

16 August 2022

# STRONG DHEM CONDUCTOR IDENTIFIED AT TORANA

 Downhole electromagnetic survey defines priority drill target at the Torana prospect

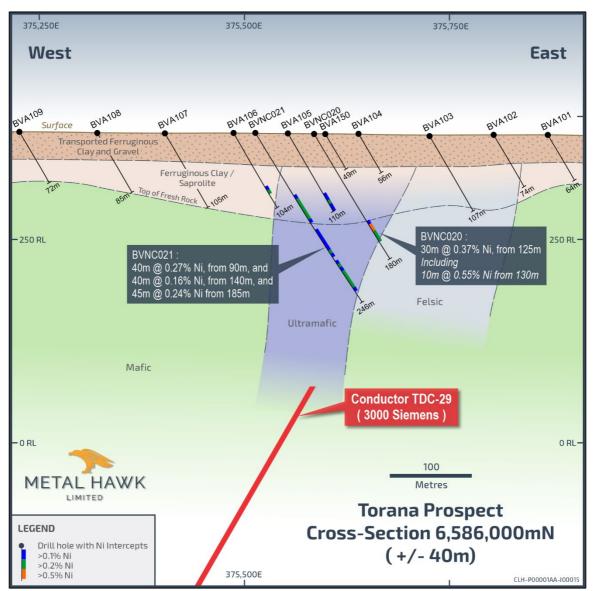
- Off-hole conductor located 200m from zone of disseminated nickel sulphides in BVNC020
- Preparations for diamond drilling underway

Metal Hawk Limited (**ASX: MHK**, "**Metal Hawk**" or the "**Company**") is pleased to advise that downhole electromagnetic (DHEM) surveying has identified a priority drill target at the Torana prospect at the Company's Berehaven Project, 20km south-east of Kalgoorlie in Western Australia.

Torana is located 1.5 kilometres north and along strike from the Commodore Prospect, where Metal Hawk discovered high-grade nickel sulphide in September 2021. Reverse circulation (RC) drilling carried out at Torana has intersected significant thicknesses of high-MgO rocks where previously no ultramafic lithologies had been identified. Significant zones of disseminated nickel sulphide mineralisation have been logged from drill chips in numerous holes, highlighted by the intersection from **BVNC020** which returned **10m @ 0.55% Ni from 130m** within a broader zone of **30m @ 0.37% Ni from 125m**.

DHEM surveys have been completed in a number of RC holes at Torana, with the northern-most hole **BVNC029** detecting a strong late-time off-hole anomaly with a 140ms time constant. A large west-dipping plate **TDC\_29** has been modelled with a source that is distal to the hole, measuring a high conductance of ~3000 Siemens. Moving loop electromagnetic (MLEM) surveys carried out previously detected a zone of conductivity in a similar position, however, due to the depth of the conductor, a poorly constrained plate was modelled with an unknown dip. The new DHEM data combined with MLEM survey data has enabled the design of a more refined plate model. Notably, the top edge of conductor TDC\_29 is positioned down-dip and 200m from the zone of disseminated nickel sulphide mineralisation intersected in BVNC020 (Figure 1).

Metal Hawk's Managing Director Will Belbin commented: "Our systematic drilling has shown that the ultramafics along the Commodore trend are fertile. At Torana we have intersected thick packages of high-MgO rocks under cover, where no ultramafics have previously been identified. Situated beneath a zone of disseminated nickel sulphides, this new DHEM conductor presents as an exciting target which will be tested with deeper drilling."

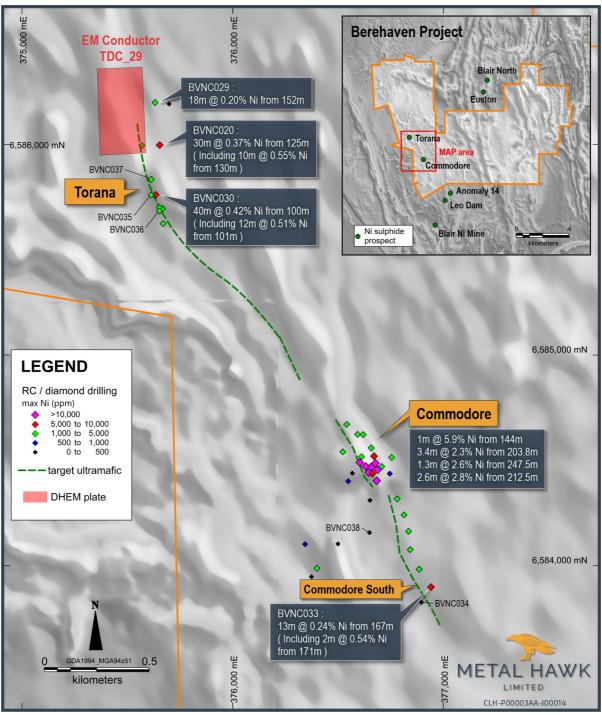


**Figure 1.** Cross section 6,586,000mN showing DHEM conductor plate **TDC\_29**. *Note that holes BVNC020 and BVNC021 were not DHEM surveyed.* 

The effectiveness of surface EM along the Commodore trend has been limited by the extremely deeply weathered rocks and the transitional nature of nickel sulphides present. Hence, DHEM surveying is an essential technique for the exploration of massive nickel sulphides under cover along this part the belt. Select RC holes drilled at the Torana prospect are cased with 50mm PVC, which enables DHEM surveys to be carried out efficiently on a campaign-basis.



Follow-up drilling at Berehaven is due to commence within the next week and will include RC holes designed to further explore along strike from zones of disseminated mineralisation intersected at Torana. Additional DHEM surveys will be carried out to further investigate and refine the electromagnetically conductive target zone. Ultimate drill-testing of conductor **TDC\_29** will require deeper diamond drilling, with a downhole target depth of approximately 420m. This will be done following completion of the upcoming RC program.



**Figure 2.** Commodore drill plan over airborne magnetics showing RC and diamond drilling with highlights, new hole locations and DHEM conductor plate **TDC\_29** 

RC drilling and DHEM will also be carried out at the Commodore South Prospect, located approximately 500m south of Commodore, where a recent intersection of disseminated and blebby sulphide mineralisation in BVNC033 returned 2m @ 0.54% Ni from 171m within a broader ultramafic package of 13m @ 0.24% Ni from 167m.

New results received from RC drilling at Berehaven are shown in **Table 1** below.

Table 1. Berehaven RC drilling - new results

Hole ID Prospect		East	North	Azimuth	Dia		Depth	Interval		Interval	Ni	Au
noie ib	Hole ID Prospect	EdSt	NOTH	Azimuth	Dip	туре	Type (m)	from	to	(m)	(%)	(g/t)
DVNC033	Commodore	376843	6583897	090	-60	RC	198	167	180	13	0.24	
BVNC033 South	South	Including					171	173	2	0.54		
BVNC034	Commodore South	376877	6583826	090	-60	RC	198	70	75	5	NSI	0.65
BVNC035	WALCOOF T	375505	6585759	090	-60	RC	270	120	130	10	0.11	
BVINCUSS	Torana	And					226	270	44	0.16		
BVNC036	Torana	375541	6585623	065	-60	RC	240	228	240	12	0.20	
		375499	6585839	90	-55	RC	228	120	130	10	0.12	
BVNC037	Torana		And					184	199	15	0.20	
				And				210	228	18	0.11	
BVNC038	Commodore	376622 6584158 90 -65 Pre- collar 144 NSI										

<sup>\*</sup>Notes to Table 1

- NSI = no significant intersection
- Significant results >0.5% Ni shown bold
- Grid coordinates GDA94: zone51, collar positions determined by handheld GPS.
- All holes nominal RL 350 +/-1m AHD.

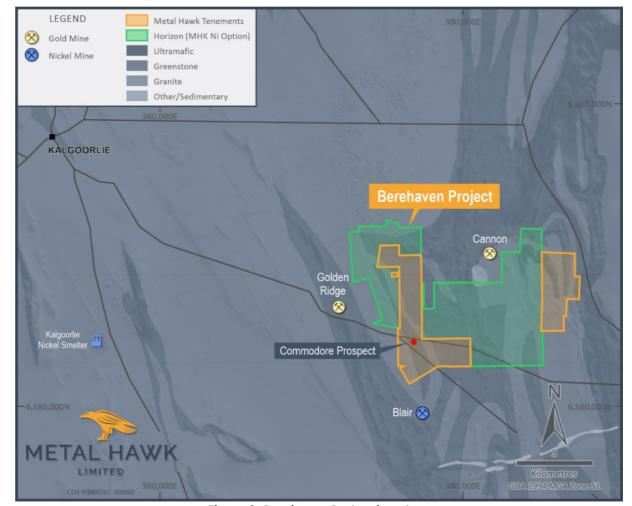


Figure 3. Berehaven Project location

This announcement has been authorised for release by Mr Will Belbin, Managing Director, on behalf of the Board of Metal Hawk Limited.

For further information regarding Metal Hawk Limited please visit our website at <a href="https://www.metalhawk.com.au">www.metalhawk.com.au</a> or contact:

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#### **About Metal Hawk Limited**

Metal Hawk Limited is a Western Australian mineral exploration company focused on early-stage discovery of gold and nickel sulphides. Metal Hawk owns a number of quality projects in the Eastern Goldfields and the Albany Fraser regions.

Metal Hawk discovered high grade nickel sulphide at the Berehaven Nickel Project, located 20km southeast of Kalgoorlie, in September 2021. The Company has consolidated over 90km<sup>2</sup> of underexplored tenure at Berehaven, which is situated north of the Blair Nickel sulphide deposit.

IGO Limited (ASX: IGO) has an Earn-In and Joint Venture Agreement with Metal Hawk whereby IGO have the right to earn a 75% interest on three of MHKs projects; Kanowna East, Emu Lake and Fraser South by spending \$7.0 million over 5 years. Metal Hawk is free carried to decision to mine and retains gold rights at Kanowna East and Emu Lake.

Falcon Metals Limited (ASX: FAL) has an Earn-in Agreement with Metal Hawk on the Viking Gold Project whereby FAL can earn up to 70% of the Viking Project by spending \$2.75 million on exploration over 4.5 years. FAL listed on the ASX in June 2021 and is a demerger of Chalice Mining Limited's (ASX: CHN) Australian gold assets.

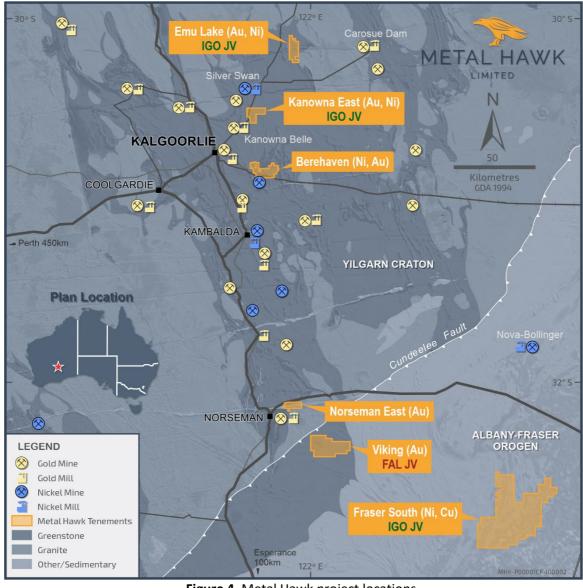


Figure 4. Metal Hawk project locations



#### **Competent Person statement**

The information in this announcement that relates to Exploration Targets and Exploration Results is based on information compiled and reviewed by Mr William Belbin, a "Competent Person" who is a Member of the Australian Institute Geoscientists (AIG) and is Managing Director at Metal Hawk Limited. Mr Belbin is a full-time employee of the Company and hold shares and options in the Company. Mr Belbin has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he has undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Belbin consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

#### **Forward-Looking Statements**

This document may include forward-looking statements. Forward-looking statements include, but are not limited to, statements concerning Metal Hawk Limited's planned exploration program(s) and other statements that are not historical facts. When used in this document, the words such as "could," "plan," "estimate," "expect," "intend," "may", "potential," "should," and similar expressions are forward looking statements.



# 2012 JORC Table 1

# **SECTION 1: SAMPLING TECHNIQUES AND DATA**

	JORC Code explanation	Commentary	
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	<ul> <li>Hole diameter was 5.5" (140mm) revers circulation percussion (RC).</li> <li>Drill holes were generally angled -60 towards the east to intersect the interpreted geology as close to perpendicular as possible.</li> <li>Sampling was undertaken by collecting 1m consplit samples at selected intervals and 2-50 composite samples throughout the remainder the drillhole.</li> <li>Samples were collected in calico bags for the drillhole.</li> </ul>	
	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.	Samples were collected in calico bags for dispatch to the sample laboratory. Sample preparation was in 3-5kg pulverizing mills followed by sample splitting to a 200g pulp which will then be analysed by Intertek Genalysis Pertrusing methods 4AE/OE (multi-acid digest) in Teflon tubes. Analysis by Inductively Coupled Plasma Optical (Atomic) Emission Spectrometry and for higher precision analyses (eg. Ni > 1%) method 4AH/OE, modified (for higher precision) multi-acid digest.  Selected samples were also analysed for platinum group elements (Au, Pt, Pd) via 25g fire assay (Intertek method FA25/MS) with mass-spectrometer finish.  Moving loop electromagnetic (MLEM) surveys and downhole electromagnetic (DHEM) surveys were undertaken by GEM Geophysics, an independent geophysical contractor.  The following equipment specifications and data sampling techniques were employed:	
		TRANSMITTER Transmitter system (Tx) VTX-100	
		Base Frequency (Hz) 0.25 Hz	
		Current (A) ~100amps	
		RECEIVER AND SENSOR	
		DHEM System Digi Atlantis system	
		Components B(a,u,v)	
		Window Timing SMARTem Standard	
		Stacks Minimum stacks required to obtain clean data	
		Readings Minimum three repeatable	
		GEOMETRY	
		Station Spacing (m)  10m with 5m infill where required	
		Loop Dimensions (m) 200x200m, 300m x 300m	
		Loop Turns 1	
		Coordinate System(s) GDA94 MGA zone 51	
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-	Drilling technique was Reverse Circulation (F with hole diameter of 140mm face sampl hammer.	



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	sampling bit or other type, whether core is oriented and if so, by what method, etc).	
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.	RC drill recoveries were visually estimated from volume of sample recovered. All sample recoveries within the mineralized zone were above 80% of expected. RC samples were visually checked for recovery, moisture and contamination and notes were made in the logs. There has been no recognisable relationship between recovery and grade, and therefore no sample bias.
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.	Detailed geological logs have been carried out on all RC drill holes, but no geotechnical data have been recorded (or is possible to be recorded due to the nature of the sample). The geological data would be suitable for inclusion in a Mineral Resource estimate.      Logging of RC drill chips recorded lithology, mineralogy, mineralisation, weathering, colour and other sample features.      RC chips are stored in plastic RC chip trays.      All holes were logged in full.
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 subsampling 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.	<ul> <li>RC samples were collected on the drill rig using a cone splitter. All of the mineralised samples were collected dry or moist as noted in the drill logs and database.</li> <li>The field sample preparation followed industry best practice. This involved collection of 1m samples from the cone splitter and transfer to calico bag for dispatch to the laboratory.</li> <li>Field QC procedures involve the use of alternating standards and blank samples (insertion rate of 1:20).</li> <li>No field duplicates were taken.</li> <li>The sample sizes were considered more than adequate to ensure that there are no particle size effects relating to the grain size of the mineralisation, which lies in the percentage range.</li> </ul>



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#### 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.

- Samples were submitted to Intertek Genalysis and analysed via method 4A/OE04: Multi-acid digest including hydrofluoric, nitric, perchloric and hydrochloric acids in Teflon tubes. Analysed by Inductively Coupled Plasma Optical (Atomic) Emission Spectrometry. This is considered a total analysis, with all of the target minerals dissolved.
- An Olympus Vanta portable handheld xrf analyser was used only for a guide to logging, selection of single metre and composite sampling intervals, and confirmation of logged mineralisation. No pXRF values are reported.
- Field QC procedures involve the use of standards and blank samples (insertion rate 1:20). In addition, the laboratory runs routine check and duplicate analyses.
- The MLTEM and DHEM surveys were undertaken by GEM Geophysics Pty Ltd, an independent geophysical contractor.

#### 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.

- The DHEM survey used a Digi Atlantis system
   The Company's Managing Director has visually inspected and verified the significant drill intersections.
- No holes have been twinned at this stage.
- Primary data was collected using a standard set of Excel templates on a Toughbook laptop computer in the field. These data are transferred to Newexco Exploration Pty Ltd for data verification and loading into the database.

# Location of data points

Accuracy and quality of surveys used to locate drillholes (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.

- Not applicable. A hand-held GPS has been used to determine collar locations at this stage.
- Gyroscopic downhole surveys were taken at approximately every 30m.
- The grid system used is MGA94, zone 51 for easting, northing and RL.
- A nominal height of 350m +/- 1m AHD was used.
   All the drillhole collars are within 1m height difference.

# 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.

- The drillholes are spaced from between 50m to 400m apart. Some sections have had limited historical aircore and RAB drilling.
- At this early stage of exploration there is insufficient data to complete a geological understanding of geological and grade continuity appropriate for Mineral Resource and Ore Reserve estimation work.
- No sample compositing has been applied.



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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.	The holes have been designed to intersect the interpreted geology as close to perpendicular as possible, however there is insufficient data to determine actual orientation of mineralisation at this stage
Sample security	The measures taken to ensure sample security.	The samples were delivered to the laboratory by the Company.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No review of the sampling techniques has been carried out.

## **SECTION 2: REPORTING OF EXPLORATION RESULTS**

Criteria	JORC Code explanation	Commentary
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 work programs were conducted at the Berehaven Project on licenses E26/210 and E26/216 which are 100% owned by the Company. Exploration was also conducted on licenses P26/4381-4386 and E/25/349, E25/543 and E25/564 which are owned by Horizon Minerals Limited. MHK has acquired the nickel rights on these tenements.
	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.	The project tenements are in good standing and no known impediments exist.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	Historical gold exploration by other parties intersected anomalous and nickel and copper values in limited RAB drilling. No known significant nickel sulphide exploration has taken place at the prospect.
Geology	Deposit type, geological setting and style of mineralisation.	The geological setting is of Archaean age with common host rocks related to komatiite-hosted nickel sulphide mineralisation as found throughout the Yilgarn Craton of Western Australia. The Archaean rocks are deeply weathered and locally are covered by 20m to 30m thick transported ferruginous clays and gravel.
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.	Refer to Table 1 and the Notes attached thereto.     For exploration results and details of previously reported MHK drillholes see previous ASX announcements dated 28 September 2021, 17 October 2021, 11 November 2021, 14 February 2022, 30 May 2022, 1 June 2022 or visit the MHK website ( <a href="https://www.metalhawk.com.au">www.metalhawk.com.au</a> ).



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Data aggregation methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. 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.	<ul> <li>Cut-off grade of 0.1% Ni has been used with a minimum width of 1m.</li> <li>No internal dilution has been stated.</li> <li>No maximum or minimum grade truncations were applied.</li> <li>High grade intervals internal to broader mineralised zones are reported as included zones – refer to drill intercept and detail tables.</li> <li>No metal equivalent values have been stated.</li> <li>Reported nickel mineralised intersections for the drilling are based on intercepts using a lower grade cut-off of 0.1% Ni for the overall mineralised zones.</li> </ul>
Relationship between mineralisation widths and intercept lengths	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 (e.g. 'down hole length, true width not known').	Not known at this stage.
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.	Refer to Figures in text.
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 company believes that the ASX announcement is a balanced report with all material results reported.
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.	Everything meaningful and material is disclosed in the body of the report. Geological and geophysical observations have been factored into the report.
Further work	The nature and scale of planned further work (e.g. 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	Further work will be planned following further analysis of results and follow-up downhole electromagnetics (DHEM).



