

RNS Number : 6101Z
African Pioneer PLC
16 May 2023



African Pioneer Plc
("African Pioneer " or "the Company")

JORC 2012 Indicated and Inferred Mineral Resource Estimate for the Ongombo Copper Project, Namibia

African Pioneer Plc ("African Pioneer" or the "Company") is pleased to announce the results of an updated Indicated and Inferred Mineral Resource Estimate for the Ongombo copper project ("Ongombo" or the "Project") in Namibia, completed by independent consultants Addison Mining Services. African Pioneer holds an 85% interest in the Project.

Highlights

- Highly successful drill programme and new Mineral Resource Estimate results in an additional 100,000 tonnes in contained copper metal and an additional 84,000 oz of gold across all Resource categories.
- Expenditure of approximately US\$480,000 on direct drilling costs ahead of the most recent Mineral Resource update represents a unit resource development cost for the additional 100,000 tonnes of contained copper metal of approximately US\$4.8 per tonne of contained metal
- The Ongombo mineralization remains open at depth with scope for the addition of further tonnage and based on recent twinned drilling, potential for significantly enhanced gold grades in the East - Ost shoots
- A 25-year Mining Licence has been granted subject to completion of an active Environmental and Social Impact Assessment.

The updated Mineral Resource Estimate has been completed by Addison Mining Services Ltd., an independent consultancy based in the United Kingdom and is reported in accordance with the JORC Code 2012 edition. Resources are of Indicated and Inferred categories and include:

- Total Indicated Resources of 5.7 million tonnes gross at 1.1 % Cu Equivalent ("CuEq"), 0.94 % Cu, 0.23 g/t Au and 4.4 g/t Ag, for 53,000 t Cu, 42,000 oz Au and 800,000 oz Ag, including:
 - Open pit potential Resources of 0.93 million tonnes at 0.68% CuEq, 0.57 % Cu, 0.19 g/t Au and 2.6 g/t Ag, for 5,300 t Cu, 5,700 oz Au and 78,000 oz Ag, above a cut-off grade of 0.25% CuEq
 - Underground potential Resources of 4.7 million tonnes at 1.2% CuEq, 1.0% Cu, 0.24 g/t Au and 4.7 g/t Ag, for 48,000 t Cu, 36,000 oz Au and 72,000 oz Ag, above a cut-off grade of 0.5% CuEq
- Inferred Underground potential Resources of approximately, 23 million tonnes at 1.1% CuEq, 0.95% Cu, 0.24 g/t Au and 5.8 g/t Ag, for 220,000 t Cu, 180,000 oz Au and 4.3 million oz Ag, above a cut-off grade of 0.5% CuEq

Notes:

1. The resource figures above are stated on a gross basis – please see full text below for the resources net attributable to African Pioneer's 85% interest.

2. Also set out below is a comparison to the previous mineral resource estimate.

Colin Bird Chairman & CEO said: *“I am delighted with the results of our recent programme and the re-evaluation of the Mineral Resource by the external consultant which has achieved the significant milestone of increasing the contained metal content of copper and gold by 100Kt Cu and 84Koz Au.*

The initial development of an open pit provides the means to establish a number of parallel drives excavated in mineralisation enabling us to operate a larger number of working faces which in turn implies more output and the need for greater processing capacity which is more efficient than the original proposal for the development of twin 7m x 7m declines to access underground resources which imposed a huge capital burden on the Project and a large proportion of the development was in waste and therefore unproductive.

Our recent drill programme included the twinning of holes drilled by Goldfields into the deeper East - Ost shoot. This drilling intersected significant gold values peaking at 1.3g/t Au over 1.15 m with a mean of 0.2 g/t Au. We intend to complete further twinning of holes and if we can replicate our most recent gold values we will be looking at a Resource with a significantly enhanced gold credit.”

JORC 2012 Indicated and Inferred Mineral Resource Estimate

Project Background

The Ongombo project is situated in Exclusive Prospecting License (EPL) 5772 in the Khomas region of the Windhoek District of Namibia, 45 km from Windhoek, the capital of Namibia. The project area has relatively well-developed infrastructure on the farms Ongombo Ost and Ongombo West. The property is easily accessed by a tar road from Windhoek to Gobabis and then on a gravel road up to the project area. There is also a railway line from Gobabis to Walvis Bay, via Windhoek running parallel to the tarred road. The Ongombo Project is located 15km northeast from Otjihase Mine which consists of two underground mines (Otjihase and Matchless) and an 800ktpa copper concentrator.

The Ongombo project lies within the Matchless Member of the Kuiseb Formation, a conspicuous assemblage of lenses of foliated amphibolites, chlorite-amphibolite schist, talc schist and metagabbro. This belt, up to 5km wide in the Otjihase area, stretches 350km east-north-eastwards in the Southern Zone of the Damara Orogen from the Gorob – Hope area. The deposit is generally described as a Besshi-type massive sulphide. These are described as thin sheet-like bodies of massive to well-laminated pyrite, pyrrhotite, and chalcopyrite within thinly laminated clastic sediments and mafic tuffs. At the Ongombo project mineralisation occurs in one continuous zone approximately 7 km long and 0.5 – 1 km wide. The mineralisation zone dips consistently 15-20° northwest and plunges 5° northeast. Mineralisation is gradually thinning westward.

In 2021 the Shali Group sold 85% equity in the Licence to African Pioneer PLC, African Pioneer are now managers and funders of the License, Shali Group are County Managers for African Pioneer. In September 2021 a Scoping Study was completed by consultants Practara Pty Ltd and was based on a Mineral Resource Estimate undertaken by consultants Red Bush Geoservices. The Scoping study proposed mining entirely by underground mining and assumed a minimum mining height of 1.05 m with access via twin declines. Alternative mining scenarios have been considered in this Resource update.

The pending renewal application for EPL 5772 which expired on 8 March 2023 is now reflected on the Namibian Mines and Energy Cadastre Map Portal and is for an additional two-year extension. A conditional Environmental Clearance Certificate for mining activities was granted on EPL 5772 and is valid until 16 April 2026. A 20 Year Mining Licence, ML 240, was granted on 10 August 2022 and covers a portion of EPL 5772 and approximately one third of the open pit resource. An extension to the Mining Licence was submitted on 6 September 2022 to encompass the wider Resource Area.

Mineral Resource Estimate

The updated Mineral Resource Estimate has been completed by Addison Mining Services Ltd., an independent consultancy based in the United Kingdom and is reported in accordance with the JORC code 2012 edition. Resources are of Indicated and Inferred categories and include.

- Total Indicated Resources of 5.7 million tonnes gross at 1.1 % Cu Equivalent (“CuEq”), 0.94 % Cu, 0.23 g/t Au and 4.4 g/t Ag, for 53,000 t Cu, 42,000 oz Au and 800,000 oz Ag, including;
 - Open pit potential Resources of 0.93 million tonnes at 0.68% CuEq, 0.57 % Cu, 0.19 g/t Au and 2.6 g/t Ag, for 5,300 t Cu, 5,700 oz Au and 78,000 oz Ag, above a cut-off grade of 0.25% CuEq
 - Underground potential Resources of 4.7 million tonnes at 1.2% CuEq, 1.0% Cu, 0.24 g/t Au and 4.7 g/t Ag, for 48,000 t Cu, 36,000 oz Au and 72,000 oz Ag, above a cut-off grade of 0.5% CuEq
- Inferred Underground potential Resources of approximately, 23 million tonnes at 1.1% CuEq, 0.95% Cu, 0.24 g/t Au and 5.8 g/t Ag, for 220,000 t Cu, 180,000 oz Au and 4.3 million oz Ag, above a cut-off grade of 0.5% CuEq

Immediately to the north-west of the open pit in the “central shoot” there is an estimated underground Resource inventory of 2.1 million tonnes at 1.2% Cu which maybe readily accessed by developing access from the high wall of the open pit, representing potential for a timely and efficient transition from open pit to underground mining. The remainder of the Indicated underground resource may then be accessible following further development. Further studies are required to assess the economic viability of such an operation.

Ongombo project has been explored for over 30 years and 209 historical drill holes (pre-1991) have been used to inform the estimate. The Indicated resource is restricted only to the area where new drilling (2007 and later) has been completed. The area is 2.2 km by 0.5 km. The northwest of the Ongombo project is estimated based on historic drilling entirely (drillholes from 1991 and earlier) and is restricted to the Inferred category. The Inferred area is approximately 4 km by 0.5 km in surface expression. African Pioneer plans to explore this area following evaluation of the Indicated open pit and underground resources and, given favourable results, undertake further exploration drilling.

The Mineral Resource Estimate is based on wireframe restricted block modelling with grade estimation by ordinary kriging. Pit optimisation was used to identify material which may be amenable to open pit mining. These data are presented in Table 1 below above a cut-off grade of 0.25% CuEq, in addition to Resources that may be amenable to underground mining techniques above a cut-off grade of 0.5% CuEq. Cu, Au and Ag grades have been diluted to reflect minimum mining width of 1.6 m. For further information see JORC Table 1 below. Supporting images can be found by clicking on the following links.

Figure 1: Ongombo Plan View Drilling Overview

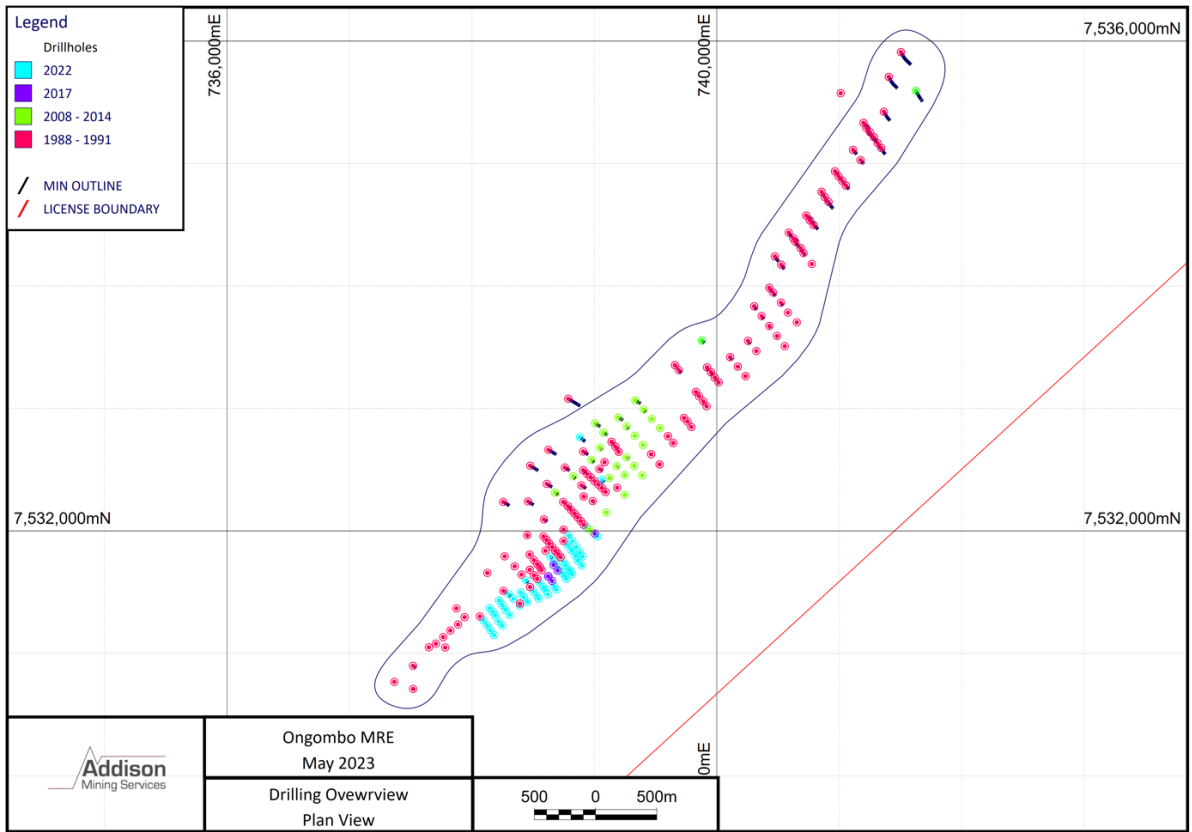


Figure 2: Ongombo MRE Block Model Example Cross-Section

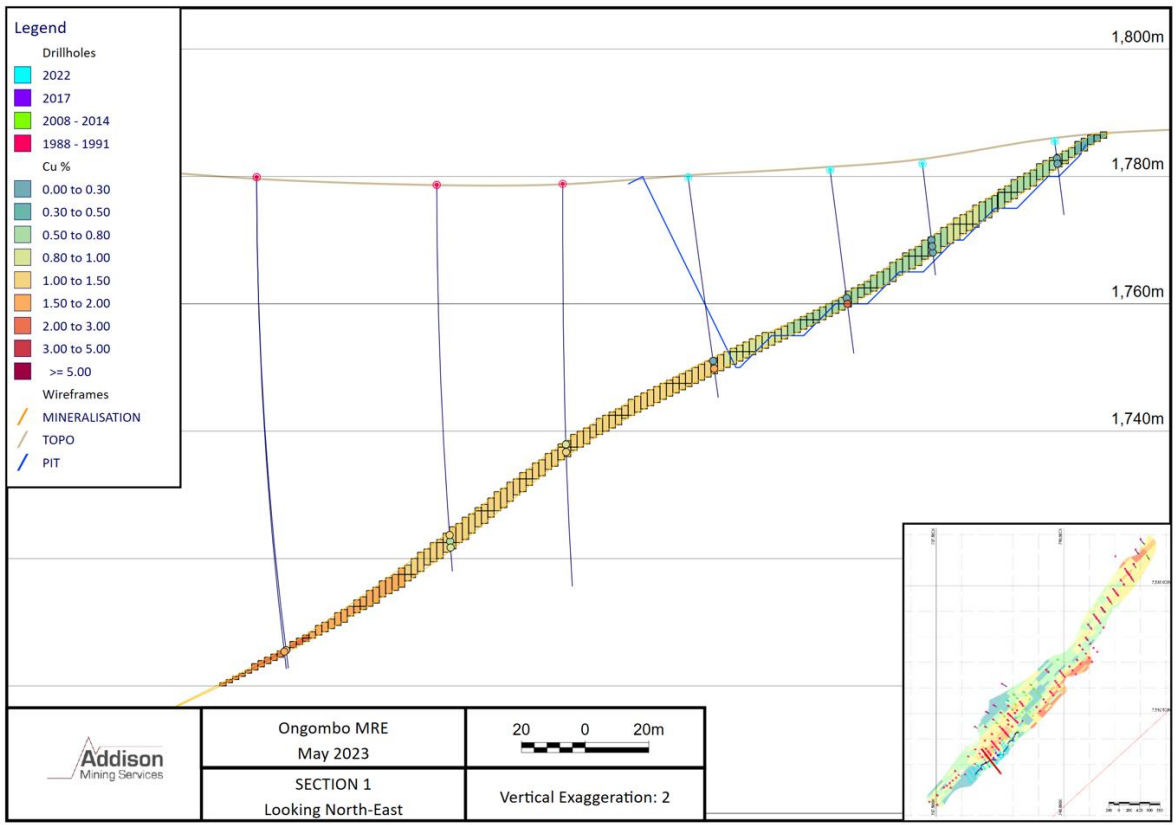
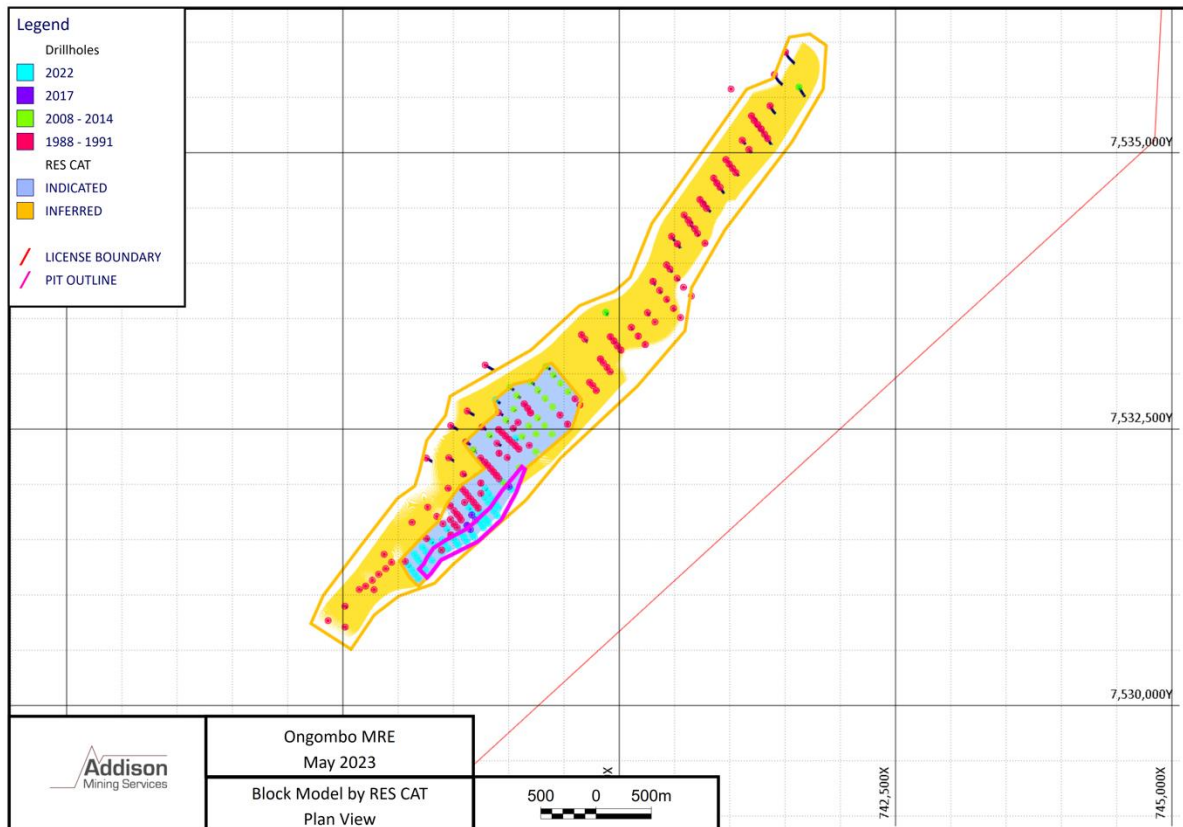


Figure 3: Ongombo Plan View Resource Category



The estimate incorporates new drilling by African Pioneer completed between 22nd April and 15 November 2022. African Pioneer drilled 54 shallow diamond holes, totalling of 2,288.80 m (ranging between 5.89 m and 200.93 m in depth). Drillhole size was PQ in overburden with HQ tails. All holes were drilled with inclination -75° and 142° azimuth. In addition, six drillholes completed in 2017 by Shali Group and 26 drillholes completed in 2008 and 2014 by Namibian Copper Organisation (“NCO”) along with 209 drillholes completed by Tsumeb Corporation Ltd in 1988 – 1991 were used in the estimate.

Table 1: Indicated and Inferred Mineral Resources for the Ongombo Project, Namibia. *Gross representing 100% estimated Resources.

CuEq% Cut off	Tonnage (t)	CuEq (%)	Cu (%)	Au (g/t)	Ag (g/t)	Cu (t)	Au (oz)	Ag (oz)
Gross*								
Open Pit Indicated								
0.25	930,000	0.68	0.57	0.19	2.6	5,300	5,700	78,000
Underground Indicated								
0.50	4,700,000	1.20	1.00	0.24	4.7	48,000	36,000	720,000
Total Indicated								
Various	5,700,000	1.1	0.94	0.23	4.4	53,000	42,000	800,000
Underground Inferred								
0.50	23,000,000	1.10	0.95	0.24	5.8	220,000	180,000	4,300,000
Inferred plus Indicated								
Various	29,000,000	1.1	0.94	0.24	5.5	270,000	220,000	5,100,000

Table 2: Indicated and Inferred Mineral Resources for the Ongombo Project, Namibia. *Net representing 85% estimated Resources reflecting African Pioneer's interest in the project.

CuEq% Cut off	Tonnage (t)	CuEq (%)	Cu (%)	Au (g/t)	Ag (g/t)	Cu (t)	Au (oz)	Ag (oz)
Net 85%*								
Open Pit Indicated								
0.25	790,000	0.68	0.57	0.19	2.6	4,500	4,800	66,000
Underground Indicated								
0.50	4,000,000	1.20	1.00	0.24	4.7	41,000	31,000	610,000
Total Indicated								
Various	4,800,000	1.1	0.94	0.23	4.4	45,000	36,000	680,000
Underground Inferred								
0.50	19,600,000	1.10	0.95	0.24	5.8	190,000	150,000	3,700,000
Inferred plus Indicated								
Various	24,700,000	1.1	0.94	0.24	5.5	230,000	190,000	4,300,000

Notes relating to Mineral Resource Estimate:

1. The independent Competent Person for the Mineral Resource Estimate, as defined by the JORC Code (2012 edition), is Mr. Richard Siddle, MSc, MAIG, of Addison Mining Services Ltd since November 2014. The effective date of the Mineral Resource Estimate is 25th of April 2023. Mr Siddle has completed a site visit between 30th April and 1st May 2023.
2. No mineral reserve estimates have been undertaken. Mineral resources that are not mineral reserves do not have demonstrated economic viability. The quantity and grade of reported Inferred Resources in this Mineral Resource Estimate are uncertain in nature and there has been insufficient exploration to define these Inferred Resources as Indicated or Measured, however it is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration and verification including infill drilling, further verification of legacy drillholes via twin drilling and metallurgical testing. Following further exploration it may be possible to convert some of the Inferred Mineral Resources to Indicated Mineral Resources.
3. Copper Equivalent is based on assumed prices of US\$9,000 per tonne Cu, US\$1,800 per oz Au and US\$20 per oz. Recovery and selling factors (see below) were incorporated into the calculation of Cu Eq values. It is the Company's and Competent Persons' opinion that all the elements included in the metal equivalents calculation (copper, gold and silver) have a reasonable potential to be recovered and sold.
4. Cu Eq% is calculated as $Cu\% + (Au \times 0.522) + (Ag \times 0.006)$, with Au and Ag expressed in terms of g/t.
5. Open pit mining assumes a Cu price of US\$9,000 per tonne with 96% payability on metal in concentrate with selling cost US\$480 per tonne, Au price of US\$1,800 per oz with 90% payability and Ag price of US\$20 per oz with 90% payability. Pit optimisation and cut-off grade selection was based on the assumption of 87% recovery of Cu, 75% recovery of Au and 75% recovery of Ag, by flotation at \$11.6/t plus \$5.7/t G&A. Mining costs were assumed as \$2/t. Underground mining was based on the same assumptions with a mining costs of \$20/t.
6. Indicated and Inferred Mineral Resource categories set out in the table above at cut-off grades >0.25% CuEq for open pit and 0.5% CuEq for underground mining comply with the resource definitions as described in the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. The JORC Code, 2012 Edition. Prepared by: The Joint Ore Reserves

Committee of The Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Minerals Council of Australia (JORC).

7. Numbers are rounded to reflect the fact that an Estimate of Resources is being reported. Rounding of numbers may result in differences in calculated totals and averages. All tonnes are metric tonnes.
8. Pit slopes were assumed as 40 degrees in overburden and fresh rock. No geotechnical studies have been completed to support this assumption and the requirement for shallower pit slopes may serve to materially reduce the open pit mineral resource.
9. The Mineral Resource Estimate set out above was based on the wireframe interpretation of the mineralised unit. At the Ongombo project mineralisation occurs in one continuous zone approximately 7 km long and 0.5 – 1 km wide. The mineralisation zone dips consistently 15-20° northwest and plunges 5° northeast. Mineralisation is gradually thinning westward.
10. The block size was 10 mE x 30 mN x 5 mZ with further sub-blocking by 5 divisions east and north and 10 divisions in the Z direction. The block model was rotated by 45° around Z axis.
11. Grades were estimated using Ordinary Kriging of 1 m downhole composites. An incrementally larger search ellipsoid with dimensions 250 x 75 x 50 m was used and expanded by a factor of 1, 2 and 3 for Cu and Ag and 1 and 1.5 for Au. The maximum number of samples per search was restricted to 24. Discretisation was 2x6x2. The estimate was completed using Micromine 2023.3 software.
12. In order to restrict the influence of high-grade outlier Au assays thresholds for estimation were applied and samples were clamped to 2 g/t Au based on the distance from the sample to the estimated block. Samples above 2 g/t used their original value inside a search of 50 x 15 x 10 m and were capped at 2 g/t outside of those radii.
13. Mineralisation in the open pit resource ranges from at surface to 30 m below the surface and extends approximately 1200 m down-plunge towards northeast and 100 m down-dip to the northwest. The underground resource extends from the pit rim 400 m down dip to the northwest and 4,500 m down plunge to the northeast. Mineralisation is 500 m below surface at its deepest point.
14. The mineral resource is closed off by drilling and as it nears surface to the southwest and southeast. In the north east area of the deposit, mineralisation may continue down dip and plunge and it has been extrapolated by ~200m from the edge of drilling, were further mineralisation to be present here it would likely only be amenable to underground mining due to the depth of the mineralisation unit.

Comparison to Previous Mineral Resource Estimate.

The Previous Mineral Resource Estimate reported in accordance with JORC (2012) for the Ongombo project was conducted by Red Bush Geoservices with the effective date of 30th September 2021. The estimate comprised 10.4 million tonnes of Indicated Resources at 1.4% Cu, 0.35 g/t Au and 7 g/t Ag, and 1.65 million tonnes of Inferred at 1.65 % Cu, 0.35 g/t Au and 7.3 g/t Ag. This updated estimate represents an increase of approximately 100,000 tonnes of contained Cu and an additional 84,000 oz of Au over all Resource classifications. Key differences accounting for the variation in the estimates are described as follows.

- Red Bush considered the minimum mining height as 1.05 m. AMS considers this mining height is not realistic in modern mining scenarios. AMS diluted the model to minimum 1.6 m mining height, therefore the tonnage reported by AMS is higher and the grades lower.
- Red Bush reported the resource at cut-off grade of 1% Cu, which in AMS opinion excludes the material with a reasonable prospect of economic extraction in between 0.5% and 1% Cu. Moreover, Red Bush reports Au and Ag, however no Au and Ag credits were considered for cut-off calculation and reporting.
- Reviewing of Red Bush estimate indicates that a number of samples with values 0 g/t were used where no Au assay was recorded for that sample. Due to this, AMS is of the opinion that Au is underreported in the Red Bush MRE. AMS prevented Au grades from over smearing into areas of no assay by use of smaller search radii, leaving some blocks in the model non-estimated for Au.
- In AMS' opinion due to data spacing and reliance on historic drilling the proportion of Indicated resource in East/Ost Shoots is not warranted.

Technical Sign off

The technical information in this release has been reviewed by Mr R. J. Siddle, MSc, MAIG Principal Resource Geologist for Addison Mining Services Ltd. Mr. Siddle is an independent Competent Person within the meaning of the JORC (2012) code and a Qualified Person under the AIM Rules, having over 15 years' experience in the industry. Mr. Siddle has reviewed and verified the technical information that forms the basis of, and has been used in the preparation of, the Mineral Resource Estimate and this announcement, including analytical data, drilling logs, QC data, density measurements, and sampling. Mr. Siddle consents to the inclusion in this announcement of the matters based on the information, in the form and context in which it appears. Mr Siddle was assisted in the preparation of the estimate by Ms P. M. Mierzwa who worked under the direction of the Competent Person, Ms Mierzwa is thanked for her involvement and contribution to the study.

Glossary

"CuEq"	Copper Equivalent is based on assumed prices of US\$9,000 per tonne Cu, US\$1,800 per oz Au and US\$20 per oz. Recovery and selling factors (see below) were incorporated into the calculation of Cu Eq values. It is the Company's and Competent Persons' opinion that all the elements included in the metal equivalents calculation (copper, gold and silver) have a reasonable potential to be recovered and sold.
"g/t"	Grammes per tonne
"Indicated Resource"	An 'Indicated Mineral Resource' is that part of a Mineral Resource for which quantity, grade (or quality), densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of Modifying Factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit.
"Inferred Resource"	That part of a Mineral Resource for which quantity and grade (or quality) are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade (or quality) continuity. It is based on exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes.
"Kriging"	Geostatistical process to extrapolate numerical values from samples into areas of no data

“Mineral Resource”	A concentration or occurrence of material of economic interest in or on the earth's crust in such form and quantity that there are reasonable and realistic prospects for eventual economic extraction. The location, quantity, grade, continuity, and other geological characteristics of a Mineral Resource are known, estimated from specific geological evidence and knowledge, or interpreted from a well-constrained and portrayed geological model.
“oz”	Troy Ounce, unit of mass for selling of precious metals.
“PQ” & “HQ”	Referring to different drill core diameters, 85mm & 63.5mm respectively
“RC drilling”	Reverse circulation drilling
“t”	Tonnes (metric)
“\$/t”	US dollars per tonne

For further information, please contact: African Pioneers PLC

Colin Bird, Chairman	Tel +44 (0) 20 7581 4477
Beaumont Cornish Limited – Financial Adviser Roland Cornish/Asia Szusciak	Tel +44 (0) 20 7628 3396
Novum Securities Limited – Joint Broker Colin Rowbury /Jon Belliss	Tel +44 (0) 20 7399 9400

or visit <https://africanpioneerplc.com/>

The information contained within this announcement is deemed by the Company to constitute inside information as stipulated under the Market Abuse Regulations (EU) No. 596/2014 as it forms part of UK Domestic Law by virtue of the European Union (Withdrawal) Act 2018 ("UK MAR").

JORC Code, 2012 Edition – Table 1 report template

Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Sampling of African Pioneer 2022 drilling and resampled legacy core was by sawn 1/2 HQ core. All samples were sent to prep lab in Namibia and then ship for assays to Actlabs in Colombia. Routine internal and external quality control samples in the form of certified reference materials were inserted and found to perform adequately. Sampling was typically 1 m in length with variation to meet lithological contacts.

Criteria	JORC Code explanation	Commentary
	<p><i>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.</i></p>	
Drilling techniques	<ul style="list-style-type: none"> • <i>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).</i> 	<ul style="list-style-type: none"> • All drilling by African Pioneers was HQ diamond drilling with PQ in overburden. • Legacy drilling was diamond and RC drilling, core size information is not available.
Drill sample recovery	<ul style="list-style-type: none"> • <i>Method of recording and assessing core and chip sample recoveries and results assessed.</i> • <i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i> • <i>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.</i> 	<ul style="list-style-type: none"> • All African Pioneer drilling was logged for core recovery. Mean total core recovery was >92% • No relationship was identified between recovery and grade. • Details of legacy drilling are unknown.
Logging	<ul style="list-style-type: none"> • <i>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.</i> • <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i> • <i>The total length and percentage of the relevant intersections logged.</i> 	<ul style="list-style-type: none"> • All African Pioneer drilling was geotechnically and geologically logged. • Details of legacy geotechnical logs are unknown. • Of the legacy drillholes seventeen drillholes have no geology Log.
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> • <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i> • <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i> • <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i> • <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i> • <i>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.</i> • <i>Whether sample sizes are appropriate to the grain size of the material being</i> 	<ul style="list-style-type: none"> • African Pioneer core was sawn. Inspection of historical core shows it was sawn and half core sampled. • 9.6% Field duplicates were taken during African Pioneer drilling and showed good precision. • No duplicate data is available for legacy core.

Criteria	JORC Code explanation	Commentary
	<i>sampled.</i>	
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> • <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i> • <i>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.</i> • <i>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.</i> 	<ul style="list-style-type: none"> • During 2022 Diamond Drilling African Pioneer collected 201 half core samples (including field duplicates) and inserted 23 control samples (12 SRMs and 11 blanks), which respectively represents 5.9% and 5.5% of the whole sample population. • Control Samples were checked for Cu, Au and Ag. No bias has been identified. • No QC data is available for legacy core.
Verification of sampling and assaying	<ul style="list-style-type: none"> • <i>The verification of significant intersections by either independent or alternative company personnel.</i> • <i>The use of twinned holes.</i> • <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i> • <i>Discuss any adjustment to assay data.</i> 	<ul style="list-style-type: none"> • African Pioneer assay data was imported into a relational database and merged by query from the digital certificates. • Historic procedures are unknown.
Location of data points	<ul style="list-style-type: none"> • <i>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.</i> • <i>Specification of the grid system used.</i> • <i>Quality and adequacy of topographic control.</i> 	<ul style="list-style-type: none"> • African Pioneer drilling was surveyed by DGPS. • Data was collected in WGS 84 UTM Zone 33S. • No topographic survey was completed. This is not expected to materially impact the resource estimate although a detailed topographic survey is recommended for mine planning. • Details of legacy survey are unknown.
Data spacing and distribution	<ul style="list-style-type: none"> • <i>Data spacing for reporting of Exploration Results.</i> • <i>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.</i> • <i>Whether sample compositing has been applied.</i> 	<ul style="list-style-type: none"> • Drillhole spacing is 30 and 50 m by 70 and 100m in the area of the indicated resource, and 50 to 100 m by 100 to 200 m in the inferred resource area. • Data spacing is close enough to establish geological continuity in the open pit resource area and underground resource area.
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> • <i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i> • <i>If the relationship between the drilling</i> 	<ul style="list-style-type: none"> • All African Pioneer drilling is with inclination -75° and 142° azimuth. The mineralization is inclined along the strike to the northwest and dipping gently to the northeast. • The orientation of legacy drilling was

Criteria	JORC Code explanation	Commentary
	<i>orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</i>	provided, however questions regarding data quality were raised. <ul style="list-style-type: none"> The orientation of drilling is not assumed to have introduced a sample bias.
Sample security	<ul style="list-style-type: none"> The measures taken to ensure sample security. 	<ul style="list-style-type: none"> Samples were transported by company personnel to the lab in labelled bags. Lab standard submission forms were used. Historic procedures are unknown.
Audits or reviews	<ul style="list-style-type: none"> The results of any audits or reviews of sampling techniques and data. 	<ul style="list-style-type: none"> No such reviews have been completed.

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	<ul style="list-style-type: none"> 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. 	In 2021 the Shali Group sold 85% equity in the Licence to African Pioneer PLC, African Pioneer are now managers and funders of the License, Shali Group are County Managers for African Pioneer. EPL 5772 expired on 08 March 2023. On 03 March 2023, Shali Group submitted an application to the Ministry of Mines and Energy for an additional two year extension. Having fulfilled all requirements, the Company has no reason to believe that the licence will not be renewed. Furthermore a conditional Environmental Clearance Certificate for mining activities was granted on for EPL 5772 and is valid until 16 April 2026. In addition to the EPL a 20 Year Mining Licence, ML 240, was granted on 10 August 2022 and covers a portion of EPL 5772 and approximately one third of the open pit resource. An extension to the Mining Licence was submitted on 6 September 2022 to encompass the wider Resource Area.
Exploration done by other parties	<ul style="list-style-type: none"> Acknowledgment and appraisal of exploration by other parties. 	<ul style="list-style-type: none"> Six drillholes completed in 2017 by Shali Group and 24 drillholes completed in 2014 by Namibian Copper Organisation ("NCO") along with 209 drillholes completed by Tsumeb Cooperation Ltd in 1988 – 1991. Review of some historical drill core has been completed by previous CPs for other studies and found to be visually similar to the that which is recorded in the database. The CP for this study was unable to complete visual inspection of legacy core during the site visit due sudden short term illness and public holidays during part of the site visit.
Geology	<ul style="list-style-type: none"> Deposit type, geological setting and 	<ul style="list-style-type: none"> The Ongombo project lies within the

Criteria	JORC Code explanation	Commentary
	<p><i>style of mineralisation.</i></p>	<p>Matchless Member of the Kuiseb Formation, a conspicuous assemblage of lenses of foliated amphibolites, chlorite-amphibolite schist, talc schist and metagabbro. This belt, up to 5km wide in the Otjihase area, stretches 350km east-north-eastwards in the Southern Zone of the Damara Orogen from the Gorob – Hope area. The deposit is generally described as a Besshi-type massive sulphide. These are described as thin sheet like bodies of massive to well-laminated pyrite, pyrrhotite, and chalcopyrite within thinly laminated clastic sediments and mafic tuffs. At the Ongombo project mineralisation occurs in one continuous zone approximately 7 km long and 0.5 – 1 km wide. The mineralisation zone dips consistently 15-20° northwest and plunges 5° northeast. Mineralisation is gradually thinning westward.</p>
<p><i>Drill hole Information</i></p>	<ul style="list-style-type: none"> • <i>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:</i> <ul style="list-style-type: none"> ○ <i>easting and northing of the drill hole collar</i> ○ <i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i> ○ <i>dip and azimuth of the hole</i> ○ <i>down hole length and interception depth</i> ○ <i>hole length.</i> • <i>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.</i> 	<ul style="list-style-type: none"> • No exploration results are presented in this announcement.
<p><i>Data aggregation methods</i></p>	<ul style="list-style-type: none"> • <i>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.</i> • <i>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</i> 	<ul style="list-style-type: none"> • No exploration results are presented in this announcement.

Criteria	JORC Code explanation	Commentary
	<p><i>in detail.</i></p> <ul style="list-style-type: none"> • <i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i> 	
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> • <i>These relationships are particularly important in the reporting of Exploration Results.</i> • <i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i> • <i>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').</i> 	<ul style="list-style-type: none"> • No exploration results are presented in this announcement.
<i>Diagrams</i>	<ul style="list-style-type: none"> • <i>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.</i> 	<ul style="list-style-type: none"> • No exploration results are presented in this announcement.
<i>Balanced reporting</i>	<ul style="list-style-type: none"> • <i>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.</i> 	<ul style="list-style-type: none"> • No exploration results are presented in this announcement.
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> • <i>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.</i> 	<ul style="list-style-type: none"> • No exploration results are presented in this announcement.
<i>Further work</i>	<ul style="list-style-type: none"> • <i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i> • <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i> 	<ul style="list-style-type: none"> • Further drilling is required in areas of only legacy drilling to confirm historical results. • Further drilling is required in areas of sparse drilling to improve confidence of the resource.

Section 3 Estimation and Reporting of Mineral Resources

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

Criteria	JORC Code explanation	Commentary
<i>Database integrity</i>	<ul style="list-style-type: none"> • <i>Measures taken to ensure that data has not been corrupted by, for</i> 	<ul style="list-style-type: none"> • African Pioneer sampling was imported into a relational database

Criteria	JORC Code explanation	Commentary
	<p><i>example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.</i></p> <ul style="list-style-type: none"> • <i>Data validation procedures used.</i> 	<p>from digital certificates.</p> <ul style="list-style-type: none"> • All data was validated for overlapping intervals, intervals beyond drillhole depth etc. • Legacy data has been validated as best is possible and by comparison to different versions of the historical database.
Site visits	<ul style="list-style-type: none"> • <i>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</i> • <i>If no site visits have been undertaken indicate why this is the case.</i> 	<ul style="list-style-type: none"> • Site visit has been undertaken between 30th April and 1st May 2023.
Geological interpretation	<ul style="list-style-type: none"> • <i>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</i> • <i>Nature of the data used and of any assumptions made.</i> • <i>The effect, if any, of alternative interpretations on Mineral Resource estimation.</i> • <i>The use of geology in guiding and controlling Mineral Resource estimation.</i> • <i>The factors affecting continuity both of grade and geology.</i> 	<ul style="list-style-type: none"> • The Mineral Resource Estimate set out above was based on the wireframe interpretation of the mineralized unit based on lithological and assay information. • The Ongombo project consists of one mineralised unit which is continuous over the area covered by drilling.
Dimensions	<ul style="list-style-type: none"> • <i>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.</i> 	<ul style="list-style-type: none"> • Mineralisation in the open pit resource ranges from at surface to 30 m below the surface and extends approximately 1200 m down-plunge towards northeast and 100 m down-dip to the northwest. The underground resource extends from the pit rim 400 m down dip to the northwest and 4,500 m down plunge to the northeast. Mineralisation is 500 m below surface at its deepest point. <p>The mineral resource is closed off by drilling and as it nears surface to the southwest and southeast. In the north east area of the deposit, mineralisation may continue down dip and plunge and it has been extrapolated by ~200m from the edge of drilling, were further mineralisation to be present here it would likely only be amenable to underground mining due to the depth of the mineralisation unit.</p>
Estimation and	<ul style="list-style-type: none"> • <i>The nature and appropriateness of the estimation technique(s) applied and key assumptions, including</i> 	<p>The block size was 10 mE x 30 mN x 5 mZ with further subblocking by 5 divisions east and north and 10 divisions</p>

Criteria	JORC Code explanation	Commentary
modelling techniques	<p><i>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.</i></p> <ul style="list-style-type: none"> • <i>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</i> • <i>The assumptions made regarding recovery of by-products.</i> • <i>Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).</i> • <i>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</i> • <i>Any assumptions behind modelling of selective mining units.</i> • <i>Any assumptions about correlation between variables.</i> • <i>Description of how the geological interpretation was used to control the resource estimates.</i> • <i>Discussion of basis for using or not using grade cutting or capping.</i> • <i>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</i> 	<p>vertically to reflect thin parts of the mineralisation unit. The block model was rotated by 45° along Z axis</p> <ul style="list-style-type: none"> • Grades were estimated using Ordinary Kriging of 1 m downhole composites, grade capping for Au estimation was applied to eliminate high grade outliers. An incrementally larger search radius of 250, 500 and 750 m was used. The maximum number of samples per search was restricted to 24. Discretisation was 2x6x2. The estimate was completed using Micromine 2023.3 software. • Mineralization is typically 0.4 to 3 m thick and mining with minimum 1.6 m width is envisaged. • A legacy estimate completed by Red Bush in 2021 disclosed resource estimate of 12 million tonnes at 1.4% Cu. No dilution to encounter for minimum mining width was applied. • No assays are available for deleterious elements
Moisture	<ul style="list-style-type: none"> • <i>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</i> 	<ul style="list-style-type: none"> • Tonnages are estimated on a dry basis.
Cut-off parameters	<ul style="list-style-type: none"> • <i>The basis of the adopted cut-off grade(s) or quality parameters applied.</i> 	<ul style="list-style-type: none"> • Open pit mining assumes a Cu price of US\$9,000 per tonne with 96% payability on metal in concentrate with selling cost US\$480 per tonne, Au price of US\$1,800 per oz with 90% payability and Ag price of \$US20 per oz with 90% payability. Pit optimisation and cut-off grade selection was based on the assumption of 87% recovery of Cu, 75% recovery of Au and 75% recovery of Ag, by flotation at \$11.6/t plus \$5.7/t G&A. Mining costs were assumed as \$2/t. Underground mining was based on the same assumptions with a mining costs of

Criteria	JORC Code explanation	Commentary
		\$20/t.
<i>Mining factors or assumptions</i>	<ul style="list-style-type: none"> 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 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. 	<ul style="list-style-type: none"> Open pit mining is assumed with 5% dilution. 40 degree pit slopes in overburden and fresh rock assumed. There are no geotechnical studies to support this. Detailed underground mining methods have yet to be investigated. 5-10% dilution is assumed.
<i>Metallurgical factors or assumptions</i>	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> No metallurgical testwork has been completed. 87% Cu recovery is assumed by floatation, 75% recovery is assumed for Au and Ag.
<i>Environmental factors or assumptions</i>	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> The project is located in a prominent mining area. No major settlements are within the immediate vicinity of the project. Adequate space is available for disposal of waste rock and tailings. Social and environmental studies are required to assess the impact on local communities which may have an interest in the land use, as well as the impact on wildlife and water.
<i>Bulk density</i>	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> African Pioneer collected 211 bulk density samples over a range of lithologies, however only 50 of them lie within mineralisation zone. Samples were weighed dry with and without wax and waxed samples

Criteria	JORC Code explanation	Commentary
	<p>of the samples.</p> <ul style="list-style-type: none"> 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. 	<p>submerged in water to account for porosity.</p> <ul style="list-style-type: none"> Density values in t/m³ were estimated into the block model using Inverse Power of Distance, mean of estimated and raw density value is comparable. Average density in the block model is 2.96 t/m³.
Classification	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> The estimate is based on a large proportion of legacy data. It is recommended to review the legacy data to increase confidence in the resource. In areas of closes spaced and newer drilling confidence in the estimation of mineralized volumes and grades is highest. The CP visited the site to inspect the project geology and as such the estimate is classified with indicated category. In areas of the sparse drilling and where only old drilling data is available the confidence is estimation of mineralized volumes and grades in lower, hence the category of that resource is assigned as inferred. Geotechnical pit slope analysis may serve to materially change the open pit resource estimate.
Audits or reviews	<ul style="list-style-type: none"> The results of any audits or reviews of Mineral Resource estimates. 	<ul style="list-style-type: none"> The have been no such audits or reviews.
Discussion of relative accuracy/ confidence	<ul style="list-style-type: none"> 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 procedures used. 	<ul style="list-style-type: none"> The estimate is local estimate and is accurate to those typical of an inferred estimate with errors of +/-30 on a local basis and +/- 20-30% on a global basis.

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"><li data-bbox="402 230 842 349">• <i>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i>	