Technical Report
Resource Update of the IRON-T VANADIUM-TITANIUM-IRON Property
MATAGAMI AREA, QUEBEC, CANADA

Respectfully submitted to:
Apella Ressources Inc.

By :
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1- Summary (Item 3)

SGS Canada Inc. was commissioned by Apella Resources inc. ("Apella") on December 9th, 2010 to prepare a 43-101 compliant Resource update technical report of the Iron-T Vanadium-Titanium-Iron property located 18 km east of Matagami in the Province of Québec, Canada, on behalf of Apella Resources Inc.

The intent of this resource estimation technical report is to provide the reader with a comprehensive review of the latest exploration activities and the current, independent NI 43-101 resource estimate completed by SGS based on 41 drill holes including 2 revised historical drill holes totalling 5519 meters.

The Iron-T property is located in the Matagami area in the west-central part of the Province of Quebec, Canada, approximately 780 km north of Montreal. The property is located between latitudes 49˚45'13"N and 49˚42'56"N and longitudes 77˚23'00" W and 77˚36'49" W. The property covers the Isle-Dieu, Lozeau, Galinée and Comporté townships and the National Topographic Sheets (NTS) 32F11 (Rivière Opaoca), 32F12 (Ile Bancroft), 32F13 (Matagami), 32F14 (Lac Olga).

The Iron-T property currently consists of 150 claims composed of map designated and land staked claims totaling 4218.32 Ha and covering one block of contiguous claims among Lozeau and Comporté townships located on the Rivière Opaoca topographic sheet. The Iron-T Vanadium-Titanium-Iron property includes a block of 17 designated claim cell designed as the Audet Option. The claims have not been legally land-surveyed. The author has verified the status of the claims of the Iron-T Vanadium-Titanium-Iron property provided by MRNF on the GESTIM website as of March 11th, 2011. The listing of the claims indicates that all claims are owned 100% by Apella and are in good standing.

The Iron-T property is accessible via Matagami located approximately 780 km of Montreal, 250 km from Val d'Or and 185 km from Amos along regional highways. Matagami is accessible via Regional Highway 109 which links Amos to the Bay James Highway. The central part of the Iron-T Vanadium-Titanium-Iron property is located 10 km ESE of the town of Matagami. Access to the property is via all-weather gravel road N805 which links Lebel-sur-Quévillon to Matagami. It is situated approximately 5.4 km ENE of Matagami and crosses the central part of the property in an EW direction and the eastern part of the property in NS direction. Travel within the property is by all terrain vehicles (ATV) or snowmobiles along secondary forestry roads, or on foot.

Several mining companies conducted exploration work since 1958 on or in the vicinity of the actual Iron-T property. The main interest was directed toward base metals mineralization following initial discoveries in the Matagami mining camp. The following is a review of significant exploration work completed and undertaken by previous owners or operators prior to Apella involvement on the property.

Apella reviewed the historical diamond drilling completed on the Iron-T property from existing historical logs, sections and maps. SGS validated the historical drilling information. The most significant drilling results in regard to oxide mineralization were generated by Juna Mining &

Exploration Ltd, SDBJ and Noranda. Starting in 2010, Apella initiated a diamond drilling campaign totalling 39 drill holes totalling 5322 meters targeting mineralisation.

The Iron-T Vanadium-Titanium-Iron property is located within the Matagami volcanic complex in the northern part of the Abitibi Greenstone Belt which represents one of several EW trending belts composed of a series of volcanic, sedimentary and intrusive rocks within the Superior Province.

Geological setting and mineralization encountered on the Iron-T Vanadium-Titanium-Iron property located in the Bell River Complex indicates many similarities with typical world-class magmatic Fe-Ti-V oxide deposits associated with a layered intrusive complex consisting mainly of layered and massive concentrations of titanomagnetite, titaniferous magnetite, magnetite, and ilmenite.

The vanadium mineralization is associated to magnetite and ilmenite layers within the layered ferrogabbro zone. It indicated also that the vanadium is mostly contained within the magnetite and that the magnetite: ilmenite ratio varying from 5:2 to 3:2.

The purpose of the 2010 diamond drilling campaign and local trenching was the better knowledge and the extension of the mineralisation of the Iron-T mineral deposit. Most of the drill holes intersected Fe-Ti-V mineralization associated to magnetite and ilmenite layers within the layered ferrogabbro zone of the upper part of the Bell River Complex. The oxide-rich gabbro horizons varying in width form 10 to 100 m clearly appear on the airborne regional magnetic survey. The oxide-rich gabbro is a mineralized cumulate forming either homogeneous horizons with disseminated oxide mineral contents ranging from 20 to 60% or homogeneous massive layers with oxide mineral contents varying from 60 to 90%. Drill holes encountered massive oxide mineralized bands which are interlayered with poorly mineralized gabbro forming pluri-centimetric to decimetric scale interlayers and contribute to the dilution of the vanadium mineralization. Mineralized layering of the gabbro appears to be at 285˚, dipping north from 75˚ to 85˚.

As part of the independent verification program, the author of the report validated the client's exploration methodology including core logging, sampling, analytical procedures, and QAQC protocols and procedures.

Following a bias observed in 2010 by SGS corresponding in a 15% average grade difference between original and duplicate V_2O_5 (V) assay results, SGS initiated a 2011 independent sampling program involving the assay of 81 samples to two other independent certified laboratories. The 2011 independent sampling program was similar to the 2010 independent sampling program. The V_2O_5 (V) average grade of original assays gave results from 12.9% to 18.7% higher than the independent samples (SGS Lakefield and Actlabs).

SGS found that the ALS-Chemex laboratory tends to be the one with the overall highest average iron, Tio_2 and V_2O_5 grades. The SGS Lakefield laboratory and Actlabs are respectively ranked second and third. Since the majority if not all of the original samples were sent to the ALS-Chemex lab, SGS strongly recommends continuing and implementing QAQC procedures involving certified materials (standards) from the industry to be sent to the ALS-Chemex lab to check any calibration errors.

Apella is implementing a QAQC program involving the assay of certified materials (standards) in order to verify the calibration of the laboratory and two other laboratories. According to the findings of this QAQC program, these results will help determine a correction factor on the assay results.

Although still considered as preliminary and based on the optic of an open pit operation, the mineral processing results of 2010 and 2011 showed interesting good recovery results. Tests included limited Davis tube tests, density tests Satmagan tests and a mineralogy study. The 2011 Davis tube V recovery was high; averaging at 88.7% and 90% of samples had a recovery of greater than 79.6%. SG testing gave results from 2.93 to 4.37 and a mean average SG of 3.68. The Satmagan (content magnetite (Fe_3O_4)) averaged at 33.8%, and ranged from 13.7% to 48.8%. The average Ti and V contents were 5.51% and 0.34%, respectively. The concentrates from the mineralogy tests contained between 80.9% and 96.5% combined Fe-Oxides, Ti-Magnetite and Ilmenite. For most of the samples analysed, the major carrier of V are the Fe-Oxides (ranging from 66.2% and 91.2%) with Ti-Magnetite being a minor carrier, at between 7.19% and 32.0%. Between 64.3% and 90.9% of the Oxides were free, and between 6.46% and 20.7% of the Oxides were liberated. The locked Oxides was mostly associated with non-opaque gangue (between 2.22% and 14.9%), with a much smaller proportion associated with sulphides (between 0.00% and 1.92%).

The mineral resource block model has been interpolated from 1.25 m long analytical composite data constrained within a 3D wireframe envelop of the mineralised geological model defined from drill hole mineralised intercepts. The mineral resource model is defined by block 5 m (east-west) by 5 m (north-south) by 5 m (elevation) in size, located below the bedrock/overburden interface, and covers an area located within sections 324,500 m E and 325,800 m E on the Property to a maximum depth of 220 m below surface. The interpolation of the block grade was performed by inverse distance squared method in multiple passes using anisotropic search ellipsoids increasing is size from one pass to another. The final mineral resources correspond to the estimated blocks located below the bedrock/overburden interface. A bulk density of 3.5 t/m^3 was used to calculate the final tonnage of the mineral resources based on the available data.

Currently, there are no measured resources and no indicated resources. Most of the sections contain only one drill hole giving limited information on the deposit. Even two separate small interpreted solids were intersected by at least two drill holes (trenches) within a radius of 50 m, there is not enough information validating the grade and lateral continuity of the solids.

There are no reserves reported in this document. The classified inferred resources reported in this document are compliant with standards as outlined in the National Instrument 43-101. These resources were calculated using a minimum cut-off grade of 0.48% V_2O_5Eq and are amounting to 14 376 000 tonnes inferred category at 0.42% V_2O_5. The final mineral resources of the Iron-T property are presented in the table below.

Final Inferred mineral Resource Estimate - Iron-T Property							
V2O5Eq Cutoff(%)	**Tonnage**	**Volume**	**Fe (%)**	**Fe2O3 (%)**	**TiO2 (%)**	**V2O5 (%)**	**V2O5Eq (%)**
0.48	**14 376 000**	**6 331 000**	**27.30**	**39.04**	**6.55**	**0.42**	**0.77**

Considering the fact that the Iron-T mineral deposit holds a non-negligible portion of TiO_2 and Iron, SGS considers the 0.48% V_2O_5Eq cut-off grade as a conservative cut-off and is the one recommended. This cut-off corresponds roughly to a combined cut-off of 0.26% V_2O_5 and 3.78% TiO_2. If the combined cut-off would have been used, a small decrease in tonnage would have been observed in comparison to the V_2O_5Eq cut-off. We can see that the recommended TiO_2 cut-off is significantly higher than the 2% TiO_2 cut-off proposed by Apella at the beginning.

The V_2O_5, Fe and TiO_2 prices were given by Mr Christian Derosier of Apella as of June 21[th], 2010. SGS did not do an extensive research of the dollar value of vanadium, TiO_2 and Fe concentrates.

Ore Type	Price US$	Price units	Assays units	Units factor	Recovery	Unitary price	V2O5Eq factor
V2O5	14	kg	%	10	75%	105.00	1.0
Fe*	0.182	kg	%	10	65%	1.18	0.011
TiO2**	0.09	kg	%	10	65%	0.59	0.006

V2O5eq=V2O5+0.011*Fe+0.006*TiO2 in %

182$/*tonne metric

**90$/tonne metric

V2O5: 14$/kg

The prices were given by Christian Derosier of Apella.

The Iron-T mineral deposit contains enough resources to justify additional exploration work and development work on the property in the optic of a bulk sampling, preliminary economic assessment study and prefeasibility study.

The project needs additional definition including detailed cartography and diamond drilling before being ready for mining. The additional drilling would increase significantly the quality of the geological information as well as the update of the overall resources and the geological model. With addition of the drilling data, the update of the resources could include the measured and indicated resources categories. SGS recommends infill drilling and target drilling with an estimated cost of CA$ 2 623 500.00. The budgetary recommendation is purely conceptual and does not include all costs.

Following SGS last recommendations, Apella is currently implementing an orientation survey on its relevant 2009-2010 drill holes and on all of its 2011 diamond drilling program.. This includes dip, direction of surveyed holes. This will permit a more precise view of the geological features and structures shaping and affecting the mineral deposit.

SGS also recommends continuing metallurgical tests including additional density tests, Satmagan on head and Davis tube products in order to better understand the recoverable Fe, Ti and V content.

SGS recommends sending duplicate samples to two different laboratories in order to determine and monitor correction factors. SGS recommends also continuing the QAQC protocols.

2- Introduction (Item 4)

2.1 General

SGS Canada Inc. was commissioned by Apella Resources inc. ("Apella") on December 9 th, 2010 to prepare a 43-101 compliant Resource update technical report of the Iron-T Vanadium-Titanium-Iron property located 18 km east of Matagami in the Province of Québec, Canada. This document follows directly the SGS independent resource estimation of the Iron-T mineral deposit and technical report submitted on august 27th, 2010.

The intent of this resource estimation technical report is to provide the reader with a comprehensive review of the latest exploration activities and the current, independent NI 43-101 resource estimate completed by SGS based on 41 drill holes including 2 revised historical drill holes totalling 5519 meters.

This update report was requested by Christian Derosier P.Geo Chief Exploration Geologist of Apella Resources Inc. As an update of the resources estimation of the Iron-T Vanadium-Titanium-Iron property previously submitted August 27th, 2010. The author met on a regular basis with Mr. Derosier and relevant personnel by phone and at SGS office in Blainville, Quebec.

Apella provided the necessary technical data in electronic and paper format. The author visited the site from May 10th to May 13th, 2010 during the ongoing 2010 diamond drilling campaign. Since this document is in direct continuation of the previous SGS 2010 resources report, the author did not do a second site visit. It is the opinion that the last site visit is considered as current within the meaning of the National Instrument 43-101 and 43-101F. During site visit, the author was able to document the ongoing 2010 drilling. It is important to note also that all of the additional 2010 drill holes for this resources estimation update were drilled within the month of the site visit.

This Technical Report is prepared using the industry accepted Canadian Institute of Mining, Metallurgy and Petroleum (CIM) “Best Practices and Reporting Guidelines” for disclosing mineral exploration information, the Canadian Securities Administrators revised regulations in NI 43-101 (Standards of Disclosure For Mineral Projects) and Companion Policy 43-101CP, and CIM Definition Standards for Mineral Resources and Mineral Reserves (December 11, 2005).

The present technical report describes the basis and methodology used in modelling the Iron–T mineral deposit. The Iron-T mineral deposit is included entirely in the Iron-T property. The report also presents a full review of the history and geology of the property and provides recommendations for future work.

2.2 Terms of Reference

This report on the Iron-T property mineral resource estimate was prepared by Maxime Dupéré P.Geo. The author is responsible for all sections of the report. He is a qualified person by virtue of education, experience and membership in a professional organization.

This technical report was prepared according to the guidelines set under "Form 43 101F1 Technical Report" of National Instrument 43 101 Standards and Disclosure for Mineral Projects. The certificate of qualification for the Qualified Person responsible for this technical report can be found in section 23- Certificate of qualification.

A complete list of the reports available to the authors is found in section 21- References.

Apella provided all new and revised technical data (database in electronic format, a set of limited cross-sections files, detailed list of claims and/or mining titles, topographic and geophysics surface maps).

The author did not visit the site in 2011. The recent drill holes were completed on the property in fall 2010 and are in direct continuation of its 2009 and 2010 phases of drilling.

In this document, the following terms are used:

ALS-Chemex: Mineral Division of ALS Laboratory Group, of Val-d'Or, (Quebec) Canada Independent laboratory used for gold fire assay gravimetric finish.
Apella: Apella Resources Inc.
GESTIM: Public register of real and immovable mining rights Viewing and consulting web interface from the Ministère des Ressources naturelles et de la Faune of the Quebec Province.
Iron-T: Vanadium-Titanium-Iron Property near Matagami (Quebec) Canada.
MNRF: Ministère des Ressources naturelles et de la Faune of the Quebec Province.
SGS: SGS Canada Inc. Geostat Office in Blainville (Quebec) Canada. Member of the SGS Group (Société Générale de Surveillence). Geology and mining consulting firm mandated for this study. Formerly called Geostat Systems International Inc., bought by SGS in 2008.
SGS-Lakefield: SGS Canada Inc. Laboratory in Lakefield (Ontario) Canada. Accredited Laboratory and Member of the SGS group (Société Générale de Surveillence), used for the independant sampling program and the Davistube, Satmagan and density tests and for total iron, titanium dioxide and vanadium content as well as 21 additional major and minor elements by X-Ray fluorescence spectrometry
Actlabs: Activation Laboratories Ltd. Ancaster (Ontario) Canada. Accredited Laboratory used for the independent sampling program as a third party check for total iron, titanium dioxide and vanadium content as well as 21 additional major and minor elements by X-Ray fluorescence spectrometry
SGS 2010 resources report: Dupéré, M. 2010: Technical Report, Resource estimation of the Vanadium-Titanium-Iron Iron-T Property, Matagami Area, Quebec, Canada. 83p.

2.3 Units and Currency

All measurements in this report are presented in meters (m), metric tonnes (tonnes), grades in weight percent (%) unless mentioned otherwise. Monetary units are in Canadian dollars (CA$) unless when specified in United States dollars (US$). A table showing abbreviations used in this report is provided below.

tonnes or mt	Metric tonnes
kg	Kilograms
g	Grams
%	percentage
NSR	Net Smelter Return
ppm, ppb	Parts per million, parts per billion
ft	Feet
ha	Hectares
km	Kilometres
In	Inches
m	Metres
m^3	Cubic metres
NAD	North American Datum
NQ	Drill Core Size (4.8 cm diametre)
nT	nanotesla
NTS	National Topographic System
SG	Specific gravity
UTM	Universal Transverse Mercator

Table 1: List of abbreviations

2.4 Disclaimer

It should be understood that the mineral resources which are not mineral reserves do not have demonstrated economic viability. The mineral resources presented in this Technical Report are estimates based on available sampling and on assumptions and parameters available to the author. The comments in this Technical Report reflect the author's and SGS Canada Inc. best judgement in light of the information available.

3- Reliance on Other Experts (Item 5)

The author of this Technical Report, Mr. Maxime Dupéré P. Geo, is not qualified to comment on issues related legal agreements, royalties, permitting, and environmental matters. The author has relied upon the representations and documentations supplied by the Company management. The author has reviewed the mining titles, their status, the legal agreement and technical data supplied by Apella, and any public sources of relevant technical information.

4- Property Description and Location (Item 6)

4.1 Location

The Iron-T Vanadium-Titanium-Iron property is located in the Matagami area in the west-central part of the Province of Quebec, Canada, approximately 780 km north of Montreal. The property is located between latitudes 49˚45'13"N and 49˚42'56"N and longitudes 77˚23'00" W and 77˚36'49" W. The property covers the Isle-Dieu, Lozeau, Galinée and Comporté townships and the National Topographic Sheets (NTS) 32F11 (Rivière Opaoca), 32F12 (Ile Bancroft), 32F13 (Matagami), 32F14 (Lac Olga).

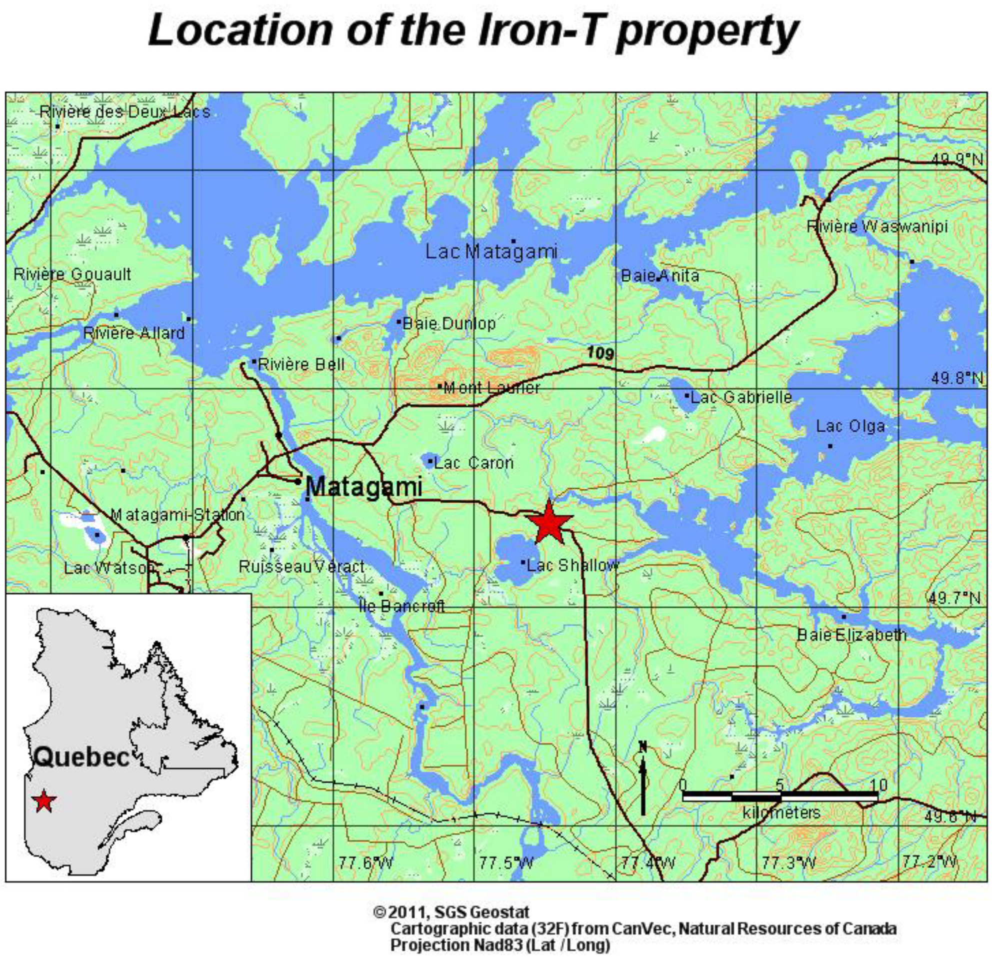


Figure 1: Location of the Iron-T property

4.2 Property Description

The Iron-T Vanadium-Titanium-Iron property currently consists of 150 claims cells composed of 44 designated claim cells and 106 staked claims totaling 4218.32 Ha and covering one block of contiguous claims among Lozeau, Comporté and Isle Dieu townships located on 32F11, 32F12, 32F13 and 32F14 NTS sheet. The Iron-T Vanadium-Titanium-Iron property includes a block of 17 designated claim cell designed as the Audet Option. The claims have not been legally land-surveyed. The author has verified the status of the claims of the Iron-T Vanadium-Titanium-Iron property provided by MRNF on the GESTIM website as of March 11th, 2011. The listing indicates that all claims are owned 100% by Apella and are in good standing. The distribution of active designated claims actually held by Apella is shown in 24.2- Iron-T Claims List.

4.2.1 Audet Option Claims

The Audet Option claims have been acquired by agreement, dated February 1st, 2008, between **Novawest Resources Inc. (Novawest)** and Mr Albert Audet, Mehmet Taner, Pierre Bérubé and Pierre d'Aragon. It comprises of 17 claims totalling 946.55 Ha (9.47 square kilometres). This group of claims is hereafter referred to as the "Audet Option". The option entitles **Novawest** to acquire a 100% interest in the claims by payment of $250,000 and the issuance of 900,000 common shares of Novawest to the vendors. In addition, Novawest is required to carry out $500,000 of exploration expenditures work on the ground being optioned, and grants a three percent net smelter return ("NSR") to the vendors. The agreement also states that any claims staked or acquired by any of the Parties within two miles of the outer boundaries of the 17 claims during the term of this Agreement will be subject to the three percent net smelter return ("NSR"). One half of the NSR (1.5%) can be purchased for $500,000. The mining titles of the Audet Option claims have been transferred to Apella as of June, 2nd, 2008 (MRNF - Registre public des droits miniers, réels et immobiliers, Registration Number 52645).

Township	Title	Expiration / Renewal dates	Area (Ha)
Lozeau & Comporte	109860	2009-12-18	55.69
Lozeau & Comporte	109861	2009-12-18	55.69
Lozeau & Comporte	109862	2009-12-18	55.69
Lozeau & Comporte	109863	2009-12-18	55.68
Lozeau & Comporte	109864	2009-12-18	55.68
Lozeau & Comporte	109865	2009-12-18	55.68
Lozeau & Comporte	109866	2009-12-18	55.68
Lozeau & Comporte	109867	2009-12-18	55.68
Lozeau	109869	2009-12-18	55.68
Lozeau	109870	2009-12-18	55.68
Lozeau	109871	2009-12-18	55.68
Lozeau	109872	2009-12-18	55.68
Lozeau	109873	2009-12-18	55.68
Lozeau	109874	2009-12-18	55.67
Lozeau	109875	2009-12-18	55.67
Lozeau	109876	2009-12-18	55.67
Lozeau	109877	2009-12-18	55.67
TOTAL			**946.55**

Table 1: Audet Option Claims List

4.2.2 Environmental Liabilities

The Iron-T Vanadium-Titanium-Iron property is not subject to any environmental liabilities.

4.2.3 Permits

To the author's knowledge, The Iron-T property posses all the necessary permits to conduct the work and proposed work in this report.

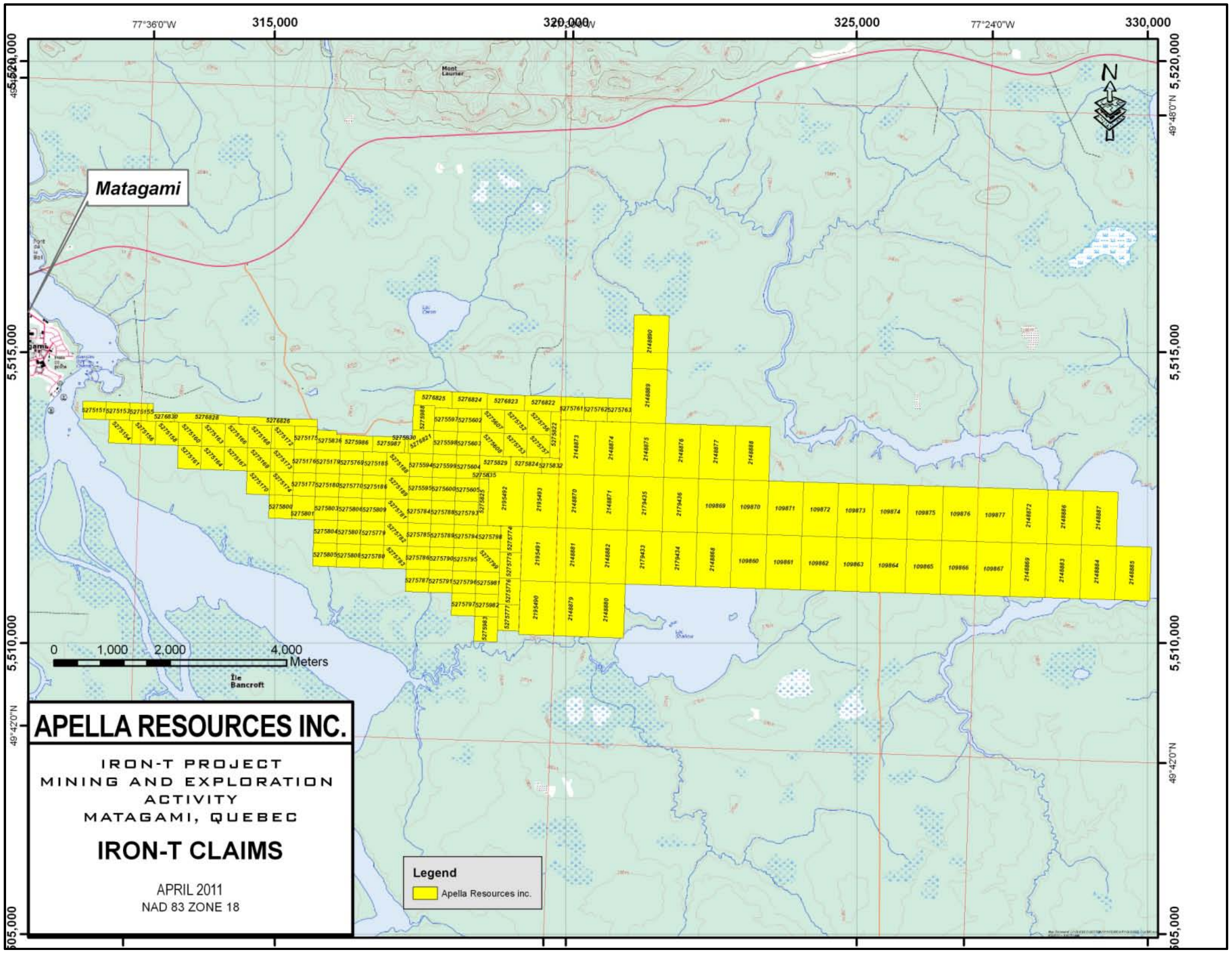


Figure 2: Claims Location Map of the Iron-T Property

5- Accessibility, Climate, Local Resources, Infrastructure and Physiography (Item 7)

5.1 Accessibility

The Iron-T Vanadium-Titanium-Iron property is accessible via Matagami located approximately 780 km of Montreal, 250 km from Val d'Or and 185 km from Amos along regional highways. Matagami is accessible via Regional Highway 109 which links Amos to the Bay James Highway. The central part of the Iron-T Vanadium-Titanium-Iron property is located 10 km ESE of the town of Matagami. Access to the property is via all-weather gravel road N805 which links Lebel-sur-Quévillon to Matagami. It is situated approximately 5.4 km ENE of Matagami and crosses the central part of the property in an EW direction and the eastern part of the property in NS direction. Travel within the property is by all terrain vehicles (ATV) or snowmobiles along secondary forestry roads, or on foot.

5.2 Climate

The Matagami area is characterized by a cold temperate continental climate with cold winters and generally warm and short summers. Temperatures in January range between -13° and -27° C with an average temperature of -20° C. July is the warmest month with temperature ranging from 9° C to 23° and an average temperature of 16° C. The annual average daily temperature in Matagami is slightly under the freezing point specifically -0.7°C. Snow accumulation and freeze-up of lakes begin in mid-November and snow remains on the ground until the beginning of May. The annual precipitation is around 905 mm with approximately one-third of the annual precipitation occurring as snow mostly between October and April.

5.3 Local Resources

The regional resources concerning labour force, supplies and equipment are sufficient; the area is being well served by geological and mining service firms. The town of Matagami, with approximately 2000 citizens, can provide the workforce for mining services and mine exploitation. This city is a regional center for the region of Northern Quebec. The area is traditionally a mining area with operating mines and active exploration companies. Matagami has the necessary infrastructures to support a mining operation. All major services are available in Matagami. Additional work force is to be considered in the Abitibi region, especially in the towns of Val-d'Or and Rouyn-Noranda. Both towns have a mining history.

5.4 Infrastructure

There is no permanent infrastructure on the Iron-T project. Matagami has a municipal airstrip. It should be noted that there is presently no regular flight to Matagami but Air Creebec and Propair offer chartered flights. Val d'Or located 250 km to the south has a regional airport with daily scheduled flight to and from major cities such as Quebec, Montreal and Toronto. The Canadian National rail-line passes some 15 km to the south of the claim block. Apella is currently leasing a warehouse for core logging and sampling directly in Matagami. The entire necessary infrastructure is available.

5.5 Physiography

The Iron-T Vanadium-Titanium-Iron property lies in the Abitibi Lowlands of the Canadian Shield. The Abitibi Lowlands are characterized by small rounded hills, widespread swamps and depressions frequently occupied by lakes and rivers. The highest area of the property has an elevation of approximately 310 m and is located 1.5 km north of Lake Shallow. The elevation of the Lake Shallow is approximately 260 m above sea-level. The average elevation is 289 m above sea-level. The property is generally well drained and contains exposed and extensive glaciolacustrine and glaciofluvial overburden deposits. The forest cover is relatively young with vegetation largely composed of spruce and lesser poplar and birch. The drainage system flows northwards towards James Bay.

6- History (Item 8)

The first mapping reconnaissance in the Matagami area was conducted by Bancroft (1913) of the Services des Mines du Québec. Major geologic features in the vicinity of the Iron-T Vanadium-Titanium-Iron property were published by Auger and Longley (1939) Black and Freeman (1940, 1944), and Longley (1943) of the Department of Natural Resources, Quebec. In 1968, Sharpe published the first geological compilation of Matagami area including the integration of data from the Matagami Lake Mine (Zn-Cu-Ag) and from bordering sulphide units. It divides the volcanic units into two main groups: The Lake Watson Group and the Wabasse Group, and also establishes a correlation between the massive sulphide deposits by using the Key Tuffite unit as reference. More recently, the Opaoca river area (NTS 32F11) as well as the Lake Olga area (NTS 32F14) has been mapped at a scale of 1: 20 000 by Goutier (2005) and Goutier et al. (2003). This work was undertaken mainly in order to correlate the geology and mineralization present between the Matagami and Chibougamau sectors. Detailed cartography covers the eastern half of the Iron-T Vanadium-Titanium-Iron property.

6.1- Regional Airborne Magnetic and Electromagnetic Survey

The area under study is covered by regional airborne magnetic and electromagnetic INPUT MK VI surveys conducted in 1977. Regional magnetic data over the study area were acquired at a nominal lines spacing of 200 metres and a nominal mean terrain clearance of 125 metres. The western half of the Iron-T Vanadium-Titanium-Iron property is covered by regional airborne gradiometric survey carried out in 1984. Magnetic data was acquired at a nominal lines spacing of 300 metres and a nominal mean terrain clearance of 150 meters. The airborne magnetic survey outlined a broad magnetic anomaly up to 4 000 nT above the background level and continuous some 25 km in a WNW direction.

In 2010 Apella retained the services of Abitibi Geophysics Inc. from Val d'Or, (Quebec) to conduct a 250km Magnetic-GPS survey on the Iron-T property in 2010. Please see: 25.1- Iron-T zones.

6.2 Previous Exploration

Several mining companies conducted exploration work since 1958 on or in the vicinity of the actual Iron-T Vanadium-Titanium-Iron property. The main interest was directed toward base metals mineralization following initial discoveries in the Matagami mining camp. The following is a review of significant exploration work completed and undertaken by previous owners or operators prior to Apella involvement on the property. The following table shows a review of exploration works conducted on the property since 1958.

YEAR	COMPANY	TYPE OF WORK	REFERENCE
2007	Albert Audet	Ground magnetic survey totalling 100.7 km	GM 63124
1998	Noranda	Mineralogical examination and microprobe analysis	GM 58344
1998	Noranda	2 ddh's (LT-98-01 and LT-98-02) totalling 196.3 m; stripping and channel sampling	GM 58343
1998	Noranda	Geological and geophysical evaluation	GM 56292
1995	Noranda	Induced Polarization survey totalling 34.45 linear km on the Lozile Joint Venture Property; using a time-domain system and a 50 m dipole-dipole array, N equals 1 to 5	GM 53135
1983	Noranda	Mapping program at 1: 20 000 scale of the Shallow Lake area	GM 40529
1983	Noranda	Lozile Joint Venture Property; linecutting; ground geophysical surveys (horizontal loops EM and ground magnetic surveys)	GM 40250
1982	Noranda	Panique Property; 2 ddh's (PAN-82-1 & PAN-82-2) totalling 357 m	GM 39290
1982	Noranda	Ground geophysical surveys (horizontal loops EM and ground magnetic surveys); Lozile Joint Venture Property	GM 39156
1981	Noranda	DEEP EM survey totalling 10 linear km and covering the Panique property	GM 39289
1982	SDBJ	1 ddh (L-1-82-1) totalling 91.44 m on the Lozeau 1 property	GM 39986
1980	SDBJ	Ground geophysical surveys (horizontal loops EM and ground magnetic surveys)	GM 36424
1981	Noranda	Ground geophysical surveys (horizontal loops EM and ground magnetic surveys); Panique property	GM 37597
1980	Noranda	Ground geophysical surveys (horizontal loops EM and ground magnetic surveys); Comporte property	GM 36419
1963	Juma Mining & Exploration Ltd	1 ddh (L-2) totalling 159.5	GM 13003
1963	Juma Mining & Exploration Ltd	1 ddh (L-1) totalling 144.9 m	GM 12956
1962	Juma Mining & Exploration Ltd	Geological survey	GM 12545
1962	Dome Exploration Co Ltd / McIntyre Porcupine Mines Ltd	4 ddh's (1, 2, 5, 6) totalling 402 m	GM 12738
1962	Mining Corp of Canada Ltd	5 ddh's (1 to 5) totalling 638 m; ddh No 5 (134 m) located within claims boundary	GM 12659
1962	Dome Exploration Company Quebec Ltd	Ground geophysical (TURAM and magnetic surveys)	GM 11989
1959	Chibougamau Mining and Smelting Co. Inc.	Ground geophysical (VEM and magnetic surveys)	GM 08867-A
1959	Chibougamau Mining and Smelting Co. Inc.	Diamond drilling; 2 ddh's (MA-1 & MA-2) totalling 441 m	GM 08867-B
1958	Chibougamau Mining and Smelting Co. Inc.	Geological and ground geophysical (vertical electromagnetic and magnetic surveys)	GM 07615

Table 2: Review of Previous Exploration Work

The first work in the Iron-T Vanadium-Titanium-Iron property area was carried out in 1958 by Chibougamau Mining and Smelting Co. Inc (GM 07615). This work consisted of a geological survey and an electromagnetic survey (VEM). In 1959, the company drilled two holes (ddh's MA-1 & MA-2) for a total of 212 m (GM 08867-B) and carried out a detailed electromagnetic survey (VEM) (GM 08867-A). The results indicate that drilling did not intersect any significant sulphide mineralization.

In 1962, Dome Exploration Co Ltd and McIntyre Porcupine Mines Ltd carried out a ground magnetic and electromagnetic survey (GM 11989) approximately 2.6 km ENE of Lake Shallow in the Comporté township. Following that work, four diamond drill holes (GM 12738) totalling 402 m were bored to test EW trending EM anomalies with magnetic coincidence. As for the Mining Corp of Canada Ltd, it carried out a series of five diamond drilling campaigns (GM 12659) for a total of 638 m the majority of which are outside the Iron-T Vanadium-Titanium-Iron property limits. The drill core logs do not indicate any significant sulphide mineralization.

Two diamond drill holes (L-1 and L-2) totalling 304.4 m were bored in 1963 by Juma Mining & Exploration Ltd (GM 12956 & GM 13003). Extensive zones of magnetite enrichment have been intersected.

In 1979, following publishing results of an airborne magnetic and INPUT MARK VI survey over the Matagami area (DPV 657) by the Ministère des Ressources Naturelles du Québec, the Société de Développement de la Baie-James (SDBJ) carried out a ground magnetic and Horizontal Loop Electromagnetic (HLEM) (GM 36424) on the Lozeau 1 property (Bellem project) situated at some 1.5 km NE of Lake Swallow. The geophysical surveys were carried out on cut lines oriented NE, spaced at 100 m and totalling 9.3 linear km. Magnetic data were collected with readings taken every 12.5 m. The instrument used was a Unimag G836 proton precession magnetometer with a sensitivity of ±10 nT. Diurnal corrections was applied to raw magnetic date. Total field magnetic profiles and contour map was produced. The HLEM survey was conducted using an Apex Parametrics MaxMin II EM system, operated in the maximum coupled (horizontal coplanar loops) mode at frequencies of 444 and 1 777 Hz. The separation between the transmitter and the receiver was maintained using a 100 m reference cable. Electromagnetic results indicated the presence of a two shallow (<22 m) conductors (A & B) in coincidence with ground magnetic anomalies. It is likely possible that the western conductor (A) has been already tested by diamond drilling by Juma Mining & Exploration Ltd in 1963. Hole L-1-82-1 (GM 39986) was bored in 1982 by SDBJ to test EM conductor (B) previously identified by HLEM survey. This hole is the first to identify vanadiferous mineralization over significant widths on the property. Results will be discussed in further detail in Section 13 of the present technical report.

Ground geophysical surveys were conducted in spring 1980 along cut lines oriented N-S in the NE area of Lake Shallow (GM 36419). Geophysical surveys consisted of a HLEM survey (16.8 km) and a magnetic survey (18.8 km). The HLEM survey was conducted using the same geophysical instruments and parameters as previously described. Total field magnetic data were collected using a Geometrics G816 proton precession magnetometer with a sensitivity of ±1 nT. Readings were collected at 12.5 m intervals. Diurnal corrections were applied using the tie-point method. The electromagnetic survey successfully located a good conductor associated to a high magnetic area located along L0+00, approximately 25 m north of the Lozeau and Comporté township line. The EM conductor extends some 300 m in an ESE direction. Based on the location provided by the assessment file, the conductor appears to be coincident with the Trench B excavated by Noranda in 1997. In 1981, Noranda carried out a ground geophysical survey on his Panique property (GM 37597) along cut lines spaced at 100 m intervals. The HLEM survey, totalling 21 linear km, was conducted in order to locate an INPUT MARK VI airborne anomaly. Electromagnetic survey was conducted using an Apex Parametrics MaxMin II EM system, at frequencies of 444 and 1 777 Hz and a 150 m reference cable. Readings were collected every 25 m. Electromagnetic results indicated the presence of two good conductors (1 & 2). As follow-up, diamond drilling was recommended on these anomalies. The ground magnetic survey, totalling 22.6 linear km, was conducted using an Exploranium G816 proton precession magnetometer with a sensitivity of ±1 nT. Readings were collected at 12.5 m intervals. Diurnal corrections were applied using a base station magnetometer. The magnetic survey indicated that the northern part of the grid lines is characterized by relatively higher amplitude magnetic anomalies. A DEEPEM (GM 39289) survey, totalling 10 km, was also completed in the NW part of the Shallow Lake. The survey was based on six (approximately 100 m X 100 m) transmitter loops on the grid, with survey lines at 100 m spacing and 25 m stations. The survey successfully located two shallow dipping conductors to the south. The following year, two AQ diamond drill holes (PAN-82-1 & PAN-82-2) (GM 39290) totalling 357 m were completed by Noranda in order to investigate EM anomalies. Logs indicate up to 15% magnetite oxide mineralization with trace amounts of pyrite associated with melanocratic gabbro interlayered with anorthositic gabbro and gabbroic anorthosite was intersected.

In 1982, Noranda carried out a ground magnetic and HLEM survey covering the Lozisle joint venture project (GM 39156) actually representing the central portion of the Iron-T Vanadium-Titanium-Iron property. The magnetic and the electromagnetic surveys covered respectively 58.4 and 56.7 linear km and were carried out on cut lines spaced at 100 m intervals. The surveys were conducted using the same geophysical instruments and parameters as previously described. Geophysical surveys identified two low priority EM conductors associated with low magnetic anomalies possibly associated with alteration zones along a geological contact. No follow-up was recommended.

A HLEM survey as well as ground magnetic (total field and vertical gradient) surveys (GM 40250) were commissioned in 1983 by Noranda. Geophysical surveys were conducted in a block of claims located some 3.2 km north of Lake Shallow. These surveys covered approximately 15% of the Iron-T Vanadium-Titanium-Iron property. The HLEM survey, totalling 85.65 km, was conducted using an Apex Parametrics MaxMin II EM system with the same geophysical parameters as previously described. The magnetic surveys totalling 88.60 km were carried out using an EDA PPM-500 gradiometer with sensitivity of 0.1 nT/m. Readings were taken at 12.5 m intervals and diurnal corrections were applied using an EDE PPM-400 as a permanent base station. The magnetic surveys indicated that the geological units located in the southern part of the surveyed area are possibly deformed and characterized by a high magnetic relief. The HLEM survey indicated the presence of one good EM conductor located in the south-eastern portion of the surveyed area. This conductor is coincident with a magnetic high (3 000-4 000 nT). As follow-up, an IP survey was recommended on this anomaly. A geological survey of the shores of Lake Shallow (GM 40529) was carried out on the Panique property during summer 1983.

Of particular significance to the current interest on the Iron-T Vanadium-Titanium-Iron property is the work conducted by Noranda. In 1997, the company acquired three properties along a 25 km strike length covering the upper portions of the Bell River Complex. The Lorte property acquired by Noranda covered most of the current Audet Option. Given the association between magnetite content and vanadium mineralization, the company carried out a ground magnetic survey, drilled two diamond drill holes and conducted stripping and channel sampling (GM 58343 & GM 56292).

The magnetic survey, totalling approximately 3.5 km, was conducted along lines oriented N-S spaced at 200 m. Readings were collected at 2 seconds intervals using a GSM-19 instrument with an "Overhauser" detector. The sensitivity of the instrument was fixed at 0.1 nT. A base station magnetometer was used to monitor diurnal corrections. Corrected total field magnetic data were plotted at 1:2 000 scale. Results indicated a broad (300-400 m) strong magnetic zone trending at N110° and associated to relatively short magnetic highs less than 25 m.

Following the vanadium values obtained on the Lake Olga Fe-Ti showing, stripping and channel sampling work was undertaken on the mineralized outcrops mainly on line 0+00 north of the line separating the Lozeau and Comporté townships. Results will be discussed in Section 11 Mineralization of the present technical report.

Two diamond drill holes totalling 196.3 m were collared in 1998 through the principal anomalous zones by Noranda under the supervision of a well recognized vanadium expert, Dr. M. Taner. The two holes were drilled 430 m apart on either side of the area of surface trenching and sampling in the southernmost sector of Lozeau Twp. Hole LT 98 1 was drilled southwards through the magnetic anomaly to a depth of 83.3 m and hole LT 98 2 was drilled northwards through the zone to a depth of 113 m. Given the sub-vertical attitude of the mineralization, both holes were drilled at an inclination of - 45º giving vertical depths of approximately 60 m and 90 m respectively. Results will be discussed in Section 13 of the present technical report.

In 2007, a total field ground magnetic survey (GM 63124) was carried out over the full extent of the Audet Option. The survey, totalling 100.7 linear km, was conducted along lines oriented N-S and spaced at 100 m intervals. The magnetic data were collected at 1 second intervals and position fixed by an integrated Marconi GPS (Global Positioning System) in Universal Transverse Mercator (UTM) metric coordinates using the North American Datum 1983 (NAD83). A GSM-19 magnetometer of GEM Systems was used with an "Overhauser" detector with a sensitivity of ±0.2 nT. Base station readings were taken at ten second intervals and diurnal corrections were applied to raw magnetic data. Survey products include a series of maps at a scale of 1:5 000: Total magnetic field contours and profiles, vertical calculated a magnetic gradient and horizontal projection of the Iron Formations as well as a 3-D diagram of the magnetite-rich horizon was produced by magnetic inversion. The magnetic data is considered high quality.

7- Geological Setting (Item 9)

7.1 Regional geology

The Iron-T Vanadium-Titanium-Iron property is located within the Matagami volcanic complex in the northern part of the Abitibi Greenstone Belt which represents one of several EW trending belts composed of a series of volcanic, sedimentary and intrusive rocks within the Superior Province. Please see: Figure 3: Simplified Geology of the Iron-T Property.

The Matagami volcanic complex has been originally subdivided by Sharpe (1968) into the Watson Lake Group overlain by the Wabassee Group which is located on both sides of the Galinée Anticline. Rocks of the Matagami mining camp were formed during two major phases of volcanism. The first phase is characterized by the extrusion of tholeiitic rhyolite and rhyodacitic lavas which correspond to the Watson Lake Group. By contrast, the second phase of volcanism which formed the Wabassee Group is characterized by a calc-alkaline basaltic to andesitic composition (*Beaudry and Gaucher 1986, Piché et al., 1993*).

The Watson Lake Group is approximately 2 000 m in thickness and hosts the massive sulphides deposits of the Matagami mining camp. This unit is mainly composed of dacite, spherulitic rhyolite; porphyritic rhyolite interlayered with tuffs and intermediate to mafic lavas horizons (*Goutier, 2003*). Felsic volcanic units of the Watson Group outcrop near the New Hosco Mine, on the northern and the eastern areas of Watson Lake, as well as east of Matagami Lake and the Orchan mines located on the southern flank of the Galinée Anticline. Rhyolitic units occur also as sparse outcrops between the Allard and Bell rivers and between Bell River and Garon Lake. Pyroclastic horizons are locally interlayered with the felsic volcanic rocks of the Watson Group. These horizons are rarely exposed at surface but are encountered in drill core and underground mining such as Lake Matagami, Orchan, New Hosco, Lake Garon and Radiore. The Key Tuffite, a cherty exhalite, is located at the stratigraphical top of these units and forms a regional marker horizon which can be followed for 30 km (*Beaudry & Gaucher, 1986*) on the southern flank of the Galinée Anticline between the contact of the Watson and the Wabassee group. Intermediate to mafic rocks are interlayered with rhyolitic units of the Watson Lake on both flanks and along the fold hinge of the Galinée Anticline. These rocks are poorly exposed and their distribution is not well defined. Pillowed basalts occur 800 m east of the Matagami Lake Mine and as an enclave within the Bell River Complex 300 m south-east of Channel River in Isle-Dieu Township.

The Wabassee Group is composed of mafic lavas and has been subdivided into the Allard River unit and the Bell River Unit (*Beaudry and Gaucher 1986*). Both units are similar in texture and are locally massive or pillowed but vary in composition. The Allard River unit crops out on both flanks of the Galinée Anticline. It consists of light green calc-alkaline basalt overlying the Watson Group (*Piché et al., 1990*). The Bell River unit crops out on the northern flank of the Galinée Anticline and stratigraphically overlies the Allard River unit. This unit is characterized by dark green, tholeiitic basalt. The Allard River unit is characterized by an informal sub-unit marker horizon, a spherulitic rhyodacite, named the Dumagami Rhyolite (*Piché et al., 1990, Piché et al., 1993*).

The volcanics described are intruded by the Bell River Complex, a syn-volcanic layered gabbro-anorthositic intrusion. It is interpreted that the Bell River Complex initiated the hydrothermal fluid circulation that formed the Matagami massive sulphides deposits (*MacLean, 1984*). This intrusion covers an area of approximately 25 km x 65 km within the Isle-Dieu, Lozeau, Galinée, Comporté and Pouchot townships. U-Pb dating suggests that the Watson Lake Group and the Bell River Complex may be comagmatic based on overlapping ages.

The Matagami Volcanic Complex is cut by several generations of Proterozoic, mafic dykes. The N-S trending dykes are generally considered part of the Matachewan dyke swarm (2473 +13/-9 Ma; *Heaman, 1997*), whereas the ENE trending dykes are younger and are part of the Abitibi dyke swarm (1141 ±2 Ma, *Krogh et al., 1987*). NW and NE trending mafic dykes also occur, but have not been assigned to any particular dyke swarm. All these dykes are clearly visible on regional magnetic maps.

Mineral assemblages indicate that archean rocks of the Matagami mining camps are gradually metamorphosed from greenschists to amphibolite facies. Metamorphic grade generally increases from a WNW to ESE direction. The typical mineral assemblage for the metamorphosed Bell River Volcanics is hornblende +plagioclase +quartz ±epidote ±carbonates ±biotite. The mineral assemblage of the Watson Lake volcanics is quartz +plagioclase +biotite +muscovite ±anthophyllite ±magnetite ±microcline ±epidote ±tourmaline. These mineral assemblages are consistent with amphibolite–facies.

Within the Bell River complex, metamorphic grade generally increases from west to east. Mineral assemblages in the eastern part of the complex are characterised by hornblende +plagioclase +actinote ±epidote ±tremolite ±magnetite ±chlorite ±pyroxene, indicative of amphibolite-facies conditions. By contrast, the western part of the complex contains the mineral assemblage actinolite +hornblende +plagioclase +chlorite ±epidote ±magnetite±tremolite ±biotite ±carbonates ±talc, interpreted by represent retrograde re-equilibration of the original amphibolite-facies assemblage to greenschist-facies conditions. This interpretation is consistent with the replacement of biotite by chlorite, amphibole by carbonates and plagioclase by damourite, which commonly occurs in the entire Matagami area.

Structural observations indicate that the Matagami volcanic complex is folded by a large-scale northwest-southeast deformation event forming the Galinée Anticline. The southern flank is weakly deformed and dips to 45° to the southwest. The northern flank of the anticline is strongly deformed, nearly vertical and is transected by several east-west trending fault and shear zones associated within the Garon high-strain zone (*Piché et al., 1993*). The Daniel Fault is a major NW trending reverse fault crosscutting the Galinée anticline and the volcanic units located on the southern flank.

7.2 Property geology

The Iron-T Vanadium-Titanium-Iron property is located in the Bell River Complex and covers the northern flank of the Galinée anticline. The Bell River complex was first recognized by Bancroft (1913) during reconnaissance work for the Service de Mines du Québec. The area was later mapped in detail by Freeman (1936), who also defined the main lithological units. The Bell River complex covers an area of 1,300 km2, near the center of the Galinée anticline and transects the volcanic rocks of the Watson and Wabassee group. The complex itself is intruded by late-stage tonalites and diorites of the Olga Pluton and Opaoca Tonalite.

The Bell River complex is composed of ~81% gabbro, 12% anorthosite, 6% pyroxenite and less than 1% dunite and magnetite. Similar to the Bushveld complex in South Africa, the Bell River complex has alternating gabbroic layers and does not contain chromite-rich horizons. In contrast to the Lake Doré complex, there are no plagioclase mega-cumulates and layering is less important in the Bell River complex. Goutier (2005) divided the Bell River complex into three sub-units based on lithological assemblages and interpreted these to represent different stages in the evolution of the layered complex. The western unit, which is closest to the surface, is interpreted to represent the last, most evolved stage and hosts the Iron-T Vanadium-Titanium-Iron property. The western unit is genetically associated with the formation of the massive sulphide deposits of the Matagami mining camp. The central unit is interpreted to represent an early event, deep within the Bell River complex, whereas the eastern segment is interpreted to represent the intermediate stage of evolution at intermediate depth.

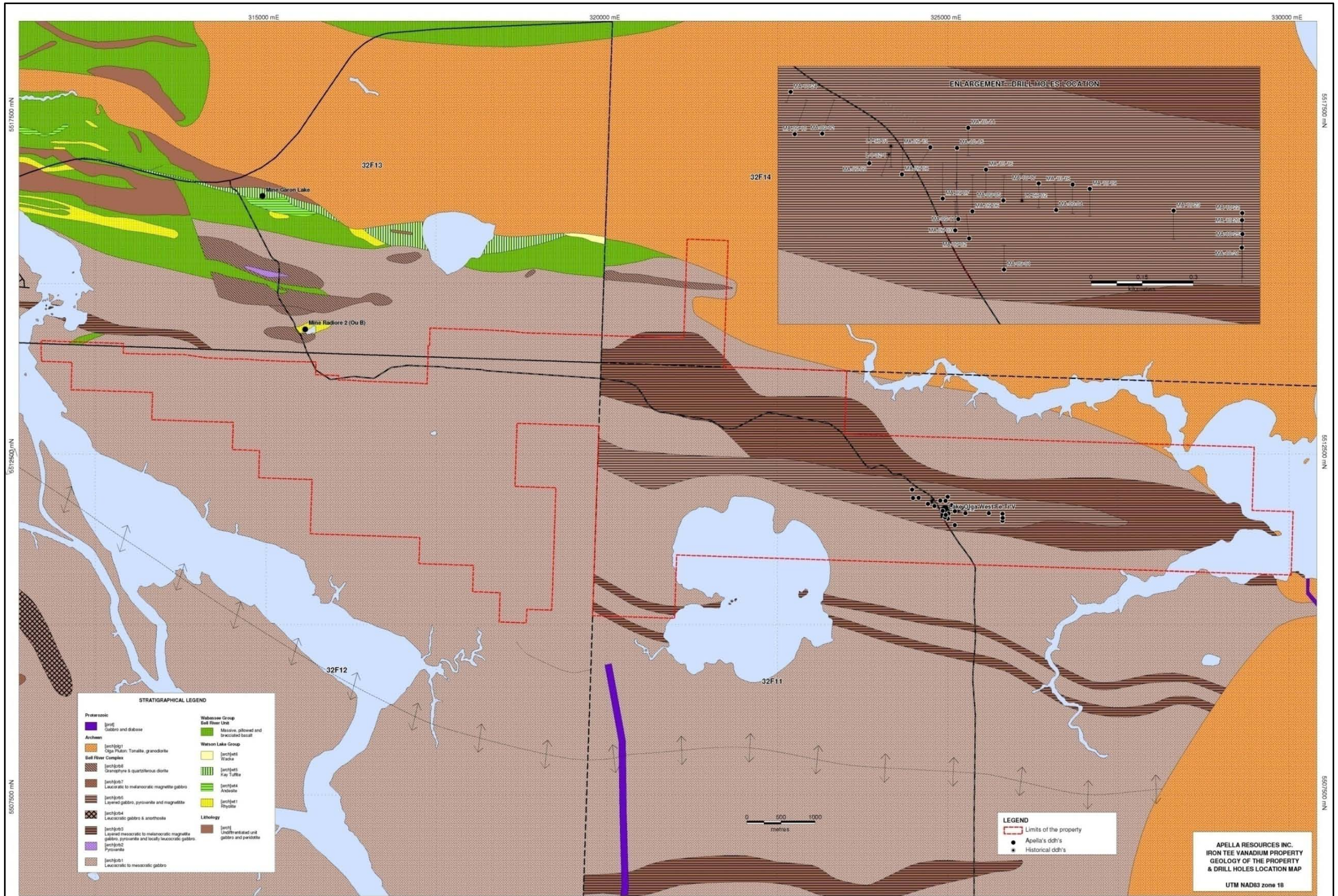
Three lithological units have been distinguished within the Iron-T Vanadium-Titanium-Iron property. However, it should be noted that the lithological contacts are often gradational. The following descriptions are taken from Goutier (2005).

Unit [arch]crb1 is the predominant unit in the vicinity of the property. It is characterized by a sequence of medium- to coarse-grained, leucocratic to mesocratic gabbro, which locally becomes melanocratic. The rocks are mainly composed of hornblende, actinolite and plagioclase. Two different generations of plagioclase can be distinguished: magmatic plagioclase with compositions varying from bytownite to labradorite and metamorphic plagioclase with compositions varying from andesine to anorthite. The gabbros are altered to chlorite, sericite, epidote, biotite, quartz and carbonate. This unit is not magnetic.

Unit [arch]crb3 is layered with alternating mesocratic gabbro, melanocratic gabbro and pyroxenite, and locally with leucratic gabbro. This unit forms horizons that are laterally continuous for over a kilometre. Locally, anorthosite and olivine-bearing gabbronorite are also present. The gabbroic rocks are medium to very coarse-grained, and are composed of variable amounts of plagioclase, amphibole and magnetite. Melanocratic gabbro can contain up to 50% vanadiferous magnetite and ilmenite. It also occurs as decimetre to metre-wide bands within mesocratic rocks.

Unit [arch]crb5 is 500 m wide and covers 7.8 km across the property. This band is defined by an alternating sequence of leucocratic to melanocratic gabbro, pyroxenite and magnetite. The magnetite-rich layers contain 20 to 90% vanadiferous magnetite and ilmenite and variable amounts of amphibole and plagioclase (Taner and Allard, 1998a, b). Sulphide minerals include pyrite in trace amount, chalcopyrite and locally sphalerite, pyrrhotite and cubanite. Goethite is locally present. These mineralized horizons can reach a thickness of up to 16m. Airborne magnetic data indicates that this unit has a lateral extent of about 10 km in a WNW-ESE trending direction. The Iron-T Vanadium-Titanium-Iron property covers approximately 85% of this unit.

Figure 3: Simplified Geology of the Iron-T Property



8- Deposit Types (Item10)

Geological setting and mineralization encountered on the Iron-T Vanadium-Titanium-Iron property located in the Bell River Complex indicates many similarities with typical world-class magmatic Fe-Ti-V oxide deposits associated with a layered intrusive complex.

The information below was modified from the document: Geology of Canadian Mineral deposit types section 26: Mafic Intrusion-Hosted Titanium-Iron. The deposit type of the Iron-T mineral deposit is part of the subtype 2 described below. The Iron-T deposit types correspond to subtype 26.2 described below.

8.1- Introduction

Large ilmenite and titaniferous magnetite deposits are hosted in massive and layered intrusive complexes dominantly ilmenite in Proterozoic anorthosite and titaniferous magnetite in gabbro and leucogabbro (formerly termed gabbro-anorthosite; e.g. Wagar and Brown, 1968). Deposits of both subtypes include irregular discordant masses in layered or massive intrusions, and concordant oxide-rich layers produced during fractional crystallization. The principal ore minerals are oxides of iron and titanium: ilmenite (FeTiO3), hemo-ilmenite (a solid solution of $FeTiO_3$-Fe_2O_3), magnetite (Fe2O4), and titaniferous magnetite. The term "titaniferous magnetite" refers to granular aggregates and exolution intergrowths consisting of ilmenite, magnetite, hematite, and titanomagnetite (a solid solution of Fe3O4-Fe2TiO4).

The iron- and titanium-rich deposits are classified as two subtypes on the basis of the principal ore minerals and the petrology of the host intrusions. The proportions of the principal ore minerals vary from ilmenite-dominant in anorthosite host rocks to titaniferous magnetite-dominant in gabbro and leucogabbro host rocks. The dominant mineralogy determines whether deposits are of interest as resources of titanium and iron or mainly of iron (Gross, 1965, 1967a).

Subtype 26.1 deposits consist mainly of ilmenite and hemo--ilmenite with minor titaniferous magnetite, and form massive irregular discordant intrusions or layered bodies hosted in massive anorthosite. Important examples are Lac Tio (Lac Allard), Degrosbois, Lac des Pins Rouges, St-Urbain, and Ivry (Morin anorthosite) in Quebec, Canada; Tellnes. and Egersund in Norway; and Ilmen Mountains in the former U.S.S.R.

Subtype 2 deposits consist mainly of titaniferous magnetite and minor ilmenite and complex Fe-Ti oxide mineral assemblages hosted in layered and/or massive intrusions of leucogabbro, gabbro, norite, and rocks or intermediate composition. Examples include Magpie Mountain, St. Charles, Lac Doré complex, Kiglapait, Newboro Lake, and Lodestone Mountain in Canada; Smaalands-Taberg in Sweden; Bushveld Igneous Complex in South Africa; Kachkanar and Kusinskoye in the former U.S.S.R.; Tahawus and Iron Mountain in the United States.

Deposits of both subtypes provide resources of titanium, vanadium, and iron. Some deposits contain important quantities of apatite (Gross, 1967a; von Gruenewaldt, 1993).

8.2- Importance

The Lac Tio deposit near Lac Allard, Quebec (Bergeron, 1972) is the only titanium-iron deposit (subtype 26.1) being mined in Canada at present. Mining was started in this area in 1961, and currently about 800 000 t of TiO_2 and 600 000 t of iron are produced annually from the processing of approximately 2 million tonnes of ilmenite Ore (Harben and Bates, 1990). Production from Lac Tio accounts for nearly 26% of the world production of titanium oxide (Adams, 1994). High quality iron metal and TiO_2 are co products recovered from titaniferous slag produced from the ilmenite ore of subtype 26.1 deposits. Iron ore concentrates in which the titanium content has been reduced to 1% or less have been produced from subtype 26.2 deposits. Other titanium-iron deposits hosted in mafic rocks are mined in Norway (subtype 26.1) and in Russia (subtype 26.2). Deposits of subtype 26.2 have been minor sources of iron ore in Canada in the past, and have been substantial sources of iron ore in the former U.S.S.R.

Titanium dioxide powder is a nontoxic, white pigment used in paint, plastics, rubber, and paper. Titanium metal, resistant to corrosion and with a high strength-to-weight ratio, is used in the manufacture of aerospace and marine components. Significant changes are taking place throughout the world with respect to the kinds and sources of raw materials used for the production of titanium oxide and metal. For example, environmental regulations in many countries make production of hard-rock-derived ilmenite impossible because of the large acid requirements. About 95% of the total titanium mineral production, from both primary magmatic deposits and heavy mineral placer deposits, is used in the production of titanium dioxide. About 20% of the world production of titanium oxide is recovered in the processing of rutile (TiO_2) derived from beach sands (see Adams, 1994). Sierra Leone is the primary producer of rutile.

8.3- Geological features

Despite the geological and economic importance of iron and titanium deposits hosted in mafic intrusions, few comprehensive reviews are available. Gross (l967a) and Rose (1969) provided geological descriptions and analytical data for deposits being mined and many of the deposits of possible economic importance known in Canada at the time. More recent reviews of the characteristics of titanium ores can be found in Korneliussen et al. (1985), and of anorthosite hosted deposits in Ashwal (1993).

8.4- Geological setting

Ilmenite and titaniferous magnetite deposits associated with anorthosite and gabbro are widely distributed in the Grenville Province and in many other tectonic belts of North America and the world. Both types of intrusive complexes are typically associated with granitoid gneisses, granulites, schists, amphibolites, quartzites, and skarn rocks of deep crustal settings but some occur in greenschists facies terranes.

Deposits of subtype 26.1 are hosted worldwide in anorthosite; intrusions of the Grenville Province are typical. Most of the deposits form discordant dykes, sills, and stock-like masses in the host anorthositic rocks; others are layered concentrations of Fe-Ti oxides within anorthosite or gabbro, concordant to layering in the host and to the internal fabric of late stage intrusions.

Subtype 26.2 deposits are hosted worldwide in mafic layered and massive intrusions, and are also widely distributed in the Grenville Province. The layered deposits generally form concordant, laterally continuous magnetite-rich layers measuring centimetres to metres thick. Deposits in massive intrusions usually consist of disseminated titaniferous magnetite. Deposits of subtype 26.2 also include massive discordant stock-like bodies of Fe-Ti oxide in layered deposits, as at Newboro Lake in Canada. The host intrusive complexes are typically differentiated and include gabbro, leucogabbro, diorite, diabase, gabbro-diorite, and quartz monzonite.

Concentrations of metallic oxide minerals in both subtypes 26.1 and 26.2 are conspicuously developed in four styles:

1. Disseminated syngenetic metal oxides in the host rocks;
2. Irregular to conformable auto intrusions which have sharp to indistinct or gradational borders with earlier phases of the host anorthosite and gabbro, and were emplaced during the lithification and cooling of the host intrusive rocks;
3. Late stage dykes and intrusions transecting the lithified host anorthosite and gabbro complexes;
4. In the skarn rock and alteration zones at the contact of the host intrusions and wall rocks.

8.5- Ages of host rocks and ore

Anorthositic host rocks to deposits of subtype 26.1 that have been dated in Canada are Proterozoic in age. These anorthosite complexes range in age from 1.65 Ga (Mealy Mountains; Emslie and Hunt, 1990) to 1.01 Ga (Labrieville; Owens et al., 1994). Major anorthosite-hosted deposits such as Lac Tio and lesser deposits such as St. Urbain, and Ivry and Degrosbois in the Morin anorthosite complexes occur within a much more restricted period with ages ranging from the 1.16 Ga Morin anorthosite (Doig, 1991) through the 1.06 Ga Havre-Saint-Pierre intrusion (van Breemen and Higgins, 1993).

In most cases the precise timing of the Fe-Ti oxide mineralization relative to the crystallization ages of the host anorthosite and gabbro rocks is not known specifically because suitable data are not available. The crystallization age of the Tellnes deposit (southern Norway), 920 ± 2 Ma, is measurably younger than the crystallization age of the host anorthosite, 930 ± 4 Ma (Duchesne et al., 1993), whereas crystallization ages for the Sybille deposit and host anorthosite (Wyoming) are indistinguishable within error at 1434 ± 1 Ma by the uranium-lead method (Scoates and Chamberlain, 1993).

Host rocks of subtype 26.2 deposits in Canada do not appear to be restricted in time. Ages of crystallization range from 2727 ± 1.3 Ma for the P3 ferric pyroxenite member of the Lac Dore complex (Mortensen, 1993; U-Pb zircon) through the 1305 Ma Kiglapait intrusion (DePaolo, 1985), which contains massive titanomagnetite layers, to the ≈ 540 Ma Sept -Iles intrusion, which contains local concentrations of titaniferous magnetite and ilmenite and low content of vanadium (Higgins and Doig, 1981).

8.6- Form of deposits and relation to host rock

Generalizations on the form and relationships of these deposits to host rocks are tenuous because of the many variations from deposit to deposit in the host rocks, mineralogy, and geological settings. Nevertheless the two groupings used herein may be of use for discussion, research, and exploration purposes. Both types of Fe-Ti oxide deposits occur in two general forms: massive lenses, dykes, sills, and irregular intrusions; and stratiform, layered, concordant, or irregular bodies. The Fe-Ti oxide minerals may be disseminated and interstitial to the silicate minerals or occur as massive aggregates separated from them. Deposits of subtype 26.1 of economic interest for the recovery of TiO_2 and iron metal are massive irregular intrusions. Deposits of subtype 26.2 are predominantly stratiform and layered. In some cases (e.g. Tahawus and Iron Mountain) attributes of both forms are combined in a single intrusive complex.

Ilmenite deposits of subtype 26.1 are typically massive discordant intrusive bodies in anorthositic host rocks but some also occur as conformable layers within late stage gabbroic, troctolitic, and dioritic intrusions in anorthosite. Some of the Fe-Ti oxide masses, especially along their borders with the host rocks, have local fragmented or brecciated structures, show evidence of plucking and stopping of the enclosing rocks, and contain abundant xenoliths of anorthosite and xenocrysts of plagioclase derived from anorthosite. Both massive and disseminated ores are found within a single intrusion. The massive discordant intrusions of Fe-Ti oxide range in shape from sinuous dyke-like forms to irregular equi dimensional masses.

Layered stratiform deposits of subtype 26.2 hosted in gabbro and leucogabbro usually contain layers of disseminated titaniferous magnetite which alternate with layers of feldspar and mafic silicate minerals. Individual layers range in thickness from centimetres to metres. Lateral continuity of oxide-rich layers in large intrusions may be in the order of several thousand metres.

8.7- Ore mineralogy, composition, and texture

The proportions of the common ore minerals, ilmenite, hemo-ilmenite, titaniferous magnetite, titanomagnetite, and magnetite vary greatly from one deposit or deposit type to another. The complex exsolution textures and mineral relationships that indicate mineral paragenesis and sequence of crystallization vary greatly and appear to be distinctive for individual deposits.

The principal ore minerals in deposits of subtype 26.1 are ilmenite, hemo-ilmenite and their exsolution intergrowths, and titanomagnetite. They are associated with plagioclase, pyroxene, olivine, garnet, biotite, apatite, ulvospinel, quartz, hornblende, rutile, and pyrrhotite which are present in varying proportions. Hemo-ilmenite, the principal ore mineral at the Lac Tio and Tellnes deposits (subtype 26.1) hosted in anorthosites, is typically equigranular with coarse exsolution lamellae of magnetite that constitute as much as 30 mole per cent of the grains. A second set of very fine exsolution lamellae of ilmenite is commonly developed within the broad hematite lamellae. The forms of earlier titanomagnetite grains can he recognized where the diagnostic trellis lamellae of ilmenite are still preserved along the {111} planes of the host magnetite.

Some parts of the Lac Allard ilmenite deposits contain 8 to 10% fluorapatite (Gross, 1967a). Ilmenite-apatite occurrences (nelsonites) have been reported in many anorthosites (Kolker, 1982). Some of the anorthosite-hosted Fe-Ti oxide deposits contain minor rutile. sapphirine, corundum, sillimanite, and graphite (Ashwal, 1993).

The principal ore minerals in deposits of subtype 26.2 are titanomagnetite, and other varieties of titaniferous magnetite and ilmenite which occur as discrete grains and as exsolution intergrowths in various proportions in magnetite. They are associated with plagioclase (commonly labradorite), olivine, pyroxene, and small amounts of apatite, titanite (sphene), rutile, spinel, biotite, pyrite, chalcopyrite, and pyrrhotite.

Mineralogy and texture are important factors to be considered in assessing potential resources that might he recovered from Fe-Ti oxide deposits. Massive ilmenite deposits of subtype 26.1, mined for the production of titanium oxide and iron metal, are usually coarse (<1cm) equigranular aggregates of ilmenite with minor titaniferous magnetite. The large titaniferous magnetite deposits of greatest interest as potential sources of iron ore consist of titaniferous magnetite, magnetite, and minor ilmenite in coarse, discrete grains that have a minimum of exsolution textures and intergrowths of Fe-Ti minerals. Material of this kind is amenable to processing and can provide concentrates of relatively pure magnetite that contain less than one per cent titanium.

8.8- Alteration

Some aspects of mineral alteration are considered in the section on genetic models.

8.9- Definitive characteristics of ore

1. Massive and layered ilmenite and hemo-ilmenite deposits (subtype 26.1) are hosted in anorthosite. Layered and massive concentrations of titanomagnetite, titaniferous magnetite, magnetite, and ilmenite (subtype 26.2) are hosted in differentiated mafic layered and massive intrusions.

2. Subtype 26.1 deposits are massive irregular to tabular bodies and disseminated masses of coarse grained ilmenite containing blades of exsolved hematite, pure ilmenite, and titaniferous magnetite hosted in massive or layered anorthosite and leucogabbro intrusive complexes, stocks, and sills.

3. Typical subtype 26.1 deposits contain from 20 to 40% titanium and 25 to 45% iron with Fe/Ti ratios of about 2:1, and 100 million tonnes or less mineable ore.

4. Subtype 26.2 deposits consist of layered disseminated concentrations and massive irregular to tabular intrusions of titaniferous magnetite, titanomagnetite, magnetite, and ilmenite. These minerals are distributed as discrete grains, and as granular and exsolution intergrowths. The host silicate phases include gabbro, gabbroic anorthosite, and other differentiated intrusive complexes ranging in composition from gabbro, through norite, quartz monzonite, to syenite.

5. The iron content in subtype 26.2 deposits ranges from 20 to 45%; Ti~ from 2 to 20%; Fe:Ti ratios vary from 40:1 to 2:1 and ere commonly about 5:1; the content of P20. varies to a maximum of about 8% and the content of V, Cu, Ni, Cr, and Mn may vary greatly, but the average for each element is about 0.25% or less.

6. As a group, subtype 26.2 deposits vary greatly in composition, mineralogy, and physical characteristics, but individual deposits are fairly uniform.

7. The mafic-hosted titanium-iron deposits of both subtypes vary greatly in character and composition depending on the kinds of associated host intrusions, the stage of differentiation and oxygen potential in the Magma from which they were derived, tectonic setting, and mobilization of elements during metamorphism (cf. Yoder, 1968).

8. They are important as sources of titanium oxide and high quality iron metal that are recovered as co products, and as resources of iron are concentrate in which the titanium content can be reduced to one per cent or less.

8.10- Genetic models for mafic intrusion-hosted titanium-non deposits

(J.S. Scoates)
The titanium-iron deposits that are associated with Proterozoic anorthosites and layered mafic intrusions are clearly late products of the crystallization history of individual intrusions. Brecciation of ore-hosting anorthosite and truncation of structural elements in anorthosite are clear evidence for late intrusion of the ore-forming magmas in many subtype 26.1 deposits. Conformable layers in small intrusions in anorthosite and in large mafic layered intrusions throughout the world indicate an origin by crystal settling and accumulation on the floors of magma chambers for subtype 26.2 deposits and parts of subtype 26.1 deposits.

Both subtypes of deposits require extensive periods of prior plagioclase crystallization to concentrate Fe and Ti in residual magmas, and variations in the oxidation state of the magmas (monitored by the intensive parameter – oxygen fugacity) to promote the formation of the titanium-iron deposits. Hemo-ilmenite deposits (subtype 26.1) require relatively more oxidizing conditions of formation compared to the more reduced titanomagnetite deposits (subtype 26.2).

Evidence is lacking for the presence of hydrous fluids during formation of the Ti-Fe deposits, although CO2-dominant fluids were likely present. The preserved primary mineral assemblages are typified by anhydrous mineralogies. Hydrous minerals are always late and volumetrically minor (<<1%) or definitely related to crosscutting monzonitic or granitic intrusions. The presence of grain-boundary graphite and CO2-rich inclusions in apatite from anorthosites indicates that the very small amounts of fluids associated with anorthosites were probably CO2-dominated.

The genesis of the discordant, massive Fe-Ti oxide deposits associated with Proterozoic anorthosites is the least understood of the deposit types. Two end-member genetic models are currently under consideration: (1) remobilization of Fe-Ti oxide-rich cumulates. And (2) formation of a Fe-Ti-oxide-rich, silica-poor immiscible melt. The remobilization mechanism involves the intrusion of dense, solidified Fe-Ti-oxide-rich cumulates into cracks or fractures within the host anorthosite (Bateman, 1951; Hammond, 1952; Ashwal. 1982, 1993). A similar remobilization mechanism, but also involving magma mixing, has been proposed for the Tellnes deposit of Norway (Wilmart et al., 1989). In this scenario, a noritic magma crystallized Fe-Ti oxides which concentrated at the bottom of the chamber, and plagioclase which concentrated at the top of the chamber. Before complete solidification, the chamber was tapped and Fe-Ti oxide cumulates were injected into a dyke that already contained a fractionated monzonitic melt.

A liquid immiscibility origin for the massive ores has been proposed for most of the large deposits in Quebec for many years (Hargraves, 1962; Anderson, 1966; Lister, 1966; Philpotte, 1966, 1967). Liquid immiscibility, the separation of a single magma into two distinctive liquid phases is most likely to occur in systems with bulk compositions high in total iron, TiO_2, P205 and high ratios of Fe^{3+}/Fe^{2+} (oxidized conditions) (Naslund. 1983). Rocks of these compositions are found throughout Proterozoic anorthosite complexes and are referred to as ferrodiorites, monzonorites, jotunites, and oxide-Apatite-rich gabbronorites. These Fe-Ti-P-enriched rocks are considered to have formed as residual liquids following extensive crystallization of plagioclase to produce the associated anorthosites.

Experimental support for the liquid immiscibility mechanism is derived from the observation in the system magnetite-fluorapatite that an immiscible eutectic melt with a composition of approximately two-thirds by volume magnetite and one-third apatite can separate from a silicate melt (Philpotts, 1967), although the temperatures of the experiments were geologically unreasonable (1420ºC). Liquid immiscibility may be appropriate for the production of small apatite rich oxide deposits, referred to as nelsonites (Kolker, 1982), but the majority of the major deposits are apatite-poor. If liquid immiscibility is to remain a reasonable option in the formation of titanium-iron deposits, then an additional suitable flux must be found associated with the massive ores, because the melting temperatures of pure Fe-Ti oxides are unrealistically high.

Titanium-free oxide liquids do exist, as exemplified by the magnetite lava flows of El Laco, Chile (Park, 1961; Henriquez and Martin, 1978), and by the experiments of Weidner (1982), which show that graphite and C-O fluids flux oxide liquids to temperatures below l000ºC. However, there is limited evidence for the existence of Fe-Ti oxide melts. Recent experimental work shows that graphite does not stabilize Ti in oxide liquids (Lindsley and Philipp, 1993), and thus the mechanism required for the generation of apatite-poor, Ti-bearing immiscible melts remains elusive.

The origin of conformable Fe-Ti oxide-rich layers in layered intrusions is more straightforward than that for the discordant massive intrusions. The conformable layers represent the overproduction of Fe-Ti oxides in a progressively crystallizing magma, mainly in response to local variations in oxygen fugacity (Morse, 1980). Prior to the cumulus arrival of magnetite and/or ilmenite in a magma, protracted crystallization of plagioclase will enrich the residual magma in Fe, Ti, (and V), and increase the density of this residual melt. The prominent titanomagnetite layers in the Kiglapait intrusion of Labrador (Morse, 1969, 1980) and the Bushveld Igneous Complex of South Africa (Willemse, 1970; Reynolds, 1985) occur relatively high in the stratigraphic sections of these intrusions, and require crystallization from magnetite-supersaturated liquids.

The compositions of Fe-Ti oxides in both hemo-ilmenite-rich and titanomagnetite-rich ores can undergo substantial modification during cooling by both intra- and intercrystalline reaction and exchange. During slow cooling, the titanium component in titanomagnetite may be exsolved by oxidation to form either discrete lamellae of ilmenite in magnetite, or granular exsolutions of ilmenite around magnetite grains, a process called oxy-exsolution (Buddington and Lindsley, 1964):

$6Fe_2TiO_4$	+	$O_2 = 6FeTiO_3$	+	$2Fe_3O_4$
in magnetite		ilmenite		magnetite

This reaction may be facilitated by the presence of a CO_2-rich fluid, and can occur to very low temperatures (400-500ºC) as a result, titanomagnetite grains can purge themselves entirely of the original titanium component, and the resultant ore mineralogy and texture is one of interlocking discrete grains of magnetite and ilmenite. In addition, at relatively high temperatures, exchange of titanium and iron between individual grains of magnetite and ilmenite can occur according to the following equilibrium reaction, which proceeds to the right with decreasing temperature:

Fe_2TiO_4	+	Fe_2O_3 =	$FeTiO_3$	+	Fe_3O_4.
in magnetite		in ilmenite	ilmenite		magnetite

This produces magnetite and ilmenite grains that will approach their end-member compositions as cooling proceeds.

Oxidation of ilmenite-rich deposits can result in the alteration of ilmenite to rutile. Associated alteration of silicate and Fe-Ti oxide minerals always postdates the formation of the deposits.

9- Mineralization (Item 11)

The Iron-T Vanadium-Titanium-Iron property hosts the Lake Olga Fe-Ti-V occurrence discovered by Black and Freeman (1944) and located approximately 1.8 km NE of Lake Shallow. Please see: Figure 3: Simplified Geology of the Iron-T Property.

This occurrence was originally assayed for Fe and Ti contents. Grabs samples returned 39.98% and 50.21% Fe and 6.49% and 8.92% Ti. This showing was also the subject of stripping work (Trench A and Trench B) and of diamond drilling (ddh' S LT98-01 and LT98-02) carried out by Noranda in the year 1998.

The geological model of the Iron-T mineral deposit covers an area of 1400 m long by 15 m to 70 m wide and with a maximum vertical extension of 220 m deep. The geological model is open on all directions.

The information in this section is modified from the report on petrographic and mineralogical study by M. Taner, May 2010.

Taner et al. (1998) conducted a mineralogical and petrological study of vanadium mineralization in the Bell River and Lake Doré Complex. This study indicates that the vanadium mineralization is associated to magnetite and ilmenite layers within the layered ferrogabbro zone of the upper part of the Bell River Complex. The oxide-rich gabbro horizons varying in width form 10 to 100 m clearly appear on the airborne regional magnetic survey. The oxide-rich gabbro is a mineralized cumulate forming either homogeneous horizons with disseminated oxide mineral contents ranging from 20 to 60% or homogeneous massive layers with oxide mineral contents varying from 60 to 90%. Massive oxide mineralized bands are interlayered with poorly mineralized gabbro forming pluri-centimetric to decimetric scale interlayers and contribute to the dilution of the vanadium mineralization. Mineralized layering of the gabbro appears to be at 285˚, dipping north from 75˚ to 85˚.

Optical microscopy indicates that oxide minerals comprise magnetite and ilmenite varying in size from 1 mm to 2 mm to less than 5 µm. They occur as subedral crystals intergrown with cumulus silicate minerals such as plagioclase and pyroxene. Electron microprobe analysis indicates that ilmenite is mineralogically and compositionally homogeneous and characterized by very low vanadium content. Titaniferous magnetite is inhomogeneous and hosts trellisworks of ilmenite lamella in Ti-poor and V-rich magnetite. Based on ionic charge and size considerations, vanadium is mainly associated with magnetite (Fe2+Fe3+2O4) where it replaces trivalent iron. Substitution may also occur with aluminum (Al) and titanium (Ti). Electron microprobe analysis was conducted by Lakefield Research Ltd (GM 58344) on five samples collected from the area of which one (Sample Nu 61344M) can be attributed to the Trench A on the property. A total of 38 magnetite grains and 22 ilmenite grains were analyzed.

Mineralogical and petrologic study of vanadium mineralization on the property by Taner et al. (2010) indicated that the vanadium mineralization is associated to magnetite and ilmenite layers within the layered ferrogabbro zone. It indicated also that the vanadium is mostly contained within the magnetite and that the magnetite: ilmenite ratio varying from 5:2 to 3:2. Please see description below.

9.1- Ilmenite

Ilmenite, FeTiO3, occurs as separate grains 0.4-2 mm across, intergrown with titanian magnetite, which occupy interstices between cumulus minerals. The grains may occur alone or as aggregates that have smooth or irregular, sharp contacts with adjoining magnetite. A textural variety of the ilmenite occurs as exsolution laths within titanian magnetite and, in some cases, constitutes irregular grains within magnetite. This lamellar textural variety was observed in both complexes. The vanadium content of ilmenite grains is very low (the average value of 11 analyses is 0.17 equivalent V_2O_5 % for the Matagami deposit), relative to magnetite samples (1.34% equiv. V_2O_5 for 24 analyses) and the vanadium content of ilmenite grains is again very low (the average value of 12 analyses is 0.53 equivalent V_2O_5 % for the Lac Dore deposit), relative to magnetite samples (1.76% equiv. V_2O_5 for 25 analyses). In addition to analyzing discrete ilmenite grains, we attempted to analyze ilmenite laths in magnetite grains. Most laths (ilmenite lamellae) are too narrow for electron-microprobe analysis; however, one large lath within a magnetite grain was suitable. Its composition compares well with that of the discrete grains of ilmenite

9.2- Magnetite

Magnetite, Fe_2+Fe_3+2O_4, is the principal host for vanadium in magmatic ores. Trivalent iron in magnetite may be replaced by Al, Ti, V and, more rarely, by Cr. A number of exsolution products can be found in magnetite formed at high temperature, most commonly ilmenite, but also other spinels, including spinel sensu stricto ($MgAl_2O_4$), hercynite ($FeAl_2O_4$), and magnesioferrite ($MgFe_2O_4$).

The titanian magnetite always contains the ilmenite exsolution lamellae. One can distinguish two generations of lamellae. Thus, the ilmenite laths occur in two distinct widths that differ by a factor of 10. The wider laths, 10 to 40 μm are rare, but common for the Lac Dore deposit. The narrow laths are 1 to 3 μm wide (Figs. 25, 46, 53 and 54) lie within {111} octahedral crystallographic planes of the magnetite host. Sections cut parallel to {111} have a characteristic distribution of ilmenite laths in equilateral triangles forming a trellis texture. Trellis lamellae are generally attributed to "oxidation-exsolution", whereas other ilmenite can be products of either oxidation or primary crystallization (Buddington & Lindsley, 1964; Haggerty, 1991). Sections cut parallel to {100} planes in magnetite have ilmenite laths distributed in a square pattern. The wide laths are usually more widely spaced and continuous than the narrower ones that occur between them. The magnetite grain boundary with any adjoining grain of ilmenite is invariably very irregular. These textural relationships are well established in the literature, as illustrated by Ramdohr (1980) and Haggerty (1991).

Our electron-microprobe data indicate that the Ti contents of the magnetite in the intergrowths is low, generally less than 2 wt. % TiO_2. For comparison, compositions of mixtures (Table 15) represent the magnetite containing the ilmenite lamellae, which can be taken as crude approximations of the bulk composition. The analyses have TiO_2 contents in the range 5.64% to

13.95%, which are comparable to those given in the literature for macroscopic "titanomagnetite" and "Ti magnetite" (Reynolds, 1985; Von Gruenewaldt et al., 1985, respectively).

The vanadium contents of titanian magnetite (appendix I) established for 24-analysis (average value of 1.34% equiv. V_2O_5, for the Matagami deposit) and 25-analysis (average value of 1.76% equiv. V2O5, for the Lac Dore deposit). The distinction is important because only the magnetite portion of the intergrowths hosts significant amounts of vanadium. It is pointed out that the V_2O_5 values are a little higher for the Lac Dore sample (25-analysis average value of 1.76% equiv. V_2O_5), because the magnetite grains contain less fine ilmenite exsolution lamellae, as indicated the amount of TiO_2, varying from 0.03% to 0.06% (e.g., Table 12). The high V_2O_5 values, compared to the sample from the Matagami deposit (24-analysis average of 1.34% equiv. V_2O_5), indicate that we analysed pure magnetite field in magnetite grain without fine ilmenite exsolution lamellae at Lac Dore deposit.

9.3- Hercynite

One can find small grains (one to ten m) of hercynite ($FeAl_2O_4$), associated to ilmenite lamellae. One microprobe analysis of hercynite in sample MA6, represented about more than 2 % of volume within titanian magnetite. Its vanadium content is very low (0.34% V_2O_5).

Figure 4: General View of Trench A

Figure 5: Trench A – Magmatic layering associated to massive oxide mineralization

Assay results of holes L-1-82-1, LT98-01 and LT98-02 confirm that the vanadium content is closely correlated with iron contents of the host rock. Given that vanadium targets are also expressed as zones of high magnetic susceptibility, it is considered that ground magnetic surveys will provide the most effective approach to locate favourable horizons that may be indicative of vanadium mineralization throughout the property. The vanadiferous oxide mineralization is associated with leucocratic to melanocratic gabbro; pyroxenite and magnetite units followed 21 km in a WNW – ESE direction from Matagami to Lake Olga.

10- Exploration (Item 12)

The following information was provided by Apella and from their different press releases. For the exploration done prior to Apella, please refer to section: 6.2 Previous Exploration.

Apella conducted in August 2008 a channel sampling program to validate previous assays results obtained on the Trench A excavated by Noranda in 1997.

10.1- 2008 Stripping and Channel sampling

The channel sampling was conducted by Apella's exploration team under the supervision of Dr Christian Derosier, P.Geo consultant and chief geologist for Apella. Twenty-five channel samples were collected over three channels across oxide mineralization on Trench A. The total sampling length was 25 m and the sampling length fixed at 1.0 m. Assay results returned values between 0.40% V_2O_5 , 6.46% TiO_2 and 28.07% Fe (total) over 9.00 m and 0.56% V_2O_5, 9.26% TiO_2 and 36.88% Fe (total) over 8.00 m. The weighted average of the three channels is 0.49% V_2O_5, 8.09% TiO_2 and 33.20% Fe (total) over 8.33 m. The channel sampling program confirmed previous results for the vanadium content obtained by Noranda in 1997 over the Trench A but indicated that vanadium grade is associated with lower iron concentrations. Assays results and calculated weighted grade for Fe, TiO_2, V and V_2O_5 for each channel are summarized in the following table.

Channel Nb	Sample Nb	From (m)	To (m)	Lenght (m)	Fe (%)	TIO_2 (%)	V (%)	V_2O_5 (%)
1	825401	0	1	1	11.45	1.86	0.08	0.14
1	825402	1	2	1	8.87	1.39	0.05	0.09
1	825403	2	3	1	24.7	5.5	0.2	0.36
1	825404	3	4	1	39	10.15	0.38	0.67
1	825405	4	5	1	27.1	5.75	0.21	0.37
1	825406	5	6	1	32.8	7.42	0.25	0.45
1	825407	6	7	1	37.6	9.3	0.3	0.54
1	825408	7	8	1	39.2	9.79	0.32	0.57
1	825409	8	9	1	31.9	7.01	0.22	0.4
Weighted average - channel 1				**9**	**28.07**	**6.46**	**0.22**	**0.4**
2	825410	0	1	1	22.3	4.93	0.18	0.32
2	825411	1	2	1	32.7	8.15	0.29	0.52
2	825412	2	3	1	36.1	9.24	0.33	0.59
2	825413	3	4	1	36	8.65	0.31	0.55
2	825414	4	5	1	38.2	9.36	0.32	0.58
2	825415	5	6	1	41.2	10.65	0.34	0.61
2	825416	6	7	1	43.6	11.5	0.39	0.69
2	825417	7	8	1	32.3	7.4	0.24	0.43
Weighted average - channel 2				**8**	**35.3**	**8.74**	**0.3**	**0.54**
3	825418	0	1	1	27.2	6.76	0.24	0.43
3	825419	1	2	1	47.1	12.9	0.46	0.82
3	825420	2	3	1	26.7	6	0.22	0.39
3	825421	3	4	1	35.9	8.7	0.31	0.55
3	825422	4	5	1	39.4	9.48	0.33	0.59
3	825423	5	6	1	45.3	12.2	0.38	0.68
3	825424	6	7	1	37.8	9.4	0.31	0.54
3	825425	7	8	1	35.6	8.65	0.27	0.48
Weighted average - channel 3				**8**	**36.88**	**9.26**	**0.31**	**0.56**
Weighted average of three channels				**8.33**	**33.2**	**8.09**	**0.28**	**0.49**

Table 3: 2008 channel sampling assay result on trench A

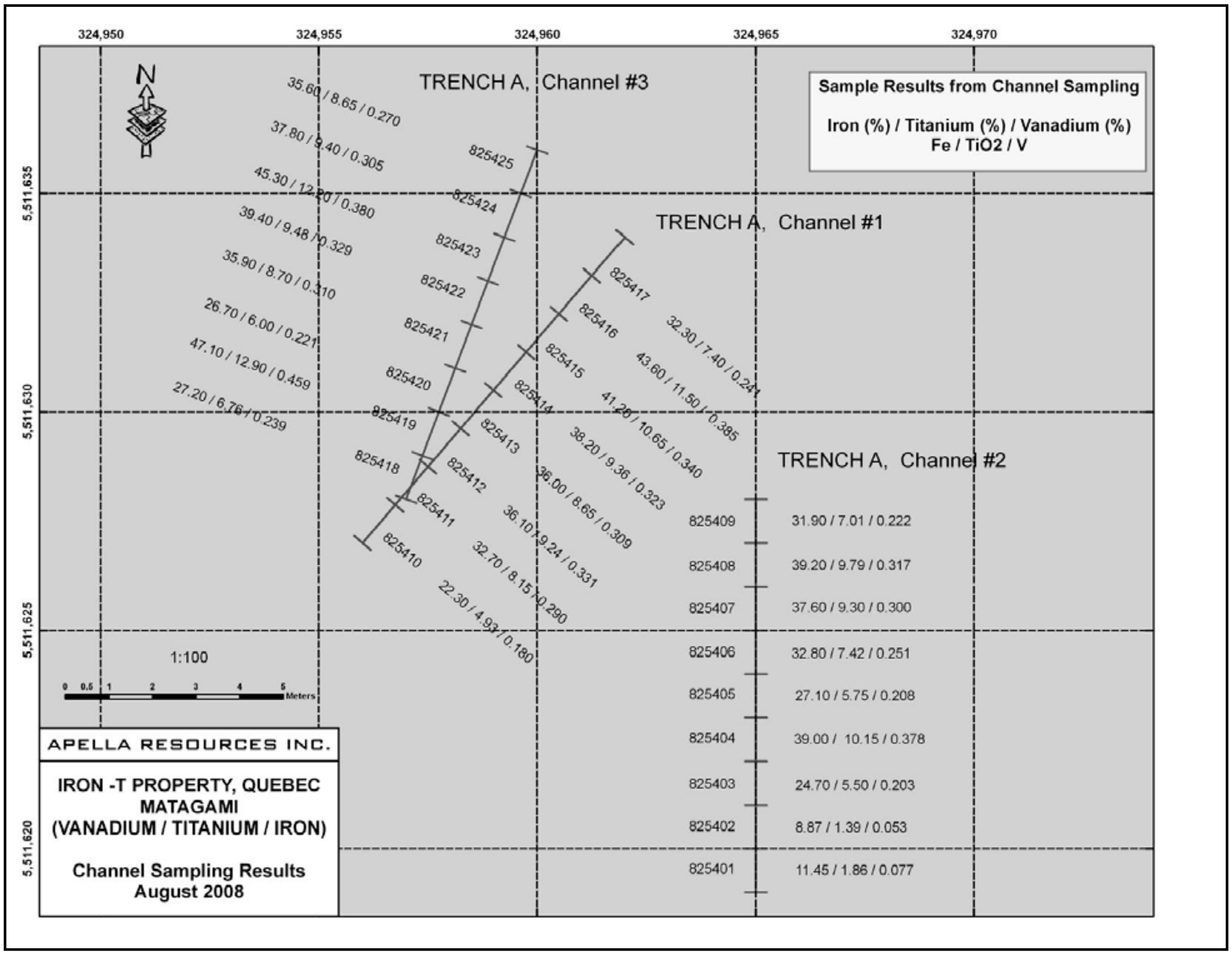


Figure 6: Trench A - Channel sampling Location

10.2- 2010 Stripping, mapping and Channel sampling

In July 2010, Apella stripped, washed, mapped and channel sampled three freshly discovered V-Fe-Ti occurrences it had identified on the Iron-T. The three stripped areas are referred to as T-1, T-2 and T-3 and reviewed below in reverse order. All the surveys and investigations related to the 2010 stripping, mapping and channel sampling have been carried out by Apella.

10.2.1- Discovery Zone T-3

It corresponds to a mineralized outcrop discovered while carrying out the last drilling programme. This highly mineralized outcrop is located 25 m (82 feet) north of Apella drill hole MA-10-15. The showing clearly displays numerous semi- massive to massive oxide layers (20-40 cm thick), and corresponds to a high magnetic anomaly Apella refers to as the II Zone.

The extensive T-3 stripping is 35 m long by 20 m wide. Semi-massive to massive oxide layers have been observed and sampled. Because of the rounded nature of the outcrops, with their steep slopes due to the presence of strong fractures, the channel sampling has been made on short lengths. A total of four channels were sawn covering a total length of 23.75 m. At this location, channel samples are 1.50 m long. Results obtained are as follows:

T3 Channel Sampling Results	Length (m)	Fe_2O_3 (%)	TiO_2(%)	V_2O_5(%)	V2O5Eq(%)
T-3A	11.75	41.64%	7.73%	0.42%	0.78%
T-3B	4.5	53.51%	8.85%	0.65%	1.12%
T-3C	3	46.47%	9.24%	0.51%	0.92%
T-3D	4.5	51.81%	10.32%	0.54%	1.00%

Table 4: T3 Channel sampling (2010) results summary

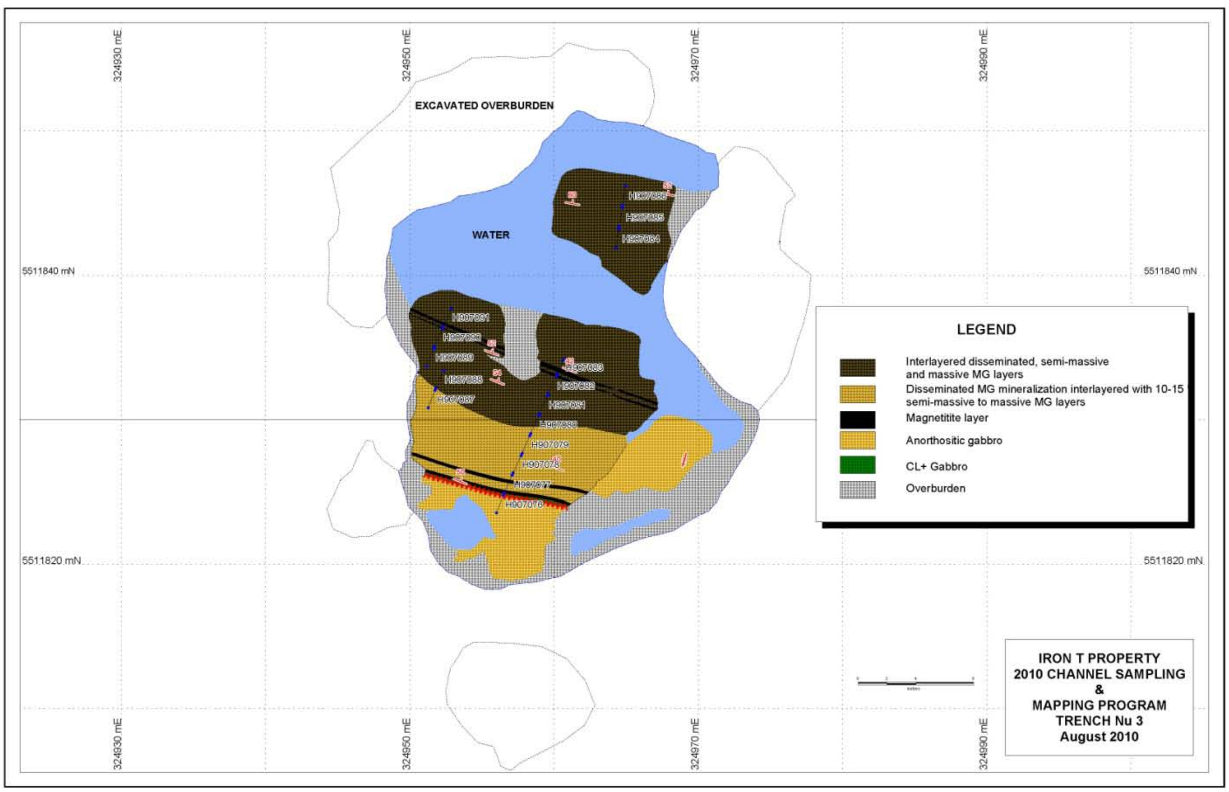


Figure 7: 2010 Channel Sampling Trench 3 (T-3)

Figure 8: Channel Sampling at T-3

10.2.2- Discovery Zone T-2

The stripping corresponds to mineralization discovered by prospecting during the last drilling campaign. At the time, a grab sample was taken in a massive oxide layer and assayed (see Apella's Press Release of Thursday June 17, 2010). It returned 46.48% Fe_2O_3, 8.14% TiO_2 and 0.64% V_2O_5. The T2 stripping is 60 m by 15 m wide. A total of 32 channel samples, each 1.25 m long, were taken, covering a length of 40 m. Results are as follows:

T2 Channel Sampling Results	Length (m)	Fe_2O_3 (%)	TiO_2(%)	V_2O_5(%)	V2O5Eq(%)
T-2A	3.75	27.07%	3.80%	0.20%	0.43%
T-2B	36.55	25.22%	3.66%	0.20%	0.41%

Table 5:T2 Channel sampling (2010) results summary

Even though the initial channel sample results obtained show that the T-2 stripping crosses a low grade zone with thin massive oxide layers these results justify a verification of the grade at depth by one or two drill holes.

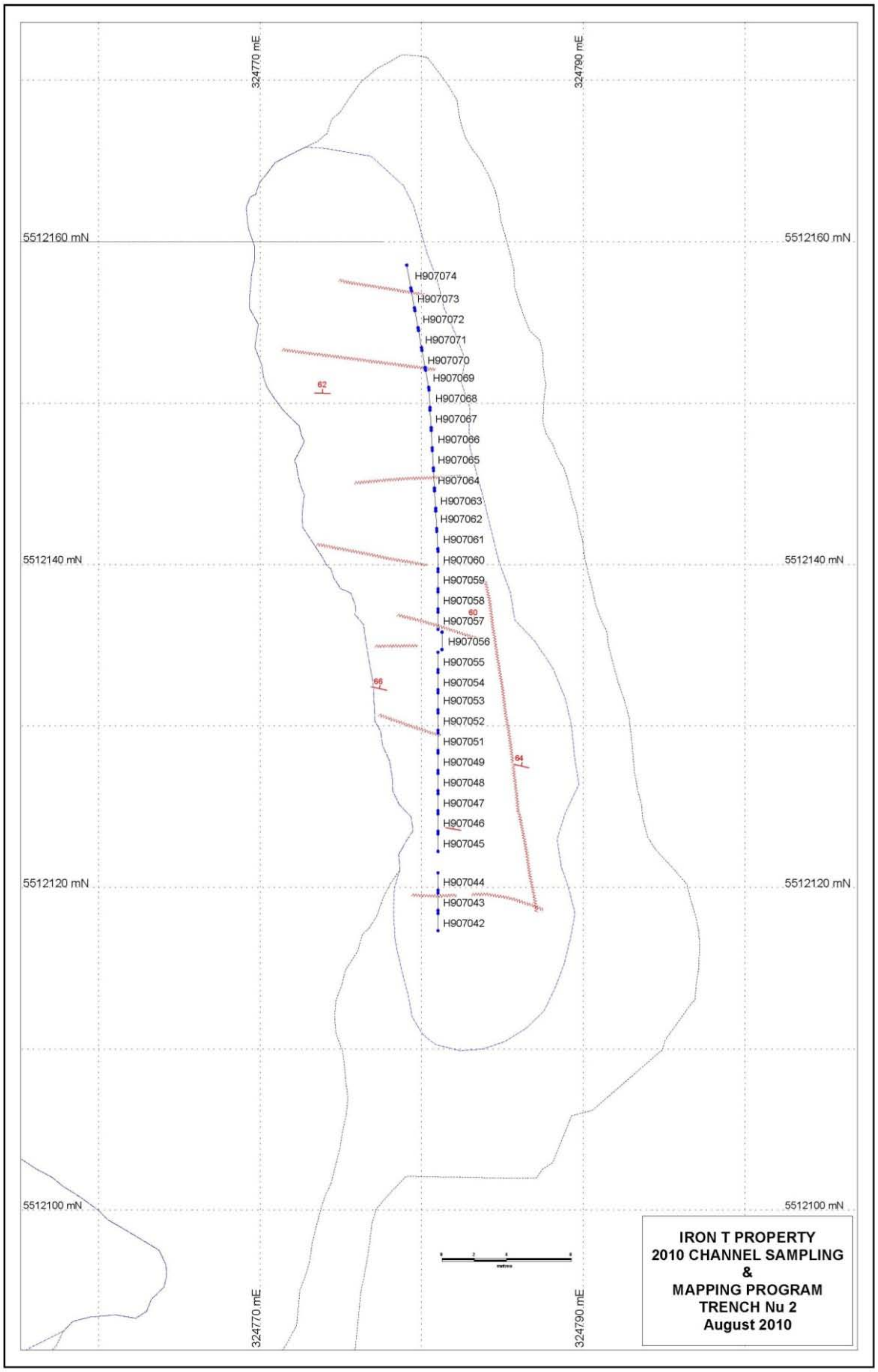


Figure 9: 2010 Channel Sampling Trench (T-2)

10.2.3- Discovery Zone T-1

It is the widest and most extensively stripped area of the three discovery zones of the 2010 stripping programme. The stripping on T-1 identified outcropping over an area about 100 m (328 feet) long by 30 m (98.40 feet) wide. It crosses a strong magnetic anomaly. Observed mineralization corresponds from disseminated through to narrow massive oxide layers. Six channels have been sawn and a total of 40 channel samples were taken for analysis. Each channel sample is 1.25 m long (4.10 feet). Total sampled length is 60 m (197 feet). Results are as follows:

T1 Channel Sampling Results	Length (m)	Fe_2O_3 (%)	TiO_2(%)	V_2O_5(%)	V2O5Eq(%)
T-1A	5.0	32.48%	5.43%	0.30%	0.59%
T-1B	2.5	28.21%	4.53%	0.24%	0.49%
T-1C	11.5	33.36%	5.08%	0.34%	0.63%
T-1D	20.0	31.73%	5.28%	0.26%	0.53%

Table 6: T1 Channel sampling (2010) results summary

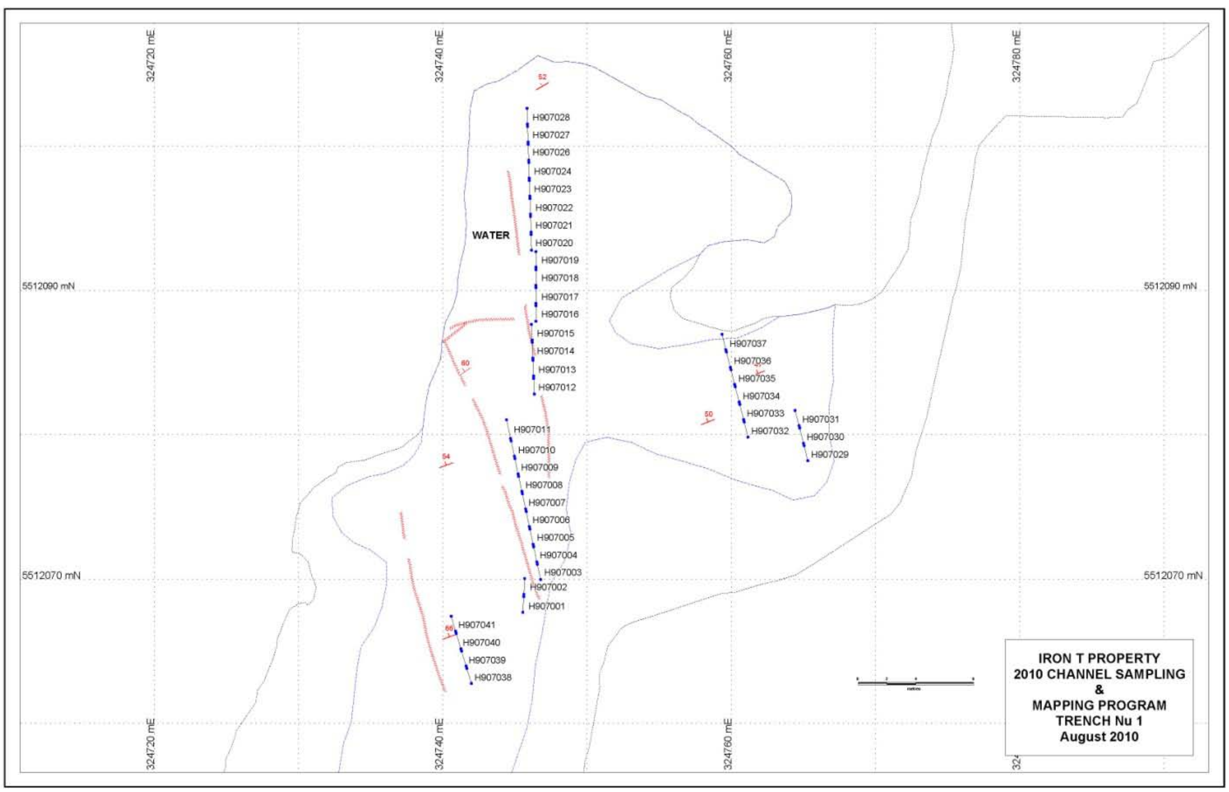


Figure 10: 2010 Channel Sampling Trench (T-1)

10.3- 2010 Ground Magnetic Survey

In 2010, Apella retained the services of Abitibi Geophysics Inc. from Val d'Or, (Quebec) to conduct a 250km Magnetic-GPS survey on the Iron-T property in 2010. Please see: 25.1- Iron-T zones and 25.2- Apella's Planned 2011 Drilling Campaign.

The magnetic survey comprised approximately 250 km of transversal lines, base lines and tie lines over the entire western part of the property from Shallow Lake to the Bell River. It represents about 50% of the total area of the Iron-T Project. The central part of the Iron-T which was the subject of the 2009-2010 exploration drilling campaigns, as well as the eastern part, have been surveyed by Apella over the years from 2007 (17 original claims) to March 2010.

The results of the new magnetic survey helped the company to locate future drill targets for the better knowledge and possible size and tonnage growth of the Iron-T property mineral deposit and other prospecting zones.

Previously, the Iron-T area was covered by a regional airborne magnetic and electromagnetic INPUT MK VI survey which was conducted in 1977. In addition, the western half of the Iron-T Vanadium-Titanium-Iron property, now being ground surveyed by Apella was covered by a regional airborne gradiometric survey carried out in 1984. Please see: 6.1- Regional Airborne Magnetic and Electromagnetic Survey. The two airborne magnetic surveys outlined a broad magnetic anomaly up to 4,000 nT above the background level which is continuous over some 25 km in a WNW direction.

To date, the ground magnetic surveys undertaken by Apella have shown a direct relationship with the Vanadium, Iron and Titanium mineralisation discovered. They have also provided more precise locationing of the anomalies and more accurate shapes of the targets.

This latest ground magnetic was carried over lines at 100 spacings with readings every 2 seconds. The diurnal corrections are made with a synchronized Mag base station. Observation of the Total Magnetic Field (TMF) was recorded and will be treated with Geosoft software. The Vertical Gradient will be calculated from the TMF. The survey was also planned to confirm the lengths and widths of a number of specific airborne anomalies. It covered a 3 km long NW oriented magnetic axis which starts near the southwest shore of Shallow Lake and which seems to joins the main magnetic axis. This magnetic "South Branch" is about 3 km long and has never been drill tested.

10.4- 2010 Detailed Topo Mapping

Apella has received from Viasat Geo Technologies Inc. all data permitting it to address a topographic map of the whole Iron T mining property. The data includes geo-referenced rivers, roads and lakes; as well as level curves at 1 m interval. The base of this topographic map is a mosaic of satellite images from Worldview-2 at 50 cm resolution. The base topographic map was released in jpeg format at a scale of 1: 25 000. The cartographic reference system used for local mapping and drawing is Universal Transverse Mercator projection for Canada (NAD 83), Zone 18. The present satellite image taken in August 2010 clearly shows all drill sites and stripping made since 1998. The grid of cut lines made in 2009 is also well visible. Please see: 25.3- 2010 Detailed Topo Mapping.

11- Drilling (Item 13)

11.1 Historical Drilling

The following describes historical diamond drilling programs conducted on the current property.

Apella reviewed the historical diamond drilling completed on the Iron-T Vanadium-Titanium-Iron property from existing historical logs, sections and maps. The following table summarizes diamond drilling completed on the property since 1959. However, the most significant drilling results in regard to oxide mineralization were generated by Juna Mining & Exploration Ltd, SDBJ and Noranda. The results of this work will thus be discussed more in detail. Please see next figure.

Year	Company	Number of DDH's	Total Length (m)
1998	Noranda	2 ddh's (LT-98-01 and LT-98-02)	196.3
1982	Noranda	2 ddh's (PAN-82-1 & PAN-82-2)	357
1982	SDBJ	1 ddh (L-1-82-1)	91.44
1963	Juma Mining & Exploration Ltd	2 ddh.'s (L-1 & L-2)	304.4
1962		4 ddh's (1, 2, 5, 6)	402
1962	Mining Corp of Canada Ltd	1 ddh (5)	134
1959	Chibougamau Mining and Smelting Co. Inc.	2 ddh's (MA-1 & MA-2)	441
	Total	**14**	**1 926.14**

Table 7: Summary of Historical Diamond Drilling

In 1962, Juma Mining & Exploration Ltd conducted 304.40 m of AX core diamond drilling. Hole L-1 was collared on a north azimuth with an inclination of -45°, approximately 350 m NW of the Lake Olga Fe-Ti-V occurrence. The hole was drilled with an AX core size. After 14.30 m of overburden along hole, heavy magnetite oxide mineralization (5-80%) was encountered to a depth of 75.60 m in a metagabbro unit. Assuming a sub vertical dip of metagabbro unit, the true width of oxide mineralization is estimated to 43.4 m. A second magnetite-bearing horizon was intersected between 141.7 to 144.8 m (true width estimated to 2.2 m). This interval contains 60 to 90% of magnetite with trace amounts of pyrrhotite and chalcopyrite. The hole was halted to at 144.8 m due to rock conditions. Assays results are not provided in the diamond drill log.

Hole L-2 is located approximately 100 m WNW of hole L-1. This hole was bored in a north direction and inclined at -45°. Bedrock was intersected at a depth of 22.9 m along hole. Six magnetite-bearing metagabbro horizons were intersected from 43.9 m to 57.60 m; 63.1 m to 64.6 m; 66.4 m to 90.8 m; 91.4 m to 96.9 m; 109.1 m to 149.4 m and 151.2 m to 159.4 m. The estimated true widths of these mineralized horizons ranges from 1.1 m to 28.5 m with a variable magnetite content of 5 to 70%. The hole was halted at a depth of 159.4 m in a metagabbro unit associated with 10 to 70% magnetite. The casing was left in the hole. There are no assay results available.

In 1982, SDBJ collared hole L-1-82-1 some 325 m NW of the Lake Olga Fe-Ti-V occurrence, on a N200° direction with an inclination of -45°. The hole was drilled using BQ core. After 7.77 m of overburden, the hole encountered mainly a sequence of leucocratic to mesocratic metagabbro interlayered with a serpentinized metaperidotite from 31.03 m to 71.78 m. The serpentinized ultramafic horizon contains 30-50% magnetite. Assay results returned 0.19% V (0.34% V_2O_5 equivalent), 6.74% TiO_2 and 25.19% Fe (total) over 56.39 m (estimated true width 39.87 m). Pyrite, pyrrhotite and chalcopyrite are present in minor amounts.

Holes PAN-82-1 and PAN-82-2 were collared by Noranda approximately 1 km NW of Lake Shallow in order to test EM conductors. AQ core diamond drilling totalled 357 m. Both holes were bored in a north direction and an inclination of -50°. The holes intersected heterogeneous layered sequences varying in composition anorthositc gabbro to melanoratic gabbro. The normal gabbro is the most abundant unit. Magnetite content varies from 5-20%. Casings have been left in both holes. There are no assay results provided in diamond drill logs. However, Taner & Allard (1998) reported values of 0.11% V or 0.19% V_2O_5 equivalent, 2.79% TiO_2 and 24.08% Fe (total) from a core sample collected at a depth of 61.87 m in hole PAN-82-2.

In 1998, Noranda completed 196.3 m of NQ diamond drilling (LT98-01 & LT98-02) in order to test high magnetic anomalies as well as the extent at depth and along strike of the vanadiferous oxide mineralization on Trenches A and B. The holes were spaced 430 m apart. Hole LT98-01 is located approximately 205 m to the west of Trench A whereas hole LT98-02 is located at 200 m to the east of Trench B.

Hole LT98-01 was collared on grid line 2+00W at station 1+25N, on a south azimuth with an inclination of -45°. After 11.20 m of casing, gabbroic rock was encountered to a depth of 12.30 m. From 12.30 m to 48.75 m, the hole intersected a magnetite-ilmenite rich (20-50%) gabbro. The magmatic layering is oriented at 45° to the core axis. A second mineralized gabbro with 5-25% magnetite-ilmenite was intersected from 53.60 m to 61.10 m. Leucocratic gabbro or mafic diorite, locally deformed, schistozed and cataclased were intersected to a depth of 78.40. The hole was halted in a fine-grained granophyre at 83.30 m. Composited assay results returned 0.19% V (0.34% V_2O_5 equivalent), 6.17% TiO_2 and 42.16% Fe (total) over 36.45 m (estimated true width 25.77 m); and 0.18% V (0.32% V_2O_5 equivalent), 4.84% TiO_2 and 30.04% Fe (total) over 7.50 m (estimated true width 5.30 m).

Hole LT98-02 was collared on grid line 2+00E at station 0+10N, on a north azimuth with an inclination of -45°. Bedrock was intersected to a depth 3.30 m. From 3.30 m to 82.60 m, the hole intersected a heterogeneous sequence of gabbro, locally deformed and cataclased, interlayered with ilmenite-magnetite-bearing gabbro layers ranging from 1.4 to 4.1 m in thickness. The iron oxide content varies from 2-50%. A massive (90%) iron oxide layer interlayered with magnetite-bearing ultramafic rock was intersected from 57.30 m to 61.40 m. The main vanadiferous iron oxide layer was intersected between 82.60 m and 105.30 m. Mineralization comprises 5-60% magnetite and ilmenite evenly distributed. Mafic to ultramafic serpentinized horizons have been observed. The magmatic layering is oriented at 45° to the core axis. The hole was stopped at 113.0 m within well layered gabbro. Composited assay results returned 0.15% V (0.26% V_2O_5 equivalent), 3.80% TiO_2 and 23.42% Fe (total) over 16.50 m (estimated true width 11.67 m); and 0.19% V (0.34% V_2O_5 equivalent), 4.90% TiO_2 and 38.96%Fe (total) over 22.70 m (estimated true width 16.05 m).

Analytical results from drill hole L-1-82-1 indicate that vanadium is associated with lower iron concentrations than those found during earlier work by Noranda. These variations can be explained by either different analytical methods, or geological differences, such as a vanadium-rich horizon with unusually low magnetite content. Unfortunately, it is not possible to distinguish between either possibility based on available data. However, geochemical data from the zones generally show a positive correlation between the abundance of Fe and V.

11.2 2009-2010 Drilling

Starting in 2009, Apella initiated a drilling campaign totalling 27 diamond drill holes. During 2010, Apella drilled additional diamond drill holes for the better knowledge of the mineral deposit for a total of 39 ddh (+3 trenches). The majority of the drill holes were drilled to the north (true) at 45°. Some also were drilled to the south (true). Please see: 25.1- Iron-T zones. And also: Figure 3: Simplified Geology of the Iron-T Property.

The purpose of this campaign was the better knowledge, to verify the known drilling and the extensions of the mineralisation of the Iron-T mineral deposit. Most of the drill holes intersected Fe-Ti-V mineralization associated to magnetite and ilmenite layers within the layered ferrogabbro zone of the upper part of the Bell River Complex. The oxide-rich gabbro horizons varying in width form 10 to 100 m clearly appear on the airborne regional magnetic survey. The oxide-rich gabbro is a mineralized cumulate forming either homogeneous horizons with disseminated oxide mineral contents ranging from 20 to 60% or homogeneous massive layers with oxide mineral contents varying from 60 to 90%. Drill holes encountered massive oxide mineralized bands which are interlayered with poorly mineralized gabbro forming pluri-centimetric to decimetric scale interlayers and contribute to the dilution of the vanadium mineralization. Mineralized layering of the gabbro appears to be at 285˚ dipping north from 75˚ to 85˚. Please see: 24.1- Iron-T Mineralized intercepts

The 2009-2010 drill hole locations were georeferenced using a high precision SX-Blue GPS (Global Positioning System) in Universal Transverse Mercator (UTM) metric coordinates using the North American Datum 1983 (NAD83).

12- Sampling Method and Approach (Item 14)

The trench locations, sampling sites and drill hole locations were georeferenced using a high precision SX-Blue GPS (Global Positioning System) in Universal Transverse Mercator (UTM) metric coordinates using the North American Datum 1983 (NAD83). A non destructible tag bearing the sample number was placed in each sample bag. All samples locations were entered and verified in a database. Grab samples taken from Trench A on the Iron-T Vanadium-Titanium-Iron property were bagged directly in the field by the geologist and stored in Apella's core shack facilities at Chibougamau until shipment by Apella's personnel to a certified laboratory.

All samples collected by Apella's personnel during the channel sampling on Trench A were cut with a diamond saw. All channel samples are properly identified on the outcrops by an aluminum tag fixed at the end of the channel sample location. Channel sample bags were properly tagged and sealed before to be sent to the ALS-Chemex laboratory in Val d'Or. One blank sample was inserted in the batch of samples sent.

All drill core samples collected by Apella's personnel during the 2009-2010 diamond drilling campaign were cut with a rock saw. Core samples were properly tagged and sealed before to be sent to the ALS-Chemex laboratory in Val d'Or. Blanks and homemade standards were inserted in the batch of samples sent.

During the 2009 and 2010 drilling campaign, samples were collected according to apparent mineralisation.

12.1- Historical Sampling

There is little information in the assessment files regarding diamond drilling conducted in 1962 by Juma Mining & Exploration Ltd. The main interest was directed toward base metals mineralization and diamond drilling failed to identify significant sulphides mineralization. There are no assay results available in the diamond drill logs. However, diamond drill logs indicate that significant oxide mineralization with variable magnetite contents was intersected in both holes. Few structural data were collected. The true width of oxide horizons has been estimated based on structural data available in other drill logs.

Hole L-1-82-1 had been completed using BQ size drill core in 1982 by SDBJ. Thirty-three consecutive samples were collected from hole L-1-82-1. Samples were collected from 7.80 m to 91.44 m with length varying from 0.06 m to 4.27 m. The average length is 2.31 m. Noranda completed two NQ drill holes in 1998. A total of 86 samples were collected from the two holes. The length of the samples varies from 0.15 m to 3.10 m and the average length is 1.06 m. True width of the vanadiferous mineralized horizons intersected has been estimated based on structural information provided in the diamond drill logs. Nineteen channel samples were collected on Trenches A and B excavated by Noranda in 1998. Channel samples were cut perpendicular to strike of magmatic layering and oxide mineralization. Most of the channel samples have been cut to a length of 1.5 m.

12.2- Recent Sampling and Logging

Starting 2009, the securely closed core boxes were sent from the drill site to the logging facilities by pick-up to the core shack directly in Matagami industrial park. Afterwards, core boxes were placed in order on the tables and opened for drill hole logging and identification of the intersection to sample by the geologist and/or consultants. After logging and sampling, the core boxes were securely stored in core racks next to the logging facility. All of the core boxes were given an aluminum tag including hole number, core box number and *from-to* in meters.

12.2.2 Core Logging

Starting 2009, all drill holes were logged at the Matagami core shack and entered directly in a well managed drill hole database management software running on Microsoft Access. All logging and sampling was conducted and/or supervised by Apella qualified personnel and consultants. The observations of lithology, alteration, structure, mineralization, structure widths and orientation, geotechnical data, sample number and location were recorded by the geologist and geotechnicians. The core was also photographed wet before sampling.

12.2.3 Sampling

Sections of the core to be analyzed were properly identified. Apella technicians and geologists then prepared the sample books, sample bags and tags accordingly. The core was cut with a rock saw. After the core was cut in half on site using a diamond saw and placed inside the core box. The identified samples were put in the corresponding sample bags. The bags were then sealed and put into a large bag for transport to the laboratory.. In SGS' opinion, the sample preparation, security and analytical procedures are adequate and were done according to the industry standards.

All samples collected by Apella during the course of the 2009-2010 diamond drilling program were sent to ALS-chemex laboratories (formerly Chimitec Laboratories) in Val d'Or, Quebec, for sample preparation and sent to the ALS Vancouver Minerals laboratory in Vancouver, BC, Canada for analysis. The total amount of samples

Sampling intervals were determined by the geologist, marked and tagged based on observations of the lithology and mineralisation. The typical 2009-2010 sampling length is 1.25 m but can vary from 0.35 metres to 1.8 metres and occasionally 3 m according to lithological contact between the mineralisation and the host rock. Some historical sample lengths in the database range from 0.15 m to 3.0 m. In general, at least one host rock sample was collected each side from the contacts with the mineralisation.

The sample shipment forms were prepared on site with one copy inserted in one of the shipment bags and one copy kept for reference. The samples were transported on a regular basis by Apella employees or contractors directly to the ALS facilities in Val d'Or. At the ALS laboratory, the samples shipment is verified and a confirmation of shipment reception is emailed to Apella's project manager upon request. The remaining core samples kept for references are stored in wooden boxes.

SGS concludes that the drill core handling, logging and sampling protocols are at conventional industry standard and conform to the generally accepted best practices. The author considers that the samples quality is good and that the samples are generally representative. Finally, SGS is confident that the system is appropriate for the collection of data suitable for the estimation of a NI 43-101 compliant mineral resource estimate.

The mineralised intervals used for the geological interpretation and resource estimation of the Iron-T deposit are available in Appendix**:** 24.1- Iron-T Mineralized intercepts.

13- Sample Preparation, Analyses and Security (Item 15)

There is no information regarding the sample preparation methods, quality control, analytical procedures or security measures provided in the SDDJ and Noranda assessment files. All SDBJ's core samples were sent to and assayed by Metriclab (1980) in Ste-Marthe sur le Lac, Quebec. All channel and core samples collected by Noranda were sent to Chimitec Laboratories in Val d'Or, Quebec and assayed using appropriate methods. Major elements were assayed using lithium meborate fusion and X-Ray fluorescence spectrometry; minor elements were assayed using four acid digestion and inductively coupled plasma with atomic emission spectroscopy (ICP-AES); and precious metals by fire assay with directly coupled plasma (DCP) emission spectrometer finish. There is no certificate of assays provided by Noranda in the assessment file.

The sample lengths coming from NQ core (half cut) vary from 0.15 to 3.0 m metres. The average sample length is 1.18m and the median is 1.25m. The channel sample lengths from the trenches vary from 0.48 m to 1.33 m. The average length is 1.03m and the median is 1m.

The samples were sent to ALS-Chemex, certified commercial laboratory, in Val d'Or, Quebec. The Samples were prepared using standard preparation procedures used by ALS-Chemex. Entire samples were crushed to better than 70% -200 mesh, split off up to 250 g, pulverize split to better than 85% - 200 mesh and homogenized. The samples were then sent to the ALS Vancouver Minerals laboratory in Vancouver, BC, Canada for analysis. All samples were assayed for total iron, titanium dioxide and vanadium content as well as 21 additional major and minor elements. Assays were performed by lithium metaborate fusion to dissolve resistive minerals followed by X-Ray fluorescence spectrometry (ME-XRF11 package) for the characterization of iron. Conversion from vanadium to vanadium pentoxide (V_2O_5) is made using a factor of 1.7852. The following information was given by ALS-Chemex through the client. It is the analysis method used especially for vanadium at the AlS-Chemex lab.

The sample preparation and QAQC procedures including Sample book filing, sample tagging and bagging, Core manipulation and cutting/splitting were done by Apella technicians and geologists. All necessary steps were supervised by Apella geologists and consultants and assured a valid chain of custody.

The author does not have any reason to believe that the methodology used by the different laboratories was inadequate for the results in the Iron-T property. SGS carried out analytical checks of a series of core samples. The results are presented in section: 14- Data Verification.

13.1- Als-Chemex Sample Preparation and analysis Methodology Description

Ore Grade Analysis by XRF – V-XRF10

Sample Decomposition: 50% Li2B4O7 – 50% LiBO2 (WEI-GRA06)
Analytical Method: X-Ray Fluorescence Spectroscopy (XRF)

A calcined or ignited sample (0.9 g) is added to 9.0g of Lithium Borate Flux (50 % - 50 % $Li_2B_4O_7$ – $LiBO_2$), mixed well and fused in an auto fluxer between 1050 - 1100°C. A flat molten glass disc is prepared from the resulting melt. This disc is then analysed by X-ray fluorescence spectrometry.

Element	Symbol	Units	Lower Limit	Upper Limit
Vanadium	V	%	0.01	50

Analysis Method: ME-XRF06

Sample Decomposition: 50% Li2B4O7 – 50% LiBO2 (WEI-GRA06)
Analytical Method: X-Ray Fluorescence Spectroscopy (XRF)

A calcined or ignited sample (0.9 g) is added to 9.0g of Lithium Borate Flux (50 % - 50 % $Li_2B_4O_7$ – $LiBO_2$), mixed well and fused in an auto fluxer between 1050 - 1100°C. A flat molten glass disc is prepared from the resulting melt. This disc is then analysed by X-ray fluorescence spectrometry.

Elements	Symbol	Units	Lower Limit	Upper Limit
Silicon oxide	SiO2	%	0.01	100
Aluminum Oxide	Al2O3	%	0.01	100
Ferric Oxide	Fe2O3	%	0.01	100
Calcium Oxide	CaO	%	0.01	100
Magnesium Oxide	MgO	%	0.01	100
Sodium Oxide	Na2O	%	0.01	100
Potassium Oxide	K2O	%	0.01	100
Chromium Oxide	Cr2O3	%	0.01	100
Titanium	TiO2	%	0.01	100
Manganese Oxide	MnO	%	0.01	100
Phosphorus	P2O5	%	0.001	100
strontium	SrO	%	0.01	100
Barium	BaO	%	0.01	100

In 2010, SGS collected a total of 40 independent samples and sent them to SGS Lakefield Laboratory in Lakefield, Ontario. The results of the independent sampling program are further discussed in section: 14.2.1 2010 Independent Sampling

In January 2011, SGS sent a series (51) of independent samples to SGS Lakefield Laboratory in Lakefield, Ontario and to the activation Laboratories in Ancaster, Ontario. The results of the independent sampling program are further discussed in section:14.2.1 January 2011 Independent Sampling

The SGS Lakefield and Actlabs laboratories are accredited. Their methodology is well documented and a quality control is in place. Their certificates are signed by a chemist. The author does not have any reason to believe that the methodology used by the different laboratories was inadequate for the results in the Iron-T mineral deposit.

The next information was given by the SGS Lakefield laboratory. It describes the methods used for the sample analysis of the 2010 and January 2011 independent samples.

13.2- SGS Lakefield Sample Preparation and analysis Methodology Description

Determination of Major Element Oxides and Rare Earth Oxides by Borate Fusion-XRF

Parameter(s) measured, unit(s):

SiO_2, Al_2O_3, Fe_2O_3, MgO, CaO, Na_2O, K_2O, P_2O_5, MnO, TiO_2, Cr_2O_3, Ni, Co, La_2O_3, Ce_2O_3, Nd_2O_3, Pr_2O_3, Sm_2O_3, BaO, SrO, ZrO_2, HfO_2, Y_2O_3, Nb_2O_5, ThO_2, $U3O_8$, SnO2, WO3, Ta2O5, LOI; %

Typical sample size:
0.2 to 0.5 g

Type of sample applicable (media):
Rocks, oxide ores and concentrates

Sample preparation technique used:
Samples are crushed and pulverized to -150 mesh. This method is used to report, in percentage, the whole rock suite (SiO_2, Al_2O_3, Fe_2O_3, MgO, CaO, Na_2O, K_2O, P_2O_5, MnO, TiO_2, Cr_2O_3) and Ni, Co as well as the rare earth oxides (La_2O_3, Ce_2O_3, Nd_2O_3, Pr_2O_3, Sm_2O_3), and other major element oxides (BaO, SrO, ZrO_2, Hf O_2, Y_2O_3, Nb_2O_5, ThO_2, U_2O_8). Sample preparation entails the formation of a homogenous glass disk by the fusion of 0.2 to 0.5 g of rock pulp with 7g of lithium tetraborate/lithium metaborate (50/50). The LOI at 1000°C is determined separately gravimetrically. The LOI is included in the matrix-correction calculations, which are performed by the XRF instrument software.

Method of analysis used:
The disk specimen is analyzed by WDXRF spectrometry.

Data reduction by:
The results are exported via computer, on line, data fed to the Laboratory Information Management System with secure audit trail. Corrections for dilution and summation with the LOI are made prior to reporting.

Figures of Merit:

element	Limit of Quantification (LOQ) %
SiO_2	0.01
Al_2O_3	0.01
MgO	0.01
Na_2O	0.01
K_2O	0.01
CaO	0.01
P2O5	0.01
TiO_2	0.01

The next information was given by the Actlabs. It describes the methods used for the sample preparation and analysis of the January 2011 independent sampling.

13.3- Actlabs Sample Preparation and analysis Methodology Description

Sample Preparation

Crush (<5kg> up to 75% passing 2mm, split (250g) and pulverize (hardened steel) to 95% passing 105u

Sample Analysis Code 4C-XRF

To minimize the matrix effects of the samples, the heavy absorber fusion technique of Norrish and Hutton (1969, Geochim. Cosmochim. Acta, volume 33, pp. 431-453) are used for major element (oxide) analysis. Prior to fusion, the loss on ignition (LOI), which includes H2O+, CO2, S and other volatiles, can be determined from the weight loss after roasting the sample at 1050°C for 2 hours. The fusion disk is made by mixing a 0.5 g equivalent of the roasted sample with 6.5 g of a combination of lithium metaborate and lithium tetraborate with lithium bromide as a releasing agent. Samples are fused in Pt crucibles using an AFT fluxer and automatically poured into Pt molds for casting. Samples are analyzed on a Panalytical Axios Advanced XRF.

The intensities are then measured and the concentrations are calculated against the standard G-16 provided by Dr. K. Norrish of CSIRO, Australia. Matrix corrections were done by using the oxide alpha - influence coefficients provided also by K. Norrish. In general, the limit of detection is about 0.01 wt% for most of the elements.

Oxides and Detection Limits (%)
Vanadium is not included in the table but it is included in our Code 4C-XRF, the detection limit for V is 0.003%

Oxides	Detection Limit (%)
SiO2	0.01
TiO2	0.01
Al2O3	0.01
Fe2O3	0.01
MnO	0.001
MgO	0.01
CaO	0.01
Na2O	0.01
K2O	0.01
P2O5	0.01
Cr2O3	0.01
LOI	0.01

13.4- Blanks

Apella uses blanks made from barren material collected from nearby sand pit. These blanks, considered not to be iron-titanium-vanadium bearing, are used to check for possible contamination in laboratories. Since the beginning of the project in 2009, a total of 28 blanks were sent for analysis. All of the results were under 0.1% V. And 85% were under or at 0.01% V corresponding to the lower detection limit. Although it shows good results, the limited amount of data indicates the necessity to continue the implemented QAQC procedures.

The author considers that blank results corresponding to 5 times the detection limit are considered as contamination issues. Given this assumption, The Fe_2O_3 results would be considered as contaminated. Only 10% of the results are lower than 0.05%, 86% are lower than 2% and 99% are lower than 3%. However, this could be explained by the fact that these blanks were handpicked in the nearby quarry and that no prior tests were done on theses blanks. SGS cannot say if there is or not any contamination for the Fe_2O_3 grade.

The same observations are noted for TiO_2. There are relatively only 40% of the results are lower than 0.05% TiO_2 and 57% are lower than 0.1%. This can also be explained by the fact that these blanks were handpicked in the nearby quarry and that no prior tests were done on theses blanks. SGS cannot say if there is or not any contamination for the Fe_2O_3 grade.

SGS recommends using industrial silica with known grades and performance gates. They can be bought at local hardware store.

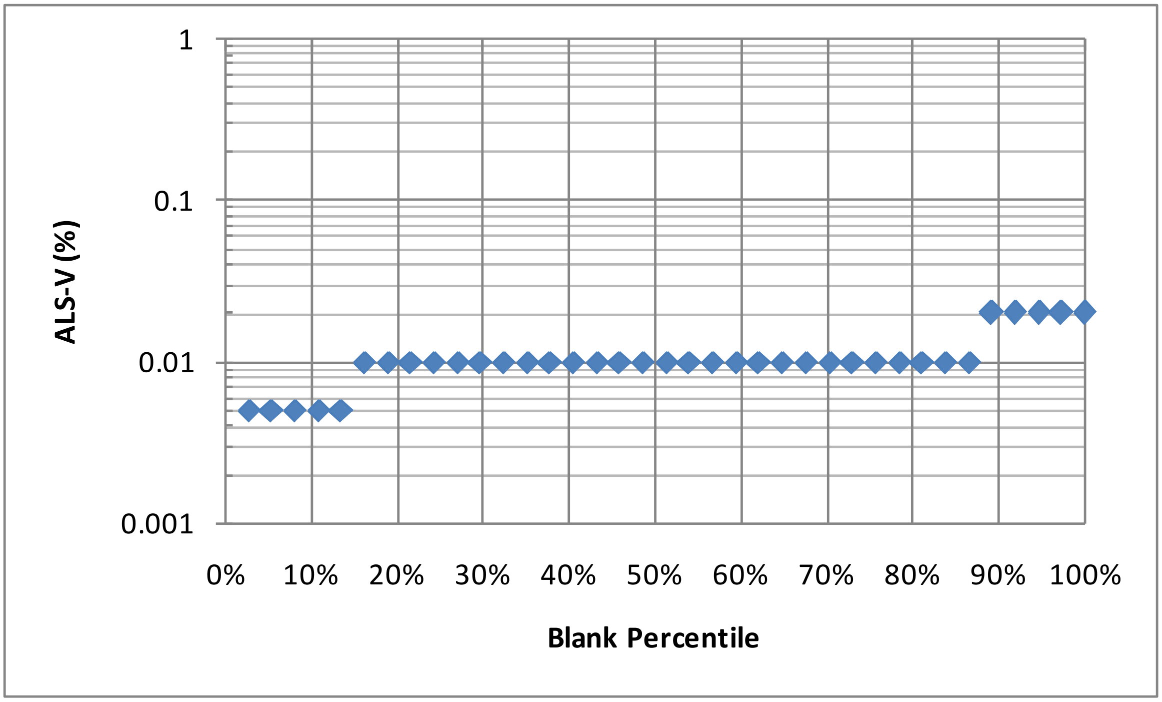


Figure 11: V grade blanks

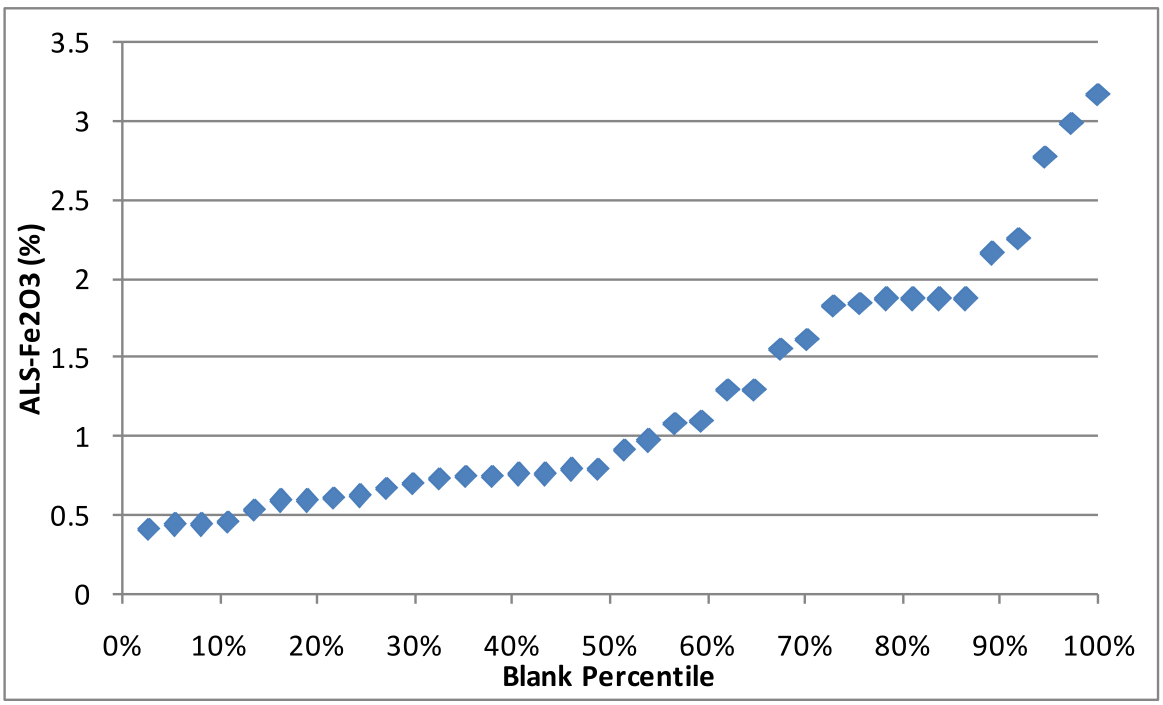


Figure 12: Fe_2O_3 grade Blanks

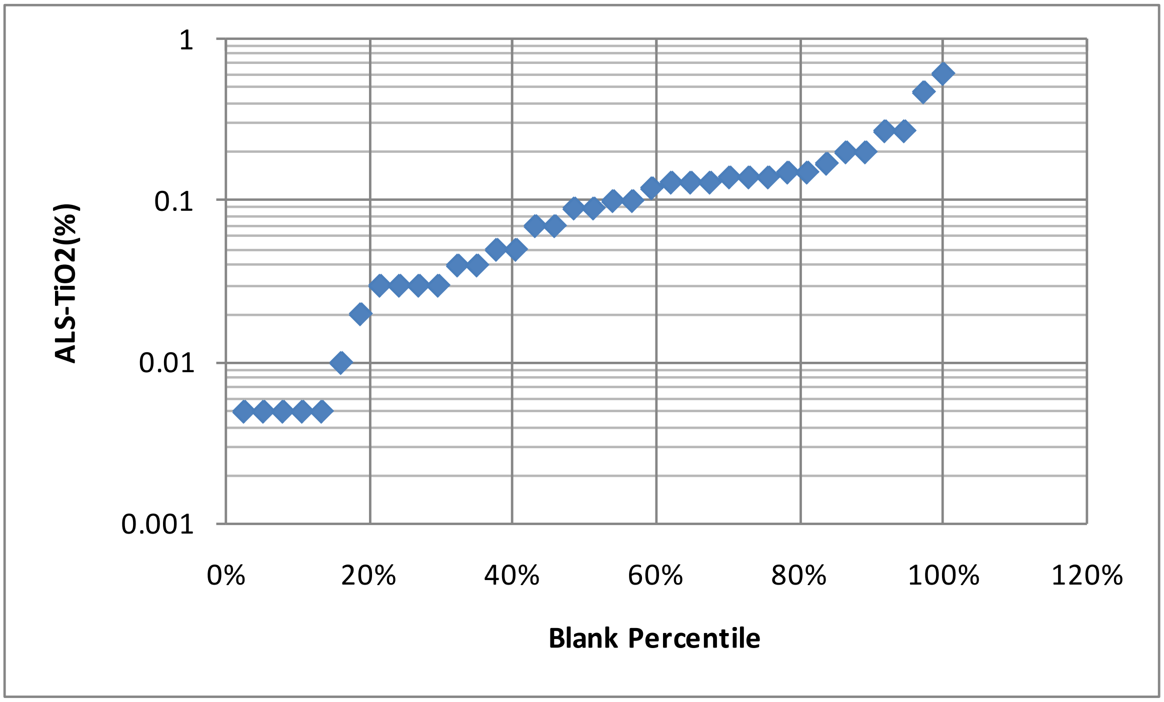


Figure 13: TiO_2 grades Blanks

13.5- Standards

Apella uses a series of 3 internal standards corresponding to low, medium and high Iron, TiO_2 and Vanadium content to check for possible contamination in laboratories. Please see next figure. The Apella homemade standards were made from selected pulps of core samples of known assay values from the Lac Doré North Property. Apella homogenized the pulps in sufficient amount for future campaigns. The standards were inserted regularly with the batch samples for analysis as part of their own QAQC procedures

Based on the available data, sample preparation and analytical procedures, there is no reason to believe that the results are erroneous and misleading. It is important to mention that the bias observed and the 15% average difference for V is significant and that a correction factor may be applied on the future resources estimates. This is why SGS cannot rely on the internal standards assay analysis for the moment.

The author did not find any preparation errors and cannot identify any errors in assay results. Secondly, at this moment, we cannot point out any flaws in assay analysis from any laboratory. The difference between assay results may be related to the calibration of the instruments. Since the majority if not all of the samples were sent to the ALS-Chemex lab, SGS strongly recommends continuing and implementing QAQC procedures involving certified materials (standards) from the industry to be sent to the ALS-Chemex lab to check any calibration errors.

At the moment of the writing of this report, SGS, on behalf of the client, has started a QAQC procedure including the shipping and analysis of certified reference materials (CRM) to the three selected laboratories that were selected for the 2011.independent sampling program. This procedure is aiming at defining the bias observed and the determination of a correction factor. The results of this study are not available for the moment.

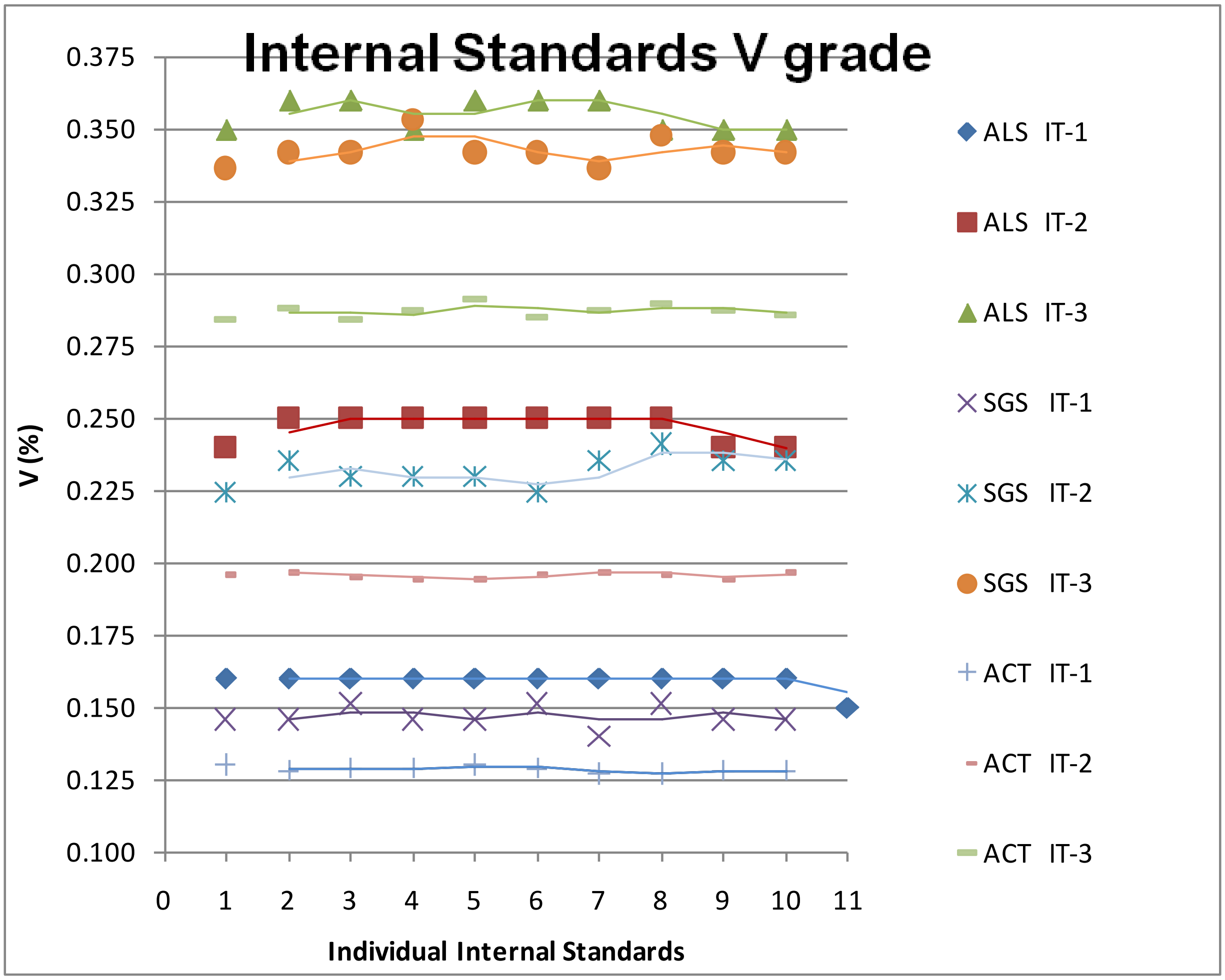


Figure 14: Apella internal Standards and analysis results from the 3 labs

14- Data Verification (Item 16)

14.1- Drill Hole data verification

The data used for the resource estimation comes from the updated 2010 database. The client provided the drill hole and trench data. SGS incorporated the database into its GeoBase drill hole database management system. The SGS GeoBase drill hole management system is an Access application designed by SGS for its own purposes and is also available for commercial use. The last database update is of December 9th, 2010. The GeoBase database contains only the relevant drill holes information for the resources estimation of the Iron-T mineral deposit.

The database consists of 41 drill holes (including 2 validated historical drill holes) totalling 5520 meters and 4 trench data totalling 140 meters. The database holds 2436 assay records, 919 lithology records, 60 downhole survey records and 107 mineralised intercepts.

SGS did a selective data verification including collar coordinate verification, assay cross reference with according assay certificates. SGS considers the data reliable and suitable for resource estimation.

The historical drill hole L-1-82-1 was taken out of the database. The relative location based on historical location maps and the impossibility of recovering the casing left on site led SGS to discard the selected drill hole of the database. SGS recommends drilling near the potential historical drill site for drill hole validation.

14.2- Independent sampling and assay Correlation

A first data verification of the iron Fe_2O_3 (Fe), TiO_2 and V_2O_5 (V) values was done by an independent sampling program at the time of the first site visit at the beginning of may 2010. The 40 independent sampling results permitted SGS to confirm the presence and content of iron (Fe), TiO_2 (Ti) and V_2O_5 (V) samples.

In January 2011, a second independent sampling was done under the author's supervision. A total of 51 samples corresponding to the rejects of half core samples were sent to two different laboratories. The Actlabs in Ancaster (Ontario) and the SGS Lakefield in Lakefield (Ontario). This was done in order to verify the presence of a bias on the Fe_2O_3 (Fe), TiO_2 and V_2O_5 (V) assay results previously discovered in by the 2010 independent sampling program.

14.2.1 2010 Independent Sampling

The 2010 independent sampling showed a good assay correlation for Fe_2O_3 , TiO_2 and V_2O_5 (V). The different correlation coefficients were all above 0.9. For Fe_2O_3, R^2=0.978. For V, R^2=0.957. For TiO_2, R^2=0.972.

For Fe2O3, the average grade of independent assays gave results less than 0.1% lower than the original samples. SGS considered the difference as negligible. For TiO_2, the average grade of independent assays gave results 3% lower than the original samples. SGS considered the difference to be not significant. For V (V_2O_5), the average grade of independent assays gave results 15% lower than the original samples. A series of tests were performed and a bias was discovered at a 95% level of confidence on the 30 samples used for the tests. The sign test for V (V_2O_5) showed that the proportion of pairs with an original sample value greater than the independent samples value: 27 out of 31. The sign test for TiO_2 showed that the proportion of pairs with an old sample value greater than the new samples value: 21 out 31.

14.2.1 January 2011 Independent Sampling

The 51 independent samples were taken from rejects from the same half core that was used for the initial assaying at ALS-Chemex laboratory. SGS took into account and selected the recent drill holes that were added for this resource estimation. The 2011 independent sampling showed a good assay correlation for Fe_2O_3, TiO_2 and V (V_2O_5). The correlation coefficients were almost all above 0.9 for Fe_2O_3, TiO_2 and V_2O_5 (V).

For Fe_2O_3, the average grade of original assays (ALS-Chemex) gave results from 0.9 to 1.8% higher than the independent assays (SGS Lakefield and Actlabs). SGS considered the difference as negligible. For TiO_2, the average grade original assays gave results from 1.1% to 5.5% higher than the independent assays. SGS considers that the difference between TiO_2 check samples and originals is significant enough to continue the QAQC procedures and to start an evaluation on the effects of the notable difference of check assays. For V (V_2O_5), the average grade of original assays gave results from 12.9% to 18.7% higher than the independent samples. A series of tests were performed and a bias was discovered at a 95% level of confidence on the 51 samples used for the tests for all three elements.

We can see in Figure 16: Independent Sampling Fe2O3 Content Comparison, Figure 18: Independent Sampling TiO2 Content Comparison and Figure 20: Independent Sampling V2O5 Content Comparison that the ALS-Chemex laboratory tends to be the one with the overall highest average iron grades. The SGS Lakefield laboratory and Actlabs are respectively ranked second and third.

It is the author's opinion that we cannot identify any errors in assay results. Secondly, at this moment and given the available information and limited amount of QAQC data, we cannot point out any flaws in assay analysis from any laboratory. The difference between assay results may be related to the calibration of the instruments.

SGS recommends implementing a QAQC program involving the assay of certified materials (standards) to ALS-Chemex in order to verify the calibration of the laboratory. Since the majority if not all of the samples were sent to the ALS-Chemex lab, SGS strongly recommends continuing and improving QAQC procedures involving the systematic insertion of certified materials (standards) from the industry to be sent to the ALS-Chemex lab to check any calibration errors and the systematic duplicate sampling and assay of relevant assay intervals. The author is suggesting a proportion of at least 20%.

14.2.1.1 Fe_2O_3 Assay Correlation

The 2011 independent sampling program outlined a good correlation of the Fe_2O_3 assay results. Please see Figure 15: Fe_2O_3 Original VS 2011 independent sample assay correlations. On the other hand, SGS observed a bias between original and independent assay results. A series of tests was performed and no significant bias was observed between the 51 ALs-Chemex original and corresponding SGS and Actlabs independent assay results. A bias was observed between SGS Lakefield and Actlabs samples. Tests included the sign test and student normal test.

Correlation Factor (R2)	AlS-Chemex	SGS Lakefield	Actlabs
AlS-Chemex	-	0.993	0.955
SGS Lakefield	-	-	0.964
Actlabs	-	-	-

The average Fe_2O_3 grade of original assay results gave results less than 0.9% higher than the SGS Lakefield independent samples and 1.8% higher than Actlabs. The average Fe_2O_3 grade of SGS assay results gave results less than 0.9% higher than the Actlabs. In general, SGS considers negligible the difference in average grade between the three laboratories.

We can see in Figure 16: Independent Sampling Fe2O3 Content Comparison and that the ALS-Chemex laboratory tends to be the one with the overall highest average iron grades. The SGS Lakefield laboratory and Actlabs are respectively ranked second and third.

It is the author's opinion that we cannot identify any errors in assay results. Secondly, at this moment, we cannot point out any flaws in assay analysis from any laboratory. The difference between assay results may be related to the calibration of the instruments. Since the majority if not all of the samples were sent to the ALS-Chemex lab, SGS strongly recommends continuing and implementing QAQC procedures involving certified materials (standards) from the industry to be sent to the ALS-chemex lab to check any calibration errors.

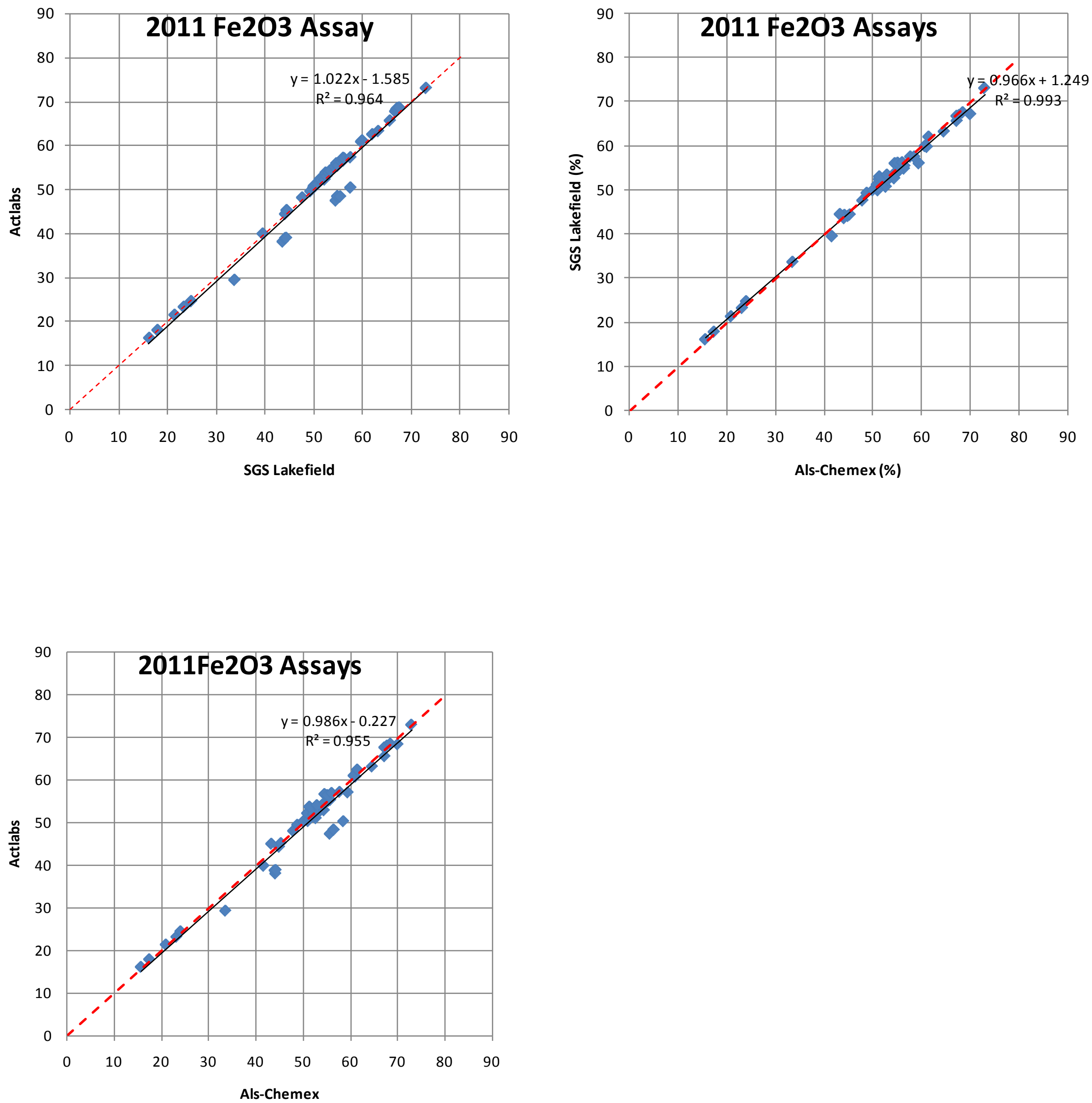


Figure 15: Fe_2O_3 Original VS 2011 independent sample assay correlations

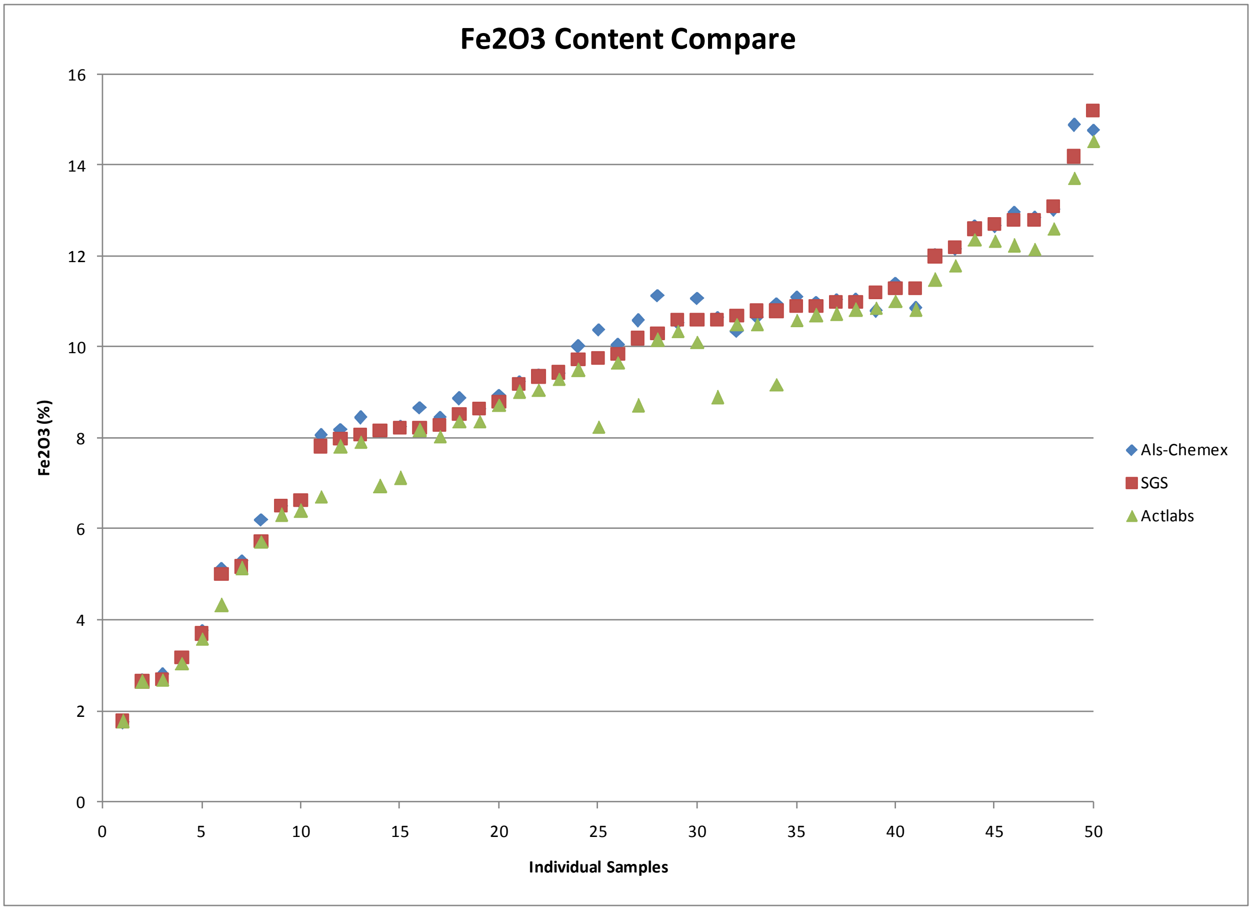


Figure 16: Independent Sampling Fe_2O_3 Content Comparison

14.2.1.2 TiO_2 Assay Correlation

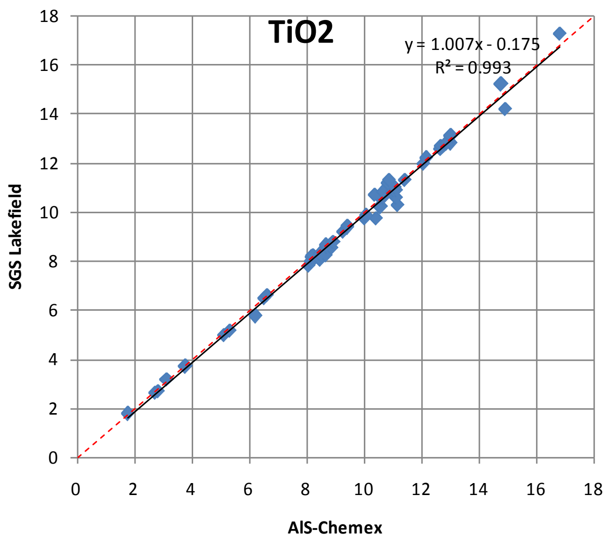
The 2011 independent sampling program outlined a good correlation of the TiO_2 assay results. Please see Figure 17: TiO_2 Original VS 2011 independent sample assay correlations. On the other hand, SGS observed a bias between original and independent assay results. A series of tests was performed and a bias at 95% level of confidence was observed the 51 ALS-Chemex original and corresponding SGS independent assay results. The same observation was observed between ALs-Chemex original and Actlabs independent assay results. Tests included the sign test and student normal test.

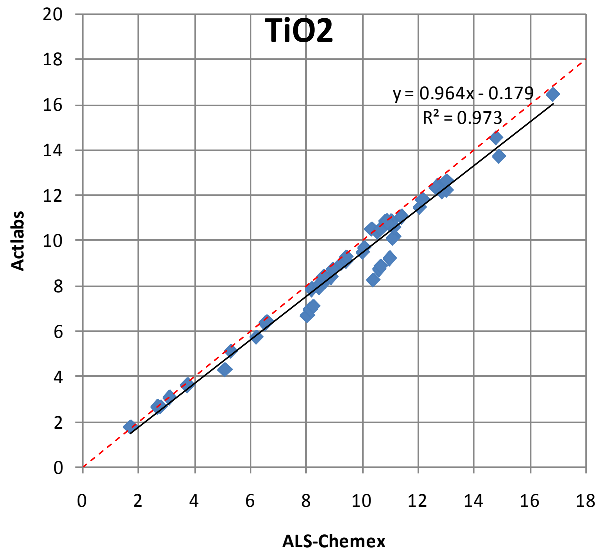
Correlation Factor (R2)	ALS-Chemex	SGS Lakefield	Actlabs
ALS-Chemex	-	0.993	0.973
SGS Lakefield	-	-	0.982
Actlabs	-	-	-

The average TiO_2 grade of original assay results gave results 1.1% higher than the SGS Lakefield independent samples and 5.5% higher than Actlabs. The average TiO_2 grade of SGS assay results gave results 4.5% higher than the Actlabs. SGS considers that the difference between check samples and originals is significant enough to continue the QAQC procedures and to start an evaluation on the effects of the notable difference of check assays

We can see in Figure 18: Independent Sampling TiO2 Content Comparison that the ALS-Chemex laboratory tends to be the one with the overall highest average iron grades. The SGS Lakefield laboratory and Actlabs are respectively ranked second and third.

It is the author's opinion that we cannot identify any errors in assay results. Secondly, at this moment, we cannot point out any flaws in assay analysis from any laboratory. The difference between assay results may be related to the calibration of the instruments. Since the majority if not all of the samples were sent to the ALS-Chemex lab, SGS strongly recommends continuing and implementing QAQC procedures involving certified materials (standards) from the industry to be sent to the ALS-chemex lab to check any calibration errors.





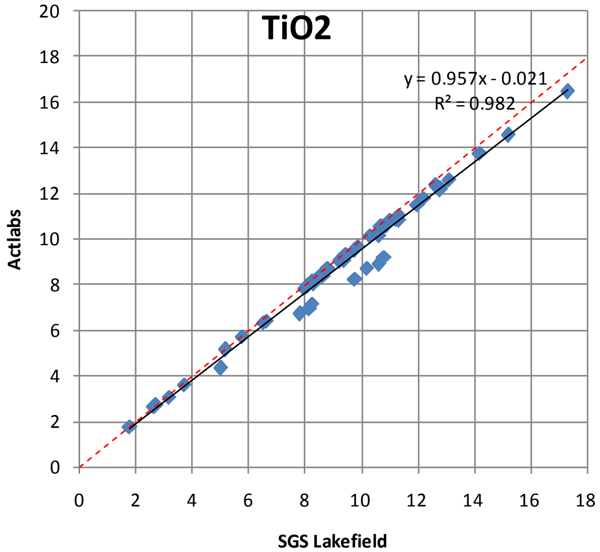


Figure 17: TiO_2 Original VS 2011 independent sample assay correlations

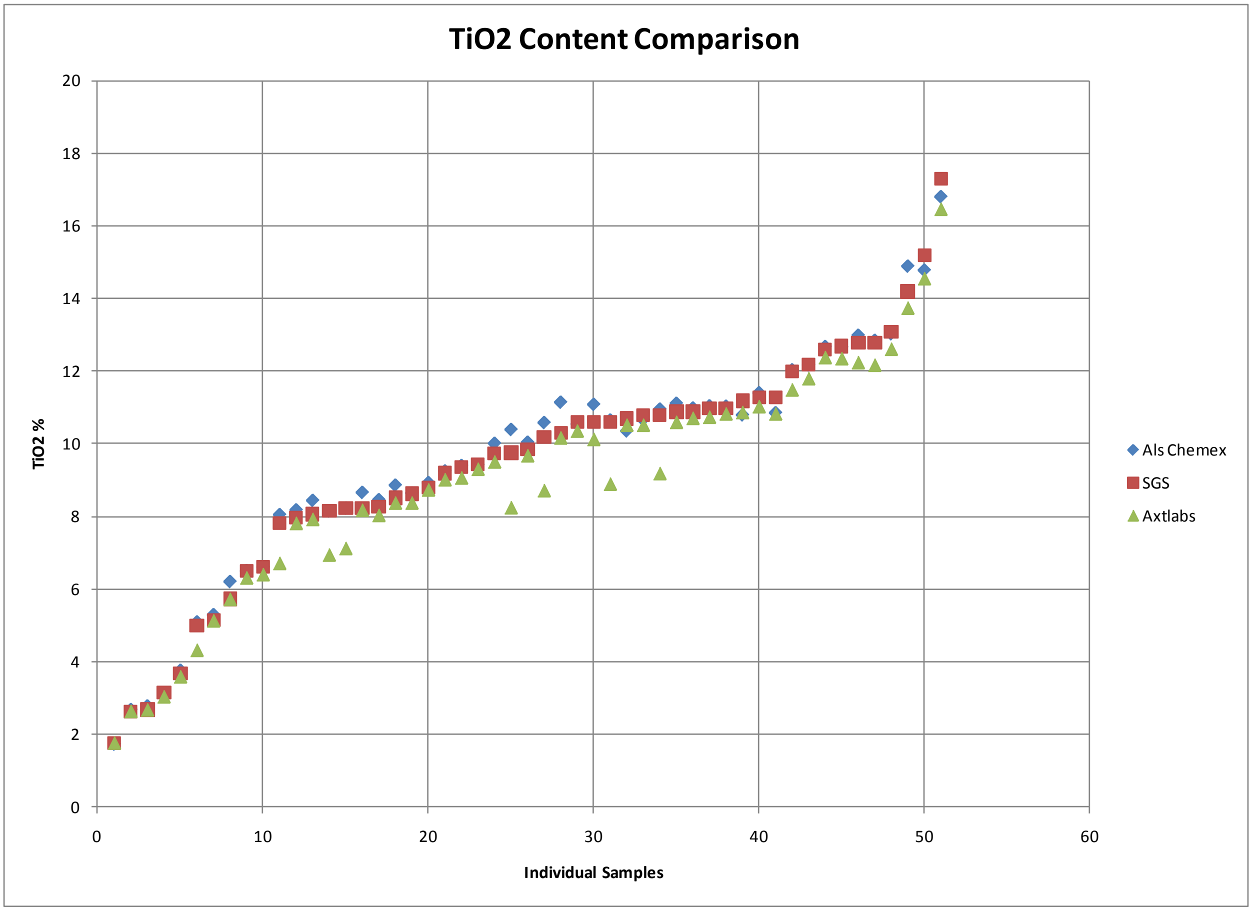


Figure 18: Independent Sampling TiO_2 Content Comparison

14.2.1.3 V_2O_5 Assay Correlation

The 2011 independent sampling program outlined a good correlation of the V_2O_5 assay results. On the other hand, SGS observed a bias between original and independent assay results. A series of tests was performed and a bias at 95% level of confidence was observed the 51 ALs-Chemex original and corresponding SGS independent assay results. The same observation was observed between ALS-Chemex original and Actlabs independent assay results. Tests included the sign test and student normal test.

Correlation Factor (R2)	ALS-Chemex	SGS Lakefield	Actlabs
ALS-Chemex	-	0.920	0.893
SGS Lakefield	-	-	0.975
Actlabs	-	-	-

The average V_2O_5 grade of original (ALS-Chemex) assay results gave results 12.9% higher than the SGS Lakefield independent samples and 18.7% higher than Actlabs. The average TiO_2 grade of SGS assay results gave results 3.9% higher than the Actlabs. SGS considers that the difference between check samples and originals is significant enough to continue the QAQC procedures and to start an evaluation on the effects of the notable difference of check assays.

It is the author's opinion that we cannot identify any errors in assay results. Secondly, at this moment, we cannot point out any flaws in assay analysis from any laboratory. The difference between assay results may be related to the calibration of the instruments. SGS recommends implementing a QAQC program involving the assay of certified materials (standards) to ALS-Chemex in order to verify the calibration of the laboratory.

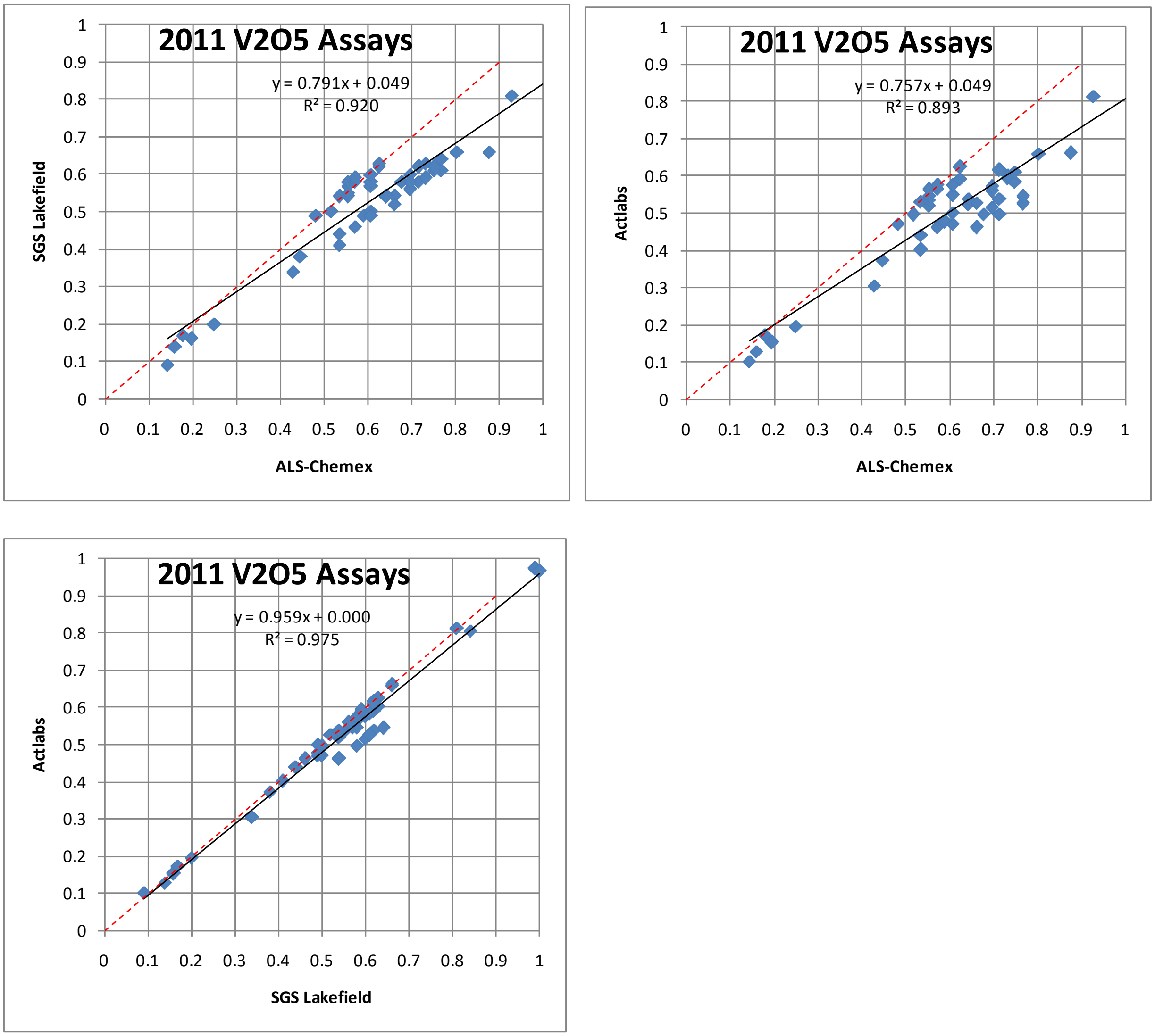


Figure 19: 2011 V_2O_5 Original VS independent sample assay correlations

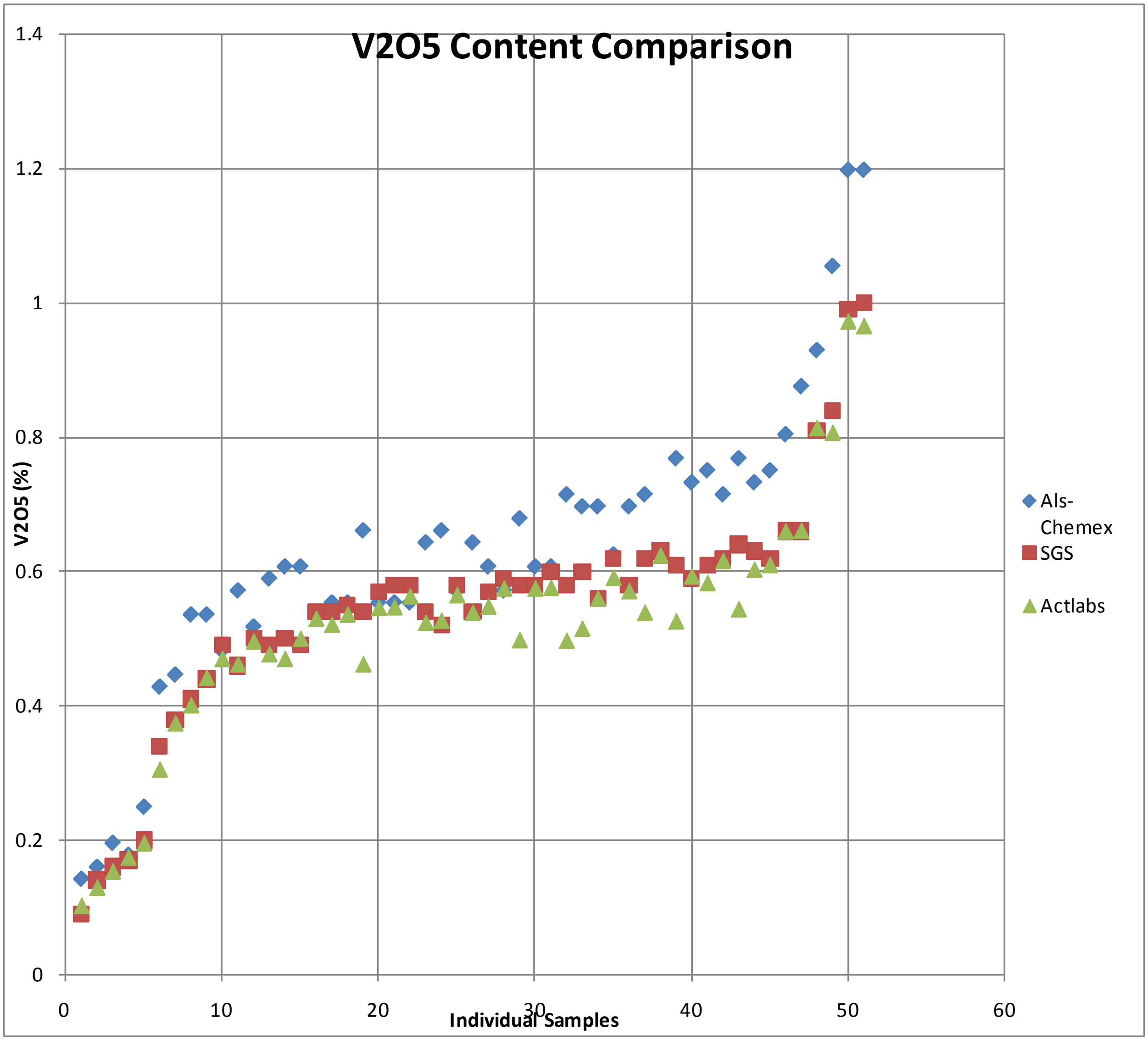


Figure 20: Independent Sampling V_2O_5 Content Comparison

15- Adjacent Properties (Item 17)

The information below is based on public information available as of the date of the report. The author has not verified the information unless otherwise stated.

The zone of potential vanadium mineralization extends beyond the limits of the Iron-T Vanadium-Titanium-Iron property. There is actually no information on the vanadium mineralization of the immediately adjacent properties. However, public assessment files indicate significant vanadium mineralization associated to the Upper zone of the Bell River Complex. This vanadium occurrence is located west of Matagami, in the Isle Dieu Twp, some 11 km WNW of the central portion of the Iron-T Vanadium-Titanium-Iron property. This mining property is part of the vast mining domain surrounding the mining installations owned by Xstrata.

Currently, The Iron-T property is bordered by other claims owned by inactive junior exploration companies and private owners.

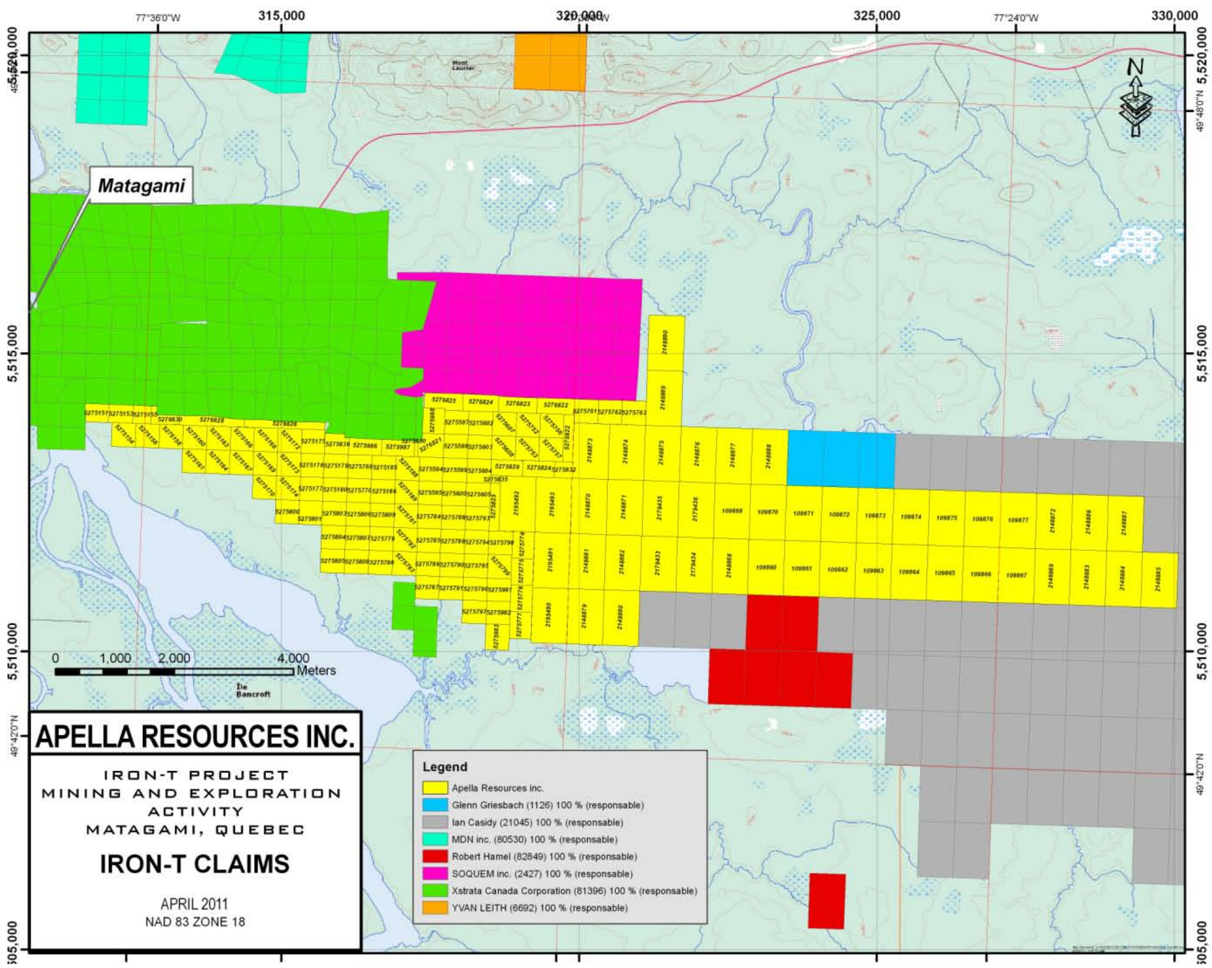


Figure 21: Iron-T Property and Adjacent Properties

16- Mineral Processing and Metallurgical Testing (Item 18)

16.1 Petrographic and Mineralogical study

16.1.1 2010 Petrographic and Mineralogical Study

During 2010, Apella ordered a petrographic and mineralogical study of samples from the Matagami and Lac Dore vanadium/titanium deposits, Quebec. from Dr Mehmet Taner. It contains the detailed mineralogical study with microprobe analyses of 12 samples. Dr. Taner selected vanadium rich 12 drill-core samples from the holes: (1) MA-10-19 and MA-10-18 at Matagami, Quebec (six samples) and (2) LDN-09-01 at Lac Dore, Chibougamau, Quebec (six samples).

The vanadium mineralisation occurs in oxide-rich horizons within the layered gabbro zones of the upper parts of the Bell River Complex, near Matagami and the Lac Doré Complex, near Chibougamau. In both complexes, the oxide-rich layers are concordant with the igneous layering of the Upper Zone. The rocks from the Lac Dore deposit have also been affected by regional greenschist metamorphism, which produced an associated assemblage of chlorite, actinolite, epidote, quartz and muscovite, in variable proportions. The main oxide minerals are ilmenite, as titanium ore, and titanian magnetite, as vanadium ore, containing 20 to 70% of volume and the titanian magnetite grains are inhomogeneous, consisting of trellisworks of ilmenite lamellae (as exsolution of ilmenite within magnetite). Thus, the magnetite is the principal ore mineral of vanadium; it hosts vanadium in the form of V3+, not V5+.

Optical microscopy of twelve selected samples from these complexes indicates that the oxide-rich mineralized zones are medium-grained titanian magnetite-ilmenite rich ferrogabbro. The main oxide minerals are ilmenite, titanian magnetite and a small quantity of hercynite.

The titanian magnetite: ilmenite ratio ranged from about 3:2 to 5:2 for the Matagami samples, with most titanian magnetite crystals containing fine lamellae of ilmenite that account for up to 50% of their volume. One can also find trace amounts of sulphide (mostly pyrrhotite and a little chalcopyrite).

The mineralized gabbro zone from the Lac Dore deposit consists of distinctly layered Fe-Ti-oxide rich gabbro. These samples are intensely deformed with strong schistosity and as well as intensely altered. The main silicates minerals are chlorite and epidote, representing the matrix of the Fe-Ti-gabbro between oxide minerals. The titanian magnetite: ilmenite ration varies from 4:1 to 9:1, indicating that the amount of large ilmenite grains is low, but there are two sets of ilmenite exsolution lamellae within the titanian magnetite and these lamellae are strongly deformed (mostly folded). In addition, trace amounts of disseminated sulphide (mostly pyrite and a little chalcopyrite) minerals were observed for the Lac Dore deposits, instead of pyrrhotite and a little chalcopyrite for the Matagami deposits.

Magnetite, Fe2+Fe3+2O4, is the principal host for vanadium in magmatic ores. The titanian magnetite always contains the ilmenite exsolution lamellae. In the samples studied here, one can distinguish two generations of lamellae, represented by two distinct widths that differ by a factor of 10. The wider laths, 10 to 40 μm are rare, but common for the Lac Dore deposit. The narrow laths are 1 to 3 μm wide lie within {111} octahedral crystallographic planes of the magnetite host. Sections cut parallel to {111} have a characteristic distribution of ilmenite laths in equilateral triangles forming a trellis texture. Trellis lamellae are generally attributed to "oxidation-exsolution", whereas other ilmenite can be products of either oxidation or primary crystallization. Sections cut parallel to {100} planes in magnetite have ilmenite laths distributed in a square pattern. The wide laths are usually more widely spaced and continuous than the narrower ones that occur between them. Ilmenite, FeTiO3, occurs as separate grains 0.4-2 mm across. The lamellar textural variety was observed in both complexes.

The vanadium content of ilmenite grains is very low (the average value of 11 analyses is 0.17 equivalent V_2O_5 % for the Matagami deposit), relative to magnetite samples (1.34% equiv. V_2O_5 for 24 analyses) and the vanadium content of ilmenite grains is again very low (the average value of 12 analyses is 0.53 equivalent V_2O_5 % for the Lac Dore deposit), relative to magnetite samples (1.76% equiv. V_2O_5 for 25 analyses).

The report concluded that the electron microprobe analyses of ore samples from both complexes indicate that vanadium is more strongly partitioned into magnetite than into ilmenite. This is most likely due to the nearly identical ionic radius and charge of V3+ (0.64 Å) and Fe3+ (0.645 Å). Consequently, magnetite, a mineral rich in Fe3+, is expected to have higher V contents than ilmenite, a mineral poor in Fe3+. Only the magnetite portion of the intergrowths hosts significant amounts of vanadium.

The mentioned vanadium deposits also contain economic quantities of ilmenite, as a titanium ore. With the current study, we now have the mineralogical data needed to complete the process of a commercial extraction procedure for vanadium from vanadium ore.

16.1.2 2011 Petrographic and Mineralogical Study

During 2011, Apella ordered a petrographic and mineralogical study of samples from the Iron-T vanadium-titanium-iron deposit from SGS Lakefield. It contains the detailed mineralogical study with microprobe analyses of 10 samples. Samples representing high, medium and above cut-off of V (V_2O_5) grade were taken from the 2010 Davis Tube and density tests done in 2010 by SGS.

The information contained in this sub section was modified from 2011 SGS Lakefield Mineralogy and Davis tube testing Report.

Ten of the Davis tube concentrates, from both phases of this project (2010 and 2011), were selected for mineralogical characterization. The ten concentrates selected had varying Fe, Ti and V grades, and had a cut-off grade of 0.26% V_2O_5 or 0.15% V in the head, The ten concentrates were submitted for mineralogical analysis by QEMSCAN using the Particle Mineral Analysis (PMA) routine. PMA is a two-dimensional mapping analysis aimed at resolving liberation and locking characteristics of a generic set of particles. A pre-defined number of particles are mapped at a point spacing selected in order to spatially resolve and describe mineral textures and associations.

The concentrates contain between 34.2% and 72.4% Fe-Oxides, between 6.82% and 42.8% Ti-Magnetite, and between 7.82% and 20.5% ilmenite. The concentrates contained between 80.9% and 96.5% combined Fe-Oxides, Ti-Magnetite and Ilmenite. Pyrrhotite was present in seven of the concentrates, at a maximum of 7.19%. The main gangue minerals in the concentrates were the pyroxenes (orthopyroxene and clinopyroxene) with a range of 1.08% and 11.7%, amphiboles (0.05% to 4.06%) and chlorite (0.60% to 3.38%).

For each of the samples, electron microprobe analyses were performed on the Fe-Oxides, Ti-Magnetite and ilmenites to quantify vanadium impurities within the crystal matrix. The probe work showed that the average vanadium grade in the Fe-Oxides varied from 0.612% to 1.237%, and averaged at 0.904%. The lowest amount of vanadium in the magnetite grains, was with a maximum of only 0.763%, while most amount of vanadium in the magnetite grains, had a maximum of 2.652%.

The average vanadium content in the Ti-magnetite grains was lower than in the Fe-Oxide. The average vanadium grade varied from 0.553% to 1.055%, and the average was 0.755%. The average vanadium grade in the ilmenite was much lower than in the Fe-Oxides grains. The grade ranged from 0.035% to 0.160% and averaged at 0.082%.

The elemental V deportment was calculated using the mineral abundances from the QEMSCAN data and the average V values from each mineral from the EMPA data. Only a very small proportion of the V is present as ilmenite and ranges from 0.96% and 2.85%. For most of the samples the major carrier of V are the Fe-Oxides (ranging from 66.2% and 91.2%) with Ti-Magnetite being a minor carrier, at between 7.19% and 32.0%. However, for some samples, the V is split more equally between the Fe-Oxides and Ti-Magnetite, with Fe-Oxides carrying between 48.8% and 51.0% of the V compared to Ti-Magnetite carrying between 46.6% and 49.3%,.

In this study, both particle-liberation and particle-association data are defined based on 2D particle area percentage. This data was compiled using the PMA mode of QEMSCAN operation. The mineral liberation categories have been classified as follows: "free" refers to grains that show area percentage greater than, or equal to, 95% of the target mineral; "liberated" refers to grains that show area percentage greater than 80% and less than 95% of the target mineral; "binary" represents middling particles, in which the target mineral (<80%) is in binary association with another mineral, where the combined binary particle area percentage is greater than or equal to 95% (i.e Oxide:Sulphides); "complex" category refers to particles that contain the target mineral (<80%) of interest along with a combination of two or more other minerals (typically ternary or quaternary particles); and "barren" category refers to grains that show 0% of the target mineral. Between 64.3% and 90.9% of the Oxides were free, and between 6.46% and 20.7% of the Oxides were liberated. The locked Oxides was mostly associated with non-opaque gangue (between 2.22% and 14.9%), with a much smaller proportion associated with sulphides (between 0.00% and 1.92%).

Between 34.3% and 66.7% of the non-opaque gangues were free or liberated, with most of the remainder present in complex associations, at between 20.4% and 46.3%. The binary non-opaque gangue minerals were associated with Fe-Oxides (2.25% to 15.5%), and small proportions of Ilmenite (0.64% to 3.59%), Ti-Magnetite (0.12% to 1.78%) and Sulphides (0.05% to 1.32%).

16.2 Davis tube tests and density tests

The following information contained in this sub section was modified from the July 2010 (phase 1) and April 27th 2011(Phase 2) SGS Lakefield Mineralogy and Davis tube testing reports. In spring 2010, SGS Lakefield laboratories did density tests and Davis tube recovery tests on the 31 samples shipped as independent samples. The following test results are considered preliminary.

The Davis tube concentrates had iron grades in the 53.3% to 63.3% Fe range. The average Fe grade in the concentrates was 58.8%. The silica grades in the concentrate ranged from 0.83% up to 8.26%, but 75% of the results were lower than 4.28%. The Al_2O_3 grade varied between 0.58% and 3.55% for all samples, while the MgO grade generally varied from 0.57% to 2.0%. The average Ti and V grades in the Davis tube concentrates were 4.90% and 0.68%, respectively. The weight recovery to the concentrate ranged as low as 1.46% (1 sample) to 58.7%, with an average of 27.8%. The iron recovery in the concentrate averaged 56.0%, and varied from 6.84% to 83.3%. The V recovery was high; averaging at 74.2% and 75% of samples had a recovery of greater than 66.6%. The Ti recovery averaged 35.5% and ranged from 4.43% to 55.5%. Please see next figure.

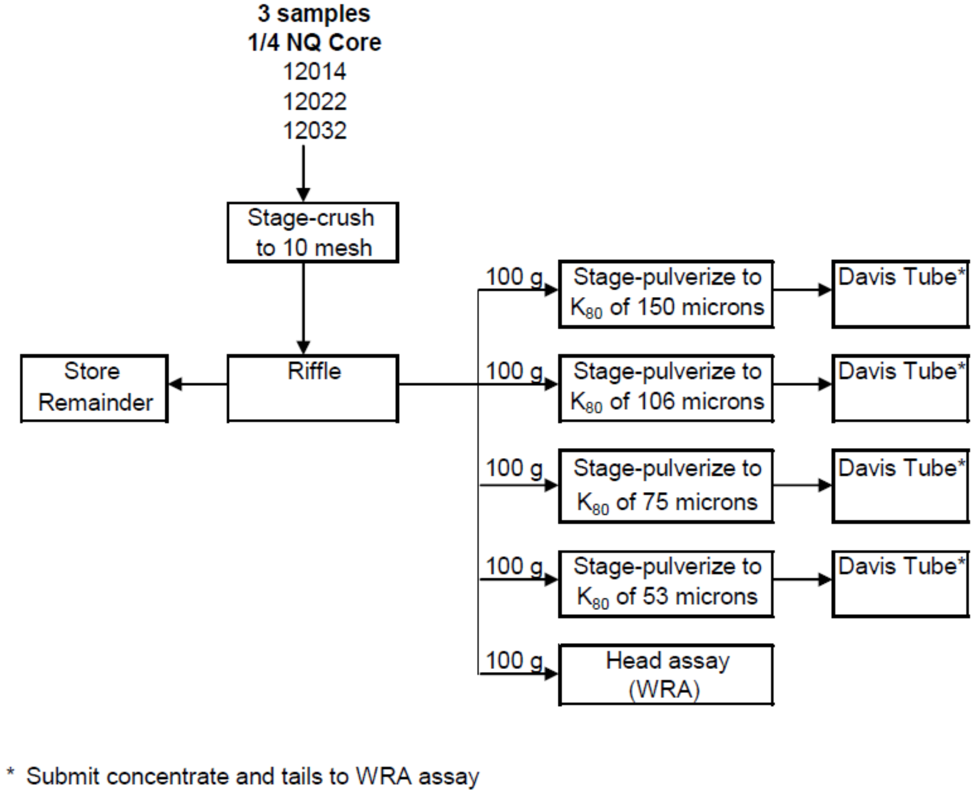


Figure 22: Sample Preparation Diagram – Davis Tube by Size Samples

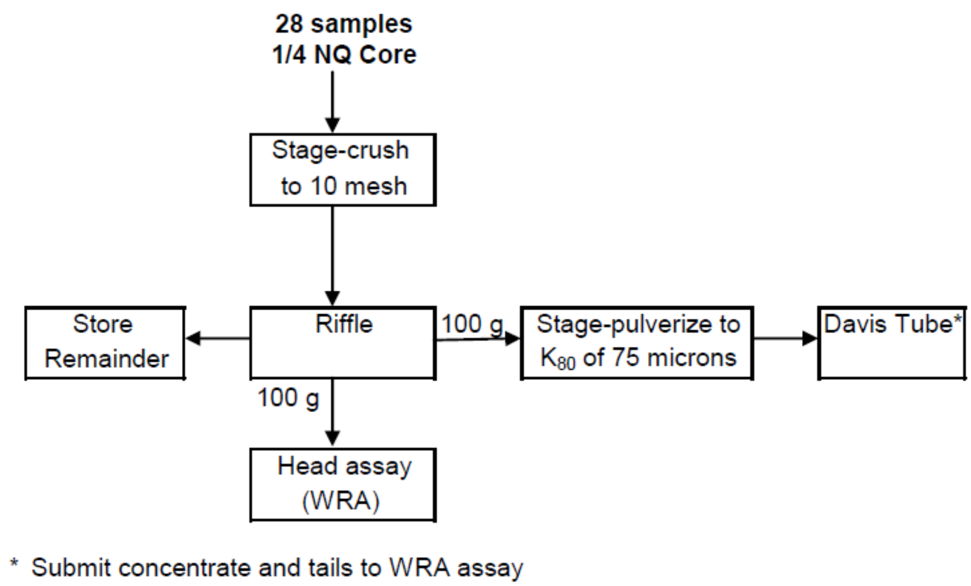


Figure 23: Sample Preparation Diagram – Davis Tube Samples

SGS Lakefield also calculated the SG of the 31 samples. A minimum of 2.93 and a maximum of 4.27 were found for a mean average of 3.54.

In 2011 20 additional SG tests were performed for an added minimum of 2.93, maximum of 4.37 and a mean average SG of 3.68. For additional information on the SG used in resources estimation, please see: 17.4 Specific Gravity.

In 2011, The Davis tube concentrates had iron grades in the 55.2% to 62.2% Fe range. The average Fe grade in the concentrates was 58.5%. The silica grades in the concentrate ranged from 1.24% up to 7.86%, but 75% of the results were lower than 4.11%. The Al2O3 grade varied between 1.41% and 3.56% for all samples, while the MgO grade varied from 0.63% to 3.39%. The average Ti and V grades in the Davis tube concentrates were 5.89% and 0.65%, respectively. The weight recovery to the concentrate ranged from 17.1% to 71.4%, with an average of 48.9%. The iron recovery in the concentrate averaged 75.0%, and varied from 44.6% to 87.7%. The V recovery was high; averaging at 88.7% and 90% of samples had a recovery of greater than 79.6%. The Ti recovery averaged 50.7% and ranged from 21.0% to 64.7%.

16.3 Satmagan Tests

In 2011, the 2010 independent samples were re-assayed for Satmagan. Additional 50 samples were also assayed for Satmagan for a total of 81.

The assay results of the samples showed that the average iron content was 36.9% Fe, with a minimum of 23.8% Fe and a maximum of 46.6% Fe. The Satmagan content averaged at 33.8%, and ranged from 13.7% to 48.8%. The average Ti and V contents were 5.51% and 0.34%, respectively.

The Satmagan results (31 head samples) of the phase 1 ranged from 0.90% to 1.4% and averaged at 18.9%, which was significantly lower than the 20 samples received for the phase 2 (50 crushed samples).

The assay results (50 crushed samples) of the phase 2 showed that the average iron content was 35.4% Fe, with a minimum of 11.3% Fe and a maximum of 51.1% Fe. The average Ti and V contents were 5.64% and 0.30%, respectively.

17- Mineral Resource and Mineral Reserve Estimates (Item 19)

There are no reserves reported in this document. The resources reported in this document are compliant with current standards as outlined in the National Instrument 43-101.

The resources estimation and classification in this report on the Iron-T property was prepared by Maxime Dupéré P. Geo. The author of this report, Maxime Dupéré P.Geo, is responsible for the entire report. He is a qualified person by virtue of education, experience and membership in a professional organization.

17.1 Definitions

The classification of Mineral Resources and Mineral Reserves used in this report relies upon the definitions provided in National Instrument 43-101. SGS followed the "Estimation of Mineral resources and Mineral Reserves – Best Practice Guidelines" adopted by the Council of the Canadian Institute of Mining Metallurgy and Petroleum. The relevant definitions for the CIM Standards/NI 43-101 are as follows:

1- **Mineral Resource**
Mineral Resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories. An Inferred Mineral Resource has a lower level of confidence than that applied to an Indicated Mineral Resource. An Indicated Mineral Resource has a higher level of confidence than an Inferred Mineral Resource but has a lower level of confidence than a Measured Mineral Resource.
A Mineral Resource is a concentration or occurrence of diamonds, natural solid inorganic material, or natural solid fossilized organic material including base and precious metals, coal, and industrial minerals in or on the Earth's crust in such form and quantity and of such a grade or quality that it has reasonable prospects for economic extraction. The location, quantity, grade, geological characteristics and continuity of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge.
The term Mineral Resource covers mineralization and natural material of intrinsic economic interest which has been identified and estimated through exploration and sampling and within which Mineral Reserves may subsequently be defined by the consideration and application of technical, economic, legal, environmental, socio-economic and governmental factors. The phrase 'reasonable prospects for economic extraction' implies a judgement by the Qualified Person in respect of the technical and economic factors likely to influence the prospect of economic extraction. A Mineral Resource is an inventory of mineralization that under realistically assumed and justifiable technical and economic conditions might become economically extractable. These assumptions must be presented explicitly in both public and technical reports.

2- **Inferred Mineral Resource**
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 drill holes.
Due to the uncertainty that may be attached to Inferred Mineral Resources, it cannot be assumed that all or any part of an Inferred Mineral Resource will be upgraded to an Indicated or Measured Mineral Resource as a result of continued exploration. Confidence in the estimate is insufficient to allow the meaningful application of technical and economic

parameters or to enable an evaluation of economic viability worthy of public disclosure. Inferred Mineral Resources must be excluded from estimates forming the basis of feasibility or other economic studies.

3- **Indicated Mineral Resource**

An 'Indicated Mineral Resource' is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics, can be estimated with a level of confidence sufficient to allow the appropriate application of technical and economic parameters, to support mine planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough for geological and grade continuity to be reasonably assumed.

Mineralization may be classified as an Indicated Mineral Resource by the Qualified Person when the nature, quality, quantity and distribution of data are such as to allow confident interpretation of the geological framework and to reasonably assume the continuity of mineralization. The Qualified Person must recognize the importance of the Indicated Mineral Resource category to the advancement of the feasibility of the project. An Indicated Mineral Resource estimate is of sufficient quality to support a Preliminary Feasibility Study which can serve as the basis for major development decisions.

4- **Measured Mineral Resource**

A 'Measured Mineral Resource' is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are so well established that they can be estimated with confidence sufficient to allow the appropriate application of technical and economic parameters, to support production planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough to confirm both geological and grade continuity.

Mineralization or other natural material of economic interest may be classified as a Measured Mineral Resource by the Qualified Person when the nature, quality, quantity and distribution of data are such that the tonnage and grade of the mineralization can be estimated to within close limits and that variation from the estimate would not significantly affect potential economic viability. This category requires a high level of confidence in, and understanding of, the geology and controls of the mineral deposit.

5- **Mineral Reserve**

Mineral Reserves are sub-divided in order of increasing confidence into Probable Mineral Reserves and Proven Mineral Reserves. A Probable Mineral Reserve has a lower level of confidence than a Proven Mineral Reserve.

A Mineral Reserve is the economically mineable part of a Measured or Indicated Mineral Resource demonstrated by at least a Preliminary Feasibility Study. This Study must include adequate information on mining, processing, metallurgical, economic and other relevant factors that demonstrate, at the time of reporting, that economic extraction can be justified. A Mineral Reserve includes diluting materials and allowances for losses that may occur when the material is mined.

Mineral Reserves are those parts of Mineral Resources which, after the application of all mining factors, result in an estimated tonnage and grade which, in the opinion of the Qualified Person(s) making the estimates, is the basis of an economically viable project after taking account of all relevant processing, metallurgical, economic, marketing, legal, environment, socio-economic and government factors. Mineral Reserves are inclusive of diluting material that will be mined in conjunction with the Mineral Reserves and delivered to the treatment plant or equivalent facility. The term 'Mineral Reserve' need not necessarily signify that extraction facilities are in place or operative or that all governmental approvals have been received. It does signify that there are reasonable expectations of such approvals.

17.2 Database used

The data used for the resource estimation comes from the 2010 database as of December 9th, 2010. The client provided the drill hole and trench data. SGS incorporated the database into its GeoBase drill hole database management system. The SGS GeoBase drill hole management system is an Access application designed by SGS for its own purposes and is also available for commercial use. The last database update is of December 9th, 2010. The GeoBase database contains only the relevant drill holes information for the resources estimation of the Iron-T mineral deposit.

The database consists of 41 drill holes (including 2 validated historical drill holes) totalling 5520 meters and 4 trench data totalling 140 meters. The database holds 2436 assay records, 919 lithology records, 60 downhole survey records and 107 mineralised intercepts.

SGS did a selective data verification including collar coordinate verification, assay cross reference with according assay certificates. SGS considers the data reliable and suitable for resource estimation.

17.3 Grids used

All interpretations were done according to the UTM NAD 83 coordinate system. SGS confirmed one of the historical drill hole on site. The others were georeferenced according to historical paper logs, historical maps and the presence of historical drill pads on the property. All of the 2009-2010 collar locations used for the resource estimation were surveyed with a high precision GPS called SX Blue. SGS considers the drill hole locations as adequate and reliable for the resources estimation.

17.4 Specific Gravity

Apella did 18 SG tests on core samples. Of those, 11 results in mineralization were retained for the SG calculation. A series of density tests were done on more than 50 core samples by SGS Lakefield as part of the Davis Tube test results ordered by SGS for Apella in spring of 2010. Please see: 16.2 Davis tube tests and density tests. A minimum of 2.92, a maximum of 4.27, a mean average of 3.58 and a median of 3.59 were observed.

In February 2011, additional SG tests were done on 20 additional core samples by SGS Lakefield as part of the 2011 Davis Tube test results ordered by SGS for Apella in December 2011. Please see: 16.2 Davis tube tests and density tests. A minimum of 2.92, a maximum of 4.37, a mean average of 3.90 and a median of 3.89 were observed.

Based on the 62 SG results from the, 2010, 2011and Apella's own SG tests, a Fe dependent, specific gravity variable were calculated. A minimum of 2.86, a maximum of 4.37, a mean average of 3.64 and a median of 3.72 were observed. The variable is: SG= 0.23(Fe) +2.634. Please see next figure.

Although there is a limited number of SG data, we can see the high correlation factor: R^2 =0.898, which is almost 0.9. Although the average SG was calculated at 3.64, SGS still retained the fixed and conservative specific gravity of 3.5 for the resources estimation. Since the resources are all still considered in the inferred category and that only a limited amount (69) of SG tests were performed on only the most mineralised parts the property, SGS recommends additional SG testing of representative mineralised intervals within the mineralised solid for any future preliminary economic assessment, prefeasibility and feasibility study after reception of additional metallurgical test work.

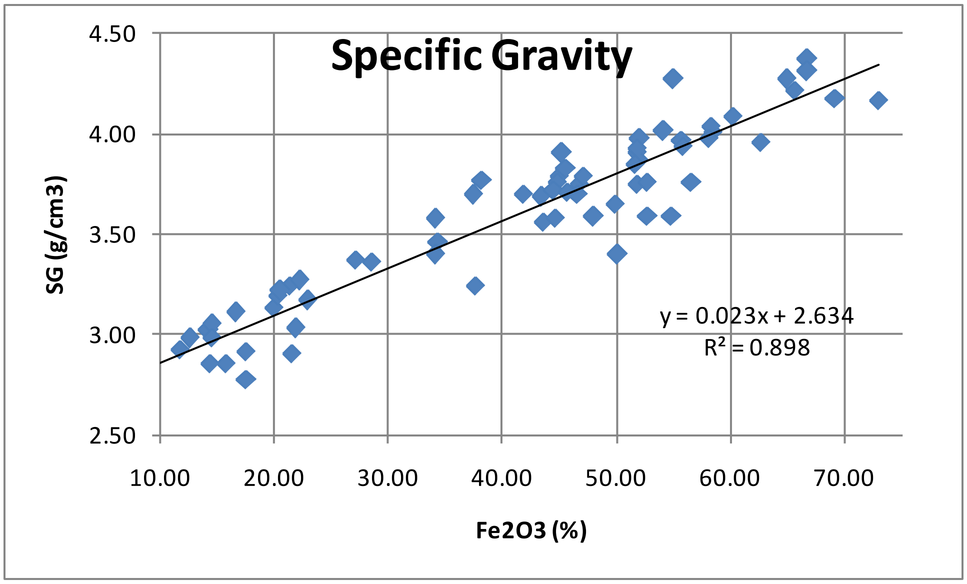


Figure 24: Specific Gravity Formula

17.5 Geological interpretation

Starting in 2009, Apella initiated a surface diamond drilling campaign in order to confirm, extend and study the mineralized body of the Iron-T mineral deposit. SGS created a geological model following the drilling and geological information provided by Apella.

The average orientation of the Iron-T mineral deposit is ENE (285°) with an average dip of 75° (70 to 85°) to the north. The geological model of the Iron-T mineral deposit covers an area of 1400 m long by 15 m to 70 m wide and with a maximum vertical extension of 220 m deep. The geological model is open on all directions.

The Iron-T mineral deposit is primarily composed of 2 solids. One called MainZone1 is corresponding to the major body, and the other solid called MainZone2 corresponding to a mineralized volume directly to the north of the MainZone1 solid. The solids were designed based on the available drill hole information. The MainZone1 and MainZone2 nomenclature is for estimation purposes solely and is considered preliminary as for the other individual smaller solids. However, Apella identified regions from its 2009-2010 geophysics surveys which can be shown in appendix: 25.1- Iron-T zones. SGS also incorporated 8 additional individual smaller solids. These solids were designed around individual mineralized intervals from drill holes and trenches. The smaller solids are close to and aligned with the MainZone1 solid and could be linked into a single larger mineralized solid with additional infill drilling. Please see Figure 25: Iron-T Mineral Deposit Looking west at -20°.

Below is the geological interpretation of some sections taken from the SectCad sectional modeling and resource estimation software. Note that the sectional zone outlines are sometimes slightly off-set from the center of the sections. This is due to the fact that some of the drill holes are oriented at angle from the set of sections used for modeling. These observations were taken into account during the modeling. SGS interpreted the mineralised solids using sections of 25m half corridors from Apella's drilling grid according to the UTM NAD 83 coordinate system. Sections from 324500 m E to 325800 m E were used for the geological interpretation and mineralised envelop modelling. Note that some interpretations on individual offset sections were also considered for the envelop modelling.

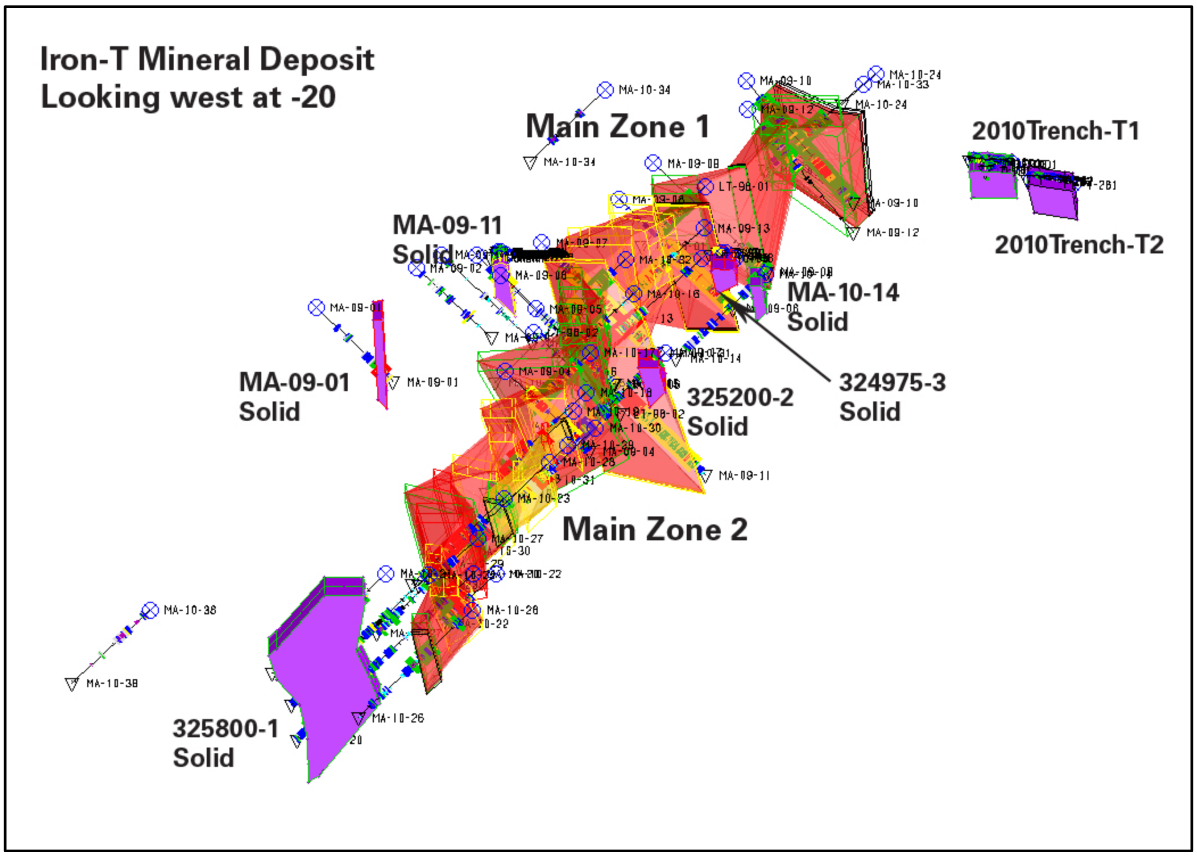


Figure 25: Iron-T Mineral Deposit Looking west at -20°

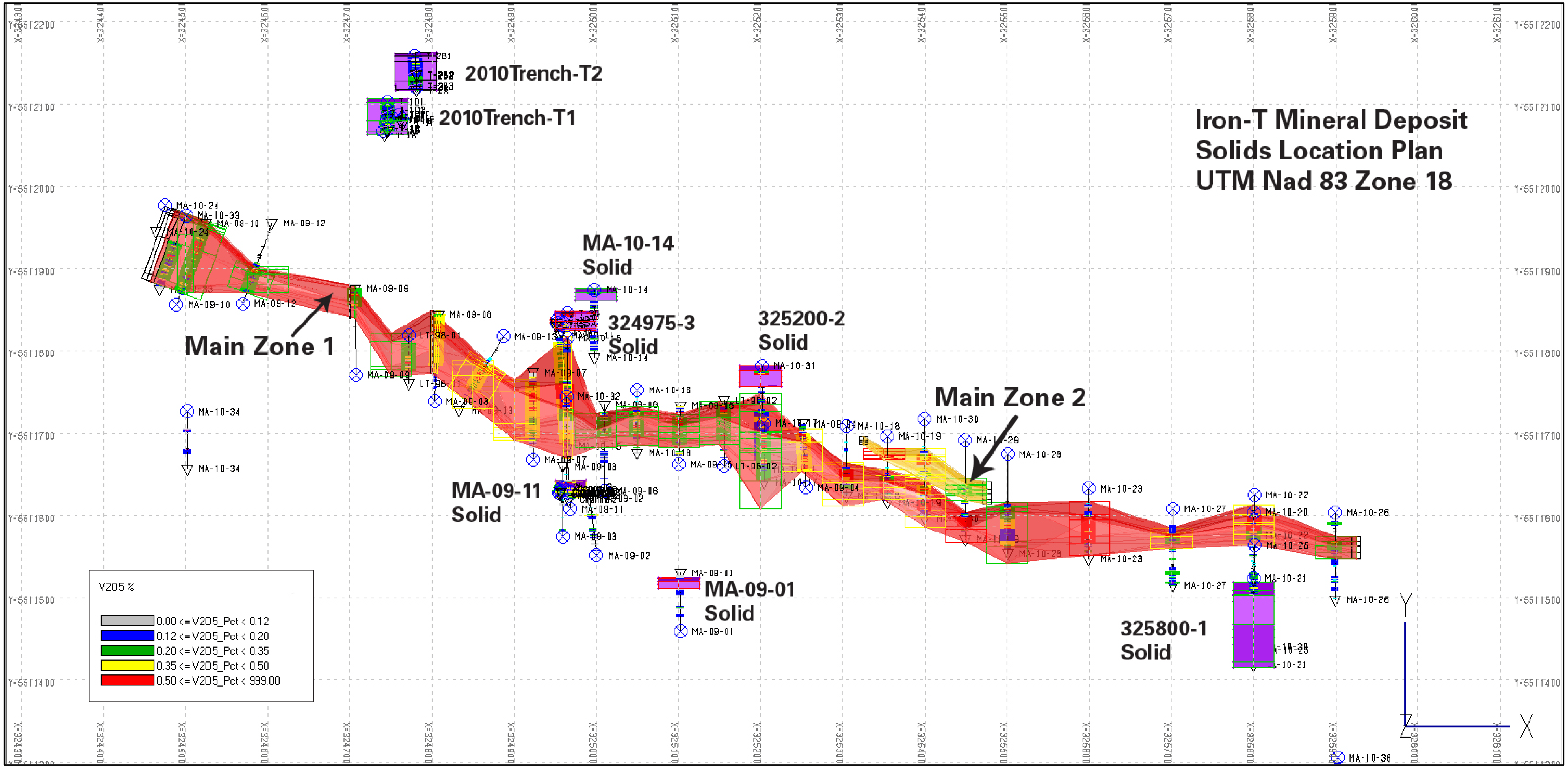


Figure 26: Iron-T Mineral Deposit Mineralized Solids Location Plan

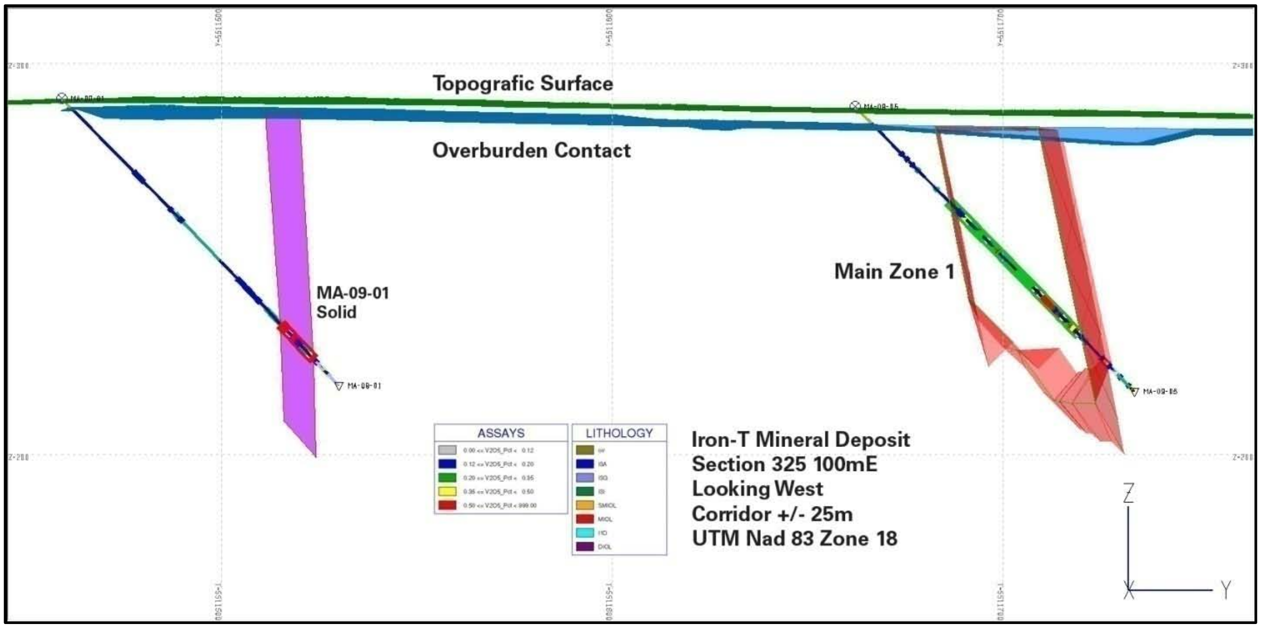


Figure 27: Section 325100mE

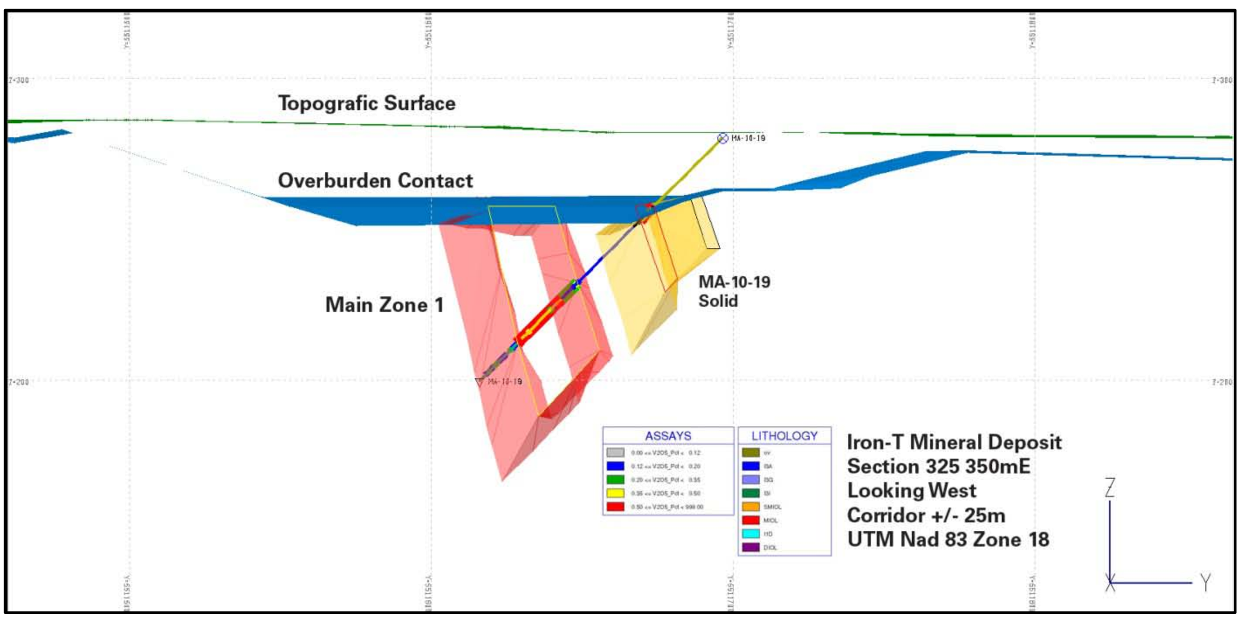


Figure 28: Section 325350mE

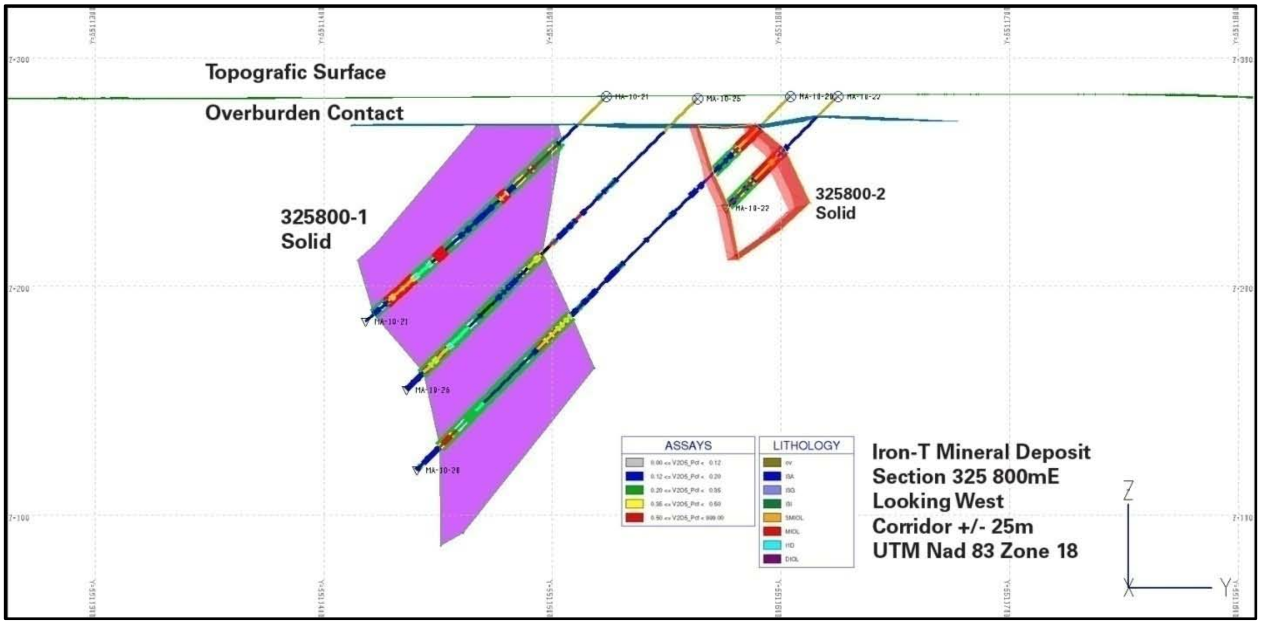


Figure 29: Section at 325800mE

17.6 Mineralized intercepts

SGS used and validated a set of mineralized intercepts outlining the different mineralized zones. Please see 24.1- Iron-T Mineralized intercepts. Parameters were used in order to have a good view of the mineral deposit throughout the sections. Note that no minimum horizontal length was used considering the selected mining method selected and the nature of the mineralisation. Mineralized intercepts below the cut-off but following the mineralized zones were also considered in the geological interpretation. Dilution of gaps was also considered. SGS used a cut-off grade of 0.48 V2O5Eq. Please see below.

17.7 Vanadium Pentoxide Equivalent Variable

SGS was asked to create a block model of the Iron-T mineral deposit with a combined minimum cut-off grade of 0.20% V_2O_5 and 2% TiO_2. SGS verified the combined cut-offs and found that they do not represent accurately the mineralisation of the Iron-T property mineral deposit and the proposed economical method of extraction.

Considering the fact that the Iron-T mineral deposit holds a non-negligible portion of TiO_2 and Iron, SGS considers the 0.48% V2O5Eq cut-off grade as a conservative cut-off and is the one recommended. This cut-off corresponds roughly to a combined cut-off of 0.26% V_2O_5 and 3.78% TiO_2. If the combined cut-off would have been used, a small decrease in tonnage would have been observed in comparison to the V2O5Eq cut-off. We can see that the recommended TiO_2 cut-off is significantly higher than the 2% TiO_2 cut-off proposed by Apella at the beginning.

Mr Christian Derosier of Apella provided prices of the Vanadium, Iron and Titanium as of April 11th, 2010 and June 14th, 2010. The revised prices were given on June 21st 2010 by Mr Derosier reflecting a better view of the method of selling of the concentrate of TiO_2, vanadium and iron.

As a reminder, all of the prices were given by Apella. SGS did not do an extensive research of the dollar value of vanadium, TiO_2 and Fe concentrates.

Ore Type	Price US$	Price units	Assays units	Units factor	Recovery	Unitary price	V2O5Eq factor
V2O5	14	kg	%	10	75%	105.00	1.0
Fe*	0.182	kg	%	10	65%	1.18	0.011
TiO2**	0.09	kg	%	10	65%	0.59	0.006

Table 8: Parameter for the V2O5Eq variable determination

V2O5eq=V2O5+0.011*Fe+0.006*TiO2 in %

* 182$/*tonne metric

**90$/tonne metric

V2O5: 14$/kg

The prices were given by Christian Derosier of Apella.

From internal discussions with SGS consultant mine engineers and Mr Derosier, a mill processing cost of 50$(US) /tonne was retained. The open pit method of extraction was considered and was estimated at 6$/tonne (12$/tonne if waste material is included). A processing cost was estimated at 35$/tonne and an extra 10$/tonne was estimated for the additional processing procedures. Considering the local resources potential and availability of the nearby town of Matagami but also its relative distance from smelters and bigger mining agglomeration, SGS considers the mill processing cost of 50$/tonne as conservative.

A recovery of 75% vanadium pentoxide was established based on similar projects such as the Lac Doré Complex near Chibougamau Also, based on the 2010 Davis tube and density tests done at SGS Lakefield laboratory, the V recovery was high; averaging at 74.2% and 75% of samples had a recovery of greater than 66.6%.

According to a 50$/tonne cut-off, SGS used also a V2O5Eq cut-off of 0.48%. SGS established this Vanadium cut-off with a linear regression diagram of US dollars/tonne Vs V2O5Eq. The equation used is: Y=0.009x with a $R^2=1$.

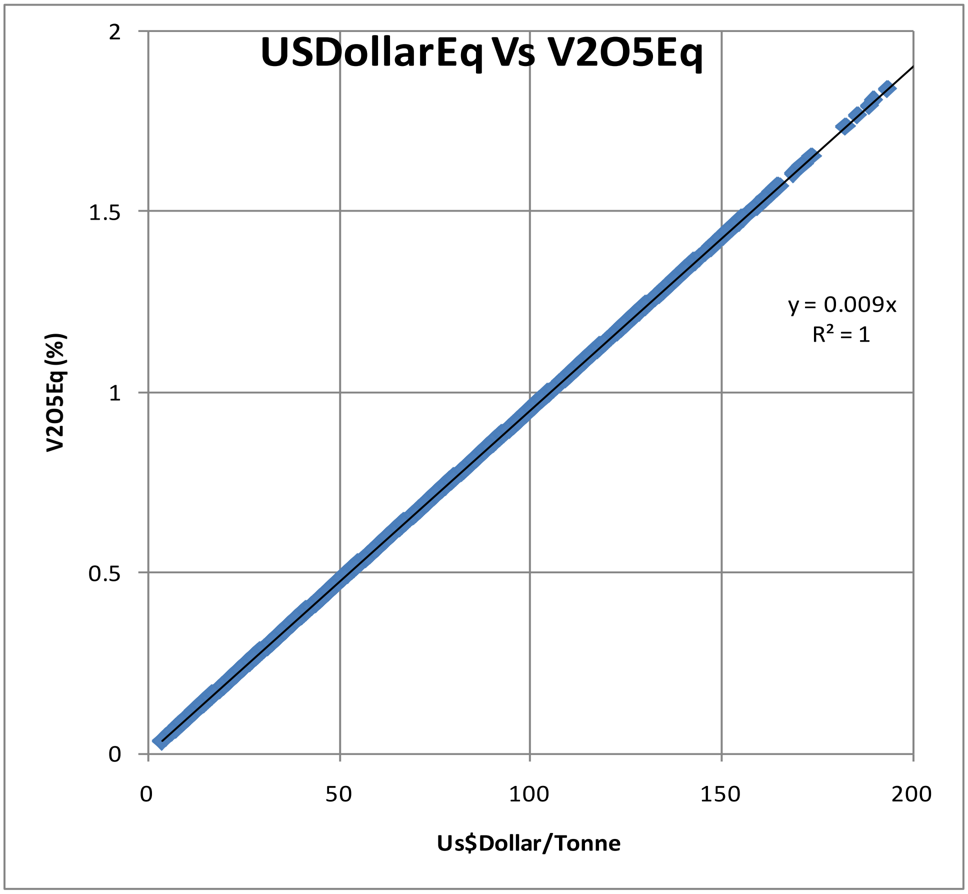


Figure 30: Us Dollar Eq Vs V_2O_5 Eq

The recent drilling permitted the modelling of the Iron-T mineral Deposit. Based on available drilling and trenching data, a simple geological model was constructed by SGS. The model was approved in December 2010 by Apella following a resource update meeting with Mr. Christian Derosier.

The following pie chart describes the metal contribution from each commodity involved in the vanadium pentoxide equivalent variable. The contribution is based on the average grade estimated in the section: 17.12 Classified Resource Estimates of the Iron-T Mineral Deposit. The average vanadium, iron and TiO_2 content correspond respectively to an average of 55%, 40% and 5% of the metal contribution of the average vanadium Equivalent grade. A factor of 1 for the V_2O_5, 0.011 for the Fe and 0.006 for the TiO_2 was used for the determination of the metal contribution of the following pie chart.

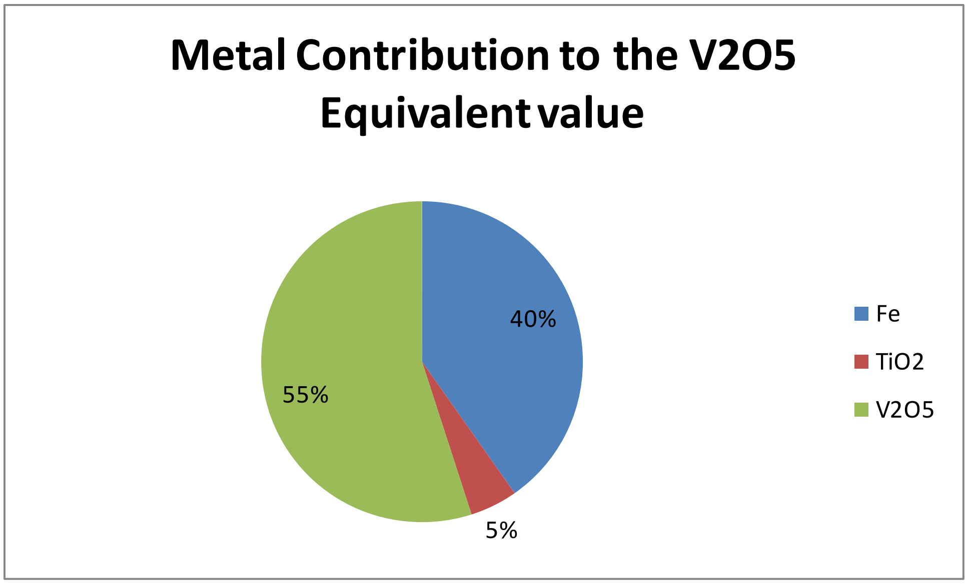


Figure 31: Metal Contribution to the V2O5Eq value

17.8 Composites

The method used to estimate the resources is by the inverse squared distance on regular blocks inside the mineralized envelope. This method requires the use of samples of regular length. Composites are then created within the selected mineralized intercepts from original samples. SGS applied dilution in the compositing setting to take into accounts occasional gaps within the mineralised envelopes. The selected length of the composites directly influences the amount of dilution of the model. The longer the composites are, the more likely they will be diluted. SGS used an average length of 1.25m with a minimum length of 0.5m. The selected length is considered suitable in comparison to the mean length of 1.18m and the median length of 1.25m of the assay lengths included in the mineralised intercepts as well as the dimension of the blocks used.

17.9 Analysis of the grade distribution

The 1.25m composites grades show distribution approaching lognormal law. There is no reason to cap any assays for Fe_2O_3, TiO_2 and V_2O_5. Furthermore, we consider an anomaly the situation when more than 10% of the metal content contained in high grades is found in less than 1% of the set of composites. That is not the case here thus it is not relevant to apply capping of high-grade values.

17.9.1 Analysis of the Fe_2O_3 grade distribution

The Fe_2O_3 grades of the composite samples show a distribution approaching the normal law. All together without any differentiation of the mineralized structures, the maximum grade is 73.24% and a minimum of 0.34% in core samples. Please see histograms below.

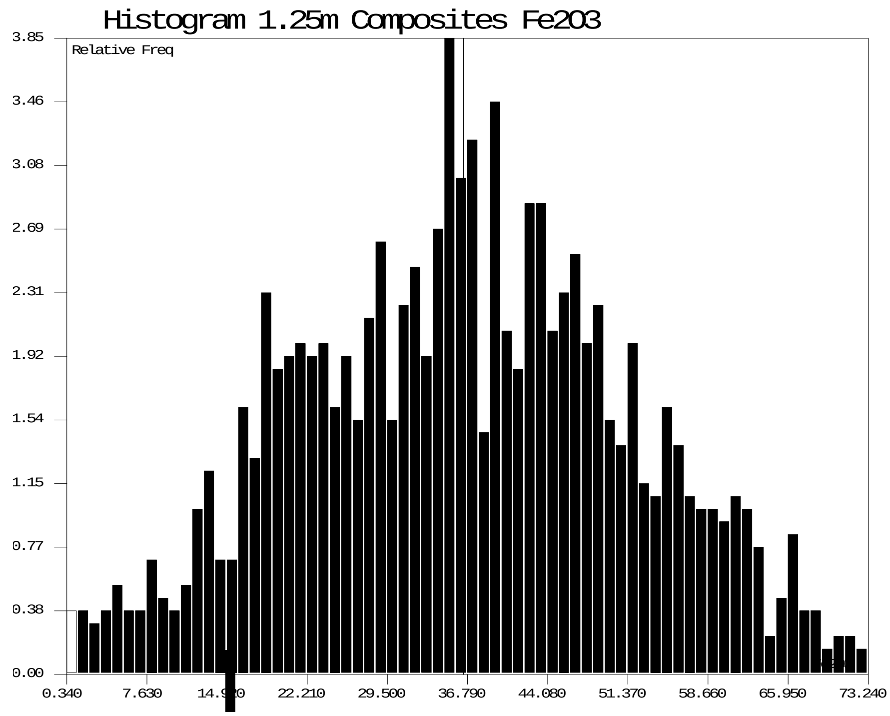


Figure 32: Histogram 1.25m Composites Fe_2O_3

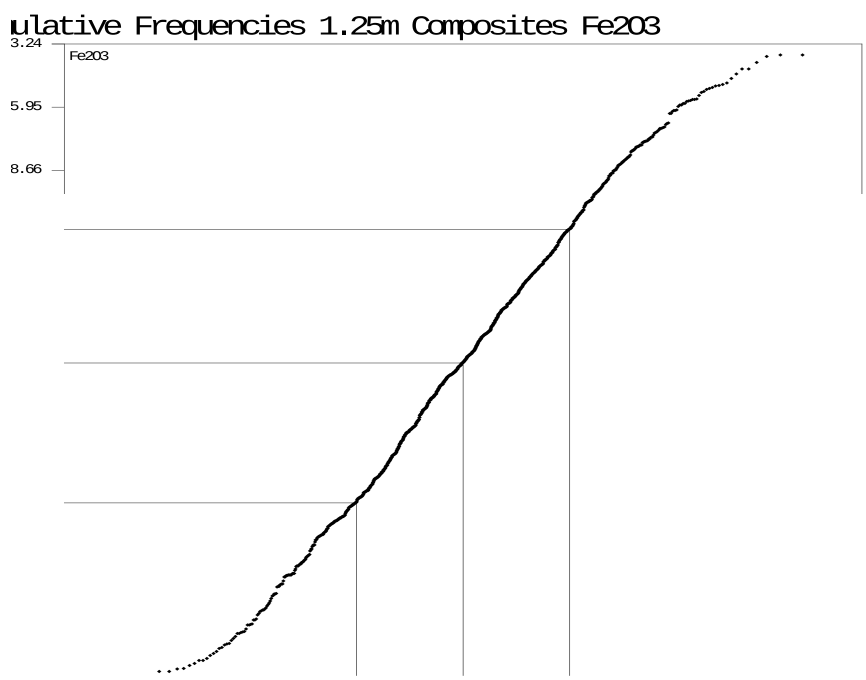


Figure 33: Cumulative Frequencies 1.25m Composites Fe_2O_3

17.9.2 Analysis of the TiO_2 grade distribution

The TiO_2 grades of the composite samples show a distribution approaching the normal law. All together without any differentiation of the mineralized structures, the maximum grade is 16.33% and a minimum of 0.03% in core samples. Please see histograms below.

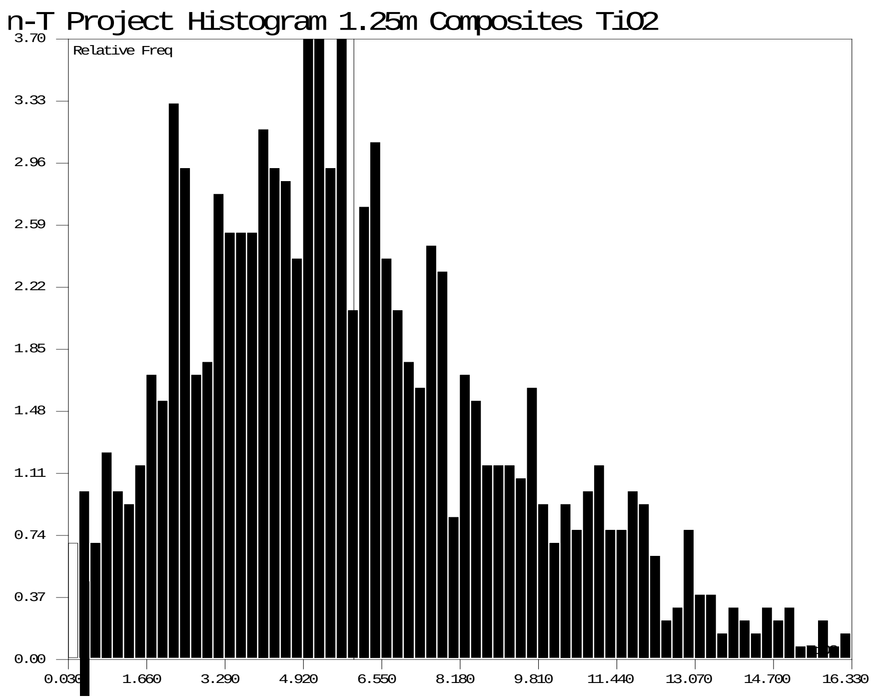


Figure 34: Histogram 1.25m Composites TiO_2

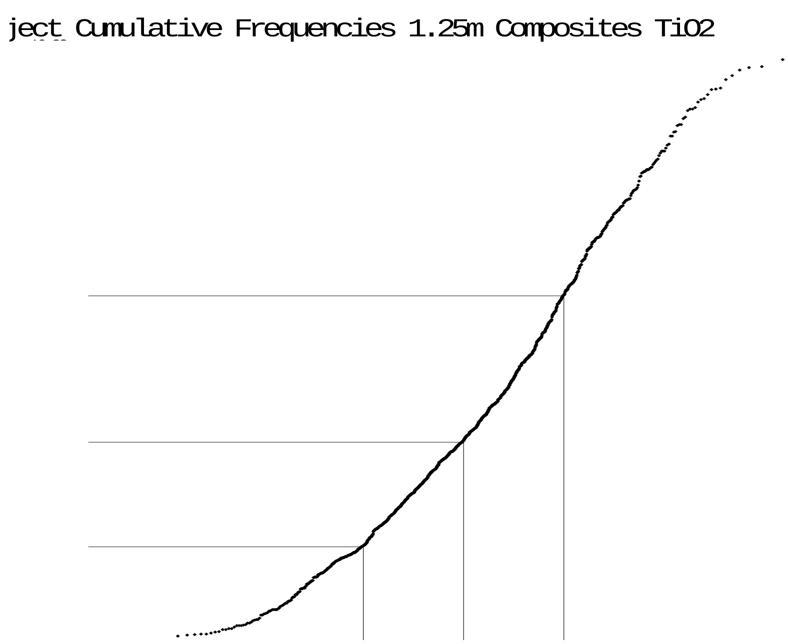


Figure 35: Cumulative Frequencies 1.25m Composites TiO_2

17.9.3 Analysis of the V_2O_5 grade distribution

The V_2O_5 grades of the composite samples show a distribution approaching the normal law. All together without any differentiation of the mineralized structures, the maximum grade is 1.20% and a minimum of 0.01% in core samples. Please see histograms below.

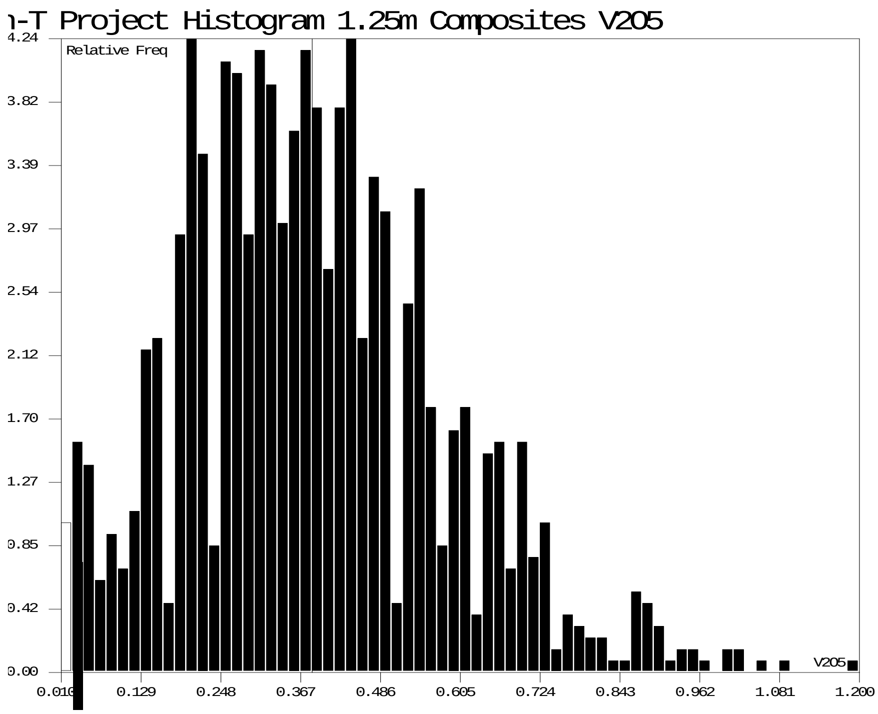


Figure 36: Histogram 1.25m Composites V_2O_5

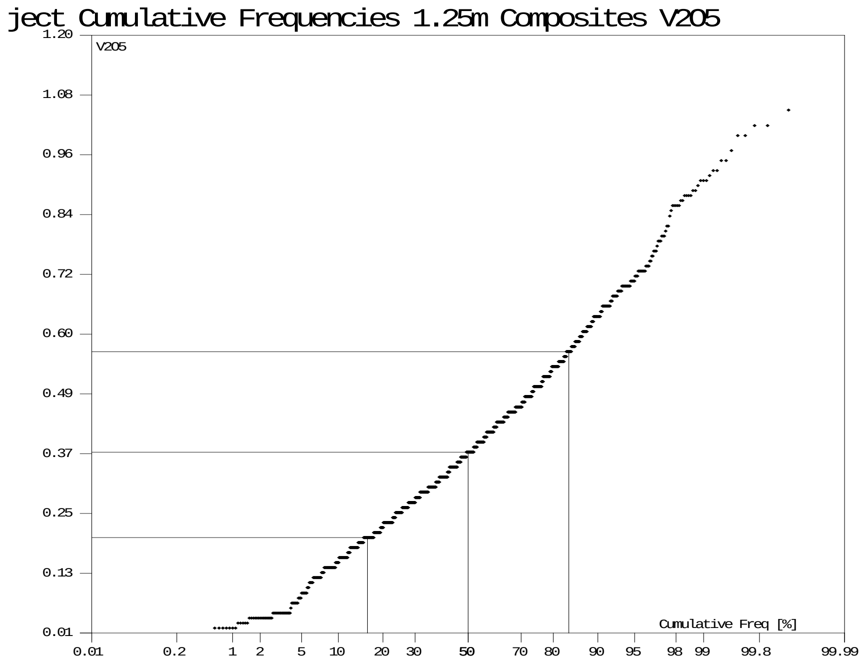


Figure 37: Cumulative Frequencies 1.25m Composites V_2O_5

17.10 Resource Estimation Settings

The estimation of the Iron-T mineral deposit was done using two methods of estimation. The MainZone1 and MainZone2 solids were estimated with the 3D block modeling method of estimation. 12 individual simple solids were estimated as extruded solids. The following geometric parameters were used for the modeling of the Iron-T block model.

Grid (NAD83)	X	Y	Z
Origin:	324,000	5,511,000	0
Size	5	5	5
Discretization	1	1	1
Starting Coordinate:	324,000	5,511,000	0
Starting Block Indice:	1	1	1
Ending Coordinate:	326,000	5,512,000	310
Ending Block Indice:	401	201	63

Table 9: Geometric parameters of the Iron-T block model

17.10.1 Solid Extrusion

8 individual simple solids intercepted by only one drill hole were estimated as extruded solids. The shapes of the solids were taken directly from the geological interpretation in section of the SectCad software. The thickness of every extruded solid was set at 50 m. The average grade of the mineralized intercepts passing through the extruded solids was attributed to each selected solid. The name of 3 of the solids was given from its respective intersected drill hole name and respective trench location. The name of 3 of the solids was given from its respective section name. Please see: Figure 26: Iron-T Mineral Deposit Mineralized Solids Location Plan and Figure 38: Iron-T Block Model location.

Extruded Solid	Tonnage	Fe (%)	Fe2O3 (%)	TiO2 (%)	V2O5 (%)	V2O5Eq (%)
2010-Trench-2	194,474.10	17.76	25.39	3.67	0.20	0.42
MA-10-14	57,704.40	17.77	25.40	3.89	0.26	0.48
325800-1	1,802,589.15	17.96	25.67	4.06	0.33	0.55
2010-Trench-1	182,196.78	22.13	31.65	5.10	0.28	0.56
MA-09-11	80,092.44	26.55	37.96	7.37	0.36	0.69
MA-09-01	119,882.22	27.84	39.80	5.99	0.57	0.91
325200-2	103,112.61	29.63	42.36	7.62	0.55	0.92
324975-3	75,574.36	33.89	48.45	9.07	0.52	0.95

Table 10: Iron-T Estimated Extruded Solids

17.10.2 Block Modeling

Inverse distance squared was used to estimate the resources of the Iron-T mineral deposit MainZone1 and MainZone2 solids by block modelling. SGS used a block model of 5m by 5m by 5m. SGS used the SectCad software designed by SGS for the resources estimation. The block model estimation did not use the topography and the overburden contact in the parameters settings. However, the overburden contact information from the drill hole logs was taken into account in the geological interpretation of the mineral deposit. Below is the block model according to the geological interpretation of the sections taken from the SectCad sectional modeling and resource estimation software. The same cross sections are shown as in sub-section17.5 Geological interpretation.

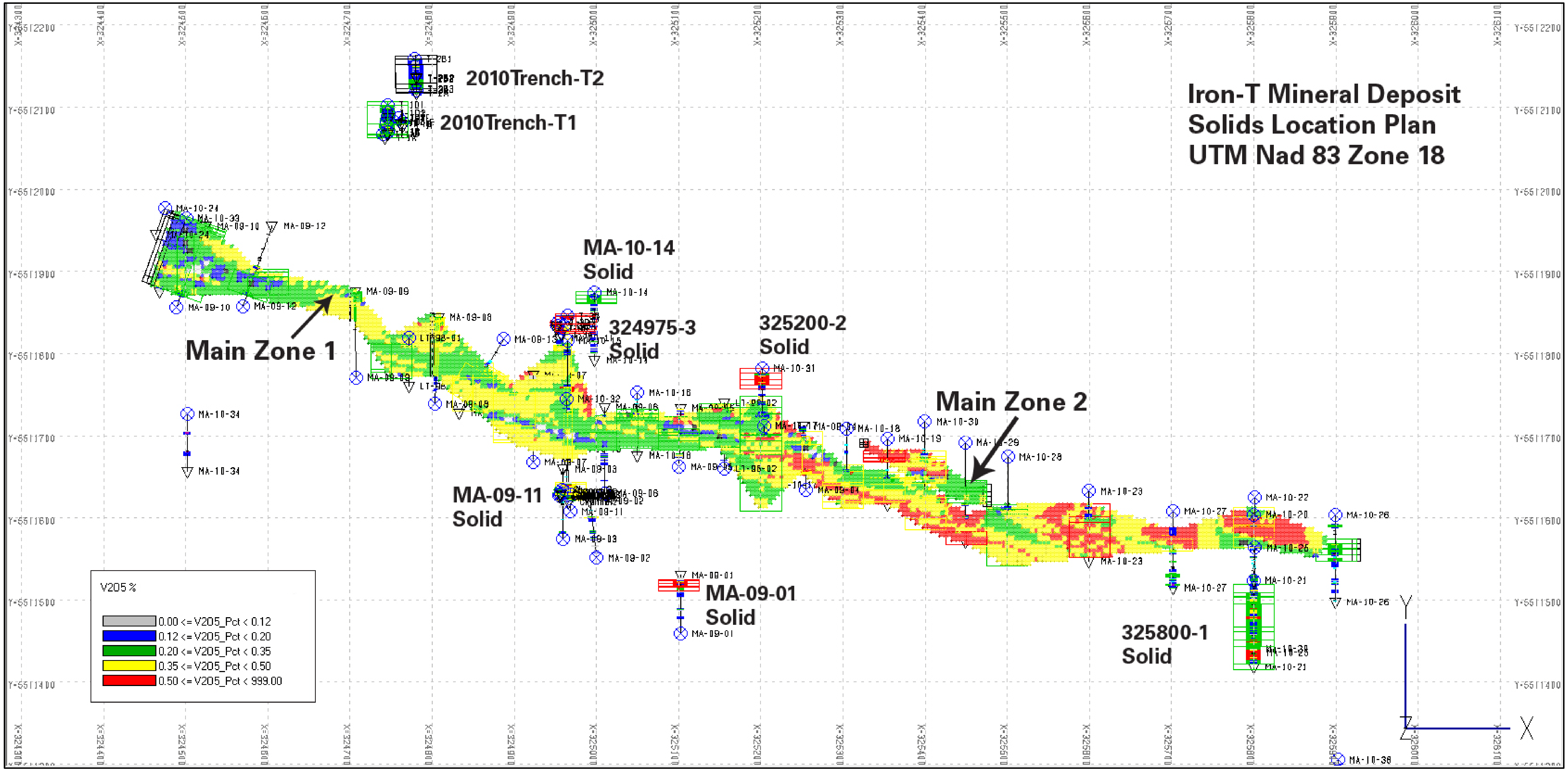


Figure 38: Iron-T Block Model location

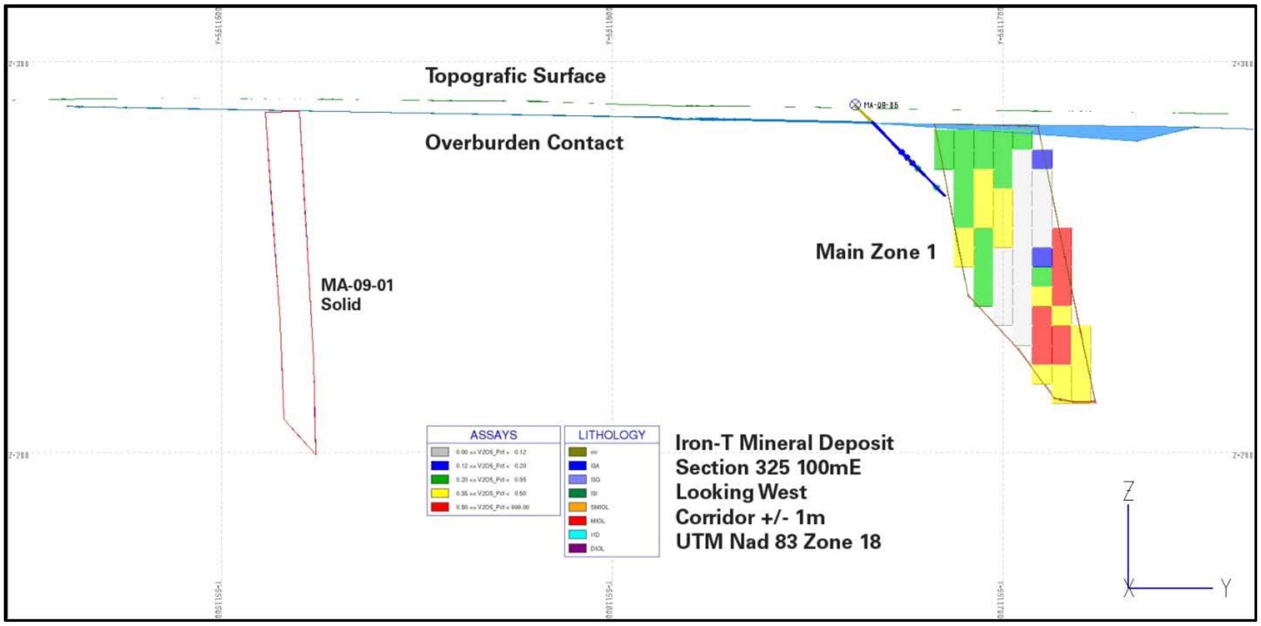


Figure 39: Block Model Projection on Section 325100mE

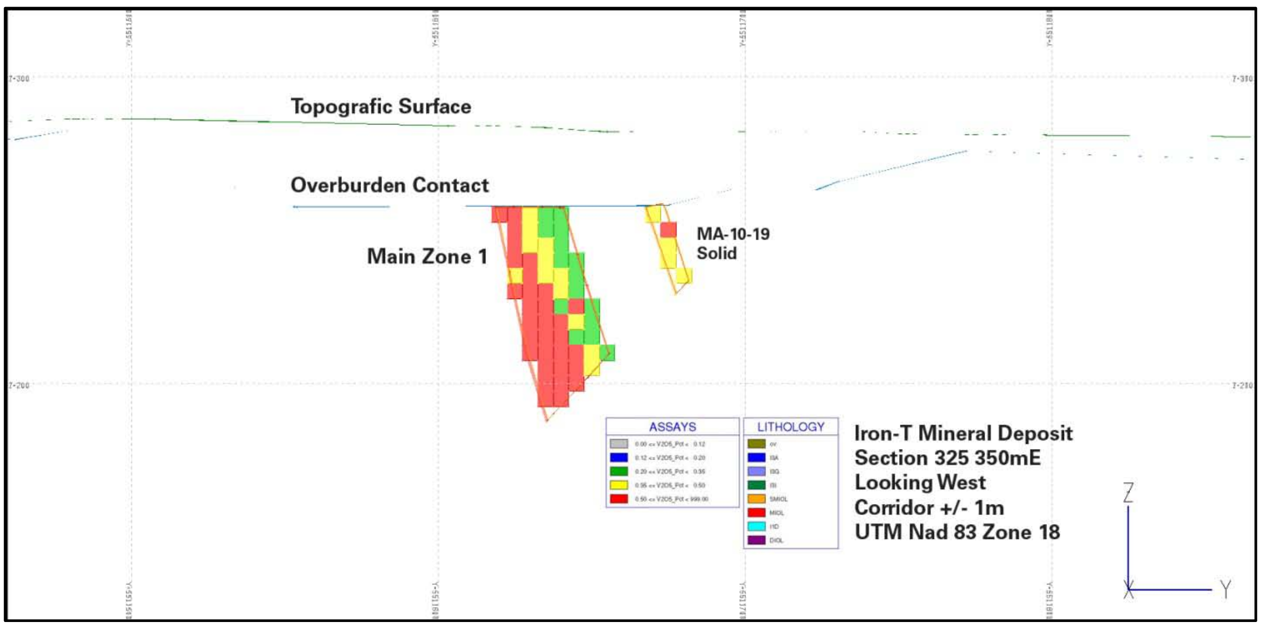


Figure 40: Block Model Projection on Section 325350mE

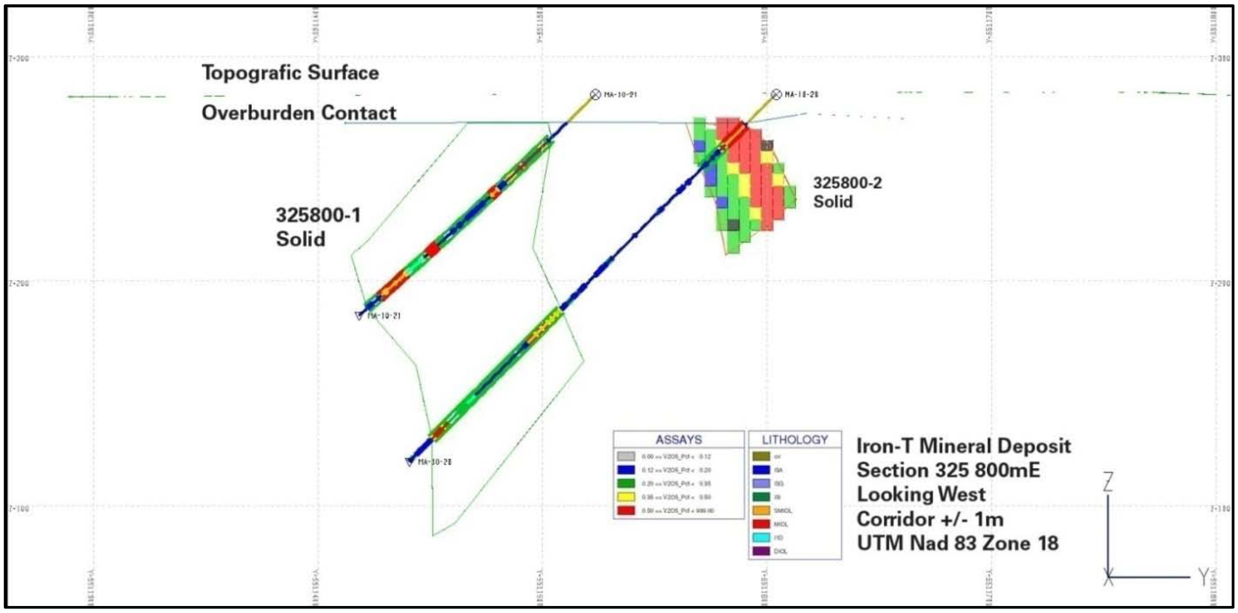


Figure 41: Block Model Projection on Section 325800mE

17.10.3 Estimation Parameters

SGS used four search ellipsoids for the resource estimation.

Search Ellipse	Azimuth	Dip	Spin	Major Axis (m)	Medium Axis (m)	Minor Axis (m)
Ellipse #1	285	0	75	75	40	20
Ellipse #2	285	0	75	150	80	40
Ellipse #3	285	0	75	300	160	80
Ellipse #4	285	0	75	600	320	160

Table 11: Search Ellipsoids of the Iron-T mineral Deposit

The estimation of the Iron-T block model was done by phases according to the following table.

Estimation Method:			Inverse Power Distance Square (IPD2)			
Block Discretization:			X:1 Y:1 Z:1			
Solid	Searh Ellipsoid	Estimation Run	Composites	Max Nb of samples used	Min Nb of samples used	Max nb of samples used per hole
MainZone-1 & MainZone-2	Elipse #1	#1	MainZone-1 & MainZone-2	20	7	3
	Elipse #2	#2		20	7	3
	Elipse #3	#3		20	7	3
	Elipse #4	#4		20	7	3

Table 12: Estimation parameters of the Iron-T mineral deposit

17.11 Resource Classification Settings

The current classified resources of the Iron-T mineral deposit reported below are compliant with standards as outlined in the National Instrument 43-101. Classification was done according to the density of drilling and level of confidence of the data.

Currently, there are no measured resources and no indicated resources. Most of the sections contain only one drill hole giving limited information on the deposit. Even two separate small interpreted solids were intersected by at least two drill holes (trenches) within a radius of 50 m, there is not enough information validating the grade and lateral continuity of the solids.

There are no reserves reported in this document. The resources reported in this document are compliant with current standards as outlined in the National Instrument 43-101.

17.12 Classified Resource Estimates of the Iron-T Mineral Deposit

These resources were estimated using different V_2O_5Eq cut-offs grades. The selected cut-off of 0.48% V2O5Eq was retained in order to outline the mineral potential of the deposit according to the open pit miming option. Below are the classified resources of the Iron-T mineral deposit.

Final Inferred mineral Resource Estimate - Iron-T Property							
V2O5Eq Cutoff(%)	Tonnage	Volume	Fe (%)	Fe2O3 (%)	TiO2 (%)	V2O5 (%)	V2O5Eq (%)
0.48	**14 376 000**	**6 331 000**	**27.30**	**39.04**	**6.55**	**0.42**	**0.77**

Table 13: Classified Resources Estimates of the Iron-T Mineral Deposit

Please see the Iron-T Inferred Mineral Resources sensitivity table below.

Inferred Mineral Resources Sensitivity Table - Iron-T Property							
V2O5Eq Cutoff(%)	Tonnage	Volume	Fe (%)	Fe2O3 (%)	TiO2 (%)	V2O5 (%)	V2O5Eq (%)
0.30	16 553 000	7 131 000.00	25.70	36.74	6.10	0.40	0.72
0.35	16 206 000	7 032 000.00	25.98	37.15	6.17	0.40	0.73
0.40	15 631 000	6 868 000.00	26.42	37.78	6.30	0.41	0.74
0.48	**14 376 000**	**6 331 000.00**	**27.30**	**39.04**	**6.55**	**0.42**	**0.77**
0.50	13 998 000	6 170 000.00	27.55	39.39	6.63	0.43	0.77
0.60	11 214 000	3 552 000.00	29.43	42.07	7.19	0.46	0.83
0.70	8 667 000	2 750 000.00	31.07	44.42	7.74	0.49	0.88
0.80	5 715 000	1 907 000.00	33.05	47.25	8.49	0.53	0.95
0.90	3 138 000	1 171 000.00	35.23	50.36	9.39	0.58	1.03

Table 14: Iron-T Inferred Mineral Resources Sensitivity Table

18- Other Relevant Data and Information (Item 20)

To the author's knowledge, there is no other relevant data and information on the Iron-T mineral deposit.

19- Interpretation and Conclusions (Item 21)

The resources reported in this document are compliant with standards as outlined in the National Instrument 43-101. These classified resources were estimated using a minimum cut-off grade of 0.48% V2O5Eq and are amounting to 14 376 000 tonnes inferred category at 0.42% V_2O_5 and 0.77% V2O5Eq. It is the author's opinion, according to the estimation parameters used including the fixed specific gravity and the selection of search parameters and classification parameters, that the current estimated resources in this report are considered to be adequate and conservative.

The Iron-T mineral deposit contains enough resources to justify additional work on the property that could lead from a bulk sampling, mineral processing and metallurgical testing to a preliminary economic assessment study and prefeasibility study.

The independent sampling done by SGS in 2010 revealed that the average grade of original assays for V (V_2O_5) is 15% higher than the independent samples. It showed a bias at a 95% confidence level for V (V_2O_5). SGS recommended also sending duplicate samples to two different laboratories in order to determine correction factors.

The 2011 independent sampling program showed that the Fe_2O_3 average grade of original assays (ALS-Chemex) gave results from 0.9 to 1.8% higher than the independent assays (SGS Lakefield and Actlabs). SGS considers the difference as negligible. The TiO_2 average grade original assays gave results from 1.1% to 5.5% higher than the independent assays The V (V_2O_5) average grade of original assays gave results from 12.9% to 18.7% higher than the independent samples. SGS considers the difference between original samples and independent check samples for TiO_2 and V_2O_5 to be significant enough to continue the QAQC procedures and to start an evaluation on the effects of the notable difference of check assays.

In January 2011, SGS sent a total of 81 independent samples to two other labs (SGS Lakefield and Actlabs). SGS found that the ALS-Chemex laboratory tends to be the one with the overall highest average iron, Tio_2 and V_2O_5 grades. The SGS Lakefield laboratory and Actlabs are respectively ranked second and third. Since the majority if not all of the original samples were sent to the ALS-Chemex lab, SGS strongly recommends continuing and implementing QAQC procedures involving certified materials (standards) from the industry to be sent to the ALS-Chemex lab to check any calibration errors.

Apella is implementing a QAQC program involving the assay of certified materials (standards) in order to verify the calibration of the laboratory and two other laboratories. According to the findings of this QAQC program, these results will help determine a correction factor on the assay results.

Based on the available data of the sample preparation and analytical procedures, there is no reason to believe that the results are erroneous and misleading. It is important to mention that the bias observed and the 15% average difference for V is significant and that a correction factor may have to be applied on the future resources estimates. The author did not find any assay errors and cannot identify any errors in assay results. Secondly, at this moment, we cannot point out any flaws in assay analysis from any laboratory. The difference between assay results may be related to the calibration of the instruments. Since the majority if not all of the samples were sent to the ALS-Chemex lab, SGS strongly recommends continuing and implementing QAQC procedures involving certified materials (standards) from the industry to be sent to the ALS-Chemex lab to check any calibration errors.

The project needs more definition diamond drilling before being ready for mining; this can be realized from surface drilling.

Although still considered as preliminary and based on the optic of an open pit operation, the mineral processing results of 2010 and 2011 showed interesting good recovery results. Tests included limited Davis tube tests, density tests Satmagan tests and a mineralogy study. The 2011 Davis tube V recovery was high; averaging at 88.7% and 90% of samples had a recovery of greater than 79.6%. SG testing gave results from 2.93 to 4.37 and a mean average SG of 3.68. The Satmagan (content magnetite (Fe3O4)) averaged at 33.8%, and ranged from 13.7% to 48.8%. The average Ti and V contents were 5.51% and 0.34%, respectively. The concentrates from the mineralogy tests contained between 80.9% and 96.5% combined Fe-Oxides, Ti-Magnetite and Ilmenite. For most of the samples analysed, the major carrier of V are the Fe-Oxides (ranging from 66.2% and 91.2%) with Ti-Magnetite being a minor carrier, at between 7.19% and 32.0%. Between 64.3% and 90.9% of the Oxides were free, and between 6.46% and 20.7% of the Oxides were liberated. The locked Oxides was mostly associated with non-opaque gangue (between 2.22% and 14.9%), with a much smaller proportion associated with sulphides (between 0.00% and 1.92%).

At the moment of the writing of this report, on behalf of the client, SGS has started a QAQC procedure including the shipping of certified reference materials (CRM) to the three selected laboratories that were selected for the 2011.independent sampling program. This procedure is aiming at defining the bias observed and the determination of a correction factor. The results of this study are not available for the moment.

20- Recommendations (Item 22)

In January 2011, SGS sent a total of 81 independent to two other certified labs (SGS Lakefield and Actlabs). SGS found that the ALS-Chemex laboratory tends to be the one with the overall highest average iron, TiO_2 and V_2O_5 grades. The SGS Lakefield laboratory and Actlabs are respectively ranked second and third. Since the majority if not all of the original samples were sent to the ALS-Chemex lab, SGS strongly recommends continuing and implementing QAQC procedures involving the systematic insertion of certified materials (standards) from the industry to be sent to the ALS-Chemex lab to check any calibration errors and the systematic duplicate sampling and assay of relevant assay intervals. The author is suggesting a proportion of at least 20%. SGS recommends using industrial silica with known grades and performance gates. They can be bought at local hardware store. To take out any contamination errors related to the blank material itself.

Apella is in the process of implementing a QAQC program involving the assay of certified materials (standards) in order to verify the calibration of the laboratory and two other laboratories. According to the findings of this QAQC program, these results will help determine a correction factor on the assay results.

Following its August 2010 recommendations, SGS recommends the continuation of detailed cartography, and exploration work of known and future mineralized occurrences throughout the property.

SGS recommends also additional drilling. This additional drilling would increase significantly the quality of the geological information as well as the update of the overall resources and the geological model. With additional drilling data and the revision of the geological model, the update of the resources could include the measured and indicated resources categories.

SGS recommends to continue drilling of the Iron-T mineral deposit with an estimated cost of CA$ 2 623 500.00. The following budgetary recommendation is purely conceptual and does not include accommodations, meals, and transport and equipment rental costs. It is based on average costs of the industry and from Apella's, inquiry on exploration activity costs.

Description	Units (m)	$/Unit	Price
Phase 1			
Detailed cartography, ground magnetics, line cutting and outcrop sampling and trenching of prime targets			200,000.00
Phase 2			
Systematic drilling (NQ) on drilled sections 50m radius	3500	150	525,000.00
Phase 3			
Drilling (NQ) of prime exploration targets, extentions drilling and infill drilling	7500	150	1,125,000.00
Tecnical sevices			
Core Logging and Field supervision			200,000.00
Reports			35,000.00
Assays(20%)			330,000.00
Contingencies (10%)			208,500.00
Total			**2,623,500.00**

As a follow up of SGS last recommendations from previous Iron-T resource report, Apella is in the process of planning a 20,000 m drilling campaign in order to add significantly the resources and its level of confidence and classification. SGS recommends selecting and prioritizing the different areas before drilling. It is in Apella's best interest to maximize every meter drilled. Please see 2011 drilling plan in appendix.

SGS recommends including regular SG, Satmagan and Davis tube analysis as part of their diamond drilling program and analysis procedures.

Following SGS last recommendations, Apella is currently implementing an orientation survey on its relevant 2009-2010 drill holes and on all of its 2011 diamond drilling program.. This includes dip, direction of surveyed holes. This will permit a more precise view of the geological features and structures shaping and affecting the mineral deposit.

Considering the fact that the present resources were calculated according to a georeferenced 3D mineralized solid, it is in Apella's best interest to know precisely where its mineralisation is.

SGS recommends doing some 3D core orientation for the better knowledge of the structures.

SGS recommend assaying all sample intervals within the conceptual mineralised solids in order to lower the effect of the 0 grades applied in the resource estimation as a dilution factor.

SGS recommends carrying out mineral processing and metallurgical tests included SG as part of a future preliminary economic study.

SGS found that a total of 7 drill hole locations had a difference of more than 2 meters either above or below surface. All these differences did not affect the overall resources estimation, however, SGS recommends carrying out a review of the collar locations given to the client.

21- References (Item 23)

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22- Date and Signature Page (Item 24)

This report entitled: **"Technical Report, Resources update of the Iron-T Vanadium-Titanium-Iron Property, Matagami Area, Quebec, Canada" dated May 19th, 2011** was prepared and signed by the author.

Signed and Sealed

Maxime Dupéré P. Geo.
Geologist
SGS Canada

Blainville, Quebec, Canada
May 19th, 2011

23- Certificate of qualification

To accompany the Report entitled: **"Technical Report, Resources update of the Iron-T Vanadium-Titanium-Iron Property, Matagami Area, Quebec, Canada" dated May 19th, 2011.**

1. I, Maxime Dupéré, reside at 9660, Rue de la Chouette, Mirabel, Quebec, Canada, J7N 0C9.

2. I am a graduate from the Université de Montréal, Quebec in 1999 with a B.Sc. in geology and I have practiced my profession continuously since 2001.

3. I am a registered member of the Ordre des Géologues du Québec (#501), and I am currently employed by SGS Canada Inc. since May 2006.

4. I have 10 years experience in mining exploration in diamonds, gold, silver, base metals, and Iron Ore. I worked on several preliminary economic and pre-feasibility studies and I have prepared and made several mineral resource calculations for different exploration projects at different stages of exploration. I am aware of the different methods of calculation and the geostatistics applied to metallic and non metallic projects as well as industrial mineral projects.

5. I am responsible for the preparation of all sections of the report entitled **"Technical Report, Resources update of the Iron-T Vanadium-Titanium-Iron Property, Matagami Area, Quebec, Canada" dated May 19th, 2011.**

6. I am a "qualified person" within the meaning of National Instrument 43-101 – Standards of Disclosure for Mineral Projects of the Canadian Securities Administrators.

7. I visited the Iron-T property from May 10th to May13th, 2010.

8. My prior involvement with the property is restricted to the preparation of the technical report entitled: **"Technical Report, Vanadium-Titanium-Iron Resource Estimation of the Iron-T Property, Matagami Area, Quebec, Canada" dated August 27th, 2010.**

9. I certify that there is no circumstance that could interfere with my judgment regarding the preparation of this technical report.

10. Neither I, nor any affiliated entity of mine, is at present, under an agreement, arrangement or understanding or expects to become, an insider, associate, affiliated entity or employee of Apella Resources Inc., or any associated or affiliated entities.

11. Neither I, nor any affiliated entity of mine, own directly or indirectly, nor expect to receive, any interest in the properties or securities of Apella Resources Inc., or any associated or affiliated companies.

12. I have read NI 43-101 and Form 43-101F1 and have prepared the report entitled: **"Technical Report, Resources update of the Iron-T Vanadium-Titanium-Iron Property, Matagami Area, Quebec, Canada" dated May 19th, 2011** in compliance with NI 43-101 and Form 43-101F1.

13. To the best of my knowledge, information and belief, and, as of the date of this certificate, the parts I wrote in this technical report contain all scientific and technical information that is required to be disclosed to make this section of the technical not misleading.

Signed at Blainville, Quebec this May 19th, 2011

(*Signed and Sealed*) "Maxime Dupéré"

Maxime Dupéré, P.Geo.

24- List of Appendices

24.1- Iron-T Mineralized intercepts

Hole Name	From (m)	To (m)	Description	Fe_2O_3 (%)	Fe(%)	TiO_2 (%)	Ti (%)	V_2O_5 (%)	V (%)	V_2O_5 Eq (%)
Channel1	0	8.24	Massive to Semi-Massive Iron Ore Layering	35.19	24.61	8.7	5.22	0.3	0.17	0.62
Channel2	0	7	Massive to Semi-Massive Iron Ore Layering	33.19	23.21	7.85	4.7	0.27	0.15	0.57
Channel3a	0	4.52	Massive to Semi-Massive Iron Ore Layering	39.52	27.65	9.93	5.95	0.32	0.18	0.69
Channel3b	0	1	Massive to Semi-Massive Iron Ore Layering	35.9	25.11	8.7	5.22	0.31	0.17	0.64
Channel3c	0	1.33	Massive to Semi-Massive Iron Ore Layering	26.7	18.68	6	3.6	0.22	0.12	0.46
LT-98-01	12.3	61.1	Semi-Massive Iron Ore Layering?	36.78	25.73	5.41	3.25	0.31	0.17	0.63
LT-98-02	44.9	105.3	Massive to Semi-Massive Iron Ore Layering-Waste	21.38	14.95	2.92	1.75	0.2	0.11	0.38
MA-09-01	80.35	93.03	Semi-Massive Iron Ore Layering	39.8	27.84	5.99	3.59	0.57	0.32	0.91
MA-09-02	69.34	72.34	I3A	34.14	23.88	4.31	2.58	0.38	0.21	0.67
MA-09-04	28	95.12	Massive to Semi-Massive Iron Ore Layering-Waste	39.36	27.53	7.27	4.36	0.41	0.23	0.76
MA-09-05	34	82	Massive to Semi-Massive Iron Ore Layering-Waste	28.73	20.1	4.93	2.96	0.31	0.17	0.56
MA-09-06	92.69	127.7	Massive to Semi-Massive Iron Ore Layering-Waste	20.38	14.25	3.08	1.85	0.21	0.12	0.38
MA-09-07	37.8	134.95	Massive to Semi-Massive Iron Ore Layering-Waste	45.01	31.48	8.15	4.89	0.43	0.24	0.83
MA-09-08	60	149.68	Semi-Massive Iron Ore Layering	43.16	30.19	7.33	4.39	0.38	0.22	0.76
MA-09-09	139.78	150	Foolwall/I3A	38.26	26.76	5.39	3.23	0.3	0.17	0.63
MA-09-09	117.58	139.78	Semi-Massive Iron Ore Layering	35.35	24.72	5.7	3.42	0.32	0.18	0.63
MA-09-10	21.55	150.2	Massive to Semi-Massive Iron Ore Layering-Waste	29.52	20.65	4.66	2.79	0.3	0.17	0.56
MA-09-11	22.18	25.18	Hangingwall/I3A	31.74	22.2	3.95	2.37	0.29	0.16	0.56
MA-09-11	193.32	218	Massive Iron Ore Layering	62.72	43.87	12.83	7.69	0.61	0.34	1.18
MA-09-11	150.49	193.32	Massive to Semi-Massive to Disseminated Iron Ore Layering	37.58	26.28	6.28	3.76	0.39	0.22	0.72
MA-09-11	150.49	193.32	Massive to Semi-Massive to Disseminated Iron Ore Layering	37.58	26.28	6.28	3.76	0.39	0.22	0.72
MA-09-11	218	293.21	Massive to Semi-Massive to Disseminated Iron Ore Layering	42.76	29.91	6.29	3.77	0.35	0.2	0.73
MA-09-11	25.18	46.88	Semi-Massive Iron Ore Layering	41.77	29.22	6.73	4.04	0.43	0.24	0.79
MA-09-11	117.66	150.49	Semi-Massive Iron Ore Layering	36.02	25.19	5.84	3.5	0.39	0.22	0.70
MA-09-12	19.5	63	Massive to Semi-Massive Iron Ore Layering-Waste	35.52	24.84	4.45	2.67	0.26	0.15	0.56
MA-09-13	56.87	110.3	Massive to Semi-Massive Iron Ore Layering-Waste	41.22	28.83	7.18	4.3	0.37	0.21	0.73
MA-10-14	4.75	17.75	I3A	25.4	17.77	3.89	2.33	0.26	0.15	0.48
MA-10-15	77.35	160.75	Semi-Massive Iron Ore Layering	42.78	29.92	7.4	4.44	0.5	0.28	0.88
MA-10-16	36.75	79.68	Semi-Massive Iron Ore Layering	30.9	21.61	4.67	2.8	0.33	0.19	0.60
MA-10-17	15.35	99.75	Massive to Semi-Massive Iron Ore Layering-Waste	26.4	18.46	4.25	2.55	0.34	0.19	0.57
MA-10-18	100.62	106.87	footWall/I3I	20.03	14.01	2.94	1.76	0.28	0.16	0.45
MA-10-18	73.47	95.86	Semi-Massive Iron Ore Layering	43.54	30.45	8.21	4.92	0.59	0.33	0.98
MA-10-18	95.86	100.62	waste	4.26	2.98	0.45	0.27	0.05	0.03	0.08
MA-10-19	32.23	38.5	FZ	45.02	31.49	8.62	5.17	0.61	0.34	1.01
MA-10-19	67.93	75.43	Hanging wall	20.83	14.57	2.93	1.76	0.26	0.14	0.44
MA-10-19	75.43	96.1	Semi-Massive Iron Ore Layering	44.86	31.38	7.84	4.7	0.58	0.32	0.98
MA-10-20	31.66	47.22	Disseminated Iron Ore Layering/I3A	23.37	16.35	3.55	2.13	0.27	0.15	0.47
MA-10-20	135.3	216.71	Massive to Semi-Massive Iron Ore Layering	18.96	13.26	2.87	1.72	0.24	0.13	0.40
MA-10-20	19	31.66	Semi-Massive Iron Ore Layering	49.93	34.92	9.79	5.87	0.76	0.43	1.21
MA-10-21	27.44	59.95	Disseminated Iron Ore Layering	32.89	23.01	4.08	2.45	0.34	0.19	0.62
MA-10-21	97.01	103	Massive Iron Ore Layering	63.03	44.08	12.84	7.69	0.99	0.55	1.56
MA-10-21	65.01	139.29	Massive to Semi-Massive Iron Ore Layering-Waste	24.72	17.29	4.11	2.46	0.32	0.18	0.54
MA-10-21	59.95	65.01	Semi-Massive Iron Ore Layering	52.07	36.42	9.45	5.67	0.8	0.45	1.26
MA-10-21	115.54	131.79	Semi-Massive Iron Ore Layering	41.82	29.25	7.62	4.57	0.6	0.34	0.97
MA-10-22	51.04	67.43	Disseminated Iron Ore Layering/I3A	25.69	17.97	3.97	2.38	0.29	0.16	0.51
MA-10-22	32.56	51.04	Semi-Massive Iron Ore Layering	43.62	30.51	7.96	4.77	0.6	0.34	0.99
MA-10-23	44.68	93.3	Semi-Massive Iron Ore Layering	42.88	29.99	7.99	4.79	0.54	0.3	0.93
MA-10-25	96.53	170.33	Massive to Semi-Massive Iron Ore Layering	22.45	15.7	3.45	2.07	0.28	0.16	0.47
MA-10-26	49.22	68.01	I3A	20.83	14.57	2.96	1.77	0.22	0.12	0.40
MA-10-26	73.14	80.64	I3A	24.84	17.37	3.15	1.89	0.25	0.14	0.46
MA-10-26	15.68	20.68	I3A	22.27	15.58	3.54	2.12	0.22	0.12	0.41
MA-10-27	49.75	58.5	Disseminated Iron Ore Layering	24.65	17.24	3.52	2.11	0.27	0.15	0.49
MA-10-27	42	49.75	Disseminated to Semi-Massive to Massive Iron Ore Layering	38.46	26.9	6.64	3.98	0.55	0.31	0.89
MA-10-27	107.25	113.5	I3A	22.71	15.88	3.48	2.09	0.28	0.16	0.48
MA-10-27	123.75	127.5	I3A	25.39	17.76	3.39	2.03	0.27	0.15	0.49
MA-10-28	127	148.17	I3A footwall	12.96	9.06	1.54	0.92	0.13	0.07	0.24
MA-10-28	91.6	111.62	I3A HangingWall	20.15	14.09	2.57	1.54	0.21	0.12	0.38
MA-10-28	111.62	127	Massive Iron Ore Layering	30.74	21.5	4.87	2.92	0.4	0.22	0.67
MA-10-28	148.17	159.42	Massive to Semi-Massive to Disseminated Iron Ore Layering	25.9	18.12	3.91	2.35	0.36	0.2	0.59
MA-10-29	86.55	94.8	I3A	20.32	14.21	3.06	1.83	0.24	0.14	0.42
MA-10-29	75.45	86.55	I3A	25.21	17.63	3.62	2.17	0.29	0.16	0.51
MA-10-29	131.71	147.14	Massive Iron Ore Layering	55.13	38.56	9.54	5.72	0.8	0.45	1.28
MA-10-30	93.65	97.4	Footwall	23.23	16.25	4.03	2.42	0.29	0.16	0.49
MA-10-30	164.67	171	Footwall I3A	21.76	15.22	2.65	1.59	0.27	0.15	0.46
MA-10-30	167.17	169.67	I3A	24.93	17.43	3.54	2.12	0.36	0.2	0.57
MA-10-30	61.25	78.05	Massive to Semi-Massive To Disseminated Iron Ore Layering	43.55	30.46	6.77	4.06	0.54	0.3	0.92
MA-10-30	115.65	131.61	Massive to Semi-Massive To Disseminated Iron Ore Layering	39.31	27.5	6.2	3.71	0.47	0.26	0.81
MA-10-30	139.03	158.42	Massive to Semi-Massive To Disseminated Iron Ore Layering	41.18	28.81	6.97	4.18	0.53	0.3	0.89
MA-10-30	83.62	93.65	Massive to Semi-Massive To Disseminated Iron Ore Layering	33.55	23.46	5.78	3.47	0.4	0.23	0.70
MA-10-30	131.61	139.03	Waste	11	7.69	1.01	0.61	0.09	0.05	0.18
MA-10-30	78.05	83.62	Waste	6.4	4.47	0.71	0.42	0.05	0.03	0.10
MA-10-31	8.52	11.49	I3A	22.21	15.53	2.47	1.48	0.22	0.12	0.41
MA-10-31	78.44	85.94	I3A HangingWall	17.39	12.16	2.39	1.44	0.2	0.11	0.35
MA-10-31	95.83	162.32	I3Afootwall	14.04	9.82	1.95	1.17	0.16	0.09	0.28
MA-10-31	11.49	29.65	Massive to Semi-Massive to Disseminated Iron Ore Layering	45.65	31.93	8.46	5.07	0.6	0.34	1.00
MA-10-31	85.94	95.83	Massive to Semi-Massive to Disseminated Iron Ore Layering	42.25	29.55	5.66	3.39	0.45	0.25	0.82
MA-10-32	41.87	56.22	APH	13.67	9.56	2	1.2	0.1	0.06	0.22

Hole Name	From (m)	To (m)	Description	Fe_2O_3 (%)	Fe(%)	TiO_2 (%)	Ti (%)	V_2O_5 (%)	V (%)	V_2O_5 Eq (%)
MA-10-32	20.75	41.87	Massive to Semi-Massive to Disseminated Iron Ore Layering	36.45	25.5	5.12	3.07	0.31	0.17	0.62
MA-10-32	56.22	83.86	Massive to Semi-Massive to Disseminated Iron Ore Layering	37.87	26.49	6.26	3.75	0.41	0.23	0.74
MA-10-33	79	116.43	I3A HangingWall	26.09	18.25	3.68	2.21	0.27	0.15	0.50
MA-10-33	49.44	50.69	I3I HangingWall	28.68	20.06	3.25	1.95	0.25	0.14	0.49
MA-10-33	50.69	79	Massive to Semi-Massive to Disseminated Iron Ore Layering	38.4	26.86	5.11	3.06	0.34	0.19	0.67
MA-10-35	59.06	66.46	Disseminated to Semi-Massive Iron Ore Layering	35	24.48	4.16	2.5	0.47	0.26	0.77
MA-10-35	54.02	59.06	I3AHangingWall	24.67	17.26	2.55	1.53	0.26	0.15	0.47
MA-10-35	60.31	66.46	Massive to Semi-Massive to Disseminated Iron Ore Layering	37.36	26.13	4.61	2.76	0.52	0.29	0.84
MA-10-36	37.03	41.73	I3H	28.83	20.16	6.17	3.7	0.41	0.23	0.67
MA-10-36	75.99	111	Semi-Massive to Disseminated Iron Ore Layering	36.76	25.71	4.8	2.88	0.38	0.21	0.69
MA-10-37	77.19	90.42	Disseminated to Semi-Massive Iron Ore Layering	41.14	28.78	5.23	3.13	0.41	0.23	0.76
MA-10-37	70.94	77.19	I3A	21.57	15.09	2.81	1.68	0.22	0.12	0.40
MA-10-37	90.42	94.17	I3A FootWall	24.13	16.88	3.33	2	0.25	0.14	0.46
MA-10-39	68.3	72.88	Massive to Semi-Massive To Disseminated Iron Ore Layering	44.73	31.28	6.57	3.94	0.75	0.42	1.14
T-1A	0	5	Outcrop-Massive to Semi-Massive Iron Ore Layering	32.48	22.71	5.43	3.25	0.3	0.17	0.59
T-1B	0	2.5	Outcrop-Massive to Semi-Massive Iron Ore Layering	28.21	19.73	4.53	2.71	0.24	0.13	0.49
T-1C	0	11.5	Outcrop-Massive to Semi-Massive Iron Ore Layering	33.36	23.33	5.08	3.04	0.34	0.19	0.63
T-1D1	0	10	Outcrop-Massive to Semi-Massive Iron Ore Layering	32.8	22.94	5.61	3.36	0.25	0.14	0.54
T-1D2	0	5	Outcrop-Massive to Semi-Massive Iron Ore Layering	31.23	21.85	5.34	3.2	0.27	0.15	0.55
T-1D3	0	5	Outcrop-Massive to Semi-Massive Iron Ore Layering	30.1	21.05	4.57	2.74	0.26	0.15	0.53
T-1E	0	7.5	Outcrop-Massive to Semi-Massive Iron Ore Layering	29.84	20.88	4.67	2.8	0.24	0.13	0.50
T-1F	0	3.75	Outcrop-Massive to Semi-Massive Iron Ore Layering	30.7	21.47	5.07	3.04	0.26	0.14	0.53
T-2A	0	3.75	Outcrop-Massive to Semi-Massive Iron Ore Layering	27.07	18.93	3.8	2.28	0.2	0.11	0.43
T-2B1	0	22.8	Outcrop-Massive to Semi-Massive Iron Ore Layering	23.57	16.49	3.36	2.02	0.17	0.09	0.37
T-2B2	0	1.25	Outcrop-Massive to Semi-Massive Iron Ore Layering	21.48	15.02	2.98	1.79	0.16	0.09	0.35
T-2B3	0	12.5	Outcrop-Massive to Semi-Massive Iron Ore Layering	28.59	20	4.27	2.56	0.25	0.14	0.50
T-3A	0	10.25	Outcrop-Massive to Semi-Massive Iron Ore Layering	45.34	31.72	8.57	5.14	0.46	0.26	0.86
T-3B	0	4.5	Outcrop-Massive to Semi-Massive Iron Ore Layering	53.51	37.43	8.85	5.3	0.65	0.37	1.12
T-3C	0	3	Outcrop-Massive to Semi-Massive Iron Ore Layering	46.46	32.5	9.24	5.54	0.51	0.28	0.93
T-3D	0	4.5	Outcrop-Massive to Semi-Massive Iron Ore Layering	51.81	36.24	10.32	6.18	0.54	0.3	1.00

24.2- Iron-T Claims List

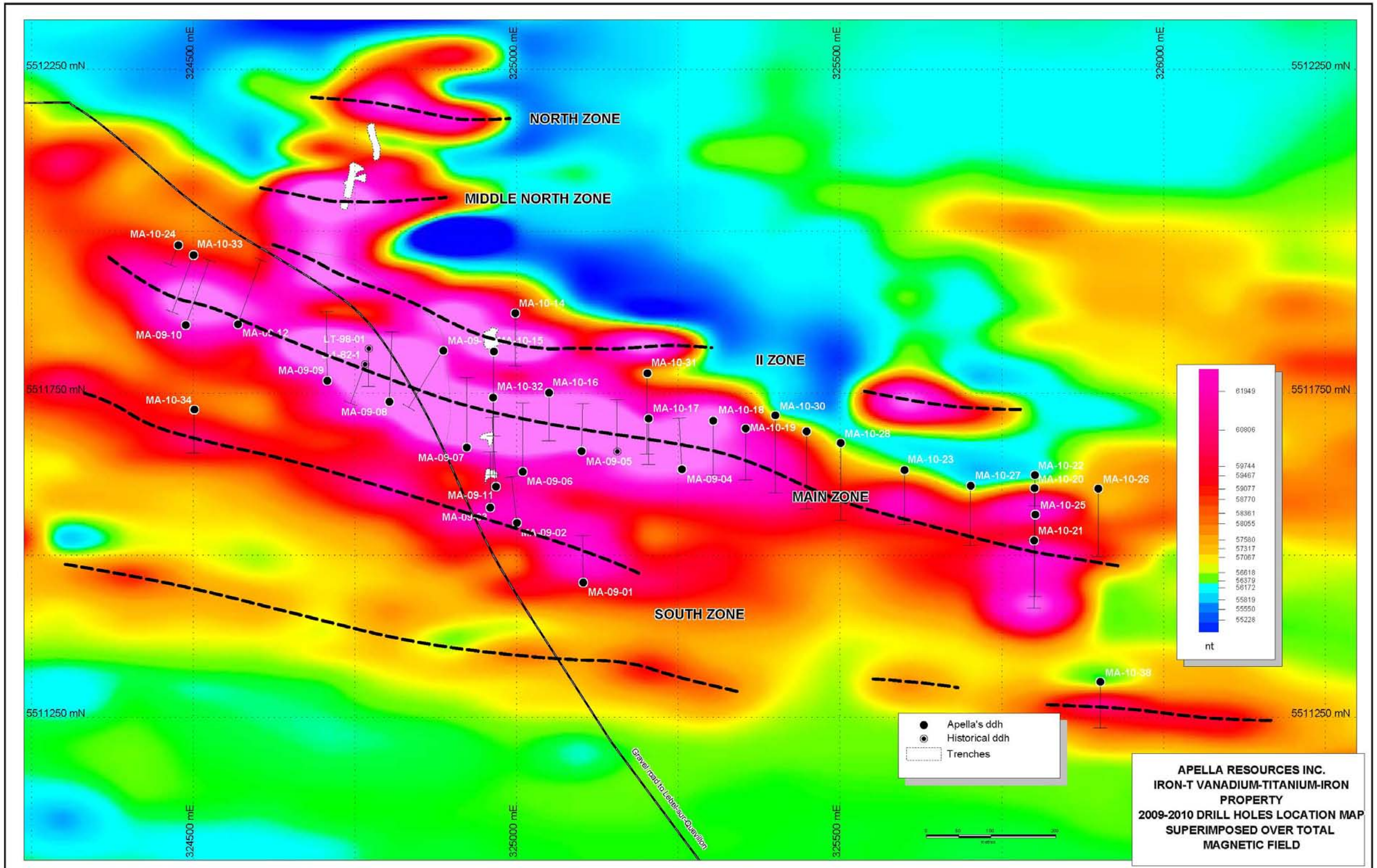
NTS sheet	Township	Row	Column	Title type	Title Number	Title status	Inscription date	Expiry date	Area (Ha)	Accrued work	Required work($)	Mining duties	Title Holder
32F11	N.A.	28	6	Online Map Staking	109860	Active	19/12/2005	18/12/2011	55.7	0,83	1200	52	Apella Resources inc
32F11	N.A.	28	7	Online Map Staking	109861	Active	19/12/2005	18/12/2011	55.7	0,83	1200	52	Apella Resources inc
32F11	N.A.	28	8	Online Map Staking	109862	Active	19/12/2005	18/12/2011	55.7	165,83	1200	52	Apella Resources inc
32F11	N.A.	28	9	Online Map Staking	109863	Active	19/12/2005	18/12/2011	55.7	20093,25	1200	52	Apella Resources inc
32F11	N.A.	28	10	Online Map Staking	109864	Active	19/12/2005	18/12/2011	55.7	10155,81	1200	52	Apella Resources inc
32F11	N.A.	28	11	Online Map Staking	109865	Active	19/12/2005	18/12/2011	55.7	455,83	1200	52	Apella Resources inc
32F11	N.A.	28	12	Online Map Staking	109866	Active	19/12/2005	18/12/2011	55.7	455,83	1200	52	Apella Resources inc
32F11	N.A.	28	13	Online Map Staking	109867	Active	19/12/2005	18/12/2011	55.7	0,83	1200	52	Apella Resources inc
32F11	N.A.	29	5	Online Map Staking	109869	Active	19/12/2005	18/12/2011	55.7	0,83	1200	52	Apella Resources inc
32F11	N.A.	29	6	Online Map Staking	109870	Active	19/12/2005	18/12/2011	55.7	0,83	1200	52	Apella Resources inc
32F11	N.A.	29	7	Online Map Staking	109871	Active	19/12/2005	18/12/2011	55.7	0,83	1200	52	Apella Resources inc
32F11	N.A.	29	8	Online Map Staking	109872	Active	19/12/2005	18/12/2011	55.7	48280,76	1200	52	Apella Resources inc
32F11	N.A.	29	9	Online Map Staking	109873	Active	19/12/2005	18/12/2011	55.7	19230,8	1200	52	Apella Resources inc
32F11	N.A.	29	10	Online Map Staking	109874	Active	19/12/2005	18/12/2011	55.7	455,82	1200	52	Apella Resources inc
32F11	N.A.	29	11	Online Map Staking	109875	Active	19/12/2005	18/12/2011	55.7	455,82	1200	52	Apella Resources inc
32F11	N.A.	29	12	Online Map Staking	109876	Active	19/12/2005	18/12/2011	55.7	165,81	1200	52	Apella Resources inc
32F11	N.A.	29	13	Online Map Staking	109877	Active	19/12/2005	18/12/2011	55.7	0,81	1200	52	Apella Resources inc
32F11	N.A.	28	5	Online Map Staking	2148868	Active	07/05/2008	06/05/2012	55.7	0,77	1200	52	Apella Resources inc
32F11	N.A.	28	14	Online Map Staking	2148869	Active	07/05/2008	06/05/2012	55.7	127,77	1200	52	Apella Resources inc
32F11	N.A.	29	1	Online Map Staking	2148870	Active	07/05/2008	06/05/2012	55.7	0,77	1200	52	Apella Resources inc
32F11	N.A.	29	2	Online Map Staking	2148871	Active	07/05/2008	06/05/2012	55.7	0,77	1200	52	Apella Resources inc
32F11	N.A.	29	14	Online Map Staking	2148872	Active	07/05/2008	06/05/2012	55.7	127,77	1200	52	Apella Resources inc
32F11	N.A.	30	1	Online Map Staking	2148873	Active	07/05/2008	06/05/2012	55.7	0,77	1200	52	Apella Resources inc
32F11	N.A.	30	2	Online Map Staking	2148874	Active	07/05/2008	06/05/2012	55.7	0,77	1200	52	Apella Resources inc
32F11	N.A.	30	3	Online Map Staking	2148875	Active	07/05/2008	06/05/2012	55.7	0,77	1200	52	Apella Resources inc
32F11	N.A.	30	4	Online Map Staking	2148876	Active	07/05/2008	06/05/2012	55.7	0,77	1200	52	Apella Resources inc
32F11	N.A.	30	5	Online Map Staking	2148877	Active	07/05/2008	06/05/2012	55.7	0,77	1200	52	Apella Resources inc
32F11	N.A.	27	1	Online Map Staking	2148879	Active	08/05/2008	07/05/2012	55.7	0	1200	52	Apella Resources inc
32F11	N.A.	27	2	Online Map Staking	2148880	Active	08/05/2008	07/05/2012	55.7	0	1200	52	Apella Resources inc
32F11	N.A.	28	1	Online Map Staking	2148881	Active	08/05/2008	07/05/2012	55.7	0	1200	52	Apella Resources inc
32F11	N.A.	28	2	Online Map Staking	2148882	Active	08/05/2008	07/05/2012	55.7	0	1200	52	Apella Resources inc
32F11	N.A.	28	15	Online Map Staking	2148883	Active	08/05/2008	07/05/2012	55.7	0	1200	52	Apella Resources inc
32F11	N.A.	28	16	Online Map Staking	2148884	Active	08/05/2008	07/05/2012	55.7	0	1200	52	Apella Resources inc
32F11	N.A.	28	17	Online Map Staking	2148885	Active	08/05/2008	07/05/2012	55.7	0	1200	52	Apella Resources inc
32F11	N.A.	29	15	Online Map Staking	2148886	Active	08/05/2008	07/05/2012	55.7	0	1200	52	Apella Resources inc
32F11	N.A.	29	16	Online Map Staking	2148887	Active	08/05/2008	07/05/2012	55.7	0	1200	52	Apella Resources inc
32F11	N.A.	30	6	Online Map Staking	2148888	Active	08/05/2008	07/05/2012	55.7	0	1200	52	Apella Resources inc
32F14	N.A.	1	3	Online Map Staking	2148889	Active	08/05/2008	07/05/2012	55.7	0	1200	52	Apella Resources inc
32F14	N.A.	2	3	Online Map Staking	2148890	Active	08/05/2008	07/05/2012	55.7	0	1200	52	Apella Resources inc
32F11	N.A.	28	3	Online Map Staking	2179433	Active	12/02/2009	11/02/2011	55.7	0	1200	52	Apella Resources inc
32F11	N.A.	28	4	Online Map Staking	2179434	Active	12/02/2009	11/02/2011	55.7	0	1200	52	Apella Resources inc
32F11	N.A.	29	3	Online Map Staking	2179435	Active	12/02/2009	11/02/2011	55.7	0	1200	52	Apella Resources inc
32F11	N.A.	29	4	Online Map Staking	2179436	Active	12/02/2009	11/02/2011	55.7	0	1200	52	Apella Resources inc
32F12	N.A.	27	60	Online Map Staking	2195490	Active	25/11/2009	24/11/2011	55.7	1424.28	1200	53	Apella Resources inc
32F12	N.A.	28	60	Online Map Staking	2195491	Active	25/11/2009	24/11/2011	55.7	1424.02	1200	53	Apella Resources inc
32F12	N.A.	29	59	Online Map Staking	2195492	Active	25/11/2009	24/11/2011	55.7	1423.76	1200	53	Apella Resources inc
32F12	N.A.	29	60	Online Map Staking	2195493	Active	25/11/2009	24/11/2011	55.7	1423.76	1200	53	Apella Resources inc
32F12,32F13	ISLE DIEU	5	28	Physical Staking	5275151	Active	21/04/2009	20/04/2011	15.1	0	500	26	Apella Resources inc
32F12,32F13	ISLE DIEU	5	29	Physical Staking	5275153	Active	21/04/2009	20/04/2011	14.7	0	500	26	Apella Resources inc
32F12	ISLE DIEU	4	29	Physical Staking	5275154	Active	04/12/2008	03/12/2010	16	0	500	26	Apella Resources inc
32F12,32F13	ISLE DIEU	5	30	Physical Staking	5275155	Active	21/04/2009	20/04/2011	14.5	0	500	26	Apella Resources inc
32F12	ISLE DIEU	4	30	Physical Staking	5275156	Active	04/12/2008	03/12/2010	16	0	500	26	Apella Resources inc
32F12	ISLE DIEU	4	31	Physical Staking	5275158	Active	04/12/2008	03/12/2010	16	0	500	26	Apella Resources inc
32F12	ISLE DIEU	4	32	Physical Staking	5275160	Active	04/12/2008	03/12/2010	16	0	500	26	Apella Resources inc
32F12	ISLE DIEU	3	32	Physical Staking	5275161	Active	04/12/2008	03/12/2010	16	0	500	26	Apella Resources inc
32F12	ISLE DIEU	4	33	Physical Staking	5275163	Active	04/12/2008	03/12/2010	16	0	500	26	Apella Resources inc
32F12	ISLE DIEU	3	33	Physical Staking	5275164	Active	04/12/2008	03/12/2010	16	0	500	26	Apella Resources inc
32F12	ISLE DIEU	4	34	Physical Staking	5275166	Active	04/12/2008	03/12/2010	16	0	500	26	Apella Resources inc
32F12	ISLE DIEU	3	34	Physical Staking	5275167	Active	04/12/2008	03/12/2010	16	0	500	26	Apella Resources inc
32F12	ISLE DIEU	4	35	Physical Staking	5275168	Active	04/12/2008	03/12/2010	16	0	500	26	Apella Resources inc
32F12	ISLE DIEU	3	35	Physical Staking	5275169	Active	04/12/2008	03/12/2010	16	0	500	26	Apella Resources inc
32F12	ISLE DIEU	2	35	Physical Staking	5275170	Active	04/12/2008	03/12/2010	16	0	500	26	Apella Resources inc
32F12	ISLE DIEU	4	36	Physical Staking	5275172	Active	04/12/2008	03/12/2010	16	0	500	26	Apella Resources inc
32F12	ISLE DIEU	3	36	Physical Staking	5275173	Active	04/12/2008	03/12/2010	16	0	500	26	Apella Resources inc
32F12	ISLE DIEU	2	36	Physical Staking	5275174	Active	04/12/2008	03/12/2010	16	0	500	26	Apella Resources inc
32F12	ISLE DIEU	4	37	Physical Staking	5275175	Active	04/12/2008	03/12/2010	16	0	500	26	Apella Resources inc
32F12	ISLE DIEU	3	37	Physical Staking	5275176	Active	04/12/2008	03/12/2010	16	0	500	26	Apella Resources inc
32F12	ISLE DIEU	2	37	Physical Staking	5275177	Active	04/12/2008	03/12/2010	16	0	500	26	Apella Resources inc
32F12	ISLE DIEU	3	38	Physical Staking	5275179	Active	04/12/2008	03/12/2010	16	0	500	26	Apella Resources inc
32F12	ISLE DIEU	2	38	Physical Staking	5275180	Active	04/12/2008	03/12/2010	16	0	500	26	Apella Resources inc
32F12	ISLE DIEU	3	40	Physical Staking	5275185	Active	04/12/2008	03/12/2010	16	0	500	26	Apella Resources inc
32F12	ISLE DIEU	2	40	Physical Staking	5275186	Active	04/12/2008	03/12/2010	16	0	500	26	Apella Resources inc
32F12	LOZEAU	3	1	Physical Staking	5275188	Active	04/12/2008	03/12/2010	16	0	500	26	Apella Resources inc
32F12	LOZEAU	2	1	Physical Staking	5275189	Active	04/12/2008	03/12/2010	16	0	500	26	Apella Resources inc
32F12	LOZEAU	3	2	Physical Staking	5275594	Active	04/12/2008	03/12/2010	16	0	500	26	Apella Resources inc
32F12	LOZEAU	2	2	Physical Staking	5275595	Active	04/12/2008	03/12/2010	16	0	500	26	Apella Resources inc
32F12,32F13	LOZEAU	5	3	Physical Staking	5275597	Active	04/12/2008	03/12/2010	16	0	500	26	Apella Resources inc

NTS sheet	Township	Row	Column	Title type	Title Number	Title status	Inscription date	Expiry date	Area (Ha)	Accrued work	Required work($)	Mining duties	Title Holder
32F12	LOZEAU	4	3	Physical Staking	5275598	Active	04/12/2008	03/12/2010	16	0	500	26	Apella Resources inc
32F12	LOZEAU	3	3	Physical Staking	5275599	Active	04/12/2008	03/12/2010	16	0	500	26	Apella Resources inc
32F12	LOZEAU	2	3	Physical Staking	5275600	Active	04/12/2008	03/12/2010	16	0	500	26	Apella Resources inc
32F12,32F13	LOZEAU	5	4	Physical Staking	5275602	Active	04/12/2008	03/12/2010	16	0	500	26	Apella Resources inc
32F12	LOZEAU	4	4	Physical Staking	5275603	Active	04/12/2008	03/12/2010	16	0	500	26	Apella Resources inc
32F12	LOZEAU	3	4	Physical Staking	5275604	Active	04/12/2008	03/12/2010	16	0	500	26	Apella Resources inc
32F12	LOZEAU	2	4	Physical Staking	5275605	Active	04/12/2008	03/12/2010	16	0	500	26	Apella Resources inc
32F12,32F13	LOZEAU	5	5	Physical Staking	5275607	Active	04/12/2008	03/12/2010	16	0	500	26	Apella Resources inc
32F12	LOZEAU	4	5	Physical Staking	5275608	Active	04/12/2008	03/12/2010	16	0	500	26	Apella Resources inc
32F12,32F13	LOZEAU	5	6	Physical Staking	5275752	Active	04/12/2008	03/12/2010	16	0	500	26	Apella Resources inc
32F12	LOZEAU	4	6	Physical Staking	5275753	Active	04/12/2008	03/12/2010	16	0	500	26	Apella Resources inc
32F12,32F13	LOZEAU	5	7	Physical Staking	5275756	Active	04/12/2008	03/12/2010	16	0	500	26	Apella Resources inc
32F12	LOZEAU	4	7	Physical Staking	5275757	Active	04/12/2008	03/12/2010	16	0	500	26	Apella Resources inc
32F14	LOZEAU	5	9	Physical Staking	5275761	Active	04/12/2008	03/12/2010	16	0	500	26	Apella Resources inc
32F14	LOZEAU	5	10	Physical Staking	5275762	Active	04/12/2008	03/12/2010	16	0	500	26	Apella Resources inc
32F14	LOZEAU	5	11	Physical Staking	5275763	Active	04/12/2008	03/12/2010	16	0	500	26	Apella Resources inc
32F12	ISLE DIEU	3	39	Physical Staking	5275769	Active	11/12/2008	10/12/2010	16	0	500	26	Apella Resources inc
32F12	ISLE DIEU	2	39	Physical Staking	5275770	Active	11/12/2008	10/12/2010	16	0	500	26	Apella Resources inc
32F12	COMPORTE	41	6	Physical Staking	5275774	Active	11/12/2008	10/12/2010	16	0	500	26	Apella Resources inc
32F12	COMPORTE	40	6	Physical Staking	5275775	Active	11/12/2008	10/12/2010	16	0	500	26	Apella Resources inc
32F12	COMPORTE	39	6	Physical Staking	5275776	Active	11/12/2008	10/12/2010	16	0	500	26	Apella Resources inc
32F12	COMPORTE	38	6	Physical Staking	5275777	Active	11/12/2008	10/12/2010	16	0	500	26	Apella Resources inc
32F12	GALINEE	40	40	Physical Staking	5275779	Active	11/12/2008	10/12/2010	16	0	500	26	Apella Resources inc
32F12	GALINEE	39	40	Physical Staking	5275780	Active	11/12/2008	10/12/2010	16	0	500	26	Apella Resources inc
32F12	LOZEAU	1	1	Physical Staking	5275781	Active	11/12/2008	10/12/2010	16	0	500	26	Apella Resources inc
32F12	COMPORTE	41	1	Physical Staking	5275782	Active	11/12/2008	10/12/2010	16	0	500	26	Apella Resources inc
32F12	COMPORTE	40	1	Physical Staking	5275783	Active	11/12/2008	10/12/2010	16	0	500	26	Apella Resources inc
32F12	LOZEAU	1	2	Physical Staking	5275784	Active	11/12/2008	10/12/2010	16	0	500	26	Apella Resources inc
32F12	COMPORTE	41	2	Physical Staking	5275785	Active	11/12/2008	10/12/2010	16	0	500	26	Apella Resources inc
32F12	COMPORTE	40	2	Physical Staking	5275786	Active	11/12/2008	10/12/2010	16	0	500	26	Apella Resources inc
32F12	COMPORTE	39	2	Physical Staking	5275787	Active	11/12/2008	10/12/2010	16	0	500	26	Apella Resources inc
32F12	LOZEAU	1	3	Physical Staking	5275788	Active	11/12/2008	10/12/2010	16	0	500	26	Apella Resources inc
32F12	COMPORTE	41	3	Physical Staking	5275789	Active	11/12/2008	10/12/2010	16	0	500	26	Apella Resources inc
32F12	COMPORTE	40	3	Physical Staking	5275790	Active	11/12/2008	10/12/2010	16	0	500	26	Apella Resources inc
32F12	COMPORTE	39	3	Physical Staking	5275791	Active	11/12/2008	10/12/2010	16	0	500	26	Apella Resources inc
32F12	LOZEAU	1	4	Physical Staking	5275793	Active	11/12/2008	10/12/2010	16	0	500	26	Apella Resources inc
32F12	COMPORTE	41	4	Physical Staking	5275794	Active	11/12/2008	10/12/2010	16	0	500	26	Apella Resources inc
32F12	COMPORTE	40	4	Physical Staking	5275795	Active	11/12/2008	10/12/2010	16	0	500	26	Apella Resources inc
32F12	COMPORTE	39	4	Physical Staking	5275796	Active	11/12/2008	10/12/2010	16	0	500	26	Apella Resources inc
32F12	COMPORTE	38	4	Physical Staking	5275797	Active	11/12/2008	10/12/2010	16	0	500	26	Apella Resources inc
32F12	COMPORTE	41	5	Physical Staking	5275798	Active	11/12/2008	10/12/2010	16	0	500	26	Apella Resources inc
32F12	COMPORTE	40	5	Physical Staking	5275799	Active	11/12/2008	10/12/2010	16	0	500	26	Apella Resources inc
32F12	ISLE DIEU	1	36	Physical Staking	5275800	Active	11/12/2008	10/12/2010	16	0	500	26	Apella Resources inc
32F12	ISLE DIEU	1	37	Physical Staking	5275801	Active	11/12/2008	10/12/2010	16	0	500	26	Apella Resources inc
32F12	ISLE DIEU	1	38	Physical Staking	5275803	Active	11/12/2008	10/12/2010	16	0	500	26	Apella Resources inc
32F12	GALINEE	40	38	Physical Staking	5275804	Active	11/12/2008	10/12/2010	16	0	500	26	Apella Resources inc
32F12	GALINEE	39	38	Physical Staking	5275805	Active	11/12/2008	10/12/2010	16	0	500	26	Apella Resources inc
32F12	ISLE DIEU	1	39	Physical Staking	5275806	Active	11/12/2008	10/12/2010	16	0	500	26	Apella Resources inc
32F12	GALINEE	40	39	Physical Staking	5275807	Active	11/12/2008	10/12/2010	16	0	500	26	Apella Resources inc
32F12	GALINEE	39	39	Physical Staking	5275808	Active	11/12/2008	10/12/2010	16	0	500	26	Apella Resources inc
32F12	ISLE DIEU	1	40	Physical Staking	5275809	Active	11/12/2008	10/12/2010	16	0	500	26	Apella Resources inc
32F12,32F13	LOZEAU	4	8	Physical Staking	5275822	Active	11/12/2008	10/12/2010	16	0	500	26	Apella Resources inc
32F12	LOZEAU	3	7	Physical Staking	5275824	Active	21/04/2009	20/04/2011	16	0	500	26	Apella Resources inc
32F12	LOZEAU	1	5	Physical Staking	5275825	Active	11/12/2008	10/12/2010	16	0	500	26	Apella Resources inc
32F12	LOZEAU	3	6	Physical Staking	5275829	Active	21/04/2009	20/04/2011	16	0	500	26	Apella Resources inc
32F12	LOZEAU	4	1	Physical Staking	5275830	Active	21/04/2009	20/04/2011	1.5	0	500	26	Apella Resources inc
32F12	LOZEAU	3	8	Physical Staking	5275832	Active	21/04/2009	20/04/2011	14	0	500	26	Apella Resources inc
32F12	LOZEAU	3	5	Physical Staking	5275835	Active	21/04/2009	20/04/2011	1.5	0	500	26	Apella Resources inc
32F12	ISLE DIEU	4	38	Physical Staking	5275836	Active	21/04/2009	20/04/2011	14	0	500	26	Apella Resources inc
32F12	COMPORTE	39	5	Physical Staking	5275981	Active	11/12/2008	10/12/2010	16	0	500	26	Apella Resources inc
32F12	COMPORTE	38	5	Physical Staking	5275982	Active	11/12/2008	10/12/2010	16	0	500	26	Apella Resources inc
32F12	COMPORTE	37	5	Physical Staking	5275983	Active	11/12/2008	10/12/2010	16	0	500	26	Apella Resources inc
32F12	ISLE DIEU	4	39	Physical Staking	5275986	Active	21/04/2009	20/04/2011	16	0	500	26	Apella Resources inc
32F12	ISLE DIEU	4	40	Physical Staking	5275987	Active	21/04/2009	20/04/2011	16	0	500	26	Apella Resources inc
32F12,32F13	LOZEAU	5	2	Physical Staking	5275988	Active	21/04/2009	20/04/2011	16	0	500	26	Apella Resources inc
32F12	LOZEAU	4	2	Physical Staking	5276821	Active	16/07/2010	15/07/2012	16	0	500	26	Apella Resources inc
32F13	LOZEAU	6	5	Physical Staking	5276822	Active	16/07/2010	15/07/2012	16	0	500	26	Apella Resources inc
32F13	LOZEAU	6	4	Physical Staking	5276823	Active	16/07/2010	15/07/2012	16	0	500	26	Apella Resources inc
32F13	LOZEAU	6	3	Physical Staking	5276824	Active	16/07/2010	15/07/2012	16	0	500	26	Apella Resources inc
32F13	LOZEAU	6	2	Physical Staking	5276825	Active	16/07/2010	15/07/2012	16	0	500	26	Apella Resources inc
32F12	ISLE DIEU	5	32	Physical Staking	5276826	Active	16/07/2010	15/07/2012	16	0	500	26	Apella Resources inc
32F12	ISLE DIEU	5	31	Physical Staking	5276828	Active	16/07/2010	15/07/2012	16	0	500	26	Apella Resources inc
32F12,32F13	ISLE DIEU	5	30	Physical Staking	5276830	Active	16/07/2010	15/07/2012	6.07	0	500	26	Apella Resources inc

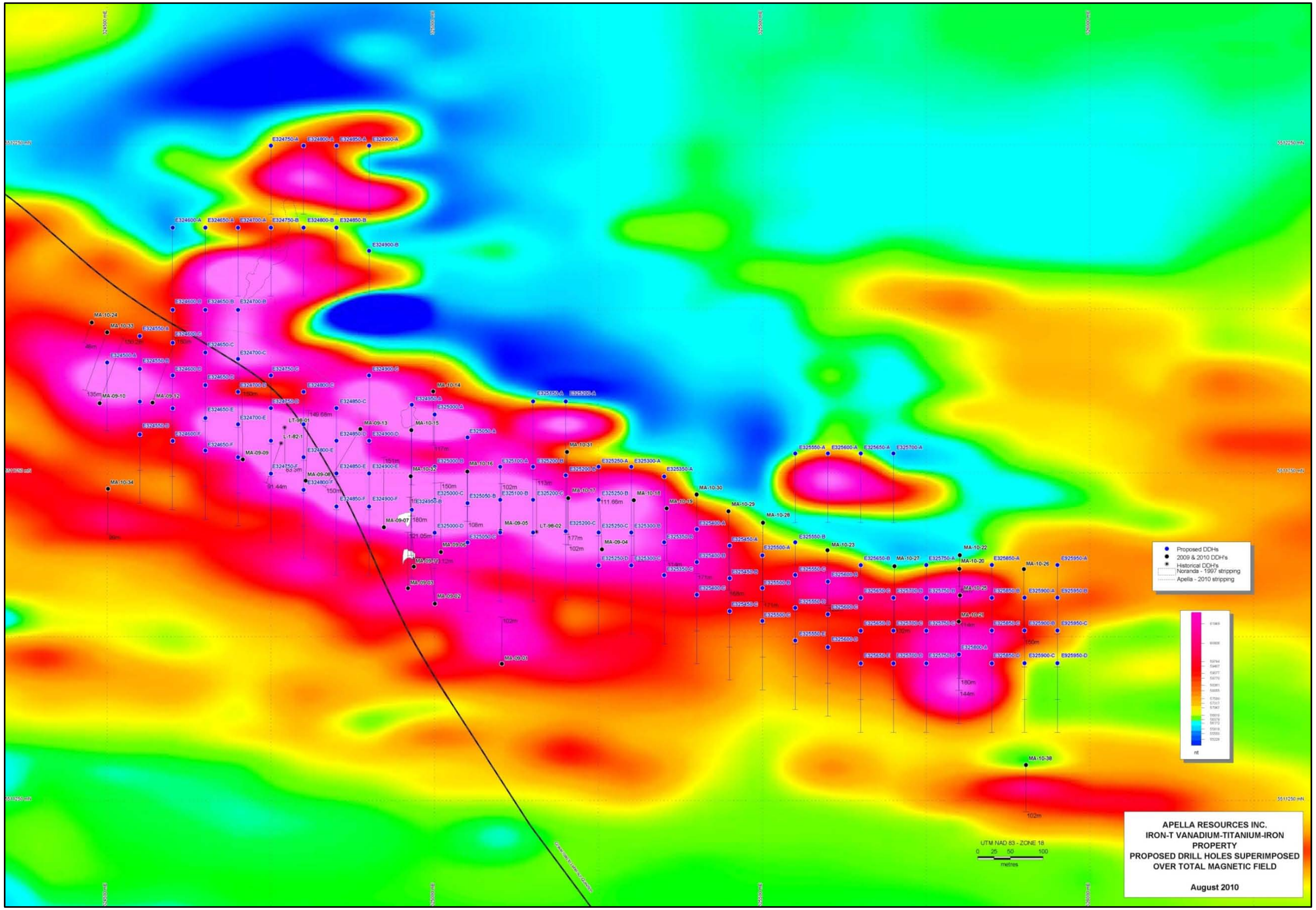
25- Illustrations (Item 26)

25.1- Iron-T Zones
25.2- 2011 Planned diamond drilling campaign
25.3- 2010 Detailed Topo mapping

25.1- Iron-T zones



25.2- Apella's Planned 2011 Drilling Campaign



25.3- 2010 Detailed Topo Mapping