ARK MINES LTD.

ASX ANNOUNCEMENT

28 April 2023

ASX: AHK

Directors

Executive Chairman
Roger Jackson

Executive Director
Ben Emery

Non-Executive Director
Ian Mitchell

Projects

- Gunnawarra
  Nickel-Cobalt
- Mt Jesse
  Iron - Copper
- Sandy Mitchell
  Rare Earths
- Pluton
  Gold

Contact Details

T: +61 82 80660601
E: info@arkmines.com.au
W: www.arkmines.com.au
Suite 9.04a, Level 9, MLC Centre, 19-29 Martin Place, SYDNEY NSW 2000

QUARTERLY ACTIVITIES REPORT FOR THE PERIOD ENDED 31 MARCH 2023

HIGHLIGHTS FOR QUARTER

- **Ark acquired an advanced Rare Earths and heavy Minerals Project in North Queensland. Sandy Mitchell 147km^2 EPM 28013**
- **Very high historical TREO grades* including high grade pan concentrates of:**
  - **18.4% TREO**
  - **17.4% TREO**
  - **15.8% TREO**
  - **15.3% TREO**
  - **12.3% TREO**
  - **9.4% TREO**
  - **4.7% TREO**
  - **3.3% TREO**

  **Historical data, Not to JORC 2012 code standards*
  ** Refer to AHK ASX announcement 1st of March 2023*
- **Extensive historical work undertaken by Jogmec in 2010 including particle mineral analysis conducted, as well as pan concentrates and over ~100 augur drill holes completed by other parties**
- **Project contains all critical Light Rare Earths as well as Heavy Rare Earths including dysprosium (Dy), terbium (Tb), holmium (Ho), erbium (Er), thulium (Tm) ytterbium (Yb), yttrium (Y) and excluding only Lutetium**
- **Rare Earths at *'Sandy Mitchell'* are amenable to panning a concentrate (Appendix B); Planned low-cost, fast start up, straightforward beneficiation by gravity processing**
- **Metallurgical reports confirm significant levels of neodymium-praseodymium (NdPr) with NdPr ratios recorded of up to 25% as a percentage of Total Rare Earth Oxides**
- **Very high historical TREO grades* including high grade pan concentrates of magnet metals and NdPr ratios of:**

Sample number	TREO	NdPr Ratio as % of TREO
451	18.4%	24.6%
450	17.4%	24.5%
452	15.8%	24.2%
430	15.3%	25.0%
452A2	12.3%	23.7%

**Historical data, Not to JORC 2012 code standards; refer to Appendix C for sample locations*
** Refer to AHK announcement 1st March 2023*

- **As well as the Rare Earths there are robust commercial grades of Heavy Minerals measured, including 13.46% Titanium (Ilmenite/Rutile) and 8.15% Zircon, which broaden Sandy Mitchell's commercial appeal.**

  **Refer to AHK announcement 28th March 2023*

- **The dominant minerals in the panned concentrate samples are zircon, ilmenite, monazite and Fe-rich chlorite, providing for simple mineralogy that can be separated in situ at a low cost.**
- **The Company secured attractive acquisition terms to acquire 100% of the project for A$200,000 cash. Ark was able to secure the project due to the vendor having limited interest in undertaking follow-up exploration and further developing the asset.**
- **Forward works program includes:**
  - ✓ **Drilling to commence in May 2023**
  - ✓ **Compile and review of extensive historical data including drilling data and pan concentrates to rapidly define a Historical Mineral Resource Estimate (MRE) under the 2012 JORC code**
  - ✓ **Application for Mining Licence**

GUNNAWARRA Ni Co

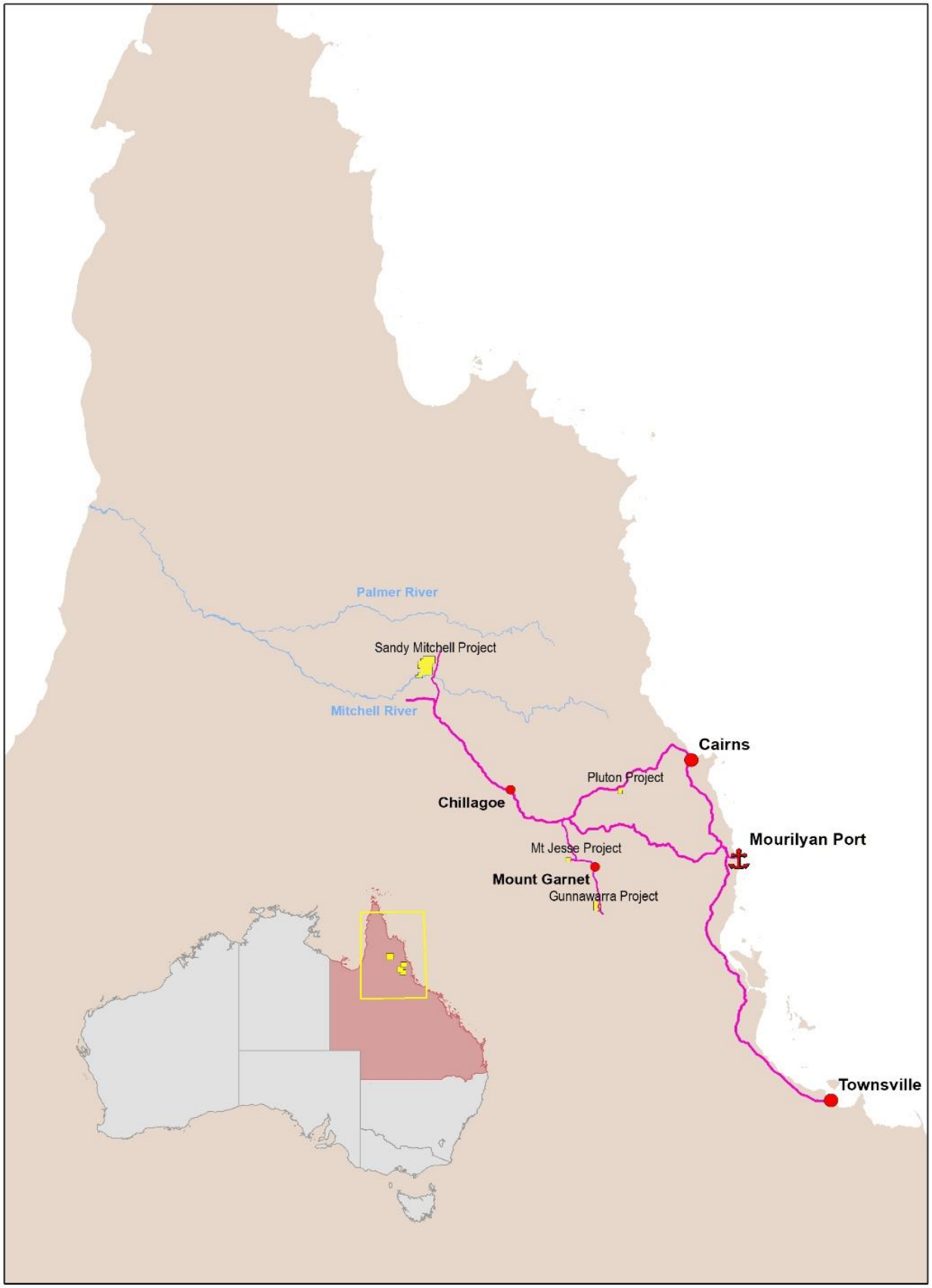
- **Maiden JORC (2012) Edition compliant inferred mineral resource estimate has been completed for the Gunnawarra Nickel-Cobalt Project**
- **The mineral resource estimate totalling 1.341 million tonnes at .53% Ni, 602,000 tonnes Cobalt at .066% and 191,500 tonnes of copper at .054% at a .4% Ni cut off was completed by Hawker geological consultants.**
- **Ark is also well-advanced with beneficiation test work which is also key to fast-tracking the project's commercialisation.**
- **Majority of high-grade intersections are shallow with little to no overburden – provides clear pathway for fast-tracked project development.**
- **Deposit remains open in numerous directions – further drilling is planned in early 2023**

Ark is focused on developing and commercializing a DSO REE HM and Ni Co product in North Queensland

REPORT FOR QUARTER

Queensland-focused exploration and project development company **Ark Mines Limited (ASX: AHK) ('Ark' 'the Company')** is pleased to provide this Quarterly Activities Report for the period ended 31 March 2023 (the 'quarter').

Figure 1: Location of Ark Tenements.



Sandy Mitchell

Location and Access

Sandy Mitchell is located 305 km north-west of Cairns and 119 km north north-west of Chillagoe in Far North Queensland. The EPM is one of several tenements which form the Mulgrave Project. Access to the tenement is via Dimbulah to Chillagoe, then along the Burke Developmental Road to the Mount Mulgrave turnoff, proceeding north to that property. Access to the tenement is then via station tracks and cleared fence lines.

Geology and Mineralisation

The tenement sits below the southern extent of the Yambo Inlier, one of the several Proterozoic inliers to the west of the Palmerville Fault System. Rocks of the Yambo Inlier covered by the tenement comprise those of the middle Proterozoic Yambo Metamorphic Group of mainly amphibolites and gneisses ranging in age from ~1690 Ma to ~1585 Ma. These rocks have been intruded by Silurian-Devonian granites of the Lukinville Suite which form an integral part of the Cape York Batholith. Within the tenement they form a belt roughly 10 km wide trending NNW.

Prospecting and exploration by various companies from the 1980's onwards and more recent follow-up prospecting have shown that most of the paleo stream systems within the Mulgrave tenement contain concentrations of rare earth minerals. These minerals have been derived from the now denuded remnant Jurassic-Cretaceous sandstone-pebble conglomerates and quartz sandstones, with the greater volumes being associated with the breakdown of the Mesoproterozoic basement rocks. Isolated areas of high garnet concentrations are derived from irregular zones of highly garnetiferous dolerites and schists.

Metallurgy

JOGMEC undertook a sampling and mineralogical investigation of a mineral sand sample using QEMSCAN particle mineral analysis methods which shows the project will be simply beneficiated by gravity processes. The samples were taken as a bulk sample and then panned.

Next Steps for Sandy Mitchell

Ark has planned an infill air core drilling program and is aiming to commence in May. As well, the Company will undertake its own metallurgical test work and gravity separation testing to confirm that Sandy Mitchell's material is amenable to panning a concentrate and a commercial low-cost, fast start up gravity separation processing operation can be developed.

Gunnawarra

Mineral Resource Estimate

The timely completion of this drilling campaign has allowed the expedited delivery of a total JORC (2012) Mineral Resource Estimate at Gunnawarra of 1.341 million tonnes at .53% Ni, 602,000 tonnes Cobalt at .066% and 191,500 tonnes of copper at .054% at a .1% Ni cut off (see below Table 1).

The mineral resource estimate was carried out by Hawker geological Consultants an independent consultant to the Company.

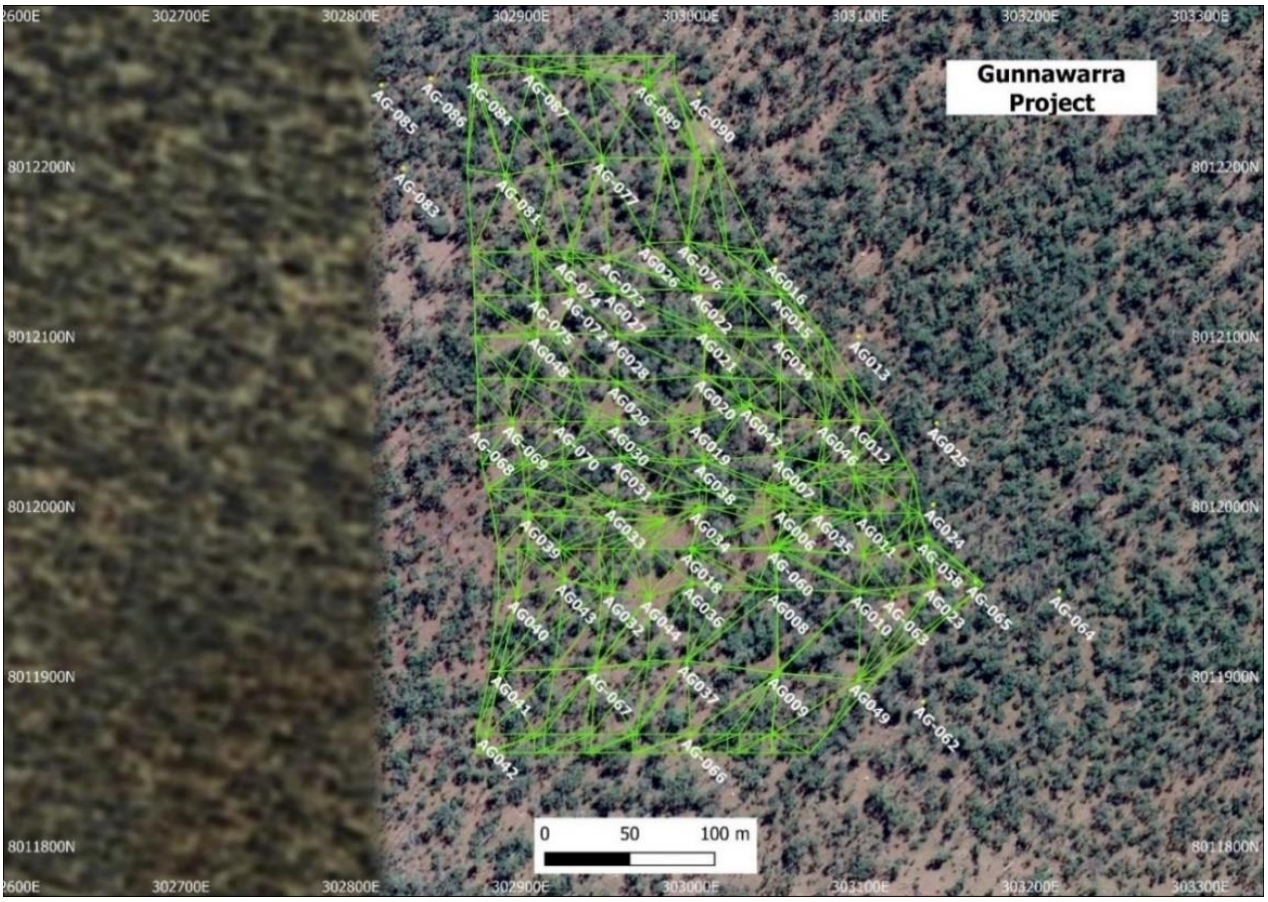
Across both Phase 1 and Phase 2 drilling programs (refer to figure 2), Ark completed a total of 2,844m of Reverse Circulation drilling at Gunnawarra and drilling will remain ongoing (weather permitting) into 2023 with a significant number of untested drill targets still remaining at the project.

Table 1: Gunnawarra Inferred JORC 2012 Resource

Metal	Tonnes	Grade ppm	Tonnes Metal
Nickel	1,341,000	5350	7,200
Cobalt	602,000	660	400
Copper	191,500	540	100

Cut-off grade 1000 ppm Ni

Figure 2: Drill hole collar plan with interpretation wireframe. This shows the hole numbers and locations. The wirelines link the resource material together.



Geology and Geological Interpretations

The Gunnawarra nickel-cobalt laterite deposits have formed on ultramafic rocks that include serpentinites, meta gabbros and pyroxenites. These occur as fragments of lower crust material rich in iron, magnesium and nickel and are thought to be emplaced by shears and faults. This tectonic activity brings the ultramafic fragments into the Proterozoic Shield and the Tasman Orogenic Belt, comprising Proterozoic meta sedimentary schists and meta-gabbros, Ordovician volcanogenic sediments and granitoids, and Devonian limestone overlain by Neogene basalt.

The Gunnawarra laterites, commonly occurring as plateaus of high ground, and were formed by a period of prolonged weathering that postdates the Cretaceous era. The nature of the laterites depends on the underlying lithology and always overly strongly weathered rocks. The Pod laterite does not sit on the high ground. It sits level with the ground.

Mineral Resource Statement

The resource estimates are classified in accordance with the Australasian Code for Reporting of Identified Mineral Resources and Ore Reserves (JORC, 2012). The Gunnawarra estimate was completed by Andrew Hawker of HGS Australia. Mr Hawker 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 Hawker consents to the inclusion in the reportof the matters based on his information in the form and context in which it appears. The resource is classified as Inferred. The classification was considered appropriate based on drill hole spacing, sample intervals, geological interpretation and representativeness of all available assay and density data. The classification reflects the low confidence in short range grade estimations in the model. The resource is based on the interpolated block Gunnawarra_model_dec2022.mdl

Figure 3: Gunnawarra Nickel Laterite Section 8012050 mN.

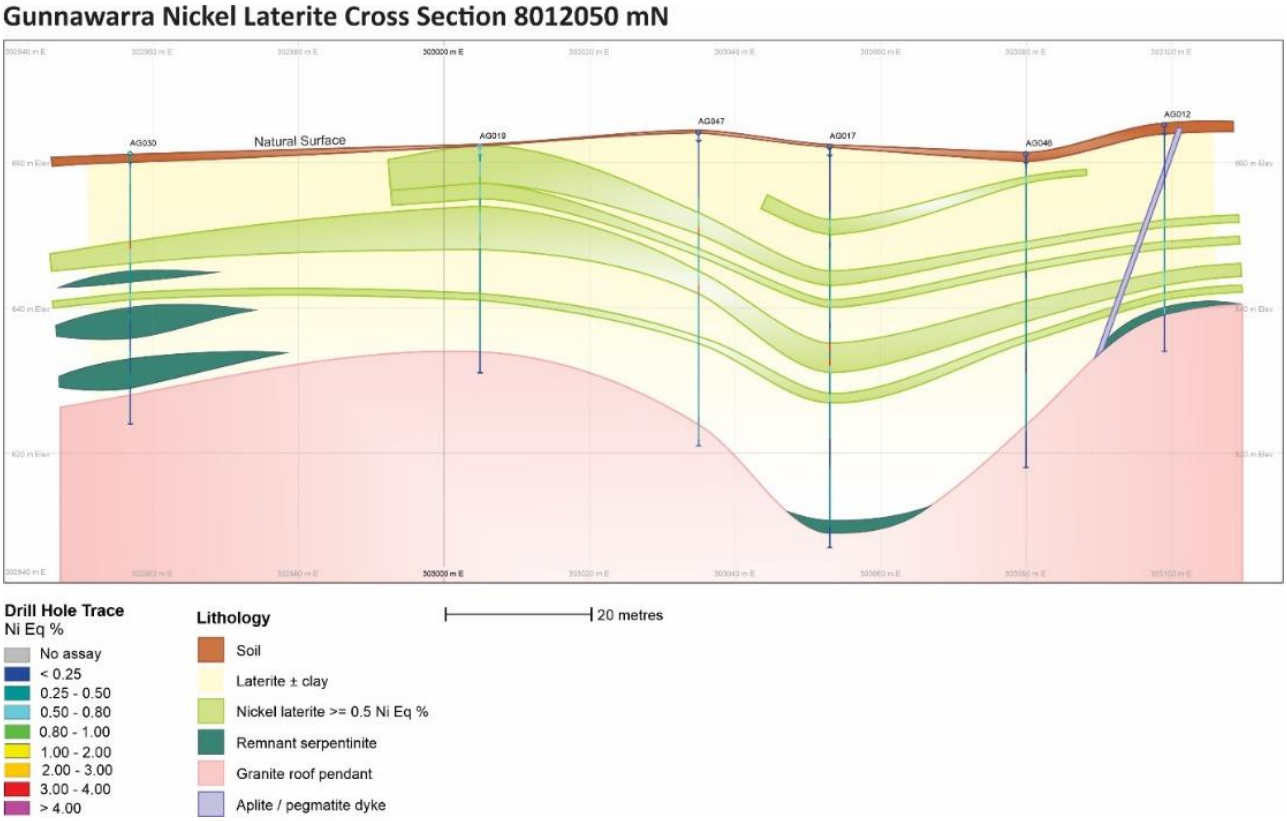


Figure 4: Gunnawarra Nickel Laterite Cross Section 8012000 mN.

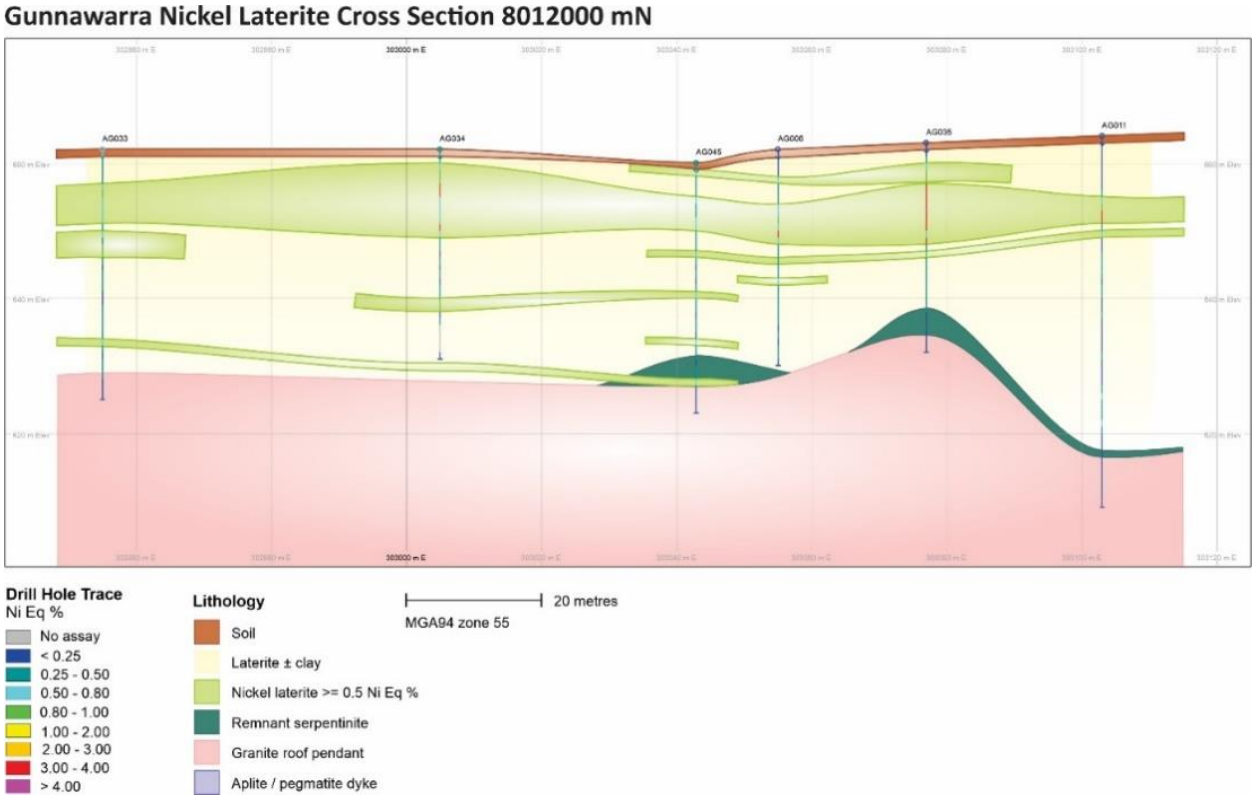


Figure 5: Gunnawarra Nickel Laterite Cross Section 8012100 mN.

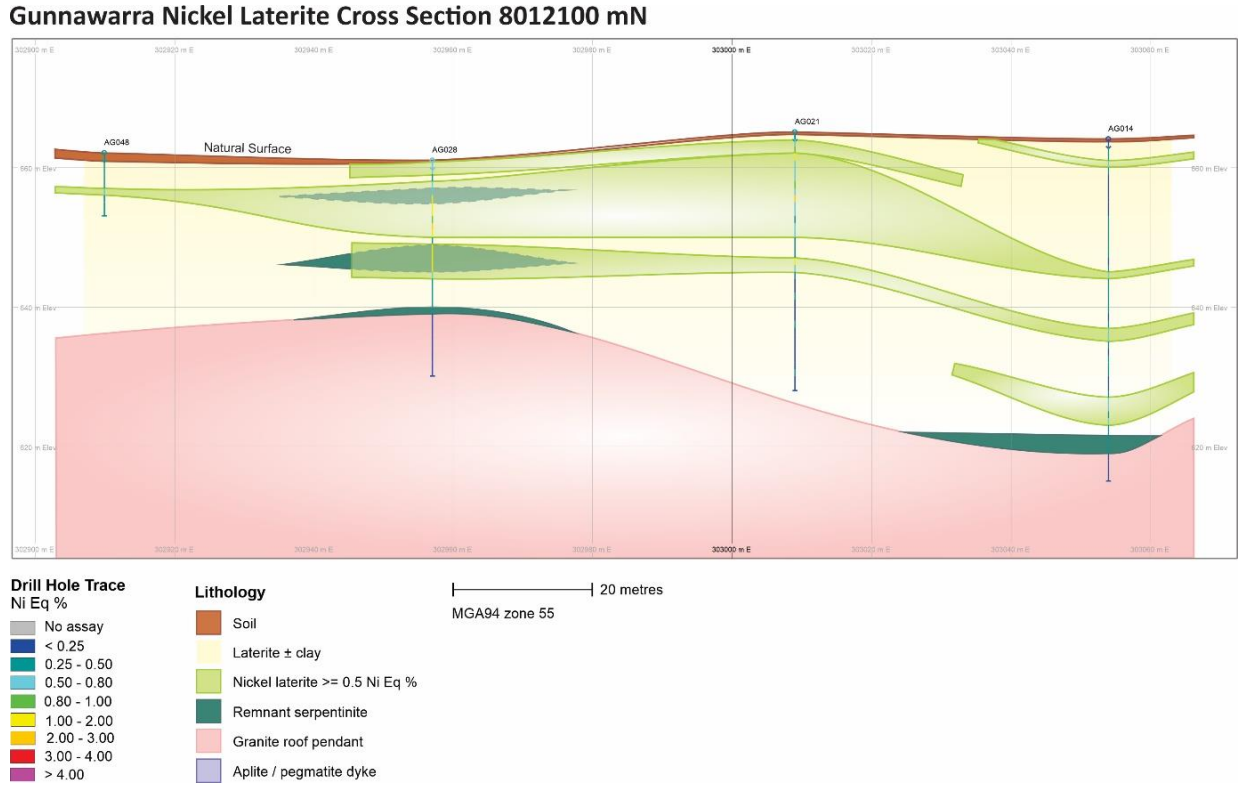


Figure 6 Gunnawarra Nickel Laterite Long Section 303000 mE.

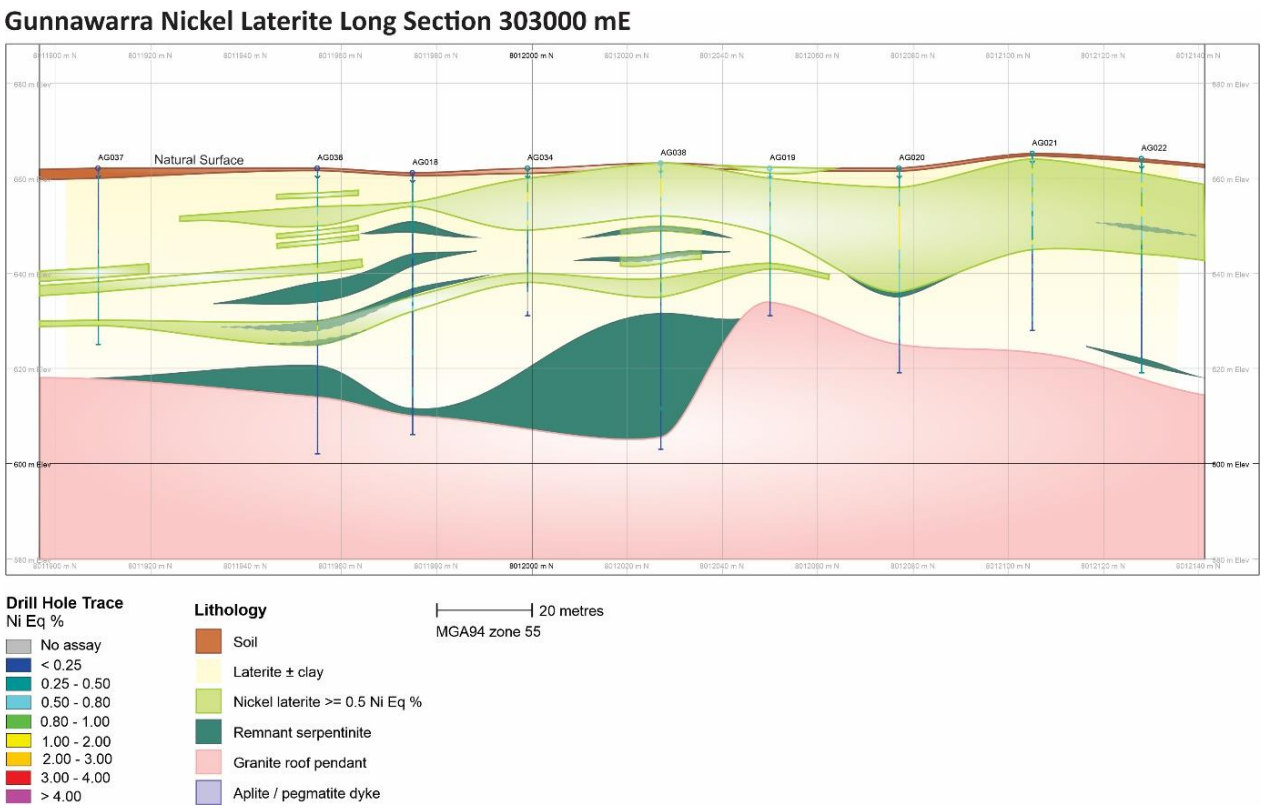


Table 2: Drill Hole Collar Locations for phase 1 drilling.

Collar	Easting	Northing	Zone	GPS RL	Dip	Azimuth
AG006	303055	8012000	55K	662	90	0
AG007	303054	8012030	55K	662	90	0
AG008	303051	8011951	55K	662	90	0
AG009	303051	8011902	55K	662	90	0
AG010	303100	8011950	55K	663	90	0
AG011	303103	8011996	55K	664	90	0
AG012	303099	8012051	55K	665	90	0
AG013	303099	8012100	55K	664	90	0
AG014	303054	8012100	55K	664	90	0
AG015	303053	8012125	55K	662	90	0
AG016	303050	8012145	55K	662	90	0
AG017	303053	8012052	55K	662	90	0
AG018	303000	8011975	55K	661	90	0
AG019	303005	8012050	55K	662	90	0
AG020	303008	8012077	55K	662	90	0
AG021	303009	8012105	55K	665	90	0
AG022	303006	8012128	55K	664	90	0
AG023	303143	8011954	55K	664	90	0
AG024	303143	8012001	55K	664	90	0
AG025	303145	8012049	55K	665	90	0
AG026	302975	8012155	55K	661	90	0
AG027	302955	8012127	55K	661	90	0
AG028	302957	8012101	55K	661	90	0
AG029	302957	8012073	55K	661	90	0
AG030	302957	8012050	55K	661	90	0
AG031	302959	8012029	55K	659	90	0
AG032	302954	8011950	55K	661	90	0
AG034	303005	8011999	55K	631	90	0
AG035	303077	8011998	55K	630	90	0
AG036	303001	8011955	55K	630	90	0
AG037	302998	8011909	55K	630	90	0
AG038	303008	8012027	55K	630	90	0
AG039	302905	8011995	55K	628	90	0
AG040	302898	8011937	55K	628	90	0
AG041	302888	8011903	55K	621	90	0
AG042	302880	8011866	55K	622	90	0
AG043	302926	8011957	55K	645	90	0
AG044	302976	8011947	55K	655	90	0
AG045	303043	8011991	55K	620	90	0
AG046	303080	8012050	55K	635	90	0
AG047	303021	8012047	55K	645	90	0
AG048	302910	8012102	55K	649	90	0
AG049	303099	8011898	55K	607	90	0
AG050	303102	8011971	55K	621	90	0

Table 3: Drill Hole Locations for Phase 2 drilling at Gunnawarra.

Collar	Easting	Northing	Zone	Est GPS RL	DEPTH	DIP	AZI
AG-090	303005	8012243	55	662	35	90	0
AG-089	302973	8012250	55	661	43	90	0
AG -087	302907	8012257	55	659	43	90	0
AG-084	302874	8012253	55	658	55	90	0
AG-086	302847	8012252	55	658	43	90	0
AG-085	302818	8012248	55	657	25	90	0
AG-083	302831	8012199	55	658	19	90	0
AG-081	302891	8012195	55	659	19	90	0
AG-077	302948	8012205	55	660	19	90	0
AG-076	302998	8012156	55	669	31	90	0
AG-073	302952	8012146	55	668	37	90	0
AG-074	302926	8012146	55	662	7	90	0
AG-075	302910	8012124	55	665	11	90	0
AG-072	302930	8012126	55	658	23	90	0
AG-071	302921	8012102	55	664	25	90	0
AG-070	302925	8012050	55	657	59	90	0
AG-069	302895	8012050	55	657	29	90	0
AG-068	302875	8012047	55	660	19	90	0
AG-067	302944	8011905	55	656	10	90	0
AG-066	303000	8011866	55	670	19	90	0
AG-065	303168	8011956	55	671	19	90	0
AG-064	303217	8011950	55	669	9	90	0
AG-063	303119	8011885	55	662	52	90	0
AG-062	303137	8011885	55	662	37	90	0
AG -061	302984	8011992	55	671	36	90	0
AG-060	303051	8011976	55	661	40	90	0
AG-059	303097	8012017	55	668	49	90	0
AG-058	303139	8011981	55	665	31	90	0

Beneficiation

Following the success of the drilling program at Gunnawarra the Company engaged Tony King to undertake rudimentary beneficiation test work on its mineralised Ni Co laterite material. From this, and due to the successful upgrade, the company will undertake a more robust and commercial test program.

The primary focus of the test work being magnetic separation. Additional options will also be reviewed and examined to further improve extractions processes of the Gunnawarra laterite material.

Given Laterites have a significant Iron content there is potential to upgrade Ni grades through a magnetic separation process. The ability to upgrade is highly dependent on how separate the Ni is from the magnetic iron.

Work on Other Projects

No work was undertaken this quarter on Mt Jesse or Pluton. Work is planned for these projects later in this year's season.

Safety and Environment for the Quarter

Reportable Incidents	**Nil**
Medical Treatments	**Nil**
LTIs	**Nil**
Environmental incidents	**Nil**
Landholder Issues	**Nil**

Tenements

Permit	Transferee Holder	Project	Area km2
EPM 26464	Mt Jesse Pty Ltd	Mt Jesse	4
EPM 26560	Gunnawarra Pty Ltd	Gunnawarra	11
EPM 26883	Mt Pluton Base Pty Ltd	Mt Pluton	6
EPM 28013	Ark Mines Ltd	Sandy Mitchell	10

Corporate

As at the end of the quarter the Company had $1.814m on hand in cash or cash equivalents and made payments of $124k to related parties (Directors) for Directors' Fees and Directors' consulting services.

This announcement has been approved by the Board of Ark Mines Limited.

On behalf of the Directors

Roger Jackson
Managing Director
28 April 2023

Further Information:

Roger Jackson
Executive Director
+61 400 408 550

Ben Emery
Executive Director
+61 409 138 138

To learn more, please visit: www.arkmines.com
Stay up to date with the latest news by connecting with AHK on LinkedIn and Twitter.

ABOUT ARK MINES LIMITED

Ark Mines is an ASX listed Australian mineral exploration company focused on developing its 100% owned projects located in the prolific Mt Garnet and Greenvale mineral fields of Northern Queensland. The Company's exploration portfolio consists of three high quality projects covering 65km^2 of tenure that are prospective for copper, iron ore, nickel-cobalt and porphyry gold:

Mt Jesse Copper-Iron project

- Project covers a tenure area of 12.4km^2 located ~25km west of Mt Garnet
- Centered on a copper rich magnetite skarn associated with porphyry style mineralization
- Three exposed historic iron formations
- Potential for near term production via toll treat and potential to direct ship

Gunnawarra Nickel-Cobalt project

- Comprised of 11 sub-blocks covering 36km^2
- Borders Australian Mines Limited Sconi project - the most advanced Cobalt-Nickel-Scandium project in Australia
- Potential synergies with local processing facilities with export DSO Nickel/Cobalt partnership options

Pluton Porphyry Gold project

- Located ~90km SW of Cairns near Mareeba, QLD covering 18km^2
- Prospective for gold and associated base metals (Ag, Cu, Mo)
- Porphyry outcrop discovered during initial field inspection coincides with regional scale geophysical interpretation.

RELIANCE ON HISTORIC DATA

All sample data reported in this release, as disclosed in the body of the release, in the tables in the Appendix and in the JORC table is based on data compiled by the Competent Person from other sources and quoted in their original context. These sources have been referenced in the text and the original Competent Persons statements may be found with the relevant documents. Some of this information is publicly available but has not been reported in accordance with the provisions of the JORC Code and a completed Table 1 of the JORC Code and Competent Persons statement is attached to this Release. Whilst every effort has been made to validate and check the data, these results should be considered in the context in which they appear and are subject to field verification by the Company.

CAUTIONARY STATEMENT

The panned concentration samples were taken by Stuart Foster. And the reported assay results supplied to MKY Resources Ltd and Delminco Pty Ltd (2007 to 2009). Stuart Foster, the present owner of the tenement has supplied a hard copy of the panned concentrate results to Ark. Mr Foster has also supplied a statement pertaining to the sampling procedures undertaken. There is however some information which is not available, and cannot be included in the Table 1. Sample results were sent to SGS Townsville for assaying the assay technique is yet to be determined and the assay receipts have not been sited. It is possible that following further evaluation and/or exploration work that the confidence in the prior exploration results may be reduced when reported under the JORC Code 2012. However, nothing has come to the attention of Ark that causes it to question the accuracy or reliability of S Fosters exploration results. The Company however has not independently validated the former explorer's exploration results and therefore is not to be regarded as reporting, adopting or endorsing those results.

COMPETENT PERSONS STATEMENT

The Information in this report that relates to exploration results, mineral resources or ore reserves is based on information compiled by Mr Roger Jackson, who is a Fellow of the Australian Institute of Mining and Metallurgy and a Fellow of the Australasian Institute of Geoscientists. Mr Jackson is a shareholder and director of the Company. Mr Jackson has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration and to the activity that he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the `Australian Code for Reporting Exploration Results, Mineral Resources and Ore Reserves' (the JORC Code).

Mr Jackson consents to the inclusion of this information in the form and context in which it appears in this report. Mr Jackson confirms information in this market announcement is an accurate representation of the available data for the exploration areas being acquired.

FORWARD LOOKING STATEMENTS AND IMPORTANT NOTICE

This report contains forecasts, projections and forward-looking information. Although the Company believes that its expectations, estimates and forecast outcomes are based on reasonable assumptions it can give no assurance that these will be achieved. Expectations and estimates and projections and information provided by the Company are not a guarantee of future performance and involve unknown risks and uncertainties, many of which are out of Ark Mines control.

Actual results and developments will almost certainly differ materially from those expressed or implied. Vertex Minerals has not audited or investigated the accuracy or completeness of the information, statements and opinions contained in this announcement. To the maximum extent permitted by applicable laws, Ark Mines makes no representation and can give no assurance, guarantee or warranty, express or implied, as to, and takes no responsibility and assumes no liability for the authenticity, validity, accuracy, suitability or completeness of, or any errors in or omission from, any information, statement or opinion contained in this report and without prejudice, to the generality of the foregoing, the achievement or accuracy of any forecasts, projections or other forward looking information contained or referred to in this report.

Investors should make and rely upon their own enquiries before deciding to acquire or deal in the Company's securities.

Appendix A: (Sandy Mitchell) JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

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.* • *Include reference to measures taken to ensure sample 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, 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.*	Data taken from W. Scott and Partners EPM18308 2014 Annual Report CR075376 Augur Sampling • Auger programme, using 6m auger • Total soils were collected by hand from the collar to give a composite sample of 5m or depth of refusal, • Sample was split by 25/75 riffle splitter to yield a 3 to 4 kg aliquot per hole Data provided by Stuart Foster and pertaining to the panned concentration samples. • Stream and soil samples were panned to yield a heavy mineral concentrate. The panned residual material was placed in calico sample bags and sent to SGS for assaying.
Drilling techniques	• *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, whethe core is oriented and if so, by what method, etc).*	Augur Samples • Augur Drilling • 6-inch diameter • 5m depth • Vertical hole Panned Concentrates • No drilling undertaken

Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coars material.*	Augur Samples • Recoveries were not recorded. • Relationships between sample recovery and grade could not be determined without original sample weight data, however the CP does not believe a material relationship exists given it was Augur sampling. Short hole auger soil sampling is not known to cause significant material fractionation as might be expected with RAB or RC techniques. Panned Concentrates • No drilling undertaken
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.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography* • *The total length and percentage of the relevant intersections logged.*	Augur Samples • Samples were not logged • Total Counts per second were taken Panned Concentrates • Not logged
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, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *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.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	Augur Samples • Samples were composited over the full length of the Augur depth. • Total soils were collected progressively by hand from the collar to give a composite sample of 5m or depth of refusal. • Sample was split by 25/75 riffle splitter to yield a 3 to 4 kg aliquot per hole. • The samples size is appropriate to the grain size of the material sampled: Sand to very fine sand. Panned Concentrates • No compositing undertaken • The sample size would be appropriate to the grain size of the material sampled. Sand to very fine sand.

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.* • *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.* • *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.*	Augur Samples • Drill samples were sent to SGS Laboratories Townsville. • Aliquots were collected from the splitter in calico sample bags and submitted to SGS Townsville for assay by ICP-OES • Duplicate samples were produced at a rate of 1 in 13 and assayed. • Twin auger holes were drilled at a rate of 1 in 100 with sample and assay as per other holes. • The laboratory procedure was SGS ICP95A for major elements and IMS41Q for REE. Panned Concentrates • The samples were sent to SGS Laboratories Townsville. • The laboratory procedure was SGS ICP95A for major elements and IMS41Q for REE. • Duplicate samples were taken Refer to the panned concentrate table.
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 entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	Augur Samples • The work was undertaken by others. • There is no way of verifying the sampling or the data other than observation of its spatial relationships and internal consistency. • Assay data yielding elemental concentrations for rare earths (REE) within the sample are converted to their stoichiometric oxides (REO) in a calculation performed within the database using the conversion factors in the table below. • Rare Earth oxide is the industry accepted form for reporting rare earths. The following calculations have been used for reporting throughout this report; **TREO** = La2O3 + Ce02 = Pr6O11 + Nd2O3 + Sm2O3 + Eu2O3 + Gd2O3 + Tb4O7 + Dy2O3 + Ho2O3 + Er2O3 + Tm2O3 + Yb2O3 + Lu2O3+ Y2O3 **CREO** = Nd2O3 + Eu2O3 + Tb4O7 + Dy2O3 + Yb2O3 **LREO** = La2O3 + Ce02 = Pr6O11 **HREO** = Sm2O3 + Eu2O3 + Gd2O3 + Tb4O7 + Dy2O3 + Ho2O3 + Er2O3 + Tm2O3 + Yb2O3 + Lu2O3+ Y2O3 **ND/Pr** = Nd2O3 + Pr6O11 TREO – Ce = TREO – CeO2 • %NdPr + NdPr/TREO

Element Name	Element Oxide	Oxide Factor
Ce	CeO2	1.2284
Dy	Dy2O3	1.1477
Er	Er2O3	1.1435
Eu	Eu2O3	1.1579
Gd	Gd2O3	1.1526
Ho	Ho2O3	1.1455
La	La2O3	1.1728
Lu	Lu2O3	1.1371
Nd	Nd2O3	1.1664
Pr	Pr6O11	1.2081
Sc	Sc2O3	1.5338
Sm	Sm2O3	1.1596
Tb	Tb4O7	1.1762
Th	ThO2	1.1379
Tm	Tm2O3	1.1421
U	U3O8	1.1793
Y	Y2O3	1.2699
Yb	Yb2O3	1.1387

Panned Concentrates

- The work was undertaken by others.
- There is no way of verifying the sampling or the data other than observation of its spatial relationships and internal consistency.

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.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	Augur Samples • All collar coordinates were located with hand held GPS with an accuracy of ±5m. • All coordinates were converted from WGS84 UTM z 54, to MGA94 z 54 by the GPS. • Current topographic control is by AGSO DEM derived 10m contours which are of greater accuracy than the ±50m available from hand held GPS. This is sufficient for the current stage of pre-resource exploration. Panned Concentrates • All collar coordinates were located with hand held GPS with an accuracy of ±5m. • All coordinates were converted from WGS84 UTM z 54, to MGA94 z 54 by the GPS. • Current topographic control is by AGSO DEM derived 10m contours which are of greater accuracy than the ±50m available from hand held GPS. This is sufficient for the current stage of pre-resource exploration.

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 Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	Augur Samples • Augur drilling was undertaken over three E-W fences of auger holes approximately each 9 km long • Hole spacings at approximately 250 metres. • Samples were composited at the sampling stage. • These factors result in some data gaps that require infill. • Variography to determine appropriateness of grade continuity for resource estimation has not yet been carried out but the current spacing is not expected to support resource estimation. • No resource or reserve is reported. Panned Concentrates • Samples were taken randomly in areas with a high radiometric reading. • No resource or reserve is reported.
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.*	Augur Samples • Drill holes were drilled vertically which is appropriate for horizontal regolith profile. • Any sampling bias resultant from the orientation of drilling and possible structural offsets of mineralisation is considered to be minimal. • The fence of augur holes running east west cross the North south alluvial patterns. • The orientation of the drilling is considered appropriate for testing the lateral and vertical extent of mineralisation without any bias. Panned Concentrates • The sampling is random • There is no relationship of sampling to mineralisation orientation.
Sample security	• *The measures taken to ensure sample security.*	• Samples were farmed on the remote site with batches transported and delivered to SGS by company personnel.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• Data was audited in mid Feb 2023 by independent geologists of Empirical Earth Science. The data was found to be acceptable for the current stage of exploration with recommendation that the original assay returns and laboratory QAQC be sourced from the previous owner or SGS Townsville.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

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.*	• **EPM 28013 Sandy Mitchell** is 100% owned by Ark Mines Limited. It was purchased on the 23rd of February 2023. • This tenement was formally EPM18308 • There are no third-party agreements • No known issues impeding on the security of the tenure of Ark Mines ability to operate in the area exist.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• A number of companies and individuals have explored the area for gold and base metals and for heavy minerals. The summaries presented below are from the IRTM source: • ATP 597M was granted to Laskan Minerals Pty Ltd in 1969 over the Reid Creek area, north of the Mitchell River. From assays of rock chip and stream sediment samples, it was concluded that there was little chance of economic mineralisation occurring in the Authority. Although good monazite grades were obtained, the samples were from creeks with little available wash. Good concentrations of monazite and ilmenite were present in large areas of sandy, alluvial sheet wash in the Reid's Creek area. It was believed that there was a potential for economic exploitation if the monazite concentrations occurred in a large enough volume of sandy material. No further work was reported. • In 1970, Altarama Search Pty Ltd was granted ATP 833M over the Mitchell River in the Reid Creek, Sandy Creek and Mount Mulgrave Homestead area. Four hundred stream sediment samples, at an average density of 1.25 samples/km^2, were collected for assay. Copper and

Criteria	JORC Code explanation	Commentary
		lead contents were low. Half of the zinc results were considered to be possibly anomalous. A two-population distribution was obtained for zinc, with a standard threshold of about 15 ppm. It was suggested that the two population distributions represented normal background ranges present in different strata. No other work was carried out. • ATP 2580M was granted to Tacam Pty Ltd over Sandy Creek and its tributaries. Stream sediment samples averaged 0.18% monazite (0.01 to 0.45%), 0.07% rutile (0.15% in terraces), and 0.06% zircon (0.14% in terraces). The area had low economic potential and the Authority was abandoned in August 1981. • The principals involved in Tacam Pty Ltd combined with Metcalfe Holdings Pty Ltd in 1986 to take up 4 Authorities to Prospect - 4400,4401,4402 and 4403 centred on Mt Mulgrave, Arkara Creek, Sandy Creek and the Kennedy River respectively. The investigations were for the possibility of locating large-scale heavy minerals in association with major drainages and lower slope eluvial deposits associated with Cretaceous weathering as indicated in previous investigations. EPM 4400, 4401, 4402 and 4403 • Barron and O'Toole focused on Mt Mulgrave for Ilmenite, rutile, REE, Monzonite, Zircon, and Gold. Tenement EPM 4400 consisted of 96 sub-blocks centred on Mount Mulgrave (7665, 7765), EPM 4401 consisted of 97 sub-blocks centred on Arkara Creek (7665), EPM 4402 consisted of 100 sub- blocks centred on Sandy Creek (7665) and EPM 4403 consisted of 86 sub-blocks centred on Kennedy River (7666, 7766) were granted to P.T.C. Barron, A. O'Toole and Metcalfe Holdings Pty Ltd on 22 September 1986 to explore for heavy minerals and precious metals. After three years of exploration the EPMs were surrendered on 22 August 1989.

Criteria	JORC Code explanation	Commentary
		• Tenement EPM 10185 consisted of 157 sub-blocks was granted to Palmer Gold Pty Ltd on 25 October 1994 for an initial 2-year period. The exploration permit was renewed for a further 3 years on 25 October 1996 and surrendered on 3 October 2001. The tenement was situated 200km west of Cooktown. Rationale Significant gold-silver, tin and base metal deposits are known from the Georgetown and southern Dargalong Inliers to the south of EPM 10185 (e.g. Etheridge, Croydon and Oaks goldfields), from the Hodgkinson Province to the east (e.g. Palmer, Hodgkinson, Russell River, Starcke, Jordon Ck, Mareeba and Mount Peter goldfields, and Herberton-Mt Garnet tinfield), and the Coen Inlier to the north (e.g. Alice River & Potallah goldfields). However, other than brief reference to sub-economic alluvial gold occurrences near the junction of the Palmer and Mitchell Rivers, and in the Staaten, Lynd and Walsh Rivers (Culpeper 1993), no precious or base metal deposits are known to occur within rocks of the Yambo Inlier. Application for the area was made after structural interpretation of the region showed prospectivity for gold occurrence. Base metal anomalies delineated from previous exploration were also targeted for follow-up work. • In 2007 exploration activity was carried out by BHP Billiton Minerals Pty Ltd under an extremely large area (2,850 sub-blocks) of the Coen Yambo area from 2005 to 2007. EPM's 14438 and 14445 covered the majority of the Yambo Inlier. BHP targeted Ni sulphide and PGM and carried out AEM surveying, field mapping and sampling and drilling. The AEM targets were found to be related to sedimentary lithological units or obvious shear zones.

Criteria	JORC Code explanation	Commentary
		• In 2007 - 2009 - MTY Resources Ltd undertook bulk sampling program along with a Panned Concentrate sampling program as reported in this report. • In 2012 Waverley Nominees undertook an Augur sampling program as set out in this report.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The tenement covers portion of the southern extent of the Yambo Inlier, one of the several Proterozoic inliers to the west of the Palmerville Fault System. Rocks of the Yambo Inlier covered by the tenement comprise those of the middle Proterozoic Yambo Metamorphic Group of mainly amphibolites and gneisses ranging in age from ~1690 Ma to ~1585 Ma. These rocks have been intruded by Silurian-Devonian granites of the Lukinville Suite which form an integral part of the Cape York Batholith. Within the tenement they form a belt roughly 10 km wide trending NNW. • Extensive intrusions of Carboniferous-Permian dolerites occur throughout the Inlier, with only a few occurrences within the tenement. • The tenement is largely gold deficient except for the gold reporting to sediments within the Palmer River. Recent Governmental radiometric surveys have highlighted areas of anomalous radiometric emission within the Yambo Inlier. The project tenements cover the majority of the anomalous radiometric areas. • There are many stream systems within the Mulgrave/Sandy Mitchell tenements and they contain concentrations of rare earth minerals. These minerals have been derived from the now denuded remnant Jurassic-Cretaceous sandstone-pebble conglomerates and quartz sandstones, with the greater volumes being associated with the breakdown of the Mesoproterozoic basement rocks. Isolated areas of high garnet concentrations are derived from irregular zones of highly garnetiferous dolerites and schists.

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:* ○ *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.*	Augur Samples • Refer to Table in Appendices C Panned Concentrate • Refer to Table in Appendices B
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 shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	Augur Samples • No high or Low-grade top/bottom-cut has been applied. • The total data set is reported in Appendix C. • REE Equivalent TREO (total REE oxides) is reported as this is the industry standard for presentation of REE data. Stoichiometric calculation of REE oxide equivalents were performed in units of ppm, with TREO, LREO (light REE oxides), HREO (heavy REE Oxides), CREO (critical REE oxides) and Mag REO (magnet production REE oxides), as per Table 1 page 2 and 3, yielding these factors as concentrations and percentages of TREO concentration. Panned Concentrates • The total data set is reported in Appendix B
Relationship between mineralisation widths and	• *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*	Augur Samples • All holes sample assays are based on sampling of the whole hole length. • The mineralisation is interpreted to be flat lying and drilling is vertical perpendicular to mineralisation. Any internal variations to

Criteria	JORC Code explanation	Commentary
intercept lengths	*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').*	REE distribution within the horizontal layering was not defined, therefore the true width is considered not known at the current stage of development. Panned Concentrates • Not relevant to soil samples
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.*	• See plan image 2 and 3.
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.*	• Results reported include all recovered assay, both low and high grade, for all holes. • See Appendix B and C for full data.
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.*	• All data material to this report that has been collected to date has been reported textually, graphically or both. • Absent material data includes, Drill collar RLs, bulk density, the nature, quality and appropriateness of the assaying and laboratory procedures, water table height and geotechnical characteristics is absent from the historical data record recovered so far, and current data is still undergoing analysis. These data are not relevant to the current pre-resource drill data release.
Further Work	• *The nature and scale of planned further work.*	• Ark plans to undertake further infill Augur drilling, further beneficiation test work, pilot plant test work. Resourcing and reserve studies.

Appendix B: (Sandy Mitchell) Panned Concentrate Table

Sample ID	E MGA94z54	N MGA94z54	Samp Type	TREO	LREO	HREO	CREO	Mag Reo	Sc_2O_3	La_2O_3	CeO_2	Pr_6O_{11}	Nd_2O_3	Sm_2O_3	Eu_2O_3	Gd_2O_3	Y_2O_3	Tb_4O_7	Dy_2O_3	Ho_2O_3	Er_2O_3	Tm_2O_3	Yb_2O_3	Lu_2O_3	*Note*
				ppm	*%*	*%*	*%*	*%*	*ppm*	*%*	*%*	*ppm*	*%*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	
430A	813624	8195067	Pan Con	153,969	95.4	4.6	23.7	25.9	225.5	3.26	7.10	8,288	2.9976	4,650	120.4		4,749	349.3	1,285	174.1	354.5	29.7	160.56		
443A	808124	8196989	Pan Con	94,180	95.5	4.5	23.1	25.3	220.9	2.05	4.34	5,014	1.7846	2,876	88.5		2,806	197.6	797	103.8	215.0	19.6	109.77		
443B	808125	8196989	Pan Con	17,554	91.1	8.9	25.5	24.3	309.8	0.35	0.76	887	0.3126	513	25.5		1,062	46.6	211	37.1	99.0	13.6	90.185		twin
447A	807601	8195835	Pan Con	47,376	95.0	5.0	23.7	25.6	123.0	1.02	2.16	2,525	0.904	1,450	56.0		1,549	120.0	457	58.2	114.4	9.7	50.786		
450A	812239	8195625	Pan Con	174,126	95.9	4.1	23.0	25.6	171.8	3.75	8.11	9,351	3.3359	5,369	135.5		4,661	407.0	1,400	173.0	335.0	25.9	133.23		
450B	812239	8195625	Pan Con	17,929	90.6	9.4	26.1	24.6	300.6	0.35	0.77	904	0.3231	525	24.0		1,156	47.0	220	39.7	109.0	15.0	100.21		twin
451	812274	8195859	Pan Con	184,777	95.8	4.2	23.1	25.6	199.4	3.99	8.59	9,895	3.5459	5,624	162.1		5,029	441.1	1,515	184.4	355.6	28.1	144.61		
452A	810407	8190286	Pan Con	158,691	95.8	4.2	22.7	25.2	170.3	3.48	7.37	8,518	2.9743	4,859	143.6		4,407	381.1	1,308	162.7	313.3	24.3	125.26		
452B	810407	8190286	Pan Con	30,334	93.8	6.2	24.4	25.3	233.1	0.63	1.36	1,583	0.5715	914	36.6		1,261	74.9	304	45.0	107.0	12.6	79.14		twin
452A2	810408	8190286	Pan Con	123,058	95.7	4.3	22.8	24.7	135.0	2.73	5.72	5,932	2.3211	3,792	118.1		3,467	297.6	1,002	131.7	268.7	19.8	112.73		duplicate

Note:

TREO: Total REE Oxides = $Sc_2O_3 + La_2O_3 + CeO_2 + Pr_6O_{11} + Nd_2O_3 + Sm_2O_3 + Eu_2O_3 + Gd_2O_3 + Y_2O_3 + Tb_4O_7 + Dy_2O_3 + Ho_2O_3 + Er_2O_3 + Tm_2O_3 + Yb_2O_3 + Lu_2O_3$ (includes Sc & Y)

NB: Gd & Lu not asayed

LREO: Light REE Oxides = $Sc_2O_3 + La_2O_3 + CeO_2 + Pr_6O_{11} + Nd_2O_3 + Sm_2O_3 + Eu_2O_3 + Gd_2O_3$ (includes Sc)

NB: Gd not asayed

HREO: Total REE Oxides = $Y_2O_3 + Tb_4O_7 + Dy_2O_3 + Ho_2O_3 + Er_2O_3 + Tm_2O_3 + Yb_2O_3 + Lu_2O_3$ (includes Y)

NB: Lu not asayed

CREO: Critical REE Oxides = $Nd_2O_3 + Eu_2O_3 + Y_2O_3 + Tb_4O_7 + Dy_2O_3$ (US Dept' Energy Definition)

Mag REO: Magnet Production REE Oxides = $Pr_6O_{11} + Nd_2O_3$, $Tb_4O_7 + Dy_2O_3$

Appendix C: (Sandy Mitchell) Augur Sample Table

Sample ID	E MGA94z54	N MGA94z54	Samp Type	TREO	LREO	HREO	CREO	Mag Reo	Sc_2O_3	La_2O_3	CeO_2	Pr_6O_{11}	Nd_2O_3	Sm_2O_3	Eu_2O_3	Gd_2O_3	Y_2O_3	Tb_4O_7	Dy_2O_3	Ho_2O_3	Er_2O_3	Tm_2O_3	Yb_2O_3	Lu_2O_3	Note
				ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
SM-01	809133	8193543	Auger	368.93	97.15	2.85	18.48	23.15	17.6	78.3	162.1	18.7	60.3	10.3	1.5	9.5		1.11	5.3	1.09	2.3	0.38		0.38	
SM-02	809383	8193538	Auger	457.05	97.72	2.28	18.68	23.65	12.3	99.0	208.8	24.0	77.3	12.9	1.3	10.9		1.21	5.5	1.03	2.1	0.32		0.31	
SM-03	809634	8193515	Auger	270.14	97.16	2.84	18.21	22.73	13.2	56.3	121.0	13.4	43.4	7.4	1.2	6.6		0.81	3.8	0.80	1.7	0.29		0.27	
SM-04	809873	8193517	Auger	479.30	97.30	2.70	18.56	23.22	23.9	101.0	211.3	24.2	79.2	13.6	1.8	11.4		1.38	6.5	1.37	2.7	0.46		0.44	
SM-05	810135	8193520	Auger	515.48	97.81	2.19	19.34	24.54	13.2	116.2	226.0	28.2	91.0	15.3	1.4	12.9		1.38	6.0	1.11	2.2	0.34		0.33	
SM-6A	810388	8193515	Auger	350.92	96.85	3.15	18.33	22.73	24.7	70.6	151.1	17.3	56.0	9.6	1.8	8.8		1.11	5.4	1.19	2.5	0.42		0.42	
SM-6B	810388	8193515	Auger	424.01	97.80	2.20	18.60	23.54	12.7	91.0	194.1	22.1	71.6	12.1	1.1	9.9		1.15	4.9	0.92	1.8	0.26		0.24	*duplicate*
SM-6B-2	810388	8193515	Auger	470.40	97.78	2.22	18.46	23.43	14.1	101.8	215.0	24.6	78.7	13.2	1.3	11.2		1.32	5.5	1.01	2.1	0.29		0.27	*duplicate*
SM-07	810641	8193513	Auger	237.47	96.50	3.50	17.91	21.98	19.5	45.7	103.1	11.1	36.3	6.3	1.4	5.8		0.79	4.0	0.88	1.9	0.33		0.35	
SM-08	810866	8193524	Auger	276.48	96.77	3.23	18.19	22.53	18.7	56.9	119.2	13.4	43.6	7.7	1.4	6.7		0.88	4.4	0.95	2.1	0.34		0.34	
SM-09	811134	8193498	Auger	307.50	97.88	2.12	18.52	23.45	9.7	67.9	138.8	16.1	51.8	8.7	0.9	7.1		0.80	3.4	0.63	1.3	0.19		0.18	
SM-10	811638	8193602	Auger	481.23	97.76	2.24	19.70	25.03	11.7	108.7	208.8	26.8	86.5	14.5	1.1	12.2		1.35	5.7	1.05	2.1	0.31		0.28	
SM-11	811823	8194069	Auger	401.64	96.93	3.07	18.38	22.89	23.6	83.6	174.4	19.9	64.6	11.4	1.8	9.9		1.20	6.2	1.31	2.7	0.43		0.43	
SM-12	811672	8193858	Auger	367.71	97.92	2.08	18.12	22.94	8.3	81.9	169.5	19.0	60.0	10.8	1.2	9.5		1.08	4.4	0.70	1.3	0.15		0.10	
SM-13	811904	8193610	Auger	391.60	97.15	2.85	18.38	22.99	23.2	81.5	170.7	19.7	63.7	10.7	1.6	9.3		1.14	5.5	1.17	2.5	0.41		0.42	
SM-14	812103	8193624	Auger	342.34	97.23	2.77	18.51	23.22	19.3	70.6	149.9	17.4	56.1	9.7	1.3	8.5		1.06	4.9	0.96	1.9	0.30		0.30	
SM-15	812371	8193862	Auger	234.51	97.55	2.45	18.31	22.97	9.8	50.8	104.7	12.1	38.3	6.6	1.1	5.4		0.66	2.9	0.58	1.3	0.18		0.18	
SM-16	812620	8193624	Auger	512.77	98.05	1.95	19.04	24.17	11.5	117.2	227.3	27.8	89.3	15.4	1.5	12.8		1.40	5.4	0.96	1.8	0.24		0.18	
SM-17	812812	8193635	Auger	418.58	98.04	1.96	18.41	23.19	9.4	94.4	191.6	21.7	69.8	11.9	1.8	9.8		1.09	4.5	0.77	1.5	0.19		0.17	
SM-18	812128	8193628	Auger	484.67	97.91	2.09	19.59	24.79	12.0	110.2	210.1	26.7	86.5	14.8	1.5	12.7		1.38	5.5	1.00	1.8	0.24		0.18	
SM-19	813376	8193613	Auger	670.81	98.27	1.73	19.21	24.54	15.8	156.0	294.8	37.5	119.0	19.1	1.7	15.3		1.65	6.5	1.10	1.9	0.23		0.16	
SM-20	813667	8193602	Auger	628.88	97.93	2.07	20.09	25.51	13.2	141.9	272.7	35.5	115.9	19.1	1.4	16.0		1.75	7.2	1.24	2.3	0.29		0.22	
SM-21	813828	8193570	Auger	976.52	98.61	1.39	18.57	23.80	12.0	197.0	481.5	52.3	170.3	27.8	1.2	20.7		2.03	7.8	1.20	2.2	0.23		0.15	
SM-22	814104	8193626	Auger	546.97	98.09	1.91	19.40	24.78	13.7	124.3	238.3	30.8	97.9	17.0	1.4	13.1		1.35	5.5	1.01	2.1	0.29		0.25	
SM-23	814360	8193613	Auger	450.85	98.03	1.97	18.77	23.87	8.9	98.0	207.6	24.0	77.7	13.5	1.1	11.2		1.19	4.7	0.86	1.7	0.23		0.19	
SM-24A	814650	8193627	Auger	377.89	97.21	2.79	17.98	22.52	20.9	78.8	167.1	18.7	60.0	10.9	1.6	9.5		1.14	5.3	1.11	2.3	0.38		0.36	
SM-24B	814650	8193627	Auger	244.44	96.22	3.78	19.71	24.37	21.5	53.6	89.9	12.7	41.3	7.3	1.3	7.6		1.00	4.6	0.97	2.1	0.32		0.31	*duplicate*
SM-25	814929	8193655	Auger	611.92	97.84	2.16	19.07	24.28	17.3	143.1	264.1	33.5	106.6	17.6	1.6	14.9		1.60	6.9	1.35	2.6	0.39		0.39	
SM-26	815167	8193650	Auger	445.58	97.36	2.64	18.19	23.00	16.4	95.8	201.5	22.8	72.4	12.4	1.4	11.1		1.26	6.0	1.21	2.5	0.41		0.41	
SM-27	815390	8193605	Auger	431.86	97.38	2.62	18.19	22.86	20.7	91.4	192.9	21.7	70.0	11.7	1.6	10.6		1.26	5.7	1.15	2.4	0.39		0.36	
SM-28	815633	8193638	Auger	356.82	97.46	2.54	18.02	22.63	16.9	76.6	159.7	17.8	57.4	9.6	1.3	8.5		1.02	4.6	0.93	1.9	0.30		0.30	
SM-30	815633	8193638	Auger	155.48	85.87	14.13	29.02	23.27	16.7	20.6	54.0	6.0	26.5	4.5	1.2	3.9	13.71	0.05	3.7	0.56	2.2	0.23	1.4	0.20	*twin*
SM-342	813963	8196260	Auger	200.68	87.40	12.60	27.52	22.55	17.8	35.2	70.3	7.6	33.4	5.5	1.3	4.5	16.25	0.54	3.8	0.60	2.3	0.22	1.4	0.23	
SM-343	817006	8193634	Auger	106.98	90.70	9.30	24.36	21.84	6.6	17.8	45.6	3.9	17.5	2.8	0.6	2.3	6.03	0.26	1.7	0.25	0.9	0.11	0.6	0.09	
SM-345	816502	8193639	Auger	197.98	89.20	10.80	27.08	23.81	15.2	34.6	72.4	8.0	35.2	5.7	1.0	4.6	13.46	0.51	3.4	0.53	1.9	0.18	1.1	0.18	
SM-346	816001	8193966	Auger	230.41	88.45	11.55	27.64	23.75	19.5	38.9	82.2	9.1	40.7	6.8	1.1	5.4	17.02	0.61	4.2	0.63	2.3	0.23	1.4	0.22	
SM-347	816186	8193926	Auger	143.18	86.95	13.05	28.09	23.22	16.1	21.9	48.0	5.5	24.4	4.2	0.8	3.6	11.59	0.42	3.0	0.47	1.7	0.17	1.1	0.18	
SM-348	815504	8198504	Auger	178.71	88.90	11.10	23.79	20.15	14.1	24.0	79.6	5.8	26.2	4.6	0.7	3.7	11.66	0.47	3.4	0.54	1.9	0.22	1.4	0.20	
SM-349	815750	8189504	Auger	304.94	90.68	9.32	26.97	25.04	14.1	56.5	117.4	13.2	57.7	9.4	1.0	7.1	18.03	0.75	4.7	0.68	2.4	0.25	1.4	0.23	
SM-350	815995	8198510	Auger	290.74	90.77	9.23	26.07	23.99	14.3	52.3	117.6	12.0	52.6	8.1	0.9	6.1	17.14	0.65	4.5	0.62	2.3	0.22	1.3	0.20	
SM-351	816251	8198508	Auger	217.75	90.69	9.31	26.13	24.06	14.4	39.5	82.9	9.0	39.4	6.4	0.8	5.0	12.67	0.51	3.4	0.49	1.8	0.16	1.0	0.15	
SM-352	816518	8198477	Auger	249.05	92.03	7.97	25.98	25.29	10.6	47.7	97.8	10.8	47.7	7.8	0.8	6.0	11.67	0.60	3.9	0.53	1.8	0.16	1.0	0.15	
SM-353A	816776	8198493	Auger	277.32	91.48	8.52	26.14	24.68	13.8	52.3	107.7	11.8	51.9	8.6	0.9	6.7	14.86	0.66	4.1	0.56	2.1	0.17	1.0	0.16	
SM-353B	816776	8198493	Auger	230.12	88.60	11.40	27.38	23.80	18.1	39.9	83.2	9.1	40.6	6.7	1.0	5.3	16.38	0.56	4.5	0.86	2.2	0.22	1.4	0.19	*duplicate*
SM-354	817003	8198465	Auger	315.87	92.02	7.98	22.08	20.35	16.7	47.5	152.3	10.9	48.2	7.9	1.1	6.1	15.24	0.65	4.6	0.63	2.3	0.23	1.4	0.23	
SM-355	815147	8198842	Auger	268.89	92.52	7.48	26.19	25.69	11.0	50.3	106.7	11.8	53.0	8.7	0.7	6.5	12.43	0.62	3.7	0.49	1.7	0.15	0.9	0.13	
SM-356	814908	8198851	Auger	220.76	91.41	8.59	26.43	25.24	11.7	38.5	87.0	9.4	42.3	7.0	0.7	5.3	11.35	0.52	3.4	0.47	1.8	0.16	1.0	0.16	
SM-357	814616	8198858	Auger	309.23	93.39	6.61	25.23	25.52	10.6	59.0	126.5	13.9	60.2	10.2	0.9	7.5	12.05	0.72	4.1	0.50	1.8	0.15	0.9	0.14	
SM-358	814545	8198699	Auger	225.90	90.20	9.80	26.71	24.19	15.3	40.3	84.9	9.3	41.2	6.8	0.8	5.1	14.10	0.54	3.7	0.52	1.8	0.18	1.1	0.17	
SM-359	814206	8198499	Auger	269.92	92.60	7.40	26.08	26.09	7.1	51.8	109.1	12.0	53.5	8.9	0.9	6.7	11.07	0.67	4.2	0.56	2.1	0.18	1.0	0.15	
SM-360	813986	8198506	Auger	231.10	91.31	8.69	26.62	25.36	9.7	43.0	90.5	9.9	44.4	7.3	0.8	5.3	12.00	0.58	3.7	0.53	1.9	0.17	1.0	0.16	
SM-361	813785	8198514	Auger	181.29	91.36	8.64	26.20	24.84	8.4	33.4	71.5	7.7	34.1	5.6	0.7	4.3	9.40	0.45	2.9	0.40	1.5	0.13	0.8	0.14	
SM-362	813493	8198516	Auger	406.64	94.55	5.45	25.69	27.11	4.0	80.8	172.0	19.2	85.3	13.2	0.9	9.1	12.55	0.82	4.9	0.63	2.2	0.15	0.8	0.13	
SM-363	812808	8198504	Auger	441.18	92.24	7.76	26.30	25.62	16.7	82.8	176.9	19.6	86.4	13.5	1.3	9.8	21.33	0.93	6.1	0.84	3.0	0.26	1.6	0.24	
SM-364	812551	8198516	Auger	224.98	88.52	11.48	27.56	24.17	14.4	37.6	84.5	9.1	40.5	6.6	1.2	5.2	15.49	0.56	4.2	0.68	2.6	0.26	1.7	0.25	
SM-365	812256	8198506	Auger	260.18	92.38	7.62	26.27	26.17	5.8	49.4	106.5	11.7	52.0	8.3	0.7	5.9	11.21	0.60	3.8	0.55	2.1	0.19	1.3	0.18	
SM-366	812003	8198507	Auger	202.06	89.41	10.59	28.02	25.83	10.0	35.2	75.3	8.7	39.2	6.6	0.7	5.1	12.42	0.55	3.8	0.58	2.3	0.21	1.4	0.20	
SM-367	811778	8198482	Auger	253.72	91.88	8.12	26.26	25.66	8.9	48.1	100.6	11.1	49.3	8.0	0.9	6.1	11.72	0.61	4.0	0.57	2.1	0.19	1.3	0.18	
SM-368	811502	8198455	Auger	216.73	93.76	6.24	25.54	25.97	5.7	43.2	88.1	9.8	42.7	7.1	1.3	5.4	7.63	0.54	3.2	0.39	1.1	0.09	0.5	0.07	
SM-369	811259	8198504	Auger	230.85	93.36	6.64	26.20	26.44	9.8	42.3	91.8	10.2	46.5	7.7	1.2	6.0	8.47	0.60	3.7	0.45	1.4	0.10	0.6	0.09	
SM-370	810998	8198511	Auger	227.65	96.19	3.81	24.08	26.47	3.1	47.6	97.9	10.6	46.9	7.3	0.6	5.0	4.58	0.45	2.3	0.25	0.8	0.03	0.2	0.03	
SM-371	810748	8198496	Auger	407.97	95.19	4.81	25.32	26.98	6.1	83.7	169.5	19.2	85.1	13.9	1.0	9.7	11.43	0.89	4.8	0.53	1.5	0.08	0.3	0.05	
SM-372	810505	8198509	Auger	267.59	94.08	5.92	25.45	26.11	7.2	53.7	109.0	12.1	53.0	8.7	1.5	6.7	8.83	0.72	4.1	0.45	1.3	0.08	0.3	0.05	
SM-373	810253	8198502	Auger	169.40	93.31	6.69	26.55	26.58	5.2	33.8	66.0	7.6	34.2	5.7	1.1	4.5	6.44	0.47	2.8	0.31	0.9	0.06	0.3	0.05	
SM-374	810033	8198495	Auger	166.01	94.26	5.74	25.07	25.73	5.5	32.7	67.8	7.4	32.5	5.5	0.9	4.1	5.32	0.41	2.4	0.26	0.8	0.06	0.2	0.05	
SM-375	809762	8198509	Auger	255.68	94.57	5.43	25.72	26.67	4.4	52.2	104.4	11.7	52.7	8.6	1.4	6.3	7.89	0.55	3.2	0.39	1.3	0.08	0.5	0.06	
SM-377	809308	8198495	Auger	178.99	93.07	6.93	26.12	25.72	4.3	35.8	71.9	7.9	34.9	5.9	1.3	4.6	7.33	0.47	2.8	0.34	1.0	0.08	0.3	0.06	
SM-378	809012	8198503	Auger	166.59	92.91	7.09	26.27	25.98	4.1	32.3	67.1	7.3	32.8	5.7	1.2	4.4	6.64	0.44	2.8	0.34	1.0	0.08	0.5	0.07	
SM-379	808758	8198518	Auger	141.46	94.20	5.80	25.40	26.22	1.4	28.6	59.0	6.5	28.2	5.1	0.7	3.8	4.60	0.34	2.1	0.23	0.7	0.03	0.2	0.03	
SM-380	808672	8198494	Auger	180.31	90.19	9.81	26.97	25.13	7.5	33.0	69.8	7.6	33.9	5.6	0.9	4.4	9.97	0.47	3.3	0.50	1.9	0.17	1.1	0.17	
SM-381	808656	8198483	Auger	151.78	89.31	10.69	27.72	25.34	6.7	26.9	57.7	6.4	28.6	4.8	0.8	3.7	9.17	0.41	3.1	0.47	1.7	0.17	1.0	0.16	
SM-383	808248	8195749	Auger	148.57	89.25	10.75	27.01	24.47	7.7	26.3	57.1	6.1	26.8	4.2	0.8	3.6	9.09	0.40	3.0	0.44	1.7	0.16	1.0	0.16	
SM-385	808604	8195657	Auger	137.27	87.71	12.29	27.57	23.42	12.3	22.8	48.3	5.3	23.6	3.9	0.9	3.3	10.10	0.39	2.9	0.45	1.7	0.16	1.0	0.17	
SM-390A	809500	8195751	Auger	192.43	92.88	7.12	25.87	25.35	5.5	37.4	78.0	8.3	37.0	6.3	1.5	4.7	7.84	0.49	3.0	0.38	1.3	0.10	0.6	0.08	
SM-390B	809500	8195751	Auger	366.85	93.81	6.19	25.18	25.50	10.0	73.8	151.1	16.4	71.4	11.8	1.3	8.4	13.97	0.81	4.9	0.53	1.7	0.10	0.6	0.07	*duplicate*
SM-391A	809742	8195743	Auger	187.05	93.93	6.07	24.87	25.05	5.8	38.0	76.7	8.3	35.7	5.8	1.1	4.3	6.86	0.42	2.4	0.29	0.9	0.07	0.3	0.05	
SM-391B	809742	8195743	Auger	188.45	94.03	5.97	25.24	25.84	3.2	39.4	77.6	8.4	36.9	6.0	1.1	4.5	6.16	0.44	3.0	0.30	0.9	0.07	0.3	0.06	*duplicate*
SM-392	810010	8195746	Auger	263.79	92.93	7.07	25.66	25.36	8.4	52.1	106.3	11.7	51.1	8.5	1.1	6.1	11.38	0.59	3.6	0.48	1.6	0.13	0.8	0.11	
SM-393	810249	8195750	Auger	245.11	91.15	8.85	26.87	25.82	5.1	49.3	96.4	10.9	47.9	7.4	0.9	5.5	12.53	0.58	3.9	0.60	2.3	0.22	1.4	0.22	
SM-394	810449	8195750	Auger	302.74	91.43	8.57	26.89	25.72	8.6	61.1	116.5	13.2	59.0	9.7	1.3	7.4	15.37	0.75	4.9	0.70	2.5	0.24	1.3	0.18	
SM-395	810750	8195752	Auger	157.69	89.19	10.81	26.88	24.01	9.7	26.9	60.4	6.4	27.9	4.6	1.3	3.6	9.63	0.42	3.2	0.47	1.8	0.17	1.1	0.17	
SM-399	811250	8195749	Auger	199.92	91.83	8.17	26.86	25.90	4.8	38.2	79.1	8.8	39.1	7.0	1.3	5.4	9.46	0.58	3.3	0.44	1.5	0.13	0.8	0.11	
SM-402	811750	8195753	Auger	306.06	92.34	7.66	26.10	25.67	8.4	60.3	122.8	13.4	59.7	9.6	1.1	7.1	13.59	0.73	4.7	0.63	2.2	0.19	1.3	0.18	
SM-403	813749	8195752	Auger	342.72	93.38	6.62	25.69	25.95	8.1	66.7	141.3	15.2	68.2	11.2	1.1	8.1	13.21	0.78	4.7	0.62	2.2	0.16	0.9	0.14	
SM-404	813498	8195744	Auger	427.77	94.03	5.97	25.73	26.69	8.1	85.5	175.7	19.8	87.9	14.1	1.4	9.7	14.35	0.92	5.5	0.73	2.5	0.19	1.1	0.18	
SM-405	813284	8195751	Auger	179.50	92.62	7.38	26.20	25.75	7.2	34.4	70.8	7.9	35.2	5.7	0.8	4.3	7.95	0.41	2.6	0.34	1.1	0.09	0.6	0.09	
SM-409	812375	8195753	Auger	217.96	93.83	6.17	24.71	25.30	6.1	40.7	93.0	9.5	42.0	7.1	0.8	5.3	7.44	0.53	3.1	0.38	1.3	0.10	0.6	0.07	
SM-410	812181	8195699	Auger	281.21	91.35	8.65	26.49	25.35	9.7	54.3	110.4	12.0	53.9	8.8	1.1	6.7	14.10	0.69	4.7	0.63	2.4	0.23	1.4	0.20	
SM-411	814008	8195748	Auger	244.87	93.52	6.48	25.34	25.94	6.1	48.1	101.1	11.0	48.6	7.8	0.8	5.5	8.78	0.55	3.3	0.44	1.6	0.14	0.9	0.13	
SM-413	814500	8195745	Auger	187.91	92.62	7.38	21.79	21.05	13.8	28.6	86.2	6.6	29.6	4.8	0.7	3.7	7.37	0.41	2.9	0.41	1.5	0.15	1.0	0.15	
SM-414	814754	8195747	Auger	352.82	93.68	6.32	25.79	26.42	8.6	67.0	146.2	15.8	71.5	11.6	1.2	8.6	12.37	0.85	5.0	0.64	2.1	0.16	1.0	0.14	
SM-415	815005	8195749	Auger	147.86	94.32	5.68	24.09	25.17	8.1	27.0	60.8	6.4	28.6	4.8	0.4	3.5	4.33	0.34	2.0	0.25	0.9	0.08	0.5	0.07	
SM-416	815258	8195750	Auger	277.60	91.55	8.45	27.19	26.34	8.0	54.8	106.3	12.6	55.5	8.9	1.3	6.8	13.59	0.67	4.4	0.64	2.4	0.22	1.4	0.20	
SM-417	815347	8195748	Auger	254.12	87.48	12.52	27.22	22.29	28.2	41.9	86.5	9.4	41.8	7.3	1.1	6.2	20.83	0.69	4.8	0.76	2.6	0.25	1.6	0.24	
SM-418	815503	8195748	Auger	314.24	92.65	7.35	25.44	25.23	9.8	60.2	129.0	13.5	60.3	9.9	1.1	7.4	13.08	0.74	4.7	0.63	2.3	0.21	1.3	0.19	
SM-419	815755	8195749	Auger	311.62	92.25	7.75	25.80	25.37	10.1	60.0	125.3	13.5	60.0	10.0	1.2	7.4	13.71	0.75	4.8	0.69	2.4	0.21	1.4	0.20	
SM-420	816250	8195749	Auger	257.83	93.31	6.69	25.47	25.80	4.3	52.8	105.9	11.6	50.9	8.2	0.8	6.1	10.01	0.58	3.4	0.46	1.6	0.14	0.9	0.11	
SM-421A	816500	8195751	Auger	455.07	93.42	6.58	25.67	26.19	9.4	91.0	186.7	20.7	91.2	14.5	1.3	10.4	17.02	0.99	6.3	0.81	2.9	0.24	1.5	0.23	
SM-421B	816500	8195751	Auger	356.82	93.04	6.96	25.75	25.95	8.9	70.1	145.0	15.9	70.8	11.6	1.1	8.5	14.10	0.81	5.0	0.71	2.5	0.22	1.3	0.19	*duplicate*
SM-423	816748	8195750	Auger	270.66	92.82	7.18	25.69	25.66	7.4	52.0	111.3	12.0	53.1	8.5	1.0	6.1	11.09	0.60	3.8	0.54	1.9	0.18	1.1	0.15	
SM-424	816998	8195747	Auger	254.01	91.77	8.23	26.50	25.63	7.7	49.8	100.1	11.1	49.6	8.0	1.1	5.8	12.17	0.58	3.9	0.57	2.1	0.19	1.3	0.18	

Appendix D: (Gunawarra) JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

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.* • *Include reference to measures taken to ensure sample 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, 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.*	• 1763 1m 5.5inch face hammer RC drill chip sample was split by rig- mounted cyclone riffle splitter yielding 2kg to 3kg aliquots. • Drill holes were fully sampled. • Some 1m samples had poor recovery (refer to Appendices 2). • Sample was reduced by jaw crush, pulverised and sub sampled to yield a 50g charge for fire assay and pulp for four acid digest.
Drilling techniques	• *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).*	• 1m drill chips samples were obtained by RC using 5.5 inch face hammer (45 collars, Total 1763m.). • Large air pack with air booster. **UDR650 – Multi-Purpose Drill Rig** • Truck Mounted on a MAN 8×8 • Capacity 900 metres NQ • Capacity 250 metres RC • 350/1050 Compressor and 8V Booster • 350/1050 onboard compressor • Automated Rod Handler with onboard rodbox • Trailer mounted dust suppression unit

<table>
<tr><td></td><td></td><td>Support Trucks
SCANIA 6 x 6 Rod Truck
VOLVO 8 x 4 Compressor/Booster Truck
ISUZU NPS 300 twin cab 4×4 support Truck (UHF/SAT/Mobile)</td></tr>
<tr><td>Drill sample recovery</td><td>Method of recording and assessing core and chip sample recoveries and results assessed.
Measures taken to maximise sample recovery and ensure representative nature of the samples.
Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</td><td>Recoveries were monitored visually in field and received sample weights recorded at NAL.
Recoveries were maximised using an auxiliary and booster compressor delivering sample through a cyclone directly to a levelled rig mounted rifle splitter.
Some wet sample was encountered (riffle splitter bypassed) but all instances were logged. No bias related to water is noted
QAQC analysis is not yet complete but as yet no correlation. Survey has been completed after the maiden MRE was completed</td></tr>
<tr><td>Logging</td><td>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.
Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.
The total length and percentage of the relevant intersections logged.</td><td>Qualitative geological logging was carried out on all holes with Ark Mines geological logging protocols at the time were followed to ensure consistency in drill logs between the geological staff.
Chips were logged for weathering, lithologies (primary and proto), mineralogy, colour and grainsize for each 1m interval. Chip trays (with chips) were photographed and retained for correlation with grade data.
Of 1763m drilled, 1763m have been logged in metre intervals.
The main logged materials were Hm (hematite rich soil), Lat (ferruginous laterite), Lsi (ferruginous laterite with silica boxwork), Sapr (saprolite), and Serp (serpentinite – fresh).
The full sample lengths were logged.
<table>
<tr><th>Code</th><th>Lithology</th></tr>
<tr><td>LAT</td><td>Laterite</td></tr>
<tr><td></td><td></td></tr>
<tr><td>Sch</td><td>Schist</td></tr>
<tr><td>Si Sch</td><td>Siliceous Schist</td></tr>
<tr><td>Gr Sch</td><td>Graphitic Schist</td></tr>
<tr><td>Mi Sch</td><td>Mica Schist</td></tr>
<tr><td>Qz Mi Sch</td><td>Quartz Mica Schist</td></tr>
<tr><td>Si Mi Sch</td><td>Silicious Mica Schist</td></tr>
<tr><td>Chl Sch</td><td>Chlorite Schist</td></tr>
<tr><td></td><td></td></tr>
<tr><td>Slt</td><td>Siltstone</td></tr>
<tr><td>Si Slt</td><td>Siliceous Siltstone</td></tr>
<tr><td>Mi Slt</td><td>Micaceous Siltstone</td></tr>
</table></td></tr>
</table>

Gr Slt	Graphitic Siltstone
Si Mi Slt	Siliceous Micaceous Siltstone
Si Gr Slt	Siliceous Graphitic Siltstone
Fe Slt	Ferruginous Siltstone
Mg	Magnesite
Qzt	Quartzite
Mi Qzt	Micaceous Quartzite
Gr Qzt	Graphitic Quartzite
Mt	Magnetite
Qz Br	Quartz Breccia
Fe Br	Ferruginous Breccia
Br	Breccia
VQZ	Vein Quartz
Myl	Shear Mylonite
Gr Myl	Shear graphitic mylonite
FG	Fault Gouge
Gr FG	Graphitic fault gouge
Peg	Pegmatite
Gnt	Granite
mGnt	Microgranite
Apl	Aplite
Serp	Serpentonite
Cly	Clay
Snd	Sand
Soil	Soil
Grv	Gravel
Fill	Fill
Sapr	Saprolite
Shr	Shear
Flt	Fault
N/S	No Sample

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, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *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.*	• Chip samples were taken by metre, recovered dry and split by riffle splitter to yield 2kg to 3kg aliquots. • Duplicates samples from all metre intervals were taken with field duplicates sent for assay at 1 in 25. • RC drill samples referred to in this report were 2 to 3kg chip samples crushed / pulverized using standard lab protocols. • Field duplicates from RC samples were taken at a rate of approximately 1 to 2 samples per drill hole. Field duplicates were taken at the rig by spear sampling selected retained B samples. • Quality assurance of the sampling was carried out by submitting quality control samples including a duplicate sample collected at the rig The Competent Person is satisfied that the sampling system is up to industry standard.

	• *Whether sample sizes are appropriate to the grain size of the material being sampled.*	
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.* • *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.* • *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.*	• Drill samples were sent to NAL laboratories in Pine Creek. • Received sample weights were recorded by NAL for the original and duplicate samples. Sample prep procedure was to sort samples as per the sample logs provided by ARK onto drying trolleys. Samples were dried at 120C for eight hours, cooled and weighed so that a "Dry Weight" was reported. Samples were then Roll crushed two a nominal 1.6 mm and 250 gram split as the assay sample taken using a Jones Riffle Splitter. The split sub-sample was pulverised to a nominal 75Um in a Labtecnics LM2 pulveriser. • Assay procedure as follows: A 300 mg sample aliquot was weighed on an analytical balance and digested in HCl/HNO3/HClO4/HF acids in a Teflon vessel to fumes of perchloric acid, the digest was cooled and leached in conc HCl and then diluted to volume with demineralised water, mixed and the elements assayed using ICP-OES. Each rack of fifty assays contains one blank, four standards [CRM's] and five duplicate [control] samples, the repeat rate is 1 in 8 samples. NAL used GEOSTATS CRM's as their reference standards, CRM's used are GBM 302-5, GBM 903-5, GBM908-10 and GBM311-6. • All techniques used are considered total. • Field duplicates were assayed at approximately 1 in 25 frequency.
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 entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• All intercepts have been verified by Company CP. No independent CP has verified the significant intersections. • No twinning analysis has been undertaken. There are historic proximal holes that may be accessed at a later time. • Primary data (geological logging + sample intervals) entered directly onto spreadsheet at the rig with cross verification of hardcopy sample ledger using Ark Mines protocols. • No adjustment to assay data applied.
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.* • *Specification of the grid system used.*	• All collar coordinates will be surveyed by licensed surveyors Twine Surveys using RTKdGPS with accuracy in x and y of 20mm, and in z of 20cm. • No Down hole surveys were undertaken due to the shallow holes and the vertical orientation of the drill holes.

	• *Quality and adequacy of topographic control.*	• Survey results will be reported in MGA2020 zone 55 and in MGA94 zone 55 for compatibility with historic project data. • The collar locations in this report are hand-held GPS surveyed. • The GPS locations are considered to be an approximate location of the actual collar coordinates. • Topographic control outside the planned high accuracy RTK collar survey is by hydrologically enforced SRTM.
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 Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• Drill spacing was set to approximately 50 m x 50 m in Indicated areas. Drill spacing within centre of the drilling area was reduced to 25m by 25m. • Samples were not composited at the sampling stage. • These factors plus historic holes with incomplete sampling result in some data gaps that require infill. • Variography to determine appropriateness of grade continuity for resource estimation has not yet been carried out. • No resource or reserve is reported.
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.*	• Drill holes were drilled vertically which is considered to minimize any potential sampling bias with the laterite host lithology. Some late-stage faulting may be present, but any offset of laterite and / or mineralisation cannot be predicted at the Mineral Resource drill-out level. • Any sampling bias resultant from the orientation of drilling and possible structural offsets of mineralisation is considered to be minimal.
Sample security	• *The measures taken to ensure sample security.*	• Drill samples were under the care and supervision of Ark Mines staff at all times until transportation by local couriers to the analytical laboratories in Pine Creek. • Ark Mines have continued the secure holdings of chip trays and duplicates.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• Independent audit of RC data is currently underway.

Appendix D: (Gunawarra) JORC Code, 2012 Edition – Table 1

Section 2 Reporting of Exploration Results

(Criteria in this section apply to all succeeding sections.)

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.*	• **EPM 26560 Gunnawarra** is 100% owned by Ark Mines Limited. • There are no third party agreements • No known issues impeding on the security of the tenure of Ark Mines ability to operate in the area exist.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• The area was first drilled by Norninco and then Metallica
Geology	• *Deposit type, geological setting and style of mineralisation.*	Geology specific to site consists of these pre-Cambrian Halls Reward metamorphic rocks overlain by the Sandalwood Serpentinite (Proterozoic injections) and intruded by the Gunnawarra Bump Granite (pale pinkish, medium-grained porphyritic biotite monzogranite) in the late Carboniferous to early Permian. These rocks are buried by the Pleistocene vesicular to massive olivine "Depression" Basalt forming the northern and western margins of the area peripheral to Bell Creek and are largely obscured by late tertiary to Quaternary lateritic soils and alluvium. The Sandalwood Serpentinite forms four outcrops of low topographical highs within EPM 26560, and trends north-west, south of Bell Creek. These are superficially separated by alluvium and/or lateritic clays. At Greys Creek in EPMA 26599, narrow serpentinite belts are associated with the Greys Creek Ultramafic Complex. Deep chemical weathering during the Cainozoic caused the formation of a laterite profile which, where developed over the ultramafic units, contain enhanced nickel and cobalt values. Nickel enrichment >1% is concentrated both in layers in a ferruginous pisolithic laterite found in depressions adjacent to the Serpentinite outcrop and in the underlying weathered Serpentinite. The duricrust varies in depth up to 5m thick. Magnesite is commonly present in the lower parts of the duricrust. The duricrust is underlain either by hard, barren silicified Serpentinite or locally deeply

Criteria	JORC Code explanation	Commentary
		weathered Serpentinite, the latter probably developed along fracture zones.

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.*
		• Refer to Table in Appendix B

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 shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• No high or Low-grade top/bottom-cut has been applied at this pre-resource stage of data processing. • All reported grade averages are sample length weighted averages. • Ni Equivalent grades were based on $82,000 USD per tonne Cobalt value and $27,000 USD per tonne Nickel value. X3 factor.
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.*	• Whilst the laterite mineralisation is generally considered to be horizontal. The thickness and depth will vary. This deposit tends to have deep gullys of laterite.

Criteria	JORC Code explanation	Commentary
	• *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').*	
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.*	• There are no sections for this announcement. • Sections are under construction.
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.*	• All results are reported.
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.*	• All data material to this report that has been collected to date has been reported textually, graphically or both. • Absent material data including bulk density, metallurgical results, water table height and geotechnical characteristics is absent from the historical data record recovered so far, and current data is still undergoing analysis. These data are not relevant to the current pre-resource drill data release.

Appendix D: (Gunawarra) JORC Code, 2012 Edition – Table 1

Section 3 Estimation and Reporting of Mineral Resources

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	• The database was created by HGS Australia for the purpose of conducting a resource evaluation. • The resource evaluation was conducted by HGS Australia.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• No site visits were conducted by HGS Australia.

Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.*
	• *Nature of the data used and of any assumptions made.*
	• *The effect, if any, of alternative interpretations on Mineral Resource estimation.*
	• *The use of geology in guiding and controlling Mineral Resource estimation.*
	• *The factors affecting continuity both of grade and geology.*
		• The resource area has been sufficiently interpreted by geological consultants and the geology matches grade and geological interpretations as anticipated.
		• Criteria used in the interpretations were:
		  • Interpretations were based on nickel values only.
		  • A nominal 1000ppm nickel lower cut-off grade with flexibility for geological continuity.
		  • Sections extended 10m beyond the last interpreted section.

Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	• Mineralised outlines were interpreted by HGS within the coordinates:
		  ○ 8011850N – 8012312N
		  ○ 302860E – 303210E
		  ○ 580mRL – 680mRL

Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* • *The availability of check estimates, previous estimates and/or mine*	• The models were created using Surpac software. • Interpolation method used is Ordinary Kriging • Grade cutting was not required as there were no adverse outliers assays that would have any significant impact. • Model sizes and parameters are:

Criteria	JORC Code explanation	Commentary

production records and whether the Mineral Resource estimate takes appropriate account of such data.

- *The assumptions made regarding recovery of by-products.*
- *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).*
- *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.*
- *Any assumptions behind modelling of selective mining units.*
- *Any assumptions about correlation between variables.*
- *Description of how the geological interpretation was used to control the resource estimates.*
- *Discussion of basis for using or not using grade cutting or capping.*
- *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*

Type	Northing	Easting	Elevation
Minimum Coordinates	8011850	302860	580
Maximum Coordinates	8012312	303210	680
User Block Size	14	10	5
Min. Block Size	3.5	2.5	1.25
Rotation	0	0	0
Total Blocks	84308		
Storage Efficiency %	94.29		

Attribute Name	Type	Decimals	Background	Description
ads	Float	3	-99	
bv	Float	3	-99	
Classif-ication	Integer	-	0	inferred=1, indicated=2 measured=3
co_id2	Real	3	0	inverse distance squared uncut for cobalt
co_ok	Real	3	0	ordinary kriged uncut value for cobalt
cu_id2	Real	3	0	inverse distance squared uncut for copper
cu_ok	Real	3	0	ordinary kriged uncut value for copper
density	Real	2	0	interpolated density values
dns	Float	3	-99	
ke	Float	3	-99	
kv	Float	3	-99	

Criteria	JORC Code explanation	Commentary

lode	Integer	-	0	lode represents wireframe number = 1
ni_id2	Real	3	0	inverse distance squared uncut for nickel
ni_ok	Real	3	0	ordinary kriged uncut value for nickel
nos	Integer	-	-99	
pass_no	Integer	-	0	Ni_ok interpolation pass number
sg	Float	2	0	Interpolated into the model from downhole data

Pass Number	Block Size (m)	Samples min-max	Max Search (m)
1	15m	30-40	30
2	15m	5-40	60
3	15m	2-40	100

Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Tonnages were estimated n a dry basis.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• Univariate statistics were conducted, but an upper cut-off grade was not required.
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods*	• Resource economics identifies the probable lower cut-off to be 4000ppm Ni.

Criteria	JORC Code explanation	Commentary
	and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	• No metallurgical data was made available.
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	• No assessments have been made yet.
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.*	• Bulk densities for 727 samples were conducted from the April drill program and interpolated into the model. Densities ranged from 1.83t/m³ to 3.92 t/m³ with an average of 2.77 t/m³.

Criteria	JORC Code explanation	Commentary
	• *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• Due to not having all of the QAQC data (in particular not having surveyed hole collars but GPS surveys) the resource can only be classified as INFERRED. The company has subsequently completed the survey of the hole collars. This will be supplied to the Resource Geologist. • The results reflect the competent person's view. .
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• No available
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the*	• The competent person has confidence in the interpretation with regards to accuracy for the classification announced. • The interpolation process was run in inverse distance squared to compare a complex algorithm to a simple one. • A background value based on statistical determination was used for the lower grade cut-off for interpretation. • The competent person in confident of the accuracy of the resource

Criteria	JORC Code explanation	Commentary
	procedures used. • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	

Appendix D: (Gunawarra) JORC Code, 2012 Edition – Table 1

Section 4 Estimation and Reporting of Ore Reserves

(Criteria in this section apply to all succeeding sections.)
(Criteria listed in section 1, and where relevant in sections 2 and 3, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	• *Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.* • *Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.*	• No reserves are present