed prior to weather conditions forcing cessation of drilling on March 26, 2007.

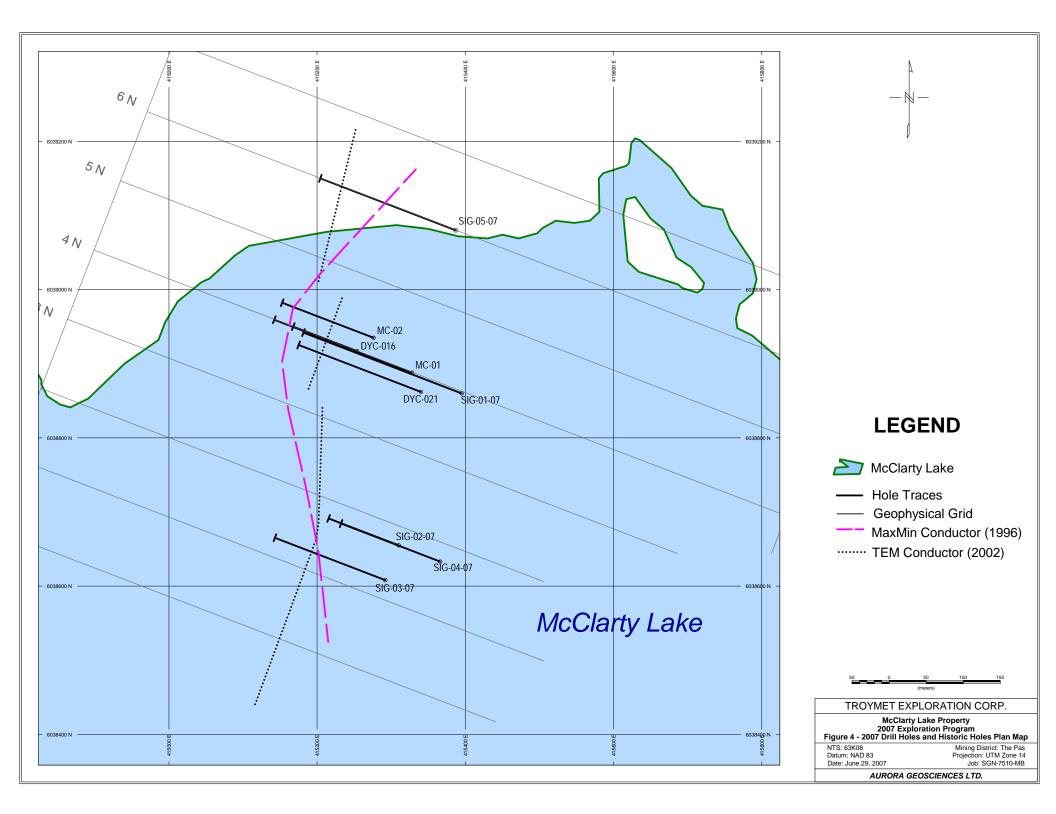
The drilling was carried out 24 hours a day with two 12-hour shifts. All drill holes were cemented upon completion at the bedrock-overburden interface and proper plugs emplaced. The drill crews and geologists traveled from Snow Lake to the McClarty Lake property by truck. A core logging facility was located approximately 5 km south of Snow Lake, where the core was logged and sampled before being returned to the shore of McClarty Lake for storage. In May 2007, several selected intervals of core were returned to the core shack south of Snow Lake for inspection and further sampling.

Analytical results and detailed core logs are provided in Appendices II and III respectively. Drill Section maps of the 2007 and historic drill holes are provided as figures in Appendix IV. All intersections report down hole lengths with true width estimated to be approximately 70% of core length.

Hole	UTM E*	UTM N*	Azimuth	Dip	Depth
			(degrees)	(degrees)	(metres)
SIG-01-07	415395	6038860	291	-55	398.68
SIG-02-07	415310	6038655	291	-55	176.48
SIG-03-07	415292	6038608	291	-55	278.28
SIG-04-07	415366	6038633	291	-55	249.63
SIG-05-07	415387	6039080	291	-55	341.07
Total					1444.14

**Table 10.1 – Drill Hole Collar Locations** 

\*All coordinates are referenced to NAD83 UTM Zone 14N (+/- 6m)



**Drill hole SIG-01-07** (Figure 5, 5A) was drilled to test the extension of the sulphide horizon 50 m below the intersection in 1997 drill hole, MC01. Collared on the lake surface, the hole intersected 19 m of ice and water and 5 m of overburden before drilling into 27.29 m of Ordovician dolomite. A sharp unconformable contact with locally fragmental intermediate volcanics (andesitic) of the Paleoproterozoic Amisk group occurred at 51.21 m down hole, followed by more felsic (dacitic) volcanics and volcaniclastics at 117.70 m that continued to the bottom of the hole at 398.68 m. The dacite is locally weakly to moderately silicified and chloritized and exhibits patchy potassic alteration. The hole intersected a 0.74-m horizon of up to 85% coarse euhedral to subhedral pyrite at 303.61 m down hole. The host rock is moderate to strongly silicified for 1.5 m either side of the semi-massive zone and hosts 2-20% disseminated and stringer pyrite. Anomalous gold and silver values were returned from the immediate hangingwall and footwall to the semi-massive pyrite horizon, returning an overall 1.76 g/t gold and 8.8 g/t silver over 2.24 m. No significant base metals were observed in this hole. The pyrite-rich sulphide zone appears to be the down dip extension of the mineralization encountered in holes MC01 and DYC016.

**Drill hole SIG-02-07** (Figures 8 and 8A) was drilled to test the TEM conductor 225 m south of the previous drilling at a vertical depth of approximately 100 m. The hole intersected the unconformity between Ordovician dolomite and underlying volcanics of the Amisk group at 51.85 m down hole. The locally fragmental and largely dacitic volcanic sequence continued to the end of the hole at 176.48 m. Increasing intensity of locally potassic and silica alteration and up to 5% pyrite and minor chalcopyrite mineralization occurs from approximately 98 m down hole, with a 30-cm semi-massive band of 40% pyrite and minor chalcopyrite intersected at 109 m. A zone of semi- to massive pyrite (up to 85%) with up to 20% disseminated and interstitial sphalerite and minor chalcopyrite was intersected from 111 to 118 m down hole. The sulphide zone returned 2.94% zinc and 0.17% copper over 7.45 m, including 4.78% zinc over 2.71 m. Anomalous silver (to 15 ppm), copper (to 0.4%), zinc (to 0.4%), arsenic (to 90 ppm) and cadmium (to 9 ppm) values, indicative of a of feeder or stringer zone, extend for 9 m up hole and 2 m down hole of the sulphide horizon. This suggests that the stratigraphy may

be overturned (tops to the west). An abrupt change from pyrite + sphalerite to pyrrhotitedominated mineralization also occurs on the down hole side of the semi- to massive sulphide horizon.

**Drill hole SIG-03-07** (Figure 9) was drilled to test the TEM conductor and extension of the sulphide zone 50 m south of SIG-02-07. The unconformity between Ordovician dolomite and underlying volcanics lies at 51.85 m down hole, with the volcanic sequence continuing to the end of the hole at 278.28 m. Intermediate (andesitic) volcanics are dominant to felsic (dacitic) volcanics in this hole. The sulphide zone present in SIG-02-07 was not intersected, and an overall lower intensity of alteration was evident in the volcanic sequence. Pyrrhotite mineralization is more predominant with trace to 5% disseminated pyrite and pyrrhotite overall. No anomalous trace element geochemistry is noted. Based on the notable differences in host rock alteration and geochemistry, along with geophysical data that suggests the massive sulphide horizon may be folded or faulted south of SIG-02-07 (Figure 4), drill hole SIG-03-07 is interpreted to have overshot the horizon.

**Drill hole SIG-04-07** (Figure 8, 8A) was drilled as a 65 m undercut to test the down-dip extension of mineralization intersected in hole SIG-02-07. The unconformity was reached at 48.36 m with intermediate to felsic volcanics continuing to the end of the hole at a depth of 249.63 m. Increasing silicification of the volcanics with 2-5% pyrite + pyrrhotite and minor chalcopyrite was noted from 185 m down hole. A zone of massive pyrite (80-90%) with up to 10% disseminated and interstitial sphalerite and minor chalcopyrite was intersected from 191.16 to 194.27 m. Assay results returned values of 2.26% zinc, and 0.12% copper over 5.07 m (189.16 to 194.23 m) including 3.00% zinc over 3.57 m. Significant gold and copper enrichment also occurs 4 to 5 m up hole of the massive sulphide horizon, returning 2.85 g/t gold and 0.22% copper over 1.0 m. Both the grade and the tenor of mineralization are similar to that in hole SIG-02-07. Anomalous trace element chemistry including elevated silver (to 15 ppm), copper (to 0.3%), zinc (to 0.3%), arsenic (to 82 ppm) and cadmium (to 9 ppm), indicative of a feeder or stringer zone, extends 10 m up hole of the sulphide horizon and further supports the possibility

that stratigraphy is overturned (tops to the west). An abrupt change to pyrrhotitedominated mineralization also occurs on the down hole side of the sulphide horizon.

**Drill hole SIG-05-07** (Figure 10, 10A) targeted the TEM conductor approximately 200 m north of SIG-01-07. The unconformity was reached at 50.41 m with intermediate to felsic volcanics continuing to the end of the hole at 341.07 m. A 0.86-m zone of 25% coarse pyrite and stringer pyrrhotite was intersected at 282.74 m down hole. The sulphide horizon is anomalous in silver (3 ppm), copper (533 ppm) and cobalt (64 ppm) and is followed by a 6-m section of strongly silicified and chloritized volcanics hosting 2 to 5% sulphide. Approximately 100 m higher up in the hole, a narrow band of 15% chalcopyrite and 5% pyrite returned 2.43 % copper over 0.21 m.

Hole	From (m)	To (m)	Width (m)*	Au (g/t)	Cu (%)	Zn (%)
SIG-01-07	303.11	305.35	2.24	1.76	-	-
SIG-02-07	110.49	117.94	7.45	-	0.17	2.94
	115.23	117.94	2.71	-	0.10	4.78
SIG-04-07	186.66	187.66	1.00	2.85	-	-
	189.16	194.23	5.07	-	0.12	2.26
	190.66	194.23	3.57	-	0.07	3.00
SIG-05-07	177.75	177.96	0.21	-	2.43	-

 Table 10.2 – Composite Values of Gold, Copper & Zinc

\* Widths represent down hole core length; true width is estimated to be approximately 70% of core length.

Preliminary statistics were applied to the data from the 2007 geochemical samples. Correlation matrices were calculated to identify any relationships between gold, silver, zinc, copper, lead, Ni, Co, Mo, As and Sb within each of the separate drill holes. Results of the correlations are outlined in table 19.1, which report the presence of strong correlations within each hole. A correlation factor of 1.00 or -1.00 indicates a strong normal or strong inverse relationship between two elements.

Hole	Elements	<b>Correlation Factor</b>
SIG-01-07	As (ppm) and Co (ppm)	0.97
SIG-01-07	As (ppm) and Cu (ppm)	0.92
SIG-01-07	Pb (ppm) and Au (g/t)	0.83
SIG-01-07	Pb (ppm) and Ag (g/t)	0.97
SIG-01-07	Co (ppm) and Cu (ppm)	0.84
SIG-01-07	Au (g/t) and Ag (g/t)	0.87
SIG-02-07	As (ppm) and Zn (ppm)	0.84
SIG-04-07	As (ppm) and Zn (ppm)	0.93
SIG-04-07	As (ppm) and Zn (%)	0.90
SIG-05-07	Mo (ppm) and Ni (ppm)	0.88

#### **Table 10.3 – Geochemical Correlations**

\* No rigorous statistical analyses were performed to determine threshold values for any of the elements. For statistical analytical purposes, all values reported below the detection limit were taken to be the set detection limit for each specific element.

## 11.0 SAMPLING METHOD AND APPROACH

The methodology of sampling drill core is to collect a representative sample of any significant mineralization and/or geological areas of interest encountered in the hole. Sample widths are often based on geology and can vary from a few tens of centimetres to 1.0 m of core length. The typical sample size for this program was 0.5 m. Core recovery was excellent and as such sampled intervals are generally representative of true length.

In addition to the sampling of visible mineralization, a representative selection of each hole was also collected for major and trace element analysis. A total of 79 samples were collected during the drilling program (Feb-Mar 2007). Further sampling (57 samples) was conducted in late May and early June 2007to allow for a more thorough evaluation of the

mineralization encountered. Digital photographs of the core were taken along the entire length of each hole and are archived as electronic files with Troymet Exploration Corp..

All core interval samples were split with a core saw at the core logging facility south of Snow Lake, Manitoba. The remaining half of each sample interval was returned to the core boxes for future reference.

A table of analytical results is presented in Appendix II and composite values of gold, copper and zinc in Table 10.2. All intersections report down hole lengths with true width estimated to be approximately 70% of core length.

## 12.0 SAMPLE PREPARATION, ANALYSES AND SECURITY

The collection and handling of all samples was conducted in a secure and reliable manner by Aurora Geosciences personnel under the overall supervision of qualified person and co-author, Tracy Hurley, P.Geo.

After splitting, each interval sampled was placed in a plastic sample bag along with the appropriate sample tag and stapled shut. Sample bags were then separated into lots of roughly 30 lbs for shipping purposes. Each lot of sample bags was placed into a labelled rice bag which was tightly secured by a zap-strap. All of the samples were delivered by the geologist to the Greyhound bus station where they were then shipped to TSL Laboratories Inc. (TSL) in Saskatoon, SK. Troymet was informed of the integrity of the sample shipment upon receipt at TSL.

TSL operates in accordance with ISO/IEC 17025 guidelines and holds a certificate of accreditation for specific tests from the Standards Council of Canada. Accredited tests include gold utilizing instrumental or gravimetric finish, silver, platinum, palladium, arsenic, cobalt, copper, nickel, lead and zinc.

All samples were assayed for gold and silver by fire assay pre-concentration with gravimetric finish on 1 assay ton sub-sample. Samples with visual chalcopyrite were assayed for copper by Atomic Absorption Spectrometry (AAS) using an Aqua Regia digestion. Representative samples were selected for 30-element Inductively Coupled Plasma- Optical Emission Spectrometry (ICP) analysis to determine major and trace element geochemistry. TSL utilizes the services of ACME Analytical Laboratories Ltd. (ACME) in Vancouver, BC for all ICP analyses. ACME is an ISO 9001:2000 accredited facility.

Initial results from ICP analysis indicated high zinc values in 28 samples. The pulps from these samples were subsequently assayed for zinc by TSL using the AAS method. Following confirmation of high zinc values, the rejects (first-stage crush material) of the 28 samples were sent to the Saskatchewan Research Council (SRC) GeoAnalytical Laboratories in Saskatoon, SK for check assays. SRC is a Standards Council of Canada certified analytical laboratory and operates in accordance with ISO/IEC 17025:2005.

The sample preparation method undertaken by TSL is as follows: Samples are crushed in oscillating jaw crushers to 70% passing 10 mesh (1.70 mm). Samples are riffle split and a 250-gm sub-sample is pulverized with the remaining is stored as reject. Ring-mill pulverizers grind samples to 95% passing 150 mesh (106 micron). At the beginning of each shift and/or the start of a new group, samples are screened to ensure correct particle sizes. Crushers, rifflers, and pans are cleaned with compressed air between samples and pulverizing pots and rings are brushed, hand cleaned, and air blown.

The fire assay method undertaken by TSL utilizes a flux mixture of litharge, soda, borax, silica, fluorspar with further oxidants or reductants added as required and the relative concentrations of the fluxing materials adjusted to suit the type of sample being analyzed. Crucibles are placed into trays and ~120 gm of flux is added. Twenty samples, three repeats and a standard are weighed into the crucibles then placed into a tumbler and mixed for 10 minutes. When mixed, the samples are removed, inquarted and fused. The resultant lead button is then coupled. After cupellation the subsequent Doré bead is

flattened, placed in a porcelain cup and parted with a dilute nitric acid solution. The gold obtained is decanted with de-ionized water, dried, annealed, and weighed on a microbalance.

The AAS method for copper and zinc is an absorption analysis (as opposed to emission analysis). Various sample weights and acid mixtures are used in digesting the samples. The elements in solution are vaporized into an acetylene flame. The atoms of the element in the flame absorb light and analysis is performed by the measurement of the amount of this light that is absorbed by the sample.

The ICP method undertaken by ACME is as follows: A 30 gm sub-sample of -150-mesh material is digested in 180 ml of hot (95°C) aqua-regia solution and diluted to 600 ml with distilled water. After cooling, the solution aspirated into a Jarrel Ash AtomComp 800 or 975 ICP or Spectro Ciros Vision emission spectrometer and analysed for 30 elements: Ag, Al, As, Au, B, Ba, Bi, Ca, Cd, Co, Cr, Cu, Fe, K, La, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Sr, Th, Ti, U, V, W, Zn. Aqua regia leach digestion is not complete for all metals and can result in the understatement of Al, Ba, Be, Ca, Cr, Fe, K,Mg, Mn, Na, P, Sn, Sr, Ti, V, W and Zr.

It is the opinion of the authors that the sample preparation, security and analytical procedures of TSL, SRC and ACME laboratories are adequate and reliable.

### **13.0 DATA VERIFICATION**

Samples collected during this program and previous exploration programs on the McClarty Lake property were obtained by experienced professionals and can be assumed to have been treated with due care. Such samples were analyzed at laboratories meeting a high level of industry standards. There is no indication that samples from this program, nor any previous programs, have been compromised resulting in any misleading results.

Check assays performed on zinc-rich samples from this program varied within acceptable limits from original assay values.

In the authors' opinion, appropriate control measures were employed throughout the sampling, shipping and analytical processes to ensure a reliable database.

#### 14.0 INTERPRETATION AND CONCLUSIONS

The McClarty Lake property is favourably situated within the Flin Flon – Snow Lake greenstone belt, one of the largest Paleoproterozoic volcanic-hosted massive sulphide (VMS) districts in the world. Twenty-seven copper-zinc-(gold) deposits within the belt have produced more than 183 million tonnes of sulphide ore.

In the area of McClarty Lake, younger Ordovician dolomite unconformably overlies the Paleoproterozoic volcanic sequence of the Flin-Flon – Snow Lake belt. This, combined with a complete lack of outcrop exposure, hampered previous exploration in the area. An airborne EM geophysical survey capable of remotely sensing the presence of a conductive horizon below the Ordovician cover was not flown over the property until 1996. The detection of two EM responses over McClarty Lake by HBED immediately prompted a follow-up ground EM survey, which outlined a conductor extending over 600 m.

Limited diamond drilling in 1997 and 2000 (4 holes total) tested the conductor over a 50m strike length and intersected a semi- to massive pyrite horizon that hosted highly anomalous gold and silver. In 2002, a deeper penetrating TEM geophysical survey was completed that suggested the possibility of two conductive horizons or one that was faulted and/or folded. Interpretation of the results indicated a high probability that a strongly conductive massive sulphide zone at depth remained to be tested. Unfavourable winter weather conditions prevented further drilling until 2007. The 2007 program tested the conductor system over a 475-m strike length and intersected semi- to massive pyrite and local interstitial sphalerite and chalcopyrite over 0.3 to 7 m lengths in 4 of 5 holes. The program successfully extended the known strike and dip extension of the pyritic horizon to over 425 m (open) and to a vertical depth of 250 m (open). Significant zinc sulphide (sphalerite) mineralization was discovered in two holes collared 225 m south of the 1997 and 2000 drill holes. Up to 20% sphalerite within the semi- to massive pyrite horizon was intersected at 100 m and 165 m vertical depths. Along with the presence of copper sulphide (chalcopyrite), this marks the first discovery of significant base metal mineralization on the property.

The volcanic sequence exhibits a distinctive alteration assemblage that is recognized in all of VMS deposits in the Snow Lake area, and reflects an earlier hydrothermal event that has been overprinted by amphibolite grade regional metamorphism. The intensity of silicification, sericite and chlorite alteration, in conjunction with various trace element enrichment up hole of the massive sulphide horizons in holes SIG-02-07 and SIG-04-07, suggests that the stratigraphy may be overturned.

Hole SIG-03-07, a 50-m step to the south of SIG-02-07, did not intersect the massive sulphide horizon. Based on the notable differences in host rock geochemistry and alteration, and geophysical data that suggest the massive sulphide horizon may be folded or faulted south of SIG-02-07, this hole is interpreted to have overshot the horizon.

VMS deposits are characteristically irregular in shape and thickness and in the Snow Lake area are notably highly deformed. The current drill hole coverage is insufficient to determine the geometry of the mineralized horizon(s) at McClarty. There is a reasonable expectation that the open ended geophysical EM conductors and associated sulphide mineralization extend to depth and beyond the existing geophysical survey limits in both directions.

The discovery of zinc-rich sulphide mineralization within the massive pyrite horizon marks great success for the 2007 program. The property is considered highly prospective for delineating an economically attractive base +/- precious metal rich VMS deposit.

### **15.0 RECOMMENDATIONS**

The success of the 2007 program warrants expanded geophysical coverage and a substantial diamond drilling campaign. An airborne time-domain electromagnetic (VTEM) and coincident magnetic survey is recommended. VTEM is noted for deep penetration, high spatial resolution and better detection of weaker anomalies. The survey will provide greater detail on the existing EM conductor(s), delineate any extension beyond the currently defined 600-m strike length and potentially identify other anomalies not previously detected. Based on the results of the VTEM survey, further ground-based TEM may be warranted.

A minimum 3000-m diamond drilling program is proposed to follow up on the 2007 drill results and test any additional targets presented by the new geophysical survey(s). There is currently no drill testing along the 200-m strike length of the known conductor(s) between 1997 hole, DYC021 and 2007 holes, SIG-02-07 and SIG-04-07. Good potential exists for extending the base metal mineralization along strike and to depth.

During the proposed drilling program, a down-hole pulse EM survey would be highly advantageous for any holes that miss the EM conductor target. This technology can detect off-hole conductors and facilitate re-targeting of subsequent holes.

Due to the low-lying, swampy nature of the area, airborne geophysics has the advantage of being staged anytime throughout the year, whereas ground-based geophysical programs are limited to winter months. Although the technology exists for drilling on lakes via floating platforms, winter drilling on ice is far more practical and cost effective. In the McClarty Lake area, the potential for sufficient ice thickness to drill on the lake extends from December to March. Ideally, an airborne VTEM and magnetic survey should be completed in fall 2007 followed by diamond drilling as soon as ice conditions allow.

The budget for this program is estimated at:

Airborne geophysics	\$25,000
Ground geophysics	\$15,000
3000 m of diamond drilling (all inclusive)	\$500,000
Total	<u>\$535,000</u>

### **21.0 REFERENCES**

- Billard, D. P., 2002: Report on the 2000 Diamond Drilling Program, McClarty Lake Property, Snow Lake, Manitoba, NI 43-101 Technical Report for Marksmen Resources Ltd., 12 p.
- Galley, A.G., Bailes, A.H., Syme, E.C., Bleeker, W., Macek, J.J., and Gordon, T.M., 1990: Geology and Mineral Deposits of the Flin Flon and Thompson Belts, Manitoba, IAGOD Field Trip Guide Book #10, Geological Survey of Canada, Open File 2165.
- Galley, A., Hannington, M. and Jonasson, I., 2007: Volcanogenic-associated Massive Sulphide Deposits, *in* Goodfellow, W., ed., Mineral Resources of Canada: A Synthesis of Major Deposit-types, District Metallogeny, the Evolution of Geological Provinces, and Exploration Methods, Geological Association of Canada, Mineral Deposits Division, Special Publication No. 5, p. 141-161.
- Government of Manitoba: Mineral Resources Division Website. June 22, 2007. "Manitoba Geology." <u>http://www.gov.mb.ca/iedm/mrd/index.html</u>
- Mineral Science Technology Students at R.D. Parker Collegiate of Thompson, Manitoba. June 22, 2007. "Geology of the Flin Flon Area." <u>http://polaris.digistar.mb.ca/minsci/areas/ffgeol.htm</u>

Robertshaw, P., 2002: Report on the Interpretation of a TEM Survey by Crone Geophysics and Exploration Ltd. in the McClarty Lake area of Northwestern Manitoba, NI 43-101 Technical Report for Marksmen Resources Ltd., 11 p.

# 21.0 DATE & SIGNATURE

The Technical Report entitled "Report on the 2007 Diamond Drilling Program, McClarty Lake Project, Manitoba", dated September 24, 2007 was prepared for Troymet Exploration Corp. by Jessica Norris, B.Sc. Hons. of Aurora Geosciences Ltd. and qualified person, Tracy Hurley, M.Sc., P.Geo., of Troymet Exploration Corp.

Dated September 24, 2007.

"Signed" & "Sealed" Tracy Hurley, P.Geo.

"Signed"

Jessica Norris, BSc. Hons.

## **APPENDIX I**

## STATEMENT OF QUALIFICATIONS

#### STATEMENT OF QUALIFICATIONS

- I, Jessica Norris certify that:
- 1. I reside at 37D Grizzly Circle, Whitehorse, Yukon Territory, Y1A 6J3.
- 2. I am a Geologist employed by Aurora Geosciences Ltd. of Whitehorse, Yukon Territory.
- 3. I graduated from The University of Alberta with a BSc. Honours in Geology in 2006 and have worked as a Geologist since that time.
- 4. I am a member in training (G.I.T.) of the Association of Professional Engineers, Geologists, and Geophysicists of Alberta (APEGGA).
- 5. I conducted the drilling program on the McClarty Lake Property for Troymet Exploration Corp. (then Signet Minerals Inc.) in February and March, 2007.

Dated this 24<sup>th</sup> day of September, 2007, at Whitehorse, Yukon Territory.

"Signed"

Jessica Norris, B.Sc. Hons.

#### **CERTIFICATE OF QUALIFIED PERSON**

- 1. I, Tracy Hurley, of 1454 Gillespie Rd., Delta, British Columbia, am a geologist under contract to Troymet Exploration Corp. (formerly Signet Minerals Inc.) of Comox, BC.
- 2. This certificate applies to the technical report entitled "Report on the 2007 Diamond Drilling Program, McClarty Lake Project, Manitoba" (the "Technical Report"), dated September 24, 2007.
- 3. I graduated from McMaster University in Hamilton, Ontario with a Bachelor of Science Degree in Geology in 1982 and a Master of Science Degree in Geology in 1985. I have worked in the mining and exploration industry as a geologist since 1981 with the exception of 6 years (1997-2003) tenure as a mining analyst. My work history includes 10 years in the Provinces of Saskatchewan and Manitoba, exploring within similar geological terrains and for similar types of deposits as that which is the subject of this report. I am a Professional Geoscientist registered with the Association of Professional Engineers and Geoscientists of British Columbia, Registration No. 23128. Based on my education, affiliation with a professional association and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
- 4. I directly supervised the 2007 diamond drilling program on the McClarty Lake property that is the subject of this report. I inspected the property and relevant drill core from the program on June 5-7, 2007.
- 5. I am responsible for co-authoring the Technical Report entitled "Report on the 2007 Diamond Drilling Program, McClarty Lake Project, Manitoba", dated September 24, 2007.
- 6. I hold the position of Vice-President, Exploration for Troymet Exploration Corp. and accordingly am not independent of the issuer as described in Section 1.4 of NI 43-101.
- 7. My prior involvement with the property includes planning of the 2007 diamond drilling program that is the subject of this report.
- 8. I have read National Instrument 43-101 and this report has been prepared in compliance with the Instrument.
- 9. As of September 24, 2007, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated September 24, 2007.

"Signed" & "Sealed"

#### Tracy Hurley, P.Geo.

### **APPENDIX II**

### ANALYTICAL RESULTS

Hole	Sample	From	То	Width	Au	Au1	Ag	Cu	Zn	Zn check	Ag	AI	As	Ва	Be	Bi	Ca	Cd	Со
	•	(m)	(m)	(m)	gt	g t	gt	%	%	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm
SIG-01-07	953001	208.20	209.70	1.50	<.03		<.2												
SIG-01-07	953002	209.70	211.20	1.50	<.03	<.03	<.2												
SIG-01-07	953003	211.20	212.70	1.50	<.03		<.2												
SIG-01-07	953004	302.11	302.61	0.50	0.03		0.9				1.3	1.97	2	71	<1	10	0.08	<.5	23
SIG-01-07	953005	302.61	303.11	0.50	<.03		<.2				<.3	1.39	2	88	<1	4	0.13	<.5	11
SIG-01-07	953006	303.11	303.61	0.50	4.97	5.56	7.3				14.5	1.34	5	112	<1	70	0.53	<.5	19
SIG-01-07	953007	303.61	303.96	0.35	0.14		2.3				2.2	0.64	55	14	<1	16	0.26	1.7	171
SIG-01-07	953008	303.96	304.35	0.39	0.07		1.2				1.4	0.91	37	16	<1	14	1.88	<.5	77
SIG-01-07	953009	304.35	304.85	0.50	1.58		6.5				6.7	1.91	4	34	<1	51	1.08	<.5	14
SIG-01-07	953010	304.85	305.35	0.50	1.2		2.5				3.3	1.4	4	73	<1	30	0.27	<.5	20
SIG-01-07	953011	305.35	305.85	0.50	<.03		<.2				<.3	1.74	<2	103	<1	4	0.13	<.5	12
SIG-02-07	812301	98.63	99.13	0.50	<.03		1.4				<.3	1.12	5	102	<1	3	0.22	<.5	4
SIG-02-07	812302	99.13	99.63	0.50	<.03		1				<.3	1.09	5	98	<1	3	0.21	<.5	4
SIG-02-07	812303	99.63	100.13	0.50	<.03		1.2				<.3	1.68	5	122	<1	3	0.08	<.5	6
SIG-02-07	812304	100.13	100.63	0.50	<.03	<.03	3.4				1.7	3.22	4	228	<1	<3	0.1	<.5	14
SIG-02-07	812305	100.63	101.13	0.50	<.03		1.6				0.6	2.38	8	261	<1	7	0.05	1	5
SIG-02-07	812306	101.13	101.63	0.50	<.03		2.8				1.6	2.11	14	100	<1	7	0.16	5.1	9
SIG-02-07	812307	101.63	102.13	0.50	0.07		5				3.1	2.78	13	73	<1	6	0.61	9.2	16
SIG-02-07	812308	102.13	102.63	0.50	<.03		2.8				1.3	3.4	7	145	<1	10	0.13	3.2	8
SIG-02-07	812309	102.63	103.13	0.50	<.03	<.03	3				1.3	3.29	12	125	<1	9	0.12	2.6	19
SIG-02-07	812310	103.13	103.63	0.50	<.03		4				2.6	3.38	11	176	<1	9	0.07	2.7	19
SIG-02-07	812311	103.63	104.13	0.50	<.03		1.8				0.9	2.68	5	80	<1	9	0.05	1.4	8
SIG-02-07	812312	104.13	104.63	0.50	<.03		1.4				<.3	2.79	2	83	<1	7	0.07	0.7	4
SIG-02-07	812313	104.63	105.13	0.50	0.24		2				0.5	3.53	6	137	<1	5	0.03	3.8	4
SIG-02-07	812314	105.13	105.63	0.50	<.03	<.03	2.2				0.4	3.52	8	217	1	7	0.08	2.6	8
SIG-02-07	812315	105.63	106.13	0.50	<.03		3				1.7	3.04	13	101	<1	10	0.14	3.8	15
SIG-02-07	953012	106.13	106.63	0.50	0.03	0.1	4				5.6	2.49	7	54	<1	5	0.1	3.4	9
SIG-02-07	953013	106.63	107.13	0.50	<.03		<.2				0.3	1.94	<2	56	<1	4	0.03	6.4	4
SIG-02-07	953014	107.13	107.63	0.50	<.03		2.5				4.4	2.23	31	38	<1	5	0.08	3.5	10
SIG-02-07	953015	107.63	108.13	0.50	<.03		1.5				1.3	1.76	9	80	<1	<3	0.03	3.4	6
SIG-02-07	953016	108.13	108.63	0.50	0.03		4.7				3.8	2.76	21	101	<1	5	0.05	3.1	14
SIG-02-07	953017	108.63	109.13	0.50	<.03		2.3				2.9	0.84	21	84	<1	5	0.09	5.4	6
SIG-02-07	953018		109.49	0.36	<.03		18				15.5	0.8	90	12	<1	<3	0.17	0.5	23
SIG-02-07	953019	109.49	109.99	0.50	<.03		1.4				1.9	1.11	13	118	<1	5	0.07	1.8	2
SIG-02-07	953020		110.49	0.50	<.03		2.8				3.3	2.58	19	91	<1	5	0.06	1.5	7
SIG-02-07	953021	110.49	110.99	0.50	<.03		4.7	0.07	0.63	0.57	4.2	3.38	14	120	<1	5	0.12	10.1	9
SIG-02-07		110.99	111.27	0.28	<.03	<.03	5.6	0.1	1.06		4.3	1.95	28	25	<1	7	0.2	18.6	13
SIG-02-07	953023	111.27	111.57	0.30	<.03		6.4	0.26	4.68	4.42	4.7	0.57	188	12	<1	4	0.15	98	104

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Hole	Sample	From	То	Width	Au	Au1	Ag	Cu	Zn	Zn check	Ag	AI	As	Ва	Be	Bi	Ca	Cd	Со
		(m)	(m)	(m)	g t	g t	g t	%	%	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm
SIG-02-07	953024	111.57	111.92	0.35	<.03		7	0.15	3.4	3.18	4.9	1.74	151	6	<1	5	0.1	74.2	116
SIG-02-07	953025	111.92	112.42	0.50	<.03		10	0.56	2.67	3.13	10	2.87	111	13	<1	<3	0.16	55.8	43
SIG-02-07		112.42	112.68	0.26	<.03		8.2	0.76	1.9	2.13	5.5	0.31	202	8	<1	<3	0.11	37	109
SIG-02-07		112.68	113.18	0.50	<.03	<.03	8.3	0.13	0.81	0.80	6.6	0.35	186	11	<1	<3	0.08	12.5	89
SIG-02-07		113.18	113.68	0.50	0.31		12	0.17	0.29	0.15	11.1	1.53	68	28	<1	6	0.7	3.8	11
SIG-02-07		113.68	114.18	0.50	0.24		12	0.2	1.15	0.89	11.1	2.71	72	19	1	<3	0.8	19.4	11
SIG-02-07		114.18	114.53	0.35	0.03		5.8	0.17	4.44	1.64	3.8	0.89	129	5	<1	<3	0.16	31.6	30
SIG-02-07		114.53	114.73	0.20	0.07		10	0.02	4.5	3.86	0.4	0.18	124	7	<1	<3	0.02	73	8
SIG-02-07		114.73	115.23	0.50	<.03	<.03	5	0.1	0.64	0.64	3.6	0.92	75	16	<1	6	0.37	10.5	9
SIG-02-07		115.23	115.52	0.29	<.03		6.2	0.1	2.46	1.86	5.1	0.25	199	10	<1	<3	0.07	43.1	13
SIG-02-07		115.52	116.02	0.50	<.03		19	0.06	2.92	3.38	14.4	1.14	112	12	<1	7	0.12	50.5	15
SIG-02-07	953035	116.02	116.52	0.50	<.03		4.2	0.05	5.79	5.46	3	0.19	197	6	<1	<3	0.03	106.1	30
SIG-02-07	953036	116.52	117.02	0.50	<.03		1.8	0.02	8.3	7.73	1.1	0.18	212	8	<1	<3	0.03	156.9	35
SIG-02-07	953037	117.02	117.52	0.50	<.03		3.1	0.08	3.56	4.62	2.3	0.2	213	7	<1	<3	0.05	85	14
SIG-02-07	953038	117.52	117.94	0.42	<.03		6.5	0.3	4.68	4.19	5.8	0.14	193	<1	<1	<3	0.35	90.6	9
SIG-02-07	953039	117.94	118.44	0.50	0.03		2.2	0.04			2.5	1.5	23	169	<1	3	1	0.6	8
SIG-02-07	953040	118.44	118.94	0.50	0.1		4.3	0.06			4.4	1.34	35	91	<1	4	0.62	1.1	9
SIG-02-07	953041	118.94	119.44	0.50	<.03	00	2.8	0.3			2.6	0.75	23	138	<1	<3	0.2	1.1	3
SIG-02-07		119.44	119.94	0.50	<.03	<.03	<.2	<.01			0.6	0.93	19	254	<1	3	0.18	<.5	4
SIG-02-07		119.94	120.44	0.50	<.03		1.2				<.3	1.58	38	356	<1	6	0.37	<.5	9
SIG-02-07	812317	120.44	120.94	0.50	<.03		1.4				<.3	1.56	23	234	<1	1	0.97	<.5	13
SIG-02-07	812318	120.94	121.44	0.50	<.03		1.2				<.3	1.19	38	318	<1	4	0.37	<.5	8
SIG-02-07	812319	121.44	121.94	0.50	<.03		1.6				<.3	2.2	11	497	<1	7	0.61	<.5	12
SIG-02-07	812320	121.94	122.44	0.50	<.03		1				<.3	0.89	4	244	<1	4	0.31	<.5	5
SIG-03-07	812321	181.4	181.9	0.50	<.03		1				<.3	0.8	<2	132	<1	<3	0.73	<.5	10
SIG-03-07	812322	181.9	182.4	0.50	<.03		1.2				<.3	1.8	<2	701	<1	11	1.06	<.5	19
SIG-03-07	812323	182.4	182.9	0.50	<.03		1.2				<.3	1.52	<2	725	<1	5	0.7	<.5	15
SIG-03-07	812324	182.9	183.4	0.50	<.03	<.03	1.4				<.3	1.91	2	198	<1	9	1.16	<.5	18
SIG-03-07	812325	183.4	183.9	0.50	<.03		1.4				<.3	1.66	<2	237	<1	7	1.07	<.5	17
SIG-03-07	812326	183.9	184.4	0.50	<.03		1.6				0.4	1.14	<2	205	<1	7	1.79	<.5	10
SIG-03-07	812327	184.4	184.9	0.50	<.03		2.2				0.7	4.31	<2	114	<1	12	0.68	<.5	13
SIG-03-07	812328	184.9	185.4	0.50	<.03		1.6				<.3	2.24	<2	202	<1	6	2.37	<.5	9
SIG-03-07	812329	185.4	185.9	0.50	<.03	<.03	1				<.3	1.09	<2	244	<1	<3	0.18	<.5	3
SIG-03-07	812330	185.9	186.4	0.50	<.03		1.4				<.3	2.08	<2	422	<1	7	0.8	<.5	10
SIG-03-07	812331	186.4	186.9	0.50	<.03		1.4				<.3	3.94	2	438	<1	9	0.09	<.5	4
SIG-03-07	812332	186.9	187.4	0.50	<.03		1.2				<.3	2.79	<2	352	<1	8	0.11	<.5	6
SIG-03-07	812333	187.4	187.9	0.50	<.03		1.6				<.3	2.8	2	167	<1	9	0.05	<.5	10
SIG-03-07	812334	187.9	188.4	0.50	<.03	<.03	1.2				<.3	2.03	<2	89	<1	8	0.05	<.5	6

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Hole	Sample	From	То	Width	Au	Au1	Ag	Cu	Zn	Zn check	Ag	AI	As	Ва	Ве	Bi	Ca	Cd	Со
	•	(m)	(m)	(m)	gt	gt	gt	%	%	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm
SIG-03-07	812335	188.4	188.9	0.50	<.03		1.2				<.3	1.75	3	42	<1	8	0.07	<.5	9
SIG-03-07	812336	188.9	190.4	1.50	<.03		1.2				<.3	1.84	<2	32	<1	6	0.07	<.5	8
SIG-03-07	812337	258.67	259.67	1.00	<.03		1.4				<.3	3.13	<2	193	<1	6	0.03	<.5	21
SIG-03-07	812338	259.67	260.67	1.00	<.03		1.6				<.3	3.11	<2	167	<1	5	0.04	<.5	15
SIG-03-07	812339	260.67	261.67	1.00	<.03		1.8				<.3	3.2	<2	165	<1	4	0.1	<.5	26
SIG-03-07	812340	261.67	262.67	1.00	<.03		1.6				<.3	2.91	<2	314	<1	8	0.25	<.5	13
SIG-03-07	812341	262.67	263.67	1.00	<.03		2				0.4	1.3	<2	111	<1	5	0.01	<.5	21
SIG-03-07	812342	263.67	264.67	1.00	<.03		2.2				0.6	1.36	<2	93	<1	4	0.01	<.5	34
SIG-03-07	812343	264.67	265.67	1.00	<.03		2.8				0.9	1.16	2	67	<1	3	0.03	<.5	96
SIG-03-07	812344	265.67	266.67	1.00	<.03	<.03	1.8				<.3	2.07	<2	458	<1	4	0.26	<.5	8
SIG-03-07	812345	266.67	267.67	1.00	0.17		1.4				<.3	0.55	<2	299	<1	3	0.22	<.5	4
SIG-03-07	812346	267.67	268.67	1.00	<.03		1.4				<.3	0.71	<2	319	<1	3	0.5	<.5	4
SIG-03-07	812347	268.67	269.67	1.00	<.03		1.4				<.3	0.48	<2	222	<1	3	0.28	<.5	4
SIG-03-07	812348	269.67	270.67	1.00	<.03		2				<.3	1.94	<2	301	<1	5	0.15	<.5	6
SIG-03-07	812349	270.67	271.67	1.00	<.03	<.03	2.4				<.3	3.09	<2	190	<1	8	0.05	<.5	9
SIG-04-07	953043	179.66	180.16	0.50	<.03		0.9	0.11			1.1	1.74	15	37	<1	4	0.05	<.5	35
SIG-04-07	953044	180.16	180.66	0.50	<.03		<.2	0.01			0.3	0.42	11	108	<1	3	0.05	0.6	4
SIG-04-07	953045	180.66	181.16	0.50	<.03		0.6	0.08			1.2	2.8	13	67	<1	3	0.03	4.8	41
SIG-04-07	953046	181.16	181.66	0.50	<.03		1.6	0.07			1.2	2.87	8	93	<1	3	0.04	2.6	13
SIG-04-07	953047	181.66	182.16	0.50	<.03	<.03	1.6	0.1			1.6	0.99	8	65	<1	3	0.03	<.5	12
SIG-04-07	953048	182.16	182.66	0.50	<.03		2.2	0.17			2.5	1.95	22	58	<1	6	0.02	3.8	54
SIG-04-07	953049	182.66	183.16	0.50	<.03		4.2	0.16			2.3	2.41	11	65	<1	4	0.02	5.8	14
SIG-04-07	953050	183.16	183.66	0.50	<.03		2.8	0.19			2.4	2.22	6	61	<1	3	0.02	7.2	6
SIG-04-07	953051	183.66	184.16	0.50	<.03		2.1	0.15			3.2	2.31	29	79	<1	<3	0.02	4.6	24
SIG-04-07	953052	184.16	184.66	0.50	<.03	<.03	3.4	0.19			3.2	1.26	82	22	<1	<3	0.03	9	107
SIG-04-07	953053	184.66	185.16	0.50	<.03		1.5	0.05			2.1	0.38	50	27	<1	3	0.09	<.5	58
SIG-04-07	953054	185.16	185.66	0.50	<.03		4.3	0.16			5.3	1.15	26	32	<1	3	0.06	3.7	5
SIG-04-07	953055	185.66	186.16	0.50	<.03		2.1	0.02			2.1	0.68	26	63	<1	7	0.09	1.3	7
SIG-04-07	953056	186.16	186.66	0.50	<.03		0.5	<.01			0.8	0.36	18	136	<1	5	0.08	1	11
SIG-04-07	953057	186.66	187.16	0.50	2.67	2.95	16	0.39			15.2	0.67	47	31	<1	5	0.08	4.7	6
SIG-04-07	953058	187.16	187.66	0.50	3.02	3.22	8.8	0.05			7.8	1.14	11	310	<1	5	0.07	9	1
SIG-04-07	953059	187.66	188.16	0.50	<.03		1.8	<.01			1.6	0.36	12	152	<1	<3	0.07	1.1	1
SIG-04-07	953060	188.16	188.66	0.50	<.03		0.7	0.01			1.1	0.42	11	167	<1	<3	0.07	<.5	4
SIG-04-07	953061	188.66	189.16	0.50	0.21		11	0.25			8.6	1.26	17	81	<1	4	0.1	0.6	2
SIG-04-07	953062	189.16	189.66	0.50	0.03	0.03	13	0.22	0.28		9.1	1.84	20	63	<1	<3	0.04	2.1	2
SIG-04-07	953063	189.66	190.16	0.50	0.17		15	0.24	0.65		12.9	3.27	40	77	<1	<3	0.04	6.2	10
SIG-04-07	953064	190.16	190.66	0.50	1.41		29	0.25	0.61		21.7	3.29	46	21	<1	13	0.02	6	7
SIG-04-07	953065	190.66	191.16	0.50	0.14		8.6	0.17	1.83	1.91	7.5	2.5	65	21	<1	<3	0.03	32.9	25

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Hole	Sample	From	То	Width	Au	Au1	Ag	Cu	Zn	Zn check	Ag	AI	As	Ва	Be	Bi	Ca	Cd	Со
	-	(m)	(m)	(m)	g t	g t	gt	%	%	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm
SIG-04-07	953066	191.16	191.66	0.50	<.03		6.1		3.1	3.30	3.6	0.2	173	3	<1	<3	<.01	64.9	28
SIG-04-07	953067	191.66	192.16	0.50	<.03		3.8		2.28	2.95	2.9	0.24	171	7	<1	<3	0.01	48.2	38
SIG-04-07	953068	192.16	192.66	0.50	<.03		2.3		2.72	3.25	1.5	0.13	186	1	<1	<3	0.01	51.6	14
SIG-04-07	953069	192.66	193.16	0.50	<.03		2.6		3.17	3.81	1.2	0.23	200	5	<1	<3	<.01	59.5	4
SIG-04-07	953070	193.16	193.66	0.50	<.03		2.6		3	2.95	1.7	0.36	168	6	<1	<3	<.01	58.3	17
SIG-04-07	953071	193.66	194.23	0.57	<.03		5.6		4.65	5.08	3.9	0.52	189	4	<1	9	0.05	87.9	29
SIG-04-07	953072	194.23	194.73	0.50	<.03		15				12.7	0.96	51	86	<1	37	1.23	0.8	11
SIG-04-07	953073	194.73	195.23	0.50	<.03		1.2				0.7	0.74	33	26	<1	<3	1.29	<.5	8
SIG-04-07	953074	195.23	195.73	0.50	<.03		<.2				<.3	1.15	14	41	<1	<3	1.21	<.5	11
SIG-04-07	953075	195.73	196.23	0.50	<.03		<.2				<.3	1.16	12	181	<1	<3	0.85	<.5	10
SIG-04-07	953076	196.23	197.23	1.00	<.03		<.2				<.3	1.24	17	155	<1	3	1	<.5	8
SIG-05-07	953077	88.09	89.05	0.96	<.03		<.2	0.02			<.3	1.42	<2	182	<1	<3	0.63	<.5	28
SIG-05-07	953078	177.75	177.96	0.21	<.03		1.6	2.43			1.7	1.76	5	118	<1	<3	0.28	<.5	7
SIG-05-07	812350	282.24	282.74	0.50	<.03		1.8				<.3	1.18	<2	495	<1	6	0.26	<.5	6
SIG-05-07	953079	282.74	283.60	0.86	<.03		4.2				3.2	1.05	2	20	<1	<3	0.04	<.5	64
SIG-05-07	812351	283.60	284.10	0.50	<.03		2.4				<.3	3.24	<2	115	<1	8	0.15	<.5	18
SIG-05-07	812352	284.10	284.60	0.50	<.03		2.6				<.3	4.08	<2	113	<1	11	0.18	<.5	16
SIG-05-07	812353	284.60	285.10	0.50	<.03	<.03	3.2				0.5	3.86	<2	71	<1	4	0.16	<.5	50
SIG-05-07	812354	285.10	285.60	0.50	<.03		2.6				<.3	4.53	<2	104	<1	10	0.05	<.5	25
SIG-05-07	812355	285.60	286.10	0.50	<.03		2.4				<.3	5.01	<2	123	1	10	0.06	<.5	28
SIG-05-07	812356	286.10	286.60	0.50	<.03		2.4				<.3	4.99	<2	151	1	6	0.12	<.5	21
SIG-05-07	812357	286.60	287.10	0.50	<.03		2				<.3	3.17	<2	403	<1	5	0.03	<.5	8

Hole Cr Mg Ti V W Υ Cu Fe Κ Mn Мо Na Ρ Pb Sb Sn Sr Zn Zr Ni % % % % % % ppm SIG-01-07 SIG-01-07 SIG-01-07 SIG-01-07 113 20 5.7 0.64 2.1 150 10 0.04 6 0.01 18 <3 <5 10 0.04 52 <2 2 43 12 23 18 SIG-01-07 15 2.83 5 3 <2 3 81 0.32 1.5 101 4 0.02 0.009 <3 <5 11 0.01 15 42 8 SIG-01-07 4.13 6 <2 3 136 34 0.31 1.4 144 7 0.02 0.017 162 <3 <5 14 0.01 21 SIG-01-07 95 94 37.49 0.11 0.57 62 4 0.01 7 7 <3 <5 8 6 <2 1 46 2 0.013 <.01 69 SIG-01-07 5 7 18 <3 <5 25 9 <2 3 4 156 100 28.57 0.11 1.01 187 0.02 0.004 <.01 SIG-01-07 74 13 2.31 4 <3 <5 12 19 <2 2 85 5 4.36 0.12 238 0.01 4 0.014 168 <.01 SIG-01-07 128 42 5.97 0.26 1.41 149 3 0.02 4 0.01 42 <3 <5 22 0.01 5 <2 4 33 8 2 7 4 <5 5 2 SIG-01-07 77 8 3.16 0.39 1.91 160 0.02 4 0.006 4 <3 13 0.02 26 SIG-02-07 53 64 1.9 0.78 0.93 232 2 0.02 15 0.005 8 <3 <5 9 0.05 5 <2 2 65 14 13 SIG-02-07 52 61 1.84 0.76 0.91 227 2 0.02 15 0.005 7 <3 <5 9 5 <2 2 63 0.05 13 3 8 2 SIG-02-07 63 91 2.44 1.24 1.6 328 0.03 14 0.013 18 3 <5 0.09 8 <2 103 9 SIG-02-07 47 434 4.47 2.37 3.36 743 3 0.05 16 0.027 65 <3 <5 9 0.15 34 <2 3 183 SIG-02-07 2 8 3 <5 10 703 62 79 2.71 1.65 2.26 542 0.06 10 0.007 17 <3 0.08 30 <2 SIG-02-07 3 8 279 10 <5 <2 2437 60 4.93 1.41 1.86 445 1 0.06 16 0.045 <3 17 0.12 68 5 SIG-02-07 60 1582 12.34 1.05 3.14 626 4 0.02 68 0.038 34 <3 <5 11 0.07 73 <2 2 3999 SIG-02-07 8 0.02 0.022 <5 84 <2 2 8 65 277 5.03 1.24 3.67 705 26 33 <3 6 0.08 1708 7 SIG-02-07 71 341 6.07 1.27 3.65 701 4 0.02 23 0.026 14 <3 <5 6 0.09 82 <2 3 1970 SIG-02-07 64 271 5.62 1.78 3.51 686 4 0.04 21 0.017 11 <3 <5 7 0.12 98 <2 2 2903 8 SIG-02-07 13 2 902 66 146 3.13 0.71 2.93 613 0.02 15 0.016 13 <3 <5 4 0.05 41 <2 4 15 SIG-02-07 3 <5 3 <2 977 53 53 2.42 0.94 3.07 743 1 0.02 5 <3 0.05 16 4 0.028 SIG-02-07 3 10 62 94 3.43 1.83 3.94 956 1 0.05 4 0.009 6 <3 <5 4 0.07 <2 1425 14 SIG-02-07 56 9 3 <5 6 <2 2 9 81 2.12 3.52 788 1 <3 31 1485 4.13 0.05 0.011 0.08 SIG-02-07 6 3 10 65 389 0.92 3.26 677 2 0.02 18 0.009 15 <3 <5 0.07 65 <2 1986 5.86 SIG-02-07 108 1217 5.72 0.61 2.52 583 2 0.02 22 0.011 25 <3 <5 5 0.04 20 <2 3 1878 7 3 12 SIG-02-07 110 66 1.68 0.61 1.89 471 4 0.02 5 0.005 10 <3 <5 0.04 9 <2 3 3152 7 SIG-02-07 2.22 4 <2 2 134 1429 4.65 0.55 528 0.02 15 0.008 22 <3 <5 4 0.03 36 1848 11 SIG-02-07 100 452 3.76 0.76 1.65 501 11 0.03 10 0.006 28 <3 <5 4 0.05 29 <2 3 1651 SIG-02-07 2.73 <5 6 84 2 2 8 128 784 5.32 1.53 687 4 0.04 14 0.014 19 <3 0.09 2615 SIG-02-07 972 3.43 0.35 0.48 2 0.04 10 0.015 30 <3 <5 16 0.02 7 <2 2 2227 14 83 151 SIG-02-07 129 3756 30.04 0.32 0.65 219 1 0.02 82 0.011 32 <3 <5 6 0.02 13 <2 <1 1845 6 2 13 SIG-02-07 80 294 2.61 0.42 0.86 218 2 0.03 8 0.007 13 <3 <5 12 0.02 6 <2 887 SIG-02-07 <5 9 2 8 137 658 4.56 1.58 2.6 670 1 0.05 10 0.012 43 <3 0.11 88 <2 2045 SIG-02-07 5 3 78 523 4.31 1.27 3.47 955 1 0.03 7 0.053 11 <3 <5 0.1 96 <2 5204 4 SIG-02-07 2 8 <5 5 17 <2 72 822 5.44 0.33 2.16 438 0.01 0.029 17 <3 0.02 2 9166 6 SIG-02-07 82 2341 36.49 0.17 0.47 189 2 0.01 21 0.004 14 3 <5 3 0.01 12 <2 >10000 2 1

McCLarty Lake Project - 2007 Diamond Drilling Results

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Hole	Cr	Cu	Fe	K	Mg	Mn	Мо	Na	Ni	Р	Pb	Sb	Sn	Sr	Ti	V	W	Y	Zn	Zr
	ppm	ppm	%	%	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
SIG-02-07	80	1416	35.61	0.71	1.26	627	4	0.02	20	0.01	20	6	5	12	0.08	71	<2	1	>10000	3
SIG-02-07	93	4828	25.68	1.23	2.45	870	5	0.03	30	0.011	52	<3	10	12	0.12	87	<2	3	>10000	7
SIG-02-07	80	6450	31.24	0.13	0.29	122	<1	0.01	13	0.006	16	<3	<5	4	0.01	14	<2	1	>10000	2
SIG-02-07	105	1152	28.22	0.11	0.21	65	7	0.03	11	0.006	37	<3	<5	9	0.01	14	<2	1	6956	2
SIG-02-07	104	1455	5.33	1.02	1.53	283	12	0.08	14	0.213	445	<3	<5	47	0.13	80	<2	9	2014	14
SIG-02-07	107	1753	10.67	1.48	2.05	452	11	0.12	17	0.122	195	3	<5	52	0.18	130	<2	7	>10000	8
SIG-02-07	94	1467	27.94	0.39	0.64	199	7	0.03	15	0.046	15	<3	<5	20	0.06	29	<2	2	>10000	9
SIG-02-07	112	183	31.21	0.09	0.13	138	2	0.01	9	0.007	11	<3	<5	3	0.01	14	<2	<1	>10000	1
SIG-02-07	83	874	12.7	0.45	0.77	268	7	0.04	8	0.084	63	<3	<5	33	0.07	27	<2	5	5457	15
SIG-02-07	103	948	30.92	0.09	0.18	102	3	0.02	11	0.006	18	<3	<5	9	0.01	13	<2	1	>10000	3
SIG-02-07	68	554	25.66	0.78	0.8	631	5	0.02	11	0.031	35	<3	5	13	0.06	32	<2	2	>10000	7
SIG-02-07	101	467	38.97	0.1	0.17	192	<1	0.01	8	0.002	<3	3	<5	2	0.01	9	<2	<1	>10000	<1
SIG-02-07	78	223	39.99	0.12	0.16	242	1	0.01	8	0.001	<3	6	<5	1	0.01	10	<2	<1	>10000	<1
SIG-02-07	113	764	37.55	0.12	0.17	159	<1	0.01	7	0.001	<3	<3	<5	1	0.01	7	<2	<1	>10000	<1
SIG-02-07	84	2968	37.84	0.02	0.25	159	1	0.01	13	0.001	<3	<3	<5	3	<.01	10	<2	1	>10000	<1
SIG-02-07	72	369	5.54	0.81	1.6	629	2	0.08	4	0.138	11	<3	5	18	0.11	65	<2	13	550	4
SIG-02-07	66	527	5.09	0.82	1.35	587	1	0.06	4	0.128	46	<3	<5	15	0.13	50	<2	13	832	6
SIG-02-07	107	2752	3.36	0.41	0.46	296	1	0.06	4	0.026	35	<3	<5	12	0.07	7	<2	6	595	4
SIG-02-07	84	34	2.83	0.53	0.5	298	1	0.07	2	0.034	7	<3	<5	12	0.1	13	<2	3	155	5
SIG-02-07	62	14	4.49	1.08	0.91	484	<1	0.09	5	0.097	7	<3	<5	13	0.19	41	<2	6	118	10
SIG-02-07	54	22	6.6	0.86	0.89	574	<1	0.11	3	0.236	4	<3	<5	14	0.17	27	<2	9	101	5
SIG-02-07	54	26	3.83	0.74	0.63	346	1	0.08	4	0.093	8	<3	<5	14	0.13	24	<2	8	79	7
SIG-02-07	49	24	6.75	1.48	1.41	636	<1	0.07	4	0.169	4	3	<5	12	0.24	35	<2	9	138	4
SIG-02-07	54	16	3.32	0.52	0.43	301	<1	0.08	2	0.041	5	<3	<5	14	0.1	10	<2	5	59	6
SIG-03-07	40	6	5.34	0.35	0.55	380	<1	0.11	2	0.128	<3	<3	<5	15	0.08	36	<2	6	52	3
SIG-03-07	45	41	5.52	1.16	1.5	533	<1	0.11	16	0.229	<3	<3	<5	82	0.21	89	<2	10	96	4
SIG-03-07	47	52	3.49	1.03	1.24	243	1	0.08	9	0.199	<3	<3	<5	65	0.16	68	<2	9	60	3
SIG-03-07	51	88	4.03	1.41	1.71	230	<1	0.1	10	0.491	<3	<3	<5	65	0.18	87	<2	25	56	4
SIG-03-07	66	113	3.63	1.29	1.56	210	1	0.09	10	0.422	<3	<3	<5	51	0.16	79	<2	24	51	4
SIG-03-07	72	41	2.37	0.8	1.14	155	1	0.05	6	0.794	<3	<3	<5	50	0.08	35	<2	42	34	4
SIG-03-07	11	35	7.02	2.82	3.87	439	1	0.11	3	0.105	<3	<3	<5	45	0.19	23	<2	23	108	11
SIG-03-07	51	35	4.12	1.52	2.37	333	4	0.06	3	0.252	<3	<3	<5	45	0.13	44	<2	22	61	28
SIG-03-07	65	28	1.58	0.8	1.12	115	5	0.06	3	0.013	3	<3	<5	20	0.06	20	<2	2	40	21
SIG-03-07	56	34	3.24	1.34	2.22	251	2	0.07	4	0.022	4	<3	<5	25	0.12	42	<2	3	68	32
SIG-03-07	48	24	4.39	2.82	4.21	362	15	0.11	3	0.009	<3	<3	<5	18	0.22	48	<2	3	130	22
SIG-03-07	53	78	3.45	1.92	3.17	205	11	0.09	6	0.039	<3	<3	<5	22	0.11	59	<2	4	69	19
SIG-03-07	51	117	5.53	1.15	3.28	193	2	0.04	3	0.02	<3	<3	<5	8	0.06	11	<2	4	67	9
SIG-03-07	41	72	3.2	0.69	2.45	126	4	0.03	2	0.018	<3	3	<5	9	0.03	8	<2	4	40	8

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Hole	Cr	Cu	Fe	K	Mg	Mn	Мо	Na	Ni	Р	Pb	Sb	Sn	Sr	Ti	V	W	Y	Zn	Zr
	ppm	ppm	%	%	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
SIG-03-07	58	136	4.61	0.31	2.06	107	3	0.02	3	0.031	3	<3	<5	8	0.01	6	<2	5	30	7
SIG-03-07	44	63	3.91	0.22	2.14	110	2	0.02	2	0.032	<3	<3	<5	8	0.01	6	<2	5	27	6
SIG-03-07	135	30	4.35	1.38	3.14	382	1	0.06	28	0.008	<3	3	<5	8	0.07	19	<2	3	126	9
SIG-03-07	129	49	5.46	0.97	3.06	631	1	0.04	30	0.009	<3	<3	<5	6	0.07	24	<2	2	120	7
SIG-03-07	157	88	7.2	0.96	3.31	750	1	0.04	41	0.009	<3	<3	<5	2	0.08	29	<2	3	110	5
SIG-03-07	113	67	4.38	1.45	2.75	415	1	0.1	23	0.01	<3	3	<5	7	0.11	36	<2	4	168	16
SIG-03-07	106	257	6.49	0.49	1.17	148	4	0.03	26	0.004	<3	<3	<5	8	0.02	9	<2	2	133	10
SIG-03-07	92	302	7.11	0.46	1.28	143	4	0.03	29	0.005	<3	<3	<5	9	0.02	8	<2	1	123	9
SIG-03-07	91	371	9.24	0.51	1.02	125	14	0.03	28	0.012	<3	<3	<5	18	0.03	14	<2	3	111	11
SIG-03-07	66	52	3.45	1.52	1.92	271	1	0.07	10	0.063	<3	<3	<5	45	0.12	30	<2	7	294	6
SIG-03-07	51	29	1.17	0.39	0.29	79	<1	0.05	4	0.025	<3	<3	<5	121	0.07	10	<2	5	63	7
SIG-03-07	49	6	1.25	0.55	0.57	97	<1	0.05	3	0.019	<3	<3	<5	149	0.11	15	<2	4	87	8
SIG-03-07	55	5	1.27	0.33	0.23	65	<1	0.05	4	0.022	<3	<3	<5	48	0.06	10	<2	3	52	8
SIG-03-07	84	137	3.58	1.17	1.86	233	4	0.05	14	0.013	<3	<3	<5	28	0.06	16	<2	3	176	10
SIG-03-07	114	232	5.5	2.06	3.15	297	5	0.04	20	0.007	<3	<3	<5	7	0.06	17	<2	3	292	20
SIG-04-07	93	1014	6.74	1.06	1.43	613	8	0.04	15	0.014	25	<3	<5	8	0.06	35	<2	4	435	14
SIG-04-07	92	95	1.59	0.25	0.23	100	1	0.04	4	0.014	49	<3	<5	13	0.01	9	2	2	288	14
SIG-04-07	82	666	8.16	1.97	2.86	644	3	0.04	18	0.013	17	<3	<5	6	0.1	75	<2	2	2783	6
SIG-04-07	166	595	7.25	1.31	3.08	682	2	0.03	24	0.017	13	<3	<5	4	0.08	93	<2	1	1793	3
SIG-04-07	87	842	6.75	0.71	0.92	228	6	0.05	24	0.009	18	<3	<5	7	0.05	29	<2	1	320	4
SIG-04-07	74	1367	9.37	0.92	2	505	3	0.03	25	0.009	19	<3	<5	6	0.06	34	<2	2	1653	4
SIG-04-07	89	1382	8.29	0.96	2.51	575	3	0.02	27	0.01	21	<3	<5	7	0.06	37	<2	2	2298	5
SIG-04-07	63	1580	10.42	1.14	2.26	508	22	0.02	39	0.01	24	<3	<5	7	0.07	31	<2	2	2488	4
SIG-04-07	71	1246	9.15	1.23	2.39	549	11	0.03	25	0.009	23	<3	<5	8	0.08	16	<2	2	1959	5
SIG-04-07	77	1683	10.37	0.7	1.05	414	5	0.03	15	0.012	62	<3	<5	8	0.06	17	<2	2	2855	5
SIG-04-07	85	395	6.59	0.14	0.11	150	2	0.03	13	0.028	67	<3	<5	16	0.01	8	<2	6	176	4
SIG-04-07	78	1374	8.27	0.82	0.74	512	3	0.06	22	0.015	71	<3	<5	14	0.08	26	2	4	1435	6
SIG-04-07	67	179	3.35	0.47	0.47	224	1	0.04	8	0.026	239	<3	<5	20	0.04	13	<2	6	535	7
SIG-04-07	74	34	1.61	0.19	0.16	97	1	0.05	4	0.025	183	<3	<5	21	0.01	5	<2	3	412	5
SIG-04-07	95	3360	5.49	0.42	0.32	207	1	0.04	9	0.029	128	<3	<5	15	0.04	10	<2	5	1507	4
SIG-04-07	101	388	3.72	0.88	0.72	454	1	0.04	5	0.026	462	<3	<5	16	0.09	25	<2	4	3557	5
SIG-04-07	78	38	0.52	0.21	0.21	104	<1	0.04	2	0.026	1529	<3	<5	17	0.02	4	<2	3	356	6
SIG-04-07	86	106	0.97	0.22	0.23	118	<1	0.05	2	0.026	744	<3	<5	22	0.02	4	<2	5	89	8
SIG-04-07	60	2171	3.41	0.94	1.07	420	<1	0.03	4	0.042	313	<3	<5	16	0.06	36	<2	7	576	6
SIG-04-07	81	1877	4.55	1.33	1.63	561	2	0.05	8	0.011	151	<3	<5	12	0.08	53	<2	5	1947	12
SIG-04-07	87	2023	7.98	0.95	3.64	919	1	0.03	13	0.012	125	<3	<5	4	0.07	110	<2	6	5191	3
SIG-04-07	77	2103	6.93	0.23	3.68	904	<1	0.01	11	0.008	820	<3	<5	2	0.02	54	<2	7	5261	2
SIG-04-07	84	1598	15.67	0.24	2.64	705	3	0.01	12	0.012	181	<3	<5	3	0.02	30	<2	7	>10000	2

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Hole	Cr	Cu	Fe	К	Mg	Mn	Мо	Na	Ni	Р	Pb	Sb	Sn	Sr	Ti	V	W	Y	Zn	Zr
	ppm	ppm	%	%	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
SIG-04-07	69	749	37.46	0.06	0.12	152	<1	0.01	11	0.002	19	<3	<5	1	<.01	9	<2	1	>10000	<1
SIG-04-07	110	529	37.95	0.1	0.17	154	<1	0.01	12	0.004	22	<3	<5	3	0.01	13	<2	1	>10000	<1
SIG-04-07	104	322	35.6	0.03	0.06	173	<1	0.01	6	0.003	<3	<3	<5	4	<.01	8	<2	<1	>10000	1
SIG-04-07	90	367	35.68	0.08	0.15	211	1	0.01	8	0.002	15	<3	<5	2	0.01	10	<2	<1	>10000	1
SIG-04-07	83	312	37.92	0.11	0.25	252	1	0.01	10	0.002	4	<3	<5	3	0.01	10	<2	1	>10000	3
SIG-04-07	109	1055	39.47	0.36	0.43	403	2	0.02	12	0.016	47	3	<5	6	0.04	22	<2	1	>10000	2
SIG-04-07	64	494	3.87	0.63	0.98	330	1	0.07	10	0.338	3839	3	<5	65	0.14	41	<2	14	277	9
SIG-04-07	80	471	4.77	0.11	0.45	498	1	0.09	4	0.203	86	<3	<5	36	0.11	18	<2	8	202	3
SIG-04-07	56	39	4.9	0.17	0.66	683	1	0.12	3	0.166	43	<3	<5	29	0.11	49	<2	9	105	3
SIG-04-07	91	26	4.44	0.46	0.7	635	1	0.11	4	0.09	14	<3	<5	19	0.13	57	<2	8	106	4
SIG-04-07	61	26	4.64	0.45	0.67	526	1	0.1	2	0.162	12	<3	<5	25	0.11	24	<2	7	95	4
SIG-05-07	54	195	3.6	0.73	1.09	497	1	0.11	3	0.063	4	<3	<5	9	0.15	125	<2	4	55	4
SIG-05-07	85	>10000	7.51	0.27	1.15	335	8	0.04	9	0.04	4	<3	<5	11	0.04	49	<2	5	138	6
SIG-05-07	51	188	3.14	0.62	0.83	180	<1	0.08	5	0.048	<3	<3	<5	50	0.12	34	<2	4	79	7
SIG-05-07	68	533	26.62	0.24	0.47	95	14	0.01	24	0.007	<3	<3	<5	13	0.01	11	<2	3	34	4
SIG-05-07	76	70	8.79	0.58	3.18	384	5	0.03	6	0.007	<3	3	<5	17	0.04	23	<2	2	149	7
SIG-05-07	51	9	10.04	1.82	4.43	404	6	0.07	5	0.007	<3	<3	<5	24	0.15	138	<2	3	204	6
SIG-05-07	52	137	14.39	1.67	3.61	496	6	0.07	8	0.008	<3	3	<5	24	0.16	108	<2	14	169	4
SIG-05-07	27	78	9.48	1.23	4.39	503	1	0.04	5	0.005	<3	<3	<5	9	0.11	228	<2	5	182	2
SIG-05-07	47	28	7.87	2.56	4.93	599	1	0.07	6	0.025	<3	<3	<5	7	0.23	269	<2	4	87	15
SIG-05-07	34	22	6.82	2.49	4.92	555	2	0.08	7	0.054	<3	<3	<5	8	0.19	209	2	4	65	7
SIG-05-07	62	15	3.21	1.17	3.44	332	1	0.04	4	0.01	<3	<3	<5	7	0.1	83	<2	3	35	4

## **APPENDIX III**

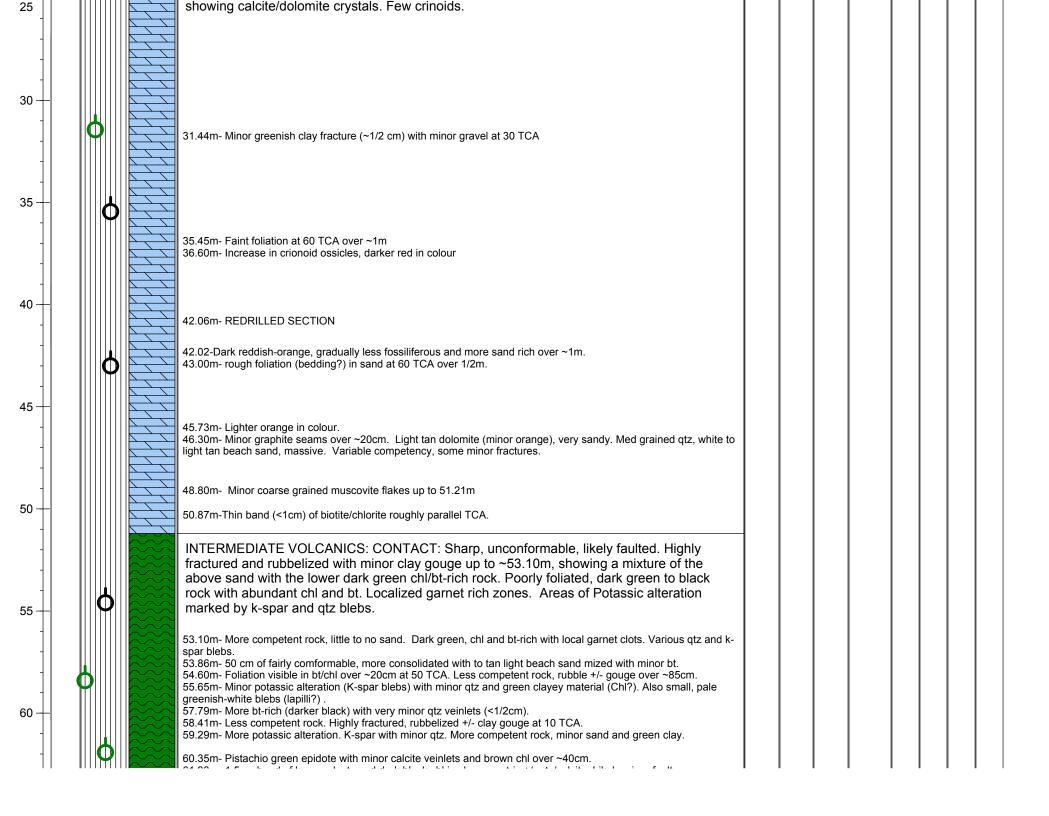
2007 DRILL LOGS

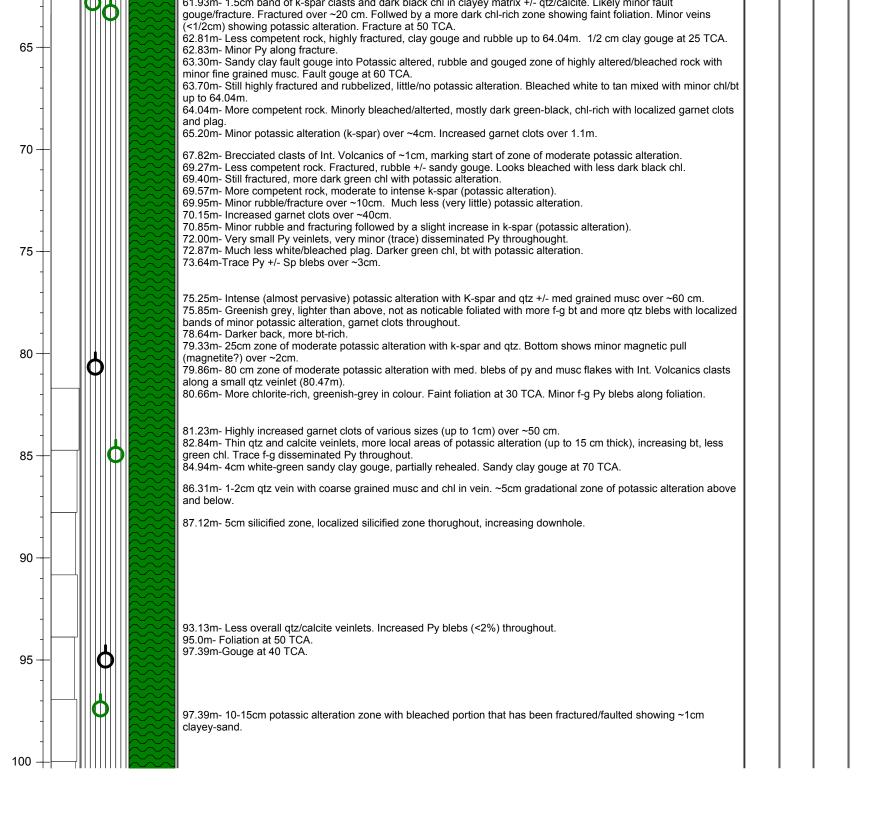
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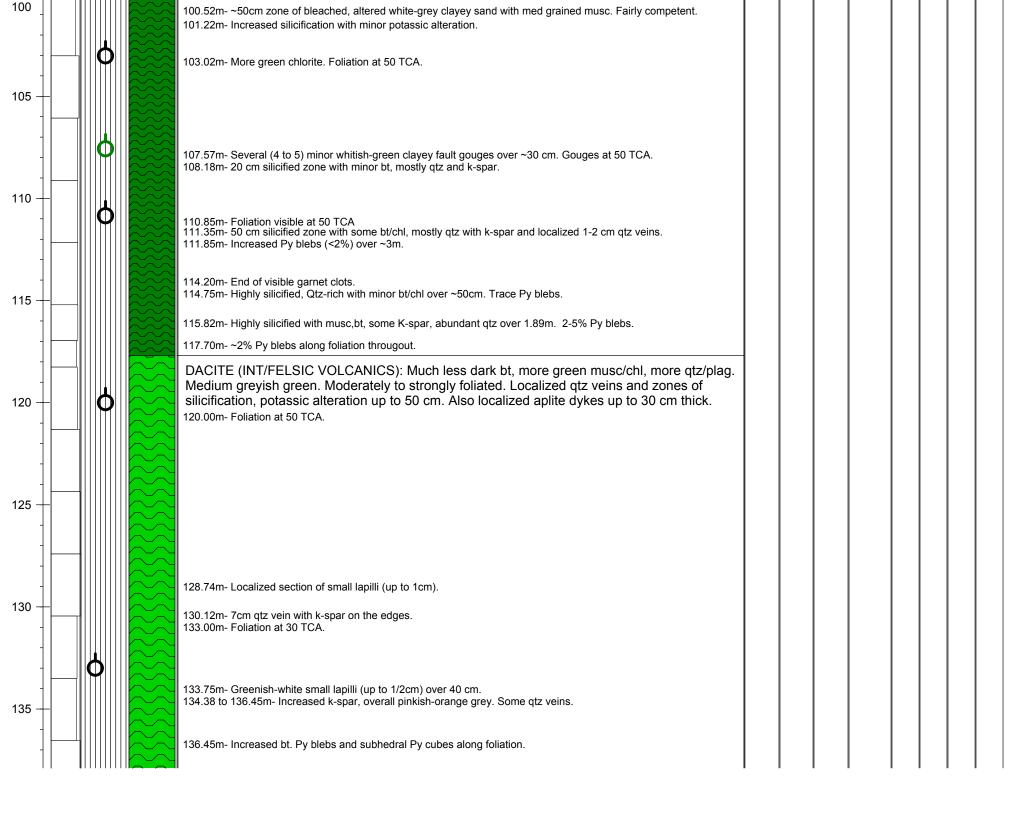
# SIGNET MINERALS INC.

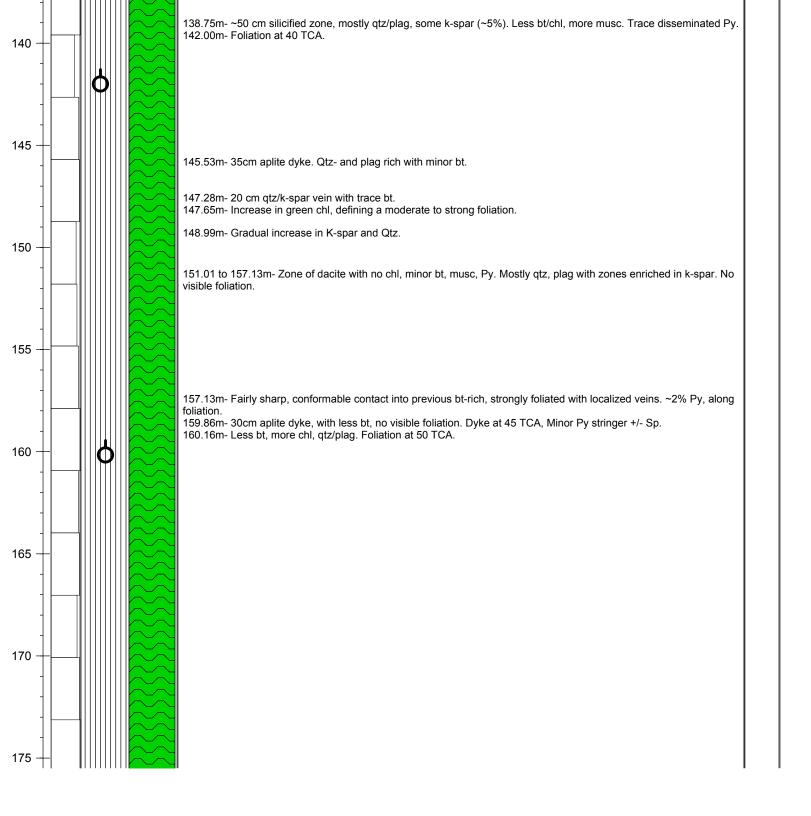
SIG-01-07

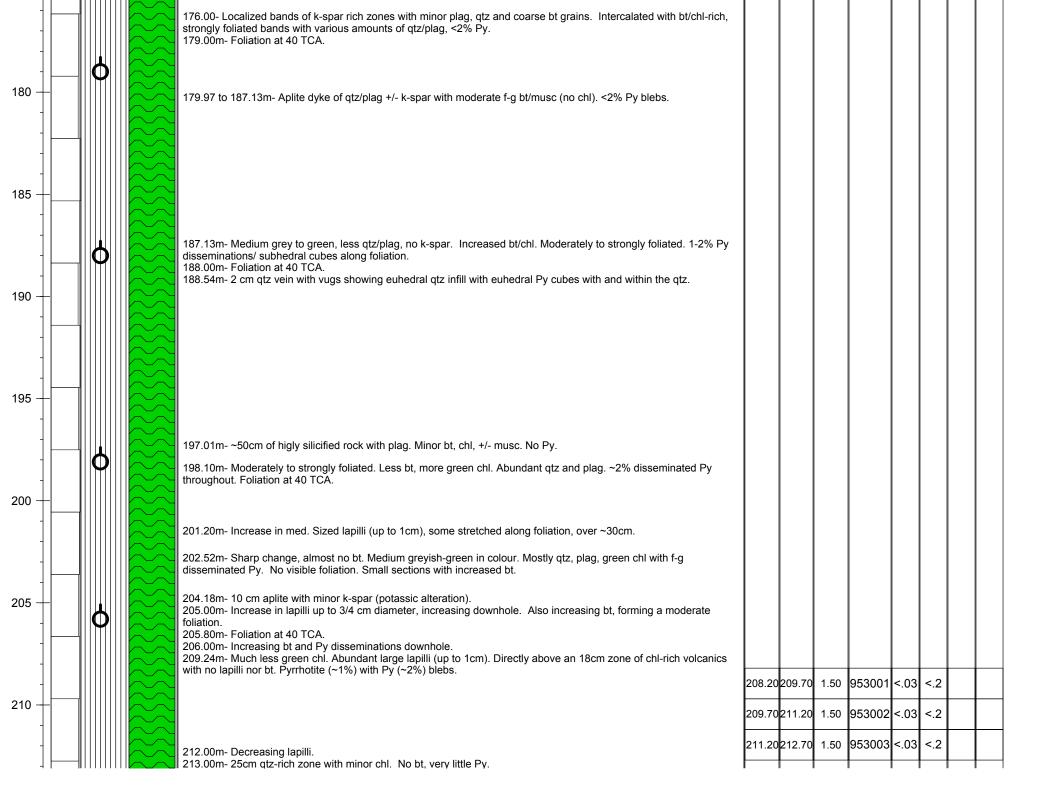
Proj Map	um: NAD 83 jection: UTM Zone 14 o Sheet: NTS 63K8 Structure Tadpoles Relative TCA	UTM E: 4 UTM N: 6 Azimuth: Dip:-55	038860	Depth (m): 398.78 Contractor: Prosp Logged By: Jessic Date: March 2007	ca Nor		A	<b>Sample</b>		Cu	Zn
Dept (m)	h <sup>Faults</sup> 90 <b>Unit</b>	Description	Downhole Survey 4: 283/51.5 at 304.80m Downhole Survey EOH:		(m)	(m)	(m)	Number			
0		OVERBURDEN: Ice, organics	S								
15 — - -											
20		19.30m- Galcial till boulders and till fr 21.64m- C horizon, fragmented limes 23.82m - 10cm of reddish-brown grav	tone/dolomite.								
25 _		DOLOMITE: Fossiliferous, re	efal. Reddish-orange with tan-grey blotches.	Minor vugs							

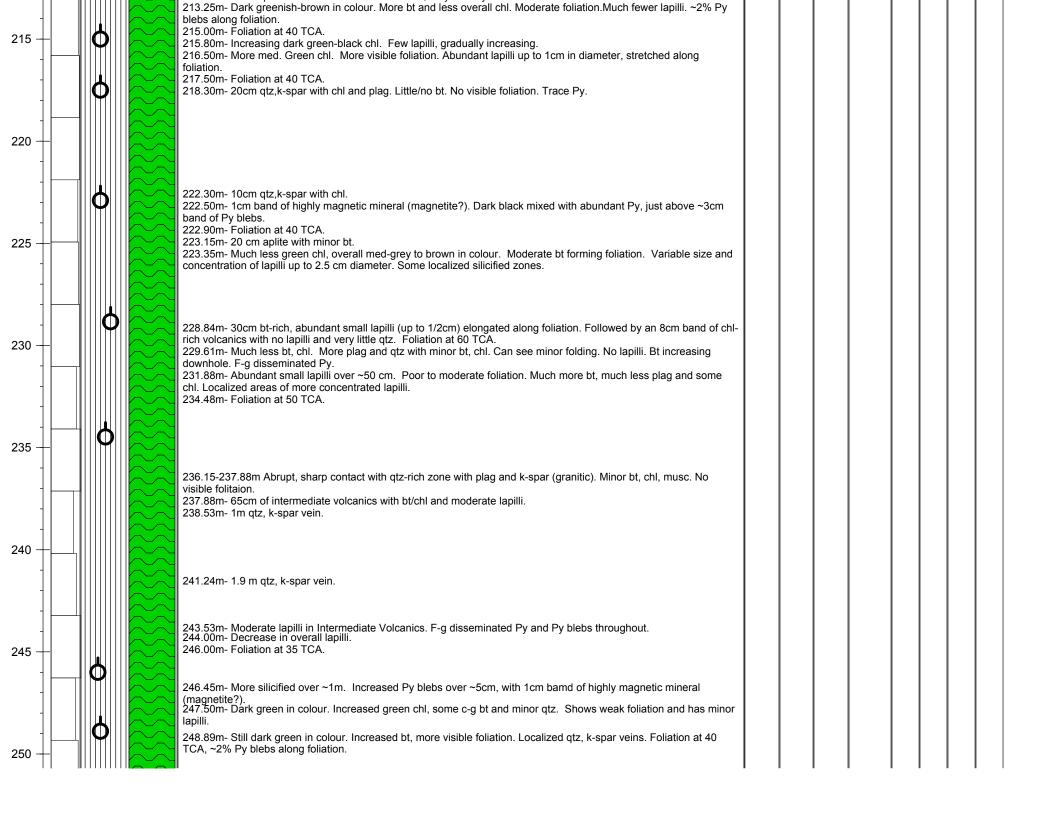






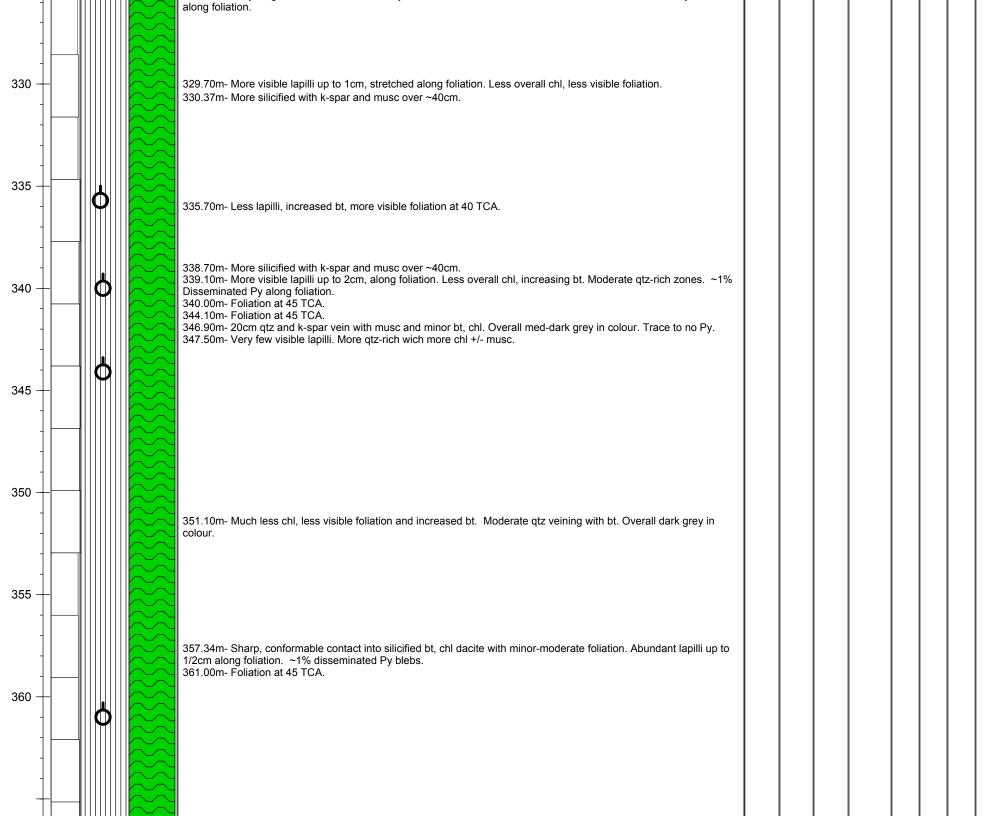


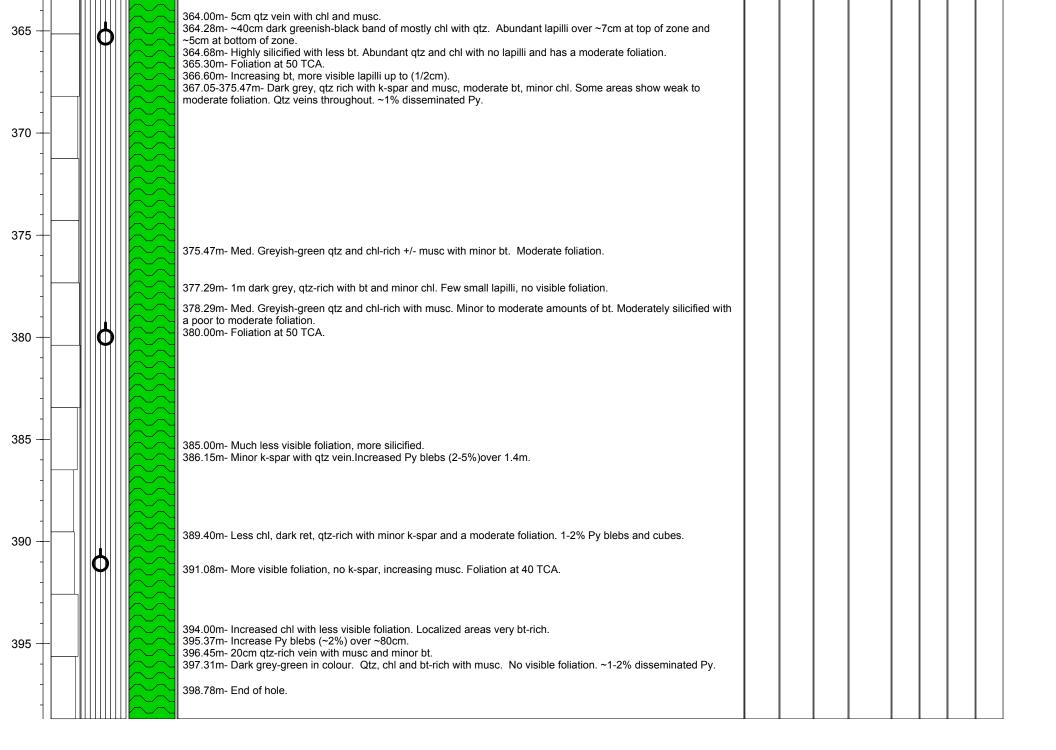






290			289.15-302.29m- Bt-rich, minor chl dark black zones with varying amounts of potassic alterations (k-spar) and qtz veins, intercalated with qtz, chl-rich and bt-poor zones with varying sizes and amounts of lapilli showing moderate foliation.					
- - 295								
				L		 953004		
300 —		$\sim$				953005		 
-						953006		 
-		$\sim\sim$			303.96	953007 953008		 
-		$\sim\sim$	302.29m- More felsic dacite, lighter greyish green in colour with abundant qtz +/- plag. Abundant chl +/- musc. Localized silicified zones. ~2% Disseminated Py.		304.35 304.85	953008	 	 
			MASSIVE PYRITE: 303.61m- 35cm of Massive Py (>80% Py). Large, subhedral, chunky	L	305.35	 953010	 	
305 —		$\sim$	crystals. Small zone of barren country rock between sulphide zones		305.85	953011		
	¢		subhedral chunky Py crystals. 304.35m- Back into more felsic, light grey-green volcanics rich in qtz and chl +/- musc. Bt- rich zones with minor amounts of lapilli.					
310			308.90m- Foliation at 50 TCA. 310.09m- Increase in bt More visible foliation. Areas of variable amounts of small lapilli. Overall med-dark greyish- green in colour. Some silicified zones. Trace Py 316.00m- Foliation at 40 TCA.					
315	<b>o</b>							
-			317.93m- Much more bt, less chl. Qtz and k-spar blebby veins, moderately throughout. Some zones of dark black, lapilli-free volcanics with no visible foliation. Mixed with above chl,bt-rich dacite with veins of qtz,plag +/- musc. 1-2% Disseminated Py.					
320								
		$\sim\sim$	322.99m- 15cm aplite dyke. Qtz-rich with plag +/- musc. Minor bt/chl. No Py in aplite dyke.					
325 —	0	$\approx$	324.58m- Wispy sericite bands forming foliation at 40 TCA. 325.00m- 35cm band of dark grey volcanis, gtz-rich, no lapilli, no visible foliation and trace Pv. 325.35m- Greyish-green in colour. Moderately foliated ch-rich with bt. Some minor silicified zones. ~1% Py blebs					

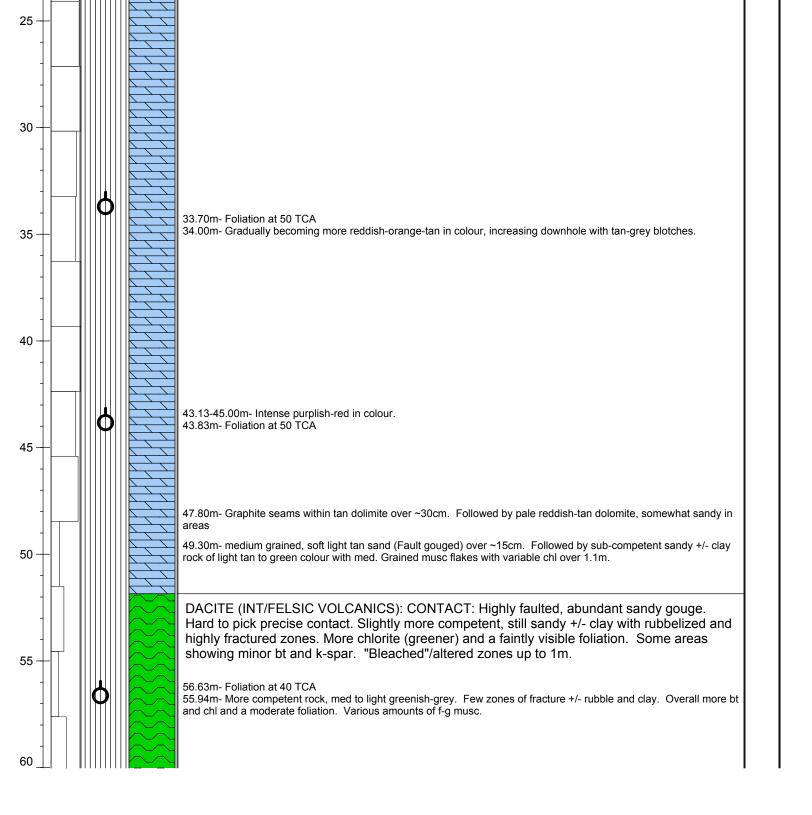




# SIGNET MINERALS INC.

SIG-02-07

Proj	um: NAD 83 jection: UTM Zone 14 o Sheet: NTS 63K8		5	Depth (m): 176.48 Contractor: Prosp Logged By: Jessie Date: March 2007			g				
	Structure Tadpoles		Downhole Survey 1: 285/55.5 at 60.96m Downhole Survey 2:				A	ssay	Res	ults	
Dept (m)	Relative TCA h <sup>Lo</sup> sting RQD 0 L <sup>D</sup> 90 Unit	Description	Downhole Survey 3: Downhole Survey 4: 284/55 at 121.92m Downhole Survey EOH:		From (m)	To (m)	Width (m)	Sample Number			
0		OVERBURDEN: Overburd	en, ice, organics, glacial till								
		DOLOMITE: Medium tan d see a faint foliation in some	lolimite with pale tan-grey blotches. Moderately e areas. Few graphitic seams, minor vugs.	/ fossiliferous. Can							



60			59.97m- Zone of increased bleaching with less chl and moderate bt and musc. Minor k-spar. Less visible foliation.								
-			60.93m- 25cm zone very rich in bt with chl. Very little qtz, plag.								
			61.00m- Foliation at 50 TCA 61.18m- More bleached rock with moderate bt, musc, little chl and minor k-spar. Poor to moderate foliation.								
			61.86m- Fairly sharp contact into bleached looking granite with bt, musc and chl. Varying degrees of dark-reddish								
-			purple colour and varying amounts of qtz. Some partially gouged zones.								
-			64.65m- Sandy gouge zone (partially rehealed), musc-rich zones mixed with sub-competent rock that is very rich in bt with chl and varying amounts of k-spar.								
65 -											
00											
-				119 94	120 44	0.50	812316	< 03	12		
-			67.15m- 30cm of orangey musc-bt-granite followed by 65cm of greenstone with gtz and bt. No visible foliation.	110.01		0.00	012010				
_											
		IIIM	68.10-71.23m- Faulted and gouged over ~5cm into highly bleached/altered, poorly competent, light tan-orange granite with musc, bt and chl. Some localized areas of very competent, hard, silicified dark orange-purple musc-bt								
			granite up to 30cm thick.								
70 –	-			117.52	117.94	0.42	953038	<.03	6.5	0.3	4.68
-											
_			71.23m- Bt-rich dacite showing poor foliation and less competent up to 72.05m								
		ШÒ	72.05m- Dark grey dacite with f-g bt and very small garnet clots. Zones (dykes?) rich in plag with bt and minor k-spar and chl. Foliation seen in veins, not seen in dark grey dacite.								
1			72.69m- Foliation at 60 TCA								
-											
75 -	-										
_			75.61m- More chl and bt, more visible foliation. No more veins. Minor k-spar. Zones of abundant lapilli stretched along								
			foliation.								
1		0	77.34m- Foliation at 30 TCA								
-			77.86m- Highly silicified musc-bt granite, orange in colour.								
-			77.99m- 1-2cm of pale green clay gouge at 25 TCA 78.54m- 15cm rubble, fracture +/- clay. Very competent zones of darker grey granite.								
80 -	_		81.63m- Trace f-g Py.								
			82.19m- Increased Py blebs to ~1% over 30cm. 83.68m- Dark grey-purple musc-bt granite with minor zones of orange k-spar. Trace f-g Py.								
-			85.52m- Less dark purple colour, mostly med-dark grey.								
-											
-											
_											
85 -											
00				98.63	99.13	0.50	812301	<.03	1.4		
				99.13	99.63	0.50	812302	<.03	1		
1				99.63	100.13	0.50	812303	<.03	1.2		
1		6	88.54m- Gradational over ~20cm into musc-bt dacite. Med-dark rey with minor chl. Fine foliation with few qtz/k-spar	100.13	100.63	0.50	812304	<.03	3.4		
]		IΥ	veins up to 5cm. 89.00m- Foliation at 40 TCA	100.63	101.13	0.50	812305	<.03	1.6		
90 —				101.13	101.63	0.50	812306	<.03	2.8		
				101.63	102.13	0.50	812307	0.07	5		
]			91.95m- Increase in k-spar. Siliceous musc-bt granite orange in colour over ~1.3m.	102.13	102.63	0.50	812308	<.03	2.8		
			93.24m- Less qtz/k-spar veining. Siliceous musc-bt dacite with chl. Med-dark grey in colour with weak foliation that is more prominent in some areas.	102.63	103.13		812309				
05			96.10m- Foliation at 50 TCA	103.13	103.63	0.50	812310	<.03	4		
95 -				103.63	104.13	0.50	812311	<.03	1.8		
-											

				$\sim\sim$		104.13	104.63	0.50	812312	<.03	1.4		
				$\overline{}$		104.63	105.13	0.50	812313	0.24	2		
100 -				$\sim$	97.85m- Gradually increasing zones of enriched k-spar (up to 30cm). Gradually increasing bt up to 102.39m. 101.03m- Increased Py blebs to ~2% over ~25cm. Bands of ~2% Py blebs with trace Cp blebs up to 50cm, over ~2m.	105.13	105.63	0.50	812314	<.03	2.2		
				$\sim$		105.63	106.13	0.50	812315	<.03	3		
100				$\sim \sim$	101.90m- 30cm massive dark grey dacite. Trace f-g Py. 102.70m- Volcanics with abundant chl, bt and rich in qtz. Moderate foliation with few qtz/k-spar veins. Possibly small	106.13	106.63	0.50	953012	0.03	4		
				$\sim\sim$		106.63	107.13	0.50	953013	<.03	<.2		
				$\sim\sim$	105.89m- Much less bt, more qtz and musc (more felsic volcanics) with a fine foliation. Localized more siliceous zones with no visible foliation and abundant qtz and k-spar. ~1-2% Py blebs with minor Cp blebs.	107.13	107.63	0.50	953014	<.03	2.5		
- 105		H	5	$\sim\sim$	107.30m- Foliation at 50 TCA	107.63	108.13		953015				
			1	$\sim\sim$	109.15m- Semi-Massive Fy (40-50%) with lew Cp blebs. Very Vuggy, likely leached, over ~50cm.	108.13	108.63		953016				
-				$\sim\sim$	qtz/k-spar.		109.13		953017				
_			$\mathbf{I}$		111.21m- Semi-Massive Py (40-60%) with few Cp blebs. Py as large, subhedral, chunky blebs within country rock,				953018				
_			<b>P</b>	$\bigwedge$	over ~60cm.	109.49			953019				
-									953020				
110 -									953021				
-			D	$\sim\sim$					953022				
-				$\sim\sim$					953023				
-					MASSIVE PYRITE: 112 40m- Massive Pyrite (80-90%) with few Cn blebs over 60cm with		111.92		953024				
				$\sim\sim$	one 10cm zone with trace Py. Py as large, subhedral, chunky blebs.				953025				
115 -	-				DACITE (INT/FELSIC VOLCANICS): 113.23m- 8cm bull qtz vein with few Py +/- Cp blebs.				953026				
-					Country rock as Int./Felsic volcanic bt-chl dacite. Areas of alteration marked by qtz/k-spar				953027				
-					114.02m- ~50cm Semi-Massive Py (30-40%) with few Cp blebs. Py as large chunky blebs		113.68		953028 953029			0.17	
-									953029 953030				
-				$\sim\sim$	MASSIVE PYRITE: 114.49m- Massive Py (80-90%) over ~20cm				953030			0.17	
120 -	-						114.73		953031			0.02	
-		Ø			DACITE (INT/FELSIC VOLCANICS): 114.69m- Bt-chl dacite with localized areas of qtz/k- spar. Poor to weak foliation.				953032 953033				
-				$\sim$					953034				
-				$\sim$	MASSIVE PYRITE: 115.09m- Massive Pv (80-90%) with few Cp blebs over ~70cm with 7cm 📲				953035				
-									953036				
125				$\sim\sim$	DACITE (INT/FELSIC VOLCANICS): 115.79m- Bt-chl dacite with localized areas of qtz/k-		117.52		953037				
				$\sim\sim$	spar. Poor to weak foliation.								
				$\sim\sim$	MASSIVE PYRITE: 116.03m- Massive Py (90%) with Cp blebs over 2m. Py as large,	117.94	118.44	0.50	953039	0.03	2.2	0.04	
130 —				$\sim\sim$	subhedral, chunky blebs.		118.94		953040				
				$\sim$	DACITE (INT/FELSIC VOLCANICS): 118.03m- Int./Felsic bt and chl-rich dacite with poor				953041				
					foliation. ~2% disseminated Pv +/-Cp.				953042				
-				$\bigwedge$									
٦	1 11		1111									<b></b>	

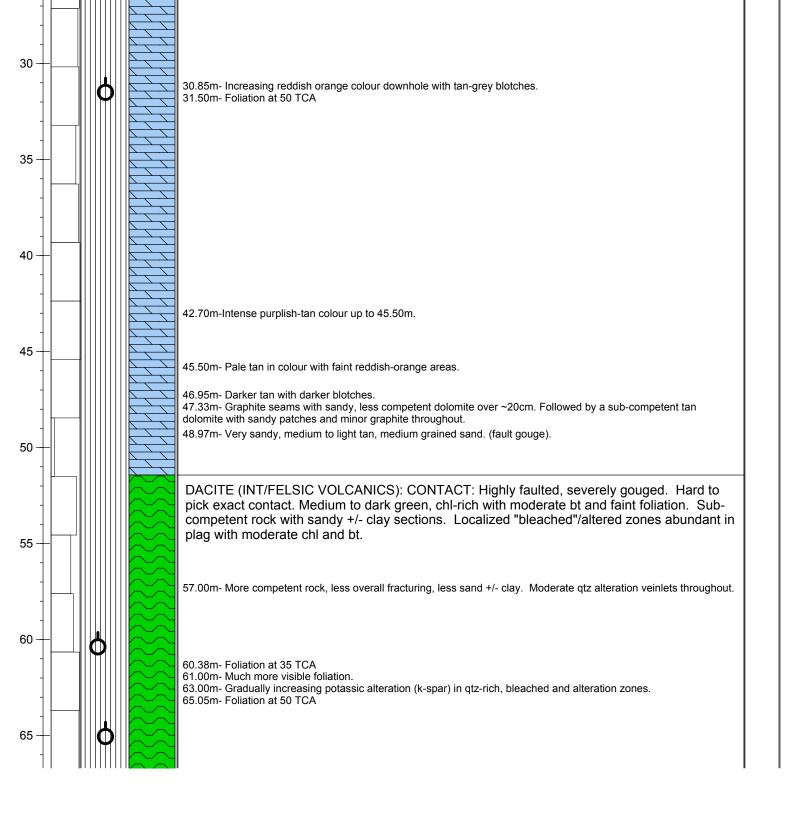
			$\sim$		120.44	120.94	0.50	812317	<.03	1.4		
135 —					120.94	121.44	0.50	812318	<.03	1.2		
				119.09m- 1/2 cm fragmented vein of massive Cp over ~1-2cm with Py blebs. 119.31m- Qtz/k-spar-rich zones/veins in dacite showing poor to moderate foliation with localized zones of moderate	121.44	121.94	0.50	812319	<.03	1.6		
				garnet clots. 121.00m- Foliation at 30 TCA	121.94	122.44	0.50	812320	<.03	1		
_		6		123.65m- Abundant k-spar and qtz with bt and chl. Very siliceous with no to poor foliation. No visible Py.								
-			$\sim$	127.63m- Very chl-rich, dark green volcanis with minor bt and no foliation. Intercalated with zones of qtz/k-spar alteration. Also sections of Int. Volcanics with veins of qtz/k-spar with bt but no chl.								
-			$\sim$	133.53m- Med-dark grey, very siliceous dacite/granite with moderate bt and no to poor foliation. Abundant K-spar/qtz								
140 —				(granitic) zones/veins. Localized bt-rich zones and localized minor garnet clots up to ~140.00m. 137.05m-Foliation at 50 TCA								
-			$\sim$									
-			$\sim$									
-			$\sim$									
-												
145 -												
-		Ø		146.45m-Foliation at 40 TCA								
-												
- 150 —												
-												
-												
-												
-				153.33m- ~25cm zone very bt-rich with dark green chl, showing poor foliation. Less siliceous. Trace Py. 155.40m- Foliation at 50 TCA								
155 -		l d										
-				156.02m- Small rubble-gravel zone over ~15cm. Fault gouge mostly rehealed, appears leached and vuggy over								
-				~30cm. 157.00m- Musc-bt granitic zones of qtz/k-spar intercalated with biotiferous/chloritic bands showing poor to moderate								
-				folitation and with minor small lapilli. 165.00m- Foliation at 55 TCA								
100				168.74m- Foliation at 40 TCA								
160 -												
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165												
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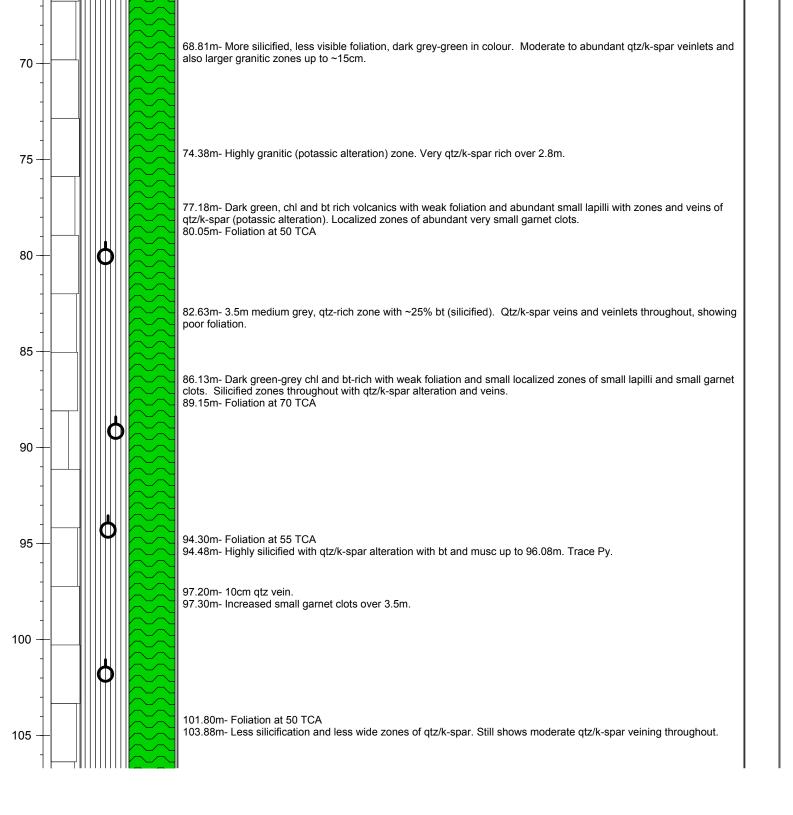


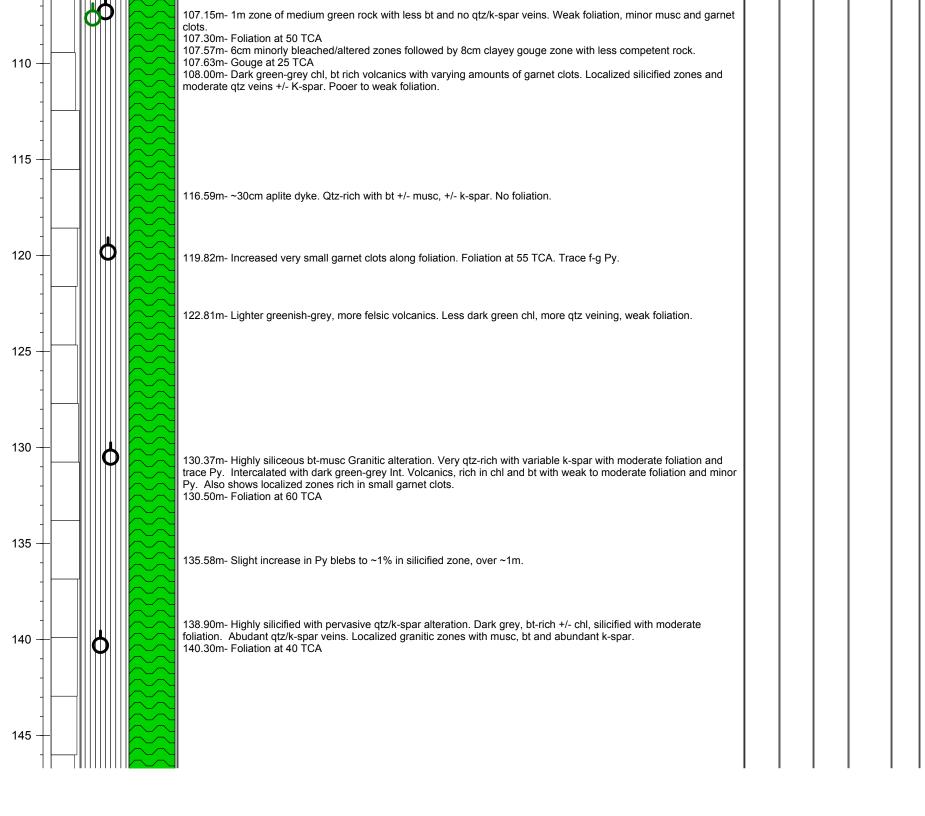
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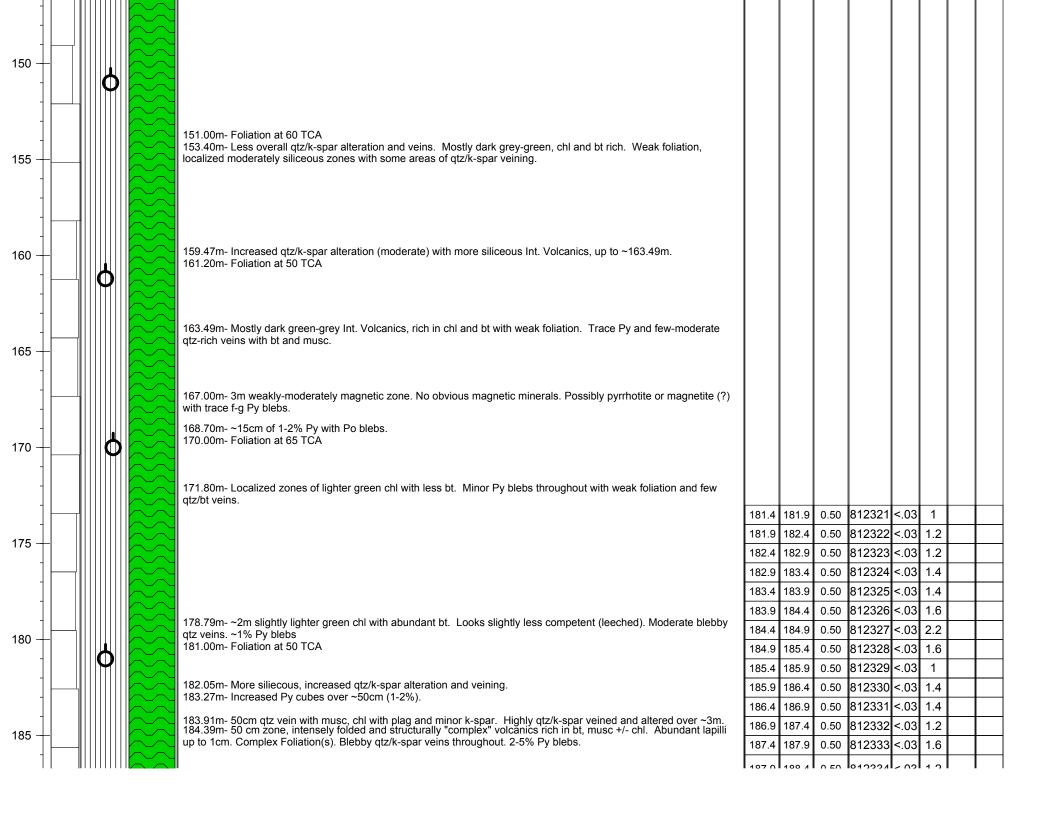
SIG-03-07

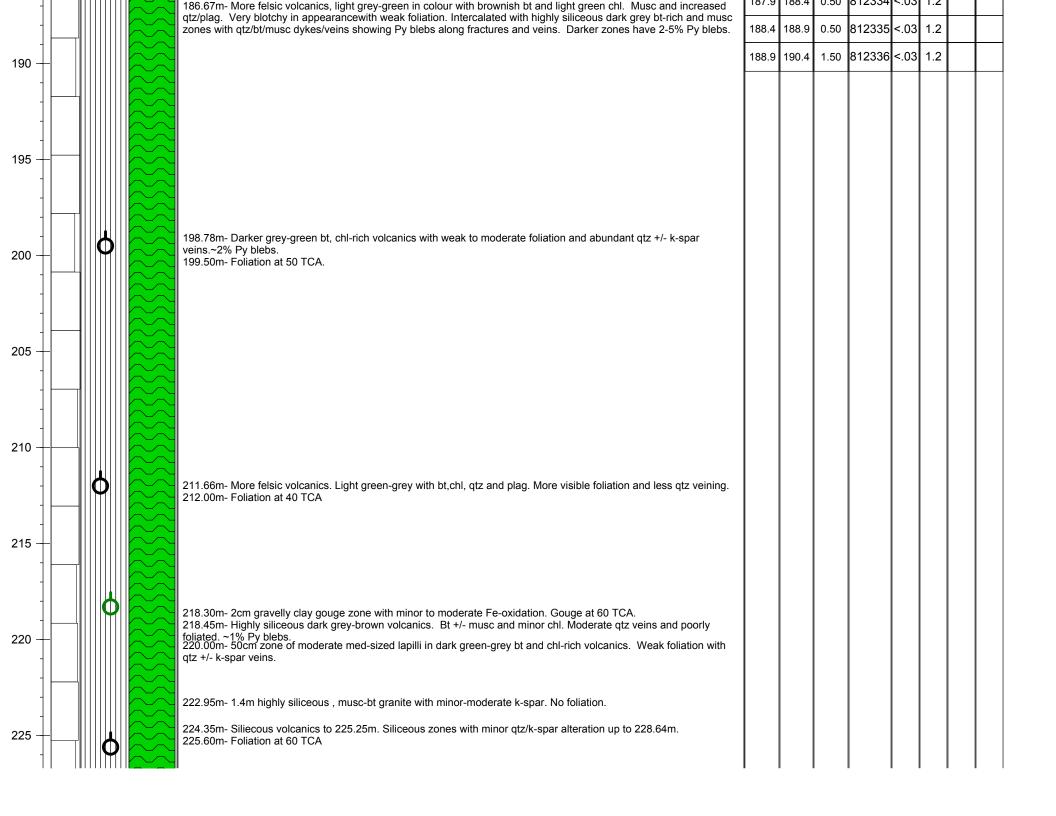
Proje	m: NAD 83 ection: UTM Zone 14 Sheet: NTS 63K8	McClarty Lake Project Diamond Drill Hole Core Log UTM E: 415292 UTM N: 6038608 Azimuth: 291 Dip:-55 Downhole Survey 1: 286/53 at 121.92m		Depth (m): 278.28 Contractor: Prospector Drilling Logged By: Jessica Norris Date: March 2007										
	Structure Tadpoles		ot a good survey)	Assay Results										
Depth (m)	Relative TCA	Description	Downhole Survey 2: 243/53 at 182.88m (n Downhole Survey 3: 289/53 at 243.84m Downhole Survey 4: Downhole Survey EOH:	ot a good survey)	From (m)	To (m)		Sample Number		-	Cu (%)			
0		OVERBURDEN: Overburden.	Ice, organics, glacial till											
15 — - - - 20 —		17.98m- Rubble from casing.			_									
25			e with light grey blotches. Moderately fossilif iation. Minor vuggy areas infilled with qtz/cal											

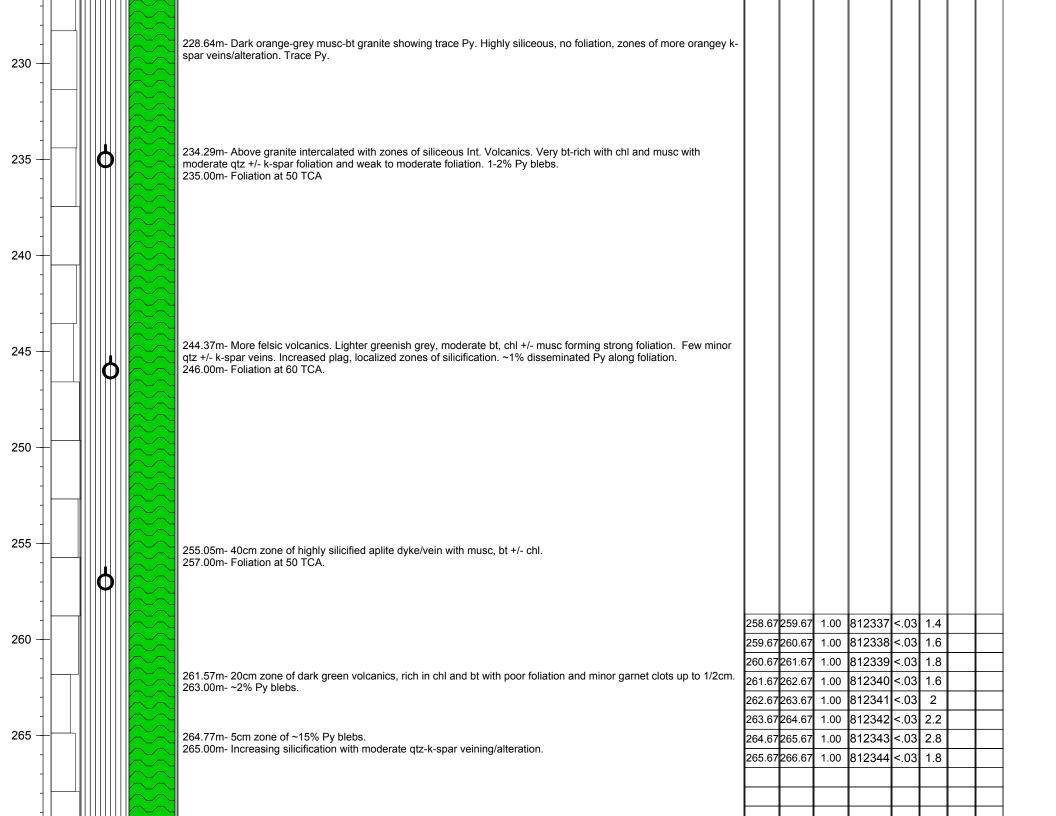










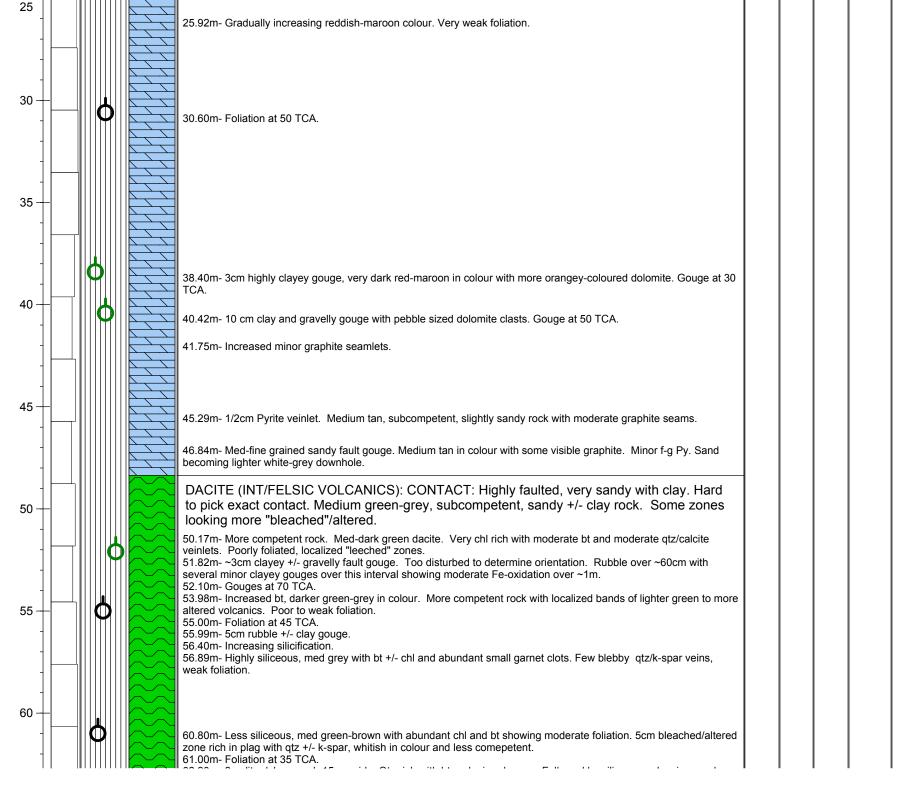


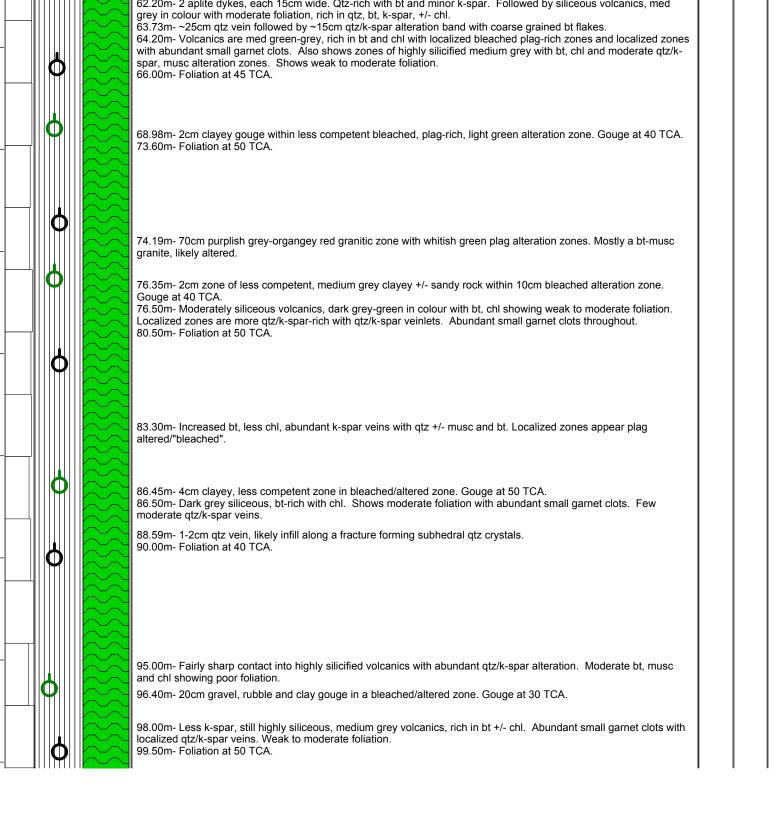
-				266.74m- Med-dark orangey-grey musc-bt granite with trace Py. No foliation, highly siliceous. Zones of more orange k-spar veins/alteration.	266.67	267.67	1.00	812345	0.17	1.4	
-			$\sim$		267.67	268.67	1.00	812346	<.03	1.4	
-			$\sim\sim$		268.67	269.67	1.00	812347	<.03	1.4	
270 -	-		$\sim \sim$	270.22m. Dark group grow by Valennias risk is all bt $\pm l$ much Weak moderate foliation and moderate gtz $\pm l$ k appr	269.67	270.67	1.00	812348	<.03	2	
-		0	$\sim \sim$	······································	270.67	271.67	1.00	812349	<.03	2.4	
-				270.33m- 2-5% disseminated Py. 271.00m- Foliation at 30 TCA.							
-				276.17m- ~1% disseminated Py.							
-			$\sim\sim$								
275 —			$\sim\sim$								
-			$\sim \sim$								
-			$\sim\sim$	278.28m- End of hole.							
-			$\sim$								

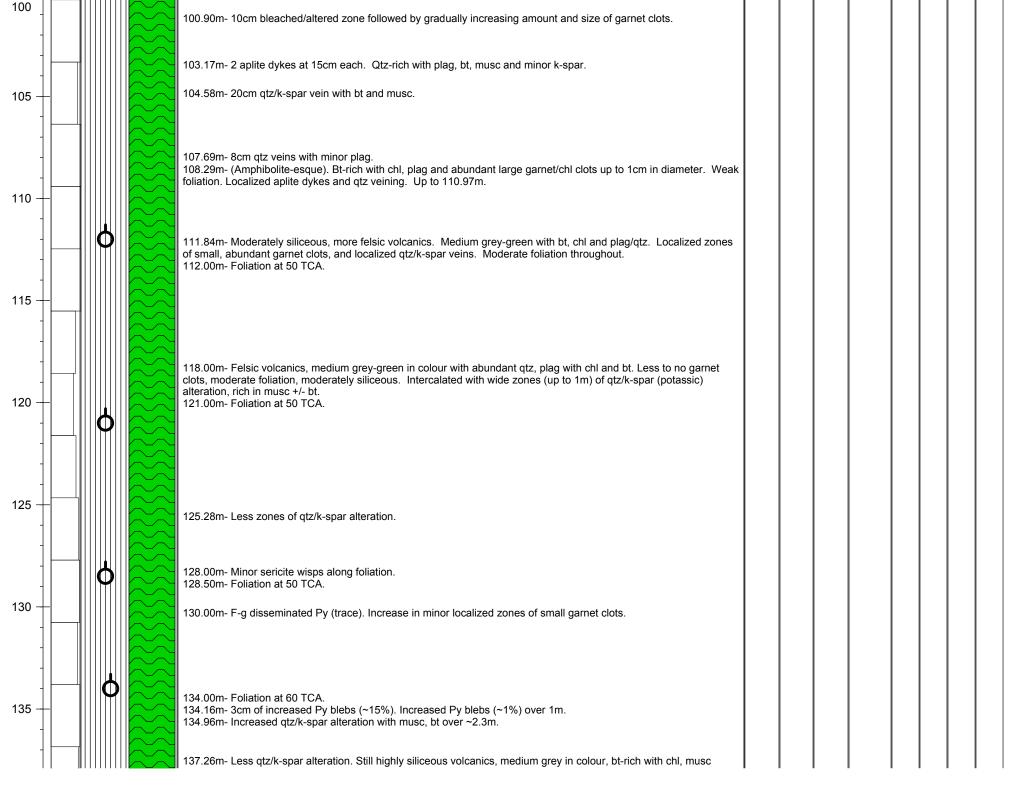
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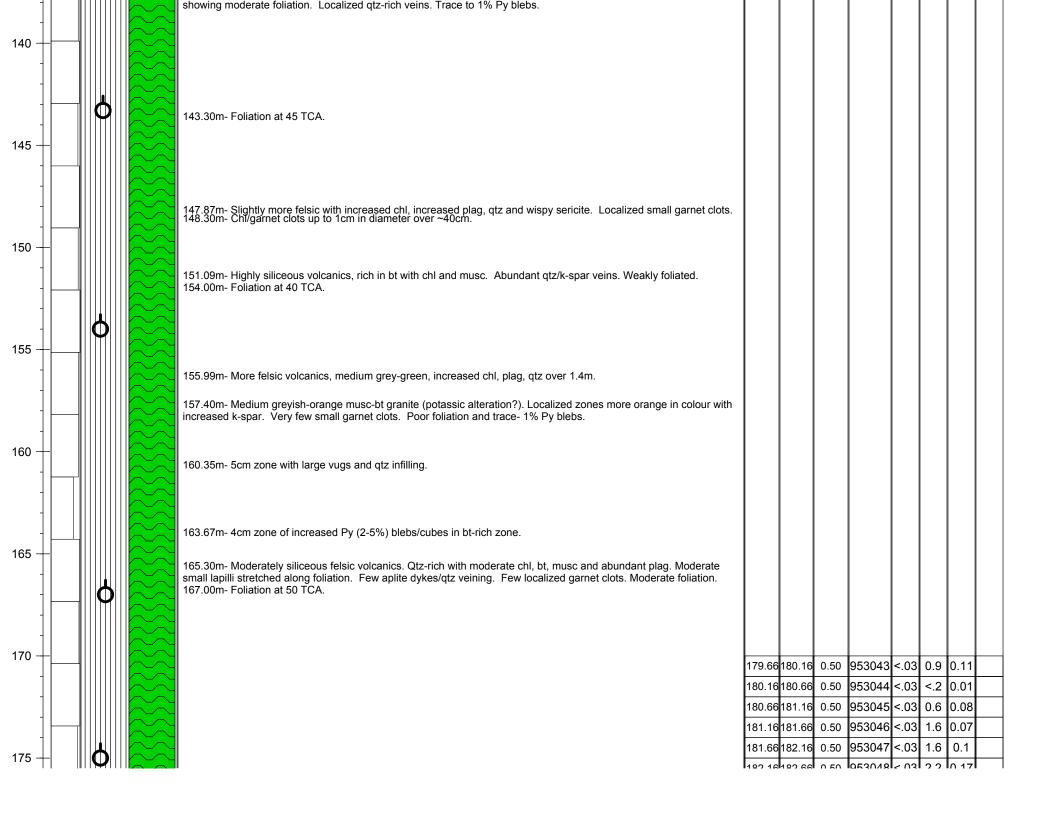
SIG-04-07

Projec Map Si	: NAD 83 tion: UTM Zone 14 heet: NTS 63K8 Structure Tadpoles Relative TCA 5 0	UTM E: 4 UTM N: 6 Azimuth Dip:-55	5038633 : 291 Downhole Survey 1: 46/56 at 60.96m (not Downhole Survey 2: 294/55 at 121.92m Downhole Survey 3: 289/55 at 191.72m	e Log Depth (m): 249.63 Contractor: Prospector Drilling Logged By: Jessica Norris Date: March 2007 Mom (not a good survey) 1.92m T.72m From To Width Samp				Sample	Au	Ag	Cu	
Depth (m) R0	Faults 06 Faults	Description	Downhole Survey 4: Downhole Survey EOH: 294/55.5 at 243.84	1m	(11)	(m)	(11)	Number	(g/t)	(y/t)	(70)	(70)
		OVERBURDEN: Ice, organic	-									
		Moderately fossiliferous, min			-							
25 🔔		24.48m- Less readish in colour, mos	stly medium-pale tan with few to moderate graphite veinle	ts up to 25.92m.								

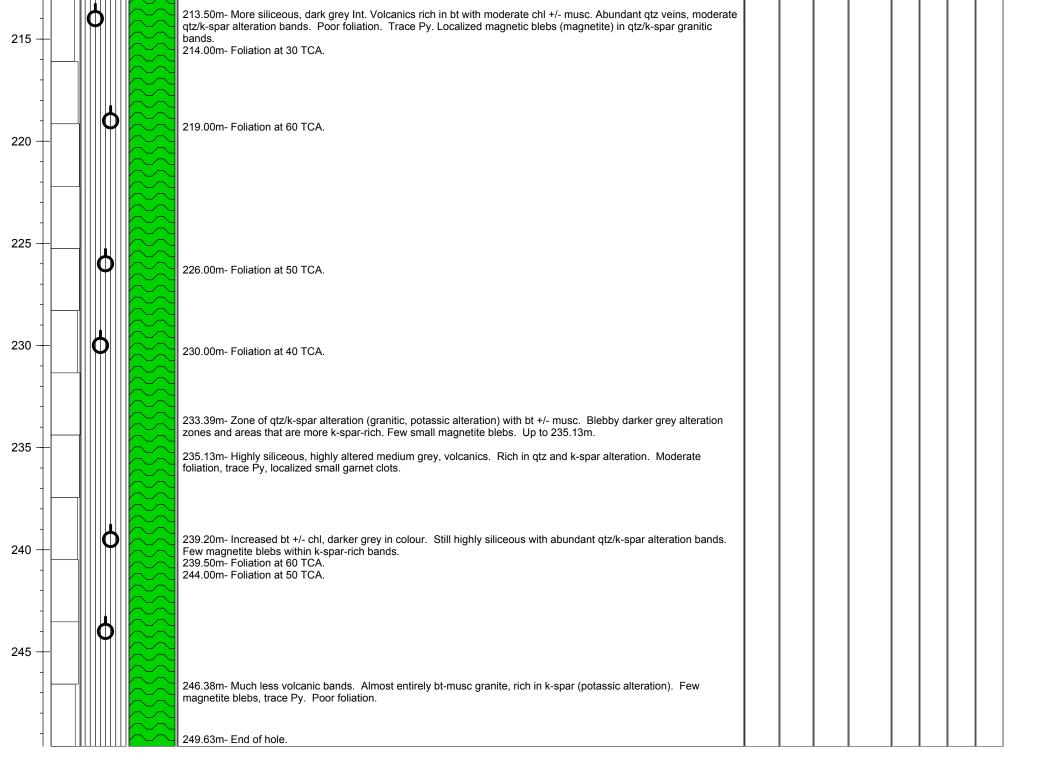








		$   _{\Gamma} \sim \sim$		102.10	102.00	0.50	955040	<b>~.</b> 03	2.2	0.17	
1	4		175.00m- Foliation at 40 TCA.	182.66	183.16	0.50	953049	<.03	4.2	0.16	
1			176.03m- Plag, musc-rich alteration zones up to ~10cm wide.	183.16	183.66	0.50	953050	<.03	2.8	0.19	
				183.66	184.16	0.50	953051	<.03	2.1	0.15	
			179.11m- Gradually increasing Py stringers/blebs.	184.16	184.66	0.50	953052	<.03	3.4	0.19	
180 —			179.96m- 20cm zone of 2-5% Py blebs and stringers +/- Cp blebs. 180.16m- 55cm zone rich in plag +/- k-spar and musc with trace Py.				953053				
-			181.09m- ~2% py blebs along foliation with moderately magnetic pyrrhotite (~1-2%).	-			953054				
							953055				
-		186.16	186.66	0.50	953056	<.03	0.5	<.01			
-							953057				
185 —	1111111110 — 1184.69m- Increasing silicification. Zones/veins of gtz/plag/k-spar and musc interfingered with volcanics showing 2-5%				953058						
-							953059				
-			187.36m- Qtz/plag-rich with k-spar alteration zone. Abundant musc +/- bt showing poor foliation. Zones of volcanics				953060				
					953061						
							953062				
190 —							953063				
-							953064				
-	MASSIVE PYRITE: 191.16m- 3m massive Pyrite (80-90%) with minor qtz and bt. Py as large, chunky, subhedral blebs. No visible Cp. 194.08m- 5cm zone with virtually no Py, abundant in qtz with ~20% disseminated Pyrrhotite.				953065						
-					953066				3.1		
-							953067				2.28
195 —			DACITE (INT/FELSIC VOLCANICS): 194.27m- Dark grey to black volcanics, rich in bt and				953068				2.72
-	$\square$				953069				3.17		
-					193.66		953070				3
-	1		195.00m- Trace Py		194.23		953071				4.65
-			196.00m- Foliation at 40 TCA. 196.47m- Localized zones of moderate garnet clots. Less overall k-spar. Still abundant qtz veining, highly siliecous.				953072				
:00 +			Anderately magnetic throughout		195.23		953073				
					195.73		953074				
-			202.41m- Highly silieceous medium grey, qtz-rich bt-granite. Moderately magnetic. Poor foliation, looks altered as				953075				
-			odd grey blebby overprinting.				953076				
205 —	Ь										
-	IY		205.64m- Dark grey-green Intermediate volcanics, rich in bt, chl, moderately foliated with trace Py. Less magnetic. Abundant chunky qtz/k-spar +/- plag veins (some with large bt flakes). Localized zones of small garnet clots.								
-			205.70m- Foliation at 40 TCA.								
-											
-											
210 +			209.63m- Visible dark green-black tourmaline (1.5cm long) crystals along a fractured surface in a 15cm zone that appears altered with slightly increased plag.								
+				1							

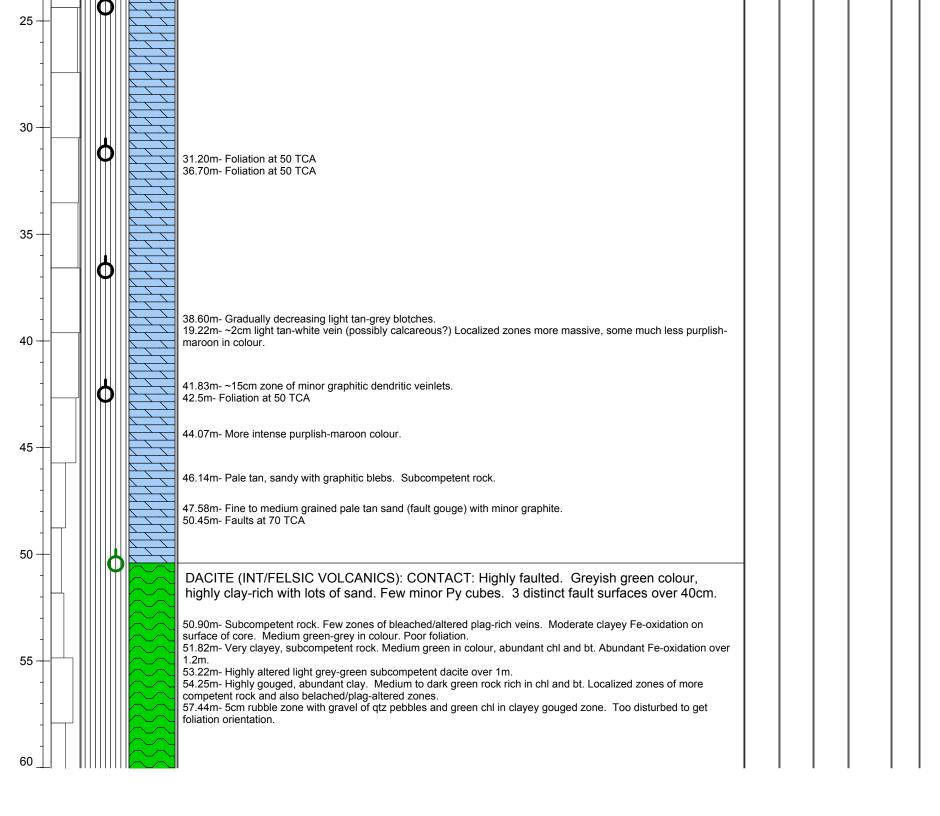


SIG-05-07

# SIGNET MINERALS INC.

SIG-05-07

Projec	a: NAD 83 stion: UTM Zone 14 heet: NTS 63K8 Structure Tadpoles	L L A D	Contractor: Pros Logged By: Jess	Contractor: Prospector Drilling Logged By: Jessica Norris Date: March 2007									
Depth (m) R0	Relative TCA Standard 90 Unit	Description	Downhole Survey 3: 293/55.5 at Downhole Survey 4: 292/56 at 2 Downhole Survey EOH: 290/55 a	182.88m 43.84m	From (m)	To (m)		Sample Number					
		OVERBURDEN: Ice,	organics, glacial till.										
15		DOLOMITE: Sandy,	bble, gravel, glacial till with some dolomite. tan in colour with grey blotches and minor g	raphite seamlets.	_								
20			eased darker grey blotches. Less sandy, more compete										



6 6	<ul> <li>60.41m- Subcompetent dacite, sandy and highly altered. Bleached (plag-rich +/- K-spar) with minor bt flakes and chl over 1.2m.</li> <li>61.76m- Highly altered dacite rich in chl and bt with plag +/- k-spar speckled throughout and as minor veins. Minor qtz veins.</li> <li>63.41m- Faintly visible foliation. Foliation at 40 TCA</li> <li>63.80m- Clayey fault surface at 75 TCA.</li> <li>64.36m- more competent dacite. Med-dark green, rich in chl and bt with moderate plag alteration speckled throughout. Minor Fe-oxidation. Weak to moderate foliation. Few localized zones of rubble +/- clay.</li> <li>67.20m- Foliation at 50 TCA</li> <li>69.28m- Highly rubbelized +/- clay up to 69.81m.</li> <li>69.31m- More competent dacite.</li> <li>72.50m- Foliation at 50 TCA</li> </ul>								
¢	<ul> <li>75.89m- Slightly less competent rock.</li> <li>76.92m- Gradually increasing whitish-green, highly altered/bleached dacite. Plag-rich with a few bt specks. Moderate fine-grained musc flakes. Minor k-spar as blebs. Poor to weak foliation.</li> <li>78.20m- Foliation at 30 TCA</li> <li>79.30m- Faulted with clay gouge back into medium-dark green dacite rich in chl and bt with speckly plag alteration with qtz/k-spar veinlets throughout. Few qtz veins. Weak foliation. Localized less competent zones.</li> <li>84.00m- Gradually increasing silicification.</li> </ul>								
Q	<ul> <li>86.63m- 1m orangey-grey granitic zone. Qtz-rich with moderate k-spar. Bt flakes +/- musc. Poor foliation.</li> <li>87.63m- Silicified dark green volcanics with less plag alteration. Rich in chl and bt with localized zones of qtz/k-spar (potassic) alteration. Weak-moderate foliation.</li> <li>88.00m- Foliation at 40 TCA</li> <li>88.80m- ~5-10cm of wispy Py +/- Cp blebs.</li> <li>89.05m- 70cm orangey-light grey granitic zone. Qtz/k-spar alteration with bt +/- musc. Poor foliation.</li> </ul>	88.09	89.05	0.96	953077	<.03	<.2	0.02	

60

65 -

70 -

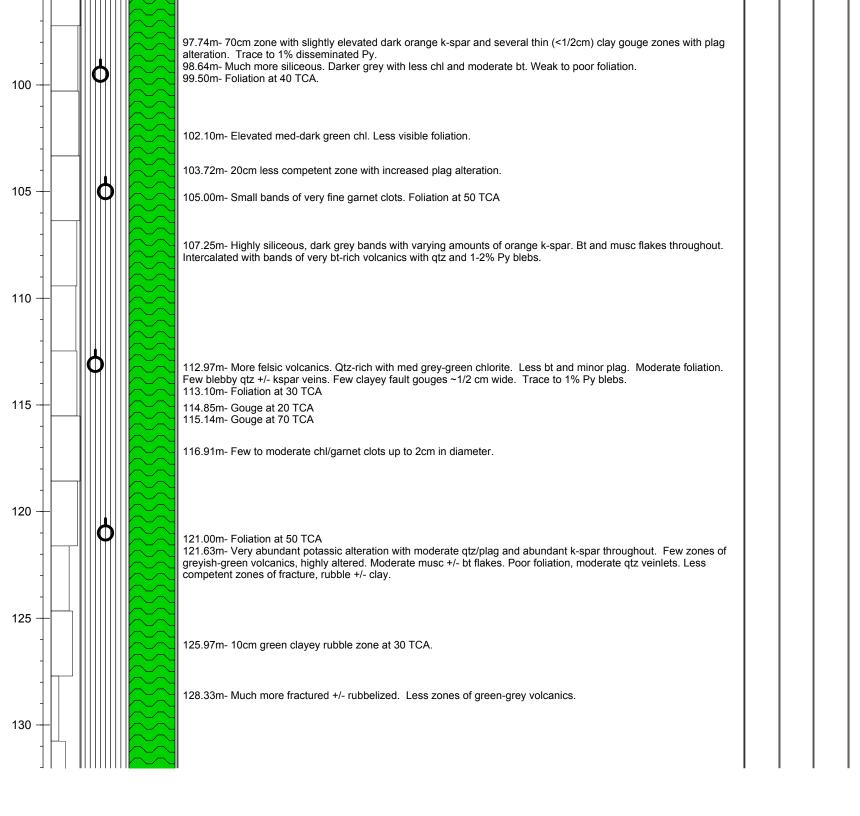
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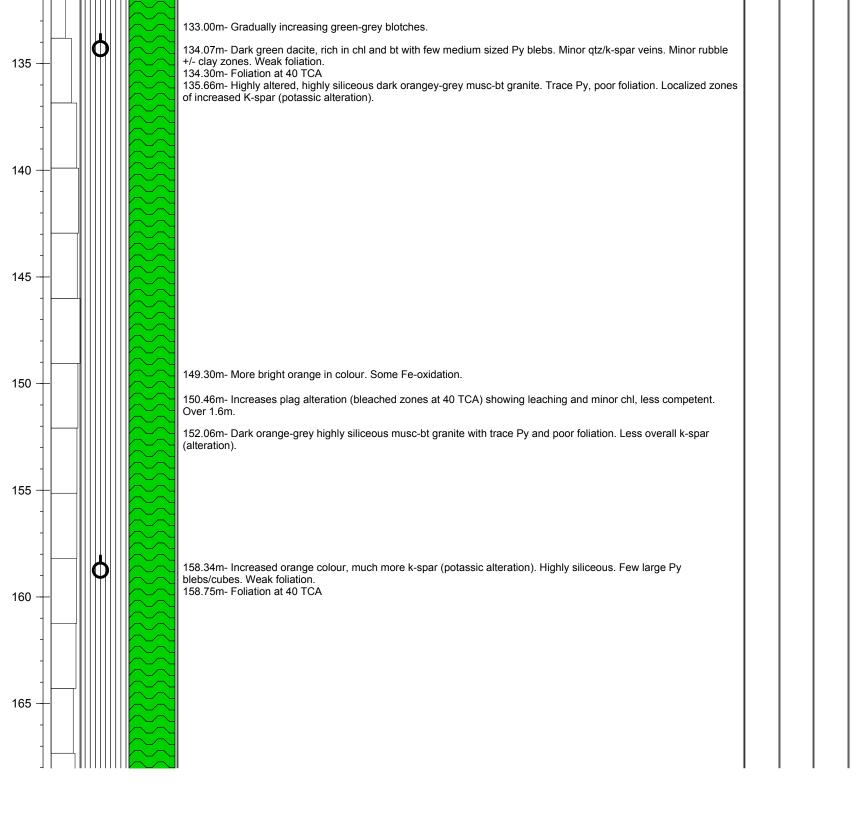
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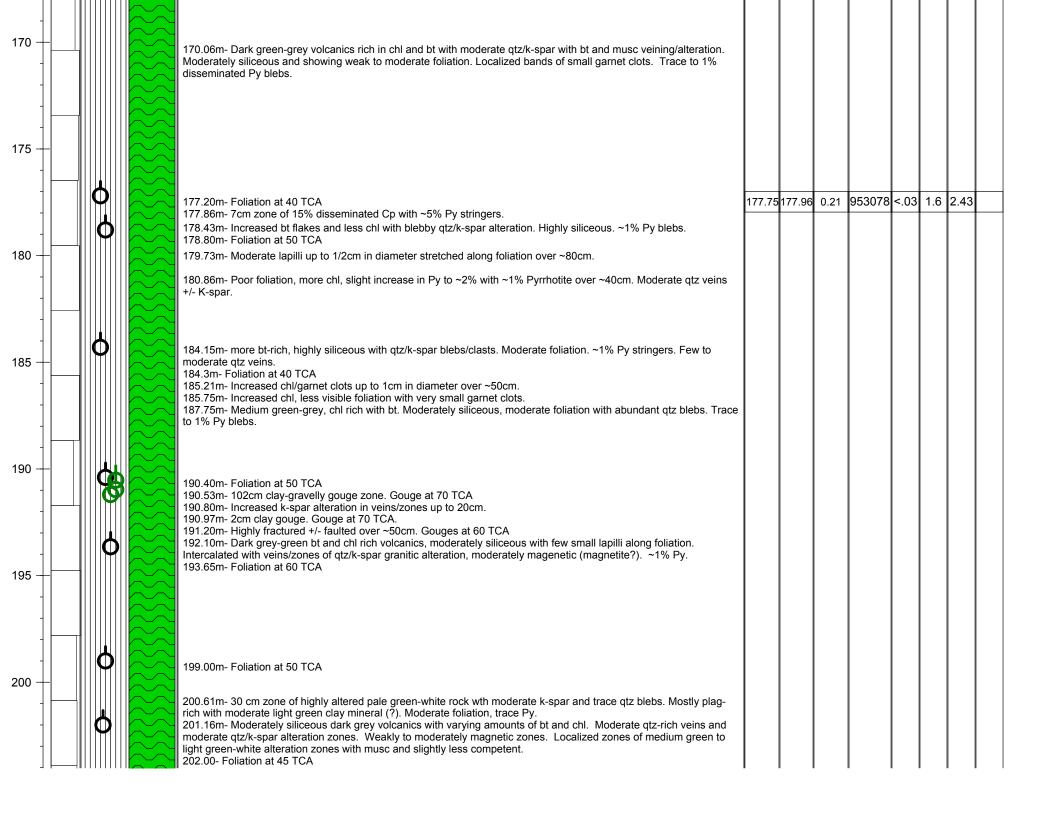
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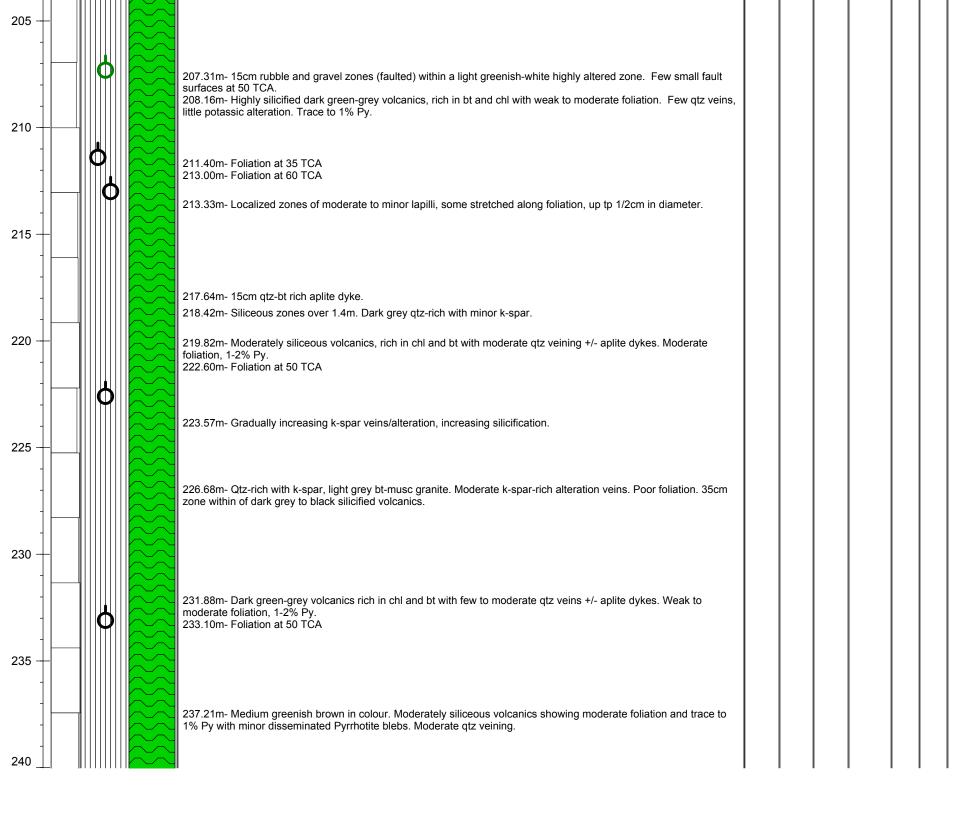
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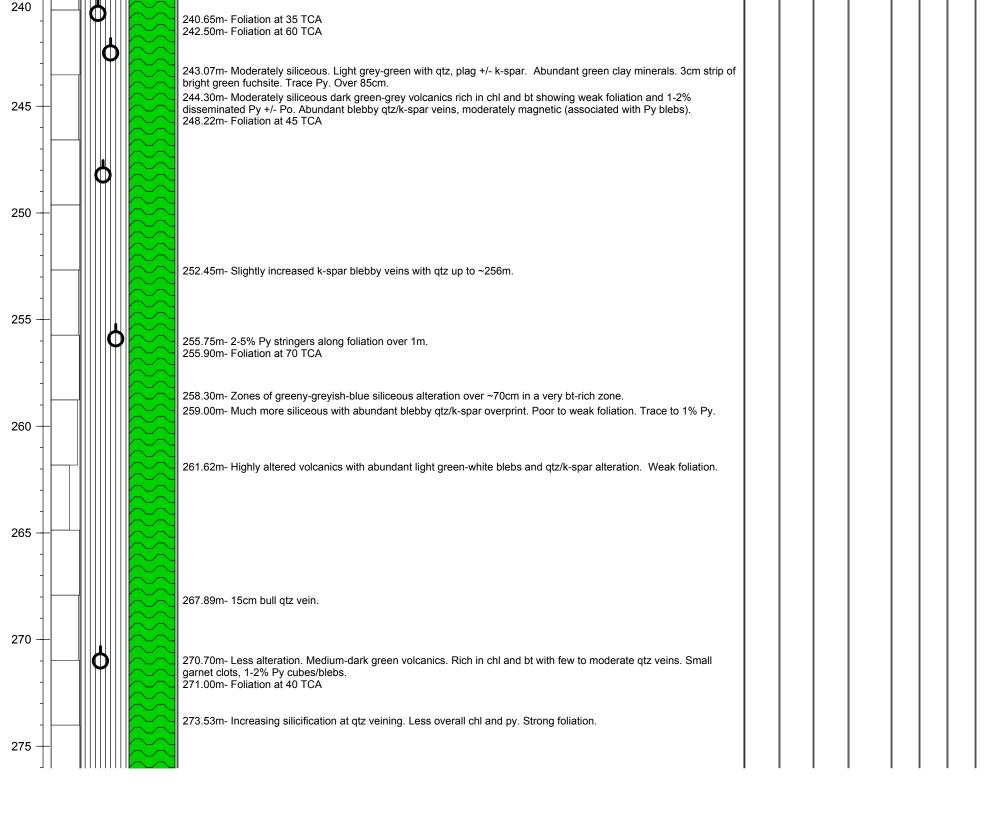
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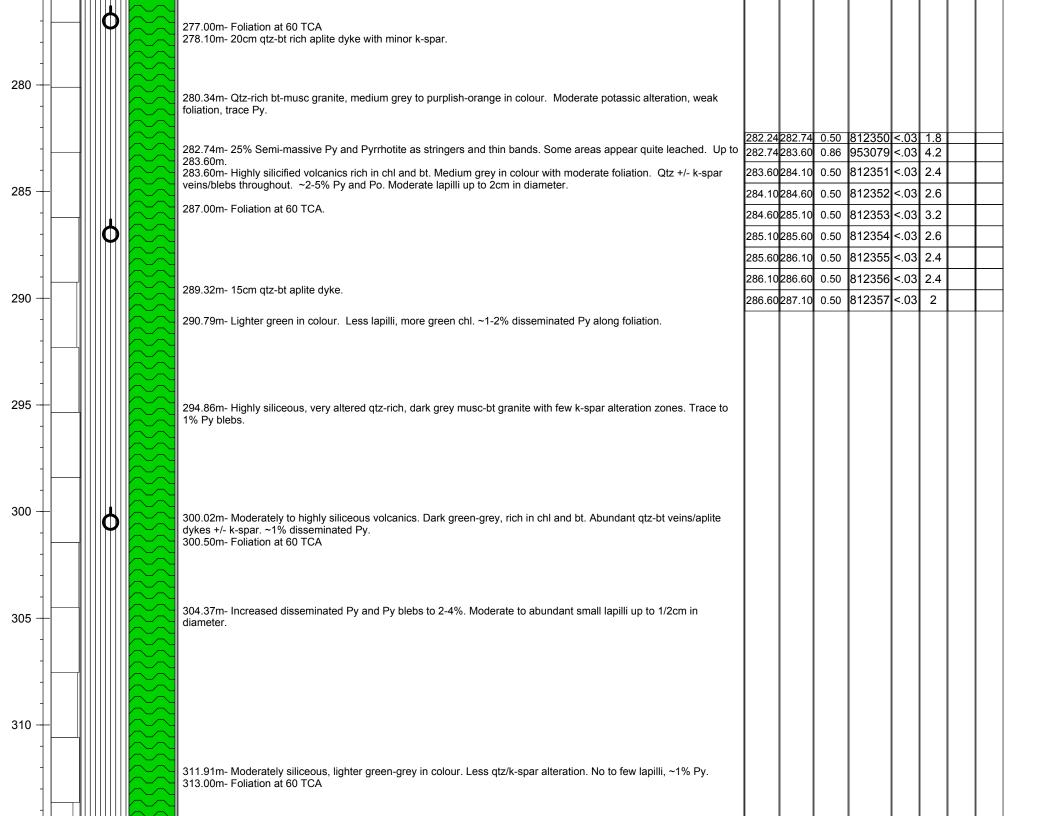


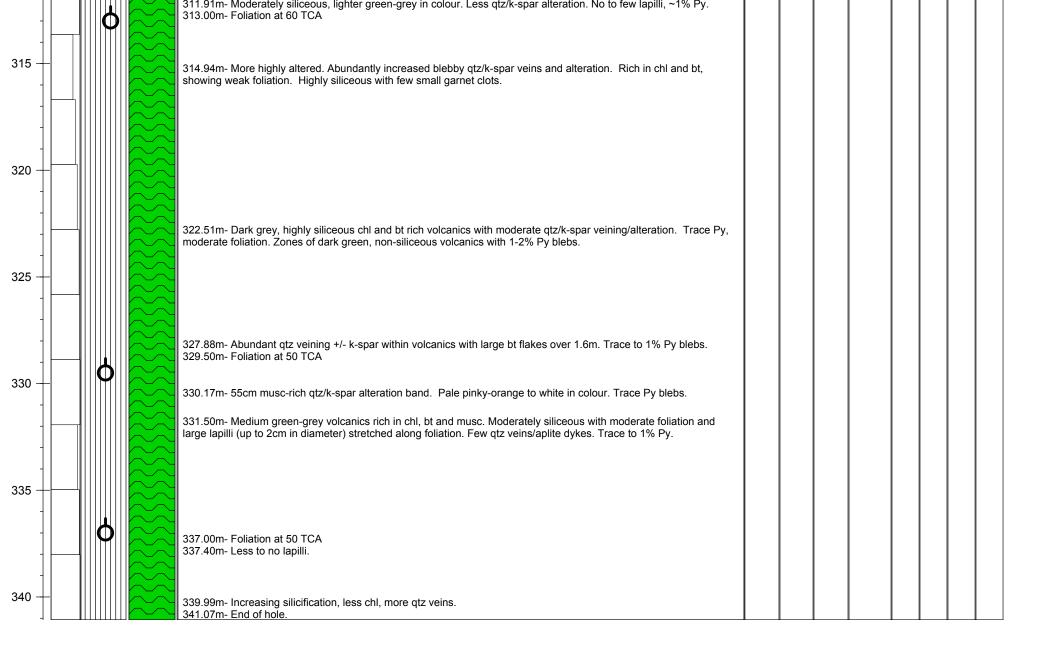






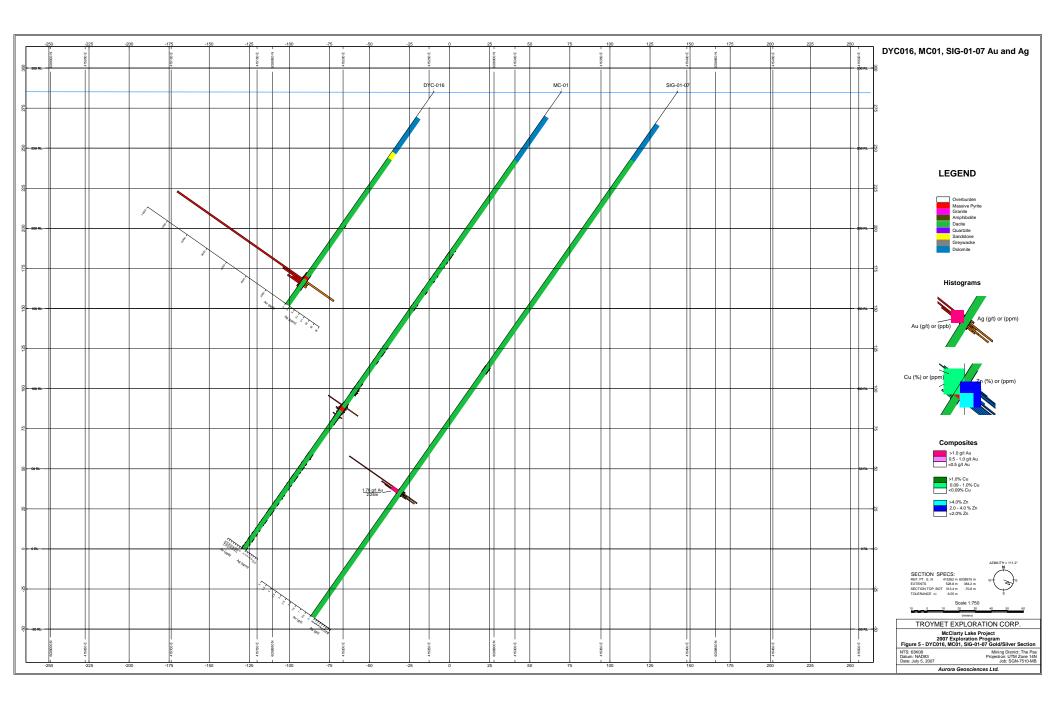


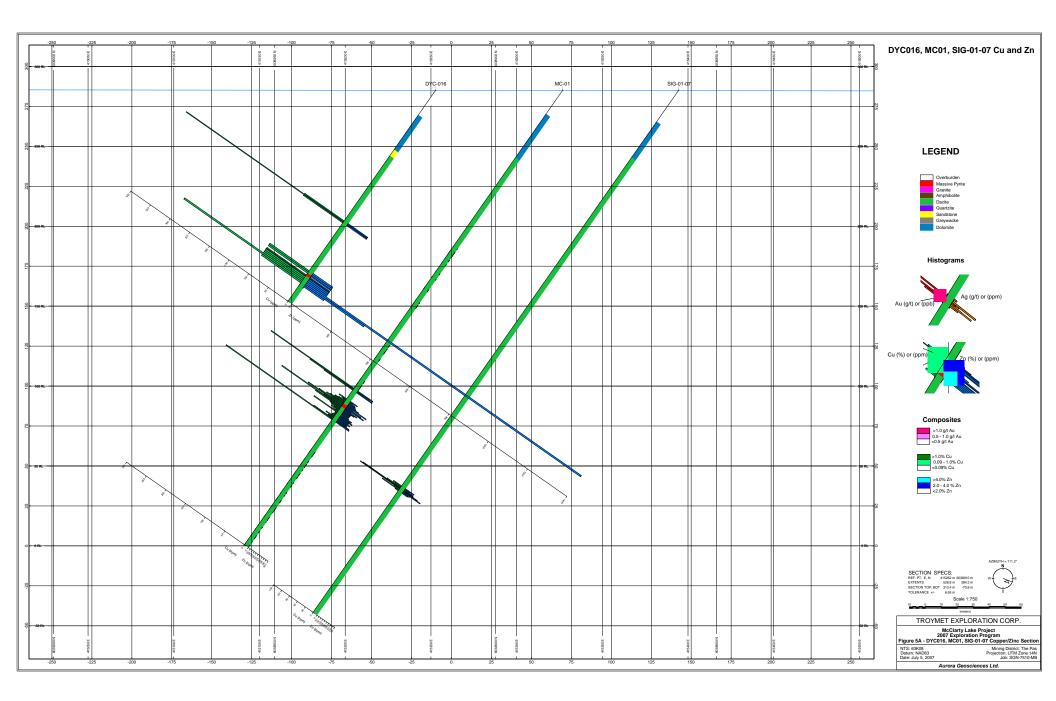


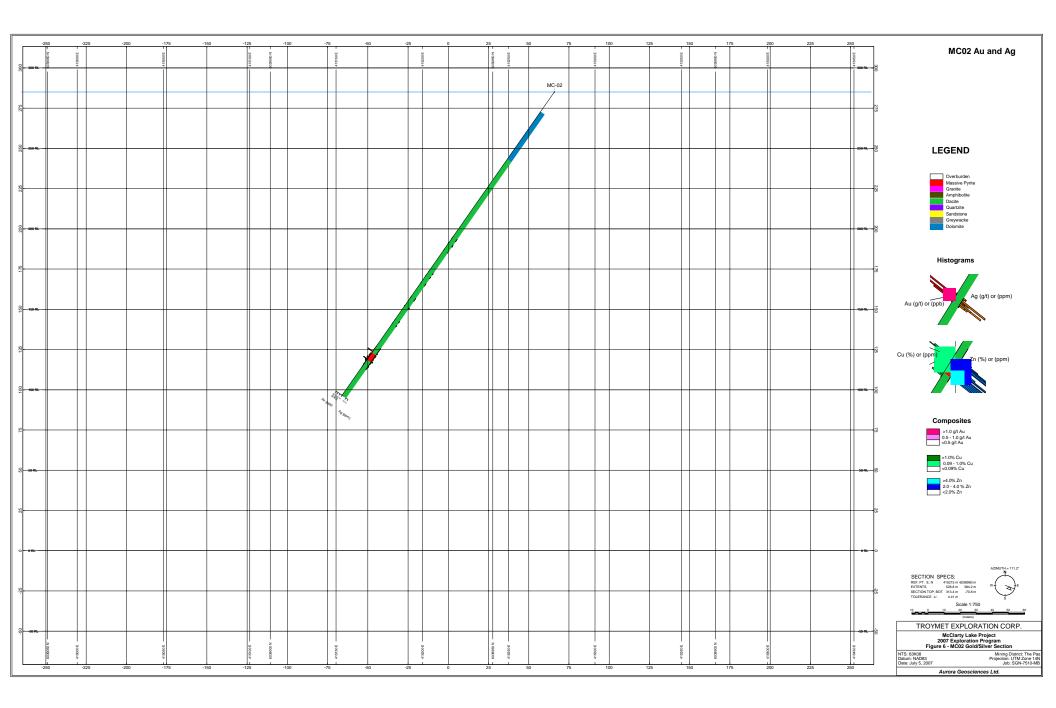


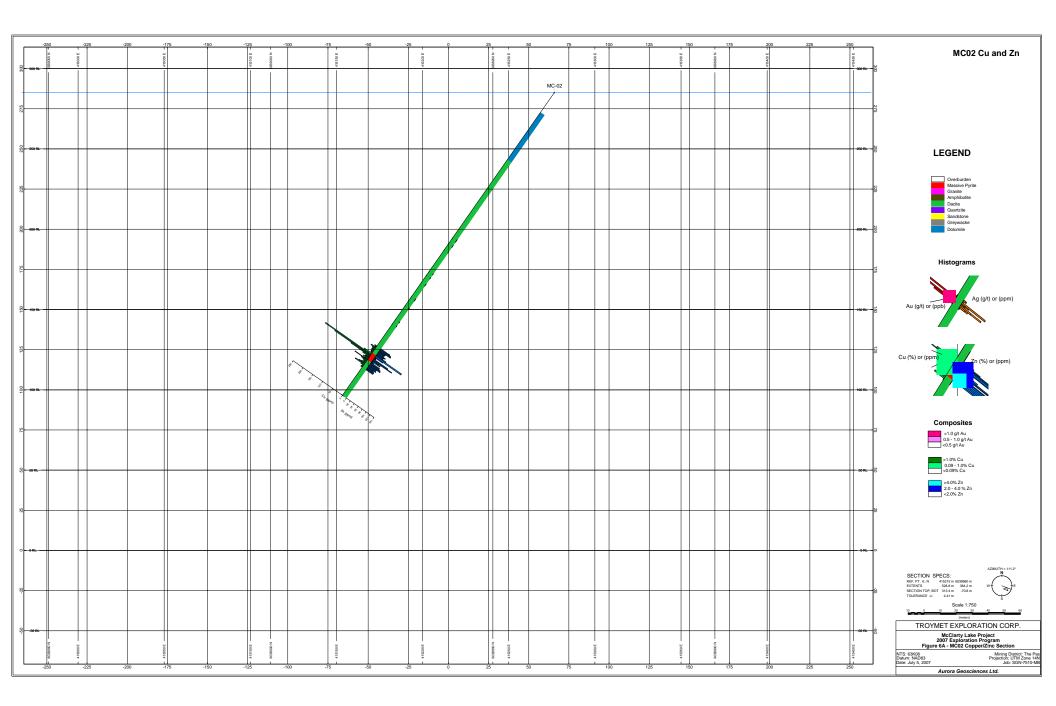
### **APPENDIX IV**

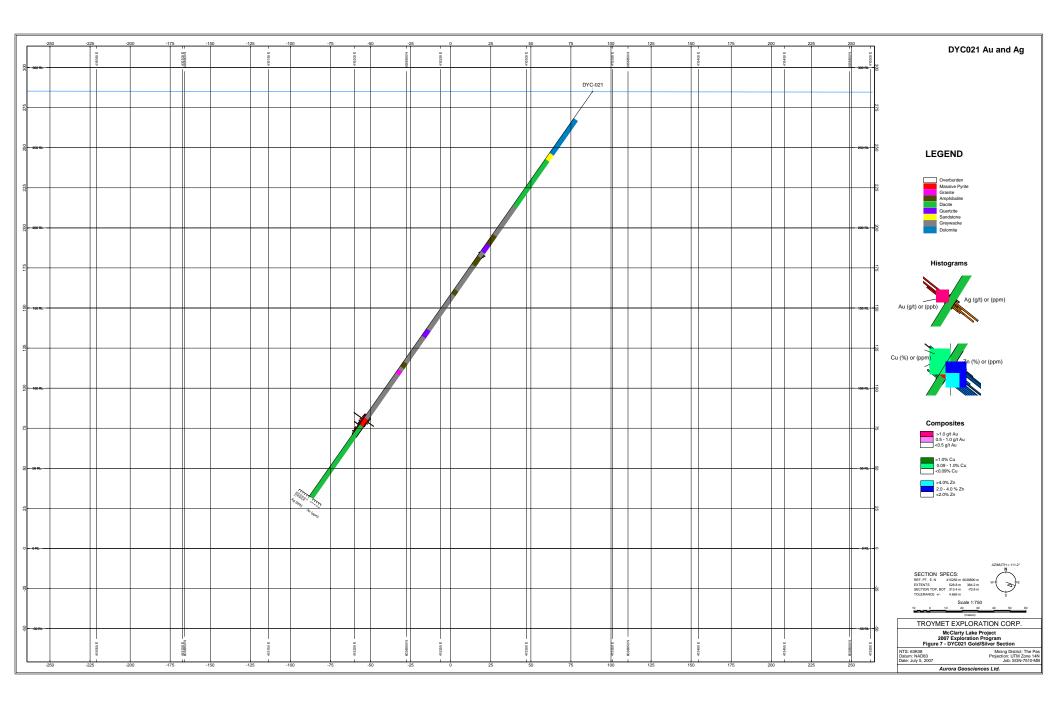
DRILL HOLE SECTION MAPS

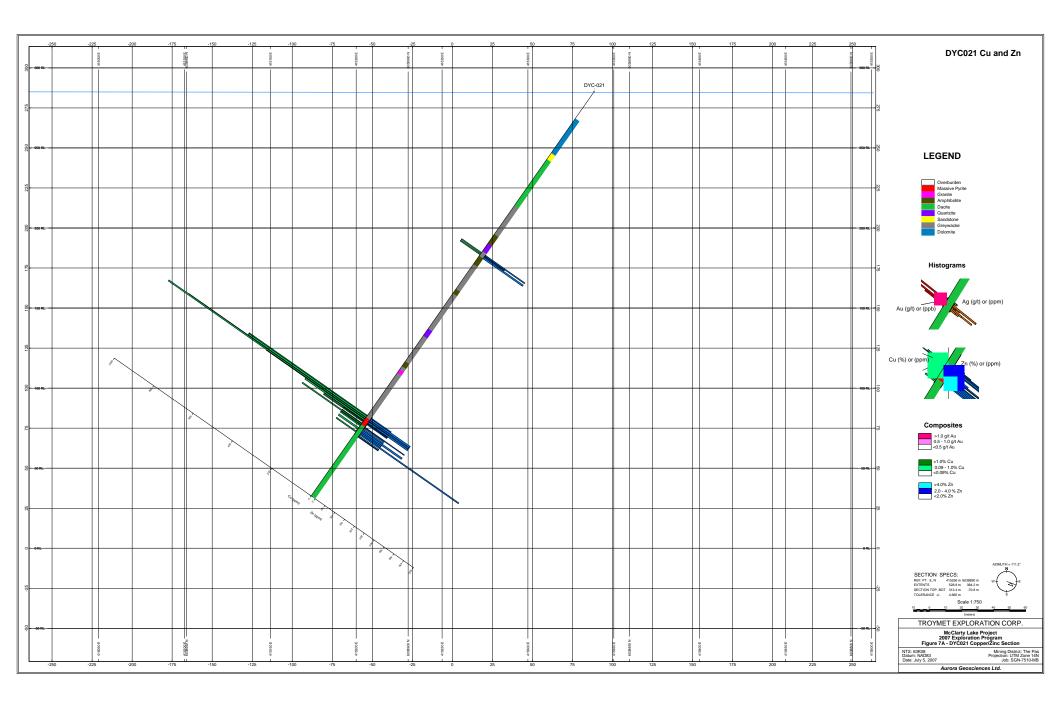


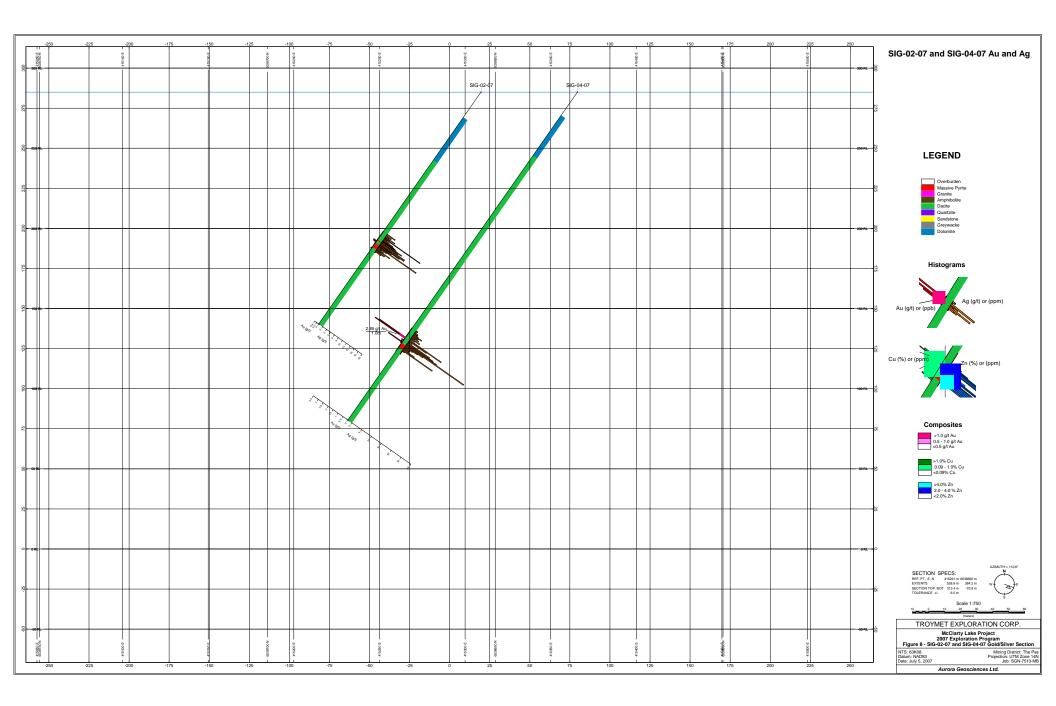


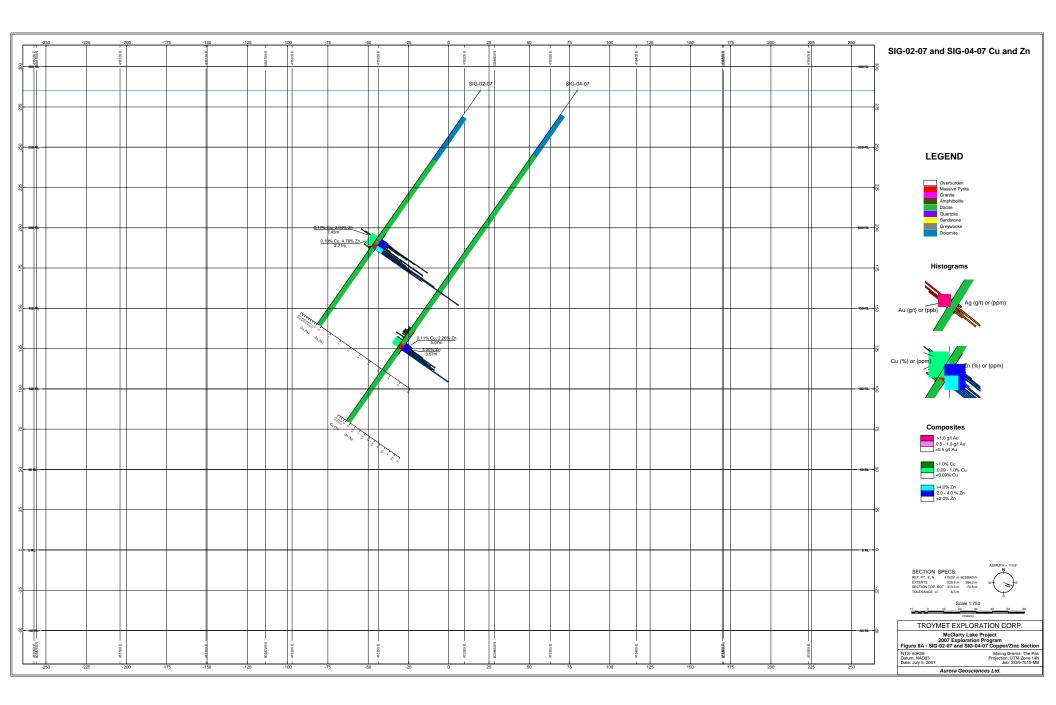


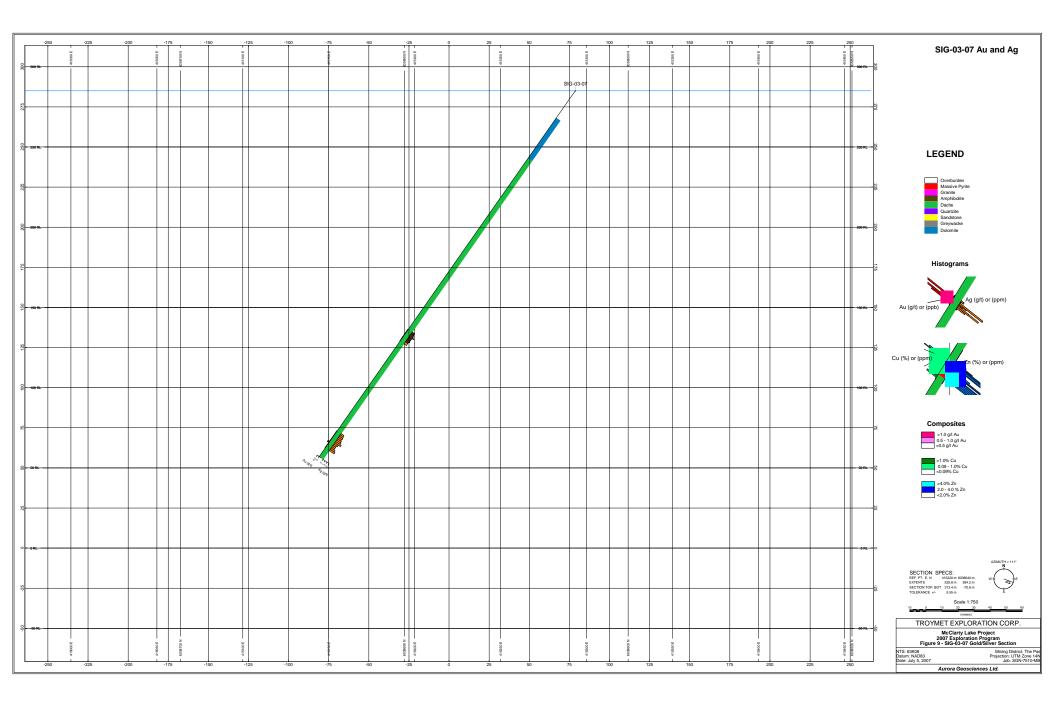


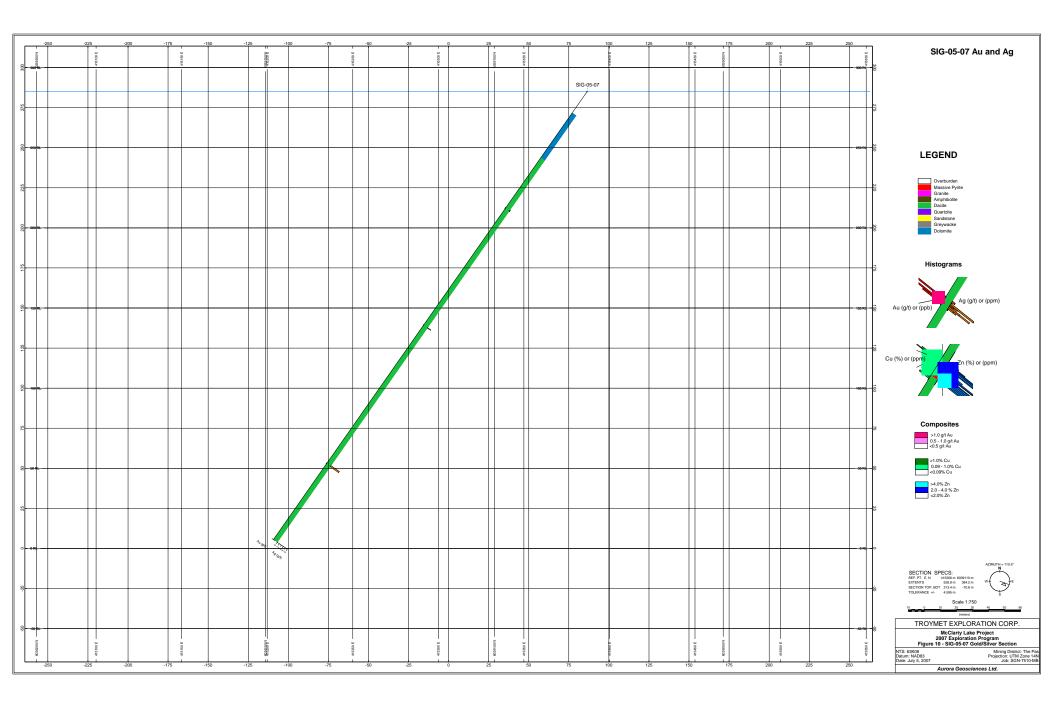


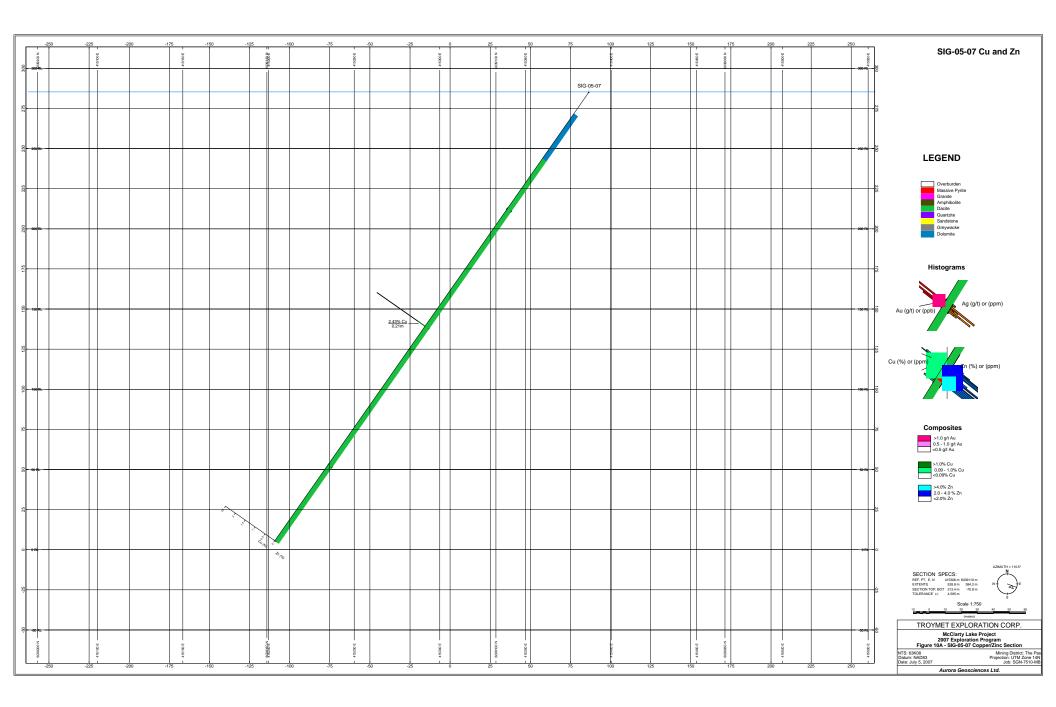












## APPENDIX V PETROGRAPHIC REPORT

## VANCOUVER PETROGRAPHICS LTD.

Report for: Signet Minerals Inc, 1963 Comox Ave, COMOX, B.C. V9M 3M4

Report 070537 July 17, 2007

Samples:

4 core samples from the Snow Lake area, Manitoba, were submitted by Tracy Hurley. The samples are numbered SIG-07-02 A, B, C and D. Typical areas were prepared for petrographic examination as polished thin sections.

Summary:

These four samples all consist of pyrite-rich, semi-massive sulfides with intergrown pockets of a silicate assemblage of rather distinctive mineralogy.

The principal economic constituent is marmatitic sphalerite. Chalcopyrite is an additional constituent in Sample B. The Zn/Cu sulfides occur dominantly as grains 0.2 - 2.0 mm in size, interstitial to the compact pyrite and, to a lesser degree, as finer disseminations in the intergrown silicate component.

The latter consists predominantly of K-feldspar (plus lesser plagioclase and quartz) and micas (phlogopite or biotite and lesser muscovite.

In Sample A the K-feldspar is of turbid altered appearance and the micaceous component is dominantly chlorite. This sample also contains minor amounts of a brown cellular-textured component somewhat resembling limonite.

Mineral X also occurs - in considerably higher abundance - in Sample B, along with minor proportions of carbonate. The pyrite and other sulfides in all the samples appear fresh and unoxidized, so it does not seem likely that this mineral is actually limonite. It looks ferruginous, and may be some form of Fe-rich silicate. This is not inconsistent with the metamorphism of a sulfidic/exhalative chemical sediment.

The constituent referred to in your covering letter as "large porphyroblasts, possibly altered kyanite or andalusite" does not appear to be represented in these thin sections. Perhaps the larger, clumpy segregations of silicate material in the massive sulfide have the macroscopic appearance of porphyroblasts in the drill core. Petrographic examination found no evidence for the presence of Al silicates like kyanite or andalusite.

Individual sample descriptions and a set of illustrative photomicrographs are attached.

J.F. Harris Ph.D.

SAMPLE SIG-07-02 A

Estimated mode

te 55	Pyrite
te 5	Sphalerite
te trace	Chalcopyrite
te trace	Pyrrhotite
tz 17	Quartz
ar 17	Altered K-feldspar
te 5	Chlorite
te 0.5	Phlogopite
X 0.5	Mineral X

One end of the sectioned portion of this sample consists of pyriterich massive sulfide. The remainder (80% of the sectioned area) is an intimate intergrowth of sulfides and silicates on a scale of 0.1 - 2.0 mm.

Petrographic examination confirms that the dominant sulfide constituent is pyrite. Accessory proportions of sphalerite (a dark red-brown, marmatitic variety) are also present as irregular grains, 0.2 - 1.0 mm in size, interstitial to the pyrite, as inclusions in coarse pyrite crystals, and intergrown with the relatively abundant silicate component

Rare chalcopyrite occurs as occasional segregations associated with sphalerite. The latter is also sparsely dusted with micron-sized exsolved pyrrhotite.

The silicate component consists dominantly of quartz and a turbid, light-brownish mineral believed to be altered K-feldspar (see the speckling of positive yellow cobaltinitrite stain on the off-cut, indicating potassic composition). The latter constituent incorporates more or less abundant slender flakes of an acicular mineral which appears to be chlorite.

Very minor additional constituents are occasional small flakes of fresh phlogopite, and an orange-brown, cellular-textured material of

secondary aspect. The latter is of uncertain origin and composition.

The quartz and altered feldspar exhibit a grain size range of 0.1 - 1.0 mm, and locally concentrate as irregular clumps up to a few mm in size. The pyrite occurs in similar textural fashion, as a non-foliated, granular intergrowth with the silicates; this has the aspect of a co-crystallized (or recrystallized) assemblage.

SAMPLE SIG-07-02 B

Estimated mode

Pyrite	60
Chalcopyrite	4
Sphalerite	3
Pyrrhotite	trace
Quartz	10
K-feldspar	10
Mineral X	6
Phlogopite	3
Carbonate	1

The sectioned portion of this sample consists dominantly of massive pyrite with intergrown accessory chalcopyrite and marmatitic sphalerite.

A silicate assemblage occurs as clumps, 1 - 8 mm in size, within the massive sulfides, and forms a larger segregation (7x15 mm in size) at one corner of the slide.

The economic sulfides (chalcopyrite and sphalerite) occur, sometimes mutually intergrown, as irregular pockets, 0.1 - 2.0 mm in size, in the massive pyrite and in the clumps of silicates. In the latter context they tend to be of smaller mean particle size (sometimes ranging down to a few tens of microns).

The silicate assemblage resembles that in Sample A except that chlorite is not seen, the unidentified brown cellular Mineral X is more abundant, and there is also a minor component of turbid carbonate. The latter two constituents sometimes occur in close conjunction with sphalerite, and it is possible that they could be forms of secondary Zn mineral - though the sulfides, overall, do not show visible signs of oxidation.

The pyrite exhibits a distinctive textural feature in this sample, in that it appears to include two generations. More or less clearly defined, coarse, cubic grains are set in a matrix/interstitial phase of pyrite which has the fine aggregate form and incipient anisotropism characteristic of secondary pyrite formed by modification of original pyrrhotite. SAMPLE SIG-07-02 C

Estimated mode

Pyrite	67	
Sphalerite	3	
K-feldspar	б	
Plagioclase	2	
Quartz	2	
Biotite	17	
Muscovite	3	

This sample consists dominantly of pyrite, as a semi-compact aggregate of anhedral grains 0.2 - 3.0 mm in size. A very minor accessory component of sphalerite, of similar grain size, occurs as interstitial pockets in the pyrite aggregate and, to a lesser degree, as tiny grains intergrown with silicates.

The silicate assemblage, which occurs as vari-sized pockets within the pyrite, and as an essentially sulfide-free segregation 2 cm or more in size at one end of the sectioned area, is distinctive for the high proportion of well-crystallized biotite. This is a distinctive olive-green variety which occurs as sheafs of flakes 0.2 - 5.0 mm in length, with a minor accessory component of intergrown muscovite.

The smaller mica flakes are often intimately intergrown, in penetrative/occluded mode, with the feldspars and possible quartz which constitute the remainder of the silicate assemblage.

SAMPLE SIG-07-02 D

Estimated mode

Pyrite	82
Sphalerite	18
Micas	trace
Quartz	trace
K-feldspar	trace

The off-cut corresponding to the sectioned area of this sample is of notably homogenous, sulfide-rich character, consisting dominantly of an aggregate of individual, sub-polygonal grains of pyrite, 0.5 -3.0 mm in size. The pyrite grains are partially in contact, with residual intergranular spaces tightly filled by a dark mineral.

Petrographic examination reveals that the latter is marmatitic sphalerite. This has an effective grain size, for purpose of liberation, of 0.2 - 2.0 mm. The sphalerite is homogenous, except for sparsely scattered, micron-sized, exsolved specks of chalcopyrite and pyrrhotite.

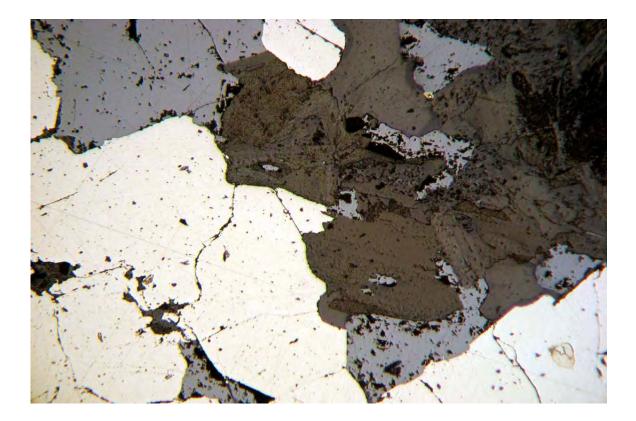
The only other constituents are extremely rare, tiny flakes of mica (phlogopite and muscovite), and specks of quartz and feldspar, 0.2 - 1.0 mm in size. These occur intergrown with the sphalerite component, interstitial to the pyrite.

#### PHOTOMICROGRAPHS

Photos are at a scale of 1 cm = approximately 140 microns, by reflected light, except where otherwise stated.

SAMPLE SIG-07-02 A

Photo: IMG-0376: Intergrowth of pyrite (creamy-white), sphalerite (battleship grey) and silicates (dark grey, upper right). Sphalerite occurs partly as relatively coarse pockets interstitial to pyrite, and in finer-grained form within the silicate component. The latter is an intergrowth of K-feldspar, quartz and flakes of chlorite.



SAMPLE SIG-07-02 B

Photo: IMG-0378: Intergrowth of chalcopyrite (yellow) and sphalerite (battleship grey) in massive pyrite (cream colour). The dark area at top left, showing cellular texture is Mineral X.

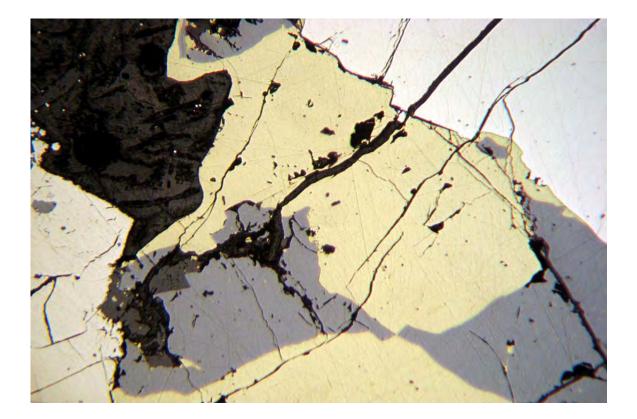
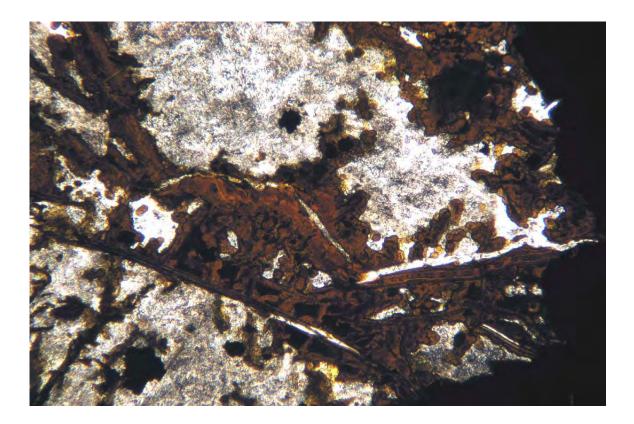


Photo: IMG-0384: Same scale as IMG-0378. Example of fine-grained chalcopyrite and sphalerite in an area of the silicate assemblage. The crustified/cellular texture of "Mineral X" is well displayed at centre top.



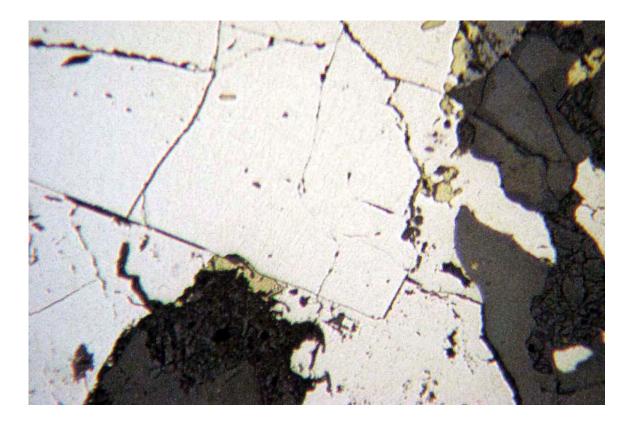
SAMPLE SIG-07-02 B

Photo: IMG-0380: Transmitted light. The brown, boxwork-textured constituent is Mineral X, intergrown with carbonate (dusty, light-coloured areas).



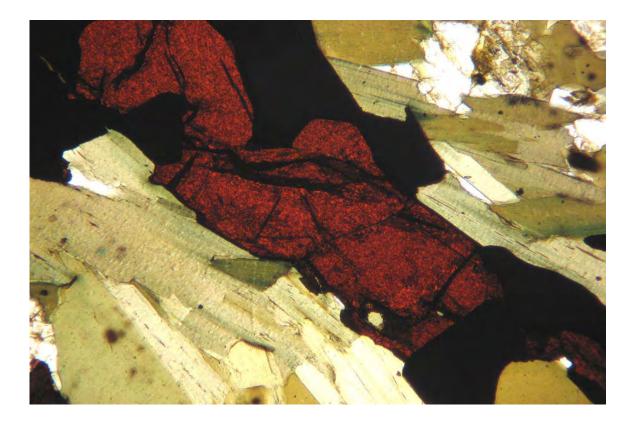
SAMPLE SIG-07-02 B

Photo: IMG-0385: Example of two generations(?) of pyrite (creamywhite). Note sharp contact between a partial cubic crystal (occupying the upper left part of the field) and the adjacent fine aggregate variant (lower part of field). Small grains of chalcopyrite (yellow) are developed at the contact. Dark areas are silicates.



SAMPLE SIG-07-02 C

Photo: IMG-0381: Transmitted light. Segregation of intergrown marmatite (dark red) and pyrite (opaque, black) in an area of wellcrystallized biotite (flaky forms, showing pleochroism from straw colour to olive brown).



### SAMPLE SIG-07-02 C

Photo: IMG-0383: Emulsion-like texture of rounded/elongate inclusions of marmatitic sphalerite (battleship grey) in massive pyrite (cream colour).

