ASX Announcement | 22 November 2022
Hexagon Energy Materials Limited (ASX: HXG)

Drilling of high-priority targets completed at McIntosh Ni-Cu-PGE project with assay due early 2023

Highlights:

- **Drilling of high-priority targets has completed at the McIntosh Ni-Cu-PGE project.**
- **Samples dispatch to the lab with results due in early 2023.**

Hexagon Energy Materials Ltd (ASX: HXG; "Hexagon" or "the Company") is pleased to announce the first phase of the RC exploration program has been successfully completed at its McIntosh Ni-Cu-PGE Project in the East Kimberley Region of northern Western Australia. Samples from the 823m RC drilling program have been submitted for analysis with results expected in Q1 2023.

The program focused on defined high Priority drill targets which include IP Anomaly A & B which were discovered by Hexagon via previous IP surveys over the Greater Mellon Patch area conducted in 2021, also Anomaly 22 and Anomaly 9 which were identified in a geophysical review of the project undertaken by the company (Table 1 and see HXG ASX Announcement 11 November 2021).

With disseminated sulphide visually identified in 2 of the 4 targets, down hole Electro Magnetic work will be carried out at Anomaly 22 & 9 locations shortly.

Chairman Charles Whitfield commented, "We are delighted that we managed to accomplish this first stage of the drill program in this field season given the external delays that the company had to overcome. Initial assessment is encouraging and predicates follow up work on the drill holes from this stage and the additional targets that we have budgeted for in 2023. We look forward to informing the market of the assay results when they are received."

Drill Program

The completed drill program tested the following 4 high-priority geophysical anomalies (Figure1)

- Two untested Airborne Electro Magnetic (AEM) anomalies Anomaly 22 and Anomaly 9
- Two untested ground Induced Polarisation (IP) anomalies A and B

EM Anomaly 9

Anomaly 9 (Figure 1) lies within the Wild Dog Creek Gabbro (WDCG) intrusion and is located near an inliers of older Panton intrusive rocks, with a coincidental historic Ni-Cu soil anomaly (see HXG ASX Announcement 28 June 2021). Hole 22HXRC001 was drilled to target this anomaly, geological observation identifying a mafic intrusive package (WDCG). The visual log also identified fine grained disseminated sulphides including suspected Bornite (<1%) observed proximal to the interpreted EM conductor from 66m to 103m. Assays are currently pending, and a downhole EM survey planned.

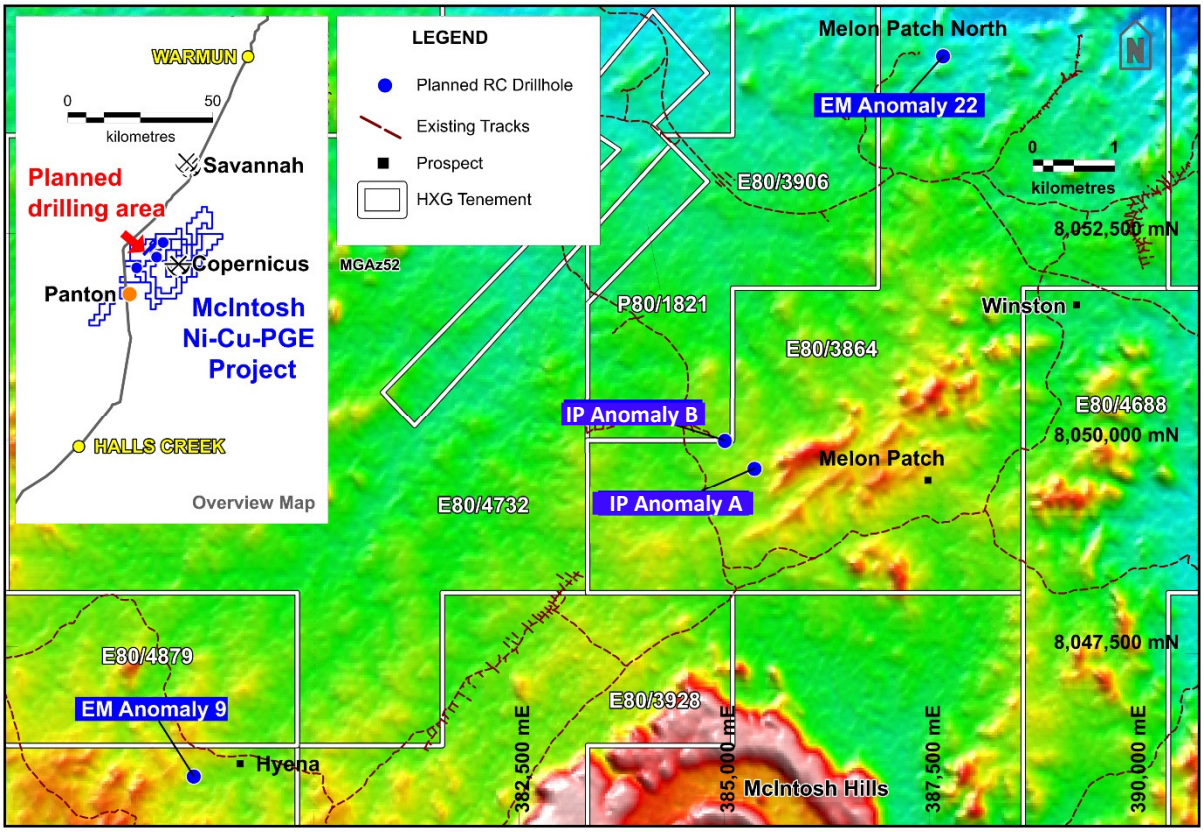

Figure 1: 2022 RC exploration drilling targets.

IP Anomalies A & B

The Melon Patch intrusion was identified as a priority Ni-Cu-PGE target by Hexagon in 2021 (see HXG ASX Announcement 28 June 2021). A Reconnaissance dipole-dipole IP/resistivity surveying of the northern margin of the Melon Patch mafic-ultramafic intrusive complex was completed in 2021 (see HXG ASX announcement 11 November 2021). The survey was designed to cover an area of strong Ni-Cu anomalism in soil geochemical sampling and to extend into the country rocks a sufficient distance to cover potential feeder dykes, and structurally remobilised mineralisation.

Anomaly A was a chargeable anomaly defined in this survey. Geological observation from hole 23HXRC004 has noted fine grain disseminated sulphides (<1%) from 44m to EOH within mafic intrusive and assays are currently pending. Hole 26HXRC003 which targeted Anomaly B has been interpreted to be likely associated with the graphite mineralisation. Geological observation from the drilling identified interbedded graphite from 208m to 231m, which is likely producing the identified IP response.

EM Anomaly 22

Anomaly 22 lies within the Melon Patch North prospect, the geological mapping undertaken by HXG now has this anomaly situated within a remnant of the potential Panton Sill type intrusive, bound to the north by Tickalara Metamorphics and to the east by the Sally Down Suite (see HXG ASX

Announcement 28 June 2021). Hexagon has secured funding through the Western Australian Government's Exploration Incentive Scheme to co-fund drilling to test the target. Hole 22HXRC003 has identified graphite mineralisation from 75m to 88m which coincides and is likely producing the interpreted EM response.

Next Steps

Downhole EM surveys are planned to be completed at Anomaly 9 and 22 in the coming weeks, subject to availability and the onset of the wet season, to confirm the current EM interpretation. Regrettably plans to test the Panton Peridotite Target Area, Panton Gabbro Target Area and the Wild Dog Creek (WDC) Gabbro 1 Target Area (See ASX HXG Announcement 7 November 2022) have had to be postponed due to increasing adverse weather conditions in the Kimberley. All approvals are in place, and drilling will recommence at the conclusion of the current wet season. Assays are pending for all drilling with results expected in Q1 2023.

The 1000 UFF soil samples completed over the Togo & Mini M prospect have been delivered to the lab with assay results expected in early 2023, with follow up work expected in 2023 (See ASX HXG Announcement 7 November 2022).

Table 1: Showing 2022 RC Drill Hole Location

Target	Hole ID	Easting	Northing	Grid	RL (m)	Dip	Azi	Depth (m)	Target Depth (m)
Anomaly 9	22HXRC001	378528	8045938	MGA94_52	434	-70	135	120	80
Anomaly 22	22HXRC002	387632	8054714	MGA94_52	385	-75	255	103	73 90
Anomaly B	22HXRC003	384967	8050072	MGA94_52	406.6	-60	313	300	80 to EOH
Anomaly A	22HXRC004	385349	8049723	MGA94_52	420	-60	313	300	80 to EOH -

Competent person's attributions

The information within this announcement that relates to Exploration Results and Geological data at the McIntosh Project is based on information compiled by Mr. Michael Atkinson and is subject to the individual consents and attributions provided in the original market announcement and reports referred to in the text of this announcement Mr. Atkinson is not aware of any other new information or data that materially affects the information included in the original market announcement or reports referred, and that all material assumptions and technical parameters have not materially changed.

Mr. Atkinson is a consultant to Company and a member of The Australian Institute of Geoscientists. He has sufficient experience relevant to the styles of mineralisation and types of deposits under consideration and to the activities currently being undertaken to qualify as a Competent Person(s) as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results Mineral Resources and Ore Reserves and he consents to the inclusion of the above information in the form and context in which it appears in this report.

ABOUT HEXAGON ENERGY MATERIALS LIMITED

Hexagon Energy Materials Limited (ASX: HXG) is an Australian company focused on future energy project development and energy materials exploration and project development.

Hexagon 100% owns the McIntosh Nickel-Copper-PGE and Graphite project in Western Australia (WA) and the Halls Creek Gold and Base metals project in WA. On 14 February 2022 Hexagon announced a binding Graphite Mineral Rights Earn-in agreement (up to 80%) had been entered into with Critical Green Minerals Pty Ltd, with McIntosh graphite expected to become part of an ASX Initial Public Offering during 2022. In the USA, Hexagon has an 80 per cent controlling interest of the Ceylon Graphite project located in Alabama, over which South Star Battery Materials Corp. (TSXV: STS) on 7 December 2021 signed an Option to develop and earn-in up to 75% interest.

Hexagon also is developing a business to deliver decarbonised Hydrogen (blue Ammonia) into export and domestic markets at scale, with Hexagon's WA Hydrogen (WAH_2) project currently being pursued.

Hexagon's plan is to use renewable energy in clean Hydrogen production to the greatest extent possible in its projects, transitioning from blue to green Hydrogen production on a commercial basis, over time. Supporting this strategy in January 2022 Hexagon signed a Memorandum of Understanding with renewable energy company FRV Services Australia Pty Ltd (FRV Australia) (51% owned by Fotowatio Renewable Ventures S.L. and 49% owned by OMERS Infrastructure part of OMERS Canadian defined benefit pension plan fund). FRV has almost 800MWdc of Australian PV assets built or under construction in Australia.

Hexagon's overarching goal for 2022 is to secure and leverage technical and commercial alliances by commodity across its project portfolio whilst maintaining a core focus on Northern Australian Future Energy Materials and Future Energy project developments, in-house. Figure 2 below summarises Hexagon's Strategy and Figure 3 shows the locations of Hexagon's projects.

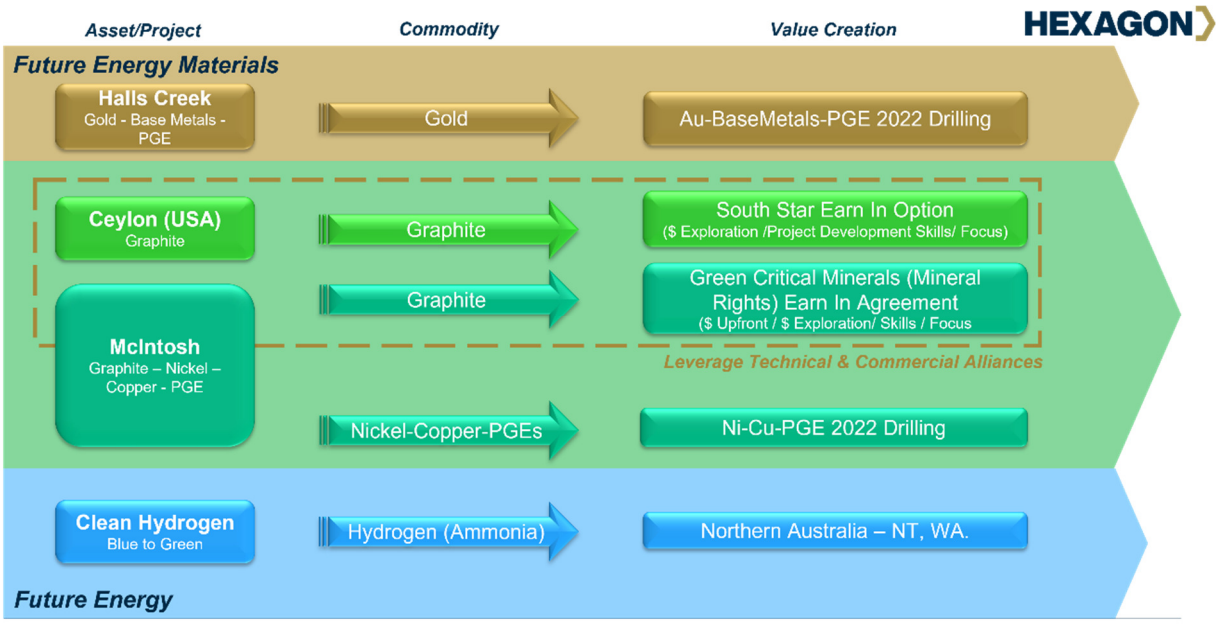

Figure 2: Hexagon's Strategy 2022.

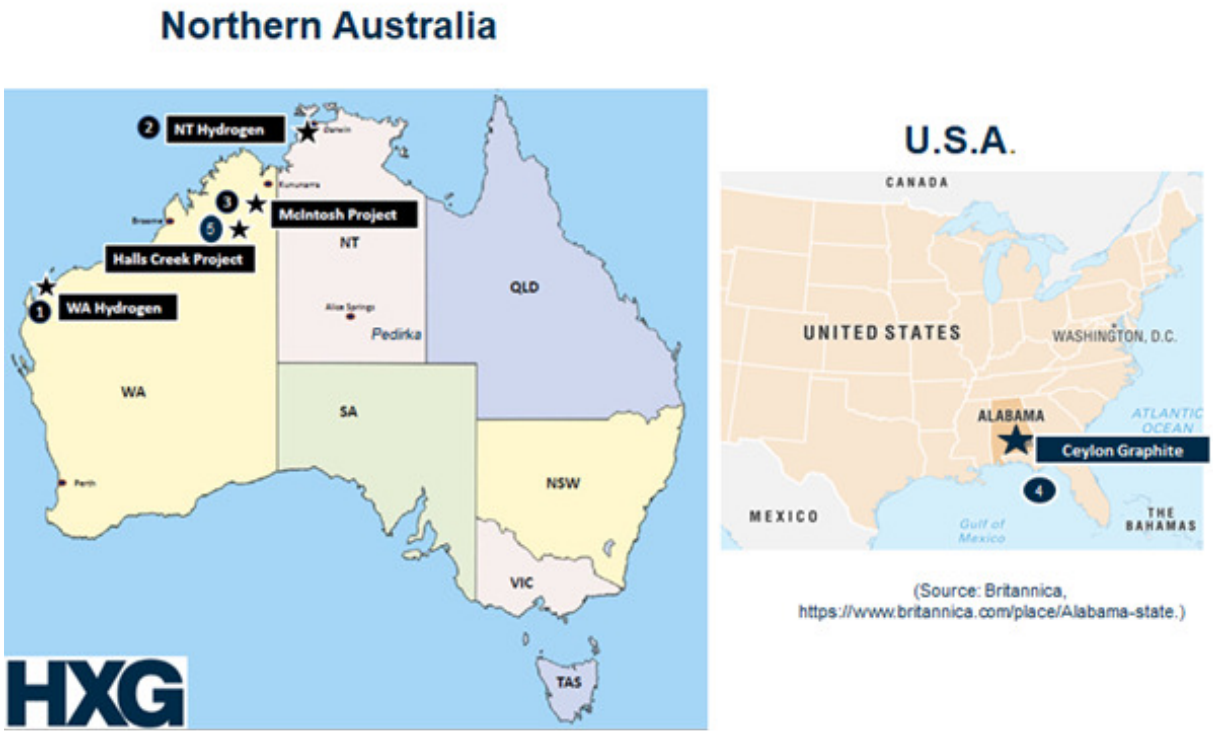

Figure 3: Hexagon project locations.

Authorisation

This announcement has been authorised by the Board of Directors.

To learn more please visit: www.hxgenergymaterials.com.au

FOR FURTHER INFORMATION, please contact:

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JORC TABE 1

Section 1 Sampling Techniques and Data

Criteria	JORC Code Explanation	Commentary
Sampling techniques	• *Nature and quality of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*	• Non-Applicable: No Assay Results Reported.
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).*	• Reverse Circulation (RC) drilling completed • Hole diameter 5 ¾" (146mm)
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.*	• Non-Applicable: No Assay Results Reported.
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.*	• All RC was logged for geology in the field by qualified geologists. Lithological and mineralogical data was recorded for all drill holes using a coding system developed specifically for the Project. Primary and secondary lithologies are recorded in addition to texture, structure, colour, grain size, alteration type and intensity, estimates of mineral quantities, and sample recovery. The oxidation zone is also recorded. • Geological logging is qualitative in nature. •
Sub-sample techniques and sample preparation	• *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.*	• Non-Applicable: No Assay Results Reported.

Criteria	JORC Code Explanation	Commentary
	• *Whether sample sizes are 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.* • *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.*	• Non-Applicable: No Assay Results Reported.
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.*	Non-Applicable: No Assay Results Reported.
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.*	• HXG drill hole location coordinate information was collected by HXG nominated personnel. • Using handheld Garmin 64S GPS utilising GDA 94 Zone 52. Positions are accurate to +/- 3m. Horizontal and +/- 10m vertical. Coordinates are referenced to the Map Grid of Australia (MGA) zone 52 on the Geographic Datum of Australia (GDA94 • Downhole Survey were undertaken every 30m using an AXIS Champ Shot Gyro • Accuracy · Azimuth : +/- 0.5º* · Dip : +/- 0.15º · Gravity Roll Angle : +/- 0.2º · Magnetic Toolface : +/- 1.0º · Magnetic Dip Angle : +/- 0.2º · Magnetic Intensity : +/- 50nT
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.*	**Historic Data** • No Mineral Resource is being considered in this report.

Criteria	JORC Code Explanation	Commentary
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.*	Non-Applicable: No Assay Results Reported
Sample Security	• *The measures taken to ensure sample security.*	Non-Applicable: No Assay Results Reported
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• No audits have been undertaken.

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 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 McIntosh Creek Project (C121/2010) is in the East Kimberley region of Western Australia and comprises 17 granted tenements covering an area of 416 km^2. These tenements are 100% owned by Hexagon Energy Materials Ltd and a subsidiary McIntosh Resources Pty Ltd
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• The East Kimberley has been largely explored for base metals and diamonds with no active previous exploration for graphite. Graphite had been noted by Gemutz during regional mapping in the Mabel Downs area for the BMR in 1967, by Rugless mapping and RAB drilling in the vicinity of Melon Patch bore, to the east of the Great Northern Highway in 1993 and has been located during nickel exploration by Australian Anglo American Ltd, Panoramic Resources Ltd and Thundelarra Resources Ltd over the last 20 years.
Geology	• *Deposit type, geological setting and style of mineralisation.*	The McIntosh project lies within the central Halls Creek Orogenic zone, Lamboo Complex, which includes the prospective large McIntosh mafic-ultramafic intrusive complex located immediately west of the Alice Downs fault and further west of the cratonic scale Halls Creek fault. The McIntosh intrusion may also be the source of the Panton mafic-ultramafic intrusive stratigraphy mapped throughout the McIntosh project. The Panton suite is known to host Ni-PGE occurrences and deposits including the + 2 Moz Panton PGM Project and Copernicus Ni-Cu Deposit and regionally includes Panoramic Resources' Savannah & Savannah North Ni-Cu operations.

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 drillholes:*
	  • *easting and northing of the drillhole collar*
	  • *elevation or RL (elevation above sea level in metres) of the drillhole collar*
	  • *dip and azimuth of the hole*
	  • *down hole length and interception depth*
		• There are 1 RAB, 9 Percussion, 142 RC and 6 Diamond Holes in the historic Mcintosh Project data identified to date.
		• Individual hole detail can be obtained from WAMEX reports, specifically, A66347, A66386, A66580 ,A66625, A68239, A70033, A71668, A73148, A73171 ,A75413, A77459, A79324

	• *hole length.*	
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.*	• Non-Applicable: No Assay Results Reported
Relationship between mineralisation widths and intercept lengths	• *If the geometry of the mineralisation with respect to the drillhole 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.*	• Non-Applicable: No Assay Results Reported
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 drillhole collar locations and appropriate sectional views.*	• Location plans are contained within the body of this announcement.
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.*	• All visual geological observation are qualitative in nature and assay results are pending
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.*	• Other data has not been considered at the time. A full evaluation of other geological and geophysical information is ongoing.
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).*	• See body of announcement.