2010 Geological and Geophysical Exploration Report on the Papaonga Iron Project

Avis, and Curie Lake Townships, Red Lake Mining Division, NW Ontario.

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Date of Work: 02/09/2010 - 05/09/2010, 13/08/2010-01/09/2010
Date of Report: 31/11/2010

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4.0 Introduction

This report summarizes, analyzes and makes recommendations based upon previous geophysical and geological work obtained from the Ministry of Northern Development Mines and Forestry, the Resident Geologist office in Red Lake, ON, and work performed during the summer and fall of 2010 on the Papaonga Iron ore project by Northern Iron Corp. The target of interest on the Papaonga Property is a magnetite oxide facies (taconite) banded iron formation (BIF) of the Algoma type that has been folded locally. It is located within the south-eastern Confederation Lake belt, an area of historic iron ore exploration and mining in North-western Ontario, which lies approximately 75km east-north-east of Ear Falls in the Red Lake mining division (see Figure No. 1). Northern Iron Corp. acquired the claims which comprise the Papaonga property from Perry Vern English. Northern Iron Corp. currently holds 100% interest in these claims. There are no private holders of the surface rights of the land covered by the claims, and the land currently belongs to the Crown. Some work was done on land owned by Excellent Adventures Ltd. adjacent to the claims for completeness of the magnetic and geological maps. All efforts to contact the holders of the surface rights were made. In the end, however, notice of intention to perform assessment work was mailed to the resort address. Northern Iron Corp. conducted a moderate exploration program on the property including geological mapping and ground based geophysics during the summer and fall of 2010.

5.0. Disclaimer

The Authors have assumed that all technical documents reviewed and listed in "References" are accurate and complete in all material aspects. While the authors carefully reviewed this information, they have not conducted an independent investigation to verify their accuracy or completeness. The authors reserve the right, but will not be obligated to, revise this report and conclusions if additional information becomes known subsequent to the date of this report.

For information relating to property agreements and costs we have relied on documents provided to us by Northern Iron Corp. and disclaim responsibility for such information.

6.0 Property Description and Location

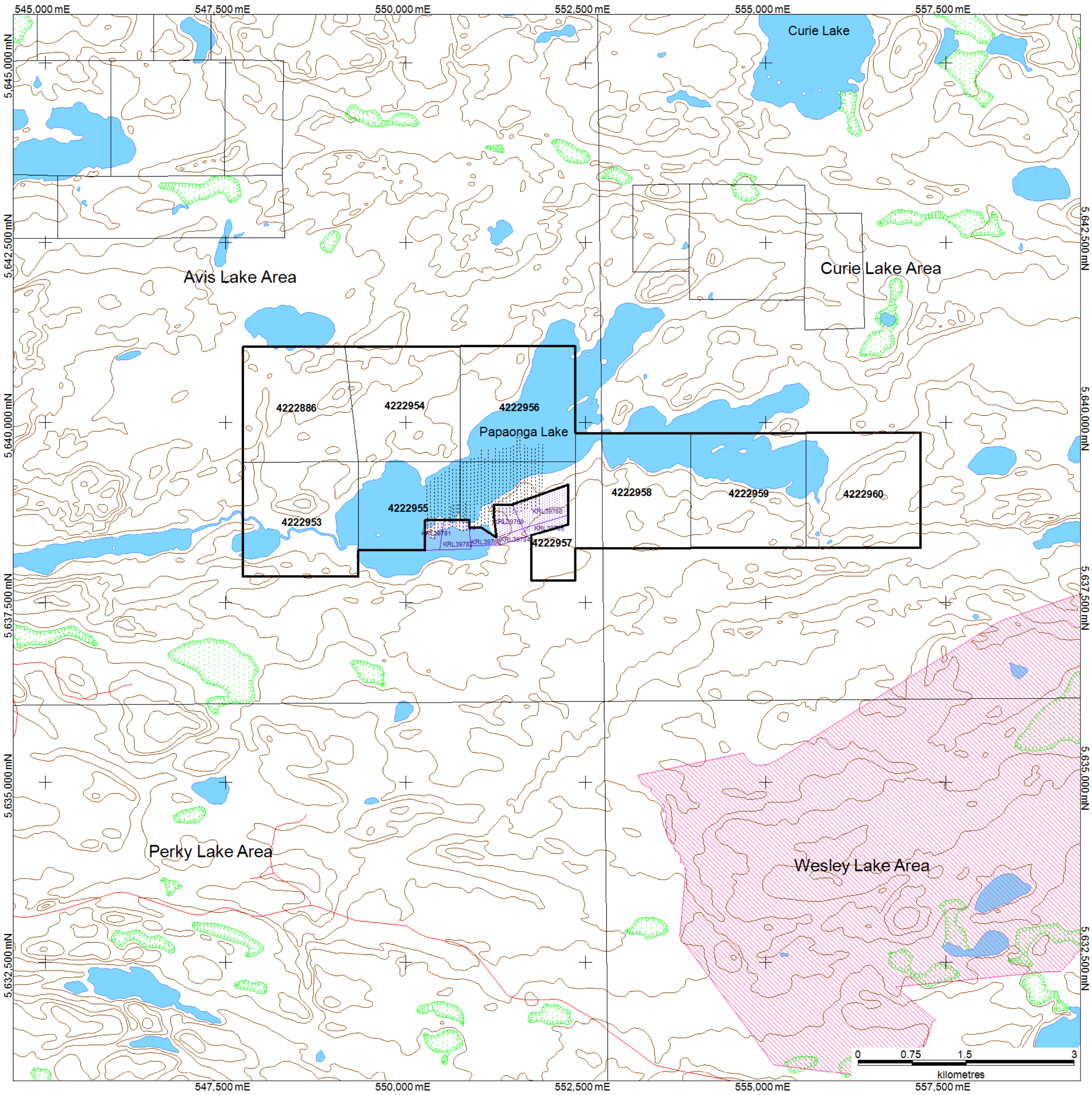
The Papaonga property is located in the Red Lake mining division of the Kenora District of northwest Ontario. It is comprised of a contiguous block of claims which occupy the eastern portion of the Avis Lake Area, and western portion of the Curie Lake Area. The property is irregular in shape and centered on the Papaonga Lake (see Fig. 2). The property consists of 9 unpatented mineral claims, covering an area of approximately 2096 hectares (see Table.1).

Table 1. List of Claims belonging to Northern Iron Corp.

Property Name	Claim Number	Number of 16 Ha Units	Expiry Date	Work Required
Papaonga	KRL4222886	16	2010-DEC-31	$6,400.00
Papaonga	KRL4222953	16	2010-DEC-31	$6,400.00
Papaonga	KRL4222955	11	2010-DEC-31	$4,400.00
Papaonga	KRL4222957	8	2010-DEC-31	$3,200.00
Papaonga	KRL4222958	16	2010-DEC-31	$6,400.00
Papaonga	KRL4222959	16	2010-DEC-31	$6,400.00
Papaonga	KRL4222960	16	2010-DEC-31	$6,400.00
Papaonga	KRL4222954	16	2010-DEC-31	$6,400.00
Papaonga	KRL4222956	16	2010-DEC-31	$6,400.00

Figure No. 1 Papaonga Property Location Map, NW Ontario, Canada

Papaonga Iron Project



Magnetics survey lines		Dispositions	
Roads		Parks	
Topography contours		Lakes	
Northern Iron Corp. Claims		Swamps	

True North

Northern Iron Corp.

Papaonga Property Claim Map
Red Lake Mining District,
NW Ontario, Canada.

Date:15/11/2010	Projection: UTM Zone 15 (NAD 83)	Figure No. 2

Notes:
1. Geography derived from digital OGS files.
2. Claim boundaries NOT SURVEYED, locations derived from MNDM ClaiMaps.
3. Disposition and park locations derived from MNDM ClaiMaps.

7.0. Accessibility Climate, and Physiography

The Papaonga property is accessible by floatplane, as well as by a moderately maintained ATV trail, that gives access to the south-western part of the property from a logging road that branches east from the Wenesaga logging road approximately at kilometre 51. During the summer and fall of the 2010 exploration program, Northern Iron Corp. field crews stayed at the Trillium Motel, located on highway 105 in the town of Ear Falls, ON, and travelled to the property via truck and then floatplane.

Topography on the property is gentle, with elevations ranging from 390 masl to 420 masl. The main topographic feature is the Papaonga Lake, which runs approximately north-east through the property and ranges from 450m wide to 1378m wide. The area is covered by a mixed forest of mostly black spruce, poplar, balsam and birch, with swampy biomes in low lying areas and sandy to gravely beaches along the lake (see figure No. 2). Steep moss-covered banks rise from the lake to drier forests of jack pine on hills which extend further from the lake. Temperatures range from highs of 27°C in the summer to lows of -30°C in the winter, with snow cover from November to May. The best season for exploration is from June to October, with optimal months being June and September. Some activities, such as diamond drilling and geophysical exploration carried out over swampy areas or lakes may best be undertaken in the winter months, when freeze-up makes these areas more accessible.

8.0 Property History and Previous Work

The following summary outlines the exploration history to the extent known of the area now covered by the Papaonga Property. It is based primarily on information obtained from assessment files housed in the office of the Resident Geologist, Red Lake, Ontario, and stored in the Ministry of Northern Development, Mines and Forestry's online database.

1957 - Continental Mining Exploration Ltd. contracted Geo-Technical Development Company Ltd. who conducted a ground based magnetometer survey covering approximately 8.6km^2 overlapping a small portion of the south western part of the Papaonga property. The ground magnetometer survey outlined four bands of strong linear anomalies, which were interpreted as indicating banded iron formations. The majority of the anomalies were located beneath the southern portion of Papaonga Lake, however The biggest and strongest anomaly, "A", lay partially along the northern portion of a peninsula striking east-west in southern Papaonga Lake and was interpreted as an iron formation of approximately 6,500 feet in length and up to 300 feet in width (Szetu, S. S., 1957).

1957 - Continental Mining Exploration Ltd. drilled 10 holes, two of which were abandoned and never reached bedrock, for a sum total of 1435m. The holes were drilled to intersect the strongest anomaly "A" delineated previously in the ground based magnetometer survey on the north of a peninsula just on the southern edge of the Papaonga claims. Each hole intersected one zone of thinly bedded magnetite, chlorite and silica material interpreted as banded iron formation ranging from 92m to 43m thick. Only two holes were assayed, and returned similar grades of 30% to 35% Fe. A large shear zone containing jasper, plentiful quartz-carbonate stringers with pyrite, and secondary pyrite mineralization in the banded iron formation were also noted (Continental Mining Exploration Ltd., 1957).

1957 - Copper Man Mines Ltd. contracted Geo-Technical Development Company Ltd. who conducted a ground based magnetometer survey covering approximately 8.6km^2 , which covered the eastern three claims of the Papaonga property. One main anomalous zone, measuring at least 1219m long, and three less intense anomalies were outlined by the survey. The anomalous zones were interpreted to represent banded iron formations. The main anomalous zone was believed to be the only one which was caused by iron formations of possible economic value (Maurice, O. D., 1957).

1957 - Copper Man Mines Ltd. drilled 11 holes totalling 1690m on the Papaonga property in the Curie Lake area. The holes were drilled to intersect the main anomalous zone delineated previously in the ground based magnetometer survey. The majority of holes intersected several zones of thinly bedded magnetite, chlorite and silica material interpreted as banded iron formation ranging from 100m to 20m thick, striking roughly E-W. Assays returned iron grades ranging from 5% to 30% Fe. (Copper Man Mines Ltd., 1957).

1979 - St. Joseph Explorations Ltd. drilled 4 holes totalling 292m just outside the southern claim boundary of the Papaonga property in the Avis Lake area. The holes were drilled to test an H.L.E.M. conductor delineated by St. Joseph Explorations in 1979 (no record of work). The majority of holes intersected several zones of rhyolite, chlorite altered rock, dacite and quartz diorite with associated agglomerates. The anomaly was explained by stringers of pyrite, pyrrotite and magnetite crystals in dacite agglomerate zones. No banded iron formations were encountered. (St. Joseph Explorations Ltd., 1979).

1983 - Getty Canadian Metals Ltd. contracted Dighem Ltd. who conducted airborne electromagnetic, airborne magnetometer, and airborne electromagnetic very low frequency surveys covering approximately 60km^2 which covered the entire Papaonga property. Several smaller scattered electromagnetic and electromagnetic very low frequency conductors were detected, while several strong, linear possibly folded magnetic conductors were outlined striking east-west and north-east south-west for 10-15km and were interpreted to represent banded iron formations (Smith, P. A., 1983).

1983 - Getty Canadian Metals Ltd. conducted a detailed geological mapping survey over a large area which covered all the southern claims of the Papaonga property in the Avis and Curie Areas. Mineralization of significance was found in the form of pyrite and arsenopyrite in quartz-tourmaline veins which were sheared and sericitized in a deformed volcanic unit near the very southern edge of Papaonga Lake, and hosted in a greywacke unit still further south. A regional iron formation was mapped running through the southern portion of Papaonga Lake and on the west of the lake and was outlined as the north limb on an anticline structure. (Nielson, B., 1983).

1984 - Getty Canadian Metals Ltd. contracted Geocanex Ltd. who conducted a ground based electromagnetic survey totalling 81km of cut and surveyed line covering the southern part of the Papaonga claims in the Avis Lake area. Getty Canadian Metals Ltd. Also contracted geological personnel under an F. W. Nielsen who conducted the magnetometer survey covering the same area. The magnetometer survey picked up several east-west striking linear conductors south of Papaonga Lake, interpreted to be the southern limbs of folds. The electromagnetic survey picked up several linear conductors as well, striking east-west (Graham, D. B. 1984).

1984 - Getty Canadian Metals Ltd. conducted a detailed geological mapping and trenching programme over a moderate area which covered a small portion of the southernmost claims in the Avis Lake Area. Mineralization of significance was found in the form of very minor pyrite hosted in greywacke to the south of Papaonga Lake, just outside Northern Iron's current Papaonga claims. Local sillicification and carbonatization as well as quartz-tourmaline stringers and boudinage were observed. Metamorphic grade was observed to be upper greenschist to lower amphibolite facies. (Graham, D. B., 1984). Mineralized zones of potential economic significance were stripped and blasted as they were discovered during the course of the mapping and prospecting programme, the most significant samples ran about 0.33 oz Au/s.t. over a width of 0.5 m (Graham, D. B., 1985).

1984 - Getty Canadian Metals Ltd. drilled 7 holes totalling 954m just outside the southern claim boundary of the Papaonga property in the Avis Lake area and just south of Curie Lake in the Curie Lake Area. The holes were drilled to test various Au-Arsenopyrite, Pyrite, and Pyrhotite showings and magnetic anomalies. Several zones of mineralization were intersected with intervals of 0.04oz/s.t. Au over intervals of 0.5m to-1m. One minor band of iron formation was encountered with very minor pyrite associated. (Bryant, J. G., 1985).

9.0 Geological Setting

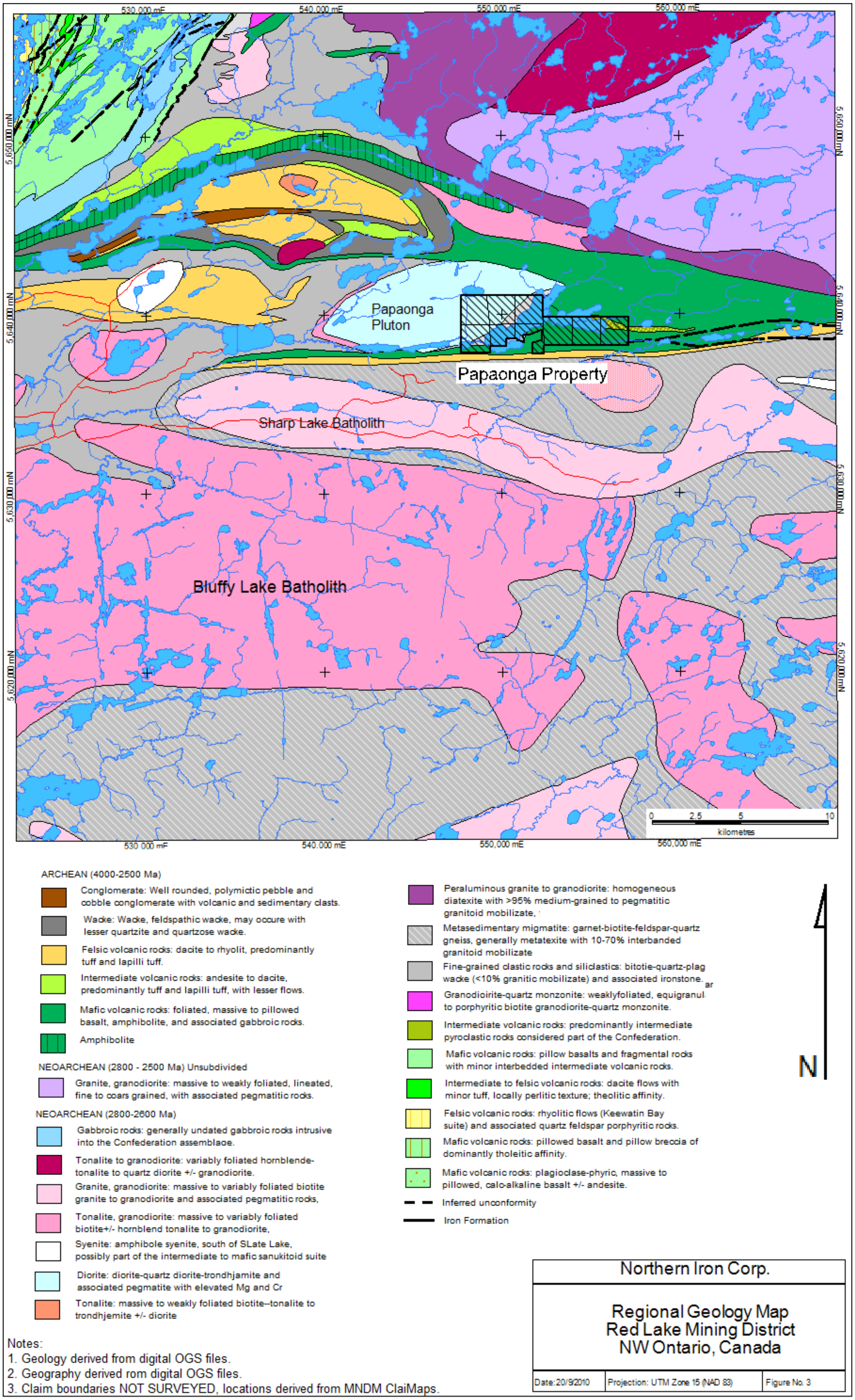
9.1 Regional Geology

The Papaonga property lies in the southernmost part of the Uchi sub-province in the Confederation assemblage (See Figure No. 3). The Confederation assemblage is the youngest of three distinct volcano-sedimentary megacycles comprising the Uchi-Confederation greenstone belt, which records a stratigraphic history of approximately 250 Ma (2989-2735 Ma). The Uchi-Confederation belt records several episodes of periodic rifting and associated submarine and aerial magmatic and depositional phases.

Unconformity bounded sequences of mafic to felsic volcanic strata, and primarily clastic sedimentary strata, accumulated between ca. 2992 Ma and 2700 Ma upon a complex extensional architecture which largely formed the template upon which later structures were superimposed.

The Confederation assemblage records about 10 Ma (2745-2735 Ma) and consists mainly of supracrustal interbedded pillow basalts, mafic to intermediate volcanics, and associated sediments, with minor interbeds of banded iron formation. The Confederation belt is thought to have formed as a rifted arc (Rogers, N. et al, 2000) with the aforementioned stratigraphy representing sequences of magmatic and associated depositional phases. The confederation assemblage can be divided into three distinct north to north-east trending tectonic-stratigraphic belts, the eastern, central and western belts, which can be distinguished by petrography, chemistry and the distinct felsic (flows and tuffs) units in each one (Rogers, N. et al, 2000). Pluton emplacement and explosive volcanism heralded the onset of the Kenoran Orogeny between ca. 2731 and 2700 Ma and induced regional greenschist facies metamorphism and localized compression-related polyphase deformation (Falls, R. 2002). Three phases of major regional deformation, amphibolite facies metamorphism, and emplacement of extensive granite, granodiorite and tonalite intusives occurred during the magmatic and tectonic accretion of the Kenoran Orogeny culminating around ca. 2710 Ma. The majority of post tectonic intrusives are comprised of gabbro sills and dykes.

The claims comprising the Papaonga property lie within an area that is comprised mainly of interbedded volcanic and sedimentary rocks of archean age, with mafic volcanic rocks in the southeast, intruded by a neoarchean granitic pluton in the middle of the property. The large gabbroic Papaonga pluton is located in the northwest part of the property, and minor intermediate volcanic rocks appear in the easternmost part of the claim group. The boundary between the Uchi and English River sub-provinces lies just to the south of the property and is defined by the Lake St. Joseph Fault (Graham, D. B., 1985).


530 000 mE
540 000 mE
550 000 mE
560 000 mE
5 650 000 mN
5 640 000 mN
5 630 000 mN
5 620 000 mN
Papaonga Pluton
Papaonga Property
Sharp Lake Batholith
Bluffy Lake Batholith
0 2.5 5 10
kilometres
N
ARCHEAN (4000-2500 Ma)
Conglomerate: Well rounded, polymictic pebble and cobble conglomerate with volcanic and sedimentary clasts.
Wacke: Wacke, feldspathic wacke, may occure with lesser quartzite and quartzose wacke.
Felsic volcanic rocks: dacite to rhyolit, predominantly tuff and lapilli tuff.
Intermediate volcanic rocks: andesite to dacite, predominantly tuff and lapilli tuff, with lesser flows.
Mafic volcanic rocks: foliated, massive to pillowed basalt, amphibolite, and associated gabbroic rocks.
Amphibolite
NEOARCHEAN (2800 - 2500 Ma) Unsubdivided
Granite, granodiorite: massive to weakly foliated, lineated, fine to coars grained, with associated pegmatitic rocks.
NEOARCHEAN (2800-2600 Ma)
Gabbroic rocks: generally undated gabbroic rocks intrusive into the Confederation assemblaoe.
Tonalite to granodiorite: variably foliated hornblende-tonalite to quartz diorite +/- granodiorite.
Granite, granodiorite: massive to variably foliated biotite granite to granodiorite and associated pegmatitic rocks,
Tonalite, granodiorite: massive to variably foliated biotite+/- hornblend tonalite to granodiorite,
Syenite: amphibole syenite, south of SLate Lake, possibly part of the intermediate to mafic sanukitoid suite
Diorite: diorite-quartz diorite-trondhjamite and associated pegmatite with elevated Mg and Cr
Tonalite: massive to weakly foliated biotite--tonalite to trondhjemite +/- diorite
Peraluminous granite to granodiorite: homogeneous diatexite with >95% medium-grained to pegmatitic granitoid mobilizate,
Metasedimentary migmatite: garnet-biotite-feldspar-quartz gneiss, generally metatexite with 10-70% interbanded granitoid mobilizate
Fine-grained clastic rocks and siliclastics: bitotie-quartz-plag wacke (<10% granitic mobilizate) and associated ironstone.
Granodioirite-quartz monzonite: weaklyfoliated, equigranular to porphyritic biotite granodiorite-quartz monzonite.
Intermediate volcanic rocks: predominantly intermediate pyroclastic rocks considered part of the Confederation.
Mafic volcanic rocks: pillow basalts and fragmental rocks with minor interbedded intermediate volcanic rocks.
Intermediate to felsic volcanic rocks: dacite flows with minor tuff, locally perlitic texture; theolitic affinity.
Felsic volcanic rocks: rhyolitic flows (Keewatin Bay suite) and associated quartz feldspar porphyritic rocks.
Mafic volcanic rocks: pillowed basalt and pillow breccia of dominantly tholeitic affinity.
Mafic volcanic rocks: plagioclase-phyric, massive to pillowed, calc-alkaline basalt +/- andesite.
Inferred unconformity
Iron Formation
Northern Iron Corp.
Regional Geology Map
Red Lake Mining District
NW Ontario, Canada
Date: 20/9/2010
Projection: UTM Zone 15 (NAD 83)
Figure No. 3
Notes:
1. Geology derived from digital OGS files.
2. Geography derived rom digital OGS files.
3. Claim boundaries NOT SURVEYED, locations derived from MNDM ClaiMaps.

9.2 Property Geology

Geological mapping was carried out on the Papaonga Property during the summer of 2010 by Lindsay Hills and Raul Sanabria (See appendix II for statement of qualifications). A combined number of approximately four full days were spent mapping in the field. Outcrop was scarce and access to many portions of the property was limited. As such, geological mapping was limited in extent and was subsequently combined with topography analysis and interpretation of geophysics to produce a geologic interpretation of the area.

The property is underlain mainly by sequences of submarine sediments which have been regionally metamorphosed to slate and phyllite in the greenschist facies. These metasediments host large Algoma-type banded iron formations (BIF) of the magnetite oxide facies (taconite). These sedimentary rocks display a moderate regional foliation striking east-west, and dipping sub-vertically. This foliation is parallel to the regional Lake St. Joseph fault system, with dip directions varying between north, south and vertical, suggesting folding with hinge axes striking east-west. The metasediments also display open symmetrical wavy folding as both anticlines and synclines with hinge axe planes striking south to southwest, dipping sub-vertically 75° to 90°. This folding has amplitudes on the order of several centimetres to a meter, and fold the regional foliation.

A banded iron formation, over 50m thick, of the Algoma type (taconite) outcrops along the northern portion of the peninsula in the southern part of Papaonga lake. This iron formation is comprised mainly of magnetite-chert, and is the main economic target on the property. It strikes generally east-west, dipping sub vertically. It is composed mainly of 90% massive crystalline magnetite beds 1-8cm thick, interbedded with 0.1-1cm thick quartz-rich shale beds. The southern edge of this banded iron formation grades gradually into discreet, 1-2cm thick cherty magnetite beds, interspersed with 3-10cm thick shale beds, and then to shale. Though the majority of bands are very linear and steeply dipping, some parasitic and minor isoclinal folding was observed in the layers of the banded iron formation mirroring that in the host metasediments.

Very rare calcite veining and podding, up to 2cm thick was observed in some metasediment beds proximal to the banded iron formation. Associated to this calcite, rare 0.2-0.5cm euhedral pyrite cubes were observed. No other mineralization was observed.

A large portion of the Papaonga Lake property was mapped by Getty Canadian Minerals Ltd. in 1983. To the west of Papaonga Lake they observed mafic to intermediate intrusives, mainly quartz diorite, which was interpreted to be part of the Papaonga Pluton (Nielson, B., 1983).

To the south and east of the Papaonga Pluton Getty observed sedimentary units of greywacke, siltstone, and volcanic derived sediments and tuffs foliated by the regional east-west foliation associated with the Lake St. Joseph fault (Nielson, B., 1983).

A belt of intermediate to felsic volcanics 1.75km to 3km in width was mapped running east-west along the southern edge of Papaonga Lake extending past the east of the lake. This belt was observed to be bounded by metasediments to the south. West of Papaonga lake, a narrow regional band of iron formation was mapped running east-west in the southern contact between mafic volcanics and metasediments (Nielson, B., 1983).

Alteration was mapped as variable throughout the Papaonga claim block, and was observed mainly as chloritization and carbonatization, with minor sericitization proximal to the Lake St. Joseph fault. Regional metamorphic grade was observed increasing from greenschist to amphibolite facies moving south toward the boundary between the Uchi and English River subprovinces (Nielson, B., 1983).

The southernmost part of the property was mapped by Getty Canadian Minerals Ltd. in 1984, and described as underlain by metasediments in the form of shale and greywacke, which were generally bedded east-west. Mineralization consisted mainly of very minor pyrite. Alteration occurred as sillicification and carbonatization. Local quartz-tourmaline stringers and boudinage were also observed. The metamorphic grade was mapped as upper greenschist to lower amphibolite. Similar greywacke hosting garnets were observed directly west of the claims (Graham, D. B., 1984).

10.0. Geophysics

10.1. Introduction

Northern Iron Corp. conducted ground based magnetic surveys over selected portions of the Papaonga property. These areas were selected based on the results of a magnetic ground-based survey performed in 1957 by Continental Mining Exploration Ltd. (Szetu, S. S., 1957) and supported by second derivative maps of the magnetism of

NW Ontario derived from regional airborne magnetometer surveys of NW Ontario, compiled by, and obtained from, the OGS. The main linear magnetic anomaly, and a weaker parallel magnetic anomaly to the north were selected as the primary exploration targets. One continuous grid was run over both of them designed following lines running north-south and spaced 50 to 25m apart. The stations were spaced approximately 10m apart for a total line length of 30.767km (see Figure No. 5). Magnetic data was used as an aid in interpreting stratigraphy and identifying banded iron formations.

10.2. Personnel

The ground Overhauser magnetic survey was conducted by Northern Iron Corp. The magnetometer survey was overseen by the project's qualified person Raul Sanabria and data was gathered by field personnel of Northern Iron Corp.

10.3. Survey Specifications and Equipment

The surveys were conducted using two GSM 19 Overhauser roving magnetometers with detection minimum at 0nT and maximum at120000nT and sensitivity of 0.022nT/√Hz, purchased from GEM Systems Inc. by Northern Iron Corp. The magnetometer sensor of each unit was located on a vertical staff attached to a backpack carried by the operator while the attached display/computer hung in front of the operator from a harness. WAAS enabled Garmin eTrex Venture GPS units using UTM Nad 83 zone 15 datum were used for navigation and positioning. The accuracy of the GPS units varied with weather and tree cover between ±4m and ±6m, though for the most part they maintained an accuracy of ±4m. A 3m canoe composed almost entirely of plastic with a few metal rivets holding the seats on was used for the lines over water. A GSM 19 Overhauser base magnetometer was used to diurnally correct the data from the roving magnetometers daily. The sensor was located on a staff stuck in the ground, approximately the same height as the sensors of the roving magnetometer units. This base magnetometer was set up in an area which was easily accessible from the float plane dock and determined from previous geophysical work (Szetu, S. S., 1957) to represent the lowest available magnetic field in the area. This area had an average magnetic reading of 64000nT, that was considerably above background values of 56500nT. It was determined that the 8000nT difference would be corrected. The slight inaccuracies this correction would cause would not make a great deal of difference to interpretation in an area of such steep magnetic gradients and strong magnetism. The base magnetometer took readings at four second intervals. 50Hz Filters were used on all magnetometer units, and both tuning and initializing of the units was automated for the roving magnetometers (the magnetometers constantly retuned to the local average magnetic field and tracked changes in that field in order to obtain more accurate readings). While initializing was manually set for the base magnetometer and tuning was automated.

10.4. Survey Methodology

GPS were used to approximately locate each station and record it, while simultaneously performing a magnetometer reading at the station. Lines were designed normal to the strike of the formations and walked from north to south and south to north (see figure No. 5). Where lines ran over Papaonga Lake a plastic canoe and small aluminium motor boat were used to carry them out. The motorboat operator used a GPS to navigate north or south along the lines slowly towing the plastic canoe by a 12m rope. The magnetometer operator sat in the bow of the canoe with a roving magnetometer and GPS simultaneously taking readings with both instruments while a second person sat in the stern with a paddle and kept the canoe on course using a compass for navigation. In several places wind and currents made it very difficult or impossible to stay on course with the lines, and many magnetometer points differ considerably from planned lines. The reading location of each station is, however, accurate. The high magnetic gradients in this area led to difficulties in tracking the average field between readings for the magnetometers. This led to 'false zero' readings being recorded when the total magnetic field increased by 1000nT or more between subsequent readings. This problem was dealt with in a variety of ways. Firstly, stations were spaced only 10m apart to help reduce between station gradients to detectable limits. Secondly, if the gradient was still too high between stations and the magnetometer unit recorded false zeroes, a combination of manual retuning and multiple repeat readings was used to help the unit detect the correct magnetic field. These techniques were often successful in acquiring an accurate reading. If a zero reading still persisted it was assumed to be above detectable limits (a 'true' zero) if nearby readings were similarly zero or close to 120000nT.

Data was diurnally corrected daily by linking the base and roving magnetometers and running an automated program built into the GSM software. Interpretation was performed by Northern Iron Corp's personnel.

It is worth noting that high magnetic gradients in the area make continuous reading magnetometers (walking magnetometers) a more likely choice for a ground survey, as the wide spacing between stations in roving magnetometer surveys may lead to gradients too steep for the sensors to detect between stations, as in this survey. However, it has been shown that with thoughtful survey design and in field attention to readings a roving magnetometer survey can still be effective and produce useful, relevant data.

10.5. Data Processing and Presentation

Post processing of the data was completed on-site. Diurnal corrections were applied, no topography corrections were applied as topography was deemed to be too gentle and host rocks un-magnetic (granites and metasediments) enough to substantially affect magnetic readings. Coincident data points were averaged and the data was hand filtered for 'false zero' readings which were removed from the data set, only four were found. These false zeroes were the result of failure to notice and correct the zero in the field. The method of inverse distance weighing was used to graph the data with a second degree power weight model (cell size: 10, search distance: 100, search extrapolations: 3, 4 search sectors, max 3 min 2 samples per sector) (see Figure No. 5).

10.6. Discussion of Results

Though topography was gentle, overburden thickness (as till, sand and clay) and subsequently depth to outcrop and iron formation varied a great deal over the survey area. The banded iron formation was observed outcropping in several places along the northern shore of the peninsula in the centre and western parts of the magnetometer grid (see Figure No. 4). These outcrops were coincident with the observed linear magnetic anomaly from the airborne surveys. In the northern part of the survey, the iron formation was under water, presumably covered with lake-bottom sediments, and in the eastern part, by thick deposits of till and clay. This varying overburden thickness did not appear to greatly affect the magnetic signature observed for the main banded iron formation along the peninsula. Perhaps, this effect is attenuated by the size of the iron formation and the strength of the signal. The relatively weak strength of the anomaly to the north of the main anomaly may be due partially to the depth of the lake and an unknown thickness of lake-bottom sediments over top of it, increasing the distance between the source of the anomaly and the surface, and hence the magnetometer sensor, and abundance of insulating overburden and water.

Both the weak northern and the strong central peninsula magnetic responses were interpreted to represent magnetite iron formations, as no basic, ultrabasic or strongly/ moderately magnetic rocks or minerals were observed in the area surveyed, or recorded in past work. This assumption was supported by the geometry of the magnetic responses, which tended to be very linear, and were interpreted to be tilted taconite beds. They may comprise two distinct banded iron formations, or possibly be part of the same one, as limbs or hinges of folds. The magnetic responses were used to help infer the location of additional banded iron formations within the property along with outcrop mapping (see figure No. 4). The main banded iron formation in the centre of the grid is interpreted as the hinge axes of a large isoclinal anticline with the banded iron formation to the north., This would explain the size of the central banded iron formation relative to all other anomalies in the area, and is supported by regional foliation dip directions.

11.0. Mineralization

The Archean Algoma-type banded iron formation (BIF) running along the northern edge of the peninsula is the main known unit of potential economic interest on the property, and the only one investigated in the mapping and geophysics of this survey. Outcrop mapping confirmed the presence of a distinct thick unit of banded iron formation, running east-west along the north edge of the peninsula in the southern part of Papaonga Lake. It was centered in the grid carried out by the magnetometer survey. This banded iron formation is interpreted as being approximately 50m to 100m thick and steeply dipping. A second, much weaker anomaly suggests another banded iron formation under the lake in the northern part of the grid. The magnetite observed in outcrop is very massive, slightly crystalline, with low silica content. Southern contacts were observed as gradational with abundant cherty bands in metasediments for a few meters proximal to the banded iron formation (BIF). The northern contact was not observed. Surface exposure of magnetite banded iron formation occurred intermittently as outcropping throughout the property in five known locations for about 5-10m along strike. The banded iron formations were all very linear and steeply dipping, however the magnetite comprising these beds prevented structural readings from being taken.

12.0. Conclusions and Recommendations

The most significant result from the magnetic survey was the delineation of the main banded iron formation in the middle of the magnetometer grid, on the north side of the peninsula. This formation, and the anomaly that represents it, continue to the west of the magnetometer grid. It is recommended that a more extensive detailed ground magnetometer survey is undertaken to the west of the current grid to further delineate and confirm the banded iron formation, possibly identifying the fold axes of the synclines on either side of the main anticline. Another area of interest for a magnetometer grid would be to the south of the current magnetometer grid, to better define the southern anomaly which may be a fold limb and was identified by Continental Mining Exploration Ltd. (Szetu, S. S. 1957). This southern limb may be another and thus a potential economic target.

If further exploration is to be undertaken, it is advisable to increase the accessibility of the property by connecting it by a road to the main network of logging roads branching from Ear Falls. In particular to a road which runs east-west 5.8km to the south of the Papaonga property. This road connects to the Wenasaga Road in the west and a new road could perhaps be created from the ATV trail which currently links to the property to the road 5.8km to the south of the property.

Finally, a drill program targeting the main central banded iron formation to better define the geometry and the iron mineralization in the area, most likely to be carried out in the winter.

Appendix I: References

References

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Szetu, S. S. (1957), Untitled, Magnetometer Survey Report for Continental Mining Exploration Ltd. Assessment file No. 52K16NW0030 of the Resident Geologist's office, Red Lake, Ontario.

Appendix II: Statement of Qualifications

STATEMENT OF QUALIFICATIONS

I, **Raul Sanabria**, *European Geologist* with license *#766* and *Professional Geoscientist* with license #154013 and business address in #3001-438 Seymour Street, Vancouver, British Columbia, V6B 6H4, do hereby certify the following:

I am a geologist retained by Golden Hammer Exploration Ltd., and *Qualified Person* as defined by National Instrument 43-101.

I hold a *Licenciado* in Geology Degree, specialist in Mineral Resources (M. Sc.) by the *Universidad Complutense de Madrid* (Spain) in 2001, and thesis on Fe-(Cu-REE) Skarns in SW Spain.

I am a member in good standing with the *European Federation of Geologists* and the *Association of Professional Engineers and Geoscientists of British Columbia.* I am a full member of the *ICOG* (*Official Spanish Association of Geologists*).

I have been practicing my profession continuously since graduation in 2001 as a mine and exploration geologist, with projects in Spain and Western Africa (Senegal). Since January 2007, I have been engaged in mineral exploration projects in Canada (Yukon Territory and British Columbia) as Senior Project Geologist, Senior Project Manager, Exploration Manager and Vice-President, Exploration, and since 2010 in a variety of projects within Canada (Ontario) and Latin America.

I am one of the authors, of this Assessment Report and it is based upon a personal examination of all available company and government reports pertinent to the subject property.

I was personally on site from May to October, 2010, visiting historic sample locations, conducting geological mapping, re-interpreting geology and styles of mineralization in key showings within the property, and supervising the diamond drill program.

I am an insider of the Corporation as Vice President, Exploration and I have an interest in the property in the form of common shares and options of the corporation.

As of the date of the certificate, to the best of my knowledge, information and belief, I am not aware of any material fact or material change with respect to the subject matter of this technical report that is not reflected in this report, or the omission to disclose, which would make this report misleading.

I consent to and authorize the use of the attached report and my name in the Company's prospectus, Statement of Material Facts or other public document.

PROFESSIONAL GEOSCIENTIST PROVINCE OF BRITISH COLUMBIA R. SANABRIA ORELLANA #154013

Raul Sanabria Orellana, *M.Sc., EurGeol., P.Geo.*

Dated in Vancouver, BC, this 13 day of DECEMBER, 2010

STATEMENT OF QUALIFICATIONS

I, **Lindsay Hills**, *Geology Student* at the University of Victoria, do hereby certify the following:

I am a geology student retained by Northern Iron Corp.

I am a 4th year Geology Student at the University of Victoria, set to graduate in the summer of 2011.

I have been studying geology full time at the University of Victoria from September 2005 to April 2010. Since May 2007, I have been engaged part-time in mineral exploration projects in Canada (Ontario and British Columbia) as a Field Assistant and Student Geologist.

I am one of the authors of this Assessment Report and it is based upon a personal examination of all available company and government reports pertinent to the subject property.

I was personally on site from May to October, 2010, visiting historic sample locations, conducting geological mapping, re-interpreting geology and styles of mineralization in key showings within the property, supervised by Raul Sanabria, P.Geo.

I am an insider of the Corporation as a contracted employee, and I have an interest in the property in the form of options of the corporation.

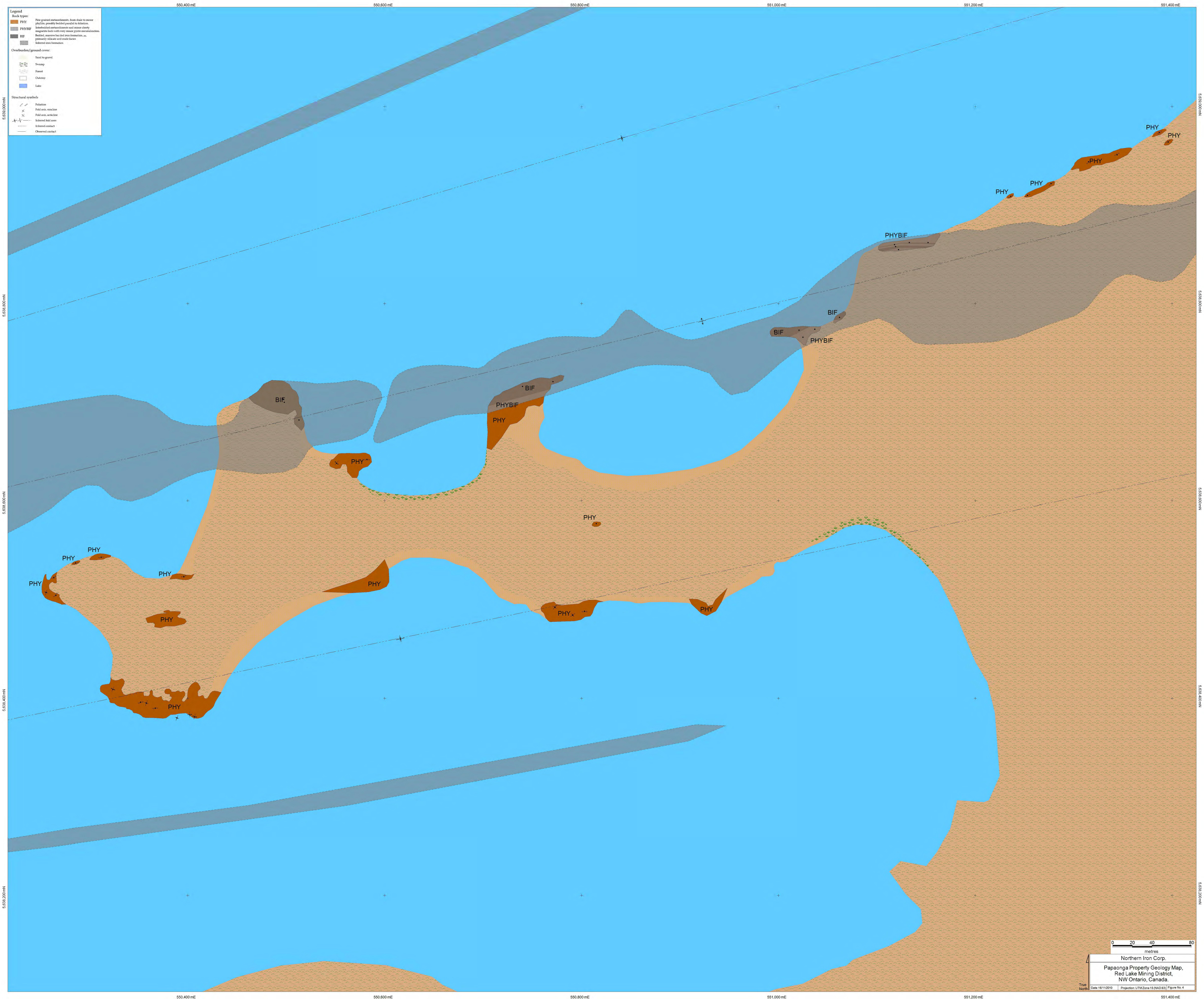
As of the date of the certificate, to the best of my knowledge, information and belief, I am not aware of any material fact or material change with respect to the subject matter of this technical report that is not reflected in this report, or the omission to disclose, which would make this report misleading.

I consent to and authorize the use of the attached report and my name in the Company's prospectus, Statement of Material Facts or other public document.

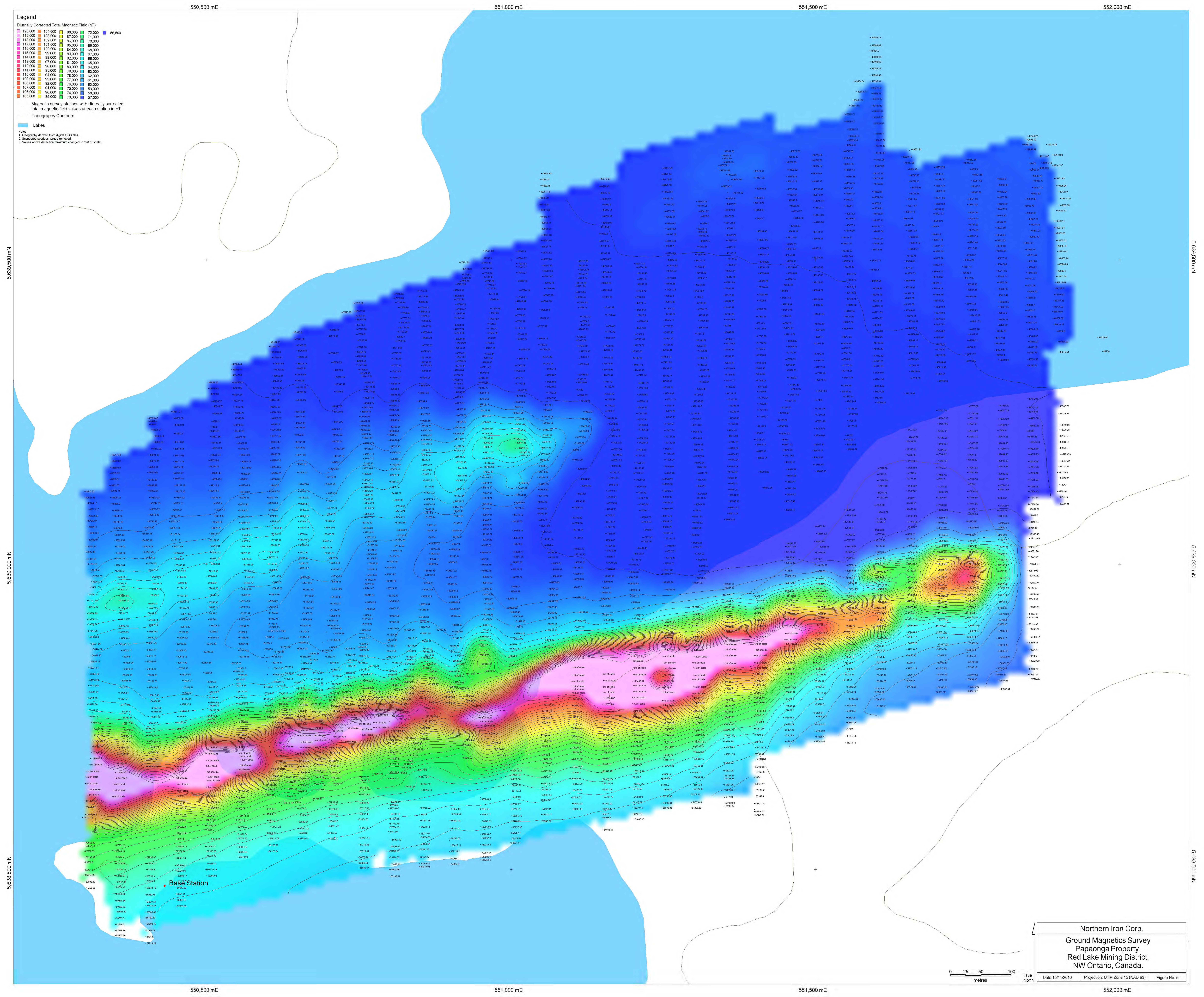
Lindsay Sylvia Hills, *Geology Student.*

Dated in Vancouver, BC, this .13... day of ..December , 2010

Appendix III: Figures



Legend
Rock types:
PHY
Fine grained metasediments, from shale to minor phyllite, possibly bedded parallel to foliation.
PHYBIF
Interbedded metasediments and minor cherty magnetite beds with very minor pyrite mineralization.
BIF
Bedded, massive banded iron formation, es. primarily sillicate and oxide facies
Inferred iron formation
Overburden/ground cover:
Sand to gravel
Swamp
Forest
Outcrop
Lake
Structural symbols
Foliation
Fold axis, syncline
Fold axis, anticline
Inferred fold axes
Inferred contact
Observed contact
550,400 mE
550,600 mE
550,800 mE
551,000 mE
551,200 mE
551,400 mE
5,639,000 mN
5,638,800 mN
5,638,600 mN
5,638,400 mN
5,638,200 mN
PHY
PHYBIF
BIF
0
20
40
80
metres
True North
Northern Iron Corp.
Papaonga Property Geology Map,
Red Lake Mining District,
NW Ontario, Canada.
Date:16/11/2010
Projection: UTM Zone 15 (NAD 83)
Figure No. 4



550,500 mE
551,000 mE
551,500 mE
552,000 mE
5,639,500 mN
5,639,000 mN
5,638,500 mN
Legend
Diurnally Corrected Total Magnetic Field (nT)
120,000
119,000
118,000
117,000
116,000
115,000
114,000
113,000
112,000
111,000
110,000
109,000
108,000
107,000
106,000
105,000
104,000
103,000
102,000
101,000
100,000
99,000
98,000
97,000
96,000
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87,000
86,000
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84,000
83,000
82,000
81,000
80,000
79,000
78,000
77,000
76,000
75,000
74,000
73,000
72,000
71,000
70,000
69,000
68,000
67,000
66,000
65,000
64,000
63,000
62,000
61,000
60,000
59,000
58,000
57,000
56,500
Magnetic survey stations with diurnally corrected total magnetic field values at each station in nT
Topography Contours
Lakes
Notes:
1. Geography derived from digital OGS files.
2. Suspected spurious values removed.
3. Values above detection maximum changed to 'out of scale'.
Base Station
0
25
50
100
metres
True North
Northern Iron Corp.
Ground Magnetics Survey
Papaonga Property.
Red Lake Mining District,
NW Ontario, Canada.
Date:15/11/2010
Projection: UTM Zone 15 (NAD 83)
Figure No. 5

-See folder on disk labeled 'Appendix III Figures' for files :

Title: Papaonga Property Geology Map
Map Scale: scale bar
Map Year: 2010
Digital File Name: Figure No 4. Papaonga Property Geology Map.jpg

Title: Ground Magnetics Survey, Papaonga Property
Map Scale: scale bar
Map Year: 2010
Digital File Name: Figure No 5. Ground Magnetics Survey, Papaonga Property.jpg