Technical Report on an Initial Resource Estimate for the Tuktu Iron Prospect, Melville Peninsula, Nunavut, Canada

Prepared for:

Advanced Explorations Inc.
Simpson Tower
401 Bay Street, Suite 2828
Toronto, ON
Canada M5H 2Y4

Prepared by:

APEX Geoscience Ltd.
200, 9797-45 Ave.
Edmonton, AB
Canada T6E 5V8

January 11, 2012

Andrew J. Turner, P.Geol.
Micheal Dufresne, M.Sc., P.Geol.
Steven Nicholls, MAIG.

Table of Contents

Table of Contents Cont'd

List Of Figures

List of Plates

List of Tables

List of Appendices

1.0 SUMMARY

APEX Geoscience Ltd. ("APEX") was retained in the spring of 2011 by Advanced Explorations Inc. ("AEI") to provide geological services with respect to planned drill programs at its iron projects on the eastern Melville Peninsula, Nunavut. The 2011 drill program began with an initial drill test of the Tuktu prospect, which became the focus of the 2011 program. This report discusses the results of the 2011 mineral exploration program that was conducted on AEI's Tuktu Property including an initial Mineral Resource estimate for the Tuktu iron prospect.

The resource estimate discussed in this technical report was prepared by Steve Nicholls, MAIG, under the direct supervision of Andrew Turner, P. Geol., and Michael Dufresne, M.Sc., P.Geol., all with APEX, and was completed in compliance with the standards set out in National Instrument (NI) 43-101. Similarly, this technical report was written in compliance with the standards set out in NI 43-101, its Companion Policy 43-101CP and Form 43-101F1 of the Canadian Securities Administration (CSA). This report includes a summary of available geological, geophysical and geochemical information for the Property. Mr. Andrew Turner, P.Geol., the principle author of this report, directly supervised the drill program that provided the data for the current Tuktu resource estimation effort and was on site frequently throughout the drill program between May 4 to July 21, 2011.

1.1 Property, Agreements and Work Permits

The Tuktu Project is located on the Melville Peninsula, Nunavut, Canada, approximately 70 km west northwest of the hamlet of Hall Beach and approximately 60km north northwest from AEI's flagship iron project at Roche Bay. The Tuktu Property is roughly centered at 68°57' N / 82°53.7' W (424000 East / 7650000 North).

The Tuktu Property comprises AEI's HABS claim block, which is a contiguous block of 15 mineral claims that are beneficially owned by AEI. Mineral claims HABS 1-11 were staked previously by AEI while claims HABS 12-15 were staked by APEX, on behalf of AEI, in July of 2011. The Tuktu Resource area lies within the HABS 1 mineral claim. As of the date of this report, the Tuktu Property

comprises a total of approximately 14,240 hectares (ha) or 35,189 acres. Lapsing notices have been issued for four (4) peripheral claims (HABS 4-7, dated Jan. 16, 2012) that would reduce the property to 11 mineral claims (10,060 ha), however, extensions may be filed with the Mining Recorder up until that date that would prevent their actual lapsing.

In January of 2007, AEI first entered into an option agreement with Roche Bay PLC (RBPLC) and acquired the right to earn an interest in 4 mineral leases located on the eastern side of the Melville, south of the Tuktu Property, which cover portions of the Roche Bay greenstone belt that is now known to host the iron deposits of the company's Roche Bay Project (see Greenough and Palmer, 2011). The agreement between AEI and RBPLC has been amended on several occasions but throughout this process an "Area of Mutual Interest" (AMI) has been established and maintained that includes the majority of the Tuktu Property (Figures 2 and 3). The current terms of the agreement between AEI and RBPLC apply to all mineral properties owned and acquired by either party within the AMI. As a result, under the terms of an amended agreement (March 31, 2009), AEI currently owns a 49.9% interest in the Tuktu Project. AEI can increase its ownership in the Project Area to 75% with the completion of a feasibility study and to 100% (less Royalties due to RBPLC as described below) with the announcement of a production decision for a deposit on the property. At present, a feasibility study with respect to the Roche Bay Project is underway (see AEI Press Release – September 28, 2011).

AEI and RBPLC finalized an amendment to the original option agreement on March 31, 2009, referred to as the "Definitive Agreement". Under the terms of the Definitive Agreement, RBPLC is entitled to the following Royalties: 4% Gross Overriding Royalty (GOR) on iron products (such as nuggets) having greater than 90% iron content, a 6% GOR on iron products (such as concentrates and pellets) having less than 90% iron content, and a 10% GOR on byproduct precious metals. AEI has the right to purchase 50% of the royalties described above (except for the byproduct precious metal royalty) by making a payment of $35,000,000 to RBPLC on or before December 31, 2020, plus an adjustment for inflation.

The Tuktu Property is located within the Qikiqtani Region of Nunavut, which is administered by the Qikiqtani Inuit Association (QIA). Land use permits are required for conducting exploration work on lands administered by the QIA and several Inuit Owned Land (IOL) blocks are present in the project area. However, the HABS claims are located adjacent to IOL blocks and thus AEI does not require specific permits from the QIA with respect to conducting exploration work at the Tuktu Project. The HABS claims are located on lands administered by the Federal Government of Canada through the Department of Aboriginal Affairs and Northern Development Canada (AANDC), from which AEI has received land use permits allowing the company to conduct mineral exploration at the property. In addition, the company possesses the necessary permits to use water for its exploration activities (camp and drills) that were obtained from the Nunavut Water Board (NWB). There are no environmental issues at the project, of which the authors of this report are aware, nor are there any other permit related issues that would prevent the company from conducting exploration work at the project in the future.

1.2 Geology And Mineralization

The Tuktu Project is located on the east side of the Melville Peninsula that lies within the northern part of the Churchill Structural Province of the Precambrian Canadian Shield. The peninsula forms a horst between the Foxe Basin to the east and Committee Bay to the west. The Melville Peninsula is underlain by Archean tonalite-granodiorite gneiss, Archean Prince Albert Group (PAg) metasedimentary and metavolcanic rocks (Archean ‘greenstone’ belts), Archean granites of the Hall Lake Plutonic Complex, Aphebian Penrhyn Group metasedimentary rocks, Helikian sandstones and conglomerates of the Folster Lake Formation and Fury and Hecla Supergroup, Archean to Proterozoic metadiabase and diabase dykes, and early Paleozoic carbonate rocks. Large areas of the peninsula are covered by Quaternary glacial drift (Besserer and Olson, 1995).

The Tuktu Project is located near the north end of the largest of the PAg greenstone belts on the east side of the Melville Peninsula that is between 2 and 10 km wide and extends south past Hall Lake to Roche Bay, where it hosts the Roche Bay iron project, and southwest from there for a total distance of nearly 200 km (Besserer and Olson, 1995).

The Tuktu Project area is underlain by granitic gneiss basement rocks that are overlain by sedimentary, including iron formation, and volcanic rocks of the PAg. The segment of the PAg which hosts the Tuktu Banded iron Formation (BIF) strikes in a general northwest-southeast direction for approximately 17 km and has a maximum width of approximately 3 km and is dominated by meta-sedimentary rocks. On the eastern side of the Tuktu property, the PAg rocks strike more N-S and the stratigraphy is dominated by mafic volcanic. The Tuktu prospect was mapped in 2009 by AEI.

Folding has affected the PAg rocks with (pene-) contemporaneous intrusion of granites. East-west trending strike-slip faults post-date this intrusive activity with sinistral movement offsetting the north-south striking stratigraphy. Proterozoic quartzites unconformably overlie the Archean supracrustal rocks and older basement, although none have been observed in the project area, and east to southeasterly striking diabase dykes cross-cut the entire suite. The rocks of the PAg are steeply dipping and affected by steeply-plunging tight folds. The folding has resulted in thickening of the iron formation units (Underhill, 1970). The Tuktu BIF, which is southeast striking, was observed to have a fairly consistent 70^o dip to the southwest and is in contact to the north with greywackes and conglomerates (meta-sediments), with an apparently conformable contact. To the south, the Tuktu BIF is in contact with mainly granites. It is not apparent if the southern contact with granites is intrusive or structural.

The Tuktu BIF itself represents a fairly typical example of an Algoma-type banded iron formation (BIF) dominated by alternating thin (mm scale) bands of silica and magnetite. No significant hematite has been observed. The Tuktu stratigraphy has been subjected to folding and metamorphism up to lower amphibolite facies. The southern portion of the Tuktu BIF is up to 400m wide and exhibits a very simple stratigraphy with no interbeds of metasedimentary rocks, occasional thin (<5m thick) mafic dykes and minor silicate alteration (biotite/chlorite). The northern portion of the Tuktu BIF exhibits greater variation with occasional interbeds of metasediments and portions of the BIF exhibit significant silicate alteration in the form of grunerite (Fe-rich amphibole) development with such units being logged as silicate iron formation (SIF). Sulphide minerals, including pyrite and pyrrhotite, are generally rare (1-2%) throughout the Tuktu BIF, although they are present in greater amounts (up to 5-15% locally, py>po) within the northern SIF units. As is common with deformed iron formations, the layering within the Tuktu BIF on a detailed scale exhibits extremely variable orientations and abundant small scale folds. However, an overall dip of approximately 70^o was observed in core and in surface exposures of both the BIF and adjacent metasedimentary units. With the exception of the SIF units discussed above, the main Tuktu prospect BIF was observed during the 2011 drill program to be remarkably consistent in terms of both mineralogy and texture. No significant high or low grade intervals were observed and visual estimates of magnetite percentages ranged from 25-50%.

1.3 Exploration

The Tuktu Property is being explored by AEI for its iron ore potential. The first claims at the Property were staked in 2009 by AEI and the area was the subject of a limited mapping and rock sampling effort that year. No significant work was completed at the Property in 2010. However, a significant exploration program was completed in 2011 that included ground geophysical (magnetic) surveying, a limited mapping and rock sampling effort and an initial diamond drilling program. The latter was successful in identifying a significant iron deposit for which an initial Inferred Resource was subsequently determined that is discussed in a later section of this report.

Apart from diamond drilling, which will be discussed in a subsequent section of this report, the 2011 exploration program at the Tuktu Property included ground geophysical (magnetic) surveys and a prospecting/rock sampling program that mainly focused on the Tuktu East area.

With respect to ground geophysical surveys, a total of 218.6 line-km of ground magnetic surveys was completed at the Tuktu Property in 2011. In May of 2011, at the start of the 2011 drill program, approximately 50 line-km of ground magnetic surveying was completed on the Tuktu grid over the main Tuktu prospect. The resulting data supported the extents of the Tuktu BIF established by the 2009 mapping work and provided detailed data that was used to help guide the 2011 Tuktu drill program. In July and August of 2011, a further 168.6 line-km of ground magnetic surveys was completed over several regional airborne magnetic anomalies in the Tuktu East area, the results of which better defined over 20km of high magnetic anomalies that were used to guide prospecting work.

During July and August of 2011, prospecting and rock sampling was conducted over the Tuktu Prospect and the Tuktu East area magnetic anomalies. At Tuktu, rock sampling was focused on the gossan areas (SIF units) located at the north end of the prospect that were first identified by the 2009 mapping work. At the Tuktu East area, prospecting was focused on iron prospects. A total of 100 rock samples was collected on the Tuktu Property in 2011.

The results of XRF iron analyses conducted on 28 BIF samples from the Tuktu Property (Tuktu and Tuktu East) identified high-grade (magnetite-rich) iron formation at both ends of the north-south trending western magnetic feature on the HABS 2 claim. Two (2) key samples retuned %Fe values of 62.26%

(southern sample) and 63.85% (northern sample) and are located approximately 1.5km apart. Bedrock exposure was limited in this area and thus follow-up work, which is recommended, may require trenching or drill testing.

Fire assaying was conducted on the 33 samples collected at the Tuktu Prospect in 2011 and no significant gold values were identified with the highest value being 130 ppb Au. No significant base metal values were identified by the geochemical analysis conducted on all of the 2011 rock samples with the exception of a single sample collected on claim HABS 10 that comprised minor chalcopyrite mineralization within basalts that returned a value of 1.29% Cu.

1.4 2011 Drilling And Resource Estimation

Advanced Explorations Inc. completed a drill program at its Tuktu Iron Project between May 4 and July 21, 2011. The program was designed to examine the iron (magnetite) content of the Tuktu Banded Iron Formation (BIF) that had been identified by sampling completed by the company in 2009. The 2011 Tuktu drill program comprised 19 drillholes totaling 4,070.4m of NQ (1 7/8", 47.6mm) drill core, not including one hole that was abandoned shortly after commencement due to poor ground conditions. The result of the 2011 drill program was the identification of a significant, and remarkably consistent, Algoma-type (silica-magnetite) banded iron formation that was intersected over a strike length of some 2000m, across widths up to 400m and to depths of up to 200m below surface. The size, grade and consistency observed in the 2011 Tuktu dill program BIF intersections were considered sufficient to warrant and support the calculation of an initial Inferred Resource for the Tuktu iron deposit.

The Initial Mineral Resource Estimate for the Tuktu iron deposit was prepared by Steve Nicholls, MAIG, under the direct supervision of Andrew Turner, P. Geol., and Michael Dufresne, M.Sc., P.Geol., all with APEX. The resource model was generated using a total of 17 diamond core holes, with an average drill-hole spacing of 250 m. The model was constrained by a geological wireframe that was constructed from the intersections of the Tuktu iron formation. The Tuktu BIF was modeled as a steeply (~70^{o}) southwest dipping body with a large hook fold at its north end. The model was limited to between 250 m and 300 m below surface and extends 2350 m along strike (2070m drill-hole to drill-hole) with widths up to 400m across strike.

The drill database consists of a total of 1,282 composites of 2 m length, with no capping levels applied. The mineral resource was estimated by Ordinary Kriging

("OK") within a three dimensional wireframe envelope based primarily on geological characteristics (geological model as opposed to a mineralization envelope). Octant search ellipsoid distances and orientations were established by variography. The search ellipsoid ranges varied from 240 to 420m as the primary axis. Grade estimation was applied to 50 m ("Y" - along strike) x 20 m ("X") x 20 m ("RL") parent blocks with sub-blocking to honor wireframe volumes. Block densities (specific gravity, or "SG") were calculated during the OK estimation process based on a combination of both field measurements (water displacement method tests were completed on one piece of core every meter along 12 drill holes) and calculated values for samples without direct SG measurements based upon a relationship between total Fe and SG.

The current resource estimate has been classified as Inferred because of the relatively wide drillhole spacing and the fact that no metallurgical test work has yet been conducted on material from the Tuktu deposit. APEX has selected for reporting purposes a resource calculated using the same 20% total iron cut-off grade that was selected for the resource calculation recently completed at the Company's Roche Bay C-Zone deposit (see AEI Press Release April 6, 2011 available at www.sedar.com). At this cut-off, the Tuktu iron deposit was estimated to comprise 465.5M tonnes of iron formation averaging 31.06% total Fe, with 35.13% magnetics, and 0.30% S and 0.04% P.

Table 1. Grade – Tonnage Summary For The 2011 Tuktu Iron Deposit Inferred Mineral Resource Estimate.*

Lower Cut-Off %Fe (Total)	Tonnes (000,000)	%Fe (Total)	% Magnetics **	%S (Total)	%P ***	SG (t/m3)
15	467.28	31.01	35.10	0.30	0.04	3.36
18	466.52	31.04	35.12	0.30	0.04	3.36
20	**465.50**	**31.06**	**35.13**	**0.30**	**0.04**	**3.36**
22	463.84	31.10	35.16	0.30	0.04	3.36
24	460.31	31.16	35.23	0.30	0.04	3.36
25	457.48	31.20	35.28	0.30	0.04	3.36
26	452.00	31.27	35.32	0.29	0.04	3.36
28	431.45	31.46	35.50	0.29	0.04	3.36
30	361.03	31.90	35.92	0.27	0.04	3.37

** Inferred Mineral Resources are not Mineral Reserves. Inferred Mineral Resources do not have demonstrated economic viability, and may never be converted into Reserves.*
*** "% Magnetics" represents Satmagan test data which is a physical test of the percentage of magnetic minerals in a given sample. This value can be affected by magnetic minerals other than magnetite the most likely being pyrrhotite, an iron sulphide mineral. However, APEX accepts that the Satmagan data is essentially equivalent to (but not actually) a measure of % magnetite based*

upon observations made during core logging and the relatively low total sulfur assays indicating that the potential influence of minerals such as pyrrhotite is negligible.
**** Converted to %P from %P_2O_5.*

1.5 Recommendations

In the opinion of APEX Geoscience Ltd., and the authors of this report, the results of the exploration program conducted at the Tuktu Property in 2011 were sufficiently encouraging to warrant a significant follow-up work program both at the Tuktu deposit and the Tuktu East areas.

For the **Tuktu Deposit**, the following work items are recommended in order to continue its advancement and provide information for a Preliminary Economic Assessment;

- **Infill and Step-out Drilling**: A sizeable drill program is recommended for the Tuktu deposit in order to provide further information regarding the extent of the banded iron formation. This program will include in-fill drilling between current drill intercepts, step-out drilling at either end of the currently defined Tuktu deposit and step-down drilling to examine the depth extent of the deposit. This program should be designed in order to provide additional information to allow for the potential upgrading of all, or a portion of, the Inferred Resource discussed in this report to the Indicated category. A drill program on the order of 12,000m (~3 x 2011 program) is recommended in order to accomplish this goal.

- **Metallurgy**: Detailed studies should be initiated to examine the metallurgical characteristics of the Tuktu BIF in order to determine its potential for producing a viable iron ore concentrate. There are currently several tonnes of coarse reject material from the 2011 Tuktu drill core samples in storage in Hall Beach, NU, that could be used to create various composites for this work, as well as the archived core located at the Tuktu camp.

The following detailed items are recommended for inclusion with the infill drill program discussed above;

- **Surveying**: It is recommended that a professional surveyor be contracted to complete detailed surveying of the 2011 drill collars and to establish benchmarks on the project site that can be used to conduct surface surveys on an ongoing basis.

- **Geotechnical Data**: Basic geotechnical data was collected for the 2011 drillholes, including core recoveries and fracture density measurements. This work should continue going forward but with greater detail added. The engagement of an engineering group is recommended to supervise this work and design a geotechnical logging template.

- **QA/QC**: The QA/QC protocols established in 2011 should be continued going forward. This should include the use of AEI's iron standards that were made during the 2011 drill program. A round-robin analytical program should be completed in order to properly establish the "accepted value" for AEI's new iron standards, as well as their pass/fail limits. Umpire testing of drill core samples (in the range of 2-5% of samples) should be completed as part of the overall QA/QC program.

- **Environmental**: Baseline environmental studies initiated in 2011 by AEI should be continued.

- **Community Consultation** meetings should be conducted in order to insure that local communities understand AEI's intentions and objectives with respect to the advancement of the Tuktu Project.

For the **Tuktu East Area**, the following work items are recommended;

- **Fieldwork**: Follow-up fieldwork is recommended throughout the Tuktu East Area that should include detailed mapping and sampling of iron formations identified in 2011 along with the completion of ground magnetic surveys over the remaining magnetic anomalies not surveyed in 2011.

- **Regional Drilling**: A small regional drilling program is recommended in order to test the iron formations that returned high iron concentrations on the HABS 2 claim. This program should comprise 4-5 shallow drillholes at each of the 2 high-grade areas and would total approximately 2,000m of drilling.

The recommended Tuktu drill program, together with the other recommended work items discussed above, represents a significant exploration program. It is estimated that such a program will comprise on the order of 14,000m of drilling at the Tuktu and Tuktu East areas. A proposed budget for the recommended work program is appended to this report (Appendix 4) and totals approximately **$12.6**

million. This figure represents project related costs only and does not include any corporate costs nor does it include any provisions for contingencies. In the opinion of APEX Geoscience Ltd., all of the work items listed above are warranted at this time and none are contingent on the results of any of the others.

2.0 INTRODUCTION

APEX Geoscience Ltd. ("APEX") was retained in the spring of 2011 by Advanced Explorations Inc. ("AEI") to provide geological services with respect to a planned drill programs at its iron projects on the eastern Melville Peninsula, Nunavut. The 2011 drill program began with an initial drill test of the Tuktu prospect, which became the focus of the 2011 program. This report discusses the results of the mineral exploration program that was conducted on AEI's Tuktu Property including an initial Mineral Resource estimate for the Tuktu iron prospect.

Throughout this report references will be made to the "Property", or the "Tuktu Property", which comprises the HABS claim block (see Section 4.0 of this report for further details). References will also be made to work completed at the main "Tuktu" iron "prospect" (or "project"), which is located on the HABS 1 mineral claim and is the focus of this report, as well as to magnetic features located on the Tuktu Property east of the Tuktu prospect that will be referred to collectively as the "Tuktu East" area.

The Tuktu (Inuktitut for Caribou) iron prospect is located approximately 72km west northwest of the hamlet of Hall Beach and 60km north northwest of the company's flagship Roche Bay iron project (Figure 1) where an indicated and inferred iron resource has previously been defined (see Greenough and Palmer, 2011). The results of the 2011 Tuktu drill program were sufficiently encouraging such that APEX was subsequently retained by AEI to complete an initial inferred resource estimate for the Tuktu deposit, which is the subject of this technical report.

The resource estimate discussed in this technical report was prepared by Steve Nicholls, MAIG, under the direct supervision of Andrew Turner, P. Geol., and Michael Dufresne, M.Sc., P.Geol., all with APEX, and was completed in compliance with the standards set out in National Instrument (NI) 43-101.

140°W
110°W
80°W
80°N
50°W
60°N
60°33'N
ALERT
Ellesmere Island
Greenland (Denmark)
Beaufort Sea
Baffin Bay
Davis Strait
Melville Is.
Banks Is.
Devon Is.
Parry Channel
POND INLET
ARCTIC BAY
CLYDE RIVER
Victoria Island
Mary River Project (Baffinland)
TUKTU PROJECT
Baffin Island
QIKIQTARJUAQ
Arctic Circle
CAMBRIDGE BAY
IGLOOLIK
HALL BEACH
Roche Bay Project (AEI)
TALOYOAK
PANGNIRTUNG
Great Bear Lake
KUGLUKTUK (COPPERMINE)
GJOA HAVEN
KUGAARUK (PELLY BAY)
Melville Peninsula
Foxe Basin
IQALUIT
Northwest Territories
REPULSE BAY
Nunavut
CORAL HARBOUR
CAPE DORSET
Hudson Strait
Great Slave Lake
YELLOWKNIFE
BAKER LAKE
Hay River
RANKIN INLET
Ungava Bay
ARVIAT
Lake Athabasca
Hudson Bay
Alberta
Saskatchewan
Manitoba
Churchill
Quebec
Location Map Area
CANADA
LEGEND
Tuktu Iron Ore Project
Other Iron Ore Projects
Town, Hamlet
Capita
Provincial/ Territorial Boundary
Road
Lake
River
ADVANCED EXPLORATIONS INC.
Melville Peninsula, Nunavut, Canada
TUKTU PROJECT LOCATION MAP
500 0 500 1000
Kilometres
APEX Geoscience Ltd.
Edmonton, AB
January 2012

Figure 1

Similarly, this technical report was written in compliance with the standards set out in NI 43-101, its Companion Policy 43-101CP and Form 43-101F1 of the Canadian Securities Administration (CSA). This report includes a summary of available geological, geophysical and geochemical information for the Property. Mr. Andrew Turner, P.Geol., the principle author of this report, directly supervised the drill program that provided the data for the Tuktu resource estimation effort discussed in this report and was on site frequently throughout the 2011 Tuktu Exploration Program between May 4 to August 21, 2011. Both Mr. Turner and Mr. Dufresne are "Qualified Persons" as defined by National Instrument 43-101.

Unless otherwise stated, all coordinates presented or discussed in this report are in the Universal Transverse Mercator (UTM) system relative to Zone 17 of the North American Datum established in 1983 (NAD83, Zone 17) and dollar amounts ($) are in Canadian currency.

3.0 RELIANCE ON OTHER EXPERTS

This report, written by Mr. Andrew J. Turner, B.Sc., P.Geol., and co-authored by Micheal Dufresne, P.Geol. and Steven Nichols, MAIG, all geological consultants with APEX Geoscience Ltd., is a compilation of proprietary and publicly available information as well as information obtained during property visits, which the author conducted on several occasions between May 4 and August 21, 2011, as supervisor of the 2011 Tuktu exploration program. The authors' certificate sheets are presented at the end of this report.

The authors, in writing this report, have used as sources of information those publications listed in the references section. Government reports referenced by this report were prepared by a person (or persons) holding post secondary geology or related university degrees and, therefore, the information in those reports is assumed to be accurate. Any reports referenced herein that were written by other geologists prior to the implementation of the standards relating to National Instrument 43-101 may be assumed by the reader to be accurate based on a review of the information conducted by the author(s), although any such information will not be the sole basis for any conclusions or recommendations made in this report.

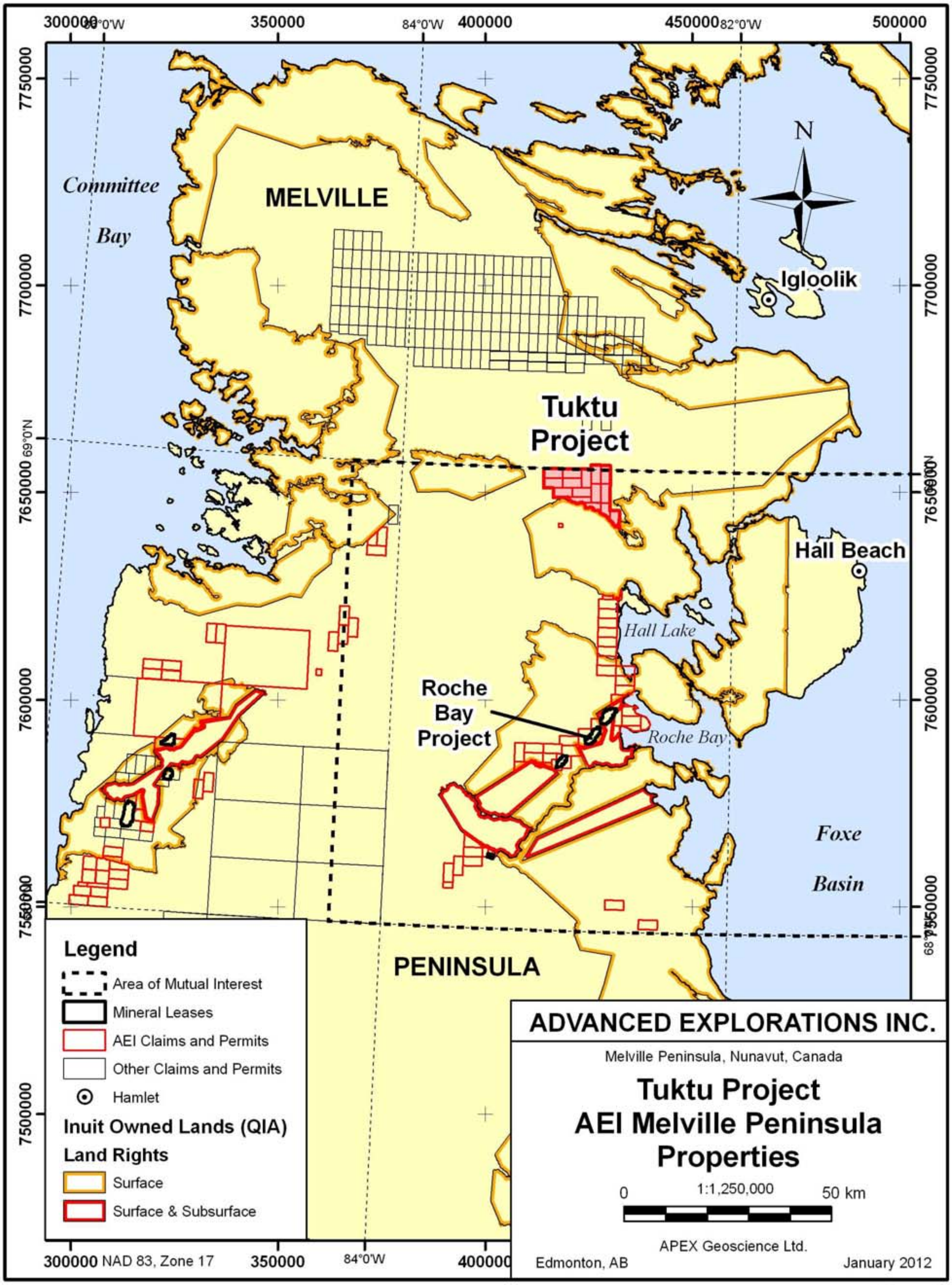
4.0 PROPERTY DESCRIPTION AND LOCATION

The Tuktu Project is located on the Melville Peninsula, Nunavut, Canada, approximately 70 km west northwest of the hamlet of Hall Beach and approximately 60km north northwest from AEI's flagship iron project at Roche Bay (Figure 1). The Melville Peninsula is bounded by the Foxe Basin to the east, Committee Bay in the west and is separated from the north end of Baffin Island by the Fury and Helca Straits. The project is roughly equidistant from the hamlets of Hall Beach and Igloolik, which are both located roughly 70 km east and northeast, respectively, from Tuktu camp on the east coast of the Melville Peninsula (Figure 2). These communities have populations of 681 and 1,592, respectively (2006 Census).

The Tuktu Property is roughly centered at 68°57' N / 82°53.7' W (424000 East / 7650000 North). AEI's Tuktu Camp, which is located immediately north of the Tuktu iron formation (resource area), is located at 68°57' 54" N / 82°56' 57" W (421395 East / 7651700 North).

The Tuktu Property comprises AEI's HABS claim block, which is a contiguous block of 15 mineral claims that are beneficially owned by AEI. However, the Tuktu Project is located within the Area of Mutual Interest (AMI) as defined in an agreement originally dated January 29, 2007, between AEI and Roche Bay PLC with respect to AEI's acquisition of the Roche Bay Project. The property Agreement is described in greater detail below.

The mineral claims HABS 1-11 were staked previously (see Table 2) by AEI while claims HABS 12-15 were staked by APEX, on behalf of AEI, in July of 2011. The Tuktu Resource area lies within the HABS 1 mineral claim. As of the date of this report, the Tuktu Property comprises a total of approximately 14,240 hectares (ha) or 35,189 acres (Table 2 and Figure 3). Lapsing notices have been issued for four (4) peripheral claims (HABS 4-7, dated Jan. 16, 2012) that would reduce the property to 11 mineral claims (10,060 ha), however, extensions may be filed with the Mining Recorder up until that date that would prevent their actual lapsing.


Committee
Bay
MELVILLE
PENINSULA
Igloolik
Tuktu
Project
Hall Beach
Hall Lake
Roche
Bay
Project
Roche Bay
Foxe
Basin
N
Legend
Area of Mutual Interest
Mineral Leases
AEI Claims and Permits
Other Claims and Permits
Hamlet
Inuit Owned Lands (QIA)
Land Rights
Surface
Surface & Subsurface
ADVANCED EXPLORATIONS INC.
Melville Peninsula, Nunavut, Canada
Tuktu Project
AEI Melville Peninsula
Properties
0
1:1,250,000
50 km
APEX Geoscience Ltd.
Edmonton, AB
January 2012
300000 NAD 83, Zone 17
350000
400000
450000
500000
84°0'W
82°0'W
7750000
7700000
7650000
7600000
7550000
7500000
69°0'N
Figure 2

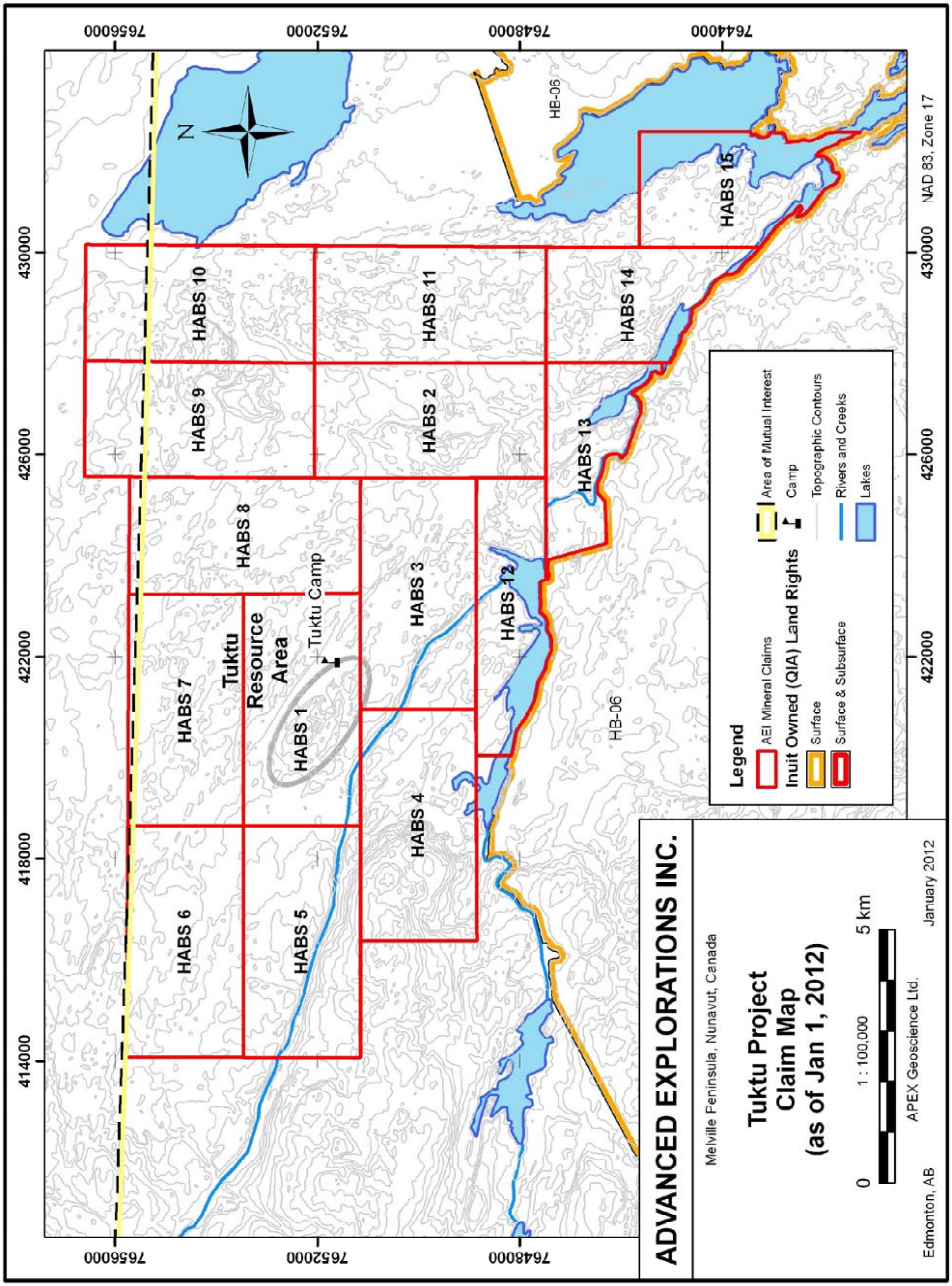

ADVANCED EXPLORATIONS INC.
Melville Peninsula, Nunavut, Canada
Tuktu Project
Claim Map
(as of Jan 1, 2012)
0
1 : 100,000
5 km
Edmonton, AB
APEX Geoscience Ltd.
January 2012
Legend
AEI Mineral Claims
Inuit Owned (QIA) Land Rights
Surface
Surface & Subsurface
Area of Mutual Interest
Camp
Topographic Contours
Rivers and Creeks
Lakes
NAD 83, Zone 17
N
HABS 1
HABS 2
HABS 3
HABS 4
HABS 5
HABS 6
HABS 7
HABS 8
HABS 9
HABS 10
HABS 11
HABS 12
HABS 13
HABS 14
HABS 15
Tuktu Resource Area
Tuktu Camp
HB-06
HB-06
414000
418000
422000
426000
430000
7656000
7652000
7648000
7644000

Figure 3

Table 2. Tuktu Property Claim Information.

Name	Tag No.	Area (Ha)	Area (Acres)	Owner *	NTS Sheet	Status	Date Acquired	Anniversary Date **
HABS 1	K12471	1045.14	2582.50	AEI	47A/13-14	Active	10-Sep-2009	10-Sep-2013
HABS 2	K12472	1045.14	2582.50	AEI	47A/14	Active	10-Sep-2009	10-Sep-2016
HABS 3	K12473	1045.14	2582.50	AEI	47A/14	Active	10-Sep-2009	10-Sep-2019
HABS 4	K13259	1045.14	2582.50	AEI	47A/13-14	Lapsing	7-Oct-2009	16-Jan-2012
HABS 5	K13260	1045.14	2582.50	AEI	47A/13	Lapsing	7-Oct-2009	16-Jan-2012
HABS 6	K13261	1045.14	2582.50	AEI	47A/13-47D/04	Lapsing	7-Oct-2009	16-Jan-2012
HABS 7	K13262	1045.14	2582.50	AEI	47A/13, 14, 47D/03	Lapsing	7-Oct-2009	16-Jan-2012
HABS 8	K13263	1045.14	2582.50	AEI	47A/14, 47D/03	Active	7-Oct-2009	7-Oct-2016
HABS 9 *	K13264	1045.14	2582.50	AEI	47A/14, 47D/03	Active	7-Oct-2009	7-Oct-2014
HABS 10	K13265	1045.14	2582.50	AEI	47A/14, 47D/03	Active	7-Oct-2009	7-Oct-2014
HABS 11	K13266	1045.14	2582.50	AEI	47A/14	Active	7-Oct-2009	7-Oct-2014
HABS 12	F91467	696.00	1719.80	Michael Dufresne	47A/14	Pending	20-Sep-2011	20-Sep-2013
HABS 13	F91468	560.31	1384.50	Michael Dufresne	47A/14	Pending	20-Sep-2011	20-Sep-2013
HABS 14	F91469	719.88	1778.80	Michael Dufresne	47A/14	Pending	20-Sep-2011	20-Sep-2013
HABS 15	F91470	768.36	1898.60	Michael Dufresne	47A/14	Pending	20-Sep-2011	20-Sep-2013
		14241.07	35189.20					

* The name in which the claim was registered with the Nunavut Mining Recorder. All claims beneficially owned by AEI.

** Anniversary dates assume acceptance of assessment credits filed in the fall of 2011.

*** Claim K13264 is currently identified as "HABS" but the Nunavut Mining Recorder, but is being changed to "HABS 9".

4.1 Property Agreement

In January of 2007, AEI first entered into an option agreement with Roche Bay PLC (RBPLC) and acquired the right to earn an interest in 4 mineral leases located on the eastern side of the Melville, south of the Tuktu Property, which cover portions of the Roche Bay greenstone belt that is now known to host the iron deposits of the company’s Roche Bay Project (see Greenough and Palmer, 2011). The agreement between AEI and RBPLC has been amended on several occasions but throughout this process an “Area of Mutual Interest” (AMI) has been established and maintained that includes the majority of the Tuktu Property (Figures 2 and 3). The current terms of the agreement between AEI and RBPLC apply to all mineral properties owned and acquired by either party within the AMI. As a result, under the terms of an amended agreement (March 31, 2009), AEI currently owns a 49.9% interest in the Tuktu Project. AEI can increase its ownership in the Project Area to 75% with the completion of a feasibility study and to 100% (less Royalties due to RBPLC as described below) with the announcement of a production decision for a deposit on the property. At present, a feasibility study with respect to the Roche Bay Project is underway (see AEI Press Release – September 28, 2011).

AEI and RBPLC finalized an amendment to the original option agreement on March 31, 2009, referred to as the "Definitive Agreement". Under the terms of the Definitive Agreement, RBPLC is entitled to the following Royalties: 4% Gross Overriding Royalty (GOR) on iron products (such as nuggets) having greater than 90% iron content, a 6% GOR on iron products (such as concentrates and pellets) having less than 90% iron content, and a 10% GOR on byproduct precious metals. AEI has the right to purchase 50% of the royalties described above (except for the byproduct precious metal royalty) by making a payment of $35,000,000 to RBPLC on or before December 31, 2020, plus an adjustment for inflation.

4.2 Permitting

The Tuktu Property is located within the Qikiqtani Region of Nunavut, which is administered by the Qikiqtani Inuit Association (QIA). Land use permits are required for conducting exploration work on lands administered by the QIA and several Inuit Owned Land (IOL) blocks are present in the project area. However, the HABS claims are located adjacent to IOL blocks and thus AEI does not require specific permits from the QIA with respect to conducting exploration work at the Tuktu Project. The HABS claims are located on lands administered by the Federal Government of Canada through the Department of Aboriginal Affairs and Northern Development Canada (AANDC), from which AEI has received land use permits allowing the company to conduct mineral exploration at the property. In addition, the company possesses the necessary permits to use water for its exploration activities (camp and drills) that were obtained from the Nunavut Water Board (NWB). There are no environmental issues at the project, of which the authors of this report are aware, nor are there any other permit related issues that would prevent the company from conducting exploration work at the project in the future.

5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES INFRASTRUCTURE AND PHYSIOGRAPHY

The Tuktu Project is located on the Melville Peninsula, Nunavut, Canada, approximately 70 km west northwest of the hamlet of Hall Beach and approximately 60km north northwest of AEI's flagship iron project at Roche Bay (Figure 1). At present, there is no permanent infrastructure on the project site or in its vicinity.

Access to the Project was achieved by helicopter from Hall Beach, which is serviced by regularly scheduled flights from Iqaluit, which can in turn be accessed directly from Ottawa, ON, and indirectly from Edmonton, AB, and Winnipeg, MB. Hall Beach is a small community of approximately 500 people where basic support services can be obtained such as fuel, groceries and temporary accommodations. Other services and supplies were procured by AEI from elsewhere and much of which had been barged previously from eastern Canada and the port of Churchill, MB, to Hall Beach and AEI's Roche Bay Project.

In advance of the 2011 Tuktu drill program, a new camp (Tuktu camp) was constructed at the Property. The majority of the materials and equipment comprising the camp were flown to site from Hall Beach and the Roche Bay cache by a Kenn Borek Air DC-3 Turbo (Basler) aircraft. The Tuktu camp can accommodate up to 30 people.

Access to drill sites during winter conditions was achieved using snowmobile but helicopters were required for drill area access during summer conditions. A B-2 A-Star helicopter was contracted from Abitibi Helicopters by AEI to support the 2011 drill program. In addition, a Bell Long Ranger helicopter was contracted by AEI from Guardian Helicopters to support the 2011 summer fieldwork program and provided occasional support to the drill program.

The climate at the project area is typical of the eastern sub-arctic being cold in the winter, with temperatures varying from -20 degrees to -45 degrees Celsius (^{o}C), and mild in the summer, with temperatures varying from +5 to +15^{o}C. Precipitation is moderate with approximately 25 cm of rain and 125 cm of snow (equivalent to a total of roughly 37.5 cm of rain) annually. Fog commonly occurs in the project area from the spring through the fall months.

Topographic relief at the Project area is moderate and can best be described as hilly with abundant bedrock outcrops located along hill tops surrounded by relatively flat drift covered areas. Further to the east, topography flattens significantly as outcrops become rare and drift deposits and recent marine deposits dominate, including abundant stranded beach deposits. At the Project area elevations vary between 100 and 150m above mean sea level. The project is located well north of the tree-line and is thus characterized by flora and fauna typical for arctic tundra

6.0 HISTORY

There is no record of any systematic exploration at what is referred to herein as the Tuktu iron prospect prior to AEI's involvement in the area in 2007. The area was first examined by AEI, and was subsequently staked, in 2009. At this time, a brief visit to the property area, intended to follow-up and examine regional airborne magnetic anomalies, resulted in the collection of rock samples that contained up to 35% Fe at the main Tuktu prospect as well as at the Tuktu East area. This work is discussed in greater detail in the Exploration section of this report.

Regionally, the first systematic geological mapping of the southern half of Melville Peninsula was conducted by Heywood in 1967 at a scale of 1 inch to 8 miles (1:506,880). Parts of southern Melville Peninsula have since been remapped by Frisch (1982) at a scale of 1:250,000 and by Henderson (1983, 1987) at a scale of 1:100,000. Schau (1981, 1993) produced geological maps of the northern Melville Peninsula at scales of 1:125,000 and 1:500,000. Airborne magnetic surveys have been performed over the entire Melville Peninsula, including NTS map areas 46M, N, O, P and 47A, B and C by the Geological Survey of Canada ("GSC") (1978a,b,c,d,e,f). More recently the GSC completed a regional aeromagnetic survey (Coyle, 2010) over the central portion of the Melville Peninsula and has recently completed a three year mapping project across the Melville Peninsula, although products from this work have not yet been released. The most recent regional geological information for the project area is Schau (1993).

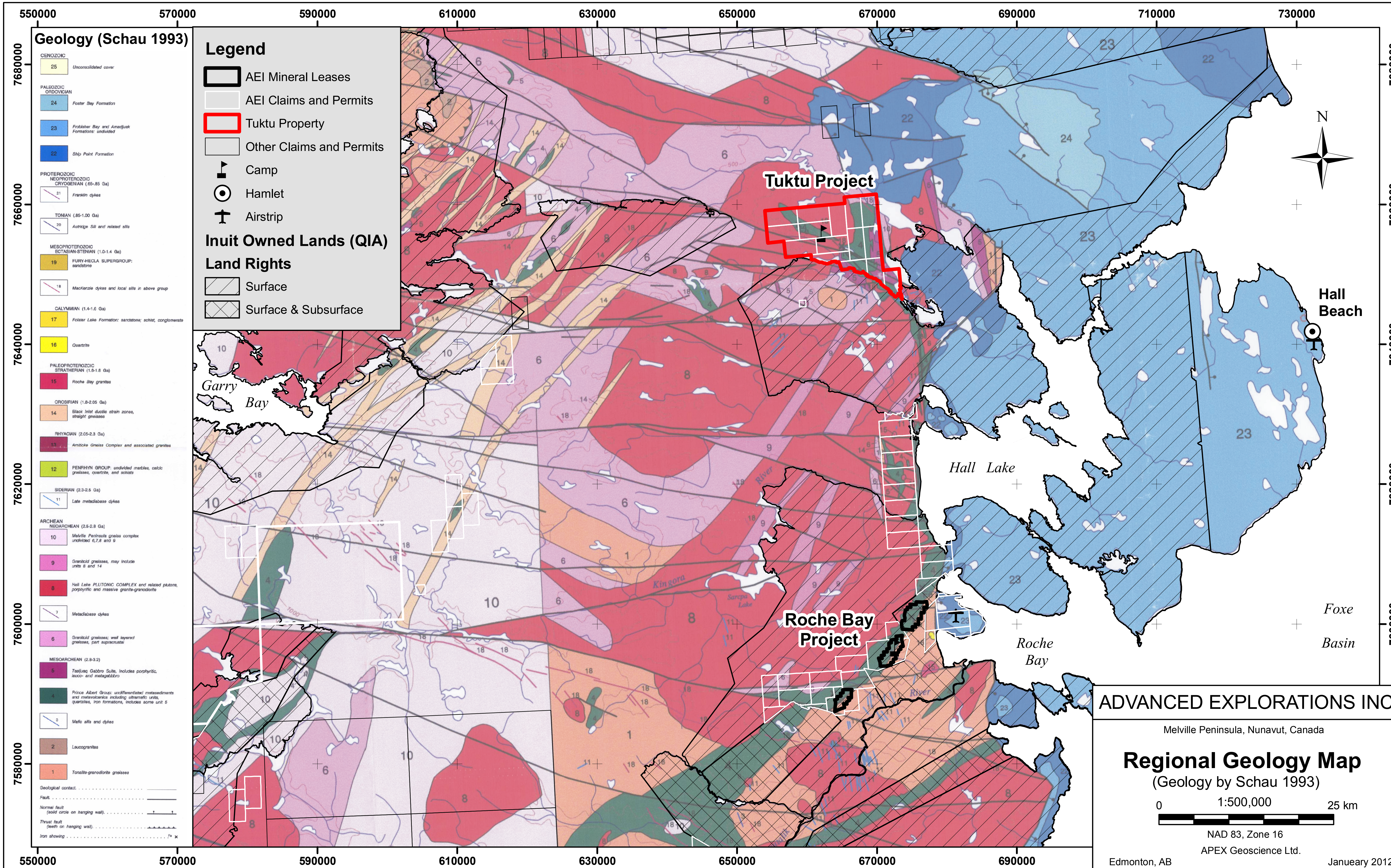
7.0 GEOLOGICAL SETTING AND MINERALIZATION

7.1 Regional Geology

The Melville Peninsula lies within the northern part of the Churchill Structural Province of the Precambrian Canadian Shield. It forms a horst between the Foxe Basin to the east and Committee Bay to the west. The Melville Peninsula is underlain by Archean tonalite-granodiorite gneiss, Archean Prince Albert Group (PAg) metasedimentary and metavolcanic rocks (Archean ‘greenstone’ belts), Archean granites of the Hall Lake Plutonic Complex, Aphebian Penrhyn Group metasedimentary rocks, Helikian sandstones and conglomerates of the Folster Lake Formation and Fury and Hecla Supergroup, Archean to Proterozoic metadiabase and diabase dykes, and early Paleozoic carbonate rocks. Large areas of the peninsula are covered by Quaternary glacial drift (Besserer and Olson, 1995).

The oldest rocks on the Melville Peninsula are partially retrogressed tonalite-granodiorite gneisses, which in some areas are crosscut by leucogranite dykes and metamorphosed mafic sills and dykes (Schau, 1993). Supracrustal rocks of the PAg unconformably overlie the gneisses. The name *Prince Albert Group* was introduced by Heywood (1967) to *"refer to a sequence of Aphebian (early Proterozoic) or Archean metamorphosed sedimentary and volcanic rocks"*, which exist mainly in two belts on the Melville Peninsula (and one belt southwest of Committee Bay), one being on the west side of the peninsula in the Prince Albert Hills. Subsequent geological and isotopic analyses by Frisch and Goulet (1975) and Schau (1975) determined that the PAg is, in fact, Archean in age. Schau (1993) described the PAg as "*a volcanogenic sequence containing meta-ultramafic rocks, metabasalt, acid volcanic rocks, quartzite, banded iron formations, as well as more common pelitic and other clastic metasedimentary rocks*". Small (100 to 400 m diameter) showings of serpentinized ultramafic rock within foliated porphyritic to megacrystic granite have been mapped in portions of the Melville Peninsula (Besserer and Olson, 1995).

The Tuktu Project is located near the north end of the largest of the PAg greenstone belts (Figure 4) on the east side of the Melville Peninsula that is between 2 and 10 km wide and extends south past Hall Lake to Roche Bay, where it hosts the Roche Bay iron project, and southwest from there for a total distance of nearly 200 km (Besserer and Olson, 1995).



Geology (Schau 1993)
Legend
AEI Mineral Leases
AEI Claims and Permits
Tuktu Property
Other Claims and Permits
Camp
Hamlet
Airstrip
Inuit Owned Lands (QIA)
Land Rights
Surface
Surface & Subsurface
Tuktu Project
Roche Bay Project
Garry Bay
Hall Lake
Hall Beach
Roche Bay
Foxe Basin
N
550000
570000
590000
610000
630000
650000
670000
690000
710000
730000
7680000
7660000
7640000
7620000
7600000
7580000
ADVANCED EXPLORATIONS INC.
Melville Peninsula, Nunavut, Canada
Regional Geology Map
(Geology by Schau 1993)
0
1:500,000
25 km
NAD 83, Zone 16
APEX Geoscience Ltd.
Edmonton, AB
Januaeary 2012

Figure 4

The tonalite-granodiorite gneiss and PAg were intruded by Late Archean metagabbroic stocks, then deformed by a complex series of folds and faults, and finally were metamorphosed and intruded by granites of the Hall Lake Plutonic Complex. Metamorphism in the Late Archean reached upper amphibolite grade throughout most of Melville Peninsula, but ranged from greenschist grade in a few regions on the east coast, through granulite grade in the northwest part of the Peninsula (Besserer and Olson, 1995).

Metasedimentary rocks of the Penrhyn Group were deposited during the Aphebian (early Proterozoic), mainly in the southern Melville Peninsula. The Penrhyn Group and underlying basement were subsequently deformed in at least two separate episodes associated with the late Aphebian Hudsonian Orogeny, and metamorphosed to amphibolite grade. Northeast-trending high-strain zones associated with this deformation are present along the contacts between the Penrhyn Group and basement rocks, and at several locations in the northern Melville Peninsula (Besserer and Olson, 1995).

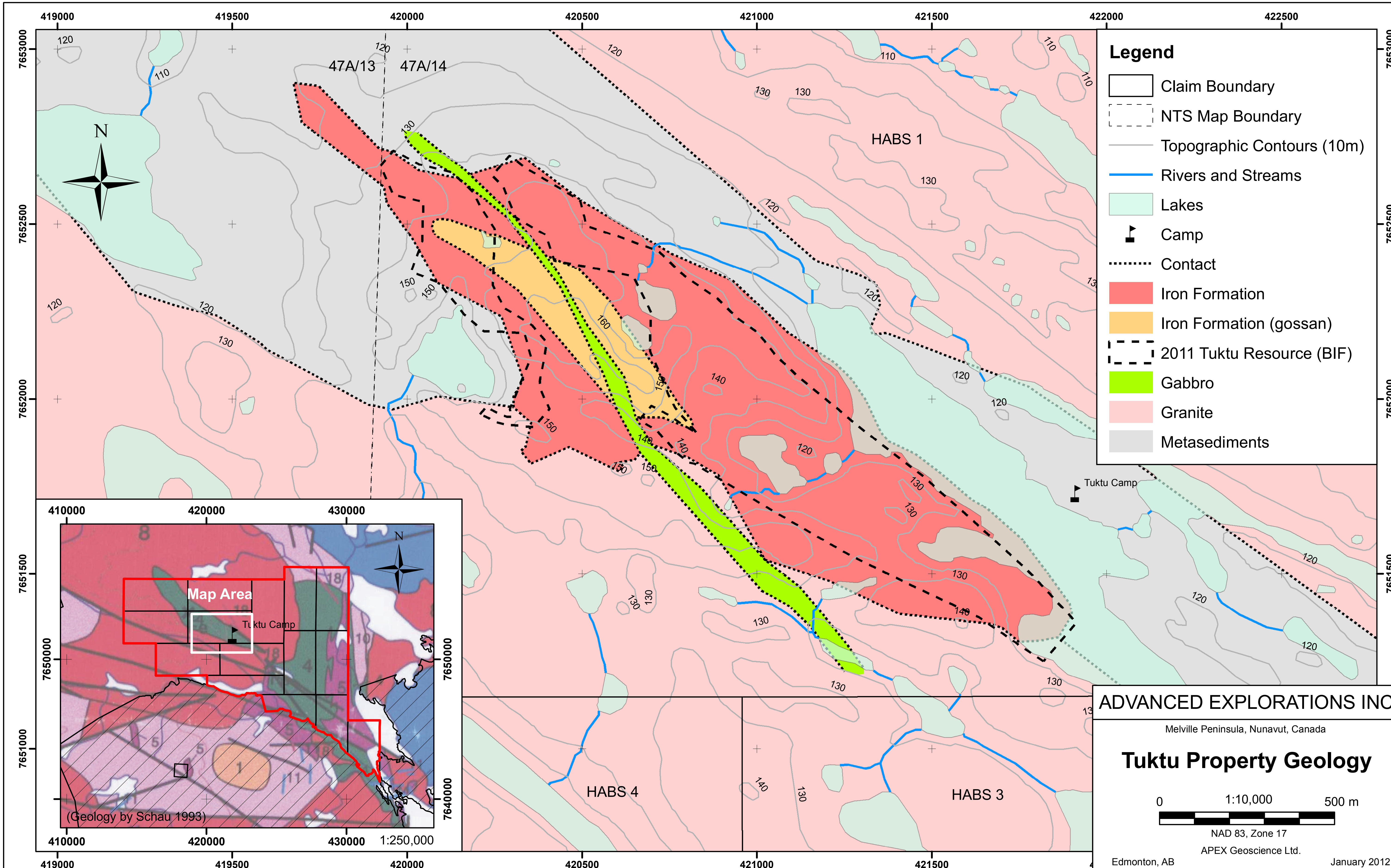
The Melville Peninsula was uplifted during the Helikian (middle Proterozoic), and cross-cut by numerous east-southeast trending 'latitudinal faults' (Schau, 1993). These latitudinal faults occur throughout the Melville Peninsula, but are more common in the north half of the Peninsula. A few granitic stocks are emplaced along these latitudinal fault zones. Sandstone and conglomerate clastic sequences were deposited later in the Helikian, first in the Folster Lake Formation on the west coast, then in the Fury and Hecla Supergroup on the north coast of Melville Peninsula. Diabase dykes, of the Mackenzie Series and of the Franklin Series, were intruded into all of the above rock units during the Late Helikian and Hadrynian (Upper Proterozoic). Ordovician carbonate rocks were deposited both on the east coast and adjacent to the west coast of Melville Peninsula, and are the youngest rock units preserved. Renewed uplift of the Melville Peninsula to near its present erosional surface occurred during the Devonian and Cretaceous. In the Quaternary thick, mainly carbonate-rich, glacial sediments were locally deposited along the west coast of the peninsula (Besserer and Olson, 1995).

7.2 Property Geology and Mineralization

The Tuktu Project area is underlain by granitic gneiss basement rocks which are overlain by sedimentary, including iron formation, and volcanic rocks of the PAg. The segment of the PAg which hosts the Tuktu Banded iron Formation (BIF) strikes in a general northwest-southeast direction for approximately 17 km and has a maximum width of approximately 3 km and is dominated by meta-sedimentary rocks. On the eastern side of the Tuktu property, the PAg rocks strike more N-S and the stratigraphy is dominated by mafic volcanics (see inset in Figure 5). The Tuktu prospect was mapped in 2009 by AEI and the result is shown in Figure 5. Also shown on the figure is the surface projection of the inferred resource that includes information gained from field examinations completed by the primary author of this report as well as projected contacts from the 2011 drill program.

Folding has affected the PAg rocks with (pene-) contemporaneous intrusion of granites. East-west trending strike-slip faults post-date this intrusive activity with sinistral movement offsetting the north-south striking stratigraphy. Proterozoic quartzites unconformably overlie the Archean supracrustal rocks and older basement, although none have been observed in the project area, and east to southeasterly striking diabase dykes cross-cut the entire suite. The rocks of the PAg are steeply dipping and affected by steeply-plunging tight folds. The folding has resulted in thickening of the iron formation units (Underhill, 1970). The Tuktu BIF, which is southeast striking, was observed to have a fairly consistent 70^{o} dip to the southwest and is in contact to the north with greywackes and conglomerates (meta-sediments), with an apparently conformable contact. To the south, the Tuktu BIF is in contact with mainly granites. It is not apparent if the southern contact with granites is intrusive or structural.

The Tuktu BIF itself represents a fairly typical example of an Algoma-type banded iron formation dominated by alternating thin (mm scale) bands of silica and magnetite. No significant hematite has been observed. The Tuktu stratigraphy has been subjected to folding and metamorphism up to lower amphibolite grades. The southern portion of the Tuktu BIF is up to 400m wide and exhibits a very simple stratigraphy with no interbeds of metasedimentary rocks, occasional thin (<5m thick) mafic dykes and minor silicate alteration (biotite/chlorite). The northern portion of the Tuktu BIF exhibits greater variation with occasional interbeds of metasediments and portions of the BIF exhibit significant silicate alteration in the form of grunerite (Fe-rich amphibole) development with such such units being logged as silicate iron formation (SIF). Sulphide minerals, including pyrite and pyrrhotite, are generally rare (1-2%) throughout the Tuktu BIF, although they are present in greater amounts (up to 5-15% locally, py>po) within the northern SIF units (identified as “gossans”, or rusty areas, in Figure 5). As is common with deformed iron formations, the layering within the Tuktu BIF on a detailed scale exhibits extremely variable orientations



Legend
Claim Boundary
NTS Map Boundary
Topographic Contours (10m)
Rivers and Streams
Lakes
Camp
Contact
Iron Formation
Iron Formation (gossan)
2011 Tuktu Resource (BIF)
Gabbro
Granite
Metasediments
47A/13
47A/14
HABS 1
HABS 3
HABS 4
Tuktu Camp
Map Area
(Geology by Schau 1993)
1:250,000
ADVANCED EXPLORATIONS INC.
Melville Peninsula, Nunavut, Canada
Tuktu Property Geology
0
1:10,000
500 m
NAD 83, Zone 17
APEX Geoscience Ltd.
Edmonton, AB
January 2012

Figure 5

and abundant small scale folds. However, an overall dip of approximately 70^{o} was observed in core and in surface exposures of both the BIF and adjacent metasedimentary units. With the exception of the SIF units discussed above, the main Tuktu prospect BIF was observed during the 2011 drill program to be remarkably consistent in terms of both mineralogy and texture. No significant high or low grade intervals were observed and visual estimates of magnetite percentages ranged from 25-50% (see Plate 1).

Plate 1. Photograph Of Tuktu BIF Outcrop.

8.0 DEPOSIT TYPES

The primary interest on the Tuktu Property is its iron ore potential. The Property hosts a significant banded iron formation (BIF) that is typical of the Algoma-type. Such ion ores are comprised of iron oxides and are present throughout the geologic record having beein deposited within marine environments associated with volcanic and sedimentary rock packages (Gross, 1993). Algoma-type BIF's are particularly prevalent in Archean-aged greenstone belts akin to that located on the Property.

Algoma-type BIF's often have significant strike extents in the field (up to several kilometers) and are typically 5-150 m thick. They typically comprise alternating millimeter- to decimeter-scale bands of quartz and magnetite, with or without hematite. Often accompanying these primary minerals are additional Fe-rich silicate minerals including chlorite, biotite, various amphiboles including hornblende and grunerite, and sulphide minerals including pyrite, pyrrhotite and arsenopyrite.

The BIF's on the Tuktu Property have been metamorphosed and recrystallized but remain largely fine-grained. The southern portion of the Tuktu BIF is relatively simple with no significant structural complexities, very little alteration and is between and 1 and 400m thick. The Tuktu BIF appears to form a large hook fold in the north that is bisected by a 5-10m wide mafic dyke. Also in this area, the iron formation thins to between 20 and 200m, is folded with metasediments and exhibits occasional alteration with silicate (grunerite) and sulphide development.

Due to the weathering-resistant mineralogy of quartz and magnetite in iron formations, they generally outcrop as prominent, rounded knobs with a steely-blue colour. BIF's have inherent strong magnetic qualities that make them readily detectable by airborne and ground magnetic surveys on which they will typically appear as thin, contorted horizons.

Iron ore mined throughout the world is generally produced from Superior-type BIF's, which are younger in age (Proterozoic), thicker, and more iron-rich. However, commercial production of iron ore has been realized from Algoma-type BIF's, including several in Ontario, Canada. Production in 1986 from oxide-facies BIF's at the Adams, Griffith and Sherman mines included eight million long tons of ore grading 19-27% Fe (Gross, 1993). Typical Fe content of the oxide-facies at these mines ranged from 29.7 to 38.8% total Fe. The Mary River Iron Project on

Baffin Island, approximately 450 km northeast of the Property, is advancing to production following a positive Definitive Feasibility Study completed in 2008. The Mary River Project will produce from oxide-facies BIF's which are found within the same group of rocks as those on the Property (Prince Albert Group). The Mary River project currently comprises a Mineral Reserve of 365 million tonnes with an average grade of 64.66% Fe along with Mineral Resources exclusive of Reserves of 52.4 million tonnes of measured and indicated grading 64.61% Fe and 448 million tonnes of inferred at a grade of 65.48% Fe (Holmes *et al.*, 2008).

In addition to the iron ore potential of the property, the primary focus of exploration, there is a potential for the property to host diamondiferous kimberlite and poly-metallic Volcanic-Hosted Massive Sulphide deposits. The former is evidenced by the property's proximity to Stornoway Diamond Corporation's Aviat (kimberlite) Project, located approximately 50km north of the Tuktu Property, while the latter is inferred from the presence of favorable geology (abundant mafic volcanics) on the east side of the property.

9.0 EXPLORATION

The Tuktu Property is being explored by AEI for its iron ore potential. The Property was acquired in 2009 by AEI and was the subject of a limited mapping and rock sampling effort that year. No significant work was completed at the Property in 2010. However, a significant exploration program was completed in 2011 that included ground geophysical (magnetic) surveying, a limited mapping and rock sampling effort and an initial diamond drilling program. The latter was successful in identifying a significant iron deposit for which an initial Inferred Resource was subsequently determined that will be discussed in a later section of this report.

9.1 2009 Exploration

The first four (4) claims at what is now the Tuktu Property were staked by AEI in 2009 (HABS 1-4). In September of 2009, Golder Associates assisted AEI with the completion of a preliminary assessment of the property, which was undertaken in order to examine magnetic anomalies identified by regional airborne geophysical surveys. Some 75 rock samples were collected from the Tuktu prospect and other iron formations on the property. Also at this time, mapping was completed at the Tuktu prospect, the results of which are illustrated in Figure 5.

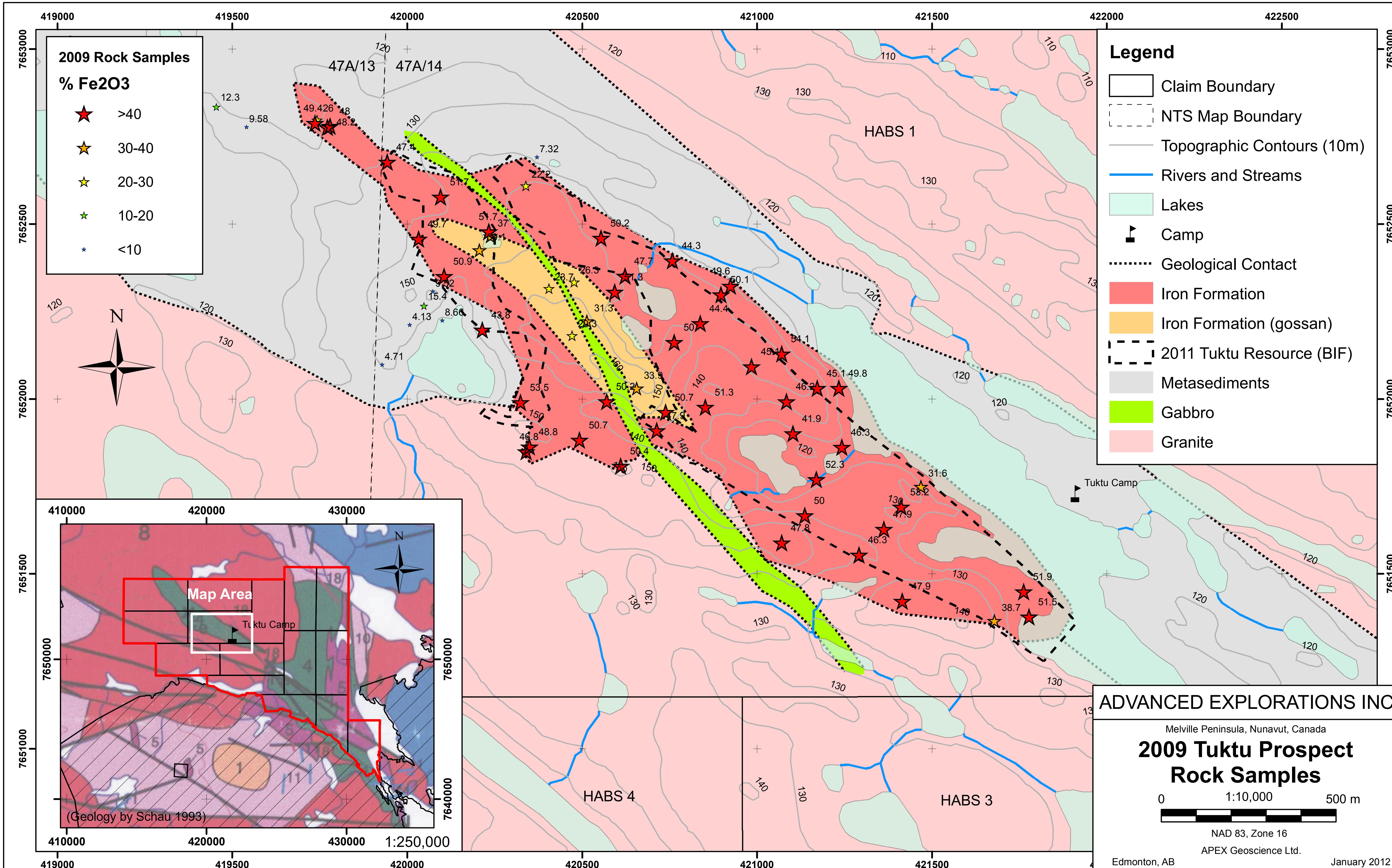
The 2009 rock grab samples were sent for XRF analysis and subsets were sent for base and precious metal analysis. No significant base or precious metal results were identified. However, the samples of BIF from the Tuktu iron formation on the HABS 1 claim retuned iron values of between 31.6% and 54.1% iron (Fe), with an arithmetic mean of 48.4% (Figure 6), as calculated from Fe_2O_3 results by XRF (Harrison *et al*, 2010). Sulfur and Phosphorus results were generally low at between 0.03% and 0.20%P_2O_5 and between 0.12% and 1.18%S. The 2009 mapping work identified a significant BIF unit that was observed over a strike length of approximately 2600m and up to 700m in width that warranted follow-up investigation including drill testing (Harrison et al, 2010).

In addition, eleven (11) rock samples were collected on iron formation horizons in the East Tuktu area (Figure 7). Six (6) of these samples returned total iron values of >30%Fe, to a maximum of 39.1%Fe. Five of these samples were located along magnetic features in the southern half of mineral claim HABS 2 and indicated a potential for identifying other significant iron formations in this area.

9.2 2011 Exploration

Apart from diamond drilling, which will be discussed in a subsequent section of this report, the 2011 exploration program at the Tuktu Property included ground geophysical (magnetic) surveys and a prospecting/rock sampling program that mainly focused on the Tuktu East area.

With respect to ground geophysical surveys, a total of 218.6 line-km of ground magnetic surveys was completed at the Tuktu Property in 2011. In May of 2011, at the start of the 2011 drill program, approximately 50 line-km of ground magnetic surveying was completed on the Tuktu grid over the main Tuktu prospect (Figure 8). The resulting data supported the extents of the Tuktu BIF established by the 2009 mapping work and provided detailed data that was used to help guide the 2011 Tuktu drill program. In July and August of 2011, a further 168.6 line-km of ground magnetic surveys was completed over several regional airborne magnetic anomalies in the Tuktu East area (Figure 9) the results of which better defined over 20km of high magnetic anomalies that were used to guide prospecting work.



2009 Rock Samples
% Fe2O3
>40
30-40
20-30
10-20
<10
47A/13
47A/14
HABS 1
HABS 3
HABS 4
Tuktu Camp
N
Legend
Claim Boundary
NTS Map Boundary
Topographic Contours (10m)
Rivers and Streams
Lakes
Camp
Geological Contact
Iron Formation
Iron Formation (gossan)
2011 Tuktu Resource (BIF)
Metasediments
Gabbro
Granite
Map Area
Tuktu Camp
(Geology by Schau 1993)
1:250,000
ADVANCED EXPLORATIONS INC.
Melville Peninsula, Nunavut, Canada
2009 Tuktu Prospect
Rock Samples
0
1:10,000
500 m
NAD 83, Zone 16
APEX Geoscience Ltd.
Edmonton, AB
January 2012

Figure 6

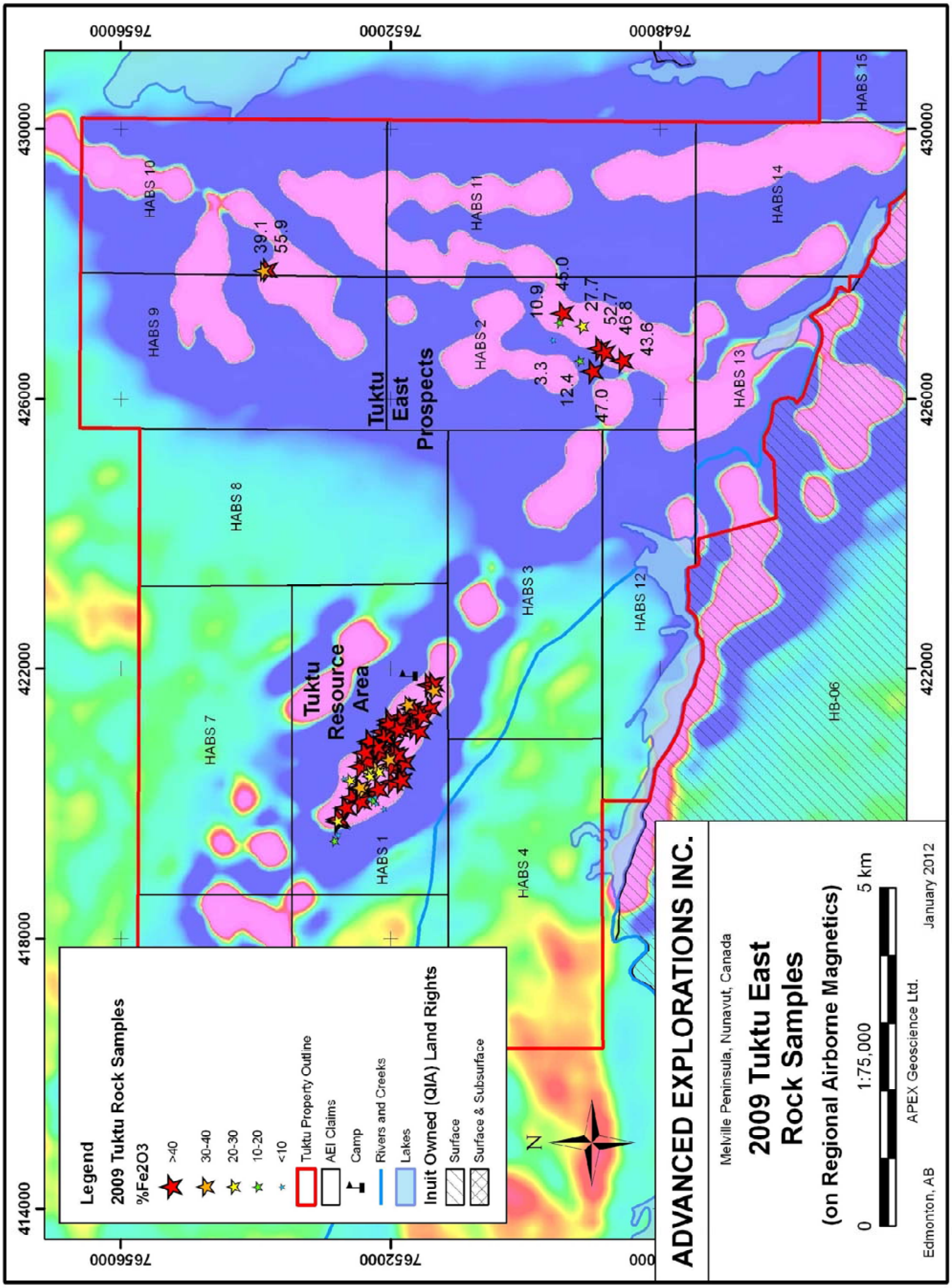
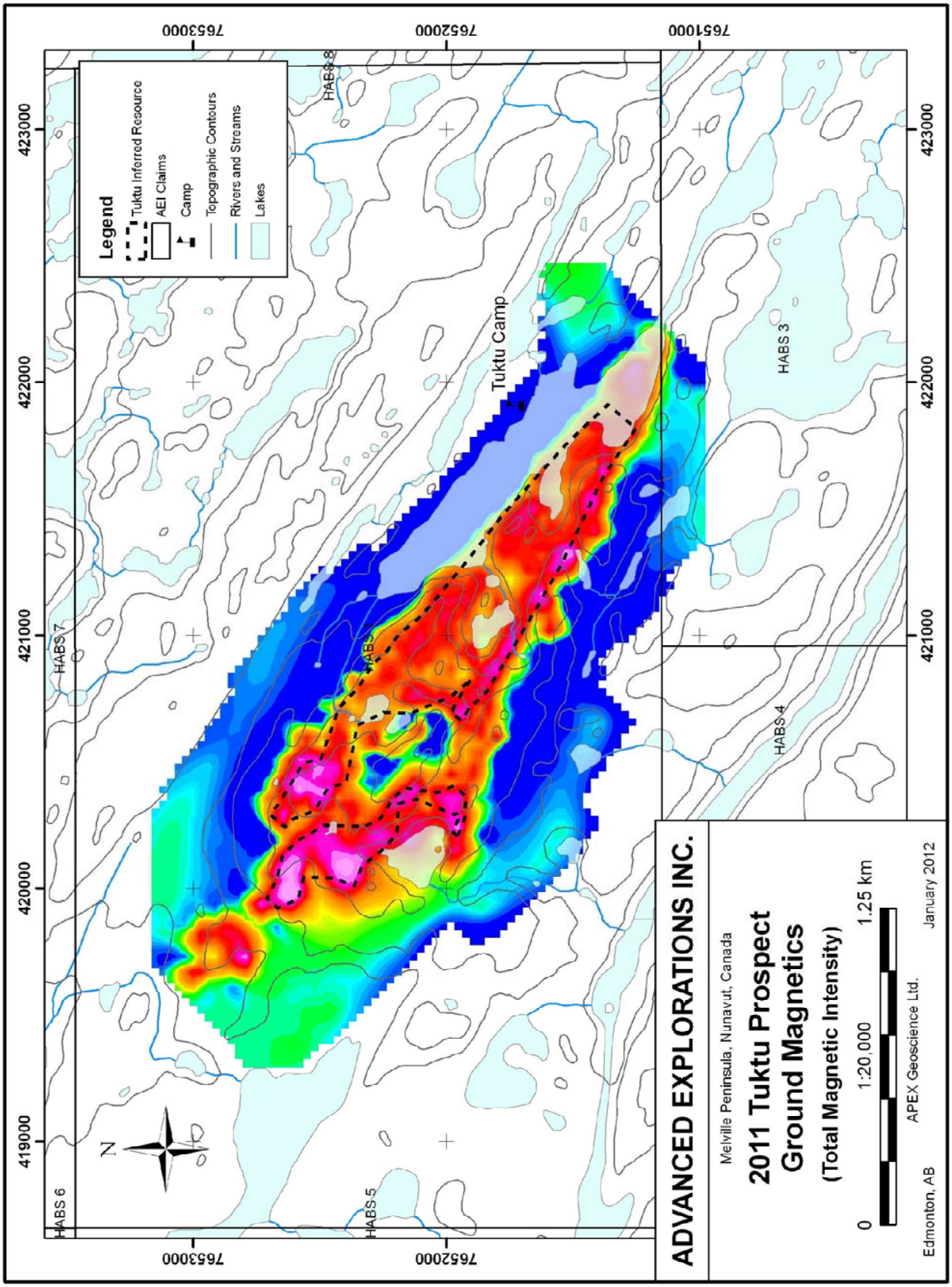

ADVANCED EXPLORATIONS INC.
Melville Peninsula, Nunavut, Canada
2009 Tuktu East Rock Samples
(on Regional Airborne Magnetics)
0
1:75,000
5 km
Edmonton, AB
APEX Geoscience Ltd.
January 2012
Legend
2009 Tuktu Rock Samples
%Fe2O3
>40
30-40
20-30
10-20
<10
Tuktu Property Outline
AEI Claims
Camp
Rivers and Creeks
Lakes
Inuit Owned (QIA) Land Rights
Surface
Surface & Subsurface
N
Tuktu Resource Area
Tuktu East Prospects
HABS 1
HABS 2
HABS 3
HABS 4
HABS 7
HABS 8
HABS 9
HABS 10
HABS 11
HABS 12
HABS 13
HABS 14
HABS 15
HB-06
39.1
55.9
10.9
45.0
27.7
52.7
46.8
43.6
3.3
12.4
47.0
414000
418000
422000
426000
430000
7656000
7652000
7648000

Figure 7


Legend
Tuktu Inferred Resource
AEI Claims
Camp
Topographic Contours
Rivers and Streams
Lakes
Tuktu Camp
HABS 3
HABS 4
HABS 5
HABS 6
HABS 7
HABS 8
7653000
7652000
7651000
419000
420000
421000
422000
423000
N
ADVANCED EXPLORATIONS INC.
Melville Peninsula, Nunavut, Canada
2011 Tuktu Prospect
Ground Magnetics
(Total Magnetic Intensity)
0
1.25 km
1:20,000
Edmonton, AB
APEX Geoscience Ltd.
January 2012
Figure 8

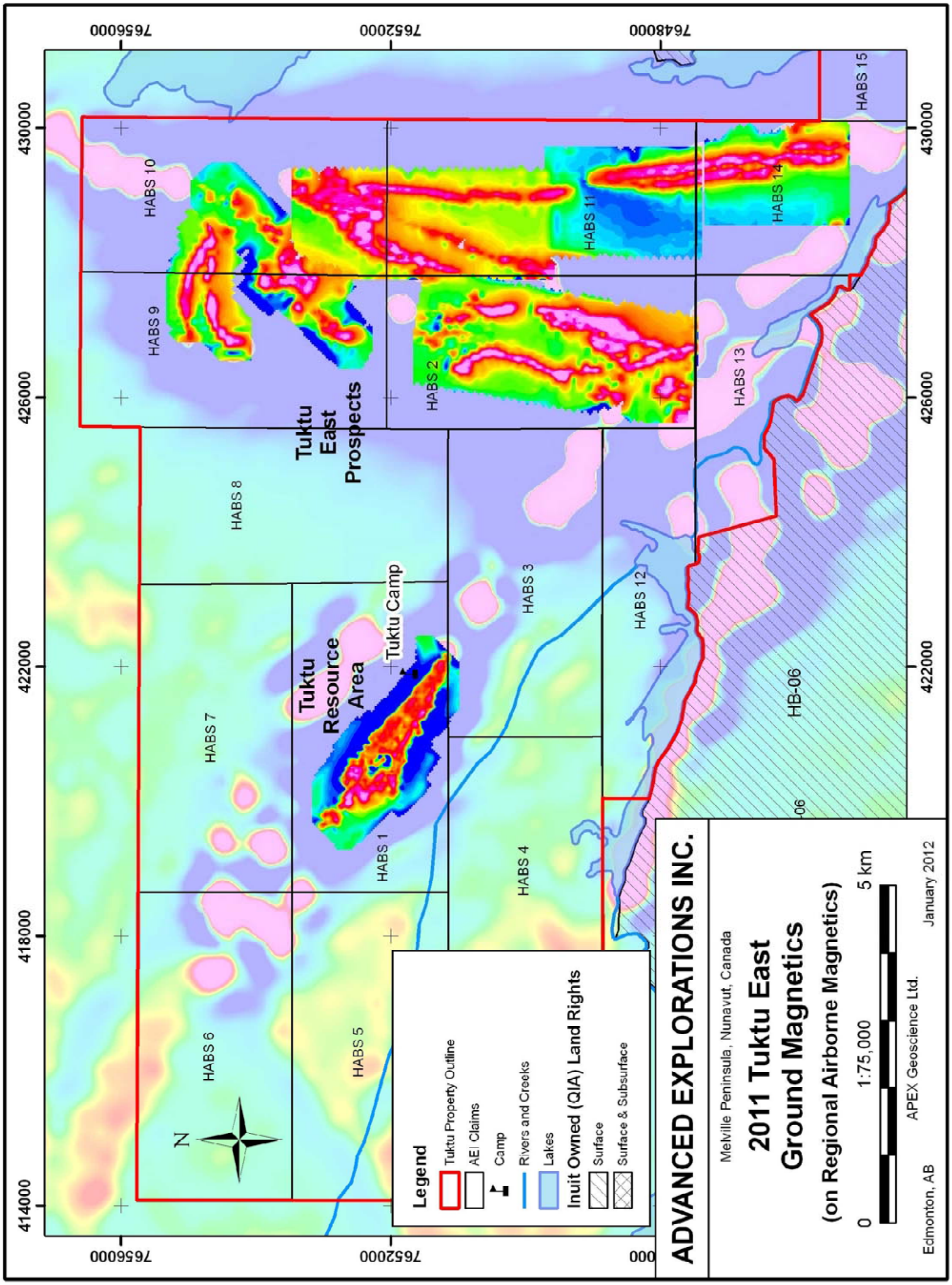

ADVANCED EXPLORATIONS INC.
Melville Peninsula, Nunavut, Canada
2011 Tuktu East
Ground Magnetics
(on Regional Airborne Magnetics)
0
5 km
1:75,000
Edmonton, AB
APEX Geoscience Ltd.
January 2012
Legend
Tuktu Property Outline
AEI Claims
Camp
Rivers and Creeks
Lakes
Inuit Owned (QIA) Land Rights
Surface
Surface & Subsurface
Tuktu East Prospects
Tuktu Resource Area
Tuktu Camp
HABS 1
HABS 2
HABS 3
HABS 4
HABS 5
HABS 6
HABS 7
HABS 8
HABS 9
HABS 10
HABS 11
HABS 12
HABS 13
HABS 14
HABS 15
HB-06
N
414000
418000
422000
426000
430000
7656000
7652000
7648000

Figure 9

During July and August of 2011, prospecting and rock sampling was conducted over the Tuktu Prospect and the Tuktu East area magnetic anomalies. At Tuktu, rock sampling was focused on the gossan areas (SIF units) located at the north end of the prospect that were first identified by the 2009 mapping work. At the Tuktu East area, prospecting was focused on iron prospects. A total of 786 rock samples was collected across the Melville Peninsula as part of the complete 2011 exploration program conducted by APEX on behalf of AEI. Of those samples 100 were collected on the Tuktu Property.

The results of the XRF iron analyses conducted on 28 BIF samples from the Tuktu Property (Tuktu and Tuktu East) are illustrated in Figure 10. Of note was the identification of high grade (magnetite-rich) iron formation at both ends of the north-south trending western magnetic feature on the HABS 2 claim. Two (2) key samples retuned %Fe values of 62.26% (southern sample) and 63.85% (northern sample) and are located approximately 1.5km apart. Bedrock exposure was limited in this area and thus follow-up work, which is recommended, may require trenching or drill testing.

Fire assaying was conducted on the 33 samples collected at the Tuktu Prospect in 2011 and no significant gold values were identified with the highest value being 130 ppb Au. No significant base metal values were identified by the geochemical analysis conducted on the 2011 rock samples with the exception of a single sample collected on claim HABS 10 that comprised minor chalcopyrite mineralization within basalts that returned a value of 1.29% Cu (Figure 11).

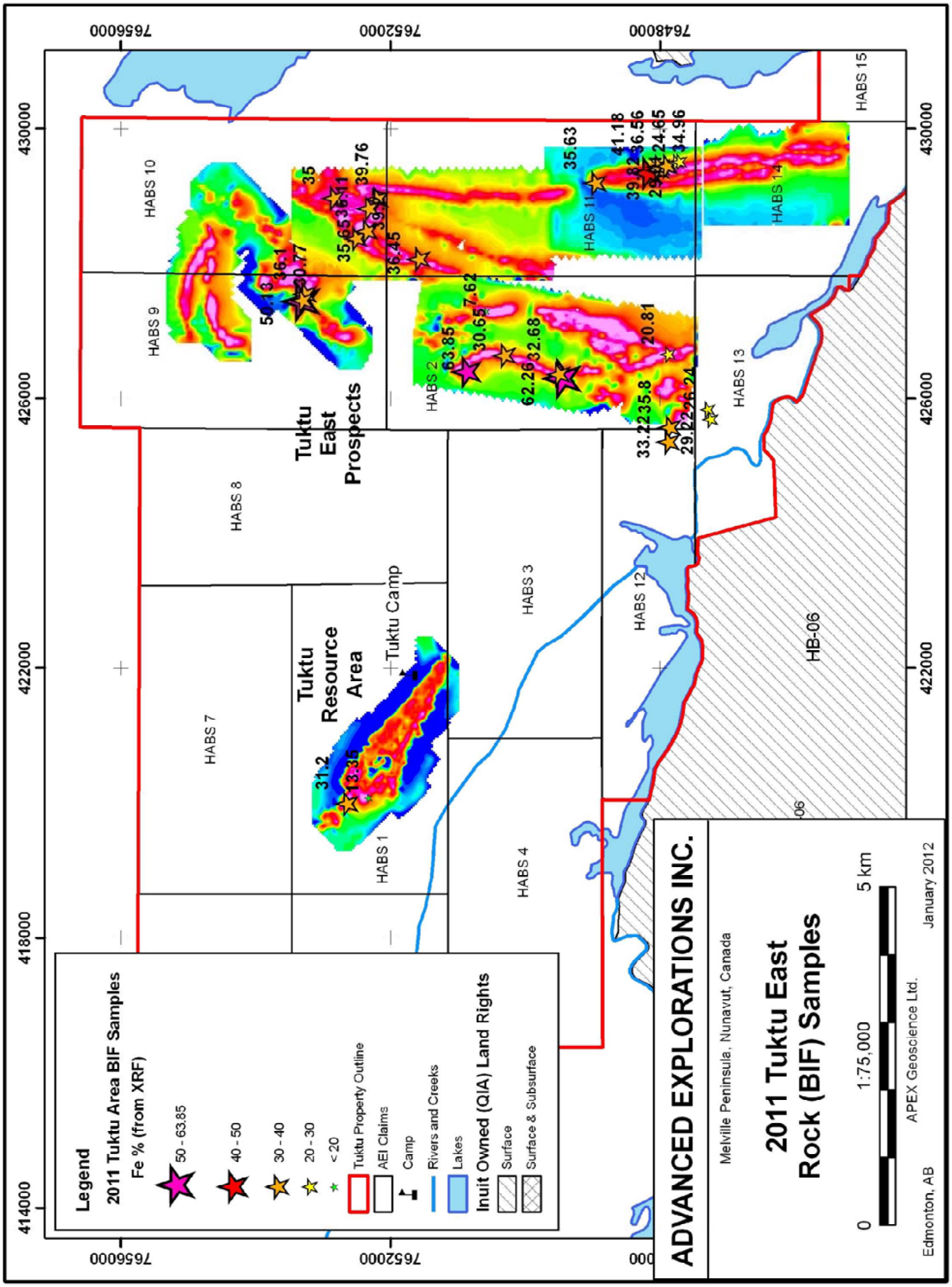
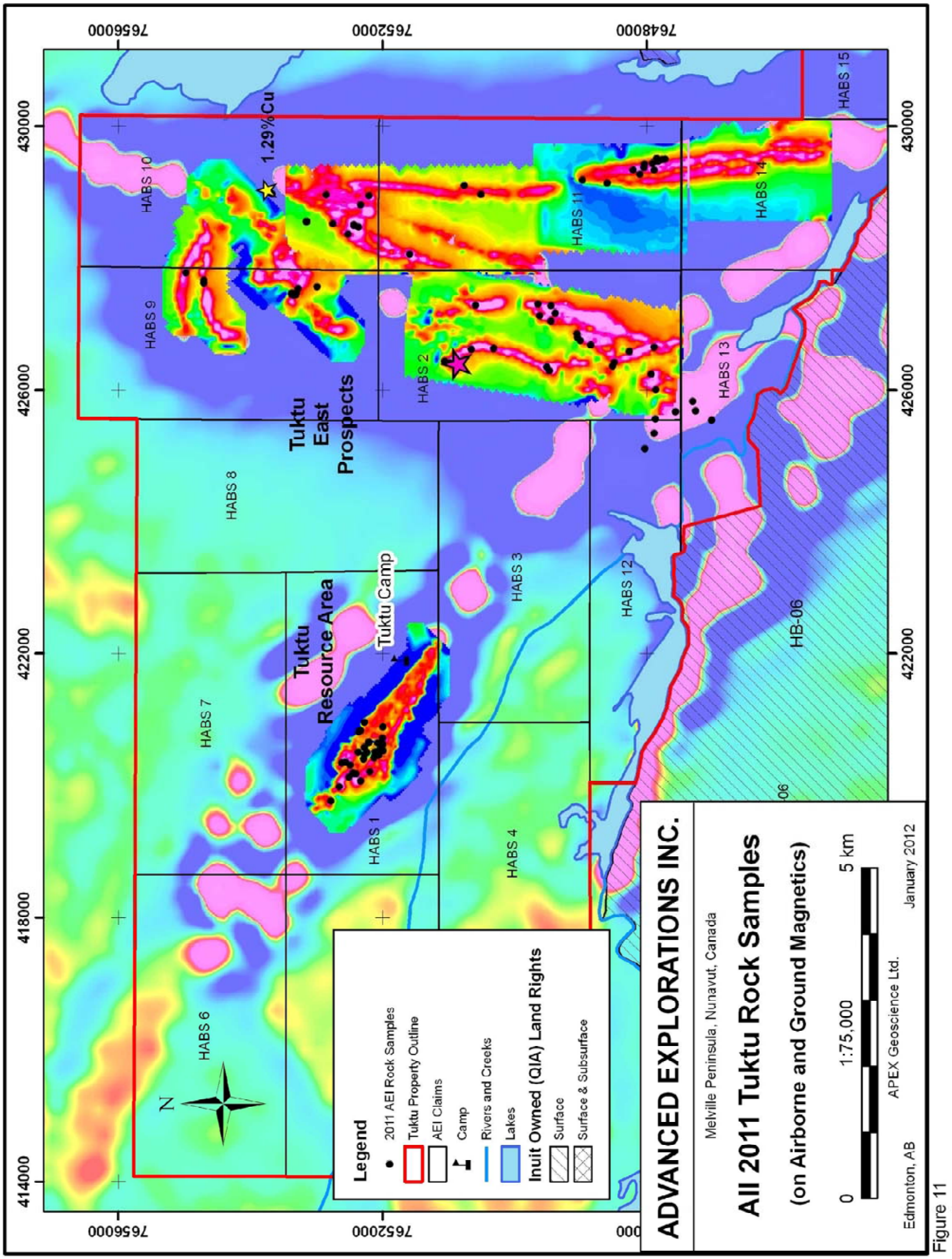

Legend
2011 Tuktu Area BIF Samples
Fe % (from XRF)
50 - 63.85
40 - 50
30 - 40
20 - 30
< 20
Tuktu Property Outline
AEI Claims
Camp
Rivers and Creeks
Lakes
Inuit Owned (QIA) Land Rights
Surface
Surface & Subsurface
ADVANCED EXPLORATIONS INC.
Melville Peninsula, Nunavut, Canada
2011 Tuktu East
Rock (BIF) Samples
1:75,000
0
5 km
Edmonton, AB
APEX Geoscience Ltd.
January 2012
Tuktu East Prospects
Tuktu Resource Area
Tuktu Camp
HABS 1
HABS 2
HABS 3
HABS 4
HABS 7
HABS 8
HABS 9
HABS 10
HABS 11
HABS 12
HABS 13
HABS 14
HABS 15
HB-06
414000
418000
422000
426000
430000
7656000
7652000
7648000

Figure 10


7656000
7652000
7648000
414000
418000
422000
426000
430000
1.29%Cu
HABS 1
HABS 2
HABS 3
HABS 4
HABS 6
HABS 7
HABS 8
HABS 9
HABS 10
HABS 11
HABS 12
HABS 13
HABS 14
HABS 15
HB-06
Tuktu East Prospects
Tuktu Resource Area
Tuktu Camp
N
Legend
2011 AEI Rock Samples
Tuktu Property Outline
AEI Claims
Camp
Rivers and Creeks
Lakes
Inuit Owned (QIA) Land Rights
Surface
Surface & Subsurface
ADVANCED EXPLORATIONS INC.
Melville Peninsula, Nunavut, Canada
All 2011 Tuktu Rock Samples
(on Airborne and Ground Magnetics)
1:75,000
0
5 km
Edmonton, AB
APEX Geoscience Ltd.
January 2012
Figure 11

10.0 DRILLING

10.1 2011 Tuktu Drill Program Summary

The Tuktu drill program was completed between May 4 and July 21, 2011 in order to examine the iron (magnetite) content of the Tuktu BIF and the potential to establish an iron resource. The program was completed using two (2) hydraulic diamond core drill rigs operated by drilling contractor Springdale Forest Resources of Springdale, NL. The drill program was initially designed as a series of widely (400m) spaced fences to which additional drillholes were subsequently added, mainly in the northern portion of the Tuktu BIF. The Tuktu iron formation was eventually tested over a strike length of 2,070m (drillhole to drillhole) and to depths of up to 250m below surface. In total, the 2011 drill program comprised 19 drillholes totaling 4,070.4m of NQ (1 7/8", 47.6mm) drill core. One hole was abandoned shortly after commencement due to poor ground conditions and has not been included in this total. Drillhole collar information is summarized in Table 3 and drillhole locations are illustrated in Figure 12.

Table 3. 2011 Tuktu Drill Collar Information.

DDH	Easting (UTM)	Northing (UTM)	RL	Easting (Grid)	Northing (Grid)	Azm (UTM)	Dip	Depth (m)
11TT001	420319.1	7652266.5	158.7	295.3	7998.8	35.0	-46.1	227.0
11TT002	420417.7	7652393.3	156.5	455.7	8007.1	40.0	-45.9	101.5
11TT003	420789.6	7652205.0	146.0	556.5	7602.6	43.9	-43.6	188.0
11TT004	420617.3	7652047.2	161.6	324.4	7629.7	39.6	-45.3	311.0
11TT005 *	420440.0	7651836.0	150.2	48.7	7625.7	40.8	-45.0	42.0
11TT005A	420426.4	7651832.6	150.5	37.2	7633.8	41.9	-45.0	142.0
11TT006	420353.7	7652430.1	154.4	441.7	8079.6	45.1	-46.8	162.0
11TT007	420007.7	7652360.4	146.5	162.7	8295.7	41.8	-43.7	215.0
11TT008	420821.5	7651803.5	135.4	273.6	7315.9	46.2	-45.2	296.5
11TT009	421014.8	7651955.6	134.9	515.1	7269.1	38.4	-44.0	207.0
11TT010	421232.2	7651530.3	135.5	335.5	6826.5	43.1	-44.5	295.0
11TT011	421368.6	7651654.7	129.9	518.9	6804.7	39.8	-44.1	199.0
11TT012	421608.2	7651350.5	138.4	445.4	6424.5	43.6	-44.4	256.0
11TT013	420644.4	7651835.0	140.5	181.6	7470.5	41.8	-45.2	214.4
11TT014	419940.3	7652565.0	139.7	273.4	8480.5	39.7	-45.1	205.0
11TT015	420289.2	7652501.1	153.5	453.2	8174.8	46.9	-45.9	235.0
11TT016	420233.0	7651915.0	148.4	-26.9	7834.0	45.0	-45.0	226.0
11TT017	420366.0	7652223.0	160.9	293.1	7934.8	223.0	-44.8	202.0
11TT018	420867.0	7652062.0	137.4	498.9	7450.5	41.6	-45.0	224.0
11TT019	420810.0	7651713.0	137.6	197.6	7265.4	44.5	-60.0	164.0

** Drillhole was abandoned due to poor ground conditions.*

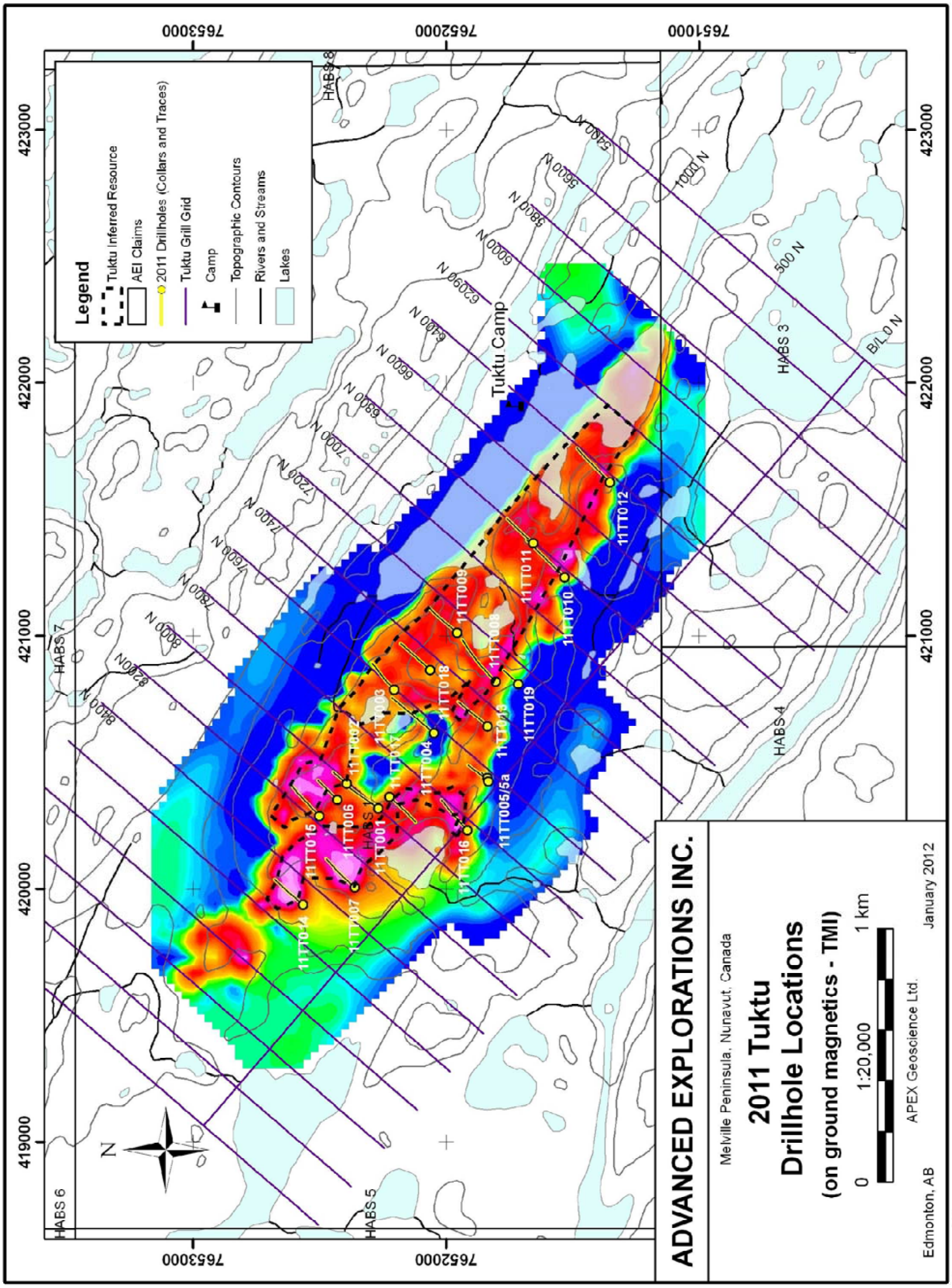

Legend
Tuktu Inferred Resource
AEI Claims
2011 Drillholes (Collars and Traces)
Tuktu Grill Grid
Camp
Topographic Contours
Rivers and Streams
Lakes
Tuktu Camp
ADVANCED EXPLORATIONS INC.
Melville Peninsula, Nunavut, Canada
2011 Tuktu
Drillhole Locations
(on ground magnetics - TMI)
0
1:20,000
1 km
Edmonton, AB
APEX Geoscience Ltd.
January 2012

Figure 12

The author is not aware of any drilling, either historic or more recent, that has been conducted on the Tuktu Property other than that completed in 2011 by AEI and discussed in this report.

Drillhole locations were determined by hand-held GPS and were double-checked during down-hole surveying using a Reflex Instruments Maxibor APS (Azimuth Pointing System) that measures drillhole azimuths using GPS signals. The APS is considered accurate to +/- 0.2 to 0.5 degrees (www.reflexinstruments.com). Drillhole azimuths were initially set by hand-held GPS devices and were checked with the APS unit after the completion of drillholes during down-hole surveying. Downhole surveys were attempted for all holes using a Reflex Instruments Maxibor II unit. Unfortunately, instrument issues prevented the collection of down-hole survey data for the first 5 drillholes of the 2011 Tuktu drill program. As a backup, a Reflex EZ-Shot instrument was present on site and was used to obtain down-hole dip data for these holes. Hand-held GPS devices are typically accurate to within +/- 5m. No significant issues with respect to drillhole locations or orientations were identified during the 2011 Tuktu drill program and APEX considers this data to be sufficiently accurate for use in calculating the initial Inferred Resource presented in this report.

All core logging data was entered by logging geologists and geological technicians directly into logging templates on laptop computers. Data was compiled on a daily basis and checked for errors or omissions. No issues with respect to the geological logging information collected during 2011 Tuktu drill program were identified during the resource estimation effort discussed in this report.

All banded iron formation (BIF) intersections were sampled in their entirety, including the collection of ‘shoulder samples’ preceding and following BIF intersections. Sample intervals were initially set at 1.5m, with respect to geologic contacts, but the consistency of the Tuktu BIF allowed for an increase in the sample interval limit to 2.0m. The eventual mean sample length for the 2011 Tuktu drill program was 1.89m. The sampling protocols and sample interval employed during the 2011 drill program is considered appropriate for the deposit type being investigated. In total, 2059 core samples were collected and sent for analysis at Activation Laboratories in Ancaster, ON.

Specific Gravity (SG) data was collected systematically during the 2011 Tuktu drill program. SG determinations were made on individual pieces of core, each being between 10cm and 20cm in length, at a rate of 1 measurement for every metre (on the metre mark) along each drillhole. The SG determinations were made using the water displacement method by measuring the weight of individual pieces of core in air (dry) and then suspended in water (wet). The SG value is then determined using the following equation; SG measured = Weight dry / (Weight dry – Weight wet). Weight measurements were made on several core samples after allowing for different drying periods with no significant affect on the final SG values. As a result, the measured SG values are considered sufficiently accurate for use in the Tuktu resource estimation effort described in a subsequent section of this report. It should be noted that Ohaus scale used to measure drill core weights for SG determinations did not arrive on site until midway through the logging of hole 11TT008. SG values for samples collected before the arrival of the scale were determined (calculated) relative to a relationship calculated with respect to Fe_2O_3 (XRF) values using the relationship SG calc = % Fe_2O_3 (XRF) x 0.0162 + 2.6521. A graph illustrating this relationship is appended to this report (Appendix 1).

10.2 2011 Tuktu Drill Program Results

Summarized below are the results of the XRF analyses on samples collected from iron formation intersections achieved during the 2011 Tuktu drill program (Table 4). The most significant result of the 2011 drill program was the identification of a significant and remarkably consistent Algoma-type (silica-magnetite) banded iron formation over a strike length of some 2000m. The majority of the BIF samples retuned XRF values between 35% and 45% Fe_2O_3 and intersections were not significantly affected by issues related to either high or low-grade results as very few were identified within the main BIF unit. The size, grade and consistency observed in the 2011 Tuktu drilling intersections were considered by APEX to be sufficient to support the calculation of the initial Inferred Resource for the Tuktu iron deposit (see section 14.0 of this report).

The Tuktu BIF, which is southeast striking, was observed to have a fairly consistent 70^o dip to the southwest. The Tuktu BIF is in contact to the north with greywackes and conglomerates (meta-sediments), with an apparently conformable contact. To the southwest, the Tuktu BIF is in contact with mainly granites. It is not apparent if the southern contact is intrusive or structural. The final drillhole of the program (11TT019) was drilled behind hole 11TT008 and was intended to test the down-dip extent of the iron formation intersection achieved in the latter. The result was a confirmation of the 70^o dip observed in surface exposures of both the BIF and adjacent meta-sediments.

Table 4. 2011 Tuktu Drill Intersection Summary Table.

Drill-hole	From (m)	To (m)	Interval* (m)	% Fe2O3	% Fe
11TT001	**6.53**	**112.39**	**105.86**	**33.64**	**23.53**
including	6.53	24.95	18.42	41.39	28.95
and	85.00	110.00	25.00	41.96	29.34
11TT002	**3.61**	**75.35**	**71.74**	**46.85**	**32.77**
11TT003	**3.00**	**151.37**	**148.37**	**44.08**	**30.83**
Including	3.00	70.00	67.00	45.34	31.71
and	105.65	150.00	44.35	45.75	32.00
11TT004	**104.95**	**283.84**	**178.89**	**41.50**	**29.02**
including	143.00	283.84	140.84	43.79	30.63
including	165.00	283.00	118.00	44.59	31.18
11TT005	no significant result				
11TT006	11.38	24.00	12.62	42.11	29.45
and	**72.50**	**162.00**	**89.50**	**47.13**	**32.96**
11TT007	**5.80**	**215.00**	**209.20**	**43.74**	**30.41**
including	47.90	215.00	167.10	45.70	31.78
and	81.00	124.4	43.4	47.65	33.14
and	149.70	215.00	65.3	46.25	32.16
11TT008	**11.97**	**295.04**	**283.07**	**46.27**	**32.36**
including	30.47	295.04	264.57	47.16	32.98
including	286.00	295.04	9.040	71.76	50.19
11TT009	**2.65**	**161.76**	**159.14**	**45.63**	**31.91**
11TT010	**40.69**	**277.27**	**236.58**	**46.74**	**32.69**
including	244.00	260.00	16.00	58.26	40.75
including	244.00	250.00	6.00	71.87	50.27
11TT011	3.75	169.00	165.25	48.05	33.61
including	126.00	140.00	14.00	66.26	46.34
including	130.00	138.00	8.00	71.88	50.27
11TT012	**58.00**	**225.08**	**167.08**	**44.34**	**31.01**
11TT013	**10.40**	**67.13**	**56.73**	**45.89**	**32.10**
and	**111.66**	**172.72**	**61.06**	**43.73**	**30.58**
11TT014	**33.10**	**163.30**	**133.20**	**44.14**	**30.87**
and	51.00	93.00	42.00	48.10	33.64
11TT015	**33.67**	**209.94**	**176.27**	**39.36**	**27.53**
including	33.67	62.97	29.30	41.08	28.73
and	103.00	209.94	106.94	42.55	29.76
including	134.00	205.00	71.00	44.00	30.78
11TT016	35.74	65.72	29.98	43.38	30.34
and	**100.15**	**226.00**	**125.85**	**47.27**	**33.06**
11TT017	**3.00**	**77.63**	**74.63**	**42.44**	**29.68**
including	24.00	77.63	53.63	46.31	32.39
11TT018	**6.00**	**202.00**	**196.00**	**44.79**	**31.32**
11TT019	**114.00**	**164.00**	**50.00**	**41.47**	**29.00**

* *Down-hole length, not true width.*

The Tuktu BIF itself represents a fairly typical example of an Algoma-type banded iron formation dominated by alternating thin (mm scale) bands of silica and magnetite. No significant hematite has been observed. The Tuktu stratigraphy has been subjected to folding and metamorphism up to lower amphibolite grades. The southern portion of the Tuktu BIF is up to 400m wide and exhibits a very simple stratigraphy with no interbeds of metasedimentary rocks, occasional thin (<5m thick) mafic dykes and minor silicate alteration (biotite/chlorite). The northern portion of the Tuktu BIF exhibits greater variation with occasional interbeds of metasediments and portions of the BIF exhibit significant silicate alteration in the form of grunerite (Fe-rich amphibole) development with such such units being logged as silicate iron formation (SIF). Sulphide minerals, including pyrite and pyrrhotite, are generally rare (1-2%) throughout the Tuktu BIF, although they are present in greater amounts (up to 5-15% locally, py>po) within the northern SIF units (identified as “gossans”, or rusty areas, in Figure 5). As is common with deformed iron formations, the layering within the Tuktu BIF on a detailed scale exhibits extremely variable orientations and abundant small scale folds. However, an overall dip of approximately 70^o was observed in core and in surface exposures of both the BIF and adjacent metasedimentary units. With the exception of the SIF units discussed above, the main Tuktu prospect BIF was observed during the 2011 drill program to be remarkably consistent in terms of both mineralogy and texture. No significant high or low grade intervals were observed and visual estimates of magnetite percentages ranged from 25-50%.

For the purpose of the 2011 resource estimation work, a conservative approach was taken with respect to the modeling of the Tuktu iron formation in that it was limited to the actual BIF (magnetite-rich portions) of the iron formation and excluded other lithologies including metasedimentary interbeds as well as silicate and/or sulphide altered portions of the iron formation (SIF units). The resulting morphology was that of a hook fold that closed in the northern portion of the prospect. The folded northern portion of the Tuktu BIF is cut by a mafic dyke that strikes sub-parallel to iron formation. Drill Sections for the Tuktu deposit are appended to this report but a typical section (6800N) is presented in Figure 13.

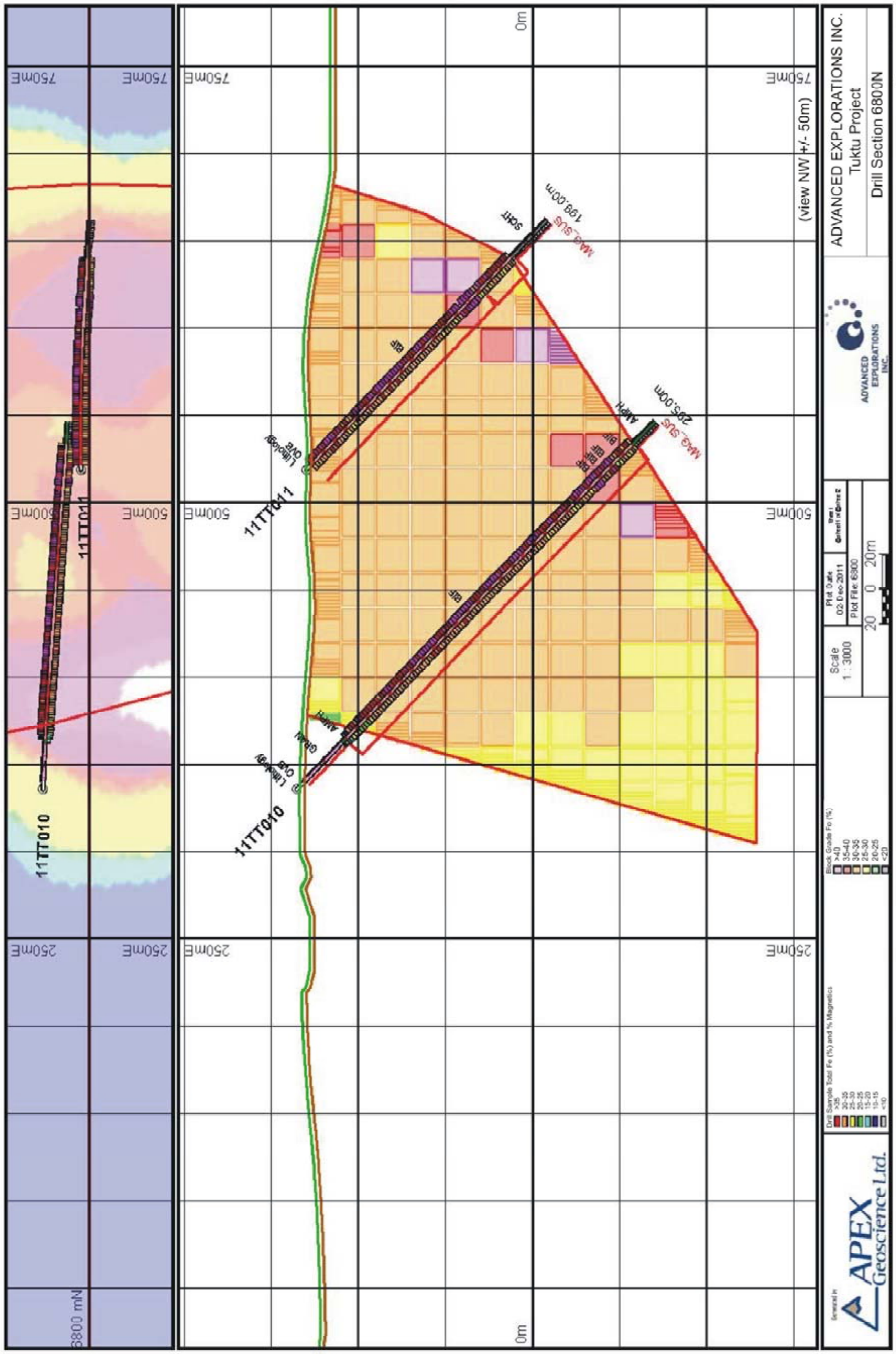

ADVANCED EXPLORATIONS INC.
Tuktu Project
Drill Section 6800N
(view NW +/- 50m)
11TT010
11TT011
198.00m
295.00m
750mE
500mE
250mE
0m
6800 mN
Scale 1 : 3000
Plot Date 02-Dec-2011
Plot File: 6800
20 0 20m
APEX Geoscience Ltd.

Figure 13

11.0 SAMPLE PREPARATION, ANALYSES AND SECURITY

11.1 2011 Rock Grab Sampling Protocols

Rock sampling was conducted during 2011 under the supervison of Mr. Andrew Turner, P.Geol., the principle author of this report, who was on site frequently throughout the program conducted in July and August of 2011. No issues were noted with respect to sample collection, sample security and analytical protocols.

Rock samples were collected by (APEX) geologists by placing approximately 2-3kg of material in a plastic bag along with a sample tag marked with a unique identifier. Sample locations were marked in the field using aluminum tags and orange arctic-grade flagging tape, both having been similarly marked with the appropriate sample number. Sample locations were determined by hand-held GPS. Sample information was transcribed to computers at the end of each day and locations were checked using GIS (Geographical Information System) software to insure that typographical errors had not been introduced.

As with drill core samples, rock samples were placed in rice bags and given shipping numbers before being sent to the Activation Laboratory prep facility in Hall Beach, NU, after which a crushed subsample was sent to the main Activation Laboratories facility in Ancaster, ON, for gold assay and ICP (geochemcical) analysis.

11.2 2011 Drill Core Sampling Protocols

The 2011 Tuktu drill program was conducted under the supervision of Mr. Andrew Turner, P.Geol., the principal author of this report, who was on site frequently throughout the drill program between May 4 to July 21, 2011. Mr. Turner is a “Qualified Persons” as defined by National Instrument 43-101. All core logging and sampling work was carried out and/or directly supervised by APEX personnel under the supervision of Mr. Turner, P.Geol. No significant issues were encountered with respect to drill core sampling during the 2011 drill program and industry standard protocols for insuring sample accuracy and data quality were observed throughout.

All core logging data was entered by logging geologists and geological technicians directly into logging templates on laptop computers. Data was compiled on a daily basis and checked for errors and/or omissions. No issues with respect to the geological logging information collected during 2011 Tuktu drill program were identified during the resource estimation effort discussed in this report.

Great care was taken with respect to establishing and confirming the depth of drill cores provided by the drill contractor for logging. Drill geologists and technicians were charged with immediately checking the depths marked by drillers on all core boxes, and run blocks within core boxes, as soon as they were received in camp. Any issues or discrepancies with respect to previously received core were discussed with the drill contractor and were fixed before core processing could begin. Once accepted, drill hole depths were marked on the cores every metre down the hole relative to run blocks. These marks and blocks were subsequently used to guide the logging and sampling of the core. The top and bottom of all core sample intervals were carefully measured and recorder and were clearly marked on the core itself using wax crayon and a 2-part Tyvek sample tag was placed (stapled) at the end of each sample interval. This was done to prevent the accidental sampling of core beyond a specific core interval as the individual responsible for core cutting and sample bagging encounters the sample tag at the end of each interval forcing that person to stop. The free part of the sample tag not attached to the core box is then placed inside the sample bag with the appropriate sample before it is closed with a plastic cable tie. All of the 2011 Tuktu drill core samples were cut by diamond saw by individuals employed from local communities by AEI that were supervised by APEX staff.

Finished samples were collected into groups, placed into rice bags and catalogued with a shipping reference number before being transported to a preparatory lab that had been setup in Hall Beach, which was operated by Activation Laboratory staff. Upon receiving samples in Hall Beach the Prep Lab staff sent a list of samples received that was checked by the drill geologists in camp in comparison to the previously collected shipping records. Furthermore, a protocol was established whereby the weight of each sample was recorded before it left camp and was checked with a “received” sample weight recorded at the Hall Beach Prep Lab after the sample had been logged into their system to insure that there were no errors with respect to sample mix-ups between their departure from camp and their preparation for analysis in Hall Beach.

All banded iron formation (BIF) intersections were sampled in their entirety, including the collection of shoulder samples preceding and following BIF intersections. Sample intervals were initially set at 1.5m, while respecting geological contacts, but the consistency of the Tuktu BIF allowed for an increase in the sample interval limit to 2.0m. The eventual mean sample length for the 2011 Tuktu drill program was 1.89m. The sampling protocols employed during the 2011 drill program are considered appropriate for the deposit type being investigated. In total, 2059 drill core samples were collected and sent for XRF, Stamagan (magnetic), ICP (geochemical) and Sulfur (Leco) analysis at Activation Laboratories in Ancaster, ON.

11.3 Hall Beach Sample Preparatory Facility (Prep-Lab)

AEI had setup a ‘Prep Lab’ in Hall Beach that was last utilized during the 2008 drill program it conducted at its flagship Roche Bay iron project located southeast of Tuktu. The facility and its equipment were procured by AEI but it was staffed and operated in 2011 by Activation Laboratories in accordance with its normal protocols and procedures. The principal author of this report conducted a visit to the Hall Beach Prep-Lab and, although found to be relatively small (appropriate industrial space being rare in the community of Hall Beach), it was found to be organized and suitable for sample processing. The facility processed all 2011 rock and drill core samples where they were crushed, to 90% passing 2mm, and homogenized. The Prep Lab staff was then responsible for the collection and shipping of a 250 gram aliquot of each sample to the main Activation Laboratory facility in Ancaster, ON, for final preparation and analysis. The remaining coarse reject was bagged and stored in Hall Beach. No issues were noted in 2011 with respect to sample shipping and security between camp and Hall Beach, or between Hall Beach and Ancaster, during the 2011 drill program.

11.4 2011 Rock Grab Sample Analytical Procedures

All 2011 rock grab samples were submitted to Activation Laboratories in Ancaster, ON, for final preparation and analysis. The 250 grams of material received from the Hall Beach prep facility was pulverized to 95% passing 105µ. Aliquots of the pulp for each sample were submitted for analysis for multi-element geochemical Inductively Coupled Plasma (ICP) analysis – 1g aliquot, and for precious metal (gold) analysis by 30g Fire Assay with a wet chemical (ICP) finish. A subset of the 2011 rock grab samples was submitted for multi-element oxide analysis by XRF (X-Ray Florescence) – 3g aliquot, with the main purpose being the determination of iron (reported as % Fe_2O_3) in samples of BIF.

11.5 2011 Drill Core Sample Analytical Procedures

All 2011 drill core samples were submitted to activation laboratories in Ancaster, ON, for final preparation and analysis. The 250 grams of material received from the Hall Beach prep facility was pulverized to 95% passing 105µ. Aliquots of the pulp for each sample were submitted for analysis for multi-element oxides (including iron reported as % Fe_2O_3) by XRF (X-Ray Florescence) – 3g aliquot, multi-element geochemical Inductively Coupled Plasma (ICP) analysis – 1g aliquot, Satmagan magnetic mineral analysis – 1g aliquot and Sulfur (Leco) analysis – 1g aliquot. Specific samples exhibiting evidence of alteration were submitted for precious metal (gold) analysis by 30g Fire Assay with a wet chemical (ICP) finish. Also, a subset of the 2011 samples was submitted for more comprehensive magnetic mineral analysis by Davis Tube (30g aliquot) instrument in order to check the results of the systematic Satmagan analyses.

11.6 QA-QC Samples

An industry standard set of protocols pertaining to Quality Assurance and Quality Control (QA-QC) was employed by AEI with respect to the 2011 Tuktu drill program. Standard Reference material samples ("Standards"), including Blank samples, were procured by AEI and were regularly inserted into the drill core sample stream by APEX staff at a frequency of one (1) in every 20 samples. Iron Standards are relatively uncommon and thus AEI decided to produce its own iron Standards from previously collected BIF surface samples. Unfortunately, these materials were not finished until well into the 2011 Tuktu drill program. As a result, Standards and Blanks normally used for testing precious metal analyses were used instead of true iron standards for the majority of the 2011 drill program. The respective iron concentrations for these Standards and Blanks were obtained from their source laboratory.

In addition to the insertion of standards and blanks, duplicate core samples were collected at a rate of 1 in every 20 samples by splitting (or quartering) the remaining half core following the collection of the initial sample. Finally, the efficiency of the prep lab facility in hall Beach was examined by Activation Laboratories through the collection of a subset of duplicate samples from crushed samples, which are referred to as 'prep duplicates'. The results of the 2011 QAQC sample analyses are discussed in a subsequent section of this report.

No systematic QAQC samples were submitted with the 2011 rock grab samples. Since the collection of rock grab samples has the potential to be inherently biased by selective sampling of visibly "mineralized" and/or altered material, there isn't the same need for checking analytical accuracy and precision as there is with drill core samples that may eventually be used for further analysis such as resource estimation. That being said, the internal QAQC data generated by Activation Laboratories as part of its own protocols and procedures was examined and no significant issues were noted.

12.0 <u>DATA VERIFICATION</u>

12.1 2011 Tuktu Rock Grab Sampling

No QAQC samples were submitted with the 2011 rock grab samples. Since the collection of rock grab samples has the potential to be inherently biased by selective collection of visibly "mineralized" and/or altered material, there isn't the same need for checking analytical accuracy and precision as there is with drill core samples that may eventually be used for further quantitative analysis such as resource estimations. That being said, the internal QAQC data generated by Activation Laboratories as part of its own protocols and procedures was examined and no significant issues were noted.

12.2 2011 Tuktu Ground Geophysical Surveying

Ground magnetic data collected at the Tuktu Property in 2011 was collected using a "walking magnetometer" with GPS location that was compiled and corrected daily. Data from each day's surveys were corrected for diurnal variation and overlapping data was collected with respect to the end of the preceding day's surveys so that subsequent data could be levelled (corrected) to allow for accurate data compilation. No issues were noted with respect to the ground magnetic data collected in 2011.

12.3 2011 Tuktu Drill Program

The 2011 Tuktu drill program was completed under the supervision of the principal author of this report, Andrew Turner, P.Geol., who was present on site for most of the program conducted between May 4 and July 21, 2011. Rigorous protocols were followed with respect to the collection and verification of all analytical and non-analytical data resulting from the 2011 Tuktu drill program.

12.3.1 Non-Analytical Drill Data

Drillhole locations were determined by hand-held GPS and were double-checked during down-hole surveying using the Maxibor APS unit that measures drillhole azimuths using GPS signals and is considered accurate to +/- 0.2 - 0.5 degrees. Drillhole azimuths were initially set by hand-held GPS devices and were checked with the AOS unit after the completion of drillholes during down-hole surveying. Downhole surveys were at least attempted for all holes using a Reflex Instruments Maxibor II unit. Unfortunately, instrument issues prevented the collection of down-hole survey data for the first 5 drillholes of the 2011 Tuktu drill program. As a backup, a Reflex EZ-Shot instrument was present on site and was used to obtain down-hole dip data from these holes. Hand-held GPS devices are typically accurate to within 5m, which is considered by APEX to be sufficient for the purposes of the initial inferred resource presented in this report. No significant issues with respect to drillhole locations or orientations were identified during the 2011 Tuktu drill program.

All core logging data was entered by logging geologists and geological technicians directly into logging templates on laptop computers. Data was compiled on a daily basis and checked for errors or omissions. No issues with respect to the geological logging information collected during 2011 Tuktu drill program were identified during the resource estimation effort discussed in this report.

12.3.2 Analytical Drill Data

All drill core, and rock grab samples, collected during 2011 were sent for analysis by Activation Laboratories Ltd. in Ancaster, ON. Prior to analysis, all samples were shipped from site to Hall Beach where a preparatory laboratory (prep-lab) had previously been setup by AEI. The prep-lab facility was last used in 2008 to process samples generated from drilling conducted at AEI's Roche Bay Project. Although the Hall Beach prep-lab was setup by AEI it was operated by personnel from Activation Laboratories in accordance with their normal procedures and protocols. The primary author, Andrew Turner, conducted an inspection of the Hall Beach prep-lab and no significant issues were identified. It should also be noted that Activation Laboratories is an ISO 17025 and CAN-P-1579 accredited laboratory. In total, 2365 samples were submitted for analysis during the 2011 Tuktu drill program comprising 2059 actual drill core samples, 215 Standard and Blank samples and 91 core duplicate samples. No significant issues were identified by the 2011 QAQC sample analyses and thus the data resulting from the analysis of actual core samples has been deemed acceptable by APEX for use in the resource estimation effort discussed in this report.

The principal author of this report was responsible for the compilation of the 2011 Tuktu drill program assay database. Throughout the program, preliminary data was replaced by data certified as "Final" by Activation Laboratories. Random checks were made to insure that analytical results provided by the laboratory on final assay certificates matched those in digital files provided that were used to compile the analytical database. Minor issues with respect to digital data files provided by the laboratory were identified during the 2011 program, mainly involving data transposition errors (correct data under incorrect headings), but all issues were remedied to the satisfaction of the principal author of this report and the resulting final database used in the resource estimation effort discussed in a later section of this report was considered to be free of errors.

Standards and Blanks

An industry standard set of protocols pertaining to Quality Assurance and Quality Control (QA-QC) was employed by AEI with respect to the 2011 Tuktu drill program. Standard Reference material samples ("Standards"), including Blank samples, were regularly inserted into the drill core sample stream at a frequency of one (1) in every 20 samples. Iron Standards are relatively uncommon and AEI was in the process of producing its own iron Standards from previously collected surface iron ore samples. Unfortunately, these materials were not finished until well into the 2011 Tuktu drill program. As a result, Standards and Blanks normally used for testing precious metal analyses were used instead and their respective iron concentrations were obtained from their source laboratory.

A statistical summary of the 2011 Standard and Blank samples inserted in the Tuktu drill program sample stream is presented in Table 5. Graphs illustrating the %Fe_2O_3 data for the QAQC samples referenced in Table 5 are appended to this report (Appendix 2), an example of which for Standard CGS-22 is provided in Figure 14. In summary, although true pass-fail information was lacking, both the consistency and accuracy compared to expected values for the %Fe_2O_3 results for each of the QAQC Standard and Blank samples were sufficient to provide confidence in the analytical precision of the Fe - XRF data that was used in the Tuktu Resource estimation effort described in a later section of this report. No significant issues were noted with respect to the analytical results for the QAQC samples inserted in the 2011 Tuktu drill program sample stream.

Table 5. Statistical Summary for 2011 Tuktu Drill Program QAQC Samples.

Standard/ Blank	Source	% Fe2O3 (source)	% Fe2O3 (2011 analyses)	Standard Deviation	% RSD	n (total)	n (Failure with 3.5% RSD)	% Failure
CGS-22	CDN Labs	6.0	6.12	0.046	0.75%	47	0	0%
CGS-26	CDN Labs	9.0	8.44	0.076	0.90%	47	0	0%
BL-8	CDN Labs	3.5	3.74	0.110	2.94%	94	4	4.3%
Fe-high	AEI	42.66	42.45	0.29	0.68%	10	0	0%
Fe-med	AEI	34.28	34.19	0.28	0.82%	10	0	0%
Fe-low	AEI	25.67	25.46	0.12	0.47%	7	0	0%

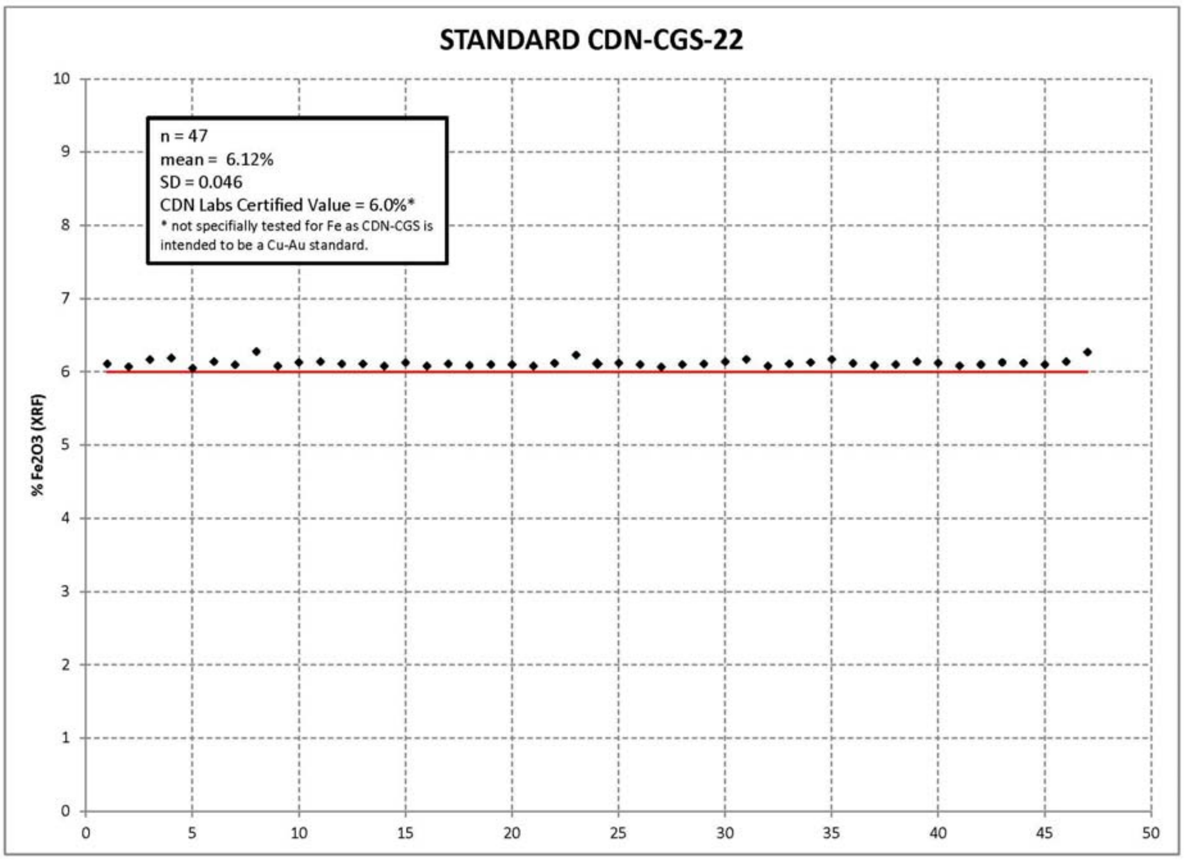


Figure 14. % Fe2O3 (XRF) Analyses for Standard CGS-22.

Core Duplicates

In addition to the standard and black reference materials discussed above, duplicate core samples were collected at a rate of 1 in every 20 samples in order to examine sample variance and overall analytical precision. The core duplicate samples were collected by splitting (quartering) the remaining half core following the collection of the initial sample. In total, 91 core duplicate samples were collected in 2011 during the Tuktu drill program. A comparison between the original and duplicate %Fe_2O_3 (by XRF) results for the 2011 Tuktu core duplicate samples is provided in Figure 15. The duplicate and original sample Fe analyses showed reasonable correlation with a 0.995 correlation coefficient.

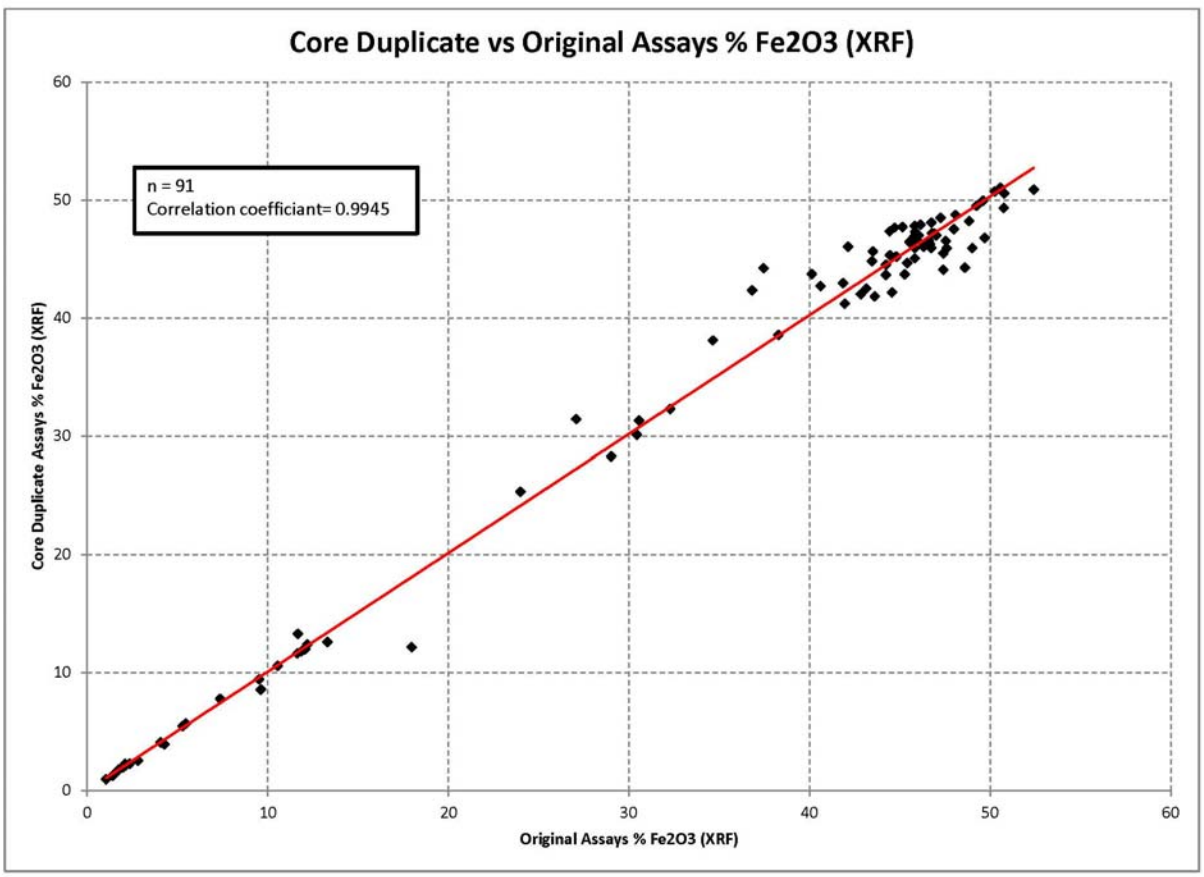


Figure 15. 2011 Tuktu Drill Program Core Duplicate % Fe2O3 (XRF) Analyses.

Prep-Lab Duplicates

Finally, the efficiency of the prep lab facility in Hall Beach was examined by Actlabs through the collection of a subset of duplicate samples from original crushed core samples. The intention was to have a duplicate sample collected and analysed at a rate of 1 in every 50 crushed drill core samples, which would represent approximately 43 samples. Instead, an initial batch of 32 prep duplicate samples was submitted for analyses but only 18 comprised Tuktu drill core samples. A comparison between the original and 'prep duplicate' %Fe_2O_3 (by XRF) results for these 18 Tuktu drill core samples is provided in Figure 16. The prep duplicate and original sample Fe-XRF analyses showed excellent correlation with a 0.996 correlation coefficient. The remaining 14 prep duplicate samples (2011 rock grab samples) also showed excellent correlation with their respective original sample analyses. As a result, no issues were identified with respect to the sample crushing and homogenization completed at the Hall Beach preparatory facility in 2011 and no additional prep duplicate sample analyses were deemed necessary.

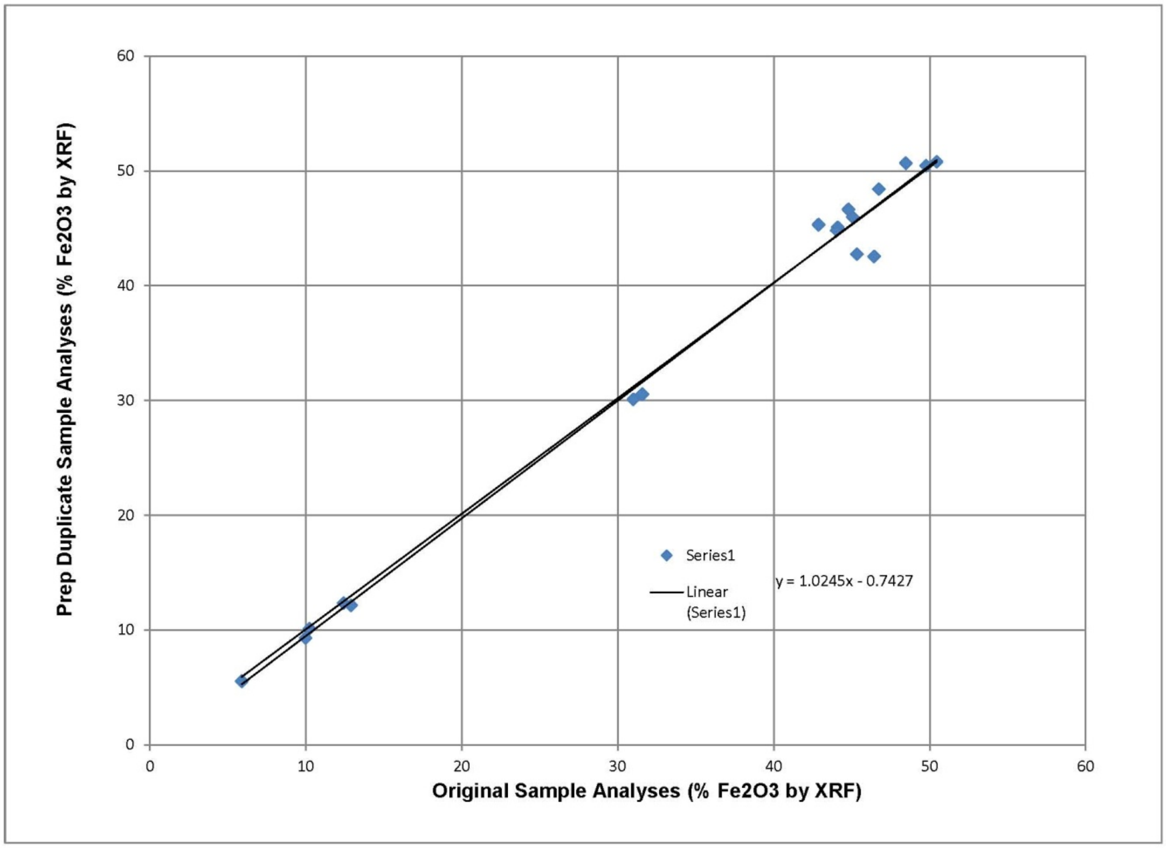


Figure 16. 2011 Tuktu Drill Program Prep-Lab Duplicate % Fe2O3 (XRF) Analyses.

13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

To date, there have been no studies completed on the metallurgical characteristics of the Tuktu iron formation nor have there been any investigations of potential mineral processing techniques or strategies. The initiation of such work forms part of the recommendations at the end of this report. With only 250 grams from each of the 2011 drill core samples having been sent to Activation Laboratories in Ancaster, ON, there is a significant amount of coarse reject sample material currently in storage in Hall Beach, NU, available for potential metallurgical testwork. In addition, half of the 2011 Tuktu drill core remains archived on site at the Tuktu camp.

However, the Tuktu iron formation was found to be remarkably consistent with little evidence of significant sulphide or silicate alteration that would adversely affect the liberation and/or recovery of magnetite from the deposit. Portions of the Tuktu BIF in the northern half of the deposit (drill) area do show significant alteration but, for the most part, these units were not included in the Tuktu model used to calculate the initial Inferred resource for the Tuktu deposit described in a later section of this report.

14.0 MINERAL RESOURCE ESTIMATES

14.1 Database Validation

The drilling database used for the 2011 Tuktu resource estimation work was current up to November 23, 2011. The database incorporates all available diamond drilling and related analytical data. As there has only been diamond drilling conducted at the Tuktu project (no RC drilling or trenching has been completed at Tuktu) a data type comparison was not required. All data for the mineral resource estimation was compiled in either Micromine file formats or MS Excel spreadsheets. The five main data files that were utilised were:

- Collars.dat (Drillhole collar file)
- TT_SURV.svy (Down hole surveys)
- Master Tuktu Chemistry.xlsx (Drillhole Assay table)
- Litho.dat (Drillhole Geology/Lithology table)
- Master Tuktu SG.xlsx (Specific Gravity table)

There are a total of 20 diamond drillholes within the Tuktu database of which 17 were used in the resource estimation. One drillhole was terminated prematurely due to poor ground conditions and two others failed to intersect significant mineralization. Drillhole section spacing varies from 70m to 450m, with an average of about 250m between sections. Drillhole intersection density is greater in the northern portion of the Tuktu deposit which was dictated by greater geological complexity than was observed in the southern portion of the deposit. The sample data file comprises 2,059 individual samples of variable length for all of the sampled lithologies that were composited in MICROMINE yielding a database of 1,282 sample composites that were used in the mineral resource estimation.

The Tuktu drill data was originally compiled by the principal author of this report, Andrew Turner, P.Geol. (APEX), who supervised the 2011 Tuktu drill program on behalf of AEI. The resource estimation work was completed by Steven J. Nicholls, BASc., MAIG., also with APEX. The data compiled in MICROMINE included collar information; eastings and northing (UTM), elevations, azimuth and dip; geological information, and analytical information including; % magnetics by Stamagan and % Fe2O3 and % P2O5 by XRF and % S by Leco; and bulk density (specific gravity) data. The collar co-ordinates were obtained using a hand-held GPS and the RL (elevations) were assigned using the XYZ co-ordinates produced from the GPS-based ground magnetic survey competed over the deposit area in May of 2011. All drillholes were drilled approximately 90° grid east (Local Grid), with one hole drilled to roughly 270° grid west, and were surveyed using a Reflex Maxibor and/or a Reflex Easy-Shot down hole tool. The final drillhole database was validated using MICROMINE. No errors were identified.

14.1.1 Grid Conversion

Since the Tuktu banded iron formation is oriented approximately 45° to the UTM co-ordinate grid (NAD83, Zone 17) relative to which all of the drillhole location and orientation data had been established, it was decided that the data would be converted to a local grid to optimize the block estimation of the resource. The 2011 drilling data was converted to local grid co-ordinates using a two point grid conversion which had a 49.092° rotation, the details of which can be seen in Table 6 and Figure 17.

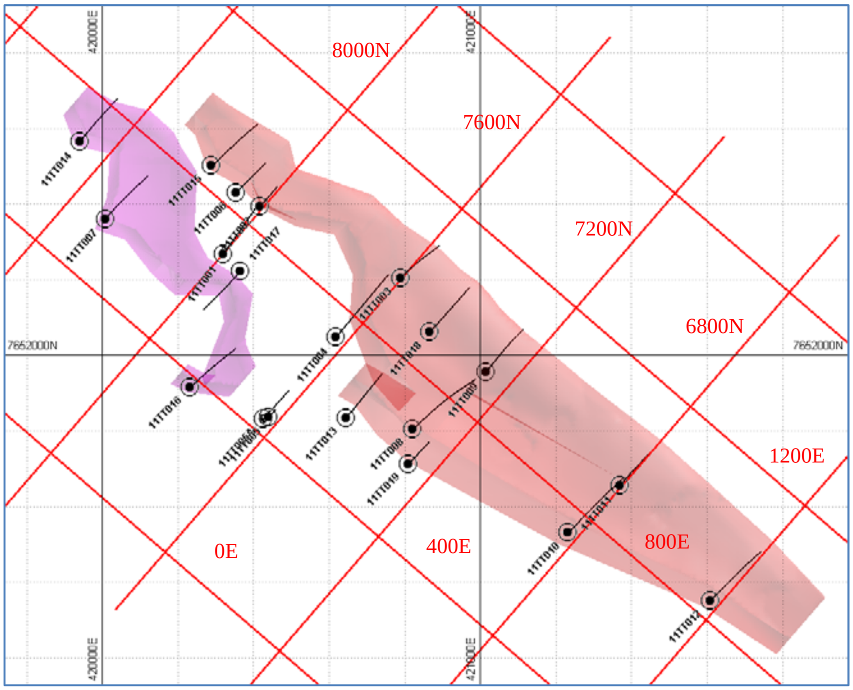


Figure 17: UTM (NAD83, Zone 17) To Tuktu Local Grid Conversion.

Table 6: UTM to Tuktu Local Grid Conversion Points.

	Easting (UTM NAD83, Zone 17)	Northing (UTM NAD83, Zone 17)	Local Easting	Local Northing
Point 1	419671.143140	7652436.330701	0	8600
Point 2	421793.222535	7651527.056843	700	6400

14.1.2 Data Quality (QA/QC)

Comprehensive Quality Assurance and Quality Control (QA/QC) protocols were employed by AEI throughout the 2011 Tuktu drill program. The reader is referred to an earlier section of this report for a more detailed discussion of the 2011 QA/QC procedures and data (see Section 12.0 Data Verification). No issues were noted with respect to either the accuracy or the quality of the 2011 Tuktu drill data and the resulting drill database was considered by APEX to be acceptable for use in the Resource estimation work.

14.2 Modeling / Lode Interpretation

Three dimensional modeling of the Tuktu iron formation was completed by the principal author of this report, Andrew Turner, P.Geol., of APEX. This was accomplished using the MICROMINE 3-D exploration and mining software package. Essentially, lithology and Total Fe (%) grades were plotted along drillhole traces in three dimensions within Micromine and strings were drawn around banded iron formation (BIF) intersections on a section-by-section basis. The southwestern and northeastern contacts (west and east contacts, respectively, in local grid space) of the Tuktu BIF were relatively well established by drilling. Surface mapping had indicated an overall dip of roughly 70° degrees (also supported by drilling with hole 19 undercutting hole 8). This dip was used mainly to constrain the southwest contact of the BIF and portions of the northeast contact (see Figure 18). However, multiple drill intercepts along the northeastern contact indicated a gentle shallowing of the dip of the BIF at depth. The overall morphology suggested a fairly large-scale, tight hook fold that opened toward grid south. The BIF is bisected by a 5-10m wide mafic dyke, which strikes sub-parallel to the BIF, near its northern extent near the hinge of the fold. As a result, the Tuktu BIF model comprised 2 lodes (see Figure 5).

At its northern end, the Tuktu model was extended 80m beyond the last drillhole, while at its southern end it was extend approximately 200m past the last drillhole intercept. These values are equivalent to half the distance to the next drillhole (drill section). The southern extension of the model is greater than the northern extension due to a greater confidence in the continuity of the BIF. At depth, the Tuktu model was generally limited to the -100m elevation (RL), although beneath hole 8 on section 7300N the model was dropped to -155m RL as greater depth continuity was demonstrated in this area. In general, this represents an average depth from surface of approximately 250m.

As previously discussed, the northern portion of the Tuktu BIF was found to be more complex than the south where BIF occurs as a single thick unit with interbeds or fold complications. In the northern half of the deposit area, magnetite-rich BIF is folded with magnetite-poor silicate iron formation (SIF) and metasediments. A conservative approach was taken with respect to the modeling of the iron formation in this area such that the model was restricted to the magnetite-rich (BIF) portions of the iron formation. Detailed infill drilling is recommended for this portion of the deposit in particular to verify the current geological model and to provide greater detail as to the extent of BIF and SIF units. It is suspected that the resource could be increased in this area by the future inclusion of additional, if lower grade, iron formation currently excluded from the resource model.

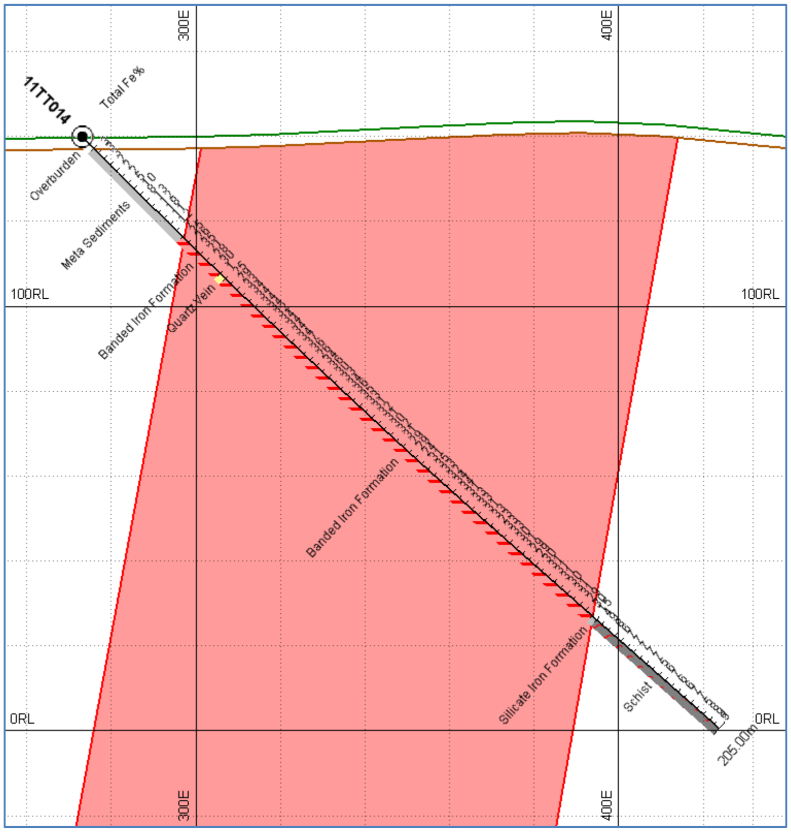


Figure 18. Cross-Section Through DDH 11TT014 Showing The Stratigraphy And Dip Of The Tuktu Model.

14.3 Assay Summary Statistics

The 2011 Tuktu modeling work focussed on four (4) elements as well as specific gravity (SG). The Tuktu Resource was calculated using total iron as calculated from the % Fe_2O_3 by XRF data (% Fe = 0.6994 x Fe_2O_3). The percentage of magnetic minerals, as determined by Satmagan analysis, was also modeled and was accepted as essentially equivalent to a measure of % magnetite (Fe_3O_4) due to the lack of other magnetic minerals observed during the logging process. Also modeled were sulphur (% S - Leco) and phosphorus (% P_2O_5 - XRF). Summary statistics and histograms were calculated for all of the modeled items (Table 7 and Figures 19a and 19b) with respect to the 1341 samples that were located within the Tuktu model lodes.

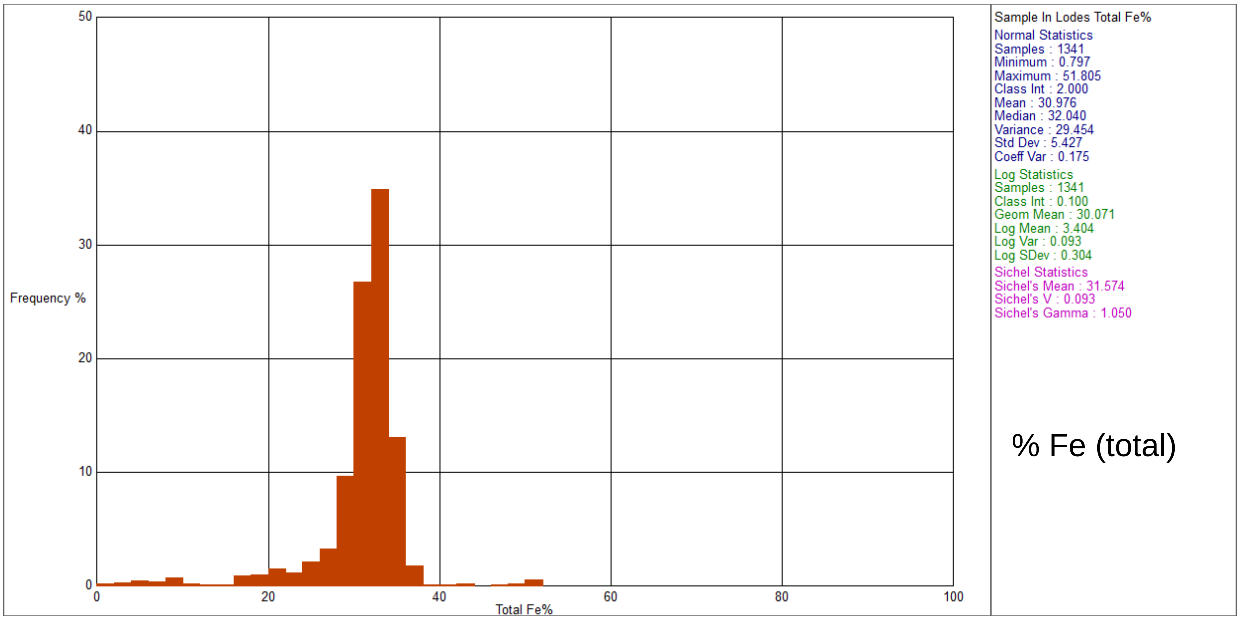
Table 7. Summary Statistics For Un-Composited Assay Data For The Tuktu Resource Model.

	% Fe (total)	% S	% P2O5	% Magnetics	Density (t/m3)
Number	1341	1341	1341	1341	1341
Minimum	0.797	0.005	0.01	1.6	2.33
Maximum	51.805	7.35	0.42	65.9	5.235
Mean	30.976	0.368	0.093	34.985	3.372
Median	32.04	0.21	0.09	38.4	3.398
Std Dev	5.427	0.613	0.041	11.102	0.157
Variance	29.454	0.376	0.002	123.251	0.025
Std Error	0.004	0	0	0.008	0
Coeff Var	0.175	1.667	0.442	0.317	0.047

Correlations between the various elements were calculated for the Tuktu mineralized domain (Table 8). There is excellent correlation between total iron (% Fe) and the Satmagan data (measured % magnetic) and between total iron and density, as well reasonable correlation between total iron and phosphorus. There is also excellent correlation between density and % magnetic and reasonable correlation between phosphorus and sulfur. No unusual trends were noted.

Table 8. Correlation Matrix Between Assay Values Within The Tuktu Model.

	% Fe (total)	% Magnetics	% Sulfur	% P2O5	Density
% Fe (total)	-				
% Magnetics	0.92	-			
% Sulfur	0.55	0.47	-		
% P2O5	0.79	0.78	0.86	-	
Density	0.96	0.91	0.57	0.82	-



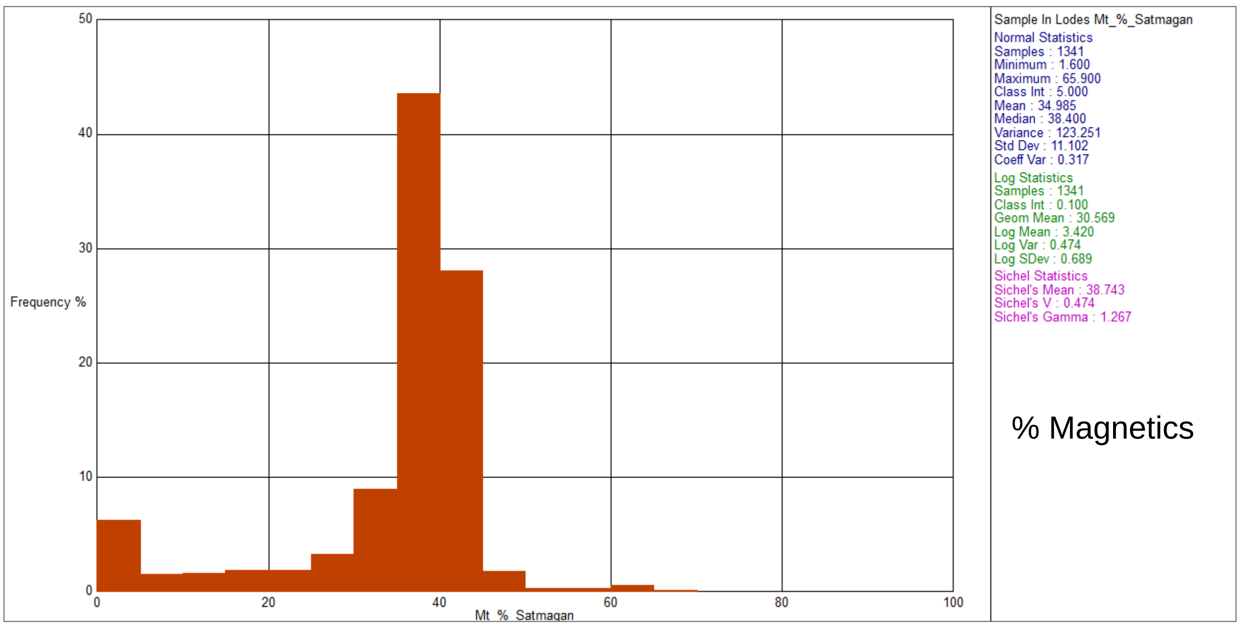


Figure 19a. Histograms For % Fe and % Magnetics (Stamagan) Data Within The Tuktu Model.

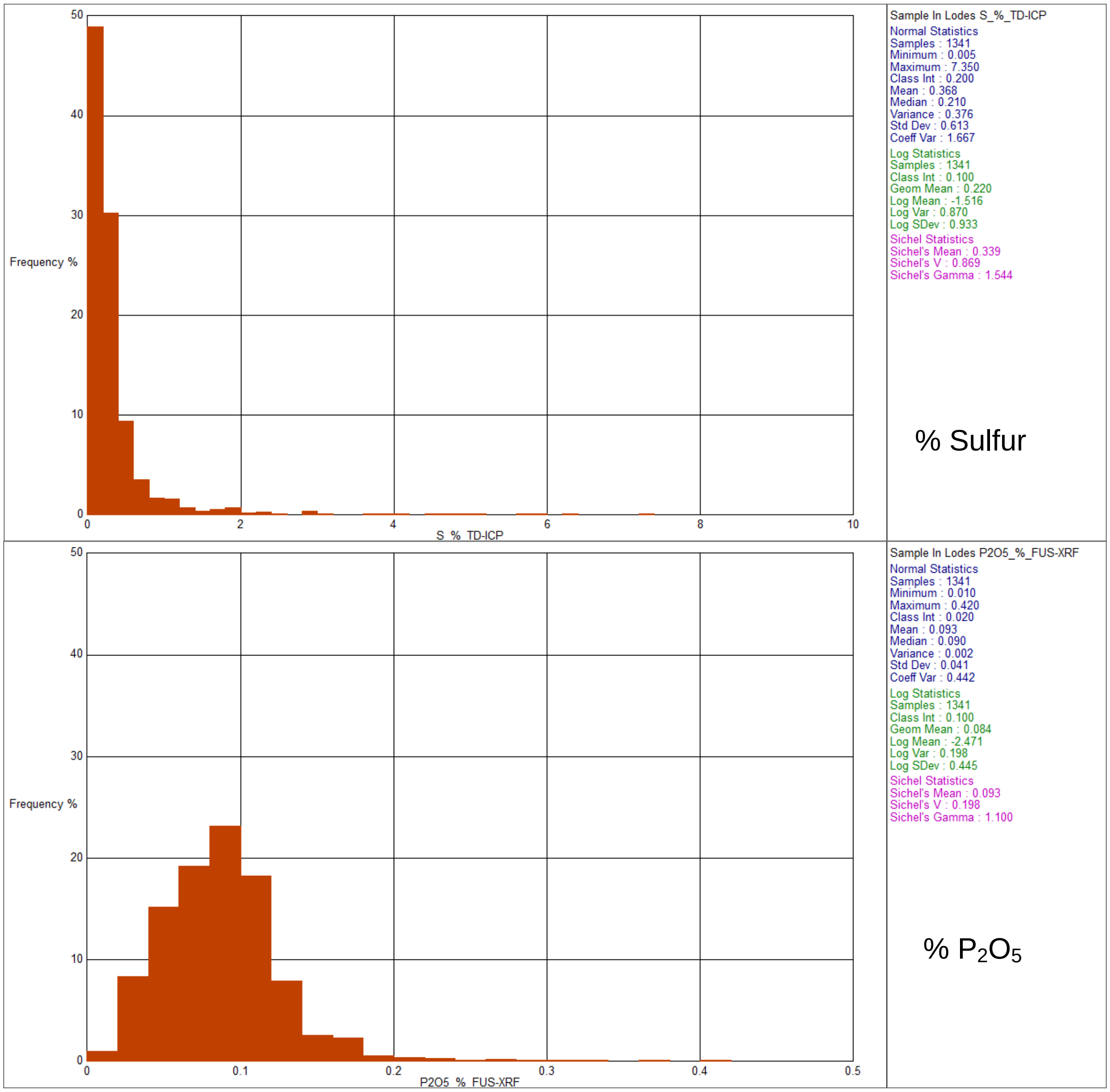


Figure 19b. Histograms For %S and %P2O5 Data Within The Tuktu Model.

14.4 Drillhole Flagging And Compositing

Drillhole samples that were situated within the Tuktu mineralized wireframe were selected and flagged by the wireframe with the name/code.

The flagged samples were checked visually next to the drillhole to check that the automatic flagging process worked correctly. All samples were correctly flagged and there was no need to manually flag or remove any samples.

A review of the sample lengths for all the Tuktu samples that were situated within the mineralized lode wireframes from the 17 diamond drillholes was conducted. The review showed that the sample lengths varied from 0.41 m to 3.0 m in length (Table 9, Figure 20). Looking at the samples, the two dominant sample length groups are from 1.4 m to 1.6 m (12.2% of total samples) and from 1.8 m to 2.0 m (77.0% of the total samples). Essentially 96.3% of the samples were less than 2.0 m in length. Thus, a composite length of 2 m was selected.

Table 9. Sample Length Statistics for the Tuktu Resource.

	Un-composited Sample Widths
Number	1341
Minimum	0.41
Maximum	3.0
Mean	1.898
Median	2.0
Std Dev	0.272
Variance	0.074

Length weighted composites were calculated for Total Fe, % Magnetics (Fe_3O_4), sulfur, phosphorus (P_2O_5) and density (SG). The compositing algorithm within the MICROMINE software starts from the first point of intersection between the drillhole and the lode wireframe, and is halted upon the end of the mineralized wireframe.

Upon completion of the 2 m compositing process, the samples less than 2 m in length were examined to make an assessment of whether or not to remove them from the dataset. There are 22 composite samples that are less than 2 m in length. As the inclusion of the sub 2 m length composites only changed the Total

Fe % average by 0.12% it was decided to include these composites into the final composite dataset.

The compositing process did not add any undue bias to the data. The composited samples were used for all samples statistics, estimation input file and validation comparisons.

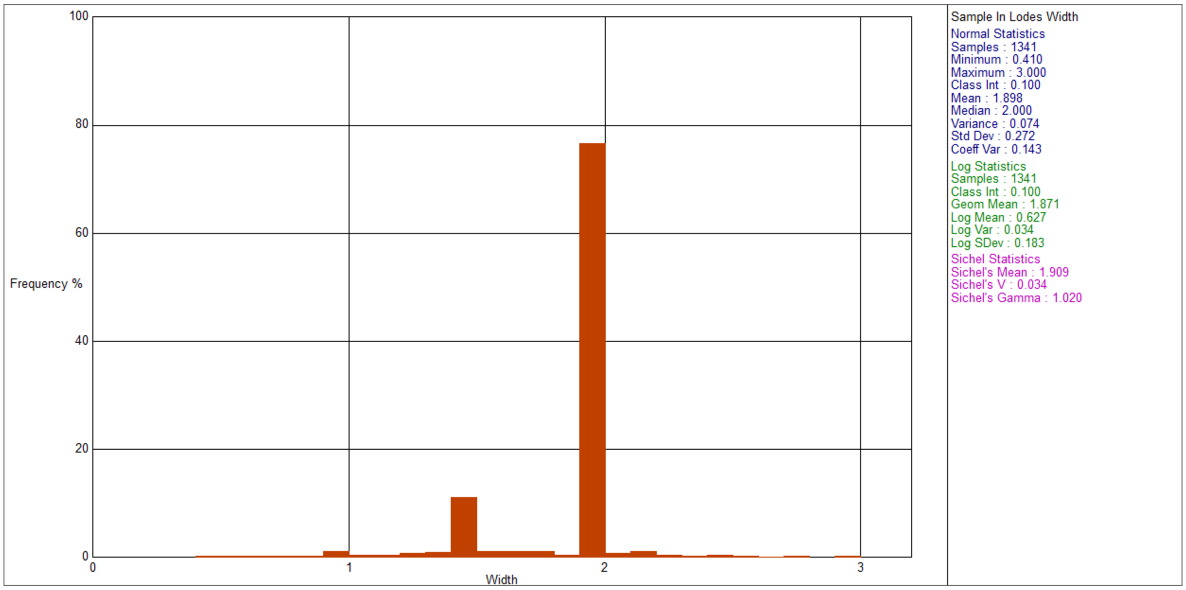


Figure 20. Histogram Of Sample Lengths Within The Tuktu Model.

14.5 Capping

The slightly skewed Fe distribution indicates that there are no unreasonably high grades in the composited sample population (Figure 21). The very small amount of data (13 composites) above the 40% Fe is deemed appropriate for the style and type of the deposit. These 40% to 50% Fe samples are considered “real” and represent a thin higher grade unit within the south lode of the deposit. As such it is APEX’s opinion that the need for capping is not required for this inferred mineral resource estimate.

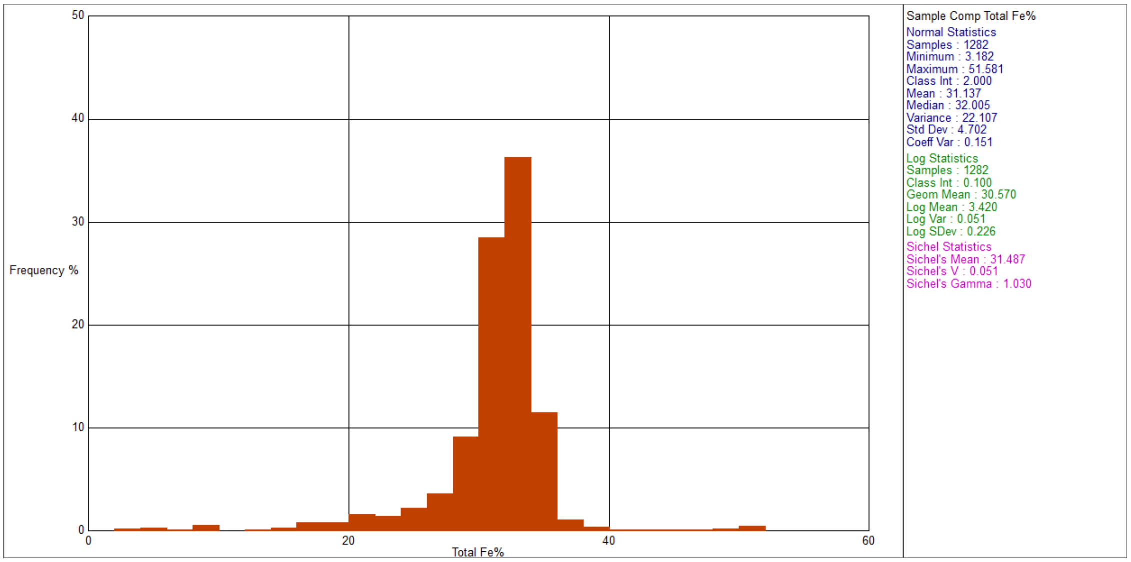


Figure 21. Histogram Of Total Fe% Composites For The Tuktu Model.

14.6 Grade Continuity

Variography utilized the composite data within the Tuktu magnetite lode wireframes to produce spherical semi variograms. Each element was modeled (spherical) individually to determine the continuity and orientation of mineralization. Some difficulties were encountered with the semi variograms for some of the elements due to limited number of drillholes, large spacing and irregular frequency of drilling. Table 10 provides the search classification and the limits used in the estimation process. The individual variograms are provided in Appendix 3. The variography was conducted using MICROMINE software algorithms.

The Tuktu geochemistry displays very good grade continuity over the 2.35 km of strike length. The variability of grade is also very uniform along and across strike and up and down dip. This can be seen in Figure 18 (and Figure 13). Drillhole 11TT014 is an example of how uniform and regular the iron grades are throughout the ore body.

Table 10. Semi-Variogram Parameters For Composited Data Within The Tuktu Model.

Grade Element	Nugget (%)	C1 (gamma)	Range 1 (m)	Range 2 (m)	Range 3 (m)
Total Fe %	9.0	20	420	420	185
Magnetite %	0.0	318	280	235	235
Sulfur %	10.0	0.27	372	322	322
Phosphorus % (P_2O_5)	0.0	0.00228	245	312	10
Density (t/m^3)	0.0	0.091	250	136	62

14.7 Search Ellipsoids

The lodes comprising the Tuktu model are generally quite linear and uniform and as such only a few search ellipsoids were utilized (Table 11). The north lode shows a noticeable flexure in its orientation at around the 7900 northing. Search ellipsoids were designed to honor the geological interpretation. The search ranges of the ellipsoids were obtained from the variographic analysis.

Table 11. Search Ellipsoids Used In The Estimation Process.

Grade Element	Search Ellipsoid Name	Coordinate Constraints (local grid)	Strike	Dip	Plunge
North Lode	North Lode 1	>8000 North	201	-80	0
	North Lode 2	B/w 7940 & 8000 North	130	-85	0
	North Lode 2	<7940 North	235	-80	0
South Lode	South Lode	All	180	-75	0

14.8 Bulk Density (Specific Gravity – SG)

Block densities (specific gravity) were calculated during the Ordinary Kriging (OK) estimation process based on a combination of both field measurements and calculated values for individual drill core samples. Field SG measurements were made using the water displacement method for every metre of core in 12 drillholes (see the Drilling section of this report). A total of 2522 individual SG measurements were made. Where multiple measurements were collected from a given sample interval, the individual SG values were averaged to determine the SG for that sample. SGs were determined for a total of 1357 drill core samples in this manner. For the remaining 702 drill core samples, comprising holes 1 – 7 and most of hole 8, SGs were calculated based on the relationship observed between the 1357 measured sample SGs and their respective % Fe_2O_3 (XRF) values as follows (see Appendix 1);

$$SG_{calc} = 0.0162 \times (\% \ Fe_2O_3 - XRF) + 2.6513$$

Upon the collection of density measurements for all samples for the 17 drillholes used in the resource, variography was conducted on these to determine appropriated search orientations and ranges. The density for each block was then estimated during the OK estimation process.

14.9 Block Model Extents And Block Size

As a result of the wide drillhole spacing a block size of 50 m x 20 m x 20 m was chosen for the Tuktu model. The block model extents were established far enough past the mineralized wireframes to encompass the entire mineralized Tuktu domain. Table 12 presents the co-ordinate ranges and block dimensions used to build the 3D block model from the mineralized wireframe. Sub-blocking was used to more effectively honour the volumes and shapes created during the geological interpretation of the mineralized wireframes or lodes. There were a total of 53,889 blocks in the model, including sub-blocks.

Table 12. Block Model Extents and Cell Size For The Tuktu Model.

Deposit	Block Model Dimensions	Easting (local grid)	Northing (local grid)	RL
Tuktu	Maximum	710	8600	180
	Minimum	-50	6250	-140
	Parent Cell Size	20	50	20
	Sub Blocking Cell Size	2	5	2

Upon setup of the block model, the volume of the block model was cross checked with the volume of the wireframe to check there were no significant discrepancies between the two. The sum of the block volumes varied by only 0.46% from sum of the two wireframe volumes.

14.10 Grade Estimation

Grade estimation for the Tuktu model was calculated using ordinary kriging (OK) for each element which included % Total Fe ((from XRF data), magnetics (Satmagan Fe_3O_4), sulphur (S), phosphorus (P_2O_5) and density (SG). No trends were applied to the OK grade estimation. The kriging parameters were based on variography conducted on the individual grade elements within the Tuktu magnetite zone. Estimation was only calculated on parent blocks. All sub blocks within the parent block were assigned the parent block grade. A block discretization of 2(X) x 10(Y) x 5(Z) was applied to all blocks during the kriging process. The two lodes were treated as hard boundaries which meant that only samples within each lode were used to estimate grade for each element in the blocks of that lode.

There were five passes of estimation conducted. The size of the octant elliptical ellipsoid was based on the suggested ranges obtained from variography. The estimation criteria for each pass are provided in Table 13.

Table 13. Search Ellipsoid Criteria For Tuktu Resource Grade Estimation.

Run Number	Minimum No. of Samples	Minimum No. of Holes	Factor x Radius	% Blocks Estimated
1	20	1	0.5	79.8
2	20	1	1	6.8
3	12	1	2	10.2
4	5	1	3	3.2
5	1	1	30	0

14.11 Model Validation

Blocks were visually validated on cross sections comparing block grades with composited sample grades for all sections and drillholes (see Figures 22 and 23). In addition, the block and sample data were compared by northing (parallel to strike) and RL (down dip).

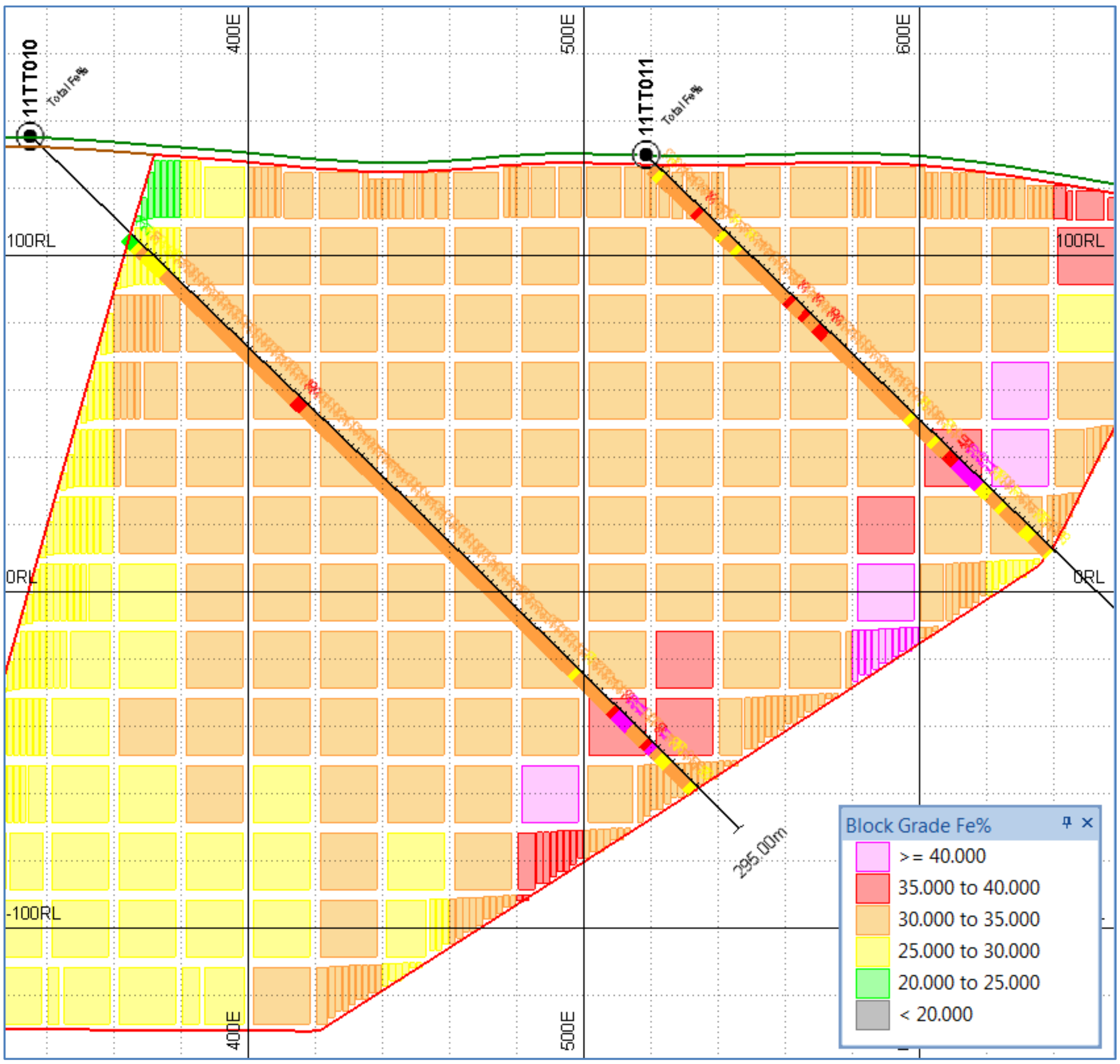


Figure 22. Cross-Section (6800N) Showing %Fe Block Grades vs. %Fe Sample Grades.

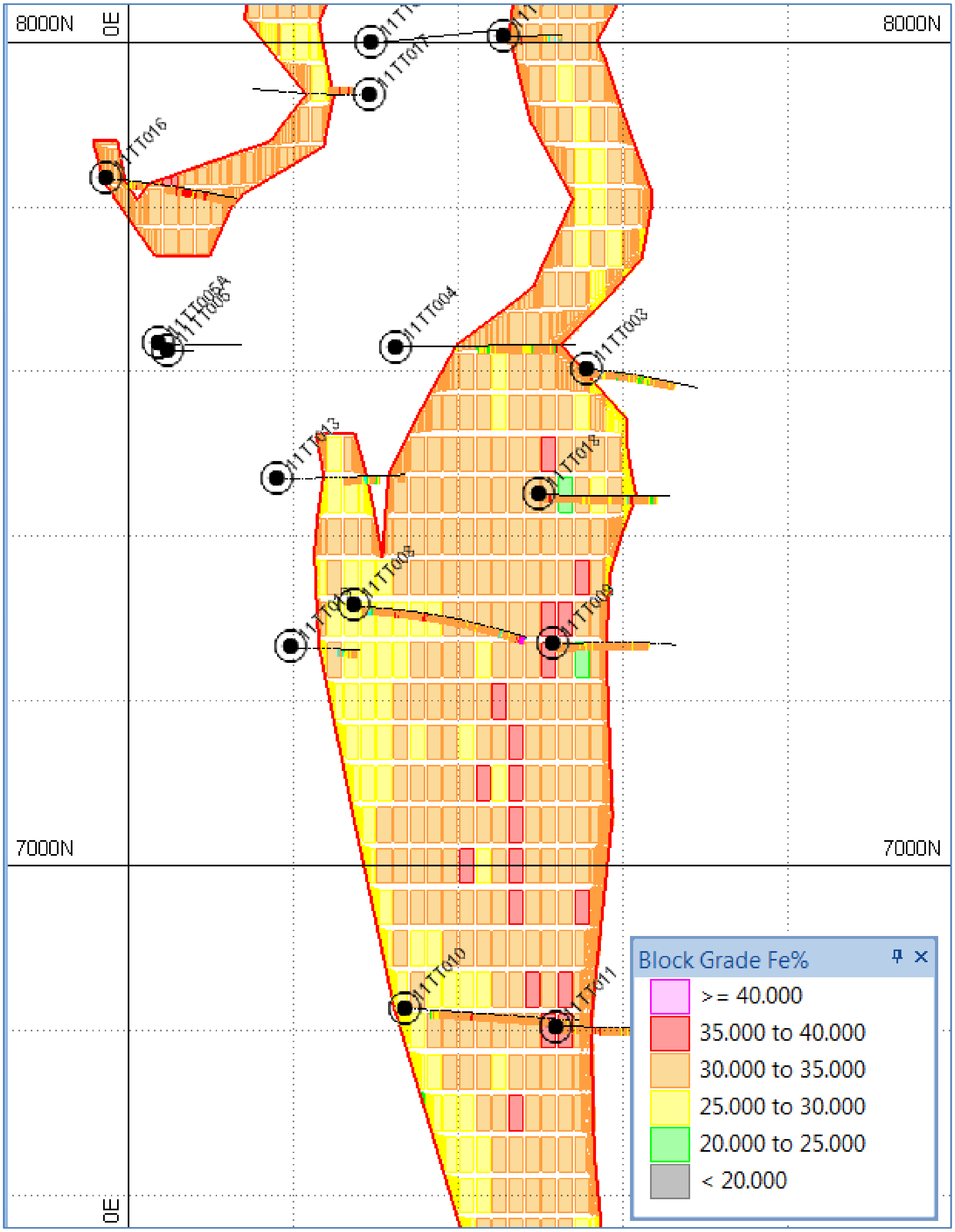


Figure 23. Plan View Showing %Fe Block Grades and %Fe Sample Grades.

14.12 Statistical Model Validation

Table 14 and Figure 24 show the average iron grade of the composited sample data versus the block data. It can be concluded that the average grade of the OK block model is very close to or generally slightly lower than the sample data. This is the expected result for well-behaved data and if the block model estimation process is being constructed correctly. The model data tends to have a reduced dispersion of the block grades resulting from the grade estimation process. The OK block modelling and estimation process tends to lower the high end grades compared to the sample data and increase the low end grades compared to the sample data. This is expected with the overall smoothing of the estimation process.

Table 14. Global Average of OK Model vs. Composited Sample Grades.

Grade Element	Sample (composite grade)	OK Block Model (calculated grade)
Total Fe %	31.14	31.00
Magnetics %	35.32	35.09
S %	0.36	0.30
P2O5 %	0.09	0.09
Density %	3.38	3.36

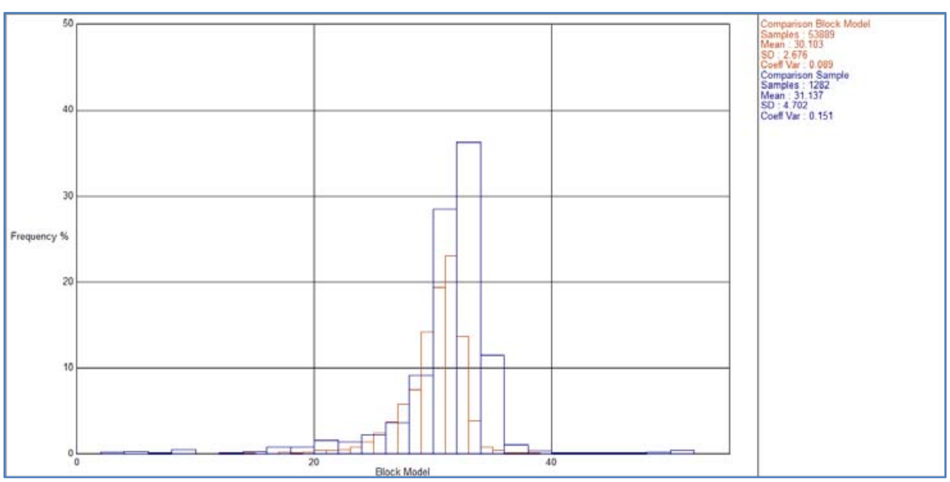


Figure 24. %Fe Histogram Comparison, Block Model vs. Composited Data.

14.12.1 Composite – Block model Comparison By Northing

The sample and block model averages were calculated on 100 m composite sections across the northing for the Tuktu mineralized zone (Figure 25). This is parallel to the strike of the lodes. The purpose is to compare the input sample file with the resulting block model to make sure that there is no gross over or under estimation occurring. The northing composites generally compare quite well. There is some local and over estimation observed but this is to be expected with the estimation process. Overall the block average grades follow the general trend of the input sample data.

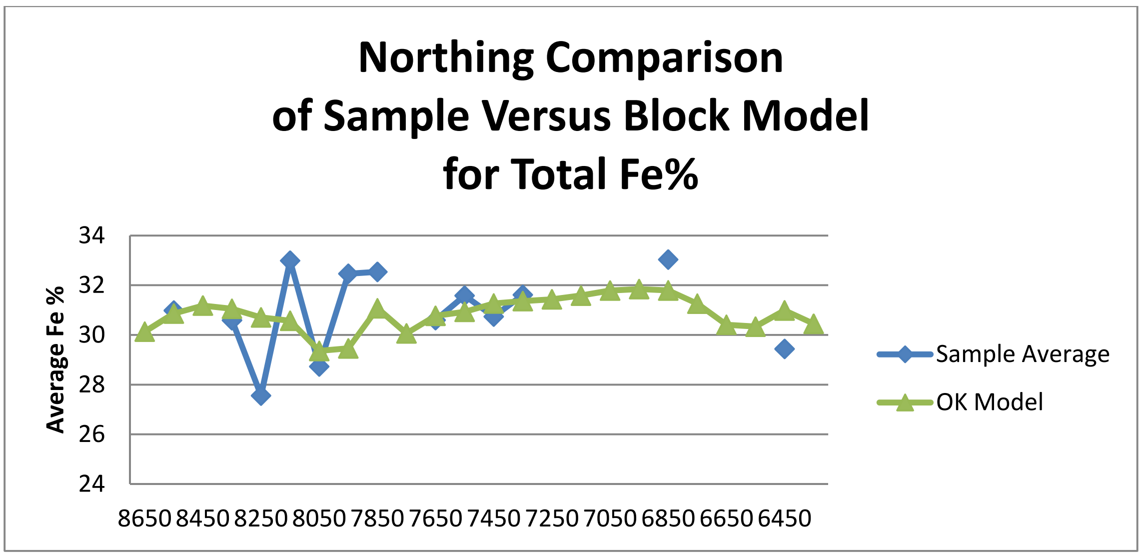


Figure 25. Northing (local grid) Comparison For %Fe Data – Composite Sample Data vs. Block Model Data.

14.12.2 Composite – Block model Comparison By RL

The sample and block model averages were calculated on 20 m composite slices down the RL for the Tuktu mineralized zone (Figure 26). This is down dip of the lodes. The purpose is to compare the input sample file with the resulting block model to make sure that there is no gross over or under estimation occurring. The RL composites compare quite well. There is some local and over estimation observed but this is to be expected with the estimation process. Overall the block average grades follow the general trend of the input sample data.

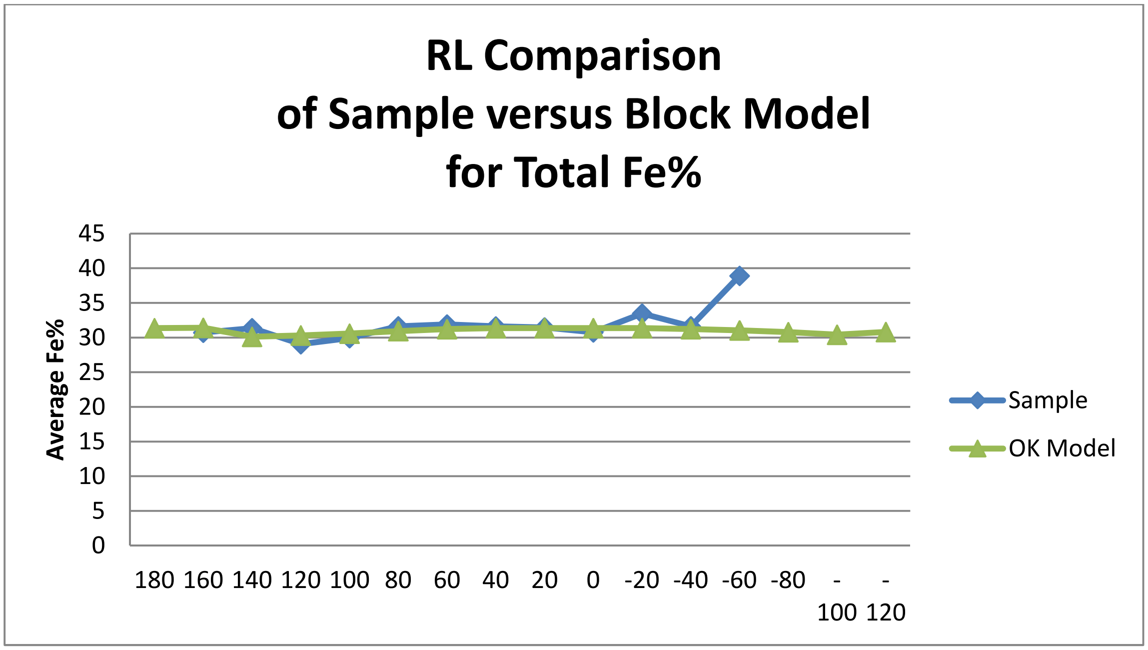


Figure 26. RL Comparison For %Fe Data – Composite Sample Data vs. Block Model Data.

14.13 Resource Classification

The Tuktu mineral resource was classified in accordance with guidelines established by the CIM "Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines" dated November 23rd, 2003 and CIM "Definition Standards for Mineral Resources and Mineral Reserves" dated November 14th, 2004.

An 'Inferred Mineral Resource' is that part of a Mineral Resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings, and drillholes.

This is the first mineral resource estimate completed for the Tuktu deposit. The mineral resource estimate has been classified as **Inferred** according to the CIM definition standards (see Tables 1 and 15). This classification is based on a number of factors which are noted below:

- Limited number of drillholes within the resource area.
- Wide drillhole spacing.
- Lack of metallurgical testwork completed on the mineralization.
- Good continuity of mineralization and good geological control from section to section along strike.

Mineral resources are not mineral reserves and do not have demonstrated economic viability. There is no guarantee that all or any part of the inferred mineral resource will be converted into a mineral reserve.

15.0 ADJACENT PROPERTIES

The Melville Peninsula and North Baffin area is developing into a significant iron district. **Figure 1** shows the location of two adjacent iron projects; AEI's Roche Bay Project, which is located approximately 60km southeast of Tuktu, and Baffinland Iron Mines' Mary River Project, which is located on Baffin Island approximately 300km northeast of Tuktu. In addition, Roche Bay PLC has recently optioned a mineral lease to West Melville Metals Corp that covers a significant iron occurrence on the west side of the Melville Peninsula approximately 150km southwest of Tuktu known as the Fraser Bay Project (**Figure 27**).

Baffinland Iron Mines' Mary River Project is an advanced iron project comprising nine plus high-grade iron deposits that are moving toward production following a positive Definitive Feasibility Study completed in 2008. Baffinland has submitted a project proposal (September 2011) to the Nunavut Impact Review Board (NIRB) in order to undertake Pre-Development Work during the summer and fall of this year (2012). If accepted, construction will begin almost immediately after NIRB approval. A Final Environmental Impact Statement is planned to be submitted in early 2012 (company website – www.baffinland.com). The Mary River Project will produce from oxide-facies BIF's which are found within the same group of rocks as those on the Property (Prince Albert Group). The Mary River project currently comprises a Mineral Reserve of 365 million tonnes with an average grade of 64.66% Fe along with Mineral Resources, exclusive of Reserves, of 52.4 million tonnes of measured and indicated grading 64.61% Fe and 448 million tonnes of inferred at a grade of 65.48% Fe (Holmes *et al.*, 2008).

AEI's Roche Bay Project comprises several zones of iron including the "C-Zone" for which a mineral resource has been calculated. The Roche Bay C-Zone comprises an estimated Indicated Resource of 323 million tonnes averaging 26.7% total iron, and an additional Inferred Resource of 226 million tonnes averaging 25.8% total iron, both at a 20% total iron cut-off grade (Greenough and Palmer, 2011). During the summer 2011, AEI completed a limited resource and geotechnical drilling program at Roche Bay. The results from this program will be used to update the existing resource that will be used in the economic analyses within the ongoing project Feasibility Study, which will be completed in early 2012 (company website – www.advanced-exploration.com).

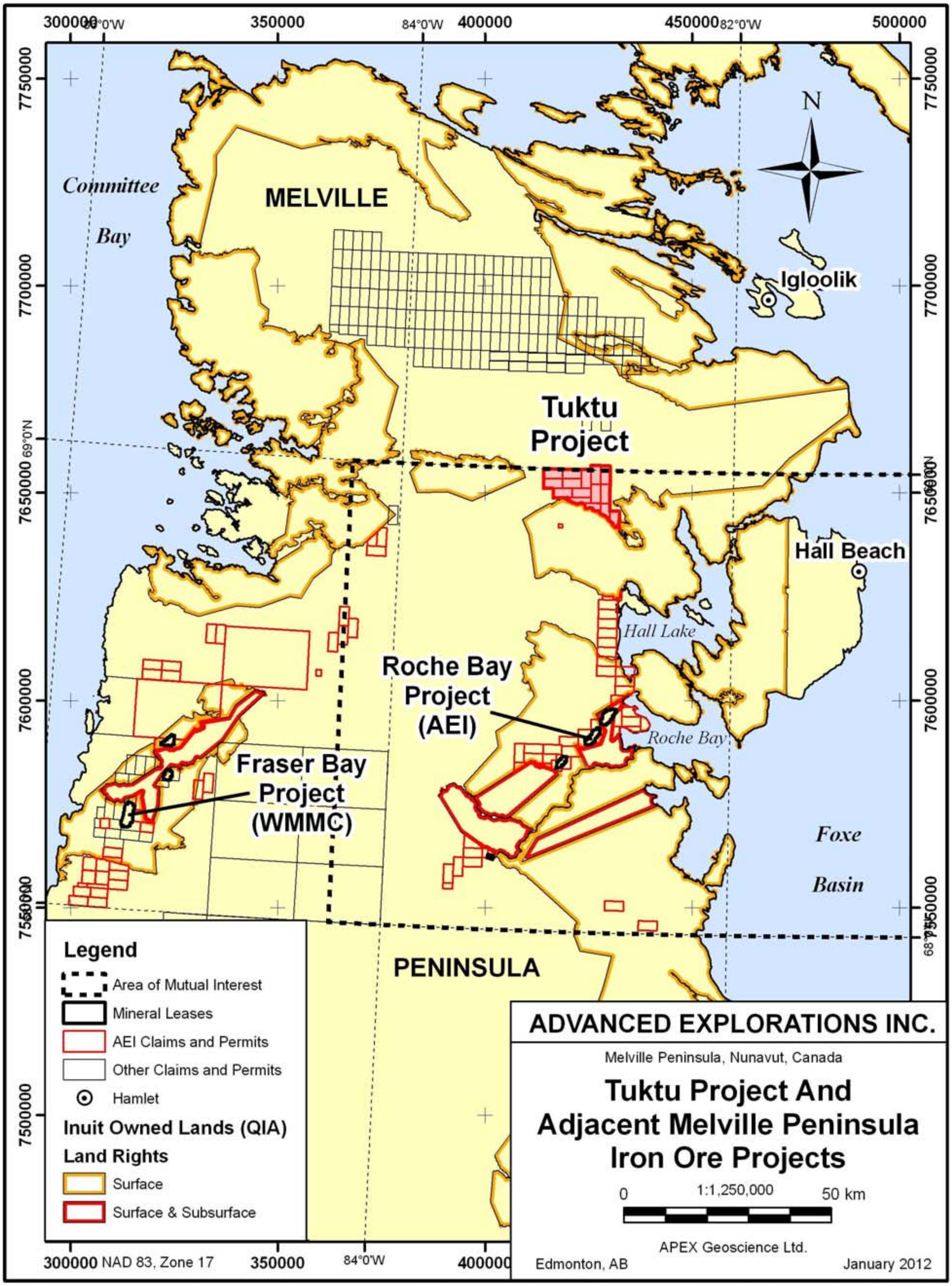

Committee
Bay
MELVILLE
Igloolik
Tuktu
Project
Hall Beach
Hall Lake
Roche Bay
Project
(AEI)
Roche Bay
Fraser Bay
Project
(WMMC)
Foxe
Basin
PENINSULA
N
Legend
Area of Mutual Interest
Mineral Leases
AEI Claims and Permits
Other Claims and Permits
Hamlet
Inuit Owned Lands (QIA)
Land Rights
Surface
Surface & Subsurface
ADVANCED EXPLORATIONS INC.
Melville Peninsula, Nunavut, Canada
Tuktu Project And
Adjacent Melville Peninsula
Iron Ore Projects
0
1:1,250,000
50 km
APEX Geoscience Ltd.
Edmonton, AB
January 2012
300000 NAD 83, Zone 17
350000
84°0'W
400000
450000
82°0'W
500000
7750000
7700000
7650000
7600000
7550000
7500000
69°0'N

Figure 27

In May 2011, Roche Bay PLC and West Melville Iron Company (now West Melville Metals Inc.) signed a JV agreement whereby WMMI can acquire up to a 70% interest in the Fraser Bay Iron Project with the completion of a Feasibility Study on the project (Roche Bay PLC Press Release dated May 24, 2011).

16.0 OTHER RELAVANT DATA AND INFORMATION

This report discusses the results of the 2011 mineral exploration program that was conducted by AEI on its Tuktu Property including an initial Mineral Resource estimate for the Tuktu iron deposit. As of the date of this report, no engineering, metallurgy or detailed economic assessment has been completed for the project. As a result, for the purposes of the revised reporting requirements set out in NI-43-101F1 (effective June 30, 2011), the Tuktu Project is not considered to be an "Advanced Mineral Project". Thus, because there is no information to report, sections pertaining to "Advanced" exploration projects have not been included in this report.

The authors of this report are not aware of any other data or information with respect to the subject matter of this Technical Report that is not reflected in this Technical Report, the omission to disclose such would make the Technical Report misleading.

It should be noted that AEI initiated baseline environmental studies at the Tuktu Project area in 2011. Such work has been ongoing with respect to the company's Roche Bay Project located south of the Tuktu Project since 2008. However, programs specific to the Tuktu Project were initiated in 2011 including Water Quality and Wildlife monitoring. In addition, a brief investigation of the immediate area (Tuktu deposit/drill area) was made with respect to potential archeological sites with none identified.

17.0 INTERPRETATIONS AND CONCLUSIONS

Advanced Explorations Inc. completed a drill program at its Tuktu Iron Project between May 4 and July 21, 2011. The program was designed to examine the iron (magnetite) content of the Tuktu Banded Iron Formation (BIF) that had been identified by sampling completed by the company in 2009. The 2011 Tuktu drill program comprised 19 drillholes totaling 4,070.4m of NQ (1 7/8", 47.6mm) drill core, not including one hole that was abandoned shortly after commencement due to poor ground conditions. The result of the 2011 drill program was the identification of a significant, and remarkably consistent, Algoma-type (silica-magnetite) banded iron formation that was intersected over a strike length of some 2000m, across widths up to 400m and to depths of up to 200m below surface. The size, grade and consistency observed in the 2011 Tuktu dill program BIF intersections were considered sufficient to warrant and support the calculation of an initial Inferred Resource for the Tuktu deposit, which is the focus of this report.

The Initial Mineral Resource Estimate for the Tuktu iron deposit was prepared by Andrew Turner, P.Geol., Michael Dufresne, M.Sc., P.Geol., and Steve Nicholls, MAIG, all with APEX Geoscience Ltd., The resource model was generated using a total of 17 diamond core holes, with an average drill-hole spacing of 250 m. The model was constrained by a wireframe that was constructed from the intersections of the Tuktu iron formation. The Tuktu BIF was modeled as a steeply (~70^o) southwest dipping body with a large hook fold at its north end. The model was limited to between 250 m and 300 m below surface and extends 2350 m along strike (2070m drill-hole to drill-hole) with widths up to 400m across strike.

The drill database consists of a total of 1,282 composites of 2 m length, with no capping levels applied. The mineral resource was estimated by Ordinary Kriging ("OK") within a three dimensional wireframe envelope based primarily on geological characteristics (geological model as opposed to a mineralization envelope). Octant search ellipsoid distances and orientations were established by variography. The search ellipsoid ranges varied from 240 to 420m as the primary axis. Grade estimation was applied to 50 m ("Y" - along strike) x 20 m ("X") x 20 m ("RL") parent blocks with sub-blocking to honor wireframe volumes. Block densities (specific gravity, or "SG") were calculated during the OK estimation process based on a combination of both field measurements (water displacement method tests were completed on one piece of core every meter along 12 drill holes) and calculated values for samples without direct SG measurements based upon a relationship between total Fe and SG.

As yet, no metallurgical test work has been conducted on material from the Tuktu deposit and thus the current resource estimate has been classified as Inferred. APEX has selected for reporting purposes a resource calculated using the same 20% total iron cut-off grade that was selected for the resource calculation recently completed at the Company's Roche Bay C-Zone deposit (see AEI Press Release April 6, 2011 available at www.sedar.com). At this cut-off, the Tuktu iron deposit was estimated to comprise 465.5M tonnes of iron formation averaging 31.06% total Fe, with 35.13% magnetic, and 0.30% S and 0.04% P (Table 15).

Table 15. Grade – Tonnage Summary For The 2011 Tuktu Iron Deposit Inferred Mineral Resource Estimate.*

Lower Cut-Off %Fe (Total)	Tonnes (000,000)	%Fe (Total)	% Magnetics **	%S (Total)	%P ***	SG (t/m3)
15	467.28	31.01	35.10	0.30	0.04	3.36
18	466.52	31.04	35.12	0.30	0.04	3.36
20	**465.50**	**31.06**	**35.13**	**0.30**	**0.04**	**3.36**
22	463.84	31.10	35.16	0.30	0.04	3.36
24	460.31	31.16	35.23	0.30	0.04	3.36
25	457.48	31.20	35.28	0.30	0.04	3.36
26	452.00	31.27	35.32	0.29	0.04	3.36
28	431.45	31.46	35.50	0.29	0.04	3.36
30	361.03	31.90	35.92	0.27	0.04	3.37

** Inferred Mineral Resources are not Mineral Reserves. Inferred Mineral Resources do not have demonstrated economic viability, and may never be converted into Reserves.*
*** "% Magnetics" represents Satmagan test data which is a physical test of the percentage of magnetic minerals in a given sample. This value can be affected by magnetic minerals other than magnetite the most likely being pyrrhotite, an iron sulphide mineral. However, APEX accepts that the Satmagan data is essentially equivalent to (but not actually) a measure of % magnetite based upon observations made during core logging and the relatively low total sulfur assays indicating that the potential influence of minerals such as pyrrhotite is negligible. Davis Tube test work to validate Satmagan data is currently underway at Activation Laboratories.*
**** Converted to %P from %P_2O_5.*

In addition, a limited prospecting and rock sampling program conducted at the Tuktu East area, approximately 6km southeast of the Tuktu deposit, identified a pair of high-grade iron assays (62.26%Fe and 63.85%Fe) that are located approximately 1.5km apart on a linear magnetic anomaly that warrants further examination.

18.0 RECOMMENDATIONS

In the opinion of APEX Geoscience Ltd., and the authors of this report, the results of the exploration program conducted at the Tuktu Property in 2011 were sufficiently encouraging to warrant a significant follow-up work program both at the Tuktu deposit and the Tuktu East areas.

For the **Tuktu Deposit**, the following work items are recommended in order to continue its advancement and provide information for a Preliminary Economic Assessment;

- **Infill and Step-out Drilling**: A sizeable drill program is recommended for the Tuktu deposit in order to provide further information regarding the extent of the banded iron formation. This program will include in-fill drilling between current drill intercepts, step-out drilling at either end of the currently defined Tuktu deposit and step-down drilling to examine the depth extent of the deposit. This program should be designed in order to provide additional information to allow for the potential upgrading of all, or a portion of, the Inferred Resource discussed in this report to the Indicated category. A drill program on the order of 12,000m (~3 x 2011 program) is recommended in order to accomplish this goal.

- **Metallurgy**: Detailed studies should be initiated to examine the metallurgical characteristics of the Tuktu BIF in order to determine its potential for producing a viable iron ore concentrate. There are currently several tonnes of coarse reject material from the 2011 Tuktu drill core samples in storage in Hall Beach, NU, that could be used to create various composites for this work, as well as the archived core located at the Tuktu camp.

The following detailed items are recommended for inclusion with the infill drill program discussed above;

- **Surveying**: It is recommended that a professional surveyor be contracted to complete detailed surveying of the 2011 drill collars and to establish benchmarks on the project site that can be used to conduct surface surveys on an ongoing basis.

- **Geotechnical Data**: Basic geotechnical data was collected for the 2011 drillholes, including core recoveries and fracture density measurements. This work should continue going forward but with greater detail added. The engagement of an engineering group is recommended to supervise this work and design a geotechnical logging template.

- **QA/QC**: The QA/QC protocols established in 2011 should be continued going forward. This should include the use of AEI's iron standards that were made during the 2011 drill program. A round-robin analytical program should be completed in order to properly establish the "accepted value" for AEI's new iron standards, as well as their pass/fail limits. Umpire testing of drill core samples (in the range of 2-5% of samples) should be completed as part of the overall QA/QC program.

- **Environmental**: Baseline environmental studies initiated in 2011 by AEI should be continued.

- **Community Consultation** meetings should be conducted in order to insure that local communities understand AEI's intentions and objectives with respect to the advancement of the Tuktu Project.

For the **Tuktu East Area**, the following work items are recommended;

- **Fieldwork**: Follow-up fieldwork is recommended throughout the Tuktu East Area that should include detailed mapping and sampling of iron formations identified in 2011 along with the completion of ground magnetic surveys over the remaining magnetic anomalies not surveyed in 2011.

- **Regional Drilling**: A small regional drilling program is recommended in order to test the iron formations that returned high iron concentrations on the HABS 2 claim. This program should comprise 4-5 shallow drillholes at each of the 2 high-grade areas and would total approximately 2,000m of drilling.

The recommended Tuktu drill program, together with the other recommended work items discussed above, represents a significant exploration program. It is estimated that such a program will comprise on the order of 14,000m of drilling at the Tuktu and Tuktu East areas. A proposed budget for the recommended work program is appended to this report (Appendix 4) and totals approximately **$12.6 million**. This figure represents project related costs only and does not include any corporate costs nor does it include any provisions for contingencies. In the opinion of APEX Geoscience Ltd., all of the work items listed above are warranted at this time and none are contingent on the results of any of the others.

APEX Geoscience Ltd.
(APEGGA PP 5824)

January 11, 2012

Andrew J. Turner, B.Sc., P.Geol.

Michael Dufresne, M.Sc. P.Geol.

Steven J. Nicholls, MAIG.

19.0 REFERENCES

Advanced Explorations Inc. (2008). Operational Summary. Available from www.advanced-exploration.com/projects/MelvillePeninsula/operational/index.html

Advanced Explorations Inc. News Release – September 28, 2011. Available at www.advanced-exploration.com.

Baffinland Iron Mines Corporation (2007). The Mary River Project. Available from: http://www.baffinland.com/MaryriverProject/default.aspx.

Besserer, D.J. and Olson R.A., (1995). Gold and Base Metal Exploration – 1995, Melville Peninsula, District of Franklin, NWT; Unpublished report prepared by APEX Geoscience Ltd. on behalf of the Melville Joint Venture.

Coyle, M., (2010). Residual total magnetic field, Sarcpa Lake aeromagnetic survey, parts of NTS 46 N northeast and 46-O northwest, Nunavut. Geological Survey of Canada, Open File 6403, 1 sheet

Frisch, T., (1982). Precambrian geology of the Prince Albert Hills, western Melville Peninsula, Northwest Territories; GSC Bulletin 346, 70 pages.

Frisch, T. and Goulet, N., (1975). Geological studies in western Melville Peninsula, District of Franklin; *In* Report of Activities, Part A, GSC Paper 75-1A, pages 323-324.

Geological Survey of Canada, (1978a). Airborne magnetic survey, Barrow River, District of Franklin, Northwest Territories; GSC Map 7669G.

Geological Survey of Canada, (1978b). Airborne magnetic survey, Miertsching Lake, District of Franklin, Northwest Territories; GSC Map 7670G.

Geological Survey of Canada, (1978c). Airborne magnetic survey, Lefroy Bay, District of Franklin, Northwest Territories; GSC Map 7671G.

Geological Survey of Canada, (1978d). Airborne magnetic survey, Hall Lake, District of Franklin, Northwest Territories; GSC Map 7938G.

Geological Survey of Canada, (1978e). Airborne magnetic survey, Committee Bay, District of Franklin, Northwest Territories; GSC Map 7939G.

Geological Survey of Canada, (1978f). Airborne magnetic survey, Encampment Bay, District of Franklin, Northwest Territories; GSC Map 7960G.

Greenough, G, and Palmer, P. (2011). Technical Report – Roche bay Magnetite Project C-Zone, Nunavut, Canada.

Gross, G.A., (1993). Industrial and genetic models for iron ore in iron-formations; *in* Kirkham,R.V., Sinclair, W.D., Thorpe, R.I., and Duke J.M., (Eds.) Mineral Deposit Modeling, Geological Association of Canada, Special Paper 40, p.151-170.

Henderson, J.R., (1987a). Mineral Exploration on Melville Peninsula, District of Franklin, Northwest Territories. Nunavut Assessment Report 60638. 28p.

Henderson, J.R., (1987b). Geology, southeastern Melville Peninsula, District of Franklin, Northwest Territories; GSC Map 1655A, scale 1:100,000.

Henderson, J.R., (1983). Structure and metamorphism of the Aphebian Penrhyn Group and its Archean basement complex in the Lyon Inlet area, Melville Peninsula, District of Franklin; GSC Bulletin 324, 50 pages.

Heywood, W.W., (1967). Geological notes, northeastern District of Keewatin and southern Melville Peninsula, District of Franklin, Northwest Territories (parts of 46, 47, 56, 57); GSC Paper 66-40, 20 pages.

Holmes, G., Gharapetian, R. and Wahl, G.H. (2008). Technical Report of the Definitive Feasibility Study, Mary River Iron Ore Project, Northern Baffin Island, Nunavut.

Schau, M., (1981). A preliminary geological map of the Prince Albert Group in eastern Melville Peninsula, Northwest Territories; GSC Open File 787.

Schau, M., (1993). Geology of northern Melville Peninsula; GSC Open File 2594, scale 1:500,000.

Roche Bay PLC Press Release - May 24, 2011. West Melville Iron Company Ltd. Signs Joint Venture with Roche Bay plc to Acquire Up To 70% of Iron Ore Project. Available at www.digitaljournal.com/pr/318512#ixzz1NJW4gizs

Underhill, D.G., (1970). Report on the 1970 Mineral Exploration Program Melville Peninsula, District of Franklin, Northwest Territories for Borealis Exploration. Nunavut. Assessment Report 60744. 64p.

Certificate of Author

I, Andrew J. Turner, P.Geol., do hereby certify that:

1. I am currently employed as a Senior Geologist with:
   APEX Geoscience Ltd.
   #200 9797 45 Avenue
   Edmonton, Alberta, Canada T6E 5V8

2. My academic qualification is: Bachelor of Science, (Honors) Geology, received from the University of Alberta in 1989.

3. My professional affiliation is: member of the Association of Professional Engineers, Geologists and Geoscientists of Alberta, Canada (APEGGA).

4. I have worked as a geologist for more than 22 years since my graduation from university and have extensive experience with exploration of, and around, Archean terrains and with Banded Iron Formations, specifically.

5. I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.

6. As the principle author, I, along with my co-authors Michael Dufresne, M.Sc., P.Geol. and Steven Nicholls, BA.Sc. (Geology), MAIG, am responsible for the preparation of all sections of the technical report entitled "***Technical Report on an Initial Resource Estimate for the Tuktu Iron Prospect, Melville Peninsula, Nunavut, Canada***" and dated January 11, 2012 (the "**Technical Report**"), on behalf of Advanced Explorations Inc., relating to the Tuktu Property. I have personally conducted numerous visits to the Tuktu Property between May 4 and August 21, 2011.

7. I have had no involvement with the property that is the subject of the **Technical Report** prior to the commencement of the 2011 exploration program discussed within the **Technical Report**.

8. As of the date of this certificate, to the best of the my knowledge, information and belief, the **Technical Report** contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

9. I am independent of the Company in accordance to section 1.4 of NI 43-101.

10. I have read NI 43-101 and Form 43-101F1, and the **Technical Report** has been prepared in compliance with that Instrument and Form.

11. I consent to the public filing of the **Technical Report** and to extracts from, or a summary of the Technical Report, with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their website accessible by the public.

PROFESSIONAL GEOLOGIST OF ALBERTA
ANDREW J. TURNER

Dated: January 11, 2012

Andrew J. Turner, B.Sc., P.Geol.

CERTIFICATE OF AUTHOR

I, Michael B. Dufresne, M.Sc., P.Geol., do hereby certify that:

1. I am President of: APEX Geoscience Ltd.
   Suite 200, 9797 – 45th Avenue
   Edmonton, Alberta T6E 5V8
   Phone: 780-439-5380

2. I graduated with a B.Sc. in Geology from the University of North Carolina at Wilmington in 1983 and with a M.Sc. in Economic Geology from the University of Alberta in 1987.

3. I am and have been registered as a Professional Geologist with the Association of Professional Engineers, Geologists and Geophysicists of Alberta since 1989.

4. I have worked as a geologist for more than 25 years since my graduation from university and have extensive experience with exploration of, and around, Archean terrains and with Banded Iron Formations, specifically.

5. I have read the definition of "Qualified Person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfil the requirements to be a "Qualified Person" for the purposes of NI 43-101.

6. I am responsible for and have supervised the preparation of the Technical Report titled "***Technical Report on an Initial Resource Estimate for the Tuktu Iron Prospect, Melville Peninsula, Nunavut, Canada***", and dated January 11, 2011 (the "**Technical Report**"). I have personally conducted visits to the Tuktu Property between April 26 and May 4 and between July 27 and August 4, 2011.

7. I have had no prior involvement with the property that is the subject of the **Technical Report**.

8. I am not aware of any scientific or technical information with respect to the subject matter of the **Technical Report** that is not reflected in the **Technical Report**, the omission to disclose which makes the **Technical Report** misleading.

9. I am independent of the issuer applying all of the tests in section 1.4 of NI 43-101.

10. I have read National Instrument 43-101 and Form 43-101F1, and the **Technical Report** has been prepared in compliance with that instrument and form.

11. I consent to the filing of the **Technical Report** with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files or their websites.

PROFESSIONAL GEOLOGIST
MICHAEL B. DUFRESNE
ALBERTA

Dated: January 11, 2012
Edmonton, Alberta, Canada

Michael B. Dufresne, M.Sc., P.Geol.

CERTIFICATE OF AUTHOR

I, Steven J. Nicholls, MAIG., do here by certify that:

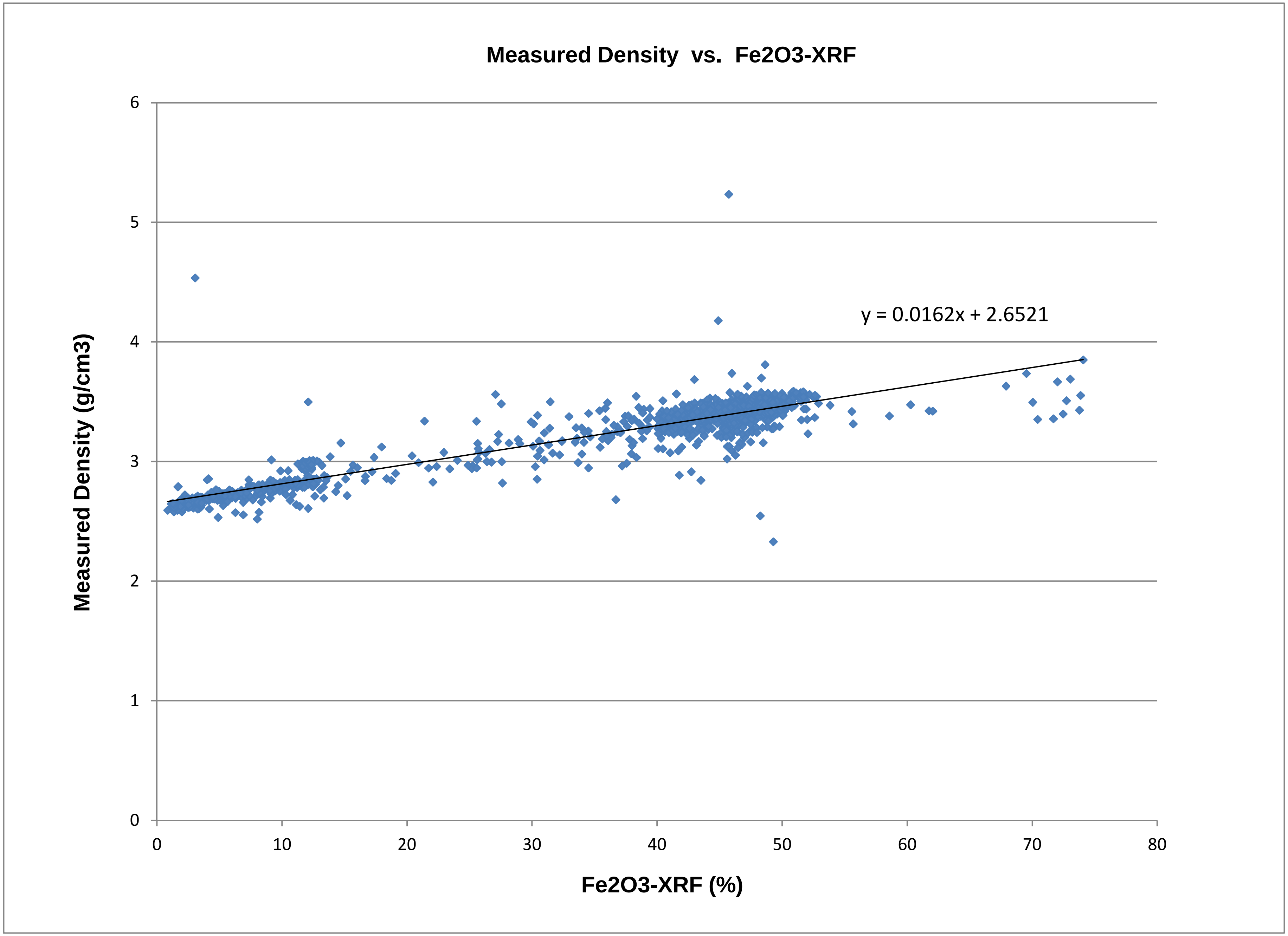
1. I am currently employed as a Resource Geologist with:
   APEX Geoscience Australia Pty Ltd.
   39B Kensington St
   East Perth WA Australia 6004
2. My academic qualification is: a Bachelor of Applied Science (BASc.) in Geology, received from the University of Ballarat, Victoria, Australia in 1997.
3. My professional affiliation is: member of the Australian Institute of Geoscientists, Australia (AIG).
4. I have worked as a geologist for more than 14 years since my graduation from university and have extensive experience with mineral resource estimation work.
5. I have read the definition of "Qualified Person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI 43-101.
6. I, along with my co-authors Andrew Turner, M.Sc., P.Geol., and Michael Dufresne, M.Sc., P.Geol., am responsible for the preparation of the "Mineral Resource Estimate" section of the Technical Report titled "***Technical Report on an Initial Resource Estimate for the Tuktu Iron Prospect, Melville Peninsula, Nunavut, Canada***", and dated January 11, 2012 (the "**Technical Report**"). I have not had prior involvement with the Property nor have I visited the Property.
7. Have no prior involvement with the property that is the subject of the **Technical Report**.
8. I am not aware of any scientific or technical information with respect to the subject matter of the **Technical Report** that is not reflected in the **Technical Report**, the omission to disclose which makes the **Technical Report** misleading.
9. I am independent of the issuer applying all of the tests in section 1.4 of NI 43-101.
10. I have read National Instrument 43-101 and Form 43-101F1, and the **Technical Report** has been prepared in compliance with that instrument and form.
11. I consent to the filing of the **Technical Report** with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files or their websites.

Dated: January 11, 2012

Steven J. Nicholls, BASc., MAIG.

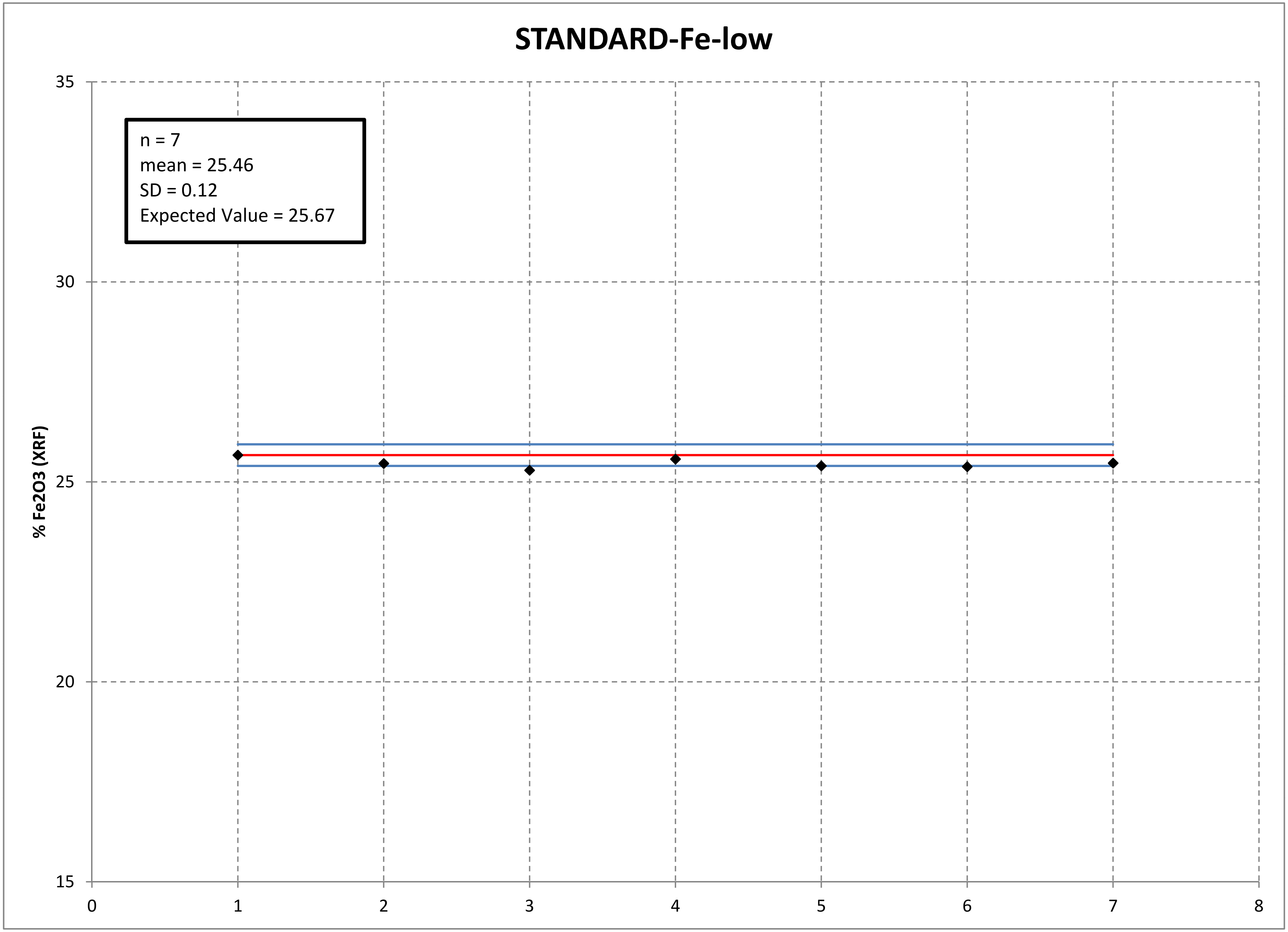
Appendix 1

Graph Of Measured SG vs Fe_2O_3 (XRF)

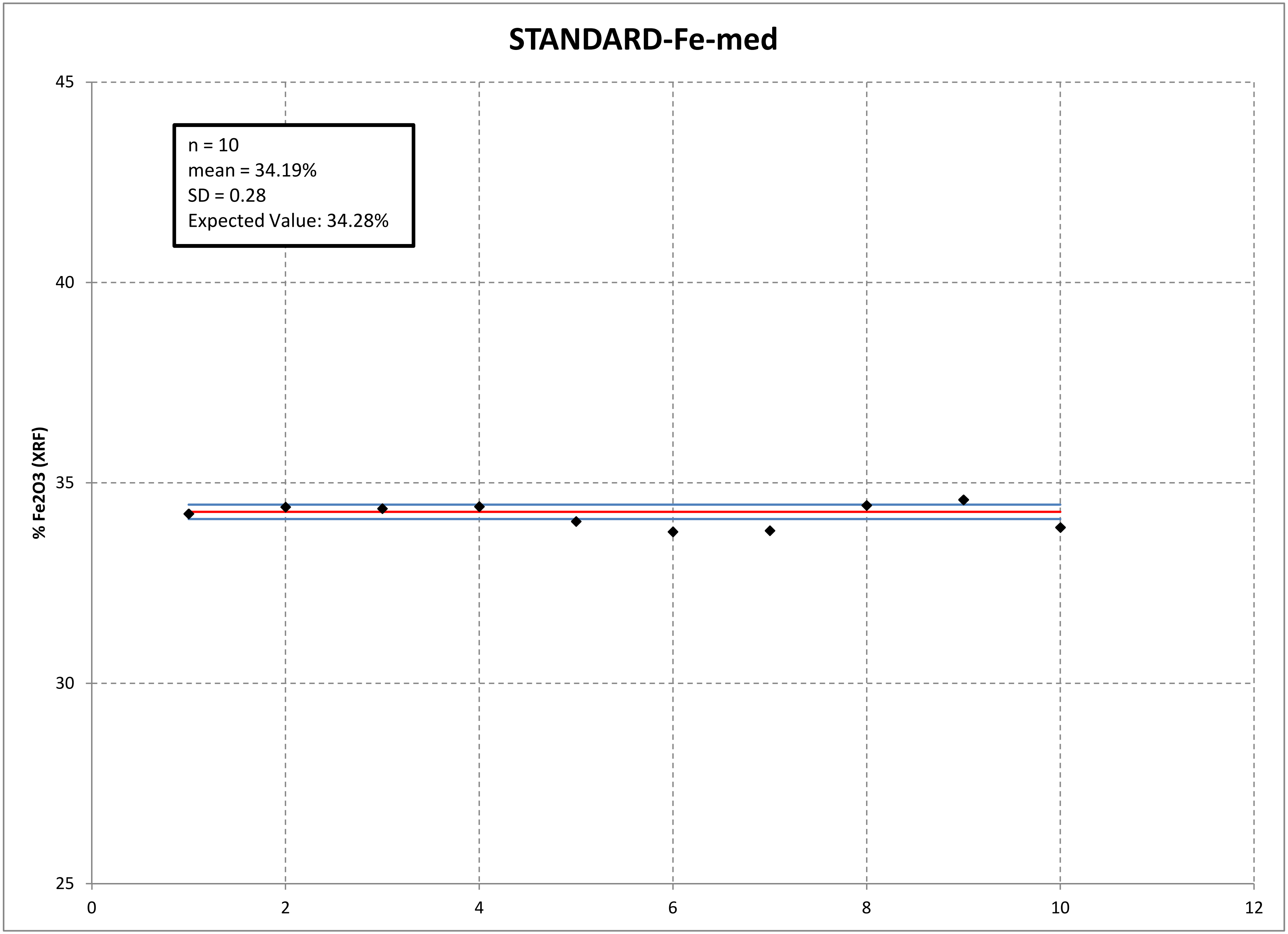

Measured Density vs. Fe2O3-XRF
Measured Density (g/cm3)
Fe2O3-XRF (%)
y = 0.0162x + 2.6521
0
1
2
3
4
5
6
0
10
20
30
40
50
60
70
80

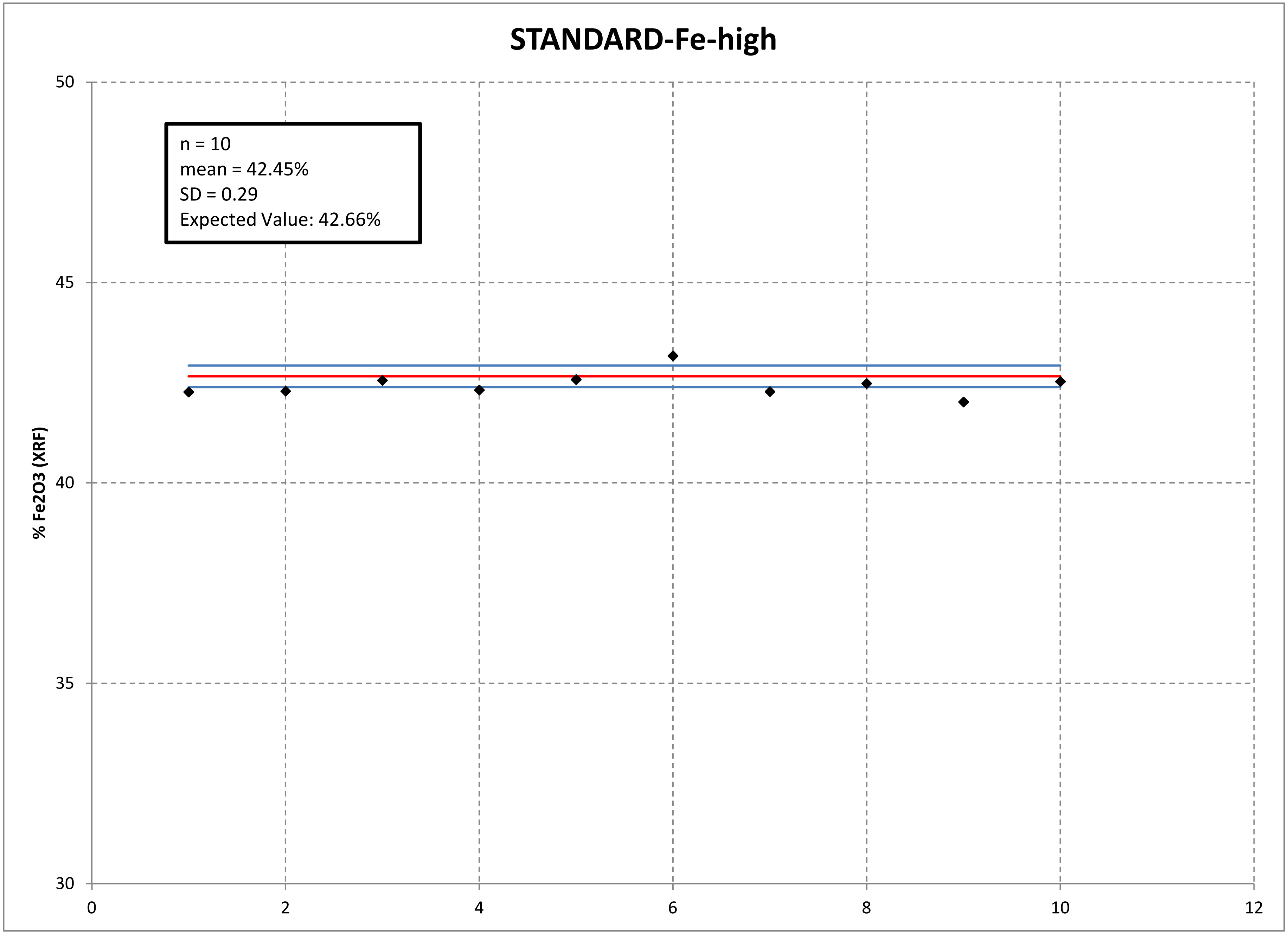
Appendix 2

Graphed Fe-XRF Data For The 2011 Tuktu Drill Program QAQC Samples

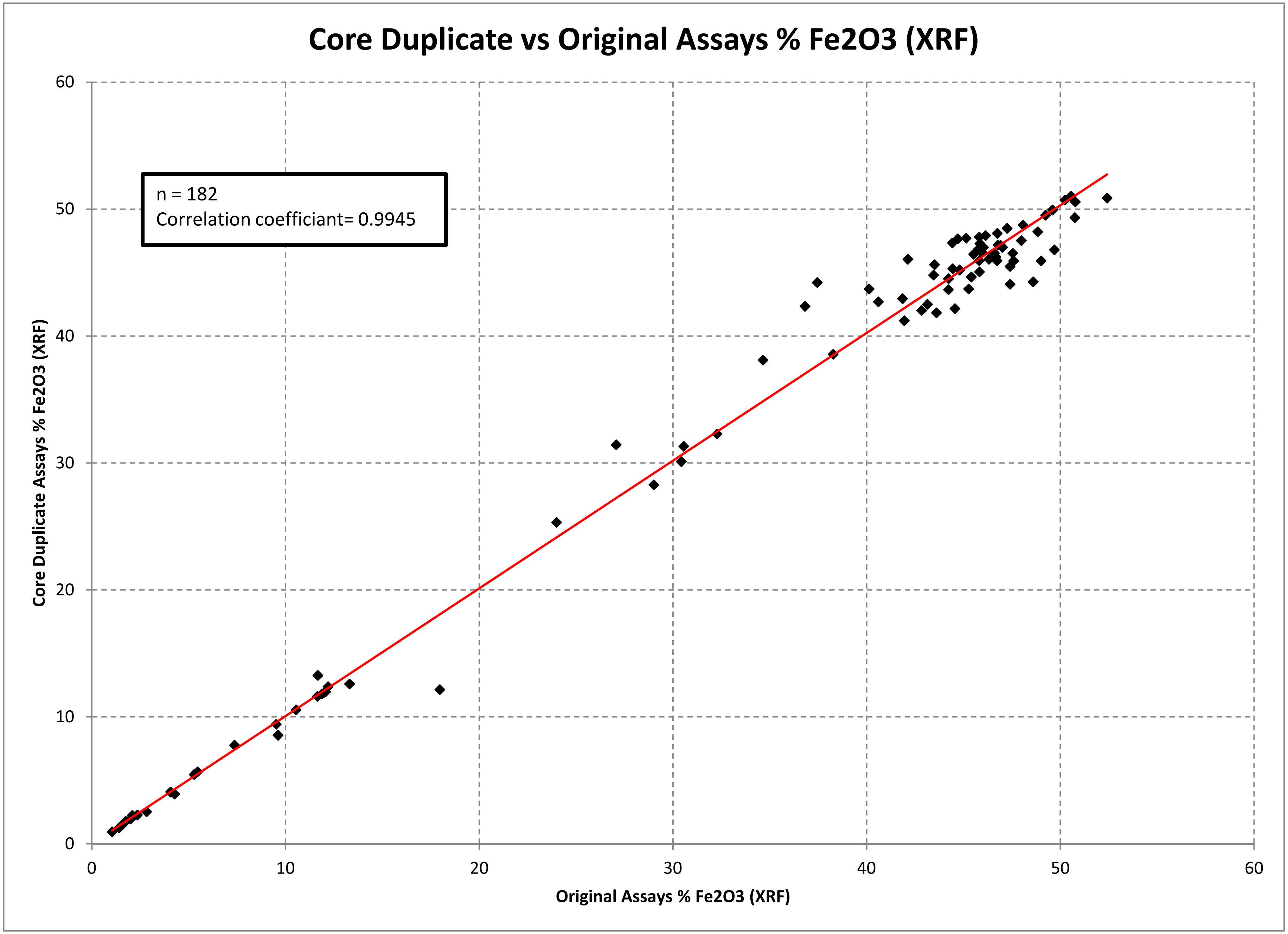


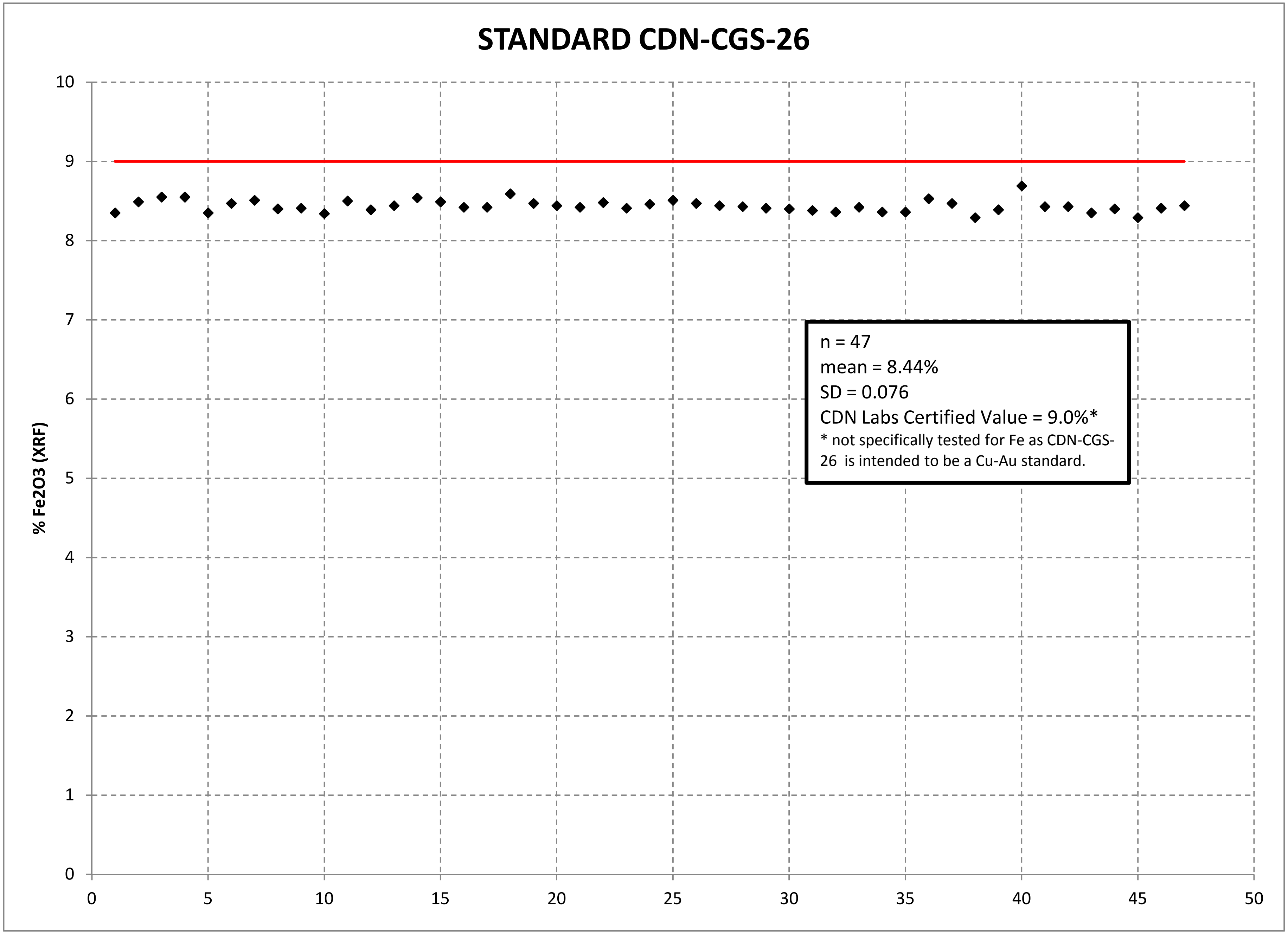
STANDARD-Fe-low
n = 7
mean = 25.46
SD = 0.12
Expected Value = 25.67
% Fe2O3 (XRF)
35
30
25
20
15
0
1
2
3
4
5
6
7
8

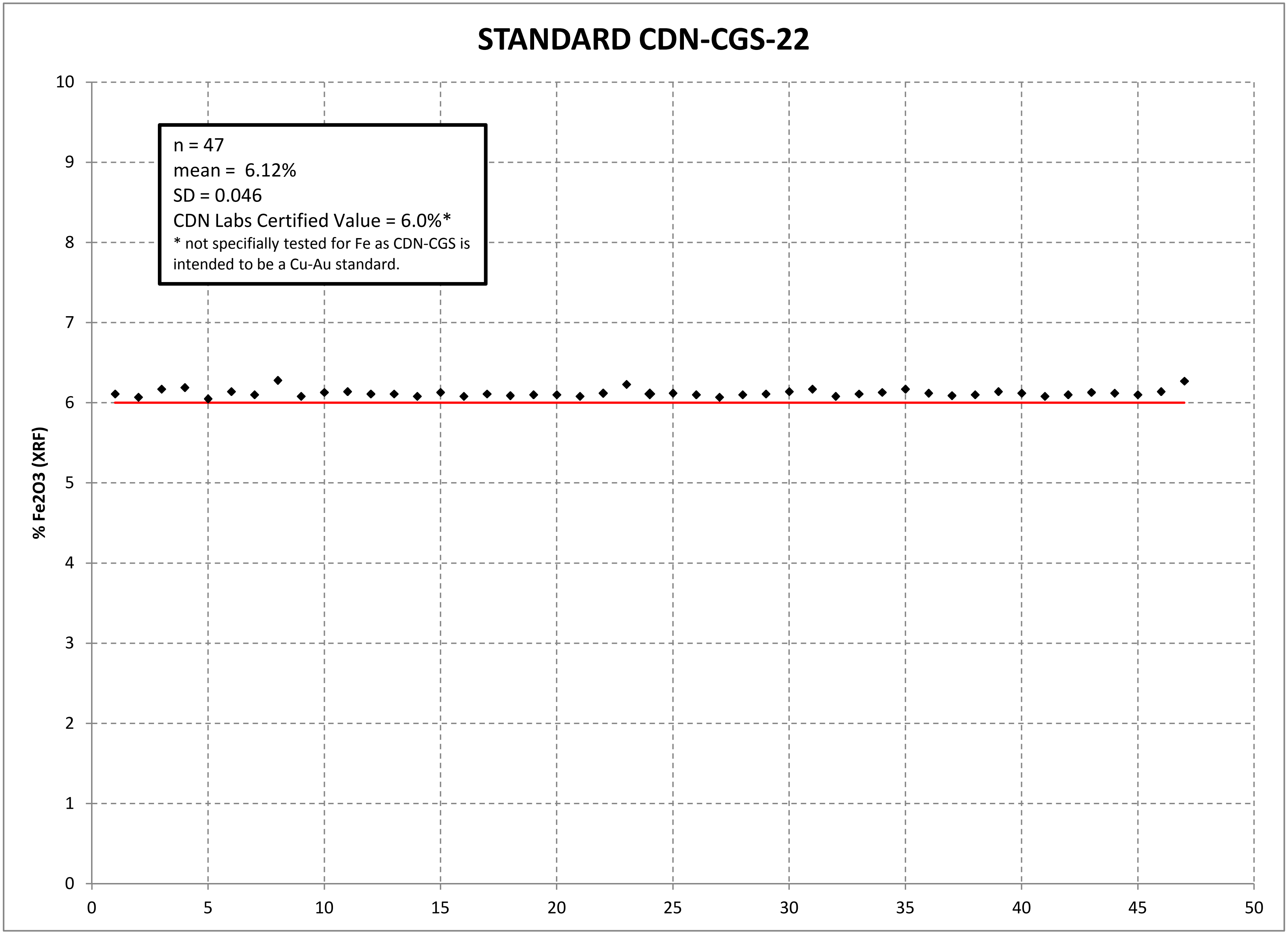

STANDARD-Fe-med
n = 10
mean = 34.19%
SD = 0.28
Expected Value: 34.28%
% Fe2O3 (XRF)
45
40
35
30
25
0
2
4
6
8
10
12

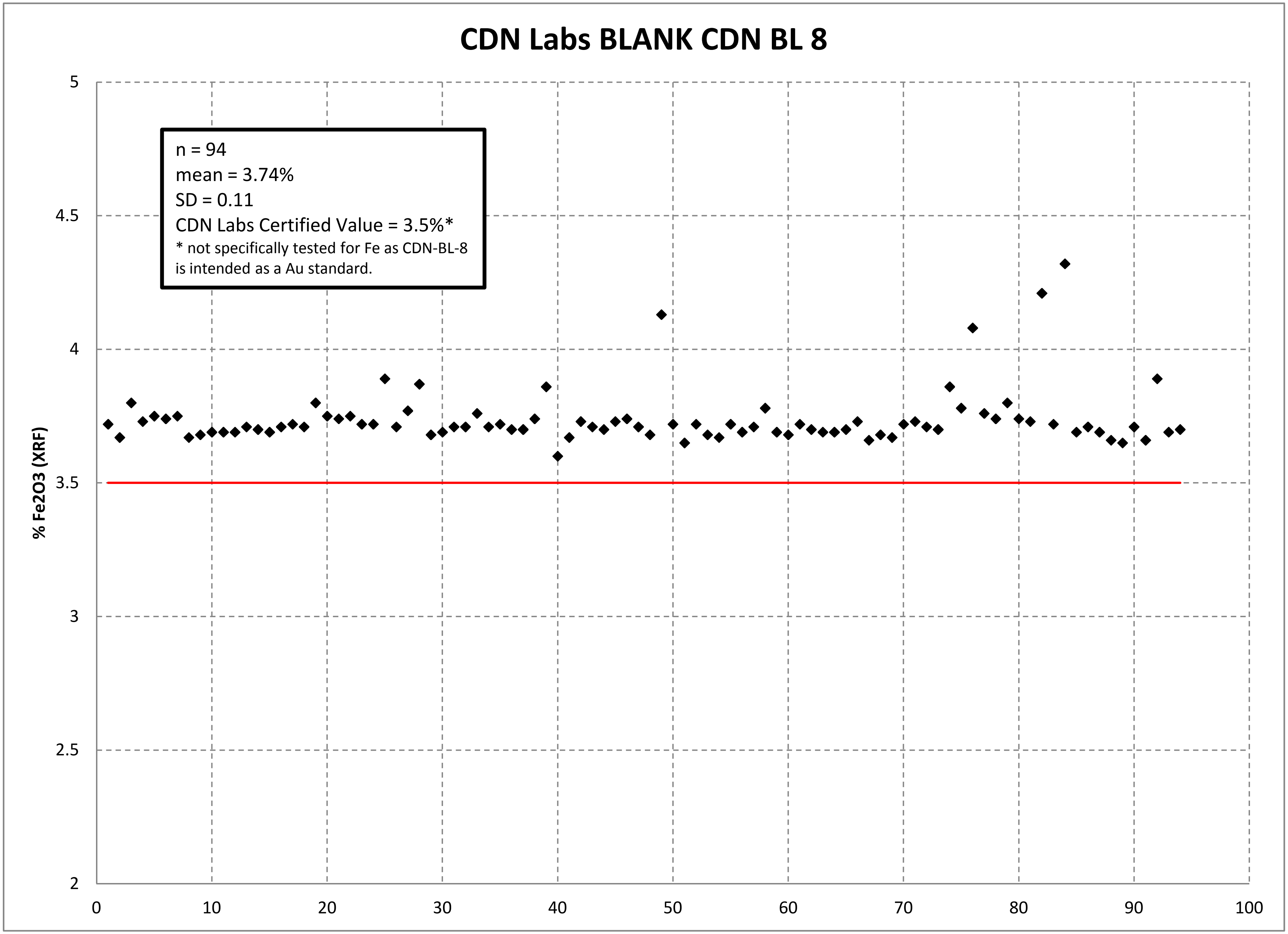


STANDARD-Fe-high
n = 10
mean = 42.45%
SD = 0.29
Expected Value: 42.66%
% Fe2O3 (XRF)
50
45
40
35
30
0
2
4
6
8
10
12


Core Duplicate vs Original Assays % Fe2O3 (XRF)
n = 182
Correlation coefficiant= 0.9945
Core Duplicate Assays % Fe2O3 (XRF)
Original Assays % Fe2O3 (XRF)
0
10
20
30
40
50
60


STANDARD CDN-CGS-26
% Fe2O3 (XRF)
n = 47
mean = 8.44%
SD = 0.076
CDN Labs Certified Value = 9.0%*
* not specifically tested for Fe as CDN-CGS-26 is intended to be a Cu-Au standard.
0
1
2
3
4
5
6
7
8
9
10
0
5
10
15
20
25
30
35
40
45
50

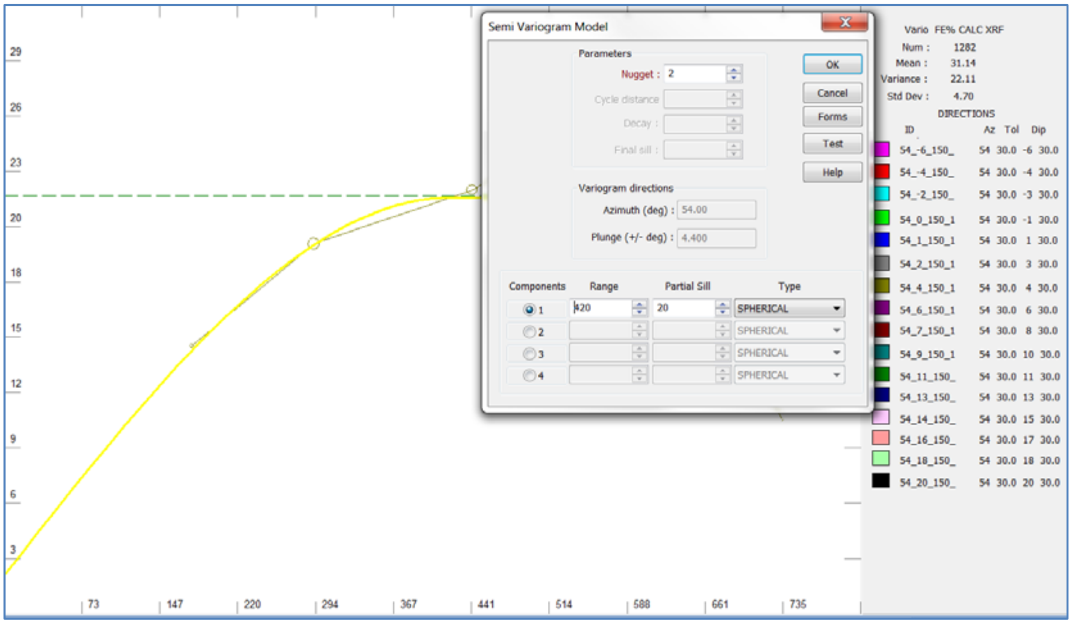

STANDARD CDN-CGS-22
n = 47
mean = 6.12%
SD = 0.046
CDN Labs Certified Value = 6.0%*
* not specifially tested for Fe as CDN-CGS is intended to be a Cu-Au standard.
% Fe2O3 (XRF)
10
9
8
7
6
5
4
3
2
1
0
0
5
10
15
20
25
30
35
40
45
50


CDN Labs BLANK CDN BL 8
n = 94
mean = 3.74%
SD = 0.11
CDN Labs Certified Value = 3.5%*
* not specifically tested for Fe as CDN-BL-8
is intended as a Au standard.
% Fe2O3 (XRF)
5
4.5
4
3.5
3
2.5
2
0
10
20
30
40
50
60
70
80
90
100

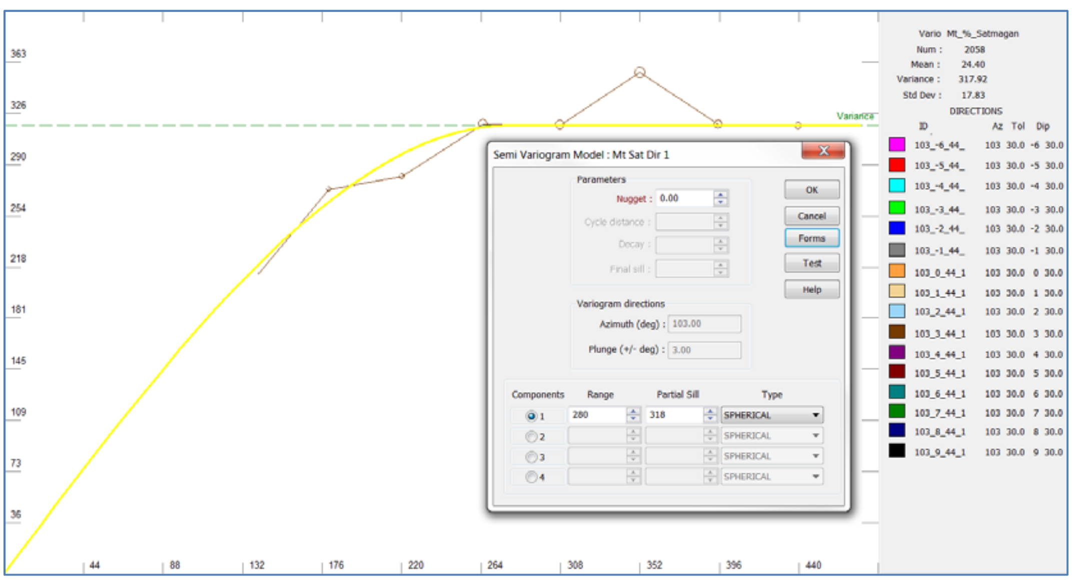
Appendix 3

Tuktu Model Composite Data Variograms

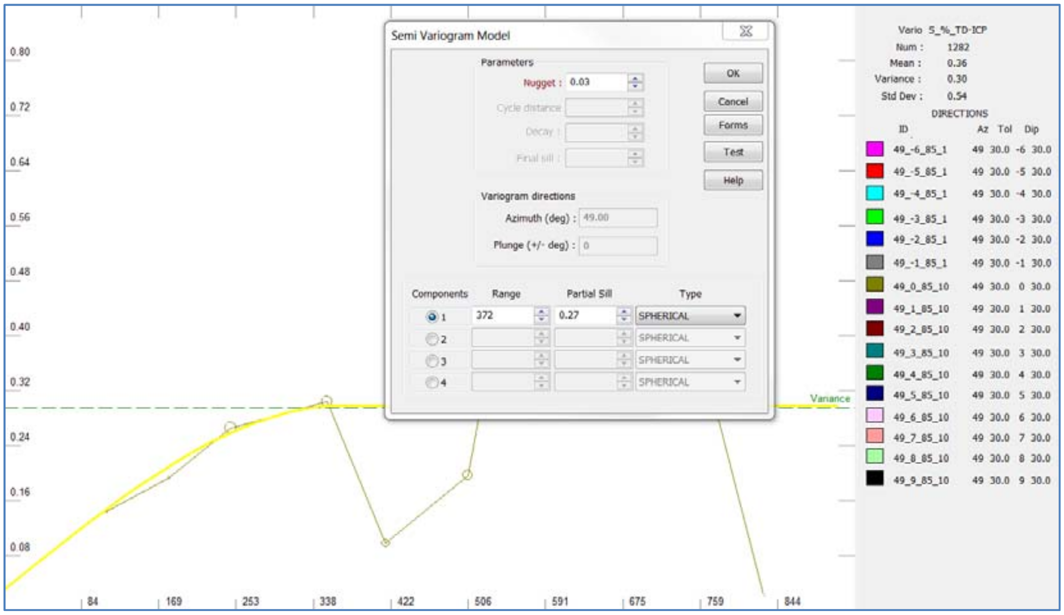
Total Fe % Direction 1:



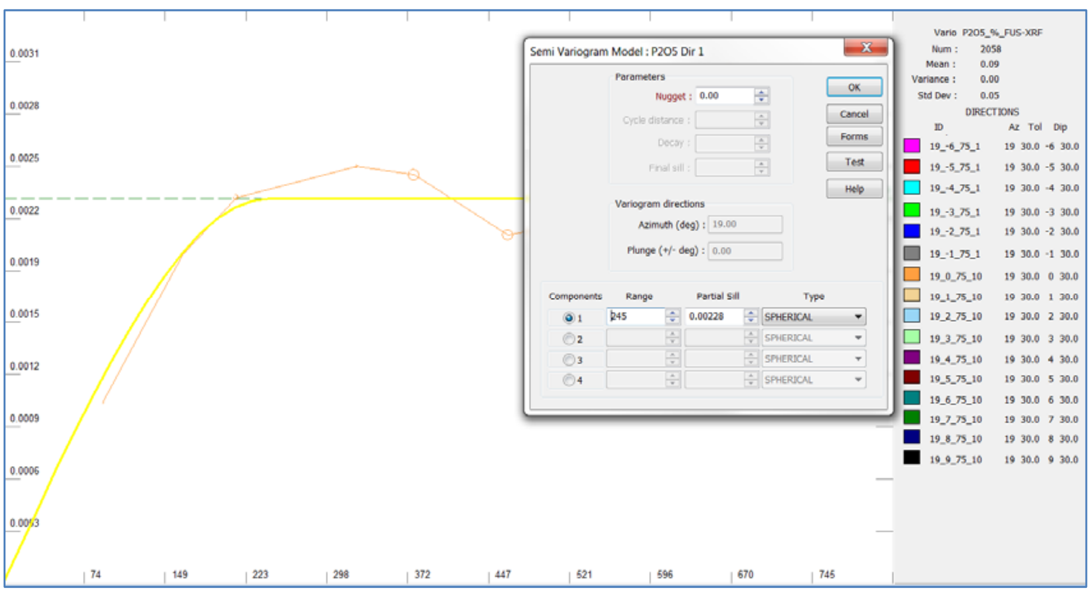
Magnetite % Direction 1:



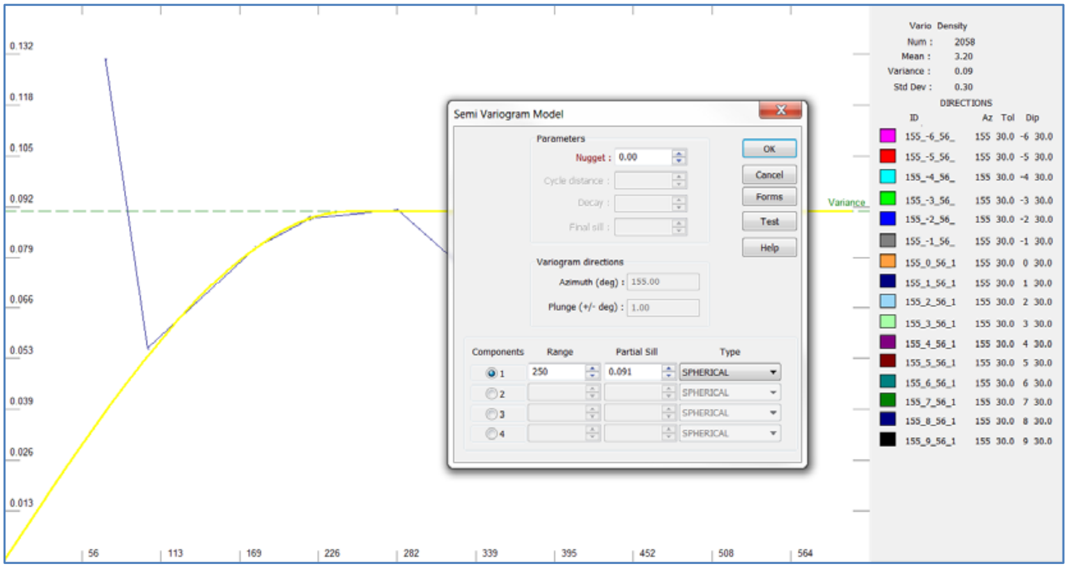
Sulfur % Direction 1:



Phosphorus % Direction 1:



Density Direction 1:



Appendix 4

Budget For Recommended Work

Estimated Budget For Recommended Work At The Tuktu Property.

Item	Unit Cost	Total Cost
Wages		
Technical Staff	100 days @ ~$3500/day	$350,000
Non-technical Staff (Support + First Aid)	100 days @ ~$5000/day	$500,000
Camp/Project Management	250 days @ ~$1500/day	$375,000
Hall Beach (logistics)	150 days @ ~$600/day	$90,000
Contractors, Consultants Special Projects		
Engineers (Geotechnical Studies)		$75,000
(Land) Surveyors		$50,000
Geophysical Contractor - ground mag		$25,000
Geological Contractor - summer fieldwork (Tuktu and Tuktu East)		$200,000
Metalurgical Test Work - Tuktu Deposit (including sample shipment and processing costs - estimated)		$200,000
Continued baseline environmental studies		$250,000
Community Consultation meetings		$75,000
Third Party Logistics (mod/demob)		$75,000
Drilling		
Tuktu: Infill, Expansion and Down-dip drill program (costs based on historical numbers)	12,000m @ ~$300/m (all in)	$3,600,000
Tuktu East: Initial drill testing (HABS 2 claim anomalies)	2,000m @ ~$300/m (all in)	$600,000
Assaying	12,000 samples @ $75/sample	$900,000
Air Support		
Mobilization/Demobilization Flights	12 @ $125,000 (Churchill - Hall Beach)	$1,200,000
	36 @ $10,000 (Hall Beach - Tuktu Camp)	$360,000
Helicopter mob./ demob.	2 @ $30,000	$60,000
	2 @ ~5hrs/day @1500/hr for ~100 days	$1,500,000
Fuel		
Drill	6 drums/day (3 drills), 100 days, $400/drum	$240,000
Camp	3 drums/day, 150 days, $400/drum	$180,000
Helicopter	0.75 drums/hr @$450/drum	$337,500
Propane	100 btls @ $500	$50,000
Camp Costs		
Camp - Rental	150 days @ ~$1650/day	$247,500
Camp - Repairs and Upgrades)		$125,000
Food		$300,000
Miscelaneous		
Freight (Sample and misc equipment)		$75,000
Other Consumables (core boxes, salt, etc)		$75,000
Hall Beach (house and truck)	12 months @ $4000/mo, + epenses	$65,000
Rentals (survey equipment)		$70,000
Airfares and Travel Costs		$300,000
Administrative Costs		$50,000
	Total	**$12,600,000**