AN UPDATED MINERAL RESOURCE ESTIMATE AND NI43-101 TECHNICAL REPORT ON THE PENOUTA TANTALUM-TIN DEPOSIT, OURENSE, GALICIA, SPAIN

Prepared For
Strategic Minerals Europe Corp.

Effective Date: 5th March 2021

Report Prepared by

srk consulting

SRK Consulting (UK) Limited
31271

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CERTIFICATE OF QUALIFIED PERSON

I, Martin Frank Pittuck, MSc., C.Eng, MIMMM do hereby certify that:

a. I am a Corporate Consultant of SRK Consulting (UK) Limited, 5th Floor, Churchill House, 17 Churchill Way, Cardiff, CF10 2HH, Wales, UK

b. The Technical Report to which this certificate applies is titled “An Updated Mineral Resource Estimate and NI43-101 Technical Report On The Penouta Tin Deposit, Ourense, Galicia, Spain” with an effective date of 5th March 2021, prepared for Strategic Minerals Europe Corp.

c. I am a graduate with a Master of Science in Mineral Resources gained from Cardiff College, University of Wales in 1996 and I have practised my profession continuously since that time. Since graduating I have worked as a consultant at SRK on a wide range of mineral projects, including many gold deposits. I have undertaken many resource estimations and multi-disciplinary technical studies for mining projects. I am a Professional Member of the Institution of Materials Mining and Metallurgy (Membership Number 49186), a Fellow of the Geological Society of London and I am a Chartered Engineer. I have read the definition of “Qualified Person” set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfil the requirements to be a “Qualified Person” for the purposes of NI 43-101.

d. I visited the The Penouta Tin Deposit most recently between the 18 to 20 March 2013.

e. I am responsible for all sections of this Technical Report.

f. I am independent of Strategic Minerals Europe Corp. as described in Section 1.5 of NI 43-101.

g. Other than an independent consulting role between 2012 and 2014, I have had no prior involvement with the property that is the subject of this Technical Report and can be considered as being independent of the project as defined in Section 1.5 of NI 43-101.

h. I have read NI 43-101 and the parts of the Technical Report I am responsible for and can confirm these have been prepared in compliance with NI 43-101.

i. As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the parts of the Technical Report that I am responsible for contain all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 9th day of September 2021

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Corporate Consultant (Mining Geology)
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AN UPDATED MINERAL RESOURCE ESTIMATE AND NI43-101 TECHNICAL REPORT ON THE PENOUTA TANTALUM-TIN DEPOSIT, OURENSE, GALICIA, SPAIN

1 EXECUTIVE SUMMARY

SRK Consulting (UK) Limited ("SRK") is an associate company of the international group holding company, SRK Consulting (Global) Limited (the "SRK Group"). SRK has been requested by Strategic Minerals Europe Corp. ("SMEC", hereinafter also referred to as the "Company" or the "Client"), formerly Buccaneer Gold Corp. ("Buccaneer"), to prepare an updated Mineral Resource Estimate ("MRE") and an updated National Instrument NI43-101 Technical Report on the Mineral Assets of the Company comprising the Penouta Tantalum-Tin Project ("Penouta" or the "Project") located in Galicia, Spain.

On July 14, 2021, Strategic Minerals Europe Inc. ("SMEI") entered into an acquisition agreement with Strategic Minerals Spain S.L. ("SMS"), whereby SMEI issued 200,000,000 shares and 1,252,395 share purchase warrants in return for all of the issued and outstanding shares of SMS (the "Vend-in Transaction"). As a result of the Vend-in Transaction, SMS, which is the license holder for the Project, became a wholly-owned subsidiary of SMEI.

On August 24, 2021, SMEI entered into share exchange agreement with Buccaneer whereby on or about December 6, 2021, Buccaneer will acquire all of the issued and outstanding shares of SMEI (the "RTO Transaction") and change its name to "Strategic Minerals Europe Corp." (i.e., the Company). As a result of the RTO Transaction, SMS will become a wholly-owned, indirect subsidiary of the Company. The closing of the transaction is subject to a number of terms and conditions including the receipt of all necessary regulatory consents and approvals, the listing of the resulting issuer on the Neo Exchange Inc. (the "NEO"), and the delisting of Buccaneer from the Canadian Securities Exchange.

SMS's Coneto Investigation Permit No. 4880 ("Coneto Permit"), which covers the drilled extents of the Penouta Ta-Sn hard rock deposit, was most recently extended on 6th February 2017 for a further three years. Prior to the end of this 3-year extension, on 6th February 2020, SMS applied for the conversion of the Coneto Investigation Permit to a Mining Concession. This application is currently pending resolution however SMS have confirmed that this status allows the Coneto Investigation Permit to remain valid in the interim.

The MRE given in this technical report (the "Technical Report") has been prepared using the guidelines and terminology given in the Canadian Institute of Mining, Metallurgy and Petroleum Code ("CIM Code") and presents the most up to date MRE, which is based on some 166 drillholes on the Penouta Property.

No new drilling has been completed at the Project since the previous SRK 2014 MRE. This updated MRE is based on the change in status of the Project's Coneto Permit and updated input parameters used for the MRE pit optimisation and cut-off grade assessment.

The Mineral Resource Statement presented herein has an effective date of 5th March 2021 and Qualified Person (QP) with overall responsibility for this report is SRK geologist Mr Martin Pittuck, Corporate Consultant at SRK.

1.1 Project Description and Location

The Penouta project represents an approximate 10.2 km^2 concession package is located in the north-western Spanish province of Ourense near the towns of Penouta, San Martin Ramilo and Viana do Bolo in the municipality of Viana do Bolo. The nearest major town is Ourense approximately 134 km to the north-west. The Project's climate is typically mild, with a high average rainfall of 1191 mm annually.

SMS currently owns an industrial plant for re-processing old tailings derived from historical surface workings, constructed in 2017. Infrastructure at the site relates to this operation, and includes a power and water supply, road access, ancillary facilities (workshop, laboratory, offices etc). Water for the plant is currently sourced from a meteoric accumulation in an old tailings pond.

The project is located in a mountainous area of the Penba Trevinca foothills at an elevation of approximately 1,300 m above mean sea level ("amsl").

1.2 Project History

Historically, the Project has been mined since Roman times, with small underground workings following mineralised quartz veins within the leucogranite. In the early 1900s, a small mining lease was granted, with workings primarily for kaolin, followed by a number of other mining leases in the area.

The Penouta Mine was historically operated by RUMASA between 1976 and 1982, extracting cassiterite and tantalum mineralisation by open pit methods. Mining targeted the kaolinized leucogranite and portions of the country rock sufficiently muscovitised to allow free digging. A pit approximately 250 m long and 150 m wide was excavated; currently filled with water. No information is available on the tonnage or grade produced. Tailings from this pit are currently being reprocessed by SMS.

1.3 Geological Setting and Mineralisation

The Penouta Project is located in the Central Iberian Zone of the Iberian Massif, incorporating the north-western part of the “Ollo de Sapo” Formation. The regional geology is comprised of the Viana do Bolo Series including the Covelo orthogneisses, the Ollo de Sapo Formation, and the Penouta alkaline granite. The geology within the Penouta Project area is comprised of predominantly metamorphic rocks with minor deformed igneous rocks. An alkaline Granite (the Penouta Leucogranite) is the predominant host rock of cassiterite and tantalite ore. The metamorphic rocks are high grade metamorphic schists.

Locally, there are two sets of fractures which are aligned north-south and east-west. It is thought the north-south features are related to the regional fault network, whilst the east-west features are potentially related to the La Potrilla system of fractures.

Emplacement of the Penouta alkaline granite is assumed to have occurred after the main deformational phases of the Variscan Orogeny (Díez Montes, 2006). Formation of the alkaline granite is thought to be the result of a combination of: a) the fractional crystallization of an evolved melt enriched in volatiles and rare-elements; and b) strong metasomatism and hydrothermal alteration of an evolved two-mica granite.

Cassiterite and columbite-tantalite are disseminated throughout the leucogranite; crystallisation of these minerals is thought to have occurred during a late magmatic event, probably as a consequence of albitisation. The muscovitisation, greisenisation, and silicification of the granitic cupola would have occurred during later hydrothermal events at temperatures of between 250 and 410°C (Mangas and Arribas, 1991). Crystallisation of cassiterite containing quartz veins would also have occurred during this time. Kaolinisation of the original granitic body would have occurred at a later stage.

1.4 Exploration, Drilling, and Sampling

Historical exploration in the Penouta area included soil geochemistry, stream sediment sampling, petrographic and geochemical analyses and geophysical studies. Historical drilling was undertaken between 1982 and 1985 when a total of 72 holes were drilled totalling 8089.5 m of diamond drill core. Only 30 of the historical drillholes had complete analysis for tantalum and tin, 42 of the historical holes had only part analysis for tantalum and tin. This historical database was verified by a SMS diamond drill programme in 2012 which twinned approximately 10% of the historical drilling, with 7 drillholes for 1489.1 m drilled. The 2013 drill programme included 55 drillholes for a total of 14,051.1 m.

The historical and recent drilling is on an approximate grid of 25 x 100 m.

This estimate is based on diamond drill core results from the historical drill programme and results from the SMS 2012 and 2013 drilling programme. All samples from the 2012 and 2013 drill programme were prepared and analysed for tantalum, tin and niobium at ALS Seville laboratory. A comprehensive Quality Assurance and Quality Control (“QAQC”) programme has been maintained which demonstrates that the sample preparation and laboratory performance for the 2012 and 2013 drill programme is suitable for use in estimation.

The correlation between the twinned 2012 and 2013 drillholes and the historical drillholes has also shown that the historical data is suitable for use in this Mineral Resource estimate.

1.5 Data Validation

The Company have purchased a detailed satellite derived topographic survey which provides a high level of confidence in the topographic database. The Company use a high precision GPS, based on Total Station measurements to measure collar locations. The final collar locations have been located to a high degree of confidence in terms of the X, Y and Z location, in UTM.

In order to verify the information incorporated within the 2012 and 2013 drill programmes, SRK has:

- Completed a check of the digital drilling database against selected diamond drill core to confirm both geological and assay values show a reasonable representation of the project;
- Completed a series of site visits during December 2012, March 2013 and August 2013 to check the geology, drilling and sampling procedures;
- Verified the quality of geological and sampling information and developed an interpretation of tin, tantalum and niobium grade distributions appropriate for use in the resource model; and;
- Reviewed the QAQC database as provided for the 2012 and 2013 drill programme.

SRK is satisfied with the quality of the laboratories used for the current programme and based on the quality control investigations there is no evidence of significant bias within the current database which would materially impact on the estimate.

1.6 Geological Model

The Penouta mineralisation is hosted within and immediately above a leucogranite dome. Tin, tantalum and niobium occur as disseminations within broad lenses which occur sub-parallel to the leucogranite dome. Tantalum is disseminated with intensity increasing upwards within the dome; mineralisation also occurs in thin quartz greisen veins within the overlying gneiss and greisenised material.

Visual review of the tantalum grades showed a gradual trend in the drillhole samples, showing high grades at the top of the leucogranite becoming lower grades with depth. SRK constructed one main subhorizontal domain; at a cut-off grade of 30 ppm tantalum. The mineralised zone was digitised on vertical sections using assay data. The tantalum zone was constrained within the leucogranite dome. Tantalum mineralisation extends approximately 1,000 m north-south and approximately 800 m east-west. All wireframes were imported into Datamine. To ensure the block model provided a true representation of the drillhole data, SRK created a tantalum coded drillhole file and produced a separate tantalum only block model, into which only tantalum was estimated.

Tin was identified as forming a high grade lens occuring near the top of the leucogranite dome. Beneath this high grade lens a lower grade domain was identified. Tin mineralisation also occurs within the overlying veined and greisenised gneiss, this mineralisation has been modelled as a broad lens, as the orientation of the individual veins is currently difficult to determine. The high grade and low grade mineralised domains were initially digitised on vertical sections using assay data and the leucogranite dome, the resultant domains were reviewed in long section and plan view to ensure geological continuity.

Tin, tantalum and niobium mineralisation also occurs within the overlying veined and greisenised gneiss. For tin, tantalum and niobium this mineralisation has been modelled as a broad lens, as the orientation of the individual veins is currently difficult to determine.

There are no niobium assays for the historical drillholes, therefore SRK has used the SMS drilling database only for the niobium mineralisation modelling and estimation. SRK constructed one main subhorizontal domain; at a cut-off grade of 19 ppm niobium. The mineralised zone was digitised on vertical sections using assay data. The niobium zone was constrained within the leucogranite dome. Niobium mineralisation extends approximately 1,200 m north-south and approximately 1,000 m east-west. To ensure the block model provided a true representation of the drillhole data, SRK created a specific niobium coded drillhole file and produced a separate niobium only block model, into which only niobium was estimated.

Internal waste domains in the mineralised granite were identified and wireframed within the tantalum and niobium, these typically consisted of low grade gneiss xenoliths within the leucogranite dome.

Drilling extends to approximately 300 m below surface, the 2013 drilling has potentially identified the base of the mineralisation of interest, although additional lower grade mineralisation potentially occurs at depth.

1.7 Grade Interpolation

Based on the sampling database provided, SRK has completed a statistical analysis to determine a composite length of 5 m for the estimation. SRK completed a statistical and geostatistical analysis on the coded 5 m composite data to determine the appropriate estimation methods and parameters. High-grade capping was applied to tin only based on a combination of log probability plots and raw and log histogram analysis.

SRK has undertaken variography in Isatis separately for tin, tantalum and niobium based on the 5 m composited, coded and in the case of tin high grade capped drillhole file. The resulting variogram ranges were used in the estimation process as a guide to the dominant direction of mineralisation.

For the August 2014 Mineral Resource Estimate, SRK used a block model with block dimensions of 25 x 25 x 10 m into which tin, tantalum and niobium grades have been estimated based on optimised kriging routines. SRK has used dynamic anisotropy tools during estimation for tin, tantalum and niobium. Dynamic anisotropy uses orientation data generated from the mineralisation wireframe to assign dip and dip direction to every block in the model. The search ellipse is rotated upon estimation of the block by honouring the associated dip and dip direction of the domain boundaries. This procedure ensures that the block estimates honour the grade trends in the deposit.

Quantitative Kriging Neighbourhood Analysis (“QKNA”) was undertaken to determine the optimum parameters to be used in the estimation. QKNA compared search ranges, and differing minimum and maximum samples with respect to the volume, slope of regression and percent of blocks filled in each search.

Tin, tantalum and niobium grades have been estimated using appropriate parameters determined from QKNA and related to the geological, geostatistical and grade continuity and sample spacing, using an Ordinary Kriging ("OK") routine. SRK has also completed an estimate using IDW methodologies for verification purposes.

SRK has treated all boundaries as hard boundaries in terms of the estimation process. The resultant block grade distribution is appropriate for the mineralisation style. In areas of limited sampling, the block grade estimates have been produced using expanded search ellipses which result in more smoothed global estimates. Localised comparisons of composite grades to block estimates will be less accurate in these areas.

Metal prices and processing recoveries for Sn and Ta_2O_5 were used to calculate grade multipliers to derive a Ta_2O_5 equivalent grade (Ta_2O_5 Eq) for use in reporting the Mineral Resource.Ta_2O_5 ppm was derived in the Ta block model based on the following formula: $Ta_2O_5 = Ta / 0.818967$.

Based on the grade multipliers, the formula used to derive Ta_2O_5 Eq in the block model is shown below:

[Ta_2O_5 Eq = Ta_2O_5 + (Sn * 0.13483)]

1.8 Mineral Resource Classification

SRK has considered sampling quality, sampling density, distance from samples and proportion of blocks filled in the first search in order to classify the Mineral Resource according to the terminology, definitions and guidelines given in the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Standards on Mineral Resources and Mineral Reserves (December 2005) as required by NI 43-101.

In SRK's classification for the Penouta Project, the following criteria have been applied:

- Measured Mineral Resources were selected as model blocks which were estimated within search volume 1 and which had a slope of regression greater than 0.8. These blocks also displayed reasonable strike continuity and down dip extensions based on drillhole intersections of approximately 25 x 25 m. The Measured classification boundary extends to half the drillhole spacing in areas where the estimation is well informed.
- Indicated Mineral Resources were selected as model blocks which were typically estimated within search volume 1 and which had a slope of regression of greater than 0.6 and which display reasonable strike continuity and down dip extensions based on drillhole intersections of approximately 100 x 50 m. The Indicated classification boundary extends to half the drillhole spacing in areas where the estimation is well informed.
- Inferred Mineral Resources are model blocks which display reasonable strike continuity and down dip extensions based on the drillhole intersections of approximately 100 x 100 m. The majority of these blocks have been estimated within search volumes 1 or 2. The Inferred classification boundary extends to half the drillhole spacing in areas where the estimation is well informed. Due to the poorly understood nature of the veins within the greisenised gneiss SRK has assigned these domains the classification of Inferred.

1.9 Mineral Resource Statement

The “reasonable prospects for economic extraction” requirement generally implies that the quantity and grade estimates meet certain economic thresholds and that the mineral resources are reported at an appropriate cut-off grade taking into account extraction scenarios and processing recoveries. In order to meet this requirement, SRK considers that portions of the Penouta Project are amenable for open pit extraction.

SRK notes that it is becoming increasingly common place to apply basic economic considerations to determine which portion of the modelled deposit has reasonable prospects for economic extraction by open pit methods. In order to determine this SRK used a pit optimiser, reasonable mining assumptions and optimistic metal prices to evaluate the proportions of the block model (Measured, Indicated and Inferred blocks) that could be “reasonably expected” to be mined from an open pit.

The optimization parameters were selected based on a combination of client information and their experience from re-processing of old tailings at the Project, SRK experience and benchmarking against similar projects. The reader is cautioned that the results from the pit optimization are used solely for the purpose of testing the “reasonable prospects for economic extraction” by an open pit and do not represent an attempt to estimate mineral reserves. The results are used as a guide to assist in the preparation of a mineral resource statement and to select an appropriate resource reporting cut-off grade.

Table 1-1: Assumptions considered for conceptual open pit optimisation

Parameter	Cost	Unit
Process Costs + General & Administrative	7.97	USD/t
Mining Costs	3.0	USD/t rock
Mining Dilution	5	%
Mining Recovery	95	%
Overall Pit Slope	45	Degrees
Ta2O5 Price	178	USD/kg
Sn Price	24	USD/kg
Ta2O5 Recovery	75	%
Sn Recovery	75	%

SRK considers that blocks located within the conceptual pit envelope show “reasonable prospects for economic extraction” and can be reported as a Mineral Resource.

A cut-off grade of 60 ppm for Ta_2O_5 Eq grade has been applied in reporting the Penouta Mineral Resource.

Table 1-2: Pit Constrained SRK Mineral Resource Statement for the Penouta Ta-Sn Hard Rock Deposit, Effective Date 05 March 2021

Category	Tonnes (Mt)	Grade				Metal	
		Ta2O5 Eq (ppm)	Sn (ppm)	Ta (ppm)	Ta2O5 (ppm)	Sn (kt)	Ta (kt)
Measured	7.6	184	600	85	103	4.6	0.6
Indicated	68.6	145	426	72	88	29.2	4.9
Total Measured and Indicated	**76.3**	**149**	**443**	**73**	**89**	**33.8**	**5.6**
Inferred	57	129	389	62	76	22	4

1) Mineral resources are not mineral reserves and do not have demonstrated economic viability.

2) All figures are rounded to reflect the relative accuracy of the estimate, numbers may not add up due to rounding.

3) The standard adopted in respect of the reporting of Mineral Resources for the Project is in accordance with the terminology, definitions and guidelines given in the Canadian Institute of Mining, Metallurgy and Petroleum Standards on Mineral Resources and Mineral Reserves (CIM Code)

4) SRK reasonably expects portions of the Penouta deposit to be amenable to open pit mining methods. Open pit Mineral Resources are constrained to within a Whittle optimised pit and reported based on a Ta2O5Eq Resource cut-off which considers processing costs and G&A costs totalling 7.79 USD/t. Pit slope angles were set to 45°

5) Resources are reported at an open pit cut-off grade of 60 ppm Ta2O5Eq.

6) Cut-off grades are based on a price of USD178/kg and recoveries of 75% for Ta2O5, and USD24/kg and recoveries of 75% for tin.

7) It is reasonably expected, but not guaranteed, that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration

8) Inferred Resources are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as Mineral Reserves.

In comparison to the previous SRK 2014 MRE, SRK notes that no new drilling has been completed; therefore, changes to the Mineral Resource Statement are the result of updates to the input parameters applied for the pit optimisation, including:

- Slight reduction in processing and G&A costs from 10 USD/t to 7.97 USD/t, based on SMS's experience from re-processing of old tailings at the Project
- Reduction in metal prices for Sn from 26 USD/kg to 24 USD/kg and for Ta_2O_5 from 260 USD/kg to 178 USD/kg, based on current long-term Sn market forecast information, 3-year trailing average price data for Ta_2O_5 and allowance for potential penalties anticipated by the Company related to their experience from re-processing of old tailings and associated historical sales.
- Slight reduction to processing recovery for Sn from 80% to 75%, based on Company preference and their experience from operating the current plant.

Based on the changes outlined above, the key differences in the updated MRE for the Penouta Ta-Sn deposit for March 2021, include:

- Overall marginal change to Measured and Indicated metal for Sn and Ta; and,
- Approximate 10% reduction to Inferred metal for Sn and Ta.

1.10 Conclusions

SRK has reviewed all QAQC information available and has deemed the assay database to be acceptable for the determination of a Measured, Indicated and Inferred Mineral Resource Estimate. SRK has generated a geological model of the project based on information gained during three site visits (2012 and 2013) and from meetings with SMS employees (2012 and 2013) and the verified electronic database provided. No new drilling has been completed at the Project since the previous SRK 2014 MRE; therefore, the underlying block model remains unchanged when compared with 2014.

SRK has considered sampling density, distance from samples, and estimate quality in order to classify the Mineral Resource according to the terminology, definitions and guidelines given in the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Standards on Mineral Resources and Mineral Reserves (December 2005) in accordance with NI 43-101.

A MRE pit optimisation study and cut-off grade assessment was undertaken based on updated input parameters (including commodity price and the SMS experience from re-processing of old tailings at the Project) to constrain the Mineral Resource and its potential depth extensions to the parts of the deposit that have sufficiently high grade, width and proximity to surface for reporting with reasonable prospects for eventual economic extraction by open pit.

In summary, SRK's updated Mineral Resource estimate on the Penouta Project 5th March 2021 reported above a cut-off grade of 60 ppm Ta_2O_5 equivalent comprises of the following:

- Measured Open Pit Mineral Resource of 7.6 Mt at 600 ppm Sn and 85 ppm Ta ppm;
- Indicated Open Pit Mineral Resource of 68.6 Mt at 426 ppm Sn and 72 ppm Ta ppm; and,
- Inferred Open Pit Mineral Resource of 57 Mt at 389 ppm Sn and 62 ppm Ta ppm.

Additional metallurgical test work on hard rock sources of mineralisation, in addition to further verification of technical and economic inputs used for MRE pit optimisation, will be important to the next stages of the Project development given the importance of these with respect to more advanced technical studies and also their potential to impact on the criteria used for reporting with reasonable prospects for eventual economic extraction.

1.11 Recommendations

SRK recommends the following:

- Additional metallurgical test work for Sn and Ta2O5 based on a representative metallurgical drillhole sampling program for hard rock mineralisation, to ensure that metallurgical parameters for use in more advanced technical studies are appropriately defined.
- Undertake drilling of inclined drillholes beneath the current open pit to help better determine the extent of the kaolinised leucogranite, such that the differences in densities can be modelled more appropriately;
- Continue using an umpire laboratory to verify and provide confidence in the primary assay laboratory. SRK would recommend submitting 5% of the total sample population to the umpire laboratory, and ensuring that a range of grades (low, medium and high) are submitted;
- Increase the submission of blanks samples to 5%;

- SMS produce an in-house matrix matched CRM for subsequent drilling programmes;
- SMS discontinue the use of CRM AMIS0355;
- Undertake a market and contracts study;
- SMS is currently investigating the potential to separate and process the leucogranite tails to recover albite, quartz, potassic feldspar and white mica for potential sale to the Industrial Minerals ("IM") market. SRK recommends further testwork and analysis should be conducted along with market and contracts studies to determine whether the Project should also consider IM sources of revenue in the next MRE.

A high-level budget to cover these recommendations is provided in Table 1-3 below. This budget does not necessarily account for all costs associated with the recommended work, such as staffing and administration, but seeks to estimate the unit costs associated likely to be incurred.

Table 1-3: High-level budget for recommended work programmes

Recommendation	Unit Count	Unit	Unit Cost	Sub-Total
Metallurgical Testwork - Sn and Ta_2O_5	1	Study	40,000	40,000
Metallurgical Testwork - Albite, quartz, feldspar, mica	1	Study	40,000	40,000
Drillhole Programme	15,000	Metres	200	3,000,000
Sample Assay	2,000	Samples	45	90,000
Umpire Sampling	100	Samples	45	4,500
QAQC	400	Samples	45	18,000
CRM development	1	-	8,000	8,000
Market & Contract Study	1	Study	50,000	50,000
Total				**3,250,500**

2 INTRODUCTION

2.1 Background

SRK Consulting (UK) Limited ("SRK") is an associate company of the international group holding company, SRK Consulting (Global) Limited (the "SRK Group"). SRK has been requested by SMEC, hereinafter also referred to as the "Company" or the "Client", formerly Buccaneer to prepare an updated Mineral Resource Estimate ("MRE") and an updated National Instrument NI43-101 Technical Report on the Mineral Assets of the Company comprising the Penouta Project ("Penouta" or the "Project") located in Galicia, Spain.

Since the previous SRK 2014 MRE, SMS has undergone a formal change in name from Pacific Strategic Minerals Spain ("PSMS") to SMS. The change occurred on 5th June, 2015, following approval from the Ministry of Economy and Industry of Orense, Spain. Excluding the name change, all other Company details including structure, VAT and personnel (including directors, managers and technical team members) remain unchanged.

On July 14, 2021, SMEI entered into an acquisition agreement with SMS, whereby SMEI issued 200,000,000 shares and 1,252,395 share purchase warrants in return for all of the issued and outstanding shares of SMS pursuant to the Vend-in Transaction. As a result of the Vend-in Transaction, SMS, which is the license holder for the Project, became a wholly-owned subsidiary of SMEI.

On August 24, 2021, SMEI entered into share exchange agreement with Buccaneer whereby on or about December 6, 2021, Buccaneer will acquire all of the issued and outstanding shares of SMEI through the RTO Transaction and change its name to "Strategic Minerals Europe Corp." (i.e., the Company). As a result of the RTO Transaction, SMS will become a wholly-owned, indirect subsidiary of the Company. The closing of the transaction is subject to a number of terms and conditions including the receipt of all necessary regulatory consents and approvals, the listing of the resulting issuer on the NEO, and the delisting of Buccaneer from the Canadian Securities Exchange.

The Penouta Property represents an approximate 10.2 km^2 concession package located in the north-western Spanish province of Ourense near the towns of Penouta, Ramilo and Viana do Bolo in the municipality of Viana do Bolo, Spain.

The Company's Coneto Investigation Permit No. 4880 ("Coneto Permit"), which covers the drilled extents of the Penouta Ta-Sn hard rock deposit, was most recently extended on 6th February 2017 for a further three years. Prior to the end of this 3-year extension, on 6th February 2020, SMS applied for the conversion of the Coneto Investigation Permit to a Mining Concession. This application is currently pending resolution, however, SMS have confirmed that this status allows the Coneto Investigation Permit to remain valid in the interim.

The MRE given in this technical report (the "Technical Report') has been prepared using the guidelines and terminology given in the Canadian Institute of Mining, Metallurgy and Petroleum Code ("CIM Code") and presents the most up to date MRE, which is based on some 166 drillholes on the Penouta Property.

This updated MRE is given based on change in status of the Project's Coneto Permit and update to input parameters used for the MRE pit optimisation and cut-off grade assessment. No new drilling has been completed at the Project since the previous SRK 2014 MRE.

The Mineral Resource Statement presented herein has an effective date of 5th March 2021 and Qualified Person (QP) with overall responsibility for this report is SRK geologist Mr Martin Pittuck, Corporate Consultant at SRK.

SMS intends to use this updated Technical Report to help secure funding to progress the Project to the next stage of development.

2.2 Sources of Information

SRK's report is based upon:

- Discussions with the director, and employees of the Company;
- Access to key employees within the Company, for discussion and enquiry;
- A review of data collection procedures and protocols, including methodologies applied in determining assays and measurements, in relation to the recently completed diamond drilling campaign;
- Historical documents provided by the Company to SRK including (but not limited to):
    - The mining industry in Spain" published by Instituto Geologico y Minero de España (IGME) in 1987;
    - Proyecto de transformación y ampliación de la explotación a cielo abierto del grupo minero de Penouta. 1971. Código 10033.

  - Centro Minero de Penouta. Informe previo. ADARO 1978. Código 50109.
  - Proyecto de cubicación y valoración de reservas de Sn en una zona del grupo minero de Penouta (Ourense). IGME 1968.Código 10042.
  - Estudio básico de los yacimientos de estaño tipo Penouta. IGME 1976. Código 10045.
  - Investigación minera yacimiento de Penouta, Tomo I. ADARO 1985. Referencia P-477-10.
  - IGME (Instituto Geológico y Minero de España) developed the report named “Estudio básico de los yacimientos de estaño tipo Penouta” (“Basic study of the Penouta-type tin ores”).
  - Estudio básico de los yacimientos de estaño tipo Penouta. IGME 1976. Código 10045.
  - Investigación minera yacimiento de Penouta Tomo IX- Estudio de Viabilidad. Centro Minero de Penouta. Diciembre, 1985. (E. N. adaro de investigaciones mineras S.A.). Código 73088.
  - “Estudio Básico de los yacimientos de Estaño Tipo Penouta - Memoria (publicado en 1976 para el Ministerio de Industria en el Plan Nacional de la Minería)” (Basic Study of the Penouta type tin ore – Memory (published in 1976 for the Industry Ministry into the National Mining Plan).
- Data files provided by the Company to SRK including (but not limited to):
  - topographic satellite grid data;
  - Microsoft Excel drillhole database, including collar, survey, geology, assay, structure, weathering, density, and geotechnical tables;
  - all historical sample data including co-ordinates and assay results;
  - all recent QAQC data including details on standards and blanks;
  - paper geological sections for deposit scale lithological interpretation;
  - historical pricing and sales information related to SMS’s re-processing of old tailings material at the Project.

2.3 Compliance and Reporting Structures

The standard adopted for the reporting of Mineral Resources in this Technical Report is the CIM Code. This Technical Report has been prepared under the direction of Martin Pittuck (the Qualified Person “QP”), as defined in the Companion Policy and who assumes overall professional responsibility for the document. The Technical Report however is published by SRK, the commissioned entity, and accordingly SRK assumes responsibility for the views expressed herein. Consequently, with respect to all references to QP and SRK: all references to SRK mean the QP and vice-versa’. SRK is responsible for this Technical Report and declares that it has taken all reasonable care to ensure that the information contained in this report is, to the best of its knowledge, in accordance with the facts and contains no omission likely to affect its import. This Technical Report has been prepared in accordance with the requirements and guidelines as included in: NI 43-101, Form 43-101F1 and the Companion Policy.

2.4 Details of Personal Inspections

SRK's Emma Rudsits (Senior Consultant) visited Penouta between 26 to 28 November 2012, accompanied by Mr Vicente Mendoza, Mr Paco Polonio (General Director SMS) and SMS Project Geologists. The purpose of the site visit was to review the exploration procedures, examine drill core, interview project personnel and to collect all relevant information for the preparation of a mineral resource model and accompanying technical report.

A second site visit was conducted by Emma Rudsits and SRK's Qualified Person Martin Pittuck (Corporate Consultant) between 18 to 20 March 2013. The purpose of this visit was to enable discussions with SMS staff regarding the geological modelling process. The 2013 drilling programme was also reviewed, including drill core, sampling procedures, density measurement procedures and future expectations of the project.

A third site visit was conducted by Emma Rudsits between 27 to 29 August 2013. The purpose of the visit was to enable discussions with SMS staff regarding re-logging programmes, density measurement procedures and review updated geological models completed by the SMS employees.

No new drilling has been completed since the previous SRK 2014 MRE; therefore, no additional site visits have been undertaken for the 2021 MRE update.

After consulting current Google Earth images it is evident that there has been no new mining activity affecting the hard rock deposit; a new processing facility and tailings disposal area is evident, this is for the retreatment of historical tailings which are not the subject of this technical report.

The Company has confirmed that there have been no significant changes in the political and regulatory environments, including no changes to the licensing regime and no quasi-political actions against the property, such as mining protests, and invasion.

Overall, SRK considers the 2014 site visit to remain current.

2.5 Limitations, Reliance on SRK, Declaration, Consent, Copyright and Cautionary Statements

SRK's opinion contained herein and effective August 2014, is based on information collected by SRK throughout the course of SRK's investigations, which in turn reflect various technical and economic conditions at the time of writing. Given the nature of the mining business, these conditions can change significantly over relatively short periods of time. Consequently, actual results may be significantly more or less favourable.

This report may include technical information that requires subsequent calculations to derive sub-totals, totals and weighted averages. Such calculations inherently involve a degree of rounding and consequently introduce a margin of error. Where these occur, SRK does not consider them to be material.

SRK is not an insider, associate or an affiliate of Strategic Minerals Spain, and neither SRK nor any affiliate has acted as advisor to Strategic Minerals Spain, its subsidiaries or its affiliates in connection with this project. The results of the technical review by SRK are not dependent on any prior agreements concerning the conclusions to be reached, nor are there any undisclosed understandings concerning any future business dealings.

SRK has not performed an independent verification of land title and tenure as summarized in Section 4 of this report. SRK did not verify the legality of any underlying agreement(s) that may exist concerning the permits or other agreement(s) between third parties, but have relied on the Company and its legal advisor for land title issues.

SRK has not undertaken any detailed investigations into the legal or environmental status of the project. SRK has not undertaken any independent check sampling of material from the project during the course of the current investigation.

SRK is not aware of any other information that would materially impact on the findings and conclusions of the report.

3 RELIANCE ON OTHER EXPERTS

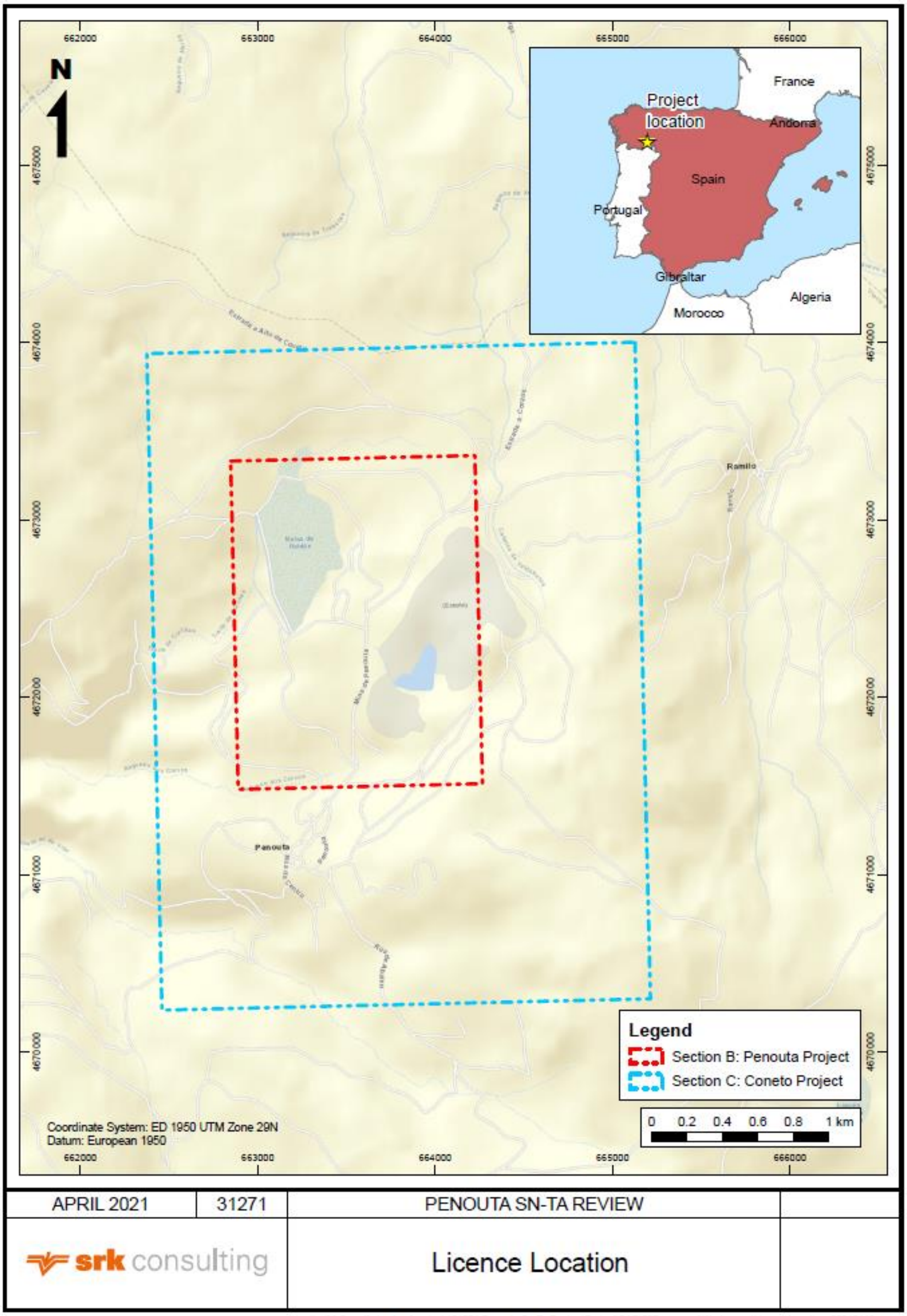
Certain forecast operational information has been provided to SRK by SMS and its associates throughout the course of SRK's investigations. SRK has interacted with SMS to discuss the provenance and reasonableness.

SRK has independently confirmed the tenure according to the Spanish Government's Catastro Minero website and has also been given a draft copy of legal opinion which states that SMS is duly registered as the holder of the Concessions and Permits which are the subject of this report and that these are valid and in good standing.

4 PROPERTY DESCRIPTION AND LOCATION

4.1 Licence Location

The Penouta project is located in the north-western Spanish province of Ourense near the towns of Penouta, Ramilo and Viana do Bolo (Figure 4-1) in the municipality of Viana do Bolo. The nearest major town is Ourense approximately 134 km to the north-west.



\\cdf-fs0-v.cdf.uk.srk.ad\projects\31271 Penouta Sn-Ta Review\Project\CAD\03Processed\Workspace\LicenceLocation_20210413.aprx

Figure 4-1: Penouta Project Licence Location

4.2 Ownership

Historical ownership of the Penouta Project was under Altos Hornos de Vizcaya, and two other unknown owners, prior to acquisition by the holding company RUMASA who operated the Penouta Mine (Centro Minero de Penouta) between 1976 and 1982. RUMASA was expropriated by the Spanish Government in 1983 at which point the Penouta Mine was abandoned.

The Project was acquired by “Aproveitamento de Recursos Naturais de Galicia, S.L.” on 28 November 2011, and subsequently acquired by Pacific Strategic Minerals Spain, S.L. in October 2012.

On 5th of June, 2015, Pacific Strategic Minerals Spain, following approval from the Ministry of Economy and Industry of Orense, underwent a change in Company name to Strategic Minerals Spain, S.L.

The Project is currently held by Strategic Minerals Spain, S.L.

4.3 Mineral Tenure

SMS currently holds two Licences at Penouta Property, including:

- The “Coneto” Section C Investigation Permit No. 4880, also referred to as ‘Section C: Coneto Project’; and
- The “Penouta” Section B Mining Concession No. 99, also referred to as ‘Section B: Penouta Project’.

Under the Spanish Mining Law, mineral resources are categorised as ‘Section C’, where the deposit type represents ‘natural mineral resource in hard rock, both metallic and non-metallic’ or ‘Section B’ where the material represents ‘resources that are not natural but the consequence of previous processing and accumulation in tailings and dumps’.

SMS currently hold a Section C Investigation Permit (Section 4.3.1, related to the exploration for hard rock Ta-Sn mineralisation) and a Section B Mining Concession (Section 4.3.2, related to the re-processing of the old tailings). SMS has applied for the conversion of the Section C Investigation Permit to a Mining Concession and this is currently pending resolution at the date of this report. Approval of the Mining Concession application would allow SMS to develop open pit mining at the hard rock deposit.

SMS’s Section C and Section B Licences are described separately in the following Sections, with their extents shown in Figure 4-1.

4.3.1 “Coneto” Section C Investigation Permit No. 4880

SMS’s Coneto Investigation Permit No. 4880, which was in place at the time of the previous SRK 2014 MRE and covers an area of approximately 10.2 km^2 , was due for renewal at the end of 2016.

The permit was subsequently extended (by way of application within the required timeframe) with authorisation given for same 10.2 km^2 permit area for a further three years, on 6th February 2017. Prior to the end of this 3-year extension, on 6th February 2020, SMS applied for the conversion of the Coneto Investigation Permit to a Mining Concession. This application is currently pending resolution however SMS have confirmed that this status allows the Coneto Investigation Permit to remain valid in the interim.

Approval of the Mining Concession application would allow SMS to develop open pit mining at the hard rock deposit, along with storage of waste rock and tailings (and associated mineral processing activities) at the site. The Mining Concession would be valid for 30 years, renewable for 30 years, and exceptionally for another 30 years. According to the Spanish Mining Act (1973), to obtain each extension, the continuity of the resource or discovery of a resource must be demonstrated, as well as the adequacy of the mineral processing techniques and technologies.

The licence co-ordinates for the Coneto Investigation Permit are presented in latitude, longitude and UTM European Datum 1950, Zone 29N in Table 4-1, with spatial extents shown in Figure 4-1.

Table 4-1: Section C Investigation Permit Licence Co-ordinates

Point	Longitude	Latitude	X(ED50, 29N)	Y(ED50, 29N)
1	7º02'00"	42º12'00"	662374.24	4673937.72
2	7º02'00"	42º10'00"	662459. 59	4670236.31
3	7º00'00"	42º10'00"	665213.25	4670300.33
4	7º00'00"	42º12'00"	665126. 46	4674001.74

The studies completed by SMS to allow a Mining Concession application to be submitted, include:

- Exploitation Project: Proyecto de Explotación Minera de Recursos de la Sección C, “Mina de Penouta” (Viana do Bolo, Ourense). Memoria, Anexos y Planos.
- Restoration Plan: Plan de Restauración del Proyecto de Explotación de los recursos de la Sección C, “Mina de Penouta” (Viana do Bolo, Orense). Memoria, *Anexos y Planos*.
- Environmental Impact Study: Estudio de impacto ambiental del Proyecto de Explotación Minera de la Sección C, “Mina de Penouta” (Viana do Bolo, Ourense). Memoria, Anexos y Planos.

SRK has not reviewed SMS’s Mining Concession application, application status or supporting studies listed above (or referred to in Section 4.3.2) as part of this NI43-101 MRE report.

Pilot Facies Project

As part of the application submitted on 6th February 2020 for the conversion of the Coneto Investigation Permit to a Mining Concession, SMS also included in the annual geological-mining work plan for the Coneto Investigation Permit (which remains valid until resolution of the application) the ‘Pilot Facies Project’ which incorporates the extraction, crushing and mineral processing test work for of 200,000 m^3 of hard rock material for metals (Sn, Ta and Nb) and industrial minerals (quartz, feldspar and mica), in addition to the current re-processing of the old tailings, as described in Section 4.3.2 below.

SMS plan to use the results from the Pilot Facies Project to improve the understanding of the mineral processing characteristics of the hard rock material at Penouta.

4.3.2 “Penouta” Section B Mining Concession No. 99

Following completion of an environmental impact study for the ‘Section B: Penouta Project’, on 6th May 2013, SMS was granted the “Penouta” Section B Mining Concession (Section B Mining Concession). This concession covers an area of approximately 2.5 km^2 and allows SMS to undertake re-processing of the old tailings and waste rock dumps at the Project for a period of 17 years.

The licence co-ordinates for the Section B Mining Concession are presented in latitude, longitude and UTM European Datum 1950, Zone 29N in Table 4-2, with spatial extents shown in Figure 4-1.

Table 4-2: Section B Mining Concession Licence Co-ordinates

Point	Latitude	Longitude	X(ED50, 29N)	Y(ED50, 29N)
1	7º 00' 40,00"	42º 10' 40,00"	664.266,60	4.671.512,67
2	7º 00' 40,00"	42º 11' 40,00"	664.223,44	4.673.363,38
3	7º 01' 40,00"	42º 11' 40,00"	662.847,21	4.673.331,42
4	7º 01' 40,00"	42º 10' 40,00"	662.890,01	4.671.480,71

During September 2017, SMS obtained the relevant authorisations and approvals for commissioning of a processing plant facility on the Section B Mining Concession (as discussed in Section 17). These included the approval of Internal Security Provisions and Discharge Authorisation for release of domestic water into public water courses. An Opening Licence was issued by the Viana do Bolo city council on 14th November 2017, which permitted SMS to start operations at the plant.

4.4 Underlying Agreements

SRK is not aware of any underlying agreements with regards to the Penouta Project.

4.5 Mining Rights in Spain

Under the Spanish Mining Act (1973) land titles with respect to mining can be held as either Exploration Permits (Permiso de Exploracion - PE), Investigation Permits (Permiso de Investigacion – PI), or as a Mining Concession (Concesion Minera – MC). These permits and concession areas are comprised of cuadriculas mineras (translated as mining squares or units), and all boundaries are aligned with astronomic north-south and east-west.

- Exploration Permits:

  - Minimum area – 300 cuadriculas mineras, maximum area – 3,000 cuadriculas mineras.
  - Only allows work which does not significantly change the land to be conducted.
  - One year permit, which can be extended once.
  - There is no minimum annual expenditure requirement.
- Investigation Permits:
  - Maximum area – 300 cuadriculas mineras.
  - Three year permit, which can be extended for two, 3-year periods (with justification).
  - Work programmes and budgets must be submitted to the government for each year of the three year permit; technical reports detailing all work completed must also be submitted.
  - Where work or budgets have been reduced, the permit holder must provide justification.
  - Were the government believes insufficient effort has been made at completing proposed programmes, the PI may be revoked.
  - Small fee and nominal taxes are payable each year and must be submitted with a summary of works report.
  - There is no minimum annual expenditure requirement.
  - Environmental conditions are only those (where specified) in annual work programs submitted to the government.
- Mining Concession:
  - Maximum area – 100 cuadriculas mineras.
  - Issued for 30 years, can be extended twice.
  - Mining Concessions will generally only constitute a portion of the Investigation Permit
  - To obtain a Mining Concession an economic mineral deposit must be identified and a mining plan, feasibility study, environmental impact study (“EIS”) and restoration plan (“RP”) need to be submitted to the government. The EIS and RP must be approved by the government environment ministry (Consejeria de Medio Ambiente).
  - Three year “Suspension of work” may be applied for where the project economics change negatively, re-application is required every three years.
  - No mining taxes or royalties are paid for mineral projects in Spain.

5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 Accessibility

The project is located in the town of Penouta which is approximately 10 km east of the town of Viana do Bolo. The project area can be accessed via OUR-533 a narrow 2-lane road which joins the C-533 two lane highway at Viana do Bolo. Access to the town of Viana do Bolo is via the A-52 a multiple lane highway which connects Ourense to Benavente. The roads are sealed and of good quality. The nearest airports are situated in the city of Vigo approximately 225 km, and the city of Santiago de Compostela approximately 235 km from Penouta on the A-52 and AP-53 multiple lane highways. Vigo also has port facilities. The major cities of Salamanca and Madrid are approximately 251 km and 427 km from Penouta respectively.

5.2 Climate

The project area has a mild but variable climate, with a high annual rainfall of 1191 mm on average. During the summer months, the average temperature is approximately 21.2°C and there is typically less rain. During the winter months, the average temperature is 7.3°C; however, temperatures as low as 0.3°C do occur and snowfall is common in the mountainous areas (including the Project area).

5.3 Local Resources and Infrastructure

The Project area is located approximately 11 km east of the town of Viana do Bolo which has a population of approximately 1470. Surrounding the project area are a number of small villages (populations of less than 150) such as Penouta, and San Martin. The city of Verin has a population of approximately 14,500 and is located approximately 62 km south-west of Penouta. The nearest substantial city is Ourense (134 km to the north-west) which has a population of approximately 108,000. A number of smaller towns and villages surround the Project area.

SMS currently owns an industrial plant for re-processing of old tailings derived from historical surface workings at the Project. SMS's processing plant was constructed at the Penouta site during September 2017 and is located centrally within the Section B Mining Concession (Section 17). Mineral processing to recover Sn, Ta_2O_5 and Nb_2O_5 from the old tailings is currently carried out through the following main activities at the plant: grinding, gravity separation by spirals and shaking tables, magnetic separation and waste management.

The current infrastructure at the Project relates to SMS's operation of the processing plant for re-processing of old tailings material. This includes a power and water supply (and road access) for the plant, along with ancillary facilities including a workshop, laboratory, offices, dining room and dressing room. Water for the plant is currently sourced from meteoric accumulation in old tailings ponds, with power provided by a 1.5 MW powerline supplied to the site.

Figure 5-1: SMS plant and tailings re-processing operation

5.4 Physiography

The Project area is located in the mountainous region of the Pena Trevinca foothills at an approximate altitude of 1,300 m above mean sea level (“amsl”). The topography ranges from approximately 1,400 mamsl to 1,000 mamsl.

6 HISTORY

6.1 Mining

Historically, mining in the Project area has been carried out since Roman times, with small underground galleries which followed cassiterite and tantalum mineralised quartz veins within the leucogranite.

In the early 1900s a 64 hectare (“ha”) mining lease (Olga Mine) was approved in the Penouta area. Surficial mining of kaolin occurred in portions of this lease. During the 1960s and 1970s a number of additional mining leases were granted in the area surrounding the Olga Mine.

The Penouta Mine (Centro Minero de Penouta) was historically operated by RUMASA from 1976 to 1982. Mining during this period focussed on cassiterite and tantalum mineralisation and was completed using open pit mining methods specifically targeting the kaolinised leucogranite and those portions of the country rock which had been muscovitised and were soft enough to be extracted using free dig methods. Areas which could be exploited using free dig methods were exhausted by 1983. RUMASA was expropriated by the Spanish Government in 1983 at which point the mine was abandoned. A pit approximately 250 m long by 150 m wide pit was excavated; this is currently filled with water (Figure 6-1). No historical information is available on the tonnage and grade produced from the pit. Tailings from this historical mining are currently being reprocessed by SMS.

Figure 6-1: Historical open pit lake at the Penouta Project

6.2 Drilling

A number of drill programs have been undertaken within the project area between 1971 and 1985. A total of 129 holes were drilled during six different drilling campaigns. Data availability and quality vary for the six campaigns (Section 10.1).

6.3 Resource History

6.3.1 Historical Estimates

A historical resource estimate was undertaken by ADARO in 1985. A total of 72 drillholes were used and a resource estimate of 13 Mt at a grade of 750 ppm Sn and 90 ppm Ta was produced. SRK has not been provided with any further information regarding this resource estimate; it is no longer relevant given the amount of exploration completed since it was prepared; it has been superseded by the Mineral Resource estimate given in this report.

Since then, two Mineral Resource estimates have been produced by SRK for the Penouta Project, as summarised below.

In June 2013, SRK reported an Inferred Mineral Resource above a tantalum equivalent cut-off grade of 30 ppm as shown in Table 6-1.

Table 6-1: SRK Penouta Project Mineral Resource Statement as of June 2013 at 30 ppm cut-off grade Tantalum Equivalent*

Category	Tonnes (Kt)	Ta Equivalent (ppm)	Sn (ppm)	Ta (ppm)
Inferred	*37,300*	*116*	*314*	*87*

**Mineral resources are not mineral reserves and do not have demonstrated economic viability. Mineral Resources are not Ore Reserves and do not have demonstrated economic viability. All figures are rounded to reflect the relative accuracy of the estimate, numbers may not add up due to rounding. Resources are reported at an open pit cut-off grade of 30 ppm Ta equivalent. Cut-off grades are based on a price of USD250/kg and recoveries of 68.5% for tantalum, and USD23/kg and recoveries of 66.5% for tin.*

In August 2014, SRK produced an updated MRE for the Penouta Project, on the basis of additional drilling and sampling, geological modelling and updated pit optimisation parameters, reporting an updated Mineral Resource above a tantalum equivalent cut-off grade of 50 ppm, as shown in Table 6-2.

Table 6-2: SRK Penouta Project Mineral Resource Statement as of August, 2014 at 50 ppm cut-off grade Tantalum Equivalent*

Category	Tonnes (Kt)	Ta Equivalent (ppm)	Sn (ppm)	Ta (ppm)
Measured	7,599	145	600	85
Indicated	68,288	115	427	72
Total Measured and Indicated	**75,887**	**118**	**445**	**73**
Inferred	61,349	103	391	64

**Mineral resources are not mineral reserves and do not have demonstrated economic viability. All figures are rounded to reflect the relative accuracy of the estimate, numbers may not add up due to rounding. Resources are reported at an open pit cut-off grade of 50 ppm Ta equivalent. Cut-off grades are based on a price of USD260/kg and recoveries of 75% for tantalum, and USD26/kg and recoveries of 80% for tin.*

The Company is not treating the historical estimates in this section as current Mineral Resources. These estimates cannot, and should not, be relied upon; they have been superseded by the Mineral Resource estimate given in this technical report.

7 GEOLOGICAL SETTING AND MINERALISATION

7.1 Regional Geology

The Penouta Project is located in the Central Iberian Zone of the Iberian Massif, incorporating the north-western part of the "Ollo de Sapo" Formation. The regional geology is comprised of the Viana do Bolo Series including the Covelo orthogneisses, the Ollo de Sapo Formation, and the Penouta alkaline granite (Figure 7-1).

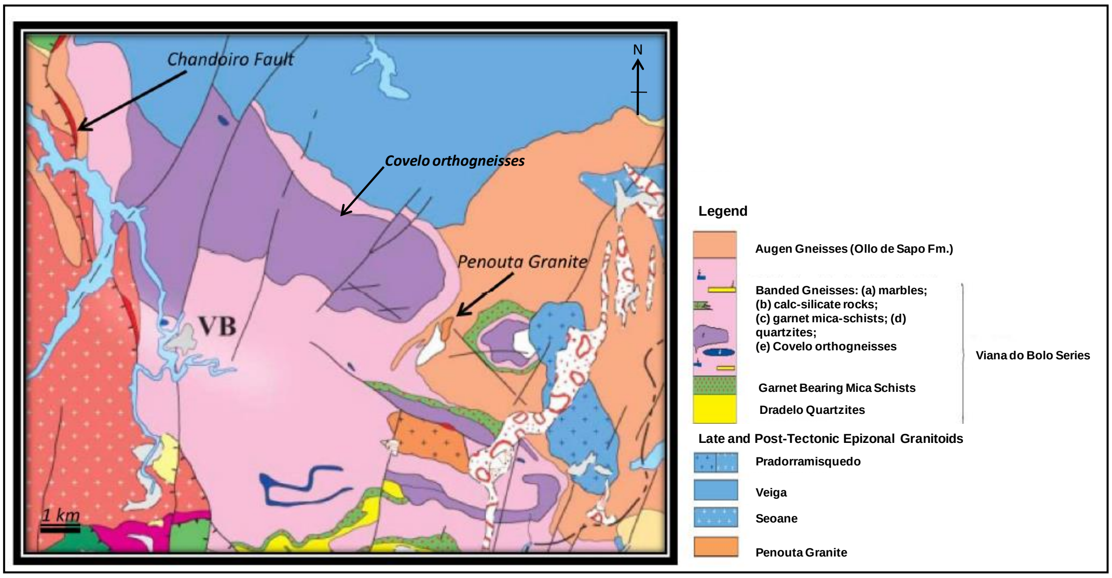


Figure 7-1: Regional Geology of the Penouta Project Area

- Viana do Bolo Series: Highly metamorphic rocks including garnet-bearing mica-schists interbedded with banded magmatic gneisses, these outcrop adjacent to the Penouta granite. The thickness of the Viana do Bolo series is estimated at a minimum of 1,500 m.
- Covelo Orthogneiss: A biotitic porphyritic orthogneiss which has been intruded into the banded gneisses of the Viana do Bolo Series. Extensive metamorphism and migmatisation of the granitoids has occurred developing magmatic granitoids, feldspar-bearing pegmatites and aplite and leucogranite dikes.
- Ollo de Sapo Formation: Volcanogenic sequence estimated at approximately 3,000 m thick. The augen gneisses are the most abundant rock type, and have a porphyritic texture of large potassium feldspars and quartz phenocrysts which have undergone intense deformation. Metamorphism has occurred up to silimanite level.

The regional structure formed during the Variscan deformational phases included overturned to recumbent folds with east and north-east vergence in the Ollo de Sapo Formation (D1). During D2 the emplacement of a large nappe stack formed of allocthonous terranes caused thrusting, and D3 saw the development of subvertical structures including upright folds and shear zones with mostly dextral wrench components.

7.2 Local Geology

The geology within the Penouta Project area is comprised of predominantly metamorphic rocks with minor deformed igneous rocks (Figure 7-2). The metamorphic rocks are high grade metamorphic schists and gneisses of the Amphibolite Facies. The main units are:

- Garnet bearing Muscovite-Quartz Schist: Fine grained crystalline rock with penetrative foliations and crenulations. Boudins are common and are comprised of hyaline quartz. This unit can be correlated to the Garnet bearing mica schists of the Viana do Bolo Series.
- Banded Granitic Gneiss: Medium to coarse grained massive crystalline, moderately banded, and contains hyaline quartz boudins. This unit can be correlated with the Banded Gneisses of the Viana do Bolo Series.

- Granodiorite-Monzogranite-Orthogneiss: Occur in a small portion of the licence area and consist of fine to coarse grained rocks with phaneritic and inequigranular texture, and massive holocrystalline structure. Magmatic foliations have developed and form discontinuous bands of felsic and mafic minerals which produces the gneissic texture. Deformed aplitic and pegmatitic segregations with similar composition also occur. This unit can be correlated with the Covelo Orthogneiss.
- Augen Gneiss: Variably fine to coarse grained crystalline rock with discontinuous bands and foliations, augen inclusions of felsic and siliceous minerals also occur. This unit covers the majority of the Penouta licence and can be correlated with the Augen Gneiss of the Ollo de Sapo Formation.
- Locally, there are two sets of fractures which are aligned north-south and east-west (Figure 7-2). It is thought the north-south features are related to the regional fault network, whilst the east-west features are potentially related to the La Potrilla system of fractures. However, further study would be required to gain a better understanding of both sets of features. The foliations observed in the metamorphic rocks are thought to potentially correspond with the D1 Variscan deformational stage, whilst the microfolding and crenulations may relate to the D3 phase of the Variscan deformational event.

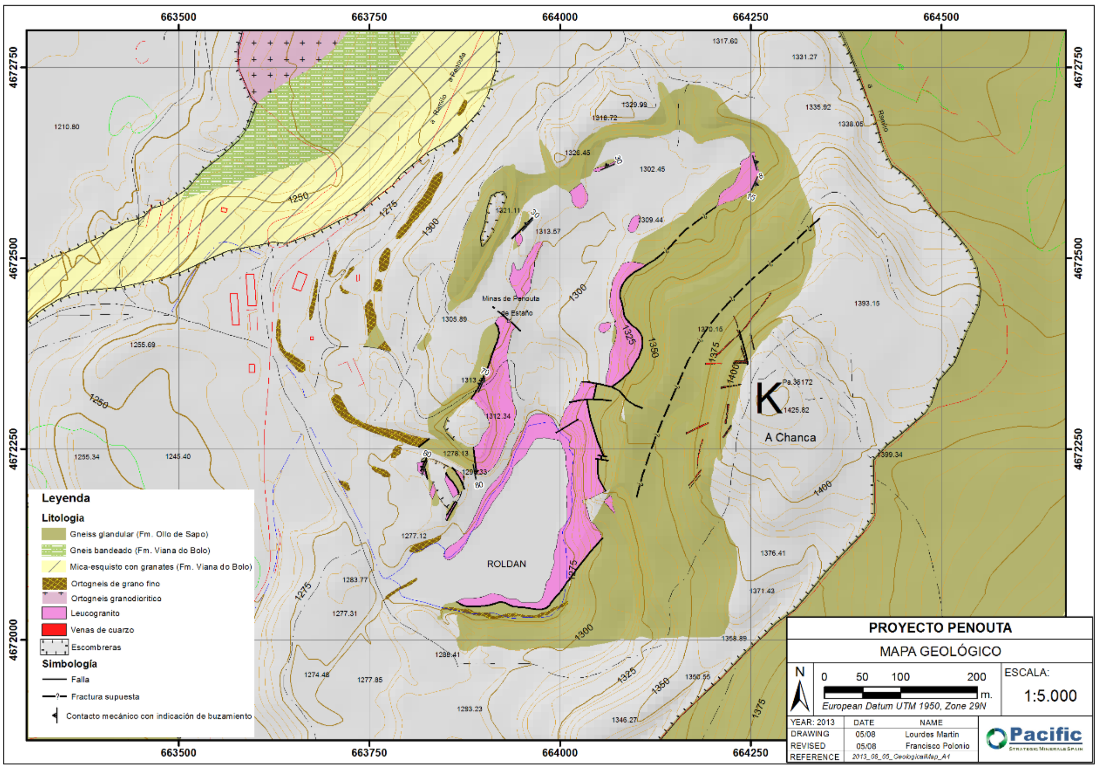


Figure 7-2: Penouta Project Area geology map

7.3 Deposit Geology

The Project area is represented by four main lithologies as described below (taken from the Strategic Minerals Spain, Exploration Report):

Alkaline Granite (Penouta Leucogranite): Fine to medium-grained rock with phaneritic, equigranular and hololeucocratic texture. It is comprised mainly of quartz, K-feldspar, albite and muscovite. Metasomatic and muscovite alteration and silicification have occurred. Cassiterite occurs as individual crystals raging in size from 60 to 800 µm, and as disseminated aggregates. Cassiterite is commonly associated with Nb-Ta oxides which range in size from 20 to 360 µm. An example of the leucogranite is shown in Figure 7-3.

Figure 7-3: Penouta Leucogranite

Aplitic-Pegmatitic Dykes are encountered in drilling, they have a phaneritic texture and are comprised of K-feldspar, plagioclase, quartz, muscovite with accessory biotite, tourmaline, and apatite. Fractures filled with chlorite and sulphides (specifically pyrite) occasionally cross-cut the dykes. Cassiterite is rare in these dykes and where present forms crystals up to 0.5 cm, columbite-tantalite mineralisation is also rare. An example of a pegmatitic dyke from the Penouta area is shown in Figure 7-4.

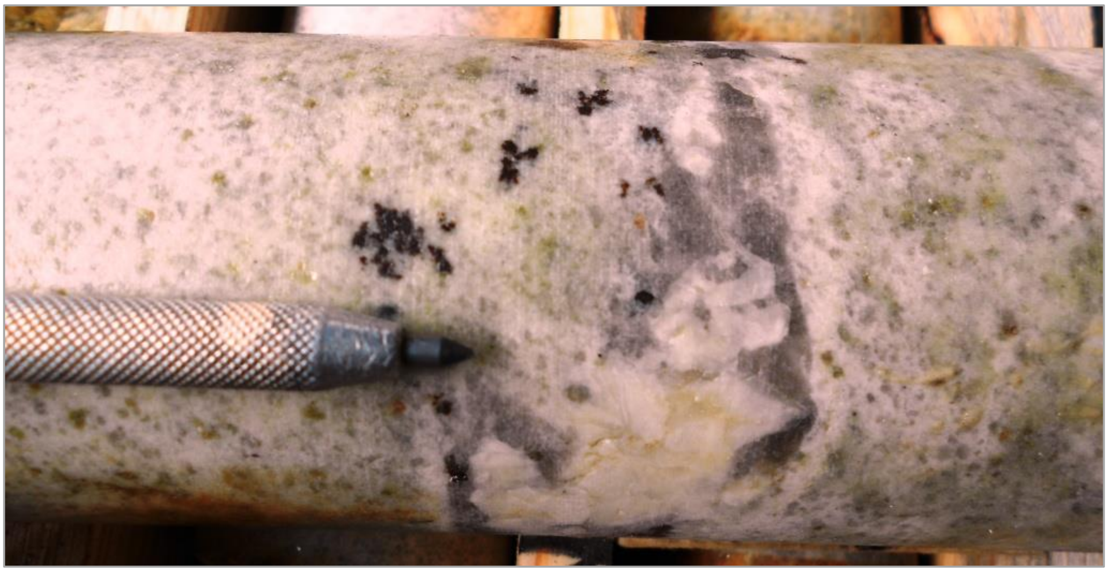


Figure 7-4: Pegmatitic dyke

Greisenisation results in a medium-grained rock with equigranular, and phaneritic texture comprised of white mica and quartz. Cassiterite and columbite-tantalite mineralisation is rare (up to 360 µm). An example of greisen is shown in Figure 7-5.

Figure 7-5: **Greisen at Penouta**

Quartz veins occur as sigmoidal, lenticular and tabular shaped swarms between 30 cm and 2 m thick. Quartz veins are typically hosted in the augen gneiss of the Ollo de Sapo Formation and in some cases in the Penouta leucogranite. Emplacement of the quartz veins caused development of muscovite-rich selvages along the contact with the host gneiss. Veins are milky to hyaline quartz and contain abundant coarse-grained cassiterite. An example of the quartz veins found at Penouta is shown in Figure 7-6.

Figure 7-6: **Quartz veins at Penouta**

7.4 Mineralisation

The following description is taken from the Strategic Minerals Spain, Exploration Report.

Emplacement of the Penouta alkaline granite is assumed to have occurred after the main deformational phases of the Variscan Orogeny (Díez Montes, 2006). Formation of the alkaline granite is thought to be the result of a combination of: a) the fractional crystallization of highly evolved melts enriched in volatiles and rare-elements; and b) strong metasomatism and hydrothermal alteration of an evolved two-mica granite.

Cassiterite and columbite-tantalite are disseminated throughout the leucogranite; deposition of these minerals is thought to have occurred during a late magmatic event, probably as a consequence of the process of albitisation. The muscovitisation, greisenisation, and silicification of the granitic cupola would have occurred during later hydrothermal events at temperatures of between 250 and 410°C (Mangas and Arribas, 1991). Crystallisation of quartz veins containing cassiterite would also have occurred during this time. Kaolinisation of the original granitic body would have occurred at a later stage.

8 DEPOSIT TYPES

The following section is summarized from Taylor, 1979 and Pollard & Taylor, 1985.

Tin deposits of a primary nature are typically associated with granite intrusions, and are within 500 m of the granite contact. They can occur in different geological settings and five general types have been recognised:

- Fold belt type:
  - volcanic;
  - subvolcanic;
  - subvolcanic – plutonic (mixed); an
  - plutonic.
- Anorogenic.
- Precambrian pegmatitic.
- Precambrian rapakivi.
- Bushveld.

The fold belt type (subvolcanic, subvolcanic – plutonic, and plutonic) setting has produced a number of major tin deposits.

Granite bodies occur in a variety of forms from small stocks to large scale, multi-phased intrusive complexes. These granite bodies were emplaced post major folding and were controlled by major fracture / suture zones.

Sn-bearing granites frequently evolve through a series of related granites, and thus become smaller and more geochemically specialised, such that mineralization is often related to small, fine grained plutons which are the final intrusive phase. Although major mineralogical and geochemical features of Sn-bearing granites are recognized, no single criteria is diagnostic.

Sn deposits in fold belt regimes may occur in a variety of styles; major breccia pipe systems, massive greisen systems, brittle fracture systems (veins / pipes, stockwork / sheeted veins), carbonate replacement deposits and Sn-bearing skarns.

With massive greisen style Sn systems, lenticular to massive alteration zones are associated with cusps on the surface of late-stage, geochemically specialized granites. The mineralization zones occur as massive, irregular or sheet-like bodies extending beneath the contact for 10 to 100 m, and consist of fluorine-rich, sericite-silicic alteration envelopes mineralized with cassiterite and sulphides. Most systems, regardless of tonnage, grade in the 500 – 2000 ppm Sn range, and thus economic deposits are rare unless there is / are associate deposit types(s) of higher grade.

9 EXPLORATION

9.1 Introduction

This section summarises the historical exploration which has occurred at Penouta. SMS has provided SRK with a number of documents which detail historical exploration. These are listed in Section 2.2.

9.2 Geochemical Sampling

A soil geochemical sampling programme was undertaken in 1976 by the Instituto Geologico y Minera de Espana ("IGME") which indicated average grades of 1082 ppm Sn, 56 ppm Ta, and 52 ppm Nb. Samples were taken in the north and east of the deposit along parallel sample lines approximately 50 m apart. Samples of 500 g were taken at 25 m intervals along the sample lines, at a depth of 40 to 60 cm. A total of 26 samples were taken along the two northern sample lines and 31 samples taken along the three eastern sample lines. Samples were split to 150 g and sent for analysis using atomic absorption. Results showed very little correlation between Sn and Ta and W, although a minor correlation between Ta and W was observed. Sn anomalies were noted in only 12 samples (>340 ppm Sn), whilst Ta and W anomalies (>25 ppm Ta and W) were noted in less than four samples.

Soil geochemical sampling was determined to be of little use as there is thought to be a) significant transportation of soil by water courses within the project area; b) a significant portion of the project area is potentially covered by schist which masks any potential mineralisation; and c) the dispersed nature of the mineralisation.

9.2.1 Stream Sediment Sampling

Stream sediment sampling was undertaken over 2 ha surrounding the mineralisation. Samples were collected from three points approximately 10 m apart to ensure a representative sample was obtained. A total of 97 samples were taken at intervals of 200 m apart. Typically, 10 litres of gravel and clay was sampled and sieved to 5 mm. Samples were dried and separated, with the heavy fraction being analysed using X-ray fluorescence ("XRF"). All 97 samples were studied for cassiterite, 30 samples were studied for poly-mineral quantitative purposes (the mineralogy observed was consistent with the lithologies seen in the sample area). A polymetallic elemental study was undertaken on 10 samples; however, this did not identify any new elements, although some rare earth elements were identified and assumed to occur in niobiotantalite.

The drainage system analysed has two secondary streams which flow north and west. Results of the analytical studies indicated that cassiterite contents increase towards the western and northern part of the drainage system (which is nearer to the deposit), whilst streams in the southern portion of the deposit do not contain cassiterite. It was concluded that stream sediment sampling could be used to determine the presence of cassiterite and define a general area of potential mineralisation.

9.3 Petrographic and Geochemical Analysis of Host Rocks

Petrographic and geochemical studies were undertaken on samples taken from east-west oriented sections which were sampled across the granite outcrop and out into the metamorphic rocks. Twenty-seven samples were taken, 24 of which were sent for petrographic analysis. Three granitic rock types were observed: a two mica granite, a granite muscovite intermediate between granite and leucogranite, and an aplitic leucogranite (alkaline leucogranite which has undergone greater differentiation at lower pressures and temperatures).

Analysis showed Sn mineralisation was directly related to lithology and was associated with the leucogranite only (up to 2550 ppm Sn with an average of 782 ppm Sn). The two mica and muscovite granites were found to contain less than 10 ppm of Sn. Concentrations of Nb and Ta were also noted as being significantly higher in the leucogranite. Arsenic and W were noted as having highly variable results, and were not noted in significant concentrations.

9.4 Geophysical Surveys

Geophysical studies were undertaken to a) define the contact between the granite and metamorphic rocks; b) detect the presence of disseminated mineralisation; and c) define the geoelectrical features of the project area. Methods included induced polarisation which was found to be the most useful geophysical tool.

9.5 SMS Channel Sampling 2013

SMS (at the time known as PSMS) undertook channel sampling where mineralised zones were identified on surface outcrops. The start and end of the mineralization is identified (typically the leucogranite contact with the unmineralised gneiss). Once the zone of mineralisation has been identified, a trench is excavated across the mineralised structure. The trench is extended to cover at least one sample on either side of the mineralised zone to ensure coverage of potentially mineralised structures in the footwall and hanging wall. Channel samples are collected from a 5 cm wide and 3 cm deep slot 10 cm above the base of the trench. Samples are typically taken horizontally across the outcrop length to take a continuous sample of 2.5 m.

SMS undertook 25 channels which included 187 samples. The location of the channels are shown on Figure 9-1. Where trench samples intersected the mineralisation wireframes they were used in the estimation. Table 9-1 below summarises those trench samples during the estimation of Ta, Sn and Nb.

Table 9-1: Trench Samples used in estimation for Ta, Sn, and Nb

	Used in Estimation		
Trench ID	**Ta**	**Sn**	**Nb**
R01	x	x	x
R02	x	x	x
R03	☐	x	☐
R04	☐	x	☐
R05	☐	x	☐
R06	☐	x	☐
R07	☐	x	☐
R08	☐	x	☐
R09	☐	x	☐
R10	☐	☐	☐
R11	x	x	x
R12	☐	☐	☐
R13	☐	☐	☐
R14	☐	☐	☐
R15	x	x	x
R16	x	x	x
R17	☐	☐	☐
R18	☐	☐	☐
R19	☐	☐	☐
R20	x	x	x
R21	x	x	x
R22	x	x	x
R23	x	x	x
R24	x	x	x
R25	x	x	x

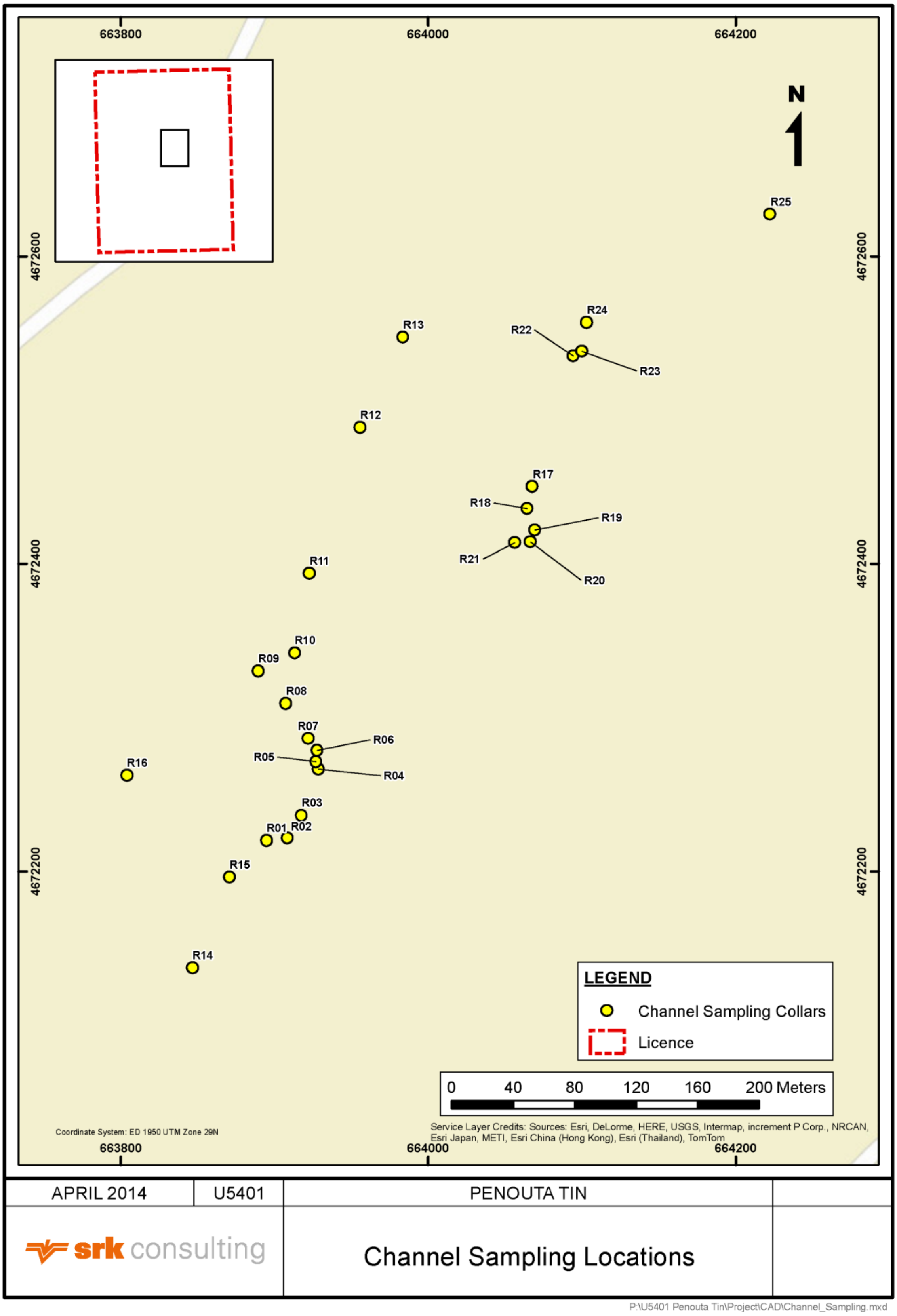


Figure 9-1: SMS Channel Sampling locations and Coneto Permit

10 DRILLING

The following Section provides a summary of the drilling completed at the Penouta Project, which includes both historical programs and the more recent drilling completed by SMS during 2012 and 2013.

No new drilling has been completed at the Project since the SRK 2014 MRE.

10.1 Drilling Programmes

10.1.1 Historical Drilling Programmes

A number of drilling programs have been undertaken within the Project area. Historical reports suggest drilling was undertaken in 1971 (7 drillholes), and 1974 – 1975 (12 drillholes) with varying Sn grades of 1,000 ppm and 550 ppm Sn reported respectively. No details regarding drillhole locations, number of metres drilled, or assaying protocols undertaken have been provided.

In 1977, Altos Hornos de Vizcaya drilled 38 diamond drillholes with an average grade of 650 ppm Sn. Tantalum was not analysed for and the analytical methods used during this drill programme could not be verified, therefore this data was not used in subsequent investigations.

A number of diamond drilling programmes were undertaken by ADARO. In 1982 a drill programme consisting of 7 drillholes (SP series drillholes, Table 10-1) for 1013 m was completed with the aim of establishing the location and extent of Sn mineralisation. A smaller drill programme of three drillholes (SA series drillholes, Table 10-1) for 597.7 m was drilled in 1984. During 1985, a further 62 drillholes (SAP series drillholes, Table 10-1) for 6478.8 m were completed. Holes were drilled based on a slightly irregular 50 x 100 m grid oriented slightly off east-west.

A total of 72 historical diamond drillholes for a total of 8089.5 m (Figure 10-1) have been reviewed as part of this report. Complete analytical data for both Sn and Ta is available for 30 of the historical drillholes, whilst the remaining 42 drillholes have only partial analytical information with regards to Sn and Ta. The majority of the historical drillholes did not intersect basement rocks therefore further exploration may be warranted to determine the down dip extents of the mineralisation.

During 2013 SMS gained access to a number of additional buildings situated within the former mine area. A number of historical drill cores were discovered in these buildings. The condition of the core stored here was variable however SMS identified, re-logged and re-sampled four of the historical diamond holes (SAP-16, SAP-23, SAP-50, and SP-07). These drillholes have been re-logged using the SMS logging, alteration and weathering codes. SMS have also obtained data and drill core for two holes drilled prior to SMS acquiring the Investigation Permit. These drillholes (SN-01 and SN-02) were drilled by Aproveitamento de Recursos Naturais de Galicia, S.L. in August 2012.

Table 10-1: Historical Drillholes

YEAR	BHID	EASTING	NORTHING	ELEVATION	EOH DEPTH
1982	SP-01	663939.6	4672101.8	1255.8	180.0
1982	SP-02	664147.6	4672199.6	1360.8	180.2
1982	SP-03	664200.7	4672342.1	1384.8	180.2
1982	SP-04	664186.4	4672436.9	1369.8	180.0
1982	SP-05	663983.0	4672734.0	1296.8	146.0
1982	SP-06	663935.0	4672642.0	1308.8	145.0
1982	SP-07	663888.5	4672585.8	1305.8	145.2
1984	SA-01	664275.7	4672320.4	1425.0	199.7
1984	SA-02	664318.7	4672379.3	1410.5	200.0
1984	SA-03	664249.2	4672350.7	1420.0	198.0
1985	SAP-01	663968.2	4672314.6	1282.3	81.4
1985	SAP-02	664004.3	4672417.9	1300.8	103.8
1985	SAP-03	664034.0	4672511.5	1298.8	101.9
1985	SAP-04	664058.1	4672614.4	1301.3	102.1
1985	SAP-05	664091.9	4672732.8	1310.8	114.3
1985	SAP-06	664074.6	4672503.5	1301.3	106.6
1985	SAP-08	663983.7	4672528.0	1299.8	107.7
1985	SAP-09	663933.4	4672541.5	1304.3	116.8
1985	SAP-10	664074.2	4672657.6	1304.8	62.0
1985	SAP-11	664045.7	4672567.0	1300.8	59.8
1985	SAP-12	664023.8	4672467.0	1299.8	62.9
1985	SAP-13	663987.5	4672380.7	1286.3	49.8
1985	SAP-14	664052.9	4672510.6	1300.8	60.0
1985	SAP-16	664004.5	4672522.0	1299.3	60.6
1985	SAP-17	663960.1	4672536.2	1313.3	64.5
1985	SAP-18	664002.2	4672313.9	1283.8	90.2
1985	SAP-19	664046.0	4672410.8	1303.3	80.2
1985	SAP-20	664102.5	4672602.2	1302.3	94.3
1985	SAP-21	664127.4	4672701.1	1318.8	120.3
1985	SAP-22	663936.3	4672337.2	1286.3	90.0
1985	SAP-23	663970.5	4672442.6	1294.8	90.0
1985	SAP-24	664005.2	4672639.0	1325.8	115.2
1985	SAP-25	664039.8	4672731.4	1307.3	110.4
1985	SAP-26	663878.2	4672357.1	1311.3	95.1
1985	SAP-27	663907.0	4672452.7	1304.8	96.1
1985	SAP-28	663966.5	4672645.0	1305.3	89.3
1985	SAP-30	663851.2	4672235.3	1279.3	125.2
1985	SAP-31	663830.2	4672175.3	1280.8	106.1
1985	SAP-32	663801.4	4672078.6	1270.3	120.2
1985	SAP-33	663920.9	4672229.9	1284.8	115.0
1985	SAP-34	663874.5	4672161.1	1277.8	115.0
1985	SAP-35	663843.8	4672066.5	1265.8	89.6
1985	SAP-39	663752.9	4672091.1	1275.8	100.0
1985	SAP-40	663788.6	4672184.4	1277.3	100.1
1985	SAP-41	663886.0	4671932.0	1290.8	116.7
1985	SAP-42	663907.0	4672009.4	1289.8	114.9
1985	SAP-44	663956.8	4672003.9	1290.8	111.0
1985	SAP-45	664000.1	4671989.8	1301.8	90.0
1985	SAP-46	664066.9	4672105.5	1305.8	150.0
1985	SAP-47	664066.9	4672105.5	1305.8	90.0
1985	SAP-48	664106.2	4672191.7	1345.3	180.0
1985	SAP-49	664106.2	4672191.7	1345.3	100.0
1985	SAP-50	663968.1	4672192.5	1256.8	101.0
1985	SAP-51	664104.9	4672286.8	1355.8	98.4
1985	SAP-52	664151.6	4672381.6	1369.8	149.9
1985	SAP-53	664151.6	4672381.6	1369.8	120.0
1985	SAP-54	664074.6	4672503.5	1301.3	110.6
1985	SAP-55	664159.3	4672456.3	1364.8	185.0
1985	SAP-56	664133.7	4672584.7	1304.8	110.0
1985	SAP-57	664185.8	4672586.1	1307.3	114.6
1985	SAP-58	664165.0	4672693.2	1310.8	115.0
1985	SAP-59	664204.5	4672681.2	1318.8	125.0
1985	SAP-60	664104.9	4672286.8	1355.8	110.5
1985	SAP-61	664159.3	4672456.3	1364.8	107.7
1985	SAP-62	664205.2	4672432.0	1369.8	150.4
1985	SAP-63	664267.6	4672521.0	1367.8	130.0
1985	SAP-64	664267.6	4672521.0	1367.8	140.0
1985	SAP-65	663815.5	4672364.2	1295.8	90.1
1985	SAP-66	663851.8	4672470.5	1309.3	100.3
1985	SAP-67	663881.2	4672559.1	1311.3	90.2
1985	SAP-68	663790.1	4672256.4	1274.8	81.2
1985	SAP-69	663802.8	4672470.9	1298.8	100.1

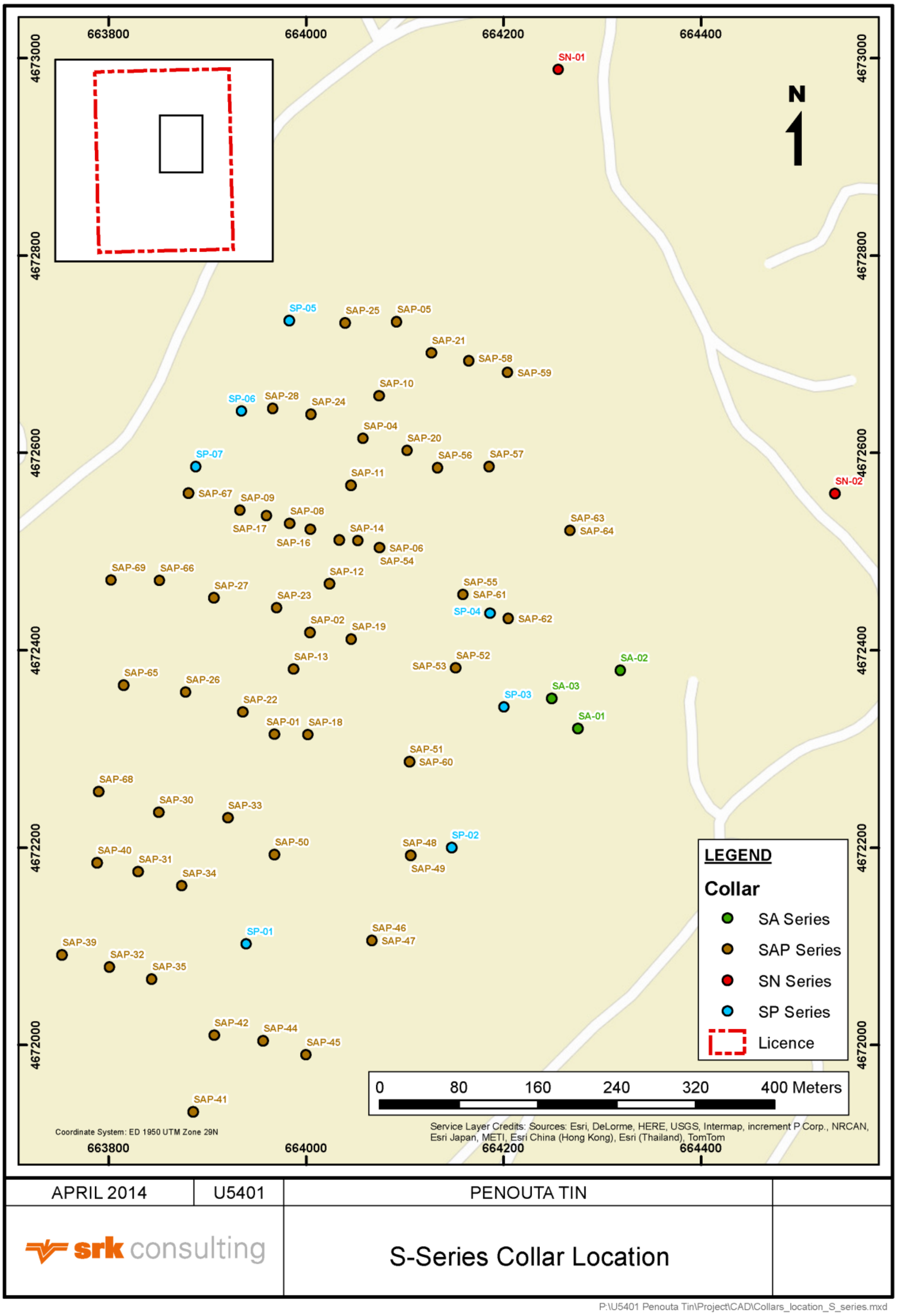


Figure 10-1: Historical and S-Series Drillhole Location Map and Coneto Permit

10.1.2 SRK Comments on Historical Drilling Data

SRK raised the following points as being of concern regarding the historical drilling database:

- Only a single downhole survey has been taken at the end of each drillhole. Typically SRK would expect multiple surveys to be completed at regular intervals to ensure accurate surveying of a hole. This is particularly important with the inclined drilling, and with the average drillhole depth being 122 m;
- Only three of the historical drillhole platforms have been located, based on these SMS corrected differences in collar locations which are thought to have occurred due to changes in co-ordinate systems. SRK is satisfied that the historical drillhole collars have been located accurately for use in a Mineral Resource estimate;
- A variety of sample lengths have been used with the mean sampling interval of 5 m but in places 10 m samples. These are large samples and therefore subsampling routines need to be reviewed to alleviate potential sample preparation concerns.
- The Sn database and the distribution of grades is reasonable below a grade of 1,000 ppm, above this value the accuracy of the assays becomes poor with the values rounded to the nearest 100 ppm, suggesting some issues in the historical assaying techniques and its appropriateness for the higher grade portions of the deposit;
- SRK has undertaken an analysis of the historical versus twinned drilling results this is discussed in Section 12.3.2 and 12.3.3.
- No QAQC has been provided for the historical database, this raises some concerns as to whether the sampling and assaying routines employed were of an acceptable industry standard. The lack of QAQC is a specific concern with regards to the historical tantalum assays, as analysis of tantalum can be difficult. Validation of the historical data is discussed in Section 12.3.2 and 12.3.3.

10.1.3 SMS Drilling Verification Programme 2012

SMS undertook a drill verification programme (the PEN series of drillholes) in 2012 to determine the suitability of the ADARO drillholes for use in an MRE. On the advice of SRK, SMS has twinned using diamond drilling approximately 10% of the historical drill programme. The results of the twin drilling are discussed in Section 12.3.2

Holes were drilled from surface using a SPIDRILL 160-D diamond rig (Figure 10-2) typically to approximately 35 m using PQ diamond core and then completed to depth using HQ diamond core. All holes have been drilled vertically. SRK conducted visits to the portable drilling rig during November 2012, and March 2013. The rig was found to be in good condition and following industry best practice. The drill programme, core logging and sampling was supervised by Company geologists.

The PEN series of verification drillholes were drilled by SMS and included 7 diamond holes to verify the historical Sn and Ta grades (Table 10-2), three diamond holes (Table 10-2; Figure 10-3) to determine the nature of the historical tailings, and four reverse circulation (“RC”) holes (Table 10-2; Figure 10-3) for bulk metallurgical testing purposes.

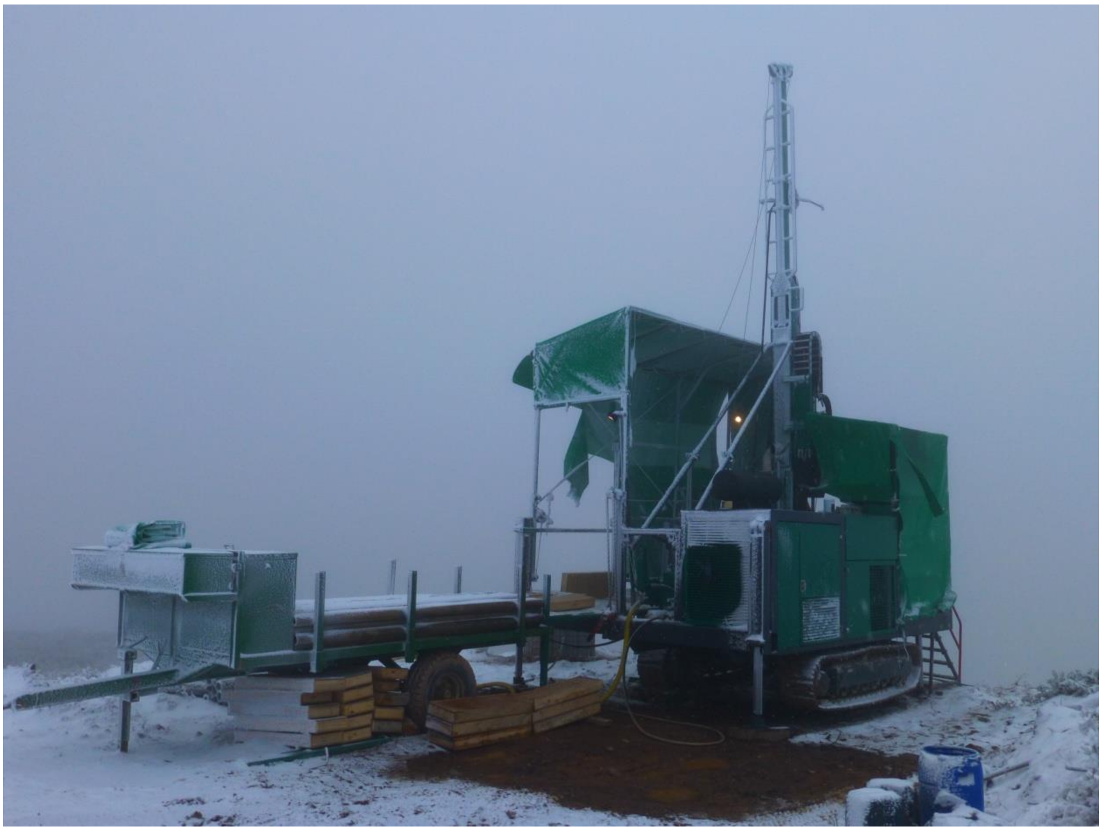


Figure 10-2: SMS Verification Drilling – SPIDRILL160-D

Table 10-2: SMS Drillholes (Verification Drillholes are in Black) 2012 Programme

BHID	Easting	Northing	Elevation	EOH Depth	Twinned Hole	Comments
PEN12-04	663856	4672212	1286.4	154.7	SAP-30	Verification Drillhole
PEN12-05	663900	4671938	1291.1	200.2	SAP-41	Verification Drillhole
PEN12-06	664013	4672723	1303.4	250	SP-05	Verification Drillhole
PEN12-07	663984	4672424	1294.1	134.2	SAP-23	Verification Drillhole
PEN12-08	664278	4672293	1424.1	300	SA-01	Verification Drillhole
PEN12-10	664286	4672490	1371.3	250	SAP-64	Verification Drillhole
PEN12-11	664074	4672591	1299.7	200	SAP-04	Verification Drillhole
PEN12-01	663586	4672605	1240.0	176.8	-	Sterilisation drilling of old tailings
PEN12-02	663699	4672470	1271.2	200	-	Sterilisation drilling of old tailings
PEN12-03	663512	4672441	1251.3	100	-	Sterilisation drilling of old tailings
PEN12-04R	663844	4672222	1273.5	200	-	Bulk Metallurgical Samples (RC)
PEN12-06R	664003	4672725	1291.0	200	-	Bulk Metallurgical Samples (RC)
PEN12-07R	663972	4672424	1289.0	88	-	Bulk Metallurgical Samples (RC)
PEN12-09R	663939	4672525	1298.5	200	-	Bulk Metallurgical Samples (RC)

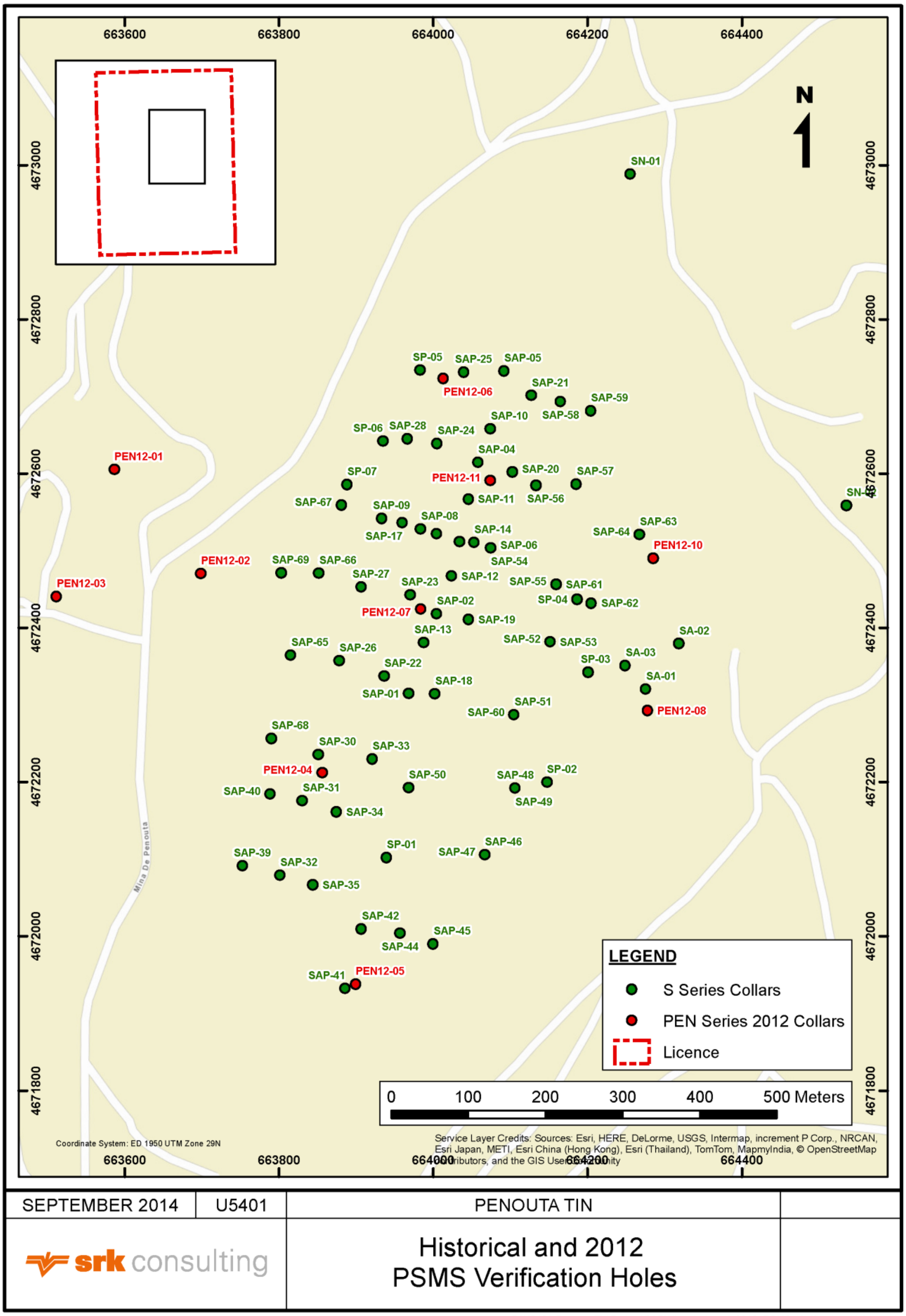


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Figure 10-3: **Historical, S-Series and 2012 Verification Drillhole Location Map within the Coneto Permit**

10.1.4 SMS Drilling Programme 2013

SMS undertook a more extensive diamond drill programme during 2013. The 2013 drilling programme was drilled on a grid of approximately 100 x 100 m. The 2013 drill programme extended the depth of drilling to approximately 300 m. As for the 2012 drilling programme holes were drilled from surface using a SPIDRILL 160-D diamond rig (Figure 10-2) typically to approximately 35 m using PQ diamond core and then completed to depth using HQ diamond core. All holes have been drilled vertically. SRK conducted visits to the portable drilling rig during November 2012, and March 2013. The rig was found to be in good condition and following industry best practice. The drill programme, core logging and sampling was supervised by Company geologists. A total of 55 diamond drillholes were completed for a total of 14051.1 m the drillhole co-ordinates are summarised in Table 10-3. The SN series drillholes are summarised in Table 10-4. The location of the recent drillholes are shown in Figure 10-4.

Table 10-3: SMS Drillholes 2013 Programme

BHID	Easting	Northing	Elevation	EOH Depth
PEN13-01	663888	4672665	1288	250.1
PEN13-02	663966	4672549	1311	251.2
PEN13-03	663952	4672449	1296	250.1
PEN13-04	664073	4672636	1303	250.0
PEN13-05	664149	4672419	1369	220.1
PEN13-06	663874	4672162	1276	253.3
PEN13-07	663741	4672489	1280	252.8
PEN13-08	664124	4672319	1362	257.3
PEN13-09	663724	4672391	1276	250.2
PEN13-10	664101	4672223	1344	250.0
PEN13-11	663823	4672374	1297	250.0
PEN13-12	664251	4672503	1367	250.0
PEN13-13	663806	4672280	1292	250.2
PEN13-14	664368	4672582	1365	250.0
PEN13-15	663972	4672651	1305	250.0
PEN13-16	663707	4672292	1268	250.0
PEN13-17	664240	4672397	1390	250.0
PEN13-18	663702	4672203	1270	250.1
PEN13-19	664328	4672380	1409	250.0
PEN13-20	663858	4672572	1299	250.5
PEN13-21	663788	4672176	1275	250.5
PEN13-22	664187	4672716	1314	250.0
PEN13-23	663890	4672268	1309	250.0
PEN13-24	664171	4672620	1304	250.0
PEN13-25	664089	4672733	1309	250.0
PEN13-26	663875	4672273	1309	250.0
PEN13-27	664287	4672699	1329	250.0
PEN13-28	664054	4672535	1298	250.6
PEN13-29	664200	4672218	1390	250.0
PEN13-30	663920	4672356	1289	250.0
PEN13-31	664211	4672308	1391	250.1
PEN13-32	664016	4672337	1285	250.0
PEN13-33	664350	4672484	1390	280.0
PEN13-34	663841	4672470	1307	250.0
PEN13-35	664037	4672437	1302	250.0
PEN13-36	664328	4672285	1417	321.5
PEN13-37	663756	4672601	1262	250.0
PEN13-38	664268	4672640	1313	250.0
PEN13-39	663643	4672508	1261	250.2
PEN13-40	664304	4672199	1409	275.3
PEN13-41	664202	4672553	1318	251.6
PEN13-42	664410	4672270	1399	280.0
PEN13-43	663776	4672684	1263	250.1
PEN13-44	664395	4672171	1393	290.0
PEN13-45	663639	4672407	1268	250.1
PEN13-46	664133	4672116	1344	253.4
PEN13-47	664280	4672090	1374	280.2
PEN13-48	664193	4672461	1366	290.1
PEN13-49	663589	4672208	1253	250.3
PEN13-50	663601	4672309	1259	250.1
PEN13-51	664431	4672368	1391	290.2
PEN13-52	663902	4672766	1283	250.1
PEN13-53	664106	4672827	1301	250.1
PEN13-54	664009	4672848	1294	250.4
PEN13-55	663669	4672657	1250	250.3

Table 10-4: SN Series Drillholes

YEAR	BHID	Easting	Northing	Elevation	EOH Depth
2012	SN-01	664,256	4,672,988	1293.0	104.0
2012	SN-02	664,536	4,672,558	1347.5	185.5

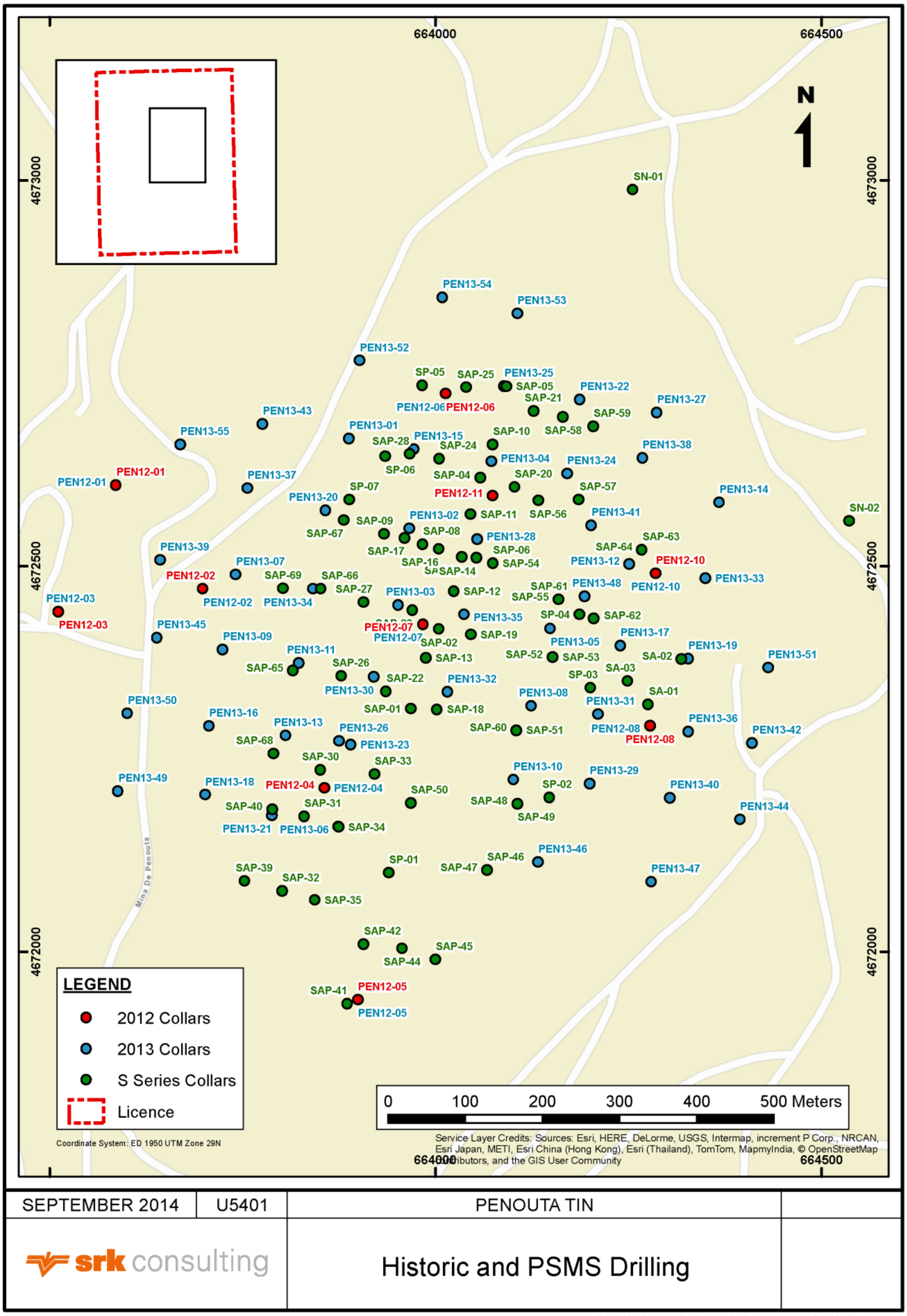


Figure 10-4: SMS Drillholes 2013 Programme and Coneto Permit

10.2 Collar Surveys (2012 and 2013)

Following completion of drilling, all collars were surveyed using a precision GPS. The co-ordinates are compared to the original collar location and recorded in an excel database maintained by SMS geologists. The collar location data has been provided to SRK in excel format and is based on UTM_European Datum 1950, Zone 29N. Table 10-5 below indicates the distance between the collars of the historical drillholes and the twinned SMS drillholes. Collar distances ranged from 5.7 to 52 metres, with the majority of the holes 8 to 12 m apart. SRK notes that very few of the historical drillhole collars have been located, however based on those historical drillholes which have currently been located SMS have corrected the drillhole co-ordinates of the historical drillholes. The corrected collar locations are presumed to be accurately located.

Table 10-5: Separation distance between historic drillholes and SMS twinned drillholes

BHID	EOH Depth	Twinned Hole	EOH Depth	Distance Between Drillholes (m)
PEN12-04	154.7	SAP-30	125.52	15
PEN12-05	200.2	SAP-41	116.4	52
PEN12-06	250	SP-05	143	9.4
PEN12-07	134.2	SAP-23	90	12
PEN12-08	300	SA-01	199.7	5.7
PEN12-10	250	SAP-64	140	12
PEN12-11	200	SAP-04	102.08	8

10.3 Downhole Surveys (2012 and 2013)

All holes were drilled vertically, and surveyed every 10 m using a Reflex EZ-Shot downhole camera. Downhole surveys are recorded in an excel database maintained by SMS geologists, and provided to SRK in this format.

10.4 Core Storage (2012 and 2013)

SMS maintain a core storage facility in the town of Penouta. All core logging, and sampling is undertaken in this facility (Figure 10-5), and all un-sampled SMS verification drill core is stored here.

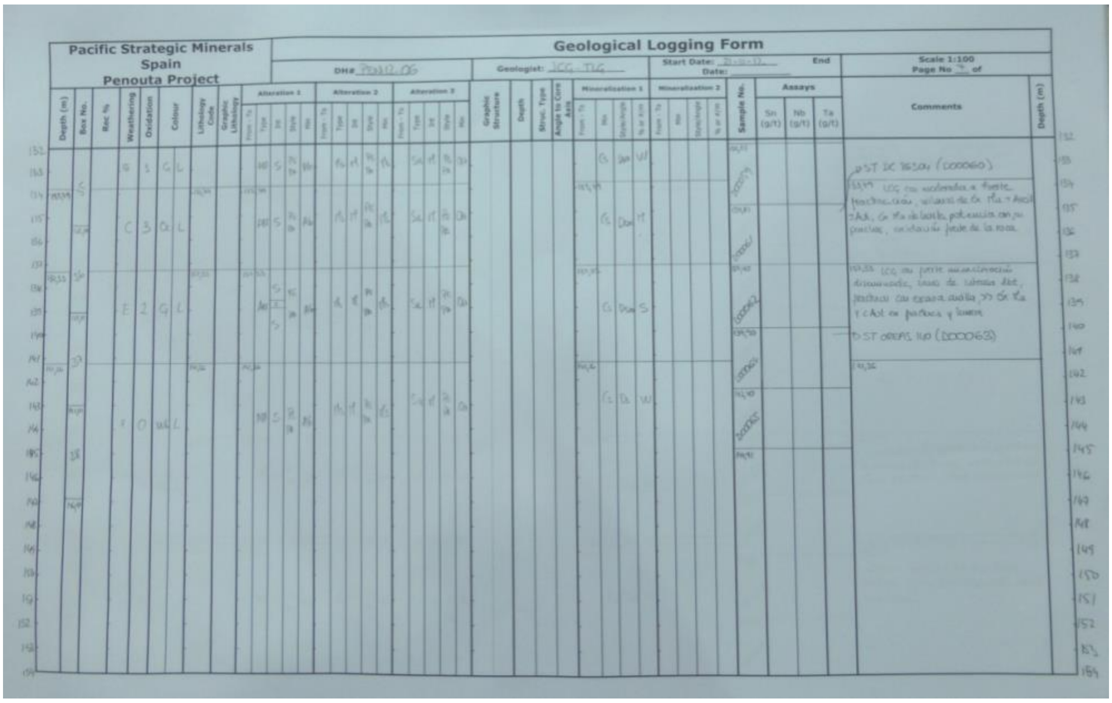
Figure 10-5: SMS Core storage, logging and sampling facility

10.5 Core Preparation and Logging (2012 and 2013)

Once the core has been delivered to the coreshed, it is washed prior to logging and sampling being undertaken. All holes have been geologically and geotechnically logged.

Geological logging is undertaken on paper log sheets (Figure 10-6) and the following information is recorded:

- lithology;
- weathering;
- oxidation;
- colour;
- alteration;
- mineralisation;
- graphic log;
- comments; and
- sample numbers.



Pacific Strategic Minerals
Spain
Penouta Project

Geological Logging Form

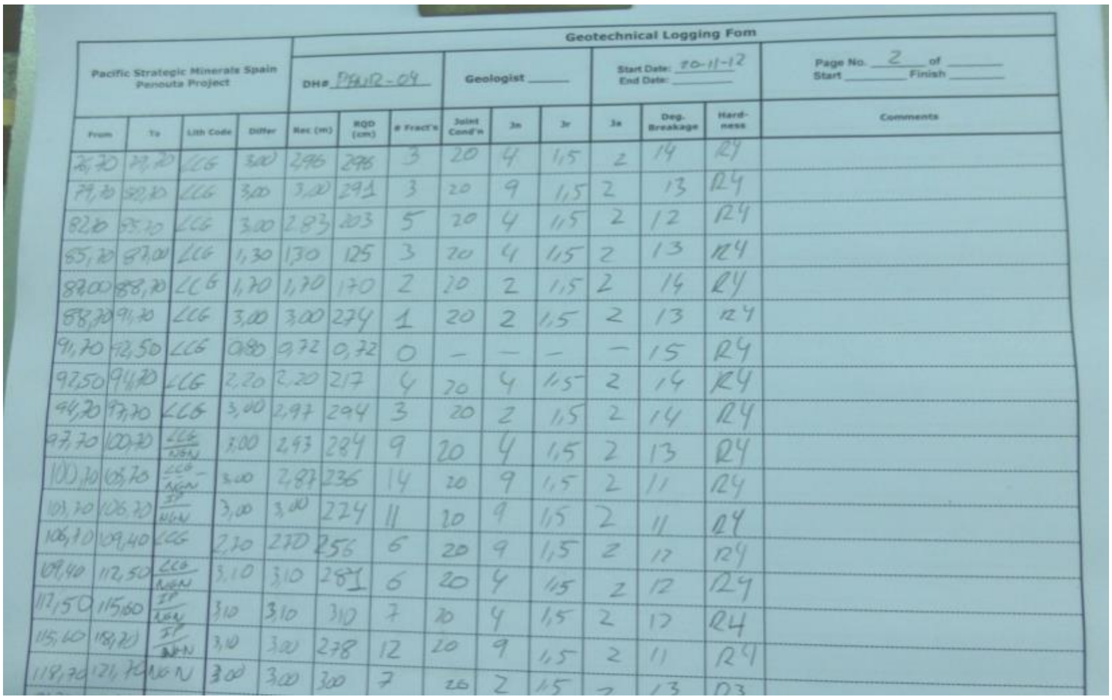
DH#
Geologist:
Start Date:
End Date:
Scale 1:100
Page No of

Depth (m)	Box No.	Rec %	Weathering	Oxidation	Colour	Lithology Code	Graphic Lithology	Alteration 1	Alteration 2	Alteration 3	Graphic Structure	Depth	Struc. Type	Angle to Core Axis	Mineralization 1	Mineralization 2	Sample No.	Assays			Comments	Depth (m)
																		Sn (g/t)	Nb (g/t)	Ta (g/t)		

Figure 10-6: Example of SMS Geological Logging Sheet

Geotechnical logging is undertaken on paper log sheets (Figure 10-7) and the following information is recorded:

- lithology;
- core recovery;
- Rock Quality Designation (“RQD”);
- number of fractures / joints;
- type of fractures / joints;
- degree of breakage;
- weathering extent;
- rock hardness; and
- rock tunnelling quality index.



Geotechnical Logging Fom

Pacific Strategic Minerals Spain
Penouta Project

DH# PEN12-04

Geologist ______

Start Date: 20-11-12
End Date: ______

Page No. 2 of ______
Start ______ Finish ______

From	To	Lith Code	Differ	Rec (m)	RQD (cm)	# Fract's	Joint Cond'n	Jn	Jr	Ja	Deg. Breakage	Hard-ness	Comments
76,70	79,70	LCG	3,00	296	296	3	20	4	1,5	2	14	R4	
79,70	82,70	LCG	3,00	3,00	291	3	20	9	1,5	2	13	R4	
82,70	85,70	LCG	3,00	2,83	203	5	20	4	1,5	2	12	R4	
85,70	87,00	LCG	1,30	1,30	125	3	20	4	1,5	2	13	R4	
87,00	88,70	LCG	1,70	1,70	170	2	20	2	1,5	2	14	R4	
88,70	91,70	LCG	3,00	3,00	274	1	20	2	1,5	2	13	R4	
91,70	92,50	LCG	0,80	0,72	0,72	0	–	–	–	–	15	R4	
92,50	94,70	LCG	2,20	2,20	217	4	20	4	1,5	2	14	R4	
94,70	97,70	LCG	3,00	2,97	294	3	20	2	1,5	2	14	R4	
97,70	100,70	LCG NGN	3,00	2,93	284	9	20	4	1,5	2	13	R4	
100,70	103,70	LCG- NGN	3,00	2,87	236	14	20	9	1,5	2	11	R4	
103,70	106,70	IP NGN	3,00	3,00	224	11	20	9	1,5	2	11	R4	
106,70	109,40	LCG	2,70	2,70	256	6	20	9	1,5	2	12	R4	
109,40	112,50	LCG NGN	3,10	3,10	281	6	20	4	1,5	2	12	R4	
112,50	115,60	IP NGN	3,10	3,10	310	7	20	4	1,5	2	12	R4	
115,60	118,70	IP NGN	3,10	3,00	278	12	20	9	1,5	2	11	R4	
118,70	121,70	NGN	3,00	3,00	300	7	20	2	1,5	2	13	R3	

Figure 10-7: Example of SMS Geotechnical Logging Sheet

A mineralogical and sample log is also recorded on paper logging sheets, the following information is recorded:

- sample number;
- sample interval;
- lithology;
- sulphide or oxide minerals present; and
- visual estimate of sulphide, oxide and gangue minerals.

Upon completion of logging procedures, all core is photographed and all data is transferred to an excel database. All data undergoes validation processes to ensure data entry errors are minimised, and the database is maintained by SMS geologists. SRK has been provided with electronic copies of the excel database.

10.6 SRK Comments

SRK has reviewed the drilling procedures and drilling database quality for the Penouta project and is satisfied that industry best practices have been followed. SRK has also reviewed the core handling, logging and sampling procedures employed by SMS during the November 2012 and August 2013 site visits and is satisfied that industry best practices have been applied. It is SRK's view that the historical and recent data is appropriate for the definition of a MRE.

11 SAMPLE PREPARATION, ANALYSES, AND SECURITY

11.1 Historical Sampling

SRK has not been provided with extensive information on the sampling routines used during the 1985 historical drilling programme. SRK has determined that historical sampling was undertaken with a mean sampling interval of 5 m, although in some cases samples up to 10 m were taken. SRK is unaware of any sub-sampling routines which may have been in place. SRK understands the sampling and analysis was undertaken at the ADARO laboratory in Madrid, Spain. SRK is unaware of the analysis method used to determine the Sn and Ta values in the historical drillholes. SRK has undertaken validation exercises on the historical data and it is SRK’s view that the historical data is suitable for use in a MRE.

11.2 Sample Security and Chain of Custody (2012 and 2013)

All samples from the 2012 and 2013 drill programmes were submitted to ALS in Seville (“ALS Seville”), an internationally accredited laboratory. The chain of custody for sample transportation is a secure core and sample storage facility in the township of Penouta. All sample bags are sealed with tape and / or cable ties such that any tampering of samples will be evident. All samples are driven by a SMS employee to the analytical facility in ALS Seville where the samples are checked according to laboratory despatch documents by both the SMS employee and ALS staff.

11.3 SMS Sample Preparation (2012 and 2013)

All analytical samples are marked by SMS geologists on the core boxes, where core recovery is poor samples are taken between drill runs. A minimum sample length of 0.5 m and a maximum sample length of 2.5 m have been used. All samples are half core and sampling is done to lithological contacts. Prior to sampling, SMS geologists mark the cut line (perpendicular to fractures and veinlets). Core is cut in half using a diamond core saw (Figure 11-1). Where core is severely broken and cannot be cut using a diamond saw a hammer is used to break the core and a knife or spoon is used for sampling.

The start and end of each sample is marked using a red core block, which is placed in the core box. A tag bearing the sample number is stapled to the core box at the start of each sample (Figure 11-2). An identical tag is then placed in the heavy duty plastic sample bags. To ensure no sample mix ups occur the sample number is also written using permanent marker on the outside of the sample bags (Figure 11-3). Samples are stored in bulk bags and transported by SMS staff to ALS Seville.

Figure 11-1: Diamond Drill Core sampling at the Penouta project

Figure 11-2: Core sampling procedures at Penouta

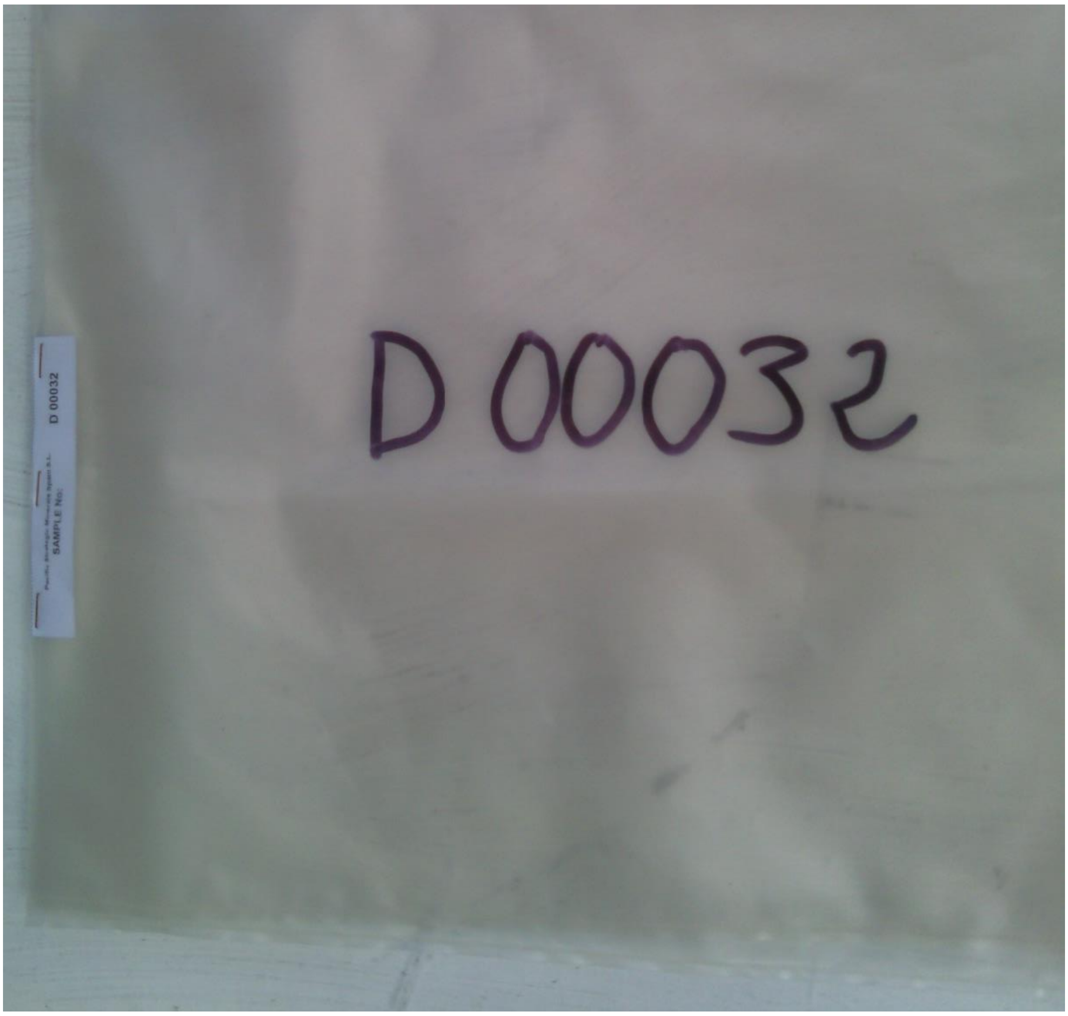


Figure 11-3: Core sampling procedures at Penouta - Sample bag showing sample tags and number

11.4 Sample Preparation (2012 and 2013)

All sample preparation work was completed at ALS Seville. The sample preparation process was the same for all submissions and is described below:

- sample logged in tracking system, bar code is attached to each sample;
- samples are dried in ovens to remove excessive moisture;
- samples are crushed with >70% passing 2 mm;
- samples are split using a riffle splitter; and
- sample is split up to 250 g and pulverised to >85% passing 75 µ.

11.5 Laboratory Analysis

11.5.1 Laboratory Analysis – 2012 Drilling Programme

After completion of sample preparation procedures at ALS Seville the pulp samples and associated Quality Assurance and Quality Control ("QAQC") samples were sent to ALS Vancouver for all analytical work. The client decided to employ lithium borate fusion followed by an Inductively Coupled Plasma – Mass Spectroscopy ("ICP-MS") as the primary analytical method whilst analysis using pressed powder x-ray fluorescence ("XRF") was also undertaken for comparison of assay values. The three different analysis methods used were:

- ME-MS81: An lithium borate fusion read by ICP-MS which has the following limits for tin (1 ppm lower – 10,000 ppm upper) and tantalum (0.1 ppm lower – 10,000 ppm upper).
- ME-MS61: A lithium metaborate fusion read by ICP-MS, which has the following limits for tin (0.2 ppm lower – 500 ppm upper) and tantalum (0.05 ppm lower – 100 ppm upper)
- ME-XRF05: A pressed powder pellet read by XRF spectrometry, which has the following limits for tin (5 ppm lower – 10,000 ppm upper) and tantalum (10 ppm lower – 10,000 ppm upper).

Based on detection limits SRK selected the results from the ME-MS81 analysis method when estimating Ta, and the results from the ME-XRF05 method when estimating Sn (Table 11-1).

Table 11-1: Analysis method and subsequent results used in Mineral Resource Estimate for Sn and Ta (method used indicated by red tick)

Analysis Method	Sn	Ta
ME-MS61	x	x
ME-MS81	x	✓
ME-XRF05	✓	x

11.5.2 Laboratory Analysis – 2013 Drilling Programme

After completion of sample preparation procedures at ALS Seville the pulp samples and associated QAQC samples were sent to ALS Vancouver for all analytical work. Based on discussions with SRK the client decided to employ lithium borate fusion followed by an Inductively Coupled Plasma – Mass Spectroscopy ("ICP-MS") as the primary analytical method whilst analysis using pressed powder x-ray fluorescence ("XRF") was undertaken as a check method on 712 samples, including drillholes, channel and re-sampled historical drillholes (approximately 13% of the total sample population). The two different analytical methods used are described below:

- ME-MS81: An lithium borate fusion read by ICP-MS which has the following limits for tin (1 ppm lower – 10,000 ppm upper) and tantalum (0.1 ppm lower – 10,000 ppm upper).
- ME-XRF05: A pressed powder pellet read by XRF spectrometry, which has the following limits for tin (5 ppm lower – 10,000 ppm upper) and tantalum (10 ppm lower – 10,000 ppm upper).

11.6 Specific Gravity Data

Density measurements were determined using the European Standard “EN 1936: Natural stone test method. Determination of real density and apparent density and of total and open porosity”.

Density determination was undertaken by IDC Laboratory in Salamanca and in the core shed at Penouta by SMS employees. The following process was undertaken for determining the density of samples:

- Drill core samples weighed prior to drying (ms);
- Drill core samples dried in a kiln and weighed upon completion of drying (md); and
- Drill core samples weighed in water (mh).

Apparent (bulk) density calculated as:

$$pb = prh*md / (ms - mh)$$

Where prh is the density of the water at 20°C = 998 kg / m^3

Where samples were highly weathered, they were wrapped in plastic film prior to weighing to preserve the sample.

In SRK’s opinion, the density database contains a significant number of measurements. SRK has created a lower density part of the model using a wireframe which encompasses the kaolinised leucogranite (“KLCG”) zones. SRK has utilised an indicator interpolation method to determine appropriate density values for each block within the estimated block model. All KLCG lithologies were assigned an indicator value of 1, and all other lithologies were assigned an indicator value of 0. Drillholes were composited to 5 m and coded using the KLCG wireframe. An Inverse Distance Weighted (“IDW”) estimate was completed using the indicator field, therefore each individual block was assigned a value between 0 and 1 which represented the proportion of the block containing KLCG or other lithologies.

The mean density for the KLCG material (2.3 g/cm^3) and all other lithologies (2.6 g/cm^3) was used to calculate the density difference between the two density end members. The final density for each block was calculated as follows:

Ratio = Density difference (0.3 g/cm^3) * Indicator Field

Block density = All lithologies density (2.6 g/cm^3) – Ratio

This calculation resulted in a density value between 2.3 and 2.6 g/cm^3.

11.6.1 SRK Recommendations

SRK notes that the current number of density determinations is considered suitable. However, SRK acknowledges that the KLCG material represents a lower density. Some of this material is assumed to exist beneath the historical open pit. SRK therefore suggests that during future drilling programmes a number of angled holes are drilled beneath the existing historical pit to test the extent of the KLCG material beneath the pit.

11.7 Quality Assurance and Quality Control Programs

11.7.1 Introduction

The historical drill programme had no quality assurance/ quality control (QAQC) associated with it and therefore part of the 2012 and 2013 drill programme is to ensure that a suitable system of QAQC is undertaken to provide reasonable assurance in the new and historical drill data.

11.8 QAQC Control Measures 2012

All QAQC results from the 2012 SMS drilling programme have been summarised in the previous NI43-101 (A Mineral Resource Estimate and NI43-101 Technical Report on the Penouta Tin Deposit, Ourense, Galicia, Spain). A brief summary of the results is provided in the following sections. All graphs relating to the 2012 QAQC data are provided in Appendix C.

11.8.1 Certified Reference Materials 2012

CRMs were obtained from Ore Research and Exploration Pty Ltd, Australia ("OREAS"), China National Analysis Centre for Iron and Steel (NCS DC86304) and International Association of Geoanalysts' Certified Reference Material Programme (IAG CRM3, OShBO). CRMs were typically submitted within batches of samples sent to the laboratory at a rate of five standards per 100 samples.

A summary of the insertion rates for certified reference material ("CRM"), blank, and duplicate reference samples is shown in Table 11-2. SRK recommended that the blank insertion rate be increased to 5% of the total sample data. CRM and duplicate insertion rates were acceptable.

Table 11-3 summarises the different CRMs' grade and expected variability for tin and tantalum respectively.

Table 11-2: Summary of reference sample insertion rate for 2012

Reference sample	Total number	Insertion rate (1/x)
Standards	84	13.4
Blanks	16	2.6
Duplicates	30	4.8
TOTAL SAMPLES	**626**	

Table 11-3: Summary of CRMs used for Tin (Sn) and Tantalum (Ta) QAQC for 2012

	Sn (ppm)		Ta (ppm)	
CRM	**Expected Value**	**Std Dev**	**Expected Value**	**Std Dev**
NCS DC86304	97.1	4.7	98.28	16.38
OREAS 45e	1.32	0.07	0.63	0.08
OREAS 140	1777	42	-	-
OREAS 98	206	14	-	-
OShBO	-	-	46.7	2.4

11.8.2 Summary of CRMs (2012)

Results from analysis of the Ta containing CRMs NCS DC86304 and OREAS45e showed that Ta assays typically fell within two standard deviations of the mean grades, which indicates that Ta data in these grades ranges is suitable for use in a MRE. SRK notes that analysis of Ta performance for OShBO showed more scatter than might be expected and a slight positive bias. This could have resulted in slight over estimation of Ta ppm within the low grade ore grade range, however SRK notes that the Ta data was still suitable for use in a MRE and the over estimation of the OShBO standard is not considered material.

Results from analysis of the Sn containing CRMs showed variable results. Results from OREAS140 and OREAS98 fell within three standard deviations indicating a robust correlation with the expected grade. Analysis of the results from OREAS 45e indicated that all Sn samples were within three standard deviations (confidence limits). This is probably due to either inaccuracy towards the lower detection limit for the laboratory's XRF method, or alternatively SRK notes OREAS45e is not certified for ME-XRF05 analytical methods. NCS DC86304 standards were submitted; all of the Sn values are greater than the CRM mean plus two standard deviations (confidence limits), which suggests an accuracy issue with tin grades in this grade range. The overarching indication from the results of the available QAQC standards is that the majority of the Sn assays in the ore grade range are over-reported by some 10% SRK.

For the purpose of this MRE, SRK has not corrected for any apparent bias in the grade block model for either Ta or Sn.

11.8.3 SRK Recommendations (2012)

- Over reporting of Sn grades addressed with ALS Seville;
- Future QAQC results are monitored closely on a batch by batch basis;
- An umpire laboratory is employed to provide additional clarity;
- SMS produce an in-house matrix matched CRM for subsequent drilling programmes;
- The use of CRM which has been certified by the same analytical method being employed at the laboratory.

11.8.4 Summary of Blank Standard Material (2012)

Coarse natural blanks were included in the 2012 sample stream. Blanks were inserted at a rate of 2 blanks per 100 samples. SRK recommended the blank insertion be increased to approximately 5% of the total sample data.

The Sn grade ranged from 5 to 2.5 ppm, consistently reporting above the expected zero value. The Ta grade ranged from 0.1 to 15.6 ppm, although it is most probable that this high value outlined in red is the result of a sample labeling error, in which case the Ta blank values are acceptably low.

The same trend observed in the CRMS is also seen in the blank samples; a consistent over-reporting of very low grades which in SRK's opinion is probably due to unreliability close to detection limit rather than contamination between samples.

11.8.5 Summary of Duplicate Samples (2012)

Field duplicates were inserted at a rate of 2 per 100 samples. Where a field duplicate has been selected, the half core was split into quarters and each quarter analysed at ALS Seville.

The duplicate samples show a strong correlation to the original sample, with a correlation coefficient of 0.77 and 0.92 for Sn and Ta respectively, thus SRK is confident in the repeatability of the sample preparation and analysis of these samples and further that grade distribution within the sample is reasonable homogeneous.

Laboratory duplicates are inserted at a rate of 2 per 100 samples. Laboratory duplicates are taken as a duplicate from pulp material. The duplicate samples show a strong correlation to the original sample, with a correlation coefficient of 0.87 and 0.94 for Sn and Ta respectively, thus SRK is confident in the repeatability of the sample preparation and analysis of these samples.

11.9 QAQC Control Measures 2013

The following measures are in place to monitor both the precisions and accuracy of sampling, sub-sampling, preparation and assaying. The results of the 2013 drilling programme are summarised in detail in the following sections.

11.9.1 Certified Reference Materials 2013

CRMs were obtained from Ore Research and Exploration Pty Ltd, Australia (“OREAS”), African Mineral Standards (“AMIS”), South Africa and International Association of Geoanalysts’ Certified Reference Material Programme (“IAG”).

A summary of the insertion rates for certified reference material (“CRM”), blank, and duplicate reference samples is shown in Table 11-4. CRM and duplicate insertion rates were acceptable, however SRK recommends increasing the blank insertion rate to 5% of the total sample data.

Table 11-5 summarises the different CRMs’ grade and expected variability for tin, tantalum and niobium.

Table 11-4: Summary of reference sample insertion rate for 2013

Reference sample	Total number	Insertion rate (%)
Standards	685	12.46
Blanks	165	3.00
Duplicates	277	5.04
TOTAL SAMPLES	**5498**	

Table 11-5: Summary of CRMs used for Tin (Sn), Tantalum (Ta) and Niobium (Nb) QAQC for 2013

	Sn (ppm)		Ta (ppm)		Nb (ppm)	
CRM	Expected Value	Std Dev	Expected Value	Std Dev	Expected Value	Std Dev
OREAS 140	1755	122	-	-	-	-
OREAS 98	206	14	-	-	-	-
OShBO	-	-	46.7	2.4	64	39
AMIS0355	469	16	210	20.5	49	3
AMIS0140	-	-	-	-	104	16.5

11.9.2 Summary of CRMs (2013)

Tin CRMs

SMS submitted 179 OREAS98 CRMs (Figure 11-4). The majority of these fell within two standard deviations, and typically showed an even spread around the expected mean grade, indicating a robust correlation with the expected grade.

SMS submitted 182 OREAS140 CRMs (Figure 11-5). The majority of these fell within two standard deviations, and typically showed an even spread around the expected mean grade, indicating a robust correlation with the expected grade.

SMS submitted 179 AMIS0355 CRMs for analysis (Figure 11-6). Results showed a high grade bias, with a significant number of results greater than three standard deviations, and elevated grades with respect to the expected mean grade. SRK and SMS identified these results as a significant issue, and steps were taken to review this CRM (see Section 11.9.4).

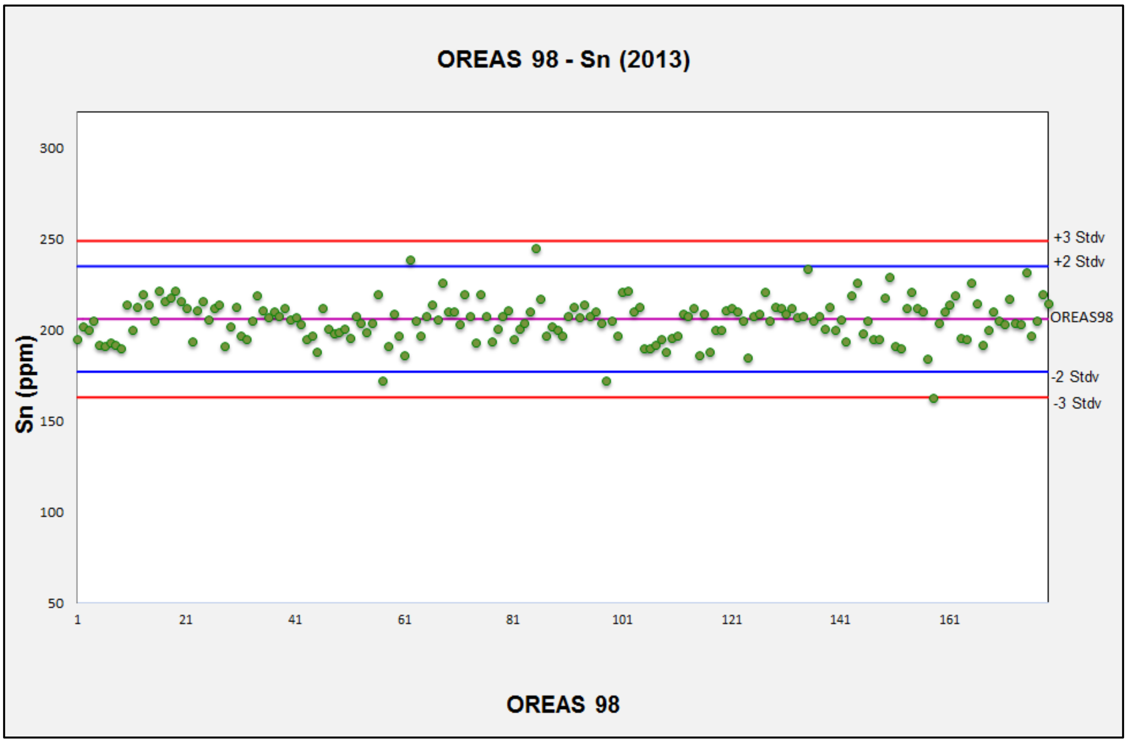


Figure 11-4: OREAS98 Sn results

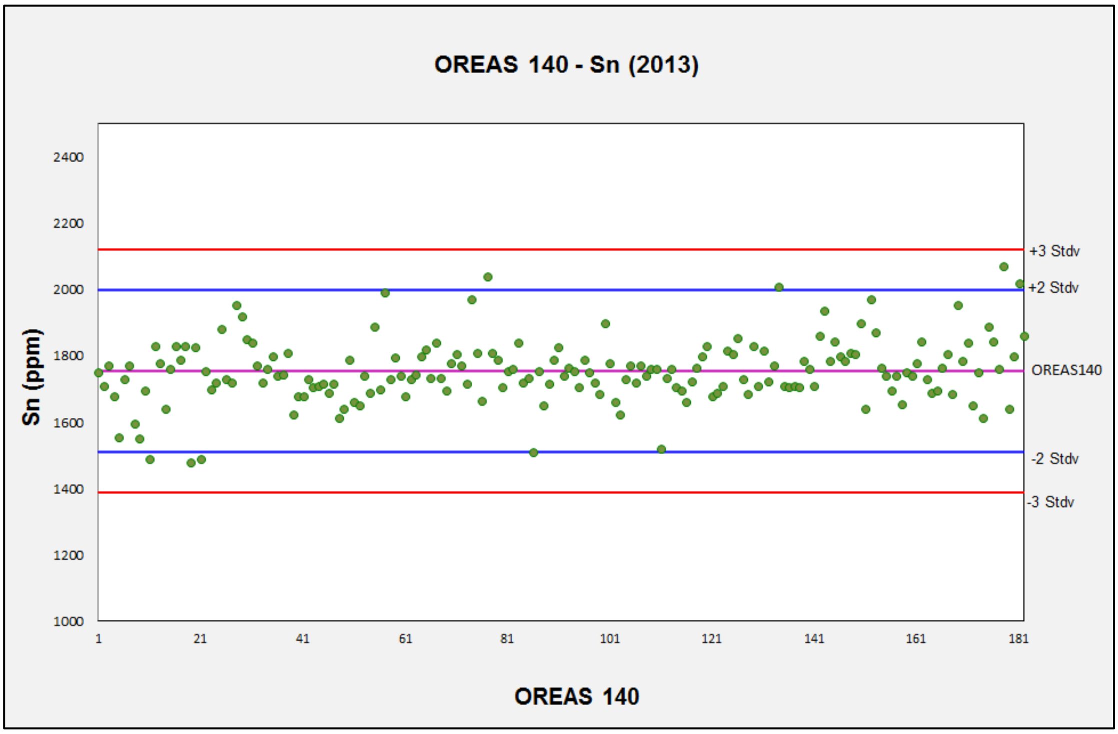


Figure 11-5: OREAS140 Sn results

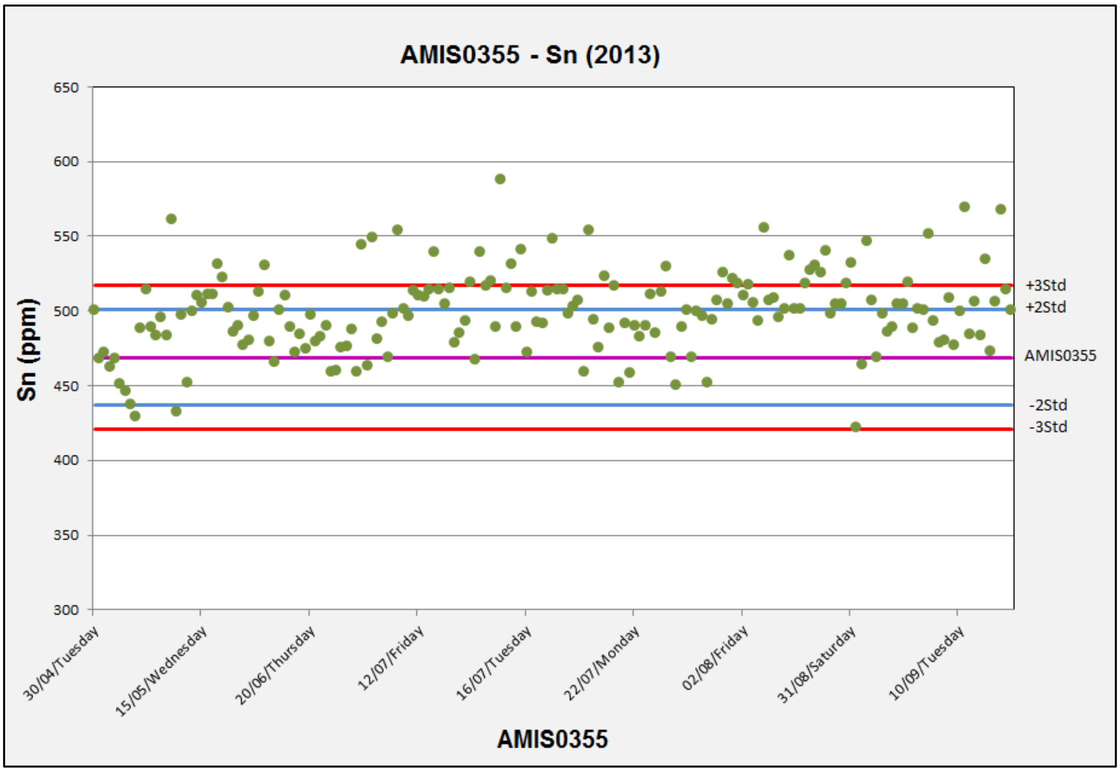


Figure 11-6: AMIS0355 Sn results

Tantalum CRMs

SMS submitted 181 OShBO CRMs (Figure 11-7). The majority of these fell within three standard deviations, and typically showed an even spread around the expected mean grade, indicating a robust correlation with the expected grade. A number of samples greater than three standard deviations occurred at the start of the analytical programme however these were identified and the issue resolved as the analytical programme continued.

SMS submitted 179 AMIS0355 CRMs for analysis (Figure 11-8). Results showed a high grade bias, with the majority of the results reporting at greater than the expected mean value. A similar issue was identified in Sn grades from AMIS0355. SRK and SMS identified these results as a significant issue, and steps were taken to review this CRM (see Section 11.9.4).

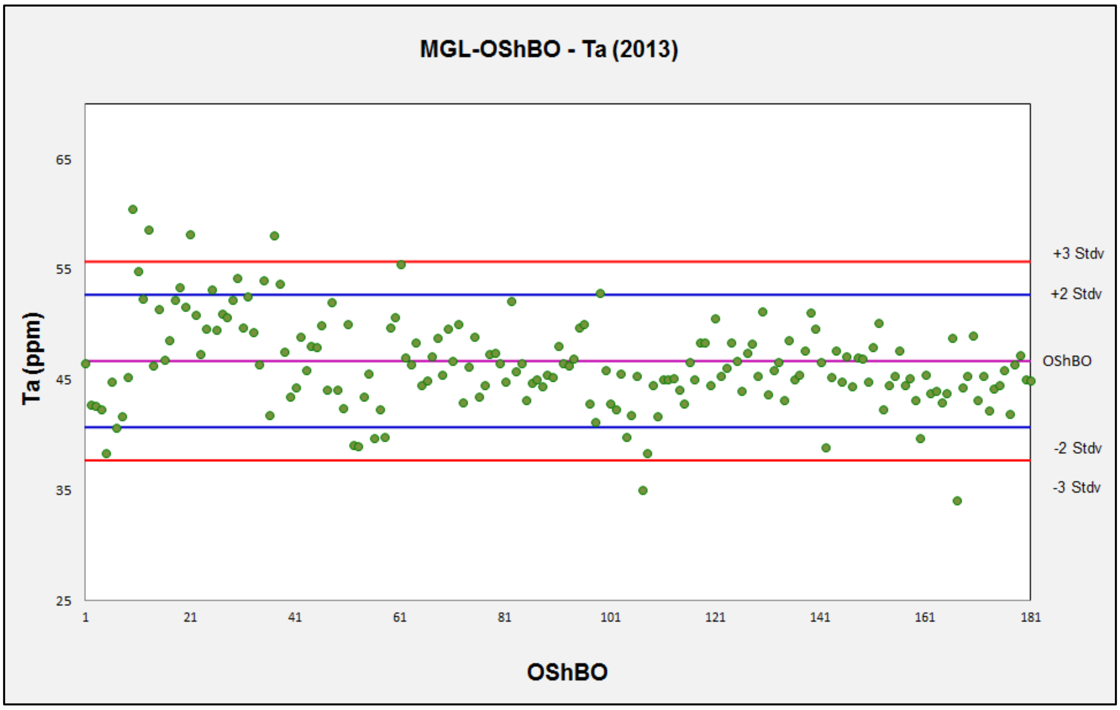


Figure 11-7: OShBO Ta results

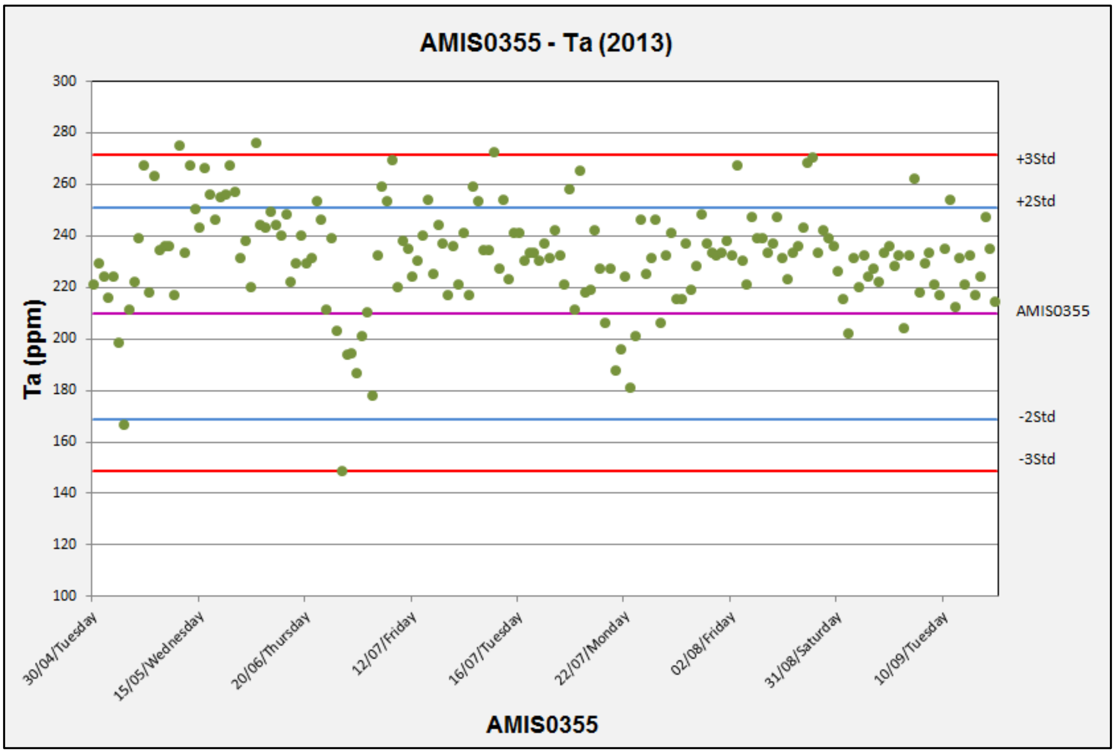


Figure 11-8: AMIS0355 Ta results

Niobium CRMs

SMS submitted 181 OShBO CRMs (Figure 11-9) the majority of these fell within three standard deviations, and typically showed an even spread around the expected mean grade, indicating a robust correlation with the expected grade.

SMS submitted 179 AMIS0355 CRMs for analysis (Figure 11-10). Results showed a high grade bias, with the majority of the results reporting at greater than the expected mean value. A similar issue was identified in Sn and Ta grades from AMIS0355. SRK and SMS identified these results as a significant issue, and steps were taken to review this CRM (see Section 11.9.4).

SMS submitted 1221 AMIS0140 CRMs (Figure 11-11). The majority of these fell within three standard deviations, a slight high grade bias was noted with the majority of the CRMs falling above the expected mean value.

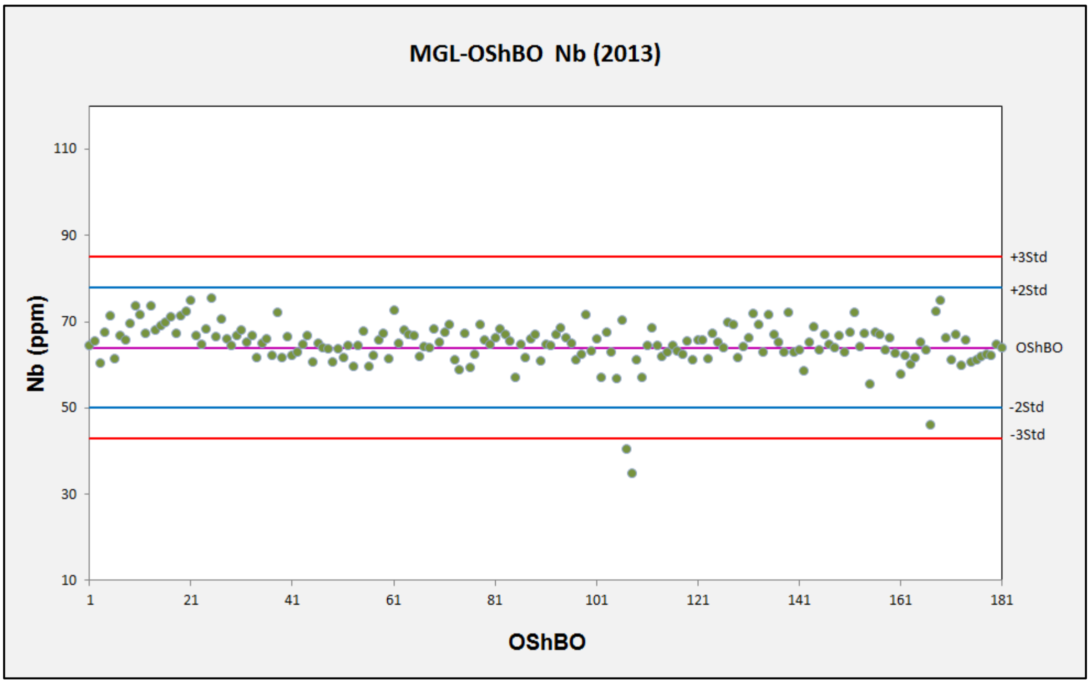


Figure 11-9: OShBO Nb results

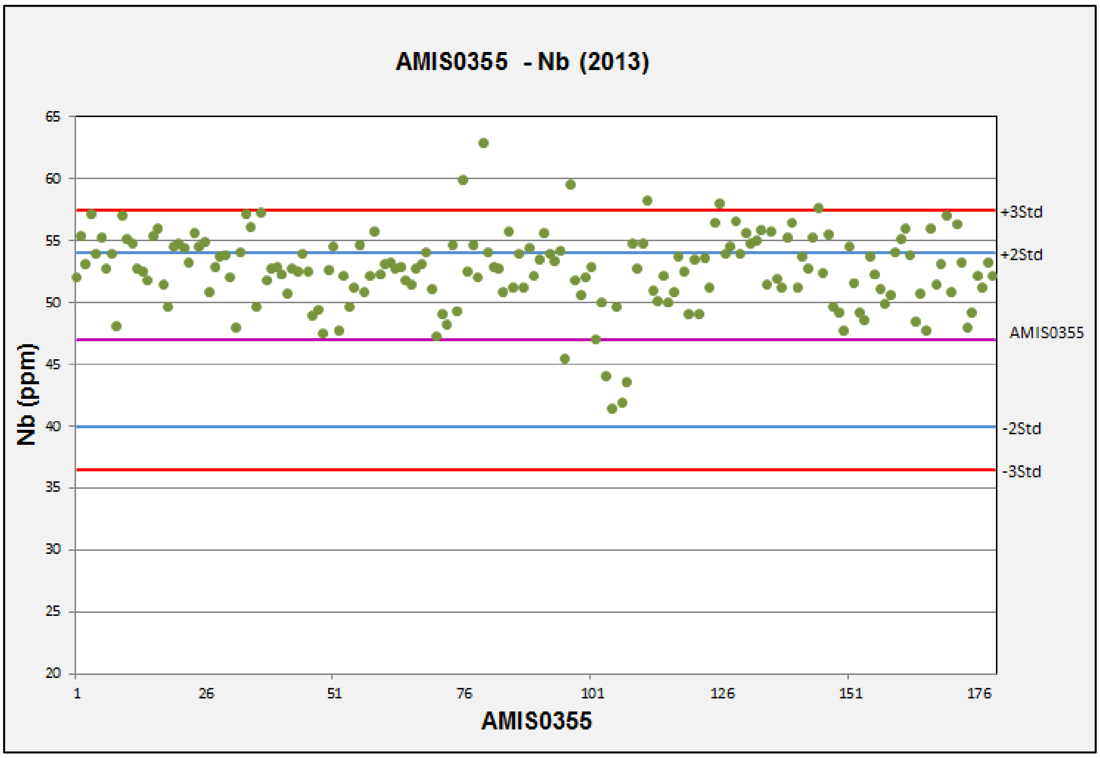


Figure 11-10: AMIS0355 Nb results

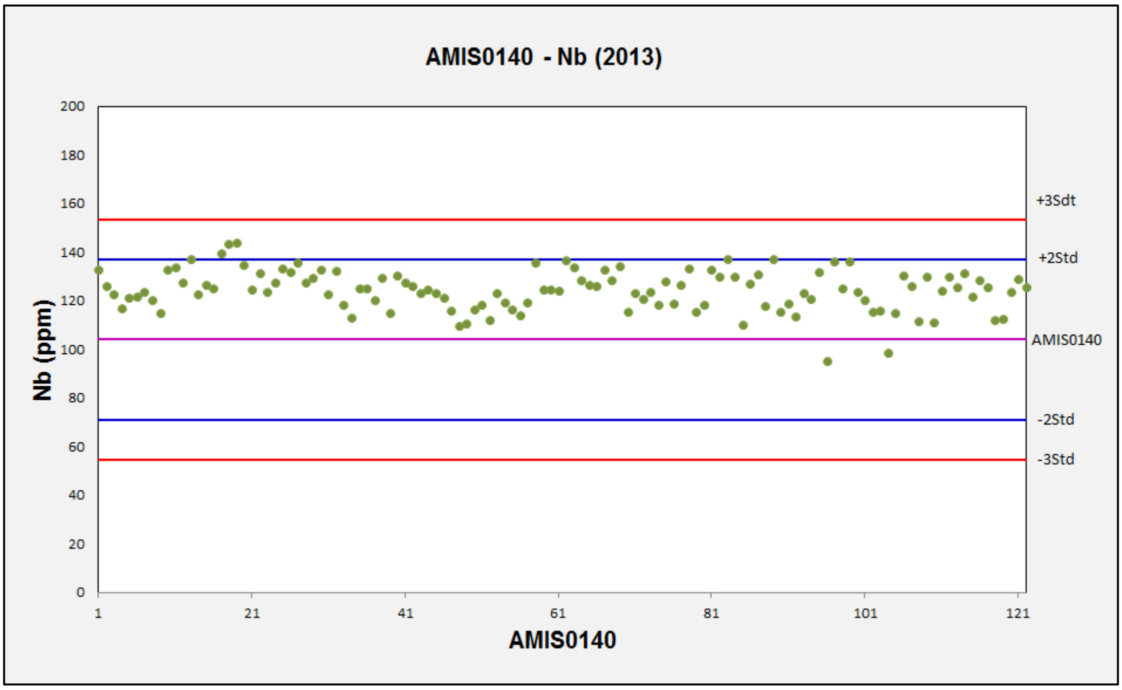


Figure 11-11: AMIS0140 Nb results

11.9.3 CRM Comparison

SRK tabulated the expected CRM grades against the actual average CRM grade received from each laboratory. Also included was the average Measured, Indicated and Inferred resource grade as a comparison. Figure 11-12, Figure 11-13 and Figure 11-14 show the CRM results for Ta, Sn and Nb respectively. The graphs show the range of grades represented by the CRMs and the performance by each laboratory. The average resource grade is also plotted and in all cases shows that the CRM grades used were appropriate to provide confidence in the data. Lower grade CRMs were found to perform similarly for all laboratories whilst higher grade CRMs for Ta (>200 ppm) and Sn (>1500 ppm) showed more variable results from the three laboratories.

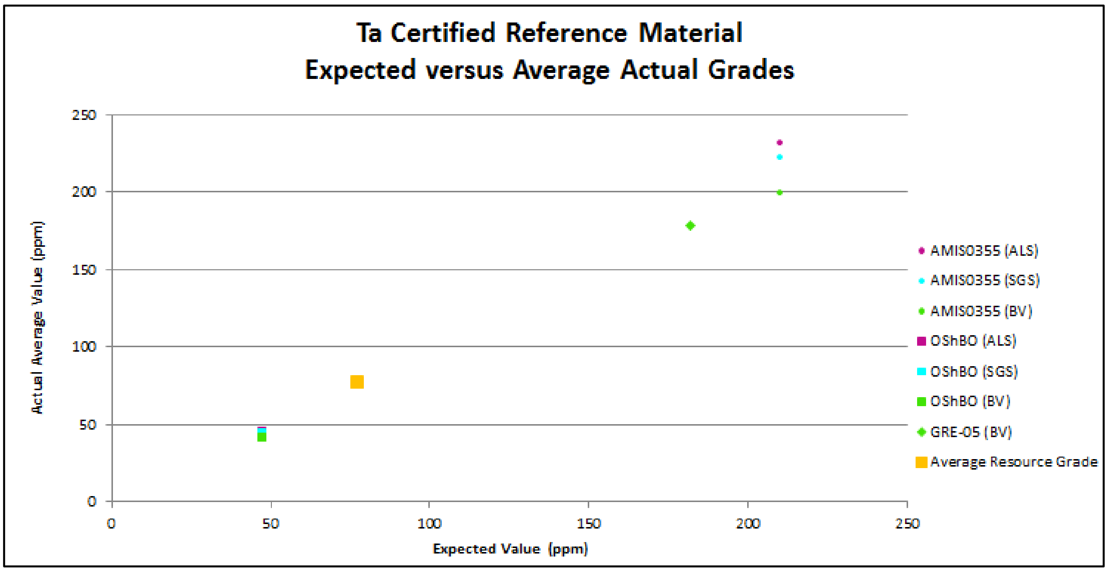


Figure 11-12: Comparison of expected and actual grades for CRMs and the average resource grade for Ta

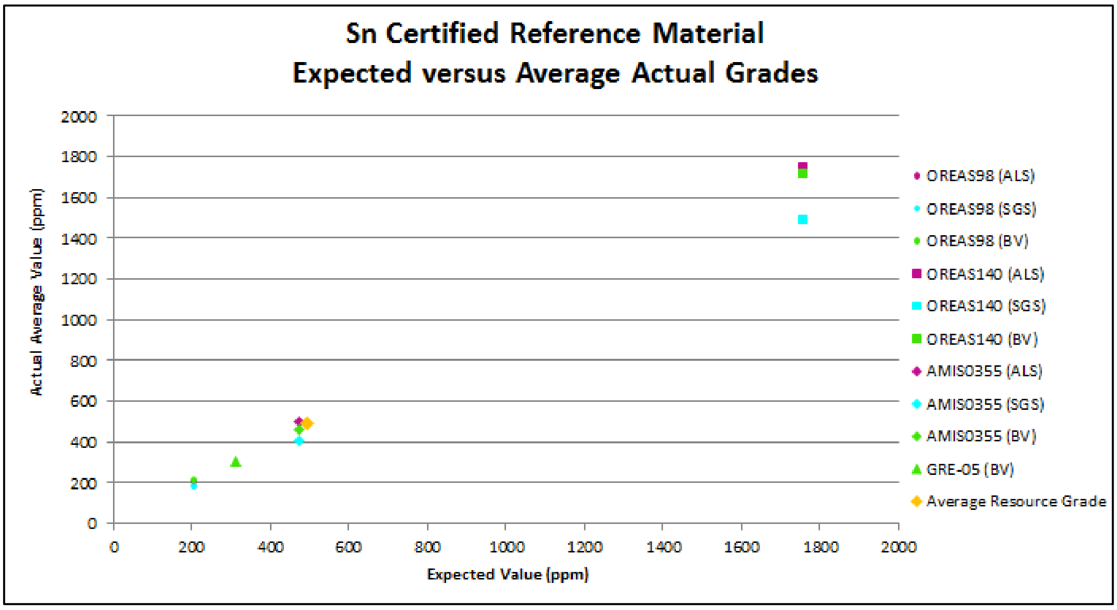


Figure 11-13: Comparison of expected and actual grades for CRMs and the average resource grade for Sn

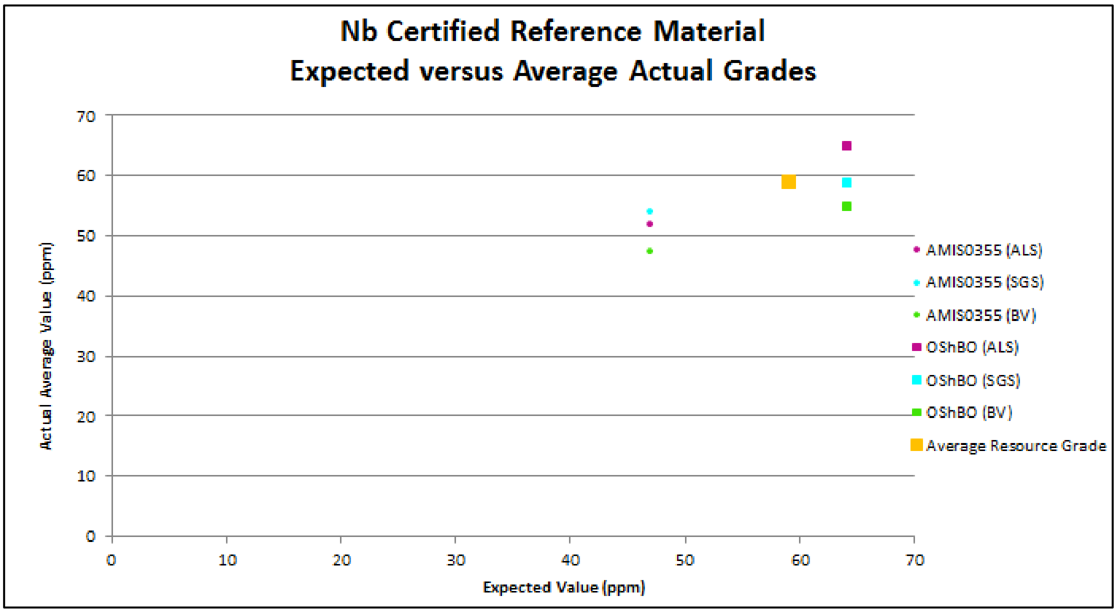


Figure 11-14: Comparison of expected and actual grades for CRMs and the average resource grade for Nb

11.9.4 AMIS0355 – Review

SRK and SMS identified key issues with the AMIS0355 CRM, shown in Figure 11-6, Figure 11-8 and Figure 11-10. ALS values for Sn, Ta, and Nb typically reported above the expected mean value, whereas SGS results showed a lower than expected value for AMIS0355. Due to the potential inhomogeneity issues associated with AMIS0355 SRK recommended a second umpire laboratory be employed, and the use of AMIS0355 be discontinued for future drilling programme submissions.

11.9.5 Summary of Blank Material (2013)

Silica sand blanks were included in the 2013 sample stream. Blanks were inserted at a rate of 3 blanks per 100 samples. SRK recommends the blank insertion be increased to approximately 5% of the total sample data.

The Ta grade ranged from 0.05 to 2.1 ppm, generally the Ta blank values are acceptably low. The Sn grade ranged from 0.5 to 59 ppm. The high grade value is most probably the result of a sample labeling error. Despite the range in Sn values SRK acknowledges that overall the Sn values are acceptably low. The Nb grade ranged from 0.01 to 3.6 ppm, generally the Nb blank values are acceptably low. Figure 11-15, Figure 11-16 and Figure 11-17show the results of blank analysis for tantalum, tin and niobium respectively.

A consistent over-reporting of very low grades occurs within the blanks samples, which in SRK's opinion is probably due to unreliability close to detection limit rather than contamination between samples.

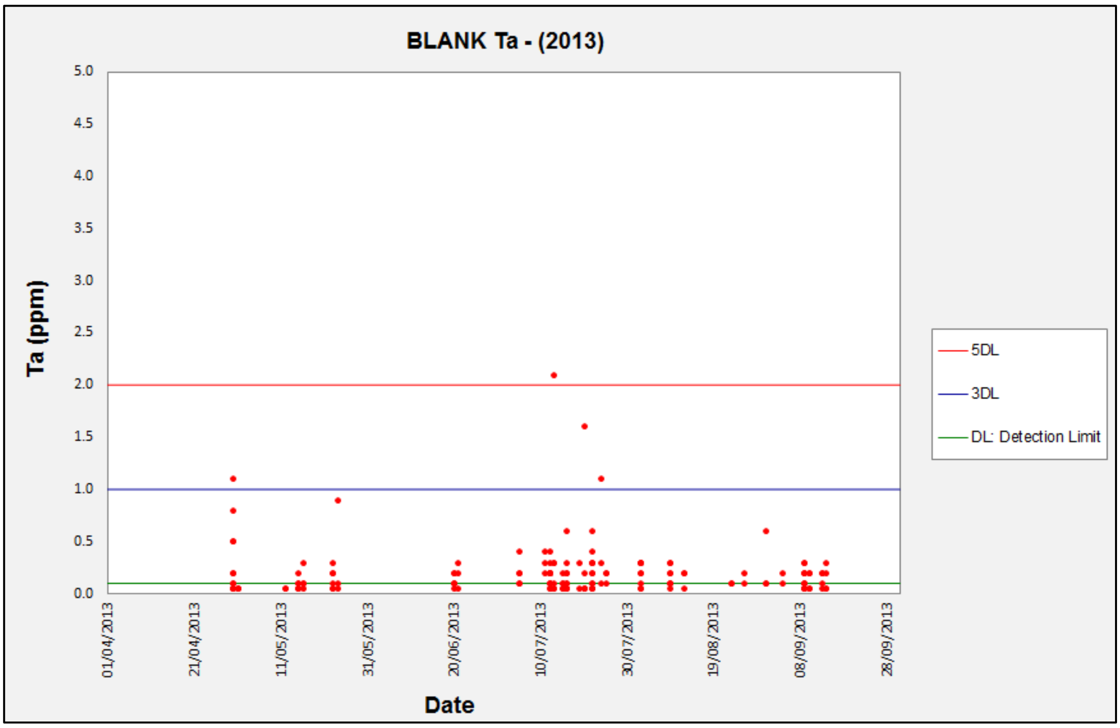


Figure 11-15: Tantalum grades within blank material

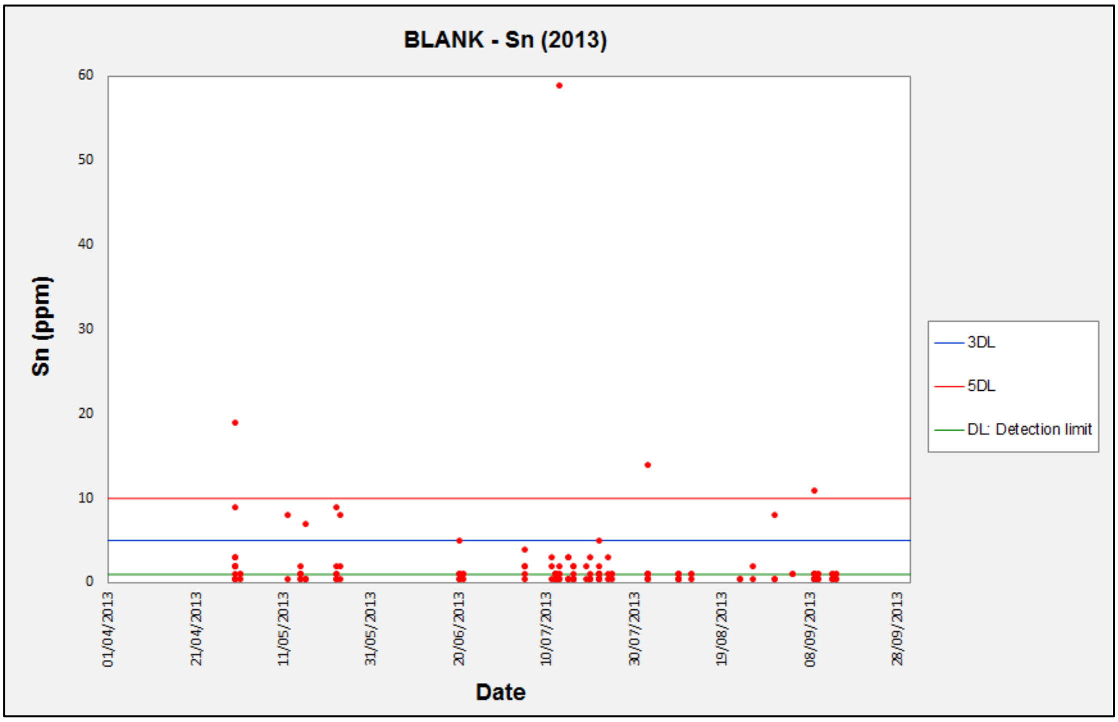


Figure 11-16: Tin grades within blank material

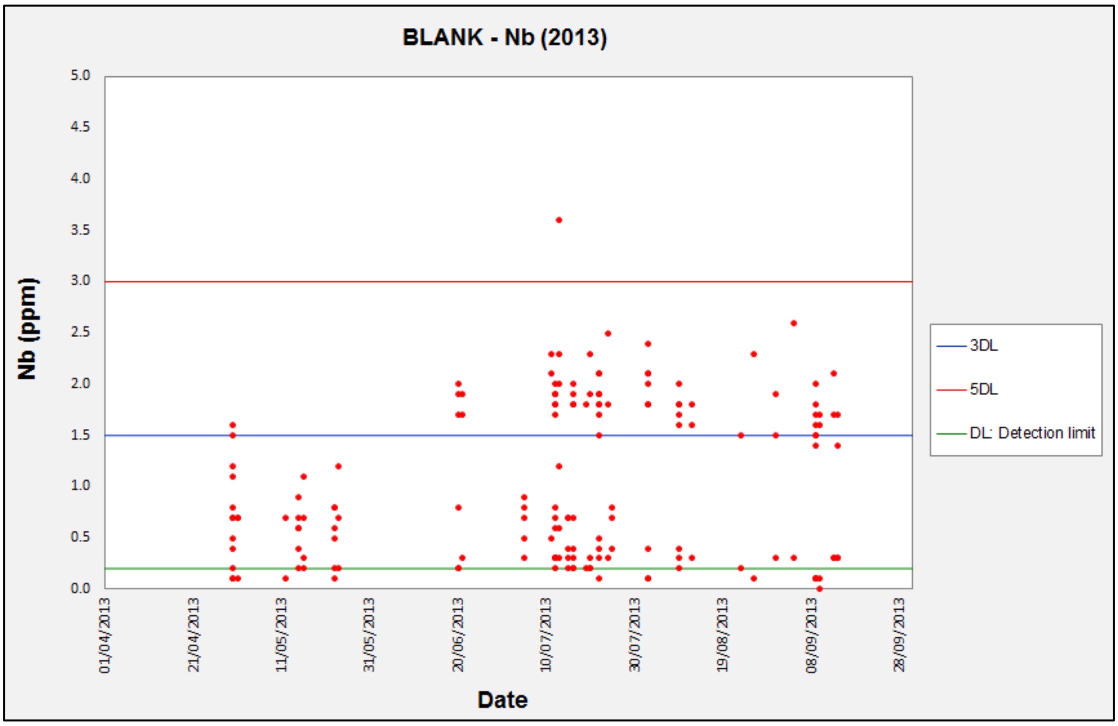


Figure 11-17: Niobium grades within blank material

11.9.6 Analytical Check Methods

SMS selected 712 samples which were analysed using lithium borate fusion with ICP-MS finish, and XRF methods. This was undertaken as a check to ensure there was no bias occurring in the lithium borate fusion results. Figure 11-18 shows the correlation for Sn between the two analytical methods. Typically the correlation is excellent, however four samples have been identified where the correlation was poor. SRK has identified this as being a result of the detection limit for the XRF method. SRK accepts that the lithium borate fusion method is suitable for use in a Mineral Resource estimate and no bias has been introduced.

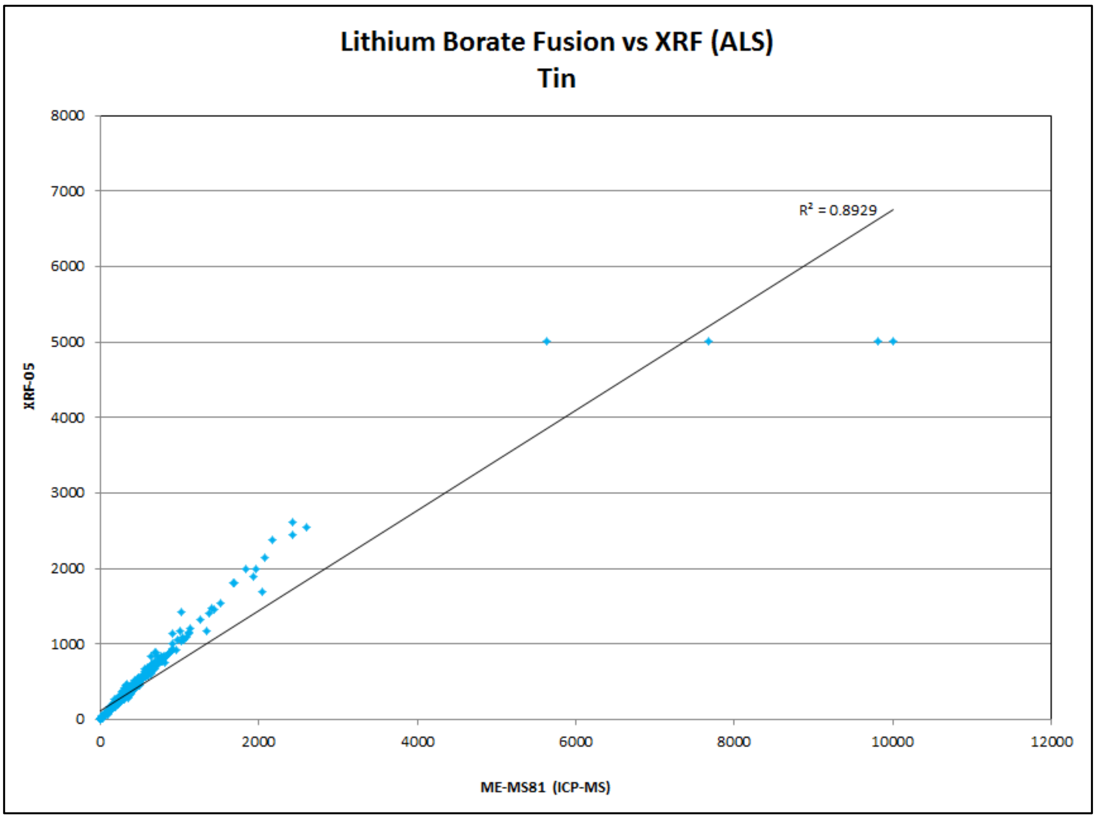


Figure 11-18: Lithium borate fusion correlated against XRF analysis for Sn

11.9.7 Summary of Duplicate Samples (2013)

Field duplicates were inserted at a rate of 5 per 100 samples. Where a field duplicate has been selected, the half core was split into quarters at ALS Seville and each quarter analysed at ALS Vancouver.

Field duplicates comprised approximately 5% of the total samples submitted for assaying. The duplicate samples for tantalum, tin and niobium show a strong correlation to the original sample, with a correlation coefficient of 0.97, 0.92 and 0.91 respectively, thus SRK is confident in the repeatability of the sample preparation and analysis of these samples and further that grade distribution within the sample is reasonable homogeneous. Figure 11-19, Figure 11-20 and Figure 11-21 show the original versus field duplicate correlations for tantalum, tin and niobium respectively.

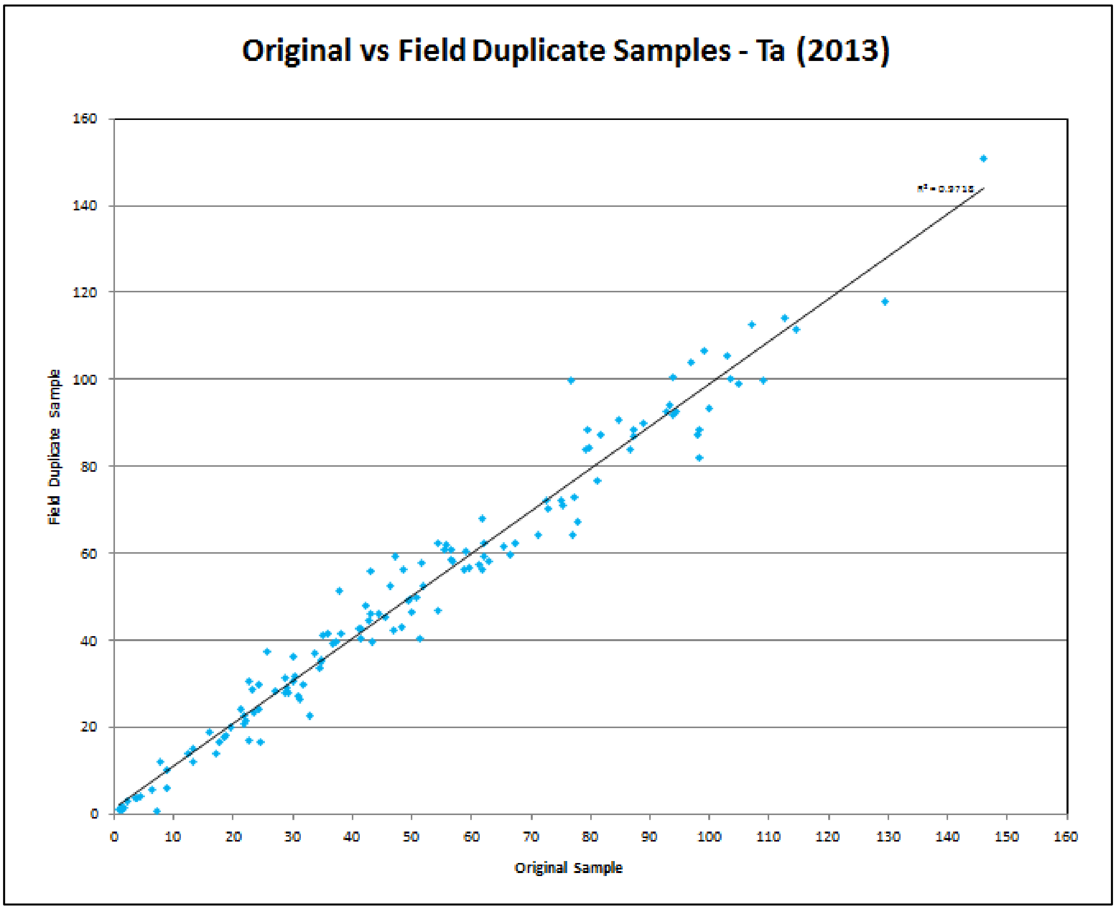


Figure 11-19: Original and field duplicate samples correlation for tantalum

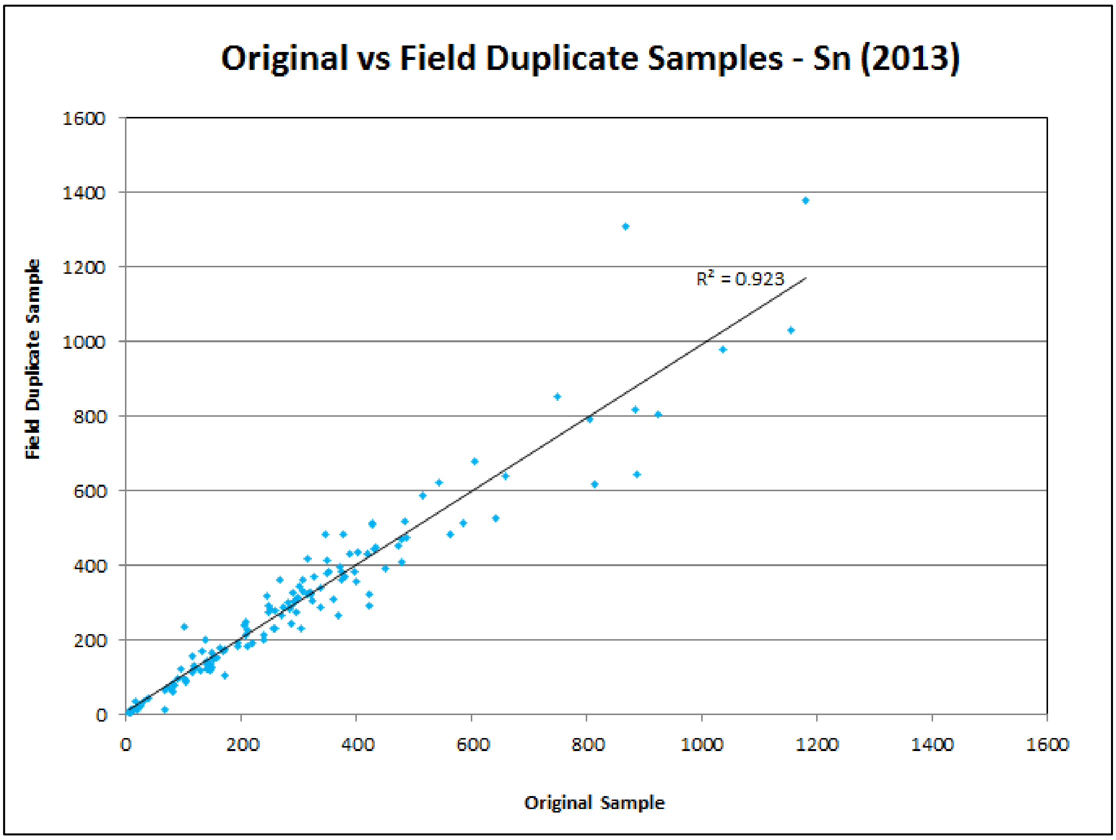


Figure 11-20: Original and field duplicate samples correlation for tin

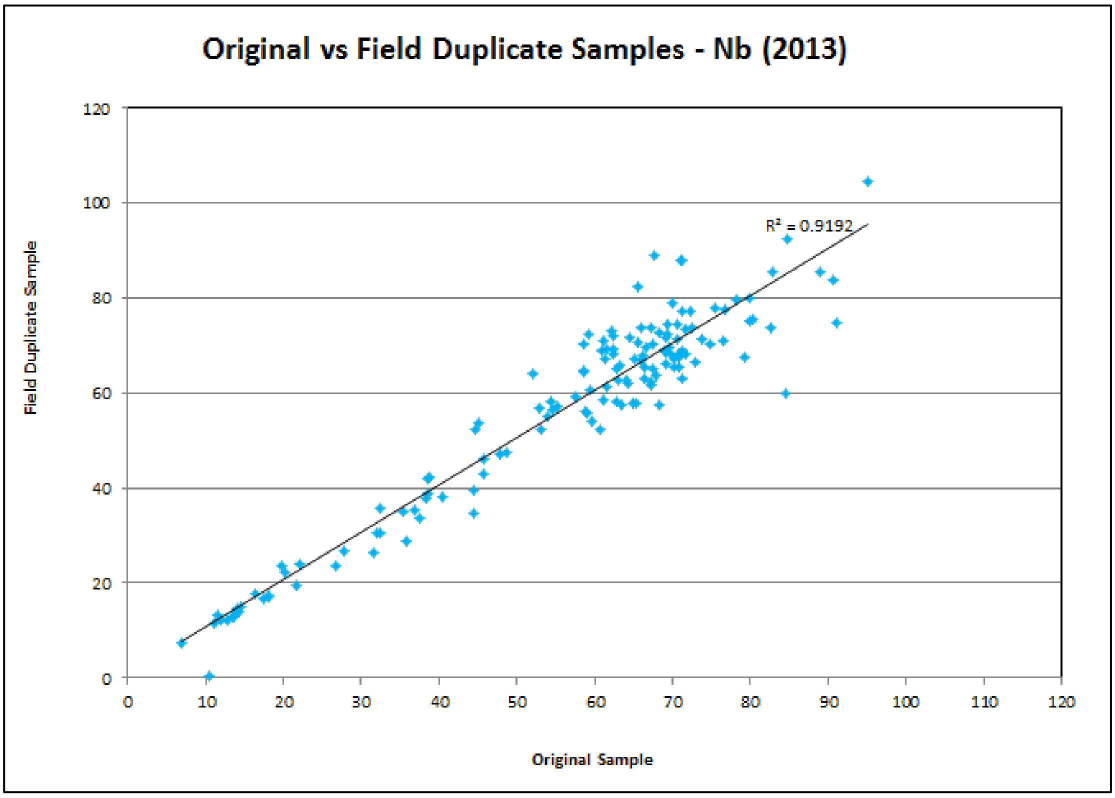


Figure 11-21: Original and field duplicate samples correlation for niobium

11.10 External Laboratory Checks

No umpire laboratory was employed during the 2012 drilling programme. SRK recommended an umpire laboratory be selected and utilized during the next drilling programme. For the 2013 drill programme SMS selected SGS Colombia ("SGS") as the umpire laboratory. Table 11-6 summarises the number of samples, CRMs and blanks submitted to the umpire laboratories.

Table 11-6: Summary of samples, CRMS and blanks submitted to umpire laboratories

Material Type	Total number	Insertion rate (%)
Samples	134	-
Standards	20	15
Blanks	4	3
TOTAL SAMPLES	**134**	

SGS used a lithium metaborate fusion method to ensure all results were representative. A suite of CRMs and blanks were submitted to ensure QAQC could be undertaken on the results. SRK reviewed the QAQC results from SGS and found that typically they were within three standard deviations for all CRMs, except for AMIS0355 which had Sn grades which reported outside three standard deviations and were typically below the expected Sn value. Correlations between the ALS and SGS re-analysis samples showed good correlation for the Sn and Ta (Figure 11-22 and Figure 11-23), and a slightly poor correlation for the Nb (Figure 11-24).

Due to the issues which arose from the initial SGS results, and the problems identified with the AMIS0355 CRM SRK recommended a second umpire laboratory was employed to re-assay the samples sent to SGS. Bureau Veritas (“BV”) in Australia was selected, and a lithium borate fusion method was used to ensure all results were representative. A suite of CRMs and blanks were submitted to ensure QAQC could be undertaken on the results. The results from BV showed a good correlation for Ta and Sn with both ALS and SGS (Figure 11-25, Figure 11-26, Figure 11-28 and Figure 11-29). The correlation with Nb for both ALS and SGS (Figure 11-27 and Figure 11-30) was poor, possibly due to the detection limit and subsequent rounding method applied by BV. The QAQC results from BV showed all CRMs were within acceptable limits, although SRK notes that a relatively low number of each CRM was submitted.

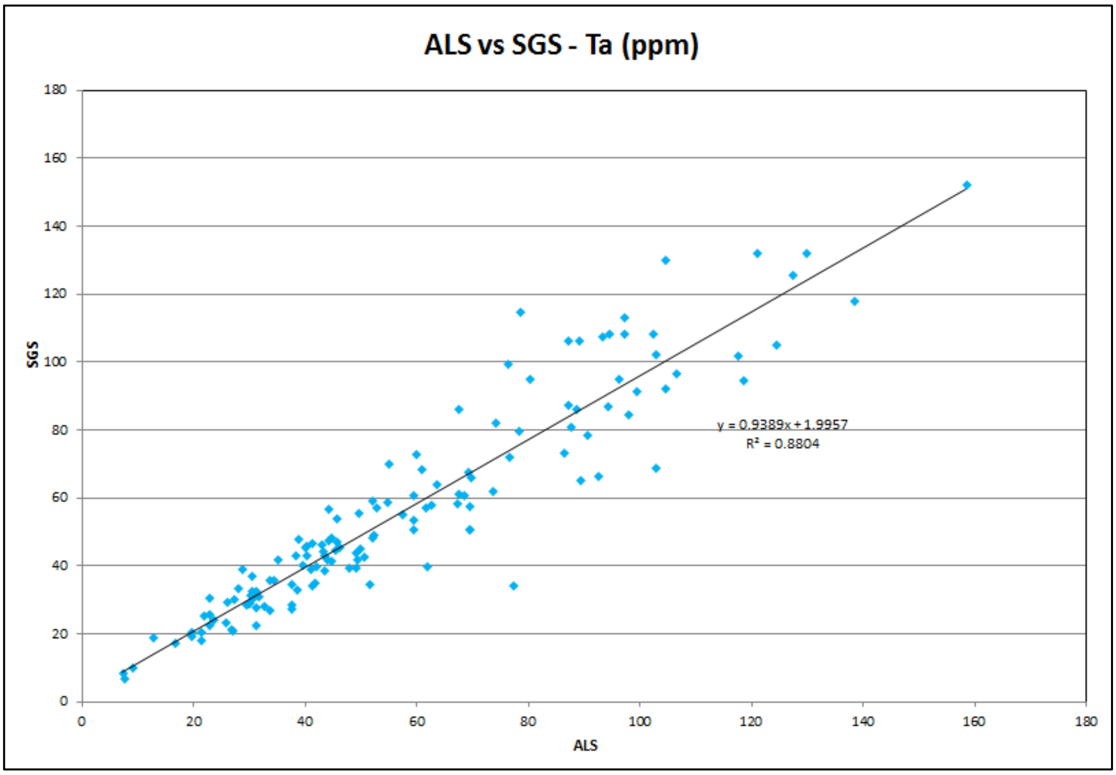


Figure 11-22: ALS (primary laboratory) results correlated against SGS (umpire laboratory) for Ta

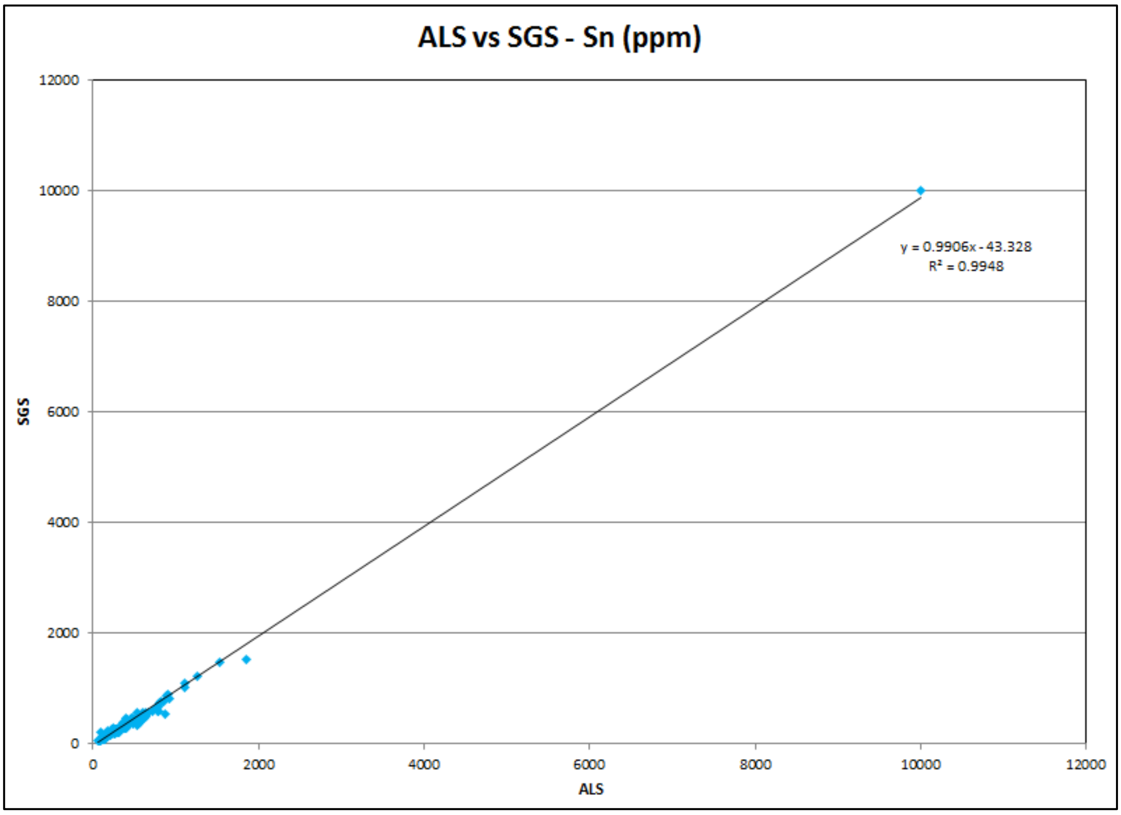


Figure 11-23: ALS (primary laboratory) results correlated against SGS (umpire laboratory) for Sn

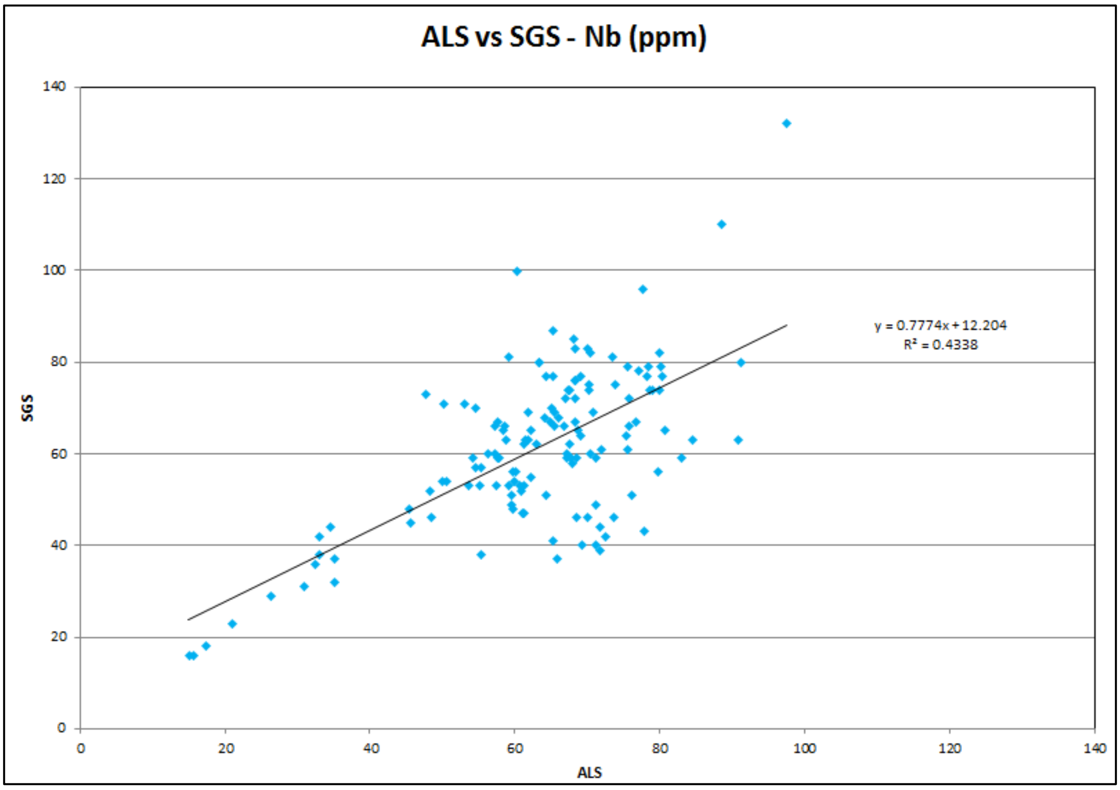


Figure 11-24: ALS (primary laboratory) results correlated against SGS (umpire laboratory) for Nb

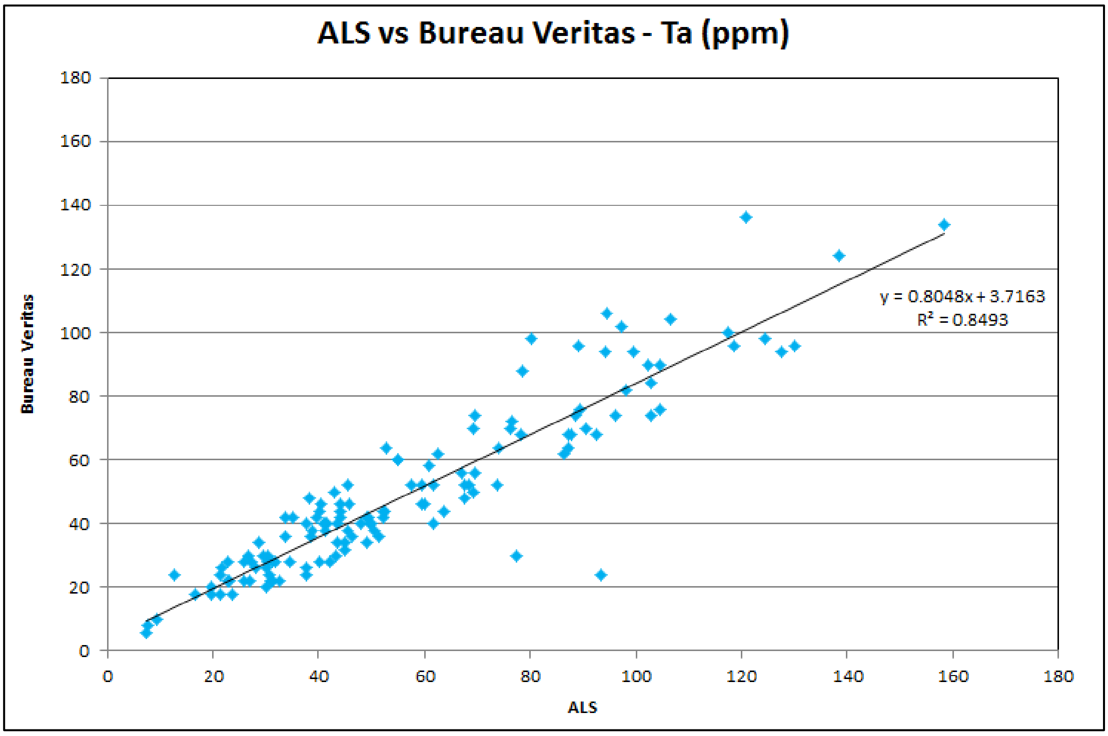


Figure 11-25: ALS (primary laboratory) results correlated against BV (second umpire laboratory) for Ta

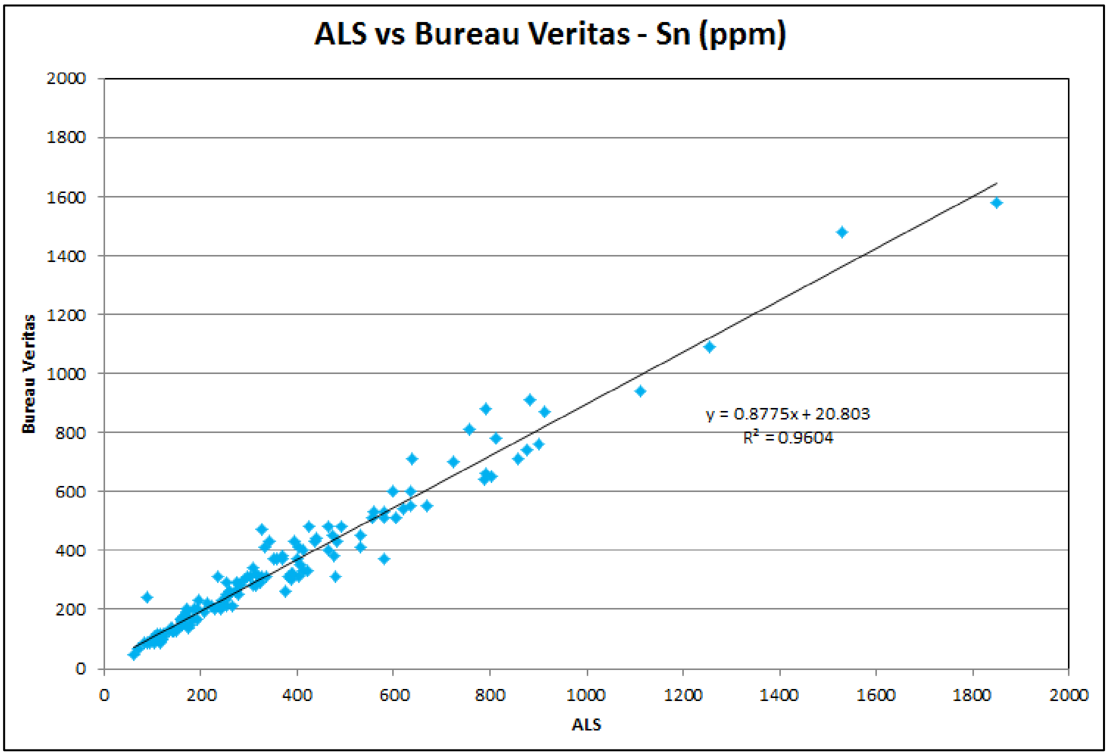


Figure 11-26: ALS (primary laboratory) results correlated against BV (second umpire laboratory) for Sn

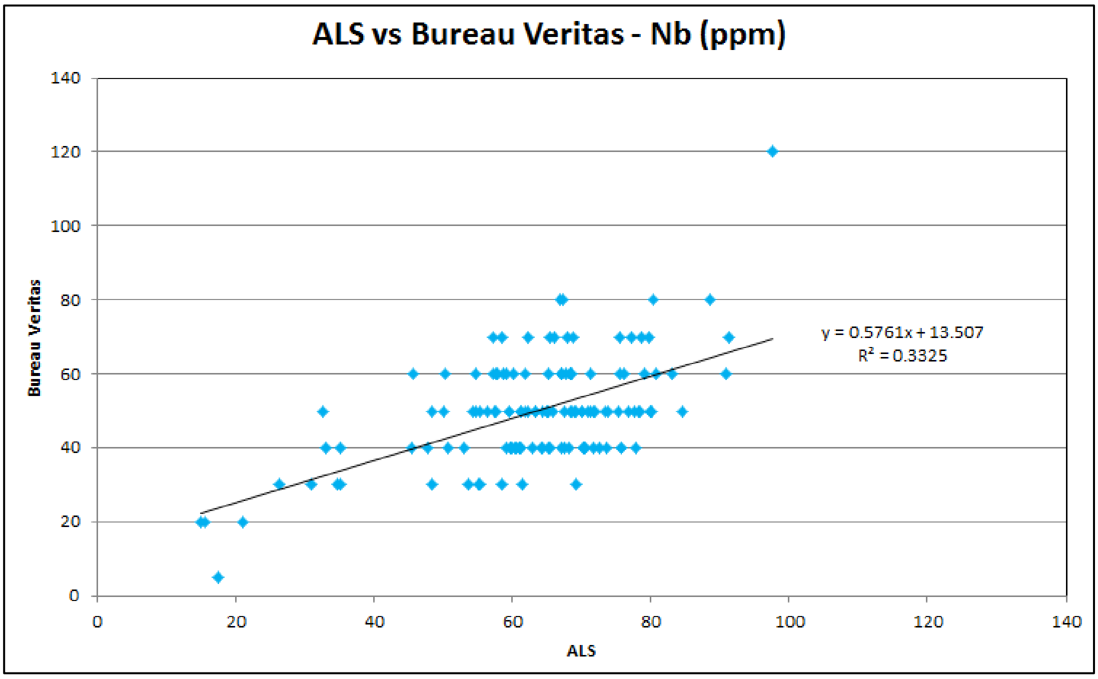


Figure 11-27: ALS (primary laboratory) results correlated against BV (second umpire laboratory) for Nb

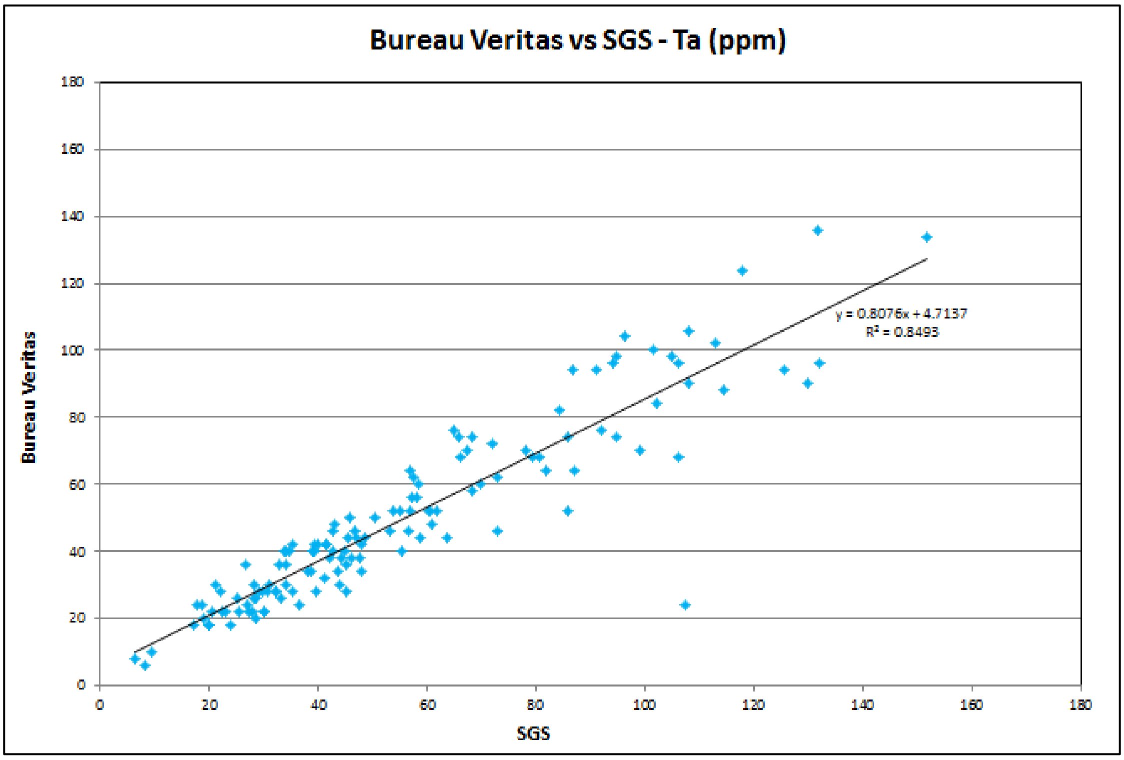


Figure 11-28: SGS (umpire laboratory) results correlated against BV (second umpire laboratory) for Ta

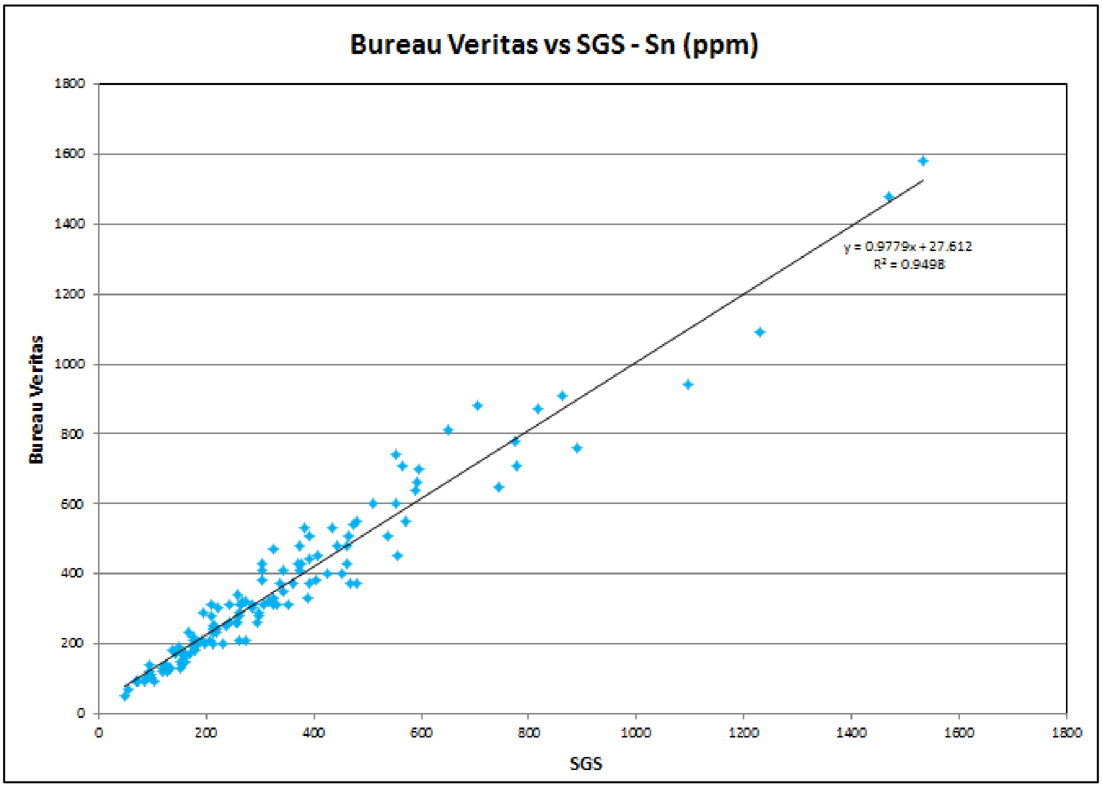


Figure 11-29: SGS (umpire laboratory) results correlated against BV (second umpire laboratory) for Sn

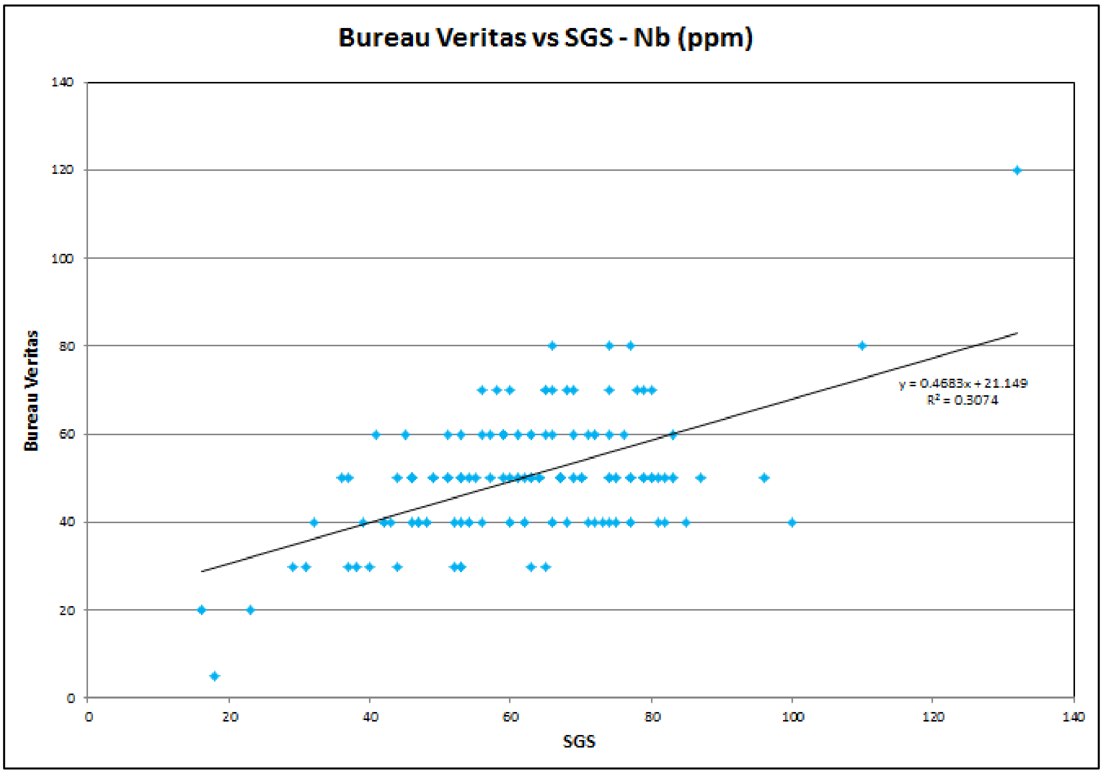


Figure 11-30: SGS (umpire laboratory) results correlated against BV (second umpire laboratory) for Nb

11.11 SRK Comments and Recommendations on SMS QAQC Programme

Overall, SRK considers that the results of the QAQC show that the data is suitable for use in a Measured, Indicated and Inferred Mineral Resource Estimate. The use of two umpire laboratories has provided confidence in the ALS database.

However, SRK and SMS have identified serious issues with the AMIS0355 CRM. SRK has therefore recommended SMS discontinue use of this CRM in the future. SRK would suggest SMS produces in-house matrix matched CRM for QAQC to be used in future drill programmes. SRK also recommends increasing the number of blanks submitted to 5% of the total sample population.

SMS has a robust QAQC checking programme, all analytical data is checked on a routine basis, SMS is aware of issues associated with the CRM and blank performances and are actively working towards correcting these issues.

12 DATA VERIFICATION

12.1 Verifications by SMS

SMS undertook in 2012 a drill verification programme to determine the suitability of the ADARO drillholes for use in an MRE. On the advice of SRK, SMS twinned using diamond drilling approximately 10% of the historical drill programme.

Laboratory audits were conducted by SMS staff on a monthly basis to ensure industry best practices are being followed at ALS Seville. ALS Seville is an internationally accredited laboratory. A routine QAQC monitoring programme has also been implemented which checks the analytical results to ensure all blanks and Certified CRM pass within the expected analytical limits.

12.2 QAQC Analysis

As discussed in Section 11.8 and 11.9, SMS has completed a detailed QAQC programme as part of the routine submission of samples to ALS Seville. SMS have also employed the services of two umpire laboratories to provide a comparison of sample assay grades. The results of this have provided comfort in the assay technique used and the repeatability of the grades. SRK deems the data to be acceptable for use in the estimation of Measured, Indicated and Inferred Mineral Resources, to be reported in compliance with CIM “Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines” (CIM Standards).

12.3 Verifications by SRK

SRK has not conducted independent sampling, SMS has produced tantalum and tin at a commercial scale by reprocessing tailings which came from the pit located in the upper portion of the mineral deposit; the existence of the mineralisation is not in doubt. Given the advanced exploration stage of the project SRK is of the opinion that the twin drilling described in this section and the review of the quality control processes related to drilling, sampling and assaying provide sufficient verification for the purposes of this report.

12.3.1 Site Visit

In accordance with National Instrument 43-101 guidelines, SRK conducted an independent Qualified Persons’ site visit to the Penouta project between 18 and 20 March 2013.

Additional visits were made by SRK technical representatives between 26 and 28 November 2012 and between 20 and 22 August 2013. The main purpose of these visits was to:

- determine the geological and geographical setting of the Penouta project;
- witness the extent of exploration work completed to date;
- inspect the drilling rig;
- review the core logging and sample storage facilities;
- review the sample preparation methodology;
- inspect the drill core;
- discuss geological interpretations with SMS staff; and
- assess the logistical aspects and other practicalities relating to the exploration property.

During the visits, SRK verified the quality of the geological and sampling information. The drill rig was found to be in good condition and following industry best practice. The drill programme, core logging and sampling was supervised by Company geologists, and followed industry best practice. Discussions with SMS staff enabled SRK to develop an increased understanding of the geology and mineralisation.

No new drilling has been completed since the previous SRK MRE; therefore, no additional site visits have been undertaken for the 2021 MRE update. SRK's previous site visit is considered to remain current.

12.3.2 Validation of Historic Drilling

SRK reviewed the historical drilling, and undertook a number of comparisons to ensure the historical data agreed with the 2012 SMS twinned drillholes. Additionally SMS re-assayed four historical drillholes (SAP-23, SAP-50, SAP-16 and SP-07) during the 2013 field season. These drillholes have been added to the validation of the historic drilling undertaken for the previous MRE. Table 12-1 lists the SMS drilled PEN series of drillholes and the twinned historical drillholes and the re-assayed historical drillholes.

Table 12-1: Historical Drillholes and associated PEN Series twinned drillholes

BHID	EOH Depth	Twinned Hole	EOH Depth	Distance Between Drillholes (m)
PEN12-04	154.7	SAP-30	125.52	15
PEN12-05	200.2	SAP-41	116.4	52
PEN12-06	250	SP-05	143	9.4
PEN12-07	134.2	SAP-23	90	12
PEN12-08	300	SA-01	199.7	5.7
PEN12-10	250	SAP-64	140	12
PEN12-11	200	SAP-04	102.08	8

Assay results for tantalum and tin and were compared visually in Datamine and in a graphical format. In general the SMS drillholes displayed similar trends in grade to the historical drillholes, however the overall Sn grade from the SMS (PEN) series holes was typically lower than the historical drillholes (Figure 12-1), whilst the overall tantalum grade typically agrees well with the historical drillholes (Figure 12-2).

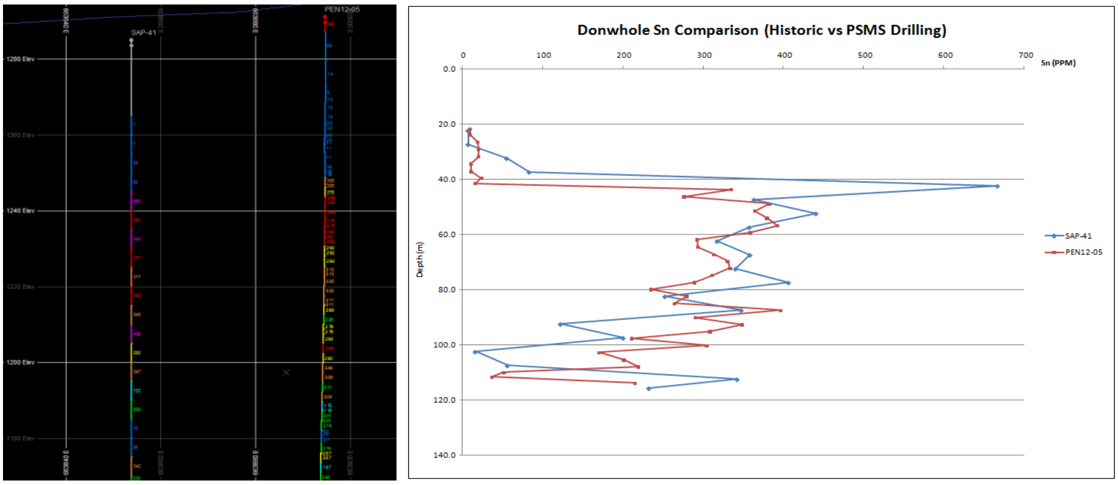


Figure 12-1: Correlation of Sn grades in historical and recently twinned drillholes

***Note**: Blue line on the graph represents historical drillhole, Red line represents PEN Series drillhole*

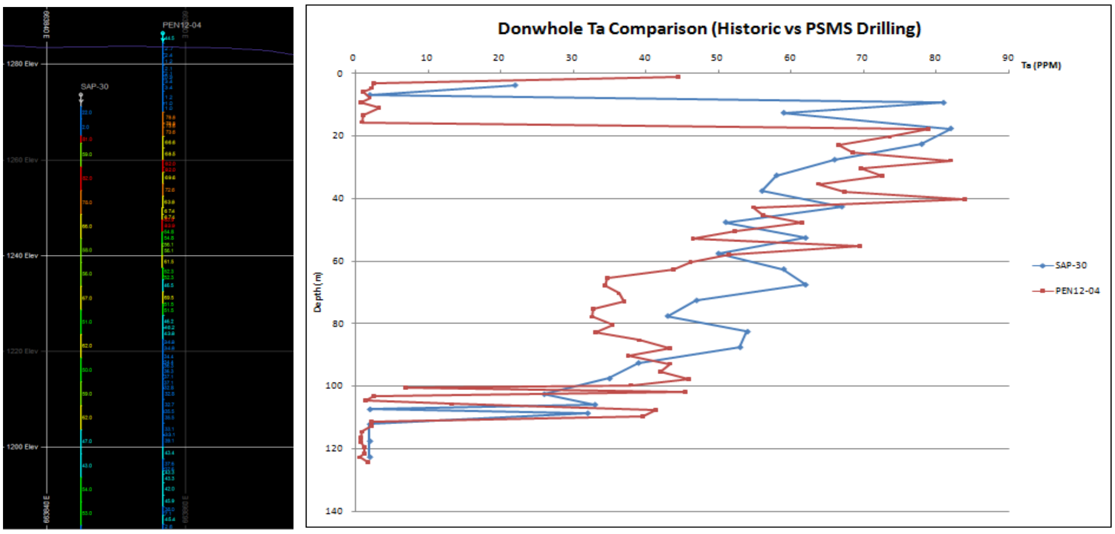


Figure 12-2: Correlation of Ta grades in historical and recently twinned drillholes

***Note:** Blue line on the graph represents historical drillhole, Red line represents PEN Series drillhole*

Comparison of the mineralised zones within the historical and SMS drillholes was undertaken. The length of the mineralised zone, average grade and accumulated metal value was determined for the entire length of mineralisation. This comparison was completed for Ta and Sn.

Table 12-2 shows the comparisons and the difference in Ta accumulated metal between the twinned drillholes, and between the re-assayed historical drillholes. Overall, the accumulated tantalum metal correlates well between the twinned drillholes, with a 3% difference in the total grade for all drillholes. Figure 12-3 shows the correlation between the accumulated metal from mineralised zones within the historic and recent twinned drillholes. There is a good correlation between all drillhole pairs.

Table 12-2: Comparison of mineralised zones, grade and accumulated metal per twinned drillholes for tantalum

BHID	Mineralised Length	Ta ppm (Weighted Average)	Metal Accumulation	Distance Between Holes	Hist / Recent
PEN12-04	72.5	54.1	3,921	15	105%
SAP-30	66.5	61.8	4,107		
PEN12-05	68.3	60.1	4,105	52	73%
SAP-41	70.0	42.7	2,990		
PEN12-06	79.5	90.4	7,184	9.5	73%
SP-05	80.0	65.9	5,270		
SAP-23 (Hist)	90.0	80.5	7,245		104%
SAP-23 (2013)	90.0	77.5	6,981	N/A	
PEN12-08	84.6	72.6	6,141	5.7	121%
SA-01	84.7	88.1	7,460		
PEN12-10	75.0	92.6	6,944	12	98%
SAP-64	75.0	91.1	6,835		
PEN12-11	99.3	102.7	10,201	8	105%
SAP-04	99.1	107.9	10,692		
SP-07 (2013)	140.2	68.8	9,641	N/A	87%
SP-07 (Hist)	140.0	60.2	8,430		
SAP-50 (2013)	77.9	46.1	3,589	N/A	108%
SAP-50 (Hist)	77.0	50.1	3,860		
SAP-16 (2013)	54.0	93.8	5,068	N/A	88%
SAP-16 (Hist)	54.0	82.2	4,437		
Total SMS Drillholes			**63,775**		**96%**
Total Historic Drillholes			**61,325**		

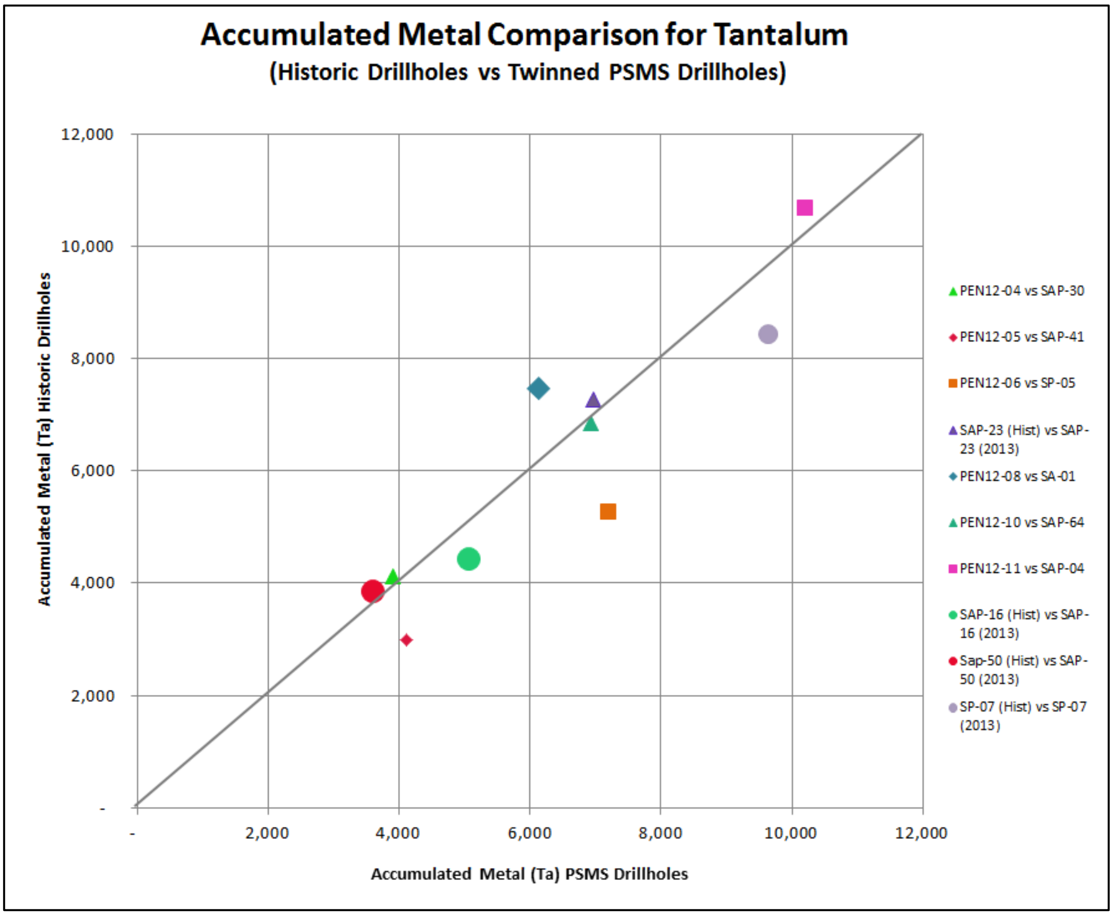


Figure 12-3: Accumulated metal comparisons for tantalum, showing historic drillholes against SMS twinned drillholes

NOTE: *The symbol size relates to the distance between the historic drillhole collar and the SMS drillhole collar. The largest dots indicate drillhole collars within at least 5 m, and the smallest dot indicates drillhole collars up to 52 m apart.*

Table 12-3 shows the comparison and the difference in Sn accumulated metal between the twinned drillholes, and between the re-assayed historical drillholes for Sn. Overall there is a poor correlation between Sn grades with recent SMS drillholes typically significantly lower than the historic drillholes. Figure 12-4 shows the correlation between the accumulated metal from mineralised zones within the historic and recent twinned drillholes. Only weak correlation is seen between the drillhole pairs, indicating an over-estimation in the historical drilling assay data with respect to the recent SMS drilling.

Table 12-3: Comparison of mineralised zones, grade and accumulated metal per twinned drillholes for tin

BHID	Mineralised Length	Sn ppm (Weighted Average)	Metal Accumulation	Distance Between Holes	Hist / Recent
PEN12-04	37.5	329	12,328	15	256%
SAP-30	45.0	700	31,515		
PEN12-05	96.6	227	21,941	52	109%
SAP-41	96.4	249	23,995		
PEN12-06	10.4	644	6,671	9.5	193%
SP-05	10.0	1290	12,900		
SAP-23 (Hist)	90.0	933	83,975		94%
SAP-23 (2013)	90.0	996	89,725	NA	
PEN12-08	25.6	332	28,088	5.7	38%
SA-01	24.7	431	10,657		
PEN12-10	68.1	265	18,044	12	308%
SAP-64	65.0	854	55,495		
PEN12-11	29.1	683	19,898	8	137%
SAP-04	30.0	910	27,285		
SP-07 (2013)	140.2	352	49,364	N/A	80%
SP-07 (Hist)	140.0	281	39,340		
SAP-50 (2013)	77.9	304	23,718	N/A	112%
SAP-50 (Hist)	77.0	346	26,631		
SAP-16 (2013)	54.0	593	31,996	N/A	107%
SAP-16 (Hist)	54.0	631	34,097		
Total SMS Drillholes			**301,772**		**115%**
Total Historic Drillholes			**345,890**		

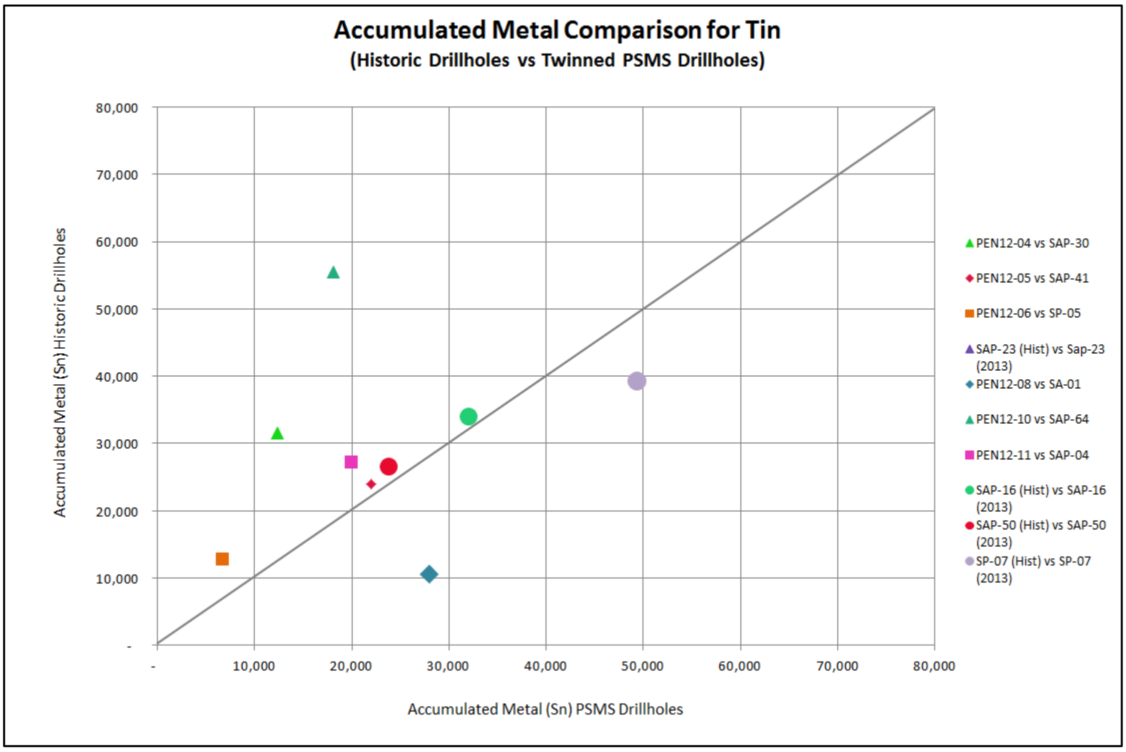


Figure 12-4: Accumulated metal comparisons for tin, showing historic drillholes against SMS twinned drillholes

NOTE: *The symbol size relates to the distance between the historic drillhole collar and the SMS drillhole collar, The largest dots indicate drillhole collars within at least 5 m, and the smallest dot indicates drillhole collars up to 52 m apart.*

12.3.3 Drillhole Validation Conclusions

Based on the comparison of twinned drillholes SRK accepts the overall Ta grades as correlating positively between the historical and new data. With regards to the comparison of Sn grades, SRK undertook further comparisons of the historical and recent drilling data by producing estimates and tabulating the results when the historical data was included or excluded. SRK found that although there was an indication of over estimation shown by the twinned drillhole comparisons, in fact when the historical Sn data was used for estimation the historical Sn data resulted in a slight under estimation of the overall Sn grade. Therefore, SRK has opted to use the historical Sn data in the estimate as it provides continuity and confidence in the geological model whilst not resulting in an over estimation of grade. SRK accepts that both the Ta and Sn datasets are suitable for use in a MRE.

13 MINERAL PROCESSING AND METALLURGICAL TESTING

SRK has not undertaken a metallurgical study as part of this report and no new metallurgical test work on hard rock sources of mineralisation has been completed by SMS since the previous SRK 2014 MRE.

SRK understands that basic gravity methods were used in historical production which mined the kaolinised parts of the deposit. SRK has been provided with the following information by SMS regarding test work undertaken by Mintek in South Africa.

13.1 Pilot Scale Testwork

Mintek has undertaken pilot scale testwork on a bulk sample comprising 1.5 tonnes. This testwork included milling of the sample to -212µm, attritioning and desliming to 38µm using a hydrocyclone. Five stages of gravity separation were undertaken using spirals and shaking tables on the -212+38 µm fraction. The -38µm fraction was further deslimed to 20 µm and the -38+20 µm was subjected to a Falcon concentrator. The final gravity (-212+38µm and -38+20 µm) concentrates were similarly subjected to Wet High Intensity Magnetic Separation ("WHIMS") processing to separate Tin and Tantalite products.

The gravity circuit on the -212+38µm and -38+20µm indicated that the material can be upgraded successfully in 5 stages of beneficiation, producing improved Sn and Ta_2O_5 grades and recoveries at low mass yields. WHIMS successfully further upgraded the -212+38µm Sn and Ta_2O_5, with good recoveries across the unit. The total recovery for Sn in a closed circuit resulted in 87%, and 89.6 % for Ta_2O_5.

For the purposes of this MRE SRK has used the more conservative processing recovery values of 75% for Ta_2O_5 and 75% for Sn, based on the Company's experience from operating the current plant for re-processing of old tailings at the Project.

SRK is aware that in addition to the test work described above SMS are planning to complete pilot scale test work to determine how hard rock mineralisation will perform in the current plant, once upgraded to allow for crushing. SRK recommends that further mineral processing test work based on a representative metallurgical drillhole sampling program should be undertaken by the Company as a next step to ensure that metallurgical parameters for use in more advanced technical studies are appropriately defined.

SMS are also investigating the potential to separate and process the leucogranite tails to produce albite, quartz, potassic feldspar and white mica products for potential sale to the Industrial Minerals (IM) market. SRK understands that IM processing test work is planned, with associated SMS market and contracts studies currently underway.

14 MINERAL RESOURCE ESTIMATES

14.1 Introduction

The Mineral Resource statement presented herein represents the latest SRK Mineral Resource estimate prepared for the Penouta Project in accordance with the Canadian Securities Administrators' National Instrument 43-101.

SRK has produced three estimated models (Ta, Sn, and Nb). The Mineral Resource models prepared by SRK utilises diamond drilling comprising:

- 166 drillholes for 25,282 m for Sn;
- 164 drillholes for 24,993 m for Ta; and
- 96 drillholes for 17,157 m for Nb.

The MRE was completed by Emma Rudsits (Senior Consultant, Mining Geology) under the supervision of Martin Pittuck, C.Eng, MIMMM (Director and Corporate Consultant, Resource Geology) who has over 15 years of experience in generating and reviewing mineral resource estimates and who specialised in deposits of this nature; meeting the definition of "independent qualified person" as this term is defined in National Instrument 43-101. The effective date of the resource statement is 5th March 2021.

This section describes the Mineral Resource estimation methodology and summarises the key assumptions used by SRK, the resource reported herein is a reasonable representation of the global Mineral Resources found in the Penouta project area at the current level of sampling. The Mineral Resources have been estimated in conformity with generally accepted CIM "Estimation of Mineral Resources and Mineral Reserves Best Practices" guidelines and are reported in accordance with the Canadian Securities Administrators' National Instrument 43-101. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. There is no certainty that all or any part of the Mineral Resource will be converted in Mineral Reserves.

The database used to estimate the Penouta Mineral Resources was audited by SRK. SRK is of the opinion that the current drilling information is sufficiently reliable to support a Mineral Resource.

Leapfrog Mining Software ("Leapfrog") was used to construct the geological and mineralisation wireframes. Datamine Studio Version 3 ("Datamine") was used to audit the drillhole database, prepare assay data for geostatistical analysis, construct the block model, estimate metal grades and tabulate the resultant Mineral Resources. ISATIS Software ("Isatis") was used for geostatistical analysis and variography.

14.2 Resource Estimation Procedures

The methodology for resource evaluation for the Penouta project was undertaken as follows:

- database verification;
- discussion with client with regards to geology and mineralisation;
- construction of geological model and wireframes;
- construction of tin, tantalum mineralisation and niobium wireframes;

- definition of resource domains;
- preparation of data for geostatistical analysis and variography (capping and compositing);
- block modelling and grade interpolation;
- calculation of tantalum equivalent grade from tin;
- resource validation and classification;
- assessment of “reasonable prospects for economic extraction” and selection of appropriate cut-off grade; and
- preparation of a Mineral Resource statement.

14.3 Resource Database

All historical data was transcribed from scanned documents into Microsoft Excel format by SMS. SRK was provided with both the scanned documents and the Microsoft Excel database in the format of collar, survey, assay and lithology spreadsheets.

All SMS drilled holes were compiled into a separate Microsoft Excel database which was provided to SRK in the format of collar, survey, assay, lithology, weathering, and alteration. SRK audited both the historical and updated SMS drillhole database and although SRK has noted some deficiencies in the historical data, the SMS verification drill programme has provided confidence in the data. Therefore, SRK is satisfied with the quality of the database for use in the construction of a geological block model and associated Mineral Resource estimate.

14.4 Geological and Mineralisation Modelling

SRK has undertaken geological modelling of the Penouta deposit to provide geological constraints for the Mineral Resource estimation. These constraints are provided as wireframe models into which the final block models were created and zoned. The geological model constructed for the project has been used to differentiate between each individual area and provides a geological framework for the deposit as a whole.

14.4.1 Geological Modelling

SRK was provided with geological maps and interpreted cross-sections by SMS. These were imported into Leapfrog Geo software and used in conjunction with the lithological information in the drillhole database to produce a geological model of the project area. The leucogranite host unit was modelled as a dome-like structure (Figure 14-1and Figure 14-2). Areas of greisenised gneiss are modelled, along with xenoliths of gneiss within the leucogranite dome. The leucogranite dome was used to constrain the mineralisation wireframes.

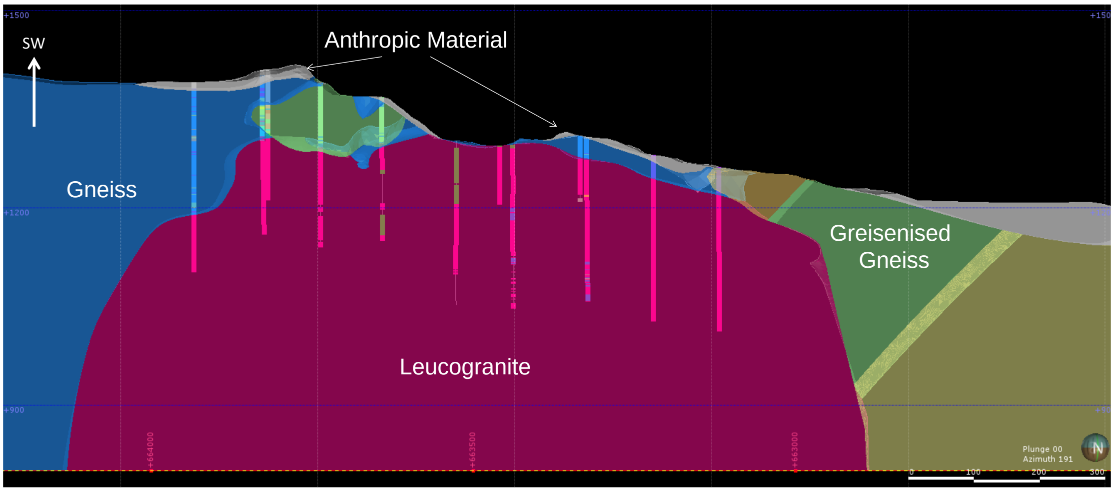


Figure 14-1: Leucogranite dome-like structure modelled in Leapfrog Geo software

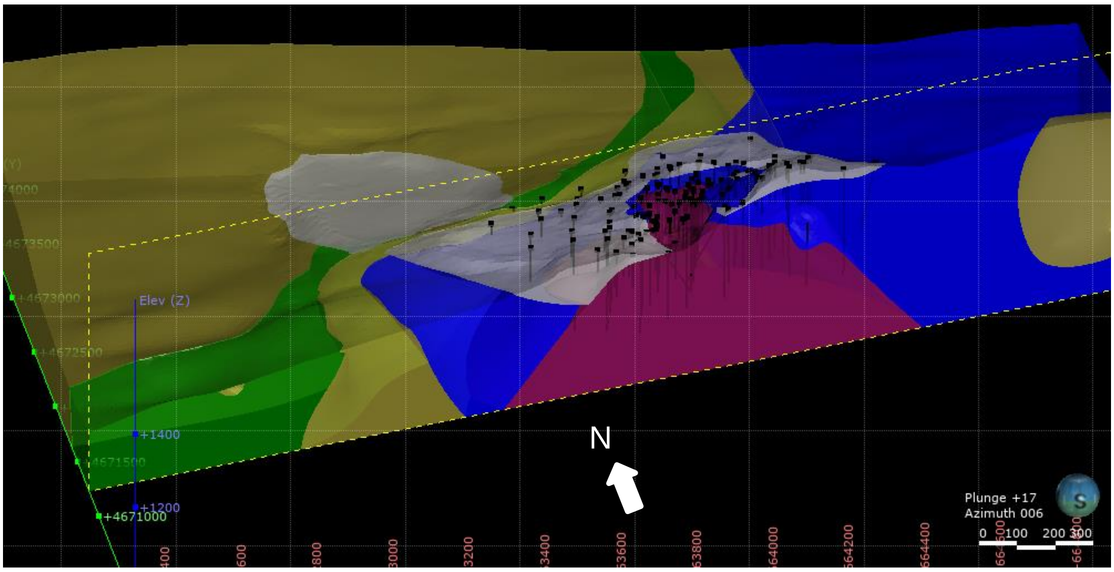


Figure 14-2: Oblique 3D section of modelled geology in Leapfrog Geo software

14.4.2 Mineralisation Modelling

A statistical analysis was undertaken on the raw Sn, Ta and Nb data. The purpose of this analysis was to determine whether different geological domains could be identified. The statistical investigations included analysis of the distributions of Sn, Ta and Nb, an assessment of outlier values, and determination of a relationship between Sn and Ta.

Histograms, log histograms and log probability plots were completed for Sn, Ta and Nb. Tantalum was found to have a slightly negatively skewed log normal distributions (Figure 14-3), whilst Sn and Nb were found to have a normal distribution (Figure 14-4 and Figure 14-5).

All electronic data was validated visually in both Leapfrog Mining and Datamine to determine relationships and patterns between and within the elements. Figure 14-6 shows the correlation between Ta and Sn assay grades, and Figure 14-7 shows the correlation between Sn and Nb. The lack of robust correlation between Ta and Sn, and Sn and Nb indicated it was more appropriate to model the elements separately. Figure 14-8 shows the correlation between Ta and Nb which correlate well, therefore it was decided to use a similar modelling approach for Ta and Nb. All mineralisation modelling was undertaken in Leapfrog Mining using the assay and lithology data plotted in both plan and section.

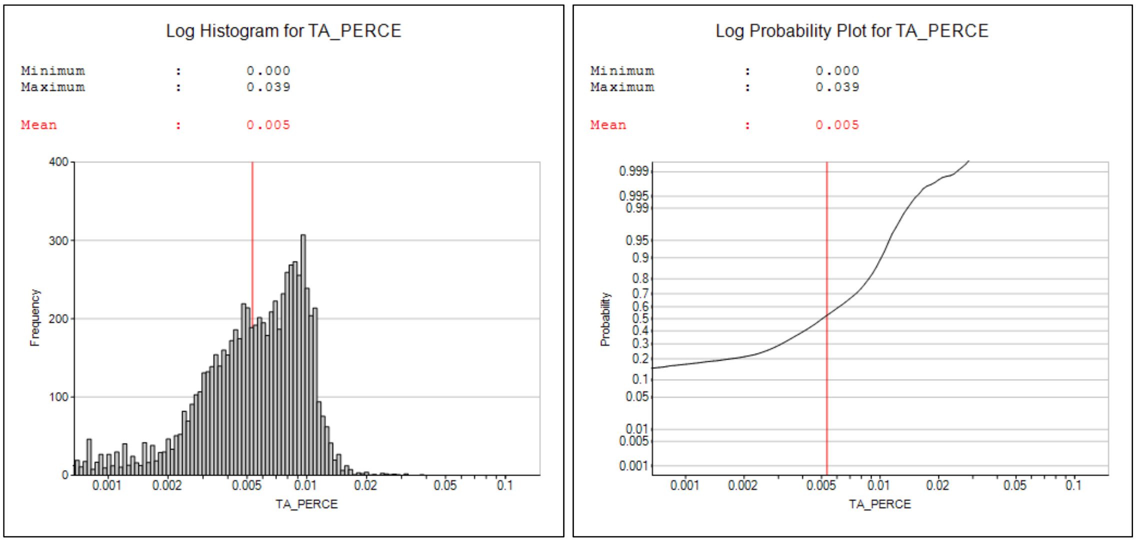


Figure 14-3: Tantalum length weighted log histogram and log probability plots

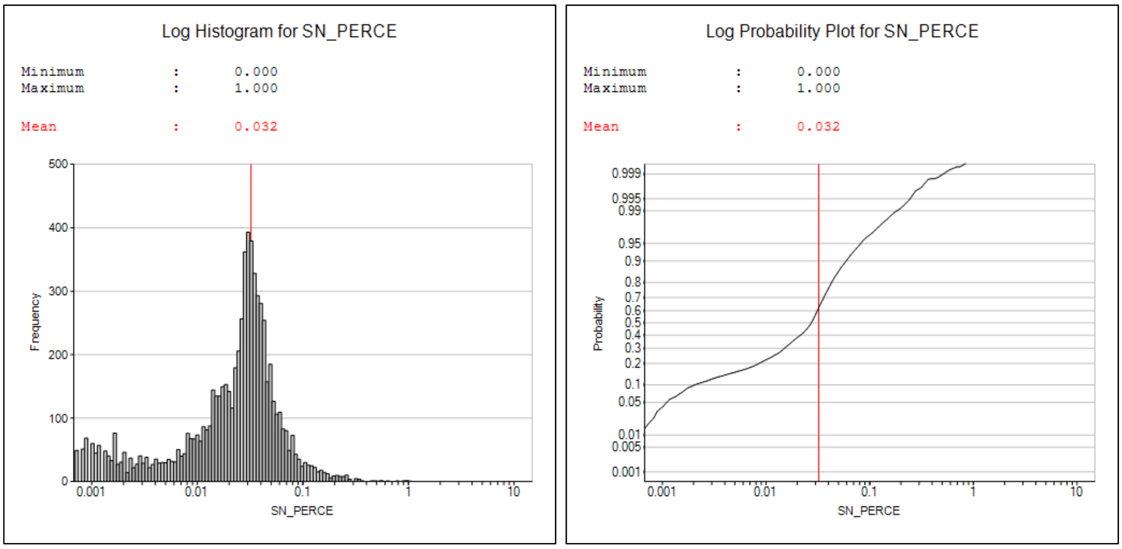


Figure 14-4: Tin length weighted log histogram and log probability plots66

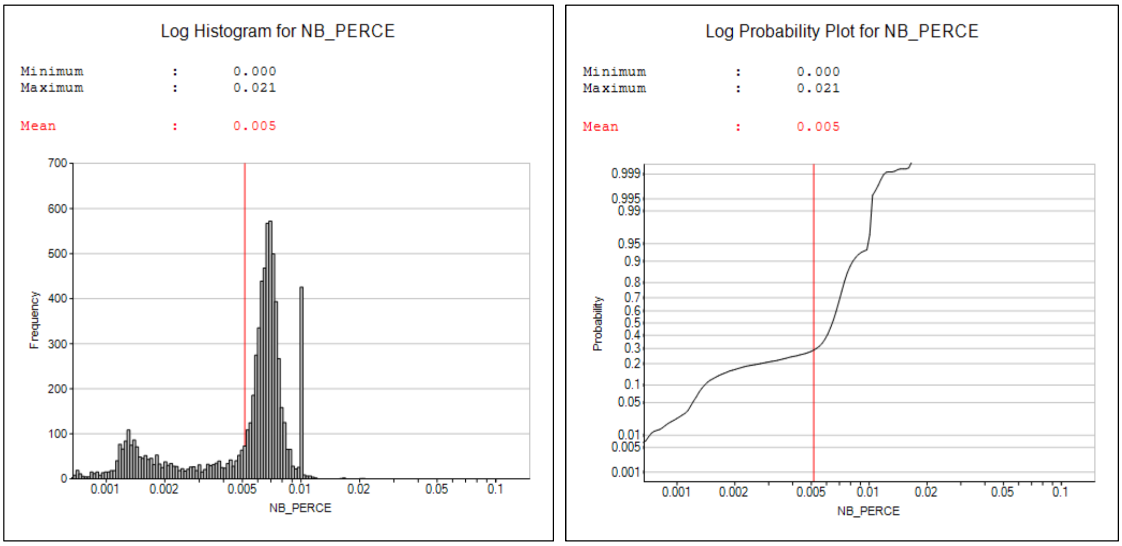


Figure 14-5: Niobium length weighted log histogram and log probability plots

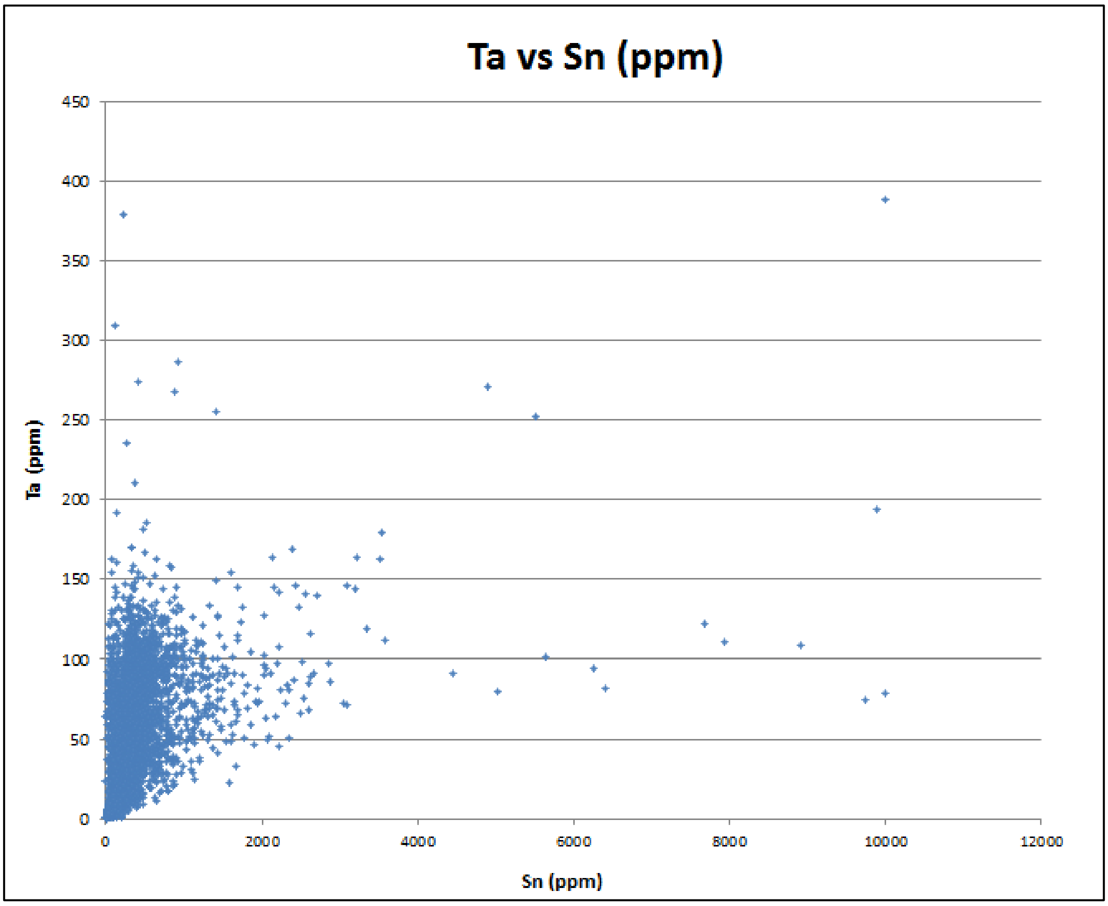


Figure 14-6: Scatter plot showing the distribution of tantalum and tin

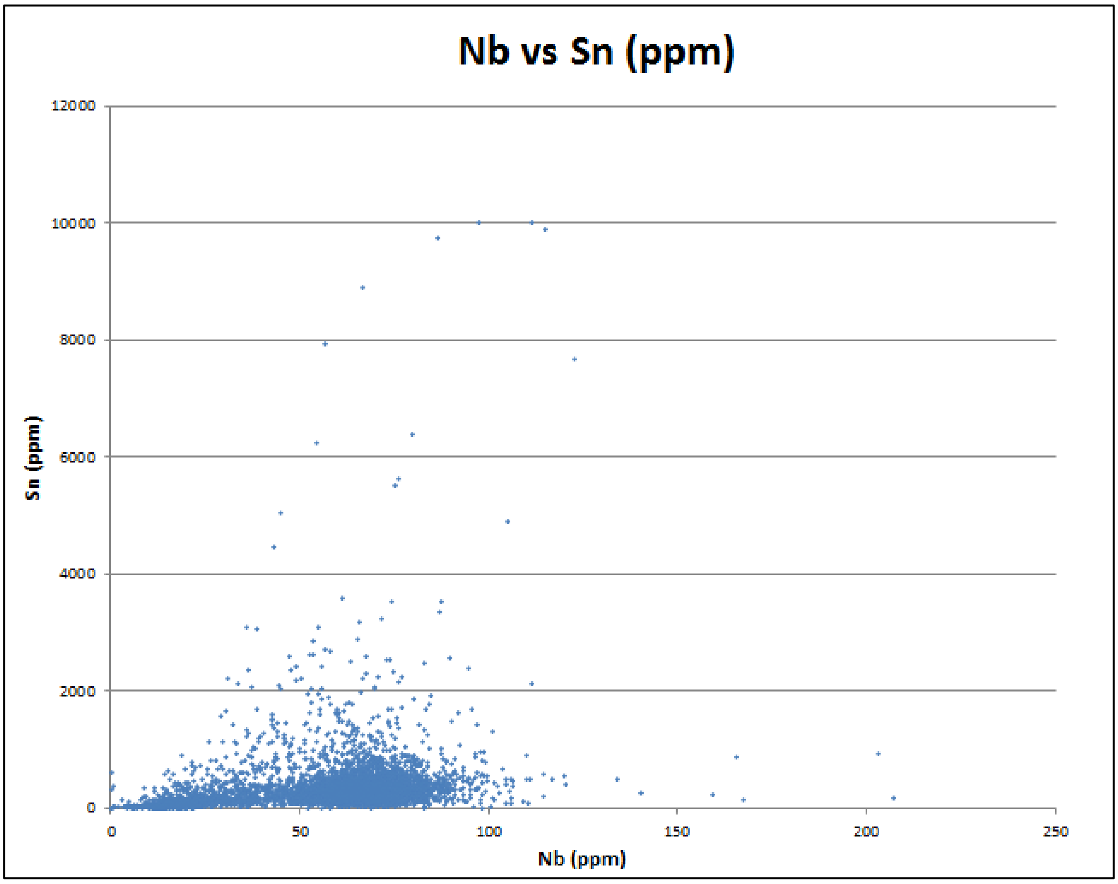


Figure 14-7: Scatter plot showing the distribution of niobium and tin

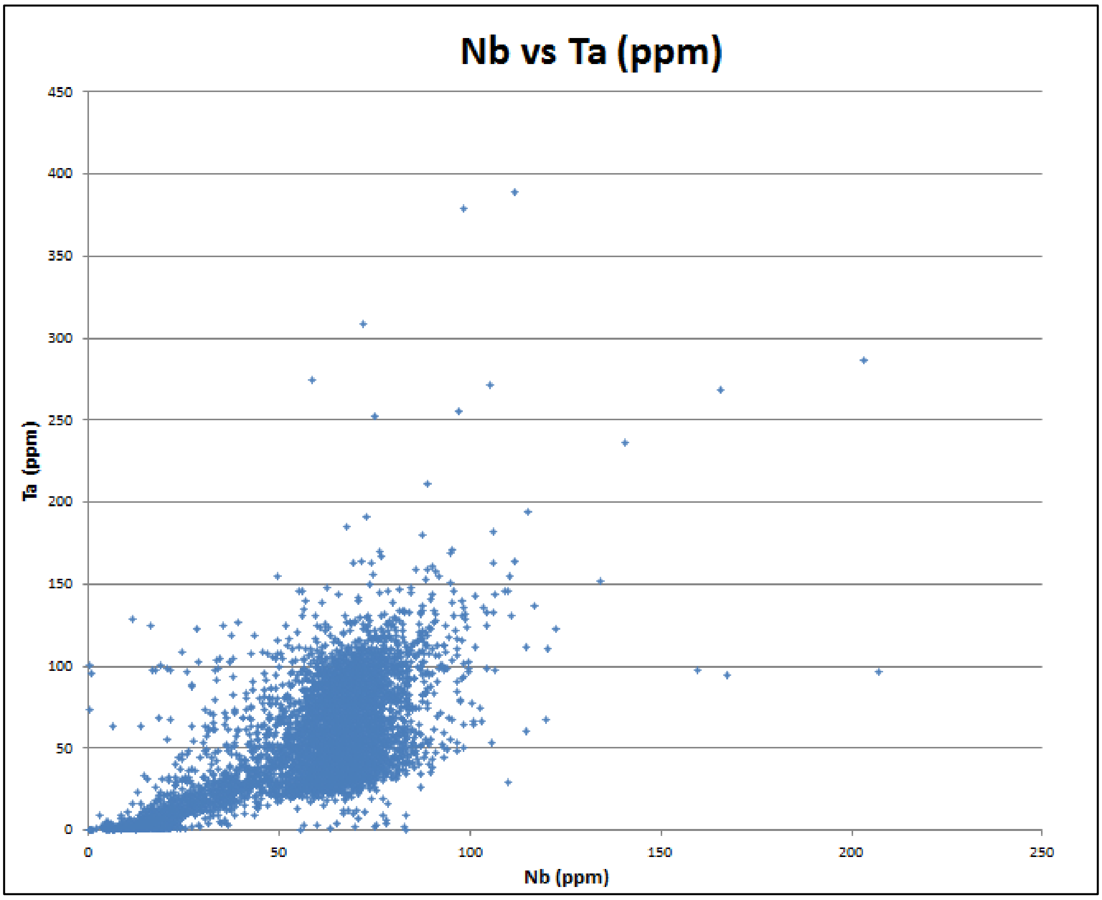


Figure 14-8: Scatter plot showing the distribution of tantalum and niobium

Tin Mineralisation

Upon review and verification of the historic drillhole data against the SMS 2013 drill programme SRK determined that it was suitable for use in Sn estimation (Section 12.3.2).

Tin was identified as forming a high grade lens within the leucogranite dome, this occurred near the top of the leucogranite dome. Beneath the high grade lens a lower grade domain was indentified. Tin mineralisation also occurs within the overlying veined and greisenised gneiss, this mineralisation has been modelled as a broad lens, as the orientation of the individual veins is currently difficult to determine. The high grade and low grade mineralised domains were initially digitised on vertical sections using assay data and the leucogranite dome, the resultant domains were reviewed in long section and plan view to ensure geological continuity. Two domains of tin were wireframed and constrained within the leucogranite dome, and one tin bearing vein was modelled within the greisenised gneiss. Mineralisation extends approximately 1,000 m east-west and approximately 800 m north-south. All wireframes were imported and coded in Datamine with a unique kriging zone (“KZONE”), described in Table 14-1.

To ensure the block model provided a true representation of the drillhole data, SRK created a Sn coded drillhole file and produced a separate Sn only block model, into which only Sn was estimated. The separate Sn drillhole file used for wireframing the mineralised domains, was coded based on the KZONE codes detailed in Table 14-1. Figure 14-9 is an example of a cross-section showing the tin mineralisation.

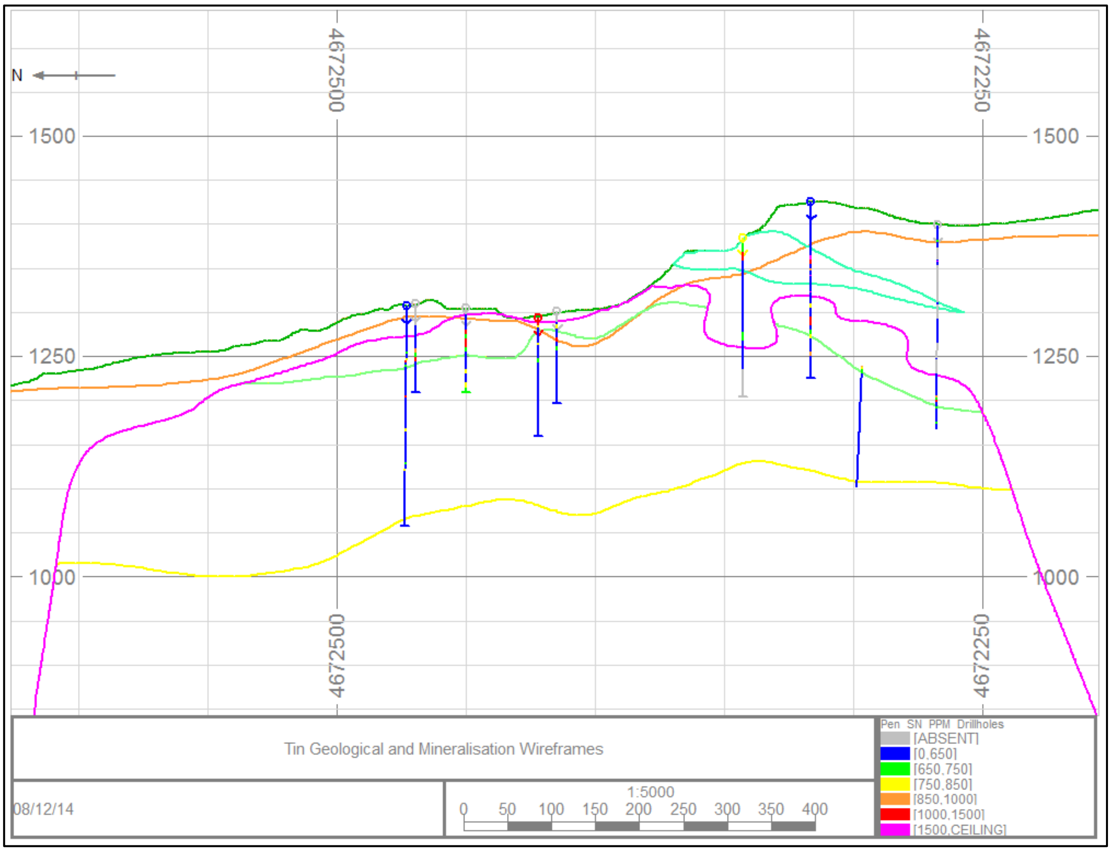


Figure 14-9: Tin geological and mineralisation wireframes

NOTE: (*Pale Green indicates main Sn mineralisation wireframe, pink line indicates the Leucogranite dome, Dark green line indicates topography, orange line indicates base of oxidation)*

Tantalum Mineralisation

Upon review and verification of the historic drillhole data against the SMS 2013 drill programme SRK decided all of the historical data was suitable for use in Ta estimation (Section 12.3.2).

Visual review of the Ta grades showed a gradual trend in the drillhole samples, showing high grades at the top of the leucogranite becoming lower grades with depth. SRK constructed one main subhorizontal domain boundary using a cut-off grade of 30 ppm Ta. Due to the greater depths drilled during the 2013 drill programme, this domain increased in size compared with the 2012 wireframe interpretation. The mineralised domain was digitised on vertical sections using assay data. The Ta domain was constrained within the leucogranite dome. Tantalum mineralisation extends approximately 1,000 m north-south and approximately 800 m east-west. All wireframes were imported into Datamine. To ensure the block model provided a true representation of the drillhole data, SRK created a Ta coded drillhole file and produced a separate Ta only block model, into which only Ta was estimated. Internal waste domains were identified and wireframed, these typically consisted of low grade gneiss material and were confined to the leucogranite dome. Each of the zones were coded and assigned using Datamine a unique KZONE as shown in Table 14-1.

Tantalum mineralisation outside of the leucogranite is limited, however some areas of low grade tantalum veins were interpreted, this mineralisation has been modelled as a broad lens, as the orientation of the individual veins is poorly understood. These veins were used for estimation and given using Datamine a unique KZONE code (Table 14-1). An example of a cross-section showing the Ta mineralisation and internal waste wireframes is shown in Figure 14-10.

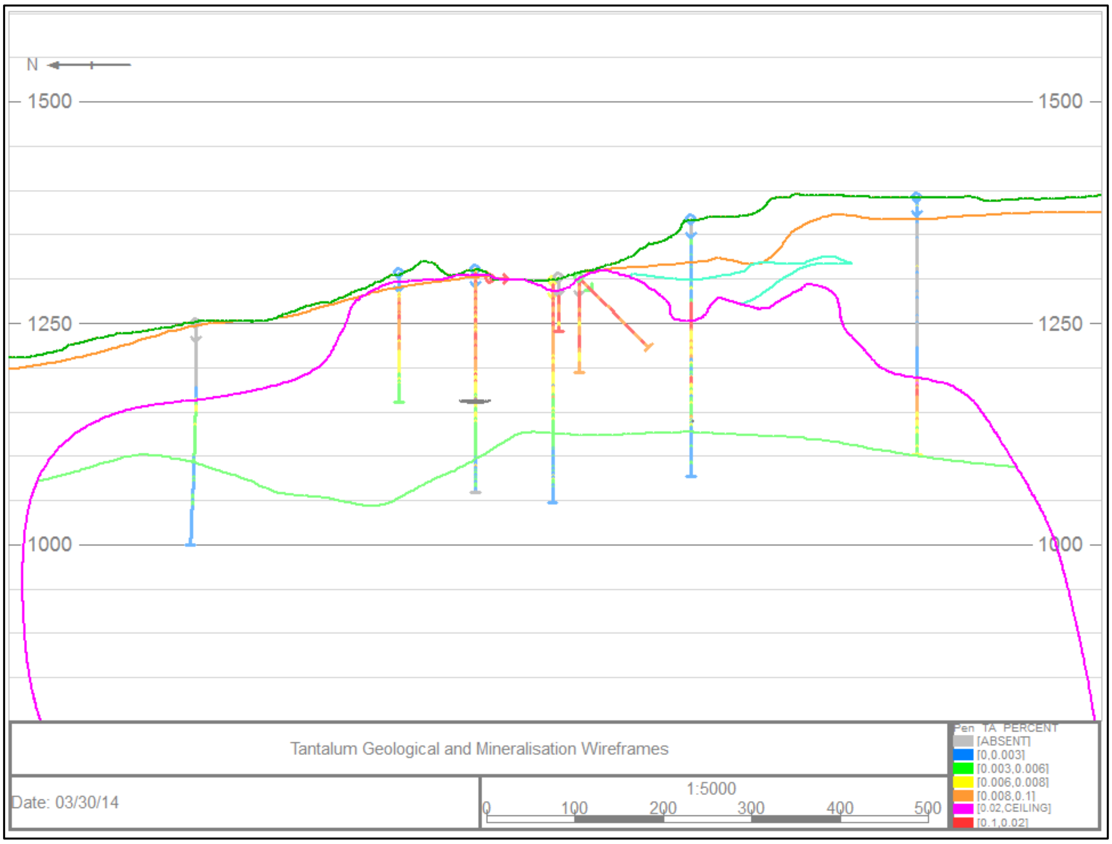


Figure 14-10: Tantalum geological and mineralisation wireframes

NOTE: *(Pale Green indicates main Ta mineralisation wireframe, light blue indicates Ta vein wireframe, grey wireframes represent zones of internal waste, pink line indicates the Leucogranite dome, Dark green line indicates topography, orange line indicates base of oxidation)*

Niobium Mineralisation

There are no Nb assays for the historical drillholes, therefore SRK has used the SMS drilling database only for the Nb mineralisation modelling and estimation. SRK constructed one main subhorizontal domain; at a cut-off grade of 19 ppm Nb. The mineralised domain was digitised on vertical sections using assay data. The Nb domain was constrained within the leucogranite dome. Niobium mineralisation extends approximately 1,200 m north-south and approximately 1,000 m east-west. All wireframes were imported into Datamine. To ensure the block model provided a true representation of the drillhole data, SRK created a Nb coded drillhole file and produced a separate Nb only block model, into which only Nb was estimated. Internal waste domains were identified and wireframed, these typically consisted of low grade gneiss material and were confined to the leucogranite dome. Each of the zones were coded and assigned using Datamine a unique KZONE as shown in Table 14-1.

Niobium mineralisation within the gneiss is limited, however low grade niobium veins were interpreted as a broad lens, as the orientation of the individual veins is currently difficult to determine. These veins were used for estimation and given using Datamine a unique KZONE code (Table 14-1). An example of a cross-section showing the Nb mineralisation and internal waste wireframes is shown in Figure 14-11.

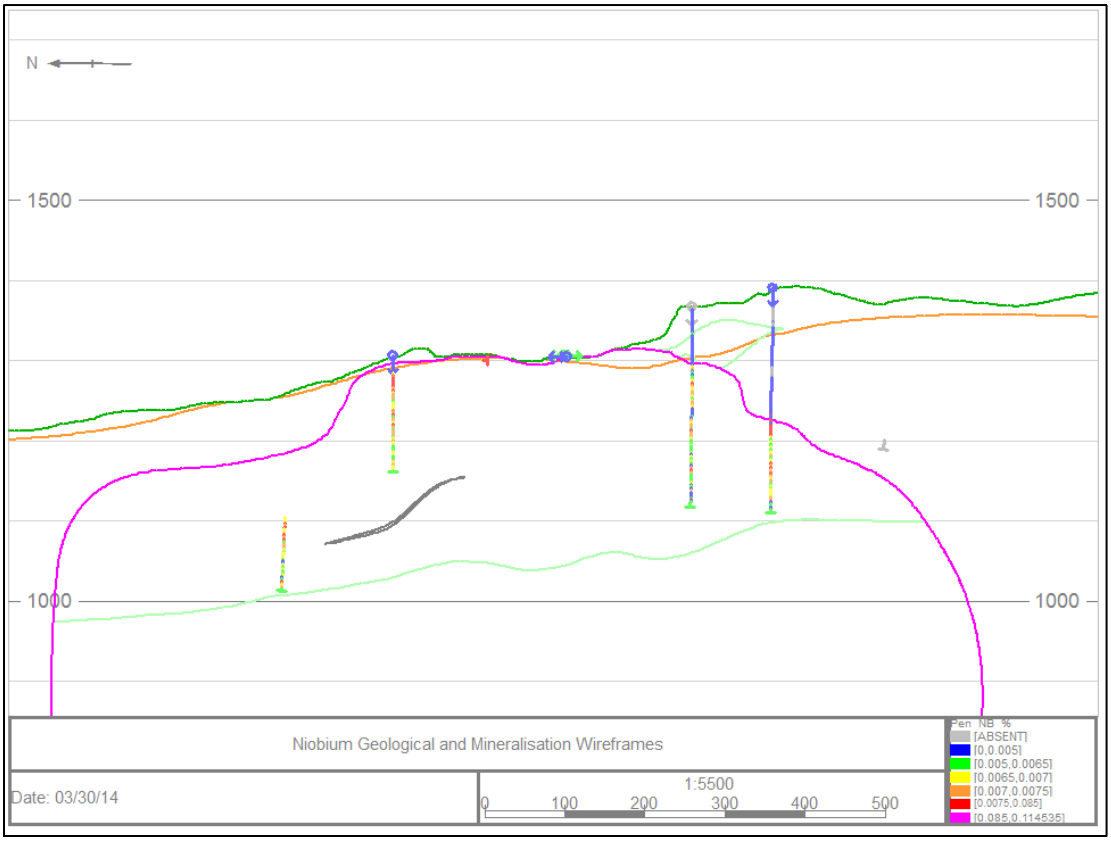


Figure 14-11: Niobium geological and mineralisation wireframes

NOTE: *(Pale Green indicates main Nb mineralisation wireframe, light blue indicates Nb vein wireframe, grey wireframes represent zones of internal waste, pink line indicates the Leucogranite dome, Dark green line indicates topography, orange line indicates base of oxidation)*

Table 14-1: Kriging Zone Codes (KZONES) for Ta, Sn and Nb

KZONE	Mineralisation Type	Host Lithology	Model
100	Tin Mineralised Lens	Leucogranite	Tin
200	Tin Mineralised Lens	Leucogranite	Tin
110	Tin Veins	Gneiss	Tin
400	Tantalum Mineralised Lens	Leucogranite	Tantalum
410	Tantalum Veins	Gneiss	Tantalum
900	Internal Waste	Leucogranite / Gneiss	Tantalum
500	Niobium Mineralised Lens	Leucogranite	Niobium
510	Niobium Veins	Gneiss	Niobium
800	Internal Waste	Gneiss / Unknown	Niobium

14.5 Statistical Analysis

14.5.1 Compositing

Prior to undertaking statistical analysis, samples must be composited to equal lengths such that a constant sample volume is achieved, therefore honouring sample support theories.

Figure 14-12, Figure 14-13 and Figure 14-14 show histograms of the sample lengths of the Ta, Sn and Nb mineralised zones.

SRK undertook a composite length analysis for Ta, Sn and Nb. Based on the statistical results of the composite length analysis and the mean sample lengths shown in Figure 14-12, Figure 14-13 and Figure 14-14, a sample length of 5 m with a minimum composite length of 1.25 m was chosen for both tantalum, tin and niobium and applied to the coded drillhole files. Compositing to 5 m was found to have little impact on the statistical mean, the comparison statistics for the Ta, Sn and Nb drillhole files is shown in Table 14-2, Table 14-3, and

Table 14-4.

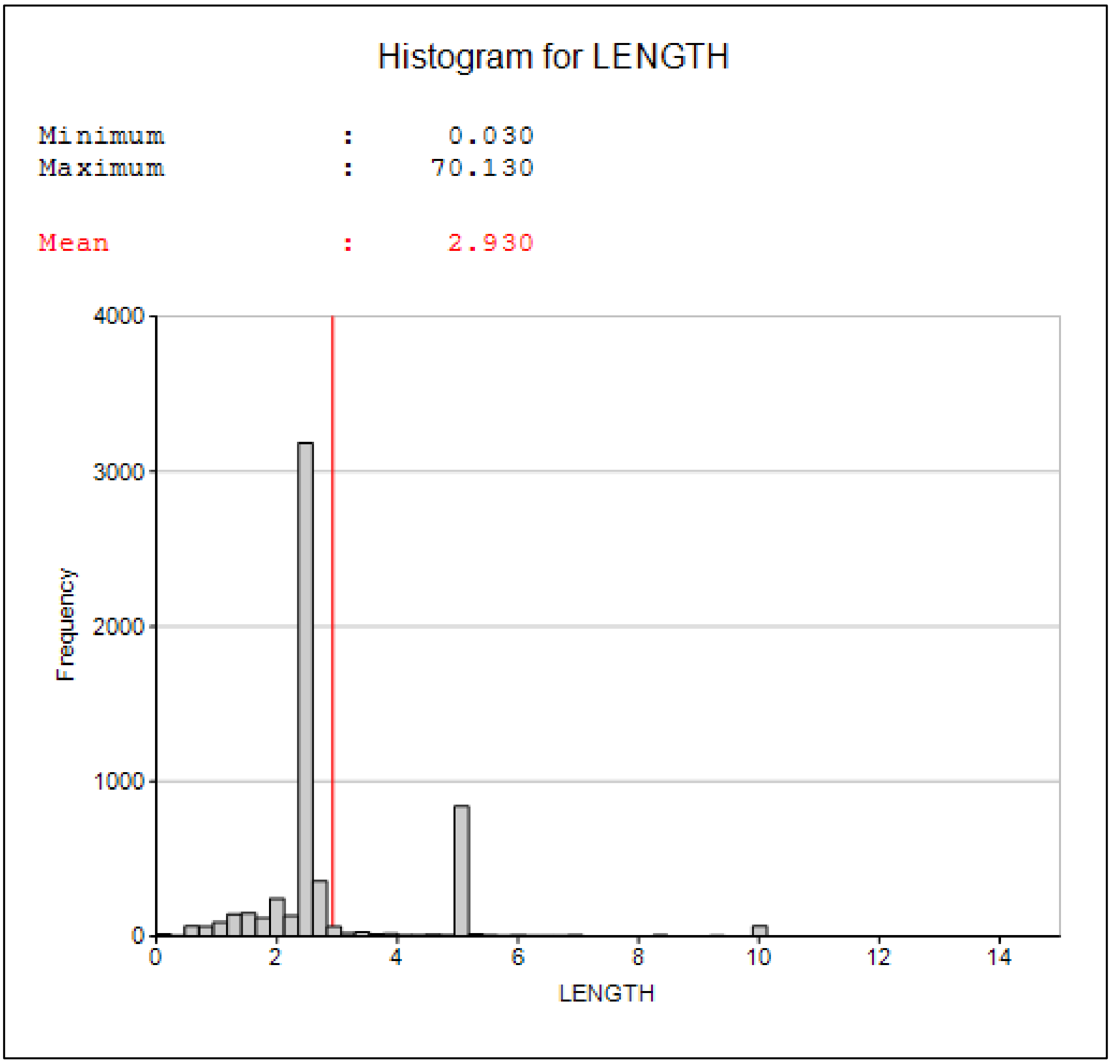


Figure 14-12: Histogram of sample lengths for Ta mineralised zones

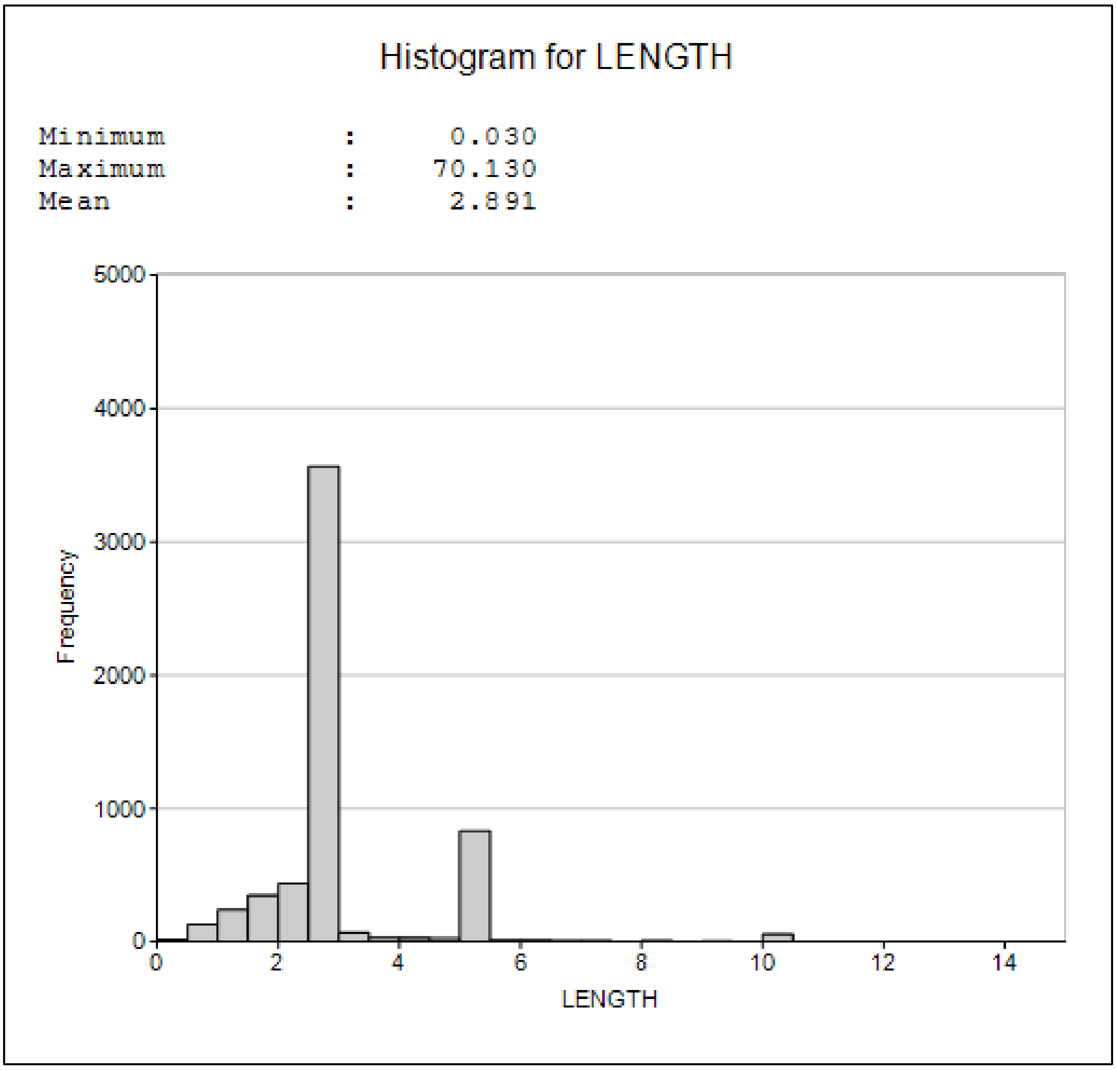


Figure 14-13: Histogram of sample lengths for Sn mineralised zones

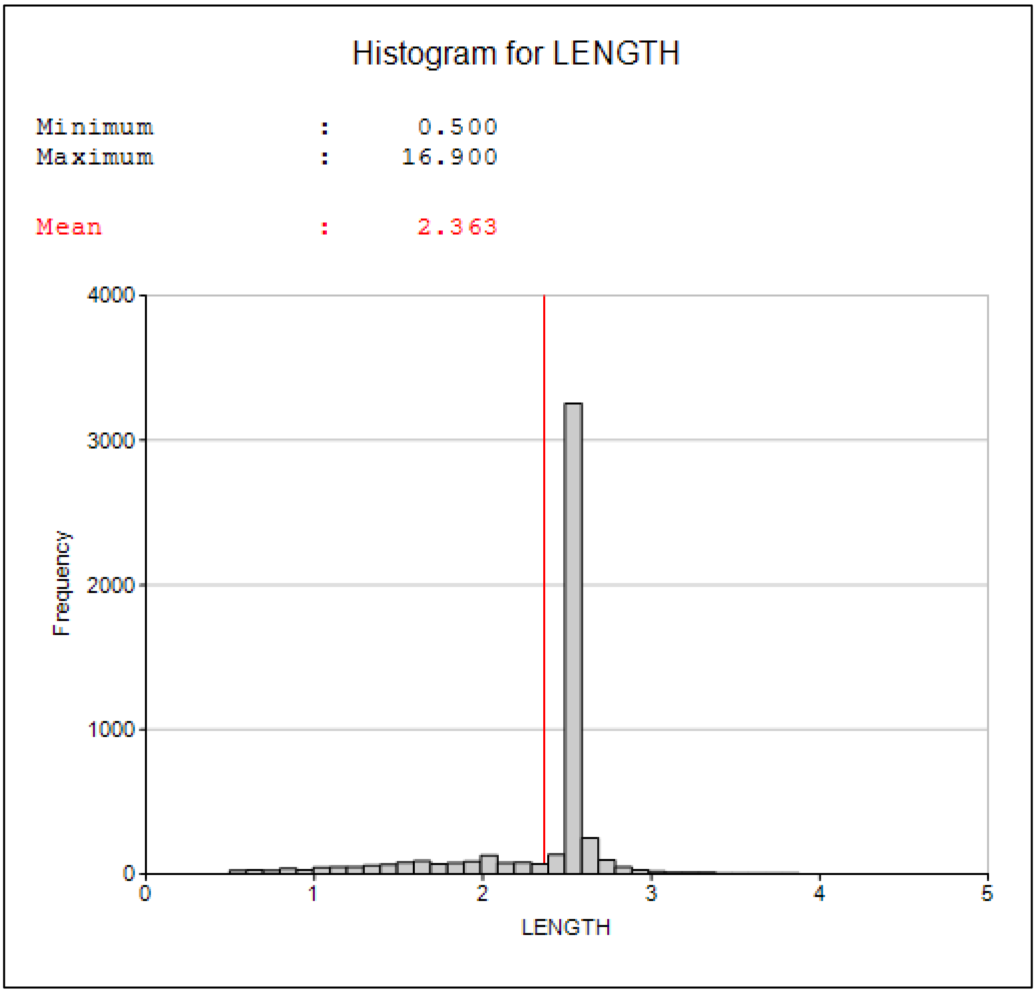


Figure 14-14: Histogram of sample lengths for Nb mineralised zones

Table 14-2: Comparison of Raw and Composite Statistics for Sn Drillhole File

	Sn Raw Statistics (ppm)					Sn Composite Statistics (ppm)					
KZONE	Number of Samples	Max	Mean	Std Dev	CoV	Number of Samples	Max	Mean	Std Dev	CoV	Mean Absolute Difference (%)
100	815	5510	743	495	0.67	559	3411	725	439	0.61	2.41
110	276	9880	768	1082	1.41	194	8700	680	852	1.25	12.05
200	4725	10001	319	245	0.77	2689	8028	314	242	0.77	1.56

Table 14-3: Comparison of Raw and Composite Statistics for Ta Drillhole File

	Ta Raw Statistics (ppm)					Ta Composite Statistics (ppm)					
KZONE	Number of Samples	Max	Mean	Std Dev	CoV	Number of Samples	Max	Mean	Std Dev	CoV	Mean Absolute Difference (%)
400	5046	315	67	31	0.46	3005	315	66	30	0.46	1.78
410	606	389	41	38	0.93	364	164	39	34	0.87	4.80
900	77	64	11	16	1.41	63	62	8	12	1.52	33.76

Table 14-4: Comparison of Raw and Composite Statistics for Nb Drillhole File

	Nb Raw Statistics (ppm)					Nb Composite Statistics (ppm)					
KZONE	Number of Samples	Max	Mean	Std Dev	CoV	Number of Samples	Max	Mean	Std Dev	CoV	Mean Absolute Difference (%)
500	4553	207	64	16	0.25	2184	145	64	14	0.22	0.53
510	485	123	40	23	0.58	207	105	40	19	0.48	0.55
800	75	168	18	23	1.22	77	72	8	12	1.53	79.90

14.5.2 Evaluation of Outliers

High grade capping is undertaken where data is considered to be outside of the main population. Analysis of probability plots, raw and log histograms can be used to distinguish the grades at which samples have significant impacts on local estimation and whose affect is considered extreme.

High grade capping was assessed using a combination of log probability plots, plus raw and log histograms. Based on this analysis, in SRK's opinion Ta and Nb did not require grade capping as the high end values are considered part of the population (Figure 14-15 and Figure 14-16). Capping was undertaken for Sn after compositing.

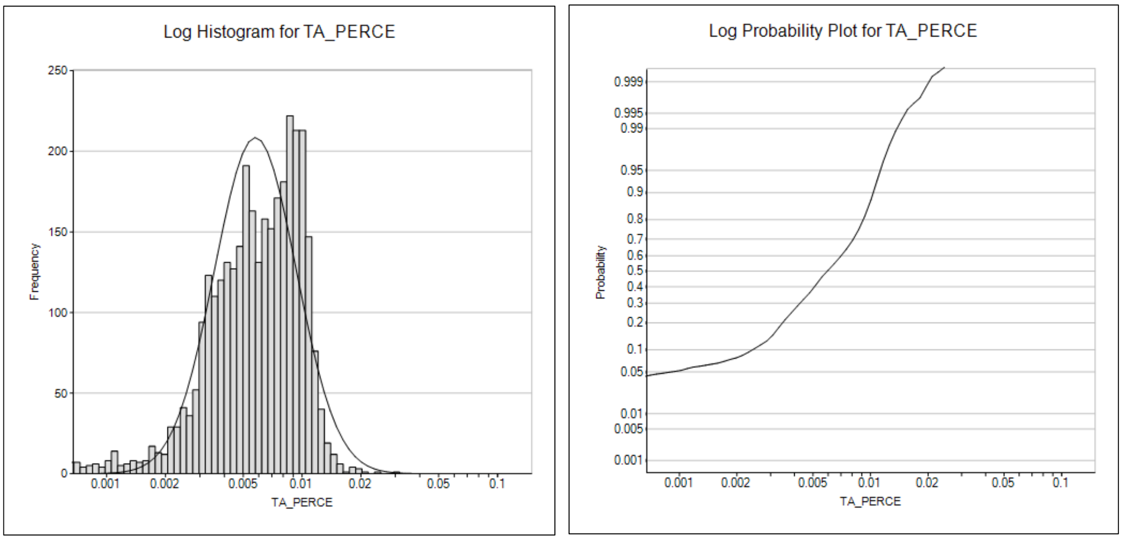


Figure 14-15: Log Histogram and Log Probability Plots for all Ta Mineralised Domains

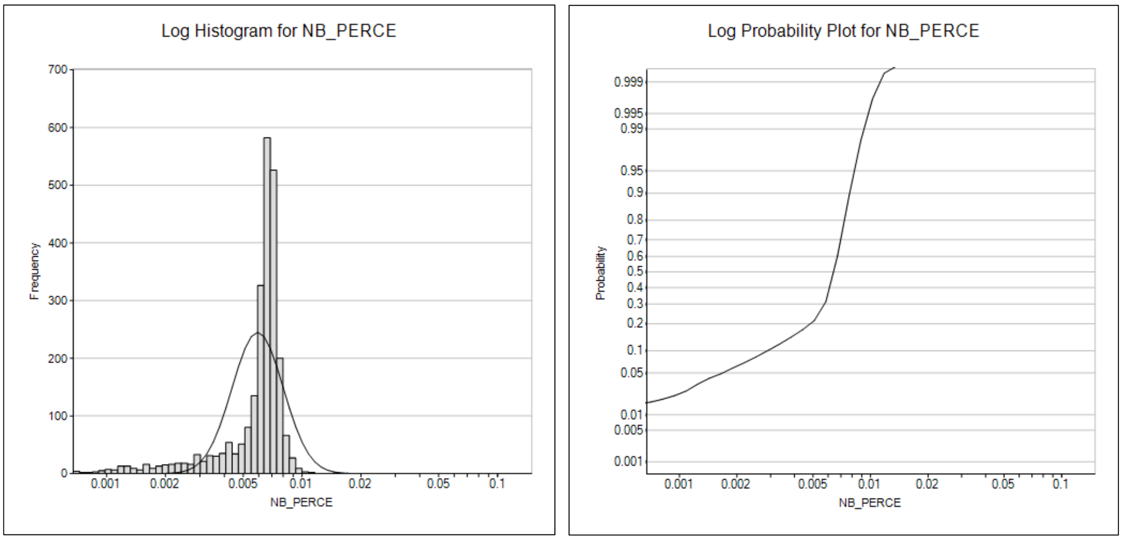
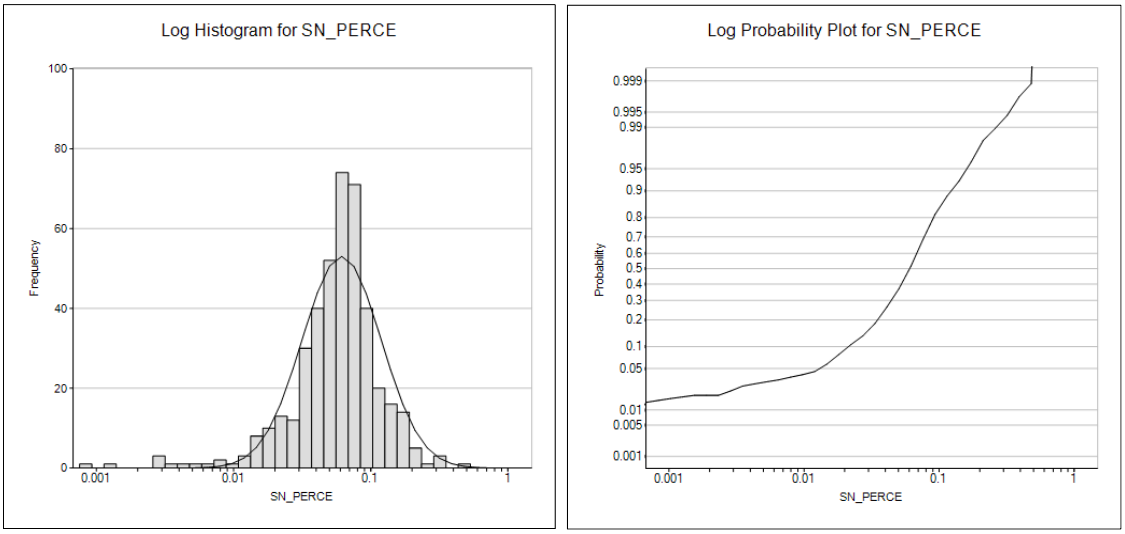


Figure 14-16: Log Histogram and Log Probability Plots for all Nb Mineralised Domains

Based on analysis of the Sn log histogram and log probability plots for both the historic and SMS drilling for each KZONE (Figure 14-17), SRK applied a different cap to each KZONE as shown in Table 14-5. The cap was also in some cases (KZONE200) different for the historic drilling and SMS drilling. A statistical analysis was undertaken to determine the effects of capping on the Sn mineralised zones. This analysis is presented in

Table 14-6 as a comparison of the mean composited and capped grades for Sn in each domain.



Log Histogram for SN_PERCE

Log Probability Plot for SN_PERCE

Figure 14-17: Log Histogram and Log Probability Plots for all Sn Mineralised Domains

Table 14-5: Sn capping values per KZONE

KZONE	Historic Drillhole Capping Values (ppm)	SMS Drillhole Capping Values (ppm)
100	-	-
110	1500	1500
200	4000	2500

Table 14-6: Comparison of composite mean Sn grades and capped Sn grades

		Sn Composite Statistics (ppm)				Sn Capped Statistics (ppm)				
KZONE	**Number of Samples**	**Max**	**Mean**	**Std Dev**	**CoV**	**Max**	**Mean**	**Std Dev**	**CoV**	**Mean Absolute Difference (%)**
100	559	3411	725	439	0.61	3411	725	439	0.61	0.00
110	194	8700	680	852	1.25	4000	642	596	0.93	5.87
200	2689	8028	314	242	0.77	1500	311	185	0.60	1.03

14.6 Geostatistical Analysis and Variography

14.6.1 Geostatistical Analysis

Variography is the study of the spatial variability of attributes (in this case, Sn, Ta and Nb). Isatis was used for geostatistical analysis of the Sn, Ta and Nb. The composited (and where applicable capped) drillhole files were imported in Isatis. Variography was undertaken for each of the three drillholes files, producing Sn variograms, Ta variograms, and Nb variograms. In order to produce variograms of sufficient clarity the mineralised zones in each drillhole file were combined such that a mineralisation variogram and waste variogram could be produced. Table 14-7 below details the mineralised zones combined to produce each variogram, and the associated drillhole file used in the geostatistical analysis.

Table 14-7: KZONES used for Variography

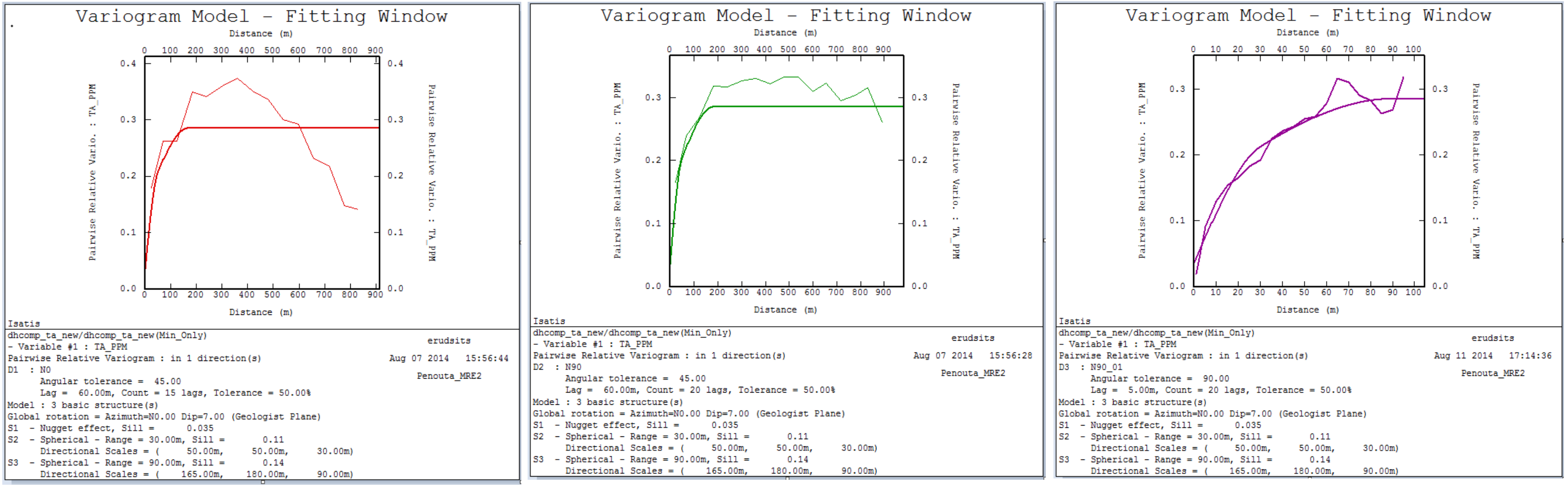
KZONE	Variogram	Drillhole File
100	Tin Mineralisation Variogram	Composited and Capped Tin
200		
110		
400	Tantalum Mineralisation Variogram	Composited Tantalum
410		
900	Tantalum Waste Variogram	Composited Tantalum
500	Niobium Mineralisation Variogram	Composited Niobium
510		
800	Niobium Waste Variogram	Composited Niobium

Geostatistical analysis for Sn, Ta and Nb was completed as follows:

- azimuth and dip of data determined;
- pairwise relative down-hole variograms were calculated and modelled to characterise the nugget effect;
- experimental pairwise relative semi-variograms were calculated to determine directional variograms for along strike, cross strike and down-dip directions;
- pairwise relative directional variograms were modelled for all mineralised domains using the nugget and sill defined in the down-hole variography, and the ranges determined for along strike, cross strike and down-dip directions; and
- all variances were re-scaled for each mineralisation domain to match the total variance for that domain.

The modelled mineralisation and waste variograms for Ta are shown in Figure 14-18, and Figure 14-19. The modelled mineralisation variograms for Sn are shown in Figure 14-20. The modelled mineralisation and waste variograms for Nb are shown in Figure 14-21 and Figure 14-22. The variograms in these figures are represented by along strike (red variograms), down dip (green variograms), and down hole (purple variograms).

The resulting variogram parameters were used in the Quantitative Kriging Neighbourhood Analysis (“QKNA”) study as a guide to determine suitable search parameters. Variography indicated continuity of mineralisation in the along strike and down-dip directions. Waste variograms were of poor quality due to the lack of data in the waste zones. The final variogram parameters for Ta, Sn and Nb are detailed in Table 14-8.



```
dhcomp_ta_new/dhcomp_ta_new(Min_Only)                              erudsits
- Variable #1 : TA_PPM
Pairwise Relative Variogram : in 1 direction(s)              Aug 07 2014   15:56:44
D1   : N0                                                          Penouta_MRE2
      Angular tolerance =  45.00
      Lag =  60.00m, Count = 15 lags, Tolerance = 50.00%
Model : 3 basic structure(s)
Global rotation = Azimuth=N0.00 Dip=7.00 (Geologist Plane)
S1  - Nugget effect, Sill =      0.035
S2  - Spherical - Range = 30.00m, Sill =       0.11
      Directional Scales = (     50.00m,     50.00m,     30.00m)
S3  - Spherical - Range = 90.00m, Sill =       0.14
      Directional Scales = (    165.00m,    180.00m,     90.00m)
```

```
dhcomp_ta_new/dhcomp_ta_new(Min_Only)                              erudsits
- Variable #1 : TA_PPM
Pairwise Relative Variogram : in 1 direction(s)              Aug 07 2014   15:56:28
D2   : N90                                                         Penouta_MRE2
      Angular tolerance =  45.00
      Lag =  60.00m, Count = 20 lags, Tolerance = 50.00%
Model : 3 basic structure(s)
Global rotation = Azimuth=N0.00 Dip=7.00 (Geologist Plane)
S1  - Nugget effect, Sill =      0.035
S2  - Spherical - Range = 30.00m, Sill =       0.11
      Directional Scales = (     50.00m,     50.00m,     30.00m)
S3  - Spherical - Range = 90.00m, Sill =       0.14
      Directional Scales = (    165.00m,    180.00m,     90.00m)
```

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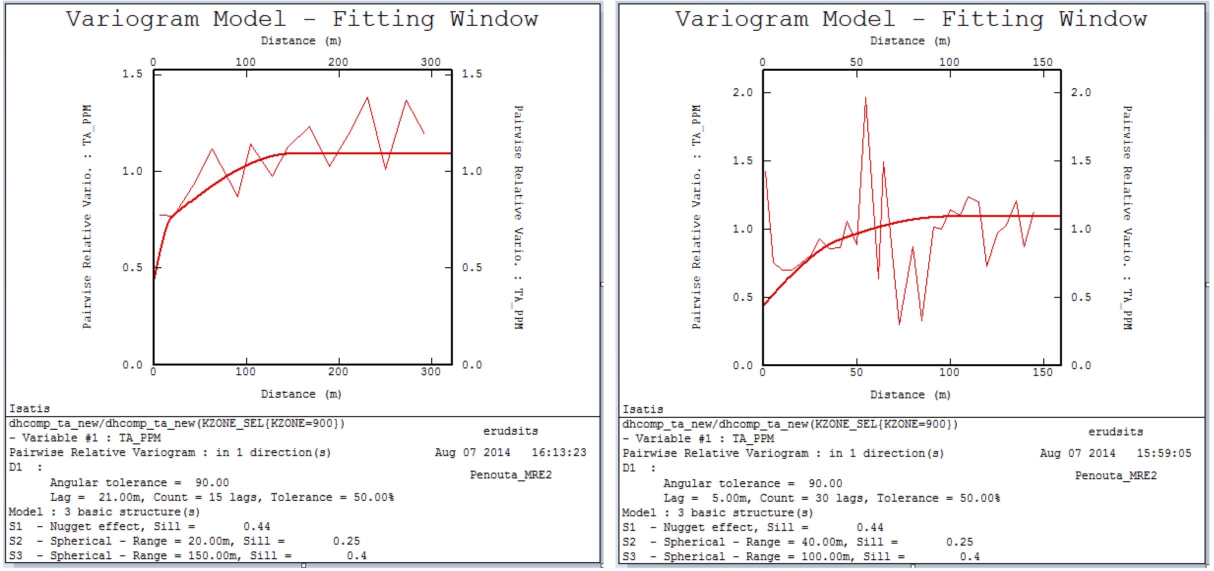
Pairwise Relative Variogram : in 1 direction(s)              Aug 11 2014   17:14:36
D3   : N90_01                                                      Penouta_MRE2
      Angular tolerance =  90.00
      Lag =  5.00m, Count = 20 lags, Tolerance = 50.00%
Model : 3 basic structure(s)
Global rotation = Azimuth=N0.00 Dip=7.00 (Geologist Plane)
S1  - Nugget effect, Sill =      0.035
S2  - Spherical - Range = 30.00m, Sill =       0.11
      Directional Scales = (     50.00m,     50.00m,     30.00m)
S3  - Spherical - Range = 90.00m, Sill =       0.14
      Directional Scales = (    165.00m,    180.00m,     90.00m)
```

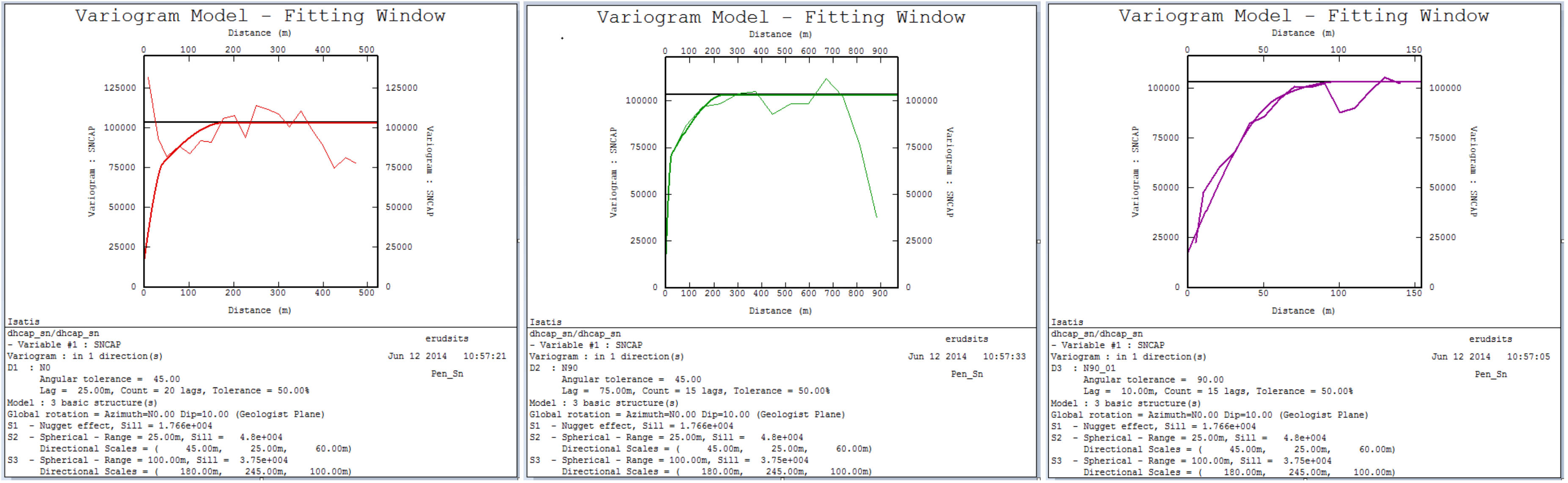
Figure 14-18: Tantalum Mineralised Domain (KZONES400, 410) Pairwise relative semi-variograms



```
dhcomp_ta_new/dhcomp_ta_new(KZONE_SEL{KZONE=900})                  erudsits
- Variable #1 : TA_PPM
Pairwise Relative Variogram : in 1 direction(s)              Aug 07 2014   16:13:23
D1   :                                                             Penouta_MRE2
      Angular tolerance =  90.00
      Lag =  21.00m, Count = 15 lags, Tolerance = 50.00%
Model : 3 basic structure(s)
S1  - Nugget effect, Sill =       0.44
S2  - Spherical - Range = 20.00m, Sill =       0.25
S3  - Spherical - Range = 150.00m, Sill =        0.4
```

```
dhcomp_ta_new/dhcomp_ta_new(KZONE_SEL{KZONE=900})                  erudsits
- Variable #1 : TA_PPM
Pairwise Relative Variogram : in 1 direction(s)              Aug 07 2014   15:59:05
D1   :                                                             Penouta_MRE2
      Angular tolerance =  90.00
      Lag =  5.00m, Count = 30 lags, Tolerance = 50.00%
Model : 3 basic structure(s)
S1  - Nugget effect, Sill =       0.44
S2  - Spherical - Range = 40.00m, Sill =       0.25
S3  - Spherical - Range = 100.00m, Sill =        0.4
```

Figure 14-19: Tantalum Waste Domain (KZONES900) Pairwise relative semi-variograms

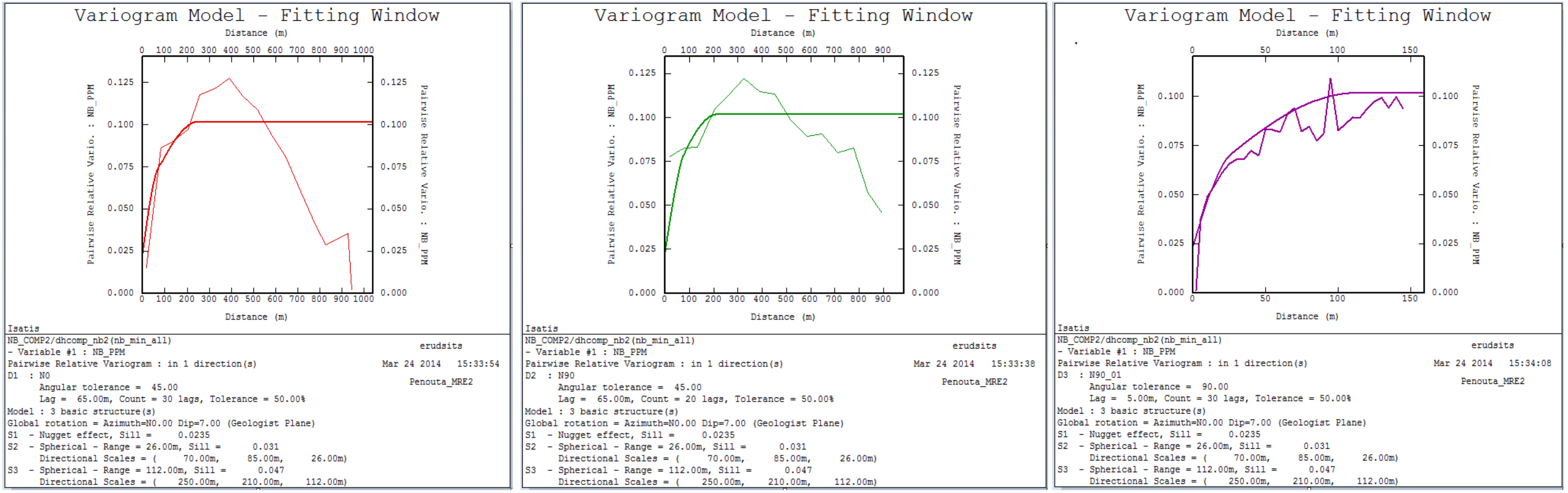


```
dhcap_sn/dhcap_sn                                                    erudsits
- Variable #1 : SNCAP
Variogram : in 1 direction(s)                                   Jun 12 2014   10:57:21
D1   : N0
      Angular tolerance =  45.00                                      Pen_Sn
      Lag =  25.00m, Count = 20 lags, Tolerance = 50.00%
Model : 3 basic structure(s)
Global rotation = Azimuth=N0.00 Dip=10.00 (Geologist Plane)
S1   - Nugget effect, Sill = 1.766e+004
S2   - Spherical - Range = 25.00m, Sill =   4.8e+004
       Directional Scales = (     45.00m,     25.00m,     60.00m)
S3   - Spherical - Range = 100.00m, Sill =  3.75e+004
       Directional Scales = (    180.00m,    245.00m,    100.00m)
```

```
dhcap_sn/dhcap_sn                                                    erudsits
- Variable #1 : SNCAP
Variogram : in 1 direction(s)                                   Jun 12 2014   10:57:33
D2   : N90
      Angular tolerance =  45.00                                      Pen_Sn
      Lag =  75.00m, Count = 15 lags, Tolerance = 50.00%
Model : 3 basic structure(s)
Global rotation = Azimuth=N0.00 Dip=10.00 (Geologist Plane)
S1   - Nugget effect, Sill = 1.766e+004
S2   - Spherical - Range = 25.00m, Sill =   4.8e+004
       Directional Scales = (     45.00m,     25.00m,     60.00m)
S3   - Spherical - Range = 100.00m, Sill =  3.75e+004
       Directional Scales = (    180.00m,    245.00m,    100.00m)
```

```
dhcap_sn/dhcap_sn                                                    erudsits
- Variable #1 : SNCAP
Variogram : in 1 direction(s)                                   Jun 12 2014   10:57:05
D3   : N90_01
      Angular tolerance =  90.00                                      Pen_Sn
      Lag =  10.00m, Count = 15 lags, Tolerance = 50.00%
Model : 3 basic structure(s)
Global rotation = Azimuth=N0.00 Dip=10.00 (Geologist Plane)
S1   - Nugget effect, Sill = 1.766e+004
S2   - Spherical - Range = 25.00m, Sill =   4.8e+004
       Directional Scales = (     45.00m,     25.00m,     60.00m)
S3   - Spherical - Range = 100.00m, Sill =  3.75e+004
       Directional Scales = (    180.00m,    245.00m,    100.00m)
```

Figure 14-20: Tin Mineralised Domains (KZONES 100, 200, 110) pairwise relative semi-variograms

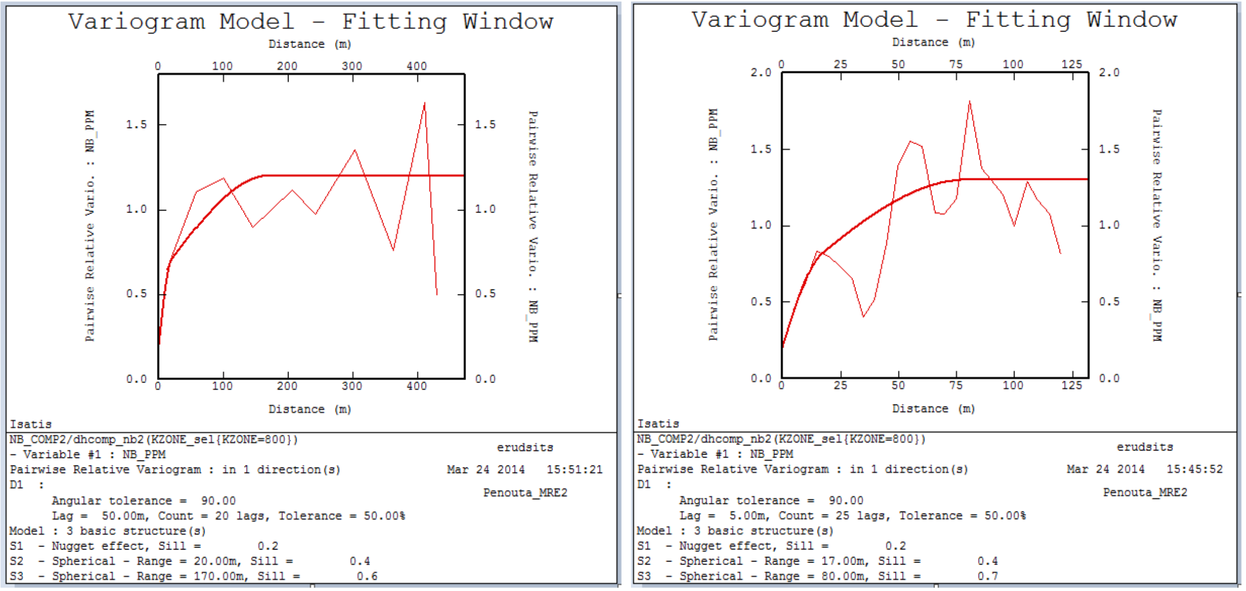


```
NB_COMP2/dhcomp_nb2(nb_min_all)                                      erudsits
- Variable #1 : NB_PPM
Pairwise Relative Variogram : in 1 direction(s)                 Mar 24 2014   15:33:54
D1   : N0
      Angular tolerance =  45.00                                   Penouta_MRE2
      Lag =  65.00m, Count = 30 lags, Tolerance = 50.00%
Model : 3 basic structure(s)
Global rotation = Azimuth=N0.00 Dip=7.00 (Geologist Plane)
S1   - Nugget effect, Sill =     0.0235
S2   - Spherical - Range = 26.00m, Sill =      0.031
       Directional Scales = (     70.00m,     85.00m,     26.00m)
S3   - Spherical - Range = 112.00m, Sill =      0.047
       Directional Scales = (    250.00m,    210.00m,    112.00m)
```

```
NB_COMP2/dhcomp_nb2(nb_min_all)                                      erudsits
- Variable #1 : NB_PPM
Pairwise Relative Variogram : in 1 direction(s)                 Mar 24 2014   15:33:38
D2   : N90
      Angular tolerance =  45.00                                   Penouta_MRE2
      Lag =  65.00m, Count = 20 lags, Tolerance = 50.00%
Model : 3 basic structure(s)
Global rotation = Azimuth=N0.00 Dip=7.00 (Geologist Plane)
S1   - Nugget effect, Sill =     0.0235
S2   - Spherical - Range = 26.00m, Sill =      0.031
       Directional Scales = (     70.00m,     85.00m,     26.00m)
S3   - Spherical - Range = 112.00m, Sill =      0.047
       Directional Scales = (    250.00m,    210.00m,    112.00m)
```

```
NB_COMP2/dhcomp_nb2(nb_min_all)                                      erudsits
- Variable #1 : NB_PPM
Pairwise Relative Variogram : in 1 direction(s)                 Mar 24 2014   15:34:08
D3   : N90_01
      Angular tolerance =  90.00                                   Penouta_MRE2
      Lag =  5.00m, Count = 30 lags, Tolerance = 50.00%
Model : 3 basic structure(s)
Global rotation = Azimuth=N0.00 Dip=7.00 (Geologist Plane)
S1   - Nugget effect, Sill =     0.0235
S2   - Spherical - Range = 26.00m, Sill =      0.031
       Directional Scales = (     70.00m,     85.00m,     26.00m)
S3   - Spherical - Range = 112.00m, Sill =      0.047
       Directional Scales = (    250.00m,    210.00m,    112.00m)
```

Figure 14-21: Niobium Mineralised Domains (KZONES 500, 510, 800) pairwise relative semi-variograms



```
NB_COMP2/dhcomp_nb2(KZONE_sel{KZONE=800})
- Variable #1 : NB_PPM                                       erudsits
Pairwise Relative Variogram : in 1 direction(s)        Mar 24 2014   15:51:21
D1  :
                                                          Penouta_MRE2
      Angular tolerance =  90.00
      Lag =  50.00m, Count = 20 lags, Tolerance = 50.00%
Model : 3 basic structure(s)
S1  - Nugget effect, Sill =        0.2
S2  - Spherical - Range = 20.00m, Sill =        0.4
S3  - Spherical - Range = 170.00m, Sill =        0.6
```

```
NB_COMP2/dhcomp_nb2(KZONE_sel{KZONE=800})
- Variable #1 : NB_PPM                                       erudsits
Pairwise Relative Variogram : in 1 direction(s)        Mar 24 2014   15:45:52
D1  :
                                                          Penouta_MRE2
      Angular tolerance =  90.00
      Lag =  5.00m, Count = 25 lags, Tolerance = 50.00%
Model : 3 basic structure(s)
S1  - Nugget effect, Sill =        0.2
S2  - Spherical - Range = 17.00m, Sill =        0.4
S3  - Spherical - Range = 80.00m, Sill =        0.7
```

Figure 14-22: Niobium Mineralised Domains (KZONE 900) pairwise relative semi-variograms

Table 14-8: Summary of tin, tantalum and niobium semi-variogram parameters

Element / Estimate	KZONE	Rotation (X)	Rotation (Y)	Rotation (Z)	Nugget	Range 1 Strike	Range 1 Dip	Range 1 Across	Sill1	Range 2 Strike	Range 2 Dip	Range 2 Across	Sill2
Sn	100	0	0	7	32993	45	25	60	89665	180	245	100	70051
	200	0	0	12	5870	45	25	60	15954	180	245	100	12464
	110	0	0	5	60915	45	25	60	165549	180	245	100	129335
Ta	400	0	0	7	112	50	50	30	353	165	180	90	450
	410	0	0	5	141	50	50	30	442	165	180	90	563
Internal Waste (Ta)	900	0	0	7	58	20	20	40	33	150	150	100	53
Nb	500	0	0	7	44	70	85	26	58	250	210	112	88
	510	0	0	7	83	70	85	26	110	250	210	112	167
Internal Waste (Nb)	800	0	0	0	25	20	20	17	49	170	170	80	74

14.7 Block Model and Grade Estimation

14.7.1 Block Model Framework

SRK created a 3D interpretation and geological block model in Datamine using European Datum 1950, Zone 29 N. A prototype of 25 x 25 x 10 m parent blocks was selected, with sub-blocking allowed along the boundaries to a minimum of 6.25 m along strike, 6.25 m across strike and 2.5 m in the vertical direction (Table 14-9). This block dimension was chosen as it reflected the drillhole spacing. Within the parent blocks discretisation points were 10 x 10 x 4 in the X,Y and Z directions respectively.

Table 14-9: Geological Block Model Dimensions for the Penouta Project

Dimension	Origin	Block Size	Number of Blocks
X	662350	25	114
Y	4670450	25	134
Z	500	10	130

Three separate block models were created using the prototype in Table 14-9. This was to allow estimation of Sn, Ta, and Nb into separate block models. The three empty block models were coded using the Sn, Ta, and Nb mineralisation wireframes. Unique codes were developed for use in coding the block model and during estimation, Table 14-10, Table 14-11 and Table 14-12 below describe those codes.

Table 14-10: Summary of fields used during estimation of Tantalum

Field Name	Code	Description
KZONE	400	Mineralised Lens
	110	Vein
	900	Internal Waste
Grade	TA_EST	Ordinary Kriged ("OK") Ta Grade
	TA_IDW	Inverse Distance Weighted ("IDW") Ta Grade
Search Parameters	NSUM_TA	Number of Samples (OK)
	SVOL_TA	Search Volume Number (OK)
	VAR_TA	Variance (OK)
	SNSMID_TA	Number of Samples (IDW)
	SVLID_TA	Search Volume Number (IDW)
	VARID_TA	Variance (IDW)
Class	1	Measured
	2	Indicated
	3	Inferred
	4	Unclassified

Table 14-11: Summary of Fields Used During Estimation of Tin

Field Name	Code	Description
KZONE	100	Mineralised Lens
	200	Mineralised Lens
	110	Vein
Grade	SN_EST	Ordinary Kriged ("OK") Sn Grade
	SN_IDW	Inverse Distance Weighted ("IDW") Sn Grade
Search Parameters	NSUM_SN	Number of Samples (OK)
	SVOL_SN	Search Volume Number (OK)
	VAR_SN	Variance (OK)
	SNSMID_SN	Number of Samples (IDW)
	SVLID_SN	Search Volume Number (IDW)
	VARID_SN	Variance (IDW)
Class	1	Measured
	2	Indicated
	3	Inferred
	4	Unclassified

Table 14-12: Summary of Fields Used During Estimation of Niobium

Field Name	Code	Description
KZONE	500	Mineralised Lens
	510	Vein
	800	Internal Waste
Grade	NB_EST	Ordinary Kriged ("OK") Nb Grade
	NB_IDW	Inverse Distance Weighted ("IDW") Nb Grade
Search Parameters	NSUM_NB	Number of Samples (OK)
	SVOL_NB	Search Volume Number (OK)
	VAR_NB	Variance (OK)
	SNSMID_NB	Number of Samples (IDW)
	SVLID_NB	Search Volume Number (IDW)
	VARID_NB	Variance (IDW)
Class	1	Measured
	2	Indicated
	3	Inferred
	4	Unclassified

14.7.2 Sensitivity Analysis

A QKNA study was conducted in Datamine to determine the optimum parameters for estimation of the three separate block models (Sn, Ta, and Nb). A QKNA study was conducted for each of the three block models. The exercise was based on varying kriging parameters during a number of different scenarios. The slope of regression, kriging variances, block estimates and percent of blocks filled in each search were recorded and compared for each scenario. The following parameters were changed during the QKNA exercise:

- minimum number of samples;
- maximum number of samples; and
- search ellipse sizes.

Analysis of the results of the QKNA scenarios for the three separate models indicated that using a search ellipse slightly larger than the variogram ranges produced in all three cases a more robust estimate for both mineralised zones and internal waste zones. This was based on better slope of regressions combined with the better distribution of blocks filled in the first and second searches. The different QKNA scenarios for the three models (Sn, Ta, and Nb) are detailed in Table 14-13, Table 14-14 and Table 14-15.

Table 14-13: Summary of Different QKNA Parameters for Tantalum

KZONE	Run Number	Search Dist 1	Search Dist 2	Search Dist 3	Min 1	Max1	Search Volume Factor 2	Min 2	Max 2	Search Volume Factor 3	Min 3	Max 3	Maxkey
400	QKNA1	50	50	30	6	24	2	6	24	5	6	24	3
	QKNA2	55	55	15	6	24	2	6	32	5	6	32	2
	QKNA3	55	55	15	8	24	2	8	24	5	8	24	3
	QKNA4	50	50	30	6	32	2	6	32	5	6	32	3
	QKNA5	50	50	30	8	32	2	8	32	5	8	32	3
	QKNA6	50	50	30	6	40	2	6	40	5	6	24	3
	QKNA7	50	50	30	8	40	2	8	40	5	6	32	3
	QKNA8	110	110	30	6	32	2	6	24	5	6	24	3
	QKNA9	110	110	30	8	32	2	6	32	5	6	24	3
	QKNA10	110	110	30	8	32	2	6	32	5	6	24	3
410	QKNA1	50	50	30	6	24	2	6	24	5	6	24	3
	QKNA2	50	50	36	6	24	2	6	32	5	6	32	3
	QKNA3	50	50	36	6	24	2	6	24	5	6	24	3
	QKNA4	50	50	36	8	32	2	8	32	5	8	32	3
	QKNA5	50	50	30	8	40	2	8	40	5	8	32	3
	QKNA6	50	50	30	12	40	2	12	40	5	6	32	3
	QKNA7	50	50	30	8	24	2	8	24	5	6	24	3
	QKNA8	65	60	30	8	32	2	6	24	5	6	24	2
	QKNA9	75	75	30	8	32	2	8	32	5	6	24	3
	QKNA10	65	60	18	8	32	2	8	32	5	6	24	3
900	QKNA1	50	50	30	6	24	2	6	24	5	6	24	3
	QKNA2	50	50	36	6	24	2	6	32	5	6	32	3
	QKNA3	50	50	36	8	24	2	8	24	5	8	24	3
	QKNA4	50	50	36	8	32	2	8	32	5	8	32	3
	QKNA5	50	50	30	8	40	2	8	40	5	8	32	3
	QKNA6	110	110	30	6	24	2	6	24	5	6	24	3
	QKNA7	110	110	30	8	32	2	8	32	5	6	32	3
	QKNA8	110	110	30	6	32	2	6	24	5	6	24	3
	QKNA9	110	110	30	8	32	2	6	32	5	6	24	3
	QKNA10	110	110	30	8	32	2	6	32	5	6	24	3

Table 14-14: Summary of Different QKNA Parameters for Tin

KZONE	Run Number	Search Dist 1	Search Dist 2	Search Dist 3	Min 1	Max1	Search Volume Factor 2	Min 2	Max 2	Search Volume Factor 3	Min 3	Max 3	Maxkey
100	QKNA1	45	25	60	6	24	2	6	24	5	6	24	3
	QKNA2	45	25	60	8	32	2	8	32	5	8	24	3
	QKNA3	65	55	30	6	24	2	6	24	5	6	24	3
	QKNA4	65	55	30	8	24	2	8	24	5	8	32	3
	QKNA5	65	55	30	6	32	2	6	32	5	6	24	3
	QKNA6	65	55	30	6	32	2	6	32	5	6	32	4
	QKNA7	65	55	30	6	40	2	6	32	5	6	32	3
	QKNA8	65	55	30	8	32	2	6	32	5	6	32	4
	QKNA9	155	110	18	6	32	3	6	32	5	6	32	3
200	QKNA1	45	25	60	6	24	2	6	24	5	6	24	3
	QKNA2	45	25	60	8	32	2	8	32	5	8	24	3
	QKNA3	65	55	30	6	24	2	6	24	5	6	24	3
	QKNA4	65	55	30	6	32	2	6	32	5	6	32	3
	QKNA5	65	55	30	6	32	2	6	32	5	6	24	3
	QKNA6	125	115	30	8	32	2	6	32	5	6	32	3
	QKNA7	125	115	30	8	40	2	8	40	5	6	32	3
	QKNA8	125	115	30	8	32	2	6	32	5	6	32	4
	QKNA9	155	110	18	6	40	3	6	40	5	6	40	3
110	QKNA1	45	25	60	6	24	2	6	24	5	6	24	3
	QKNA2	45	25	60	8	32	2	8	32	5	8	24	3
	QKNA3	65	55	30	6	24	2	6	24	5	6	24	3
	QKNA4	65	55	30	8	32	2	8	32	5	8	32	3
	QKNA5	100	100	30	6	32	2	6	32	5	6	32	3
	QKNA6	65	55	30	6	32	2	6	32	5	6	32	3
	QKNA7	65	55	30	6	40	2	6	40	5	6	24	3
	QKNA8	65	55	30	6	32	2	6	32	5	6	32	4
	QKNA9	155	110	18	8	32	3	6	32	5	6	32	3

Table 14-15: Summary of Different QKNA Parameters for Niobium

KZONE	Run Number	Search Dist 1	Search Dist 2	Search Dist 3	Min 1	Max1	Search Volume Factor 2	Min 2	Max 2	Search Volume Factor 3	Min 3	Max 3	Maxkey
500	QKNA1	70	85	26	6	24	2	6	24	5	6	24	3
	QKNA2	70	85	26	8	24	2	8	24	5	8	24	3
	QKNA3	70	85	26	6	32	2	6	32	5	6	32	3
	QKNA4	70	85	26	6	40	2	6	40	5	6	24	3
	QKNA5	110	110	26	6	32	2	6	24	5	6	24	3
	QKNA6	110	110	26	8	32	2	8	32	5	6	24	3
	QKNA7	110	110	26	6	40	2	6	32	5	6	24	3
	QKNA8	110	110	26	6	32	2	6	32	5	6	24	2
	QKNA9	110	110	26	6	32	2	6	24	5	6	24	4
	QKNA10	110	110	26	6	40	2	6	24	5	6	24	3
510	QKNA1	70	85	26	6	24	2	6	24	5	6	24	3
	QKNA2	70	85	26	8	24	2	8	24	5	8	24	3
	QKNA3	70	85	26	6	32	2	6	32	5	6	32	3
	QKNA4	70	85	26	6	40	2	6	40	5	6	24	3
	QKNA5	70	85	26	8	32	2	8	24	5	6	24	3
	QKNA6	110	85	26	8	32	2	8	32	5	6	24	3
	QKNA7	110	85	26	6	32	2	6	32	5	6	24	3
	QKNA8	110	85	26	6	32	2	6	32	5	6	24	2
	QKNA9	110	85	26	6	32	2	6	24	5	6	24	4
	QKNA10	110	85	26	6	24	2	6	24	5	6	24	3
800	QKNA1	70	85	26	6	24	2	6	24	5	6	24	3
	QKNA2	70	85	26	8	24	2	8	24	5	8	24	3
	QKNA3	70	85	26	6	32	2	6	32	5	6	32	3
	QKNA4	70	85	26	6	40	2	6	40	5	6	24	3
	QKNA5	110	110	26	6	32	2	6	24	5	6	24	3
	QKNA6	110	110	26	8	32	2	8	32	5	6	24	3
	QKNA7	110	110	26	6	40	2	6	32	5	6	24	3
	QKNA8	110	110	26	6	32	2	6	32	5	6	24	4
	QKNA9	110	110	26	6	40	2	6	24	5	6	24	4
	QKNA10	110	85	26	6	24	2	6	24	5	6	24	3

All grade estimation was undertaken in Datamine. Ordinary kriging ("OK") was used for grade interpolation for all three estimations. All boundaries have been treated as hard boundaries during the estimation process. The final kriging parameters are based on variography and a QKNA study (Section 14.7.2). A summary of the final kriging parameters for Sn, Ta and Nb is presented in Table 14-16. The second and third searches were expanded by a multiplier factor of 2 and 5 respectively; the latter ensured all blocks in the model were estimated. SRK has used dynamic anisotropy tools during estimation for Sn, Ta and Nb. Dynamic anisotropy uses angle data generated from the mineralisation wireframe to assign dip and dip direction to every block in the model, appropriate filtering was carried out to ensure angles not consistent with the trend of deposit were eliminated prior to estimation. The search ellipse is rotated upon estimation of the block by honouring the associated dip and dip direction of that block. This procedure ensures that the block estimates honour the local changes in orientation of geological and grade continuity.

Table 14-16: Summary of final kriging parameters for tantalum, tin and niobium

Element	KZONE	Search Dist 1	Search Dist 2	Search Dist 3	Search Angle 1	Search Angle 2	Search Angle 3	Search Axis 1	Search Axis 2	Search Axis 3	Min 1	Max1	Search Volume Factor 2	Min 2	Max 2	Search Volume Factor 3	Min 3	Max 3	Maxkey
Sn	100	65	55	30	0	0	15	2	1	3	6	32	2	6	32	5	6	32	4
	200	125	115	30	0	0	15	2	1	3	8	32	2	6	32	5	6	32	4
	110	65	55	30	0	0	15	2	1	3	6	32	2	6	32	5	6	32	4
Ta	400	110	110	30	0	0	15	2	1	3	8	32	2	6	32	5	6	24	3
	410	50	50	30	0	0	15	2	1	3	8	24	2	8	24	5	6	24	3
Internal Waste (Ta)	900	110	110	30	0	0	15	2	1	3	6	32	2	6	24	5	6	24	3
Nb	500	110	110	26	0	0	15	2	1	3	6	32	2	6	24	5	6	24	4
	510	110	85	26	0	0	15	2	1	3	6	32	2	6	32	5	6	24	3
Internal Waste (Nb)	800	110	110	26	0	0	15	2	1	3	6	32	2	6	32	5	6	24	4

14.8 Model Validation

SRK has undertaken a number of methods of validation on the resulting estimated model, to confirm that the modelled estimates represent the input sample data on both local and global scales, and to check that the estimate is not biased. Methods of validation used include:

- visual inspection of block grades in comparison with drillhole data (in plan and cross section);
- sectional validation of the mean samples grades in comparison to the mean model grades;
- comparison of block model statistics; and
- comparing OK and Inverse Distance Weighting estimations.

Validation was undertaken on all three models, prior to the tantalum and tin models being added together to enable tantalum equivalency to be calculated.

14.8.1 Validation

Visual Validation

Visual validation provides a comparison of the interpolated block model on a local scale. A thorough visual inspection of cross-sections, long-sections and bench/level plans, comparing the sample grades with the block grades has been undertaken, on all three models. This demonstrates a good comparison between local block estimates and nearby samples without excessive smoothing in the all three block models. Figure 14-23, Figure 14-24 and Figure 14-25 are cross-section examples of visual validation checks. These cross-sections indicate how the overall block grades correspond with composite samples grades, for Ta, Sn, and Nb.

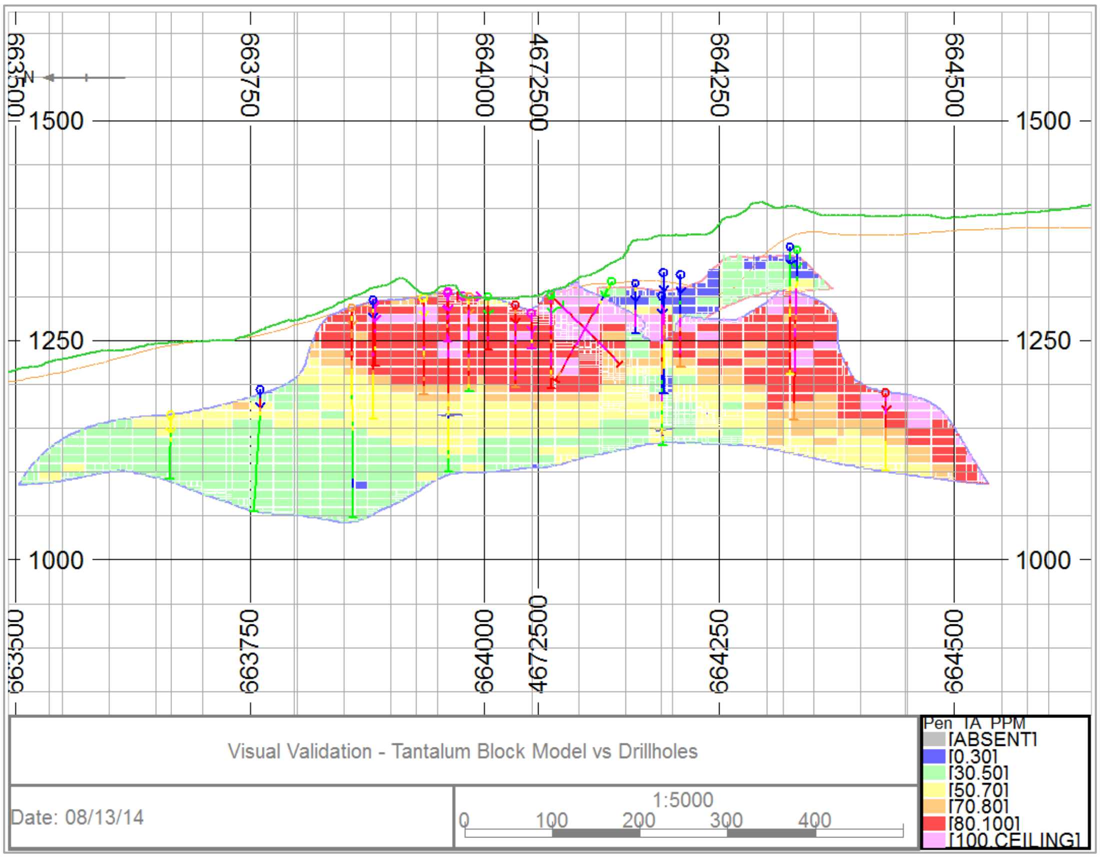


Figure 14-23: Ta model validated against drillhole data

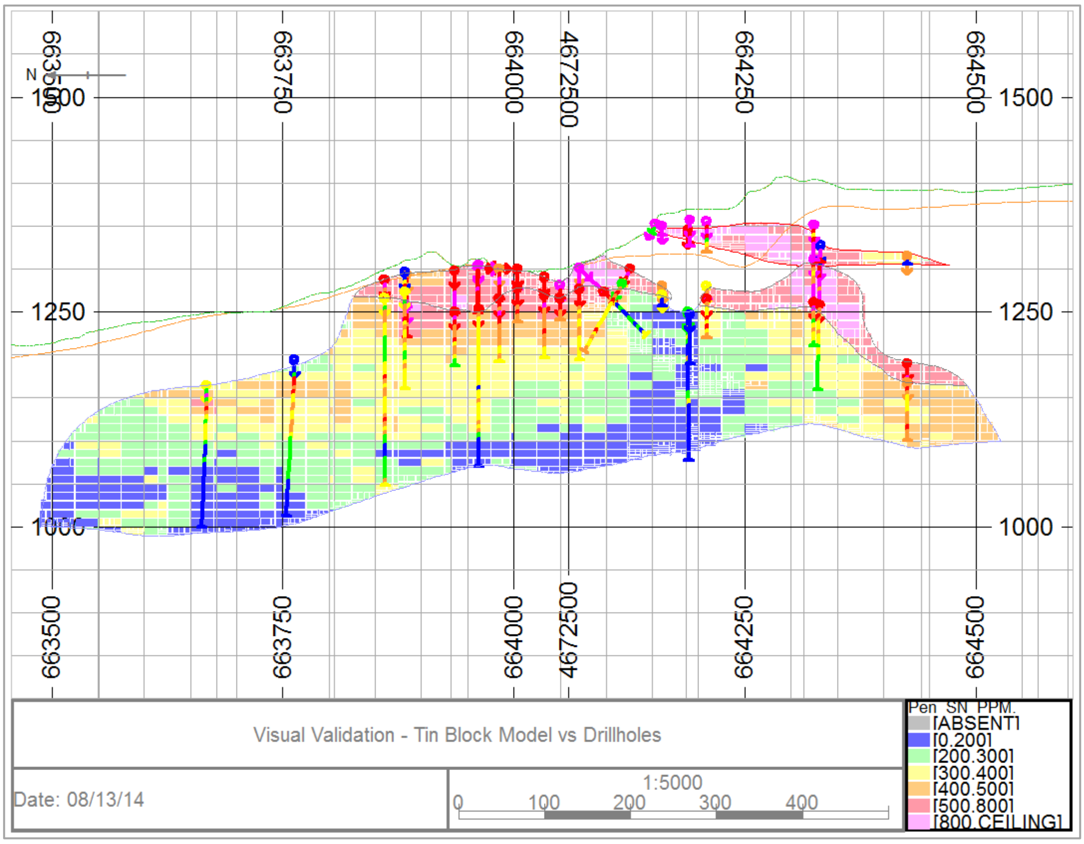


Figure 14-24: Sn model validated against drillhole data

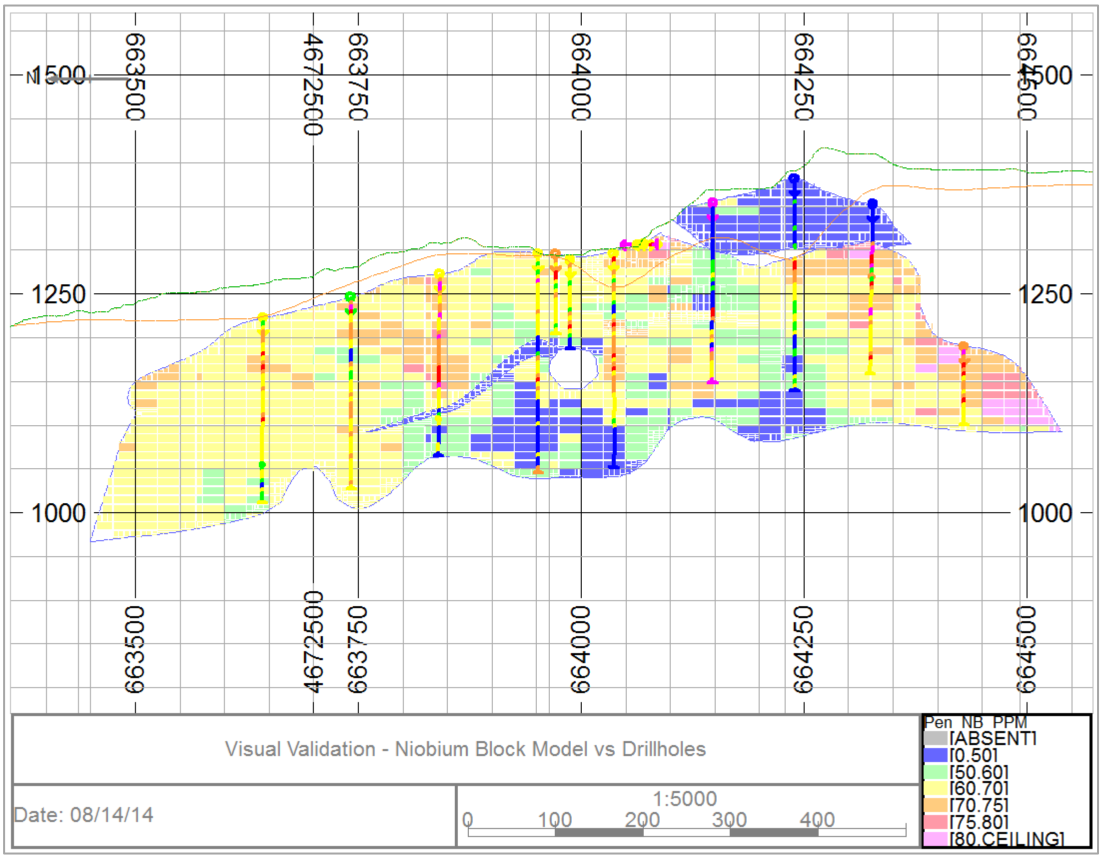


Figure 14-25: Nb model validated against drillhole data

Swath Plot Validation

Validation plots have been created for all mineralised zones within the three block models. These plots compare the mean estimated block grade to the mean sample input grade within a series of co-ordinates (easting, northing, and elevation). The results are displayed in a graphical format which can be checked for discrepancies between mean block and mean sample grades. For Sn, and Nb the validation plots show a good correlation between model grades and sample grades, confirming that no significant bias has been introduced during the estimation process. For Ta the validation plots show a slightly lower model grade compared with the sample grades in the easting and northing directions, although good correlation is seen in the elevation. SRK does not expect this will have a material impact on the overall grade. Validation plots for mineralised zones for Sn, Ta and Nb are shown in Figure 14-26, Figure 14-27, and Figure 14-28 respectively.

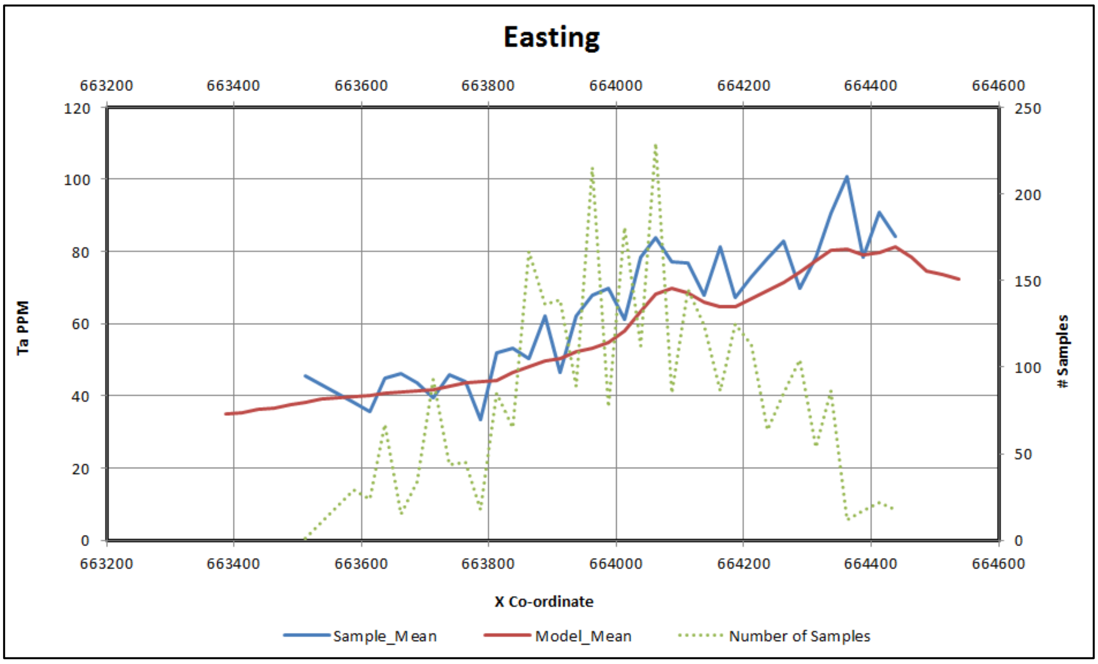


Figure 14-26: **Validation Plot (Easting Direction) for KZONE400 in the tantalum model, showing block estimates versus sample mean (25 m interval)**

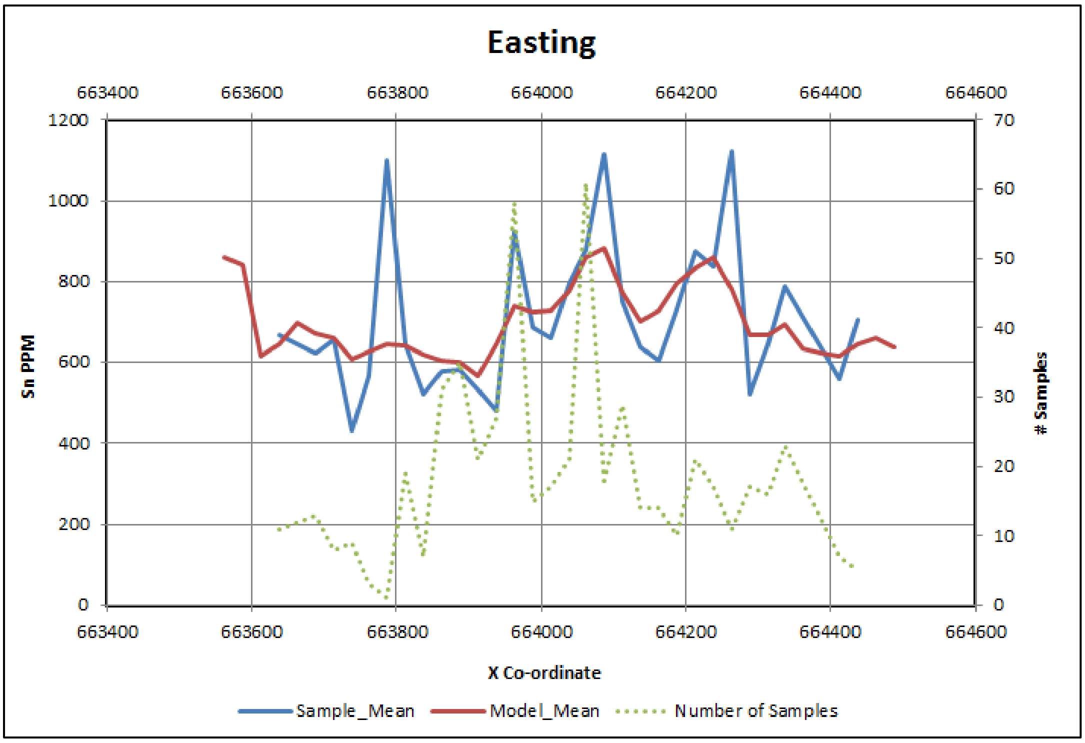


Figure 14-27: **Validation plot (Northing Direction) for KZONE100 in the tin model, showing block estimates versus sample mean (25 m interval)**

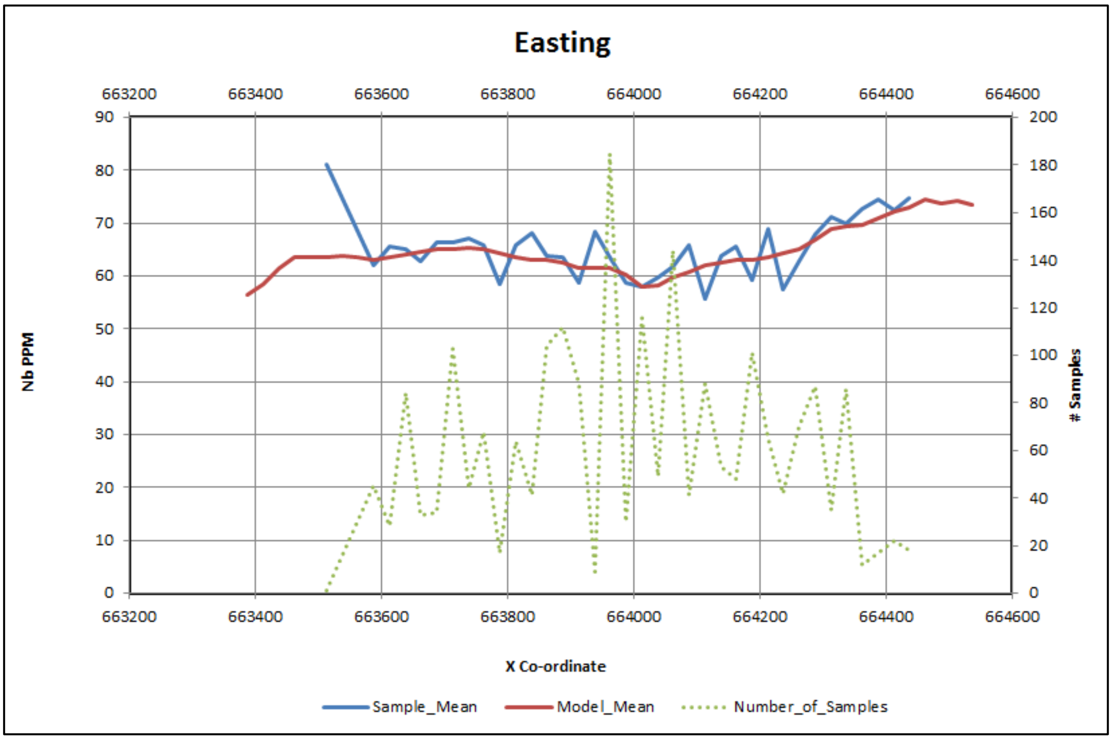


Figure 14-28: Validation Plot (Northing Direction) for KZONE500 in the niobium model, showing block estimates versus sample mean (25 m interval)

Statistical Validation

Classical statistics were calculated for the estimated block grades and compared with the declustered drillhole statistics associated with each drillhole file used in the estimation of each block model. The absolute difference in the declustered and block model means was considered immaterial for all mineralised domains. The comparison between the declustered composite and block model statistics for Ta, Sn and Nb are shown in Table 14-17, Figure 14-19 and Table 14-19.

Table 14-17: Comparison statistics for Ta declustered composites versus block model grades

	Ta Declustered Composite Statistics (ppm)				Ta Block Statistics (ppm)				
KZONE	**Max**	**Mean**	**Std Dev**	**CoV**	**Max**	**Mean**	**Std Dev**	**CoV**	**Mean Absolute Difference (%)**
400	315	58	28	0.48	192	58	22	0.37	0.05
410	164	35	31	0.88	129	35	16	0.45	0.35
900	62	8	12	1.49	30	11	5	0.45	34.73

Table 14-18: Comparison statistics for Sn declustered composites versus block model grades

	Sn Declustered Composite Statistics (ppm)				Sn Block Statistics (ppm)				
KZONE	**Max**	**Mean**	**Std Dev**	**CoV**	**Max**	**Mean**	**Std Dev**	**CoV**	**Mean Absolute Difference (%)**
100	3411	663	427	0.64	1746	696	217	0.31	4.84
110	8700	624	723	1.16	1652	619	258	0.42	0.81
200	8028	291	217	0.75	829	291	104	0.36	0.28

Table 14-19: Comparison statistics for Nb declustered composites versus block model grades

	Nb Declustered Composite Statistics (ppm)				Nb Block Statistics (ppm)				
KZONE	Max	Mean	Std Dev	CoV	Max	Mean	Std Dev	CoV	Mean Absolute Difference (%)
500	145	63	14	0.23	91	64	8	0.13	0.54
510	105	37	16	0.44	92	37	8	0.23	1.29
800	72	7	11	1.57	41	9	7	0.72	24.63

IDW Validation

Validation of the estimation process was also conducted using an Inverse Distance Weighting ("IDW") estimate as a comparison with the OK estimate. A comparison between the IDW and OK estimation for Ta is presented in Figure 14-29 as a Grade-Tonnage Curve. A Grade-Tonnage comparison of IDW versus OK for Sn is presented in Figure 14-30. A Grade-Tonnage comparison of IDW versus OK for Nb is presented in Figure 14-31. The different estimation methods produce similar tonnes and grade, indicating the appropriateness of the parameters used for estimation, and the robustness of the final estimate.

Based on the visual, sectional and statistical validation, SRK has accepted the grades in the Sn, Ta and Nb block models. The resultant block grade distribution is considered appropriate for the mineralisation style. In areas of limited sampling, the block grade estimates have been produced using expanded search ellipses. Localised comparisons of composite grades to block estimates will be less accurate in these areas.

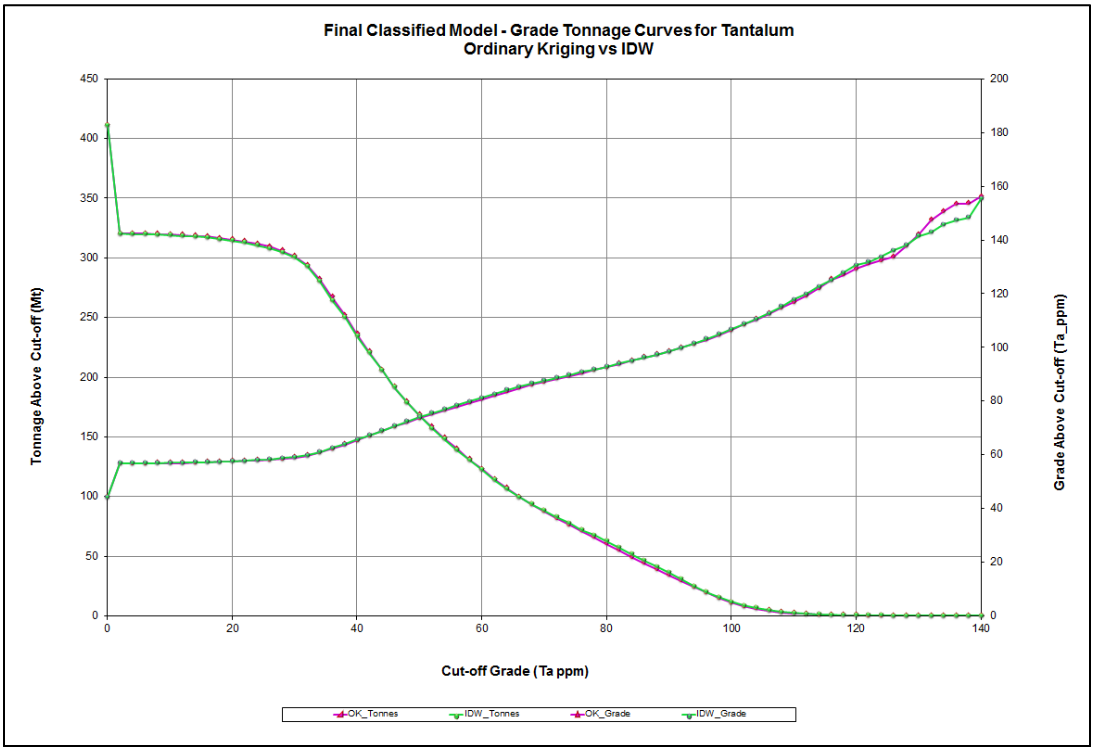


Figure 14-29: Grade-Tonnage comparison for tantalum showing Inverse Distance Weighted estimate versus an Ordinary Kriged estimate

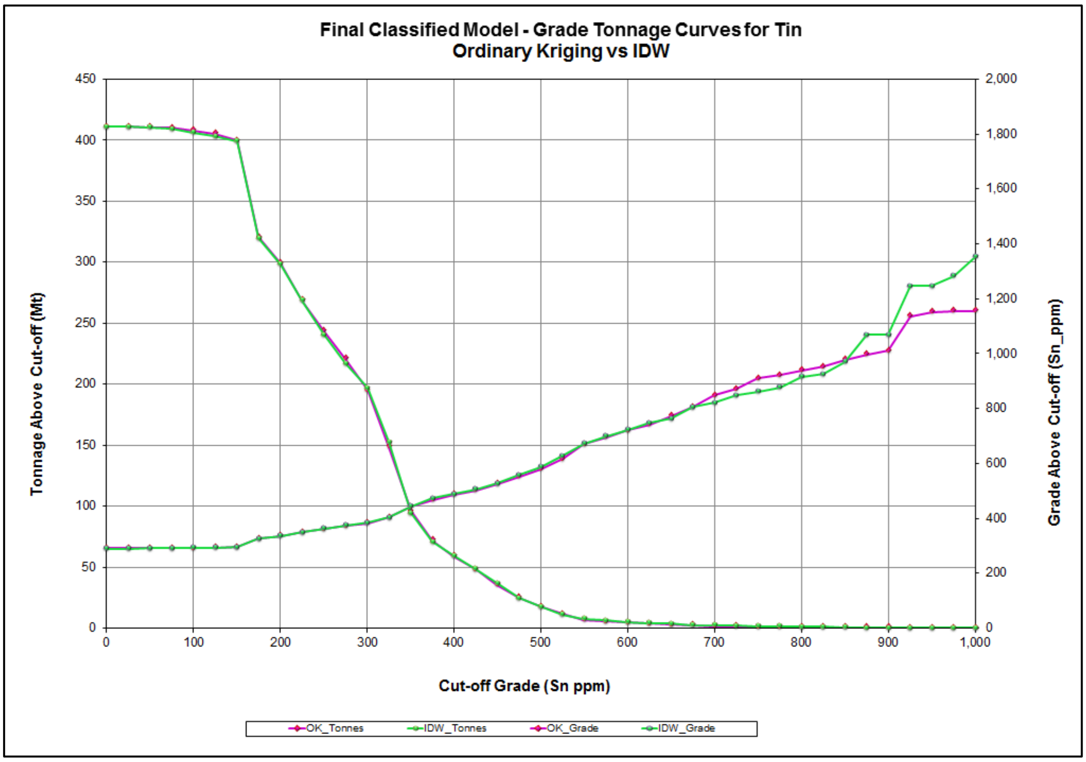


Figure 14-30: Grade-Tonnage comparison for tin showing Inverse Distance Weighted estimate versus an Ordinary Kriged estimate

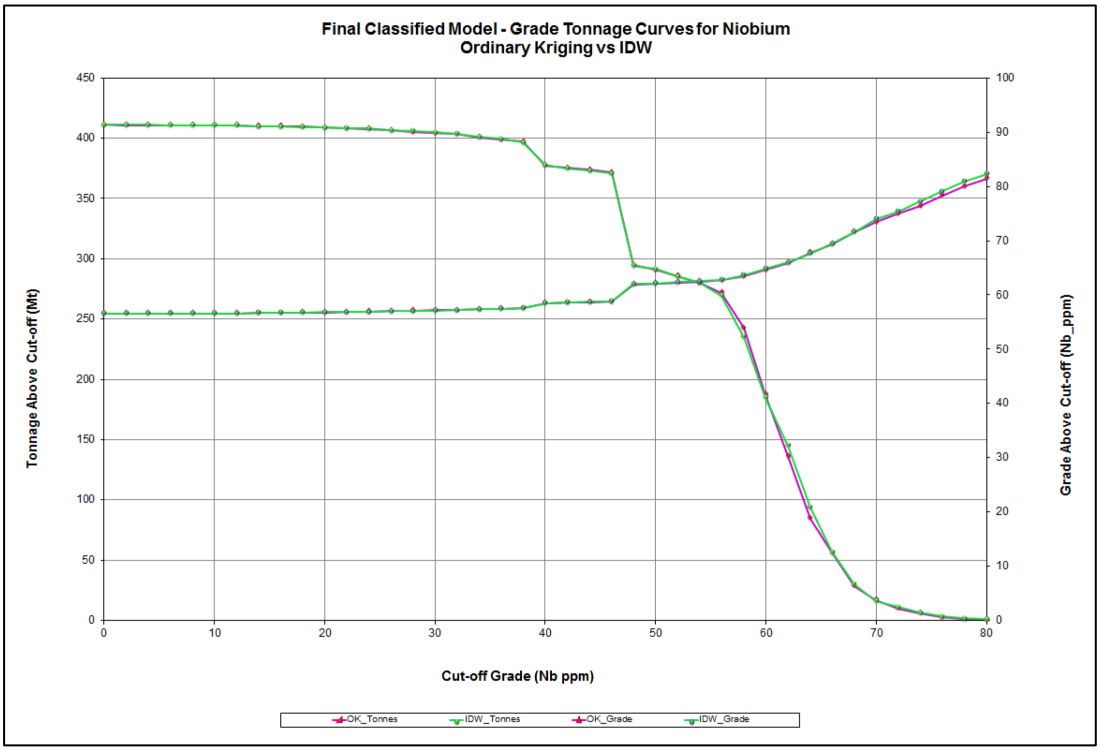


Figure 14-31: Grade-Tonnage comparison for niobium showing Inverse Distance Weighted estimate versus an Ordinary Kriged estimate

14.9 Ta_2O_5 Equivalent Grade

Basis

SMS provided SRK with metal prices and recoveries for Sn and Ta_2O_5 shown in Table 14-20. Metal prices were sourced from long term (5 year) forecast data for Sn (source: Fastmarkets) and 3-year trailing average price data for Ta_2O_5 (source: Argus Metals), with ~30% uplift applied to reflect potential for assessing Mineral Resources.

A discount has been applied to the Sn and Ta_2O_5 Mineral Resource prices, prior to use in the updated MRE, to account for potential penalties anticipated by the Company related to their experience from re-processing and historical sales (2-years) of old tailings material at the Project. Penalties on Sn and Ta_2O_5 concentrate sales encountered by the Company (which have the potential to also impact on hard rock sources of mineralisation) include lower than market concentrate grades or presence of elevated impurities such as As and Fe.

No new metallurgical test work has been completed for hard rock material by SMS since the previous MRE; therefore, processing recoveries remain unchanged for Ta_2O_5 (at 75%). However, based on SMS's preference and their experience from operating the current plant (for the processing old tailings), SMS considers that a processing recovery of 75% for Sn to be more appropriate for the updated MRE, which compares with 80% used in the previous MRE.

SRK considers that the updated metal prices and processing recoveries are reasonable assumptions for use in the 2021 MRE; however, metallurgical parameters will need to be further verified for hard rock material through a representative metallurgical test work program during the next level of study.

These parameters were used to calculate multipliers per unit grade for Sn and Ta_2O_5, and to derive a Ta_2O_5 equivalent (Ta_2O_5Eq) grade for use in reporting the Mineral Resource (Section 14.11). SRK did not include Nb in calculation of the Ta_2O_5 equivalent grade as the Company does not generate revenue directly from Nb; however, SRK note that a Nb credit is given for its presence in the Ta_2O_5 concentrate, which has been considered as well as the discount when deriving Ta_2O_5 price from historical sales information. The Ta_2O_5 equivalent multiplier grade was 0.13483.

Table 14-20: SMS Metal Prices, and processing recoveries

Parameter	Sn	Ta2O5	Unit
Mineral Resource Price[1]	27	203	USD / kg
Discounted Mineral Resource Price[2]	24	178	USD / kg
Processing Recovery	75	75	%
Ta2O5 Equivalence multiplier on Grade	0.13483	1	-

Notes:

[1] Long term price for Sn and 3-year trailing average price for Ta_2O_5, with ~30% uplift to reflect potential for assessing Mineral Resources

[2] Discount applied to Mineral Resource Price to account for penalties anticipated by the Company

Block Model Application

Ta_2O_5 ppm was derived from Ta in the block model based on the following formula based on atomic mass ratios: $Ta_2O_5 = Ta / 0.818967$.

The ADDMOD process was used to combine the final Ta (and Ta_2O_5), Sn and Nb estimated block models. For each block, a Ta_2O_5 equivalent grade was calculated based on the formula shown below and this resultant model was used for pit shell optimisation and MRE reporting purposes.

[Ta_2O_5 equivalent (Ta_2O_5 Eq) = Ta_2O_5 + (Sn * 0.13483)]

14.10 Mineral Resource Classification

Block model quantities and grade estimates for the Penouta project were classified according to the CIM Definition Standards for Mineral Resources and Mineral Reserves (December 2005) by A Qualified Person as defined by the Canadian National Instrument 43-101 and the companion policy 43-101CP.

Mineral Resource classification is typically a subjective concept, industry best practices suggest that Mineral Resource classification should consider both the confidence in the geological continuity of the mineralized structures, the quality and quantity of exploration data supporting the estimates and the geostatistical confidence in the tonnage and grade estimates. Appropriate classification criteria should aim at integrating both concepts to delineate regular areas at similar resource classification.

14.10.1 SRK Classification Methodology

SRK is satisfied that the geological modelling honours the current geological information and knowledge. The location of the samples and the assay data are sufficiently reliable to support resource evaluation. The sampling information was acquired by diamond core drilling on sections spaced at 100 m, with infill sections at 50 m, with some closer spaced drilling at 25 m infill. In many places this gives reasonable confidence in the geometry of the geological features controlling grade and the grade trends themselves.

SRK has also considered sampling quality, representivity and accuracy of historical and recent assaying and density determinations.

The QAQC results of the 2012 and 2013 SMS drill programmes indicate an acceptable level of quality for the assays in terms of Ta and Sn. The results from the analysis of blank submissions and duplicate pulp submissions confirm the quality of the assays in terms of precision noted in the CRM. SMS employed two umpire laboratories which has provided additional confidence in the assay database.

Graphical, visual, statistical and estimation validation of the historical drillholes against the twin SMS drillholes was undertaken to provide some indication of the risk associated with using the historical data at this stage. SRK concluded that historical tantalum assays are broadly in line with recent assays, the historical tin assays appear to underestimate grade. SRK has therefore elected to use both the historical tantalum and tin assays in the MRE.

The addition of the 2013 drilling data has provided SRK with additional confidence in the database and enabled portions of the MRE to be reported in the categories of Measured, Indicated and Inferred.

SRK notes that the current number of density determinations is considered suitable to report a Mineral Resource in the categories of Measured, Indicated and Inferred. However, SRK acknowledges that the KLCG material represents a lower density. Some of this material is assumed to exist beneath the historical open pit. SRK therefore suggests that during future drilling programmes a number of angled holes are drilled beneath the existing historical pit to test the extent of the KLCG material beneath the pit.

Overall, it is SRK's view that the historical and recent data is of a sufficient quality for the quoting of Measured, Indicated and Inferred category of Mineral Resources.

14.10.2 Geological Complexity

The bulk of the mineralisation is retained within a leucogranite dome. Tantalum forms a continuous lens which contains thin lenses of internal waste which is typically associated with xenoliths of gneiss material within the leucogranite. Tin forms a high grade lens at the top of the leucogranite dome. Tin grades typically decrease with depth. The current drill spacing, geological knowledge and interpretation in relation to the continuity of the mineralisation and internal waste zones has allowed SRK to classify portions of the Mineral Resource in the category of Measured, Indicated and Inferred, closer spaced drilling will be required to improve and upgrade portions of the Inferred to Indicated, and portions of the Indicated to Measured.

14.10.3 Results of Geostatistical Analysis

The data used in the geostatistical analysis resulted in variograms with relatively low nugget values for both Sn and Ta. SRK is satisfied that the resultant estimates have a reasonable level of confidence. It is SRK's view that there is sufficient confidence in the estimation parameters to classify Measured, Indicated and Inferred resources where down dip continuity is evident.

14.10.4 SRK Classification Approach

In SRK's classification for the Penouta Project (Figure 14-32), the following criteria have been applied:

- Measured Mineral Resources were selected as model blocks which were estimated within search volume 1 (using between 6 and 32 samples within search distances as described in Table 14-16) and which had a slope of regression greater than 0.8. These blocks also displayed reasonable strike continuity and down dip extensions based on drillhole intersections of approximately 25 x 25 m. The Measured classification boundary extends to half the drillhole spacing in areas where the estimation is well informed.
- Indicated Mineral Resources were selected as model blocks which were typically estimated within search volume 1 (using between 6 and 32 samples within search distances as described in Table 14-16) and which had a slope of regression of greater than 0.6 and which display reasonable strike continuity and down dip extensions based on drillhole intersections of approximately 100 x 50 m. The Indicated classification boundary extends to half the drillhole spacing in areas where the estimation is well informed.

- Inferred Mineral Resources are model blocks which display reasonable strike continuity and down dip extensions based on the drillhole intersections of approximately 100 x 100 m. The majority of these blocks have been estimated within search volumes 1 or 2 (using between 6 and 32 samples within search distances as described in Table 14-16). The Inferred classification boundary extends to half the drillhole spacing in areas where the estimation is well informed. Due to the poorly understood nature of the veins within the greisenised gneiss SRK has assigned these domains the classification of Inferred.

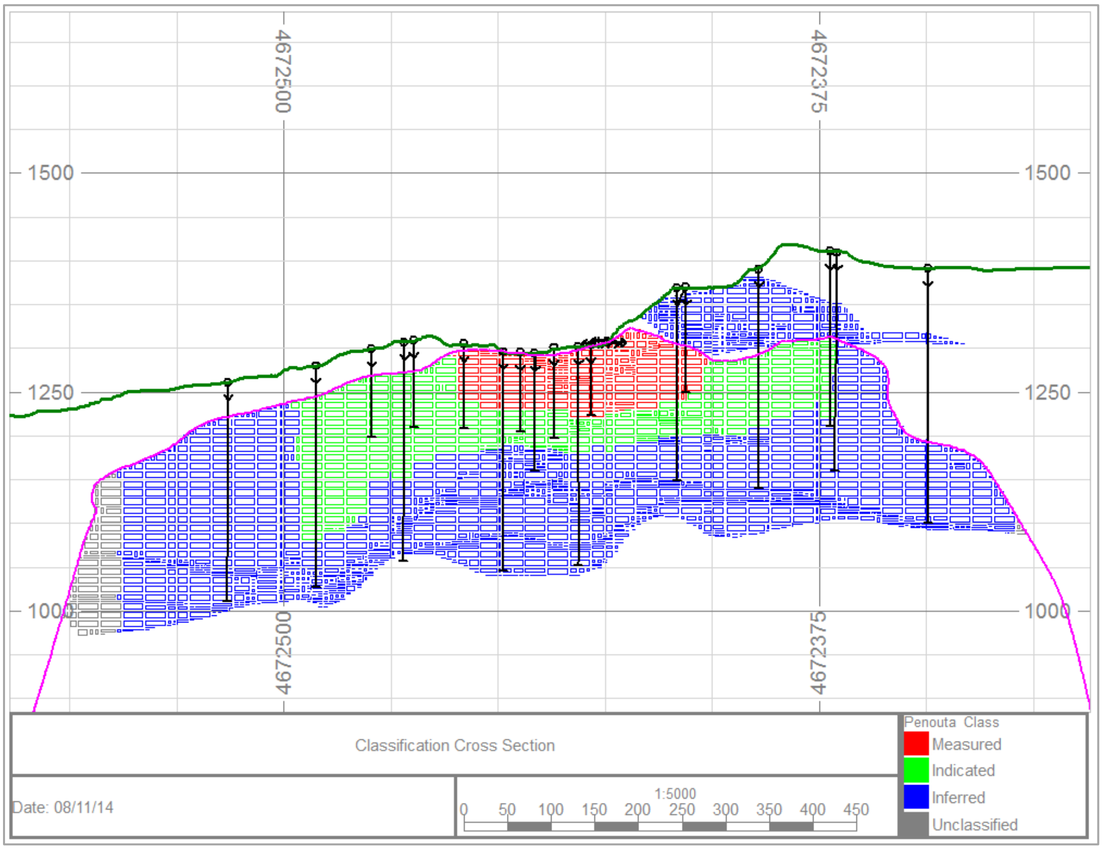


Figure 14-32: Cross Section showing classification of the Penouta Project (Red blocks = Measured, Green blocks = Indicated, Blue blocks = Inferred, Grey blocks = Unclassified)

14.11 Mineral Resource Statement

CIM Definition Standards for Mineral Resources and Mineral Reserves (December 2005) defines a mineral resource as:

“(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 "reasonable prospects for economic extraction" requirement generally implies that the quantity and grade estimates meet certain economic thresholds and that the mineral resources are reported at an appropriate cut-off grade taking into account extraction scenarios and processing recoveries. In order to meet this requirement, SRK considers that portions of the Penouta Project are amenable for open pit extraction.

In order to determine the quantities of material offering "reasonable prospects for economic extraction" by an open pit, SRK used a pit optimiser and reasonable mining assumptions to evaluate the proportions of the block model (Measured, Indicated and Inferred blocks) that could be "reasonably expected" to be mined from an open pit.

The optimization parameters were selected based on a combination of client information and their experience from re-processing of old tailings at the Project, SRK experience and benchmarking against similar projects. The reader is cautioned that the results from the pit optimization are used solely for the purpose of testing the "reasonable prospects for economic extraction" by an open pit and do not represent an attempt to estimate mineral reserves. The results are used as a guide to assist in the preparation of a mineral resource statement and to select an appropriate resource reporting cut-off grade.

Table 14-21: Assumptions considered for conceptual open pit optimisation

Parameter	Cost	Unit
Process Costs + General & Administrative	7.97	USD/t
Mining Costs	3.0	USD/t rock
Mining Dilution	5	%
Mining Recovery	95	%
Overall Pit Slope	45	Degrees
Ta2O5 Price	178	USD/kg
Sn Price	24	USD/kg
Ta2O5 Recovery	75	%
Sn Recovery	75	%

SRK considers that blocks located within the conceptual pit envelope shown in Figure 14-33 have "reasonable prospects for economic extraction" and can be reported as a Mineral Resource.

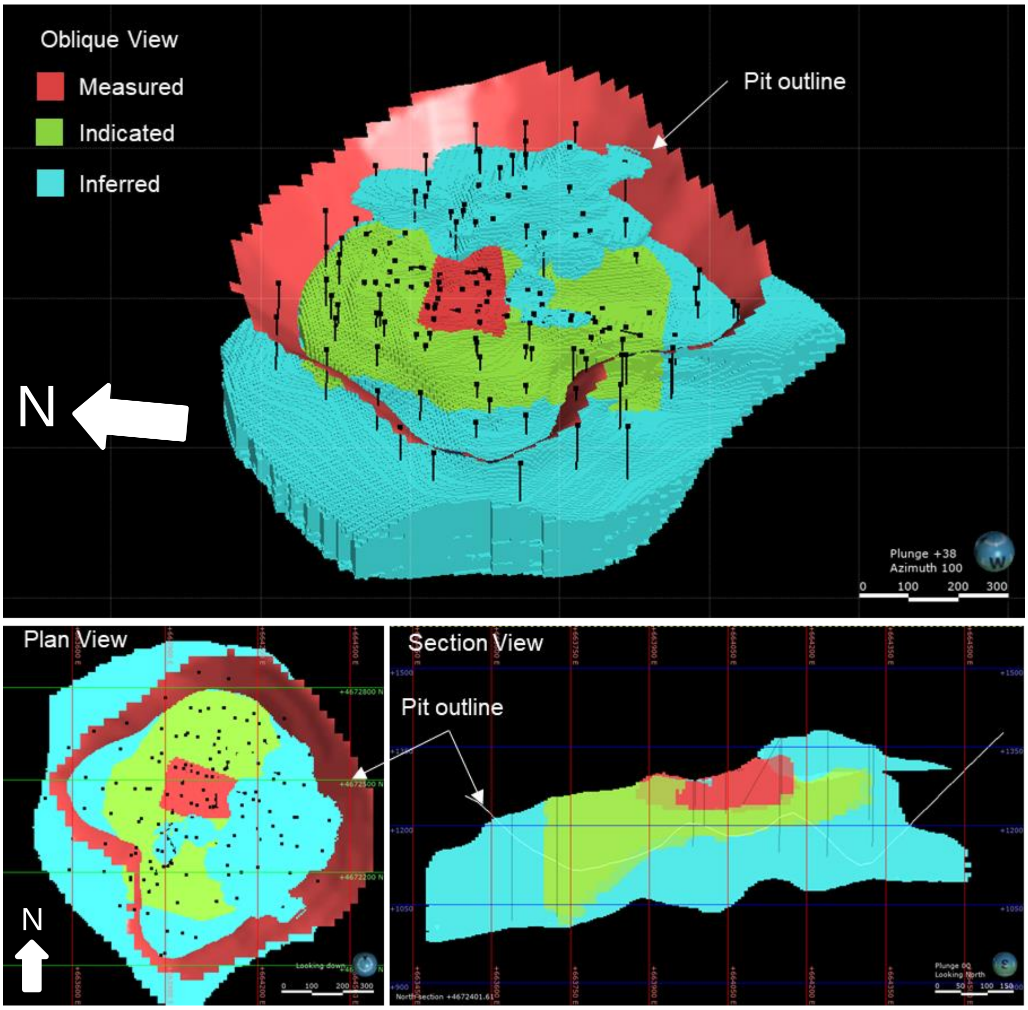


Figure 14-33: Resources within the conceptual pit outline, coloured by classification

A cut-off grade of 60 ppm for Ta_2O_5Eq grade has been applied in reporting the Penouta Mineral Resource.

Table 14-22: Pit Constrained SRK Mineral Resource Statement for the Penouta Ta-Sn Hard Rock Deposit, Effective Date 05 March 2021

Category	Tonnes (Mt)	Grade				Metal	
		Ta2O5 Eq (ppm)	Sn (ppm)	Ta (ppm)	Ta2O5 (ppm)	Sn (kt)	Ta (kt)
Measured	7.6	184	600	85	103	4.6	0.6
Indicated	68.6	145	426	72	88	29.2	4.9
Total Measured and Indicated	**76.3**	**149**	**443**	**73**	**89**	**33.8**	**5.6**
Inferred	57	129	389	62	76	22	4

1) Mineral resources are not mineral reserves and do not have demonstrated economic viability.

2) All figures are rounded to reflect the relative accuracy of the estimate, numbers may not add up due to rounding.

3) The standard adopted in respect of the reporting of Mineral Resources for the Project is in accordance with the terminology, definitions and guidelines given in the Canadian Institute of Mining, Metallurgy and Petroleum Standards on Mineral Resources and Mineral Reserves (CIM Code)

4) SRK reasonably expects portions of the Penouta deposit to be amenable to open pit mining methods. Open pit Mineral Resources are constrained to within a Whittle optimised pit and reported based on a Ta2O5Eq Resource cut-off which considers processing costs and G&A costs totalling 7.79 USD/t. Pit slope angles were set to 45°

5) Resources are reported at an open pit cut-off grade of 60 ppm Ta2O5Eq.

6) Cut-off grades are based on a price of USD178/kg and recoveries of 75% for Ta2O5, and USD24/kg and recoveries of 75% for tin.

7) It is reasonably expected, but not guaranteed, that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration

8) Inferred Resources are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as Mineral Reserves.

14.12 Niobium Occurrence

In addition to the Ta and Sn Mineral Resource SRK has also completed an assessment of the Nb mineralisation present. Given that the Company does not generate a revenue directly from Nb (with Nb credit accounted for in the Ta_2O_5 price). SRK has therefore not reported the Nb as part of the Mineral Resource estimation process; however, SRK has reviewed the data and notes that there is an almost 1:1 ratio with regards to Ta to Nb within the optimised pit.

14.13 Grade Sensitivity Analysis

SRK has completed a number of estimates on the deposit using a variety of parameters and the resultant models produced a robust estimate in terms of the selected estimation parameters.

The Mineral Resources of the Penouta Project are sensitive to the selection of the reporting cut-off grade. To illustrate this sensitivity, the block model quantities and grade estimates (Ta_2O_5 equivalent) within the conceptual pit used to constrain the Mineral Resources are presented in Figure 14-34, Figure 14-35 and Figure 14-36. These figures are only presented to show the sensitivity of the block model tonaage (pink line) and grade above cut-off grade (green line) to the selection of cut-off grade.

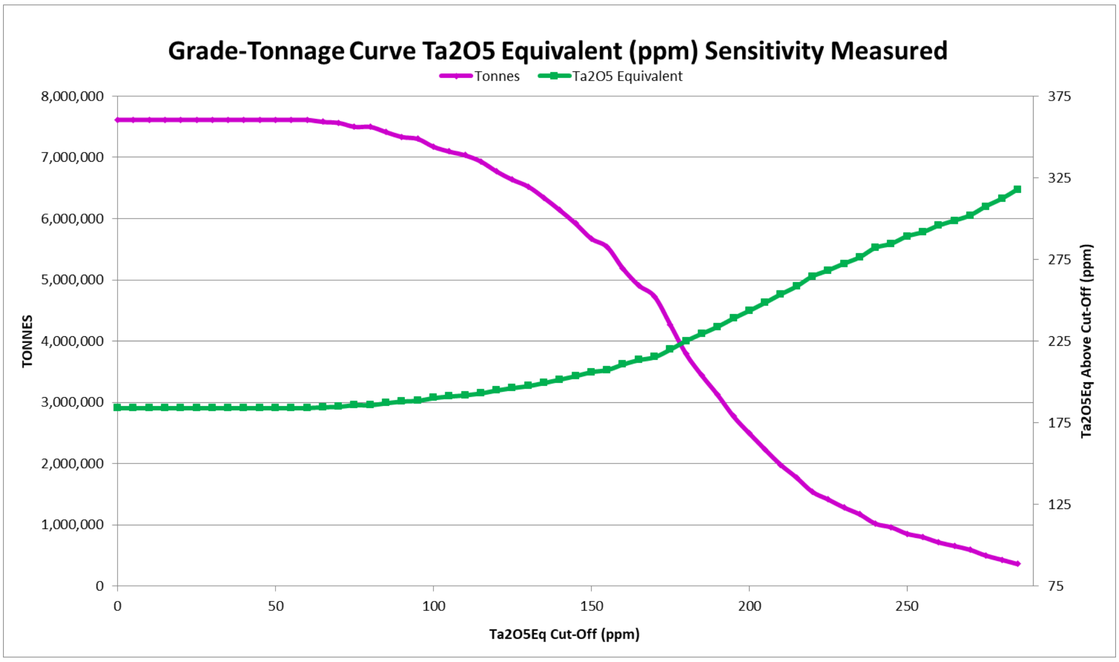


Figure 14-34: Global Grade-Tonnage Curve for Ta2O5 Equivalent (Measured material)

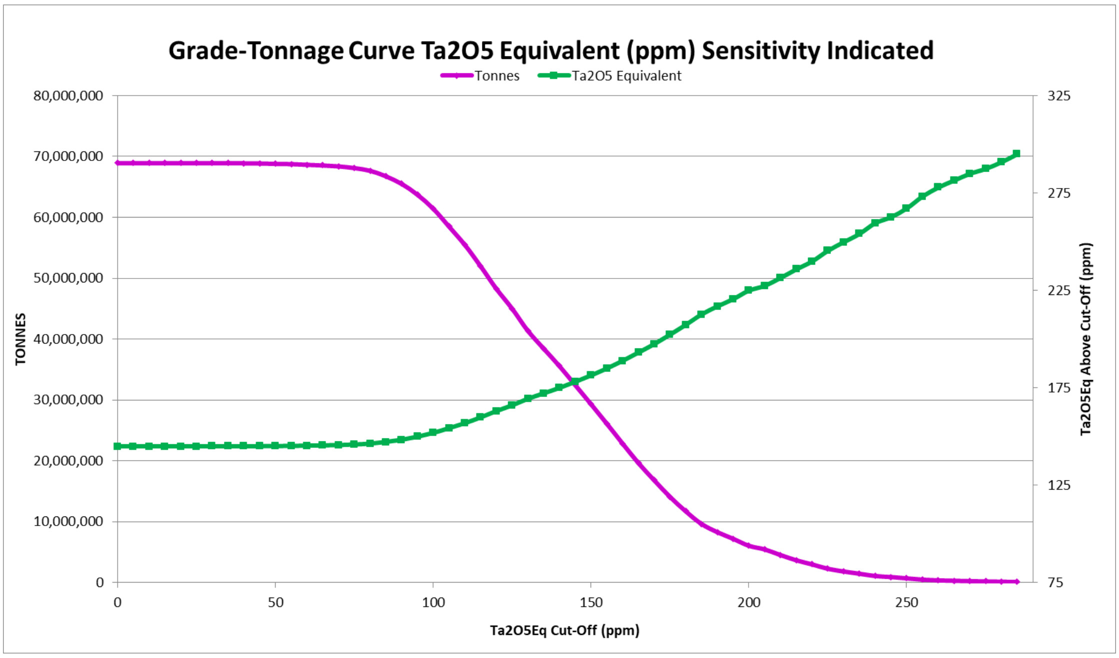


Figure 14-35: Global Grade-Tonnage Curve for Ta2O5 Equivalent (Indicated material)

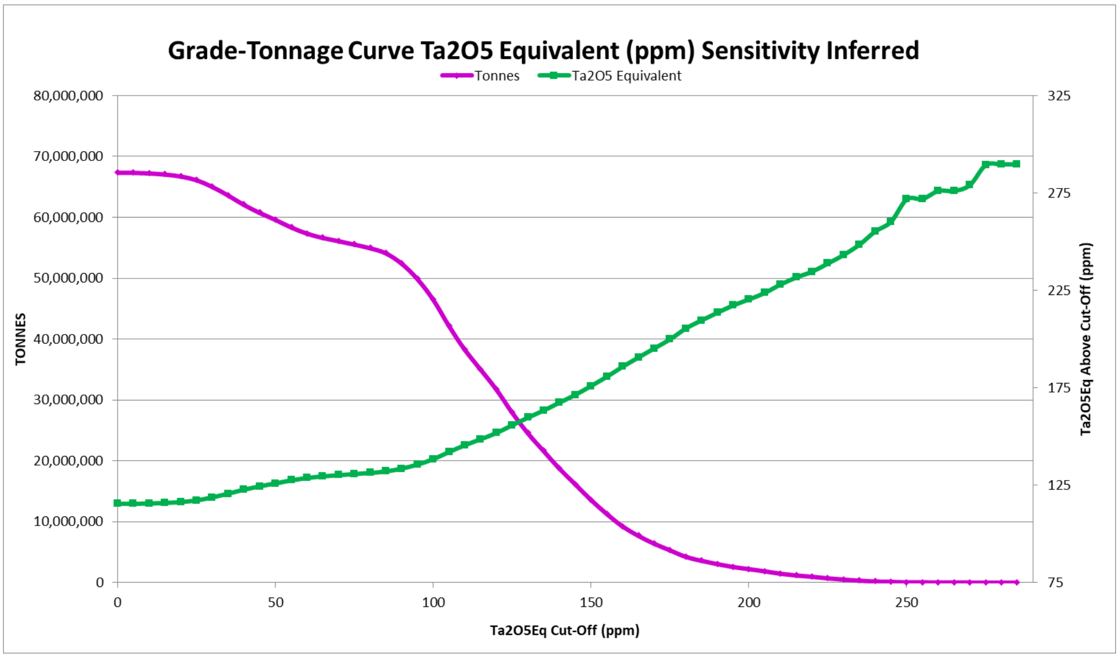


Figure 14-36: Global Grade-Tonnage Curve for Ta2O5 Equivalent (Inferred material)

14.14 Comparison to Previous Mineral Resource Estimates

In comparison to the previous SRK 2014 MRE, SRK notes that no new drilling has been completed; therefore, changes to the Mineral Resource Statement are the result of updates to the input parameters applied for the pit optimisation, including:

- Slight reduction in processing and G&A costs from 10 USD/t to 7.97 USD/t, based on SMS's experience from re-processing of old tailings at the Project
- Reduction in metal prices for Sn from 26 USD/kg to 24 USD/kg and for Ta_2O_5 from 260 USD/kg to 178 USD/kg, based on current long-term Sn market forecast information, 3-year trailing average price data for Ta_2O_5 and allowance for potential penalties anticipated by the Company related to their experience from re-processing of old tailings and associated historical sales
- Slight reduction to processing recovery for Sn from 80% to 75%, based on Company preference and their experience from operating the current plant.

Based on the changes outlined above, the key differences in the updated MRE for the Penouta Ta-Sn deposit for March 2021, include:

- Overall marginal change to Measured and Indicated metal for Sn and Ta; and,
- Approximate 10% reduction to Inferred metal for Sn and Ta.

15 MINERAL RESERVE ESTIMATES

SRK is not reporting Mineral Reserves as part of this report.

16 MINING METHODS

SRK believes that a standard open pit mining method will be employed at the Penouta project.

17 RECOVERY METHODS

SRK understands that basic gravity methods were used in historical production which mined the weathered and kaolinised parts of the deposit.

SRK has not undertaken a metallurgical study as part of this report and no new metallurgical test work on hard rock sources of mineralisation has been completed by SMS since the previous SRK 2014 MRE.

SMS currently owns an industrial plant for re-processing of old tailings derived from historical surface workings at the Project. The plant currently allows Sn and Ta_2O_5 concentrates to be recovered from the old tailings, at a processing capacity of 1 Mtpa.

SMS's processing plant was constructed at the Penouta site during September 2017 and is located centrally within the Section B Mining Concession, as illustrated in Figure 17-1.

Mineral processing to recover Sn, Ta_2O_5 and Nb_2O_5 from the old tailings is currently carried out through the following main activities at the plant: grinding, gravity separation by spirals and shaking tables, magnetic separation and waste management.

To allow the future processing of hard rock material, initially as part of the 'Pilot facies Project', described in Section 4.3.1, SMS are planning to upgrade the current plant with a new crushing and milling facility. Further additions to the plant would also be required to accommodate the recovery of industrial minerals (quartz, feldspar, mica and kaolin) and SMS currently envisage that this would include a hydrocyclone to separate the kaolin and floatation for the recovery of quartz, feldspar and mica.

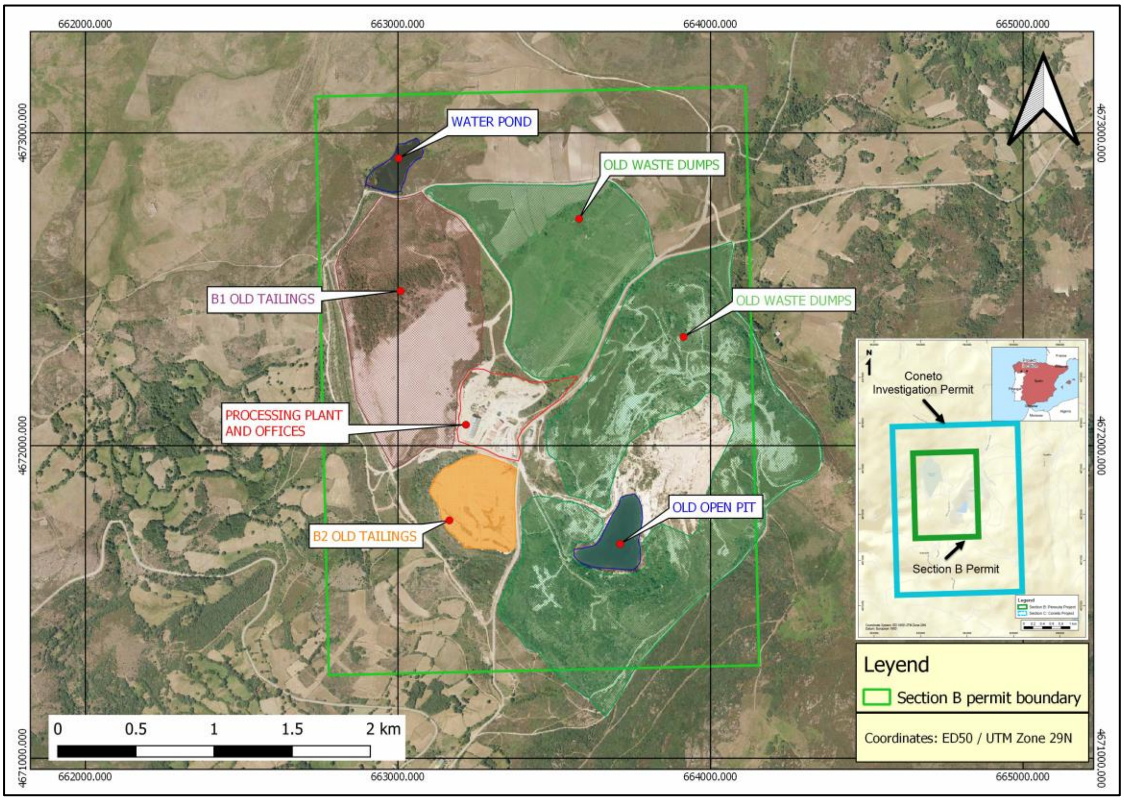


Figure 17-1: Processing Plant Location within the Section B Permit (Source: SMS, modified by SRK, 2021)

18 PROJECT INFRASTRUCTURE

The current infrastructure at the Project relates to the Company's operation of the processing plant for re-processing of old tailings material. This includes a power and water supply (and road access) for the plant, along with ancillary facilities including a workshop, laboratory, offices, dining room and dressing room.

SRK has not reviewed in detail or prepared a study on the project infrastructure for this report.

19 MARKET STUDIES AND CONTRACTS

SRK has not undertaken a market or contracts review or study for this report. SMS currently sells tin and tantalum concentrates generated from the reprocessing of historical tailings on the site so there are established arrangements in place which can be expected to continue in the future.

20 ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT

SRK understands that an Environmental Impact Assessment is currently underway at the Project. Based on maps provided by SMS, SRK note that the Project area is adjacent to environmental protection areas towards the north, east and south (Figure 20-1), which will need to be considered, along with any other key environmental, social and governance (ESG) sensitivities, as part of the future development of the Project.

Figure 20-1 also shows the maximum extents of any surface exploitation from the Penouta site (the 'Exploitation Perimeter'), which is based on the boundary with the environmental protection areas and (towards the east) occurs close to the eastern limit of the MRE optimised pit shell for Penouta Ta-Sn hard rock deposit.

SRK has not reviewed in detail or prepared any environmental studies or studies into the permitting, social or community impact for this report.

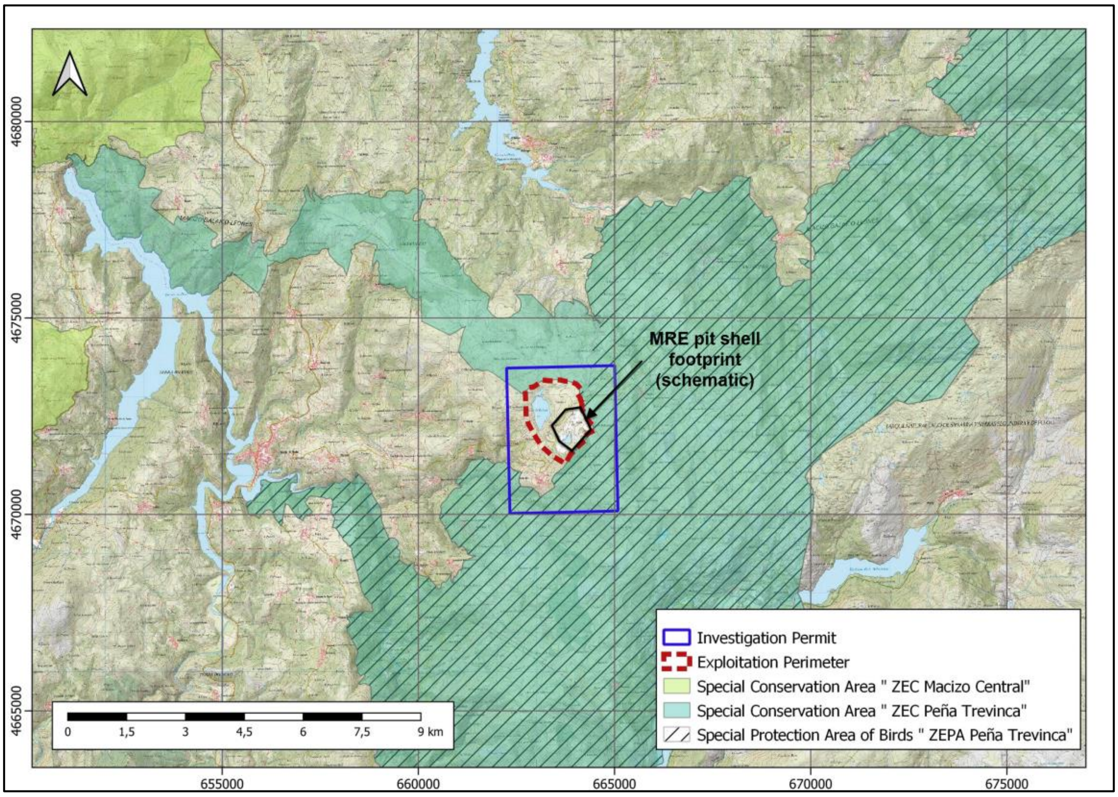


Figure 20-1: Coneto Investigation Permit shown with Special Conservation Areas

21 CAPITAL AND OPERATING COSTS

SRK has not prepared a detailed study into the capital and operating costs of the Penouta project for this report. The operating costs and production efficiencies considered for the assessment of RPEEE are taken from SMS's modified version of current actuals and their expected mining costs.

22 ECONOMIC ANALYSIS

SRK has not prepared an economic analysis for this report.

23 ADJACENT PROPERTIES

SRK is not aware of any adjacent properties to Penouta.

24 OTHER RELEVANT DATA AND INFORMATION

SRK is not aware of any other relevant data or information necessary to make this technical report understandable and not misleading.

25 CONCLUSIONS

SRK has reviewed all QAQC information available and has deemed the assay database to be acceptable for the determination of a Measured, Indicated and Inferred Mineral Resource Estimate. SRK has generated a geological model of the project based on information gained during three site visits (2012 and 2013) and from meetings with SMS employees (2012 and 2013) and the verified electronic database provided. No new drilling has been completed at the Project since the previous SRK 2014 MRE; therefore, the block model remains unchanged when compared with 2014.

SRK has considered sampling density, distance from samples, and estimate quality in order to classify the Mineral Resource according to the terminology, definitions and guidelines given in the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Standards on Mineral Resources and Mineral Reserves (December 2005) as required by NI 43-101.

A MRE pit optimisation study and cut-off grade assessment was undertaken based on updated input parameters (including commodity price and the SMS experience from re-processing of old tailings at the Project) to constrain the mineral resource and its potential depth extensions to the parts of the deposit that have sufficiently high grade, width and proximity to surface for reporting with reasonable prospects for eventual economic extraction by open pit.

In summary, SRK's updated Mineral Resource estimate on the Penouta Project 5th March 2021 reported above a cut-off grade of 60 ppm Ta_2O_5 equivalent comprises of the following:

- Measured Open Pit Mineral Resource of 7.6 Mt at 600 ppm Sn and 85 ppm Ta ppm;
- Indicated Open Pit Mineral Resource of 68.6 Mt at 426 ppm Sn and 72 ppm Ta ppm; and,
- Inferred Open Pit Mineral Resource of 57 Mt at 389 ppm Sn and 62 ppm Ta ppm.

Additional metallurgical test work on hard rock sources of mineralisation, in addition to further verification of technical and economic inputs used for MRE pit optimisation, will be important to the next stages of the Project development given the importance of these with respect to more advanced technical studies and also their potential to impact on the criteria used for reporting with reasonable prospects for eventual economic extraction.

26 RECOMMENDATIONS

SRK recommends the following:

- Additional metallurgical test work for Sn and Ta_2O_5 based on a representative metallurgical drillhole sampling program for hard rock mineralisation, to ensure that metallurgical parameters for use in more advanced technical studies are appropriately defined.
- Undertake drilling of inclined drillholes beneath the current open pit to help better determine the extent of the kaolinised leucogranite, such that the differences in densities can be modelled more appropriately;

- Continue using an umpire laboratory to verify and provide confidence in the primary assay laboratory. SRK would recommend submitting 5% of the total sample population to the umpire laboratory, and ensuring that a range of grades (low, medium and high) are submitted;
- Increase the submission of blanks samples to 5%;
- SMS produce an in-house matrix matched CRM for subsequent drilling programmes;
- SMS discontinue the use of CRM AMIS0355;
- Undertake a market and contracts study;
- SMS is currently investigating the potential to separate and process the leucogranite tails to recover albite, quartz, potassic feldspar and white mica for potential sale to the IM industry. SRK recommends further testwork and analysis should be conducted along with market and contracts studies to determine whether the next phase of technical studies at the Project should also consider IM sources of revenue in the next MRE.

A high-level budget to cover these recommendations is provided in Table 26-1 below. This budget does not necessarily account for all costs associated with the recommended work, such as staffing and administration, but seeks to estimate the unit costs associated likely to be incurred.

Table 26-1 High-level budget for recommended work programmes

Recommendation	Unit Count	Unit	Unit Cost	Sub-Total
Metallurgical Testwork - Sn and Ta_2O_5	1	Study	40,000	40,000
Metallurgical Testwork - Albite, quartz, feldspar, mica	1	Study	40,000	40,000
Drillhole Programme	15,000	Metres	200	3,000,000
Sample Assay	2,000	Samples	45	90,000
Umpire Sampling	100	Samples	45	4,500
QAQC	400	Samples	45	18,000
CRM development	1	-	8,000	8,000
Market & Contract Study	1	Study	50,000	50,000
Total				**3,250,500**

For and on behalf of SRK Consulting (UK) Limited

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Robert Goddard,
Senior Consultant (Mining Geology),
SRK Consulting (UK) Limited

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Martin Pittuck,
Corporate Consultant (Resource Geology),
SRK Consulting (UK) Limited

27 REFERENCES

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- IGME (Instituto Geológico y Minero de España) developed the report named “Estudio básico de los yacimientos de estaño tipo Penouta” (“Basic study of the Penouta-type tin ores”)
- Estudio básico de los yacimientos de estaño tipo Penouta. IGME 1976. Código 10045.
- Investigación minera yacimiento de Penouta Tomo IX- Estudio de Viabilidad. Centro Minero de Penouta. Diciembre, 1985. (E. N. adaro de investigaciones mineras S.A.). Código 73088.
- “Estudio Básico de los yacimientos de Estaño Tipo Penouta - Memoria (publicado en 1976 para el Ministerio de Industria en el Plan Nacional de la Minería)” (Basic Study of the Penouta type tin ore – Memory (published in 1976 for the Industry Ministry into the National Mining Plan).

28 GLOSSARY

28.1 Abbreviations

The following abbreviations may be used in this report:

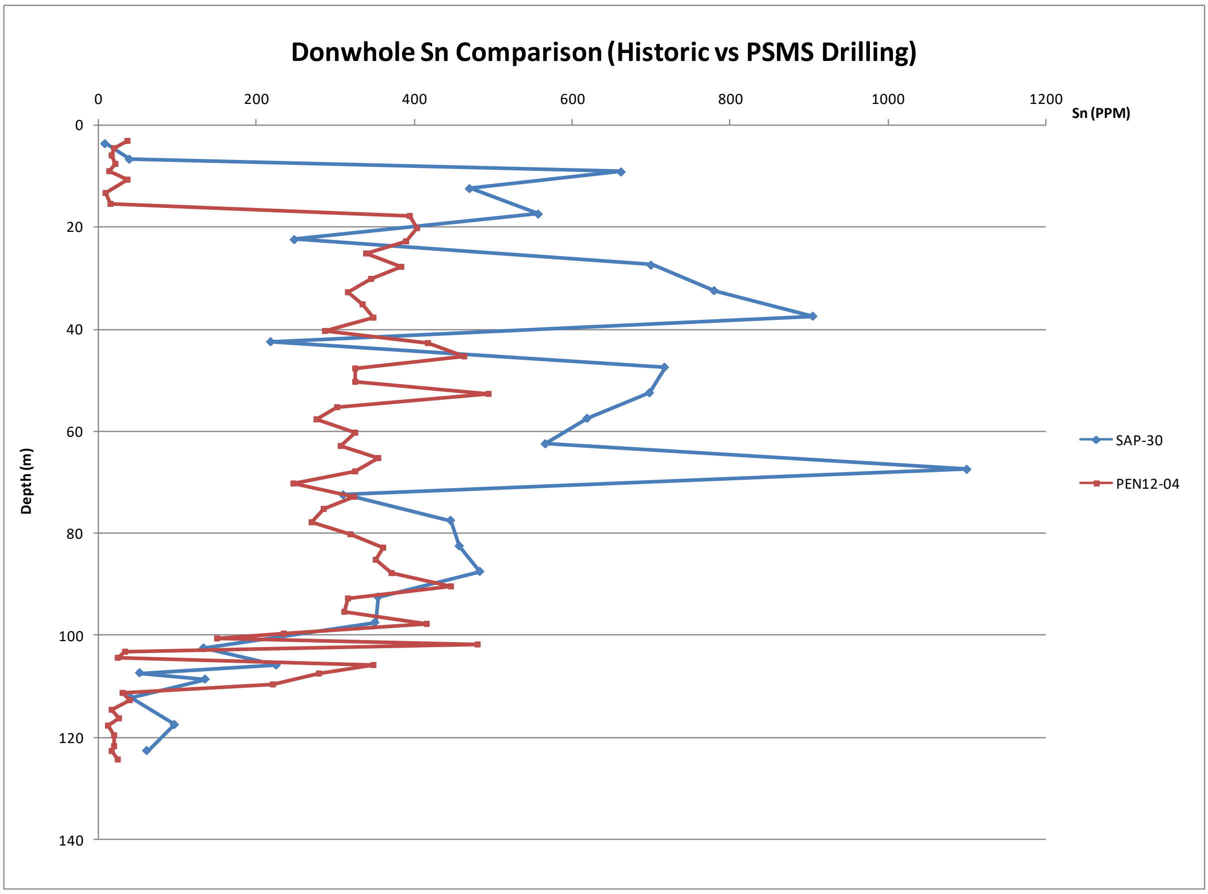
Table 28-1: Abbreviations

Abbreviation	Unit or Term
%	percent
°	degree (degrees)
°C	degrees Centigrade
µm	micron or microns
3D	three-dimensional
AMIS	African Mineral Standards
amsl	above mean sea level
BV	Bureau Veritas
CIM	Canadian Institute of Mining, Metallurgy and Petroleum
CIT	corporate income tax
cm	centimeter

Abbreviation	**Unit or Term**
cm^3	cubic centimeter
CoG	cut-off grade
CRM	certified reference material
Datamine	Datamine Studio Version 3
EIS	Environmental Impact Study
ha	hectares
IAG	International Association of Geoanalysts' Certified Reference Material Programme
ICP-MS	Inductively Coupled Plasma – Mass Spectroscopy
IDW	Inverse Distance Weighted
IGME	Instituto Geologico y Minera de Espana
IM	Industrial Minerals
kg	kilograms
KLCG	kaolinised leucogranite
km	kilometer
Km^2	square kilometer
KZONE	kriging zone
Leapfrog	Leapfrog Mining Software
m	meter
m2	square meter
m3	cubic meter
mm2	square millimeter
mm3	cubic millimeter
MME	Mine & Mill Engineering
MRE	Mineral Resource Estimate
Mt	million tonnes
MW	million watts
Nb	Niobium
NI 43-101	Canadian National Instrument 43-101
OK	Ordinary Kriging
OREAS	Ore Research and Exploration Pty Ltd, Australia
ppm	parts per million
PSMS	Pacific Strategic Minerals Spain
QAQC	Quality Assurance and Quality Control
QKNA	Quantitative Kriging Neighborhood Analysis
QP	Qualified Person
RC	reverse circulation
RP	restoration plan
RQD	Rock Quality Description
SGS	SGS Colombia
SMS	Strategic Minerals Spain
Sn	Tin
SRK	SRK Consulting (UK) Limited
t	tonne (metric ton) (2,204.6 pounds)
Ta	Tantalum
W	Tungsten
WHIMS	Wet High Intensity Magnetic Separation
XRF	X-ray fluorescence

APPENDIX

A VALIDATION OF TIN GRADES IN HISTORICAL AND TWINNED DRILLHOLES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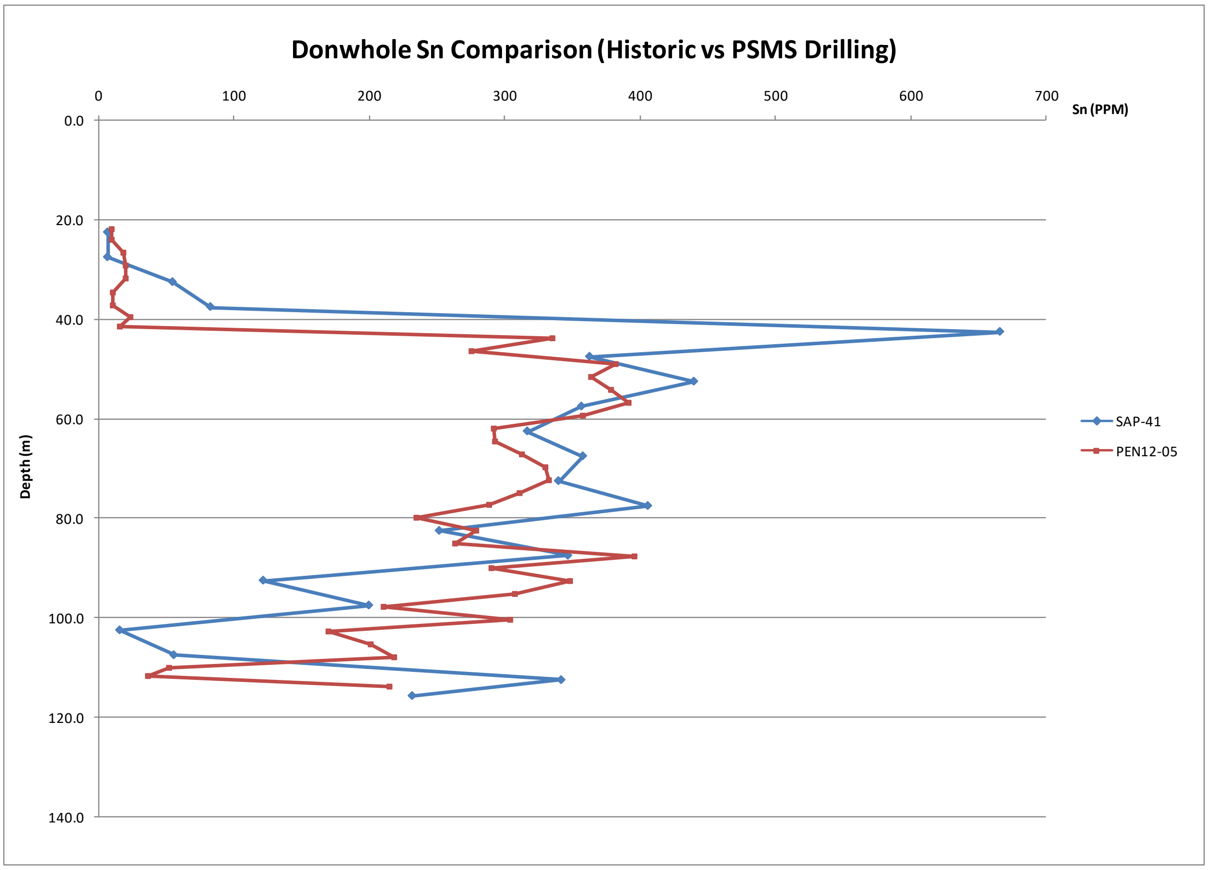
PEN12-04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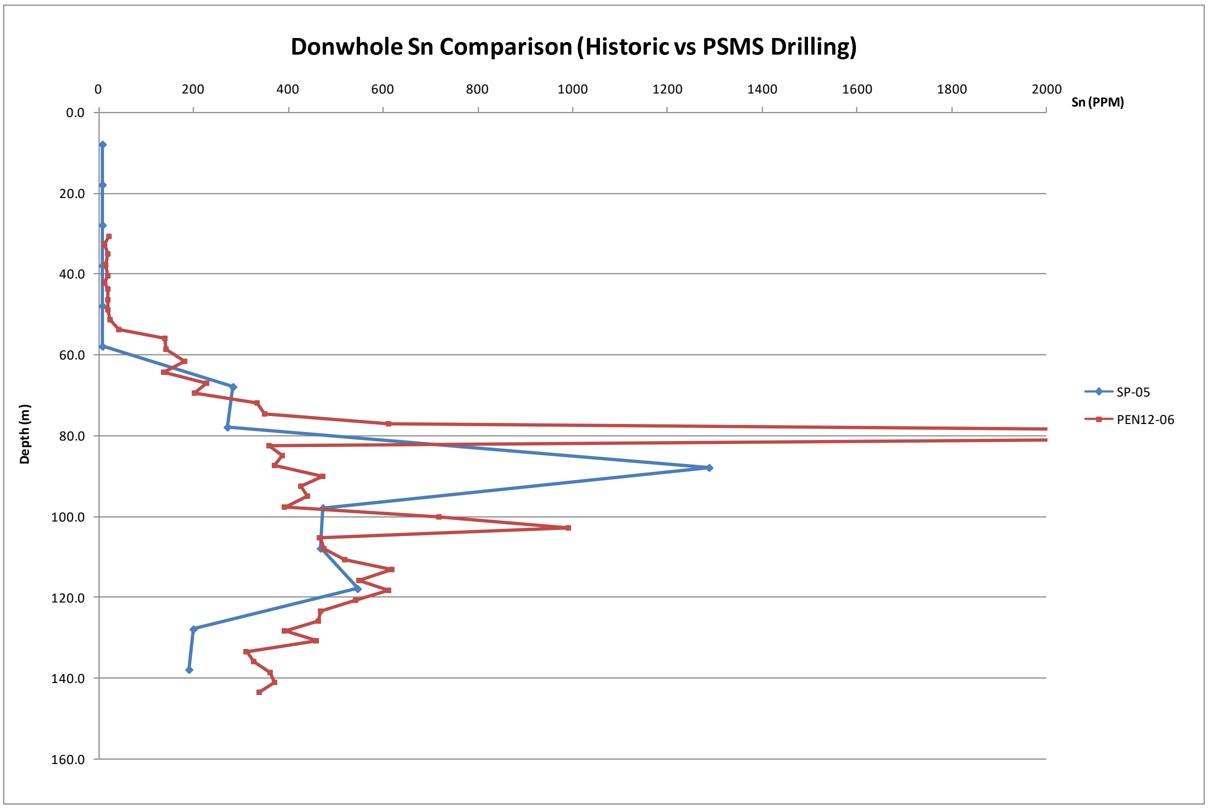
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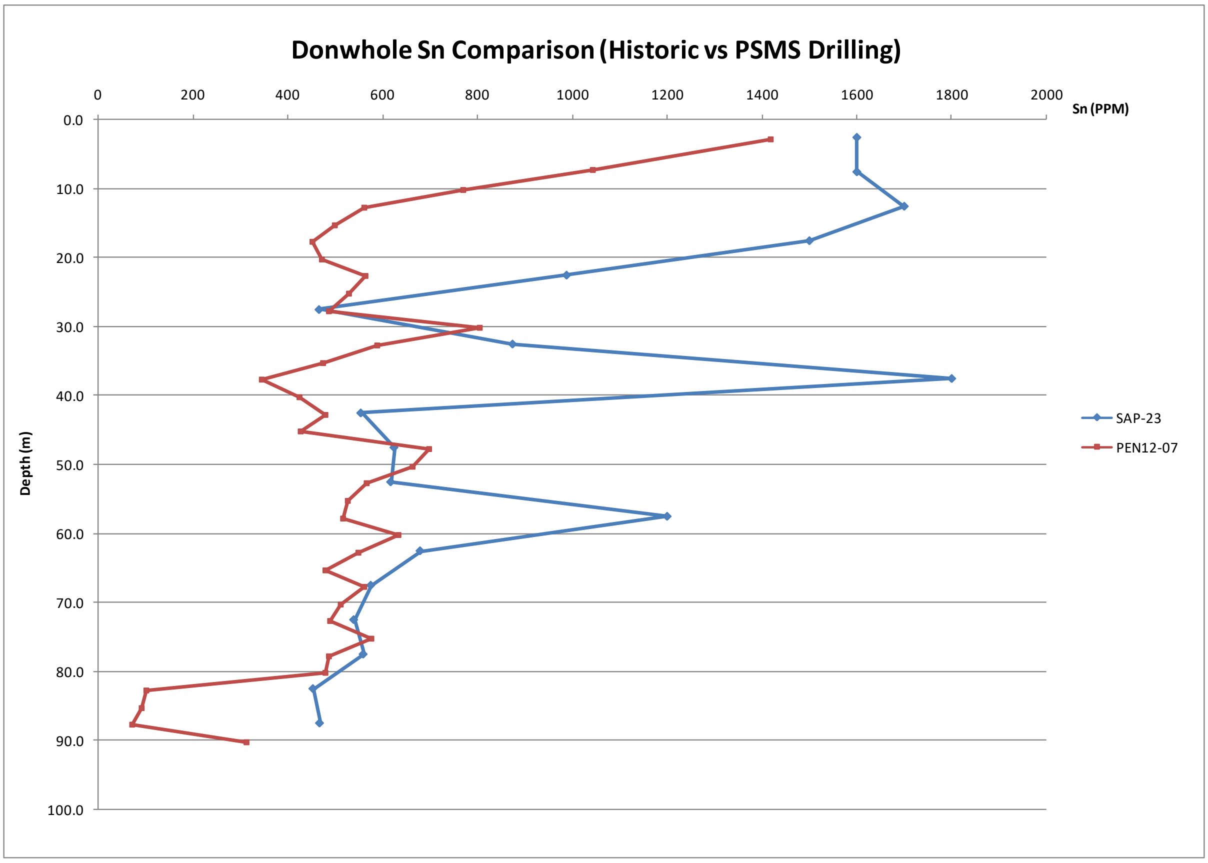
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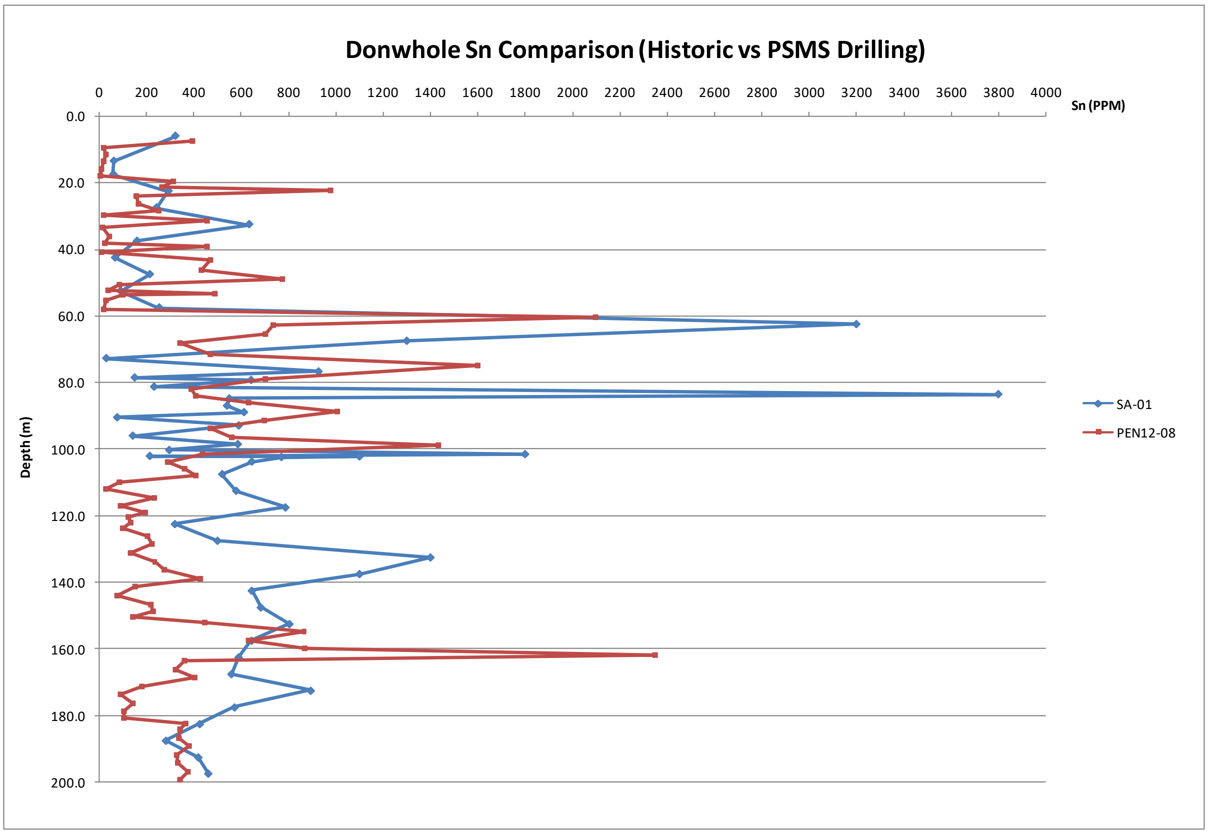
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3400
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3800
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Sn (PPM)
Depth (m)
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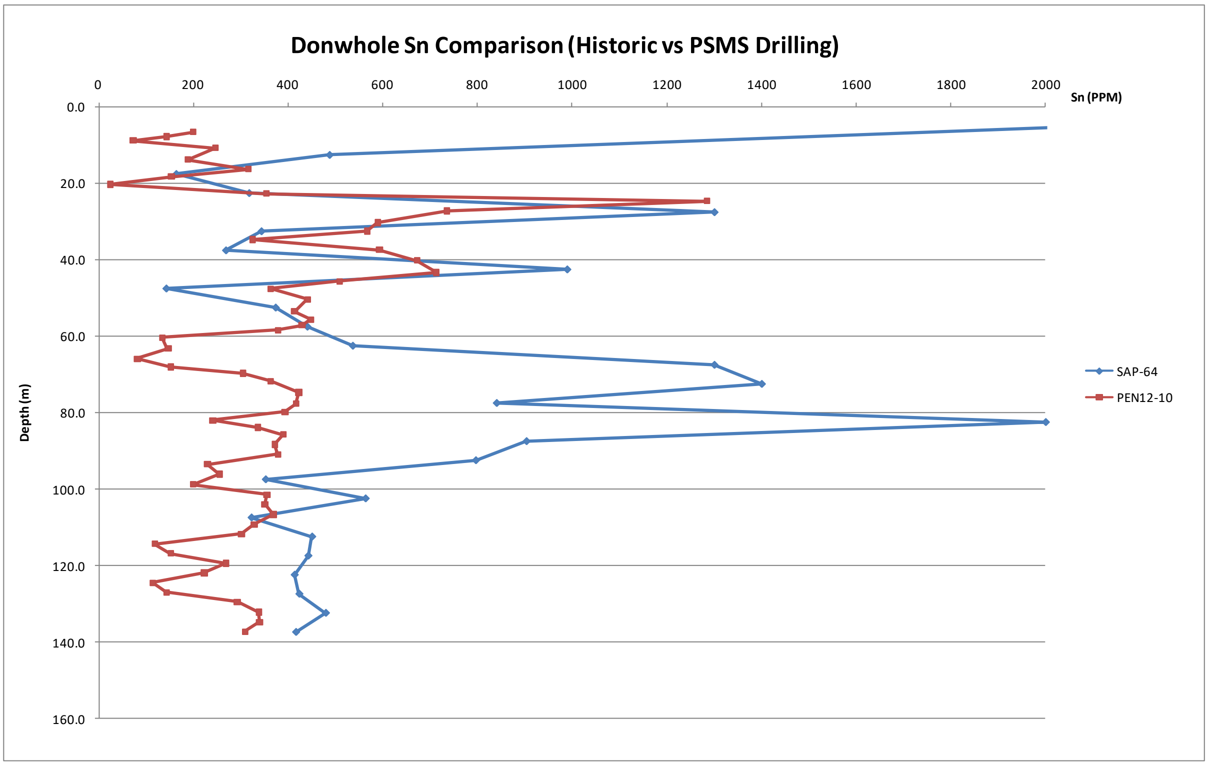
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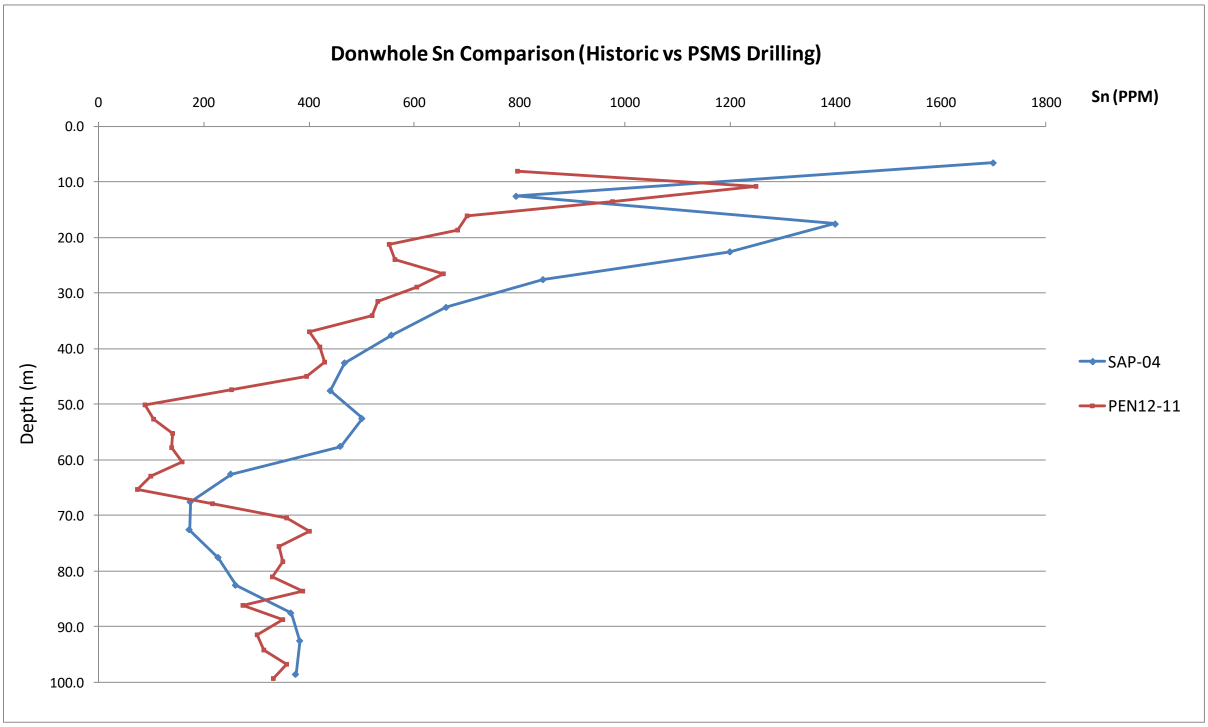
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Depth (m)
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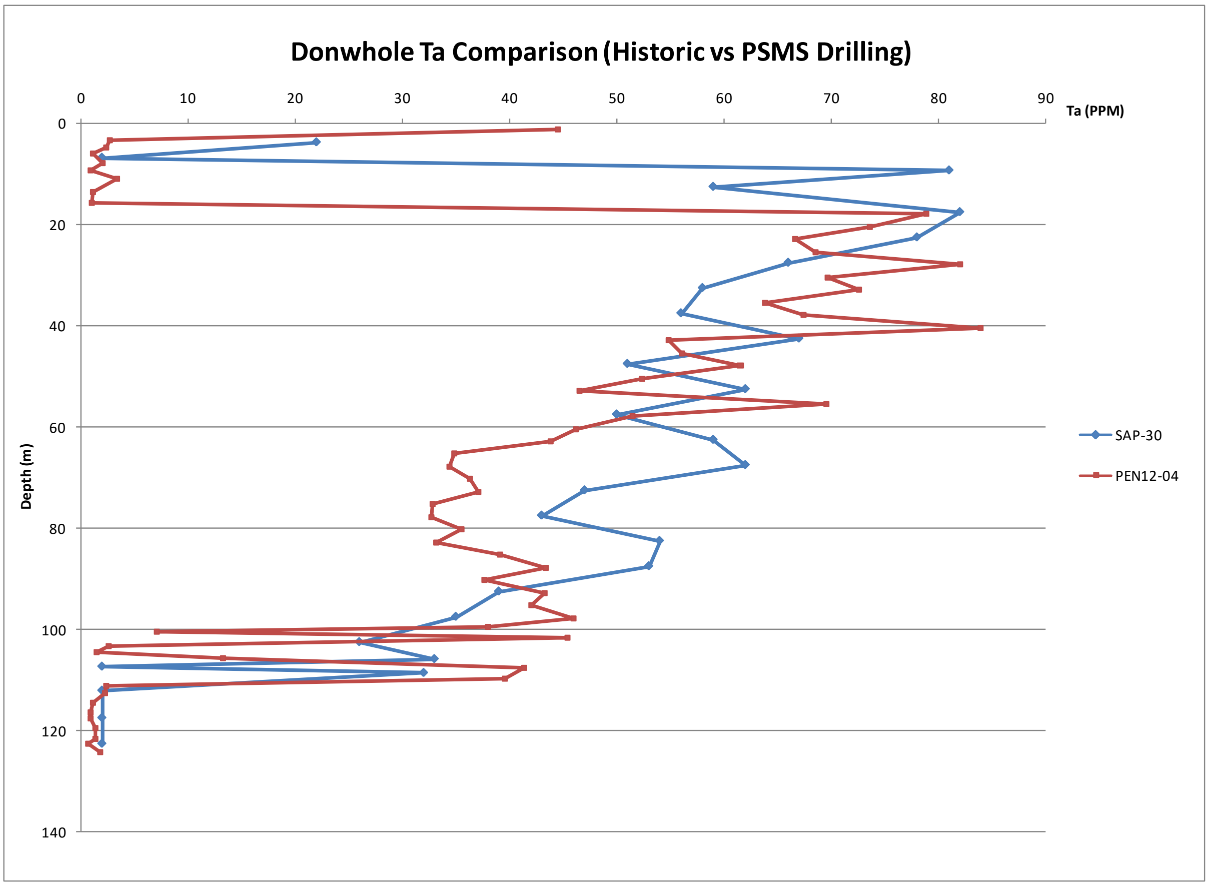
APPENDIX

B VALIDATION OF TANTALUM GRADES IN HISTORICAL AND TWINNED DRILLHOLES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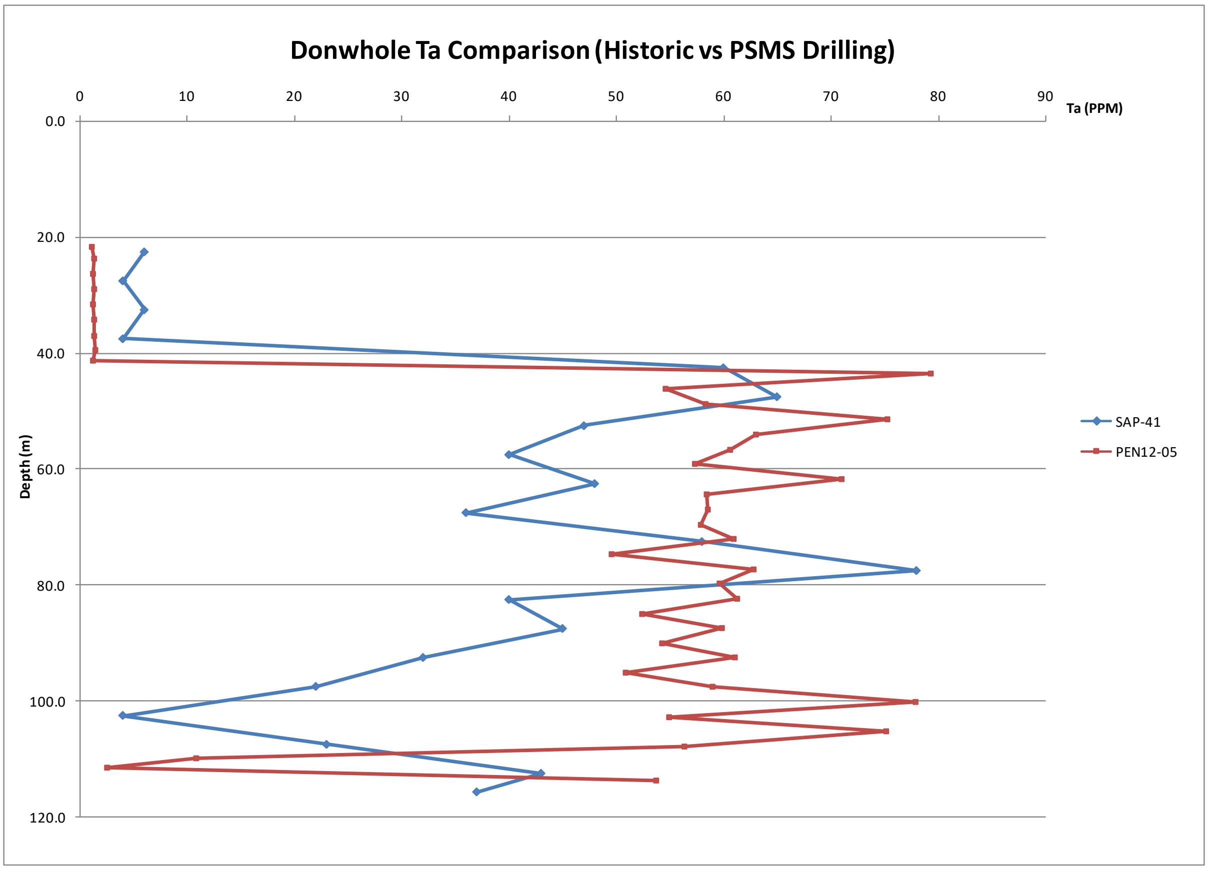
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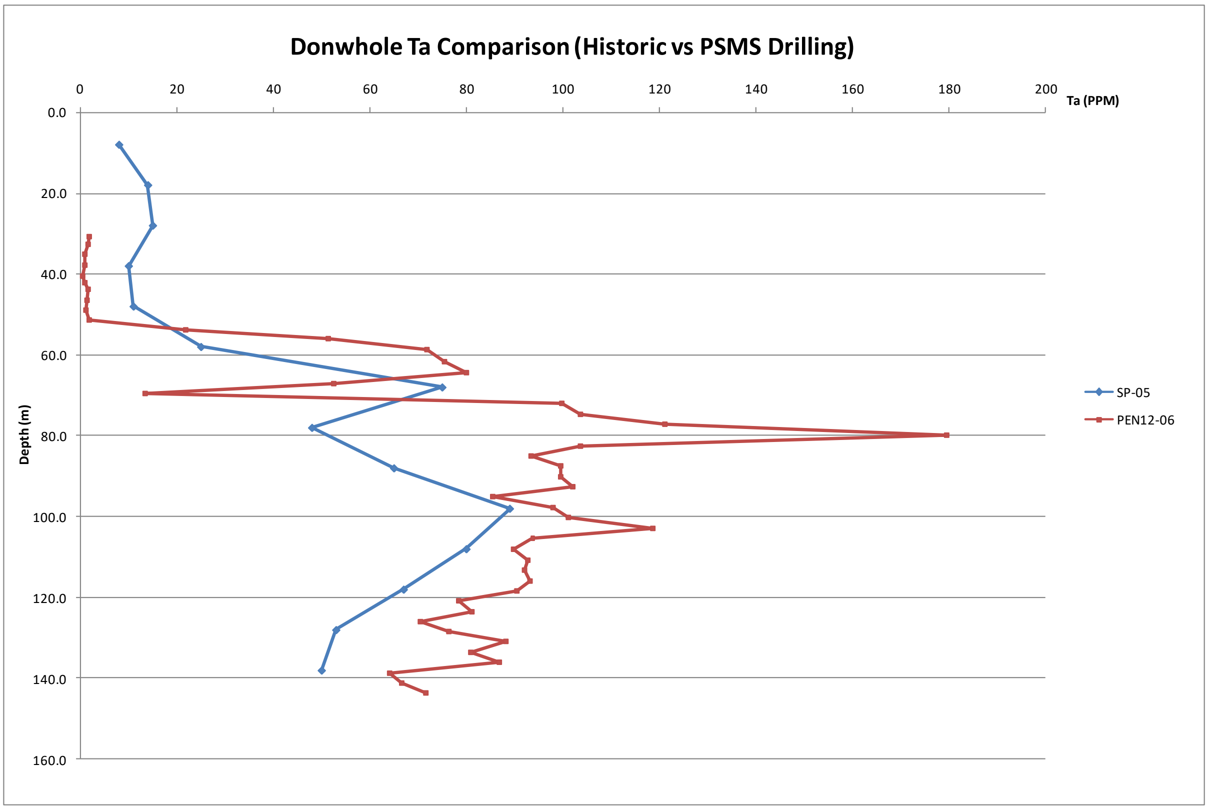
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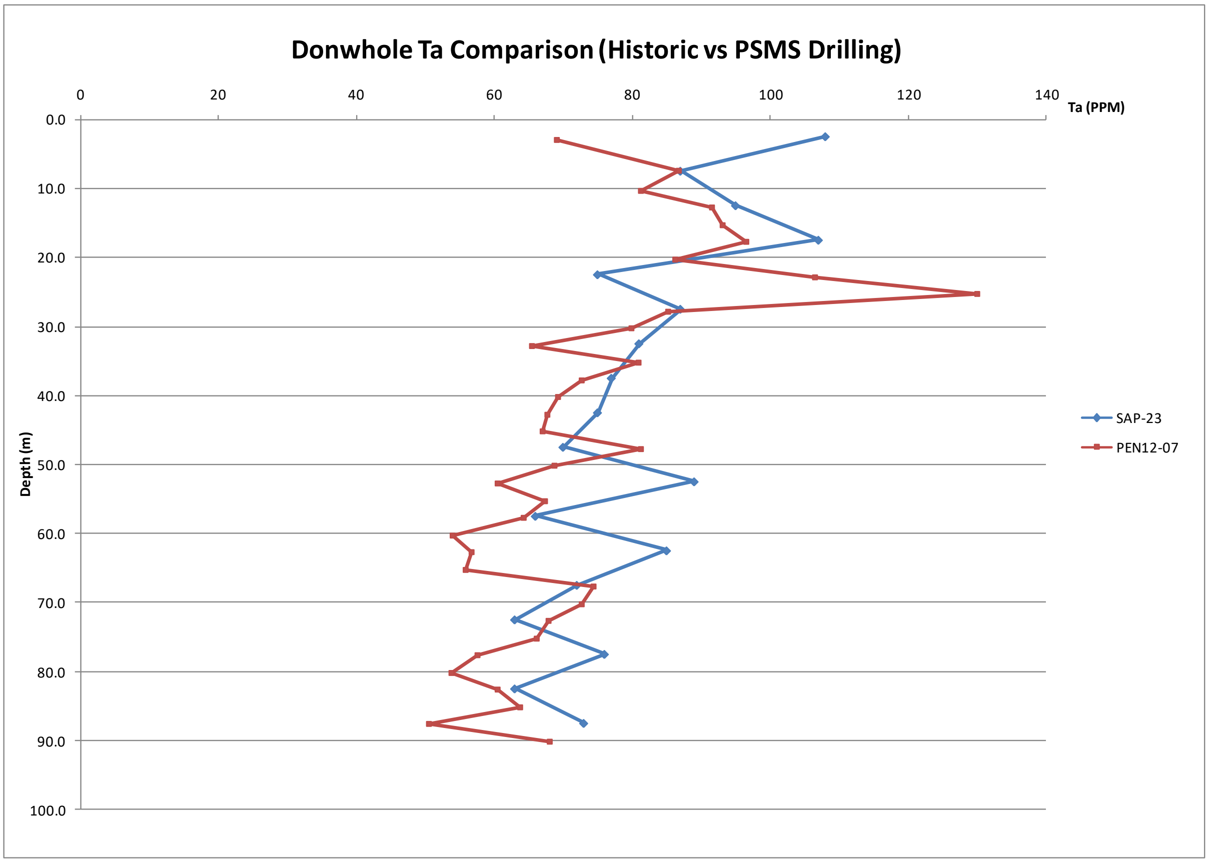
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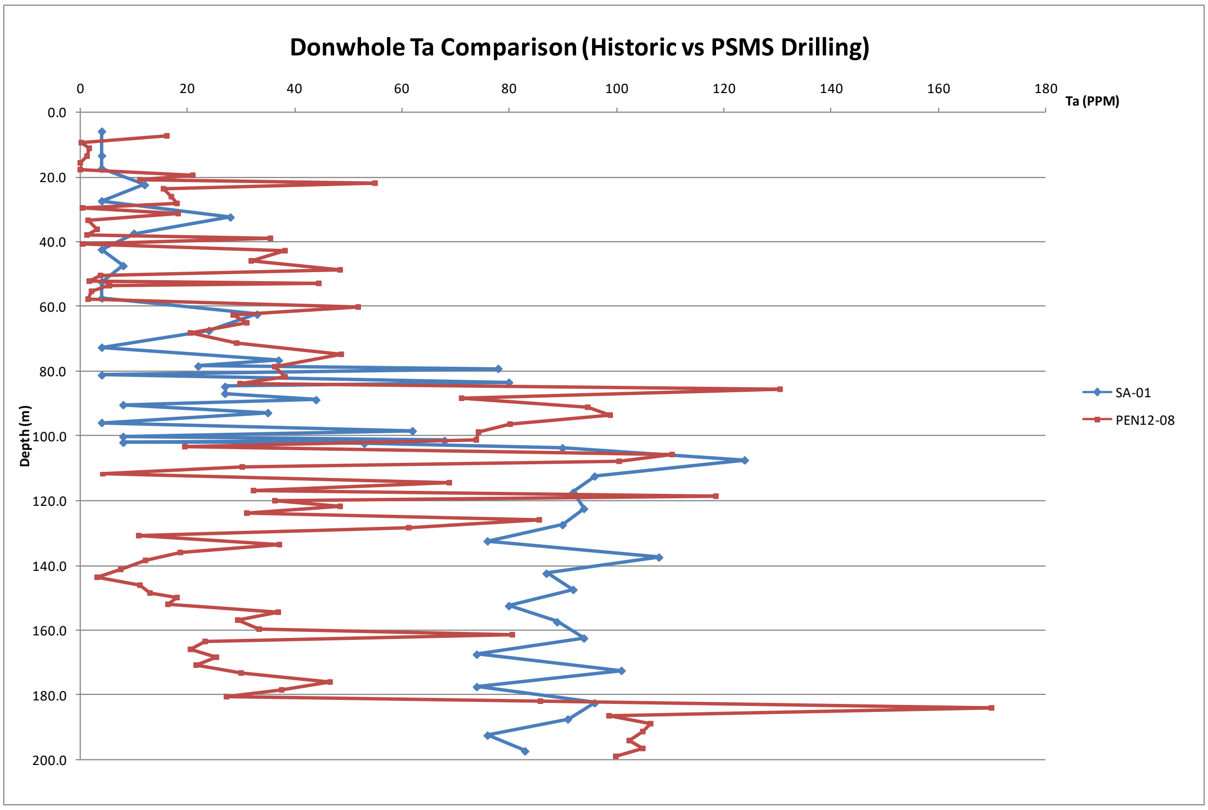
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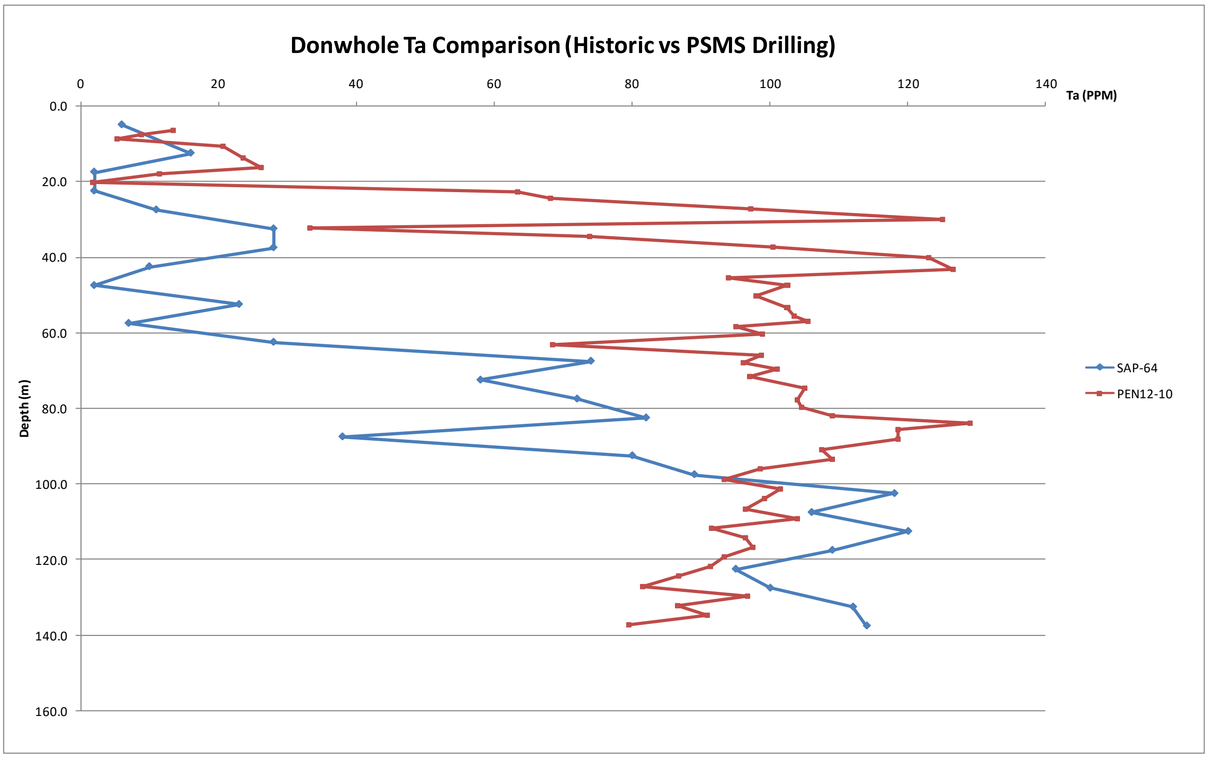
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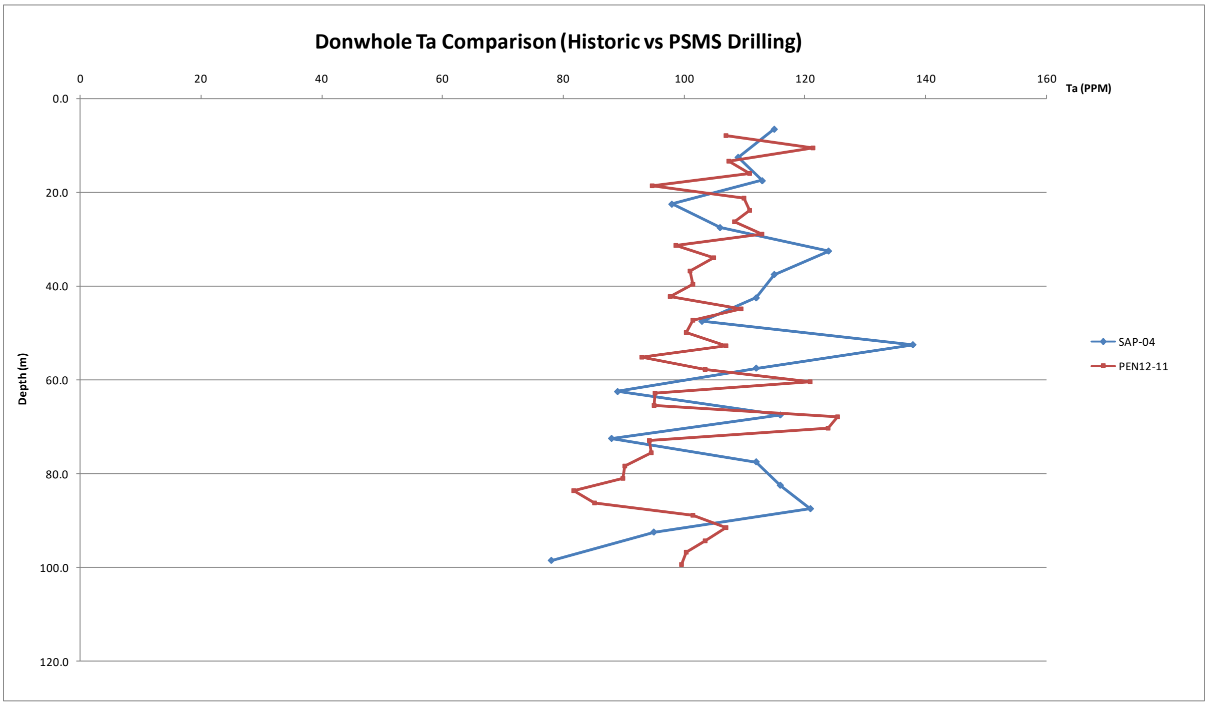
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Depth (m)
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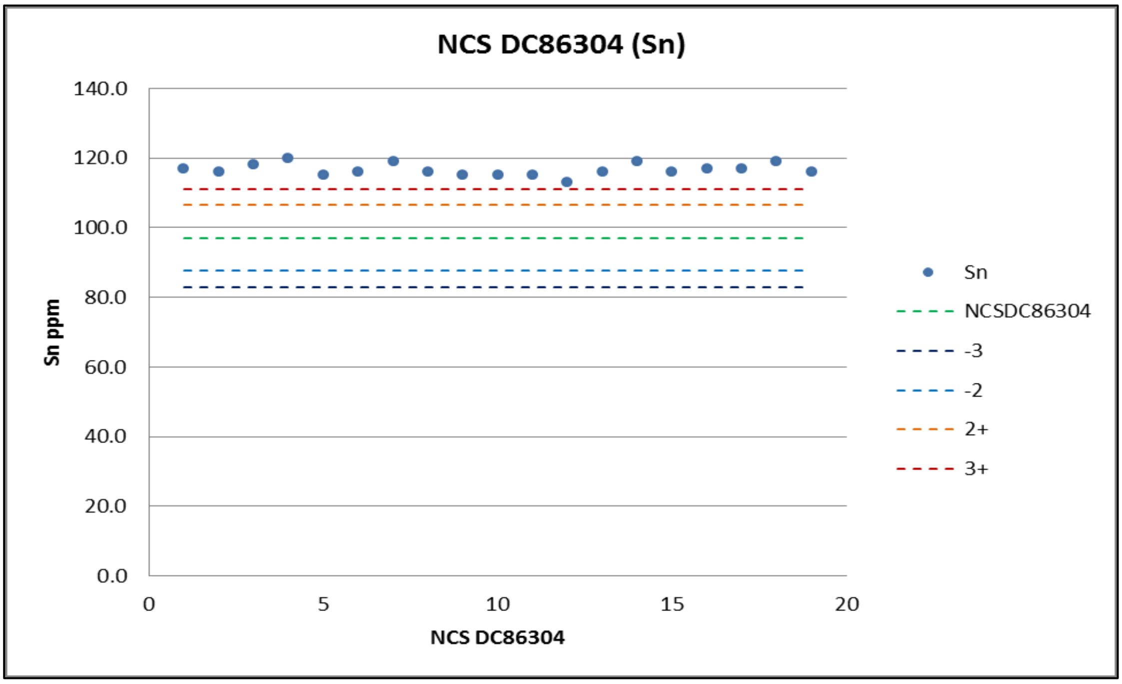
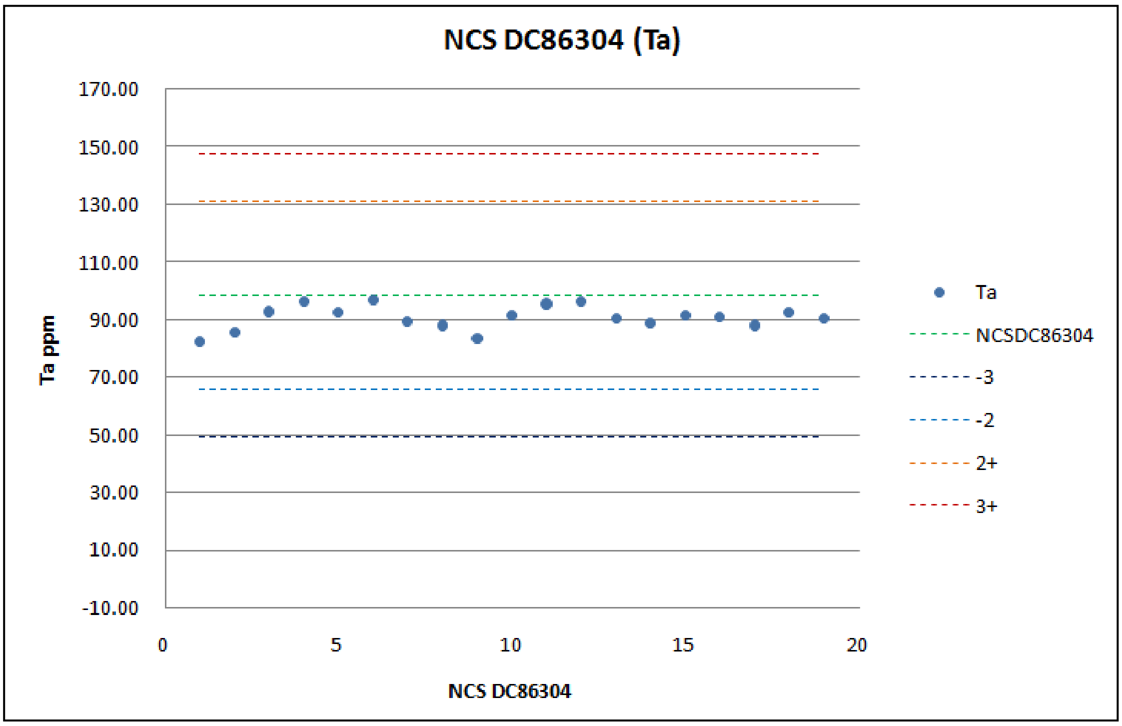
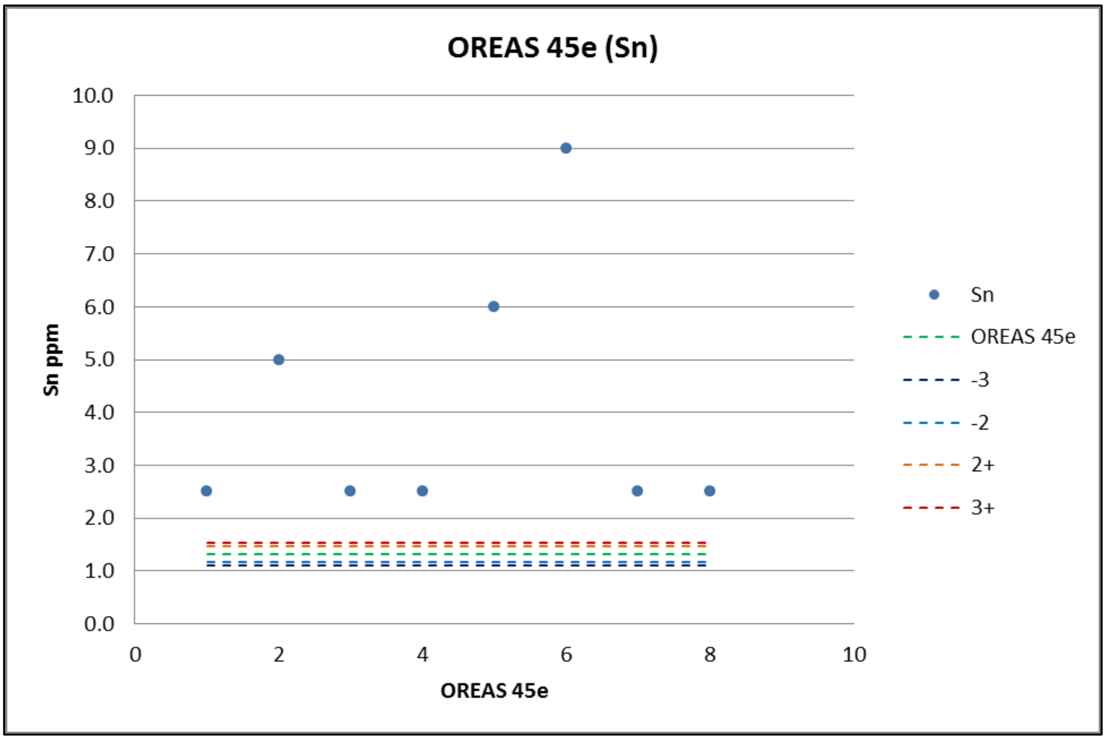
PEN12-11

APPENDIX
C QAQC PLOTS FOR 2012 DRILL PROGRAMME

Certified References Material Submissions



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8
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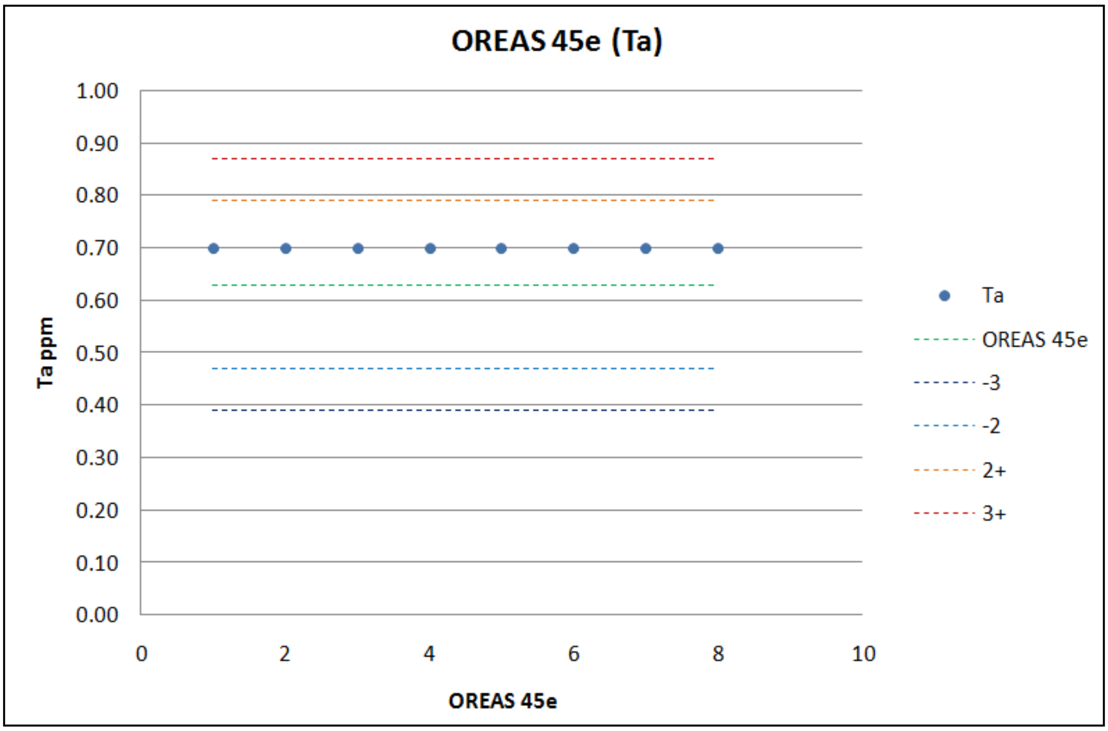
OREAS 45e
Sn
OREAS 45e
-3
-2
2+
3+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4
6
8
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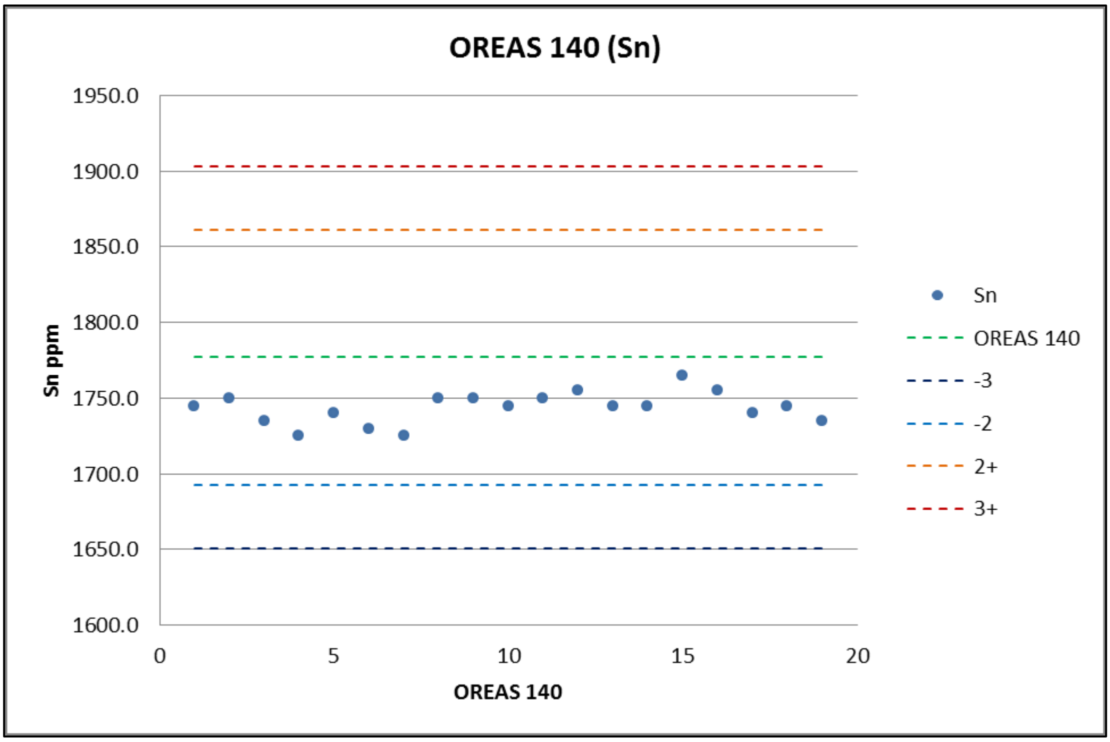
OREAS 45e
Ta
OREAS 45e
-3
-2
2+
3+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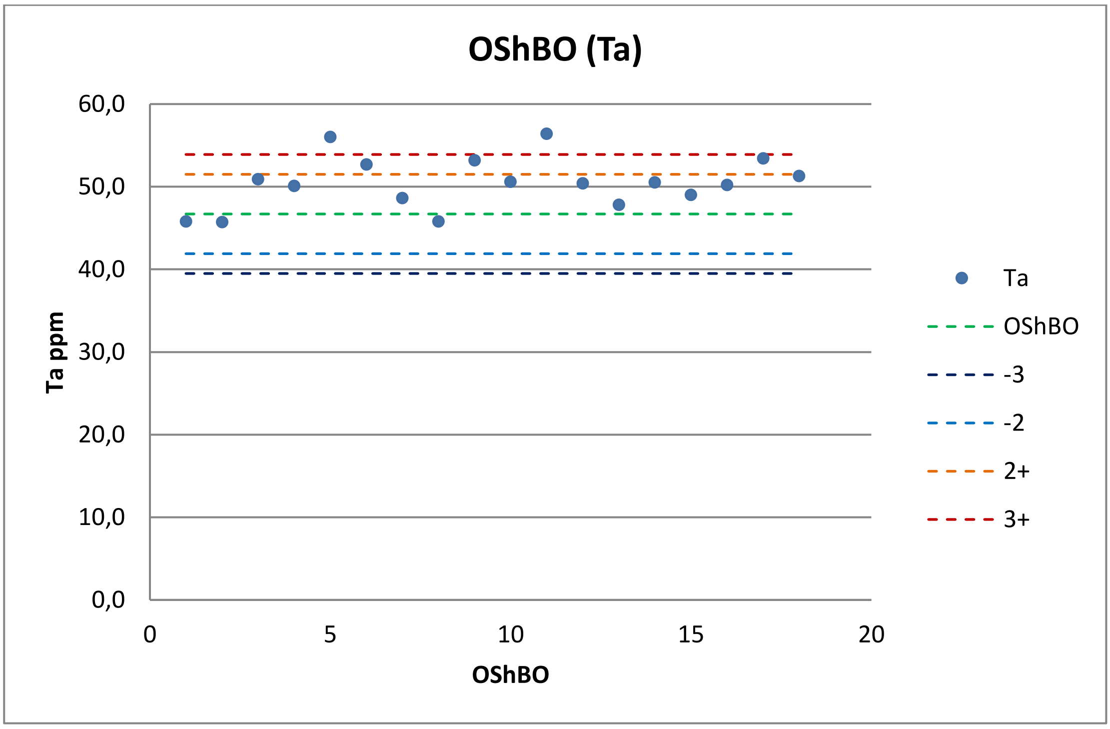
2+
3+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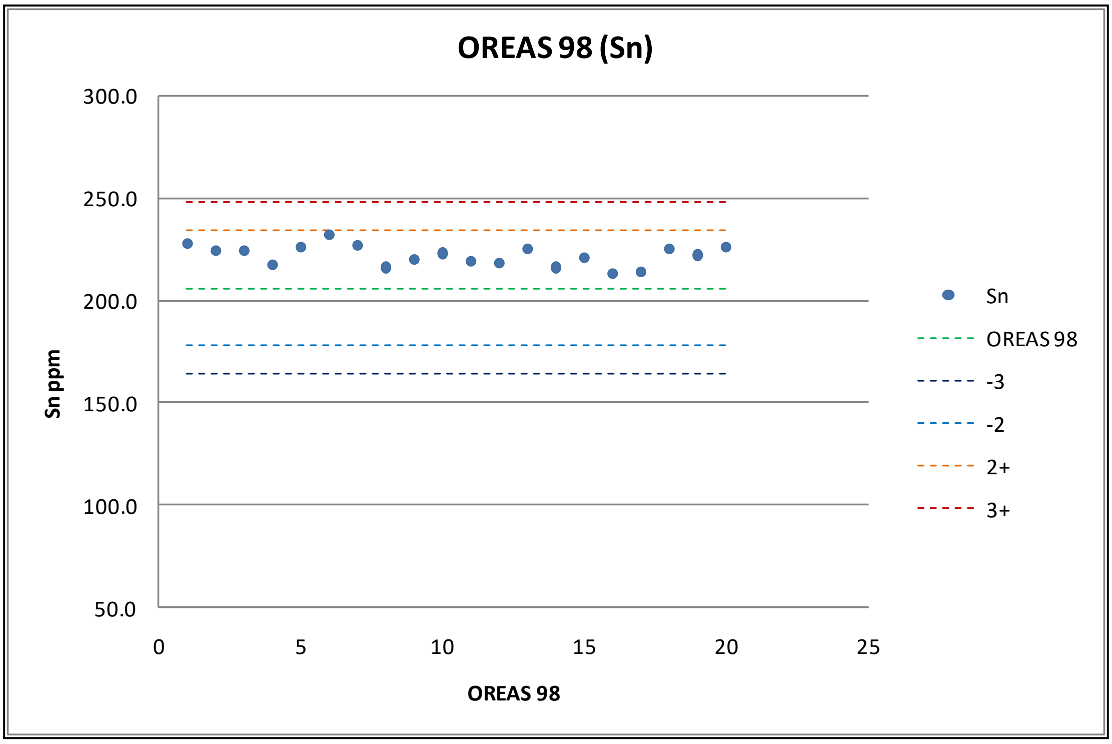
2+
3+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2+
3+

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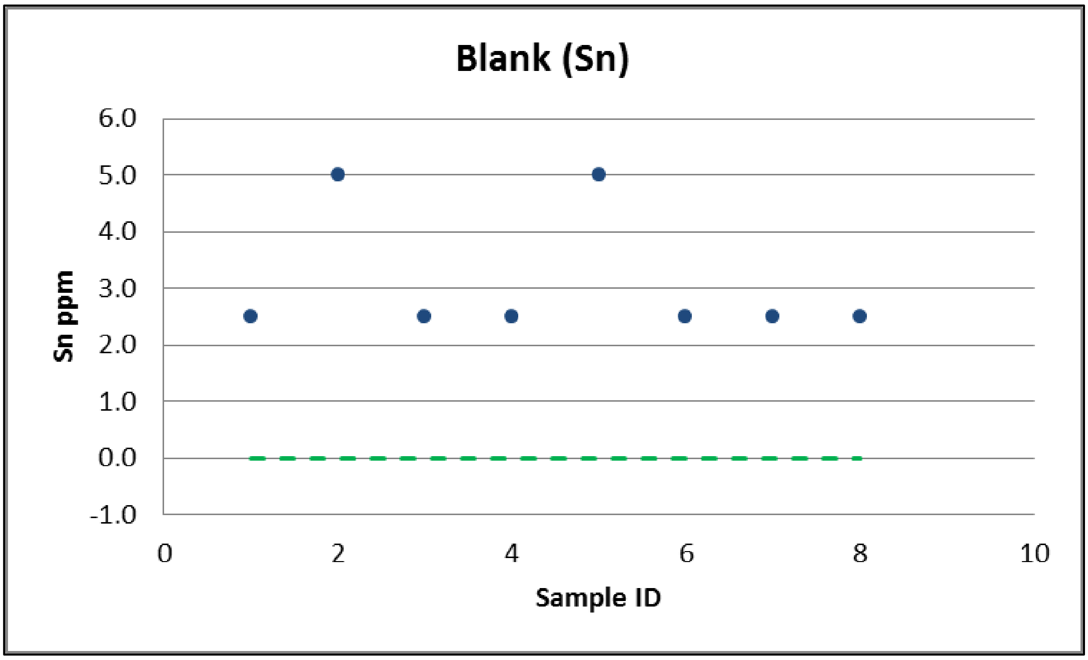

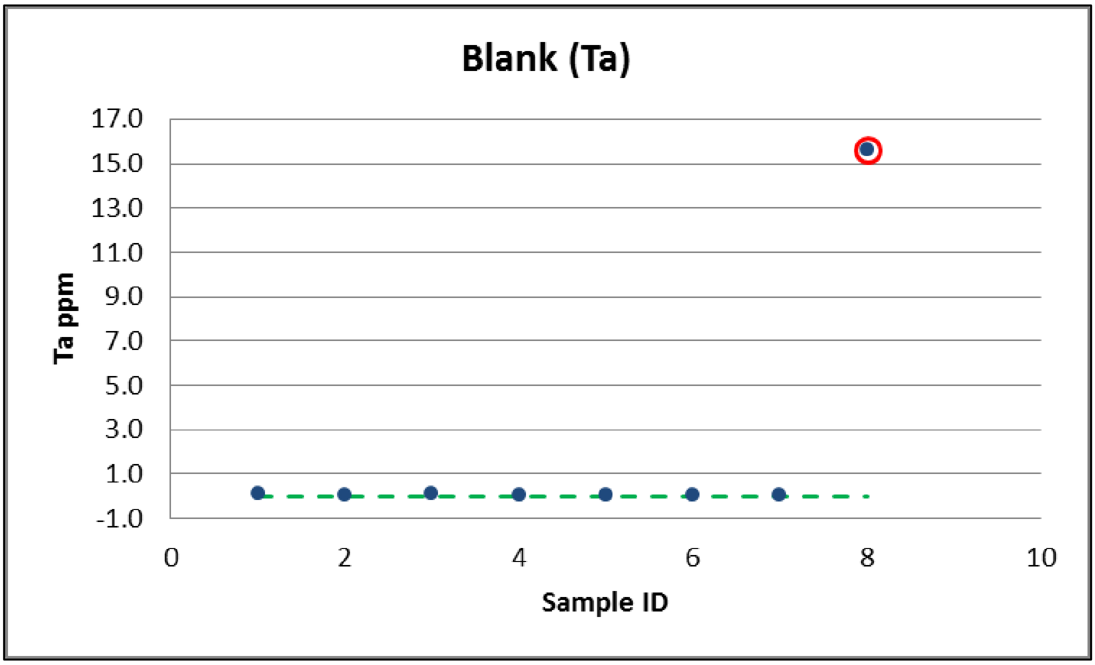

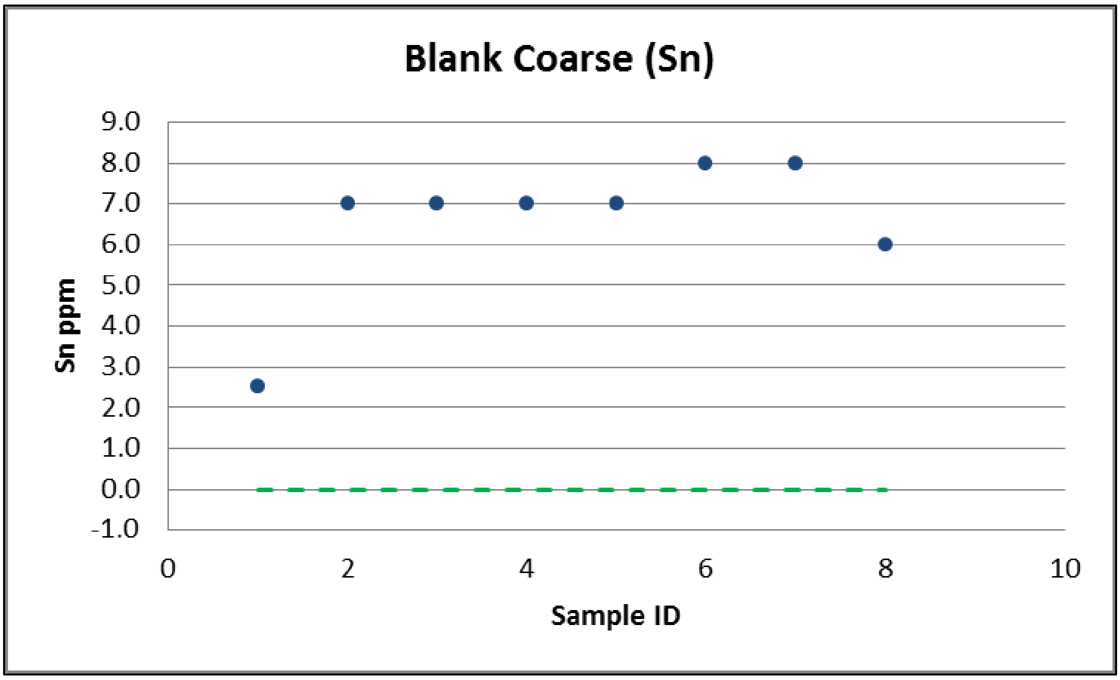
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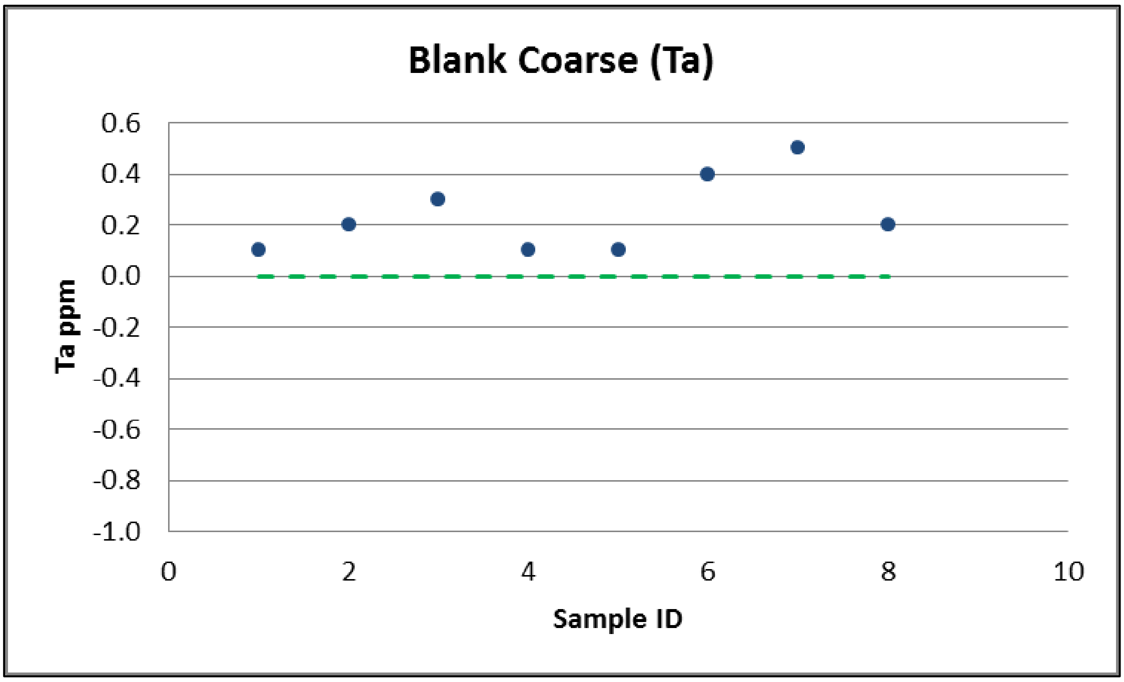
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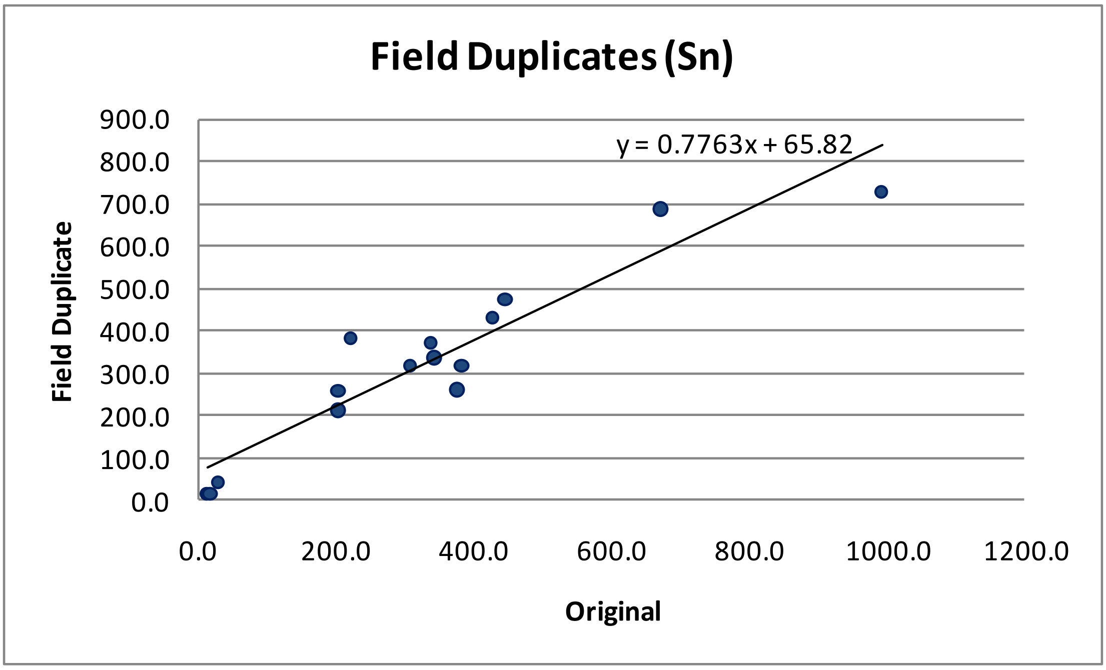

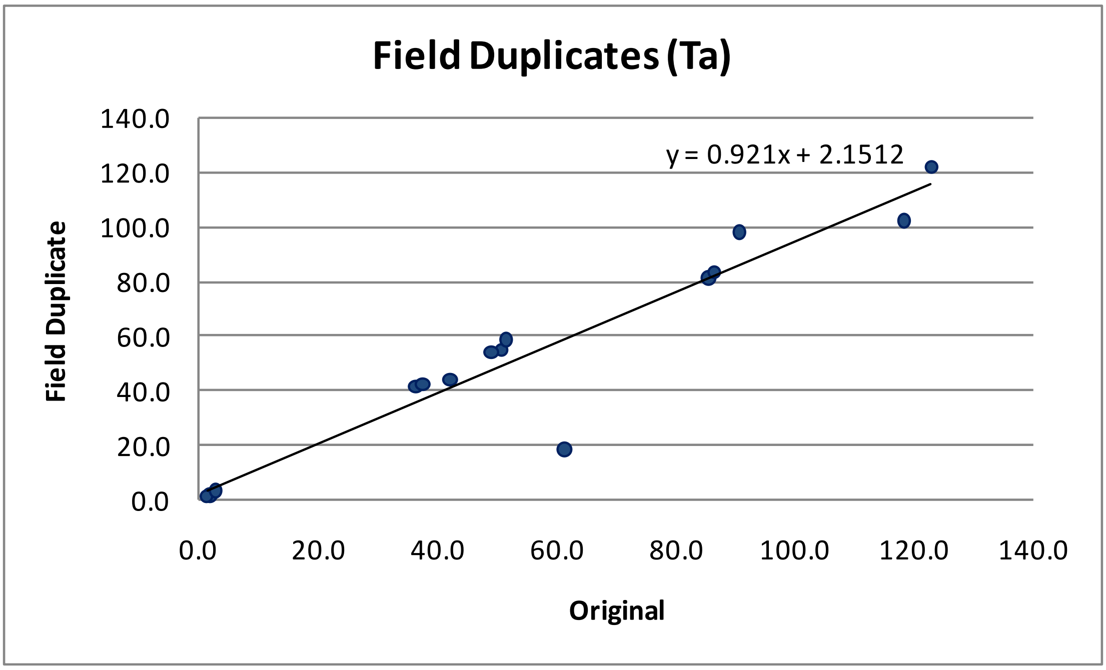

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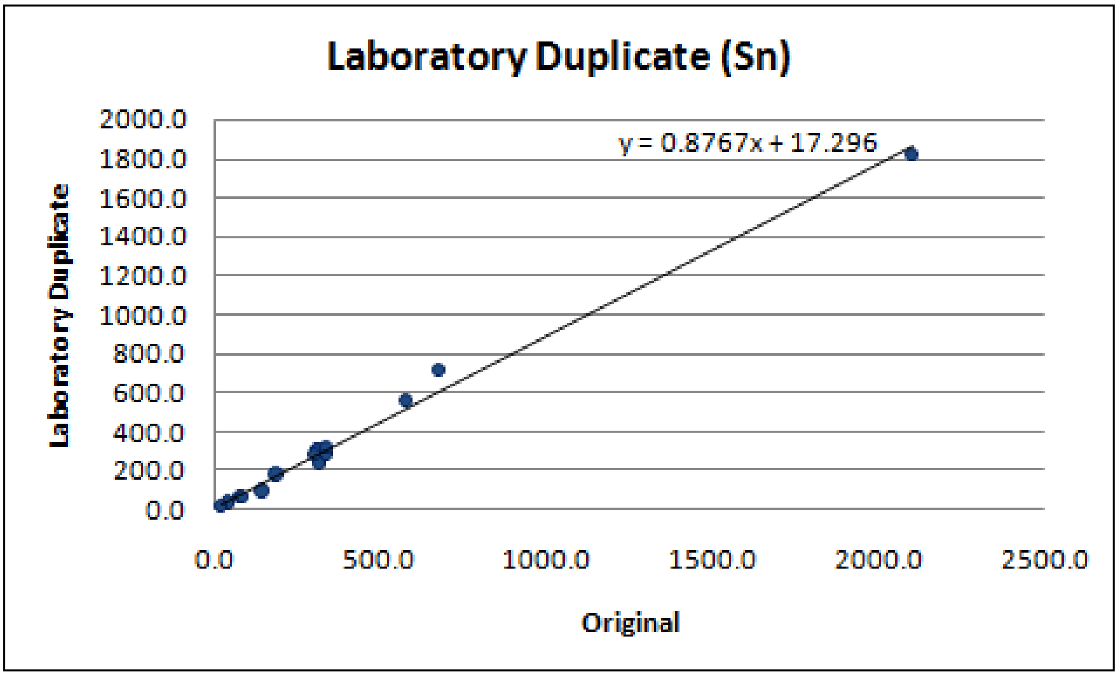

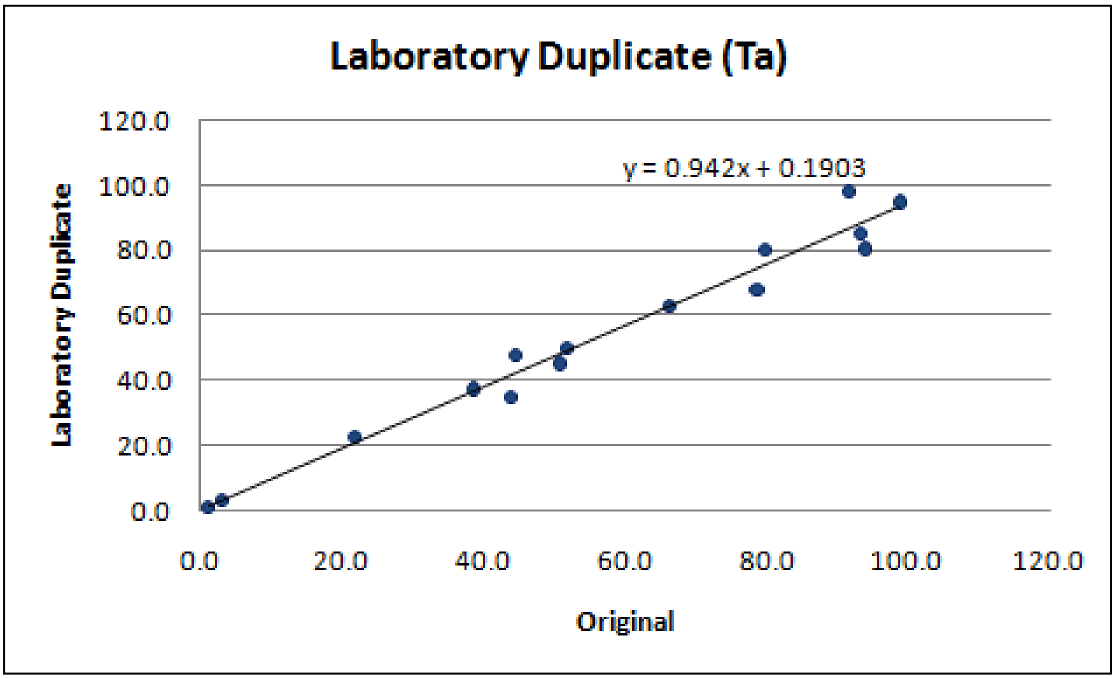

APPENDIX

D TIN, TANTALUM AND NIOBIUM VALIDATION PLOTS

Tin Validation Plots

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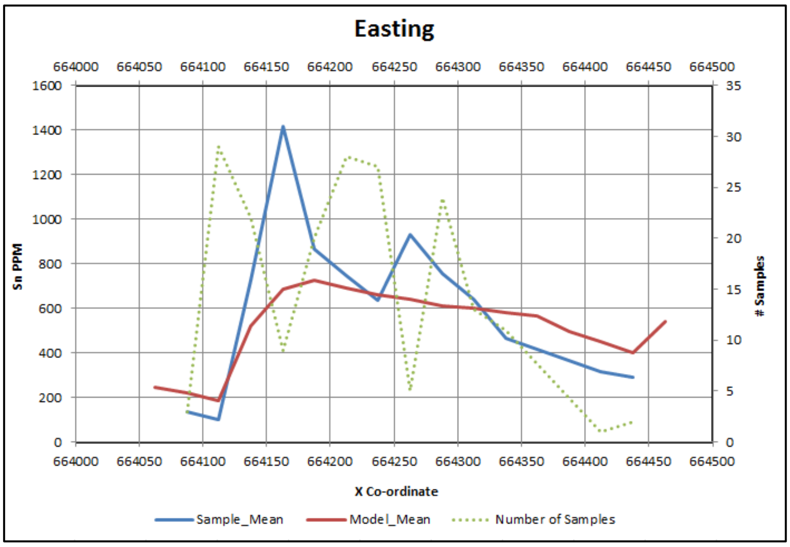
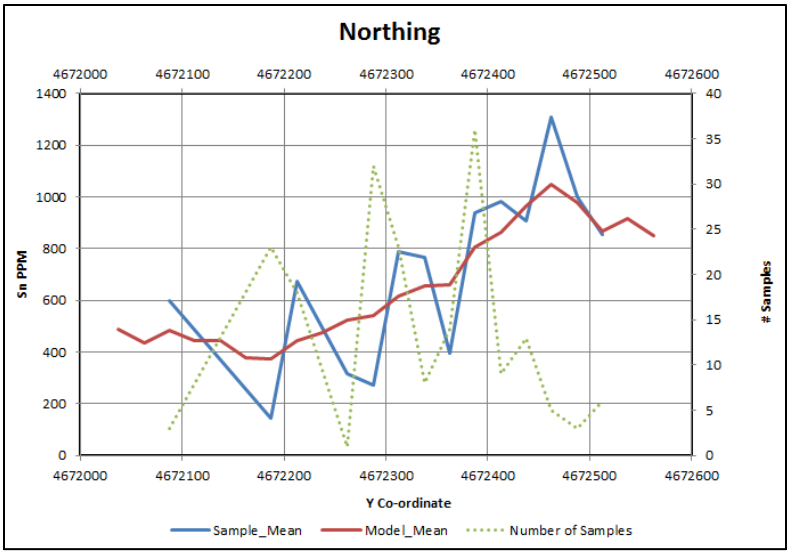
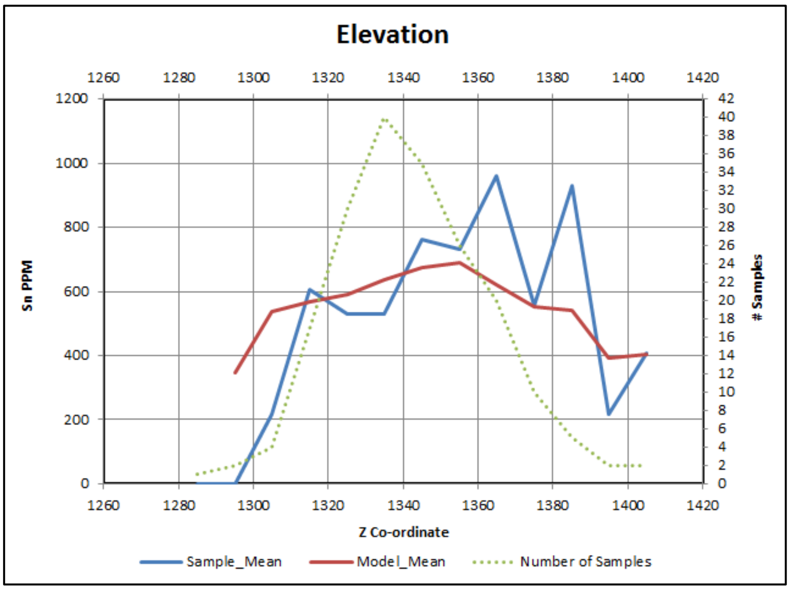
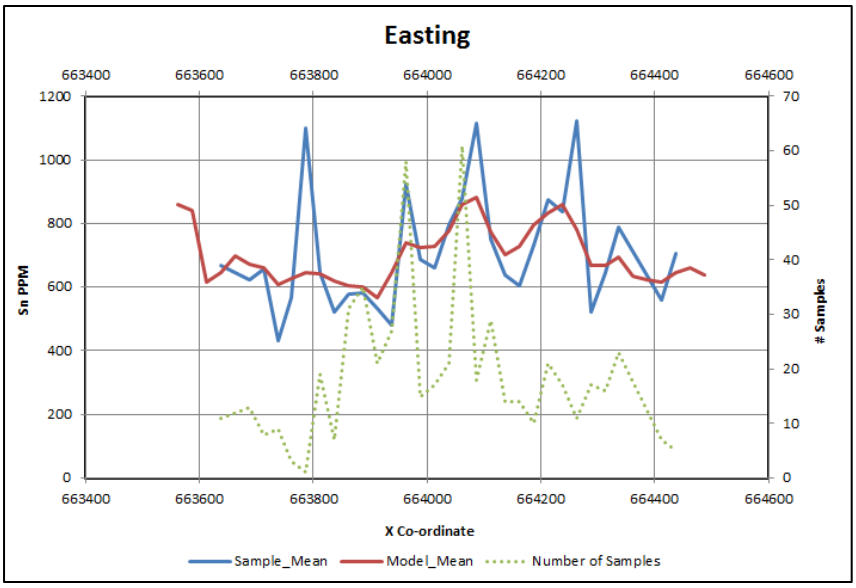
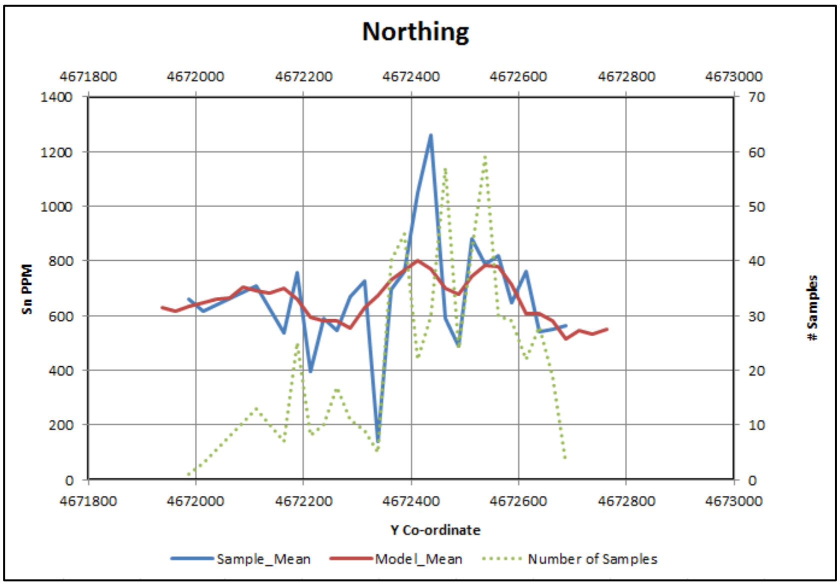


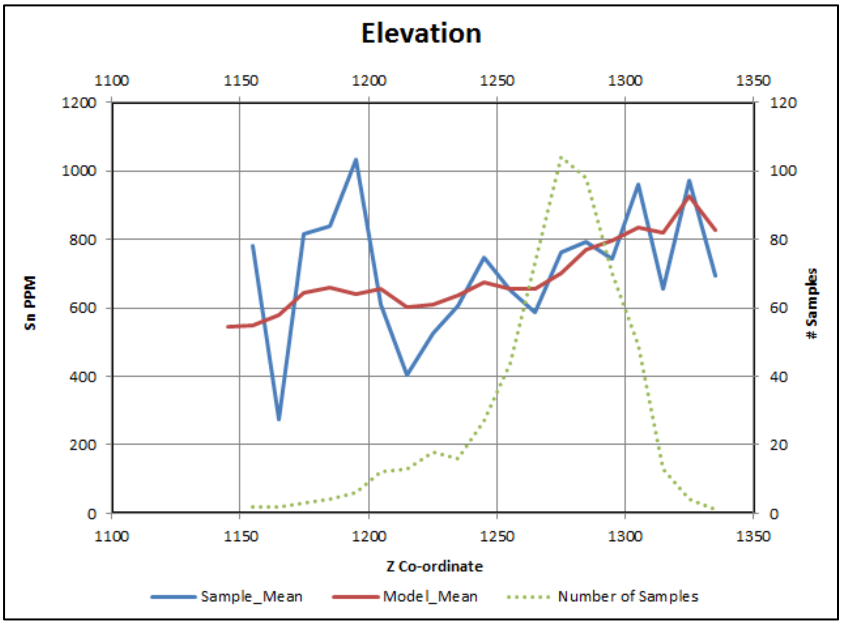




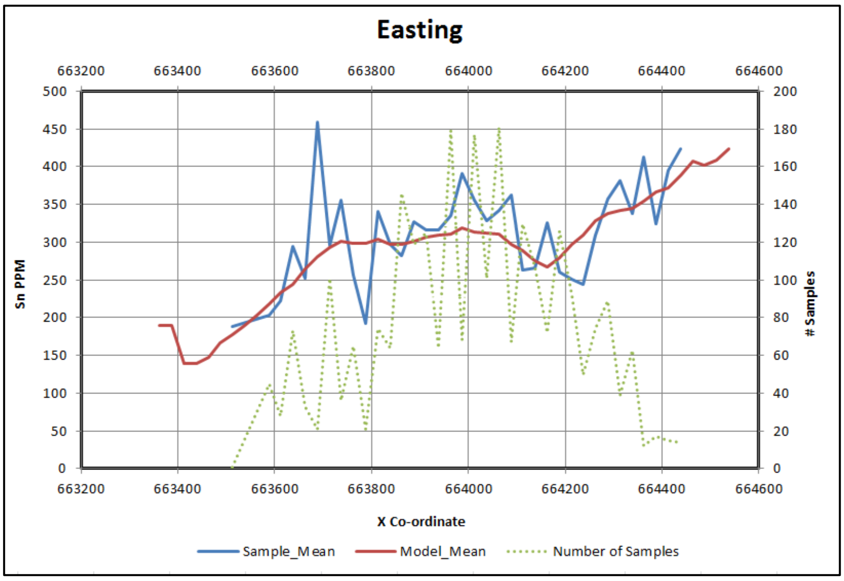
KZONE 100 (Tin)

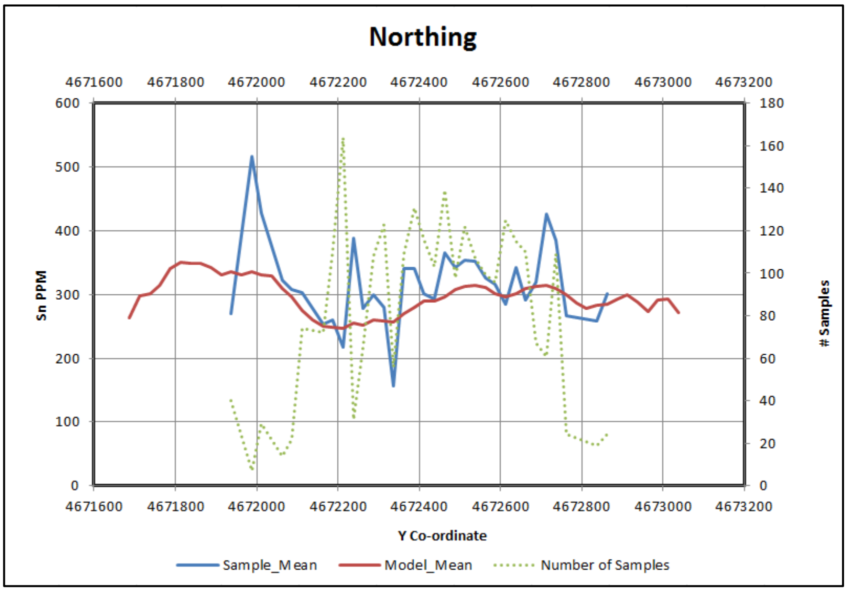


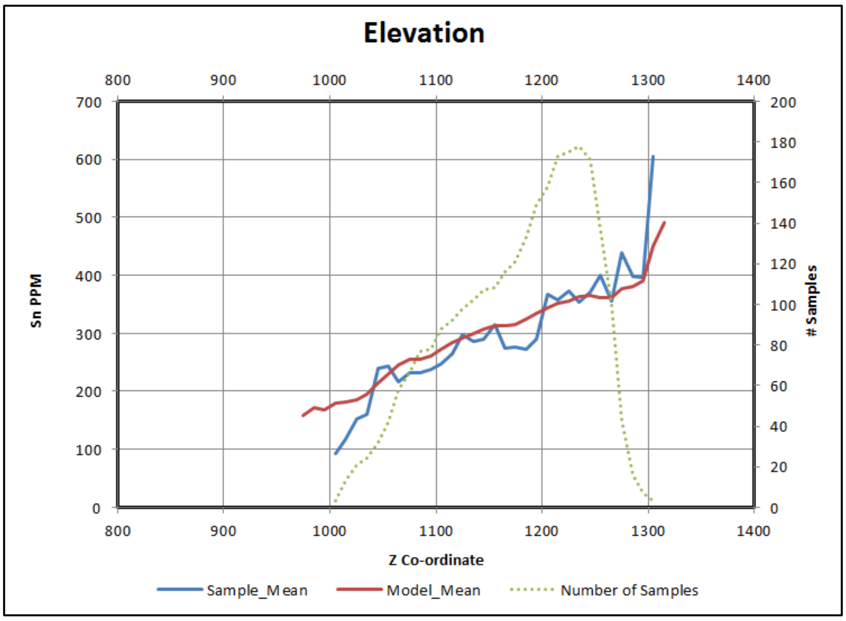




KZONE 200 (Tin)

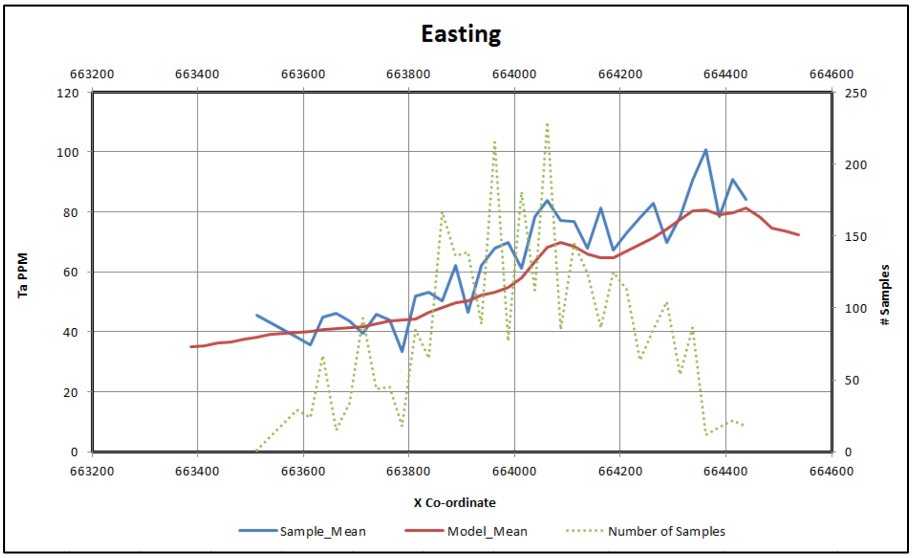


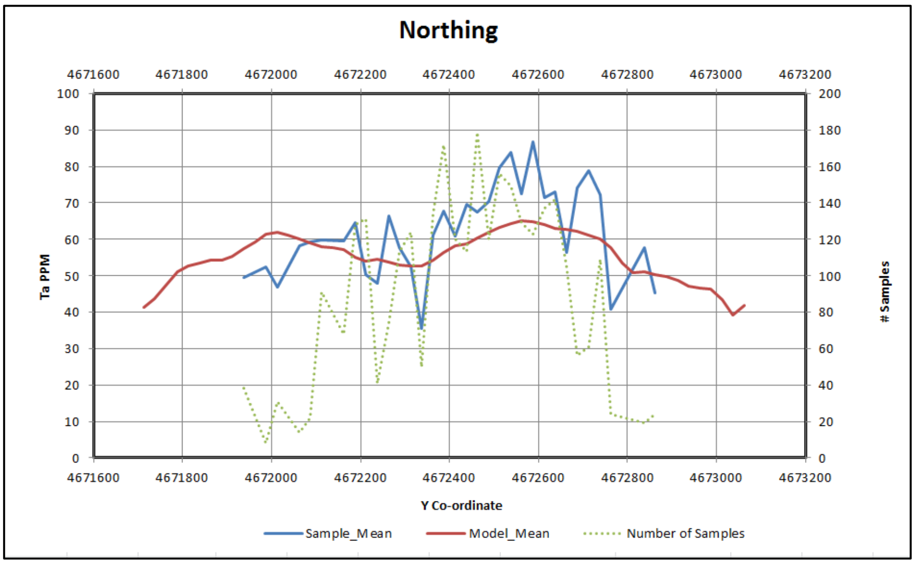


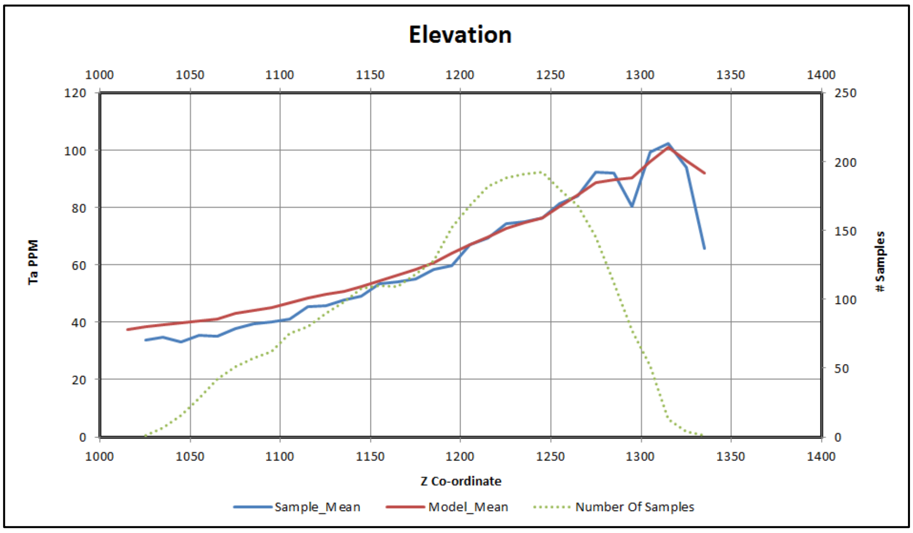


Tantalum Validation Plots

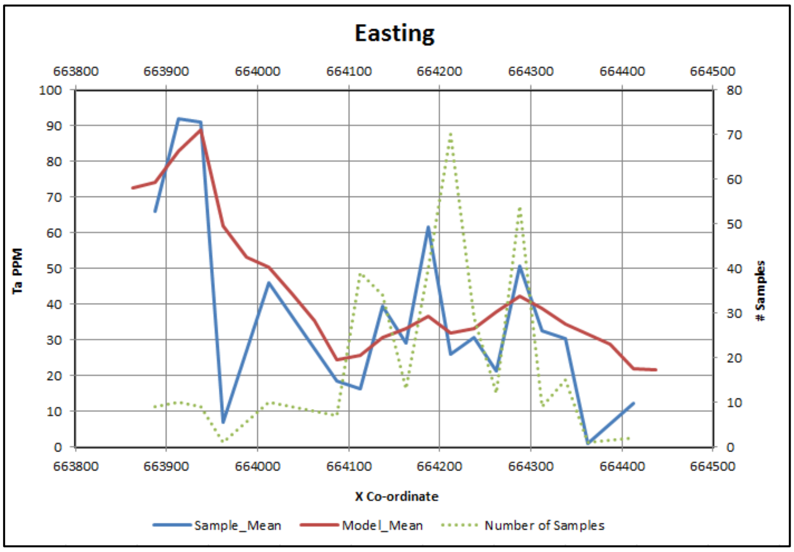
KZONE 400

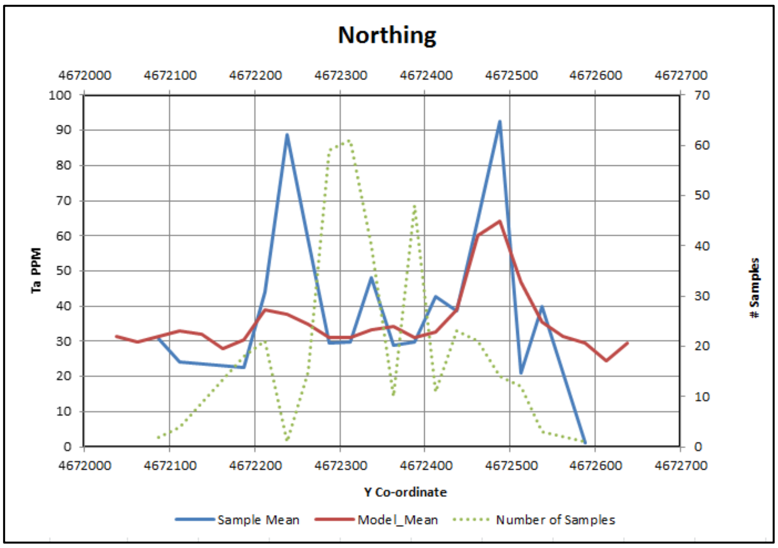


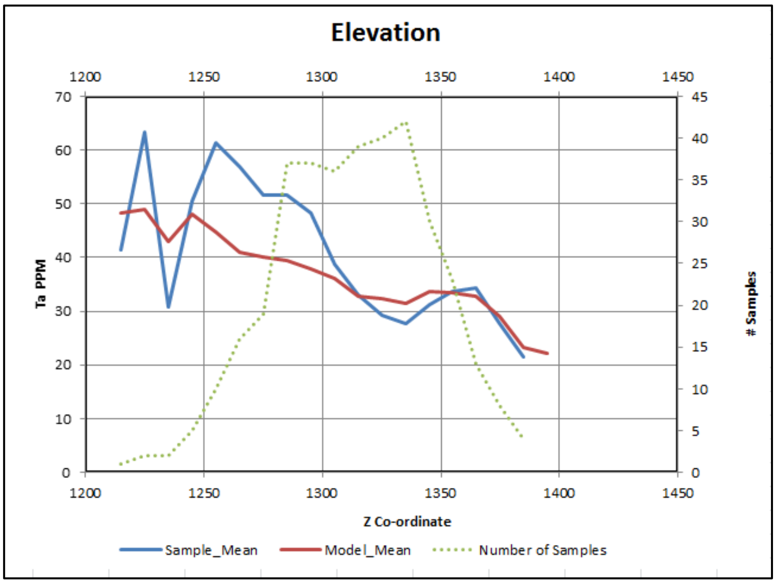




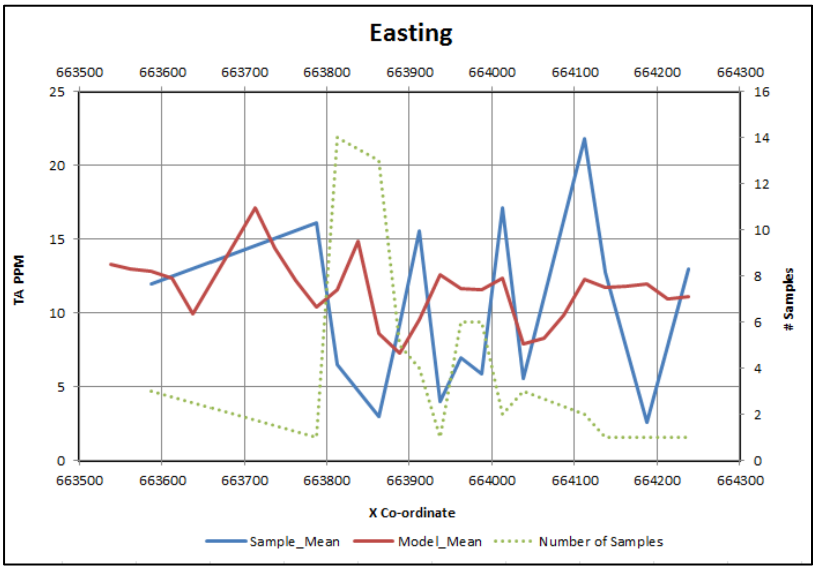
KZONE 410

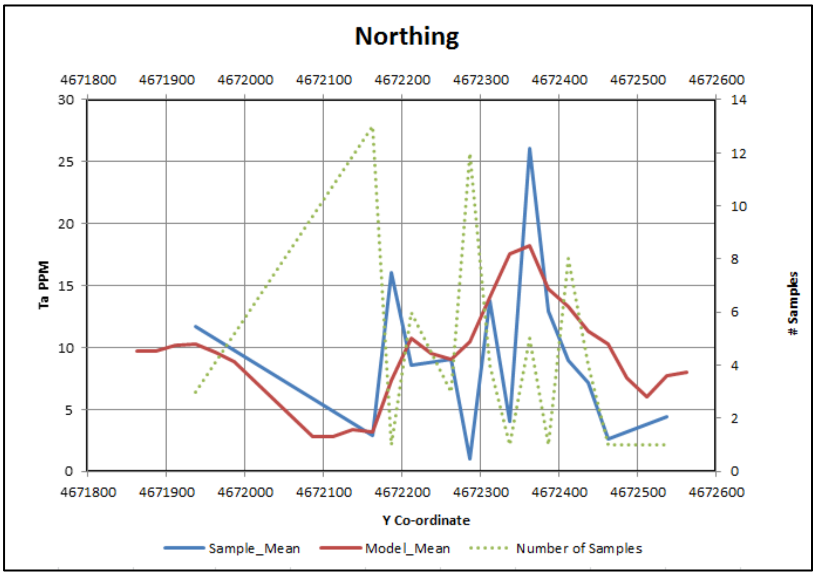

Easting
663800 663900 664000 664100 664200 664300 664400 664500
Ta PPM
0 10 20 30 40 50 60 70 80 90 100
Samples
0 10 20 30 40 50 60 70 80
X Co-ordinate
Sample_Mean
Model_Mean
Number of Samples

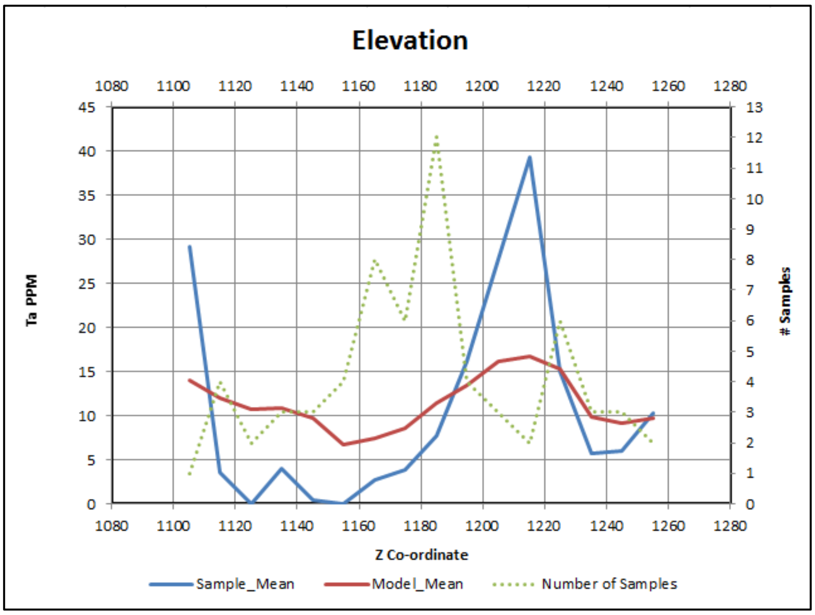

Northing
4672000 4672100 4672200 4672300 4672400 4672500 4672600 4672700
Ta PPM
0 10 20 30 40 50 60 70 80 90 100
Samples
0 10 20 30 40 50 60 70
Y Co-ordinate
Sample Mean
Model_Mean
Number of Samples


Elevation
1200 1250 1300 1350 1400 1450
Ta PPM
0 10 20 30 40 50 60 70
Samples
0 5 10 15 20 25 30 35 40 45
Z Co-ordinate
Sample_Mean
Model_Mean
Number of Samples

KZONE 900

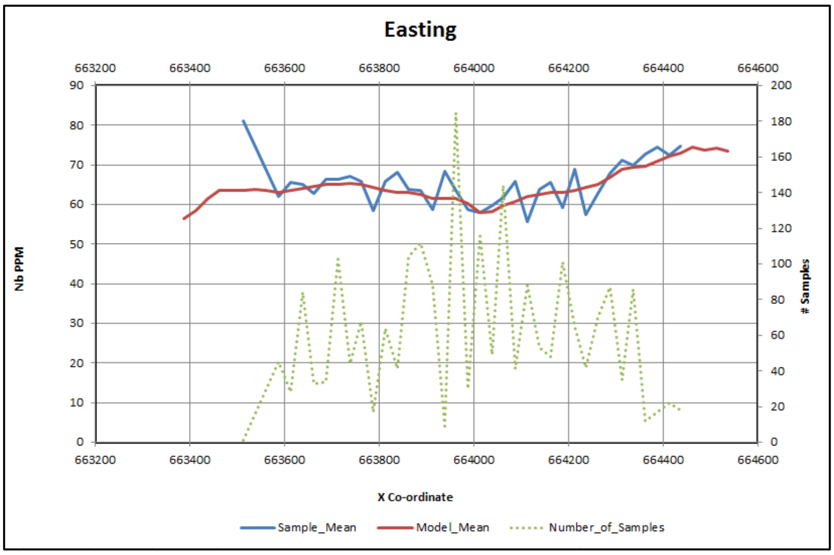

Easting
663500
663600
663700
663800
663900
664000
664100
664200
664300
TA PPM
0
5
10
15
20
25
Samples
0
2
4
6
8
10
12
14
16
X Co-ordinate
Sample_Mean
Model_Mean
Number of Samples

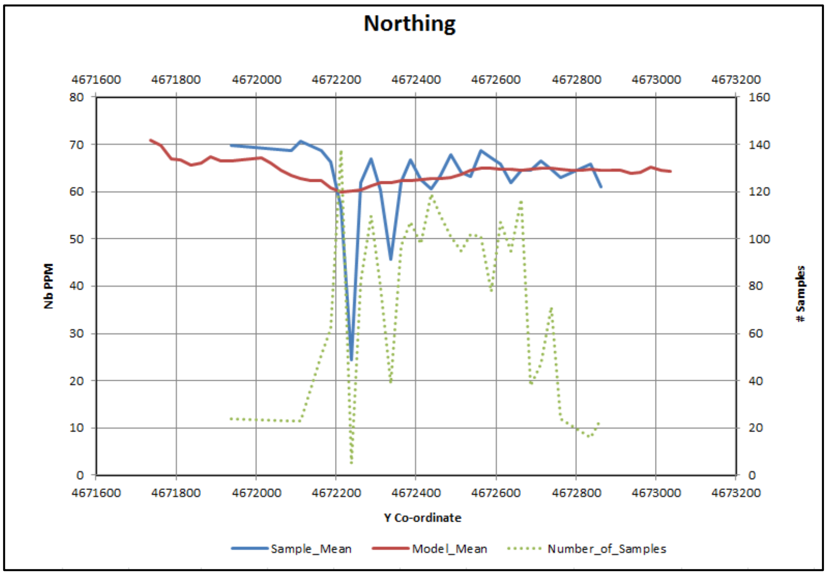

Northing
4671800
4671900
4672000
4672100
4672200
4672300
4672400
4672500
4672600
Ta PPM
0
5
10
15
20
25
30
Samples
0
2
4
6
8
10
12
14
Y Co-ordinate
Sample_Mean
Model_Mean
Number of Samples

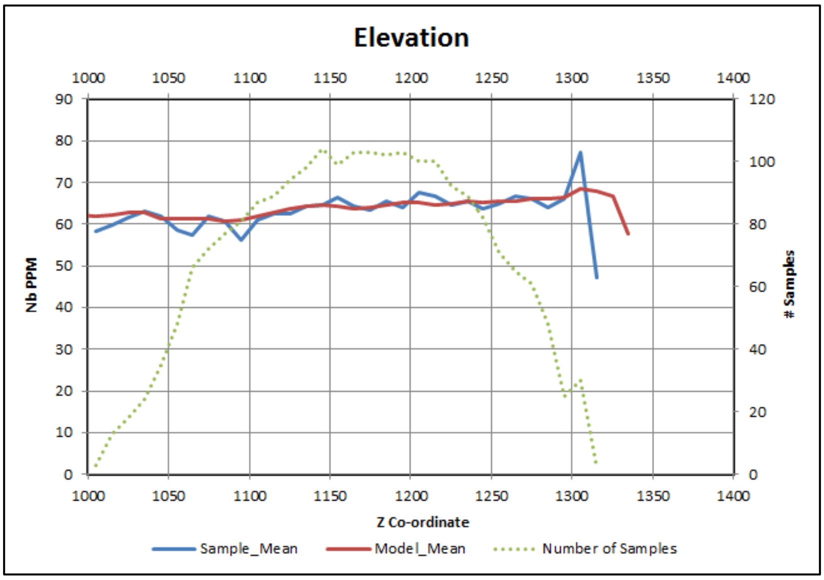

Elevation
1080
1100
1120
1140
1160
1180
1200
1220
1240
1260
1280
Ta PPM
0
5
10
15
20
25
30
35
40
45
Samples
0
1
2
3
4
5
6
7
8
9
10
11
12
13
Z Co-ordinate
Sample_Mean
Model_Mean
Number of Samples

Niobium Validation Plots

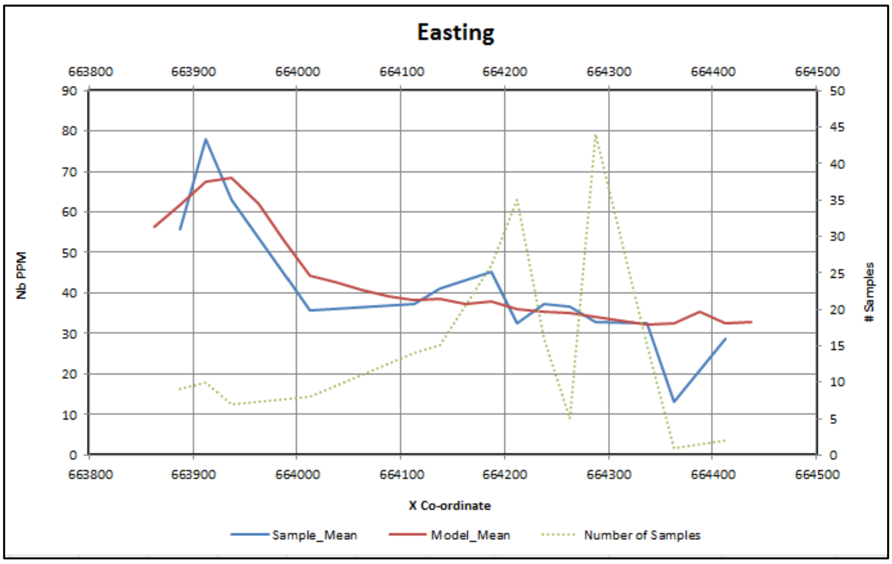
KZONE 500

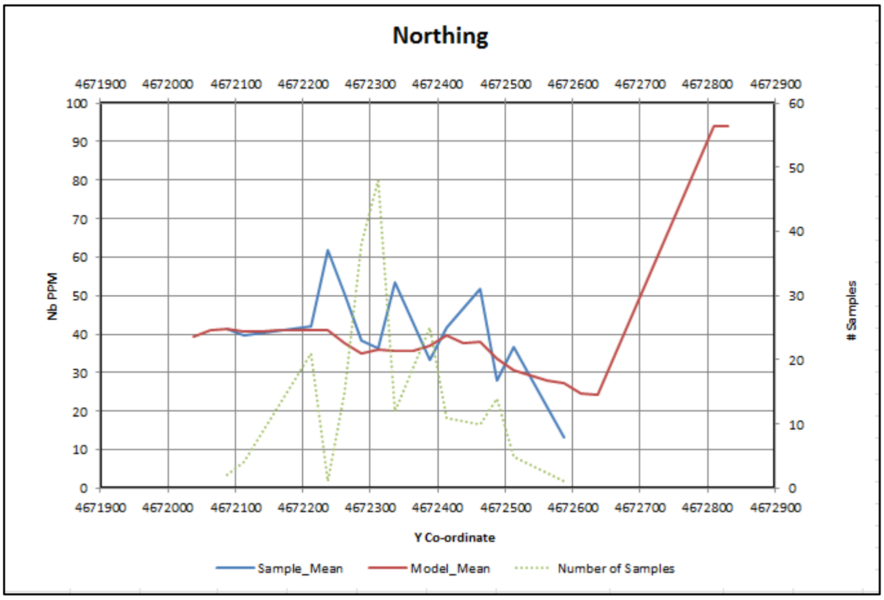


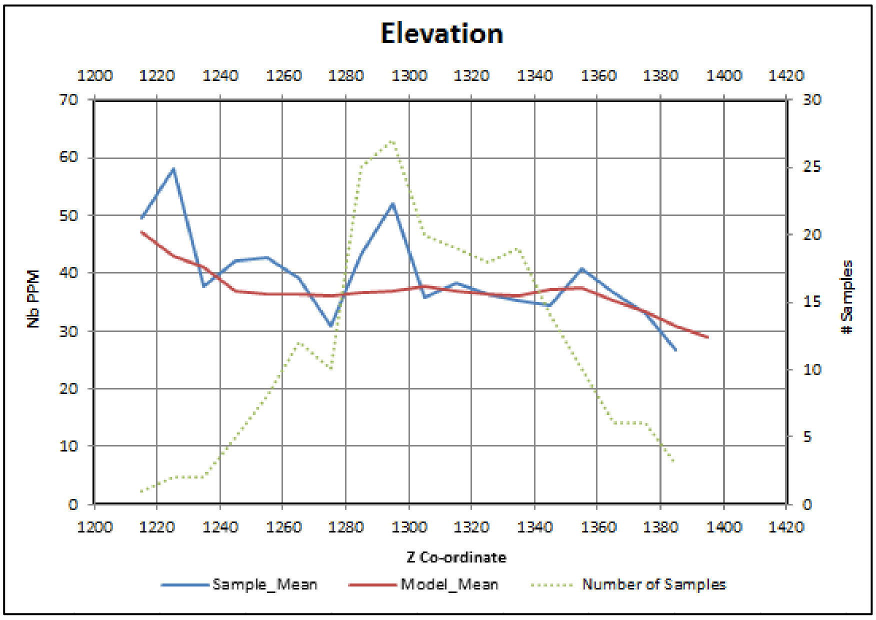



Elevation
Nb PPM
Samples
Z Co-ordinate
0 10 20 30 40 50 60 70 80 90
0 20 40 60 80 100 120
1000 1050 1100 1150 1200 1250 1300 1350 1400
Sample_Mean
Model_Mean
Number of Samples

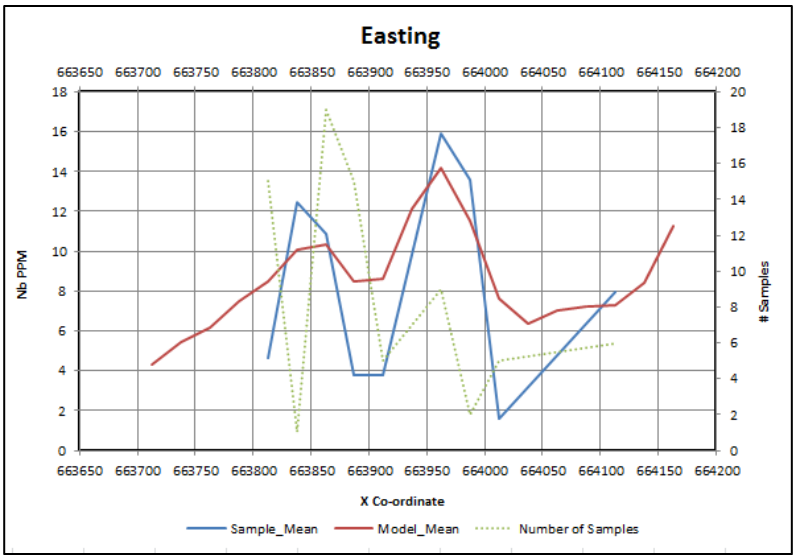
KZONE 510

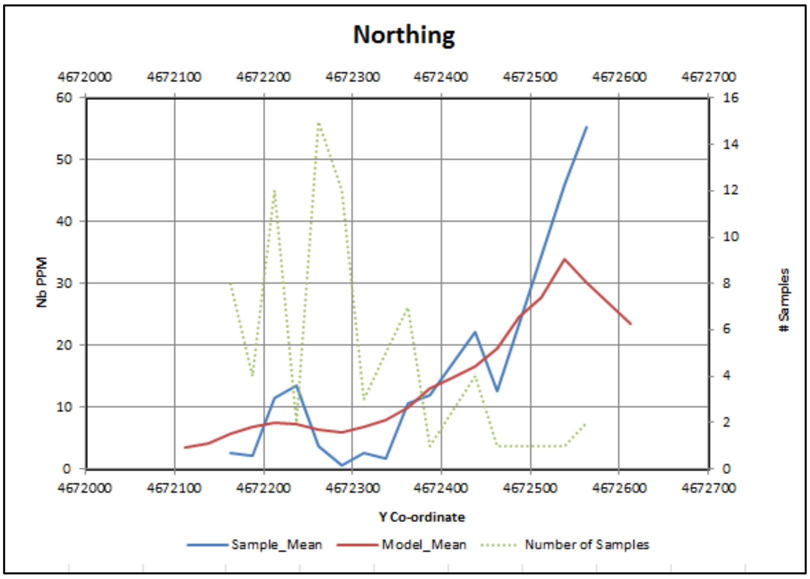

Easting
Nb PPM
Samples
X Co-ordinate
0 10 20 30 40 50 60 70 80 90
0 5 10 15 20 25 30 35 40 45 50
663800 663900 664000 664100 664200 664300 664400 664500
Sample_Mean
Model_Mean
Number of Samples

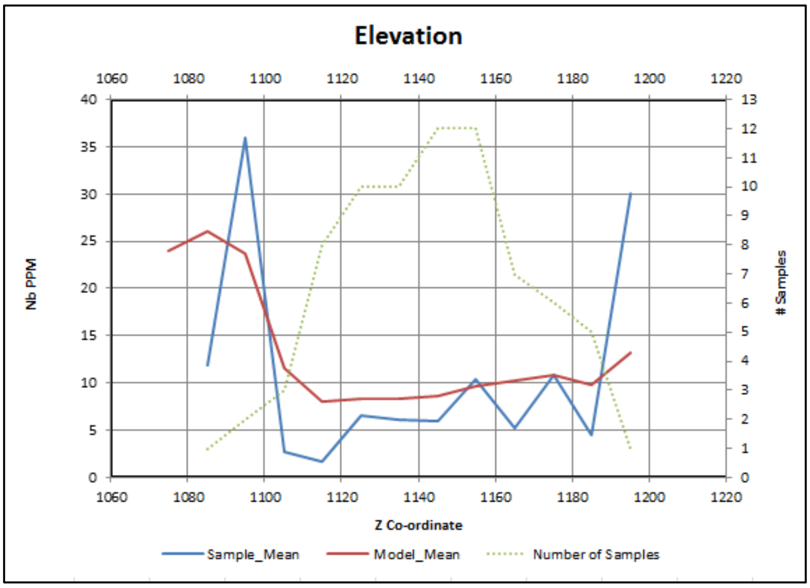

Northing
Nb PPM
Samples
Y Co-ordinate
0 10 20 30 40 50 60 70 80 90 100
0 10 20 30 40 50 60
4671900 4672000 4672100 4672200 4672300 4672400 4672500 4672600 4672700 4672800 4672900
Sample_Mean
Model_Mean
Number of Samples


Elevation
1200
1220
1240
1260
1280
1300
1320
1340
1360
1380
1400
1420
Nb PPM
0
10
20
30
40
50
60
70
Samples
0
5
10
15
20
25
30
Z Co-ordinate
Sample_Mean
Model_Mean
Number of Samples

KZONE 800


Easting
663650
663700
663750
663800
663850
663900
663950
664000
664050
664100
664150
664200
Nb PPM
0
2
4
6
8
10
12
14
16
18
Samples
0
2
4
6
8
10
12
14
16
18
20
X Co-ordinate
Sample_Mean
Model_Mean
Number of Samples

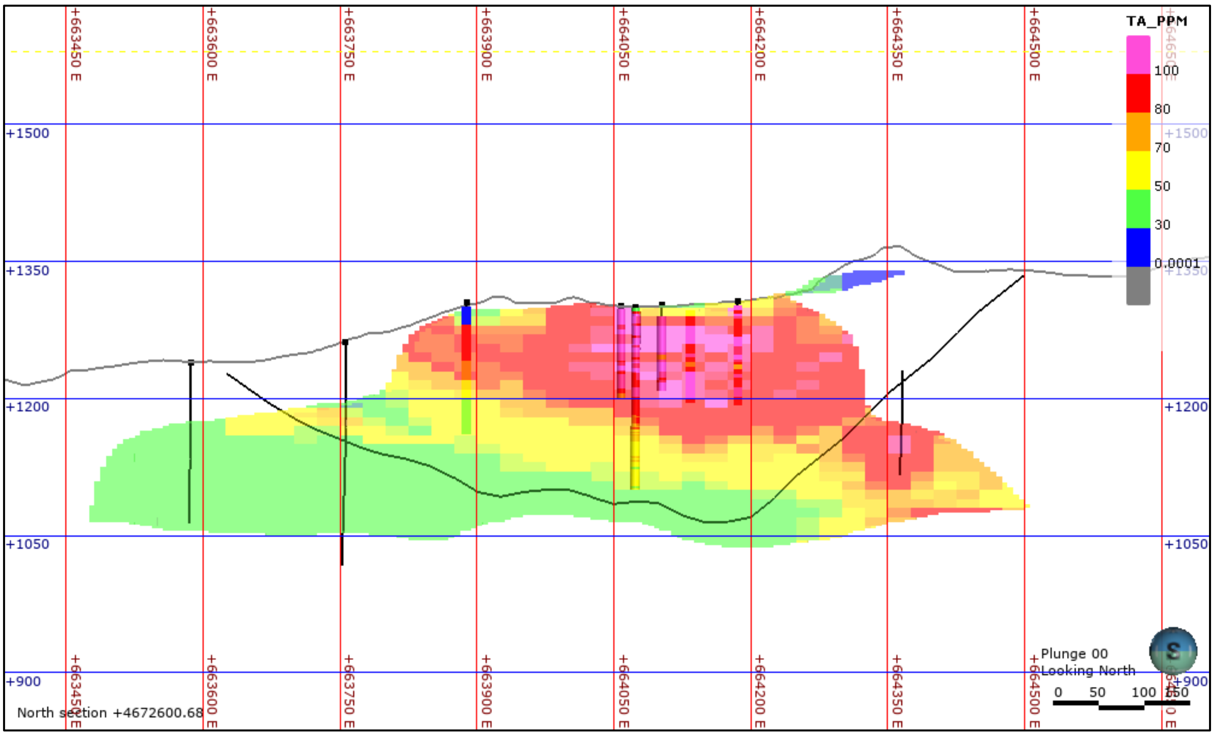

Northing
4672000
4672100
4672200
4672300
4672400
4672500
4672600
4672700
Nb PPM
0
10
20
30
40
50
60
Samples
0
2
4
6
8
10
12
14
16
Y Co-ordinate
Sample_Mean
Model_Mean
Number of Samples

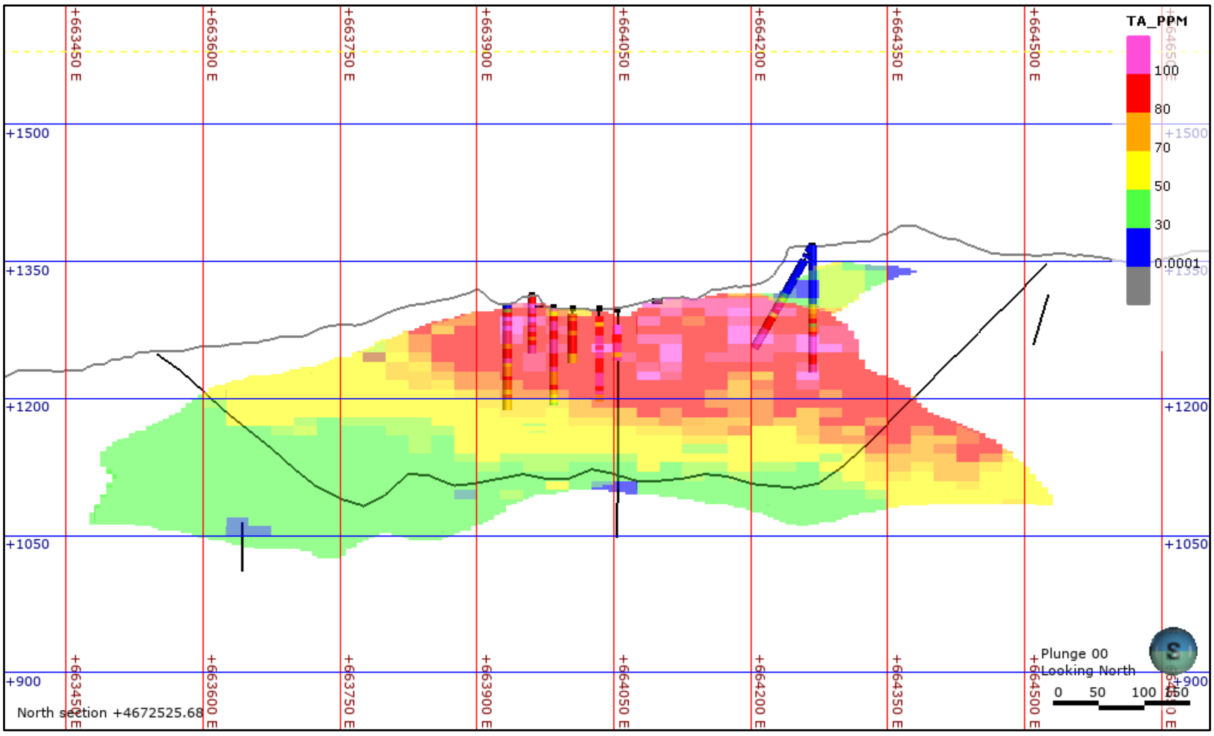

Elevation
Nb PPM
Samples
Z Co-ordinate
1060 1080 1100 1120 1140 1160 1180 1200 1220
0 5 10 15 20 25 30 35 40
0 1 2 3 4 5 6 7 8 9 10 11 12 13
Sample_Mean
Model_Mean
Number of Samples

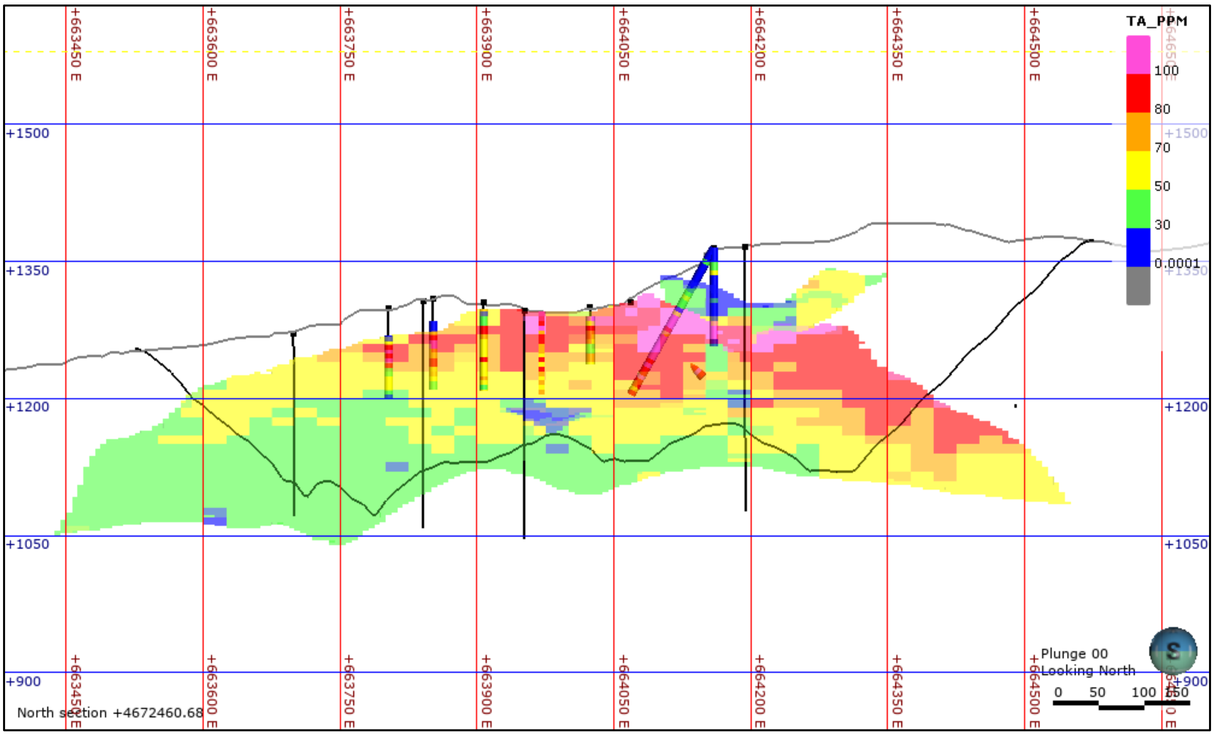
APPENDIX

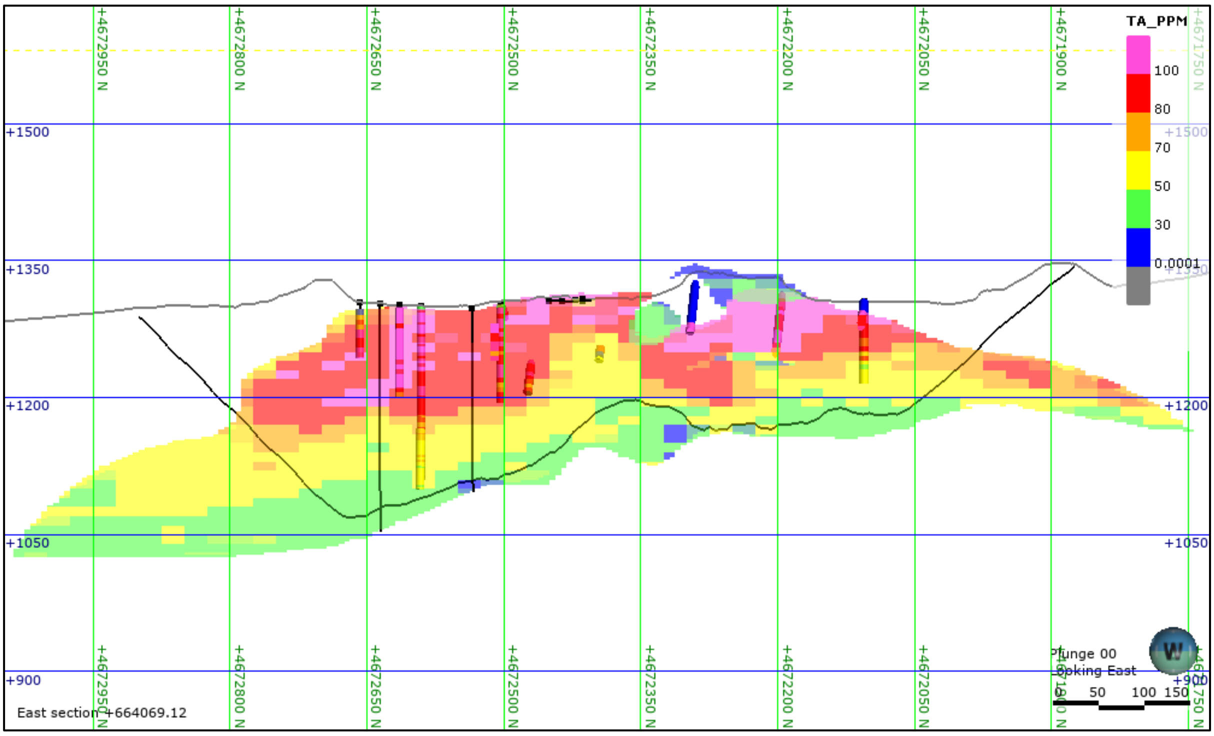
E TANTALUM VALIDATION CROSS SECTIONS

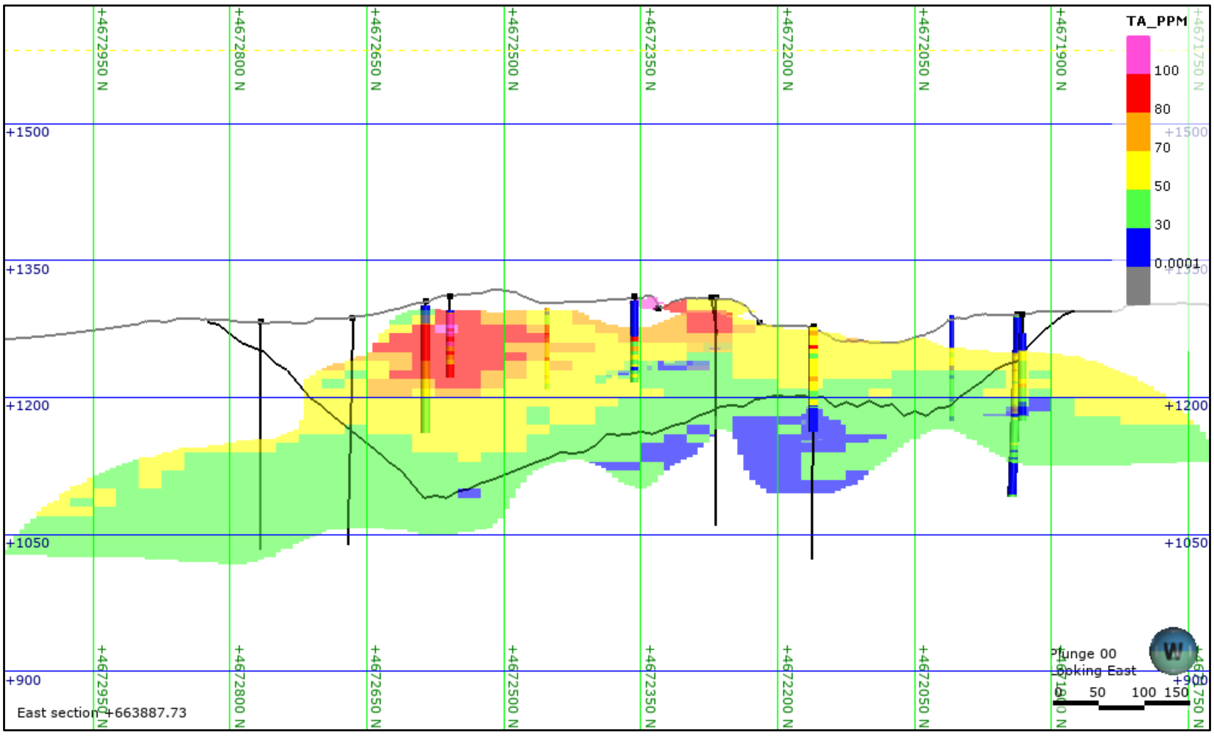
Cross-Sections Validating Tantalum model against drillhole data

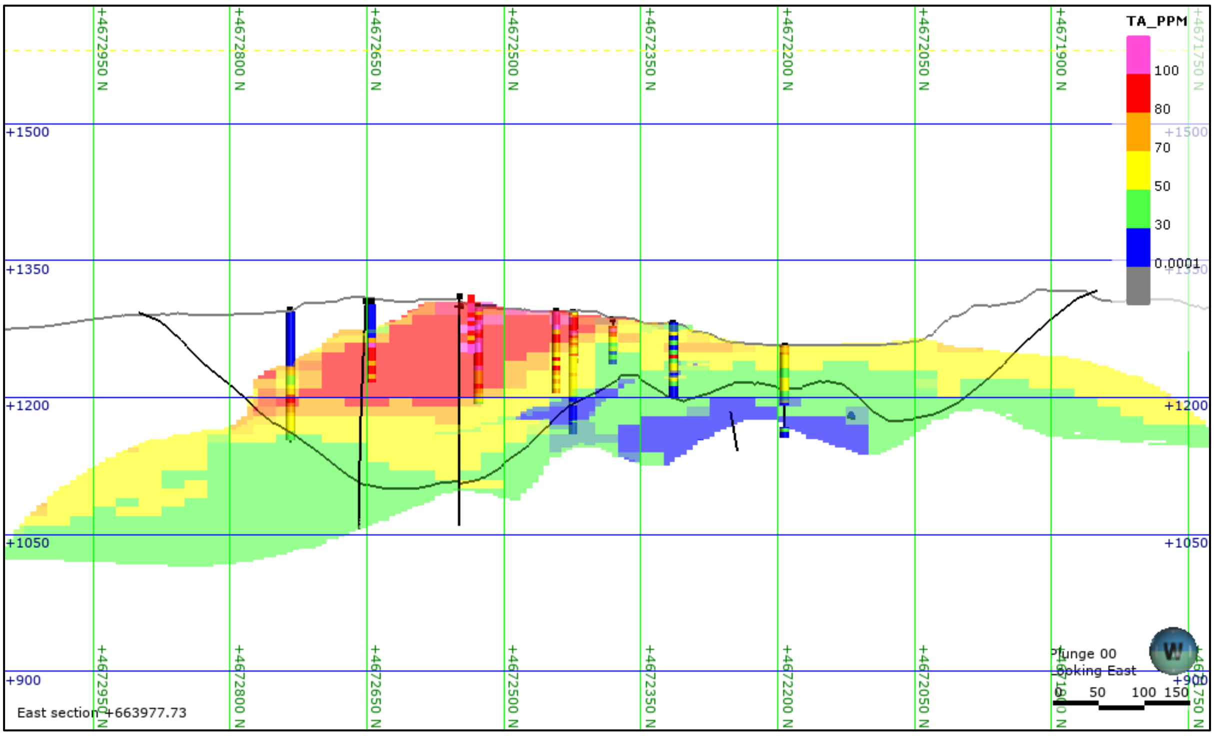





+663450 E
+663600 E
+663750 E
+663900 E
+664050 E
+664200 E
+664350 E
+664500 E
TA_PPM
100
80
70
50
30
0.0001
+1500
+1350
+1200
+1050
+900
Plunge 00
Looking North
0 50 100 150
North section +4672460.68


+4672950 N
+4672800 N
+4672650 N
+4672500 N
+4672350 N
+4672200 N
+4672050 N
+4671900 N
TA_PPM
100
80
70
50
30
0.0001
+1500
+1350
+1200
+1050
+900
Plunge 00
Looking East
0 50 100 150
East section +664069.12

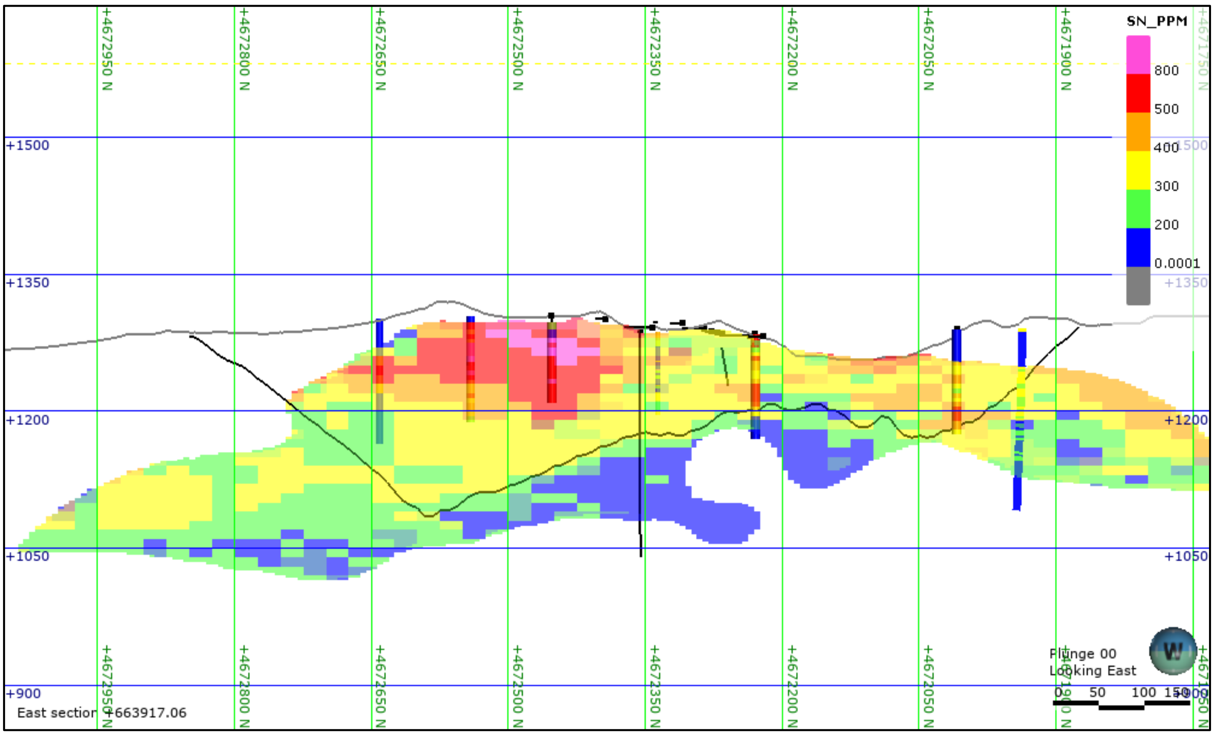

TA_PPM
100
80
70
50
30
0.0001
+4672950 N
+4672800 N
+4672650 N
+4672500 N
+4672350 N
+4672200 N
+4672050 N
+4671900 N
+4671750 N
+1500
+1350
+1200
+1050
+900
Plunge 00
Looking East
0 50 100 150
East section +663887.73

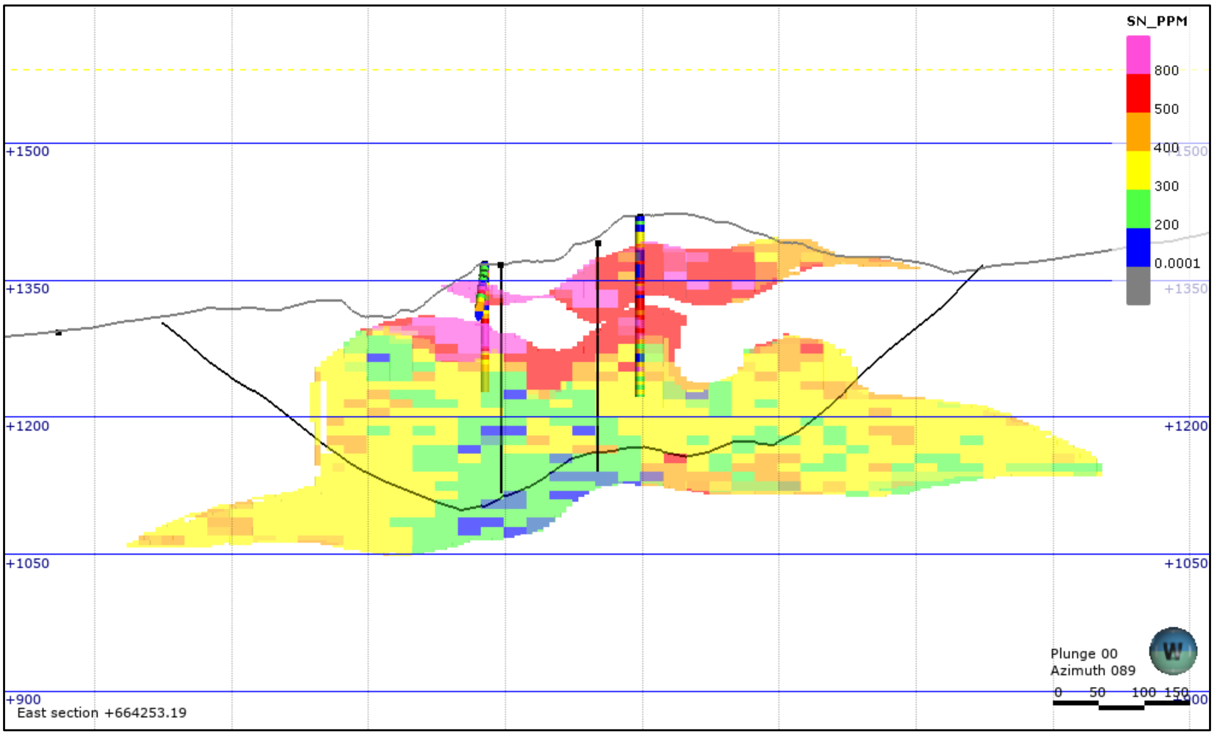

TA_PPM
100
80
70
50
30
0.0001
+4672950 N
+4672800 N
+4672650 N
+4672500 N
+4672350 N
+4672200 N
+4672050 N
+4671900 N
+4671750 N
+1500
+1350
+1200
+1050
+900
Plunge 00
Looking East
0 50 100 150
East section +663977.73

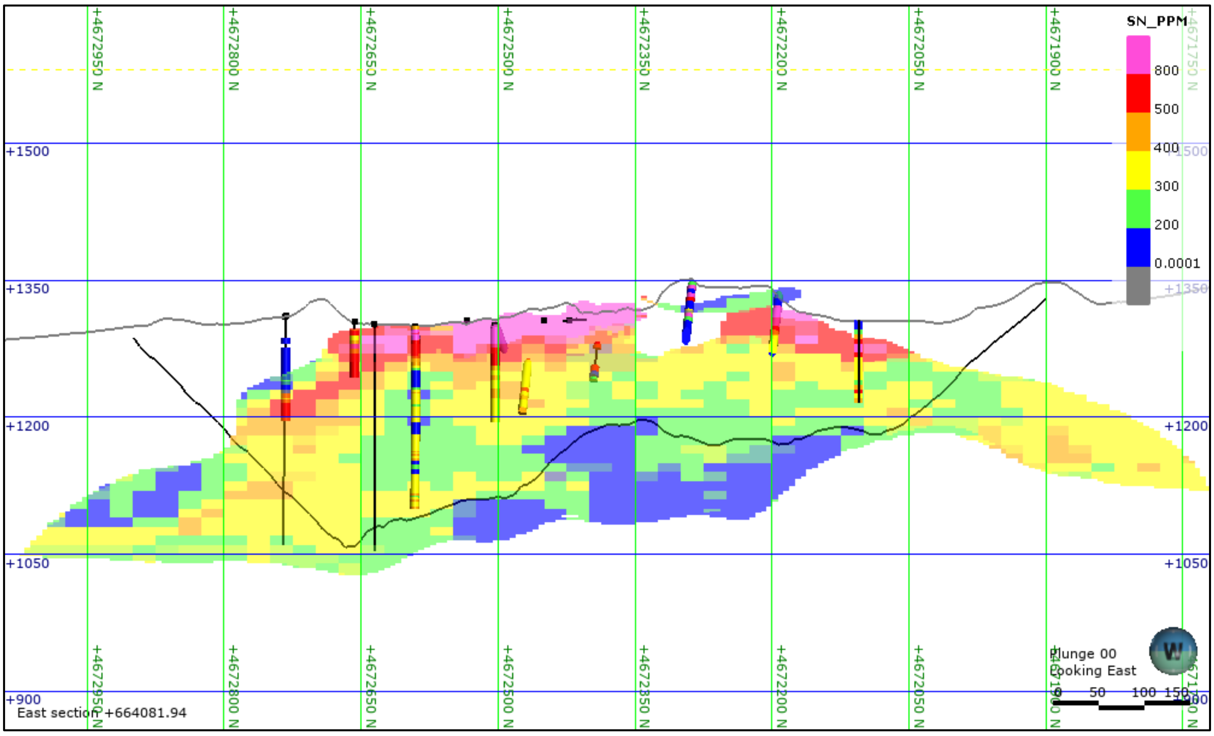
APPENDIX

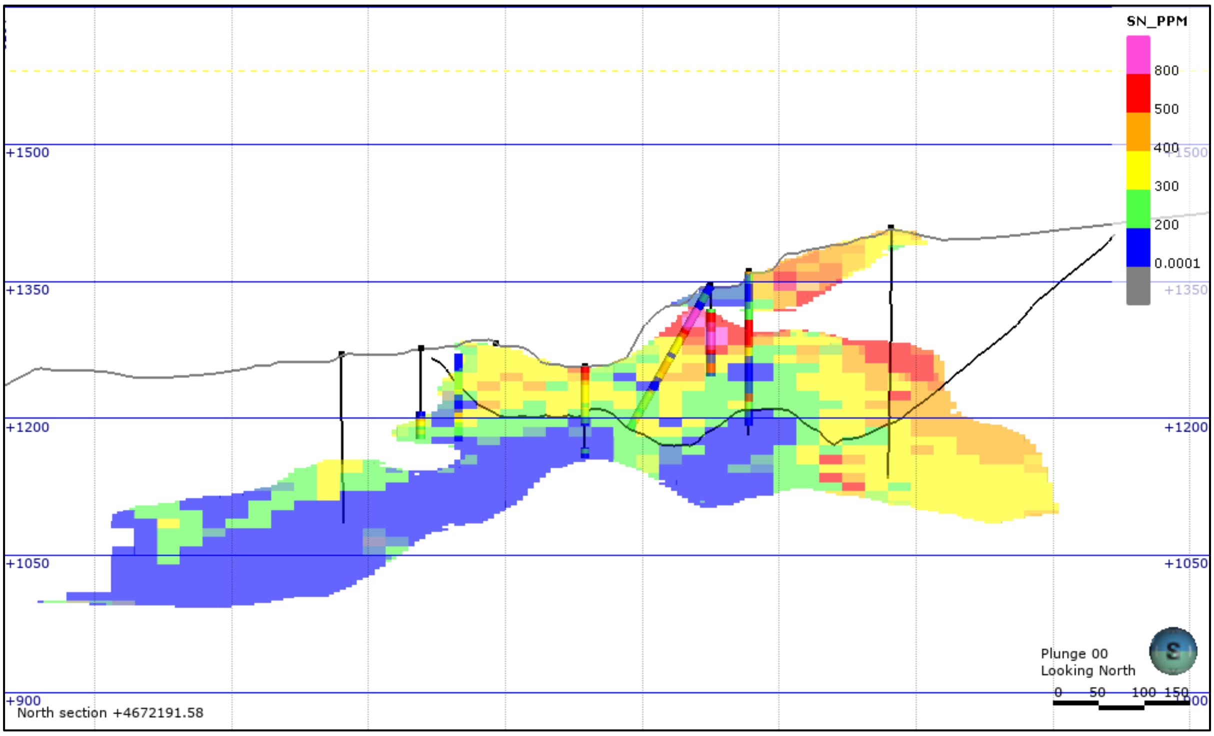
F TIN VALIDATION CROSS SECTIONS

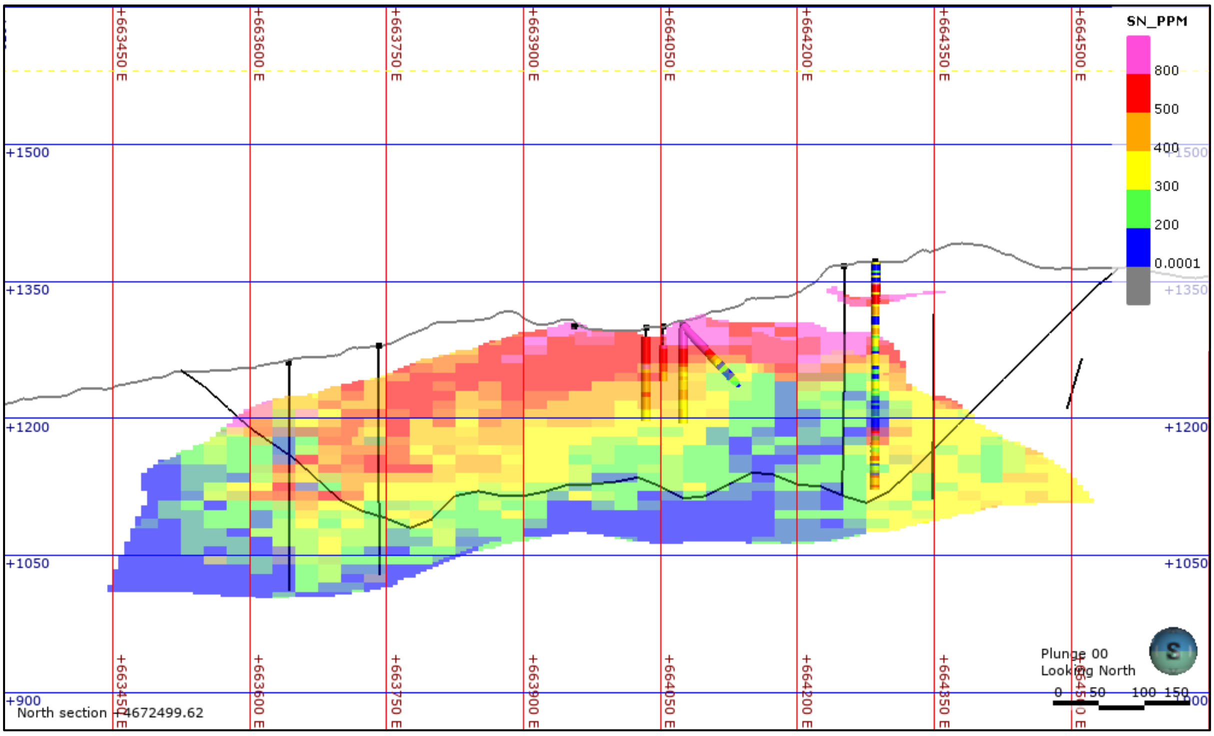
Cross-Sections Validating final tin model against Drillhole Data

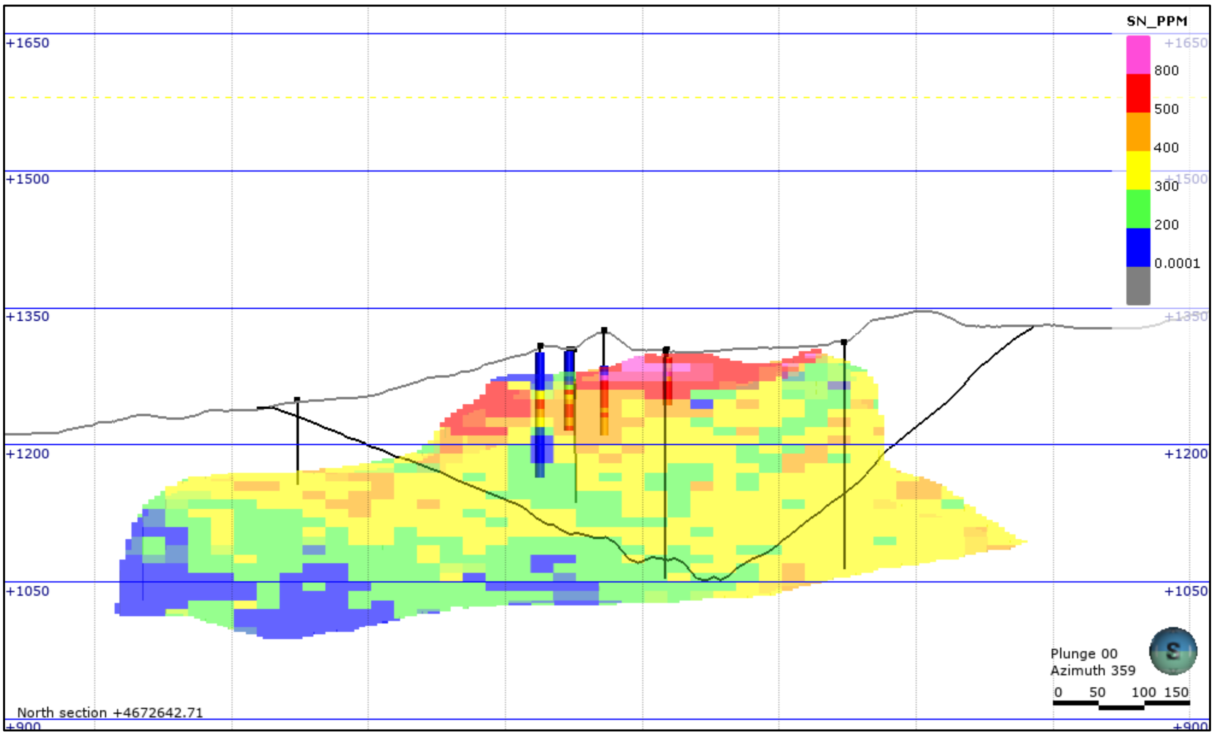





SN_PPM
800
500
400
300
200
0.0001
+1500
+1350
+1200
+1050
+900
+4672950 N
+4672800 N
+4672650 N
+4672500 N
+4672350 N
+4672200 N
+4672050 N
+4671900 N
+4671750 N
Plunge 00
Looking East
W
0 50 100 150
East section +664081.94


SN_PPM
800
500
400
300
200
0.0001
+1500
+1350
+1200
+1050
+900
Plunge 00
Looking North
S
0 50 100 150
North section +4672191.58

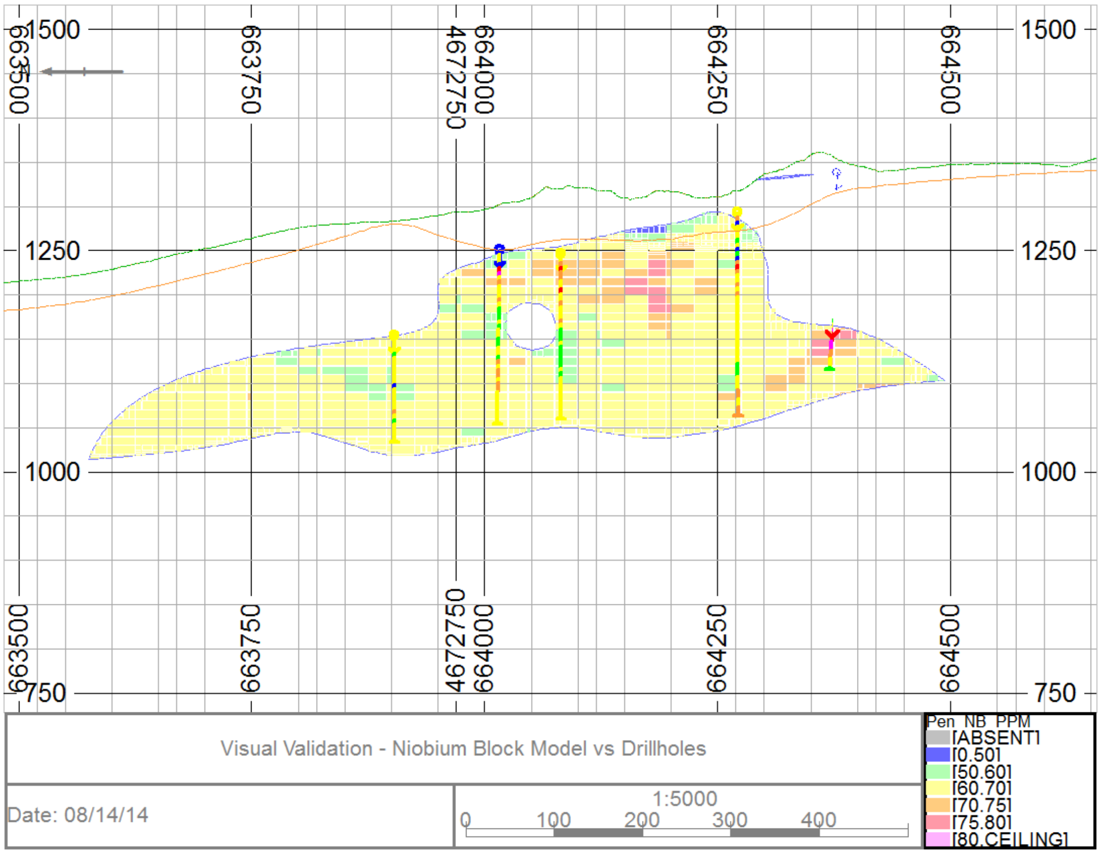

+663450 E
+663600 E
+663750 E
+663900 E
+664050 E
+664200 E
+664350 E
+664500 E
SN_PPM
800
500
400
300
200
0.0001
+1500
+1350
+1200
+1050
+900
Plunge 00
Looking North
0 50 100 150
North section +4672499.62

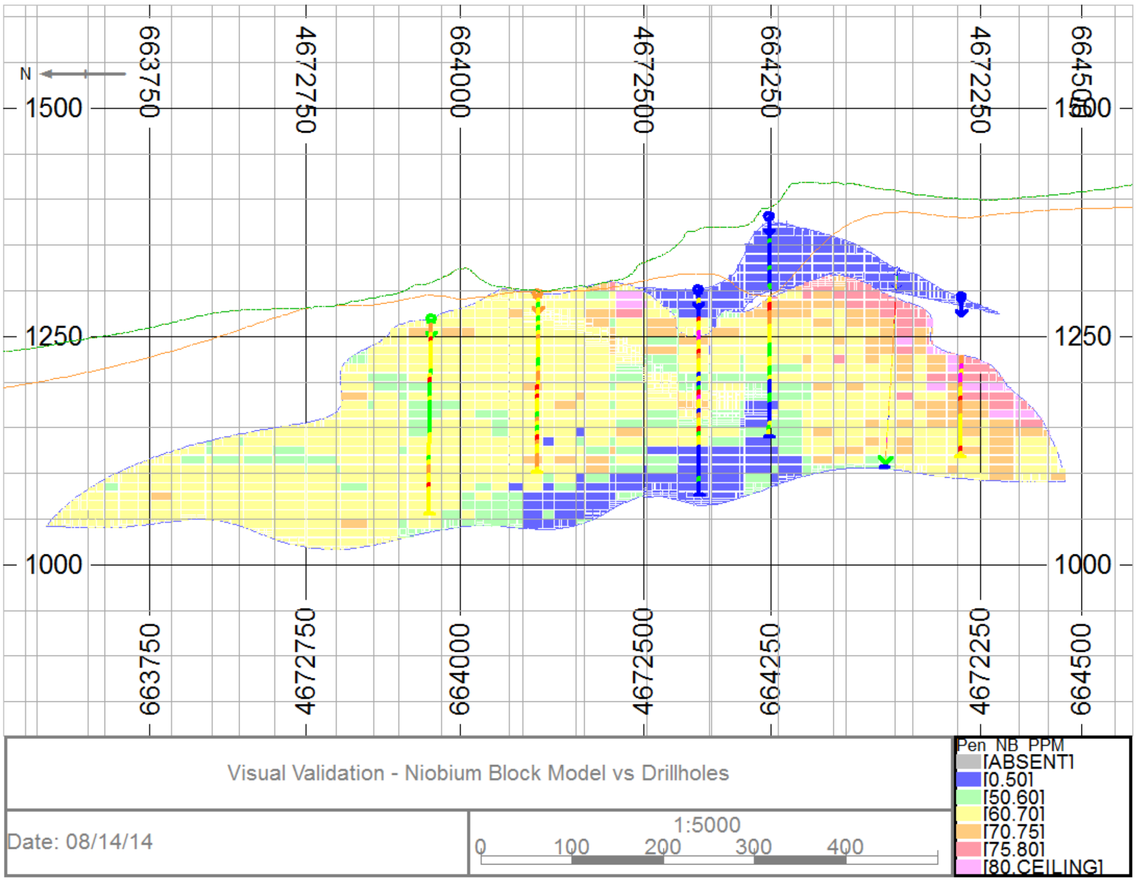

SN_PPM
800
500
400
300
200
0.0001
+1650
+1500
+1350
+1200
+1050
+900
Plunge 00
Azimuth 359
0 50 100 150
North section +4672642.71

APPENDIX

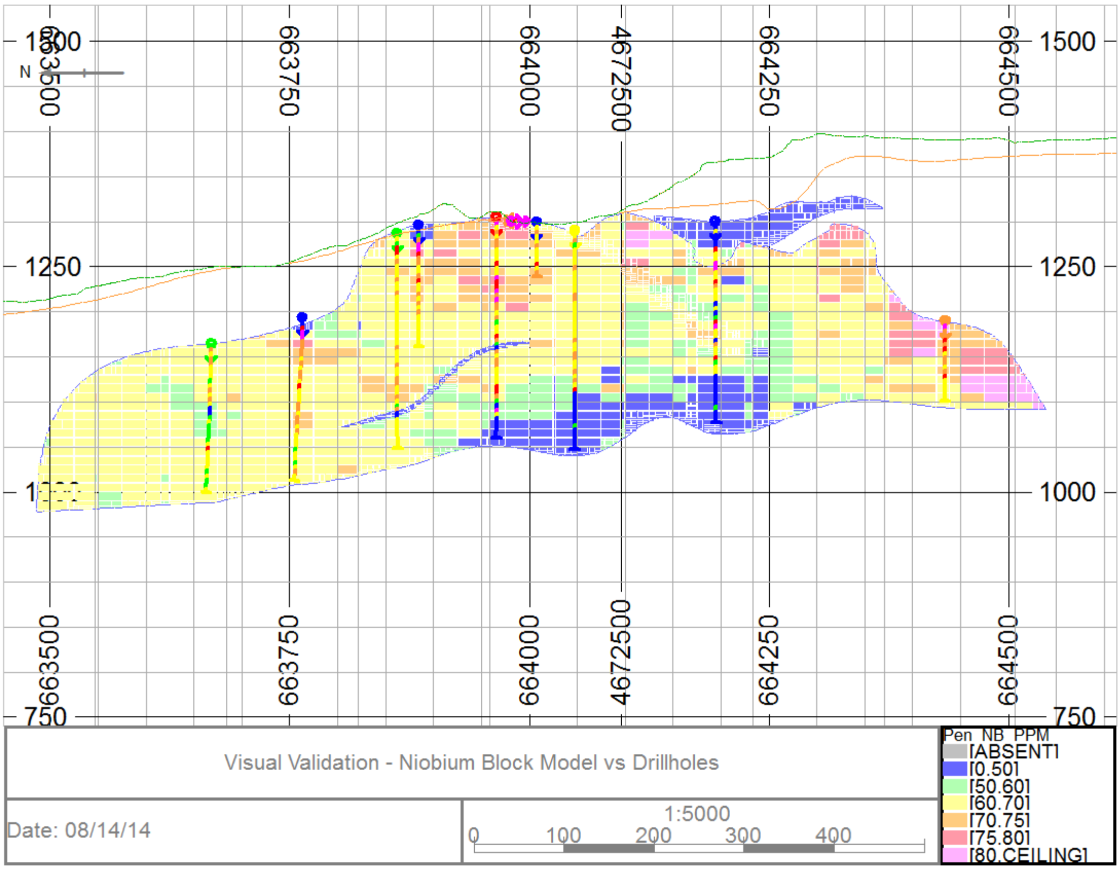
G NIOBIUM VALIDATION CROSS SECTIONS

Cross-Sections Validating final niobium model against drillhole data

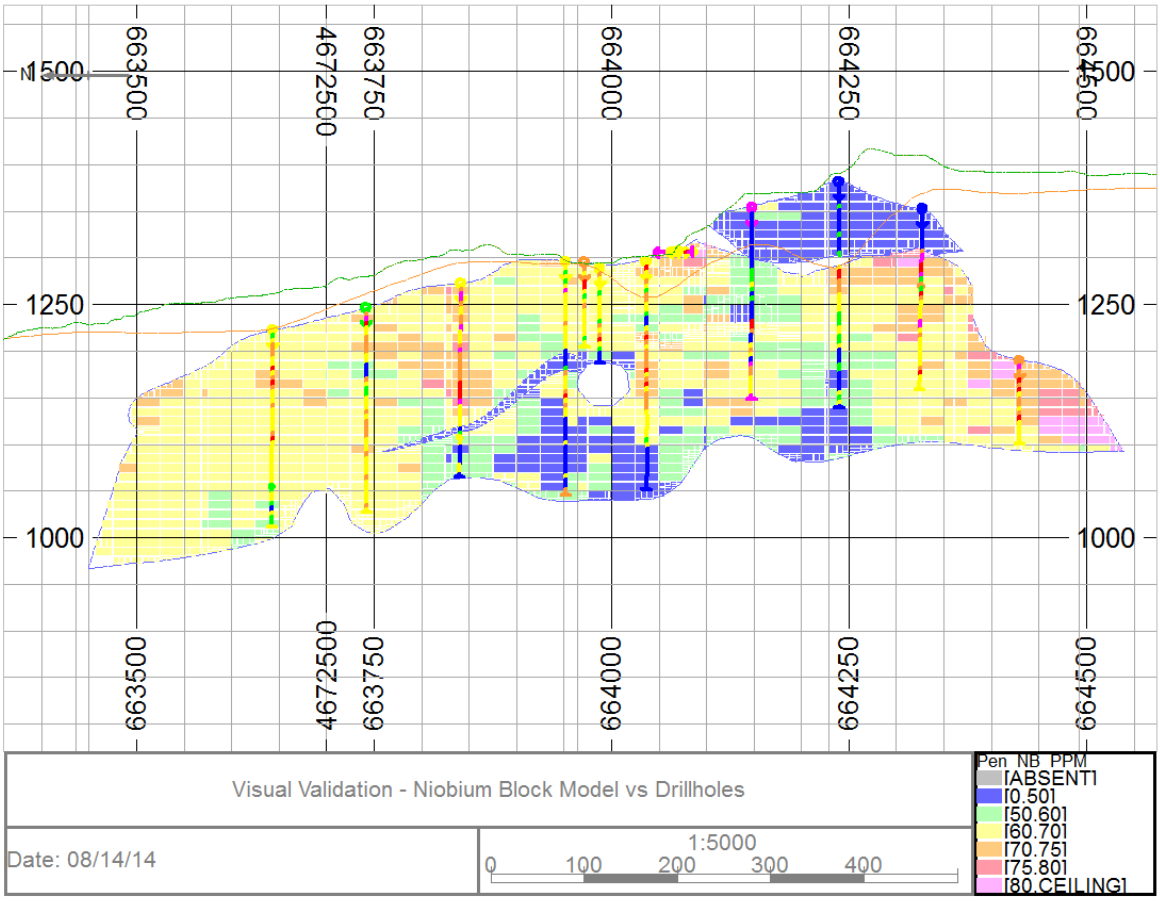


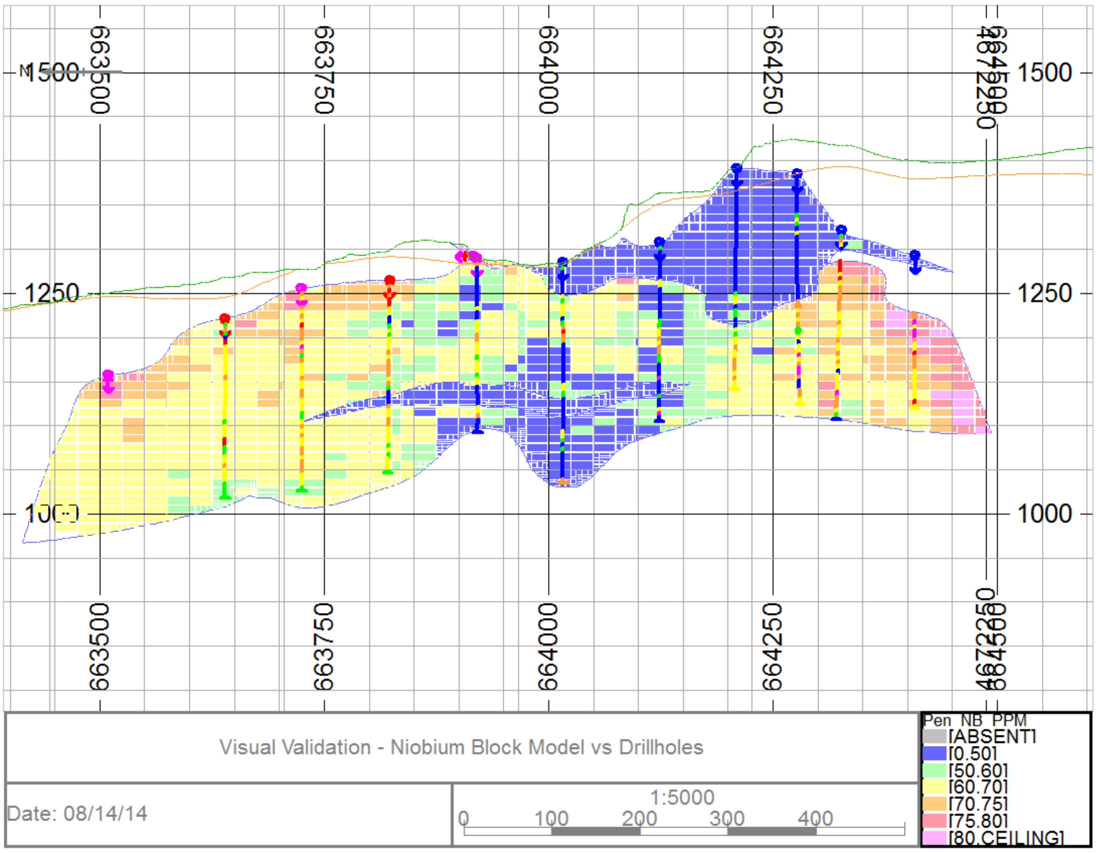


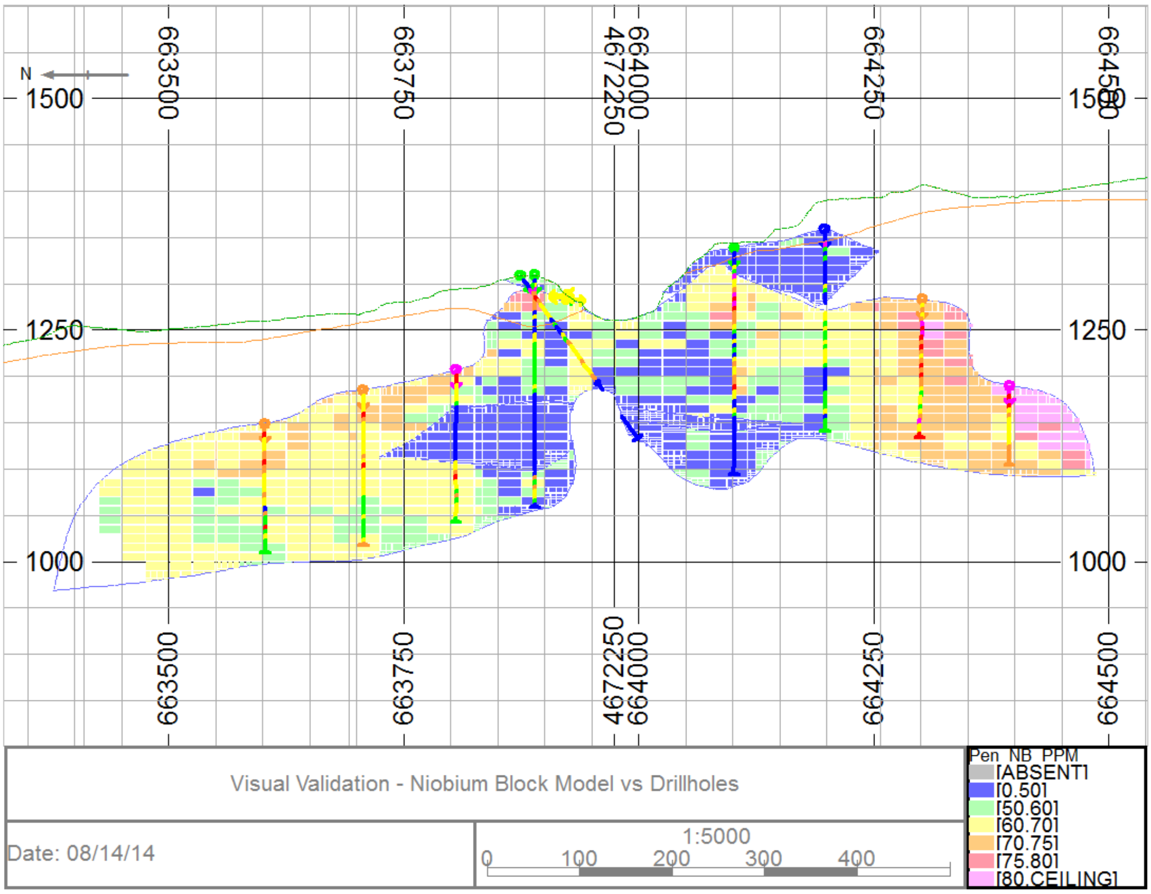
Visual Validation - Niobium Block Model vs Drillholes

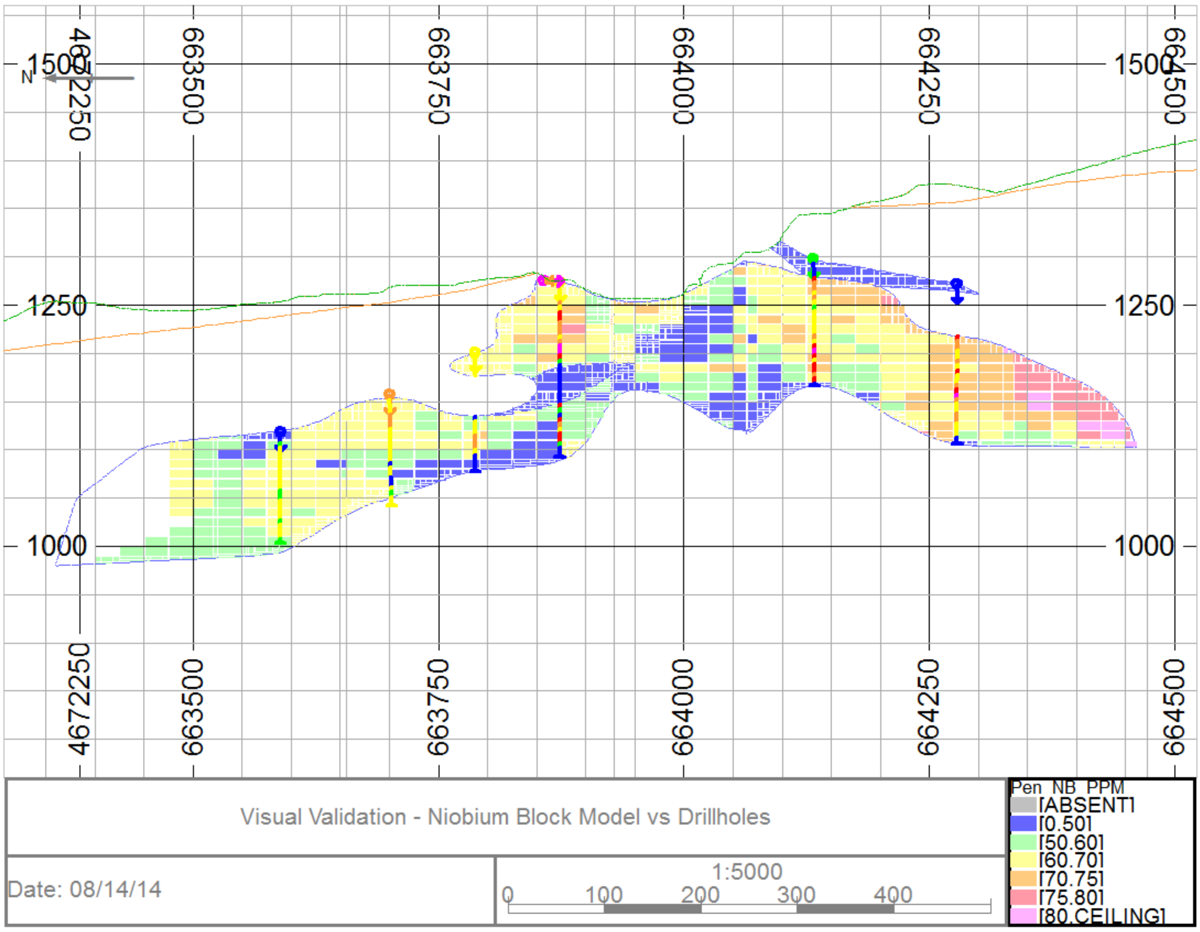


Visual Validation - Niobium Block Model vs Drillholes


663500
4672500
663750
664000
664250
664500
1500
1250
1000
N
Visual Validation - Niobium Block Model vs Drillholes
Date: 08/14/14
1:5000
0 100 200 300 400
Pen NB PPM
[ABSENT]
[0.50]
[50.60]
[60.70]
[70.75]
[75.80]
[80.CEILING]


663500
663750
664000
664250
664500
4672250
1500
1250
1000
N
Visual Validation - Niobium Block Model vs Drillholes
Date: 08/14/14
1:5000
0 100 200 300 400
Pen NB PPM
[ABSENT]
[0.50]
[50.60]
[60.70]
[70.75]
[75.80]
[80.CEILING]


N
1500
1250
1000
663500
663750
664000
4672250
664250
664500
Visual Validation - Niobium Block Model vs Drillholes
Date: 08/14/14
1:5000
0 100 200 300 400
Pen_NB_PPM
[ABSENT]
[0.50]
[50.60]
[60.70]
[70.75]
[75.80]
[80.CEILING]


N
1500
1250
1000
4672250
663500
663750
664000
664250
664500
Visual Validation - Niobium Block Model vs Drillholes
Date: 08/14/14
1:5000
0 100 200 300 400
Pen_NB_PPM
[ABSENT]
[0.50]
[50.60]
[60.70]
[70.75]
[75.80]
[80.CEILING]