

ASX ANNOUNCEMENT

MAIDEN COAL RESOURCE OF 154 MILLION TONS DEFINED IN ILLINOIS COAL BASIN

HIGHLIGHTS:

- **Maiden Coal Resource at the Buck Creek Project confirms potential to develop a large, high quality thermal coal deposit in the low cost and highly productive Illinois Coal Basin**
- **Coal Resource Estimate of 154 million tons (~140 million tonnes) defined at Buck Creek Project with over 88% in the Measured & Indicated categories**
- **Entire Coal Resource is contained in a single, flat, and laterally continuous coal seam known as the Springfield Seam, which is the third largest producer of thermal coal in the USA**
- **Excellent Illinois Coal Basin coal quality with high heating value (6,550kcal/kg), low ash (8.4%) and low chlorine (0.2%) at a very high in-seam yield of +92%**
- **163 bore holes on over 25,000 acres of controlled coal leases form the basis for the maiden Coal Resource Estimate**
- **Company is continuing to acquire leases and conduct its exploration program with the potential to substantially increase the resource base**

Paringa Resources Limited (“**Paringa**” or “**Company**”) is pleased to announce a 154 million ton (~140 million tonne) maiden Coal Resource Estimate (“**CRE**”) for its Buck Creek thermal coal project (“**Project**”) located in the low cost and proven Illinois Coal Basin (“**ILB**”) in Kentucky, USA. The Project’s maiden CRE confirms that the Company has secured one of the largest undeveloped coal deposits in the high growth ILB.

Table 1: Buck Creek Project – Coal Resource Estimate (Springfield Seam)						
CRE Tonnage (Mt)				Product Quality (+4% Eq. Moisture)		
Measured	Indicated	Inferred	Total	Calorific Value	Ash	Yield
32.1	104.8	17.5	154.4	6,550 kcal/kg	8.4%	92.7%

The maiden CRE is reported in accordance with the JORC Code 2012 and comprises over 135 million tons (~122 million tonnes) in the Measured and Indicated categories. It is adjacent to some of the highest productivity mines in the ILB. The coal quality is also exceptional, containing a higher heat, lower ash and lower chlorine content than many of the current and most of the new coal operations being developed in the ILB.

Paringa’s Chief Executive Officer – USA, Mr David Gay, said “*The maiden Coal Resource is the first step in consolidating one of the largest undeveloped coal deposits in the region. The size of our initial Coal Resource allows us to commence our Scoping Study to determine potential production scenarios and economics. We are excited to progress this Project towards production in this highly profitable coal region which can serve both the USA and international thermal coal markets.*”

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Significant ILB Coal Position

The delineation of over 154 million tons (~140 million tonnes) in the maiden CRE confirms that the Company has consolidated a very large undeveloped position in the ILB and in particular, the highly profitable Springfield Seam, which is the third largest producer of thermal coal in the USA. The Springfield seam is a thick, flat, and laterally continuous coal seam and is the source of most of the low-cost production in the Western Kentucky region of the ILB.

The maiden CRE at the Project compares very well to other high productivity continuous miner operations which account for a significant proportion of the ILB production (+50 million tons per annum (“Mtpa”) of the 135Mtpa of current ILB production). Paringa is continuing to acquire leases and conduct its exploration program with the potential to substantially increase the resource base.

Table 2: Coal Reserves of Operational Mines in ILB			
Mine	Company	FY12 Production (Mtpa)	SEC¹ Reserve (Mt)
Riverview	Alliance Resource Partners	8.6	127
Warrior	Alliance Resource Partners	5.9	124
Highland	Patriot Coal	4.0	83
Fransisco U/G	Peabody Energy	2.8	67
Dotiki	Alliance Resource Partners	3.4	49
Pattiki	Alliance Resource Partners	2.4	47
Carlisle	Hallador Energy	3.3	46
Onton No.9	Alliance Resource Partners	1.6	44
Hopkins	Alliance Resource Partners	3.1	41
Wild Cat Hills U/G	Peabody Energy	1.5	30
Bluegrass	Patriot Coal	1.5	27
Gibson North	Alliance Resource Partners	3.4	21
Dodge Hill	Patriot Coal	0.9	19

¹ Sourced from SEC 10k filings of saleable coal reserves.

United States Security and Exchange Commission (“SEC”) Reserves are quoted on a saleable tonne basis. Typically in the ILB in-seam yields are ~80-85% and in-situ recovery from continuous miner operations are ~50-55%. SEC regulations do not allow for the quoting of in-situ resource numbers.

It is important to note above that Alliance Resource Partners LLC’s Riverview mine is a newly commissioned project having begun operations in 2009 and is currently the 5th largest underground coal mine by production, and the largest underground coal mine not utilising longwall mining methods in the USA. Riverview’s capital cost to achieve 8.6Mtpa production was ~US\$230 million which included the construction of the mine, a 1,800 ton per hour process plant, barge load-out and mining equipment.

Attractive ILB Coal Product

Paringa’s Project has particularly attractive coal quality properties as compared to existing and new mines being developed in the ILB. On a product basis, together with a 4% addition to equilibrium moisture, the coal has a relatively high heat content of 6,550kcal/kg for the region which compares very well with the current operations in the 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 ILB.

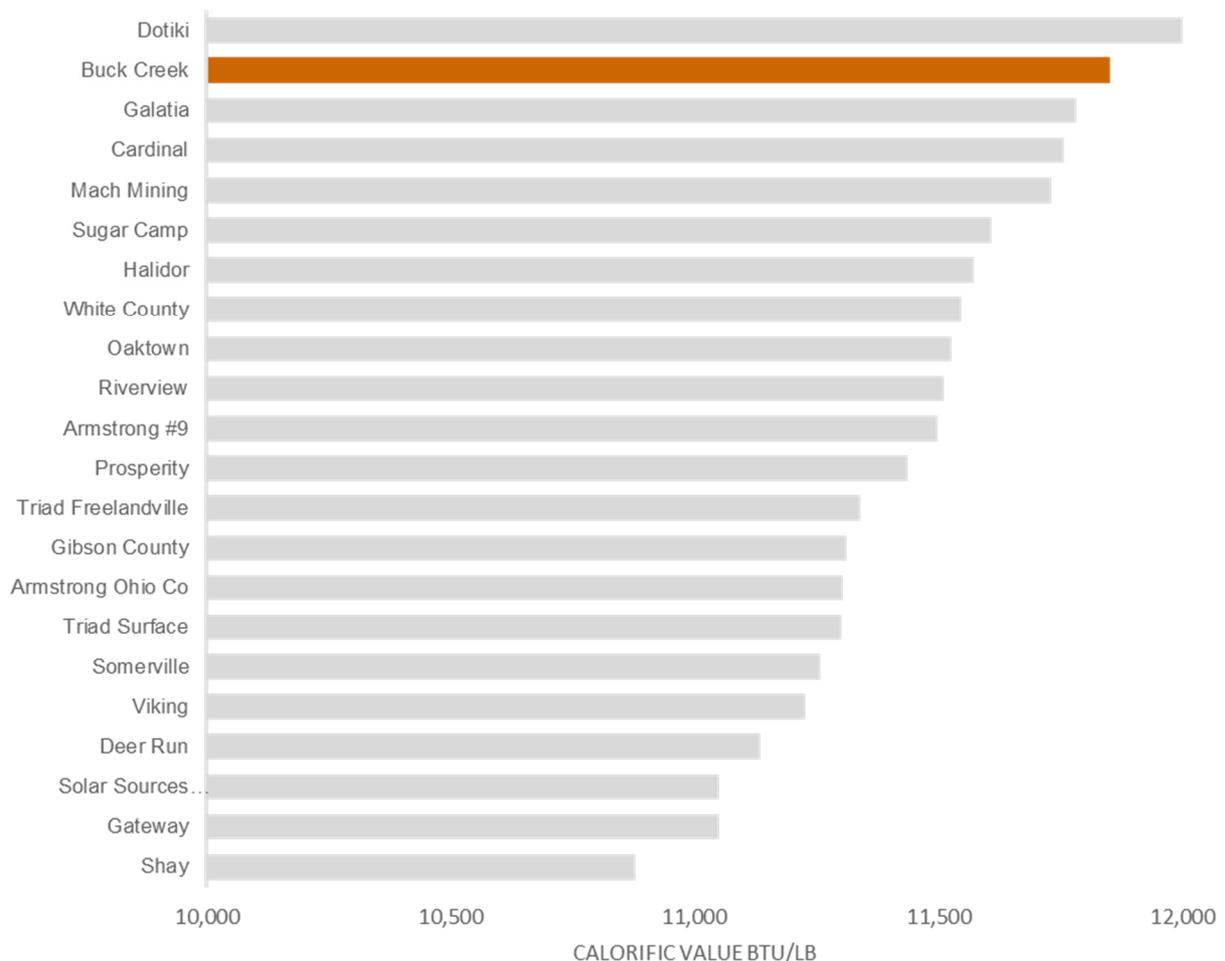


Figure 1: Buck Creek Project Quality Comparison

The ash content of the Project’s coal averages ~8.4% when typical ILB coal products are over 9.1% and the sulphur content at 2.8% is slightly lower than the average seen across the ILB. One of the most important characteristics to be considered in the ILB is the chlorine content. Chlorine can be very corrosive to boilers and is a detrimental quality found in many of the new developments in the ILB which tend to have values exceeding 0.30%. The Project’s chlorine content is a low 0.20% and has a huge advantage over many of the new developments.

The qualities seen at the Project provides confidence that this will be an attractive ILB product to the domestic and international thermal coal markets.

Coal Resource Estimate (“CRE”)

The preparation of the CRE was undertaken by Cardno MM&A based in Bluefield, Virginia, USA. Marshall Miller & Associates, Inc. (“MM&A”) was acquired in 2012 by Cardno Limited (“Cardno”), an ASX-200 professional infrastructure and environmental services company, to form Cardno MM&A. MM&A has over 38 years of expertise in mining engineering, mine reserve evaluation, feasibility studies and due diligence services for mining and resource projects across the globe. MM&A 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 MM&A 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.

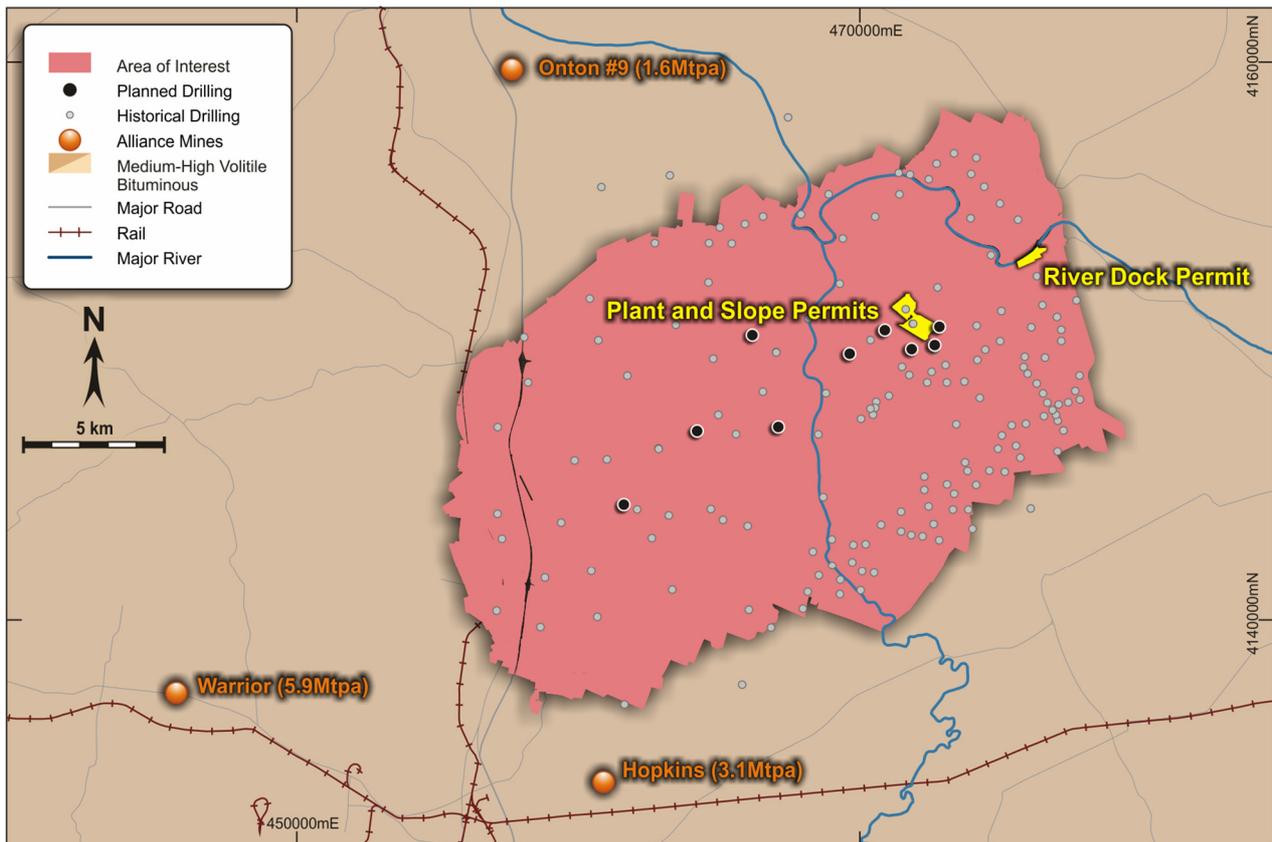


Figure 2: Buck Creek Drilling and Regional Operations

MM&A 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).

After the geological data was correlated within MM&A'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 a dry, in-situ basis.

Key Points from the work by MM&A on the CRE are:

- A total of 154.4Mt was defined on the Project and comprised of 32.1Mt Measured, 104.8Mt Indicated and 17.5Mt Inferred tonnages was defined;
- 163 bore holes were used in the calculation which included 98 Kentucky Geological Survey ("KGS") core holes, 29 Buck Creek Resources LLC core holes, 10 Buck Creek Resources LLC Rotary Holes and 26 gas wells;

- The CRE was calculated over only the Company's controlled 25,000 acre (~10,000 ha) position in the region;
- The CRE in this announcement refers only to the Springfield Seam which is one of the most prolific coal seams produced in the USA;
- The region has been extensively mined particularly within the Springfield Seam but no mining of the Springfield Seam has occurred within the Project;
- Drilling has confirmed the Springfield Seam to demonstrate lateral stratigraphic and coal quality continuity and the raw in-situ coal is classified as a high sulfur, high volatile bituminous C thermal coal;
- 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;
- The average thickness of the Springfield Seam is 3.8 feet (1.16 metres) across the property which compares well to many of the operations in the immediate vicinity; and
- The cut-off seam thickness utilised was 3.0 feet (0.91 metres).

Geology

The CRE is located in Hopkins and McLean County, Kentucky, within the Carbondale Formation. The Springfield Seam associated with the Project has been identified as exhibiting potential underground mineable resource tonnage. The seam names used reflect the local names correlative to their respective formal names as set forth by the KGS. Within the Project area the Springfield Seam is also known as the Western Kentucky No. 9 Seam ("**WK No. 9**").

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 SO₂ 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 Springfield Seam across the Project is generally continuous and non-complex but may vary in thickness and even be locally absent. Furthermore, the seams are affected by tectonic deformation within the resource areas. The average mineable seam thickness ranges from 3.0 feet (0.91 metres) to 4.5 feet (1.37 metres) for the Springfield Seam with fairly consistent coal thickness exhibiting minimal splitting and non-coal partings.

This interval overlying the Springfield Seam 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 Springfield 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 MM&A. 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 Springfield Seam but no mining of the Springfield Seam has occurred within the Project.

Coal Quality

The CRE coal quality was derived from 24 samples taken from the only 25 boreholes which conducted core quality and washability testing on the Springfield Seam (one sample was excluded from the analysis due to it possibly containing a large amount of out of seam dilution). The coal samples were shipped to Standard Laboratories, Inc. in Evansville, Indiana for analysis. Core recovery was greater than 90 percent for all of the samples sent for analysis.

Coal seam quality data is available only from borehole core samples and is utilized in determining coal quality. Borehole quality was tabulated by seam on spreadsheets to allow for basic statistical analyses (average, maximum, minimum) of the data set. The arithmetic average was used to represent the quality of the area. In one case laboratory test result were judged to be anomalous and unrepresentative of the seam quality within the resource area, the anomalous data was not used in computation of the area averages.

Product qualities include an addition of 4 percent moisture to the equilibrium moisture.

Table 3: Springfield Seam Coal Quality Specifications										
Raw Proximate Analysis (Equilibrium Moisture)							Product Quality (Equilibrium Moisture +4%)			
Moisture	Ash	Volatile Matter	Fixed Carbon	Chlorine	HGI	AFT IDT °C	Calorific Value	Ash	Sulphur	Yield @ 1.60 Float
6.6%	12.5%	36.3%	44.6%	0.20%	59	1,096	6,550 kcal/kg	8.4%	2.85%	92.7%

Exploration Drilling Program

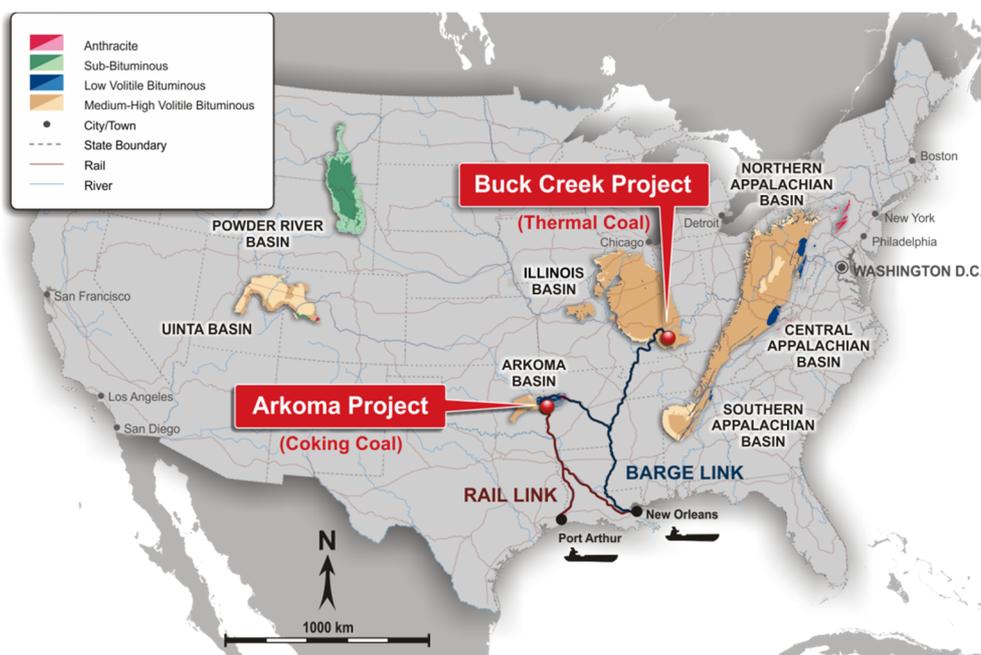
The Company is currently conducting a nine hole core drilling program which is intended to add to the understanding of the coal geology, geotechnical and quality of the Project. The completion of this core drilling program is expected over this quarter with the results of the analyses expected to be announced in the first quarter 2014.

ABOUT THE BUCK CREEK PROJECT

The Buck Creek Project is located in the Western Kentucky region of the ILB which is one of the most prolific coal producing regions in the USA. Paringa controls over 25,000 gross acres (~10,000 ha) of coal leases within an area of interest of approximately 72,000 acres (~28,000 ha). The Buck Creek Project is one of the few remaining high quality thermal coal projects within the Springfield Seam that is not controlled by one of the major USA coal companies. Buck Creek coal offers one of the highest quality, highest heating value products in the ILB. The Buck Creek Project is located adjacent to the Green River which provides year round linkage to the Ohio and Mississippi rivers systems which feed domestic coal-fired power plants and coastal export coal terminals in the Gulf of Mexico.

ABOUT THE ARKOMA COKING PROJECT

The Arkoma Project is located in Sebastian County along the Arkansas River Valley in the State of Arkansas, USA. The Company has secured over 14,000 gross acres (~6,000 ha) of coal leases out of an area of interest of approximately 25,000 acres (~10,000 ha). Regional mapping and analysis of past coal production in the Arkoma basin lead to the definition of this high value coking coal target area. Preliminary coal quality testing confirms low volatile hard coking coal, ranking amongst the best hard coking coal products in the world.



Forward Looking Statements

This release 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 release, to reflect the circumstances or events after the date of that release.

Competent Persons Statement

The information in this report that relates to Exploration Results and Coal Resources is based on information compiled 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 MM&A. 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'. 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.

APPENDIX 1 – Drill Hole Details

Project	Drill Hole	Northing	Easting	Surface Elevation (ft)	Springfield Seam Base Elevation (ft.)	Depth to Springfield Seam Base (ft.)	Springfield Seam Thickness (ft.)	Total Drill Hole Depth (ft.)	Quality Data
Buck Creek	11L25-N5	414980.21	1515289.77	395.00	-305.75	700.75	5.05	720.00	Yes
Buck Creek	11M26-P13	441944.00	1540899.17	374.00	-275.40	649.40	3.50	666.20	Yes
Buck Creek	13M27-E14	441609.24	1552038.47	381.00	-119.00	500.00	3.90	515.15	Yes
Buck Creek	15M27-K6	444544.66	1543774.84	381.00	-150.40	531.40	3.65	858.00	Yes
Buck Creek	16M28-LM16	434578.84	1568598.04	389.00	-71.60	460.60	4.05	479.00	Yes
Buck Creek	17M27-L1	431796.36	1564256.41	380.00	-89.35	469.35	3.80	480.60	Yes
Buck Creek	18M27-N1	437252.11	1554362.77	382.00	-201.15	583.15	3.85	601.00	Yes
Buck Creek	1L26-P5	427442.96	1540159.87	405.00	-293.90	698.90	3.90	705.40	Yes
Buck Creek	20M26-D5	439437.35	1537083.71	381.00	-402.10	783.10	3.50	795.63	Yes
Buck Creek	22M26-NO10	431198.10	1535952.74	382.00	-398.15	780.15	3.65	792.95	Yes
Buck Creek	22M27-N1	434698.90	1559688.34	380.00	-179.60	559.60	3.85	575.75	Yes
Buck Creek	24M27-JK3	433535.75	1548070.05	383.00	-264.24	647.24	3.90	660.66	Yes
Buck Creek	25M26-P3	434476.85	1521361.37	397.00	-718.98	1115.98	4.03	1140.00	Yes
Buck Creek	25M27-O14	429309.01	1545183.85	405.00	-287.95	692.95	4.05	700.00	Yes
Buck Creek	3L26-G10	426132.86	1529162.40	380.00	-422.60	802.60	3.55	817.45	Yes
Buck Creek	3L27-KL7	426157.41	1553536.12	385.00	-129.20	514.20	3.50	535.20	Yes
Buck Creek	6L27-G5	420887.81	1542246.47	405.00	-132.20	537.20	3.50	559.00	No
Buck Creek	9L26-05	421271.23	1534889.33	382.00	-204.59	586.59	3.54	601.35	Yes
Buck Creek	BCR-1	404506.50	1514364.80	398.22	-360.23	758.45	4.25	773.75	No
Buck Creek	BCR-2	407141.90	1516379.40	446.66	-468.79	915.45	4.75	930.00	No
Buck Creek	BCR-3	406550.30	1522686.40	381.91	-450.19	832.10	4.40	844.50	No
Buck Creek	BCR-4	427841.00	1508444.60	396.07	-902.93	1299.00	3.50	1320.00	No
Buck Creek	BCR-5	434120.60	1536651.00	384.83	-384.47	769.30	3.50	784.20	No
Buck Creek	BCR-6	407833.40	1521289.40	404.40	-480.80	885.20	4.65	900.00	No
Buck Creek	BCR-7	406463.70	1503809.20	386.83	-384.77	771.60	4.60	784.00	No
Buck Creek	BCR-8	416000.00	1534000.00	375.00	-165.65	540.65	3.50	565.45	No
Buck Creek	BCR-9	418000.00	1548250.00	440.00	-286.05	726.05	3.85	966.45	No
Buck Creek	BCR-10	408000.00	1534500.00	345.00	-470.40	815.40	3.00	843.90	No
Buck Creek	DH-01	430044.88	1532917.63	390.00	-429.65	819.65	3.65	839.65	No
Buck Creek	DH-02	407600.65	1496416.49	405.00	-421.70	826.70	4.60	843.10	No
Buck Creek	DH-03	404650.82	1496887.78	410.00	-411.10	821.10	4.85	839.60	No
Buck Creek	DH-04	411824.58	1509935.83	385.00	-391.85	776.85	4.30	789.50	Yes
Buck Creek	DH-06	415071.65	1515262.35	395.00	-308.00	703.00	4.93	713.00	Yes
Buck Creek	DH-07	426197.04	1529144.91	380.00	-425.48	805.48	3.73	818.17	Yes
Buck Creek	DH-08	421269.08	1534847.66	380.00	-210.90	590.90	3.50	607.00	Yes
Buck Creek	DH-09	431300.41	1536108.08	380.00	-403.25	783.25	3.70	803.90	Yes
Buck Creek	DH-10	429308.41	1545092.60	405.00	-291.51	696.51	4.05	709.00	Yes
Buck Creek	DH-11	431029.26	1544325.45	400.00	-313.10	713.10	4.05	729.00	Yes
Buck Creek	DH-12	424255.67	1543794.51	400.00	-198.90	598.90	3.80	610.70	Yes
Buck Creek	10	384976.76	1510905.71	386.00	-160.83	546.83	4.83	548.00	No
Buck Creek	24	400956.02	1535339.78	369.00	43.00	326.00	4.00	331.00	No
Buck Creek	GR8	393742.21	1528128.45	382.00	-76.83	458.83	4.75	469.75	No
Buck Creek	GR9	395863.67	1525556.88	375.00	-84.33	459.33	5.08	465.83	No
Buck Creek	PR3	387108.52	1524666.51	387.00	-44.50	431.50	5.00	432.08	No
Buck Creek	R100	405727.55	1541110.42	399.00	-9.00	539.10	3.00	415.00	No
Buck Creek	R107	413395.57	1557452.28	384.00	-42.50	575.00	4.00	434.00	No
Buck Creek	R109	404466.85	1544628.97	394.00	-15.00	457.00	2.00	412.50	No
Buck Creek	R11	427120.97	1555277.15	380.00	-110.00	492.50	4.00	498.00	No
Buck Creek	R114	420190.69	1540753.66	401.00	-134.00	468.00	3.00	543.00	No
Buck Creek	R116	420490.44	1552819.90	385.00	-213.00	474.00	5.00	607.00	No
Buck Creek	R-13	430666.25	1555484.96	379.70	-159.40	709.00	3.00	542.10	No
Buck Creek	R-14	428965.39	1552570.83	382.00	-193.00	492.00	4.50	578.00	No
Buck Creek	R-15	428710.68	1558938.35	380.00	-77.00	469.00	3.00	464.00	No
Buck Creek	R167	411936.89	1553829.14	387.00	-114.00	464.50	3.50	504.50	No
Buck Creek	R168	411755.45	1555628.76	385.00	-113.00	359.50	3.50	500.00	No

Project	Drill Hole	Northing	Easting	Surface Elevation (ft)	Springfield Seam Base Elevation (ft.)	Depth to Springfield Seam Base (ft.)	Springfield Seam Thickness (ft.)	Total Drill Hole Depth (ft.)	Quality Data
Buck Creek	R-169	410260.72	1552264.56	386.00	-106.50	460.00	5.00	498.00	No
Buck Creek	R-17	428355.69	1562432.57	380.00	-88.00	448.00	4.00	472.50	No
Buck Creek	R170	407405.25	1549518.72	405.00	-88.00	439.50	5.00	496.00	No
Buck Creek	R172	407239.02	1543474.04	432.00	-56.50	434.00	3.50	492.00	No
Buck Creek	R173	403381.79	1537830.19	378.00	23.00	160.00	4.00	361.00	No
Buck Creek	R174	404074.21	1535341.49	384.00	14.00	445.50	3.50	417.00	No
Buck Creek	R175	403457.68	1539271.90	380.00	27.00	310.50	4.00	360.00	No
Buck Creek	R176	401315.70	1537694.60	382.00	44.50	501.00	5.00	341.00	No
Buck Creek	R177	400194.51	1538818.60	375.00	29.00	408.00	3.00	355.00	No
Buck Creek	R178	400021.77	1540214.48	378.00	34.00	426.50	3.00	350.00	No
Buck Creek	R179	397984.77	1538628.67	372.00	19.97	409.00	3.00	359.98	No
Buck Creek	R-18	429862.14	1561956.75	381.00	-93.00	490.00	4.00	478.50	No
Buck Creek	R181	399782.08	1533768.31	376.00	23.00	535.00	3.00	356.00	No
Buck Creek	R182	397869.96	1532440.03	374.00	-12.96	598.00	5.00	394.96	No
Buck Creek	R183	395891.66	1531855.83	379.00	-32.96	501.00	4.00	416.96	No
Buck Creek	R19	427056.37	1562412.12	385.00	32.00	498.00	4.00	363.00	No
Buck Creek	R21	422352.79	1549014.06	409.00	-120.00	493.00	3.50	540.00	No
Buck Creek	R211	399237.28	1536262.20	380.00	25.00	488.50	2.50	360.00	No
Buck Creek	R212	397541.14	1536193.73	377.00	6.04	355.00	3.00	374.96	No
Buck Creek	R213	402662.66	1533117.07	374.00	14.00	370.00	3.00	365.00	No
Buck Creek	R22	423633.17	1547245.51	388.00	-144.00	353.00	4.50	540.00	No
Buck Creek	R-220	447126.43	1517031.16	394.00	-315.00	337.50	3.50	716.00	No
Buck Creek	R23	422420.75	1551063.16	425.00	38.00	346.00	3.50	440.00	No
Buck Creek	R25	425115.79	1560479.34	382.00	62.00	344.00	3.00	335.00	No
Buck Creek	R26	425255.15	1558131.19	383.00	-20.00	352.03	3.04	415.00	No
Buck Creek	R-264	441371.90	1557559.60	384.00	-108.00	353.00	3.50	500.00	No
Buck Creek	R-265	443306.33	1555487.90	383.00	-86.00	386.96	4.00	472.00	No
Buck Creek	R-266	445303.02	1553672.96	384.00	-80.50	411.96	3.95	470.00	No
Buck Creek	R-269	448093.76	1548152.90	380.00	20.50	353.00	3.00	370.00	No
Buck Creek	R-27	431289.17	1560278.66	383.00	-77.00	529.00	3.00	478.00	No
Buck Creek	R-270	446261.38	1547222.94	382.00	-66.00	355.00	3.00	453.00	No
Buck Creek	R-271	446845.03	1545031.59	380.00	-59.50	370.96	4.00	446.00	No
Buck Creek	R-276A	446829.43	1552163.74	384.00	-50.00	360.00	3.00	451.00	No
Buck Creek	R28	422083.16	1559480.87	379.00	-105.00	532.00	4.00	492.50	No
Buck Creek	R-295	449261.36	1550203.35	382.00	222.00	387.00	1.00	376.50	No
Buck Creek	R-296	447068.72	1543734.61	383.00	-62.50	320.00	3.50	453.00	No
Buck Creek	R-301	448718.18	1552795.93	380.00	69.50	403.00	3.00	320.00	No
Buck Creek	R32	418934.64	1561280.53	380.00	98.00	484.00	5.00	437.00	No
Buck Creek	R329	419382.93	1540040.65	407.00	-117.00	282.00	2.00	531.00	No
Buck Creek	R33	420921.41	1560213.86	382.00	17.00	524.00	3.50	378.00	No
Buck Creek	R330	418680.05	1540326.65	402.00	-63.50	365.00	4.50	475.00	No
Buck Creek	R334	418202.99	1538918.76	389.00	-116.50	465.50	4.50	517.00	No
Buck Creek	R335	419473.86	1540589.86	409.00	-118.00	505.50	3.50	532.00	No
Buck Creek	R34	419812.15	1560694.68	381.00	75.00	527.00	3.70	318.00	No
Buck Creek	R35	423248.65	1558449.10	380.00	-200.00	306.00	3.00	614.00	No
Buck Creek	R36	424056.14	1557964.15	382.00	28.00	580.00	2.00	372.00	No
Buck Creek	R37	417676.33	1561861.22	380.00	136.50	354.00	4.00	358.00	No
Buck Creek	R38	416515.33	1562528.55	378.00	-110.00	243.50	3.50	574.00	No
Buck Creek	R39	418378.12	1561673.62	382.00	119.00	488.00	1.50	378.00	No
Buck Creek	R40	418252.03	1560270.30	377.00	71.00	263.00	4.00	315.00	No
Buck Creek	R41	419825.97	1563133.68	388.00	144.00	306.00	4.00	378.00	No
Buck Creek	R42	420152.57	1564486.98	425.00	227.00	244.00	7.00	318.00	No
Buck Creek	R43	419591.48	1561991.66	384.00	175.50	198.00	3.00	318.00	No
Buck Creek	R44	421160.60	1563955.36	422.00	186.00	208.50	3.50	338.00	No
Buck Creek	R45	422952.23	1564481.25	435.00	141.00	236.00	4.00	310.00	No
Buck Creek	R47	414076.56	1561803.68	384.00	-108.00	294.00	4.00	623.00	No
Buck Creek	R48	414486.47	1554870.66	412.00	-19.50	492.00	2.00	536.00	No

Project	Drill Hole	Northing	Easting	Surface Elevation (ft)	Springfield Seam Base Elevation (ft.)	Depth to Springfield Seam Base (ft.)	Springfield Seam Thickness (ft.)	Total Drill Hole Depth (ft.)	Quality Data
Buck Creek	R50	417212.06	1556514.82	381.00	-95.00	431.50	3.50	498.00	No
Buck Creek	R51	417384.04	1558154.93	376.00	-20.00	476.00	4.00	402.00	No
Buck Creek	R52	416029.29	1555347.08	383.00	-224.00	396.00	4.00	616.00	No
Buck Creek	R53	414803.42	1556975.43	385.00	-43.00	607.00	3.00	438.00	No
Buck Creek	R58	412932.66	1551006.46	402.00	-62.00	428.00	3.00	468.00	No
Buck Creek	R60	411927.67	1551291.93	400.00	-113.00	464.00	3.00	521.50	No
Buck Creek	R61	423277.20	1544641.21	389.00	-163.00	513.00	4.00	560.00	No
Buck Creek	R66	422389.43	1546726.69	395.00	-137.00	552.00	4.00	537.00	No
Buck Creek	R71	424944.21	1552606.16	390.00	-135.00	532.00	3.00	531.00	No
Buck Creek	R72	424405.62	1548896.65	390.00	-158.00	525.00	3.00	560.00	No
Buck Creek	R73	411311.96	1546242.43	401.00	-205.50	548.00	3.00	615.00	No
Buck Creek	R74	409759.68	1546215.29	415.00	-75.00	606.50	4.50	502.00	No
Buck Creek	R75	407803.71	1546684.96	411.00	-97.00	490.00	3.00	512.00	No
Buck Creek	R76	405725.26	1547251.70	422.00	-63.00	508.00	3.00	494.00	No
Buck Creek	R77	410368.14	1548865.36	401.00	-118.00	485.00	3.00	524.00	No
Buck Creek	R78	409254.01	1549697.45	408.00	-102.00	519.00	4.00	514.00	No
Buck Creek	R79	407378.32	1551317.08	393.00	-258.00	510.00	3.00	659.00	No
Buck Creek	R80	405101.03	1551779.29	422.00	-225.00	651.00	3.00	650.00	No
Buck Creek	R-9	453753.74	1530904.12	415.00	-86.00	647.00	3.00	506.00	No
Buck Creek	R94	407409.84	1558597.54	385.00	-130.00	515.00	4.00	518.50	No
Buck Creek	R97	403813.65	1547859.61	397.00	-86.00	483.00	2.00	525.00	No
Buck Creek	R98	404295.31	1545926.24	405.00	-107.00	512.00	3.00	520.00	No
Buck Creek	R99	404889.43	1543436.38	407.00	-13.00	420.00	4.00	430.00	No
Buck Creek	WKUG-7	398328.03	1516662.02	400.00	-315.25	715.25	4.65	737.65	No
Buck Creek	WKUG-8	445850.13	1509038.53	409.00	-386.74	795.74	4.02	811.50	No
Buck Creek	11150	431473.89	1528136.18	379	-443.00	822.00	4.00	N/A	No
Buck Creek	24920	400664.91	1507240.38	504	-403.00	907.00	4.00	N/A	No
Buck Creek	50538	423626.07	1511765.35	381	-681.00	1062.00	4.00	N/A	No
Buck Creek	50800	417796.81	1496572.97	478	-407.00	885.00	5.00	N/A	No
Buck Creek	50802	422999.76	1500185.66	425	-724.00	1149.00	5.00	N/A	No
Buck Creek	50817	428326.09	1499802.28	475	-454.00	929.00	4.00	N/A	No
Buck Creek	51746	399942.44	1501836.48	402	-426.00	828.00	4.00	N/A	No
Buck Creek	51919	395264.42	1507873.12	399	-375.00	774.00	4.00	N/A	No
Buck Creek	52041	429544.40	1517481.54	387	-851.00	1238.00	4.00	N/A	No
Buck Creek	52065	432755.94	1507492.78	467	-671.00	1138.00	4.00	N/A	No
Buck Creek	52114	396145.96	1496160.86	410	-411.00	821.00	4.00	N/A	No
Buck Creek	52132	439097.51	1521484.07	473	-494.00	967.00	3.00	N/A	No
Buck Creek	52133	440935.28	1522766.16	386	-464.00	850.00	2.00	N/A	No
Buck Creek	52165	442137.73	1527830.58	384	-573.00	957.00	3.00	N/A	No
Buck Creek	52267	418886.36	1522296.09	382	-276.00	658.00	3.00	N/A	No
Buck Creek	52343	416600.69	1524340.73	377	-205.00	582.00	4.00	N/A	No
Buck Creek	64523	425514.71	1521796.99	381	-550.00	931.00	3.00	N/A	No
Buck Creek	66418	421544.59	1527534.50	379	-312.00	691.00	4.00	N/A	No
Buck Creek	72326	405776.25	1525556.96	382	-424.00	806.00	4.00	N/A	No
Buck Creek	93527	394164.43	1501231.27	468	-356.00	824.00	4.00	N/A	No
Buck Creek	107852	441264.41	1525705.39	386	-354.00	740.00	4.00	N/A	No
Buck Creek	107854	439001.59	1524126.39	387	-489.00	876.00	2.00	N/A	No
Buck Creek	107869	439188.30	1515181.67	478	-455.00	933.00	4.00	N/A	No
Buck Creek	2023900	442331.98	1532257.32	373	-330.00	703.00	2.00	N/A	No
Buck Creek	2023903	444635.20	1535514.79	382	-253.00	635.00	3.00	N/A	No
Buck Creek	50932	413766.00	1505476.00	388	-368.00	756.00	4.00	N/A	No

APPENDIX 2 – JORC Table 1 Checklist of Assessment and Reporting Criteria

Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
<i>Sampling techniques</i>	<ul style="list-style-type: none"> > <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> > <i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i> > <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> 	<ul style="list-style-type: none"> > Prior to 1950, Oil and gas drilling was the primary source of seam thickness and elevation data for the Springfield Seam, which is also known as the West Kentucky No. 9 (WKY9) seam; no core samples were retrieved. > In 1950 the Kentucky Geological Survey (KGS) 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. > In 2009 Buck Creek Resources (BCRs) 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. > The last 10 drill holes in this program were air rotary holes and no coal core samples were collected > Roof and floor samples from five of the WKY9 core samples were retained for acid-base analyses.
<i>Drilling techniques</i>	<ul style="list-style-type: none"> > <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> 	<ul style="list-style-type: none"> > One continuous core, DH-11, was taken and 3-inch diameter core samples were produced. > The air rotary spot core drilling consisted of 6.625-inch diameter holes followed by 3-inch conventional core samples of the roof, seam, and floor. > The air rotary drilling consisted of 6.625-inch diameter bore holes.
<i>Drill sample recovery</i>	<ul style="list-style-type: none"> > <i>Method of recording and assessing core and chip sample recoveries and results assessed.</i> > <i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i> > <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> 	<ul style="list-style-type: none"> > 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.
<i>Logging</i>	<ul style="list-style-type: none"> > <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> > <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</i> > <i>The total length and percentage of the relevant intersections logged.</i> 	<ul style="list-style-type: none"> > 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 were geophysically logged using a downhole density and gamma tool. A sonic log was performed on 14 of the BCR's drill holes. > In the case of core drill holes, lithological logs were correlated with the geophysical logs and seam thickness and elevation adjusted where appropriate.

Criteria	JORC Code explanation	Commentary
<i>Sub-sampling techniques and sample preparation</i>	<ul style="list-style-type: none"> > <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i> > <i>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</i> > <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i> > <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i> > <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> > <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i> 	<ul style="list-style-type: none"> > Core was not divided for sampling.
<i>Quality of assay data and laboratory tests</i>	<ul style="list-style-type: none"> > <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i> > <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> > <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> 	<ul style="list-style-type: none"> > Sample analysis was carried out by Standard Laboratories, Inc. and performed to American Society for Testing and Materials (ASTM) standards. > Analyses were performed on an as-received, air dry and washed basis unless otherwise stated. > Geophysical tools are calibrated by the logging company (Cardno GLS) and where possible, validated using a calibration hole.
<i>Verification of sampling and assaying</i>	<ul style="list-style-type: none"> > <i>The verification of significant intersections by either independent or alternative company personnel.</i> > <i>The use of twinned holes.</i> > <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i> > <i>Discuss any adjustment to assay data.</i> 	<ul style="list-style-type: none"> > 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.
<i>Location of data points</i>	<ul style="list-style-type: none"> > <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> > <i>Specification of the grid system used.</i> > <i>Quality and adequacy of topographic control.</i> 	<ul style="list-style-type: none"> > 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 2009 through 2011 drilling program. 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. > Topography is based on the United States Geological Survey's (USGS) topographic 7.5 minute quadrangle maps.

Criteria	JORC Code explanation	Commentary
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> > <i>Data spacing for reporting of Exploration Results.</i> > <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> > <i>Whether sample compositing has been applied.</i> 	<ul style="list-style-type: none"> > Various sources of data were utilized, as such, spacing of the drill holes used to model the WKY9 seam resource varied across the property ranging from 500 feet (152m) in the eastern portion of the property to 10,000 feet (3,048m) in the western portion of the property. > As prescribed by the USGS the following distances between points of observation were used to define the corresponding Resource category arcs: <ul style="list-style-type: none"> o Inferred Resources – greater than 3,960 feet (1,207m) but less than 15,840 feet (4,828m) or 3 miles apart. o Indicated Resources – 3,960 feet (1,207m) apart. o Measured Resources – 1,320 feet (402m) apart. > Correlation of the WKY9 seam is relatively simple due to the thickness and continuity of the seam. > Inferred, Indicated, and Measured resource classifications have been reported which reflects the expansive spacing and extent of the supporting data used for the resource estimate.
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> > <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> > <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> 	<ul style="list-style-type: none"> > 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 (244m), any deviation is expected to be insignificant and immaterial to the geologic characterization of the property. > Horst and graben faults that exist on the property are part of the Rough Creek fault system and have been accurately identified by the KGS. > 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.
<i>Sample security</i>	<ul style="list-style-type: none"> > <i>The measures taken to ensure sample security.</i> 	<ul style="list-style-type: none"> > Sample handling procedures were developed for the project and are understood to have been employed by BCRs during exploration.
<i>Audits or reviews</i>	<ul style="list-style-type: none"> > <i>The results of any audits or reviews of sampling techniques and data.</i> 	<ul style="list-style-type: none"> > 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 a Coal Resource estimate in accordance with the JORC Code 2012 Edition.

Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> > <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> > <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> 	<ul style="list-style-type: none"> > 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 area of interest but concentrated on the coal controlled properties. > All coal is leased from numerous private owners through the payment of an annual minimum royalty and an earned royalty. 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. > There are no known legal or environmental encumbrances that would impede coal property acquisition.
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> > <i>Acknowledgment and appraisal of exploration by other parties.</i> 	<ul style="list-style-type: none"> > The oil and gas exploration was carried out by several drilling entities. The largest collection of drill holes was carried out by the KGS in the 1950's. The latest drilling was conducted by BCRs between 2009 and 2011. > Oil and gas wells were used in the resource study largely for structural control.
<i>Geology</i>	<ul style="list-style-type: none"> > <i>Deposit type, geological setting and style of mineralisation.</i> 	<ul style="list-style-type: none"> > 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 WKY#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. > 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.
<i>Drill hole Information</i>	<ul style="list-style-type: none"> > <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> > <i>easting and northing of the drill hole collar</i> > <i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i> > <i>dip and azimuth of the hole</i> > <i>down hole length and interception depth</i> > <i>hole length.</i> > <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> 	<ul style="list-style-type: none"> > A detailed list of BCRs drill holes used to define the resource can be found in Appendix 1 of this report entitled Drill Hole Details. > For coal quality drill hole locations, see Appendix 1: Drill Hole Details > All drill holes are provided with a Kentucky South NAD 27 easting and northing coordinate. > All drill holes have been vertically drilled on flat topography.

Criteria	JORC Code explanation	Commentary
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> > <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> > <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> > <i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i> 	<ul style="list-style-type: none"> > Coal quality results have been documented in this report. Average values can be found in Table 3: Springfield Seam Coal Quality Specifications > Average coal quality values were generated and summarized in Microsoft® Excel.
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> > <i>These relationships are particularly important in the reporting of Exploration Results.</i> > <i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i> > <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> 	<ul style="list-style-type: none"> > 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.
<i>Diagrams</i>	<ul style="list-style-type: none"> > <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> 	<ul style="list-style-type: none"> > Appropriate geologic and coal quality maps, diagrams and exhibits are included in this report.
<i>Balanced reporting</i>	<ul style="list-style-type: none"> > <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> 	<ul style="list-style-type: none"> > All of the available exploration data from BCRs and the KGS have been included > A select group of oil and gas wells of suitable resolution were also used in modelling the Resource.
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> > <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> 	<ul style="list-style-type: none"> > Informational material available from the KGS was used to assist in the Resource estimate.
<i>Further work</i>	<ul style="list-style-type: none"> > <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> > <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> 	<ul style="list-style-type: none"> > The WKY9 seam extends in all directions beyond the limits defined by the area of interest. Outcrop and potential seam thinning to the east, along with previous mining around the property, are the most obvious limits to potential resource expansion. > Further work is expected to include additional exploration, geotechnical testing, coal quality analyses, and coal property acquisition.

Section 3 Estimation and Reporting of Mineral Resources

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

Criteria	JORC Code explanation	Commentary
<i>Database integrity</i>	<ul style="list-style-type: none"> > <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> > <i>Data validation procedures used.</i> 	<ul style="list-style-type: none"> > All data has been validated prior to being imported into the geological database used to build the geological model. > Seam picks for all core drill holes have been compared to lithological logs, sample intervals, and geophysical logs where available.
<i>Site visits</i>	<ul style="list-style-type: none"> > <i>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</i> > <i>If no site visits have been undertaken indicate why this is the case.</i> 	<ul style="list-style-type: none"> > No site visit has been undertaken by Cardno. > The CP has worked with the exploration geologists and other Hartshome personnel involved in the exploration. > 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. > A site visit was considered to not be required as the data provided was sufficient to develop the geological model and estimate Resources. Furthermore, there is currently no mining of the WKY9 seam or infrastructure on the property.
<i>Geological interpretation</i>	<ul style="list-style-type: none"> > <i>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</i> > <i>Nature of the data used and of any assumptions made.</i> > <i>The effect, if any, of alternative interpretations on Mineral Resource estimation.</i> > <i>The use of geology in guiding and controlling Mineral Resource estimation.</i> > <i>The factors affecting continuity both of grade and geology.</i> 	<ul style="list-style-type: none"> > A total of 163 drill holes have been used to define the WKY9 seam coal deposit and provide the basis for a good understanding of the geology of the project area. > Three mines in the WKY9 seam are actively operating in areas to the north, west and south of the area of interest as shown on the diagram included in this report. > Faulting is present throughout the area, the extent of which is well documented by the KGS. > The geology of the Buck Creek project is sufficiently understood through the exploration data and historical public records for estimation of the Resource.
<i>Dimensions</i>	<ul style="list-style-type: none"> > <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> 	<ul style="list-style-type: none"> > The geological model for the Buck Creek project covers an area in excess of 72,000 acres, 25,000 of which are currently leased. > The overburden thickness varies from less than 400 feet (122m) in the south eastern portion of the property to more than 1,100 feet (335m) in the north western corner.

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<p><i>Estimation and modelling techniques</i></p>	<ul style="list-style-type: none"> > <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> > <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> > <i>The assumptions made regarding recovery of by-products.</i> > <i>Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).</i> > <i>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</i> > <i>Any assumptions behind modelling of selective mining units.</i> > <i>Any assumptions about correlation between variables.</i> > <i>Description of how the geological interpretation was used to control the resource estimates.</i> > <i>Discussion of basis for using or not using grade cutting or capping.</i> > <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> 	<ul style="list-style-type: none"> > Exploration and oil and gas drill hole information was used to develop a geologic model, which was used as the basis of the Resource estimation. > 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. > Seam correlation across the drill holes was completed by a BCRs and Cardno geologists. All correlations were verified by Cardno. > Coal seams from cored drill holes were sampled and sent to laboratory for testing. > Geological data was imported into Surfer 8 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. > Once imported, a model was created for all of the mapped seam and geologic and quality features. > The geological model was verified and reviewed. > Resources were estimated by defining seam thickness at each point of observation and by defining resource confidence arcs around the points of observation. > Points of observation for Measured and Indicated confidence arcs were defined for all drill holes that intersected the seam. > As prescribed by the USGS the following distances between points of observation were used to define the corresponding Resource category arcs: <ul style="list-style-type: none"> ○ Inferred Resources – greater than 3,960 feet (1,207m) but less than 15,840 feet (4,828m) or 3 miles apart. ○ Indicated Resources – 3,960 feet (1,207m) apart. ○ Measured Resources – 1,320 feet (402m) apart. > Resources were then estimated from the geological model using the resource categorization polygons for the WKY9 seam to limit the estimate to within the area defined by each polygon.
<p><i>Moisture</i></p>	<ul style="list-style-type: none"> > <i>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</i> 	<ul style="list-style-type: none"> > Resource tonnage has been estimated and reported on an in-situ air dry basis. > Equilibrium moisture is reported to range between 4.5% and 8.1%. > Based on the Cardno estimate of the equilibrium moisture conditions, Resource tons estimated on a dry basis will be less than Resource tons reported on an in-situ moisture basis. Therefore, reporting Resource tons on an air dried basis is a more conservative approach.

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<i>Cut-off Parameters</i>	<ul style="list-style-type: none"> > <i>The basis of the adopted cut-off grade(s) or quality parameters applied.</i> 	<ul style="list-style-type: none"> > Resource tonnage was estimated within the approximately 25,000 acres of controlled coal. > Resource tons were terminated at a minimum seam thickness of 3.0 feet. > A 200-foot mine exclusion zone was applied to each side and terminus of the identified faults. > No coal quality cut-off parameters were applied.
<i>Mining factors or assumptions</i>	<ul style="list-style-type: none"> > <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> 	<ul style="list-style-type: none"> > No mining factors (i.e. dilution, coal loss, recoverable resources at selective mining block size) have been applied.
<i>Metallurgical factors or assumptions</i>	<ul style="list-style-type: none"> > <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> 	<ul style="list-style-type: none"> > The WKY9 seam is a thermal product therefore no metallurgical assumptions have been applied in estimating the Resource.
<i>Environmental factors or assumptions</i>	<ul style="list-style-type: none"> > <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> 	<ul style="list-style-type: none"> > No environmental assumptions have been built into the geological model or the Resource estimate. > 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.

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<i>Bulk density</i>	<ul style="list-style-type: none"> > <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> > <i>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.</i> > <i>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</i> 	<ul style="list-style-type: none"> > Laboratory derived seam densities measured in pounds per cubic foot were established for each coal sample analysed and used to estimate the Resource tons. > Coal Resources were estimated and reported on an air dry basis. > Resource tons estimated on an air dried basis will be less than Resource tons reported on an in-situ moisture basis. Therefore, reporting Resource tons on an air dried basis is a more conservative approach and suitable for this deposit.
<i>Classification</i>	<ul style="list-style-type: none"> > <i>The basis for the classification of the Mineral Resources into varying confidence categories.</i> > <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> > <i>Whether the result appropriately reflects the Competent</i> > <i>Person's view of the deposit.</i> 	<ul style="list-style-type: none"> > The Resource has been classified based on suitable distances from points of observations prescribed in the USGS Circular 891 and the United States Security and Exchange Commission's Industry Guide 7. > 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.
<i>Audits or reviews</i>	<ul style="list-style-type: none"> > <i>The results of any audits or reviews of Mineral Resource estimates.</i> 	<ul style="list-style-type: none"> > The geological model and Resource estimation have been conducted by Mr. Kirt W. Suehs, Senior Geologist with Cardno. > Cardno constructed the geological model after validation of the raw data and data processed previously by personnel from BCR. > The geological model was reviewed by checking the data in the geologic model against the actual data. > The geological model was verified by a series of cross sections and contour plans. > Mr. Justin Douthat, Director of Engineering Services for Cardno MM&A and Mr. Peter Taylor, Vice President with Cardno MM&A, peer reviewed the resource estimation and found it to be satisfactory with no fatal flaws.

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<p><i>Discussion of relative accuracy/ confidence</i></p>	<ul style="list-style-type: none"> > <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> > <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> > <i>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i> 	<ul style="list-style-type: none"> > The geological model used for the Resource estimation has been constructed by Cardno and all data has been validated. > Resource estimation has been completed using standard coal estimation methods which are deemed appropriate for this deposit. > Resources have been categorized based on valid points of measurements and distances from points of observation as prescribed in the USGS Circular 891 and the United States Security and Exchange Commission's Industry Guide 7. > The categories reflect the underlying confidence in the resources over the Project area.