



2 March 2023

## Mallina Gold Project Update

### **HIGHLIGHTS:**

- The Company has recommenced gold exploration program at Roberts Hill within the Mallina Project
- Geochemical review of 2021 aircore drilling completed and follow-up soil sampling survey underway, to provide proof of concept and scalability of exploration
- Mallina Project is located immediately north of De Grey Mining Ltd (ASX:DEG) 10.6m oz Hemi Gold project
- Results from the soil survey expected May, with the aim of highlighting potential mineralisation and extending future surveys to define drill targets that could be drilled later this year

Mantle Minerals Limited (ASX:MTL) (“the Company”) is pleased to announce the recommencement of gold exploration at Roberts Hill, part of the Company’s Mallina gold project, immediately north of De Grey Mining Limited’s (ASX: DEG) discovery of 10.6M ounces of gold at Hemi and satellite deposits.

After a recent geochemical review of the 2021 aircore drilling, it is interpreted that Mantle intersected Hemi-style mineralisation at Roberts Hill.

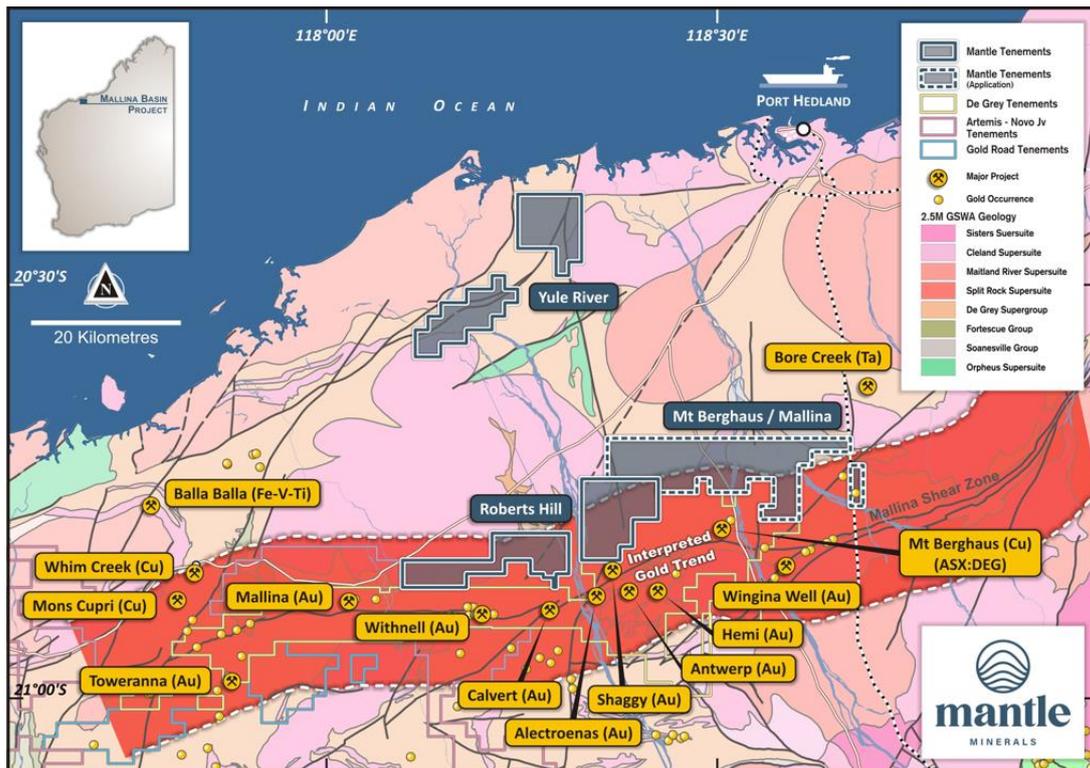
Follow-up exploration activities have been initiated with a soil geochemical survey, to identify the most effective and systematic way to define drilling targets over the extensive tenement holding.

Geochemistry is one of several methods to be used, including geophysics, regional structural geology and detailed studies of previous drilling.

**Mantle Minerals Limited Executive Chairman, Nick Poll said:**

*“We hope that this orientation survey for soil geochemistry will provide us with a proof of concept that helps us to see through 5m of concealing sediments. If it works, then we can scale the method up and explore larger areas. This is important, because we know that gold deposits in this area can be difficult to find with shallow drilling, so if we’re going to persevere and drill deep, then it better be in the right place.”*

The Roberts Hill project is located within an interpreted gold trend extending from Whim Creek and Toweranna gold mines eastwards through Hemi and potentially beyond. The area is easily accessed by 45 minutes drive south west of Port Hedland along the Great Northern Highway. See Figure 1.

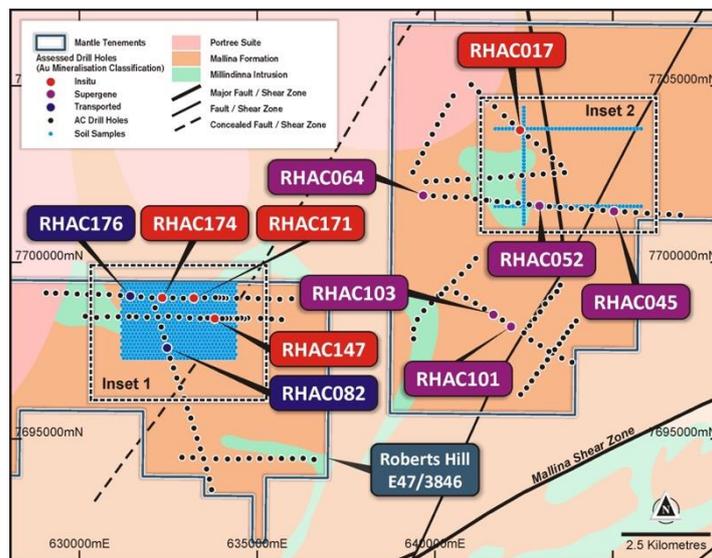


**Figure 1.** Project location map and proximity to the interpreted gold trend, including the Hemi deposit.

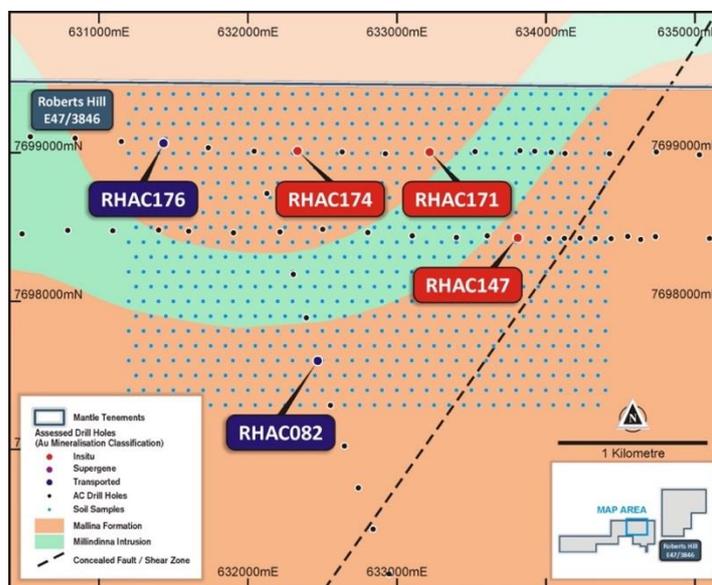
The soil orientation survey is designed to pass over significant intersections from air core drilling in 2021 (refer to Company announcement 25 January 2022), particularly hole RHAC147 (4m @0.42g/t gold and 848ppm arsenic), which confirms Hemi-style mineralisation. Over 750 soil samples will be collected from two separate areas, on a 100m x 100m grid spacing, to demonstrate possible soil anomalies above mineralisation (Figure 2).

The first series of soil samples form a grid of 100x100m spacing over a cluster of intersections of gold mineralisation (Figure 3), which occur in three different types of settings: in-situ (semi-fresh rock), supergene (weathered rock) and transported (within the concealing sediments). See Table 1. The occurrence of gold within these three settings together is encouraging. The soil orientation survey is designed to test possible

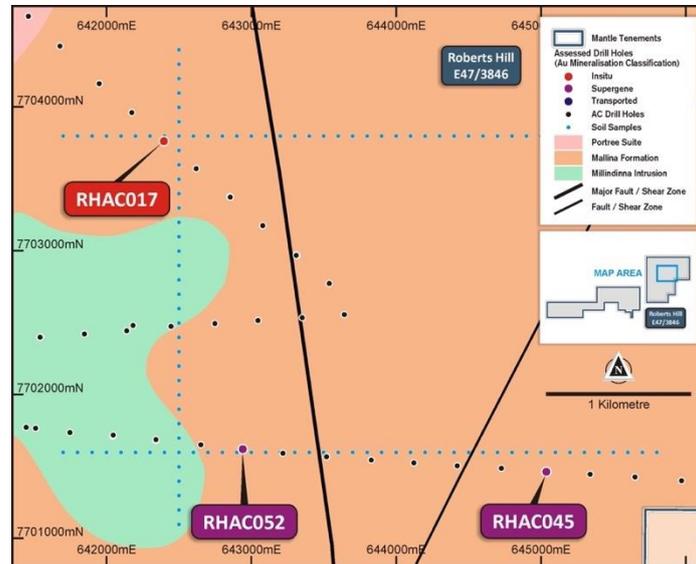
mobilisation of this gold and associated arsenic into the surface soils, to identify anomalies reflecting primary gold mineralisation below.



**Figure 2:** Detail of tenements showing planned soil geochemical survey over two areas of Hemi-style mineralisation, intersected in previous aircore drilling.



**Figure 3.** Plan of 100 x 100m soil survey over mineralisation previously drilled.



**Figure 4.** Three orientation soil sampling survey lines with sampling conducted at 100m intervals.

The second series of soil sampling lines at 100m spacing (Figure 4) are designed to test a soil possible response to a second cluster of gold mineralisation. See Table 1. The three sampling lines should be sufficient to determine a geochemical response to potential primary gold mineralisation in this area.

Results from the survey are expected during May. Should these soil results highlight the potential for mineralisation below, the survey will be extended over other areas of the tenements, to define potential gold exploration targets that could be drilled later this year.

This announcement has been authorized for release by the Mantle Minerals Limited Board of Directors.

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## Competent Person Statement

The information contained in this report to exploration results relates to information previously announced by the Company and the Company is not aware of any new information which materially affects the information included in those announcements. The information was compiled or reviewed by Mr Nick Poll. Mr Poll is the Company's Executive Chairman. Mr Poll has sufficient experience of relevance to the styles of mineralization and the types of deposits under investigation, and to the activities undertaken to qualify as a Competent Person as defined in the 2012 edition of the Joint Ore Reserve Committee (JORC) "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves".

## Forward-Looking Statement Disclaimer

This announcement contains forward-looking statements that involve a number of risks and uncertainties. These forward-looking statements are expressed in good faith and believed to have a reasonable basis. These statements reflect current expectations, intentions, or strategies regarding the future and assumptions based on currently available information. Should one or more of the risks or uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary from the expectations, intentions, and strategies described in this announcement. No obligation is assumed to update forward-looking statements if these beliefs, opinions, and estimates should change or to reflect other future developments.

Table 1: Intersections referred to in Figures 1 to 3

Hole ID	East	North	Azimuth Degrees	Dip Degrees	Total depth (m)	Depth From (m)	Depth To (m)	Interval Width (m)	Au ppb	Ag ppm	As ppm	Bi ppm	Te ppm
RHAC017	642396	7703767	307	-60	113	71	72	1	105	0.14	2.9	2.52	0.08
						80	81	1	15	0.13	38.6	0.67	0.08
						81	82	1	18	0.11	44.9	0.52	0.08
						82	83	1	44	0.09	128	0.42	0.09
						83	84	1	32	0.1	69.4	0.39	0.1
						84	85	1	72	0.14	99.9	0.43	0.35
RHAC045	645037	7701468	91	-60	39	24	28	4	5	0.07	9.9	0.16	0.04
						28	32	4	134	0.16	4.3	0.09	0.07
						32	36	4	32	0.05	5.9	0.12	0.06
RHAC052	642941	7701625	95	-60	85	52	56	4	76	0.06	25.5	0.12	0.06
RHAC057	641510	7701769	89	-60	117	0	4	4	76	0.06	25.5	0.12	0.06
						4	8	4	1	1.5	5.3	0.08	0.07
						8	12	4	4	1.32	3.5	0.06	0.04
RHAC064	639671	7701919	z	-60	150	68	72	4	5	1.72	3.7	0.09	0.02
						72	76	4	21	0.09	19.8	0.37	0.11
						76	80	4	80	0.48	20.1	0.43	0.1
						80	84	4	24	0.27	21.5	0.31	0.07
RHAC082	632469	7697601	348	-60	106	12	16	4	22	0.11	4.9	0.08	0.09
						16	20	4	76	0.1	10.9	0.12	0.05
						20	24	4	63	0.1	20.2	0.17	0.06
RHAC101	642140	7698203	118	-60	74	40	44	4	113	0.04	14.6	0.12	0.04
						44	48	4	24	0.03	12.4	0.08	0.04
RHAC103	641646	7698542	125	-60	93	28	32	4	170	0.02	89.5	0.1	0.04
						44	48	4	32	0.03	74.4	0.17	0.06
						48	52	4	91	0.03	107.5	0.32	0.12
						52	56	4	73	0.07	92.2	0.25	0.07
						88	90	2	10	0.05	83.7	0.09	0.05
						90	92	2	75	0.08	90.9	0.13	0.09
RHAC138	635098	7698426	84	-60	43	4	8	4	1	2.51	2	0.07	0.02
						8	12	4	1	2.28	3.1	0.08	0.03
RHAC147	633811	7698431	88	-60	100	76	80	4	13	0.06	152.5	0.07	0.03
						80	84	4	418	0.1	848	0.21	0.08
						84	88	4	68	0.11	178.5	0.19	0.06

Hole ID	East	North	Azimuth Degrees	Dip Degrees	Total depth (m)	Depth From (m)	Depth To (m)	Interval Width (m)	Au ppb	Ag ppm	As ppm	Bi ppm	Te ppm
RHAC159	630166	7698490	83	-60	99	0	4	4	1	2.63	2.3	0.09	0.02
						4	8	4	1	0.7	2.1	0.06	0.03
						8	12	4	1	1.14	11	0.1	0.04
RHAC171	633220	7699010	95	-60	75	12	16	4	4	1.68	9.1	0.17	0.06
RHAC174	632333	7699018	100	-60	97	93	94	1	106	0.49	19.6	0.55	0.08
						94	95	1	49	0.28	31	0.62	0.14
						95	96	1	19	0.14	26.8	0.33	0.06
						96	97	1	68	0.68	29.4	0.43	0.09
RHAC176	631434	7699070	111	-60	37	0	4	4	34	0.33	1.4	0.03	0.02
						4	8	4	101	0.66	3	0.06	0.04
						8	12	4	18	0.33	11.4	0.14	0.04



JORC Code, 2012 Edition – Table 1 report template

## Section 1 Sampling Techniques and Data

(Criteria in this section apply to all sections of this announcement.)

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Mantle Sampling was undertaken using standard industry practices including the use of duplicates and standards at regular intervals.</li> </ul> <p><b>Air Core (AC) Drilling</b></p> <p>AC samples are composited at 4m intervals using an aluminium scoop from spoil piles with all composite intervals over 0.25g/t Au resampled at 1m intervals using the primary cyclone split calico bags. Individual 1m samples were selected where significant alteration is intersected such as quartz veining and sulphides.</p> <p>Sample weight approximately 1.5-2kg each to ensure total preparation at the laboratory preparation stage. The sample size is deemed appropriate for the grain size of the material being sampled.</p> <ul style="list-style-type: none"> <li>All coordinates are in UTM grid9GDA94 Z50) and drillhole collars have been surveyed by handheld GPS to ensure accuracy of within +/-0.3m.</li> <li>Samples are sent to ALS laboratories in Perth for Multielement analysis (AusME-TL44). A 50g charge after sample preparation is digested by Aqua Regia to deliver trace level analytes for regolith-bedrock mineralization.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>• <i>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).</i></li> </ul>	<ul style="list-style-type: none"> <li>• AC drilling was undertaken by Bostech Drilling utilizing a Drill boss 200. AC holes were drilled with a Black Diamond 3" hammer.</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>• <i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></li> <li>• <i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Mantle contracted drillers use industry appropriate methods to maximize sample recovery and minimize downhole contamination including using compressed air to maintain a dry sample in air core drilling.</li> <li>• No significant sample loss or bias has been noted in current drilling or in the historical reports or from MGCV drill campaigns.</li> </ul>
<b>Logging</b>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></li> <li>• <i>The total length and percentage of the relevant intersections logged.</i></li> </ul>	<ul style="list-style-type: none"> <li>• All geological, structural and alteration related observations were stored in the database. Air core hole would not be used in any resource estimation, mining, or metallurgical studies.</li> </ul>
<b>Sub-sampling techniques and sample</b>	<ul style="list-style-type: none"> <li>• <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> <li>• <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></li> </ul>	<ul style="list-style-type: none"> <li>• NA. No Diamond Core drilling was carried out.</li> <li>• AC samples are taken from 1m sample piles and composited at 4m interval using a plastic scoop.</li> <li>• Sample preparation at ALS is by dry pulverization to 85% passing 75microns.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>preparation</b>	<ul style="list-style-type: none"> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>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.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>Mantle field QAQC procedures involve the use of certified reference standards, duplicates, and blanks at consistent intervals for mineral resource modelling and studies.</li> <li>Sampling is carried out using standard protocols and QAQC procedures as per industry practice.</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>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.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>4m composite and 1m AC samples analysis is undertaken by ALS Laboratories using Multi-Elements Analysis (AusME-TL44) protocols. Internal certified laboratory QAQC is undertaken including check samples, blanks, and internal standards. This methodology is considered appropriate for base and precious metal mineralization at the exploration phase.</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> </ul>	<ul style="list-style-type: none"> <li>Samples are verified by geologist before importing into the main database (Datashed).</li> <li>No twin holes have been drilled by mantle during this program.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>Field data is collecting using a standard set of templates. Geological samples logging is undertaken on a Panasonic Toughbook with structure, alteration and lithology recorded for each interval. Data is verified before loading to the database. Geological logging of all samples is undertaken.</li> </ul>
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>All maps and locations of drillholes are in UTM grid (GDA94 Z50) and have been surveyed by hand-held GPS with an accuracy of +/-3m.</li> </ul>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>Variable drill hole spacing are used to complete 1st pass testing of targets and are determined from geochemical, geophysical and geological data together with any historical drilling information.</li> <li>For the reported drilling drill hole spacing 200-300m for most holes except for tighter spacing where shallow bedrock was encountered.</li> <li>No resource have been calculated on regional drilling targets as described in this release due to the early stage nature of the drilling.</li> <li>4m composite samples were submitted for initial analysis in most cases. Composite sampling is undertaken using a plastic scoop at on1 meter intervals and combined in a calico bag. Where composite assays</li> </ul>

Criteria	JORC Code explanation	Commentary
		are above 0.25g/t Au, individual 1m samples are re-submitted for gold assay. 1m individual samples and 2m composites may be submitted in certain intervals exhibiting strong alteration.
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Drilling is designed to cross the geophysical feature of interest close to perpendicular as possible. Most drillholes are designed at a dip of 60 degrees and some are drilled vertically.</li> <li>No orientation-based sampling bias can be confirmed at this time and true widths are not yet known.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>Chain of custody is managed by Mantle internal staff. Drill samples are stored on site and transported by a licensed reputable transport company to a registered laboratory in Perth (ALS Wangara). When at the laboratory samples are stored in locked yard before being processed and tracked through the ALS Webtrieve System.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>No audits have been completed on sampling techniques and data due to the early-stage nature of the drilling.</li> </ul>