

## BFS CONFIRMS BUCK CREEK WILL BE A LOW CAPEX, HIGH MARGIN COAL MINE

### BFS Highlights:

- **Average Annual EBITDA of US\$87m (A\$121 million)**
- **Low Capex of only US\$105 million**
- **Low Opex FOB barge of US\$29.37 per ton**
- **BFS results based on executed sales contract with a major Illinois Basin utility**
- **All major environmental permits received to commence construction**
- **US based debt and equity finance discussions progressing rapidly**
- **Results of the Scoping Study for the Buck Creek No.2 Mine due December 2015**

Paringa Resources Limited (“**Paringa**” or “**Company**”) is pleased to announce the results of a Bankable Feasibility Study (“**BFS**”) on the Buck Creek No.1 Mine (“**Project**”). The BFS confirms that the Buck Creek No.1 Mine will be a world class, low capex, high margin coal mine, and will generate EBITDA of over US\$87 million (A\$121million) per annum, even at current depressed coal prices.

Commenting on the completion of the BFS, Paringa’s President and CEO, Mr David Gay, said:

*“The BFS has produced an excellent result and has confirmed the Buck Creek No.1 Mine to be a compelling world-class mining project, generating strong EBITDA margins of over 35% despite the current depressed coal market in general.*

*“The 17% reduction in Capex to only US\$105 million has also resonated well with US funding providers, and with the Project’s average annual EBITDA of US\$87 million (A\$121 million) per annum, has resulted in a much shorter payback period of upfront funding.*

*“Importantly for current funding activities and for investors, the BFS is based on actual contracted sale prices from the Company’s binding agreement with a major Illinois Basin utility and a final bidding process with a large pool of local contractors for all major Capex items. In addition, we expect the Project’s strong financial returns to increase even further as domestic coal markets recover.*

*“With the required environmental permits already in place, the BFS was the final stage before we commence construction of the Buck Creek No.1 Mine next year once funding has been finalized.”*

For further enquiries:

**David Gay**  
President & CEO

**Nathan Ainsworth**  
Vice-President of Business Development

## Key Results from BFS

Table 1: Coal Sales Price Sensitivity Analysis					
Adjustment to Coal Sales Forecasts	-10%	-5%	Base Case	+5%	+10%
Annual EBITDA (US\$, Steady State)	US\$69m	US\$78m	US\$87m	US\$96m	US\$105m
Annual EBITDA (A\$, Steady State)	A\$96m	A\$108m	A\$121m	A\$128m	A\$146m

Note: assumed US\$0.72 per A\$1.0

Table 2: Strong Project Fundamentals (to a maximum accuracy variation +/- 10%)		
<b>Initial Capital Costs</b>		
Mine Site Development and Infrastructure	US\$61 million	
CHPP & Barge Load-Out Facility	US\$44 million	
<b>Total Initial Capital Cost</b>	<b>US\$105 million</b>	
<b>Production (tons)</b>		
Average ROM Coal Production Steady State	5.2 Mtpa	
Total ROM Coal Produced Life-of-Mine ("LOM")	86.3 million	
Average Product Yield	73.5%	
Mine Life	18 years	
Average Saleable Coal Production Steady State	3.8 Mtpa	
Total Saleable Coal Produced LOM	63.5 million	
Start of Construction	Q1 2016	
Start of Production Ramp-Up	Q4 2017	
Construction Period	19 months	
<b>Cashflow</b>		
Average Sales Price Received (per ton)	<b>2018</b>	<b>2035</b>
	US\$45.99 /t	US\$55.63 /t
Average Annual Operating Costs (steady state)	US\$29.37 per ton	
Average Annual Operating Cashflow (steady state)	US\$87 million	

## Buck Creek No.1 Mine: A World Class Mining Project

Despite the challenging environment for the US coal industry, the Project has a number of attributes that are consistent with a world class mining project:

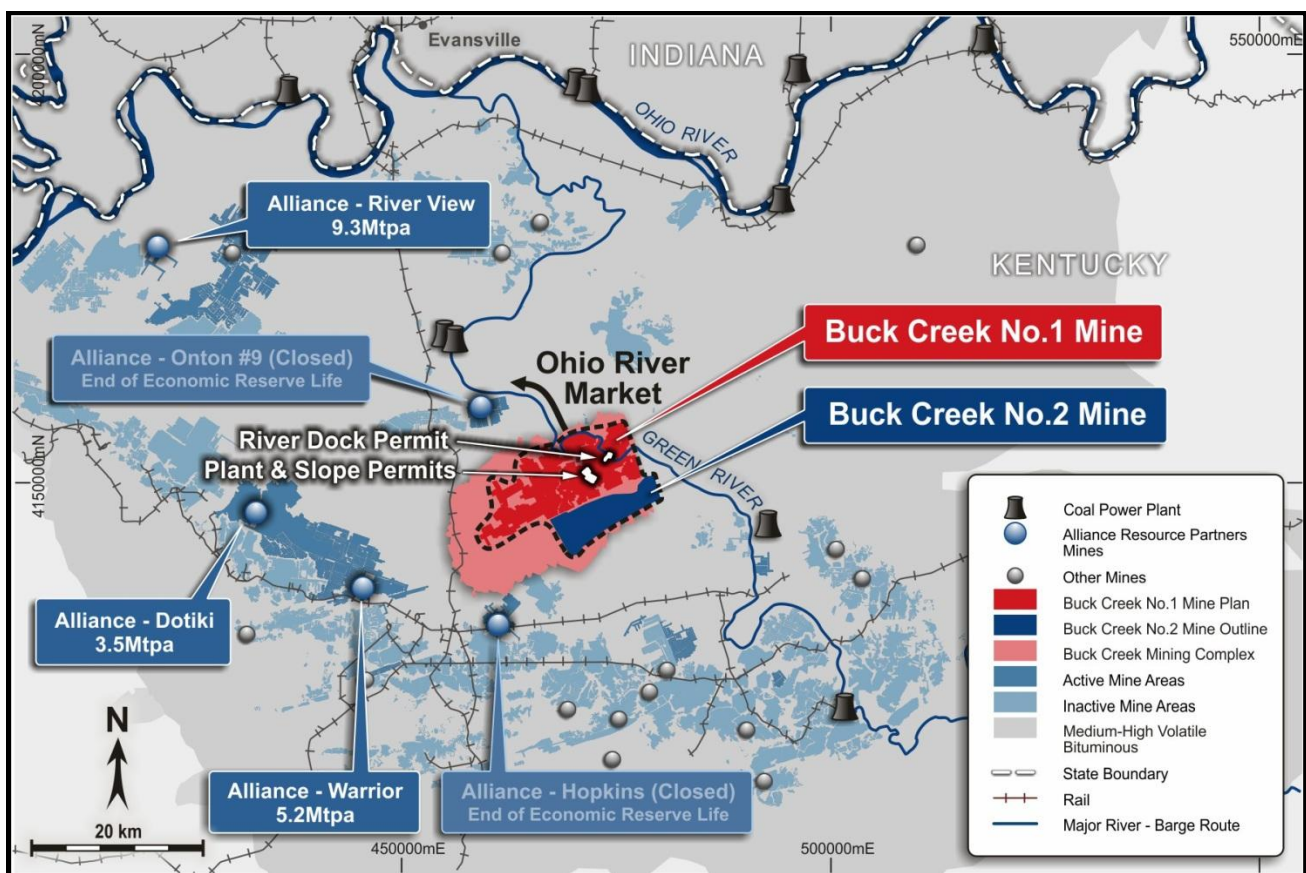
✓	<b>Low Opex</b>	- Project's low opex of US\$29.37 (FOB Barge) is comparable to other newly developed room-and-pillar operations in the Illinois Basin
✓	<b>Low Capex</b>	- Project's low capex of US\$105 million is in line with the capital intensity of recent Illinois Basin developments
✓	<b>High Margins</b>	- Based on long term contracted sales, the Project will yield over +35% EBITDA margins at the bottom of the market
✓	<b>Established Coal Industry and Transport Infrastructure</b>	- Project is located in the heartland of the Western Kentucky coal industry and is adjacent to similar mining operations, providing strong benchmarks for opex, capex and sales
✓	<b>High Quality Product</b>	- Project's WK No.9 coal spec is a premium coal product that is increasingly being consumed throughout most parts of the Eastern US power market
✓	<b>Fully Permitted, First World Jurisdiction</b>	- All key environmental permits required to construct the Project and its Green River barge load-out facility have been approved
✓	<b>Stable Initial Target Market</b>	- Paringa's initial target market, the Ohio River Market, is a stable customer base largely insulated from the impact of natural gas prices, consuming around +55 million tons of coal per year
✓	<b>Growing Secondary Market</b>	- Paringa's secondary target market, South East Market, is a growing market for Illinois Basin Coal as it continues to displace the high cost Central Appalachian coal basin
✓	<b>Organic Growth Potential</b>	- Paringa has completed the BFS at Buck Creek No.1, is nearing completion of the Scoping Study at Buck Creek No.2 and is assessing the potential for a third mine development (Buck Creek No.3) in the western half of the Buck Creek Mining Complex
✓	<b>Experienced Management</b>	- Paringa's US based team are highly experienced in developing and operating coal projects in the US

## Introduction

The BFS has been prepared in accordance with JORC Code 2012 Edition (“**JORC Code**”) and National Instrument NI 43-101 ‘Standards of Disclosure for Mineral Projects’ (“**NI 43-101**”).

Utilizing the Project’s Marketable Ore Reserve Estimate of 63.5 million tons of coal, the Project can support production of 5.2 million tons per annum (“**Mtpa**”) Run-of-Mine (“**ROM**”) coal yielding approximately 3.8Mtpa of saleable clean coal at steady state production.

The low capex, high margin Project is expected to achieve average earnings before interest, taxes, depreciation, and amortization (“**EBITDA**”) of US\$87 million per annum (steady state) with average annual total operating costs (steady state; inclusive of royalties and severance taxes) of US\$29.37 per ton Free On Board Barge (“**FOB Barge**”) at the Project’s barge load-out facility.



**Figure 1: Buck Creek No.1 Mine Plan and Buck Creek No.2 Mine Layout**

## Comparison of Results from BFS and PFS

Compared to the results of the Pre-Feasibility Study (“**PFS**”) released in March 2015, the BFS results show a significant decrease in the total initial capital by US\$23 million to US\$105 million as a result of conducting a competitive bidding process with a large pool of local contractors experienced in developing coal mines in the Illinois Basin. With an additional 10% contingency, the total capital figure increases to US\$115 million.

In addition, the BFS results indicate a slight reduction in the average annual operating costs (FOB Barge) of US\$0.82 to US\$29.37 per ton as a result of a reduction in leased equipment costs (on a per

ton basis), reduction in employee benefits insurance costs and the assumed removal of the vendor override royalty (0.5%) as part of the re-negotiation of the remaining vendor payments announced to the Australian Securities Exchange (“**ASX**”) on 2 June 2015. Note, Paringa has not included the final vendor payments within the total initial capital of US\$105 million, however will account for the final vendor payments within the total financing requirement currently negotiated with US debt and equity financiers.

A comparison of the results from the BFS and PFS are as follows:

<b>Table 3: Comparison of Scoping Study and PFS</b>		
<b>Item</b>	<b>BFS</b>	<b>PFS</b>
Average Annual Production (Steady State)	3.8 Mtpa	3.8 Mtpa
Average Sales Price Received (FY18)	US\$45.99 /t	US\$47.36 /t
Average Sales Price Received (FY35)	US\$55.63 /t	US\$55.63 /t
Total Operating Costs (FOB Barge) (Steady State)	US\$29.37 /t	US\$30.19 /t
Average Annual EBITDA (Steady State)	US\$87 million	US\$81 million
Total Initial Capital	US\$105 million	US\$127 million

## **Next Steps**

### **1. Financing the Buck Creek No.1 Mine**

Following the execution of the cornerstone sales agreement with Louisville Gas and Electric Company and Kentucky Utilities Company (“**LG&E and KU**”), and the completion of the final bidding process for major capital items to develop the Project, Paringa will continue to progress advanced discussions with debt and equity financiers.

### **2. Execute Additional Coal Sales Contracts**

The cornerstone sales contract executed with LG&E and KU is a 7-year contract covering an initial 2-year construction period (2016 to 2017) and a 5-year production period (2018 to 2022). LG&E and KU are two of the largest fuel buyers within the Company’s initial target Ohio River Market, with significant resources to undertake a 12 month due diligence process, and are subsidiaries of PPL Corporation, a diversified US energy company that has a market capitalisation of approximately US\$22.6 billion (NYSE: PPL).

Paringa has also completed 12 months of due diligence identifying and building relationships with local utilities who operate scrubbed coal fired power plants along the Ohio River Market and who are buyers of the Project’s Western Kentucky No.9 (“**WK No.9**”) coal specification.

Following execution of the cornerstone sales agreement and completion of financing activities, Paringa will contract additional coal sales by participating in future solicited bids with local utilities during the North American Spring and Fall solicitation periods and will also approach local utilities to make unsolicited offers to sell coal outside of the solicitation periods. In addition, the Company will assess opportunities to sell coal into a secondary target South East Market, which is a growing market for Illinois Basin coal.

### 3. Results of Scoping Study for Buck Creek No.2 Mine

Paringa has also begun assessing opportunities to incrementally expand production at the Buck Creek Mining Complex, forming part of a staged multi-project development program. The Company announced to the ASX in November 2014, that it had begun technical studies (now Scoping Study) at the Buck Creek No.2 Mine. This second mine development has the potential to be a low capital cost project due to the shallow depth of the coal seam from the surface at the mine portal. The results of the Scoping Study for the Buck Creek No. 2 Mine are expected to be released during the December quarter of 2015.

#### Illinois Basin Update

Consistent with the rationalization of depleting resources and high cost mines across the US coal industry, several Illinois Basin producers have recently announced the closures of older or higher cost operations with continued consolidation into newer and lower cost mining operations. Recent company fillings from Illinois Basin producers have announced the following closures:

Mine	Owner	Production (FY14)	Close Date	Reason
Onton No.9	Alliance	2.8 mt	Closed	End of economic reserve life
Hopkins (Elk Creek)	Alliance	3.0 mt	2016	End of economic reserve life
Midway	Armstrong	2.5 mt	2016	End of economic reserve life
New Era	Murray	5.5 mt	2016	End of economic reserve life

In relation to the Onton No.9 and Hopkins mines owned by Alliance Resource Partners, LP (“**Alliance**”), it has been announced that the company is effectively transferring coal production to its recently acquired Illinois White Oak longwall mine and the expanding Western Kentucky River View room-and-pillar mine, which is estimated to produce nearly 10 million tons in 2015, making it the largest and most productive underground room-and-pillar coal mine in the US.

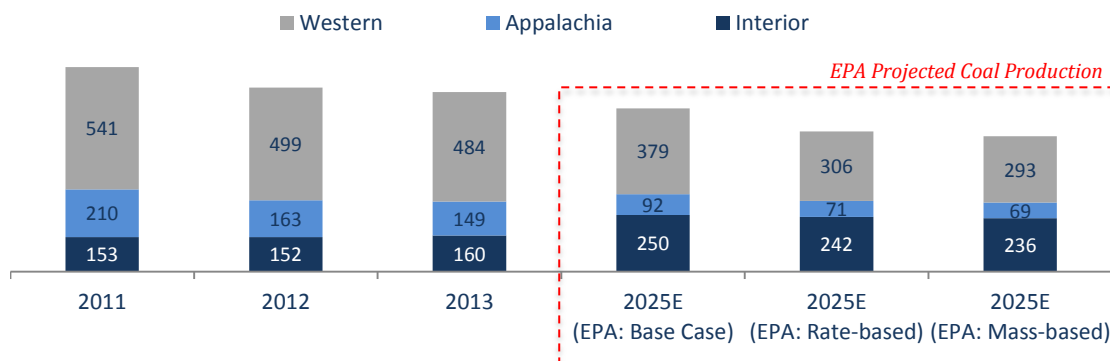
This rationalization of production within the Illinois Basin is a positive indication that producers are focused on maximizing margins which carefully protecting the market from over-production. This willingness from multiple producers to protect the market from oversupply is one of the primary reasons for the exceptional margins produced from this region.

#### Illinois Basin: Remains an Exciting Growth Story

The U.S. Environmental Protection Agency (“**EPA**”), using data supplied by the U.S. Energy Information Administration (“**EIA**”), has published forecasts for future US coal production for the electric power sector in its “Regulatory Impact Analysis for the Clean Power Plan Rule” (or “**RIA**”), released in August 2015. The RIA detailed future coal production for the three major US coal producing regions (refer to Figure 3) under three CO<sub>2</sub> emissions scenarios: (i) *Base Case* (assuming no reduction of CO<sub>2</sub> emissions under the Clean Power Plan); (ii) *Rate-Based* (calculation of CO<sub>2</sub> emission reductions allowing for growth in base-load energy); and (iii) *Mass-Based* (calculation of CO<sub>2</sub> emission reductions based on a set allocation of CO<sub>2</sub> emissions for each power plant).

Under the Clean Power Plan’s “worst-case” scenario (i.e. “Mass-Based” scenario) for the US coal industry, the forecasts project coal production from the Interior Region, consisting of the Illinois Basin and southern lignite coal fields, to be at 236 million tons by 2025E. The Interior Region’s lignite coal production, typically associated with “mine-mouth” (i.e. coal mine to adjacent power plant) operations, is

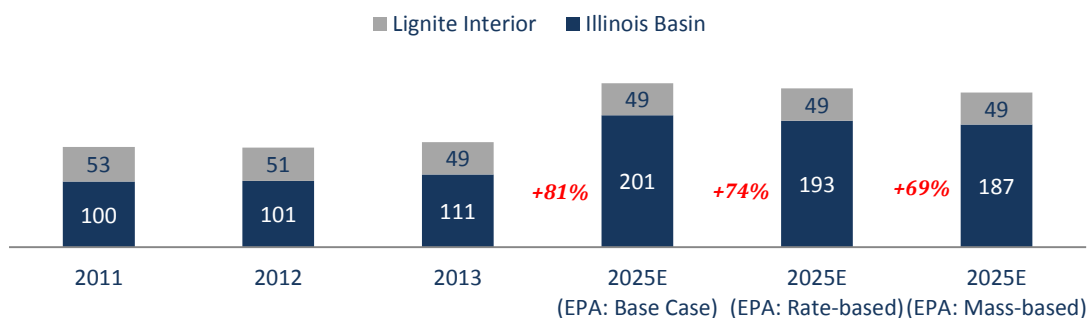
not projected to grow since transportation of lignite coal across large distances is largely uneconomic, and therefore any growth in the Interior Region’s lignite coal production would require the construction of new local coal fired power plants.



**Figure 3: EIA Historical and EPA Projected Production for Interior (Illinois & Lignite Basins), Western and Appalachian Regions**

(Source: EIA, EPA <http://www2.epa.gov/cleanpowerplan/clean-power-plan-existing-power-plants> Table 3-15).

This implies growth within the Interior Region will need to be sourced from Illinois Basin coals, a high quality coal which can be transported via barge or rail throughout most of the Eastern US power market. Under the Mass-Based scenario, the EPA forecasts imply that the Illinois Basin is poised to grow by over 69%, adding 76 million tons of additional demand to the basin by 2025E. The increase in the Illinois Basin’s market share is underpinned by the first quartile position of the Illinois Basin on a delivered cost curve (i.e. after accounting for transportation costs and the heating content of coal) into the Eastern US power market.

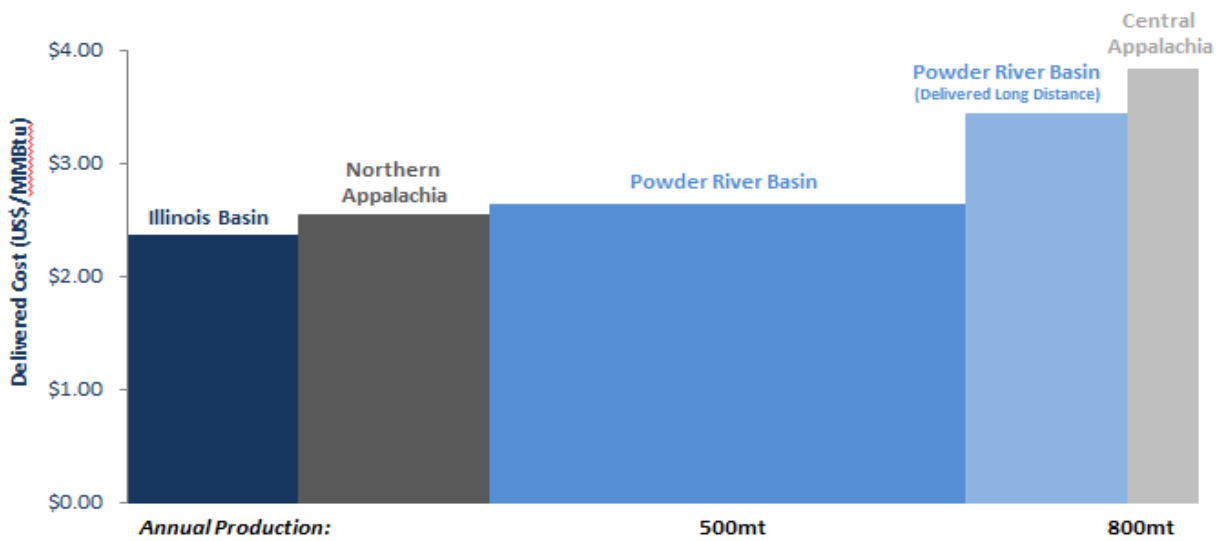


**Figure 4: EIA Historical and EPA Projected Production for Interior (Illinois & Lignite Basins) Region**

(Million tons; Source: EPA and EIA Data taken from latest Annual Distribution Report 2013)

### Illinois Basin: Lowest Delivered Cost to Eastern US Power Markets

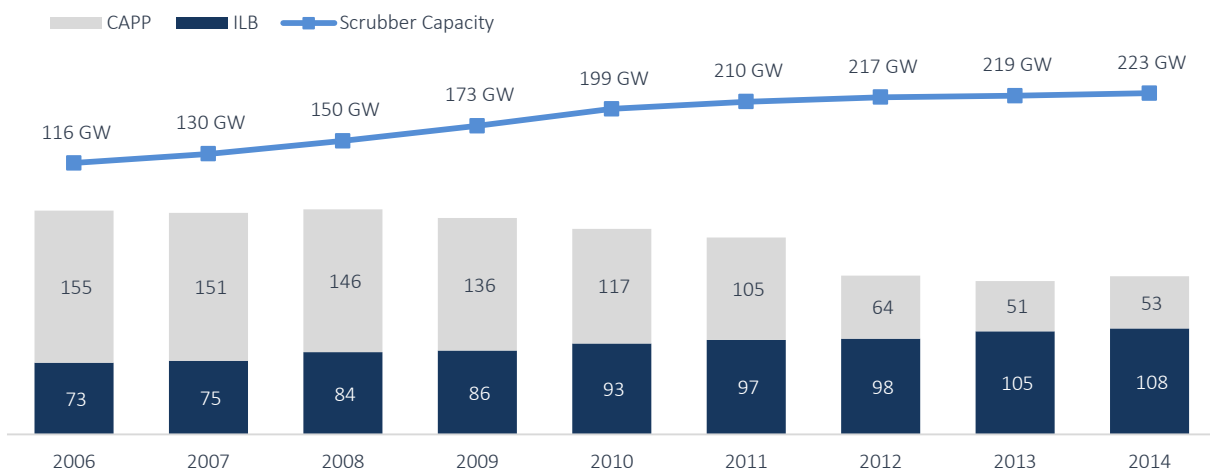
The Illinois Basin’s position at the bottom of the delivered cost curve for the Eastern US power markets, coupled with the recent scrubbing of US coal fired power plants which removes sulfur as a key consideration, are the key drivers for the basin’s success. This position is dictated by both the consistent and highly productive geology of the basin, which lends itself to low cost underground mining methods, and the basins access to low cost barge and rail transportation infrastructure. When both factors are taken into account, the Illinois Basin excels as one of the lowest cost delivered fuel sources into the Eastern US power market (refer to Figure 5).



**Figure 5: Major US Coal Basin Delivered Cost Curve to Eastern US Power Markets**

(Source: Clarksons Platou; Note: Delivered cost curve for each coal basin represents the average operating mine cash costs plus the average transportation costs to Eastern US power markets)

Given Illinois Basin’s position on the delivered cost curve, it will continue to take market share from other higher cost coal basins as it has done over the past decade, typically displacing the higher cost Central Appalachian coal basin (“CAPP”).



**Figure 6: Illinois Basin and CAPP Coal Deliveries compared with US Scrubber Capacity Additions**

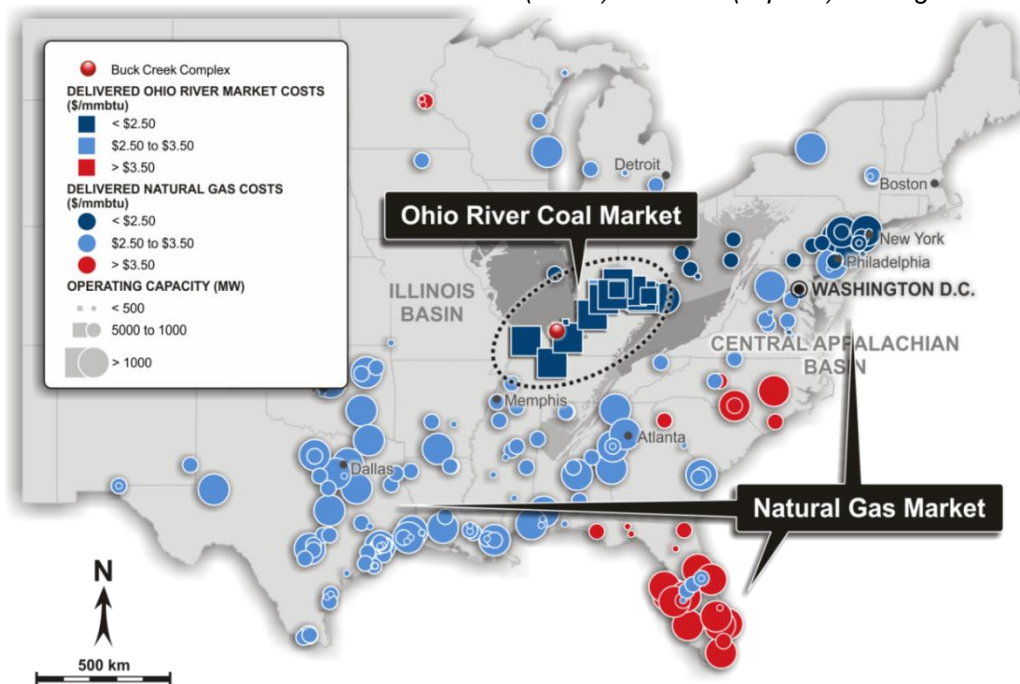
(Source: SNL and EIA Data)

**Illinois Basin: Competitive with Natural Gas**

Even at currently depressed natural gas prices, coal remains a highly competitive and dominant energy source for the Ohio River market, which is the initial target market for the Buck Creek No. 1 Mine. This is primarily due to the lower production costs of the Illinois Basin coals and the extremely favorable logistical and transportation costs of barge supplied coal. With Illinois Basin coals supplying this region for a delivered cost of less than US\$2.50 per mmbtu, it is expected the Ohio River Market will remain strongly in favor of coal going forward.



Available Delivered Prices for Natural Gas (Circle) and Coal (Square) for August 2015



**Figure 7: Ohio River Market Delivered Cost of Coal (\$/mmbtu) vs. Regional Delivered Cost of Natural Gas (\$/mmbtu)**

(Note: Only those natural gas power plants with average utilization rates of greater than 30% for 2014 have been identified, utilization rates of less than 30% usually represent "peaking" power plants and are not typical of base-load energy power plants) (Source: SNL)

Within the Northeast of the US, low cost natural gas from the Marcellus and Utica basins is expected to remain the most economic fuel for power generation. The physical limitations and costs of natural gas transportation rapidly increase the delivered cost of this natural gas as it moves towards the Ohio River Market or into the South East Market (represented by the high delivered cost of natural gas in Figure 7).

In the event natural gas prices rise in the future, there is the ability for US coal fired power plants based in the Ohio River Market and South East Market to increase utilization rates (i.e. "run harder"), potentially leading to an increase in Illinois Basin coal burn. This utilization demand dynamic is in addition to the coal basin switching dynamic that underpins the long term demand growth for Illinois Basin coals.

### US\$220 Million Cornerstone Long Term Contract Secured

Paringa executed its "cornerstone" coal sales agreement with LG&E and KU for future coal sales from the proposed Buck Creek No.1 Mine, totaling US\$220 million of contracted sales.

Based on feedback from Paringa's potential "tier-1" customers within the Ohio River Market, the Buck Creek No.1 Mine's Coal Handling and Preparation Plant was redesigned as part of the Pre-Feasibility Study ("PFS") released to the ASX in March 2015, to produce both a fully-washed and a blended product. It is estimated that 30% of total sales from the Buck Creek No.1 Mine will be a fully washed 11,800 btu/lb product and 70% of total sales will be a 11,200 btu/lb product.

Paringa is expected to begin production at the Buck Creek No.1 Mine in 2018, reaching full production of 3.8mtpa by approximately 2020. Under the coal sales agreement, Paringa is contracted to deliver a total of 4.75 million tons over a 5-year period of its 11,200 btu/lb product, with 750,000 tons to be delivered in 2018 and 1,000,000 tons to be delivered in each year from 2019 to 2022.

Table 5: Summary of Key Terms		
Year	Contracted Production	Fixed Contract Price (FOB Barge; 11,200 btu/lb)
2018	750,000 tons	US\$44.50 per ton
2019	1,000,000 tons	US\$45.50
2020	1,000,000 tons	US\$46.30
2021	1,000,000 tons	US\$47.25
2022	1,000,000 tons	US\$48.20
Buck Creek No.1 Mine "All-in" Operating Costs per ton		US\$29.37 per ton

The Buck Creek No.1 Mine's direct barge access to the Green and Ohio River systems provides a significant transportation advantage. The LG&E and KU coal sales agreement calls for fixed sales prices based on a Free-on-Board ("F.O.B.") Buck Creek No.1 Green River Barge Price", which is equivalent to selling coal at the end of the Buck Creek No.1 Mine's conveyor belt at the Green River barge load-out facility.

The contracted fixed coal sales prices for Paringa's 11,200 btu/lb coal spec begins at US\$44.50 per ton in 2018, escalating to US\$48.20 per ton in 2022.



**Figure 8: LG&E and KU's Trimble County Power Plant on the Ohio River**

*(Note: Cooling tower is releasing water vapor)*

The LG&E and KU agreement includes standard project development milestones that are in line with the proposed Buck Creek No.1 Mine construction program. During this construction period, LG&E and KU will progressively monitor Paringa's performance in meeting these milestones.

LG&E and KU are two of the largest fuel buyers within the Company's initial target Ohio River Market, with resources to perform a 12 month due diligence process on Paringa and the Project, and are subsidiaries of PPL Corporation, a diversified US energy company that has a market capitalisation of approximately US\$22.6 billion (NYSE: PPL).

## Coal Sales Marketing Strategy Going Forward

For utilities within Paringa’s initial target Ohio River Market, the duration of most standard sales contracts with coal producers is currently between one and three years. The Ohio River Market utilities are not currently contracting for the 2019 year and beyond.

Paringa will continue contracting additional coal sales with utilities in the Ohio River Market as the Company moves towards production in 2018. Paringa has been added to the “Qualified Bidders List” of all utilities within the Ohio River Market and will participate in all future solicited bids during the North American spring and fall solicitation periods. In addition, Paringa has begun approaching utilities to make unsolicited offers for future coal sales.

Over the coming months, the Company will add resources to its coal sales and marketing team to build relationships with utilities within the South East Market, a growing market for Illinois Basin coal. Provided below is an overview of Paringa’s initial target Ohio River Market and the expanding South East Market.

### Initial Target Market – Ohio River Market

#### *A Stable Base-load Energy Source for the Region*

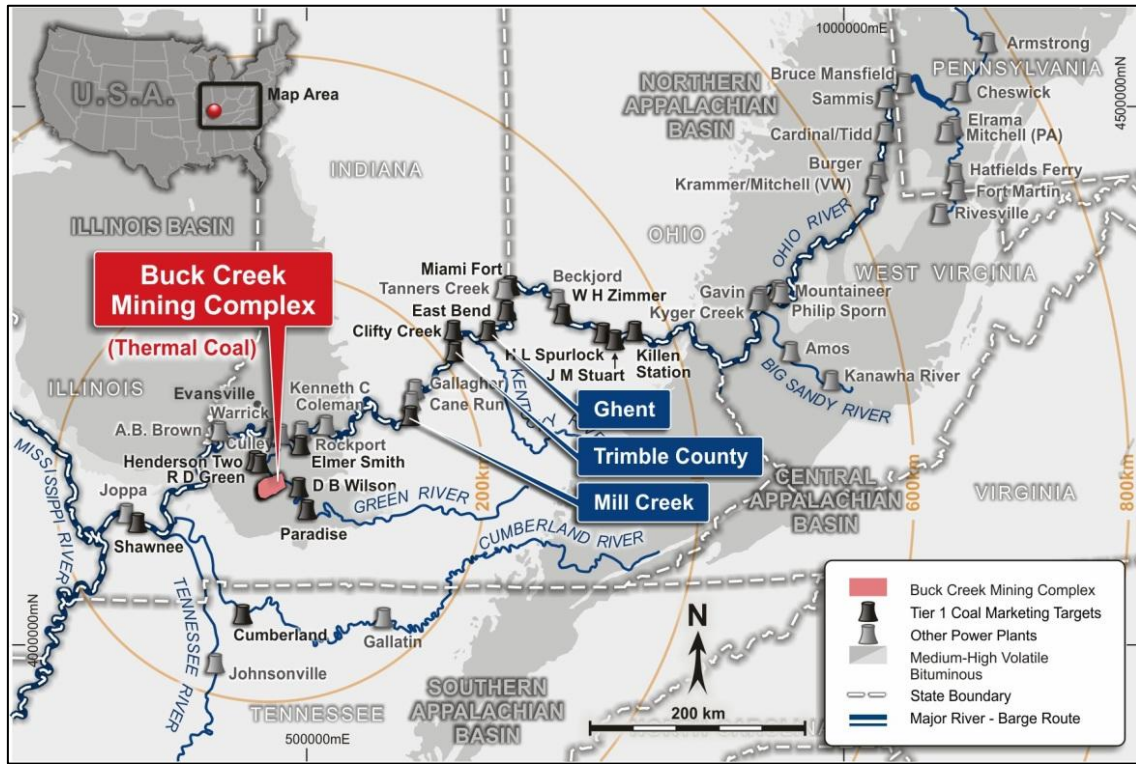
The Project is in an enviable position in having direct barge access to the Green and Ohio rivers, providing a significant transportation cost advantage over other Illinois Basin and US coal producers. Paringa’s initial target market is the 17 large base-load coal fired power plants located on the Ohio River. These plants consumed 55 million tons of coal in 2014, primarily from the Illinois Basin and have installed environmental controls and are fully compliant with Mercury and Air Toxics Standard (“MATS”) regulations.

The Ohio River Market is an important base-load energy source for the region and is largely insulated from the volatility of natural gas prices. For example, there are no combined-cycle natural gas plants currently in the State of Kentucky. Given the cost competitiveness of Illinois Basin coal delivered to the Ohio River Market (approximately US\$2.00 to US\$2.30 per mmbtu) and the capital spent on installing environmental controls (+US\$35 billion in total in the US), the Ohio River Market will remain a vital source of energy for the region.



**Figure 9: Typical Modern Coal Fired Power Plants on the Ohio River**

*(Left: 2.4GW JM Stuart Plant, Right: 1.4GW Zimmer Plant)*



**Figure 10: Buck Creek Mine Complex and LG&E and KU's Power Plants within the Ohio River Market**

Provided below is an overview of the 17 large base-load energy power plants within the Ohio River Market:

Table 6: Ohio River Market - Target Customers #1									
Plant	Ghent	Trimble County	Mill Creek	Cumberl and	Shawnee	Paradise	R.D. Green	D.B. Wilson	East Bend
State	KY	KY	KY	TN	KY	KY	KY	KY	KY
Plant Owner	LG&E	LG&E	LG&E	TVA	TVA	TVA	BREC	BREC	Duke
Regulated?	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes
Scrubbers?	Yes	Yes	Yes	Yes	Planned	Yes	Yes	Yes	Yes
Capacity (GW)	2.0	1.3	1.5	2.5	1.4	2.3	0.5	0.4	0.6
Utilization (2014)	74%	66%	67%	66%	59%	66%	87%	82%	55%
Coal Burn (2014)	6.03 mt	3.29 mt	3.89 mt	6.11 mt	3.88 mt	5.89 mt	1.30 mt	1.34 mt	1.38 mt
% Illinois Basin Supplied	97%	81%	100%	82%	0%	100%	96%	100%	96%
Delivered Coal Price (2014, US\$ pe rmmbtu)	\$2.26	\$2.32	\$2.34	\$2.41	\$2.32	\$2.25	\$2.74	\$2.55	\$2.17
Primary Transport Method	Barge	Barge	Rail	Barge	Rail	Barge	Barge	Truck	Barge
Barge Load-out Location	Ohio River	Ohio River	Ohio River	Cumberla nd River	Ohio River	Green River	Green River	Green River	Ohio River

Table 7: Ohio River Market - Target Customers #2								
Plant	W.H. Zimmer	J.M. Stuart	Killen Station	Miami Fort	Elmer Smith	Henderson 2	H.L. Spurlock	Clifty Creek
State	OH	OH	OH	OH	KY	KY	KY	IN
Plant Owner	Dynegy	Dynegy	AES	Dynegy	Owensboro City	Henderson City	EKPC	Multi-owned
Regulated?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Scrubbers?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Capacity (GW)	1.3	2.3	0.6	1.2	0.4	0.3	1.3	1.2
Utilization (2014)	62%	51%	73%	74%	67%	84%	73%	58%
Coal Burn (2014)	2.92 mt	4.64 mt	1.90 mt	3.36 mt	1.19 mt	1.02 mt	4.01 mt	2.85 mt
% Illinois Basin Supplied	43%	46%	48%	61%	100%	100%	54%	100%
Delivered Coal Price (2014, US\$ pe rmmbtu)	\$2.12	\$2.20	\$2.18	\$2.07	\$2.02	\$2.37	\$2.38	\$2.92
Primary Transport Method	Barge	Barge	Barge	Barge	Truck	Truck	Barge	Barge
Barge Load-out Location	Ohio River	Ohio River	Ohio River	Ohio River	Ohio River	Green River	Ohio River	Ohio River

## Secondary Target Market – South East

### *Switching from High Cost Central Appalachia Coal Supply to the Illinois Basin*

Paringa has also identified a secondary target market, the South East Market, which has traditionally been supplied by the Central Appalachian region. Coal basin switching from the higher cost Central Appalachian coals to lower cost Illinois Basin coals has been facilitated by changing environmental standards.

These standards require installation of pollution control devices at coal fired power plants, including flue gas desulphurization units (“**Scrubbers**”). These Scrubbers now allow power plants to burn the cheapest fuels on a delivered basis with less regard to sulfur content, because almost all of the sulfur and other harmful chemicals are removed before being released to the atmosphere.

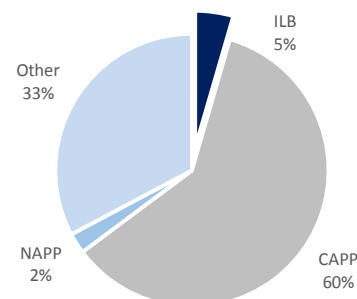
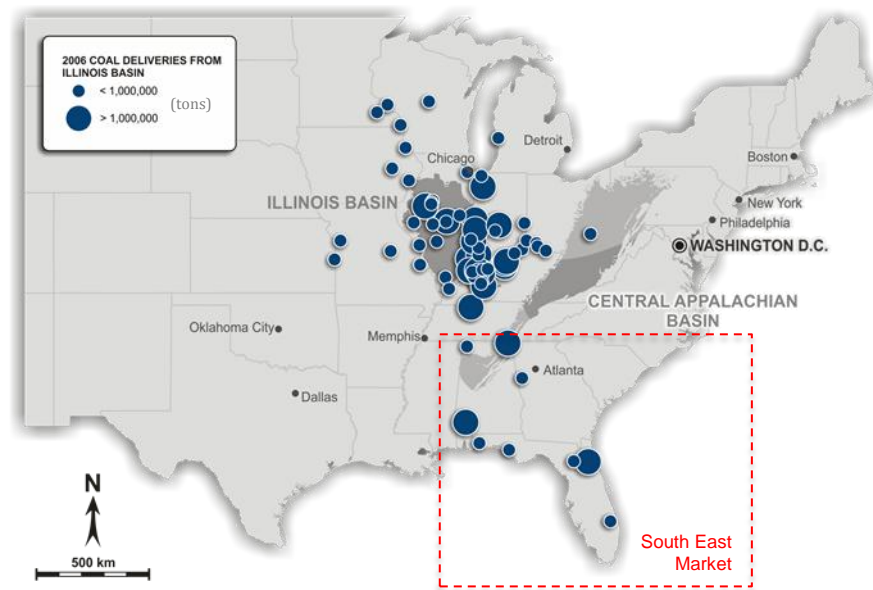
The increase in Scrubber installations in the US has provided an opportunity for low cost Illinois Basin coal to increasingly penetrate a large proportion of the Eastern U.S. power market which has been traditionally supplied by Central Appalachia. For example, the Illinois Basin’s market share of the South East Market has increased from 5% in 2006, to a market share of 26% in 2014. The South East Market consumed approximately 20 million tons of Illinois Basin coal in 2014.

The typical “mine-gate” costs of Central Appalachian mines are between US\$55 to US\$70 per ton, compared to Paringa’s “all-in” average annual operating costs of US\$29.37 per ton (FOB Barge). The key reason for this difference in operating cost structure is primarily due to the geology.

The typical “in-seam” yield (i.e. the percentage of coal from top to bottom of the coal seam) for Central Appalachian thermal coal mines ranges from 45% to 55%. The equivalent in-seam yield for Buck Creek’s WK No.9 coal seam is 92.9%. This difference in in-seam yield is the largest single difference in explaining the difference in mine productivity and operating costs at the mine-gate.

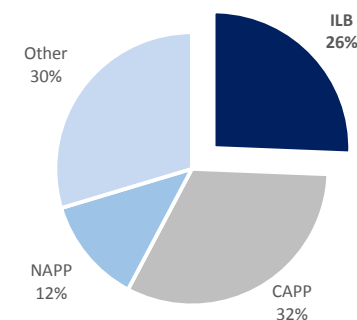
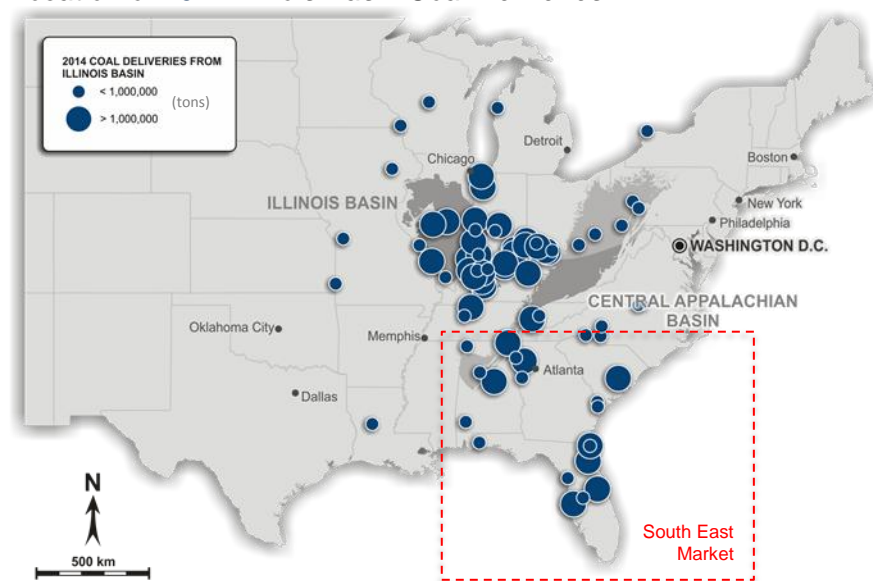
**Location 2006 Illinois Basin Coal Deliveries**

**2006 South East Market Share**



**Location of 2014 Illinois Basin Coal Deliveries**

**2014 South East Market Share**



**Figure 11: Location of Illinois Basin Coal Deliveries and Illinois Basin’s South East Market Share (2006 vs. 2014) (Source: SNL)**

The increase in Scrubber installations in the US has provided an opportunity for low cost Illinois Basin coal to increasingly penetrate a large proportion of the Eastern U.S. power market which has been traditionally supplied by Central Appalachia. For example, the Illinois Basin’s market share of the South East Market has increased from 5% in 2006, to a market share of 26% in 2014. The South East Market consumed approximately 20 million tons of Illinois Basin coal in 2014.

The typical “mine-gate” costs of Central Appalachian mines are between US\$55 to US\$70 per ton, compared to Paringa’s “all-in” average annual operating costs of US\$29.37 per ton (FOB Barge). The key reason for this difference in operating cost structure is primarily due to the geology.

The typical “in-seam” yield (i.e. the percentage of coal from top to bottom of the coal seam) for Central Appalachian thermal coal mines ranges from 45% to 55%. The equivalent in-seam yield for Buck Creek’s WK No.9 coal seam is 92.9%. This difference in in-seam yield is the largest single difference in explaining the difference in mine productivity and operating costs at the mine-gate.

### Realistic BFS Sales Price Assumptions

Paringa has adopted the LG&E and KU long term contract prices for the Project’s Blended Product (11,200 Btu/lb) for the BFS from 2018 to 2022. Hanou Energy Consulting, LLC’s latest Illinois Basin coal price forecast has been adopted for the Project’s Fully Washed Product (11,800 btu/lb) for years 2018 to 2035 and for the Blended Product (11,200 btu/lb) for years 2023 to 2035.

A selection of the sales prices used in the BFS for Paringa’s Fully Washed and Blended Products for the years 2018 to 2035 are summarised in the table below:

Project Coal Specification	2018	2019	2020	2025	2030	2035
Fully Washed (11,800 Btu/lb)	49.46	49.92	50.39	52.81	55.35	58.03
Blended (11,200 Btu/lb)	44.50	45.50	46.30	49.64	52.06	54.60

### Low Operating Costs

The average annual operating costs per clean ton of coal during steady state production (“all-in cash costs”) is approximately US\$29.37 per ton (FOB Barge), including the cost of leased mining equipment, royalties and severance taxes. The average annual operating costs adopted in the BFS has been reduced by US\$0.82 from the PFS equivalent operating cost.

Average Annual Operating Costs (Steady State)	BFS (US\$ per ton)	PFS (US\$ per ton)	Variance (US\$ per ton)
Labor and Benefits	7.46	7.71	(0.25)
Operating & Maintenance	9.33	9.40	(0.07)
Power & Utilities	0.91	0.97	(0.06)
General & Administration	0.81	0.78	0.03
Leased Equipment	1.71	1.85	(0.14)
<b>Sub-total Direct Mining Costs</b>	<b>20.22</b>	<b>20.69</b>	<b>(0.47)</b>
CHPP & Barge Load-Out Facility	3.45	3.51	(0.06)
Taxes & Insurance	1.37	1.29	+0.08
Royalties (Average rate of 4.1%)	2.01	2.37	(0.36)
Severance Taxes	2.32	2.32	-
<b>Average Annual Operating Costs</b>	<b>29.37</b>	<b>30.19</b>	<b>(0.82)</b>

The reduction is largely due to a reduction in leased equipment costs (on a per ton basis) and the assumed removal of the vendor override royalty (0.5% of gross sales value) as part of the re-negotiation of the remaining vendor payments announced to the ASX on 2 June 2015.

Note, Paringa has not included the final vendor payments within the total initial capital of US\$105 million, however will account for the final vendor payments within the total financing requirement currently negotiated with debt financiers.

The Project's low operating costs result from the following inherent advantages:

- In-seam yield of the Project's WK No.9 seam is 92.9%, effectively almost pure coal, and the Project's mine plan being a relatively flat lying (i.e. 2° to 3° dip), consistent, and laterally continuous coal seam resulting in high productivity;
- Close proximity to the Green River provides direct low-cost barge access to the lucrative Ohio River Market consisting of large, scrubbed, and efficient base load power plants;
- Proximal to local mining services and equipment providers;
- Located within a mature coal mining district with access to highly skilled union-free labour;
- Competitive power and utilities costs; and
- Economic rights to the coal are generally owned by the local landowners (e.g. farmers) who are highly supportive of the Project.

### **Capex: Final Bidding Process Completed**

Paringa received competitive bids for all major capital items in the BFS for the construction and development of the Project. These bids were received as a result of an extensive six month contract negotiation and bidding process for all major capital items including site development, electrical substation and infrastructure, slope (decline) construction, shaft excavation, mine fan and escape hoist, surface facilities, coal preparation plant, materials handling, overland conveyor belt and barge load-out facility.

Due to the competitive bidding process between several highly experienced contractors, there has been a significant saving to the quotes used in the initial total capital estimate for the PFS. This is an indication of the availability of highly experienced coal industry contractors and the competition among contractors to win mine development work in the Illinois Basin.

Total initial capital is estimated at US\$105 million which includes the cost of surface property, surface and underground mine development and infrastructure estimated at US\$61 million and the cost of a 700 tph wash plant, barge load-out and surface facilities of US\$44million. The total initial capital cost with an added 10% contingency reserve is US\$115 million. Sustaining capital for the mine, mine site infrastructure and CHPP have been estimated at US\$1.28 per ton.

A comparison of the Project's major capital cost items adopted in the BFS and PFS is shown below:



**Table 10: Comparison of BFS and PFS Major Capital Item Costs**

Capital Item	BFS (US\$ million)	PFS (US\$ million)	Variance (US\$ million)
Project Development	8.82	9.35	(0.53)
Electrical	3.07	3.62	(0.55)
Site Development	2.78	2.83	(0.05)
Surface Facilities	5.05	5.53	(0.48)
Slope	19.31	35.48	(16.17)
Slope Hoist	2.24	0.00	+2.24
Underground Development	3.92	2.76	+1.16
Shaft	6.80	10.50	(3.70)
Slope Belt	5.42	6.59	(1.17)
Fan, Escape and Hoist	1.77	1.66	+0.11
Engineering and Safety	1.47	1.33	+0.14
<b>Sub-total Mine Development</b>	<b>60.65</b>	<b>79.65</b>	<b>(19.03)</b>
Preparation Plant	19.55	18.51	+1.04
Materials Handling	20.14	23.38	(3.24)
River Dock	4.20	4.72	(0.52)
Refuse Disposal	0.10	1.00	(0.90)
<b>Sub-total CHPP and Load-out</b>	<b>43.99</b>	<b>47.61</b>	<b>(3.62)</b>
<b>Total Initial Capital</b>	<b>104.60</b>	<b>127.28</b>	<b>(22.68)</b>

Capital costs for the Buck Creek No.1 Mine have been benchmarked against similar underground mines in the region that mine the Project's WK No.9 coal seam in similar conditions, utilizing identical mining and processing techniques and equipment. In addition, the capital intensity (inclusive of leased equipment) of the Buck Creek No.1 Mine is similar to other new coal developments in the Illinois Basin by public listed companies that have started construction since 2007:

**Table 11: Capital Intensity of Recent Illinois Basin Developments**

Mine	Owner	Construction Start Year	Nameplate Production	Capex Intensity
River View (CM)	Alliance	2007	8.4 Mtpa	US\$29 /t
Bear Run (DL)	Peabody	2009	5.2 Mtpa	US\$50 /t
White Oak #1 (LW)	Alliance/Private	2011	6.5 Mtpa	US\$62 /t
Gibson South (CM)	Alliance	2011	5.2 Mtpa	US\$38 /t
Pennyrile (CM)	Rhino	2013	2.0 Mtpa	US\$34 /t
<b>Average</b>				<b>US\$43 /t</b>
Buck Creek No.1 (CM)	Paringa	2016	3.8 Mtpa	US\$43 /t

Capital Intensity = Total Capital divided by Nameplate Production; Capex includes all mining equipment to full production  
Note: (CM) – Continuous Miner; (LW) – Longwall; (DL) – Surface Dragline  
Source: Company Filings

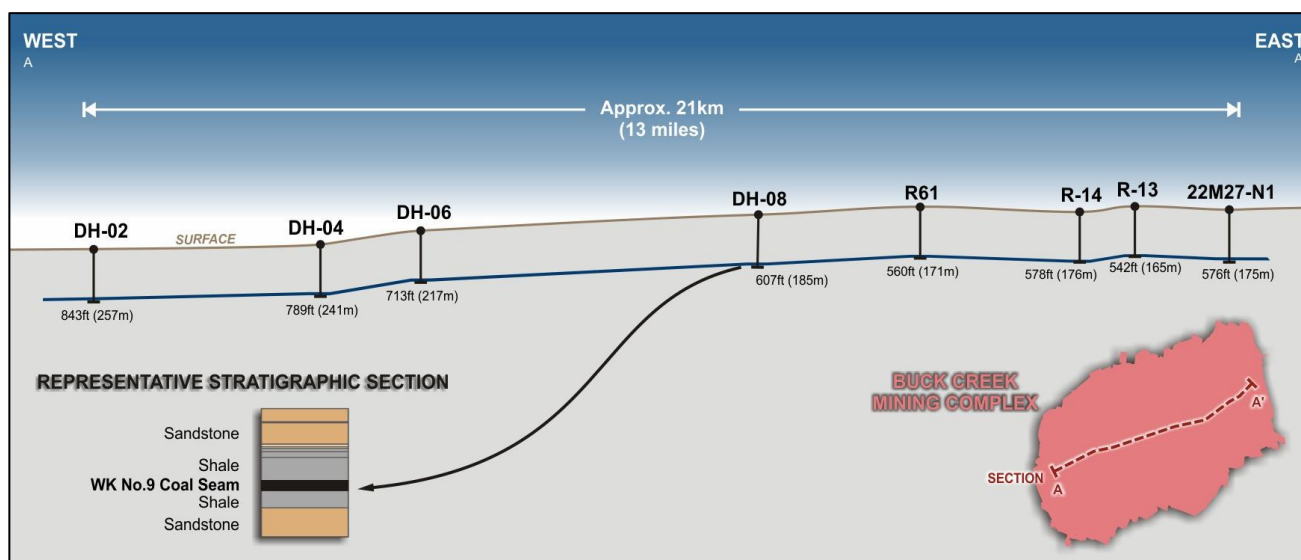
The Buck Creek No.1 Mine is located in one of the best-served and infrastructure advantaged coal regions in the US. All construction services, construction personnel, contractors and parts will be supplied by firms who are operating in the region. Final bid awards and construction contract executions will align with the completion of formal negotiations with financiers to develop the Buck Creek No.1 Mine.

### Growing Coal Resource

Paringa previously announced to the ASX (February 2015), an updated Coal Resource Estimate (“CRE”) of 211 million tons (Measured and Indicated categories) reported in accordance with the JORC Code 2012. For the BFS, the CRE has now increased to 224 million tons (~203 million tonnes) in the Measured and Indicated categories. The updated CRE incorporated results from an additional seven air rotary holes drilled by Paringa 2015. Drilling has confirmed the WK No.9 seam to demonstrate lateral stratigraphic and coal quality continuity.

CRE Tonnage (Mt)					Product Quality (+4% Eq. Moisture)		
Measured	Indicated	Total Measured & Indicated	Inferred	Total	Calorific Value	Ash	Yield
60.5	163.6	224.1	0.7	224.8	11,893 Btu/lb	8.4%	92.9%

A total of 194 bore holes were used in the estimation, including 103 Kentucky Geological Survey core holes, 29 Buck Creek Resources LLC core holes, 10 Buck Creek Resources LLC rotary holes, 21 Hartshorne Mining LLC core holes, 4 Hartshorne Mining LLC rotary holes, and 27 gas wells.



**Figure 13: Cross Section and Stratigraphic Column of the WK No.9 within the Project**

The Buck Creek Mining Complex coal resource is in the WK No. 9 coal seam approximately 650 feet below the surface at the proposed mine portal site. The coal seam is flat lying with a modest dip of 2 to 3 degrees generally to the northwest and toward the centre of the bowl-shaped Illinois Coal Basin. Thickness of the WK No. 9 coal seam modelled in the CRE averages approximately 3.8 feet (46 inches), a suitable seam thickness for high-productivity underground mining with approximately 0.7 feet (8

inches) of out-of-seam mining needed to achieve an average mining height of 4.5 feet (54 inches) required for equipment clearance. Seam and mining heights are similar to a number of underground mines in the region.

## High Quality Coal

The Project has particularly attractive coal quality properties compared to existing and new mines being developed in the Illinois Basin. On a product basis, after a 4% addition to equilibrium moisture, the coal has a high heat content of 11,855 Btu/lb which compares very favourably with the larger producing mines in the Illinois Basin. Since thermal coal mines are ultimately selling energy, this factor makes the Project's quality very attractive as a new source of energy from the Illinois Basin.

Table 13: Buck Creek Mining Complex – Coal Quality Specifications								
Raw Proximate Analysis (As Received)						Washed Core Quality (Equilibrium Moisture +4%)		
EQ Moisture	Ash	Volatile Matter	Fixed Carbon	Chlorine	HGI	Calorific Value (Btu/lb)	Ash	Yield @ 1.60 Float
6.6%	11.9%	37.1%	44.5%	0.18%	60	11,855	8.4%	92.9%

One of the more important characteristics to be considered in the Illinois Basin is the chlorine content because chlorine is corrosive to the boilers of coal fired power plants. The Project's chlorine content is a relatively low 0.18% and thus has a significant advantage over many new developments in the Illinois Basin which often have values exceeding 0.3%. The ash content of the Project's coal averages 8.4% and the sulfur content of 2.8% is slightly lower than the average typically seen across the Illinois Basin. The Project's coal quality provides confidence that the coal will be an attractive product in the growing scrubbed domestic and international thermal coal markets.

## Ore Reserve Estimate

The Project's Marketable Ore Reserve Estimate of 63.5 million tons of thermal coal has been defined from Recoverable Ore Reserve Estimate of 86.3 million tons. The Marketable Ore Reserve is classified as a Proven and Probable Ore Reserve Estimate, of which 16.5 million tons (or 26 percent) is considered proven and 46.9 million tons (or 74% percent) is considered probable (after the application of all mining factors).

Table 14: Project Ore Reserve Estimate						
Recoverable Coal Reserve (Mt)			Product Yield	Marketable Coal Reserve (Mt)		
Proven	Probable	Total	%	Proven	Probable	Total
22.49	63.84	<b>86.33</b>	73.54%	16.54	46.95	<b>63.49</b>

The Ore Reserve Estimate underpinning the production target has been reported in accordance with the JORC Code and CIMDS (as adopted May 10, 2014) and has been prepared under the direction of Mr Justin Douthat, a Competent Person who is a Registered Member of the Society of Mining, Metallurgy and Exploration and Mr Kirt Suehs, a Competent Person who is a Member of The American Institute of Coal Seam Access

Access to the proposed mine will be provided by a slope for transport of personnel, materials, and ROM coal, and a two-compartment vertical shaft for mine ventilation. The mine slope (decline entryway from the surface to the coal seam) will accommodate a conveyor belt to transport ROM coal to the surface and a travelway for the transportation of personnel, supplies, and equipment.

Professional Geologists. The Ore Reserve Estimate has been generated from the BFS mine plan which is based entirely on Measured and Indicated Coal Resource of 224 million tons and does not take into account Inferred Resources.

Proven and probable coal reserves were derived from the defined coal resource considering relevant mining, processing, infrastructure, economic (including estimates of capital, revenue, and cost), marketing, legal, environmental, socio-economic, and regulatory factors. They are presented on an as-received, recoverable basis.

### **Simple Mine Development Plan**

The Project is a well-defined coal resource, which is located in an area with a long history of coal mining. Proposed production from the mine will come exclusively from utilising the room-and-pillar method. The selection of underground room-and-pillar mining is validated by examining the method of mining used by adjacent operations which are some of the highest productivity room-and-pillar mines in the world.

In addition, the room-and-pillar mining method with continuous miners has received all of the necessary approvals from regulatory agencies at nearby operations and is supported by well-established equipment models with a ready supply of repair and replacement parts. No prototype equipment has been selected for use in the Project.

Paringa's US-based executive staff has vast coal mining experience and, more specifically, operational experience in the WK No. 9 coal seam. The seasoned backgrounds of the leadership team will enable the successful development and execution of a sound business plan that incorporates management best-practices, engineering design, personnel selection and training, equipment selection, and a mine plan to maximize safe mine production and high productivity.



**Figure 14: Example of a Slope Portal Transporting ROM Coal to Preparation Plant**

The slope is designed as an 18-foot wide by 18-foot high slope constructed at a 16 degree gradient that measures approximately 2,500 feet in length from the bottom of the box cut to the coal seam. This length includes an allowance for a vertical curve at the bottom of the slope to provide room for a level segment of the slope belt for conveyor transfer points.

A dual-compartment vertical airshaft will be constructed in order to ventilate the mine. One-half of the shaft will be designed for intake (fresh) air, and the other will carry return air which has coursed through the mine. The shaft will be constructed on the permitted surface site by conventional drilling, blasting and mucking from the surface to a depth of approximately 650 feet. The finished (concrete-lined) inside diameter of the shaft will be 24 feet and divided by a concrete wall.

### *Mining Method*

Production will be by room-and-pillar mining with four super-section units with a total of eight continuous miners (i.e. two continuous miners per super-section unit). Each super-section will be equipped with four battery haulers discharging onto a belt feeder/breaker, which provides surge capacity to reduce hauler dump time.

In addition, each super-section will be equipped with two dual-head roof bolting machines to provide roof support in mined entries. The super-sections will also require scoops for clean-up of spillage, and supply cars for distribution of supplies and materials, rockdusting, and other utility purposes.



**Figure 15: Typical Underground Super-Section Mining Equipment**

Personnel and supplies will be transported from the surface, down the slope using personnel and supply cars lowered by the hoist. Once underground, the mine's working sections will be reached with battery or diesel-powered rubber-tired equipment. Supplies will generally be loaded on combination rail-rubber cars on the surface and transported to the operating sections or areas designated for material use. Rehandling and stockpiling supplies underground (in areas other than active working sections) will be minimized to reduce labour and damage to supplies.

### *Mine Production*

The BFS mine plan includes a total production of 86.3 million raw (ROM) tons and 63.5 million clean, marketable tons over an 18-year period. This schedule includes a two-year ramp-up period and a period when production declines (Year 18) as the current mine plan area is depleted. At planned productivity, each super-section will produce approximately 2,300 to 2,400 tons of ROM coal per shift. ROM production for the Project will total approximately 5.2 million tons per year at full production.

Average product yield is estimated at 73.5 percent (which includes direct shipment/preparation plant bypass of approximately 14 percent of the ROM production). This will yield an average of approximately 1,675 to 1,765 tons of clean coal from each unit-shift of production. Annual production will total approximately 3.8 million marketable tons at full production.

### *Productivity*

Favourable geology, established mining infrastructure, including coal mining equipment and services industries, and access to highly skilled population centres within the Illinois Basin, lends itself to some of the most productive underground mining in the US. Mine production is most often measured by feet of entry advance per shift which provides an assessment of crew and equipment performance independent of geologic conditions. The continuous miner advance rate projected for the Project is 560 feet per super-section unit-shift which is comparable to the performance of other producers in western Kentucky and other parts of the Illinois Basin.

The Project is proximal to some of the largest and highest margin thermal coal mines in the US. Based on 2013 data, nine out of the top ten most productive non-longwall underground coal mines in the US are based in the Illinois Basin. The River View mine, which began production in 2009, produced 9.3 million tons in 2014, is the largest non-longwall (e.g. room-and-pillar) mine and is the most productive in the US. In developing the Project, Paringa will seek to replicate the productivity of underground room-and-pillar mines in the region.

### *Local Mining Industry*

With mining operations dating back to the early 1800's, western Kentucky's coal mining industry is one of the oldest and most extensively developed coal regions in the US. At full production, staffing for the Project operation is expected to total 283 employees, be non-unionised, highly skilled and sourced predominately from nearby population centres.

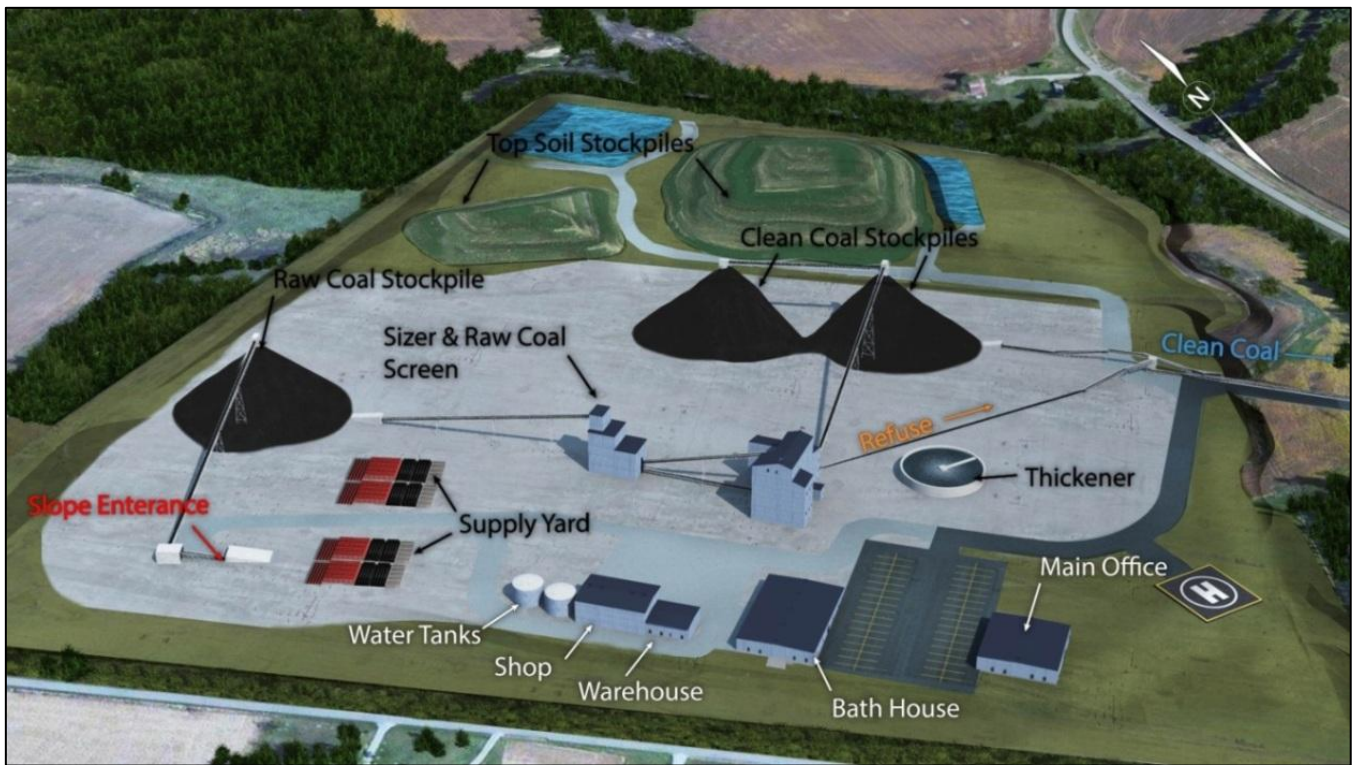
The Project is extremely well-serviced by all major mining equipment manufacturers and mine service and supply centres. Major mining equipment manufacturers have rebuild and component service exchange centres located near the proposed mine site. A major network of mining service providers including slope, shaft, and preparation plant construction companies are located in the immediate area.

## Mine Site Infrastructure and Coal Handling & Preparation Plant (“CHPP”)

The mine portal, coal preparation plant, and refuse disposal facility will be located in McLean County in the east-central portion of the Property. An overland conveyor will connect the mine and plant to a barge load-out on the Green River, approximately two miles to the northeast along Kentucky Route 138.

### Processing

The Project will include a modern, fully integrated, coal preparation plant in order to provide a consistent product, which meets the specifications of its customers. At full production, the coal preparation plant will be capable of processing 5.2 million tons of ROM coal annually, which equates to approximately 3.8 million marketable tons per year. The plant will be scheduled for operation 302 days each year, which represents an average six-day per week work schedule for 52 weeks (less 10 holidays).



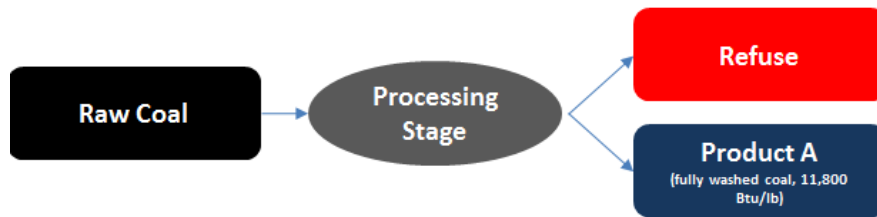
**Figure 16: Project Site Plan Layout**

Based on feedback from Paringa’s potential Tier-1 customers, the Project’s CHPP has been redesigned to produce both a fully-washed and blended product as shown below:

- **Product A - Fully Washed Product (11,800 Btu/lb)**

Raw coal from the underground mine is transferred via conveyor belt to the CHPP for screening and processing. All raw coal is immediately washed and stockpiled as a fully washed, higher heating content 11,800 Btu/lb product. It is estimated that 30% of total sales from the Project will be a fully washed product (Product A) with a preparation plant yield, for this product estimated at 67.1%.

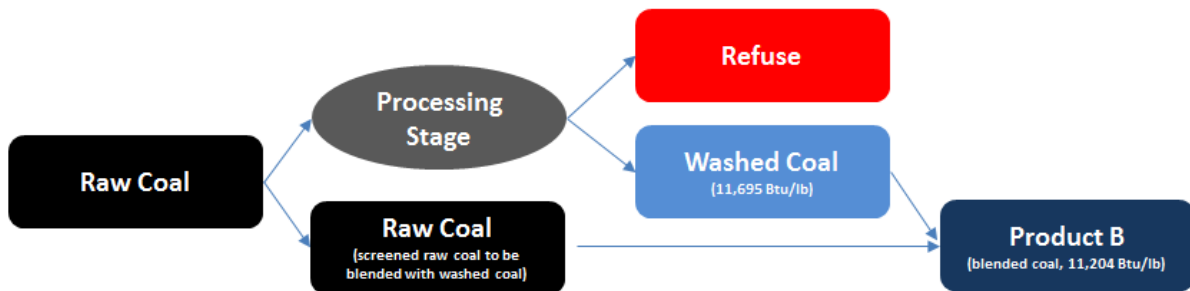
Overview of Producing Product A – Fully Washed Product



- **Product B - Blended Product (11,200 Btu/lb, 12% Ash)**

Raw coal from the underground mine is transferred via conveyor belt to the CHPP for screening and processing. Approximately 20% of raw coal bypasses the processing stage and is subsequently blended with fully washed coal. This blended product is stockpiled, separately from Product A, as an 11,200 Btu/lb product with maximum 12% ash. It is estimated that 70% of total sales the Project will be a blended product (Product B) with a preparation plant yield, for this product, estimated at 76.7%.

Overview of Producing Product B – Blended Product



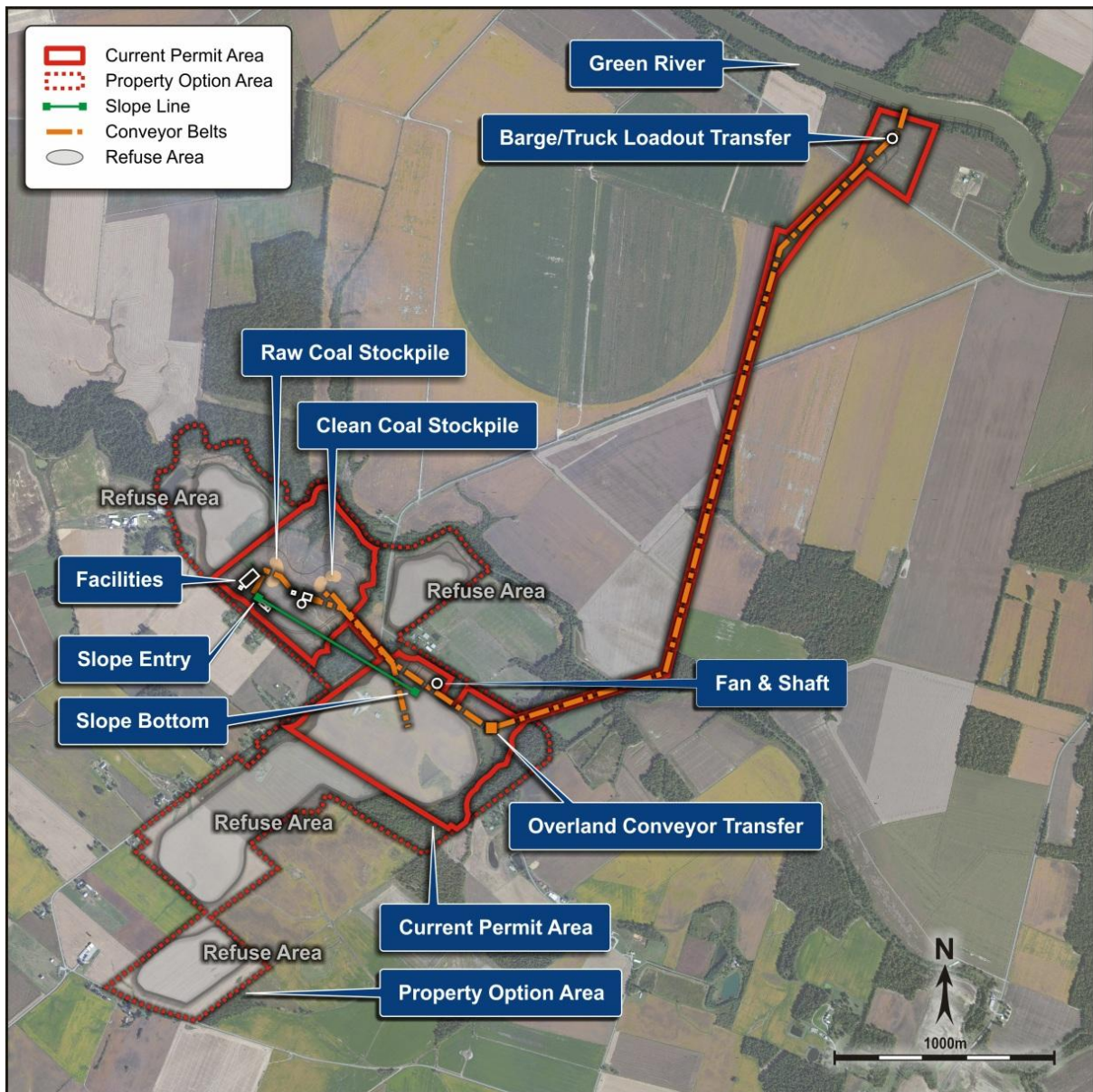
An overview of the product mix and their relative CHPP yields and coal specifications are shown below:

Table 15: Project Product Mix and Quality						
Product	Product Mix	CHPP Yield	Moisture (a.r.)	Ash (a.r.)	Heating Content (a.r.) (Btu/lb)	Heating Content (a.r.) (Kcal/kg)
A – Fully Washed	30%	67.1%	11.12%	7.90%	11,800 Btu/lb	6,552 Kcal/Kg
B – Blended	70%	76.7%	10.90%	11.72%	11,200 Btu/lb	6,221 Kcal/kg
<b>Weighted Average</b>		<b>73.5%</b>	<b>11.0%</b>	<b>10.57%</b>	<b>11,380 Btu/lb</b>	<b>6,320 Kcal/kg</b>

Materials Handling

Clean coal (originating from the stockpiles located at the preparation plant) will be reclaimed using a system of underground feeders and placed on a 2,000 ton per hour conveyor system. The conveyors, totalling approximately 13,500 feet in length, will run from the plant’s clean coal piles over the controlled right-of-way and continue onto the dock site. At the dock site, the conveyor will dump coal into a 500-ton capacity bin which allows the loading of barges without re-handling coal. The bin will be equipped with two feeders allowing trucks to be loaded or coal to be transferred to the barge loader.





**Figure 18: Aerial Photo of Proposed Mine Plant and Slope, and Barge Load-Out Locations**

*Barge Load-Out Facility*

The Company holds necessary permits required to construct the barge load-out facility approximately two miles northeast of the Project’s plant site. The barge load-out facility will consist of a ground-based tower connected to a floating work barge by a 48-inch wide, 170-foot long, loading conveyor. The tower will stand approximately 45 feet above the river and 90 feet away from the river bank with a 30-foot wide by 120-foot long work barge anchored on piers situated 30 feet from the river bank. The system will have a design capacity of 2,500 tons per hour

### *Barge Waterways*

The primary market access point for the Project's saleable product is via barge on the Green River. The Green River is part of the Mississippi River System, a 12,350-mile (19,871 km) network of navigable waterways serving much of the Eastern and Midwestern US. On the Mississippi, coal is the largest commodity, by volume, and accounts for over 20 percent of all coal consumed in the US.



**Figure 19: View of 4-Barge Tow along the Green River**

The Project's permitted barge load-out facility is located at mile marker 62 on the Green River, as measured from the confluence with the Ohio River. The Green River meets the Ohio River at mile marker 784, which is approximately 169 miles (271 km) from the Mississippi River and 145 miles (233 km) from the Tennessee and Cumberland Rivers.

The width of the Green River enables a two-by-two arrangement (two-barges wide and two-barges long) for barge tows originating from the Project's barge load-out facility. Standard coal barges are typically 195 feet long, 35 feet wide with a draft of 9 feet and a capacity of 1,500 tons each. Once on the Ohio River, the loaded barges will be fleeted and assembled into larger tows (i.e. 9 to 16 barge tows) to be moved to the coal power plant or export facility.

### *Alternative Coal Transportation*

It is proposed that coal produced at the Project will be shipped from a barge load-out facility located on the Green River, but occasional shipments to nearby power plants by truck may be arranged. Future studies will assess the possibility of utilising barge to rail trans-loading services on the Tennessee, Ohio, and Big Sandy rivers.

### *Access to Seaborne Markets*

To access coal export terminals in the Gulf of Mexico, barge tows from the Project barge load-out facility will travel down the Green, Ohio and Mississippi Rivers. The average transit time to the Gulf Coast is approximately 11 days with the base rate for barging being approximately US\$15.00 to US\$16.50 per

ton. Coal terminals along the Mississippi River are capable of loading cape-sized vessels with up to 120,000 tons (~100,000 tonnes) of coal for service coal markets in Europe, South America and Asia.

### *Power and Water*

The Project is located in a region serviced by two separate electric utility providers, Kentucky Utilities and Big Rivers Electric Corporation, both of which are capable of supplying the 69-kv service required. Major transmission and distribution lines are located within the Project. Power rates are currently in the range of 6 cents to 7 cents per kWh.

Fresh water for the Project's mine and plant will be pumped from the barge load-out facility on the Green River along the corridor provided for the overland conveyor. To supply the mine office and bathhouse, potable water will be accessed from the local public water system supplied by the City of Calhoun.

## **Permitting, Surety Bonds and Socioeconomic Position**

### *Permitting*

Paringa has two distinct permitted areas for the Project (refer to Figure 18), the plant site and the barge load-out facility. Both areas are permitted by Hartshorne and the rights to develop the surface are controlled via option agreements. Surface rights to the new optimised barge load-out site and associated conveyor right-of-way are currently held under an option to lease with full rights to develop the surface. The permitting of the new optimised barge load-out facility site is currently underway, and the Company does not expect this routine permit approval process to impose delays in the construction of the Project.

Routine permits that have not been submitted will be submitted on an as-needed basis prior to the commencement of construction. The outstanding permits (with the exception of those required for the new optimised barge load-out facility) are not considered to be long lead times and none of the outstanding permits are expected to impose delays to the Project's timeline.

### *Surety Bonds*

In order to obtain mining permits, federal and state laws and regulations in the United States require coal mine operators to post collateral securing their obligations to reclaim land used for mining. The collateral can take the form of cash or other forms of collateral acceptable to the regulatory agency. Operators often prefer to submit surety bonds as collateral, which are agreements by a third party (the surety provider) with the regulatory agency to perform the reclamation obligations associated with a particular mining permit in the event the permit holder fails to perform those obligations. The surety provider collects a fee from the permit holder for providing the surety bond, and also may require the permit holder to submit collateral to the surety provider. Typically, however the amount of collateral required by the surety provider is substantially less than the face amount of the surety bond, with the result that submitting the surety bond as collateral to the regulatory agency is much less capital intensive for the mine operator than submitting cash collateral to the regulatory agency.

A reputable surety bond provider has provided a surety bond in the amount of \$US85,300 to the Kentucky Department for Natural Resources on behalf of the Company's subsidiary, Hartshorne Mining, LLC, in connection with the permitting process for the Buck Creek Mine No. 1. The bond was provided after completing a rigorous due diligence process regarding Hartshorne and the Buck Creek Mine No. 1,

which culminated in surety bond provider's issuance of a letter in September, 2015, confirming that Hartshorne has been conditionally approved for the issuance of up to US\$5.0 million in surety bonds.

### *Environmental Audit*

Cardno was retained to perform an Environmental Audit for the Project in 2013. As part of this Environmental Audit, Cardno reviewed federal, state, and local regulatory records, investigated historical uses of the subject property and potential sources of environmental contamination of the parcel and conducted interviews with State agency personnel to evaluate whether Recognized Environmental Conditions (RECs) or conditions indicative of releases and threatened releases of hazardous substances are on, at, in, or adjacent to the subject property. This Environmental Audit did not reveal the presence of any RECs associated with the subject property or operations proposed at the subject property.

### *Population Centres*

The Project is located in the western section of Kentucky approximately 30 miles south of Henderson, Kentucky (population 28,757) and between the towns of Calhoun (population 763) to the east and Hanson (population 742) to the west. The property is located within a 45-minute drive of Evansville, Indiana (metro population of 358,676) and within a two-hour drive of Louisville, Kentucky (metro population of 569,135) and Nashville, Tennessee (metro population of 1,589,934). Given the importance of coal mining to the region, community attitudes towards new underground coal mine developments are positive.

### **Net Present Value**

The (ungeared) Net Present Value ("**NPV**") after tax is US\$300 million (A\$416million) at an 8% discount rate (real), and the (ungeared) IRR is 30%. Compared to the PFS released in March 2015, the NPV for the Project has increased by US\$33 million as a result of a reduction in total initial capital of US\$23 million and a fall in average annual operating costs (steady state production) of US\$0.82 per ton.

<b>Table 16: Project Net Present Value</b>		
<b>Discount Rate (Real)</b>	<b>BFS</b>	<b>PFS</b>
NPV (US\$)	US\$300 million	US\$267 million
NPV (A\$)	A\$416 million	A\$371 million

<b>Table 17: Coal Sales Price Sensitivity Analysis</b>					
<b>Adjustment to Coal Sales Forecasts</b>	<b>-10%</b>	<b>-5%</b>	<b>Base Case</b>	<b>+5%</b>	<b>+10%</b>
<b>NPV (US\$)</b>	US\$204m	US\$252m	US\$300m	US\$348m	US\$396m
<b>NPV (A\$)</b>	A\$283m	A\$350m	A\$416m	A\$483m	A\$550m

Note: assumed US\$0.72 per A\$1.0

The Project is expected to exhibit levels of profitability that would contribute value to Paringa shareholders. As the domestic coal market in general recovers, there is a strong potential for the Project's strong financial returns to materially improve.

## Study Consultants

The BFS was managed by Cardno with utilisation of local industry consultants, with expertise in coal mine development in the Illinois Basin region, to analyse the various components of the BFS, including (but not limited to) the design of slope and shafts, design of the mine, design of processing facilities, and the preparation of coal marketing studies. Cardno has over 39 years of expertise in mining engineering, mine reserve evaluation, feasibility studies, and due diligence services for mining and resource projects across the globe, and is a subsidiary of Cardno Limited, an ASX-200 professional infrastructure and mining services company.

<b>Table 18: Buck Creek BFS Consultants</b>	
<b>Consultant</b>	<b>Activity</b>
Alpha Engineering Services Inc.	Mine Ventilation Modeling and Design
Cardno, Inc.	Geology, Mineral Resource and Reserve Estimation, and Mine Planning, Site Planning, and BFS Management
Strategic Energy Resolutions, Inc.	Market Assessment and Preliminary Marketing Plan
Hanou Energy Consulting, LLC	Market Price Forecasts
Appalachian Mining & Engineering, Inc.	Ground Control Design
Keystone Mining Services, LLC	Ground Control Analysis and Slope Design
General Mine Contracting, Inc.	Preliminary Preparation Plant Design and Cost Estimation
Powell Companies, Inc.	Preliminary Preparation Plant Design
Robertson Process LLC	Preliminary Preparation Plant Design and Cost Estimation
William E. Groves Construction, Inc.	Electrical System Preliminary Design and Cost Estimation
Robertson Process LLC	Electrical System Preliminary Design and Cost Estimation
T&D Solutions	Electrical System Preliminary Design and Cost Estimation
Pittman Mine Service, LLC	Preliminary Design and Cost Estimates for Slope and Shafts
Cowin & Company, Inc.	Preliminary Design and Cost Estimates for Slope and Shafts
Frontier Kemper Mining Construction	Preliminary Design and Cost Estimates for Slope and Shafts
Associated Engineers, Inc.	Permitting Information and Surveying
Magnum Drilling Services, Inc.	Exploration Core Drilling Services
Hawkey & Kline Coring & Drilling, Inc.	Exploration Core Drilling Services
3D Dycus Diamond Drilling, LLC	Exploration Core Drilling Services
Standard Laboratories, Inc.	Analytical Laboratory Testing Services
SGS North America, Inc.	Analytical Laboratory Testing Services
Precision Testing Laboratory, Inc.	Analytical Laboratory Testing Services

## SUMMARY OF RESOURCE ESTIMATE AND REPORTING CRITERIA

### Geology and Geological Interpretation

The CRE is located in Hopkins and McLean County, Kentucky, within the Carbondale Formation. The WK No.9 Seam associated with the Project has been identified as exhibiting potential underground mineable resource tonnage.

The primary coal-bearing formations on the Project are situated in the Western Kentucky Coal Field of the Illinois Basin (or Eastern Interior Basin) of the USA and are of middle Pennsylvanian-age. These strata include conglomerate, sandstone, siltstone, shale, limestone, and coal that were deposited primarily in coastal deltaic settings. Coal rank in this area is high volatile bituminous C, with higher rank coals sometimes found along major structural fault systems. Coal in the West Kentucky Coal Field is generally medium to high sulfur, exhibiting average sulfur contents of more than 3.0 percent and averaging more than 5.0 pounds of SO<sub>2</sub> per million Btu.

The strata on the Project generally exhibit a regional northeast-southwest strike, and a regional northwestward dip towards the center of the Illinois Basin, with offsets along the fault zone. As the strata bend around the nose of the basin, strike rotates from northeast to north to northwest, along with an associated change in dip direction. Depth of cover increases gradually to the northwest towards the center of the basin. Depth of cover ranges from approximately 250 (76 metres) feet in the east in the vicinity of the Green River to in excess of 1,100 feet (335 metres) near the town of Slaughters in the west. The WK No.9 Seam across the Project is generally continuous and non-complex but may vary in thickness. Furthermore, as common in Western Kentucky, the seams are affected by tectonic deformation within the resource area. The average mineable seam thickness ranges from 3.0 feet (0.91 metres) to 4.5 feet (1.37 metres) for the WK No.9 Seam with fairly consistent coal thickness exhibiting minimal splitting and non-coal partings.

This interval overlying the WK No.9 generally consists of black shale ("**Turner Mine Shale**" or "**TMS**") that ranges in thickness from 0 to 7.0 feet (2.13 metres) with an average of about 1.5 feet (0.46 metres). The black shale is overlain by gray shale ("**Canton Shale**") ranging in thickness from 0 to 55 feet (16.76 metres). Overlying the gray shale is sandstone ("**Vermillionville Sandstone**") ranging in thickness from 0 to 75 feet (22.86 metres).

The Project is east of the Henderson Sandstone Channel (as defined by the KGS through mapping of both boreholes and oil/gas well geophysical logs that penetrate a thin or absent coal area of the WK No.9 Seam). The Hopkins and McLean County, Kentucky property is south of the northern extent of the Rough Creek Fault System ("**RCFS**") on the down-side of the graben structure. The RCFS is a normal fault with displacement on the order of 200 feet (61 metres). The Project occurs within the RCFS and consists of a series of horst and graben faults trending in an east-west direction with maximum displacements of up to 450 feet (137 metres). The RCFS has been mapped by the KGS and is shown on 1:24,000 scale USGS 7.5-minute quadrangle maps. Fault locations have been reviewed by Cardno. These locations have been accepted as being true and accurate depictions of the fault locations and displacements. Exploration drill holes completed thus far on the Project have not identified any additional faults or structural features.

The region has been extensively mined particularly within the WK No.9 Seam but no mining of the WK No.9 Seam has occurred within the Project.

## **Drilling and Sampling Techniques**

A total of 194 bore holes were used in the calculation, including 103 Kentucky Geological Survey core holes, 29 Buck Creek Resources LLC core holes, 10 Buck Creek Resources LLC rotary holes, 21 Hartshorne Mining LLC core holes, 4 Hartshorne Mining LLC rotary holes, and 27 gas wells. The updated CRE incorporates results from an additional 4 air rotary holes and 14 diamond core holes drilled by Paringa in 2013 and 2014 since the maiden CRE was released in November 2013

Prior to 1950, oil and gas drilling was the primary source of seam thickness and elevation data for the WK No.9 seam. In 1950 the Kentucky Geological Survey (“**KGS**”) began acquiring core data from drill holes in and adjacent to the property. In 2009 Buck Creek Resources LLC (“**BCR**”) began a drilling program that continued through 2011. The program consisted of diamond core drilling for seam delineation and acquisition of coal samples and air rotary holes for seam delineation. Between 2013 and 2014 Paringa successfully completed 2 drilling campaigns. Like the BCR holes these programs consisted of diamond core drilling for seam delineation and acquisition of coal samples as well as air rotary holes for seam delineation. In addition, all of the 2013 core holes and the first two (2) 2014 core holes underwent geotechnical testing of the roof, seam, and floor.

BCR core drilling consisted of one continuous core, DH-11, with 3-inch diameter core samples produced from the entire rock column. The remainder of the core holes were spot drilled utilizing a 6.625-inch diameter rotary bit followed by a 3-inch diamond core of the roof, seam, and floor. The air rotary drilling consisted of 6.625-inch diameter bore holes.

Paringa core drilling included two (2) continuous cores, HMG-14-01 and HMG-14-02, with 2.5-inch diameter core samples produced from the entire rock column. The remainder of the core holes were spot drilled utilizing a 6.625-inch diameter rotary bit followed by a 3-inch diamond core of the roof, seam, and floor. The air rotary drilling consisted of 6.625-inch diameter bore holes.

Core recoveries were monitored and were generally good at greater than 95%. Coal core samples used for quality analysis contained greater than 95% recovery. Where available, core recovery thickness was reconciled with the thickness interpreted from geophysical logs.

Drill holes were geologically logged by the driller and those producing core were also logged by a geologist. All holes drilled during the 2009 through 2011 program and the 2013 through 2014 program were geophysically logged using a downhole density and gamma tool. A sonic log was performed on 14 of the BCR’s drill holes and 16 of the Paringa Holes. In the case of core drill holes, lithological logs were correlated with the geophysical logs and seam thickness and elevation adjusted where appropriate.

### **Classification criteria**

The CRE has been reported in-situ and classified as measured, indicated, and inferred based on the guidelines recommended in the JORC Code (2012 Edition). As is customary in the USA, the categories for measured, indicated, and inferred resources are based on the distances from valid points of measurement as prescribed in United States SEC Industry Guide 7 and USGS Circular 891. This is considered appropriate for the preparation of the CRE in accordance with the JORC Code (2012 Edition).

### **Sample analysis method**

Sample analysis on the BCR recovered cores was carried out by Standard Laboratories, Inc. and performed to American Society for Testing and Materials (ASTM) standards. Paringa utilized SGS North America, Inc. and Precision Testing Laboratory, Inc. for quality testing, both to ASTM standards. All analyses were performed on an as-received, air dry and washed basis unless otherwise stated.

Geophysical tools are calibrated by the logging company (Cardno) and where possible, validated using a calibration hole. All coal intersection data used to generate the geologic model has been cross referenced with the lithological and geophysical logs by Cardno.

Coal quality was adjusted to reflect an addition of 4% moisture to the equilibrium moisture. Coal quality results were verified with laboratory analysis sheets by Cardno geologist before inclusion into the geologic model and use in the resource estimate.

### **Resource Estimation Methodology**

The preparation of the CRE was undertaken by Cardno based in Bluefield, Virginia, USA. Cardno has over 39 years of expertise in mining engineering, mine reserve evaluation, feasibility studies and due diligence services for mining and resource projects across the globe. Cardno has over 10 offices and 180 people based in the USA.

As a leading USA consulting firm working in the coal and coalbed methane industries Cardno has served some of the largest mining companies including Alpha Natural Resources, Peabody, Asian American Coal, Cliffs Natural Resources, Rothschild, First Reserve Corporation, ESSAR Minerals Americas, ArcelorMittal and BHP Billiton.

Cardno prepared the CRE in accordance with the JORC Code (2012 Edition). The resource estimation criteria were developed using current conditions found in surrounding operations and industry accepted standards to assure that the basic geologic characteristics of the coal resources are in reasonable conformity with those currently being mined and marketed in the region. The tonnage estimates provided herein report in-situ coal resources as measured, indicated, and inferred. As is customary in the USA, the categories for measured, indicated, and inferred resources are based on the distances from valid points of measurement as prescribed in United States SEC Industry Guide 7 and USGS Circular 891. This is considered appropriate for the preparation of the CRE in accordance with the JORC Code (2012 Edition).

Fault impacted areas have been excluded from the CRE in an area bounded by 200 feet (60 metres) barriers along either side of a fault and in areas determined as intensely impacted by faulting;

After the geological data was correlated within Cardno's proprietary database and verified, the data required for mapping was extracted and composited with additional data from spreadsheets containing coordinates and similar Z values. These Z value files were imported into either Surfer 8 or Carlson® Mining 2012 computer software packages for modelling. The software programs were used to generate geologic models including coal seam thickness, elevation, and others as well to delineate acreage and thickness for estimation of coal resources. The modelling output for the CRE was imported into a Microsoft® Excel workbook for final processing and tabulation of coal tonnage. The CRE is reported on an as received basis.

### **Cut-off grades**

The average thickness of the WK No.9 Seam is 3.8 feet (1.16 metres) across the property which compares favorably to many of the operations in the immediate vicinity. The cut-off seam thickness utilised was 3.0 feet (0.91 metres).

### **Mining and metallurgical methods and parameters**

The Company has completed a Bankable Feasibility Study ("**Study**") on the Project which was prepared by Cardno, with input from local experts. The Study was prepared in accordance with JORC Code (2012



Edition) and the requirements for a Preliminary Economic Assessment report in accordance with NI 43-101. The Study was conducted on the north-eastern quadrant of the Company's Buck Creek thermal coal project (Buck Creek No.1 Mine) located in the low cost and proven Illinois Coal Basin in Kentucky, US.

The Study confirmed the potential of the Project to be developed as a high margin, low cost mine in the growing Illinois Basin. The Study utilised the Project's CRE of 224.1 million tons of coal to demonstrate that the Project's fundamentals from this initial development are extremely encouraging. The Project is located in a well serviced and infrastructure advantaged coal region in the US, offering the potential for a low operating and capital cost environment.

Core quality and washability testing was completed on the fourteen drill core holes conducted within controlled leases of the Project targeting the WK No.9 seam. The coal samples were shipped to SGS North America Inc. in Henderson, Kentucky and Precision Testing Labs Inc. in Davis, West Virginia for analysis. Core recovery was greater than 95 percent for all of the samples sent for analysis. Coal seam quality data from the fourteen recently completed core samples and the historical 24 samples were utilised in determining the average core coal quality.

This average quality value was tabulated in Microsoft Excel utilizing the polygonal area method. The polygonal method involves the calculation of an area of influence around each sample intersection and calculating the average grade by weighting each sample grade by the corresponding polygon's area. Qualities for each core hole include an addition of 4 percent moisture to the equilibrium moisture, which is intended to represent the true moisture of a saleable product (to approximate the As Received (AR) basis).

<b>Table 19: Buck Creek Mining Complex – Coal Quality Specifications</b>								
<b>Raw Proximate Analysis (As Received)</b>						<b>Washed Core Quality (Equilibrium Moisture +4%)</b>		
EQ Moisture	Ash	Volatile Matter	Fixed Carbon	Chlorine	HGI	Calorific Value (Btu/lb)	Ash	Yield @ 1.60 Float
6.6%	11.9%	37.1%	44.5%	0.18%	60	11,855	8.4%	92.9%

## SUMMARY OF ORE RESERVE ESTIMATE AND REPORTING CRITERIA

### Material assumptions

The BFS, Coal Reserves, Production Targets, and forecast financial information derived from the BFS, Coal Reserve, Production Target contained in this announcement, are based on the material assumptions contained within this announcement which are summarized below:

<b>Table 19: Assumptions</b>		
Maximum Accuracy Variation	+/- 10%	
Minimum LOM	18 years	
Mining Method	Underground / room-and-pillar	
Average Seam Thickness	46 inches	
Average Mining Height	54 inches	
Total Work Days per Year	276	
Productivity Rate (feet advance per unit shift at steady state production)	560 feet	
Annual ROM Coal Production (tons)	5.2 Mtpa	
Capacity CHPP	700 raw tons per hour	
Utilization CHPP	90%	
Yield CHPP	73.5%	
Processing Method	Dense Media 2stage	
Annual Clean Coal Production (tons)	3.8 Mtpa	
Average Direct Mining Costs (Steady State)	US\$20.22 per ton	
Average CHPP costs (Steady State)	US\$3.45 per ton	
Average Other (Steady State)	US\$5.70 per ton	
Total Average Operating Costs (Steady State)	US\$29.37 per ton	
Total Initial Capital Costs	US\$105 million	
Total Initial Capital Costs (plus contingency)	US\$115 million	
Mine Royalty	4.1%	
Leased Equipment - Operating Lease	Costs included in Average Direct Mining Costs	
Leased Equipment - Interest Rate (Real Basis)	6.0%	
Leased Equipment - Term	5 to 7 years	
Leased Equipment - Residual Value	20%	
Kentucky State Severance Taxes	4.5%	
Coal Specification	11,800 btu/lb	11,200 Btu/lb
Coal Sales Price (2018)	US\$ 49.46 /t	US\$ 44.50 /t
Coal Sales Price (2019)	US\$ 49.92 /t	US\$ 45.50 /t
Coal Sales Price (2020)	US\$ 50.39 /t	US\$ 46.30 /t
Coal Sales Price (2025)	US\$ 52.81 /t	US\$ 49.64 /t
Coal Sales Price (2030)	US\$ 55.35 /t	US\$ 52.06 /t
Coal Sales Price (2035)	US\$ 58.03 /t	US\$ 54.60 /t
Corporate Tax Rate	25%	
Discount Rate (8%)	8%	

## Coal Reserve classification criteria

Proven and probable Coal Reserves were calculated only on the measured and indicated portion of the Coal Resources for the Project. The coal reserve was calculated using Carlson Mining software by applying a detailed mine design and LOM mine production scheduling to the resource model, also created in Carlson Mining. A minimum underground mining height of 54 inches (based on typical mining practices and/or equipment capabilities) was used to determine out-of-seam dilution (*OSD*) and project raw production tons. Production data outputs from LOM sequencing were exported into Microsoft® Excel spreadsheets and summarized on an annual basis for processing within the economic model. Coal reserves are estimated based on a mining recovery that ranges from 30 to 61 percent, and an effective plant yield of 73.5 percent. The Coal Reserves estimate has been classified as proven and probable based on guidelines specified in the JORC Code. The Coal Resources in this report are reported inclusive of Coal Reserves.

## Mining method and assumptions

Hartshorne anticipates commencing construction at the proposed Buck Creek No. 1 Mine in the first quarter of 2016, with initial production planned for the first quarter of 2018. Access to the coal seam will be via decline slope, with ventilation provided through vertical shafts. Production from the proposed Buck Creek No. 1 Mine will come exclusively from continuous miner units using room-and-pillar methods. Production sections will be configured as super-sections, each equipped with two continuous miners, four haulage units, two roof-bolting machines and one feeder/ breaker for enhanced productivity. Production sections will be equipped with four battery-powered haulers to move material from the continuous miner to the mine's conveyors. Haulage units will discharge onto a belt feeder/breaker, which provides a limited amount of surge capacity to reduce hauler dump time. Feeders also provide more uniform transfer of raw coal onto the section conveyor. Two dual-head roof bolting machines will install immediate roof support in mined entries. Battery scoops will be used for cleanup of spillage, distribution of supplies and materials and other utility purposes on the production sections.

At full production, staffing for the operation is expected to total 283 employees, and each section will produce approximately 2,300 to 2,400 tons of run-of-mine (*ROM*) coal per shift; *ROM* production for Buck Creek will total approximately 5.1 million to 5.3 million tons per year. Clean coal recovery is calculated at approximately 73.5 percent, (which includes average direct shipment/preparation plant bypass of approximately 14 percent of the *ROM* production) yielding an average of approximately 1,680 to 1,755 tons of clean coal from each unit-shift of production. Annual production will total approximately 3.7 to 3.9 million clean, marketable tons at full production.

## Processing method and assumptions

In order to optimize product yields and to conform with market needs and specifications, the Buck Creek preparation plant will be designed and equipped to incorporate direct ship *ROM* coal blended with fully-washed product. Based on customer coal quality needs, approximately 30 percent of the marketable coal produced by Hartshorne is required to be a fully-washed product with heating content of 11,800 Btu/lb. The remaining 70 percent of the marketable coal will be a blend of raw and processed coal that will have a heating content of 11,200 Btu/lb. The plant is designed as a 700-raw-ton-per-hour facility. The *minus two-inch* plant feed will be separated into coarse and fine material at a one-millimeter size separation as it crosses two single-deck raw coal de-slime screens. The coarser material (*plus one-millimeter* size fraction) will be processed in a heavy media cyclone; the finer coal (*minus one millimeter*) will be processed by classifying cyclones and spirals. The *minus 150-micron* material is lost as effluent. Coarse and fine refuse will be combined and subsequently exit the plant on a 36-inch refuse collecting conveyor at an anticipated rate of 239 tons per hour with a surface-moisture of 9.4 percent. Course refuse will be dewatered utilizing drain & rinse and high frequency screens. Fine refuse will be dewatered using plate and frame presses.

The combined refuse will be placed in the permitted refuse-disposal facilities on the southeast side of Pack Church Road as dry material with no impoundment. The total surface property available to Hartshorne contains adequate refuse capacity for the life of the Project. All property to be used for refuse disposal are flat to slightly rolling and will not require any valley fills.

The capital cost of the coal preparation plant, refuse disposal site, and materials-handling system is expected to total \$39.7 million. That total excludes permitting, site preparation, power substation and distribution, which are included in mine and site development capital estimates. The capital costs projected for the river dock is estimated at \$4.2 million. The LOM average plant cash cost is estimated to be \$2.67 per clean ton sold for the assumed product mix.

The proposed Buck Creek preparation plant will use standard equipment and processes for gravity separation of coal and reject; it will also use mechanical dewatering processes. Similar equipment to that proposed for the Buck Creek plant is currently in use at other ILB preparation plants. The proposed method for disposal of refuse material is consistent with those of neighboring operations.

### **Coal quality parameters applied**

The WK No. 9 seam on the Project contains an average in-seam raw ash content of 11.85 percent, raw sulfur content of 4.01 percent and raw thermal (heat) content of 11,850 British thermal units per pound (*Btu/lb.*) at the average as-received moisture content of 6.28 percent. Based on the preparation plant information and product mix described in the Processing Methods and Assumptions section above, the average product coal quality is projected to contain an ash content of 10.57 percent, sulfur content of 3.01 percent, heat content of 11,383 Btu/lb and 5.3 lbs. SO<sub>2</sub>. The effective plant yield is 73.5 percent.

### **Coal Reserve estimation methodology**

Grid files prepared from the geological database were used in the estimation of coal resources, including both seam thickness and elevation models encompassing the WK No. 9 seam. Coal seam thickness and base-of-coal-seam structure grid files were used to define the top and bottom of the coal horizon. The grid models were developed using Carlson Mining software, which was also used to develop LOM projections and production timing sequence plans. A minimum underground mining height of 54 inches, based on typical mining practices and/or equipment capabilities, was used to determine OSD and project raw production tons. A project schedule and estimated capital and operating costs (+/-10 percent in accuracy) have been developed. Annual production will total approximately 3.7 to 3.9 million clean, marketable tons at full production.

### **Other material modifying factors**

#### *Economic*

A detailed financial model and discounted cash flow analysis was been prepared in order to demonstrate the economic viability of the Coal Reserves. The NPV of the projected cash flows is US\$300 million at an 8% (real) discount rate, with an IRR of 30%.

#### *Marketing*

Paringa has identified 17 "Tier 1" coal marketing targets operated by 9 different utilities that have traditionally received fuel similar to the Project's coal. Latest available data indicates Paringa's target market received over 55 million tons of coal in 2014. Whilst Paringa's target market is largely insulated from the impact of volatile natural gas prices and is relatively stable in terms of coal demand, over the past 10 years coal supply into the market has become increasingly concentrated into one to two major

US coal producers. Based on discussions with Paringa's target market, new independent sources of supply are highly valued.

#### *Infrastructure*

The Project is a well-defined coal resource, which is located in an area with a long history of coal mining. The primary market access point for the Project's saleable product is via barge on the Green River. The Green River is part of the Mississippi River System, a 12,350-mile (19,871 km) network of navigable waterways serving much of the Eastern and Midwestern US. The Project is located in a region serviced by two separate electric utility providers, Kentucky Utilities and Big Rivers Electric Corporation, both of which are capable of supplying the 69-kv service required. Fresh water for the Project's mine and plant will be pumped from the barge load-out facility on the Green River along the corridor provided for the overland conveyor.

#### *Environmental, Permitting, Legal and Socioeconomic Position*

Hartshorne has two distinct permitted areas for the proposed Buck Creek No. 1 Mine. Both areas are permitted by Hartshorne and the rights to develop the surface are controlled via option agreements. The larger of the areas is the proposed location of the mine site and preparation facilities; while the smaller site is an alternate barge load-out site on the Green River. The primary barge load-out site and associated conveyor right-of-way are currently held under an option to lease with full rights to develop the surface. The permitting of this site is underway (the permit approval process is not expected to impose delays in the construction of the Project).

Paringa controls approximately 34,556 gross acres (~13,988 ha) of coal leases in Kentucky, United States which comprise the Buck Creek Mining Complex. Kentucky state law allows the owner (or controller) of a partial interest to develop and enjoy the coal rights in a manner consistent with 100% control, therefore leases with partial interests (i.e. less than 100%) can be mined. The coal leases grant Paringa the coal and coal rights with respect to the leased premises, together with the right to mine coal by the underground mining method only and the right to remove the coal seam gas and coal mine gas by any method from under the leased premises. All of the coal leases are with private owners and the agreements are fundamentally identical with a term of 20 years for the date of execution. The coal leases require the payment of an annual minimum royalty and an earned royalty which are industry standard in the region. The annual minimum royalty is an annual per acre charge during the term of the coal leases. Once mining operations commence, the annual minimum royalty is reduced by the amount of earned royalty due on mined coal. All annual minimum royalty payments are recoupable against any earned royalty due under the coal leases on a lease-by-lease basis.

## **Forward Looking Statements**

This announcement may include forward-looking statements. These forward-looking statements are based on Paringa's expectations and beliefs concerning future events. Forward looking statements are necessarily subject to risks, uncertainties and other factors, many of which are outside the control of Paringa, which could cause actual results to differ materially from such statements. Paringa makes no undertaking to subsequently update or revise the forward-looking statements made in this announcement, to reflect the circumstances or events after the date of that announcement.

## **Competent Persons Statement**

The information in this announcement that relates to Exploration Results and Coal Resources is based on, and fairly represents, information compiled or reviewed by Mr. Kirt W. Suehs, a Competent Person who is a Member of The American Institute of Professional Geologists. Mr. Suehs is employed by Cardno. Mr. Suehs has sufficient experience that is relevant to the style of mineralization and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' and to qualify as a Qualified Person as defined in the 2011 Edition of the National Instrument 43-101 and Canadian Institute of Mining's Definition Standards on Mineral Reserves and Mineral Resources. Mr. Suehs consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Coal Reserves, Mining, Coal Preparation, Infrastructure, Production Targets and Cost Estimation is based on, and fairly represents, information compiled or reviewed by Messrs. Justin S. Douthat and Gerard J. Enigk, both of whom are Competent Persons and are Registered Members of the Society for Mining, Metallurgy & Exploration. Messrs. Douthat and Enigk are employed by Cardno. Messrs. Douthat, and Enigk have sufficient experience that is relevant to the style of mineralization and type of deposit under consideration and to the activity being undertaken to qualify as Competent Persons as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' and to qualify as Qualified Persons as defined in the 2011 Edition of the National Instrument 43-101 and Canadian Institute of Mining's Definition Standards on Mineral Reserves and Mineral Resources. Messrs. Douthat and Enigk consent to the inclusion in the report of the matters based on their information in the form and context in which it appears.

**JORC Table 1 Checklist of Assessment and Reporting Criteria**  
**Section 1 Sampling Techniques and Data**

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>&gt; <i>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as downhole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.</i></li> <li>&gt; <i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></li> <li>&gt; <i>Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</i></li> </ul>	<ul style="list-style-type: none"> <li>&gt; Prior to 1950, Oil and gas drilling was the primary source of seam thickness and elevation data for the West Kentucky No. 9 (WK No. 9) or Springfield seam; no core samples were retrieved.</li> <li>&gt; In 1950 the <b>Kentucky Geological Survey (KGS)</b> began acquiring core data from drill holes in and adjacent to the property; no core samples from this drilling have been physically examined by Hartshorne.</li> <li>&gt; In 2009 <b>Buck Creek Resources (BCRs)</b> began a drilling program that continued through 2011. The program consisted of continuous core drilling and air rotary spot core drilling designed for seam delineation and acquisition of coal samples for analyses.</li> <li>&gt; The last 10 drill holes in this program were air rotary holes and no coal core samples were collected.</li> <li>&gt; Roof and floor samples from five of the WK No. 9 BCRs core samples were retained for acid-base analyses.</li> <li>&gt; <b>The Hartshorne Mining Group, LLC (HMG)</b> conducted drilling programs beginning in 2013 and continued through 2015 to retrieve coal core samples for quality analyses and seam thickness determination. The programs consisted of 25 drill holes from which 20 WK No. 9 coal core samples were retrieved and analysed.</li> <li>&gt; Unless otherwise specified, drilling data that references sampling, core recoveries, quality, geophysical logging and other specific analyses refers to the coal specific drill holes associated with BCRs and HMG programs.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>&gt; <i>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).</i></li> </ul>	<ul style="list-style-type: none"> <li>&gt; One continuous core, DH-11, was taken during the BCRs drilling programs and 3-inch diameter core samples were produced. HMG drilling programs included two continuous core drill holes producing 2.75 inch diameter core samples.</li> <li>&gt; The BCRs air rotary spot core drilling consisted of 6.625-inch diameter holes followed by 3-inch diameter conventional core samples of the roof, seam, and floor. HMG air rotary spot core drilling consisted of 5.0-inch diameter holes and 3.0-inch diameter core samples of roof, seam and floor.</li> <li>&gt; The BCRs air rotary drilling consisted of 6.625-inch diameter bore holes. HMG air rotary drilling consisted of 5.0-inch diameter bore holes.</li> <li>&gt; Drill type of the oil and gas wells was not known.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>&gt; <i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></li> <li>&gt; <i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></li> <li>&gt; <i>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</i></li> </ul>	<ul style="list-style-type: none"> <li>&gt; Core recoveries were monitored and were generally good at greater than 95%.</li> <li>&gt; Coal core samples used for quality analysis contained greater than 95% recovery.</li> <li>&gt; Where available, core recovery thickness was reconciled with the thickness interpreted from geophysical logs.</li> <li>&gt; A portion of the 98 KGS drill holes used in the resource study contained quality results. The results were provided in an Excel format that did not identify the basis of the analysis, the laboratory that performed the results or the core recovery, therefore the reported data was not used.</li> </ul>
<b>Logging</b>	<ul style="list-style-type: none"> <li>&gt; <i>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i></li> <li>&gt; <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</i></li> <li>&gt; <i>The total length and percentage of the relevant intersections logged.</i></li> </ul>	<ul style="list-style-type: none"> <li>&gt; Drill holes were geologically logged by the driller and those producing core were also logged by a geologist.</li> <li>&gt; All holes drilled during the BCRs 2009 through 2011 were geophysically logged using a downhole density and gamma tool. All but one of the drill holes in the HMG 2013 through 2015 programs were geophysically logged using a downhole density and gamma tool. A sonic log was performed on 14 of the BCR's drill holes and on 24 of the HMG drill holes.</li> <li>&gt; In the case of core drill holes, lithological logs were correlated with the geophysical logs and seam thickness and elevation adjusted where appropriate.</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>&gt; <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> <li>&gt; <i>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</i></li> <li>&gt; <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> <li>&gt; <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li>&gt; <i>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</i></li> <li>&gt; <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	<ul style="list-style-type: none"> <li>&gt; Except for samples from drill holes HMG-14-1, 3 and 6, core samples were not divided.</li> </ul>



Criteria	JORC Code explanation	Commentary
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>&gt; <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li>&gt; <i>For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i></li> <li>&gt; <i>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</i></li> </ul>	<ul style="list-style-type: none"> <li>&gt; Sample analysis was carried out by Standard Laboratories, Inc., SGS North America Inc., and PRECISION Testing Laboratory and performed to <b>American Society for Testing and Materials (ASTM)</b> standards.</li> <li>&gt; Analyses were performed on a raw as-received, air dry and washed basis unless otherwise stated.</li> <li>&gt; Geophysical tools are calibrated by the logging company (Cardno) and where possible, validated using a calibration hole.</li> <li>&gt; Quality summary results presented in <i>Appendix 3</i> compare favourably to those prepared and documented in the <b>United States Geological Survey's (USGS)</b> report titled "<i>Paper 1625-D, Chapter C Geologic Overview by J. R. Hatch and R. H. Affolter entitled "Resource Assessment of the Springfield, Herrin, Danville and Baker Coals in the Illinois Basin"</i> dated August 2002 (<i>Paper 1625-D</i>) and "<i>USGS Fact Sheet FS-072-02 August 2002</i>" as summarized in <i>Appendix 3</i> for comparison.</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li>&gt; <i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li>&gt; <i>The use of twinned holes.</i></li> <li>&gt; <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li>&gt; <i>Discuss any adjustment to assay data.</i></li> </ul>	<ul style="list-style-type: none"> <li>&gt; All coal intersection data used to generate the geologic model has been cross referenced with the lithological and geophysical logs by Cardno.</li> <li>&gt; Coal quality was adjusted to reflect an addition of 4% moisture to the equilibrium moisture.</li> <li>&gt; Coal quality results were verified with laboratory analysis sheets by Cardno geologist before inclusion into the geologic model and use in the resource estimate.</li> </ul>
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>&gt; <i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i></li> <li>&gt; <i>Specification of the grid system used.</i></li> <li>&gt; <i>Quality and adequacy of topographic control.</i></li> </ul>	<ul style="list-style-type: none"> <li>&gt; Coordinates for the drill hole locations are in the Kentucky South, State Plane system, North American Datum 1927. Surveyed locations were available for all of the drill holes from the BCRs 2009 through 2011 drilling program and the HMG 2013 through 2015 drilling programs. Coordinates for the oil and gas wells and those drill holes obtained from the KGS were provided by the KGS and the method of determination is unknown.</li> <li>&gt; Topography is based on the USGS's topographic 7.5 minute quadrangle maps.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li>&gt; <i>Data spacing for reporting of Exploration Results.</i></li> <li>&gt; <i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</i></li> <li>&gt; <i>Whether sample compositing has been applied.</i></li> </ul>	<ul style="list-style-type: none"> <li>&gt; Various sources of data were utilized, as such, spacing of the drill holes used to model WK No. 9 seam resource varied across the property. The abundant oil and gas well data in the area were not used for resource thickness mapping, but provided added evidence of the continuity of the seam throughout the area. The oil and gas wells' WK No.9 seam thicknesses were rounded to even feet and therefore were not used in modelling the seam thickness. As prescribed by the USGS, the following distances from points of observation were used to define the corresponding Resource category arcs: <ul style="list-style-type: none"> <li>- Inferred Resources – greater than 3,960 feet but less than 15,840 feet (3 miles).</li> <li>- Indicated Resources – 3,960 feet.</li> <li>- Measured Resources – 1,320 feet.</li> </ul> </li> <li>&gt; Correlation of the WK No. 9 seam is relatively simple. Thickness and quality continuity of the WK No. 9 seam is exceptional and well documented as described in Paper 1625-D and the KGS Map and Chart 197, Series XII, 2010 titled "<i>Remaining Resources of the Springfield Coal</i>" by Gerald A. Weisenfluh (<i>USGS Map 2010</i>).</li> <li>&gt; Inferred, Indicated, and Measured resource classifications from the USGS Circular 891 have been implemented in this updated resource report to reflect the spacing and extent of the supporting data used for the resource estimate. The use of the USGS standards are appropriate and customary for this resource jurisdiction and deposition type.</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li>&gt; <i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></li> <li>&gt; <i>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</i></li> </ul>	<ul style="list-style-type: none"> <li>&gt; Drill holes have been vertically drilled. No downhole deviation logs have been collected and it is therefore not known if the drill holes have deviated away from vertical. Based on an average depth of 800 feet, any deviation is expected to be insignificant and immaterial to the geologic characterization of the property.</li> <li>&gt; Horst and graben faults that exist on the property are part of the Rough Creek fault system and have been accurately identified through USGS and KGS mapping.</li> <li>&gt; The dip of the coal seam ranges from 2.0 to 3.0 degrees except for areas directly adjacent to the faulting, where the dip can potentially increase.</li> </ul>
<b>Sample security</b>	<i>The measures taken to ensure sample security.</i>	<ul style="list-style-type: none"> <li>&gt; Sample handling procedures were developed for the project and are understood to have been employed by BCRs and HMG during exploration</li> </ul>
<b>Audits or reviews</b>	<i>The results of any audits or reviews of sampling techniques and data.</i>	<ul style="list-style-type: none"> <li>&gt; Cardno has reviewed all available geological information for the property in developing the geologic model. The data is suitable and has been used for the purpose of generating an updated Resource estimate compliant with the 2012 edition of the JORC Code.</li> </ul>

## Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <li>&gt; <i>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</i></li> <li>&gt; <i>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</i></li> </ul>	<ul style="list-style-type: none"> <li>&gt; The Buck Creek project is located within the Carbondale Formation of the Illinois Basin between the towns of Hanson and Calhoun in Hopkins and McLean Counties, Kentucky. The geologic model and Resource estimate prepared by Cardno was for the region identified as the coal controlled properties.</li> <li>&gt; All WK No. 9 coal is leased from numerous private owners through the payment of an annual minimum royalty and an earned royalty. The annual minimum royalty is an annual per acre charge that escalates from US \$10 per acre to US \$25 per acre during the term of the coal leases. Once mining operations commence, the annual minimum royalty is reduced by the amount of earned royalty due on mined coal. All annual minimum royalty payments are recoupable against any earned royalty due under the coal leases on a lease-by-lease basis. The earned royalty is the greater of \$1.25 per ton or 4% of the average gross sales price F.O.B. mine.</li> <li>&gt; Under the agreement granting HMG the right to the Buck Creek project an additional 0.5% overriding royalty is payable on all coal within the area of interest.</li> <li>&gt; There are no known legal or environmental encumbrances that would impede coal property acquisition.</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>&gt; <i>Acknowledgment and appraisal of exploration by other parties.</i></li> </ul>	<ul style="list-style-type: none"> <li>&gt; The oil and gas exploration was carried out by several drilling entities. The largest collection of drill holes designed specifically for coal identification was carried out by the KGS in the 1950's. BCR conducted three different drilling programs between 2009 and 2011. HMG conducted three drilling programs between 2013 and 2015.</li> <li>&gt; Oil and gas wells were used in the resource study for structural control and proof of seam continuity.</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li>&gt; <i>Deposit type, geological setting and style of mineralisation.</i></li> </ul>	<ul style="list-style-type: none"> <li>&gt; The project is located in the West Kentucky Coal Fields, which is part of the Illinois Basin. The thickest and most continuous coal seams, including the WK No. 9 seam, are found in the Carbondale Formation. The Carbondale Formation consists largely of shale, sandstone, siltstone, limestone and to a lesser extent fireclays and coal.</li> <li>&gt; Coal seams dip on average 2.0 to 3.0 degrees toward the center of the basin which lies toward the northwest portion of the property.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <li>&gt; <i>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:</i> <ul style="list-style-type: none"> <li>• <i>easting and northing of the drill hole collar</i></li> <li>• <i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i></li> <li>• <i>dip and azimuth of the hole</i></li> <li>• <i>down hole length and interception depth</i></li> <li>• <i>hole length.</i></li> </ul> </li> <li>&gt; <i>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</i></li> </ul>	<ul style="list-style-type: none"> <li>&gt; A detailed list of the BCRs, KGS and HMG drill holes used to define the resource can be found in <i>the attached Appendix 1: Drill Hole Details- WK No.9 seam.</i></li> <li>&gt; For coal quality drill hole locations, see the attached <i>Appendix 2: Coal Quality Drill Hole Details</i></li> <li>&gt; All drill holes are provided with a collar elevation and a Kentucky South NAD 27 easting and northing coordinate.</li> </ul>
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>&gt; <i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</i></li> <li>&gt; <i>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</i></li> <li>&gt; <i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li> </ul>	<ul style="list-style-type: none"> <li>&gt; Coal quality summary results have been documented in this report and can be found in the attached <i>Appendix 3: Analytical Results</i> for the Project. Coal quality was not used as a limiting parameter. The coal Resource estimate was limited to a minimum seam thickness of 3.0 feet.</li> <li>&gt; Average coal quality values were generated using the polygonal method based on drill hole spacing and summarized in Microsoft® Excel.</li> </ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li>&gt; <i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li>&gt; <i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <li>&gt; <i>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</i></li> </ul>	<ul style="list-style-type: none"> <li>&gt; Coal thickness values from all coal intersections and down hole geophysical logs are considered to be vertical thicknesses. Seam dip of approximately 2.0 to 3.0 degrees has little effect on the vertical thickness of the seam.</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>&gt; <i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i></li> </ul>	<ul style="list-style-type: none"> <li>&gt; Modifications to the WK No. 9 seam thickness, areas of influence, and leased property were appropriately sufficient to warrant the insertion of two figures in this report for clarification. <i>Figure 1</i> identifies the controlled property as of the date of this reporting. <i>Figure 2</i> identifies the drill data used in the Resource estimate model in reference to the property control. In addition, <i>Figure 2</i> identifies the oil and gas well locations that lie within the frame of the figure but were not included in developing the Resource model. These oil and gas wells intercept the WK No. 9 seam horizon but currently do not provide a sufficiently accurate seam thickness for inclusion in the model.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li>&gt; <i>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</i></li> </ul>	<ul style="list-style-type: none"> <li>&gt; All of the available exploration data from HMG, BCRs and the KGS have been included in reporting of this Resource.</li> <li>&gt; A select group of 27 oil and gas wells of suitable resolution were also used in modelling the Resource. These 27 oil and gas wells were examined but not correlated by Cardno. Only 4 oil and gas wells were correlated by Cardno. The data for these 4 wells was obtained from the KGS and occur near the south-east portion of the property. This data was needed to define the location of the seam outcrop. All other oil and gas wells were correlated and a seam thickness determined by an independent party under the direction and verification of BCRs.</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li>&gt; <i>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i></li> </ul>	<ul style="list-style-type: none"> <li>&gt; Informational material available from the KGS and USGS was used to assist in the Resource estimate.</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li>&gt; <i>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li>&gt; <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	<ul style="list-style-type: none"> <li>&gt; The WK No. 9 seam extends in all directions beyond the limits of the controlled property. Outcrop and potential seam thinning to the east, along with previous mining around the property, are the most obvious limits to potential resource expansion.</li> <li>&gt; Further work is expected to include additional exploration, geotechnical testing, coal quality analyses, and coal property acquisition.</li> </ul>

### Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
<b>Database integrity</b>	<ul style="list-style-type: none"> <li>&gt; <i>Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.</i></li> <li>&gt; <i>Data validation procedures used.</i></li> </ul>	<ul style="list-style-type: none"> <li>&gt; The BCRs, HMG, KGS and specific oil and gas well data has been validated prior to being imported into the geological database used to build the geological model.</li> <li>&gt; Seam picks for all coal-specific drill holes have been compared to lithological logs, sample intervals, and geophysical logs where available.</li> </ul>
<b>Site visits</b>	<ul style="list-style-type: none"> <li>&gt; <i>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</i></li> <li>&gt; <i>If no site visits have been undertaken indicate why this is the case.</i></li> </ul>	<ul style="list-style-type: none"> <li>&gt; No site visit has been undertaken by the Cardno Competent Person (CP); however, site visits by Cardno mining engineers have occurred.</li> <li>&gt; The CP has worked with the exploration geologists and other Hartshorne personnel involved in the exploration.</li> <li>&gt; The CP is familiar with the area through working with other projects in the area and is experienced in the type of depositional environment of the coal seams being explored.</li> <li>&gt; A site visit by the CP Geologist was considered not to be required as the data provided was sufficient to develop the geological model and Resource estimate. Furthermore, there is currently no mining of the WK No. 9 seam or infrastructure on the property and all controlled resources occur below drainage.</li> </ul>
<b>Geological interpretation</b>	<ul style="list-style-type: none"> <li>&gt; <i>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</i></li> <li>&gt; <i>Nature of the data used and of any assumptions made.</i></li> <li>&gt; <i>The effect, if any, of alternative interpretations on Mineral Resource estimation.</i></li> <li>&gt; <i>The use of geology in guiding and controlling Mineral Resource estimation.</i></li> <li>&gt; <i>The factors affecting continuity both of grade and geology.</i></li> </ul>	<ul style="list-style-type: none"> <li>&gt; A total of 193 drill holes have been used to define the WK No. 9 seam coal deposit, develop a geologic model and provide the basis for a good understanding of the geology within the project area. This includes 166 drills holes specific to coal identification from BCRs, HMG and the KGS and an additional 27 oil and gas well holes incorporated to identify areas of indicated resource in the western portion of the resource area. These oil and gas wells contained a geophysical log of better resolution than others in the area from which a seam thickness was obtained. An additional 1,040 oil and gas well holes have been identified within and surrounding the property of interest that have identifiable seam thickness but were used only to map the bottom seam elevation and overburden of the WK No. 9 seam, confirm location and displacement of faults, and verify continuity of the seam. Seam thickness of the oil and gas wells were generally reported on an even-feet basis and may not represent an accurate thickness compare to the BCRs, HMG and KGS data.</li> <li>&gt; Three mines in the WK No. 9 seam are actively operating in areas to the north, west and south of the Buck Creek property.</li> <li>&gt; Faulting is present throughout the area, the extent of which is well documented by the KGS.</li> <li>&gt; The geology of the Buck Creek project is sufficiently understood through the exploration data, historical public records and publications by the USGS and the KGS for estimation of the coal</li> </ul>

		Resource.
<b>Dimensions</b>	<ul style="list-style-type: none"> <li>&gt; <i>The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.</i></li> </ul>	<ul style="list-style-type: none"> <li>&gt; The geological model for the Buck Creek project covers an area in excess of 73,800 acres, 34,560 of which are currently leased.</li> <li>&gt; The overburden thickness varies from less than 100 feet in the south eastern portion of the property to more than 1,100 feet in the north western corner.</li> </ul>
<b>Estimation and modelling techniques</b>	<ul style="list-style-type: none"> <li>&gt; <i>The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</i></li> <li>&gt; <i>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</i></li> <li>&gt; <i>The assumptions made regarding recovery of by-products.</i></li> <li>&gt; <i>Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).</i></li> <li>&gt; <i>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</i></li> <li>&gt; <i>Any assumptions behind modelling of selective mining units.</i></li> <li>&gt; <i>Any assumptions about correlation between variables.</i></li> <li>&gt; <i>Description of how the geological interpretation was used to control the resource estimates.</i></li> <li>&gt; <i>Discussion of basis for using or not using grade cutting or capping.</i></li> <li>&gt; <i>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</i></li> </ul>	<ul style="list-style-type: none"> <li>&gt; Coal exploration along with oil and gas drill hole information was used to develop a geologic model, which was used as the basis of the Resource estimation. The seam thickness model used for Resource estimation contains 193 drill holes of which 166 are coal specific obtained from the KGS and drilling programs conducted by BCRs and HMG. The other 27 are select oil and gas well holes use to identify areas of indicated coal.</li> <li>&gt; Coal seams were identified from drill holes based on lithological logging by a competent geologist, and cross referenced with downhole geophysical survey logs where available.</li> <li>&gt; Seam correlation across the drill holes was completed by a BCRs and Cardno geologists. All correlations were verified by Cardno.</li> <li>&gt; Coal seams from cored drill holes were sampled and sent to a laboratory for testing.</li> <li>&gt; Geological data was imported into Surfer™ 12 and Carlson Mining® (formerly SurvCADD®) geological modelling software in the form of Microsoft® Excel files incorporating, drill hole collars, seam and thickness picks, bottom seam elevations and raw and washed coal quality. These data files were validated prior to importing into the software.</li> <li>&gt; Once imported, a model was created for all of the mapped seam and geologic and quality features.</li> <li>&gt; The geological model was verified and reviewed.</li> <li>&gt; Resources were estimated by defining seam thickness at each point of observation and by defining resource confidence arcs around the points of observation.</li> <li>&gt; Points of observation for Measured and Indicated confidence arcs were defined for all drill holes that intersected the seam.</li> <li>&gt; As prescribed by the USGS the following distances from points of observation were used to define the corresponding Resource category arcs: <ul style="list-style-type: none"> <li>- Inferred Resources – greater than 3,960 feet but less than 15,840 feet (3 miles).</li> <li>- Indicated Resources – 3,960 feet</li> <li>- Measured Resources – 1,320 feet.</li> </ul> </li> <li>&gt; The use of the USGS standards are appropriate and customary for this resource jurisdiction and deposition type.</li> <li>&gt; Resources were then estimated from the geological model using the resource categorization polygons for the WK No. 9 seam to limit the estimate to within the area defined by each polygon.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Moisture</b>	<ul style="list-style-type: none"> <li>&gt; <i>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</i></li> </ul>	<ul style="list-style-type: none"> <li>&gt; Resource tonnage has been estimated and reported on a raw as received moisture basis.</li> <li>&gt; Equilibrium moisture is reported to range between 3.9% and 8.1%.</li> <li>&gt; Resource tons estimated on a raw as received moisture basis will be less than Resource tons reported on an equilibrium moisture + 4.0 percent moisture basis. Therefore, reporting Resource tons on a raw as received moisture basis is a more conservative approach.</li> </ul>
<b>Cut-off Parameters</b>	<ul style="list-style-type: none"> <li>&gt; <i>The basis of the adopted cut-off grade(s) or quality parameters applied.</i></li> </ul>	<ul style="list-style-type: none"> <li>&gt; Resource tonnage was estimated within the approximately 34,560 acres of controlled coal.</li> <li>&gt; Resource tons were terminated at a minimum seam thickness of 3.0 feet.</li> <li>&gt; A 200-foot mine exclusion zone was applied to each side and terminus of the identified faults.</li> <li>&gt; No coal quality cut-off parameters were applied.</li> </ul>
<b>Mining factors or assumptions</b>	<ul style="list-style-type: none"> <li>&gt; <i>Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.</i></li> </ul>	<ul style="list-style-type: none"> <li>&gt; No mining factors (i.e., dilution, coal loss, recoverable resources at selective mining block size) have been applied.</li> </ul>
<b>Metallurgical factors or assumptions</b>	<ul style="list-style-type: none"> <li>&gt; <i>The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.</i></li> </ul>	<ul style="list-style-type: none"> <li>&gt; The WK No. 9 seam is a thermal product; therefore, no metallurgical assumptions have been applied in estimating the Resource.</li> </ul>
<b>Environmental factors or assumptions</b>	<ul style="list-style-type: none"> <li>&gt; <i>Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.</i></li> </ul>	<ul style="list-style-type: none"> <li>&gt; No environmental assumptions have been built into the geological model or the Resource estimate.</li> <li>&gt; Cardno is not aware of any significant environmental risk or encumbrances to mine development associated with the Buck Creek project. The land is currently primarily used for farming.</li> </ul>
<b>Bulk density</b>	<ul style="list-style-type: none"> <li>&gt; <i>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.</i></li> <li>&gt; <i>The bulk density for bulk material must have been</i></li> </ul>	<ul style="list-style-type: none"> <li>&gt; Laboratory derived seam densities measured in pounds per cubic foot were established for each of the BCRs and HMG's 2015 coal samples analysed and used to estimate the Resource tons. Seam density was not determined for the coal samples from the HMG drilling programs of</li> </ul>



	<p><i>measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.</i></p> <p>&gt; <i>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</i></p>	<p>2013 and 2014.</p> <p>&gt; Coal Resources were estimated and reported on a raw as received moisture basis.</p> <p>&gt; Resource tons estimated on a raw as received moisture basis will be less than Resource tons reported on an equilibrium moisture + 4.0 percent moisture basis. Therefore, reporting Resource tons on a raw as received moisture basis is a more conservative approach.</p>
<b>Classification</b>	<p>&gt; <i>The basis for the classification of the Mineral Resources into varying confidence categories.</i></p> <p>&gt; <i>Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</i></p> <p>&gt; <i>Whether the result appropriately reflects the Competent</i></p> <p>&gt; <i>Person's view of the deposit.</i></p>	<p>&gt; The Resource has been classified based on suitable distances from points of observations prescribed in the USGS <i>Circular 891</i> and the United States Security and Exchange Commission's <i>Industry Guide 7</i>. The use of the USGS and SEC standards are appropriate and customary for this resource jurisdiction and deposition type.</p> <p>&gt; Points of observation that included seam thickness have been extracted from cored drill holes, air rotary drill holes and a select few oil and gas wells.</p>

<b>Criteria</b>	<b>JORC Code explanation</b>	<b>Commentary</b>
<b>Audits or reviews</b>	<p>&gt; <i>The results of any audits or reviews of Mineral Resource estimates.</i></p>	<p>&gt; The geological model and Resource estimation have been conducted by Mr. Kirt W. Suehs, Senior Geologist with Cardno.</p> <p>&gt; Cardno constructed the geological model after validation of the raw data and data processed previously by personnel from BCRs and the latest data provided by HMG as a result of the 2013 through 2015 drilling programs.</p> <p>&gt; The geological model was reviewed by checking the data in the geologic model against the actual data.</p> <p>&gt; The geological model was verified by a series of cross sections and contour plans.</p> <p>&gt; Mr. Justin Douthat, Business Unit Manager – Mining Advisory Service for Cardno and Mr. Peter Taylor, Business Unit Manager – Mining Advisory Service with Cardno, peer reviewed the resource estimation and found it to be satisfactory with no fatal flaws.</p>
<b>Discussion of relative accuracy/ confidence</b>	<p>&gt; <i>Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.</i></p> <p>&gt; <i>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</i></p> <p>&gt; <i>These statements of relative accuracy and</i></p>	<p>&gt; The geological model used for the Resource estimation has been constructed by Cardno and all data has been validated.</p> <p>&gt; Resource estimation has been completed using standard coal estimation methods which are deemed appropriate for this deposit.</p> <p>&gt; Resources have been categorized based on valid points of measurements and distances from points of observation as prescribed in the USGS <i>Circular 891</i> and the United States Security and Exchange Commission's <i>Industry Guide 7</i>. The use of the USGS standards are appropriate and customary for this resource jurisdiction and deposition type.</p> <p>&gt; The categories reflect the underlying confidence in the resources over the Buck Creek project area.</p>

	<i>confidence of the estimate should be compared with production data, where available.</i>	
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### **Section 4 Estimation and Reporting of Ore Reserves**

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary	
<b>Mineral Resource estimate for conversion to Ore Reserves</b>	> Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.	<ul style="list-style-type: none"> <li>&gt; The original coal resource estimate for the Property was prepared by Cardno and presented in the TR titled "Resource Estimate for the Buck Creek Property as of August 14, 2013 - Located in McLean and Hopkins Counties, Kentucky" dated November 2013.</li> <li>&gt; The coal resource estimate was subsequently updated in conjunction with this Bankable Feasibility Study (BFS) in order to incorporate additional exploration and coal quality data, along with changes in mineral property control since the 2013 TR.</li> <li>&gt; The relative accuracy of, and confidence in, the coal resource tonnage estimates are judged to be in conformance with current industry best-practices; they are of sufficient reliability to support the life-of-mine (LOM) plans and coal reserve estimates.</li> </ul>	
	> Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.	> Coal resources are reported inclusive of the coal reserves.	
<b>Site visits</b>	> Comment on any site visits undertaken by the Competent Person and the outcome of those visits.	<ul style="list-style-type: none"> <li>&gt; A site visit, including Cardno's representative Mr. George Oberlick, P.E., was made to the Buck Creek Property on December 17 and 18, 2013. Mr. Oberlick served as an advisor in development of the PFS. As part of the 2013 site visit, Cardno met with Hartshorne personnel to discuss Hartshorne's planned future operations. Cardno also visited the locations for the proposed surface facilities, river dock and underground mine.</li> <li>&gt; A subsequent site visit to the Buck Creek Property occurred on October 29, 2014 by Mr. Gerard Enigk, P.E., who is one of the CPs for this report. As part of the 2014 site visit, Cardno met with Hartshorne to discuss the proposed Buck Creek operations. The following observations were made: <ul style="list-style-type: none"> <li>- Site access is well established and not likely to be impacted by adverse weather conditions</li> <li>- Public utilities (electrical power, potable water) are available at the site</li> <li>- Relatively flat-lying topography will help minimize earthwork-related construction and expense</li> </ul> </li> </ul>	
<b>Study status</b>	> The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.	> The Study is classified as a BFS, and was undertaken by a team of industry professionals as listed below:	
		Cardno	Geology, Mineral Resource and Reserve Estimation, and Mine Planning, Site Planning, and BFS Management
		Strategic Energy Resolutions, Inc.	Market Assessment and Preliminary Marketing Plan
		SNL Financial LC	Market Price Forecasts
		Energy Venture Analysis, Inc.	Market Price Forecasts

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	<p>&gt; The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.</p>	<p>&gt; Coal reserves are based on an independent evaluation of the coal geology and a BFS of the coal reserve deposits contained within the controlled property.</p> <p>&gt; A BFS economic analysis was completed, including discounted cash flow (DCF). Sensitivities to annual production, sales price, operating costs and capital costs were analyzed.</p> <p>&gt; Coal reserves are presented on a recoverable basis and were derived from the controlled coal resources considering relevant modifying factors.</p>																																						
<b>Cut-off parameters</b>	<p>&gt; The basis of the adopted cut-off grade(s) or quality parameters applied.</p>	<p>&gt; No coal quality cut-off parameters were applied.</p>																																						

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<b>Mining factors or assumptions</b>	<p>&gt; The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).</p>	<p>&gt; Grid files prepared from the geological database were used in the estimation of coal resources, including both seam thickness and elevation models encompassing the WK No. 9 seam.</p> <p>&gt; The grid models were developed using Carlson Mining software, which was also used to develop LOM projections and production timing sequence</p>

Criteria	JORC Code explanation	Commentary
		plans.
	> The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.	<ul style="list-style-type: none"> <li>&gt; The selection of the underground room-and-pillar mining method (with no second mining) is dictated by the size and configuration of the proposed mine boundary and the stipulation in the mineral leases that mining will not result in surface subsidence.</li> <li>&gt; Access to the coal seam will be via decline slope, with ventilation provided through vertical shafts.</li> <li>&gt; Standard mining equipment, as deployed in neighboring mines, will be used at Buck Creek.</li> </ul>
	> The assumptions made regarding geotechnical parameters (e.g. pit slopes, stope sizes, etc.), grade control and pre-production drilling.	<ul style="list-style-type: none"> <li>&gt; Geotechnical parameters and coal quality characteristics are based on laboratory results from samples taken from the coal seam, overlying strata, and underlying strata. These samples were taken from core obtained during exploration drilling.</li> <li>&gt; A detailed geotechnical study was completed by AME in December 2013 titled "Ground Control Design for the Buck Creek Reserve West Kentucky #9 Seam".</li> </ul>
	> The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).	> Pillar design is based on geotechnical characteristics defined during exploration drilling and laboratory testing of the coal seam, overlying strata, and underlying strata.
	> The mining dilution factors used.	> Dilution is based on the minimum mining height required (54 inches) for the equipment selected for the operation, resulting in an average dilution of approximately 8 inches for the reserve.
	> The mining recovery factors used.	> Resource recovery used in the BFS is based on pillar design which incorporates geotechnical parameters defined by laboratory samples, mining depth at specific locations, and on practices at adjacent mines. Mining recovery ranges from 30% to 61%.
	> Any minimum mining widths used.	> Productivity and ground control design are based on mining widths of 19 feet. This width is consistent with the geotechnical design and practices at adjacent mines and is compatible with continuous mining room-and-pillar production equipment.
	> The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.	> No Inferred Mineral Resources are included in the reserves or BFS financial model.
	> The infrastructure requirements of the selected mining methods.	<ul style="list-style-type: none"> <li>&gt; Provisions for supporting infrastructure are included in the capital expense estimates and include the following: <ul style="list-style-type: none"> <li>- Offices and warehouse buildings</li> <li>- Bath house facilities</li> <li>- Power substation and connection to local utility</li> <li>- Coal Handling and Preparation Plant</li> <li>- Slope and shafts for seam access</li> <li>- Overland conveyor to barge-loading dock</li> <li>- Barge loading dock on the Green River</li> </ul> </li> </ul>
<b>Metallurgical factors or assumptions</b>	> The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.	> Processing will include crushing, heavy media separation, spiral separation, and mechanical dewatering. The plant will have the capability for a percentage of the run-of-mine feed to bypass the plant in order to produce a different quality product.

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>&gt; Whether the metallurgical process is well-tested technology or novel in nature.</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Processes are typical of those used in the coal industry, and are in use at adjacent coal processing plants.</li> </ul>
	<ul style="list-style-type: none"> <li>&gt; The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Processes have been simulated by numerous float/sink tests on coal cores from exploration drilling using specific gravity of 1.6 based on 38 samples. Results indicate an average 93% float recovery of the coal seam.</li> </ul>
	<ul style="list-style-type: none"> <li>&gt; Any assumptions or allowances made for deleterious elements.</li> </ul>	<ul style="list-style-type: none"> <li>&gt; No significant effects on product quality are anticipated from dilution material; Float product quality was used to model final product quality.</li> </ul>
	<ul style="list-style-type: none"> <li>&gt; The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole</li> </ul>	<ul style="list-style-type: none"> <li>&gt; No bulk sample or pilot scale work has been completed.</li> </ul>
	<ul style="list-style-type: none"> <li>&gt; For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet specifications?</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Average heat value, ash, and sulfur of the test results for the WK No. 9 seam at Buck Creek indicate suitability for local thermal markets.</li> </ul>
<b>Environmental</b>	<ul style="list-style-type: none"> <li>&gt; The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Cardno was retained by Hartshorne to perform an Environmental Audit for the Project.</li> <li>&gt; This Audit did not reveal the presence of any Recognized Environmental Conditions associated with the subject property or operations proposed at the subject property.</li> <li>&gt; The designed refuse disposal areas are all on surface property controlled under existing option agreements and are located within 1.25 miles of the preparation plant.</li> <li>&gt; The total refuse volume required for the life of the Buck Creek Project is estimated at 18.4 million cubic yards (MCY). The total available storage capacity is sufficient for the LOM refuse disposal needs of the Project (approximately 23.3 MCY).</li> </ul>
<b>Infrastructure</b>	<ul style="list-style-type: none"> <li>- The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.</li> </ul>	<ul style="list-style-type: none"> <li>&gt; The Buck Creek Project is located in McLean County, Kentucky; the required project infrastructure is readily available.</li> <li>&gt; Paved roads provide access to the Area of Interest and planned facilities.</li> <li>&gt; High-voltage power is available and sufficient to operate the mine, plant and associated facilities.</li> <li>&gt; Potable water for offices and bathhouse facilities is available from a nearby community.</li> <li>&gt; Water needed for processing coal and underground use can be readily supplied from the Green River.</li> <li>&gt; The Green River dock site will be the primary avenue for shipment of coal to customers.</li> <li>&gt; Western Kentucky is an established coal mining region, and workers are readily available from nearby existing communities.</li> <li>&gt; Social infrastructure such as schools, hospitals, and commercial establishments are available in the surrounding communities.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Costs</b>	<ul style="list-style-type: none"> <li>&gt; The derivation of, or assumptions made, regarding projected capital costs in the study.</li> <li>&gt; The methodology used to estimate operating costs.</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Capital and operating cost estimates were prepared by Hartshorne and Cardno.</li> <li>&gt; The mine will be operated by Hartshorne.</li> <li>&gt; Capital costs are based on vendor quotations.</li> <li>&gt; Mobile equipment is assumed to be leased, with costs provided by equipment manufacturers.</li> <li>&gt; Operating costs are estimated based on Hartshorne</li> </ul>

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		<p>and Cardno information from adjacent operations, and on the productivity and mine plan components of the BFS.</p> <p>&gt; Estimated operating costs for steady-state operating years is shown below:</p> <table border="1"> <thead> <tr> <th>Average Annual Operating Costs (steady-state)</th> <th>US\$ per ton</th> </tr> </thead> <tbody> <tr> <td>Labour Costs</td> <td>7.72</td> </tr> <tr> <td>Operating &amp; Maintenance</td> <td>9.33</td> </tr> <tr> <td>Power &amp; Utilities</td> <td>0.91</td> </tr> <tr> <td>General &amp; Administration</td> <td>0.84</td> </tr> <tr> <td>Leased Equipment</td> <td>1.72</td> </tr> <tr> <td><b>Subtotal Direct Mining Costs</b></td> <td><b>20.50</b></td> </tr> <tr> <td>CHPP &amp; Barge Load-Out Facility</td> <td>3.48</td> </tr> <tr> <td>Taxes &amp; Insurance</td> <td>1.37</td> </tr> <tr> <td>Royalties</td> <td>2.01</td> </tr> <tr> <td>Severance Tax</td> <td>2.32</td> </tr> <tr> <td><b>Average Annual Operating Costs</b></td> <td><b>29.68</b></td> </tr> </tbody> </table>	Average Annual Operating Costs (steady-state)	US\$ per ton	Labour Costs	7.72	Operating & Maintenance	9.33	Power & Utilities	0.91	General & Administration	0.84	Leased Equipment	1.72	<b>Subtotal Direct Mining Costs</b>	<b>20.50</b>	CHPP & Barge Load-Out Facility	3.48	Taxes & Insurance	1.37	Royalties	2.01	Severance Tax	2.32	<b>Average Annual Operating Costs</b>	<b>29.68</b>
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	> Allowances made for the content of deleterious elements.	> No allowances have been made for deleterious elements; no impact to quality from deleterious elements is anticipated.																								
	> The derivation of assumptions made of metal or commodity price(s), for the principal minerals and co-products.	<p>&gt; Sales price assumptions for the Buck Creek product are based on a market study by Hanou Energy Consulting, LLC, titled "Illinois Basin Coal Price &amp; Demand Forecast 2014 - 2034", in conjunction with sales agreements between Hartshorne and LGE for 2018 through 2022.</p> <p>&gt; The coal price used to generate the expected revenue for all fully-washed coal sold from Buck Creek and which ranges from \$49.46 to \$58.03 per ton during the mine's life.</p> <p>&gt; Approximately 30 percent of annual production is projected to be sold as fully washed coal; the remaining 70 percent is projected to be sold as a blended product.</p> <p>&gt; The blended product is predicted to have a quality of 11,200 Btu/lb. and 5.5 lbs. SO<sub>2</sub> which meets the specifications of the target customers.</p> <p>&gt; The lower-quality blended product will be subject to a price deduction for having a heating content less than 11,800 resulting in sales prices for the blended coal ranging from \$44.50 to \$54.60 during the mine's life.</p> <p>&gt; The estimated average revenue (the weighted average of both products) ranges from \$45.99 per ton to \$55.63 per ton.</p>																								
	> Derivation of transportation charges.	> Transportation costs are based on barge rates for delivery to power plants along the Green River and Ohio River.																								
	> The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.	> Processing costs are based on experience at adjacent operations. Sales price is based on average delivered quality.																								
	> The allowances made for royalties payable, both Government and private.	> The combination of royalties from all mineral leases is 4.1 percent of gross sales price less federal excise tax, severance tax, and OSM reclamation tax.																								
<b>Revenue factors</b>	> The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.	<p>&gt; Average projected product coal quality is consistent with both the site-specific laboratory data available for the Property and adjacent mining operations currently producing in the WK No. 9 seam.</p> <p>&gt; Average coal sales prices as defined above.</p>																								

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		<ul style="list-style-type: none"> <li>&gt; All prices are based on 2015 constant United States dollars.</li> <li>&gt; Processing costs based on producing two products as described above.</li> <li>&gt; Materials handling costs, including overland conveyor and dock costs, are included in the DCF model.</li> <li>&gt; US \$0.50 per ton discount was applied to all coal shipped from Buck Creek to account for the additional transportation cost of shipping from the Green River.</li> </ul>
	<ul style="list-style-type: none"> <li>&gt; The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Coal sales prices as defined above.</li> </ul>
<b>Market assessment</b>	<ul style="list-style-type: none"> <li>&gt; The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Coal price forecasts, transportation, and market assessment were based on the Hanou Energy Consulting, LLC report titled "Illinois Basin Coal Price &amp; Demand Forecast 2014-2034", which forecasts the market and pricing for Illinois Basin coals, and Strategic Energy Resolution's report titled "Buck Creek Project Market Assessment and Preliminary Marketing Plan," which provides information on the United States coal industry, the Illinois Basin (ILB), and the Ohio River utility market.</li> <li>&gt; Information on historical ILB pricing was also obtained from IHS Energy.</li> <li>&gt; Actual sales agreements between Hartshorne and LGE for Buck Creek No. 1 product.</li> </ul>
	<ul style="list-style-type: none"> <li>&gt; A customer and competitor analysis along with the identification of likely market windows for the product.</li> </ul>	<ul style="list-style-type: none"> <li>&gt; The Project is well-positioned to take advantage of the lowest cost transportation option, which is delivery by barge on the Ohio River system to electrical utility customers.</li> <li>&gt; In addition, the project is located in close proximity to several power plants which purchase fuel by truck.</li> <li>&gt; The Ohio River utility market provides a stable customer base for the marketing and sales of Buck Creek coal, largely on account of the targeted plants already being retrofitted with pollution controls and the fact that they provide base-load generation.</li> </ul>
	<ul style="list-style-type: none"> <li>&gt; Price and volume forecasts and the basis for these forecasts.</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Annual production will total approximately 3.7 to 3.9 million marketable tons at full production.</li> <li>&gt; The estimated average revenue ranges from \$45.99 per ton to \$55.63 per ton.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Economic</b>	<ul style="list-style-type: none"> <li>&gt; The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Excluding debt, the NPV of the projected cash flows beginning in the year 2016 is \$293 million at an 8-percent (real) discount rate.</li> <li>&gt; The internal rate-of-return is 30 percent.</li> <li>&gt; Capital is projected to be committed beginning in 2016</li> <li>&gt; All costs and prices are based on 2015 constant United States dollars. <ul style="list-style-type: none"> <li><b>Initial Capital Costs</b></li> <li>- Mine Site Development and Infrastructure = \$60.7 million</li> <li>- Coal Handling &amp; Preparation Plant &amp; Barge Load-Out Facility = \$44.0 million</li> </ul> </li> </ul>

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		<ul style="list-style-type: none"> <li>- Total Initial Capital Cost = \$104.6 million</li> </ul> <p><b>Production (tons)</b></p> <ul style="list-style-type: none"> <li>- Average run-of-mine (ROM) Coal Production Steady State = 5.2 Mtpa</li> <li>- Total ROM Coal Produced Life-of-Mine = 86.3 million tons</li> <li>- Effective CHPP Yield = 73.5%</li> <li>- Life of Mine = 18.0 years</li> <li>- Average Clean Coal Production Steady State = 3.8 Mtpa</li> <li>- Total Saleable Coal Produced LOM* = 63.5 million tons</li> <li>- Start of Construction = Q1 2016</li> <li>- Start of Production Ramp-Up = Q4 2017</li> </ul> <p><b>Cash flow</b></p> <ul style="list-style-type: none"> <li>- Average Sales Price Received (per ton) = 2018 is \$45.99/ton and 2035 is \$55.63/ton</li> <li>- Average Cash Operating Costs = \$29.68 per ton</li> <li>- Average Annual Operating Earnings before Interest, Taxes, Depreciation and Amortization (EBITDA) (steady state) = \$83 million</li> <li>- NPV = \$293 million</li> <li>- Internal rate of return (IRR) = 30%</li> </ul>																																																		
	<p>&gt; NPV ranges and sensitivity to variations in the significant assumptions and inputs.</p>	<p>&gt; The sensitivity study shows the NPV at the 8-percent (real) discount rate when Base Case annual production tonnages, sales prices, operating costs and capital costs are increased and decreased in increments of 5 percent within a +/-10-percent range.</p> <table border="1" data-bbox="938 1227 1445 1899"> <thead> <tr> <th>Minus 10%</th> <th>NPV (\$000)</th> </tr> </thead> <tbody> <tr><td>Production (tons)</td><td>\$222,237</td></tr> <tr><td>Sales Value</td><td>\$197,320</td></tr> <tr><td>Controllable Costs</td><td>\$322,103</td></tr> <tr><td>Capital Expenditures</td><td>\$306,319</td></tr> <tr><td colspan="2">Minus 5%</td></tr> <tr><td>Production (tons)</td><td>\$257,846</td></tr> <tr><td>Sales Value</td><td>\$245,387</td></tr> <tr><td>Controllable Costs</td><td>\$307,779</td></tr> <tr><td>Capital Expenditures</td><td>\$299,886</td></tr> <tr><td colspan="2">Base Case</td></tr> <tr><td>Production (tons)</td><td>\$293,454</td></tr> <tr><td>Sales Value</td><td>\$293,454</td></tr> <tr><td>Controllable Costs</td><td>\$293,454</td></tr> <tr><td>Capital Expenditures</td><td>\$293,454</td></tr> <tr><td colspan="2">Plus 5%</td></tr> <tr><td>Production (tons)</td><td>\$329,062</td></tr> <tr><td>Sales Value</td><td>\$341,521</td></tr> <tr><td>Controllable Costs</td><td>\$279,129</td></tr> <tr><td>Capital Expenditures</td><td>\$287,022</td></tr> <tr><td colspan="2">Plus 10%</td></tr> <tr><td>Production (tons)</td><td>\$364,671</td></tr> <tr><td>Sales Value</td><td>\$389,588</td></tr> <tr><td>Controllable Costs</td><td>\$264,805</td></tr> <tr><td>Capital Expenditures</td><td>\$280,589</td></tr> </tbody> </table>	Minus 10%	NPV (\$000)	Production (tons)	\$222,237	Sales Value	\$197,320	Controllable Costs	\$322,103	Capital Expenditures	\$306,319	Minus 5%		Production (tons)	\$257,846	Sales Value	\$245,387	Controllable Costs	\$307,779	Capital Expenditures	\$299,886	Base Case		Production (tons)	\$293,454	Sales Value	\$293,454	Controllable Costs	\$293,454	Capital Expenditures	\$293,454	Plus 5%		Production (tons)	\$329,062	Sales Value	\$341,521	Controllable Costs	\$279,129	Capital Expenditures	\$287,022	Plus 10%		Production (tons)	\$364,671	Sales Value	\$389,588	Controllable Costs	\$264,805	Capital Expenditures	\$280,589
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<b>Social</b>	<p>&gt; The status of agreements with key stakeholders and matters leading to social license to operate.</p>	<p>&gt; Stakeholder support has been strong during the property acquisition and permitting processes. Almost all mineral leases are held with resident land owners or families of resident land owners providing an enormous opportunity for economic</p>																																																		



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		gain in a relatively small community.
<b>Other</b>	To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:  > Any identified material naturally occurring risks.	> No material naturally occurring risks have been identified.
	> The status of material legal agreements and marketing arrangements.	> Mining and water quality permits are approved as discussed below. > Hartshorne has received strong support from potential utility customers, and will continue negotiations with these potential customers. One forward sales agreement has been executed, whereby the utility has, prior to the start of construction, committed to buy coal from Hartshorne at a set price.
	> The status of government agreements and approvals critical to the viability of the project, such as mineral tenement status and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third part on which extraction of the reserve is contingent.	> The permit required for construction of the mine and plant was issued by the Kentucky Division of Mine Permits 4/3/2014. > The U.S. Army Corps of Engineers and Kentucky Division of Water have approved the associated 404/402 permits required for mine construction. > Other permits are being prepared (including the primary dock permit) or have been submitted.
<b>Classification</b>	> The basis for the classification of the Ore Reserves into varying confidence categories. Whether the result appropriately reflects the Competent Person's view of the deposit. The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).	> Measured and indicated resources have been converted to proven and probable reserves, respectively. > None of the probable coal reserves have been derived from measured resources. > The results of this BFS define an estimated initial recoverable ore (coal) reserve estimate of 86.3 million tons. > The results of this BFS define an estimated 63.5 million tons of proven and probable marketable coal reserves, of which 16.5 million tons (or 26 percent) is considered proven and 46.9 million tons (or 74 percent) is considered probable (after the application of all mining factors).
<b>Audits or reviews</b>	> The results of any audits or reviews of Ore Reserve estimates.	> Coal reserve estimate has been prepared by Cardno and reviewed internally. > An external reviews and reserve audit has been completed by Golder.
<b>Discussion of relative accuracy/ confidence</b>	> Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.	> The BFS is based on a mine plan, project schedule and estimated capital and operating costs with an accuracy of +/-10 percent. > The accuracy of and confidence in the tonnage estimates provided herein are judged to be in conformance with current industry best practices. > Based on the sensitivity analysis conducted, the Project's NPV is most sensitive to changes in sales value. Because of this, detailed sales and marketing analysis were undertaken to verify the data used in the study.
	> The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.	> All modifying factors have been applied to design the proposed Buck Creek No. 1 Mine on a global scale as current local data reflects the global assumptions.

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	<ul style="list-style-type: none"> <li>&gt; Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.</li> </ul>	<ul style="list-style-type: none"> <li>&gt; An independent third-party expert should be retained in order to conduct an updated formal market study for the Project.</li> <li>&gt; Ongoing efforts should be made to prepare and submit remaining permit applications necessary for construction and operation of the Project to the appropriate federal and state agencies.</li> </ul>
	<ul style="list-style-type: none"> <li>&gt; It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</li> </ul>	<ul style="list-style-type: none"> <li>&gt; There has been no production to date, so no comparison to production or reconciliation data can be made.</li> </ul>