

# **QUARTERLY REPORT** to 30 SEPTEMBER 2013



## **Highlights**

#### Coal

- Maiden JORC Inferred Resource reported for the Mackenzie tenement in Queensland's Bowen Basin in July 2013
- Coal quality testing completed and reported
- Conceptual mining study completed initial conclusions reported

## UCG

- All litigation matters concluded
- Discussions commenced with government department on rehabilitation at Kingaroy

## Corporate

- Private placement of new equity completed in July
- EGM approved change of name of company
- Ms Eva Armila Djauhari appointed as Non-Executive Director
- New funding agreement with Twinkle Woods Ltd announced



# MACKENZIE PCI PROJECT (EPC 1445, MDLa 503,504) Cougar Energy 100%

Cougar Energy is the holder of Exploration Permit for Coal EPC 1445 (MDLa 503, 504) in the Central Bowen Basin in Queensland.

The Project is located approximately 25 km north-east of Blackwater in the Bowen Basin in Central Queensland and covers an area of 21 km<sup>2</sup>. It is situated between the open cut operating mines of Jellinbah and Yarrabee, both long-term producers of PCI grade export coal.

The Project is being assessed by the Company for its potential as an underground operation.



Figure 1: Location of EPC 1445 (MDLa 503,504)



As previously reported the Company completed its first phase of exploration drilling at Mackenzie on 24 June 2013. This work consisted of 3 holes (with data available on a further 4 previously drilled holes along the western edge of the tenement) and concentrated on the southern section of the EPC which covers approximately 60% of the 2,100ha project area. A total of 2,197 metres was drilled including 262 metres of HQ size core.

Xenith Consulting completed the resource estimation work for the Project. The results were prepared under the requirements of the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code) and reported by the Company on 17 July 2013.

Inferred Coal Resources within the Project area are estimated at 201Mt<sup>1</sup>. Tables 1, 2 and 3 summarise the distribution of resources by seam, raw quality and depth increment:

Table 1: Summary by seam

Inferred Coal Resources						
Seam	Average Thickness	Coal Area	Coal Volume	PRD	Mass	
	[m]	[Ha]	[M bcm]	[g/cc]	[Mt]	
Aries	2.80	1,650	46	1.51	70	
Pollux Upper	3.16	1,650	52	1.58	82	
Pisces	1.91	1,650	32	1.55	49	
				Total Tonnes	201	

Table 2: Summary by raw quality

Quality - Raw Air Dried Basis (adb)								
Canada	IM	ASH	VM	FC	RD	CSN	TS	SE
Seam	[%]	[%]	[%]	[%]	[g/cc]		[%]	[Mj/Kg]
Aries	1.6	21.4	14.7	62.3	1.53	3.5	0.53	29.08
Pollux Upper	2.0	27.4	13.3	57.3	1.61	1.0	-	-
Pisces	1.7	25.9	14.5	57.9	1.58	1.0	0.38	25.65

Table 3: Summary by depth increment

	Average Thickness (m)	Area (Ha)	Volume (Mbcm)	PRD (g/cc)	Mass (Mt)
Aries 200 – 300m	2.99	789	23.6	1.52	36
Aries 300 – 400m	2.63	860	22.6	1.44	33
Pollux Upper 200 – 300m	2.89	20	0.6	1.58	1
Pollux Upper 300 – 400m	3.21	1,233	39.6	1.60	63
Pollux Upper 400 – 500m	3.04	396	12.1	1.53	18
Pisces 300 – 400m	1.72	783	10.8	1.59	22
Pisces 400 – 500m	2.07	866	17.7	1.56	28
Total					201

<sup>&</sup>lt;sup>1</sup> Refer to the Company's announcement to the ASX on 17 July 2013. The Company is not aware of any new information which would materially affect the resources stated.





Coal quality assessment was carried out on samples taken from the phase 1 exploration programme. Clean coal composites were simulated with tests including Proximate analysis, CV, CSN and TS. Additional vitrinite reflectance testing was carried out to assess coal rank.

Sample raw ash ranged from 15% to 40% with average seam ash in the range of 20% to 25% (Table 2). Coal preparation will be required to achieve a metallurgical coal product.

Indicative coal specification for the Aries seam product is summarised in Table 4.

**Table 4: Indicative Product Specification Mackenzie** 

Description		Value
		(Air Dried Basis)
Moisture (%)	Total	8.0(arb)
Proximate analysis (%)	Inherent moisture	1.5
	Ash	9.5
	Volatile matter	14.2
	Fixed carbon	74.8
Total Sulphur (%)		0.65
Calorific value	Gross (kcal/kg)	7570
HGI	85-90	

The results of this work remain encouraging with all seams at Mackenzie having potential to produce a low volatile PCI product. In addition to this, CSN values of up to 7 were identified within the Aries seam. Further investigations will be conducted in future studies to determine the potential for a semi soft product from this seam.

Xenith were retained to undertake the conceptual mining study<sup>2</sup>. The conceptual layout was based on exploiting the EPC limits and maximising potential long wall extraction. Considering the northern block, separate access would be required under the current EPC configuration, bord and pillar was assumed for this area. Drift access was assumed to the Aries seam.

For the purposes of the conceptual study, all surface infrastructure was assumed to be located off site near the existing rail way. Further land access and acquisition will form the basis of future investigations. Figure 2 on the following page shows the conceptual panel layout.

<sup>&</sup>lt;sup>2</sup> Cautionary Statement: The conceptual mining study referred to in this announcement is based on low-level technical and economic assessments, and is insufficient to support estimation of Ore Reserves or to provide assurance of an economic development case at this stage, or to provide certainty that the conclusions of the conceptual mining study will be realised. There is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result on the conversion of Inferred Mineral Resources to Indicated and/or Measured Mineral Resources or that the potential production range itself will be realised. The Company advises that the conceptual mining study results and potential production range reflected in this announcement are preliminary in nature as conclusions are partly drawn from Inferred Resources.





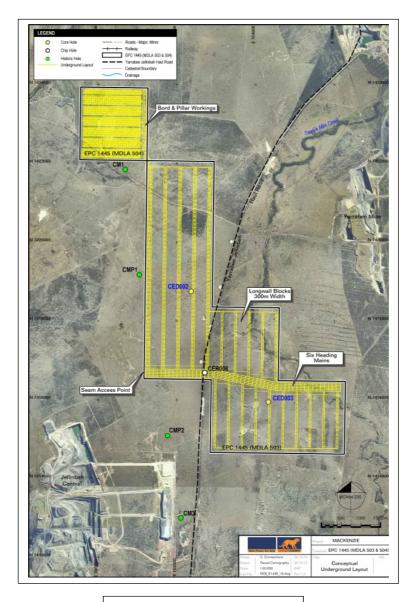


Figure 2: Conceptual layout

The mining depth at Mackenzie for the Aries seam is considered within the middle of the range for Australian long wall operations. The initial mining target is the Aries seam. Following mining of the Aries seam, production would continue at depth to the Pollux and Pisces seams.

Productivities for a potential operation have been considered with comparison to a range of Australian long wall operations. This work identified a range of 2 to 5Mtpa ROM for operations at similar depth. Considering the potential size, depth and level of definition of the Mackenzie resource, a nominal production rate of 4Mtpa ROM was assumed.

Capital and operating cost estimates at a conceptual level were developed by Larpro consulting in conjunction with Xenith and the Company.





#### **Capital costs**

Table 5 presents the capital cost estimate. Capital costs include on site infrastructure, production equipment, initial development work and owners costs.

Table 5: Capital costs breakdown

Description	AUD(M)
Mine surface works and coal processing	155
Underground	478
Transport and rail	104
Offsite	25
EPCM and Owners costs	98
TOTAL	860

## **Operating costs**

FOB operating costs were estimated within the range of AUD90-130/t based on comparisons to a range of Australian long wall producers and a work up considering a base case of 4mtpa ROM production. Table 6 presents the operating cost breakdown.

Table 6: Operating cost breakdown

Item	AUD/t
Mining and coal processing	64
Coal handling and logistics	28
Overheads	6
Royalties and levies	15
TOTAL	113

# WANDOAN (MDL 420) Cougar Energy 100%

Cougar Energy is the holder of the Mineral Development Licence MDL 420 located in the Surat Basin in Queensland. The coal tenement is located approximately 35km north-west of Miles and 30 kilometres south-east of Wandoan and covers approximately 81 km².

Review work continued during the quarter, examining the existing geological data with a view to meeting the requirements of the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" (JORC Code). No other exploration and development work was undertaken on MDL 420 during the quarter ended 30 September 2013.







# KINGAROY (MDL 420) Cougar Energy 100%

Cougar Energy is the holder of the Mineral Development Licence MDL 385 at Kingaroy in Queensland. The tenement is approximately 10 kilometres south of Kingaroy and approximately 9 km² in size. In 2010 the Company undertook a UCG trial however no further UCG activities have been undertaken since suspension of the trial. The facilities have been kept on 'care and maintenance' with a small team on site.

The Company continued its ongoing groundwater monitoring programme in accordance with the requirements of the prescribed environmental authority. Since July 2010, monitoring has consistently demonstrated values of below the trigger levels, in fact below the limits of detection.

## **CORPORATE**

Discussions have commenced with the government department on rehabilitation for the site.

- The two civil proceedings between the Company and the Queensland Government and other defendants were discontinued in July 2013.
- The Company has announced the closure of its current Melbourne office in November of this year. A
  smaller office will be retained in the short term in Melbourne until longer term arrangements are
  established in Brisbane.
- In July a private placement of new equity was completed.
- At an EGM held on 19 September 2013 shareholders approved all resolutions, including subscriptions to new equity by the Company's directors.
- Subsequent to the EGM results, Rob Neill chose not to subscribe the approved \$5,000 for new equity in the Company.
- Rob Neill has resigned as Managing Director and CEO and leaves the Company on 10 December 2013.
- Ms Eva Armila Djauhari was appointed as a Non-Executive Director of the Company on 24 September 2013
- A short term lending agreement for A\$1,000,000 (to be converted into equity and convertible notes
  after requisite approvals are obtained) with Twinkle Woods Ltd was announced on 25 September
  2013
- The Company pleaded guilty to three counts of breaching the Environmental Protection Act (Queensland) in the Brisbane Magistrates Court. No convictions were recorded. Fines of \$75,000 and costs of \$40,000 are to be paid on an instalment basis over the next 18 months.
- Progress continues on retrieving value from within the existing business, through rationalisation of
  existing commercial agreements, potential monetisation of the Kingaroy gas handling facilities and
  completion of the Company's Research & Development Tax Cash Rebate Submission for the UCG trial.
- At the EGM approval was given for the change of company name to Moreton Resources Ltd. For ASX purposes the change will take place on Friday 11 October 2013. The Company's new logo appears below.

