

POSITIVE METALLURGICAL RESULTS FOR SHALLOW HIGH-**GRADE NICKEL SULPHIDES AT NEPEAN**

Highlights

- Preliminary metallurgical testwork has successfully been completed on the shallow high-grade nickel sulphide mineralisation identified directly south of the historic Nepean nickel mine
- Testwork confirms the nickel sulphide mineralisation responds well to conventional flotation beneficiation with nickel recoveries between 85% to 97%
- Saleable nickel concentrate grades (>13% Ni) were achieved for all three composite samples
- The positive results from the testwork are an important milestone for the Nepean Scoping Study looking into the economic viability of a potential open-pit mining scenario of the shallow high-grade nickel sulphide mineralisation

Auroch Minerals Limited (ASX:AOU) (Auroch or the Company) is pleased to advise that preliminary metallurgical testwork has successfully been completed on the high-grade shallow nickel sulphide mineralisation directly south of the historic Nepean nickel mine at the Nepean Nickel Project (Nepean) in Western Australia (Auroch Minerals Ltd 80%; Lodestar Minerals Ltd 20%).

Head assays were initially taken for the three composite drill-core samples (Table 1) with nickel grades up to 7.18% Ni for the massive sulphide sample (Sample 3). Results from the metallurgical testwork indicated all samples responded well to conventional froth flotation, with rougher recoveries for nickel between 85% and 97%. Saleable concentrate grades in excess of 13% Ni were achieved for all three composite samples (Table 2), albeit at a lower recovery (30%) for Sample 1, which is the subject of ongoing optimisation testwork.

All samples demonstrated minor non-sulphide nickel (NSNi) present. Sulphur speciation for the samples also indicated some degree of sulphide oxidation has occurred, consistent with the petrology which identified violarite as the dominant nickel sulphide species. No talc or deleterious elements were detected during the testwork.

The results achieved during the preliminary metallurgical testwork programme are encouraging and further work would be expected to improve upon current results, especially with respect to Fe:MgO ratios of the final nickel concentrates produced.

The positive results from the testwork are an important milestone for the Nepean Scoping Study looking into the economic viability of a potential open-pit mining scenario of the known shallow high-grade nickel sulphide mineralisation, which commences within 50m from surface (Figure 2). The Company will now look to complete a JORC(2012)-compliant Mineral Resource Estimate (MRE) for the shallow high-grade nickel sulphide mineralisation at Nepean.

Auroch Managing Director Aidan Platel commented:

"We are very happy with the results from this first phase of metallurgical testwork at Nepean. We knew we have very shallow, high-grade nickel sulphide mineralisation at Nepean that may potentially be extracted in an open-pit mining scenario, but because of the oxidation of the mineralisation being so close to surface, we were unsure if we would be able to produce a saleable grade nickel sulphide concentrate.

The results are extremely encouraging and show that this shallow nickel sulphide mineralisation will indeed produce a saleable grade nickel concentrate, and furthermore that the nickel recoveries are more than acceptable.

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As such, the results justify continuing work on the Nepean Scoping Study, and the Company will now commence work on updating the MRE for the shallow portion of the known nickel sulphide mineralisation at Nepean so that we can then begin work on mine designs and optimisation work on potential open-pit mining scenarios."



Figure 1 – Nickel concentrate (>13% Ni) produced during testwork on the high-grade massive nickel sulphides from Sample 3 (source: internal report from Strategic Metallurgy)

Table 1 – Head assay results for the three composite drill-core samples from Nepean

HOLE ID	Mineralisation	Ni %	NSNi ppm	Co %	Cu %	Fe %	S %	MgO %
Sample 1	Disseminated and Matrix	1.21	1,050	0.02	0.10	9.28	1.93	34.80
Sample 2	Matrix	2.22	1,570	0.03	0.09	8.64	3.98	31.80
Sample 3	Massive	7.18	5,390	0.10	0.42	14.50	14.70	19.50







Table 2 – Optimised metallurgical testwork results (best recovery to saleable concentrate grade achieved todate) for each of the three composite samples from the Nepean Nickel Project

		Sample 1		S	ample 2		Sample 3		
	Recovery %	Grade Ni%	Fe:MgO	Recovery %	Grade Ni%	Fe:MgO	Recovery %	Grade Ni%	Fe:MgO
Rougher	84.5	4.0	0.5	85.9	6.9	0.7	94.5	13.9	3.0
Cleaner*	30.0	13.3	2.8	75.6	13.0	2.1	83.4	15.5	5.1

^{*}Further optimisation testwork ongoing for Sample 1

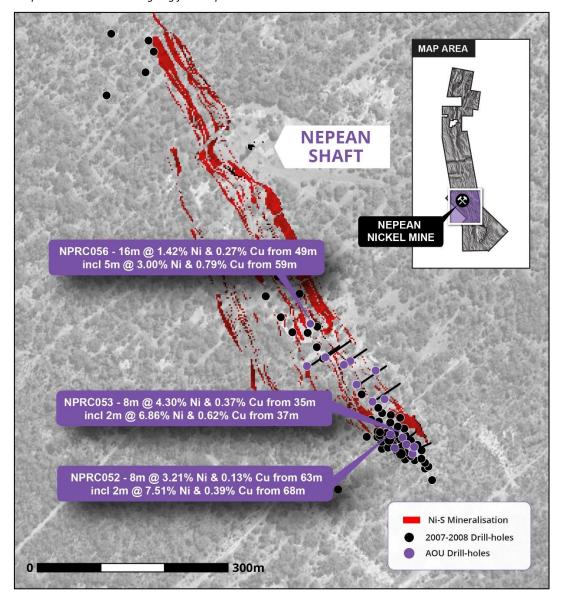


Figure 2 – Map showing the extent of the shallow high-grade nickel sulphide mineralisation in relation to the historic Nepean nickel mine and selected drilling results ¹

This announcement has been authorised by the Board of Directors of the Company.

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¹ Refer to 31 March 2021 ASX Announcement - <u>NEW HIGH-GRADE NICKEL SULPHIDE DRILL INTERCEPTS AT NEPEAN</u>. Auroch Minerals Ltd ABN 91 148 966 545
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27th April 2022



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Competent Persons Statement

The information in this report that relates to Exploration Results is based on and fairly represents information compiled by Mr Matthew McCarthy BSc (Hons), a Competent Person, who is a Member of the Australian Institute of Geoscientists. Mr McCarthy is the Company's Senior Geological Officer and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken 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. Mr McCarthy consents to the inclusion in the announcement of the matters based on his information in the form and context in which it appears.

The information in this release that relates to Metallurgical Results and Interpretations is based on information compiled by Nick Vines, Executive Director at Strategic Metallurgy Pty Ltd. Mr Vines is a Member of the Australasian Institute of Mining and Metallurgy (AusIMM) and has sufficient experience which is relevant to the metallurgical test work on the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Vines consents to the inclusion in the release of the matters based on this 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 Auroch Minerals Limited's planned exploration programmes 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. Although Auroch Minerals Limited believes that its expectations reflected in these forward-looking statements are reasonable, such statements involve risks and uncertainties and no assurance can be given that actual results will be consistent with these forward-looking statements.

JORC Code, 2012 Edition, Table 1 (Nepean) Section 1: Sampling Techniques and Data

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of sampling.

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

- 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 1m samples from which 3kg was pulverised to produce a 30g 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

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Auroch Minerals Limited:

- Nickel mineralisation at Nepean has been sampled from the following drilling techniques:
- Diamond Core half core samples with a maximum of 1.2m and minimum 0.2m length.
- RC drilling 1m samples of pulverised chips, approximately 3kg's is collected in individual calico bags
- Air Core drilling creates single metre sample of drill chips; however samples are composited every 3 metres, with the end of hole sample consisting of a 1m sample.

Metallurgy Testwork

Auroch Minerals Limited:

- Metallurgical samples were crushed to -3.35mm and split into 1kg sub-samples for flotation testwork
- The testwork utilised depression of magnesium silicates to selectively float nickel concentrates

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	commodities or mineralisation types (eg	The flotation regime utilised common
	submarine nodules) may warrant disclosure of detailed information.	flotation reagents, similar to that used in Kambalda
	disclosure of detailed information.	Kambaida
		Air Magnetic Survey:
		Contractor: UTS
		Client: St Francis Mining Ltd
		Year: 1996
		Aircraft: Fletcher
		Instrumentation: Caesium Vapour
		Sample Interval: ~5m
		Flight Line Spacing: 50 and 100m Flight Line Direction: 068°-248°, 158°-338°,
		090°-270°
		Tie Line Spacing: 500m and 1000m
		Mean Terrain Clearance: 25m
		Navigation: Differential GPS
		ID Dougementous
		IP Parameters Contractor: Vortex Geophysics
		Receiver: 1-2x GDD 16 channel IP Receiver
		Transmitter: Vortex VIP-30 transmitter system
		rated at 1500V, 30A and 15KVA
		Configuration: Dipole-Dipole
		Line Spacing: 200m
		Dipole spacing: 100m
		Domain/Cycle: Time domain – 2 seconds or
		0.125Hz
		DHEM Parameters:
		Contractor: SGC Niche Acquisition
		Configuration: Down-hole EM (DHEM)
		Tx Loop size: 300x300m to 350x450m,
		single turn
		Transmitter: TTX2
		Receiver: Smartem24
		Sensor: DigiAtlantis
		Station spacing: 2m to 10 m
		Tx Freq: 0.5 Hz
		Duty cycle: 50%
		Current: ~68-75 Amp
		Stacks: 64 Readings: 2-3 repeatable readings
		per station
		A Moving Loop Transient Electromagnetic
		(MLTEM) ground survey was completed at
		the Nepean extended mine corridor/sequence. The MLTEM survey
		commenced late April 2021 and was
		completed late June 2021.
		MLTEM configuration:
		NORDICem24 receiver
		CSIRO LANDTEM HT SQUID B-field sensor
		ORE_HPTX transmitter

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		• Loop size – 200x200m
		200m line spacing
		100m station spacing
		Sensor offset – slingram, 200m east of loop centre
		0.5Hz base frequency
		200A current
		• ~1msec ramp time
		Multiple readings at 64 stacks
		MLTEM surveys are an industry standard practice for definition of bedrock conductors representing potential mineralised massive sulphide bodies.
		Source: 22,500lb Vibroseis Vehicle Line Length: ~6km Total Number of Channels: 1211x2 (2422) Active Receiver Spread (min): 600
		Full Receiver Spread (max): 1200 Receiver Spacing: 5m
		Receiver X-line Spacing: 30m
		Total Number of Source Points: 1209 Source Point Spacing: 5m Source Skid (distance from each line): 15m Nominal Fold: 300 Max Offset: +/- 1500m
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).	Diamond Core (DD) drilling is oriented and retrieved via double or triple tube methods.
Drill sample	Method of recording and assessing core	DD core recovery is measured and
recovery	and chip sample recoveries and results	recorded by Auroch staff and contractors.
·	 assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. Whether a relationship exists between 	 No relationship between sample recovery and grade has been yet observed and no sample bias is believed to have occurred.
	sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	
Logging	Whether core and chip samples have been	Auroch Minerals Limited:
Logging	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.	 Drill core is lithologically and structurally logged by Geologists in the field. Drill chips are lithologically logged by Geologists in the field Logging is qualitative, recording rock type and mineral abundance Logging of RC & AC chips is conducted on
	The total length and percentage of the	a 1 metre sample size.

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	relevant intersections logged.	 Logging of DD core is conducted on lithological boundaries. Historic: Geological logging data collected to date is sufficiently detailed. At this stage detailed geotechnical logging is not required. Geological logging is intrinsically qualitative. Historic drill holes were geologically logged by previous operators and these data are available to Auroch Minerals.
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. 	 Auroch Minerals Limited: Diamond core is sawn in half with half used for sampling and the other half retained for future reference. 1m RC percussion, sample is split via a cyclone and cone splitter attached to the drill rig to produce a bagged 3kg sample. Certified reference material and blank material are inserted every 20 samples as per company QAQC procedure for both DD & RC. Field duplicates collected from the Cyclone and cone splitter are inserted every 60 samples No further sub sampling has been conducted 3m AC sample composites are scooped from sample piles to create a 3kg bagged sample. Certified reference material are inserted every 30 samples as per the company Air Core QAQC procedure. Historic: 1m RC percussion, maximum 1m length core samples, or as close as reasonable within geological boundaries, are considered appropriate for the style of mineralisation being targeted. Historic drill holes were logged at level of detail to ensure sufficient geological understanding to allow representative selection of sample intervals. Sampling QAQC measures taken by previous operators not fully documented.





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Quality of assay data and laboratory tests

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- 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 (i.e. lack of bias) and precision have been established.

COMMENTARY

Auroch Minerals Limited:

- ALS Minerals, multi element analysis method ME-ICP61 utilised for all samples, consisting of multi acid digestion with HF and ICP-AES analysis. Over limit method Ni-OG62H for ore grade Ni consisting of four acid digestion with ICP-AES analysis. PGM-ICP23 fire assay ICP-AES finish method used selectively for samples considered to contain Pt, Pd & Au. All methods are considered suitable for the style of mineralisation targeted.
- Certified Reference Material (CRM's)and quartz blank (Blanks) samples are inserted 1:20 for DD & RC and 1:30 for AC as part of Auroch's QAQC procedure. Accuracy and performance of CRM's and Blanks are considered after results are received.
- Field duplicates collected from the Cyclone and cone splitter are inserted every 60 samples

Historic:

- Focus Minerals at Nepean utilised a AD02 ICP (4 Acid Digest) Ni, Cu & Co analysis performed by ALS.
- It is assumed that industry standard commercial laboratory instruments were used by ALS to analyse historical drill samples from the Nepean prospect.
- It is assumed that industry best practice was used by previous operators to ensure acceptable assay data accuracy and precision. Historical QAQC procedures are not recorded in available documents.

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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. 	 Auroch Minerals Limited: No third party verification has been completed to date Drill holes have not been twinned All primary paper data is held on site, digitised data is held in a managed database off site. No adjustments to assays have occurred. Historic: All historic drilling data including collar coordinates, hole orientation surveys, total depth, sampling intervals and lithological logging were collated from statutory annual reports and historic digital data files and verified by Auroch's Geologists. No indication of drill holes being twinned by previous workers has been observed or documented. It is assumed that industry best practice was used for collection, verification and storage of historic data. No adjustments to assay data were undertaken. 			
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. 	 Auroch Minerals Limited: Drill collars were surveyed in GDA94/MGA Zone 51 datum for Nepean, by handheld GPS +-5m accuracy At completion of programme drill collars will be surveyed using a Differential GPS +- 0.1m accuracy. Historic: Drill collars were surveyed in GDA94/MGA Zone 51 datum for Nepean At Nepean hole series NP07 & NP08 have been resurveyed in the field by Auroch Minerals utilising Differential GPS with accuracy ±0.1m Air Magnetic Survey: Differential GPS was used during flight 			
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. 	survey Auroch Minerals Limited: Drill data spacing of historic drill data is sufficient to establish the degree of geological and grade continuity appropriate for this stage of exploration and understanding of mineralisation Historic: Typically sampled in 1-4 metre intervals, skipping intervals of no interest and increasing the frequency of sampling depending on the geology observed in diamond drill core. Drill data spacing of historic drill data is sufficient to establish the degree of			





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CRITERIA	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.	geological and grade continuity appropriate for estimating an Inferred Ni Resource. Air Magnetic Survey: Flight-line spacing 50-100m Auroch Minerals Limited: Drill holes azimuth is nominally planned perpendicular to stratigraphic strike Drill hole dip is regarded suitable for subvertical stratigraphy and provides a near true width intersection to minimise orientation bias. Historic: Historical drill holes were oriented, as far as reasonably practical, to intersect the centre of the targeted mineralised zone perpendicular to the interpreted strike orientation of the mineralised zone. The geometry of drill holes relative to the
Sample security	The measures taken to ensure sample security.	
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No independent audit or review has been undertaken.

Section 2: Reporting of Exploration Results

CRITERIA	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 	 The Nepean Nickel Project consists of two Mining Leases and nine prospecting leases: M15/709, M15/1809, P15/5738, P15/5740, P15/5741, P15/5742, P15/5743, P15/5749, P15/5750, P15/5963, P15/5965 No known royalties exist on the leases. There are no material issues with regard to access. The tenements are in good standing and no







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	CRITERIA	EX	(PLANATION	CC	DMMENTARY
			impediments to obtaining a licence to operate in the area.		known impediments exist.
)	Exploration done by other parties	•	Acknowledgment and appraisal of exploration by other parties.	•	Exploration drilling at Nepean has been conducted by the previous lease holders including Metals Exploration NL, Endeavour, St Francis Mining, Anaconda, Spinifex Nickel, Ausminex NL - Consolidated Nickel Pty Ltd. Focus Minerals owned the project between 2007-2020. Data collected by these entities has been reviewed in detail by Auroch.
	Geology	•	Deposit type, geological setting and style of mineralisation.	•	The Nepean Projects hosts Archaean komatiite-hosted nickel sulphide deposits and orogenic gold mineralisation
	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 Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	•	Relevant drill-hole information is included in this announcement.
	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.	•	Exploration Results have been reported by using the weighted average of each sample result by its corresponding interval length, as is industry standard practice. Grades >0.3% Ni are used to identify nickel sulphide mineralisation in fresh rock samples. Top-cuts were deemed not applicable considering the style of Ni mineralisation Metal equivalent values have not been used.
	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').	•	Most drill-holes are orthogonal to the orientation of stratigraphy and mineralisation.

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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.	Relevant figures have been included within the 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 results related to relevant mineralisation at Nepean and Arden have been previously 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.	No other substantive data exists.
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. 	 Auroch is currently reviewing data at both projects to determine where further drilling is warranted. If it is determined that additional drilling is required, the Company will announce such plans in due course. Refer to diagrams in the main body of text.





