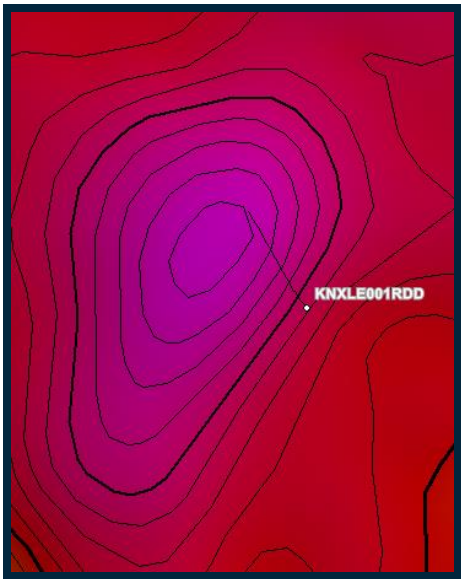
ASTUTEMETALSNL

19 March 2024

MORE COMPELLING IOCG DRILL TARGETS GENERATED AT CENTRAL GEORGINA PROJECT, NT

Geophysical modelling reveals further off-hole targets at Banks & Leichhardt West



Key Highlights

- **Constrained gravity modelling reveals further high-density targets not yet tested by drilling at the Banks and Leichhardt West prospects.**
- **Elevated copper and bismuth intersected in previous drilling at Banks and Leichhardt West, indicating proximal IOCG copper-gold potential.**
- **Leichhardt East model refined by adjustments to the modelling process.**
- **High-density targets are consistent with the dense nature of IOCG mineralised rocks.**
- **Drilling scheduled to commence at Leichhardt East in mid-2024.**

Astute Metals NL (ASX: ASE) ("ASE", "Astute" or "the Company") is pleased to advise that it has generated additional high-priority IOCG targets from continued geophysical modelling at the Banks and Leichhardt West prospects, both located within the highly-prospective central tenement area of its Georgina IOCG Project in the Northern Territory.

The modelling process has remained largely unchanged from that which identified the strong IOCG target at Leichhardt East, announced earlier this year[1]. In 2023, an Ambient Noise Tomography (ANT) geophysical survey identified a coherent zone of low seismic velocity rocks in the shallows of the survey area, which was interpreted to approximate the Georgina Basin limestone. The limestone covers the underlying basement rocks, which have the potential to host iron-oxide copper-gold (IOCG) deposits.

Consulting group Mitre Geophysics performed constrained inversions of the gravity survey data, with a view to removing the effects of the overlying limestone cover rocks to produce a more accurate model for where prospective gravity (density) anomalies reside in the underlying basement.

Previous results from this modelling approach at Leichhardt East identified an outstanding model of dense rocks located just off-hole from drill-hole KNXLE001RDD, which intersected ironstone mineralised with respect to copper, bismuth, silver and uranium[1,3]. The most recent modelling effort has identified further targets, at the nearby Leichhardt West and Banks prospects., The former owner of the Georgina Basin Project, Greenvale Energy (Greenvale, ASX: GRV), previously drilled a single hole into each of these targets, both of which intersected elevated levels of copper, silver and bismuth, metals associated with IOCG-style deposits[9].

With geophysical modelling work essentially complete and the key characteristics of the three high impact targets understood, the Company has elected to test Leichhardt East as first priority, given its size, high-density character and depth to the target. Drilling is scheduled to commence in mid-2024.

Astute Executive Chairman, Tony Leibowitz, said: "*Following our recent success in defining a strong IOCG target at Leichhardt East, modelling of the existing geophysical and gravity data has now produced two additional compelling IOCG drill targets at Banks and Leichhardt West. These results have added significant value to the Georgina IOCG Project and represents one of the most compelling discovery opportunities in our portfolio.*

"We are now moving ahead with plans to drill test these exciting new targets, with our initial focus expected to be on Leichhardt East because of its size and other defining characteristics. We are looking forward to moving this project to the drilling stage, in parallel with a new phase of drilling at our lithium claystone projects in Nevada, USA."

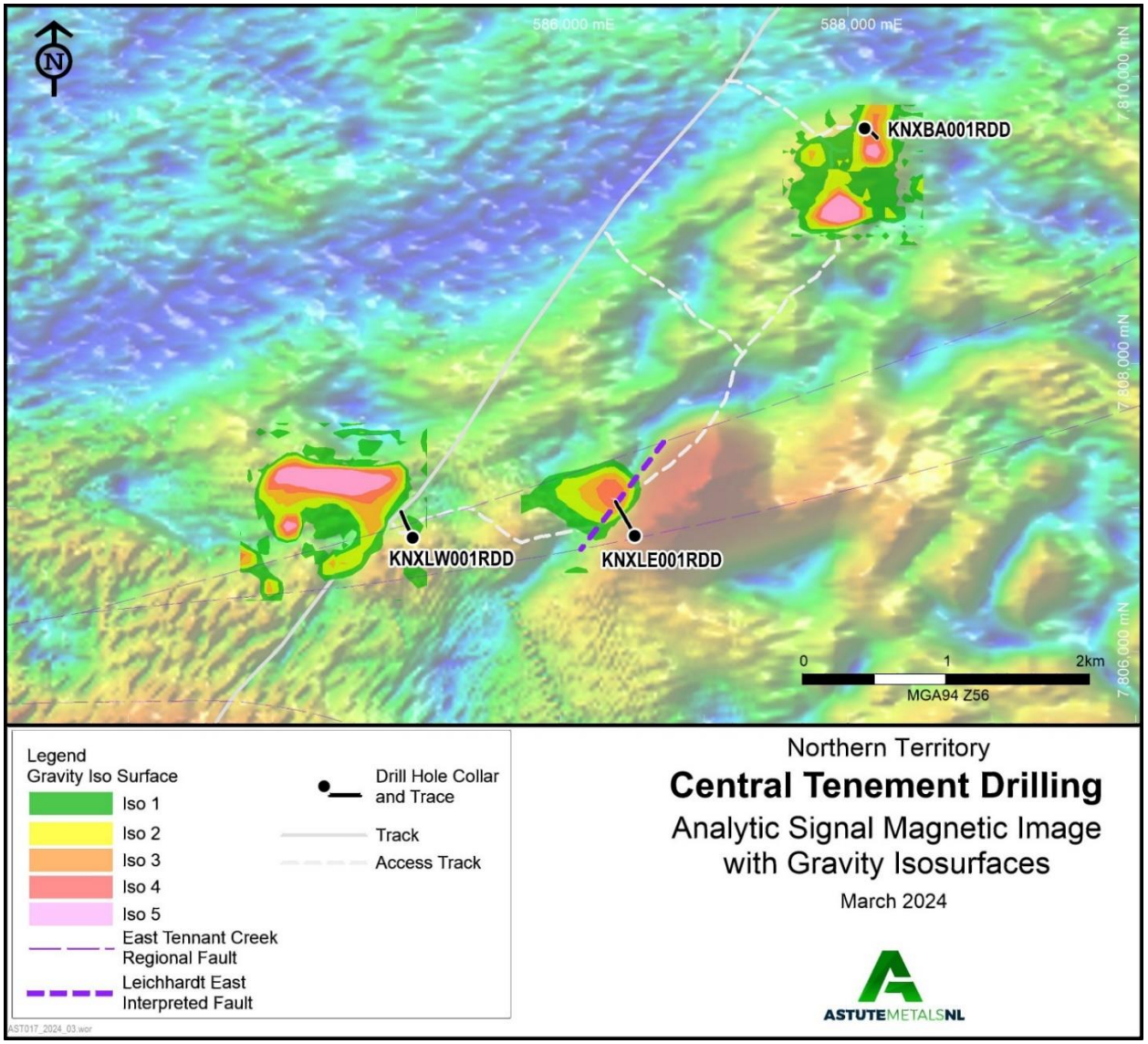


Figure 1. Plan view of all three modelled prospects at the Georgina IOCG Project.

Background

Previous drilling conducted by the Company and the previous operator, Greenvale Energy Ltd (ASX: GRV), in the central tenement area, which targeted coincident magnetic and gravity anomalies, intersected prospective host-rocks that exhibit alteration and geochemical anomalism that may be associated with an Iron-Oxide-Copper-Gold (IOCG) style mineralising system.

Three prospect areas were tested – Leichhardt East, Leichhardt West and Banks – with each of the holes intersecting highly prospective altered host rocks, with elevated IOCG 'pathfinder' metals such as copper, uranium, bismuth and silver[3,9].

In August 2023, the Company conducted an Ambient Noise Tomography (ANT) geophysical survey, designed to gain an improved understanding of the sub-surface structure in the central tenement area of the Georgina Project[4]. In January 2024, the Company used data generated from the ANT survey to conduct constrained inversion geophysical modelling of gravity survey data from the Leichhardt East prospect, resulting in the identification of a dense zone of modelled rocks, in close proximity to anomalous copper and uranium mineralisation reported in the one hole drilled at the prospect[1].

Following the successful identification of a dense body from modelling at Leichhardt East (refer to the ASX release dated 11 January 2024[1]), the Company set out to model other prospective areas in the Central tenement area, comprising the Leichhardt West and Banks prospects.

Results – Leichhardt West

Two models were created to assess the residual basement gravity response at Leichhardt West. The Windisp model produced a series of nested isosurfaces with the highest density isosurface having dimensions of approximately 800x150x100m.

The Windisp modelling does not allow for absolute densities to be derived for the isosurfaces, but the comparative parametric inversion model yielded three distinct geobodies with densities of 3.50g.cc, 3.82g.cc and 3.90g.cc, respectively.

The single hole drilled by Greenvale did not intersect the core of the modelled bodies, which is located some 200m north-east of the end of the drill-hole, however the hole did intersect a number of instances of low-grade copper mineralisation, including:

- 1m @ 0.10% Cu from 441-442m[9]
- 1m @ 0.12% Cu from 445-446m[9]
- 0.25m @ 0.22% Cu from 536.05-536.3m[9]
- 1m @ 0.15% Cu from 600-600.8m (End of hole)[9]

Each of the above intersections were also associated with elevated bismuth and silver, metals that are commonly associated with IOCG mineralising systems.

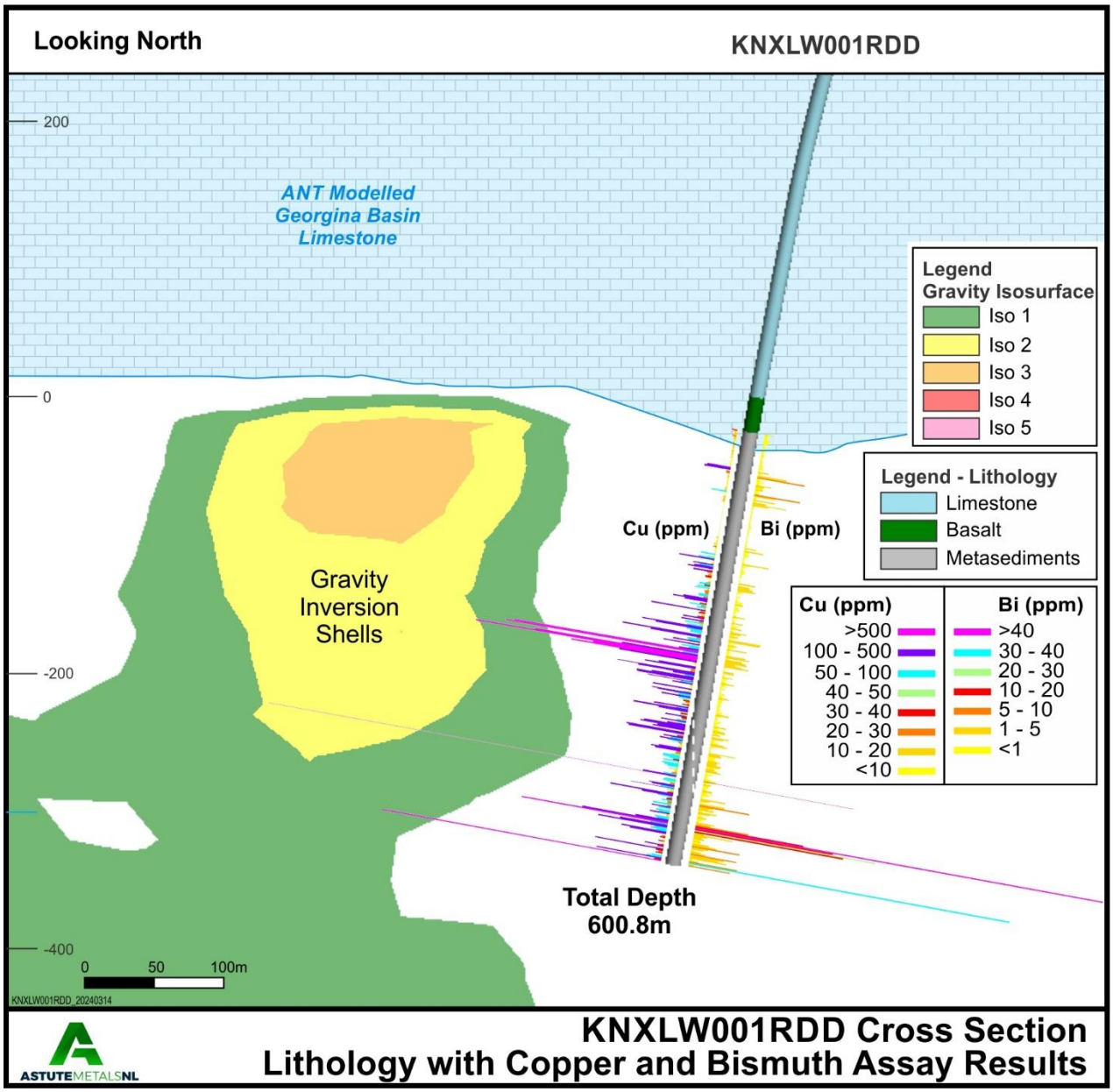


Figure 2. Constrained gravity model density isosurfaces and existing drill-hole at Leichhardt West

Results – Banks

As with Leichhardt West, two models were created to assess the residual basement gravity response at Banks. The Windisp model produced a series of nested isosurfaces for two distinct density anomalies with the most dense of these the southern of the two having approximate dimensions of 270x190x100m and the northern anomaly possessing a smaller dense 'core' of 100x100x150m. The comparative parametric inversion model yielded two dipping geo-bodies with the same density of 3.49g.cc.

The single hole drilled at Banks by Greenvale intersected the eastern edge of the northern model (see figure 3) but has not effectively tested core of this target, which can be seen in plan view in Figure 1. The Banks hole intersected low-level anomalism in copper, bismuth and silver, including:

- 3m @ 167ppm Cu, 1.02ppm Bi and 0.22g/t Ag from 325-328m[9]
- 4m @ 226ppm Cu, 1.55ppm Bi and 0.43g/t Ag from 436-440m[9]

In addition, the second, larger, southern target at Banks remains completely untested and approximately 600m south of the existing hole (Figure 1).

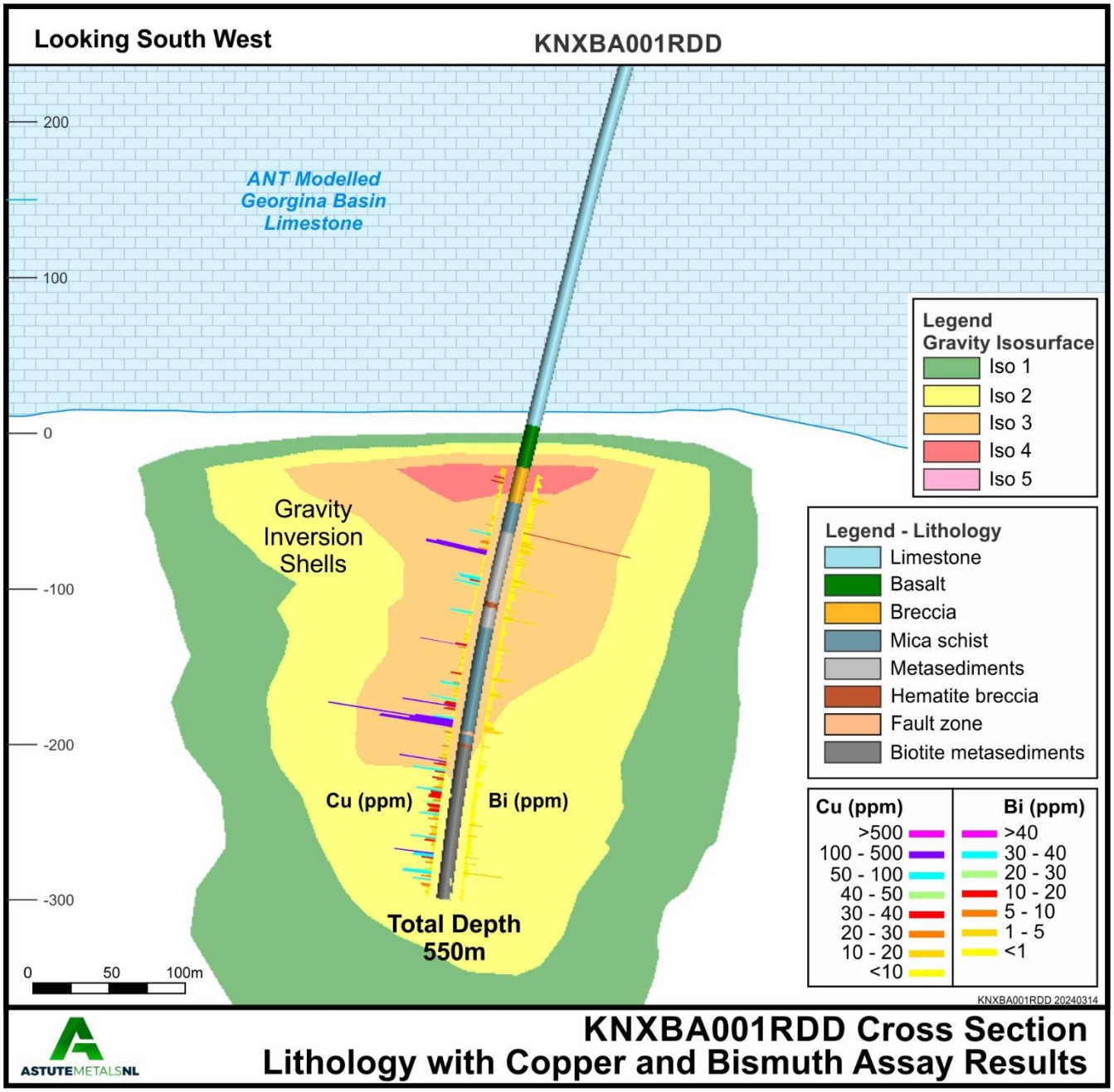


Figure 3. Constrained gravity model density isosurfaces and existing drill-hole at Banks

Updated model of Leichhardt East

The previously announced[1] inversion model for Leichhardt East has been updated to include an additional step to the modelling process, discussed below. The updated model has changed somewhat however remains a high-density off-hole target to the Leichhardt East hole, KNXLE001RDD, which intersected significant polymetallic zones of mineralisation, including high-grade uranium. Intersections include:

- 0.32m @ 0.24% U_3O_8, 819ppm Cu and 0.15g/t Ag from 689.09-689.41m
- 0.90m @ 374ppm U_3O_8, 11.8ppm Bi and 78.6ppm Cu from 693.3-694.2m
- 0.75m @ 0.11% U_3O_8, 40.8ppm Bi and 0.11g/t Ag from 481.1-481.85m
- 1.04m @ 635ppm Cu and 0.26g/t Ag from 576.34-577.38m

In addition, the target has a favourable structural position, sited between two regional faults as part of the Geoscience Australia East Tennant dataset ('regional faults' in the image below), and abutting an interpreted, potentially later or second order, fault marked by a thin zone of low-level magnetics cutting through moderate to high intensity magnetic response. As structures are fundamental to fluid flow in IOCG systems, this configuration of interpreted faults, nested around the dense modelled body and nearby elevated geochemistry, make Leichhardt east a highly-compelling IOCG target.

A complete set of assay results for the Leichhardt East drilling can be found in the original 3 April 2023 ASX release[3].

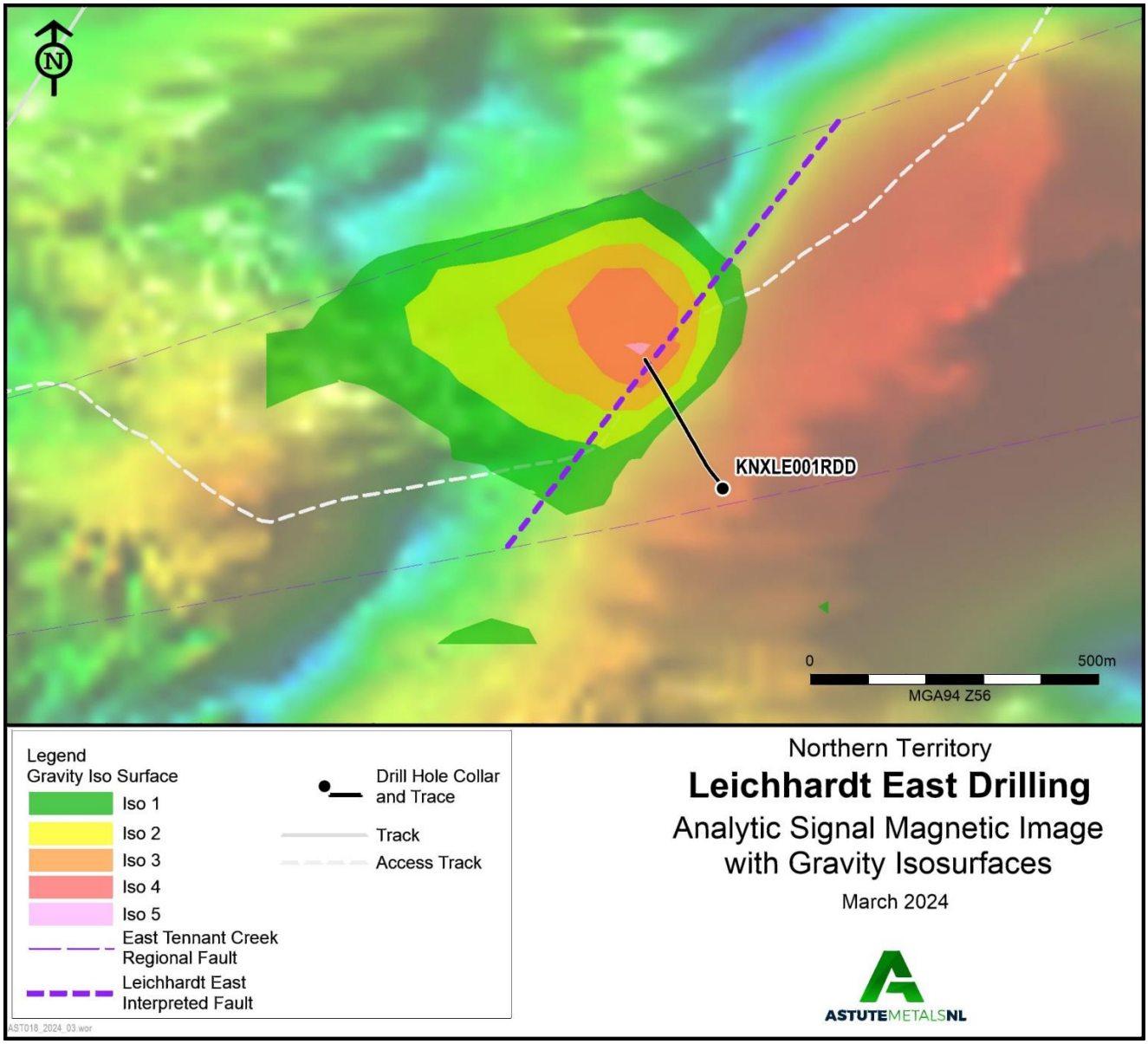


Figure 4. Constrained gravity model density isosurfaces and existing drill-hole at Leichhardt East – Plan view

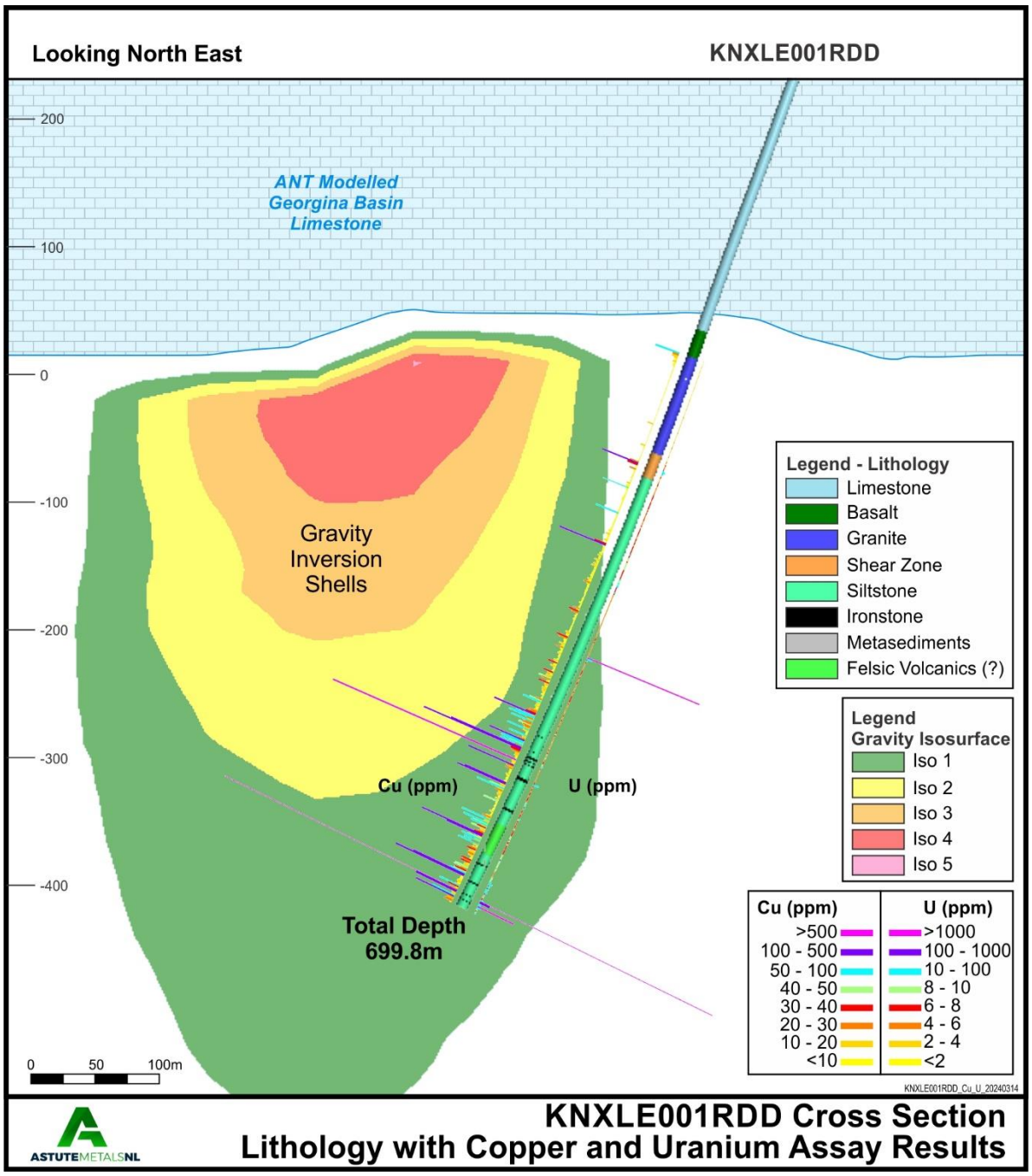


Figure 5. Constrained gravity model density isosurfaces and existing drill-hole at Leichhardt East – Section view

Interpretation

The results received from the constrained inversion modelling continue to highlight the highly prospective nature of the Company's Georgina Basin IOCG Project, with each of the three prospects in the central tenement area presenting as compelling drill targets.

Most rock-forming minerals have a density/specific gravity of between 2.6 and 3g.cc, while minerals that are significant in the mineralised part of IOCG deposits have significantly higher densities[6], such as iron-oxide minerals magnetite (density of 5.18g.cc), hematite (5.26g.cc) and copper-bearing minerals such as chalcopyrite (4.1-4.3g.cc) and bornite (5.06-5.08g.cc).

As a result of the increased presence of these dense minerals – in particular iron oxide minerals that typically make up 15-60wt% of mineralised rocks[5] – the rocks that make up IOCG deposits are dense themselves. For example, mineralised rocks at Carrapateena, a South Australian IOCG deposit (Measured Mineral Resource of 130Mt at 1.01% copper, 0.42g/t gold and 4g/t silver)[8], owned by BHP, have densities ranging from approximately 3.51 – 4.7g.cc[2].

The identification of further high-density bodies with nearby drill holes possessing anomalism or mineralisation with respect to metals commonly found in IOCG systems indicates clear potential for a nearby IOCG copper system at Leichhardt West and/or Banks.

Next Steps

The completion of constrained gravity inversion modelling at three prospects in the central tenement area has revealed three compelling, untested, high-density IOCG targets, with nearby drill holes that exhibit elevated key IOCG pathfinder metals such as uranium, silver, bismuth and copper[1,3].

The Company has reviewed and evaluated each of the targets and has elected to proceed with drill testing of the high-density Leichhardt East target as a first step. Leichhardt East is considered to have the highest prospectivity based on its size, high-density character, structural location and depth to the target. This initial drilling will be undertaken in June/July 2024.

The initial hole will also provide proof-of-concept that the novel geophysical modelling approach undertaken by the Company is effective at identifying high-density targets under cover. Once proven successful, further drill holes will be designed and permitted for the Banks and Leichhardt West prospects.

Updated Geophysical Modelling Workflow

A specialised workflow was developed by Mitre Geophysics (Mitre) to bring together gravity, ANT survey and geological inputs to arrive at the final constrained inversion model for Leichhardt East, which is described in detail in the 11 January 2024 ASX release[1].

An additional step has since been introduced to the workflow whereby the elevation of the lower contact surface of the ANT low-velocity zone was adjusted downward to match an average best-fit with the lower contact of the Georgina basin limestone in each of five pre-existing drill-holes in the survey area.

This additional step is expected to better reflect the actual position of the lower contact of the Georgina Basin limestone, and thus improve modelling outcomes.

1 ASX: ASE 11 January 2024 'Strong IOCG target revealed by geophysical modelling at Georgina Project, NT'
2 Vella, L., Emerson, D., 2009 'Carrapateena: physical properties of a new iron-oxide copper-gold deposit'
3 ASX: ARO 3 April 2023 'Significant polymetallic anomalism intersected at Georgina IOC Project, NT'
4 ASX: ASE 3 August 2023 'Commencement of Geophysics Survey at Georgina IOCG Project'
5 Skirrow, R.G, 2022 'Iron oxide copper-gold (IOCG) deposits – A review (part 1): Settings, mineralogy, ore geochemistry and classification
6 AusIMM, Mineral Densities - https://www.ausimm.com/globalassets/insights-and-resources/minerals-processing-toolbox/mineraldens.pdf
7 ASX: ARO 17 April 2023 'AGES Presentation – Georgina Basin'
8 ASX: BHP 'Annual Report 2023'
9 ASX: ARO 10 February 2023 'Assay results strengthen IOCG credentials of the Georgina IOCG Project'

Authorisation

This announcement has been authorised for release by the Board of Astute.

More Information

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Competent Person

The information in this report is based on information compiled by Mr Matthew Healy, a Competent Person who is a Member of The Australasian Institute of Mining and Metallurgy (AusIMM Member number 303597). Mr Healy is a full-time employee of Astute Metals NL and is eligible to participate in a Loan Funded Share incentive plan of the Company. Mr Healy 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 Healy consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

APPENDIX 1 - JORC Code, 2012 Edition – Table 1

Section 1 - Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	Nature and quality of sampling (eg cut channels, random chips, or specific specialisedindustry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheldXRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling. Include reference to measures taken to ensuresample 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, suchas where there is coarse gold that has inherentsampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.	Gravity data collected using a CG-6 Autograv Gravity Meter and ESVE300PRO GNSS Rover Receiver and Base Receiver. Ambient Noise Tomography (ANT) Survey completed using 64 satellite and GPS enabled Fleet Space Technologies Geodes on an approximate 600 x 550m grid. The survey was completed in four phases in August 2023
Drilling techniques	Drill type (eg core, reverse circulation, open-holehammer, 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 isoriented and if so, by what method, etc).	Not applicable.
Drill sample recovery	Method of recording and assessing core andchip sample recoveries and results assessed. Measures taken to maximise sample recoveryand 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/gainof fine/coarse material.	Not applicable.
Logging	Whether core and chip samples have been geologically and geotechnically logged to alevel of detail to support appropriate MineralResource estimation, mining studies and metallurgical studies. Whether logging is qualitative or quantitative innature. Core (or costean, channel, etc) photography. The total length and percentage of the relevantintersections logged.	Not applicable.

APPENDIX 1 - JORC Code, 2012 Edition – Table 1

Criteria	JORC Code explanation	Commentary
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, rotarysplit, etc and whether sampled wet or dry. For all sample types, the nature, quality and appropriateness of the sample preparationtechnique. Quality control procedures adopted for all sub-sampling stages to maximise representivityof samples. Measures taken to ensure that the sampling isrepresentative of the in situ material collected,including for instance results for field duplicate/second-half sampling.	Constrained Geophysical Modelling Process described in announcement body text and text of previous related announcement (ASX: ASE 11 January 2024 'Strong IOCG target revealed by geophysical modelling at Georgina Project, NT')
Quality of assay data and laboratory tests	Whether sample sizes are appropriate to thegrain size of the material being sampled. The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial ortotal. For geophysical tools, spectrometers, handheldXRF 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 precisionhave been established.	Not applicable.
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 entryprocedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data.	Not applicable
Location of data points	Accuracy and quality of surveys used to locatedrill 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.	Gravity survey locations and ANT survey locations determined by GPS Topographic survey used in modelling gridded from gravity observation points

APPENDIX 1 - JORC Code, 2012 Edition – Table 1

Criteria	JORC Code explanation	Commentary
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 MineralResource and Ore Reserve estimation procedure(s) and classifications applied. Whether sample compositing has been applied.	Not 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. 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.	Not applicable
Audits or reviews	The results of any audits or reviews of samplingtechniques and data.	Not applicable

APPENDIX 1 - JORC Code, 2012 Edition – Table 1

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Section 2 - Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	Tenements held in 80% Astute subsidiary Knox Resources Pty Ltd. Remaining 20% interest held by Greenvale Energy Ltd Drilling conducted on granted exploration tenement EL33375 Landholder access agreement in place.
Exploration done by other parties	Acknowledgment and appraisal of exploration byother parties.	Previous exploration conducted by Greenvale Mining, comprising airborne magnetic and ground gravity surveying, desktop studies and exploration drilling. Previous Greenvale exploration referenced in this announcement from the following ASX releases: ASX: GRV 29 June 2022 'First Diamond hole at the Banks Target intersects IOCG-style Alteration' ASX: GRV 27 July 2022 'Diamond hole at Leichhardt confirms IOCG potential at Georgina'
Geology	Deposit type, geological setting and style of mineralisation.	The principal target deposit style is iron-oxide-copper-gold (IOCG). IOCG deposits are typically characterized by associated magnetic and gravity responses due the prevalence of dense and often magnetic iron oxide minerals as a substantial portion of the deposit footprint mineralogical constitution. IOCG deposits are known in the Tennant Creek region and recent Geoscience Australia prospectivity analysis indicates that basement rocks east of Tennant Creek, the location of the Company tenements, are prospective for IOCG deposits.
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.	Referenced in originating ASX releases: ASX: GRV 29 June 2022 'First Diamond hole at the Banks Target intersects IOCG-style Alteration' ASX: GRV 27 July 2022 'Diamond hole at Leichhardt confirms IOCG potential at Georgina' ASX: ARO 3 April 2023 'Significant polymetallic anomalism intersected at Georgina IOCG project, NT' ASX: ARO 10 February 2023 'Assay results strengthen IOCG credentials of the Georgina IOCG Project'

Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
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 shownin detail. The assumptions used for any reporting of metal equivalent values should be clearly stated.	Not applicable
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').	Not applicable
Diagrams	Appropriate maps and sections (with scales) andtabulations 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.	Included in ASX 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.	This release describes all relevant information
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysicalsurvey 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.	This release describes all relevant information
Further work	The nature and scale of planned further work (egtests for lateral extensions or depth extensions orlarge-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.	Results will be used to design exploration drill holes for permitting, and drill testing in H2 2024