

ASSESSMENT REPORT

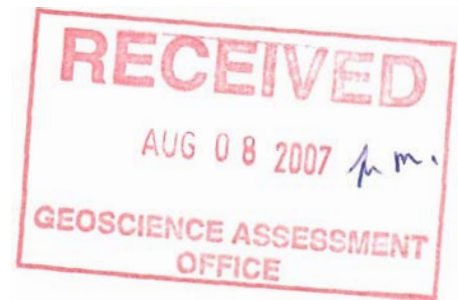
HIGHBANK LAKE PROPERTY

BMA 523861, 523862, 524861 and 524862
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1.0 INTRODUCTION

The mining claims that comprise the Highbank Lake Property are located 350 kilometres northwest of the town of Hearst, Ontario, in the Highbank Lake/Attawapiskat River area, and within the National Topographic System (NTS) map area 43D/08 (Figure 1). The mining claims lie within numbered townships BMA 523861, 523862, 524861 and 524862 of the Porcupine Mining Division, District of Cochrane, Ontario.

The Property is accessible only by floatplane and boat, with the Attawapiskat River providing the main waterway. A tent camp previously used by de Beers and now operated by Harry Baxter of Ogoki, Ontario, is located on a peninsula on the west shore of Highbank Lake. The drill sites are only accessible by helicopter in the summer and snow mobile in the winter.

The Highbank Lake Property consists of two non-contiguous claim groups, for which staking originally started in 2001. The Property comprises 169 unpatented mining claim blocs, totalling 2,849 mining claims or units (16 hectares per unit) that cover 45,584 hectares (Appendix 1, Figure 1.1). The mining claims are held 100% by Northern Shield and have not been legally surveyed. All claims are currently in good standing.

The Property is located within the Archaean Sachigo Subprovince of the Superior Structural Province of the Canadian Shield. According to recent subdivisions of the Sachigo Subprovince, the Fishtrap Intrusive Complex (previously known as the Fishtrap Lake Intrusive Complex or FLIC) underlying the Property is located at or near the boundary between the 2.73 to 2.72 Ga Oxford-Stull terrane to the north and the 3.0 Ga North Caribou terrane to the south (Stott and Rayner 2004). However, the subdivisions are based mostly on work carried out on the western portion of the Sachigo Subprovince and since there is very little data available in the area of the Property, this boundary remains highly speculative.

The association between mafic rocks observed in the field and a well-layered stratigraphy delineated by airborne magnetic fabrics suggests that the Fishtrap Intrusive Complex has potential for "reef-style" platinum-group element ("PGE") mineralization similar to the mineralization found in the Bushveld Igneous Complex of South Africa or the Stillwater Complex in Montana, USA. The Bushveld Igneous Complex in South Africa hosts the world's largest deposits of platinum, and comprises a well-layered suite of mafic and ultramafic rocks with PGE typically associated with thin chromite-rich "reefs". Discovery of significant quantities of detrital chromite and chromitite fragments within the Highbank Lake Property supports an exploration model based on Bushveld-style mineralization.



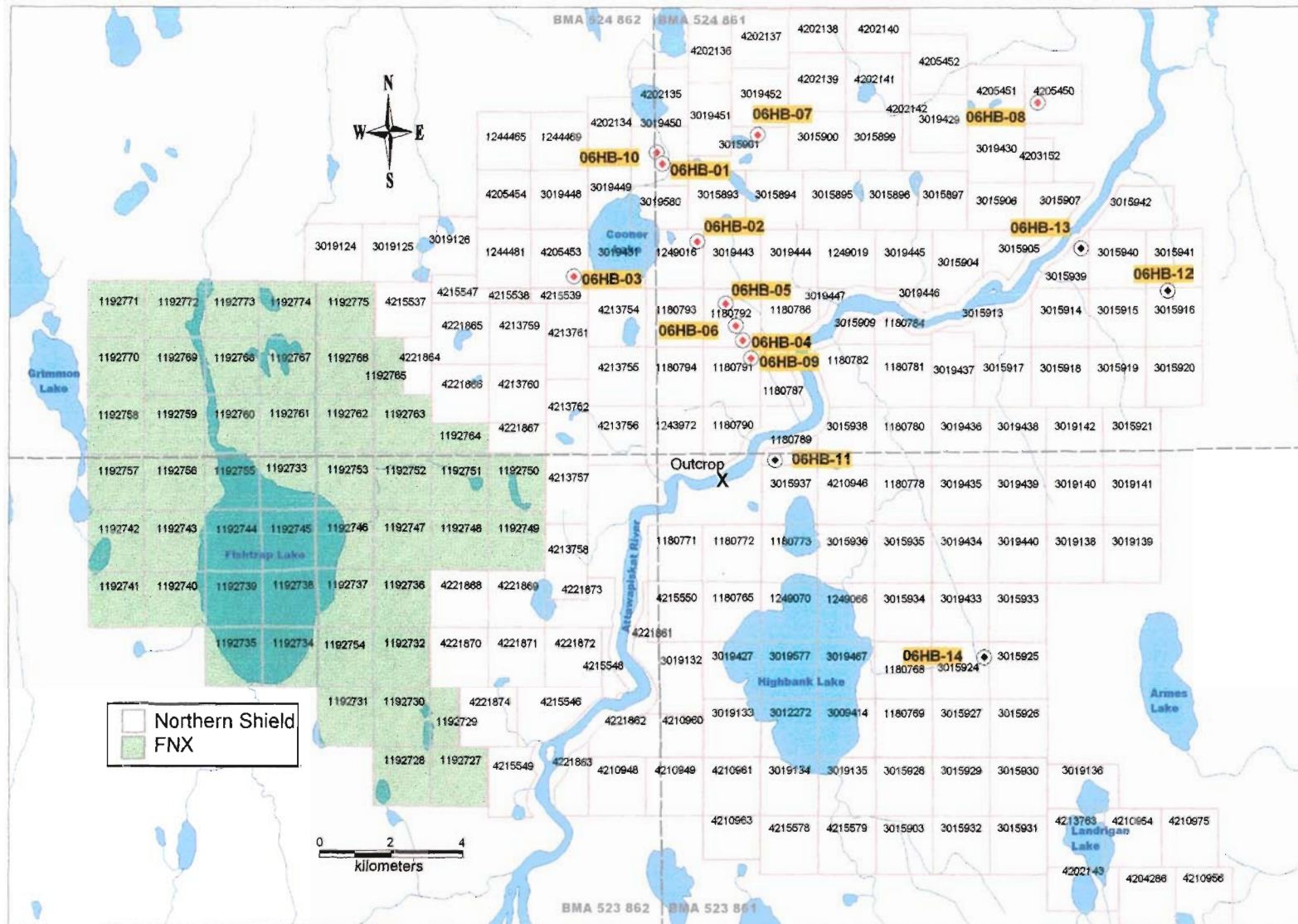


Figure 1.1. Highbank Lake Property location map.



A wide variety of exploration work has been completed at the Highbank Lake Property since 2003 and includes different types of overburden geochemistry, heavy mineral count and chemistry, litho-geochemistry, diamond drilling, airborne and ground geophysical surveying and petrographic study of core and boulder samples, including mineral chemistry by scanning electron microscope (SEM).

Very encouraging results were obtained from a large coverage of MMI® (Mobile Metal Ions) geochemistry on 23 profiles for a total of 75 line kilometres. Significant anomalies in one or many of the elements Pd, Pt, Ni, Cu, Co and Cr were identified and some are consistent along layers defined by the airborne magnetic surveys. Three lines of deep looking IP survey were carried out approximately over MMI® lines in the northwestern portion of the Property, where PGE and other metal anomalies were well defined. A number of chargeability and conductivity anomalies were identified with the survey and were used, in combination with the MMI® results, to define drill targets for the summer 2006 program.

2.0 GEOLOGICAL SETTING

2.1 Regional Geology

The Highbank Lake Property lies within the Sachigo Subprovince of Northwestern Superior Province in Northern Ontario. The Superior Province covers an area of 1,572,000 km², which represents 23% of the earth's exposed Archaean crust (Thurston, 1991). The Superior Province is divided into numerous Subprovinces (Figure 2.1), each bounded by linear faults and characterized by differing lithologies, structural/tectonic conditions, ages and metamorphic conditions. These Subprovinces can be classified as one of four types: 1) Volcano-plutonic, consisting of low-grade metamorphic greenstone belts, typically intruded by granitic magmas, and products of multiple deformation events; 2) Metasedimentary, dominated by clastic metasedimentary rocks and displaying low grade metamorphism at the Subprovince boundary and amphibolite granulite facies towards the centres; 3) Gneissic/plutonic, comprised of tonalitic gneiss containing early plutonic and volcanic mafic enclaves, and larger volumes of granitoid plutons, which range from sodic (early) to potassic (late); and, 4) High-grade gneissic Subprovinces, characterized by amphibolite to granulite facies igneous and metasedimentary gneisses intruded by tonalitic, granodioritic and syenitic magmas (Card and Ciesieliski, 1986).

The Sachigo Subprovince represents the northernmost extent of exposed Archaean basement rocks of the Superior Province. It is bounded to the northwest by granitoid and mafic-ultramafic rocks of the Thompson Belt, interpreted to represent a collisional zone formed during the Trans-Hudson Orogen



(1.8 Ga). To the east, the Sachigo is bounded by the Winisk River Fault, which separates the Superior Province from rocks of the Fox River Belt of the Trans-Hudson Orogen, while the southern limit of the Sachigo Subprovince is in contact with the Berens River granite-greenstone Subprovince.

Until recently, much less was known about the Sachigo Subprovince than the more accessible granite-greenstone belts to the south, with most work concentrating on the handful of isolated greenstone belts found enclosed within the granitic and gneissic units (e.g., Bennett and Riley, 1969; Ayres, 1974; Card and Ciesielski, 1986; Thurston et al., 1991). A number of differences can be noted between the greenstone belts of the Sachigo Subprovince and other greenstone belts to the south, including some of the oldest ages for greenstones in the Superior Province and narrower, southeast-trending belts relative to east-trending belts in the southern Superior Province. The Berens River granite-greenstone Subprovince, immediately to the south of the Sachigo Subprovince, is interpreted to represent a deeply eroded arc or micro continental core, while rocks of the Sachigo Subprovince are considered remnants of widespread, early (3.0 Ga) sialic crust (Thurston et al., 1991).

Recent work integrating mapping, geochronology and isotopic studies has outlined important subdivisions of the Sachigo Subprovince (e.g., Skulski et al., 2000; Corkery et al., 2001; Stone, 2005; Stott and Rayner, 2004 and Rayner and Stott, 2005), which are generally defined as the following tectonic terranes: 1) the 3.0 Ga North Caribou Terrane to the south; 2) a juvenile 2.73 to 2.72 Ga Oxford-Stull Terrane in the centre; and, 3) the reworked 3.6 Ga crust of the Northern Superior Superterrane to the north. There is general agreement on these subdivisions although there is still a lot of uncertainty in regards to the exact location of the boundaries, especially on the eastern side where little to no data is available. The Fishtrap Intrusive Complex, which underlies the Property is located at or near the boundary between the Oxford-Stull Terrane to the north and the North Caribou Terrane to the south.

Felsic to Intermediate Intrusive Rocks

Granitic rocks represent the dominant lithology in the Sachigo Subprovince and include, from oldest to youngest: gneissic tonalites; foliated tonalites; a muscovite granodiorite–granite series; and, a diorite-monzonite-granodiorite suite (Thurston et al., 1991).

Gneissic Tonalites

These intrusive rocks are amongst the oldest examples of plutonic rocks (Thurston et al., 1991), and can be divided into melanocratic (>20% amphibole) and leucocratic (<20% amphibole) series, although dominated by the latter. These rocks are heterogeneous, typically cut by several generations of granitic dikes, and may contain mafic inclusions up to kilometre-scale in diameter (Thurston et al., 1991). The origin of these inclusions can be traced back to supracrustal xenoliths



and tectonized mafic dikes. Tonalitic rocks of the Sachigo Subprovince display a general west to northwest strike in their layering. This layering shows divergence around younger intrusive complexes and in the vicinity of shear zones. Contact relationships with greenstone terranes are almost invariably tectonic, while more gradational with other felsic intrusions (Thurston et al., 1991).

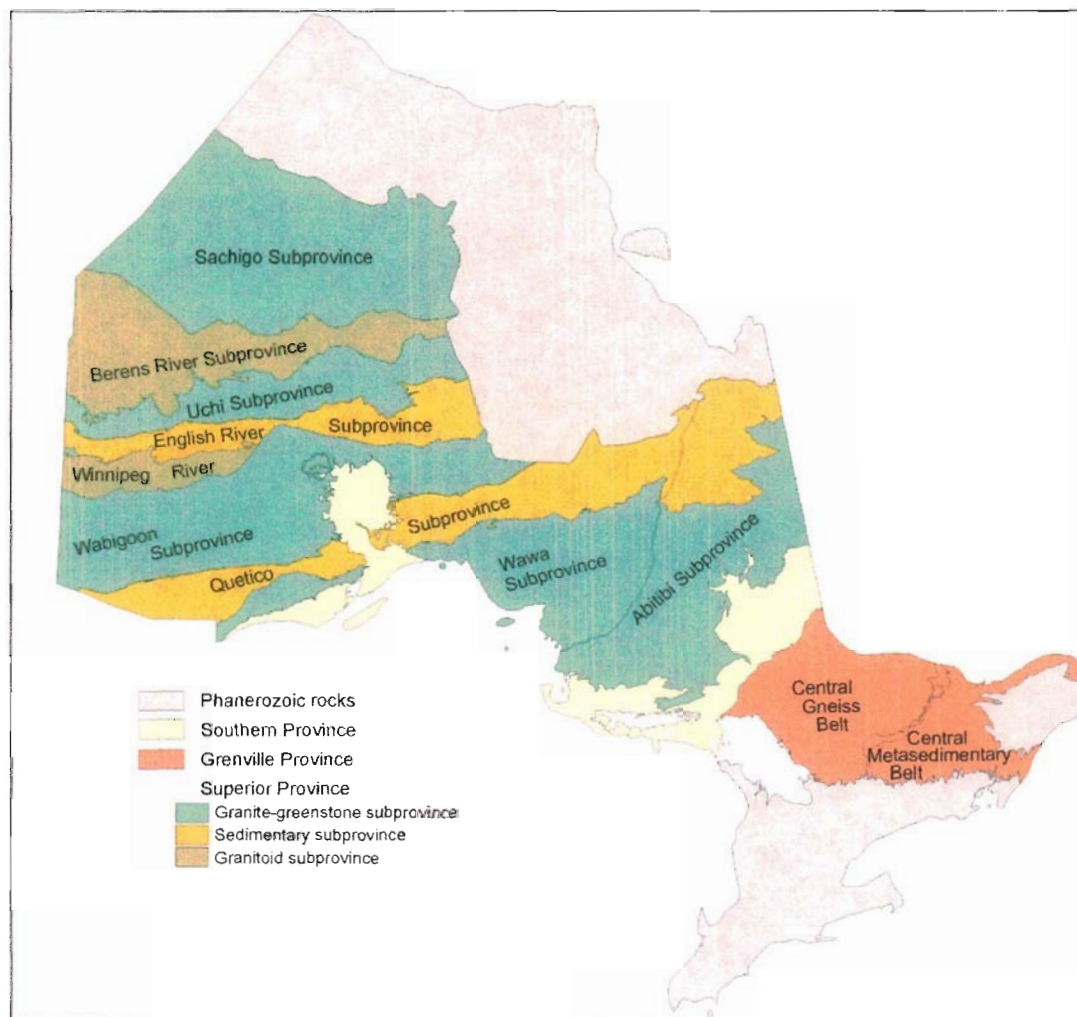


Figure 2.1. The Superior Province of Ontario

Foliated Tonalite

In the Sachigo Subprovince, foliated tonalites include mafic and felsic members, which characteristically form irregular batholiths and stocks at the interface between greenstone terranes and massive tonalite (Stone, 1989; Thurston et al., 1991). Mafic tonalite typically contains less than 20% mafic minerals, which is usually hornblende but more felsic versions are dominated by biotite in their mafic assemblage. Rocks are generally medium- to coarse-grained, and relatively homogeneous, although megacrystic and clotty amphibole are common in hornblende tonalites and granodiorites (Thurston et al., 1991). The intrusions are well foliated, with foliation defined by



oriented lenticles of quartz, plagioclase, biotite and hornblende (Thurston et al., 1991).

Massive Granodiorite-Granite

Within the granodiorite to granite suite, feldspar-megacrystic granodiorite and biotite granodiorite form the two most voluminous lithologies (Thurston et al., 1991). Megacrystic varieties are grey to pink, and contain feldspar megacrysts up to 2 cm in length and generally less than 15% mafic constituents, including possible relict clinopyroxene (Thurston et al., 1991). Magnetite is common in this series and accounts for its high magnetic signature in regional aeromagnetic surveys. Massive biotite-granodiorites are weakly foliated, pale pink in colour, and contain irregular pods of pegmatitic material (Thurston et al., 1991). Mafic minerals, dominated by biotite, typically make up less than 10% of the rock.

Muscovite-Bearing Granite

Members of this suite range from granodiorite to granite, are coarse-grained to pegmatitic, and often contain metasedimentary xenoliths. They include two-mica granites and leucogranites, which are commonly associated with major shear zones in the Sachigo Subprovince. Their young ages (2653 Ma) compared to two-mica granites in the southern Superior Province, smaller sizes and tectonic association suggest that these granites may have formed from melting of metasedimentary units during late block-to-block movement (Thurston et al., 1991).

Diorite-Monzonite-Granodiorite

The diorite-monzonite-granodiorite suite of rocks represents the youngest felsic to intermediate intrusion event in the Sachigo Subprovince. They range between quartz-diorite and quartz-monzonite. Mafic minerals can be abundant (up to 30%) and are typically dominated by hornblende over biotite, with occasional pyroxene (Thurston et al., 1991). Rocks of this suite show a spatial association with mafic intrusive rocks, and usually display a gradational transition to gabbroic compositions. Their mafic mineralogy and inclusion-rich nature suggest that they are mantle derived, similarly to monzodiorite plutons in the southern Superior (Stern et al., 1989).

Mafic Intrusive Rocks

Pre-tectonic mafic intrusive rocks in the Sachigo Subprovince are considered to be synvolcanic by Thurston et al. (1991), and comprise predominantly mafic to ultramafic sills. Post-tectonic magmatism in the northwestern Superior Province includes three diabase dike swarms, including the 2170 Ma Marathon swarm (Fahrig and West, 1986), 1883 Ma Molson Swarm (Heaman et al., 1986) and the 1267 Ma MacKenzie Swarm (LeCheminant and Heaman, 1989).

Big Trout Lake Intrusive Complex

The Big Trout Lake Intrusive Complex is the largest exposed mafic-ultramafic intrusion of the Sachigo



subprovince, and consists of a folded 5,000 m thick sill containing a 500 m thick lower ultramafic sequence of dunite, chromite and chromite-rich layers overlain by homogeneous peridotite. Two batches of tholeiitic magma are indicated in the formation of the sill (Borthwick and Naldrett, 1984).

Lansdowne House Igneous Complex

The Lansdowne House Igneous Complex is well described in two technical reports for Aurora Platinum Corp. (Winter, 2003; Mazur and Osmani, 2002). It occurs in the 2.7 to 2.8 Ga Oxford Lake – Stull Lake Terrane, near the faulted contact with the 2.9 to 3.0 Ga North Caribou Terrane. The complex can be separated into three zones: 1) Ultramafic Basal zone composed of layered peridotite and pyroxenite; 2) Middle zone, composed of cumulate gabbro and minor ultramafic units; and, 3) Upper zone, composed of a sequence of diorite, leucogabbro, anorthosite and magnetite-gabbro. Both sulphide-poor horizons rich in PGE and Cu-Ni disseminated to massive sulphides were encountered in the Middle zone, whereas V-Ti rich zones are described in magnetite-gabbro of the Upper zone.

Fishtrap Intrusive Complex

The Fishtrap Intrusive Complex is situated in the extreme southeast corner of the Sachigo Subprovince, and is partly overlain by Paleozoic sedimentary rocks of the Hudson Platform (Thurston et al., 1991). Prior to this drill program, very little work had been undertaken on the complex, and its definition was based on very limited bedrock exposure. Outcrops consist of gabbroic lithologies in the western section of the complex and anorthosite in the east.

2.2 Property Geology

The Highbank Lake Property was staked to cover an area interpreted from geophysical data to be the eastern continuation of the Fishtrap Intrusive Complex. This intrusive complex, as currently mapped, is identified on provincial geology maps as a 20 km x 10 km ultramafic-mafic intrusion centered on Fishtrap Lake (Figure 2.2). Early mapping of the complex located only two outcrops on the northeast shores of Fishtrap Lake, where the lithology was described as a very coarse-grained (up to 5 x 1 inch crystal sizes) hornblende-gabbro (Thurston and Carter, 1970). A third outcrop, located downstream in the Attawapiskat River just north of Highbank Lake, was described as a dioritic rock consisting of 15-20% quartz, 30% hornblende and dark grey plagioclase feldspar. This body is currently mapped on provincial geology maps as a 10 km diameter diorite intrusion, separate from the Fishtrap Intrusive Complex. In 2000, and prior to any field visit, Northern Shield reinterpreted the magnetic data as a partially over-turned layered intrusion with the “dioritic” rocks in the vicinity of Highbank Lake potentially representing the end stages of fractionation of the ultramafic-mafic magma as seen at Fishtrap Lake. This reinterpretation was largely based on the provincial magnetic maps that showed crude concentric layering of the rocks at Highbank Lake. As is described in more detail further in this



Report, the outcrop previously reported as "dioritic" has now been identified by Northern Shield as magmatic layers of anorthosite and gabbro.

The high resolution airborne magnetic survey completed by Northern Shield in 2003 shows a remarkably well-banded and concentric signature presumed to represent the alternating lithologies of a layered intrusion (Figure 2.3). Three sequences were defined on the basis of the magnetic signatures (Figure 2.3): 1) The Layered Sequence, located on the eastern portion of the intrusion, displays well defined layering reflected in low and high magnetic signatures; 2) The Middle Sequence has a generally low magnetic signature and envelops the Layered Sequence; and, 3) The Lower Sequence has a generally high magnetic signature and forms the western portion of the intrusion.

Palmer (2003) describes the structure of the complex to consist of D2 isoclinal folding of (magmatic) layers with distinct attenuation of limb. Palmer also interprets radial fracturing associated with the extensional regime created by D2 folding. While folding of a layered dike or sill is possible, it is also possible that the curvi-linear banding is the result of an oblique section through a partially overturned, funnel shaped, layered intrusion. The "attenuation of limbs" and "radial fracturing" described by Palmer (2003) are unlikely to have occurred together as the former occurs in a high-strain, highly ductile environment and the latter occurs in a high-strain, brittle regime.



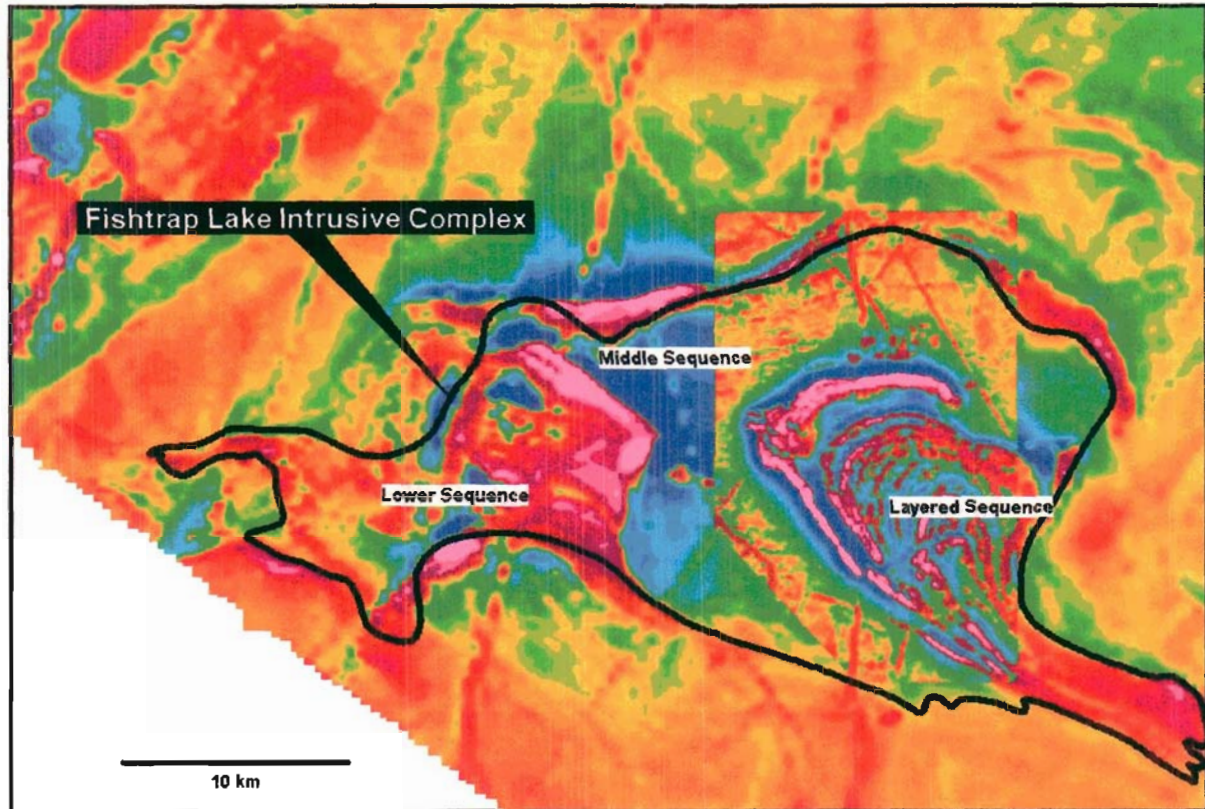


Figure 2.3. Revised outline of the Fishtrap Intrusive Complex as expanded and interpreted from geophysical Survey. Background survey is from Ontario Geological Survey (2003) and high resolution area (centered on the Layered Sequence) is from high resolution airborne magnetic survey by Northern Shield Resources.

The only outcrop within the Highbank Lake Property occurs as an irregular-shaped island on the shore of the Attawapiskat River (Figures 2.4a and b). The outcrop, located at UTM 554080mE and 5802520mN (NAD 83, Zone 16), is approximately 200 m x 75 m in size and although the outcrop has not been mapped in detail, it appears to be composed dominantly of alternating layers of metamorphosed anorthosite and gabbro with volumetrically sub-ordinate ultramafic (amphibolite) layers (Figures 2.4a and b). At this location, layers generally strike north-south and dip 55° east. This is consistent with the dip modelled from ground magnetic survey. A number of narrow, east-west trending shear zones were also observed on the outcrop. These shear zones are generally only a few centimetres in width and the surrounding anorthosites and gabbros are massive, displaying no obvious penetrative foliation.



Figure 2.4a. Magmatically layered gabbros and anorthosites on an outcrop in the Attawapiskat River, north of Highbank Lake. This outcrop was previously mapped as "diorite" by Thurston and Carter (1970).



Figure 2.4b. Possible rhythmic layering on the same outcrop as in Figure 2.4a.



The anorthosites are described as consisting of 90-95% plagioclase up to 1 centimetre in length. Other minerals in the rock include epidote, chlorite and amphibole.

The gabbro is composed of plagioclase and amphibole, with accessory magnetite. Local pyrrhotite was also observed. No visual evidence of penetrative fabric was detected.

Rhythmically layered horizons between one and two metres thick were observed on the outcrop. These horizons are composed of alternating one to two centimetre thick layers of mafic, green-black amphibole-rich and felsic, anorthositic units. The "gneissic banding" reported by Palmer (2003) is reinterpreted to be rhythmic layering resulting from magmatic processes.

Based on the identification of magmatically layered rocks in the Highbank Lake area, the similarity of the gabbros at Highbank and Fishtrap Lake ("hornblende" gabbros), and considering very recent airborne geophysics, the Fishtrap Intrusive Complex is now interpreted to be a layered mafic-ultramafic intrusion that covers an area of approximately 500 km². The new interpreted boundaries of the Fishtrap Intrusive Complex are shown on Figure 2.3. The approximately 80 metre section of drill core recovered from diamond drilling carried in 2003 on this sequence shows dominantly medium- to coarse-grained gabbro and sub-ordinate very coarse-grained gabbro, which locally displays cumulate textures. Numerous layers of coarse-grained to pegmatitic anorthosite and minor intervals of pyroxenite are also present. Trace amounts of sulphide, including pyrite, pyrrhotite and chalcopyrite are sparsely distributed throughout the core.

To the north, the Fishtrap Intrusive Complex is in contact with a thin (5 km wide) lens of Archaean metasedimentary rocks, while a small section of mafic metavolcanic rocks is partially enclosed by rocks of the Fishtrap Intrusive Complex at its western limits (Figure 2.2). The extensive tonalitic gneisses, which dominate the area, are hosts to the complex along with minor metasedimentary and metavolcanic rocks. Younger Palaeozoic carbonate rocks occur to the east, and partially cover the eastern section of the Fishtrap Intrusive Complex at Highbank Lake.

Although no exposure of dikes have been observed on the Property, at least two sets of diabase dikes are presumed to occur based on the orientations of linear magnetic features, and the description of known dikes in the surrounding area. These include at least two dikes of the MacKenzie Swarm (1267 Ma; LeCheminant and Heaman, 1989), which trend ~330° and cut through the entire length of the Fishtrap Intrusive Complex. Five other dikes with variable orientation occur in the middle of the Property.



2.3 Quaternary Geology

The dominant ice direction in the area of the Fishtrap Intrusive Complex, as determined from air-photo and satellite image analysis by Northern Shield is approximately 165°. This differs significantly from the area east and west of Highbank Lake, where the glacial fabric trends 230°-250° (Thurston and Carter, 1970). However, striations trending 250-265° have been noted on the outcrop and proximal to the Property. The boundary between these two zones of differing ice direction is sharp. Although detailed quaternary studies have not been carried out in the area, the till is generally composed of pebble-rich clay and is estimated to be between 35 and 60 m thick. An esker is present in the center of the Property directly to the north of Highbank Lake, and locally controls the path of the Attawapiskat River.

3.0 DIAMOND DRILLING PROGRAM

3.1 Introduction

Northern Shield Resources completed a 2048 metre diamond drill program in June and July 2006, a 1330 metre program in October and November 2006 and is currently carrying a 3000 metre program on its Highbank Lake Property in northwestern Ontario. The work reported in this assessment was supervised by Christine Vaillancourt, P.Geol. The programs are funded by Impala Platinum Holdings Limited of South Africa as part of the terms of an earn-in option agreement. The programs were designed to test a number of targets generated through geophysical surveys and surface geochemistry on the Fishtrap Intrusive Complex at Highbank Lake. This report describes diamond-drill holes 06HB-01 to 10 except for 08 for which a report was filed in November 2006. The location of the holes and the orientations, dips and lengths are reported on Figure 3.1 to 3.6. The logs for each hole are detailed in Appendix 2 and the locations of the samples that were assayed are reported in Appendix 3. The sections for the 9 holes are in Appendix 4.



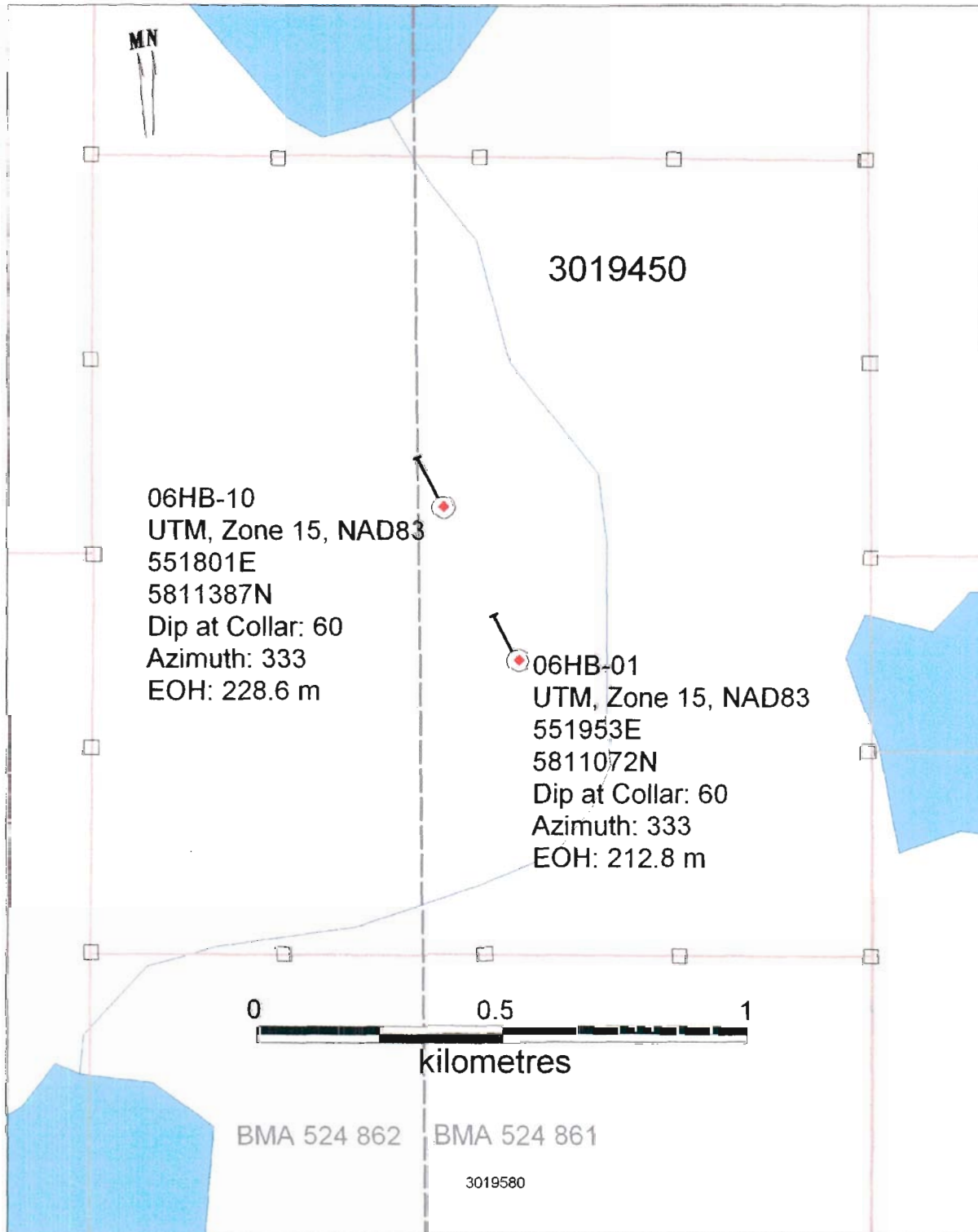


Figure 3.1. Location of diamond-drill hole 06HB-01 and 06HB-10 within claim number 3019450.



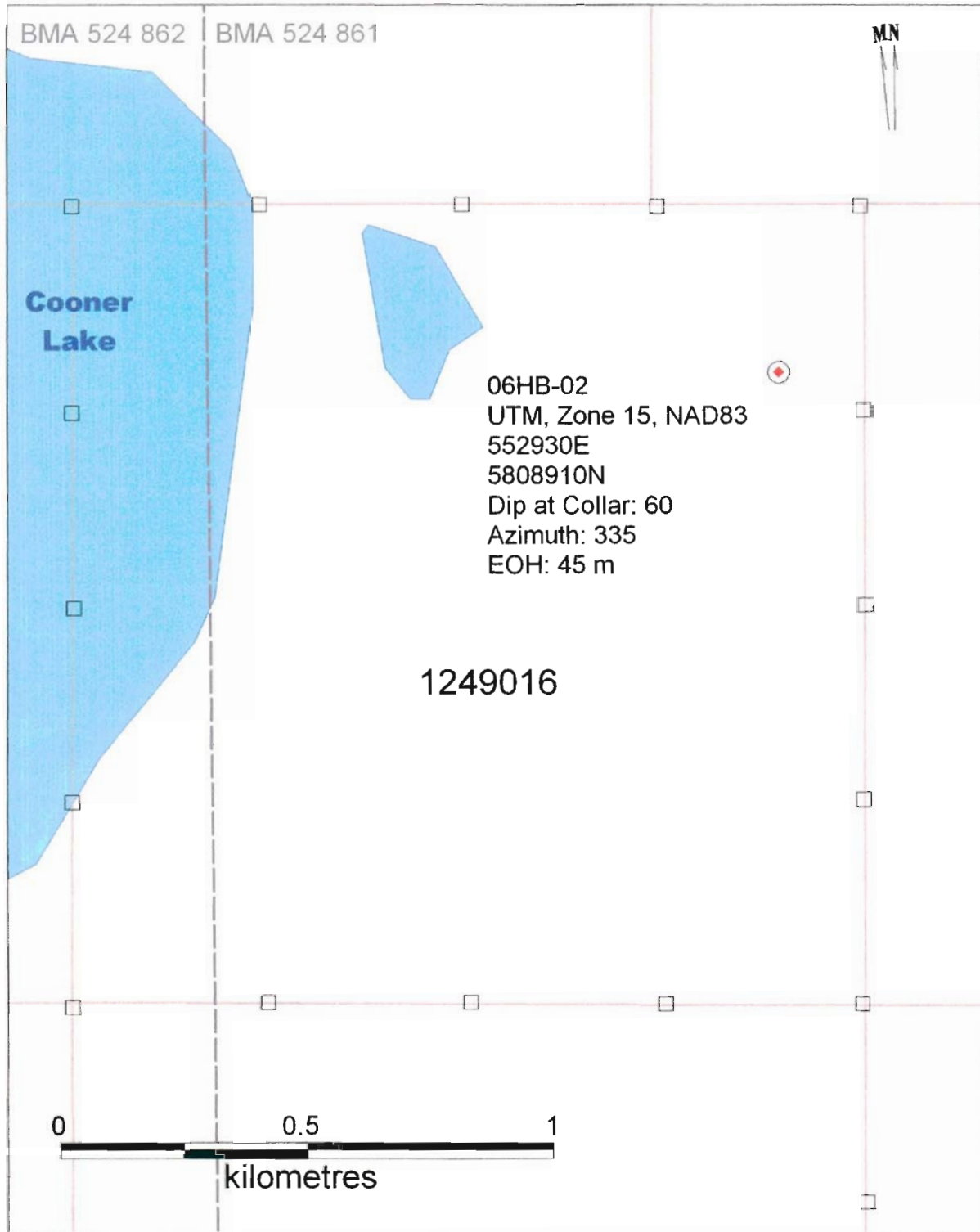


Figure 3.2. Location of diamond-drill hole 06HB-02 within claim number 1249016.



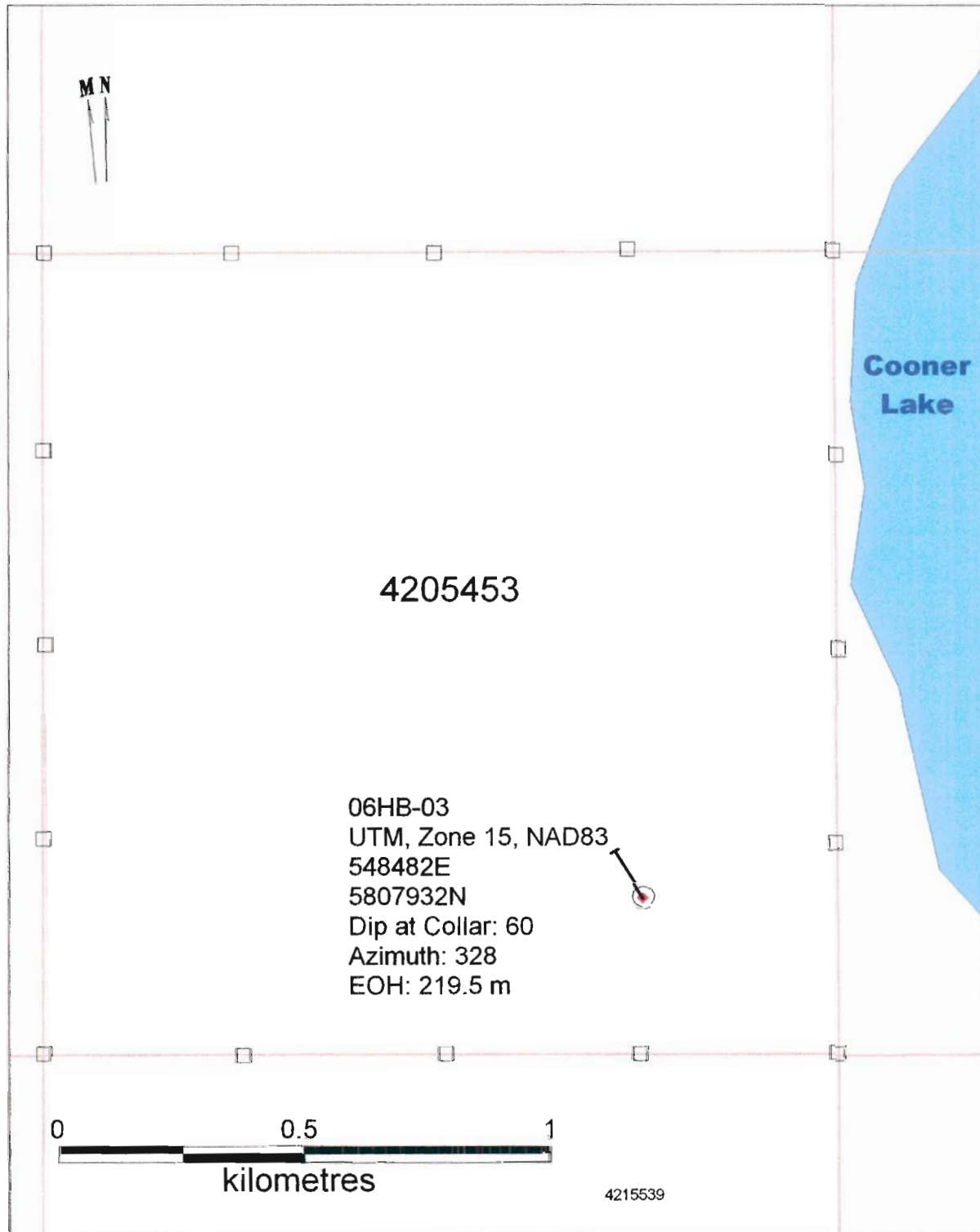


Figure 3.3. Location of diamond-drill hole 06HB-03 within claim number 4205453.



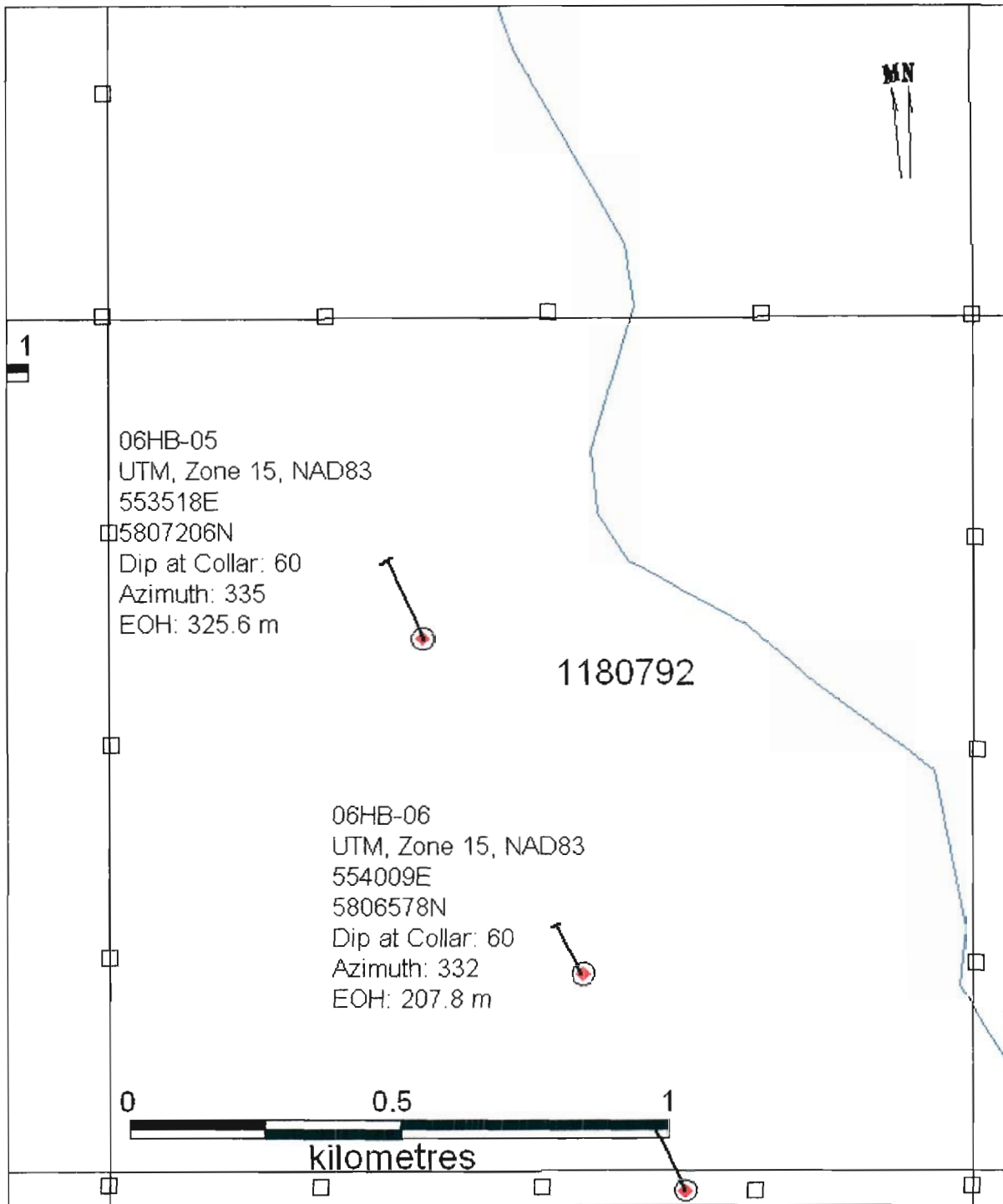


Figure 3.4. Location of diamond-drill hole, 06HB-05 and 06HB-06 within claim number 1180792.



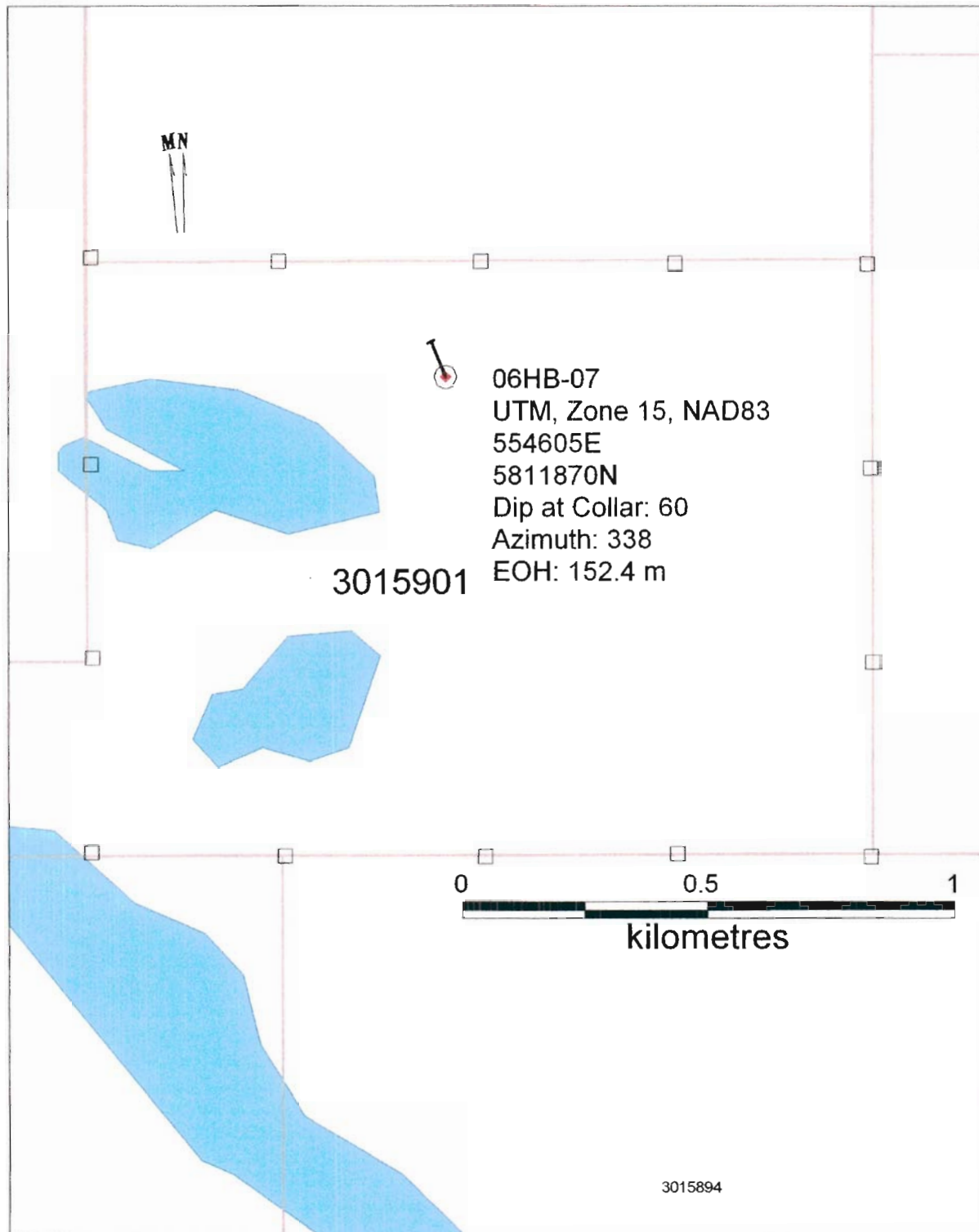


Figure 3.5. Location of diamond-drill hole 06HB-07 within claim number 3015901.



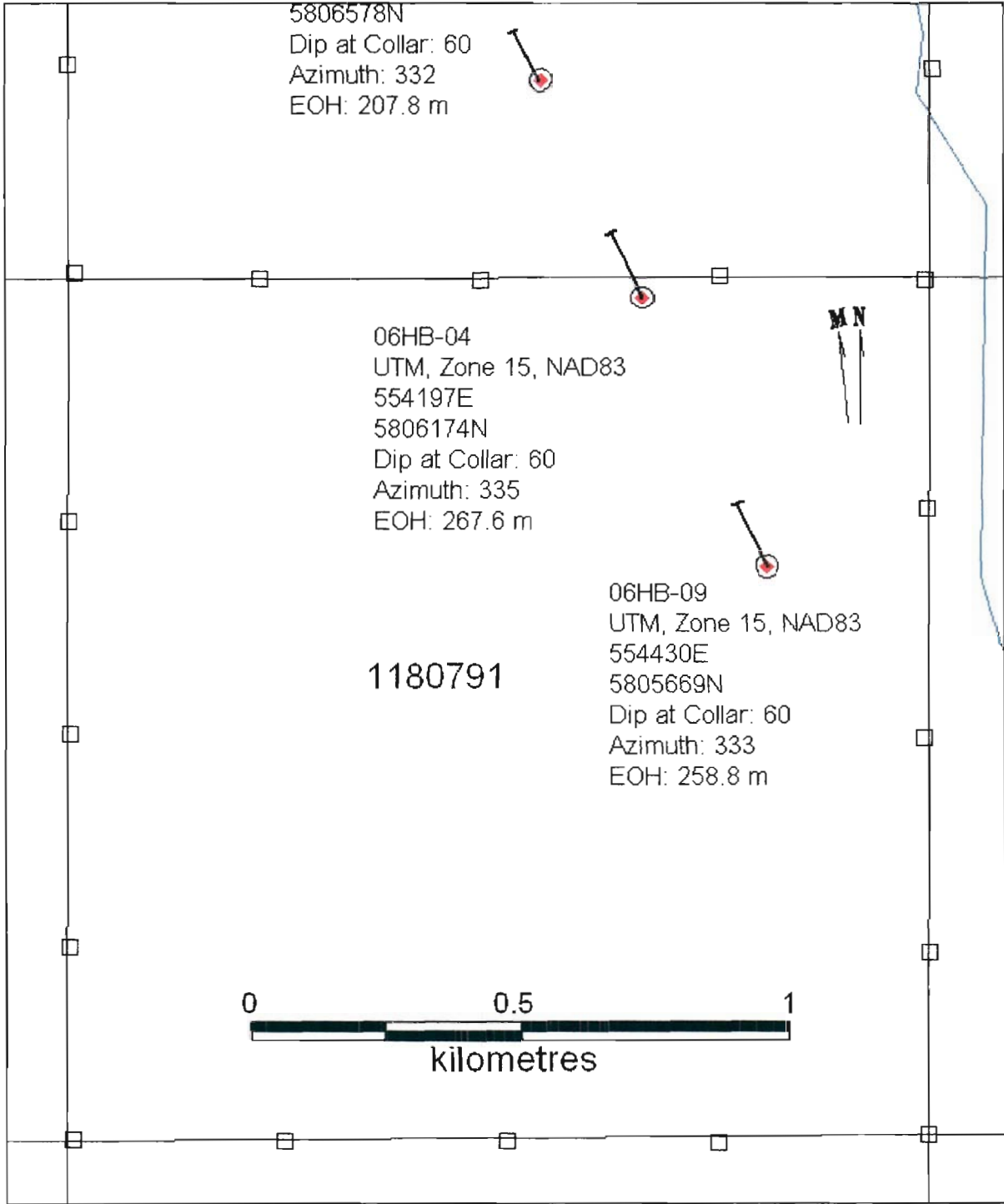


Figure 3.6. Location of diamond drill-hole 06HB-04 and 06HB-09 within claim number 1180791.



3.2 Summer 2006 Diamond-Drilling Program

The summer drill program was designed to test a series of targets based on MMI® anomalies, IP anomalies and geological models. The drill, a JKS Super300, and drill crew were supplied by Cartwright Drilling Inc. of Goose Bay, Labrador.

The drill was flown in a "large-door" Hawker Siddely 748 aircraft from Pickle Lake, Ontario to the airstrip at the Ogoki Reserve, 60 km southeast of Highbank Lake. From Ogoki, the drill was slung in multiple parts to the first drill site by an A350-B2 helicopter of Expedition Helicopters Inc. Slingshotting was conducted over a two day period, after which the on-site helicopter was down-sized to a Bell 206 Long Ranger. Mobilization commenced on May 31st, 2006 and drilling started on June 2nd, 2006. A stock pile of diesel and jet-fuel was flown in from Hearst Air Service base at Carey Lake, Ontario in an up-grossed Turbo Otter. Throughout the drill program fuel and supplies were brought from Hearst several times a week.

Drilling commenced using BTW gauged rods within BQ casing. Because the drill was struggling to penetrate the thick overburden, NW casing was subsequently brought in and used in conjunction with the BW casing to "telescope" through the overburden. The holes were positioned using a GPS and drilling direction adjusted with a compass. The variation of dip during drilling was measured with acid tests.

DDH 06HB-001			
Collar UTMN:	5,811,072	Core Angle	55°-70°
Collar UTME	551,953	Dip of Layering	50°-65°
Drilling Azimuth	333°	Main Lithology	porphyritic hornblende gabbro (feldspathic pyroxenite)
Dip	-60°	Main Mineralization	Ilm+py+po, cpy

This hole was designed to test contact style mineralization at the north end of P11. The target is supported by anomalous MMI® and a strong chargeable IP anomaly corresponding to low resistivity.

Bedrock was reached at a downhole depth of 48 metres. Many occurrences of caving in the hole due to faults and strong alteration zones encountered in bedrock rendered the progression of the hole very slow as rods had to be pulled frequently. Drilling was stopped at a down hole depth of 212 metres because the drill rods became irretrievably stuck in blocky and loose rock. Core-tube, casing shoe, 47 metres of BTW casing and 175 metres of BTW rods were lost.

The dominant rock type intersected in the first portion of the hole was a coarse grained porphyritic



hornblende gabbro with lesser amounts of finer grained gabbro, anorthosite and pyroxenite. Ilmenite is the dominant opaque mineral (locally up to 15%) and often occurs as coarse blebs with a white halo (leucoxene?). Magnetite is also abundant in specific units. Pyrite, pyrrhotite and occasional chalcopyrite are common in the sections richest in ilmenite, which are also devoid of plagioclase megacrysts. Pyrite is also seen in the shear zones in association with silicification or fractures. Large porphyroblasts of garnet becomes prevalent in the lower portion of the hole, and are interpreted to be the result of contact metamorphism from the emplacement of late granitoid batholiths. A felsic porphyry dike approximately 2 metre-wide was intersected and several narrow felsic dykes and shear zones occur near the bottom of the hole.

It is likely that the coarse disseminated ilmenite and sulphides were the cause of the IP chargeability anomaly that this hole targeted and may be the source for the elevated nickel and PGEs seen in the overlying soil samples.

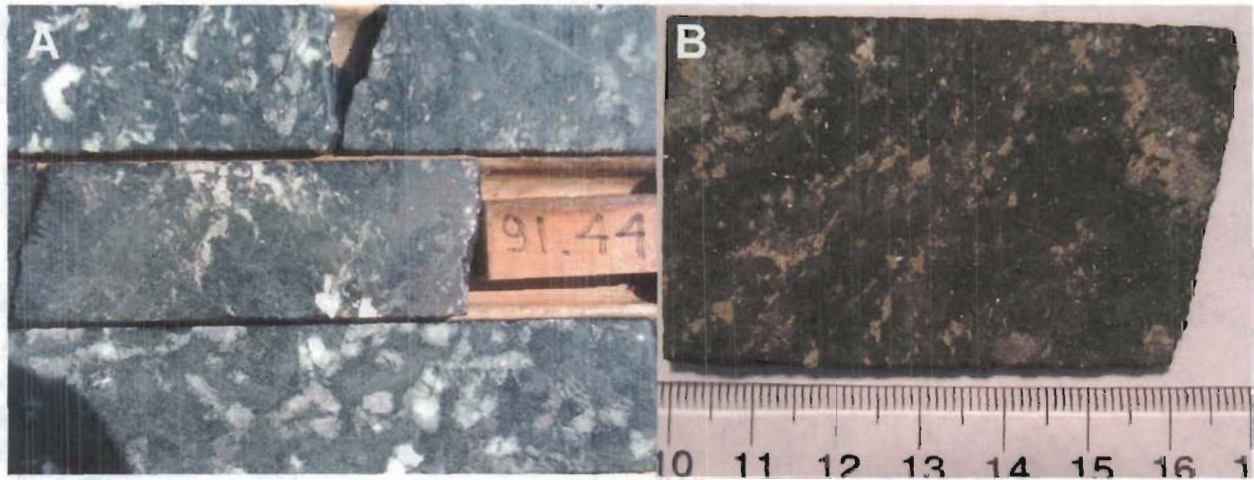


Figure 3.7. Core from hole 06HB-01. A) Megacrystic gabbro to pyroxenite and B) Pyrite and ilmenite in pyroxenite.

DDH 06HB-002			
Collar UTMN:	5,808,909	Core Angle	
Collar UTME	552,928	Dip of Lithology	
Drilling Azimuth	333°	Main Lithology	Hole abandoned in overburden
Dip	-60°	Main Mineralization	

This hole was designed to test the Lower Zone MMI anomaly at a point where there is a subtle chargeability anomaly and distinct change in resistivity. The casing became stuck in overburden at a depth of 45 metres. It was decided to move along strike to P14 where overburden was interpreted to be thinner.



DDH 06HB-003			
Collar UTMN:	5,807,934	Core Angle	85-90
Collar UTME	549,478	Dip of Layering	30-35
Drilling Azimuth	333°	Main Lithology	Leucogabbro, melagabbro-hornblende gabbro, anorthosite
Dip	-60°	Main Mineralization	

This hole was designed to test the MMI-defined Lower Zone, which displays anomalies in Cr, Cu, and PGE on P14. The hole was drilled to a depth of 219.5 metres.

Lithologies intersected include well layered leuco to melagabbro, with some amphibolite and anorthosite. General grain size is medium but up to very coarse. Layering defined by varying amount of plagioclase in "bands" of ~1 to 10 cm. Foliation is generally weak to absent, except for specific zones of high strain, which are a few centimetres and up to 5 metres. Quartz veins are locally relatively abundant (some have tourmaline), as are zones of very strong silicification. Other alteration minerals locally present are epidote, chlorite, sericite and pink (potassic?) alteration.

Common lithologies are:

1. Porphyritic gabbro with medium-grained matrix of mostly hornblende and very large plagioclase phenocrysts/glomerocrysts, mostly concentrated in layers of a few centimetres. Some gabbros have remnant texture of large pyroxene oikocrysts (4-5 cm) crystallized around plagioclase cumulates.
2. Anorthosite, typically less than 30 cm wide sections.
3. Pyroxenite, ~10-20 cm intersections, typically more foliated. Some less foliated sections show what seems to be remnant texture of pyroxene mezzo to adcumulate. Actinolite needles are locally present. These ultramafic intersections commonly have traces to 2% disseminated sulphides (py±po±cpy).
4. Medium-grained gabbro, hornblende, local actinolite and/or chlorite and/or biotite.



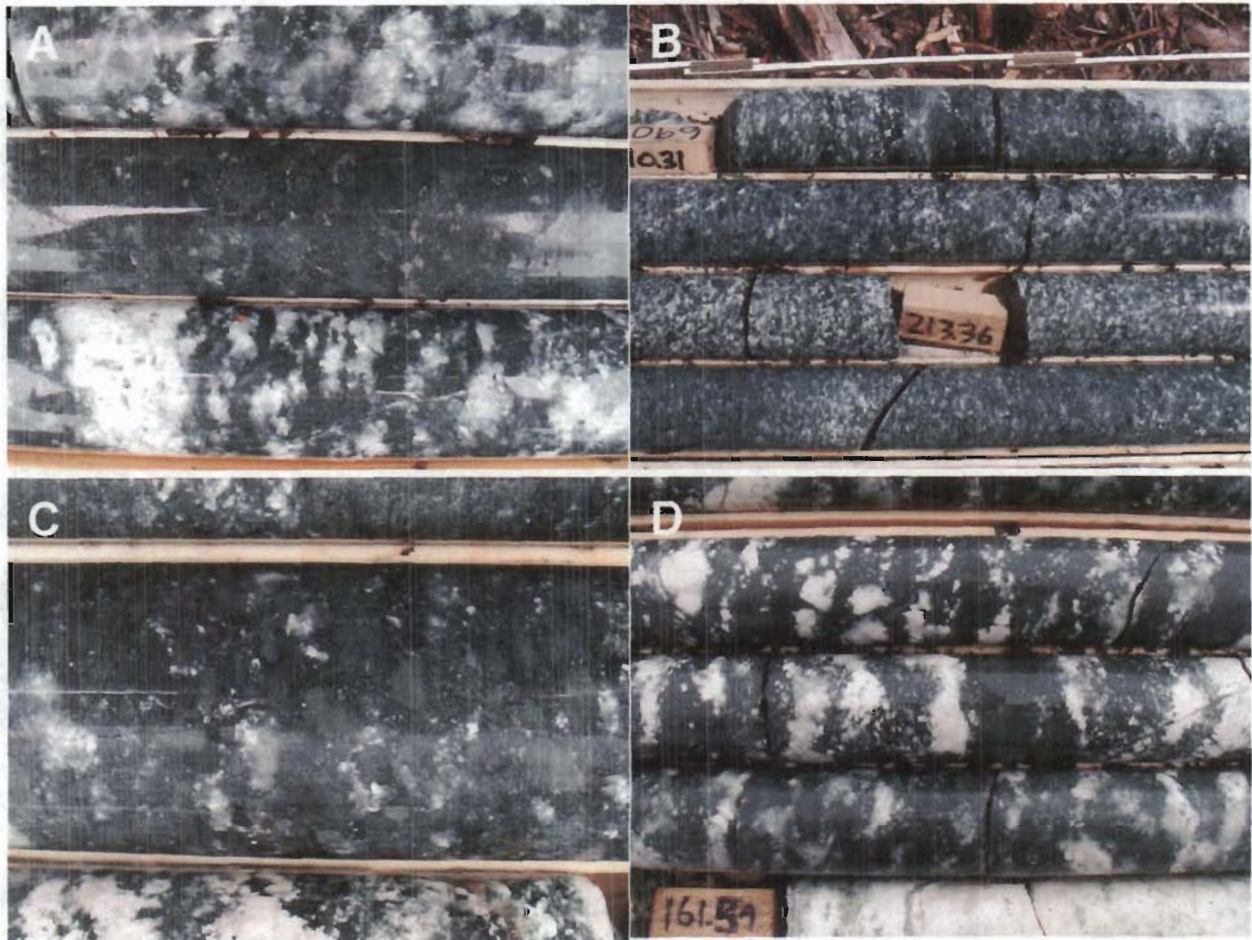


Figure 3.8. Core from hole 06HB-03. A) Pyroxenite with interstitial pyrite, B) Granular gabbro, C) Pyroxenite and D) Banded megacrystic gabbro.

DDH 06HB-004			
Collar UTMN:	5,806,174	Core Angle	90, 60°
Collar UTME	554,197	Dip of Layering	30°-60°
Drilling Azimuth	335°	Main Lithology	Leucogabbro, magnetite-hornblende gabbro
Dip	-60°	Main Mineralization	Massive magnetite reefs, diss to blebby py, po, cpy

This hole was designed to investigate the source of high chargeability related to low resistivity obtained on the IP survey, which also corresponds to weak MMI anomalies in Pd and Ni.

Bedrock was reached at a downhole depth of 63.5 metres. Drilling was delayed because of sand washing in the hole and damaging the drill bit. Hole was stopped at a downhole depth of 268 metres because the risks of losing everything as in hole 06HB-001 became too great.



There are four dominant lithologies in this hole, and contact between them is typically gradual. They are:

1. Hornblende-magnetite gabbro

This unit is medium-grained and has intergranular texture. It generally contains about 50% plagioclase and variable proportions of magnetite and hornblende. Chlorite may be present locally.

2. Magnetite gabbro

This unit is medium-grained and composed of plagioclase and magnetite in variable proportions but typically more than 60% plagioclase.

3. Massive magnetite

This unit is composed of massive magnetite with multiple pale green fractures, possibly very fine chlorite. The widest intersection of this unit is 1.6 metres. Traces of pyrite and chalcopyrite are commonly associated with the massive magnetite intersections.

4. Ultramafic rock

This unit is generally medium-grained and appears to have taken more deformation than surrounding units. It is composed of variable amounts of chlorite and hornblende and actinolite needles are locally abundant. This unit also commonly hosts disseminated pyrite.

Other units intersected in this hole include medium to very coarse-grained leuco to melagabbro, anorthosite and feldspar-porphry dikes. Remnant textures of possible oikocrysts were observed in leucogabbros.

Rocks are generally undeformed to weakly foliated but narrow shear zones are present along with strongly veined and altered zones. Different alteration types include quartz and epidote, rusty orange – probably potassic alteration and chloritic alteration with accessory pyrite.

Pyrite and chalcopyrite are present from traces to 1-2% and mostly associated with the massive magnetite or ultramafic sections. They are also found in variable amount and grain size in quartz veins.



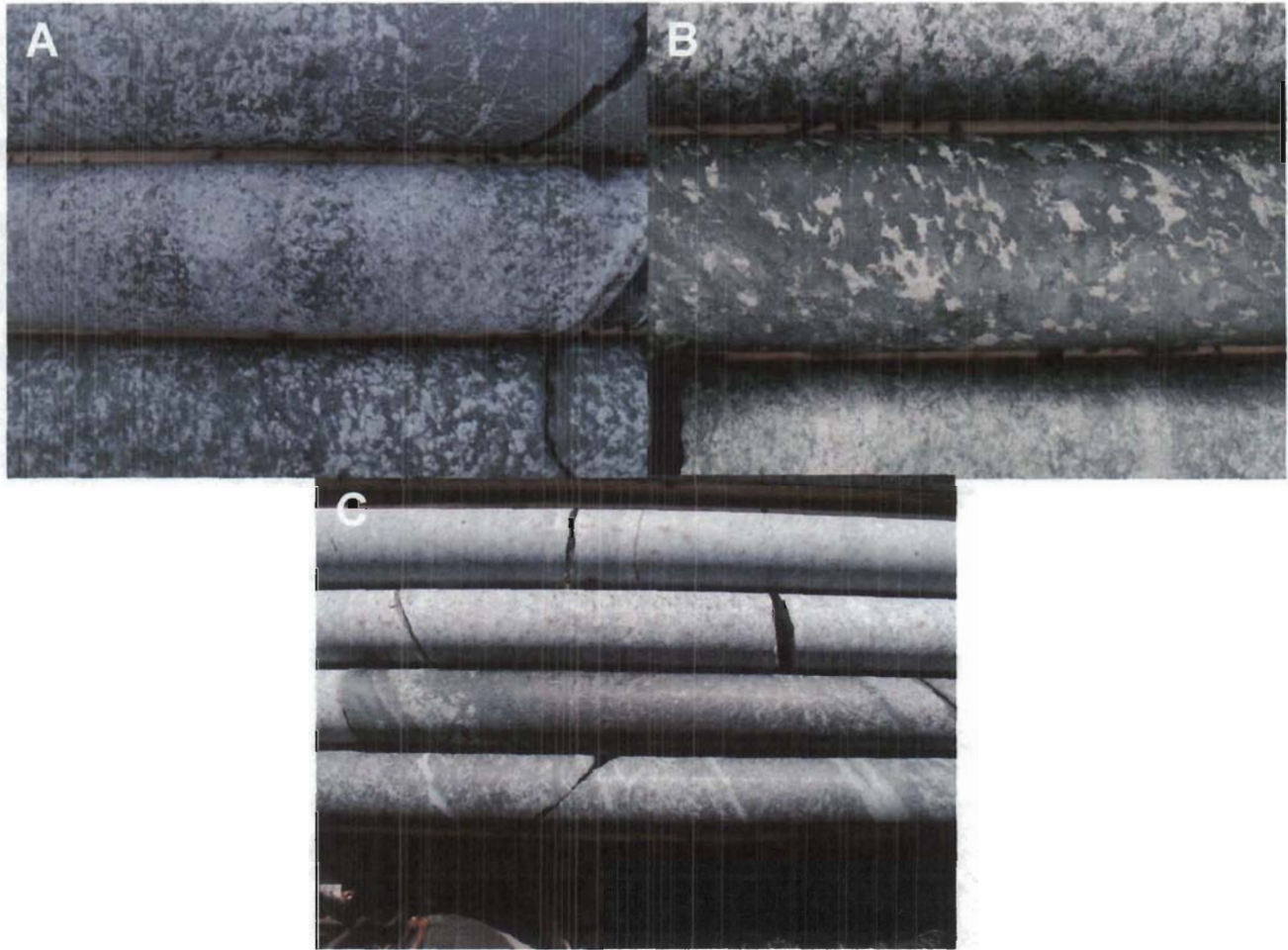


Figure 3.9. Core from hole 06HB-04. A) Remnant pyroxene oikocrysts, B) Cumulate texture in pyroxenite and C) Massive magnetite "reef" and magnetite-gabbro

DDH 06HB-005			
Collar UTMN:	5,807,204	Core Angle	50-60, 75
Collar UTME	553,717	Dip of Layering	
Drilling Azimuth	333°	Main Lithology	Gabbro
Dip	-60°	Main Mineralization	None, diss. py in pyroxenite

This hole was designed to test a MMI-defined horizon (the HB1 Zone), which intersects Pd anomalies on several MMI profiles as well as some local anomalies in Pt, Ni and Co. A break in resistivity on the IP survey suggests a sharp lithological change, which was thought could represent a chromitite horizon or other ultramafic layer.



Bedrock was reached at a down hole depth of 64 metres. Progression of the hole was reasonable compared to previous holes but encountered two small zones of fault gouge, which resulted in the rods getting stuck and having to be pulled back. Drilling was stopped at a down hole depth of approximately 160 metres for a two week break. The hole was stopped at a depth of 326 metres.

The dominant lithology intersected is coarse- to medium-grained gabbro, which locally displays plagioclase and/or pyroxene cumulate textures. The grain size variation from coarse to medium and compositional change from more mafic to more felsic are very progressive, as no real contacts were observed. Small sections of anorthositic rock containing less than 5% mafic minerals and sections of pyroxenite, now composed of mostly of hornblende with accessory actinolite, biotite and chlorite were also intersected. All lithologies in this hole are generally only weakly foliated but narrow shear zones are present. The more mafic lithologies are typically more foliated. Only traces of pyrite were observed locally.

Occasional coarse blebs of pyrite and chalcopyrite were observed in this hole. Sulphide veinlets, most commonly cutting anorthositic units are also present.

None of the lithologies encountered in this hole appears to explain the MMI anomalies or the break in the resistivity profile.



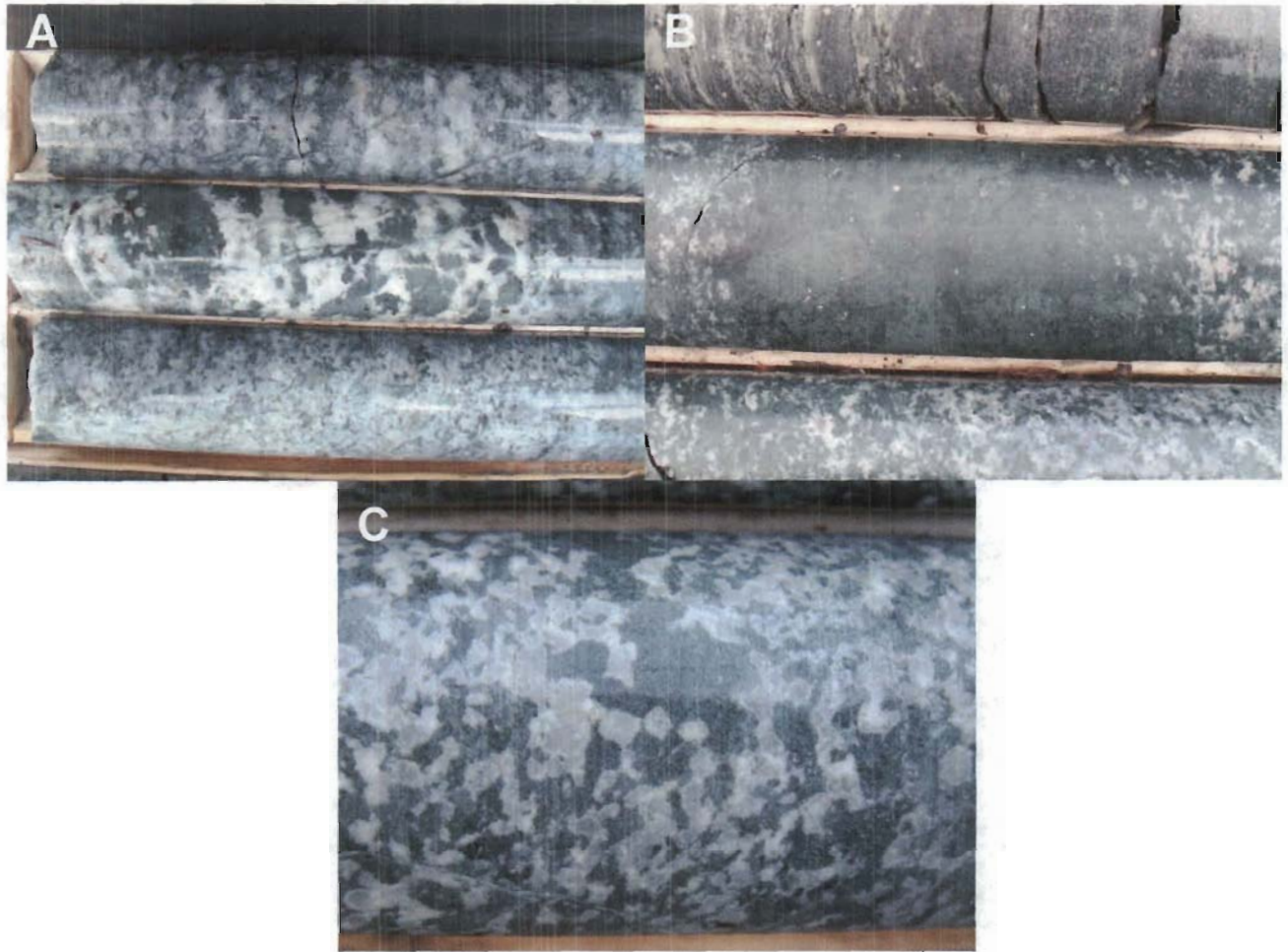


Figure 3.10. Core from hole 06HB-05. A) Pegmatitic gabbro, B) Disseminated pyrite in pyroxenite layer and C) Plagioclase-pyroxene cumulate

DDH 06HB-006			
Collar UTMN:	5806578	Core Angle	85
Collar UTME	554009	Dip of Layering	
Drilling Azimuth	333°	Main Lithology	Mela to leucogabbro
Dip	-60°	Main Mineralization	Diss. py, py+moly in quartz vein

The location for this hole was selected to investigate the interpreted unconformity and the source for the MMI anomalies previously referred to HB1 and HB2 Zones.

Bedrock was reached at 53.8 metres, with less difficulty than previous holes because from this point on, overburden was drilled by telescoping NW and BW casing. Drilling was stopped at 208 metres.

Leuco to melagabbro is the dominant lithology in this hole. Local areas display subtle layering with more or less plagioclase-rich "bands" but the variation from more leucocratic to more melanocratic



gabbro is generally progressive. Pyroxenite layers less than one metre in width are present and are composed of pyroxene cumulates (partly transformed to hornblende) with interstitial plagioclase. Small anorthosite layers were intersected but are scarce. A wide feldspar porphyry dike was encountered near the bottom of the hole.

No significant magmatic mineralization was observed though scattered occurrences of traces of pyrite are not uncommon. A 20 cm quartz vein with pyrite and molybdenite was intersected.

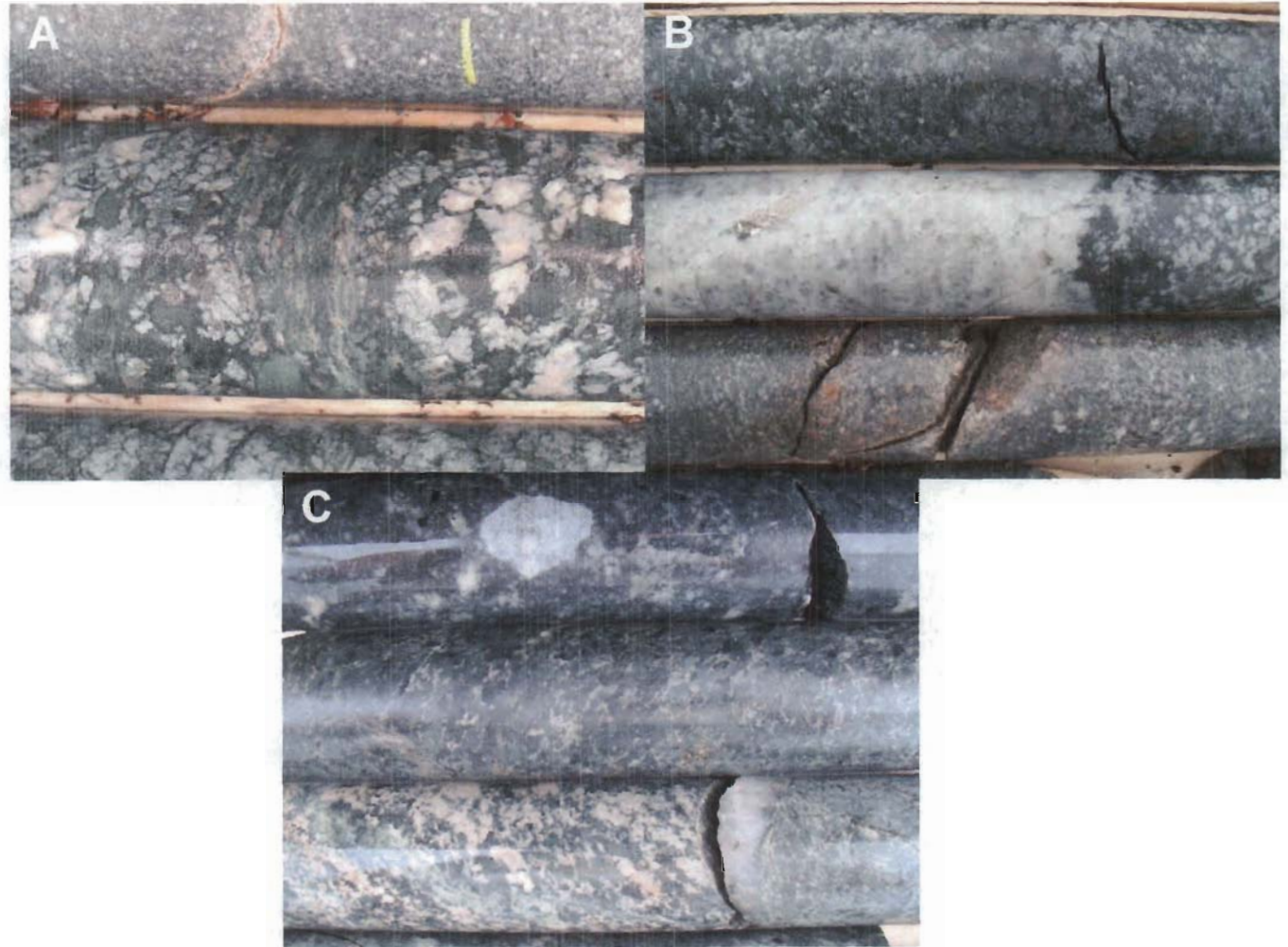


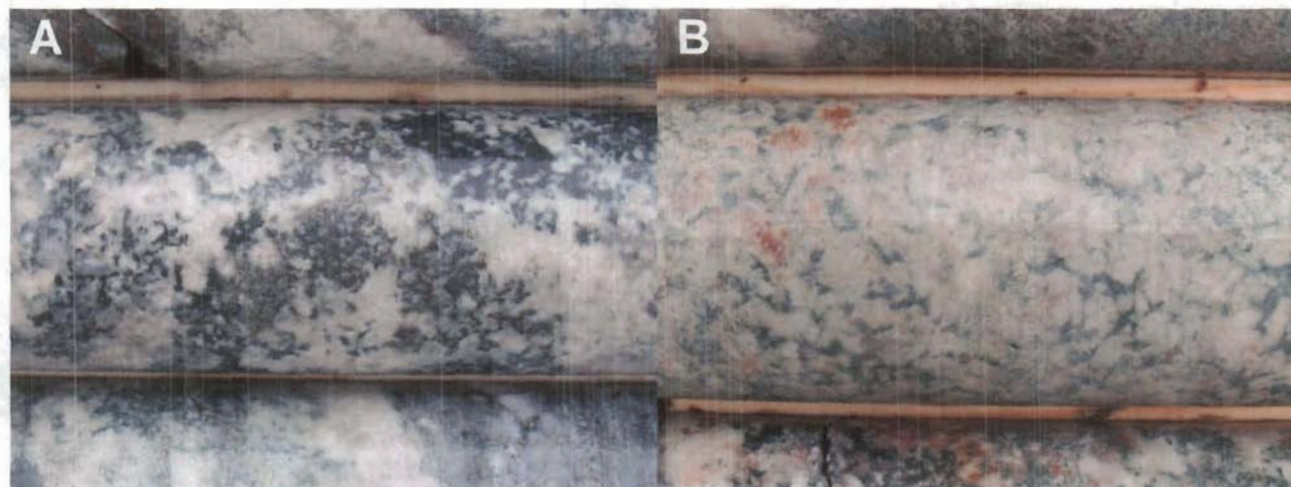
Figure 3.11. Core from hole 06HB-06. A) Very coarse-grained gabbro with small shear, B) Contact anorthosite-gabbro and C) Pyroxenite (pyroxene cumulate).

DDH 06HB-007			
Collar UTMN:	5811870	Core Angle	30 to 45
Collar UTME	554605	Dip of Layering	
Drilling Azimuth	333°	Main Lithology	Anorthositic gabbro
Dip	-60°	Main Mineralization	Ilmenite and pyrite "oikocrysts"?

This hole targeted the highest Pt and Pd MMI anomaly from Highbank at the north end of P-15, in the northern part of the property. Paleozoic carbonates were intersected at a depth of 43.3 metres, followed by semi consolidated to unconsolidated carbonate-rich clays. Strongly carbonate-altered rock displaying what appeared to be remnant textures of a gabbro with mafic oikocrysts was intersected at approximately 50 metres. The top portion of the hole is strongly altered and oxidized, and contains a variety of minerals including talc, sericite, epidote, iron-carbonate (brick-red), serpentine and a non-identified copper color mica, which replaces the mafic minerals.

The dominant lithology in this hole is anorthositic gabbro, with thin mafic oikocrysts forming variable proportions of the rock. Oikocrysts (or replacement of oikocrysts) of ilmenite and pyrite with fine specks of sericite and/or epidote are common in this unit. Small intersections of medium-grain plagioclase cumulate rocks and pegmatitic gabbro were also intersected.

Quartz veins with very large pyrite crystals are common in this hole. Blebs of pyrite and ilmenite with leucoxene coronas are also relatively abundant.



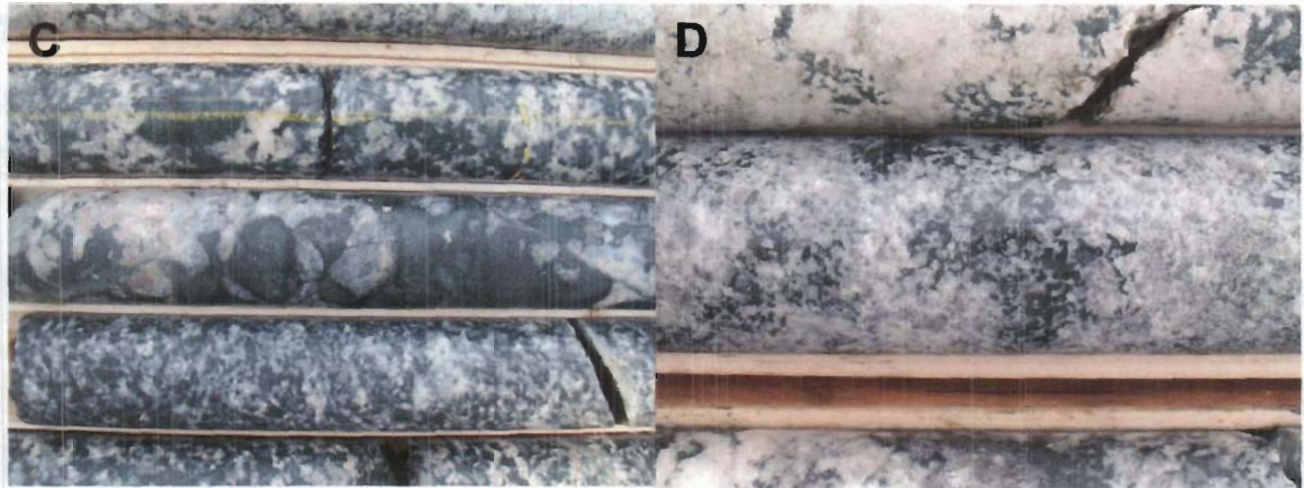


Figure 3.12. Core from hole 06HB-07. A) Ilmenite-pyrite “oikocryst”, B) Plagioclase cumulate, C) Pegmatitic gabbro and D) Anorthosite with mafic oikocrysts.

DDH 06HB-009			
Collar UTMN:	5,805,669	Core Angle	80° -90°
Collar UTME	554,430	Dip of Layering	40° -30°
Drilling Azimuth	333°	Main Lithology	Garnetiferous metapyroxenite-melagabbro, magnetite-gabbros and magnetite reefs
Dip	-60°	Main Mineralization	Magnetite reefs

Diamond-drill hole 06HB-009 was intended to test the strong chargeability anomaly that corresponds to the main magnetic marker horizon that forms the outer layer of the layered sequence. Although this horizon was not well supported by MMI, all five of the chromitite boulders so far recovered along the river's edge are located directly over this magnetic layer.

No chromitite layers were intersected. The top of the hole was dominated by garnetiferous metapyroxenite and melagabbro with thin fine-grained ultramafic layers commonly containing pyrite and magnetite. Magnetite gabbro and magnetite reefs, akin to those seen in hole 06HB-004 were intersected in the middle portion of the hole overlying a 27 meter interval of fine rhythmic layered gabbro. Thin layers of what is tentatively identified as plagioclase-olivine cumulate, occurs at the at irregular intervals in the hole.

A 4 metre-wide zone of breccia dominated by a bright orange mineral was intersected near the end of the hole. Pieces of thinly bedded sedimentary looking fragments are still recognizable through this zone. The orange mineral forms long, tabular to acicular crystals. The origin, nature and composition of this breccia are unknown.



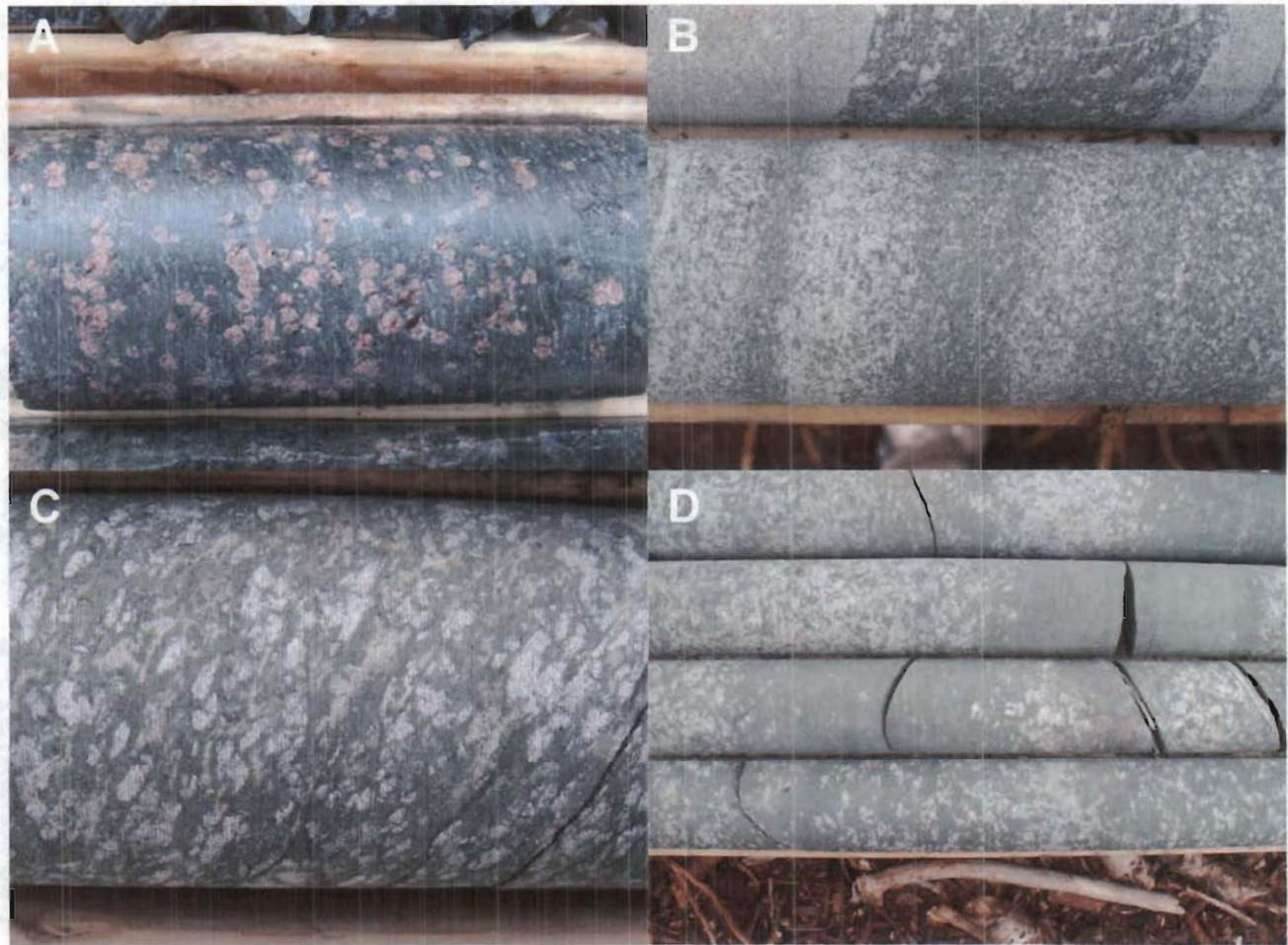


Figure 3.13. Core from hole 06HB-09. A) Garnetiferous pyroxenite, B) Fine rhythmically layered gabbro, C) Possible plagioclase-olivine cumulate and D) Layered pyroxenite to leucogabbro.

DDH 06HB-010			
Collar UTMN:	5,811,386	Core Angle	0° · 45°
Collar UTME	551,798	Dip of Layering	0° · 0°
Drilling Azimuth	333°	Main Lithology	
Dip	-60°	Main Mineralization	Net-textured pyrrhotite, 5 meter interval with 4% disseminated pyrrhotite

This drill-hole targeted a second chargeability anomaly that's exists 250 metres north of the anomaly tested by 06HB-001. There are no MMI anomalies directly overlying this chargeable zone though it is possible that the elevated Ni, Co and PGE values overlying the first drill target are the result of a



slight southward migration of the ions due to ground water flow. The strong IP chargeable anomaly, as seen in the first IP section, may not be a single vertically dipping body as it appears but the results of several closely spaced chargeable zones. The IP data re-processed to only include near surface response (N= 1 to 10, Figure 3.14) appears to highlight this possibility with possibly up to three relatively shallowly dipping layers. Hole 06HB-010 tested this second IP anomaly.

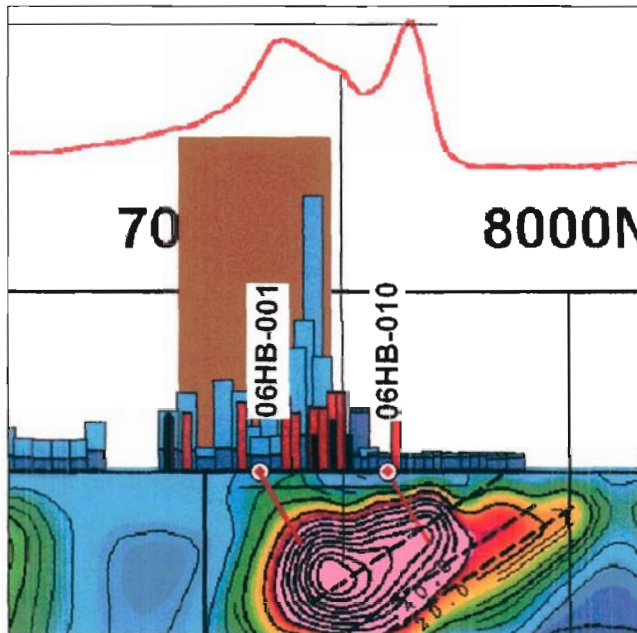


Figure 3.14. Titan 24 IP data for N=1 to 10 in the area of holes 06HB-01 and 06HB-10.

Garnetiferous pyroxenites with strongly silicified zones were intersected at the beginning of this hole. The silicified zones are in very sharp contact with the pyroxenites, and their nature and origin is uncertain. Anorthosite with small pyrrhotite-rich veins is also a common lithology in this hole. Other rock types intersected include magnetite-melagabbro to pyroxenite and rhythmically layered fine- and medium-grained gabbros.

Two significant intervals of sulphide mineralization were intersected in hole 06HB-010. The first was a 12 cm interval of semi-massive – net-textured pyrrhotite and lesser pyrite occurring at the base of a 14 metre-thick anorthosite layer. The sulphides enclose 20% rounded to angular, 0.2-2.0 mm, black, hornblende fragments, 15% cloudy, rounded 1-15 mm plagioclase fragments, and 3-5% patchy irregular ilmenite. Underlying the semi-massive sulphides the rock is well foliated and is composed of chloritized hornblende (60%), plagioclase (<10%), patchy ilmenite (20%) and stringer-like sulphides (10%), roughly paralleling foliation. Sulphides include pyrite (7%) pyrrhotite (2%) and chalcopyrite (1%). The second mineralized intersection is a 5 metres interval with 4% fine grained disseminated pyrrhotite, 1% ilmenite and 1% pyrite, hosted in an altered pyroxenite. The rock is patchy, dark green



to grey, with no obvious fabric. Reported grain size is 0.4-0.8 mm. Darker patches are composed of green to black chloritized augite/hornblende (90%; SEM confirmed) and a trace of quartz (SEM confirmed). Lighter coloured patches are chemically similar but composed of paler fibrous to acicular augite possibly partly metamorphosed into actinolite (80%), hypersthene (10-15%; SEM confirmed) and a trace of quartz.

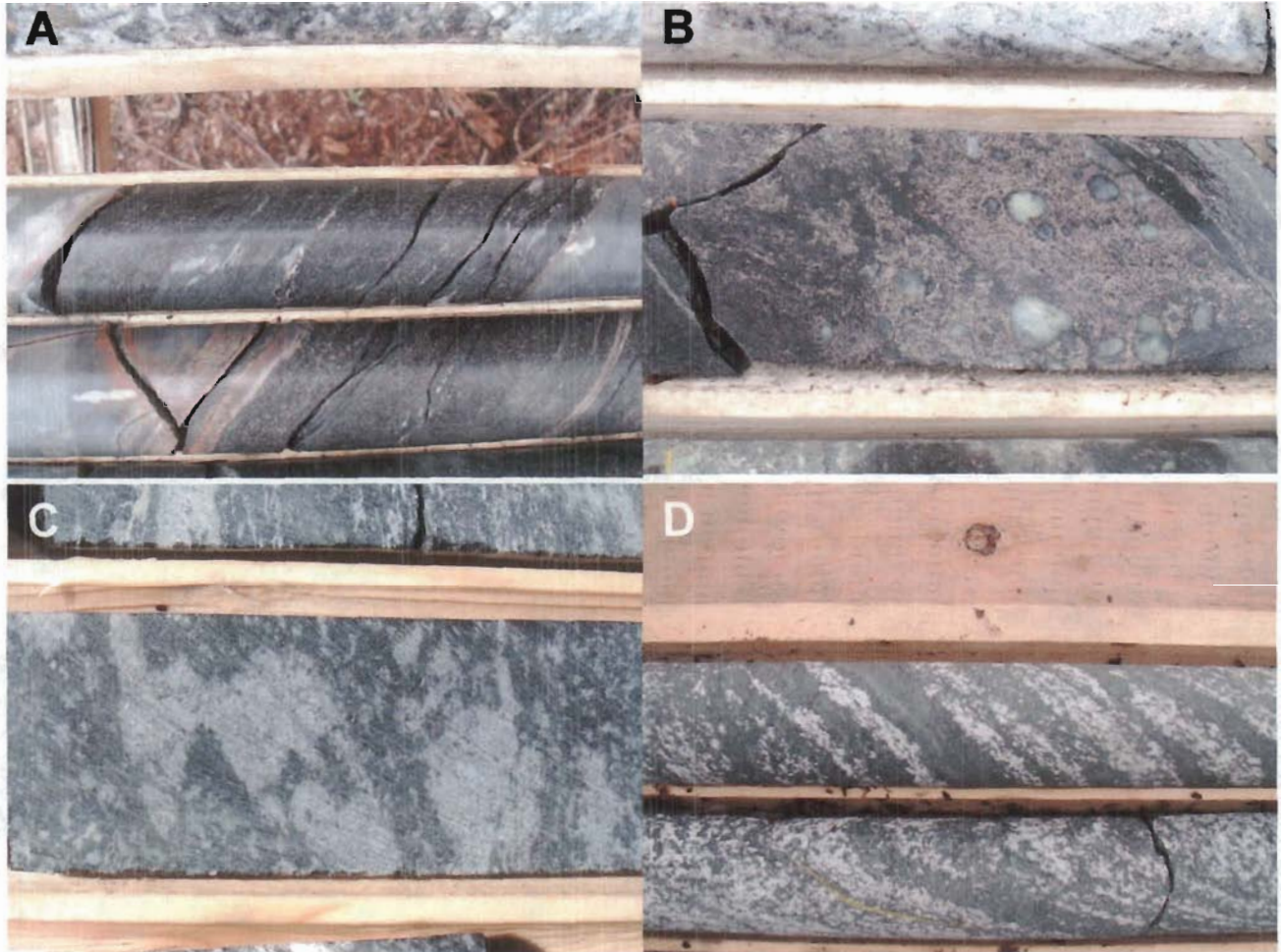


Figure 3.15. Core from hole 06HB-10. A) Pyroxenite with silicified zones, B) Net textured pyrrhotite and pyrite, C) Altered pyroxenite with disseminated pyrrhotite and D) Rhythmically layered gabbro



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Township	Claim Number	Recording Date	Claim Due Date	Status	% Option	Work Required	Total Applied	Total Reserve	Claim Bank
North Bloc									
BMA 524861	3015904	2005-Jul-22	2007-Jul-22	A	1	\$5,600	\$0	\$0	\$0
BMA 524861	3015905	2005-Jul-22	2007-Jul-22	A	1	\$4,800	\$0	\$0	\$0
BMA 524861	3015906	2005-Jul-22	2007-Jul-22	A	1	\$5,600	\$0	\$0	\$0
BMA 524861	3015907	2005-Jul-22	2007-Jul-22	A	1	\$4,800	\$0	\$0	\$0
BMA 524861	4203152	2005-Sep-14	2007-Sep-14	A	1	\$2,400	\$0	\$0	\$0
BMA 524861	1249016	2003-Oct-08	2007-Oct-08	A	1	\$6,400	\$12,800	\$1,789	\$0
BMA 524861	1249019	2003-Oct-08	2007-Oct-08	A	1	\$6,400	\$12,800	\$0	\$0
BMA 524861	1180786	2001-Oct-18	2007-Oct-18	A	1	\$5,600	\$22,400	\$0	\$0
BMA 524861	1180787	2001-Oct-18	2007-Oct-18	A	1	\$4,000	\$16,000	\$198	\$0
BMA 524861	1180790	2001-Oct-18	2007-Oct-18	A	1	\$5,200	\$20,800	\$0	\$0
BMA 524861	1180791	2001-Oct-18	2007-Oct-18	A	1	\$6,400	\$25,600	\$0	\$0
BMA 524861	1180792	2001-Oct-18	2007-Oct-18	A	1	\$6,400	\$25,600	\$5,274	\$0
BMA 524861	1180793	2001-Oct-18	2007-Oct-18	A	1	\$6,400	\$25,600	\$0	\$0
BMA 524861	1180794	2001-Oct-18	2007-Oct-18	A	1	\$6,400	\$25,600	\$0	\$0
BMA 524861	1243972	2001-Oct-18	2007-Oct-18	A	1	\$6,400	\$25,600	\$0	\$0
BMA 524862	3019124	2004-Oct-18	2007-Oct-18	A	1	\$6,400	\$6,400	\$0	\$0
BMA 524862	3019125	2004-Oct-18	2007-Oct-18	A	1	\$6,400	\$6,400	\$1,006	\$0
BMA 524862	3019126	2004-Oct-18	2007-Oct-18	A	1	\$6,400	\$6,400	\$0	\$0
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BMA 524862	3019431	2003-Nov-18	2007-Nov-18	A	1	\$6,400	\$12,800	\$0	\$0
BMA 524861	3019443	2003-Nov-18	2007-Nov-18	A	1	\$6,400	\$12,800	\$501	\$0
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BMA 524861	3019445	2003-Nov-18	2007-Nov-18	A	1	\$6,400	\$12,800	\$0	\$0
BMA 524861	3019446	2003-Nov-18	2007-Nov-18	A	1	\$2,400	\$4,800	\$0	\$0
BMA 524861	3019447	2003-Nov-18	2007-Nov-18	A	1	\$1,200	\$2,400	\$0	\$0
BMA 524861	3019448	2003-Nov-18	2007-Nov-18	A	1	\$6,400	\$12,800	\$0	\$0
BMA 524862	3019449	2003-Nov-18	2007-Nov-18	A	1	\$5,600	\$12,400	\$0	\$0
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BMA 524862	1244465	2006-May-17	2008-May-17	A	1	\$6,400	\$0	\$0	\$0
BMA 524862	1244469	2006-May-17	2008-May-17	A	1	\$6,400	\$0	\$0	\$0
BMA 524862	1244481	2006-May-17	2008-May-17	A	1	\$6,400	\$0	\$0	\$0
BMA 524862	4202134	2006-May-17	2008-May-17	A	1	\$4,800	\$0	\$0	\$0
BMA 524861	4202135	2006-May-17	2008-May-17	A	1	\$6,400	\$0	\$0	\$0
BMA 524861	4202136	2006-May-17	2008-May-17	A	1	\$4,800	\$0	\$0	\$0
BMA 524861	4202137	2006-May-17	2008-May-17	A	1	\$6,400	\$0	\$0	\$0
BMA 524861	4202138	2006-May-17	2008-May-17	A	1	\$4,800	\$0	\$0	\$0
BMA 524861	4202139	2006-May-17	2008-May-17	A	1	\$6,400	\$0	\$0	\$0
BMA 524861	4202140	2006-May-17	2008-May-17	A	1	\$5,600	\$0	\$0	\$0
BMA 524861	4202141	2006-May-17	2008-May-17	A	1	\$6,400	\$0	\$0	\$0
BMA 524861	4202142	2006-May-17	2008-May-17	A	1	\$3,200	\$0	\$0	\$0
BMA 524861	4205450	2006-May-17	2008-May-17	A	1	\$6,400	\$0	\$21,748	\$0
BMA 524861	4205451	2006-May-17	2008-May-17	A	1	\$6,400	\$0	\$0	\$0
BMA 524861	4205452	2006-May-17	2008-May-17	A	1	\$6,400	\$0	\$0	\$0
BMA 524862	4205453	2006-May-17	2008-May-17	A	1	\$6,400	\$0	\$0	\$0

Township	Claim Number	Recording Date	Claim Due Date	Status	% Option	Work Required	Total Applied	Total Reserve	Claim Bank
BMA 524862	4205454	2006-May-17	2008-May-17	A	1	\$6,400	\$0	\$0	\$0
BMA 524861	3015893	2005-Jul-14	2008-Jul-14	A	1	\$6,400	\$0	\$0	\$0
BMA 524861	3015894	2005-Jul-14	2008-Jul-14	A	1	\$6,400	\$0	\$0	\$0
BMA 524861	3015895	2005-Jul-14	2008-Jul-14	A	1	\$6,400	\$0	\$0	\$0
BMA 524861	3015896	2005-Jul-14	2008-Jul-14	A	1	\$6,400	\$0	\$0	\$0
BMA 524861	3015897	2005-Jul-14	2008-Jul-14	A	1	\$6,400	\$0	\$0	\$0
BMA 524861	3015899	2005-Jul-14	2008-Jul-14	A	1	\$6,400	\$0	\$0	\$0
BMA 524861	3015900	2005-Jul-14	2008-Jul-14	A	1	\$6,400	\$0	\$0	\$0
BMA 524861	3015901	2005-Jul-14	2008-Jul-14	A	1	\$6,400	\$0	\$0	\$0
BMA 524862	4213754	2006-Nov-21	2008-Nov-21	A	1	\$6,400	\$0	\$0	\$0
BMA 524862	4213755	2006-Nov-21	2008-Nov-21	A	1	\$6,400	\$0	\$0	\$0
BMA 524862	4213756	2006-Nov-21	2008-Nov-21	A	1	\$6,400	\$0	\$0	\$0
BMA 524862	4213757	2006-Nov-21	2008-Nov-21	A	1	\$6,000	\$0	\$0	\$0
BMA 523862	4213758	2006-Nov-21	2008-Nov-21	A	1	\$6,000	\$0	\$0	\$0
BMA 524862	4213759	2006-Nov-21	2008-Nov-21	A	1	\$6,400	\$0	\$0	\$0
BMA 524862	4213760	2006-Nov-21	2008-Nov-21	A	1	\$6,400	\$0	\$0	\$0
BMA 524862	4213761	2006-Dec-07	2008-Dec-07	A	1	\$6,000	\$0	\$0	\$0
BMA 524862	4213762	2006-Dec-07	2008-Dec-07	A	1	\$6,000	\$0	\$0	\$0
BMA 524862	4215537	2007-Jun-26	2009-Jun-26	A	1	\$6,400	\$0	\$0	\$0
BMA 524862	4215538	2007-Jun-26	2009-Jun-26	A	1	\$1,200	\$0	\$0	\$0
BMA 524862	4215539	2007-Jun-26	2009-Jun-26	A	1	\$1,600	\$0	\$0	\$0
BMA 524862	4215547	2007-Jun-26	2009-Jun-26	A	1	\$2,800	\$0	\$0	\$0
BMA 524862	4221864	2007-Jun-26	2009-Jun-26	A	1	\$3,200	\$0	\$0	\$0
BMA 524862	4221865	2007-Jun-26	2009-Jun-26	A	1	\$6,400	\$0	\$0	\$0
BMA 524862	4221866	2007-Jun-26	2009-Jun-26	A	1	\$6,400	\$0	\$0	\$0
BMA 524862	4221867	2007-Jun-26	2009-Jun-26	A	1	\$3,200	\$0	\$0	\$0
BMA 523862	4215546			A	1	\$6,400	\$0	\$0	\$0
BMA 523862	4215548			A	1	\$2,400	\$0	\$0	\$0
BMA 523862	4215549			A	1	\$6,400	\$0	\$0	\$0
BMA 523862	4221868			A	1	\$6,400	\$0	\$0	\$0
BMA 523862	4221869			A	1	\$6,400	\$0	\$0	\$0
BMA 523862	4221870			A	1	\$6,400	\$0	\$0	\$0
BMA 523862	4221871			A	1	\$6,400	\$0	\$0	\$0
BMA 523862	4221872			A	1	\$6,400	\$0	\$0	\$0
BMA 523862	4221873			A	1	\$6,400	\$0	\$0	\$0
BMA 523862	4221874			A	1	\$6,400	\$0	\$0	\$0

Township	Claim Number	Recording Date	Claim Due Date	Status	% Option	Work Required	Total Applied	Total Reserve	Claim Bank
South Bloc									
BMA 523861	1249066	2004-Aug-17	2007-Aug-17	A	1	\$6,400	\$6,400	\$0	\$0
BMA 523861	1249070	2004-Aug-17	2007-Aug-17	A	1	\$6,400	\$6,400	\$0	\$0
BMA 523861	3009414	2004-Aug-17	2007-Aug-17	A	1	\$6,400	\$6,400	\$0	\$0
BMA 523861	3012272	2004-Aug-17	2007-Aug-17	A	1	\$6,400	\$6,400	\$0	\$0
BMA 523861	3019467	2004-Aug-17	2007-Aug-17	A	1	\$6,400	\$6,400	\$0	\$0
BMA 523861	3019577	2004-Aug-17	2007-Aug-17	A	1	\$6,400	\$6,400	\$0	\$0
BMA 523861	1180765	2001-Oct-18	2007-Oct-18	A	1	\$6,400	\$25,600	\$0	\$0
BMA 523861	1180768	2001-Oct-18	2007-Oct-18	A	1	\$6,400	\$25,600	\$0	\$0
BMA 523861	1180769	2001-Oct-18	2007-Oct-18	A	1	\$6,400	\$25,600	\$0	\$0
BMA 523861	1180771	2001-Oct-18	2007-Oct-18	A	1	\$6,400	\$25,600	\$196	\$0
BMA 523861	1180772	2001-Oct-18	2007-Oct-18	A	1	\$6,400	\$25,600	\$0	\$0
BMA 523861	1180773	2001-Oct-18	2007-Oct-18	A	1	\$6,400	\$25,600	\$0	\$0
BMA 523861	1180778	2001-Oct-18	2007-Oct-18	A	1	\$6,400	\$25,600	\$0	\$0
BMA 524861	1180780	2001-Oct-18	2007-Oct-18	A	1	\$6,400	\$25,600	\$0	\$0
BMA 524861	1180781	2001-Oct-18	2007-Oct-18	A	1	\$6,400	\$25,600	\$0	\$0
BMA 524861	1180782	2001-Oct-18	2007-Oct-18	A	1	\$5,600	\$22,400	\$0	\$0
BMA 524861	1180784	2001-Oct-18	2007-Oct-18	A	1	\$1,600	\$6,400	\$0	\$0
BMA 524861	1180789	2001-Oct-18	2007-Oct-18	A	1	\$2,400	\$9,600	\$0	\$0
BMA 523861	3019138	2004-Oct-18	2007-Oct-18	A	1	\$6,400	\$6,400	\$0	\$0
BMA 523861	3019139	2004-Oct-18	2007-Oct-18	A	1	\$6,400	\$6,400	\$0	\$0
BMA 523861	3019140	2004-Oct-18	2007-Oct-18	A	1	\$6,400	\$6,400	\$0	\$0
BMA 523861	3019141	2004-Oct-18	2007-Oct-18	A	1	\$6,400	\$6,400	\$0	\$0
BMA 524861	3019142	2004-Oct-18	2007-Oct-18	A	1	\$6,400	\$6,400	\$0	\$0
BMA 523861	3019136	2005-Oct-27	2007-Oct-27	A	1	\$6,000	\$0	\$10,230	\$0
BMA 523861	3019135	2004-Nov-04	2007-Nov-04	A	1	\$6,400	\$6,400	\$0	\$0
BMA 523861	3019427	2003-Nov-18	2007-Nov-18	A	1	\$6,400	\$12,800	\$0	\$0
BMA 523861	3019433	2003-Nov-18	2007-Nov-18	A	1	\$6,400	\$12,800	\$0	\$0
BMA 523861	3019434	2003-Nov-18	2007-Nov-18	A	1	\$6,400	\$12,800	\$0	\$0
BMA 523861	3019435	2003-Nov-18	2007-Nov-18	A	1	\$6,400	\$12,800	\$0	\$0
BMA 524861	3019436	2003-Nov-18	2007-Nov-18	A	1	\$6,400	\$12,800	\$0	\$0
BMA 524861	3019437	2003-Nov-18	2007-Nov-18	A	1	\$6,000	\$12,000	\$0	\$0
BMA 524861	3019438	2003-Nov-18	2007-Nov-18	A	1	\$6,400	\$12,800	\$0	\$0
BMA 523861	3019439	2003-Nov-18	2007-Nov-18	A	1	\$6,400	\$12,800	\$0	\$0
BMA 523861	3019440	2003-Nov-18	2007-Nov-18	A	1	\$6,400	\$12,800	\$0	\$0
BMA 523861	3019132	2005-Jan-07	2008-Jan-07	A	1	\$6,000	\$6,000	\$0	\$0
BMA 523861	3019133	2005-Jan-07	2008-Jan-07	A	1	\$6,400	\$6,400	\$0	\$0
BMA 523861	3019134	2005-Jan-07	2008-Jan-07	A	1	\$6,400	\$6,400	\$0	\$0
BMA 523861	3015903	2005-Jul-14	2008-Jul-14	A	1	\$6,400	\$6,400	\$0	\$0
BMA 523861	3015924	2005-Jul-14	2008-Jul-14	A	1	\$6,400	\$6,400	\$64,479	\$0
BMA 523861	3015925	2005-Jul-14	2008-Jul-14	A	1	\$6,400	\$6,400	\$0	\$0
BMA 523861	3015926	2005-Jul-14	2008-Jul-14	A	1	\$6,400	\$6,400	\$0	\$0
BMA 523861	3015927	2005-Jul-14	2008-Jul-14	A	1	\$6,400	\$6,400	\$0	\$0
BMA 523861	3015928	2005-Jul-14	2008-Jul-14	A	1	\$6,400	\$6,400	\$0	\$0
BMA 523861	3015929	2005-Jul-14	2008-Jul-14	A	1	\$6,400	\$6,400	\$0	\$0
BMA 523861	3015930	2005-Jul-14	2008-Jul-14	A	1	\$6,400	\$6,400	\$0	\$0
BMA 523861	3015931	2005-Jul-14	2008-Jul-14	A	1	\$6,400	\$6,400	\$0	\$0
BMA 523861	3015932	2005-Jul-14	2008-Jul-14	A	1	\$6,400	\$6,400	\$8,099	\$0
BMA 523861	3015933	2005-Jul-14	2008-Jul-14	A	1	\$6,400	\$6,400	\$1,068	\$0

Township	Claim Number	Recording Date	Claim Due Date	Status	% Option	Work Required	Total Applied	Total Reserve	Claim Bank
BMA 523861	3015934	2005-Jul-14	2008-Jul-14	A	1	\$6,400	\$6,400	\$1,068	\$0
BMA 523861	3015935	2005-Jul-14	2008-Jul-14	A	1	\$6,400	\$6,400	\$1,068	\$0
BMA 523861	3015936	2005-Jul-14	2008-Jul-14	A	1	\$6,400	\$6,400	\$1,068	\$0
BMA 523861	3015937	2005-Jul-14	2008-Jul-14	A	1	\$6,400	\$6,400	\$74,148	\$0
BMA 524861	3015938	2005-Jul-14	2008-Jul-14	A	1	\$6,400	\$6,400	\$1,268	\$0
BMA 524861	3015909	2005-Jul-22	2008-Jul-22	A	1	\$2,000	\$2,000	\$0	\$0
BMA 524861	3015913	2005-Jul-22	2008-Jul-22	A	1	\$5,200	\$5,200	\$0	\$0
BMA 524861	3015914	2005-Jul-22	2008-Jul-22	A	1	\$6,400	\$6,400	\$0	\$0
BMA 524861	3015915	2005-Jul-22	2008-Jul-22	A	1	\$6,400	\$6,400	\$0	\$0
BMA 524861	3015916	2005-Jul-22	2008-Jul-22	A	1	\$6,400	\$6,400	\$43,680	\$0
BMA 524861	3015917	2005-Jul-22	2008-Jul-22	A	1	\$6,400	\$6,400	\$0	\$0
BMA 524861	3015918	2005-Jul-22	2008-Jul-22	A	1	\$6,400	\$6,400	\$0	\$0
BMA 524861	3015919	2005-Jul-22	2008-Jul-22	A	1	\$6,400	\$6,400	\$0	\$0
BMA 524861	3015920	2005-Jul-22	2008-Jul-22	A	1	\$6,400	\$6,400	\$0	\$0
BMA 524861	3015921	2005-Jul-22	2008-Jul-22	A	1	\$6,400	\$6,400	\$0	\$0
BMA 524861	3015939	2005-Jul-22	2008-Jul-22	A	1	\$3,200	\$3,200	\$72,899	\$0
BMA 524861	3015940	2005-Jul-22	2008-Jul-22	A	1	\$6,400	\$6,400	\$0	\$0
BMA 524861	3015941	2005-Jul-22	2008-Jul-22	A	1	\$6,400	\$6,400	\$0	\$0
BMA 524861	3015942	2005-Jul-22	2008-Jul-22	A	1	\$6,000	\$6,000	\$0	\$0
BMA 523861	4210946	2006-Aug-25	2008-Aug-25	A	1	\$6,400	\$0	\$0	\$0
BMA 523861	4202143	2006-Nov-21	2008-Nov-21	A	1	\$6,000	\$0	\$0	\$0
BMA 523861	4204286	2006-Nov-21	2008-Nov-21	A	1	\$6,400	\$0	\$0	\$0
BMA 523862	4210948	2006-Nov-21	2008-Nov-21	A	1	\$6,400	\$0	\$0	\$0
BMA 523861	4210949	2006-Nov-21	2008-Nov-21	A	1	\$6,400	\$0	\$0	\$0
BMA 523861	4210954	2006-Nov-21	2008-Nov-21	A	1	\$6,400	\$0	\$0	\$0
BMA 523861	4210956	2006-Nov-21	2008-Nov-21	A	1	\$6,400	\$0	\$0	\$0
BMA 523861	4210960	2006-Nov-21	2008-Nov-21	A	1	\$3,600	\$0	\$0	\$0
BMA 523861	4210961	2006-Nov-21	2008-Nov-21	A	1	\$6,400	\$0	\$0	\$0
BMA 523861	4210963	2006-Nov-21	2008-Nov-21	A	1	\$4,800	\$0	\$0	\$0
BMA 523861	4210975	2006-Nov-21	2008-Nov-21	A	1	\$6,400	\$0	\$0	\$0
BMA 523861	4213763	2006-Nov-21	2008-Nov-21	A	1	\$6,400	\$0	\$0	\$0
BMA 523861	4215550	2007-Jun-26	2009-Jun-26	A	1	\$6,400	\$0	\$0	\$0
BMA 523861	4215578	2007-Jun-26	2009-Jun-26	A	1	\$6,400	\$0	\$0	\$0
BMA 523861	4215579	2007-Jun-26	2009-Jun-26	A	1	\$6,400	\$0	\$0	\$0
BMA 523862	4221861	2007-Jun-26	2009-Jun-26	A	1	\$400	\$0	\$0	\$0
BMA 523862	4221862	2007-Jun-26	2009-Jun-26	A	1	\$4,800	\$0	\$0	\$0
BMA 523862	4221863	2007-Jun-26	2009-Jun-26	A	1	\$3,600	\$0	\$0	\$0

APPENDIX 2

Logs for Diamond-Drill Holes 06HB-01 to 06HB-10



Drill Log

Company Name:	Northern Shield Resources	DDH Number: 06HB-01
Property Name:	Highbank Lake	Collar UTMN: 5811072
Location:	250 km north of Nakina, ON	Collar UTME: 551953
	75 km northwest of Ogoki	Zone, Datum: 16, NAD83
Claim Number:	3019450	Drilling Azimuth: 333°
		Hole Length: 212.8 m
Drilling Contractor:	Cartwright Drilling	Core Size: BTW (BQ Thin Wall)
Date of start:	3-Jun-06	Logs by: Christine Vaillancourt, CCIC
Date completed:	8-Jun-06 - hole lost	Core Storage: Warehouse in Hearst, Ontario

From	To	Rock Type	Description
0.0	47.8	Overburden	Rubbles: one grey to pinkish sandstone, one very carbonated white-beige sediment, one VF, grey-green, posy mafic volcanic
47.8	47.9	Coarse grained, porphyritic metagabbro	Weathered top portion of outcrop, see below for rock description.
49.1	51.0	Coarse grained, porphyritic metagabbro	Very weathered, rusty core, some of it with the recognizable glomerocrysts and others are more altered dark-green with cb veins. It looks like 47.9 to 49.1 is boulder and real bedrock starts at 51.0
51.0	65.3	Coarse grained, porphyritic metagabbro	Rock does not really look deformed but there is some orientation of the phenocx typically between 20-25, up to 35o to perpendicular. There are "layers" with different sizes and amounts of glomerocx but the transition from one to the other is not sharp.
			Phenocx are 2mm to 3cm, typically similar within one section. They look like saussuritized and or silicified plagioclase. They are commonly irregular in shape, and broken-up. Form up to 15-20% of the rock.
			Matrix is very fine amphiboles and possibly chlorite?
			Magnetite forms 1 to 5% of the rock generally but up to 15% and forms irregular blebs up to 3-4mm wide and centimetric in length. There is another mineral that looks just like the magnetite but is only slightly magnetic, ilmenite or hematite? It is recognizable because it almost always has a hairline corona of what looks like milky quartz?
			~1% disseminated pyrite all through the section, often associated with the magnetite and more abundant in phenocx-poor sections. Py also fills fine fractures. . Fine quartz-rich veins also carry pyrite in variable amounts. The disseminated pyrite in the rock seems to be more abundant near the veins.
			Up to 1-2% sericite in some sections, typically associated with silicification that renders the phenocx translucent.
			54.1 - Two quartz veins with trace py and tr ep, parallel to layering.

				54.2 - Small 0.5 cm qz vein at 45o to perpendicular with py smeared along one contact.
				54.9-55.1 - Section practically cx free, 10% mt with patchy qz+ep (greenish) clouds.
				62.7-63.3 - Silicified section along qz+py veins. Phenocx look silicified (transparent look). Py forms large blebs around vein and also 3% disseminated.
				63.4 - Qz-pg vein sub-perpendicular to core with halo of orangy alteration on pg near the vein.
				64.5 - Pyrite and illmenite
				59-65.3 - Generally larger glomerocx (>1cm), silicified, shattered, more dispersed, mt-rich section.
65.3	68.1		Coarse-grained magnetite-rich metagabbro	Scarce to no phenocx section.
				Up to 10% mt in "bands" at around 45o to perpendicular. ~1% disseminated py.
				65.4-65.8 - Amphibolite (metapyroxenite)
				67.9 - Small py vein with a patch of cpy
68.1	70.2		Coarse-grained, porphyritic metagabbro	Same as 51.0-65.3. Orientation of phenocx is ~30o to perpendicular
				67.9 - Hairline fractures at 45o to perpendicular
				68.5 - Large bleb of magnetite
70.2	70.5		Coarse-grained metagabbro	Same as 65.3-68.1. 3-4% mt, tr py
				70.4 - Small 3 mm qz vein
70.5	71.2		Coarse-grained, porphyritic metagabbro	Same as previously described, large pg phenocrysts, tr py, 2-3% mt.
71.2	79.6		Coarse-grained metagabbro	Phenocx-poor, mt-rich section. Mt is interstitial, up to 10% of rock 1% specks of py with tr po and cpy Short sections are sericite?-rich with 1-2% illmenite
				75.4 - Fine mafic dike, 15 cm wide, 40o to perpendicular
79.6	103.7		Coarse-grained, porphyritic metagabbro	Same as previously described
				80.5 - Qz vein, core is fragmented, hard to guess real size.
				83.4-83.6 - Pyrite-rich zone (6-7%) aligned with foliation at 25o to perpendicular, tr po and cpy, 2% mt-il.
				83.7 - Py vein cutting a pg phenocx
				86.25-86.4 - Sericite-rich zone with 1% py and tr cpy
				86.8-87.7 - 1-2% patchy sulfides, mostly py, some cubes, tr cpy
				90.2-91.9 - Sulphide-enriched zone, 2% irregularly distributed. Mostly py, tr cpy and po. Qz bleb with py corona at 91.6.

				93.7-94.3 - Sulphide-enriched area, up to 5% at 94.2. Py+mt veins also.
				94.6 - Qz vein, 4cm, massive.
				94.6-95.7 - Looks almost sheared with disseminated py and dislocated mt-sericite bands.
				103.3 - "S" shape shear
103.7	103.9		Very fine-grained metagabbro	Dike, grey-greenish, no obvious chilled margin, very massive, looks undeformed. Hairline fractures filled with qz. A bit greenish, possibly some ep+ser?
103.9			Coarse-grained, porphyritic metagabbro	Same as previously described.
				110.2-112.0 - Deformed zone ~15-20o to perpendicular, sericitic veins with up to 2% py, seems associated with qz, mt+illmenite
				119.8-120.1 - More deformed section, py-rich zone (up to 6-7%), illmenite and local sericite.
				120.1-120.6 - Mixed zone with some very large phenocx, up to 5cm, tabular. Large mt blebs, 1% py zones, illmenite with coronas.
				120.6-122.2 - Very small phenocx, sheared, lots of illmenite with coronas, py+mt bands.
				122.2-128.3 - Generally layered porphyritic gabbro, with proportions of phenocx varying between 5-30%.
				124.2 - Small 2 cm wide shear with micas? Not sure if fine bt but has an almost talc softness when scratched.
				126.1 - Orangy alteration on the phenocx (K?)
				127.5 - 4cm qz vein, perpendicular to core, orangy-green (K and ep?) patches.
128.3	128.4		Very fine-grained metagabbro	Dike. Feels hard and silicified. No chill but if anything, coarser at contacts. Has lots of very small veins and one larger 1mm qz vein, most sub parallel to layering, some at angles.
128.4	128.8		Coarse-grained, porphyritic metagabbro	Same as previously described.
128.8	128.9		Very fine-grained metagabbro	Same as previously described.
128.9	129.0		Coarse-grained, porphyritic metagabbro	Same as previously described
129.0	129.6		Very fine-grained metagabbro	Dike. 2-3cm silicified zones, some pieces of porphyritic gabbro stuck in. Qz at both contacts.
129.6	132.0		Coarse-grained, porphyritic metagabbro	Section with irregularly distributed, very large phenocx. with orangy alteration. Some qz veins.

132.0	135.0		Layered very coarse metagabbro	Best layered looking section so far. Pg phenocrysts concentrate in "layers" of 2-4 cm.
				Dispersed ilmenite, local mt, not much sulphides except near contact with next unit.
				133.0 - Small 4 cm fine gabbro dike.
135.0	135.3		Felsic intrusive	High silica zone, possibly a granitic dike or a "dirty" quartz vein. Pg crystals and some chlorite, possibly other mafic minerals.
135.3	136.9		Layered very coarse metagabbro	Same as previously described.
136.9	137.5		Fine-grained metagabbro-qz gabbro	Dike, contacts are sheared at both ends and contain py and mt.
				Pg gets whiter and mafic mineral (hb?) bigger near hairline fractures
137.5	138.1		Layered very coarse metagabbro	Same as previously described.
138.1	138.2		Granitic intrusive	Orangy dike, very siliceous. Looks a bit like
138.2	138.4		Fine-grained metagabbro	Same as previously described
138.4	139.2		Coarse grained, porphyritic metagabbro	Altered section, pink siliceous material as 138.15 but <1cm.
				Qz-ep veins, phenocx are pink brown (K?).
				Mt and py are almost absent.
139.2	139.6		Fine-grained metagabbro	Same as previously described
139.6	139.8		Coarse-grained, porphyritic metagabbro	Medium and large phenocx make ~40% of rock, vague orientation at ~20o to perpendicular.
				Some hairline fractures with qz
				Minor traces of py and ilmenite
139.8	140.8		Fine-grained metagabbro	Dike, up hole contact is somewhat vague, looks like pieces of the porphyritic gabbro were dragged into the dike. Down hole contact is sharp and cuts a pg phenocx.
				Up hole portion is sericitized around qz vein with ep.
				Mafic minerals could be am and chl but very fine so not sure.
				Small qz? phenocx (<0.5mm), concentrated mostly in middle of dike to ~1%.
				Hairline fractures with silicification halos.
				No visible sulphides.
140.8	141.3		Coarse grained, porphyritic metagabbro	Large and small phenocx bands (layers).
141.3	141.5		Very fine-grained metagabbro	Dike, no qz phenocx.
				Qz veins.
				Some ilmenite with the qz coronas.
				Tr of small specks of py.

141.5	142.7		Layered porphyritic metagabbro?	Mixed intersection that is more foliated. Looks like it could have been layered and the finer grained layers took more deformation than the coarse. Down hole contact is marked by going from phenocx to none (not cutting). Qz veins and partial silicification of phenocx locally. Some K alteration Mt + ilmenite blebs are stretched and have qz coronas. Disseminated py, mostly in mt-ilmenite-rich areas. Small fault at 90o to core axis.
142.7	144.7		Fine-grained metagabbro	Very messy, lots of qz+pg veins 3mm to hairline, randomly oriented. Most fine ones have orangy alteration halos. One ~2mm chlorite vein. Really altered to lighter green and brown color near down hole contact. Big qz vein
144.7	146.5		Granitic feldspar porphyry	Light grey, orangy, faint orientation defined by mafic minerals (mostly chlorite, I think) almost perpendicular to core axis. Fp phenocx are tabular to square, homogeneous in size (~1.5mm) and form ~5% of the rock. Very hard and siliceous rock. 3% chlorite.
146.5	148.5		Fine-grained metagabbro?	Zone of massive alteration. Very crumbly core. Up hole contact is bright light green over ~20cm, mixture of epidote and sericite? that grades into a rusty brown section with epidote-rich veins and one dark green vein that could be serpentine. Small granitic injections. Where less altered, it is same fine-grained gabbro or qz-gabbro described previously. Veins of epidote and other with orangy halos in what could be small granitic dike at 147.4.
148.5	149.2		Granitic feldspar porphyry	Same as described before. This one has small veins that are glassy green and soft (looks like serpentine to me!) and also contain white carbonates. Veins are locally rusty red.
149.2	161.0		Fine-grained metagabbro and very fine-grained metagabbro	Intermixed fine to coarse-grained and very fine-grained gabbros, not sure but seems that vfg intrudes into fg. There is no obvious chilled margins and units are occasionally separated by veins. Very fine-grained gabbro is massive, has very small <0.5mm fp and qz phenocx locally, is slightly to not magnetic. Mafic mineral is likely hb with or without a bit of chlorite. Contains up to 1% mt and 1% py, which follow the minor foliation at ~30o to perpendicular.

				Randomly oriented qz veins with very minor cb locally. Py is generally in or near veins
				Garnet porphyroblasts of varying sizes up to 7mm form horizons of similar sizes.
				Fine to coarse-grained gabbro or qz-gabbro, somewhat layered. Not sure if qz is primary or alteration. Mafic minerals are likely mostly am and some chl but not sure. Plagioclase are locally slightly pink or greenish from epidote.
				What looks like possible layering varies from 20 to a max of 350 to perpendicular. Extremely variable amounts of mt and ilmenite up to 15% on short sections in between vfg gabbro dikes. I think that mt is more abundant in finer grained portions.
				Py commonly with mt but not exclusively. Some horizons have 2-3% disseminated py and no mt.
				Garnet porphyroblasts are locally present but not as common or big as in the vfg gabbro.
				157.2 - Fragment of medium-grained gabbro in vfg gabbro 158.2 - Py vein cuts across a contact between the 2 gabbros. 159.5 - Mt reef, 3-4 cm.
161.0	179.7		Porphyritic very fine-grained metagabbro	Generally very fine melagabbro with <1mm pg phenocx concentrated in "bands" layering-like at ~30o to perpendicular. Mafic minerals could be am and chl but not sure. Traces of disseminated py and ilmenite with the qz coronas. Py veins 2-3mm wide. Qz veins, 3-10 mm crosscutting or parallel to foliation. 171.3-171.6 - Qz veined area with more py and some po. 173.0 - Dislocated vein with py mostly but also some po (2 blebs of ~10mm x 3mm - one has a cube of py in it). This section is also mt-rich and also has fair amount of disseminated py and po.
179.7	184.2		Very fine-grained metagabbro	No pg phenocx, contact with previous seems gradual. Good general foliation. Smeared py veins and trace to 1% disseminated py. Mt amounts variable, small grains, not big blebs a previously described in other lithologies. Sections with garnet porphyroblasts, not particularly affected by deformation. 181.0 - Qz and fp veins, 5mm. 179.9-183.8 - Disseminated po that changes sharply to py+po but no lithology change. The specks are minuscule, only really identifiable with 20X lens. 182.90 - Po and qz veinlets, specks of cp

184.2	192.1		Fp porphyritic metagabbro to anorthosite	Locally layered sequence with 5cm layer of anorthosite. Layering at 30-40o to perpendicular. Garnet is more abundant in more mafic portion but present in felsic as well. Qz veins up to 5cm in size. 184.2-184.7 - Porphyritic textured portions contains garnet, ilmenite and ~1% disseminated py. 187.2-192.1 - Well layered section.
192.1	194.2		Fine-grained meta-melagabbro	Pg pheno are rare to mostly absent. Contact with previous somewhat gradual and approximate. Garnet porphyroblasts up to 1cm in size vary in abundance from 0 to 20% of the rock and generally following layering but have also grown across. 192.8 - Po+py vein, no disseminated po or py halo. 193.5-193.9 - <1% disseminated py + po and veins in magnetite "reef". Up hole contact is sharp and not parallel to layering. Looks like a chlorite + py vein at that contact. Down hole contact is gradual into a garnet-rich horizon.
194.2	200.4		Coarse-grained metagabbro	This lithology has not been encountered previously. It is well foliated at ~15o to perpendicular. Homogeneous through the section, looks like a good old plain hornblende metagabbro. There could be some chlorite. <1% mt or ilmenite (not very magnetic) <1% sulphides (not sure, very small) The ilmenite here looks chunkier, as if it might actually be chromite... Grains are very small and hard to identify.
200.4	208.8		Fine-grained porphyritic metagabbro	Some areas are not porphyritic. Alternating veins of py and py+po. Mt "reefs" at 40o to perpendicular with specks of disseminated po 203.7 - Sample sent to Ian Bliss. Beautiful small mt "reef" with disseminated po and py, and blebs of po (could be dislocated vein). 205.8 - Nice 10 cm wide mt reef with some garnet. It is cut by a small py vein. 206.3 - Small 1cm wide mt "reef" with disseminated po. 207.2 - Up to 2cm wide garnet porphyroblasts.
208.8	212.8		Fine porphyritic to layered metagabbro	Similar to previously described. Variable proportions of garnet through section. <1% disseminated py and mt, possibly some po.

Drill Log

Company Name:	Northern Shield Resources	DDH Number:	06HB-02
Property Name:	Highbank Lake	Collar UTMN:	5808910
Location:	250 km north of Nakina, Onta 75 km northwest of Ogoki	Collar UTME:	552930
Claim Number:	1249016	Zone, Datum:	16, NAD83
Drilling Contractor:	Cartwright Drilling	Drilling Azimuth:	335°
Date of start:	8-Jun-06	Hole Length:	0 m
Date completed:	10-Jun-06	Core Size:	BTW (BQ Thin Wall)
		Logs by:	Christine Vaillancourt, CCIC
		Core Storage:	No core

From	To	Rock Type	Description
			Never reached bedrock, hole was cancelled

Drill Log

Company Name:	Northern Shield Resources	DDH Number: 06HB-03
Property Name:	Highbank Lake	Collar UTMN: 5807932
Location:	250 km north of Nakina, Onta 75 km northwest of Ogoki	Collar UTME: 549482
Claim Number:	4205453	Zone, Datum: 16, NAD83
Drilling Contractor:	Cartwright Drilling	Drilling Azimuth: 328°
Date of start:	10-Jun-06	Hole Length: 219.5 m
Date completed:	16-Jun-06	Core Size: BTW (BQ Thin Wall)
		Logs by: Christine Vaillancourt, CCIC
		Core Storage: Warehouse in Hearst, Ontario

From	To	Rock Type	Description
33.5	43.4	Overburden	Variety of pebbles. Didn't find anything interesting like chromitite or other UM lithologies. There are a few soft friable very weathered pieces of light green stuff that has the touch of talc near bedrock but not sure.
43.4	47.2	Layered gabbro to leucogabbro	Layering ~ 15o to perpendicular from core. Grain size is generally medium to coarse, although some multi cm pg are locally present. Most abundant mafic mineral looks like hornblende, possibly with some chlorite. Pg is ~50% of rock in "patches", probably phenocx up to 3cm in length. Small 1-3cm wide bands of pure pg. Small mm size books of bt locally This rock looks siliceous but probably not primary. Some small clear qz veins sub parallel to core.
47.2	47.3	Layered gabbro to leucogabbro	44.4-44.8 - Patchy section with very large pg, fragmented and partially silicified. This unit reminds me of a funny textured troctolite in the Stillwater. 46.3 - Small 3cm shear with chlorite and possibly sericite. White cb veins. Very altered section centered on a qz vein. Contacts are very sharp but look like alteration fronts. Vaguely more deformed at low angle with layering (almost perpendicular to core) Pg is cloudy and pale green - ser+ep alteration?
47.3	53.0	Layered gabbro to leucogabbro	Same as 43.4-47.2

96.2	97.6		Amphibolite	Ultramafic zone with medium-grained hornblende and some tabular to acicular actinolite oriented in weak foliation (~20o to perpendicular)
				Small qz veins and silicification all through, trace sericite, no sulf
				96.4 - Zone of strong silicification ~10 cm wide, pink to brownish color probably caused by bt
				97.3 - Bt-enriched zone
97.6	100.3		Medium-grained layered gabbro to melagabbro	Pg varies from none to 60% in different layers
				Qz veins with sericite
100.3	100.4		Coarse pyroxenite	Probably px cumulate
				2% py+po+cpy interstitial, in veins and blebs
100.4	101.0		Medium-grained amphibolite	Medium-grained mafic minerals with very coarse pg crystals (10%)
				Tr of pink-brownish mineral (titanite?)
101.0	106.8		Medium-grained melagabbro to gabbro	Mostly melagabbro, somewhat layered
				Mafic mineral mostly hb (I think)
				Pg up to 60%
				Small qz and qz+ser veins
				Tr titanite?
106.8	108.0		Coarse-grained amphibolite	Small actinolite needles locally
				Chl-rich areas
				Locally flooded with qz
				Some local brick color alteration mineral in small veins
				Some small qz veins
				Tr to 2% bt forming small bands
108.0	118.2		Medium-grained melagabbro	1-10 cm layers formed by concentrations of pg crystals (0 to 35%)
				Many small qz veins, some big ones
				Some pale biotite and titanite?
				110.3-111.4 - Drilling parallel to a qz vein
				112.3-112.5 - Very silicified layer with anastomosing qz veins, could be anorthosite or just alteration zone.
				113.6 - Small shear at 40o to perpendicular with ser and minor ep
				113.6-113.8 - Qz vein parallel to core
				116.4-116.8 - Coarser, more felsic section
				117.2-117.3 - Altered, more foliated zone, pale green with ser, possible ep, dislocated qz+sulfide veins
118.2	119.0		Fine ultramafic	Contains 2% sulfides, very fine disseminated po, py specks concentrated in foliation

				Some tabular or acicular actinolite concentrated in small bands and aligned with foliation
				Local very altered zones with sericitic bands with qz, particularly near down hole contact
119.0	128.0		Medium-grained mela to leucogabbro	Mostly melagabbro, somewhat layered 10 to 150 to perpendicular
				Contains actinolite
				125.7 - Fibrous white mineral in vein where core broke
				126.1-126.4 - More pyroxenitic zone with medium to coarse hb
128.0	129.3		Very hard black siliceous alteration zone	Flooded with silica
				Local bt+chl patches
				Tr py+po+/-cpy
				Tr titanite?
129.3	133.7		Altered mixed zone grading into solid quartz	Not sure if big vein or near total replacement
				Local sericite
				133.0 - ~4cm section with 2% very small tourmaline in pure qz
				133.3 - Ep vein with chl in middle
133.7	134.5		Medium-grained gabbro	Locally coarse, fairly homogeneous section
				Some very fine qz veins
134.5	135.1		Layered coarse leucogabbro and amphibolite	Layers are 3 to 5 cm each
				Tr 2 mm py cx in ultramafic
135.1	135.6		Coarse-grained amphibolite	Foliated ultramafic zone
				1-2% disseminated py, occasional 2mm py cubes
135.6	136.7		Medium-grained gabbro	Similar to 133.7-134.5
136.7	141.9		Shear zone	Flooded with qz, locally with ser and/or ep and/or chl, some bt-rich blebs
				Possible small black tourmaline locally
				Schistosity is crenulated locally
				Orangy potassic alteration in qz-rich areas
				Orange veins cut schistosity
141.9	146.2		Amphibolite	Fine-grained at uphold contact but otherwise coarse-grained
				Generally ~10% pg
				Mafic mineral mostly hb (I think) with some chl and possible tr act
				1% specks disseminated py
				Foliation is fair to moderate
				Qz-ser veins with titanite? near veins
				Rock is generally very silicified
146.2	162.0		Very coarse-grained gabbro	Large pg >1cm in size

				Alteration and deformation vary a lot through this section
				Layering of 1-2 cm mafic-rich and felsic-rich bands
				146.2-146.8 - Black rock, mafic minerals are hb+act+chl
				146.8-149.3 - Paler green, more silicified zone, becomes progressively more foliated down hole
				149.3-150.3 - Black rock, strongly silicified, strong shear with bt+chl, small am needles floating in siliceous bands, posy more chl than hb generally
				150.3-153.0 - Sheared, very altered zone, lots of ep-rich qz veins, other pinkish bt-rich zones, act is most abundant mafic mineral
				152.8 Very fine gabbro "dike" with disseminated py, ~4cm wide,
				153.0-154.0 - 1% fine disseminated py, similar to 150.3-151.0, alternating 1cm bands of fine mafic rock (am+bt+chl) with bands of pure clear qz
				155.3 - 10cm wide anorthositic layer
				158.4 - 4cm UM layer with coronated mt, 3mm titanite? and disseminated po+py
				160.8-161.5 - Other zone of paler green altered rock, odd texture almost graphic, recrystallized to medium-grained
				161.5-161.9 - Anorthositic layer, very siliceous, abundant pink bt at down hole contact
162.0	163.2		Medium-grained melagabbro	Slightly layered, similar to previously described
163.2	169.6		Very coarse-grained gabbro to melagabbro	Pg content varies from 10 to 40%
				Mafic minerals are hb+chl+act
				166.5-166.7 - Ultramafic zone with 3-4% po + tr cpy and other mineral (titanite?)
169.6	170.0		Anorthosite?	Beige-brownish alteration Multiple qz veins and silicification
170.0	170.1		Coarse-grained gabbro	
170.1	170.5		Anorthosite	
170.5	170.9		Coarse-grained gabbro	
170.9	171.6		Anorthosite	
171.6	171.8		Pyroxenite	Best remnant of adcumulate texture seen so far Coarse, chunky, 0.5 to 1cm pyroxenes now probably hb? Interstitial material to px is bt, po, py and tr cpy Great sample for thin section Slight orientation at <20o to perpendicular but not strong
171.8	172.8		Very coarse-grained melagabbro	Same as previously described

172.8	173.1		Coarse-grained leucogabbro	Unusual recrystallized texture, almost graphic - photo looks like oikocrysts
173.1	173.4		Very coarse-grained melagabbro	Similar to previously described
173.4	173.6		Anorthosite	
173.6	173.7		Ultramafic rock	Small intersection with well developed actinolite needles
173.7	176.0		Very coarse-grained melagabbro	Similar to previously described
				175.0 - Small anorthositic band
				175.0-175.3 - Well preserved mezocumulate texture, 10% pg, no sulphides except tr disseminated near down hole contact where sheared
				175.7 - Small 1cm shear with py vein followed by 1cm wide hard, dark brown and glassy siliceous zone
176.0	180.9		Coarse-grained leucogabbro	Same as 172.8-173.1, main difference is that pg-rich bands are more like a gabbro with granular texture
180.9	181.2		Mafic dike	Probably metapyroxenite
				Very-fine grained at contacts and large 2mm chunky pyroxenes? channelized in center of dike
				Uphold contact is sharp and cuts large pg crystal
				Abundant py at uphold contact (ring)
				3% disseminated py, some following "veins" cutting across the orientation defined by grain-size difference from center to edges
181.2	182.0		Very coarse-grained gabbro	
182.0	183.0		Anorthosite	There seems to be a zone of altered gabbro at both ends, which suggest that this unit may not be anorthosite but simply an alteration zone of some sort..
183.0	190.3		Coarse-grained gabbro	Hb, chl, act, some bt
				Oriented but not quite foliated
				<10cm intersection of anorthosite near uphold contact
				Fractures in large pg are filled with what looks like chlorite (not sure but dark green)
				183.1 - Small shear filled with qz at 40o to perpendicular
190.3	191.0		Anorthosite	Small ultramafic intersections in between (hb+act+titanite?+fibrous acicular mineral that could be talc?)
				Hard to say grain size
191.0	191.6		Coarse-grained melagabbro	Very dark green
				Pg forms band of 1-3 cm
				Large 10X4mm bt blebs and small disseminated
				Possibly some chl
				2% py cubes and disseminated near down hole contact
191.6	192.0		Amphibolite	Somewhat more deformed, almost perpendicular to core

				3% py cubes and small disseminated Actinolite needles and chlorite
192.0	193.2		Coarse-grained gabbro	Similar to 183.0-190.3, with grain size up to very coarse-grained Dark green to black
193.2	198.0		Coarse to very coarse-grained gabbro	Similar to previous but paler green, more pg and larger bands of anorthositic material Mostly hb+pg about 50% each Tr titanite? Tr py Some small sections have oikocryst-looking remnant textures
198.0	198.6		Very fine-grained gabbro	Probably dike 5% disseminated py Medium grey in color Deformed Small qz veins Contacts are deformed at both ends but still looks like is dike Py concentrates locally in band
198.6	206.6		Coarse to very coarse-grained gabbro	Similar to 193.2-198.0 Banding near perpendicular to core Local bt+py+titanite? Near vein Local oikocryst-like texture 205.6 - Sheared with sericitic vein and titanite?
206.6	207.5		Anorthosite	Compact and massive, similar to previously described Both contacts are not too sharp
207.5	209.4		Layered ultramafic and anorthosite	5-10 cm wide layers UM is sheared and contains 3-4 mm veins of epidote +/- sericite Most abundant mafic mineral is probably chl Py + tr cpy concentrated in bands 209.2 - Ilmenite with leucoxene coronas on 8 cm UM intersection
209.4	219.5		Medium to coarse-grained gabbro	Very granular and boring Some sections almost sub-ophitic (not quite) Homogeneous, undeformed, not layered 2 to 5 mm hb+pg ~50% each Hairline qz veins with occasional sericite, some with displacement along thin shears 209.6-209.9 - 2 small intersections of anorthosite (4 cm), down hole contact of last is sheared and sericitic 209.9-210.3 - 1% disseminated py 210.4 - Small shear with displacement

Drill Log

Company Name:	Northern Shield Resources	DDH Number: 06HB-04
Property Name:	Highbank Lake	Collar UTMN: 5806174
Location:	250 km north of Nakina, Onta 75 km northwest of Ogoki	Collar UTME: 554197
Claim Number:	1180792	Zone, Datum: 16, NAD83
Drilling Contractor:	Cartwright Drilling	Drilling Azimuth: 335°
Date of start:	16-Jun-06	Core Size: BTW (BQ Thin Wall)
Date completed:	20-Jun-06	Hole Length: 267.6 m
		Logs by: Christine Vaillancourt, CCIC
		Core Storage: Warehouse in Hearst, Ontario

From	To	Rock Type	Description
?	63.5	Overburden	Pebbles of granitic rocks and very fine light grey rock (seds?) plus sub-crop pieces of gabbroic, very weathered rock.
63.5	65.2	Medium-grained melagabbro	Medium-grained (2-3 mm) Granular texture Dark green >60% hb, 10% mt, 30% pg Weak foliation at 45o
65.2	67.4	Medium-grained leucogabbro	<30% mafic minerals - actinolite+hb, 2% mt Weak foliation at 25o to perpendicular Concentrations of large 1cm pg near both ends of this intersection Tr to 1% disseminated py locally
67.4	71.2	Melagabbro to amphibolite	Strongly foliated Hb+act+pg, generally <1% mt Dark green rock, not sure about proportions of mafic to felsic minerals because pg is greenish. Very tiny hairline sericitic veins Rusty red alteration mineral? soft-scratches off 69.5 - Odd intersection ~5cm with concentration of the rusty red mineral, mt and another pale green and tabular to polygonal mineral?
71.2	74.2	Medium to coarse-grained leucogabbro	69.9 - Only qz vein with py Intergranular texture Generally ~70% pg, 1% mt, rest hb Foliation is weak to moderate and at ~35o to perpendicular Sericite-filled fractures Tr py, disseminated or in qz veins

				Down hole contact is strongly silicified
				72.6 - Zone of strongly sheared, crumbled core
				73.0 - Small vein at low angle to core with sericite and chlorite, orange rusty halo around vein
74.2	76.3		Very coarse-grained gabbro	Somewhat layered (banded)
				50-50 pg and hb
				Py veins locally but rare
				Unit similar to the very coarse-grained gabbro in 06-HB-03
76.6	80.5		Fine to medium-grained magnetite-gabbro	Up to 15% mt, 15% actinolite and rest pg
				Disseminated py
				Weak to no foliation
				Intergranular texture
				Sericitic hairline veins
				77.4 - Py-ser vein at slow angle to core
				78.2-78.5 - Missing piece of core???
				78.5-79.0 - Silicified zone
				79.4-80.5 - Silicified zone
80.5	80.7		Magnetite-gabbro	Down hole contact is strongly shear over ~10 cm. >60% mt with <1mm veins of yellowy sericitic looking stuff, surrounded by dark green mineral that looks like serpentine? - has the softness. Possible serp also in rock (not just veins).
80.7	81.8		Medium-grained magnetite-gabbro	Similar to 76.6-80.5
				80.7-80.9 - Hard and silicified
				Tr disseminated py
				80.9-81.2 - More felsic, slightly larger grain size, one py-rich vein at low angle to core axis
				81.3 - Py-rich "band", followed by crumbly core
81.8	82.3		Magnetite-gabbro	Similar to 80.5-80.7
				Crumbly core
				Mt crystals up to 5mm but shattered
82.3	83.5		Medium-grained magnetite-gabbro	Similar to 76.6-80.5
				Down hole contact is intensely sheared over ~ 30cm, flacky chlorite schist with mt mostly concentrated in ribbons
83.5	84.8		Intermediate feldspar porphyry	Must be a dike
				Massive, but weak orientation of minerals at <15° to perpendicular
				Fine ~0.5mm pg phenocx in a very fine light grey matrix.
				Contains also what looks like books of muscovite as phenocx of similar size to pg

84.8	85.1		Medium-grained ultramafic	Mafic mineral is very fine bt, I think, <5% Mixture of bt, chl, possibly hb, actinolite needles abundant locally Sheared and flacky Tr disseminated py 0 to 10% mt
85.1	85.3		Medium-grained hornblende-magnetite gabbro	40% hb, 40% pg, 10% mt, 10% chlorite Intergranular texture Pale green, I think has chloritic alteration Mt content varies from 5 to 10% Some sections with larger grain size are also more felsic Bt-rich veins
85.3	85.6		Medium-grained magnetite-gabbro	45% mt, 45% pg, 10% hb Intergranular texture Weak foliation defined by orientation of planar features, varies from perpendicular to ~30o to perpendicular Pg is generally white to light green, especially near light green veins. Not sure what alteration is, not epidote-green, more like chlorite-green, but very fine. Crumbly core in middle of this intersection
85.6	87.6		Shear zone, alteration zone	Unsure of protolith(s) Qz-epidote veins Rusty orange potassic? alteration locally Chlorite-py veins Local crumbly core One less messy intersection looks like dunite? Should sample for TS
87.6	87.9		Medium-grained hornblende-magnetite gabbro	Similar to 85.1-85.3 Looks silicified Chlorite-py veins
87.9	88.1		Massive magnetite	With fractures filled by pale green material? Texture is like shattered mt Tr disseminated py and cpy
88.1	88.7		Medium-grained magnetite-gabbro	Similar to 85.3-85.6
88.7	88.8		Massive magnetite	Similar to 87.9-88.1
88.8	88.9		Medium-grained magnetite-gabbro	Similar to 85.3-85.6
88.9	90.2		Medium-grained hornblende-magnetite gabbro	Similar to 85.1-85.3

					Grades into next
90.2	92.5			Medium-grained magnetite-gabbro	Similar to 85.3-85.6
					91.5 - Crumbly core
92.5	95.7			Medium-grained hornblende-magnetite gabbro	Similar to 85.1-85.3
					92.5-92.9 - More felsic and also silicified section, contains actinolite
					92.9 - Small <5cm band of massive mt
					93.1 - Small <5cm band of massive mt
					95.0 - Small <5cm band of massive mt
95.7	95.8			Medium-grained ultramafic	Similar to 84.8-85.1
95.8	100.1			Medium-grained hornblende-magnetite gabbro	Similar to 85.1-85.3
					Locally coarser
					97.3 - Chl-py veins sub parallel to core
					98.2 - Bigger qz vein with ep and brownish alteration?
100.1	100.3			Medium-grained ultramafic	Similar to 84.8-85.1
					Strongly foliated + crenulation of the foliation
100.3	102.1			Medium-grained hornblende-magnetite gabbro	Similar to 85.1-85.3
					Grades into next
102.1	102.9			Medium-grained magnetite-gabbro	Similar to 85.3-85.6
					Grades into next
102.9	105.0			Medium-grained hornblende-magnetite gabbro	Similar to 85.1-85.3
					Grades into next
105.0	105.2			Massive magnetite	Similar to 87.9-88.1
105.2	105.3			Medium-grained ultramafic	Similar to 84.8-85.1
					Strong foliation
105.3	106.7			Medium-grained hornblende-magnetite gabbro	Similar to 85.1-85.3
					Strong foliation at down hole contact
106.7	107.5			Medium-grained magnetite-gabbro	Similar to 85.3-85.6
					106.8 - Shear
					107.2 - Shear
					107.4 - 1cm band of massive magnetite
107.5	108.0			Medium-grained hornblende-magnetite gabbro	Similar to 85.1-85.3
108.0	108.3			Medium-grained magnetite-gabbro	Similar to 85.3-85.6

				Somewhat layered with 2-3 cm bands richer in mt (more mafic) Specks of py and cpy
108.3	109.4		Medium-grained hornblende-magnetite gabbro	Similar to 85.1-85.3
				Grades into next 108.3-108.4 - Anorthositic band with nice 50-50 py+cpy in vein and disseminated 108.8-108.9 - More mafic and foliated
109.4	110.3		Medium-grained magnetite-gabbro	Similar to 85.3-85.6
110.3	110.4		Medium-grained ultramafic	Somewhat layered with 2-3 cm bands richer in mt (more mafic) Similar to 84.8-85.1 Bt-rich and foliated
110.4	111.0		Medium-grained hornblende-magnetite gabbro	Similar to 85.1-85.3
111.0	111.1		Massive magnetite	Similar to 87.9-88.1
111.1	111.2		Anorthosite	Chlorite veins with py and po?
111.2	113.6		Medium-grained hornblende-magnetite gabbro	Similar to 85.1-85.3
				Grades into next
113.6	115.1		Medium-grained magnetite-gabbro	Similar to 85.3-85.6
				Grades into next
115.1	115.2		Massive magnetite	Similar to 87.9-88.1
				Grades into next
115.2	116.1		Medium-grained magnetite-gabbro	Similar to 85.3-85.6
				Gets more hb-rich very gradually going down hole
116.1	117.0		Leucogabbro with hb oikocrysts	This rock looks a lot like a pg cumulate (2mm) with 3-5 cm oikocrysts (originally px, now hb+mt) Some orientation (weak foliation or layering) near perpendicular 116.3 - Py+cpy vein 116.6 - Py+cpy vein
117.0	117.3		Layered leucogabbro - mt	Bands of massive mt in leucogabbro Chl+bt veins Py+cpy disseminated mostly in chloritic patches
117.3	120.7		Medium-grained hornblende-magnetite gabbro	Similar to 85.1-85.3
				Becomes progressively leucocratic down hole 4 cm mt band with py and cpy at down hole contact Contact/layering at ~20o to perpendicular
120.7	121.5		Anorthosite	Few cm sections enriched in hb+bt+act+chl

121.5	123.6		Medium-grained hornblende-magnetite gabbro	Similar to 85.1-85.3
				Generally ~1% disseminated py, local 3-6 mm py cubes
123.6	124.3		Anorthosite	Patches of chlorite+sericite alteration Gradual down hole contact
124.3	126.2		Medium-grained hornblende-magnetite gabbro	Similar to 85.1-85.3 Qz-tm vein with py cubes near up hole contact
126.2	126.3		Anorthosite	
126.3	127.1		Magnetite-gabbro	Different from previous 25% 1-2mm mt grains in a pale green, very fine matrix of chlorite? and well oriented actinolite needles Orientation of foliation/layering at <10o from perpendicular Very powdery unit 126.8 - Mt-free section, more foliated, almost talc-like softness
127.1	127.3		Anorthosite	
127.3	129.8		Coarse-grained leucogabbro	65-70% pg >5mm in size, rest is hb, actinolite needles and possibly some chlorite. No mt, no sulf. 127.8 - 8 cm chloritized section 129.5 - Small 4 cm shear
129.8	130.7		Medium-grained hornblende-magnetite gabbro	Similar to 85.1-85.3 Grades into more mt-rich going down hole, no real contact with following
130.7	136.2		Medium to coarse-grained melagabbro	Deep green Mt varies from 2% to about 10% Foliation near perpendicular, varies from moderate to weak 132.5-133.4 - Section with anorthositic layers, tr py+cpy
136.2	137.2		Fine to medium-grained magnetite-gabbro	More leucocratic than usual Actinolite needles Tr to 1% disseminated py+cpy Qz+py+ long needles of tm near down hole contact
137.2	137.6		Massive magnetite	Similar to 87.9-88.1 Tr to 1% py+rare cpy Grades into following
137.6	138.7		Medium-grained hornblende-magnetite gabbro	Similar to 85.1-85.3 Grades into following
138.7	142.6		Medium-grained magnetite-gabbro	Similar to 85.3-85.6

				Becomes progressively leucocratic down hole ~ from 140.5 except for last ~6 cm where mt gets coarser and more abundant
				Disseminated py+cpy
				140.5 - Strong foliation perpendicular
				Down hole contact is very sharp (unusual)
				142.6 - Chl-bt-py-cpy bleb
142.6	143.1		Medium-grained hornblende-magnetite gabbro	Similar to 85.1-85.3
				Disseminated py, some chl-rich blebs with large py and cpy
				Weakly sericitized
				Chl+act vein at down hole contact
143.1	147.0		Feldspar porphyritic leucogabbro	Phenocr average 2mm and form ~15% of rock.
				10-15% mafic minerals are small chl+bt (I think...)
				Little to no mt
				Mafic mineral somewhat oriented at ~0 to 20o to perpendicular
				Very rare disseminated py
				Hairline chl veins with py, local orangy alteration halos around vein
147.0	147.1		Medium-grained ultramafic	Similar to 84.8-85.1
				Center of intersection has channelized pg cx up 5-10 mm in size and bt blebs. Both sides are very fine grained and deep green.
				No sulphides
				Both contacts are sharp
147.1	147.3		Massive magnetite	Similar to 87.9-88.1
				> 1mm py near cubes form >1% of rock, possible tr of cpy specks
147.3	147.8		Feldspar porphyritic leucogabbro	Similar to 143.1-147.0
				Foliated
147.8	148.0		Medium-grained magnetite-gabbro	Similar to 85.3-85.6
				148.0 - Py+cpy+bt bleb
148.0	148.8		Massive magnetite	Similar to 87.9-88.1
				Some 1-2 cm intersections of foliated ultramafic
				Local blebs of py+cpy+bt
148.8	151.4		Medium-grained hornblende-magnetite gabbro	Similar to 85.1-85.3
151.4	151.6		Medium-grained ultramafic	Similar to 84.8-85.1
151.6	153.6		Medium-grained hornblende-magnetite gabbro	Similar to 85.1-85.3
				Some fairly leucocratic sections
153.6	153.9		Massive magnetite	Similar to 87.9-88.1

153.9	154.6		Medium-grained magnetite-gabbro	Similar to 85.3-85.6
				Down hole contact is 4 cm of massive magnetite
154.6	157.0		Medium-grained hornblende-magnetite gabbro	Fairly leucocratic
				155.6 - 1 cm band of solid mt
				155.7-156.1 Py+cpy veins with chlorite
157.0	157.1		Massive magnetite	Similar to 87.9-88.1
157.1	158.1		Medium-grained hornblende-magnetite gabbro	Similar to 85.1-85.3
				Local 1-2% disseminated py+cpy
				157.6 - Small 3 cm mt band displaced by chlorite vein
158.1	159.3		Magnetite-gabbro	Same as 126.3-127.1 (pale green)
				Actinolite needles present where mt-poor and sheared
159.3	160.0		Medium to coarse-grained hb-gabbro	Coarse and not magnetic near up hole contact, becomes progressively enriched in mt near 159.7 and back to coarse-grained, non-magnetic near down hole contact.
				Grades into following
160.0	160.5		Magnetite-gabbro	Same as 126.3-127.1 (pale green)
				Progressive contact into following
160.5	161.9		Medium-grained hornblende-magnetite gabbro	Similar to 85.1-85.3
				160.7 - Small ultramafic intersection
				160.8 - Small ultramafic intersection
				161.0 - Small ultramafic intersection
				161.2 - Small ultramafic intersection
				161.9 - Small ultramafic intersection
161.9	162.4		Medium-grained magnetite-gabbro	Similar to 85.3-85.6
162.4	163.4		Medium-grained hornblende-magnetite gabbro	Similar to 85.1-85.3
				162.7 - Small shear followed by a fold
163.4	164.0		Medium-grained ultramafic	Similar to 84.8-85.1
				Strong shear
				Local actinolite needles
				Local disseminated py
164.0	164.7		Medium-grained hornblende-magnetite gabbro	Similar to 85.1-85.3
				Leucocratic
				Down hole last 30 cm of intersection is very strongly sheared
164.7	170.8		Feldspar porphyritic leucogabbro	Similar to 143.1-147.0 with more phenocx

Drill Log

Company Name: Northern Shield Resources
Property Name: Highbank Lake
Location: 250 km north of Nakina, Onta
 75 km northwest of Ogoki
Claim Number: 1180792

Drilling Contractor: Cartwright Drilling
Date of start: 21-Jun-06
Date completed: 12-Jul-06

DDH Number: 06HB-05
Collar UTMN: 5807206
Collar UTME: 553718
Zone, Datum: 16, NAD83
Drilling Azimuth: 335°
Core Size: BTW (BQ Thin Wall)
Hole Length: 325.6 m
Logs by: Christine Vaillancourt, CCIC
Core Storage: Warehouse in Hearst, Ontario

From	To	Rock Type	Description
0.0	63.8	Overburden	
63.8	68.6	Coarse-grained gabbro	35% hb, 65% pg Weak sericitization locally Rare tr py Not sure about texture name... hb is interstitial to pg that has no specific shape Some chl-rich hairline veins with sericite ± little ep No real foliation or layering
68.6	68.7	Anorthosite	~3% chlorite (I think, very small, could be hb) Massive Could be a xenolith but DH contact looks somewhat primary 1 - 7X2 mm bleb of py
68.7	73.4	Medium-grained gabbro	Grain size ~2 mm 50% hb, 50% pg More granular texture Fine chl veins and qz-ep veins Occasional specks of py 70.9-71.2 - Deeper green section, could be cpx remnants, slightly coarser, more mafic, crumbly core, possibly some alteration (ser?) on pg 73.0-73.4 - Crumbly core, marker with word "wash" on marker bloc?
73.4	73.6	Fine-grained gabbro	Dike Down hole contact is intrusive, up hole contact is 1 cm shear
73.6	74.2	Medium-grained gabbro	Same as 68.7-73.4
74.2	87.7	Coarse to medium-grained gabbro	Similar to previous except for a slight orientation at ~35° to perpendicular Varies from coarse to medium, and is more or less leucocratic but changes are progressive (can't put actual contacts) Qz veins, irregular and discontinuous, 1 cm to hairline 77.3 - Py-rich vein

				77.6 - Shear, crumbly core and whiter pg, some chl and ep
				77.7-78.0 - <1% 1-2 mm specks of py
				78.2-78.4 - Mixed zone of chl and qz veins with some foliation along 5-6 cm bands, contact foliated to non-foliated is very sharp
				79.4-80.5 - More leucocratic zone
				83.5-86.0 - Coarse-grained, more melanocratic section, pg and hb are more polygonal, deeper green, could be cpx remnants as 70.9-71.2.
				Foliation starts at ~87.6
87.6	88.5		Green mud and crumbles	I guess fault zone
88.5	88.8		Metapyroxenite	Hb (could be cpx remnants) ±act, bt, chl
				Some pg but seems mostly concentrated in small bands
				Py cubes ~ 2mm and cubic holes
				Very foliated all through, no signs of a lineation at face perpendicular to foliation (where core breaks), pure shear-like... odd
88.8	90.2		Hb-bt gabbro	Strongly foliated and chlorite-altered
90.2	90.9		Ultramafic rock	Very fine grained, I think is mostly actinolite + chlorite
				Contact with following is sheared and crumbly
90.9	91.7		Very fine-grained leucogabbro-diorite	Dike
				Not sure about mafic minerals but I think chl+bt (very fine), <10%
				Small fractures with beige alteration halos
				Not really foliated
				Occasional very small pg phenocx
				Down hole contact is bt + sulfides all sheared
91.7	98.2		Medium-grained gabbro to leucogabbro	35% hb, 65% pg, no bt, no sulf
				Granular
				Slight foliation at <15o to perpendicular
				Some veins with chloritic shears, silicification around qz veins
98.2	124.1		Coarse-grained leucogabbro	~30% hb+chl generally, down to 20% in areas, local actinolite needles
				Rare specks of py, some in qz veins
				Small 1-2 cm shears @ ~35o to perpendicular where more mafic (even ultramafic)
				Blebs of pinkish bt locally
				112.2 - Shear zone, 7 cm, ~15o to perpendicular, chloritic with py in veins, sericite, bt and possibly fine ep
				112.8-112.9 - Similar zone, pink-orange alteration @ 112.9 on what was probably pg
				113.4 - Similar shear ~8cm, contains py
				114.4 - 1 cm shear with py cubes

				116.1 - Similar shear, rubbly core
				117.3 - 6 cm qz veins with chl at down hole contact
				121.1 - 2 cm zone of beige-greenish (ser-ep?) and local pink alteration
				12.5-123.0 - 1 cm qz vein almost parallel to core, zone of pale green-being to salmon alteration stronger at down hole contact
124.1	124.3		Very fine-grained gabbro	Dike
				Foliation mostly shown by alignment of ~2% disseminated py
				Both contacts are sheared
124.3	137.0		Coarse-grained leucogabbro	Similar to 98.2-124.1
				2-5% pinkish biotite
				125.7 - 1 cm shear, similar to previously described
				127.0 - 1 cm shear, similar to previously described
				128.2 - patch of anorthosite
				129.5 - Small shear
				130.0-130.7 - Strong shear zone, very siliceous chloritic bands, also biotite and sericite bands
				131.0-131.1 - Multiple chloritic small shears perpendicular to core, some with py, one with a large bleb, drag fold in foliation
				134.4-134.8 - Chloritic-biotitic band with py, cpy and po
				Shear zone, silicified, bt-rich, ± sericite, perpendicular to core
				136.0-136.1 - Shear zone, silicified, bt-rich, ± sericite, perpendicular to core
137.0	137.4		Anorthosite	Up hole contact is biotite-rich shear, down hole contact is gradual
				Massive
				Some pinkish biotite
				Some sericitization locally
137.4	137.5		Coarse-grained melagabbro to gabbro	2 mm books of biotite
				Look like anorthosite xenoliths in middle of section
137.5	137.8		Anorthosite	Same as 137.0-137.4
				Buff brown alteration bands
				Contacts are irregular, could be xenolith
137.8	138.0		Coarse-grained melagabbro	Sericitized
				Chlorite+sericite veins parallel to core axis, goes through this and following unit displacing the contact
138.0	138.4		Anorthosite	Same as 137.0-137.4
				Py-rich patches, seem associated with alteration
138.4	139.9		Medium to coarse-grained gabbro	Medium-grained grading into coarse-grained gabbro

				5-10 cm whiter irregular patches of sericite alteration with some biotite
139.9	140.3		Anorthosite	Same as 137.0-137.4
140.3	142.2		Coarse-grained gabbro to leucogabbro	Similar to 98.2-124.1
142.2	143.0		Anorthosite	Pale green, very massive 2-3% patches of chlorite and buff brown veins with biotite
				Down hole last 30 cm grades into coarse-grained leucogabbro with chlorite patches
143.0	144.6		Medium-grained leucogabbro	35% hb+chl
				Local possible remnant texture of pg cumulate
144.6	144.8		Anorthosite	143.80 - large qz vein (4cm) Massive Pale with 1-2% patches of chl+bt+ser Up hole contact is broken but down hole looks gradual
144.8	145.9		Medium-grained gabbro	Same as 68.7-73.4
145.9	146.0		Anorthosite	Same as 137.0-137.4
146.0	147.5		Medium to coarse-grained gabbro	Looks "banded", possible rhythmic layering of pg-rich bands about 1 cm wide
147.5	147.9		Shear zone	Very strong shear Biotite-rich, chlorite-rich and sericite-rich bands Shear is crenulated Contacts are gradual
147.9	154.6		Medium to coarse-grained leucogabbro to gabbro	Same as before 148.3 - 6 cm anorthositic patch with chlorite blebs 148.5 - 2 cm same as above 150.0 - 2 cm same as above 151.4-152.2 - Coarse-grained, very leucocratic 153.2 - 5 cm shear 153.5 - 6 cm mafic zone, probably pyroxene cumulate, now hb, partially altered to chlorite and possible actinolite
154.6	155.7		Coarse-grained, rhythmically layered gabbro	Layering ~2-4 cm Small traces of py 155.6 - Small mm shears
155.7	155.9		Metapyroxenite (amphibolite) to metagabbro	Looks like orthocumulate, now all hb with pg
				Gradual contacts at both ends

155.9	156.8		Medium to coarse-grained leucogabbro	Vague layering defined by leuco and mezogabbro and/or grain size, at ~20o to core 156.1 - 2 small bands of pg 156.4-156.5 - Very coarse hb followed by anorthosite
156.8	160.4		Coarse rhythmically layered leucogabbro	Rhythmic layering by pg-rich and hb-rich at ~20o to perpendicular Tr biotite
160.4	160.5		Anorthosite	Contacts look like layering
160.5	160.7		Coarse rhythmically layered gabbro	
160.7	160.9		Shear zone	Chloritic, some pg left, very small tr py
160.9	161.1		Medium-grained leucogabbro	
161.1	161.3		Ultramafic rock	Pale green, fine grained chlorite+actinolite,
161.3	161.5		Medium-grained leucogabbro	Foliated
161.5	161.7		Ultramafic rock	Pale green, fine grained chlorite+actinolite, center is mt-rich
161.7	162.2		Medium-grained gabbro	Foliated 1-5 cm intersections of pale chloritic material
162.2	162.5		Ultramafic rock	Mt-rich, looks like some of the sections in hole 06HB-04
162.5	162.6		Coarse-grained leucogabbro	
162.6	162.7		Ultramafic rock	Less deformed, no mt, possibly metapyroxenite
162.7	164.3		Coarse-grained leucogabbro	Small <5 cm intersections of chloritic material
164.3	164.5		Ultramafic rock	Chloritic
164.5	167.4		Coarse to medium-grained leucogabbro	Local shear zones of melagabbro (~3-4 cm)
167.4	167.7		Ultramafic rock	Chloritic, tr py
167.7	168.4		Rhythmically layered leucogabbro to melagabbro	leucogabbro bands ~5 cm and melagabbro ~3 cm
168.4	169.1		Coarse-grained leucogabbro	
169.1	169.4		Ultramafic rock	Chloritic, tr to 1% py, mt
169.4	174.8		Coarse-grained leucogabbro	Starts to get a bit rhythmically layered at ~173.0 and grades into following 2 cm layers
174.8	175.5		Rhythmically layered leucogabbro to melagabbro	
175.5	176.2		Medium to coarse-grained leucogabbro	Metapyroxenite-looking texture with chunky hb - px pseudomorphs?
176.2	176.6		Coarse-grained leucogabbro	

176.6	177.0		Anorthosite	Similar to previously described Patches of buff brown alteration also with sericite and chlorite Down hole contact is particularly altered
177.0	179.5		Rhythmically layered gabbro	1-3 cm bands of anorthosite and melagabbro 178.6-179.5 - Patches of beige-brown alteration
179.5	179.8		Medium-grained leucogabbro	Locally patchy, possible px oikocryst pseudomorphs, now hb
179.8	180.3		Layered anorthosite to metapyroxenite	Anorthosite ~5-7 cm, metapyroxenite ~3 cm
180.3	180.7		Medium-grained gabbro	
180.7	181.3		Fine-grained diorite	Dike but appear more foliated?? at 25o to perpendicular Contacts seem sharp but hard to be sure because broken core I think it is same as previously described porphyry but without too many phenocx visible
181.3	182.7		Very coarse leucogabbro	Pg-hb, gets somewhat "patchy" near down hole contact, looks gradational (layering)
182.7	186.2		Medium-grained gabbro	Small 1-3 cm wide intersections of metapyroxenite 185.8 - Small shear (5 mm)
186.2	189.5		Medium-grained melagabbro to gabbro	185.35 - Metapyroxenite section Weak foliation at 10o to perpendicular Very small shears with sericite and biotite concentrated in more mafic sections 188.3 - Metapyroxenite section
189.9	190.0		Anorthosite	Unclear contacts, could be fragments
190.0	192.1		Medium-grained gabbro to leucogabbro	More mafic sections are more foliated, which gives the rock a "banded" look
192.1	194.9		Coarse-grained gabbro	Rhythmically layered generally Some pg look shattered with mafic minerals (fine dk chlorite?) crystalizing in fractures 192.55 - Small shears 194.0 - 4 cm qz vein, py near
194.9	195.0		Pegmatitic gabbro	~50% hb, 50% pg, tr bt, tr py Chunky hb 0.7-1 cm Layering is perpendicular to core
195.0	196.3		Coarse-grained gabbro	Same as 192.1-194.9
196.3	196.5		Medium-grained leucogabbro	Pg cumulate, <20% mafic minerals (hb±chl)
196.5	197.1		Coarse-grained gabbro	Gradual contacts Same as 192.1-194.9

197.1	205.0		Medium-grained gabbro	Hb-pg-act Tr sericite alteration Small shears 197.1 - Small fault displacing pg-rich horizon 197.4-197.6 - More melanocratic section with 1-2 mm amoeboidal ilmenite with leucoxene coronas 198.8 - 2 cm shear 198.8-200.6 - Shear zone 200.9 - 3 small shears 200.3 - Chlorite-filled shear perpendicular to layering (~35o to perp.) 203.5 - Small shear perpendicular to layering 204.3 - More melanocratic section
205.0	205.2		Very fine-grained gabbro	Dike Deep forest green 1% fine disseminated py
205.2	212.0		Medium-grained gabbro	Same as 197.1-205.0 205.2-205.9 - Weak layering <10o to perpendicular 206.8 - 2 cm very fine-grained gabbro (diklet?) 207.8 - 1 cm small shear, chlorite-rich <10o to perpendicular 208.0 - Shear < 1cm chloritic, perpendicular to core 208.1 - Shear < 1cm chloritic, perpendicular to core 208.8 - bt+chl shear <10o to perpendicular 209.2 - Shear, chloritic, 30o to perpendicular 209.3 - Shear, chloritic, 30o to perpendicular 209.6-212.0 - Moderate foliation defined by mafic minerals, perpendicular to core
212.0	212.3		Coarse-grained gabbro	Rhythmically layered by 1cm bands of mafic and felsic ~50% pg, 50% hb with some bt
212.3	212.5		Medium-grained gabbro	Same as 197.1-205.0
212.5	212.8		Very fine-grained diorite	Intermediate to felsic dike Possibly the porphyry but phenocx are rare and small
212.8	215.2		Medium-grained gabbro to melagabbro	Same as 197.1-205.0 except for some sections that are strongly chloritic and foliated at ~10o to perpendicular
215.2	215.4		Coarse-grained gabbro	Same as 212.0-212.3
215.4	216.1		Medium-grained gabbro	Same as 197.1-205.0 215.8 - Shear 25o to perpendicular
216.2	218.1		Shear zone	Mixed of fine-grained gabbroic rocks, possibly dike and medium to coarse-grained gabbro. Broken slices of core Shear perpendicular to <10o to perpendicular The very fine grained gabbro contains 2-3% fine py Some larger py cubes

				4-5 mm biotite-rich bands
				1-2 cm chloritic bands
218.1	219.9		Layered medium-grained melagabbro to pyroxenite	5-10 cm pyroxenite sections distributed irregularly with progressive contacts
				218.2 - 5 cm pyroxenite intersection
				218.5 - 7 cm pyroxenite intersection
				218.9 - 3 cm pyroxenite intersection, sheared
				219.3 - 5 cm pyroxenite intersection
219.9	222.1		Leucogabbro	Pg cumulate, <230% mafic minerals (chl±hb)
				Pg is more beige colored particularly near fractures/veins
222.1	225.0		Layered medium-grained melagabbro to pyroxenite	Same as 218.1-219.9
				Layering variable, between 10 and 45o to perpendicular
				222.4-222.5 - Pyroxenite, 3 cm
				223.0 - Pyroxenite, foliated, 3 cm
				223.2 - Chl-ep-qz vein, ~parallel to core, large 1 cm chlorite
				223.3 - Pyroxenite, foliated, 3cm, foliated
				223.9 - Pyroxenite, 10 cm
225.0	225.4		Very fine porphyritic diorite	Dike, same as 212.5-212.8 but with 20% 1mm pg phenocx
				Purplish grey
				Mafic mineral is fine biotite
225.4	227.4		Coarse-grained gabbro	Rhythmically layered, same as described before
				226.6 - Qz vein and chlorite veins
				Last 30 cm is sheared in bands
227.4	227.6		Medium-grained gabbro	Altered section around 1 cm qz vein
227.6	228.1		Pyroxenite	Larger section than usual
				Looks like px cumulate
				Tr py and ilmenite with the leucoxene coronas
228.1	239.5		Medium-grained gabbro	Same as before
				Foliation is variable, 10-50o to perpendicular
				Local large biotite blebs
				230.3 - Small shear
				232.1 - Small shear, 1 cm, 10o to perpendicular
				232.2 - Small shear, 1 cm, 45o to perpendicular
				237.8 - 8 mm qz vein with altered halo around
239.5	240.8		Very fine diorite	Dike
				10% biotite, some 1 mm pg phenocx, mostly ghost-like
				Many fractures with alteration halos of sericite and K alt?, local ep patches
240.8	244.3		Medium to coarse-grained gabbro	Lots of small qz+chl small veins and small chlorite shears and zones of white-beige alteration
				Local big blebs of biotite

244.3	248.4		Shear zone-alteration zone	Probably medium to coarse-grained gabbro from less altered sections
				Lots of crumbly core, where not crumbly, very strong shear Silicification, chloritization, carrot orange (K?) alteration, epidote-rich zones around big veins
248.4	249.7		Medium-grained leucogabbro	Looks like pg cumulate
				~25% mafic minerals Altered, creamy white pg, silicification+chlorite from veins Weak fabric almost perpendicular to core, not sure if foliation or layering
				Last 20 cm is fine-grained Pure pg bands 1 cm wide
249.7	251.9		Medium-grained gabbro	Same as before Weak to moderate foliation at 20o to perpendicular Crumbly core around qz veins Silicification and ep-K alteration
251.9	253.1		Medium to coarse-grained leucogabbro	Altered, silicification, chlorite, sericite
253.1	254.0		Alteration zone	Crumbly core, qz veins
254.0	263.2		Medium to coarse-grained gabbro	Plagioclase cumulate looking on some sections
				254.3 - Qz vein 254.45 - Coarse-grained band ~3 cm 254.65-254.75 - Anorthositic section or just alteration zone, pink K alteration and green epidote, sharp contacts 255.0 - Ultramafic section, sheared to very fine-grained 251.3-251.4 - Ultramafic section, sheared to very fine-grained, crumbly core 251.8-260.0 - Qz-chl veins making core very crumbly Or could be alteration zone? Sort of alteration halos around section
263.2	263.5		Anorthosite	
263.5	264.4		Medium-grained melagabbro to pyroxenite	Chunky px? 2-3 mm with ~15% pg
				Veined and deformed at down hole contact
264.4	268.6		Medium-grained gabbro	Same as before 268.3 - Chloritic bands with brown minerals in white coronas
268.6	268.9		Very coarse-grained anorthosite	Poikilitic mafic "blebs" over 1 cm Up hole contact is progressive, down hole contact is hairline shear
268.9	269.5		Medium-grained gabbro	
269.5	270.4		Anorthosite	Same as above, with poikilitic blebs Qz veins with silicification locally, also local pinkish alteration

270.4	270.8		Coarse to medium-grained gabbro	Progressively grading into next
270.8	271.0		Anorthosite	
271.0	274.0		Medium to very coarse-grained leucogabbro	Primary cumulate texture preserved
				Layering defined mostly by grain size variation and also by pg-hb proportions
				Large blebs of biotite in very coarse-grained sections
				272.1 - Very coarse-grained
274.0	278.2		Medium-grained gabbro	Weak foliation at 15o to perpendicular
278.2	281.5		Dioritic porphyry	Dike
				Veined, as previously described
281.5	282.7		Medium-grained leucogabbro	~20% mafic minerals are biotite and chlorite
				Beige alteration?
				281.8-282.1 - Massive milky white qz vein with fine bt at contacts
				282.3-282.7 - Zone of strg g silicification, almost all qz with bt-rich veins
282.7	286.5		Dioritic rock	Same as porphyry but phenocx-poor
				Qz veins, large one at 285.4-286.6
285.5	286.8		Medium-grained gabbro	Mafic mineral is hb
				Sericitized
286.8	288.3		Anorthosite	Sericitized
				Bt-chl-rich bands at 35o to perpendicular
				Pinkish and epidote-green alteration locally
				Qz-bt veins
288.3	288.5		Medium to coarse-grained melagabbro	65% mafic minerals are hb and chl
288.5	288.8		Anorthosite	Purplish remnants of magmatic pg crystals
288.8	289.4		Medium-grained gabbro	Rhythmically layered, 1 cm pg-rich or hb-rich, <30o to perpendicular
289.4	289.9		Anorthosite	Some 1 cm hb-rich bands
289.9	290.8		Medium-grained gabbro	Rhythmically layered, same as described before
290.8	291.2		Very fine-grained gabbro	Dike
				large py vein about 1 cm average near up hole contact
				Sharp contact
291.2	291.8		Anorthosite	Very altered at up hole contact
291.8	294.5		Coarse to very coarse-grained gabbro	Locally more banded, otherwise massive
				272.3 - 10 cm shear zone with qz vein and bt enrichment
294.5	294.8		Coarse-grained leucogabbro	Altered areas, epidote patches
294.8	295.4		Medium-grained gabbro	

295.4	295.9		Coarse-grained gabbro	Hb is mafic mineral Qz-chl veins, local epidote
295.9	296.4		Anorthosite	3-4 cm mafic patches, possible oikocrysts (or fragments?) concentrated in middle of intersection Contacts are vague
296.4	314.4		Coarse-grained gabbro	Hb and pg Texture varies through intersection, get more or less rhythmically layered-looking or hornblende is chunkier instead of interstitial (possibly cpy) 296.5-296.7 - Pale green epidote and pink (K?) alteration around veins 297.0-297.7 - Rhythmically layered, not too well defined 297.7-297.9 - Very strong epidote and pink (K?) alteration 299.4-299.5 - Pegmatitic gabbro with specks of py in mafic phases 301.4-301.5 - Anorthositic layer and very coarse-grained pyroxenite with tr of py 307.9-308.5 - Zone of massive epidote and K alteration 310.5 - 3 cm anorthosite band with displacement along hairline fault, specks of py in fault 310.8-311.0 - Small 2 cm pyroxenite intersection, very fine-grained, py specks 311.2-314.4 - Strong alteration zone - lots of sericite and bt disseminated and in patches, tr disseminated py 313.3 - 5 cm of massive biotite with py cube
314.4	321.7		Medium-grained gabbro	Very massive and homogeneous Rare disseminated py 319.0 - 3 cm chloritic shear 319.9 - 1.5x0.5 cm chloritic patches with epidote alteration near, looks like xenolith 320.5 - Biotite-rich discontinuous bands 320.9-321.0 - Biotite-rich discontinuous bands
321.7	322.0		Very fine-grained gabbro	Dike Contains >1% disseminated py Contacts are veined and altered - up hole is few mm shear, down hole is 7 cm strong shear with qz forming ribbons, continuing in following unit
322.0	322.9		Medium to coarse-grained gabbro	
322.9	323.6		Medium to fine-grained melagabbro	From medium-grained to fine-grained progressively down hole Contacts are vague, not gradational but not cutting
323.6	325.6		Medium-grained gabbro	323.7-323.8 - Qz+ep+ser altered area

					323.8 - Pg-rich with py-rich patch	
					323.9 - Qz+ep+ser altered area	
					323.9-324.2 - 5 mm qz vein parallel to core	
					324.1 - Qz+ep+ser altered area	
					324.2-324.3 - Qz+ep+ser altered area	
					324.6 - Qz+ep+ser altered area	

Drill Log

Company Name:	Northern Shield Resources	DDH Number: 06HB-06
Property Name:	Highbank Lake	Collar UTMN: 5806578
Location:	250 km north of Nakina, Onta	Collar UTME: 554009
	75 km northwest of Ogoki	Zone, Datum: 16, NAD83
Claim Number:	1180792	Drilling Azimuth: 332°
		Core Size: BTW (BQ Thin Wall)
Drilling Contractor:	Cartwright Drilling	Hole Length: 207.8
Date of start:	14-Jul-06	Logs by: Christine Vaillancourt, CCIC
Date completed:	16-Jul-06	Core Storage: Warehouse in Hearst, Ontario

From	To	Rock Type	Description
	53.8		Pebbles
53.8	56.0	Medium to coarse-grained gabbro	Wide variety, no chromitite or interesting looking ultramafic Hb+pg but from 54.5, hb altered to biotite and possibly some chlorite
			Pervasive sericite alteration, strongly silicified particularly @ beginning of hole
			53.8-53.9 - Very strong silicification
			54.7-55.1 - Very strong silicification with ser and ep also, possibly on more anorthositic section
			55.2 - Weak foliation at 45o to perpendicular
			55.7-56.0 - Stronger foliation @ 30o to perpendicular, very strong sericitization, also ep.
56.0	57.7	Alteration/shear zone	Biotite-chlorite rich, locally sulfides, also pervasive silicification and variable intensity of sericitization
			Unsure of protolith, could be more mafic than previous
			57.1 - Qz vein with halo of silicification and sericitization, some chl.
			57.3 - 5 cm qz vein
			57.1-57.6 - Very strong biotite alteration, very strong shear, local py cubes in biotite bands.
57.7	60.8	Coarse-grained gabbro	Somewhat layered from mela to leuco
			Mafic minerals mostly hb (I think), specks of bt and possibly some chlorite
			Many 2-3 mm chloritic veins all ~ perpendicular to layering
60.8	61.4	Pyroxenite	Chunky hb (possible leftover cpx?) 2-4 mm, deep green
			Rare specks of py
			Weak orientation (not sure if foliation or layering) at ~30o to perpendicular
			Down hole contact is 3 cm shear perpendicular to fabric
61.4	62.6	Coarse-grained gabbro	Same as before, mostly mezogabbro
			Foliation/layering at >45o to core

				Down hole contact is qz vein
				61.1 - Sheared (perpendicular to core) and altered area
				62.5 - K alteration and chlorite veins
62.6	63.4		Pyroxenite	Same as before
				Up to 15% pg
63.4	68.4		Coarse-grained gabbro to leucogabbro	63.4 - Qz vein with halo of ser+ep
				Fabric orientation varies from 30 to >60o to perpendicular
				63.7 - 5 mm qz vein
				64.9 - 2 cm qz vein with ep alteration, bit of bt at down hole contact
				65.2 - 4 cm sericitic band with minor ep+chl
				65.3-65.8 - Coarser, more leucocratic section with fabric >60o to perpendicular
				65.9 - Small bt-rich shears with qz
				66.1-67.0 - Strong shear zone, nothing recognizable
				Different sections are altered differently: brown: bt-rich, dark green: chl+ser, pale green: ep+qz+chl (this typically around qz veins)
68.4	68.9		Feldspar porphyry	67.5-68.4 - Similar shear zone but no qz veins
				Dike
				> 15% 1-2 mm pg phenocx
				~10% bt
				Foliation at ~25o to perpendicular
				Tr py cubes
68.9	70.1		Coarse-grained gabbro	Altered similarly as previously described, most abundant is chloritic alteration
				69.1 - 4 cm porphyry dike
				69.4 - 7 cm porphyry dike
70.1	71.3		Feldspar porphyry	Same but not really foliated
71.3	72.4		Coarse-grained gabbro	Mixed zone, very altered as previously described
				Small porphyry dikes through
				Contacts are sheared
				71.7 - >10 cm qz vein with ep-chl-bt alteration around
				72.2 - 3 cm qz vein
72.4	72.9		Feldspar porphyry	Qz veins and shear at down hole contact, shear at up hole contact
72.9	75.0		Coarse-grained gabbro	Massive but bt-chl alteration is pervasive
				Orientation of foliation/layering is ~40o to perpendicular
				Whiter, more chloritic and medium-grained near down hole contact
75.0	92.0		Feldspar porphyry	Same as previously described
				Moderate foliation but not particularly altered in any way
92.0	93.1		Ultramafic rock	Chlorite-actinolite schist sections, could be pyroxenite
				Sections with recognizable gabbroic texture with actinolite needles.
				Either the schist has ultramafic protolith or is strongly chloritized???

				Py cubes locally, mostly in the chlorite-actinolite schist
93.1	94.5		Porphyry	92.2 - 8 cm porphyry dike Somewhat different from previous with very, very fine matrix and less phenocrysts (<10%)
94.1	97.2		Coarse-grained gabbro	Same shade of purplish grey, probably related to other described porphyry but slightly different phase Same as before
				Mafic minerals I think are mostly chlorite and actinolite 94.8-95.1 - Chlorite schist with 1% py, bright green shade, could have other mineral I don't recognize 95.1-95.5 - Strong silicification and biotite alteration, qz chlorite vein Down hole contact is sheared and sericitized
97.2	97.8		Porphyry	Same as previously described White-beige veins
97.8	101.0		Coarse-grained gabbro	I think mafic minerals are hb+chl Sort of banding, possibly superimposition of deformation on weakly defined rhythmic layering - more mafic absorbs more deformation Number of small biotite-rich sheared areas Some sericitic hairline bands Some chloritised bands 99.8 - 99.2 - Strong shear and silicification with biotite and chlorite 100.5-100.7 - Strong shear and silicification with biotite and chlorite 100.8 - 8 cm porphyry dike 100.9-101.0 - Strong shear and silicification
101.0	101.6		Porphyry	Similar to first described 101.4 - Biotite vein with py cubes
101.6	113.7		Coarse to medium-grained gabbro	Same 102.4-103.0 - Strong silicification and chloritisation, loss of all texture 103.0-103.3 - Abundance of sheared chloritic bands 103.3-104.0 - More medium-grained than rest 104.4 - Abundance of sheared chloritic bands 106.45-106.6 - Qz vein with pyrite and molybdenite - true width is ~6cm, 5X5 cm py patch, moly mostly in one flat band 107.6 - 1 cm qz vein 108.0-108.2 - Large irregular chlorite-qz veins 108.9-109.0 - Biotite-chlorite "veins", look like material is injected in gabbro, ripping off pieces of it 109.9-110.2 - 1 cm fine gabbro vein sub parallel to core 110.2-110.3 - Pegmatitic gabbro, 40% hb and 60%

				112.0-112.3 - Odd textured section with fine-grained matrix and a few floating shapeless pg glomerocrysts? Contacts are not clear because altered - could be dike or even fragment but probably not
113.7	114.5		Quartz vein	Milky No py, one section in middle of very altered gabbro Sericite-chlorite, tr cb, tr ep, tr fine molybdenite
114.5	116.6		Coarse-grained gabbro	Up hole contact with qz vein is altered with chlorite and orangy color 115.6 - Shear with chlorite and sericite 115.8-116.6 - Sheared folded zone, unusual for these rocks, no idea???
116.6	120.9		Porphyry	Qz-chl-bt-ser; could be fragment, contacts unclear Same as previously described Foliation and alteration vary
				Strong shear near down hole contact, hairline fracture with orange alteration halos 116.7 - 10 cm piece of previous
120.9	121.6		Very coarse-grained gabbro and porphyry	Contact zone Tr py in porphyry
121.6	123.9		Very coarse-grained leucogabbro	10% biotite, 2-3% chlorite, tr py cubes, rest is pg Areas have almost a brecciated look with broken-up pg and fractures filled with chl+bt Possibly some remnants of layering at angles from 25-45o to perpendicular
123.9	128.1		Porphyry	
128.1	129.3		Coarse-grained gabbro	Hb-chl, some bt Foliation at 45o to perpendicular
129.3	130.0		Pegmatitic gabbro	Deep dark green, possibly px left, probably all hb Vague alignment at 0-20o to perpendicular - different from previous Bt blebs, some with py specks
130.0	133.0		Alteration zone	Strong alteration in possibly leucogabbro to anorthosite? Silicification is very strong, some sericite, local ep and local bt 130.6 - Anorthositic section 130.8-132.8 - Possible anorthosite, some remnant of purplish pg crystal fragments 132.9-133.0 - Bt-chl shear with py cubes
133.0	134.2		Coarse to very coarse-grained leucogabbro	Somewhat layered
134.2	140.5		Coarse to medium-grained gabbro to pyroxenite	Local py cubes, local bt blebs Same as described before Mafic minerals mostly hb, bt in variable amounts

				Layering defined by mafic-felsic proportion and/or grain size Some small qz veins 134.6-135.0 - Pyroxenite interval 136.9-137.1 - Pyroxenite interval 140.0 - 5 cm shear
140.5	142.4		Porphyry	
142.4	146.2		Medium to coarse-grained gabbro	Composition varies slightly but generally mezo to leuco. Hb-bt are mafic mineral Tr py cubes 142.7 - 3 cm pyroxenite interval, sheared 146.0-146.2 - Chlorite schist with white alteration mineral, slightly reactive to acid - dolomite? Brick red alteration from in following unit
146.2	147.2		Porphyry	Ep-chl-cb veins with brick red alteration halos around
147.2	148.4		Alteration zone	Crumbly core, completely altered brick red, possibly Fe-cb? Some white mica, bt, chl, ep
148.4	153.0		Porphyry	Multiple small orange veins 150.8 - 7 cm qz vein
153.0	155.6		Very coarse-grained to pegmatitic gabbro to leucogabbro	Mafic mineral mostly hb with some chl and patches of bt Large crystals up to 3 cm of pg, pink-orange altered locally 153.4 - Small ultramafic shear 154.8 - Oikocryst-looking texture 155.6 - Brecciated vein at contact
155.6	164.8		Coarse to medium-grained leucogabbro to pyroxenite	Layered Bt amount varies but up to 50% of mafic minerals 155.9-156.0 - Pegmatitic gabbro 156.1-156.2 - Pyroxenite 156.5 - 5 cm pyroxenite 157.0-157.1 - Shear zone 157.2-157.4 - Shear zone with orangy alteration (Fe-cb?) 157.55 - Small shear 157.7 - Small shear 160.0 - Chl vein with large py crystal 2X1.5 cm, 2 mm thick 164.5-164.8 - Pyroxenite section, bt-rich, gets more foliated down hole - several perfect py cubes
164.8	166.2		Porphyry	
166.2	167.6		Coarse-grained leucogabbro	Somewhat rhythmically layered Sericitic patches

167.6	170.1		Coarse-grained gabbro to melagabbro	166.5 - Fragment or dike of medium-grained gabbro Contact with previous is progressive and approximate
				Occasional <1 mm py cubes 168.4 - 2 cm chloritic shear 168.5 - 10 cm chloritic shear
170.1	171.1		Anorthosite	Very pure, purplish remnants of py crystals 170.35 - Chl+py vein 170.75 - Py-chl vein
171.1	171.8		Medium-grained leucogabbro	171.5-171.8 - Very altered section adjacent to porphyry, chlorite, calcite and orange mineral (Fe-cb?)
171.8	176.0		Porphyry	Hairline orangy veins 173.7 - Xenolith of foliated chloritic rock (1X3 cm) Down hole contact at 60o to perpendicular
176.0	177.3		Medium-grained gabbro	Mafic are ~60% hb and 40% pg Massive, not too layered, weak foliation Rare py cubes 177.3 - Chlorite shear
177.3	177.9		Porphyry	Pieces of gabbro, looks like drilling near parallel to contact
177.9	178.3		Coarse-grained gabbro	1% py cubes ~1 mm
178.3	179.3		Porphyry and coarse-grained gabbro	Drilling parallel to irregular contact
179.3	180.8		Coarse-grained gabbro	
180.8	183.3		Porphyry	Down hole contact >60o to perpendicular, about 90o to layering/foliation
183.3	189.7		Coarse-grained leucogabbro to melagabbro	More mafic going down hole 185.6-185.7 - Chloritic shears
189.7	201.0		Porphyry	Pink veins
201.0	207.6		Coarse-grained leucogabbro	201.7-201.9 - Breccia-looking texture 202.5-3 cm chloritic shear with cb 203.3-2 cm chloritic shear with cb and orange alteration 203.9-204.1 - Chl-bt-cb rich section
207.6	207.8		Porphyry	EOH

Drill Log

Company Name:	Northern Shield Resources	DDH Number: 06HB-07
Property Name:	Highbank Lake	Collar UTMN: 554605
Location:	250 km north of Nakina, Onta 75 km northwest of Ogoki	Collar UTME: 5811870
Claim Number:	3015901	Zone, Datum: 16, NAD83
Drilling Contractor:	Cartwright Drilling	Drilling Azimuth: 338°
Date of start:	17-Jul-06	Core Size: BTW (BQ Thin Wall)
Date completed:	19-Jul-06	Hole Length: 152.4 m
		Logs by: Christine Vaillancourt, CCIC
		Core Storage: Warehouse in Hearst, Ontario

From	To	Rock Type	Description
	50.6	Overburden to very weathered	Metres very approximate because all mud and crumbles.
			43.3-45.7 - Probably boulder of carbonate rock of some type
			45.7-48.0 - Consolidated mud with local fragments, also cb-rich
			48.0-50.6 - Crumbles of what looks like strongly cb-altered gabbro
50.6	78.8	Oikocrystic anorthositic gabbro	The top portion of this hole is a very altered anorthositic gabbro with large oikocryst of a mafic mineral, originally px, which can be several cm in size
			~20% mafic minerals, could be hb with remnant px (paler green)
			Common siliceous veins with py
			50.6-51.8 - Strongly cb-altered somewhat solid section with remnant oikocryst (poikilitic) textures. Other unidentified alteration mineral, looks like a copper-red mica. Rest of rock is beige and soft, turns pale green with acid and has the soft touch of talc.
			51.8-60.0 - Brick color alteration, cb only in veins, not in rock, large portion of mafic mineral replaced by brick-red alteration mineral. Serpentine-cb veins cut through this section.
			60.0-61.5 - Cloudy section of same oikocrystic anorthosite.
			61.5-63.8 - Less altered portion of oikocrystic anorthosite. No cb except in veins.
			63.1 - Mt oikocrysts with py and possible ser+ep.
			61.4 - 5 mm py cube near ep-qz patch
			61.5 - Vein with serpentine
			62.6 - Serpentine vein with ser+chl and copper-color mica. Veins has brick-color alteration halo down hole and ser+chl halo down hole.
			63.8-76.8 - Brick color alteration, ep with Fe-cb? Many qz veins from 3 to 20 cm in width, some with large py crystals, also some brick-red veins.
			66.6-67.1 - Shear zone

				76.8-77.3 - Less altered section, similar oikocrysts, more mafic 77.3-78.6 - Epidote and brick-red alteration, also somewhat cloudy
78.8	79.6		Anorthosite	Coarse pg cumulate texture. Pg is 2-5mm, average 3mm Not sure about mafic mineral, partly epidotized and sericitized. Some ep veins
79.6	84.6		Oikocrystic anorthositic gabbro	Same as previously described
84.6	91.5		Oikocrystic anorthosite	Some mt+py oikocrysts with sericitized areas Getting more leucocratic with less abundant oikocrysts Local remnants of purplish original pg cumulates 84.7 - Turquoise color serp+cb+ser vein 85.3 - Black tm vein? 85.7-88.3 - Cloudy altered section 88.3-89.2 - Less altered, more mafic section 89.2-91.5 - Brick-red and ep alteration, discontinuous qz vein through intersection with ep+ser alteration and significant py and mt, some purplish pg crystals.
91.5	95.6		Oikocrystic anorthositic gabbro	More mafic, not too altered section
95.6	102.2		Coarse-grained gabbro	92.7-93.0 - Well preserved pg cumulate texture 93.7 - Cb vein with py Granular texture Fabric at 40-45o to perpendicular Generally medium-grained with coarse to very coarse-grained area Generally mezogabbro with amp proportion varying slightly 40% mafic mineral, px possibly partly into hb, some bt Some local ilmenite, also mt oikocrysts with ep? alt around Py in chl+qz veins 95.9 - Brick red vein with turquoise serpentine and cb, some sericite halos and py 96.1 - Same as 95.9 97.0 - Same as above, larger vein with some qz 98.8 - Large py crystal in qz vein 99.0 - Same as above 100.0 - Large py crystals in vein
102.2	102.8		Pegmatitic gabbro	Px (partly to hb or act at borders?), bt and pg 2-4 cm crystals More pg-rich in middle of intersection
102.8	109.3		Coarse-grained gabbro	Some mt+py and ilm with leucoxene coronas Same as before pegmatite

				106.0-107.7 - Cloudy alteration zone also with brick red alteration, ep, possibly ser, qz veins with py and turquoise serp. Very coarse section from 107.1 to 107.5.
				108.4-109.6 - Long vein parallel to core, qz-serp-py and very small specks of moly.
109.3	110.9		Very coarse to pegmatitic anorthosite to pyroxenite	Composition varies from anorthositic gabbro to ultramafic in sections with unclear contacts.
				109.6-109.8 - Ultramafic section with 1mm books of bt with deep green mineral (px?), could be intrusive in the anorthositic gabbro
110.9	111.1		Coarse-grained gabbro	Altered and veined
111.1	112.1		Pegmatitic anorthosite to pyroxenite	Similar to 109.3-110.9
				112.0 - Ilmenite with leucoxene coronas and py in pegmatitic UM.
112.1	117.0		Medium to coarse-grained gabbro	Mostly granular texture, medium-grained at up hole contact, rest is coarse-grained
				114.4-117.6 - Green and brick-red cloudy alteration
				114.9-115.3 - Section is pegmatitic in center, altered and veined
				115.6-15.7 - Very coarse grained section
				116.2 - Qz-ep-cb vein with py
				116.8 - 1cm porphyry dike
				116.9 - 5 cm porphyry dike
117.0	117.2		Porphyry	Dike
				Contact at low angle with core
				Lots of brick-red veins
				Foliation is close to parallel to contact
				1% py
117.2	117.6		Coarse-grained gabbro	Orangy alteration near dike
				Some veins with ep, cb and turquoise serp
117.6	118.0		Layered anorthosite to medium-grained gabbro	Layers at 30o to perpendicular and not sharp, more wavy (s-shape) of 2-3 cm of anorthosite and 4-5 cm of gabbro.
				1 cm ilm+py blebs in anorthosite
				117.9 - Qz-ep-cb-py vein
118.0	119.2		Coarse-grained gabbro	Sericitic areas around ilm+py blebs
119.2	119.3		Diorite	Dioritic dike, no phenocrysts but seems to be related to porphyry
119.3	119.8		Coarse-grained gabbro	
				119.5 - 4X3 cm pyroxenite fragment with ilmenite
119.8	120.0		Diorite	Dioritic dike on half the core only since contact is parallel to core.
				1-2% fine disseminated py
120.0	120.5		Coarse-grained gabbro	Lots of sericitic patches of ilm+py
120.5	121.5		Anorthosite	Strong alteration, brick-red and fine bt-rich veins
				8 cm shear with qz vein at up hole contact

					Down hole contact is strongly brick-red altered with also cb-py-ep and other mint-green mineral?
121.5	123.5			Very coarse-grained gabbro to anorthositic gabbro	Many large patches of ilm+py
					Many py-rich veins
123.5	124.4			Anorthositic gabbro	Very altered intersection with qz-py-cb-ep-chl veins with other very pale green mica.
					Purplish remnants of original pg
124.4	129.2			Anorthositic gabbro	Oikocryst-looking texture
					Vague banding at 45o
					Purplish remnants of original pg
					125.6-126.5 - Very strong ep alteration, cb-ep vein at beginning, turquoise serp seems to be partly replacing mafic minerals?
					126.5-126.9 - Lots of ep-cb veins
129.2	131.3			Very coarse-grained anorthositic gabbro to gabbro	Lots of ilm+py blebs
					130.9 - Py-rich vein
131.3	131.5			Coarse-grained gabbro	Granular texture
					Qz veins with py cubes
131.5	133.3			Very coarse-grained anorthositic gabbro to gabbro	Similar to 129.2-1131.3
133.3	133.9			Coarse-grained gabbro	Similar to 131.3-131.5
133.9	137.1			Gabbro	Patchy, oikocryst looking
					Py+ilm enrichment typically close to veins
					134.2 - Qz-ep orangy vein
					136.2 - Dark am? vein 3-4mm with some py
137.1	144.7			Coarse to very coarse-grained gabbro	Granular texture, relatively homogenous but some variation in grain size and mafic to felsic mineral ratio
					Some ilm+py blebs
					Up to 5% biotite
					137.2 - Qz-ep-orangy vein
					137.8 - Big qz vein
					138.3 - 13 cm sections with abundant qz veins with alteration halos, very small specks of py and possibly small specks of moly
					138.9-140.1 - Strong foliation at 35o to perpendicular
					140.3 - Qz-cb-ep-py vein
					141.1 - 1cm qz vein
					143.6 - 10 cm alteration zone around qz-ep-cb vein
					144.5-144.7 - More leucocratic (anorthositic gabbro)
144.7	145.1			Very fine-grained gabbro	Dike?

					Pale grey, foliated perpendicular to core
					Contacts are unclear - up hole is ep-cb vein and down hole is sharp and has no chilled margin - could be xenolith
					Tr cb
					Lots of ep veins
145.1	147.4			Very coarse-grained gabbro	Granular texture
					Some ilm-py blebs
147.4	152.4			Anorthositic gabbro	Oikocryst-looking texture
					<15% mafic minerals except small bands with coarser mafic (hb+bt)
					Some nice well formed ilm+py blebs
					149.0 - 3 cm ultramafic bands with mt-ilm-py
					150.0-150.1 - Fine chloritic dike with 20 cm of strong silicification in following unit (down hole from dike)

Drill Log

Company Name:	Northern Shield Resources	DDH Number: 06HB-09
Property Name:	Highbank Lake	Collar UTMN: 5805669
Location:	250 km north of Nakina, Onta 75 km northwest of Ogoki	Collar UTME: 554430
Claim Number:	1180791	Zone, Datum: 16, NAD83
Drilling Contractor:	Cartwright Drilling	Drilling Azimuth: 333°
Date of start:	22-Jul-06	Core Size: BTW (BQ Thin Wall)
Date completed:	27-Jul-06	Hole Length: 258.8 m
		Logs by: Christine Vaillancourt, CCIC
		Core Storage: Warehouse in Hearst, Ontario

From	To	Rock Type	Description
	58.8	Overburden	
54.8	67.6	Garnetiferous metapyroxenite (amphibolite) to melagabbro	Garnetiferous amphibolite - Original composition is hard to define Black with slight shade of green Garnet <0.5 to >5 mm in size, 5 to 10% of rock Medium-grained (~2 mm?) Possibly pyroxenite to gabbro, pg is altered to pale green not sure 2-5% oxides, some magnetite and other non-magnetic (ilmenite?), amoeboidal in shape. Magnetite content is irregular and erratic. Very small specks of secondary quartz? I think Tr py and tr po 54.8-56.1 - Dark, ultramafic looking, weathered and soft, small gt, blue mineral? 56.1-56.3 - Very weathered and crumbly section with bright blue mineral, ~3mm crystals, some look like they have radial needles. Very soft buff brown veins. 56.3-58.1 - Similar to previous but contains yellowish remnants of minerals - possibly sericite? Very weathered. 58.1-59.4 - Bright orange to brown alteration, very crumbly 59.4-61.2 - Ultramafic section, relatively massive, contains yellowish remnants. 61.2-62.0 - Stripy - protolith probably more gabbroic, pg is altered to pale green on fresh surface but yellow on drill surface (?changed color since drilled?) 62.0-67.6 - Gabbroic
67.6	72.1	Dioritic porphyry	Dike, similar to previously described in other holes 5-10% pg phenocx, 1-3 mm in size

				Up hole contact at low angle to core, down hole contact at high angle
				3-5% small specks of biotite Generally moderate foliation
72.1	77.4		Garnetiferous metapyroxenite (amphibolite)	Same as before dike
				Moderately magnetic from beginning to 76.7, than not magnetic and gets finer grained
77.4	77.8		Metapyroxenite (amphibolite) to melagabbro	Fine grained, similar to previous without garnet Foliated
77.8	78.3		Dioritic porphyry	
78.3	78.4		Garnetiferous metapyroxenite (amphibolite)	Very altered and crumbly Garnet >0.7 cm
78.4	78.6		Dioritic porphyry	
78.6	79.1		Garnetiferous metapyroxenite (amphibolite)	Strong foliation, irregular bands (not sure what they are) 2% py transposed along foliation and in chloritic veins cutting foliation Garnet only locally in few mm bands Small secondary qz crystals Relatively strongly magnetic with mt following foliation
79.1	81.0		Garnetiferous metapyroxenite (amphibolite)	>15% large garnets > 5mm, size and distribution is uneven Garnet not affected by foliation Local 4-5 cm bands appear more felsic (pg) Oxides rare and erratically distributed Tr sulphides, mostly flat along foliation
81.0	83.5		Garnetiferous metapyroxenite (amphibolite) to melagabbro	Small garnets Foliation almost perpendicular to core, equivalent to "layering" defined by amount of altered pg <1% ilmenite 81,6-82.3 - >5% mt 81.9 - 7 cm pyroxenite interval with large px crystals and no garnet; up hole contact is faulted (displaced)

				82.2 - 3 cm pyroxenite layer in melagabbro	
				82.5-83.5 - Non-magnetic, more pg-rich section, diss py, <1% oxides	
83.5	84.5		Garnetiferous metapyroxenite (amphibolite)	20% garnet, some > 5mm	
				Foliation is generally strong	
84.5	85.0		Porphyry	Dike with gt-pyroxenite garnets	
85.0	89.6		Garnetiferous metapyroxenite (amphibolite)	Same as before dike	
				up to 2% oxides, erratically distributed	
				Tr py and tr po	
				85.0-85.2 - 20% garnet, 3-5 mm	
				85.2-86.3 - 20% garnet, 3-5mm, locally sheared	
				85.6 - 7 cm sheared section with talc	
				86.3-87.0 - Talc-rich shear zone with less garnet	
				87.0-89.6 - 15-20% garnet, 3-5 mm, size and amount of gt varies in bands	
				88.6 - 6 cm ultramafic band with actinolite needles	
89.6	100.6		Metapyroxenite (amphibolite) to melagabbro	Medium to coarse-grained	
				Small garnets at top of intersection, gradually disappearing, none left at 90.2	
				Alteration of plagioclase is near total (talc?) at top of intersection and gradually less.	
				89.6-91.0 - Medium-grained melagabbro with talc?	
				91.0-92.1 - Coarse grained melagabbro, weak talc alteration	
				92.5-92.8 - Medium-grained pyroxenite	
				92.8-93.9 - Medium-grained melagabbro with moderate talc alteration	
100.6	100.8		Fine-grained layered anorthositic gabbro to gabbro	Layering defined by proportion of mafic versus minerals in 1-2 cm wide bands	
100.8	102.6		Anorthosite	Massive, homogeneous	
				Tr chl and tr ilm	
				Fine white veins	
				100.95 - 3 cm mafic band	
				101.6 - 7 cm purplish alteration zone	
				102.0-102.1 - More mafic bands with chl+talc? alteration	
				102.3 - Soft dark green vein - serpentine?	
102.6	102.8		Pyroxenite	Strong foliation perfectly perpendicular to core	

				Banded rock
				Biotite alteration
				Sulphide-enriched bands followed by ilm-rich bands
102.8	103.4		Medium-grained melagabbro	Foliated contact down hole at 45o
				~3% ilm with leucoxene coronas evenly distributed through intersection
103.4	104.0		Medium-grained leucogabbro	Down hole contact is foliated at ~45o and veined (qz-bt-chl)
				Vague layering close to perpendicular with few cm bands that are more hb-rich
				Some small ilm, typically concentrated below (DH) more mafic sections
104.0	104.4		Fine-grained gabbro	Dike - Contacts are perpendicular to core, recrystallized and not very clear but appears to cut medium-grained gabbro
				Weak to moderate foliation
				Small qz vein with alteration halos
				Not much oxides
104.4	108.5		Layered medium-grained gabbro to pyroxenite	Small ilm with coronas start appearing at ~107.5 and get more abundant going down hole to ~1%
				104.4-106.15 - Homogeneous section of mezogabbro
				105.8 - Specks of po
				106.15-106.25 - Pyroxenite, weakly magnetic
				106.25-106.4 - Melagabbro
				106.4-106.6 - Pyroxenite
				106.6-107.3 - Melagabbro
				107.3-108.3 - Mezogabbro
				108.3-108.5 - Pyroxenite
108.5	108.9		Porphyry	Dike
				Silicified contact up hole ~1cm, host gabbro is bt-chl altered over ~1cm as well
				108.75 - 5 cm fragment of gabbro
108.9	109.0		Melagabbro	
109.0	109.7		Anorthosite	Very massive
				Few chl patches and act needles
109.7	110.0		Pyroxenite	Moderate foliation
				~3% ilm
110.0	111.6		Layered fine-grained gabbro	Fine layering looks like bedding, close to perpendicular to core
				Fine hb-chl-pg
				Very weakly magnetic locally but no visible mt, random (not associated with more or less mafic)
				Gets more foliated at ~110.0, and gets really foliated from 111.2.
				Sections with fine bt-altered bands and fine ep altered bands

111.6	114.3		Layered medium-grained gabbro to pyroxenite	Layering defined by grain size and/or felsic-mafic mineral proportions Garnet starts appearing at 113.6 Not much oxides 111.6-112.4 - Medium-grained gabbro 112.4-113.7 - Melagabbro, med to coarse-grained, weak foliation at 75o to core 113.7-113.9 - Pyroxenite; "stripy" with posy talc alteration, gt, mt and small qz 113.9-114.0 - Melagabbro with traces of ilm 114.0 - 3 cm porphyry dike 114.0-114.25 - Pyroxenite, "stripy" with biotite, no gt, small qz, tr ilm
114.3	117.7		Porphyry	Small qz veins locally with chlorite
117.7	118.9		Coarse-grained gabbro to leucogabbro	Tr ilm with coronas 117.7-118.0 - Melagabbro that grades into next 118.0-118.9 - Leucogabbro, tr diss po and in veins at 118.7
118.9	119.4		Pyroxenite	Relatively strong foliation ~1% oxides, not magnetic tr diss po py around veins 119.1-119.4 - Layered
119.4	121.9		Layered coarse to medium-grained melagabbro to pyroxenite	119.4-119.5 - Pyroxenite with garnet and 2% ilm 119.5-120.0 - Coarse grained melagabbro, relatively homogeneous, 2-3% slightly magnetic ilm, tr diss po 121.6-121.9 - Pyroxenite, tr po, 1-2% oxides
121.9	123.0		Medium-grained melagabbro	Possible olivine remnants 1% oxides (not magnetic) Locally deformed - yellow mineral (posy ol) is most affected
123.0	124.3		Medium-grained leucogabbro	<1% small specks of oxides Transition into next is gradual
124.3	126.4		Anorthosite	Tr very small ilm with coronas
126.4	127.8		Fine-grained layered melagabbro to pyroxenite	Rhythmic layering Pyroxenite beds between 1 and 7 cm wide, also contain more ilm (up to 10%) and very fine py (1%)

127.8	128.2		Medium-grained melagabbro	Similar to 121.9-123.0
128.2	128.4		Pyroxenite	Tr oxides and tr sulphides
128.4	128.6		Fine-grained layered gabbro to pyroxenite	Rhythmic layering is irregular 1% oxides
128.6	131.7		Medium-grained melagabbro	
				128.6-129.5 - Some of the possible olivine remnants, moderately foliated, very small oxides - very weakly magnetic 129.5-131.7 - No olivine remnants, some well preserved tabular plagioclase crystals.
131.7	132.0		Medium-grained leucogabbro	Tr oxides - not magnetic
				Small cb veins
132.0	132.5		Pyroxenite	To melagabbro down hole Some sericitic alteration Tr oxides - not magnetic Fine diss py and in veins
132.5	133.0		Fine to medium-grained layered gabbro	Rhythmic layering, possible olivine remnants - this units particularly looks like a plagioclase-olivine cumulate
133.0	138.7		Medium to coarse-grained gabbro	Some of the possible olivine remnant but not much Tr diss po and py through all intersection some in veins as well Some chl hairline veins 137.5 - 10 cm pyroxenite interval 137.6 - 2 cm pyroxenite interval 138.0 - 15 cm interval with 2 beds of pyroxenite, more ilm, weakly magnetic, posy po 138.3-138.6 - Weak rhythmic layering 138.6 - 3 cm sheared area with bt-chl-py-cb 138.7 - Same as 138.8 at contact with porphyry
138.7	139.6		Porphyry	
139.6	142.3		Medium-grained gabbro	Vague layering Possible olivine remnants Tr oxides - not magnetic 142.2 - 3 cm anorthosite band
142.3	143.6		Foliated and altered rock??	Not sure what it is, mixture of chl+taalc+ser? NOTE: Photos don't seem to make sense with this description??? 142.3 - Contact is sheared 142.5 - ilm+py vein ??

				143.5-143.6 - Zone of almost just the yellow mineral (use to be olivine?) with a discontinuous ilm vein
143.6	144.9		Layered leucogabbro to gabbro	Locally very weakly magnetic, tr ilm
144.9	145.3		Coarse-grained leucogabbro	Chl+bt < 10%
				1% ilm
145.3	145.7		Layered leucogabbro to gabbro	Similar to 143.6-144.9
145.7	146.4		Coarse-grained leucogabbro	Similar to 144.9-145.3
				146.0 - Small shear, bt-rich area with qz and chl
146.4	158.1		Medium-grained melagabbro to gabbro	Small occasional pyroxenite intervals
				Cb-rich veins
				Mostly non-magnetic except some narrow mt-rich bands
				147.0 - Small shear
				149.0 - 4 cm band of pyroxenite
				154.8 - 2 cm band of pyroxenite with ilm
				155.2 - Two 1 cm mt-rich band
				155.7 - 1 cm mt-rich band
				156.0 - Starts getting more mt-rich section from this point
158.1	158.4		Porphyry	Dike
158.4	160.3		Hb-mt melagabbro	Small garnets
				Tr diss py, some in veins
160.3	161.1		Coarse-grained gabbro	Possible olivine
				1% oxides, somewhat chunky, posy chromitite but probably ilm
161.1	161.3		Porphyry	Dike
161.3	161.6		Coarse-grained gabbro	Similar to 160.3-161.1
161.6	162.4		Mt-hb gabbro	Small intersection of pyroxenite with large garnets
162.4	163.3		Mt-rich ultramafic rock	
163.3	163.6		Garnetiferous metapyroxenite (amphibolite)	Pale green alteration mineral - fine chlorite? - replacing large portion of mafic minerals
163.6	164.1		Fine-grained ultramafic rock	Banded pale green-dark green
				Tr oxides - not magnetic
164.1	165.4		Mt-hb gabbro	Some garnet
165.4	166.8		Mt-rich ultramafic rock	Py in veins
166.8	169.6		Medium to coarse-grained leucogabbro	Contains sheared small ultramafic intersections with ilmenite, and small mt reefs
				167.2 - Ultramafic intersection
				167.35 - Ultramafic intersection

				182.05-182.25 - Fine ultramafic rock, no mt
				182.2-182.8 - Rhythmic layering with mt-rich base down hole and grading into more felsic up hole
				182.4 - Two 4 mm po veins on either sides of core above mt+py+hb-rich section
				183.2 - 15 cm interval with 2 ultramafic zones with mt+py at base down hole and in middle
				183.6 - 15 cm fine ultramafic intersection, no mt
				184.0-184.1 - Mt-hb gabbro
				184.3 - Fine ultramafic intersection, no mt
				185.2 - 10 cm ultramafic intersection, no mt
				185.7 - 3 cm anorthosite
				185.9 - 20 cm ultramafic intersection with mt+py at down hole base
				186.5 - Mt-rich base down hole
				186.6 - Mt-rich base down hole
				186.6-187.5 - Mt-hb gabbro
				187.5 - Mt-py rich bed layer at up hole end of sequence, getting less abundant towards down hole
				187.6-188.7 - Mt-rich section with less hb
				188.7-189.7 - Pyroxenite, not magnetic, some oxides, 3-4 mm bands with pg, none in rest of intersection, 3 cm mt reef with py at down hole contact
				189.7-191.5 - Medium-grained mt-hb gabbro, progressively more chloritized towards down hole
191.5	191.9		Medium-grained magnetite-rich ultramafic	Double corona on plagioclase?? - from center: pg-hb-white corona
191.9	192.1		Pyroxenite and magnetite reef	Magnetite+pyrite reef at up hole contact, grading into pyroxenite without magnetite down hole
192.1	192.7		Medium-grained melagabbro	Some mt in specific layers
192.7	193.0		Medium-grained gabbro	Local mt
193.0	193.4		Coarse-grained leucogabbro to anorthosite	Grades from leucogabbro to anorthosite down hole.
				Pegmatitic "dike" with chlorite and biotite
193.4	195.2		Medium-grained magnetite gabbro	
195.2	197.5		Coarse to very coarse-grained gabbro	Somewhat layered finely with <1cm "bands" that have higher concentration of mafic minerals ~1% ilmenite with local small coronas of leucoxene
197.5	207.4		Layered magnetite reef-pyroxenite to leucogabbro	
				201.7-203.2 -

				203.2-203.6 -	
				203.6-204.2 -	
				204.2-206.0 -	
				206.0-206.6 -	
				206.6-207.4 -	
207.4	219.5		Coarse-grained gabbro	Rhythmic layering poorly defined 2-3 cm bands rich in ilmenite with leucoxene coronas No sulphides	
219.5	222.0		Porphyry	Same as usual with lots of qz veins and orange alteration	
222.0	222.9		Medium to coarse-grained melagabbro	Grades into more mt-rich down hole Down hole contact is 1 cm shear zone	
222.9	226.3		Medium-grained magnetite-hornblende leucogabbro	Homogeneous and granular textured	
226.3	227.4		Anorthositic gabbro	Very strong alteration with orange veins, epidote and local biotite	
227.4	231.6		Coarse-grained leucogabbro	Not really granular, more like 207.4-219.5	
				228.0-228.1 - UM section, hb with some mt	
				229.4-229.6 - Mt reef, looks like base at down hole contact	
				230.5 - <10 cm mt-rich horizon, no "grading"	
231.6	234.0		Layered magnetite reef-pyroxenite to leucogabbro	Medium-grained generally Similar to previously described in this hole except that mt reefs don't have as much py Some garnet in more mafic layers	
				232.1-232.2 - Mt-rich section, grades in and out in both directions	
				232.5 - Grades in an out of mt-rich layer both directions, longer up hole	
				232.7 - Grades in an out of mt-rich layer both directions, longer up hole	
				232.9-233.2 - Mt-reef up hole, followed by ultramafic section with tr. sulphides	
234.0	238.8		Medium-grained magnetite leucogabbro	234.5-234.8 - Py-enriched zone 234.9-235.1 - Chl-py veins with tr cpy 235.8-236.1 - Silicified shear zone, up to 2% py, serpentine veins, bt 236.8 - Fine-grained mt-rich horizon, different from usual because mt is very fine 237.1-237.2 - Fine-grained mt-rich horizon, different from usual because mt is very fine 237.4-237.6 - More mafic zone, grades in and out both directions	

				237.8-237.9 - Mt-enriched zone, grades in and out both directions	
				237.95-238.15 - Fine mt-enriched zone, grades in and out both directions, more foliated down hole	
				238.2-238.8 - Foliated and altered zone with ep+ser	
				238.25 - Qz-ep-py vein	
				238.6-238.7 - Qz-ep-py vein, m+act+ilm with coronas	
238.8	242.3		Porphyry	Same as usual, very strong orange alteration starts around 241.1	
242.3	246.6		Brecciated orange alteration zone	Very strongly altered zone, unrecognizable protolith, main mineral is bright orange and forms long tabular to acicular crystals, possibly a carbonate but not reactive to acid	
246.6	247.3		Medium-grained magnetite-hornblende gabbro to melagabbro	Biotite alteration is strong at contact with alteration zone up hole	
247.3	257.9		Coarse-grained layered leucogabbro and magnetite reefs		
				248.8-249.0 - Mt reef with bt+chl+py	
				249.35-249.55 - Mt reef, no obvious direction	
				250.4 - 5 cm mt-enriched zone, no obvious direction	
				252.3-253.0 - Mt-enriched zone, ends with 8 cm reef down hole	
				253.4-253.5 - Mt enriched zone, no obvious direction	
				253.6 - Small blebs of py growing around hb crystals	
				253.9-254.0 - Mt reef with chlorite (hb?) enrichment at both ends	
				254.1-254.2 - Mt reef with sharp base at down hole contact and progressive at up hole contact	
				254.3-254.4 - Mt reef with sharp base at down hole contact and progressive at up hole contact	
				254.4-254.7 - Chl-bt enriched zone with py hairline veins	
				255.1-255.2 - Mt-chl-bt enriched zone, no direction	
				256.0 - 6 cm bt-chl-py vein	
				257.3-257.9 - Bt alteration with discontinuous foliation, generally py-rich	
257.9	258.8		Porphyry	257.6 - 1 cm band with nice actinolite needles and py	

Drill Log

Company Name:	Northern Shield Resources	DDH Number: 06HB-10
Property Name:	Highbank Lake	Collar UTMN: 5811387
Location:	250 km north of Nakina, Onta 75 km northwest of Ogoki	Collar UTME: 551801
Claim Number:	3019450	Zone, Datum: 16, NAD83
Drilling Contractor:	Cartwright Drilling	Drilling Azimuth: 333°
Date of start:	28-Jul-06	Core Size: BTW (BQ Thin Wall)
Date completed:	31-Jul-06	Hole Length: 228.6 m
		Logs by: Christine Vaillancourt, CCIC
		Core Storage: Warehouse in Hearst, Ontario

From	To	Rock Type	Description
48.8	67.0	Metapyroxenite (amphibolite)	Crumbles, badly weathered Garnets only locally One ~15cm more solid (better preserved) porphyry dike
67.0	69.3	Garnetiferous metapyroxenite (amphibolite)	Strongly foliated 2-3% very small crystals - qz? possibly extra silica after metam? Garnet distribution and size is variable but somewhat affected by foliation - late tectonic 3-5% magnetite Stripy look where more foliated - more pg-rich?
69.3	69.8	Silicified rock?	Not sure what this is - pure silica with orange veins Small 1-2 mm green rounded particles with sulphides precipitated around or inside - these particles have 3-4 mm halo of cloudy alteration around them.
69.8	69.9	Metapyroxenite (amphibolite)	Biotite-chlorite-ilmenite-magnetite 1-3% pyrite Very strongly sheared Contact with previous siliceous zone is knife sharp
69.9	71.2	Silicified rock?	
71.2	71.3	Metapyroxenite (amphibolite)	Same as 69.8-69.9
71.3	71.9	Silicified rock?	
71.9	72.3	Metapyroxenite (amphibolite)	With silicified stuff looking like small "veins" Looks brecciated with biotite filling space between fragments
72.3	72.5	Silicified rock?	

72.5	73.0		Garnetiferous metapyroxenite (amphibolite)	Similar but with garnet	
73.0	73.3		Banded garnetiferous pyroxenite and silicified rock	Folded	
73.3	76.4		Garnetiferous melagabbro	Distribution of garnet is erratic and is less abundant to absent progressively toward down hole Up to 10% magnetite Foliation at ~25o to perpendicular	
76.4	76.6		Silicified rock?	76.4 - Small ultramafic band at contact With acicular black mineral - actinolite?	
76.6	76.8		Porphyritic gabbro	Pg phenocx 1-2 mm 3% oxides, mostly ilmenite with leucoxene coronas	
76.8	76.9		Silicified rock?	With acicular black mineral - actinolite? Some small garnets Some pg - I think	
76.9	77.8		Porphyritic gabbro	Same as 76.6-76.8 Weak foliation at >45o to core Tr. diss. py 77.7 - 3 mm qz vein with py and moly	
77.8	79.0		Medium-grained gabbro	More granular textured Pervasive biotite alteration Chlorite veins 78.1 - Chl vein with sericitic halo	
79.0	94.4		Anorthosite	Small actinolite needles, chl, bt Strong sericitization around chlorite veins Rare Ilmenite with coronas Rare diss. to ~ 1% po and in qz veins 79.6 - Small po vein 87.0 - Patch of po near qz vein 87.5 - 7 cm very fine-grained gabbro dike 92.7 - 6 cm very fine-grained gabbro dike 94.3 - Big qz vein with tr po 94.4 - Contact is a series small bands of ultramafic in anorthosite before turning into just anorthosite	
94.4	96.0		Silicified rock?	95.6 - Band of ultramafic rock 95.7 - Band of ultramafic rock 95.7-96.0 - Very orange, also contains garnets	

96.0	96.6		Garnetiferous metapyroxenite (amphibolite)	With magnetite
				Down hole contact is sheared and crumbly Some py
96.6	97.4		Silicified rock?	
				With chl+py veins
97.4	100.7		Metapyroxenite (amphibolite)	Mt-rich, no garnet
				Py abundant especially near up hole contact
100.7	114.4		Anorthosite	Contact with previous is gradual over ~20 cm
				101.55 - Big qz vein
				103.6-104.3 - Alteration zone, crumbly and orange, diss. py, po, cpy, moly
				104.3 - Few visible specks of cpy
				106.0 - Other veined sulf-rich zone with po+py+cpy
				108.3-109.1 - Altered zone around chlorite vein with orange color and big py veins
				110.2 - Altered zone around chlorite vein with orange color and big py veins
				112.4-112.5 - Waxy serpentine veins
114.4	114.6		Net-textured sulphides	"bands" of net-textured pyrite and pyrrhotite (separate)
				Tr visible cpy in po band
				Particles are rounded plagioclase (up to 1cm), tabular to acicular hornblende (<0.5 mm) and oxides (<1mm).
				Both contacts are sheared - up hole contact is folded siliceous bands with po along foliation.
114.6	118.2		Garnetiferous metapyroxenite (amphibolite)	Bands rich in garnets
				Magnetite-rich
				Up to 3% sulphides - py and/or po - finely disseminated or in veins
				116.5-118.2 - Less mt, big gt porphyroblasts
118.2	118.8		Medium-grained garnetiferous melagabbro	30% pg, 15% gt, mafic minerals=hb-chl-bt, some oxides
118.8	119.2		Anorthosite	Strongly silicified
				Brecciated at down hole contact, with big patches of mt+py+po
119.2	119.4		Garnetiferous gabbro	
119.4	121.3		Fine grained garnetiferous metapyroxenite (amphibolite)	Garnets concentrated in bands of 1-3 cm, some very big ones
				Foliated rock

				Tr mt - very locally magnetic
				Possible talc or other alteration mineral defining foliation
121.3	121.6		Pyroxenite	Chunky pyroxene (or pseudomorphs) crystals, no garnet
				Mt-rich
				Not foliated
121.6	124.0		Garnetiferous metapyroxenite (amphibolite)	Somewhat foliated
				>10% mt
				Big garnets
				Tr py, diss and in veins
124.0	125.5		Magnetite reef	80% mt with chlorite, garnet and pyrite
125.5	127.0		Medium-grained melagabbro	Contains some megacrysts of pyroxene up to 3 cm in size
				<15% pg
				Possible olivine remnants
127.0	127.6		Fine grained garnetiferous metapyroxenite (amphibolite)	Garnets only in center of intersection
				Some oxides
				Fine diss. po
127.6	129.3		Medium-grained melagabbro	Local large garnet
				Not magnetic
129.3	135.1		Garnetiferous metapyroxenite (amphibolite)	Some pg locally
				Variably magnetic from weak to strong
				Contains what looks like pieces of the silicified rock
				132.9-133.1 - 4 pieces of siliceous rock
				133.3 - Piece of siliceous rock
				134.2-134.4 - Piece of siliceous rock
				134.6-135.0 - Piece of siliceous rock
135.1	137.7		Melagabbro to pyroxenite	Alternating melagabbro and pyroxenite every 10 to 30 cm
				Local garnet in gabbro
137.7	139.3		Medium-grained layered gabbro	Rhythmic 0.5 to 1.5 cm layers anorthosite to pyroxenite
				Up to 4 cm garnet porphyroblasts
139.3	141.5		Melagabbro to pyroxenite	Alternating melagabbro and pyroxenite every 10 to 30 cm
				Local garnet in gabbro
141.5	142.5		Silicified rock?	

142.5	147.0		Hb-bt medium-grained leuco to mezogabbro	Very homogeneous No oxide, no garnet, no sulphides except near silicified rock "fragments"
				143.5 - Small fragment of silicified rock
147.0	147.5		Silicified rock?	
147.5	148.7		Melagabbro	Foliated
148.7	155.4		Hb-bt medium-grained leuco to mezogabbro	Very homogeneous Contact with next is gradual
				153.7 - "Fragment" of silicified rock
155.4	157.7		Medium-grained melagabbro	Similar to previous but more mafic, some possible olivine remnants, some oxides
157.7	158.0		Fine-grained pyroxenite	Chlorite-biotite, tr oxides, tr py
158.0	158.4		Quartz vein with pyrite	
158.4	159.0		Fine-grained pyroxenite	Same as 157.7-158.0
159.0	159.3		Medium-grained melagabbro	
159.3	161.3		Pyroxenite	Some possible olivine remnants
161.3	166.7		Melagabbro	Some possible olivine remnants, also core of pyroxene remnants both with darker green coronas Grades into following unit
				166.2-166.4 - Pale zone of alteration with large py bleb
				164.9 - White vein cut by shear??
				166.75 - 2 cm white vein with garnet in gabbro down hole from vein
166.7	170.0		Gabbro	Possible olivine remnants Orientation of weak fabric is at low angle with core, locally almost parallel
170.0	170.7		Silicified rock?	10 cm shear at both contacts, which are perfectly perpendicular to core Looks like bleached rock? Possible anorthosite protolith? Contains small garnets
170.7	171.0		Hb-bt medium-grained leuco to mezogabbro	Similar to 148.7-155.4 but more biotite
171.0	171.7		Fine-grained ultramafic	Possibly a dike - weak layering in previous unit seems to be cut by this unit Looks like all chlorite 1 cm alteration zone in previous gabbro at up hole contact Looks like small chilled at down hole contact
171.7	173.8		Hb-bt medium-grained leuco to mezogabbro	Similar to 170.7-171.0 Down hole last 12 cm is more strongly foliated

				173.2 - 5 cm ultramafic dike, not quite parallel to layers and has small chill margins
173.8	173.9		Fine-grained ultramafic rock	Up hole contact is strongly foliated, down hole contact looks like layering
				Some ilmenite near up hole contact
173.9	175.4		Medium-grained melagabbro	Somewhat layered - slightly more mafic horizons but generally relatively massive <30% pg, rest hb
175.4	175.9		Fine-grained pyroxenite to melagabbro	Rhythmic layering, 2-5 cm layers
175.9	178.0		Pyroxenite	Possible olivine remnants Strong foliation
				Some intersection of melagabbro are less foliated
178.0	179.2		Medium-grained gabbro	Relatively homogeneous but grades into following unit 178.8 - 10 cm more melanocratic 178.8 - Small vein truncated by hairline shear
179.2	179.8		Medium-grained melagabbro	Down hole contact is sheared with dissected veins
179.8	179.9		Medium-grained leucogabbro	Biotite and ilmenite with coronas
179.9	180.2		Silicified rock?	Similar to 170.0-170.7 Crumbly
				Up hole contact looks sharp, almost intrusive
180.2	183.5		Medium-grained gabbro	Not really layered Areas with possible olivine remnants 181.1 - 5 cm siliceous zone with qz veins 182.65-183.15 - Zone of shear and qz veins; shear is close to perpendicular to core than fabric in gabbro 183.1 - Hairline shear displacing foliation
183.5	183.7		Coarse-grained gabbro	Both contacts are sheared Py in veins, disseminated po
183.7	188.8		Altered pyroxenite	Blotchy altered rock, patches of dark greenish grey and pale greenish beige. Darker patches are green to black chloritized augite/hornblende (90%; SEM confirmed) and tr qz (SEM confirmed). Variety of textures, including some poikilolithic patches and graphic-looking areas. Lighter colored patches are chemically similar but composed of paler fibrous to acicular augite to actinolite (80%), hypersthene (10-15%; SEM confirmed) and tr qz. Both phases contain 1% fine diss ilm (SEM confirmed), 1% diss py and 4% diss po.

				No pentlandite detected.
				185.0-185.1 - Siliceous section around qz veins with garnet and one speck of moly
				187.7 - Beginning of more po enriched zone
				188.5 - Po in small veins and disseminated
188.8	192.0		Fine-grained gabbro	With patches of coarse-grained gabbro - like pockets Fine granular, homogeneous except for the coarse-grained pockets Up hole contacts not clear - could be intrusive Down hole contact is broken-up and sheared with bt and chl Some ultramafic xenoliths with actinolite needles Numerous qz veins
				191.1 - 2 cm siliceous vein with slight displacement along hairline fracture
192.0	194.1		Fine-grained ultramafic rock	Bt+chl+act needles Local foliation is irregular
				192.1 - Broken-up qz vein with biotite infilling
				193.1-193.4 - Altered zone around qz veins - one straight, others discontinuous, forming blotches with bit of epidote alteration
194.1	195.1		Porphyritic melagabbro and fine ultramafic rock	Looks like UM is intruding the gabbro but unclear
				194.35 - Po enrichment in UM patch
195.1	198.1		Coarse-grained melagabbro	Odd irregular texture with amoeboidal blebs of mafic mineral and interstitial plag
				Some orientation of vague layering? at low angle with core
198.1	198.5		Fine-grained ultramafic rock	Contact with next is gradual - more like layering - at low angle (~20o) to core
				1% disseminated very fine po and py
				2% slightly magnetic ilmenite
198.5	199.3		Medium-grained gabbro	Homogeneous granular
				Weak foliation at 40o to core
199.3	199.6		Silicified rock?	Both contacts are sharp 1-2 cm shears
				Small garnets
199.6	201.8		Medium-grained melagabbro	Gets progressively more leucocratic toward down hole
201.8	202.0		Silicified rock?	Same kind of contacts as 199.3-199.6
				Gt-rich particularly at down hole contact
202.0	202.8		Medium-grained gabbro	Similar to 199.6-201.8, more leucocratic
				202.1-202.3 - Qz vein and related alteration with some epidote
202.8	203.2		Medium-grained gabbro to pyroxenite	Layered
				1% po

203.2	204.8		Medium-grained mezo to leucogabbro	Same as previous but more leucocratic
204.8	212.9		Medium-grained gabbro to pyroxenite	203.6 - 2 cm UM section with small shear at down hole contact Rhythmic layering, orientation varies to almost parallel to core 212.4-212.9 - Foliated zone close to perpendicular to core with very sharp contacts and drag fold at down hole contact 212.6-212.7 - UM with po+py enrichment with vein
212.9	213.1		Fine-grained mafic to intermediate dike	
213.1	213.3		Silicified rock?	With garnet Shear at down hole contact with piece of siliceous rock dragged into UM and drag fold
213.3	215.1		Leucogabbro to pyroxenite	Layered Foliated sections close to perpendicular to core 214.1-215.1 - More altered zone, more UM with magnetite and possible olivine remnants
215.1	215.3		Silicified rock?	
215.3	215.6		Leucogabbro to pyroxenite	Same as 213.3-215.1
215.6	215.8		Silicified rock?	
215.8	216.9		Leucogabbro to pyroxenite	Same as 213.3-215.1
216.9	217.5		Silicified rock?	Cuts layering
217.5	219.1		Leucogabbro to pyroxenite	Same as 213.3-215.1
219.1	219.9		Silicified rock?	
219.9	225.0		Medium-grained mezo to leucogabbro	Homogeneous Occasional < 1cm ultramafic bands, otherwise very homogeneous 222.7 - 4 cm siliceous band 223.65 - Small mafic-intermediate dike 223.7-223.9 - UM band 224.6 - 5 cm of siliceous stuff 224.85-224.95 - Siliceous stuff
225.0	225.2		Mafic to intermediate dike	Dike
225.2	226.3		Medium-grained mezo to leucogabbro	Same as 219.9-225.0 with occasional small UM bands 225.2-225.4 - More UM zone, foliated and altered
226.3	227.3		Silicified rock?	
227.3	228.6		Fine-grained pyroxenite	Pg porphyritic - phenocrysts < 1mm Hb+chl+bt - I think 227.25-227.5 - Breccia zone with strong alteration (K and sericite?) 228.5 - Qz vein cutting small mafic-intermediate dike

APPENDIX 3

**Location of Assay Samples for Diamond-Drill Holes
06HB-01 to 06HB-10**



06HB-01

From	To	Length	From	To	Length	From	To	Length
51.88	52.80	0.92	91.62	92.16	0.54	135.78	136.38	0.60
52.80	53.81	1.01	92.16	93.50	1.34	136.38	137.03	0.65
53.81	54.48	0.67	93.50	93.93	0.43	138.40	139.13	0.73
54.48	55.50	1.02	93.93	94.49	0.56	140.84	141.67	0.83
55.50	56.43	0.93	94.49	95.41	0.92	141.67	142.44	0.77
56.43	57.39	0.96	95.41	96.42	1.01	143.76	144.50	0.74
57.39	58.31	0.92	96.42	97.37	0.95	146.46	147.00	0.54
58.31	59.64	1.33	97.37	97.91	0.54	149.35	150.00	0.65
59.64	60.17	0.53	97.91	98.31	0.40	150.10	150.81	0.71
60.17	60.50	0.33	98.31	98.91	0.60	155.00	155.45	0.45
60.50	61.26	0.76	98.91	99.97	1.06	155.80	159.32	3.52
61.26	61.72	0.46	99.97	100.58	0.61	159.32	159.70	0.38
61.72	62.76	1.04	100.58	101.65	1.07	160.70	161.07	0.37
62.76	63.79	1.03	101.65	102.76	1.11	161.07	161.54	0.47
63.79	64.72	0.93	102.76	103.63	0.87	161.54	162.00	0.46
64.72	65.40	0.68	103.63	103.81	0.18	166.09	166.94	0.85
65.40	65.82	0.42	103.81	104.29	0.48	170.20	171.13	0.93
65.82	66.87	1.05	104.29	104.80	0.51	171.13	171.47	0.34
66.87	67.80	0.93	104.80	105.73	0.93	172.94	173.51	0.57
67.80	68.72	0.92	105.73	106.51	0.78	173.51	174.13	0.62
68.72	69.72	1.00	106.51	107.79	1.28	174.13	174.49	0.36
69.72	70.71	0.99	107.79	108.76	0.97	174.49	174.85	0.36
70.71	71.77	1.06	108.76	110.04	1.28	174.85	175.32	0.47
71.77	72.52	0.75	110.04	110.50	0.46	176.98	177.70	0.72
72.52	73.59	1.07	110.50	111.38	0.88	177.70	178.40	0.70
73.59	74.40	0.81	111.38	112.09	0.71	178.40	179.41	1.01
74.40	75.36	0.96	112.09	112.90	0.81	180.54	181.10	0.56
75.36	75.68	0.32	112.90	113.98	1.08	181.43	182.17	0.74
75.68	76.61	0.93	113.98	114.94	0.96	182.73	183.40	0.67
76.61	77.47	0.86	114.94	115.82	0.88	183.40	184.20	0.80
77.47	78.20	0.73	115.82	116.83	1.01	193.33	193.76	0.43
78.20	79.03	0.83	116.83	117.75	0.92	193.76	194.23	0.47
79.03	79.64	0.61	117.75	118.69	0.94	194.23	194.70	0.47
79.64	80.16	0.52	118.69	119.72	1.03	196.00	196.32	0.32
80.16	81.10	0.94	119.72	120.20	0.48	196.32	196.67	0.35
81.10	82.10	1.00	120.20	121.16	0.96	196.67	197.30	0.63
82.10	83.14	1.04	121.16	121.92	0.76	200.64	201.17	0.53
83.14	83.73	0.59	121.92	122.92	1.00	201.17	201.62	0.45
83.73	84.42	0.69	122.92	124.16	1.24	201.62	202.34	0.72
84.42	85.14	0.72	124.16	124.97	0.81	202.86	203.83	0.97
85.14	85.92	0.78	124.97	125.85	0.88	204.22	204.72	0.50
85.92	86.68	0.76	125.85	126.83	0.98	204.72	205.23	0.51
86.68	87.10	0.42	126.83	127.78	0.95	205.23	205.47	0.24
87.10	87.40	0.30	127.78	128.61	0.83	205.47	206.00	0.53
87.40	87.73	0.33	128.61	130.64	2.03	206.00	206.53	0.53
87.73	88.62	0.89	130.64	131.75	1.11	206.53	206.87	0.34
88.62	89.76	1.14	131.75	132.78	1.03	206.87	207.26	0.39
89.76	90.22	0.46	132.78	133.80	1.02	207.26	207.73	0.47
90.22	90.62	0.40	133.80	134.87	1.07	207.73	208.23	0.50
90.62	91.10	0.48	134.87	135.78	0.91			
91.10	91.62	0.52						

06HB-03

From	To	Length	From	To	Length
49.10	49.73	0.63	164.19	165.04	0.85
54.86	55.52	0.66	165.04	166.02	0.98
58.56	59.53	0.97	166.02	166.38	0.36
61.54	62.60	1.06	166.38	166.79	0.41
65.64	66.63	0.99	166.79	167.20	0.41
67.54	67.98	0.44	167.20	168.10	0.90
67.98	68.93	0.95	168.10	168.73	0.63
77.93	78.80	0.87	171.57	171.75	0.18
86.80	87.78	0.98	171.75	172.19	0.44
94.30	95.13	0.83	172.19	172.71	0.52
96.66	97.41	0.75	172.71	173.20	0.49
98.09	98.86	0.77	173.20	174.16	0.96
98.86	99.46	0.60	174.16	175.00	0.84
99.46	100.58	1.12	175.00	175.57	0.57
117.70	118.36	0.66	175.57	176.54	0.97
118.36	118.67	0.31	180.32	180.78	0.46
118.67	119.19	0.52	180.78	181.06	0.28
127.16	128.01	0.85	181.06	181.50	0.44
128.01	128.99	0.98	191.00	191.58	0.58
128.99	129.74	0.75	191.58	192.03	0.45
134.17	135.02	0.85	192.03	192.76	0.73
135.02	135.75	0.73	192.96	193.46	0.50
135.75	136.70	0.95	193.46	194.20	0.74
136.70	137.56	0.86	197.40	198.00	0.60
143.88	144.68	0.80	198.00	198.66	0.66
144.68	145.39	0.71	198.66	199.55	0.89
145.39	146.30	0.91	199.55	200.36	0.81
148.30	149.27	0.97	208.42	209.01	0.59
151.19	152.14	0.95	209.01	209.40	0.39
155.50	156.41	0.91	209.40	209.94	0.54
159.97	160.68	0.71	209.94	210.44	0.50
160.68	161.48	0.80	210.44	211.38	0.94

06HB-04

From	To	Length	From	To	Length
69.21	69.70	0.49	121.87	123.08	1.21
71.78	72.64	0.86	123.08	123.44	0.36
72.64	73.63	0.99	123.44	124.00	0.56
73.19	73.63	0.44	124	125.12	1.12
73.63	74.28	0.65	125.12	126.2	1.08
74.28	75.41	1.13	126.20	127.14	0.94
77.09	77.84	0.75	137.10	137.62	0.52
80.11	80.80	0.69	142.40	143.10	0.70
80.80	81.34	0.54	146.94	147.38	0.44
84.82	85.83	1.01	147.74	148.10	0.36
86.00	86.72	0.72	148.10	148.45	0.35
87.79	88.63	0.84	148.45	148.81	0.36
88.63	89.75	1.12	148.81	149.95	1.14
89.75	90.71	0.96	149.95	151.08	1.13
90.71	91.9	1.19	151.08	152.2	1.12
91.9	92.74	0.84	152.2	153.43	1.23
92.74	93.47	0.73	153.43	154.27	0.84
93.47	94.37	0.90	154.27	155.45	1.18
94.37	95.39	1.02	155.45	156.47	1.02
95.39	96.39	1.00	156.47	157.5	1.03
98.18	99.16	0.98	157.5	158.25	0.75
100.99	101.95	0.96	158.25	159.19	0.94
101.95	102.87	0.92	159.19	160.08	0.89
102.87	103.9	1.03	170.9	171.94	1.04
103.9	105.05	1.15	171.94	172.89	0.95
105.40	105.44	0.04	172.89	173.74	0.85
105.44	106.63	1.19	173.74	174.75	1.01
106.63	107.06	0.43	174.75	175.24	0.49
107.06	107.45	0.39	175.24	175.65	0.41
107.45	107.84	0.39	175.65	176.13	0.48
108.00	108.61	0.61	176.13	177.18	1.05
108.61	109.66	1.05	177.18	177.48	0.30
109.66	110.68	1.02	177.48	178.28	0.80
110.68	111.66	0.98	178.28	179.15	0.87
111.66	112.87	1.21	179.15	179.68	0.53
112.87	113.89	1.02	179.68	180.4	0.72
113.89	115	1.11	180.4	181.3	0.90
115	116.18	1.18	181.3	182.28	0.98
116.18	116.81	0.63	182.28	183.11	0.83
116.81	117.49	0.68	183.11	184.04	0.93
117.49	118.11	0.62	186.03	186.59	0.56
118.11	119.25	1.14	197.32	198.01	0.69
119.25	120.66	1.41	203.00	203.68	0.68
120.66	121.87	1.21			

06HB-05

From	To	Length
66.14	67.06	0.92
84.50	85.34	0.84
98.88	99.69	0.81
109.04	109.73	0.69
109.73	110.47	0.74
112.11	113.05	0.94
124.02	124.45	0.43
130.02	130.80	0.78
130.80	131.45	0.65
134.52	135.08	0.56
142.14	142.50	0.36
147.20	147.92	0.72
155.45	156.14	0.69
156.33	156.76	0.43
167.35	168.33	0.98
175.60	176.33	0.73
177.15	177.94	0.79
181.88	182.73	0.85
194.80	195.16	0.36
196.09	196.75	0.66
196.75	197.26	0.51
197.26	197.78	0.52
211.93	212.48	0.55
215.99	216.76	0.77
216.76	217.43	0.67
227.45	228.16	0.71
270.90	271.64	0.74
271.64	272.47	0.83
190.64	191.41	0.77
299.04	299.72	0.68
301.23	301.64	0.41
308.69	309.53	0.84
309.53	310.55	1.02
310.55	311.14	0.59
311.14	311.87	0.73
311.87	312.67	0.80
312.67	313.23	0.56
313.23	314.18	0.95
314.18	314.64	0.46
319.72	320.70	0.98
320.70	321.68	0.98
321.68	322.10	0.42
322.10	323.09	0.99
323.09	323.67	0.58
323.67	324.67	1.00
324.67	325.59	0.92

06HB-06

From	To	Length
56.69	57.21	0.52
57.21	57.79	0.58
57.79	58.71	0.92
60.60	60.96	0.36
60.96	61.42	0.46
61.42	62.44	1.02
62.44	62.95	0.51
62.95	63.70	0.75
65.30	66.08	0.78
66.08	66.86	0.78
66.86	67.48	0.62
68.29	69.22	0.93
91.97	92.85	0.88
92.85	93.13	0.28
93.13	94.02	0.89
94.49	95.30	0.81
102.27	102.75	0.48
105.33	105.66	0.33
109.86	110.50	0.64
113.70	114.68	0.98
115.82	116.58	0.76
129.32	129.95	0.63
129.95	130.80	0.85
132.97	133.73	0.76
133.73	134.24	0.51
134.24	135.15	0.91
147.20	148.40	1.20
153.20	153.98	0.78
153.98	154.97	0.99
179.96	180.76	0.80
186.41	187.23	0.82
187.23	188.28	1.05
188.28	188.98	0.70
188.98	189.70	0.72

06HB-07

From	To	Length	From	To	Length
45.72	47.20	1.48	98.58	99.32	0.74
47.70	50.50	2.80	99.32	100.31	0.99
50.50	51.50	1.00	100.31	101.34	1.03
57.04	57.91	0.87	101.34	102.24	0.90
57.91	58.91	1.00	102.24	102.82	0.58
59.49	60.33	0.84	102.82	103.17	0.35
60.33	61.28	0.95	108.37	109.62	1.25
61.28	62.18	0.90	109.62	110.65	1.03
62.18	62.72	0.54	110.65	111.50	0.85
62.72	63.66	0.94	111.50	112.35	0.85
63.66	64.65	0.99	118.39	119.10	0.71
64.65	65.46	0.81	119.10	120.07	0.97
65.46	66.52	1.06	120.07	121.01	0.94
66.52	67.29	0.77	121.01	121.92	0.91
67.29	68.27	0.98	121.92	122.91	0.99
68.27	69.26	0.99	122.91	123.70	0.79
69.26	70.24	0.98	123.70	124.63	0.93
70.24	71.21	0.97	124.63	125.40	0.77
73.15	74.07	0.92	128.29	129.12	0.83
74.07	74.87	0.80	129.12	130.07	0.95
74.87	75.71	0.84	132.55	133.51	0.96
77.41	78.33	0.92	135.64	136.31	0.67
78.29	79.33	1.04	136.31	137.07	0.76
79.33	80.25	0.92	137.07	138.03	0.96
80.25	81.09	0.84	138.03	138.65	0.62
81.09	82.06	0.97	141.60	142.55	0.95
82.06	82.99	0.93	142.55	143.60	1.05
83.00	83.89	0.89	143.60	144.74	1.14
83.89	84.83	0.94	144.74	145.11	0.37
84.83	85.58	0.75	145.11	146.01	0.90
89.44	90.35	0.91	146.01	146.68	0.67
92.67	93.56	0.89	146.68	147.39	0.71
93.56	94.49	0.93	147.39	148.31	0.92
94.49	95.62	1.13	148.31	149.00	0.69
95.62	96.65	1.03	149.00	149.64	0.64
96.65	97.54	0.89	149.64	150.33	0.69
97.54	98.58	1.04			

06HB-09

From	To	Length	From	To	Length	From	To	Length
54.86	56.00	1.14	167.71	167.96	0.25	195.00	195.32	0.32
56.00	56.60	0.60	167.96	168.58	0.62	195.32	195.77	0.45
56.60	57.20	0.60	168.58	168.90	0.32	195.77	197.75	1.98
58.00	58.70	0.70	168.90	169.36	0.46	197.75	198.80	1.05
78.60	78.90	0.30	169.36	170.21	0.85	198.80	199.74	0.94
80.92	81.63	0.71	170.21	170.88	0.67	199.74	200.15	0.41
81.63	82.30	0.67	171.27	171.57	0.30	200.15	201.17	1.02
85.20	85.70	0.50	171.57	171.87	0.30	201.17	201.74	0.57
88.86	89.57	0.71	171.87	172.73	0.86	201.74	202.23	0.49
89.57	90.39	0.82	172.87	173.19	0.32	202.23	202.96	0.73
98.49	99.11	0.62	173.19	173.60	0.41	202.96	203.25	0.29
102.57	102.80	0.23	173.60	174.09	0.49	203.57	204.40	0.83
102.80	103.37	0.57	174.09	174.51	0.42	204.40	205.10	0.70
117.98	118.61	0.63	176.59	176.93	0.34	205.10	205.42	0.32
118.61	118.87	0.26	176.93	177.28	0.35	205.42	206.50	1.08
118.87	119.11	0.24	177.28	177.70	0.42	206.50	206.82	0.32
119.11	119.42	0.31	177.70	178.00	0.30	206.82	207.46	0.64
119.42	120.01	0.59	178.00	178.35	0.35	215.28	216.25	0.97
120.01	120.74	0.73	178.35	179.05	0.70	217.87	218.75	0.88
120.74	121.60	0.86	179.05	179.40	0.35	218.75	219.10	0.35
121.60	121.92	0.32	179.40	179.72	0.32	222.05	222.87	0.82
111.18	111.68	0.50	179.72	180.72	1.00	222.87	223.77	0.90
111.68	112.25	0.57	181.75	182.10	0.35	223.77	224.31	0.54
112.25	112.73	0.48	182.10	182.42	0.32	225.35	225.80	0.45
112.73	113.31	0.58	182.42	183.12	0.70	225.80	226.48	0.68
113.31	113.68	0.37	183.12	183.68	0.56	228.04	229.00	0.96
113.68	114.23	0.55	183.68	184.05	0.37	229.00	229.51	0.51
142.20	142.40	0.20	184.05	184.35	0.30	229.51	229.78	0.27
142.49	142.96	0.47	184.35	185.10	0.75	229.78	230.45	0.67
142.96	143.37	0.41	185.10	185.39	0.29	230.45	230.80	0.35
143.37	143.69	0.32	185.39	185.74	0.35	230.80	231.46	0.66
147.46	147.86	0.40	185.74	186.13	0.39	231.46	232.20	0.74
147.86	148.80	0.94	186.13	186.45	0.32	232.20	233.20	1.00
148.80	149.16	0.36	186.45	186.95	0.50	233.90	234.50	0.60
149.16	149.99	0.83	186.95	187.50	0.55	234.50	235.29	0.79
149.99	150.33	0.34	187.50	187.80	0.30	235.29	235.65	0.36
158.40	158.92	0.52	187.80	188.48	0.68	235.65	236.00	0.35
158.92	159.48	0.56	188.48	188.78	0.30	236.00	236.75	0.75
159.48	160.25	0.77	188.78	189.52	0.74	236.75	237.10	0.35
161.54	162.01	0.47	189.52	189.84	0.32	237.10	237.40	0.30
162.01	162.31	0.30	189.84	190.35	0.51	237.40	237.93	0.53
162.31	163.30	0.99	190.35	190.85	0.50	237.93	238.40	0.47
163.30	163.61	0.31	190.85	191.48	0.63	238.40	238.75	0.35
165.05	165.35	0.30	191.48	191.90	0.42	246.71	247.21	0.50
165.35	166.19	0.84	191.90	192.36	0.46	254.40	254.95	0.55
166.19	166.50	0.31	192.36	193.00	0.64	254.95	255.55	0.60
166.50	166.85	0.35	193.00	193.37	0.37	255.55	256.03	0.48
166.85	167.35	0.50	193.37	194.24	0.87	256.03	257.32	1.29
167.35	167.71	0.36	194.24	195.00	0.76			

06HB-10

From	To	Length	From	To	Length
78.48	79.25	0.77	114.30	114.75	0.45
79.25	79.93	0.68	114.75	115.00	0.25
79.93	80.66	0.73	115.00	115.33	0.33
80.66	81.46	0.80	115.33	115.65	0.32
92.23	92.62	0.39	115.65	116.48	0.83
92.62	93.11	0.49	116.48	117.22	0.74
93.11	93.61	0.50	118.79	119.10	0.31
93.61	94.14	0.53	158.14	158.50	0.36
94.14	94.41	0.27	181.33	182.31	0.98
94.41	94.66	0.25	182.31	182.65	0.34
94.66	95.00	0.34	183.19	183.49	0.30
95.00	95.34	0.34	183.49	183.89	0.40
97.43	97.79	0.36	183.89	184.44	0.55
97.79	98.30	0.51	184.44	184.95	0.51
98.30	98.88	0.58	184.95	185.20	0.25
98.88	99.51	0.63	185.20	185.70	0.50
99.51	100.03	0.52	185.70	186.20	0.50
100.03	100.65	0.62	186.20	186.71	0.51
100.65	101.25	0.60	186.71	187.17	0.46
101.25	102.00	0.75	187.17	187.68	0.51
103.63	104.30	0.67	187.68	188.13	0.45
104.30	104.68	0.38	188.13	188.64	0.51
104.68	105.32	0.64	188.64	188.93	0.29
105.32	106.04	0.72	188.93	189.30	0.37
106.04	106.34	0.30	197.59	198.10	0.51
106.34	106.83	0.49	198.10	198.50	0.40
108.36	109.00	0.64	198.50	?	?
112.38	113.00	0.62	203.18	203.65	0.47
113.00	114.00	1.00	205.44	205.87	0.43
114.00	114.30	0.30			

APPENDIX 4

**Sections for Diamond-Drill Holes
06HB-01 to 06HB-10**



06HB-01
5,811,072N 551,953E
Dip -60, Az: 333
EOH 212.8

Claim # 3019450

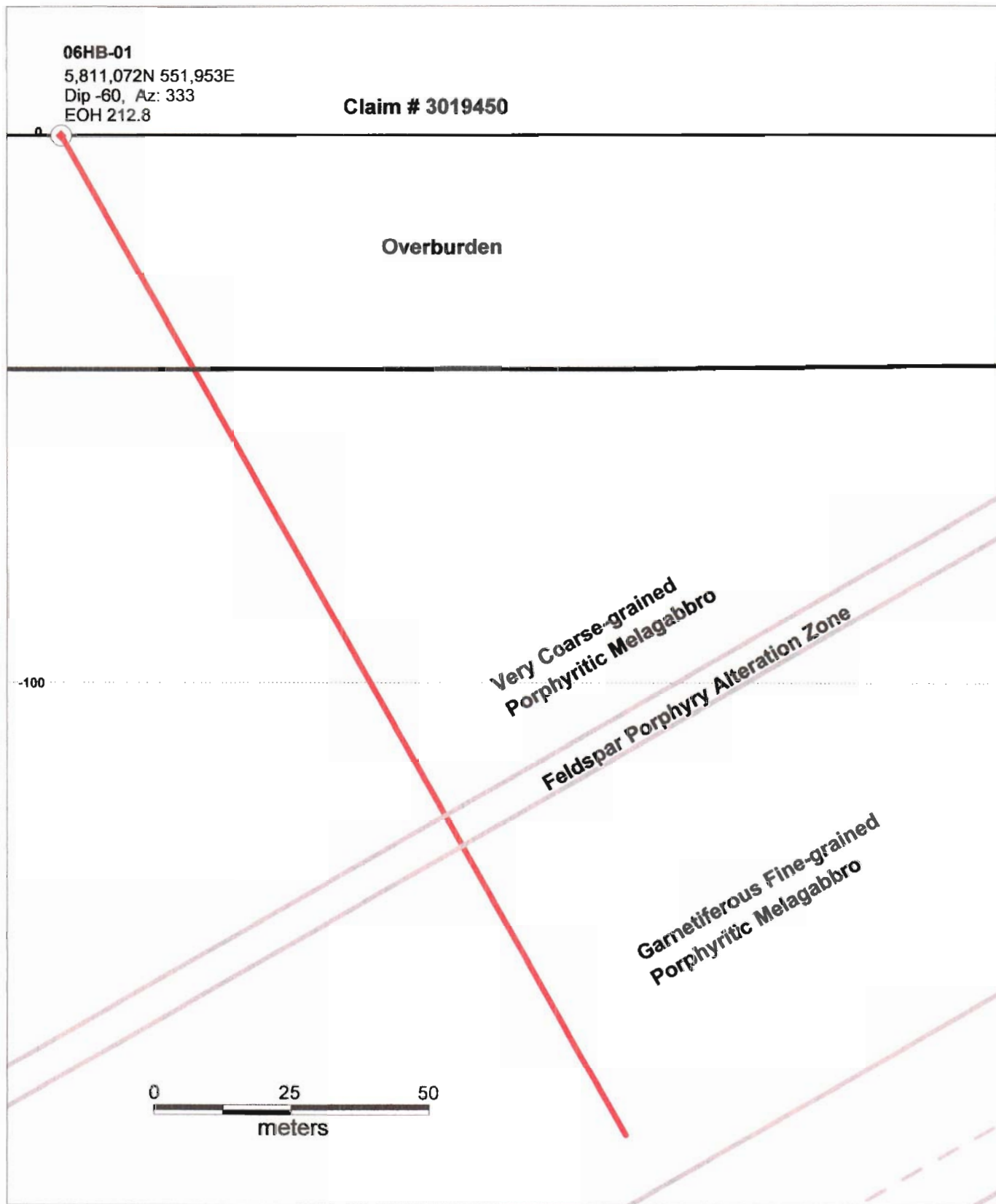
Overburden

-100

Very Coarse-grained
Porphyritic Melagabbro

Feldspar Porphyry Alteration Zone

Garnetiferous Fine-grained
Porphyritic Melagabbro



06HB-003
5,807,932N 549,482E
Dip -60, Az: 328
EOH 219.5

Claim # 4205453

0

Overburden

-100m

**Well layered Sequence
Melagabbro, Pyroxenite & Gabbro**

-200m

Coarse-grained Leucogabbro and Gabbro

**Medium to Coarse-grained
Granular Gabbro**



06HB-004

5,806,174N 554,197E

Dip -60, Az: 335

EOH 267.6

Claim # 1180791

Claim # 1180792

Overburden

Layered medium-grained
Melagabbro & Leucogabbro

-100m

Magnetite Gabbro
& Magnetite Reefs

Thin Ultramafic layering

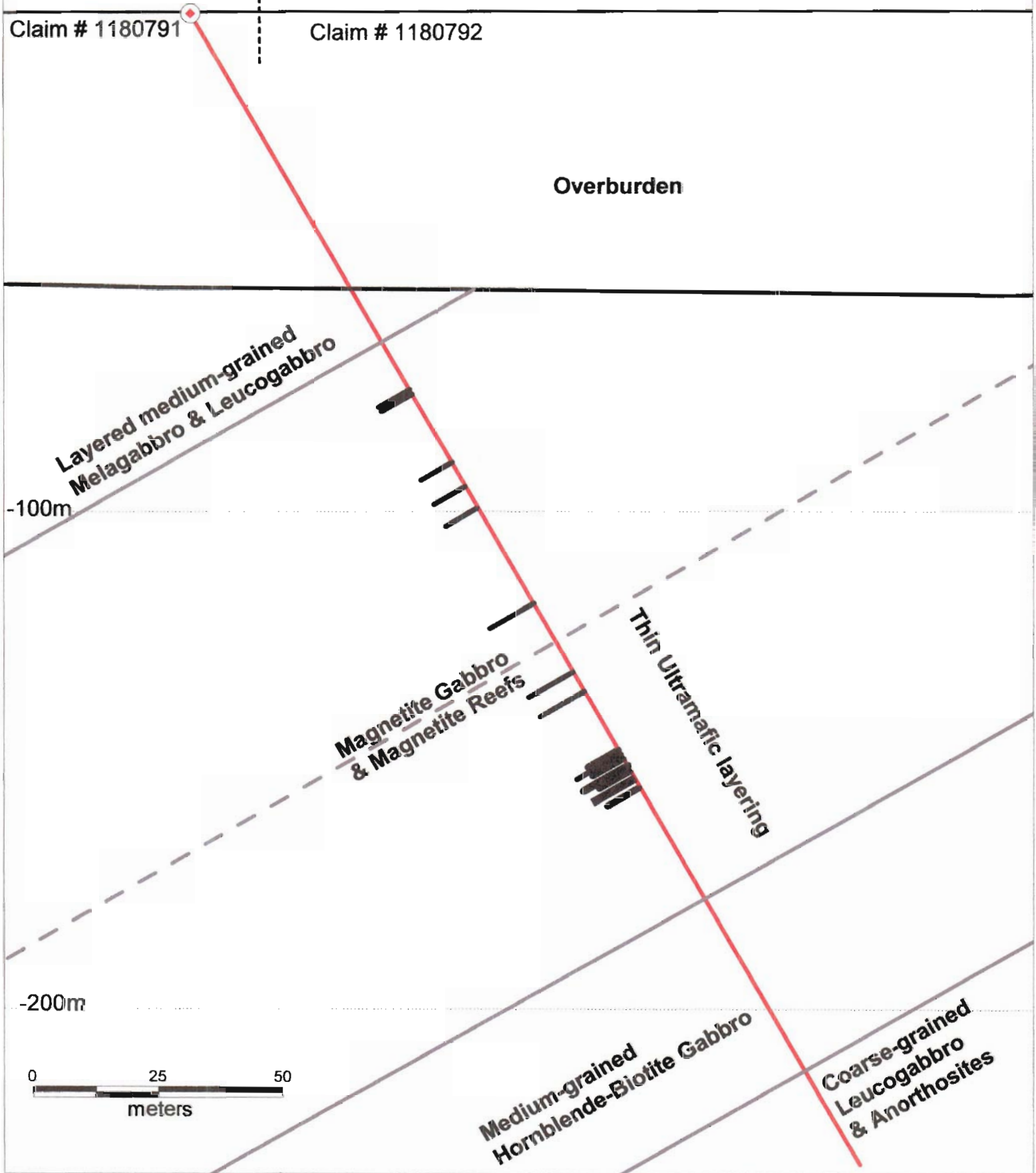
-200m

Medium-grained
Hornblende-Biotite Gabbro

Coarse-grained
Leucogabbro
& Anorthosites



— Magnetite reefs



06HB-05

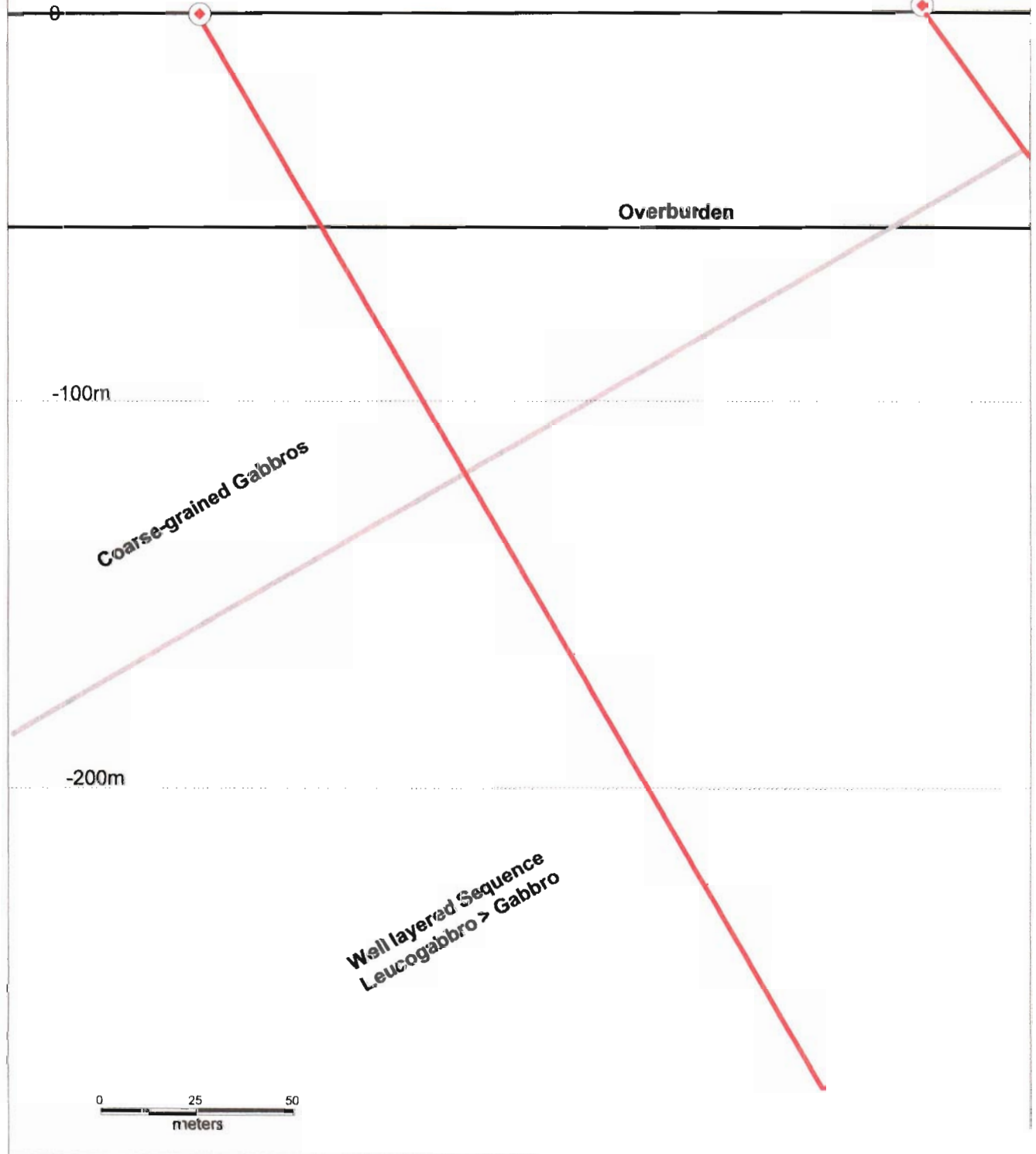
5,807,206N 553,718E

Dip -60, Az: 335

EOH 325.6

Claim# # 1180792

04HB-01



-100m

-200m

0 25 50
meters

06HB-006
5,806,578N 554,009E
Dip -60, Az: 332
EOH 207.8

Claim # 1180792

Overburden

Coarse-grained Gabbro to Leucogabbro

Coarse-grained
Leucogabbro to Gabbro

-100

-200



06HB-009
5,805,669N 554,430E
Dip: -60, Az: 330
EOH 258.8

Claim # 1180791

Overburden

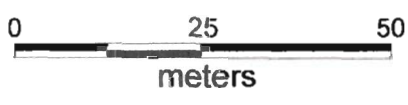
Garnetiferous
Pyroxenite

-100m

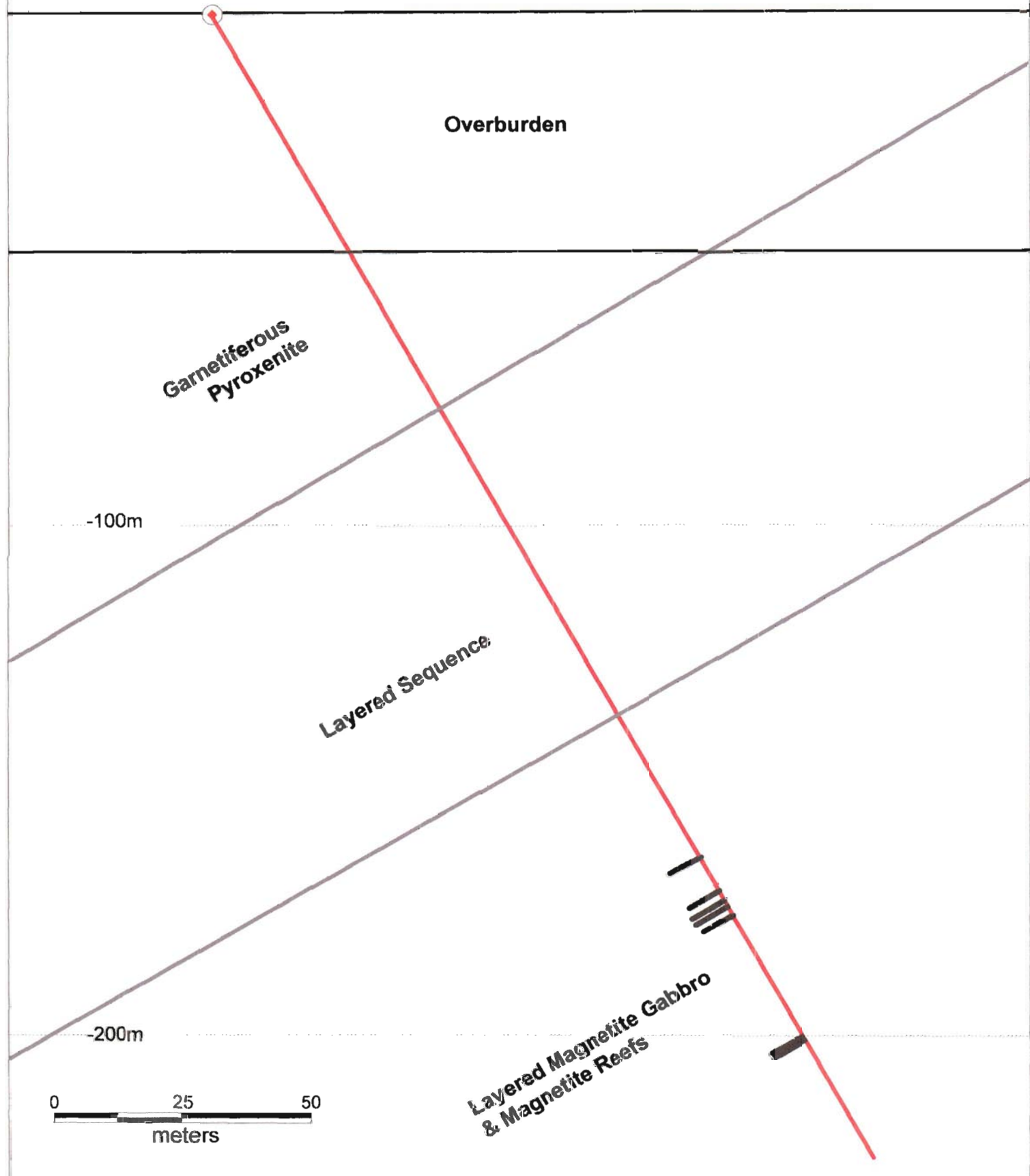
Layered Sequence

-200m

Layered Magnetite Gabbro
& Magnetite Reefs



— Magnetite Reefs



06HB-010
5,811,386N 551,798E
Dip -60, Az 333
EOH 228.6

Overburden

Pyroxenite

Garnetiferous Pyroxenite

Anorthosite

Garnetiferous Pyroxenite

Layered Pyroxenite-Melagabbro-
Leucogabbro

Altered Clinopyroxenite

Rhythmically Layered Pyroxenite-
Leucogabbro-Gabbro

-100

-200m



TM06061436 - Finalized

CLIENT : "NORSHI - Northern Shield Resources Inc."

of SAMPLES : 33

DATE RECEIVED : 2006-07-19 DATE FINALIZED : 2006-08-25

PROJECT : ""

CERTIFICATE COMMENTS : ""

PO NUMBER : ""

SAMPLE	PGM-ICP24						ME-ICP61																								
	Au	Pt	Pd	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Sr	Ti	V	W	Zn	
	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
315791	0.022	<0.005	0.001	<0.5	11.5	5	60	<0.5	2	9.01	<0.5	148	51	1060	7.89	0.22	2.93	911	1	1.54	80	1350	<2	2.71	<5	1090	0.28	162	<10	38	
315792	<0.001	<0.005	0.001	<0.5	0.38	<5	20	<0.5	<2	0.05	<0.5	1	4	14	0.07	0.13	0.03	11	<1	0.01	<1	40	2	0.01	<5	7	0.02	2	<10	2	
315793	0.002	<0.005	0.001	<0.5	9.63	11	120	<0.5	2	8.59	<0.5	45	188	158	5.6	0.46	4.73	1100	1	1.59	133	40	<2	0.12	<5	212	0.21	164	<10	52	
315794	0.009	<0.005	0.001	0.6	10.9	<5	40	<0.5	2	9.34	<0.5	28	139	129	4.03	0.17	3.09	709	1	1.65	90	30	<2	0.13	<5	256	0.17	129	<10	31	
315795	<0.001	<0.005	<0.001	<0.5	11	13	30	<0.5	<2	9.09	<0.5	29	154	46	4.49	0.15	2.91	659	<1	1.79	90	40	<2	0.06	<5	248	0.22	187	<10	37	
315796	<0.001	<0.005	<0.001	<0.5	11.05	<5	20	<0.5	3	9.16	<0.5	30	105	61	5	0.12	2.76	638	1	1.82	106	50	<2	0.09	<5	242	0.28	240	<10	34	
315797	0.007	<0.005	<0.001	<0.5	10.7	7	30	<0.5	4	8.96	<0.5	48	63	192	8.1	0.21	3.47	883	<1	1.45	220	30	<2	0.23	<5	196	0.67	536	<10	54	
315798	0.001	0.006	0.001	<0.5	11.6	10	30	<0.5	<2	9.28	<0.5	39	58	225	6.42	0.19	2.97	753	<1	1.69	137	50	<2	0.26	<5	239	0.53	428	<10	44	
315799	<0.001	<0.005	0.001	<0.5	11.7	12	40	<0.5	2	9.06	<0.5	42	79	266	6.27	0.26	2.61	753	1	1.87	146	60	<2	0.41	<5	244	0.6	462	10	44	
315800	<0.001	<0.005	<0.001	<0.5	11.2	<5	40	<0.5	3	8.9	<0.5	24	37	134	4.98	0.18	1.92	578	<1	2.52	79	40	<2	0.23	<5	279	0.32	348	<10	30	
315801	<0.001	<0.005	<0.001	<0.5	10.95	<5	50	<0.5	<2	8.87	<0.5	43	49	243	6.99	0.29	3.51	826	1	1.41	133	70	<2	0.5	<5	233	0.44	416	<10	54	
315802	0.002	<0.005	0.001	<0.5	11.7	7	20	<0.5	3	10	<0.5	31	55	88	5.54	0.16	2.81	729	<1	1.51	100	60	<2	0.16	<5	262	0.32	244	<10	42	
315803	0.115	0.474	1.345	1.6	8.7	<5	330	0.6	3	8.43	<0.5	63	146	3980	9.2	0.48	4.43	1390	1	1.88	288	1760	10	0.87	<5	713	0.61	313	<10	101	
315804	0.001	0.007	0.004	<0.5	11	<5	30	<0.5	2	9.2	<0.5	25	31	89	3.33	0.11	2.12	486	1	2.27	57	50	<2	0.13	<5	279	0.08	56	10	30	
315805	<0.001	<0.005	0.001	<0.5	11.15	<5	40	<0.5	2	8.66	<0.5	31	41	54	4.06	0.15	2.76	591	<1	2.08	93	50	<2	0.09	<5	291	0.08	57	<10	37	
315806	<0.001	<0.005	0.002	<0.5	9.78	<5	40	<0.5	3	7.55	<0.5	25	34	168	4.35	0.12	1.98	691	<1	2.01	46	800	<2	0.54	<5	764	0.24	132	<10	32	
315807	<0.001	0.006	0.003	<0.5	11	<5	50	<0.5	<2	8.96	<0.5	26	58	52	3.71	0.16	2.57	581	<1	2.31	115	60	<2	0.06	<5	352	0.09	70	<10	35	
315808	<0.001	0.007	0.003	<0.5	9.17	<5	30	<0.5	<2	8.43	<0.5	54	180	18	6.88	0.14	5.92	1115	1	1.37	213	50	<2	0.04	<5	185	0.18	159	<10	58	
315809	<0.001	<0.005	0.001	<0.5	10.4	<5	60	<0.5	3	8.79	<0.5	23	38	38	3.24	0.14	1.95	525	1	2.27	77	60	<2	0.06	<5	338	0.08	54	<10	27	
315810	<0.001	0.005	0.001	<0.5	11.55	<5	80	<0.5	<2	8.68	<0.5	29	54	42	3.67	0.27	2.61	559	1	1.99	87	70	<2	0.04	<5	293	0.11	70	10	29	
315811	<0.001	<0.005	0.002	<0.5	10.65	<5	140	<0.5	4	8.16	<0.5	23	148	140	3.42	1.11	2.3	492	1	2.09	84	70	<2	0.19	<5	299	0.21	121	<10	35	
315812	<0.001	0.005	0.001	0.5	9.34	<5	80	<0.5	4	6.63	<0.5	36	192	117	5.16	1.07	3.43	670	2	1.43	119	80	20	0.11	<5	213	0.3	161	10	80	
315813	<0.001	<0.005	<0.001	<0.5	10.45	10	20	<0.5	2	8.93	<0.5	21	165	40	3.46	0.25	2.4	546	1	1.83	67	50	<2	0.02	<5	264	0.18	135	10	30	
315814	<0.001	<0.005	<0.001	<0.5	0.37	<5	10	<0.5	<2	0.05	<0.5	1	3	5	0.06	0.12	0.03	13	<1	0.01	<1	40	<2	0.01	<5	5	0.02	2	10	2	
315815	0.001	<0.005	0.002	<0.5	10.45	14	20	<0.5	2	10.1	<0.5	39	273	48	5.74	0.32	4.44	974	1	1.1	170	50	<2	0.02	<5	202	0.3	225	<10	51	
315816	<0.001	<0.005	0.001	<0.5	6.17	<5	<10	<0.5	7	10.2	<0.5	48	272	62	7.55	0.11	7.26	1405	2	0.38	162	50	<2	0.02	<5	96	0.33	248	<10	76	
315817	0.001	0.006	0.001	<0.5	8.56	<5	10	<0.5	3	9.75	<0.5	36	220	106	5.46	0.19	4.98	1025	7	1.01	125	40	<2	0.03	6	175	0.26	200	<10	43	
315818	0.002	<0.005	0.001	<0.5	7.06	<5	10	<0.5	2	9.9	<0.5	41	223	160	6.09	0.19	5.89	1190	2	0.62	143	30	<2	0.05	<5	148	0.28	209	<10	46	
315819	0.001	<0.005	0.001	<0.5	7.06	<5	10	<0.5	4	10.6	<0.5	40	198	22	6.13	0.1	5.83	1230	3	0.41	129	40	<2	<0.01	<5	142	0.26	191	<10	57	
315820	<0.001	<0.005	0.001	<0.5	8.87	<5	40	<0.5	<2	9.15	<0.5	11	142	44	2.14	0.33	0.91	307	<1	2.29	39	40	<2	0.01	<5	311	0.14	90	<10	18	
315821	<0.001	<0.005	0.001	<0.5	9.16	<5	220	0.5	5	7.6	<0.5	12	157	17	2.34	1.13	1.29	351	2	2.09	43	40	<2	0.01	<5	344	0.16	110	<10	21	
315822	<0.001	<0.005	0.001	<0.5	10.4	<5	60	<0.5	2	9.34	<0.5	28	145	52	4.44	0.44	3.45	772	1	1.77	89	70	<2	0.01	<5	298	0.21	135	<10	40	
315823	0.003	<0.005	0.001	<0.5	9.47	<5	440	0.7	4	4.83	<0.5	16	99	72	2.91	1.02	1.79	435	<1	3.37	51	460	<2	0.13	<5	587	0.25	90	10	48	

SAMPLE	PGM-ICP24						ME-ICP61																							
	Au	Pt	Pd	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Sr	Ti	V	W	Zn
	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
315732	0.002	<0.005	<0.001	<0.5	7.22	<5	40	<0.5	<2	4.01	<0.5	122	577	452	23.4	0.25	2.71	1100	<1	0.8	321	40	14	0.31	<5	160	3	2490	<10	142
315733	0.002	<0.005	0.002	<0.5	8.48	<5	100	<0.5	<2	3.9	<0.5	118	484	435	23.1	0.48	2.58	1085	<1	0.71	346	60	19	0.35	6	217	2.97	2440	<10	125
315734	0.001	<0.005	0.003	<0.5	8.98	<5	60	<0.5	<2	4.66	<0.5	124	783	506	19.25	0.3	3.07	1065	<1	1.09	343	50	20	0.34	<5	196	2.25	1880	<10	131
315735	0.002	0.007	0.008	<0.5	11.8	<5	70	<0.5	<2	6.04	<0.5	71	874	1020	15.2	0.3	1.32	693	15	1.55	324	40	15	0.74	<5	305	1.91	1580	<10	87
315738	<0.001	<0.005	0.001	<0.5	11.8	<5	20	<0.5	<2	8.28	<0.5	28	228	106	6.9	0.08	0.49	378	<1	1.92	90	40	11	0.24	<5	283	0.9	663	<10	46
315737	0.106	0.406	1.445	1.6	8.02	<5	310	0.6	2	7.66	<0.5	80	140	3670	8.44	0.43	3.87	1255	1	1.65	271	1660	21	0.76	<5	603	0.55	298	<10	91
315738	0.003	<0.005	0.007	<0.5	8.69	<5	30	<0.5	<2	4.8	<0.5	111	240	597	23	0.16	1.99	1015	<1	0.96	398	50	12	0.52	<5	197	2.94	2490	<10	169
315739	0.002	<0.005	0.001	<0.5	7.39	<5	10	<0.5	<2	3.99	<0.5	130	129	504	22.1	0.13	3.53	1140	<1	0.89	412	40	12	0.33	<5	98	2.51	2150	<10	141
315740	0.002	<0.005	0.011	<0.5	8.64	<5	20	<0.5	<2	4.45	<0.5	120	43	555	22.7	0.16	2.9	1130	<1	1.06	364	60	10	0.31	<5	190	2.8	2310	<10	131
315741	0.003	<0.005	<0.001	<0.5	10.65	<5	70	<0.5	<2	7.08	<0.5	54	7	387	7.93	0.36	2.88	733	1	1.98	126	100	24	0.28	<5	271	0.62	432	<10	80
315742	0.002	<0.005	<0.001	<0.5	6.77	<5	10	<0.5	<2	3.92	<0.5	147	45	548	19.1	0.05	6.75	1465	<1	0.45	381	50	12	0.32	<5	83	1.51	1170	<10	119
315743	0.01	0.007	0.002	<0.5	7.35	<5	20	<0.5	<2	3.59	<0.5	172	665	425	37	0.08	1.56	1180	<1	0.81	394	30	19	0.51	5	162	4.2	3690	<10	206
315744	0.001	<0.005	0.005	<0.5	10.65	<5	140	<0.5	<2	6.06	<0.5	68	306	780	14.3	0.8	2.24	843	<1	1.85	189	150	15	0.21	<5	313	1.53	1265	<10	102
315745	<0.001	0.005	0.001	<0.5	5.93	<5	210	<0.5	<2	2.99	<0.5	124	1845	134	30.1	0.85	2.84	1260	<1	1.07	289	180	16	0.25	<5	174	3.27	2780	<10	209
315746	0.007	0.006	0.007	<0.5	7.93	<5	210	<0.5	<2	4.8	<0.5	118	1110	699	23.2	0.52	1.51	1040	1	1.02	381	40	16	0.45	<5	248	3.03	2610	<10	153
315747	0.007	<0.005	0.012	<0.5	4.21	<5	40	<0.5	<2	2.09	<0.5	177	1395	772	38.9	0.13	3.29	1520	<1	0.24	520	20	20	0.42	<5	30	4.37	3640	<10	225
315748	<0.001	<0.005	<0.001	<0.5	0.31	<5	10	<0.5	2	0.03	<0.5	<1	6	4	0.13	0.12	0.02	12	<1	0.01	1	40	3	0.01	<5	4	0.02	10	<10	<2
315749	0.004	<0.005	0.006	<0.5	3.42	<5	20	<0.5	<2	1.47	<0.5	175	1075	444	42.5	0.11	2.03	1460	<1	0.15	545	30	23	0.26	6	66	4.88	4120	<10	234
315750	0.008	0.012	0.003	<0.5	2.46	<5	10	<0.5	<2	0.36	<0.5	186	3740	942	>50	0.06	1.19	1480	<1	0.03	657	10	29	0.44	5	21	5.41	5220	<10	319
315751	0.002	<0.005	0.008	<0.5	5.69	<5	50	<0.5	<2	2.13	<0.5	160	1960	1320	39.9	0.42	1.26	1130	<1	0.33	804	30	26	1.32	<5	104	4.74	4100	<10	277
315752	0.001	0.006	0.001	<0.5	4.28	<5	10	<0.5	<2	2.05	<0.5	162	2980	196	43.3	0.06	1.06	1315	<1	0.21	557	<10	25	0.18	<5	97	5.08	4430	<10	240
315753	0.024	0.009	0.014	<0.5	5.48	<5	<10	<0.5	<2	3.21	<0.5	157	785	1995	39.3	0.02	1.16	1185	<1	0.15	757	50	22	0.62	<5	138	4.48	3790	<10	205
315754	0.009	<0.005	0.005	<0.5	2.74	<5	<10	<0.5	<2	0.53	<0.5	205	1025	728	>50	0.01	1.5	1535	<1	0.03	790	20	37	0.41	5	26	5.65	5320	<10	298
315755	0.009	0.009	0.004	<0.5	2.09	<5	<10	<0.5	<2	0.04	<0.5	194	911	751	>50	<0.01	1.47	1515	<1	<0.01	774	10	32	0.3	<5	1	5.75	5490	<10	200
315756	0.011	<0.005	0.003	<0.5	2.49	<5	<10	<0.5	<2	0.36	<0.5	194	230	990	>50	<0.01	1.38	1485	<1	0.03	861	10	33	0.41	6	17	5.55	5480	<10	206

SAMPLE	PGM-ICP24			ME-ICP61																										
	Au ppm	Pt ppm	Pd ppm	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	K %	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sr ppm	Ti %	V ppm	W ppm	Zn ppm
315986	<0.001	<0.005	0.011	<0.5	9.75	<5	10	<0.5	<2	8.4	<0.5	34	149	83	5	0.09	3.93	873	<1	1.41	108	50	<2	0.08	<5	188	0.15	136	<10	40
315987	0.001	<0.005	0.005	<0.5	10.05	<5	20	<0.5	2	8.33	<0.5	29	113	56	4.38	0.09	3.41	753	<1	1.57	87	60	3	0.11	<5	206	0.12	111	<10	37
315988	0.001	<0.005	<0.001	<0.5	11.15	<5	70	<0.5	<2	8.63	<0.5	28	108	123	3.97	0.16	2.82	628	2	2.15	68	50	<2	0.39	<5	429	0.13	102	<10	26
315989	0.001	<0.005	0.001	<0.5	9.94	<5	30	0.7	<2	7.99	<0.5	72	33	640	6.8	0.12	3.22	782	<1	2.26	36	2630	5	2.16	<5	946	0.43	193	<10	36
315990	0.001	<0.005	<0.001	<0.5	0.35	<5	20	<0.5	<2	0.04	<0.5	<1	4	5	0.06	0.12	0.02	10	<1	0.01	<1	40	<2	0.01	<5	7	0.02	2	<10	2
315991	0.001	<0.005	<0.001	<0.5	11.15	<5	40	<0.5	<2	8.85	<0.5	21	94	68	3.65	0.18	2.76	646	<1	2.06	66	60	7	0.16	<5	359	0.12	100	<10	33
315992	<0.001	<0.005	<0.001	<0.5	10.3	<5	20	<0.5	2	8.64	<0.5	29	116	44	4.51	0.13	3.58	798	<1	1.64	89	90	4	0.09	<5	226	0.15	125	<10	36
315993	0.001	0.005	0.008	<0.5	10.25	<5	30	<0.5	2	8.33	<0.5	28	146	40	4.23	0.18	3.34	757	<1	1.76	98	40	4	0.01	<5	237	0.16	122	<10	37
315994	<0.001	<0.005	0.003	<0.5	10.2	<5	40	<0.5	3	8.8	<0.5	19	94	60	3.51	0.28	2.28	640	<1	1.74	73	60	3	0.06	<5	287	0.13	103	<10	22
315995	0.002	0.005	0.009	<0.5	8.95	<5	40	<0.5	2	7.02	<0.5	35	173	294	4.36	0.19	3.12	729	<1	1.51	167	30	<2	0.1	<5	234	0.14	101	<10	36
315996	0.019	0.027	0.037	1	9.45	<5	40	<0.5	2	7.83	<0.5	54	236	1775	6.03	0.17	4.29	905	<1	1.4	530	30	<2	0.62	<5	181	0.15	139	<10	46
315997	0.002	0.006	0.008	<0.5	9.98	<5	20	<0.5	2	8.14	<0.5	37	204	178	5.33	0.22	4.67	939	<1	1.78	157	40	3	0.07	<5	205	0.13	119	<10	41
315998	0.001	<0.005	0.001	<0.5	10.5	<5	20	<0.5	2	7.2	<0.5	22	69	70	4.27	0.24	1.85	647	<1	2.6	51	60	4	0.08	<5	261	0.29	175	<10	37

SAMPLE	PGM-ICP24			ME-ICP61																										
	Au ppm	Pt ppm	Pd ppm	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	K %	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sr ppm	Ti %	V ppm	W ppm	Zn ppm
315333	<0.001	<0.005	0.001	0.5	7.2	8	20	<0.5	2	4.11	<0.5	150	<1	54	29.6	0.07	1.39	1625	1	1.09	19	20	<2	0.63	<5	147	5.94	1605	<10	238
315334	<0.001	<0.005	<0.001	<0.5	5.02	<5	10	<0.5	<2	2.9	<0.5	164	<1	73	35.9	0.04	1.08	1905	2	0.72	11	10	<2	0.56	<5	76	7.61	1725	<10	270
315335	0.003	<0.005	0.003	<0.5	7.53	<5	10	<0.5	12	5.59	<0.5	115	<1	101	24.3	0.09	2.22	1700	<1	1.06	11	20	<2	0.73	<5	113	5.31	1295	<10	209
315336	0.002	<0.005	0.001	<0.5	8.62	9	10	<0.5	7	7.8	<0.5	83	<1	30	15.9	0.1	3.1	1575	<1	1.09	17	40	<2	0.12	<5	163	2.62	742	<10	146
315337	0.001	<0.005	<0.001	<0.5	7.53	<5	10	<0.5	12	5.42	<0.5	117	<1	75	23.3	0.09	2.03	1605	1	1.11	3	20	<2	0.6	<5	141	4.97	1460	<10	212
315338	0.001	<0.005	<0.001	0.6	6.5	<5	10	<0.5	<2	4.14	<0.5	152	<1	73	29.7	0.07	1.58	1735	1	1	19	20	<2	0.53	<5	125	5.93	1860	10	258
315339	<0.001	<0.005	<0.001	0.8	6.66	<5	10	<0.5	<2	3.7	<0.5	170	<1	79	32.4	0.07	1.69	1830	1	0.89	28	20	<2	0.51	<5	92	6.49	2070	<10	283
315340	0.001	<0.005	0.011	<0.5	7.41	<5	20	<0.5	9	4.25	<0.5	149	<1	75	26.7	0.1	1.75	1720	<1	1.04	18	20	<2	0.53	<5	142	5.94	1870	<10	249
315341	0.001	<0.005	<0.001	<0.5	6.4	<5	20	<0.5	<2	4.18	<0.5	150	<1	86	32.6	0.1	1.89	2010	<1	0.78	33	10	<2	0.54	<5	90	6.3	2200	10	241
315342	<0.001	<0.005	<0.001	<0.5	7.4	<5	20	<0.5	<2	5.61	<0.5	113	1	104	23.5	0.13	2.86	1645	<1	1.05	25	20	2	0.67	<5	145	4.75	1500	<10	180
315343	<0.001	<0.005	<0.001	<0.5	0.35	<5	20	<0.5	<2	0.04	<0.5	<1	3	3	0.14	0.12	0.02	18	<1	0.01	1	40	2	0.01	<5	6	0.03	7	<10	<2
315344	<0.001	<0.005	<0.001	<0.5	9.54	<5	30	<0.5	<2	6.53	<0.5	83	2	70	17.05	0.19	2.16	1325	<1	1.71	16	20	3	0.46	<5	199	3.27	1030	<10	147
315345	<0.001	<0.005	<0.001	<0.5	11.15	<5	80	4.3	<2	6.39	<0.5	25	2	23	6.2	0.24	1.21	572	<1	3.5	7	220	3	0.12	<5	463	0.95	307	10	72
315346	<0.001	<0.005	<0.001	<0.5	11.55	<5	40	<0.5	<2	6.44	<0.5	65	2	107	14.2	0.19	1.05	908	<1	2.26	19	40	17	0.58	<5	275	2.74	939	<10	131
315347	0.001	0.016	<0.001	<0.5	11.15	<5	60	<0.5	<2	5.76	<0.5	78	<1	68	18.1	0.23	1.23	1115	<1	2.18	25	560	<2	0.46	<5	280	3.68	1240	<10	147
315348	<0.001	<0.005	<0.001	<0.5	8.49	<5	20	<0.5	<2	4.91	<0.5	97	2	128	23	0.14	1.59	1540	<1	1.58	44	20	<2	0.69	<5	189	5.03	1800	10	180
315349	<0.001	<0.005	<0.001	<0.5	9.62	<5	30	<0.5	<2	8.41	<0.5	54	33	47	11.1	0.24	3.66	1415	<1	1.6	48	30	2	0.13	<5	238	1.44	520	<10	88
315350	<0.001	<0.005	<0.001	<0.5	6.43	<5	10	<0.5	<2	4.35	<0.5	115	19	72	30	0.1	2.25	1705	<1	0.76	36	10	2	0.66	<5	76	5.32	1880	<10	199
315351	<0.001	<0.005	<0.001	<0.5	7.15	<5	10	<0.5	<2	3.92	<0.5	129	<1	65	32.1	0.1	1.59	1645	<1	0.89	35	20	2	0.43	<5	124	5.97	2160	<10	237
315352	<0.001	<0.005	<0.001	<0.5	6.55	<5	10	<0.5	<2	3.44	<0.5	136	2	75	34.1	0.08	1.38	1690	<1	0.79	39	20	3	0.49	<5	122	6.37	2300	<10	242
315353	<0.001	<0.005	<0.001	<0.5	5.85	<5	10	<0.5	<2	3.94	<0.5	143	6	59	36	0.06	2.05	1810	<1	0.75	35	280	3	0.53	<5	48	6.42	2330	<10	276
315354	0.105	0.374	1.22	1.7	9.24	<5	360	0.7	<2	8.76	<0.5	68	155	3940	9.76	0.49	4.51	1455	<1	1.95	282	1960	10	0.95	<5	755	0.6	325	<10	97
315355	<0.001	<0.005	<0.001	<0.5	10.15	<5	20	<0.5	<2	5.42	<0.5	95	5	117	17.45	0.1	0.98	982	<1	1.79	37	60	2	0.67	<5	248	3.54	1270	<10	140
315356	<0.001	<0.005	<0.001	<0.5	7.14	<5	10	<0.5	<2	4.46	<0.5	127	14	83	31.1	0.09	1.9	1625	<1	1.02	42	20	2	0.52	<5	112	5.5	2020	<10	232
315357	<0.001	<0.005	<0.001	<0.5	10.5	<5	20	<0.5	<2	5.85	<0.5	91	17	106	17.8	0.1	1.34	1150	<1	2	35	20	3	0.63	<5	259	3.69	1300	<10	143
315358	<0.001	<0.005	<0.001	<0.5	7.99	<5	10	<0.5	<2	7.14	<0.5	79	8	61	14.7	0.12	3.84	1615	<1	1.22	34	30	2	0.28	<5	156	2.02	763	<10	123
315359	<0.001	<0.005	<0.001	<0.5	6.98	<5	10	<0.5	<2	7.31	<0.5	88	29	88	16.15	0.12	4.47	1855	<1	1.04	49	20	<2	0.58	<5	90	2.29	888	<10	123
315360	<0.001	<0.005	<0.001	<0.5	8.17	<5	20	<0.5	<2	7.4	<0.5	69	13	104	12.9	0.17	3.36	1425	<1	1.37	28	20	<2	0.37	<5	169	1.86	718	<10	136

SAMPLE	PGM-ICP24			ME-ICP61																										
	Au ppm	Pt ppm	Pd ppm	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	K %	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sr ppm	Ti %	V ppm	W ppm	Zn ppm
315400	<0.001	<0.005	<0.001	<0.5	11	<5	30	<0.5	3	6.1	<0.5	79	36	114	14.05	0.22	1.22	882	<1	2.27	74	20	2	0.68	<5	275	2.37	1170	<10	116
315401	<0.001	<0.005	<0.001	<0.5	11.3	<5	40	<0.5	<2	6.67	<0.5	69	28	105	12.1	0.28	1.04	797	<1	1.97	51	30	4	0.66	<5	298	2.17	1080	<10	98
315402	<0.001	<0.005	<0.001	<0.5	11.65	5	60	<0.5	<2	6.55	<0.5	57	14	94	10.8	0.35	0.81	635	<1	2.3	50	30	3	0.53	<5	317	1.79	884	<10	87
315403	<0.001	<0.005	<0.001	<0.5	10.5	<5	30	0.7	<2	6.76	<0.5	30	5	32	7.85	0.75	1.82	1115	<1	2.85	<1	100	8	0.21	<5	279	1.55	44	<10	74
315999	<0.001	0.105	0.213	<0.5	3.54	<5	<10	<0.5	11	0.08	<0.5	83	>10000	3	7.41	0.01	15.5	861	3	0.02	1290	30	3	0.01	86	11	0.12	384	10	169

TM06079380 - Finalized

CLIENT : "NORSHI - Northern Shield Resources Inc."

of SAMPLES : 25

DATE RECEIVED : 2006-08-17 DATE FINALIZED : 2006-08-23

PROJECT : ""

CERTIFICATE COMMENTS : ""

PO NUMBER : ""

SAMPLE	PGM-ICP24									ME-ICP61																					
	Au	Pt	Pd	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Sr	Ti	V	W	Zn	
	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	%	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm
315311	0.002	<0.005	<0.001	<0.5	10.45	<5	120	0.6	<2	6.11	<0.5	25	3	48	4.89	1.01	0.33	506	2	3.17	9	530	5	0.81	<5	455	0.7	25	<10	39	
315312	0.002	<0.005	<0.001	0.6	7.21	<5	110	2.3	<2	3.35	<0.5	128	15	344	16.6	0.78	1.39	1445	8	1.95	43	260	14	4.34	<5	301	3.27	110	<10	125	
315313	<0.001	<0.005	<0.001	0.5	5.62	<5	6	70	0.5	<2	2.43	<0.5	79	47	112	31	1.05	1.76	2670	2	0.84	12	80	3	1.09	<5	132	8.11	357	<10	205
315404	<0.001	<0.005	<0.001	<0.5	10.55	<5	50	0.6	<2	6.86	<0.5	33	6	27	7.92	1	1.76	1075	2	2.56	<1	180	7	0.16	<5	282	1.4	37	<10	72	
315405	<0.001	<0.005	<0.001	<0.5	9.68	<5	190	<0.5	<2	6.04	<0.5	17	5	1	5.01	1.72	1.55	919	1	2.91	<1	180	3	0.01	<5	319	1	15	<10	44	
315406	<0.001	<0.005	<0.001	<0.5	4.3	7	10	<0.5	<2	4.4	<0.5	63	7	99	15.2	0.16	6.33	3030	1	0.55	26	50	2	0.44	<5	13	0.77	24	<10	127	
315407	<0.001	<0.005	<0.001	<0.5	7.07	7	30	<0.5	<2	5.5	<0.5	51	6	74	12.6	0.49	4.86	2190	2	1.33	12	80	8	0.4	<5	152	1.18	27	<10	104	
315408	<0.001	<0.005	<0.001	<0.5	5.66	<5	10	1.7	<2	2.92	<0.5	41	4	118	9.36	0.13	3.77	2690	1	1.72	18	240	8	0.38	<5	185	0.46	12	<10	119	
315409	<0.001	<0.005	<0.001	<0.5	0.33	<5	20	<0.5	<2	0.03	<0.5	<1	5	4	0.05	0.12	0.02	13	<1	0.01	2	50	5	0.01	<5	4	0.02	1	<10	2	
315410	<0.001	<0.005	<0.001	<0.5	4.79	8	10	<0.5	<2	4.58	<0.5	61	7	90	15.05	0.15	6.28	3080	1	0.68	35	150	6	0.33	<5	40	0.73	22	<10	131	
315411	<0.001	<0.005	<0.001	<0.5	5.21	<5	10	<0.5	<2	4.71	<0.5	68	5	107	15.4	0.19	6.4	2940	1	0.84	33	120	<2	0.45	<5	78	0.56	19	<10	129	
315412	<0.001	<0.005	<0.001	<0.5	5.19	<5	10	<0.5	<2	4.74	<0.5	64	5	84	15.35	0.14	6.24	2900	1	0.79	24	50	4	0.35	<5	64	1.1	21	<10	124	
315413	<0.001	<0.005	<0.001	<0.5	3.99	5	<10	<0.5	<2	4.21	<0.5	73	6	115	17.7	0.1	7.32	3470	<1	0.64	23	160	3	0.53	<5	52	0.96	33	<10	144	
315414	<0.001	<0.005	<0.001	<0.5	4.39	<5	10	<0.5	<2	4.24	<0.5	73	5	141	16.15	0.15	6.62	3160	1	0.74	25	120	2	0.63	<5	90	0.71	21	<10	131	
315415	<0.001	<0.005	<0.001	<0.5	4.99	<5	10	<0.5	<2	4.51	<0.5	68	4	124	14.7	0.18	6.17	2860	1	0.85	29	50	5	0.51	<5	125	0.56	17	<10	119	
315416	<0.001	<0.005	0.004	<0.5	4.02	5	10	<0.5	<2	4.36	<0.5	76	4	151	16	0.15	6.79	3140	<1	0.7	33	50	7	0.68	<5	72	0.29	18	<10	130	
315417	<0.001	<0.005	<0.001	<0.5	2.92	<5	<10	<0.5	<2	4.97	<0.5	91	13	290	18	0.05	7.51	3210	1	0.43	40	40	<2	1.34	<5	7	0.53	36	<10	131	
315418	<0.001	<0.005	<0.001	<0.5	3.44	<5	<10	<0.5	<2	4.95	<0.5	73	10	169	15.75	0.09	6.79	2950	<1	0.54	33	50	3	0.76	<5	23	0.56	32	<10	123	
315419	<0.001	<0.005	<0.001	<0.5	7.75	<5	40	<0.5	<2	7.82	<0.5	29	64	16	7.84	0.5	4.34	1210	1	1.45	46	360	<2	0.06	<5	212	1.16	328	<10	58	
315420	0.175	0.5	1.195	1.1	8.31	<5	330	0.7	<2	8.43	<0.5	62	156	3870	9.54	0.44	4.21	1355	1	1.79	281	1760	12	0.82	<5	674	0.55	315	<10	94	
315421	<0.001	<0.005	0.003	<0.5	7.92	<5	10	<0.5	<2	7.95	<0.5	51	132	21	13.15	0.2	4.83	1555	10	1.55	215	70	4	0.07	<5	179	0.98	209	<10	101	
315422	0.001	<0.005	0.003	<0.5	5.16	<5	<10	<0.5	<2	7.41	<0.5	70	221	127	16.8	0.15	5.33	2100	1	0.76	175	60	<2	0.66	<5	27	2.4	218	<10	127	
315423	<0.001	<0.005	<0.001	<0.5	8.42	<5	20	<0.5	<2	7.28	<0.5	54	5	56	14.5	0.25	2.9	1625	2	1.66	6	70	<2	0.27	<5	203	2.53	82	<10	117	
315424	<0.001	<0.005	<0.001	<0.5	10.7	<5	20	0.5	<2	7.44	<0.5	38	8	34	9.27	0.32	2.13	1160	2	2.53	1	180	8	0.18	<5	257	1.46	53	<10	81	
315425	<0.001	<0.005	<0.001	<0.5	7.66	7	10	<0.5	<2	6.77	<0.5	58	8	69	13.85	0.16	3.27	1600	1	1.45	2	70	7	0.37	<5	119	2.23	74	<10	104	

315465	0.004	<0.005	0.003	<0.5	10.15	<5	20	<0.5	<2	6.5	<0.5	73	374	40	11.85	0.15	3.6	942	<1	1.54	221	80	8	0.03	6	273	0.79	676	<10	76
315466	<0.001	<0.005	<0.001	<0.5	11.4	<5	220	0.8	<2	7.01	<0.5	28	372	92	6.9	0.75	0.41	480	<1	2.13	64	220	15	0.53	<5	351	0.66	559	<10	29
315467	<0.001	<0.005	0.001	<0.5	6.78	<5	50	0.5	<2	3.75	<0.5	120	2690	153	31.7	0.43	0.9	1025	<1	0.75	397	40	2	0.17	9	178	3.38	3090	<10	176
315468	<0.001	<0.005	0.001	<0.5	9.23	<5	70	0.6	<2	5.35	<0.5	87	1935	181	22.4	0.36	1.05	841	<1	1.24	309	240	6	0.21	<5	414	2.63	2350	<10	116
315469	<0.001	<0.005	<0.001	<0.5	0.35	<5	20	<0.5	<2	0.03	<0.5	<1	6	3	0.08	0.12	0.02	10	<1	0.01	3	40	2	0.01	<5	6	0.02	5	<10	<2
315470	<0.001	<0.005	<0.001	<0.5	11.5	9	230	<0.5	<2	6.83	<0.5	37	945	64	12.1	0.51	0.83	654	<1	1.62	131	200	12	0.13	<5	638	1.37	1190	<10	55
315471	<0.001	<0.005	<0.001	<0.5	11.75	<5	20	<0.5	<2	7.32	<0.5	47	755	117	13	0.13	0.49	580	<1	1.73	164	50	11	0.04	<5	271	1.43	1220	<10	63
315472	0.002	<0.005	0.002	<0.5	10.45	<5	30	0.5	<2	6.17	<0.5	56	343	402	13.85	0.14	0.54	576	<1	1.18	251	50	14	0.24	<5	222	1.5	1345	<10	73
315473	0.003	0.008	0.001	<0.5	11.35	10	50	<0.5	<2	6.35	<0.5	86	1460	307	20.5	0.16	0.97	799	<1	1.29	342	100	11	0.22	<5	256	2.33	2070	<10	115
315474	0.009	<0.005	<0.001	<0.5	9.39	7	30	<0.5	<2	6.23	<0.5	81	567	504	11.65	0.2	3.71	985	<1	1.17	346	60	12	0.24	<5	213	0.74	602	<10	83
315475	0.002	<0.005	<0.001	<0.5	10.45	<5	20	<0.5	<2	7.73	0.6	48	297	233	7.24	0.08	2.53	709	<1	1.9	200	60	11	0.14	<5	285	0.34	254	<10	51
315476	0.001	<0.005	<0.001	<0.5	8.63	<5	10	<0.5	<2	8.9	<0.5	58	228	66	8.36	0.18	5.24	1165	<1	1	181	40	11	0.08	<5	173	0.25	234	<10	57

SAMPLE	PGM-ICP24				ME-ICP61																									
	Au ppm	Pt ppm	Pd ppm	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	K %	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sr ppm	Ti %	V ppm	W ppm	Zn ppm
415500	0.002	<0.005	<0.001	<0.5	9.83	5	10	<0.5	3	6.01	<0.5	78	100	280	12.9	0.07	3.91	1060	1	1.3	179	130	<2	0.23	<5	157	1.12	652	<10	93
415501	0.001	<0.005	<0.001	<0.5	8.68	<5	10	<0.5	<2	8.32	<0.5	59	171	178	11.55	0.06	4.37	1280	<1	0.99	125	70	<2	0.15	5	186	1	662	<10	75
415502	0.001	<0.005	<0.001	<0.5	10.15	<5	10	<0.5	<2	7.87	<0.5	55	182	161	12	0.06	3.51	1205	<1	1.3	126	70	5	0.13	5	220	1.29	830	<10	74
415503	0.001	<0.005	<0.001	<0.5	8.96	<5	10	<0.5	<2	7.75	<0.5	62	171	130	12.7	0.05	3.54	1150	1	1	129	60	<2	0.1	<5	196	1.33	890	<10	81
415504	0.003	<0.005	<0.001	<0.5	12.4	5	20	<0.5	<2	8.75	<0.5	57	26	958	7.5	0.06	2.03	687	<1	1.91	119	100	2	0.72	9	300	0.6	394	<10	46
415505	0.002	<0.005	<0.001	<0.5	11.6	<5	20	<0.5	<2	8.28	0.6	43	12	124	8.06	0.05	2.87	888	2	2.07	139	70	2	0.08	5	282	0.62	430	<10	63
415506	0.001	<0.005	<0.001	<0.5	8.7	<5	10	<0.5	<2	7.95	<0.5	65	8	381	12.8	0.05	3.87	1210	2	1.22	152	60	<2	0.34	11	163	1.39	965	<10	84
415507	0.001	<0.005	<0.001	<0.5	9.16	<5	10	<0.5	<2	8.6	0.9	60	8	358	10.5	0.04	4.08	1120	2	1.26	153	60	2	0.21	<5	221	0.86	614	<10	81
415508	0.001	<0.005	<0.001	<0.5	7.89	<5	10	<0.5	<2	7.53	<0.5	75	5	529	12.6	0.03	4.17	1280	2	1.14	207	50	<2	0.46	7	141	1.21	841	<10	82
415509	<0.001	<0.005	<0.001	<0.5	0.32	<5	10	<0.5	<2	0.04	<0.5	<1	3	4	0.07	0.11	0.02	8	<1	0.01	3	50	4	0.01	<5	5	0.02	4	<10	<2
415510	0.001	<0.005	<0.001	<0.5	8.01	<5	10	<0.5	<2	7.85	0.8	57	4	252	11.55	0.03	4.45	1260	<1	1.16	133	40	5	0.16	<5	153	0.97	681	<10	83
415511	0.01	<0.005	<0.001	<0.5	8.47	<5	10	<0.5	<2	7.8	<0.5	60	6	243	11.7	0.03	4	1210	<1	1.23	133	50	<2	0.17	<5	172	1.03	719	<10	81
415512	0.003	<0.005	<0.001	<0.5	11.55	<5	10	<0.5	<2	8.49	<0.5	47	18	238	9.03	0.04	2.73	868	<1	1.69	90	80	<2	0.19	6	245	0.83	566	<10	59
415513	0.008	<0.005	<0.001	<0.5	11.45	<5	10	<0.5	<2	8.71	0.7	39	33	143	7.46	0.03	2.86	858	2	1.71	62	70	<2	0.11	<5	243	0.65	429	<10	52
415514	0.002	<0.005	<0.001	<0.5	11.75	<5	10	<0.5	<2	8.4	0.9	38	30	153	6.81	0.03	2.66	777	1	1.96	55	60	5	0.12	<5	250	0.55	376	10	49

SAMPLE	PGM-ICP24			ME-ICP61																											
	Au ppm	Pt ppm	Pd ppm	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	K %	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sr ppm	Ti %	V ppm	W ppm	Zn ppm	
415600	<0.001	<0.005	0.001	<0.5	8.23	12	30	1.4	2	7.32	<0.5	58	60	201	11.45	0.16	4.43	1330	1	1.28	111	110	<2	0.17	<5	184	1.04	594	<10	77	
415601	<0.001	<0.005	<0.001	<0.5	7.87	<5	20	<0.5	<2	7.55	<0.5	66	98	239	12.65	0.11	4.23	1370	1	1.11	139	70	3	0.24	<5	189	1.33	823	<10	79	
415602	0.001	<0.005	0.001	<0.5	7.84	11	20	<0.5	<2	8.21	<0.5	61	92	256	12.45	0.11	4.26	1310	1	1.07	137	100	<2	0.23	<5	185	1.29	777	<10	78	
415603	<0.001	<0.005	0.001	<0.5	7.73	8	10	<0.5	<2	8.22	<0.5	56	83	255	12	0.08	3.97	1260	1	1.02	140	100	2	0.22	<5	173	1.24	774	<10	76	
415604	<0.001	<0.005	<0.001	<0.5	9.09	14	20	<0.5	<2	8.32	<0.5	54	95	231	11.1	0.11	3.64	1150	1	1.22	124	150	2	0.2	<5	201	1.08	845	<10	68	
415605	<0.001	<0.005	<0.001	<0.5	9.22	11	20	<0.5	<2	8.52	<0.5	48	90	208	10.7	0.12	3.57	1100	1	1.22	112	110	<2	0.2	<5	193	1.1	641	<10	68	
415606	<0.001	<0.005	<0.001	<0.5	10.85	<5	20	<0.5	<2	8.18	<0.5	47	82	218	9.59	0.09	3.13	1000	1	1.72	110	100	3	0.23	<5	236	0.9	539	<10	63	
415607	<0.001	<0.005	<0.001	<0.5	10.4	<5	10	<0.5	3	8.28	<0.5	42	76	156	8.41	0.08	3.12	934	1	1.62	83	90	2	0.17	<5	223	0.75	447	<10	60	
415608	<0.001	<0.005	<0.001	<0.5	0.33	<5	10	<0.5	2	0.04	<0.5	1	4	4	0.06	0.12	0.02	8	<1	0.01	2	40	2	0.01	<5	6	0.02	3	<10	2	
415609	<0.001	<0.005	<0.001	<0.5	11.5	<5	30	<0.5	3	8.46	<0.5	42	25	168	8.59	0.16	2.56	854	1	1.82	88	170	7	0.22	<5	266	0.81	494	<10	56	
415610	<0.001	<0.005	0.001	<0.5	7.92	<5	20	<0.5	<2	7.97	<0.5	59	143	208	11.5	0.22	4.5	1280	1	1.09	139	80	4	0.24	<5	168	1.11	684	<10	80	
415611	<0.001	<0.005	<0.001	0.5	8.36	5	40	<0.5	<2	5.51	<0.5	84	430	52	11.1	0.39	6.07	1140	1	1.2	256	110	<2	0.05	<5	181	0.36	237	<10	78	
415612	<0.001	<0.005	<0.001	<0.5	7.08	<5	20	<0.5	<2	5.11	<0.5	94	423	80	12.2	0.11	6.28	1270	1	1.07	270	120	<2	0.06	<5	126	0.45	290	<10	86	
415613	0.002	<0.005	<0.001	<0.5	10.3	7	20	<0.5	<2	8.29	<0.5	40	62	217	8.5	0.11	2.65	864	1	1.44	108	90	5	0.16	<5	226	0.83	533	<10	57	
415614	<0.001	<0.005	<0.001	<0.5	6.87	<5	20	<0.5	<2	8.03	<0.5	64	132	337	11.85	0.14	5.06	1360	<1	0.99	138	270	4	0.31	<5	111	1.05	620	<10	86	

TM06130907 - Finalized

CLIENT : "NORSHI - Northern Shield Resources Inc."

of SAMPLES : 15

DATE RECEIVED : 2006-12-27 DATE FINALIZED : 2007-01-18

PROJECT : "HIGHBANK LAKE"

CERTIFICATE COMMENTS : ""

PO NUMBER : " "

SAMPLE	PGM-ICP24										ME-ICP61																			
	Au	Pt	Pd	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Sr	Ti	V	W	Zn
	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	%	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
415321	<0.001	0.006	0.008	<0.5	9.42	10	40	<0.5	3	7.8	<0.5	32	119	151	6.11	0.27	2.8	837	1	1.77	67	110	<2	0.11	<5	241	0.37	233	<10	55
415322	<0.001	0.008	0.001	<0.5	0.33	<5	10	<0.5	<2	0.04	<0.5	<1	4	3	0.05	0.12	0.02	8	<1	0.01	<1	40	<2	0.01	<5	5	0.01	1	<10	2
415323	0.001	0.01	0.011	<0.5	9.15	<5	50	<0.5	3	7.81	<0.5	40	169	267	7.33	0.37	3.43	980	1	1.47	92	100	<2	0.28	<5	227	0.55	316	<10	66
415324	<0.001	0.005	0.006	<0.5	10.4	<5	50	<0.5	3	8.42	<0.5	37	155	210	7.06	0.32	3.27	929	1	1.61	93	90	<2	0.14	<5	252	0.52	289	<10	63
415325	<0.001	<0.005	0.005	<0.5	9.25	5	150	<0.5	3	6.75	<0.5	43	145	160	6.94	0.85	3.77	1045	1	1.64	133	110	<2	0.27	<5	213	0.32	226	<10	73
415326	<0.001	0.006	0.005	<0.5	9.12	<5	90	<0.5	<2	7.11	<0.5	37	145	115	6.19	0.56	3.48	884	1	1.73	106	120	<2	0.21	<5	246	0.26	185	<10	55
415327	<0.001	0.007	0.005	<0.5	8.23	<5	140	<0.5	2	5.89	<0.5	31	226	134	5.6	0.5	3.33	836	2	1.83	95	90	2	0.14	<5	258	0.27	163	<10	54
415328	<0.001	0.006	0.006	<0.5	9.43	8	120	<0.5	3	7.61	<0.5	37	181	102	6.25	0.85	3.9	960	<1	1.62	109	110	<2	0.1	6	265	0.26	178	<10	55
415329	0.001	0.008	0.007	<0.5	9.36	<5	50	<0.5	<2	7.77	<0.5	41	212	132	6.41	0.39	3.98	957	3	1.68	133	80	6	0.08	<5	252	0.28	193	<10	56
415330	0.001	0.008	0.007	<0.5	9.44	<5	140	<0.5	<2	7.07	<0.5	46	170	161	6.45	1.08	3.94	1000	<1	1.58	158	70	6	0.18	<5	259	0.24	180	<10	67
415331	<0.001	<0.005	0.005	<0.5	9.01	<5	80	<0.5	<2	6.83	<0.5	57	138	95	7.02	0.83	4.54	1035	7	1.64	206	80	5	0.15	<5	260	0.2	128	<10	73
415332	<0.001	<0.005	0.001	<0.5	10.35	<5	180	<0.5	<2	7.59	0.6	32	62	121	5.15	1.12	2.59	786	<1	2.05	87	380	8	0.34	<5	347	0.3	155	<10	52
415333	0.117	0.554	1.345	1.5	8.29	5	330	0.7	<2	7.77	0.5	66	145	3850	8.86	0.45	4.06	1315	<1	1.77	262	1720	15	0.76	6	675	0.55	313	<10	94
415334	0.001	<0.005	0.001	<0.5	9.3	<5	130	<0.5	<2	7.54	0.6	35	100	64	6.02	1	3.31	901	2	1.56	102	370	6	0.14	<5	299	0.31	195	<10	58
415335	<0.001	<0.005	<0.001	<0.5	9.54	<5	140	<0.5	<2	7.51	0.5	30	94	40	5.41	1.08	2.86	840	<1	1.7	80	150	5	0.08	<5	307	0.33	177	<10	53

TM06132902 - Finalized

CLIENT : "NORSHI - Northern Shield Resources Inc."

of SAMPLES : 14

DATE RECEIVED : 2006-12-21 DATE FINALIZED : 2007-01-08

PROJECT : "Highbank Lake"

CERTIFICATE COMMENTS : ""

PO NUMBER : " "

SAMPLE	PGM-ICP24			ME-ICP61																										
	Au	Pt	Pd	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Sr	Ti	V	W	Zn
	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	%	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
415336	0.001	<0.005	0.001	<0.5	9.77	<5	120	<0.5	<2	7.67	<0.5	41	132	94	7.39	1.04	3.9	1105	2	1.56	130	150	4	0.18	<5	232	0.45	235	<10	67
415337	0.001	0.005	0.004	<0.5	6.75	<5	50	<0.5	5	6.71	<0.5	69	193	111	10.55	0.38	6.49	1790	1	0.97	181	90	3	1.26	6	180	0.64	326	<10	113
415338	<0.001	0.009	0.005	<0.5	9.65	<5	240	<0.5	<2	5.62	<0.5	30	75	25	5.43	1.49	3.09	941	1	1.81	80	140	<2	0.08	<5	314	0.2	143	<10	59
415339	<0.001	<0.005	0.001	<0.5	7.56	<5	70	<0.5	<2	5.49	<0.5	64	184	66	9.48	0.63	5.78	1515	<1	1.05	146	90	<2	0.69	<5	190	0.51	306	<10	98
415340	<0.001	0.005	0.001	<0.5	7.08	<5	20	<0.5	<2	7.87	<0.5	45	164	58	8.27	0.21	5.14	1415	2	0.84	117	220	<2	0.1	<5	339	0.38	244	<10	83
415341	<0.001	<0.005	<0.001	<0.5	7.69	<5	80	<0.5	<2	6.81	<0.5	47	142	88	8.16	0.64	4.81	1380	1	1.31	104	130	<2	0.12	<5	246	0.34	234	<10	84
415342	<0.001	<0.005	<0.001	<0.5	7.41	<5	50	<0.5	<2	7.26	<0.5	47	164	82	8.74	0.46	4.71	1445	4	1.19	115	110	<2	0.16	<5	416	0.5	283	10	88
415343	0.001	0.005	<0.001	<0.5	7.92	<5	90	<0.5	<2	6.95	<0.5	49	157	99	8.59	0.85	5	1425	<1	1.27	111	180	<2	0.16	<5	263	0.42	279	<10	82
415344	<0.001	0.006	<0.001	<0.5	0.3	<5	10	<0.5	<2	0.02	<0.5	<1	3	2	0.03	0.11	0.02	6	<1	0.01	2	30	<2	0.01	<5	4	0.01	1	<10	<2
415345	<0.001	<0.005	<0.001	<0.5	7.36	<5	10	<0.5	<2	9.06	<0.5	44	147	37	7.96	0.04	4.34	1255	4	0.55	110	220	<2	0.06	<5	428	0.32	230	<10	62
415346	<0.001	<0.005	<0.001	<0.5	8.11	<5	70	<0.5	<2	7.04	<0.5	51	139	448	9.12	0.69	4.96	1425	1	1.22	112	180	<2	0.3	<5	395	0.51	321	<10	94
415347	<0.001	<0.005	<0.001	<0.5	8.09	<5	40	0.8	<2	7.26	<0.5	44	148	68	7.86	0.26	4.36	1195	9	1.6	114	270	<2	0.25	<5	587	0.42	261	10	76
415348	<0.001	<0.005	0.001	<0.5	7.98	<5	60	0.6	<2	6.68	<0.5	53	160	46	9.07	0.46	5.69	1505	8	1.51	132	190	<2	0.21	<5	295	0.42	268	<10	104
415349	<0.001	<0.005	<0.001	<0.5	8.25	<5	80	0.7	<2	7.02	<0.5	47	161	79	8.37	0.51	4.86	1415	2	1.51	111	170	<2	0.11	<5	377	0.41	246	<10	92