

# Quarterly Report to 31 March 2013 (updated)

## ASX Release

30 April 2013

Cougar Energy Limited ABN | 75 060 111 794

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SHARE INFORMATION Issued Shares | 1,599,275,714 Unlisted Options | 3,000,000

**BOARD OF DIRECTORS** 

Andrew Matheson, Chairman Rob Neill, CEO & MD Andrew Purcell, Non-executive Director

### **REGISTERED OFFICE**

Suite 1002, Level 10, 530 Little Collins Street, Melbourne, Victoria, 3000 Telephone: +(61) 3 9909-7200 Facsimile: +(61) 3 9909-7217

WEBSITE www.cougarenergy.com.au

COAL ASSETS Mackenzie | EPC 1445 Bowen Basin, Queensland Exploration target 120-170Mt PCI Grade Coal Wandoan | MDL 420 Surat Basin, Queensland JORC Resource 360Mt Thermal Grade Coal Kingaroy | MDL 385 Surat Basin, Queensland JORC Resource 73Mt Thermal Grade Coal

INVESTOR CONTACTS

**Rob Neill:** CEO & MD Tel: + 61 (0) 418 161 162 <u>rob.neill@cougarenergy.com.au</u>

**Brad Glynne:** GM Corp Fin/Inv Rel Tel: + 61 (0) 447 774 009 <u>brad.glynne@cougarenergy.com.au</u>

# Highlights

### MACKENZIE COAL TENEMENT EPC 1445

- Preparations for Phase 1 drilling program commenced
- Exploration Target 120-170 Mt (prospective PCI grade)\*
- Well positioned for infrastructure support and logistics

### WANDOAN THERMAL COAL TENEMENT MDL 420

- · JORC Compliant Resource 360 Mt (32 Mt Indicated, 328 Mt Inferred) \*
- Thermal grade coal suitable for power generation offshore
- Potential to identify additional resources with further drilling program
- Close proximity to other thermal coal projects and infrastructure in fast emerging Surat Basin

### **UNDERGROUND COAL GASIFICATION**

- Initial review of global positioning and market attractiveness of UCG undertaken
- Refocus of business activities to markets in Asia where there can be control of the coal assets suitable for UCG

### **FINANCIAL DEVELOPMENTS**

- Capital raising A\$ 1.043 MM completed in February 2013
- Discontinuation of ASOF funding facility

### **CORPORATE DEVELOPMENTS**

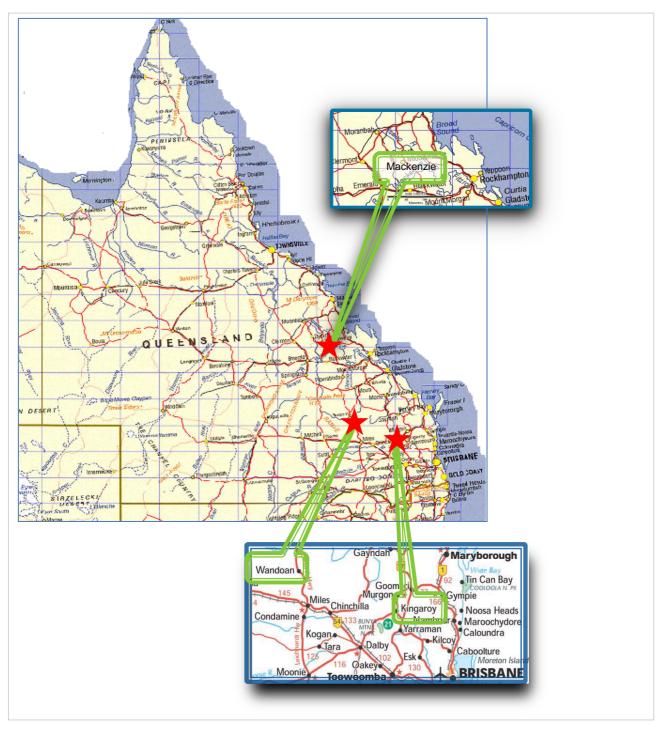
- Restructure of Company's Board in March 2013
- Repositioning of Company's activities and cost reductions

\* Refer to Competent Person's Statement at the rear of this Report



### **Coal Tenements**

The company holds three coal assets within the Bowen and Surat Basins of Queensland as depicted below:



Coal Asset	Indicated Resource *	Inferred Resource *	Total Resource *	Exploration Target *
Mackenzie EPC 1445				120 Mt to 170 Mt
Wandoan MDL 420	32.29 Mt	328.32 Mt	360.61 Mt	
Kingaroy MDL 385	44.97 Mt	28.30 Mt	73.27 Mt	

\* Refer to the Competent Person's Statement at the rear of this Report



### Mackenzie (100%)

Cougar Energy is the holder of Exploration Permit for Coal (EPC) 1445 in the Central Bowen Basin in Queensland. The coal tenement is approximately 25 kms north-east of Blackwater and is 21 km<sup>2</sup> in size. It is located between the open cut operating mines of Jellinbah East (south-west of the tenement) and Yarrabee (north-east of the tenement) and is being targeted for metallurgical (PCI) grade coal.

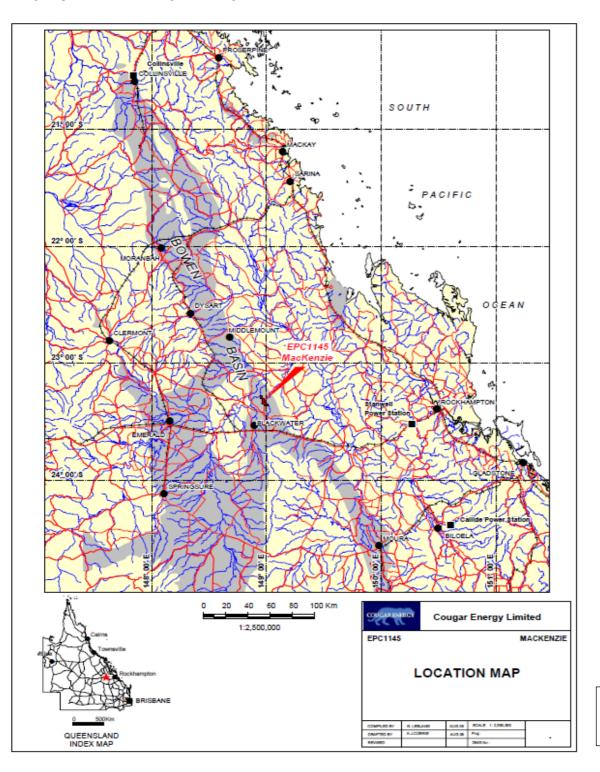


Figure 1: Location map EPC 1445



#### Mackenzie EPC 1445

EPC 1445 was granted to Cougar Energy permitting the exploration of coal from 29 June 2011 to 28 June 2014 over seven sub-blocks. On the south western side of the tenement (Jellinbah side) various CBM wells were completed by Bow Energy. Bow also holds a Petroleum Survey Licence over the area of EPC 1445.

#### **Regional Geology**

The coal resources within the region are contained within the Upper Permian Rangal Coal Measures which produce PCI/Semi Soft and Thermal coal products. The seams at Jellinbah and Yarrabee are the Aries, Castor and Pollux Seams. The two mines are separated structurally by a major overthrust fault, the Yarrabee Fault.

Cougar Energy's Mackenzie drilling program is targeting both of the Aries and Pollux seams.

There is drill hole data (Bow Energy CBM wells) west of EPC 1445. A review of the data from these wells indicates that the target coal seams could be expected to continue to dip eastwards into EPC 1445.

#### **Exploration Target**

The previously published **Exploration Target of 120-170 million tonnes** \* at estimated depths between 250 and 400 metres was arrived at in a Company-commissioned report which has analysed publically available data selected on the basis of overlap and proximity of the historical tenements to the current footprint of EPC 1445.

The body of data was used to extrapolate the geology of the area to make inferences about the potential coal targets. Please refer to the Competent Person's Statement at the rear of this Quarterly Report for comments on the nature of the Exploration Target and associated caveats.

#### **Phase 1 Drilling Program**

During the first quarter of 2013 the Phase One drilling program was prepared. The planned drilling program which consists of 6 holes including 3 cored holes as shown in Figure 2 on the following page.

The following works have been undertaken during the reporting quarter and during April 2013:

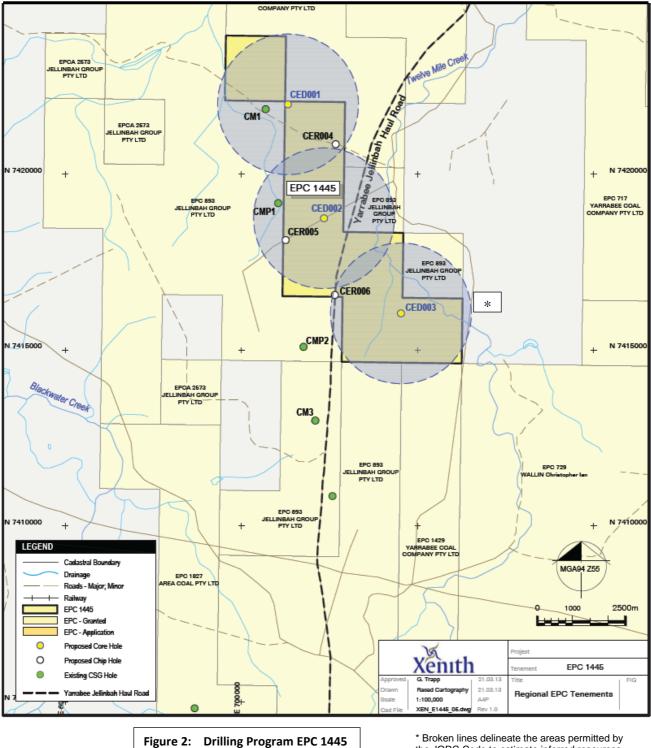
- Appointed Xenith Consulting to manage the Phase 1 drilling program and ongoing geological analysis;
- Engaged and consulted with landowners and cultural heritage representatives seeking requisite approvals to access the tenement;
- Appointed a drilling contractor to carry out the works.

Drilling on-site is expected to commence in early May 2013.



<sup>\*</sup> Refer to the Competent Person's Statement at the rear of this Report. The basis for setting the target quantity is based on Mr Leblang's report which referenced 25 reports held by the Queensland Department of Natural Resources and Mines of historical drilling results to extrapolate the geology of the area and make inferences about potential coal targets. Mr Leblang also considered geological mapping, shallow drilling results, mines exposures and seismic mapping from the immediate region, most particularly the Pollux coal seam, which is a well-known PCI grade coal seam. The target estimate of quantity was based on the understanding of the thickness of one the Pollux seams multiplied by the area of the EPC 1445 and using an in-situ density factor of 1.4.



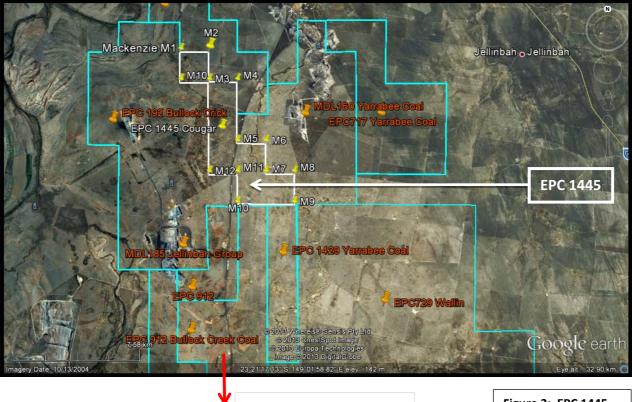


\* Broken lines delineate the areas permitted by the JORC Code to estimate inferred resources.



#### Infrastructure

The road used for haulage of coal from the Yarrabee mine runs north to south through the area covered by EPC 1445. It leads to a rail loop and loading facility connecting into the Blackwater rail line which transports coal to the Port of Gladstone.



Road to Blackwater Rail

Figure 3: EPC 1445 Surrounding mines



### Wandoan (100%)

Cougar Energy is the holder of the Mineral Development Licence (MDL420) (previously the area covered by EPC 1118) in the Surat Basin in Queensland. The coal tenement is approximately 35 kms north west of Miles and 30 kilometres south east of Wandoan and is 81 km<sup>2</sup> in size. No exploration, development or production work was undertaken on MDL 420 during the quarter ended 31 March 2013.

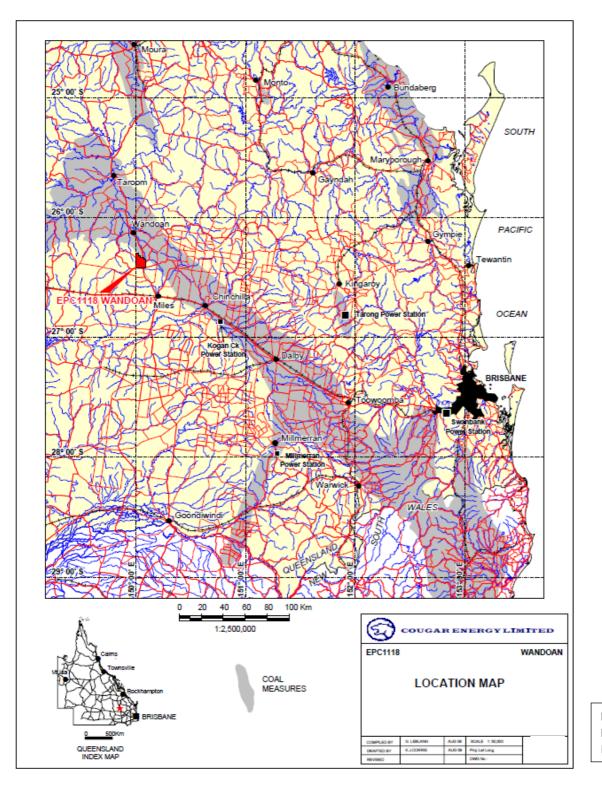


Figure 4: Location map MDL 420



#### Wandoan MDL 420

The MDL 420 was granted to Cougar Energy permitting the exploration of coal from 1 December 2012 to 30 November 2017 and is not overlain by any other competing tenements. A JORC Compliant Resource Report was produced in August 2009 and updated in March 2012 (referred to the tenement as EPC 1118).

#### **Regional Geology**

MDL 420 is located in the North-Central part of the Surat Basin on the eastern flank of the major geological structure known as the Taroom Trough. The target formation for coal exploration is the Walloon Coal Measures. The Juandah Coal Measures are the top unit of four formations therein. The principal coal seam in the Juandah Coal Measures is the Macalister Seam, which divides into three sections MA1, MA2 and MA3 on MDL 420. The seams generally occur as separate seams with significant partings between them.

The coal deposits in proximity (particularly north east) to the area covered by MDL 420 have been drilled extensively to reveal "pod" formations of thick coal seams. They form a near-to-surface belt west from Wandoan and extend in a south easterly direction to point north east of MDL 420. Little closed spaced drilling has been completed at depth at these pods. The geological structure of the area is indicated to be relatively free of significant faults.

#### JORC Resource | 360Mt (32 Mt Indicated, 328 Mt Inferred)

Cougar Energy completed 11 drill holes. Data from 4 holes completed by previous explorers was also evaluated. Six holes were used as points of observation. Holes drilled within the Estimated Resource areas have all been core sampled and analysed to generate the following JORC compliant Coal Resources estimation:

	Indicated resource *	Inferred resource *	Total resource *
Wandoan MDL 420	32.29 Mt	328.32 Mt	360.61 Mt

\* Refer to the Competent Person's Statement at the rear of this Report

#### Observations made by Cougar Energy on the Wandoan Resource

- 1. All drill holes intersected the Macalister Seam at depths ranging from 250-300 metres and seams which form the Resource occur at depths interpreted between 220 290 metres.
- 2. Seams with thickness < 1.5 metres were generally excluded from the Resource Estimate.
- 3. Partings within a coal seam were constrained to be less than or equal to 0.5 metres to be included as part of the seam.
- 4. Seam thickness is between 1.52 5.61 metres were recorded.
- 5. The coal has high volatiles and low sulphur. It has similar coal quality attributes to coal mined in various open cut operations in the area and once beneficiated the product thermal grade coal will be suitable as a feedstock for power generation with target markets of China and India.
- 6. No beneficiation testing has been completed on the coal from MDL 420, but it is expected that the coal will behave similarly to coal in nearby deposits (float test sinking at RD 1.80 consistently returns ash contents of around 8%).

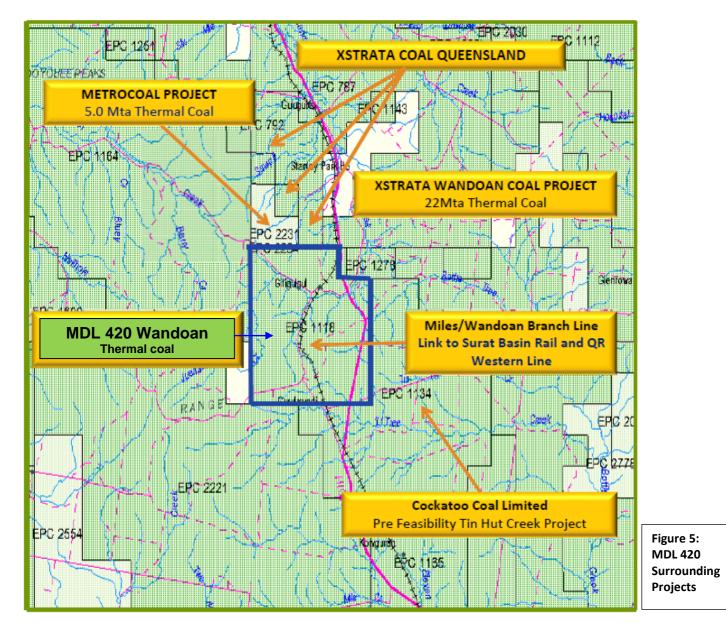
The drilling to date has only assessed a small part of the area of MDL 420. There is the potential to identify additional resources with the instigation of a further drilling program.

The coal resources of MDL 420 are suited to power generation and the Walloon coal is mined in a wide geographic area of the Surat Basin, including Camby Downs (Wilke Creek), Kogan Creek, Acland, Millmerran (Reference to "Utilisation of



Walloon Coals of Southern Queensland for Power Generation" by the Queensland Department of Mines and Energy, 1999).

All of the tonnage mined from these sites is utilised in overseas or domestic power generation.



#### Wandoan Infrastructure

MDL 420 has the potential to be well serviced by the Surat Basin Rail (SBR) which was approved by the Queensland Government in 2012. SBR is a consortium of companies namely ATEC Rail Group, Xstrata Coal and Aurizon.

A rail load out facility on the tenement could connect directly into the existing Queensland Rail Western Rail System – which runs through the tenement – and then connect into the new Surat Basin Rail and the Moura rail system leading to the Port of Gladstone.

The Moura rail system provides connections to the existing and proposed ports at Gladstone, including the coal industry owned Wiggins Terminal.



#### **Planned Tenement Development**

The JORC Report was generated whilst Cougar Energy was evaluating the tenement for a potential Underground Coal Gasification (UCG) project.

Cougar Energy is evaluating the tenement for resource extraction via conventional underground mining methods. The Company commissioned a further report (dated March 2012) summarising previous reports and taking into account the new evaluation methodology by adopting geological constraints consistent with conventional underground mining extraction.



### Kingaroy (100%)

Cougar Energy is the holder of the Mineral Development Licence (MDL) 385 at Kingaroy in Queensland. The coal tenement is approximately 10 kilometres south of Kingaroy and approximately 9 km<sup>2</sup> in size. No exploration, development or production work was undertaken on MDL 385 during the quarter ended 31 March 2013.

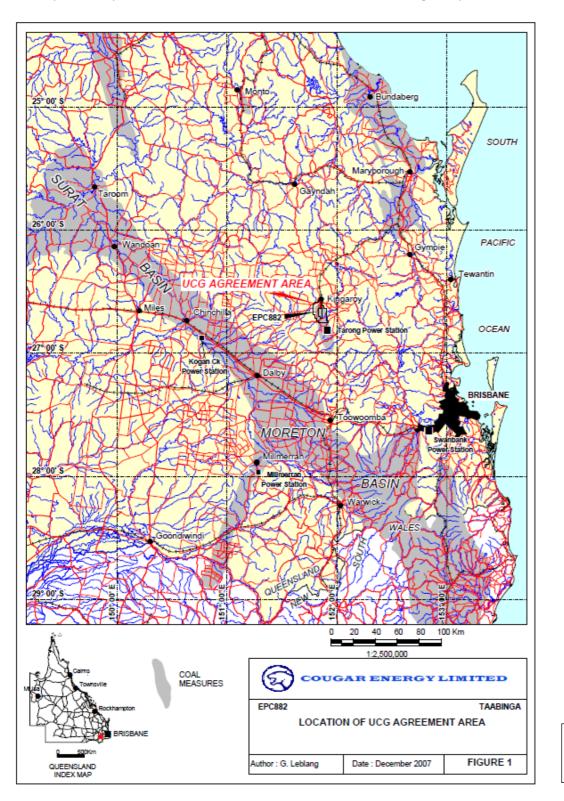


Figure 6: Location map MDL 385

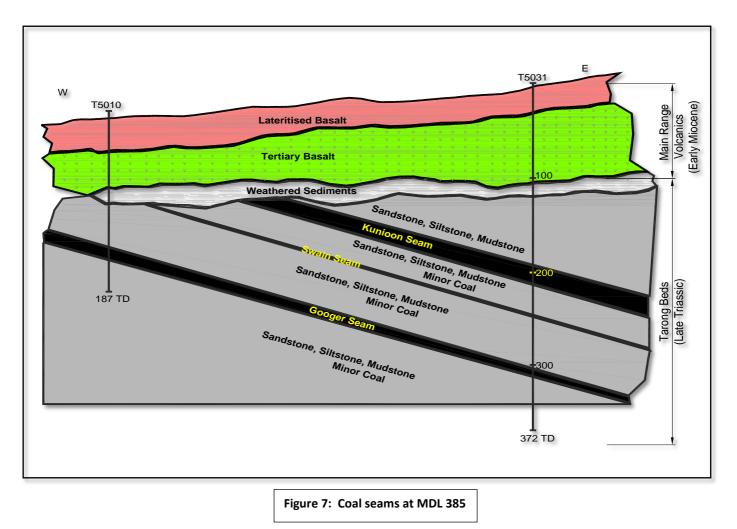


#### **Kingaroy MDL 385**

MDL 385 was granted to Cougar Energy in February 2009 to extract or produce coal. In August 2009 the Company was granted a mineral "f" endorsement to the MDL which also permitted it to operate one of three UCG trial projects in Queensland. The MDL is not overlain by any other competing tenements. The MDL expires on 28 February 2014.

#### **Kingaroy Geology**

Cougar Energy targeted and located the Goodger and Kunioon Seams in the Tarong Beds. Structure contouring indicates a moderate north easterly dipping structure for both seams. Some minor faulting was identified in the Kunioon Seam, but not in the Goodger Seam.



### JORC Resource | 73 Mt (45 Mt Indicated, 28 Mt Inferred)

A JORC compliant resource report was published by the Company in July 2008. Drilling of 23 holes was completed for a total of 4,933 metres. Coal seams were core sampled in four of the drill holes (336 metres) to generate the following JORC compliant Coal Resources estimation:



	Indicated resource *	Inferred resource *	Total resource *		
Kingaroy MDL 385	44.97 Mt	28.30 Mt	73.27 Mt		
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\* Refer to the Competent Person's Statement at the rear of this Report

#### Observations made by Cougar Energy on the Kingaroy resource

- 1. The estimation of Coal Resources (with reasonable prospects of eventual economic extraction to exist) was made based on Cougar Energy investigating the potential for economic extraction via the UCG method.
- 2. Coal seams whose roof depth is less than 100 metres were excluded from the Coal Resource.
- 3. In the Kunioon Seam coal quantities were observed in depths from 105 217 metres with seam thickness 7 16.8 metres.
- 4. In the Goodger Seam coal quantities were observed in depths from 160 221 metres with seam thickness 6.5 13.2 metres.
- 5. Further work is required to precisely identify the lower boundaries of the seam thicknesses.
- 6. Both seams extend at depth.

The drilling program confirmed that the MDL site contains the occurrence of two prospective seams. The company is currently conducting further review of the drilling data to determine coal quality.

#### **Current Site Activities**

Groundwater monitoring continues at observation wells both on-site and at selected locations adjacent to the site. All measured readings continue to remain below the investigative trigger levels specified in the Amended Environmental Authority on MDL 385, as they have since the middle of 2010.

### **Underground Coal Gasification**

During the first quarter 2013 and during April the Company's re-constituted Board undertook an initial review of Cougar Energy's UCG business in the context of UCG's global market attractiveness.

The Company is refining its strategic approach to UCG. Previous efforts were spreading scarce capital across too many prospects without advancing beyond the MOU stage.

The Company continues to hold its UCG technology General Licence Agreement with Ergo Exergy Technologies, Inc. It has also redefined its strategic approach to UCG in Asia. The strategy is to focus on a smaller number of opportunities within Asia where there can be control of coal assets suitable for UCG.

### **Financial Developments**

On 21 February 2013 the Company announced the completion of a capital raising for A\$1.043 million (before transaction costs) from sophisticated and professional investors. These funds are being used for the previously announced drilling program at Mackenzie (EPC 1445), test coal qualities, as well as working capital.

Subsequently the Company announced that it had terminated the Share Purchase Agreement funding facility with The Australian Special Opportunity Fund (ASOF).



### **Corporate Developments**

On 8 March 2013 the Company announced that three Directors had tendered their resignations. This was part of a Board restructure taking place as a result of the Company's new focus on the conventional development of its current coal assets, and its intent to seek similar opportunities. Andrew Matheson (now Chairman) and Andrew Purcell (Non-Executive Director) have joined the Company's Board.

In an announcement made on 15 April 2013 and subsequent to the period of this Report, Cougar Energy announced a number of steps to reposition the Company's activities and reduce costs.

The Company continued the progress of completing interlocutory steps in its legal cases against the State of Queensland and others.



#### \* Competent Person's Statement

The information as it relates to coal resources and exploration targets advised in this document is based on information compiled by Mr. Garry Leblang and covers the following reports: (1) JORC report for Kingaroy MDL 385 referred to as MDL(A) (Part EPC 882) dated July 2008, (2) JORC Report for Wandoan EPC 1118 / MDLa 420 dated March 2012, and (3) A report dated 15 May 2012 titled: Report on Investigation of Historical Exploration Date and Potential Coal Resources EPC 1445 Mackenzie, Bowen Basin Queensland. Any reference to reported exploration targets as to coal quantity and quality for Mackenzie is considered conceptual in nature. Exploration of the Mackenzie EPC 1445 carried out to date is insufficient to be able to estimate and report coal resources in accordance with the JORC Code (2004). It is uncertain if further exploration will result in the determination of a Coal Resource. Presently there has been no exploration by Cougar Energy on the Mackenzie tenement. Mr Leblang is a Fellow of the Australian Institute of Mining and Metallurgy. Mr. Leblang is employed by Himap Pty Limited, trading as Coal Search Consultants. Mr. Leblang has in excess of 40 years geological experience in the coal industry and therefore 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 as defined in the 2004 edition of the "Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr. Leblang consents to the use of the resource figures in the form and context in which they appear in this document. The resource and exploration target information in this report has been released to the Australian Securities Exchange (refer to announcements made on 31 July 2008, 18 August 2009, 17 & 22 August 2012 and 31 October 2012).

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