

Highly Anomalous Lithium in Itambacuri Stream Sediments, Minas Gerais, Brazil

HIGHLIGHTS

- Itambacuri project stream sediment samples contain highly anomalous lithium grades up to 116ppm over an area of approximately 11km²
- There is a strong lithium-caesium-beryllium-rubidium association across the assay data set suggesting a highly favourable geological environment for lithium mineralised pegmatites
- All anomalous samples lie in Neoproterozoic age metasediments which are the typical host rocks for lithium rich pegmatites in Minas Gerais
- The Itambacuri licence lies midway between two Cambrian age G4 Sao Tome granite bodies. G4 granites are interpreted to be the source of lithium rich pegmatites in Minas Gerais
- Assays results for Alderan's six remaining lithium project areas are expected over the next 1-2 months
- Next steps at Itambacuri will entail infill stream sampling to define the prospect area for detailed soil sampling, geological mapping and drilling
- Update on Frisco Copper-Gold Project in Utah USA: New Years prospect soil sampling completed with assays awaited; drill sites expected to be permitted late June; targeting drill start end June-early July.

Alderan Resources Limited (ASX: AL8) (Alderan or the Company) is pleased to advise that assay results have been received for stream sediment samples collected from its Itambacuri project area in Minas Gerais, Brazil. The assays highlight an 11km² area in the western portion of the licence with highly anomalous grades up to 116ppm Li against a background lithium grade of approximately 10ppm and average grade for all assays of 28ppm Li. There is a strong positive lithium-caesium-beryllium-rubidium correlation throughout the assays which suggests that the area is in a favourable geological environment for lithium mineralisation.

Managing Director of Alderan, Scott Caithness, commented:

"Alderan's lithium exploration in Brazil is off to a great start with highly anomalous lithium assays being returned for stream sediments samples collected from the Itambacuri project area. Lithium assays range up to 116ppm against an average grade of 28ppm for the entire batch of samples. Also encouraging is the very strong lithium-caesium-beryllium-rubidium correlation in the assays which suggests that Itambacuri has the right geological environment for lithium mineralisation.

"The next step at Itambacuri will be detailed infill stream sediment sampling to narrow down the prospective area. This will be followed by geological mapping and soil sampling once a prospect scale area has been



identified. Assays for the stream sediments collected over the remaining six project areas in Minas Gerais are expected over the next 1-2 months.

"Preparations are also well underway to drill the New Years copper-gold prospect in Alderan's Frisco project in Utah, USA. Soil sampling over the prospect has been completed, permitting drill sites is underway. Drilling is targeted to commence end June-early July."

Itambacuri Stream Sediment Programme Results

The Itambacuri stream sediment samples contain highly anomalous lithium grades over an area of 11km² in the western half of the licence and there is a very strong lithium-caesium-beryllium-rubidium correlation in the assay data set (see Figure 1).

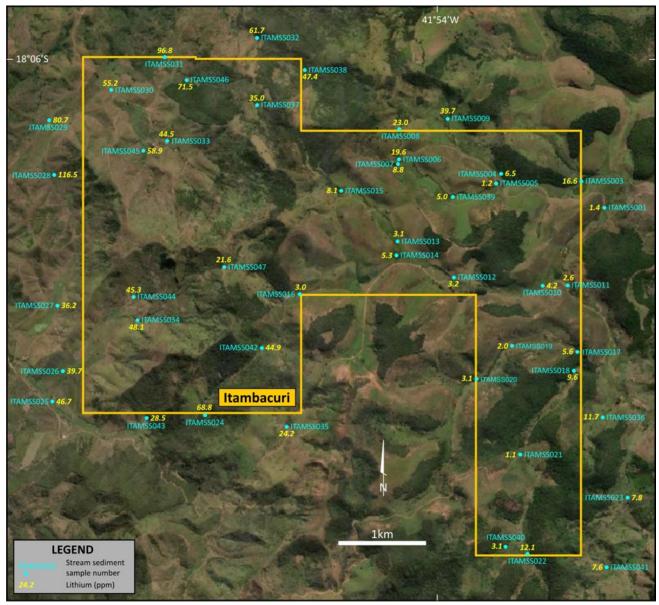


Figure 1: Itambacuri stream sediment sample locations and lithium assays. The samples collected marginally outside the western boundary of the licence including sample ITAMSS028 which has the highest lithium assay of 116.5ppm Li were all collected from streams which drain from within the licence area.



The grade of lithium in the samples ranges from a low of 1.1ppm to a high of 116.5ppm with the average grade across all samples being 28ppm lithium. Background lithium grades are estimated to be approximately 10ppm There is also a very strong correlation between lithium grades and caesium, beryllium and rubidium grades with correlation coefficients of 0.96, 0.92 and 0.85 respectively (a correlation coefficient value of 1 is the maximum possible). These elements are all key indicators of a favourable geological environment for lithium bearing pegmatites.

The anomalous samples are concentrated in the western half of the licence where the top 10% of assays include 116.5ppm, 96.8ppm, 80.7ppm and 71.5ppm and the geology consists of two Neoproterozoic metasedimentary units (see Figure 2). The Tumiritinga Formation consisting of gneiss, marble, calcsilicates and schist lies to the east of the Sao Tome Formation which consists of tourmalinite, calcsilicates, schist and quartzite. At a district scale, the Itambacuri licence lies midway between two Santa Rosa granite bodies of Cambrian age which are approximately 10km apart within the Sao Tome Formation.

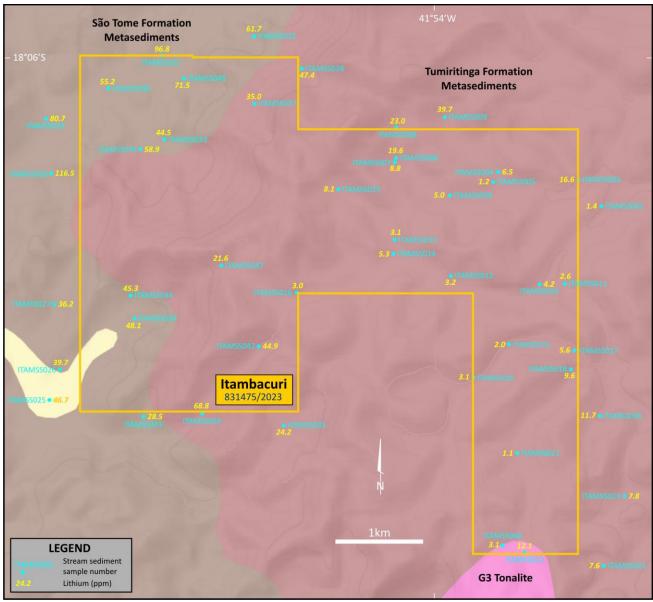


Figure 2: Itambacuri geology, stream sediment sample locations and lithium assays.



The stream sediment samples were collected from 46 sites in drainages throughout the 19.6km² Itambacuri licence area.¹ The sample sites were at approximately one kilometre intervals from the headwaters of drainages, at stream junctions and at the tenement boundary where drainages exited the licence areas.

The samples consist of fine sediment aggregated from multiple collection sites typically within 25 metre intervals along the active stream bed at each site. All samples have GPS co-ordinates, site descriptions, sample logs and geology noted. The samples were submitted to the ALS laboratory in Belo Horizontale for sample preparation and ICP analysis for 53 elements. The samples were prepared with drying and ultra-fine sieving to -75 microns prior to analysis. Thirteen of the stream sediment samples were analysed for rare earth elements with all assays being low order.

Next Steps

The Itambacuri project stream sediment assay results are the first to be received of Alderan's seven project areas which have undergone sampling for lithium mineralisation. Assays for the remaining areas are expected over the next 2 months and once received will be assessed for anomalies. Non-anomalous areas will be relinquished.

Alderan's next step at Itambacuri in Q3, 2024 will entail infill stream sampling and preliminary geological mapping to narrow down the anomalous area to prospect scale. Once a prospect has been delineated, the area can be soil sampled and geologically mapped in detail to define targets for drill testing.

Frisco Copper-Gold Project Update, Utah, USA

Alderan is preparing to drill the New Years copper gold prospect at its Frisco project in Utah, USA.² New Years has historical high grade copper intersections including **13.7m** @ **2.32%** Cu within **19.8m** @ **1.67%** Cu from 22.9m downhole (NY-6), **10.7m** @ **1.52%** Cu within **27.4m** @ **0.85%** Cu from surface (NY-2) and in hole NYM-1 which lies midway between New Years and the historically mined Cactus deposit, **10.7m** @ **1.60%** Cu and **4.6m** @ **1.3%** Cu within **42.7m** @ **0.80%** Cu which was the entire length of the hole.

There has been no on-ground exploration at New Years since the early 1960s despite it being only 400m along the same structural trend as the Cactus and Comet deposits. Historical production at Cactus is reported at 1.27Mt at a grade of 2.07% Cu, 0.33g/t Au and there are multiple post-mining high grade drill intersections which suggest that a significant volume of copper mineralisation remains in-ground and that the deposit remains open at depth.

Grid soil sampling over the New Years magnetic anomaly has been completed and assay results are awaited. All documentation for permitting the drill sites has been submitted to the Department of Mines and Geology and approval is expected in late June. Quotations to carry out the drilling are being assessed with a target to commence the programme by end June-early July.

END

This announcement was authorised for release by the Board of Alderan Resources Limited.

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¹ Refer Alderan ASX Announcements dated 5 December 2023, 23 January 2024

² Refer Alderan ASX Announcements dated 22 February 2024, 13 March 2024, 29 April 2024



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About Alderan Resources Limited

Alderan Resources specialises in critical and precious metal exploration.³ The Company has seven (7) lithium projects in Minas Gerais, Brazil (AL8 ASX announcement dated 20th October, 2023) plus copper and gold projects in Utah, USA (Frisco, Detroit, White Mountain), with tenements held either directly or through option agreements via Alderan's USA subsidiaries, Volantis Resources Corp and Valyrian Resources Corp (see Figures 3 & 4). Alderan's objective is to rapidly discover, delineate and develop critical metal and gold deposits for mining. The Company's project portfolio has high potential for discovery as it lies in under-explored geological belts with similar geology to neighbouring mining districts. Our exploration plans also include reviewing new opportunities to secure and upgrade our pipeline of projects.

For more information please visit: https://alderanresources.com.au/

Competent Persons Statement

The information contained in this announcement that relates to exploration results is based on, and fairly reflects, information compiled by Mr Scott Caithness, who is a Member of the Australian Institute of Mining and Metallurgy. Mr Caithness is the Managing Director of Alderan and has sufficient experience which is relevant to 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 Caithness consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears. Mr Caithness holds securities in the Company.

³ https://www.energy.gov/cmm/what-are-critical-materials-and-critical-minerals



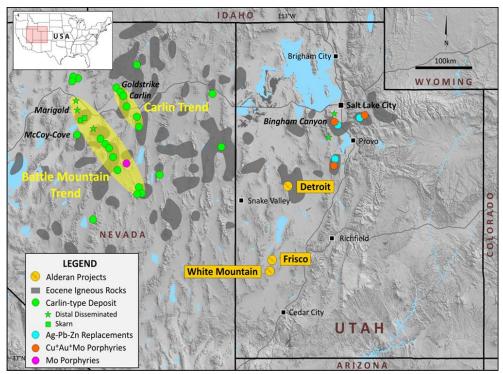


Figure 3: Alderan Resources project locations in Utah, USA.

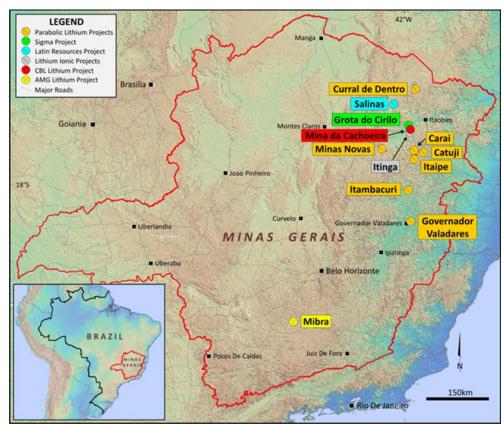


Figure 4: Alderan Resources project locations in Minas Gerais, Brazil.



Appendix 1: JORC Code, 2012 Edition – Table 1 Report in relation to proposed drilling and soil sampling at the Frisco project, Utah, USA.

Section 1 - Sampling Techniques and Data

(Criterial in this section apply to all succeeding sections)

Criteria of JORC Code 2012	JORC Code (2012) explanation	Details of the Reported Project
Sampling techniques	Nature and quality of sampling (e.g. cut channels, random chips, or specific specialized 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.	Stream sediment samples sieved to -75 microns and analysed by ICP-MS for 53 elements is an effective first pass technique to identify areas with anomalous metal content for followup exploration. The samples were collected from sites at approximately one kilometre intervals along drainages to provide full coverage of entire licence area. The approximately 1kg samples were collected from 2-3 locations in the stream beds at each site over a 25m interval to ensure that they are representative of the sediment in the stream. Sample sites are descibed and photographed, their co-ordinates recorded and geology noted. The samples were filtered (organic matter removed) and dried before being sent to the ALS laboratory in Belo Horizontale for analysis.
	Include reference to measures taken to ensure sample representativeness and the appropriate calibration of any measurement tools or systems used.	Stream sediment samples were routinely collected from 2-3 locations over a 25m interval at each sample site to ensure they were representative of the sediment in the streams.
	Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as	A number of small-scale artisanal mine workings were identified while carrying out the stream sampling programme. Where possible these have been inspected. Pegmatites and minerals such as beryl and tantalum which are associated with fertile intrusives that may contain lithium mineralisation have been identified associated with these workings. The strong Li-Cs-Be-Rb association in the stream assays suggests that the samples are from a favourable geological environment for lithium mineralisation.

	where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.	
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.).	Not applicable.
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	Not applicable.
	Measures taken to maximize 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.	
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.	Not applicable.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	

	The total length and percentage of the relevant intersections logged.	
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken	Not applicable.
	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	Not applicable.
	For all sample types, the nature, quality, and appropriateness of the sample	The samples were filtered (organic matter removed) and dried before being sent to the ALS laboratory in Belo Horizontale for sample preparation as per the table below.
	preparation technique.	SAMPLE PREPARATION
		ALS CODE DESCRIPTION
		WEI-21 Received Sample Weight LOG-22 Sample login - Rcd w/o BarCode SCR-41f Screen to -75um, save both
	Quality control procedures adopted for all sub-sampling stages to maximise representativeness of samples.	ALS quality control procedures for the industry standard sample preparation have been adopted for this early stage of sampling.
	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.	The stream sediment samples weigh approximately 1kg and are collected from ultra-fine material at 2-3 separate locations in the stream bed at each sample site. These separate locations may be 25 metres apart. This ensures that the samples are representative of the sediment within the stream at that location. All sample locations are recorded using a GPS hence locations can be revisited and resampled if required.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	Sample sizes for ultra-fine stream sediment samples is approximately 1kg.
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.	All samples have been submitted to the ALS laboratory in Belo Horizontale, the capital of Minas Gerais state in Brazil for analysis using ICP-MS (ME-MS41L method of ALS) which is used for low detection level of 53 elements. Some samples were also analysed for rare earth elements using the REE add on MS41L-REE.

			ANALYTICAL PROCE	DUBEC
			ANALYTICAL PROCEI	JURES
		ALS CODE	DESCRIPTION	INSTRUMENT
		ME-MS41L	Super Trace Lowest DL AR by ICF	P-MS
		MS41L-REE	REE Add-on to ME-MS41L	
	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.	Not Applicable.		
	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.	anomalous lithium and sampling. Checks will be carried	es or blanks accompany these initial samples and LCT pegmatite pathfinder element contents who out on the analytical values of certified reference ification sheets to assess whether analyses are	hich will be followed up with more detailed be material (CRM's) used by the laboratory
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	Not applicable.		
	The use of twinned holes.	Not applicable.		
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.		e sites are located, logged and photographed a ich is routinely backed up.	and this data is stored electronically on the
	Discuss any adjustment to assay data.	Not applicable.		
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.		located using handheld Garmin GPS Model 6: I accuracy of the instrument is approximately +/-	
	Specification of the grid system used.	All data are recorded	in WGS84 and UTM coordinates.	

	Quality and adequacy of topographic control.	The elevation data recorded by the Garmin GPS models used in the sampling programme is considered adequate for this initial phase of sampling.
Data spacing and distribution	Data spacing for reporting of Exploration Results.	Not applicable. This announcement follows the compilation and review of historical exploration data on the Frisco project area which was released in Alderan's ASX announcements on 22 February 2024 and 13 March 2024. No new data is reported in this announcement.
	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.	Not applicable.
	Whether sample compositing has been applied.	No applicable.
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.	No applicable.
	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.	Not applicable.
Sample security	The measures taken to ensure sample security	Samples were submitted to the ALS lab by Company personnel and only authorised personnel have attended the samples.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	Not Applicable.

Section 2 – Reporting of Exploration Results (Criterial in this section apply to all succeeding sections)

Criteria of JORC Code	JORC Code (2012) explanation	Details of the Reported Project
2012		

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.	Alderan Resources Limited announced shareholder approval on 13 October 2023 to acquire 100% of the issued capital in Parabolic Lithium Pty Ltd which has the right to acquire a 100% interest in seven lithium exploration projects in the mineral resource rich state of Minas Gerais, Brazil. The legal holder of the projects is Mars Mines Brasil Ltda and pursuant to the terms of the acquisition agreement, Alderan and Parabolic have agreed that Mars Mines Ltd, a shareholder of Parabolic and the parent company of Mars Mines Brasil Ltda, will procure the transfer of the Projects by Mars Mines Brasil Ltda to Alderan.
		The projects stream sediment and rock sampled cover 472km² and consist of 24 granted exploration licences in seven (7) project areas, Curral de Dentro, Minas Novas, Carai, Catuji, Itaipe, Itambacuri and Governador Valadares. The Projects are all located in and immediately to the south of the area known as 'Lithium Valley' in the Eastern Lithium Belt of Eastern Brazil. The Projects have not undergone historical exploration for lithium.
		This announcement covers the assay results for stream sediments samples collected over the Itambacuri project area.
	The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.	The Itambacuri licence is granted and the process of transferring it to Alderan is underway.
Exploration done by other parties (2.2)	Acknowledgment and appraisal of exploration by other parties.	Alderan is not aware of any historical exploration for lithium within the project area.
Geology	Deposit type, geological setting, and style of mineralisation.	Regional 1:1 million scale geological mapping by the Geological Survey of Brazil indicates that the lithium deposits of the East Brazil Lithium Belt lie primarily within the Neoproterozic Aracuai Fold Belt. This belt consists largely of metamorphosed sediments and volcanics which have been intruded by younger Neoproterozoic I-type granites and Neoproterozoic to Cambrian age peraluminous S-type granites commonly referred to as G1 to G5.
		The lithium deposits throughout the belt are typically associated with pegmatite intrusions in close proximity to G4 granites S-type granites.
		Mineral occurrences associated with the deposits include spodumene, beryl, niobium, tantalum, tin and tourmaline, many of which have been identified by the Geological Survey of Brazil.
		The geology of the Itambacuri project consists primarily of two Neoproterozoic metasedimentary units, the Tumiritinga Formation in the east of the area and the Sao Tome Formation in the west. A Neoproterozoic tonalite of the Brasilandia Granite body occurs at the SE margin of the project area. The project licence lies midway between two G4 Santa Rosa granite bodies.
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:	Not applicable.

	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 and 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.	
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.	Not applicable.
	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.	Not applicable.

Relationship between mineralisation widths and	These relationships are particularly important in the reporting of Exploration Results.	No applicable.
intercept lengths	If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.	No applicable.
	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').	No applicable.
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.	Maps are presented in the text of this ASX release.
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.	This announcement covers all available data on the Itambacuri stream sediment samples.
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.	Not applicable.

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.	Prospect soil and rock sampling, detailed geological mapping , geophysical surveying Drill testing
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	Maps showing anomalous stream sediment results are presented in the text of this ASX release.