

For electronic distribution

22 August 2012

SUCCESSFUL BOILER TRIAL USING SESE COAL

Highlights:

- A boiler trial using Sese coal as the fuel has been successfully completed in South Africa.
- Sese coal ignited and combusted well, and generated heat and steam with no adverse effects on the boiler.
- Stack emissions were noted and recorded as clear throughout the trial.
- The trial has confirmed the suitability of Sese coal as a fuel for industrial boilers.

Introduction:

The Sese Coal & Power Project occurs approximately 60km south of Francistown in eastern Botswana and contains a Measured Resource of 651Mt of thermal coal and Indicated and Inferred Resources of over 1,850Mt. The entire geological resource is amenable to low strip-ratio open-pit mining.

The project has been sub-divided into two key focus areas:

1. The Sese Export Project which is planned to export coal to regional industrial markets in southern Africa and to power station markets in Asia. Marketing studies, combustion trials and studies of rail and port options are currently underway for this project.
2. The Sese Integrated Power Project; an initial 300MW power station and 'captive' 1.5Mtpa coal mine to be pursued as a stand-alone project. Feasibility studies and environmental and social impact studies are underway for this project and its potential expansion beyond 600MW.

Boiler Trial:

A 15,000t bulk sample was excavated from part of the Measured Resource earlier this year and has provided coal for beneficiation test work, export trials and combustion testing. 60t of raw coal from the bulk sample was recently trucked to South Africa where it was crushed and processed through Gecko Mineral Processing's pilot-scale air-separation plant to provide information on air-

plant performance and to provide a beneficiated product for combustion testing in boilers (see Diagram 1). The processed coal was screened to “peas”, a 6x25mm sized product, and three random samples sent to ALS Chemex Witlab facility for coal quality analysis. The average quality of the coal is given in the table below:

Sese coal quality for 6x25mm “pea” sized product (air-dried basis). Ash fusion temp (°C) recorded under a reducing atmosphere									
CV (MJ/kg)	Ash %	IM %	VM %	FC %	S %	AFT (def)	AFT (soft)	AFT (hem)	AFT (flow)
21.2	20.2	8.3	23.6	47.9	0.5	1343	1359	1401	1447

Bagged samples of the sized coal were sent to GH Boiler and Energy Services in Johannesburg for the combustion trial. Sized Sese coal was fed onto the boiler’s chain-grate by means of an overhead hopper, and introduced to the boiler as a replacement for the boilers standard 25.5 MJ/kg feedstock (Diagram 2).

The following observations were made:

- Sese coal was observed via a peephole and was seen to ignite and combust well (Diagram 3).
- The process and efficiency was monitored throughout the trial and indicated that Sese coal combusted favourably and successfully with no adverse impact on the boiler.
- The boiler was able to generate heat and steam satisfactorily using Sese coal.
- Stack emissions were noted and recorded as clear throughout the test.
- Soft and friable clinker was seen at the back-end of the chain-grate and was not detrimental to the boiler performance or ash recovery.
- Sese coal is therefore compatible with and suitable for use in industrial chain-grate boilers.

JORC DISCLAIMER:

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.

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



Diagram 1. Sese coal passing through Gecko Mineral Processing's pilot scale air-separator plant in South Africa



Diagram 2. Sese coal on the bed of the chain-grate feeding into the boiler



Diagram 3. Inspection peephole showing Sese coal igniting under arch