ARK MINES LTD.

2 November 2022

ASX: AHK

Corporate Directory

Directors

Chairman
Tony Corel

Managing Director
Roger Jackson

Executive Director
Ben Emery

Non-Executive Director
Ian Mitchell

Projects

- Gunnawarra Nickel-Cobalt
- Mt Jesse Iron – Copper
- 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

SECOND PHASE OF BENEFICIATION TRIALS FOR GUNNAWARRA NICKEL COBALT PROJECT

HIGHLIGHTS

- **Following from the completion of the first and second phase of its drilling program at its 100% owned Gunnawarra Nickel Cobalt Project, North Queensland Ark is proceeding with metallurgical testing of the nickel cobalt ore for commercial beneficiation at the Eriez pilot plant in Victoria.**
- **The pilot plant is designed as a scalable template for the design and construction of a beneficiation plant for commercial production.**
- **Small scale beneficiation trials have delivered very positive results conducted by Tony King at Herbaton metallurgical and this has been the catalyst to initiate a pilot scale commercial beneficiation program.**
- **Ark on track to report assays from second Gunnawarra drill program this month.**

Ark Mines Ltd (ASX: AHK, "Ark" or the "Company") is pleased to announce that following the completion of the first and second phase of its drilling program at its 100%-owned Gunnawarra Nickel Cobalt Project, North Queensland, it is proceeding with metallurgical testing of the nickel cobalt ore from the project for commercial beneficiation at the Eriez pilot plant in Victoria. The pilot plant is designed as a scalable template for the design and construction of a beneficiation plant for commercial production.

Small scale beneficiation trials have showed positive results conducted by Tony King at Herbaton metallurgical and the results from this program, which will be published in the near-term, is the catalyst for this pilot scale beneficiation program.

Commenting on the beneficiation program, Ark Executive Director Ben Emery said:
"Following encouraging small-scale beneficiation trials which have demonstrated that the Gunnawarra material can be upgraded, Ark has engaged Eriez, a global leader in process plant manufacture to complete the next phase of test work, potentially leading to commercial production. Ark will use material produced from recent drill programs to further understand the potential for increasing grade across the Gunnawarra deposit. This will potentially increase the volume of Direct Sale of Ore grade material. Eriez designs and manufactures separation, metal detection and material handling equipment for processing industries. Eriez will conduct laboratory trials using pilot plant equipment to determine optimum product grade so that such equipment can be scaled up for commercial production.

"Ark looks forward to updating shareholders with results from the Eriez test program as they become available. Assays from the second phase Gunnawarra drill program are also on track to be reported this month."

Forward Looking Statements

Any forward-looking information contained in this news release is made as of the date of this news release. Except as required under applicable securities legislation, Ark does not intend, and does not assume any obligation, to update this forward-looking information. Any forward-looking information contained in this news release is based on numerous assumptions and is subject to all of the risks and uncertainties inherent in the Company's business, including risks inherent in resource exploration and development. As a result, actual results may vary materially from those described in the forward-looking information. Readers are cautioned not to place undue reliance on forward looking information due to the inherent uncertainty thereof.

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

For further Information please contact:

Roger Jackson
Executive Director
info@arkmines.com.au

Ben Emery
Executive Director
info@arkmines.com.au

Released through: Ben Jarvis, Six Degrees Investor Relations, +61 413 150 448

Or visit our website and social media www.arkmines.com | www.twitter.com/arkmineslimited |www.linkedin.com/company/ark-mines-limited/

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

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 Member 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.

APPENDICES A 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.*	• 844 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 (28 collars, Total 844m.) • Large air pack with air booster
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/coarse material.*	• 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 is evident between recovery and grade.
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.*	• 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

- *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.*
- *The total length and percentage of the relevant intersections logged.*

interval. Chip trays (with chips) were photographed and retained for correlation with grade data.
- Of 844m drilled, 844m 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.

Code	Lithology
LAT	Laterite
Sch	Schist
Si Sch	Siliceous Schist
Gr Sch	Graphitic Schist
Mi Sch	Mica Schist
Qz Mi Sch	Quartz Mica Schist
Si Mi Sch	Silicious Mica Schist
Chl Sch	Chlorite Schist
Slt	Siltstone
Si Slt	Siliceous Siltstone
Mi Slt	Micaceous Siltstone
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.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• 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.
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.* • *Quality and adequacy of topographic control.*	• 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 • 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.

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 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

Criteria	JORC Code explanation	Commentary
		"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 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
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.*	• NA

Criteria	JORC Code explanation	Commentary
	• *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.*	
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	• 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.
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.