

# **Uranium Exploration Yields High Priority Drill Targets**

# HIGHLIGHTS

- Maiden multi-technique program identifies significant new targets for uranium deposition
- Large scale and priority uranium exploration target outlined in the Marree Embayment
- EM, gravity and radiometric data confirm numerous potential palaeochannels
- Multiple soil anomalies defined by lead/uranium ratios will be prioritised for exploration
- Drill program planning and associated heritage clearance surveys already underway

Adavale Resources Limited (ASX: ADD) ("or the Company") advises that positive results have been returned for the maiden Mundowdna exploration program on EL6821 and EL6957, an area now referred to as part of Adavale's Marree Embayment Project (MEP). These latest results at the MEP have identified a significant new area for uranium deposition that will be a priority drill target, together with numerous channel features and surface uranium anomalies (Figure 1). The exploration was Adavale's first step in an expanded regional uranium focus in South Australia and the data will provide the solid foundation for future exploration programs now being finalised.

#### Adavale's Executive Director, David Riekie commented:

*"The positive outcomes generated by our maiden, multi-technique exploration program indicates a uranium-rich paleo drainage system.* 

What is most exciting is that collectively this data has now identified a significant basement structure at depth that appears to be a large trap site for the ancient uraniferous groundwaters washing/shedding from the adjacent Flinders Ranges. This area of the Marree Embayment will be a priority uranium exploration focus. Most pleasing is this basement structure does not appear to have been previously recognised or drilled.

The multiple surface uranium anomalies and prospective palaeochannel features will be further tested and are expected to generate high priority targets as part of our next MEP exploration program.

These outcomes vindicate our expanded regional exploration focus in the uranium friendly jurisdiction of South Australia and we look forward to reporting on follow-up exploration programs including drilling activities that are now being prepared."

#### **Directors & Officers**

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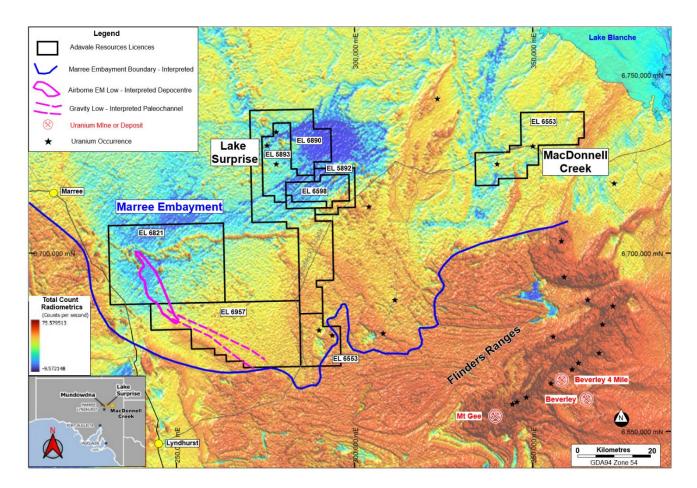
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**Figure 1:** Adavale expanded Exploration Licence areas and current exploration program outcomes on Total Count Radiometric Imagery (PIRSA). The large scale uranium target area and the interpreted Airborne EM low together with the associated and interpreted palaeochannel gravity low are shown in magenta. The extensive Marree embayment is outlined in blue to the north of the Flinders Ranges in South Australia.

#### **TECHNICAL OVERVIEW**

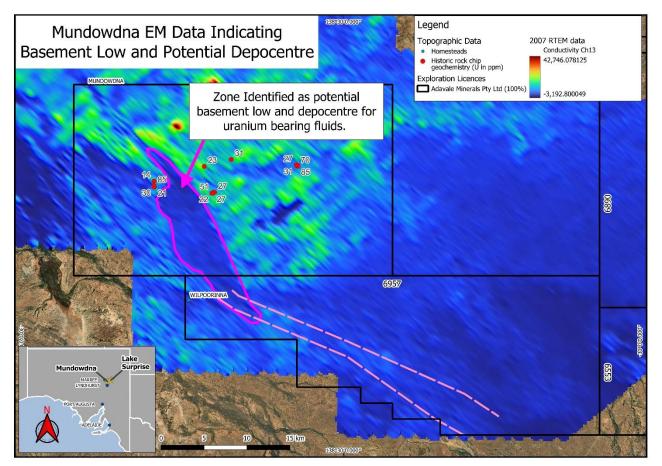
#### New Uranium target area defined by from airborne EM Data

Reprocessing of historical (2008) airborne EM (**AEM**) data over the Mundowdna licences as part of the Maiden Exploration program identified a large EM low running in a NW direction along the western margin of the Mundowdna licences (Figure 2).

The sharpness of the low feature, particularly along its NE edge suggests it may be fault controlled in part creating a half graben like feature (a depressed crustal block). By inference, the region of the EM low is interpreted to reflect the greatest thickness (depocentre) of the uranium prospective Eyre and Namba Formations overlying the basement Maree Subgroup sediments and as such represent the prime pathway and potential trap site for the earliest uraniferous groundwaters shedding from the adjacent Flinders Ranges.

Importantly, the significance of the EM low does not appear to have been previously recognised and therefore remains untested.





**Figure 2**: Area identified as potential basement low. This was identified using channel 9 – 15 of the re-processed EM Data. The image above shows channel 13 of the dataset.

#### Gravity

Supporting the EM interpretation are the results of the gravity survey undertaken as part maiden exploration program, which shows a consistent rising gravity trend towards the NE along all surveyed lines, indicating thickening sediment cover in the SW and thinning towards the NE.

Detailed interpretation of the gravity data for each line was also undertaken looking for subtle variations in the gravity that may reflect potential palaeochannels. Numerous such anomalies were identified in this way with their current surface location recorded. Individual anomalies were then classified as either modern day or older palaeochannel depending on their location with respect to the modern-day drainage system (Figure 3).



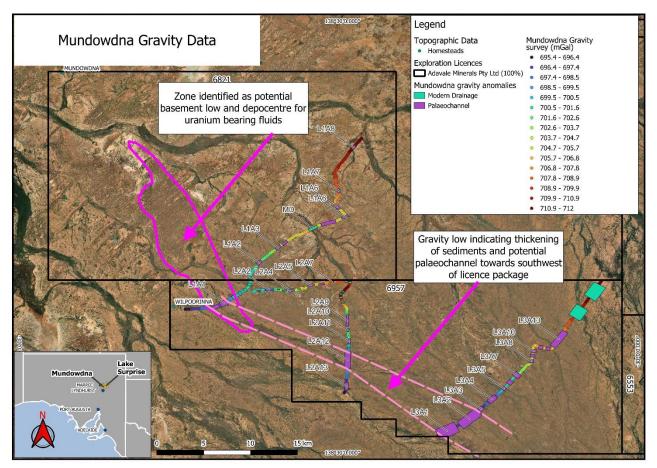


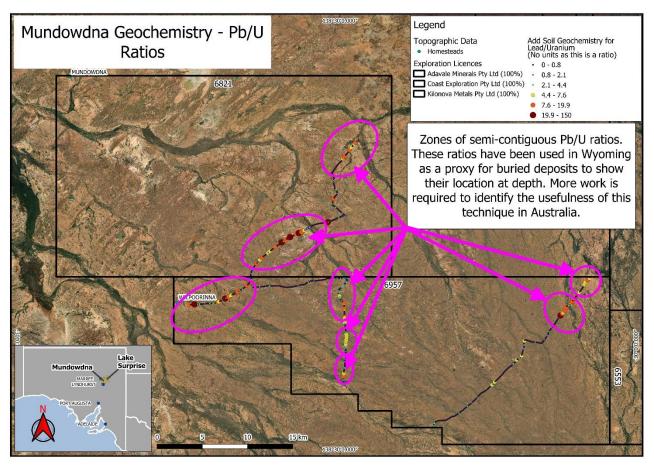
Figure 3: Newly acquired gravity data indicating a thickening of sediments in the southwestern portion of the licence package.

## Soil Sampling

Soil samples and surface spectrometer readings collected a part of the Mundowdna program have defined numerous surface uranium anomalies (Figure 4). Adavale is investigating the use of element ratios as a proxy for elevated uranium at depth, which has been shown by Abzalov (2021) to define such zones from surface in basins in Wyoming, USA.

The anomalies present targets for follow up work programs to test and validate as they are significantly elevated compared to the surrounding samples in the data. Importantly, these targets coincide with the interpreted gravity anomalies related to the palaeochannels described above. Work on this concept is ongoing.





**Figure 4**: zones of anomalous Pb/U Ratios along transects 1-3. Pink circles represent semi-continuous anomalies that have been mapped by the sampling program. Additional work on these anomalies is required to determine their usefulness in mapping systems.

### Summary of findings from exploration program

- Additional interpretation of reprocessed airborne EM geophysical data has highlighted a new and exciting area where uranium deposition has been interpreted to be occurring.
- Gravity data defined several channels plus a key regional trend along the lines.
- Multiple soil targets have been defined based on the elevated levels in the TerraLeach analysis.
- Use of Pb/U ratios will be investigated further as an effective vectoring tool.

#### **NEXT KEY STEPS**

- Heritage clearances along tracks and trails crossing interpreted basement low/depocentre on western margin of the MEP and additional possible targets for advanced exploration.
- Finalise design of drilling program to test structures for uranium redox boundaries.
- Expanded clearances on MacDonnell Creek licence areas to undertake a broader exploration and drilling program.
- Further development and analysis of Pb/U data to define its potential for use in the Australian environment.
- Ongoing development of targets and additional areas of interest based on current, historic work and recently acquired datasets.



#### Acknowledgements to traditional owners

Adavale acknowledges the Dieri and Adnyamathanha as Traditional Custodians of the land on which our current works are located. With respect to Elders past, present and emerging, Adavale is committed to conducting its activities with respect to the communities in which it operates.

This announcement is authorised for release by the Board of Adavale Resources Limited

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#### References

Abzalov, M. A., (2021) Geochemical exploration for buried sandstone-hosted uranium mineralization using mobile U and Pb isotopes: case study of the REB deposit, Great Divide Basin, Wyoming. *Geochemistry: Exploration, Environment, Analysis*, Vol. 21.

#### **Competent Persons Statement**

The information in this release that relates to "exploration results" for the Project is based on information compiled or reviewed by Mr Patrick Harvey MAppSc Australia. Mr Harvey is a consultant for Adavale Resources Limited and is a member of the AIG. Mr Harvey has sufficient experience that is relevant to the style of mineralisation and type of deposits under consideration as well as to the activity that is being undertaking to qualify as a Competent Person under the ASX Listing Rules. Mr Harvey consents to this release in the form and context in which it appears.

Refer to ASX announcements dated 26 March 2024 and 7 March 2024 for further details on exploration results for the Project including JORC tables. The Company confirms that it is not aware of any new information or data that materially affects the information including in the original market announcements.

#### Forward looking statements

This document contains forward-looking statements concerning Adavale. Forward-looking statements are not statements of historical fact and actual events and results may differ materially from those described in the forward-looking statements as a result of a variety of risks, uncertainties and other factors. Forward-looking statements are inherently subject to business, economic, competitive, political and social uncertainties and contingencies. Many factors could cause the Company's actual results to differ materially from those expressed or implied in any forward-looking information provided by the Company, or on behalf of the Company. Such factors include, among other things, risks relating to additional funding requirements, metal prices, exploration, development and operating risks, competition, production risks, regulatory restrictions, including environmental regulation and liability and potential title disputes.

Forward looking statements in this document are based on Adavale's beliefs, opinions and estimates of Adavale as of the dates the forward-looking statements are made, and no obligation is assumed to update forward looking statements if these beliefs, opinions and estimates should change or to reflect other future developments. Although management believes that the assumptions made by the Company and the expectations represented by such information are reasonable, there can be no assurance that the forward-looking information will prove to be accurate. Forward-looking information involves known and unknown risks, uncertainties, and other factors which may cause the actual results, performance or achievements of the Company to be materially different from any anticipated future results, performance or achievements expressed or implied by such forward-looking information. Such factors include, among others, the actual market price of nickel, the actual results of future

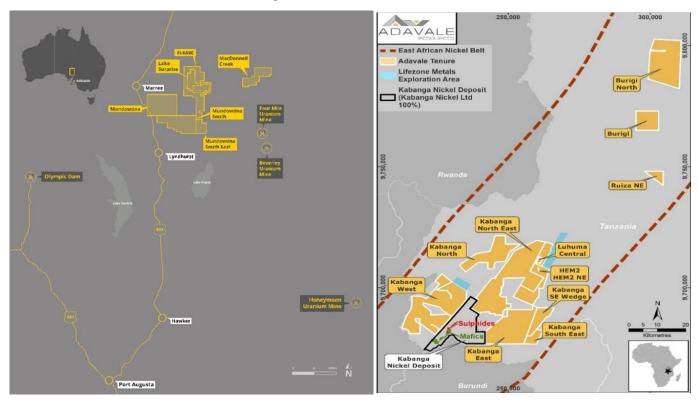


exploration, changes in project parameters as plans continue to be evaluated, as well as those factors disclosed in the Company's publicly filed documents. Readers should not place undue reliance on forward-looking information. The Company does not undertake to update any forward-looking information, except in accordance with applicable securities laws. No representation, warranty or undertaking, express or implied, is given or made by the Company that the occurrence of the events expressed or implied in any forward- looking statements in this document will actually occur.

#### ABOUT ADAVALE – Uranium and Nickel Sulphide Explorer

Adavale Resources Limited (ASX:ADD) holds the Kabanga Jirani Nickel Project, a portfolio of 12 highly prospective granted licences along the Karagwe-Ankolean belt in Tanzania. The 9 southernmost licences are proximal to the world-class Kabanga Nickel Deposit (87.6Mt @ 2.63% Ni Eq). Adavale holds 100% of all licences except 2 licences known as the Luhuma-Farm-in are held 65% adding a further 99km2 bringing the portfolio to 1,315sq km). Adavale's licences were selected based on their strong geochemical and geophysical signatures from the previous exploration undertaken by BHP.

Adavale also holds 5 granted exploration licences prospective for their sedimentary uranium potential within the northern part of the highly prospective Northern outwash from the Flinders Ranges in South Australia. Adavale is in the process of completing the acquisition of exploration licence EL6553 (456km<sup>2</sup>) and EL6890 (599km<sup>2</sup>) to increase Adavale's uranium tenement holdings to 2,657km<sup>2</sup>.





# Appendix 1

# Adavale Resources Limited – Lake Surprise and Mundowdna Projects, South Australia

# JORC Code Edition 2012: Table 1 Section 1: Sampling Techniques and Data

Criteria	JORC Code Explanation	Commentary
Sampling techniques	<ul> <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</li> </ul>	Geochemical Sampling was conducted based on the best methodology for Intertek Genalysis Laboratories TerraLeach method for soil collection. This involved the use of plastic sampling tools, Ziploc bags and the collection of samples between 100 and 300g. Samples were weighed in the field to give 200g as the nominal quantity for analysis. Samples were taken from a depth of 200mm. sample locations were selected based upon geophysical data interpretation and the best fit with anomalies that were seen as palaeochannels.
	<ul> <li>Include reference to modulate 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. 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>	Geophysical sampling was conducted by Daishsat Geodetic Surveyors as a contractor for Adavale Resources. Scintrex CG-5 Autograv gravity meters were used exclusively for the field acquisition. For each gravity observation the CG-5 gravity meter was carefully placed on its tripod and levelled, restricting the vertical and horizontal levels to 5 arc seconds. Once the meter was level, two gravity observations of 20- second stacking time were read and recorded. The instrument was monitored for any seismic or instrumental noise and the X/Y tilts, temperature and tolerance between readings was monitored during the reading by the Surveyor. The tolerance between readings is set at 0.030 of a dial reading and any readings falling outside of this were re-read. Field readings were also manually recorded by the field crews in Daishsat gravity field books along with any observations that may affect the reading. During the day the field crews monitored any internal repeat gravity stations collected for abnormal drift and tares as well as the drift closure at the end of the day. If the meter received a bump or knock the previous station was revisited to detect if a tare had occurred.
Drilling techniques	<ul> <li>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).</li> </ul>	Not relevant to this announcement as no drilling has taken place.
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>	Not relevant to this announcement as no drilling has taken place.
Logging	Whether core and chip samples have been geologically and geotechnically logged to a	Not relevant as drilling did not take place.



Criteria	JORC Code Explanation	Commentary
	level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.	
	<ul> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> </ul>	
	The total length and percentage of the relevant intersections logged.	
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> </ul>	No sub sampling occurred in the field as whole samples were required.
	<ul> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> </ul>	
	<ul> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> </ul>	
	<ul> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> </ul>	
	<ul> <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> </ul>	
	• Whether sample sizes are appropriate to the grain size of the material being sampled.	
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> </ul>	Assays were partial leach of soils as per the TerraLeach process at Intertek Genalysis. There are a number of internal controls that they employ to ensure the sample and analysis quality. There are no standards for the type of analysis
	<ul> <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> </ul>	undertaken, so no standards could be used in the program.
	<ul> <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>	
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	Not applicable as early stages of exploration. Work aimed at identifying broader areas of mineralisation and follow up work will provide a greater level of detail and data validation will occur at the later stages of exploration.
	The use of twinned holes.	
	<ul> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> </ul>	
	Discuss any adjustment to assay data.	



Criteria	JORC Code Explanation	Commentary
Location of data points	<ul> <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>	Handheld GPS using GDA2020 was used by Adavale to locate and record soil sample sites. Differential GPS with RTK was used to locate the gravity surveying equipment.
Data spacing and distribution	<ul> <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>	Samples were collected at 100m intervals along tracks and aim at identifying broad anomalies at surface related to mineralisation at depth.
Orientation of data in relation to geological structure	<ul> <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>	Data was collected along the chosen tracks as they cut across regional structures interpreted to be palaeochannels.
Sample security	The measures taken to ensure sample security.	Samples were placed into bags as lots of 50 and were cable tied shut. This was seen as adequate as no very high grades were expected for this first pass program.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	Not applicable as no audits has been undertaken.



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

Criteria	Explanation	Commentary
Mineral tenement and land tenure status	<ul> <li>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.</li> <li>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.</li> </ul>	The Marree Embayment Project comprises Lake Surprise and Mundowdna, along with the recent acquisition of the ground held by Coast Exploration and Kilonova Metals. Tenement IDs are: EL5892, EL5893, EL6589, EL8621, EL6957, EL6890 and EL6553 The Project are covers 2685km <sup>2</sup> . The tenement package is located in the North-East Pastoral District of South Australia. It is 100% owned and operated by Adavale Resources. The tenement package covers portions of Clayton Station Murnpeowie Station, Farina, Mundowdna, Wilpoorinna and Mount Lyndhurst. Native Title on the licences is held by The Adnyamathanha People and the Dieri People.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	Past exploration work shown in figure 2 is related to rock chips taken by Eromanga Uranium ASX releases included in data that was downloaded from the South Australian Resources Information Geoserver (SARIG) and is freely provided by them as a dataset for companies to use under Creative Commons Licencing.
Geology	Deposit type, geological setting and style of mineralisation.	Not applicable to this announcement.
Drill hole Information	<ul> <li>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:         <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>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.</li> </ul>	Not applicable to this announcement.
Data aggregation methods	<ul> <li>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.</li> <li>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.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly</li> </ul>	Not applicable to this announcement.



Criteria	Explanation	Commentary
	stated.	
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>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').</li> </ul>	Not applicable to this announcement.
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 provided do not contain any drilling. Maps show interpretation from publicly available data and from data acquired during recent exploration programs – gravity and geochemistry (Pb/U ratios).
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.	A summary of the locations and values for the geochemistry is provided on the maps. Additional work is required on the geochemistry ratios to determine how useful the techniques used will be.
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.	Gravity data is summarised as the full results are extensive. The data tables show the same results presented in the summary maps, with a trending increase from SW to NE in the Bouguer Anomaly.
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	The next phases of work will involve planning and execution of drilling on the depocenter, based on the information presented within this announcement.