



## ASX Announcement

### Aus Tin Mining Limited (ASX:ANW)

10 May 2019

#### Shallow High-grade Nickel Intersections at Mt Cobalt

##### Highlights:

- **Recent diamond drilling results highlight:**
  - high-grade nickel intersections up to 1.6%Ni near surface at Mt Cobalt;
  - Existence of shear-zones north of previous drilling extends target zone to 500m long x 25m wide and open at depth.
- **Elevated silver assays (average 116 g/t over 13m) reported for sludge samples.**

The Directors of Aus Tin Mining Limited (the **Company**) are pleased to provide the following update in relation to the Company's Mt Cobalt cobalt-nickel project.

In April 2019 the Company completed a program of five diamond drill holes for a total 153.6m to test potential extensions of mineralisation below and along strike from historic workings at Mt Cobalt. Assays results have now been obtained and are summarised in Table 1. Sampling was selective over the length of the holes reflecting intervals of poor core recovery (HQ) due to the extremely broken ground. Additional results are provided in Table 2 and Appendix 1.

**Table 1 – Summary Analytical Results for Diamond Drilling**

Hole #	Significant Ni intersections
COB033	0.4m @ 1.19% Ni, 149ppm Co from 11.6m
COB034	0.9m @ 1.62% Ni, 125ppm Co from 16.4m
COB035	0.4m @ 0.97% Ni, 222ppm Co from 13.1m &
	0.4m @ 1.02% Ni, 155ppm Co from 13.6m
	1.0m @ 1.10% Ni, 152ppm Co from 16m
	0.5m @ 1.14% Ni, 229ppm Co from 40.2m &
	0.2m @ 1.10% Ni, 285ppm Co from 44.8m

Results from this most recent drilling confirm the occurrence of high-grade nickel at relatively shallow depths in a new zone north of where previous drilling has been conducted (Figure 1). The recent drilling also confirmed the existence of shear zones north and west of where previous drilling has been conducted, the shear zone having previously been found to host high-grade cobalt-manganese oxide, asbolite. Notwithstanding an absence of the elevated cobalt or manganese assays in this latest program, previous drilling in 2016 and 2018 did indicate not all shear zone was mineralised with asbolite, and the Company will continue to explore this northern extension in due course.

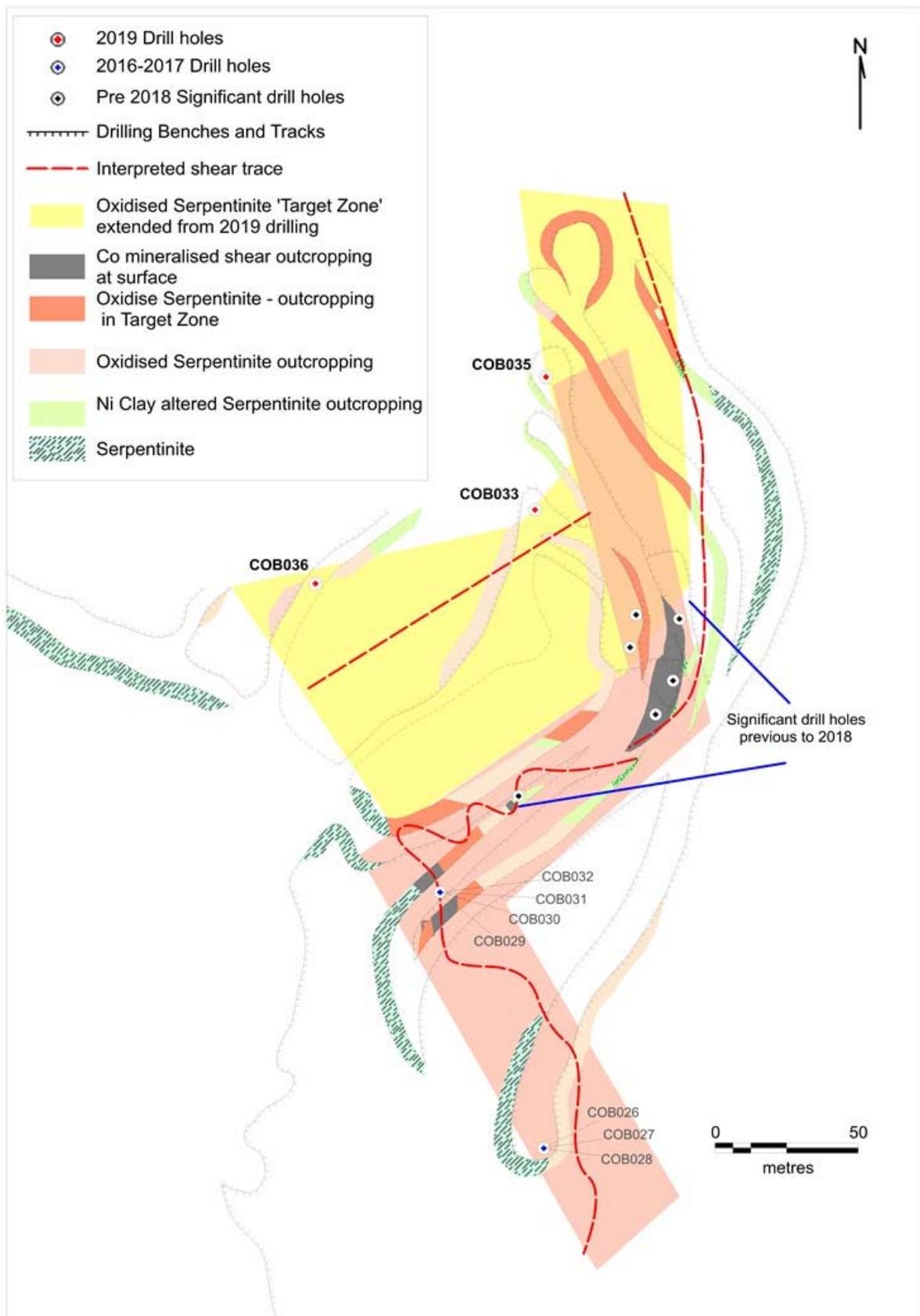


Figure 1 – Geological interpretation of Mt Cobalt

As previously announced<sup>1</sup> the shear zones observed in the latest drilling program support the previous interpretation of a possible continuation of the shear zone in a north west direction and possible extension of the target zone. In 2018<sup>2</sup> a 350m target zone was defined by a combination of target lithology mapping, surface mineralisation, soil geochemistry, drilling and the extent of historic workings, over a sinusoidal folded and sheared zone in the host serpentinite. As illustrated in Figure 1, this latest drilling extended the target zone by a further 150m, to a total 500m long x 25m wide and open at depth. The Company will focus the next phase of exploration at Mt Cobalt to further field reconnaissance and mapping for shear zones west of the target zone in order to develop further drill targets.

Following problems with lower core recovery in the 2018 programs<sup>3</sup> this latest program employed HQ triple tube diamond drilling but recovery was lower than desired in areas of broken ground associated with the shear zone. Again sludge samples were collected for selected intervals and notable was a high silver assay averaging 116 g/t over a 13m interval from surface (COB034). In the 2018 program a sludge sample from the southern end of the target zone returned a silver grade of 247 g/t over 43m from surface and any potential connection between the two results are being examined. The Company will also examine the results against the high-grade copper-silver Silver Valley prospect located two kilometers south-east of Mt Cobalt where historic drilling results have included 21m @ 1.0%Cu, 99g/t Ag including 1.5m @ 6.2%Cu, 582 g/t Ag<sup>4</sup>.



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<sup>1</sup> Refer ASX Announcement dated 27<sup>th</sup> March 2019

<sup>2</sup> Refer ASX Announcement dated 16 February 2018

<sup>3</sup> Refer ASX Announcement dated 23<sup>rd</sup> January 2018

<sup>4</sup> Refer ASX Announcement dated 29<sup>th</sup> March 2011

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### COMPETENT PERSON STATEMENT

The information in this presentation that relates to Exploration Targets and Exploration Results is based on information compiled by Mr Nicholas Mather B.Sc (Hons) Geol., who is a Member of The Australian Institute of Mining and Metallurgy. Mr Mather is employed by Samuel Capital Pty Ltd, which provides certain consultancy services including the provision of Mr Mather as a Director of Aus Tin Mining. Mr Mather has more than five years experience which is relevant to the style of mineralisation and type of deposit being reported and to the activity, which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Minerals Resources and Ore Reserves' (the JORC Code). This public report is issued with the prior written consent of the Competent Person(s) as to the form and context in which it appears.

**Table 2 – Summary Results for Diamond Drilling**

Hole ID	mgE	mgN	RL	DIP	AZ_MAG	EOH (m)	From	To	Interval (m)	Co (ppm)	Ni (%)	Ag (g/t)
COB033	427617	7102461	516	60	350	20.3	11.6	12.0	0.4	149	1.19	
COB034	427617	7102467	516	70	71	26.5	16.4	17.5	0.9	125	1.62	
			Sludge Sample				0	13.0	13			116
COB035	427622	7102490	492	60	115	56.5	13.1	13.5	0.4	222	0.97	
							13.6	14.0	0.4	155	1.02	
							16.0	17.0	1.0	152	1.10	
							40.2	40.7	0.5	229	1.145	
							44.8	45.0	0.2	285	1.10	
COB036a	427545	7102435	480	60	118	17.8	Hole abandoned due to poor core recovery through shear zone					
COB036	427545	7102435	480	70	118	32.5				-	-	

# Appendix 1 - JORC Code, 2012 Edition – Table 1

## 1.1 Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<i>Nature and quality of sampling (eg 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.</i>	Sub surface samples were collected as drill core from diamond drilling (HQ). A total of 5 DD drill holes were completed for a total of 153.6m and 1 hole abandoned at 18m due to loss of circulation. The reported results are for 4 holes totalling 137.6m. Drill holes were oriented to intersect the interpreted strike of the targeted shear zone trend. Dip angles ranging from 60 and 70 degrees from horizontal to maximise drill distance to test intersections of the shear while taking topography of the site into consideration. Samples submitted for assay typically weighed 1-3kg
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i>	Samples were collected from halved cut core and where the core was intact. Where core was too soft to be cut with a power saw the core was halved by cutting with a sharp knife. Intervals with broken core had the sample debris divided into halves and the half core sample collected by spoon.
	<i>Aspects of the determination of mineralisation that are Material to the Public Report.</i>  <i>In cases where 'industry standard' work has been done this would be relatively simple (eg '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 (eg submarine nodules) may warrant disclosure of detailed information.</i>	Samples for geochemical analysis were selectively collected at intervals of varying thickness over mineralised zones not greater than 1.5m or less than 0.2m in competent core. Over intervals of core loss and broken ground samples intervals were no greater than 2.5m. 3 samples were taken from as sludge samples at the drill collar due to no core in unconsolidated ground. Zones not sampled reflected zones of either poor core recovery or lithology not representing exploration target zone. A total of 83 samples were collected with sample weights typically 1-3kg. Samples were packaged at site and delivered to ALS labs in Brisbane to be assayed using Nitric aqua regia digestion followed by ICP AES finish (ALS ME-ICP41). Samples assaying above 1% Ni and 100ppm Ag were reassayed using aqua regia method ALS NE-OG46.
<b>Drilling techniques</b>	<i>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg 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).</i>	Diamond drilling comprised: HQ diamond drilling. Hole depths range from 17-56.5m
<b>Drill sample recovery</b>	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	HQ core samples were visually checked and recorded for recovery, moisture and contamination.
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	The drill holes were drilled using polymers and muds to limit core loss in argillic zones and where cutting return was lost swelling polymers were mixed with the mud to restore mud and cutting return to the surface
	<i>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.</i>	Sample recoveries were high within the mineralised zones in competent ground and low in zones of unconsolidated ground. No significant bias is expected.
<b>Logging</b>	<i>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.</i>	Drill core was geologically logged and the level of understanding of these variables increases with the maturity of the prospect.

Criteria	JORC Code explanation	Commentary
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i>	<p>All drill holes were geologically logged for the entirety of the holes with the following observations recorded: Lithology, texture, colour, mineralogy, alteration, weathering and other relevant features of the samples. Mineralised zones were identified from observation of mineralogy and lithological characteristics.</p> <p>All logged information was initially logged on to field notes and then later entered digitally into a MS database (Excel).</p> <p>Core from each hole for the entirety of the hole was collected into core trays, with intervals and core loss recorded on drillers blocks, numbered and photographed as a representation of the hole. The core trays are stored in a designated building for future reference.</p>
	<i>The total length and percentage of the relevant intersections logged.</i>	All drillholes were geologically logged in full where core recovery allowed.
<b>Sub-sampling techniques and sample preparation</b>	<p><i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></p> <p><i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></p> <p><i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples</i></p> <p><i>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.</i></p> <p><i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></p>	<p>80 samples were from drill core. 3 samples were sludge samples taken from the drill collar.</p> <p>Sample preparation follows industry best practice standards and is conducted by internationally recognised laboratories.</p> <p>Regular cleaning of sampling equipment was undertaken to prevent contamination.</p> <p>Sample sizes are considered appropriate for the rock type, style of mineralisation, the thickness and consistency of the intersections, the sampling methodology and percent value assay ranges for the primary elements.</p>
<b>Quality of assay data and laboratory tests</b>	<p><i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></p> <p><i>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.</i></p> <p><i>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</i></p>	<p>Assay and laboratory procedures have been selected following a review of techniques provided by internationally certified laboratories.</p> <p>None used</p> <p>Appropriate analytical method using Nitric aqua regia digestion with ICP-AES finish (ME_ICP41 and OG46) and fire assay with ICP-AES finish (PGM-ICP23) Assaying was carried out by ALS, an accredited laboratory. No duplicates or standards were submitted</p>
<b>Verification of sampling and assaying</b>	<p><i>The verification of significant intersections by either independent or alternative company personnel.</i></p> <p><i>The use of twinned holes.</i></p>	<p>The drill logs were prepared by the site supervising geologist and have subsequently reviewed by the Company's senior geologist.</p> <p>No twinned holes were undertaken</p>

Criteria	JORC Code explanation	Commentary
	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	All field data is manually collected and noted on field sheets then later entered into excel spreadsheets.  Hard copies are stored within a local office and electronic data is stored on the Brisbane server.  All electronic data is routinely backed up.
	<i>Discuss any adjustment to assay data.</i>	None required
<b>Location of data points</b>	<i>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.</i>	All drill holes are initially located using a hand held GPS  Upon completion of drill hole, collars are again checked with two hand held GPS with a 3m lateral accuracy.
	<i>Specification of the grid system used.</i>	The grid system used is MGA_GDA94 Zone56.
	<i>Quality and adequacy of topographic control.</i>	The accuracy is adequate for collection of initial data on the zone of mineralisation
<b>Data spacing and distribution</b>	<i>Data spacing for reporting of Exploration Results.</i>	Due to the steep terrain, drill spacing was largely dependent on accessible sites.
	<i>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.</i>	The purpose of the drilling was to target mineralisation of a shear zone inferred from previous drilling and geophysics and is not intended to be used for JORC resource calculation purposes.
	<i>Whether sample compositing has been applied.</i>	Some assaying samples were collected by compositing half core up to 2.5m within zones of little visible mineralisation. The composite samples to be resampled at 1m intervals as quarter core at a later date if the results from the composite samples were considered significant based on grade.
<b>Orientation of data in relation to geological structure</b>	<i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i>	Drill holes were oriented perpendicular to the interpreted strike of the targeted shear zone trend at dip angles to optimally intersect the mineralisation zones and with strike to establish depth of mineralisation.
	<i>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.</i>	The drill holes oriented perpendicular to the interpreted strike of mineralisation, are regarded as having no bias sampling bias.
<b>Sample security</b>	<i>The measures taken to ensure sample security.</i>	Company geologist supervises all sampling and subsequent storage in the field. The samples are delivered to ALS Brisbane by either company management or recognized freight service.  Sample submission forms are submitted both electronically and with the samples.  Upon receipt of samples, ALS delivers by email to the Company's CEO confirmation of arrival of samples.

Criteria	JORC Code explanation	Commentary
<b>Audits or reviews</b>	<i>The results of any audits or reviews of sampling techniques and data.</i>	None completed

## 2 Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<i>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.</i>	Mt Cobalt is located wholly within Exploration Permit 19366 approximately 40km West of Gympie and is 100% held by AusTin Mining.
	<i>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.</i>	All granted tenements are in good standing and there are no impediments to operating in the area.
<b>Exploration done by other parties</b>	<i>Acknowledgment and appraisal of exploration by other parties.</i>	Reference made to results previously reported by the Company
<b>Geology</b>	<i>Deposit type, geological setting and style of mineralisation.</i>	<p>The Mt Cobalt project is part of a larger Nickel mineralisation province.</p> <p>The prospect setting is a structurally controlled nickel/cobalt mineralising system hosted in Carboniferous Serpentinite rocks of the Wandilla Province.</p> <p>The mineralisation is associated with an almost North/South master shear that deepens steeply to the West. The cobalt-Manganese enriched mineralisation is a result of the weathering of a polymetallic lode system.</p> <p>The principle ore minerals identified at the Mt Cobalt prospect include, Asbolite and garnierite.</p> <p>Asbolite occurs as bluish black dendrites and fracture coatings throughout the laterite profile.</p> <p>The footwall of the fault consists of a talcose Garnierite zone hosting irregular veins of Nickel/Cobalt Manganese oxide (Asbolite). On the hangwall, a silicate rich assemblage hosts the main portion of Asbolite being the greater source of the mineralisation.</p>
<b>Drill hole Information</b>	<p><i>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:</i></p> <p><i>easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i></p> <ul style="list-style-type: none"> <li>○ <i>dip and azimuth of the hole</i></li> <li>○ <i>down hole length and interception depth</i></li> <li>○ <i>hole length.</i></li> </ul> <p><i>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.</i></p>	Refer to the body of this report for significant intercepts pertaining to this announcement.
<b>Data aggregation methods</b>	<i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off</i>	Results are reported for individual and averaged intervals

Criteria	JORC Code explanation	Commentary
	<p>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.</p> <p>The assumptions used for any reporting of metal equivalent values should be clearly stated.</p>	
<b>Relationship between mineralisation widths and intercept lengths</b>	<p>These relationships are particularly important in the reporting of Exploration Results.</p> <p>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</p> <p>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').</p>	<p>Drill holes were orientated to intersect the mineralised shear at the perpendicular.</p> <p>The general orientation of the drill holes is considered suitable.</p>
<b>Diagrams</b>	<p>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.</p>	
<b>Balanced reporting</b>	<p>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.</p>	<p>Results are reported for grades greater than 0.1%Co and 0.5%Ni</p>
<b>Other substantive exploration data</b>	<p>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.</p>	<p>Limited preliminary metallurgical test work has been undertaken and a review of extraction options evaluated.</p>
<b>Further work</b>	<p>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</p> <p>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</p>	<p>Details of further work are yet to be determined</p>