Pan African Resources PLC

(Incorporated and registered in England and Wales under the Companies Act 1985 with registered number 3937466 on 25 February 2000)

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("Pan African" or the "Company" or the "Group")

# PAN AFRICAN SUCCESSFULLY CONCLUDES MINTAILS' MOGALE GOLD DEFINITIVE FEASIBILITY STUDY ("DFS")

Pan African is pleased to announce that the Company has successfully completed a DFS on the Mogale Gold Proprietary Limited ("Mogale Gold") Tailings Storage Facilities ("TSFs") that forms part of the Mintails Mining SA (Proprietary) Limited ("Mintails SA") assets, situated near Krugersdorp to the west of Johannesburg, South Africa (the "Project"). The DFS was prepared by DRA Projects SA (Pty) Ltd ("DRA"), with reliance on specialist input from third parties for Mineral Resource and Mineral Reserve estimation, dump re-mining, tailings pumping and disposal and metallurgical test work. The parties have provided their consent for the release of the information contained in this announcement as far as it pertains to the results of the DFS.

## **HIGHLIGHTS FROM DFS**

- Significant production impact:
  - The Project has the potential to increase the Group's gold production profile over the coming years, with re-mining of the Mogale Gold TSFs expected to add approximately 50koz/yr of production over its 13-year life of mine (LOM)
  - o Equivalent to an increase >25% on Group's current production
- Compelling project economics:
  - Pre-tax NPV (at 9.5% real discount rate) of ZAR1,006 million (US\$64,9 million), real ungeared IRR of 20.1% at US\$1,750/oz and US\$/ZAR:15.50.
  - Forecast AISC of ~US\$914/oz and operating cost of ~ZAR78/t (~US\$5/t at US\$/ZAR:15.50) over the initial 13-year LOM
- Construction capex:
  - ~R2.5billion (US\$161.3 million at US\$/ZAR:15.50)
- Payback:
  - Construction capital payback estimated within 3.5 years, post commissioning
  - Targeting production within 18-24 months from commencement of construction
- Mineral reserve:
  - The Mogale Gold TSFs, which comprise various individual dams, contain a Probable Mineral Reserve of 123.6Mt of re-mineable material at a head grade of 0.29g/t for an estimated content of 1.14Moz gold
- Further production upside:
  - Addition of Mintails SA's Soweto Cluster resource has potential to extend LOM from 13 years to 21 years and further increase annual gold production
- Proven technology:
  - Low unit cost hydro mining with low project execution risk at 800ktpm (thousand tons per month) carbon in leach ("CIL") plant, similar to Pan African's Elikhulu operation (currently processing ~1.2Mt per month)
- Project funding:

- A number of funding options for the Project are being considered, including offers of debt finance from financial institutions and other third party financiers
- Strategic rationale:
  - Builds on the Group's track record of bringing value enhancing surface re-mining operations into production
  - Enhanced ESG credentials
    - Environmental rehabilitation and socio-economic initiatives for local economic development to run concurrent with operations
    - Job creation and skills development in host communities
    - Potential to extend the Group's solar renewable energy PV footprint in line with its decarbonisation strategy and strategic production cost reduction initiatives

Cobus Loots, CEO of Pan African, commented: "Pan African has an excellent track record of successfully commissioning and operating surface tailings retreatment operations, as evidenced by our BTRP, ETRP and Elikhulu operations. As originally anticipated, the Mogale Gold DFS has demonstrated a compelling Project, both operationally and financially. Mintails has the potential to further improve the Group's overall AISC, while increased annual production will move Pan African further up the ranks of mid-tier gold producers.

Additionally, our re-mining activities will assist with environmental remediation in this area. We look forward to working with all stakeholders to further progress the Project in the months ahead."

#### **Background to the Project**

In November 2020, Pan African announced that the Company had entered into conditional sale of shares agreements to acquire the share capital and associated shareholder loans and other claims of Mogale Gold and Mintails' SA Soweto Cluster Proprietary Limited ("MSC") (together the "Mintails Transaction"). Both Mogale Gold and MSC are 100% owned by Mintails SA, which was placed into provisional liquidation during 2018.

The deadline for fulfilment of the conditions to conclude the Mintails Transaction was extended to August 2022 and included the completion of a fatal flaw analysis, prefeasibility study ("PFS") and DFS. The PFS on the Mogale Gold TSFs was completed during July 2021, followed by the DFS, announced today. Both studies were led by DRA. Further technical work on the MSC TSFs is currently in progress.

## **Mineral Reserves and Resources**

Following the initial due diligence on Mogale Gold, the following work was undertaken to improve the Mineral Resource confidence:

- a highly accurate Light Detection and Ranging ("LIDAR") survey of the entire project area to ascertain available tonnages;
- twinning 25 of the historical holes in order to verify grades previously reported; and
- drilled 82 new boreholes in areas with sparse or no data.

The combined drilling totaled 2,761m resulting in 1,877 samples and 187 control samples; and resulted in the remodeling of all available resources as reported in the Mineral Resource table below:

# **Indicated and Inferred**

TSF	Tonnage	Gold

	Mt	g/t	kg	oz
Indicated				
Total Indicated	121.62	0.29	35,049	1,126,855
Inferred				
Total Inferred	4.64	0.33	1,525	49,040

- Density of 1.44; Gold conversion: 1kg = 32.1508oz
- No cut-off applied; No geological losses or modifying factors applied
- Mineral Resources are stated inclusive of Mineral Reserves
- Mineral Resources are reported as total Mineral Resources and not attributed
- Mineral Resources are SAMREC Code (2016 Edition) compliant
- The Mineral Resources are signed-off by Charles Muller (BSc (Hons), Pr.Sci.Nat), an independent Competent Person

The updated three-dimensional Mineral Resource models were subjected to a hydro-mining and load-and-haul mine design and schedule according to engineering parameters as defined in the DFS. The same approach was previously used by Pan African during the design process of the Group's Elikhulu operation (Elikhulu).

Scheduling of the available resources was built around achieving a throughput rate of 800ktpm, as detailed in the July 2021 PFS, as the optimal processing throughput. The Mineral Resources subjected to the mine design and scheduling was subsequently converted to Probable Mineral Reserves, as depicted in the table below:

#### **Mineral Reserves**

	Tonnage	Gold		
Probable Reserves	Mt	g/t	kg	oz
<b>Total Mineral Reserves</b>	123.58	0.29	35,400	1,140,180

- Density of 1.44; Gold conversion: 1kg = 32.1508oz
- No cut-off applied; No geological losses or modifying factors applied
- Mineral Reserves includes 1.96Mt of Inferred Mineral Resources, scheduled to access remaining Indicated Mineral Resources. The Inferred Mineral Resource represents 3.75% of the total Mineral Reserve and is not deemed a significant risk
- The Mineral Reserve is signed-off by PAR's Competent Person, Hendrik Pretorius

#### Conceptual MSC resource/reserve and production upside

In the SENS announcement of 6 November 2020, the Company reported that the MSC TSFs comprise nine separate facilities with resources of 119Mt with an in-situ grade of 0.31g/t, containing an estimated gold content of 1.20Moz. Although Pan African currently classifies the MSC Mineral Resources in the Inferred Mineral Resource category until further technical studies and work is completed, a conceptual production schedule for this project was applied, based on available information.

This conceptual production scheduling, entailing the processing of combined TSFs demonstrates a more robust recovered ounce profile and an extended LOM for the project, in excess of 20 years. The conceptual MSC TSF model increased production by an average of 11koz/yr from years 6 to 13 (once the Mogale Gold TSF resources are depleted), giving rise to a production profile of an average 54koz/yr from year 14 to 20.

No Mineral Reserves or financial valuation for the conceptual MSC scheduling can be reported on at this stage and the incremental production from this cluster is included for illustrative purposes only.

# Re-mining and processing

The study envisages hydro-mining to be utilised for the larger dumps, using hydraulic guns of similar specification as used at Elikhulu, cutting mine widths of 15m wide and 20m deep. The North Sands and South Sands dumps are conducive to load-and-haul mining, to extract the resources from these dams.

The re-mined tailings will be processed in a CIL plant of similar design to the Elikhulu operation, with the addition of a water treatment section to limit corrosion and potentially improve recoveries. The DFS process plant is designed for an average throughput of 800ktpm, with up to 900ktpm achievable without negatively affecting performance.

All of the borehole samples were utilised to refine and test the expected gold recoveries from the processed material, under the direct supervision and management of Pan African. The modelled recoveries are presented in the table below:

Resource material TSF	% Recovery modelled
1L23-25	54.70%
1L13-15	48.90%
1L28	34.40%
1L8	53.56%
1L10	50.85%
North Sand Dump	71.00%
South Sand Dump	75.71%

# Key financial assumptions and outputs (as per DFS)

Description	
Net Present Value (9.4)	R1,006 million (US\$64,9 million)
Real Ungeared Internal Rate of Return	20.1%
Total construction capex requirement	R2,460 million (US\$158,7 million)
Forecast payback period (post commissioning)	38 months
Average AISC	~US\$ 914/oz
LOM operating cost	~ZAR 78/t (~US\$5/t)
Average annual gold production	~50koz
LOM	13 years

- Long term gold price US\$1,750/oz
- Long term US\$/ZAR:15.50

# **Envisaged project financing**

The Group has received a number of offers from financing institutions and third party financiers for the Project funding and expects to finalise the funding package later this year, if the Company was to proceed to project execution.

# Way forward and possible project execution timeline

Following in-principle approval by Pan African's board to further progress the Project, the Company will commence with the environmental authorisation process and stakeholder engagements.

Activity Estimated date

Completion and finalisation of DFS Completed

Engineering optimisation activities June – August 2022

Detailed engineering study September 2022 – March 2023

Likely project commencement date September 2022

Funding package finalised October/November 2022

Environmental approvals March 2023 Construction commences April 2023

Commissioning July 2024 – December 2024

## **ESG/Social Impact**

As part of the DFS, the Company has already conducted extensive engagements with community representatives and other interested and affected organisations based in the area, including regulatory authorities. This information and the EMPR is being utilised to compile an action plan to remediate past environmental damage and restore the surface for productive land use, while at the same time investigating impactful socio-economic development projects intended to stimulate the local economy.

The Company will also conduct feasibility studies into the merits of renewable energy for the new tailings retreatment plant's energy requirements.

#### **Competent Person**

The competent person for Pan African Resources, Hendrik Pretorius, the manager for Group mineral resource management, signs off the Mineral Resources and Mineral Reserves for the Group. He is a member of the South African Council for Natural Scientific Professions (SACNASP 400051/11 – Management Enterprise Building, Mark Shuttleworth Street, Innovation Hub, Pretoria, Gauteng Province, South Africa), as well as a member in good standing of the Geological Society of South Africa (GSSA – CSIR Mining Precinct, Corner Rustenburg and Carlow Roads, Melville, Gauteng Province, South Africa). Hendrik has 18 years' experience in economic geology and mineral resource management (MRM). He is based at The Firs Office Building, 2nd Floor, Office 204, Corner Cradock and Biermann Avenues, Rosebank, Johannesburg, South Africa. He holds a BSc (Hons) degree in Geology from the University of Johannesburg as well as a Graduate Diploma in Mining Engineering from the University of the Witwatersrand. Hendrik has reviewed, and approved, in writing the information contained in this document as it pertains to Mineral Resources and Mineral Reserves.

The information contained in this announcement is the responsibility of the Company's board of directors and has not been reviewed or reported on by the Group's external auditors.

Rosebank

30 June 2022

Certain information communicated in this announcement was, prior to its publication, inside information for the purposes of Article 7 of Regulation 596/2014.

For further information on Pan African, please visit the Company's website at

# www.panafricanresources.com

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