

11<sup>th</sup> June 2009

Manager Announcements  
Company Announcements Office  
Australian Stock Exchange Limited  
10th Floor, 20 Bond Street  
SYDNEY NSW 2000

*Via electronic lodgement*

Dear Sir/Madam,

## **OPERATING COST ESTIMATE REDUCTION FOR CHIRUNDU URANIUM JV PROJECT**

### **HIGHLIGHTS:**

- **Recent test work results show reduced operating cost estimate for the project.**
- **New operating cost range of US\$26 to US\$31/lb U<sub>3</sub>O<sub>8</sub> over 5-6 year project life.**
- **Cost reductions in mining by using continuous surface mining equipment.**
- **Cost reductions from significantly lower acid consumption in recent tests.**

### **OVERVIEW**

The Directors of African Energy Resources Limited are pleased to announce that a revised operating cost estimate for the Chirundu Uranium Project has been provided by GRD Minproc, the BFS Study Manager. The revised operating costs for the Njame and Gwabe uranium projects are based on the following assumptions:

- Mining costs have been developed from an assessment of mining options undertaken by Sound Mining Solution Central Africa (Pty) Ltd (SMS). SMS concluded that the use of continuous surface mining machines offered the best option.
- Mining to be based on Measured and Indicated resources as delineated at the Njame and Gwabe deposits
- Uranium recovery of 85% for Njame and 70% for Gwabe, based on metallurgical test work.
- Acid consumption of 5kg/t for Njame and 10kg/t for Gwabe.
- Sulphuric acid price of US\$320/t delivered to the mine gate.
- Power, labour, administration and other costs as per the Prefeasibility Study which was completed in 2008. Whilst these figures are now over 12 months old, they comprise less than 15% of total costs and are not expected to vary significantly when updated at the conclusion of the BFS.

On the above basis the revised operating costs are as follows:

**Njame**

Area	% of Total Cost	Annual Cost (US\$)	US\$/t Processed	US\$/lb U <sub>3</sub> O <sub>8</sub>
Mining Cost	65%	22,520,000	11.26	20.03
Labour	6%	1,922,914	0.96	1.71
Power	2%	652,767	0.33	0.58
Reagents	24%	8,441,540	4.22	7.51
Consumables	1%	420,782	0.21	0.37
Maintenance Materials	1%	250,000	0.13	0.22
Product Transport	0%	129,030	0.06	0.11
General and Admin	1%	452,556	0.23	0.40
<b>Total</b>	<b>100%</b>	<b>34,789,589</b>	<b>17.39</b>	<b>30.95</b>

**Gwabe**

Area	% of Total Cost	Annual Cost (US\$)	US\$/t Processed	US\$/lb U <sub>3</sub> O <sub>8</sub>
Mining Cost	41%	11,082,500	4.93	10.64
Labour	7%	2,000,000	0.89	1.92
Power	2%	450,000	0.20	0.43
Reagents	46%	12,257,160	5.45	11.77
Consumables	1%	348,535	0.15	0.33
Maintenance Materials	1%	250,000	0.11	0.24
Product Transport	0%	119,543	0.05	0.11
General and Admin	1%	266,336	0.12	0.26
<b>Total</b>	<b>100%</b>	<b>26,774,074</b>	<b>11.90</b>	<b>25.71</b>

**MINING COSTS**

Sound Mining Solution Central Africa (Pty) Ltd have completed a trade-off study to assess the use of surface mining machines (specifically the T1255 from Vermeer), conventional drill and blast and ripping/free-digging using a bulldozer. These costs have been derived through a consideration of the mechanical strength properties of the rock mass at Njame and Gwabe and have been benchmarked against mining operations in rocks of similar strength. Operating cost estimates for the Vermeer T1255 were also factored to account for actual vs. claimed performance for these machines in a large mining operation in southern Africa. Load and haul costs to deliver mineralisation to the heap leach pads and to deliver waste to the waste rock dump have been factored into the estimate.

A summary of the results of this study is provided below:

Activity	Ripping & Dozing	Drilling & Blasting	Surface Miner
Operating cost for ore excluding capital	1.81	2.32	1.78
Operating cost for ore including capital	2.12	2.59	2.02
Operating cost for waste excluding capital	1.49	2.00	1.58
Operating cost for waste including capital	1.75	2.23	1.83

On the basis of these results, and subject to further test-work to verify the assumptions made, the Company has selected surface miners as the preferred mining solution for Chirundu, although both deposits are likely to benefit from ripping and free-digging in the upper 5-10m which will slightly reduce costs.

### REAGENT COSTS

Mintek have been performing metallurgical test work studies on the mineralisation from Njame and Gwabe as part of the BFS. This work has comprised rolling-bottle tests to assess material variability within and between the deposits and to determine parameters for subsequent column leach tests, and column leach tests on Njame mineralisation. Key results to date are:

- Rolling-bottle tests indicate that there is no material variability in reagent consumption for the mineralisation within each deposit.
- Rolling bottle tests indicate that Gwabe mineralisation consumes approximately twice as much sulphuric acid as Njame mineralisation.
- Column leach tests for Njame mineralisation indicate that no scrubbing or agglomeration is required.
- Column leach tests for Njame mineralisation have achieved uranium recoveries of 84-87% with acid consumption of 3kg/t to 4kg/t.
- An average recovery of 85% and acid consumption of 5kg/t has been used for calculating operating cost estimates for processing Njame mineralisation.
- Uranium recovery of 70% was assumed for Gwabe based on column leach tests undertaken in 2008.
- An acid consumption of 10kg/t has been assumed for Gwabe based on twice that for Njame, as derived from the rolling-bottle tests.
- Uranium is recovered onto ion-exchange resins which are eluted with sulphuric acid and then neutralised with lime prior to final precipitation by hydrogen peroxide and sodium hydroxide to produce a stable  $UO_4$  product. These costs are also factored into the overall reagent costs.

Sulphuric acid prices used for this estimation are US\$170/t for acid purchased in the Copperbelt (2008 estimated contract price) and US\$150/t transport to Chirundu as quoted by a local transport contractor. Given the current low global price for elemental sulphur and new copper smelting and associated sulphuric acid production capacity coming on-stream in the Copperbelt in 2009, a reduction in these prices may be possible, which will have a positive impact on overall operating costs. Prices for other reagents were derived from quotes obtained by GRD Minproc.

Further metallurgical test work is also underway to optimise the process flowsheet. This may lead to a reduction in reagent consumption and an increase in uranium recovery, particularly for the Gwabe deposit.

### TECHNICAL BACKGROUND TO PROJECT

The Chirundu uranium project contains the Njame and Gwabe uranium deposits, which contain a total of 7.4 Mlb  $U_3O_8$  in Measured and Indicated resources at an average grade of 293 ppm  $U_3O_8$ . These deposits are currently the focus of metallurgical test-work being undertaken as part of the BFS. The Chirundu uranium project is a joint venture between African Energy which owns 70% and is the manager, and Albion Limited (ASX: ALB) which owns the remaining 30%.

*The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the 'JORC Code') sets out minimum standards, recommendations and guidelines for Public Reporting in Australasia of Exploration Results, Mineral Resources and Ore Reserves. The information contained in this announcement has been presented in accordance with the JORC Code and references to "Measured, Indicated and Inferred Resources" are to those terms as defined in the JORC Code.*

*Information in this report relating to Exploration results, Mineral Resources or Ore Reserves is based on information compiled by Dr. Frazer Tabcart (an employee and the Managing Director of African Energy Resources Limited) who is a member of The Australian Institute of Geoscientists. Dr. Tabcart has sufficient experience which is 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 under the 2004 Edition of the Australasian Code for reporting of Exploration Results, Mineral Resources and Ore Reserves. Dr. Tabcart consents to the inclusion of the data in the form and context in which it appears.*

*Information in this report relating to Metallurgical Test Work is based on information compiled by Mr. Michael Boylett. Mr. Boylett is a Member of the Institute of Materials, Minerals and Mining, which is a 'Recognised Overseas Professional Organisation' included in a list promulgated by the ASX from time to time. Mr. Boylett is a consultant to GRD Minproc and has sufficient experience which is 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 Persons under the 2004 Edition of the Australasian Code for reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr. Boylett consents to the inclusion of the data in the form and context in which it appears.*

*Information in this report relating to Mining Costs is based on information compiled by Mr. Vaughn Duke. Mr. Duke is a Fellow of the South African Institute of Mining and Metallurgy which is a 'Recognised Overseas Professional Organisation' included in a list promulgated by the ASX from time to time. Mr. Duke is a full time employee and Managing Director of Sound Mining Solution Central Africa (Pty) Ltd and has sufficient experience which is 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 Persons under the 2004 Edition of the Australasian Code for reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr. Duke consents to the inclusion of the data in the form and context in which it appears.*

For any further information, please refer to the Company's website or contact the Company directly on +61 8 6465 5500.

*For and on behalf of the board*

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