TECHNICAL REPORT

On the

Jean Property

Thunder Bay Mining District
Northwestern Ontario, Canada

Prepared for:

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1.0 SUMMARY

Afzaal Pirzada of Geomap Exploration Inc. (“the author”) was retained by AsiaBaseMetals Inc. (“ABZ” or “the Company”) to prepare an updated independent Technical Report on the Jean Property (“the Property”). The report was prepared to include the exploration work carried out on the Property in 2015 by ABZ and secure future financing.

The Jean Iron Property consists of 18 mineral claims in 115 units covering 1,840 hectares’ land located in Thunder Bay Mining District of Northwestern Ontario, Canada. The Property is located about 65 kilometers to the southwest of Thunder Bay, approximately 2 kilometers north of the Whitefish Lake on Highway 588. It can be accessed via the Trans-Canada Highway 11/17, about 20 km west from the Highway 61 junction to Highway 588 (Stanley access), and then a further 45 km southwest along Highway 588. A network of gravel roads and trails traverse the mineral claims and provide access to various areas of the Property.

AsiaBaseMetals Inc. (“ABZ” or “the Company”) owns 100% of the Mineral Claims. The Company initiated exploration work on the property immediately after acquisition of claims from the previous owners by applying for an exploration work permit in April 2015 which was issued (PR15-412660) effective April 07, 2015 to March 06, 2018y. The exploration work was started in October 2015 and included prospecting, sampling and mapping of the Gunflint Iron Formation outcrops for stripping, trenching and channel sampling.

The Property area is underlain by an Archean granitic basement, which is unconformably overlain by gently southerly-dipping sedimentary rocks of the Aphebian (lower Proterozoic) Animikie group. These sediments are capped by a Helikian (1.0 Ga) Keweenawan diabase sill. Unconsolidated rocks are Pleistocene age glacial till debris which forms an extensive mantle over low –lying parts of the area.

Gunflint Iron formation of Animikie Group is part of extensive Lake Superior-type iron formation (LSTIF) ranges developed along the margins of cratons or epicontinental platforms between 2.4 Ga and 1.9 Ga. It is banded iron formation (BIF) mainly comprised of taconite rocks, and is characterized by unusually high iron content, as well as by a variety of textures, of which the granular texture of the taconite rock being most distinctive. The Gunflint formation, approximately 145 m thick, is divided into lower and upper cycles. Each cycle contains a sequence of members, most of which are common to both. The uppermost member, a limestone bed, is unique to the formation and marks the top of the iron-bearing rocks. The key economic parameters for magnetite iron being economic in BIF are the crystallinity of magnetite, the grade of the iron in the host rock, and the contaminant elements which exist within the magnetite concentrate. The typical grade of iron at which a magnetite-bearing banded iron formation becomes economic is roughly 25% Fe, which can generally yield a 33% to 40% recovery of magnetite by weight, to produce a concentrate grading in excess of 64% iron by weight.

The historical exploration data available for the Property area includes geophysical surveys, geological mapping, diamond drilling, bulk surface sampling, and magnetic tube testing of core and surface samples. This work was carried out during the period from 1943 to 1962. The total Fe% obtained through magnetic tube separation and acid roasting with magnetic concentration range from 23.95% to 39.85% for feed, from 38.66% to 54.21% for minus 100-mesh and from 43.42% to 56.77% for minus 200-mesh.

In 2011, Great Lakes Resources Ltd. (GLR) re-activated exploration work on the current Property and carried out field geological prospecting, collection of selective grab and channel samples, assaying for iron content, Davis Tube Test (DTT) for magnetic concentrates, and Mineral Liberation Analysis (MLA) test.

In May-June 2012, GLR followed-up on previous years' exploration with diamond drilling program which included eight vertical NQ-size drill holes totaling 492.88m bounding 3km by 0.5km area. Geology obtained from the diamond drill program verified known surface geology with additional detailed stratigraphic information. The drill area is underlain by northeast trending (approximately 055° azimuth) gently 4-5° southeast dipping Lower Gunflint Formation. Lower Taconite Member of Lower Gunflint Formation was the main economically-interesting stratigraphic horizon investigated in this program. All eight holes intersected iron bearing Lower Taconite Member, whereas two complete Lower Taconite Member vertical intersections were delineated in holes JN12-03 (56.81m) and JN12-05 (57.75m). The average true thickness was estimated to be 57.06m.

Only Upper Shale, Upper Jasper and Upper Algae Chert Member composing lower portion of Upper Gunflint Formation was encountered in two holes, JN12-03 and JN12-05, located on the higher ground and on baseline or southern portion of the drilled area. No Upper Taconite Member was intersected during the program. Both Upper Gunflint and Lower Gunflint Formation within the Property contain no diluting diorite sills. Narrow diorite sills less than a meter in thickness, are only recorded in JN12-02 and JN12-04 at the contact of the base of Lower Gunflint Formation and underlying Archean Basement. A total of 84 drill core samples with varying length from 0.33m to 12.00m based on geology were collected and assayed for iron content. In addition, Davis Tube Test (DTT) on two composite samples combined from drill core samples of Lower Taconite Member of Lower Gunflint Formation, one from JN12-03 and the other from JN12-05 was performed. The results indicated 23.44 percent weighted average iron (Fe). For DTT, the weighted average feed grade was 24.08% Fe. For minus 200-mesh size, the magnetic concentrates recovery averaged 7.48% with the magnetic concentrates grade of 57.79% Fe. The non-magnetic concentrate values for this size fraction were 91.45% for recovery and 22.55% Fe for grade.

Mineral Liberation Test results on two samples indicated that the Lower Taconite Members samples are mineralogically fairly similar with average magnetic content of 8.34% and average magnetic grain size of 23 microns. The non-magnetic goethite/siderite averaged 4.1%. The sample from Lower Shale contains <0.1% magnetite with main iron minerals as pyrite (14.3%) and goethite/siderite (combined 17.3%).

During the current exploration work carried out by ABZ in 2015, a total 74 rock samples were collected, out of which 49 were channel samples for XRF analysis and 12 for Davis Tube Testing from 5 trenches, 8 grab rock surface samples for XRF, and 5 field duplicate samples for XRF as part of field QA/QC program. Total cost of this exploration work is $50,215.

Prospecting and mapping work indicated that the majority of the property area, particularly the area underlain by the Gunflint Iron Formation is covered by glacial overburden with the exception of diabase sill rocks which are more resistant to weathering. Algal chert and jasper containing rocks are found to be more resistant to weathering and exposed at places; whereas, a few new road cuts were also helpful in locating Taconite and shale outcrops. Iron content of shales were observed to be generally low with rusty brown surface weathering due to disseminated hematite along fractures and bedding planes. Jasper and algal cherts are found to be rich in iron and are more magnetic than other units of Gunflint Iron Formation. Taconite unit visually contains 20% to 30% iron. Lower contact with Archean granites is well exposed in the northern part of the property and adjoining areas.

A total of five outcrops were mapped for stripping and channel sampling work on the property. A rubber tire backhoe and an excavator were used for stripping overburden. Trenching and stripping was carried out at four locations (TR 15-01, TR 15-02, TR 15-03, and TR 15-05). Taconite rock outcrop was found exposed at location of trench TR 15-04 due to a new road cut, therefore, a new claim (Number 4283669) was immediately staked to cover this outcrop. Cumulative length of channel sampling for this program is 60 meters.

The results of eight grab rock samples indicate that total iron is in the range of 12.29% to 41.03%. Trench TR 15-01 results show a relative consistent values of iron (29 to 36% Fe_2O_3), silica (52 to 57% SiO_2) and other oxides, except for calcium oxide which is higher in sample 1192099 (3.61%). DTT fraction of trench is very low. Trench TR 15-02 is about 400 meters to the southeast of TR 15-01 and have similar results with total iron in the range of 34.94 to 36.55% Fe_2O_3, silica 52.67 to 53.71% and LOI 8.86 to 9.39%. DTT results also indicate 0.02% magnetics.

The exploration work in 2015 was carried out under direct supervision of the author who worked on the property from October 5-18, 2015. The author also visited the property on May 21, 2011 and September 21-22, 2013. The geological work performed in order to verify the existing data consisted of geological mapping of the Gunflint Iron Formation (GIF); surface grab rock, channel, and drill core sampling; and stripping to further expose the mapped outcrops for channel sampling. The sampling approach for this work was to collect representative surface grab and channel samples, and drill core samples from each of the dominant rock type.

During previous visits of the Property on May 21, 2011 and September 21-22, 2013, a total of five representative grab rock and eight drill core samples were collected. The magnetic tube separation of grab rock samples indicated that the percent values of magnetics are 41.1% and 58.3% in samples GE-JP11-01 and GE-JP11-05, respectively. These samples were from taconite member of Gunflint Iron formation. The drill core samples were collected from Lower Gunflint formation and their results indicated iron oxide (Fe_2O_3) in the range of 28.53% to 73.17%. Two values of relatively higher iron content are shown in samples JN12-03-32.5m (61.46% Fe_2O_3) and JN12-05-29.5m (73.17%).

Finding more areas with natural concentration of iron in GIF is a key exploration criterion for further development of the Property. The economic future of the iron-bearing rocks of Jean Property also appears to depend upon a process that will produce a commercial concentrate. More detailed metallurgical testing can reveal such a process.

The data presented in this report is based on the current and historical exploration work results, published assessment reports available from ABZ, Ontario MNDMF, the Geological Survey of Canada, and the Ontario Geological Survey.

Based on its favourable geological setting indicating surface and subsurface presence of Gunflint Iron formation (GIF), and the results of present study, it is concluded that the Property is a property of merit and possess a good potential for discovery of economic concentration of iron bearing rocks through further exploration and improvement of beneficiation processes. Good road access, availability of exploration and mining services in the vicinity makes it a worthy mineral exploration target.

Recommendations

In the qualified person’s opinion, the character of the Jean Property is sufficient to merit the following phased work program, where the second phase is contingent upon the results of the first phase.

Phase 1 - Geological Mapping, Trenching, Sampling, and Diamond Drilling

The present trenching work was focussed more on the western part of the property area. A few small outcrops were mapped and sampled which need follow up detailed geological mapping, stripping and channel sampling to assess the potential of eastern claims. The areas around samples 1192091, 1192092, 1192095, collected during 2015 exploration, would be interesting to undertake stripping and trenching. A 1,000 metres diamond core drilling program should follow-up if the results of trenching work are encouraging. Total estimated cost of this program is $202,950.

Phase 2 – Step-out and Infill Exploratory Drilling and Beneficiating Tests

If results from the first phase are positive, then a step-out and infill drilling program would be warranted. This work will help to define trends and continuity of favourable taconite units of Gunflint Iron formation within and adjacent to the past exploratory drilling area. This drilling program, if successful will provide basis of iron resource estimation. The metallurgical testing will help in defining the potential for economic concentration of iron in taconite. The scope of work and budget would be determined based on the findings of Phase 1 investigations.

2.0 INTRODUCTION

2.1 Purpose of Report

Afzaal Pirzada of Geomap Exploration Inc. (“the author”) was retained by AsiaBaseMetals Inc. (“ABZ” or “the Company”) to prepare an updated independent Technical Report on the Jean Property (“the Property”). The report is prepared to include the exploration work carried out on the Property in 2015 by ABZ and secure future financing.

2.2 Sources of Information

The present report is based on findings of the 2015 exploration work by ABZ, published assessment reports available from the Ministry of Northern Development, Mines and Forestry (MNDMF) Ontario, and published reports by the Ontario Geological Survey (OGS), the Geological Survey of Canada (“GSC”), various researches, websites, and personal observations during the Property visits. All consulted sources are listed in the References section. The sources of the maps are noted on the figures.

The author directly supervised 2015 exploration work by ABZ, and also carried out two visits of the Property on May 21, 2011 and September 21-22, 2013 respectively. The scope of Property visits was to complete the 2015 exploration work, and to verify historical information about: the Property geology, mineralization, and structures; past exploration work on the Property, Property accessibility and location; and location of sources of water, electricity and utilities.

The author was retained to complete this report in compliance with National Instrument 43-101 of the Canadian Securities Administrators (“NI 43-101”) and the guidelines in Form 43-101 F1. The author is a “qualified person” within the meaning of National Instrument 43-101.

The information, opinions and conclusions contained herein are based on:

- Information available to the author at the time of preparation of this report;
- Assumptions, conditions, and qualifications as set forth in this report;
- Data, reports, and other information supplied by ABZ and other third party sources; and
- The findings of 2015 exploration work on the Property by ABZ.

The author has no reason to doubt the reliability of the information provided by ABZ. The author reserves the right, but will not be obliged to revise the report and conclusions if additional information becomes known subsequent to the date of this report.

3.0 RELIANCE ON OTHER EXPERTS

For the purpose of the report the author has reviewed and relied on ownership information provided by ABZ which to the author's knowledge is correct. A limited search of tenure data on the MNDMF Database Online website on February 29, 2016 conforms to the data supplied by ABZ. However, the limited research by the author does not express a legal opinion as to the ownership status of the Jean Property. This disclaimer applies to ownership information relating to the Property, and the information is available in Section 1 (Summary) and Section 4 (Property Description and Location) of this report.

4.0 PROPERTY DESCRIPTION AND LOCATION

The Jean Iron Property consists of 18 mineral claims in 115 units covering 1,840 hectares' land located in Thunder Bay Mining District of Northwestern Ontario, Canada (Figure 1 and 2). It is located about 65 kilometers to the southwest of Thunder Bay, approximately 2 kilometers north of the Whitefish Lake on Highway 588. ABZ owns 100 % of the Mineral Claims.

The Company acquired 100% ownership of the Property through an agreement announced on April 30th, 2015, by issuing 100,000 common shares of the Company to Great Lakes Resources, the Property vendor. There are no known royalties or encumbrances attached to the Property.

The property claims were staked on ground by erecting physical posts as required by claim staking regulations in Ontario. In Ontario all mineral claims staked are subject to $400 per unit worth of eligible assessment work to be undertaken before year 2 anniversary, followed by $400 per unit per year thereafter. There is no past producing mine on the Property and there were no historical mineral resource or mineral reserve estimates documented.

There are no known environmental liabilities for the Property. An exploration work permit (PR15-412660) was issued effective April 07, 2015 to March 06, 2018 for the Property. The permit was issued to carry out trenching, stripping, line-cutting, and drilling. Aboriginal communities potentially affected by the exploration permit activities were consulted by the Company during the exploration permit application process and at the beginning of the work program.

Claim data is summarized in the Table 1, while a map showing the claims is presented in Figure 2.

Township/Area	Claim Number	Recording Date	Claim Due Date	Status	Claim Units	Area (Ha)	Percent Option	Work Required	Total Applied	Total Reserve	Claim Bank
HARDWICK	4252106	2009-Nov-16	2016-Nov-16	A	8	128	100%	$3,200	$16,000	$0	$0
JEAN	4252101	2009-Nov-16	2016-Nov-16	A	6	96	100%	$2,400	$12,000	$0	$0
JEAN	4252102	2009-Nov-16	2016-Nov-16	A	2	32	100%	$800	$4,000	$0	$0
JEAN	4252103	2009-Nov-16	2016-Nov-16	A	1	16	100%	$400	$2,000	$0	$0
JEAN	4252104	2009-Nov-16	2017-Nov-16	A	16	256	100%	$6,400	$38,400	$0	$0
JEAN	4252105	2009-Nov-16	2017-Nov-16	A	8	128	100%	$3,200	$19,200	$0	$0
JEAN	4252107	2009-Nov-16	2017-Nov-16	A	6	96	100%	$2,400	$14,400	$0	$0
JEAN	4252108	2009-Nov-16	2017-Nov-16	A	16	256	100%	$6,400	$38,400	$0	$0
JEAN	4252109	2009-Nov-16	2017-Nov-16	A	2	32	100%	$800	$4,801	$0	$0
JEAN	4252110	2009-Nov-16	2017-Nov-16	A	16	256	100%	$6,400	$38,400	$3,398	$0
JEAN	4252111	2009-Nov-16	2017-Nov-16	A	4	64	100%	$1,600	$9,600	$28	$0
JEAN	4252112	2009-Nov-16	2017-Nov-16	A	1	16	100%	$400	$2,400	$0	$0
JEAN	4252113	2009-Nov-16	2017-Nov-16	A	8	128	100%	$3,200	$19,200	$193	$0
JEAN	4252114	2009-Nov-16	2017-Nov-16	A	3	48	100%	$1,200	$7,200	$1,116	$0
JEAN	4252115	2009-Nov-16	2017-Nov-16	A	3	48	100%	$1,200	$7,200	$20	$0
JEAN	4283669	2015-Nov-12	2018-Nov-12	A	1	16	100%	$400	$400	$0	$0
WABINDON LAKE AREA	4252116	2009-Nov-16	2018-Nov-16	A	2	32	100%	$800	$5,600	$0	$0
WABINDON LAKE AREA	4252117	2009-Nov-16	2016-Nov-16	A	12	192	100%	$4,800	$26,287	$4,336	$0
TOTAL 18 CLAIMS					115	1840					

Table 1: Claim Data

Figure 1: Property Location Map

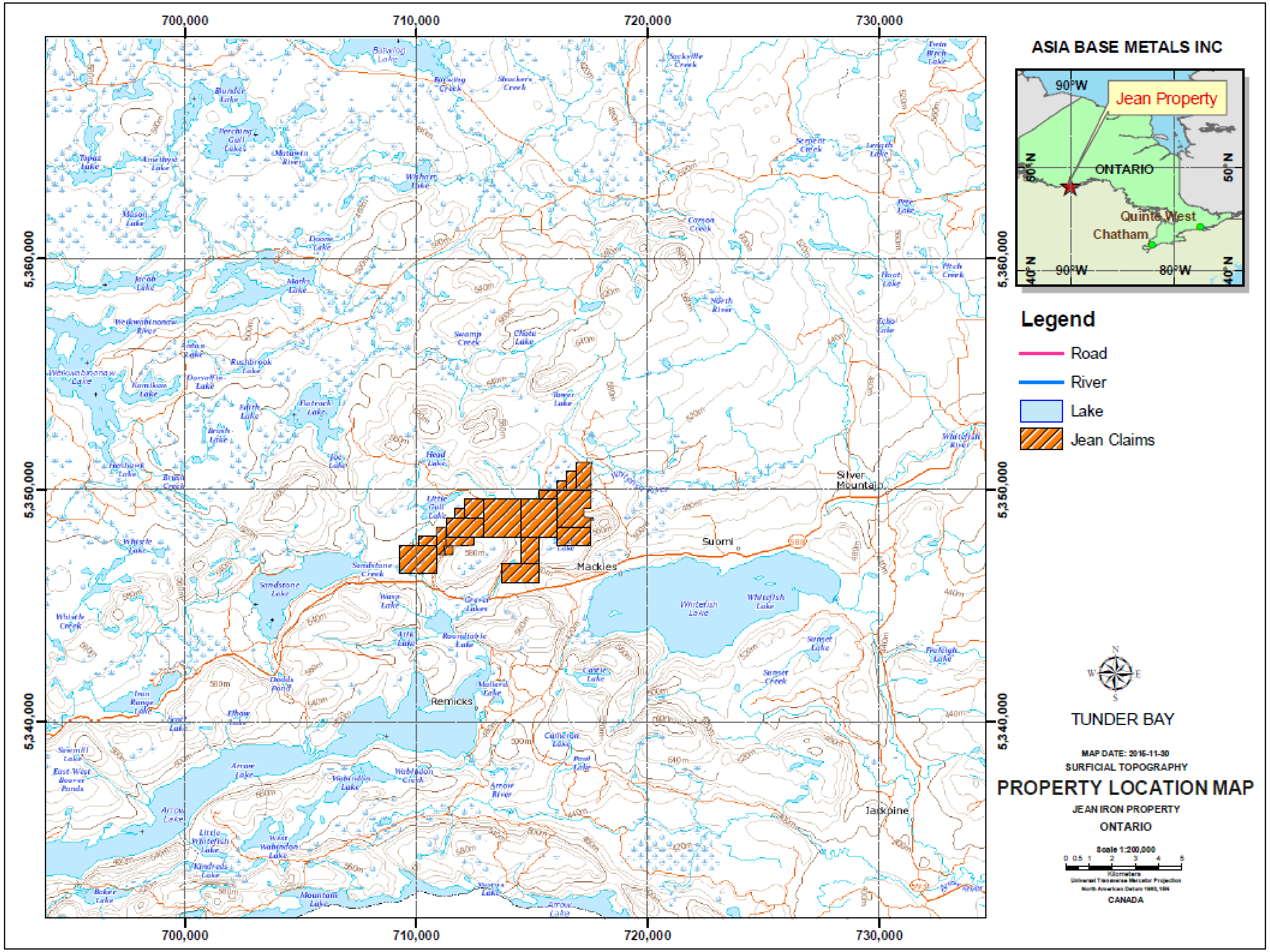
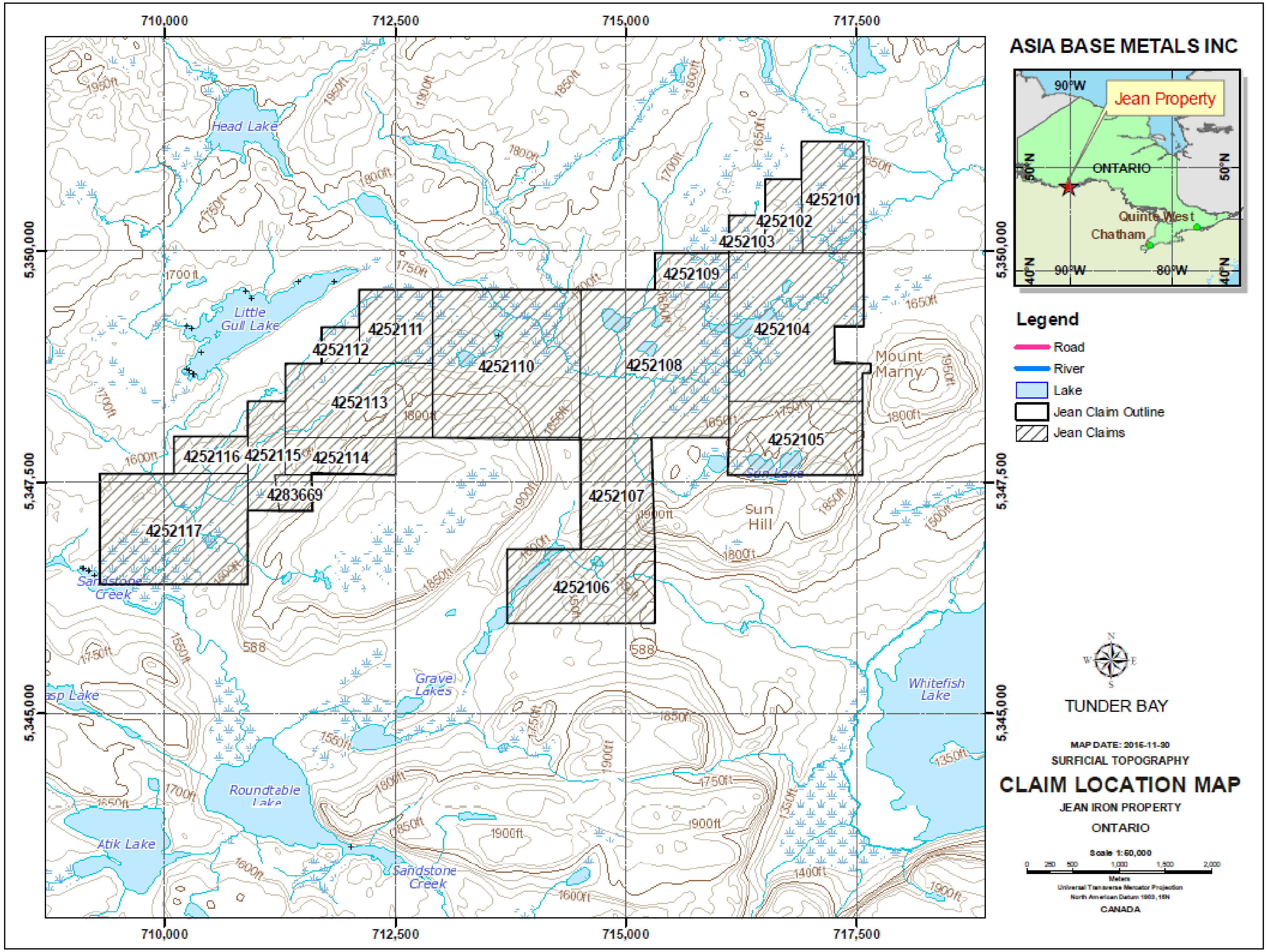


Figure 2: Mineral Claim Map



5.0 ACCESS, CLIMATE, PHYSIOGRAPHY, LOCAL RESOURCES, AND INFRASTRUCTURE

5.1 Access

The Jean Property has good year round road access from the town of Thunder Bay, Ontario. Highway 588, located immediately to the south of the Property is a paved all season road (Figure 1). The Property can be accessed via the Trans-Canada Highway 11/17, about 20 km west from the Highway 61 junction to Highway 588 (Stanley access), and then a further 45 km southwest along Highway 588. Travel time by road from Thunder Bay to the Property is approximately one hour. A network of gravel roads and trails traverse the mineral claims and provide access to various areas of the Property.

5.2 Climate

The climate of Thunder Bay region including the Jean Property area is influenced by Lake Superior, resulting in cooler winter temperatures and warmer summer temperatures for an area extending inland as far as 16 km. The average daily temperatures range from a high of 17.6 °C in July and a low of -14.8 °C in January. The summer period is approximately 97 days in length extending from the beginning of June to the beginning of September; fall lasts about 60 days and extends to November. The winter season lasts approximately 6 months extending from November through to May. Although the area normally has about six months of snow-free conditions, exploration and mining work can be carried out throughout the year.

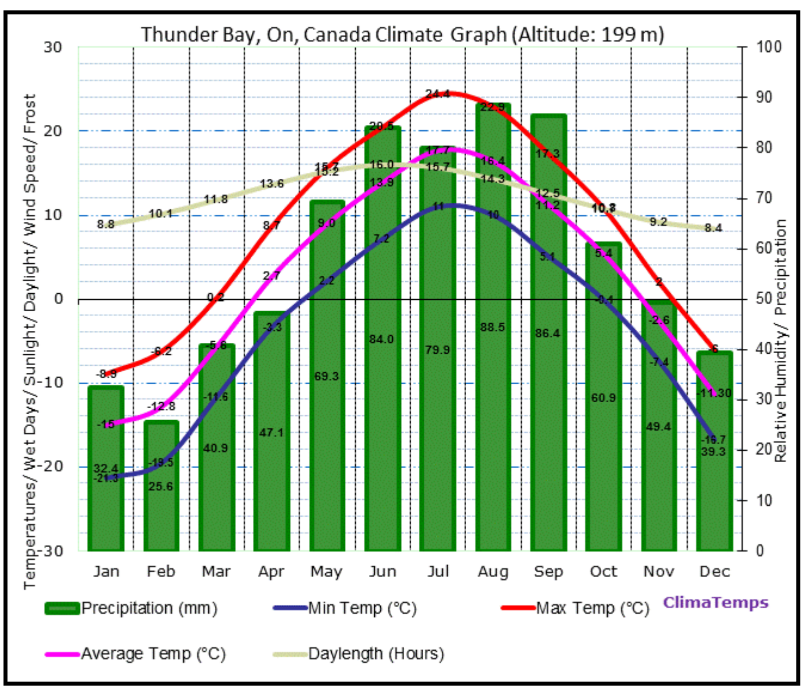


Figure 3: Climate Data

5.3 Physiography

The maximum relief in the area is about 110 metres (from 470 m to 580 m above sea level). Topography is generally flat with the exception of hills located in the southern part of the Property and were formed due to the presence of diabase sill rocks that has resisted erosion and now stands above the surrounding flat lying terrain in the form of large round mesas such as Mink Mountain and Sun Hill (Figures 2 and 4). The southern and western areas of the Property drain southward by the tributaries of the Pigeon River, which enters Lake Superior at Pigeon Point. Drainage in the eastern part of the Property mostly runs through tributaries of the Whitefish River, which joins the Kaministikwia River, and thence flows through Fort Williams to Lake Superior.

The Property area is a part of the Whitefish River watershed. Some of the more common wildlife species that live in the area include otters, beavers, whitetailed deer, black bear, muskrat, pileated woodpecker and various migratory birds. The Whitefish River watershed includes many other mammals, birds, fish and insects that are commonly found in the Great Lakes and Boreal Forest Regions. Most of the watershed is dominated by white spruce, trembling aspen, black ash and balsam fir (Zago 2012). The Property area is mostly covered by forest and bush mostly of second growth.

Exposures of iron-bearing rocks are scarce in the low-lying country adjoining streams and lakes because of drift cover. Beneath the diabase capping of hills and ridges, however, the rocks are well exposed.

5.4 Local Resources and Infrastructure

The town of Thunder Bay, located about 65 kilometres from the Property, is the largest city in Northwestern Ontario, serving as a regional commercial Centre. The town is a major source of workforce, contracting services, and transportation for the forestry, pulp and paper and mining industry. Thunder Bay is a transportation hub for Canada, as the TransCanada highways 11 and 17 link eastern and western Canada. It is close to the Canada-U.S. border and highway 61 links Thunder Bay with Minnesota, United States. Thunder Bay has an international airport with daily flights to Toronto, Ontario and Winnipeg, Manitoba, and the United States. There is a large port facility on the St. Lawrence Seaway System which is a principal north-south route from the Upper Midwest to the Gulf of Mexico.

The city of Thunder Bay has most of the required supplies for exploration work including drilling and geophysical survey companies, grocery stores, hardware stores, exploration equipment supply stores, restaurants, hotels, and a hospital. The population of the city of Thunder Bay was 109,140 people in 2006 (Statistics Canada, www.statcan.gc.ca). Many junior exploration and mining companies are based in Thunder Bay, and thus the city is a source of skilled mining labour.

There are several lakes, rivers and creeks in and around the Jean Property area which can be a source of water. Power lines are also within a few kilometres range.

(Source: http://www.thunderbaydirect.info/about_thunder_bay

http://www.thunderbay.ca/Doing_Business/About_Thunder_Bay.htm)

6.0 HISTORY

The Jean Property is underlain by Gunflint Iron Formation (GIF) which was first discovered in 1850. The earliest recorded geological investigation of the Gunflint was conducted by E. O. lngall in 1887 who briefly described the iron-bearing strata near Silver Mountain and Whitefish Lake. Other early accounts were made by Smith (1905) and Silver (1906). Van Hise and Leith in 1911 presented a general overview of the iron bearing rocks in the Thunder Bay district. In 1924 J. E. Gill was the first to describe the Gunflint Iron Formation in detail, and in 1926, its stratigraphy northeast of Silver Mountain. T. L. Tanton described the iron prospects at Mink Mountain in 1923, and in 1931 gave an overview of the general geology in the vicinity of Thunder Bay (Pufahl 1996). The Property was part of historical exploration work carried out by various operators in this area. The historical exploration and geological work documented on the Property area is summarized in the following sections, and the work on adjoining properties is summarized in Section 23 of this report.

6.1 Gunflint Iron Mines Ltd. (1943)

Gunflint Iron Mines Ltd. (GIML) in 1943 staked and explored southern portion of Mink Mountain which is now located within the Jean Property with 10-hole diamond drilling program out of which only one was located on the Property. During 10-hole drilling program, four holes were abandoned because of thick overburden and only six holes, No. 1, No. 3, No. 4, No. 5, No.7 and No. 8, were completed. A compilation of drill hole data indicated that hole number 7 is located on the Jean Property claim 4252106 (Figure 4). The original drill logs were pre-Moorehouse and Goodwin's 1960 stratigraphic classification and nomenclature, and were just purely lithologic descriptions.

In 1960, Moorehouse and Goodwin re-interpreted five (No. 1, No. 3, No. 4, No. 5 and No.7) of six drill logs of completed holes using their adopted stratigraphic classification and nomenclature system and included in their Ontario Department of Mines (ODM)-Report ORV 69.

The oriented summarized drill logs based on information obtained from ODM-Report ORV 69 is shown in Tables 2 and 3. In 1952, ODM collected four drill core samples belonging to Lower Taconite by their interpretation, from one hole located west of Mink Mountain and Lloyd K. Johnson Exploration conducted minus 100- and minus 200-mesh magnetic tube test for determining total iron content (Fe%).

The total Fe% obtained range from 22.18% to 26.86% for feed, 34.68% to 52.26% for minus 100-mesh and 50.08% to 62.26% for minus 200-mesh, and was published as representative for Lower Taconite in ODM-Report 69 (Table 3).

Oriented Summarized Drill Logs															
Gun Flint Mines Ltd: Drill Program 1943															
Member	South of Mink Mountain														
	Hole No. 4 (West)			Hole No. 5			Hole No. 3			Hole No. 1			Hole No. 7 (East)*		
	From (m)	To (m)	Interval (m)	From (m)	To (m)	Interval (m)	From (m)	To (m)	Interval (m)	From (m)	To (m)	Interval (m)	From (m)	To (m)	Interval (m)
Overburden	0.00	44.53	44.53	0.00	64.66	64.66	16.69	68.93	52.24	16.65	71.37	54.72	0.00	54.595	54.60
Upper Taconite				64.66	80.52	15.86	68.93	71.07	2.14	71.37	76.86	5.49	54.60	89.06	34.47
Upper Shale				EOH			71.07	71.83	0.76	76.86	78.385	1.53	89.06	90.585	1.52
Upper Jasper	44.53	58.10	13.57				71.83	88.45	16.62	78.39	93.94	15.56	90.59	106.75	16.17
Upper Algae															
Lower Taconite	58.10	113.77	55.66				88.45	100.04	11.59	93.94	156.77	62.83	106.75	125.05	18.30
Lower Shale							EOH			156.77	166.53	9.76	EOH (Located on the Property)		
Lower Algae Chert															
Basal Conglomerate															
Archean Granite	113.77	114.07	0.30							166.53	169.28	2.75			

Note: Only Hole No. 7 (East) is located on the Property

Table 2: Drill logs – 1943 drill program

Magnetic Tube Tests on Drill Cores																		
Gunflint Iron Mines Ltd: Drill Program 1943																		
Sample Information			minus 100-mesh								minus 200-mesh							
			Magnetic Concentrate					Non-Magnetic Tails			Magnetic Concentrate					Non-Magnetic Tails		
No.	Interval (m)	Total Fe%	Weight %	Total Fe%	Percent Total Fe	Phos. %	Fusion Silica %	Weight %	Total Fe%	Percent Total Iron	Weight %	Total Fe%	Percent Total Fe	Phos. %	Fusion Silica %	Weight %	Total Fe%	Percent Total Iron
20'-40'	6.10	**22.98**	24.83	**38.87**	41.99	0.010	35.40	75.17	17.73	58.01	14.28	**54.44**	33.81	0.009	19.84	85.72	17.73	66.19
40'-60'	6.10	**22.18**	24.43	**34.68**	38.19	0.009	38.46	75.57	18.14	61.81	11.51	**50.08**	25.97	0.008	23.08	88.49	18.55	74.03
60'-100'	12.20	**26.86**	25.21	**48.07**	45.12	0.010	23.30	74.79	19.71	54.88	15.13	**59.92**	33.77	0.009	12.20	84.87	20.97	66.23
100'-125'	7.63	**25.48**	18.23	**52.26**	37.40	0.010	16.91	81.77	19.51	62.60	12.64	**62.26**	30.89	0.009	9.00	87.36	20.16	69.11

Table 3: Magnetic tube tests – 1943 drill program

6.2 Great Lakes Resources Ltd. (2011-12)

Great Lakes Resources Ltd. (GLR) staked the Jean Iron Property in 2009 and started exploration work in 2011 with two-phase geologic exploration and surface sampling programs, one in May 2011 and the other in August 2011. A diamond drill program was completed in May-June 2012.

6.2.1 Prospecting and Sampling May 2011

The first phase program consisted of field geological prospecting, collection of selective grab samples to verify historical information, assaying for iron content, Davis Tube Test (DTT) for magnetic concentrates, literature search, data compilation and geological report writing.

Five grab samples from lower portions of Upper Gunflint Formation, namely Upper Shale, Upper Jasper, Upper Algae Chert Member, were collected and assayed. The assay returns range from 5.58% to 41.06% iron (Fe) and 27.14% to 90.10% Silica (SiO_2).

DTT using -150 mesh size fraction, were also conducted on these grab samples. The size fraction used was -150 mesh and magnetic recoveries ranging from 2.8% to 58.3% were obtained.

6.2.2 August 2011 Exploration

The second phase program, based on geologic information obtained from May 2011 program, was followed in August 2011 and consists of systematic channel and bulk sampling, DTT tests, Mineral Liberation Analysis (MLA) test.

A total of 25 saw-cut channel samples, 2.5cm by 2.5cm and of varying length and three 25-kg bulk samples were collected on Lower Taconite and Lower Shale members belonging to Lower Gunflint Formation during the program. In addition, three bulk samples were also collected from Lower Taconite Member exposures. All samples were assayed for iron content.

Lower Taconite Member of Lower Gunflint Formation is the main economically interested stratigraphic horizon. Assays of channel samples obtained from Lower Taconite Member averaged 25.60% Fe and bulk samples of Lower Taconite Member averaged 26.16% Fe.

A total of four, three from bulk sampling from Lower Taconite Member and one from made-up composite sample from two of those three bulk samples were selected for Davis Tube Test (-200 and -325 mesh).

DTT conducted on four bulk samples, having average 24.58% Fe feed grade, at minus 200-mesh size indicated the magnetic concentration weight% or recovery% averaged 9.12%, 53.50% Fe respectively for magnetic concentrates and 21.80% Fe for non-magnetic concentrates. The corresponding values for minus 325-mesh sizes were 7.57% for magnetic concentrates recovery, 60.67% Fe for magnetic concentrates and 21.69% Fe for non-magnetic concentrates.

MLA test using two fractions, -106 and +106 mesh, were also conducted on composite sample. The salient information obtained indicated that the sample is composed of 22% combined hematite and magnetite (magnetite estimated as 4%), 61% quartz and 7% Fe-silicates (minnesotiate predominantly) and 6% calcite with traces of apatite, feldspars, Fe-chlorite and kaolinite. MLA test also suggested the average grain size of combined Fe-oxides is between 24 and 53 microns (Aung 2011).

6.2.3 2012 Exploration Work

During the month of May-June 2012, Great Lakes conducted a diamond drilling program on the Property to test the depth dimension of iron formation stratigraphy. The diamond drill program consisted of eight vertical NQ-size diamond drillholes totaling 492.88m. The drilled area bounded by the eight drillholes measured 3km in length and 0.5km in width covering 1.5sq.km. All drillholes were located on the grid with 1000m spacing along baseline and 400-500m along tie-line. Both GPS and grid co-ordinates of drillholes and their lengths are tabulated in Table 4, and locations are shown on the property geology map (Figure 4).

Table 4: Co-ordinates and Lengths of Drill holes - May-June 2012 Drilling Program

Hole Number	NAD83-Z15			Grid + Map Elev. (m)	Attitude	Depth (m)
	Easting	Northing	Elev. (m)			
JN12-01	711270	5347265	485	10E/00N 480m	Vertical	102.00
JN12-02	710989	5347679	477	10E/5N 475m	Vertical	30.00
JN12-03	712073	5347856	541	20E/00N 540m	Vertical	96.00
JN12-04	711865	5348200	513	20E/4N 515m	Vertical	36.88
JN12-05	712910	5348412	538	30E/00N 535m	Vertical	87.00
JN12-06	712665	5348750	518	30E/4N 515m	Vertical	39.00
JN12-07	713705	5349014	498	40E/00N 495m	Vertical	60.00
JN12-08	713591	5349219	500	40E/2+50N 500m	Vertical	42.00

(GPS Reading by Garmin 60CSx)

Drill Hole Geology

Geology obtained from the diamond drill program verified known surface geology with additional detailed stratigraphic information. The drill area is underlain by northeast trending (approximately 055° azimuth) gently 4-5° southeast dipping Lower Gunflint Formation. Lower Taconite Member of Lower Gunflint Formation was the main economically-interested stratigraphic horizon investigated in this program.

The summary drill logs of 2012 diamond drilling program is provided as follows:

JN12-01
0.00-3.00m: Casing/Overburden
3.00-59.40m: Lower Gunflint Formation (56.40m)
3.00-52.68m: Lower Taconite Member
52.68-55.60m: Lower Shale Member
55.60-58.26m: Lower Algae Chert Member
58.26-59.40m: Basal Conglomerate
59.40-102.00m: Archean Basement
102.00m- End of Hole (EOH)
JN12-02
0.00-3.00m: Casing/Overburden
3.00-19.25m: Lower Gunflint Formation (16.5m)
3.00-13.50m: Lower Taconite Member
13.50-15.75m: Lower Shale Member
15.75-19.25m: Lower Algae Chert Member
19.25-19.50m: Diorite Sill
19.50-30.00m: Archean Basement
30.00m-EOH

JN12-03
0.00-10.00m: Casing/Overburden
10.00-31.89m: Upper Gunflint Formation (21.89m)
10.00-15.50m: Upper Shale Member
15.50-29.48m: Upper Jasper Member
29.48-31.89m: Upper Algae Chert Member
31.89-95.20m: Lower Gunflint Formation (63.31m)
31.89-88.70m: Lower Taconite Member
88.70-90.77m: Lower Shale Member
90.77-95.00m: Lower Algae Chert Member
95.00-95.20m: Basal Conglomerate
95.20-96.00m: Archean Basement
96.00m-EOH

JN12-04
0.00-3.00m: Casing/Overburden
3.00-36.00m: Lower Gunflint Formation (33.0m)
3.00-32.62m: Lower Taconite Member
32.62-35.70m: Lower Shale Member
35.70-36.00m: Lower Algae Chert Member
36.00-36.88m: Diorite Sill
36.88m-EOH

JN12-05
0.00-21.00m: Casing/Overburden
21.00-23.12m: Upper Gunflint Formation (2.12m)
21.00-23.12m: Upper Algae Chert Member
23.12-86.87m: Lower Gunflint Formation (63.75m)
23.12-80.90m: Lower Taconite Member
80.90-82.82m: Lower Shale Member
82.82-86.87m: Lower Algae Chert Member
86.87-87.00m: Archean Basement
87.00m-EOH

JN12-06
0.00-1.50m: Casing/Overburden
1.50-36.67m: Lower Gunflint Formation (35.17m)
1.50-31.17m: Lower Taconite Member
31.17-33.45m: Lower Shale Member
33.45-36.32m: Lower Algae Chert Member
36.32-36.67m: Basal Conglomerate
36.67-39.00m: Archean Basement
39.00m-EOH

JN12-07
0.00-3.00m: Casing/Overburden
1.50-57.20m: Lower Gunflint Formation (55.7m)
5.00-52.05m: Lower Taconite Member
52.05-53.40m: Lower Shale Member
53.40-57.05m: Lower Algae Chert Member
57.05-57.20m: Basal Conglomerate
57.20-60.00m: Archean Basement
60.00m-EOH

JN12-08
0.00-3.00m: Casing/Overburden
1.50-40.90m: Lower Gunflint Formation (39.4m)
3.00-35.70m: Lower Taconite Member

35.70-36.88m: Lower Shale Member
36.88-40.90m: Lower Algae Chert Member
40.90-42.00m: Archean Basement
42.00m-EOH

All eight holes intersected iron bearing Lower Taconite Member, whereas two complete Lower Taconite Member vertical intersections were delineated in JN12-03 (56.81m) and JN12-05 (57.75m). The average true thickness is estimated to be 57.06m.

Lower Shale and Lower Algae Chert Member of Lower Gunflint Formation consistently underlie Lower Taconite Member. However, Basal Conglomerate Member is not universally persistent and lacking in some drill holes.

Only Upper Shale, Upper Jasper and Upper Algae Chert Member composing lower portion of Upper Gunflint Formation was encountered in two holes, JN12-03 and JN12-05, located on the higher ground and on baseline or southern portion of the drilled area. No Upper Taconite Member was intersected during the program.

Both Upper Gunflint and Lower Gunflint Formation within the Property contain no diluting diorite sills. Narrow diorite sills less than a meter in thickness, are only recorded in JN12-02 and JN12-04 at the contact of the base of Lower Gunflint Formation and underlying Archean Basement.

The monoclinal structure is evident in all holes with consistently 4-5° by core angles. Graded bedding where observed suggested upright sequence and tectonic deformation is virtually absent. Glacial overburden is generally thin to non-existence in elevated ground as much as 10m in low swampy lands. The depth of surface oxidation is average 3m. The presence of talus fan deriving from Mink Mountain is evident as approach south. The overburden of 21m in JN12-05 may include main portion of talus fan.

Drill Core Sampling and Assaying

Drill core sampling during this program was continuous. The entire length of the Gunflint Formation stratigraphy intersected in all drill holes sampled.

Drill core samples were collected by sawing one-sixth (one cm) of the NQ-4.6 cm diameter radius rather than conventional half to control weight-volume of sample sizes and to retain as much for future metallurgical tests. Three-tag sample recording system was used with one tag placing at start of sample site in core box, another in sample bag and the last one as duplicate reference. A total of 84 drill core samples with varying length from 0.33m to 12.00m based on geology were collected.

Samples were shipped to ISO-accredited ActLabs Laboratories, Thunder Bay. All samples were assayed for iron and associated element content particularly silica and manganese using ActLabs Laboratories Code-C4C.

Sample preparation at the ActLabs Laboratories was done according to standard industry practice. Samples were crushed to -10 mesh followed by pulverizing a 250-gram split to -150 mesh (95%). Each sample was analyzed for Iron Ore Analysis XRF. A rigorous series of in-laboratory duplicate, reference and blank sample analyses are routinely carried out.

As Lower Taconite Member is the main iron bearing interested stratigraphic horizon within the Jean Iron Property and the weighted assay information obtained from drill core samples from Lower Taconite Member is summarized in Table 5.

Table 5: Weighted Assay: Lower Taconite Member -May-June 2012 Drilling Program

DDH No.	Length (m)	Fe%	Mn%	SiO2%	P2O5%
JN12-01	49.71	**21.65**	0.346	43.40	0.03
JN12-02	10.50	**24.36**	0.299	44.10	0.05
JN12-03	56.81 (complete)	**24.39**	0.337	47.54	0.03
JN12-04	29.62	**24.31**	0.259	50.53	0.04
JN12-05	57.722 (complete)	**23.88**	0.287	47.76	0.04
JN12-06	29.67	**25.02**	0.364	46.24	0.04
JN12-07	49.05	**22.03**	0.529	47.37	0.03
JN12-08	31.87	**23.37**	0.570	44.92	0.04
Weighted Average		**23.44**	**0.377**	**46.66**	**0.04**

Davis Tube Test

In addition to assaying, DTT on two composite samples combined from drill core samples of Lower Taconite Member of Lower Gunflint Formation, one from JN12-03 and the other from JN12-05, were conducted at ActLabs Laboratories, Ancaster, Ontario.

Sample designated DT Composite #1 is a combination of eight drill core samples, #1078091 to #1078098 from drillhole JN12-03 and DT Composite #2 resulted from nine drill core samples, #1078102 to #1078111 from JN12-05. DTT were performed on two size fractions, minus 200-mesh and minus 325-mesh, and assaying were again done on both magnetic portions and non-magnetic portions of DTT.

The weighted average feed grade is 24.08% Fe. For minus 200-mesh size, the magnetic concentrates recovery averaged 7.48% with the magnetic concentrates grade of 57.79% Fe. The non-magnetic concentrates values for this size fraction were 91.45% for recovery and 22.55% Fe for grade.

In regard to minus 325-mesh, the magnetic concentrates recovery was 7.20% and the concentrates grade was 53.62% Fe. The non-magnetic concentrates values are 91.55% and 22.42% Fe respectively. The breakdown of DTT recovery percent and assays for two end-members, magnetic and non-magnetic portions, are shown in Table 6.

Table 6: Davis Tube Test: Recovery and Assays of Lower Taconite Member - May-June 2012 Drilling Program

Minus 200-mesh

Sample ID	Head		Magnetic Concentrates -200 mesh			Non-Mag Concentrates -200 mesh		
	gm	Fe%	gm	Fe%	Wt. %	gm	Fe%	Wt. %
DT Composite #1	30.0	24.39	2.441	52.33	8.1	27.240	22.66	90.8
DT Composite #2	30.0	23.88	2.045	63.25	6.8	27.625	22.45	92.1

Minus 325-mesh

Sample ID	Head		Magnetic Concentrates -325 mesh			Non-Mag Concentrates -325 mesh		
	gm	Fe%	gm	Fe%	Wt. %	gm	Fe%	Wt. %
DT Composite #1	30.0	24.39	2.110	51.59	7.0	27.568	22.17	91.9
DT Composite #2	30.0	23.88	2.220	55.64	7.4	27.360	22.66	91.2

<u>Mineral Liberation Analysis (MLA test)</u>

MLA test was also conducted on three samples. Two samples, DT Composite #1 and DT Composite #2 were from Lower Taconite Member. The remaining #1078112 was from Lower Shale Member of Lower Gunflint Formation and was included to determine mineralogy of associate iron minerals that elevated Fe% in this member.

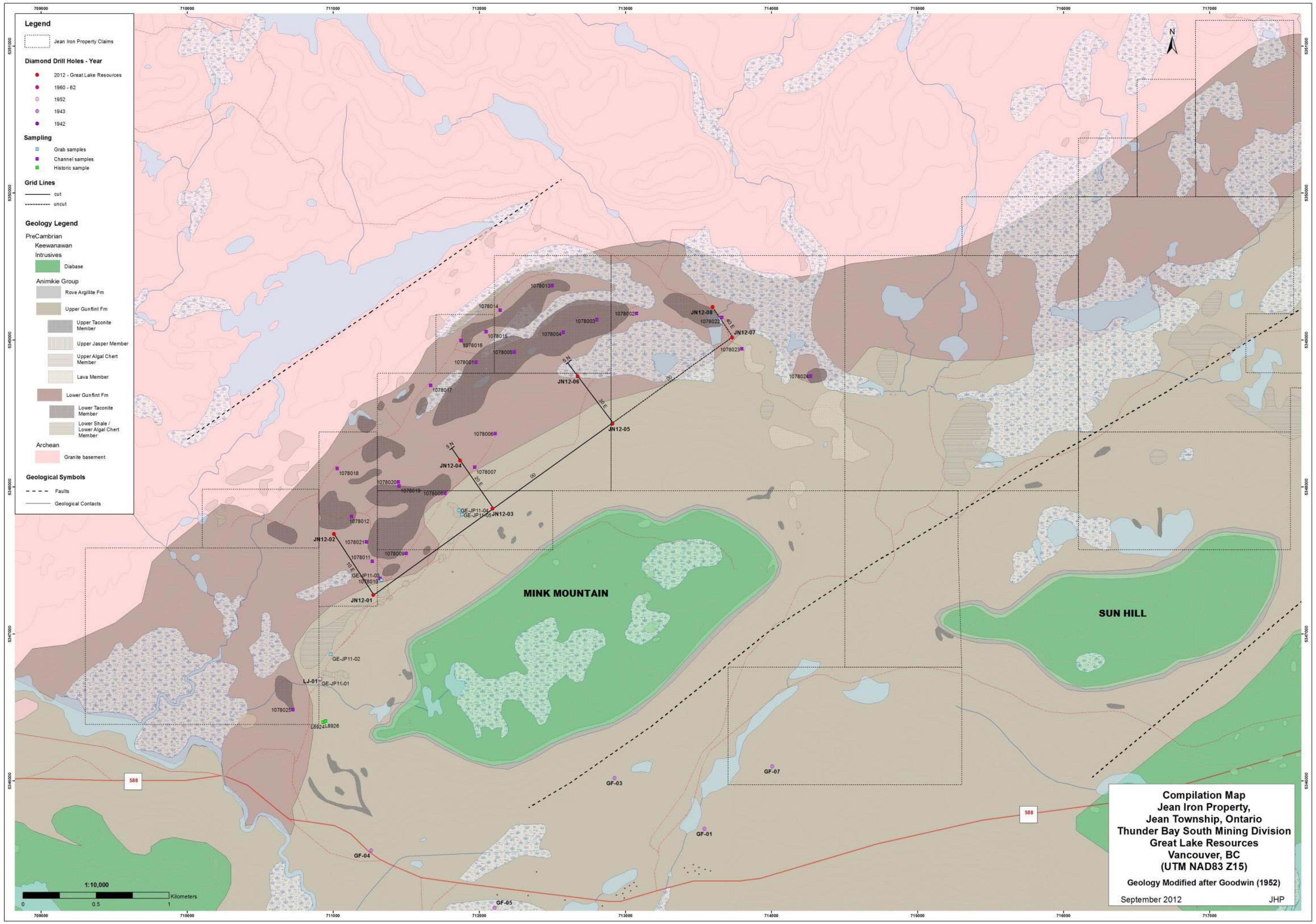
Highlights of MLA test report provided by Actlabs Laboratories, Ancaster, Ontario are provided below:

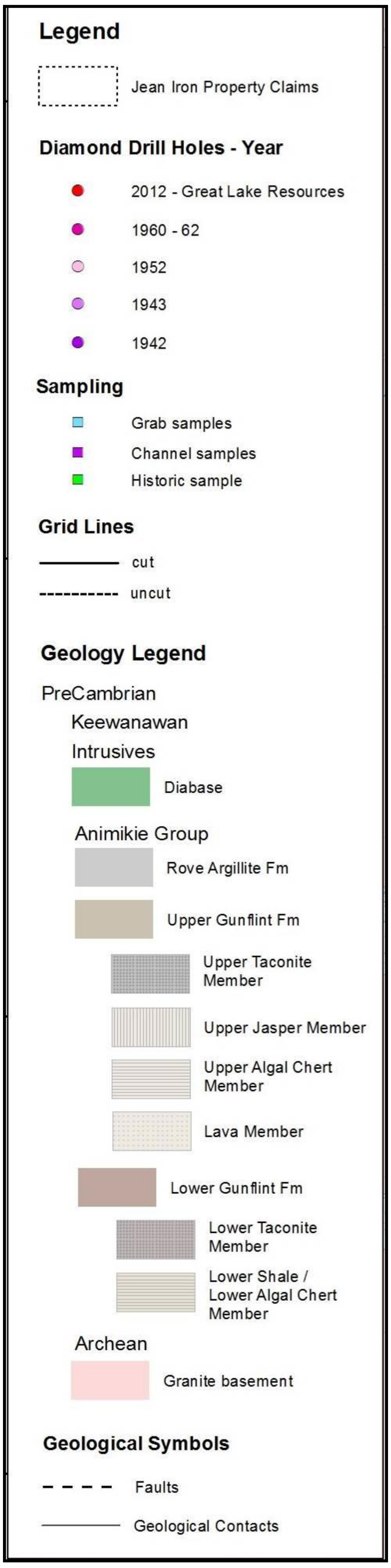
1. Two samples, DT Composite #1 and DT Composite #2 are mineralogically fairly similar. DT Composite #2 has higher magnetite content (9.5%) than DT Composite #1 (7.14%). The difference corresponds to slightly higher magnetite grain size (26 microns) in the former in compare to latter (20 microns). Goethite/Siderite accounts for between 3.8% and 4.4% in these two samples.
2. Sample from Upper Shale Member, #1078112 contain <0.1% magnetite. The main iron minerals are pyrite (14.3%) and high goethite/siderite contents (combined 17.3%).

In essence, Lower Taconite Members samples are mineralogically fairly similar with average magnetic content of 8.34% (from 9.5% to 7.14%) and average magnetic grain size of 23 microns

(20 to 26 microns). The non-magnetic goethite/siderite averaged 4.1% (3.8%-4.4%). The other sample, Lower Shale contains <0.1% magnetite with main iron minerals as pyrite (14.3%) and goethite/siderite contents (combined 17.3%) (Aung 2012).

Figure 4: Location of Historical Drill Holes





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7.0 GEOLOGICAL SETTING AND MINERALIZATION

7.1 Regional Geology

The Paleoproterozoic iron formations in the seven iron ranges of the Lake Superior region crop out in in northwestern Ontario, east-central and northern Minnesota, northern Wisconsin, and the Upper Peninsula of Michigan as an oval shaped region encompassing 220,000 km^2. Iron formation strata in the Lake Superior region were the first to be mined on a large scale in North America and to have their geology described in detail (Figure 5). Iron formations in other parts of the world were compared to the Lake Superior ranges and genetic concepts were developed with direct reference to the sedimentary basins in this classical area. Similar iron formation lithofacies and stratigraphic- tectonic settings have been reported on all continents. The iron ranges of the Lake Superior region have provided an excellent type-area for reference and study of iron formation and other stratafer sediments in continental shelf and platform settings (Gross 2009).

Extensive Lake Superior-type iron formation (LSTIF) ranges were developed along the margins of cratons or epicontinental platforms between 2.4 Ga and 1.9 Ga (Figure 5). Thicker iron formations were deposited in shallow basins on continental shelves and platforms in neritic environments, interbedded with mature dolostone, quartz arenite, black shale and argillite. Iron formation units in the Animikie basin were the first examples of LSTIF to be described in detail and remain as the principal type area for reference (area around L. Superior and L. Michigan on Figure 5).

The Paleoproterozoic sedimentary rocks deposited in the Animikie Basin form: a southward-thickening wedge covering the southern margin of the Superior province, which is truncated in east-central Minnesota and northern Wisconsin by: the 'Penokean" magmatic terranes". The nature of the sediment varies from volcanic and clastic to the chemical precipitates which form the thick successions of iron formation. The termination of the Penokeani orogeny marked the onset of an intrusive igneous phase which emplaced subduction related tonalitic and granitic plutons into the Anirnikie sediments and the arc related volcanics of the Wisconsin magmatic terranes. The present form of the basin was achieved around 1 Ga ago when a north-northwest trending branch of the-Midcontinental Rift System separated the Animikie sediments into a northwestern and southeastern segment. The northwestern segment of the Anirnikie Group unconformably overlays the Superior Province and consists of a basal sandstone-siltstone (Pokegama Quartzite, Mahnomen Formation), iron formation (Gunflint, Biwabik, Trommald iron formations), and a thick, upper, shale-siltstone sequence (Rove, Virginia and Rabbit Lake Formations) (Gross 2009).

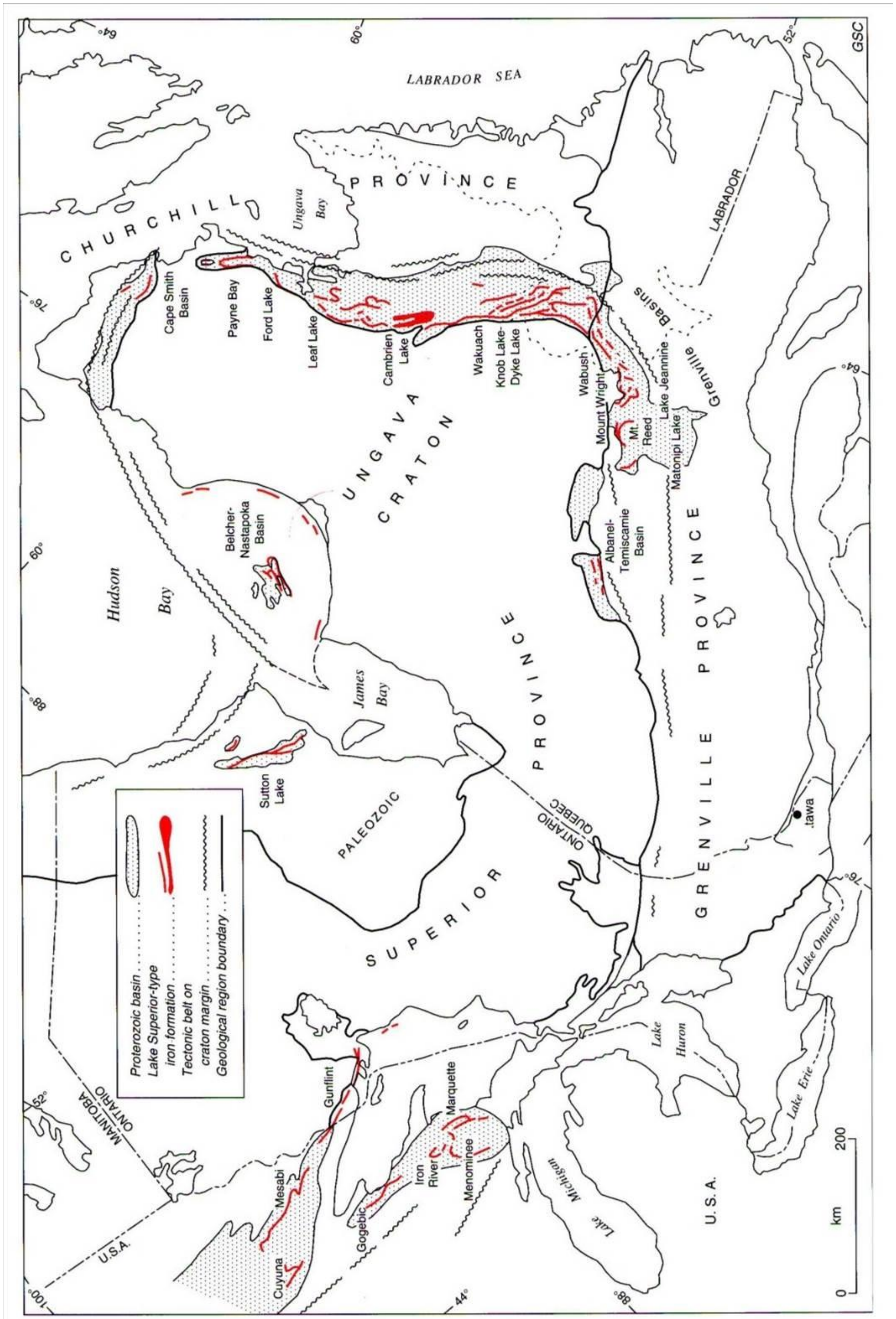


Figure 5: Regional geological map showing location of iron ranges (G.A Gross 2009).

7.2 Local Geology

Locally, the Jean Lake Property area is underlain by an Archean granitic basement, which is unconformably overlain by gently southerly-dipping sedimentary rocks of the Aphebian (lower Proterozoic) Animikie group. These sediments are capped by a Helikian (1.0 Ga) Keweenawan diabase sill. Unconsolidated rocks are Pleistocene age glacial till debris which forms an extensive mantle over low -lying parts of the area (Figure 6 and Table 7).

Table 7: Generalized stratigraphic column of the area

Era	**Group**	**Formation/ Rocks**
Pleistocene and Recent	Glacial Till	Unconsolidated gravel, sand, and clay
Unconformity		
Helikian (1.0 GA)	Keweenawan Group	Diabase sill and related rocks
Intrusive Contact		
Aphebian (Lower Proterozoic)	Animikie Group	Rove Formation argillites Gunflint Iron Formation
Unconformity marked by Kakabeka Formation Conglomerate		
Archean	Algoman	Granite, granite gneiss, with inclusion of chlorite and mica schist

Source: Goodwin, A.M. (1952)

7.2.1 Archean Basement Rocks

Basement related Algoman-type granitic rocks consist predominantly of normal, pink granite and granite gneiss. The texture ranges from conspicuously gneissic to coarsely pegmatitic. Numerous inclusions of chloritic and micaceous schist, and gneiss of various shapes and sizes, occur within the granite.

7.2.2 Aphebian Animikie Group

Sedimentary and volcanic rocks of Animikie Group consist of two formations: the lower Gunflint iron formation, and the upper, the Rove argillite formation. These rocks gently dip south at an average angle of 5 degrees.

Gunflint Iron Formation

The Gunflint iron formation consists mainly of sedimentary rocks that are unusually rich in iron. Zircon dating of the Gunflint formation yielded an age of 1878.3± 1.3 million years. The formation is characterized by unusually high iron content, as well as by a variety of textures, the granular texture of the taconite rock being most distinctive. The Gunflint formation is approximately 145 m thick and is divided into lower and upper cycles. Each cycle contains a sequence of members, most of which are common to both. The uppermost member, a limestone bed, is unique to the formation and marks the top of the iron-bearing rocks. The general stratigraphy of Gunflint formation is presented in the following table.

Table 8: Stratigraphy of Gunflint Iron Formation

Cycle	Member	Thickness (metres)
Upper Gunflint	Upper Limestone	1.5 – 6
	Upper Taconite	45 – 55
	Upper Shale	1.5 – 5
	Upper Jasper	12 – 20
	Upper Algal Chert	2.5 – 6.5
	Lava Flow Locally	0 – 12
	Total Upper Gunflint	**62.5 – 104.5**
Lower Gunflint	Lower Taconite	46 – 64
	Lower Shale	1 – 6
	Lower Algal Chert	0.6 – 4.5
	Basal Conglomerate	0 – 0.3
	Total Lower Gunflint	**47.6 – 74.8**
Total Thickness of Gunflint Iron Formation		**110.1 – 179.3**

Source: Goodwin (1952)

Basal Conglomerate

The pebbles of the conglomerate are formed of white vein quartz, milky white chert, and occasionally jasper. Most pebbles are around 2.5 centimeter in diameter, although several with diameters of 15 centimeters are present, and the majority is well rounded. The matrix consists of sandy quartz grains with considerable admixed chloritic material.

Lower Algal Chert

The algal chert is commonly in the form of reef-like mounds, which are roughly elliptical in plan view and average 3-meter-long, 1.5-meter-wide, and 0.6 meter thick. The chert forming the mounds is finely contorted in the manner typical of algal structures. Small brown, white, and red granules are often closely associated. The algal chert typically grades upwards into green and white banded chert with massive texture.

Lower Shale

The shale is soft, black and typically fissile. Thin-section examination carried by previous workers revealed much fine-grained clastic material together with carbonaceous matter. Bands of grey to black chert, commonly flecked with pyrite, are present near the top of the member.

Lower Taconite

The lower taconite is approximately 60 m thick and contains roughly 26% iron 46% silica. The upper unit is 40-50m thick and averages 31% iron with 43% silica (Goodwin 1961). Weathered rocks of the member are characterized by a shingly appearance due to numerous closely spaced parting planes, rusty colour, and finely granular texture. Under the microscope, the typical rock of this member is seen to consist of small granules up to 2 millimeters in diameter, in a fine-grained chert or carbonate matrix. The granules consist of a mixture of fine-grained chert, a green silicate mineral (probably greenalite), and iron oxide. The iron oxide is commonly an intimate mixture of hematite and magnetite, or near the weathered surfaces, the hydrated equivalents. The oxides often form the rims of granules.

The matrix to the granules is fine-grained chert or ferruginous carbonate. Where the carbonate is present the granules are not well formed. Carbonate nodules are common in certain beds. In cross-section, the nodules are characteristically round and occasionally slightly elliptical. The individual nodule when fresh is typically composed of salmon pink, finely crystalline carbonate, commonly with a rim of greenalite. The carbonate shows rusty weathering, the colour being yellow, orange, brown, or black, depending on the degree of oxidation and hydration. There is a variation in the relative proportions of chert, greenalite, hematite, and magnetite, within the unweathered beds of the member. Some beds are unusually rich in the iron oxide minerals, whereas adjacent beds contain a high proportion of chert and greenalite.

Upper Algal Chert

This member can be further divided into three parts based on the mode of occurrence of chert; which include from bottom to top: i) Granular chert with jasper veinlets (0.6m – 3m thick); ii) Algal-oolitic chert, lava flow locally (1.2m – 15m thick); and iii) Coarse granular ferruginous chert (0.6m – 2m thick).

Hematite bearing veinlets are present in the flow rock. Thin-section study reveals oolitic granules formed of concentrically banded red hematite and chert up to 5 millimetres in diameter, in a fine-grained chert matrix (Goodwin 1952).

Upper Jasper Member

The rocks of this member grade upwards by increase in shaly material to shale of the overlying member. The jasper lenses consist of abundant, close-packed, small red granules in a chert matrix having a granular texture. Not all granules are red; occasionally a lens has a local concentration of green granules or a general intermixture of red and green. There is an increase of green granules relative to red granules towards the top of the member, and the uppermost lenses are predominantly green. The lower beds of the member are characterized by granules and small lenticles, or beads, of jaspery chert; this grades upwards into beds consisting of thick lenses of granular jaspery chert with shaly partings.

Upper Shale Member

The member consists largely of black, fissile shale. Locally, small concretions are present; they are generally 5-7 cm in diameter and composed of black sideritic carbonate. A prominent feature of the Shale member, and a good horizon marker, is the presence of a pisolite layer near the top of the member. The layer is 22-45 cm thick. It consists of pisolites averaging 1/8 inch in diameter that are somewhat flattened along the bedding plane. They weather characteristically to a rusty brown colour and are easily noticed against the background of black shale.

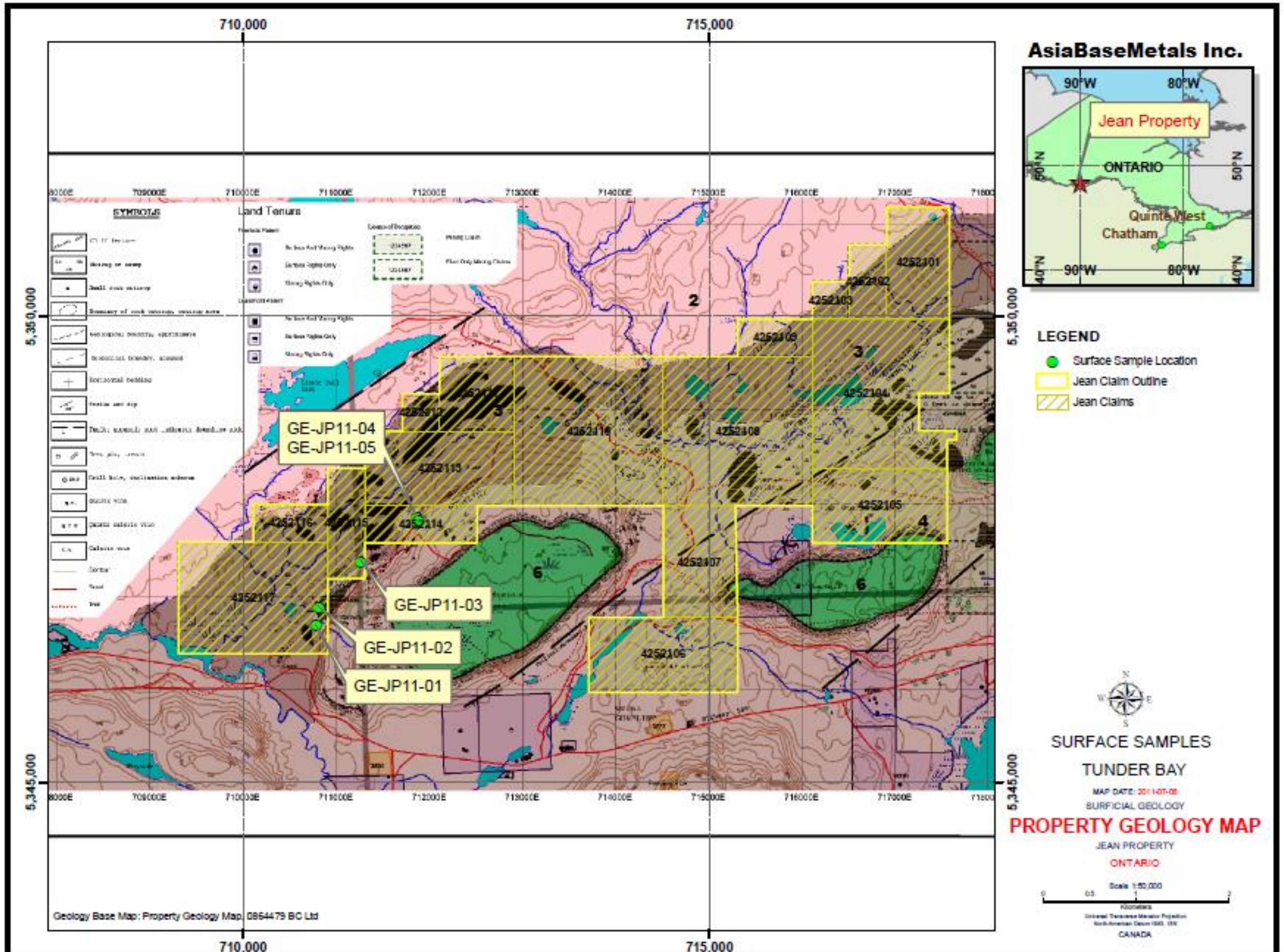
Upper Taconite Member

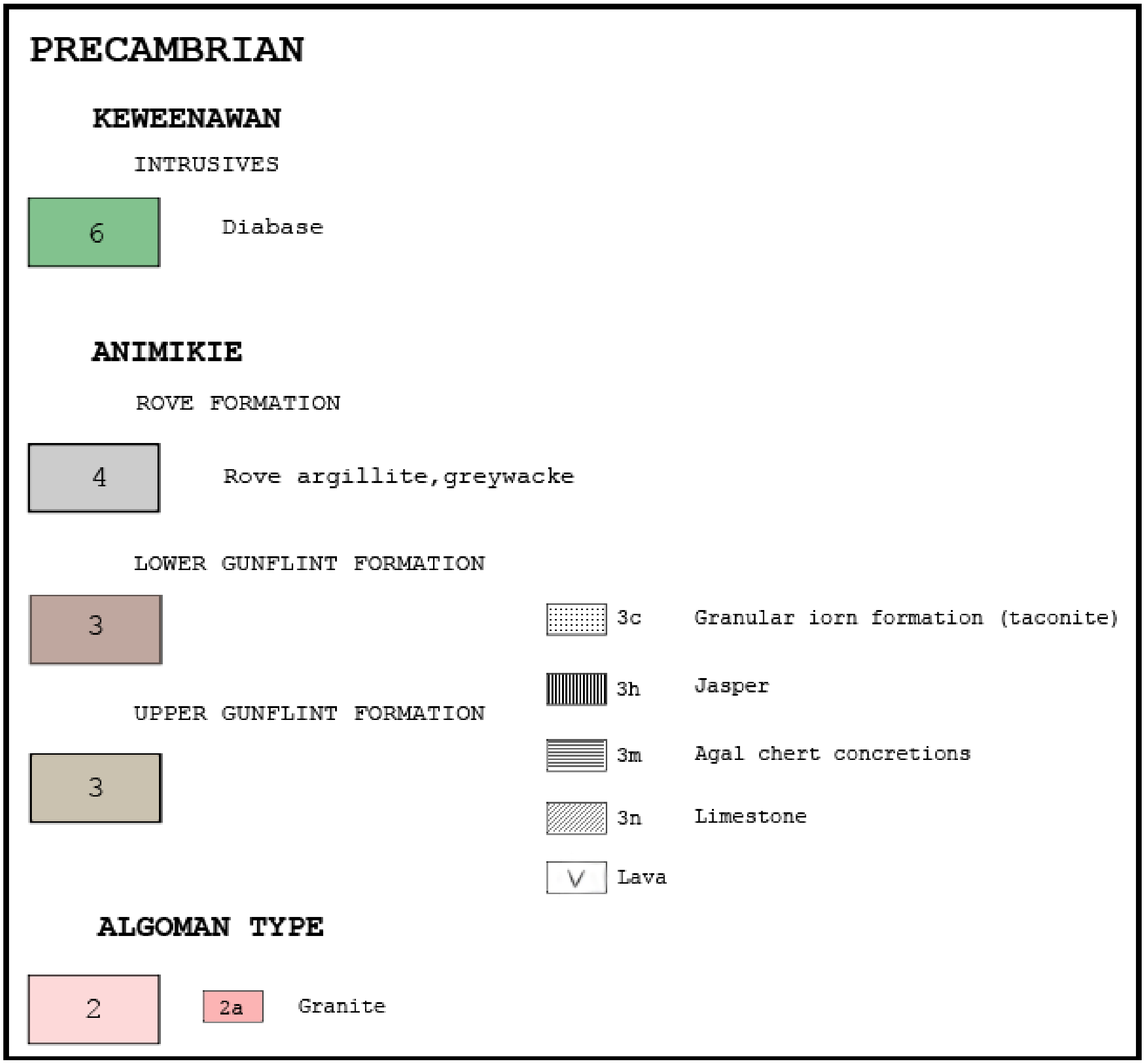
The rocks of this member consist of thick-bedded granular chert with shaly partings. The chert layers are commonly green in colour, due to abundant greenalite granules. The thickness of the chert layers' ranges from 12 to 60 centimeters. An occasional layer is of uniform thickness, but most are noticeably wavy banded; such bands pinch and swell within a lateral distance of 3-7 metres. Within a vertical section, chert lenses are arranged so that the thick part of a particular lens rests in the hollow formed by the tapered extensions of subjacent lenses. The plan view of a lens is typically circular to elliptical, so far as was determined.

The shaly partings that separate chert beds range in thickness from 2-30 centimetres, most commonly about 10 cm. The partings are dark-brown to black and very fine grained. They consist of an intermixture of ferruginous carbonate, magnetite, and occasional fragmental grains. Beds within 25 metres of the diabase sills have considerably higher magnetite content than normal. In such beds, the magnetite grains are up to 3 millimetres in diameter; they occur in both the chert layers and shaly partings, but more abundantly in the partings. Bands up to 12 cm thick, rich in magnetite were observed; however, cherty material is usually intimately associated.

The upper 7 metres of this member consists locally of beds that have been highly contorted and brecciated. The rock now consists of chert fragments, up to 15 cm thick and 60 cm long, within a matrix of magnetite, secondary iron bearing amphibole minerals, and calcite. The chert of the fragments is commonly dark-grey to black and finely laminated. The rock appears to have consisted originally of thinly inter-banded chert and ferruginous carbonate.

Figure 6: Local Geological Map with Location of 2011 Property Visit Samples





Legend for Figure 6

Upper Limestone Member

The limestone of this member is typically dark-grey to black and very fine grained. It is easily confused with the finer-grained phases of diabase. There are usually thin inter-bandings of grey-to-black massive chert up to 5 cm thick.

Rove Formation

The Rove formation consists typically of thinly-bedded, black to dark-grey argillite. They are several hundreds of metres thick, intruded by the Keweenanwan diabase sills and cut by steeply dipping northwest and northeast trending normal faults. Within the Rove formation, quartz carbonate veins emplaced along these faults in a belt extending northeast and southwest of Thunder Bay are mineralized with native silver, argentite, sphalerite, galena, pyrite, pyrrhotite, and chalcopyrite. The veins are predominantly hosted in the flat-lying Rove formation sediments, but also occur in the diabase sills and rarely in the Archean basement. This type of mineralization supported several mines, the largest of which were the Beaver, Silver Mountain, and Badger.

7.2.3 Helikian Keweenawan Group

Rocks of the Kewaneenawan in the Jean Property area consist of diabase intrusives dipping gently southward, conforming more or less with the attitude of enclosing sedimentary rocks.

7.2.4 Pleistocene and Recent

Unconsolidated sand and gravel of Pleistocene and Recent age are widespread and in places very thick. Most of the material is unsorted and appears to represent glacial debris; along the river banks, however there has been considerable reworking and sorting. The thickness of the debris ranges from a thin discontinuous mantle of boulders on top of the diabase-capped hills to sand and boulder deposits up to 75 metres thick, such as occur on the southeast side of Mink Mountain.

Structure

The Animikie sedimentary rocks are essentially flat-lying and rest upon a granite terrain of low relief. The principal disturbance has been due to normal gravity faults which are common throughout the area. The beds of Gunflint iron formation are gently dipping southward with an average angle of 5 degrees. Local folding and brecciation occur in the uppermost part of the Gunflint iron formation due to violent volcanic disturbances that occurred towards the end of the deposition of iron-bearing rocks.

There appear to be two principal systems of normal gravity faults within the map area. One system strikes northeast; the other, generally northward. The age relationship between them was not determined, as individual faults cannot be traced with certainty for more than a few kilometres.

One example of an east-trending fault is located between Silver Bluff and Divide Ridge, in which the north side appears to have moved down about 30 m relative to the south side. Another example is the fault southeast of Mink Mountain, where the south side has moved down about 75 m.

The north-trending system is illustrated by the two faults, one on either side of the North River, that together have formed a down-faulted block, or graben. Movement has been about 60 m.

A fault is indicated between Silver Bluff and Silver Mountain. The diabase capping rocks at both localities are at the same elevation, but whereas the capping rock at Silver Bluff is underlain by iron-bearing rocks of the Gunflint formation, there is 60 m of Rove argillite beneath the capping rock of Silver Mountain. There are probably many other faults in the area but with such limited vertical movement that they are not readily discernible.

7.3 Property Geology

The Jean Property is underlain by an Archean granitic basement, which is unconformably overlain by gently southerly-dipping sedimentary rocks of the Aphebian (lower Proterozoic) Animikie group. These sediments are capped by a Helikian (1.0 Ga) Keweenawan diabase sill which covers the entire south slope of the hill north of Whitefish Lake (Figure 4).

The basal conglomerate member of Gunflint Iron formation is well exposed along the north fringe of the iron formation, where it forms a thin skin on top of the basement complex. The thickness of the conglomerate is seldom more than 30 centimetres, even where completely preserved, and is usually only a few centimetres. Algal chert rests directly upon the basal conglomerate, or where this is absent, upon the granitic basement. There are excellent exposures north of Burnt Bridge on the Whitefish River. The total thickness of the member ranges from 0.6 to 4.5 metres.

The algal chert member is commonly in the form of reef-like mounds, which are roughly elliptical in plan view and average 3 m long, 1.2 m wide, and 0.6 m thick. The chert forming the mounds is finely contorted in the manner typical of algal structures. Small brown, white, and red granules are often closely associated. The algal chert typically grades upwards into green and white banded chert with massive texture.

Rocks of the Lower Taconite member are exposed along the north slope of Mink Mountain, on the banks of the Whitefish River, and on numerous small hills and ridges north of this river.

Rocks of the Upper Algal chert member are exposed on the west and east flanks of Mink Mountain, beneath the diabase sill of Divide Ridge, along the banks of the Whitefish River, and within the North River down-faulted block. The thickness of the member ranges from 2.5 to 7 metres. There is a scattering of large boulders containing considerable amounts of hematite and magnetite, distributed over the area that is apparently underlain by flow rock. The boulders are up to 2 metres in diameter, and typically contain hematite and magnetite in the form of large granules up to 0.5 cm in diameter, and lenticles as much as 5 cm long (Goodwin 1961). Under the microscope, the granules and lenticles are seen to consist of an intimate intergrowth of specular hematite and magnetite.

Beds of Upper Jasper Member are exposed the east and west sides of Mink Mountain. There are also good exposures beneath the capping sill of Divide Ridge. The member ranges in thickness from 12 m to 20 m. The Upper Shale member is exposed in the same localities as the underlying Jasper member. It ranges in thickness from 1.5m to 5m and is persistent throughout the Property area.

Upper Taconite beds are exposed beneath the capping sills of the hills and ridges of the area. There are particularly good exposures on the north face of Silver Bluff. The member is 45-55 metres thick. The Upper Limestone member is exposed immediately north of the abandoned railway on the south slope of Sun Mountain; the thickness is estimated to range from 1.3 to 6 m.

Interpretation of Geology from Flint Rock Drill Holes

In this relatively flat-lying sedimentary sequence, drilling is really the only way to get a good review of the Gunflint formation in the Property area. Drilling conducted by the past operators indicates that the taconite sequence averages in the order of 60 m and ranges up to 90 m true thickness. Logging in the Flint Rock holes has differentiated between upper and lower taconite units. The upper taconite unit is composed largely of hematite dominant shales and jasper, and the lower taconite composed predominantly of magnetite dominant chert and shale. Both units have similar total iron contents, and there is no significant barren zone between the two.

7.4 Mineralization

Partial analyses are available to determine the average composition of mineralized beds of the Gunflint iron formation. The members considered in this respect are the Lower Taconite member, Upper Jasper member, and the Upper Taconite member. The other members of the formation are relatively thin and contain less iron.

Table 9: Average Iron and Silica Content of Mineralized Members in Gunflint Iron Formation

Member	Number of Historical Assays	Iron (Fe) (Percent)	Silica (SiO_2) (Percent)
Lower Taconite	18	25.71	46.44
Upper Jasper	20	25.50	46.36
Upper Taconite	20	30.70	43.16

Source: Goodwin 1961

8.0 DEPOSIT TYPES

8.1 Deposit Types

There are four major types of iron deposits around the world being worked currently, depending on the mineralogy and geology of the deposits. These are magnetite, titanomagnetite, massive hematite and pisolitic ironstone deposits. Banded Iron Formation (BIF) also known as taconite in North America are metamorphosed sedimentary rocks composed predominantly of thinly bedded iron minerals and silica (as quartz). Jean Property is mainly underlain by Gunflint Iron Formation, a BIF which is mainly comprised of taconite rocks. The formation is similar to the taconite deposits of the Mesabi Iron Range in northern Minnesota, where iron mining occurred for over 100 years and continues to expand into the future.

The key economic parameters for magnetite ore being economic in BIF are the crystallinity of the magnetite, the grade of the iron in the host rock, and the contaminant elements which exist within the magnetite concentrate. Non-economic rock types interbedded with the iron formation must be sufficiently segregated from the economic iron-bearing areas. At the Jean Property, however, hematite appears to be the dominant iron species rather than magnetite. The thin magnetite bands are mixed with chert, limestone and shale.

The typical grade of iron (Fe) at which a magnetite-bearing banded iron formation becomes economic is roughly 25% Fe, which can generally yield a 33% to 40% recovery of magnetite by weight, to produce a concentrate grading in excess of 64% Fe by weight. The typical magnetite iron ore concentrate has less than 0.1% phosphorus, 3–7% silica and less than 3% aluminum. Generally, most magnetite BIF deposits must be ground to between 32 and 45 micrometres in order to provide a low-silica magnetite concentrate. Magnetite concentrate grades are generally in excess of 63% Fe by weight and usually are low phosphorus, low aluminum, low titanium and low silica and demand a premium price (USGS 2010).

8.2 Deposit Models

Stratigraphically, to the southwest, the Gunflint Iron formation of Jean Property strikes into Minnesota where it is known as the Biwabik formation. In Canada the formation is relatively undeformed, but in Minnesota it was folded during the Penokean Orogeny (1.85 Ga). In this deformed part of the belt the cherty iron formation was sporadically oxidized and leached creating zones of enrichment containing between 50 and 70% iron. It is a similar setting and age to the iron deposits in the Labrador trough. These high-grade ore deposits in Minnesota were known as the Iron Range, the largest of which was the Mesabi Iron Range. Since their discovery in 1890, they have produced in excess of 3.6 billion tonnes of iron ore, 2.3 billion of which was from the high grade lenses. It is the largest iron resource in the United States and still produces significant portion of the nation's iron output. Shortly after the Second World War the high grade resource was largely exhausted. There was still, however, a huge resource of what was called "taconite" ore. Taconite was a term given to the unoxidized (unweathered) cherty iron formation (as occurs in the Gunflint formation on Jean Property) grading in excess of 25% iron. This taconite ore became economic with the development of a beneficiation process. The ore is ground, concentrated with magnetic separators, mixed with clay and dolomite, and roasted into pellets. The final grade of these pellets is typically 60-65% iron.

The taconite ore in the Biwabik formation in Minnesota appears texturally to be of fine-grained cherty fragmental or sandstone. Although it appears to be clastic sediment, it is felt that 95% of this material was deposited as a chemical precipitate. Iron was probably precipitated as an "oxy-hydroxyl carbonate gel" with minimal clastic component. The clastic textures observed are probably due to reworking of the precipitate; possibly by wave or current action, or by slumping (turbidity currents). Magnetite distribution appears in some cases to be related to porosity and permeability of the host rocks. Fine-grained, silty, and presumably less permeable, horizons are typically barren.

To be of value as concentrating material, the iron-bearing rock must be of appropriate chemical and textural composition and readily available in large quantities. The iron-bearing rocks of the Lower and Upper Taconite members on the Jean Property are considered with this in mind. There are widespread exposures of Lower Taconite rocks in the general area north of Mink Mountain and Whitefish River. Thicknesses in the range of 15 m to 70 m have been encountered in drill holes. Furthermore, the material is relatively soft and friable, and is exposed over a large area without capping rock to hinder extraction.

The analyses of Upper Taconite rocks indicate that they contain more iron and less silica than the Lower Taconite rocks, and the magnetite content in proximity to diabase sills is considerably higher.

Exploration Criteria:

Since the average composition of the iron-bearing rock contains too much silica for its use as ore material, good exploration criteria is to search for parts of the iron-bearing rock that have been concentrated by natural processes, or are amenable to commercial beneficiating methods.

Rocks of the Lower Taconite member appear to have been weathered more than other parts of the formation, particularly in the ridges and mounds north of the Whitefish River. However, close inspection of the outcrops reveals that alteration is restricted to a rim 2-5 cm thick. The chemical analyses demonstrate that there has been little, if any, removal of silica and other impurities.

Outcrops and drill core of Upper Jasper rocks apparently give indication of slight surface alteration, and hold little promise of large scale, natural concentrations. A 30 cm bed of soft hematite ore, assaying 52 percent iron and 3-8 percent silica, was reported to have been encountered at a depth of 250 feet, in the region south of Mink Mountain, by Gunflint Iron Mines Limited, in 1943 (Goodwin 1961).

It is possible that rocks of the Upper Taconite member that formerly overlay the diabase sill underwent oxidation and leaching of impurities before removal. Such iron-enriched material might have been concentrated in low-lying areas, such as Whitefish Lake and vicinity, and thus protected from erosion. However, there is no direct evidence that such a concentration exists.

Concentrations of iron-rich material can also occur along fault planes. Fault zones that might repay investigation lie between Silver Bluff and Divide Ridge, between Silver Bluff and Silver Mountain east of North River where the iron-bearing rocks abut on granite, and southeast of Mink and Sun mountains.

In conclusion, the economic future of the iron-bearing rocks appears to depend upon a process that can produce a commercial concentrate. More detailed experimental investigation might reveal such a process.

9.0 EXPLORATION

In 2015, ABZ carried out exploration on the Property which included prospecting, mapping, surface sampling, trenching and channel sampling. An exploration work permit (PR15-412660) was issued effective April 07, 2015 to March 06, 2018 to carry out mechanized drilling (assembled weight >150kg), mechanized stripping (>100m^2 in 200m radius), pitting and trenching (>3m^3 in 200m radius), and line-cutting (>1.5m width) on the Property. Aboriginal communities to be potentially affected by the exploration activities were consulted during the exploration permit application process and at the time of its execution. A total of 74 rock samples were collected, out of which 49 were channel samples for XRF analysis and 12 for Davis Tube Testing from 5 trenches, 8 grab rock surface samples for XRF, and 5 field duplicate samples for XRF as part of field QA/QC program. Total cost of this exploration work is $50,215.66. Details of the exploration work and its results are provided in the following sections.

9.1 Exploration Work Details

9.1.1 First Nations Consultations

The Jean Iron property is located in traditional area of interest of the following three First Nations.

- Metis Nation of Ontario (MNO)
- Red Sky Métis Independent Nation
- Fort William First Nation

Several emails regarding work program details were sent to all three First Nations groups with a request for face to face meeting. Red Sky Metis Independent Nation asked for a meeting which took place on October 08, 2015, in their community office at 406 East Victoria Avenue, Thunder Bay. A brief outline of scope of current exploration work, general market consideration for iron ore depressed prices, and struggle of junior mining industry was provided by the author. The group indicated their support of the project and it was agreed to keep in touch if the project moves forward.

Similarly, another meeting took place with Mr. Kevin Muloin, Coordinator for Metis Nation of Ontario on October 13, 2015 in his office at 226 May Street, Thunder Bay. The meeting was also attended by Andrew Kane, Mineral Exploration and Development Consultant from the Ministry of Northern Development and Mines. A brief outline of scope of current exploration work, general market consideration for iron ore depressed prices, and struggle of junior mining industry was provided by the author. Mr. Muloin provided details of activities related to his office and potential mutual collaboration in case Jean iron project moves forward. Potential availability of other iron ore projects in Ontario also came under discussion.

9.1.2 Prospecting and Outcrop Mapping

The prospecting and mapping work commenced from October 05-31, 2015 and its purpose was to map Gunflint Iron Formation outcrops for trenching and channel sampling, and to collect representative samples for iron analysis. A total of eight grab rock samples were collected during this work from different outcrops or subcrops as listed in Table 10.

It was observed that, majority of the property area, particularly the area underlain by the Gunflint Iron Formation is covered by glacial overburden with the exception of diabase sill rocks which are more resistant to weathering. The overburden is especially thick in the southeastern part of the property, on claims 4252105, 4252106, and 4252107 where a gravel pit operation has exposed approximately 50-meter-thick layer of overburden. Algal chert and jasper containing rocks are found to be more resistant to weathering and exposed at places; whereas, a few new road cuts were also helpful in locating Taconite and shale outcrops. Several Gunflint Iron Formation outcrops were mapped, out of which five outcrops were selected for stripping and channel sampling work on the property. Iron content of shales was observed to be generally low with rusty brown surface weathering due to disseminated hematite along fractures and bedding planes. Jasper and algal cherts are found to be rich in iron and are more magnetic than other units of Gunflint Iron Formation. Taconite unit visually contains 20% to 30% iron. Lower contact with Archean granites is well exposed in the northern part of the property and adjoining areas. Basal conglomerate at the base of Lower Gunflint Iron Formation is thin and not well exposed. Similarly, upper contact with diabase sills is well marked in the southern part of the property and adjoining areas.

Photo 1: Taconite outcrop exposed after stripping

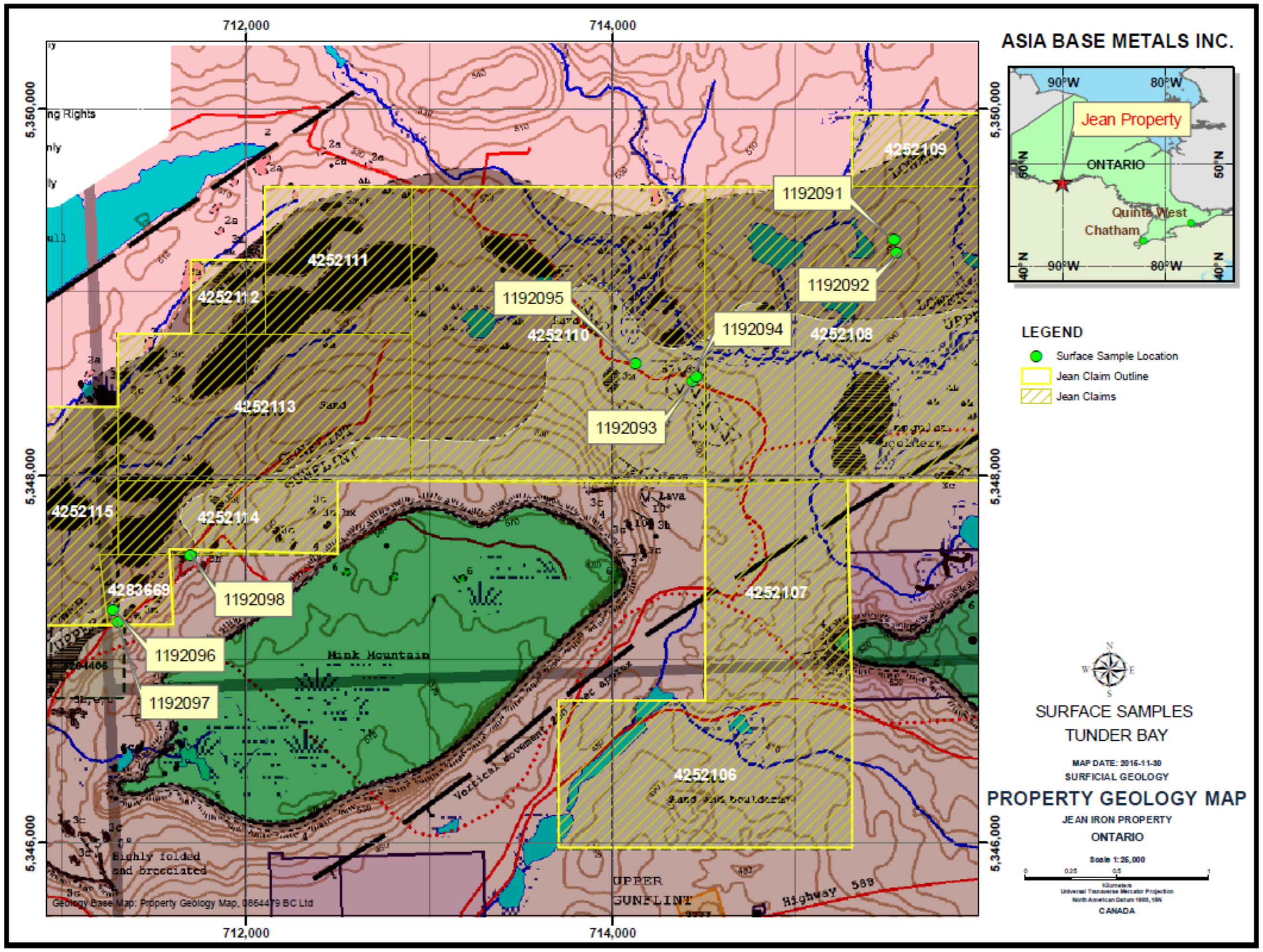
Photo 2: Taconite sample

Table 10: List of Grab Rock Samples

Sample ID	Easting	Northing	Claim Number	Type	Description
1192091	715513	5349284	4252108	Grab, outcrop/ subcrop	TACONITE: Dark grey, fine to medium grained, medium bedded, brown weathered surface due to hematite, siliceous, 20% magnetite.
1192092	715544	5349214	4252108	Grab, outcrop/ subcrop	TACONITE: dark grey, fine to medium grained, medium bedded, brown weathered patches and layers due to hematite, siliceous, 25% magnetite.
1192093	7114433	5348511	4252110	Grab, outcrop	TACONITE: Dark grey to brown, hematite staining and patches, reddish jasper at places, less magnetic (<20%), fine grained, green clayey parts.
1192094	714452	5348539	4252110	Grab, outcrop	TACONITE: Greenish grey to dark grey, brown haematitic weathering, reddish jasper at places, shingly to massive, <20% magnetite.
1192095	714123	5348607	4252110	Grab outcrop	TACONITE: Dark grey, shingly to massive, hematite along fractures and bedding planes, less green minerals more magnetic (30% magnetite).

Sample ID	Easting	Northing	Claim Number	Type	Description
1192096	711275	5347266	4283669	Grab outcrop	TACONITE: Dark grey, thinly to medium bedded, hematite weathering with red jasper at places, highly magnetic (35% magnetite).
1192097	711302	5347200	4283669	Grab, outcrop	Same as above but massive and more jasper.
1192098	711696	5347568	4252114	Grab, outcrop	TACONITE: Dark grey, massive, jasper at places, highly magnetic (30% magnetite), sample at the claim boundary.

Figure 7: Location of Surface Samples - 2015



9.1.3 Trenching and Channel Sampling

Majority of the property area is covered by quaternary overburden of varying thicknesses. Outcrops of Taconite bearing Lower Gunflint Iron Formation were marked during prospecting, for stripping and channel sampling work. A rubber tire backhoe and an excavator was used for stripping overburden. Trenching and stripping was carried out at four locations (TR 15-01, TR 15-02, TR 15-03, and TR 15-05). One Taconite rock outcrop was found exposed at location of trench TR 15-04 due to a new road cut, therefore, a new claim (Number 4283669) was immediately staked by ABZ to cover this outcrop. Details of trenching work is provided as follows:

<u>Trench TR 15-01:</u>

This trench was excavated to uncover a partially exposed Lower Shale Member of Lower Gunflint Iron Formation. The shale member is dark grey to brownish grey in colour with rustier brown on weathered surface due to staining and fracture filling of hematite. It is thin to medium bedded, calcareous at places, strongly to moderately magnetic, and laterally it changes to dark grey siltstone. A total of four samples were collected to determine iron content, where each sample was chipped across 0.75 m channel length. One composite sample (1192064) from entire 3-meter channel length was collected for Davis Tube Testing (DTT) (Table 11). A small excavator was used to remove overburden and dig deeper parts of outcrops.

Table 11: Trench TR 15-01 Log

Start Date: October 11, 2015		Claim Number: 4252113		End Date October 11, 2015
Coordinates	Sample ID XRF	Length (m)	Sample ID DTT	Lithology
5348391N / 0711391E / 508m	1192061	3		SHALE/ARGILLACEOUS TACONITE: Dark grey to brownish grey, more shaly at places, Lower Shale Member of the Lower Gunflint Iron Formation (GIF), thin bedded, brown rusty weathering, pyrite nodules, calcareous at places, magnetic to weakly magnetic (10-15% magnetite)
	1192062	2.25		SILTSTONE/SHALE: Dark grey to brownish grey, medium bedded, splintery, breaks in columns, vertical and bedding joints, 15% magnetite
	1192063	1.5	1192064	Same as above

WP 244: 5348393N/0711392E/506m	1192099	0.75		TACONITE/SILTSTONE: Dark grey, brown weathering colour, hematite filling along bedding planes, more argillaceous, splintery, medium bedded, 10% magnetite, flat dipping 3-degree south with E-W strike

Photo 3: Trench TR 15-01

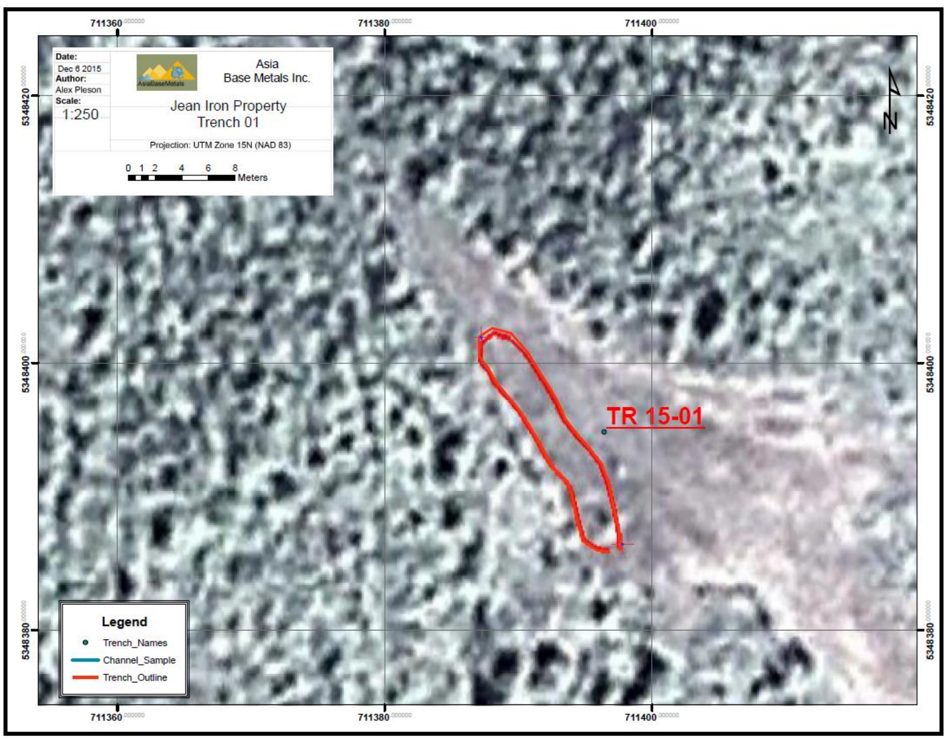


Figure 8: Map of Trench TR 15-01

Trench TR 15-02:

This trench is located approximately 400 m to the south of Trench TR 15-01 in the extension of same shale outcrop belonging to Lower Shale Member. A total of two chip channel samples, each with one-meter thickness, were collected for XRF analysis to determine the iron content, and one composite sample for DTT along the entire exposed thickness of outcrop (Table 12).

Table 12: Trench TR 15-02 Log

Coordinates	Sample ID XRF	Length (m)	Sample ID DTT	Lithology
Start Date: October 11, 2015	Claim Number: 4252115		End Date October 11, 2015	
WP 211: 5348134N/0711036E/504m	1192065	2		SHALE: Dark grey with brown weathering, thinly bedded, splintery, fissile, carbonaceous at places, hematite patched and filling along bedding, 15% magnetite, Lower Shale Member of the Lower GIF
WP 212: 5348132N/0711038E/502m	1192066	1	1192067	Same as above, more magnetic (20%)

Photo 4: Trench TR 15-02 sampling

Figure 9: Location of Trench TR 15-02

Trench TR 15-03:

This trench was excavated to strip a taconite outcrop of Lower Gunflint Iron Formation, by using a rubber tire backhoe and an excavator. A total of 21-meter-long channel was cut using a mechanical saw and blades. Each sample was collected across one-meter length of the cut channel for XRF analysis to determine its iron content. 21 samples were taken from this location. Additionally, four composite samples were taken for DTT to determine magnetic and no-magnetic fractions. Three duplicate samples were also collected as part of field quality control and quality assurance (QA/QC) purposes.

The overall lithology of this section is comprised of dark grey to greenish grey taconite, strongly to moderately magnetic, shingly to massive in nature, showing internal micro-folding and fracturing at places. Greenish color is due to greenalite mineral in taconite.

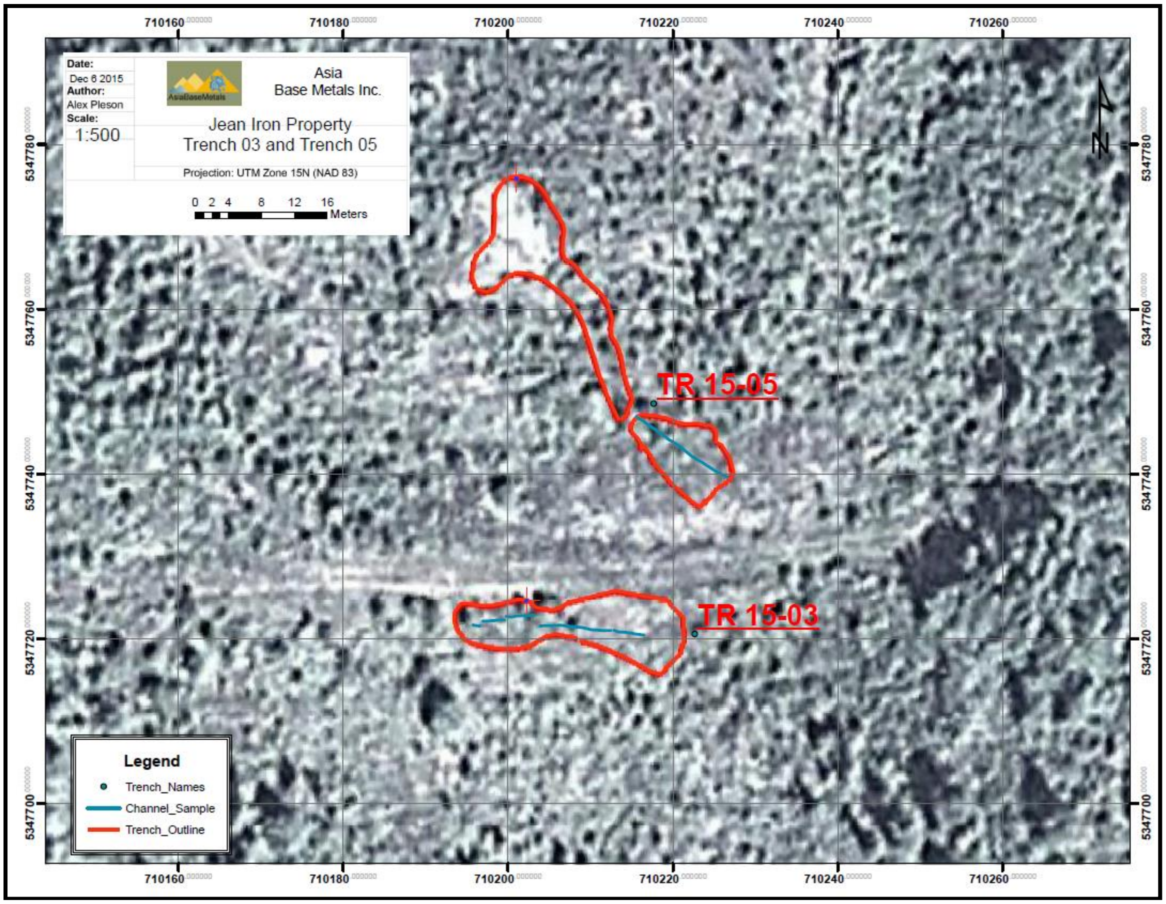


Figure 10: Location of Trenches TR 15-03 and TR 15-05

Table 13: Trench TR 15-03 Log

Coordinates	**Sample ID XRF**	**Length (m)**	**Sample ID DTT**	**Description**
Start Date: October 14, 2015	Claim Number: 4252116		End Date October 15, 2015, Extended on October 17, 2015	
5347719N/0710217E/482m	1192235 plus 1192236 DUP	21		TACONITE: Dark grey, shingly to massive, fine grained, brown hematite weathering, 2 cm quartz vein, 20% magnetite
	1192234	20		Same as above
	1192233	19	1192237	TACONITE: Dark grey to greenish grey, fine to medium grained, shingly due to micro jointing, up to 10cm thick quartz vein, 20% magnetite, 30% green minerals (greenalite)

Coordinates	Sample ID XRF	Length (m)	Sample ID DTT	Description
	1192232	18		TACONITE: Dark grey, fine siliceous, shingly due to jointing, patches of secondary magnetite concentration, brown hematite along fractures and bedding plane, concentric rings of green minerals due to internal microfolding, 15% magnetite
5347726N/0710216E/474m	1192089	17		TACONITE: Greenish grey, shingly, magnetite seams, hematite along fracture planes, 20% magnetite
	1192088	16	1192090	TACONITE: Greenish grey, shingly, some jasper, cherty, concentric ring structures (algal material), magnetite seams, hematite along fracture planes, 10% magnetite
	1192086	15		Same as above
	1192085	14		TACONITE: Dark greenish grey, more greenalite, some hematite as fracture filling and along bedding planes, cherty patches, 15% magnetite.
	1192084	13		TACONITE: Dark grey to brownish, cherty with jasper, hematite patches and fracture filling, white siliceous patches, voids are filled with hematite, massive to shingly, 20% magnetite
	1192083	12		TACONITE: Greenish grey to brown, hematite as fracture filling and patches, some jasper, up to 1 cm thick quartz veins, siliceous chert layers along green minerals, 15% magnetite
	1192082 & 1192081 (DUP)	11	1192087	TACONITE: Greenish grey to brownish, magnetite specks and lenses due to secondary concentration, hematite as fracture filling, some jasper, 15% magnetite
	1192079	10		Same as 1192078, with greenalite mineral which is generally aligned along bedding planes with internal microfolding, a few magnetite lenses
	1192078	9		TACONITE: Grey to greenish grey, shingly to massive, some hematite patches and fracture filling, layers of green minerals, 15% magnetite
	1192077	8	1192080	TACONITE: Greenish grey to brown, shingly, thin to medium bedded, haematitic weathering along bedding and joints, 10% magnetite

Coordinates	Sample ID XRF	Length (m)	Sample ID DTT	Description
	1192076	7		TACONITE: Dark grey to brown, argillaceous, shingly, thin bedded, brown hematite along bedding and fractures, 30% magnetite, 10% argillites, rest silicates and hematite
	1192075	6		TACONITE: Dark grey to greenish grey, shingly, haematitic brown fracture fillings, some jasper /chert, <cm thick quartz veins, magnetite seams and nodules as secondary filling, 20% magnetite
	1192073	5		TACONITE: Dark grey to greenish grey, brownish colour hematite veins and fracture fillings, reddish colour jasper, a few pyrite nodules, 20% magnetite
	1192072	4		TACONITE: Dark grey to brownish grey, massive to shingly, with concentric rings of green silicate minerals with stromatolites, one cm thick quartz vein, some jasper and hematite, 20% magnetite
	1192070 & 1192071 (DUP)	3		TACONITE: Grey to brownish grey, magnetite seam 3cm long and one cm wide, greenalite mineral surrounding magnetite secondary concentration, hematite fracture fillings and specks, 20% magnetite
	1192069	2		Same as 1192074
5347720/0710194/ 471	1192068	1	1192074	TACONITE: dark grey to brownish grey, massive to shingly, medium bedded, some jasper, magnetite seams cutting across bedding planes indicate secondary concentration, hematite nodules and fracture fillings, 15% magnetite

Photo 5

Photo 6

Photo 7 Phot 8

(Photos 5-8 of Trench TR 15-03)

<u>Trench TR 15-04:</u>

This trench was sampled at a location where a road cut exposed approximately 20 m wide area of Lower Gunflint Iron Formation. A new claim (Number 4283669) was staked by ABZ immediately to cover this outcrop. The exposed rock is very shingly and fractured, therefore chip channel sampling was carried out with sample length of 2 m each.

Table 14: Trench TR 15-04 Log

Coordinates	**Sample ID XRF**	**Length (m)**	**Sample ID DTT**	**Lithology**
Start Date: October 16, 2015		Claim Number: 4283669		End Date: October 17, 2015
WP 242: 5347382N/0711324E/480m	1192212	20		TACONITE: Greenish grey, thin to medium bedded, fine silty, brown haematitic weathering and fracture filling, 20% magnetite
	1192210 plus 1192211 DUP	18		Same as above
	1192209	16	1192213	TACONITE: Dark grey to brownish grey, fine grained, thin to medium bedded, 20% magnetite

Coordinates	Sample ID XRF	Length (m)	Sample ID DTT	Lithology
	1192208	14		Same as above
	1192207	12		Same as 119205, more shingly
	1192205	10		TACONITE: Dark grey to greenish grey, shingly to massive, more green minerals, some jasper, hematite along bedding planes and fractures, 15% magnetite
	1192204	8		TACONITE: Dark grey to brownish, fine grained, thin bedded to massive, hematite weathering, voids are filled with hematite, magnetite concretion along bedding planes, 20% magnetite
WP241: 5347368N/0711326E/488m	1192203	6		Same as above
WP240: 5347369N/0711329E/468m offset at 4 m	1192202	4		Same as above
WP 239: 5347364N/0711329E/488m	1192201	2	1192206	TACONITE: Dark grey to brown, thin bedded, hematite along bedding and fractures giving rock brown colour, some reddish jasper, splintery, 20% magnetite

Photo 9

Photo 10

(Photo 9-10: Trench TR 15-04)

Trench TR 15-05:

This trench is located across the road to the north from trench TR 15-03, and represents lower part of the same taconite outcrop. The lower contact with Archean basement granite was also uncovered through stripping. A total of 14 saw cut channel samples were collected where each representing one-meter width of outcrop. Three composite samples, each covering 4 or 5 m width were also collected for Davis Tube Testing. One duplicate sample was taken as part of field QA/QC program. Trench log is presented in Table 15. General lithology of the trench area comprised of greenish grey to dark grey taconite, massive to shingly due to micro fracturing, magnetite and hematite occur as fracture filling, coating and disseminated in rock. This part of taconite appears to be good in terms of overall iron grade and its liberation due to coarser nature of host rock.

Table 15: Trench TR 15-05 Log

Coordinates	Sample ID XRF	Length (m)	Sample ID DTT	Lithology
Start Date: October 16, 2015	Claim Number: 4252116			End Date October 17, 2015, Extended on October 17, 2015
WP 247: 5347738 /0710229/ 481m	1192230	14		TACONITE: Greenish grey to brownish, some green mineral, jasper specks and patches, shingly due to micro fracturing, internal microfolding, 20% iron.
	1192229	13		TACONITE: Greenish grey to brownish, reddish jasper specks and patches, shingly due to micro fracturing, internal microfolding, 20% iron.
	1192228	12		TACONITE: Greenish grey to brownish grey, internal microfolding of green minerals, shingly due to micro fracturing, 20% iron.
	1192227	11	1192231	Same as above
	1192224 plus 1192225 DUP	10		TACONITE: Brownish grey to greenish grey, fine siliceous, hematite staining and fracture filling, some jasper, 0.5 cm quartz vein, 20% iron.
	1192223	9		TACONITE: Brown grey to greenish grey, fine to medium grained, more greenalite mineral, voids and fractures filled with brown hematite, internal microfolding, 20% magnetite
	1192222	8	1192226	TACONITE: Brownish grey to greenish grey, shingly due to micro fracturing, chert nodules, hematite staining and fracture filling, some greenalite, 20% iron.

Coordinates	Sample ID XRF	Length (m)	Sample ID DTT	Lithology
	1192221	7		TACONITE: Dark grey to brownish, hematite staining, shingly, thin to medium bedded, less green minerals, 30% iron.
	1192220	6		TACONITE: Greenish grey to brown, medium grained to fine grained, hematite staining, fractures are aligned NE and NW, 30% iron.
	1192218	5		TACONITE: Brownish grey to greenish grey, brown weathering, more argillaceous, fine grained, shingly, 20% iron.
	1192217	4		TACONITE: Greenish grey to brown, hematite specks and fracture fillings, concentric ring like structures, some chert and siliceous matter, shingly, 30% iron.
	1192216	3		TACONITE: Brownish grey, more jasper and hematite, some green minerals, fine, massive to shingly, 30% iron.
	1192215	2		TACONITE: Greenish grey to brownish grey, fine siliceous, jasper patches, massive, haematitic veins and fracture filling, some green minerals, 30% iron.
WP 243: 5347748/0710216/477	1192214	1	1192219	TACONITE: Greenish grey to brownish, fine siliceous, brown hematite as patches and fracture filling, foliation cut by faulting and secondary magnetite filling, massive, lower contact with granite, 30% magnetite hematite nodules and fracture fillings, 15% magnetite

Photo 11: Excavator used for stripping

Photo 12: Taconite contact with granite

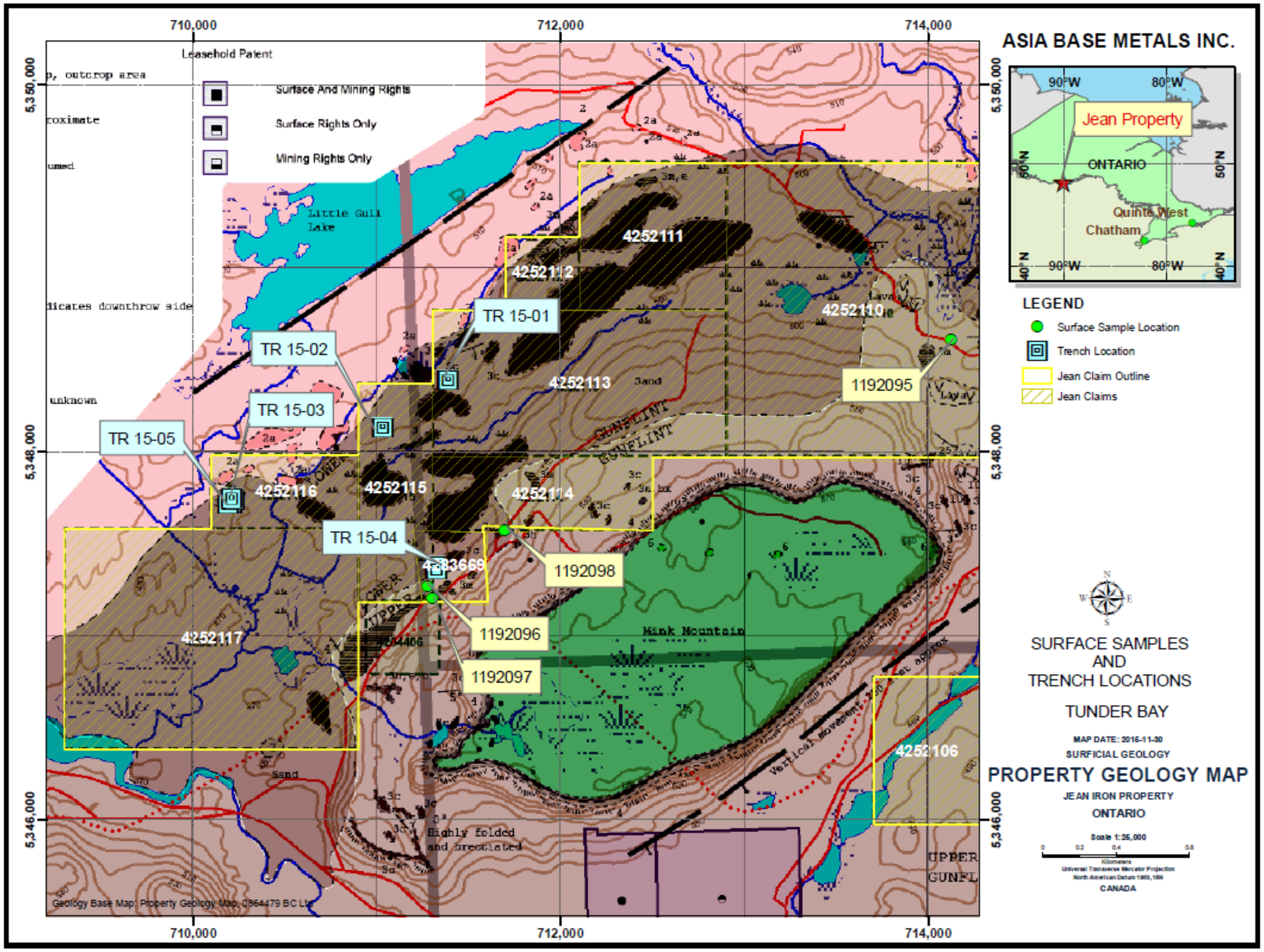


Figure 11: Location of Trenches

9.2 Exploration Results

Results of eight grab rock samples, 49 channel samples for XRF and 12 channel samples for Davis Tube Testing are discussed in the following sections.

9.2.1 Surface Samples Results

Surface samples assay results indicate total iron is in the range of 12.29% to 41.03% Fe_2O_3 (Table 16). Samples 1192091 and 1192092 were collected from an outcrop of 50 m x 75 m on a flat area with mostly siliceous cherty iron formation having total iron 26 to 29%, silica 63 to 69%, and low values of aluminum and magnesium. On the other hand, samples 1192093 and 1192094 were taken from an outcrop where green minerals were dominant and visual iron content was low. Assay results of these samples show higher aluminum values (13-14% Al_2O_3), low total iron (12-15% Fe_2O_3), moderate silica values (47 to 54% SiO_2), and higher values of MgO and K_2O. Samples 1192095 to 1192097 have lithology and results which are typical of taconite average composition. Whereas sample 1192098 which was collected from a reddish jasper outcrop, hard siliceous, and highly magnetic.

9.2.2 Channel Sampling Results

Trench TR 15-01

The results of samples from this channel indicate a relative consistent values of iron (29 to 36% Fe_2O_3), silica (52 to 57% SiO_2) and other oxides, except for calcium oxide which is higher in sample 1192099 (3.61%) (Table 17). Loss on ignition (LOI) is in the range of 6 to 10% which is relatively on higher side. Davis Tube Testing (DTT) results of one sample from this channel indicate very low magnetic fraction (0.02%) (Table 22) which can be either due to presence of more hematite or the grinding limits of the sample preparation in the laboratories.

Trench TR 15-02

As this trench is approximately 400 m in the southwestern extension of the same outcrop as exposed in trench TR 15-01 and the assay results show similarity in results. Total iron is in the range of 34.94 to 36.55% Fe_2O_3, silica 52.67 to 53.71% and LOI 8.86 to 9.39% (Tables 18 and 23). DTT results also indicate 0.02% magnetics (Table 23).

Trench TR 15-03

This part of the Gunflint Iron Formation represents the best section in terms of iron and silica contents, low LOI, and higher magnetic fraction (Tables 19 and 24). The lower five meters have iron in the range of 32.73 to 42.41% Fe_2O_3, silica 52.15 to 64.22% SiO_2, and LOI 1.49 to 3.63%. DTT results for corresponding composite sample for this five-meter interval show 2.57% magnetics. The next five meters have iron 26.08 to 70.66% Fe_2O_3, silica 24.42 to 62.74% SiO_2, and LOI 3.55 to 5.87%. The composite sample for DTT in this five-meter interval has magnetic content 10.26%. The next five-meter interval has a wider range of iron (5.52 to 47.27% Fe_2O_3) and silica (51.97 to 93.63%), however, the composite sample for DTT in this five-meter interval has magnetic content 5.36% indicating more magnetic content compared to average iron content of this interval. The next two-meter interval is low in iron values (11.19 and 14.04% Fe_2O_3) and high silica (84.27 and 86.74%) with 1.32% magnetics. The top five-meter intersection also has a wide range of iron (7.59% to 41.92% Fe_2O_3) and silica (53.01 to 90.71%) with 1.01% magnetics in DTT.

Trench TR 15-04

This trench represents a taconite outcrop with uniform lithology, iron and silica content and variable LOI (Table 20). Five samples from the lower ten meters have iron content ranging 26.6 to 48.49% Fe_2O_3, silica 29.42 to 68.67%, LOI 3.68 to 11.5%, and DTT of composite sample from this 10m interval has 8.49% magnetics. Five samples from the upper ten meters have more consistent assay results with iron content in the range of 30.53 to 36.27% (Fe_2O_3), silica 53.02 to 63.67% (SiO_2), LOI 3.58 to 7.25%, and DTT for 10m composite have 3.89% magnetics (Table 25).

Trench TR 15-05

This trench represents results of the lowest part of the Gunflint Iron Formation which is in contact with Archean basement granite. Generally, this section has lower iron content, higher silica, moderate LOI, and lower magnetics in DTT (Tables 21 and 26). The lowest five-meter part has iron in the range of 13.94 to 41.52% (Fe_2O_3), silica 51.94 to 83.02% (SiO_2), LOI 1.75 to 4.09%, and 3.27% magnetics in composite sample DTT. The next 5 m section has 14.37 to 23.3% iron, 68.76 to 80.45% silica, 3.03 to 4.86% LOI, and 0.47% magnetics in composite sample DTT. The upper four-meter section has 21.53 to 27.54% iron, 66.58 to 73.28% silica, 3.65 to 4.60% LOI, and 2.15% magnetics in composite sample DTT (Table 26).

Table 16: Grab Samples Assay Results - XRF

Analyte Symbol	**SiO2**	**TiO2**	**Al2O3**	**Fe2O3(T)**	**MnO**	**MgO**	**CaO**	**Na2O**	**K2O**	**P2O5**	**Cr2O3**	**LOI**	**V2O5**	**Total**
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Detection Limit	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01		0.003	0.01
Analysis Method	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF
1192091	67.79	0.01	0.05	26.34	0.2	0.23	0.86	0.02	0.01	0.01	< 0.01	3.91	< 0.003	99.42
1192092	63.63	0.01	0.02	29.38	0.36	0.27	0.63	0.04	0.01	0.02	< 0.01	4.88	< 0.003	99.23
1192093	47.61	1.63	14.43	15.56	0.18	5.89	0.77	0.08	6.61	0.2	< 0.01	6.73	0.058	99.75
1192094	54.47	1.66	13.13	12.29	0.11	4.37	1.11	0.11	7.18	0.2	< 0.01	5	0.048	99.69
1192095	68.22	0.03	0.24	27.35	0.09	0.27	0.16	0.02	0.04	0.02	< 0.01	3.54	< 0.003	99.98
1192096	65.11	0.01	0.06	27.64	0.18	0.42	1.08	0.03	0.02	0.01	< 0.01	4.7	< 0.003	99.25
1192097	75.45	0.03	0.42	22.33	0.06	0.3	0.13	0.02	0.15	0.04	< 0.01	1.33	< 0.003	100.3
1192098	50.53	0.13	2.19	41.03	0.06	1.35	0.96	0.03	0.13	0.04	< 0.01	3.22	< 0.003	99.68

Table 17: Trench TR 15-01 Assay Results - XRF

Analyte Symbol			SiO2	TiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	P2O5	Cr2O3	LOI	V2O5	Total
Unit Symbol			%	%	%	%	%	%	%	%	%	%	%	%	%	%
Detection Limit			0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01		0.003	0.01
Analysis Method	Length (m)	Sample ID DTT	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF
1192061	3		52.62	0.01	0.25	36.48	0.2	0.71	0.1	0.08	0.03	0.03	< 0.01	9.01	< 0.003	99.53
1192062	2.25		57.62	0.02	0.26	33.14	0.12	1.02	0.79	0.04	0.02	0.03	< 0.01	6.51	< 0.003	99.56
1192063	1.5		56.3	0.01	0.23	34.49	0.14	0.92	0.59	0.04	0.03	0.03	< 0.01	6.7	< 0.003	99.48
1192099	0.75	1192064	53.6	0.02	0.32	29.42	0.33	1.7	3.61	0.03	0.04	0.03	< 0.01	10.51	< 0.003	99.59

Table 18: Trench TR 15-02 Assay Results - XRF

Analyte Symbol			**SiO2**	**TiO2**	**Al2O3**	**Fe2O3(T)**	**MnO**	**MgO**	**CaO**	**Na2O**	**K2O**	**P2O5**	**Cr2O3**	**LOI**	**V2O5**	**Total**
Unit Symbol			%	%	%	%	%	%	%	%	%	%	%	%	%	%
Detection Limit			0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01		0.003	0.01
Analysis Method	Length (m)	Sample ID DTT	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF
1192065	2		53.71	0.02	0.3	34.94	0.15	0.54	0.12	0.05	0.02	0.03	< 0.01	9.39	< 0.003	99.27
1192066	1	1192067	52.67	0.02	0.25	36.55	0.19	0.81	0.18	0.04	0.02	0.03	< 0.01	8.86	< 0.003	99.62

Table 19: Trench TR 15-03 Assay Results - XRF

Analyte Symbol			**SiO2**	**TiO2**	**Al2O3**	**Fe2O3(T)**	**MnO**	**MgO**	**CaO**	**Na2O**	**K2O**	**P2O5**	**Cr2O3**	**LOI**	**V2O5**	**Total**
Unit Symbol			%	%	%	%	%	%	%	%	%	%	%	%	%	%
Detection Limit			0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01		0.003	0.01
Analysis Method	Length (m)	Sample ID DTT	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF
1192235	21		53.01	0.02	0.3	41.92	0.3	0.12	0.2	0.04	0.02	0.06	< 0.01	3.76	< 0.003	99.74
1192234	20		62.76	0.02	0.43	31.95	0.2	0.13	0.81	0.04	0.02	0.04	< 0.01	3.24	< 0.003	99.64
1192233	19		81.77	0.02	0.64	11.53	0.16	0.16	2.07	0.03	0.02	0.03	< 0.01	3.17	< 0.003	99.6
1192232	18	1192237	90.71	0.01	0.01	7.59	0.13	0.05	0.04	0.03	0.02	0.02	0.01	0.91	0.003	99.53
1192089	17		86.74	0.02	0.18	11.19	0.12	0.09	0.05	0.03	0.03	0.03	< 0.01	1.1	< 0.003	99.56
1192088	16	1192090	84.27	0.01	0.09	14.04	0.19	0.05	0.04	0.04	0.01	0.02	< 0.01	0.92	< 0.003	99.67
1192086	15		51.97	0.01	0.13	47.27	0.2	0.05	0.04	0.03	0.01	0.02	< 0.01	0.22	< 0.003	99.97
1192085	14		92.88	0.01	0.17	6.62	0.12	0.04	0.06	0.03	0.02	0.01	< 0.01	0.51	< 0.003	100.5
1192084	13		93.63	0.01	0.32	5.52	0.06	0.09	0.06	0.04	0.03	0.01	< 0.01	0.51	< 0.003	100.3
1192083	12		91.18	0.01	0.59	6.8	0.14	0.17	0.11	0.04	0.02	0.01	< 0.01	0.76	< 0.003	99.84
1192081	11	1192087	75.64	0.02	0.29	20.29	0.46	0.09	1.28	0.06	0.03	0.02	< 0.01	1.98	< 0.003	100.2
1192079	10		62.74	0.03	0.26	26.08	0.72	0.22	3.84	0.05	0.04	0.04	< 0.01	5.87	< 0.003	99.89
1192078	9		60.09	0.02	0.13	30.08	0.67	0.14	3.19	0.03	0.02	0.03	< 0.01	5.26	< 0.003	99.65
1192077	8		39.94	0.03	0.28	53.77	0.54	0.24	0.11	0.04	0.04	0.05	< 0.01	4.13	< 0.003	99.17
1192076	7		40.73	0.03	0.26	52.25	0.7	0.18	0.95	0.03	0.02	0.06	< 0.01	4.23	< 0.003	99.43
1192075	6	1192080	24.42	0.03	0.25	70.66	0.59	0.22	0.12	0.03	0.01	0.04	< 0.01	3.55	< 0.003	99.94
1192073	5		59.12	0.02	0.17	37.42	0.32	0.12	0.15	0.04	0.02	0.03	0.01	2.04	< 0.003	99.44
1192072	4	1192074	61.88	0.01	0.28	35.51	0.18	0.08	0.42	0.04	0.02	0.02	< 0.01	1.49	< 0.003	99.93

Analyte Symbol			SiO2	TiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	P2O5	Cr2O3	LOI	V2O5	Total
1192070	3		52.15	0.02	0.36	42.41	0.33	0.16	0.11	0.03	0.02	0.04	< 0.01	3.63	< 0.003	99.25
1192069	2		62.94	0.01	0.21	32.74	0.3	0.15	0.09	0.03	0.02	0.03	< 0.01	2.56	< 0.003	99.08
1192068	1		64.22	0.01	0.17	32.73	0.26	0.13	0.07	0.02	0.02	0.02	< 0.01	1.96	< 0.003	99.61

Table 20: TR 15-04 Assay Results - XRF

Analyte Symbol			SiO2	TiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	P2O5	Cr2O3	LOI	V2O5	Total
Unit Symbol			%	%	%	%	%	%	%	%	%	%	%	%	%	%
Detection Limit			0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01		0.003	0.01
Analysis Method	Length (m)	Sample ID DTT	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF
1192212	20		63.67	0.01	0.04	30.53	0.09	0.42	0.79	0.03	0.01	0.02	< 0.01	3.58	< 0.003	99.2
1192210	18		60.42	0.01	0.06	31.01	0.14	0.5	2.51	0.03	0.01	0.01	< 0.01	4.9	< 0.003	99.6
1192209	16		53.02	0.01	0.09	33.65	0.2	0.43	5.19	0.04	0.01	0.02	< 0.01	7.25	< 0.003	99.9
1192208	14		57.53	0.01	0.05	34.09	0.12	0.42	2.52	0.03	0.01	0.01	< 0.01	4.79	< 0.003	99.58
1192207	12	1192213	56.92	0.01	0.01	36.27	0.21	0.43	0.92	0.02	0.02	0.01	< 0.01	4.69	< 0.003	99.51
1192205	10		58.36	0.01	0.04	36	0.15	0.38	0.49	0.04	0.02	0.01	< 0.01	4.32	< 0.003	99.82
1192204	8		55.94	0.01	0.07	32.1	0.21	0.37	4.82	0.03	0.01	0.01	< 0.01	6.58	< 0.003	100.1
1192203	6		68.67	0.01	0.05	26.6	0.1	0.26	0.18	0.02	0.02	0.01	< 0.01	3.68	< 0.003	99.61
1192202	4		29.42	0.01	0.18	48.49	0.34	0.95	9.35	0.04	0.01	0.01	< 0.01	11.5	< 0.003	100.3
1192201	2	1192206	45.59	0.02	0.17	38.16	0.18	0.33	7.52	0.06	0.03	0.02	< 0.01	8.25	< 0.003	100.3

Table 21: TR 15-05 Assay Results - XRF

Analyte Symbol			**SiO2**	**TiO2**	**Al2O3**	**Fe2O3(T)**	**MnO**	**MgO**	**CaO**	**Na2O**	**K2O**	**P2O5**	**Cr2O3**	**LOI**	**V2O5**	**Total**
Unit Symbol			%	%	%	%	%	%	%	%	%	%	%	%	%	%
Detection Limit			0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01		0.003	0.01
Analysis Method	**Length (m)**	**Sample ID DTT**	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF
1192230	14		73.28	0.01	0.11	21.53	0.6	0.22	0.08	0.03	0.02	0.01	< 0.01	3.65	< 0.003	99.54
1192229	13		68.7	0.01	0.11	26.03	0.46	0.19	0.1	0.02	0.01	0.02	< 0.01	3.72	< 0.003	99.37
1192228	12		66.58	0.01	0.09	27.54	0.56	0.25	0.08	0.03	0.02	0.02	< 0.01	4.03	< 0.003	99.2
1192227	11	1192231	66.7	0.01	0.03	26.73	0.69	0.28	0.06	0.03	0.01	0.02	< 0.01	4.6	< 0.003	99.16
1192224	10		73.57	0.01	0.07	20.62	0.73	0.23	0.11	0.04	0.01	0.01	< 0.01	3.82	< 0.003	99.22
1192223	9		80.45	0.01	0.04	14.37	1.09	0.22	0.08	0.03	0.01	0.01	< 0.01	3.32	< 0.003	99.64
1192222	8		74.97	0.01	0.09	19.52	0.9	0.23	0.1	0.03	0.02	0.02	< 0.01	3.6	< 0.003	99.49
1192221	7		68.76	0.01	0.14	23.3	1.58	0.32	0.14	0.03	0.02	0.01	< 0.01	4.86	< 0.003	99.17
1192220	6	1192226	75.45	0.01	0.09	19.67	0.8	0.25	0.25	0.03	0.01	0.01	< 0.01	3.03	< 0.003	99.61
1192218	5		78.61	0.01	0.2	17.06	0.7	0.2	0.11	0.04	0.02	0.01	< 0.01	2.73	< 0.003	99.69
1192217	4		69.29	0.01	0.16	23.67	1.74	0.24	0.08	0.02	0.02	0.02	< 0.01	4.09	< 0.003	99.35
1192216	3		51.94	0.01	0.17	41.52	2.58	0.23	0.11	0.03	0.04	0.02	< 0.01	2.93	< 0.003	99.59
1192215	2		76.68	0.01	0.17	18.98	1	0.25	0.17	0.03	0.02	0.01	0.01	2.08	< 0.003	99.43
1192214	1	1192219	83.02	0.01	0.17	13.94	0.51	0.09	0.1	0.03	0.03	0.01	< 0.01	1.75	< 0.003	99.66

Table 22:TR 15-01: Davis Tube Test Results on Composite Sample

Sample ID	Start Mass	Magnetic Fraction	Non-Mag Fraction	Weight % Magnetics	Calculated Start Mass	% Loss Mass
	g	g	g	%	g	%
1192064	30	0.006	29.572	0.02	29.578	1.44

Table 23: TR 15-02: Davis Tube Test Results on Composite Sample

Sample ID	Start Mass	Magnetic Fraction	Non-Mag Fraction	Weight % Magnetics	Calculated Start Mass	% Loss Mass
	g	g	g	%	g	%
1192067	30	0.007	29.536	0.02	29.543	1.55

Table 24: TR 15-03: Davis Tube Test Results on Composite Sample

Sample ID	**Start Mass**	**Magnetic Fraction**	**Non-Mag Fraction**	**Weight % Magnetics**	**Calculated Start Mass**	**% Loss Mass**
	g	g	g	%	g	%
1192074	30	0.771	28.886	2.57	29.657	1.15
1192080	30	3.079	26.103	10.26	29.182	2.74
1192087	30	1.609	28.139	5.36	29.748	0.85
1192090	30	0.398	29.329	1.32	29.726	0.94
1192237	30	0.304	29.215	1.01	29.52	1.63

Table 25:TR 15-04: Davis Tube Test Results on Composite Sample

Sample ID	**Start Mass**	**Magnetic Fraction**	**Weight % Magnetics**	**Calculated Start Mass**	**% Loss Mass**
	g	g	%	g	%
1192206	30	1.168	3.89	29.802	0.67
1192213	30	2.548	8.49	29.502	1.68

Table 26: TR 15-05: Davis Tube Test Results on Composite Sample

Sample ID	**Start Mass**	**Magnetic Fraction**	**Non-Mag Fraction**	**Weight % Magnetics**	**Calculated Start Mass**	**% Loss Mass**
	g	g	g	%	g	%
1192219	30	0.98	28.549	3.27	29.529	1.58
1192226	30	0.141	29.441	0.47	29.583	1.4
1192231	30.3	0.652	29.403	2.15	30.055	0.94

10.0 DRILLING

No drilling was done on the Jean Property by ABZ. The historical drilling on the Property carried out by various operators is discussed in Section 6 of this report.

11.0 SAMPLE PREPARATION, ANALYSES AND SECURITY

All surface rock and subsurface drill core samples collected during 2011, 2012, and 2015 exploration work were prepared and analyzed at Activation Laboratories (Actlabs) in Thunder Bay and Toronto. Actlabs is ISO 17025 accredited and/or certified to 9001: 2008, and is independent of ABZ. The samples were crushed to -10 mesh followed by pulverizing a 250-gram split to -150 mesh (95%). Each sample was analyzed for Iron Ore Analysis or XRF, and several composite samples were tested for Davis Tube Magnetic Separation at -200 mesh fraction.

Activation Laboratories has its own quality assurance and quality control program on sample preparation, analysis and security. Five field duplicate samples were collected from channel sampling work as part of field QA/QC program in 2015. The results of sample and its field duplicate with standard deviation and percent difference are shown in Table 27.

For the present study, the sample preparation, security and analytical procedures used by the laboratories are considered adequate. No officer, director, employee or associate of ABZ was involved in sample collection, preparation and analysis. Historical grades and assay data used for the present study are taken from MNDM assessment reports and OGS geological reports which are deemed reliable. Historical geological descriptions taken from the above mentioned sources were prepared and approved by the professional geologists or engineers and are deemed reliable.

Table 27: Results of Field Duplicate Samples (2015)

Analyte Symbol	Type	SiO2	TiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	P2O5	Cr2O3	LOI	V2O5	Total
Unit Symbol		%	%	%	%	%	%	%	%	%	%	%	%	%	%
Detection Limit		0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01		0.003	0.01
Analysis Method		FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF
TR 15-03															
1192070	Sample	52.15	0.02	0.36	42.41	0.33	0.16	0.11	0.03	0.02	0.04	< 0.01	3.63	< 0.003	99.25
1192071	Duplicate	43.44	0.03	0.28	51.37	0.33	0.15	0.11	0.03	0.02	0.03	< 0.01	3.62	< 0.003	99.41
Standard Deviation		**6.16**	**0.01**	**0.06**	**6.34**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.11**
Difference %		***16.70***	***-50.00***	***22.22***	***-21.13***	***0.00***	***6.25***	***0.00***	***0.00***	***0.00***	***25.00***	***0.00***	***0.28***	***0.00***	***-0.16***
1192081	Sample	75.64	0.02	0.29	20.29	0.46	0.09	1.28	0.06	0.03	0.02	< 0.01	1.98	< 0.003	100.2
1192082	Duplicate	78.12	0.02	0.29	18.5	0.42	0.12	0.65	0.05	0.03	0.02	< 0.01	1.45	< 0.003	99.67
Standard Deviation		**1.75**	**0.00**	**0.00**	**1.27**	**0.03**	**0.02**	**0.45**	**0.01**	**0.00**	**0.00**	**0.00**	**0.37**	**0.00**	**0.37**
Difference %		***-3.28***	***0.00***	***0.00***	***8.82***	***8.70***	***-33.33***	***49.22***	***16.67***	***0.00***	***0.00***	***0.00***	***26.77***	***0.00***	***0.53***
1192235	Sample	53.01	0.02	0.3	41.92	0.3	0.12	0.2	0.04	0.02	0.06	< 0.01	3.76	< 0.003	99.74
1192236	Duplicate	58.68	0.01	0.29	37.52	0.24	0.11	0.21	0.03	0.02	0.05	< 0.01	2.8	< 0.003	99.96
Standard Deviation		***4.01***	***0.01***	***0.01***	***3.11***	***0.04***	***0.01***	***0.01***	***0.01***	***0.00***	***0.01***	***0.00***	***0.68***	***0.00***	***0.16***
Difference %		***-10.70***	***50.00***	***3.33***	***10.50***	***20.00***	***8.33***	***-5.00***	***25.00***	***0.00***	***16.67***	***0.00***	***25.53***	***0.00***	***-0.22***
TR 15-04															
1192210	Sample	60.42	0.01	0.06	31.01	0.14	0.5	2.51	0.03	0.01	0.01	< 0.01	4.9	< 0.003	99.6
1192211	Duplicate	61.76	0.01	0.08	30.58	0.13	0.47	2.07	0.02	0.01	0.01	< 0.01	4.49	< 0.003	99.63
Standard Deviation		***0.95***	***0.00***	***0.01***	***0.30***	***0.01***	***0.02***	***0.31***	***0.01***	***0.00***	***0.00***	***0.00***	***0.29***	***0.00***	***0.02***
Difference %		***-2.22***	***0.00***	***-33.33***	***1.39***	***7.14***	***6.00***	***17.53***	***33.33***	***0.00***	***0.00***	***0.00***	***8.37***	***0.00***	***-0.03***
TR 15-05															
1192224	Sample	73.57	0.01	0.07	20.62	0.73	0.23	0.11	0.04	0.01	0.01	< 0.01	3.82	< 0.003	99.22
1192225	Duplicate	68.59	0.01	0.06	24.87	0.98	0.22	0.15	0.03	0.02	0.02	< 0.01	4.66	< 0.003	99.59
Difference %		***6.77***	***0.00***	***14.29***	***-20.61***	***-34.25***	***4.35***	***-36.36***	***25.00***	***-100.00***	***-100.00***	***0.00***	***-21.99***	***0.00***	***-0.37***
Standard Deviation		***3.52***	***0.00***	***0.01***	***3.01***	***0.18***	***0.01***	***0.03***	***0.01***	***0.01***	***0.01***	***0.00***	***0.59***	***0.00***	***0.26***

12.0 DATA VERIFICATION

The exploration work in 2015 was carried out under the author's supervision who worked on the property from October 5-18, 2015. The author also visited the property on May 21, 2011 and September 21-22, 2013. The geological work performed in order to verify the existing data consisted of geological mapping of the Gunflint Iron Formation (GIF); surface grab rock, channel, and drill core sampling; and stripping to further expose the mapped outcrops for channel sampling. The sampling approach for this work was to collect representative surface grab and channel samples, and drill core samples from each of the dominant rock type. The drill core from 2012 drill program carried out by Great Lakes Resources is stored at Maki Resort near White Fish Lake.

During the current exploration work carried out by ABZ in 2015, a total 74 rock samples were collected, out of which 49 were channel samples for XRF analysis and 12 for Davis Tube Testing from 5 trenches, 8 grab rock surface samples for XRF, and 5 field duplicate samples for XRF as part of field QA/QC program. Total cost of this exploration work is $50,215.66, and its details are provided in Section 9.

Field description and assays of the samples collected during 2011 and 2013 property visits is provided in the following tables.

Table 28: Description of Samples (May 21, 2011 property visit)

Sample ID	Easting	Northing	Elevation	Type	Description
GE-JP11-01	0710911	5346690	494 m	Grab, outcrop/ subcrop	Dark brown, mostly hematite bearing chert and limestone, with thinly bedded magnetic seams.
GE-JP11-02	0710984	5346860	492 m	Grab, outcrop	Brown taconite, mainly hematite bearing chert and sediments with concentration of magnetite at places. No visible control of magnetic and nonmagnetic minerals concentration.
GE-JP11-03	0711332	347366	489 m	Grab, outcrop	Dark brown outcrop of banded iron formation with algal chert concretion mostly hematitic.
GE-JP11-04	0711863	5347839	514 m	Grab, outcrop	Brown taconite outcrop with upper layer of magnetite bearing chert, rest of the bedding is hematite / limonite dominant sandy and calcareous material.
GE-JP11-05	0711884	5347811	515 m	Grab, outcrop	Brownish thinly bedded argillites dominated with 1-5 cm thick magnetite bearing layers.

Table 29: List of core samples collected during Sep 21-22, 2013 property visit

Sample ID	Depth (m)	Total Length Sampled (m)	Description
JN 12-01-8m	8	0.5	Brown weathered silty sand, moderately to strongly magnetic, also include fresh greenish siltstone with pyrite nodules (Lower Taconite Member)
JN 12-02-9m	9	0.5	Greenish grey siltstone, thinly laminated, mostly un-weathered, magnetic (Lower Taconite Member)
JN 12-03-32.5m	32.5	0.5	Grey to brown silty sand plus siltstone, thinly laminated, mostly un-weathered, weathered along lineation, strongly magnetic (Lower Taconite Member)
JN 12-04-6m	6	0.5	Grey sandstone, fine grained with silt, thinly bedded, brown weathering along bedding, strong magnetic (Lower Taconite Member)
JN 12-05-29.5m	29.5	0.5	Greenish grey siltstone, thinly laminated, mostly un-weathered, slight weathering along lamellae, strongly magnetic (Lower Taconite Member)
JN 12-06-33m	33	0.5	Dark grey to greenish grey silty shale, thinly laminated, weakly magnetic (Lower Shale Member)
JN 12-07-54m	54	0.5	Dark grey silty shale, moderately magnetic, trace pyrite, thinly to massive bedded (belongs to Lower Algae Chert Member)
JN 12-08-12m	12	1	Greenish grey siltstone with brown coarse sandy texture volcanic fragments mm to 3 cm wide, reddish brown (Lower Taconite Member)

Highlights of the assay results are provided in the following tables.

Table 30: Results of Davis Tube Recovery – 2011 Sampling

Sample s	Client ID	Start Mass (g)	Magnetics (g)	Non-Magnetics (g)	% Magnetics (of start mass)
1	GE-JP11-01	30.0	12.34	17.2	41.1
2	GE-JP11-02	30.0	0.83	28.9	2.8
3	GE-JP11-03	30.0	6.67	23.1	22.2
4	GE-JP11-04	30.0	1.103	28.8	3.7

5	GE-JP11-05	15.0	8.74	5.3	58.3
***** The start weights of all samples were 30g except sample 5 (15g)***					

As shown in Table 30, percent values of magnetics are 41.1% and 58.3% in samples GE-JP11-01 and GE-JP11-05 respectively. These samples are from upper taconite member of Gunflint Iron formation.

Table 31: Highlights of Sample Assay Results – XRF (2011 Sampling)

Analyte Symbol	Unit	Detection Limit	Analysis Method	GE-JP11-01	GE-JP11-02	GE-JP11-03	GE-JP11-04	GE-JP11-05
SiO2	%	0.01	FUS-XRF	37.68	90.10	27.14	83.22	35.28
TiO2	%	0.01	FUS-XRF	0.03	0.02	0.02	0.03	0.07
Al2O3	%	0.01	FUS-XRF	0.54	0.20	0.10	0.30	0.97
Fe2O3 (T)	%	0.01	FUS-XRF	50.89	7.98	40.79	13.69	58.71
MnO	%	0.01	FUS-XRF	0.17	0.08	0.31	0.29	0.14
MgO	%	0.01	FUS-XRF	4.14	0.07	0.58	0.12	0.61
CaO	%	0.01	FUS-XRF	4.42	0.07	16.09	0.15	0.23
Na2O	%	0.01	FUS-XRF	0.11	0.02	0.04	0.03	0.06
K2O	%	0.01	FUS-XRF	0.06	0.05	0.02	0.10	0.09
P2O5	%	0.01	FUS-XRF	0.27	0.02	0.01	0.02	0.05
Cr2O3	%	0.01	FUS-XRF	0.01	<0.01	<0.01	<0.01	<0.01
LOI	%	0.01	FUS-XRF	1.49	0.93	14.31	1.86	3.54
Total	%	0.01	FUS-XRF	99.81	99.54	99.41	99.81	99.76
Fe	%	0.003	ICP-OES	48.4	60.4	52.7	63.7	58.2

Results for iron oxide (Fe_2O_3) total in Table 31 are showing consistency with Davis Tube testing results for GE-JP11-01 and GE-JP11-05 in Table 30. For sample GE-JP11-03 nonmagnetic iron is dominating over the magnetic iron.

The assay results from core samples indicate iron oxide (Fe_2O_3) in the range of 28.53% to 73.17%. Two values of relatively higher iron content are shown in samples JN12-03-32.5m (61.46% Fe_2O_3) and JN12-05-29.5m (73.17%) (Table 32).

For the present study, the sample preparation, security and analytical procedures used by the laboratories are considered adequate. No officer, director, employee or associate of Great Lakes and ABZ was involved in sample preparation and analysis. Historical grades and assay data for the present study are taken from MNDM assessment reports and OGS geological reports which are deemed reliable. Historical geological descriptions taken from the above mentioned sources were prepared and approved by the professional geologists or engineers and are deemed reliable.

Table 32: Assay results for drill core samples collected during Sep 21-22, 2013 Property visit

Analyte Symbol	SiO2	TiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	P2O5	Cr2O3	LOI	V2O5	Total
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Detection Limit	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01		0.003	0.01
Analysis Method	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF
JN12-01-8m	38.3	0.01	0.22	28.53	0.3	0.54	16.4	0.03	0.01	0.02	< 0.01	14.64	< 0.003	99
JN12-02-9m	47.94	0.02	0.24	35.66	0.15	1.59	5.77	0.04	0.02	0.04	< 0.01	8.04	< 0.003	99.51
JN12-03-32.5m	33.52	0.07	0.47	61.46	0.13	0.68	0.75	0.06	0.15	0.07	< 0.01	2.02	< 0.003	99.38
JN12-04-6m	48.01	0.02	0.18	42.62	0.09	0.38	4.09	0.05	0.02	0.02	< 0.01	4.3	< 0.003	99.78
JN12-05-29.5m	20.15	0.05	0.35	73.17	0.2	0.94	1.92	0.04	0.08	0.08	< 0.01	3.27	< 0.003	100.3
JN12-06-33m	46.02	0.2	3.53	30.44	1	3.76	1.18	0.06	0.08	0.05	< 0.01	13.02	< 0.003	99.34
JN12-07-54m	41.29	0.04	0.32	29.92	2.4	2.51	5.76	0.05	0.02	0.07	< 0.01	17.02	< 0.003	99.4
JN12-08-12m	46.87	0.01	0.06	36.82	0.65	2.34	4.74	0.03	0.01	0.02	< 0.01	8.44	< 0.003	99.98

Photo 1: Drillhole location for 2012 drill program (Photo taken during Sep 2013 Property Visit)

Photo 2: Drill core photo and location of sample interval (Photo taken during Sep 2013 Property Visit)

13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

No metallurgical testing was done on the property by ABZ. The historical metallurgical test work on the Property was carried out by various operators is discussed in Section 6 of this report.

14.0 MINERAL RESOURCE ESTIMATES

No mineral resource estimates were carried out by ABZ.

Items 15 to 22 are not applicable.

23.0 ADJACENT PROPERTIES

Seven mineral claims located adjacent to the east of the Jean Property are held by individual prospectors (Figure 12) where no active exploration work has been carried out since 2010. Historical work on adjacent claims and the area immediately south and east of the Jean Property is summarized in the following sections. The following information is taken from the publically available sources which are identified in the text and in Section 27. The writer has not been able to independently verify the information contained although he has no reason to doubt the accuracy of the descriptions. The information is not necessarily indicative of the mineralization on the Jean Property, which is the subject of this technical report.

23.1 Lloyd K. Johnson Exploration (1952-1953)

Exploration on the Gunflint Iron Formation (GIF) was carried out by Lloyd K. Johnson Exploration (LKJE) during the year 1952 and 1953. LKJE staked the area underlain by GIF extending from the village of Nolalu in the east-northeast to the North Lake in west-southwest, including current Jean Property and carried out a regional iron exploration program. Mr. M. W. Bartley, Geologist, managed the overall exploration program consisting of reconnaissance geological mapping, aeromagnetic survey, ground magnetic survey, surface bulk sampling and diamond drilling.

23.2 ODM-Report 69 (1960)

Dr. A. M. Goodwin, in ODM-Report ARV69, reported analytical information for Upper Taconite, Upper Jasper and Lower Taconite member. Partial chemical analyses for determination of Fe% were made on drill cores and surface samples of Upper Taconite, Upper Jasper and Lower Taconite member.

The results obtained are as follows:

Member	Upper Taconite Partial Fe%	Upper Jasper Partial Fe%	Lower Taconite Partial Fe%
	25.71	25.50	30.70

23.3 Flint Rock Mines Ltd.

Flint Rock Mines Ltd. (FR) conducted exploration adjacent to the east and southeast of Jean Property from 1959 to 1962. Majority of this work was carried out on claims which were held by 1401385 Ontario Inc. The program started with prospecting and surface sampling by Mr. L. D. Chisholm in 1959. Two samples from UGF formation were collected continuously from the cliff face under diabase sill. These two samples may probably belong to Upper Taconite, and the first sample assayed 29.54% over 3.05 m and the second 25.40% Fe over 4.57 m averaging 27.00% Fe over 7.63 m.

With these encouraging values and after dip needle survey, FRML drilled 7 holes in 1960 under the supervision of Mr. H. H. Sutherland. The drill logs were broadly grouped into two main Upper Gunflint and Lower Gunflint Formation, and no attempt was made on differentiating iron-bearing members in the formations.

23.4 Raytech Metals Corp. (2007-08)

Raytech Metal Corp., (RMC) staked almost the same area located immediate east of Jean Property in 2007 cover historic Gunflint or Mt. Edna Property drilled by Flint Rock Mines Ltd (1959-1962) and estimated by Shklanka in 1968.

A reconnaissance-style mineral exploration consisting prospecting, geologic mapping, surface rock sampling and radiometric survey was conducted in 2008 under the supervision of Mr. Gordon. J. Allen.

RMC during 2008 program collected 30 surface rock chip samples mainly from Upper Taconite horizon exposing approximately 3.4 km strike length beneath the diabase capping of Divide Ridge. In addition, 16 vertical samples, each representing different lithologic units were also collected along cliff face exposed by trenching north of Divide Ridge. The lengths of trench samples range from 0.1 to 1.90 m based on thickness of individual lithologic units.

All the samples were shipped to SGS Lakefield Research Ltd, Lakefield, Ontario for analyzing whole rock by borate fusion XRF, magnetic iron by Satmagan and ferrous iron by titration. No DT magnetic concentration test was involved during the program.

Assay returns from chip samples collected from the Upper taconite member average 22% total iron and 6.4% magnetite iron (by Satmagan). The grab sample assays from trench are variable as they represented different lithology. The highest assay, 47.2% Fe over 0.1

m was obtained from magnetite bearing lithology.

23.5 Canada Iron Inc. (2010)

Canada Iron Inc. carried out and airborne VTEM survey in 2010 contracted to Geotech Ltd. The survey identified six electromagnetic anomalies interpreted to be associated with diabase sills of Mount Marny and its contact with Gunflint Iron Formation. The magnetic lows adjacent to the strong highs may represent the Gunflint horizons where hematite-carbonate-jasper-greenalite predominate. Results of twenty samples are also available in the technical report filed by Canada Iron Inc. in 2011, with iron oxide (Fe_2O_3) results in the range of 28.189% to 32.560%.

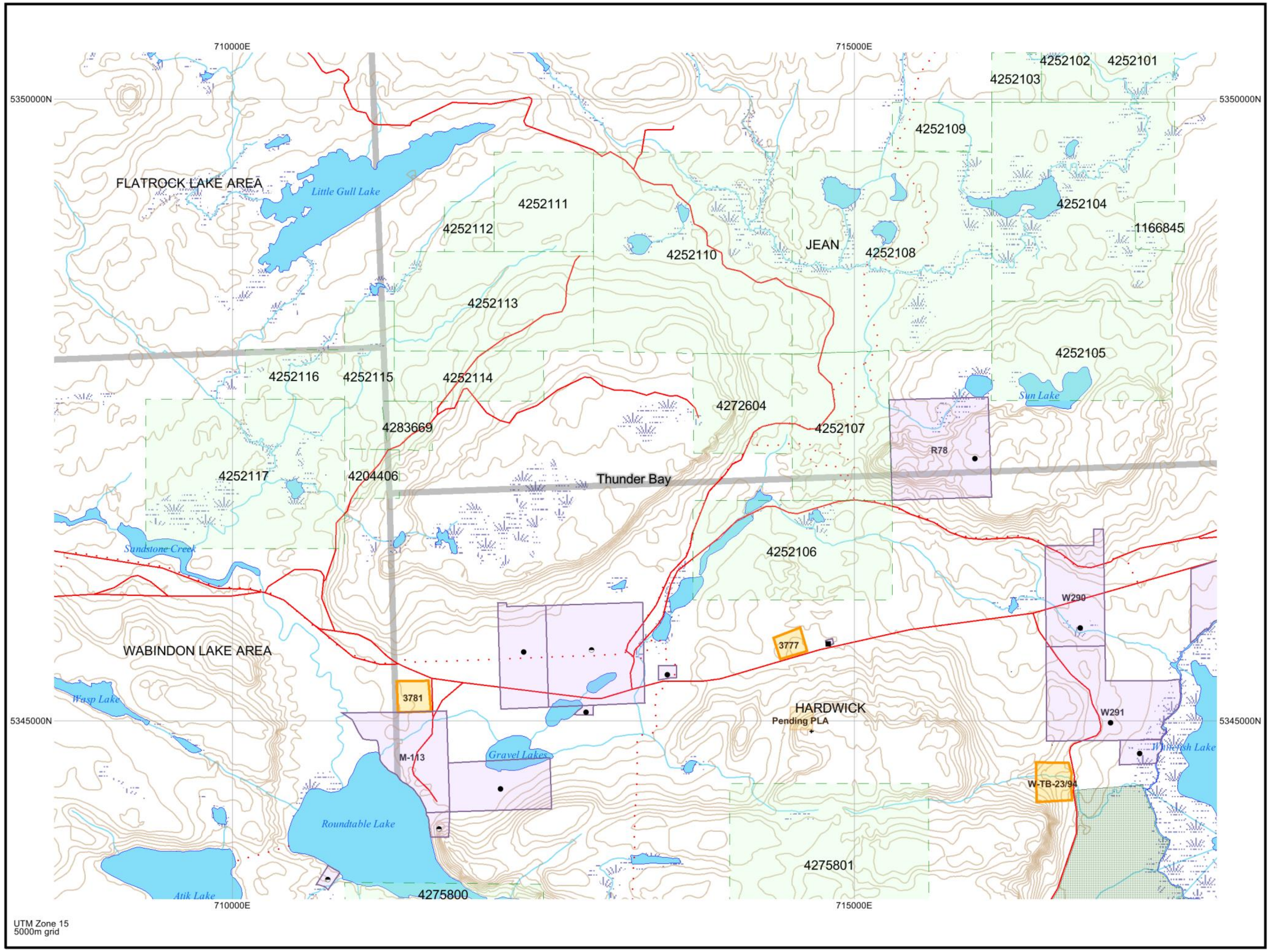


Figure 12: Adjacent Property showing location of claims and dispositions

24.0 OTHER RELEVANT DATA AND INFORMATION

24.1 Environmental Concerns

There is no historical production from the Jean Property, and the author is not aware of any environmental liabilities which have accrued from historical exploration activity.

24.2 Aboriginal Issues

The area is under claim by the following three First Nations Groups:

1. Fort Williams First Nations, 90 Anemkie Drive, Suite 200, Thunder Bay, Ontario, P7J 1L3.
2. Metis Nation of Ontario, 226 May St S, Thunder Bay, ON P7E 1B4.
3. Red Sky Métis Independent Nation, 406 East Victoria Avenue, Thunder Bay, Ontario, P7C 1A5.

Ministry of Northern Development, Mines and Forestry (MNDMF) Ontario encourages claim holders to engage with Aboriginal communities and begin developing a working relationship as early in the mining sequence as possible.

25.0 INTERPRETATION AND CONCLUSIONS

The Jean Iron Property consists of 18 mineral claims in 115 units covering 1,840 hectares' land located in Thunder Bay Mining District of Northwestern Ontario, Canada. The Property is located about 65 kilometers to the southwest of Thunder Bay, approximately 2 kilometers north of the Whitefish Lake on Highway 588. It can be accessed via the Trans-Canada Highway 11/17, about 20 km west from the Highway 61 junction to Highway 588 (Stanley access), and then a further 45 km southwest along Highway 588. A network of gravel roads and trails traverse the mineral claims and provide access to various areas of the Property.

AsiaBaseMetals Inc. ("ABZ" or "the Company") owns 100% of the Mineral Claims. The Company initiated exploration work on the property immediately after acquisition of claims from the previous owners by applying for an exploration work permit in April 2015 which was issued (PR15-412660) effective April 07, 2015 to March 06, 2018y. The exploration work was started in October 2015 and included prospecting, sampling and mapping of the Gunflint Iron Formation outcrops for stripping, trenching and channel sampling.

The Property area is underlain by an Archean granitic basement, which is unconformably overlain by gently southerly-dipping sedimentary rocks of the Aphebian (lower Proterozoic)

Animikie group. These sediments are capped by a Helikian (1.0 Ga) Keweenawan diabase sill. Unconsolidated rocks are Pleistocene age glacial till debris which forms an extensive mantle over low –lying parts of the area.

Gunflint Iron formation of Animikie Group is part of extensive Lake Superior-type iron formation (LSTIF) ranges developed along the margins of cratons or epicontinental platforms between 2.4 Ga and 1.9 Ga. It is banded iron formation (BIF) mainly comprised of taconite rocks, and is characterized by unusually high iron content, as well as by a variety of textures, of which the granular texture of the taconite rock being most distinctive. The Gunflint formation, approximately 145 m thick, is divided into lower and upper cycles. Each cycle contains a sequence of members, most of which are common to both. The uppermost member, a limestone bed, is unique to the formation and marks the top of the iron-bearing rocks. The key economic parameters for magnetite iron being economic in BIF are the crystallinity of magnetite, the grade of the iron in the host rock, and the contaminant elements which exist within the magnetite concentrate. The typical grade of iron at which a magnetite-bearing banded iron formation becomes economic is roughly 25% Fe, which can generally yield a 33% to 40% recovery of magnetite by weight, to produce a concentrate grading in excess of 64% iron by weight.

The historical exploration data available for the Property area includes geophysical surveys, geological mapping, diamond drilling, bulk surface sampling, and magnetic tube testing of core and surface samples. This work was carried out during the period from 1943 to 1962. The total Fe% obtained through magnetic tube separation and acid roasting with magnetic concentration range from 23.95% to 39.85% for feed, from 38.66% to 54.21% for minus 100-mesh and from 43.42% to 56.77% for minus 200-mesh.

In 2011, Great Lakes Resources Ltd. (GLR) re-activated exploration work on the current Property and carried out field geological prospecting, collection of selective grab and channel samples, assaying for iron content, Davis Tube Test (DTT) for magnetic concentrates, and Mineral Liberation Analysis (MLA) test.

In May-June 2012, GLR followed-up on previous years' exploration with diamond drilling program which included eight vertical NQ-size drill holes totaling 492.88m bounding 3km by 0.5km area. Geology obtained from the diamond drill program verified known surface geology with additional detailed stratigraphic information. The drill area is underlain by northeast trending (approximately 055° azimuth) gently 4-5° southeast dipping Lower Gunflint Formation. Lower Taconite Member of Lower Gunflint Formation was the main economically-interesting stratigraphic horizon investigated in this program. All eight holes intersected iron bearing Lower Taconite Member, whereas two complete Lower Taconite Member vertical intersections were delineated in holes JN12-03 (56.81m) and JN12-05 (57.75m). The average true thickness was estimated to be 57.06m.

Only Upper Shale, Upper Jasper and Upper Algae Chert Member composing lower portion of Upper Gunflint Formation was encountered in two holes, JN12-03 and JN12-05, located on the higher ground and on baseline or southern portion of the drilled area. No Upper Taconite Member was intersected during the program. Both Upper Gunflint and Lower Gunflint Formation within the Property contain no diluting diorite sills. Narrow diorite sills less than a meter in thickness, are only recorded in JN12-02 and JN12-04 at the contact of the base of Lower Gunflint Formation and underlying Archean Basement. A total of 84 drill core samples with varying length from 0.33m to 12.00m based on geology were collected and assayed for iron content. In addition, Davis Tube Test (DTT) on two composite samples combined from drill core samples of Lower Taconite Member of Lower Gunflint Formation, one from JN12-03 and the other from JN12-05 was performed. The results indicated 23.44 percent weighted average iron (Fe). For DTT, the weighted average feed grade was 24.08% Fe. For minus 200-mesh size, the magnetic concentrates recovery averaged 7.48% with the magnetic concentrates grade of 57.79% Fe. The non-magnetic concentrate values for this size fraction were 91.45% for recovery and 22.55% Fe for grade.

Mineral Liberation Test results on two samples indicated that the Lower Taconite Members samples are mineralogically fairly similar with average magnetic content of 8.34% and average magnetic grain size of 23 microns. The non-magnetic goethite/siderite averaged 4.1%. The sample from Lower Shale contains <0.1% magnetite with main iron minerals as pyrite (14.3%) and goethite/siderite (combined 17.3%).

During the current exploration work carried out by ABZ in 2015, a total 74 rock samples were collected, out of which 49 were channel samples for XRF analysis and 12 for Davis Tube Testing from 5 trenches, 8 grab rock surface samples for XRF, and 5 field duplicate samples for XRF as part of field QA/QC program. Total cost of this exploration work is $50,215.

Prospecting and mapping work indicated that the majority of the property area, particularly the area underlain by the Gunflint Iron Formation is covered by glacial overburden with the exception of diabase sill rocks which are more resistant to weathering. Algal chert and jasper containing rocks are found to be more resistant to weathering and exposed at places; whereas, a few new road cuts were also helpful in locating Taconite and shale outcrops. Iron content of shales were observed to be generally low with rusty brown surface weathering due to disseminated hematite along fractures and bedding planes. Jasper and algal cherts are found to be rich in iron and are more magnetic than other units of Gunflint Iron Formation. Taconite unit visually contains 20% to 30% iron. Lower contact with Archean granites is well exposed in the northern part of the property and adjoining areas.

A total of five outcrops were mapped for stripping and channel sampling work on the property. A rubber tire backhoe and an excavator were used for stripping overburden. Trenching and stripping was carried out at four locations (TR 15-01, TR 15-02, TR 15-03, and TR 15-05). Taconite rock outcrop was found exposed at location of trench TR 15-04 due to a new road cut, therefore, a new claim (Number 4283669) was immediately staked to cover this outcrop. Cumulative length of channel sampling for this program is 60 meters.

The results of eight grab rock samples indicate that total iron is in the range of 12.29% to 41.03%. Trench TR 15-01 results show a relative consistent values of iron (29 to 36% Fe_2O_3), silica (52 to 57% SiO_2) and other oxides, except for calcium oxide which is higher in sample 1192099 (3.61%). DTT fraction of trench is very low. Trench TR 15-02 is about 400 meters to the southeast of TR 15-01 and have similar results with total iron in the range of 34.94 to 36.55% Fe_2O_3, silica 52.67 to 53.71% and LOI 8.86 to 9.39%. DTT results also indicate 0.02% magnetics.

The exploration work in 2015 was carried out under direct supervision of the author who worked on the property from October 5-18, 2015. The author also visited the property on May 21, 2011 and September 21-22, 2013. The geological work performed in order to verify the existing data consisted of geological mapping of the Gunflint Iron Formation (GIF); surface grab rock, channel, and drill core sampling; and stripping to further expose the mapped outcrops for channel sampling. The sampling approach for this work was to collect representative surface grab and channel samples, and drill core samples from each of the dominant rock type.

During previous visits of the Property on May 21, 2011 and September 21-22, 2013, a total of five representative grab rock and eight drill core samples were collected. The magnetic tube separation of grab rock samples indicated that the percent values of magnetics are 41.1% and 58.3% in samples GE-JP11-01 and GE-JP11-05, respectively. These samples were from taconite member of Gunflint Iron formation. The drill core samples were collected from Lower Gunflint formation and their results indicated iron oxide (Fe_2O_3) in the range of 28.53% to 73.17%. Two values of relatively higher iron content are shown in samples JN12-03-32.5m (61.46% Fe_2O_3) and JN12-05-29.5m (73.17%).

The Property is exposed to certain risks which may potentially impact its future economic viability or continued viability. The economics of the iron-bearing rocks of Jean Property appears to depend upon a process that will produce a commercial concentrate. More detailed metallurgical testing might reveal such a process.

26.0 RECOMMENDATIONS

In the qualified person's opinion, the character of the Jean Property is sufficient to merit the following phased work program, where the second phase is contingent upon the results of the first phase.

Phase 1 - Geological Mapping, Trenching, Sampling, and Diamond Drilling

The present trenching work was focussed more on the western part of the property area.

A few small outcrops were mapped and sampled which need follow up detailed geological mapping, stripping and channel sampling to assess the potential of eastern claims. The areas around samples 1192091, 1192092, 1192095, collected during 2015 exploration, would be interesting to undertake stripping and trenching. A 1,000 metres diamond core drilling program should follow-up if the results of trenching work are encouraging. Total estimated cost of this program is $202,950.

Table 33: PHASE 1 BUDGET – Ground Geophysical Survey, Drilling, Trenching and Sampling

Item	Unit	Unit Rate ($)	Number of Units	Total ($)
Permitting	day	$650	3	$1,950
Ground geophysical survey (2-person crew)	day	$800	10	$8,000
Geological work and sampling	day	$650	10	$6,500
Prospecting and sampling	day	$450	15	$6,750
Diamond drilling	meters	$1,000	80	$80,000
Core logging geologist	day	$550	15	$8,250
Core cutting and sampling	meters	$1,000	3	$3,000
Excavator for trenching and drilling	hrs	$135	80	$10,800
Equipment rentals	lump sum	$5,000	1	$5,000
Transportation air	airfare	$1,000	2	$2,000
Transportation ground	day	$150	50	$7,500
Field supplies	lump sum	$2,000	1	$2,000
Meal and board	day	$200	50	$10,000
Sample assays and DTT testing	sample	$120	200	$24,000
GIS work	hrs	$60	20	$1,200
Data compilation	day	$650	15	$9,750
Report and filing	day	$650	15	$9,750
Project management	day	$650	10	$6,500
TOTAL BUDGET ESTIMATE				**$202,950**

Phase 2 – Step-out and Infill Exploratory Drilling and Beneficiating Tests

If results from the first phase are positive, then a step-out and infill drilling program would be warranted. This work will help to define the trends and continuity of the favourable taconite units of Gunflint Iron formation within and adjacent to the past exploratory drilling area. This drilling program, if successful will provide basis of iron resource estimation. The metallurgical testing will help in defining the potential for economic concentration of iron in taconite. The scope of work and location of drill holes would be determined based on the findings of Phase 1 investigations. Initially a 3,000 metres diamond core drilling is proposed in 20-25 drill holes.

Estimated cost of this program is $450,000.

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14.0 Websites:

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28.0 SIGNATURE PAGE

Dated: March 1st, 2016

Signed and Sealed

Afzaal Pirzada, P.Geo.

29.0 CERTIFICATE OF AUTHOR

I, Afzaal Pirzada, P.Geo., as an author of this report entitled, "Technical Report on the Jean Property, Thunder Bay Mining District, Northwestern Ontario, Canada; Dated March 1st, 2016", do hereby certify that:

1. I am a consulting geologist of: GEOMAP EXPLORATION INC. 12430 – 76th Avenue, Surrey, British Columbia, Canada, V3W 2T5.
2. I have M.Sc. degree in Geology from Punjab University, Lahore, Pakistan in 1979.
3. This certificate applies to the report entitled "Technical Report on the Jean Property, Thunder Bay Mining District, Northwestern Ontario, Canada; Dated March 1st, 2016".
4. I am registered as a Professional Geologist in British Columbia (License #: 28657) Canada.
5. I have been practicing my profession continuously since 1979, and have over twenty years of experience in mineral exploration for uranium, iron, titanium, lithium, rare metals, base metals, coal, PGE, and gold.
6. I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI43-101") and certify that by reason of my education, affiliation with professional associations and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purpose of NI43-101.
7. I visited the property from October 5-18, 2015, on May 21, 2011, and September 21-22, 2013, and I am the Author of the report. To my knowledge, no exploration work has been carried out by ABZ or Great Lakes Resources Ltd. on the property since my last visit to the Property.
8. I am responsible for all items of this report.
9. I have no interest, direct or indirect in the Jean Property, nor do I have any interest in any other properties of ABZ, nor do I own directly or indirectly any of the securities of neither ABZ, nor do I expect to receive any such interest or securities in the future.
10. I am independent of ABZ and Great Lakes Resources Ltd., as that term is defined in Section 1.5 of NI 43-101.
11. I have no prior involvement with the Jean Property other than as disclosed in item 7 of this certificate.
12. I have read National Instrument 43-101 ("NI43-101"), and the Technical Report has been prepared in compliance with NI43-101, and Form 43-101F1.

13. I am not aware of any material fact or material change with respect to the Jean Property the omission of which would make this report misleading.
14. As at the date of this certificate, to the best of my knowledge, information and belief the technical report contains all scientific and technical information that is required to be disclosed to make this technical report not misleading.

Dated: March 1st, 2016

Signed and Sealed

Afzaal Pirzada, P.Geo.