HYPERION METALS

ASX RELEASE | ASX:HYM

29 June 2021

THICKEST, HIGHEST GRADE DRILL RESULTS AT THE TITAN PROJECT

- Excellent high-grade intercepts from the first batch of results from the Phase 3 drill program include the thickest, highest grade intercepts to date.
- The results continue to highlight the consistent grade and thickness of mineralization over ~3.6km strike length, and the potential to rapidly define a large, critical mineral resource at the Titan Project.
- The remaining 40 Phase 3 drill holes and further heavy mineral assemblage samples are currently with SGS for analysis. A maiden mineral resource estimate in accordance with the JORC Code is expected in Q3 2021.
- New assays received from 38 holes of the Phase 3 drill program continue to show thick, high grade intercepts of Total Heavy Minerals ("THM"), including:
  - ***48.8m @ 3.3% THM including 15.2m @ 6.5% THM and 13.7m @ 4.3% THM***
  - ***42.7m @ 3.7% THM including 7.6m @ 7.0% THM and 13.7m @ 6.8% THM***
  - ***44.2m @ 3.5% THM including 10.7m @ 5.6% THM***
  - ***45.7m @ 3.2% THM including 13.7m @ 4.6% THM and 12.2m @ 6.0% THM***
  - ***48.8m @ 2.4% THM including 12.2m @ 6.0% THM***
  - ***15.2m @ 7.6% THM including 6.1m @ 14.7% THM***
- The results continue to support the Company's view that this region in Tennessee is a major, untapped U.S. critical mineral province, with Hyperion having the unique potential to become one of the most important critical mineral suppliers in the U.S.
- Hyperion continues to consolidate land and complete exploration drilling in additional areas in Tennessee and is confident of discovering further mineralization in the region.
- Initial exploration work at the Company's newly secured landholding is well advanced, with a 32-hole drill program and a bulk sample completed in an area that saw significant drilling by companies including DuPont, Kerr McGee, BHP, RGC / Iluka and Altair International from the 1950's to the 1990's.

Commenting on the exploration progress, Anastasios (Taso) Arima, Managing Director of Hyperion Metals said:

"I am delighted with the initial Phase 3 drill results, being the best to date from the Titan Project in Tennessee, USA. In the coming months we will rapidly move towards resource delineation and completion of our initial economic studies. This would be the foundation for us to capitalize on this opportunity to become one of the major suppliers of critical minerals in the U.S. for advanced industries which are expected to see massive growth in the coming years from modernization and infrastructure spending in the country.

We are excited about continuing to explore and consolidate the area and we are confident in continuing to find additional areas of mineralization in this this major, untapped U.S. critical mineral province."

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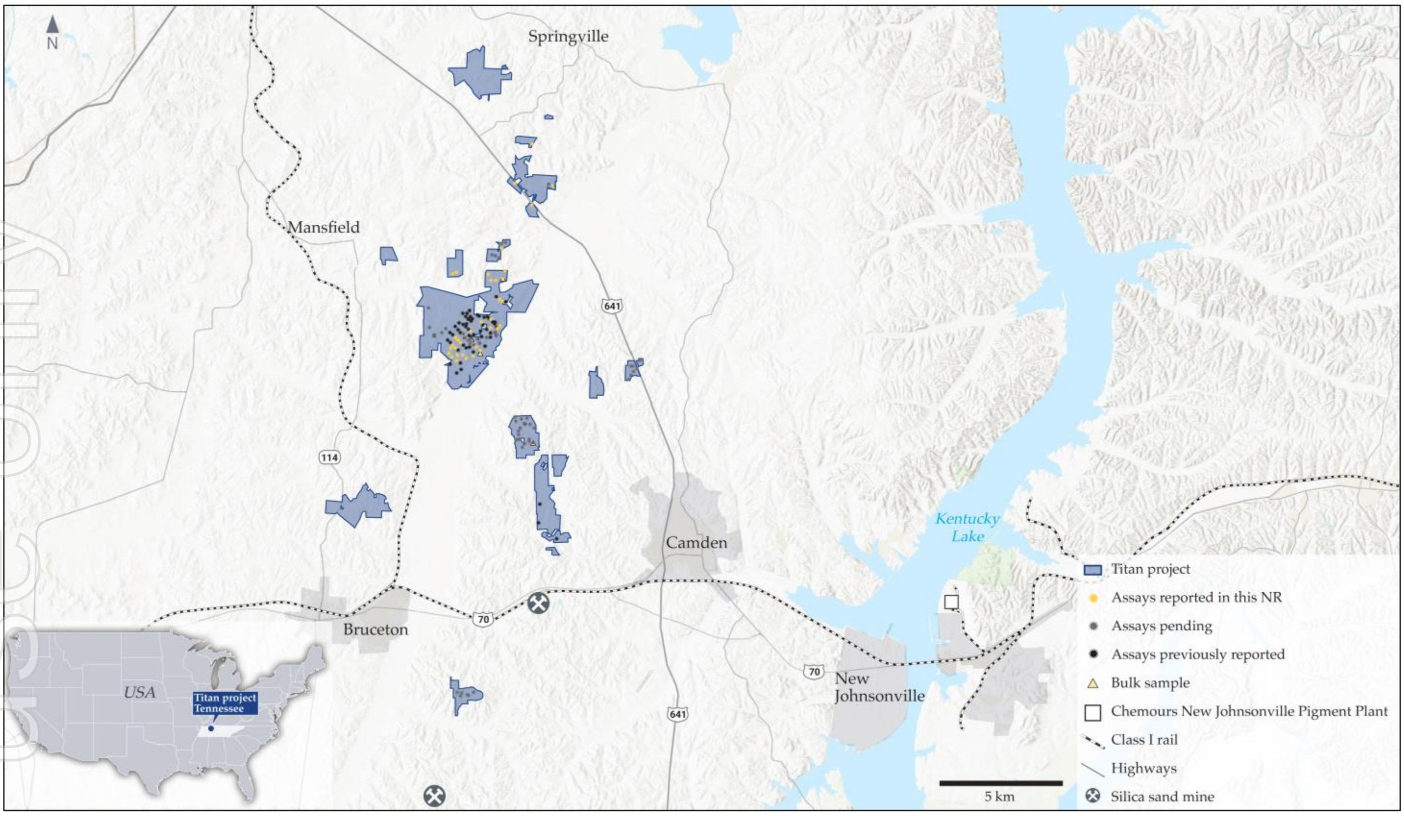

Figure 1: Map highlighting exploration activites and status at the Titan Project.

This announcement has been authorized for release by the Managing Director.

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Hyperion Metals Limited ("Hyperion" or "the Company") (ASX: HYM) is pleased to announce that the initial results of the Phase 3 drilling program have been received, with excellent high-grade intercepts from the first 38 holes of the program highlighting the potential to rapidly define a large, critical mineral resource at the Titan Project, and the definition of a critical mineral rich province in the USA.

The Phase 3 drill program is focused upon infill drilling at the Titan Project in order to delineate a maiden mineral resource estimate. The results received include the thickest, highest grade intercepts to date, highlighting the huge potential for consistent grade and thickness of mineralization over ~3.6km strike length drilled to date. Highlights include:

Drill hole ID	Result
21-SDW-055	***48.8m @ 3.3% THM including 15.2m @ 6.5% THM and 13.7m @ 4.3% THM***
21-SDW-054	***42.7m @ 3.7% THM including 7.6m @ 7.0% THM and 13.7m @ 6.8 % THM***
21-SDW-059	***44.2m @ 3.5% THM including 10.7m @ 5.6% THM***
21-SDW-056	***45.7m @ 3.2% THM including 13.7m @ 4.6% THM and 12.2m @ 6.0% THM***
21-SDW-058	***48.8m @ 2.4% THM including 12.2m @ 6.0% THM***
21-SWW-048	***15.2m @ 7.6% THM including 6.1m @ 14.7% THM***

Table 1: Select drilling intersections highlighting very thick, high grade mineralization.

The main mineralized zone is hosted stratigraphically in the lower member of the McNairy Formation. Mineralization averages 18 meters thickness and to date has been traced for 3.6 kilometers along strike.

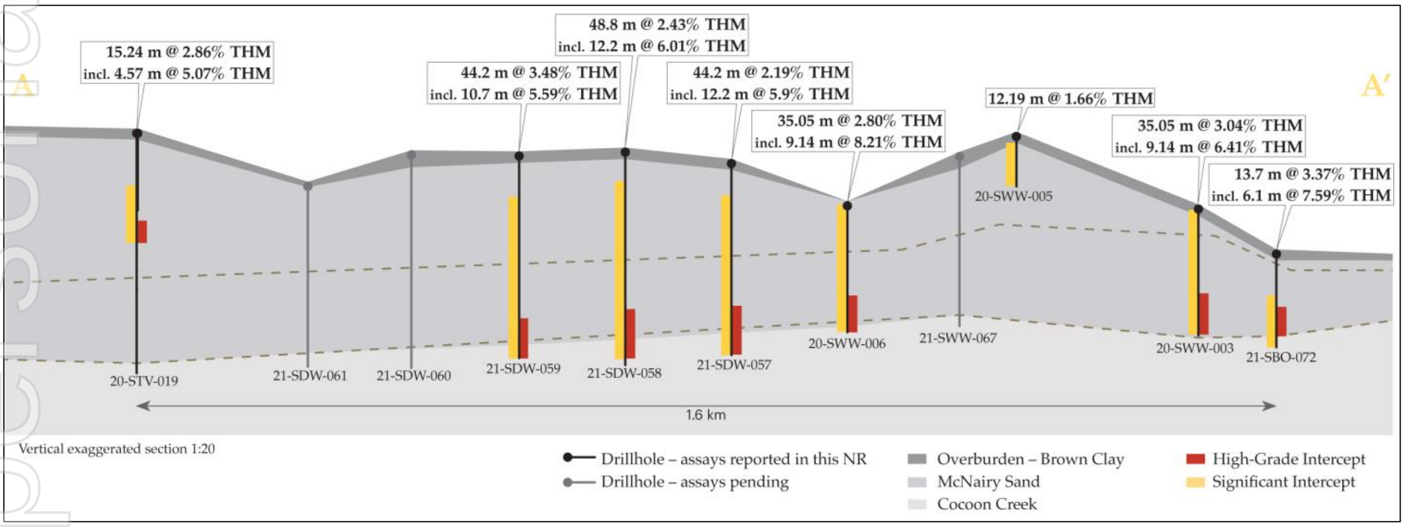

Figure 2: Cross section (A – A') displaying the thick, high grade intersections.

Analytical data for the final products will be completed by SGS Laboratories in Lakefield, Ontario, with results expected in the coming weeks, and will further inform heavy mineral concentrate assemblage data for an initial mineral resource estimate and flowsheet development for the Titan Project.

Further, Hyperion has recently completed 32 drill holes and a 1 tonne metallurgical bulk sample at its recently expanded land position in the region. The new land position includes areas which saw significant drilling by companies including DuPont, Kerr McGee, RGC / Iluka, BHP and Altair International from the 1950's to the 1990's. Exploration results from the new land position are expected to be released in the coming months.

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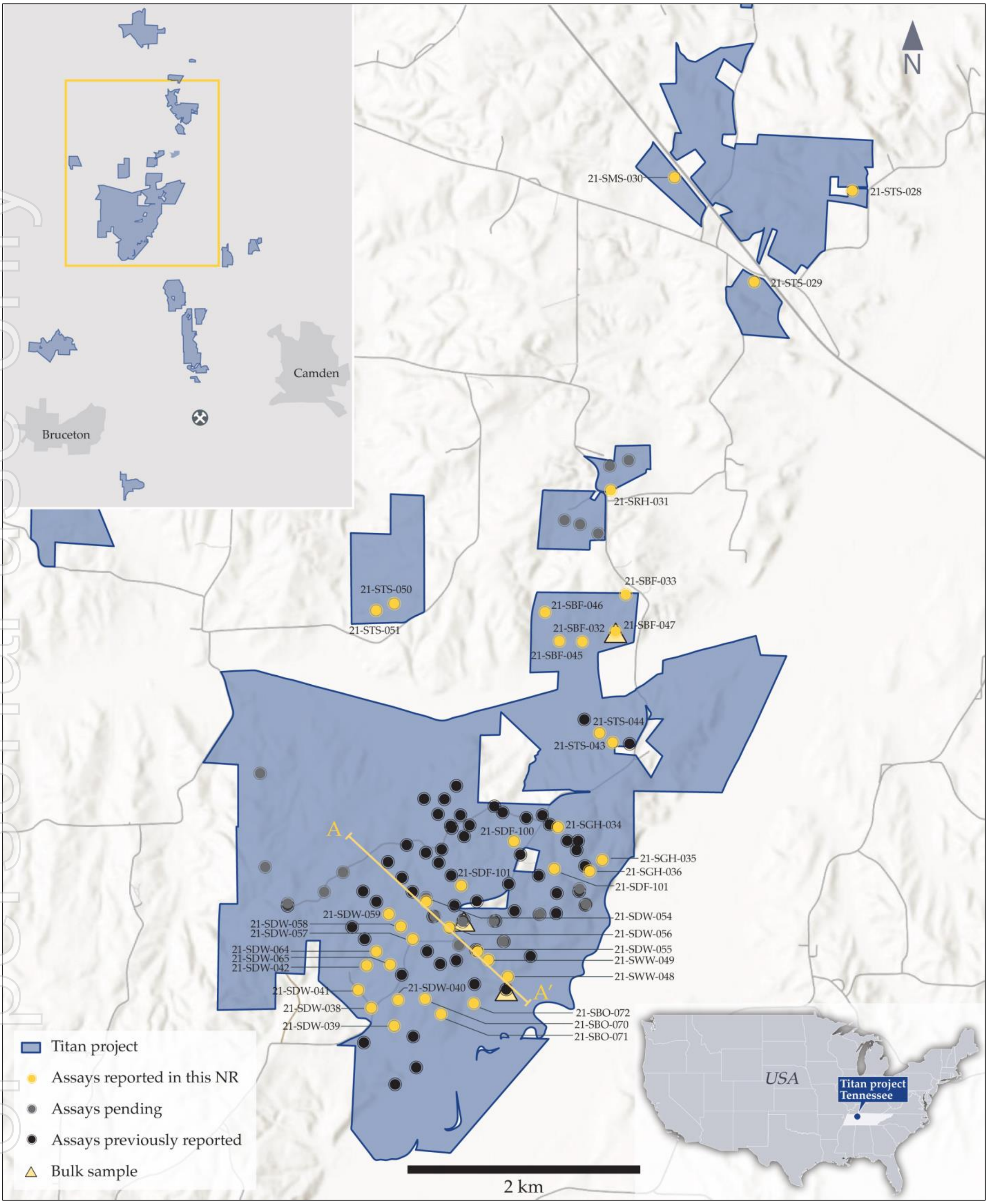

Figure 3: Map highlighting the focus area of Phase 3 infill drilling and previous bulk sample locations.

About Hyperion Metals

Hyperion's mission is to be the leading developer of zero carbon, sustainable, critical material supply chains for advanced American industries including space, aerospace, electric vehicles and 3D printing.

The Company holds a 100% interest in the Titan Project, covering approximately 6,000 acres of titanium, rare earth minerals, high grade silica sand and zircon rich mineral sands properties in Tennessee, USA. The Titan Project is strategically located in the southeast of the USA, with low-cost road, rail and water logistics connecting it to world class manufacturing industries.

Hyperion has secured options for the exclusive license to produce low carbon titanium metal and spherical powers using the breakthrough HAMR & GSD technologies. The HAMR & GSD technologies were invented by Dr. Z. Zak Fang and his team at the University of Utah with government funding from ARPA-E.

The HAMR technology has demonstrated the potential to produce titanium powders with low-to-zero carbon intensity, significantly lower energy consumption, significantly lower cost and at product qualities which exceed current industry standards. The GSD technology is a thermochemical process combining low cost feedstock material with high yield production, and can produce spherical titanium and titanium alloy powders at a fraction of the cost of comparable commercial powders.

Hyperion also has signed an MOU to establish a partnership with Energy Fuels (NYSE:UUUU) that aims to build an integrated, all-American rare earths supply chain. The MOU will evaluate the potential supply of rare earth minerals from Hyperion's Titan Project to Energy Fuels for value added processing at Energy Fuels' White Mesa Mill. Rare earths are highly valued as critical materials for magnet production essential for wind turbines, EVs, consumer electronics and military applications.

Figure 4: Titanium ingot producers and major U.S aeronautic and space manufacturing facilities.

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Forward Looking Statements

Information included in this release constitutes forward-looking statements. Often, but not always, forward looking statements can generally be identified by the use of forward-looking words such as "may", "will", "expect", "intend", "plan", "estimate", "anticipate", "continue", and "guidance", or other similar words and may include, without limitation, statements regarding plans, strategies and objectives of management, anticipated production or construction commencement dates and expected costs or production outputs.

Forward looking statements inherently involve known and unknown risks, uncertainties and other factors that may cause the Company's actual results, performance, and achievements to differ materially from any future results, performance, or achievements. Relevant factors may include, but are not limited to, changes in commodity prices, foreign exchange fluctuations and general economic conditions, increased costs and demand for production inputs, the speculative nature of exploration and project development, including the risks of obtaining necessary licenses and permits and diminishing quantities or grades of reserves, political and social risks, changes to the regulatory framework within which the company operates or may in the future operate, environmental conditions including extreme weather conditions, recruitment and retention of personnel, industrial relations issues and litigation.

Forward looking statements are based on the Company and its management's good faith assumptions relating to the financial, market, regulatory and other relevant environments that will exist and affect the Company's business and operations in the future. The Company does not give any assurance that the assumptions on which forward looking statements are based will prove to be correct, or that the Company's business or operations will not be affected in any material manner by these or other factors not foreseen or foreseeable by the Company or management or beyond the Company's control.

Although the Company attempts and has attempted to identify factors that would cause actual actions, events or results to differ materially from those disclosed in forward looking statements, there may be other factors that could cause actual results, performance, achievements, or events not to be as anticipated, estimated or intended, and many events are beyond the reasonable control of the Company. Accordingly, readers are cautioned not to place undue reliance on forward looking statements. Forward looking statements in these materials speak only at the date of issue. Subject to any continuing obligations under applicable law or any relevant stock exchange listing rules, in providing this information the company does not undertake any obligation to publicly update or revise any of the forward-looking statements or to advise of any change in events, conditions or circumstances on which any such statement is based.

Competent Persons Statement – JORC Code 2012

The information in this announcement that relates to Exploration Results is based on information compiled and/or reviewed by Mr. Adam Karst, P.G. Mr. Karst is an independent consultant to Hyperion Metals Pty Ltd. Mr. Karst is a Registered Member of the Society of Mining, Metallurgy and Exploration (SME) which is a Recognized Overseas Professional Organization (ROPO) as well as a Professional Geologist in the state of Tennessee. Mr. Karst has sufficient experience which is relevant to the style and type of mineralization present at the Titan Project area 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 2012 JORC Code). Mr. Karst consents to the inclusion in this report of the matters based on this information in the form and context in which it appears.

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Appendix A: Significant intersections

Hole ID	Easting	Northing	Elev. (m)	Az. (°)	Dip (°)	Depth (m)		From (ft)	To (ft)	From (m)	To (m)	Intercept (m)	HMT (%)	Unit
21-STS-027	394279.9	4008013.5	129.6	0	-90	21.3		5	55	1.5	16.8	15.2	**1.1**	**Lower McNairy**
21-STS-028	395093.7	4006271.2	130.0	0	-90	18.3	*No Significant Intercept*							
21-STS-029	394235.9	4005497.2	139.3	0	-90	33.5		5	50	1.5	15.2	13.7	**1.2**	**Upper McNairy**
21-SMS-030	393559.3	4006404.3	146.2	0	-90	33.5		10	50	3.0	15.2	15.2	**1.1**	**Lower McNairy**
21-SRH-031	392975.6	4003718.6	130.6	0	-90	36.6		20	90	6.1	27.4	21.3	**2.4**	**Lower McNairy**
21-SBF-032	392714	4002418.1	119.8	0	-90	24.4		5	55	1.5	16.8	15.2	**3.1**	**Lower McNairy**
21-SBF-033	393093.5	4002819.7	130.4	0	-90	30.5		0	90	0.0	27.4	27.4	**3.6**	**Lower McNairy**
							including	20	60	6.1	18.3	12.2	**6.0**	**Lower McNairy**
21-SGH-034	392483.5	4000824.5	138.2	0	-90	36.6		35	115	10.7	35.1	24.4	**2.9**	**Lower McNairy, Coon Creek**
							including	85	115	25.9	35.1	9.1	**3.6**	**Lower McNairy, Coon Creek**
21-SGH-035	392863.3	4000537.2	122.3	0	-90	21.3		10	70	3.0	21.3	18.3	**2.8**	**Lower McNairy, Coon Creek**
21-SGH-036	392752.3	4000442.4	133.0	0	-90	30.5		25	100	7.6	30.5	22.9	**2.8**	**Lower McNairy, Coon Creek**
21-SGH-037	392447.4	4000466.4	133.8	0	-90	27.4		20	90	6.1	27.4	16.8	**3.7**	**Lower McNairy**
							including	30	50	9.1	15.2	6.1	**5.3**	**Lower McNairy**
21-SDW-038	390850.5	3999289.5	132.5	0	-90	33.5		35	75	10.7	22.9	12.2	**1.1**	**Upper McNairy, Lower McNairy**
21-SDW-039	391046.5	3999131	127.5	0	-90	30.5		30	85	9.1	25.9	16.8	**1.0**	**Lower McNairy**
21-SDW-040	391083.9	3999354.6	133.4	0	-90	30.5		10	20	3.0	6.1	3.0	**1.5**	**Lower McNairy**
21-SDW-041	390738.6	3999445	130.0	0	-90	30.5	*No Significant Intercept*							
21-SDW-042	390815.2	3999654.7	133.3	0	-90	30.5	*No Significant Intercept*							
21-STS-043	392964.5	4001547.4	141.5	0	-90	42.7		10	130	3.0	39.6	36.6	**2.9**	**Upper McNairy, Lower McNairy**
							including	85	130	25.9	39.6	13.7	**6.0**	**Lower McNairy**
21-STS-044	392852.9	4001630.9	131.4	0	-90	33.5		10	100	3.0	30.5	27.4	**3.7**	**Upper McNairy, Lower McNairy**
							including	55	90	16.8	27.4	10.7	**6.8**	**Lower McNairy**
21-SBF-045	392515.7	4002426.1	121.5	0	-90	27.4		5	80	1.5	24.4	22.9	**3.2**	**Lower McNairy**
							including	20	55	6.1	16.8	10.7	**5.2**	**Lower McNairy**
21-SBF-046	392394.9	4002675.6	121.3	0	-90	27.4		0	90	0.0	27.4	27.4	**2.5**	**Lower McNairy, Coon Creek**
								30	60	9.1	18.3	9.1	**4.3**	**Lower McNairy**
21-SBF-047	393001.5	4002503.3	119.0	0	-90	18.3		0	50	0.0	15.2	15.2	**4.4**	**Lower McNairy**
							including	10	30	3.0	9.1	6.1	**8.8**	**Lower McNairy**
21-SWW-048	392033.9	3999542.5	125.5	0	-90	24.4		30	80	9.1	24.4	15.2	**7.6**	**Lower McNairy, Coon Creek**
							including	50	70	15.2	21.3	6.1	**14.7**	**Lower McNairy**

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Hole ID	Easting	Northing	Elev.	Az.	Dip	Depth		From	To	From	To	Intercept	HMT	Unit
			(m)	(°)	(°)	(m)		(ft)	(ft)	(m)	(m)	(m)	(%)	
21-SWW-049	391867.1	3999690.1	137.6	0	-90	39.6		0	125	0.0	38.1	38.1	**3.0**	**Lower McNairy, Coon Creek**
							including	85	115	25.9	35.1	9.1	**9.1**	**Lower McNairy**
21-STS-050	391091.6	4002766.3	138.0	0	-90	51.8		25	170	7.6	51.8	44.2	**2.6**	**Upper McNairy, Lower McNairy, Coon Creek**
							including	120	155	36.6	47.2	10.7	**5.1**	**Lower McNairy**
21-STS-051	390935.3	4002709.6	139.2	0	-90	51.8		10	170	3.0	51.8	48.8	**1.7**	**Upper McNairy, Lower McNairy, Coon Creek**
							including	140	170	42.7	51.8	9.1	**4.9**	**Lower McNairy, Coon Creek**
21-SDW-054	391336.9	4000197.4	158.8	0	-90	45.7		5	145	1.5	44.2	42.7	**3.7**	**Upper McNairy, Lower McNairy, Coon Creek**
							including	5	30	1.5	9.1	7.6	**7.0**	**Upper McNairy**
							and	100	145	30.5	44.2	13.7	**6.8**	**Lower McNairy, Coon Creek**
21-SDW-055	391774.9	3999763.2	144.6	0	-90	57.9		30	190	9.1	57.9	48.8	**3.3**	**Upper McNairy, Lower McNairy, Coon Creek**
							including	30	80	9.1	24.4	15.2	**6.5**	**Upper McNairy**
							and	145	190	44.2	57.9	13.7	**4.3**	**Lower McNairy, Coon Creek**
21-SDW-056	391533.6	3999972.4	152.0	0	-90	48.8		10	160	3.0	48.8	45.7	**3.2**	**Upper McNairy, Lower McNairy, Coon Creek**
							including	10	55	3.0	16.8	13.7	**4.6**	**Upper McNairy**
							and	120	160	36.6	48.8	12.2	**6.0**	**Lower McNairy, Coon Creek**
21-SDW-057	391216.3	3999877.5	150.4	0	-90	45.7		35	180	10.7	54.9	44.2	**2.2**	**Upper McNairy, Lower McNairy, Coon Creek**
							including	140	180	42.7	54.9	12.2	**5.9**	**Lower McNairy, Coon Creek**
21-SDW-058	391114.8	3999986.9	153.6	0	-90	57.9		30	190	9.1	57.9	48.8	**2.4**	**Upper McNairy, Lower McNairy, Coon Creek**
							including	150	190	45.7	57.9	12.2	**6.0**	**Lower McNairy, Coon Creek**
21-SDW-059	391012	4000094.2	152.5	0	-90	48.8		45	190	13.7	57.9	44.2	**3.5**	**Upper McNairy, Lower McNairy, Coon Creek**
							including	155	190	47.2	57.9	10.7	**5.6**	**Lower McNairy, Coon Creek**
21-SDW-064	390899.8	3999773.6	144.5	0	-90	51.8		100	170	30.5	51.8	21.3	**1.8**	**Lower McNairy, Coon Creek**
							including	140	170	42.7	51.8	9.1	**3.1**	**Lower McNairy, Coon Creek**
21-SDW-065	391018.5	3999658.8	146.6	0	-90	51.8		100	170	30.5	51.8	21.3	**3.6**	**Lower McNairy, Coon Creek**
							including	140	170	42.7	51.8	9.1	**7.5**	**Lower McNairy, Coon Creek**
21-SDW-070	391316.1	3999360.7	151.7	0	-90	54.9		145	180	44.2	54.9	10.7	**4.5**	**Lower McNairy, Coon Creek**
21-SDW-071	391452.8	3999228.1	139.9	0	-90	42.7		75	140	22.9	42.7	19.8	**3.2**	**Lower McNairy, Coon Creek**
							including	110	130	33.5	39.6	6.1	**7.6**	**Lower McNairy**
21-SDW-072	391737	3999316.6	125.0	0	-90	27.4		45	90	13.7	27.4	13.7	**3.4**	**Lower McNairy, Coon Creek**
							including	55	75	16.8	22.9	6.1	**5.5**	**Lower McNairy**
21-SDW-100	391010.3	4000543.3	132.9	0	-90	39.6		55	130	16.8	39.6	22.9	**2.9**	**Lower McNairy, Coon Creek**
21-SDW-101	392101.2	4000708	136.8	0	-90	47.2		35	155	10.7	47.2	36.6	**2.3**	**Upper McNairy, Lower McNairy, Coon Creek**
							including	120	155	36.6	47.2	10.7	**5.8**	**Lower McNairy, Coon Creek**

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Appendix B: JORC Code, 2012 Edition – Table 1 report template

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *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.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple (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.*	• A roto-sonic drill rig, the Geoprobe 5140LS, utilized a 10 foot core barrel to obtain direct 5-foot samples of the unconsolidated geological formations hosting the mineralization in the project area. All holes were drilled vertically which is essentially perpendicular to the mineralization. The sonic cores were used to produce approximately 2kg samples for heavy liquid separation as well as further mineralogical analysis.
Drilling techniques	• *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).*	• All drilling thus-far for the project has been roto-sonic. This method alternates advancement of a core barrel and a removeable casing (casing is used when needed to maintain sample integrity). The core barrel utilized for this project is 4" in diameter with a 6" diameter outer casing. The core barrel is retrieved from the ground and the samples are recovered directly from the barrel into a plastic sleeve. All holes are drilled vertically.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery*	• Each core is measured, and the recovery is calculated as length of recovered core divided by length drilled (typically 10'). Some interpretation is involved as the material can expand or compact as it is recovered from the core barrel into the plastic sleeve. • The driller and geologist keep a careful eye on formation run-up into the casing as the core barrel is run

Criteria	JORC Code explanation	Commentary
	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.*	down the hole for sample collection. Any run-up is removed from the casing prior to sampling. • The sonic drilling method has been shown to provide representative unconsolidated mineral sands samples across a variety of deposits as it is a direct sampling method of the formation(s). At times water is used to create a head on the formation to help prevent run-up.
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.*	• Samples are logged for lithological, geological, and mineralogical parameters in the field to help aid in determining depositional environment, major geologic units, and mineralized zones. All samples are panned and estimates made for the %HM and %SL. • Logging is both qualitative (sorting, color, lithology) and quantitative (estimation of %HM, %SL) to help support the integrity of the Exploration Results and Mineral Resource estimate. Photographs are taken of the sonic cores. • Total depth of the drillhole is recorded. Samples are collected at regular (5 foot) intervals unless the geology/mineralogy warrant altering this as to co-mingle samples across major geological/mineralized boundaries. The total hole is logged by the field geologist and recorded in custom logging software on a Panasonic Toughbook (or similar) laptop. The data is transferred weekly to the project's GeoSpark database.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• The unconsolidated sonic cores are sampled by splitting the core in half lengthwise using a machete then recovering an even fillet with a trowel along the entire length of the sample interval.  • Samples are collected directly to the pre-labeled/pre-tagged sample bags; the remaining sample is

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Criteria	JORC Code explanation	Commentary
		further split into a replicate/archival sample and what remains is used to backfill the drillhole. • A chip tray is maintained for each hole to keep a representative sample for each interval for later use during geological interpretation or between holes in the field. • Field duplicates are collected at a 3% rate by splitting the sample from the sonic core as described above into two samples bags. • The sample size (approx. 2kg) is appropriate for the type of material and concentration of the HM mineralization.
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 (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	• Standard mineral sands industry assay procedures (sizing 44-micron [325 mesh] for slimes and 595-micron [30 mesh] for oversize) heavy-liquid separation of an 85g split of the -30/+325 sand using methylene iodide. For mineralogy, QEMSCAN analysis was utilized. • Accuracy monitoring will be achieved through submission of in-house heavy mineral sand standard reference materials (SRM) developed specifically for the project. At least 5 repeat HLS of these materials were analyzed to establish an average value and standard deviation. A low-grade and a high-grade SRM were produced with materials (HMs and silica sand) from the project area. A quality control sample failure is any single sample 3 standard deviations from the true value for the comparison for each sample, or two out of three consecutive samples between 2 and 3 standard deviations, on the same side of the mean value (i.e. both above or both below the mean value). Should the errors for a particular batch exceed these limits, the section of a batch bracketed by the SRM samples (i.e. number samples on either side) should be re‐analyzed. Overall, the objective of the quality assurance program for resource purposes should be a pass rate of >95%. A lower pass rate, on the order of 90% is acceptable for exploration purposes. Eleven SRMs (6 high and 5 low grade) were submitted during the drilling campaign for analysis and results were all within 3 standard deviation of the mean of the SRM. • Sampling precision will be monitored by selecting a sample interval likely to be mineralized and taking a second fillet sample over the same sample interval. These samples should be consecutively numbered after the primary sample and recorded in the sample database as “field duplicates” and the primary sample number recorded. Field duplicates should be collected at the rate of approximately 3 in 100 samples and ideally should be collected when sampling mineralized sonic core intervals containing visible HM (panning). Random sampling precision will be monitored by duplicating core samples. Analytical precision will also be monitored using HLS duplicates that will need to be requested from the laboratory at a similar rate (i.e. 3 in 100 samples), with the duplicate HLS analysis to be completed on the duplicate core sample. Data from these two types of duplicate analyses can be used to constrain sampling variance at different stages of the sampling and preparation process. It is critical to record the primary sample of the field duplicate. By convention, this should be the preceding sample. Field duplicates should have an average coefficient of variation (CoV) <10%, whereas laboratory duplicates should have an average CoV <5%. For the drilling results reported, 32 field duplicates were submitted to the laboratory with results showing a CoV of less than 10%. • The use of an 85 g sub-sample for heavy liquid separation (HLS) results in a relative precision of 4% based on repeat analyses of standard reference materials (SRM) at SGS. This sub-sample mass is therefore appropriate for the grain size being sampled.

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<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
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Preliminary analysis of limited field duplicate splits indicates a relative precision of 31, indicating sampling of drill material presents the greatest uncertainty in the sampling procedure.
QEMSCAN analysis of the Heavy Mineral Concentrate (HMC) averages 11.5% quartz. Seven low grade samples showed elevated quartz with values ranging from 18 to 51% of the HMC. The remaining samples produced an average of 8.09% quartz.
QEMSCAN (Qualitative Evaluation of Minerals by Scanning Electron Microscopy) is the state of the art, top of the range automated mineral analyser. It is an analytical tool that produces efficient and accurate information on minerals. This tool has been custom developed for the mining industry.
QEMSCAN Ti percentage classification:

<table>
<tr><th>Mineral ID</th><th>Ti%</th></tr>
<tr><td>Rutile</td><td>59.9</td></tr>
<tr><td>Leucoxene</td><td>42.0</td></tr>
<tr><td>Pseudorutile</td><td>37.7</td></tr>
<tr><td>Ilmenite</td><td>34.5</td></tr>
</table>

The Valuable Heavy Mineral(VHM) is calculated from the QEMSCAN data using the percent of rutile+leucoxene+pseudorutile+ilmenite+zirconium+REE in the sink fraction of the sample.

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<tr><td>Verification of sampling and assaying</td><td>

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.

</td><td>

The assay data are independently visually validated and cross-checked against the geology. This is done as the results are received and prior to geological modeling and resource estimation.
Twinned holes have not been used. Analysis of twin data for other similar deposits indicate that they are of limited value due to the inherent variably over small distances for this style of mineralization and it is the assessment of the Competent Person that the absence of twin data is not material to the accuracy of the Exploration Results and Resource Estimate. Twinned holes will be used if there is a change in drilling methods during the project to assess whether any bias exists with the different methods and how this bias may impact the integrity of the Exploration Results or Mineral Resource Estimate.
Data are collected in the field using both a field computer and a field notebook. Data are transferred weekly to the company network and verified against the field log book if questions arise. The data are checked and verified by the geologist completing the resource estimation to ensure there are no errors. Lab data are added as they become available and verified against the field geologist's visual HM grade and SL estimates. Any data in question that is not able to be rectified are removed from the database and not used in the reporting of Exploration Results or the estimation of the Mineral Resource.
The data appear to be in good order with no significant quality issues identified that will be material to the Exploration Results and Mineral Resource Estimate.

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</table>

Criteria	JORC Code explanation	Commentary
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• All drillholes are surveyed after drilling with a hand-held GPS unit and the X and Y coordinates recorded in the project's database by the field geologist. Elevation data for each collar has been determined using publicly available topographic data. • The coordinate system used for the project is UTM (Zone16N).
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.*	• Drillhole spacing varies at this early point in the project. Drill samples are collected at regular intervals (5 foot). • Compositing of samples downhole and across/along strike based on geological/mineralized units may be utilized for assemblage and quality parameters.
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 drilling and sampling have been orientated such to test the thickness and grade of the deposit(s). Holes are drilled vertically to give true thickness of the gently dipping mineralized units.
Sample security	• *The measures taken to ensure sample security.*	• Samples remain in the custody of the field geologist from time of collection until time of delivery to the project's temporary storage location which is a secure third-party storage unit. • Samples are placed in rice bags and a red security tag secure the top. These tags are verified by the lab to guarantee all sample bags are intact.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• No third-party review of the sampling techniques employed have been conducted. Only internal reviews by the Competent Person who is considered to have expertise in the drilling/sampling methods has been utilized.

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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.* • *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.*	• All areas reported are held under mining lease option agreements with mineral rights to owner. Negotiations are ongoing to secure additional parcels within the deposits. • No known impediments to obtaining a license to operate. License to operate is based on obtaining land access through mining leases with individual landowners as well acquiring local, state, and federal permits.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Several Heavy Mineral Sand (HMS) exploration campaigns have focused on this region over the past 60 years, with DuPont reportedly being the first company to investigate this region, followed by Kerr-McGee Chemical Corporation that had exploration success but never commenced mining. BHP Titanium Minerals had an interest in the region in the 1990's and Mineral Recovery Systems, a company associated with Altair International Inc., had significant activities in the region in the late 1990's, including land acquisition, drilling and metallurgical studies.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The deposits are Cretaceous mineral sands deposits located in the Mississippi Embayment region of the U.S. These deposits consist of reworked deltaic sediments hosting HM mineralization. The deposits overly other deeper marine sediments and are overlain by more recent fluvial sediments.
Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* ○ *easting and northing of the drill hole collar* ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* ○ *dip and azimuth of the hole* ○ *down hole length and interception depth* ○ *hole length.* • *If the exclusion of this information is justified on the basis that the information is not*	• A total of 24 drill holes for 459 HM assay samples (heavy liquid) and 70 HM mineralogy (QEMSCAN) have been completed to-date. A summary of representative HM intersections from the drilling is presented in tables in the main text and on the accompanying cross section(s). Refer to table in main text.

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Criteria	JORC Code explanation	Commentary
	Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• No lower cut-offs have been applied. • Sample interval lengths are typically 5 feet. • No metal equivalent values are used in this report.
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 (eg 'down hole length, true width not known').*	• Drillholes are vertical and drilled from ground surface through the entire mineralized thickness typically terminating in the Coon Creek Formation. The geological units in this area are near flat lying (slight westward dip) so mineralized thicknesses are close to true.
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.*	• 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*	• Representative reporting of low and high grades has been employed within this report.

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Criteria	JORC Code explanation	Commentary
	avoid misleading reporting of Exploration Results.	
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.*	• None at this time material to the reporting of exploration results.
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• Additional drilling within the deposits as agreements are negotiated on new properties is required to better define lateral extents of mineralization and to increase the geological confidence.

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