



Arc Minerals Limited - First Phase of Proof of Concept Study Completed

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**Arc Minerals Ltd
('Arc' or the 'Company')**

First Phase of Proof of Concept Study Completed at Cheyeza East

Arc Minerals ("Arc" or "the Company") the Zambian focussed copper exploration and development company, is pleased to announce the completion of a positive Proof of Concept Study (the "Study" or "PoC"), for which conceptual mining, extraction and processing methods were examined for the Cheyeza East and Kalaba Deposits in Northwest Zambia.

The PoC concludes that both Cheyeza East and Kalaba Deposits are technically feasible and economically viable, thereby supporting the Company's decision to advance the formal technical studies to target completion of a Scoping Study during the first half of 2021.

Summary Highlights

- Study confirms technical and economic feasibility for the Cheyeza East Oxide

and Kalaba Sulphide ores and the viability of progressing to Scoping Study phase.

- Both projects deliver low strip ratios of less than 1:1
- Study modelled on a 3,000 t/d processing plant for both projects at a \$6,500/t copper price
- Modest Capital requirements with quick payback
- Potential for asset-backed loan against the plant
- **Independent consultants used to generate the grade-tonnage models, metallurgical testwork and processing flowsheet/assumptions and run the Whittle optimisation**

Nick von Schirnding, Executive Chairman of Arc stated:

"This is a major and very exciting development for us and is the result of a significant amount of work completed over the past year. Detailed metallurgical testwork and financial studies project a highly attractive return on investment for Zamsort with annual free cash generation per annum of around \$15 - \$20m at conservative copper prices, which would be used to progress further drilling and return capital to Arc Minerals. Capex requirements are minimal and likely to be financed by offtake agreements or asset-backed lending. Our current timeline indicates production potentially commencing in around 12 months' time.

I look forward to providing further results from these studies during H1 in 2021."

Summary

Arc Minerals in association with a number of key independent consultants completed a Proof of Concept study for the Cheyeza East and Kalaba Deposits examining the mining and processing requirements for the respective projects.

Grade-Tonnage models generated for the respective deposits were used for the Whittle optimisation runs, through which a number of pit shells were generated simulating the potential open pit mines.

Studies of this nature typically assume +/- 50% order of accuracy. However, for this PoC, mining costs used were based on contractor mining rates using existing in-country open pit mining contractor rates at current operations.

Similarly, plant processing capital expenditures and operating costs were based on prevailing prices and costs from operations that are currently in operation in Zambia.

The respective projects infrastructure and logistics will be assessed in the planned upcoming Scoping Studies.

Further drilling and testwork along with the respective technical studies will be required before the Company is able to formally confirm that the projects are economically viable.

Investors should note that the PoC uses non-JORC management resource estimates for the Cheyeza East and Kalaba Deposits. However, the finalisation of a JORC report on the Cheyeza and East Kabala Deposits are very advanced, so there is a high level of confidence in the management resource estimates that underpin the PoC.

Qualified Persons

The technical data contained in this disclosure has been read and approved by Mr Vassilios Carellas (BSc (Hons), MAusIMM) who is the Chief Operating Officer for Arc and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined under the JORC Code (2012).

****ENDS****

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Market Abuse Regulation (MAR) Disclosure

Certain information contained in this announcement would have been deemed inside information for the purposes of Article 7 of Regulation (EU) No 596/2014 until the release of this announcement.

Forward-looking Statements

This news release contains forward-looking statements that are based on the Company's current expectations and estimates. Forward-looking statements are frequently characterised by words such as "plan", "expect", "project", "intend", "believe", "anticipate", "estimate", "suggest", "indicate" and other similar words or statements that certain events or conditions "may" or "will" occur. Such forward-looking statements involve known and unknown risks, uncertainties and other factors that could cause actual events or results to differ materially from estimated or anticipated events or results implied or expressed in such forward-looking statements. Such factors include, among others: the actual results of current exploration activities; conclusions of economic evaluations; changes in project parameters as plans continue to be refined; possible variations in ore grade or recovery rates; accidents, labour disputes and other risks of the mining industry; delays in obtaining governmental approvals or financing; and fluctuations in metal

prices. There may be other factors that cause actions, events or results not to be as anticipated, estimated or intended. Any forward-looking statement speaks only as of the date on which it is made and, except as may be required by applicable securities laws, the Company disclaims any intent or obligation to update any forward-looking statement, whether as a result of new information, future events or results or otherwise. Forward-looking statements are not guarantees of future performance and accordingly undue reliance should not be put on such statements due to the inherent uncertainty therein.

Notes to the Editors

Arc Minerals is a dynamic AIM listed exploration and mine development company focused on the discovery and development of large-scale copper and copper cobalt deposits in the Western part of the Zambian Copperbelt.

Arc Minerals current holdings include:

- A 66% equity interest in Zamsort Limited ("Zamsort"), a private company focused on a prospective copper licence in the Zambia Copperbelt.
- A 72.5% equity interest in Zaco Investments Limited ("Zaco"), a private company focused on a prospective copper and cobalt licence adjacent to Zamsort.

For more information visit www.arcminerals.com

Glossary of Technical Terms

"anomaly or anomalous"	something in mineral exploration that geologists interpret as deviating from what is standard, normal, or expected.
"assay"	The laboratory test conducted to determine the proportion of a mineral within a rock or other material. For copper, usually reported as percentage which is equivalent to percentage of the mineral (i.e. copper) per tonne of rock.
"azimuth"	the "compass direction" refers to a geographic bearing or azimuth as measured by a magnetic compass, in true or magnetic north.
"bornite"	Bornite, also known as peacock ore, is a copper sulphide mineral with the formula Cu_5FeS_4 .
"breccia"	Breccia is a rock classification, comprises millimetre to metre-scale rock fragments cemented together in a matrix, there are many sub-classifications of breccias.
"chalcocite"	Chalcocite is a copper sulphide mineral with the formula Cu_2S and is an important copper ore mineral. It is opaque and dark-gray to black with a metallic luster.
"chalcopyrite"	Chalcopyrite is a copper sulphide mineral with formula $CuFeS_2$. It has a brassy to golden yellow colour.

"chargeability"	Chargeability is a physical property related to conductivity. Chargeability is used to characterise the formation and strength of the induced polarisation within a rock, under the influence of an electric field, suggesting sulphide mineralisation at depth.
"covellite"	Covellite is a copper sulphide mineral with the formula CuS. This indigo blue mineral is ubiquitous in some copper ores.
"diamond drilling"	A drilling method in which penetration is achieved through abrasive cutting by rotation of a diamond encrusted drill bit. This drilling method enables collection of tubes of intact rock (core) and when successful gives the best possible quality samples for description, sampling and analysis of an ore body or mineralised structure.
"dip"	A line directed down the steepest axis of a planar structure including a planar ore body or zone of mineralisation. The dip has a measurable direction and inclination from horizontal.
"grab sample"	are samples of rock material collected from a small area, often just a few pieces or even a single piece of rock "grabbed" from a face, dump or outcrop or roughly 2-5kg. These are common types of rock samples collected when conducting mineral exploration. The sample usually consists of material that is taken to be representative of a specific type of rock or mineralisation.
"grade"	The proportion of a mineral within a rock or other material. For copper mineralisation this is usually reported as % of copper per tonne of rock.
"g/t"	grams per tonne; equivalent to parts per million ('ppm')
"hematite"	Hematite is the mineral form of iron(III) oxide (Fe ₂ O ₃), one of several iron oxides. Magnetite alteration is also typically associate with porphyry copper systems, at or close to the central core.
"Indicated Resource"	An "Indicated Mineral Resource" is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics, can be estimated with a level of confidence sufficient to allow the appropriate application of technical and economic parameters, to support mine planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough for geological and grade continuity to be reasonably assumed.
"Inferred Resource"	An "Inferred Mineral Resource" is that part of a Mineral Resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes.
"Induced Polarisation Geophysics"	Induced polarisation (IP) is a geophysical survey used to identify the electrical chargeability of subsurface materials, such as sulphides. The survey involves an electric current that is transmitted into the subsurface through two electrodes, and voltage is monitored through

	two other electrodes.
"intercept"	Refers to a sample or sequence of samples taken across the entire width or an ore body or mineralised zone. The intercept is described by the entire thickness and the average grade of mineralisation.
"JORC Code"	The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves ('the JORC Code') is a professional code of practice that sets minimum standards for Public Reporting of minerals Exploration Results, Mineral Resources and Ore Reserves.
"K"	The element potassium, abundance on surface can be inferred from radiometric surveys
"Magnetics"	Rocks are made up of different minerals and the magnetic properties of a rock depends on the amount and type of iron rich minerals it contains. Earth's magnetic field interacts with these iron rich minerals to generate variations in the magnetic field. Measuring and mapping these variations allows remotely mapping of the distribution and patterns of magnetic rocks and, as a result, map the subsurface geology
"magnetite"	Magnetite is main iron ore mineral, with chemical formula Fe_3O_4 . Magnetite is ferromagnetic, and it is attracted to a magnet and can be magnetized to become a permanent magnet itself.
"massive"	In a geological sense, refers to a zone of mineralisation that is dominated by sulphide minerals. The sulphide-mineral-rich material can occur in centimetre-scale, metre-scale or in tens of metres wide veins, lenses or sheet-like bodies containing sphalerite, galena, and / or chalcopyrite etc.
"Measured Resource"	A "Measured Mineral Resource" is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are so well established that they can be estimated with confidence sufficient to allow the appropriate application of technical and economic parameters, to support production planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough to confirm both geological and grade continuity.
"Mineral Resource"	A "Mineral Resource" is a concentration or occurrence of diamonds, natural solid inorganic material, or natural solid fossilised organic material including base and precious metals, coal, and industrial minerals in or on the Earth's crust in such form and quantity and of such a grade or quality that it has reasonable prospects for economic extraction. The location, quantity, grade, geological characteristics and continuity of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge.
"mineralisation"	In geology, mineralisation is the deposition of economically important metals (copper, gold, lead, zin etc) that in some cases can be in sufficient quantity to form mineral ore bodies.
"open pit mining"	A method of extracting minerals from the earth by excavating downwards from the surface such that the ore is extracted in the open air (as opposed to underground mining).

"outcrop"	A section of a rock formation or mineral vein that appears at the surface of the earth. Geologists take direct observations and samples from outcrops, used in geologic analysis and creating geologic maps. In situ (in place) measurements are critical for proper analysis of the geology and mineralisation of the area under investigation.
"polymict"	A geology term, often applied to breccias or conglomerates, which identifies the composition as consisting of fragments of several different rock types.
"Preliminary Economic Assessment"	NI 43-101 defines a PEA as "a study, other than a pre-feasibility study or feasibility study, which includes an economic analysis of the potential viability of mineral resources".
"Pyrrhotite"	Pyrrhotite is an iron sulfide mineral with the formula $Fe(1-x)S$ ($x = 0$ to 0.2). It is a nonstoichiometric variant of FeS , the mineral known as troilite . Pyrrhotite is also called magnetic pyrite
"Radiometrics"	The radiometric, or gamma-ray spectrometric method is a geophysical process used to estimate concentrations of the radioelements potassium, uranium and thorium by measuring the gamma-rays which the radioactive isotopes of these elements emit during radioactive decay
"sediments"	Sedimentary rocks formed by the accumulation of sediments. There are three types, Clastic, Chemical and Organic sedimentary rocks.
"sphalerite"	Sphalerite is a zinc sulphide in crystalline form but almost always contains variable iron, with formula $(Zn,Fe)S$. It can have a yellowish to honey brown or black colour.
"supergene"	Supergene ore processes occur near surface, and form deposits of secondary minerals, such as malachite, azurite, chalcocite, covellite, digenite, etc.
"surface rock chip samples"	Rock chip samples approximately 2kg in size that are typically collected from surface outcrops exposed along rivers and mountain ridgelines.
"Th"	The element thorium, abundance on surface can be inferred from radiometric surveys
"U"	The element uranium, abundance on surface can be inferred from radiometric surveys
"veins"	A vein is a sheet-like or anastomosing fracture that has been infilled with mineral ore (chalcopyrite, covellite etc) or mineral gangue (quartz, calcite etc) material, within a rock. Veins form when minerals carried by an aqueous solution within the rock mass are deposited through precipitation and infill or coat the fracture faces.
"volcanics"	Volcanic rock such as andesite or basalt that is formed from magma erupted from a volcano, or hot clastic material that erupts from a volcano and is deposited as volcaniclastic or pyroclastics.

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