ASX Announcement
14 April 2022

# MINJINGU URANIUM EXPLORATION PROGRESS

## HIGHLIGHTS

- **Maiden drilling results at Minjingu Project confirm a thick uranium mineralised layer**
- **Extensive radiometric anomaly at Minjingu ground-truthed by pitting program to guide new drill targeting**
- **Updated Mineral Resource Estimate (MRE) at flagship Mkuju Uranium Project imminent**

Gladiator Resources Ltd (ASX: GLA) (**Gladiator** or the **Company**) is pleased to provide the following update for activities undertaken by its wholly owned subsidiary (subject to final regulatory approvals) Zeus Resources (T) Limited (**Zeus**) at its Minjingu and Mukuju Uranium Projects located in Tanzania.

**Gladiator Resources Chairman Ian Hastings commented:**

*"Gladiator is pleased to announce uranium mineralisation in the first drillholes at Minjingu – whilst low grade, the results confirm presence of thick beds with uranium mineralisation. The next steps will aim to identify areas with higher grades. In the meantime, the updated JORC2012 Mineral Resource Estimate for the Likuyu North deposit at the Mkuju Project is almost complete and is expected to be released shortly."*

**Maiden Drilling at Minjingu Project– (Uranium, Phosphate) 100% Gladiator**

The Minjingu Uranium and Phosphate Project covers a total area of 296.9km$^2$ and is located in Northern Tanzania, 106km southwest of Arusha the main administrative city in the area and 520km northwest of Dar es Salaam. The Minjingu Project area possesses solid infrastructure such as quality tarmac roads, power lines, airport services via both Arusha and Kilimanjaro International airports and ample water resources. The project offers good year-round access offering the Company an opportunity to continue exploration during the wet season when its other projects cannot be accessed.

As previously announced (*ASX:GLA 4 March 2022*) two priority drill holes were completed at Minjingu by Zeus with samples dispatched to ALS Johannesburg for analysis. These maiden initial holes (21MJRC001 and 21MJRC002) returned a low grade but with a thick layer with uranium mineralisation (Table 1). 21MJRC001 south of the phosphate mine (Fig. 1) intersected a 15m thick interval including 4m with an average grade of 122ppm $U_3O_8$. Hole 21MJRC002 intersected 6m with an average grade of 91ppm $U_3O_8$ and ended in this mineralisation. These holes were drilled to 'twin' historic holes drilled by Montero Mining and Exploration Ltd (Montero) in 2007.

In addition, a total of 50 exploration pits have been completed to target a possible continuation of the uranium mineralisation reported by previous explorers at the Minjingu phosphate mine immediately to the south. The pits have defined an anomalous area of approximately 600 by 300 metres (Fig. 1).

The next step is to now complete the pitting program and to receive assay results for these and from samples taken in the nearby phosphate mine so that the onward program can be designed accordingly. The Company believes that there is potential for intervals with higher grade zones hosted by the extensive phosphate layers at Minjingu and will continue to progress the exploration program.

*Table 1 - Results of the maiden drillholes at Minjingu*

| BHID | From (m) | To (m) | Interval (m) | Grade (U3O8 ppm) |
|---|---|---|---|---|
| 21MJRC001 | 62 | 77 | 15 | 94 |
| includes | 73 | 77 | 4 | 122 |
| 21MJRC002 | 65 | 71* | 6 | 91 |

**Hole ended at 71 metres*

*Table 2 - Position of the Company's drillholes at Minjingu. All holes are vertical.*

| | East | North | Elevation (m) | Hole depth (m) |
|---|---|---|---|---|
| 21MJRC001 | 0823392 | 9589326 | ~1000 | 93 |
| 21MJRC002 | 0822998 | 9589328 | ~1000 | 71 |

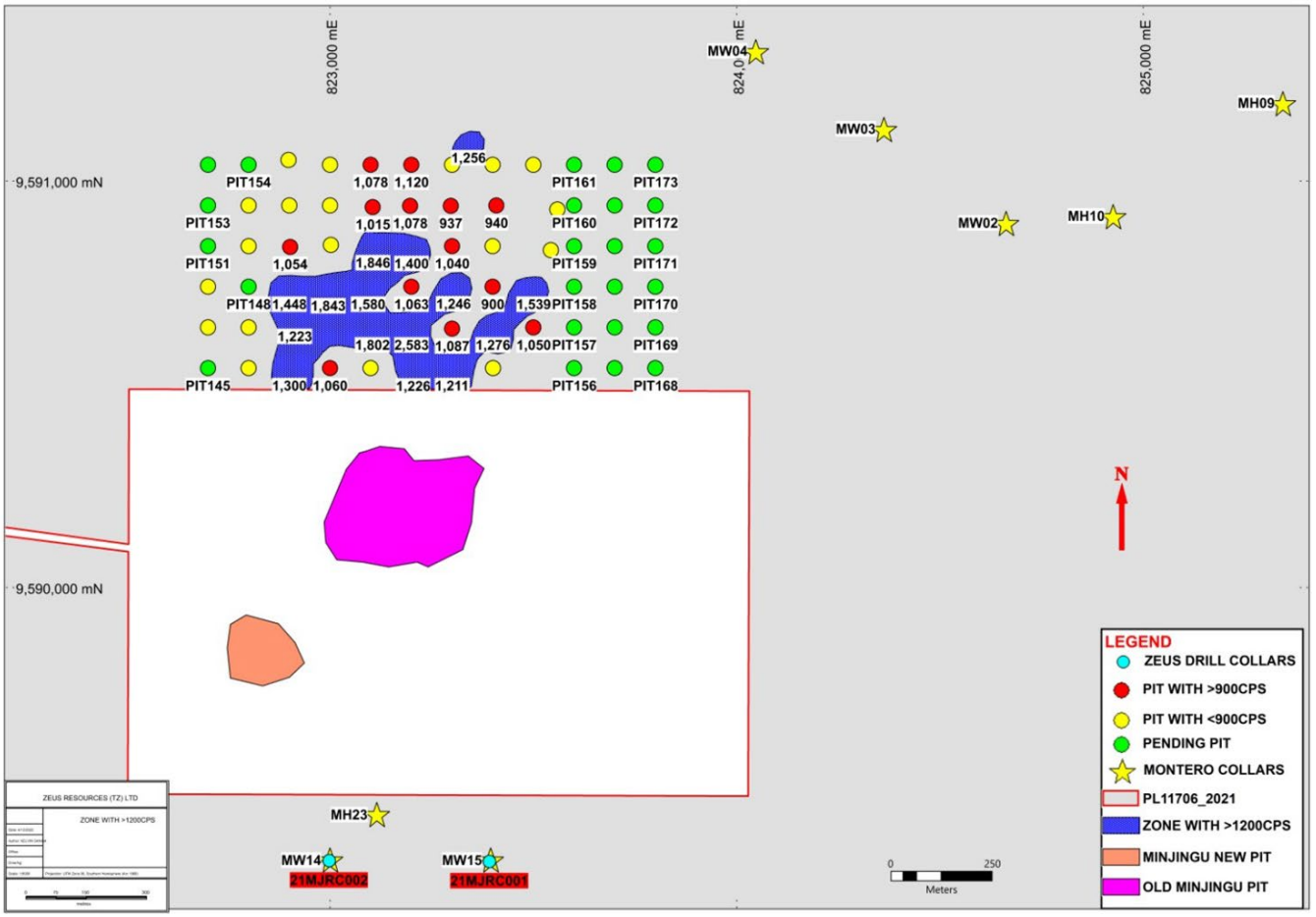


*Figure 1 - Map showing the position of the historic and recent drilling and the exploration pits. The area within the red box (PL11706_2021) is the Minjingu Phosphate mine lease. The two new holes are those highlighted red south of the mine lease.*

**Updated Mineral Resource Estimate (MRE) at Mkuju uranium Project**

The MSA Group of South Africa is close to completing the review and update to the previous MRE for the Likuyu North deposit on the Mkuju Project. The previous estimate was reported under JORC 2004. The update will report the MRE in accordance with JORC 2012. Likuyu North is one of several targets on the 679 $km^2$ Mkuju Project and the Company aims to expand it and define additional deposits as part of its exploration program that will commence during the dry season beginning in May. The world class Nyota deposit belonging to Uranium One is 35km to north – Nyota is within similar rocks as Likuyu North and hosts a Measured and Indicated Mineral Resource of 124 Mlbs of $U_3O_8$ highlighting the potential of the region.

**-ENDS-**

Released with the authority of the Board.

For further information please visit: **www.gladiatorresources.net**

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**Competent Person's Statement**

Information in this "ASX Announcement" relating to Exploration Targets, Exploration Results and Mineral Resources has been compiled by Mr Andrew Pedley who is a member in good standing with the South African Council for Natural Scientific Professions (SACNASP). Mr Pedley is an Associate with the MSA Group of Johannesburg who are providing consulting services to Gladiator Resources Ltd. Mr Pedley has sufficient experience that is relevant to the types of deposits being explored for and qualifies as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" (JORC Code 2012 Edition). Mr Pedley consents to the inclusion in this document of the matters based on the information in the form and context in which it appears. Mr Pedley does not hold any securities in the company, either directly or indirectly.

**About Gladiator Resources**

Gladiator is an ASX listed (ASX: GLA) exploration and mining company with a focus on gold and uranium.

The Company was granted seven exploration licenses covering over 1,764km$^2$ of highly prospective exploration tenements located in Tanzania, East Africa.

Gladiator also has three gold projects in Australia including Marymia located in Western Australia and Rutherglen and Bendoc which are each located in Victoria.

All the Company's projects are located in areas that have experienced significant exploration attention and investment whilst also recording highly encouraging results. Victoria, in particular, is currently experiencing a revival in exploration and production which is attracting significant investment attention both domestically and abroad. The Company's primary focus is to advance its current portfolio of projects whilst also evaluating other opportunities that are complimentary.

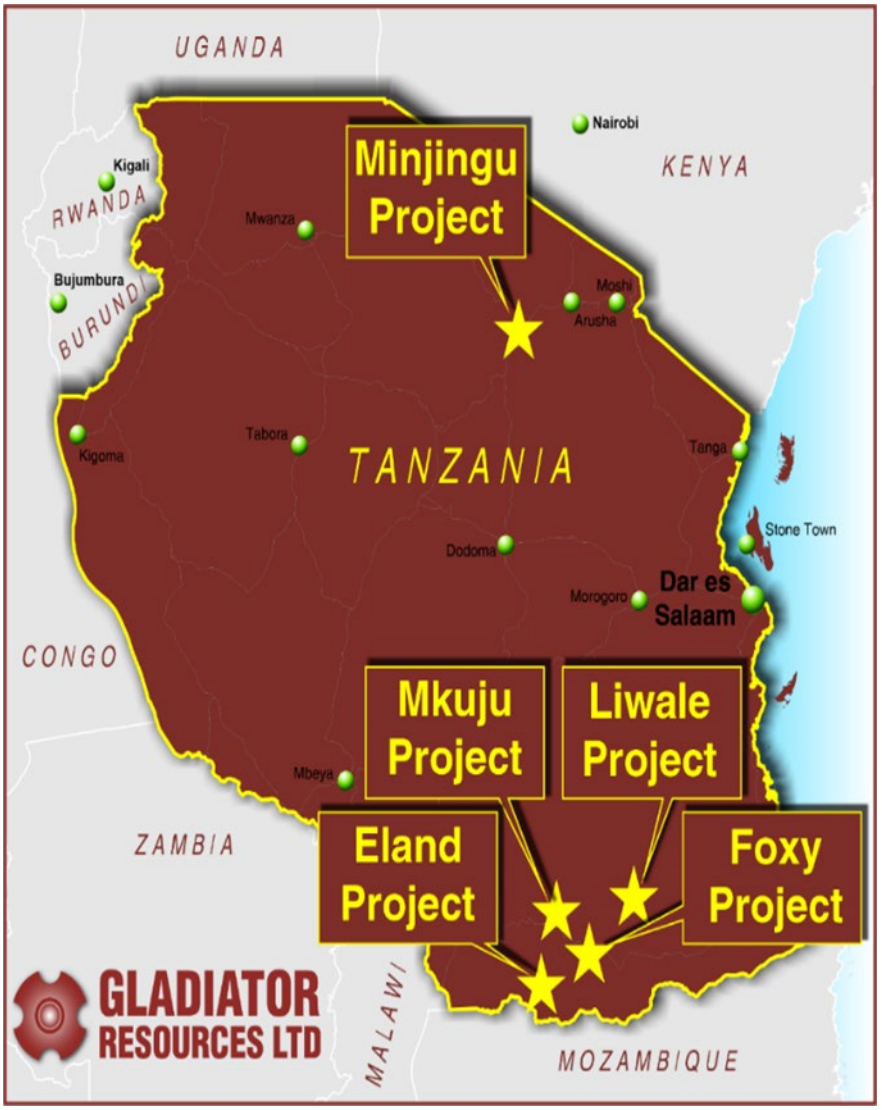


*Figure 2 - Gladiator Project locations in Tanzania*

# 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 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.*<br>• *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*<br>• *Aspects of the determination of mineralisation that are Material to the Public Report.*<br>• *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.* | <u>Current Zeus drill program</u><br>• Drill holes were sampled at geological intervals of 1 metre.<br>• To minimize sample contamination, the Cyclone was cleaned at regular intervals i.e. after every 10m and, before commencing a new hole.<br>• Drill cuttings are preserved for future assay as required. Samples were collected from the sample bags after they had been transported from the drill site to the base camp at Makuyuni. They were marked up and recovery recorded.<br>• Sample quality was checked by the supervising rig geologist.<br>• All samples were submitted to internationally accredited SGS Laboratories both in Mwanza, Tanzania (sample preparation) and then to ALS Laboratories in Johannesburg (analysis) for multi element elements by pressed pellet XRF (XRF75G). Both the SGS and ALS laboratories are ISO/IEC 17025:2005 certified.<br><u>Relating to the exploration pits</u><br>• The exploration pits were dug by hand to depths of up to 2 metres to attempt to expose the sedimentary rocks of the Manyara Formation.<br>• No physical samples were collected. The data is geophysical, collected using a handheld device to measure radiation, quantified in counts per second (cps). |
| *Drilling techniques* | • *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diametre, 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).* | • The current drilling (two holes) was by a combination of Reverse Circulation (RC) and Aircore drilling.<br>• All Drilling was vertical<br>• The drillholes were not oriented for structural data collection.<br>• Hole 21MJRC001 was drilled by RC from start to end. 21MJRC002 was drilled by RC from surface to 38m and thereafter the hole was completed by aircore. The change to aircore was due to water and clay which caused difficult to proceed with RC.<br>• Both drill holes were drilled and sampled for 20m and later were widened by reaming to 152.5mm for downhole PVC installations |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| *Drill sample recovery* | • *Method of recording and assessing core and chip sample recoveries and results assessed.*<br>• *Measures taken to maximise sample recovery and ensure representative nature of the samples.*<br>• *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.* | • Each of the drill samples were collected at the end of each metre drilled and weighed. Based on an expected weight per metre a recovery % was calculated based on a maximum weight of 21 kgs per metre.<br>• Recovery for the two mineralised intervals was 58 and 68% for 21MJRC001 and 21MJRC002 respectively. This is lower than generally accepted industry standard of 80%. |
| *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.*<br>• *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.*<br>• *The total length and percentage of the relevant intersections logged.* | • All the boreholes drilled were logged and sampled by the supervising rig geologists.<br>• All the logged information which includes depth, lithology, mineral assemblage, U mineralization, collar survey and geologist are recorded in a strip-log which is generated from the field logging sheets |
| *Sub-sampling techniques and sample preparation* | • *If core, whether cut or sawn and whether quarter, half or all core taken.*<br>• *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.*<br>• *For all sample types, the nature, quality and appropriateness of the sample preparation technique.*<br>• *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.*<br>• *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.*<br>• *Whether sample sizes are appropriate to the grain size of the material being sampled.* | • A 1 metre composite sample collected from the cyclone was weighed to determine the sample recovery then the sample was split by a three-tier riffle splitter where 1/8 of the total recovery was collected for shipment to the laboratories for analysis. These sub-samples were between 2.5 and 3 kg and is considered representative for Analytical requirements.<br>• QAC samples were inserted at a rate of 4.5% (all types) less than the industry best practice. These included Certified Reference Material (CRM) and duplicates. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| *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.*<br>• *For geophysical tools, spectrometres, handheld XRF instruments, etc, the parametres used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.*<br>• *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.* | • The QAQC data was reviewed by the Company and the Competent Person. Slight underreporting of the CRMs was noted.<br>• A Spectrometer was used to record radiation (counts per second) of each 1 metre sample before splitting to provide a comparison with assay data. |
| *Verification of sampling and assaying* | • *The verification of significant intersections by either independent or alternative company personnel.*<br>• *The use of twinned holes.*<br>• *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.*<br>• *Discuss any adjustment to assay data.* | • The recent Zeus holes were drilled in an attempt to verify/test the historic results by twinning those holes but were unsuccessful in doing so.<br>• There is no database for the historic data, just 1-2 lines of text with the grade (U3O8 ppm) over a thickness and a start depth.<br>• The current Zeus data is stored in Excel sheets. Lab results as pdfs. Uranium measured as U was converted to U3O8 by multiplying by 1.1792 |
| *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.*<br>• *Specification of the grid system used.*<br>• *Quality and adequacy of topographic control.* | • The two drillholes were positioned with a handheld Garmin GPS64sx in UTM Arc1960 projection/datum Zone 36_S. |
| *Data spacing and distribution* | • *Data spacing for reporting of Exploration Results.*<br>• *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.*<br>• *Whether sample compositing has been applied.* | • The two drill holes are spaced 400m apart in an east-west direction and were positioned so as to twin the historic Montero holes MW14 and MW15 that reported interesting u mineralisation.<br>• There are insufficient holes to demonstrate continuity of grade or geology.<br>• No sample composites were applied. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| *Orientation of data in relation to geological structure* | • *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.*<br>• *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.* | • The stratigraphy of the area has a low angle of dip and the uranium mineralization is thought to be controlled by this layering and so the intersected thickness is considered to be the true thickness or very close to it. |
| *Sample security* | • *The measures taken to ensure sample security.* | • All drilling samples were sent to the (SGS Mwanza - Tanzania) under full security and "Chain of Custody" procedures by the Company. This is done by the following procedures:<br>Drill chips produced at the rig are logged, processed, then transported to the Company's long-term chips/core storage facility under the direct supervision of a Company representative where it is securely locked.<br>• Each 1 metre composite sample (1/8 of the recovery) is sent to the SGS lab for preparation. Bagged samples are secured by tags and delivered by a Company representative to SGS Mwanza (sample preparation laboratory).<br>• The preparation laboratory, (SGS Mwanza) then forwarded the SAMPLE pulps directly to the assay laboratory, ALS laboratory in Johannesburg South Africa for analysis via a door-to-door courier service (DHL). |
| *Audits or reviews* | • *The results of any audits or reviews of sampling techniques and data.* | • There has been no independent physical review or audit of the sampling methodology of Montero or Zeus. |

## 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.*<br>• *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.* | • All results were undertaken on PL 11706 (Minjingu Project) which is held by Zeus Resources (Tanzania) Limited (100%).<br>• There are no other known impediments pertaining to operating in the current license. |
| *Exploration done by other parties* | • *Acknowledgment and appraisal of exploration by other parties.* | • The Minjingu phosphate deposit was discovered by New Consolidated Goldfields Ltd (NCG) in 1956 who explored Minjingu for Phosphate. Japan Consulting Institute and Geomin, carried out further studies in 1970 and in the same year Kloeckner Industrieanlagen carried out a feasibility study on the phosphate deposit. The phosphate mine was ultimately operated by the state until 1989-1990.<br>• During the period 1978 to 1981, Uranerzbergbau GMBH carried out ground examination of about 110 radiometric anomalies identified by the airborne survey (Bianconi, 1987) in joint venture with the Tanzanian government and the United Nations as part of a uranium evaluation program. The work resulted in the identification of many uranium occurrences and prospects throughout Tanzania, including the identification of anomalous uranium values in the Minjingu phosphate deposit ranging from 11 to 849 ppm $U_3O_8$ (Bianconi, et al, 1978; Ingovatov, et al, 1982). Uranerzbergbau carried out reconnaissance mapping, ground radiometrics, ground magnetics, ground electromagnetics, with limited auger drilling<br>• In 2005 Tanganyika Uranium Corp and later, East African Resources (2010) have also conducted uranium exploration in the PL11706 licence area.<br>• In 2007 Montero Mining and Exploration Ltd completed a program of pitting, trenching, hand-aguering, and drilling. They drilled 18 holes between 5 and 79 m in depth using a RAB rig, sampling at the end of each run. Due to the poor sample reliability of RAB samples and that they sampled at the end of each run the Montero drill results cannot be considered reliable. The maximum assay value was 1627 ppm U308 in hole |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | | MW15 from 36 to 37 metres. |
| *Geology* | • *Deposit type, geological setting, and style of mineralisation.* | • The regional geology of the area is dominated by the East African Rift Valley (EAR), which extends approximately 5000km from the from the junction of the Red Sea and Gulf of Aden to Mozambique.<br>• The Minjingu phosphate mine is within flat lying well bedded sediments of fluvial and lacustrine origin, being claystones, sandstones and phosphatic beds undifferentiated Neogene aged lake beds from the Lake Manyara Formation. These are very poorly exposed at surface.<br>• The mineralisation appears to be associated with thick phosphate layers dipping gently away from a central topographic high where the basement rocks are thought to have formed an island within the lake. Phosphate beds may be better developed on the flanks of this island wedging out laterally. Uranerzbergbau considered the phosphate to be of the guano type, formed by the accumulation and re-working of mostly bird guano during the Neogene. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| *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:*<br>○ *easting and northing of the drill hole collar*<br>○ *elevation or RL (Reduced Level – elevation above sea level in meters) of the drill hole collar*<br>○ *dip and azimuth of the hole*<br>○ *down hole length and interception depth*<br>○ *hole length.*<br>• *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.* | • Table 2 in the announcement provides the drill-hole position of the Zeus holes. All holes were drilled vertically. |
| *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.*<br>• *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.*<br>• *The assumptions used for any reporting of metal equivalent values should be clearly stated.* | • No data aggregation methods were applied. |
| *Relationship between mineralisation widths and intercept lengths* | • *These relationships are particularly important in the reporting of Exploration Results.*<br>• *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.*<br>• *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').* | • The stratigraphy of the area has a low angle of dip and the uranium mineralization is though to be controlled by this layering and so the intersected thickness is considered to be the true thickness or very close to it. |
| *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.* | • A map is provided in the announcement |
| *Balanced reporting* | • *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading* | • The reporting is considered balanced. All drillholes have been reported. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | *reporting of Exploration Results.* | |
| *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.* | • There is no other substantive exploration data to report |
| *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).*<br>• *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.* | • The pitting program will be completed and these results along with ongoing interpretation of the drilling data and historical reports will be used to plan additional drilling. |