

**ASX Code: IPT** 

# March 10<sup>th</sup>, 2025



# **New Ground Acquisition at Broken Hill**

- Impact to acquire a large tenement package from New Frontier Minerals Limited (ASX:NFM)
  adjoining its existing ground holding that almost completely surrounds the giant Broken Hill
  lead-zinc-silver mine in New South Wales.
- Impact's ground now extends over 1,770 sq km and covers an area considered extremely prospective for large copper deposits following a novel exploration model that formed the basis of the company's participation in the inaugural BHP Xplor program in 2023.
- Detailed mapping and sampling of 99 gabbro sills and other work completed during the Xplor
  program confirmed the copper potential with numerous areas for further exploration identified
  within the Broken Hill sequence. At least one such target lies within the newly acquired ground.
- Next steps will include ground geophysics to help identify targets for drilling.
- Terms of the acquisition are as follows: Impact to purchase BHA No 1 Pty Ltd, a wholly owned subsidiary of NFM, for \$275,000 in Impact shares and subject to staged voluntary escrow over six months commencing one month after Completion.

Impact Minerals Limited (ASX:IPT) is pleased to announce the acquisition of a large, 675 sq km landholding adjacent to its current land position surrounding one of the world's greatest mines containing over 350 million tonnes of massive sulphide mineralisation, the Broken Hill silver-lead-zinc deposit in New South Wales.

The acquisition builds on exploration and research completed as part of the BHP Xplor program, in which Impact participated in its inaugural year, and positions the company as one of the largest ground holders in the region, particularly to the south of Broken Hill. Impact now has 100% ownership of tenements covering 1,770 sq km and over 100 kilometres of strike (Figures 1 and 2; ASX Releases January 17, 2023, and February 16, 2023).

The Broken Hill region is currently experiencing a resurgence of interest in exploration. Broken Hill Mines (ASX: BHM, formerly Coolabah Metals Limited) recently purchased the privately owned Rasp Mine in Broken Hill and the nearby Pinnacles deposit. In addition, South32 Limited has entered a joint venture with a private company that owns a significant ground holding north of the Broken Hill mine. This interest is partly driven by a recent increase in silver prices and long-term demand trends for zinc and lead.



## The Search for Copper at Broken Hill

Since the discovery of the giant Broken Hill deposit in 1883, most previous exploration has focused on silver-lead-zinc mineralisation. However, various styles of copper mineralisation are also known to occur throughout the region and have been the focus of some exploration and shallow drilling, though with limited success (Figures 1 and 2). Since copper mineralisation is commonly associated with, but peripheral to, numerous silver-lead-zinc deposits, many exploration geologists have asked, "Where is the large copper deposit at Broken Hill?".

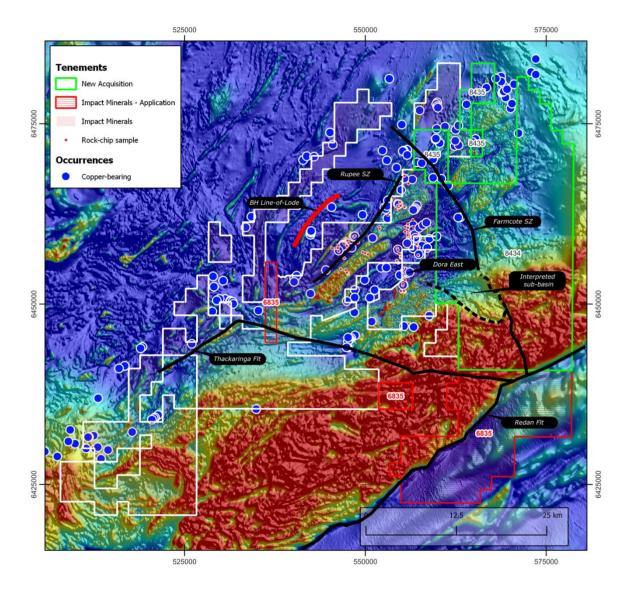
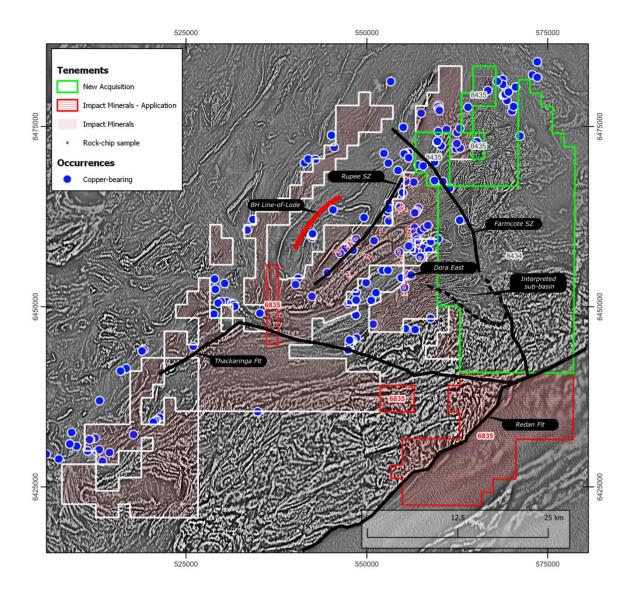


Figure 1. Image of regional total magnetic intensity showing the Broken Hill orebody (Line of Lode), Impact's granted licences and licence applications and the new tenements acquired. Note the Thackeringa Fault and Farmcote shear zone, both interpreted as deep-seated long-lived crustal lineaments, and the interpreted sub-basin in the new tenements. Widespread copper occurrences attest to the prospectivity of the region for copper. Impact's rock chip locations are also shown.



**Figure 2.** Image of the first vertical derivative of regional magnetic data as in Figure 1. A detailed interpretation of this data has resulted in the identification of numerous target areas for large copper deposits.

Impact became interested in the region's copper potential during exploration for silver-lead-zinc at the Dora East prospect, located about 30 km south of Broken Hill (Figures 1 and 2). Here, Impact discovered moderate widths of high-grade silver-lead-zinc mineralisation and narrow zones of high-grade copper-silver mineralisation (Figure 3 and ASX Releases December 8, 2015, and February 19 2016).

Drill hole RHD020 returned an intercept of:

7 metres at 7% zinc, 1.1% lead and 20.7 g/t silver from 131 metres including 1.6 metres at 22.0% zinc, 3.6% lead and 66.7 g/t silver from 132.4 metres (Figure 3).

In addition, a zone of good copper and silver grades was identified that returned:

0.7 metres at 2.4% copper and 22.5 g/t silver from 109.5 metres (Figure 3).

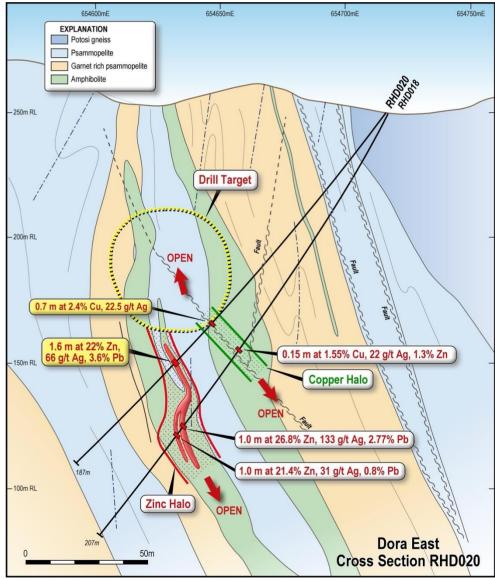
Hole RHD018 returned:

5.1 metres at 10% zinc, 0.8% lead, 40.4 g/t silver from 148.4 metres including 1 metre at 26.8% zinc, 2.8% lead, 133 g/t silver (4 ounces) from 148.9 metres; and 1 metre at 21.4% zinc, 0.8% lead and 31.5 g/t silver (1 ounce) from 152.5 metres.

In addition, a narrow zone of highly anomalous copper, silver and zinc grades was identified that returned:

# 0.15 metres at 1.5% copper, 1.3% zinc and 22 g/t silver (Figure 3).

The copper mineralisation had a different origin than the silver-lead-zinc mineralisation, prompting Impact to initiate an internal research project to further explore the region's copper potential (ASX Release May 5<sup>th</sup>, 2016). This ultimately led to Impact's successful application for the BHP Xplor program (ASX Releases January 17, 2023, and February 16, 2023).

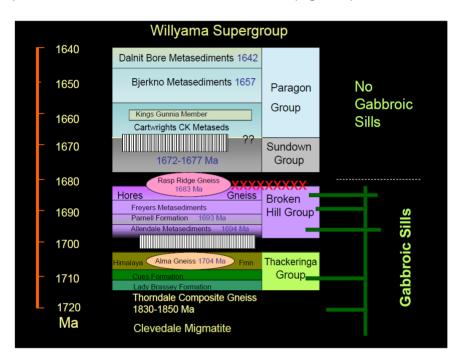


**Figure 3.** Cross section through the Dora East Prospect showing high-grade silver-lead-zinc and copper-silver-zinc intercepts.

## A new model for copper at Broken Hill

Impact's thesis for the Xplor program is based on unpublished work completed by Prof. Tony Crawford and his associates at the Centre for Ore Deposit Studies at the University of Tasmania, which proposed a new model for the source of metals in the Broken Hill deposit. This model suggested there is significant exploration potential for a large copper deposit related to Broken Hill somewhere in the stratigraphic (rock) sequence below the deposit.

The Crawford model proposed that there was an important, if not dominant, contribution of silver, lead, and zinc, along with associated pathfinder elements such as manganese and phosphorus, to the metal budget at the Broken Hill deposit from a series of mafic gabbro sills that occur only at or below the Broken Hill mineralisation (Figure 4).



**Figure 4.** Cross section through the Dora East Prospect showing high grade silver-lead-zinc and copper-silver-zinc intercepts.

Crawford's work indicated that the parental magma for the mafic gabbro sills was unusually iron-rich and also that as those magmas fractionated (cooled) and crystallised, they would concentrate any silver-lead-zinc and other metals that could be released into the hydrothermal system that created Broken Hill. Impact found field evidence at Dora East that supported this model.

A corollary of the proposed process is that the parental mafic magma would also have carried a large amount of copper, which, if concentrated deeper in the system, could potentially form a very large magmatic copper sulphide deposit. Alternatively, the copper may have accumulated as a large sedimentary copper deposit, depending on how and when the copper was concentrated and released into the rock sequence.

# Impact's Xplor Work

Impact completed to following research work funded by the Xplor program:

- 1. Mapping and sampling of the mafic gabbro sills with a total of 655 rock chip samples taken across 99 different mafic sills from throughout the Broken Hill stratigraphy (rock sequence). These were submitted for multi-element geochemical assay focusing on copper, lead, zinc and iron.
- 2. A detailed magnetic interpretation of the south Broken Hill area.
- 3. Geophysical case studies over the Dora East silver-lead-zinc discovery using the Sub-Audio Magnetic (SAM) and Audio-Magnetotelluric (AMT) techniques, together with some regional MT readings. Broken Hill-style massive sulphide mineralisation is generally non-conductive in traditional electromagnetic (EM) surveys. The SAM and AMT techniques offer potential direct detection of galena-sphalerite mineralisation.

This work could not have been funded without the Xplor program, and the Company thanks BHP for their innovative approach to helping fund exploration by junior companies. To clarify though, Impact is under no obligation to BHP with respect to the Broken Hill project.

Figure 5 summarizes the rock chip geochemistry results for copper, lead, zinc and iron (further details are provided in the JORC Table at the end of this report). There are some clear relationships.



**Figure 5.** Summary of 655 rock chip samples taken across 99 gabbro units throughout the Broken Hill stratigraphic sequence. There are three major rock Groups (Basement, Thackeringa Group and Broken Hill Group), within which there are 10 separate rock formations, all of which contain gabbro sills. The Broken Hill mineralisation occurs at the top of the sequence at and above the Freyers unit (Figure 4).

First, the gabbros become very iron-enriched towards the top of the sequence.

Secondly, the gabbros also become significantly more zinc and lead-enriched toward the top of the sequence. This supports the Crawford model in that the gabbro sequence is fractionating (or evolving) over time and concentrating iron, lead and zinc (and other key metals not shown). Thus, these gabbros could have provided metals (as well as heat and fluids) into the Broken Hill mineralizing system.

Thirdly, and most importantly, as predicted, it is evident that copper is being depleted at the top of the system. This suggests that copper may have been lost from the system over time; therefore, it is possible that this copper has concentrated deeper in the sequence below the Broken Hill deposit.

Impact interprets the rock chip data, along with field evidence, to indicate the Crawford model could apply to Broken Hill and that there is significant potential for a larger copper deposit in the region.

Together with the other data collected as part of the Xplor program, as well as in-house knowledge of the region built up over the past ten years, several key areas have been identified as prospective for significant copper mineralisation related either to magmatic sulphides or sedimentary sulphides. One such area is a large sub-basin identified in the magnetic data adjacent to the Farmcote Shear Zone in the newly acquired ground (Figures 1 and 2).

Both the Farmcote Shear Zone and the well-known Thackeringa Fault are two major structures that have a fundamental effect on the distribution of rock types and structural history of the Broken Hill region. Impact interprets these as long-lived trans-crustal structures that had an important role to play in the mineralisation of the Broken Hill region.

## **Next Steps**

Impact's immediate focus is on completing the Pre-Feasibility Study for the Lake Hope High Purity Alumina project in Western Australia. However, some funds from the current renounceable rights issue will be directed towards developing some of the priority copper targets for drilling. This will include some ground geophysics over the newly identified subbasin. Impact is considering a number of options for funding further work in the area considering its potential.

#### TERMS OF THE AGREEMENT WITH NEW FRONTIER METALS LTD

- 1. Impact has entered into an agreement to purchase from New Frontier Metals Ltd (ASX:NFM) its wholly owned subsidiary BHA No. 1 Pty Ltd ("BHA"), which holds the Broken Hill East Project comprising tenements EL8434 and EL8435.
- 2. Under the terms of the agreement, in consideration for NFM transferring all of the shares in BHA to Impact, NFM will receive \$275,000 worth of IPT shares (based on a 14-day VWAP as at March 7<sup>th</sup> 2025), which IPT shares are subject to voluntary escrow arrangements for up to 6 months.
- 3. Completion of the agreement, and the sale of BHA, is expected to occur on or around Monday, 10 March 2025.

#### **COMPLIANCE STATEMENT**

This report contains new Exploration Results for 655 rock chip geochemistry samples.

The acquisition was incomplete at the time of the recent renounceable rights issue's lodgment, as declared in the prospectus (ASX Release February 28<sup>th,</sup> 2025).

Dr Michael G Jones

**Managing Director** 

### **Competent Persons Statement**

The review of results in this report is based on information compiled by Dr Mike Jones, a Member of the Australasian Institute of Geoscientists and a full-time employee of Impact Minerals Limited. He has sufficient experience which is relevant to the style of mineralisation and types of deposits under consideration and to the activity that he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code). Dr Jones has consented to including the matters in the report based on his information in the form and context in which it appears.

# JORC Code, 2012 Edition - Table 1

# Section 1 Sampling Techniques and Data

Criteria	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 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.  Description of 'industry standard' work	Rock-chip samples of amphibolites were collected along traverses bisecting the exposed thickness of intrusive gabbro units (i.e. 'Willyama Amphibolites').      Sample collection – performed by a geologist and a field-assistant – was achieved using a geo-pick. Due to the objectives of the sampling campaign, only un-weathered or minimally weathered units were targeted. Judgement regarding what classifies as 'un-weathered' ultimately rests with the geologist supervising the collection. To ensure consistent identification of un-weathered amphibolite units, the same two geologists supervised the campaign with ample shift-overlaps.      A minimum of 1kg of rock-chip sample would be inserted into a labelled calico bag.
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).	• NA.
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.  Mether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	• NA.
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.	Mineralogical logging of every rock-chip sample collected was performed. In addition, structural measurements of traverses were also collected, as well as magnetic susceptibility measurements using a K-10 magnetic susceptibility meter.
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 insitu 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.	Measures undertaken to ensure rock-chip samples are representative of the intrusive units sampled include: 1) a minimum of 1kg sample weight designated as appropriate; 2) by virtue of sampling an intrusive unit via a traverse – samples encapsulate most geochemical excursions contained within, given that the basal and roof-contacts are always 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.  Far geophysical tools, spectrometers, handheld XRF instruments, etc, the	Assaying of rock-chips samples was performed by Intertek (Adelaide) using conventional analytical methods.     Assay suites included total complete digests (Na-peroxide fusions:

Criteria	JORC Code explanation	Commentary
	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.	FP1/OM42 & FP6/OM55, with ICP-finishes), near-complete digests (four-acid multi-element digests with ICP-finishes), fire-assays for precious metals/platinoids (i.e. FA25/MS on 25g of pulp), and lastly, acid digestion & titration for determination of ferrous iron (FeO, using AD71/VOL) for the purposes of determining oxidation levels of the mafic plutonic units.  Standard laboratory QAQC procedures were employed. Blank and Standards (i.e. Certified Reference Material – CRM) analyses did not yield results that would warrant concern regarding contamination or precision, respectively.  No in-field QAQC samples were inserted for wet-chemistry given that rock-
		chip samples generally do not warrant them.
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	• NA.
Location of data points	Accuracy and quality of surveys used to locate drill holes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.      Specification of the grid system used.	655 rock-chip samples have been collected for a total of 99 traverses (i.e. amphibolites analyzed).      Sample locations were measured using a handheld GPS. Coordinates were recorded using the GDA94 / MGA zone 54 grid system.
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.	A minimum of 4-5 samples were to be collected for intrusives of apparent thickness <10m.  Sample spacing along a traverse was to ensure equidistance between consecutive samples. To do so, once every traverse was oriented, a measuring tape would be laid out from contact to contact, and every sample's 'apparent height' within the intrusive was recorded.
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.	Traverses were oriented using a compass such that the traverse axis is orthogonal to the strike of the intrusive unit.  Structural measurements (i.e. foliation, contact, etc.) were recorded for every traverse. A minimum of 2 structural measurements was set per traverse.  Using the strike/dip of both contacts, a true thickness of every amphibolite sample was calculated. Further, every 'apparent height' measurement of a sample was subsequently converted to a 'true height'.
Sample security	The measures taken to ensure sample security.	10-15 bagged samples would be contained within labelled poly-weave sacks. At the end of every sample collection day, the poly-weave sacks would be stored at the gated and secure premises of Aussam Geotechnical Services in Broken Hill.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	• NA.

# Section 2 Reporting of Exploration Results

Criteria listed in the preceding section also apply to this section.

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.	Rock-chip samples have been collected within the following IPT (holding company "Siouville Pty Ltd") Exploration Licences: EL8636, EL9036, EL7390, EL8234, EL9384. All exploration licences are 100% IPT owned.
	<ul> <li>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.</li> </ul>	
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	• NA.
Geology	Deposit type, geological setting and style of mineralisation.	The model invoked during the rock-chip sampling campaign is the following: 1) ferrobasaltic evolution of syn-tectonic shallow-crustal magmas, 2) intrusion/extrusion into/unto basin sequences; 3) copperaffinity linked to intrusives most reflective of 'ferrobasaltic' characteristics, 4) post-emplacement concentration/remobilization of copper into favourable structural domains.
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:	• NA.
	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.	
	<ul> <li>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.</li> </ul>	

Criteria	JORC Code explanation	Commentary
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	No aggregation required nor used for tabulation of rock-chip assay results.
	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.	
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	• NA.
	If it is geometry of the immension 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').	
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.	• NA.
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.	• NA.
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.	• NA.
Further work	The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step- out drilling).	• NA.
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	