26 September 2018

SUBSTANTIAL INCREASE IN CLEVELAND OPEN PIT PROJECT RESOURCES FOLLOWING REVISED JORC STUDY

Highlights

- **Cleveland Open Pit Project Resource tonnes increase by 128% to 1.89mt @ 0.95% Sn and 0.34% Cu**
- **Open Pit Resource contained tin increased by 168% to 17,955 tonnes and contained copper by 164% to 6,426 tonnes**
- **Revised JORC Hard Rock Combined Open Pit and Underground Resource of 7.47mt @ 0.75% Sn and 0.3% Cu for 56,100 tonnes of contained tin and 22,200 tonnes of contained copper**
- **Total JORC Hard Rock Resource contained tin increased by 15.8% and contained copper increased by 20.0%**
- **Total combined hard rock and tailings resources contain 67,100t of tin and 27,200t of copper.**

Elementos Limited (ASX: ELT) ("Elementos" or the "Company") is pleased to report the results from an update to the JORC Resource Estimate for the Cleveland tin-copper and tungsten projects in Tasmania. The results are reported in accordance with JORC Code (2012) and was independently prepared by Measured Group Consultants. The 2018 JORC Resource Estimate is shown in Table 1.

The review was undertaken following the recent completion of the diamond drilling exploration programme at Cleveland that was specifically targeting extensions and limits to the potential open pit resources. The open pit resource potential has been assessed to a depth of 150m from surface with pit boundaries positioned with no impact on existing natural water courses and minimal interference with any future underground re-development.

The significant upgrade in the revised JORC Resource for the Cleveland Project can be viewed in Table 2. The open pit resource contained tin content has increased by 168% from the previous estimate announced in 2015. The mineral resource upgrade resulted from modelling near surface ore lenses that were not included in the previous resource estimate, increased resources resulting from the recently completed drilling programme and reducing the dilution along the margins of the ore lenses. The Cleveland ore body remains open at depth, along strike and down dip from the currently defined ore lenses.

Chris Creagh, CEO of Elementos commented "The definition of a considerably larger open pit tin and copper resource at Cleveland is an extremely positive outcome from the exploration drilling programme that was completed in the second quarter of 2018. Open pit mining optimisation studies will commence as soon as possible to determine what is expected to be a significantly positive impact on the development potential of a combined open pit mining and tailings retreatment project and underground mining re-development at Cleveland."

Open Pit Tin-Copper Mineral Resource - September 2018 (at 0.35% Sn cut-off)					
NOTE: this Open Pit Tin-Copper Mineral Resource is a sub-set of the Total Tin-Copper Mineral Resource noted below					
Category	Tonnage	Sn Grade	Contained Sn	Cu Grade	Contained Cu
Indicated	1.73 Mt	0.93%	16,100t	0.33%	5,700t
Inferred	0.16 Mt	1.18%	1,900t	0.49%	800t
TOTAL	1.89 Mt	0.95%	18,000t	0.34%	6,500t
Table subject to rounding errors; Sn = tin, Cu = copper					

Underground Tin-Copper Mineral Resource - September 2018 (at 0.35% Sn cut-off)					
NOTE: this Underground Tin-Copper Mineral Resource is a sub-set of the Total Tin-Copper Mineral Resource noted below					
Category	Tonnage	Sn Grade	Contained Sn	Cu Grade	Contained Cu
Indicated	4.50 Mt	0.68%	30,600t	0.29%	13,000t
Inferred	1.08 Mt	0.70%	7,500t	0.25%	2,700t
TOTAL	5.58 Mt	0.68%	38,100t	0.28%	15,700t
Table subject to rounding errors; Sn = tin, Cu = copper					

Total Tin-Copper Mineral Resource - September 2018 (at 0.35% Sn cut-off)					
Category	Tonnage	Sn Grade	Contained Sn	Cu Grade	Contained Cu
Indicated	6.23 Mt	0.75%	46,700t	0.30%	18,700t
Inferred	1.24 Mt	0.76%	9,400t	0.28%	3,500t
TOTAL	7.47 Mt	0.75%	56,100t	0.30%	22,200t
Table subject to rounding errors; Sn = tin, Cu = copper					

Tailings Ore Reserve - September 2018 (at 0% Sn cut-off)					
Category	Tonnage	Sn Grade	Contained Sn	Cu Grade	Contained Cu
Probable	3.7 Mt	0.29%	11,000t	0.13%	5,000t
Table subject to rounding errors; Sn = tin, Cu = copper					

**This information was prepared and first disclosed in 2014 under the JORC Code 2012. It has not been updated since on the basis that the information has not materially changed since it was last reported.*

Table 1. 2018 JORC Resource Estimate for the Cleveland Tin-Copper (tungsten) Project

Total Tin-Copper Mineral Resource (at 0.35% Sn cut-off)					
	Tonnes	Sn Grade	Contained Sn	Cu Grade	Contained Cu
	Tonnage	Sn Grade	Contained Sn	Cu Grade	Contained Cu
2014 JORC	7.44Mt	0.65%	48,390t	0.25%	18,610t
2018 JORC	7.47 Mt	0.75%	56,030t	0.30%	22,410t
Difference	0.03 Mt	0.10	7,640t	0.05	3,800t
Change	0.35%	15.4%	15.8%	20.0%	20.4%

Table 2. Comparison between 2014 JORC estimate and 2018 JORC estimate.

Open Pit Tin-Copper Mineral Resource - September 2018 (at 0.35% Sn cut-off)					
	Tonnes	Sn Grade	Contained Sn	Cu Grade	Contained Cu
	Tonnage	Sn Grade	Contained Sn	Cu Grade	Contained Cu
2015 Estimate	0.83Mt	0.81%	6,707t	0.28%	2,324t
2018 Estimate	1.89 Mt	0.95%	17,955t	0.34%	6,426t
Difference	1.06Mt	0.14	11,248	0.05	3,800t
Change	128%	17.3%	168%	17.9%	164%

Table 3. Comparison between 2015 Open Pit Mineral Resource and 2018 Open Pit Mineral Resource

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CAUTIONARY STATEMENTS

Forward-looking statements

This document may contain certain forward-looking statements. Such statements are only predictions, based on certain assumptions and involve known and unknown risks, uncertainties and other factors, many of which are beyond the company's control. Actual events or results may differ materially from the events or results expected or implied in any forward-looking statement.

The inclusion of such statements should not be regarded as a representation, warranty or prediction with respect to the accuracy of the underlying assumptions or that any forward-looking statements will be or are likely to be fulfilled. Elementos undertakes no obligation to update any forward-looking statement to reflect events or circumstances after the date of this document (subject to securities exchange disclosure requirements).

The information in this document does not take into account the objectives, financial situation or particular needs of any person or organisation. Nothing contained in this document constitutes investment, legal, tax or other advice.

The Australian Securities Exchange has not reviewed and does not accept responsibility for the accuracy or adequacy of this release.

COMPETENT PERSONS STATEMENT

The information in this report that relates to Exploration Results and Mineral Resources is based on information compiled by Chris Grove, who is a full-time employee of Measured Group Consulting. Mr Grove has been engaged by Elementos as an Independent Consultant to prepare a Mineral Resource estimate and supporting documentation for the Cleveland Tin-Copper Project.

Chris Grove has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined by the 2010 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Grove is a Member of the Australasian Institute of Mining and Metallurgy. Chris Grove consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

MINERAL RESOURCES AND REPORTING

Mineral Resources, which are not Ore Reserves, do not have demonstrated economic viability. Economic, environmental, permitting, legal, title taxation, socio-political, marketing or other relevant issues may materially affect the estimate of Mineral Resources.

Appendix One – Mineral Resources Report Summary

Resource Overview

Cleveland was an underground tin and copper mine operated by Aberfoyle Limited between 1968 and 1986. Geological records exist from the Aberfoyle operations to allow for the estimation of Mineral Resources and reporting of Mineral Resources in accordance with the JORC Code 2012. Elementos completed an initial JORC Resource estimation for Cleveland in accordance with the JORC Code 2012 in March 2014.

Geological Interpretation

The Cleveland tin-copper mineralisation occurs as a series of separate semi-massive sulphide lenses that have formed by the hydrothermal replacement of carbonate rich sediments. The tin-copper mineralisation consists of pyrrhotite, pyrite, cassiterite and chalcopyrite, with minor amounts of stannite, fluorite, arsenopyrite, quartz and carbonate. Sulphide minerals comprise approximately 20- 30% of the mineralised zones. Interpretation of the ore lens boundaries was made using tin and copper assay data and geological logging.

The Cleveland tin-copper mineralisation is considered to be associated with the intrusion of the Devonian-Carboniferous Meredith Granite, with gravity modelling suggesting the granite is located approximately 4 kilometres below the known resource.

The semi-massive sulphide lenses are geologically similar to the tin bearing semi-massive to massive sulphide mineralisation at the Renison Bell and Mt Bischoff deposits.

Sampling and Drilling

A total of 2059 diamond drill holes have been recorded by Aberfoyle. 1910 diamond drill holes from the Aberfoyle data base were used in the JORC resource estimation. Verification of recorded Aberfoyle sample assay data was carried out with the collection and re-assay of 111 samples from 87 Aberfoyle drill cores. This process produced excellent reconciliations to the original work and confirmed the reliability of the tin and copper sampling and assaying methods employed by Aberfoyle. More than 75,000 assay points from the Aberfoyle data set for tin and copper have been utilised in the assessment of the Cleveland resource. Diamond drill collar locations, drill hole surveys, assays, lode intercepts, historical mining voids and underground development data have all been converted to GDA94 Zone 55 datum. Topographical data has been used from a LIDAR survey carried out in 2013.

A total of 19 exploration diamond drill holes have been completed by Elementos since the announcement of the previous JORC resource statement in 2014. Half core samples of the mineralised zones were submitted to ALS Laboratories in Burnie, Tasmania for analysis by XRF and ICPMS. A QA/QC programme, including standards and blanks samples was used in the programme to verify drill hole assay data.

Mineral Resources

The resources have been classified by considering several aspects including the search criteria, the variography, the drill hole and sample density, geological logging and sampling and assay issues. Parts of the deposit, where drilling intensity was adequate to reasonably reliably define the lens shapes and extents, and to indicate reasonable grade continuity, were classified as Indicated Mineral Resources with the balance classified as Inferred Mineral Resources. Additional drilling in 2018 around the extents and within areas previously classified as Inferred status has increased confidence in the resource. Tin grades were estimated by ordinary kriging.

A cut-off grade of 0.35% has been used to define the resources. At a tin price of A$26,500 per tonne this implies that material can be treated at a profit above that cut-off grade from an open pit operation with relatively modest recoveries from a conventional gravity, sulphide and cassiterite flotation processing circuit.

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Inferred	1.24 Mt	0.76%	9,400t	0.28%	3,500t
	7.47 Mt	0.75%	56,100t	0.30%	22,200t
Table subject to rounding errors; Sn = tin, Cu = copper					

Table 1. Cleveland 2018 Open pit and underground JORC resources

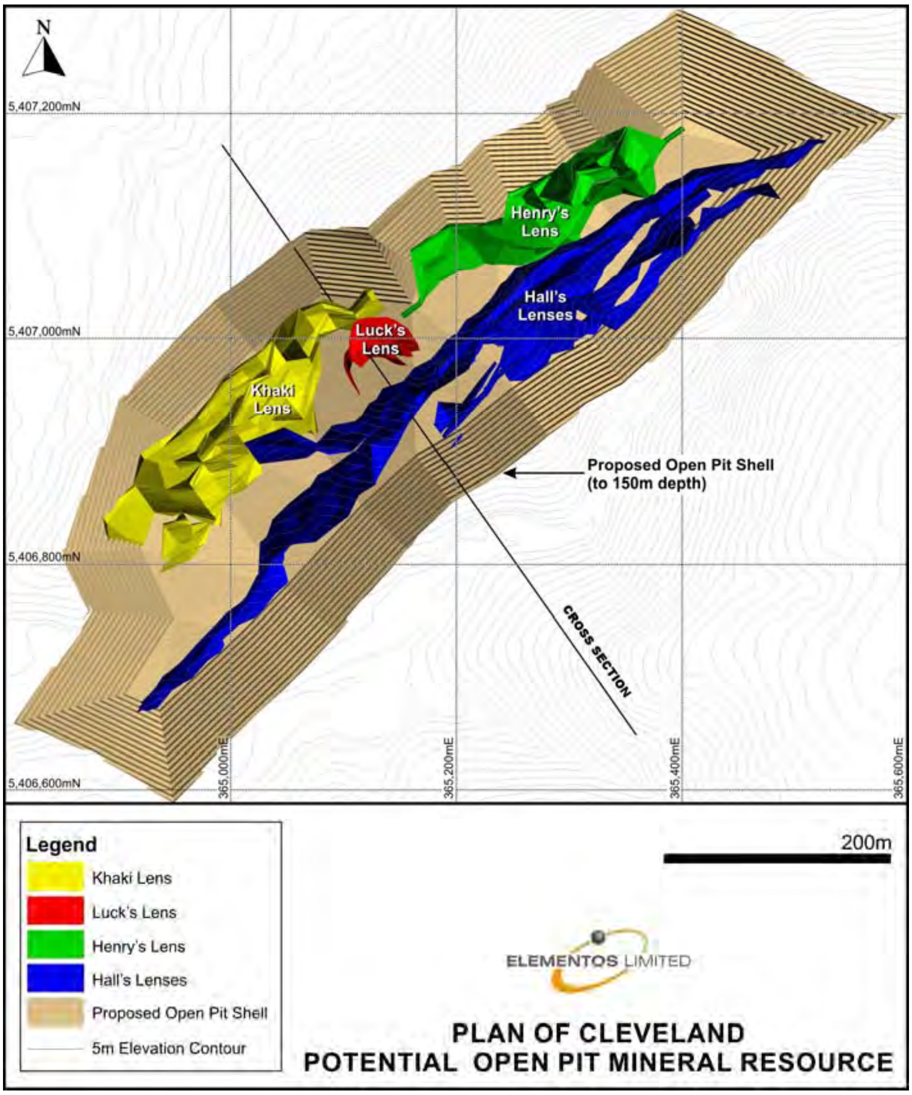

Figure 1. Plan of Potential Cleveland Open Pit Resource

ELEMENTOS LIMITED

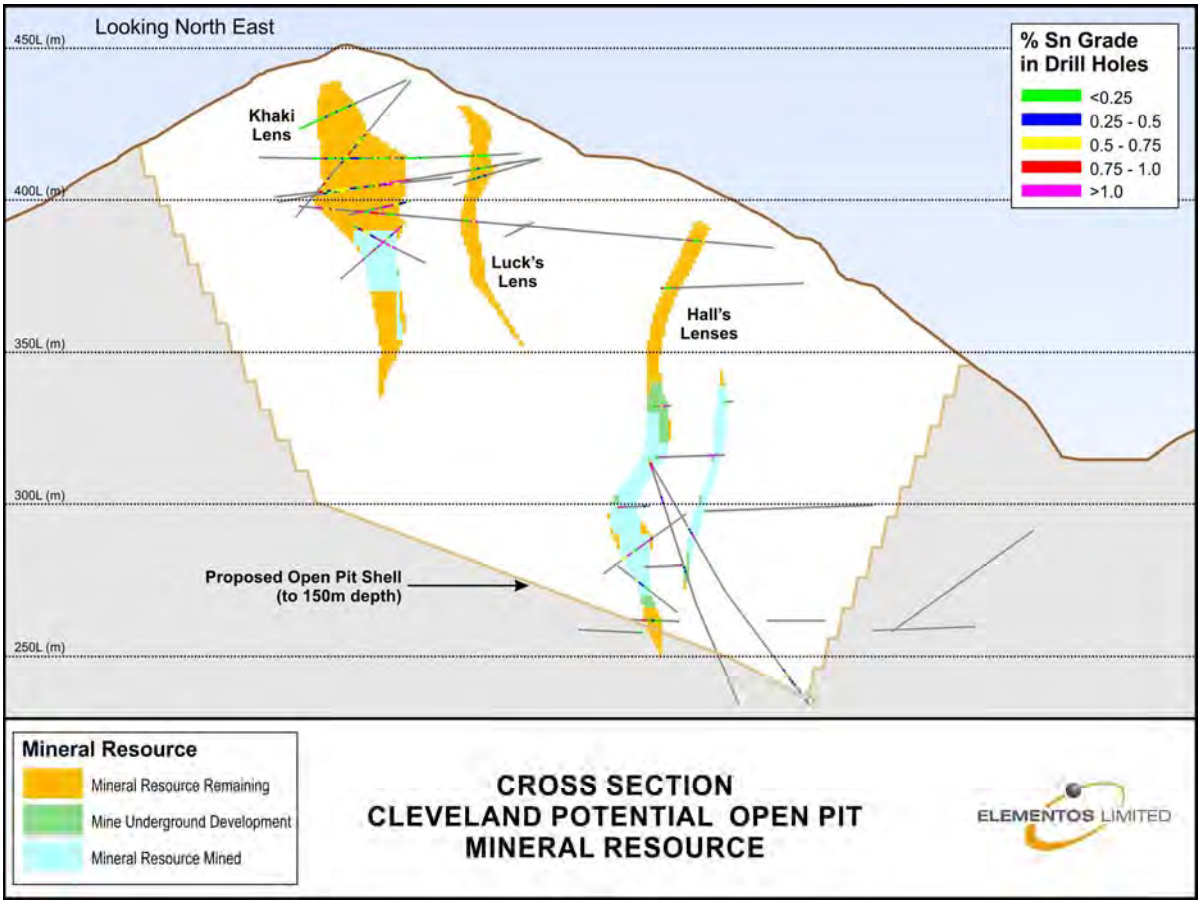

Figure 2. Cross Section of Cleveland Potential Open Pit Resource

Appendix Two – Geology and Resource Estimate Report – Cleveland Project, Elementos Ltd.

Geology and Resource Estimate Report

Cleveland Project
Elementos Ltd

Report No: MG2018_07

September 2018

Document Issue and Approvals

Document Information

Project:	Cleveland Project
Document Number:	MG2018_07
Title:	Geology and Resource Estimate Report
Client:	Elementos Ltd
Date:	September 2018

Contributors

	Name	Position	Signature	Date
Prepared by:	Chris Grove	Principal Geologist		20/09/2018
Reviewed by:	Lyon Barrett	Managing Director		20/09/2018
Approved by:				

Distribution

Company	Attention	Hard Copy	Electronic Copy
Elementos Ltd	Chris Creagh	2	Yes

PURPOSE OF RESOURCE STATEMENT

Measured Group Pty Ltd (MG) has prepared a report on the Mineral Resources of the Cleveland Project for the Directors of Elementos Ltd (Elementos). The Mineral Resources are estimated as at September 2018.

The purpose of the report is to provide for Resources, an objective assessment and estimate of the Mineral Resources contained within the Cleveland Project that is compliant with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, 2012 edition (The JORC Code).

COMPETENT PERSON STATEMENT

The information in this report that relates to Mineral Resources is based on information compiled and reviewed by Mr Chris Grove, who is a Member of the Australasian Institute of Mining and Metallurgy and is a Principal Geologist employed by Measured Group Pty Ltd.

Chris Grove has more than 20 years' experience in the estimation of Mineral Resources both in Australia and overseas. This expertise has been acquired principally through exploration and evaluation assignments at operating mines and exploration areas. This experience is more than adequate to qualify him as a Competent Person for Mineral Resource Reporting as defined in the 2012 edition of the JORC Code.

....

Chris Grove, B. App Sci., MAusIMM 310106

20th September 2018

The estimates of Mineral Resources for the Cleveland Project presented in this report have been carried out in accordance with the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" (2012 Edition) prepared by the Joint Ore Reserves Committee of the Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Minerals Council of Australia.

EXECUTIVE SUMMARY

Measured Group Pty Ltd (Measured) was commissioned by Elementos Ltd (Elementos) to complete an estimate of Mineral Resources for the Cleveland Tin Project (the project), located in Western Tasmania, Australia.

The Cleveland mine and associated tenements were acquired by Elementos in 2013, from Lynch Mining, having previously been operated by Aberfoyle Limited between 1968 and 1986. The operations produced 5.6 million tonnes @ 0.68% Sn and 0.28% Cu.

Measured completed a review of data provided by Elementos, including the geological database, QAQC procedures and results, laboratory results, topographic surfaces and geological interpretations.

Measured developed a new geological model that includes approximately 1,675 m of new drilling completed during 2017 and 2018, which has led to a significant update of geological interpretations and completely new wireframing of interpreted tin-copper zones.

This recent work has resulted in an updated Mineral Resource estimate for Cleveland, which includes a total estimate of 7.47 million tonnes at 0.75% Tin and 0.30 % Copper for 56,100 tonnes of contained Tin metal and 22,200 tonnes of contained copper metal (see Table 1-1).

A reconciliation with the previous estimate of February 2014, shows an increase in Tin grade of 15.4% and a 15.8% in total contained Tin. The total tonnes within the defined resource increased by 0.35%.

There is no change to the Mineral Resource Estimates previously calculated for the Tungsten Resource or the Tailings Resource.

Table 1-1: Cleveland Mineral Resource Estimate September 2018.

Cleveland Tin and Copper Mineral Resources September 2018					
0.35% Sn cut-off					
Classification	Tonnes (Mt)	Sn (%)	Contained Sn (kt)	Cu (%)	Contained Cu (kt)
Indicated	6.23	0.75	46.7	0.30	18.7
Inferred	1.24	0.76	9.4	0.28	3.5
TOTAL	7.47	0.75	56.1	0.30	22.2

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1. Introduction

The Geology Report and Resource estimate on the Cleveland Project at Luina in Western Tasmania has been prepared by Measured Group Pty Ltd (MG) in conjunction with Elementos Pty Ltd (Elementos) personnel.

The purpose of the report is to document the geology of Cleveland Project holdings (EL7/2005) and to support an estimate of Mineral Resources based on information available from historical data and 2017/18 drilling campaigns carried out by Elementos. This report was prepared in accordance with the requirements of the Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code 2012 edition).

The Cleveland Project is 100% owned by Elementos. It is located at Luina 80 km SW of the town of Burnie and 30 km due west of the town of Waratah in Western Tasmania as shown in Figure 2-1.

Much of the information available for this report was completed by Aberfoyle and associated parties over the period 1968 to 1986. There is a repository of data and information regarding the Cleveland Mine which was accumulated by Aberfoyle and is now held at the offices of the Burnie Research Lab, 39 River Road, Burnie, Tasmania.

2. Location and Tenure

2.1 Location

The Cleveland mine is located at Luina about 80km from Burnie (see Figure 2-1). Access to the mine is by way of the sealed all-weather road which runs from Burnie through Waratah and Luina to Savage River.

Figure 2-1: Project Location

The former mine infrastructure and the tailings dams lie in the valleys of the Whyte River and Deep Creek.

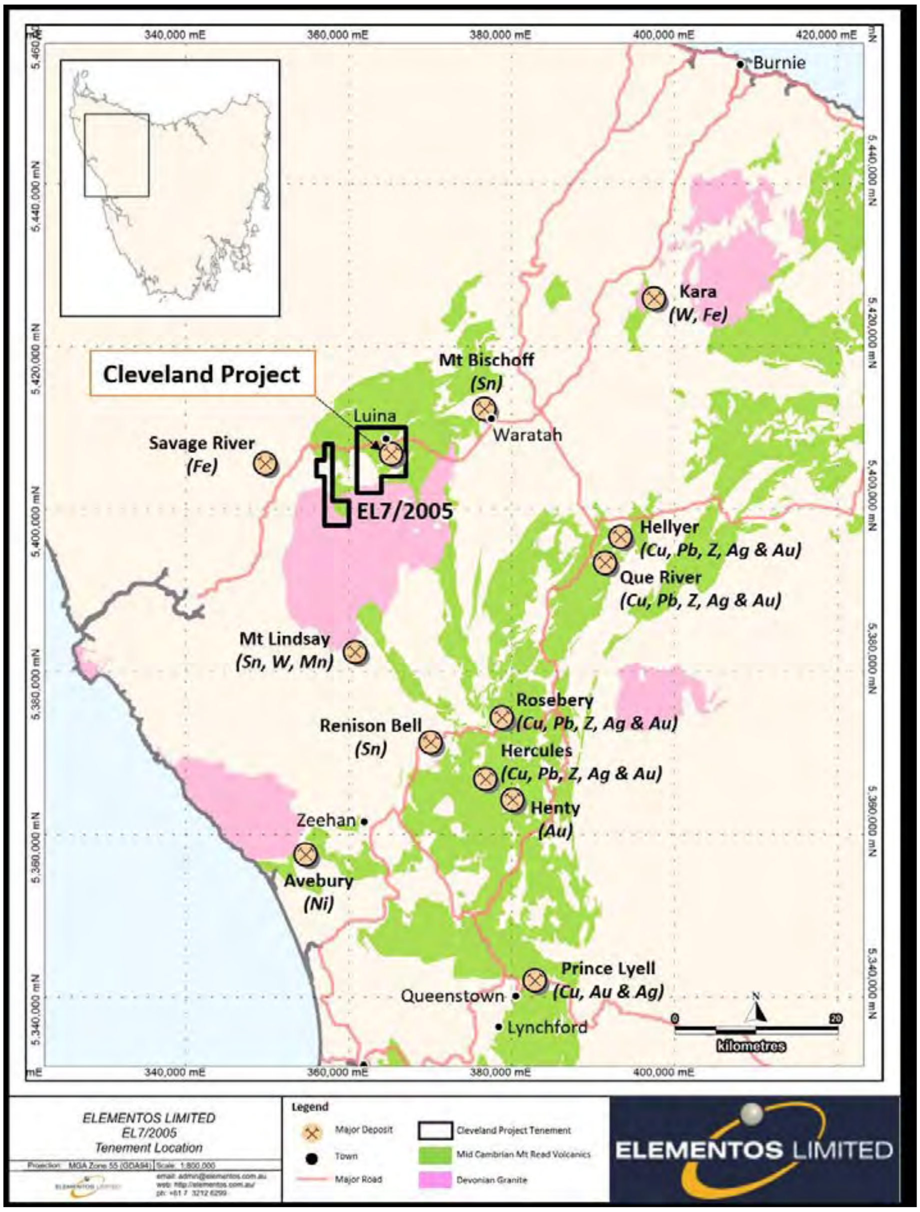
Accessible power runs through the Cleveland Project area.

2.2 Tenure

Exploration Licence 7/2005 was granted to Lynch Mining Pty Ltd on the 30th June 2005 for a period of 5 years. Rockwell Minerals Ltd acquired 100% ownership of EL7/2005 on the 6th of June 2014. Exploration Licence EL9/2006 was granted to Rockwell Minerals Ltd on 21st September 2007. An application was approved for the consolidation of EL7/2005 and EL9/2006 on the 30th of January 2015. EL7/2005 covers 55 square kilometres.

Rockwell Minerals (Tasmania) Pty Ltd is a wholly owned subsidiary of Elementos Limited.

Figure 2-2: Project Boundary



2.3 Topography, Land Use and Climate

The topography around the mine is relatively steep and rugged with elevations ranging from about 300m to over 500m above sea level. The mine was developed beneath Crescent Hill which rises to an elevation of 520m while the former township of Luina, the former mine infrastructure and the tailings dams lie in the valleys of the Whyte River and Deep Creek (see Figure 2-3).

Figure 2-3: Topography near Cleveland Mine

2.4 Environmental Aspects and Management

The exploration program was undertaken in compliance with the Mineral Exploration Code of Practice Edition 5 — 2012.

2.4.1 Land status and the existing leases

The project is located in the Waratah–Wynyard municipal area on Future Potential Production Forest (Crown) land, approximately one kilometre from the Savage River Regional Reserve located to the north and the Meredith Range Regional Reserve located to the south. Mineral prospectivity is a primary value of regional reserves.

The project lies within a strategic prospectivity zone established under the Mining (Strategic Prospectivity Zones) Act 1993. The proposed project is consistent with the intent of Parliament to protect and foster the mining of mineral resources in this area.

2.4.2 Threatened species

No vegetation communities of national (Environment Protection and Biodiversity Conservation Act 1999) or state (Nature Conservation Act 2002) significance were found during surveys of the site and no species listed as threatened on the Tasmanian Threatened Species Protection Act 1995 (TSPA) or the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBCA) were recorded.

The Tasmanian Devil is listed as endangered on both the EPBCA and the TSPA and is likely present within the area based on scats observed during the surveys. Dense wet eucalypt and rainforest, alpine areas, dense wet heath and open grassland all support only low densities of devils. Devils are more abundant in habitats (open eucalypt forests and woodlands, coastal scrub) that support dense populations of their prey (macropods, wombats, possums). Hence the higher slopes of Crescent Ridge are likely to carry some Tasmanian devil habitat.

The spotted-tailed quoll is listed as vulnerable on the EPBCA and rare on the TSPA and is likely present within the area based on scat surveys. Spotted-tail quolls in Tasmania have been recorded occurring in rainforest, tall eucalypt forest and medium eucalypt forest, but occur in highest densities in very wet forests, rainforest and blackwood swamps (Bryant, S. L. and Jackson, J).

In July 2011 a ground-based survey by ECOtas was conducted of suitable habitat surrounding the former mining and processing area. This consisted of a visual assessment from open ground in the Luina/Cleveland mine site area using binoculars and walking to more inaccessible gullies that had suitable nesting habitat. No wedge-tailed eagle nests were located. However, it should be noted that visibility was impeded in some areas due to the thick understory of the forest communities present. Two aerial nest searches were undertaken by helicopter in 2011. No nests were detected during these surveys.

Beddomeia beli (hydrobiid snail) has been noted by the Tasmanian Policy and Conservation Assessment Branch (PCAB) as potentially being present. Potential habitat is described as 'immediate catchment of the stream in which the known locality occurs'. Washington Creek is approximately 4 km from the known locality of this species (Thirteen Mile Creek) and is not within a catchment supporting or likely to support the species (based on a predicted range boundary map provided to M. Wapstra (FPA, 2011)). The Natural Values Atlas shows two records of the Hydrobiid snail *Phrantela marginata* occurring along Thirteen Mile Creek, which is 2.4km west and is a tributary to the Heazlewood River.

2.4.3 Wilderness Index

The National Wilderness Inventory is measured as a continuum from cleared land (rating of 0) through to the highest quality wilderness areas (20). The nationally agreed Reserve Criteria for a Comprehensive, Adequate and Representative Reserve System in Australia (JANIS 1997) defined high-quality wilderness as areas larger than 8,000 ha having National Wilderness Inventory ratings of 12 or greater. This definition was used in the delineation of high-quality wilderness areas under the Tasmanian Regional Forest Agreement process in 1997.

The closest high-value wilderness area is the Meredith Range Regional Reserve, approximately 1100m to the southwest of the area.

2.4.4 Geoconservation sites on the register

A search of LIST shows that there are no geoconservation sites within the proposed works area. The closest site is ~3000m to the northeast, Western Tasmanian Blanket Bogs.

2.4.5 Vegetation Communities

An initial flora and fauna habitat assessment of the former mine site and the western slopes of Crescent Spur and Godkin Ridge was undertaken in July 2011 by Environmental Consulting Options Tasmania (ECOtas). Two aerial surveys and a number of ground-based surveys for eagles were also undertaken in 2011 (Figure 2-4). A further site visit was undertaken in October 2013 to determine whether any habitat changes had occurred since the original assessment. Even though the survey did not include the eastern slopes of Crescent Spur and the upper Washington Creek valley, some inferences can be drawn.

The main findings of the assessment were:

- Eight vegetation communities were recorded in the site, but no vegetation communities of national (*Environment Protection and Biodiversity Conservation Act 1999* (EPBCA)) or state (*Nature Conservation Act 2002*) significance were found.
- No species listed as threatened on the Tasmanian *Threatened Species Protection Act 1995* or the Commonwealth EPBCA were recorded from the site.

Similar vegetation communities are expected along the eastern slopes of Crescent Ridge and the Washington Creek valley. The topography of the Washington Creek valley is steeply incised and is likely to be heavily clothed in rainforest with some eucalypt forest on the adjacent spurs and ridges. The risk to threatened flora is considered remote.

The extent of each vegetation community found in the 2011 survey and expected in the exploration area is described below:

Permanent easement (FPE)

FPE describes the large power transmission lines that cross the centre of the site. The vegetation associated with the power lines is actively managed through regular burns. There were no weed species noted from this mapping unit.

Regenerating cleared land (FRG)

FRG is a dominant mapping unit across the area. FRG, in this case, is used to describe the tailings dam areas and previous infrastructure which was the focus of past rehabilitation activities.

Acacia melanoxylon forest on rises (NAR)

NAR occurs on the slopes around Washington Creek in the south of the site.

Eucalyptus obliqua forest with broadleaf shrubs (WOB)

WOB is common on the relatively dry northern slopes of Crescent Spur and also as a transitional community between the rainforest (RMT) and mixed forest (WOR) communities across the site (see below). This community is in good condition with no weeds recorded.

Eucalyptus obliqua forest over rainforest (WOR)

WOR occurs in the moist and fertile lower slopes on the southern end of Crescent Spur and adjacent to Washington Creek in the south. This community is gradational with WOB as moisture availability decreases and with RMT in moist, fertile and undisturbed sites. This community is in good condition with no weeds recorded.

Nothofagus–Atherosperma rainforest (RMT)

RMT occurs in small areas in the west of the site, adjacent to the Whyte River and possibly in the wetter areas along the banks of Washington Creek. This community occurs on the moist and fertile lower slopes where disturbance has not occurred for a very long time. This community is in good condition, and no weeds species were recorded.

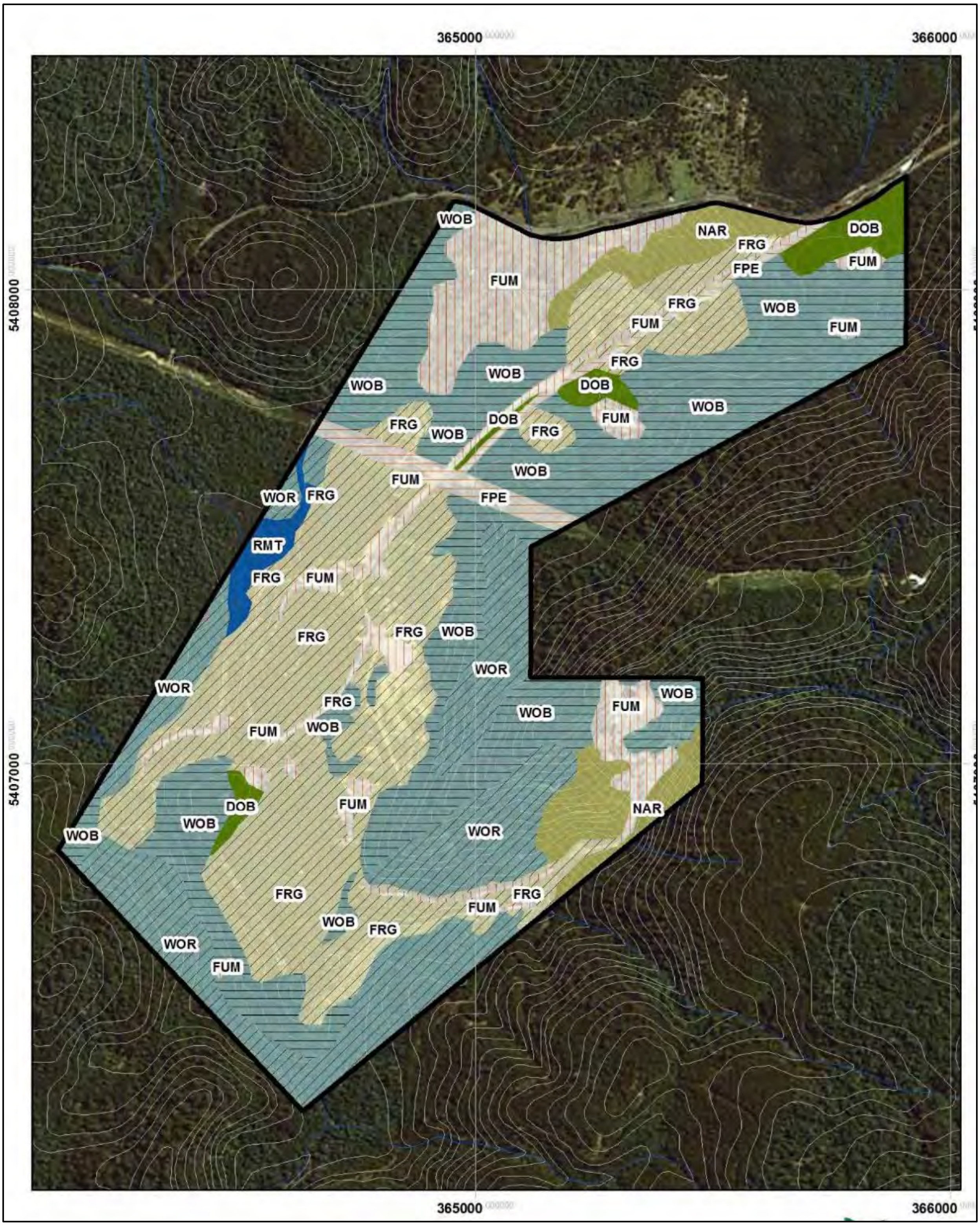
2.4.6 Ramsar Wetlands

A search of the EPBC database shows no Ramsar wetlands in the exploration area.

2.4.7 Nationally significant wetlands

A search of the EPBC database shows no nationally significant wetlands in the exploration area.

Figure 2-4: Vegetation Mapping



2.4.8 Private Reserve under the Regional Forest Agreement

A search of LIST shows that there are no Private Reserves under the Regional Forest Agreement or private timber reserves within the works area.

2.4.9 Forest community managed by prescription

Under the terms of the National Parks and Reserves Management Act 2002, the name 'Regional Reserve' is applied to an area of land with high mineral potential or prospectivity and predominantly in a natural state. Hence management objectives of Regional Reserves include provisions for mineral exploration activities and utilisation of mineral resources as well as provisions for the controlled use of other natural resources on a small scale, and the conservation of natural biological diversity and geological diversity. As a result, exploration area does not conflict with the objectives of the Regional Reserve system.

2.4.10 Tasmanian Natural Gas Pipeline corridor

The Tasmanian Natural Gas Pipeline corridor is not within or near the works area.

2.4.11 State Forest areas

The site is located wholly within what has historically been State Forest, designated as Future Reserve land under the Tasmanian Forests Agreement Act 2013 (TFA). The passing of the Forestry (Rebuilding the Forest Industry) Act 2014 by the Tasmanian Parliament repealed the TFA and has resulted in this section of Future Reserve land being designated Future Potential Production Forest land (FPPF land) managed by the Crown. The harvesting of native forest in FPPF land is currently prohibited, with the exception of special species harvesting which is highly unlikely to be considered within the site given the history of site disturbance. Under the Forestry (Rebuilding the Forest Industry) Act 2014, the Minister for Crown Land, on the request of the Minister for Forestry, could either exchange or convert FPPF land for permanent timber production zone land to enable timber harvesting; however, under the current legislation this cannot be done prior to 8 April 2020.

2.4.12 Phytophthora cinnamomi management area

The Forest Botany Manual (FPA 2005) and Rudman (2005) indicate that "Eucalyptus obliqua dry forest" (DOB) is moderately susceptible to the root-rot pathogen Phytophthora cinnamomi. During the ECOtas surveys in 2011 and 2013, no evidence of the pathogen was noted. Due to the lack of susceptible plant species to the pathogen, no special management prescriptions are considered warranted.

2.4.13 Archaeologically interesting areas or sites, including mining heritage sites

The Cleveland ore deposit was first discovered in 1898. Further exploration resulted in the Cleveland Tin Mining Company No Liability being formed to work the lease as a tin mine by 1907 (Kostoglou). As part of site development, a 10-head battery and concentrating plant capable of treating 1000 tons of ore per month were constructed. A tram line and water race were also constructed to facilitate processing and transport of materials.

1917 saw the closure of the mine due to low production rates. During the nine years of mine life the mine had produced 344 tons of concentrated tin oxide but, despite its proven ore body, no new lessee could be found to restart the mine and its mill plant. The mining lease was held by a number of companies between 1917 and the 1960s although operations were not resumed.

A geophysical survey of the Cleveland leases was undertaken by the Commonwealth Government Geophysicist in the 1950s, and as a result, a consolidated lease to all the old Cleveland workings was acquired by Aberfoyle in the late 1960s. Aberfoyle subsequently reopened and operated the new Cleveland Mine and substantially expanded the site with extensive underground workings, a new processing area, two tailings storage facilities, and a number of water storage and borrow pits. The site was closed in the late 1980s, with the majority of structures demolished or removed and efforts at rehabilitation instigated.

Although from a historical perspective the Cleveland Mine was not an exceptional operation on the west coast of Tasmania, the physical integrity of the 1907 concentrating mill raises the significance of the site (Kostoglou). The surviving in situ plant and equipment at this site is considered to be regionally unique, as other known tin mines in the north-west, such as the Zeehan group, have been extensively disturbed during subsequent salvage or mining efforts.

No heritage properties, sites and/or values as listed on the National Heritage List, Register of the National Estate, Tasmanian Heritage Register or the Tasmanian Historic Places Inventory exist in the area of the site.

Figure 2-5: Historic Grinding Wheel and Battery Stamping Rod at the Cleveland Mine

An assessment completed in 2000 identified a number of significant features relating to historic activity in the former mining area (Kostoglou):

- the original Cleveland Mill
- the Cleveland Mill water race
- the Cleveland tramway
- numerous peripheral adit workings to the north-east of the main mine.

Some of the features identified are located within the exploration area. None of the significant features identified were disturbed by the current programme.

2.4.14 Other significant features

For the former mining area, Aboriginal Heritage Tasmania completed a search of the Tasmanian Aboriginal Site Index and provided correspondence on 5 July 2011 advising that there were no Aboriginal heritage sites recorded within or close to the proposed site. Details of this correspondence are summarised as:

> *Due to the area being highly disturbed as a result of previous mining activities, Aboriginal Heritage Tasmania believes that the area has a low probability of Aboriginal heritage being present. Accordingly, there is no requirement for an Aboriginal heritage investigation.*

The Crescent Ridge site has not been surveyed for Aboriginal Heritage. If Aboriginal cultural heritage is found during the exploration works, an Aboriginal heritage permit will be required before any damage, removal or other actions as noted below are allowed. A person must apply to the Minister for Environment, Parks and Heritage for a permit if they are proposing to:

- Destroy, damage, deface, conceal or interfere with a relic
- Make a copy or replica of a carving or engraving that is a relic
- Remove a relic from where it is found
- Sell or offer for sale a relic
- Remove a relic from Tasmania
- Excavate on Crown Land in search of a relic

The Director of National Parks and Wildlife, Department of Primary Industries, Parks, Water and Environment considers every Permit application made on the prescribed form and makes a recommendation to the Minister. The Aboriginal Heritage Council also considers every Permit application and makes a recommendation to the Minister.

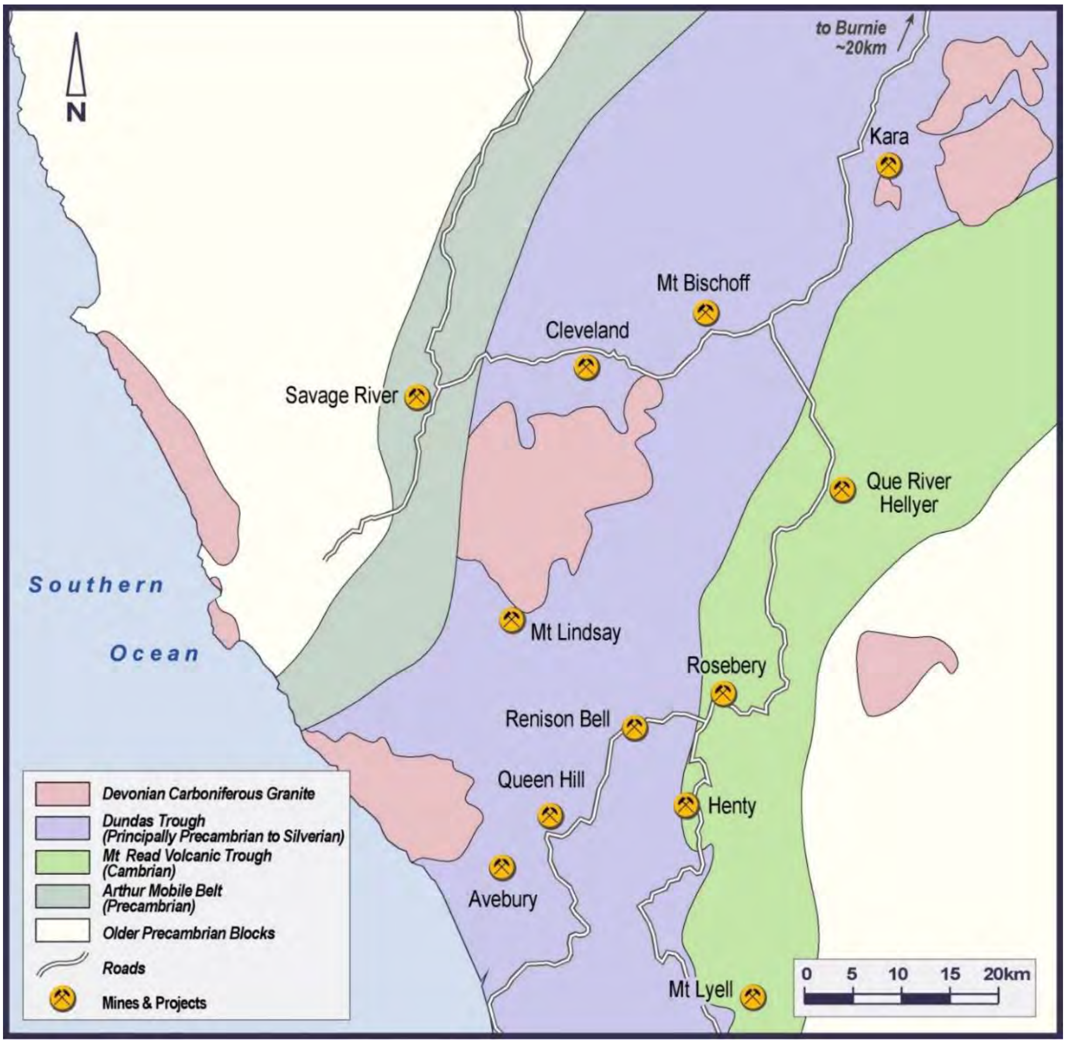
3. Regional Geology Setting

3.1 Regional Geology

In Tasmania, the principal metal mines are associated with Devonian-Carboniferous granite, the Cambrian Mt Read Volcanic rocks, or the Precambrian metamorphic rocks of the Arthur Mobile Belt. Tin and tungsten deposits and some silver-lead-zinc deposits are associated with Devonian-Carboniferous granite; lead-zinc, copper and gold deposits are associated with the Mt Read Volcanics; large iron deposits are associated with the Arthur Mobile Belt (See Figure 3-1).

Tasmania's three largest tin mines occur on the West Coast: Renison, 35 kilometres south of Cleveland, Mt Bischoff, 15 kilometres north-east of Cleveland, and Cleveland. Renison has been in production for over a century, Mt Bischoff was mined from 1872 to 1947 and for a brief period in 2009 and 2010, and Cleveland was mined from 1908 to 1917 and from 1968 to 1986.

Figure 3-1: Geological regimes and principal mines on the West Coast of Tasmania.



4. Project History

4.1 Tenure

Formerly, Cleveland was operated by Cleveland Tin N.L., Aberfoyle Limited and other Aberfoyle group companies (collectively referred to in this report as "Aberfoyle").

4.2 Exploration

4.2.1 Discovery and Early Mining

Outcrops of gossan were first discovered by prospectors at Cleveland in about 1898. It is likely that the gossan was originally hoped to be the outcrop of a silver-lead deposit. Tin was first identified at Cleveland in 1900 by Harcourt Smith, Government Geologist. Mining by the Cleveland Tin Mining Co NL commenced in 1908, but the mine closed in 1917 after production of about 275 tonnes of tin in the form of cassiterite concentrate. (Reid, 1923)

From 1935 to 1939, the Mt Bischoff Tin Mining Co undertook exploration by small-scale underground mining, but no tin production occurred during this period.

4.2.2 Exploration and Modern Mining

Exploration by the Tasmania Mines Department and the Australian Bureau of Mineral Resources in the 1950s identified the potential for relatively large cassiterite bearing sulphide ore bodies (Hughes, 1952, 1953a, 1953b, 1954 and Keunecke, O. and Tate, K.H., 1954). Consequently, in 1961, the Aberfoyle Tin Development Partnership acquired the leases at Cleveland and commenced systematic exploration based on geological mapping and using diamond drilling (Mason et al., 1963). Since then, over 2000 diamond drill holes have been drilled into the deposit, and its known depth has been demonstrated to about 700 metres below the surface (Barth, 1986).

In the 1960s and early 1970s, the mines of the Aberfoyle group of companies were Australia's chief producers of tin and tungsten. The group operated the Cleveland tin and copper mine, the Storeys Creek and Aberfoyle tin and tungsten mines in North-East Tasmania, and the Ardlethan tin mine in southern New South Wales.

Mining of ore at Cleveland commenced in 1968 using trackless methods for mining and ore haulage to the surface. The Cleveland Mine was among the first in the world to use trackless mining, and the mine now extends to a depth of over 500 metres below surface (see Figure 4-1).

Production from the mine during the Aberfoyle operation from 1968 to 1986 was 5,645,000 tonnes at a grade of 0.68% Sn as cassiterite and 0.28% Cu (see Figure 4-2). Allowing for the minor occurrence of Sn as stannite, estimated to be 8.4% of the total Sn during the period of mining, the total production from 1968 to 1986 was:

5,645,000 tonnes at 0.74% Sn, 0.28% Cu, 0.06% soluble Sn

The Cleveland mine produced about 24,000 tonnes of tin in concentrate and about 10,000 tonnes of copper in concentrate.

Cleveland closed in 1986. The tin price fell significantly in 1985 following the collapse of price support from the International Tin Council (see Figure 4-2). Also, Aberfoyle had turned its attention to lead, zinc and copper following the discovery of the Que River deposit in 1974 and the Hellyer deposit in 1983. It is, perhaps, no coincidence that Cleveland was closed in June 1986, the same month that the Hellyer orebody was exposed in the Hellyer Decline.

Table 4-1: Historical summary of exploration and mining at the Cleveland mine.

1898	S.C. Coundon, Prospector	Pegged leases over gossan for the possibility of silver and lead.
1900	Harcourt Smith Government Geologist Department of Mines, Tasmania	Identified cassiterite in gossan.
1908 - 1917	Cleveland Tin Mining Company N.L.	Mined oxidised ore for tin.
1923	A.M. Reid Government Geologist Department of Mines, Tasmania	Recognised fissure lodes and replacement lodes.
1935-1937	Mount Bischoff Tin Mining Company	Small-scale underground exploration: Battery, Smithy, Lucks, Khaki, Hall's, Henry's recognised.
1937	Q.J. Henderson Government Geologist Department of Mines, Tasmania	Described the work undertaken by the Mount Bischoff Tin Mining Company.
1945	S.W. Carey Government Geologist Department of Mines, Tasmania	Reported all deposits were of replacement style.
1952-1954	T.D. Hughes Government Geologist Department of Mines, Tasmania	Postulated that the ore would continue in depth. Recommended cutting of a grid and geophysical surveys.
1953-1954	O. Keunecke and K.H. Tate Bureau of Mineral Resources	Concluded self-potential and magnetic surveys anomalies suggested that sulphide mineralisation may extend beyond the old workings.

	Commonwealth of Australia	
1961-1965	Aberfoyle Tin Development Partnership	Explored the area with diamond drilling and proved up sufficient resources for mining.
1968-1986	Cleveland Tin N.L. and Aberfoyle Limited	Mined tin and copper ore.
2007	Lynch Mining Pty Ltd	30 air core holes, for a total length of 561m, drilled to test tailings dams.
2013	Limited	High-resolution topographic data acquired using LiDAR. 32 auger holes, for a total length of 612m, drilled to test tailings dams and to obtain samples for metallurgical testing.

Table 4-2: Cleveland Mine – mine production during Aberfoyle operations.

(Compiled from Aberfoyle Ltd and Cleveland Tin N.L. annual reports.)

Year	Ore Treated tonnes	Ore Treated	
		% Sn as cassiterite	% Cu
1968	?	?	?
1969	256,865	0.85	0.40
1970	281,875	0.79	0.37
1971	305,726	0.73	0.42
1972	357,498	0.78	0.40
1973	505,806	0.76	0.32
1974	314,210	0.75	0.25
1975	289,018	0.78	0.32
1976	363,036	0.73	0.27
1977	393,275	0.66	0.22
1978	388,579	0.53	0.18
1979	352,977	0.52	0.24
1980	367,866	0.47	0.21
1981	439,304	0.51	0.22
1982	350,300	0.64	0.28
1983	277,700	0.71	0.25
1984	180,300	0.71	0.26
1985	137,000	0.80	0.25
1986	83,700	0.92	0.41
Total	**5,645,035**	**0.68**	**0.28**

Figure 4-1: Cleveland Mine – perspective view.

The entrance to the Cleveland Decline is circled; the mine was over 500m deep: the heights above sea level (asl) are shown on the right.

(Taken from Aberfoyle records.)

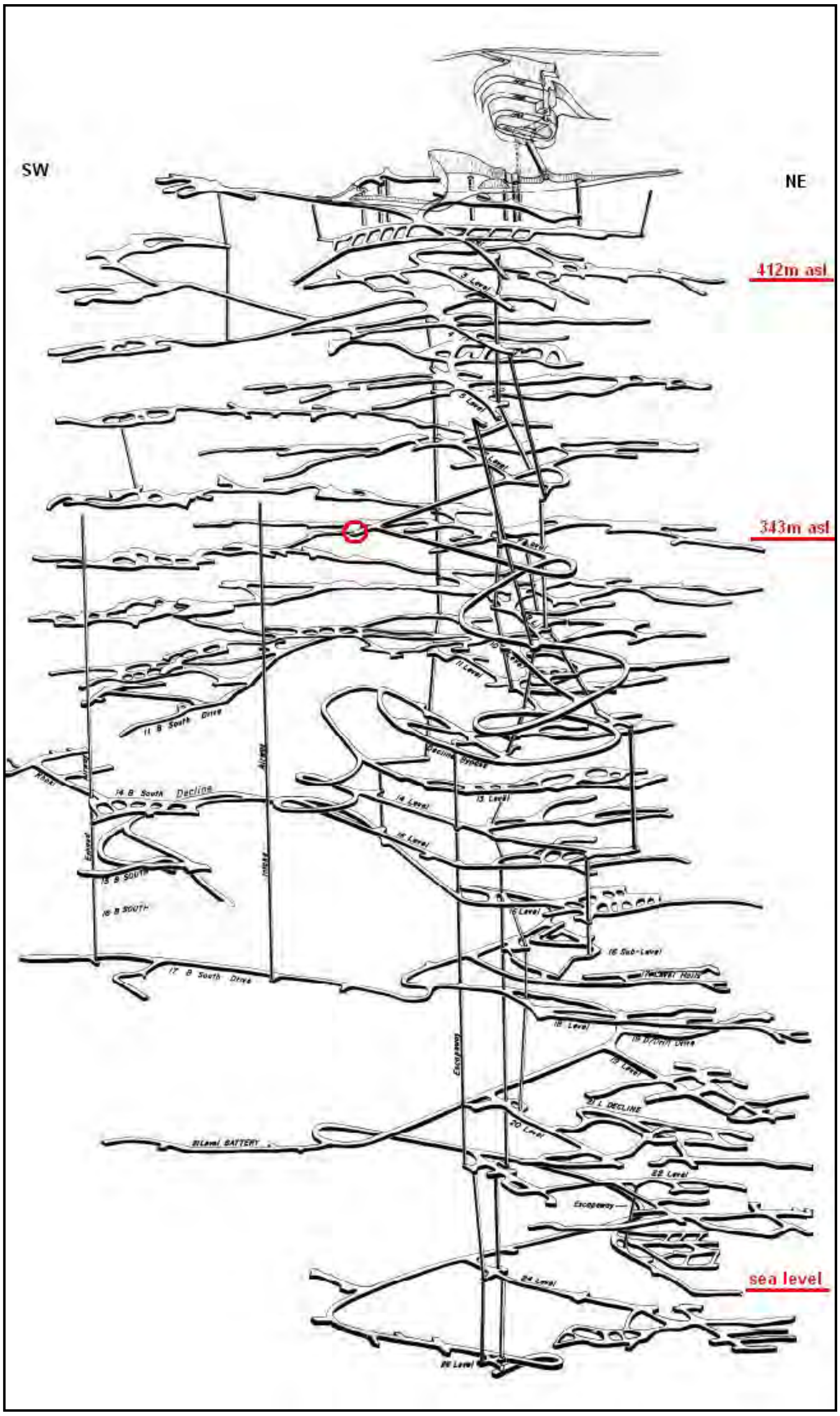
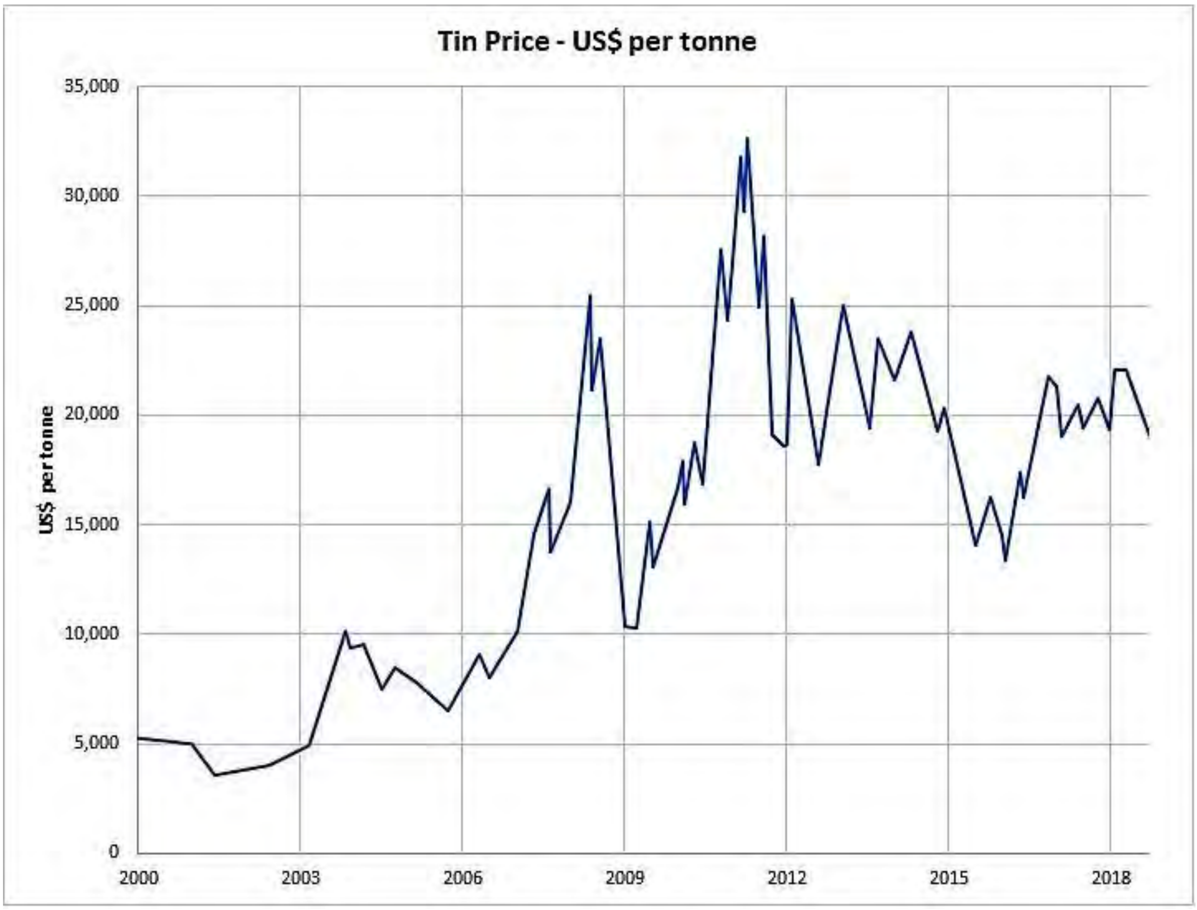


Figure 4-2: Tin price 1960 to 2018 – US$ per tonne.



5. Recent Exploration and Data Acquisition

The following details pertain to activity on the Exploitation Licence area EL7/2005 which contains Cleveland mineralisation.

5.1 Geological and Topographic Mapping

The most detailed geological map that is available over the Cleveland licence area is a 1:25,000 scale geological map.

A topographic surface exists for the Cleveland mineralisation area, which was sourced from a regional LIDAR survey.

5.2 Drilling and Other Sampling Methods

The only sampling methods that have been employed on or near the Cleveland licence area is drill hole sampling. Diamond drilling methods have been used to drill and sample the Cleveland mineralisation. A total of 2020 drill holes have been drilled to intersect the Cleveland mineralisation. 62 of those drill cores are stored at Mineral Resources Tasmania Core Library in Mornington.

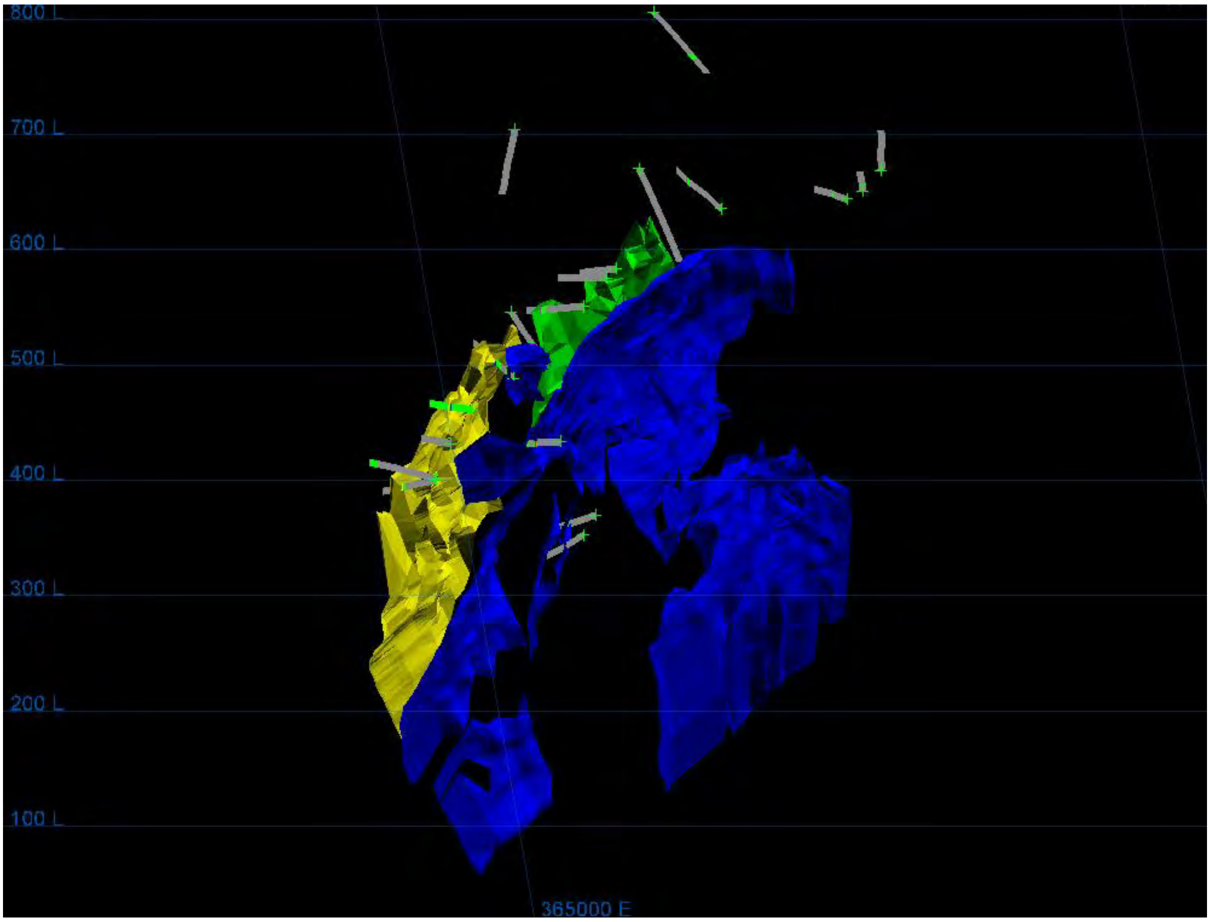
During 2017/2018, Elementos completed a diamond drilling campaign of 19 holes (drilled from surface), totalling 1675 metres, targeting new lodes and extension of existing known mineralisation. The drilling programme was carried out by Low Impact Diamond Drilling Specialists (LIDDS), a company based in Burnie, Tasmania. LIDDS have been able to supply a very manoeuvrable Onram 1000 track mounted drilling rig with a very small footprint which allows the company to minimise site preparation works and drill at angles between +90 degrees and -90 degrees. Table 5-1 and Figure 5-1 describes the location, traces and depths of the recent drilling campaign.

Table 5-1: Drillholes completed in 2017/2018 by Elementos.

HOLE ID	EASTING	NORTHING	RL	TURE AZIMUTH	MAGNETIC AZIMUTH	DIP	TOTAL DEPTH
C2100	365286.5	5407111	442.91	312	300	-35	68.9
C2101	365269.5	5407095	445.81	312	300	-30	89.7
C2102	365044.8	5406939	406.21	312	300	-15	67.9
C2103	365004.5	5406897	393.64	312	300	-15	47.8
C2104	364975.7	5406858	368.6	312	300	-40	107.7
C2105	364974.6	5406859	369.51	312	300	-5	104.4
C2106	365157.3	5406885	371.64	312	300	-30	60
C2107	365225.5	5407047	453.6	312	300	-30	101.2
C2108	365186.2	5406794	313.38	312	300	-45	84.5
C2109	365161.7	5406762	314.42	312	300	-55	97.4
C2110	365685.7	5407227	410.49	15	3	-5	79.9
C2111	365629.9	5407194	403.94	320	308	-25	68.3
C2112	365654.4	5407202	404.81	10	358	-30	80.5

C2113	365453.2	5407198	426.06	330	318	-5	98.3
C2114	365347.1	5407240	490.44	150	138	-55	152.6
C2115	365125.4	5407053	460.88	132	120	-60	74.4
C2116	365110.8	5406974	415.23	336	324	-3	86.3
C2117	365219.3	5407452	355.86	206	194	-38	92.6
C2118	365448.1	5407600	372.81	140	128	-31	113.4

Figure 5-1: Drillholes completed in 2017/2018 by Elementos.



5.2.1 Drill Core Storage

All split (sampled intervals) and un-split diamond cores that were drilled by Elementos Ltd are stored at Elementos' core shed facility in Waratah, Tasmania.

5.3 Drill Hole Sample Preparation

Drill core from Cleveland is processed at Elementos' core shed facility. The following shows the workflow for the processing of drill core, from sample receipt from the drilling contractor through to despatch to the sample preparation laboratory:

1. Core transported by Elementos to Waratah core shed and laid out on core racks and metre marking undertaken.

2. Geology logging - Lithology, Alteration, Mineralisation.
3. Geotech logging - Rock Quality Designation ("RQD")
4. Core photography. Core is photographed in both a dry and wet state.
5. Selection of sampling intervals. Marking up of sampling intervals on core and enter sample intervals into database. QA/QC samples are inserted in the sample list.
6. Cutting core to sample half core.
7. Bagging of split core for assay (calico sample bags).
8. Five to ten calico sample bags are inserted into heavy-duty poly woven bags which are zip tied.
9. Polywoven bags are transported to the ALS sample preparation laboratory in Burnie, Tasmania.

Coarse rejects currently exist for those cores sampled during the 2017/18 drilling campaign and are currently being stored at the sample preparation laboratory in Burnie.

5.3.1 Geological Logging

All available core is geologically logged for lithology, weathering, mineralogy, mineralisation, colour and other features. Geological data from drill core and chip samples is logged directly into a database to minimise transcription errors and to expedite the entry of data into digital form. Geological information is captured in three main logging forms: Lithology, Mineralisation and Alteration.

The sub-header fields that are captured in each of these data-entry forms are listed in Table 5-2 below. The logged intervals (From and To fields) are the actual geological intervals and not the sampling intervals; sample boundaries are subsequently determined based on mineralisation and lithological boundaries.

Table 5-2: Data Fields for Geological Logging.

Lithology	Mineralisation	Alteration
Hole ID	Sulphide %	Alteration
Geology From	Sulphide 1	Alt Comments
Geology To	Sulphide 2	
Recovery	Sulphide 3	
Weathering	Other	
Colour	Sulph Comments	
Hardness		
Grain-size		
Lithology		
Vein		
Vein %		
Lith Comments		

5.3.2 Geotechnical Logging

All available core is geotechnically logged for rock properties and characteristics, including Rock Quality Data (RQD), fracture type and characterisation. Geotechnical data from drill core is logged directly into a database to minimise transcription errors, and to expedite the entry of data into digital form.

Geotechnical information is captured in a 'Geotech' logging format, and sub-header fields that are captured for Geotech data entry are listed in Table 5-3.

Table 5-3: Data fields captured in the Geotech Data Entry Form.

Geotech
Hole ID
From
To
Weathering
Hardness
RQD
Fracture Type
Fracture surface description
Grain-size
Rock Type

5.4 Geophysical Surveys

A ground magnetic survey was completed using man-portable magnetometers traversing a grid that had been constructed over the area of interest. The survey covered a total of 32-line kilometres at a 30m line spacing. The narrow line spacing was used to maximise the potential to collect high-resolution data from near surface features.

The ground magnetic survey was completed by Modern Mag, an Australian company with extensive local and international experience.

5.5 Geochemistry

5.5.1 Core Sampling

Drill hole intervals that are selected for sampling are marked up by Elementos geologists during geological logging of the drill core. Generally, only intervals that are mineralised are selected for sampling. Sampling is in most cases done to 2 metres beyond interpreted boundaries such as varying tin content and lithological or alteration boundaries.

Core samples are generally taken at 0.5-metre intervals within the mineralised zone, 1-metre interval outside the zone (except where adjusted to geological boundaries) after geological, geotechnical logging and photography. The core is aligned before splitting in half and sampled as required.

Drill core is cut in half for assay with a traditional diamond core saw.

5.5.2 Sample Preparation and Security

Half drill core samples split for assay are allowed to dry before being bagged in standard calico sample bags. The sample number is written on the outside of the calico using a black permanent marker pen, and the sample number is also recorded on a printed waterproof sample ticket that is placed inside the calico bag.

Following the insertion of any external blanks and standards into calico bags, five to ten bagged samples are placed into large, heavy-duty poly woven bags which are sealed with cable ties. These poly woven bags are then marked with delivery information ready for transport to the sample preparation laboratory in Burnie.

The sample preparation laboratory in Burnie is located at 39 River Road, Burnie, Tasmania, 7320. For the 2017/18 drilling campaign, samples were routinely sent by Elementos personnel at Cleveland.

5.5.3 Sample Analysis

All Elementos drill core samples are analysed by ALS.

The sample preparation procedure that has been utilised for the 2017/18 drilling campaign at Cleveland involves the following procedures conducted at ALS in Burnie:

- WEI-21: Received sample weight determined
- CRU-21: Crush entire sample >70% -6 mm.
- PUL-31b: Pulverise split to >80% -75um
- PUL-QC: Pulverising QC test
- LOG-21: Sample login – Rcd w/o Barcode.

Samples have been analysed using the ME-XRF15 analytical technique for tin, copper and tungsten for the entire suite of Elementos drill cores. For samples with Sn greater than 0.1%, Pb, Zn, As, and soluble Sn. were also analysed by ME-ICP41.

<u>ME-XRF15</u>

Base Metal Concentrates By XRF

Samples are analysed by XRF following a lithium borate fusion with the addition of strong oxidizing agents to decompose sulphide concentrates.

Detection Limits:

- Sn: 0.01-79%
- Cu: 0.01-50%
- WO3: 0.01-100%

ME-ICP41

High-Grade Aqua Regia ICP-AES

These methods are economical tools for first pass exploration geochemistry. Data reported from an aqua regia digestion should be considered as representing only the leachable portion of the particular analyte.

5.6 QA/QC

Elementos' quality assurance and quality control (QA/QC) procedure for the geochemical analyses of drill core involves the insertion of a series of certified reference materials (standards) and blank samples (blanks). The laboratory also inserts their own sets of standards and blanks and analysis of periodic repeat assays. No duplicate core samples were submitted for analysis during the 2017-18 drilling programme.

For the 2017/18 drilling programme Elementos used Blank and Standards purchased from OREAS (Ore Research and Exploration - http://www.ore.com.au) who have developed Certified Reference Materials for the mining and exploration industry. Elementos use one blank: OREAS 21e Oxide quartz blank, and two standards: OREAS-141 and OREAS-142. These analytical standards cover the tin and other base metals as well as a number of pathfinder elements. The certified values for each of these standards are listed in Table 5-4.

Elementos inserts standards and blanks in the sample stream at a frequency of 1 standard and 1 blank for every 20 drill hole samples.

Table 5-4: OREAS Certified Reference Materials used by Elementos

Standard	Constituent	Certified Value
OREAS 141	Silver, Ag (ppm)	1.58
	Arsenic, As (ppm)	789
	Bismuth, Bi (ppm)	324
	Copper, Cu (ppm)	2453
	Indium, In (ppm)	34
	Molybdenum, Mo (ppm)	2.28
	Lead, Pb (ppm)	59.0
	Zinc, Zn (ppm)	3637
	Tin via fusion, Sn (ppm)	6061
	Tin via PPP, Sn (ppm)	6312
OREAS 142	Silver, Ag (ppm)	1.22
	Arsenic, As (ppm)	584
	Bismuth, Bi (ppm)	242
	Copper, Cu (ppm)	1466
	Indium, In (ppm)	45
	Molybdenum, Mo (ppm)	2.99
	Lead, Pb (ppm)	54.3

	Zinc, Zn (ppm)	2436
	Tin via fusion (wt.%)	1.04
	Tin via PPP (wt.%)	1.08

5.7 Drill Hole Survey, Hole Position and Set-Up Angle

Drill holes are planned in the 3D modelling software package Vulcan (produced by Maptek), and planned drill hole collar locations are pegged on the ground. The line up of the drill rig on the drill hole is guided by the geologist using a Suunto compass. The compass provides a Magnetic North azimuth measurement, which requires the True North azimuth to be corrected by 12 degrees.

For example: C2100 planned azimuth was 300.0 Magnetic North or 312.0 True North.

The geologist sites the azimuth using the compass, to draw a line on the ground and instructs the driller to move the rig until the desired azimuth is achieved. Once the azimuth is established, the geologist supplies the driller with the Hole ID and dip

Borehole collar co-ordinates are surveyed using Differential GPS in the coordinate system GDA94 (which is situated 12° to the east of True North) to a decimetre level of accuracy. Collar surveys have been completed by a qualified and competent local contract surveying company. Survey equipment is well maintained and regularly calibrated and checked for accuracy.

Re-survey and checks of historical borehole collars have been completed where possible, and no material issues have been identified.

5.8 Downhole Position and Survey Method

Regular downhole surveys are conducted by the drilling contractor using an Ausmine downhole camera that measures the drill hole dip and azimuth. Downhole surveys are typically conducted at 20m, and then every 30m after that, or as required. A full-length end of drill hole survey is also taken.

5.9 Data Management

All drill hole data, which includes collar, lithology, geotechnical and assay data, is stored on the Database Server located in Cleveland, Tasmania, and on a separate storage facility. The database is protected and only Elementos employees or third parties that Elementos has granted permission, can access the database.

Drill hole data is entered into the database on a daily basis during an active drill program. The data is logged onto lap-top personal computers that are used on the logging racks for data entry purposes.

6. Deposit Geology

6.1 Local Geology

The Cleveland and Mt Bischoff tin mines both occur to the north of the outcrop of the Meredith granite (see Figure 6-1 and Figure 6-2). Two other mines occur in the area: the Magnet silver-lead mine between Cleveland and Mt Bischoff and the Godkin Mine to the south of Cleveland (see Figure 7). The more significant of these was the Magnet Mine which operated from 1895 to 1940 and produced 630,000 tonnes of ore containing 38,000 tonnes of lead and 8,000,000 ounces of silver (Cottle, 1953).

Figure 6-1: Geological regimes and principal mines on the West Coast of Tasmania.

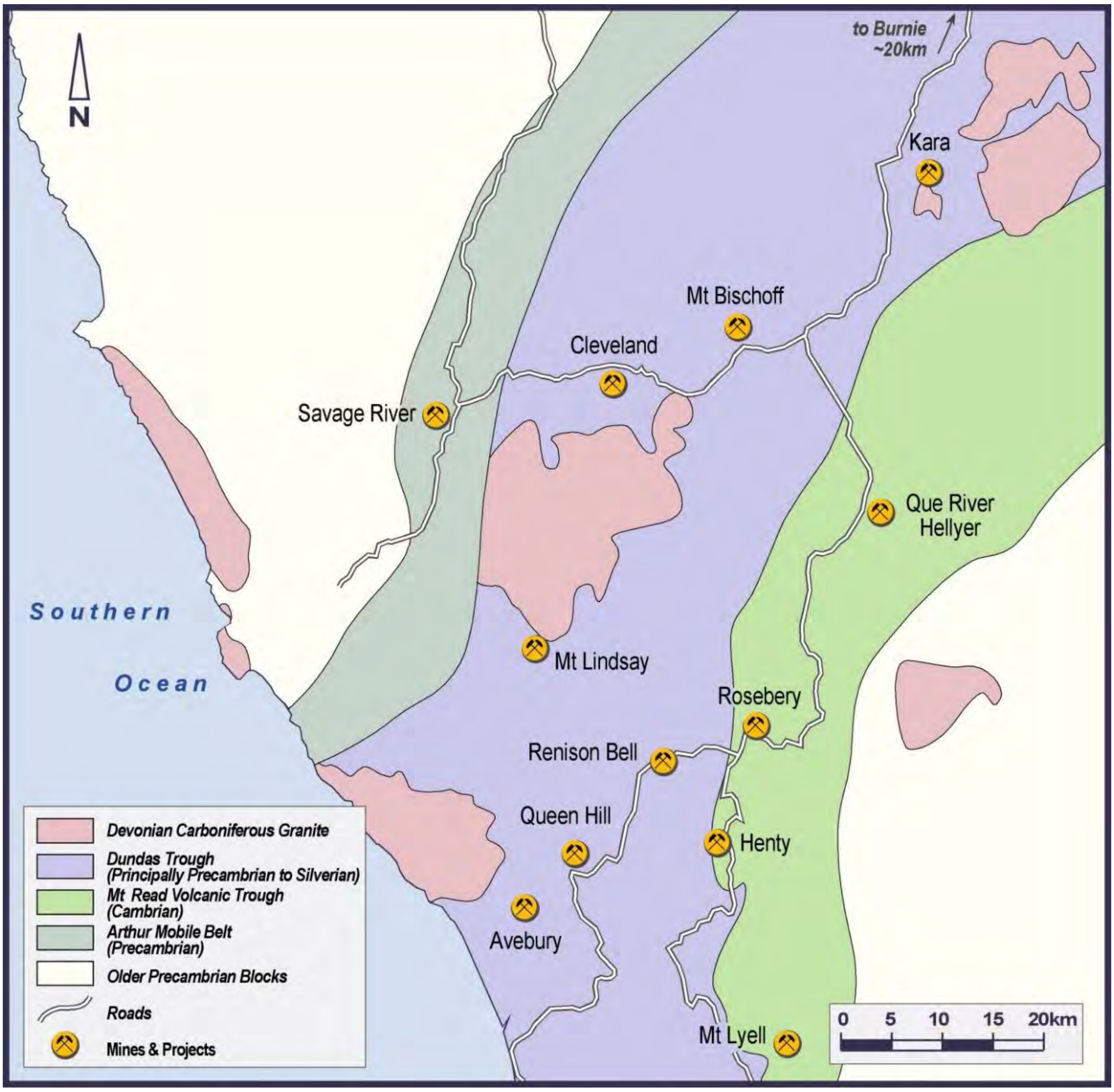
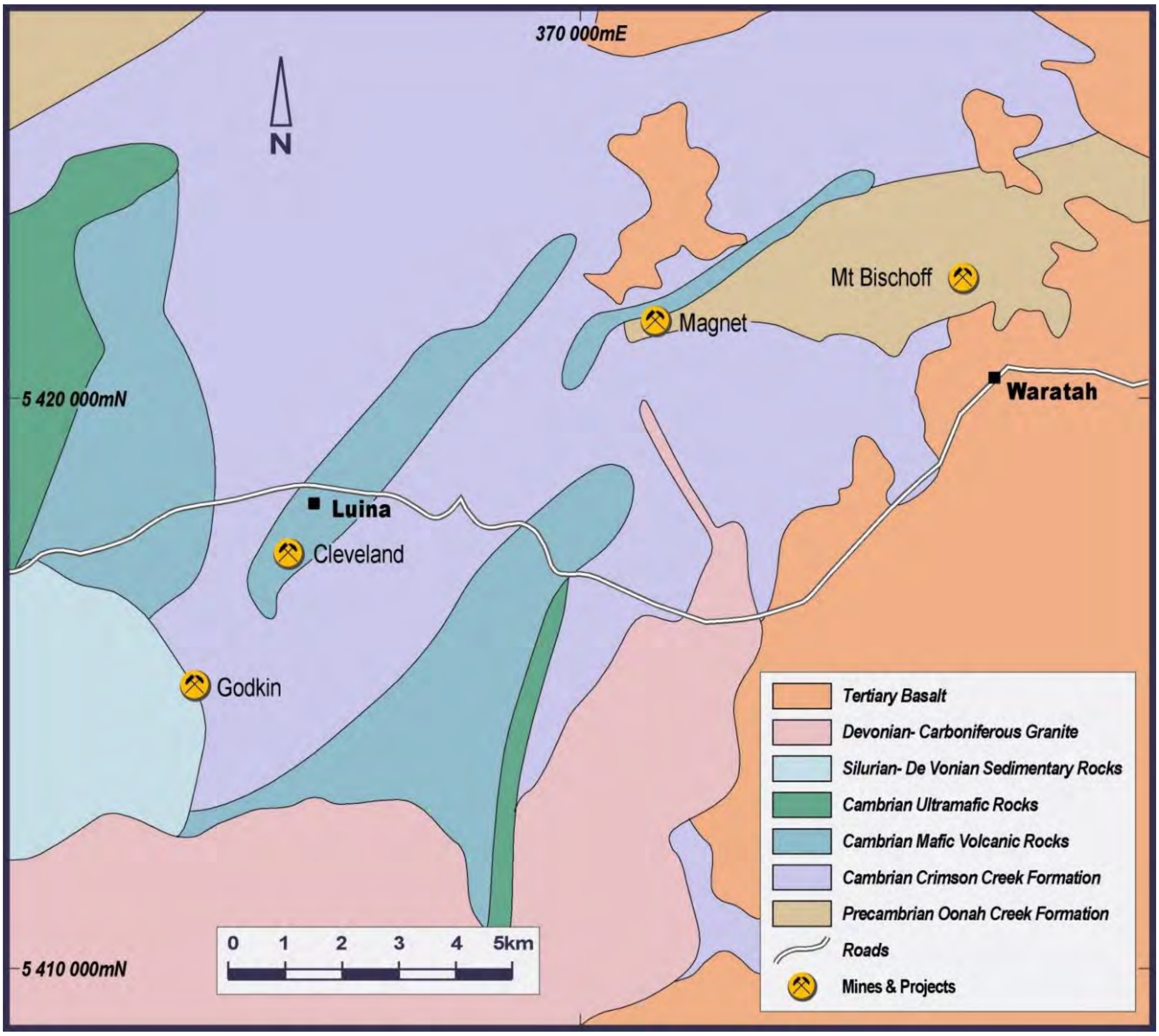


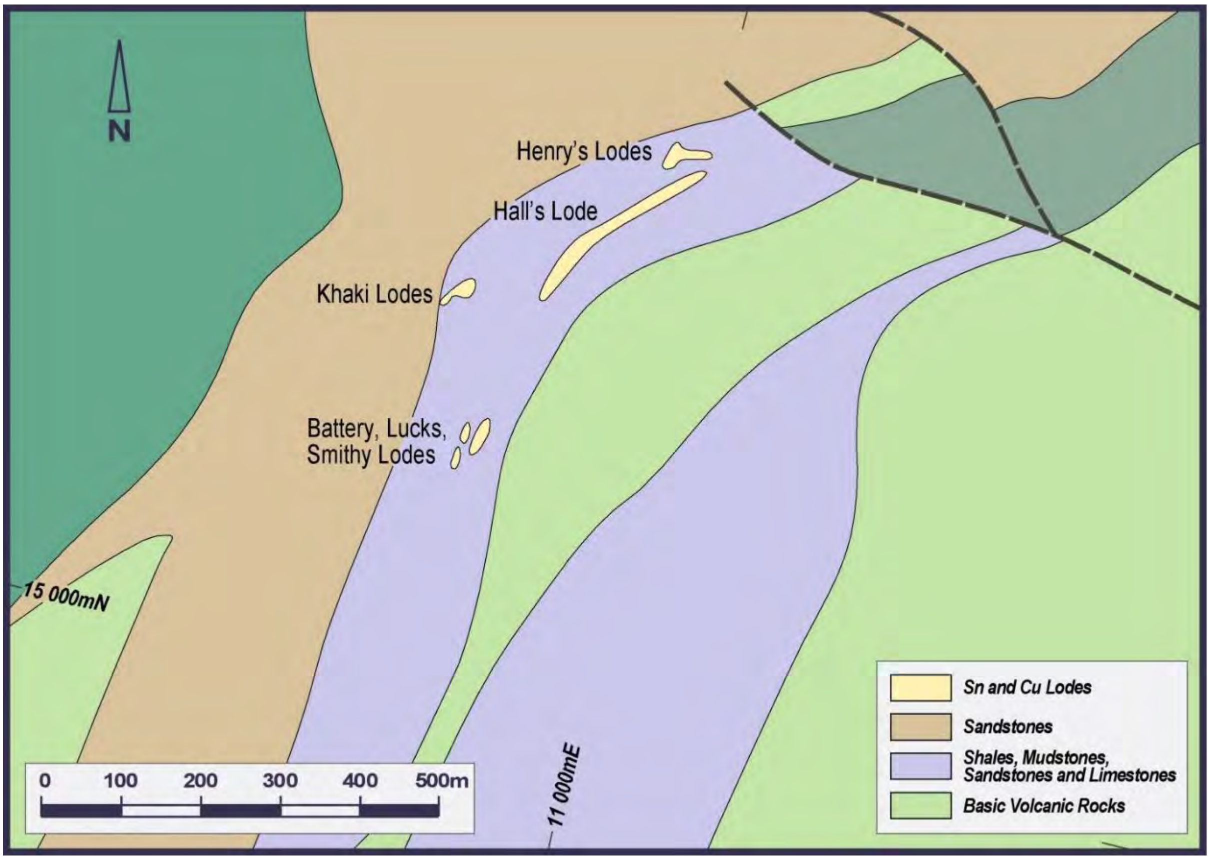
Figure 6-2: Local geology around Cleveland.



6.1.1 Mineralisation and Alteration

At Cleveland, tin-copper mineralisation occurs as stratiform lenses within a series of sedimentary rocks belonging to Hall's Formation (see Figure 6-3). Sandstone underlies the Hall's Formation and is overlain by rocks of volcanic origin. All these rocks are of Cambrian age and, while they were originally deposited horizontally, they have been tilted and are now more or less vertical.

Figure 6-3: Surface geology near the Cleveland Mine.



The Cambrian rocks were intruded by the Devonian-Carboniferous Meredith granite, and a quartz porphyry dyke occurs in the bottom of the mine, 350m below the surface.

Mineralisation at Cleveland is of two styles:

- Tin and copper bearing semi-massive sulphide mineralisation in lenses. The mineralisation consists of pyrrhotite and pyrite with cassiterite and lesser chalcopyrite and stannite, and quartz, fluorite and carbonates. Sulphide minerals make up 20% to 30% of the mineralisation.
- Tungsten bearing quartz stock-work and minor greisen with wolframite.

The semi-massive sulphide mineralisation formed by the hydrothermal replacement of limestone beds and is geologically similar to the tin-bearing semi-massive and massive sulphide stratiform mineralisation at Renison.

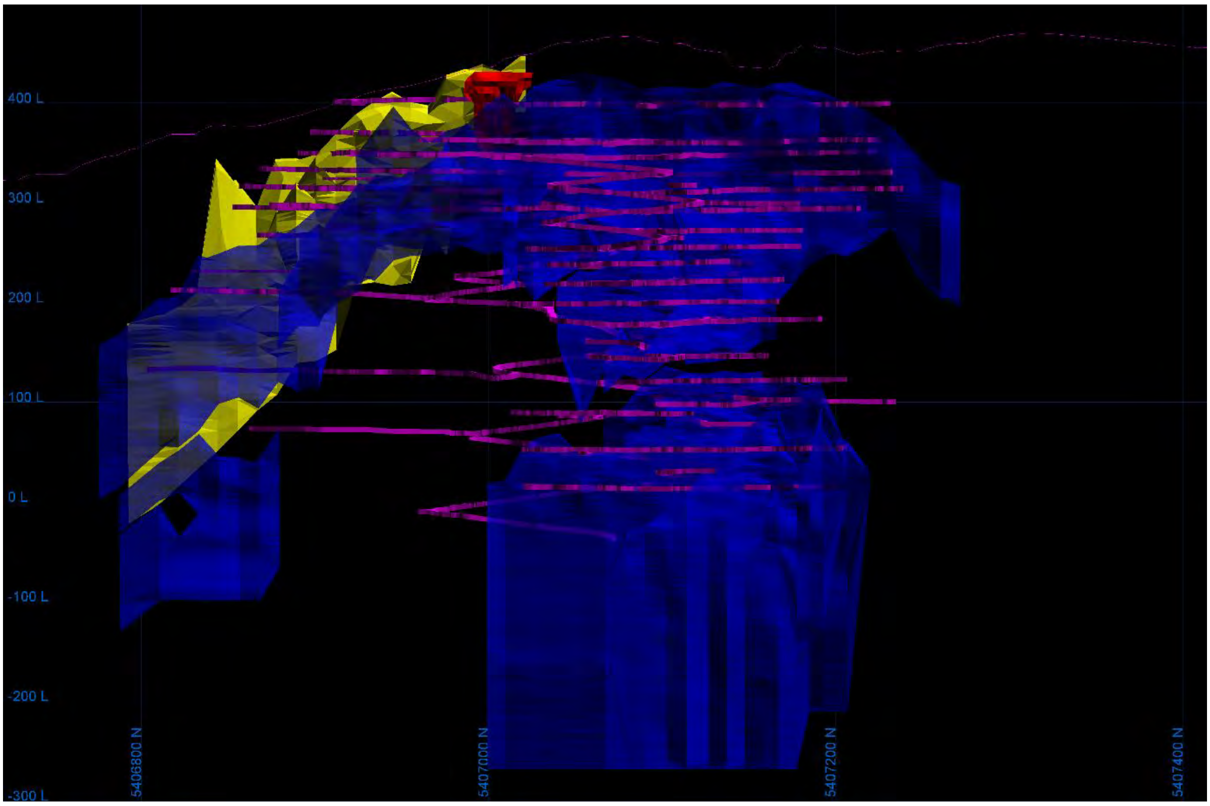
The known tin-copper lenses occur with strike lengths of up to 550 metres, across strike thicknesses of up to 30 metres and down-dip extents of up to 800 metres. Traditionally, the deposits have been referred to as lodes, and at the outcrop, these were from west to east:

- Khaki,
- Henry's,
- Hall's,
- Battery, Smithy and Lucks.

Geological interpretations by Aberfoyle geologists varied over time. The principal changes in interpretation were based around the number and type of faults included in the interpretation.

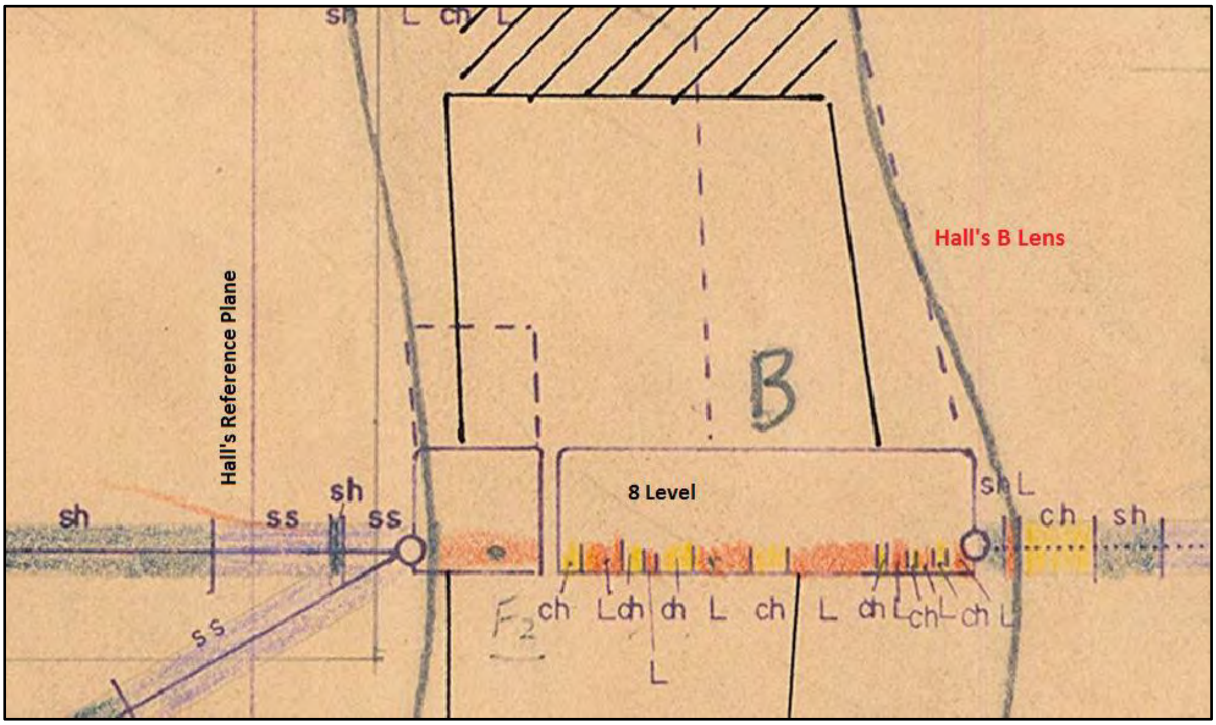
In this report, the tin-copper mineralisation has been described as occurring in lenses rather than lodes. The principal controls on the formation of the tin-copper mineralisation are considered to be the presence of beds of limestone that are favourable for replacement by tin and copper-bearing sulphide mineralisation. The lenticular shapes of the replacement mineralisation are appropriately referred to as lenses. The known tin-copper lenses have a general plunge to the north and south.

Figure 6-4: Longitudinal view of the tin-copper lenses.



The tin-copper mineralisation consists of intercalated layers of replaced limestone and chert, for example, see Figure 6-5. The chert content of the mineralisation is variable, and the variation in chert content was addressed by Mason (1965). Mason reported that the chert content of Hall's lens, as known at the time, varied from 15% to 55%.

Figure 6-5: Detail of mapping shown on Aberfoyle cross-section.



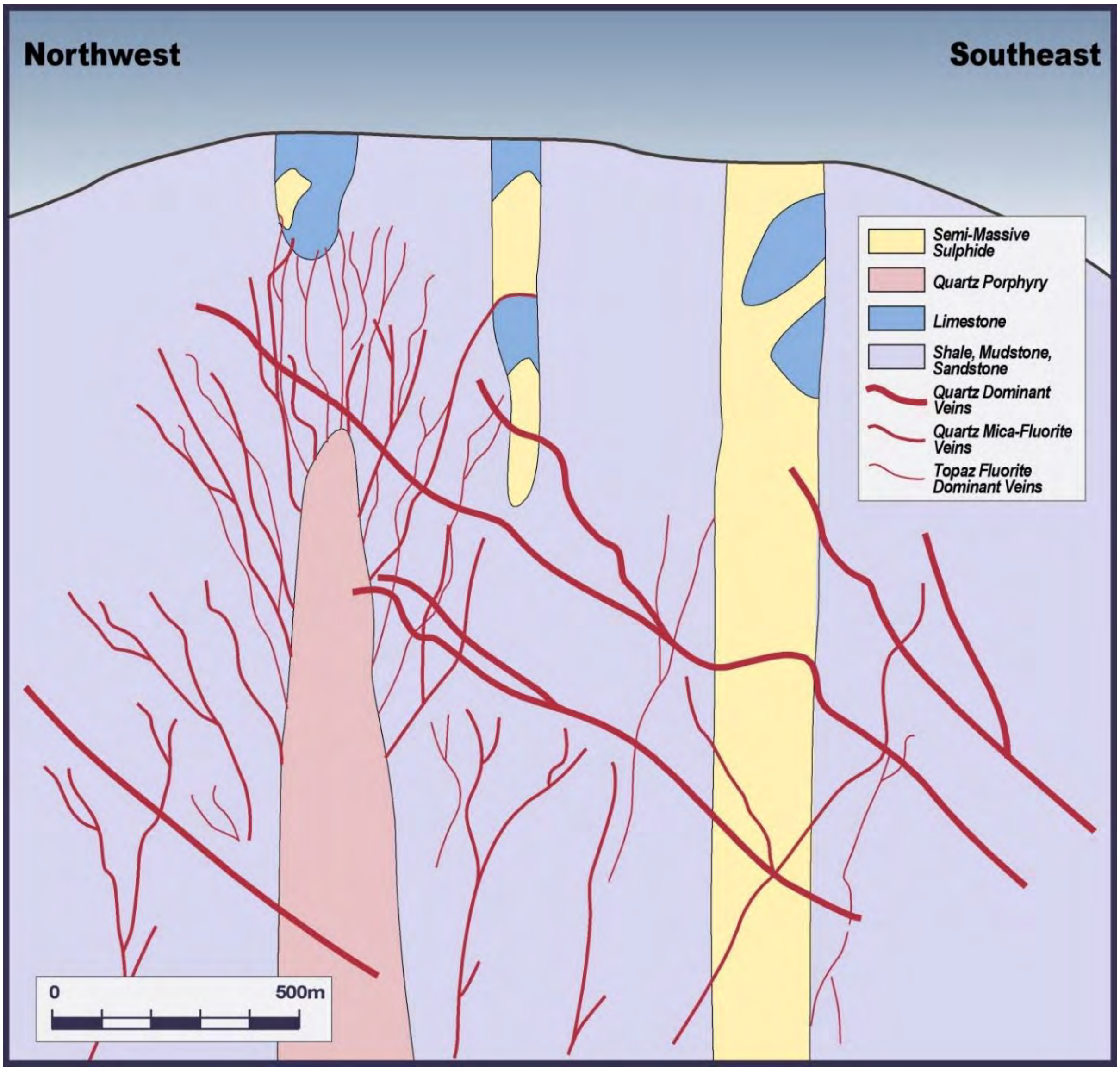
The tungsten bearing stock-work formed around and possibly from the quartz porphyry dyke. The dyke dips vertically and has a known strike length of 100m, an across strike thickness of up to 60m and a down-dip extent of 800 metres (Jackson et al., 2000).

The tungsten-bearing quartz stock-work was formed by the intense quartz veining creating a halo around the quartz porphyry dyke.

The tungsten-bearing quartz stock-work is known as Foley Zone. Foley Zone is currently considered to dip vertically and has a known strike length of about 300 metres, an across strike width of up to 300 metres and a down-dip extent of about 900 metres (Dronseika, 1983).

Figure 6-6**: Schematic representation of Foley's Zone –** cross-section.

(After Jackson et al., 2000)



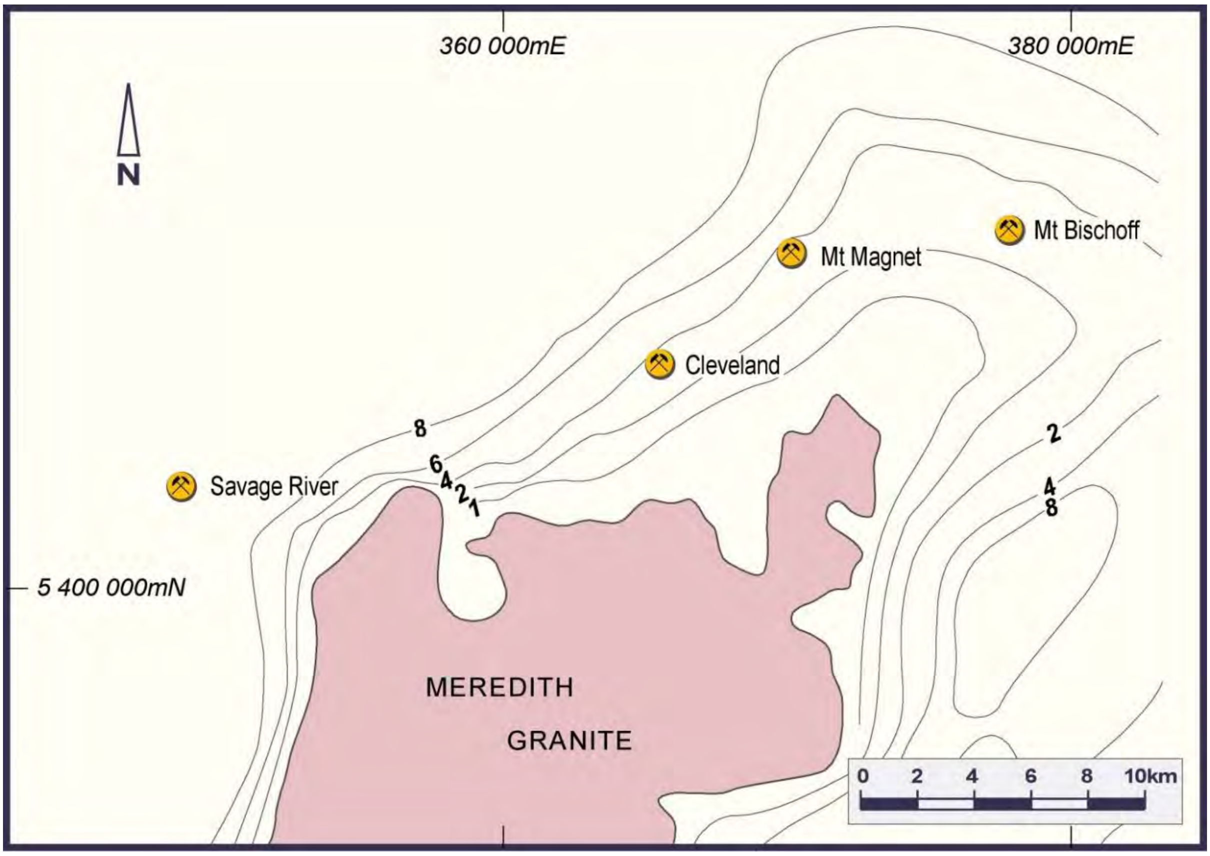
The quartz stock work and the semi-massive sulphide mineralisation overlap in part although the quartz stock-work generally contains very low tin grades, generally less than 0.2% Sn.

Modelling of the granite, based on geophysical gravity survey, indicates that the top of the granite is nearly 4 kilometres deep at Cleveland (see Figure 6-7) (Leaman and Richardson, 1989 and 2003). This is important because;

- at Renison, the tin mineralisation continues to the granite,
- in Cornwall, tin mineralisation continues into the granite, and
- the granite is deeper than thought by the explorer's from the 1960s to the 1980s.

Figure 6-7: Depth to granite in the Cleveland area.

(After Leaman and Richardson, 1989 and 2003)



6.2 Cleveland Ore

Aberfoyle's principal aim of processing at Cleveland was the recovery of tin rather than copper. This was because the tin price was then, as now, significantly greater than the copper price and the tin grade of the ore was greater than the copper grade (see Table 6-1).

The cassiterite in the semi-massive sulphide mineralisation is fine-grained with grains generally being in the range 0.02mm to 0.07mm across. The fine grain size dictates the extent to which the ore must be ground to release the cassiterite from the other minerals present so that it can then be recovered. As the grind size becomes finer, the cassiterite becomes more difficult to recover in a traditional processing plant which uses gravity and flotation methods to recover the cassiterite. During the Aberfoyle operations at Cleveland, tin and copper recovery both averaged about 60% (see Table 6-1).

Table 6-1: Cleveland Mine – mill performance during Aberfoyle operations.

(Compiled from Aberfoyle Ltd and Cleveland Tin N.L. annual reports.)

Year	Ore Treated	Feed Grade		Sn Recovered from Cassiterite		Cu Recovered	
	tonnes	% Sn as cassiterite	% Cu	tonnes	recovery	tonnes	recovery
1969	256,865	0.85	0.40	1,136	52%	378	37%
1970	281,875	0.79	0.37	1,472	66%	717	69%
1971	305,726	0.73	0.42	1,557	69%	823	65%
1972	357,498	0.78	0.40	1,874	67%	969	69%
1973	505,806	0.76	0.32	2,668	69%	1216	76%
1974	314,210	0.75	0.25	1,513	65%	529	69%
1975	289,018	0.78	0.32	1,370	60%	565	61%
1976	363,036	0.73	0.27	1,519	60%	617	62%
1977	393,275	0.66	0.22	1,386	54%	420	49%
1978	388,579	0.53	0.18	1,236	60%	458	65%
1979	352,977	0.52	0.24	1,106	60%	422	49%
1980	367,866	0.47	0.21	1,080	63%	414	53%
1981	439,304	0.51	0.22	1,337	60%	518	55%
1982	350,300	0.64	0.28	1,457	65%	602	60%
1983	277,700	0.71	0.25	1,182	60%	405	59%
1984	180,300	0.71	0.26	668	53%	300	64%
1985	137,000	0.80	0.25	525	48%	198	59%
1986	83,700	0.92	0.41	434	56%	140	41%
Total	**5,645,035**	**0.68**	**0.28**	**23,519**	**61%**	**9,691**	**60%**

7. Mineral Resource Estimate

7.1 Introduction

The September 2018 Mineral Resource estimate is based on a detailed review completed by Elementos and MG of current local conditions. It has incorporated Elementos' current view of long-term metal prices, cost assumptions, plus mining and metallurgy performance to select cut-off grades and physical mining parameters. The resulting geological and mining models show that the quoted Resource has "reasonable prospects for eventual economic extraction" as required by the JORC Code (2012).

The Mineral Resource estimate has been prepared under the direction of the Competent Person under the JORC Code using accepted industry practice and has been classified and reported in accordance with the JORC Code.

The Mineral Resources quoted are extractable via open-pit mining and underground mining methods. A cut-off criterion of 0.35% Sn has been applied to Mineral Resources for reporting purposes in September 2018.

7.2 Sample Database and other available data

Most of the information used for this report was compiled by Aberfoyle and associated parties over the period 1968 to 1986. There is a large repository of data and information regarding the Cleveland mine which was accumulated by Aberfoyle and which is now held at the offices of the Burnie Research Lab, 39 River Road, Burnie, Tasmania.

The Aberfoyle data includes drill logs, maps, reports and survey information. Drill logs exist for all holes drilled for geological purposes. A full set of 1:500 working geological cross-sections exists for the mine.

Aberfoyle drilled over 2000 diamond drill holes (see Table 7-1). Location data for most holes have been retrieved from the existing records. The holes for which location data have not currently been acquired were nearly all drilled into the upper part of the mine above 1100m RL.

MRT holds reports regarding exploration activity at and around Cleveland from around 1900 to the present day. These are all available via the Tiger Database on the MRT website. Many of these reports refer directly to the Cleveland mine. Amongst the reports held by MRT is a report of the remaining resources made at mine closure (Dronseika, 1986).

MRT also holds many paper mine plans and sections. Of particular note is a set of plans and cross-sections showing the mine workings and bearing the date 1982. Despite the date on the plans, the plans appear to show the mine workings at mine closure, although this still requires clarification. The mine plans show all development outlines and relevant survey station locations and numbers but not RLs. However, a file of survey station numbers with RLs was discovered in the Aberfoyle data held in Burnie; this data is considered critical and has been entered into digital form.

MRT also holds drill core for 87 diamond drill holes at its Core Store at Mornington, Tasmania. For this report, samples taken from this core were used to verify the Aberfoyle assay data.

Table 7-1: Summary of drillholes at Cleveland.

Category	Number of Holes
Holes with collar coordinates	1,910
Holes without collar coordinates	119
Holes abandoned	7
Holes drilled for tailings dams	3
Hole numbers not allocated to an actual hole	20
Total of hole numbers	2,059

7.3 Reliability of the Aberfoyle Data

The Aberfoyle data was compiled during Aberfoyle's ownership of Cleveland from 1961 to 1986. During that time, Aberfoyle drilled over 2000 diamond drill holes into the Cleveland deposit and mined about 5.65 million tonnes of ore over a period of 18 years, from 1968 to 1986. In the 1970s, Aberfoyle was one of the leading tin producers in Australia with four operating tin mines: Cleveland, the Storeys Creek and Aberfoyle tin and tungsten mines in North-East Tasmania, and the Ardlethan tin mine in southern New South Wales.

Corollary validation of the data as it was used for the work for this report has confirmed the reliability of much of the data, for example, the collars of diamond drill holes drilled from the surface plot on the surface digital terrain model. There are some discrepancies between the digital database and the data presented on the Aberfoyle working sections.

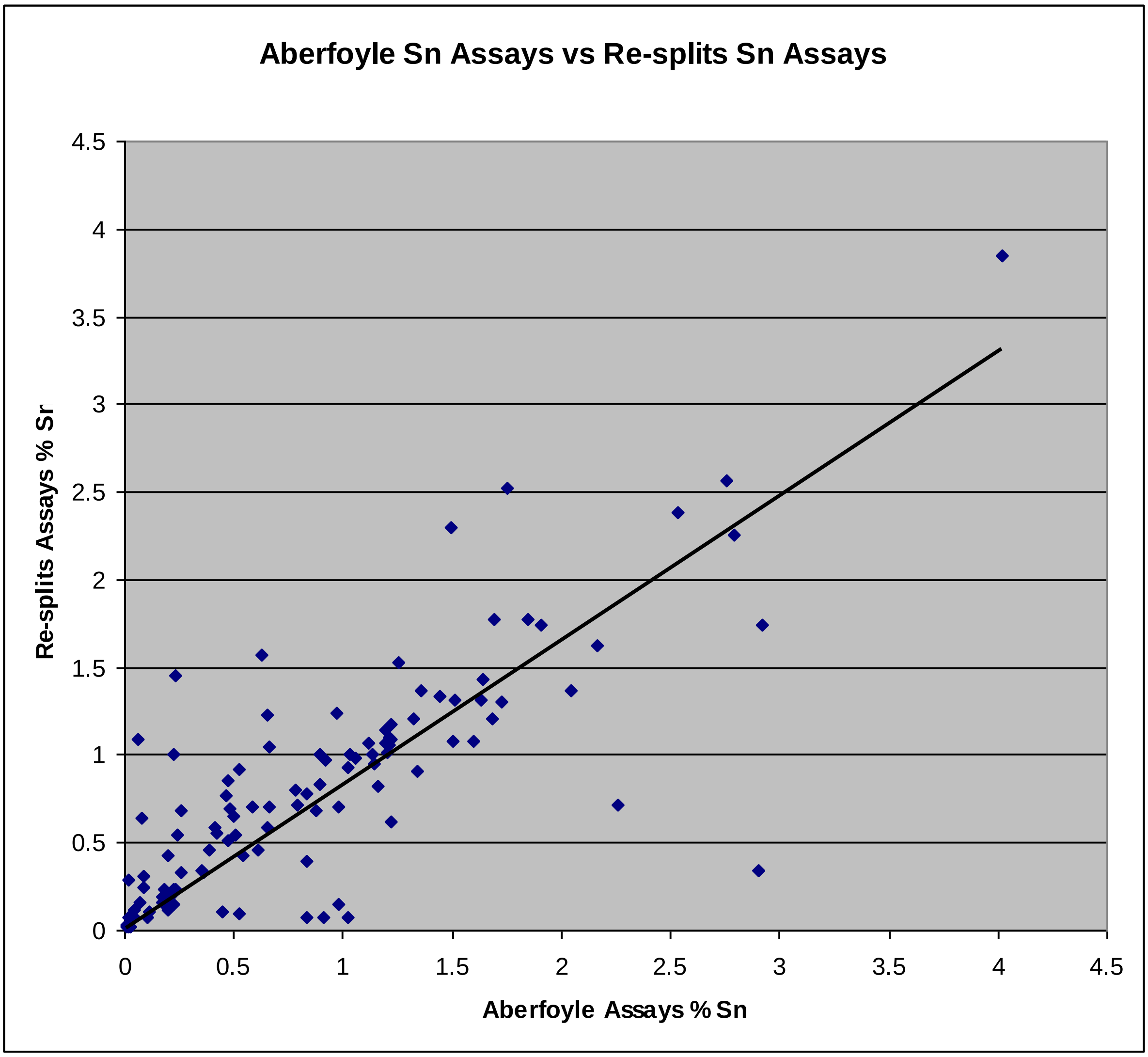
An assessment of the validity of the Aberfoyle assay data was made by quartering some of the core held in the MRT Core Store and submitting the samples for assay at the Burnie Research Lab, part of the ALS Group. Staff at the Burnie Research Lab are recognised experts in sample preparation and assaying for Sn.

111 samples were prepared by quartering drill core from parts of drill holes which had previously been split, sampled and assayed by Aberfoyle. The samples covered a range of Sn assays from about 0% to about 4% Sn. Sn content was determined by fused bead XRF, soluble Sn content by acid digest and AAS, and Cu content by AAS.

The length-weighted average of the re-splits Sn assays was 0.84% compared with the length weighted average of the Aberfoyle Sn assays of 0.78%. As expected with smaller samples, the variance of the re-splits Sn assays was higher than the variance of the Aberfoyle Sn assays: 0.59 % compared with 0.44% (the "support effect").

A graph of the two sets of Sn assays shows a reasonable correlation between the two data sets with no obvious systematic error (see Figure 7-1). Note that this is not a graph of re-assays of the same samples but a graph of samples taken, as far as possible and within the limits of the depth records in the core trays, adjacent to each other. Given these factors, these results are a good confirmation of the reliability of the Aberfoyle Sn assay data.

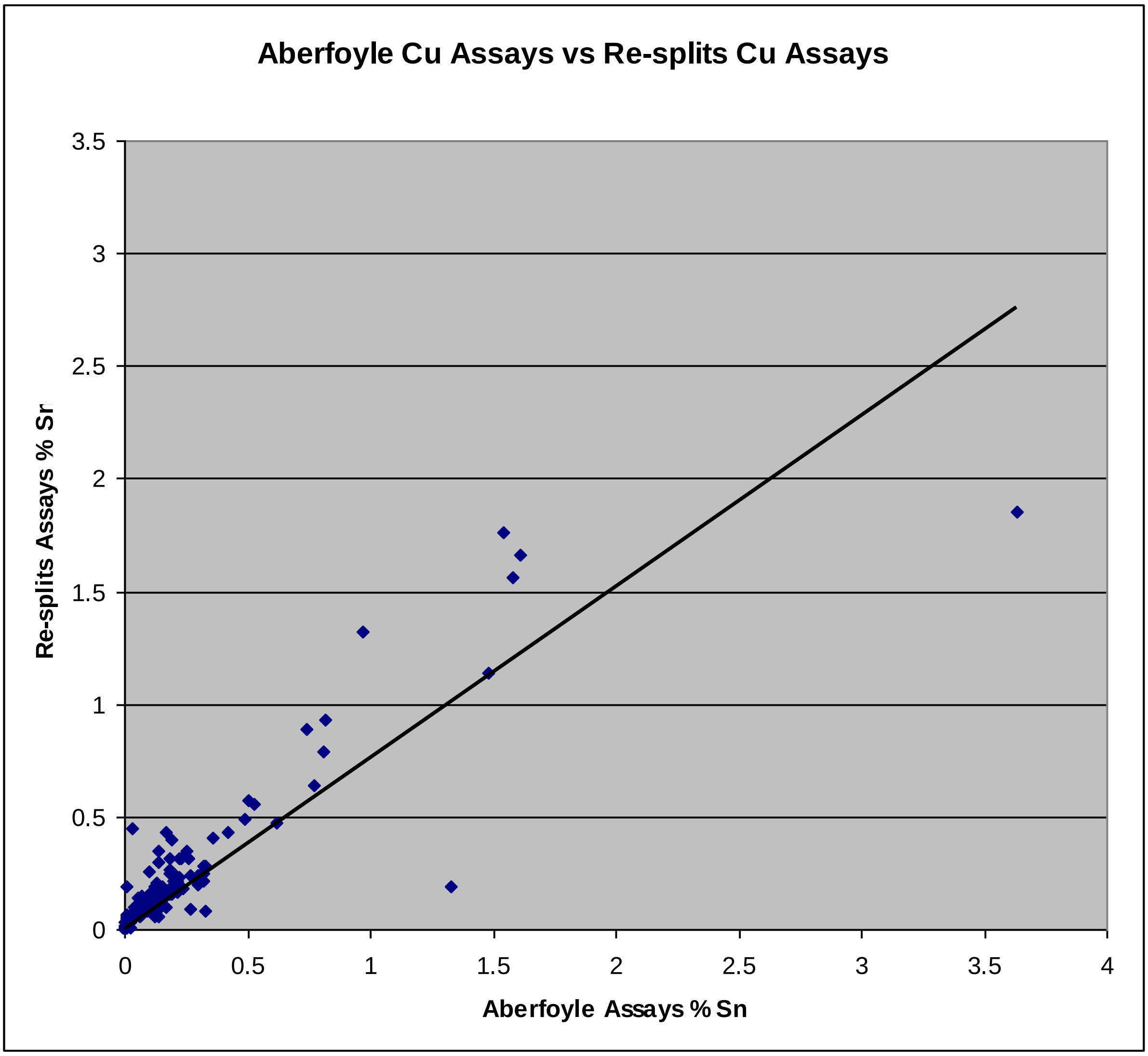
Figure 7-1: Sn Assays vs Re-splits Sn Assays.



The length-weighted average of the re-splits Cu assays was 0.28% the same as the length weighted average of the Aberfoyle Cu assays. As expected with smaller samples, the variance of the re-splits Cu assays was higher than the variance of the Aberfoyle Cu assays: 0.21% compared with 0.13% (the "support effect").

A graph of the two sets of Cu assays shows a reasonable correlation between the two data sets with no obvious systematic error (see Figure 7-2). Note, again, that this is not a graph of re-assays of the same samples but a graph of samples taken, as far as possible and within the limits of the depth records in the core trays, adjacent to each other. Given these factors, these results are a good confirmation of the reliability of the Aberfoyle Cu assay data.

Figure 7-2: Cu Assays vs Re-splits Cu Assays



7.4 Grid

In previous resource estimates, the grids used were a local grid called Halls grid. This estimate transformed all data which was in Halls grid to GDA94 grid. All new drilling is surveyed in the GDA94 grid.

The transformation used datum points which were surveyed by site surveyors.

7.5 Nil Assays Added

A corollary consequence of the tin-copper mineralisation consisting of intercalated layers of replaced limestone and chert was the procedure, at times, of not assaying the chert bands within intersections of tin-copper mineralisation.

This procedure was of little consequence during a time when all geological compilations were made by hand. However, these un-assayed intervals are unacceptable in a digital database that is to be used for three-dimensional modelling of grades. Consequently, records for these un-assayed intervals were added to the database and were allocated zero Sn and Cu grades.

3143 nil assay records were added with the sample number 999999.

7.6 Wireframing

7.6.1 Geological Interpretation

For this report, the interpretation of the tin-copper lenses of mineralisation on each cross-section was based on:

- Aberfoyle's geology cross-sections: these exist as paper cross-sections showing drill holes and development geology coloured for lithology. These were drawn during the period of operation ending in 1986.
- Interpretations by Aberfoyle geologists: interpreted lode boundaries were shown in pencil on the Aberfoyle cross-sections.
- Dronseika's list of lode intercepts: Dronseika (1986) included a list of lode intercepts in drill holes which included depths from and to and lode name.
- Sn assays in drill holes: the Aberfoyle cross-sections did not show any assays, so the Aberfoyle lode interpretations were based entirely on lithology. This may seem to be a geologically sound approach but, unfortunately, many holes drilled towards the end of the mine life do not have lithology plotted on the Aberfoyle cross-sections. In any event, Sn assays must be good indicators of the locations of tin lenses not only because they are prima facie indications of the presence of tin mineralisation but also because they are indications of the presence of a rock type in drill core which geologists thought worthy of sampling.
- The use of Sn assays must be tempered by the fact that in hydrothermal deposits tin mineralisation will leak outside the main zones of mineralisation.
- The extent of Sn assaying in drill holes: Aberfoyle geologist's selected likely looking intersections for assaying for Sn, so, the extent of Sn assaying is an indication of the logging geologist's opinion of the extent of the Sn bearing rock.
- Geology mapped in mine openings: Aberfoyle's 1:500 cross-sections show geology mapped in mine openings.
- Locations of mine openings: Aberfoyle's 1:500 cross-sections showing the locations of mine openings. Development openings were determined by Aberfoyle's surveyors and are shown. Stope boundaries are depicted by straight lines and are, most likely, based on planned stope outlines. Nearly all stopes were long hole open

stopes, left unfilled and, before the invention of cavity monitoring systems ("CMS") there was no way for actual stope shapes to be surveyed. The extent of cross-cuts through lenses is some guide as to the operators' view of the extent of the lenses.
- The interpretation of the lenses on adjacent cross-sections.

Aberfoyle geologists described two significant flatly dipping faults as off-setting the lenses: Nadir and Tulip faults. Although the current interpretation only recognises the existence of Tulip fault, the current lens nomenclature applies a suffix to the names of Hall's lenses to indicate where the lenses occur relative to the two flat faults postulated by Aberfoyle:

- 1 – above Nadir fault,
- 2 – between Nadir and Tulip faults,
- 3 – below Tulip fault.

It is worth noting here that the fault referred to by Aberfoyle geologists as En fault, a fault structurally parallel to subparallel to the lodes is almost certainly not a fault but a disconformity. Also, it is now thought that the variation in thickness, dip and position of the tin-copper lenses can be explained by variations in the thickness, dip and position of the host lithology, that is, the tin-copper mineralisation is primarily controlled by host lithology.

The Foley stock-work was modelled within a 0.2% WO3 threshold. Using this threshold value resulted in a bounding shape for the stock-work.

A zone known as Foley North, located to the north of Aberfoyle's interpretation of the Foley stock-work was identified by Aberfoyle (Dronseika, 1983). Foley North was based on an intersection in C0969. The interpretation of the stock-work for this report has incorporated all the relevant intersections, including the intersection in C0969, into a single body.

7.7 Summary of Geological Domains

A total of 19 geological domains were wireframed reflecting the geology and the Tin and Copper mineralisation. These domains are discussed in Section 7.6 and were developed by the Competent Person.

These wireframes were validated to ensure that no boundaries crossed over each other and priorities were enforced when block modelling to code the block model with sub-blocks on these hard boundaries.

Each wireframe was validated to ensure that they reflected the drill hole information (geology and grade) and snapped to the relevant intercepts. Also, that each individual solid wireframe was closed, consistent and did not have any crossing facets.

Each separate solid was cut to the topography surface, which was previously validated, and the basement surface, which was half the distance below the deepest drill hole. The solids were then used in the generation of the block model and sample compositing.

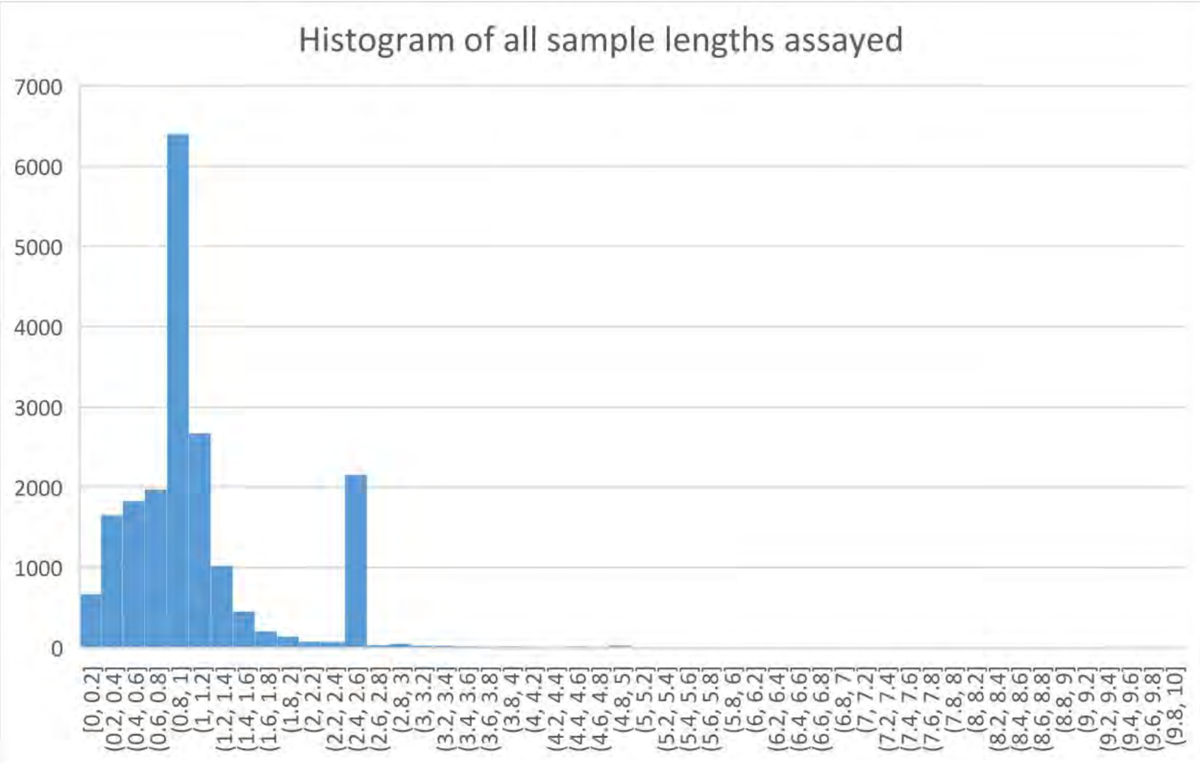
7.8 Compositing

All assays for the estimate of Mineral Resources came from the sampling of diamond drill core.

A histogram of the sample lengths of the raw assays of all data shows that most assays were taken over lengths of less than 1.0m with the mode of the histogram occurring at 0.8m to 1.0m (Figure 7-3).

Samples were restricted to the domain boundaries from top to bottom of the hole with the last sample within the boundary varying in length.

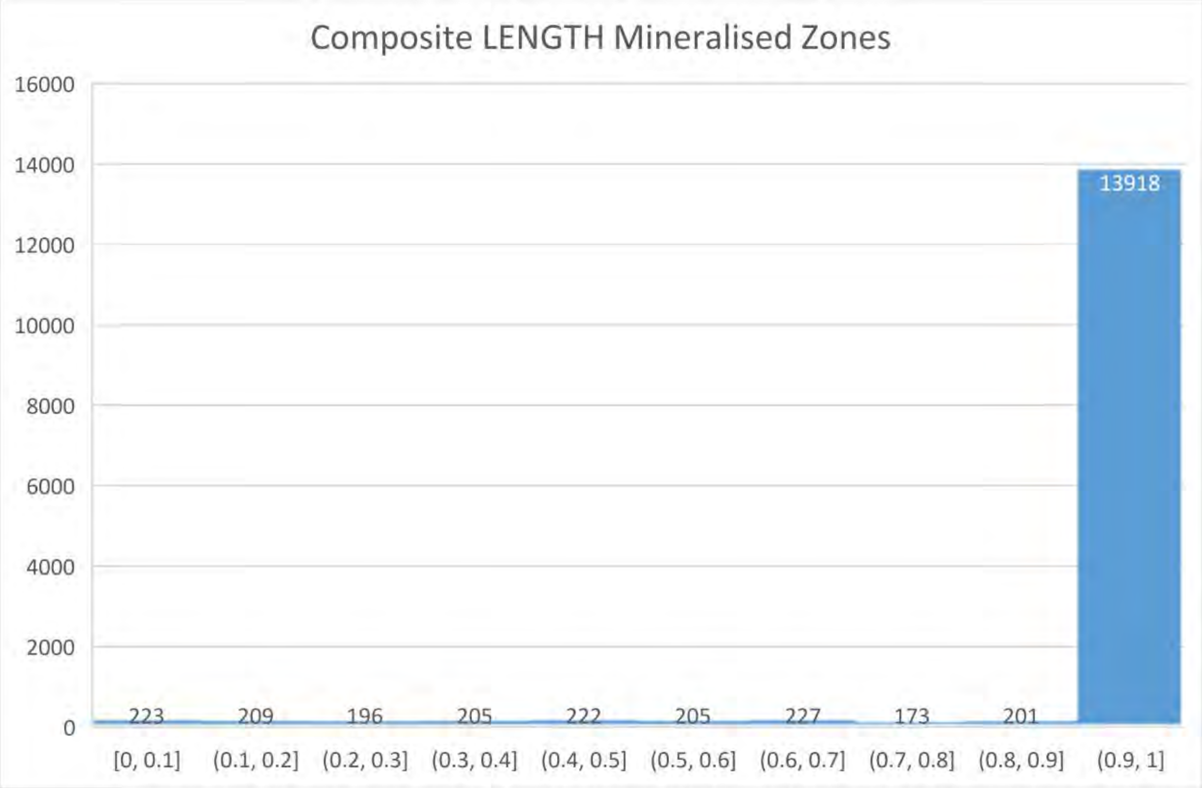
Figure 7-3: Histogram of all sample lengths assayed



Samples were composited to 1-metre lengths within the domain boundaries using Vulcan from top to bottom of the hole. This generated 88% of samples at 1-metre lengths as shown in Figure 7-4.

Composited sample lengths of optimally 1 metre were used in grade estimation with a lower limit of 0.5 metres used. The percentage of samples between 0.5 and 1 metre is 93.3% with the samples below 0.5 metres being 6.7% (composites less than 0.5m length were not used in grade estimation).

Figure 7-4: Histogram for Composite Length in Mineralised Zones



7.9 Bulk Density

The Aberfoyle database contained 960 samples from within mineralised lenses for which specific gravity had been determined. The mean of the specific gravities was 3.1 g/cm3.

The principal gangue sulphide mineral present at Cleveland is pyrrhotite. A bulk density of 3.1 tonnes/m3 for pyrrhotite bearing limestone implies that the rock contains about 20% pyrrhotite which is in line with descriptions of the deposit. A bulk density of 3.1 tonnes/m3 was used for this resource estimate.

The last estimate by Aberfoyle (Dronseika, 1986) used bulk densities of 3.05 and 3.08 tonnes/m3.

7.10 Statistical Analysis

Figure 7-5: Histogram for Sn% of all composited lens samples.

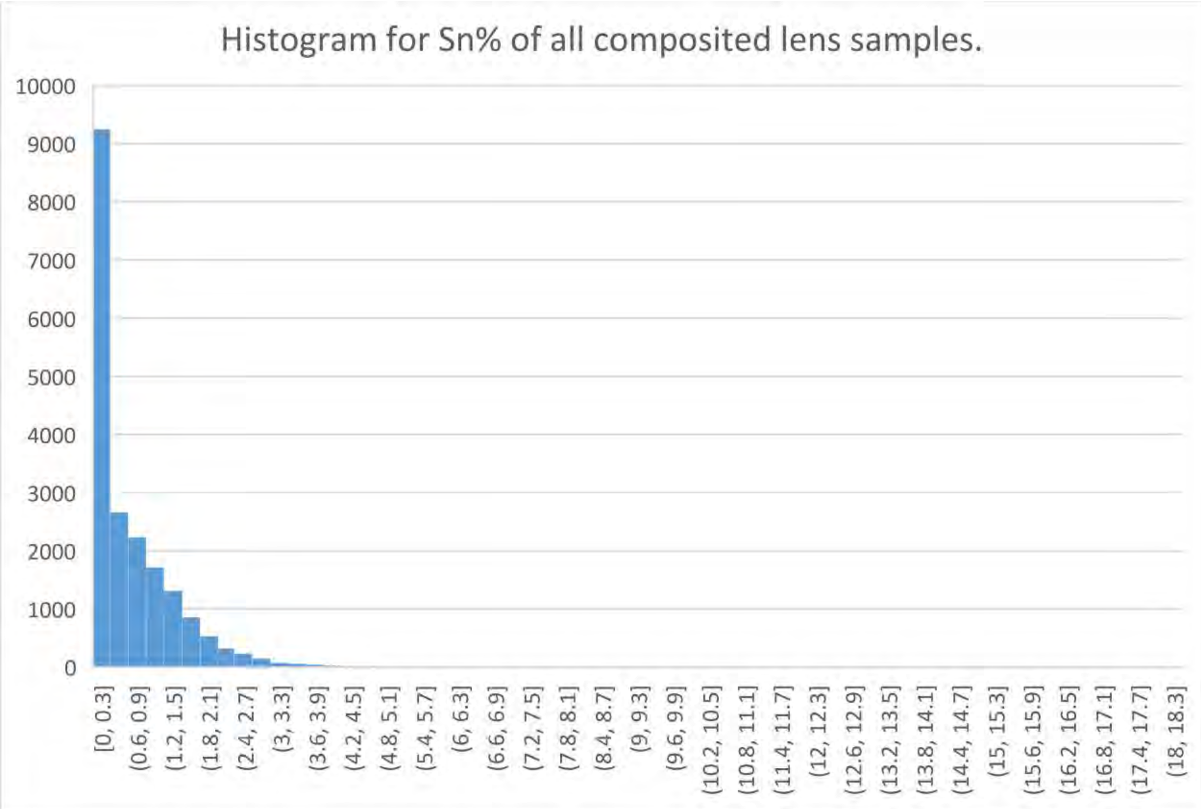
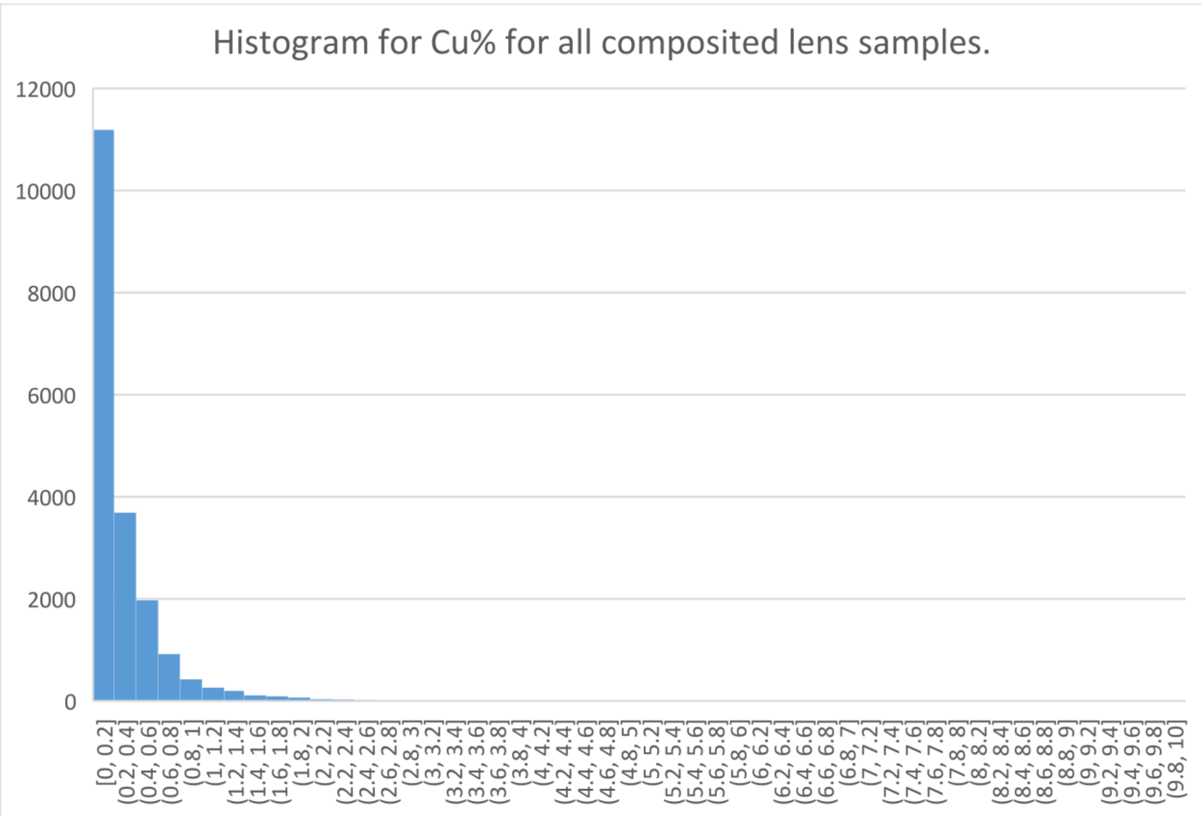


Figure 7-6: Histogram for Cu% for all composited lens samples.



7.10.1 Variography

Variography was completed in Vulcan using the mapfiles created from compositing limited to geological domains. These results were used to determine kriging parameters and grade estimation search radii and assist in resource classification determination.

Variograms were attempted for all domains, however, due to insufficient data in some domains, not every individual domain could create a meaningful variogram. The variograms were restricted by length to discard the smaller sample lengths for meaningful results. The variograms produced are presented in Appendix E.

Directional experimental variograms, based on multiple geostatistical domains, were prepared. Domains were allocated based on:

- the number of composited Sn samples in each lens,
- the mean Sn grade of composited samples in each lens,
- the variance of Sn grades of composited samples in each lens,
- the proximity of lenses, and
- the general strike and dip of each lens.

Table 7-2: Variogram models

Geostatistical Domain	Axis	Direction	Spherical Model	% Nugget
1	Major	+50°/055°	0.30 + 0.24Sph5 + 0.24Sph40	38%
	Semi-major	+00°/145°	0.30 + 0.24Sph2.5 + 0.24Sph20	
	Minor	+00°/145°	0.30 + 0.24Sph1.25 + 0.24Sph10	
6	Major	-40°/055°	0.29 + 0.26Sph5 + 0.16Sph35	41%
	Semi-major	+50°/055°	0.29 + 0.26Sph4 + 0.16Sph25	
	Minor	+00°/145°	0.29 + 0.26Sph3 + 0.16Sph6	
7	Major	-75°/145°	0.30 + 0.25Sph4.5 + 0.15Sph45	43%
	Semi-major	+15°/145°	0.30 + 0.25Sph4.5 + 0.15Sph45	
	Minor	+00°/055°	0.30 + 0.25Sph4.5 + 0.15Sph45	
10	Major	Isotropic	0.27 + 0.20Sph4 + 0.17Sph30	42%
	Semi-major			
	Minor			

7.11 Geological Modelling

7.11.1 Modelling Parameters and Method

The block model parameters were determined by the orientation of the ore zones, the size of the geological zones and the sample intervals. The block model dimensions and parameters are listed in Table 7-3. The parent block sizes are 10x10x10 metres. Sub-blocks were used to ensure the block model honours the geometry of the domains. The sub-blocks are a minimum 1 metre in all directions.

Table 7-3: Block Mode Parameters

BLOCK MODEL PARAMETERS	X	Y	Z
Origin	364660 mE	5406830 mN	-300 mRL
Extent	500	1000	800
Maximum Block Size (m)	10	10	10
Rotation	55		
ATTRIBUTES			
Rock Type	air(0), rock(1)		
Geological Zones	waste(0), bs(1), hla1(2), hla3(3), hlb1(4), hlb2(5), hlb3(6), hlc3(7), hn31(8), henrys(9), kk(10), bt(11), bte(12), btw(13), hlc1(14), hld1(15), ll(16), hla2(17), hlaeast(18), hlc2(19), hld3(20)		
Density	Assigned bulk density = 3.1		
Classification	target(0), measured(1), indicated(2), inferred(3)		
Sn	Estimated Sn grade		
Cu	Estimated Cu grade		
W03	Estimated W grade		
Mined_out	Mined out zones within the model (1 and 2 = mined)		
Estimflag	Blocks flagged when estimated		
Num_Sam	Number of samples used to estimate		
Num_Holes	Number of holes used to estimate		

7.12 Grade Estimation

Tin, Copper and Tungsten were interpolated into the block model via grade estimation editor in Vulcan. The grades were restricted to the search ellipsoid ranges based on the variography results. Ordinary Kriging (OK) was used to estimate grade into all domains.

Each block was estimated using search ellipsoids with a minimum of 4 samples and a maximum of 32 samples with an octant-based search with a maximum of 4 samples per octant. If a block was not estimated on the first search, then the search ellipsoid was doubled to allow sufficient sample data to be captured. If the second search pass failed to select sufficient samples to populate the block, then the search ellipsoid was trebled.

The composited drill hole data used in grade estimation was restricted to lengths between 0.5 metres and 1.0 metres.

7.13 Model Validation

Model validation was completed visually, graphically and statistically to certify that block model grades accurately represent the drill hole data.

Cross sections were generated with block model grades and drill hole data. These were scrutinised to certify that the block model grades honoured the composited drill hole data. These cross sections are presented in Appendix D.

Swath plots are presented in Appendix F. These plots compare average Tin grades between composited drill hole data and block model along easting, northing and elevation trends. These plots are used to determine if there are problems geographically and if the grade estimation is too smooth.

These plots show good correlation between the composited drill hole grades and the OK estimated block model grades. The greatest differences are in the domains which are poorly sampled and where there are local variances. There is no systematic bias evident from the plots and the smoothing introduced by OK is evident.

7.14 Resource Classification

The resources have been classified by considering several aspects including the search criteria, the variography, the drill hole and sample density, geological logging and sampling and assay issues.

Additional drilling in 2018 around the extents and within areas previously classified as Inferred status has increased confidence in the resource.

With the changes in domaining displaying better grade continuity and additional drilling into areas previously classified Inferred, the current Resource Estimate has 83% in the Indicated classification with the remaining tonnes (17%) Inferred classification.

7.15 Depleted Global Resource Estimate

Two-dimensional outlines of the mined-out parts of lenses were included in Aberfoyle's closure resource report as longitudinal projections (Dronseika, 1986). These outlines were digitised and used to flag the blocks in the block model which had been mined out (Table 7-4). No differentiation was made on the basis that some mine workings may not have taken out the full width of the mineralisation and, consequently and conservatively, the full width of the mineralisation was depleted in the block model.

In December 2013, Pitt and Sherry provided wireframes of mine development and some stopes based on their digitising of mine workings shown on historical mine plans. These wireframes were also used to further deplete the block model.

The depleted global resource is listed by lens in Table 7-4, and a reconciliation of the depleted global resource and the mined-out global resource to the total global resource is listed in Table 7-4.

Table 7-4: Depletion of Cleveland Resource.

Lens	Code for this report	Depletion reference in Dronseika, 1986 (Note the lens names in Dronseika do not necessarily match those used in this report)
Hall's	HLA1	Hall's A above W Fault Hall's B W – Ratchet Faults
	HLB1	Hall's B above W Fault Hall's B W – Ratchet Faults Hall's A1 Ratchet – Nadir South of Culshaw Hall's A2 Ratchet – Nadir South of Culshaw Hall's A3 Ratchet – Nadir South of Culshaw
	HLC1	Hall's C above Ratchet Fault
	HLD1	Hall's D above Ratchet North Hall's D above Ratchet South
	HLA2	(Combined with HLB2 for this report)
	HLB2	Hall's B Ratchet – Nadir south of Culshaw
	HLC2	Hall's C Ratchet - Nadir
	HLD2	Hall's D Ratchet - Nadir
	HLA3	Hall's A West Hall's A East Hall's B West En – Tulip Hall's B East En - Tulip
	HLB3	Hall's B below Tulip Fault South Hall's C West En – Tulip Hall's C East En – Tulip
	HLC3	Hall's C below Tulip Hall's D En - Tulip
"Henry's"	HN31	Henry's Below Tulip Henry's West below Tulip Henry's East below Tulip

Khaki	KK	Khaki East Khaki West
B South	BS	B South below 11 Level

7.16 Mineral Resource Estimate

7.16.1 Estimation Parameters

The cut-off Tin grades were determined through the analysis of mining optimisation, long-term prices, and processing recoveries for both open pit and underground. The results of these studies provided a robust determination of a potential economic extraction in both types of mining.

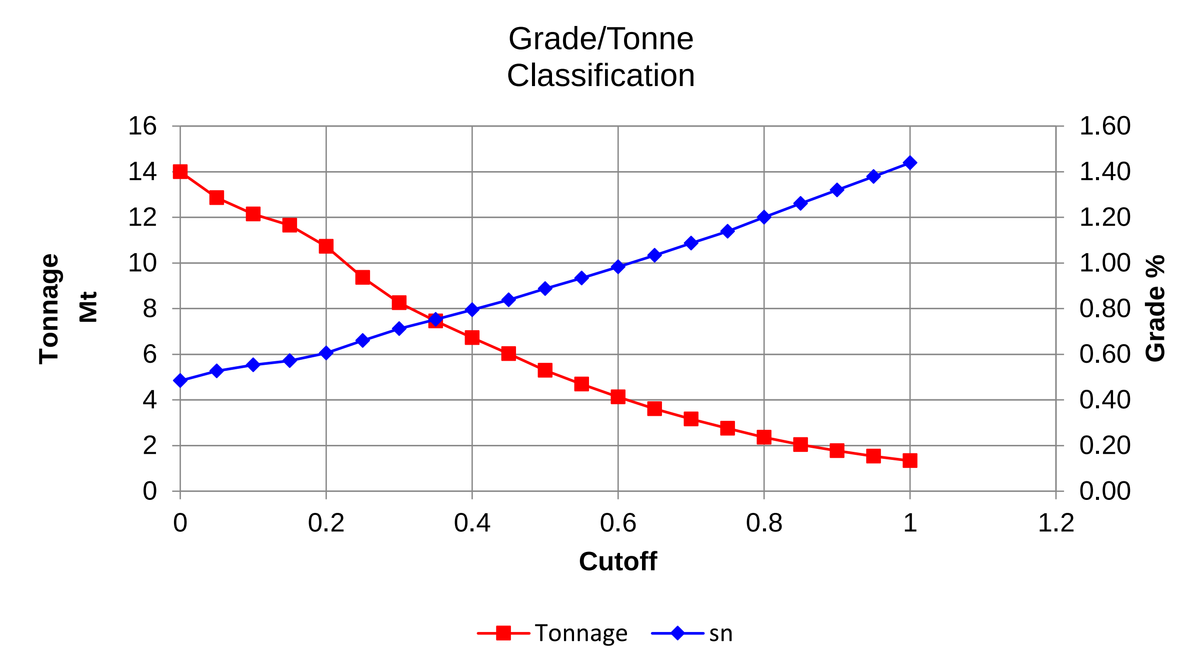
The resultant cut-off grades are the basis for the Resource statement.

The cut-off grade-tonnage results are presented in Table 7-5 and Figure 7-7: Mineral Resource Grade/Tonne Classification.

Table 7-5: Cut-off Grade Tonnage Results (depleted for mining).

Cutoff	Tonnes (Mt)	Sn %	Contained Tin (kt)	Cu %	Contained Copper (kt)
0	13.99	0.48	67.73	0.21	29.39
0.05	12.86	0.53	67.63	0.23	29.57
0.1	12.15	0.55	67.18	0.23	27.94
0.15	11.65	0.57	66.52	0.24	27.96
0.2	10.72	0.61	64.87	0.25	26.81
0.25	9.36	0.66	61.80	0.27	25.28
0.3	8.26	0.71	58.78	0.28	23.12
0.35	**7.46**	**0.75**	**56.18**	**0.3**	**22.38**
0.4	6.72	0.80	53.44	0.3	20.17
0.45	6.03	0.84	50.50	0.31	18.68
0.5	5.29	0.89	47.00	0.32	16.94
0.55	4.70	0.93	43.86	0.33	15.50
0.6	4.13	0.98	40.60	0.35	14.45
0.65	3.61	1.03	37.37	0.36	13.01
0.7	3.16	1.09	34.35	0.37	11.70
0.75	2.75	1.14	31.35	0.39	10.73
0.8	2.36	1.20	28.31	0.41	9.67
0.85	2.03	1.26	25.62	0.42	8.53
0.9	1.77	1.32	23.29	0.43	7.59
0.95	1.53	1.38	21.15	0.44	6.75
1	1.33	1.44	19.20	0.44	5.87

Figure 7-7: Mineral Resource Grade/Tonne Classification



7.16.2 Factors Affecting Resource Estimate

The mining parameters used to generate optimised pits and underground stopes and provide cut-off grades for potential economic extraction are thought to be reasonable. However, the cut-off grades for potential economic extraction are susceptible to many factors, including changes in mining and processing costs, tin and copper prices, further studies influencing mine design, fuel and power costs.

The geological knowledge of Cleveland mineralisation is robust and the refinement of the high grade zones has assisted in grade continuity. Further drilling will determine the future refinement of these zones and accompanying grade continuity for resource classification.

The current domaining and subsequent geological model is clipped to the extents of drilling data and geological knowledge. The resource is currently open along strike and at depth, it is therefore possible that further drilling and other exploration methods will extend and/or refine the Cleveland mineralisation and Mineral Resource estimate, resulting in an increased tonnage or to close off the lenses.

7.17 Resource Statement

The Resource estimate for Cleveland is 7.47 Mt @ 0.75% Sn and 0.30% Cu producing 56,100t of contained tin metal and 22,200t of contained copper metal. The Resource estimate for Cleveland is presented in Table 7-6.

Table 7-6: Summary of Mineral Resources.

Cleveland Tin and Copper Mineral Resources September 2018					
0.35% Sn cut-off					
Classification	Tonnes (Mt)	Sn (%)	Contained Sn (kt)	Cu (%)	Contained Cu (kt)
Indicated	6.23	0.75	46.7	0.30	18.7
Inferred	1.24	0.76	9.4	0.28	3.5
TOTAL	7.47	0.75	56.1	0.30	22.2

7.18 Comparison to Previous Resource Estimates

The current resource estimate is different to previous estimates due to the modelling of high grade tin copper wireframes within the broader package. The addition of the greater "Henrys" lode and the tightening of wireframes to grade interceptions has increased the tonnes slightly and grade has also increased due to the lodes adhering to higher grade intersections.

The comparison to the February 2014 Resource estimate shows a resource tonnage increase of 0.35% and a Tin grade increase of 15.4% and a total contained Tin increase of 15.8%. The comparison to the June 1986 Resource Estimate shows a total resource tonnage increase of 14.4%, a Tin grade increase of 7.1% and a total contained Tin increase of 22.6% as shown in Table 7-7.

Table 7-7: Comparison to Previous Mineral Resource Estimates.

Date	Tonnes (Mt)	Sn (%)	Contained Sn (kt)	Cu %	Contained Cu (kt)
Jun-86	6.53	0.70	45.71	0.29	18.94
Feb-14	7.44	0.65	48.39	0.25	18.61
Jul-18	7.47	0.75	56.03	0.30	22.41
Difference between Jun-86 to Jul-18	0.94	0.05	10.32	0.01	3.47
Change (%)	14.40	7.14	22.57	3.45	18.34
Difference between Feb-14 to Jul-18	0.03	0.10	7.64	0.05	3.80
Change (%)	0.35	15.38	15.79	20.00	20.42

7.19 Additional Mineral Resource Estimates at Cleveland

Additional Mineral Resource Estimates were completed on the Tungsten Mineral Resource for the Foley's lense and the Tin and Copper contained in the Tailings Mineral Resource by Mining One in 2014. These Resource Estimates have not changed since that time as no extra data has been added to either resource. They are tabulated in Table 7-8 and Table 7-9 and the work completed (including the JORC Table 1) are shown in Appendix B and Appendix C.

Table 7-8: Tungsten Mineral Resource Estimate (McKeown, 2014).

Cleveland Tungsten Mineral Resource 16 February 2014		
0.20% WO_3 cut-off		
Category	Tonnage	% WO3
Inferred	3,970,000	0.28
Total	3,970,000	0.28

Table 7-9: Tailings Mineral Resource Estimate (McKeown, 2014).

Cleveland Tin and Copper in Tailings Mineral Resource 23 May 2014			
0% Sn cut-off			
Category	Tonnage	% Sn as cassiterite	% Cu
Indicated	**3,850,000**	**0.30**	**0.13**
Total	**3,850,000**	**0.30**	**0.13**

8. Forward Work Programme

Future work at Cleveland will consist of additional metallurgical testwork to refine the processing flowsheet, mine design and technical assessment of suitable sites for mine operating infrastructure, which will include tailings dam location and design. This work will be critical to the completion of a feasibility study on developing a mining operation at the site.

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APPENDIX A: JORC TABLE 1

Section 1 - Sampling Techniques and Data

Criteria	Explanation	Detail
Sampling techniques	• *Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.*	Diamond drilling was used to obtain samples which were sawn in half longitudinally then one half of the core was submitted for assaying and the remainder was stored on site. The half core was crushed and pulverised prior to assay. Sn assays were made using pressed powder XRF. The tin-copper mineralisation occurs associated with sulphide replacement of limestone beds; the mineralisation is visually distinct but the principal tin bearing mineral, cassiterite, is not usually visible to the naked eye. The drilling database used to support the estimate contains 2059 drill holes for a total of 132795 m. All available data was used for geological interpretation and for grade estimation.
Drilling techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).*	All samples came from diamond drilling, generally ranging from 30mm to 45mm in diameter, using conventional drill tubes. Core was not oriented. Core was logged and sampled for assaying and the remaining core stored on site.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	A sampling of drill logs by the author did not reveal that core loss was a problem during diamond drilling. The reliability of core recovery was confirmed in discussions with a former Aberfoyle geologist. Aberfoyle reported that core recovery at Cleveland was consistently good (Cox, 1967). This is in accordance with the reported ground conditions in the Cleveland mine which have been reported as competent to highly competent (Everett, 1977 and Buckland, 1980). Tin and copper minerals occur in such concentrations and grain sizes, and the sample preparation methods were such, that the likelihood of sample bias due to preferential loss/gain of fine/coarse material is very low,

Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.* • *The total length and percentage of the relevant intersections logged.*	A sampling of drill logs by the author indicated that the logs contained adequate locational, sampling and assay data. Lithological logging was not always carried out but, given the style of the mineralisation, even though not ideal, this lack is tolerable. Paper logs exist for the holes drilled. Only the 2018 drilling program was geotechnically logged. Good ground conditions were reported from the mine which was successfully mined from 1968 to 1986 using trackless mining methods with mine development dimensions of about 5m X 5m. Geotechnical logging is recommended for future drilling programmes.. All the resource drilling has been qualitatively logged with appropriate detail by Elementos and previous companies, to support the current resource estimate.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	Drill core was sawn in half longitudinally, and crushing and pulverising were subject to specific and definite protocols. Aberfoyle paid particular attention to sampling technique and sample preparation (Cox, 1967). The reliability of sub-sampling techniques and sample preparation has been confirmed by re-sampling and re-assaying of existing drill core by Rockwell/Elementos. Sample sizes were appropriate to the grain size of the material being sampled.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	Assays were conducted at the Tasmanian Mines Department Laboratory at Launceston and at the Aberfoyle laboratory on the Cleveland mine site; check samples, although not recorded in the drill logs, were used (Cox, 1967). The reliability of the assays is also partly confirmed by reconciliations of resources to production (Dronseika, 1986). 2018 assays conducted at ALS laboratories Burnie, Tasmania. Total Sn assays were made by pressed powder or fused bead XRF which are appropriate methods for the style of tin occurrence. The reliability of Sn assays has been confirmed by re-sampling and re-assaying of existing drill core by Rockwell.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data*	2020 cored diamond drill holes were completed. 1725 lens intersections were used for this resource estimate. Lens intersections were noted by Aberfoyle geologists during the operation of the mine from 1968 to 1986. The intersections were verified by successive mine geologists and recorded by Dronseika (1986). The intersections for the estimate for this report were based on the Aberfoyle records, modified by the author where considered appropriate, and Elementos drill logs.

		Verification of assay data was carried out routinely by Aberfoyle staff. Check samples, although not recorded in the drill logs, were in use (Cox, 1967). The reliability of the Aberfoyle assays is also partly confirmed by reconciliations of resources to production made by Aberfoyle (Dronseika, 1986) and during the preparation of the estimates for this report. Laboratory assay reports are filed with the hard copy drill logs. No adjustments to assay data have occurred.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	Locations of diamond drill hole collars, channel samples and mine workings were established by mine surveyors. About 20% of holes were missing the records of collar coordinates, however, many of these missing collar coordinates have been measured from 1:500 scale Aberfoyle mine cross-sections. At the time of this resource estimate, of the 2020 holes drilled, 119 still lacked collar coordinates and could not be used. This estimate for this report used GDA94 grid. In 2013, high resolution topography over the mine site was acquired using LiDAR. This topography was used during the preparation of this estimates for this report. Diamond core holes were surveyed using a single-shot camera and core orientations. This provides sufficient accuracy for the current estimates.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	Data spacing was sufficient for estimation of Sn grades by ordinary kriging and Cu by ordinary kriging for classification as Indicated or Inferred Mineral Resources according to the JORC Code. No compositing of sample intervals was undertaken in the field. Samples were composited to 1m lengths within the mineralisation envelopes for resource modelling.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	Holes were generally drilled at high angles to the strike and dip of the tin copper lenses which, given the style of mineralisation, was appropriate for minimising sampling bias from this factor.
Sample security	• *The measures taken to ensure sample security.*	Most analyses were made in the laboratory on the Aberfoyle mine site. Given the style of the tin copper mineralisation, and the proximity of the core splitting area and the sample preparation area to the laboratory, samples were not susceptible to interference.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	There are no known audits or reviews by personnel outside Aberfoyle. However, there was a culture of internal reviewing of the geological procedures including at least one review of sampling methods (Cox, 1967).

Section 2 - Reporting of Exploration Results

Criteria	Explanation	Detail
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	Exploration Licence EL7/2005 covers the Cleveland mine and Mineral Resource. EL7/2005 is held by Rockwell Minerals Tasmania Pty Ltd, 100% subsidiary company of Elementos Ltd. The proposed project area lies in Forestry Tasmania Managed Land.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	
Geology	• *Deposit type, geological setting and style of mineralisation.*	The Cleveland tin-copper mineralisation is hydrothermal mineralisation associated with Devonian granite which outcrops within 5 kilometres of the mine and is interpreted from gravity surveys to lie about 4 kilometres beneath the surface at the mine. The host sedimentary rocks were intruded by the Devonian-Carboniferous Meredith granite. A quartz porphyry dyke occurs in the bottom of the mine below 350m from the surface. The tin-copper mineralisation occurs as semi-massive sulphide lenses consisting of pyrrhotite and pyrite with cassiterite and lesser chalcopyrite and stannite, and quartz, fluorite and carbonates. Sulphide minerals make up 20% to 30% of the mineralisation. The semi-massive sulphide lenses have formed by the replacement of limestone and are geologically similar to the tin bearing semi-massive and massive sulphide mineralisation at Mt Bischoff and Renison.

Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:*
	  • *easting and northing of the drill hole collar*
	  • *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
	  • *dip and azimuth of the hole*
	  • *down hole length and interception depth*
	  • *hole length.*
	• *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case*
		A summary of drill hole information used in the resource estimate is appended to the resource report (Geology and Resource Estimate Report, Cleveland Project, Septemebr 2018, Appendix E). Detailed drill hole intercepts have not been included as they are deemed commercially sensitive.

Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated*	Drill hole data was composited to 1m intervals limited to the mineralisation envelopes (composited from the top of hole) and coded to the relevant domains which were used for geostatistical studies, grade estimation and reporting. No metal equivalent values have been calculated or reported.
Relationship between mineralisation widths and intercept length	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. • If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	Holes were generally drilled at high angles to the strike and dip of the tin copper lenses which, given the style of mineralisation, was appropriate. In tables of lens intersections, the lengths listed are down- hole lengths.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	Maps and sections are included in the resource report (Geology and Resource Estimate Report, Cleveland Project, September 2018).
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	The Cleveland Project resource estimate was produced by Measured Group Pty Ltd (MG) based on information provided by Elementos. The resource report contains summary information for all historical and current drilling campaigns within the project area and provides a representative range of grades intersected in the relevant drill holes.
Other substantive exploration data	*Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	Modelling of the granite, based on geophysical gravity surveys, indicates that the top of the granite is nearly 4 kilometres deep at Cleveland (Leaman and Richardson, 1989 and 2003). The metallurgical amenability of the tin-copper mineralisation was established by mining and processing operations from 1968 to 1986. The acceptable geotechnical conditions in the mine were established by successful mining operations from 1968 to 1986. Groundwater inflows to the mine were easily handled by conventional pumping techniques during mining operations from 1968 to 1986.
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	There is excellent potential for further exploration of the Cleveland tin-copper mineralisation. The definition and prioritisation of Exploration Targets has been reported separately. The Cleveland tin-copper mineralisation is open at depth and along strike, including as several shallow targets near the surface.

Section 3 - Estimation and Reporting of Mineral Resources

Criteria	Explanation	Detail
Database integrity	*Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* *Data validation procedures used.*	The specific measures taken by Aberfoyle to ensure database integrity are not known but the creation of a digital database has allowed for on-going review of the integrity of the data. Elementos maintain a database (MS Access) that contains all drill hole survey, drilling details, lithological data and assay results. Where possible, all original geological logs, hole collar survey files, digital laboratory data and reports and other similar source data are maintained by Elementos. The MS Access database is the primary source for all such information and was used by the Competent Person to estimate resources. The Competent Person undertook consistency checks between the database and original data sources as well as routine internal checks of database validity including spot checks and the use of validation tools in Maptek's Vulcan V9 modelling software. No material inconsistencies were identified.
Site visits	*Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* *If no site visits have been undertaken indicate why this is the case.*	The Competent Person has not visited the Cleveland Project site.
Geological interpretation	*Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* *Nature of the data used and of any assumptions made.* *The effect, if any, of alternative interpretations on Mineral Resource estimation.* *The use of geology in guiding and controlling Mineral Resource estimation.* *The factors affecting continuity both of grade and geology.*	The tin-copper mineralisation at Cleveland occurs as semi-massive sulphide lenses consisting of pyrrhotite and pyrite with cassiterite and lesser chalcopyrite and stannite, and quartz, fluorite and carbonates. Sulphide minerals make up 20% to 30% of the mineralisation. The semi-massive sulphide lenses have formed by the replacement of limestone and are geologically similar to the tin bearing semi-massive and massive sulphide mineralisation at Mt Bischoff and Renison. A geological interpretation was devised by the author of this report using cross sections showing drill holes with tin assays, and fact geology as mapped by Aberfoyle geologists. The interpretation was based on, but was not a copy of, the Aberfoyle interpretations. In many places, the tin-copper mineralisation consists of intercalated layers of replaced limestone and chert. Aberfoyle geologists did not always have such chert bands assayed which was of little consequence during a time when all geological compilations were made by hand. However, these un-assayed intervals are unacceptable in a digital database that is going to be used for three dimensional modelling of grades. Consequently, records for these un-assayed intervals had to be added to the database and were allocated zero Sn and Cu grades. Geological setting and mineralisation controls of the Cleveland Project mineralisation have been confidently established from drill hole logging and geological mapping, including the development of a robust three-dimensional model of the major rock units. Lithological wire-frames interpreted from drill hole logging were used to assign densities to the estimates. Due to the confidence in the understanding of mineralisation controls and the robustness of the geological model, investigation of alternative interpretations is unnecessary.

Dimensions	*The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	Hall's Formation, the geological formation which contains the lenses of mineralisation, generally dips vertically or steeply to the east and is known over a strike length of 1000m, an across strike width of about 200m, and a down-dip length of over 800m (Ransom and Hunt, 1975 and Dronseika, 1986). For this resource estimate, 19 lenses of tin copper mineralisation were interpreted ranging in strike lengths from about 100m to about 600m, with across strike widths of up to about 20m, and down dip lengths of up to about 300m. The lenses occur from surface outcrop to 700m below the surface. The limits of the mineralisation have not been completely defined and are open at depth and along strike..
Estimation and modelling techniques	*The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* *The assumptions made regarding recovery of by-products.* *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).* *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* *Any assumptions behind modelling of selective mining units.* *Any assumptions about correlation between variables.* *Description of how the geological interpretation was used to control the resource estimates.* *Discussion of basis for using or not using grade cutting or capping.* *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	Most assays were taken over lengths of less than 1.0m with the mode occurring at 0.8m to 1.0m. A composting length of 1.0m was used for this resource estimate. Grade estimates for Sn and Cu were made by ordinary kriging. Sn grade interpolations were made using geostatistical domains which were allocated based on: the number of composited Sn samples in each lens; the mean Sn grade of composited samples in each lens; the variance of Sn grades of composited samples in each lens; the proximity of lenses; and the general strike and dip of each lens. For grade interpolations, the search method used was ellipsoidal with a major search axis length of 200m and the semi-major and minor search axes proportioned using the ranges of the relevant variograms. A previous, pre-JORC, resource estimate made by Aberfoyle geologists at mine closure in 1986 totalled 5.2 million tonnes at 0.70% Sn and 0.31% Cu at a 0.35% Sn cut-off grade. At the same cut-off grade, the estimate for the updated JORC report in 2014 totalled 7.44 million tonnes at 0.65% Sn and 0.25% Cu. The differences between the estimates are due to the differences in the geological interpretations used for the estimates, differences between the actual extent of the estimates, and differences between the two dimensional estimate by Aberfoyle and the current three dimensional estimate. Beyond the assumption that Cu would be recovered in processing, as was the case when the mine operated from 1968 to 1986, no other assumptions about the recovery of by-products were made. No estimates of S grade or the grades of other deleterious elements were made. Mineralisation was modelled as three dimensional blocks of parent size 10m X 10m X 10m with sub-celling allowed to 1m X 1m X 1m. The 10m length of the parent block equates to about half the cross-section spacing on which drilling was concentrated. Computer assisted estimations were made using Vulcan 3D software. Depletion was made for mining. No assumptions were made regarding the modelling of selective mining units. No assumptions were made about the correlation between variables.

		Wireframes of the geological interpretations of the tin-copper lenses were used to assign lens codes to blocks in the block model. Grades were interpolated into each lens using only composited samples from within the lens. Statistical analyses of the Sn and Cu showed that there were no rogue outliers, that is, high grade assays that did not fit the distributions and which consequently indicated the need for cutting of high grades. Validation of the block model was made by: checking that drill holes used for the estimation plotted in expected positions; checking that flagged lens intersections lay within, and corresponded with, lens wireframes; ensuring whether statistical analyses indicated that grade cutting was required; checking that the volumes of the wireframes of lenses matched the volumes of blocks of lenses in the block model; comparing the mean of composited sample grades within a lens with the mean grades of the lens in the block model; checking plots of the grades in the block model against plots of diamond drill holes; reconciling the tonnage and grades of the mined out blocks in the block model against historical production: historical production from 1968 to 1986 was estimated from Aberfoyle reports as 5.645 million tonnes at 0.74% Sn and 0.28% Cu; at a mining recovery of 90% and a dilution rate of 10% in the run of mine mill feed, the mined out blocks in the block model provided a material inventory of 5.630 million tonnes at 0.75% Sn and 0.29% Cu.
Moisture	*Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	Tonnages were estimated on a dry basis.
Cut-off parameters	*The basis of the adopted cut-off grade(s) or quality parameters applied.*	A cut-off grade of 0.35% has been used to define the resources. At a Tin price of A$26,500 per tonne, this implies that material can be treated at a profit above that cut-off grade from an open-pit operation with relatively modest recoveries from a conventional gravity, sulphide and cassiterite floatation processing circuit. This was also the cut-off grade used by Aberfoyle for its final resource estimate (Dronseika, 1986) and the updated Resource Estimate by Mining One in 2014.
Mining factors or assumptions	*Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	The resource estimate has been completed with the assumption that it will be mined using open cut mining and underground mining methods.

Metallurgical factors or assumptions	*The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	Sn and Cu can be recovered using traditional tin and copper processing, as was the case when the mine operated from 1968 to 1986. Mill recoveries of 60% for both tin and copper were the historical averages achieved in the Cleveland mill operated by Aberfoyle Limited.
Environmental factors or assumptions	*Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	Pitt and Sherry Consultants and GHD Consultants have provided preliminary designs for waste and tailings disposal.
Bulk density	*Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	A bulk density of 3.1 tonnes/m3 was used based on the results of 960 pycnometer determinations of specific gravities made from drill core samples of tin-copper lenses. The principal gangue sulphide mineral present at Cleveland is pyrrhotite. A bulk density of 3.1 tonnes/m3 for pyrrhotite bearing limestone implies that the rock contains about 20% pyrrhotite which is in line with descriptions of the deposit. A bulk density of 3.1 tonnes/m3 was used for this resource estimate and this was similar to the bulk densities used by Aberfoyle which ranged from 3.05 to 3.08 tonnes/m3.
Classification	*The basis for the classification of the Mineral Resources into varying confidence categories.* *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* *Whether the result appropriately reflects the Competent Person's view of the deposit.*	The resources were classified by the author as Indicated and Inferred based on current understanding of geological and grade continuity. Parts of the deposit, where drilling intensity was adequate to reasonably reliably define the lens shapes and extents, and to indicate reasonable grade continuity, were classified as Indicated Mineral Resources, and the balance as Inferred Mineral Resources. The classification reflected the author's confidence in the location, quantity, grade, geological characteristics and continuity of the Mineral Resources. The Mineral Resource has been classified into Measured, Indicated and Inferred based on the following relevant factors: drill hole density, style of mineralisation and geological continuity, data quality and associated QA/QC and grade continuity. The resource classification accounts for all relevant factors. Two methods were used to determine the optimal drill spacing for Resource classification at Cleveland: a). Variogram method which analyses proportions of the sill,

		b). an estimation variance method. The data spacing and distribution is sufficient to establish geological and grade continuity appropriate for Mineral Resource estimation and classification and the results appropriately reflect the Competent Person's view of the deposit.
Audits or reviews.	*The results of any audits or reviews of Mineral Resource estimates.*	No external audits or review have been undertaken. An internal review of modelling and estimation methods, assumptions and results has been conducted by Lyon Barrett and James Knowles, Principal Geologists of Measured Group Pty Ltd
Discussion of relative accuracy/ confidence	*Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	The estimates made for this report are global estimates. Predicted tonnages and grades made from such block estimates are useful for feasibility studies, and long, medium and short term mine planning. Individual, as distinct from aggregated, block estimates should not be relied upon for block selection for mining. Local block model estimates, or grade control estimates, whose block grades are to be relied upon for selection of ore from waste at the time of mining will require additional drilling and sampling of blast holes and underground development. Reconciliation of the tonnage and grades of mined out blocks in the block model against historical production has been made: historical production from 1968 to 1986 was estimated from Aberfoyle reports as 5.645 million tonnes at 0.74% Sn and 0.28% Cu; at a mining recovery of 90% and a dilution rate of 10% in the run of mine mill feed, the mined out blocks in the block model provided a material inventory of 5.630 million tonnes at 0.75% Sn and 0.29% Cu. Confidence in the relative accuracy of the estimates is reflected in the classification of estimates as Indicated and Inferred. Variography was completed for Tin and Copper. The variogram models were interpreted as being isotropic in the plane with shorter ranges perpendicular to the plane of maximum continuity. Validation checks have been completed on raw data, composited data, model data and Resource estimates. The model is checked to ensure it honours the validated data and no obvious anomalies exist which are not geologically sound. The mineralised zones are based on actual intersections. These intersections are checked against the drill hole data. Field geologist picks, and the competent person has independently checked laboratory sample data. The picks are sound and suitable to be used in the modelling and estimation process. Where the drill hole data showed that no Tin or Copper existed, the mineralised zone was not created in these areas. At the final drill hole intercept, the mineralised zone was created half the distance from the previous intersection unless there was evidence that no mineralisation was intercepted. Further drilling also needs be completed to improve Resource classification of the Inferred Resource. Metallurgy is assumed to be representative.

APPENDIX B: TAILINGS RESOURCE ESTIMATE

1.1 Data for the Tailings Resource Estimate

Sampling techniques and a data summary are presented in Table 38. The criteria in this table are taken from Table 1 within the JORC Code 2012.

The criteria for the reporting of exploration results are presented in Table 9-1. These criteria are also taken from Table 1 within the JORC Code 2012.

Table 9-1: Sampling techniques and data summary for tailings resource estimate.

Criteria	Commentary
Sampling techniques	• The tailings grade is based on sampling in the Cleveland Mill and subsequent metallurgical mass balances made by Aberfoyle during operations from 1968 to 1986. • Unconsolidated samples of tailings were collected in 2007 from air core drilling of 31 holes in tailings dams 1 and 2. • Unconsolidated samples of tailings were collected in 2013 from Wacker drilling of 21 holes in tailings dams 1 and 2.
Drilling techniques	• Holes drilled to test the tailings in 2007 were air cored. • Holes drilled to test the tailings in 2013 were drilled using a Wacker drill with a continuous sample recovery barrel enabling a full column sample of tailings material to be recovered.
Drill sample recovery	• The 2007 air core drilling technique is designed for recovering samples from unconsolidated ground. The sample is returned from the face of the bit between an inner and outer tube which minimises sample contamination from the walls of the hole. Samples were weighed wet and sample masses ranged from 1kg to 10kg (Brewer, 2008). • Samples from the 2013 Wacker drilling were collected into core trays. Samples were sent to the Burnie Research Laboratory for storage.
Logging	• All samples acquired from the air core drilling in 2007 were logged for material type and extent of apparent oxidation. Samples were submitted to a commercial laboratory for particle sizing determinations and assay. • All samples acquired from the Wacker drilling in 2013 were logged for material type. Currently, samples are stored in a freezer pending further investigations.
Sub-sampling techniques and sample preparation	• Sampling in the Cleveland Mill was subject to metallurgical mass balances from 1968 to 1986. • Samples from air core holes drilled in 2007 to test tailings were dried and split using a rotary splitter. The samples were of tailings, that is, of material which had already been crushed and pulverised. Sampling and sample preparation methods were appropriate for the testing of the tailings that was undertaken. • Samples from the Wacker holes drilled in 2013 have not yet been split or sampled.

Criteria	Commentary
Quality of assay data and laboratory tests	• Samples were taken routinely in the Cleveland Mill and routinely assayed in the laboratory at Cleveland. Assaying in the Cleveland Mill was subject to metallurgical mass balances from 1968 to 1986. • The quality control procedures used in the Cleveland Mill are not specifically known but the use of check samples was routine (Cox, 1967). • The reliability of Sn assays made in the Cleveland laboratory has been confirmed by re-sampling and re-assaying of existing drill core by Rockwell (McKeown, 2011). • Total Sn assays were made by pressed powder XRF which is appropriate methods for the style of tin occurrence in the tailings.
Verification of sampling and assaying	• Samples were taken routinely in the Cleveland Mill and routinely assayed in the laboratory at Cleveland. Assaying in the Cleveland Mill was subject to metallurgical mass balances from 1968 to 1986.
Location of data points	• Collar positions of the air core holes drilled in 2007 were picked up by a registered Surveyor in MGA coordinates. • In 2013, high resolution topography over the mine site was acquired using LiDAR. This topography was used during the preparation of this resource estimate. • Collar positions of the Wacker holes drilled in 2013 were picked up using GPS.
Data spacing and distribution	• Sampling in the Cleveland Mill was routine and subject to metallurgical mass balances from 1968 to 1986. A very large number of tailings samples were taken during that time, probably at least one per day from 1968 to 1986.
Orientation of data in relation to geological structure	• Not applicable to mill sampling. • Air core and Wacker holes were drilled vertically which is perpendicular to the general stratification in the tailings dams.
Sample security	• Samples taken in the Cleveland mill were submitted to the laboratory attached to the mill. Given the proximity of mill to the laboratory, samples were not susceptible to interference. • Supervision of the drilling of the air core holes in 2007 and transportation of the samples to the Burnie Research Laboratory were undertaken by the supervising geologist for Lynch Mining. • Supervision of the drilling of the auger holes in 2013 and transportation of the samples to the Burnie Research Laboratory were undertaken by the supervising geologist for Pitt and Sherry
Audits or reviews	• Aberfoyle made estimates of tonnage and grade of tailings made in 1981 (Foo, 1981) which were confirmed in 2008 (Moony, 2008). These estimates were in reasonable agreement with the estimates made for this report. • The volumes of the tailings dams were estimated by Pitt and Sherry following acquisition of high resolution topographic data using LiDAR in 2013. The mass of tailings estimated by Pitt and Sherry were in excellent agreement with the mass estimated for this report. • The Sn and Cu grades from the samples acquired from the 2007 air core drilling of the tailings confirmed the reliability of the Sn and Cu grades of the tailings estimated for this report.

Table 9-2: Reporting of exploration results for the tailings resource estimate.

Criteria	Commentary
Mineral tenement and land tenure status	• Exploration Licence EL7/2005 covers the Cleveland mine and Mineral Resource. EL7/2005 is held by Rockwell Minerals Tasmania Pty Ltd, 100% subsidiary company of Elementos Ltd. The proposed project area lies in Forestry Tasmania Managed Land.
Exploration done by other parties	• See Table 1 for a summary of work done by other parties.
Geology	• Not applicable.
Drill hole Information	• Not applicable.
Data aggregation methods	• Not applicable.
Relationship between mineralisation widths and intercept lengths	• Not applicable.
Diagrams	• Not applicable.
Balanced reporting	• Not applicable.
Other substantive exploration data	• Not applicable.
Further work	• Samples acquired from the Wacker drilling of tailings in 2013 will be submitted for assay and metallurgical testing in 2014.

Figure 9-1: Locations of air core holes drilled into tailings dams in 2007.

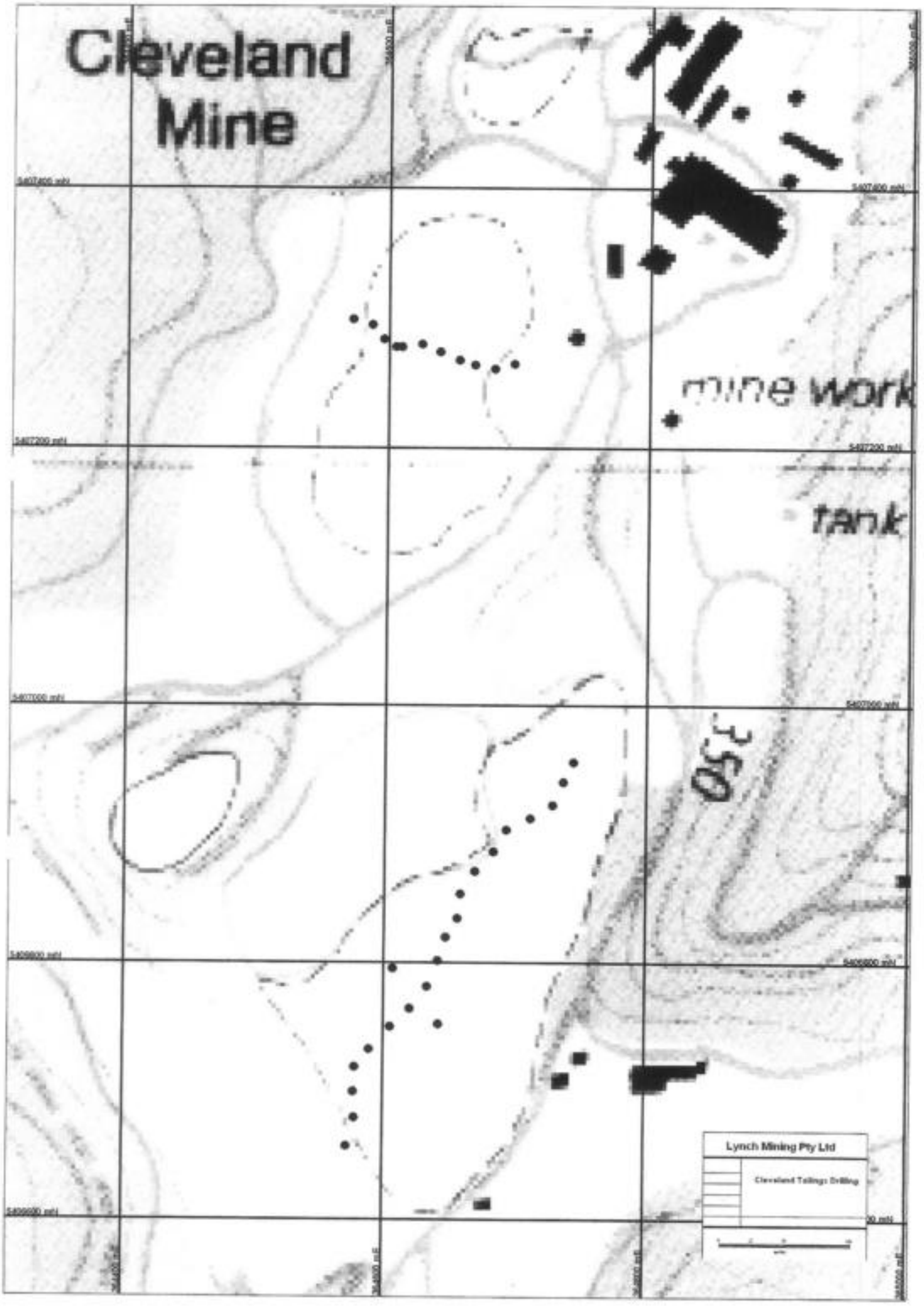
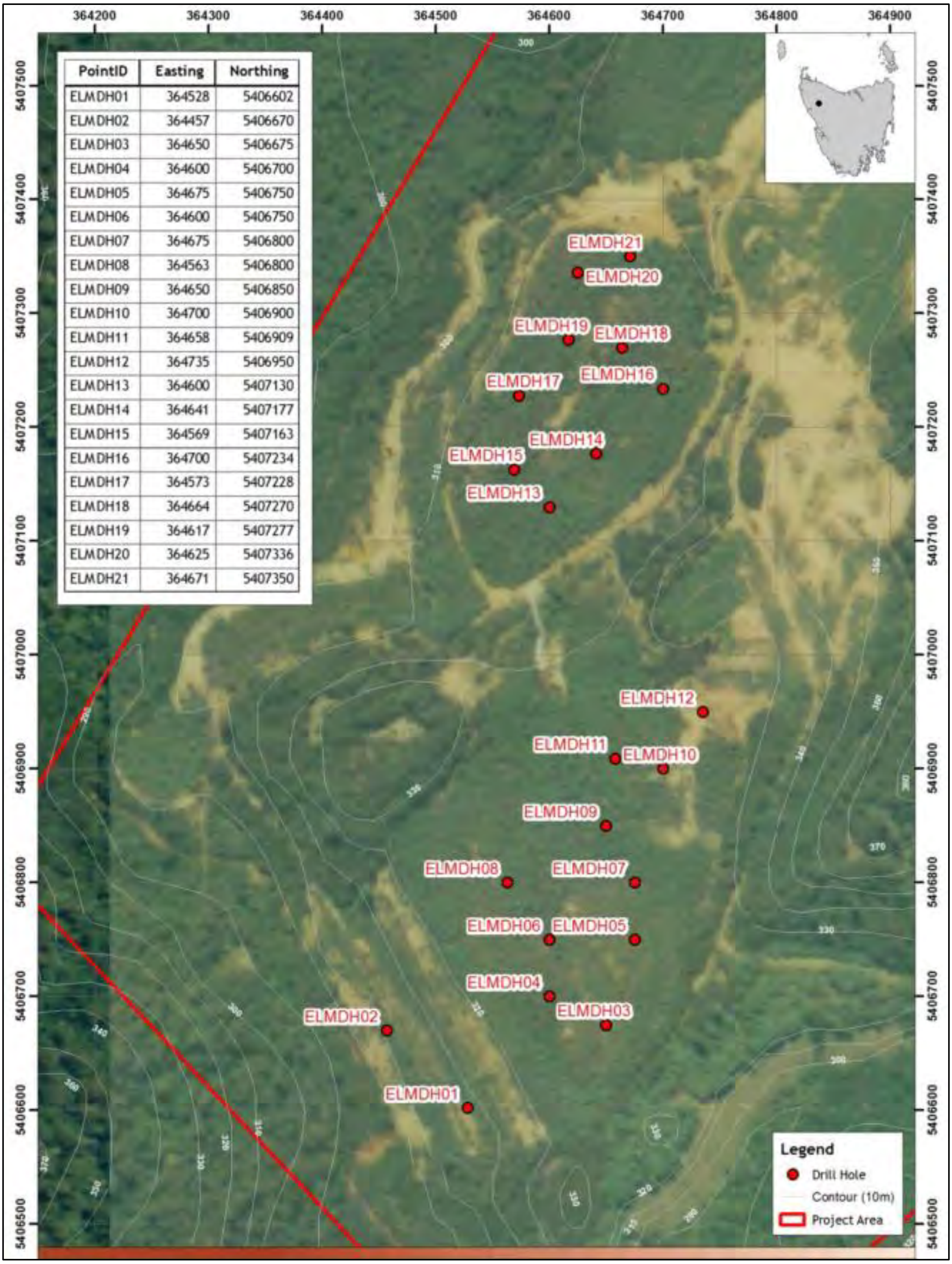

Cleveland
Mine
mine work
tank
350
Lynch Mining Pty Ltd
Cleveland Tailings Drilling

Figure 9-2: Locations of Wacker holes drilled into tailings dams in 2013.

(from Pollington and O'Toole, 2013)



PointID	Easting	Northing
ELMDH01	364528	5406602
ELMDH02	364457	5406670
ELMDH03	364650	5406675
ELMDH04	364600	5406700
ELMDH05	364675	5406750
ELMDH06	364600	5406750
ELMDH07	364675	5406800
ELMDH08	364563	5406800
ELMDH09	364650	5406850
ELMDH10	364700	5406900
ELMDH11	364658	5406909
ELMDH12	364735	5406950
ELMDH13	364600	5407130
ELMDH14	364641	5407177
ELMDH15	364569	5407163
ELMDH16	364700	5407234
ELMDH17	364573	5407228
ELMDH18	364664	5407270
ELMDH19	364617	5407277
ELMDH20	364625	5407336
ELMDH21	364671	5407350

1.2 Tin and Copper Tailings Resource Estimate

The operating statistics for the Cleveland mill are tabulated in Table 39. This information was accumulated by Rockwell from Cleveland and Aberfoyle Annual Reports and data reported by Foo (1981).

The Cleveland mill discharged two waste streams: a coarse waste stream from heavy media separation ("HMS floats") and a tailings stream of finely ground material. The HMS plant scalped coarse reject material from the ore stream prior to the grinding and subsequent treatment of the ore.

The tailings are stored on site in two tailings dams, the surfaces of which have been re-vegetated. None of the tailings has been removed from the site since they were placed.

The quantity and grade of tailings discharged from the Cleveland mill was estimated (see Table 9-4 and Table 9-5) using the following steps;

Step 1.

The tonnage of Sn and Cu concentrate was estimated from the Sn and Cu in concentrate, assuming grades of 50% Sn and 20% Cu for concentrate. For 1969, these tonnages were:

tonnage of Sn concentrate = 1,136 / 50% = 2,272 tonnes

tonnage of Cu concentrate = 377.5 / 20% = 1,887 tonnes

Step 2.

The tonnage of tailings was estimated as the tonnage of mill feed less the tonnage of Sn concentrate, Cu concentrate and HMS floats, for example, in 1969 this was:

256,865 – 2,272 – 1,887 - 34,934 = 217,772 tonnes.

Step 3.

The Sn as cassiterite grade of mill feed and HMS floats, Sn as cassiterite recovery of the mill circuit, and production of Sn in cassiterite concentrate were recorded in the mill operating figures.

The grade of Sn in tailings was estimated from these figures by subtracting the tonnage of Sn in HMS floats plus the tonnage of Sn in concentrates from the tonnage of Sn in mill feed, and dividing by the tonnage of tailings (from Step 2), for example in 1969 this was:

((256,865 * 0.85%) – (34,934 * 0.21%) –(1136)) / 217,772 = 0.44% Sn

Step 4.

The Cu grade of HMS floats was not recorded in the available data. For this estimate, the Cu grade of HMS floats was estimated to be 25% of the Cu grade of the feed. This was in line with the average Sn grade of the floats (0.17% Sn) versus the average Sn grade of the feed (0.68% Sn) over the life of the mine (see the bottom line of Table 40. For example in 1969, the Cu grade of the floats was estimated to be:

25% of 0.40 = 0.10% Cu

Step 5.

The Cu grade of mill feed, Cu in copper recovery of the mill circuit, and production of Cu in copper concentrate were recorded in the mill operating figures. The Cu grade of HMS floats was estimated as described in Step 4. The grade of Cu in tailings was estimated from these figures by subtracting the tonnage of Cu in HMS floats plus the tonnage of Cu in concentrates from the tonnage of Cu in mill feed, and dividing by the tonnage of tailings (from Step 2), for example in 1969 this was:

((256,865 * 0.40%) – (34,934 * 0.10%) – (377.5)) / 217,772 = 0.28% Cu

Step 6.

The annual totals of tailings and contained Sn and Cu tonnes were summed over the life of the mine and the Sn and Cu grades were calculated.

Foo (1981) considered that mill recoveries from treatment of run of mine ore of 65% for Sn could be maintained under best operating conditions. This is considerably better than the mill recoveries during the routine operation of the mill up until the time of his report. This implies that some, at least, of the tin in the tailings dams should be recoverable.

The tailings resource is documented, discrete and complete. The mine operated (a) over a relatively short time period for a mine in this style of deposit – 18 years compared with over 100 years at Renison and Mt Bischoff and (b) in a relatively modern time period from 1968 to 1986, and stored all tailings in two discrete, easily identifiable dams.

The quantity and global grades of the tailings have been estimated from the operating statistics of a competently run mill and are reasonably reliable. The spatial distribution of the tailings, both for tonnage and grades is not known but selective mining of the tailings is neither necessary nor desirable.

Stribley et al. (1984) reported that mill recoveries from pilot scale treatment of tailings of between 33% and 45% for Sn were attainable using conventional gravity and flotation processing and 48-69% Sn recovery using pre-concentration by flotation and matte fuming. The metallurgical amenability of the tailings for Sn and Cu recovery has also been reported in a recent study (Foster et al., 2014) based on the results of Aberfoyle bench and pilot scale test work by Aberfoyle on tailings samples. Mill recovery, for tin, of 50% into a 40% Sn concentrate and, for copper, of 40% into a 20% Cu concentrate were proposed, although further test work was recommended to confirm the copper recovery values. Further test work was also proposed to confirm the recoveries and grades and to confirm the unit operations and flow sheet proposed (PFS, 2014).

Recent financial analysis (Foster et al., 2014) concludes that the tailings can be re-treated profitably when mined in toto, that is, mining of all the tailings without selective mining will be profitable. This conforms with the proposed plan to re-treat all the tailings, including that in the dam walls, to remediate acid drainage from the dams.

Since selective mining is not required, so further drilling of the tailings before mining will not be necessary for the purposes of tonnage and grade estimation and also means that a zero cut-off grade can be applied to the Mineral Resource estimate (see Table 9-3).

Also, since selective mining of the tailings is not required, the current knowledge of tonnage and grade is adequate to classify the tailings resource as an Indicated Mineral Resource which is defined as "that part of a Mineral Resource for which quantity, grade (or quality), densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of modifying Factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit." (JORC, 2012)

Table 9-3: Tin and Copper in Tailings Mineral Resources

Cleveland Tin and Copper in Tailings Mineral Resource 23 May 2014			
0% Sn cut-off			
Category	Tonnage	% Sn as cassiterite	% Cu
Indicated	**3,850,000**	**0.30**	**0.13**
Total	**3,850,000**	**0.30**	**0.13**

Table 9-4: Cleveland mill operating statistics 1968 to 1986 (mine life).

Year	Ore Treated	HMS Floats				Head Grade		Contained Metal		Sn in Con	Sn Recovery from cassiterite	Cu in Con	Cu Recovery
	tonnes	% Wt	Tonnes	Sn tonnes	% Sn	% Sn as cassiterite	% Cu	Sn in Feed	Cu in feed	tonnes		tonnes	
1969	256,865	14%	34,934	75	0.21	0.85	0.40	2,193	1,026	1136.0	51.8%	377.5	36.8%
1970	281,875	23%	64,831	92	0.14	0.79	0.37	2,234	1,040	1472.2	65.9%	717.4	69.0%
1971	305,726	27%	83,769	119	0.14	0.73	0.42	2,247	1,275	1557.2	69.3%	822.6	64.5%
1972	357,498	27%	97,954	207	0.21	0.78	0.40	2,789	1,414	1873.9	67.2%	968.5	68.5%
1973	505,806	25%	124,934	175	0.14	0.76	0.32	3,844	1,619	2667.9	69.1%	1216	76.0%
1974	314,210	23%	72,268	103	0.14	0.75	0.25	2,357	786	1512.5	64.6%	529.4	68.8%
1975	289,018	20%	56,648	108	0.19	0.78	0.32	2,254	925	1369.6	60.3%	565.1	60.7%
1976	363,036	30%	107,822	303	0.28	0.73	0.27	2,650	980	1519.1	60.0%	617.0	62.3%
1977	393,275	37%	143,939	292	0.20	0.66	0.22	2,596	865	1386	53.5%	420	48.7%
1978	388,579	38%	147,271	206	0.14	0.53	0.18	2,059	699	1236	59.6%	458	65.2%
1979	352,977	41%	144,721	202	0.14	0.52	0.24	1,849	847	1106	59.8%	422	49.2%
1980	367,866	43%	158,182	222	0.14	0.47	0.21	1,729	773	1080	62.7%	414	53.3%
1981	439,304	31%	137,359	234	0.17	0.51	0.22	2,240	966	1337	60.1%	518	54.7%
1982	350,300	31%	109,530	187	0.17	0.64	0.28	2,231	998	1457	65.3%	602	60.3%
1983	277,700	31%	86,830	148	0.17	0.71	0.25	1,973	692	1182	59.9%	405	58.5%
1984	180,300	31%	56,375	96	0.17	0.71	0.26	1,272	471	668	52.5%	300	63.7%
1985	137,000	31%	42,836	73	0.17	0.80	0.25	1,094	337	525	48.0%	198	58.8%
1986	83,700	31%	26,171	45	0.17	0.92	0.41	770	343	434	56.4%	140	40.8%
Total	**5,645,035**	**30%**	**1,696,375**	**2,886**	**0.17**	**0.68**	**0.28**	**38,382**	**16,056**	**23,519**	**61.3%**	**9,691**	**60.4%**

Table 9-5: Cleveland mill estimation of tailings quantity and grade.

Year	Feed			HMS Float			Tailings		
	tonnes	%Sn as cassiterite	% Cu	tonnes	%Sn as cassiterite	% Cu	tonnes	%Sn as cassiterite	% Cu
1969	256,865	0.85	0.40	34,934	0.21	0.10	217,772	0.44	0.28
1970	281,875	0.79	0.37	64,831	0.14	0.09	210,512	0.31	0.12
1971	305,726	0.73	0.42	83,769	0.14	0.10	214,730	0.26	0.16
1972	357,498	0.78	0.40	97,954	0.21	0.10	250,953	0.27	0.13
1973	505,806	0.76	0.32	124,934	0.14	0.08	369,456	0.26	0.08
1974	314,210	0.75	0.25	72,268	0.14	0.06	236,270	0.31	0.09
1975	289,018	0.78	0.32	56,648	0.19	0.08	226,806	0.33	0.14
1976	363,036	0.73	0.27	107,822	0.28	0.07	249,091	0.32	0.11
1977	393,275	0.66	0.22	143,939	0.20	0.06	244,464	0.37	0.15
1978	388,579	0.53	0.18	147,271	0.14	0.05	236,546	0.26	0.07
1979	352,977	0.52	0.24	144,721	0.14	0.06	203,934	0.26	0.16
1980	367,866	0.47	0.21	158,182	0.14	0.05	205,454	0.20	0.13
1981	439,304	0.51	0.22	137,359	0.17	0.06	296,681	0.22	0.12
1982	350,300	0.64	0.28	109,530	0.17	0.07	234,846	0.24	0.13
1983	277,700	0.71	0.25	86,830	0.17	0.06	186,481	0.34	0.12
1984	180,300	0.71	0.26	56,375	0.17	0.07	121,089	0.41	0.11
1985	137,000	0.80	0.25	42,836	0.17	0.06	92,124	0.53	0.12
1986	83,700	0.92	0.41	26,171	0.17	0.10	55,961	0.51	0.31
Totals	**5,645,035**	**0.68**	**0.28**	**1,696,375**	**0.17**	**0.07**	**3,853,169**	**0.30**	**0.13**

1.3 Reliability of the Tin and Copper Tailings Resource Estimate

LiDAR topographical data acquired in 2013 has allowed an estimate of the tonnage of tailings on site to be made. The tonnage estimate has been based on the results of the LiDAR survey plus existing Aberfoyle ground survey data.. Pitt and Sherry Consultants have estimated the volumes of tin and copper tailings in the two dams as:

- tailings dam 1 423,900m^3
- tailings dam 2 1,459,300m^3
- total 1,883,300m^3

Testing for bulk density of the tailings was included in a recent materials investigation programme (Pollington and O'Toole, 2013). The programme was based on Wacker drilling of the tailings dams in 2013 (see Table 9-6 and Error! Reference source not found.) and results of the test work indicated that bulk density of the tailings was just over 2.0 tonnes per m^3.

At a reasonable dry density of 2.0 tonnes per m^3 for the tailings, the total volume of tailings listed just above equates to a total mas of tailings of 3,765,000 tonnes. This is in very good agreement with the mass of tailings estimated for this report which was 3,850,000 tonnes.

In 2007, Lynch Mining drilled 31 air core holes to test the tailings. Samples from the drill holes were submitted for assaying at the Burnie Research Laboratory and the assay results for the samples submitted are attached to this report (see Appendix 4). The Sn and Cu assays from these samples generally confirmed the reliability of Sn and Cu grades estimated for this report.

1.4 JORC Estimation and Reporting of Mineral Resources Summary.

Table 9-6: JORC estimation and reporting of Mineral Resources summary.

Criteria	Commentary
Database integrity	• The specific measures to ensure the integrity of the Aberfoyle metallurgical data are not known but, given that the data was collected at a large operating mill, it is reasonable to assume that the data is sound.
Site visits	• Mick McKeown was employed as a geologist by Aberfoyle Limited from 1970 to 1973 and was professionally and personally acquainted with many of the Aberfoyle staff who worked at Cleveland. He made several visits to the Cleveland mine during the 1970s. In 2012, he visited the mine site and examined drill core from Cleveland held at the Mornington Core Store of Mineral Resources Tasmania.
Geological interpretation	• Not applicable.
Dimensions	• Tailings Dam 1 is 300m long and 100m wide with a maximum depth of about 20m. Tailings Dam 2 is 400m long and up to 200m wide with a maximum depth of about 35m.
Estimation and modelling techniques	• There is no block model of the tailings deposits. The tonnages and grades for this report were estimated from reports of tailings recorded by Aberfoyle as having been discharged from the Cleveland Mill between 1968 and 1986.
Moisture	• All assays were reported on a dry basis and all tonnages and grades are reported on a dry basis.
Cut-off parameters	• Selective mining of the tailings is not planned, so a zero cut-off grade has been applied, that is, the Mineral Resource has been quoted at 0.0% Sn cut-off grade.
Mining factors or assumptions	• Mineral Resources were estimated, not Ore Reserves, and no mining factors were applied.
Metallurgical factors or assumptions	• Foo (1981) considered that mill recoveries from treatment of run of mine ore of 65% for Sn could be maintained under best operating conditions. This is considerably better than the mill recoveries during the routine operation of the mill up until the time of his report. This implies that some, at least, of the tin in the tailings dams should be recoverable. • Stribley et al. (1984) reported that mill recoveries from pilot scale treatment of tailings of between 33% and 45% for Sn were attainable using conventional gravity and flotation processing and 48-69% Sn recovery using pre-concentration by flotation and matte fuming. • The metallurgical amenability of the tailings for Sn and Cu recovery has been reported in a recent study (PFS, 2014) based on the results of Aberfoyle bench and pilot scale test work by Aberfoyle on tailings samples. Mill recovery, for tin, of 50% into a 40% Sn concentrate and, for copper, of 40% into a 20% Cu concentrate were proposed, although further test work was recommended to confirm the copper recovery values. Further test work was also proposed to confirm the recoveries and grades and to confirm the unit operations and flow sheet proposed (PFS, 2014).

Criteria	Commentary
Environmental factors or assumptions	• Pitt and Sherry Consultants have been retained to design and plan for waste and tailings disposal. Environmental approvals for operating a mine and processing plant at Cleveland are currently being sought.
Bulk density	• Not applicable - tailings discharged from the Cleveland Mill were measured in tonnes.
Classification	• The mass and grades of the tailings have been estimated from the operating statistics of a competently run mill and are expected to be reasonably reliable. The spatial distribution of the tailings, both for tonnage and grades is not known but selective mining of the tailings is neither necessary nor desirable. • Recent financial analysis (PFS, 2014) concludes that the tailings can be re-treated profitably when mined in toto, that is, mining of all the tailings without selective mining will be profitable. This conforms with the proposed plan to re-treat all the tailings, including that in the dam walls, to remediate acid drainage from the dams. • Selective mining is not required, so further drilling of the tailings before mining will not be necessary for the purposes of tonnage and grade estimation and also means that a zero cut-off grade can be applied to the Mineral Resource estimate. • Since selective mining of the tailings is not required, the current knowledge of tonnage and grade is adequate to classify the tailings resource as an Indicated Mineral Resource which is defined in JORC 2012 as "that part of a Mineral Resource for which quantity, grade (or quality), densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of modifying Factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit."
Audits or reviews	• The method of estimation of the tailings resource has been reviewed by Mike Adams of Rockwell Minerals Limited and David Foster of Mining One Pty Ltd.
Discussion of relative accuracy/ confidence	• The quantity and grades of the tailings have been estimated from the operating statistics of a competently run mill and are reasonably reliable. • Current knowledge of tonnage and grade of the tailings is adequate to classify the tailings resource as an Indicated Mineral Resource (see Classification just above).

APPENDIX C: TUNGSTEN RESOURCE ESTIMATE

1.5 Data for Tungsten Resource Estimate

Sampling techniques and a data summary are presented in Table 9-7. The criteria in this table are taken from Table 1 within the JORC Code 2012.

The criteria for the reporting of exploration results are presented in Table 9-8. These criteria are also taken from Table 1 within the JORC Code 2012.

Table 9-7: Sampling techniques and data summary for tungsten resource estimate.

Criteria	Commentary
Sampling techniques	• Diamond drilling was used to obtain 2.5m samples which were sawn in half longitudinally then one half of the core was submitted for assaying. The half core was crushed and pulverised prior to assay. Sn assays were made using pressed powder or fused bead XRF. • The tungsten mineralisation occurs in a quartz stock-work and in minor greisen. The quartz veining is readily visible as is the wolframite within the quartz veining.
Drilling techniques	• All samples came from diamond drilling, generally about 45mm in diameter, using standard core tubes.
Drill sample recovery	• A sampling of drill logs by the author did not reveal that core loss was a problem during diamond drilling. The reliability of core recovery was confirmed in discussions with a contemporary Aberfoyle geologist. Aberfoyle reported that core recovery at Cleveland was consistently good (Cox, 1967). This is in accordance with the reported ground conditions in the Cleveland mine which have been reported as competent to highly competent (Everett, 1977) and Buckland, 1980) and, in the quartz porphyry host rock, as excellent (Dronseika, 1983). • Core recovery in the tungsten mineralisation was in excess of 95% (Dronseika, 1983).
Logging	• 6796.9m of core, from 26 holes, was logged in detail noting country rock, wall-rock alteration, structures, mineralogy, vein thickness and vein to core angle (Dronseika, 1983). • A sampling of drill logs by the author indicated that the logs contained adequate locational, geological, sampling and assay data. • In addition, there are 64 petrological and mineralogical descriptions made under the microscope by AMDEL and Latrobe University (included in Dronseika, 1983).
Sub-sampling techniques and sample preparation	• Drill core was split longitudinally and crushing and pulverising were subject to specific and definite protocols. Aberfoyle paid particular attention to sampling technique and sample preparation (Cox, 1967).
Quality of assay data and laboratory tests	• Samples were routinely assayed in the laboratory at Cleveland. Thirty samples were re-split and re-assayed by AMDEL Laboratories. Some samples were re-assayed by AMDEL Laboratories. The correlation of assay results for WO_3 was acceptable (Hample and Waters, 1983).

Criteria	Commentary
Verification of sampling and assaying	• Samples were routinely assayed in the laboratory at Cleveland. Thirty samples were re-split and re-assayed by AMDEL Laboratories. Some samples were re-assayed by AMDEL Laboratories. The correlation of assay results for WO_3 was acceptable (Hample and Waters, 1983).
Location of data points	• Locations of drill hole collars and mine workings were established by mine surveyors. • This report estimate employed a local grid, known as Hall's grid, which is oriented parallel to the general strike of the tin copper lenses.
Data spacing and distribution	• Data spacing was sufficient for creation of useful WO_3 variograms with relatively low nugget effect and ranges for spherical models of up to 150m, This was in general agreement with previous Aberfoyle variography (McArthur, 1983 in Dronseika, 1983).
Orientation of data in relation to geological structure	• The strike and dip of the quartz porphyry intrusion and the quartz vein stock-work mineralisation were well known from the beginning of systematic evaluation by Aberfoyle in 1970 and the drill holes were oriented accordingly.
Sample security	• Most analyses were made in the laboratory on the Aberfoyle mine site. Given the style of tungsten mineralisation, and the proximity of the core splitting area and the sample preparation area to the laboratory, samples were not susceptible to interference.
Audits or reviews	• There are no known audits or reviews by personnel outside Aberfoyle. However, there was a culture of internal reviewing of the geological procedures including at least one review of assaying methods (Hample and Waters, 1983).

Table 9-8: Reporting of exploration results for the tungsten resource estimate.

Criteria	Commentary
Mineral tenement and land tenure status	• Exploration Licence EL7/2005 covers the Cleveland mine and Mineral Resource. EL7/2005 is held by Rockwell Minerals Tasmania Pty Ltd, 100% subsidiary company of Elementos Ltd. The proposed project area lies in Forestry Tasmania Managed Land.
Exploration done by other parties	• All exploration of Foley Zone was done by Aberfoyle Limited or its subsidiaries between 1978, when the zone was intercepted on 17 Level and in the decline between 20 and 22 levels, and 1983.
Geology	• The tungsten mineralisation at Cleveland occurs as wolframite and minor scheelite in a quartz stock-work and in minor greisen. The quartz stock-work has formed as a halo around a greisenised quartz porphyry dyke that acted as a pathway for the mineralising fluids which deposited the tungsten mineralisation in the stock-work and the greisenised dyke itself. The dyke dips vertically and has a known strike length of 100m, an across strike thickness of up to 60m and a down-dip extent of 800 metres (Jackson et al., 2000). • The tungsten bearing quartz stock-work and greisen is known as Foley zone. Foley zone is currently considered to dip vertically and has a known strike length of about 300 metres, an across strike width of up to 300 metres and a down-dip extent of about 900 metres (Dronseika, 1983).
Drill hole Information	• See Appendix 1 below for coordinates, directions and lengths of diamond drill holes at Cleveland.
Data aggregation methods	• Where WO_3 grades of drill core samples have been averaged, length weighting was used. • Statistics revealed no rogue high grade WO_3 assays and no sample cutting was applied.
Relationship between mineralisation widths and intercept lengths	• See Appendix 3 where down-hole lengths of intercepts have been reported; true widths are not known.
Diagrams	• See Figures 19 and 44. It was not practical to create a meaningful plot of all the drill hole collars but a perspective view of the holes is shown in Figure 19 and a cross-section in Figure 44.
Balanced reporting	• 37 intersections of Foley zone were used for this resource estimate and a summary of the intersections is attached (see Appendix 3).
Other substantive exploration data	• Most data was obtained from the logging of diamond drill core although the upper margin Foley's zone was exposed in the lower levers of the mine.
Further work	• Infill diamond drilling of Foley zone above 850m RL is required to increase confidence in the Mineral Resource which is currently classified as Inferred. Diamond drilling to further explore the Exploration Target of Foley zone below 850m RL will require the development of a suitable drilling platform close to the bottom of the current mine. Both drilling programmes can take place once the mine has been de-watered which Elementos is hoping to achieve over the

Criteria	Commentary
	next two to three years.

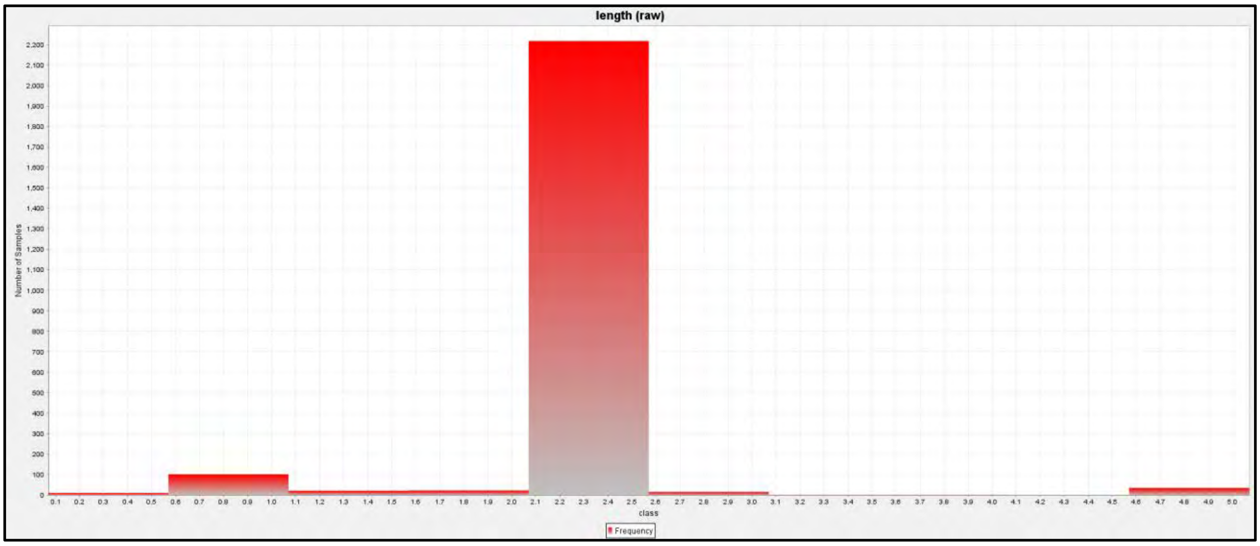
1.6 Compositing Length for Tungsten Resource Estimation

All assays for the estimate of the Mineral Resources came from sampling of diamond drill core.

A histogram of the sample lengths of the raw assays of the data for Foley's stock-work shows that most assays were taken over lengths of 2.5m (see Figure 9-3).

A composting length of 2.5m was used for this resource estimate.

Figure 9-3: Histogram of WO3 sample lengths.



1.7 Basic Statistics for Tungsten Mineralisation

A histogram, log histogram and log-probability plot for % WO_3 for composited samples within the stock-work as defined within a 0.2% WO_3 threshold.

The distribution appears log-normal and the log-probability plot is nearly linear suggesting that there is only one population of assays present in the data. In addition, there are no rogue outliers, that is, high grade assays that do not fit the distributions and which consequently indicate the need for cutting of high grades.

Figure 9-4: Histogram of % WO3 for all composited samples from within Foleys stock-work defined within a 0.2% WO3 threshold.

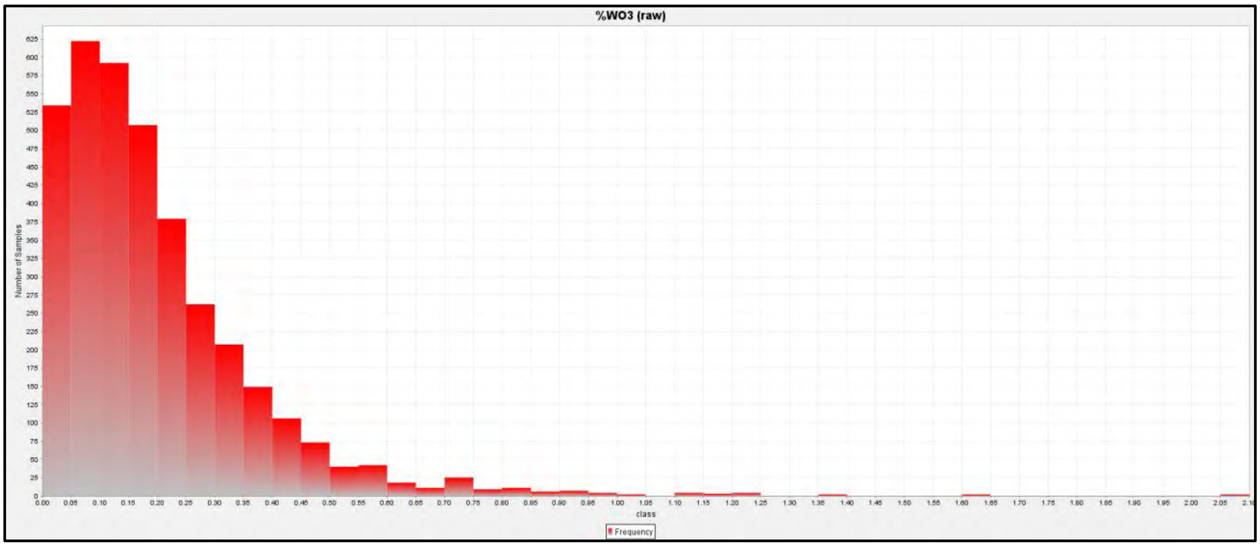


Figure 9-5: Log-histogram of % WO3 for all composited samples from within Foleys stock-work defined within a 0.2% WO3 threshold.

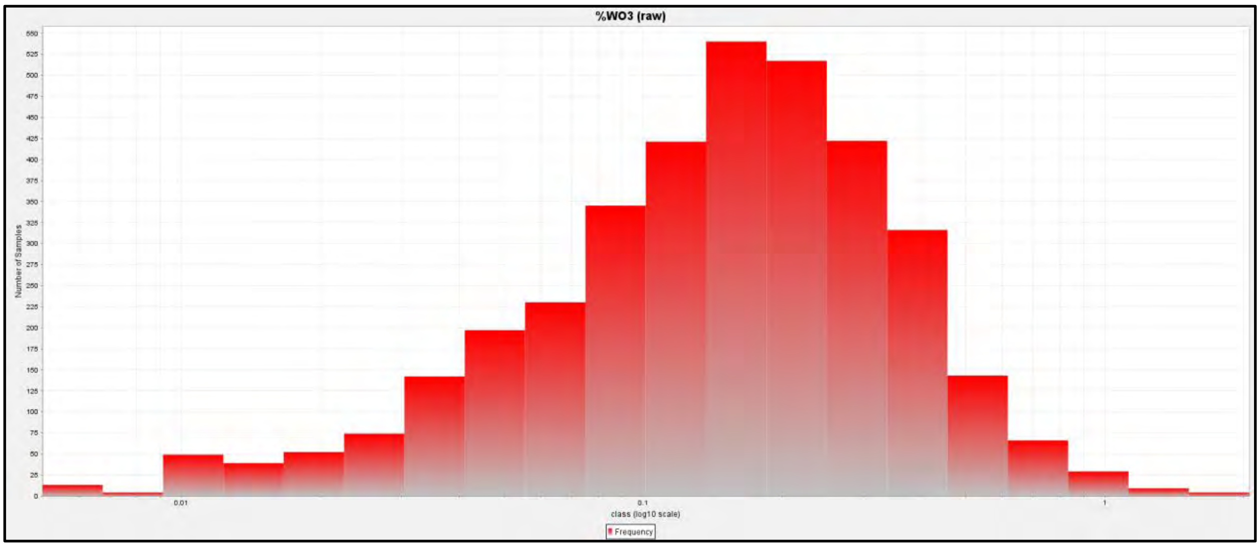
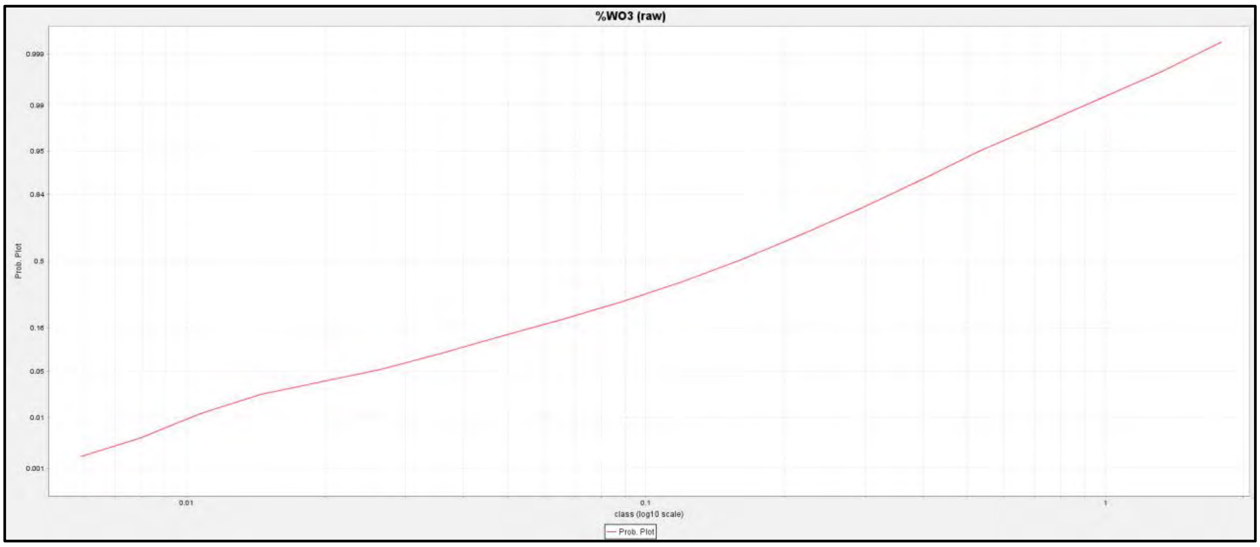


Figure 9-6: Log-probability plot of % WO3 for all composited samples from within Foleys stock-work defined within a 0.2 % WO3 threshold.



1.8 Variography for % WO3

Directional variography was successful for % WO_3 for the composited samples within Foley's stock-work as defined within a 0.2% WO_3 threshold.

Directional pair-wise relative experimental variograms were fitted with the following spherical models:

$+40^{O}/090^{O}$ $\gamma(h) = 0.10 + 0.18Sph7.5(h) + 0.16Sph75(h)$

$00^{O}/000^{O}$ $\gamma(h) = 0.10 + 0.18Sph5(h) + 0.16Sph50(h)$

$-50^{O}/090^{O}$ $\gamma(h) = 0.10 + 0.18Sph5(h) + 0.16Sph50(h)$

The nugget effect represented about 22% of the total variance.

The principal direction of grade continuity was $+40^{O}$ towards 090^{O} which may correspond to the average dip direction of the WO_3 bearing veins.

The success of the variography meant that WO_3 grades in the stock-work could be interpolated by ordinary kriging and this was undertaken.

Figure 9-7: Directional 40O/090O variogram for % WO3 for all composited samples from within Foleys stock-work defined within a 0.2% WO3 threshold.

Figure 9-8: Directional 00O/000O variogram for % WO3 for all composited samples from within Foleys stock-work defined within a 0.2% WO3 threshold.

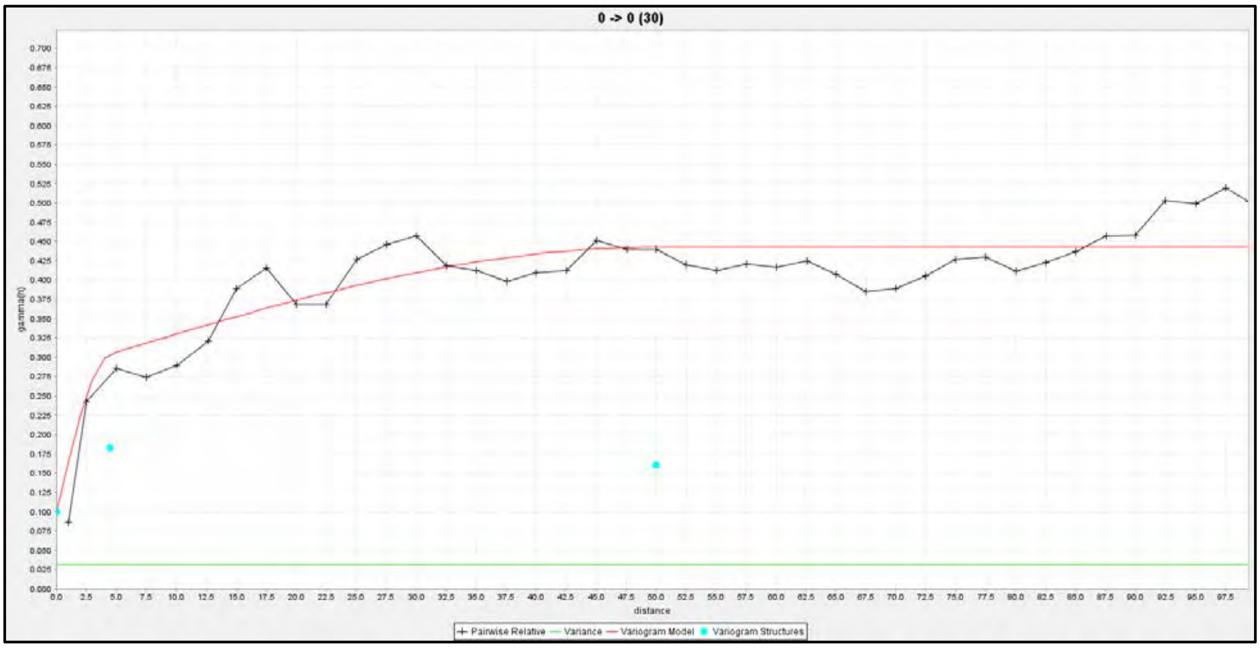
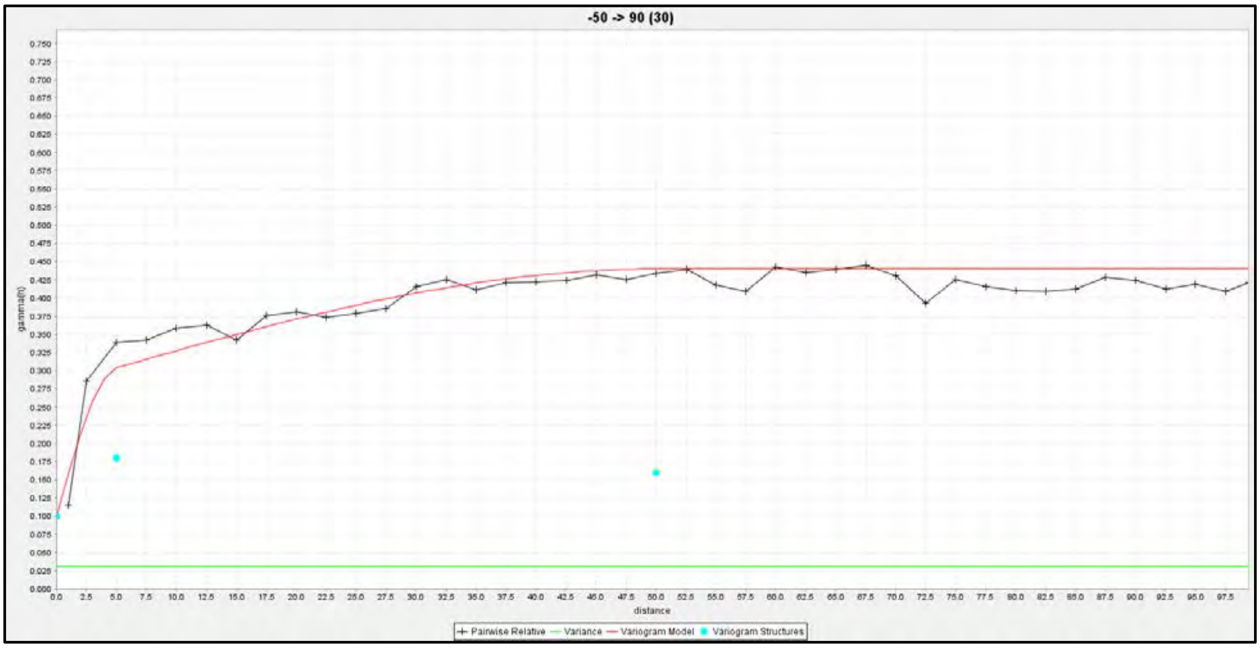


Figure 9-9: Directional -50O/090O variogram for % WO3 for all composited samples from within Foleys stock-work defined within a 0.2% WO3 threshold.



1.9 Bulk Density for Tungsten Resource Estimation

The Aberfoyle database contained 1235 samples from the composited samples within the Foley stock-work as defined within a 0.2% WO_3 threshold. The mean of the specific gravities was 2.86 g/cm^3.

A bulk density of 2.85 tonnes/m^3 was used for this resource estimate.

The last estimate by Aberfoyle (Dronseika, 1983) used a bulk density of 2.87 tonnes/m^3.

1.10 Tungsten Resource Estimate

A wireframe was created for the stock-work as defined within a 0.2% WO_3 threshold.

The same block model as used for the tin and copper resource estimates was used for the tungsten estimate in the Foley stock-work.

The attributes listed in Table 9-9 were included for each block in the block model.

Table 9-9: Attributes included in the block model for tungsten estimation.

Attribute	Description
lens_code	The lode code for each lens as listed in Table 14.
wo3_ok	WO_3 grade interpolated by ordinary kriging.
wo3_numsam	Number of samples used to interpolate WO_3 grade into the block.
ok_numsam	Number of samples used to interpolate WO_3 grade into the block.

WO_3 grades were interpolated into the block model using ordinary kriging.

The dimensions of the search ellipsoid and other parameters are listed in Table 9-11. The dimensions were chosen to allow for interpolation of grades into all blocks representing the stock-work above 850m RL and the search radii were in proportion to the ranges of the variogram models.

The orientation of the search ellipsoid was aligned along the directions of the variograms.

The Foley stock-work does not have a distinct geological boundary: it does not appear to occupy a particular geological structure or a particular lithology. The boundary derived for the stock-work was based simply on the available WO_3 grades from samples from holes which intersected the stock-work. This is a fuzzy boundary, sometimes referred to as a soft boundary.

Estimation of grades within the soft boundary using only samples from within the boundary would have over-estimated the grade of the stock-work. Consequently, the WO_3 grade was interpolated into the blocks within the Foley stock-work (as defined within a 0.2% WO_3

threshold) using all WO_3 assays from samples from holes that intersected the stock-work or that occur in the neighbourhood of the stock-work.

The deeper holes into the Foley stock-work did not intersect the boundary of the stock-work as defined by the 0.2% WO_3 threshold. The lowest intersections of the boundary are at about 850m RL and this level was taken as a lower limit for the resource estimation for this report.

The volume of the Foley stock-work, as defined by the 0.2% WO_3 threshold, above 850m RL was 3,454,998m^3.

The global resource estimate was 9,845,058 tonnes at 0.19% WO_3 (see

Table 9-12).

The Mineral Resource has been stated at a cut-off grade of 0.20% WO_3.

A cut-off grade of 0.20% and the current WO_3 concentrate price of $33,000 per tonne implies that material with a contained metal value of about $65 could be treated at a profit. This appears reasonable even at relatively modest metallurgical recoveries. This was also the cut-off grade used by Aberfoyle for its final resource estimate (Dronseika, 1983).

The tungsten Mineral Resource has been classified as Inferred. The geological and grade continuity are currently not well enough understood to allow for a higher classification.

At a cut-off grade of 0.20% WO_3, the Inferred Mineral Resource was 3.9M tonnes at 0.30% WO_3 (see Table 9-13).

Table 9-10: Search ellipsoid orientation for WO_3 interpolation.

Lens	Code	Orientations
Foleys	FOL	strike 000^O, dip -50^O/090^O

Table 9-11: Search parameters.

Ellipsoid axis	Direction	Axis Radius
Major	40^O/090^O	100m
Semi-major	00^O/000^O	66m
Minor	-50^O/090^O	66m
Other Parameters		
Discretisation	4 * 4 * 4	

No of samples	1 to 10

Table 9-12: Global tungsten resource, grade-tonnage information.

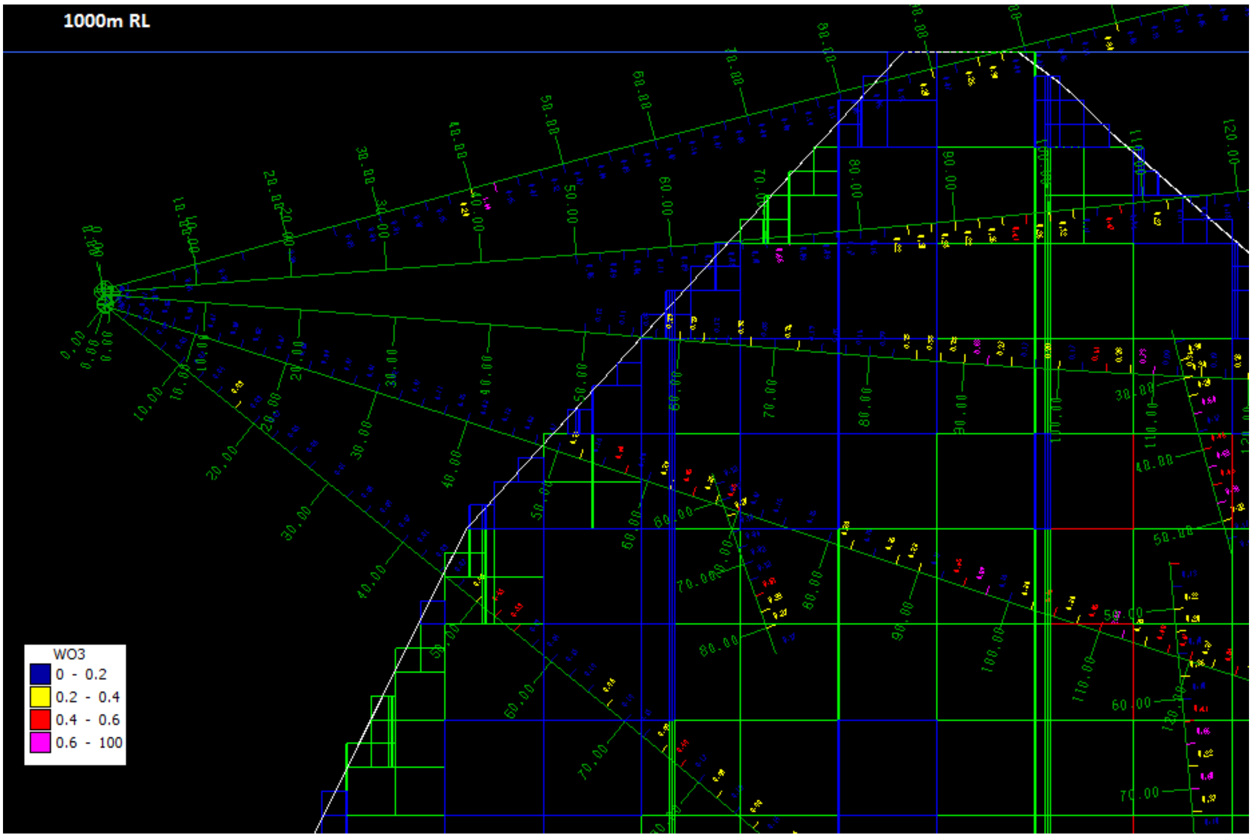
Cut-off % Sn	Tonnage	% WO_3	Contained WO_3 tonnes
0.00	9,845,904	0.195	19,200
0.05	9,815,727	0.196	19,239
0.10	8,432,794	0.214	18,046
0.15	6,274,186	0.244	15,309
0.20	3,967,601	0.284	11,268
0.25	2,304,581	0.329	7,582
0.30	1,417,964	0.361	5,119
0.35	605,002	0.417	2,523
0.40	251,602	0.477	1,200
0.45	142,500	0.519	740
0.50	74,100	0.563	417

Table 9-13: Tungsten Mineral Resources

Cleveland Tungsten Mineral Resource 16 February 2014		
0.20% WO_3 cut-off		
Category	Tonnage	% WO3
Inferred	3,970,000	0.28
Total	3,970,000	0.28

Figure 9-10: Oblique cross-section through the tungsten block model.

The boundary of the Foley stock-work as defined within the 0.20% WO3 threshold is shown as a white line. The largest blocks are 10m X 10m.



1.11 JORC Estimation and Reporting of Mineral Resources Summary.

Table 9-14: JORC estimation and reporting of Mineral Resources summary.

Criteria	Commentary
Database integrity	• The specific measures taken by Aberfoyle to ensure database integrity are not known but the creation of a digital database is allowing for on-going review of the integrity of the data.
Site visits	• Mick McKeown was employed as a geologist by Aberfoyle Limited from 1970 to 1973 and was professionally and personally acquainted with many of the Aberfoyle staff who worked at Cleveland. He made several visits to the Cleveland mine during the 1970s. He also visited the mine site in 2012 and examined drill core from Cleveland held at the Mornington Core Store of Mineral Resources Tasmania.
Geological interpretation	• The geological interpretation was devised by the author of this report. • Halls Formation, the geological formation which contains the lenses of tin-copper mineralisation and the stockwork of tungsten mineralisation, dips sub-vertically with a general steep dip to the east and is known over a strike length of 700m, an across strike width of about 200m, and a down-dip extent of over 800m (Ransom and Hunt, 1975 and Dronseika, 1986). • The tungsten mineralisation at Cleveland occurs as wolframite and minor scheelite in a quartz stock-work and in minor greisen. The quartz stock-work has formed as a halo around a greisenised quartz porphyry dyke that acted as a pathway for the mineralising fluids which deposited the tungsten mineralisation in the stock-work and the greisenised dyke itself. The dyke dips vertically and has a known strike length of 100m, an across strike thickness of up to 60m and a down-dip extent of 800 metres (Jackson et al., 2000).
Dimensions	• The tungsten bearing quartz stock-work and greisen is known as Foley zone. Foley zone is currently considered to dip vertically and has a known strike length of about 300 metres, an across strike width of up to 300 metres and a down-dip extent of about 900 metres (Dronseika, 1983).
Estimation and modelling techniques	• Mineralisation was modelled as three dimensional blocks from 10m X 10m X 10m to 2.5m X 2.5m X 2.5m in size. Grade estimates of WO_3 were made by ordinary kriging. • No assumptions were made about the recovery of by-products. • No estimates of S grade were made.
Moisture	• All assays were reported on a dry basis and all tonnages and grades are reported on a dry basis.
Cut-off parameters	• The cut-off grade of 0.20% and the current WO_3 concentrate price of $30,000 per tonne implies that material with a contained metal value of about $60 could be treated at a profit. This appears reasonable even at relatively modest metallurgical recoveries. This was also the cut-off grade used by Aberfoyle for its final resource estimate
Mining factors or assumptions	• Mineral Resources were estimated, not Ore Reserves, and no mining factors were applied.

Criteria	Commentary
Metallurgical factors or assumptions	• No metallurgical assumptions were made.
Environmen-tal factors or assumptions	• Pitt and Sherry Consultants have been retained to design and plan for waste and tailings disposal. Environmental approvals for operating a mine and processing plant at Cleveland are currently being sought.
Bulk density	• A bulk density of 2.85 tonnes/m^3 was used. This was the same as that used in the historical estimate made by Aberfoyle.
Classification	• The resources were classified Inferred based on the author's current confidence in geological and grade continuity.
Audits or reviews	• This report has been peer reviewed by Mining One.
Discussion of relative accuracy/ confidence	• This estimate of the tungsten Mineral Resources in Foley Zone is a global estimate. • No production data is available for comparison.

APPENDIX D: CROSS SECTIONS

Figure 9-11: Plan View of Cleveland Deposit showing sections.

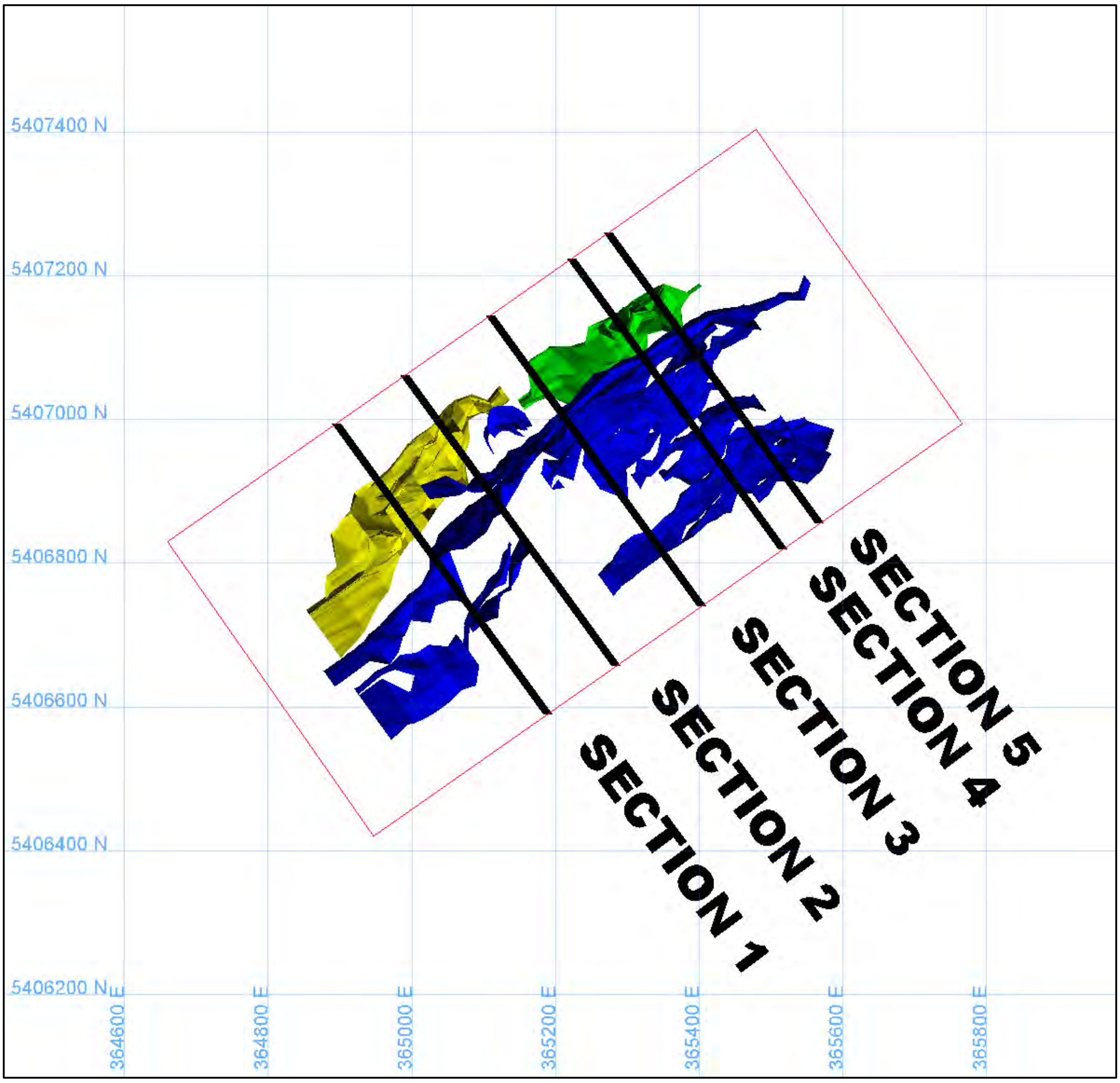


Figure 9-12: Cleveland Resource Cross Section 1

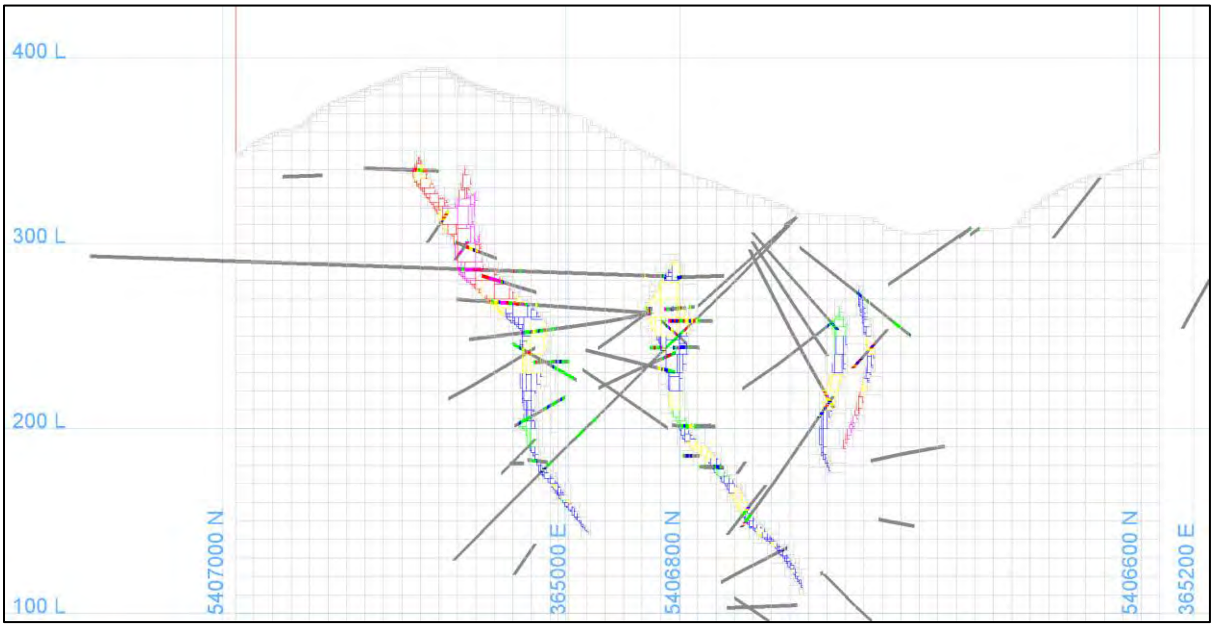


Figure 9-13: Cleveland Resource Cross Section 2

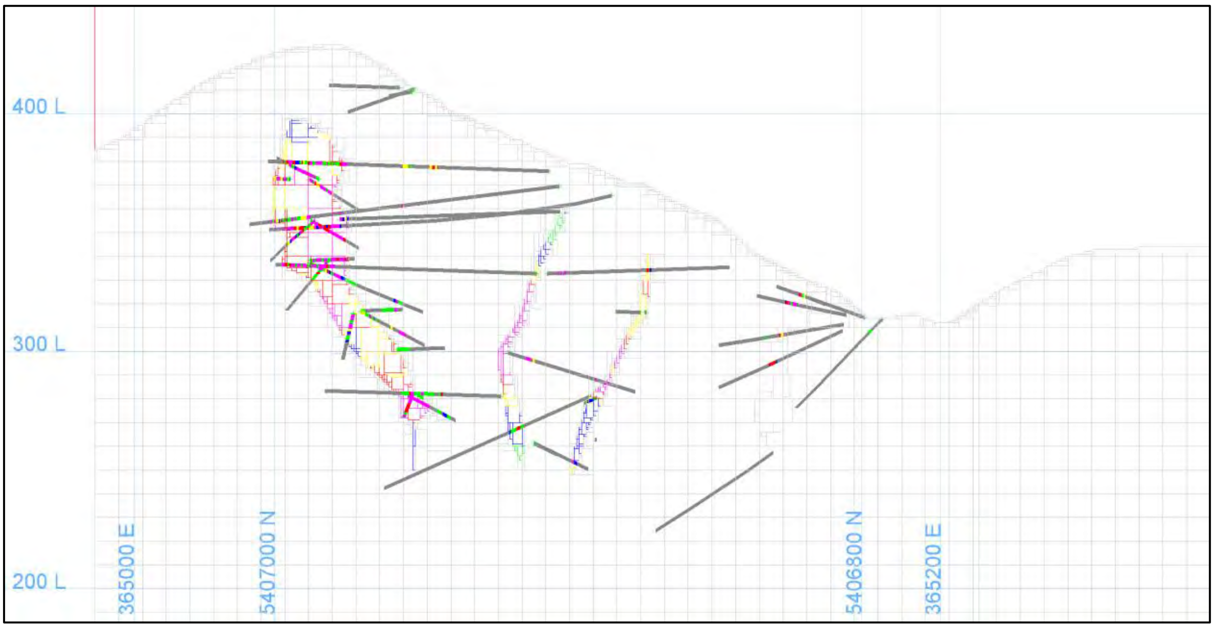


Figure 9-14: Cleveland Resource Cross Section 3

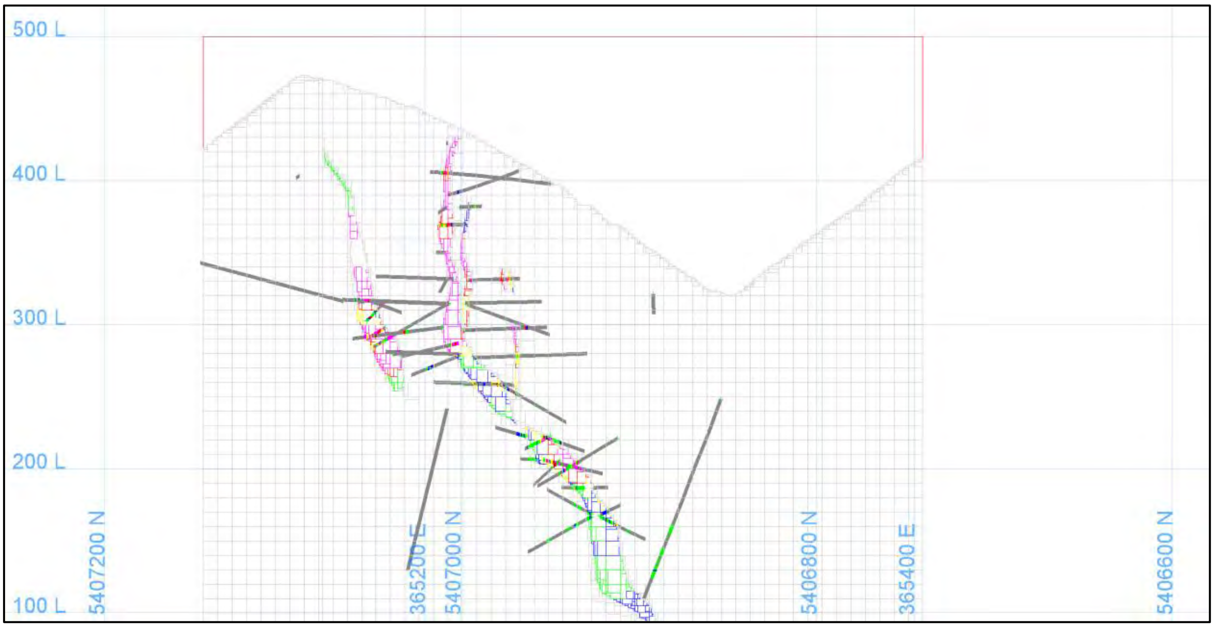


Figure 9-15: Cleveland Resource Cross Section 4

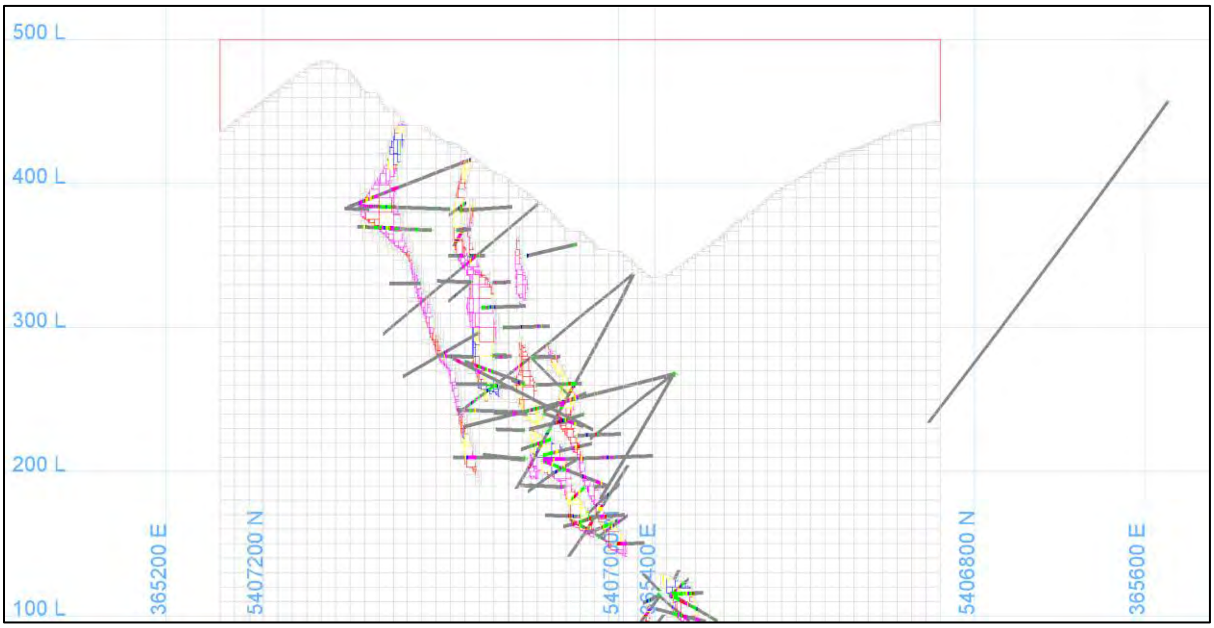
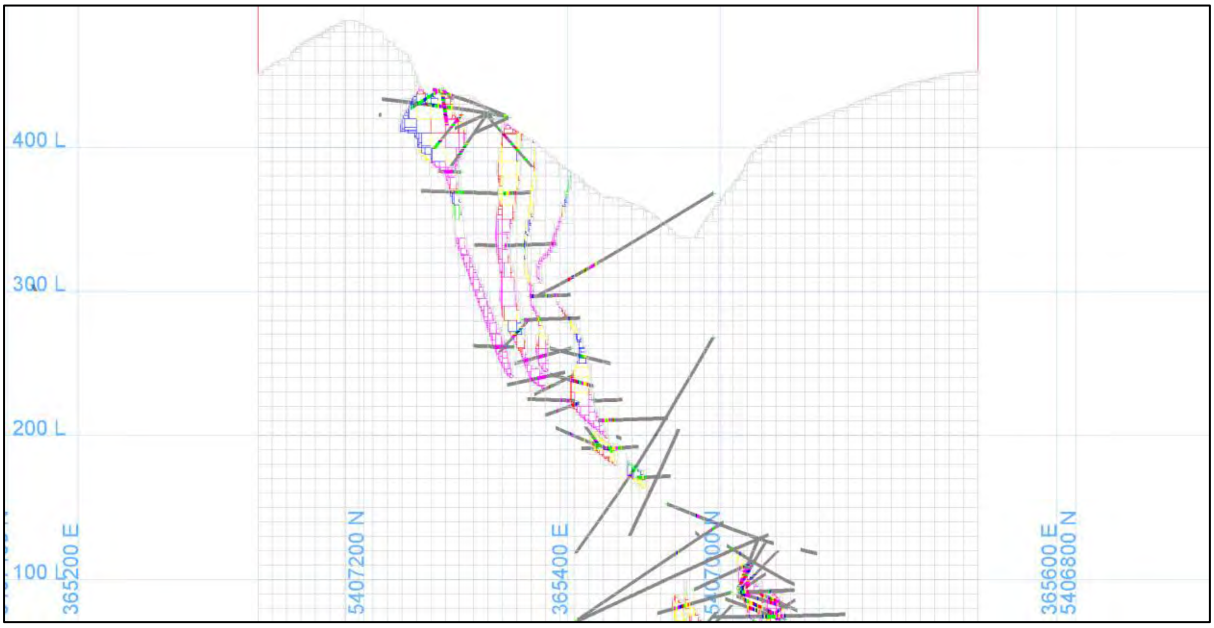


Figure 9-16: Cleveland Resource Cross Section 5



APPENDIX E: VARIOGRAMS

Figure 9-17: Variogram Sn Domain 1

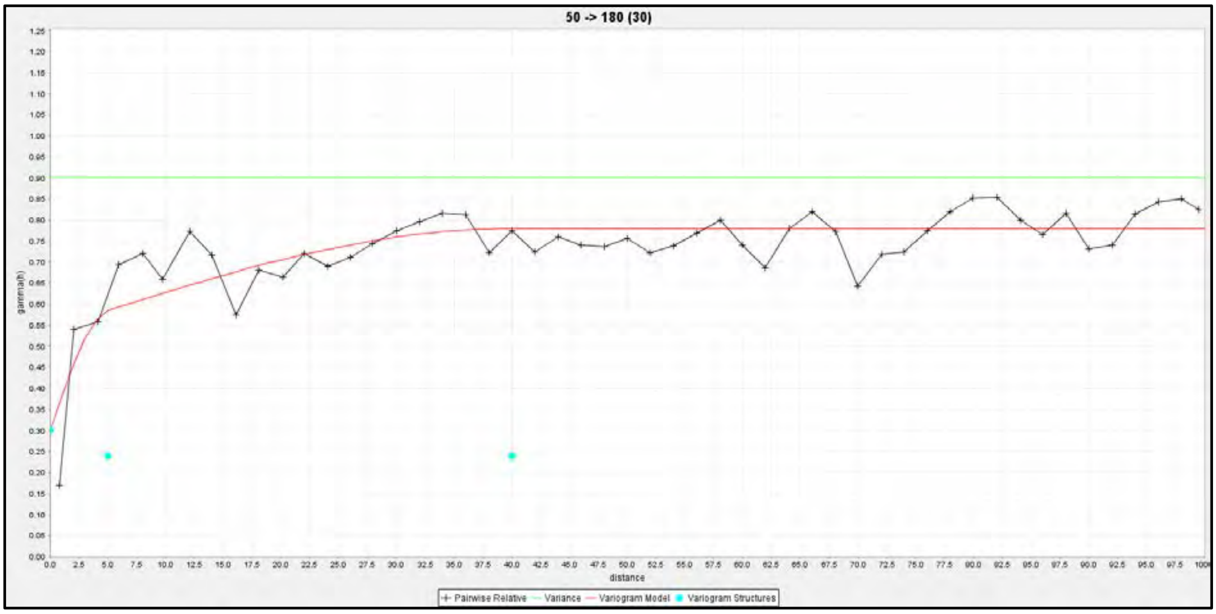


Figure 9-18: Variogram Cu Domain 1

Figure 9-19: Variogram Sn Domain 6

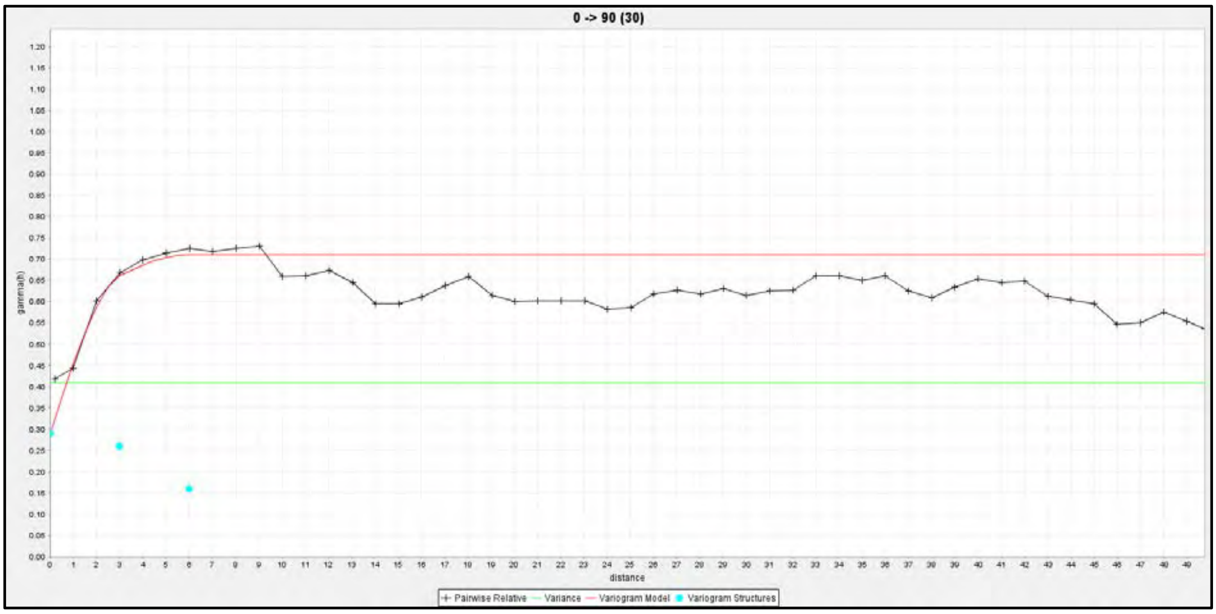
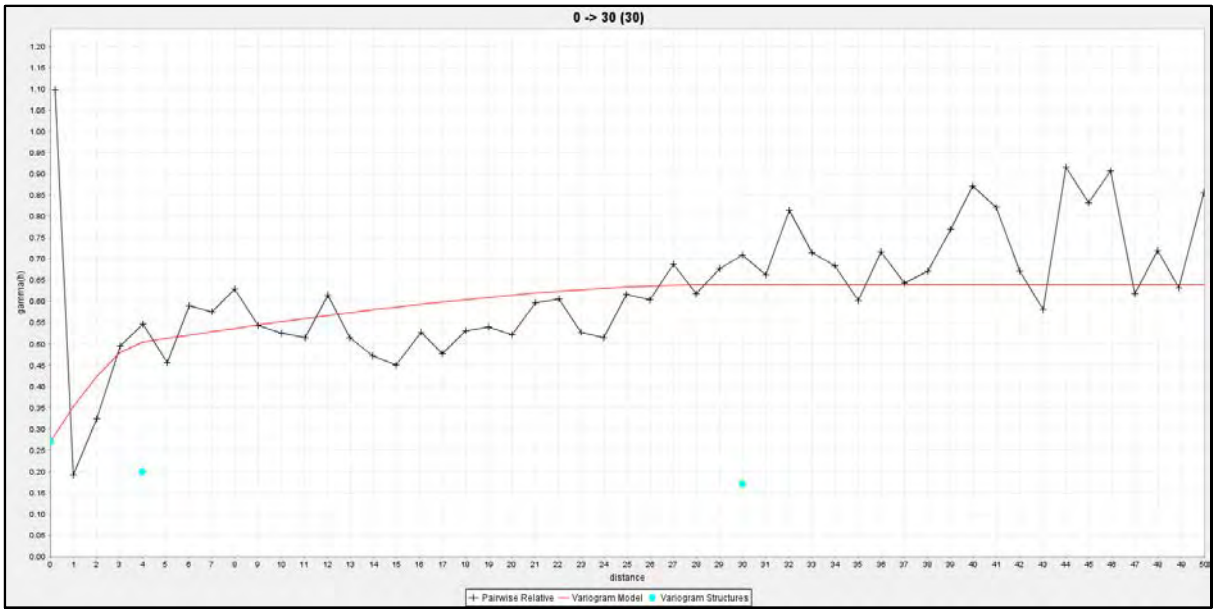


Figure 9-20: Variogram Sn Domain 7

Figure 9-21: Variogram Sn Domain 10



APPENDIX F: SWATH PLOTS

Figure 9-22: Swath Plot – HLA Easting

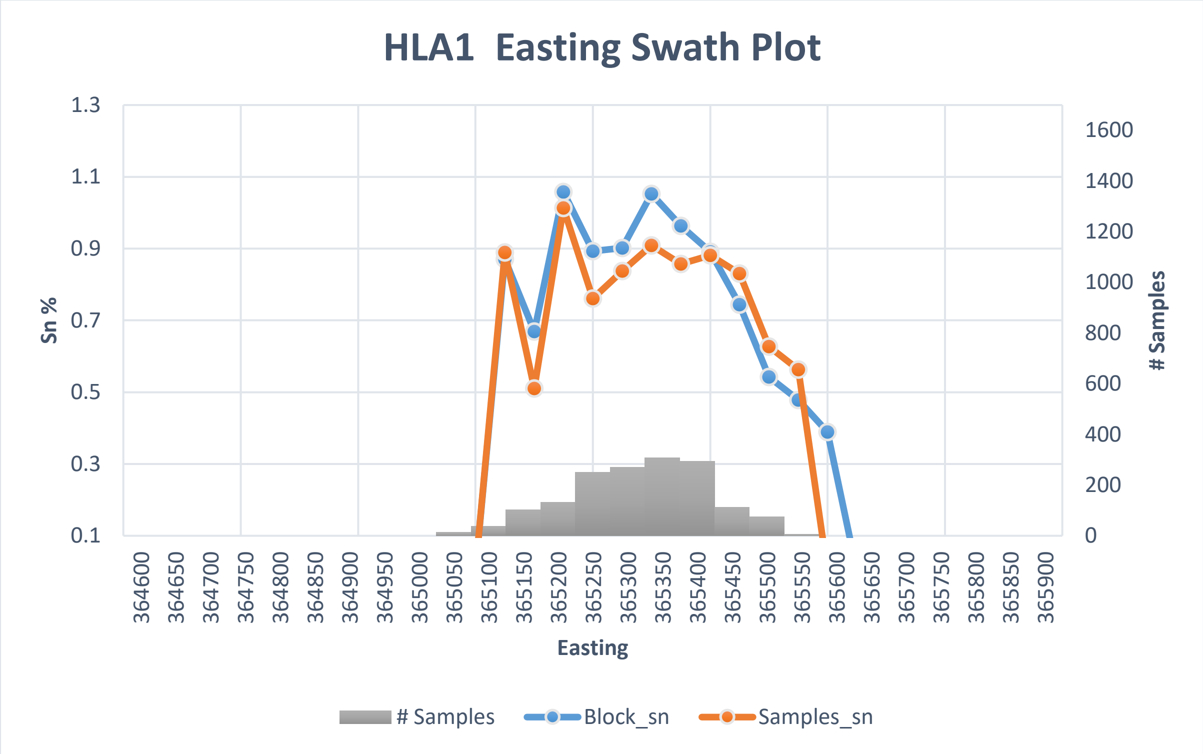


Figure 9-23: Swath Plot - HLA1 Northing

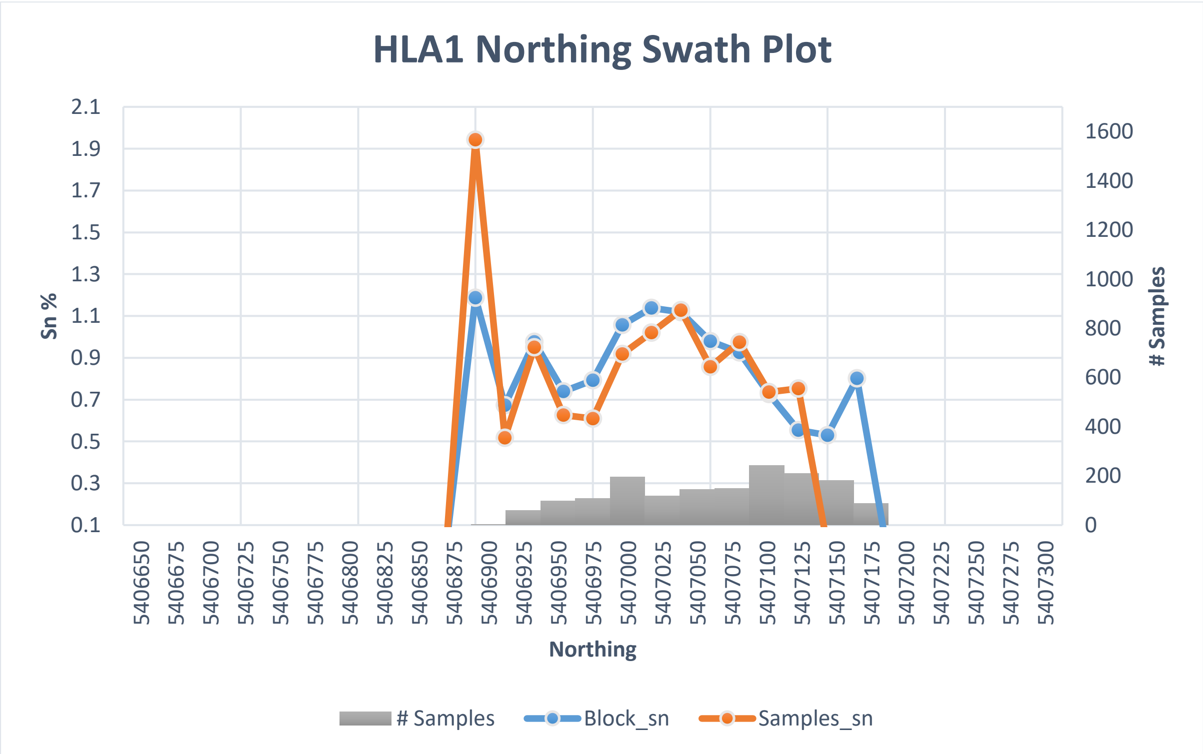


Figure 9-24: Swath Plot - HLA1 RL

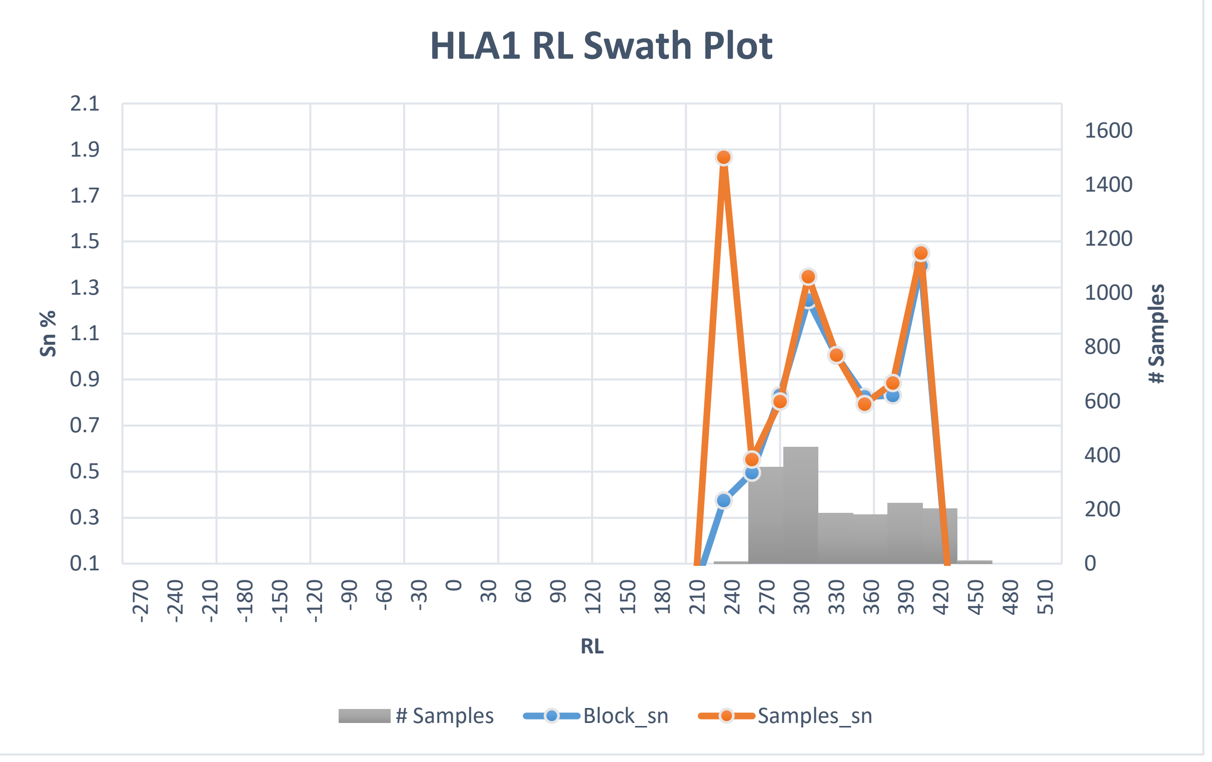


Figure 9-25: Swath Plot - HLB1 Easting

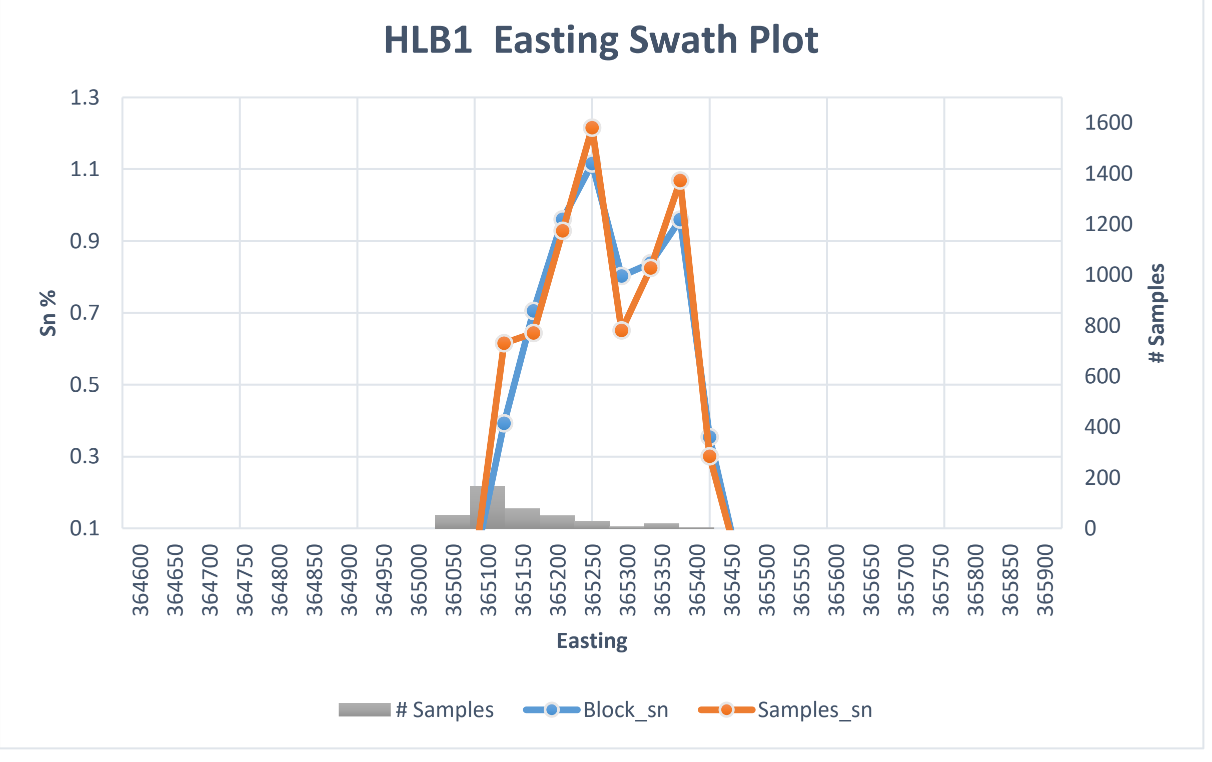


Figure 9-26: Swath Plot - HLB1 Northing

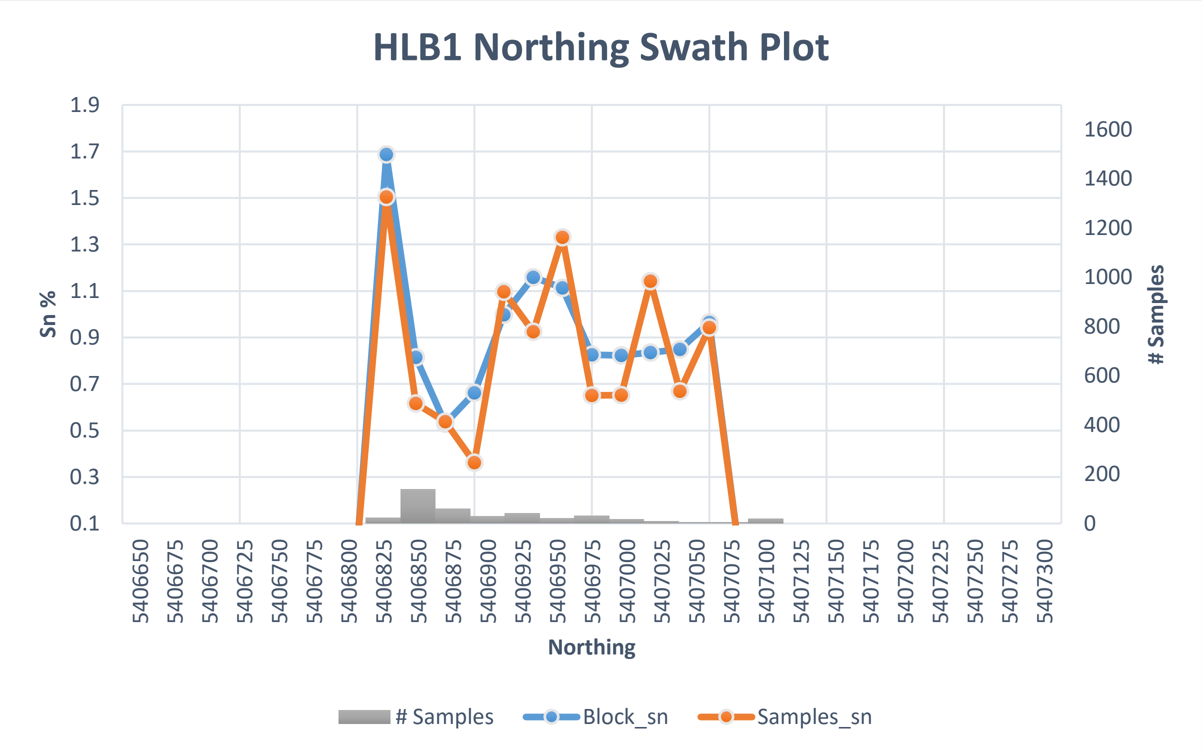


Figure 9-27: Swath Plot - HLB1 RL

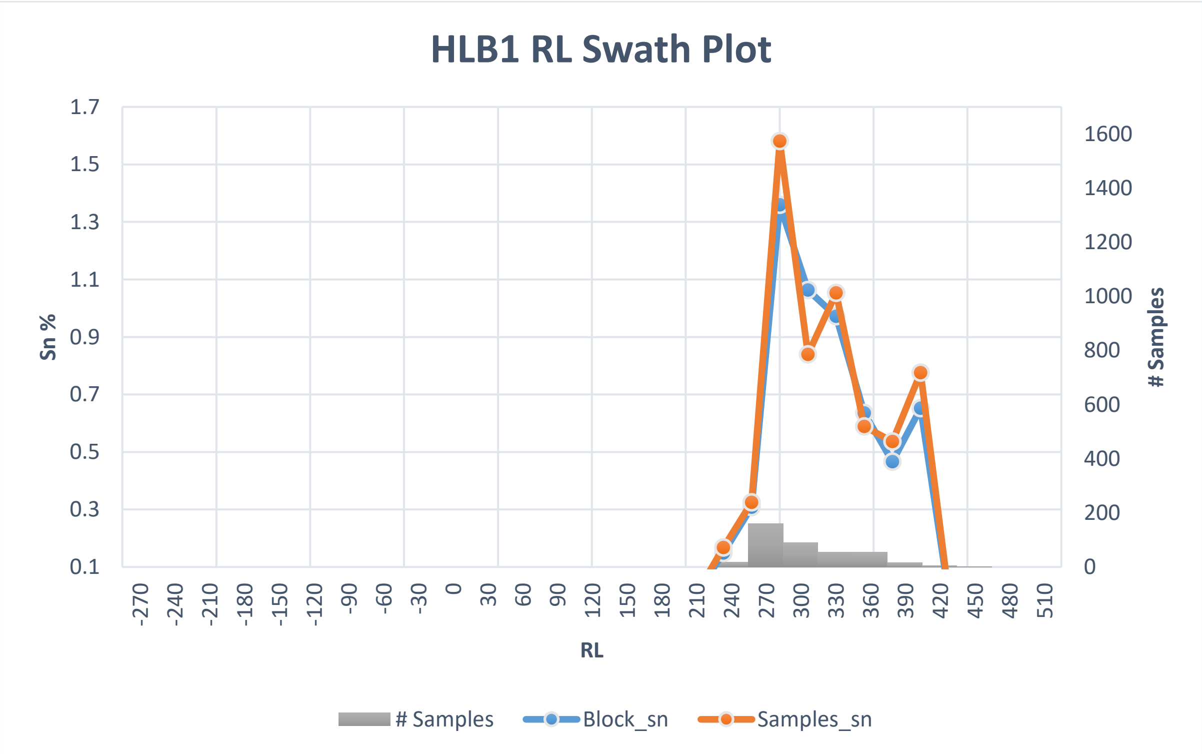


Figure 9-28: Swath Plot - HLC1 Easting

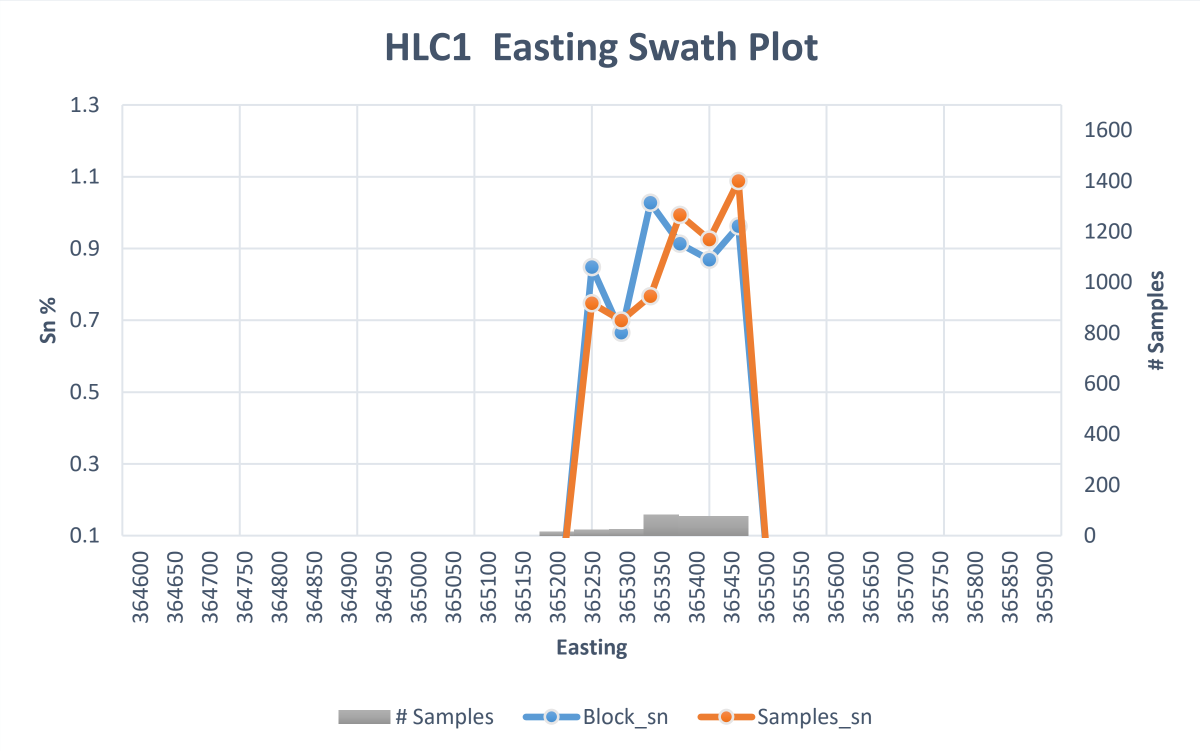


Figure 9-29: Swath Plot - HLC1 Northing

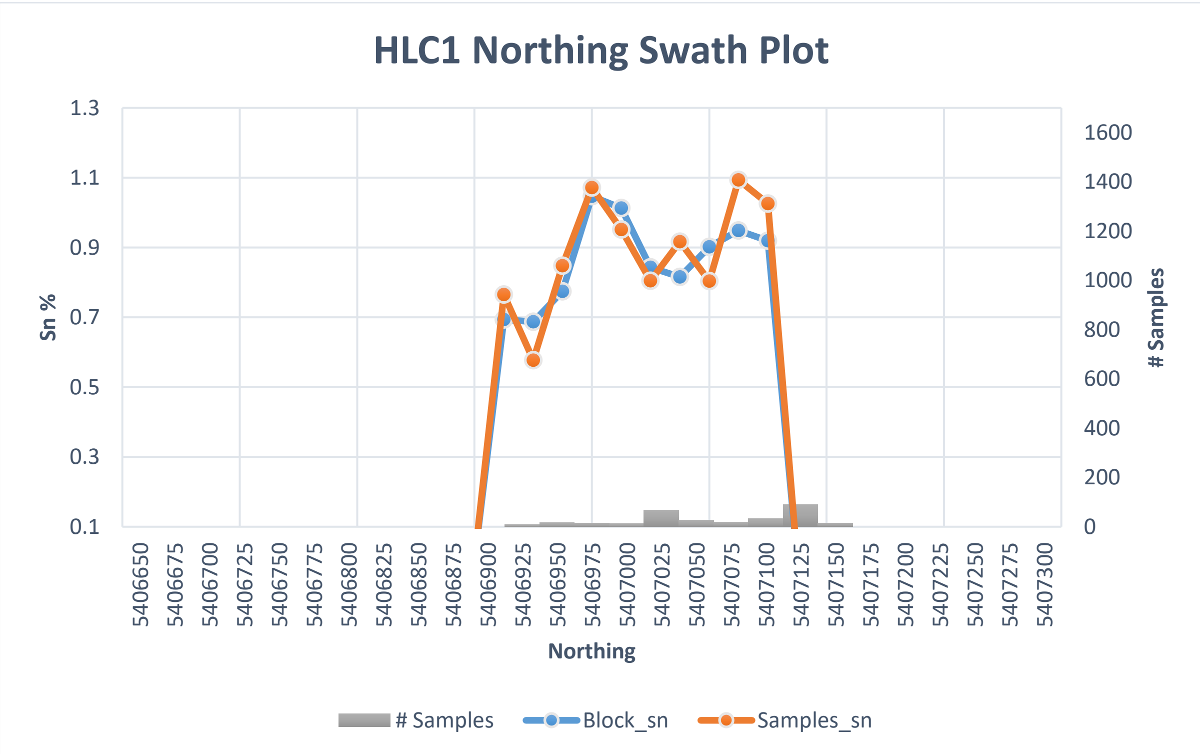


Figure 9-30: Swath Plot - HLC1 RL

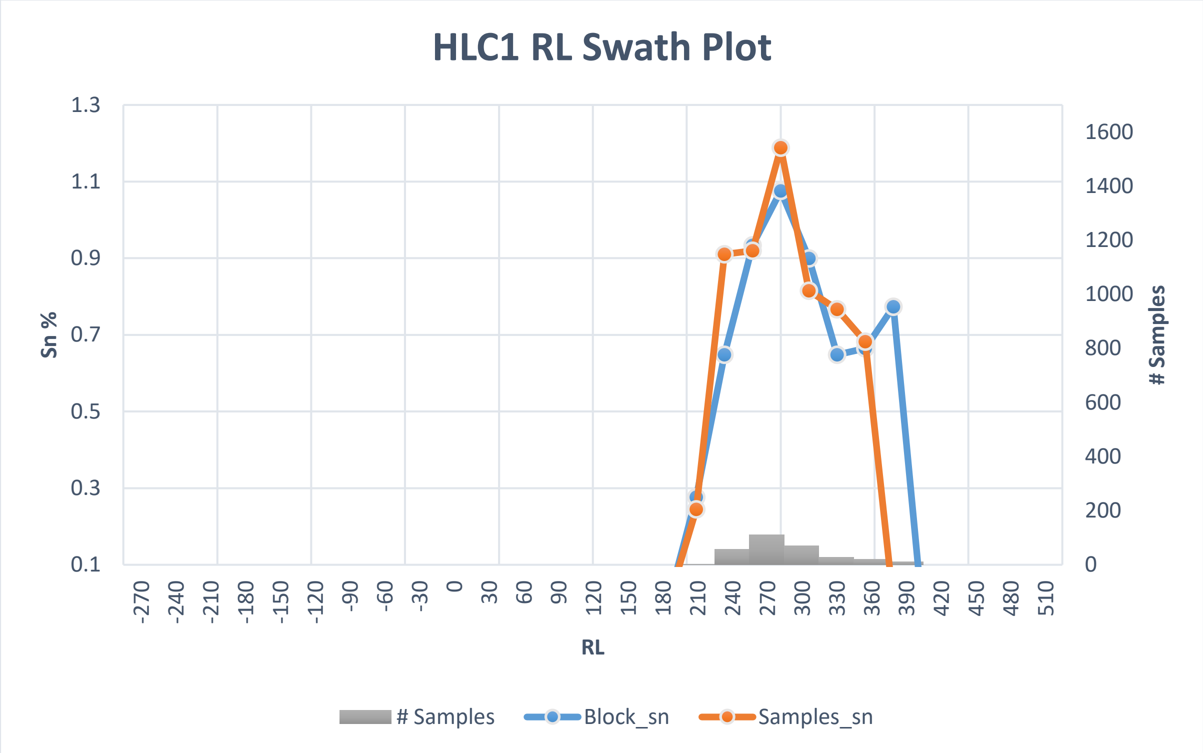


Figure 9-31: Swath Plot - HLD1 Easting

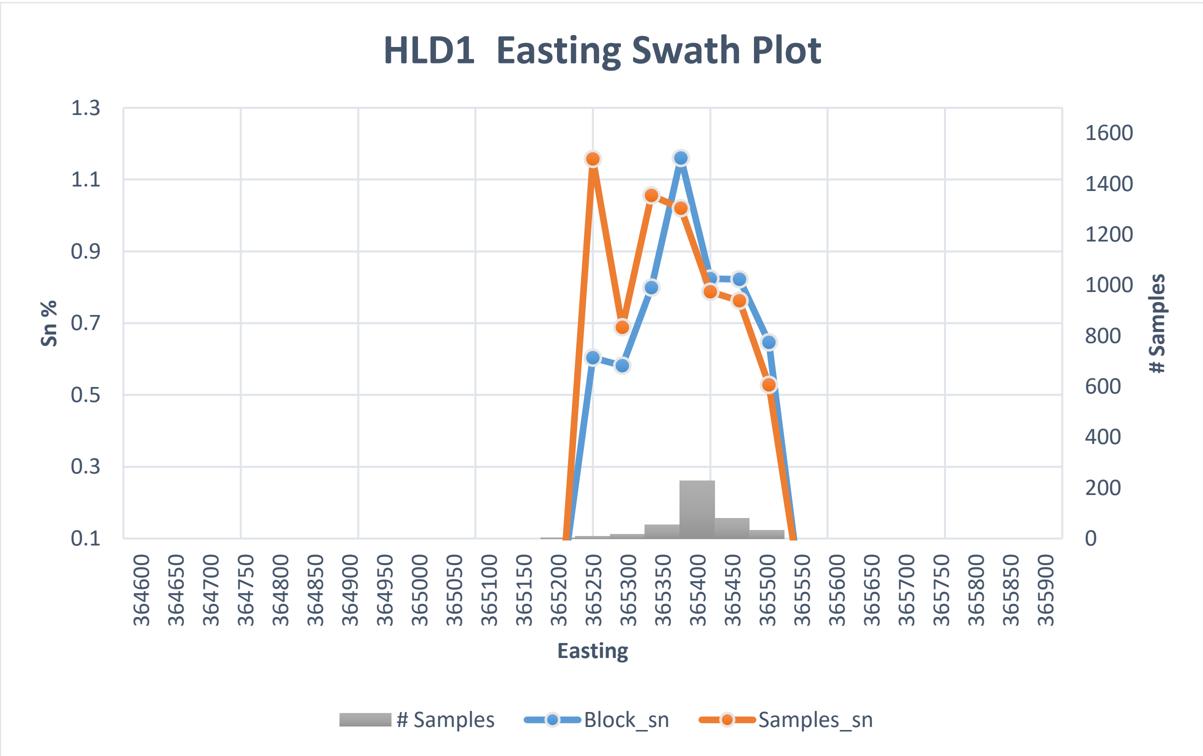


Figure 9-32: Swath Plot - HLD1 Northing

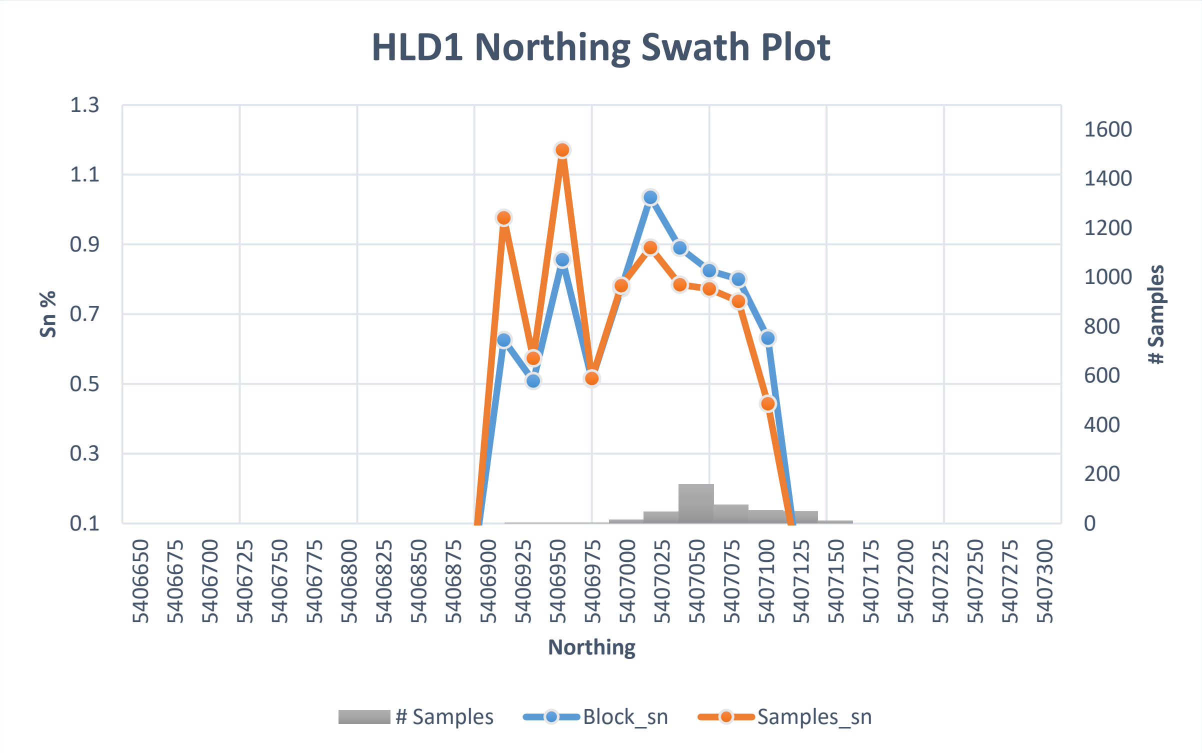


Figure 9-33: Swath Plot - HLD1 RL

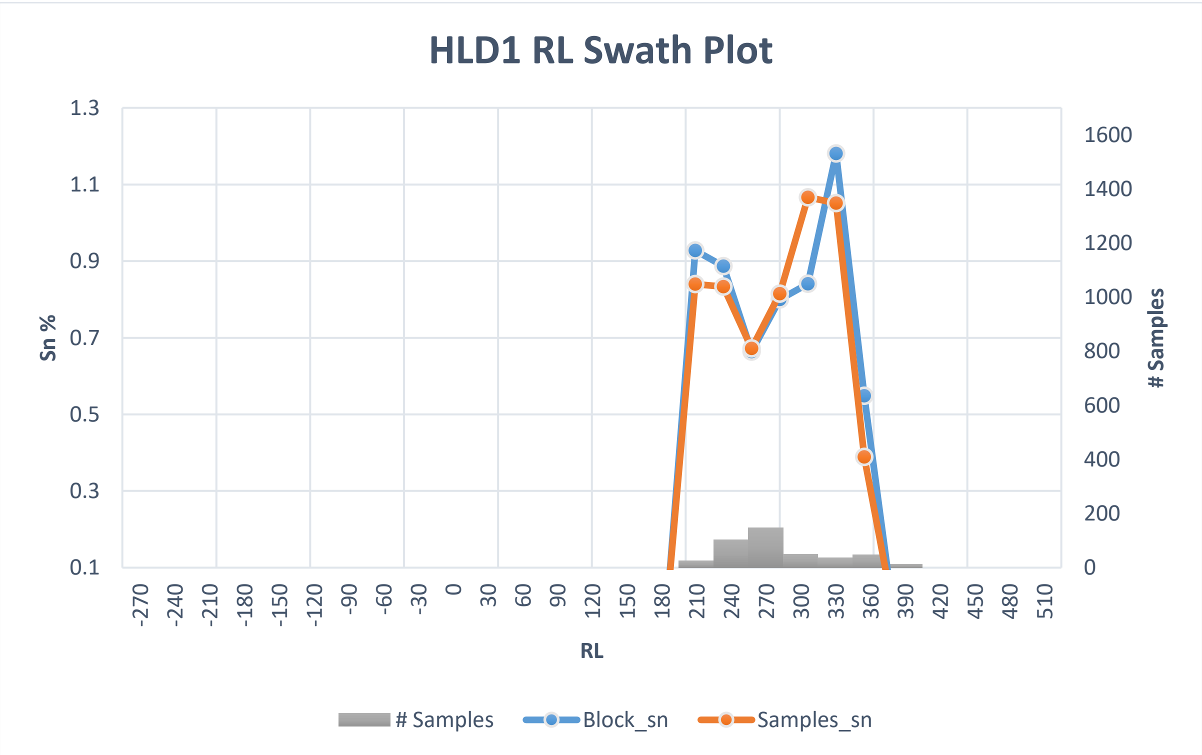


Figure 9-34: Swath Plot - HLA2 Easting

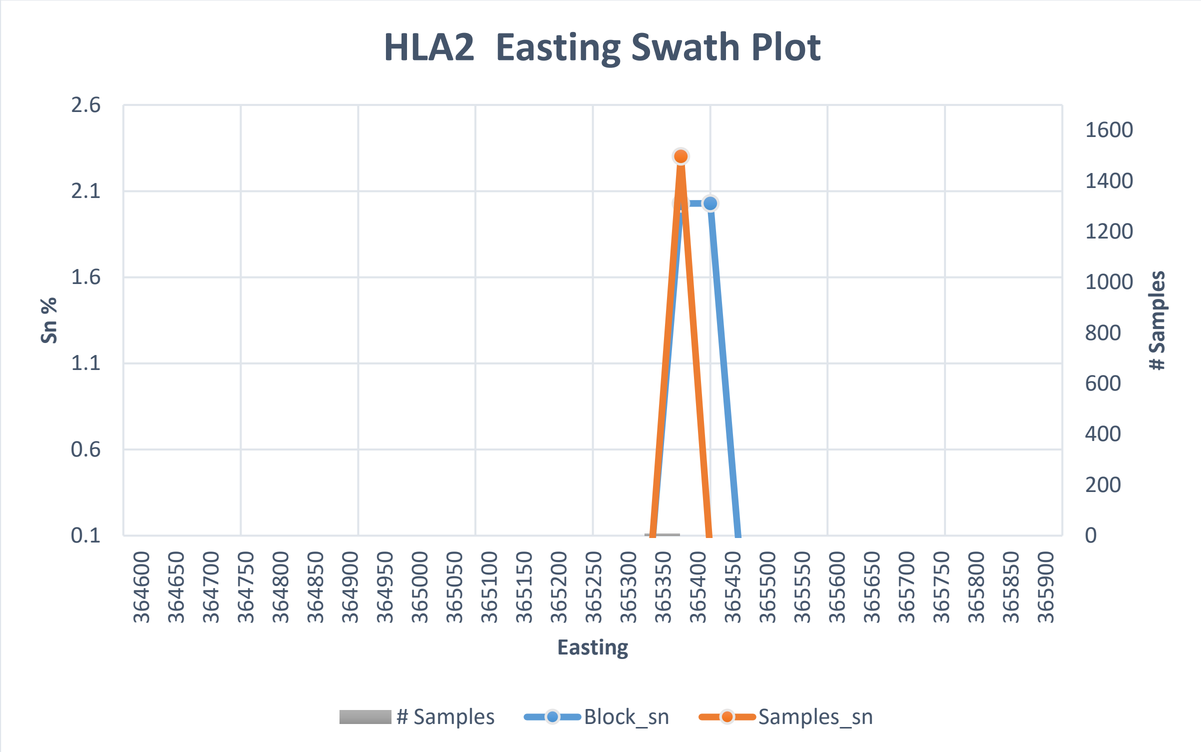


Figure 9-35: Swath Plot - HLA2 Northing

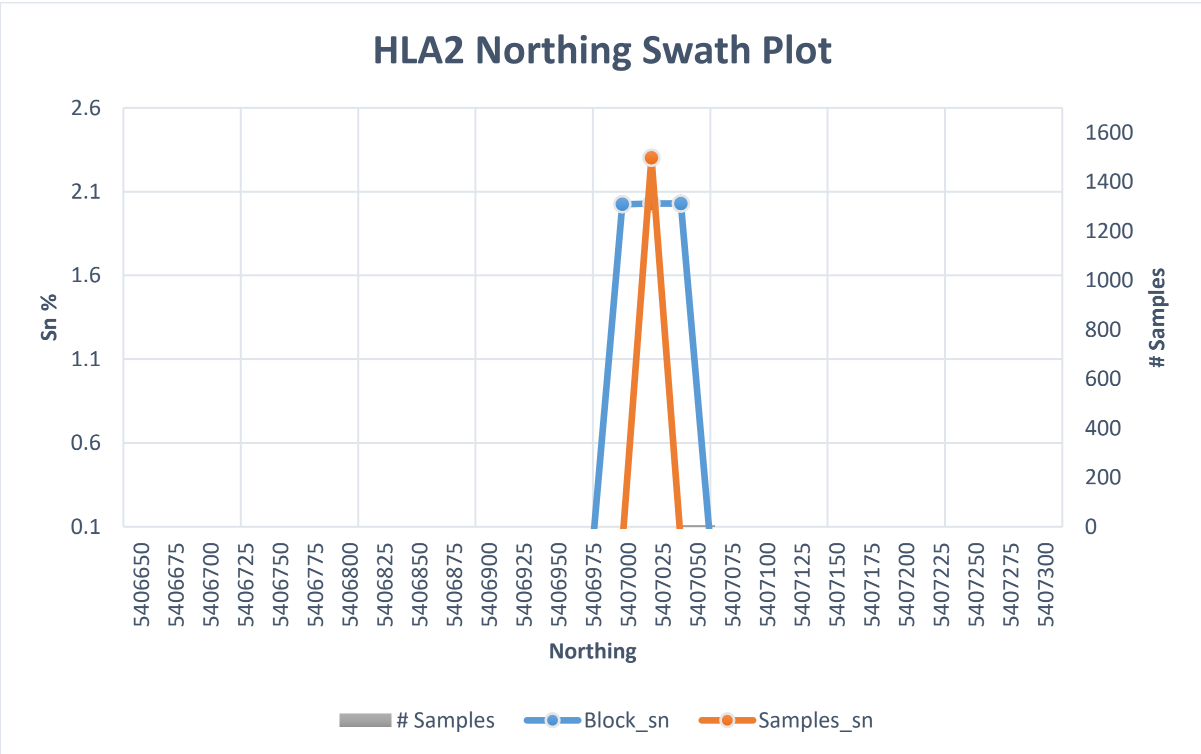


Figure 9-36: Swath Plot - HLA2 RL

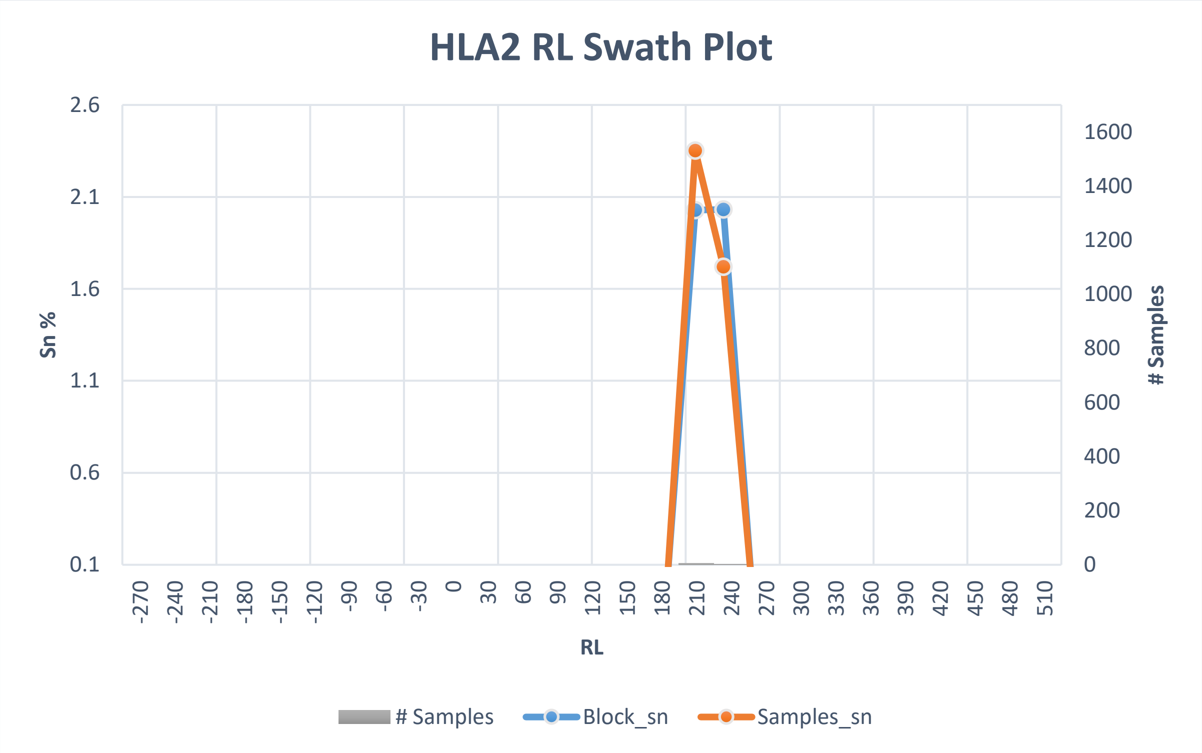


Figure 9-37: Swath Plot - HLB2 Easting

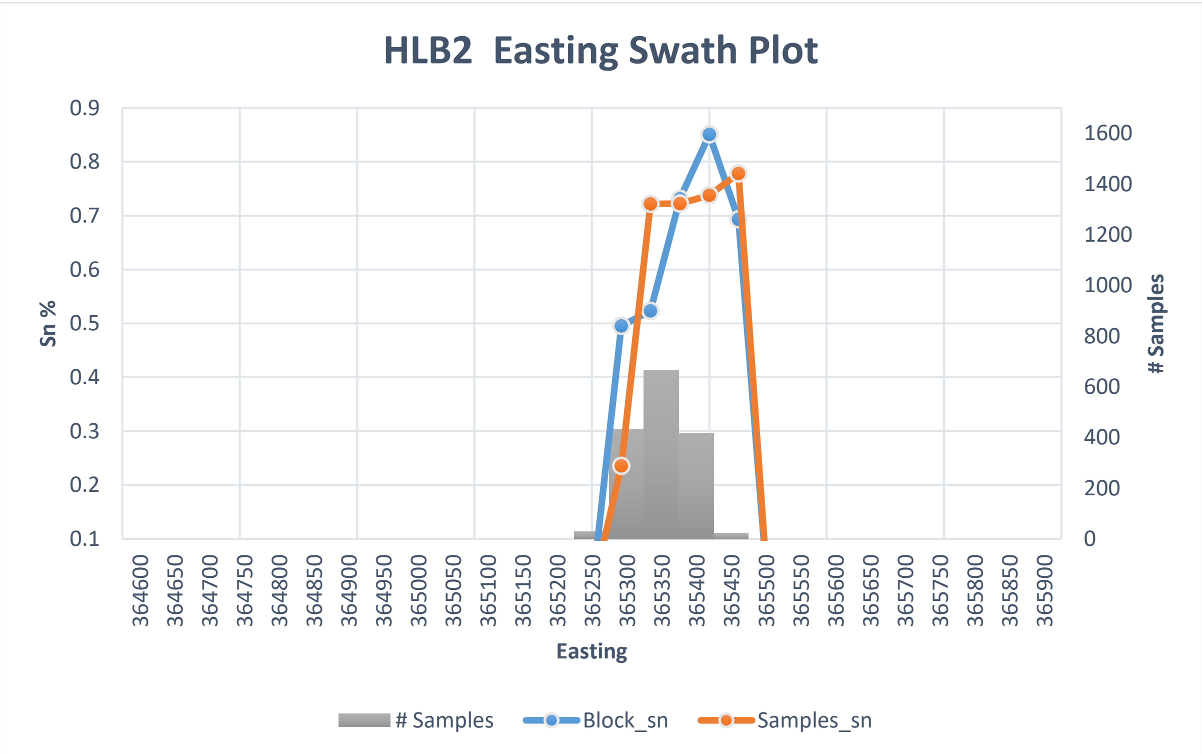


Figure 9-38: Swath Plot - HLB2 Northing

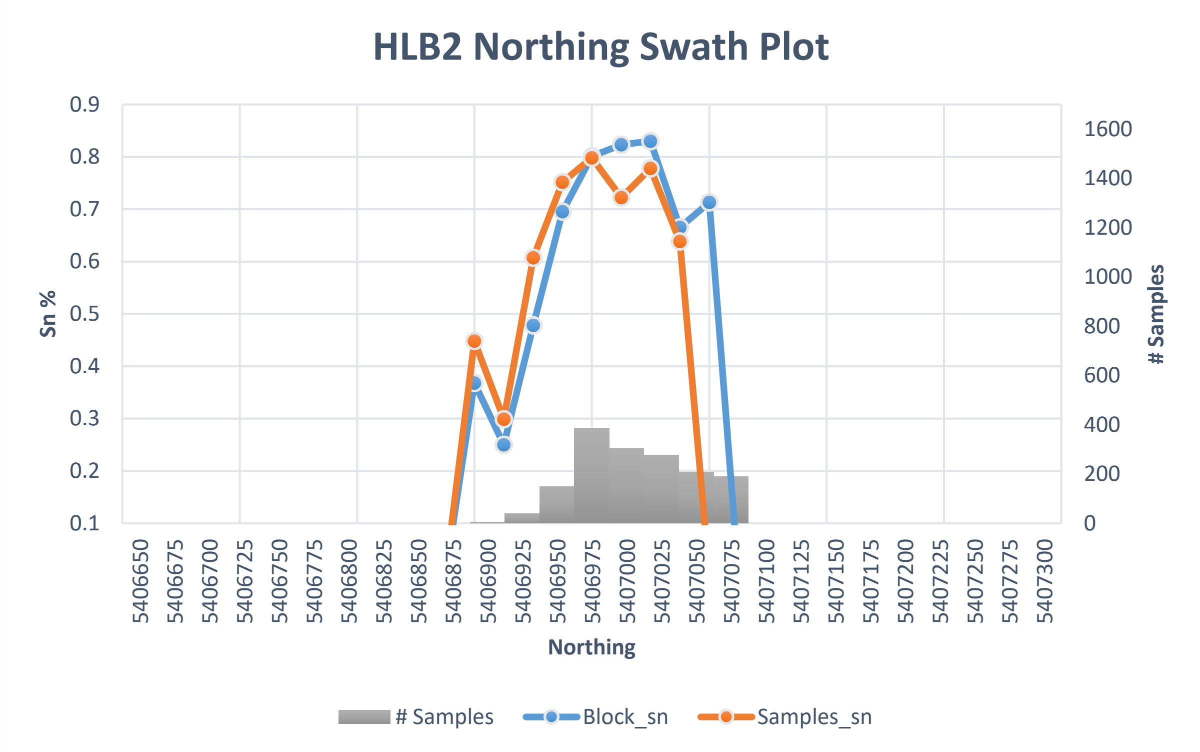


Figure 9-39: Swath Plot - HLB2 RL

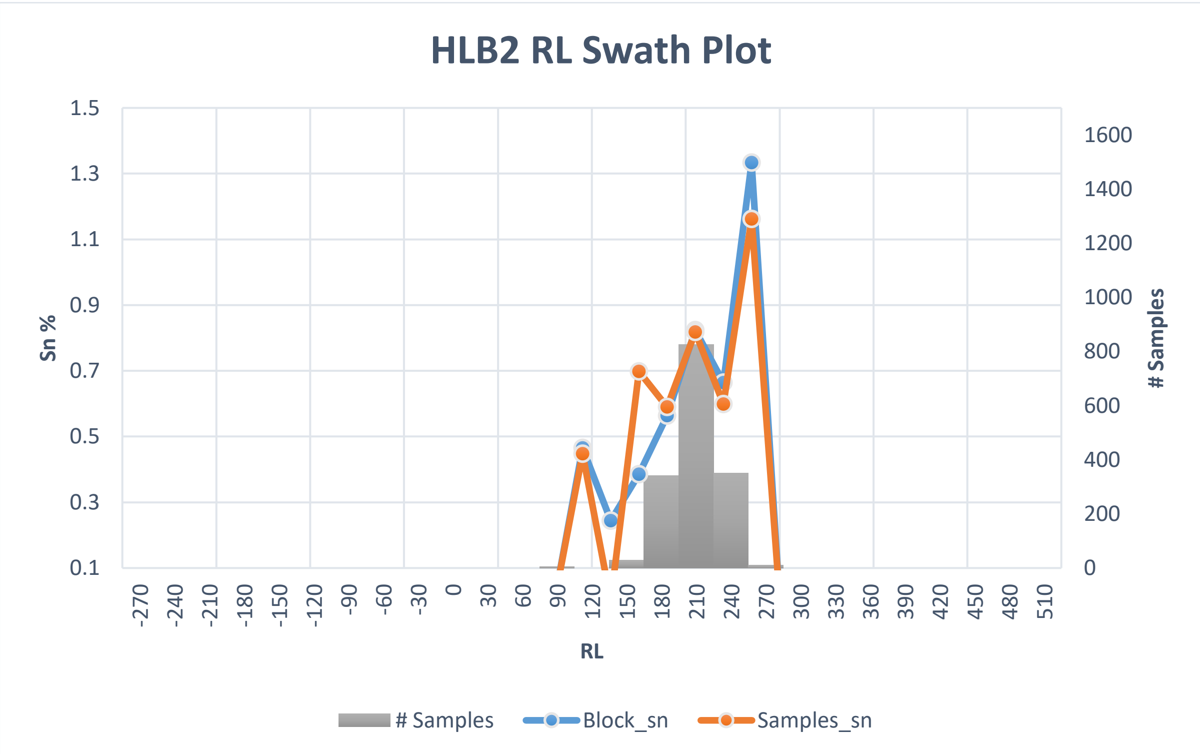


Figure 9-40: Swath Plot - HLC2 Easting

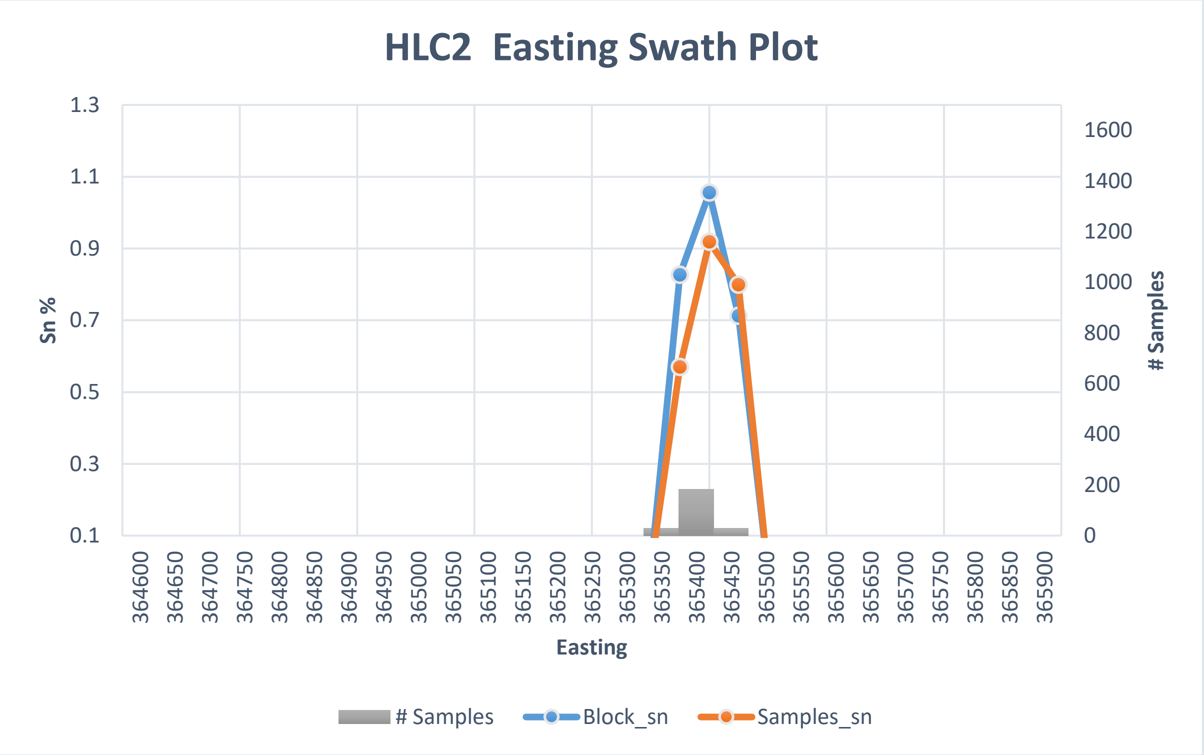


Figure 9-41: Swath Plot - HLC2 Northing

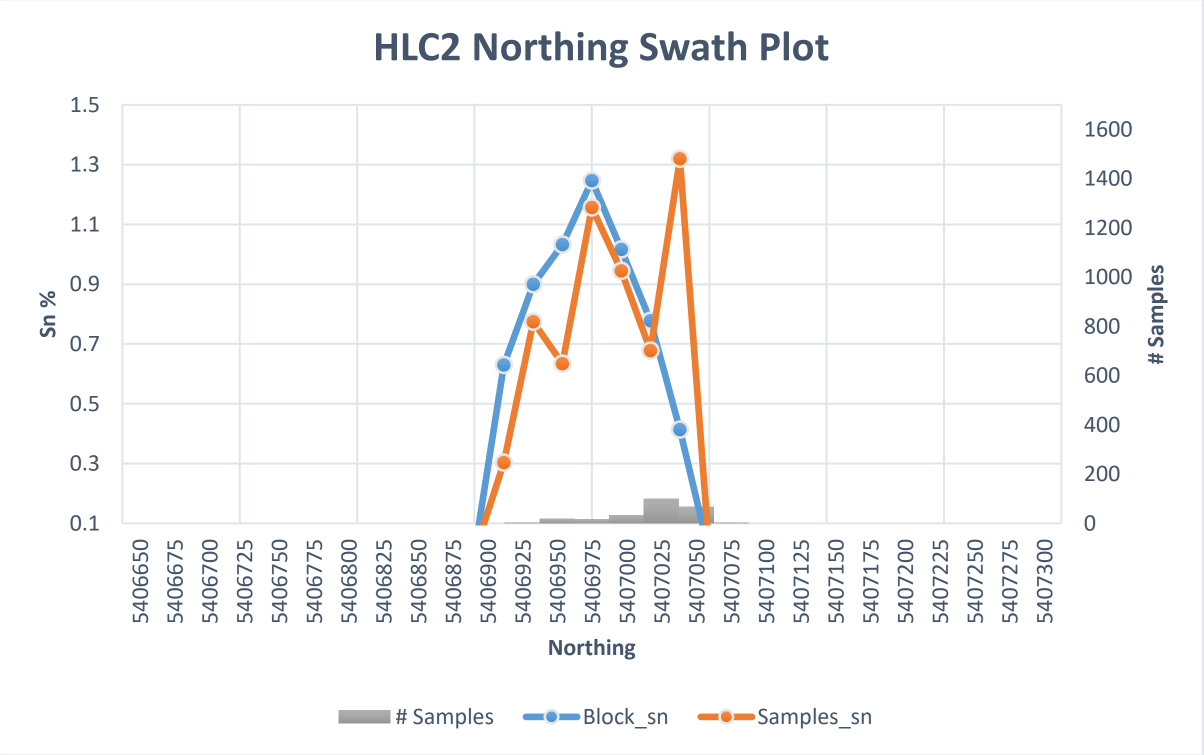


Figure 9-42: Swath Plot - HLC2 RL

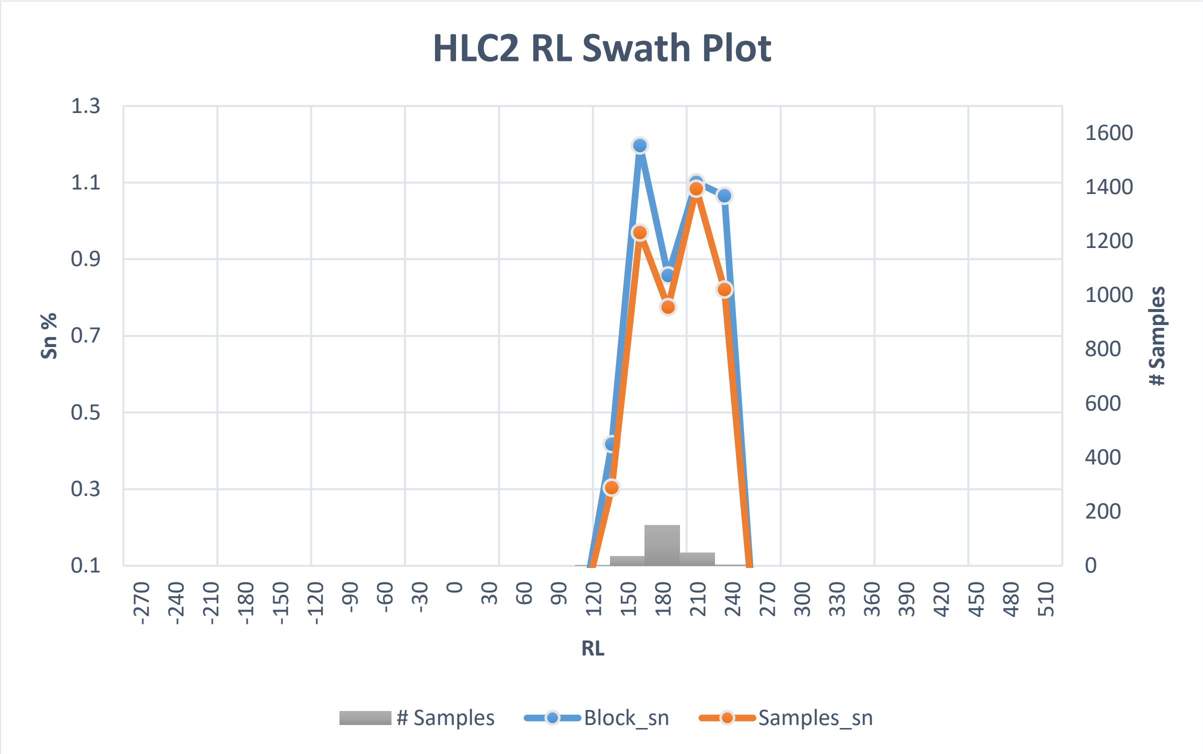


Figure 9-43: Swath Plot - HLA3 Easting

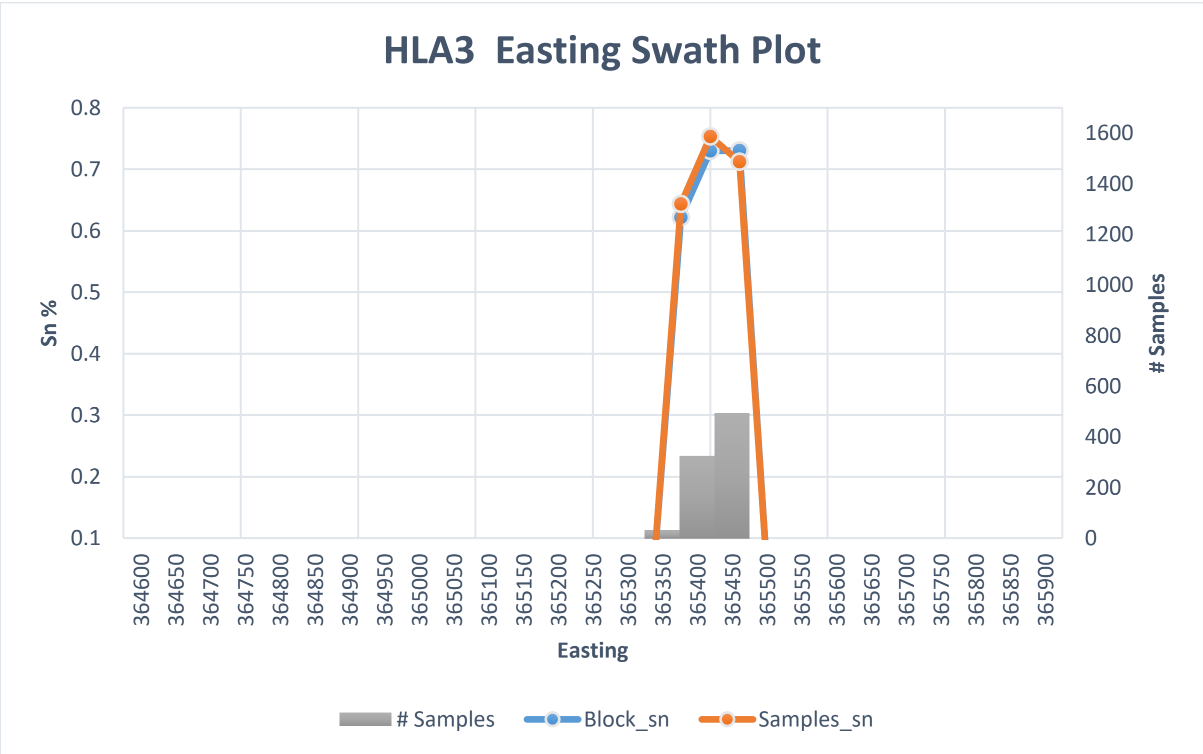


Figure 9-44: Swath Plot - HLA3 Northing

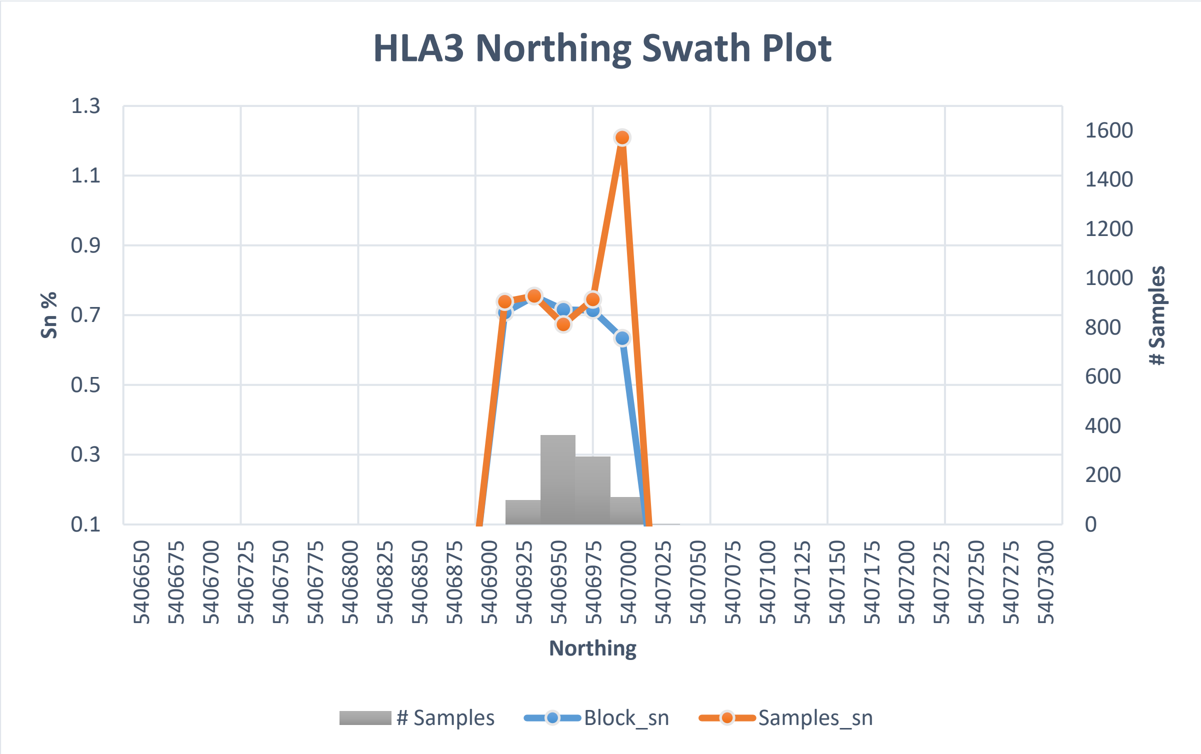


Figure 9-45: Swath Plot - HLA3 RL

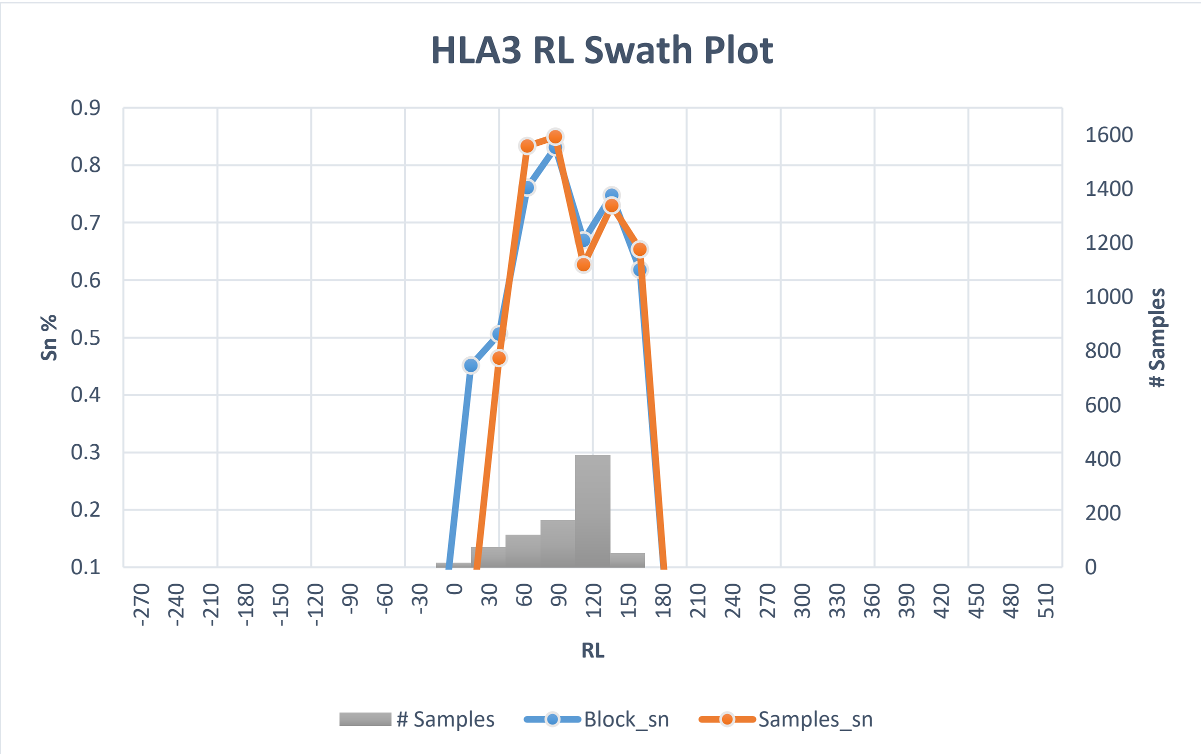


Figure 9-46: Swath Plot - HLB3 Easting

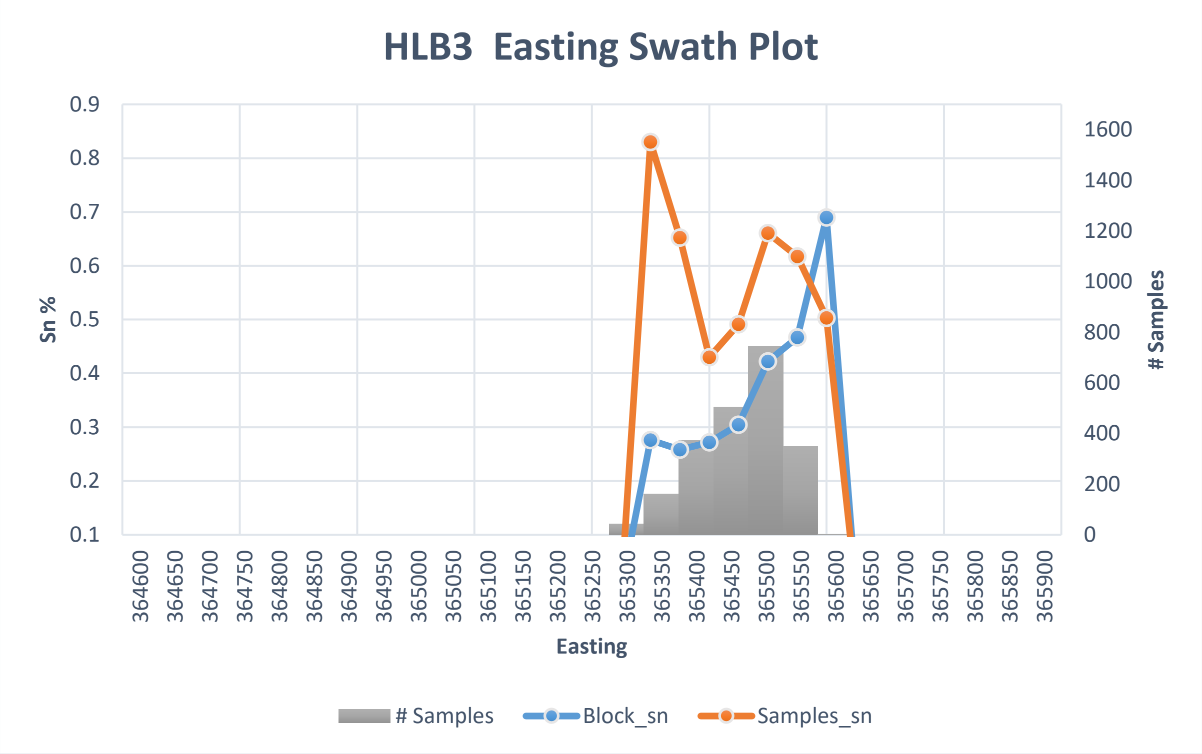


Figure 9-47: Swath Plot - HLB3 Northing

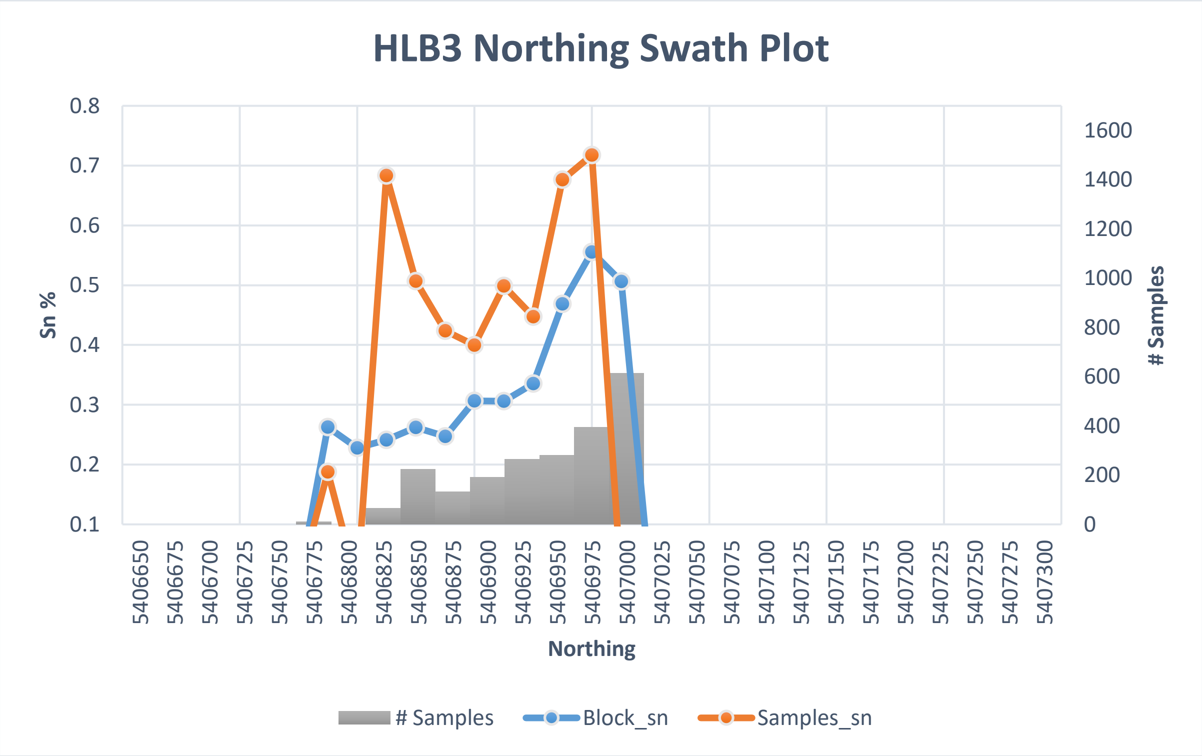


Figure 9-48: Swath Plot - HLB3 RL

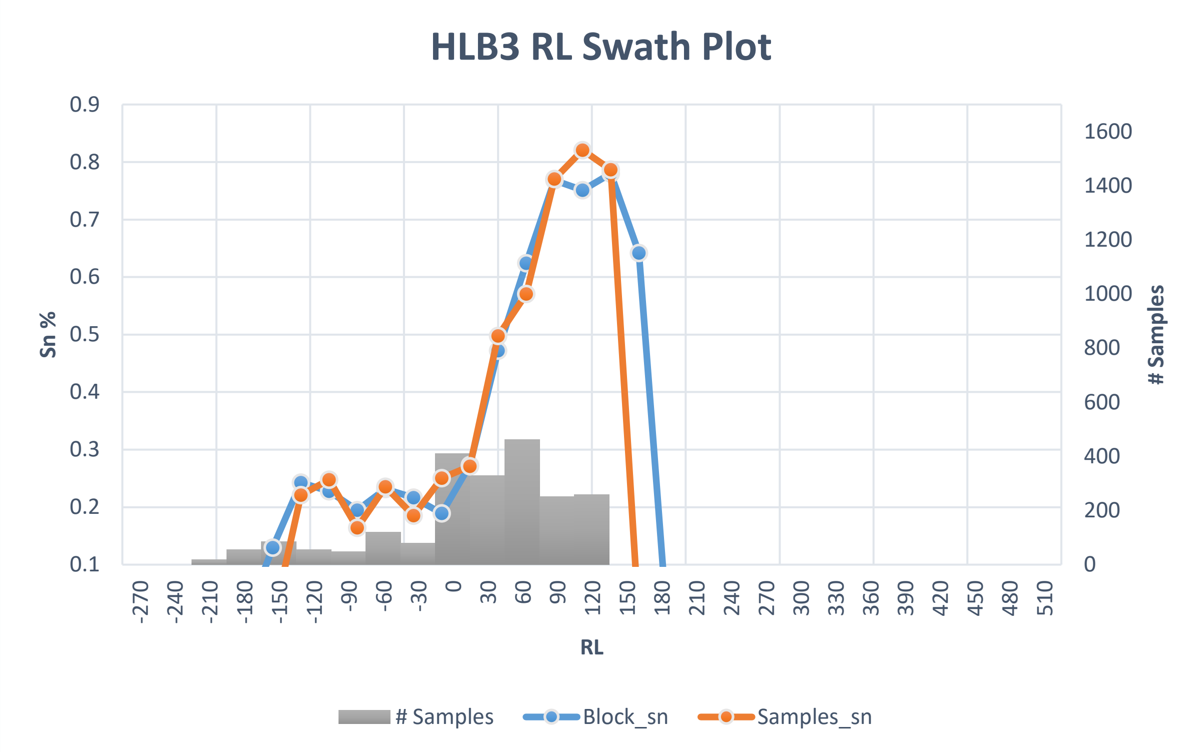


Figure 9-49: Swath Plot - HLC3 Easting

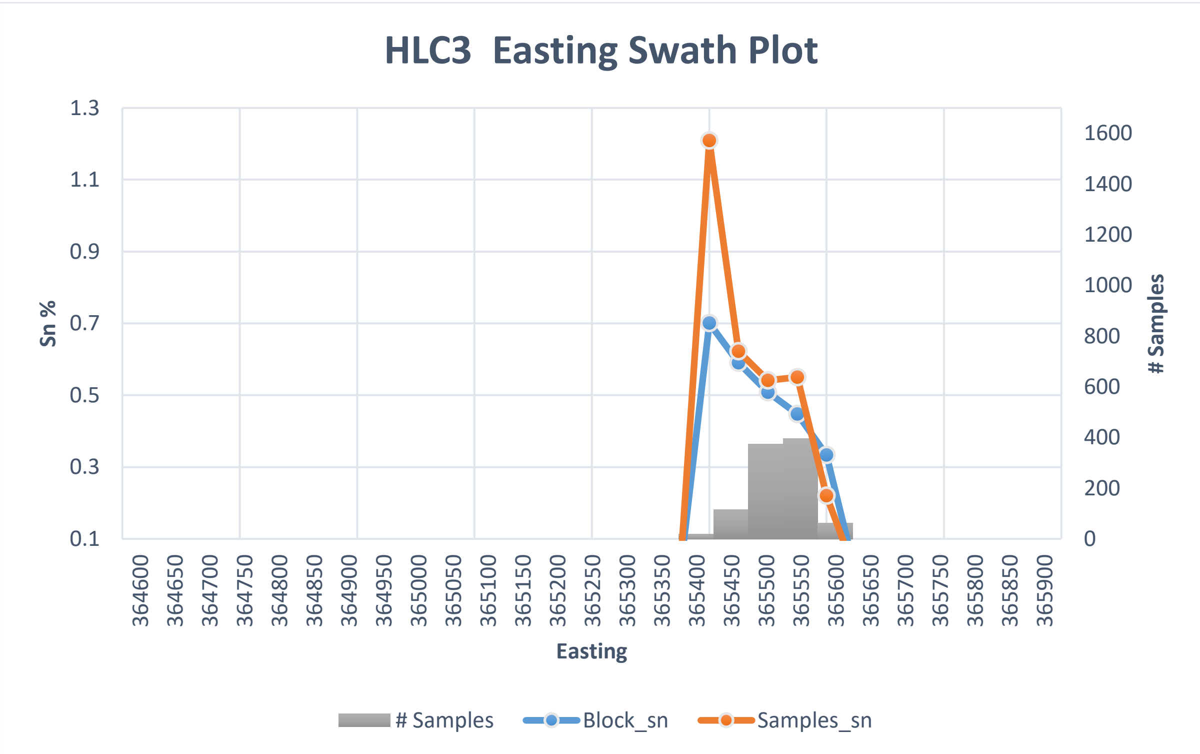


Figure 9-50: Swath Plot - HLC3 Northing

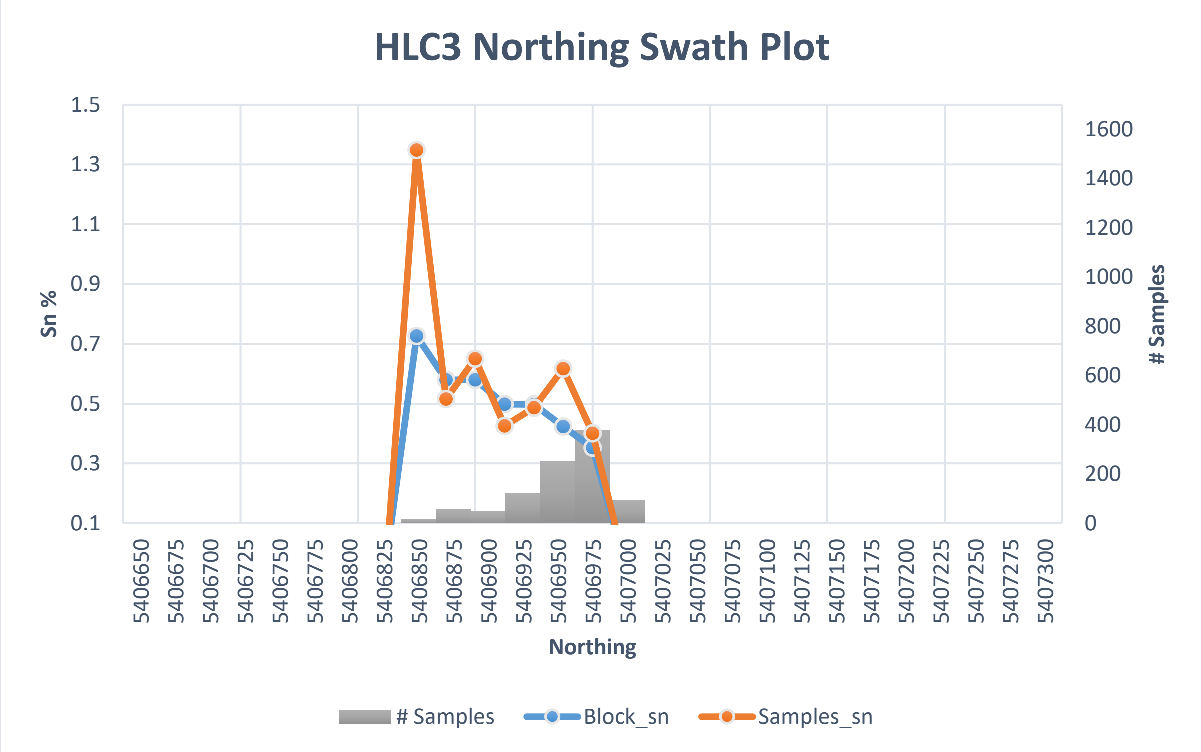


Figure 9-51: Swath Plot - HLC3 RL

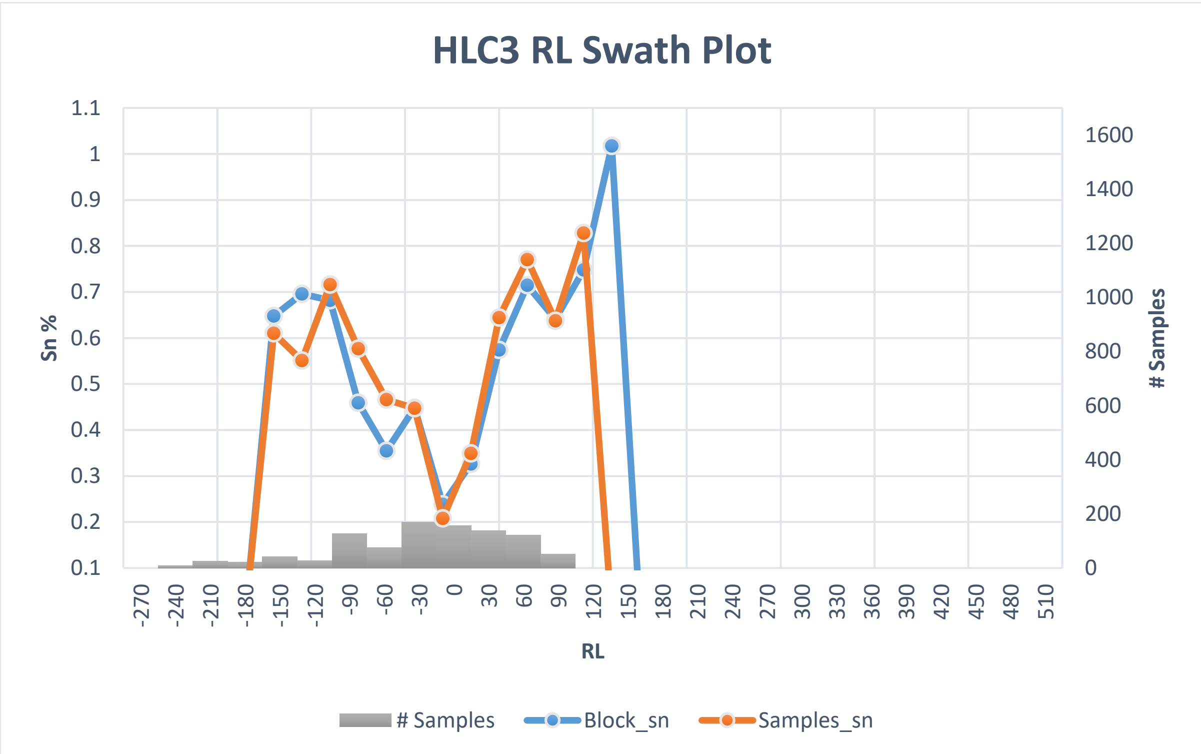


Figure 9-52: Swath Plot - HN31 Easting

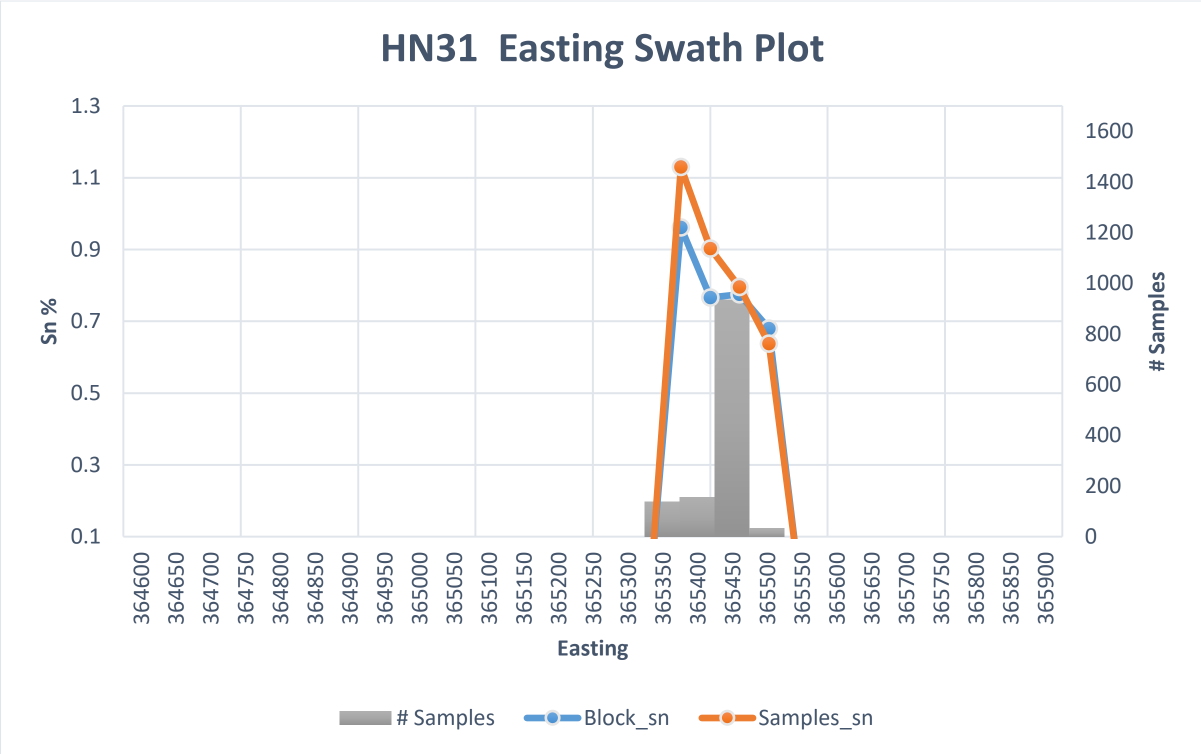


Figure 9-53: Swath Plot - HN31 Northing

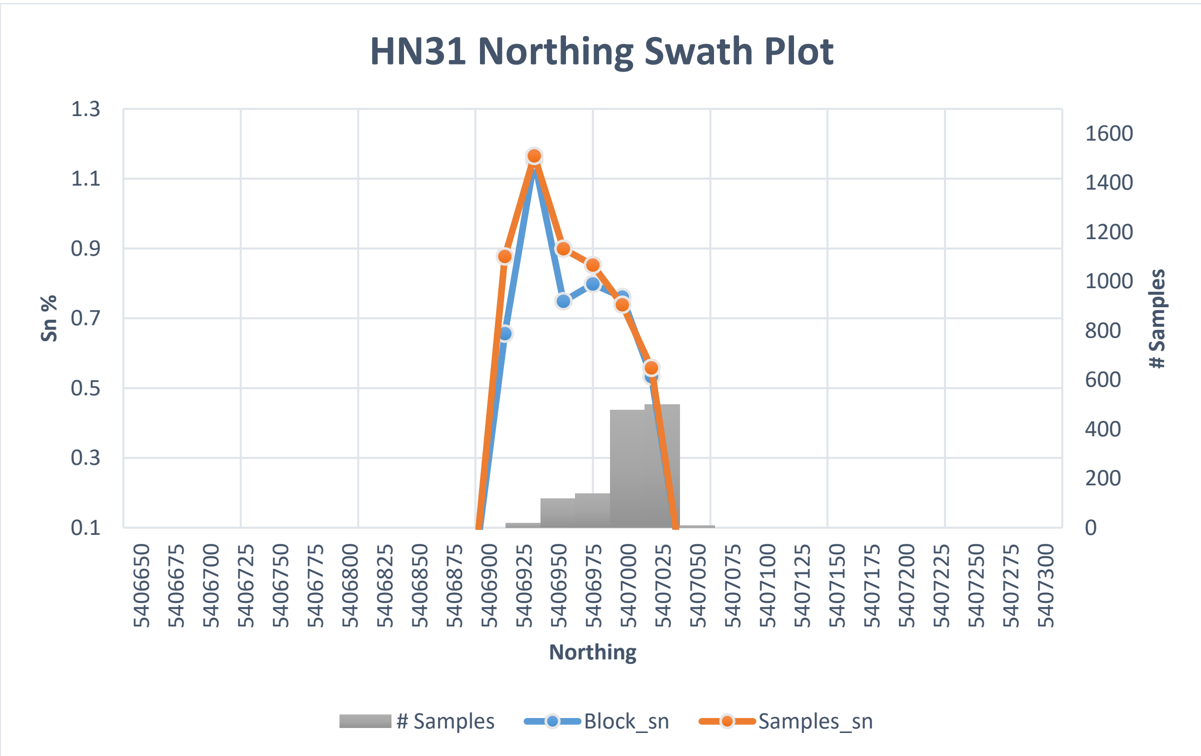


Figure 9-54: Swath Plot - HN31 RL

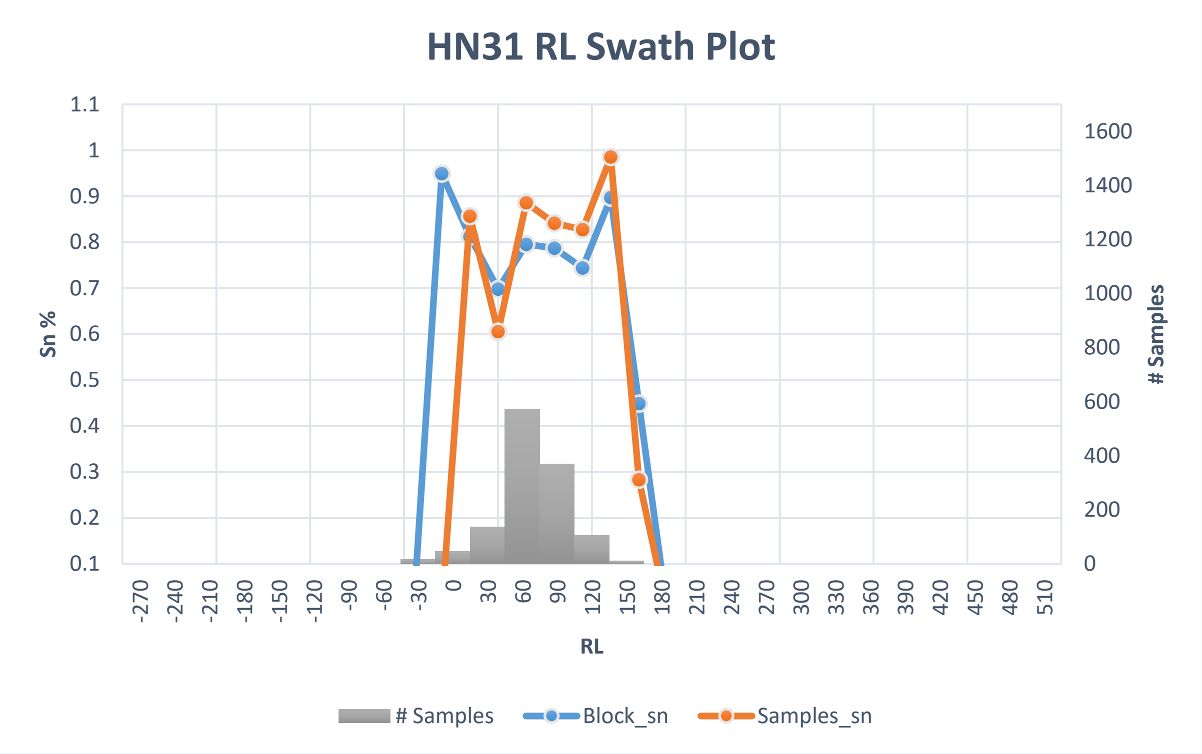


Figure 9-55: Swath Plot - KK Easting

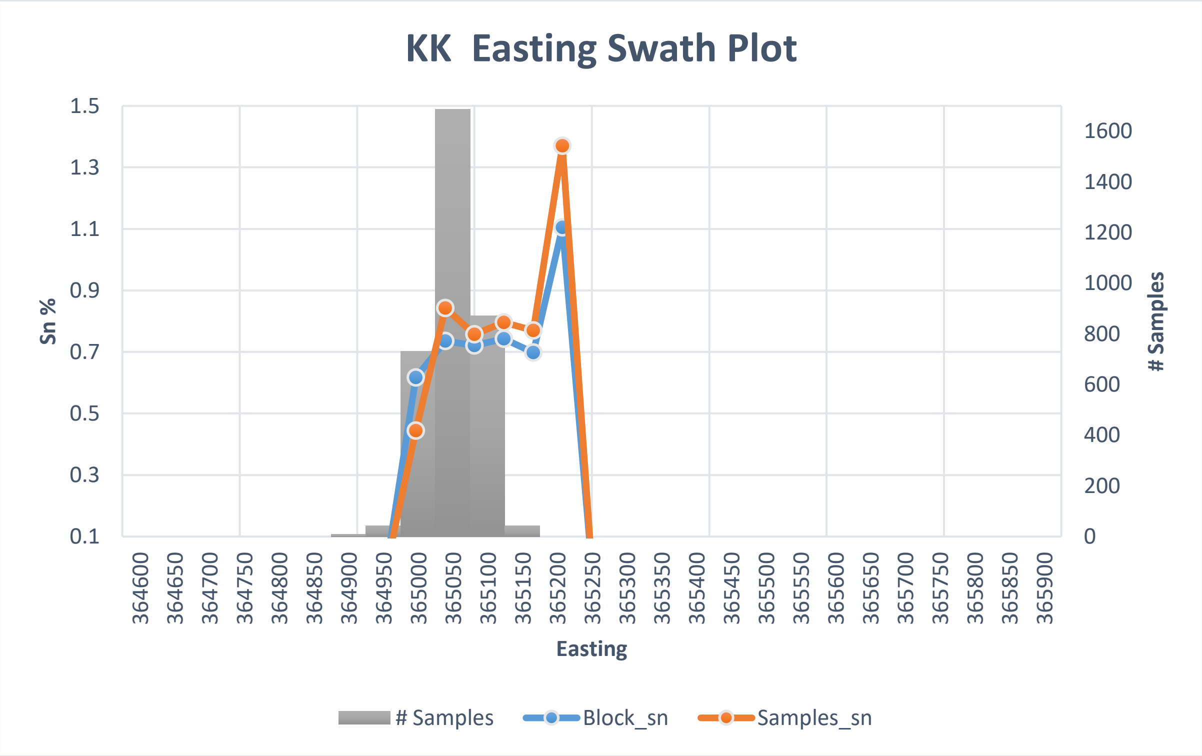


Figure 9-56: Swath Plot - KK Northing

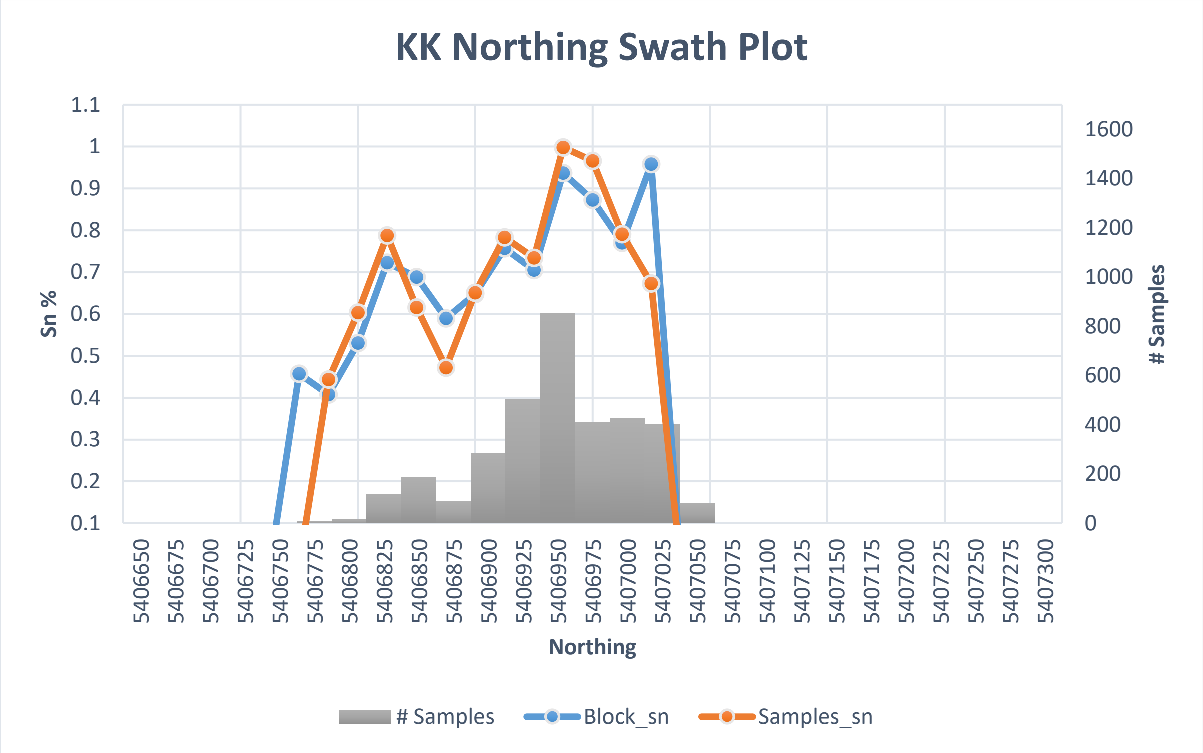


Figure 9-57: Swath Plot - KK RL

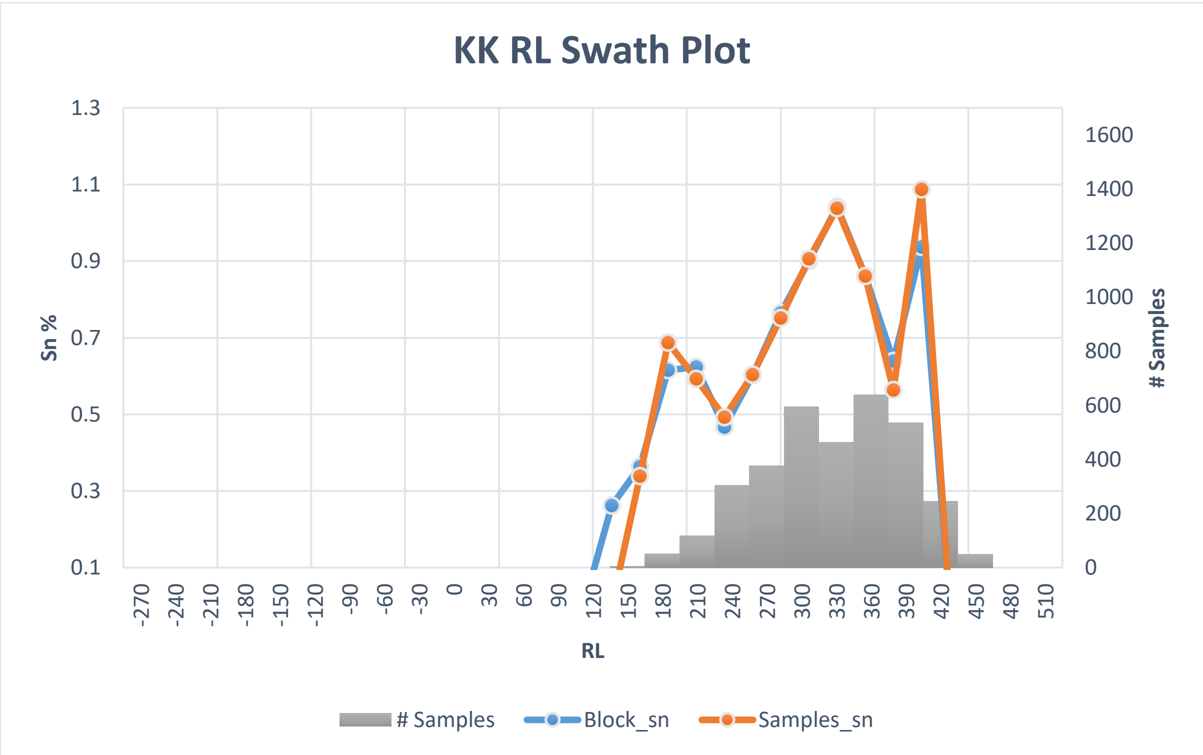


Figure 9-58: Swath Plot - BS Easting

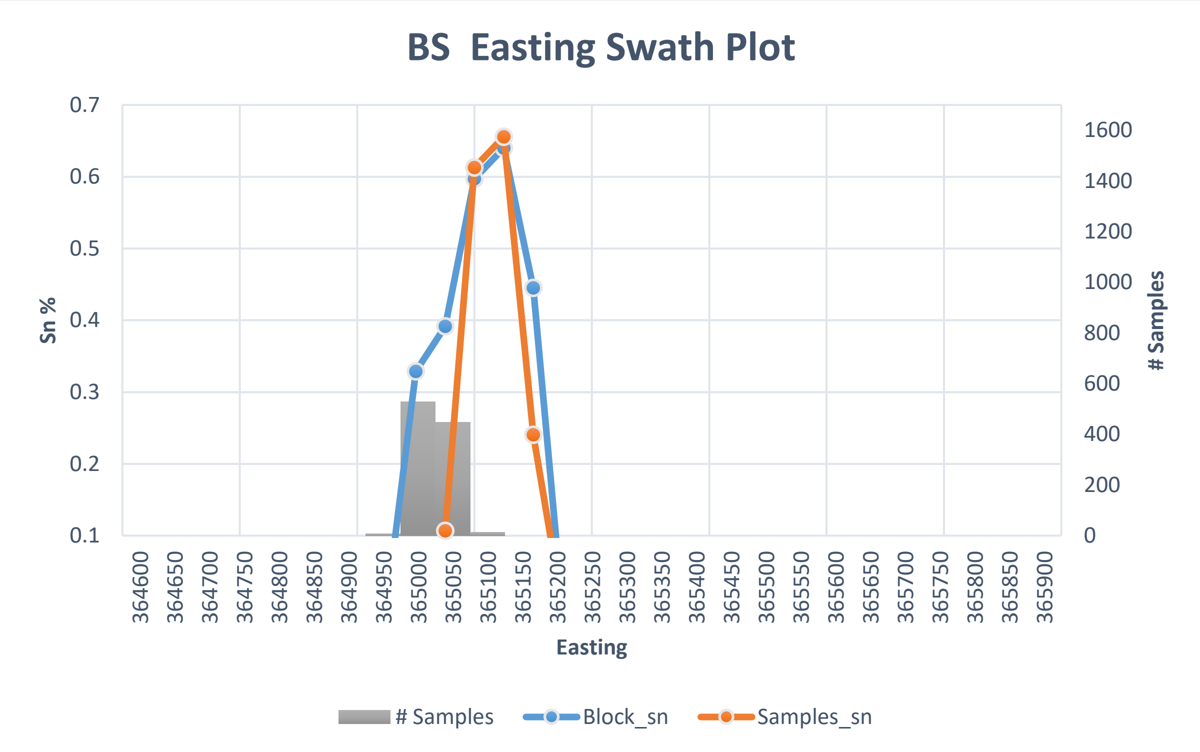


Figure 9-59: Swath Plot - BS Northing

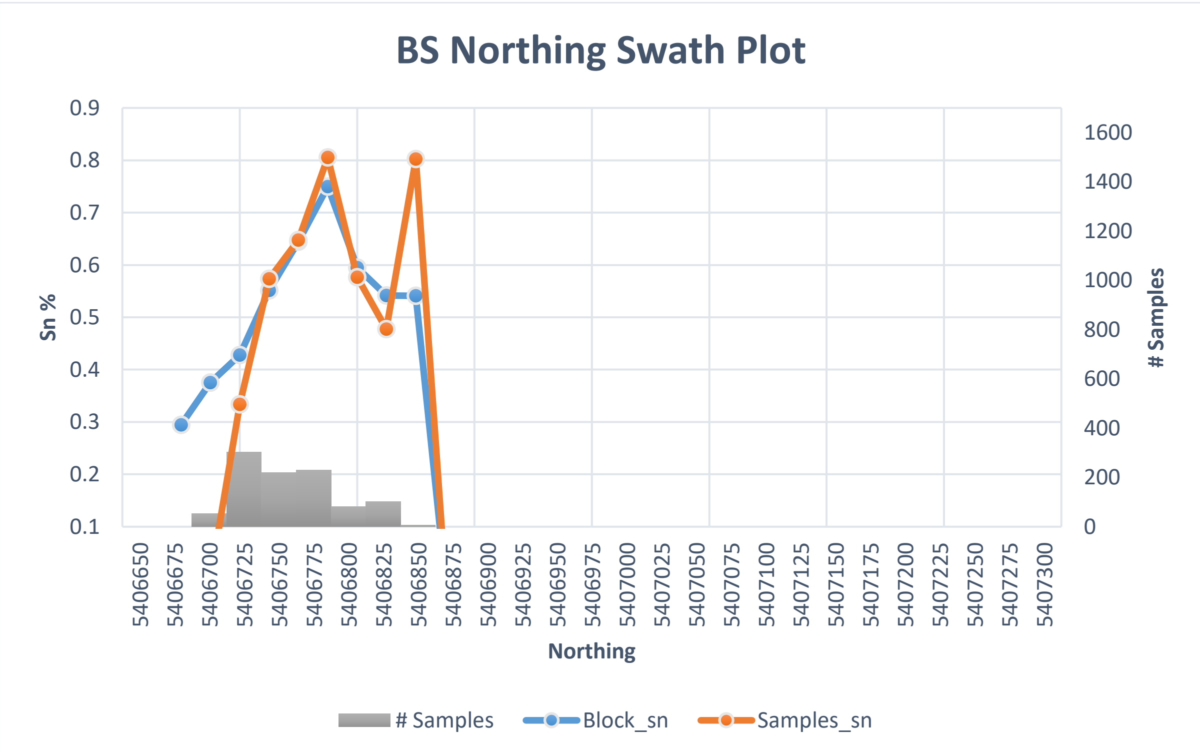


Figure 9-60: Swath Plot - BS RL

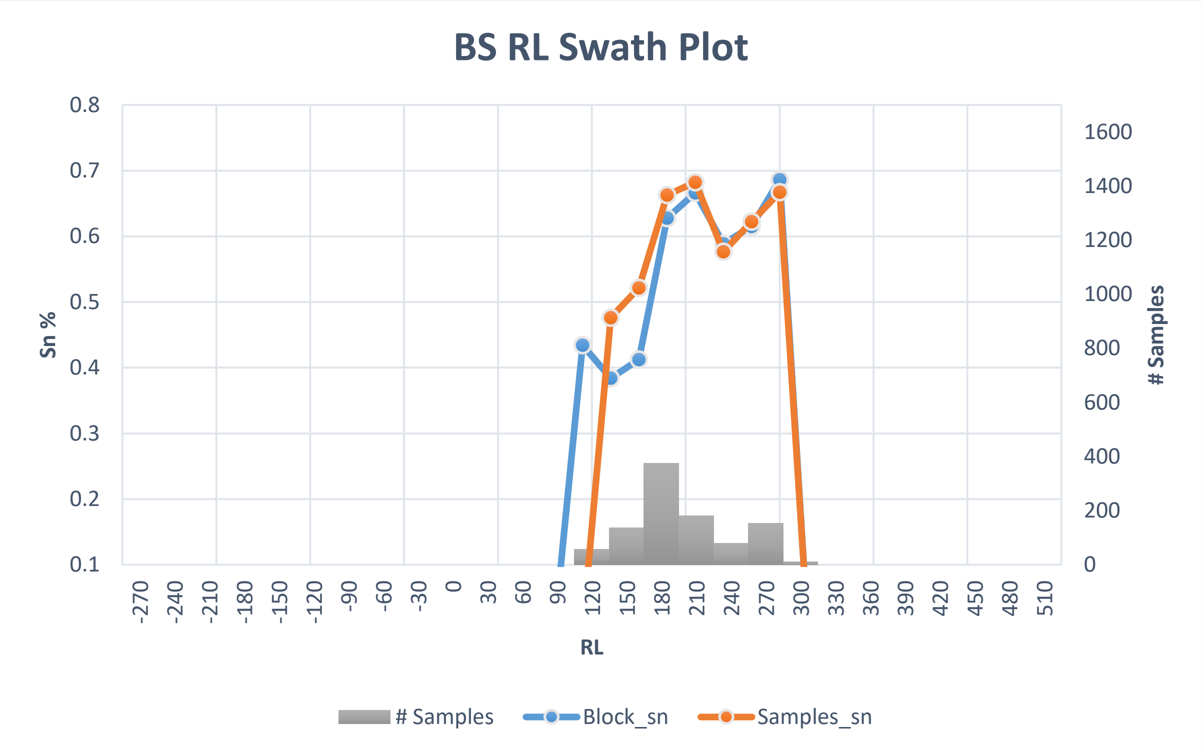


Figure 9-61: Swath Plot - BTW Easting

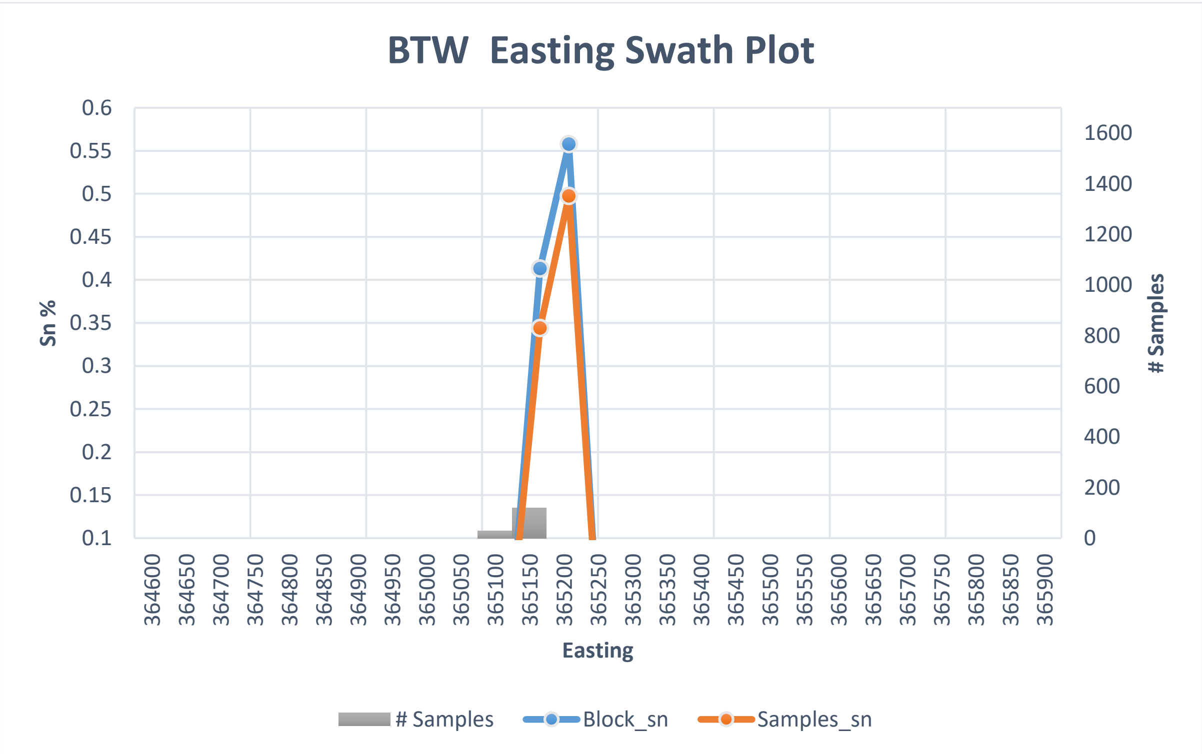


Figure 9-62: Swath Plot - BTW Northing

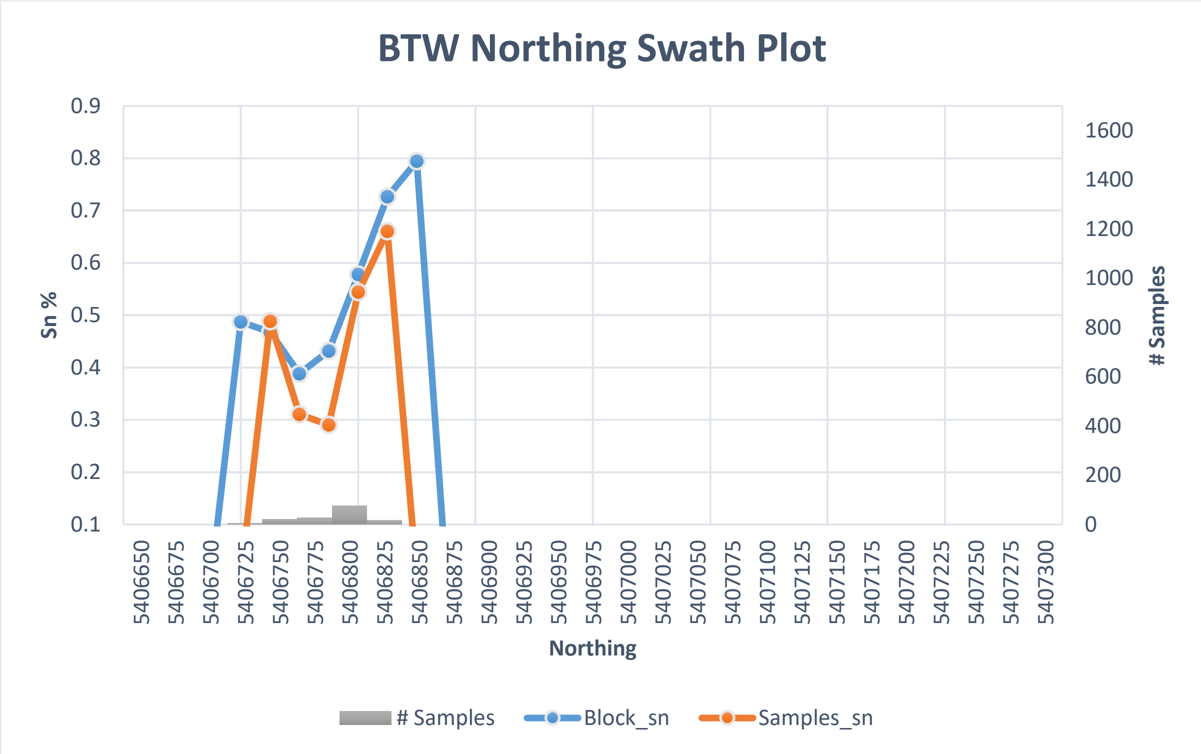


Figure 9-63: Swath Plot - BTW RL

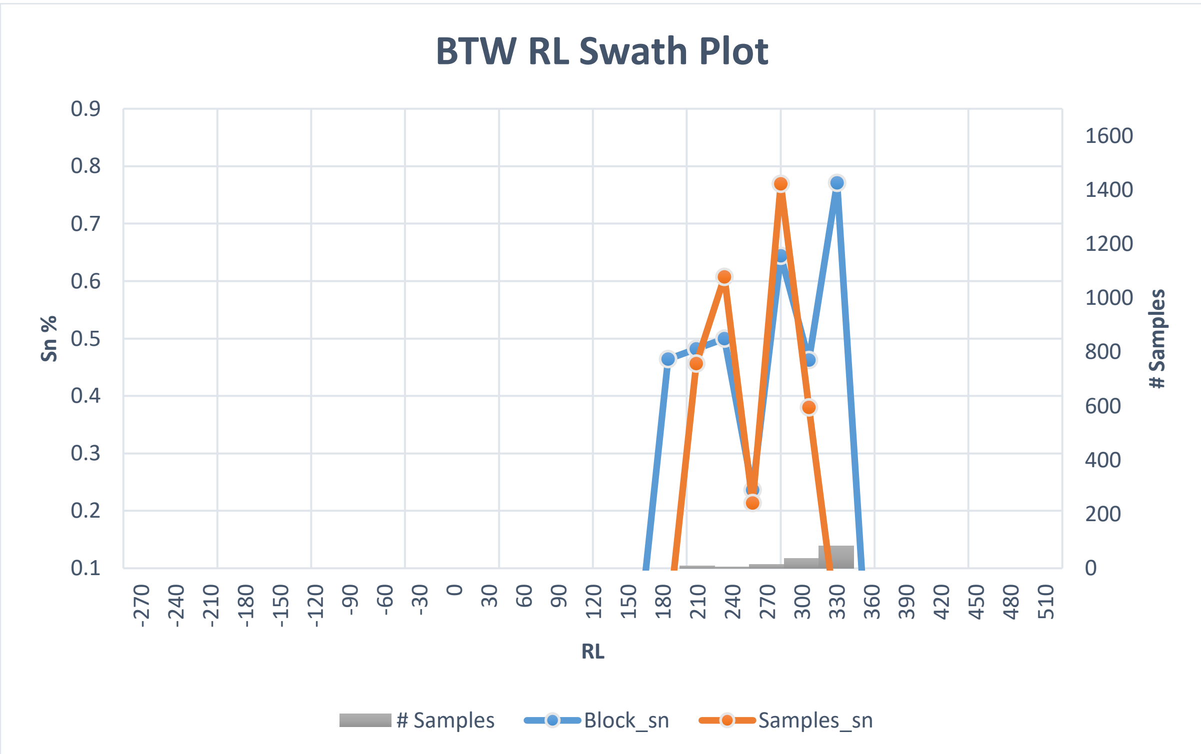


Figure 9-64: Swath Plot - HENRYS Easting

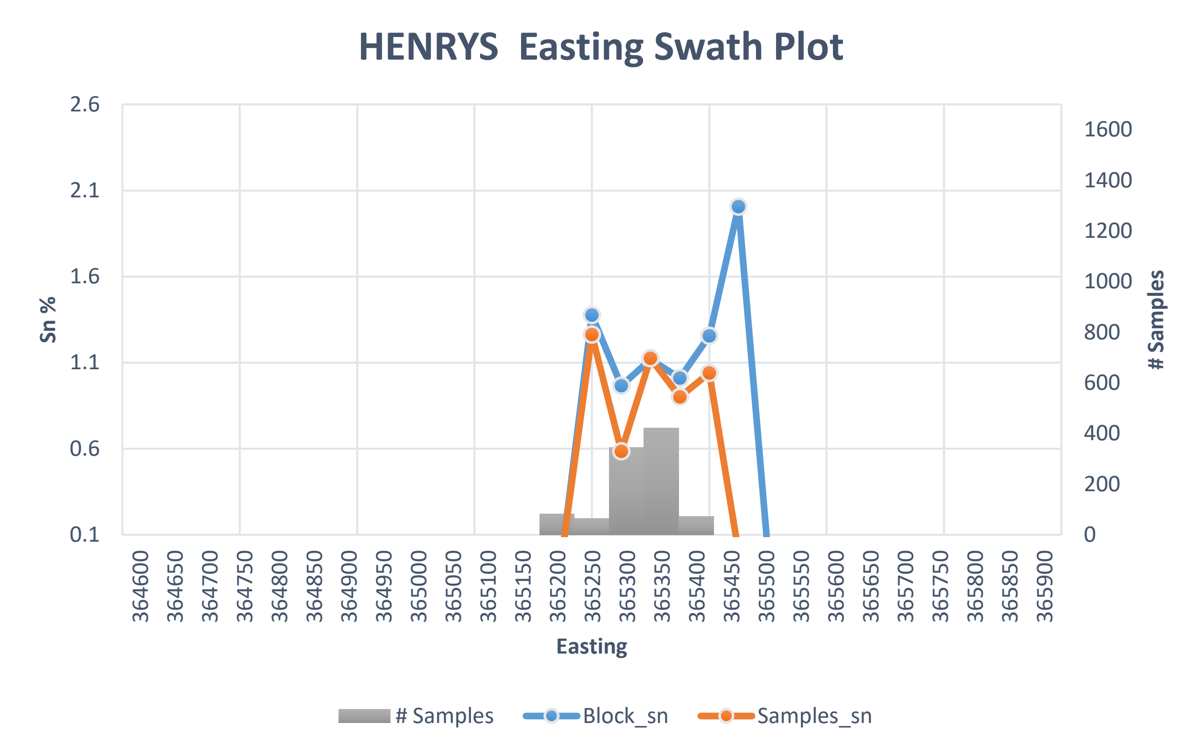


Figure 9-65: Swath Plot - HENRYS Northing

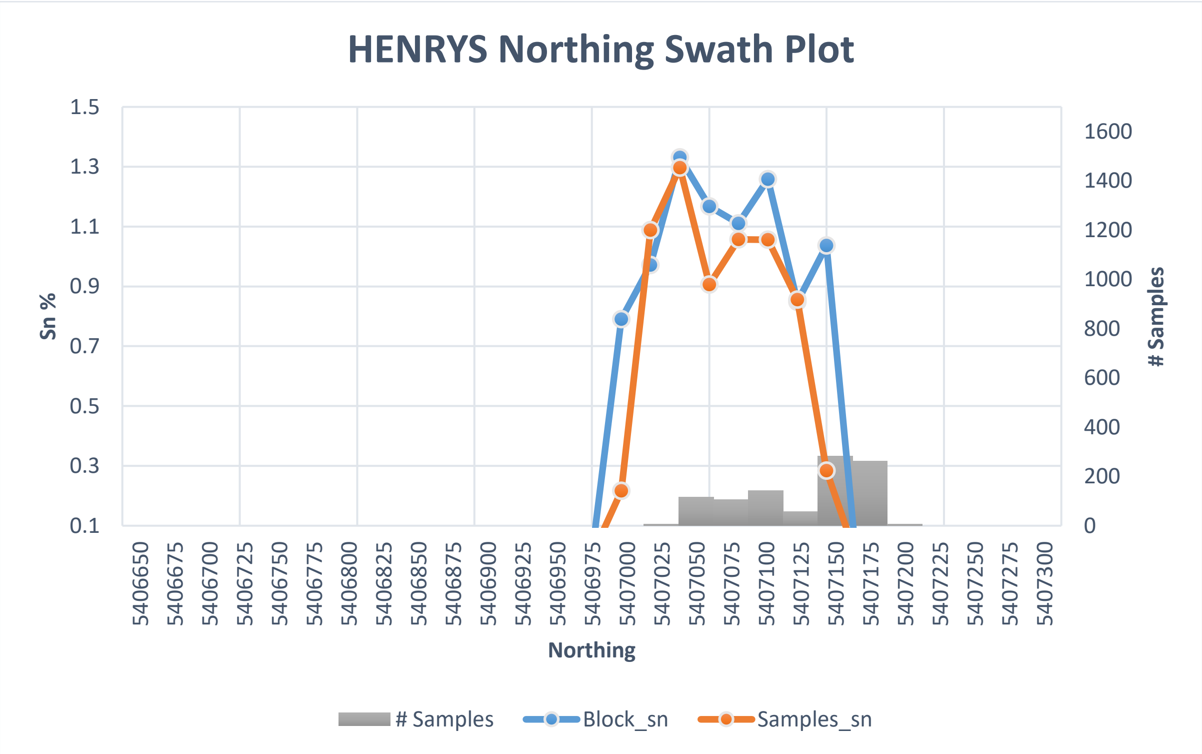


Figure 9-66: Swath Plot - HENRYS RL

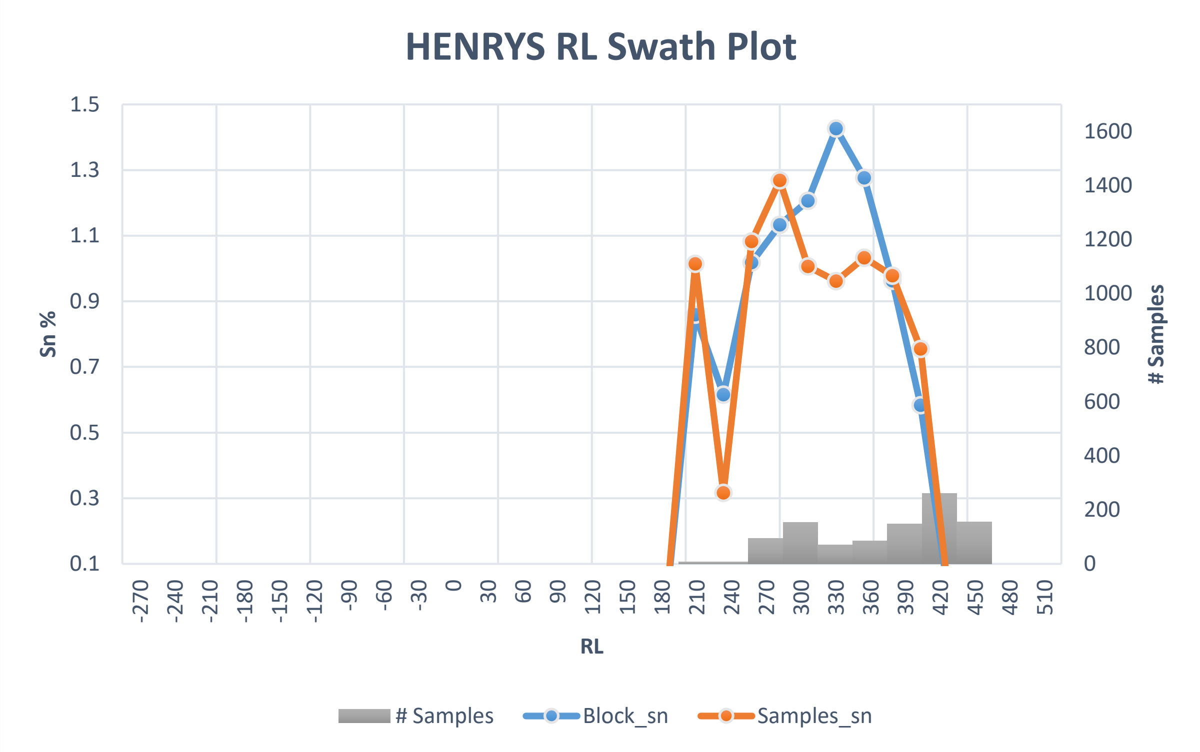


Figure 9-67: Swath Plot - LL Easting

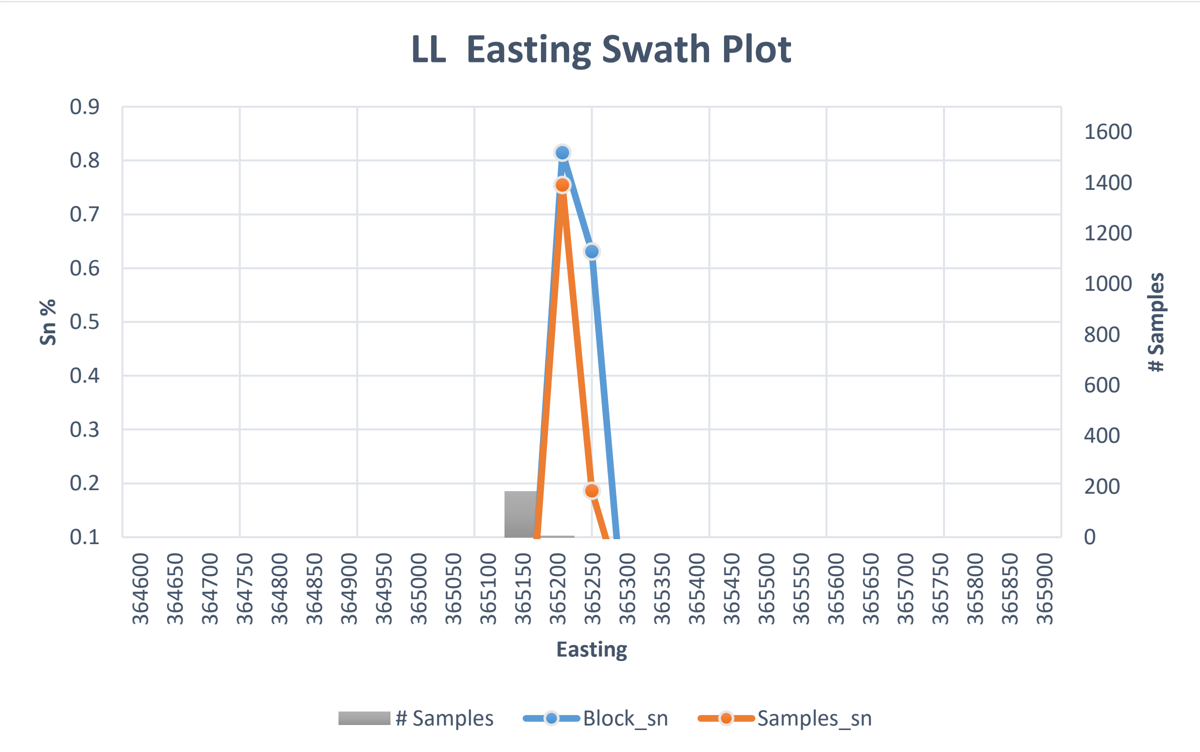


Figure 9-68: Swath Plot - LL Northing

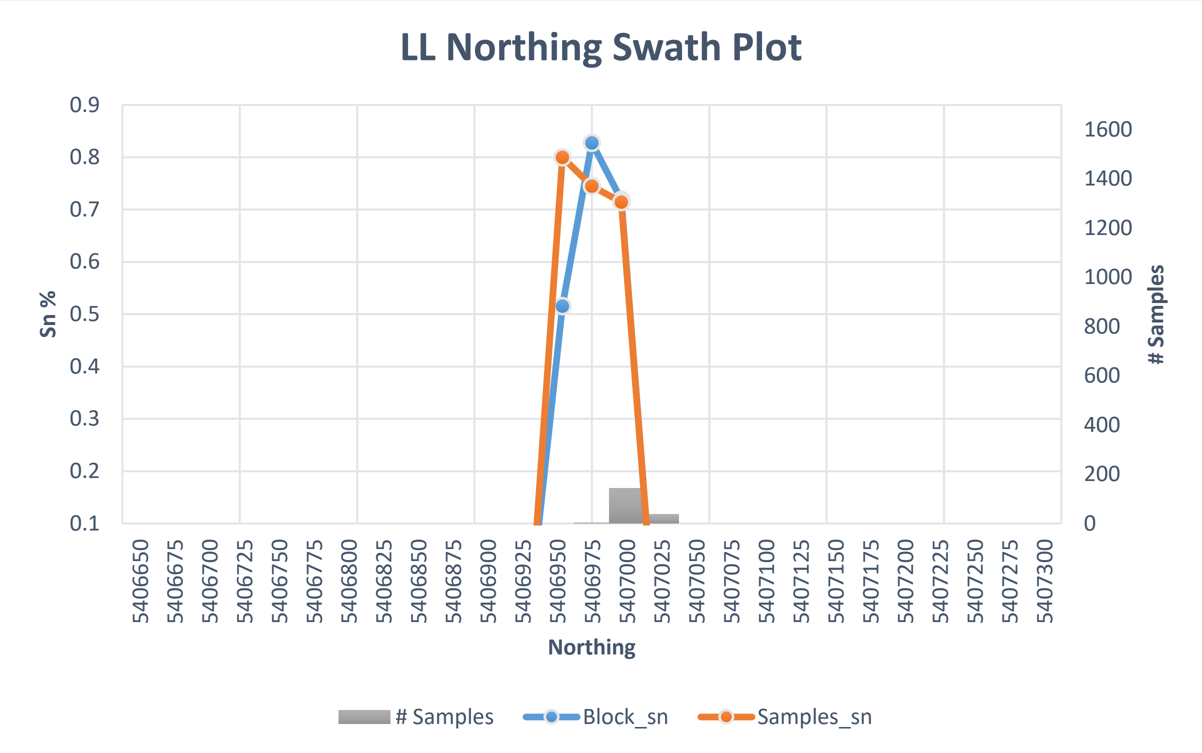


Figure 9-69: Swath Plot - LL RL

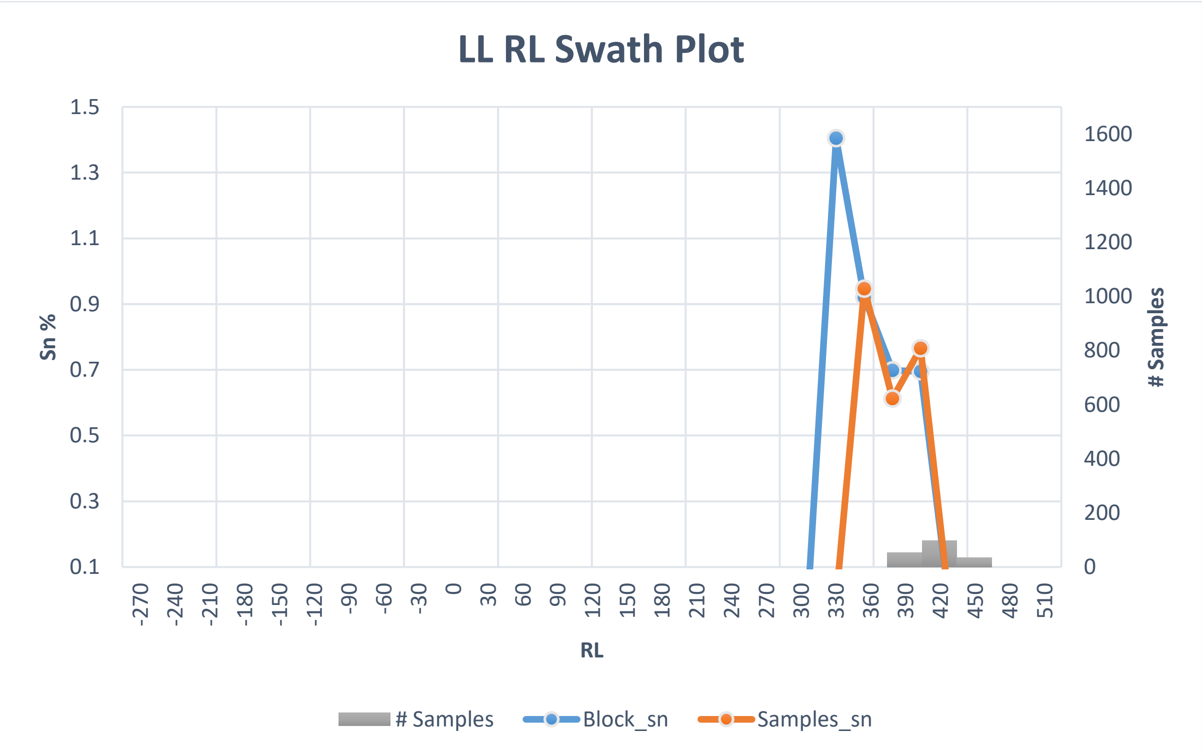


Figure 9-70: Swath Plot - BTE Easting

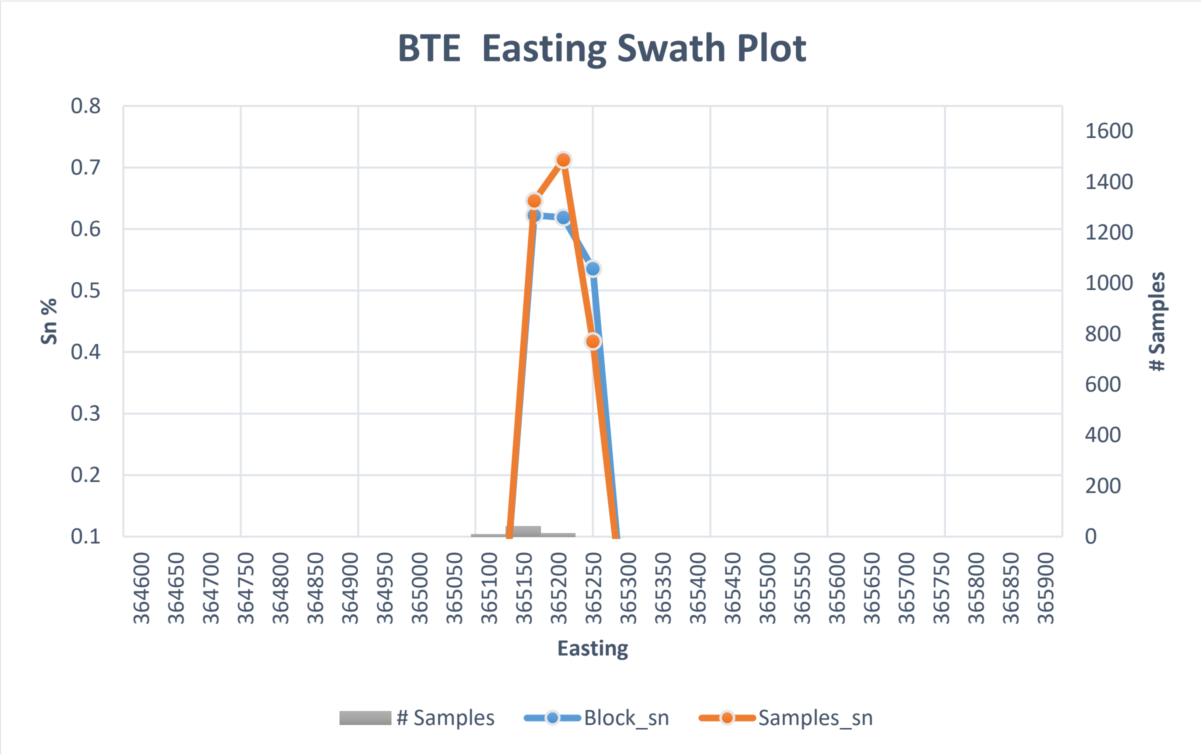


Figure 9-71: Swath Plot - BTE Northing

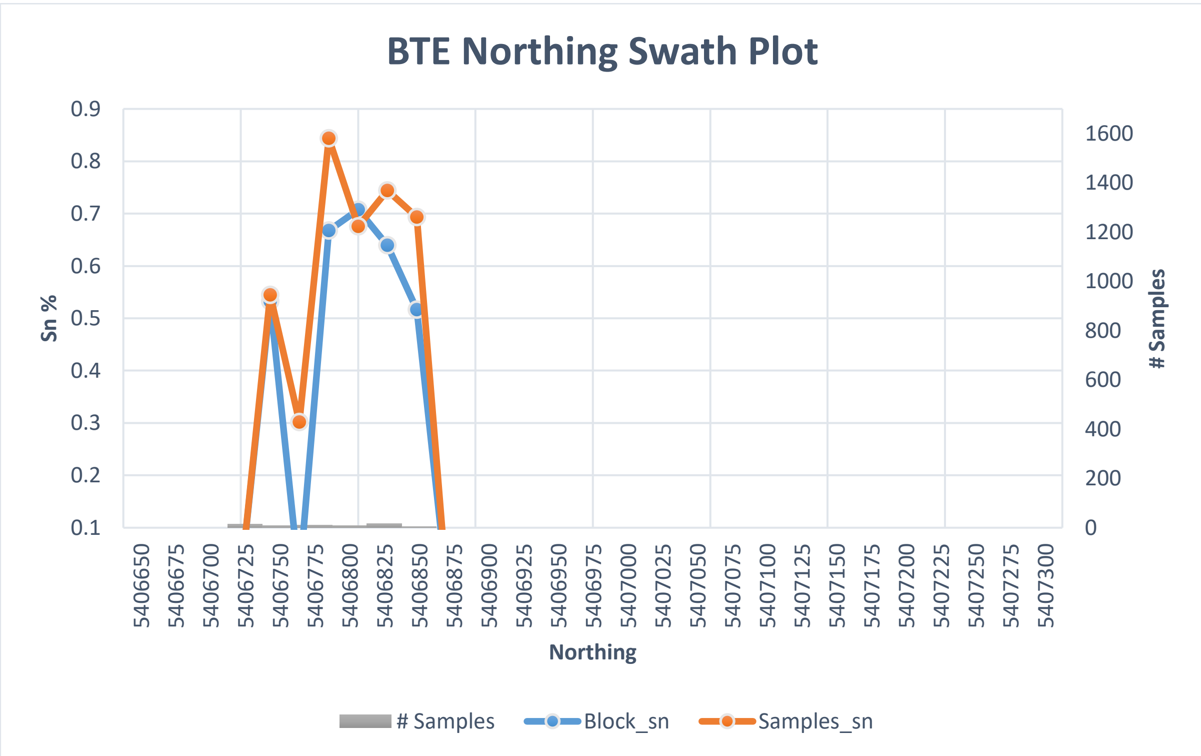


Figure 9-72: Swath Plot - BTE RL

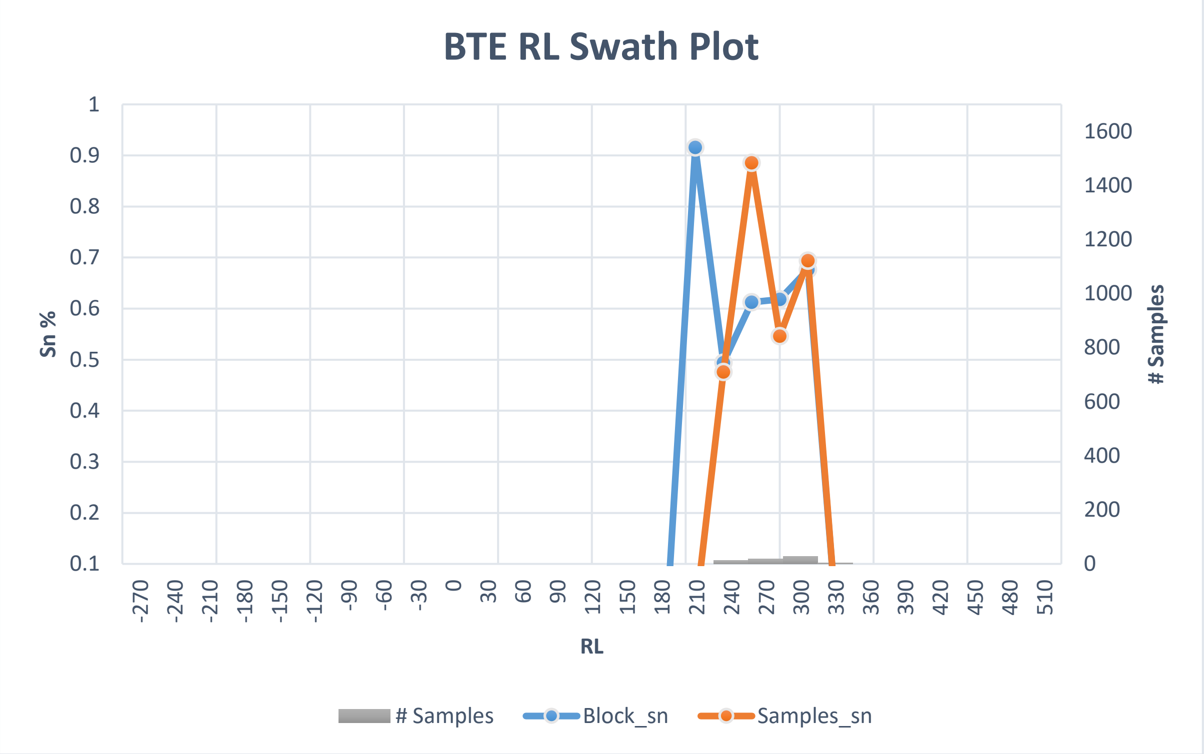


Figure 9-73: Swath Plot - BT Easting

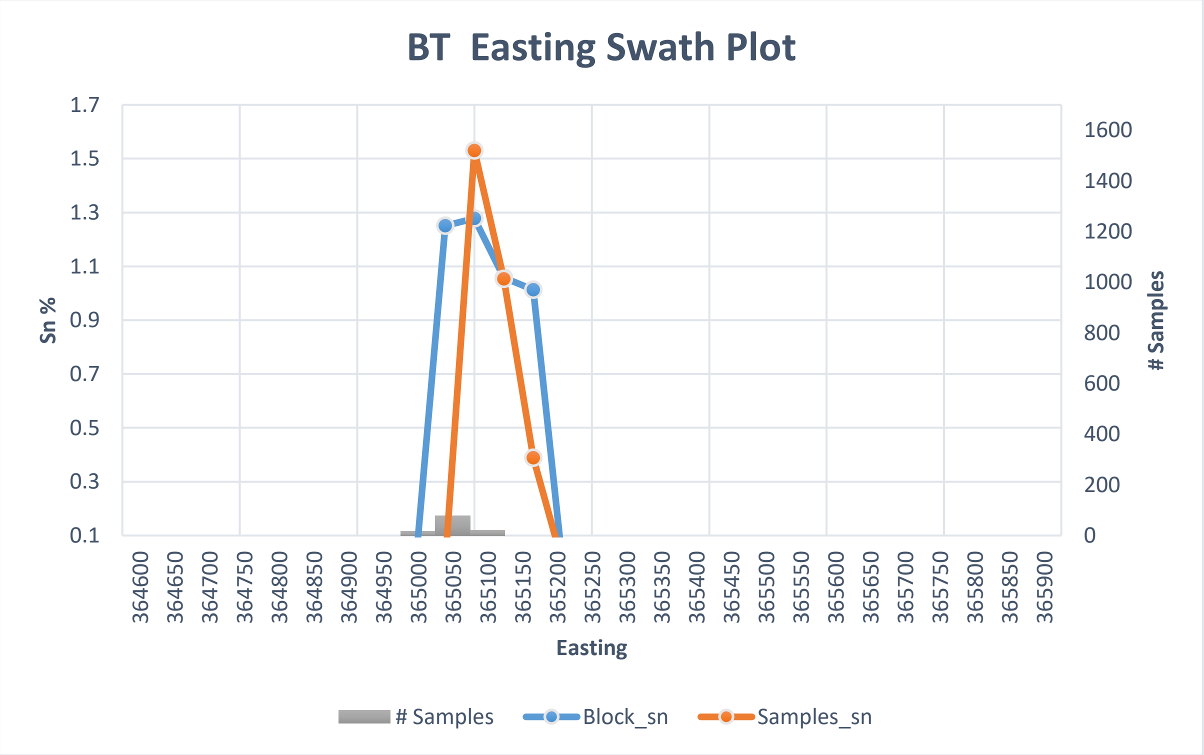


Figure 9-74: Swath Plot - BT Northing

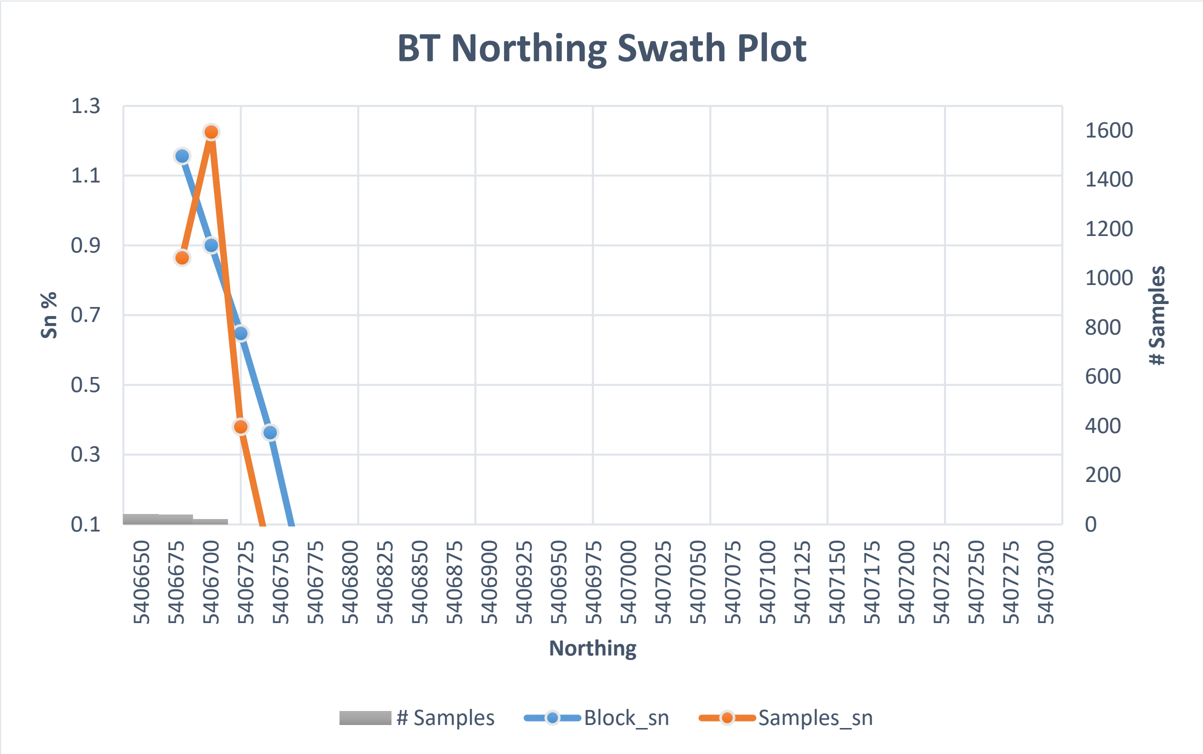


Figure 9-75: Swath Plot - BT RL

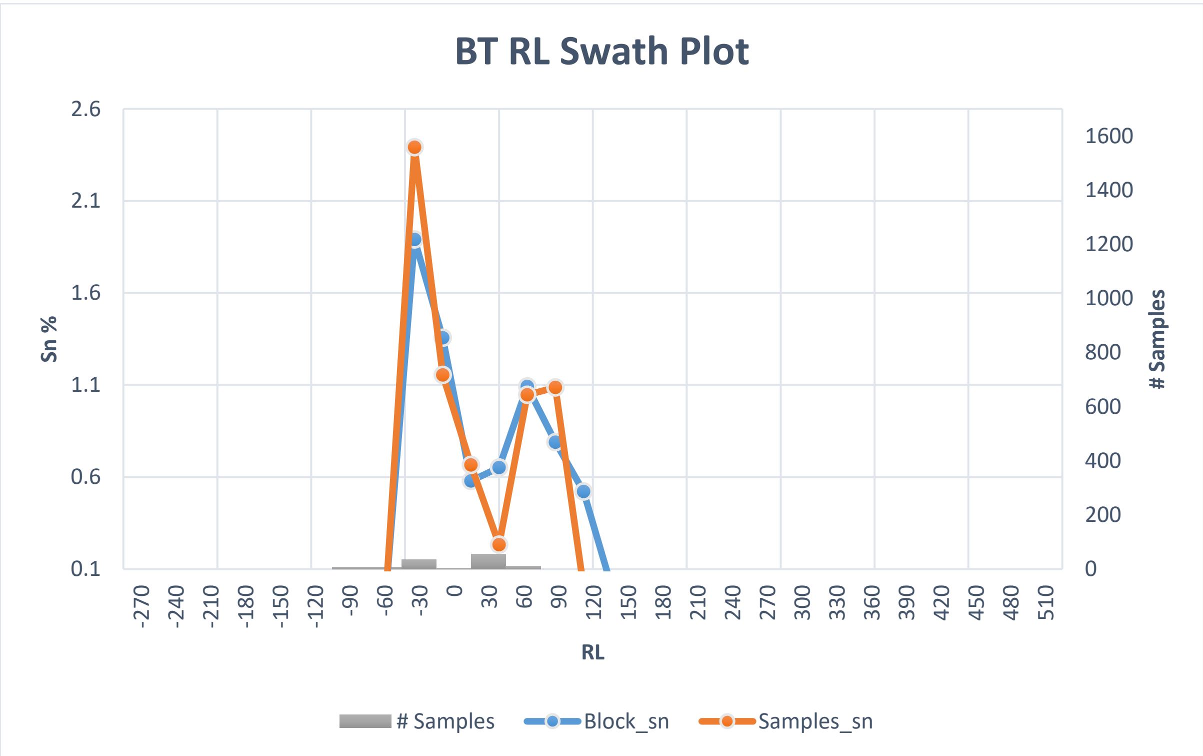


Figure 9-76: Swath Plot - HLAEAST Easting

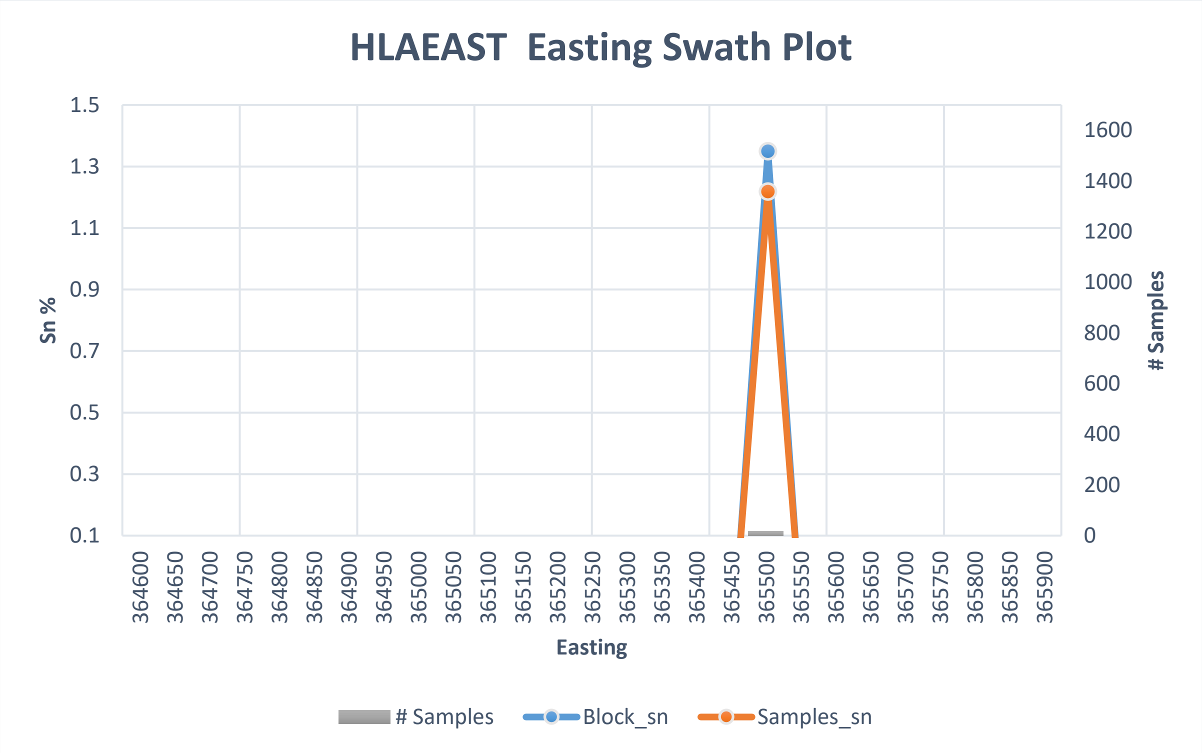


Figure 9-77: Swath Plot - HLAEAST Northing

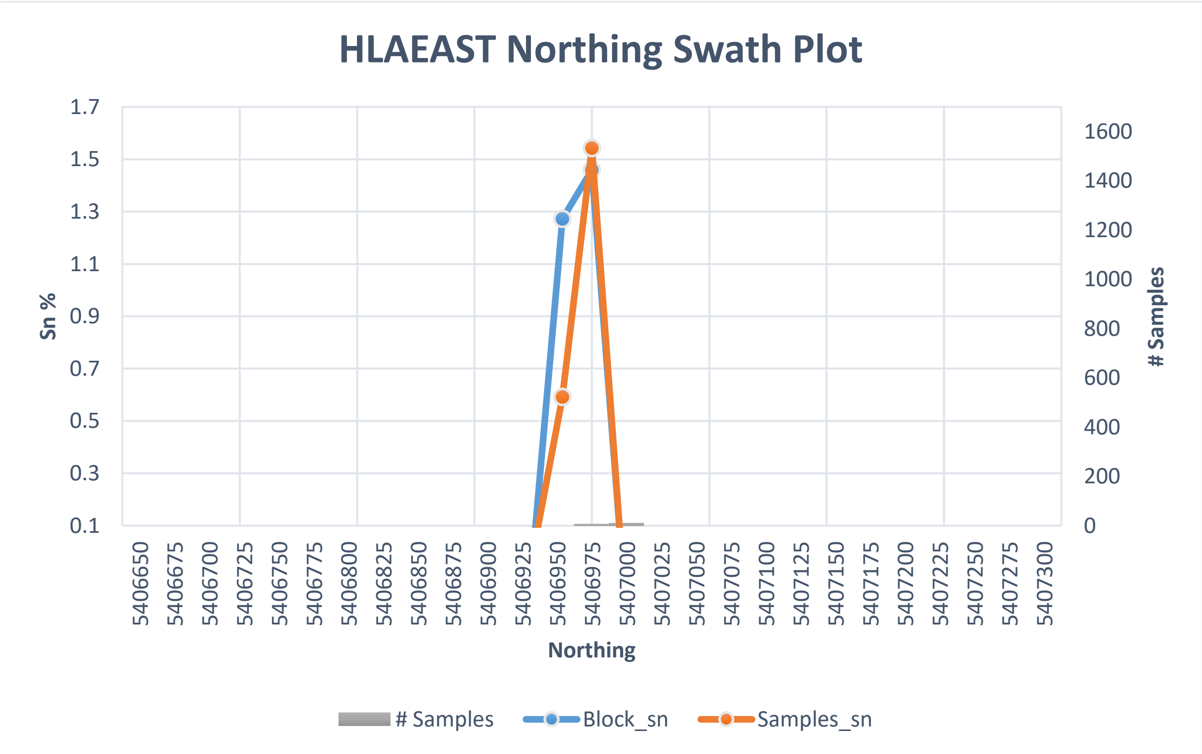


Figure 9-78: Swath Plot - HLAEAST RL

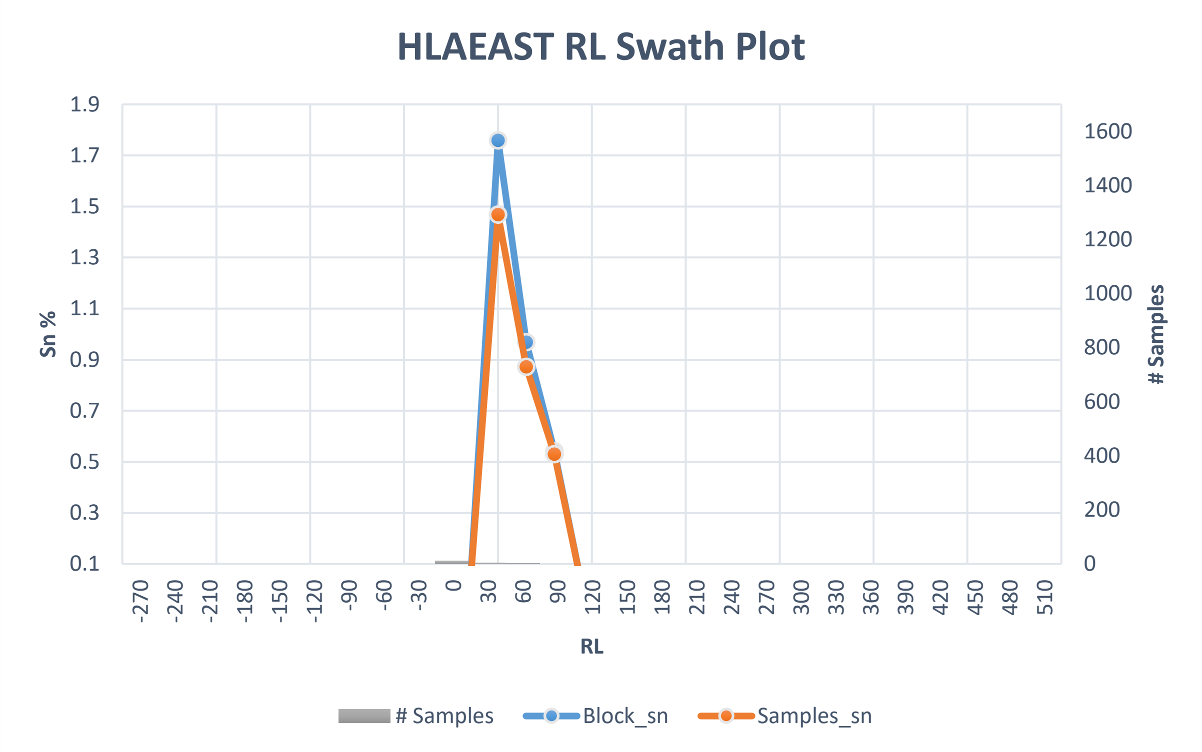


Figure 9-79: Swath Plot - HLD3 Easting

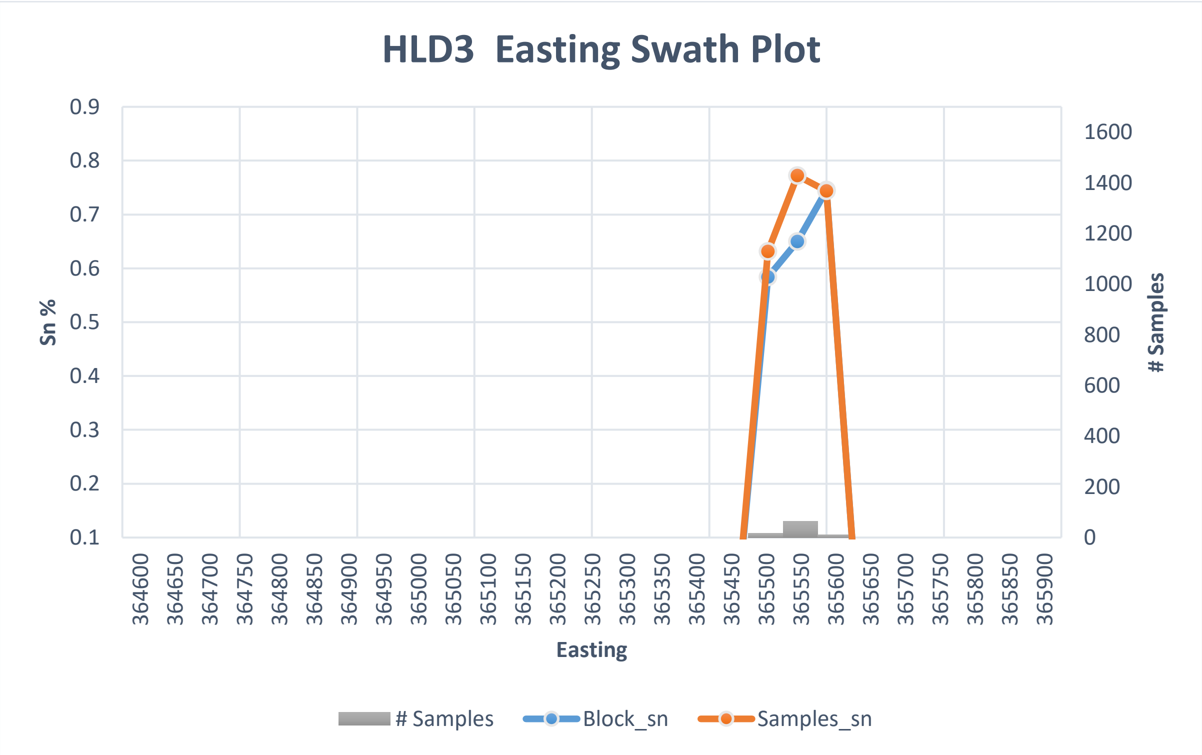


Figure 9-80: Swath Plot - HLD3 Northing

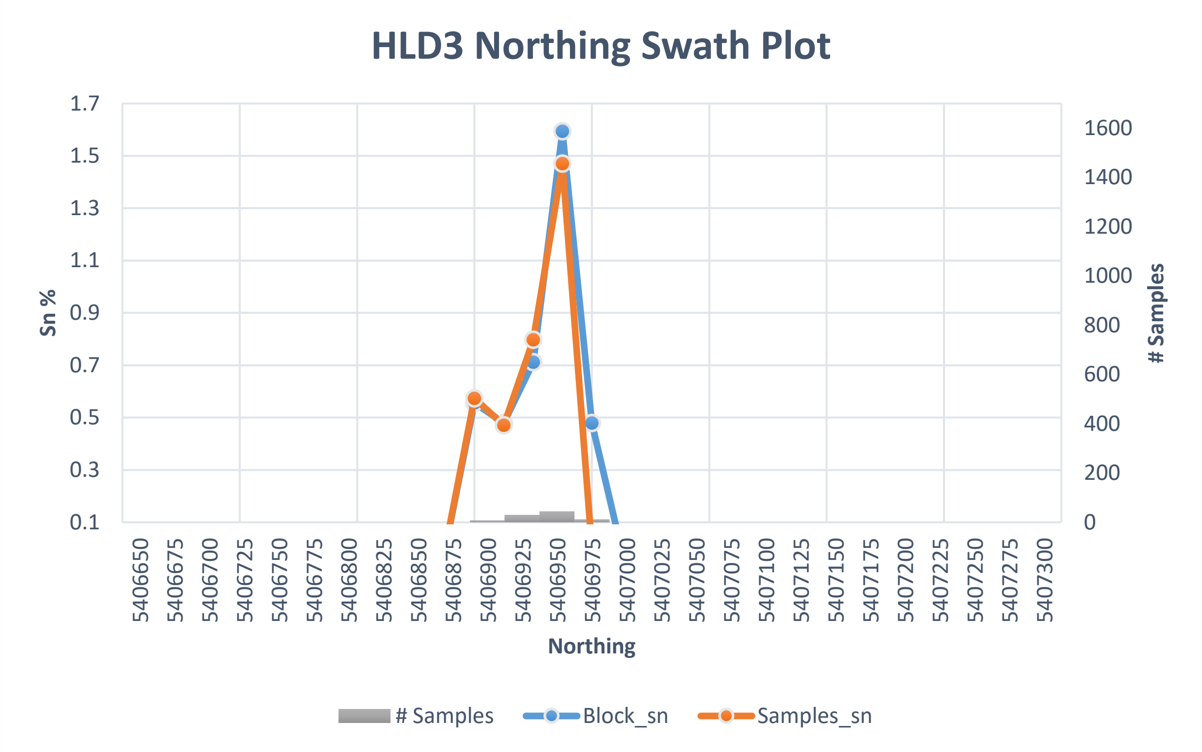
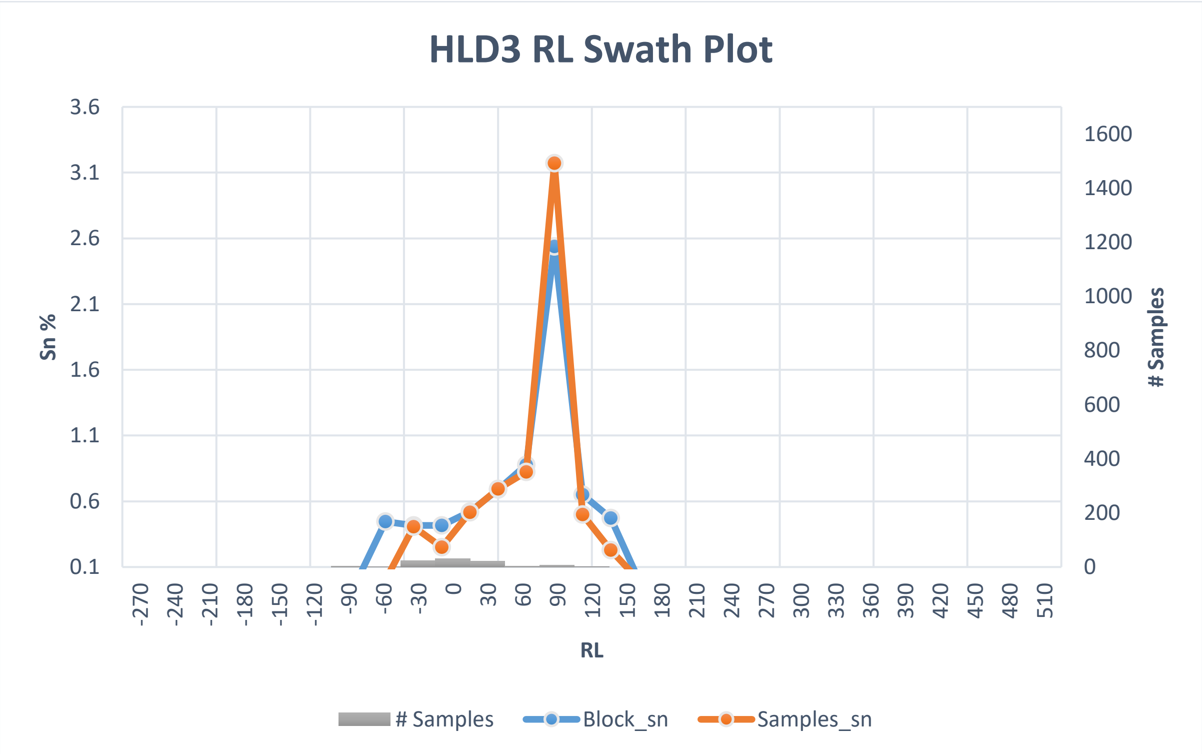


Figure 9-81: Swath Plot - HLD3 RL



APPENDIX G: BOREHOLE DATA

HOLEID	EAST	NORTH	ELEVATION	TOTAL DEPTH	AZIMUTH	DIP
C0001	365132.145	5406804.126	312.04	39.78	126.76	-60
C0002	365141.225	5406783.539	311.123	21.95	275.9	-20
C0003	365143.926	5406784.532	311.123	42.37	340.33	-20
C0004	365141.579	5406783.783	311.741	29.57	288.33	-45
C0005	365139.711	5406788.221	311.741	42.37	280	-64
C0006	365107.138	5406951.053	399.195	43.28	322	-45
C0007	365108.695	5406951.033	399.195	32.31	322	-20
C0008	365109.36	5406951.206	399.195	32.92	367	-20
C0009	365304.249	5407055.231	396.764	35.97	337	-30
C0010	365303.71	5407054.1	399.195	36.88	287	-20
C0011	365269.029	5407061.038	397.671	38.56	220	-12
C0012	365285.282	5407067.288	397.063	35.97	218	-60
C0013	365374.124	5407134.659	422.877	46.02	110	-45
C0014	365371.74	5407135.155	422.877	66.75	287	-20
C0015	365349.85	5407155.615	439.585	11.73	192	-35
C0016	365349.441	5407156.64	439.585	44.81	216	-65
C0017	365374.787	5407136.386	421.97	50.6	172	-45
C0018	365279.943	5407037.272	413.771	97.23	277	-50
C0019	365272.84	5407120.975	419.848	30.48	337	-45
C0020	365360.006	5407147.574	422.578	58.83	288	-45
C0021	365281.673	5407076.774	397.671	18.59	334	2
C0022	365279.776	5407066.265	397.98	15.55	324	2
C0023	365304.554	5407055.168	396.156	56.39	22.33	-20
C0024	365209.673	5406958.866	407.693	99.06	348.35	-60
C0025	365304.554	5407055.168	396.764	57.3	20	-45
C0026	365343.728	5407166.541	422.877	57.3	262	-75
C0027	365209.84	5406958.209	407.693	288.3	348.35	-75
C0028	365372.688	5407135.261	422.578	155.14	289	-50
C0029	365277.558	5407165.764	481.488	136.86	105.36	-82
C0030	365211.317	5406956.34	408.421	61.72	347	-30
C0031	365284.701	5406927.599	372.166	186.84	331	-37
C0032	365349.214	5407158.538	439.585	25.3	302	-30
C0033	365459.212	5407124.64	377.635	72.24	324	-40
C0034	365460.681	5407122.765	377.635	71.02	144	-65
C0035	365296.186	5407001.797	399.195	133.5	324	-60

C0036	365334.237	5407086.947	416.501	107.59	324	-45
C0037	365359.743	5407051.092	385.526	140.51	324	-40
C0038	365387.18	5407070.577	388.475	143.56	324	-40
C0039	365360.985	5407051.646	385.526	139.14	324	-65
C0040	365459.44	5407124.274	377.028	111.25	324	-65
C0041	365339.347	5406941.699	336.638	312.12	324	-60
C0042	365425.969	5407083.319	362.452	128.93	324	-45
C0043	365424.832	5407083.866	363.06	107.99	324	-15
C0044	365512.466	5407130.62	363.06	108.81	324	-45
C0045	365511.994	5407131.34	364.265	61.26	324	-5
C0046	365558.552	5407149.943	362.751	114.3	324	-46
C0047	365343.156	5407104.382	367.613	10.84	144	2
C0048	365311.999	5407086.301	367.613	10.36	144	2
C0049	365315.073	5407109.949	367.613	29.57	324	2
C0050	365225.577	5407076.662	368.519	10.97	144	2
C0051	365237.876	5407046.072	369.127	10.59	144	2
C0052	365372.088	5407125.11	367.912	53.64	324	2
C0053	365374.184	5407121.566	367.912	18.59	144	2
C0054	365206.852	5407012.395	369.127	18.59	144	2
C0055	365412.584	5407144.36	369.436	28.35	144	2
C0056	365410.391	5407147.303	369.436	30.78	324	2
C0057	365181.654	5406975.308	369.436	27.13	144	2
C0058	365226.855	5407023.151	367.613	21.34	324	-55
C0059	365248.364	5407061.938	368.828	31.39	324	2
C0060	365169.596	5406759.858	307.178	153.54	302	-50
C0061	365310.076	5406841.953	319.024	292.15	324	-40
C0062	365296.601	5407069.287	368.22	43.89	144	2
C0063	365168.454	5406760.413	307.178	108.05	302	-38
C0064	365261.312	5407046.461	368.828	33.83	144	2
C0065	365240.208	5407005.103	368.828	17.68	144	2
C0066	365210.412	5406968.365	369.735	18.29	144	2
C0067	365371.649	5407099.05	368.828	35.79	144	2
C0070	365310.554	5406841.225	319.024	247.8	324	-60
C0071	365287.396	5407081.795	368.21	43.66	324	2
C0072	365465.962	5407150.936	369.127	37.49	144	2
C0073	365463.472	5407153.949	369.127	12.19	324	2
C0074	365485.672	5407163.308	369.436	34.74	144	2
C0075	365482.72	5407167.06	369.436	6.1	324	2
C0076	365398.849	5407118.895	368.828	40.54	144	0

C0077	365229.91	5406796.446	311.741	172.92	302	-38
C0078	365247.576	5406830.413	312.04	183.49	302	-35
C0079	365276.012	5406890.477	356.076	206.96	324	-45
C0080	365353.663	5407120.238	368.519	22.86	144	2
C0081	365385.844	5407135.627	368.828	18.29	146	2
C0082	365223.57	5407023.835	368.828	3.66	144	2
C0083	365248.636	5407058.765	368.828	16.76	144	2
C0084	365287.303	5407078.394	368.21	10.67	144	2
C0085	365248.5	5406828.983	312.04	173.33	324	-45
C0086	365194.857	5406993.733	369.436	18.29	144	2
C0087A	365158.162	5406955.321	369.735	32	144	2
C0087B	365158.162	5406955.321	370.034	53.95	144	2
C0088	365397.052	5406997.202	336.638	154.23	324	-40
C0089	365248.632	5406829.585	312.04	252.37	324	-65
C0090	365397.524	5406996.482	336.638	169.77	324	-65
C0091	365155.975	5406958.256	370.034	60.9	324	2
C0092	365170.92	5406964.164	369.735	44.2	144	2
C0093	365145.073	5406941.854	370.95	46.73	144	2
C0094	365434.064	5407153.247	369.127	20.42	144	2
C0095	365323.529	5407092.305	367.912	7.42	144	2
C0096	365475.884	5407097.167	356.375	118.26	324	-60
C0097	365148.893	5406704.085	307.487	196.93	302	-40
C0098	365149.19	5406704.016	307.487	243.59	302	-60
C0099	365342.755	5407103.845	367.912	27.79	144	2
C0100	365303.711	5407010.962	396.156	70.26	12	-90
C0101	365180.044	5407009.28	369.735	34.14	324	2
C0102	365225.273	5407033.451	381.571	63.93	324	5
C0103	365277.988	5407066.637	381.272	56.31	324	3
C0104	365220.903	5406959.01	411.948	131.22	324	-5
C0105	365230.04	5407024.976	381.571	19.2	144	3
C0106	365209.581	5406997.185	381.571	15.54	144	3
C0107	365197.611	5406981.628	381.272	18.29	144	3
C0108	365325.756	5407094.004	381.571	14.02	144	3
C0109	365301.542	5407066.062	415.893	84.73	324	-20
C0110	365316.524	5407085.628	381.272	36.07	144	4
C0111	365282.173	5407059.852	381.571	18.29	144	3
C0112	365362.907	5407110.832	381.571	30.78	144	3
C0113	365334.237	5407086.947	417.108	85.65	324	-20
C0114	365202.751	5407000.24	381.571	80.39	324	2

C0115	365373.182	5407116.778	420.446	75.13	309	-23
C0116	365423.243	5407140.263	382.188	18.59	144	2
C0117	365405.083	5407133.78	382.188	2.52	144	2
C0118	365322.572	5407099.662	382.188	64	324	2
C0119	365391.934	5407134.975	421.054	49.68	324	-40
C0120	365415.965	5407135.24	382.487	15.07	144	2
C0121	365388.626	5407138.469	382.487	35.46	324	2
C0122	365357.079	5407114.242	382.188	78.74	303.5	2
C0123	365265.069	5407058.442	422.578	96.93	314	-30
C0124	365415.252	5407149.712	382.188	9.14	324	2
C0125	365259.426	5406967.448	411.34	146.6	324	-6
C0126	365157.195	5406959.572	412.246	84.73	324	-17
C0127	365255.244	5407096.306	368.828	19.28	324	2
C0128	365287.517	5407122.565	369.127	25.04	324	2
C0129	365301.052	5407065.238	349.51	40.08	144	1
C0130	365286.016	5407054.374	349.51	33.63	144	1
C0131	365179.8	5406975.397	349.998	34.75	144	2
C0132	365177.149	5406979.058	349.998	5.49	324	2
C0133	365194.613	5406994.088	349.998	6.7	324	2
C0134	365211.141	5407010.563	349.998	6.88	324	2
C0135	365226.315	5407029.489	349.689	6.81	324	2
C0136	365229.444	5407025.1	349.689	6.86	144	2
C0137	365293.12	5407080.915	349.998	40.64	324	1
C0138	365318.637	5407079.317	349.689	10.36	144	2
C0139	365315.978	5407082.972	349.689	10.57	324	2
C0140	365334.076	5407089.164	349.998	13.82	144	2
C0141	365331.488	5407093.13	349.998	10.21	324	2
C0142	365363.635	5407111.31	349.998	41.15	144	2
C0143	365359.351	5407114.702	349.998	10.06	324	2
C0144	365387.729	5407132.733	350.307	16.15	324	3
C0145	365349.659	5407099.596	349.998	9.8	144	1
C0146	365347.004	5407103.279	349.998	13.72	324	2
C0147	365250.524	5407063.354	349.391	47.55	324	2
C0148	365248.848	5407062.77	349.391	13.41	313	2
C0149	365149.992	5406950.491	350.307	24.38	144	2
C0150	365235.701	5407016.322	349.998	17.73	144	2
C0151	365202.82	5406982.721	349.998	16.92	144	2
C0152	365298.946	5407035.785	330.142	15.54	144	2
C0153	365296.817	5407039.033	330.142	43.28	324	2

C0154	365302.062	5407037.313	330.501	26.21	110	2
C0155	365395.248	5407124.004	350.905	48.16	144	2
C0156	365305.024	5407136.341	381.88	7.06	144	2
C0157	365266.507	5407112.944	381.571	16.76	324	2
C0158	365222.7	5406998.796	330.86	35.97	144	2
C0159	365237.65	5407013.733	330.81	31.78	144	2
C0160	365247.793	5407005.694	330.86	27.94	144	2
C0161	365196.998	5406986.123	331.776	27.13	171	2
C0162	365316.941	5407077.175	331.477	23.77	324	2
C0163	365316.941	5407077.175	331.477	20.93	324	-40
C0164	365338.987	5407082.843	331.477	46.86	144	2
C0165	365335.474	5407097.276	330.87	35.87	324	2
C0166	365253.036	5407029.196	314.471	27.56	144	2
C0167	365371.657	5407125.823	331.776	15.54	324	2
C0168	365365.584	5407108.721	331.477	42.72	144	2
C0169	365259.35	5407055.411	313.863	304.4	144	-60
C0170	365323.24	5407038.808	329.654	22.12	104	2
C0173	365240.071	5407010.424	314.77	33.17	144	2
C0174	365237.178	5407014.453	314.77	36.88	324	2
C0175	365250.851	5407032.145	314.471	42.67	324	2
C0178	365192.719	5406996.976	349.998	63.8	324	2
C0179	365225.906	5407030.514	349.689	60.27	324	2
C0180	365259.933	5407053.907	313.863	214.58	144	-35
C0181	365330.308	5407094.93	349.998	51.13	324	2
C0182	365199.803	5406986.154	314.162	215.19	144	-60
C0183	365199.872	5406986.45	314.162	122.37	144	-35
C0184	365214.63	5407006.41	331.776	53.77	324	2
C0185	365375.069	5407121.367	331.776	36.37	144	2
C0186	365371.657	5407125.823	331.776	48.95	324	2
C0187	365275.555	5407068.48	329.345	42.06	324	2
C0188	365198.853	5406987.602	314.162	366.37	144	-75
C0189	365242.097	5407043.943	331.776	69.49	324	2
C0190	365224.446	5407028.012	331.776	65.84	313	2
C0191	365243.677	5406986.008	331.776	19.64	324	2
C0192	365224.205	5406953.956	331.776	29.59	324	2
C0193	365207.324	5406937.251	332.085	10.72	324	2
C0194	365219.415	5406999.479	315.078	53.42	144	1
C0195	365367.996	5407105.356	315.985	25.55	144	2
C0196	365337.147	5407084.462	314.471	30.48	144	2

C0197	365393.299	5407126.593	315.537	91.59	144	-30
C0198	365226.079	5407029.849	313.554	49.48	324	-30
C0199	365392.731	5407127.65	315.467	128.07	144	-55
C0200	365392.418	5407128.338	315.377	442.26	144	-70
C0201	365236.814	5407020.14	301.11	8.38	244	2
C0202	365392.418	5407128.338	332.085	29.87	144	2
C0203	365390.289	5407131.586	330.561	15.65	324	2
C0204	365323.116	5407072.449	313.863	30.63	144	2
C0205	365302.554	5407059.004	314.162	9.93	324	2
C0206	365348.522	5407100.143	314.162	30.94	144	2
C0207	365318.45	5407078.416	313.863	16.84	324	2
C0208	365327.425	5407066.26	331.168	12.83	144	2
C0209A	365283.903	5407106.823	369.127	9.19	144	2
C0209X	365271.853	5407123.667	369.127	12.7	324	2
C0210	365312.933	5407050.605	295.95	17.83	144	2
C0211	365331.789	5407060.37	299.895	32.31	144	2
C0213	365305.473	5407058.093	300.194	21.77	324	2
C0214	365269.27	5407108.327	349.699	25.63	144	2
C0215	365341.7	5407077.919	300.194	37.21	144	2
C0216	365276.932	5407135.988	381.979	17.17	324	2
C0217	365187.738	5406974.886	314.77	48.46	144	2
C0218	365356.813	5407145.743	382.796	15.57	324	2
C0219	365307.418	5407100.146	382.487	19.86	324	2
C0220	365164.993	5406970.083	315.078	9.14	324	2
C0221	365171.852	5406961.172	315.078	12.88	144	2
C0222	365337.494	5407144.186	382.796	15.24	282	2
C0223	365201.481	5406985.183	315.168	5.59	144	2
C0224	365158.219	5406954.066	315.228	55.78	144	2
C0225	365255.184	5407096.015	367.613	7.29	324	2
C0226	365255.184	5407096.015	367.613	9.66	324	2
C0227	365201.481	5406985.183	315.168	17.25	144	2
C0228	365202.181	5406984.097	297.763	52.56	144	2
C0229	365419.414	5407133.836	331.776	34.59	144	2
C0230	365383.37	5407143.169	316.294	28.68	144	2
C0231	365195.701	5406927.846	331.168	26.57	324	2
C0232	365243.363	5407017.216	296.249	30.48	144	2
C0233	365424.709	5407142.757	316.294	35.66	144	2
C0234	365181.463	5406972.861	296.249	52.37	144	2
C0235	365365.829	5407150.086	369.127	15.85	324	2

C0236	365159.509	5406951.296	331.477	22.17	144	0
C0237	365177.609	5406923.215	329.953	12.57	144	2
C0238	365115.043	5406918.874	332.384	11.76	144	2
C0239	365168.121	5406965.694	331.168	19.81	144	2
C0240	365331.828	5407091.808	315.377	36.45	324	2
C0241	365346.103	5407103.466	315.686	43.59	324	2
C0242	365243.616	5407092.824	331.477	31.39	277	2
C0243	365258.367	5407091.925	331.288	22.12	324	2
C0244	365278.023	5407096.528	330.352	8.66	324	2
C0245	365297.625	5407107.105	330.581	21.3	324	0
C0246	365361.784	5407112.945	315.985	37.9	324	2
C0247	365375.008	5407121.076	315.985	41.66	324	2
C0249	365441.949	5407159.698	332.374	15.85	324	2
C0250	365227.139	5407028.913	313.554	69.49	322	2
C0251	365286.716	5407053.289	313.853	48.56	324	2
C0252	365321.726	5407077.727	315.078	36.5	324	2
C0253	365220.178	5406998.698	313.983	61.42	144	-20
C0254	365331.747	5407090.539	295.641	623	144	-70
C0255	365263.622	5407036.639	349.699	46.93	195	2
C0256	365240.187	5407045.115	313.983	58.52	326	2
C0257	365288.842	5407151.255	381.88	76.2	324	2
C0258	365391.179	5407068.806	295.641	160.17	144	-50
C0259	365169.59	5406963.819	296.249	73.46	144	2
C0260	365143.303	5406945.339	314.53	329.21	144	-60
C0261	365142.786	5406944.927	314.54	548.94	144	-72
C0262	365217.2	5406999.332	296.249	58.24	144	2
C0263	365112.914	5406922.123	332.374	117.35	324	2
C0264	365139.922	5406946.99	332.075	114.28	324	2
C0265	365098.882	5406910.11	332.693	110.11	324	2
C0266	365101.539	5406906.441	332.693	76.81	144	2
C0267	365212.679	5407008.985	314.471	89.61	310	2
C0268	365176.677	5406979.778	313.983	93.57	324	2
C0269	365166.143	5406911.615	384.31	156.22	324	5
C0270	365321.161	5407075.046	295.342	54.41	324	2
C0271	365321.397	5407074.686	295.95	60.35	324	-30
C0272	365305.534	5407058.384	295.95	45.87	324	2
C0273	365291.497	5407046.379	295.95	53.64	324	2
C0274	365170.424	5406616.484	335.423	457.81	302	-50
C0275	365144.662	5406908.629	381.88	146.61	324	2

C0276	365331.364	5407092.534	295.95	38.4	324	2
C0277	365353.372	5407093.531	296.856	37.19	324	2
C0278	365305.43	5407058.408	314.471	52.73	324	2
C0279	365310.854	5407051.038	314.471	34.14	144	2
C0280	365296.435	5407039.646	314.441	34.9	144	2
C0281	365081.374	5406903.803	315.985	123.44	324	2
C0282	365144.662	5406908.629	381.88	145.08	324	-13
C0283	365083.561	5406900.868	315.377	92.25	144	2
C0284	365101.536	5406905.661	375.812	118.41	324	2
C0285	365388.458	5407133.211	314.77	32.61	324	2
C0286	365436.932	5407153.583	315.298	38.4	144	2
C0287	365142.571	5406943.315	332.085	6.1	144	2
C0288	365149.357	5406919.177	333.599	30.28	187	2
C0289	365416.122	5407138.946	299.287	29.57	144	2
C0290	365396.566	5407123.019	297.803	34.74	144	2
C0291	365389.735	5407110.22	296.557	28.35	144	2
C0292	365367.167	5407105.904	296.557	33.33	144	2
C0293	365470.991	5407158.603	332.992	48.84	144	2
C0294	365373.84	5407191.384	295.95	22.33	144	2
C0295	365462.542	5407156.955	317.201	34.75	144	2
C0296	365405.293	5407131.87	316.593	33.9	144	2
C0297	365143.043	5406942.595	315.377	22.86	144	2
C0298	365208.902	5406974.593	315.078	32.61	144	2
C0300	365253.513	5407061.408	296.508	22.17	324	2
C0301	365240.891	5407044.995	314.66	28.5	355	2
C0302	365104.637	5406932.563	299.287	12.8	144	2
C0303	365125.744	5406937.772	298.998	13.56	144	2
C0304	365434.621	5407135.069	296.647	30.18	144	2
C0305	365067.976	5406890.421	315.985	83.82	324	2
C0306	365063.133	5406893.989	372.166	86.56	324	2
C0307	365068.458	5406892.671	315.985	84.43	309	2
C0308	365126.119	5406934.611	315.377	99.67	144	2
C0309	365054.661	5406890.718	371.259	72.24	302	2
C0310	364904.802	5406838.302	375.055	437.39	122.3	-56
C0311	365047.807	5406886.237	369.436	76.2	324	-33
C0312	365110.363	5406921.621	315.686	49.38	134	0.2
C0313	365110.027	5406926.144	315.925	83.52	324	0.2
C0314	365123.934	5406937.56	315.686	85.04	324	0.2
C0315	365157.139	5406959.889	315.497	28.19	324	0.2

C0316	365212.618	5407008.694	314.799	74.07	324	2
C0317	365212.681	5407008.999	314.77	60.66	324	-30
C0318	365157.547	5406959.802	412.555	70.71	324	11
C0319	365099.412	5406661.216	308.334	274.93	302	-47
C0320	365242.278	5407043.284	313.255	35.66	324	-30
C0321	365069.143	5406959.925	410.941	29.87	324	2
C0322	365191.553	5406998.774	298.132	69.49	324	2
C0323	365081.453	5406957.913	410.822	8.23	319.96	-15
C0324	365067.285	5406951.851	409.218	10.06	328.44	-10
C0325	365167.68	5406965.349	298.54	62.18	144	2
C0326	364951.047	5407017.641	374.896	27.74	122	12
C0327	365153.519	5406930.105	297.703	55.19	144	2
C0328	365085.573	5406865.865	299.287	119.94	324	2
C0329	365258.113	5407022.217	277.12	55.78	324	2
C0330	365021.872	5406860.518	368.22	71.63	324	-5
C0331	365021.872	5406860.518	367.912	73.76	324	-14
C0332	365203.546	5406985.605	277.877	24.38	141	2
C0333	365149.554	5406935.086	296.707	33.55	324	-36
C0334	365171.791	5406960.881	296.806	32	324	-50
C0335	365017.86	5406846.093	367.912	85.04	324	-31
C0336	365100.556	5406876.443	299.586	52.58	324	-18
C0337	365376.629	5407106.273	280.159	39.62	136.65	2
C0338	365214.056	5407001.167	279.551	50.9	320	2
C0339	365035.948	5406774.79	305.175	155.45	324	-8
C0340	365192.274	5406997.147	296.806	43.74	324	-27
C0342	365177.8	5406979.233	298.371	76.81	324	2
C0343	365237.744	5407009.665	279.242	53.34	324	2
C0344	365244.423	5407000.698	279.361	45.11	144	2
C0345	365461.194	5407159.942	299.297	10.06	144	-55
C0346	365460.959	5407160.266	299.596	60.96	144	-38
C0348	365153.289	5406964.744	297.833	33.21	143.83	-41.5
C0349	364808.851	5406788.933	343.931	546.81	122	-60
C0350	365461.311	5407159.78	300.792	33.99	144	2
C0351	365313.84	5407047.459	278.913	30.48	144	2
C0352	365239.439	5407008.126	279.242	18.59	313	2
C0353	365268.206	5407007.956	279.242	18.28	144	2
C0354	365135.774	5406952.53	298.978	10.67	144	2
C0355	365125.53	5406875.255	316.294	12.5	292	2
C0356	365320.474	5407077.684	279.551	26.09	324	2

C0357	365125.575	5406872.447	316.294	18.59	239	2
C0358	365299.792	5407030.952	278.943	12.5	148	2
C0359	365300.509	5407031.41	278.943	23.77	128	2
C0360	365267.885	5407027.034	296.856	1.52	144	2
C0361	365410.728	5407124.348	280.856	32.46	144	2
C0362	365420.733	5407132.68	281.065	35.97	144	2
C0363	365125.291	5406937.493	298.68	32.61	145.93	-30
C0364	365431.879	5407142.812	281.673	40.84	144	2
C0365	365092.582	5406920.141	299.287	56.08	140.46	-17
C0366	365333.125	5407091.278	279.87	35.36	324	2
C0367	365064.849	5406893.256	299.895	48.76	142.25	-21
C0368	365089.676	5406924.494	299.895	73.15	323.43	2
C0370	365119.478	5406943.68	299.795	65.53	324	2
C0371	365173.74	5406979.145	279.7	70.1	324	2
C0372	365016.591	5406900.956	301.389	80.77	288	2
C0373	365278.067	5407064.755	278.943	96.01	144	-20
C0374	365155.246	5406965.025	298.68	71.02	321.01	2
C0375	365309.411	5407087.317	278.634	109.42	144	-27
C0376	365166.333	5406973.535	298.371	76.2	331	2
C0377	365168.629	5406959.196	279.999	72.85	144	2
C0378	365472.18	5407109.288	282.43	33.53	324	2
C0379	364751.749	5406712.532	325.858	464.82	122	-60
C0380	365359.131	5407112.875	298.67	4.57	144	2
C0381	365355.632	5407105.823	298.072	3.05	144	2
C0382	365341.952	5407093.274	297.763	4.88	144	2
C0383	365141.387	5406945.495	279.361	12.5	145.15	2
C0387	365448.373	5407153.214	281.822	9.45	144	2
C0388	365394.081	5407209.263	298.371	7.62	324	2
C0389	365436.817	5407154.389	280.866	13.71	324	2
C0390	365158.338	5407039.084	280.766	21.03	161	2
C0391	365181.133	5407033.811	279.7	12.5	154	2
C0392	365328.248	5407065.004	279.551	11.88	144	2
C0393	365340.125	5407080.111	279.7	18.29	144	2
C0394	365494.372	5407121.95	281.374	13.71	324	2
C0395	365377.756	5407092.73	281.264	21.94	136.66	2
C0396	365366.674	5407076.73	280.916	24.38	144	2
C0397	365364.275	5407079.412	280.916	20.17	319.93	2
C0398	365355.403	5407059.32	279.85	21.34	144	2
C0399	365344.308	5407042.792	279.242	18.29	144	2

C0400	365168.325	5406764.222	307.756	359.97	324	-40
C0401	365039.744	5406770.587	323.208	242	302	-55
C0402	364741.326	5406812.584	307.766	402.95	122	-40
C0403	365108.085	5406800.778	329.505	213.36	302	-40
C0404	365108.085	5406800.778	329.505	214.71	302	-50
C0405	365108.085	5406800.778	329.505	252.68	302	-60
C0406	365040.475	5406770.055	325.101	330.71	304.36	-65
C0407	365057.045	5406849.269	282.43	98.16	324	2
C0408	365477.548	5407135.584	282.281	103.63	347	2
C0411	365390.29	5407131.686	297.803	10.97	324	2
C0413	365167.347	5407044.324	315.039	8.84	233	-40
C0414	365167.034	5407045.319	315.985	18.29	265.15	2
C0415A	365168.506	5407049.373	315.985	10.97	302.4	2
C0415B	365407.61	5407129.523	281.215	9.14	303.6	2
C0416	365377.816	5407065.674	281.215	7.32	325.08	10
C0417	365389.596	5407117.095	280.916	21.94	326.5	10
C0419	365273.748	5407033.465	259.147	20.73	324.03	2
C0420	365336.1	5407040.009	279.391	26.21	171.5	2
C0421	365355.188	5407059.054	279.85	18.9	152.61	-1
C0423	365026.223	5406930.451	387.05	11.28	134.81	2
C0424	365034.33	5406976.151	371.986	21.34	137.43	2
C0425	365063.865	5407003.07	372.465	17.68	147.58	2
C0426	365054.44	5407001.9	372.475	19.51	145.5	2
C0427	365030.353	5406982.309	372.475	6.1	324	2
C0428	365037.248	5406993.537	372.475	7.32	324	2
C0429	365016.867	5406936.602	371.588	5.18	144	2
C0430	365010.046	5406930.54	371.588	7.62	144	2
C0431	365068.308	5407012.485	372.475	12.19	324	2
C0433	365309.363	5407021.623	277.877	26.21	142.45	2
C0434	365328.056	5407066.446	259.595	15.85	122.25	-6.16
C0435	365330.869	5407071.001	259.595	21.34	81.1	0.66
C0437	365168.384	5407049.371	315.985	21.34	299.61	2
C0438	365170.483	5407043.199	315.836	22.86	120.23	-19
C0439	365277.972	5407004.052	259.047	25.3	144.16	2
C0440	365111.846	5406892.446	280.766	94.49	319.95	-24
C0441	365381.505	5407075.345	280.159	39.62	325.8	-38
C0442	365292.273	5407056.646	258.898	75.59	142.78	-32
C0443	365384.903	5407107.327	280.766	31.09	320.7	-48
C0444	365366.006	5407075.777	280.159	43.59	149.7	-35

C0445	365311.323	5406989.299	259.505	27.43	143.78	2
C0446	365229.448	5407028.845	259.356	80.47	127.38	-15
C0447	365350.268	5407049.651	278.943	36.58	140.83	-45
C0448	365119.424	5406893.662	280.457	62.78	362.06	-19
C0449	365420.48	5406970.151	267.396	177.8	324	-42
C0450	365483.4	5407128.611	282.58	76.2	159.91	3
C0451	365237.553	5407013.749	313.554	24.38	333.75	-35
C0452	365081.062	5406914.923	281.215	56.08	324.36	2
C0453	365240.151	5407019.742	313.554	25.91	357.15	-25
C0454	365072.807	5406901.55	281.215	79.55	299.4	2
C0455	365218.007	5407003.213	278.634	36.58	322.23	-22
C0456	365072.807	5406901.55	280.457	70.4	303.05	-22
C0457	364896.617	5406973.287	335.731	29.26	135	2
C0458	365237.89	5407009.635	278.784	39.62	324.03	-26
C0459	365198.636	5406992.47	278.784	52.73	324.58	-27
C0460	365367.82	5407104.525	279.391	54.25	144.51	-41
C0461	365439.794	5407149.409	280.756	58.83	144.33	-28
C0462	365295.644	5406893.544	321.146	68.89	56.5	-63
C0463	365420.727	5407132.688	280.756	56.08	142.71	-32
C0464	365173.74	5406979.145	279.092	55.17	317.53	-25
C0465	365480.316	5407135.478	282.131	35.97	24.41	2
C0466	365459.574	5407122.964	281.862	54.86	324	-37
C0467	365374.735	5407095.913	261.329	24.38	323.88	2
C0468	365330.344	5407024.395	260.263	33.53	143.61	2
C0469	365325.073	5407069.594	260.631	21.64	324.36	0
C0470	365313.196	5407046.166	259.535	35.66	323.2	0
C0471	365315.938	5407042.447	259.535	9.75	144.21	1.16
C0472	365240.078	5407035.394	259.655	15.55	323.2	2.83
C0474	365412.941	5406971.952	268.014	152.4	325.13	-15
C0475	365211.153	5406971.519	260.143	52.73	143.21	1
C0476	365052.593	5406878.059	368.828	86.86	330.5	-13
C0479	365034.516	5406808.002	282.161	312.12	324	2
C0480	365303.094	5407030.961	258.469	40.23	326.13	-20
C0481	365236.555	5406981.419	259.655	9.14	139.31	-11.25
C0482	365249.123	5406998.879	259.505	11.58	324.93	-0.15
C0483	365252.338	5406994.49	259.505	3.66	144.33	0.15
C0484	365221.564	5407037.84	260.143	10.36	321.7	1
C0485	365184.841	5406968.146	259.934	9.14	324.03	1.83

C0486	365271.703	5407015.181	259.326	42.67	335.21	- 27.75
C0488	365197.765	5406953.095	407.394	133.2	324	-0.2
C0489	365303.696	5406923.908	239.819	145.69	324	-52
C0490	365413.292	5406971.688	267.227	159	350.05	-12
C0492	364998.644	5406925.74	371.03	15	144	0
C0493	365341.059	5407037.254	260.542	27.43	145.35	1
C0494	365104.401	5406902.439	369.436	131.67	326.55	-7
C0495	365104.287	5406902.442	282.022	131.98	324	11.33
C0496	365197.759	5406991.773	273.892	63.7	144	2
C0497	365197.765	5406953.095	407.394	128	324	7
C0498	365200.358	5407005.063	298.132	63.41	329	-7
C0499	365379.054	5407116.512	261.239	28.36	324	2
C0500	365388.21	5406942.882	264.666	150.72	324	-45
C0501	365187.355	5406964.793	260.84	26.2	143.01	0.33
C0503	365093.796	5406758.552	316.732	99.4	326.66	-11
C0504	365171.611	5407040.498	297.155	110	322.5	-5
C0505	365069.016	5406884.433	369.436	101.5	315.66	-15
C0506	365055.399	5406805.37	281.264	115.5	313	-11
C0507	365410.192	5407120.417	261.936	30.1	12.97	2
C0508	365377.873	5407092.568	280.467	26.3	323.5	-25
C0509	365303.511	5406923.823	241.014	120.2	324	-13.5
C0511	365093.788	5406758.188	316.732	78.6	332.28	-33
C0512	365351.927	5407094.213	298.201	41.8	144	0.02
C0513	365195.682	5406951.896	405.402	46.6	324.75	-14
C0514	365173.23	5407070.709	316.334	103	324	15
C0515	365119.068	5406885.576	365.55	145.4	327.51	-13
C0516	365020.765	5406860.58	368.34	123.7	324	-62
C0517	365365.5	5407046.569	281.862	18.6	144	2
C0519	365252.047	5406994.551	260.143	54.86	144	2
C0520	365128.259	5406770.532	313.743	100.74	322.1	-11
C0521	365180.951	5406948.488	260.442	60.35	148	0.5
C0522	365403.018	5407114.11	261.737	23.8	324	0
C0523	365481.135	5407132.404	261.438	23.5	352	2
C0524	365076.798	5406911.588	280.866	60.96	324	-28
C0525	364983.098	5406854.355	368.34	50.15	322.81	-15
C0526	365077.351	5406752.089	313.843	7.9	324	-33
C0527	365090.411	5406922.422	281.065	74.86	318	1.75
C0528	365059.34	5406852.153	282.161	92.7	324	2
C0529	365077.351	5406752.089	313.843	71.9	325.16	-42

C0530	365324.774	5407034.61	223.779	21.3	324	2
C0531	365128.412	5406770.68	313.743	67.3	324	0
C0532	365102.842	5406964.265	410.383	99.8	326	-6
C0533	365474.929	5407123.958	261.339	7.9	82	2
C0534	365076.798	5406911.588	280.866	86	324.36	2
C0536	365103.987	5407029.197	392.351	14.94	324	2
C0537	365519.077	5407170.373	281.962	27.74	144	0
C0538	365082.37	5406903.894	280.866	48.16	144	-28
C0540	365077.351	5406752.089	313.843	262.43	325.16	-47
C0541	365030.781	5406797.816	281.563	25.3	144.23	2
C0543	365128.412	5406770.68	313.743	91.01	333.7	2.5
C0544	365065.565	5406833.326	280.368	21.34	324	-45
C0545	365417.742	5407138.107	259.944	15.85	372	2
C0546	365347.924	5407053.263	241.214	47.4	372	2
C0547	365047.372	5406824.349	281.165	21.34	144	-45
C0549	365102.003	5406678.489	303.88	174.65	315.5	-25
C0550	365087.556	5406866.042	282.36	26.82	144	30
C0551	365025.851	5406794.616	281.563	51.82	212.11	2
C0553	365347.924	5407053.263	241.214	48.2	322.56	2
C0554	365079.557	5406844.693	480.123	25.6	144	-45
C0556	365457.932	5407125.231	262.534	46.3	324	0
C0557	365079.557	5406844.693	281.364	25.6	144	2
C0558	365103.858	5406964.26	410.383	104.7	344	-6
C0559	365103.858	5406964.26	410.383	104.7	324	-43
C0560	365136.413	5406797.055	318.426	119.17	336	-40
C0562	365157.306	5406947.774	280.268	75.6	147.35	2
C0564	365438.27	5407109.759	258.948	20.23	324	2
C0565	365475.1	5407014.568	267.914	151.04	351	-12
C0566	365358.197	5406916.827	258.35	207.9	314	-72
C0567	365079.381	5406844.936	281.364	0	182	0
C0568	365073.544	5407009.857	317.529	40.24	358	0
C0570	365224.71	5407012.524	296.806	12.2	324	2
C0573	365136.413	5406797.055	317.729	75.2	324	2
C0574	365230.346	5406985.986	258.748	18.9	324	0
C0575	365045.964	5406826.293	281.663	20.12	324	2
C0578	365116.136	5406933.086	280.368	41.76	144	2
C0580	365466.99	5406692.439	429.313	489.5	331	-62
C0582	365166.469	5406716.59	308.762	92.7	335	-35
C0584	365174.91	5406956.831	260.442	18.29	324	2

C0585	365141.831	5406784.373	312.249	107.3	302	5
C0586	365365.299	5407077.537	262.335	42.98	144	2
C0587	365390.665	5406688.481	404.406	457.2	325.25	-67
C0590	365282.289	5406989.276	240.018	18.59	324	2
C0591	365357.113	5407058.151	261.737	38.71	144	2
C0593	365342.534	5407047.594	240.018	23.16	324	2
C0594	365030.55	5406881.679	370.333	86.56	324	-43
C0595	365357.113	5407058.151	261.936	24.69	144	30
C0597	365368.349	5407073.325	241.014	20.12	324	0
C0598	365381.979	5407086.899	242.011	18.59	324	2
C0602	365365.417	5407077.375	262.136	28.04	144	25
C0603	365056.304	5406970.58	317.031	17.68	144	2
C0604	365162.643	5406948.195	257.154	45.72	282	2
C0606	365373.418	5407035.635	241.513	18.74	12	2
C0607	365223.719	5406995.138	277.18	78.8	144	2
C0608	365447.991	5406994.222	267.914	150.35	324	-67
C0609	365368.877	5407072.596	241.313	18.29	144	2
C0611	365622.428	5407023.728	423.504	289.7	324	-50
C0612	365466.99	5406692.439	429.313	488	330	-50
C0613	365392.829	5407071.915	242.011	12.2	144	0
C0614	365180.415	5406923.654	257.154	71.63	162	2
C0618	365188.631	5406965.162	261.139	64.92	144	2
C0619	365349.547	5407068.6	262.435	39.48	324	25
C0620	365044.559	5406667.622	299.397	153.62	303	-17
C0622	365017.53	5406899.66	370.034	70.1	324	-25
C0625	365234.276	5406980.559	258.549	46.64	324	2
C0627	365064.661	5406674.338	301.091	122.22	309	-27
C0628	364983.149	5406913.038	317.828	17.37	144	2
C0629	364968.886	5406898.635	318.227	7.92	144	2
C0630	365354.65	5407061.553	241.214	49.68	324	2
C0631	365325.04	5406665.332	366.945	489.8	324	-60
C0632	365234.276	5406980.559	258.748	53.34	144	-30
C0634	365187.299	5406718.463	319.392	140.8	302	-57
C0638	365064.661	5406674.338	301.091	152.6	309	-42
C0641	365393.834	5407096.101	260.442	43.59	144	-14
C0643	365405.551	5406714.693	418.354	460.25	321	-60
C0644	365331.988	5407024.648	259.545	30.48	144	-18
C0645	365420.48	5406970.151	267.416	146.9	324	-72
C0646	365103.108	5406661.806	307.527	237.74	302	-57

C0650	365325.654	5407033.395	258.051	26.21	324	-45
C0651	365341.244	5407049.376	261.438	43.9	324	20
C0653	365346.171	5407042.573	260.143	32	144	2
C0654	365341.361	5407049.214	260.442	9.75	324	18.5
C0656	365363.423	5407080.129	261.139	30.48	324	29
C0657	365368.877	5407072.596	242.011	35.66	144	27
C0658	365050.18	5406635.888	306.989	267.31	298	-62
C0659	365633.571	5406799.596	457.209	571.8	324	-65
C0660	365401.442	5406964.625	267.516	147.8	324	-36
C0661	365068.289	5406539.339	346.123	110.64	302	-61
C0662	365037.167	5406838.442	281.264	90.83	324	-28
C0663	365415.452	5407096.939	262.036	50.75	324	13
C0664	365433.669	5406983.122	267.615	147.9	324	-32
C0665	365068.289	5406539.339	346.123	443.18	302	-60
C0666	365375.234	5407096.213	262.933	32.31	324	33
C0668	365379.339	5407090.544	262.933	29.26	144	28
C0669	365415.452	5407096.939	261.04	50.6	324	-15
C0670	365093.878	5407009.568	391.454	26.82	324	-41
C0671	365460.403	5407004.173	368.041	140.6	324	-31
C0673	365402.398	5407084.276	260.442	40.81	324	-15
C0675	365085.953	5407023.411	391.553	26.82	144	-29
C0676	365077.063	5407004.997	391.454	21.36	324	-30
C0677	365241.761	5407009.438	240.317	18.29	183	2
C0678	365420.909	5407133.733	260.243	52.12	144	-13
C0679	365057.276	5406999.928	391.454	23.46	324	-32
C0680	365054.93	5407003.168	391.255	23.17	144	-34
C0681	365295.72	5406970.728	224.177	25.91	144	2
C0682	365067.21	5407018.604	391.454	25	144	-28
C0684	365794.116	5407322.807	438.17	164.89	347	-55
C0685	365024.624	5406952.949	370.93	34.75	324	-38
C0687	364998.586	5406925.821	317.729	7.47	144	2
C0688	365040.434	5406961.805	372.026	39.32	324	-21
C0689	365282.135	5406914.468	221.089	66.14	308	-29
C0692	365013.399	5406936.054	317.729	6.71	144	2
C0695	365119.274	5406914.345	262.435	13.86	324	2
C0696	365477.462	5407098.26	356.375	90.2	282	-13
C0697	365477.462	5407098.26	356.375	35.46	324	-13
C0698	365475.884	5407097.167	356.375	60.2	324	-41
C0699	365058.39	5406998.389	372.724	24.99	324	-41

C0700	365073.544	5407009.857	372.524	20	324	-52
C0701	365307.648	5406986.65	222.483	5.4	144	2
C0702	365074.424	5407008.642	372.524	22.56	144	-32
C0703	365057.1	5407000.171	372.026	20.72	144	-40
C0705	365450	5407093.56	358.178	26.02	324	-20
C0706	365043.518	5406988.237	372.325	25.3	144	-32
C0707	365031.461	5406974.197	371.727	24.99	144	-22
C0708	365024.448	5406953.192	370.93	20.12	324	-23
C0710	365045.964	5406826.293	281.663	101.86	324	11
C0711	365045.864	5406984.997	372.524	20.12	324	25
C0712	365031.461	5406974.197	373.919	33.53	144	25
C0713	365316.974	5407045.382	259.944	12.19	324	2
C0714	365316.974	5407045.382	259.944	12.19	324	25
C0715	365210.793	5407052.203	296.209	70.1	130	-7
C0716	365029.995	5406976.222	358.078	18.29	144	2
C0717	365039.789	5406962.696	373.72	40.23	324	25
C0718	365313.092	5407016.643	244.402	20	144	55
C0719	365058.419	5406998.349	355.787	18.29	144	2
C0721	365322.042	5407004.284	242.708	27.4	144	40
C0722	365343.836	5407008.287	240.018	46.64	324	-16
C0723	365074.424	5407008.642	355.687	18.29	144	2
C0724	365058.39	5406998.389	336.857	18.29	144	2
C0725	365325.115	5407000.04	223.679	18.29	144	2
C0730	365343.836	5407008.287	240.516	37.19	324	23
C0732	365459.944	5407003.989	268.113	178.11	322	-60
C0733	365392.829	5407071.915	43.55	35.36	324	22
C0734	365043.635	5406988.075	338.252	18.9	144	2
C0735	365744.42	5406875.297	451.63	535.23	321	-68
C0736	365024.448	5406953.192	370.93	18.28	144	-23
C0737	365097.859	5407006.969	337.754	18.29	324	2
C0739	365008.472	5406942.858	355.587	18.29	324	2
C0740	365349.338	5407038.199	242.11	32	144	23
C0741	365013.81	5406935.487	369.536	17.07	144	-34
C0742	365014.983	5406933.867	370.034	15.85	324	-34
C0743	365007.031	5406914.158	370.532	28	324	-23
C0744	365241.468	5407009.843	296.806	20.4	324	-10
C0745	365242.113	5407008.952	295.611	18.29	324	-35
C0746	365027.615	5406948.818	374.517	20.12	324	50
C0747	365361.688	5407051.834	243.007	36.58	144	32

C0749	365023.04	5406955.135	374.517	20.12	144	50
C0752	365744.42	5406875.297	451.729	446.84	321	-50
C0754	365423.076	5407086.41	242.011	20	144	2
C0755	365447.991	5406994.222	267.914	139	324	-44
C0756	365021.574	5406957.16	355.587	19.2	144	2
C0757	364967.595	5406900.417	317.031	20	144	-37
C0758	364965.249	5406903.657	317.031	20	324	-57
C0759	365017.974	5406929.737	355.388	14.33	144	2
C0760	364981.976	5406914.658	317.031	20.1	324	-45
C0761	364983.736	5406912.228	317.031	20	144	-30
C0762	365003.043	5406919.665	317.43	20	324	-40
C0763	365136.139	5407037.652	390.258	28.96	324	2
C0765	365017.915	5406929.818	317.131	25	324	-33
C0766	365032.6	5406941.933	316.932	20	324	-35
C0767	365044.481	5406956.216	316.932	25.35	324	-50
C0768	365633.571	5406799.596	457.209	493.78	321	-55
C0769	365054.427	5406973.172	315.935	20	324	-77
C0770	365046.006	5406954.11	316.732	40	144	-17
C0772	365010.994	5406939.375	371.528	34.75	324	2
C0773	365064.196	5406990.371	316.234	30.2	144	-18
C0774	365064.372	5406990.128	316.234	18.09	144	-65
C0775	365026.149	5406950.843	317.729	30	144	-20
C0776	365013.575	5406935.811	316.533	22	144	-27
C0777	364999.465	5406924.606	317.031	30.5	144	-20
C0778	365229.268	5407026.689	262.435	50.44	144	18
C0780	365056.48	5406970.337	316.533	30	144	-28
C0781	365292.622	5407044.91	280.368	55	324	12
C0782	365328.634	5407066.79	280.567	9.5	144	2
C0784	365292.622	5407044.91	279.371	40	324	-12
C0785	365250.089	5407033.742	260.84	58.38	144	21
C0786	365021.046	5406957.889	371.827	30.48	324	2
C0787	365292.622	5407044.91	278.375	35	324	-31
C0788	365305.126	5407061.743	280.168	40	324	20
C0791	365286.523	5407053.334	261.837	44.9	144	23
C0792	365102.837	5406888.059	281.364	40	310	-15
C0793	365073.757	5406977.169	281.364	13.69	144	0
C0794	365133.287	5406894.959	280.368	30	324	-22
C0795	365301.49	5406995.155	223.38	60	324	0
C0796	365415.452	5407096.939	261.438	40	324	-26

C0797	365474.791	5407014.875	268.213	150	352	-38
C0798	365026.735	5406950.033	282.958	24.32	144	2
C0799	365016.566	5406931.681	282.36	24.4	144	2
C0801	365310.746	5407019.883	240.217	45	324	2
C0804	365325.654	5407033.395	224.077	20	324	2
C0805	365433.669	5406983.122	267.615	150	324	-58
C0806	364978.105	5406920.003	318.426	40	324	2
C0807	365341.361	5407049.214	228.66	20	324	2
C0808	365313.209	5407016.481	224.476	20	324	2
C0809	365420.48	5406970.151	267.416	150	324	-58
C0811	365374.926	5406916.027	229.457	150	328	-21
C0813	365376.267	5407062.391	224.576	12.8	144	2
C0814	365396.113	5407067.379	226.07	20	324	2
C0815	365370.989	5407069.681	224.576	20	324	2
C0816	365357.172	5407058.07	225.074	20	324	2
C0817	365401.442	5406964.625	267.516	149.55	324	-60
C0818	365018.993	5406960.724	337.854	20	144	0
C0819	365006.889	5406945.045	337.156	22	144	2
C0820	365403.922	5407082.17	224.077	33	324	2
C0821	365151.897	5407035.123	387.967	65	207	4
C0822	365376.644	5406915.666	229.059	156.25	314	-25
C0823	365411.723	5407071.398	224.077	20	144	2
C0824	365402.037	5407059.199	225.572	23	144	2
C0825	365390.05	5407043.357	224.576	19.3	144	2
C0826	365272.508	5406869.519	248.287	147	333	-38
C0827	365363.18	5407019.084	225.074	30	144	2
C0828	365347.883	5407002.698	222.982	29	144	2
C0829	365335.497	5406915.082	226.07	137.3	324	-27
C0830	365375.354	5407032.962	225.074	30	144	2
C0831	365078.709	5406876.759	263.232	30	324	2
C0832	365082.463	5406872.7	262.933	10	144	2
C0833	365406.771	5407108.926	341.341	35	144	25
C0834	365068.893	5406857.663	266.42	10	144	2
C0835	365064.84	5406864.642	266.42	10	324	0
C0836	365059.758	5406841.344	263.132	13	144	2
C0837	365403.16	5407083.223	241.513	30	324	-26
C0838	365054.714	5406848.31	263.132	10	324	0
C0839	365417.328	5407094.347	241.014	30.1	324	-19
C0840	365045.671	5406826.698	262.733	12	144	2

C0841	365042.739	5406830.748	262.733	10	324	2
C0842	365047.472	5406952.086	300.792	30	324	2
C0843	365057.653	5406968.717	300.592	25	324	2
C0844	365235.385	5406935.618	226.07	31	144	2
C0846	365065.277	5406958.188	300.692	20	144	2
C0847	365019.99	5406959.347	300.094	10	324	2
C0848	365009.294	5406941.724	300.294	10	324	2
C0849	365227.496	5406952.599	206.642	34	144	2
C0850	365276.834	5406961.003	207.639	25	144	2
C0851	365073.427	5407010.019	354.691	21.34	324	-50
C0852	365069.908	5407014.878	354.691	25.2	144	-20
C0853	365059.446	5406996.931	350.407	20	324	-40
C0854	365265.515	5406952.202	207.141	25	144	2
C0855	365044.925	5406986.293	355.089	25.6	324	-40
C0857	365058.155	5406998.713	355.289	27.43	144	-30
C0858	365043.87	5406987.751	355.089	23.47	144	-30
C0861	365021.574	5406957.16	355.089	20	144	-35
C0862	365029.995	5406976.222	354.591	30	144	-27
C0863	365013.927	5406935.325	353.993	20.73	144	-50
C0864	365032.516	5406972.739	354.79	20.13	324	-40
C0865	365208.752	5406936.285	205.945	28	144	2
C0866	364962.376	5406907.625	339.149	40.84	324	2
C0867	365025.562	5406951.653	355.587	31.7	324	-30
C0869	364981.331	5406915.549	338.352	36.57	324	2
C0870	365014.689	5406934.272	354.591	24.69	324	-30
C0871	365296.541	5406969.594	207.141	24.69	144	2
C0872	365001.962	5406949.922	339.448	31.09	324	2
C0873	364997.412	5406927.441	356.584	28.96	324	2
C0874	365054.754	5407003.411	356.385	53.64	324	2
C0875	365017.505	5406930.385	356.982	60.36	144	2
C0876	365017.237	5406900.065	263.132	24.61	324	2
C0877	365020.909	5406869.537	252.571	30	144	2
C0879	365051.025	5406977.87	355.587	92.96	144	2
C0880	365031.427	5406943.553	356.385	47.85	144	2
C0881	365608.778	5406690.87	456.711	614.2	326	-54.5
C0882	365009.425	5406876.753	262.733	25	324	0
C0884	365063.141	5406991.829	357.58	60.05	144	2
C0886	364968.182	5406899.607	302.087	15	144	0
C0887	365357.172	5407058.07	226.07	46.63	324	2

C0888	365084.101	5406995.278	356.086	58.82	144	2
C0889	365341.361	5407049.214	209.133	49.68	324	2
C0890	365406.771	5407108.926	341.341	30.48	144	-14
C0891	365394.128	5407095.696	242.21	30.78	144	-15
C0892	365336.329	5407018.654	239.719	75	144	-22
C0893	365381.979	5407086.899	241.014	39.62	144	-15
C0895	365330.874	5407026.187	239.819	37.3	324	-33
C0896	365368.818	5407072.677	245.996	41.15	144	-13
C0897	365349.338	5407038.199	240.317	28.96	144	-18
C0898	365321.479	5407005.061	240.018	70.18	144	-19
C0899	365326.475	5407032.261	239.719	25	144	-20
C0900	365393.005	5407071.672	241.014	35	324	-16
C0901	365365.584	5407015.764	239.819	39.62	324	-17
C0902	365382.719	5407053.482	245.996	37.74	324	-17
C0903	365328.106	5406995.909	240.815	31.4	324	-25
C0904	365029.765	5406814.563	262.335	105.73	324	4
C0905	365079.228	5406877.543	261.936	94.49	324	-10
C0906	365052.983	5406943.742	262.933	22.77	144	2
C0907	365049.947	5406948.26	262.933	20	324	2
C0908	365029.765	5406814.563	262.136	99.97	324	-10
C0909	365474.791	5407014.875	268.213	134.42	324	-45
C0910	365054.714	5406848.31	262.235	85.95	324	-13
C0912	365306.71	5406987.946	209.233	21	144	2
C0913	365354.734	5407030.747	234.04	7.35	144	2
C0914	365064.953	5406864.86	262.933	93.57	324	-14
C0915	365474.791	5407014.875	268.213	136.55	340	-36
C0916	365022.398	5406892.937	262.136	10	144	2
C0918	365315.652	5406893.945	253.966	156.06	334	-76
C0919	365008.12	5406943.344	317.928	25	324	2
C0920	365008.908	5406911.566	318.824	25.36	144	2
C0921	365326.79	5406858.155	248.287	148.74	314	-70
C0922	364995.524	5406895.948	283.357	20.06	324	2
C0923	364999.689	5406890.198	283.357	22.65	144	2
C0924	364963.713	5406871.678	283.556	20.05	144	2
C0925	364959.608	5406877.347	283.556	24.4	324	2
C0926	365314.174	5406892.986	-28.98	159.41	310	-55
C0927	365374.926	5406916.027	229.457	122.53	331.5	-50
C0928	365359.753	5407054.507	208.735	24.91	144	2
C0932	365011.991	5406937.998	370.034	33.83	324	-20

C0933	365047.975	5406982.081	337.654	26.82	324	-50
C0935	365006.889	5406945.045	354.591	24.7	324	-20
C0936	365466.99	5406692.439	16.85	644.96	331	-62
C0938	365038.088	5406965.045	337.256	27.74	324	-35
C0940	364994.128	5406931.977	358.078	34.75	324	24
C0941	364995.242	5406930.438	355.089	24.69	324	-23
C0942	365042.278	5406928.569	300.792	10	144	2
C0943	365024.448	5406953.192	335.861	26.52	324	-50
C0944	365025.305	5406919.612	300.294	10.05	144	2
C0945	365020.379	5406926.416	300.294	10.55	324	2
C0946	365348.986	5407038.685	208.236	76.5	144	2
C0947	365012.695	5406937.026	337.654	27.43	324	-45
C0949	365043.635	5406988.075	337.156	52.12	144	-25
C0950	364986.621	5406942.344	355.587	30.48	144	-19
C0951	364975.583	5406923.486	338.651	41.15	144	-31
C0952	365373.804	5407065.793	208.535	62.48	144	2
C0953	365515.374	5406630.209	433.069	670.1	324	-67
C0954	364992.31	5406934.487	338.651	41.76	144	-27
C0955	365390.6	5407074.993	209.631	68.28	132	2
C0956	365006.947	5406944.964	336.16	35.66	144	-25
C0957	365342.417	5407047.756	349.809	35.99	144	13
C0958	365309.994	5406983.411	224.576	15.05	144	2
C0959	365325.654	5407033.395	224.376	49.07	324	2
C0960	365018.935	5406960.805	336.658	64.31	144	-25
C0961	365322.836	5407136.177	351.005	41.76	144	19
C0962	365023.831	5406800.474	257.951	42.3	192	2
C0963	365033.396	5406971.524	336.957	39.64	144	-25
C0964	365366.553	5407108.2	417.357	21.35	324	-78
C0965	365058.39	5406998.389	336.16	31.39	144	-27
C0966	365356.82	5407058.556	209.432	48.77	144	15
C0967	365020.5	5406801.68	257.951	19.2	282	2
C0968	365333.396	5407022.704	207.838	27.4	136	2
C0969	365515.374	5406630.209	433.069	1050.4	324	-67
C0970	365373.804	5407065.793	211.126	52.7	144	15
C0971	365029.436	5406802.879	257.951	24.4	144	2
C0972	365329.514	5406993.965	223.081	30.48	324	-17
C0973	365313.092	5407016.643	258.748	26.82	324	-32
C0974	365301.725	5407066.441	415.365	20.11	324	-72
C0975	365241.901	5406970.03	406.797	52.12	324	-23

C0976	365034.135	5406810.677	257.951	139.29	122	-40
C0977	365344.305	5407007.639	222.982	21.34	324	-24
C0979	365383.213	5407022.109	223.779	24.99	324	-30
C0980	365383.037	5407022.352	223.978	30.48	324	-18
C0981	365405.565	5407079.903	222.483	25	324	-20
C0982	365074.34	5406956.108	410.383	53.04	332	-19
C0983	365396.055	5407067.46	223.579	25	324	-18
C0986	365384.068	5407051.619	223.579	30.78	324	-20
C0987	365384.068	5407051.619	223.579	10.97	324	-55
C0988	365014.513	5406934.515	399.424	22.78	324	-90
C0989	365352.095	5407034.392	222.384	21.95	324	-19
C0990	365348.198	5407070.463	368.24	19.2	324	22
C0991	365313.971	5407015.428	208.236	10.5	324	2
C0992	365348.198	5407070.463	365.75	18.9	324	-47
C0994	365003.279	5406918.589	263.929	151.79	324	2
C0995	365356.82	5407058.556	208.436	10.5	324	2
C0996	364998.272	5406761.125	328.15	153.31	300.7	- 27.39
C0998	365324.657	5407034.772	207.539	10	324	2
C1000	365194.217	5407035.878	278.076	40.84	144	13
C1004	365341.713	5407048.728	208.336	10.5	324	2
C1007	365313.594	5407118.249	316.334	31.7	144	13
C1009	364971.525	5406894.99	300.792	12.19	324	-57
C1010	364991.947	5406900.889	300.792	17.07	324	-56
C1011	365008.883	5406942.291	298.998	32.97	144	-32
C1012	364967.771	5406900.174	300.592	24.08	144	-23
C1013	365295.427	5406971.133	222.384	26.52	324	-25
C1014	364986.785	5406908.016	300.294	31.7	144	-18
C1015	364996.181	5406929.142	305.574	39.52	144	-13
C1016	365348.986	5407038.685	211.325	35.05	144	14
C1017	365306.71	5406987.946	210.628	21.94	144	34
C1018	365319.895	5407007.248	211.823	30.18	144	18
C1019	365333.396	5407022.704	211.126	30.78	144	12
C1020	365999.801	5407402.204	436.636	198.4	323.5	-40
C1021	365295.896	5406970.485	210.129	25.6	144	25
C1022	365027.875	5406813.934	263.63	91.2	302	-35
C1023	365162.252	5406659.891	315.646	295.8	121.5	-45
C1024	365324.657	5407034.772	207.24	51.2	324	2
C1025	365341.713	5407048.728	209.133	52.12	324	2
C1027	365960.036	5407394.101	457.159	100	324	-47

C1029	365054.597	5406848.472	262.435	104.85	324	-47
C1030	365300.705	5406963.843	188.809	19.51	324	2
C1031	365304.107	5406959.146	188.809	11.58	144	2
C1033	365131.978	5406927.73	262.435	20.12	324	2
C1034	365148.534	5406936.99	261.438	17.07	324	2
C1035	365082.316	5406878.223	262.096	98.45	330.21	-42.83
C1036	365324.943	5406993.235	188.082	24.69	121.38	2.25
C1037	365319.829	5406991.705	188.211	14.94	328.16	1
C1038	365333.396	5407022.704	206.941	39.62	144	-20.5
C1039	365339.261	5407014.605	206.642	29.87	324	-31
C1040	365349.045	5407038.604	207.34	48.15	144	-21
C1041	365131.978	5406927.73	265.423	25.29	324	42
C1042	365149.527	5406938.363	264.427	24.99	324	38
C1044	365359.929	5407054.264	208.137	47.85	144	-17
C1045	364980.779	5406892.135	282.46	31.08	144	-17
C1046	364995.021	5406903.054	281.962	44.19	144	-16
C1047	364993.237	5406892.082	282.261	20.11	324	-51
C1048	365373.298	5407035.239	208.525	35.05	326.34	-16.26
C1049	365399.689	5407050.831	209.482	40.23	324	-48
C1050	365363.41	5407020.523	208.236	40.53	326.7	-30.54
C1051	365015.849	5406931.631	282.41	35.35	138.09	-21.6
C1052	364942.635	5406864.094	284.263	21.03	148.18	2.17
C1053	364939.534	5406869.195	284.253	10.53	327.35	1.48
C1054	365022.859	5406920.348	282.261	25.6	336	-31.47
C1055	365010.366	5406908.905	282.32	20.73	329.66	-38.26
C1056	365011.162	5406904.395	282.35	26.72	144.58	-37.09
C1057	365388.712	5407067.847	208.466	33.35	121.87	-17.71
C1058	365372.189	5407065.5	208.486	44.5	149.95	-14.08
C1059	364963.713	5406871.678	286.545	15.84	145.79	49.06
C1060	365076.745	5407005.47	237.597	27.43	326.81	-2.22
C1061	364945.745	5406861.283	264.616	10.36	321.96	3.93
C1062	364966.132	5406864.996	264.288	16.15	317.8	2.1
C1063	364973.62	5406856.122	264.208	16.76	137.49	2.47
C1064	364960.789	5406840.064	264.298	17.06	145.97	4.32

C1065	365019.754	5406925.198	301.579	27.42	315.69	-33.22
C1066	365035.14	5406936.55	300.453	25.3	329.64	-21.01
C1067	365029.712	5406941.25	283.108	29.57	151.68	20.3
C1068	365050.751	5406947.2	299.397	29.56	146.96	-15.83
C1069	365051.319	5406946.944	299.407	17.07	323.8	-36.72
C1070	365380.584	5407024.341	189.636	11.27	142.4	3.21
C1071	365370.045	5407009.314	189.476	10.36	130.04	4.31
C1072	365042.363	5406927.718	282.32	34.13	323.3	-19.68
C1073	365369.234	5407039.828	189.706	26.82	320.8	1.48
C1074	365387.07	5407046.262	190.104	27.12	142.13	2.99
C1075	365402.834	5407057.825	190.283	27.49	149.45	4.12
C1076	365417.14	5407063.048	190.652	21.33	140.73	4.49
C1077	365419.703	5407063.669	190.692	28.31	90.57	0.55
C1078	365412.345	5407068.885	190.732	11.27	322.23	1.68
C1079	365399.64	5407062.389	190.473	16.45	331.65	1.41
C1080	365380.844	5407055.099	190.144	24.38	322.91	1.45
C1081	365357.035	5407026.018	189.287	25.29	324.55	2.66
C1082	365344.696	5407006.638	188.54	30.48	321.9	1.13
C1083	365322.939	5407002.686	189.128	40.34	145.92	20.31
C1084	365324.272	5406997.725	207.569	26.21	323.72	-18.73
C1085	365308.373	5406985.002	206.901	26.51	324	-34
C1086	365306.281	5406987.993	207.25	39.62	142.99	-23.88
C1087	365296.74	5406965.602	190.144	25.29	148.75	32.75
C1088	365068.977	5406950.521	281.693	3.05	141.89	-29.67
C1089	365067.048	5406954.038	281.404	22.86	143.3	-27.74
C1090	365067.914	5406952.245	281.394	10.36	317.04	-68.1
C1091	365057.896	5406938.509	282.012	29.26	321.71	-26.49
C1092	365054.253	5406944.871	281.952	24.38	139.75	-24.9
C1093	365029.457	5406941.398	282.619	30.16	154.31	-15.36
C1094	365419.416	5407061.252	189.337	16.15	326.8	22.13
C1095	365402.477	5407057.603	188.839	24.07	335.14	-38.7
C1096	365411.859	5407067.681	192.475	33.04	337.89	22.76

C1097	365411.77	5407067.531	193.332	15.84	325.44	56.01
C1098	365322.575	5407003.189	187.833	38.1	139.8	-32.6
C1099	365399.498	5407062.62	191.708	26.31	331.66	32.86
C1100	365378.27	5407028.679	188.829	25.29	324.09	-35.38
C1101	365364.66	5407014.823	188.679	25.6	310.83	-40.98
C1102	365380.487	5407055.557	191.27	32.3	321.36	27.18
C1103	365349.919	5406999.494	187.613	24.38	323.63	-42.35
C1104	365329.933	5406992.33	187.653	31.39	320.13	-25.9
C1105	365301.13	5406964.843	187.364	21.94	322.63	-43.8
C1106	365314.337	5406976.493	187.026	21.03	324.81	-41.58
C1107	365020.429	5406773.528	264.975	126.18	292.08	-26.62
C1108	365031.204	5406778.306	265.394	4.57	125.59	3.2
C1109	365041.146	5406807.815	264.646	10.67	121.07	0.65
C1110	365057.074	5406832.98	263.939	7.62	123.96	3.53
C1111	365045.081	5406831.605	264.039	3.96		
C1112	365041.146	5406807.815	264.397	5.49	307.33	0.69
C1113	365036.808	5406798.069	185.222	9.45	119.81	0
C1114	365028.94	5406791.816	265.324	6.09	124.5	3.86
C1115	365038.901	5406803.14	264.895	4.57	122.86	0
C1116	365038.909	5406803.146	264.726	3.65	302.93	2.75
C1117	365061.206	5406860.504	262.963	3.05	303.8	3.31
C1118	365062.794	5406847.74	263.212	9.75	123	2.3
C1119	365330.878	5406994.298	168.405	20.73	325.32	1.18
C1120	365064.831	5406852.055	263.182	9.75	123.14	3.45
C1121	365075.598	5406869.223	263.022	5.18	145.83	2.75
C1122	365070.411	5406860.614	263.032	7.01	124.83	4.7
C1123	365085.605	5406874.568	262.963	3.05	120.77	3.04
C1124	365104.251	5406886.379	262.454	3.35	124.7	4.63
C1125	365100.115	5406889.124	262.524	3.05	305.93	4.81
C1126	365317.621	5406971.957	168.086	24.99	323.16	1.51
C1127	364965.576	5406713.114	180.301	10.06	305.68	0.46
C1128	364990.422	5406733.501	179.882	5.18	121.78	4.73
C1129	364970.527	5406709.773	180.639	10.06	126.08	4.83
C1130	364984.819	5406736.753	179.783	8.23	300.2	-4.7
C1131	364972.769	5406720.471	180.251	6.71	305.43	1.78
C1132	364986.712	5406733.901	179.932	7.92	305.51	4.6

C1133	364981.927	5406732.683	179.753	6.1	303.53	3.11
C1134	364969.189	5406716.718	180.34	9.14	305.81	2.23
C1135	365261.613	5406527.691	397.232	370.5	306.96	-58.36
C1136	364974.116	5406713.359	180.36	3.66	125.01	3.86
C1137	364976.076	5406724.804	178.567	6.4	305.15	0
C1138	365017.809	5406740.283	179.643	3.35	301.1	4.4
C1139	365001.324	5406749.544	179.454	6.1	125.73	2.25
C1140	364987.991	5406751.878	179.733	3.35	302.8	4.15
C1141	365003.176	5406760.849	179.504	5.18	304.53	0.11
C1142	365009.815	5406756.335	179.374	5.18	123.55	0.65
C1143	365013.691	5406765.611	179.344	3.65	308.31	1.6
C1144	364991.836	5406749.995	179.563	3.35	302.75	3.61
C1145	364996.791	5406747.126	179.384	7.92	118.43	1.78
C1146	365004.943	5406753.276	179.474	3.35	128.46	1.58
C1147	364961.027	5406709.61	180.839	6.1	303	0
C1148	364958.458	5406706.083	180.739	6.86	303.33	0
C1149	364973.003	5406751.655	180.639	3.96	156.66	0
C1150	365020.167	5406768.449	179.045	5.49	313.83	-2
C1151	365008.27	5406762.884	179.583	3.35	307.55	5.03
C1152	365363.771	5407017.5	169.003	24.84	324.73	1.6
C1153	365340.888	5406979.212	168.624	27.43	147	5.02
C1154	365327.681	5406958.389	167.947	19.81	143.92	1.65
C1155	365234.766	5406510.683	391.633	600	300.68	-52.7
C1156	365352.171	5406995.89	169.132	60.05	143.59	2.72
C1157	364994.591	5406742.15	178.946	4.42	122.66	0
C1158	364956.04	5406701.578	181.317	7.32	304.16	0
C1159	364959.72	5406698.712	179.245	4.11	124.2	0
C1160	364986.052	5406702.52	180.54	3.05	122	0
C1161	364993.533	5406737.149	179.045	3.96	120.1	0
C1162	365121.712	5406750.827	178.746	3.96	309.5	0
C1163	365029.516	5406773.441	178.547	3.35	307.16	0
C1164	365038.973	5406785.462	179.045	11.58	122.78	0
C1165	365211.455	5406491.469	387.768	625	302.63	-52.55
C1166	365044.723	5406792.935	179.245	11.88	131.45	0
C1167	365047.661	5406792.322	179.245	10.11	124	0
C1168	365367.357	5407012.701	168.285	24.99	144.42	3.97
C1169	365379.409	5407025.095	169.78	35.97	144	5.14
C1170	365380.079	5407050.682	169.511	16.15	326.07	2.45

C1171	365029.303	5406791.979	264.626	3.05	311.35	0
C1172	365023.733	5406783.44	264.626	3.35	302.2	0
C1173	365035.475	5406823.216	264.856	5.79	301.5	0
C1174	365031.584	5406819.485	264.626	3.96	122.23	0
C1175	365038.777	5406826.978	264.626	8.69	126.01	0
C1176	364949.205	5406839.182	264.427	53.8	148.93	0.66
C1177	365345.475	5407003.227	170.348	32.31	151.3	43.41
C1178	365342.312	5407010.221	168.684	61.57	325.58	0
C1179	365050.453	5406843.026	263.441	3.51	304	1
C1180	365059.505	5406843.075	263.65	10.36	119.16	1
C1181	365256.37	5406945.394	205.646	25.3	322.03	-43.42
C1182	365324.647	5406962.426	145.48	23.47	322.99	1.67
C1183	365328.537	5406956.712	145.48	21.64	143.06	0.24
C1184	365314.807	5406943.09	145.181	19.2	143.86	0.32
C1185	365342.419	5406974.95	145.998	30.32	142.44	2.93
C1186	365344.913	5407006.425	90.346	88.39	143.32	-21.52
C1187	365334.764	5406989.408	167.747	40.54	146.88	-28.65
C1188	365313.592	5406977.743	187.045	31.39	142.06	-20.99
C1189	365322.967	5407002.682	189.038	41.38	145.25	-13.04
C1190	365409.966	5407047.84	169.929	20.12	324.11	5.09
C1191	365396.37	5407033.896	169.551	24.38	325.32	2.8
C1192	365403.849	5407039.954	169.889	19.81	328.94	4.41
C1193	365399.21	5407030.026	170.397	13.41	144.36	3.28
C1194	365413.063	5407043.206	170.049	24.69	145.65	3.12
C1195	365429.175	5407044.502	170.607	21.34	138.64	3.29
C1196	365430.918	5407048.233	170.527	57.91	89.2	1.58
C1197	365235.279	5406959.037	222.583	67.06	315	16
C1198	365274.53	5406958.643	206.164	14.63	320.5	-32
C1199	365275.231	5406957.83	206.164	19.81	320.5	-51
C1200	365293.056	5406966.12	206.433	23.77	321.48	-44.87
C1201	365393.389	5407039.923	188.928	33.98	324.3	-49
C1202	365371.13	5407007.593	168.873	25.29	318.46	-16.01
C1203	365354.973	5406992.362	168.445	31.7	324	-17
C1204	365328.881	5407017.533	127.099	180.44	152.16	-32.38

C1205	365344.457	5406973.006	167.867	41.75	327.12	-20.46
C1206	365329.025	5407017.81	127.119	170.38	128.29	-29.55
C1207	365325.823	5406998.465	167.289	31.39	133.59	-46.08
C1208	365383.613	5407053.253	189.008	126.27	145.38	-24.09
C1209	365402.608	5407058.069	189.207	68.96	154.8	-27.27
C1213	365413.207	5407043.211	169.461	91.09	142.17	-23.22
C1214	365399.123	5407030.062	169.909	105.05	143.57	-21.82
C1215	365393.433	5407007.842	151.159	11.58	142.44	-1.09
C1216	365393.204	5407008.108	150.392	25.3	143.69	-34.77
C1217	365378.59	5406996.661	149.834	75.72	152.37	1.66
C1218	365383.257	5407028.289	172.46	54.42	148.52	44.99
C1219	365110.821	5407019.861	351.991	25.15	358.04	2.05
C1220	365146.717	5407038.15	348.225	19.2	368.51	-0.71
C1221	365117.707	5407012.995	339.537	42.98	334.05	0.65
C1222	365194.013	5407058.189	346.611	19.51	317.56	2.69
C1223	365117.885	5407012.408	338.601	37.19	318.65	-36.5
C1224	365367.514	5407012.741	171.473	29.41	149.27	44.04
C1225	365193.986	5407058.107	345.923	27.13	320.71	-21.86
C1226	365388.943	5407013.48	151.378	17.68	320.29	-5.16
C1227	365399.855	5407021.752	152.584	31.39	94.33	1.64
C1228	365364.648	5406978.762	148.738	34.44	137.63	-24.95
C1229	365351.859	5406996.133	168.544	33.83	142.44	-25.27
C1230	365393.552	5407007.644	152.046	28.65	143.64	23.34
C1231	365399.833	5407021.698	152.723	32.61	140.41	0.01
C1232	365340.829	5406979.601	168.295	31.09	144.12	-16.01
C1233	365364.255	5406978.675	149.336	32.31	143.49	1.08
C1234	365388.625	5407013.015	152.076	30.78	305.89	29.83
C1235	365379.17	5407024.725	156.589	25.3	143.18	20.96
C1236	365329.595	5406955.626	144.006	44.5	143.5	-31.29
C1237	365371.377	5407007.389	154.666	25.91	130.05	36.36

C1238	365342.383	5406975.085	144.922	39.63	137.12	-27.61
C1239	365006.702	5406758.587	178.268	63.93	12	-90
C1240	365006.908	5406758.44	178.268	71.24	123.4	-76.56
C1241	365007.121	5406758.298	178.268	63.93	123.86	-65.77
C1242	365022.143	5406927.731	262.903	50.52	133.26	-9.59
C1243	365114.27	5407017.877	300.463	15.24	316.53	22.15
C1244	365122.463	5407017.34	299.795	16.92	176.68	2.75
C1245	365187.758	5407045.19	297.972	16.15	336.23	-29.97
C1246	365182.576	5407057.512	302.615	19.51	153.55	45.59
C1247	365113.674	5407015.445	317.44	16.15	142.49	2.9
C1248	365095.155	5407009.22	317.33	18.29	132.42	0.06
C1249	365264.389	5406976.178	257.951	24.08	321.27	-53.97
C1250	365430.462	5406356.854	437.781	205	306.82	-49.43
C1251	365108.668	5407010.252	281.364	11.58	333.52	1.93
C1252	365262.08	5406979.469	258.449	70.63	321.67	-20.75
C1253	365215.934	5406947.782	107.721	179.95	141.6	-20.66
C1254	365272.94	5406967.011	224.307	30.17	326.2	30.58
C1255	365345.319	5406428.208	444.237	870	306.35	-53.5
C1256	365272.936	5406966.897	223.5	20.73	322.69	2.92
C1257	365273.125	5406966.602	222.643	19.2	322.26	-35.26
C1258	365276.51	5406961.929	223.4	17.37	145.56	0.91
C1259	365214.888	5406949.704	107.731	218	130.33	-31.28
C1261	365250.795	5406955.445	222.503	31.09	155.14	-19.47
C1262	365329.364	5407018.587	127.119	169.12	123.63	-18.08
C1263	365254.449	5406951.917	222.593	20.12	315.96	-25.79
C1264	365268.055	5406967.363	207.141	10.67	322.98	0.73
C1265	365274.679	5406958.233	206.164	34.9	141.23	-27.51
C1266	365227.234	5406950.285	205.537	43.59	148.38	-17.68
C1267	365329.246	5407018.649	127.119	228	126.46	-41.83

C1268	365231.168	5406943.146	205.158	15.85	327.48	-40.48
C1269	365230.123	5406944.76	209.721	44.5	334.48	38.74
C1270	365124.172	5406475.329	366.238	517	306.96	-62.53
C1271	365327.481	5407020.421	126.939	145.89	145.44	-15.83
C1272	365261.268	5407048.108	348.315	20.73	324	-26
C1273	365226.445	5406950.368	209.95	25	150.86	38.1
C1274	365329.125	5407017.809	127.079	160	139.35	-26.9
C1275	365273.823	5406959.551	210.468	17.07	138.83	40.61
C1276	365248.688	5406960.043	206.563	11.28	326.74	2.47
C1277	365251.309	5406955.656	206.144	42.37	148.83	-12.95
C1279	365257.748	5407029.423	241.313	49	150.34	15.87
C1280	365214.709	5406949.525	107.721	245.17	137.36	-40.16
C1282	365261.268	5407048.108	347.617	59.36	330.98	-22.95
C1283	365404.541	5407080.668	70.47	183.86	143.99	-6.92
C1284	365062.106	5406900.147	243.405	56.92	325.3	8.92
C1285	366143.274	5407313.825	457.468	241.5	326.62	-52.76
C1286	365404.374	5407080.831	69.862	215	144.2	-12.7
C1287	365303.312	5406948.718	119.467	114.52	145.26	-15.59
C1288	365062.158	5406900.11	242.808	49	326.52	-14.33
C1289	365062.242	5406900.011	242.509	48.67	326.09	-28.7
C1290	366263.291	5407134.294	445.602	582.5	328.37	-54.8
C1291	365303.299	5406948.906	119.079	136.7	140.91	-23.93
C1292	365404.143	5407081.133	69.125	238.7	146.7	-31.25
C1293	365079.351	5406907.091	261.877	35.66	143.57	-14.96
C1294	365303.332	5406949.559	119.069	147.3	127.89	-29.03
C1295	365345.832	5406349.463	451.002	864	309.41	-53.33
C1296	365098.612	5406910.569	261.179	24.84	143.45	-26.02
C1297	365099.438	5406911.883	261.159	36.88	98.56	-18.81
C1298	365303.283	5406949.61	119.069	180.05	148.5	-34

C1299	365391.593	5407073.094	70.719	188.25	145.25	3.33
C1300	364967.428	5406712.109	179.145	55.7	12	-90
C1301	364943.221	5406836.294	246.942	151.5	156.5	-21.75
C1302	365302.539	5406949.615	119.069	44	147.55	-44.66
C1303	365302.79	5406949.933	119.069	195	130.38	-44.26
C1304	364967.478	5406712.022	179.145	56.3	122	-85
C1305	365391.413	5407073.001	70.251	161.26	149.74	10.23
C1306	365391.385	5407073.141	69.314	229.5	147.44	-20.07
C1307	365239.188	5406862.354	96.094	140	136.93	-37.23
C1308	364943.329	5406836.026	247.022	140	156.34	-14.11
C1309	364967.036	5406712.344	179.145	21.33	302	-68
C1310	364967.371	5406712.154	179.145	103.02	122	-75
C1311	364997.454	5406745.631	244.671	9.45	123.51	1.51
C1312	365391.105	5407073.58	71.645	310.3	147.2	-34.64
C1313	365238.885	5406862.653	96.104	189	136.55	-49.19
C1314	364992.613	5406748.496	244.591	3.05	305.81	0.21
C1315	365008.726	5406756.287	244.362	9.14	124.34	30.31
C1316	364944.503	5406838.037	247.052	129	138.19	-21.54
C1317	364992.284	5406731.269	245.398	3.05	125.14	1.86
C1318	364985.742	5406734.149	245.518	10.36	307.08	2.23
C1319	365312.16	5406911.64	87.566	231.1	144.15	-60.59
C1320	365012.298	5406769.973	243.595	135.2	320.13	-13.58
C1321	364977.314	5406726.503	245.737	11.58	306.81	2.56
C1322	364981.726	5406723.957	245.637	7.1	126.27	0.01
C1323	364992.301	5406738.134	178.667	95.1	120.19	-78.15
C1324	365012.318	5406769.877	243.126	136.5	319.79	-31.19
C1325	365018.366	5406767.305	244.033	9.3	125.88	1.7
C1326	365312.365	5406911.443	87.566	195.3	144	-46
C1327	365020.181	5406756.001	244.252	4.57	302.78	2.78
C1328	365025.423	5406780.935	243.694	7.92	122.46	1.63
C1329	365026.76	5406783.471	243.655	13.41	118.37	0.26

C1330	365039.775	5406807.032	243.605	10.06	124.74	1.59
C1331	365391.404	5407073.031	69.394	196.95	149.87	-15.5
C1332	365313.024	5406909.117	87.566	108	156.77	-20.64
C1333	364965.712	5406833.061	246.892	113.8	162.51	-7.35
C1334	365035.314	5406792.493	243.824	5.4	125.09	-1.49
C1335	365047.884	5406819.806	243.704	5.18	125.18	2.55
C1336	365065.916	5406844.469	243.405	5.18	120.44	4.26
C1337	365059.475	5406848.3	243.107	15.24	297.43	1.99
C1338	365052.003	5406835.975	243.605	15.85	303.61	1.28
C1339	364984.614	5406732.74	244.79	140.5	324.94	-29.48
C1340	365034.978	5406810.843	243.605	7.32	304.13	0.61
C1341	365312.102	5406911.191	87.566	155.75	157	-52
C1342	364954.884	5406849.209	246.693	39.93	150.21	-29.22
C1343	365335.306	5407058.497	75.033	305.25	154.84	-30.89
C1344	364986.759	5406875.76	245.667	39.63	145.04	-29.61
C1345	365312.257	5406910.636	87.447	134	157.39	-36.14
C1346	365378.535	5406960.199	89.09	52.96	143.41	-3.01
C1347	365455.349	5407041.775	152.215	118.85	143.61	-29.95
C1348	365336.38	5407058.855	75.132	256.07	147.91	-28.97
C1349	365455.412	5407041.722	152.833	109.8	143.64	-8.09
C1350	365393.918	5406974.573	89.927	52.96	152.01	0.93
C1351	365408.158	5406988.156	90.306	61.49	142.24	2.43
C1352	365274.567	5406940.162	54.709	182.9	124.79	-29.73
C1353	364965.428	5406832.534	248.387	145.05	179.09	-6.74
C1354	365420.477	5407000.794	90.485	67.56	143.96	2.82
C1355	365328.942	5407017.96	127.667	275	145.88	-42.45
C1356	364966.102	5406834.553	246.952	111.11	127.72	-17.43
C1357	365274.249	5406940.772	54.21	200.6	114.25	-37.51
C1358	365440.174	5407009.723	91.661	75.74	143.53	4.32
C1359	364976.62	5406848.194	246.653	98.2	118.76	-9.14
C1360	365238.869	5406934.388	186.478	15.54	323.45	1.36

C1361	365244.034	5406928.226	186.776	25.3	141.38	2.49
C1362	365268.747	5406933.417	186.627	16.15	333.99	1.98
C1363	365272.54	5406928.076	186.856	10.36	141.32	1.92
C1364	365284.703	5406949.268	186.557	28.35	323.05	-36.19
C1365	364976.441	5406848.287	246.085	125.5	118.36	-31.05
C1366	365304.476	5406960.29	187.125	52.35	142.75	-29.45
C1367	365284.051	5406950.747	187.155	35.36	146.07	-24.68
C1368	365158.052	5406891.484	38.688	193.5	134.29	-7.08
C1369	365023.59	5406890.541	242.658	47.5	323.87	-35.21
C1370	365032.338	5406909.593	241.473	38.5	320.87	-34.94
C1371	365255.133	5407063.383	349.251	18.92	365.9	-16.16
C1372	365419.755	5407013.061	150.561	109.9	133.19	-18.5
C1373	364955.159	5406695.446	180.908	18.59	226	0.9
C1374	364954.898	5406694.937	180.918	17.68	210.65	0.52
C1377	364954.412	5406711.363	245.388	46.02	171.24	-65.89
C1378	365516.948	5407000.289	92.538	38.1	145.1	-1.1
C1379	365530.671	5407008.942	92.826	63.4	121.25	1.71
C1380	365517.01	5407000.494	95.347	34.75	143.7	46.51
C1381	364983.37	5406737.902	201.342	10.06	118.96	1.12
C1382	364991.296	5406745.95	200.356	10.36	128.62	1.28
C1383	364997.918	5406752.918	200.366	7.01	128.83	0.05
C1384	365506.218	5406992.754	92.378	54.75	145.1	0.49
C1385	365004.965	5406759.231	201.203	9.14	121.85	4.07
C1386	365012.314	5406767.257	201.661	10.36	129.05	4.43
C1388	364967.786	5406721.196	201.113	9.14	109.23	1.38
C1389	365472.039	5406986.535	91.212	48.46	159.76	2.36
C1390	364976.027	5406730.942	201.741	40.06	119.49	1.18
C1391	365378.803	5406959.812	89.021	49.38	142.21	24.01
C1392	365407.903	5406988.218	89.778	86.41	143.69	-13.22
C1393	365336.96	5407059.571	75.162	184.3	146.43	-43.91
C1394	365408.303	5406987.768	90.107	68.8	142.74	22.47
C1395	365462.191	5407158.429	70.201	396.5	142.89	-32.33

C1396	365423.414	5406966.782	67.043	46.56	316.82	1.37
C1397	365423.501	5406966.882	65.528	56.92	321.25	-30.6
C1398	365428.371	5406962.05	66.206	50.85	141.21	0.46
C1399	365430.787	5407022.446	151.05	104.57	141.38	-34.01
C1400	365410.653	5407052.807	69.374	580.6	144.13	-57.77
C1401	365434.498	5406981.056	68.059	51.44	325.35	25.88
C1402	365434.768	5406980.683	66.365	63.32	326.12	-34.98
C1403	365441.347	5407029.994	152.325	79	140.22	-20.94
C1404	365438.583	5406975.569	70.609	49.61	140.48	19.97
C1405	365437.96	5407108.806	70.031	494	153.44	-44.09
C1406	365372.589	5406933.509	89.29	39.19	144.75	1.59
C1407	365317.144	5406970.945	166.671	26	321.33	-28.88
C1408	365350.825	5406926.65	89.021	32.92	323.35	0.76
C1409	365313.417	5406946.442	167.976	14	143.02	1.83
C1410	365313.699	5406946.275	167.04	25.6	140.29	-29.09
C1411	365354.66	5406921.525	89.17	34.75	144.56	1.8
C1412	365308.155	5406953.385	167.957	9.5	321.47	2.65
C1413	365377.945	5406960.315	91.551	55.39	151.08	-55.81
C1414	365308.351	5406953.132	167.189	35	322.27	-45.15
C1415	365438.429	5407108.516	71.327	262	142.34	1.2
C1416	365320.091	5406981.129	167.568	54	159.49	-19.57
C1417	365392.847	5406974.859	92.408	56.61	157.44	50.74
C1418	365271.315	5406928.745	166.821	51.44	322.63	-27.85
C1419	365406.754	5406988.782	92.777	44	148.31	62.45
C1420	365438.389	5407108.401	72.054	192	144.33	25.01
C1421	365304.411	5406887.423	19.639	90	145	-29
C1422	365271.105	5406929.001	168.544	35.36	319.08	29.63
C1423	365274.624	5406923.919	168.126	16.15	143.83	25.24
C1424	365274.615	5406923.863	166.93	35.58	144.56	-28.94
C1425	365438.344	5407108.479	71.117	262	142.25	-19.09
C1426	365040.418	5406792.077	201.163	11.28	100.08	1.96

C1427	365040.251	5406792.734	201.163	15.88	72.26	1.63
C1428	365040.072	5406792.999	201.163	21.39	56.79	2.26
C1429	365304.411	5406887.423	19.928	81	145.48	-8.48
C1430	365438.297	5407108.544	70.709	361.5	142.99	-33.24
C1431	365037.012	5406792.808	201.063	13.72	363.55	2.17
C1432	365035.668	5406787.452	200.964	10.06	126.88	1.23
C1433	365032.434	5406789.259	200.964	13.41	310.37	0.05
C1434	365028.987	5406780.737	201.163	8.33	125.64	3.69
C1435	365038.929	5406794.542	201.163	21.03	21.38	0.48
C1436	365294.973	5406935.58	167.737	12.19	144.98	0.52
C1437	365304.331	5406887.414	20.745	71	146.63	16.56
C1438	365420.114	5407000.988	92.916	59	147.8	42.91
C1439	365294.617	5406936.088	166.522	17	144.51	-53.08
C1440	365448.093	5407137.54	71.287	310.5	147.61	-12.84
C1441	365381.057	5406922.565	65.947	65	322.22	-18.08
C1442	365292.443	5406940.489	167.957	29.26	326.87	12.03
C1443	365321.633	5406891.807	56.163	69	142.44	-18.68
C1444	365291.768	5406941.556	167	30	324.38	-25.79
C1445	365447.736	5407138.084	70.878	347.6	148.13	-29.41
C1446	364955.13	5406743.824	102.64	121.8	110.19	1.4
C1447	365352.965	5406853.688	57.319	15	329.65	-47.38
C1448	365381.032	5406922.498	66.704	58	321.96	14.3
C1449	364955.125	5406743.574	105.21	82	202.02	41.99
C1450	365310.833	5406904.777	55.934	155	134.27	-46.22
C1451	364930.041	5406733.151	103.138	94	106.07	2.14
C1452	365385.662	5406917.109	67.202	13	145.54	24.07
C1453	365393.213	5406938.344	66.953	52.5	319.53	24.26
C1454	364929.104	5406732.62	104.124	99.3	123.84	19.76
C1455	365303.702	5406948.827	120.404	60.27	116.36	-9.51
C1456	364929.215	5406732.552	103.128	83.4	124.39	1.97
C1457	365393.325	5406938.24	65.977	56	321.4	-14.57
C1458	364929.101	5406732.692	104.752	98.6	118.95	39.5

C1459	365347.372	5406930.941	56.9	139	144.34	-38.43
C1460	365479.356	5407175.217	70.161	343.5	125.19	-15.31
C1461	365393.408	5406938.176	66.186	63	321.51	-35.67
C1462	364915.535	5406708.188	103.457	75	122	11.48
C1463	364915.331	5406708.436	102.759	80.45	122.19	29.62
C1464	365396.392	5406933.954	65.468	67	140.52	-43.15
C1465	365479.168	5407174.13	70.051	327.5	146.91	-15.2
C1466	364969.449	5406781.627	102.341	117.85	121.66	6.29
C1467	365347.487	5406930.765	57.309	83	145.5	-18.36
C1468	365457.802	5407008.635	66.624	90	140.88	-9.18
C1469	365014.467	5406788.632	103.058	139.2	122.22	25.05
C1470	364955.052	5406744.187	102.212	147.6	112.69	-14.73
C1471	365347.572	5406930.579	57.946	63	146.25	1.8
C1472	365407.582	5406952.737	65.598	72.5	321.29	-18.71
C1473	365334.765	5406916.28	57.677	78.5	144.06	-6.36
C1474	365014.313	5406788.742	103.905	86.5	122.46	49.33
C1475	364954.714	5406743.511	102.311	145.4	135.27	-12.41
C1476	365397.138	5406933.247	66.684	16	140.61	3.08
C1477	365438.464	5406975.767	67.043	50.5	143.5	-14.15
C1478	365014.144	5406788.805	101.434	136	123.83	-17.2
C1479	365334.717	5406916.381	57.289	79.5	143.53	-20.91
C1480	365439.718	5407006.158	66.544	86	153.37	-14.38
C1481	365314.966	5406988.48	169.461	26.5	341.83	2.33
C1482	365014.203	5406788.774	101.833	115.1	123.45	2.7
C1483	365334.68	5406916.465	56.96	94	142.25	-32.76
C1484	365364.854	5406996.295	-7.31	48	164.5	3
C1485	365151.424	5406832.643	98.635	398	143.24	-74.82
C1486	365448.32	5407137.396	71.735	231.4	144.91	2.51
C1487	365086.319	5406960.4	246.663	18	324.13	-1.65
C1488	365101.837	5406967.785	248.566	195	327.26	0.15
C1489	365492.772	5406992.141	92.249	69	326.36	2.43

C1490	365331.518	5406920.645	57.638	21.1	318.01	-2.41
C1491	365454.105	5406986.154	93.335	70	325.41	31.08
C1492	365493.024	5406991.793	91.093	73.5	326.81	-31.06
C1493	365448.339	5407137.336	71.496	182.5	146.78	20.18
C1494	364929.488	5406733.898	104.742	106	120.96	54.81
C1495	365474.639	5407045.348	153.321	76.5	151.25	-12.33
C1496	365479.269	5407173.685	71.635	205.6	146.81	19.91
C1497	365478.366	5407044.652	153.321	18	240.91	-12.1
C1498	365455.61	5407041.841	153.012	80	146.4	-23.01
C1499	365413.79	5407098.143	70.41	139.9	322.03	-10.81
C1500	365410.731	5406954.424	65.947	90	149.15	-38.16
C1501	365008.401	5406786.523	100.159	399.3	319.31	-74.3
C1502	364946.175	5406759.378	104.772	99	120.38	49.95
C1503	364968.939	5406781.752	104.274	93	128.38	46.68
C1504	365327.078	5407030.883	7.654	364	152.28	-37.41
C1505	365005.907	5406796.718	103.935	95	127.31	57.15
C1506	365419.215	5406972.051	92.747	55.9	324	42.05
C1507	364916.741	5406792.574	180.261	31	12.73	-90
C1508	365431.862	5406985.209	92.687	46	323	35.48
C1509	364914.659	5406794.153	180.5	26	12.66	-90
C1510	364193.058	5406241.316	324.015	382.7	124.88	-46.01
C1511	364948.433	5406768.569	180.898	105	357.4	36.75
C1512	364954.289	5406744.166	101.584	191.5	114	-30.56
C1513	364953.646	5406744.355	101.584	269.3	122	-49
C1514	364952.537	5406842.373	181.377	22	12	-90
C1515	364284.11	5406344.03	312.687	292.5	126.59	-44.78
C1516	364961.792	5406851.791	201.462	114	120.61	25.7
C1517	364895.081	5406760.9	180.938	19	12	-90
C1518	365326.894	5407031.206	7.674	369	152.38	-43.85
C1519	364942.975	5406763.456	104.344	69	320.06	38.75
C1520	365404.158	5407081.316	69.214	423.6	149.85	-45.83
C1521	364934.985	5406789.29	181.944	58	293.78	44.26

C1522	364956.024	5406779.4	104.334	57.9	324.55	38.31
C1523	365185.772	5406941.472	260.193	67	146.21	-46
C1524	364929.485	5406732.896	101.674	164.6	124	-28.73
C1525	365403.792	5407081.446	69.085	472.7	157	-53.26
C1526	365326.695	5407031.531	7.584	433.9	154.33	-57.18
C1527	365448.631	5407011.785	93.026	61	130.53	24.88
C1528	364929.308	5406733.089	101.494	215.5	134.5	-42.5
C1529	365350.873	5406926.413	90.874	37.5	322.93	42.78
C1530	365345.868	5406929.284	57.12	650	151.09	-23.37
C1531	365177.718	5406946.184	261.339	64	196.41	1.28
C1532	365351.226	5406926.25	88.144	40.8	324.3	-33.68
C1533	365415.538	5406978.833	22.618	75	144.6	30.16
C1534	365415.146	5406979.068	21.114	81	154.96	4.81
C1535	365415.293	5407008.225	20.974	130	138.35	-9.25
C1536	364915.488	5406708.253	102.182	157.5	122.08	-29.71
C1537	365415.257	5406979.444	20.486	138	139.96	-29.63
C1538	365415.275	5407008.25	21.672	111	138.61	18.33
C1539	364929.493	5406732.902	101.574	240	125.35	-45.23
C1540	365371.473	5406938.306	114.406	21	142.78	0.23
C1541	365350.942	5406926.71	114.197	21.7	143.03	0.25
C1542	365414.95	5407008.767	20.576	150.2	139.38	-18.93
C1543	365415.481	5406979.322	20.795	105.5	144.61	-18.61
C1544	364915.297	5406708.312	101.843	240.5	123.33	-42.86
C1545	365327.302	5407031.341	7.963	454	136.96	-49.66
C1546	365433.219	5407015.218	21.442	113.5	143.53	8.63
C1547	365386.395	5406986.855	21.423	41	140.76	13.13
C1548	364952.141	5406737.141	180.988	115	316.26	38
C1549	365335.624	5406917.088	114.008	25	145.61	0.45
C1550	365433.183	5407015.217	20.755	147	144.88	-18.78
C1551	364897.883	5406683.306	101.693	166.5	122.66	-38.4
C1552	365314.368	5406909.239	113.808	23	146.21	2.15

C1553	365449.87	5407016.213	21.124	128	146.43	-3.03
C1554	364897.297	5406683.672	101.793	205	122.53	-48.8
C1556	365449.867	5407016.199	20.625	145	146.2	-19.75
C1557	364957.64	5406742.727	180.629	100	326.05	30.18
C1558	365468.551	5407014.728	20.386	155	147.81	-31.34
C1559	365372.325	5406968.962	20.107	108	140.51	-8.43
C1560	364979.35	5406842.974	180.968	29	357.91	0.43
C1561	364981.52	5406842.433	181.048	37	25.56	3.45
C1563	365372.253	5406968.959	21.313	91	141.63	8.01
C1564	365468.712	5407014.523	21.612	112.5	146.2	12.51
C1565	365371.823	5406968.87	22.21	102	142.86	28.8
C1566	365468.658	5407014.632	20.845	130.5	145.14	-13.49
C1567	365336.437	5406845.634	58.484	24	347.11	-1.1
C1568	365386.415	5406986.894	21.452	109	143.27	14.59
C1569	365314.763	5406829.445	58.624	18	326.36	0.74
C1570	365188.638	5406963.055	25.647	408	322.62	-79.38
C1571	365336.653	5406845.37	57	26	12	-90
C1572	365386.377	5406986.965	20.456	115	140.57	-8.22
C1573	365272.835	5406809.615	57.897	70.7	184.03	-63.58
C1574	365432.801	5407015.607	20.546	196	143.94	-37.16
C1575	365325.684	5407032.553	8.072	617	129.96	-65.16
C1576	365386.15	5406987.295	20.426	153	142.83	-20.75
C1578	365419.297	5407001.655	67.162	23	322.38	2.47
C1580	365327.243	5407032.94	8.012	561	122.86	-51.33
C1581	365185.844	5406943.351	260.203	53	325.39	-28.07
C1582	365469.021	5407014.08	23.186	88	147	35.85
C1583	365377.666	5406963.632	-7.679	188.2	147.44	-40.71
C1584	365494.951	5407030.956	22.379	113	145.19	18.98
C1585	365403.21	5406993.932	-6.234	175	146.12	-26.84
C1586	365294.354	5406805.456	-14.434	11	331.26	0.87
C1587	365299.7	5406812.549	-14.504	8	326.91	0.32

C1588	365302.374	5406807.56	-14.354	9	145.52	1.24
C1589	365307.522	5406820.979	-14.952	6	328.57	0.36
C1590	365310.01	5406817.645	-15.012	10.1	146.31	0.6
C1591	365321.894	5406819.41	-15.55	10.3	155.04	-1.26
C1592	365332.21	5406828.658	-15.57	15.2	333.21	-3.4
C1593	365334.746	5406821.679	-15.341	7	152.31	-1.04
C1594	365337.463	5406837.006	-15.659	8	322.82	0.94
C1595	365341.316	5406831.906	-15.659	7	142.82	0.95
C1596	365344.96	5406844.657	-15.958	6.5	326.39	0.68
C1597	365348.701	5406839.934	-15.849	9	146.69	0.51
C1598	365354.909	5406851.343	-15.978	8.7	321.73	-1.51
C1599	365368.303	5406852.251	-16.257	15	324.84	0.73
C1600	365371.255	5406867.168	-16.735	8.3	325.46	-1.13
C1601	365375.425	5406874.521	-17.054	6	324.98	0.11
C1602	365379.4	5406869.065	-16.885	12	138.92	0.28
C1603	365382.972	5406881.591	-16.755	13	324.47	0.76
C1604	365386.894	5406877.369	-16.905	14	141.14	0.3
C1605	365392.826	5406887.233	-17.084	13	323.91	0.65
C1606	365396.171	5406882.716	-16.994	13	145.41	-1.63
C1607	365495.038	5407031.006	21.084	156	144.57	-13.59
C1608	365130.662	5406844.178	-40.497	208	144.72	-49.37
C1609	365495.036	5407031.264	20.506	170	141.06	-28.95
C1610	365104.847	5406014.624	439.774	397	289.17	-52.12
C1611	365130.333	5406844.718	-40.537	252	145.32	-69.39
C1612	365124.559	5406669.71	308.025	135.6	287.25	-32.56
C1613	365294.831	5406913.661	84.806	32	176.08	0.55
C1614	365495.114	5407031.259	20.516	181	123.02	-19.3
C1615	365139.092	5406853.048	-41.005	421	120	-90
C1616	365370.627	5407007.402	-7.868	56	110.79	-28.61
C1617	365369.834	5407007.729	-7.988	101	107.46	-55.35
C1618	365124.709	5406670.424	307.895	78	317.36	-34.28
C1619	365495.002	5407031.005	22.399	134	126.05	20.75
C1620	365447.538	5407137.965	70.46	400	147.05	-43.06

C1621	365483.944	5407023.923	20.546	149	145.79	-44.14
C1622	365483.914	5407023.964	20.994	170	145.33	-24.52
C1623	365052.267	5406836.191	242.738	89.75	294.68	-29.41
C1624	365417.354	5406948.331	67.481	18	144.76	25.26
C1625	365313.195	5406977.678	-15.002	282	145.16	-32.96
C1626	365147.484	5406903.265	-35.147	33	145.06	-18.63
C1627	365147.204	5406903.617	-35.784	202	145.93	-42.17
C1628	365060.065	5406848.27	227.555	87	299.67	-28.81
C1629	364911.162	5406783.484	180.44	38.5	122	-46
C1630	365313.019	5406977.835	-14.872	331	144.48	-54
C1631	364974.722	5406832.35	179.763	37	310.03	-34.4
C1632	364946.52	5406832.386	181.436	420	122	-32
C1633	365190.775	5406961.775	25.288	657.8	143.27	-79.62
C1634	365144.392	5406907.655	-35.565	383	142.33	-62.32
C1635	365484.094	5407023.835	23.076	101	145.45	28.43
C1636	365494.982	5407031.015	22.728	175	109.49	15.16
C1637	365144.312	5406904.116	-35.814	277.5	206.19	-50
C1639	365423.929	5407003.478	281.543	223.5	141.08	-35.28
C1640	365436.46	5407111.609	69.892	77.8	143.57	-64.13
C1641	364956.452	5406807.452	179.932	42	301.57	-28.1
C1642	365144.013	5406903.591	-34.2	150	206.19	14.21
C1643	364938.438	5406790.556	179.245	30	310.21	-36.82
C1644	365103.988	5406968.651	250.011	15	327.82	-42.21
C1645	365436.46	5407111.609	304.757	23	143.57	-64.13
C1646	365120.206	5406976.654	249.941	21	324.32	-37.13
C1647	365103.725	5406968.979	252.721	38	324.63	39.5
C1648	365401.204	5407002.073	22.03	8	324	2
C1649	365401.204	5407002.073	20.635	18	324	-74
C1650	365436.268	5407110.852	69.882	638	144.38	-64.76

C1651	365395.631	5406972.702	117.425	16	327.63	45.72
C1652	365396.249	5406973.212	114.346	13	328.03	-26.75
C1653	365396.665	5406972.587	114.027	24	329.37	-53.34
C1654	365387.436	5406963.286	117.136	23	313.53	39.11
C1655	365388.723	5406963.724	114.496	19	321.6	-25.9
C1656	365388.647	5406963.472	114.207	26	321.67	-50.37
C1657	365379.007	5406958.985	114.287	18	331.35	-28.28
C1658	365378.717	5406958.873	113.888	24	331.35	-50.81
C1659	365372.982	5406946.93	116.448	54	316.88	33.63
C1660	365374.561	5406948.654	114.715	36	317.51	-15.08
C1661	365374.853	5406948.421	114.227	32	319.96	-37.58
C1662	365367.276	5406942.959	115.93	54	319.63	30.66
C1663	365366.347	5406942.384	113.938	33	324.78	-18.85
C1664	365366.509	5406942.144	113.28	15	324.28	-39.8
C1665	365354.597	5406936.395	115.861	19	324.3	30.48
C1666	365355.342	5406935.724	113.46	29.6	322.55	-19
C1667	365355.369	5406935.719	113.37	27	325.35	-40.08
C1668	365346.857	5406931.568	114.526	27	322.98	7.98
C1669	365339.295	5406926.784	115.841	30	322.31	28.5
C1670	365339.416	5406926.958	113.549	29	324.68	-24.53
C1671	365339.511	5406926.52	122.974	31	323.05	-49.98
C1672	365405.974	5406962.425	90.007	30	329.53	-16.05
C1673	365405.623	5406962.381	89.688	40	333.58	-31.38
C1674	365397.131	5406955.404	89.599	28.6	328.33	-16.46
C1675	365397.219	5406955.283	89.12	38	326.84	-32.75
C1676	365397.44	5406954.825	89.07	30	325.92	-52.53
C1677	365386.636	5406947.409	89.768	36	323.73	-15.73

C1678	365386.901	5406947.095	89.369	40	324.85	-32.04
C1679	365387.071	5406946.86	89.08	41.5	324.92	-45.29
C1680	365376.687	5406944.711	88.901	34	320.98	-30.5
C1681	365361.648	5406930.475	88.971	46	323.65	-17.77
C1682	365361.59	5406930.47	88.363	39	321.06	-34.76
C1683	365361.777	5406930.247	87.875	29.6	321.28	-47.27
C1684	365350.769	5406926.523	90.864	37	325.19	28.47
C1685	365350.117	5406926.162	88.014	36.5	317.78	48.08
C1686	365349.992	5406926.504	88.094	28	318.53	-48.31
C1687	365338.37	5406925.027	88.154	19	318.05	-25.84
C1688	365339.068	5406924.335	88.024	40	314.71	-51.13
C1689	365339.568	5406925.265	87.835	25	324	-67
C1690	365349.756	5406923.642	88.413	53	324	-78
C1691	365332.453	5406919.865	61.553	35.6	321	58.6
C1692	365331.317	5406920.376	59.341	32	326.53	37.15
C1693	365426.132	5406977.195	65.986	32	313.1	-36.6
C1694	365437.603	5407012.948	66.863	19	325.73	-24.76
C1695	365442.433	5406985.801	67.013	38	323.41	-37.3
C1696	365320.823	5406917	60.268	14	318.41	53.3
C1697	365321.461	5406918.079	58.993	15	325.5	38.2
C1698	365425.995	5406977.368	66.246	39	308.08	-18.25
C1699	365460.956	5406989.77	90.973	53	324.95	-15.91
C1700	365434.977	5406981.316	68.158	42.8	325.15	13.73
C1701	364897.586	5406683.325	101.664	144	143.38	-43.53
C1702	364897.265	5406683.735	101.763	168	145.38	-57.24
C1703	365057.283	5406833.662	243.943	132	134.41	2.33
C1704	365366.439	5406942.069	113.29	21	319.11	-39.95
C1705	365523.152	5406992.558	95.516	36	325.51	60.08
C1706	365377.104	5407122.137	420.725	69	324.86	-20.21

C1707	365395.068	5406953.701	89.379	44	324	-47
C1708	365523.087	5406992.783	94.351	36	328.9	- 37.56
C1709	365377.069	5407122.186	421.133	83	324.35	-4.8
C1710	365509.344	5406988.523	95.128	33	316.53	59.21
C1711	365377.069	5407122.186	421.542	87	325.08	9.91
C1712	365509.422	5406988.739	94.291	18	321.76	46.43
C1713	365189.305	5406959.254	25.308	373	212.2	- 57.04
C1714	365506.117	5406993.013	95.835	24	146.56	62.58
C1715	365377.107	5407122.151	421.89	54	325.21	23.05
C1716	365506.286	5406992.864	94.949	24	140.51	26.93
C1717	365495.991	5406985.94	95.457	17.6	133.86	68.58
C1718	365389.697	5407136.17	421.492	24	320.61	17.55
C1719	365389.587	5407136.288	420.954	69	320.01	0.15
C1720	365446.499	5406976.35	90.874	49	322.76	-9.45
C1721	365347.769	5407102.376	418.613	90	323.93	- 17.33
C1722	365448.238	5406977.819	90.475	57	323.25	- 19.78
C1723	365347.736	5407102.575	419.041	84	325.9	-4.63
C1724	365334.256	5407087.603	417.965	95.5	327.35	-10.9
C1725	365418.388	5406971.402	89.977	38	318.73	- 26.61
C1726	365453.17	5406985.279	90.874	51	324.71	- 18.08
C1727	365347.767	5407102.498	419.469	89	324.26	7.93
C1728	365418.275	5406971.32	90.376	36	321.33	- 16.58
C1729	365347.527	5407102.83	419.918	89	323.78	16.51
C1730	365217.99	5406912.292	-55.481	172	218.21	- 17.14
C1731	365446.211	5407005.477	44.477	24	335.8	- 23.73
C1732	365449.223	5407020.449	44.058	28.6	145.55	- 27.57
C1733	365446.211	5407005.477	43.998	29	334	-43
C1734	365449.219	5407020.471	43.998	25.6	143.63	- 47.06
C1735	365448.296	5407019.938	47.406	48	145.25	46.68
C1736	365440.4	5407017.85	47.117	39.6	140.77	50.54
C1737	365445.85	5407005.771	45.592	33.6	336.12	18.5

C1738	365443.322	5407001.607	44.267	30	322.73	-29.95
C1739	365440.365	5407017.899	46.987	26	144.6	31.86
C1740	365334.241	5407087.555	418.423	92	325.63	4.38
C1741	365217.959	5406912.283	-55.391	200	217.45	-38.23
C1742	365440.489	5407017.915	44.776	36	143.38	2.05
C1743	365443.296	5407001.625	44.686	35	323.96	-16.19
C1744	365440.479	5407018.031	44.068	37.6	143.57	-20.08
C1745	365443.463	5407001.412	45.722	33.6	323.55	18.21
C1746	365440.35	5407018.123	44.028	34	143.56	-31.22
C1747	365428.503	5406995.678	46.977	27.6	138.55	51.21
C1748	365423.305	5406997.076	44.337	36	322.04	-37.84
C1749	365333.7	5407087.398	418.005	76	310.55	-7.51
C1750	365407.162	5406980.46	45.533	9	324.62	2.63
C1751	365432.619	5407015.228	46.858	40	138.48	29.34
C1752	365422.934	5407012.388	44.038	34	144.34	-21.19
C1753	365416.545	5406990.538	44.497	36	324.15	-36.94
C1754	365239.675	5406900.043	-55.192	232	210	-38.07
C1755	365416.246	5406990.865	44.865	29	322.41	-19.69
C1756	365416.289	5406990.822	46.111	22	322.01	18.5
C1757	365409.992	5406984.225	44.686	39	321.4	-36.67
C1758	365432.61	5407014.728	47.266	35	146.5	-20.3
C1759	365409.902	5406984.332	45.035	35	320.19	-21.09
C1760	365432.587	5407014.761	43.879	37	144.21	-30.42
C1761	365417.876	5407003.824	43.68	32	147.04	-39.98
C1762	365410.393	5407000.38	43.421	30	143.09	-39.35
C1763	365422.809	5407012.68	47.485	30	145.43	49.69
C1764	365418.202	5407003.356	43.939	28	146.02	-25.18
C1765	365410.449	5407000.422	43.919	25	139.76	-24.67

C1766	365410.412	5407000.32	44.287	15	143.45	-7.75
C1767	365402.363	5406994.862	44.128	32.6	141.5	-25.41
C1768	365417.89	5406957.905	66.534	38.5	322.1	-21.3
C1769	365432.827	5406999.476	44.726	35.6	322.5	-30.75
C1770	365406.251	5407004.975	44.576	7	322.52	1.35
C1771	365417.834	5406958	66.734	53	325.75	-12.2
C1772	365432.519	5406999.834	44.467	59	322.82	-22.92
C1773	365413.586	5406979.518	45.483	4.1	142.44	2.48
C1774	365420.113	5406985.764	45.413	4	143.65	0.03
C1775	365056.861	5406833.171	244.282	134	136.9	15.58
C1776	365423.32	5406966.109	66.774	46	314.8	-12.3
C1777	365413.608	5406994.696	66.275	15	322.75	-23.6
C1778	365396.495	5406989.07	45.184	18	144.5	-25.5
C1779	365066.968	5406846.256	244.8	125	121.11	29.31
C1780	365425.271	5407010.031	66.455	16.8	322.7	-26.56
C1781	365396.213	5406988.198	45.064	24	146.6	-42.6
C1782	365419.971	5406983.846	65.867	19.2	324	-51
C1783	365363.456	5407113.007	419.161	75	326.4	-10.68
C1784	365463.887	5406984.768	94.66	37.6	101.7	61.51
C1785	365021.516	5406749.264	163.334	128.6	119.21	14.78
C1786	365303.109	5406889.493	18.882	323	218.16	-53.88
C1787	365433.314	5406980.236	66.863	42.6	324.25	-12.05
C1788	365465.186	5406985.104	92.767	44	112.63	40.81
C1789	365432.298	5406969.005	90.077	52	322.56	-22.06
C1790	365432.298	5406969.005	90.077	4	322.58	-10.78
C1791	365433.373	5406980.019	66.365	50	322.11	-26.16
C1792	365056.607	5406832.926	244.691	126	133.11	20.18
C1793	365363.48	5407112.888	419.579	88	324.45	2.53
C1794	365021.327	5406749.337	162.686	104	120.91	-6.2
C1795	365263.836	5407049.523	296.149	24.2	329.5	-21.7
C1796	365056.552	5406832.985	244.681	136	130.43	26.51
C1797	365363.618	5407112.68	420.247	134	324.4	15.53

C1798	365266.507	5407010.047	258.928	35	323.64	-16.14
C1799	365272.616	5407017.126	259.217	31.1	324.65	-20.26
C1800	365302.757	5406888.991	18.962	263	219.4	-35.86
C1801	365289.461	5407019.694	259.236	39.6	338.3	-15.85
C1802	365265.592	5407029.843	278.036	24	322.66	-26.21
C1803	365198.737	5406834.976	-45.777	134	210.66	-47.21
C1804	365056.507	5406832.927	242.897	131	141.93	-13.63
C1805	365334.392	5407087.602	417.258	99	309.08	-19.46
C1806	365280.178	5407034.219	278.305	42.5	337.03	-17.9
C1807	364928.382	5406809.473	182.184	41.1	125.98	13.05
C1808	365270.8	5407039.343	277.817	25.5	326.8	-24.2
C1809	365198.316	5406834.313	-45.259	112	209.55	-21.28
C1810	364934.553	5406822.758	182.881	57.6	120.83	38.14
C1811	365217.545	5406911.798	-54.355	139	221.31	-4.76
C1812	364934.585	5406822.731	182.841	44.6	123.45	20.82
C1813	365274.264	5407030.024	258.888	24	328.98	-20.6
C1814	364933.64	5406821.343	184.136	59.5	121.15	52.8
C1815	365342.663	5406921.962	114.287	12	144.33	1.46
C1816	365128.321	5406770.021	313.415	32	297.43	-40.95
C1817	365371.383	5406938.636	113.489	34	139.03	-34.25
C1818	364945.524	5406831.887	185.003	56.5	122.85	53.59
C1819	365377.565	5406943.261	114.884	15	140.21	1.55
C1820	364945.678	5406831.862	183.827	50.6	125.71	21.15
C1821	365377.678	5406943.343	113.788	31.9	138.43	-34.58
C1822	365198.259	5406834.272	-44.96	17	209.4	-12.01
C1823	364956.741	5406843.097	183.758	48.6	126.22	28.56
C1824	365198.436	5406834.659	-45.677	117	210.15	-36.16
C1825	365325.842	5406911.893	113.689	13.3	146.76	3.48
C1826	365130.492	5406945.963	-35.107	171	211.81	-31.41

C1827	364956.181	5406842.456	185.103	40.5	119.65	50
C1829	365360.694	5406931.982	114.187	11.7	144.23	2.36
C1830	364955.361	5406842.48	186.149	63.1	121.94	64.86
C1831	365360.62	5406932.101	113.29	17.65	145.03	-32.33
C1832	365219.596	5406911.319	-54.106	141	220.3	5.01
C1833	365130.349	5406945.564	-34.898	145.5	211.11	-22.14
C1834	365383.521	5406949.784	114.984	17.4	149.56	1.35
C1835	364934.687	5406821.311	181.068	39.1	120.38	-17.61
C1836	364926.182	5406809.016	180.908	30.6	120.26	-19.45
C1837	365390.66	5406958.509	84.597	11	128.41	1.06
C1838	365021.586	5406749.253	163.404	100	122	34
C1839	365451.37	5406972.778	90.475	26.8	134.31	-22.5
C1840	365130.358	5406945.534	-34.28	154	210.2	-7.35
C1841	365443.77	5406968.645	90.276	21	144.08	-23.11
C1842	365219.486	5406911.129	-53.737	128	218.01	15.03
C1843	365435.864	5406964.575	89.778	48.5	143.06	-29.71
C1844	365120.642	5406977.093	252.771	27	323.4	34.08
C1845	365421.703	5406953.542	89.379	37.2	143.21	-27.98
C1846	365415	5406949.33	89.18	24.6	152.48	-30.98
C1847	365023.013	5406749.891	165.546	125.5	116.11	45.35
C1848	365400.697	5406946.899	89.379	29	147.73	-21.13
C1849	365191.665	5406807.199	312.717	76	302.15	-8.85
C1850	365391.326	5406942.126	88.782	36.5	140.85	-26.35
C1851	365378.193	5406938.949	88.782	33.3	138.85	-24
C1852	365142.711	5406905.833	-35.575	137	202.76	-37.98
C1853	365378.288	5406938.92	89.479	23.6	137.48	1.8
C1854	365191.689	5406807.216	312.647	80	303.03	-22.91
C1855	365372.715	5406933.761	88.483	35.2	142.18	-25.18
C1856	365365.242	5406925.411	89.28	19.8	143.26	1.8
C1857	365435.946	5406964.461	90.575	16.4	142.43	0.05
C1858	365191.578	5406807.284	313.763	69	299.3	10.55

C1859	365451.354	5406972.68	90.973	18.8	143.15	0.73
C1860	365142.553	5406905.608	-35.316	128.6	205.18	-27.46
C1861	365037.41	5406771.305	324.424	152	122.98	-48.98
C1862	365522.501	5406992.655	91.721	20	328.61	-28.98
C1863	365153.823	5406788.698	313.185	56.5	302.83	-18.91
C1864	364992.811	5406731.428	163.125	133	120.29	2.84
C1865	365142.408	5406905.416	-34.997	98.6	206.01	-14.59
C1866	365484.787	5406983.049	90.575	30	153.2	-24.11
C1867	365153.272	5406789.188	314.331	40	302.08	14.76
C1868	365435.628	5406980.059	89.877	31	145.13	-22.56
C1869	365130.088	5406946.486	-35.246	168	233.9	-37.75
C1870	365430.704	5406971.172	89.579	47	147.68	-29.3
C1871	365435.469	5406979.783	93.564	23	147.98	52.13
C1872	364976.544	5406706.784	162.557	143.6	120.1	-8.9
C1873	365037.327	5406771.368	324.314	164	122.1	-54.1
C1874	365518.686	5406998.127	72.144	37	143.18	3.21
C1875	365518.671	5406998.03	72.542	40	144.8	18.6
C1876	365506.814	5406992.135	71.845	48	150.06	2.25
C1877	365103.63	5406969.009	250.34	7	328.05	36.01
C1878	365506.888	5406992.016	72.741	41	150.66	26.46
C1879	365495.342	5406985.643	71.745	44	145.46	3.4
C1880	365495.648	5406985.68	72.642	38.7	143.26	29.91
C1881	365036.081	5406762.194	324.473	155	123.11	-34.81
C1882	365414.845	5406962.503	89.409	40	143.35	-29.88
C1883	365495.217	5406985.935	75.88	33.7	151	64.8
C1884	364976.683	5406706.711	163.692	100.1	122.48	18.53
C1886	365459.041	5406979.456	90.724	31.3	145.08	-19.91
C1887	365481.458	5406974.194	72.741	24	144.73	32.88
C1888	365150.173	5406962.944	412.675	78	324.7	-5.25
C1889	365464.52	5406984.609	90.625	35	145.41	-16.97
C1890	365496.459	5406968.55	72.642	37.7	322.86	25.25

C1891	365486.766	5406965.79	72.442	41	323.21	20.25
C1892	365495.18	5406985.884	70.848	55	145.18	-25.85
C1893	365464.537	5406984.449	91.212	32.6	146.64	1.53
C1894	364985.652	5406724.503	164.031	88	122.56	22.75
C1895	365150.173	5406962.944	410.881	66	324	-36
C1896	365488.535	5406979.356	70.749	48	144.78	-20.78
C1897	365465.467	5406984.887	92.099	21.67	152.09	33.44
C1898	365488.571	5406979.307	70.609	66.7	145	-31.41
C1899	365463.947	5406984.787	94.66	35.8	143.43	59.28
C1900	364985.757	5406724.308	162.218	112.6	124.68	-18.3
C1901	365092.377	5406962.811	249.005	45.6	309.95	47.45
C1902	365150.572	5406963.381	413.173	83.5	324.35	11.83
C1903	365037.008	5406771.569	324.453	182	120.21	-59.53
C1904	365446.054	5406981.756	68.168	75.2	145.31	-14.51
C1905	365330.886	5407138.462	368.798	12.6	153.1	44.5
C1906	364985.731	5406724.326	162.138	137.6	125.33	-30.58
C1907	365328.39	5407140.902	368.748	9	347.56	37.65
C1908	365422.681	5406980.104	114.994	18.8	141.85	2.38
C1909	365445.661	5406981.719	70.29	25.4	148.93	34.93
C1910	365283.816	5406986.604	399.554	76.8	324.71	4.41
C1911	365422.918	5406980.288	114.008	35	144.4	-31.75
C1912	365416.837	5406976.119	114.884	18.8	141.2	3.5
C1913	365446.078	5406981.774	68.178	96	139.88	-29.36
C1914	365270.312	5406969.43	399.245	83	325.3	4.53
C1915	365409.144	5406970.289	115.064	20.6	143.06	2.35
C1916	364962.193	5406679.39	162.507	74	118.25	-27.28
C1917	365409.078	5406970.5	113.948	35.7	144.05	-30.01
C1918	365409.044	5406969.575	116.548	13.6	142.38	42.05
C1919	365270.118	5406969.647	399.813	81	323.92	21.38
C1920	365400.675	5406966.725	114.954	20.6	148.01	2.13
C1921	365400.431	5406966.807	114.077	24.4	146.4	-27.06
C1922	365392.426	5406959.208	116.787	15	141.53	43.98

C1923	365258.651	5406954.775	397.75	84.6	323.41	6.6
C1924	365391.377	5406958.917	114.665	17.6	143.71	2.88
C1925	365391.427	5406958.916	114.585	23.6	141.08	-24.43
C1926	365518.653	5406975.003	25.368	47.5	143.95	33.51
C1927	364976.493	5406706.82	162.268	128	123.18	-30.06
C1928	365391.421	5406959.147	113.918	40	137.06	-41.75
C1929	365148.281	5406906.496	384.161	85.7	323.78	22.03
C1930	365506.047	5406971.455	22.768	73	144.05	-21.36
C1931	365420.31	5406984.758	117.076	15	321.81	51.33
C1932	365423.328	5406980.659	116.678	11.6	137.36	41.4
C1933	365432.534	5406971.509	68.587	19.5	139.73	32.9
C1934	365415.908	5406975.595	117.076	11.6	137.56	51.36
C1935	365432.165	5406971.44	66.285	83	137.23	-26.9
C1936	365416.714	5406976.425	113.699	17.6	136.85	-46.73
C1937	365087.485	5406876.114	376.111	55.6	324.67	18.39
C1938	365383.063	5406949.205	114.336	26.6	149.2	-24.68
C1939	365488.516	5406979.366	70.579	23.7	142.86	-49.45
C1940	365383.008	5406949.214	113.778	14.6	129.01	49.71
C1941	365379.357	5406944.793	114.167	12.6	148.26	52.98
C1942	365114.033	5406968.726	413.283	29.6	323.58	-16.46
C1943	365470.545	5406976.527	70.848	44.8	144	-25
C1944	365379.634	5406944.956	110.57	26.6	143.86	-60.23
C1945	365234.992	5406939.877	394.413	2	323.33	8.43
C1946	365371.171	5406938.877	113.768	8.9	137	51.06
C1947	365360.232	5406931.783	113.011	11.6	140.03	43.06
C1948	365359.096	5406931.084	113.29	29.6	135.75	-52.98
C1949	365470.552	5406976.569	70.011	63	141.66	-36.95
C1950	365198.376	5406930.956	391.384	69	326.36	22.93
C1951	365121.9	5406973.497	413.591	13	327.03	-7.1
C1952	365414.836	5406962.447	89.409	29.6	144.61	-48.08
C1953	365427.278	5406977.284	91.84	14.6	328.21	33.85

C1954	365448.299	5406977.53	92.986	29.6	329.08	39.16
C1955	365198.849	5406931.274	391.195	73	347.35	10.23
C1956	365448.032	5406977.695	91.81	23.6	324.36	14.68
C1957	365441.208	5406978.815	116.379	37.5	327.52	34.61
C1958	365419.146	5406958.37	92.388	35	323.76	39.89
C1959	365441.12	5406978.851	116.359	29.6	348.39	35.1
C1960	365391.472	5406940.935	90.854	14.6	143.68	20.53
C1961	365121.9	5406973.497	413.591	87.5	327.03	-7.1
C1962	365441.136	5406978.862	116.339	35	369.86	27.46
C1963	365450.597	5406991.8	114.366	23.6	140.03	-10.44
C1964	365372.406	5406933.796	91.083	26.6	146.16	39.55
C1965	365450.58	5406991.788	114.237	28	142.61	-36.39
C1966	365404.73	5407080.681	71.825	122.5	145.85	34.65
C1967	365441.436	5406990.673	114.376	27	142.98	-31.27
C1968	365139.311	5406967.475	410.393	79.5	323.65	-9.1
C1969	365417.293	5406983.895	115.392	7	289.82	16.18
C1970	365417.838	5406983.671	116.867	10.5	292.71	48.65
C1971	365392.202	5406923.883	20.347	92	144.6	-32.51
C1972	365139.447	5406967.338	412.894	55.5	323.03	-27.23
C1973	365528.49	5406961.964	24.561	33	321.35	23.36
C1974	365168.43	5406959.608	413.014	65	324.25	1.36
C1975	365404.224	5407079.895	71.107	145.5	144.9	25.18
C1976	365431.493	5406969.571	93.195	36	322.2	39.91
C1977	365168.449	5406959.597	412.525	63.5	325.23	-14.93
C1978	365528.43	5406962.081	22.927	42	322.5	-32.88
C1979	365409.343	5407017.448	-6.733	169.6	140.6	-35.3
C1980	365168.479	5406959.557	412.087	47.5	324.73	-30
C1981	365517.104	5406956.374	24.521	42.5	324.75	34.86
C1982	365168.38	5406959.608	413.392	88.5	324.26	13.63
C1983	365507.87	5406957.243	25.567	36	322.88	44.27
C1984	365168.554	5406959.623	412.256	73.5	330.68	-25.05
C1985	365507.19	5406957.738	22.558	27.5	325.08	-22.01
C1986	365168.722	5406959.375	411.938	55	328.3	-39.2

C1987	365510.32	5406952.103	22.419	42.6	143.9	-41.43
C1988	365127.844	5406666.384	308.005	6	318.28	-35.15
C1989	365168.608	5406959.651	412.824	106	333.55	-5.31
C1990	365492.211	5406946.966	22.827	38	144.34	0.21
C1991	364967.385	5406825.296	235.186	15	118.98	0.48
C1992	364966.734	5406825.615	234.17	17.7	122	-40
C1993	364969.933	5406835.809	234.937	17.8	122.99	0.41
C1994	364969.841	5406835.902	233.901	29.8	121.31	-39.52
C1995	365168.473	5406959.701	413.133	112.5	328.3	5
C1996	364975.504	5406840.732	235.017	16	122.82	8.611
C1997	365423.446	5407025.525	-6.573	40	145.45	-43.2
C1998	364975.05	5406841.07	234.15	25	121.67	-40
C1999	365423.46	5407025.523	-6.523	40	146.26	-27.9
C2000	364992.283	5406865.796	235.654	28	124.06	1.42
C2001	364995.705	5406874.608	235.854	27.8	124.23	-1.06
C2002	365439.76	5406975.051	-6.005	106	137.06	-41.93
C2003	364995.67	5406875.645	235.804	35	88.02	-1
C2004	365168.443	5406959.691	413.422	108	328.2	14.6
C2005	365205.567	5406928.953	391.813	12	344.15	26.48
C2006	365205.502	5406929.128	391.862	52.6	343.58	27.78
C2007	365434.657	5406979.183	-6.075	48	315.6	-50.61
C2008	365488.801	5406951.744	25.338	55.7	326.51	48.6
C2009	365400.016	5406947.567	49.229	67	139.05	-21.78
C2010	365139.687	5406966.87	412.625	67.7	324.5	-43.7
C2011	365465.345	5406929.166	22.728	57	316.46	20.5
C2012	365372.08	5406949.795	52.716	80.5	143.43	-18.08
C2013	365360.355	5406950.898	54.091	86.6	143.03	-17.51
C2014	365139.812	5406967.158	412.525	65.6	324.9	-54.5
C2015	365139.87	5406967.027	412.495	65.6	321.68	-69.51
C2016	365210.34	5406961.287	411.071	45	349.53	19.28
C2017	365248.703	5406974.054	412.187	56.6	324.76	20.75
C2018	365018.472	5406903.849	392.6	39.6	327.06	2.96
C2019	365332.901	5406992.442	367.682	113.6	320.9	25.15

C2020	365049.063	5406925.507	394.941	20	352	21
C2021	365048.959	5406925.481	394.941	10.8	352	5
C2022	365019.197	5406903.683	391.703	41.7	328.13	-19.63
C2023	365007.947	5406897.906	392.331	39.9	318.56	-7.73
C2024	365032.396	5406915.413	392.799	49.9	331.08	-3.78
C2025	365074.916	5406729.978	41.298	86.6	143.7	-19.76
C2026	365074.942	5406729.96	41.179	126	141.86	-49.18
C2028	365072.767	5406711.89	41.737	120	142.75	-44.66
C2030	365093.092	5406945.352	401.048	83	322.21	8.31
C2031	365101.4	5406948.627	402.712	101	333.1	12.78
C2032	365116.471	5407015.298	442.404	16	321.76	-35.15
C2033	365139.026	5407019.531	446.05	27	322	-40
C2034	365137.257	5407025.213	448.242	34.5	320.8	8.1
C2035	365095.615	5407007.357	439.176	58.8	326	-50
C2036	365094.824	5407008.45	439.375	38.5	328.26	-24.5
C2037	365194.526	5406812.283	314.202	37	315.61	21.13
C2038	365194.333	5406812.057	314.202	36.5	311.03	19.1
C2039	365194.265	5406812.082	314.212	32	293.48	18.96
C2040	365183.244	5406800.533	314.172	61	305.2	18.5
C2100	365286.46	5407110.75	442.91	68.9	312	-35
C2101	365269.46	5407095.48	445.81	89.7	312	-30
C2102	365044.77	5406938.67	406.21	67.9	312	-15
C2103	365004.52	5406897.35	393.64	47.8	312	-15
C2104	364975.65	5406858.19	368.6	107.7	312	-40
C2105	364974.61	5406859.38	369.51	104.4	312	-8
C2106	365157.28	5406885.01	371.64	60	312	-30
C2107	365225.48	5407047.49	453.6	101.2	312	-30
C2108	365186.21	5406793.66	313.38	84.5	312	-45
C2109	365161.71	5406762.16	314.42	97.4	312	-55
C2110	365685.67	5407227.27	410.49	79.9	15	-5
C2111	365629.89	5407193.83	403.94	68.3	320	-25
C2112	365654.39	5407202	404.81	80.5	10	-30
C2113	365453.2	5407197.62	426.06	98.3	330	-5
C2114	365347.06	5407239.86	490.44	152.6	150	-55
C2115	365125.44	5407053.33	460.88	74.4	132	-60
C2116	365110.77	5406974.03	415.23	86.3	336	-3

C2117	365219.34	5407452.4	355.86	92.6	206	-38
C2118	365448.11	5407599.75	372.81	113.4	140	-31

Appendix Three – Potential Open Pit Mineral Resource Estimate – Cleveland Project, Elementos Ltd

Potential Open Pit Mineral Resource Estimate

Cleveland Project
Elementos Ltd

Report No: MG2018_09

September 2018

Document Issue and Approvals

Document Information

Project:	Cleveland Project
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Contributors

	Name	Position	Signature	Date
Prepared by:	Chris Grove	Principal Geologist		20/09/2018
Reviewed by:				
Approved by:				

Distribution

Company	Attention	Hard Copy	Electronic Copy
Elementos Ltd	Chris Creagh	1	Yes

COMPETENT PERSON STATEMENT

The information in this statement that relates to Mineral Resources, is based on information complied and reviewed by Mr. Chris Grove, who is a Member of the Australasian Institute of Mining and Metallurgy and is a Principal Geologist employed by Measured Group Pty Ltd.

Chris Grove has more than 20 years' experience in the estimation of Mineral Resources both in Australia and overseas. This expertise has been acquired principally through exploration and evaluation assignments at operating mines and exploration areas. This experience is more than adequate to qualify him as a Competent Person for the purpose of Mineral Resource Reporting as defined in the 2012 edition of the JORC Code.

....

Chris Grove, B. App Sci., MAusIMM 310106

20th September 2018

The estimates of Mineral Resources for the Cleveland Project presented in this report have been carried out in accordance with the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" (2012 Edition) prepared by the Joint Ore Reserves Committee of the Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Minerals Council of Australia.

1. Introduction

After completing the Cleveland Mineral Resource Estimate in accordance with the JORC Code (2012), a study was undertaken to asses the potential for developing part of the Cleveland Mineral Resource as an open pit mine.

A conceptual pit outline was developed with reference to previous studies to optimise the Mineral Resource above 150m depth from surface by AMC Consultants and a pit shape outline, using 150% Revenue factor, was followed. The Henry's lode was included in the Mineral Resource Estimate with environmental factors, up to 10m away from the creek, were addressed. Accordingly, the Mineral Resource above 150m depth within this conceptual outline has been reported as a potential Open Pit Mineral Resource and the remaining Mineral Resource has been reported as an Underground Mineral Resource (Table 1-1). The total Mineral Resource at the Cleveland Project remains unchanged.

Table 1-1: Cleveland Tin and Copper Mineral Resources.

Cleveland Tin and Copper Mineral Resources September 2018					
0.35% Sn cut-off					
Open Pit Mineral Resources (above 150m)					
Classification	Tonnes (Mt)	Sn (%)	Contained Sn (kt)	Cu (%)	Contained Cu (kt)
Indicated	1.73	0.93	16.1	0.33	5.7
Inferred	0.16	1.18	1.9	0.49	0.8
TOTAL	1.89	0.95	18.0	0.34	6.5
Underground Mineral Resources (below 150m)					
Classification	Tonnes (Mt)	Sn (%)	Contained Sn (kt)	Cu (%)	Contained Cu (kt)
Indicated	4.50	0.68	30.6	0.29	13.0
Inferred	1.08	0.70	7.5	0.25	2.7
TOTAL	5.58	0.68	38.1	0.28	15.7
Total Mineral Resources					
Classification	Tonnes (Mt)	Sn (%)	Contained Sn (kt)	Cu (%)	Contained Cu (kt)
Indicated	6.23	0.75	46.7	0.30	18.7
Inferred	1.24	0.76	9.4	0.28	3.5
TOTAL	7.47	0.75	56.1	0.30	22.2

The geological plan (Figure 1-1) outlines the Tin and Copper lenses which strike NE-SW over 700m in length. Cross section 1 (Figure 1-2) demonstrates the near-surface extensively drilled mineralisation within the Khaki, Luck's and Hall's lenses. Cross section 2 (Figure 1-3) demonstrates the potential insitu mineralisation to the depth of 150m from surface using the conceptual pit outline.

Figure 1-1: Geological Plan of Potential Open Pit with Ore Lenses

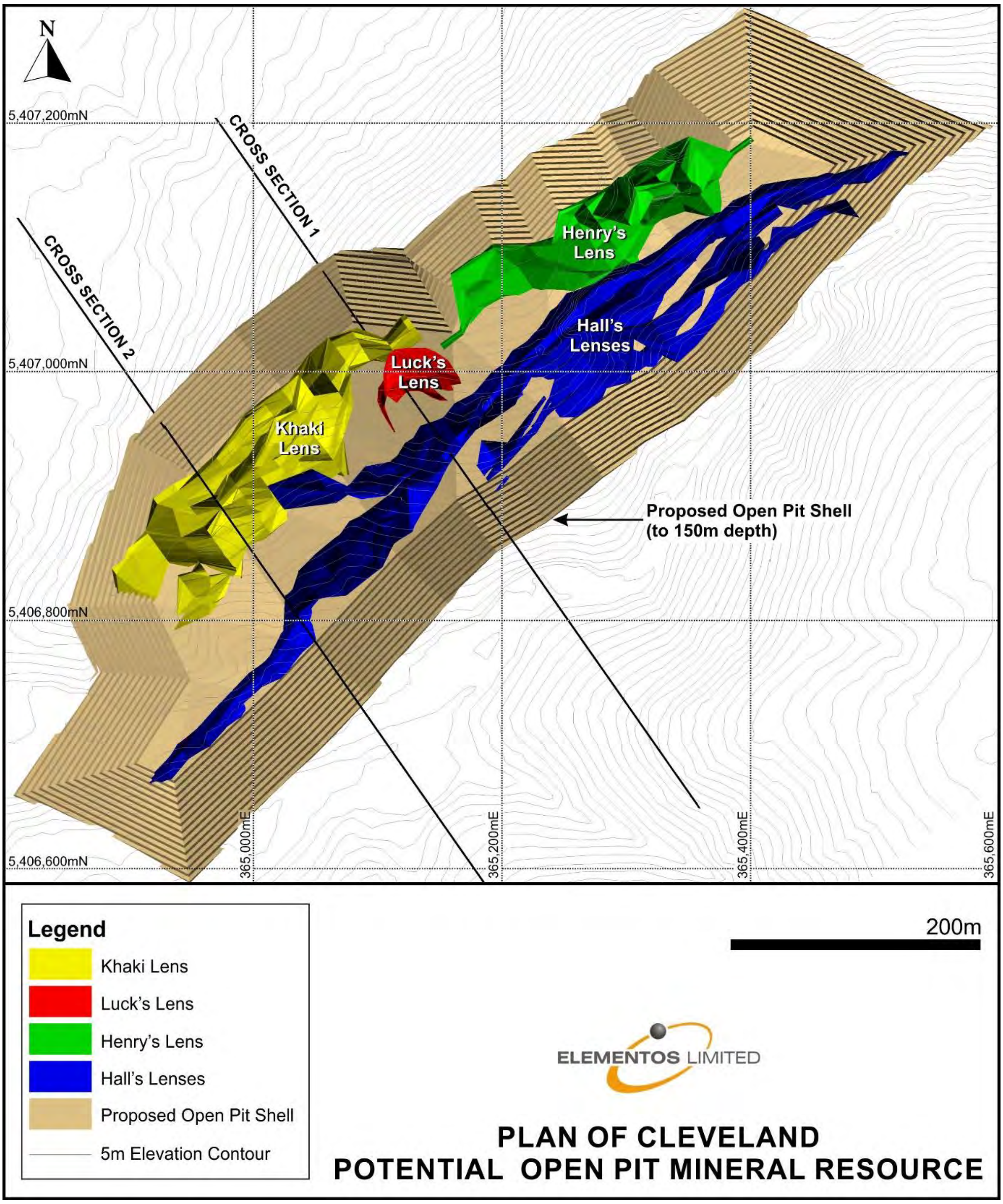


Figure 1-2: Cross Section 1

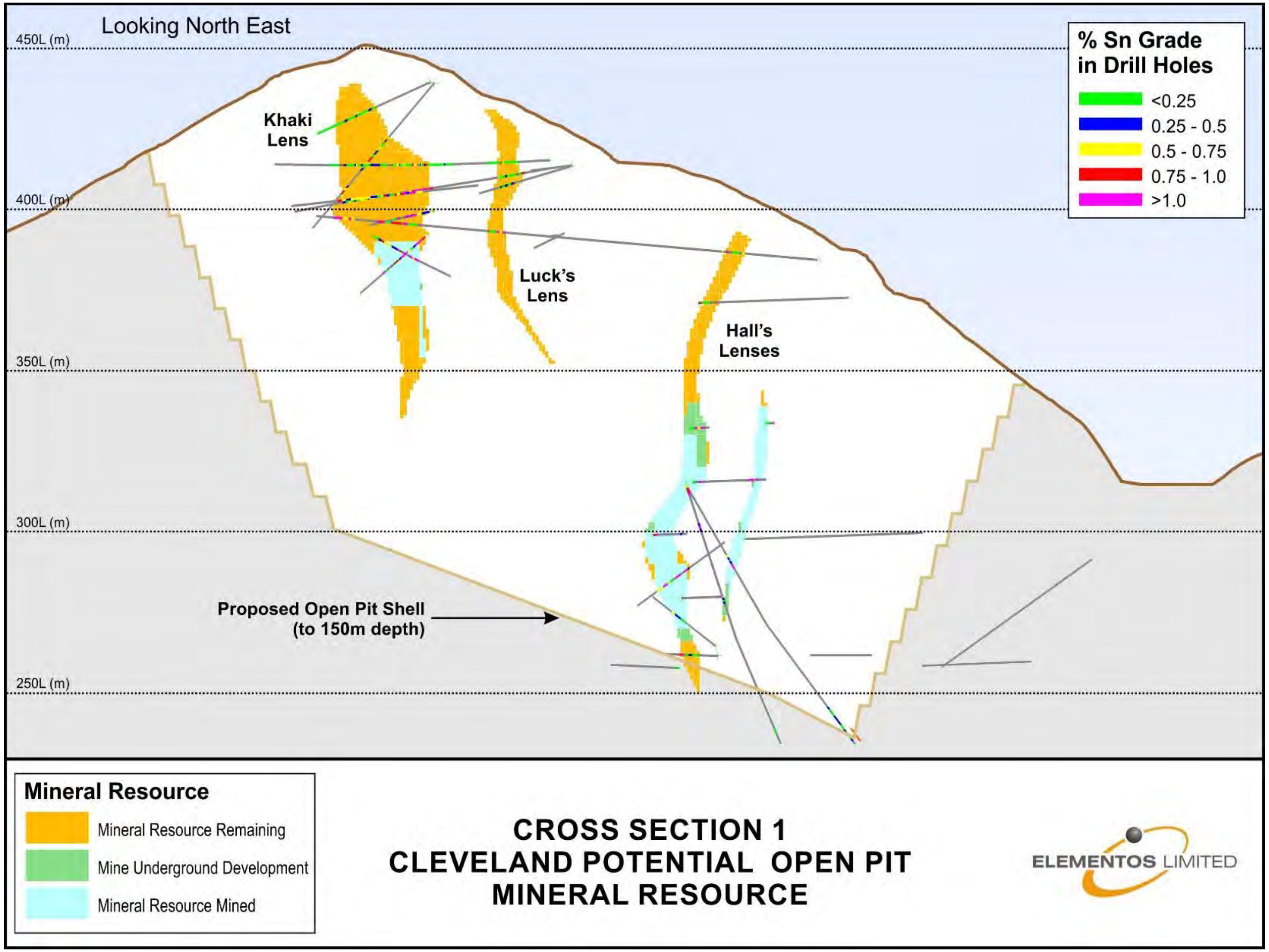
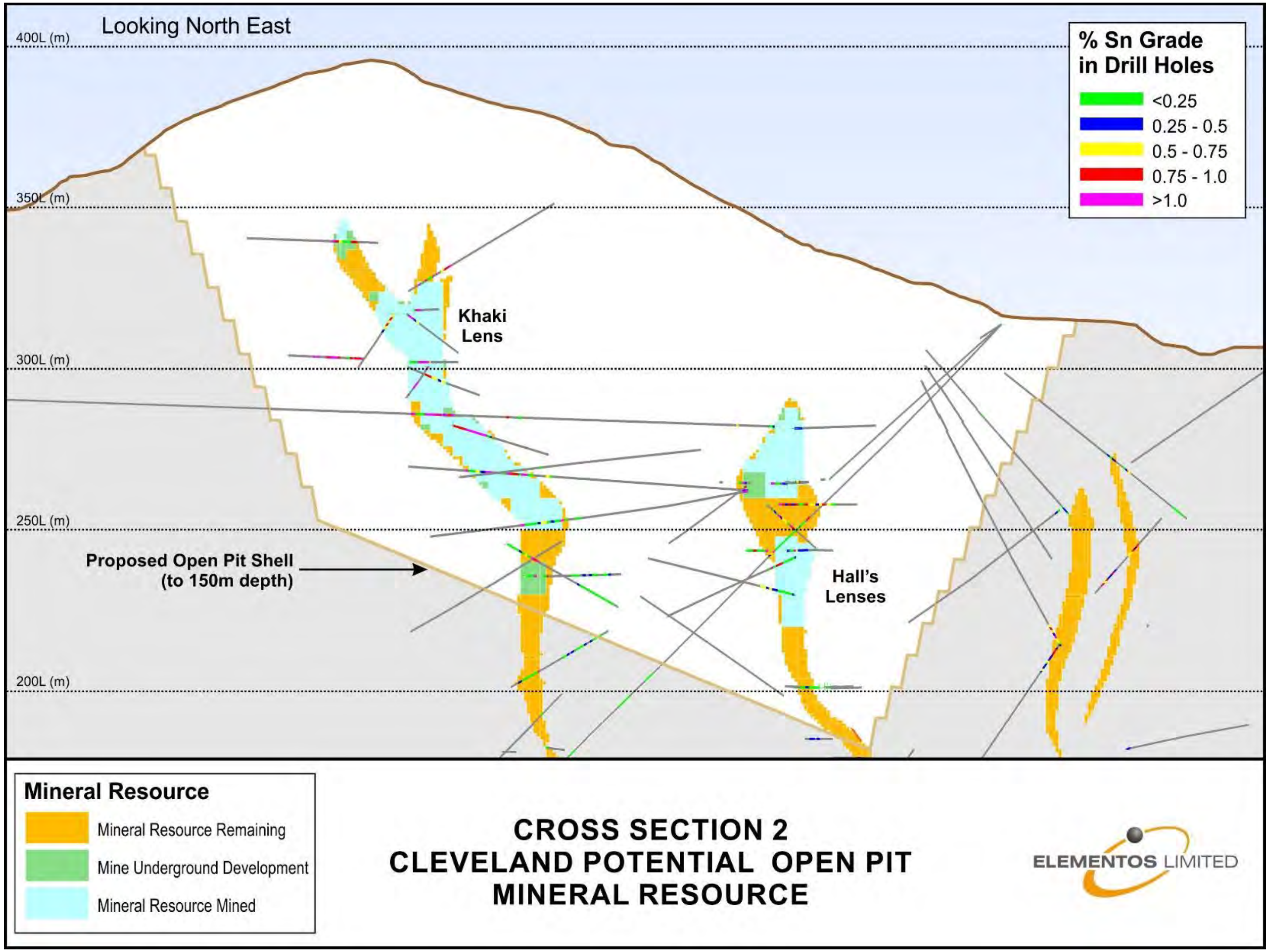


Figure 1-3: Cross Section 2



APPENDIX A: JORC TABLE 1

Section 1 - Sampling Techniques and Data

Criteria	Explanation	Detail
Sampling techniques	• *Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.*	Diamond drilling was used to obtain samples which were sawn in half longitudinally then one half of the core was submitted for assaying and the remainder was stored on site. The half core was crushed and pulverised prior to assay. Sn assays were made using pressed powder XRF. The tin-copper mineralisation occurs associated with sulphide replacement of limestone beds; the mineralisation is visually distinct but the principal tin bearing mineral, cassiterite, is not usually visible to the naked eye. The drilling database used to support the estimate contains 2059 drill holes for a total of 132795 m. All available data was used for geological interpretation and for grade estimation.
Drilling techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).*	All samples came from diamond drilling, generally ranging from 30mm to 45mm in diameter, using conventional drill tubes. Core was not oriented. Core was logged and sampled for assaying and the remaining core stored on site.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	A sampling of drill logs by the author did not reveal that core loss was a problem during diamond drilling. The reliability of core recovery was confirmed in discussions with a former Aberfoyle geologist. Aberfoyle reported that core recovery at Cleveland was consistently good (Cox, 1967). This is in accordance with the reported ground conditions in the Cleveland mine which have been reported as competent to highly competent (Everett, 1977 and Buckland, 1980). Tin and copper minerals occur in such concentrations and grain sizes, and the sample preparation methods were such, that the likelihood of sample bias due to preferential loss/gain of fine/coarse material is very low,
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.*	A sampling of drill logs by the author indicated that the logs contained adequate locational, sampling and assay data. Lithological logging was not always carried out but, given the style of the mineralisation, even though not ideal, this lack is tolerable.

	• *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.* • *The total length and percentage of the relevant intersections logged.*	Paper logs exist for the holes drilled. Only the 2018 drilling program was geotechnically logged. Good ground conditions were reported from the mine which was successfully mined from 1968 to 1986 using trackless mining methods with mine development dimensions of about 5m X 5m. Geotechnical logging is recommended for future drilling programmes.. All the resource drilling has been qualitatively logged with appropriate detail by Elementos and previous companies, to support the current resource estimate.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	Drill core was sawn in half longitudinally, and crushing and pulverising were subject to specific and definite protocols. Aberfoyle paid particular attention to sampling technique and sample preparation (Cox, 1967). The reliability of sub-sampling techniques and sample preparation has been confirmed by re-sampling and re-assaying of existing drill core by Rockwell/Elementos. Sample sizes were appropriate to the grain size of the material being sampled.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	Assays were conducted at the Tasmanian Mines Department Laboratory at Launceston and at the Aberfoyle laboratory on the Cleveland mine site; check samples, although not recorded in the drill logs, were used (Cox, 1967). The reliability of the assays is also partly confirmed by reconciliations of resources to production (Dronseika, 1986). 2018 assays conducted at ALS laboratories Burnie, Tasmania. Total Sn assays were made by pressed powder or fused bead XRF which are appropriate methods for the style of tin occurrence. The reliability of Sn assays has been confirmed by re-sampling and re-assaying of existing drill core by Rockwell.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data*	2020 cored diamond drill holes were completed. 1725 lens intersections were used for this resource estimate. Lens intersections were noted by Aberfoyle geologists during the operation of the mine from 1968 to 1986. The intersections were verified by successive mine geologists and recorded by Dronseika (1986). The intersections for the estimate for this report were based on the Aberfoyle records, modified by the author where considered appropriate, and Elementos drill logs. Verification of assay data was carried out routinely by Aberfoyle staff. Check samples, although not recorded in the drill logs, were in use (Cox, 1967). The reliability of the Aberfoyle assays is also partly confirmed by reconciliations of resources to production made by Aberfoyle (Dronseika, 1986) and during the preparation of the estimates for this report.

		Laboratory assay reports are filed with the hard copy drill logs. No adjustments to assay data have occurred.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	Locations of diamond drill hole collars, channel samples and mine workings were established by mine surveyors. About 20% of holes were missing the records of collar coordinates, however, many of these missing collar coordinates have been measured from 1:500 scale Aberfoyle mine cross-sections. At the time of this resource estimate, of the 2020 holes drilled, 119 still lacked collar coordinates and could not be used. This estimate for this report used GDA94 grid. In 2013, high resolution topography over the mine site was acquired using LiDAR. This topography was used during the preparation of this estimates for this report. Diamond core holes were surveyed using a single-shot camera and core orientations. This provides sufficient accuracy for the current estimates.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	Data spacing was sufficient for estimation of Sn grades by ordinary kriging and Cu by ordinary kriging for classification as Indicated or Inferred Mineral Resources according to the JORC Code. No compositing of sample intervals was undertaken in the field. Samples were composited to 1m lengths within the mineralisation envelopes for resource modelling.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	Holes were generally drilled at high angles to the strike and dip of the tin copper lenses which, given the style of mineralisation, was appropriate for minimising sampling bias from this factor.
Sample security	• *The measures taken to ensure sample security.*	Most analyses were made in the laboratory on the Aberfoyle mine site. Given the style of the tin copper mineralisation, and the proximity of the core splitting area and the sample preparation area to the laboratory, samples were not susceptible to interference.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	There are no known audits or reviews by personnel outside Aberfoyle. However, there was a culture of internal reviewing of the geological procedures including at least one review of sampling methods (Cox, 1967).

Section 2 - Reporting of Exploration Results

Criteria	Explanation	Detail

Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	Exploration Licence EL7/2005 covers the Cleveland mine and Mineral Resource. EL7/2005 is held by Rockwell Minerals Tasmania Pty Ltd, 100% subsidiary company of Elementos Ltd. The proposed project area lies in Forestry Tasmania Managed Land.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	
Geology	• *Deposit type, geological setting and style of mineralisation.*	The Cleveland tin-copper mineralisation is hydrothermal mineralisation associated with Devonian granite which outcrops within 5 kilometres of the mine and is interpreted from gravity surveys to lie about 4 kilometres beneath the surface at the mine. The host sedimentary rocks were intruded by the Devonian-Carboniferous Meredith granite. A quartz porphyry dyke occurs in the bottom of the mine below 350m from the surface. The tin-copper mineralisation occurs as semi-massive sulphide lenses consisting of pyrrhotite and pyrite with cassiterite and lesser chalcopyrite and stannite, and quartz, fluorite and carbonates. Sulphide minerals make up 20% to 30% of the mineralisation. The semi-massive sulphide lenses have formed by the replacement of limestone and are geologically similar to the tin bearing semi-massive and massive sulphide mineralisation at Mt Bischoff and Renison.

Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:*
	  • *easting and northing of the drill hole collar*
	  • *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
	  • *dip and azimuth of the hole*
	  • *down hole length and interception depth*
	  • *hole length.*
	• *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case*
		A summary of drill hole information used in the resource estimate is appended to the resource report (Geology and Resource Estimate Report, Cleveland Project, Septemebr 2018, Appendix E). Detailed drill hole intercepts have not been included as they are deemed commercially sensitive.

Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure*	Drill hole data was composited to 1m intervals limited to the mineralisation envelopes (composited from the top of hole) and coded to the relevant domains which were used for geostatistical studies, grade estimation and reporting. No metal equivalent values have been calculated or reported.

	used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. • *The assumptions used for any reporting of metal equivalent values should be clearly stated*	
Relationship between mineralisation widths and intercept length	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. • If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	Holes were generally drilled at high angles to the strike and dip of the tin copper lenses which, given the style of mineralisation, was appropriate. In tables of lens intersections, the lengths listed are down- hole lengths.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	Maps and sections are included in the resource report (Geology and Resource Estimate Report, Cleveland Project, September 2018).
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	The Cleveland Project resource estimate was produced by Measured Group Pty Ltd (MG) based on information provided by Elementos. The resource report contains summary information for all historical and current drilling campaigns within the project area and provides a representative range of grades intersected in the relevant drill holes.
Other substantive exploration data	*Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	Modelling of the granite, based on geophysical gravity surveys, indicates that the top of the granite is nearly 4 kilometres deep at Cleveland (Leaman and Richardson, 1989 and 2003). The metallurgical amenability of the tin-copper mineralisation was established by mining and processing operations from 1968 to 1986. The acceptable geotechnical conditions in the mine were established by successful mining operations from 1968 to 1986. Groundwater inflows to the mine were easily handled by conventional pumping techniques during mining operations from 1968 to 1986.
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	There is excellent potential for further exploration of the Cleveland tin-copper mineralisation. The definition and prioritisation of Exploration Targets has been reported separately. The Cleveland tin-copper mineralisation is open at depth and along strike, including as several shallow targets near the surface.

Section 3 - Estimation and Reporting of Mineral Resources

Criteria	Explanation	Detail
Database integrity	*Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* *Data validation procedures used.*	The specific measures taken by Aberfoyle to ensure database integrity are not known but the creation of a digital database has allowed for on-going review of the integrity of the data. Elementos maintain a database (MS Access) that contains all drill hole survey, drilling details, lithological data and assay results. Where possible, all original geological logs, hole collar survey files, digital laboratory data and reports and other similar source data are maintained by Elementos. The MS Access database is the primary source for all such information and was used by the Competent Person to estimate resources. The Competent Person undertook consistency checks between the database and original data sources as well as routine internal checks of database validity including spot checks and the use of validation tools in Maptek's Vulcan V9 modelling software. No material inconsistencies were identified.
Site visits	*Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* *If no site visits have been undertaken indicate why this is the case.*	The Competent Person has not visited the Cleveland Project site.
Geological interpretation	*Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* *Nature of the data used and of any assumptions made.* *The effect, if any, of alternative interpretations on Mineral Resource estimation.* *The use of geology in guiding and controlling Mineral Resource estimation.* *The factors affecting continuity both of grade and geology.*	The tin-copper mineralisation at Cleveland occurs as semi-massive sulphide lenses consisting of pyrrhotite and pyrite with cassiterite and lesser chalcopyrite and stannite, and quartz, fluorite and carbonates. Sulphide minerals make up 20% to 30% of the mineralisation. The semi-massive sulphide lenses have formed by the replacement of limestone and are geologically similar to the tin bearing semi-massive and massive sulphide mineralisation at Mt Bischoff and Renison. A geological interpretation was devised by the author of this report using cross sections showing drill holes with tin assays, and fact geology as mapped by Aberfoyle geologists. The interpretation was based on, but was not a copy of, the Aberfoyle interpretations. In many places, the tin-copper mineralisation consists of intercalated layers of replaced limestone and chert. Aberfoyle geologists did not always have such chert bands assayed which was of little consequence during a time when all geological compilations were made by hand. However, these un-assayed intervals are unacceptable in a digital database that is going to be used for three dimensional modelling of grades. Consequently, records for these un-assayed intervals had to be added to the database and were allocated zero Sn and Cu grades. Geological setting and mineralisation controls of the Cleveland Project mineralisation have been confidently established from drill hole logging and geological mapping, including the development of a robust three-dimensional model of the major rock units. Lithological wire-frames interpreted from drill hole logging were used to assign densities to the estimates. Due to the confidence in the understanding of mineralisation controls and the robustness of the geological model, investigation of alternative interpretations is unnecessary.

Dimensions	*The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	Hall's Formation, the geological formation which contains the lenses of mineralisation, generally dips vertically or steeply to the east and is known over a strike length of 1000m, an across strike width of about 200m, and a down-dip length of over 800m (Ransom and Hunt, 1975 and Dronseika, 1986). For this resource estimate, 19 lenses of tin copper mineralisation were interpreted ranging in strike lengths from about 100m to about 600m, with across strike widths of up to about 20m, and down dip lengths of up to about 300m. The lenses occur from surface outcrop to 700m below the surface. The limits of the mineralisation have not been completely defined and are open at depth and along strike..
Estimation and modelling techniques	*The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* *The assumptions made regarding recovery of by-products.* *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).* *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* *Any assumptions behind modelling of selective mining units.* *Any assumptions about correlation between variables.* *Description of how the geological interpretation was used to control the resource estimates.* *Discussion of basis for using or not using grade cutting or capping.* *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	Most assays were taken over lengths of less than 1.0m with the mode occurring at 0.8m to 1.0m. A composting length of 1.0m was used for this resource estimate. Grade estimates for Sn and Cu were made by ordinary kriging. Sn grade interpolations were made using geostatistical domains which were allocated based on: the number of composited Sn samples in each lens; the mean Sn grade of composited samples in each lens; the variance of Sn grades of composited samples in each lens; the proximity of lenses; and the general strike and dip of each lens. For grade interpolations, the search method used was ellipsoidal with a major search axis length of 200m and the semi-major and minor search axes proportioned using the ranges of the relevant variograms. A previous, pre-JORC, resource estimate made by Aberfoyle geologists at mine closure in 1986 totalled 5.2 million tonnes at 0.70% Sn and 0.31% Cu at a 0.35% Sn cut-off grade. At the same cut-off grade, the estimate for the updated JORC report in 2014 totalled 7.44 million tonnes at 0.65% Sn and 0.25% Cu. The differences between the estimates are due to the differences in the geological interpretations used for the estimates, differences between the actual extent of the estimates, and differences between the two dimensional estimate by Aberfoyle and the current three dimensional estimate. Beyond the assumption that Cu would be recovered in processing, as was the case when the mine operated from 1968 to 1986, no other assumptions about the recovery of by-products were made. No estimates of S grade or the grades of other deleterious elements were made. Mineralisation was modelled as three dimensional blocks of parent size 10m X 10m X 10m with sub-celling allowed to 1m X 1m X 1m. The 10m length of the parent block equates to about half the cross-section spacing on which drilling was concentrated. Computer assisted estimations were made using Vulcan 3D software. Depletion was made for mining. No assumptions were made regarding the modelling of selective mining units. No assumptions were made about the correlation between variables. Wireframes of the geological interpretations of the tin-copper lenses were used to assign lens codes to blocks in the block model. Grades were interpolated into each lens using only composited samples from within the lens. Statistical analyses of the Sn and Cu showed that there were no rogue outliers, that is, high grade assays that did not fit the distributions and which consequently indicated the need for cutting of high grades.

		Validation of the block model was made by: checking that drill holes used for the estimation plotted in expected positions; checking that flagged lens intersections lay within, and corresponded with, lens wireframes; ensuring whether statistical analyses indicated that grade cutting was required; checking that the volumes of the wireframes of lenses matched the volumes of blocks of lenses in the block model; comparing the mean of composited sample grades within a lens with the mean grades of the lens in the block model; checking plots of the grades in the block model against plots of diamond drill holes; reconciling the tonnage and grades of the mined out blocks in the block model against historical production: historical production from 1968 to 1986 was estimated from Aberfoyle reports as 5.645 million tonnes at 0.74% Sn and 0.28% Cu; at a mining recovery of 90% and a dilution rate of 10% in the run of mine mill feed, the mined out blocks in the block model provided a material inventory of 5.630 million tonnes at 0.75% Sn and 0.29% Cu.
Moisture	*Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	Tonnages were estimated on a dry basis.
Cut-off parameters	*The basis of the adopted cut-off grade(s) or quality parameters applied.*	The cut-off grade of 0.35% takes into account Elementos's current view of long term metal prices, foreign exchange and cost assumptions, mining and metallurgy test work were used to select cut-off grades and physical mining parameters. This was also the cut-off grade used by Aberfoyle for its final resource estimate (Dronseika, 1986) and the updated Resource Estimate by Mining One in 2014.
Mining factors or assumptions	*Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	The resource estimate has been completed with the assumption that it will be mined using open cut mining and underground mining methods.
Metallurgical factors or assumptions	*The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	Sn and Cu can be recovered using traditional tin and copper processing, as was the case when the mine operated from 1968 to 1986. Mill recoveries of 60% for both tin and copper were the historical averages achieved in the Cleveland mill operated by Aberfoyle Limited.

Environmental factors or assumptions	*Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	Pitt and Sherry Consultants and GHD Consultants have provided preliminary designs for waste and tailings disposal.
Bulk density	*Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	A bulk density of 3.1 tonnes/m3 was used based on the results of 960 pycnometer determinations of specific gravities made from drill core samples of tin-copper lenses. The principal gangue sulphide mineral present at Cleveland is pyrrhotite. A bulk density of 3.1 tonnes/m3 for pyrrhotite bearing limestone implies that the rock contains about 20% pyrrhotite which is in line with descriptions of the deposit. A bulk density of 3.1 tonnes/m3 was used for this resource estimate and this was similar to the bulk densities used by Aberfoyle which ranged from 3.05 to 3.08 tonnes/m3.
Classification	*The basis for the classification of the Mineral Resources into varying confidence categories.* *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* *Whether the result appropriately reflects the Competent Person's view of the deposit.*	The resources were classified by the author as Indicated and Inferred based on current understanding of geological and grade continuity. Parts of the deposit, where drilling intensity was adequate to reasonably reliably define the lens shapes and extents, and to indicate reasonable grade continuity, were classified as Indicated Mineral Resources, and the balance as Inferred Mineral Resources. The classification reflected the author's confidence in the location, quantity, grade, geological characteristics and continuity of the Mineral Resources. The Mineral Resource has been classified into Measured, Indicated and Inferred based on the following relevant factors: drill hole density, style of mineralisation and geological continuity, data quality and associated QA/QC and grade continuity. The resource classification accounts for all relevant factors. Two methods were used to determine the optimal drill spacing for Resource classification at Cleveland: a). Variogram method which analyses proportions of the sill, b). an estimation variance method. The data spacing and distribution is sufficient to establish geological and grade continuity appropriate for Mineral Resource estimation and classification and the results appropriately reflect the Competent Person's view of the deposit.
Audits or reviews.	*The results of any audits or reviews of Mineral Resource estimates.*	No external audits or review have been undertaken.

		An internal review of modelling and estimation methods, assumptions and results has been conducted by Lyon Barrett and James Knowles, Principal Geologists of Measured Group Pty Ltd
Discussion of relative accuracy/ confidence	*Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	The estimates made for this report are global estimates. Predicted tonnages and grades made from such block estimates are useful for feasibility studies, and long, medium and short term mine planning. Individual, as distinct from aggregated, block estimates should not be relied upon for block selection for mining. Local block model estimates, or grade control estimates, whose block grades are to be relied upon for selection of ore from waste at the time of mining will require additional drilling and sampling of blast holes and underground development. Reconciliation of the tonnage and grades of mined out blocks in the block model against historical production has been made: historical production from 1968 to 1986 was estimated from Aberfoyle reports as 5.645 million tonnes at 0.74% Sn and 0.28% Cu; at a mining recovery of 90% and a dilution rate of 10% in the run of mine mill feed, the mined out blocks in the block model provided a material inventory of 5.630 million tonnes at 0.75% Sn and 0.29% Cu. Confidence in the relative accuracy of the estimates is reflected in the classification of estimates as Indicated and Inferred. Variography was completed for Tin and Copper. The variogram models were interpreted as being isotropic in the plane with shorter ranges perpendicular to the plane of maximum continuity. Validation checks have been completed on raw data, composited data, model data and Resource estimates. The model is checked to ensure it honours the validated data and no obvious anomalies exist which are not geologically sound. The mineralised zones are based on actual intersections. These intersections are checked against the drill hole data. Field geologist picks, and the competent person has independently checked laboratory sample data. The picks are sound and suitable to be used in the modelling and estimation process. Where the drill hole data showed that no Tin or Copper existed, the mineralised zone was not created in these areas. At the final drill hole intercept, the mineralised zone was created half the distance from the previous intersection unless there was evidence that no mineralisation was intercepted. Further drilling also needs be completed to improve Resource classification of the Inferred Resource. Metallurgy is assumed to be representative.