

**NI43-101 TECHNICAL REPORT ON A  
MINERAL RESOURCE ESTIMATE ON  
THE OROPESA TIN PROJECT,  
CORDOBA PROVINCE, SPAIN,  
SEPTEMBER 2018**

Prepared For  
**Minas de Estaño de España**

Report Prepared by



SRK Consulting (UK) Limited  
UK6692

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<b>SRK Legal Entity:</b>	SRK Consulting (UK) Limited	
<b>SRK Address:</b>	5 <sup>th</sup> Floor Churchill House 17 Churchill Way Cardiff, CF10 2HH Wales, United Kingdom.	
<b>Effective Date:</b>	17 February 2017	
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<b>Project Number:</b>	UK6692	
<b>SRK Project Director:</b>	Martin Pittuck	Corporate Consultant (Resource Geology)
<b>SRK Project Manager:</b>	Mike Beare	Corporate Consultant (Mining Engineering)
<b>Client Legal Entity:</b>	Minas de Estano de Espana, S.L.U	
<b>Client Address:</b>	Calle Americo Vesputio, 5 Bloque E Isla de la Cartuja Sevilla Spain	

## EXECUTIVE SUMMARY

# NI43-101 TECHNICAL REPORT ON A MINERAL RESOURCE ESTIMATE ON THE OROPESA TIN PROJECT, CORDOBA PROVINCE, SPAIN, SEPTEMBER 2018

## 1 EXECUTIVE SUMMARY

### 1.1 Introduction

SRK Consulting (UK) Limited (“SRK”) has been requested by Minas De Estaño De España, SLU (“MESPA” or “the Company”) to prepare an update of the Mineral Resource Estimate (MRE) on the Oropesa Tin Project (“Oropesa” or “the Project”).

SRK has prepared this update based on targeted infill drilling completed at the Oropesa deposit during 2016. The deposit has been modelled using the UTM coordinate grid.

The Mineral Resource Statement presented is signed off by Robert Goddard, a Qualified Person in accordance with the CIM Code.

### 1.2 Project Description

The Oropesa property represents a 14.51 km<sup>2</sup> concession package located approximately 75 km northwest of Cordoba and 180 km northeast of Seville, Region of Andalucía, in southern Spain. The Company has earned a 96% interest in the Oropesa property with registered title to the property with the Andalucía mining authorities under the Spanish Mining Act.

### 1.3 Project Geology

The Oropesa deposit is located within the Peñarroya basin, a Carboniferous, transtensional basin that formed during the Hercynian/Variscan orogeny.

The Oropesa project area comprises intercalated sandstones and conglomerates with complex geometries, reflecting an active depositional environment and syn-sedimentary faulting. This geometry has been further complicated by a subsequent phase of basin inversion that involved reactivation of some basin-controlling faults as reverse faults and associated folding of the stratigraphic package, producing locally overturned bedding.

Tin mineralisation (cassiterite with minor stannite) is typically associated with pervasive silica alteration and several phases of paragenetically late sulphides. The majority of the tin mineralisation is replacement style, primarily occurring in granular sandstones at the contacts between the sandstone and conglomerate units. Two main fault sets are also interpreted to be mineralised, however fault-hosted mineralisation is volumetrically far less significant than the replacement style mineralisation.

## 1.4 Exploration Drilling and Sampling

The updated Mineral Resource Estimate for the Oropesa Project is based on some 54,026 m of drilling for a total of 261 drillholes. The drilling has been completed from the surface on a grid spacing of approximately 20–100 m, providing intersections at a similar spacing. Drillholes are typically angled between  $-45^{\circ}$  and  $-85^{\circ}$  (from horizontal), orientated broadly perpendicular to the strike of mineralisation with intersection angles with the mineralisation typically ranging from perpendicular to  $45^{\circ}$ .

In comparison to the MRE reported in October 2015, the database includes an additional 16 exploration drillholes for 2,619 m of DD drilling, with an additional three metallurgical holes for some 574 m. The latest phase of exploration work completed by the Company focused on improving the geological confidence in the model within a small zone of relatively high grade, near-surface mineralisation (targeted for open pit extraction) in the west of the Oropesa deposit.

All recent samples were sent for preparation to ALS Laboratories sample preparation facility in Seville, Spain (“ALS Seville”), and then dispatched to ALS Vancouver, Canada (“ALS Vancouver”) for analysis for tin by glass fusion X-Ray fluorescence (“XRF”).

In the opinion of SRK, the sampling procedures used by the Company conform to industry best practices and the resultant drilling pattern is sufficiently dense to interpret the geometry, geological boundaries and tin mineralisation with an appropriate level of confidence.

## 1.5 Mineral Resource Estimate

In summary, for this Mineral Resource update, SRK has completed the following:

- modelled tin mineralisation horizons in 3D;
- created a single composite for each of the drillholes per intersected domain and undertaken statistical analysis of these;
- reviewed the sample composite data for grade outliers - based on histogram analysis no high-grade capping was applied;
- undertaken geostatistical analyses to determine appropriate interpolation algorithms;
- created block models with block dimensions of 20x20x10 m;
- undertaken a Quantitative Kriging Neighbourhood Analysis (QKNA) to test the sensitivity of the interpolation parameters;
- interpolated tin grades and density data into the block model;
- visually and statistically validated the estimated block grades relative to the original sample results; and
- reported the Mineral Resource according to the terminology, definitions and guidelines given in the CIM Code.

Upon consideration of data quality, drillhole spacing and the interpreted continuity of grades controlled by the deposit, SRK has classified portions of the deposit in the Measured, Indicated and Inferred Mineral Resource categories.

## 1.6 Mineral Resource Statement

SRK has applied basic economic considerations to determine which portion of the block model has reasonable prospects for economic extraction by open-pit mining methods. To achieve this, the Mineral Resource has been subject to a high-level pit optimisation study to assist with determining the potential depth to which an open pit operation could be considered viable and reported above a suitable cut-off grade for resource reporting. This approach remains consistent with that used in the 2015 MRE.

SRK's updated mine planning exercise for 2017 envisages a medium-sized open pit operation followed by underground mining to access the remaining medium to high grade mineralisation at depth. However, the results of the pit optimisation study for 2017 showed that an open pit operation could potentially reach a depth of 235 m (close to the bottom of the model) and that a cut-off grade of 0.15% Sn would be appropriate. The cut-off grade is higher when compared to the 2015 MRE (0.1 Sn%), which is mainly due to a higher processing cost.

Whilst an underground mining scenario would be unlikely to target some of the lower grade tin mineralisation at depth, SRK considers that this material continues to have reasonable prospects for economic extraction with a larger open pit should the Company's mining strategy change.

Based on the above, SRK has elected to consider the full extents of the geological model for Mineral Resource reporting.

The parameters used for the 2017 pit optimisation exercise were based on SRK's 2017 mining study:

- A tin price of USD23,400/t derived from market consensus long term price forecasts with a 30% uplift as appropriate for assessing eventual economic potential of Mineral Resources.
- A tin process recovery of 71%.
- A cost of USD18/t for processing, USD4/t G&A and USD1.8/t for mining.
- Slope angles of 35° for oxide, 40° for transition and 46° for fresh material.

The 2017 Mineral Resource Statement for the Oropesa deposit is shown per weathering zone and grade category in Table 1-1. The Company has earned a 96% interest in the Oropesa property with registered title to the property with the Andalusia mining authorities under the Spanish Mining Act.

**Table 1-1: SRK Mineral Resource Statement effective of 17 February 2017 for the Oropesa Deposit prepared in accordance with the CIM Code**

Category	Weathering Zone	Grade Category %Sn	Tonnes (kt)	Tin	
				% Sn	Metal (Sn t)
Subtotal Measured	Oxide	>0.15	-	-	-
	Transition	>0.15	40	1.62	650
	Fresh	>0.15	290	1.01	2,940
Subtotal Indicated	Oxide	>0.15	110	0.58	645
	Transition	>0.15	1,900	0.49	9,250
	Fresh	>0.15	7,000	0.53	37,430
Subtotal Measured and Indicated	Oxide	>0.15	110	0.58	645
	Transition	>0.15	1,940	0.51	9,900
	Fresh	>0.15	7,290	0.55	40,365
Subtotal Inferred	Oxide	>0.15	190	0.43	815
	Transition	>0.15	1,120	0.41	4,645
	Fresh	>0.15	1,890	0.59	11,155
Total Measured >0.15			330	1.09	3,585
Total Indicated >0.15			9,010	0.53	47,320
Total Measured and Indicated >0.15			9,340	0.55	50,910
Total Inferred >0.15			3,200	0.52	16,615

1. All figures are rounded to reflect the relative accuracy of the estimate.
2. Mineral Resources are not Ore Reserves and do not have demonstrated economic viability.
3. The reporting standard adopted for the reporting of the MRE uses the terminology, definitions and guidelines given in the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Standards on Mineral Resources and Mineral Reserves (May 2014)
4. The Mineral Resource is given on the basis of 100% ownership of the Oropesa property.

## 1.7 Conclusions

The Oropesa deposit is an open pit and underground mining target, which is at a relatively advanced stage of drilling and geological understanding. Selective infill drilling from surface and updated geological modelling in 3D has added further geological confidence to the local scale geometry of the mineralisation and grade distributions in the Resource model.

The geological interpretation used to generate the Mineral Resource presented herein is generally considered to be robust; however, there are areas of lower geological confidence which may be subject to further revision in the future. In addition, SRK notes there is potential to add additional replacement-style and/or fault-controlled mineralisation along strike and around the margins of the deposit.

SRK considers the exploration data accumulated by the Company is generally reliable and suitable for the purpose of this Mineral Resource estimate.

## 1.8 Recommendations

SRK considers there to be good potential to improve confidence and increase tonnage in the reported Mineral Resource at Oropesa with further modelling work and additional drilling. In relation to drilling and sampling, SRK would recommend the following:

- Targeted infill drilling to add geological confidence to convert the Inferred Resources to Indicated and convert more of the Indicated to Measured Resources.
- Complete additional exploration drilling along strike and around the margins of the deposit where there is potential to add additional replacement-style and/or fault-controlled mineralisation. Any future drilling should include the systematic collection of downhole structural data to further constrain the geological model.

- The geological model should be further tested and refined in conjunction with a reassessment of the licence scale exploration potential.

In addition, SRK would also recommend the following:

- Update the July 2014 PEA with more detailed mining studies to determine the optimal mining plan for the Project on the basis of this updated Mineral Resource Estimate. The scoping level mining study and associated economic analysis that was carried out for the 2014 PEA illustrated that the Project stripping ratio was sensitive to input parameters. Changes in deposit geometry will also affect the stripping ratio.
- Density test work during future exploration programmes should focus on characterising the density of rubbly, oxidised material and the sampling of existing drillholes which have not yet been sampled for density to maximise the confidence in density estimates within these areas;
- Future exploration programs should use a high-accuracy GPS for drillhole collar survey given the potential variability noted in the accuracy of the z-coordinate determined by handheld GPS.
- Consider sending the remaining non-sampled (tin) intervals located within the mineralised zones to ALS Vancouver to remove the need for inserting values from Niton XRF data.
- Adopt a commercial database system to improve management of the raw database at Oropesa.
- For the holes drilled prior to ORPD059 (if available) SRK recommend to send pulp splits from a representative portion of samples to the primary laboratory along with QAQC samples according to the current protocols to compare the laboratory performance today with its performance in 2011 and 2010 prior to drillhole ORPD059.

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## **NI43-101 TECHNICAL REPORT ON A MINERAL RESOURCE ESTIMATE ON THE OROPESA TIN PROJECT, CORDOBA PROVINCE, SPAIN, SEPTEMBER 2018**

### **2 INTRODUCTION**

#### **2.1 Background**

SRK Consulting (UK) Limited (“SRK”) has been requested by Minas De Estaño De España, SLU (“MESPA” or “the Company”) to prepare an update of the Mineral Resource Estimate (MRE) on the Oropesa Tin Project (“Oropesa” or “the Project”).

The Oropesa property represents a 14.51 km<sup>2</sup> concession package located approximately 75 km northwest of Cordoba and 180 km northeast of Seville, Region of Andalucía, in southern Spain.

The Company has earned a 96% interest in the Oropesa property with registered title to the property with the Andalucía mining authorities under the Spanish Mining Act

SRK first produced a Mineral Resource Estimate (“MRE”) for the Project in October 2012, then updated this in June 2014 and October 2015 and now provides this update based on targeted infill drilling. The MRE given in this technical report (the Technical Report) has been prepared using the guidelines and terminology given in the CIM Code and presents the most up to date MRE, which is based on some 54,026 m of drilling for a total of 261 drillholes.

The latest phase of exploration work completed by the Company focused on improving the geological confidence in the model within a small zone of relatively high grade, near-surface mineralisation (targeted for open pit extraction) in the west of the Oropesa deposit.

### **3 RELIANCE ON OTHER EXPERTS**

SRK’s opinion is based on information provided to SRK by the Company and their consultants and associates. SRK was reliant upon such information and, where possible, SRK has independently verified the data provided and has completed a site visit to review physical evidence for the deposit.

SRK has not performed an independent verification of land title and tenure as summarised in Section 4.1 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 has relied on the Company and its legal advisor for land title issues.

SRK was informed by the Company that there are no known litigations potentially affecting the Oropesa Project.

## 4 PROPERTY DESCRIPTION AND LOCATION

The 14.51 km<sup>2</sup> Oropesa property is located approximately 75 km northwest of Cordoba and 180 km northeast of Seville in the Cordoba Province, Region of Andalucía, in southern Spain (Figure 4-1). The licence is host to the Oropesa Tin Project, as well as the La Grana West and La Grana East tin occurrences which were discovered in the 1980s by the Spanish government agency “Instituto Geologico y Minero de Espana” (“IGME”). The La Grana West and East tin occurrences are excluded from this Mineral Resource estimate, which reflects the Company’s current focus on the Oropesa deposit.

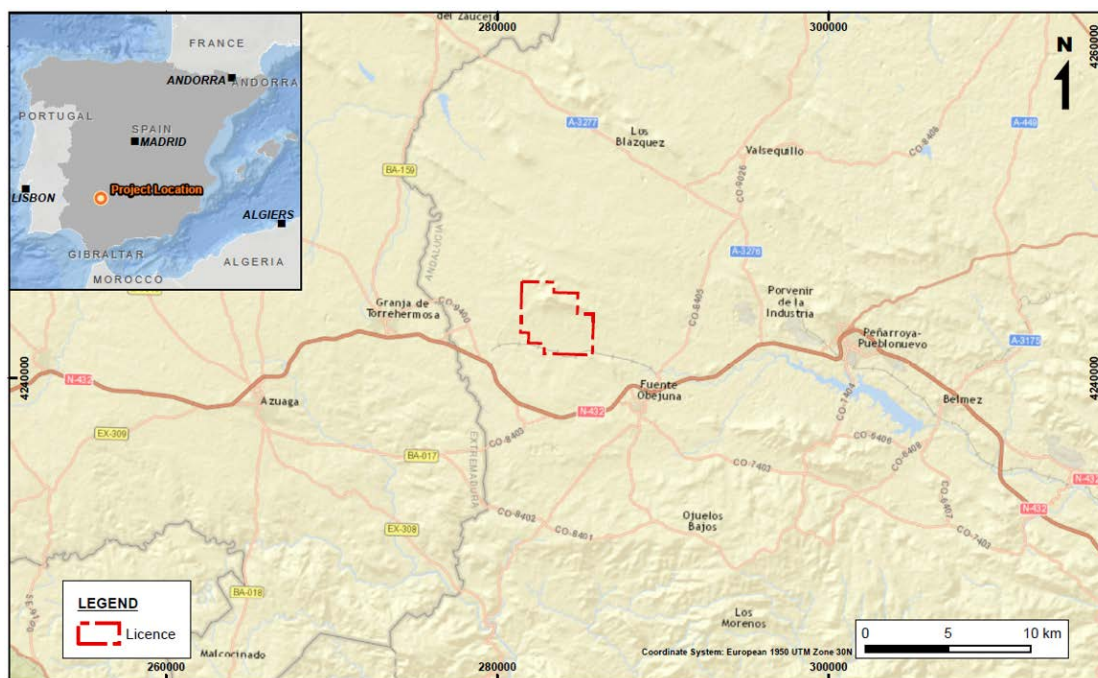


Figure 4-1: Location of Oropesa Property

### 4.1 Property Description and Ownership

The Oropesa Investigation Permit number 13.050 (the “Permit”), is comprised of 50 “cuadrícula mineras”, (blocks of land which measure 0°00’20” per side). Approximate geographical coordinates for the centre of the property are latitude 19°00.0’ north and longitude 5°28.5’ west.

The Permit was issued to Sondeos y Perforaciones Industriales del Bierzo, S.A. (SPIB) in January 2008. Pursuant to a Sale and Purchase Agreement (the “SPA”) dated 30 January 2013, SPIB agreed to transfer to Minas De Estano De Espana, SLU (“MESPA”), a 100% interest in the permit. Also, as of 30 January 2013, MESPA and SPIB entered into a Shareholder Agreement (the Sale and Purchase Agreement and the Shareholder Agreement collectively referred to herein as the “Agreements”) relating to their respective continuing interests in the Oropesa property.

MESPA was originally granted the rights to acquire the Permit by SPIB in December 2007. It was agreed by the parties that MESPA would acquire a 50% interest by spending EUR1,500,000 on exploration on the Oropesa property and a further 50% interest by:

1. either granting SPIB a 1.35% net smelter royalty (“NSR”) or paying SPIB 0.90% of the value of the metal reserves in the Oropesa Tin Property; and

2. agreeing to issue to SPIB a 4% equity ownership in MESPA at the time of commercial production.

MESPA satisfied all of the foregoing requirements which, in the case of item 1 above, were satisfied by granting a 1.35% NSR and, as such, the parties have entered into the Agreements to complete the transfer to MESPA of the Permit.

The salient terms of the Agreements included:

1. A transfer to MESPA of a 100% interest in the Permit.
2. MESPA agrees to deliver a scoping study for the Oropesa Tin Property (the “Scoping Study”) by July 2014 (which has been completed).
3. MESPA shall pay to SPIB a 1.35% NSR from the sale of tin concentrate from the Oropesa Tin Property
4. Upon determination of the feasibility of the project, SPIB shall be issued common shares of MESPA so that SPIB becomes a 4% shareholder of MESPA, which percentage ownership shall be fixed and not subject to further dilution.
5. MESPA and SPIB shall establish a technical committee consisting of three individuals, two of which shall be appointed by MESPA and one by SPIB. Until delivery of the Scoping Study, all decisions of the technical committee must be unanimous; however, any lack of unanimity cannot delay advancement of the Scoping Study or other project related work. Following delivery of the Scoping Study, all decisions of the technical committee shall be effective if taken by a majority of its members.
6. SPIB shall be contracted by MESPA for all drilling on the Oropesa Tin Property subject to SPIB’s capacity to fulfil MESPA’s requirements and competitive pricing for its services.
7. For all other works and matters to do with the commercial exploitation of the Oropesa Tin Property, excluding plant construction, SPIB shall be given the opportunity to participate in an open tender process. The results from the open tender process will be kept confidential from SPIB and, to the extent that SPIB has presented a bid, SPIB will not participate in the decision making process of the technical committee. If however (i) SPIB’s quotes for any contract or work are competitive and not more than 2% greater than those of an unrelated third party, and (ii) SPIB can demonstrate that it has equal or better technical ability and equipment to fulfil the contract or work, MESPA agrees to give preferential treatment to use SPIB as the contractor.

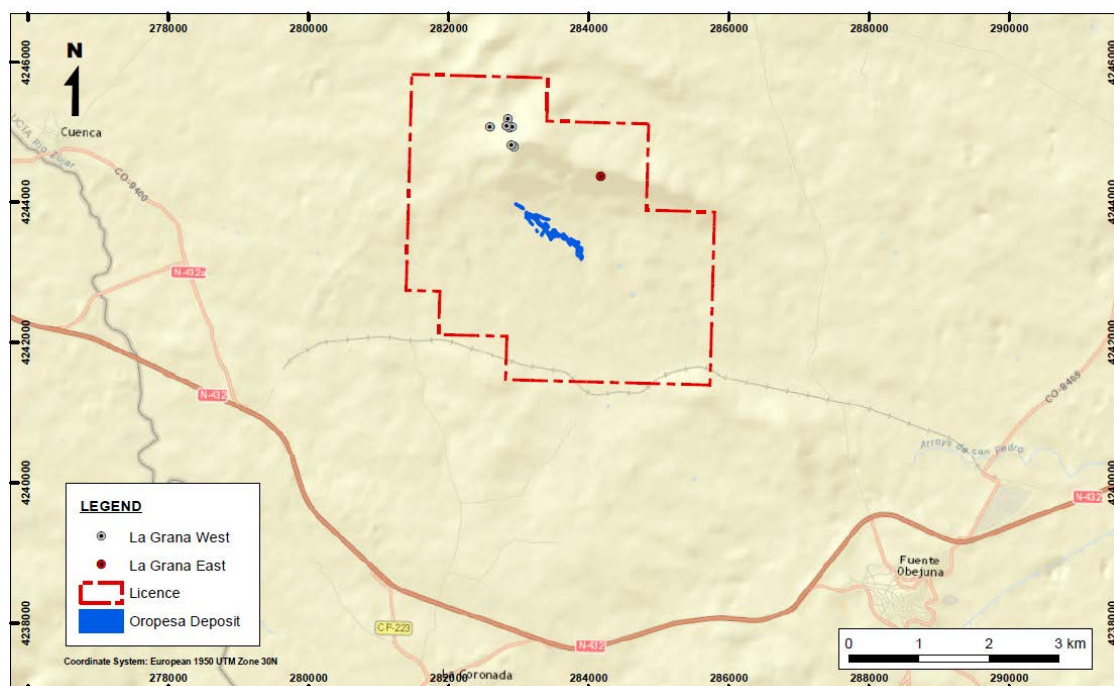
The Permit was issued for base and precious metals according to Section “C” of the Spanish Mining Act. The boundary of the Oropesa property is not required to be surveyed; it is defined (in accordance with Spanish law) by geographical co-ordinates, provided in Table 4-1. The Permit overlies a section of the Investigation Permit Guadiato IV, and to the east meets the State Reserve 379 both of which were issued for coal under Section “D” of the Spanish Mining Act.

Figure 4-2 shows the current exploration Licence in relation to the Oropesa mineralisation wireframes and location of the La Grana West and East Occurrences.



**Table 4-1: Current Oropesa Investigation Permit 13.050 - Boundary Corner Points**

Point	West Longitude	North Latitude
1	5°30'00"	38°20'00"
2	5°28'40"	38°20'00"
3	5°28'40"	38°19'40"
4	5°27'40"	38°19'40"
5	5°27'40"	38°19'00"
6	5°27'00"	38°19'00"
7	5°27'00"	38°17'40"
8	5°29'00"	38°17'40"
9	5°29'00"	38°18'00"
10	5°29'40"	38°18'00"
11	5°29'40"	38°18'20"
12	5°30'00"	38°18'20"



**Figure 4-2: Current Oropesa Investigation Permit 13.050 showing Oropesa mineralisation wireframes and MESPA's La Grana drillhole collars**

The Oropesa Investigation Permit was officially renewed on 23 October 2014 for a second extension period of three years.

SRK has been informed by the Company that the current three year Oropesa Investigation Permit expired on 1 November 2017. On 10 October 2017 the Company filed an Exploitation Permit application for the Oropesa property and within 90 days (as regulation dictates) on 2 January 2018 the Company also filed an Environmental Impact Study and Closure Plan for the Oropesa property. Under Spanish Law an Exploitation Concession is granted for a 30-year period, and may be extended for two further periods of 30 years each and up to a maximum of 90 years. Completing and filing the Exploitation Application prior to the expiration of the Investigation Permit allows the Company to remain in compliance with its title for the Oropesa property.

## 4.2 Additional Permits and Payments

No additional Investigation Permits are currently held by the Company. The Company previously held two additional Investigation Permits adjacent to the Oropesa Investigation Permit; however, as of 3 October 2016 these have now been relinquished.

## 4.3 Surface Rights

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 cuadrículas mineras, and all boundaries are aligned with astronomic north-south and east-west.

### 4.3.1 Exploration Permits:

- Minimum area: 300 cuadrículas mineras, maximum area: 3000 cuadrículas mineras.
- Only allows work which does not significantly change the land to be conducted.
- One year permit, which can be extended once.

### 4.3.2 Investigation Permits:

- Maximum area: 300 cuadrículas 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.
- Where 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.

### 4.3.3 Mining Concession:

- Maximum area: 100 cuadrículas mineras.
- Issued for 30 years, can be extended twice.
- Mining Concessions will generally only constitute a portion of the Investigation Permit
- To obtain Mining Concessions, 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.

## **5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY**

### **5.1 Accessibility**

The property is easily accessible from Seville, the regional capital via paved highways, 133 km north on A-66 / E-803, and 96 km east on N-432 to the town of Fuente Obejuna. The property can be accessed from the town of Los Blazquez approximately 1.8 km north of Fuente Obejuna on highway CO-9012. Paved roads are within 3 km of the property, which is directly accessed via a farm road which intersects the CO-9012 highway. Other farms tracks and trails provide convenient access to other parts of the property.

### **5.2 Climate**

The region has a Mediterranean climate which has short mild winters, and long, hot, dry summers. The daily temperatures average 12°C from December to February; during the summer months (July and August) an average temperature of 28°C is experienced. Precipitation is limited to approximately 640 mm annually, half of which falls from January to March. Exploration and mining practices (open pit and underground) are typically conducted year round.

### **5.3 Local Resources**

The property is located close to the regional capital of Seville, and to the cities of Huelva, Cordoba and the former coal mining town of Penarroja-Pueblonuevo. The Andalusia Region has a long mining history and supplies, services and professional, skilled and semi-skilled labour are easily sourced from the cities/towns described previously, for both exploration and mining. The area is currently used for sheep and pig farming, with minor plantations of grain crops.

### **5.4 Infrastructure**

The area is well serviced with paved dual and multi-lane highways, there are also gravel roads and farm tracks throughout the area. The district has power transmission lines which have different voltage capacities. There is a rail head in the town of Penarroja-Pueblonuevo approximately 16 km away.

### **5.5 Physiography**

The local topography is typically gently rolling hills, elevations on the property range from approximately 550 m at the eastern boundary of the property to approximately 811 m at the top of the Sierra de la Grana in the northern part of the property. Sierra de la Grana is thickly covered in jara bushes, whilst the rest of the property is sparsely vegetated with thorn bushes, other shrubs and oak trees.

Several seasonal water courses run through the property. Whilst these are anticipated to be suitable for exploration activities additional water source will be required for mining operation requirements.

## 6 HISTORY

### 6.1 History of Exploration and Mining

#### 6.1.1 Early History

Mining has been occurring in the Ossa-Morena area since at least 2,000 BC. There is evidence that copper-silver (Cu-Ag) deposits were worked by ancient cultures and the Romans mined outcrops containing lead-silver (Pb-Ag) veins and copper-gold (Cu-Au) veins approximately 45 km west of the Oropesa property. Mining activities appeared to cease at the end of the Roman period. The Cu-Ag veins appear to have been mined again during the 1500s and the Pb-Ag veins were again exploited from 1848 to 1945 in the Azuaga-Berlanga area (20 – 30 km west of Oropesa). Small mining operations were probably occurring in the central area of the Oropesa property during medieval times and during the last century, with slag piles and hand dug shafts having been identified. Coal mining was occurring to the east of Oropesa from the mid-1800s until recently.

#### 6.1.2 Recent History

IGME, between 1969 and late 1990, conducted multi-discipline exploration programmes over an area which included the current Oropesa property. A summary of the historical exploration and drilling programs completed by IMGE is provided in Section 9.1 and Section 10.1.

### 6.2 Historical Estimates

SRK has previously produced three Mineral Resource Estimates on the Oropesa Permit, which are summarised below:

- Mineral Resource with effective date of 9 October 2012 reporting an Oxide Indicated Mineral Resource of 1.7 Mt grading 0.33% Sn, a Fresh Indicated Mineral Resource of 7.3 Mt grading 0.31% Sn, an Oxide Inferred Mineral Resource of 2.7 Mt grading 0.22% Sn and a Fresh Inferred Mineral Resource of 6.1 Mt grading 0.28% Sn.
- Mineral Resource Estimate completed by SRK for 5 June 2014 (“2014 MRE”), which reported an Oxide Indicated Mineral Resource of 3.3 Mt grading 0.35% Sn, a Fresh Indicated Mineral Resource of 11.6 Mt grading 0.37% Sn, an Oxide Inferred Mineral Resource of 1.1 Mt grading 0.35% Sn and a Fresh Inferred Mineral Resource of 3.2 Mt grading 0.38% Sn.
- Mineral Resource Estimate completed by SRK for 30 October 2015 (“2015 MRE”), which reported an Oxide Indicated Mineral Resource of 80 kt grading 0.48% Sn, Transition Indicated Mineral Resource of 2.1 Mt grading 0.56% Sn and Fresh Indicated Mineral Resource of 7.3 Mt grading 0.55% Sn. Inferred Mineral Resources included an Oxide sub-total of 78 kt grading 0.43% Sn, Transition sub-total of 1.2 Mt grading 0.42% Sn and Fresh sub-total of 2.1 Mt grading 0.58% Sn.

### 6.3 Historical Production

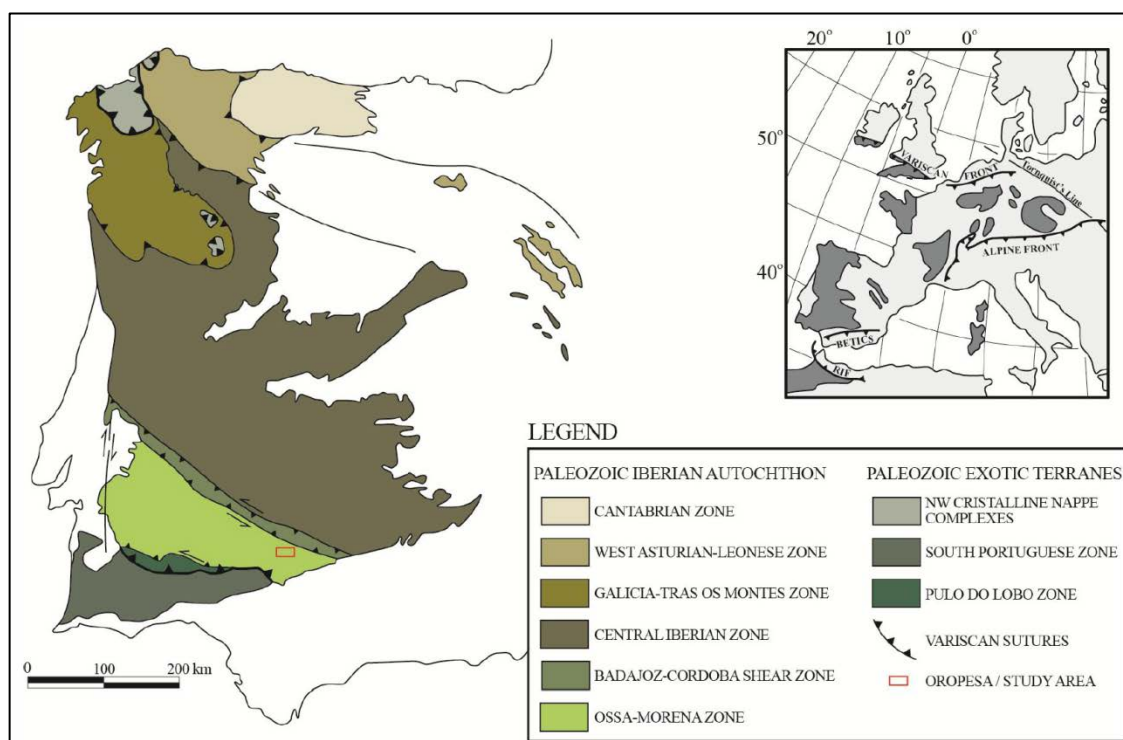
The Company notes that historically there may have been some very small operations of primitive smelting for iron from the central part of the deposit. SRK is not aware of any previous significant production from the Oropesa Property.

## 7 GEOLOGICAL SETTING AND MINERALISATION

### 7.1 Regional Geology

The following summary of the regional geology uses information primarily contained within Dallmeyer and Martinez-Garcia (1990) and Wagner (2004).

The Oropesa Project is located within the Iberian Massif, a complex orogenic belt consisting of numerous allochthonous and autochthonous terranes that comprise Paleozoic sedimentary sequences with lesser Precambrian basement. These rocks are cut by numerous intrusions of varying ages and deformed by one or more phases of folding and faulting. The Iberian Massif can be subdivided into six zones, based on differences in stratigraphy and structural history (Figure 7-1). The Oropesa project occurs near the northeastern edge of the Ossa Morena Zone.

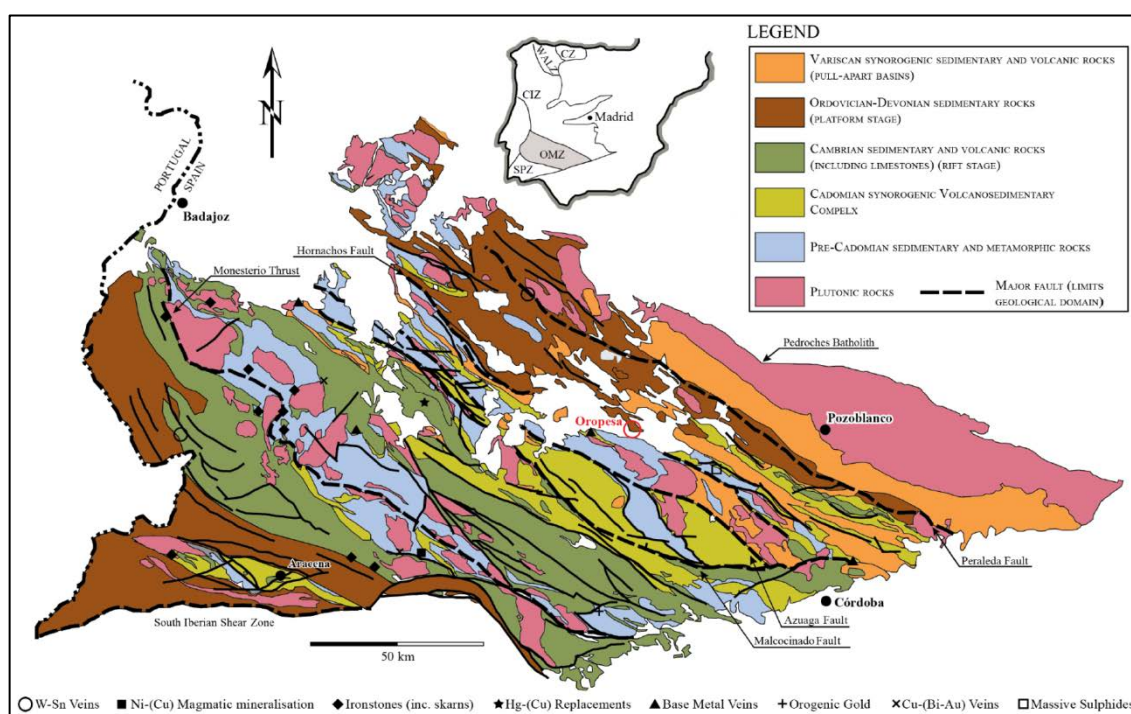


**Figure 7-1: Simplified geology map of the Iberian Massif from Smith 2012**

The Precambrian and Paleozoic metasedimentary rocks of the Ossa Moreno Zone can be further subdivided into four main packages (Figure 7-2) based on differences in age and depositional environment:

- Precambrian rocks of various type and affinity;
- a Cambrian, rift-related sedimentary sequence;
- an Ordovician to Devonian passive margin sequence; and
- Mid-Devonian to Early Permian syn-orogenic (basin-fill) sequences.

The structural history of the Precambrian basement is not well constrained, but likely involved one or two distinct orogenic phases. Rifting initiated during the Cambrian, leading to the development of an oceanic basin along the edge of which the passive margin sediments that are now preserved in the Ossa-Morena zone were deposited. The earliest evidence for collision is recorded by obduction of the Beja-Acebuches ophiolite in the Middle Devonian. From the Mid-Devonian until the Early Permian the Ossa Morena Zone underwent a protracted multi-stage orogenesis (the Variscan/Hercynian orogeny) which led to the development of several basins, including the Peñarroya basin which hosts the Oropesa deposit.

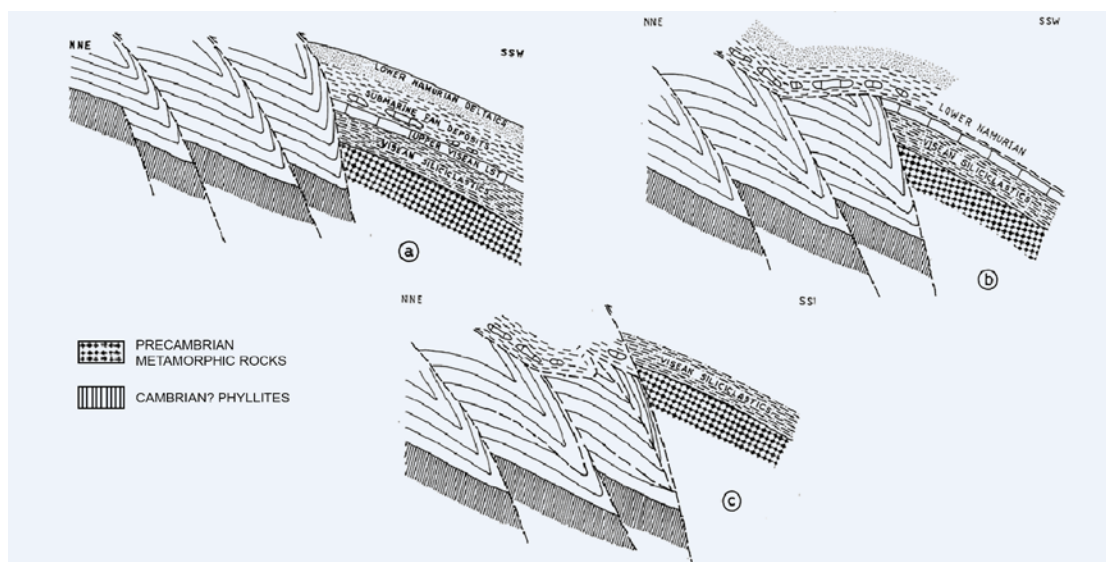


**Figure 7-2: Geology of the Ossa Morena Zone from Smith 2012**

The Peñarroya basin is northwest trending and approximately 50 km long by 2 km wide. It is interpreted by Wagner (2004) to have formed as a pull-apart basin within a strike-slip to transtensional fault system. This interpretation is supported by observations at the Oropesa project, where there is evidence for syn-sedimentary faulting strongly oblique to the basin-bounding faults. The Peñarroya basin contains a variety of sedimentary rocks including conglomerates, sandstone, siltstone and coal measures. There is a broad transition from rocks that are predominantly marine in origin at the base of the sequence to predominantly terrestrial in origin near the top of the sequence. The coal measures in the Peñarroya basin have been extensively mined since Roman times up to the 20th century.

Subsequent to basin formation, but still within the broad time constraints of the Variscan/Hercynian orogeny, there was a switch to a transpressional tectonic regime. Evidence for this transpressional phase can be observed in the widespread folding within the Peñarroya basin, including overturned stratigraphy, and development of reverse faulting. The basin inversion has a strong asymmetry, with the most intense folding and the largest reverse faults localised along the southwest margin of the basin. Many of the reverse faults are probably reactivated from the earlier basin-forming event and thus the asymmetry likely reflects, to some extent, the original basin-forming fault architecture.





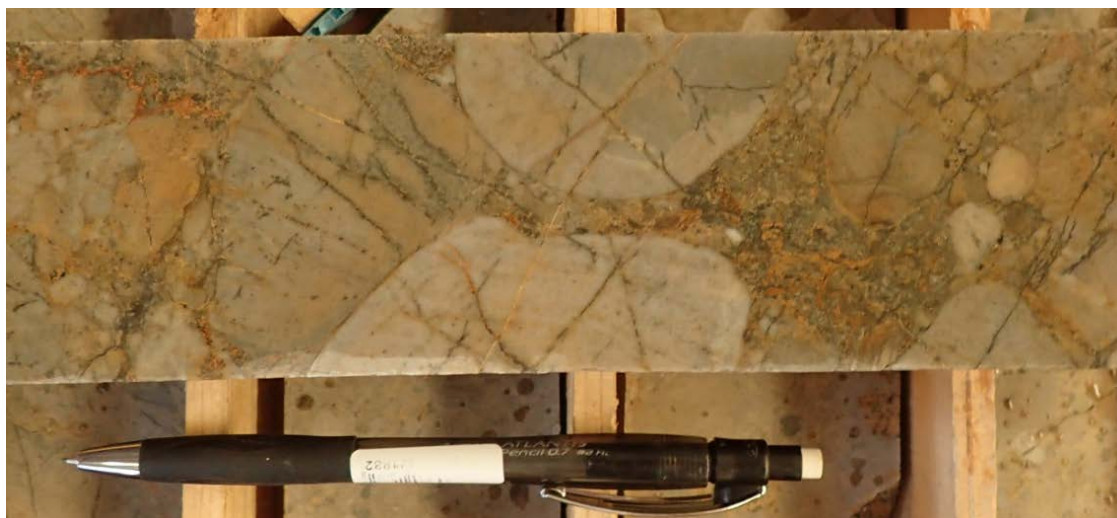
**Figure 7-3: Schematic cross section illustrating the evolution of folding in the Peñarroya basin modified from Wagner 2004**

## 7.2 Local/Project Geology

### 7.2.1 Stratigraphy

The Oropesa Deposit consists of two main lithological units: conglomerate and sandstone.

The conglomerate is poorly-sorted and predominantly clast-supported (Figure 7-4). It consists primarily of cobble to pebble-sized, sub rounded clasts with a gradational matrix. Most clasts are of sedimentary origin, although occasional igneous clasts can be observed. Locally, the conglomerate also contains occasional 1-5 m interbeds of sandstone.



**Figure 7-4: Conglomerate intersected in drillhole ORPD57 at 193.8 m**

The sandstone unit is quite variable and includes several different lithofacies. There is considerable grain size variation, from a pebbly sandstone, down to a very fine sandstone; however, the majority of the sandstones fall between the fine and granule grain size classifications (Figure 7-5).



**Figure 7-5: Bedded Sandstone in drillhole ORPD108 at 173 m**

Rare siltstones and shales are also observed locally and are included in the broad 'sandstone' unit. The sandstone unit varies from massive to bedded, with local younging indicators, such as graded bedding and trace fossils. Some sandstone beds also preserve silica pseudomorphs of early (diagenetic) bladed gypsum and broken crinoid fossils are also occasionally observed at the base of some sandstone beds.

As will be discussed in Section 7.2.2, post-sedimentary deformation has complicated the geometry of the Oropesa deposit; however, even when this deformation is accounted for, there is clear evidence for considerable lateral variations in sandstone grain size as well as the presence of wedge-shaped conglomerate units, erosional surfaces and channels. In addition to these features, there are also some very sharp changes in lithology both along and across strike that are interpreted to result from syn-sedimentary faulting. All of these features support the interpretation that the Peñarroya basin was a fault-controlled basin with significant topography at the basin margins. The presence of crinoid fossils, which do not occur in fresh water, indicate at least periodic marine ingress while the gypsum blades suggest the presence of syn-sedimentary brines, possibly formed during periods where the basin was sealed off from the ocean.

## 7.2.2 Structure

The geometry of the Oropesa deposit is primarily the result of two major deformation phases, an initial strike-slip to extensional phase of deformation during basin formation followed by a strong contractional overprint.

The initial phase of basin formation produced a complicated initial geometry characterised by at least two major fault orientations: a basin-parallel, NW striking fault set, the original dip of which is still uncertain, and an oblique N-S striking, fault set with steep to subvertical dips. Both fault sets appear to have been active during basin formation, producing rapid lateral facies changes and the characteristic wedge shaped stratigraphic packages mentioned in Section 7.2.1.



Low core axis angles indicating local dips of greater than 60°, combined with evidence for overturned bedding indicate that the sedimentary sequence has undergone significant folding post-deposition. Modelling has identified a single closed to open fold that controls the first order geometry of the deposit (Figure 7-6 and Figure 7-7). The axial plane of the fold varies from flat-lying to shallow-dipping to the northeast, which broadly supports previous interpretations of a syn-folding reverse fault controlling the uplift of Devonian quartzites immediately northeast of Oropesa. Importantly, due to the geometry of the fold, NW striking faults are likely to be folded whereas N-S faults may be relatively undeformed.

Properly understanding the geometries that might be expected as a result of folding an already complex syn-sedimentary fault network is essential to constraining the geometry of mineralisation.

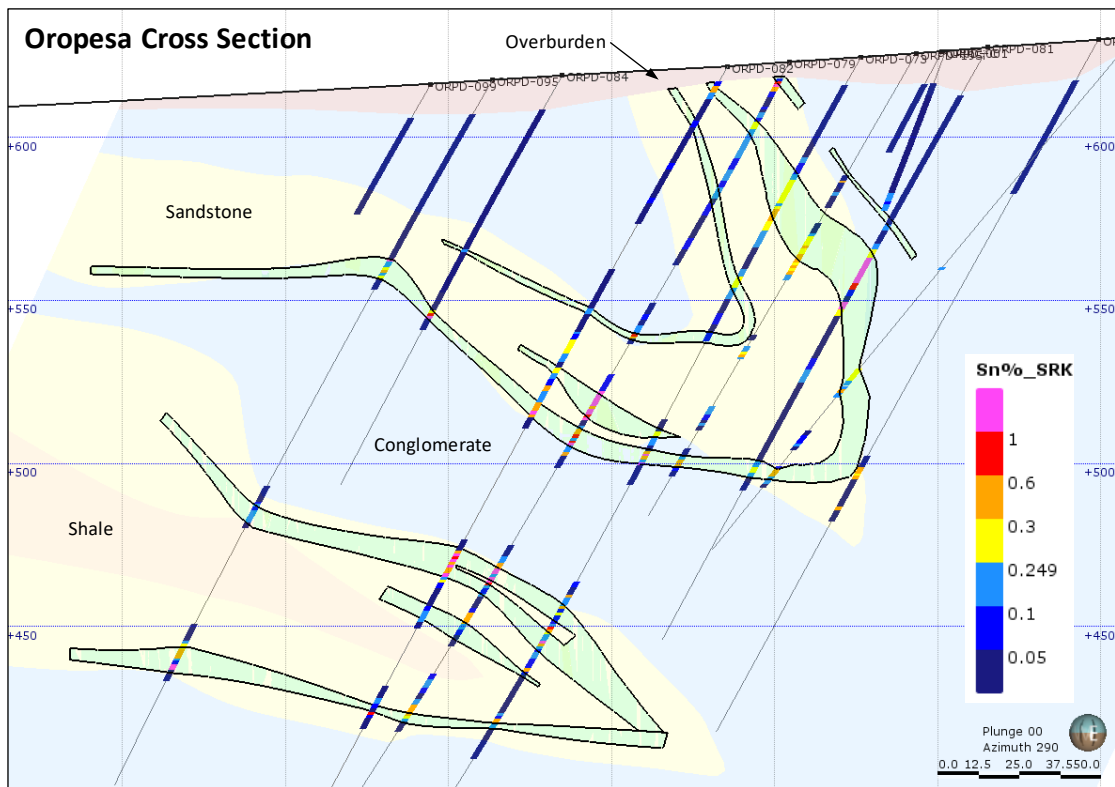


Figure 7-6: Cross Section from the northwest of Oropesa

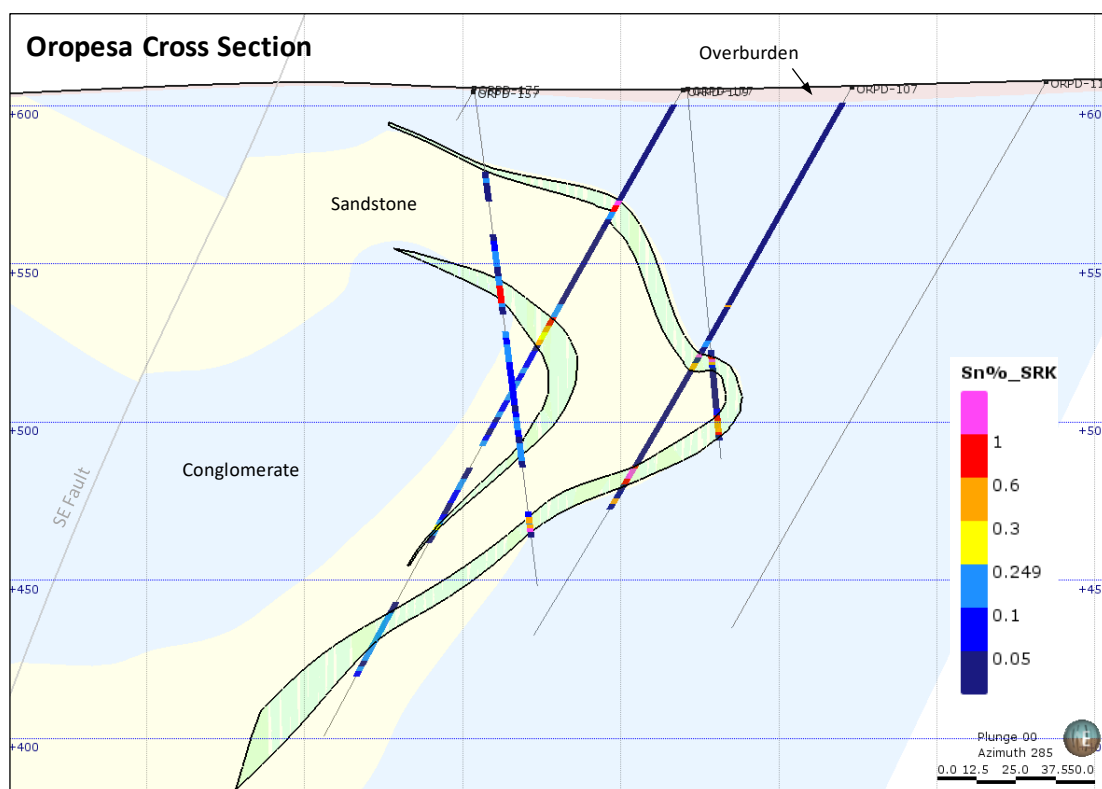


Figure 7-7: Cross Section from the southeast of Oropesa

### 7.2.3 Mineralisation

Tin at Oropesa is associated with sulphide mineralisation, dominantly pyrite, and pervasive silica alteration. There is a strong stratigraphic control on the distribution of mineralisation along with subordinate fault-related mineralisation.

#### *Tin Paragenesis*

Field studies and petrography conducted in 2011 by Roger Taylor identified a six stage paragenetic sequence (which has been slightly modified herein to include an unmineralised quartz phase):

1. Silica alteration and cassiterite infill, possibly with minor muscovite/sericite, pyrite and arsenopyrite. This is the main tin-bearing stage.
2. Pyrite as alteration and infill. Pyrite is the dominant sulphide in the system but this phase is not interpreted to be associated with the introduction of additional tin. The spatial distribution of this phase broadly mirrors Stage 1.
3. Mixed sulphide and carbonate. Sulphides include sphalerite, pyrite, marcasite, chalcopyrite, galena and arsenopyrite. Minor stannite is also observed locally. Spatially, this phase occurs in conjunction with Stage 1 and 2 mineralisation and locally also as a distinct sheeted vein set.
4. Pyrrhotite. This was split out by Taylor as a separate phase, although he noted that it was possibly part of stage 3.
5. Argillisation (clay). Clay occurs as late infill, though most of it has been removed by Stage 7.

6. Quartz infill. The quartz infill is commonly associated with cockade breccias as well as crustiform and colloform layering. These textures are typical of epithermal environments, suggesting that at least this phase of mineralisation occurred at relatively shallow depths (<2-3 km).
7. Leaching and oxidation. This phase is associated with widespread cavity development that often focuses in zones associated with Stage 5 clays and Stage 6 quartz infill. At least some of this leaching is associated with late acid weathering; however, an earlier leaching phase cannot be entirely excluded.

#### *Controls on Mineralisation*

Mineralisation at Oropesa is strongly lithologically controlled, with the majority of mineralisation occurring in sandstone (Figure 7-8); grain-size and stratigraphic position act as second-order controls.



**Figure 7-8: Replacement mineralisation in sandstone in drillhole ORPD108 at 216.7 m**

Overall, granular sandstones are typically better mineralised, whereas finer-grained sandstones are commonly lower grade or barren, even when associated with silica alteration. The cause of this relationship between grain-size and mineralisation is not well understood but could be due to increased porosity in coarser-grained sandstones and/or potentially related to the composition of the cement.

Tin mineralisation is also controlled by stratigraphic position, typically occurring proximal to conglomerate contacts. This may in part relate to the natural grain-size variation through the sandstone packages, however, other influences, such as micro or macro-scale fracturing localised at rheological contrasts may have some influence.

In addition to the stratigraphic-controls, there are also several interpreted mineralised faults. Fault-hosted mineralisation is commonly associated with increased weathering, broken ground and, in some cases, an increase in clay content. Two north-striking, subvertical faults have been modelled thus far, more may exist, however, they are difficult to identify with the existing drill patterns. These faults cut across the main mineralisation trend and appear to be relatively undeformed by folding. A mineralised, basin-parallel (northwest-striking) fault has also been identified. Based on the major facies changes across this fault and the angular relationship with bedding this fault is interpreted to have been folded.

Fault-hosted mineralisation is volumetrically much less significant than the sediment-hosted replacement style mineralisation, however, faults are interpreted to have acted as feeder structures, bringing the mineralising fluid up from depth.

A sheeted carbonate-base metal vein system is also locally observed at Oropesa. Where present, these veins are typically 1cm wide, with a spacing of 1-5m and a sulphide mineralogy dominated by chalcopyrite, sphalerite and galena. This vein system is interpreted to be associated with Stage 3 in the paragenetic sequence and thus likely post-dates the major tin mineralising stage.

#### *Timing of Mineralisation*

Mineralisation occurred during the Variscan/ Hercynian orogeny. Initial indications suggest that mineralisation was pre-folding, however, further field studies focused on identifying key timing relationships and testing existing concepts will need to be completed to improve the associated geological understanding as this will be an important constraint for planning the next phase of exploration.

## **8 DEPOSIT TYPES**

The Oropesa deposit is a replacement type deposit with subordinate fault-controlled mineralisation. It likely formed at relatively shallow depths (<5 km) probably well above the granitic intrusion that was the likely source for the mineralising fluid. Pyroxene-rich skarn does occur locally at Oropesa (Taylor 2011), however, skarn accounts for only a very small proportion of the deposit in terms of volume and has an inconsistent relationship with mineralisation (typically <0.25% Sn), suggesting that it is not primarily a skarn deposit. Instead, Oropesa has more in common with the Tasmanian replacement deposits such as Renison Bell, Cleveland and Mt Bischoff. As with Oropesa, each of these has significant massive to semi-massive sulphide mineralisation and varying degrees of silica alteration. They differ from Oropesa in that they are all hosted in carbonate host rocks, however, this difference could be explained if the granular sandstones at Oropesa originally contained a carbonate cement. It should be noted that tin deposits have not been a major focus of academic research over the last 30 years. Therefore the classification of some modern tin deposits can be somewhat difficult as these classification systems do not necessarily represent the full diversity of styles that may exist in nature.

## **9 EXPLORATION**

### **9.1 Historical Exploration**

Instituto Geológico y Minero de España (“IGME”), between 1969 and late 1990, conducted multi-discipline exploration programmes over an area which included the current Oropesa property. These programmes included 1:50,000 scale geological mapping, and stream sediment geochemical surveys. The mapping programme discovered the presence of tin (Sn) on the present Oropesa property in 1982. The tin mineralisation on Oropesa was identified as banded copper-tin veins occurring within a carbonitised detrital unit of Lower Carboniferous age.

From 1983 to 1990, exploration on the property was focused on two areas of tin mineralisation, Oropesa and La Grana (situated approximately 1.5 km north of Oropesa) and also covered the regional extents of the property. The exploration programmes conducted during this time included, detailed mapping, geochemical surveys (including stream sediment and soil), and geophysical surveys (including ground Induced Polarization and Resistivity, ground and airborne magnetic and VLF electromagnetic surveys), trenching, diamond drilling and metallurgical test work.

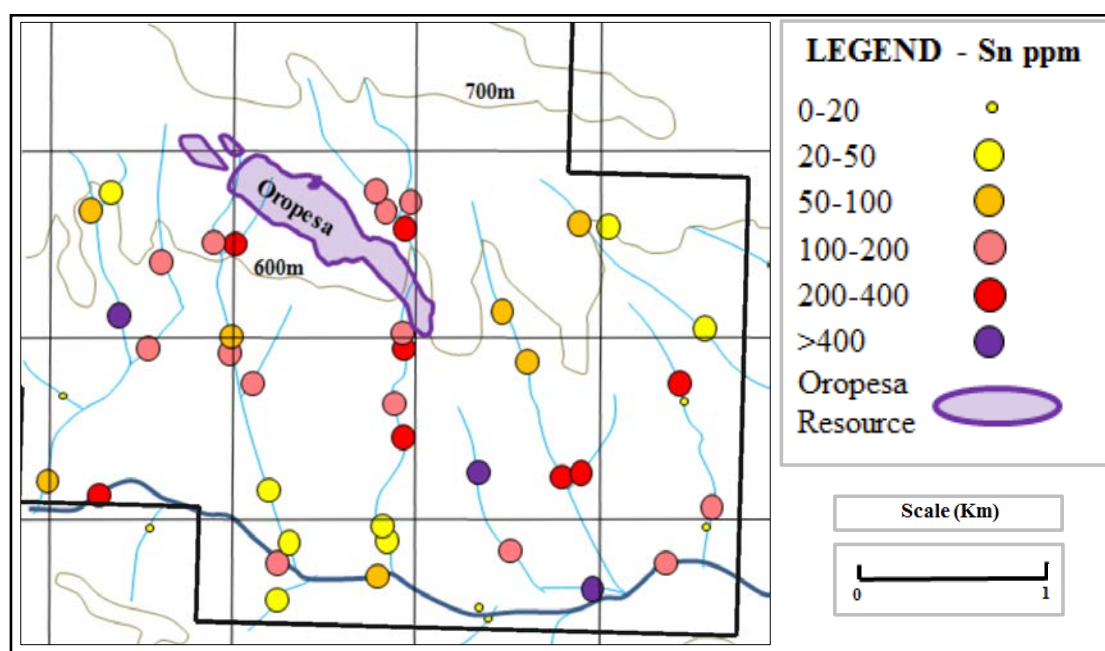
### 9.1.1 Regional Geological Mapping

From 1982 to 1988, detailed geological mapping was completed over the property and surrounding areas. The tin mineralisation host unit was identified as a carbonitised, detrital conglomerate and arenite (also referred to as greywacke) and this was traced across the property.

### 9.1.2 Regional Geochemical Stream Sediment Surveys

Multiple stream sediment sampling programmes have been undertaken over Oropesa and the surrounding areas. Approximately 130 samples covering 115 km<sup>2</sup> were taken and analysed for Cu, Pb, Zn, and Sn. No sample collection or analytical methodology is available. As expected, the best Sn values (<10 to 650 ppm) were situated over the Oropesa area. Higher Cu, Pb and Zn values were found not to correlate with the higher Sn values.

Additional sampling from the same area included 36 samples which were concentrated by panning, followed by heavy liquid separation and, subsequently, a Frantz magnetic separator. Information from the sampling programmes is incomplete, with only limited descriptive information available for 20 of the 36 samples. Mineralogical content was examined by Dr D Antonio Arribas from the Granada University. Cassiterite was identified in 18 samples, with samples from downstream of the Oropesa project showing most abundant cassiterite concentrations. Figure 9-1 shows a map of the results from the stream sediment sampling program.



**Figure 9-1: Map of Oropesa Stream Sediment Sampling Results within the Company's current Licence Boundaries (Source: MESPA)**

### 9.1.3 Regional Geochemical Soil Surveys

A regional geochemical soil survey was conducted by IGME in 1989 and covered both Oropesa (11 lines, 1200 m long, 100 m apart, oriented at 030°) and La Grana (two lines, approximately 500 m long, 100 m apart, oriented at 030°). The aim of the survey was to establish the ideal parameters (grain size, minimum sample density, soil horizon) for a regional sampling programme and the Oropesa project area was used as a control site. Samples were collected from the B soil horizon (where outcrops occurred surface soil was collected) and 575 samples in total were collected at -80 mesh (-0.177 mm) and sent for analysis.

Twenty-three test pits were also dug between 1.5 and 2 m deep using an excavator. Soil horizons A, B, and C were sampled for 69 samples and three fractions were collected (0.25/+0.177 mm, -0.177/+0.125 mm, and <0.125 mm). Analysis was completed by ICP methodology for 20 elements and colorimetry for three elements: Sn, tungsten (W), and fluorine (F).

Results indicated that A-B soil material at -80 mesh is suitable for analysis, at a sampling density of 100x250 m. Sampling identified areas of Sn mineralisation and hydrothermal alteration zones.

### 9.1.4 Regional Geophysical Surveys

#### *Combined Airborne Magnetic, Electromagnetic and VLF Survey*

An area covering approximately 160 km<sup>2</sup> (including the entire Oropesa property) was flown by helicopter between December 1987 and January 1988 by Aerodat Ltd. Lines were flown at approximately 400 m spacing (although 200 m intervals occurred in places) on a bearing of 030°, with an average ground clearance of 60 m. A magnetic high (2000 m long and 1000 m wide) was identified which is associated with the Sierra La Grana – Oropesa area. The Oropesa project appears to coincide with an electro-magnetic anomaly, whilst a second anomaly extends westward from the La Grana occurrences.

### 9.1.5 Local Geochemical Soil Surveys

#### *Soil Surveys*

Soil surveys at Oropesa were undertaken from 1989 to 1990 and included 25 lines, approximately 100 m apart at an orientation of 020°. Samples were taken at 25 m spacing, and the lines varied from 500 to 1300 m in length. In total, 665 samples were collected and analysed for Sn, Cu, Pb, and Zn at Laboratorios Almeria, SA (“Laboral”) by Atomic Absorption methods. It is unknown whether the laboratory was certified during this time. An anomalous (>125 ppm) area was identified at 2000 m long and 200 – 700 m wide at an approximate orientation of NNW/SSE (Figure 9-2). Three other areas of high Sn were detected in the western, central and southern parts of the area.

At La Grana, 1,173 samples were collected at 25 m spacing and analysed for Cu, Pb, Zn, and Sn. Two areas of significant Sn (>250 ppm) were identified approximately 1.3 km apart (Figure 9-2). Sn occurrences at La Grana West showed a strong correlation with Cu and Pb, whilst La Grana East had a weak Cu-Sn correlation and strong Pb-Sn correlation.

### 9.1.6 Local Geophysical Surveys

#### *Oropesa IP-Resistivity Survey*

A two phase pole-dipole survey was completed over Oropesa in 1983 and 1985. A total of 10.075 km was surveyed and there appeared to be a correlation between chargeability and geochemical anomalies.

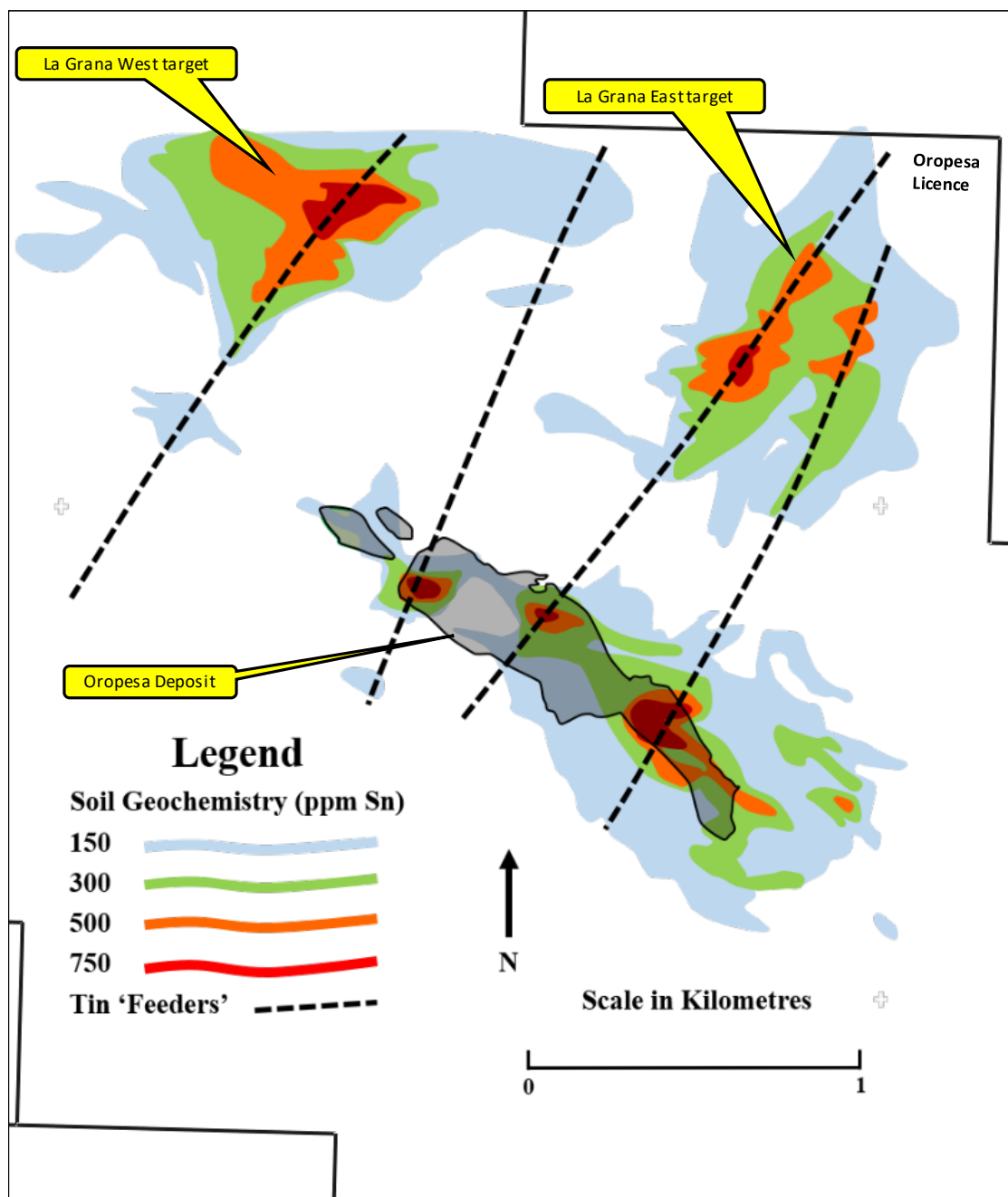
#### *Oropesa VLF Electromagnetic and Magnetometer Surveys*

A total of 14.775 km of surveys, was conducted across the mineralised horizon at Oropesa, including the three anomalous zones identified by geochemical sampling. Readings were taken parallel to the geochemical grid lines at 25 m intervals, approximately 100 m apart. Data were smoothed using a moving average. Four VLF electromagnetic conductors were identified; being associated with the known mineralisation and geochemical anomalies previously identified with the fourth conductor thought to be due to a result of cultural influences. The magnetic data was found to be inconclusive.

#### *La Grana Gravity Survey*

At La Grana, an area of approximately 3x6 km was surveyed on lines spaced either 500 or 1,000 m apart and oriented 020°. Plans of the Bouger, Regional and Residual data is available; however, no report has been found to date. Separate gravity anomalies are coincident with both the La Grana West and La Grana East occurrences.





**Figure 9-2: Schematic of the Oropesa and La Grana soil geochemistry relative to wireframe locations, interpreted ‘feeder’ structures and Licence Boundary (Source: MESPA)**

### 9.1.7 Oropesa Trenching and Sampling

From 1982 through to 1986, 26 trenches totalling 2,681 m in cumulative length were dug to bed rock. The trenches were oriented at 020° and at a maximum approximate depth of 3 m. Nine of the trenches were aimed at exposing mineralisation and 14 were designed to test geochemical and geophysical anomalies. All of trenches were mapped in detail; however systematic sampling occurred only for the last 14 trenches. Sample methodology was not typically detailed. All analysis was completed at the IGME laboratory in Madrid by XRF.



### **9.1.8 Local Drilling**

Between 1983 and 1990, 33 holes were drilled by IGME in to the Oropesa anomaly. Further details are provided in Section 10.1.

### **9.1.9 Mineralogical Studies**

Mineralogical studies were undertaken by IGME and reported in the Boletín Geológico y Minero (Alvarez Rodriguez and Gomez-Limon, 1988, and Garcia Frutos and Ranz Boquerin, 1989). Both papers describe technical difficulties encountered in relation to the recovery of cassiterite from Oropesa with poor yields being a result of a low liberation size and the occurrence of iron oxides which are partly embedded in the cassiterite.

## **9.2 Exploration by the Company**

Since acquisition of the property, the Company has completed a review of the IGME data including re-interpretation and development of an exploration model for tin emplacement. A number of exploration programmes have been carried out over the property including geochemical and geophysical surveys, trenching, test pitting programmes.

### **9.2.1 Geochemical Survey**

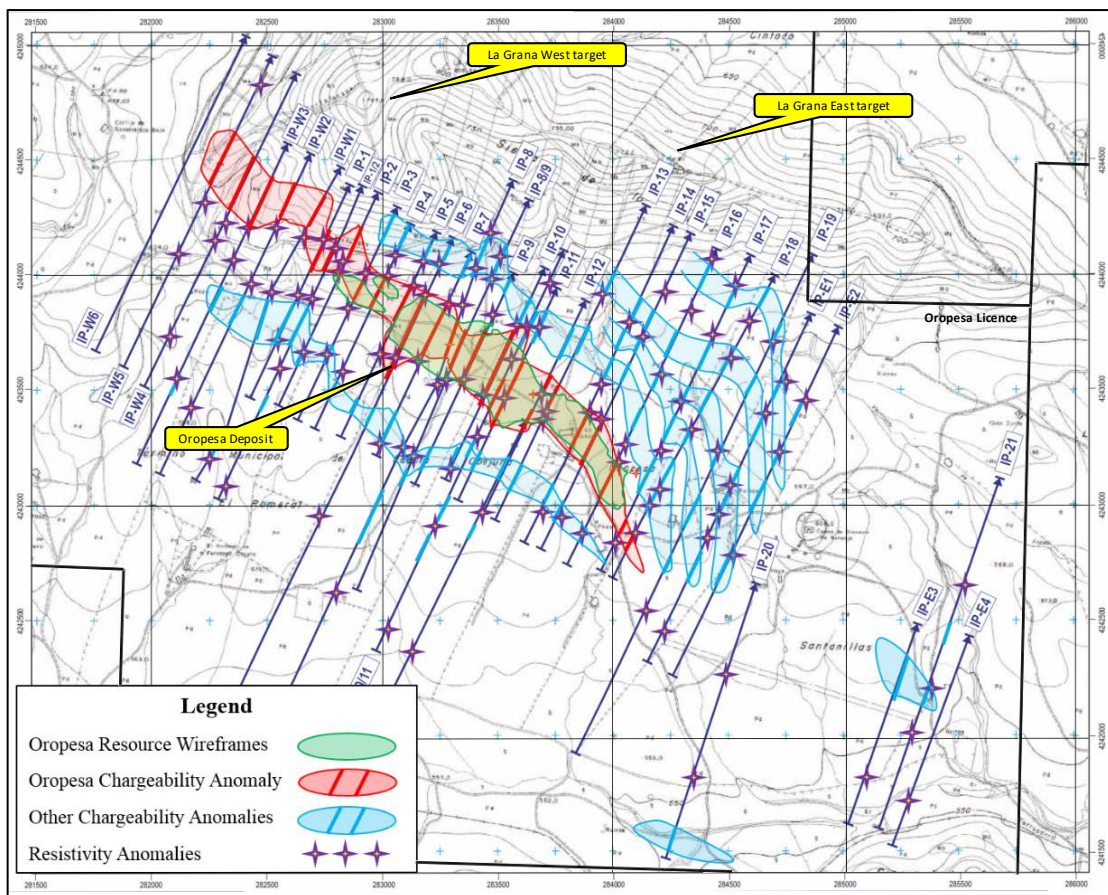
From 2008 to 2010, a sampling programme was conducted taking 160 float samples from the La Grana West area (a small number of samples were also taken from La Grana East and Oropesa). All sample locations were recorded using a hand held GPS ( $\pm 5$  m accuracy).

The aim of this sampling programme was to identify and prove the presence of cassiterite mineralisation on the property, and to gain an understanding of the size and nature of the mineralisation.

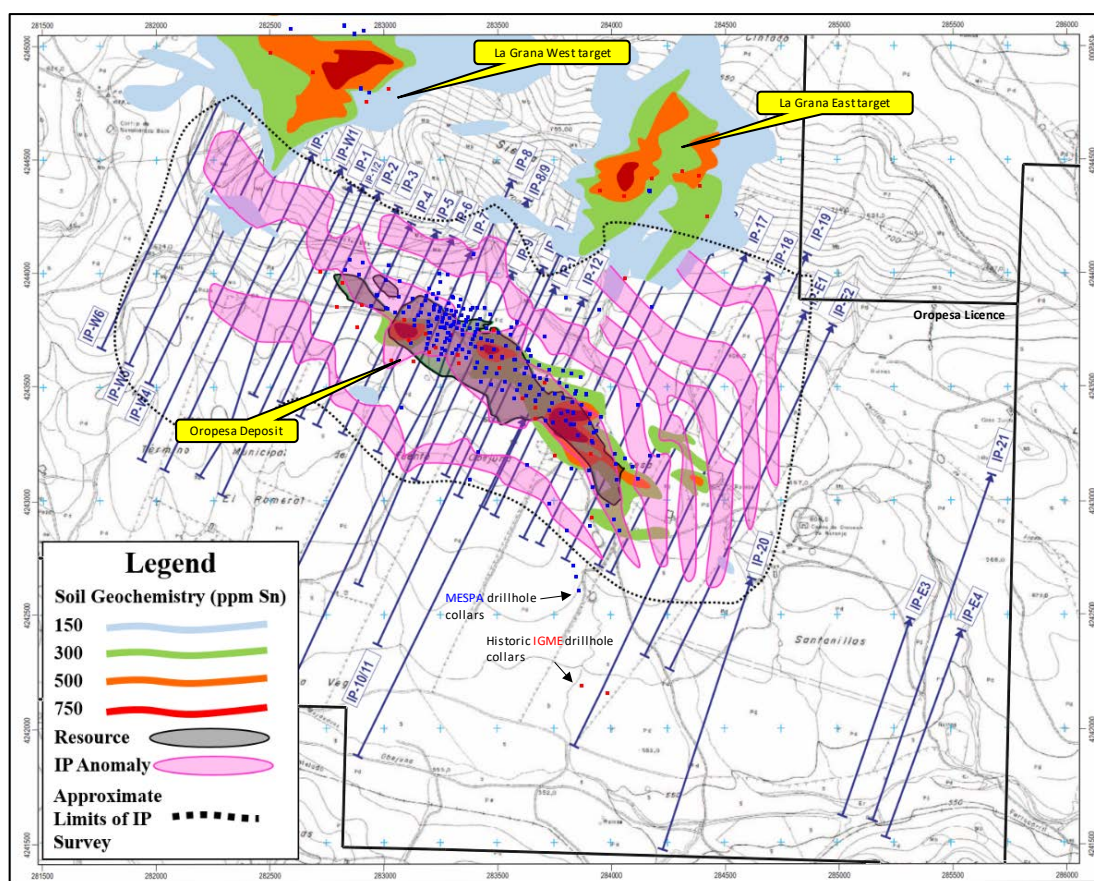
Samples were approximately cobble sized and were initially collected randomly over areas of 1.5x1.0 km area at Oropesa, 1.0x1.0 km area at La Grana West and 0.5x0.75 km area at La Grana East. Once the presence and orientation of the mineralisation had been identified, samples were collected in a manner which would confirm mineralisation orientation. All samples were described geologically and subsequently bagged and tagged.

### **9.2.2 Geophysical Surveys**

From February to June 2011, IP-resistivity and ground magnetic surveys were conducted over the property. The IP-resistivity survey covered 50.02-line km on 34 lines spaced 50 to 100 m apart and oriented NE/SW. A dipole-dipole electrode array was used, spacing between electrodes was 20 m and the distance between the current dipole and receiving potential dipole was between 1 and 20 m. The Oropesa mineralisation corresponded with anomalies identified in the central part of the survey area. A number of sub-parallel NNW/SSE anomalies were identified by the survey, as illustrated in Figure 9-3 and overlain with soil geochemistry results and drillhole collars in Figure 9-4. SRK note that the La Grana occurrences were not covered by the geophysical surveys.



**Figure 9-3: Oropesa Chargeability and Resistivity Anomalies from the Company's 2011 Geophysical Survey (Source: MESPA)**



**Figure 9-4: Oropesa Chargeability Anomalies from the Company's 2011 Geophysical Survey overlain with Oropesa Sn Soil Geochemistry (Source: MESPA)**

The magnetic survey covered 63.5 km along the IP NE/SW oriented IP lines. An additional six lines plus three tie lines were also surveyed. Readings were taken automatically every two seconds, as the operator walked along the lines, GPS readings were also taken at each location. A general NW/SE trend is visible, with the Oropesa mineralisation lying at a change in magnetics between the shale (highly magnetic) to the SW and conglomerate (low magnetic) to the NW, as illustrated in Figure 9-5.

Additionally, detailed airborne Versatile Time Domain Electromagnetic ("VTEM") and magnetic surveys were undertaken in 2011 and SRK Exploration Services Ltd carried out the processing and interpretation of the data. The VTEM survey was performed by Geotech in 2011 and covered most of the area with lines flown in a NNE direction with a central area covering the Oropesa project flown in more detail in the orthogonal ESE direction. It was found that the Oropesa Sn deposit gave rise to a strong electromagnetic anomaly that indicates the presence of good conductivity material at depth. The conductor appeared to be approximately 1100 m long and 800 m wide and possibly caused by more conductive minerals such as pyrrhotite.



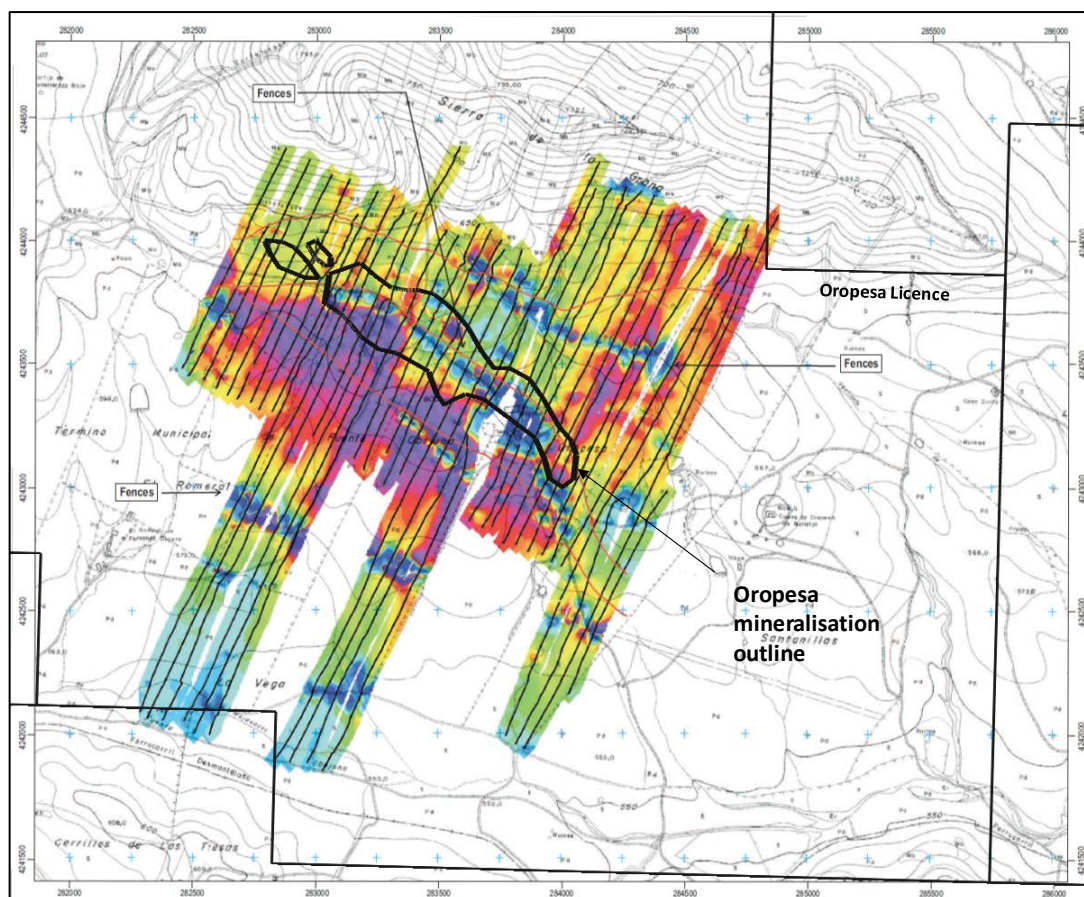


Figure 9-5: Oropesa Ground Magnetic Survey Results (Source: MESPA)

### 9.2.3 Trenching Programmes

Trenching programmes were undertaken at La Grana West (18 trenches, 8 to 30 m in length, totalling a cumulative length of 720 m) and La Grana East (one trench, 284 m in length). Trenches were oriented across areas of known mineralisation with the purpose of exposing bedrock and determining whether high grade intercepts indicated mineralized structures. Some areas of high Sn concentrations were found, however these were sporadic in nature. The company believes some mineralized areas are due to soil creep (Burns, 2011).

### 9.2.4 Test Pitting Programmes

In early 2011, the Arroyo Majavacas flood plain located in the southeast of the property was sampled using nine test pits. The aim was to test the potential for alluvial Sn deposits. The test pits were dug (using an excavator) down to bedrock at depths of between 1.7 to 2.7 m.

Material between the overlying soil and underlying rock was sampled, assay results ranged from 6 to 219 ppm Sn, with only two out of 12 assays above 100 ppm Sn. These results indicate the presence of an alluvial Sn deposit on the flood plain being unlikely.

## 10 DRILLING

### 10.1 Historical Drilling

Between 1983 and 1990, 33 core drillholes with a cumulative length of 6,913.55 m were drilled by IGME in to the Oropesa anomaly. The majority of these holes were oriented at 020° NE. Between 1987 and 1990, 16 core drillholes with a cumulative length of 3,420 m were drilled in to the neighbouring La Grana Sn occurrences. Holes one to five tested La Grana West, and Holes six to 16 La Grana East.

Holes were collared in HQ and reduced to NQ, and BQ where required. There are no descriptive drill logs available (only graphical logs) and no report has been found detailing the purpose and interpreted results of the drill programme. Collar surveys were not completed and downhole surveys are noted only on the graphical logs (survey method was not recorded). Drill collars were located by Burns during a site visit. Sample lengths vary and Burns (August, 2011) notes that sampling appears to have been primarily based on core recovery. It was also noted that sections of mineralized core had not been sampled.

All sample preparation was undertaken at IGME Litoteca de Sondeos in Penarroya-Pueblonuevo, and all analysis for Cu, Pb, Zn, and Sn by XRF was completed at the IGME laboratory in Madrid.

Whilst the IGME drillhole collars were difficult to locate, with low confidence in the survey and assay data, the IGME data at Oropesa in general supports the presence of anomalous tin grades and range of mineralised thicknesses intercepted by the more recent drilling.

### 10.2 Drilling by the Company

The Company has undertaken six drilling programs to date, with the latest phase of drilling and sampling completed between during 2016. A summary of each of the drill programs is provided as follows:

#### 10.2.1 Drilling Summary 2010

The first drill programme (March to November, 2010) comprised of 30 holes with a cumulative length of 4,817.10 m, conducted by drill contractor Sondeos y Perforaciones Industriales del Bierzo, SA (SPIB), also the property vendor. Sixteen holes were drilled at Oropesa (totalling 2,798.9 m) and 14 holes at La Grana West (totalling 2,018.2 m). The core was typically HQ in size, although reduction to NQ occurred in two holes. A track mounted, Model 100 SPIRILL hydraulic diamond drill was used; this equipment could reach a maximum depth of 750 m.

The 16 holes drilled at Oropesa covered an 800 m strike length and were designed to intersect previously drilled mineralisation. This drilling encountered hydrothermal Sn and sulphide mineralisation in the eastern anomaly at Oropesa. The 14 drillholes at La Grana West were exploration holes aimed at testing the various structures which had been identified during sampling programmes and from re-interpretation of the IGME data.

Tin mineralisation at La Grana has been interpreted by the Company to occupy brittle fractures in quartzities, where reported drilling intervals typically have grades of 0.1 to 1.0% tin over intervals of 1-6 m. The geological continuity, lateral and vertical extent of the mineralisation at La Grana remains to be fully defined.

### 10.2.2 Drilling Summary 2011

The second SPIB Oropesa drill programme (December 2010 to July 2011) completed by the Company, included 92 diamond drillholes ('DD') with a total cumulative length of 20,023.45 m.

All holes were planned in Datamine Mining Software, and a compass and handheld GPS were used to position the holes. Downhole surveys were taken using a Reflex single shot camera at approximately 50 m intervals. Deviations in azimuth have been attributed to the magnetic minerals (pyrrhotite) present in rocks at Oropesa. The aim of the drill programme was to:

- delineate the grade, and attitude of zones and/or expand zones laterally by using a fence across the mineralized zones;
- test IP delineated targets;
- determine source of high grade Sn boulders located in the SE of the property; and
- check the existence of interpreted structures.

On completion of drilling, holes were geotechnically (RQD, core recovery) and geologically logged, all core was photographed and samples were selected and marked. All data is entered electronically.

The November 2011 drilling programme indicated that the mineralisation dips to the north, suggesting that the IGME and previous MESPA (2010) holes were drilled in the wrong orientation. All subsequent drilling has therefore been drilled to the south.

### 10.2.3 Drilling Summary 2012

The third drilling phase was completed in May 2012 with the drilling completed by SPIB for an additional 21,233.1 m of diamond core drilling (92 holes) and 2,118.0 m reverse circulation ("RC") drilling (16 holes), for a total of 108 holes. All drilling undertaken in this phase of work was conducted to infill to a 50x50 m grid with a partial 25x25 m grid.

### 10.2.4 Drilling Summary 2013

The fourth phase was completed during June to September 2013 for an additional 4,087.8 m. During this phase, a total of 24 holes were drilled across the deposit to target higher grade structures and infill areas of lower confidence.

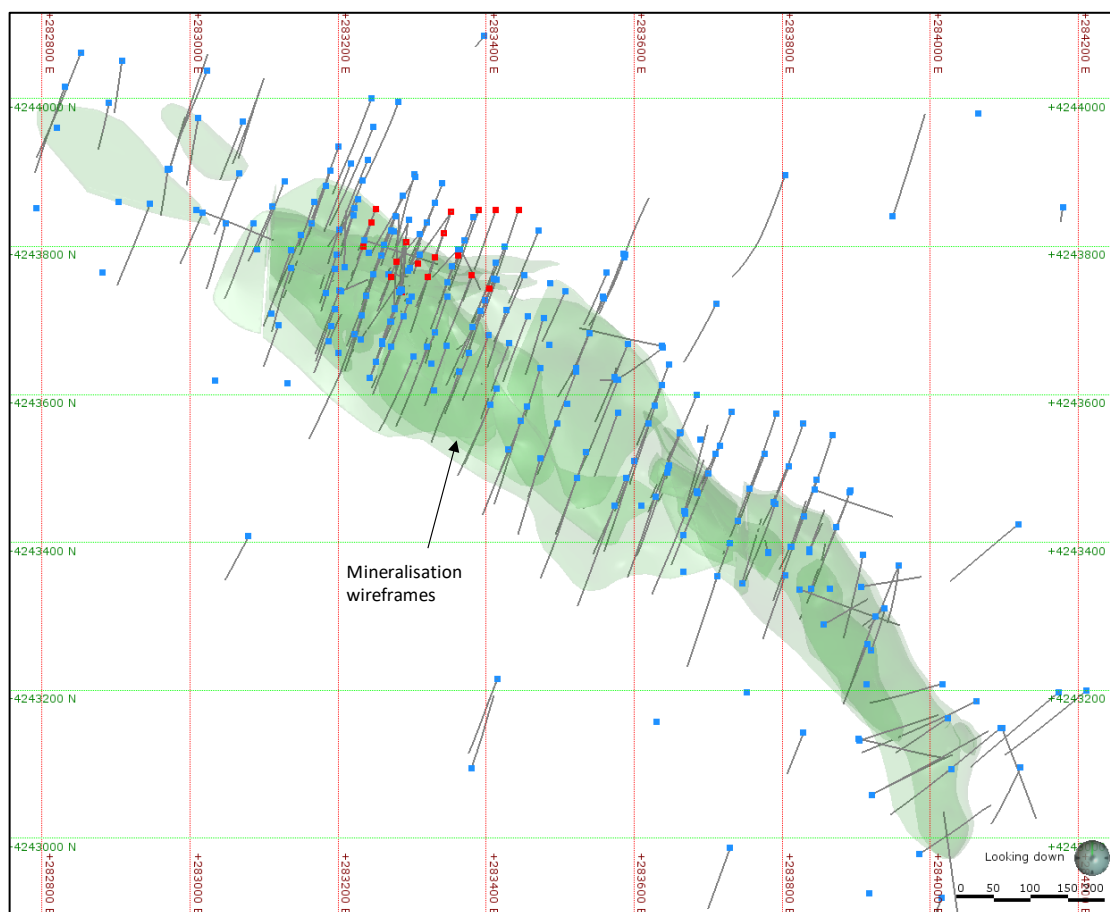
### 10.2.5 Drilling Summary 2015

The fifth phase of exploration drilling was a relatively small program aimed at confirming the presence of mineralisation within previously non-sampled zones and testing for additional tin mineralisation at depth below previously modelled domains. Additions to the database for 2015 consisted of three drillholes for 980 m of DD drilling, with an additional four earlier holes for some 754 m which were not available in time for inclusion in the Drilling Summary for 2013.

### 10.2.6 Drilling Summary 2016

The latest phase of exploration drilling and sampling was a small program focused towards improving the geological confidence in the model within a zone of high grade, near-surface mineralisation (targeted for open pit extraction) in the west of the Oropesa deposit. DD drillholes for 2016 were collared on previously established drill section lines and angled between -45° and -60° (below horizontal) towards the southwest.

Additions to the database for 2016 consist of a further 16 exploration drillholes for 2,619 m of DD drilling, with an additional three (non-sampled) metallurgical holes for some 574 m. The positions of new drillhole collars for 2016 are illustrated in Figure 10-1.



**Figure 10-1: Location of new collars (red) completed by MESPA during the 2016 exploration program**

### 10.2.7 Summary of Data Quantity

A total of 259 holes totalling some 53,726.0 m have been completed by the Company at the Oropesa Project. All drilling data available as of 17 February 2017 was made available to SRK. A summary of the Oropesa holes completed by the Company is provided in Table 10-1 subdivided by drilling type.

**Table 10-1: Summary of Oropesa Drilling Completed by MESPA as at 17 February 2017\***

Target Area	Drilling Type	Count	Total length (m)
Oropesa	DD	243	51,193.8
	RC	12	1,610.0
	RC+DD	4	922.2
Subtotal		259	53,726.0

\*Drill statistics include all Oropesa metallurgical holes, re-drills and RC holes provided by the Company and exclude 2,725 m of drilling completed at the neighbouring La Grana prospects (“LGR” series holes).

### 10.2.8 Collar and Topography Survey

Prior to 2016 the topographic survey of all drillhole collars was completed using a Leica 530 SR GPS (illustrated in Figure 10-2) which provides survey measurements in x, y and z coordinates accurate to within 15cm. The geodetic control point for the surveying was located at la Grana Hill, approximately 1km north from the Oropesa deposit.

Since then, the limited number of additional drillhole collars have been surveyed using tape and compass based on triangulation from nearby, previously surveyed collars; this provides measurements accurate to within 10cm in x and y coordinates. A handheld GPS was used to determine the z coordinate (elevation) for the collars surveyed using triangulation.

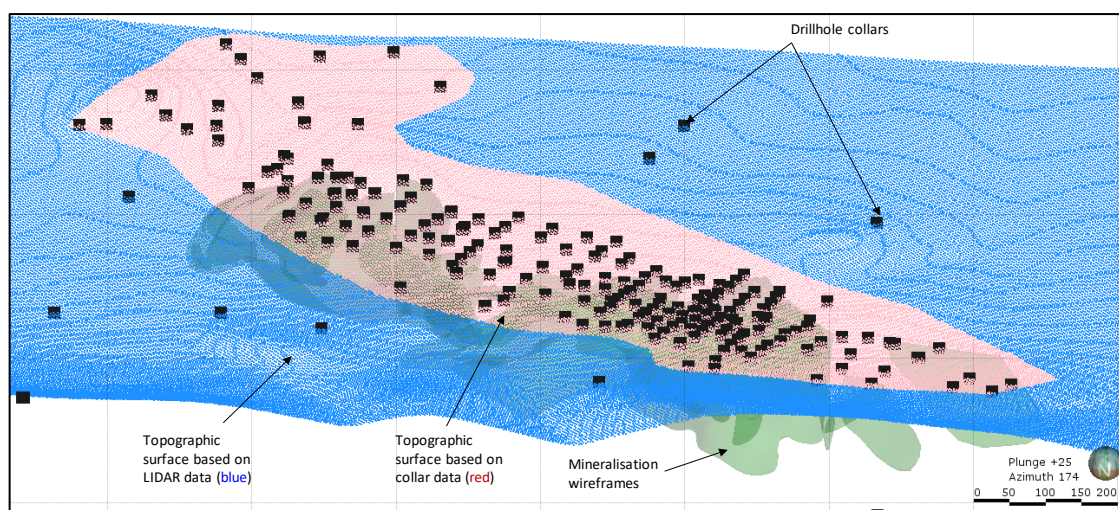
Following visual validation of the collar surveys (as described in Section 12.1.1), SRK has used the collar point-data to generate a topography for use in constraining the model to surface above the footprint of the mineralisation wireframes; this appropriately reflects flat-lying relief of the Oropesa deposit area.

SRK has also been provided with LIDAR data which is accurate to within 5m. Given the limited collar coverage away from the well-drilled footprint of the mineralisation (and only small (typically <1m) difference between collar and LIDAR survey data), SRK has used the LIDAR data to inform the surface topography outside of this area, as illustrated in Figure 10-3.



**Figure 10-2: Leica 530 SR GPS at the Oropesa Deposit area**





**Figure 10-3: Collar and LIDAR data used to create surface topography for the Oropesa Project**

### 10.2.9 Downhole Surveys

SRK has been supplied with downhole survey information for the start and the end of each hole, with intermediate readings at approximately every 50 m, typically using a Reflex single shot camera survey measurement. In general, the data collected is considered to be of high precision and accuracy suitable for use in this resource estimation.

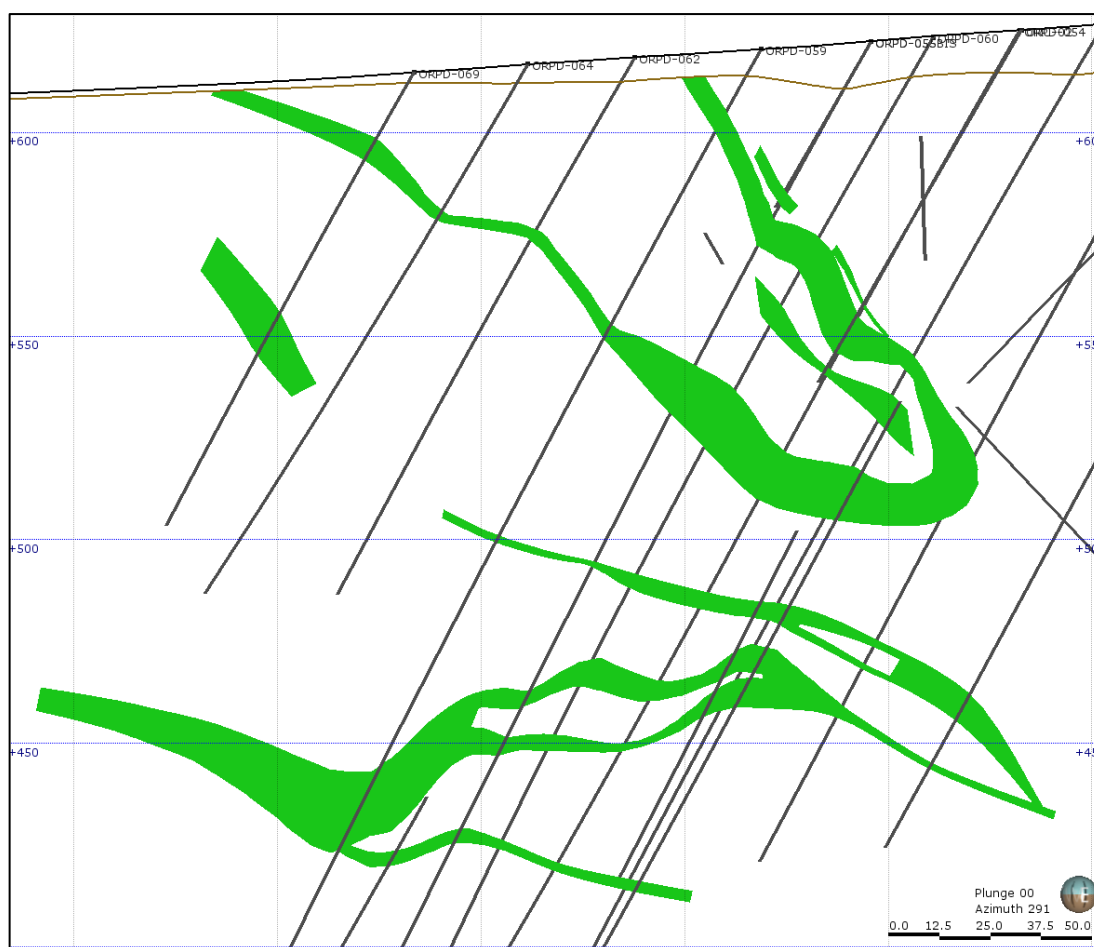
### 10.2.10 Hole Orientation

All drilling undertaken on the Project has been completed from surface.

At Oropesa, the drilling intersects the mineralised zone from the southwest and northeast orientations. The Oropesa drillholes are plotted on sections oriented NE-SW across the principal structural control of the deposit and are spaced approximately 20–100 m apart, proving intersections at a similar spacing.

Drillholes are typically angled between  $-45^{\circ}$  and  $-85^{\circ}$  (below horizontal), hole lengths ranging from 50–636 m and intersection angles with the mineralisation typically ranging from perpendicular to  $-45^{\circ}$ .

It is SRK's view that the drilling orientations are reasonable to model most of the geology and mineralisation based on the current geological interpretation. Figure 10-4 provides a cross section to show the typical drilling orientation and dip of the mineralisation wireframe.



**Figure 10-4: Example cross section through the Oropesa deposit**

### 10.2.11 Diamond Drilling Procedure

The drilling was performed by the SPIB contractors and managed by the Company's geological team. With the exception of a limited number of RC holes (16) completed during February to April 2012, which are largely situated away from the main mineralised zones at Oropesa, all drilling was completed using DD.

DD drilling was performed with the use of a double tube; core was typically HQ in size.

Core was typically produced in 3 m core runs and then placed into a V-rail for core recovery measurement. The core was then placed in wooden boxes using cut wooden blocks to mark drilling intervals and then transported to the core storage facility.

### 10.2.12 Core Recovery

Sample recovery is measured by technical staff as part of the logging process. This is recorded in the drilling logs.

Visual assessment of the core shows that recovery is variable with areas of lower recoveries often noted in zones of significant oxidation, mineralisation or structure. Estimated recovery ranges from 0% to 100% core recovery and averages 92%.

The core loss in higher grade regions was investigated to test for the existence of a relationship with increased grade and decreased core recovery.

Figure 10-5 presents a correlation plot of Sn% grade versus estimated recovery. No clear relationship exists and therefore it is unlikely that a systematic bias has been introduced.

While no systematic relationship exists between Sn grade and recovery, future drilling should consider appropriate techniques to improve areas where problematic drilling conditions are anticipated. For example, triple tube diamond coring or reverse circulation drilling could be considered.

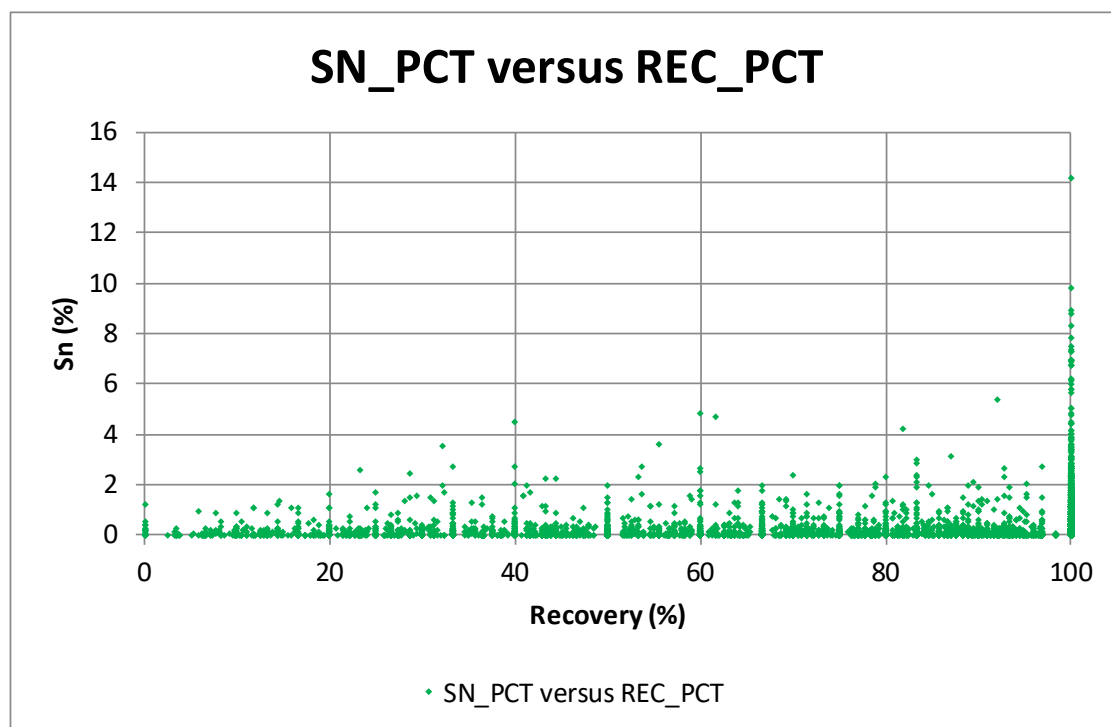


Figure 10-5: Sn% versus core recovery

### 10.2.13 Core Storage

All diamond drill core is stored in custom made wooden core boxes in the warehouse located in the town of Fuente Obejuna, Cordoba. The boxes are then stacked on pallets. In addition to the core storage, crushed reject samples are returned from ALS Laboratories sample preparation facility in Seville, Spain ("ALS Seville") and stored in the facility in locked metal containers for later submission as supuplicate samples.

The facility is locked and secured. A security system alarm has been installed and is connected to the police station. Access to the sample storage facility is restricted to MESPA personnel.

### 10.3 SRK Comments

In the opinion of SRK, the sampling procedures used by the Company conform to industry standard practices and the resultant drilling pattern is sufficiently dense to interpret the geometry, geological boundaries and tin mineralisation with an appropriate level of confidence.

## 11 SAMPLE PREPARATION, ANALYSIS AND SECURITY

### 11.1 Introduction

The following section relates to the methods and protocols used by the Company during the 2016 exploration campaign, which remains unchanged from the Company's previous sampling programs.

### 11.2 Chain of Custody, Sample Preparation, and Analyses

All core samples were collected from the drill rig and transported to the core farm in Fuente Obejuna, Cordoba, by Company personnel for logging, sample selection and splitting using a core saw. The samples were then transported by the Company to the ALS sample preparation facility in Seville ("ALS Seville") as batches of between approximately 40 to 150 samples. The samples were typically submitted to ALS Seville on a hole by hole basis.

The samples received by the ALS Seville sample preparation facility were logged into the LIMS tracking system and processed in accordance to the requested analytical procedure. Sample preparation was via procedure PREP-31 in which the sample is weighed, dried, and crushed prior to a 250 g split being taken and pulverized to better than 85% passing 75 microns. Samples were then shipped by bonded courier to the ALS Laboratory in Vancouver, Canada ("ALS Vancouver"), for analysis by glass fusion X-Ray fluorescence ("XRF"). ALS Seville is ISO accredited.

### 11.3 Specific Gravity Data

The Company technical staff collected bulk density data using an immersion method collecting weight in air versus weight in water. Density determinations were completed as follows:

- Three pieces of core were selected for each sample interval (1 or 2 m sampling interval depending if the interval was visually mineralized or not).
- The core billets were selected taking into account the lithology and the core quality (competent intervals were selected preferentially).
- Calibration weights were used to check the calibration scale each day prior to weighing samples commenced. The scale was calibrated to  $\pm 5$  g;
- The core billet was oven dried and weighed prior to immersion to determine the dry weight of the sample in air. The core billet was then placed in the sample basket, immersed in water and reweighed to determine the weight in water. The core was observed to ensure all bubbles disappeared prior to the immersed sample weight was determined.
- Density was determined using the following formula:

$$\text{Density} = \text{weight (in air)} / [ \text{weight (in air)} - \text{weight (in water)} ]$$

- The results of the three readings were averaged for each interval.
- In cases of assumed high porosity, sample densities were derived using the above methodology and then dried again using an oven and then wax coated. The samples were then subjected to the same immersion methodology and a factor representing the density of the wax was applied to the density calculation.

- Density for wax-coated samples was determined using the following formula:

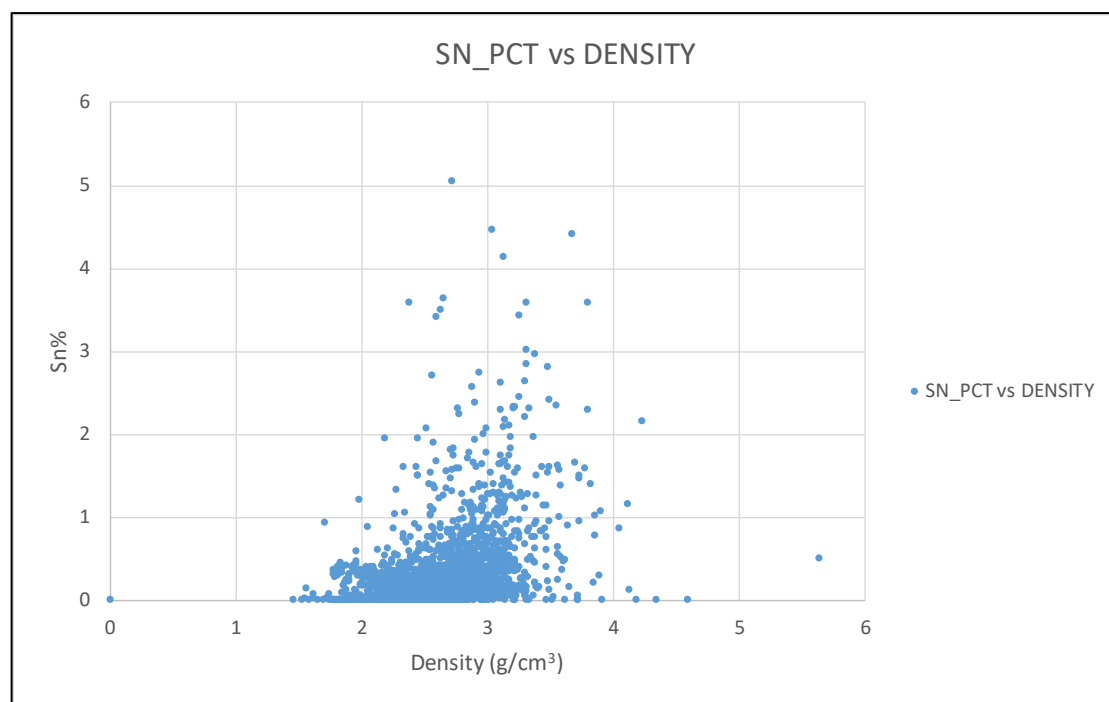
$$\text{Density} = \frac{\text{weight (in air)}}{[\text{weight with wax (in air)} - \text{weight with wax (in water)}] - [(\text{weight with wax (in air)} - \text{weight (in air)}) / \text{wax density (0.8 g/cm}^3)]}$$

The density database for the 2017 MRE comprised 2,726 density measurements recorded by the Company and 755 density measurements from ALS Vancouver, with wax coated samples used in preference over the raw samples, to account for porosity. The raw density data was initially coded within the modelled wireframes and weathering surfaces and the descriptive statistics per domain are provided in Table 11-1.

An updated assessment of Sn grade relative to density for the 2017 MRE did not indicate a high correlation relationship, as illustrated in Figure 11-1. SRK has therefore interpolated the density data into the modelled wireframes using Inverse Distance Weighting Squared (IDW2), producing a variable density block model. Blocks that did not meet the search criteria for estimation were set to the average density per domain.

**Table 11-1: Summary of density inside mineralisation wireframes and weathering zones (2017)**

Group	Description	Field	Zone	Sample No.	Mean	Max	Min
100	Mineralisation	DENSITY	Oxide	11	2.3	2.7	2.1
			Transition	251	2.5	4.1	1.7
			Fresh	778	2.9	5.6	1.6



**Figure 11-1: Scatterplot showing tin grade versus density data**

In the absence of data, an assumed overburden density has been derived from the AusIMM field geologist’s guide, which provides density estimates for various overburden types. The overburden present at the Oropesa deposit is classified and a mix of gravels and clays. From this a dry density of 1.8 g/cm<sup>3</sup> has been derived, which remains consistent with the previous MRE.

## 11.4 SRK Comments

In the opinion of SRK, the sampling preparation, security and analytical procedures used by the Company are consistent with generally accepted industry standard practices and are therefore adequate for the purpose of this Mineral Resource estimate. However, SRK notes that density measurements were only taken using competent core and therefore may slightly overestimate density in zones of broken/rubbly, oxidised core.

SRK recommends that density test work during future exploration programmes should focus on characterising the density of rubbly, oxidised material and the sampling of existing drillholes which have not yet been sampled for density to maximise the confidence in density estimates within these areas.

## 12 DATA VERIFICATION

### 12.1 Verifications by SRK

In accordance with National Instrument 43-101 guidelines, SRK has completed several Resource Geology visits to the Project, including:

- Howard Baker (Resource Geology, CP for the 2012 and 2014 MRE) during March 2012;
- Paul Stenhouse (Structural Geology) and Oliver Jones (Resource Geology) during July 2015.

The site visits allowed SRK to review exploration procedures, define geological modelling procedures, examine drill core, inspect the site, interview project personnel and collect relevant information.

A further Resource Geology site visit during was not deemed necessary during 2017 due to the limited number of additional holes (16) completed subsequent to the October 2015 Mineral Resource Estimate.

#### 12.1.1 Verification of Sampling Database

SRK completed a phase of data validation on the digital sample database supplied by the Company which included, but was not limited to the following:

- Search for sample overlaps, duplicate or absent samples, anomalous assay and survey results. No material issues were noted in the final sample database.
- Exclusion of the following historic drillholes that did not pass all aspects of SRK's validation procedures:
  - RC drillhole ORC-10, based on anomalous assay data; and
  - 30 historic IGME drillholes, namely the "OR" series holes and ORM-3, ORM-4 and ORM 5 based on low confidence in the survey and assay data. That said, historic drillholes ORM-1 and ORM-2 were not excluded from the database given that the Company has verified these collar locations and the associated tin grade and mineralised thickness visually correlates well adjacent more recent drilling.

- Visual validation of the z-coordinate (elevation) of (16) new infill drillhole collars against the topographic surface used for the previous MRE. In general, the new collars were very close to the topographic surface (typically within <0.3m), however SRK noted a more significant difference (i.e. 2-3m) for drillholes ORPD-192i, ORPD-194i and ORPD-195i. Given that the z-coordinate of the new drillhole collars (based on handheld GPS) is considered to be less accurate when compared with the data used to generate the topographic surface for the previous model, SRK moved these 3 holes on to the topographic surface for creating the geological model.
- Verification of the formulae used to calculate sample density, as described in Section 11.3. No issues were noted in the final formulae, however, whilst previous models assumed a paraffin density of 0.9 g/cm<sup>3</sup> (as required to determine the density from samples coated in paraffin), further investigation by the Company identified that a paraffin density of 0.8 g/cm<sup>3</sup> is more appropriate. The overall impact of this on the resource model is small, with approximately 0.4% added to the tonnage when applying a paraffin density of 0.8 g/cm<sup>3</sup> instead of 0.9.
- Identification of absent tin values within the mineralised zones. Excluding non-sampled metallurgical and superseded/ failed holes, SRK noted the presence of a limited number of non-sampled intervals, representing some 0.5% of the sample database. Of this, 0.3% relate to either core loss in less competent rock or minor volumetric wireframe discrepancy where complexity of the geometry of the mineralisation results in the capture of a few isolated non-sampled intercepts. The remaining 0.2% represent intervals within the host structure of visually weak to very poorly mineralised core (verified based on Niton XRF data), which have therefore not been sent for analysis at ALS Vancouver.

Drilling completed during 2016 has significantly increased the amount of Niton XRF data for comparison with assay results for tin from ALS Vancouver. Excluding a limited number of anomalous results (2), scatterplot analysis for the grade range of interest (<1% Sn) suggests a reasonable correlation between the two sets of data (as illustrated in Figure 12-1). Therefore, to prevent the smoothing of higher grade data in to areas of non-sampled (weak to very poorly-mineralised) core, SRK has allowed a length-weighted tin value from the Niton analysis (ranging from 0.01 to 0.1% Sn) to influence the composited grades used in to the estimation database. SRK notes that the overall impact of this on the interpolated resource model tin grade is small (i.e. approximately 1% relative reduction in tin grade above a 0% Sn cut-off).

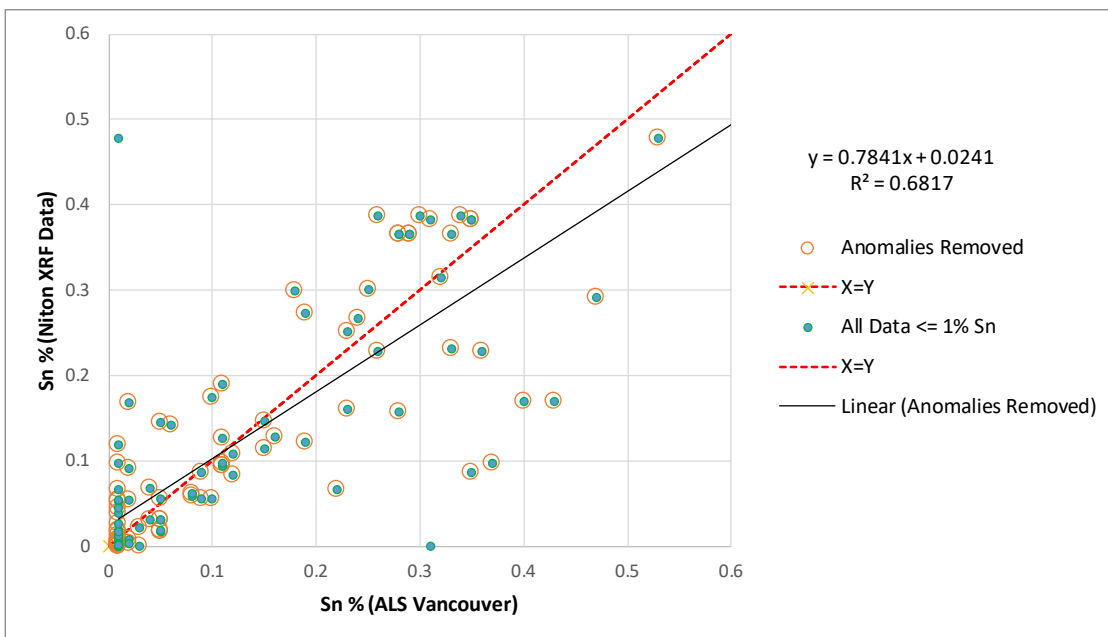


Figure 12-1: Scatter plot of Sn% (ALS Vancouver) vs Sn% (Niton XRF); 89 Values

### 12.2 Verifications by the Company

The Company has undertaken validation of sample assays during the exploration drilling programs completed using standards, blanks and duplicate samples (QAQC samples) which have been inserted routinely into each batch submitted to the laboratory at ALS Vancouver.

SRK notes that 2,883 m (74%) of the total 3,892 m of drillhole intersections inside the mineralisation wireframes is supported by QAQC data, which largely relates to holes drilled following ORPD059 which was drilled during 2011.

The remaining 1,008 m (26%) of sampling inside the mineralisation wireframes is not supported by QAQC data, however this forms part of the same mineralised body and underwent the same sample preparation and assay procedures at ALS Vancouver. These drillholes are interspersed with those that are supported by QAQC data, they are visually comparable with adjacent intersections with QAQC and also show comparable sample distributions and mean grades (Figure 12-2).

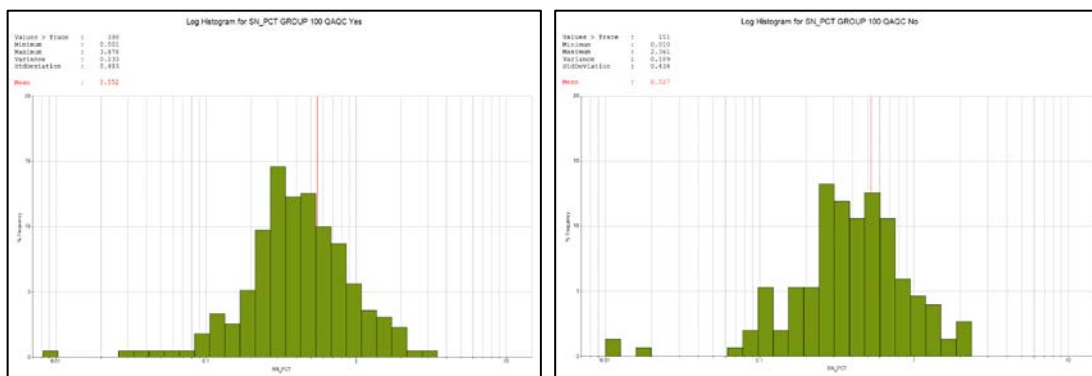


Figure 12-2: Composite sample grade log histogram distributions for tin, showing data assayed with QAQC support (left) and without QAQC (right)



The quality assurance and quality control (QAQC) results for tin analysis completed by the Company between 2010-2016 is summarised in Section 12.3.

### 12.3 QAQC for Tin Analysis 2010-2016

Routine QAQC procedures were introduced during the 2011 drilling program following drillhole ORPD059.

The following control measures were implemented by the Company to monitor both the precision and accuracy of sampling, preparation and assaying. Results shown have been limited to the QAQC samples inserted during routine sample submissions.

Certified Reference Materials (“CRM”), blanks and duplicates were submitted into the sample stream, equating to a QAQC sample insertion rate of approximately 6%, as illustrated in Table 12-1.

The QAQC system includes the submission of blank samples, CRM and duplicates in every batch of samples in a proportional sequence approximately every 10-15 samples.

**Table 12-1: Summary of Analytical Quality Control Data Produced by the Company for the Oropesa Project (subsequent to ORPD059)**

Company Analytical Quality Control Data – 2011 (ORPD059) - 2016			
Sampling Program	Count	Total (%)	Comment
	Tin	Tin	
Sample Count	9,515		
Field Blanks	218	2%	
CRM Samples	183	2%	Sourced from African Mineral Standards
Duplicates (coarse reject)	199	2%	
Total QC Samples	600	6%	

#### 12.3.1 Insertion of CRM

The Company has introduced three different CRM into the analysis sample stream, inserted at regular intervals. The CRM for tin have been supplied by African Mineral Standards, South Africa (Table 12-2). Summary statistics for each CRM sample are shown in Table 12-3.

SRK has reviewed the CRM results and is satisfied that they demonstrate an acceptable level of accuracy at the assaying laboratory and hence give sufficient confidence in the assays for these to be used to derive a Mineral Resource estimate. CRM charts are presented in Appendix A.

**Table 12-2: Summary of Certified Reference Material for tin submitted by the Company in sample submissions**

Standard Material	Tin; Sn (%)		
	Certified Value	SD	Company
AMIS0019	1.095	0.062	African Mineral Standards
AMIS0020	0.68	0.040	African Mineral Standards
AMIS0021	0.27	0.026	African Mineral Standards

**Table 12-3: Analysis of tin assays versus assigned CRM values for 2010-2016 Submissions**

Sample Type	Standard Code	Lab	Count	Assigned	Mean	Variance	Maximum	Minimum
DD	AMIS0019	XRF10 - ALS Vancouver	9	1.10	1.12	2.49%	1.13	1.09
DD	AMIS0020	XRF10 - ALS Vancouver	101	0.68	0.66	-3.03%	0.69	0.001
DD	AMIS0021	XRF10 - ALS Vancouver	73	0.27	0.27	-0.25%	0.3	0.22

### 12.3.2 Blanks

A coarse blank sourced from a quartz gravel quarry located more than 25 km from the project is included in the sample stream. In total, 218 blanks were inserted at regular intervals within the sample stream for drilling, which represents some 2% of total sample submissions from the sampling programs completed with routine QAQC samples.

SRK has reviewed the results from the blank sample analysis and (with the exception of one anomalous result of 0.57% Sn, which may represent a sample switch) has determined that there is little evidence for sample contamination at ALS Vancouver. Blank sample analysis charts are presented in Appendix A.

### 12.3.3 Duplicates

Duplicate samples representing coarse reject material were returned from the laboratory and were then re-submitted in different sample batches. The practise included insertion of duplicates based on four approximate grade ranges for Sn, including: low grade (0.10% to 0.30%), medium grade (0.31% to 0.50%), high grade (0.51% to 1.00%) and very high grade (>1%).

In total, 199 duplicates for drilling were submitted for analysis which represents some 2% of total sample submissions from the sampling programs completed with routine QAQC samples.

The duplicates for drilling show a relatively good correlation to the original samples. SRK notes the presence of a small number of anomalous results between the mean grades for Sn, which lie outside of the typically expected scatter in the results from the coarse reject material; this potentially reflects the underlying geological variability at the Project which is not always resolved by sample preparation. Duplicate charts are presented in Appendix A.

Excluding the small number of anomalous results, SRK is reasonably confident in the repeatability of the sample preparation process.

### 12.3.4 Umpire Laboratory Duplicates

A small number of inter-laboratory check samples (512) were submitted to SGS Wheel Jane during the 2012-2013 drilling programs; however, only 61 of these samples are associated with sample numbers that can be correlated with the original assays.

The duplicate data is presented in Appendix A. The duplicate data shows a high level of correlation with the linear correlation coefficient being 0.93.

The data contains a number of anomalous outliers. In SRK's opinion, it is likely that a degree of variability between duplicate pairs is associated with the inherent variability of the sample or settling and homogenisation issues relating to sample storage and resubmission. While the data set is limited and submission of continuous inter-laboratory duplicate samples is recommended, no major issues were identified in the duplicate samples.

## 12.4 SRK Comments

SRK has reviewed the data collection methodologies during the site visit, and has undertaken an extensive review of the assay and geology database during the Mineral Resource estimation procedure.

For the data available for use in the MRE, some 26% of the data inside the mineralisation wireframes is not supported by QAQC, however these samples appear to be similar to, are well supported by and interspersed with more recent intersections which have good QAQC results.

Assessment of the available QAQC data indicates the assay data for the drilling and sampling to date is both appropriately accurate and precise.

SRK recommends that on-going assessment of all QAQC data is completed routinely to increase the size of the database for review and therefore further increase confidence in the quality of the analytical data.

For the holes drilled prior to ORPD059 (if available) SRK recommends sending pulp splits from a representative portion of samples to the primary laboratory along with QAQC samples according to the current protocols to compare the laboratory performance today with its performance in 2011 and 2010 prior to drillhole ORPD059. This would maximise the confidence in the assay QAQC.

With regard to sampling protocols, SRK recommends for all future exploration programs that drillhole collars are surveyed using a high-accuracy GPS (as used for holes completed prior to 2016), given the potential variability noted in the accuracy of the z-coordinate determined by handheld GPS. In addition, SRK recommends sending the remaining non-sampled intervals located within the mineralised zones to ALS Vancouver (during future sampling programs) to remove the need to insert values from Niton XRF data and therefore further improve confidence in the grade estimates within these areas of the model.

Whilst in general SRK would also continue to recommend the adoption of a commercial database system to improve the overall database management at Oropesa, SRK is confident that the data provided by the Company is of sufficiently high quality, and has been subjected to a sufficiently high level of checking for use in this Mineral Resource estimate.

## **13 MINERAL PROCESSING AND METALLURGICAL TESTING**

### **13.1 Introduction**

The following information has largely been sourced from the SRK 2014 NI43-101 PEA.

### **13.2 Metallurgical testwork 1988-2011**

Initial metallurgical testwork was performed in 1988/89 on a low grade sample containing 0.284% Sn. Visible cassiterite was observed in the sample. Further evaluation of the results has not been included as the quality of the work by the laboratories in Madrid was reported to be poor due to the lack of proper equipment (Burns 2011, 43-101 report).

SGS Minerals Services (“SGS”) conducted two separate metallurgical testwork programs on various samples from Oropesa in November 2009 and March 2011. In addition, in April 2011, SGS prepared a report detailing the metallurgical interpretation of mineralogical characterisation work on the 2009 samples.

In November 2009, gravity characterization testwork was performed on two grab samples designated Oropesa 11 and 27, containing 0.46% and 1.66% Sn respectively. SGS noted that the samples were not representative of the deposit as a whole. Sample 11 contained 0.08% WO<sub>3</sub>. The main findings were as follows:

- gravity pre-concentration tests indicated that the maximum liberation of cassiterite occurred between 125 and 45 microns for both ores;
- some liberation at coarser sizes was observed;
- pre-concentration recoveries of 80% were achieved at 35 to 50% mass pull to bulk concentrates grading 2 to 7% Sn in the -125 +45 micron fractions;
- slimes losses were apparent in the -45 micron fraction;
- Sn losses as fines could be reduced by considered design of the primary grinding and middlings regrind circuits; sequential grind recovery as practiced in the Cornish tin mining industry could be exploited;
- multi-gravity separation and/or Sn flotation would probably be appropriate but have yet to be tested; and
- W-Sn separation would have to be employed if W was found to be present in the mineralised body as a whole.

In March 2011, further gravity characterisation testwork was performed on three surface outcrop samples from La Grana (approximately 1 km north of Oropesa) designated ORP - J994527, J994528 and J994529, containing 5.0%, 2.89% and 0.89% Sn respectively. As with the 2009 testwork, SGS noted that the samples were not representative of the deposit as a whole. Sample J994527 contained 1.17% Pb and 1.1% As. All samples contained significant Fe, but the sulphur levels were low indicating that the pyrite in the samples was probably oxidised. Heavy liquid testwork at 3.3 GG and Mozley Laboratory Separation tests were performed on three size fractions below 1 mm. The main findings were as follows:

- coarse gravity pre-concentration had limited success;
- gravity pre-concentration tests indicated that the maximum liberation of cassiterite occurred between 250 and 75 microns for all three ores tested;
- some cassiterite was liberated at coarser sizes;
- pre-concentration recoveries of 90%, 88% and 69% were achieved at 30% mass pulls to bulk concentrates grading 5 to 15% Sn in the -250 +75 micron fractions;
- 55% Sn could be achieved without cleaning or middlings regrinding of the -250 +75 micron fractions at recoveries of 70%, 50% and 30% respectively;
- slimes losses were apparent in the -75 micron fraction; and
- the different metallurgical recoveries achieved on the three samples indicates that the deposit is highly variable.

SGS reiterated:

- Sn losses in the finer fraction could be reduced by using sequential grind recovery circuits;
- flotation would probably be appropriate but has yet to be tested; and
- production of W and Pb by products should be evaluated if the level of these elements in the mineralised body is significant.

The mineralogical study in 2011 was performed on Oropesa 11 and 27 samples.

The Oropesa 11 sample contained 0.46% Sn, of which 90% was present as cassiterite with the balance as stannite. Pyrite and quartz were also present. The cassiterite had a liberation size of 39 microns, although 56% is free at 135 microns. A total of 81 to 91% of the cassiterite reports as free or as a middlings product that should be recoverable by conventional processing. Between 9 and 19% of the cassiterite is locked down to 21 microns and is likely to be lost to tailings. SGS indicated that Sn recovery should be approximately 78% at a 50% Sn grade and a grind size of 80% passing 210 microns, and around 85% at finer grinds. The level of pyrite in the sample was significant and SGS recommended bulk flotation prior to gravity separation.

The Oropesa 27 sample contained approximately 1.7% Sn. Cassiterite was the predominant Sn mineral. Unlike the Oropesa 11 sample, stannite was not present, but 7% of the Sn was present as complex iron oxy-hydroxides. The sample contained small amounts of pyrite together with quartz, iron oxides and chlorites with mica and feldspars. Some wolframite, rutile and zircon were present in small amounts. The cassiterite had a liberation size of 25 to 30 microns although 12% was free at 165 microns. The degree of liberation increased with decreasing size and SGS suggested that a sequential grind down to at least 30 microns would be required to achieve an acceptable Sn recovery and disposable tailing. This is finer than that required for the Oropesa 11 sample. SGS indicated that the theoretical Sn recovery would be approximately 91% at a 50% Sn grade.

### 13.3 Metallurgical testwork 2013/ 2014

In 2013/14 another 2 sulphide core samples from Oropesa were tested by SGS; samples 1 and 2, whose head grades were 1.47% and 0.33% Sn respectively. Initial flotation testwork was also undertaken during 2014, which suggested in general minor losses of tin and indicated that a clean, sulphide free, tailings product can be readily made, suitable for cassiterite flotation. No attempt has been made to determine whether there are economic quantities of copper or zinc sulphides present in the Oropesa ores.

According to the Company, testwork undertaken to date by SGS on the Oropesa mineralisation and recent work completed internally by MESPAS using the multi-element assay database (Miller 2015), suggest the following approximate amounts of tin which are unrecoverable in the Oropesa mineralisation: approximately 6-8% Stannite ( $\text{Cu}_2(\text{Fe,Zn})\text{SnS}_4$ ): and 4-6% very fine grained cassiterite ( $\text{SnO}_2$ ).

The Company also suggested that approximately 40% of the tin content could be recovered by gravity means and the remaining recoverable tin recovered by cassiterite flotation. The Company estimated that 1% of the cassiterite would be lost in the sulphide removal process, prior to cassiterite flotation. The Company therefore feels that there is potential upside on the tin recovery currently used by SRK, however SRK has not independently investigated this.

The recovery methods considered appropriate for treating the sulphide primary and secondary mineralisation are summarised in Section 17.

No further metallurgical testwork was undertaken for the oxide mineralisation.

## 13.4 Metallurgical testwork 2017

In order to test the results of potential tin extraction from mineralisation intersected in more recent infill drilling at Oropesa and further verify previous work undertaken, the Company completed a phase of gravity concentration and flotation tests on approximately 1.7 tonnes of PQ core from drillholes ORPM-05, ORPM-06 and ORPM-07 at Wardell Armstrong's metallurgical laboratory in Cornwall, UK during 2017.

A full metallurgical balance was generated using the mass pulls and recoveries from the pilot plant work, and the ancillary test work. From this a total tin recovery of 74.2% at a combined concentrate of 62.4% Sn was achieved, which is generally in line with previous testwork and assumptions. A proportion of 64% of the total recovery came from gravity concentration at a grade of 63.2% Sn, and the remaining 36% came from tin flotation at a grade of 61.0% Sn.

## 14 MINERAL RESOURCE ESTIMATES

### 14.1 Introduction

The Mineral Resource Statement presented herein represents the latest Mineral Resource evaluation prepared for the Project in accordance with the CIM Code.

The Mineral Resource model prepared by SRK utilises some 54,026 m of drilling for a total of 261 drillholes at the Oropesa Project. The Mineral Resource estimate was completed by Mr Robert Goddard, CGeol an 'independent qualified person' as defined by the CIM Code. The effective date of the Mineral Resource statement is 17 February, 2017.

### 14.2 Resource Estimation Procedures

The resource estimation methodology involved the following procedures:

- database compilation and verification;
- construction of wireframe geological models and definition of Resource domains;
- data conditioning (compositing and capping review) for statistical analysis, geostatistical analysis;
- variography;
- block modelling and grade interpolation;
- resource classification and validation;
- assessment of "reasonable prospects for economic extraction" and selection of appropriate reporting cut-off grades; and
- preparation of the Mineral Resource Statement.

### 14.3 Resource Database

SRK was supplied with a Microsoft Excel Database. The files supplied had an effective date of 17 February 2017. The database has been reviewed by SRK and imported into Datamine to complete the Mineral Resource Estimate. SRK is satisfied with the quality of the database for use in the construction of the geological block model and associated Mineral Resource Estimate.

## 14.4 Statistical Analysis – Raw Data

An initial global statistical analysis was undertaken on the raw drill data. Summary statistics, incremental and log histograms were calculated and used to determine whether different geological domains could be identified. The positively skewed log normal distributions for tin are shown in Figure 14-1, with the separate populations noted in the tin assays relating to lower grade host rock and higher grade mineralised zones. SRK notes a low grade population caused by the analytical lower detection limits at less than 0.01%.

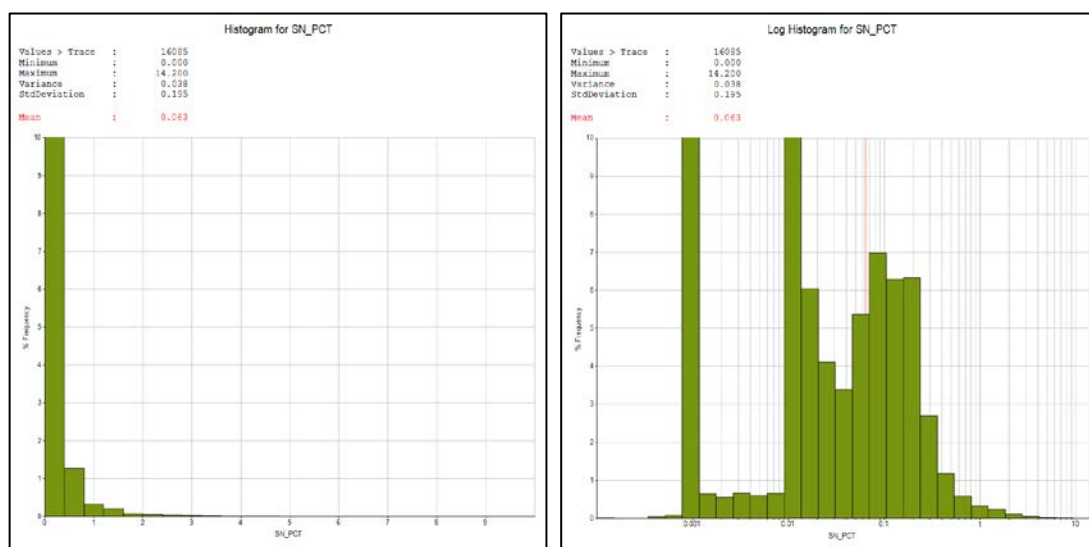


Figure 14-1: Incremental and Log Histogram of Length Weighted Project Tin Assays

## 14.5 3D Modelling

All electronic data was initially imported into the Leapfrog Geo Software (“Leapfrog”) for visual validation against the topography and preliminary review in plan and section. For the 2017 Mineral Resource estimate, the geological units modelled for the deposit were:

- fault interpretation;
- definition of weathering and overburden zones; and
- tin mineralised horizons.

### 14.5.1 Geological Wireframes

#### *Fault Surfaces*

Two fault surfaces for the Oropesa deposit have been interpreted by SRK using a combination of geological logging and interpreted offsets in the lithological and mineralisation domains. The structural model has been used to guide the termination of the major mineralised horizons and orientation of minor fault-hosted mineralisation.

### *Weathering and Overburden Surfaces*

Surfaces representing the base of oxidation and the top of fresh weathering were created based on geological logging, with resultant model zones defined as 'oxide', 'transition' or 'fresh'. SRK noted in general higher levels of oxidation in more significantly mineralised zones associated with massive and semi-massive sulphides, which results in a 'pull down' effect within certain areas where surficial weathering has extended to greater depths.

The overburden surface has been modelled based on geological logging and represents a relatively thin zone of un-mineralised transported material and clays with an average thickness of approximately 6 m.

## **14.5.2 Mineralisation Wireframes**

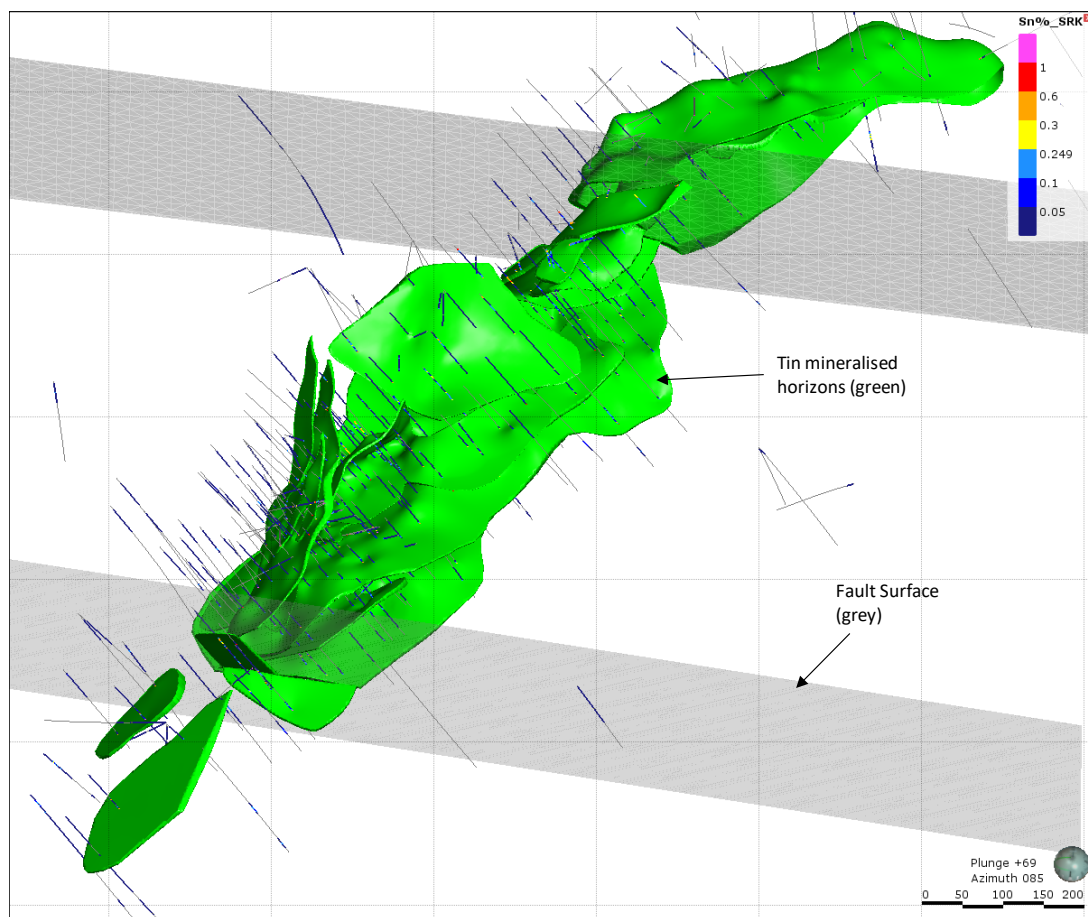
### *Tin Mineralised Horizons*

Mineralised horizons have been defined based on a combination of lithological logging and tin grade whilst honouring the structural controls and ensuring geological and grade continuity. Top and bottom contacts reflect a cut-off of 0.25% tin (Sn) to differentiate mineralised layers from lower grade host rock and internal partings.

SRK created 3D solid wireframes from selected sample intervals using the vein tool in the Leapfrog Geo Software ("Leapfrog").

An example 3D image showing the tin mineralised horizons in context of the modelled fault surfaces is provided in Figure 14-2. Mineralisation modelled for 2017 comprises several separate features which are geologically continuous along strike for between 100 m and 800 m, with dip extents of up to 250 m and an average thickness normally between 3 m and 10 m, reaching over 20 m in certain areas.





**Figure 14-2: 3D view (looking NE) illustrating the position and orientation of the mineralised horizons and faulting at Oropesa**

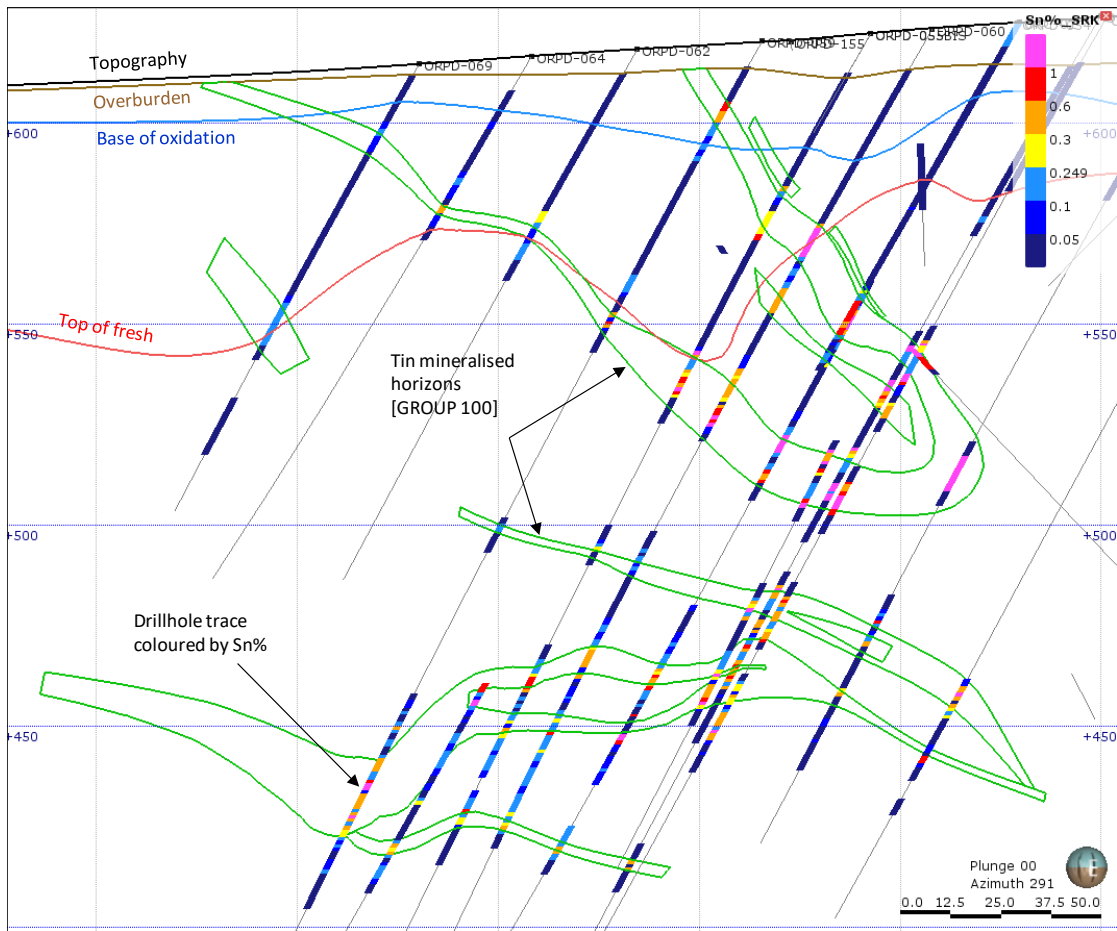
### 14.5.3 Mineralisation Model Coding

A summary of the modelled mineralisation horizons is provided in Table 14-1. The GROUP code relates to the mineralisation domain globally, whereas the KZONE code relates to individual mineralised horizons.

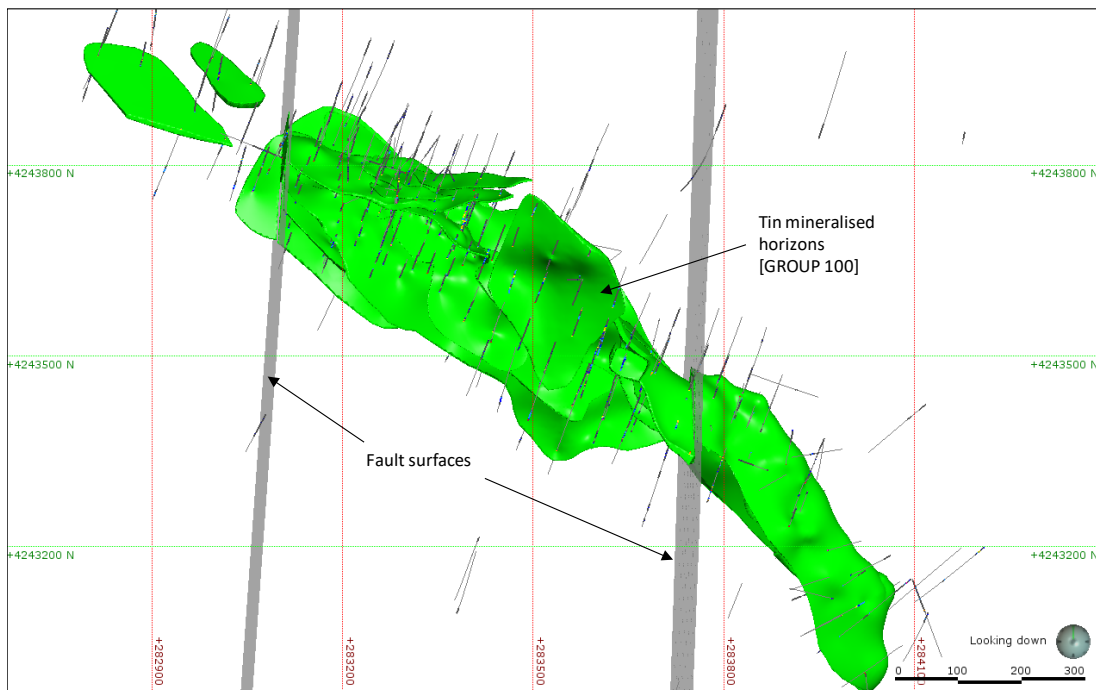
Table 14-1 and Figure 14-4 provide images of the Oropesa geological wireframes, which have been reviewed by the Company for approval and have been deemed acceptable for use in the MRE.

**Table 14-1: Summary of Mineralisation Zones at the Oropesa Project**

GROUP	KZONE	Wireframe	Deposit	Description
100	1 - 20	Tin mineralised horizons (k1_tr - k20_tr)	Oropesa	Tin mineralised zones primarily occurring in granular sandstones at the contacts between the sandstone and conglomerate units



**Figure 14-3: Oropesa Mineralisation Model Cross Section, 25 m slice width**



**Figure 14-4: Oropesa Mineralisation Model Plan View**

## 14.6 Compositing

Prior to the undertaking of a statistical analysis, the samples were composited into equal lengths to provide a constant sample volume, honouring sample support theories.

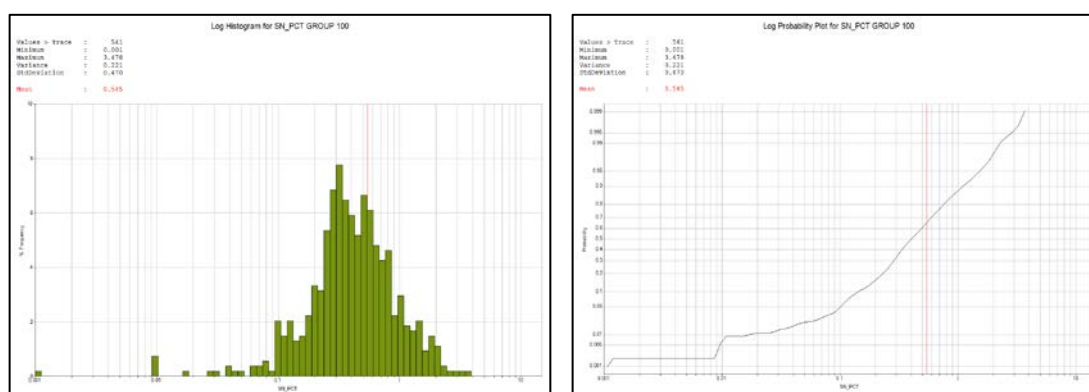
The tin grade data at Oropesa shows that there are higher and lower grade patches within the deposit, with the preferentially mineralised zones possibly related to coarser-grained sandstones or fracturing localised in areas of rheological contrast at the sandstone-conglomerate contacts.

The gradation between patches of higher and lower grade is observed as a lateral patchiness rather than a predictable grade trend from top to bottom contact within the stratigraphy. Therefore, recognising the absence of such a grade trend and in order to overcome the variable number of samples per intersection due mainly to variable intersection angles, SRK elected to create a single composite for each of the drillholes per intersected horizon ('zone-composites') to ensure variography and block grade estimation focused on variability along stratigraphy. Where a drillhole intersects the horizon at a very shallow angle, two or more equal length composites were made each with a length typically no more than 40 m.

## 14.7 Evaluation of Outliers

High grade capping is undertaken where very high grade data is considered to be unrepresentative of the main population. SRK has completed the analysis based on log probability plots, raw and log histograms which can be used to distinguish the grades at which samples have significant impacts on the local estimation and whose affect is considered extreme. Based on a review of raw and log histogram plots for the mineralisation domain (in context of a visual assessment for sample support), no high-grade capping was applied.

Log histograms and log-probability plots (as illustrated for tin zone-composites in Figure 14-5) are shown for the mineralisation domain in Appendix B, which also presents capping analysis based on 2 m composites to illustrate in general the limited sensitivity on the outlier assessment to composite length. Table 14-2 and Table 14-3 provide a summary of the zone-composite sample statistics within the mineralisation domain and individual mineralised horizons, respectively.



**Figure 14-5: Log Histogram and Log Probability Plot for the tin mineralisation domain at Oropesa**

**Table 14-2: Composite Statistics (Global Mineralisation Domain)**

GROUP	FIELD	NSAMP	MIN	MAX	MEAN	VAR	STDDEV	COV
100	SN_PCT	541	0.001	3.48	0.54	0.22	0.47	0.86

**Table 14-3: Composite Statistics (Individual Mineralised Horizons)**

KZONE	FIELD	NSAMP	MIN	MAX	MEAN	VAR	STDDEV	COV
1	SN_PCT	57	0.0	1.95	0.39	0.08	0.28	0.72
2	SN_PCT	66	0.0	1.46	0.44	0.11	0.33	0.74
3	SN_PCT	5	0.3	0.38	0.31	0.00	0.05	0.15
4	SN_PCT	6	0.1	1.19	0.55	0.19	0.43	0.79
5	SN_PCT	20	0.1	1.85	0.56	0.25	0.50	0.88
6	SN_PCT	5	0.3	0.58	0.40	0.01	0.10	0.25
7	SN_PCT	16	0.3	0.55	0.37	0.01	0.08	0.23
8	SN_PCT	6	0.2	0.53	0.36	0.01	0.10	0.27
9	SN_PCT	3	0.3	0.64	0.43	0.02	0.16	0.37
10	SN_PCT	177	0.0	3.39	0.67	0.30	0.55	0.82
11	SN_PCT	24	0.3	1.74	0.64	0.16	0.40	0.63
12	SN_PCT	13	0.2	1.09	0.44	0.07	0.26	0.58
13	SN_PCT	61	0.0	2.35	0.37	0.11	0.33	0.91
14	SN_PCT	57	0.0	3.48	0.72	0.42	0.65	0.89
15	SN_PCT	5	0.2	0.87	0.41	0.06	0.24	0.59
16	SN_PCT	7	0.2	0.38	0.29	0.00	0.07	0.23
17	SN_PCT	3	0.2	1.70	1.00	0.36	0.60	0.60
18	SN_PCT	3	0.6	0.72	0.68	0.00	0.04	0.05
19	SN_PCT	5	0.3	1.40	0.56	0.18	0.42	0.75
20	SN_PCT	2	0.4	0.66	0.52	0.02	0.14	0.26

## 14.8 Geostatistical Analysis

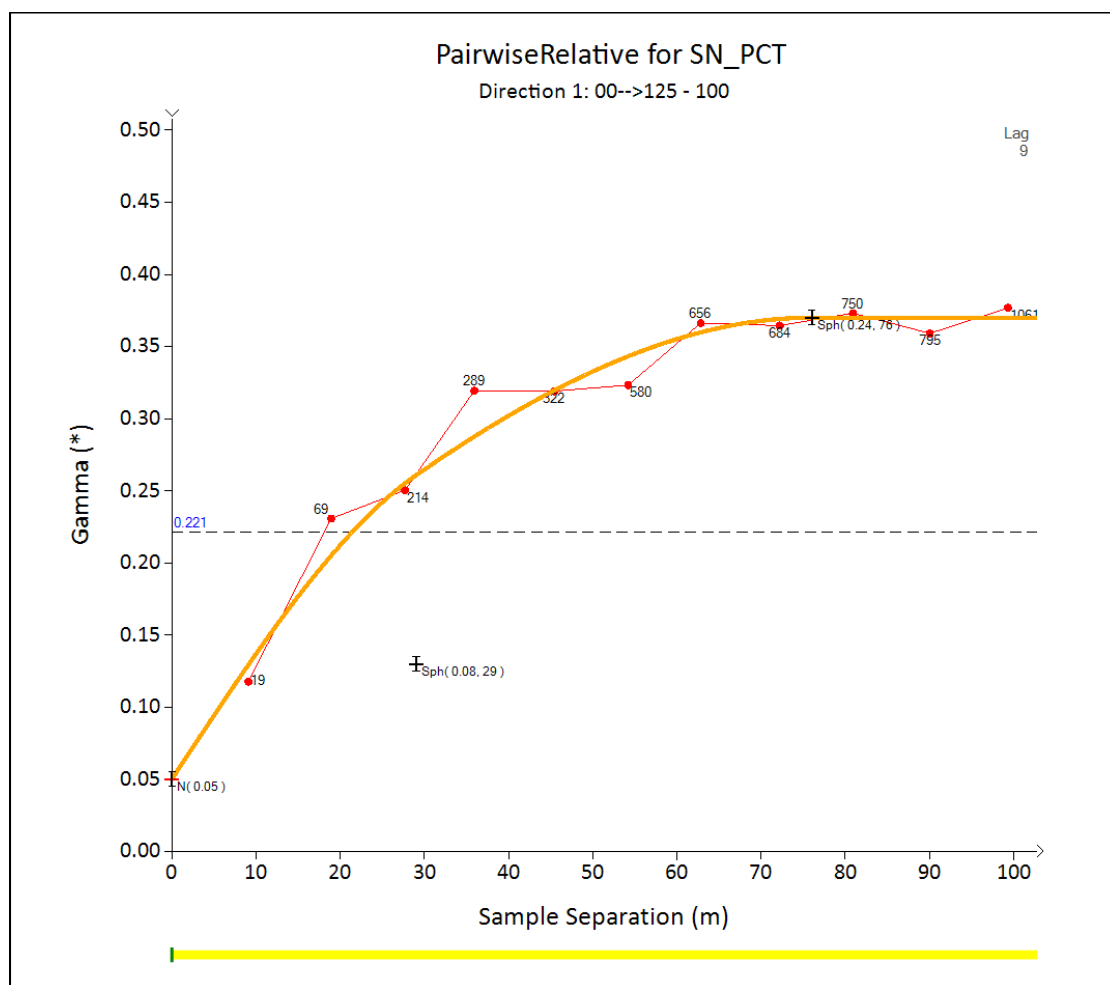
Variography is the study of the spatial variability of an attribute, in this case tin grade. The Snowdon Supervisor Software (“Supervisor”) was used for geostatistical analysis and the data has been analysed using a pairwise relative variogram in order to define variogram models of sufficient clarity.

In completing the analysis for the mineralised domains, the following has been considered:

- strike azimuth of the zone was determined;
- a short-lag variogram was calculated and modelled to characterise the nugget effect;
- Experimental Pairwise Relative semi-variograms were calculated to review directional variograms for the along strike direction, to limit the influence from sample pairs situated on opposite sides of folded units;
- variograms were modelled using the nugget defined in the short-lag variography and the ranges identified for the along strike direction; and
- all variances were re-scaled for each mineralised lens to match the total variance for that zone (namely the ‘VAR’ field in Table 14-3).

SRK treated the mineralisation domain as a single zone for variography due to the limited number of samples within certain horizons; however, the experimental variogram was calculated using a 35° cone in attempt to reduce the influence of sample data from spatially separate horizons from impacting the assessment of grade continuity. Omni-directional structures were selected for fitting of the final variogram models.

The pairwise relative variogram modelled for the Mineralisation domain (GROUP 100) for tin is shown in Figure 14-6. The variogram parameters for the Project are displayed in Table 14-4.



**Figure 14-6: Summary of modelled semi-variogram parameters for the Oropesa Mineralisation domain (GROUP 100)**

**Table 14-4: Summary of semi-variogram parameters\***

Variogram Parameter	SN_PCT-GROUP100
Co	0.05
C1	0.08
A1 – Along Strike (m)	29
A1 – Down Dip (m)	29
A1 – Across Strike (m)	29
C2	0.24
A2 – Along Strike (m)	76
A2 – Down Dip (m)	76
A2 – Across Strike (m)	76
C3	0.00
A3 – Along Strike (m)	0
A3 – Down Dip (m)	0
A3 – Across Strike (m)	0
Nugget Effect (%)	14%

\*Semi-variogram structures were subsequently re-scaled to the total sample variance per estimation zone

## 14.9 Block Model and Grade Estimation

A block model prototype was created for Oropesa based on UTM coordinate grid. Block model parameters were chosen to reflect the average drillhole spacing (along strike and on section) and to appropriately reflect the grade variability along strike and along dip.

To improve the geometric representation of the geological model, sub-blocking was allowed

along the boundaries to a minimum of 2x2x1 m (x, y, and z). A summary of the block model parameters is given in Table 14-5. Using the wireframes created and described in Section 14.5, several codes have been written in the block model to describe each of the major geological properties of the rock types. Table 14-6 summarises geological fields created within the block model and the codes used.

**Table 14-5: Details of Block Model Dimensions for the Project Geological Model**

Model	Dimension	Origin (UTM)	Block Size	Number of Blocks	Min Sub-blocking (m)
Oropesa	X	282680	20	81	2
	Y	4242800	20	65	2
	Z	250	10	45	1

**Table 14-6: Summary of block model fields used for flagging different geological properties**

Field Name	Description
SVOL	Search Volume reference (range from 1 - 3)
KV	Kriging Variance
NSUM	Number of samples used to estimate the block
SN	Interpolated tin value
CLASS	Classification
KZONE	Zone for estimation
GROUP	Zone for statistical analysis
CLASS	Classification
DENSITY	Density of the rock
OXZONE	Zone for density estimation
OX	Weathering zone (1=oxide; 2=transition; 3=fresh)
OVB	Overburden zone code (1=overburden)

## 14.10 Final Estimation Parameters

Ordinary Kriging (“OK”) was used for the grade interpolation for the Mineralisation domain for tin and individual mineralised horizons were estimated separately (per KZONE) to honour spatial differences observed in the sample grade distribution and to prevent drillhole data from one domain affecting blocks in another domain.

For grade interpolation, given the folded nature of the estimation domains, the use of a dynamic search ellipse which follows the trend of the mineralisation wireframes was initially considered. However, the tightly folded stratigraphy limits the effectiveness of this technique at the fold hinges, given the difficulty with getting the ellipse to ‘fold’ around the hinge. Instead, SRK has used a relatively local spherical search ellipse that achieves well informed local block estimates within the hinge-area of the folds without overly influencing the blocks from one side of the fold with sample data from the opposite side. All domain boundaries were treated as hard boundaries during the estimation process.

Inverse distance weighting (“IDW”) was used for the interpolation of density and for verification of the OK estimates for tin.

The selected estimation parameters have been verified based on the results of a quantitative Kriging Neighbourhood Analysis (“QKNA”), and are presented in Table 14-7.

**Table 14-7: Summary of Final Estimation Parameters for Oropesa**

GROUP	Estimation Parameters		Description
	SN_PCT	DENSITY	
FIELD	100		Kriging zone for estimation
SREFNUM	1	2	Field for interpolation
SMETHOD	2	2	Search reference number
SDIST1	65	65	Search volume shape (2 = ellipse)
SDIST2	65	65	Search distance 1 (dip)
SDIST3	65	65	Search distance 2 (strike)
SANGLE1	0	0	Search distance 3 (across strike)
SANGLE2	0	0	Search angle 1 (dip direction)
SANGLE3	0	0	Search angle 2 (dip)
SAXIS1	3	3	Search angle 3 (plunge)
SAXIS2	1	1	Search axis 1 (z)
SAXIS3	3	3	Search axis 2 (x)
MINNUM1	4	10	Search axis 3 (z)
MAXNUM1	8	40	Minimum sample number (SVOL1)
SVOLFAC2	2	2	Maximum sample number (SVOL1)
MINNUM2	4	10	Search distance expansion (SVOL2)
MAXNUM2	8	40	Minimum sample number (SVOL2)
SVOLFAC3	3	5	Maximum sample number (SVOL2)
MINNUM3	2	2	Search distance expansion (SVOL3)
MAXNUM3	8	40	Minimum sample number (SVOL3)
MAXKEY	-	-	Maximum sample number (SVOL3)
			Maximum number of samples per drillhole

## 14.11 Model Validation and Sensitivity

### 14.11.1 Sensitivity Analysis

Grade estimation was performed in Datamine, based on optimum parameters verified through a QKNA exercise. The exercise was based on varying kriging parameters for tin during a number of different scenarios. The slope of regression, kriging variances, block estimates and percentage 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.

The QKNA exercise for the MRE has focused on testing the sensitivity of block grade estimates to changes in the selected search parameters for the KZONE 10 Mineralised horizon, based on its representative geometry and relatively significant contribution to tonnage (31%) in the geological model.

In general, the estimate showed a relatively limited sensitivity in the mean block grade to changes in the estimation parameters. SRK noted, however, that block grades (visually) better reflected the sample variability by restricting the search ellipse dimension and maximum number of composites to within reasonable limits, the associated sensitivity is shown in Table 14-8 and Table 14-9. The final parameters were selected to ensure that the contiguous patches of higher and lower tin grade sometimes evident in the drilling data were appropriately reflected in block grade estimates.

**Table 14-8: QKNA Search Ellipse Size for Oropesa; Mineralised horizon KZONE 10**

DETERMINE SEARCH VOLUME					GRADE		SLOPE	NUM	KV	% Fill
RUN	Min	Max	Search	SVOL	SNOK	SNIDW				
1	4	8	50x50x50	1	0.67	0.68	0.85	7	0.09	56.1%
	4	8	50x50x50	2	0.53	0.53	0.65	7	0.15	43.8%
	2	8	50x50x50	3	0.54	0.53	0.26	8	0.21	0.2%
2	4	8	65x65x65	1	0.63	0.63	0.81	7	0.10	82.0%
	4	8	65x65x65	2	0.53	0.53	0.57	8	0.16	18.0%
	2	8	65x65x65							0.0%
3	4	8	80x80x80	1	0.61	0.62	0.79	7	0.11	95.2%
	4	8	80x80x80	2	0.54	0.54	0.38	8	0.19	4.8%
	2	8	80x80x80							0.0%
4	4	8	95x95x95	1	0.61	0.61	0.78	8	0.11	98.9%
	4	8	95x95x95	2	0.55	0.54	0.28	8	0.20	1.1%
	2	8	95x95x95							0.0%
5	4	8	110x110x110	1	0.60	0.61	0.78	8	0.11	100.0%
	4	8	110x110x110	2	0.48	0.43	0.44	8	0.19	0.0%
	2	8	110x110x110							0.0%

**Table 14-9: QKNA Number of Samples for Oropesa; Mineralised horizon KZONE 10**

DETERMINE NUMBER OF SAMPLES					GRADE		SLOPE	NUM	KV	% Fill
RUN	Min	Max	Search	SVOL	SNOK	SNIDW				
1	5	8	65x65x65	1	0.64	0.65	0.84	7	0.095	69.0%
	5	8	65x65x65	2	0.53	0.53	0.62	8	0.154	31.0%
	2	8	65x65x65							0.0%
2	6	8	65x65x65	1	0.67	0.68	0.88	8	0.084	54.2%
	6	8	65x65x65	2	0.53	0.53	0.67	8	0.146	45.8%
	2	8	65x65x65	3	0.48	0.43	0.44	8	0.192	0.0%
3	4	10	65x65x65	1	0.62	0.63	0.81	7	0.104	82.0%
	4	10	65x65x65	2	0.53	0.53	0.59	10	0.158	18.0%
	2	10	65x65x65							0.0%
4	4	12	65x65x65	1	0.62	0.63	0.82	8	0.103	82.0%
	4	12	65x65x65	2	0.53	0.53	0.60	11	0.157	18.0%
	2	12	65x65x65							0.0%
5	4	14	65x65x65	1	0.62	0.63	0.82	9	0.103	82.0%
	4	14	65x65x65	2	0.53	0.53	0.61	12	0.156	18.0%
	2	14	65x65x65							0.0%

## 14.12 Block Model Validation

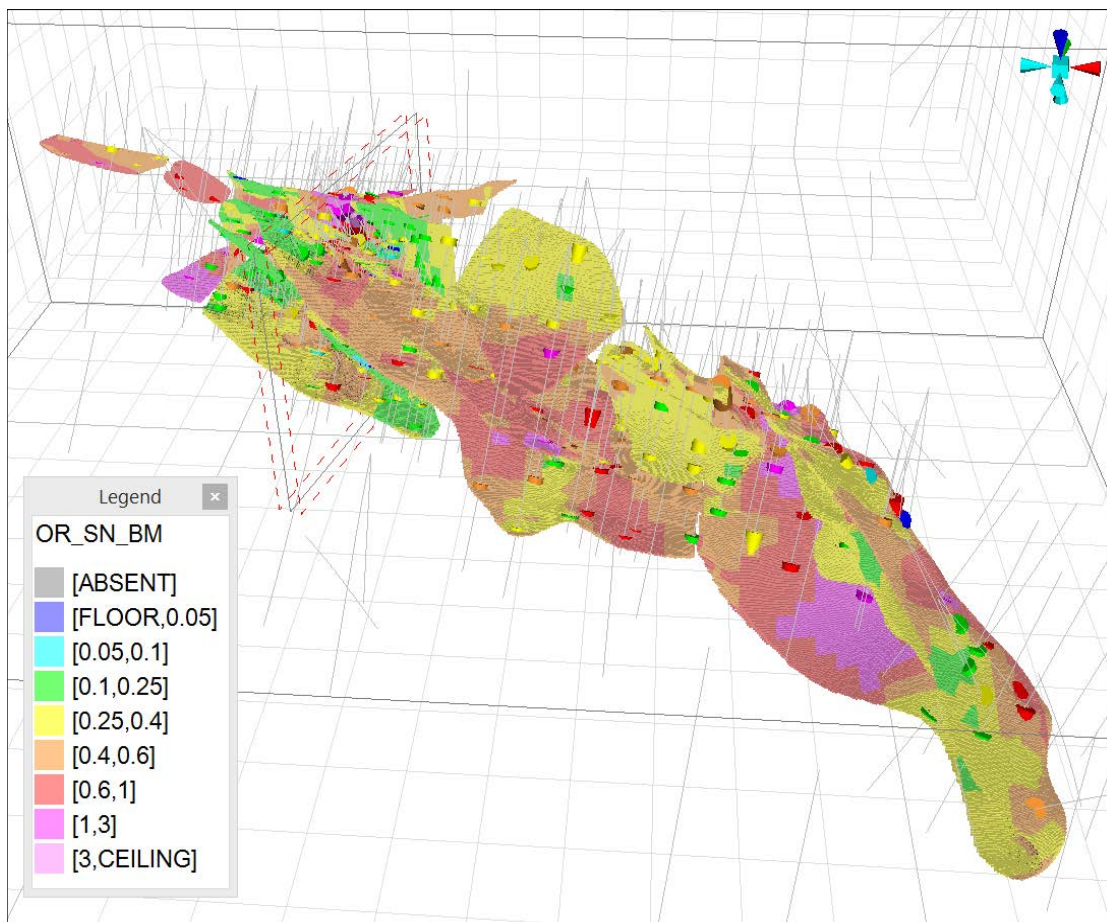
SRK has validated the block model using the following techniques:

- visual inspection of block grades in comparison with drillhole data;
- sectional validation of the mean samples grades in comparison to the mean model grades; and
- comparison of block model statistics.

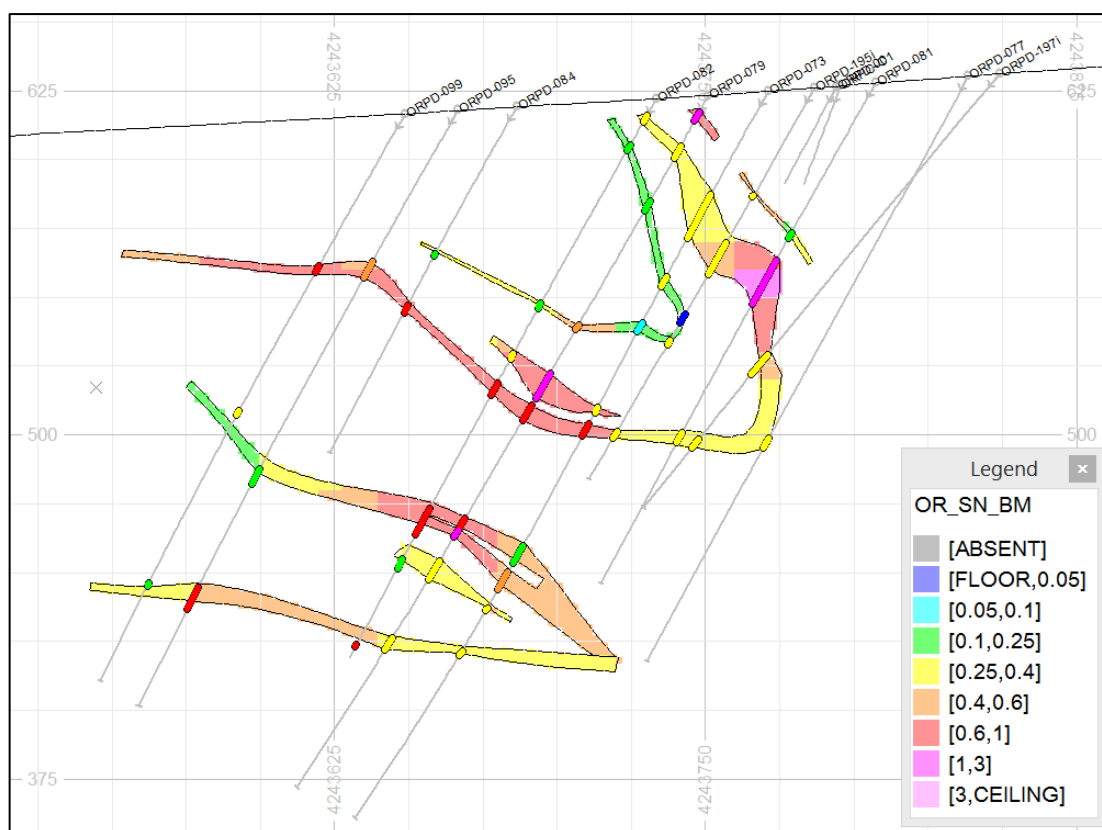
### *Visual Validation*

Visual validation provides a comparison of the interpolated block model on a local scale. A thorough visual inspection has been undertaken in section and 3D, comparing the sample grades with the block grades, which demonstrates in general good comparison between local block estimates and nearby samples, without excessive smoothing in the block model. Figure 14-7 and Figure 14-8 provide examples of the visual validation checks and highlights the overall block grades corresponding with composite sample grades. Further visual validation images are shown in Appendix C.





**Figure 14-7: Oropesa Block Model 3D view showing visual validation of modelled borehole intercepts to grade estimates**



**Figure 14-8: Oropesa Block Model 2D view showing visual validation of modelled borehole intercepts to grade estimates**

#### *Sectional Validation*

As part of the validation process, the drillhole composite samples are compared to the block model grades within a series of coordinates (based on the principle directions). The results of which are then displayed on charts to check for visual discrepancies between grades. Figure 14-9 shows the results for the tin grades for the Mineralised horizon KZONE 10 based on section lines cut along x-coordinates.

The resultant plots show a reasonable correlation between the block model grades and the composite grades, with the block model showing a typically smoothed profile of the composite grades as expected. SRK notes that in less densely sampled areas, minor grade discrepancies do exist on a local scale. Overall, however, SRK is confident that the interpolated grades reflect the available input sample data and the estimate shows no sign of material bias.

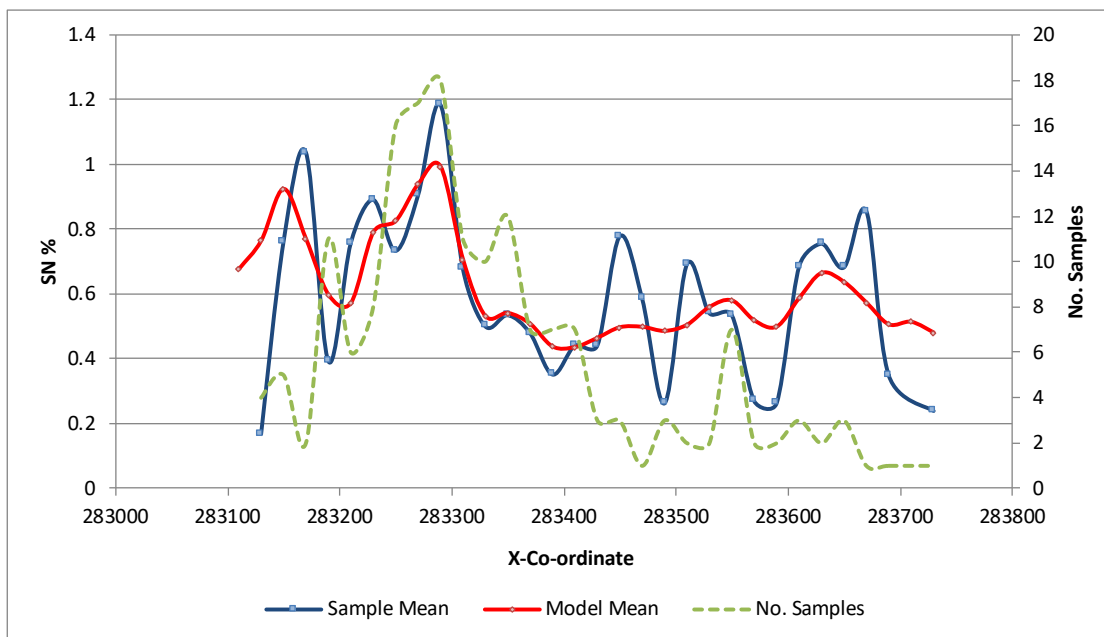
Validation plots for selected Mineralised horizons are shown in Appendix D.

#### *Statistical Validation*

The block estimates for the 2017 MRE have been compared to the mean of the composite samples (Table 14-10) which indicate the overall percentage difference in the mean grades typically vary between 1% – 10%, which SRK deems to be within acceptable levels.

SRK notes a slightly higher percentage difference in the means for mineralised horizons KZONE 4, 14 and 19, which is as a result of the sample mean being skewed by relatively few low/ high grade samples that influence a large proportion of the tonnage.

Based on the visual, sectional and statistical validation results SRK has accepted the grades in the block model.



**Figure 14-9: Validation Plot (Easting) showing Block Model Estimates versus Sample Mean (20m Intervals) for Mineralised horizon KZONE 10**

**Table 14-10: Summary Block Statistics for Ordinary Kriging and Inverse Distance Weighting Estimation Methods for tin**

KZONE	Field	Estimation Method	Block Estimate Mean (ppm)	Composite Mean (ppm)	% Difference	Absolute Difference (ppm)
1	SN	OK	0.38	0.39	-3%	-0.01
		IDW	0.38	0.39	-3%	-0.01
2	SN	OK	0.45	0.44	3%	0.01
		IDW	0.47	0.44	6%	0.03
3	SN	OK	0.30	0.31	-3%	-0.01
		IDW	0.31	0.31	-1%	0.00
4	SN	OK	0.45	0.55	-18%	-0.10
		IDW	0.42	0.55	-23%	-0.12
5	SN	OK	0.54	0.56	-4%	-0.02
		IDW	0.51	0.56	-10%	-0.06
6	SN	OK	0.39	0.40	-3%	-0.01
		IDW	0.39	0.40	-3%	-0.01
7	SN	OK	0.37	0.37	1%	0.00
		IDW	0.37	0.37	1%	0.00
8	SN	OK	0.34	0.36	-6%	-0.02
		IDW	0.35	0.36	-4%	-0.01
9	SN	OK	0.43	0.43	2%	0.01
		IDW	0.44	0.43	4%	0.02
10	SN	OK	0.61	0.67	-9%	-0.06
		IDW	0.62	0.67	-8%	-0.05
11	SN	OK	0.69	0.64	8%	0.05
		IDW	0.70	0.64	9%	0.06
12	SN	OK	0.46	0.44	4%	0.02
		IDW	0.47	0.44	7%	0.03
13	SN	OK	0.38	0.37	2%	0.01
		IDW	0.38	0.37	2%	0.01
14	SN	OK	0.63	0.72	-13%	-0.09
		IDW	0.63	0.72	-12%	-0.09
15	SN	OK	0.44	0.41	7%	0.03
		IDW	0.43	0.41	6%	0.02
16	SN	OK	0.27	0.29	-6%	-0.02
		IDW	0.27	0.29	-5%	-0.02
17	SN	OK	1.08	1.00	8%	0.08
		IDW	1.09	1.00	8%	0.08
18	SN	OK	0.69	0.68	1%	0.01
		IDW	0.69	0.68	1%	0.01
19	SN	OK	0.62	0.56	11%	0.06
		IDW	0.65	0.56	15%	0.09
20	SN	OK	0.55	0.52	5%	0.03
		IDW	0.59	0.52	13%	0.07

### 14.13 Mineral Resource Classification

Block model quantities and grade estimates for the Oropesa deposit were classified according to the CIM Code.

Mineral Resource classification is typically a subjective concept, industry best practices suggest that resource classification should consider both the confidence in the geological continuity of the mineralised 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.

Data quality, geological confidence, sample spacing and the interpreted continuity of grades controlled by the deposit has allowed SRK to classify the block model in the Measured, Indicated and Inferred Mineral Resource categories.

The following guidelines apply to SRK’s classification:

#### *Measured*

Measured Mineral Resources are where block grades are based on multiple drillhole intercepts, where there is typically 20m spacing and where there is good continuity shown by both assay grades and geological wireframes. Additional density sampling during future infill drilling is required in the oxide zone prior to reporting the oxidised resource with ‘measured’ confidence.

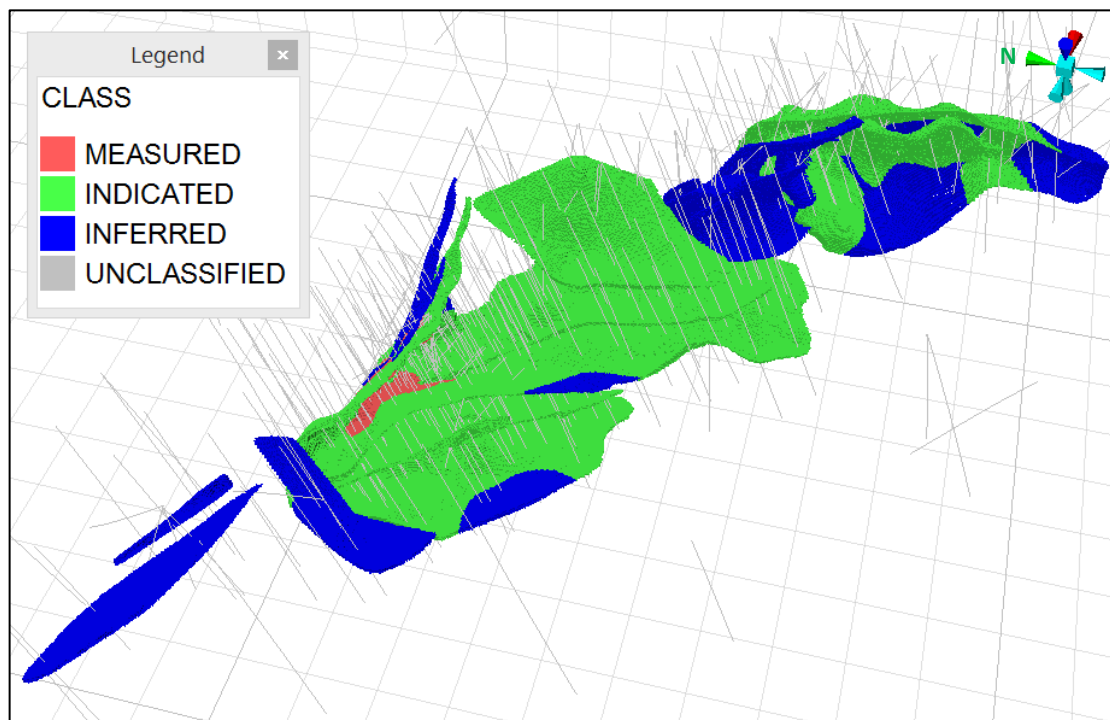
#### *Indicated*

Indicated Mineral Resources comprise the blocks in where SRK has a reasonable level of geological confidence in well drilled areas of the model and typically up to 70 m beyond these areas.

#### *Inferred*

Inferred Mineral Resources are in domains that display reasonable to low geological confidence, where blocks are typically within 100 m of sample data and bound by the maximum extents of the mineralisation wireframes. These areas require infill drilling to improve the quality of the geological interpretation and local block grade estimates to a level suitable for mine planning.

An example of SRK’s Mineral Resource classification for the Oropesa deposit is shown in Figure 14-10.



**Figure 14-10: Plan view showing SRK’s wireframe-defined Mineral Resource Classification for the Oropesa deposit**

## 14.14 Mineral Resource Statement

The CIM Code 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 eventual 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.

### *Reporting and Cut-off Derivation*

SRK has applied basic economic considerations to determine which portion of the block model has reasonable prospects for economic extraction by open-pit mining methods. To achieve this, the Mineral Resource has been subject to a high-level pit optimisation study to assist with determining the potential depth to which an open pit operation could be considered viable and reported above a suitable cut-off grade for resource reporting. This approach remains consistent with the previous 2015 MRE.

SRK’s updated mine planning exercise for 2017 envisages a medium-sized open pit operation followed by underground mining to access the remaining medium to high grade mineralisation at depth. However, the results of the pit optimisation study for 2017 showed that an open pit operation could potentially reach a depth of 235 m (close to the bottom of the model) and that a cut-off grade of 0.15% Sn would be appropriate. The cut-off grade is higher when compared to the 2015 MRE (0.1 Sn%), which is mainly due to a higher processing cost.

Whilst an underground mining scenario would be unlikely to target some of the lower grade tin mineralisation at depth, SRK considers that this material continues to have reasonable prospects for economic extraction with a larger open pit should the Company’s mining strategy change.

Based on the above, SRK has elected to consider the full extents of the geological model for Mineral Resource reporting.

The parameters used for the 2017 pit optimisation exercise were based on SRK’s 2017 mining study:

- A tin price of USD23,400/t derived from market consensus long term price forecasts with a 30% uplift as appropriate for assessing eventual economic potential of Mineral Resources.
- A tin process recovery of 71%.
- A cost of USD18/t for processing, USD4/t G&A and USD1.8/t for mining.
- Slope angles of 35° for oxide, 40° for transition and 46° for fresh material.

The 2017 Mineral Resource Statement for the Oropesa deposit is shown per weathering zone and grade category in Table 14-11. The Company has earned a 96% interest in the Oropesa property with registered title to the property with the Andalucia mining authorities under the Spanish Mining Act.

**Table 14-11: SRK Mineral Resource Statement effective of 17 February 2017 for the Oropesa Deposit prepared in accordance with the CIM Code**

Category	Weathering Zone	Grade Category %Sn	Tonnes (kt)	Tin	
				% Sn	Metal (Sn t)
Subtotal Measured	Oxide	>0.15	-	-	-
	Transition	>0.15	40	1.62	650
	Fresh	>0.15	290	1.01	2,940
Subtotal Indicated	Oxide	>0.15	110	0.58	645
	Transition	>0.15	1,900	0.49	9,250
	Fresh	>0.15	7,000	0.53	37,430
Subtotal Measured and Indicated	Oxide	>0.15	110	0.58	645
	Transition	>0.15	1,940	0.51	9,900
	Fresh	>0.15	7,290	0.55	40,365
Subtotal Inferred	Oxide	>0.15	190	0.43	815
	Transition	>0.15	1,120	0.41	4,645
	Fresh	>0.15	1,890	0.59	11,155
Total Measured >0.15			330	1.09	3,585
Total Indicated >0.15			9,010	0.53	47,320
Total Measured and Indicated >0.15			9,340	0.55	50,910
Total Inferred >0.15			3,200	0.52	16,615

1. All figures are rounded to reflect the relative accuracy of the estimate.
2. Mineral Resources are not Ore Reserves and do not have demonstrated economic viability.
3. The reporting standard adopted for the reporting of the MRE uses the terminology, definitions and guidelines given in the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Standards on Mineral Resources and Mineral Reserves (May 2014)
4. The Mineral Resource is given on the basis of 100% ownership of the Oropesa property.

## 14.15 Grade Sensitivity Analysis

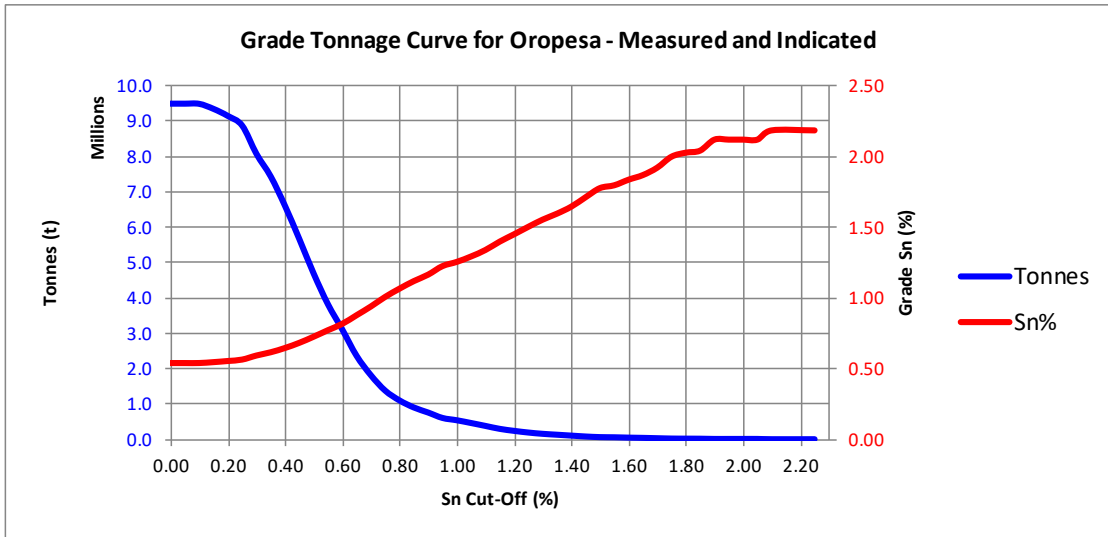
The results of grade sensitivity analysis completed for Oropesa are shown in Table 14-12 and Table 14-13 graphically in Figure 14-11 and Figure 14-12.

This is to show the continuity of the grade estimates at various cut-off increments and the sensitivity of the Mineral Resource to changes in cut-off. The tonnages and grades in these tables at cut-off grades other than 0.15% Sn, however, are not Mineral Resources.

**Table 14-12: Gradations for Measured and Indicated Material at Oropesa at various %Sn Cut-off Grades**

Grade - Tonnage Table, Oropesa, February 2017			
Cut-off Grade	Measured and Indicated		
	Quantity	Tin	
Sn (%)	(Mt)	% Sn	Metal (Sn Mt)
0.00	9.5	0.54	51.1
0.10	9.5	0.54	51.1
0.15	9.3	0.55	50.9
0.20	9.1	0.55	50.6
0.30	8.1	0.59	47.8
0.40	6.6	0.65	42.6
0.50	4.7	0.73	34.0

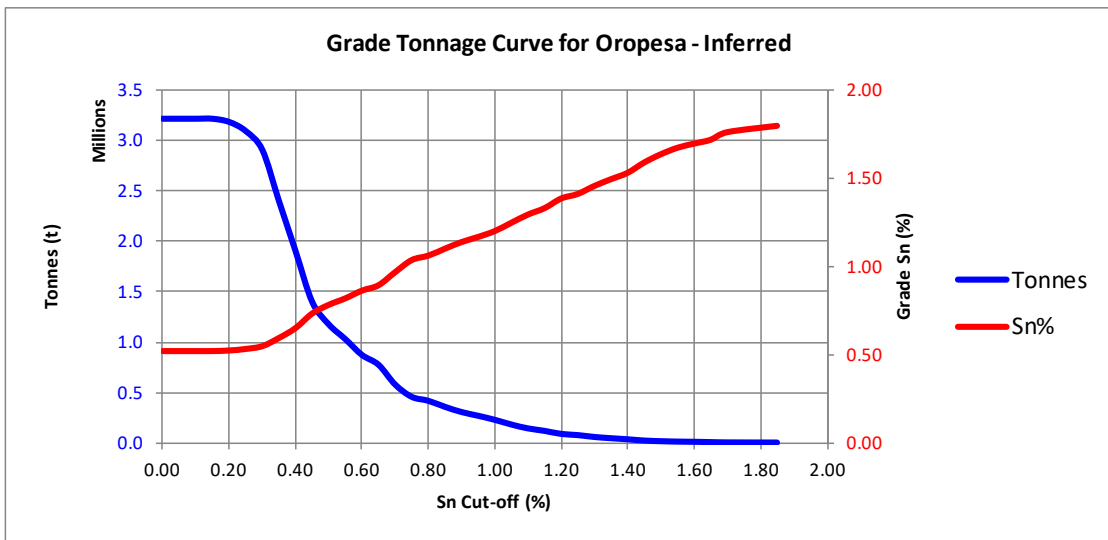




**Figure 14-11: Grade Tonnage Curve for Measured and Indicated at Oropesa at various %Sn Cut-off Grades**

**Table 14-13: Gradations for Inferred Material at Oropesa at various %Sn Cut-off Grades**

Grade - Tonnage Table, Oropesa, February 2017				
Cut-off Grade	Inferred			
	Quantity (Mt)	% Sn	Tin	Metal (Sn Mt)
0.00	3.2	0.52		16.6
0.10	3.2	0.52		16.6
0.15	3.2	0.52		16.6
0.20	3.2	0.52		16.6
0.30	2.9	0.55		15.8
0.40	1.9	0.65		12.3
0.50	1.2	0.78		9.2



**Figure 14-12: Grade Tonnage Curve for Inferred at Oropesa at various %Sn Cut-off Grades**

## 14.16 Vertical Profile Analysis

SRK has completed a vertical profile analysis of the classified Mineral Resource grouped over 10m increments to illustrate the nature of the grade and tonnages of the mineralisation with depth. To illustrate the sensitivity of the vertical profiles to cut-off gradations, separate tabulations are provided above cut-off grades of 0.15%, 0.2% and 0.25% Sn and are presented in Appendix E. The reader is cautioned that the tables presented should not be misconstrued as a Mineral Resource Statement.

The vertical profile plot at a 0.15% Sn cut-off shows that the material classified as Measured and Indicated has an overall higher grade in the top half of the model (above 480m RL i.e. to depth of 140 m). The grade in the top half is 0.58% Sn, whereas the lower half of the model has a slightly lower grade at 0.52% Sn.

## 14.17 Comparison to Previous Mineral Resource Estimates

In comparison to the previous 2015 Mineral Resource estimate for the Project which was comprised Indicated and Inferred categories, SRK has upgraded 0.3 Mt at a grade of 1.1% tin in to the Measured category, which is primarily due to additional geological confidence provided by infill drilling.

In comparison to the previous Indicated Mineral Resource which was reported at a cut-off grade of 0.1% tin, the updated Measured+Indicated Mineral Resource estimate (reported at a cut-off of 0.15% tin) represents a marginal decrease in the metal content, from 52.1 to 50.9 kt. The change in contained metal is the result of 1% reduction in tonnage and 1% (relative) decrease in tin grade.

The reduction in tonnage is mainly due to infill drilling improving the definition of the geological contacts between the (mineralised) sandstone and (non-mineralised) conglomerate. SRK note a 2% relative reduction in grade due to new drilling returning slightly lower tin grades and the (Niton) assaying of a small number of previously non-sampled intervals; this is balanced by a small 1% relative increase in grade by increasing the cut-off grade, which results in a net 1% relative reduction in tin grade.

Within the Inferred category, the updated Mineral Resource estimate (reported at a cut-off of 0.15% tin) represents a decrease in the metal content, from 17.5 kt to 16.6 kt. The change in contained metal is mainly the result of 5% reduction in tonnage due to infill drilling improving the definition between the sandstone and conglomerate at the deposit periphery.

SRK considers that the key changes in the Mineral Resource result from a combination of the following factors:

- metal converted to Measured, primarily due to new infill drilling confirming the continuity of the geology and mineralisation within targeted areas of the deposit;
- infill drilling improving the definition between the mineralised sandstone and (non-mineralised) conglomerate, mainly at the deposit periphery;
- new drilling returning slightly lower tin grades overall;
- (Niton) assaying of previously non-sampled intervals within the mineralised zone; and
- increase to the tin cut-off grade used to report the Mineral Resource.

## 14.18 Exploration Potential

SRK notes that the mineralisation remains open along strike and around the margins of the deposit where there is potential for additional replacement-style and/or fault-controlled mineralisation.

Furthermore, the geological model used to guide the development of the mineralisation wireframes has significant implications for exploration in the surrounding area, with several NNW/SSE trending geophysical anomalies sub-parallel to the interpreted hinge of the major fold at Oropesa (Figure 9-3) highlighting the potential for additional zones of mineralisation within the Licence boundary. The geological model should be further tested and refined in conjunction with a reassessment of the licence scale exploration potential.

In addition, SRK considers that within certain areas lower grade material may exist adjacent to the current mineralisation wireframes, with the potential to add a small amount of tonnage to the resource. SRK has not attempted to model this material given its typically discontinuous and poorly understood nature.

## 15 MINERAL RESERVE ESTIMATES

SRK has not produced a Mineral Reserve Estimate for the Oropesa Project. Mineral Reserves cannot be reported until a Preliminary Feasibility Study is completed.

## 16 MINING METHODS

Excluding a number of internal technical studies completed to assist with the Company's application for an Exploitation Concession, no detailed mining study has been completed as part of the February 2017 MRE update on the Oropesa Project. The information presented in this section is therefore summarised from the SRK 2014 NI43-101 PEA.

Due to its near surface location an open pit mining method was selected for the Oropesa PEA. The mine planning scenarios were based on optimised pit shells generated on the basis of a USD23,250/t Sn commodity price, as directed by the Company.

Open pit optimisation of the Oropesa block model was undertaken using Datamine's NPV Scheduler software ('NPVS'). NPVS uses the Lerchs-Grossmann algorithm to determine a range of pit shells based on technical and economic parameters at a varying metal price. Multiple optimisations were run to test the deposit's sensitivity to different slope angles.

A final pit shell and intermediate cutbacks were planned to form the basis for a preliminary 1 Mtpa mine schedule and economic model.

### 16.1 Geotechnics

Preliminary geotechnical assessments provided two possible overall slope angles (OSA): 47° and 52°. Optimisations and schedules were run for both options, however, a subsequent geotechnical investigation confirmed that a 52° overall slope angle provides an acceptable factor of safety. No detailed pit designs were completed. It is expected that a pit design will incorporate different slope angles based on the rock type (overburden, oxide and fresh).

## 16.2 Optimisation Parameters

The optimisation parameters were sourced from available data on the Oropesa deposit and SRK internal benchmark data. SRK used the parameters outlined in Table 16-1. The optimisation algorithm considers indicated and inferred oxide and fresh mineralisation as potential sources for revenue purposes. Optimisations for 47° and 52° OSAs were performed. This section presents the results of the 52° OSA optimisation as this was subsequently confirmed to be an appropriate overall slope angle for the Project. Detail for both options is presented in the main body of the SRK 2014 NI43-101 PEA.

**Table 16-1: Optimisation Parameters (July 2014 PEA)**

Parameter	Units	Value	Source
<b>Production</b>			
Production Rate - Ore	(tpa)	1,000,000	Eurotin supplied
<b>Geotechnical</b>			
Overall	(Deg)	variable	SRK analysis
<b>Mining Factors</b>			
Dilution	(%)	5	SRK estimate
Recovery	(%)	95	SRK estimate
<b>Processing</b>			
Process Recovery	(%)	71.0 <sup>1</sup>	SRK estimate
Metal in Concentrate	(%)	55	SRK estimate
<b>Operating Costs</b>			
Mining Cost	(US\$/t <sub>waste</sub> )	3	SRK estimate
Incremental Mining Cost	(US\$/4m bench)	0.02	SRK estimate
Reference Level	(Z Elevation)	616	
Processing	(US\$/t <sub>ore</sub> )	15	SRK estimate
G&A	(US\$m/Year)	4,000,000	
	(US\$/t <sub>ore</sub> )	4	SRK estimate
Transport and Other	(US\$/t <sub>conc</sub> )	540	Eurotin supplied
	(US\$/t <sub>metal</sub> )	981.82	
Selling Costs	%	2	Eurotin supplied
	(US\$/t <sub>metal</sub> )	465	
NSR Royalty	%	1.35	Eurotin supplied
	(US\$/t <sub>metal</sub> )	294.34	
<b>Metal Price</b>			
Concentrate	(US\$/t <sub>conc</sub> )	12,788	
	(US\$/t <sub>metal</sub> )	23,250	Eurotin supplied
<b>Other</b>			
Discount Rate	(%)	10	
<b>Cut-Off Grade</b>			
Marginal COG	(% Sn)	0.122	Calculated

<sup>1</sup> SRK notes that a metallurgical recovery of 71% was used for the open pit optimisation, based on initial estimates. A recovery of 74% was, however, used for the financial model based on updated information outlined in the recovery methods section.

## 16.3 Optimisation Results

Pit shells were generated for a range of tin prices. Figure 16-1 shows various metrics for the optimised pit shells in for a 52° overall slope angle. In addition to mined tonnes, grade, and strip ratio, the graphs show undiscounted and discounted cash flows. The best case discounted cash flow assumes that the pit is mined in a series of optimised pit shells as cutbacks. The worst case assumes that the final shell in consecutive benches, with no intermediate cutbacks. A likely discounted cash flow curve has been included to show the expected discounted cash flow generated from mining a practical series of open pit cutbacks; it is based on 75% of the difference between the best and worst case discounted cash flows.

Table 16-2 provides detail of the open pit optimisation results at metal prices of USD20,460/t Sn (RF 0.88) and USD23,250/t Sn (RF 1). The USD23,250/t Sn (RF 1) pit shell is 1.35 km long along the strike of the pit, 400 m across at its widest point, and 200 m deep.

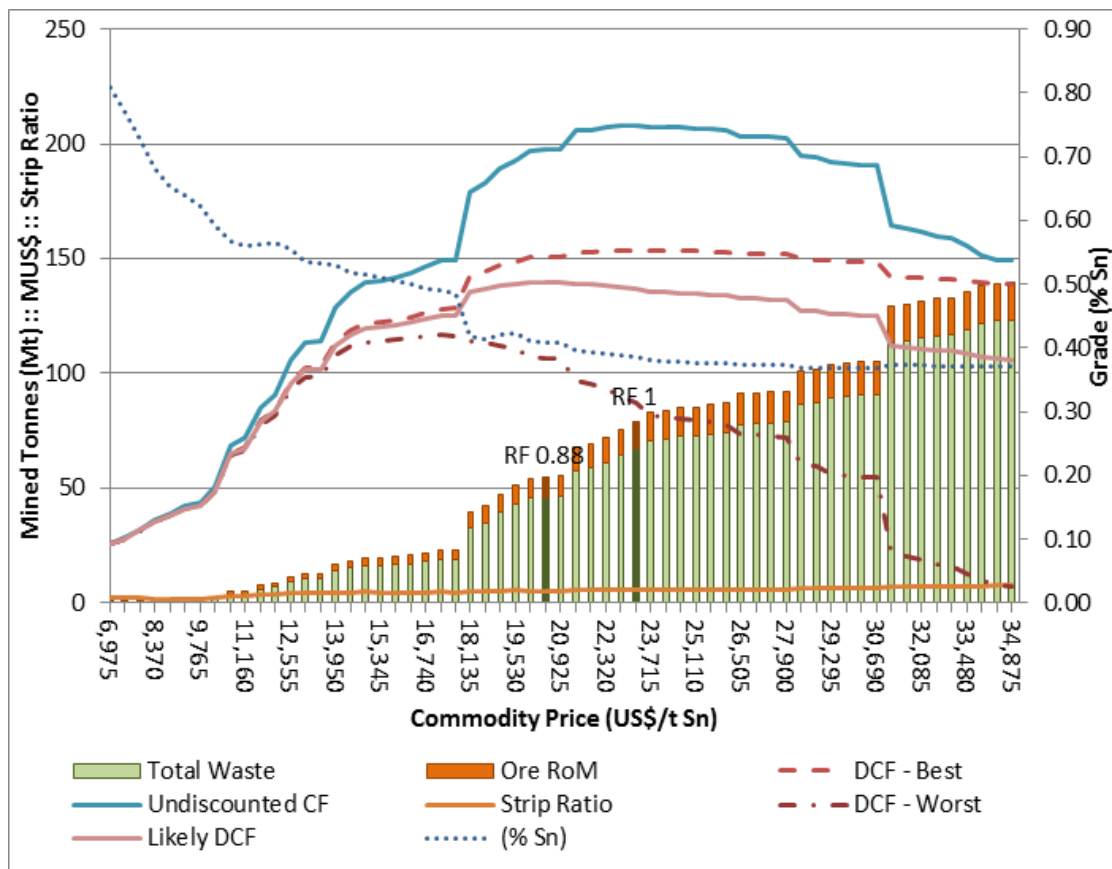


Figure 16-1: Pit Optimisation Results for 52° slope angle (PEA July 2014)

**Table 16-2: Comparison of Pit Optimisation Results (PEA July 2014)**

	Units	US\$20,460/t Sn Pitshell	US\$23,250/t Sn Pitshell
<b>Modifying Factors</b>			
Mining Dilution	(%)	5	5
Mining Recovery	(%)	95	95
<b>ROM</b>			
Total	(kt)	8,603	11,712
	(% Sn)	0.41	0.39
Fresh Indicated	(kt)	4,576	6,624
	(% Sn)	0.43	0.41
Oxide Indicated	(kt)	2,877	3,068
	(% Sn)	0.35	0.35
Fresh Inferred	(kt)	339	968
	(% Sn)	0.63	0.42
Oxide Inferred	(kt)	811	1,052
	(% Sn)	0.37	0.34
<b>Quantities</b>			
Total Rock	(Mt)	54,461	78,625
Diluted Mineral Inventory	(kt)	8,603	11,712
Waste + OM	(kt)	45,858	66,913
Waste	(kt)	45,640	66,652
Inventory (Below Cut-off)	(kt)	218	261
Stripping Ratio	(t:t)	5.4	5.7
<b>Operating Expenditures</b>			
Mining	(US\$/t <sub>mined</sub> )	3.26	3.31
	(US\$/t <sub>ore</sub> )	20.58	22.15
	(US\$/t Sn)	3,894	4,449
Processing + G&A	(US\$/t <sub>ore</sub> )	19	19
	(US\$/t Sn)	6,538	6,939
Selling Cost	(US\$/t Sn)	1,741	1,741
Total Cash Cost	(US\$/t Sn)	12,173	13,130
<b>Product</b>			
Concentrate	(kt)	45.5	58.3
	(% Sn)	55	55
Sn Recovery	(%)	71	71
<b>Economic Summary</b>			
Metal Price	(US\$/t Sn)	23,251	23,250
Revenue	(US\$ <i>k</i> )	581,297	745,588
Mining Costs	(US\$ <i>k</i> )	-177,015	-259,429
Processing Costs	(US\$ <i>k</i> )	-163,455	-222,536
Selling Cost	(US\$ <i>k</i> )	-43,531	-55,836
Cashflow	(US\$ <i>m</i> )	197.3	207.8
Discount Rate	(%)	10	10
Mill Rate	(ktpa)	1000	1000
DCF - Best Case	(US\$ <i>m</i> )	150.7	153.5
DCF - Worst Case	(US\$ <i>m</i> )	106.8	87.2
Project Life	(years)	8.6	11.7

## 16.4 Mine Scheduling

Mine schedules were generated using NPVS software. Cutbacks were generated within the optimised pit shells, using a minimum mining width of 24 m. The maximum pit depth was 200 m. The 52° OSA option has four cutbacks.

The following parameters were used to generate the production schedules for both options:

- the vertical advance rate was constrained at 48 m per year, which is 12 benches per year assuming 4 m benches;
- the target production rate was 1 Mtpa of ore, as in the optimisation;
- the first year has a reduced milled tonnage as a ramp-up consideration;
- direct-tip run of mine (“RoM”), no stockpiling strategies considered; and
- the total material movement was constrained to 8 Mtpa.

Table 16-3 presents the mine schedule based on the 52° OSA cutbacks.

**Table 16-3: Mine Schedule for 52° OSA Pit Shells (PEA July 2014)**

	Unit	LOM	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Fresh (Indicated)	(kt)	4,580	-	340	560	440	330	600	610	630	970	100
	(kt Sn)	19.87	0	1.35	2.68	1.94	1.38	1.8	2.32	2.94	5.02	0.43
	(% Sn)	0.43	0	0.4	0.48	0.44	0.42	0.3	0.38	0.47	0.52	0.43
Oxide (Indicated)	(kt)	2,860	380	600	300	410	500	380	190	100	-	-
	(kt Sn)	10.18	1.75	2.86	1.1	0.94	1.09	1.4	0.53	0.47	0.03	-
	(% Sn)	0.36	0.46	0.48	0.37	0.23	0.22	0.37	0.28	0.47	0	0
Fresh (Inferred)	(kt)	340	-	10	40	50	60	10	20	130	20	-
	(kt Sn)	2.14	0	0.02	0.15	0.36	0.46	0.02	0.18	0.81	0.14	-
	(% Sn)	0.63	0	0.23	0.36	0.71	0.77	0.21	0.88	0.63	0.71	0
Oxide (Inferred)	(kt)	820	120	50	100	100	110	20	180	130	10	-
	(kt Sn)	3.03	0.35	0.22	0.57	0.31	0.27	0.03	0.65	0.6	0.03	-
	(% Sn)	0.37	0.29	0.44	0.57	0.31	0.25	0.16	0.36	0.46	0.26	0
<b>Total RoM</b>	(kt)	<b>8,600</b>	<b>500</b>	<b>1,000</b>	<b>1,000</b>	<b>1,000</b>	<b>1,000</b>	<b>1,010</b>	<b>1,000</b>	<b>990</b>	<b>1,000</b>	<b>100</b>
	(kt Sn)	<b>35.2</b>	<b>2.11</b>	<b>4.46</b>	<b>4.5</b>	<b>3.55</b>	<b>3.21</b>	<b>3.25</b>	<b>3.68</b>	<b>4.82</b>	<b>5.21</b>	<b>0.43</b>
	(% Sn)	<b>0.41</b>	<b>0.42</b>	<b>0.45</b>	<b>0.45</b>	<b>0.35</b>	<b>0.32</b>	<b>0.32</b>	<b>0.37</b>	<b>0.49</b>	<b>0.52</b>	<b>0.43</b>
Waste	(kt)	<b>42,670</b>	5,050	5,100	5,660	5,970	5,870	5,170	5,270	3,010	1,500	70
Overburden	(kt)	<b>2,740</b>	1,560	680	250	210	0	0	40	0	0	0
Ore Below COG	(kt)	<b>210</b>	30	70	20	30	20	40	0	0	0	0
<b>Total Waste</b>	<b>(kt)</b>	<b>45,620</b>	<b>6,640</b>	<b>5,850</b>	<b>5,930</b>	<b>6,210</b>	<b>5,890</b>	<b>5,210</b>	<b>5,310</b>	<b>3,010</b>	<b>1,500</b>	<b>70</b>
Strip Ratio	(t:t)	5.3	13.28	5.85	5.93	6.21	5.89	5.16	5.31	3.04	1.5	0.7

## 16.5 Operating Strategy

The pit will be mined on 4 m benches using conventional truck and shovel techniques.

SRK estimated that an approximate surface area of 1 km<sup>2</sup> would be required for waste rock disposal. A combined waste rock and tailings storage facility ('TSF') is the most appropriate waste storage solution in order to minimise surface disturbance and reduce TSF construction costs.

The pit will be mined using a conventional truck and shovel arrangement. SRK proposed the use of the following primary equipment:

- One 4 m<sup>3</sup> hydraulic face shovel, such as a CAT 390D shovel;
- 28 t articulated dump trucks, such as CAT 730C trucks; and
- 102 mm production drills.

The primary fleet would be supported by an auxiliary fleet of track dozers, wheel dozers, graders and water trucks. The equipment sizes were chosen on the basis of the degree of selectivity required for the operation. Mining would be in 2 m to 4 m fitches (sub divisions of benches) in order to minimise dilution. Hydraulic shovels were selected for their relocation flexibility, given that the scheduling exercise shows a rapidly evolving pit. The same equipment would be used for mining ore as for mining waste. The equipment required would be three shovels and 12 to 14 trucks over the life of mine ('LoM').

A summary of the projected mine labour requirement by department is presented in Table 16-4.

**Table 16-4: Summary of Projected Mine Personnel (PEA July 2014)**

Department	Personnel
Mine Operations	102
Mine Maintenance	35
Technical Services	9
<b>Total</b>	<b>146</b>

## 16.6 Conclusions

SRK concluded the following with respect to open pit mining of the Oropesa deposit, on the basis of the 2014 MRE:

- at 1 Mtpa of mill throughput, Oropesa has a 9 to 10 year mine life;
- the average head grade is 0.41% Sn;
- the LoM strip ratio is 5.3 although SRK notes that the strip ratio is sensitive to metal price, mining cost and process recovery. Small changes in parameters will result in large changes in stripping ratio;
- selectivity and grade control will be critical to achieving mine plan targets; and
- an overall slope angle of 52° has been supported by geotechnical investigation work and is the preferred option to be input to the financial model due to the lower stripping ratio.

## 16.7 Recommendations

SRK recommends the following with regard to further technical studies of the Oropesa deposit:

- the results of this study are verified with further, more detailed studies at a Feasibility Study (“FS”) level and based on the latest Mineral Resource Estimate;
- an underground trade-off study to determine whether mineralisation at depth is suitable to be mined by underground methods;
- open pit optimisations that take into account a potentially more complex mineral processing flow sheet based on rock type mineralogy;
- open pit optimisations that take into account more detailed geotechnical domain information, based on further geotechnical analysis to confirm slope angles;
- open pit schedules that make provision for potential stockpiles to achieve a stable head grade; and
- detailed open pit designs in order to understand the impact of a practical design on the potentially economic mineralisation.

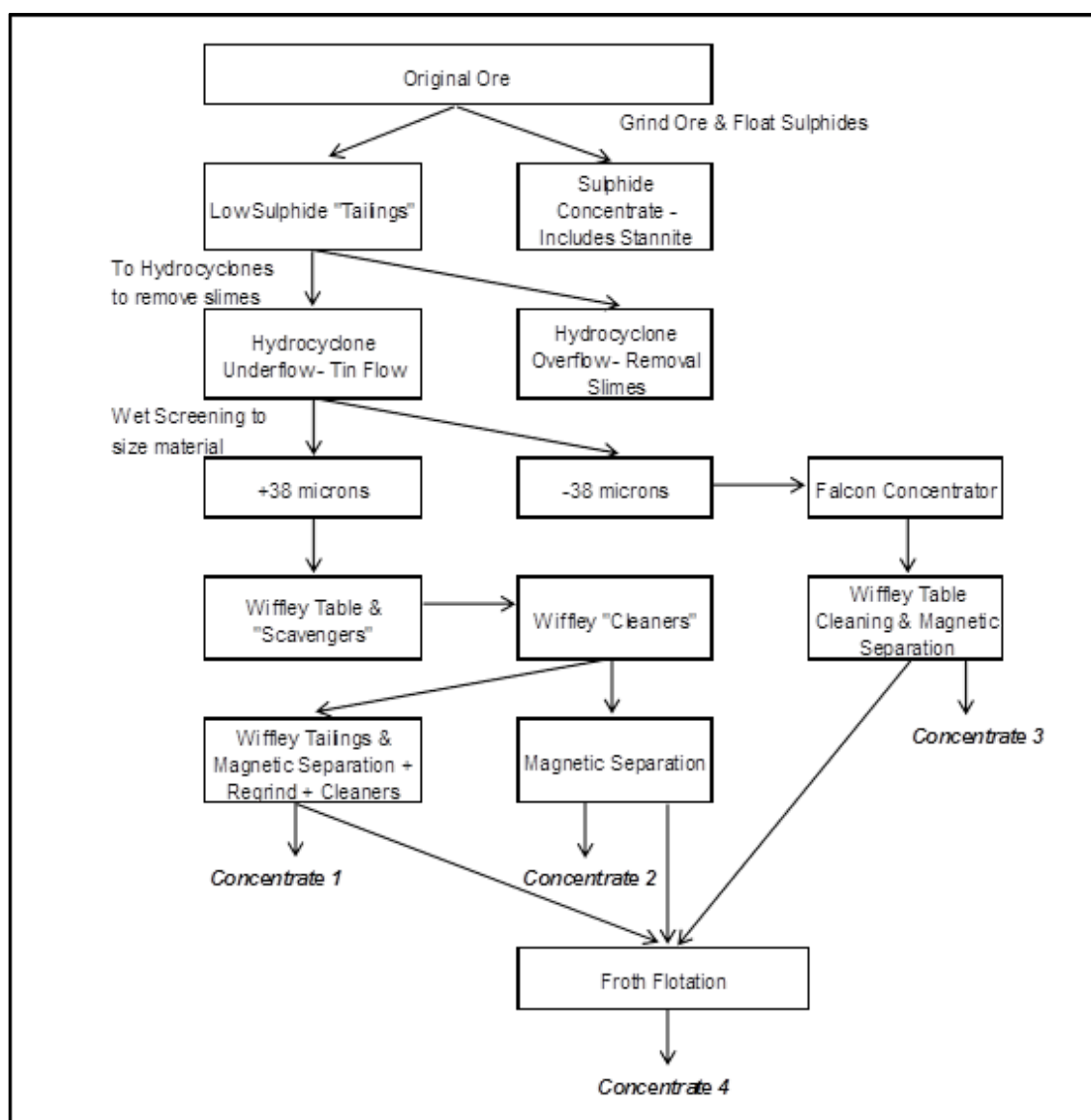
## 17 RECOVERY METHODS

The information presented in this section is sourced from the SRK 2014 NI43-101 PEA.

SGS has developed a preliminary flowsheet for treating the Oropesa RoM material, based on the two samples tested in 2013/2014. Sample 1 (1.47% Sn) is high grade primary sulphide material and sample 2 (0.33% Sn) is low grade secondary sulphide material.

The preliminary flowsheet has been developed based on the Oropesa 1.47% Sn primary sulphide sample 1. The flowsheet is presented in Figure 17-1.





**Figure 17-1: Preliminary Oropesa Sulphide Processing Flowsheet (PEA July 2014)**

SRK was not able to evaluate the representativeness of the samples used for the scoping testwork. The majority of the scoping metallurgical testwork has been undertaken on the high grade primary sulphide sample (1.47% Sn). SRK considers that this sample does not represent the average grade of the Oropesa deposit.

A tin flotation recovery of 85% Sn has been estimated based on the flotation testwork undertaken. SGS is confident that flotation Sn concentrates could be upgraded to marketable concentrates using the process utilized in the past in the Wheal Jane tin mine in Cornwall where, mechanically, concentrates were upgraded from 20% Sn in cassiterite flotation concentrates to a grade of >55% Sn by maintaining high circulating loads in the cleaners. SRK has noticed that only rougher flotation testwork has been undertaken so the upgrade of the flotation concentrate to values >55% Sn has not been tested yet by SGS.

A secondary sulphide sample (0.33% Sn) was also tested by SGS, obtaining lower Sn recoveries due to higher levels of the tin sulphide mineral stannite, the requirement of finer grinding and the increase of tin losses with the slimes. No tailings flotation testwork has been carried out on this sample. While 90% Sn recovery is considered reasonable for the tailings flotation, a figure of 85% has been used to calculate the overall tin recovery expected.

SRK believes that there is a shortcoming in that no metallurgical testwork has been undertaken by the Company since 2010 for the Oropesa oxide mineralisation, which (with the transition material) contributes approximately 25% to the Oropesa Mineral Resource.

SRK recommends the following with respect to the recovery methods of the Oropesa deposit:

- carry out metallurgical testwork on samples which better represent the LoM planned grades; the samples recently used for the scoping metallurgical testwork have a grade that is too high;
- demonstrate that the process utilized in the past in the Wheal Jane tin mine in Cornwall, to upgrade Sn flotation concentrates, is applicable for the Oropesa material;
- carry out sulphide tailings flotation testwork for the secondary sulphide sample; and
- carry out more detailed metallurgical testwork for the oxide material.

## 18 PROJECT INFRASTRUCTURE

The information presented in this section is sourced from the SRK 2014 NI43-101 PEA.

SRK notes that a very limited amount of infrastructure is required due to the favourable location.

SRK has not completed a detailed water supply study, but notes that there are two nearby sources of water for the Project that are considered viable. SRK has not completed a detailed power supply study, but there are two power lines that pass close to the Project that are considered to be suitable. Capital cost provisions have been made to allow for the cost of the infrastructure required to access local power and water supplies.

SRK conducted a high level survey of TSF location options. Three sites were selected and the final selection was made based on advice from the Company. The selected site (TSF 3) is not in a valley or overlying a natural water course. For the next stage of the study, it is recommended that the following studies be undertaken to further define the Project components and confirm the assumptions made within the PEA:

- topographical survey to provide a topographical map with contours of 1 m accuracy for the preferred TSF location;
- geotechnical and geochemical testing to be undertaken on overburden and waste to determine if the material is suitable for construction;
- trade-off study to co-dispose tailings material and waste rock material from the open pit mining operations as there will be waste rock that will require an additional storage;
- land access and acquisition to be confirmed;
- the layout and interrelationships of infrastructure components to be defined for material flows and efficiencies; and
- geotechnical and hydrogeological field investigations of the in situ ground conditions within the TSF footprint.

## 19 MARKET STUDIES AND CONTRACTS

SRK has not undertaken a market or contracts study for this report.

## 20 ENVIRONMENTAL STUDIES

The information presented in this section is sourced from the SRK 2014 NI43-101 PEA.

The proposed Project is located in a rural environment in southern Spain in the Autonomous Region of Andalusia, approximately 110 km north east from the regional capital of Seville. The region has experienced a long history of mining activities, although unemployment levels in the area are currently high (approximately 25%). Further to a desktop review of existing information and some preliminary baseline data collection that has been undertaken for the site, the following four key environmental and social risks were identified for the Project:

- elevated arsenic concentrations in soils and groundwater need to be characterised to understand any potential liability;
- high expectations around job creation need to be managed through adequate stakeholder engagement and training to maximise employment of local people;
- economic and/or physical displacement of farmsteads and or subsistence lands may require some time to negotiate agreements with farmers; although current good relations with landowners suggest that this should not have scheduling implications; and
- the location of the Project site within a legally recognised area of conservation significance requires that potential impacts are clearly understood and the necessary permits obtained. Based on the Company's discussions with government this is not considered to pose any significant delays to the Project;

All of the key environmental and social risks identified are considered to be manageable within the next stage of Project development and are not expected to pose material risks to the Project either in terms of material delays or significant cost implications.

## 21 CAPITAL AND OPERATING COSTS

The information presented in this section is sourced from the SRK 2014 NI43-101 PEA.

SRK estimated the costs appropriately for a PEA. The results are presented in Table 21-1 and Table 21-2 and were used as inputs to the economic analysis.

**Table 21-1: Capital Cost Summary (PEA July 2014)**

Item	Unit	Value
Mining Equipment	USDM	23
Processing Plant	USDM	55
Tailings Storage Facility	USDM	22.4
Miscellaneous	USDM	6

**Table 21-2: Operating Cost Summary (PEA July 2014)**

Item	Unit	Value
Mining Cost	USD/t expit	3.76
Processing	USD/t milled	12
G&A	USD/t milled	2.69
Selling Costs	USD/t Sn	1,299.00

## 22 ECONOMIC ANALYSIS

The information presented in this section is sourced from the SRK 2014 NI43-101 PEA.

Based on the scoping level work undertaken, SRK concluded the following with respect to the economic model:

- the Project is economically viable at the two metal price scenarios of USD23,250/t and USD27,000/t;
- the Project generates positive cash flow starting in Year 3, based on an 18-month project implementation timeline;
- the Project's payback is five years for the USD27,000/t scenario and 8 years for the USD23,250/t scenario.
- the value of the Project is most sensitive to changes in commodity price; and
- the value of the Project is least sensitive to changes in capital expenditure.

Table 22-1 provides the results of the economic analysis at a metal price of USD27,000/t Sn.

**Table 22-1: Summary of Economic Model Results at USD27,000/t Sn (PEA July 2014)**

	Discount Rate	NPV USDm Post Tax	NPV USDm Pre Tax
Net Present Value	0.00%	163	211
	5.00%	99	134
	7.50%	73	105
	8.00%	69	100
	10.00%	54	81
	15.00%	23	44
Internal Rate of Return	IRR	20.20%	24.40%

SRK recommends the following:

- future drilling should focus on the high grade areas to enhance the Project economics;
- the economic impact of contractor mining should be examined, based on detailed quotes from local contractors;
- examine higher production rates to improve economics in future iterations of the Project;
- additional mine scheduling with the intent to smooth head grades and bring higher grades forward in time;
- smelter terms and transport charges should be detailed further; and
- a tin marketing study be undertaken as part of future technical studies.

## 23 ADJACENT PROPERTIES

SRK is not aware of any properties adjacent to Oropesa.

## 24 OTHER RELEVANT DATA AND INFORMATION

The information presented in this section is sourced from the SRK 2014 NI43-101 PEA.

### 24.1 Geotechnics

For optimisation purposes, pit slopes should not exceed 52° for both 150 and 200 m deep pits. This study did not include any information related to structure orientation. Orientation data are necessary for kinematics analyses in order to determine the potential for planar, toppling and wedge failures on a bench scale and therefore give a detailed bench and berm configuration. A more detailed geotechnical investigation programme would be required for a PFS including:

- drilling of orientated borehole core;
- determination of groundwater conditions;
- detailed geotechnical logging of the core;
- laboratory strength testing of selected core samples.;
- development of a geotechnical domain model; and
- undertaking more detailed rock mass and kinematic stability analysis.

### 24.2 Hydrogeology

Hydrogeological characterisation has been based on the environmental permitting study conducted by PGMA, SLP (PGMA, 2012) which is intended to complement an Environmental Impact Study. It is evident that PGMA has undertaken a programme of hydrogeological fieldwork, including:

- construction of monitoring wells;
- sampling of groundwater; and
- measurement of groundwater levels.

Only summary details of the hydrogeological study were made available to SRK. The groundwater flow direction appears to be structurally controlled where the groundwater contours are approximately parallel to mapped structures (regional groundwater flow direction has not been defined).

### 24.3 Environmental Geochemistry

The data and information currently available for an environmental geochemistry assessment is limited; however, preliminary evaluation of potential risks have been conducted and are summarised as follows:

- Presence of sulphide minerals. Oropesa is a hard rock sulphide deposit. The pit walls and associated waste rock are likely to include exposed sulfidic minerals, including pyrite, pyrrhotite and arsenopyrite. There is therefore a potential for acid generation as a result of sulphide oxidation. This may impact contact waters flushing the pit walls, waste rock dumps and also the tailings facility. The high sulphide tailings from the potential flotation products could be particularly problematic.

- Lack of acid-buffering carbonate minerals. The mineralogy of the deposit reports a lack of substantial carbonate presence to act as a buffer against acid release and low pH contact waters. Siderite may be present in moderate quantities; however, even though a carbonate mineral, siderite offers negligible potential for acid neutralisation.
- Solute mobilisation. Formation of low pH contact waters would likely lead to the associated release of metal and metalloid species such as iron, manganese and arsenic and elevated solute loading, primarily from sulphate release.
- Baseline groundwater monitoring. Water quality monitoring has been completed for a limited number of groundwater locations. Sample data report circum-neutral waters, often with elevated arsenic concentrations. This suggests that the baseline water quality conditions in the project area may be relatively poor due to the nature of the mineralisation. Elevated concentrations of iron and manganese may be indicative of particulate matter and/or anoxic conditions.

Overall, given the abundance of sulphide minerals and the inherent propensity for acid rock drainage and metal leaching ('ARDML') solute release, and the naturally elevated arsenic concentrations in groundwater, it is likely that if unmanaged the discharge of mine contact waters could adversely impact upon the environment and local receptors.

SRK recommends undertaking a programme of testing for ARDML assessment, and to expand the water quality monitoring programme to collect more data for a wider range of parameters. Following the data collection, the potential for impacts to water quality should be assessed and mitigation strategies developed.

## 25 INTERPRETATIONS AND CONCLUSIONS

The Oropesa deposit is an open pit and underground mining target, which is at a relatively advanced stage of drilling and geological understanding. Selective infill drilling from surface and updated geological modelling in 3D has added further geological confidence to the local scale geometry of the mineralisation and grade distributions in the Resource model.

The geological interpretation used to generate the Mineral Resource presented herein is generally considered to be robust; however, there are areas of lower geological confidence in parts of the Inferred Mineral Resource which may be subject to further revision in the future. In addition, SRK notes there is potential to add additional replacement-style and/or fault-controlled mineralisation along strike and around the margins of the deposit.

SRK considers the exploration data accumulated by the Company is generally reliable and suitable for the purpose of this Mineral Resource estimate.

## 26 RECOMMENDATIONS

SRK considers there to be good potential to improve confidence and increase tonnage in the reported Mineral Resource at Oropesa with further modelling work and additional drilling. In relation to drilling and sampling, SRK would recommend the following:

- Targeted infill drilling to add geological confidence to convert the Inferred Resources to Indicated and convert more of the Indicated to Measured Resources.

- Complete additional exploration drilling along strike and around the margins of the deposit where there is potential to add additional replacement-style and/or fault-controlled mineralisation. Any future drilling should include the systematic collection of downhole structural data to further constrain the geological model.
- The geological model should be further tested and refined in conjunction with a reassessment of the licence scale exploration potential.

In addition, SRK would also recommend the following:

- Update the July 2014 PEA with more detailed mining studies to determine the optimal mining plan for the Project on the basis of this updated Mineral Resource Estimate. The scoping level mining study and associated economic analysis that was carried out for the 2014 PEA illustrated that the Project stripping ratio was sensitive to input parameters. Changes in deposit geometry will also affect the stripping ratio;
- Density test work during future exploration programmes should focus on characterising the density of rubbly, oxidised material and the sampling of existing drillholes which have not yet been sampled for density to maximise the confidence in density estimates within these areas;
- Future exploration programs should use a high-accuracy GPS for drillhole collar survey given the potential variability noted in the accuracy of the z-coordinate determined by handheld GPS.
- Consider sending the remaining non-sampled (tin) intervals located within the mineralised zones to ALS Vancouver to remove the need for inserting values from Niton XRF data.
- Adopt a commercial database system to improve management of the raw database at Oropesa.
- For the holes drilled prior to ORPD059 (if available) SRK recommends sending pulp splits from a representative portion of samples to the primary laboratory along with QAQC samples according to the current protocols to compare the laboratory performance today with its performance in 2011 and 2010 prior to drillhole ORPD059.

## 27 REFERENCES

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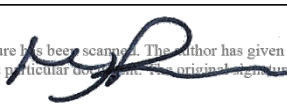
**For and on behalf of SRK Consulting (UK) Limited**

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

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Mike Beare,  
Corporate Consultant (Mining Engineering),  
SRK Consulting (UK) Limited



## CERTIFICATE OF QUALIFIED PERSON


I, Robert Goddard, CGeol, FGS, MSc do hereby certify that:

1. I am a Senior Consultant (Resource Geology) of SRK Consulting (UK) Ltd with an office at 5th Floor, Churchill House, Churchill Way, Cardiff CF10 2HH.
2. This certificate applies to the technical report titled “NI43-101 TECHNICAL REPORT ON A MINERAL RESOURCE ESTIMATE ON THE OROPESA TIN PROJECT, CORDOBA PROVINCE, SPAIN, SEPTEMBER 2018” with an Effective Date of 17th February 2017 (the “Technical Report”) prepared for Minas de Estaño de España (MESPA).
3. I am a graduate with a Master of Science in Mining Geology gained from the Camborne School of Mines, University of Exeter in 2010 and I have practised my profession continuously since that time on a wide range of mineral projects as a consultant at SRK specialising geological modelling, resource estimations and due diligence reports. I have contributed to many technical reports for gold and base metal mineral assets. I am a Fellow of the Geological Society of London and I am a Chartered Geologist (Membership Number 1019199);
4. 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.
5. Howard Baker (SRK CP for the 2012 and 2014 MRE) and Paul Stenhouse (SRK Geology CP for the 2015 MRE), visited the property during March 2012 and July 2015 respectively. I have not visited the property. No site visit was undertaken as part of this MRE update due to the limited number of additional holes (16) completed subsequent to the 2015 MRE.
6. I am the author of this report and am responsible for all Sections.
7. I am independent of the issuer applying all of the tests in section 1.5 of NI 43-101.
8. SRK was requested by MESPA to prepare an update of the Mineral Resource Estimate on the Oropesa Property. Our report was completed using the terminology, definitions and guidelines given in the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definition Standards for Mineral Resources and Mineral Reserves (May 2014).
9. I have read NI 43-101 and Form 43-101F1 and the sections of the Technical Report I am responsible for have been prepared in compliance with that instrument and form.
10. As of the aforementioned Effective Date, to the best of my knowledge, information and belief, the sections of the Technical Report I am responsible for contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 13 Day of September, 2018

“Signed and Sealed”

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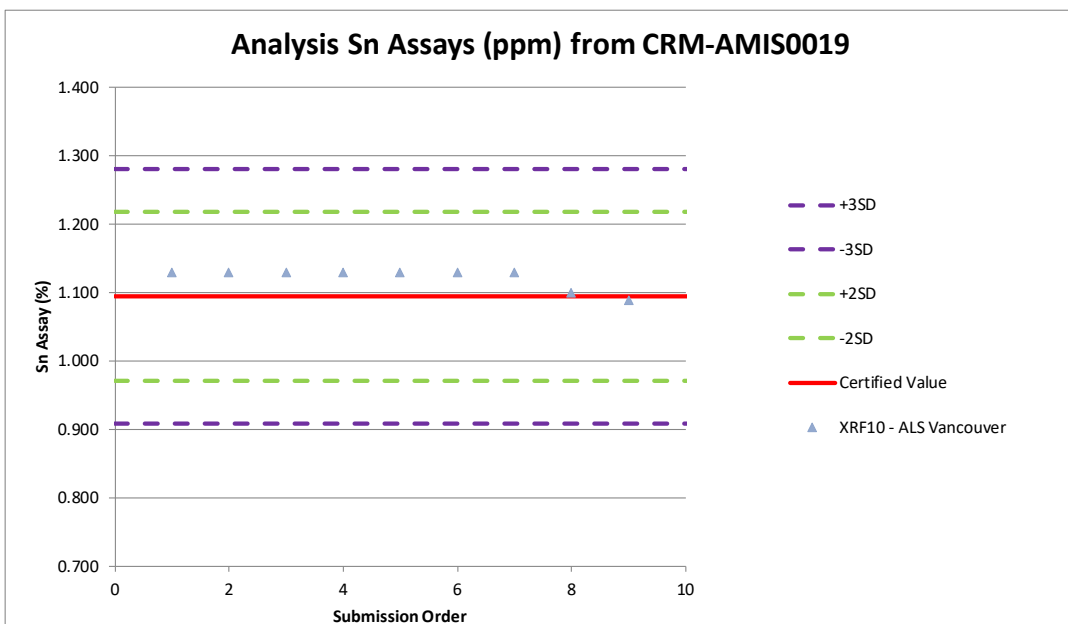
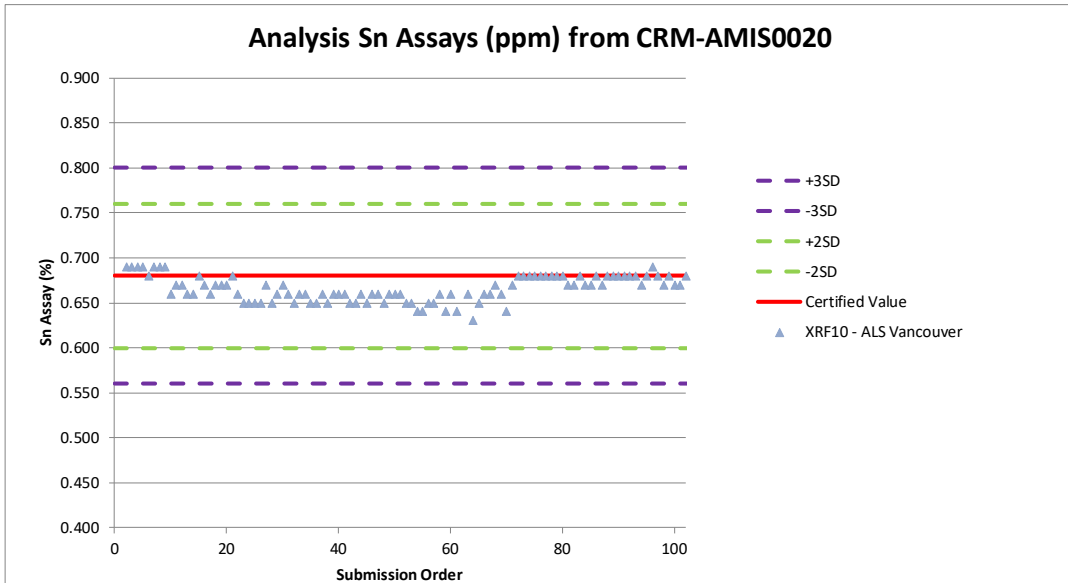


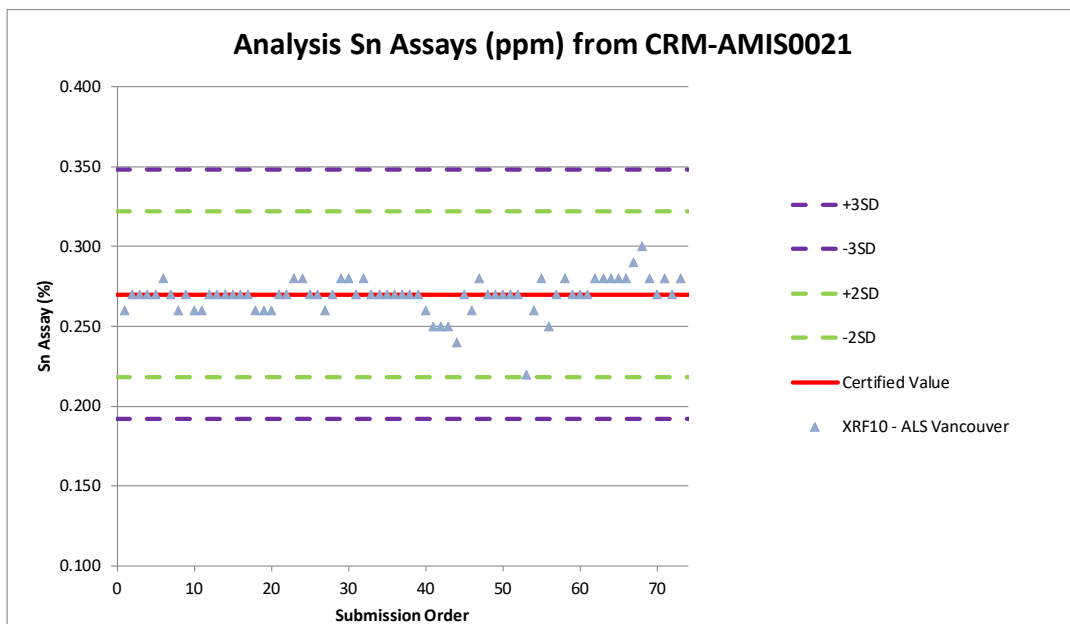
Robert Goddard, CGeol, FGS, MSc  
Senior Consultant (Resource Geology)

**APPENDIX**  
**A QAQC ANALYSIS**

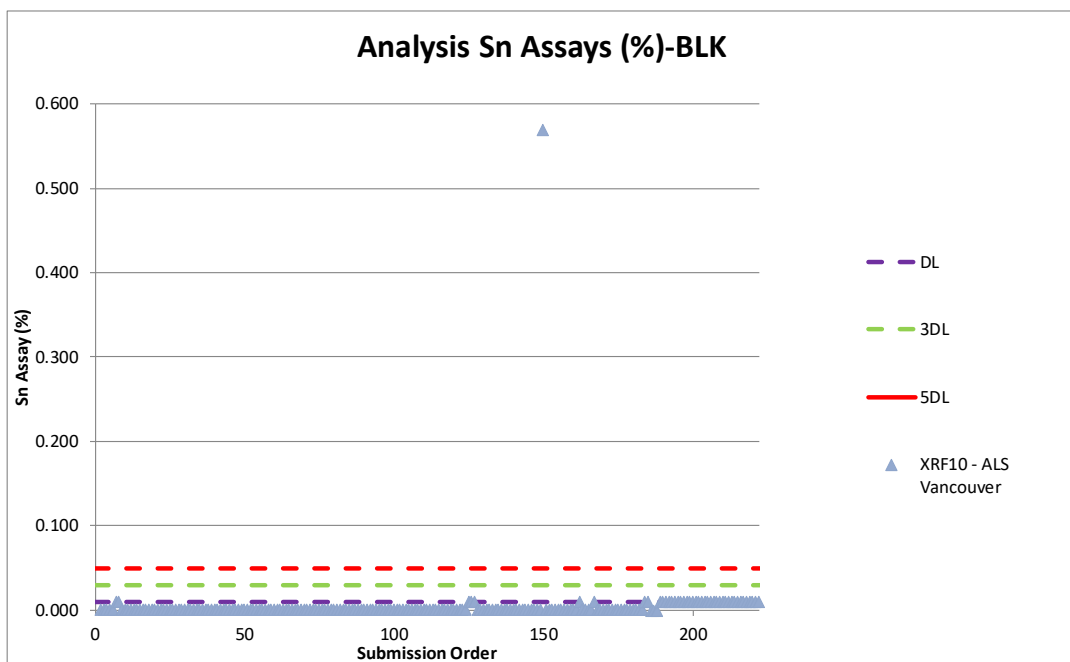
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#### TIN CRM

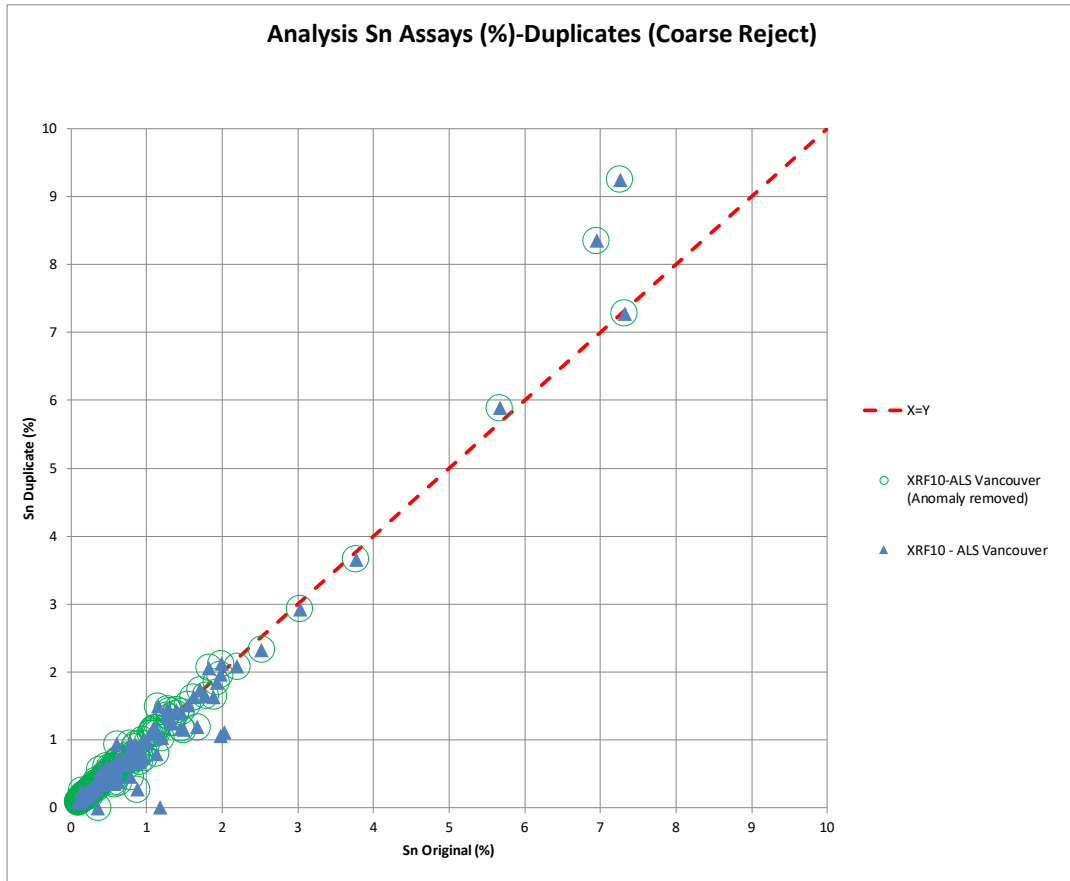




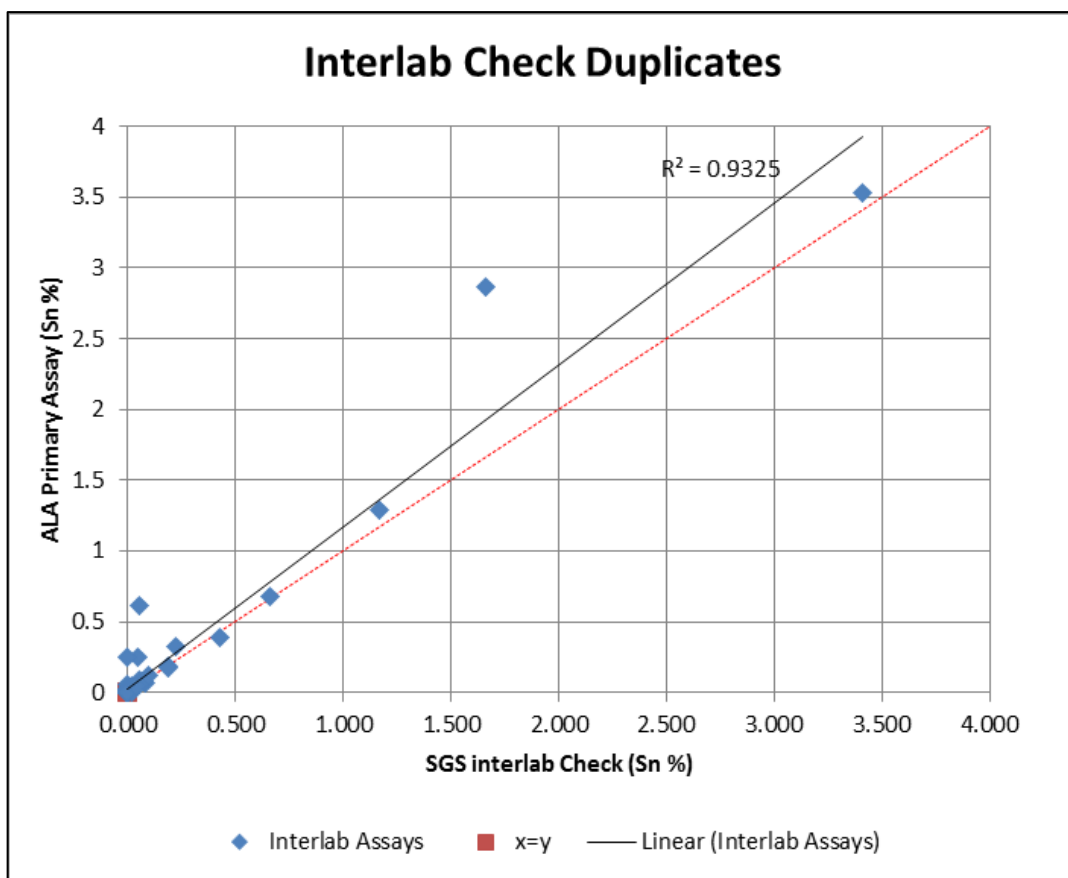
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DUPLICATES



UMPIRE LABORATORY DUPLICATES

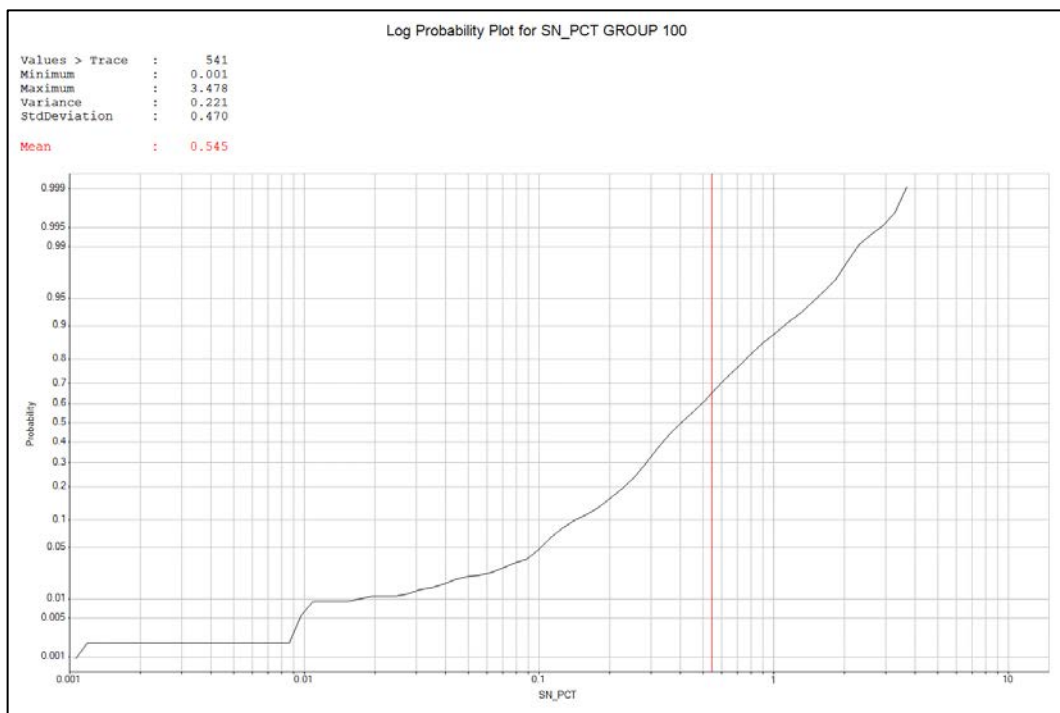
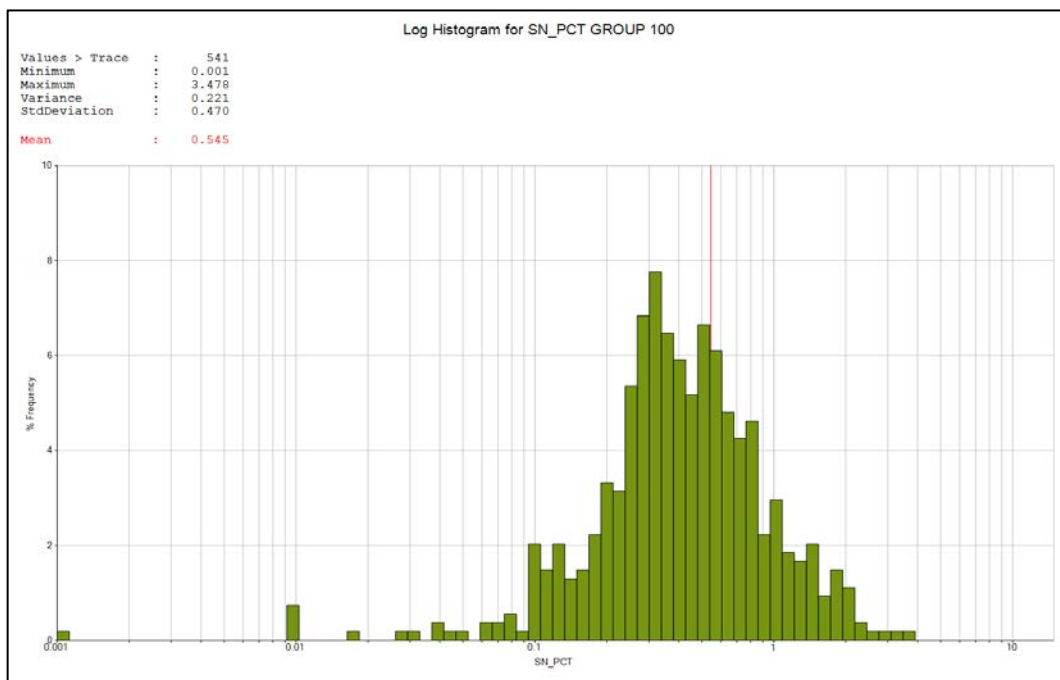


## **APPENDIX**

### **B HISTOGRAMS AND LOG PROBABILITY PLOTS**

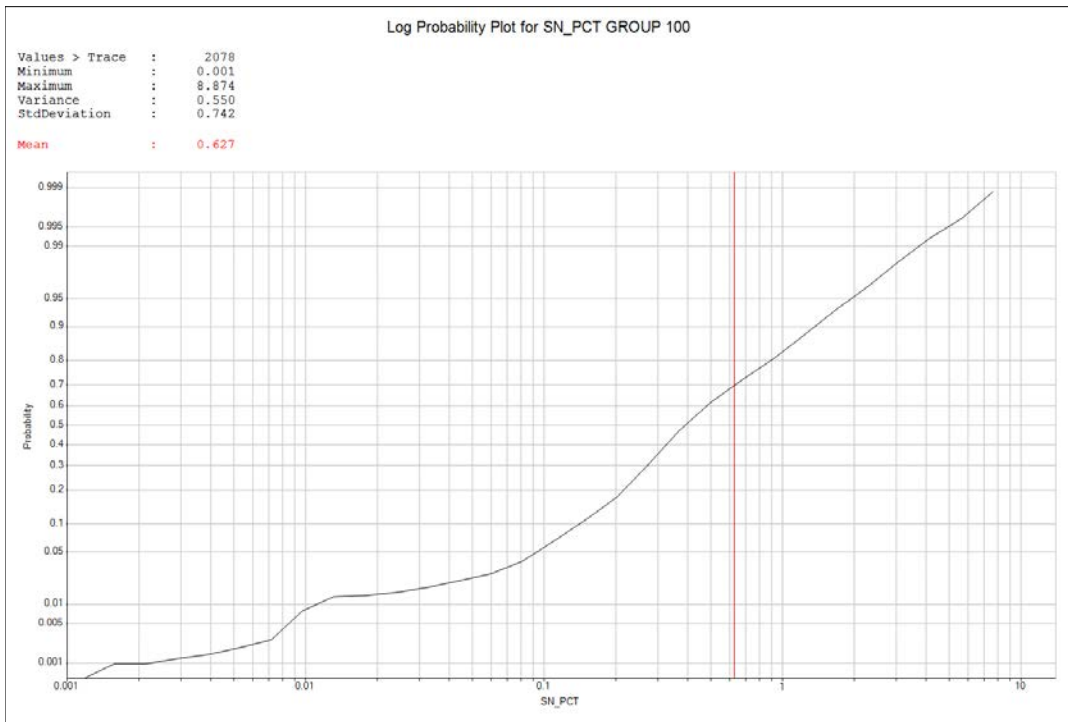
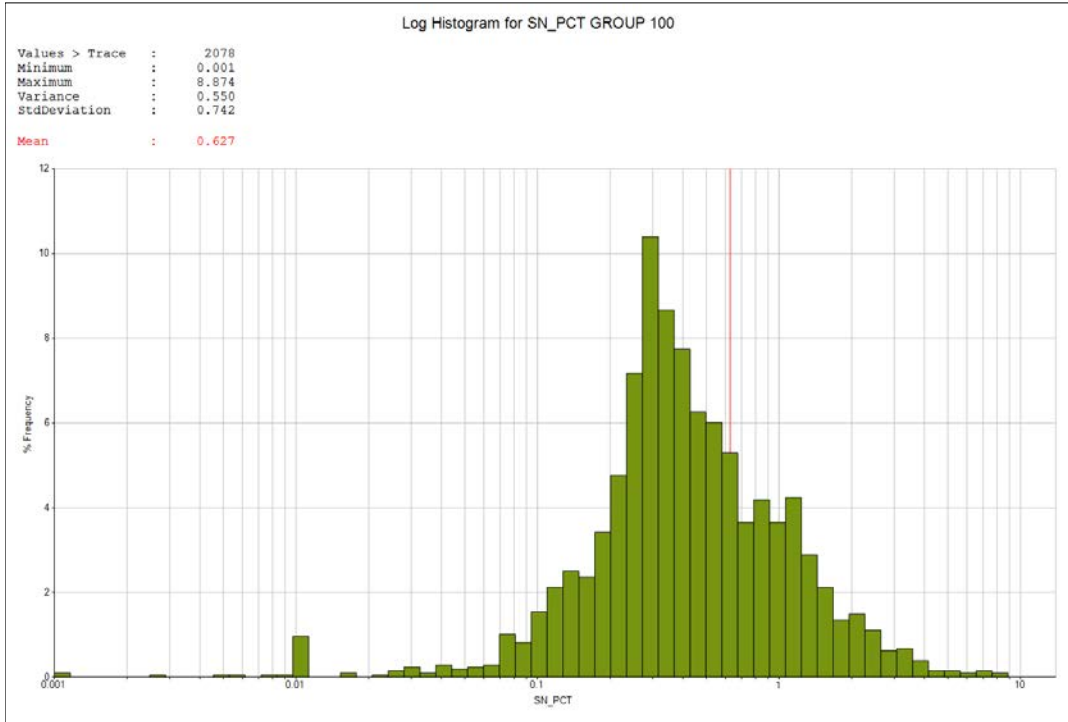
### MINERALISATION DOMAIN GROUP 100

#### ZONE-COMPOSITES





2M COMPOSITES

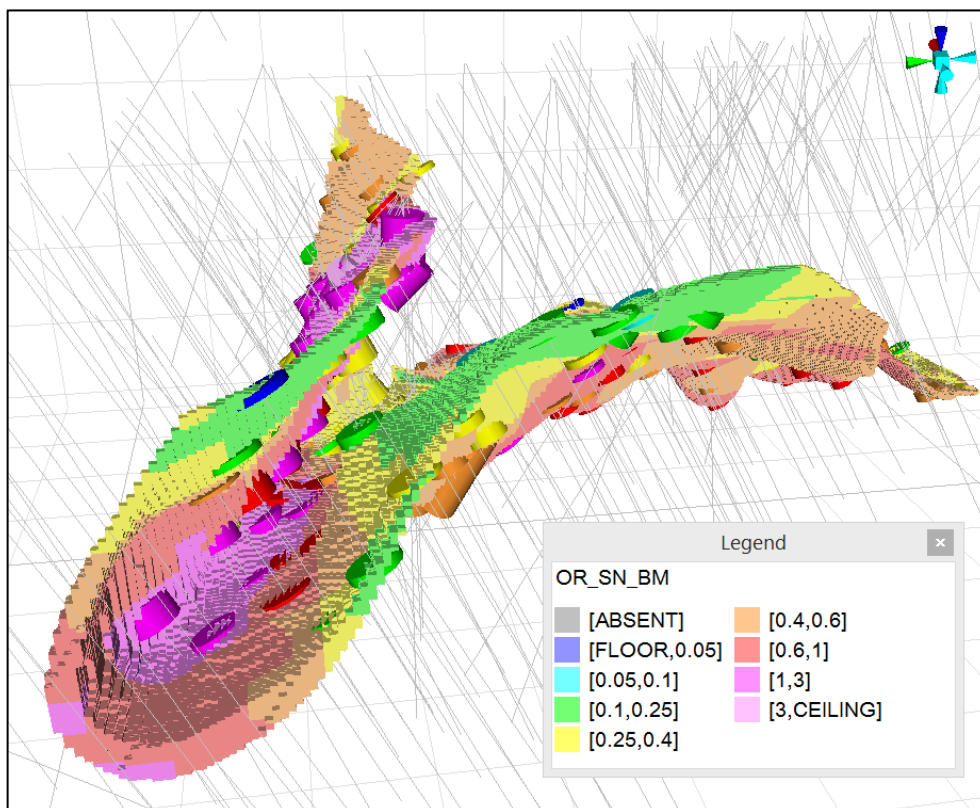


## **APPENDIX**

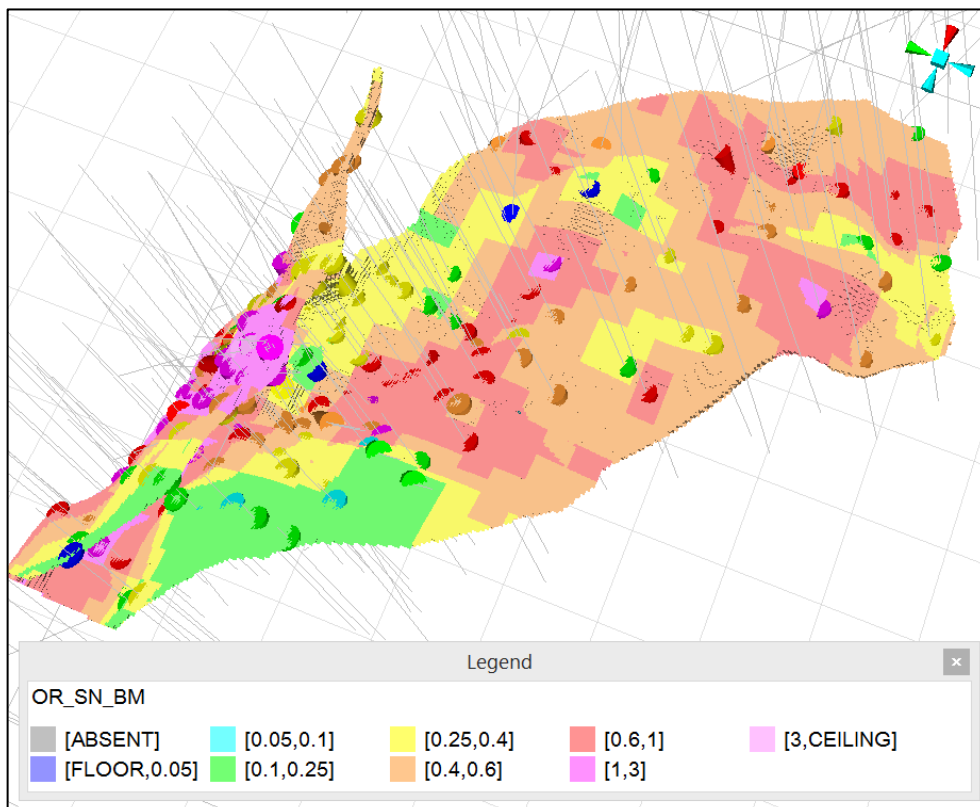
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**MINERALISATION DOMAIN GROUP 100 – 3D Visual Validation**

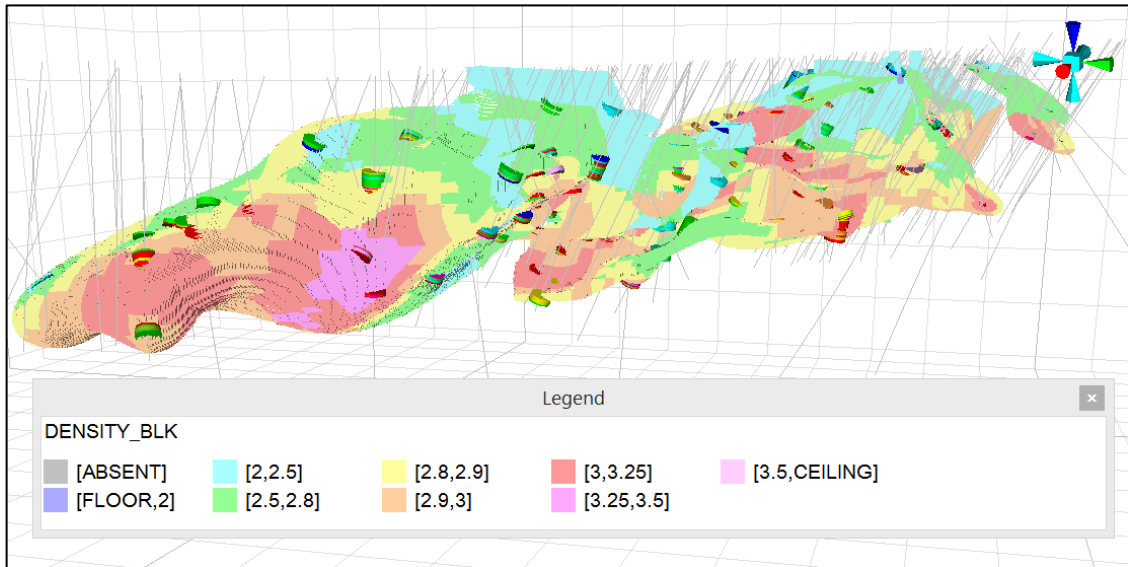
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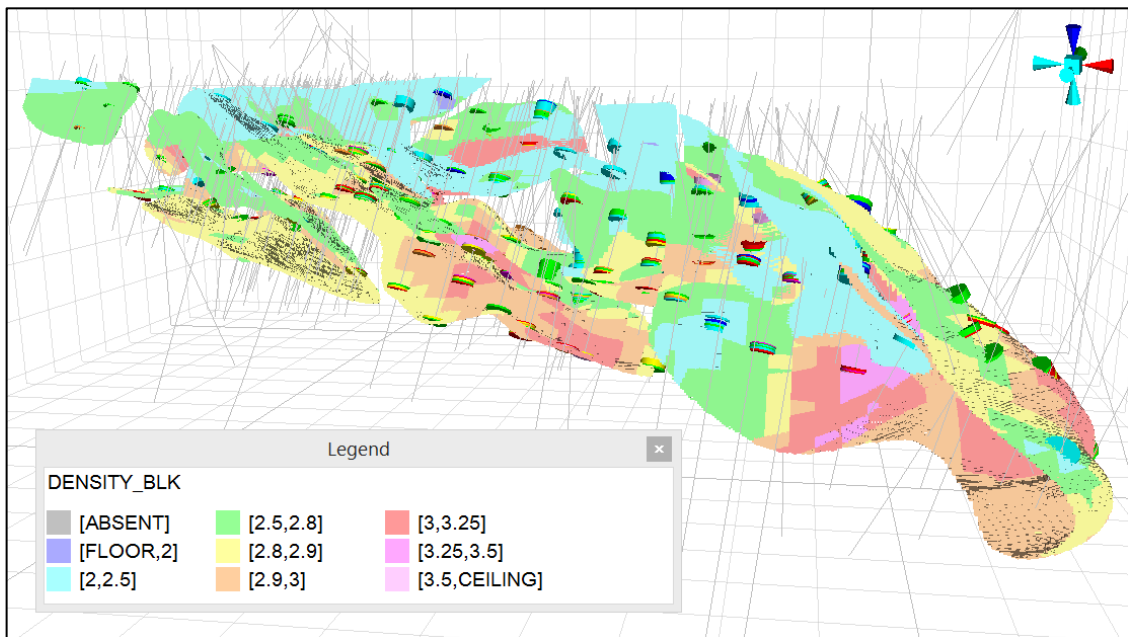
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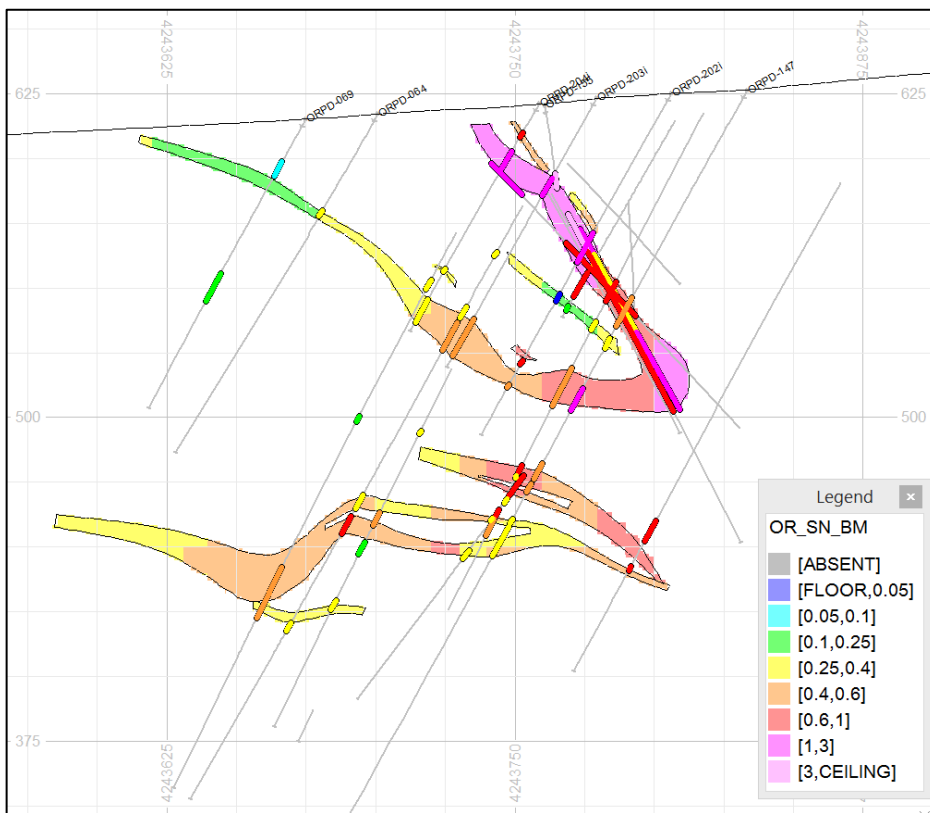
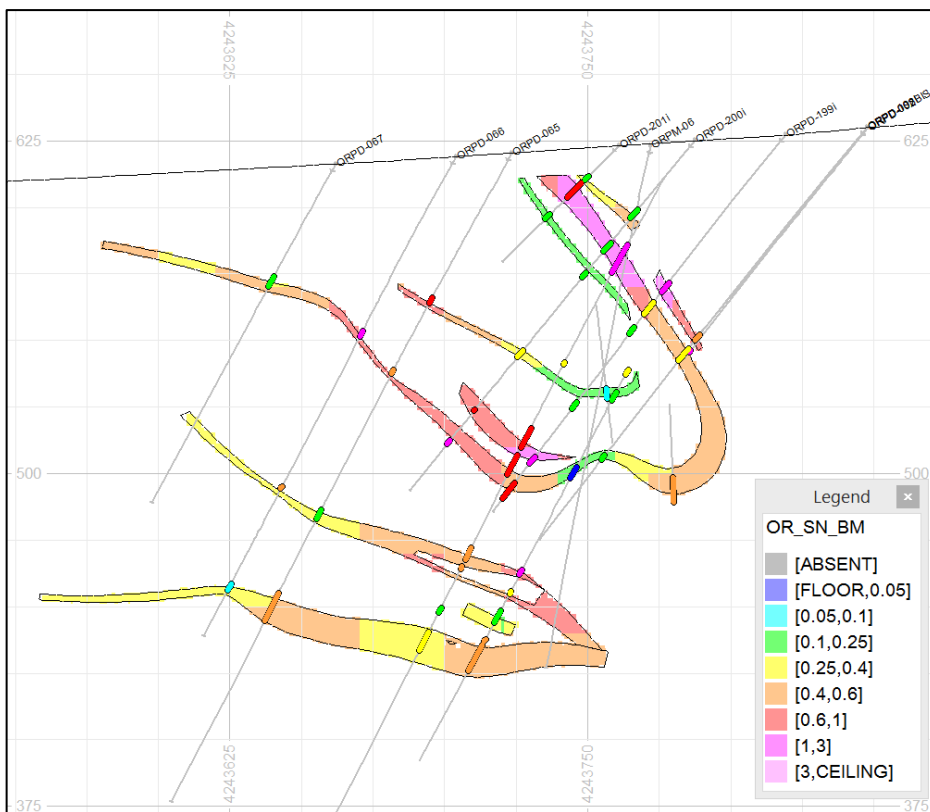
DENSITY - GROUP 100

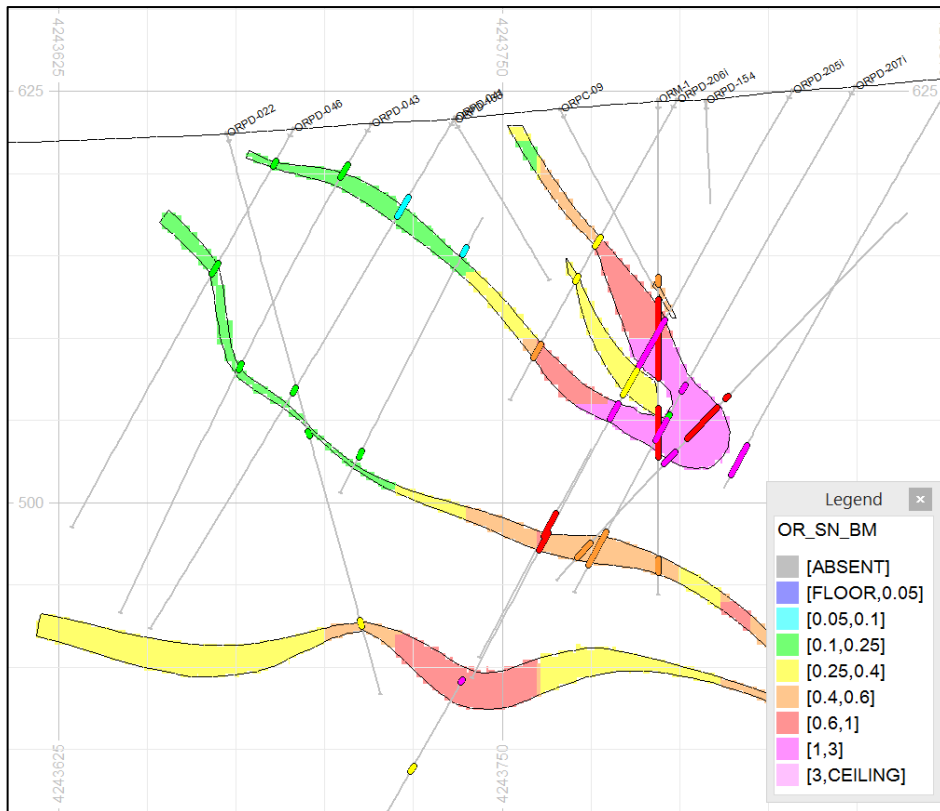


DENSITY - GROUP 100



### MINERALISATION DOMAINS – 2D Sectional Visual Validation for Sn%

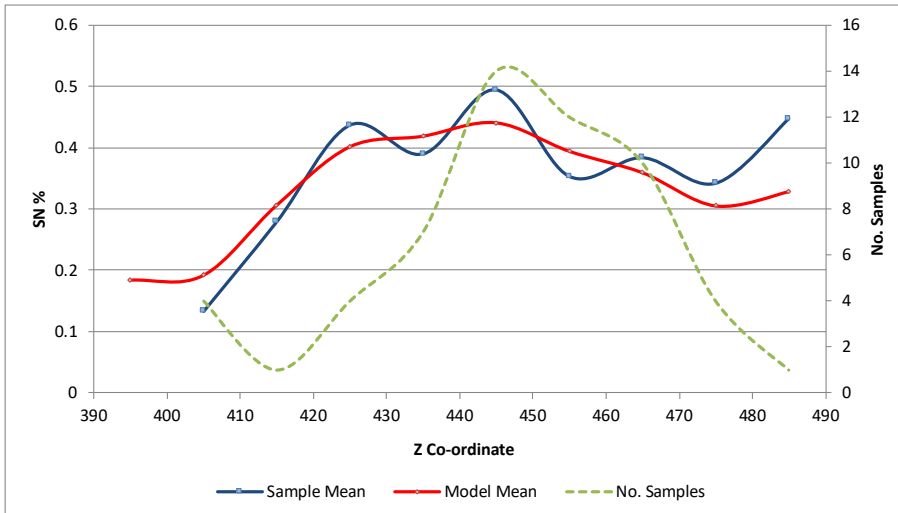
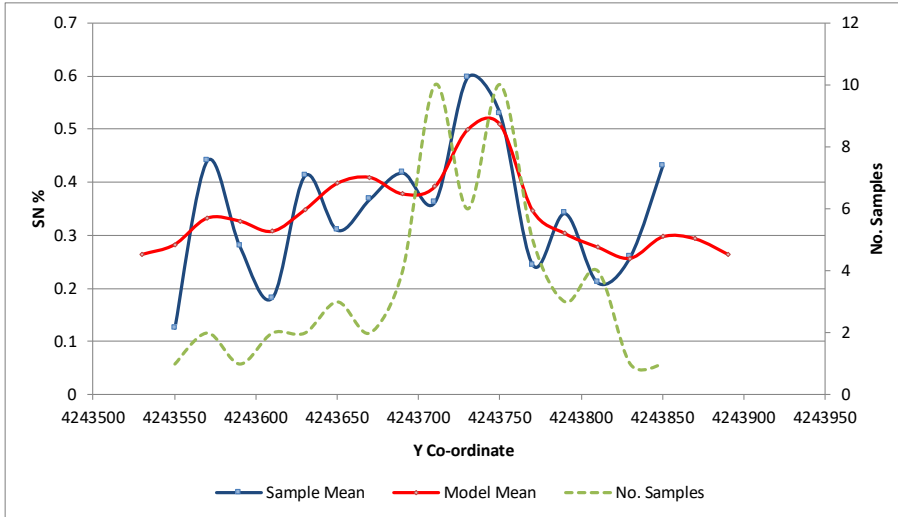
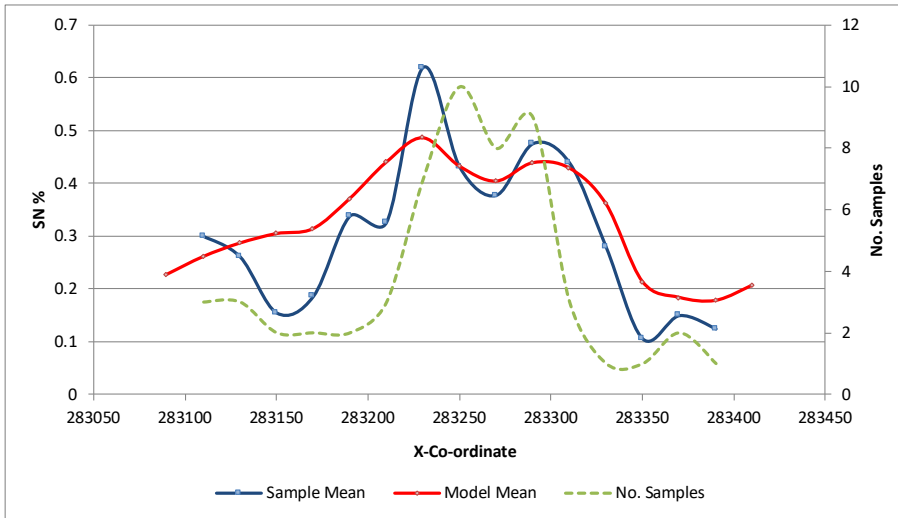




**APPENDIX**  
**D VALIDATION PLOTS**

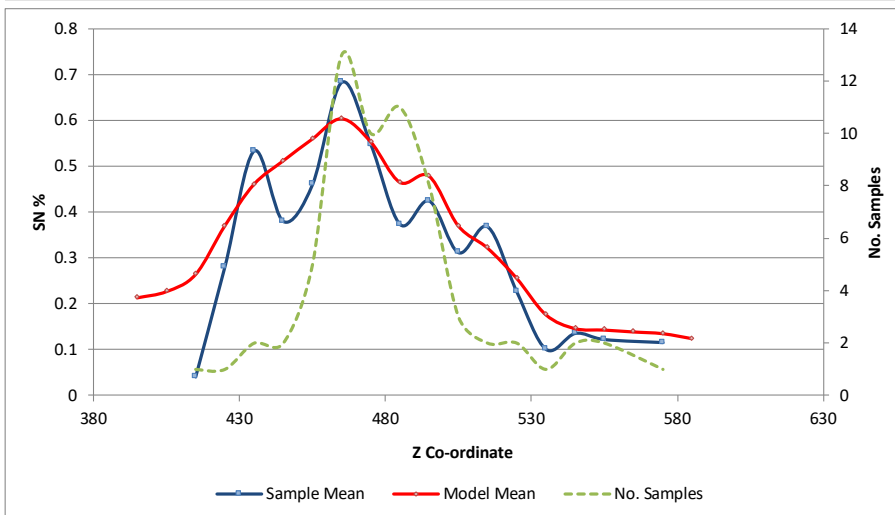
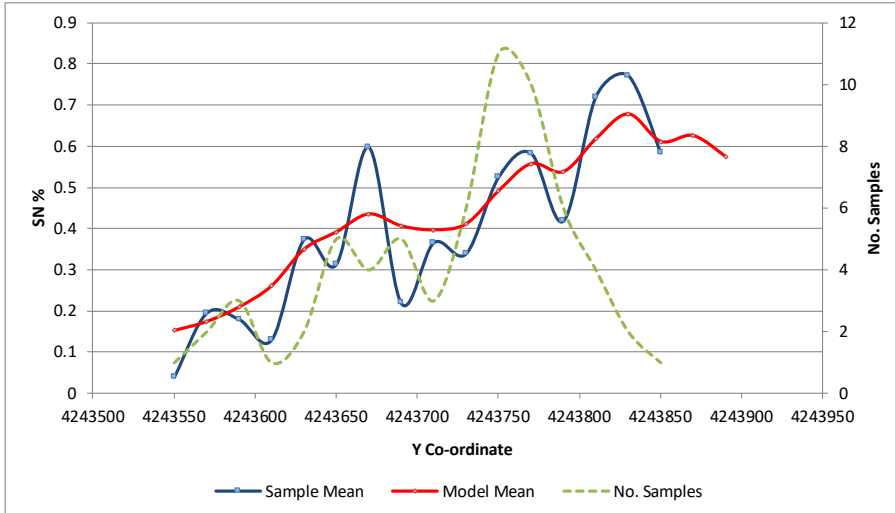
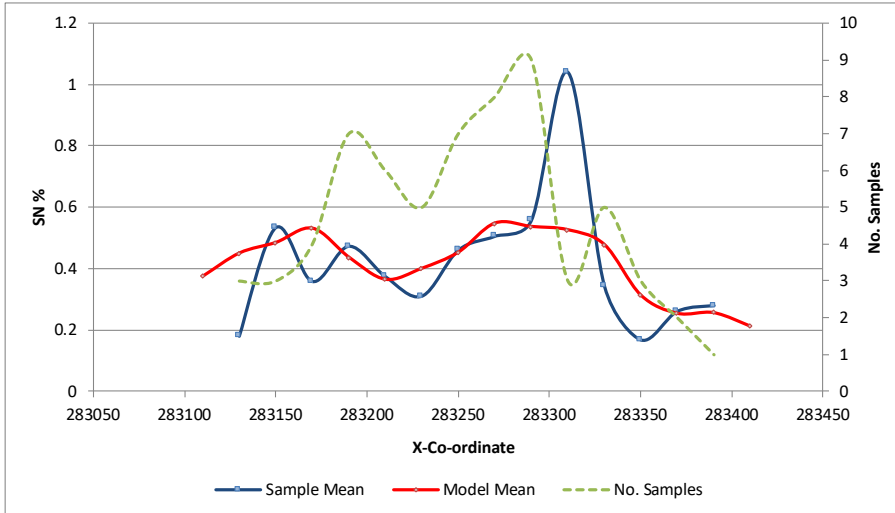
**MINERALISATION DOMAIN GROUP 100**

**SN – KZONE 1**

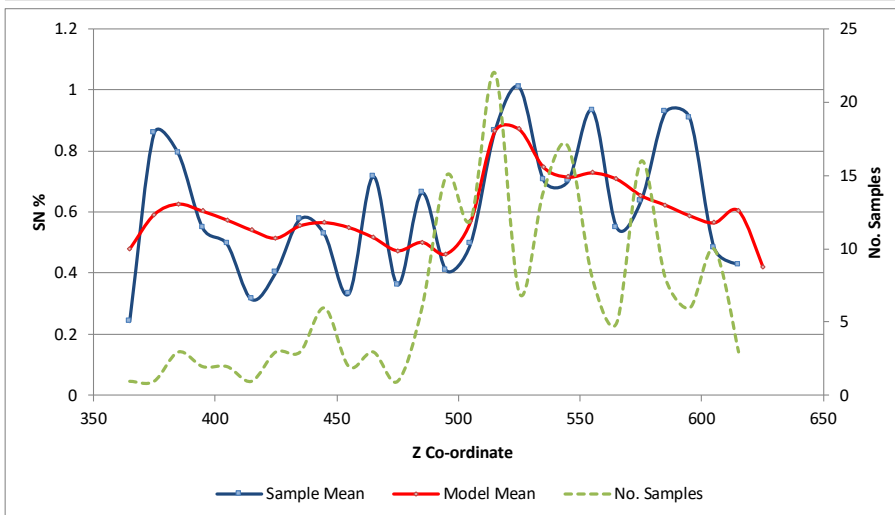
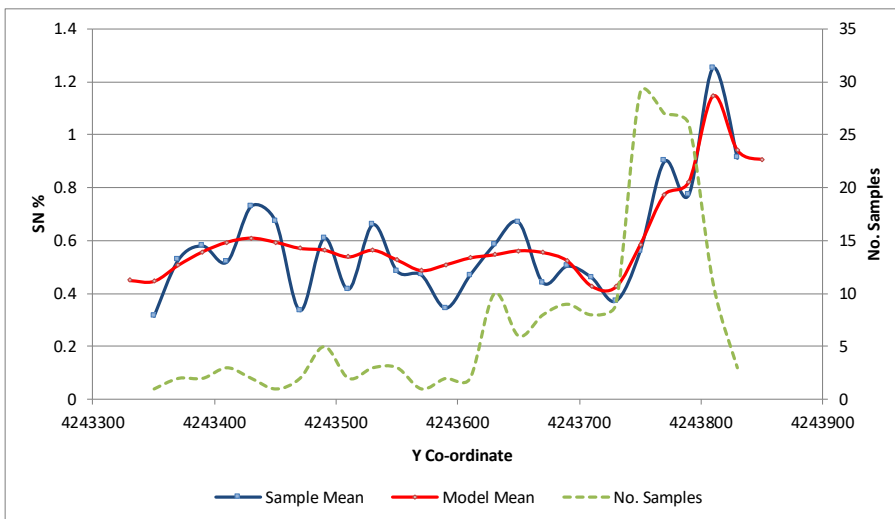
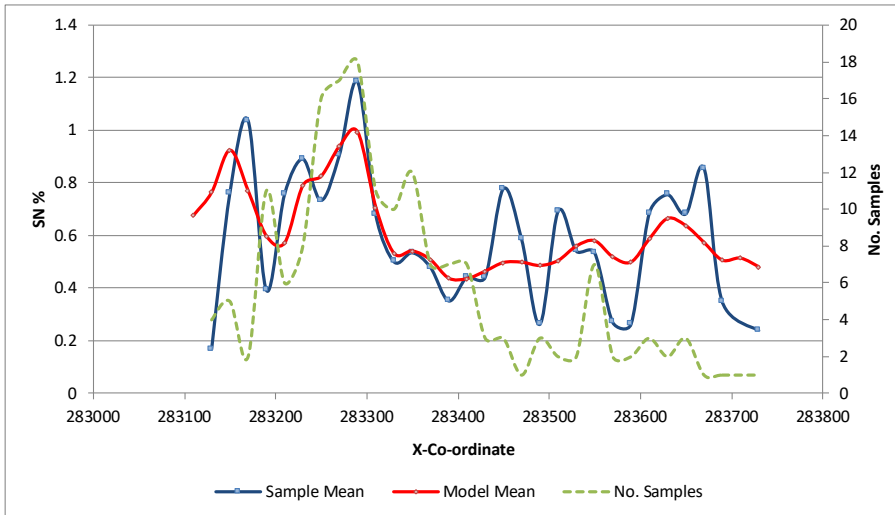




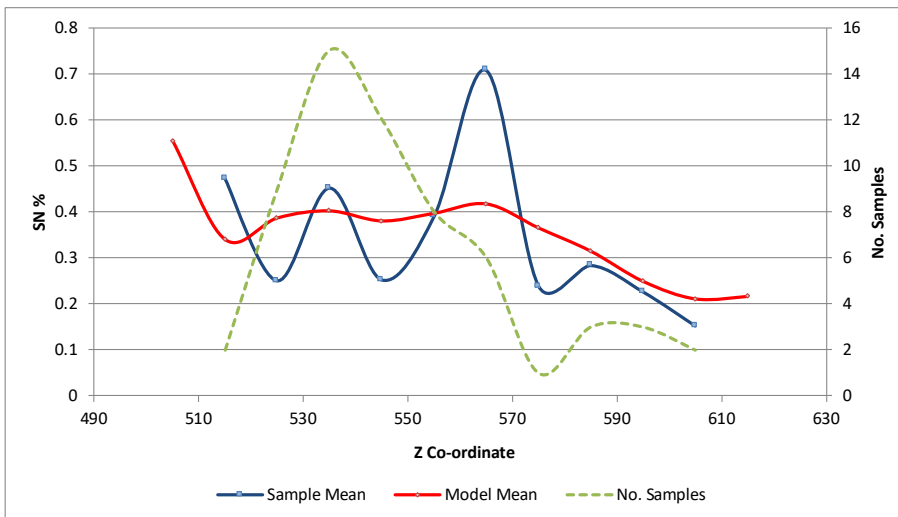
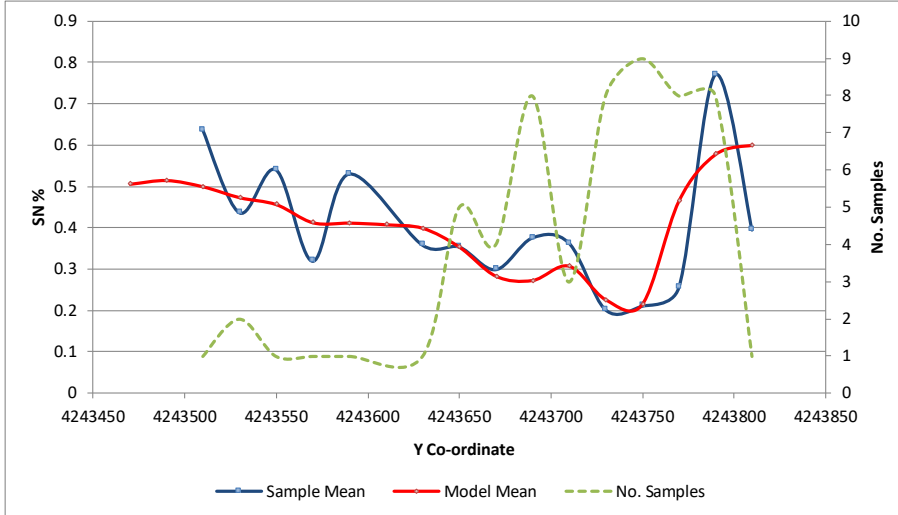
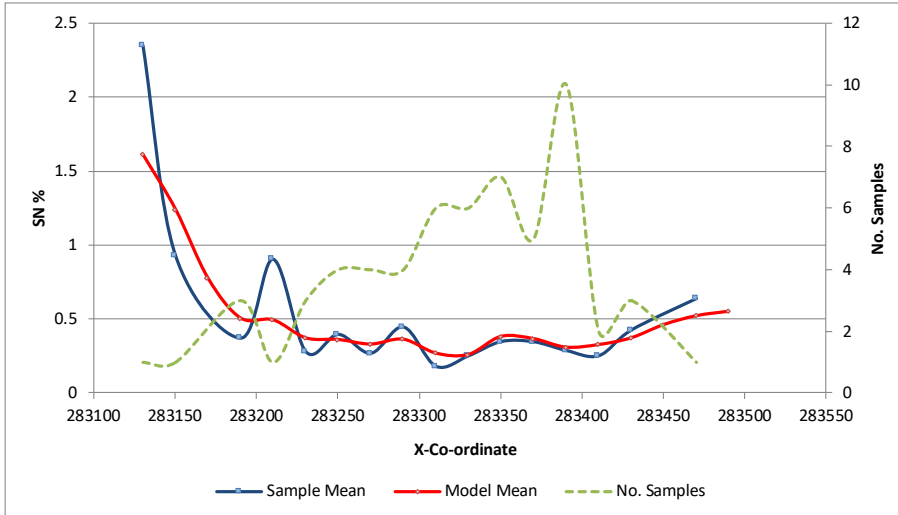
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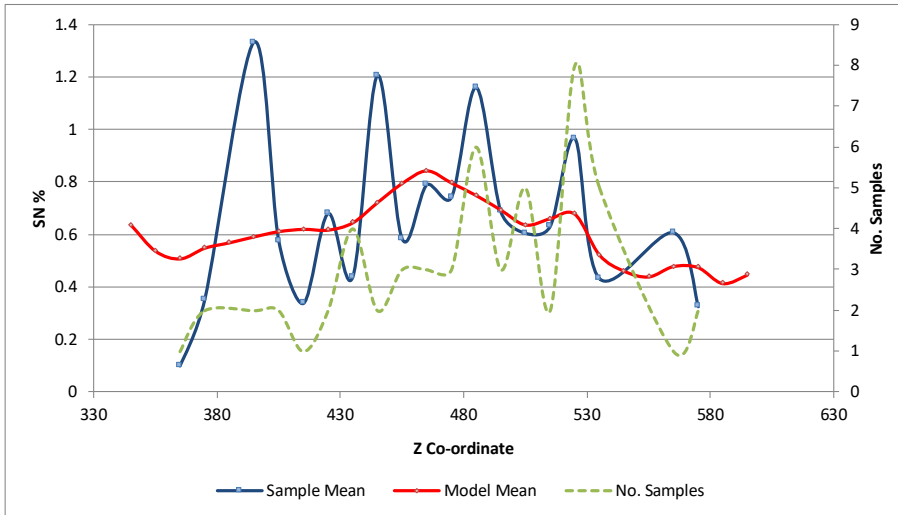
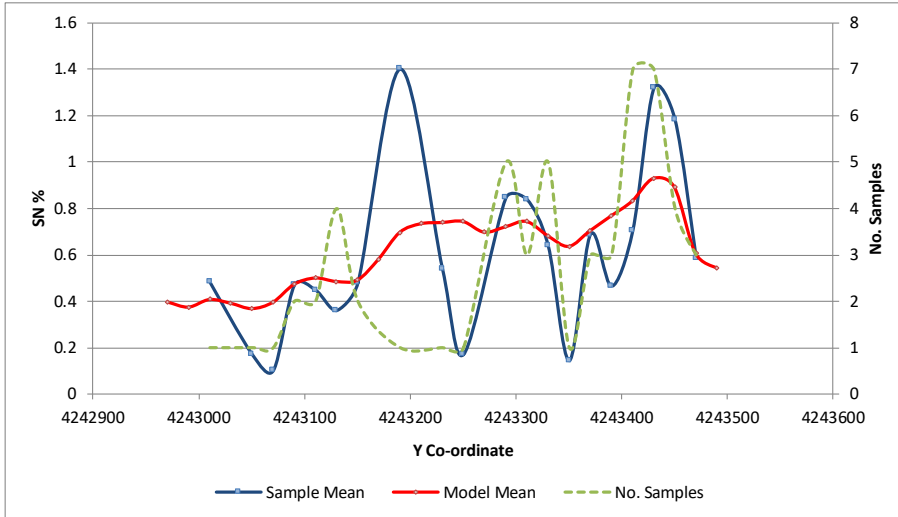
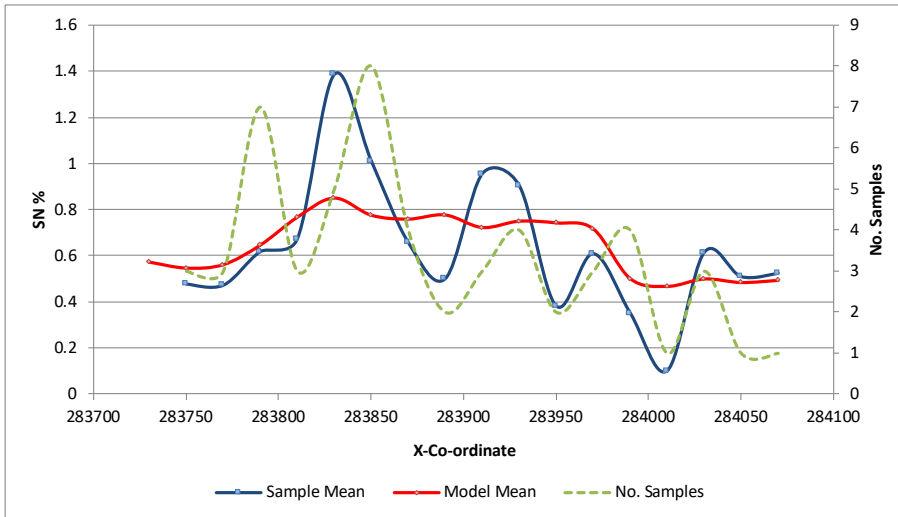
SN – KZONE 10



SN – KZONE 13



### SN – KZONE 14



**APPENDIX**  
**E VERTICAL PROFILE ANALYSIS**

**Vertical Profile Analysis for the Oropesa Project above a 0.15% Sn cut-off**

Elevation (m RL)	Measured and Indicated			Inferred		
	Tonnes (kt)	Tin		Tonnes (kt)	Tin	
		% Sn	Metal (Sn t)		% Sn	Metal (Sn t)
>620	3	0.42	10	4	1	25
610 to 620	18	0.61	110	49	0.50	250
600 to 610	49	0.71	350	78	0.47	365
590 to 600	110	0.56	615	100	0.45	450
580 to 590	136	0.53	715	103	0.46	470
570 to 580	150	0.55	820	112	0.49	555
560 to 570	187	0.58	1,080	117	0.52	610
550 to 560	316	0.52	1,640	131	0.51	670
540 to 550	400	0.49	1,975	145	0.52	750
530 to 540	477	0.54	2,565	122	0.52	640
520 to 530	616	0.67	4,125	120	0.49	585
510 to 520	597	0.71	4,245	111	0.46	515
500 to 510	575	0.56	3,235	117	0.44	510
490 to 500	524	0.51	2,665	136	0.52	715
480 to 490	489	0.54	2,640	177	0.65	1,150
470 to 480	533	0.55	2,920	110	0.40	440
460 to 470	515	0.54	2,775	132	0.41	535
450 to 460	594	0.51	3,020	197	0.44	865
440 to 450	694	0.51	3,535	158	0.51	805
430 to 440	600	0.50	2,975	224	0.50	1,130
420 to 430	384	0.47	1,805	110	0.59	655
410 to 420	273	0.49	1,345	95	0.63	595
400 to 410	323	0.49	1,595	101	0.62	635
390 to 400	322	0.55	1,775	97	0.60	580
380 to 390	218	0.59	1,290	89	0.60	540
370 to 380	140	0.53	745	98	0.61	600
360 to 370	73	0.41	305	102	0.57	580
350 to 360	21	0.34	75	53	0.62	325
340 to 350	-	-	-	15	0.64	95

**Vertical Profile Analysis for the Oropesa Project above a 0.2% Sn cut-off**

Elevation (m RL)	Measured and Indicated			Inferred		
	Tonnes (kt)	Tin		Tonnes (kt)	Tin	
		% Sn	Metal (Sn t)		% Sn	Metal (Sn t)
>620	3	0.42	10	4	1	25
610 to 620	17	0.64	105	47	0.52	245
600 to 610	42	0.80	340	73	0.49	355
590 to 600	98	0.61	595	100	0.45	450
580 to 590	118	0.58	685	103	0.46	470
570 to 580	139	0.57	800	112	0.49	555
560 to 570	183	0.58	1,070	112	0.53	600
550 to 560	308	0.53	1,625	124	0.53	660
540 to 550	387	0.50	1,955	136	0.54	735
530 to 540	471	0.54	2,555	121	0.53	635
520 to 530	613	0.67	4,120	120	0.49	585
510 to 520	596	0.71	4,240	111	0.46	515
500 to 510	572	0.56	3,230	117	0.44	510
490 to 500	519	0.51	2,655	136	0.52	715
480 to 490	484	0.54	2,630	177	0.65	1,150
470 to 480	522	0.56	2,900	110	0.40	440
460 to 470	505	0.55	2,755	132	0.41	535
450 to 460	579	0.52	2,995	197	0.44	865
440 to 450	692	0.51	3,535	158	0.51	805
430 to 440	600	0.50	2,975	224	0.50	1,130
420 to 430	384	0.47	1,805	110	0.59	655
410 to 420	266	0.50	1,335	95	0.63	595
400 to 410	287	0.53	1,530	101	0.62	635
390 to 400	300	0.58	1,740	97	0.60	580
380 to 390	218	0.59	1,290	89	0.60	540
370 to 380	140	0.53	745	98	0.61	600
360 to 370	73	0.41	305	102	0.57	580
350 to 360	21	0.34	75	53	0.62	325
340 to 350	-	-	-	15	0.64	95

**Vertical Profile Analysis for the Oropesa Project above a 0.25% Sn cut-off**

Elevation (m RL)	Measured and Indicated			Inferred		
	Tonnes (kt)	Tin		Tonnes (kt)	Tin	
		% Sn	Metal (Sn t)		% Sn	Metal (Sn t)
>620	3	0.42	10	4	1	25
610 to 620	16	0.65	105	45	0.53	240
600 to 610	38	0.86	330	70	0.50	350
590 to 600	92	0.63	580	88	0.48	425
580 to 590	111	0.60	670	90	0.49	440
570 to 580	129	0.60	775	101	0.53	530
560 to 570	173	0.60	1,045	110	0.54	595
550 to 560	300	0.53	1,605	117	0.55	645
540 to 550	387	0.50	1,950	128	0.56	715
530 to 540	457	0.55	2,520	108	0.56	610
520 to 530	604	0.68	4,100	110	0.51	560
510 to 520	575	0.73	4,190	111	0.46	510
500 to 510	552	0.58	3,180	117	0.44	510
490 to 500	509	0.52	2,630	136	0.52	715
480 to 490	478	0.55	2,620	177	0.65	1,150
470 to 480	502	0.57	2,860	108	0.40	435
460 to 470	492	0.55	2,725	132	0.41	535
450 to 460	566	0.52	2,965	195	0.44	865
440 to 450	667	0.52	3,480	156	0.51	800
430 to 440	594	0.50	2,960	224	0.50	1,130
420 to 430	379	0.47	1,795	110	0.59	655
410 to 420	250	0.52	1,300	95	0.63	595
400 to 410	255	0.57	1,460	101	0.62	635
390 to 400	287	0.60	1,715	97	0.60	580
380 to 390	218	0.59	1,290	89	0.60	540
370 to 380	140	0.53	745	98	0.61	600
360 to 370	71	0.42	295	97	0.59	570
350 to 360	21	0.34	75	53	0.62	325
340 to 350	-	-	-	15	0.64	95