ASX RELEASE

Jameson RESOURCES LIMITED

2 AUG 2019

Fast Facts **ASX: JAL**

Share Price Range (6mths)	$0.23 - $0.15
Shares on Issue	263,766,890
Market Capitalisation	~$55M

Major Shareholders (as at 1 AUG 2019)

AustralianSuper	14.0%
Perth Investment Corporation Ltd	6.1%
Hillboi Nominees	5.8%

Directors & Management

Art Palm (Chairman & CEO)
Steve van Barneveld (Non-Executive Director)
Joel Nicholls (Non-Executive Director)

Key Projects

Crown Mountain Coking Coal Project
Elk Valley Coal Field, Canada
Dunlevy Coal Project
Peace River Coal Field, Canada

Investment Highlights

- ✓ Positioned in world class metallurgical coalfields
- ✓ Significant development expertise on board with successful track record
- ✓ Modern rail and port facilities
- ✓ Strong financial position

Newsflow / Catalysts

Strategic Partner	Complete
Exploration Program	Complete
Coal quality lab analysis	Complete
Crown Mtn EA Application	In Progress
Crown Mtn Design Engineering	In Progress
Bankable Feasibility Study	In Progress

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Crown Mountain Coal/Coke Testing Program Complete: Hard Coking Coal Confirmed (Updated)

Highlights

- **As previously reported, carbonization testing confirmed Crown Mountain North blend coal to be a benchmark premium hard coking coal ("HCC").**
- **Pilot oven testing has now also determined the Crown Mountain South blend as a hard coking coal resource, confirming previous test results from the PFS (with the smaller sole heated oven).**
- **Coke strength after reaction ("CSR") was analysed at 64, placing the South blend sample in solid HCC territory (see Figure 2 graph below).**
- **JIS Drum Index (DI30/15) 86 and (DI150/15) 69.**
- **ASTM coke stability: 51. ASTM coke hardness: 57.**
- **Micum M40: 70. Irsid I40: 36.**
- **Desirable low wall pressure of 2.8 kPa.**
- **FSI for the feed coal is 5, ash 9.0%, volatile matter 18.4%, 0.63% sulphur, 0.08% phosphorous, RoMax 1.44, with total reactives of 65.9%.**

One objective of the 2018 exploration program was to gather coal samples over a broader area of the resource, and in greater quantity, to allow more extensive testing of coal and coke quality. These test results have confirmed the conclusions of previous studies contained in the 2014 PFS and 2017 PFS Update.

The objectives of the coal quality program of 2018/2019 have been met, and work is now essentially complete (other than a few smaller specialized tests).

The management teams of Jameson, and its strategic partner Bathurst Resources Limited, are very pleased with the testing results and are advancing the project on multiple fronts: the BFS and EA Application continue to progress as Crown Mountain's path towards development gains momentum.

On Behalf of the Board of Directors,

Art Palm
Chief Executive Officer

DISCUSSION:

Testing of the north pit blend of Crown Mountain coal was completed (and announced) in April. The results are overwhelmingly positive and confirm the north pit coal to be a premium hard coking coal.

South pit blend evaluation is now also complete, and confirms previous (PFS, PFS Update) conclusions that this resource is a low volatile hard coking coal: a key ingredient required for blast furnace iron making.

The South blend is comprised of the coal seams encountered from all large diameter core ("LDC") holes drilled in the south resource area during 2018 (see Figure 1). These holes are CM18-16-LDC1, CM18-16-LDC2, CM18-16-LDC3, CM18-18-LDC1, CM18-21-LDC1, CM18-24-LDC1, CM18-25-LDC1, CM18-25-LDC2, and CM18-26-LDC1. The cores from all seams encountered (8 lower, 8 rider, 9, 9 rider, 10 upper, 10 middle, and 10 lower) were combined in weights representing the ratios of each seam to the total south reserve as determined in the 2017 PFS.

Figure 2 displays the superior competitive position the Crown Mountain products will command in the coking coal market.

HCCs are a necessary component of the feed blend and generally receive a higher price than lower CSR coals.

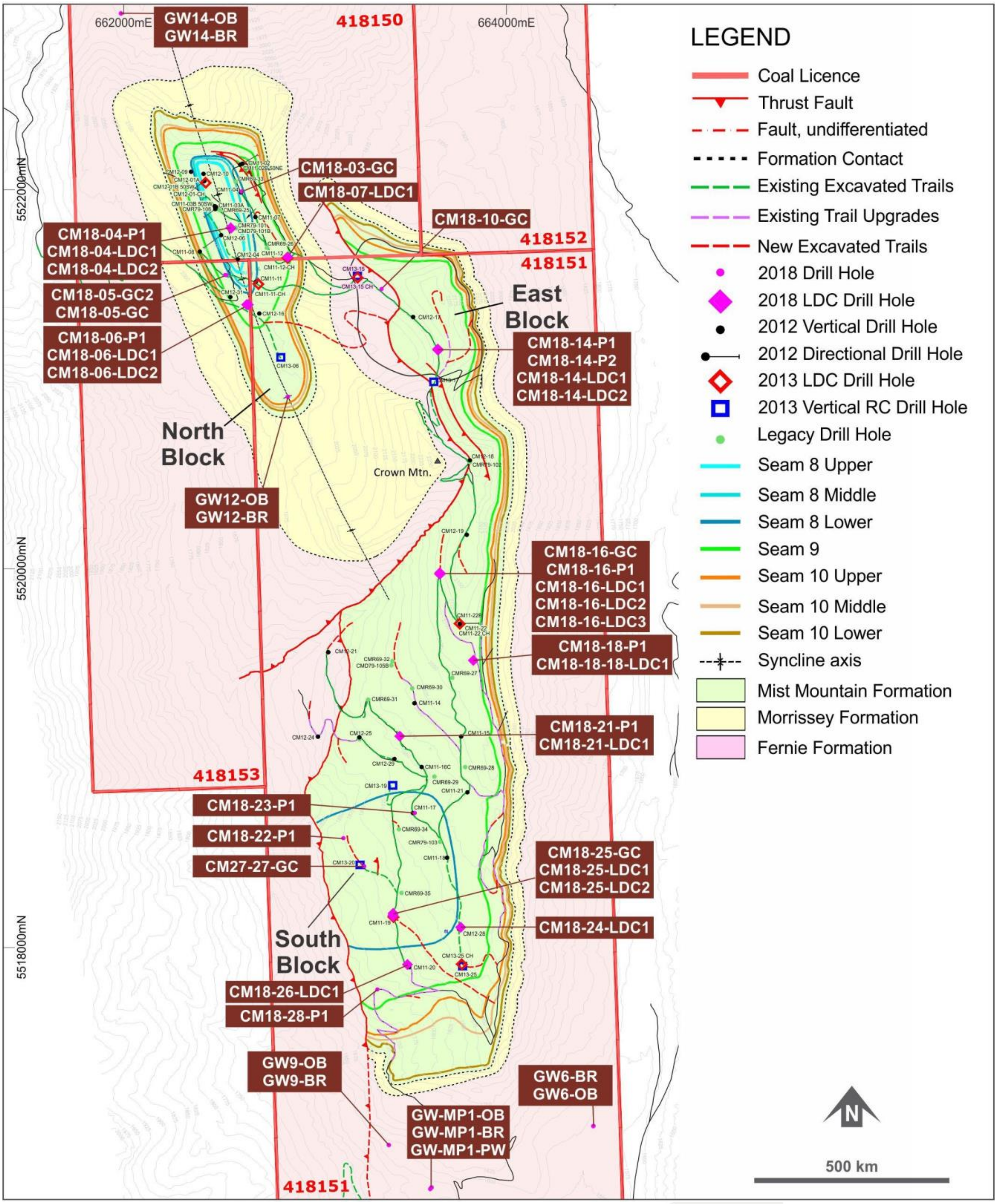
The "Blend Quality Target" shown in Figure 2 depicts the mixture of different coking coals that comprises the optimal feed for a coke oven. Single coking coals are seldom used alone, but blended with other coking coals to obtain the best combination of qualities. The Crown Mountain coal, for example, adds high coke strength (CSR) while other coals may provide different properties.

In converting coal to coke, a key concern with lower volatile coals is the potential for oven wall pressure, as coals causing high wall pressures can cause structural damage to coke ovens. CanMet determined the north pit coal to have very low oven wall pressure of 2.5 kPa (0.36 psi). The south blend has similar beneficial characteristics in carbonisation, with a wall pressure of 2.8 kPa (0.40 psi).

The pages that follow contain the detailed data reporting sheets, for the south blend, provided by the respective laboratories involved in testing the coal and coke. (North blend results were posted to ASX on 23 April 2019 in an announcement titled: *Additional Testing Confirms Crown Mountain as Premium Hard Coking Coal*).

In addition, for the sake of completeness, a listing of every test performed and the international standard applied by the laboratory, is included.

The Bankable Feasibility Study and Application for an Environmental Assessment Certificate are both advancing. The objective of constructing and operating a high-quality and low-cost open pit hard coking coal mine with superior environmental management remains the dedicated focus of the management team.



662000mE
664000mE
418150
418152
418151
418153
418151
5522000mN
5520000mN
5518000mN
GW14-OB
GW14-BR
CM18-03-GC
CM18-07-LDC1
CM18-10-GC
CM18-04-P1
CM18-04-LDC1
CM18-04-LDC2
CM18-05-GC2
CM18-05-GC
CM18-06-P1
CM18-06-LDC1
CM18-06-LDC2
East Block
CM18-14-P1
CM18-14-P2
CM18-14-LDC1
CM18-14-LDC2
North Block
Crown Mtn.
GW12-OB
GW12-BR
CM18-16-GC
CM18-16-P1
CM18-16-LDC1
CM18-16-LDC2
CM18-16-LDC3
CM18-18-P1
CM18-18-18-LDC1
CM18-21-P1
CM18-21-LDC1
CM18-23-P1
CM18-22-P1
CM27-27-GC
CM18-25-GC
CM18-25-LDC1
CM18-25-LDC2
CM18-24-LDC1
South Block
CM18-26-LDC1
CM18-28-P1
GW9-OB
GW9-BR
GW6-BR
GW6-OB
GW-MP1-OB
GW-MP1-BR
GW-MP1-PW
LEGEND
Coal Licence
Thrust Fault
Fault, undifferentiated
Formation Contact
Existing Excavated Trails
Existing Trail Upgrades
New Excavated Trails
2018 Drill Hole
2018 LDC Drill Hole
2012 Vertical Drill Hole
2012 Directional Drill Hole
2013 LDC Drill Hole
2013 Vertical RC Drill Hole
Legacy Drill Hole
Seam 8 Upper
Seam 8 Middle
Seam 8 Lower
Seam 9
Seam 10 Upper
Seam 10 Middle
Seam 10 Lower
Syncline axis
Mist Mountain Formation
Morrissey Formation
Fernie Formation
N
500 km

FIGURE 1

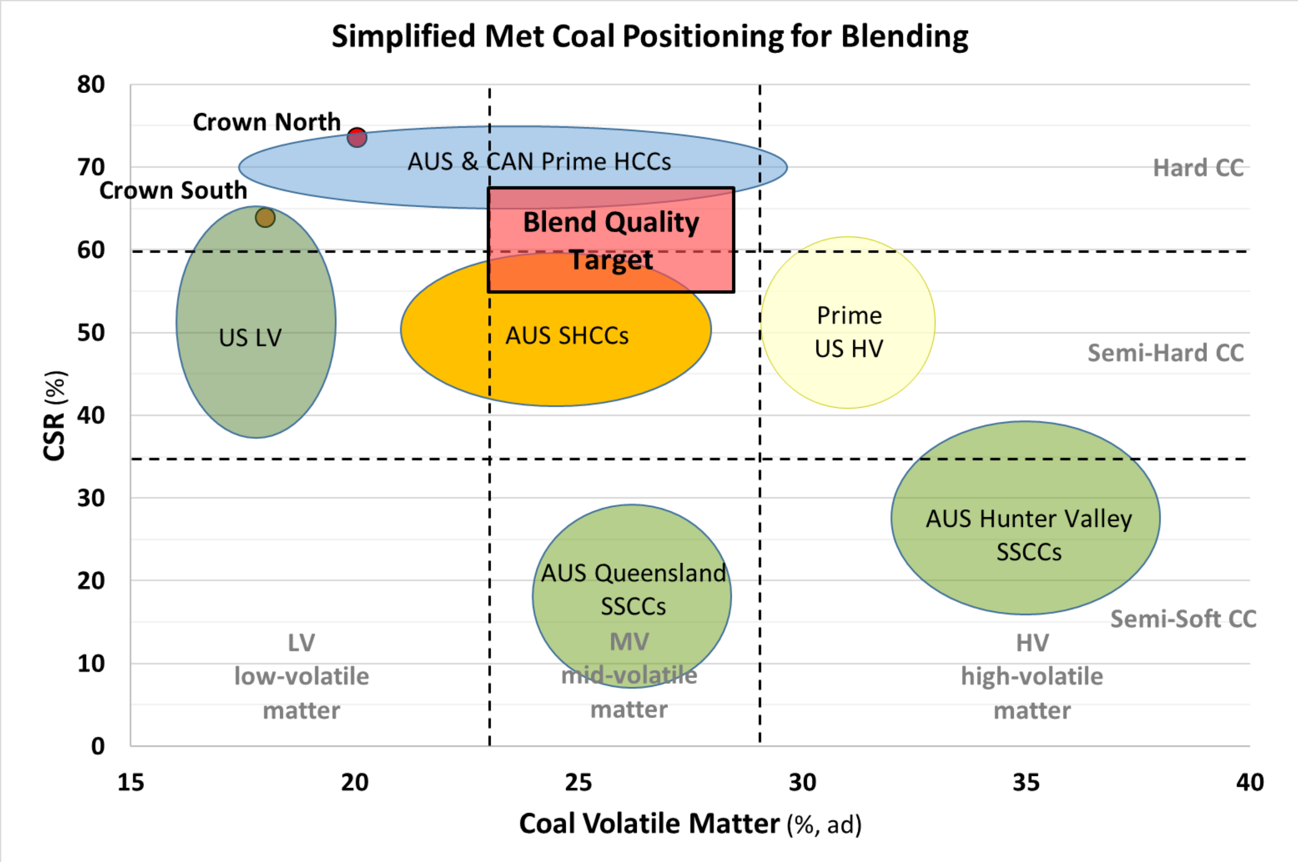


FIGURE 2

Chart prepared by Stantec Consulting Services Inc. using publicly available information and standard industry definitions. Refer https://www.spglobal.com/platts/plattscontent/_assets/_files/en/our-methodology/methodology-specifications/metcoalmethod.pdf (Dated July 2019)

Note: "Prime HCCs" refers to the category representing the best hard coking coal on the market.

Coal Moisture	Moisture	%	1.19
Coal Proximate analysis (db)	Ash	%	8.95
	Volatile Matter	%	18.41
	Fixed Carbon	%	71.45
Coal Ultimate analysis (db)	C	%	82.1
	H	%	4.20
	N	%	1.29
	S	%	0.63
	O (by difference)	%	2.83
Calorific Value	Calorific Value	MJ/KG	32.89
Gieseler Fluidity	Initial softening temperature	°C	
	Max Fluid temperature	°C	473
	Solidification temperature	°C	492
	Melting Range	°C	
	Max Fluidity	ddpm	1.1
Ruhr Dilatation	Softening temperature, T1	°C	430
	Max Contraction temperature, T2	°C	477
	Max Dilatation temperature, T3	°C	
	Contraction	%	21
	Dilatation	%	
	SD 2.5	%	
FSI	FSI		5
Coal Sieve Analysis, cumulati	6.30 mm	%	0.98
	3.35 mm	%	12.22
	1.70 mm	%	28.05
	0.85 mm	%	50.87
	0.50 mm	%	60.80
	passing 3.35 mm	%	87.78
Carbonization Results	Oven Test Number		C-2842
	Test Date		8-Jul-19
	Flue Temp	°C	Programmed from 875C
	Moisture in Charge	%	2.5
	Net dry charge weight	kg	336.2
	ASTM BD	kg/m3	776.9
	Oven dry BD	kg/m3	824.8
	Coking time	h:min	17:49
	Final Center Temp	°C	1079
	Time to 900 °C	h:min	14:23
	Time to 950 °C	h:min	14:49
	Time to 1000 °C	h:min	15:28
	Time to Max Wall Pressure	h:min	02:45
	Max wall pressure	kPa	2.8
	Max gas pressure	kPa	10.6
	Coke Yield	%	78.9
Sieve Analysis of Coke, cumu	100 mm sieve	%	4.0
	75 mm sieve	%	13.6
	50 mm sieve	%	52.7
	37.5 mm sieve	%	74.7
	25.0 mm sieve	%	82.0
	19.0 mm sieve	%	83.0
	12.5 mm sieve	%	83.8
	Passing 12.5 mm sieve	%	16.2
	Mean coke size	mm	51.4
ASTM Coke Tumbler Test	Stability		51.1
	Hardness		56.6
JIS Coke Tumbler Test	50 mm sieve 30 rev		23.4
	25 mm sieve 30 rev		81.8
	15 mm sieve 30 rev		85.9
	50 mm sieve 150 rev		8.6
	25 mm sieve 150 rev		62.6
	15 mm sieve 150 rev		69.0
Micum Coke Tumbler Test	M10		18.2
	M40		70.0
IRSID Coke Tumbler Test	I10		33.6
	I20		65.3
	I40		35.8
Coke Properties	CSR		64.0
	CRI		18.7

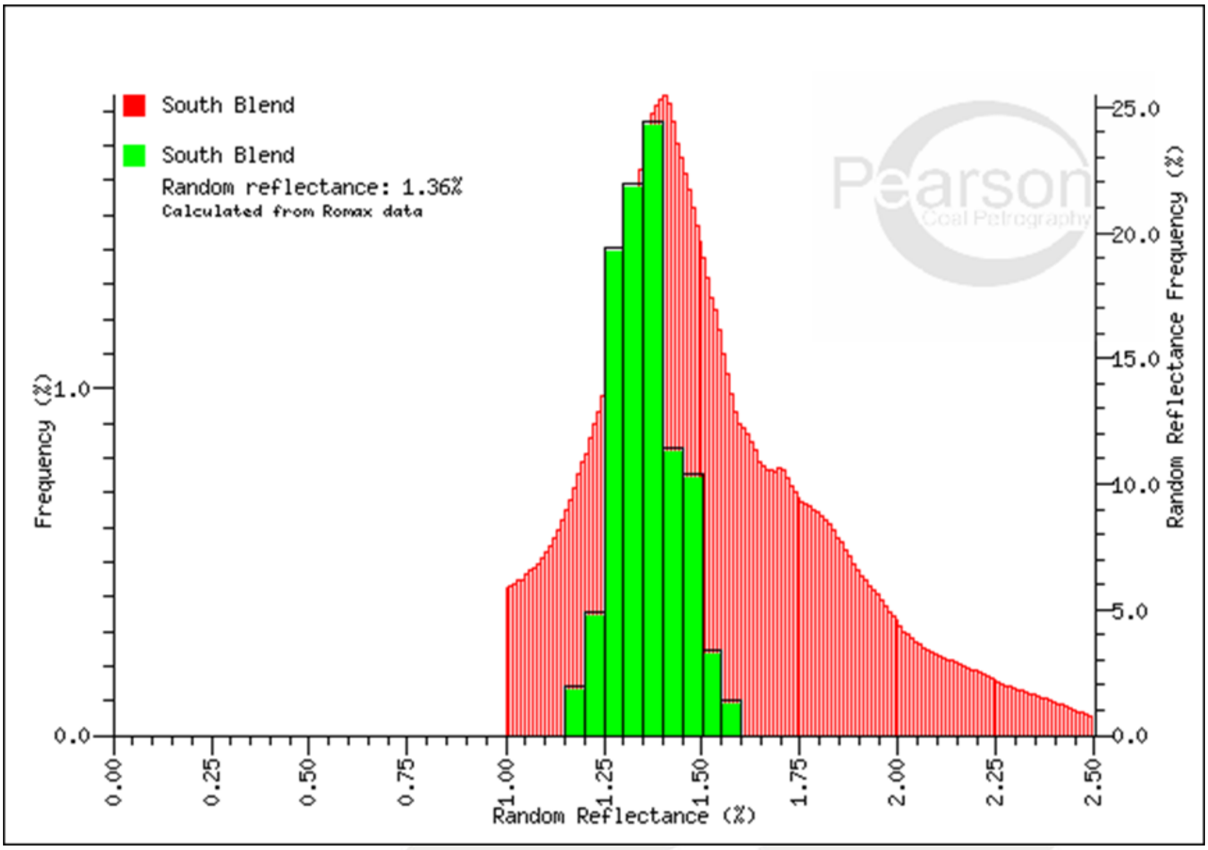
CanMet Results

Petrographic Analysis	
Sample Identification	
Company ID	NWP Coal Canada Limited
Laboratory Number	41705
Sample Identifier	South Blend
Date Analyzed	07/10/19
Ash	9.05
Sulphur	0.64
Petrographic Indices	
Mean Maximum Reflectance (RoMax)	1.44
Random Reflectance (calculated)	1.36
Standard Deviation	0.09
Composition Balance Index	2.56
Calculated Strength Index	6.42
Calculated Stability Index	58.00
Estimated Coke Strength DI 30/15	94.13
Predicted Free Swelling Index	7.00
Distribution of Vitrinite Types	
V-12	2.50
V-13	32.50
V-14	42.50
V-15	18.00
V-16	4.50
Reactive Components	
Vitrinite	47.80
Reactive Semifusinite	18.10
Total Reactives	**65.90**
Inert Components	
Inert Semifusinite	18.20
Fusinite	8.80
Inertodetrinite	1.80
Macrinite	0.10
Mineral Matter	5.20
Total Inerts	**34.10**

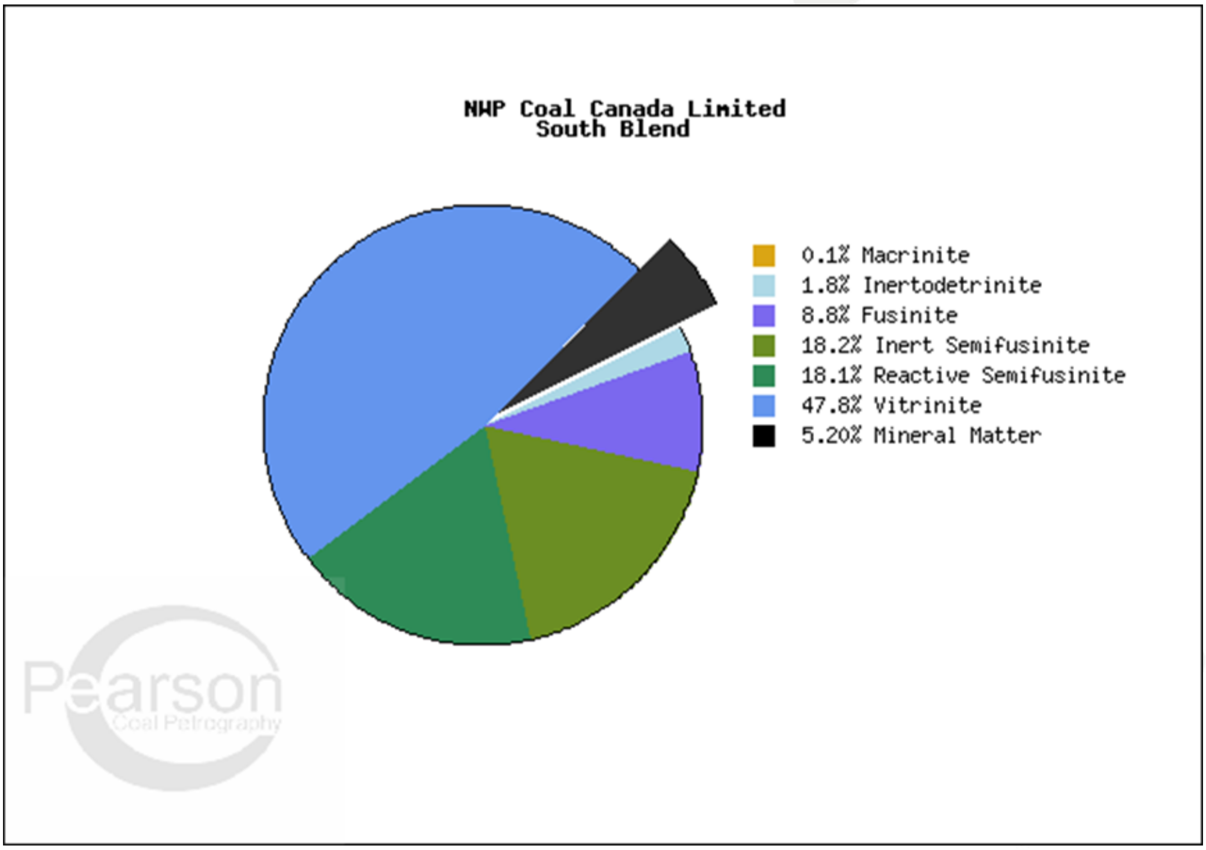
Pearson Petrographic Results

Vitrinite Analysis	
NWP Coal Canada Limited	
Vitrinite reflectance by	ISO 7404/5
	South Blend
Basic Statistics	
Romax	1.44
Standard Error of the mean	0.01
Coefficient of Variation	5.9636
Variance	0.0074
Standard Deviation	0.0858
Skewness	0.2899
Kurtosis	2.6886
Number of Measurements	200
Vitrinite Distribution	
Vitrinite type (V-Type)	Frequency (%)
V-12	2.50
V-13	32.50
V-14	42.50
V-15	18.00
V-16	4.50

Pearson Vitrinite Analysis



Pearson Vitrinite Reflectance Profile



Pearson Maceral Pie Chart

GWIL INDUSTRIES Birtley Coal & Minerals Testing Division

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Calgary, AB
T2C 5K2
Tel: (403) 253-8273
Email: info@birtley.ca
www.birtley.ca

CERTIFICATE OF ANALYSIS

CLIENT: **Crown Mountain**

SAMPLE ID: **SOUTH BLEND -Clean Coal From Hazen**

LAB#: 193779

RECEIVED DATE: May 31, 2019

REPORT DATE: July 5, 2019 updated

CLEAN COAL ANALYSIS, air dried basis

ADM%	MOIST %	ASH %	VM %	FC %	S %	Hg(ppb)	F (ppm)	FSI	Cal/g	% P in coal	SG	HGI	BASIS
5.93	0.63	8.99	18.62	71.76	0.64	44	158	4.0	7808	0.082	1.36	85	adb
	6.52	8.46	17.52	67.50	0.60	41	149		7345				arb
		9.05	18.74	72.21	0.64	44	159		7858				db

ULTIMATE ANALYSIS, air dried basis

MOIST %	% C	% H	% N	% S	ASH %	O b/d	BASIS
0.63	80.49	4.08	1.23	0.64	8.99	3.94	adb
	81.00	4.11	1.24	0.64	9.05	3.96	db

FORMS OF SULFUR, air dried basis

Total S %	Sulfate %	Pyritic S %	Org S %	BASIS
0.64	0.007	0.035	0.598	adb

GIESELER PLASTOMETER

TEMPERATURES °C				
SOFT TEMP °C	MAX FLUIDITY °C	SOLIDIFICATION °C	TEMP RANGE °C	MAX DDPM
464	474	499	35	**1.4**

run date: June 3, 2019

RHUR DILATATION

TEMPERATURES °C							
SOFT TEMP °C	MAX CONT. TEMP °C	MAX DIL. TEMP °C	% CONT. (C)	% SD 2.5	% DIL. (D)	C+D	TOTAL DIL (C+SD2.5)
421	475	-	20	-	-	-	-

MINERAL ANALYSIS OF ASH

SiO_2	Al_2O_3	TiO_2	CaO	BaO	SrO	Fe_2O_3	MgO	Na_2O	K_2O	P_2O_5	SO_3	Undet.
65.18	22.86	2.36	1.50	0.52	0.21	1.93	0.30	0.42	0.55	2.08	0.62	1.47

ASH FUSION TEMPERATURES (°C)

REDUCING				OXIDIZING			
RED_IDT	RED_ST	RED_HT	RED_FT	OX_IDT	OX_ST	OX_HT	OX_FT
+1500	+1500	+1500	+1500	+1500	+1500	+1500	+1500

Base/Acid = 0.05
Tps, °C = 1500
Fouling = 0.93

Birtley Lab Results on Clean Coal
(a split of the larger sample processed by CanMet)

For more detail on coal quality, please refer to the following ASX announcements:

- 23 APR 2019: Additional Testing Confirms Crown Mountain as Premium Hard Coking Coal
- 16 JAN 2019: Initial Coal Quality Testing Results
- 26 APR 2017: Crown Mountain Prefeasibility Study Update
- 11 AUG 2014: PFS Confirms Crown Mountain Will Enjoy Outstanding Economics

APPENDIX: DETAIL ON LABORATORY TESTS PERFORMED AND APPLICABLE STANDARDS

BIRTLEY COAL & MINERAL TESTING LIST OF STANDARDS

LABORATORY ANALYSIS	Procedure
APPARENT RELATIVE DENSITY (+2mm)	AS 1038 part 21.2
ASH	ASTM D3174
ASH FUSION ANALYSIS (Ox. and Red.)	ASTM D1857
ATTRITION TEST (wet or dry)	ACARP C5053
CALORIFIC VALUE	ASTM D5865
CARBON or HYDROGEN or NITROGEN - COAL	ASTM 5373
CHLORINE	ASTM D4208
DILATATION TEST (RUHR-ISO 8264)	ASTM D5515
DROP SHATTER TEST	ASTM D440
FLOAT-SINK ANALYSIS (dependent on size fraction and bulk of sample)	ASTM D4371
FLUORINE	ASTM D3761
FREE SWELLING INDEX	ASTM D720
FROTH FLOTATION (2-Stage Standard Bench Scale Test)	ASTM D5114
GIESELER PLASTOMETER TEST	ASTM D2639
HARDGROVE GRINDABILITY TEST	ASTM D409
LIGHT TRANSMITTANCE FOR OXIDIZED COAL	ASTM D5263
MERCURY	ASTM D6722
MINERAL ANALYSIS OF ASH: ($Si0_2$, Al_20_3, $Ti0_2$, Fe_20_3, Ca0, Ba0, Sr0,	ASTM D3682
MgO, MnO, Na_20, K_20, P_20_5, $S0_3$)	
MINERAL ANALYSIS OF PHOSPHOROUS	ASTM D2795
MOISTURE AIR DRIED - ASTM	ASTM D3302
MOISTURE RESIDUAL - ASTM	ASTM D3173
MOISTURE EQUILIBRIUM (INHERENT)	ASTM D1412
PROXIMATE ANALYSIS (includes Residual Moisture, Ash, Volatile, Fixed Carbon)	ASTM D3172
SCREEN ANALYSIS (dependent on size separation and bulk for sample)	ASTM D4749
SPECIFIC GRAVITY (bottle method)	ISO 1014 (MODIFIED)
SULFUR (Eschka Method)	ASTM D3177
SULFUR (LECO S-632)	ASTM D4239
SULFUR FORMS (includes total, pyritic, sulfate and organic)	ASTM D2492
ULTIMATE ANALYSIS (includes H20, Carbon, Hydrogen, Nitrogen, Sulfur, Ash, Oxygen)	ASTM D5373
VOLATILE MATTER	ASTM D3175

PEARSON COAL PETROGRAPHY LIST OF STANDARDS

LABORATORY ANALYSIS	Procedure
Preparation of Coal Sample for Microscopial Analysis by Reflected Light	ASTM D2797/D2797M
Standard test Method for Microscopial Determination of the Vitrinite Reflectance of Coal	D2798
Standard test Method for Microscopial Determination of the Maceral Composition of Coal	D2799
Standard test Method for Microscopial Determination of the Textural Components of Metallurgical Coke	D5061
Standard Practice for Preparing Coke Samples for Microscopial Analysis by Reflected Light	D3997/D3997M
Methods for the Petrographic Analysis of Coals	ISO7404

CANMET LIST OF STANDARDS

	LABORATORY ANALYSIS	Procedure
Oven Test	Moveable Wall Oven Test	In-House
	Sole-Heated Oven Test	ASTM D2014
	CSR/CRI	ASTM D5341
	Apparent Specific Gravity (ASG)	ISO 1014
Coal/Coke Analysis	True Specific Gravity (TSG)	ISO 1014
	Coke Sieve Analysis	ASTM D293
	Coke Handling/Collection/Preparation	ASTM D346
	ASTM Tumbler Test	ASTM D3402
	JIS Tumbler Test	JIS K2151
	MICUM Tumbler Test	ISO 556
	IRSID Tumbler Test	ISO 556
	Coal Sieve Analysis (as received coal)	ASTM D4749
Chemistry	Ash content (coal, coke)	ASTM D3174
	Moisture Content (coal, coke)	ASTM D3173
	Proximate analysis (coal, coke)	ASTM D3172
	Sulfur analysis (coal, coke)	ASTM D4239
	Sulfur forms (coal)	ASTM D2492
	Cl analysis (coal)	ASTM D4208
	Hg analysis (coal)	ASTM D6414
	C, H, and N analysis (coal, coke)	ASTM D5291
	Ultimate analysis (coal, coke)	ASTM D3176
	Ash analysis (coal, coke)	ASTM D4326
	Calorific value (coal, coke)	ASTM D5865
	Ash fusion	ASTM D1857
Thermal Rheology	Geisler Plasticity	ASTM D2639
	Dilatation analysis	ASTM D5515
	FSI/CSN	ASTM D720
	Caking Index G	ISO 15585

Competent Person Statement

The information pertaining to the ASX Announcement to which this statement is attached that relates to exploration and laboratory testing results is based on, and fairly represents information compiled by Mr. Art Palm P.Eng., who is a Member of a Recognised Overseas Professional Organisation (ROPO) included in a list promulgated by the ASX from time to time, being the Association of Professional Engineers and Geoscientists of British Columbia. Mr. Palm is a full time employee of Jameson Resources Ltd and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr. Palm consents to the inclusion in the ASX Announcement of the matters based on his information in the form and context in which it appears. Mr Palm currently holds 2,234,000 fully paid ordinary shares in Jameson Resources Limited, 3,000,000 performance rights and 4,000,000 options with varying exercise prices and vesting dates.

About Jameson Resources Limited

Jameson Resources Limited (ASX:JAL) is a junior resources company focused on the acquisition, exploration and development of strategic coal projects in western Canada. The Company has a 92% interest in NWP Coal Canada Limited ("NWP") which holds a 90% interest in the Crown Mountain coal project, and a 100% direct interest in the Dunlevy coal project located in British Columbia. Jameson's tenement portfolio in British Columbia is positioned in coalfields responsible for the majority of Canada's metallurgical coal exports and are close to railways connecting to export facilities. To learn more, please contact the Company at +61 8 9200 4473, or visit: **www.jamesonresources.com.au**

About Bathurst Resources Limited

In July 2018, a subsidiary of Bathurst Resources Limited (ASX:BRL) acquired an 8% interest in NWP, with option to increase that interest to 50% subject to certain milestones and additional payments.

In September 2017, Bathurst took control and ownership of three mines from Solid Energy through its 65% joint venture BT Mining. The Bathurst Group of companies now employs almost 600 people in New Zealand.

Bathurst is the largest coal company operating in New Zealand with over 2.4 million tonnes per annum of coal under management. Approximately 75% of coal revenue is generated from the steel making sector, both domestically and for export to Asian coke makers and steel mills. The remainder is sold to domestic users in the agricultural and energy sectors.

The Bathurst operations are long life assets with extension potential for all operations beyond their current mine life. Bathurst is focussed on low cost, sustainable mining with a strong focus on the local communities and environmental management.

Forward Looking Statements

This announcement contains "forward-looking statements". Such forward-looking statements include, without limitation: estimates of future earnings, the sensitivity of earnings to commodity prices and foreign exchange rate movements; estimates of future production and sales; estimates of future cash flows, the sensitivity of cash flows to commodity prices and foreign exchange rate movements; statements regarding future debt repayments; estimates of future capital expenditures; estimates of resources and statements regarding future exploration results; and where the Company expresses or implies an expectation or belief as to future events or results, such expectation or belief is expressed in good faith and believed to have a reasonable basis. However, forward looking statements are subject to risks, uncertainties and other factors, which could cause actual results to differ materially from future results expressed, projected or implied by such forward-looking statements. Such risks include, but are not limited to commodity price volatility, currency fluctuations, increased production costs and variances in resource or reserve rates from those assumed in the company's plans, as well as political and operational risks in the countries and states in which we operate or sell product to, and governmental regulation and judicial outcomes. For a more detailed discussion of such risks and other factors, see the Company's Annual Reports, as well as the Company's other filings. The Company does not undertake any obligation to release publicly any revisions to any "forward looking statement" to reflect events or circumstances after the date of this release, or to reflect the occurrence of unanticipated events, except as may be required under applicable securities laws.

JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (eg 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.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *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 (eg '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 (eg, submarine nodules) may warrant disclosure of detailed information.*	• Reverse circulation ("RC") and large diameter core ("LDC") drilling was used to collect samples. • RC samples were collected on 0.5m intervals as soon as coal zones were reached. Drilling was stopped between each sample for dewatering and to allow accurate interval separation. • Sample bags were assigned hole and individual sample numbers, zip-tied and stored in heavy duty plastic tubs for transportation to laboratory. • For LDC drilling, all coal seams ≥0.5m were sampled. The entire coal zone was sampled and bagged for analysis. The top and bottom 0.2m of rock partings ≥0.5m were sampled and bagged separately for use in out-of-seam dilution evaluation. In addition, coal seams marginally below 0.5m were sampled for separate analysis but are not currently contemplated to be included in a reserve estimate • A suite of geophysical logs, including density, gamma, neutron, temperature and drill hole deviation were run both within drill pipe and in the open hole where ground conditions permitted.
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg 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).*	• In 2012 Jameson Resources Limited ("Jameson") undertook an exploration drilling program which included 40 reverse circulation drill holes for a total of 5,707m. • In 2013 Jameson undertook an exploration drilling program which included a total of 6 RC drill holes for 796m and 7 LDC (150mm) core holes for 853m. • The 2018 Jameson program consisted of 33 drill holes totaling 4,674 meters. Included were 16 LDC holes, 10 RC holes, and 7 SDC (75mm) fully cored geotech holes. • LDC holes were twinned from new or existing pilot holes and were drilled vertical. Coal intervals were cored (in 2013 selected rock intervals were cored for geotech purposes…in 2018 7 geotech holes were completely cored for that purpose). • RC holes were drilled using a conventional face hammer, PDC or tri-cone drill bit.

Criteria	JORC Code explanation	Commentary
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *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.*	• Core recovery from the LDC was excellent - overall greater than 95%. Prognosis depth to coal seams was known from the geophysical log of the RC pilot hole. The driller was advised prior to reaching the top of the seam. Core catcher tools were used through less competent coal zones to ensure maximum recovery. • For the majority of LDC holes all of the coal seam recovered was submitted to a laboratory for coal quality test work. • 2012 RC samples were largely wet and passed over a static 100 mesh screen. 2013 RC samples were passed over a 325 mesh vibrating screen to ensure the vast majority of fine coal was retained and dewatered as much as possible. The 2018 RC holes were largely for pilot purposes to guide LDC drilling and were not all sampled (selected holes were sampled over a 300 mesh vibrating screen). • Limited coal was recovered from the SDC geotech holes: the target for that drilling was rock, and coal recovery was not an objective. • Sample was collected in polywoven cloth and/or high strength polyethylene bags on approximately 0.5 metre intervals.
Logging	• *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.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• All core was photographed immediately following separation of split barrel at the rig and also following mark-up. • Core was geologically and geotechnically logged before shipment to lab. • RC holes were geologically logged. • Holes were geophysically logged. • All geophysical tools were calibrated by the logging Company (Century Wireline) using their internal calibration procedures. • Geophysical logs were analysed extensively and used to confirm and correct geological logs. Validation of geological logs against geophysics were undertaken to ensure accuracy.

Criteria	JORC Code explanation	Commentary
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *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.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• In 2013 all core coal samples were bagged and placed into heavy duty plastic tubs on site before being transported to Birtley Coal & Minerals (“Birtley”) in Calgary for coal quality test work. In 2018 the bagged samples were stored in a refrigerated trailer before and during transport to Birtley. • Roof and floor dilution samples were also collected and sent to the laboratory for test work. • Core samples from the roof and floor along with selected zones of interburden have been retained for metal leaching and acid rock drainage analysis. The British Columbia Ministry of Energy and Mines requires this data as part of the environmental approvals process. • All remaining core sample (non-coal) from 2013 was retained in wooden boxes on pallets at each drill site within project area. Those samples were shipped to a geochemical lab in 2018 for analysis. There are no core samples remaining on site. • The majority of RC sample collected through the coal zones was retained. • Birtley complies with Australian Standards for sample preparation and sub-sampling. • The collection of LDC ensured sufficient bulk sample was retained for all the required coal quality test work.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *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.* • *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	• Birtley adheres to ASTM and ISO preparation and testing specifications and has Quality Control processes in place. • Birtley adopts standard quality control procedures and have participated in the International Canadian Coal Laboratories Round Robin Series (CANSPEX) since its inception. • Select samples from the 2018 program were forwarded to two other labs for a round robin on ash and FSI. • Geophysical tools were calibrated by the logging company Century Wireline using their internal calibration procedures.

Criteria	JORC Code explanation	Commentary
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• Many levels of analysis results verification are included in the ASTM standards relating to coal quality analysis. • All LDC holes are twinned from RC pilot holes drilled in 2012, 2013 and 2018. All LDC holes have geophysical logs. • Sample and coal quality results were verified by Jameson and external consultants before being reported and by external consultants and Norwest (now Stantec, which acquired Norwest) before being used in the resource model. • All analytical data is provided by the coal laboratory and reviewed by external consultants for comments and reporting. No adjustments are made to any coal quality data: they are reported as received from the laboratory. • Coal quality data is stored in electronic format and then transferred to a database retained by independent external consultants.
Location of data points	• *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.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• All Jameson drill hole and trench locations are surveyed by external professional contract surveyors Garrett Winkel Land Surveying Ltd after completion of drilling. • Holes are surveyed in UTM NAD83 CSRS datum with geodetic (sea level) elevation. • LIDAR topographic survey data with a 1m by 1m spacing was used to create gridded topographical surface.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *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.* • *Whether sample compositing has been applied.*	• Drill holes were nominally spaced at 150m in the North Block where geology is classified as Complex and at 250-300m spacings in the South Block where geology is classified as moderate. • A total of 12 trenches were constructed using a backhoe. Coal seams exposed were surveyed and provided additional data points used to confirm the geological model. • The data spacing is considered sufficient to give accurate control to the resource model and give the required confidence to the resource areas. • LDC coal quality samples were individually analysed in 2013 on a per seam basis. In 2018, where multiple LDC holes were drilled on a pad, those samples were composited by seam and then analysed. These seam samples were then composited to form representative blends.

Criteria	JORC Code explanation	Commentary
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *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.*	• The orientation and spacing of the drilling grid are deemed to be suitable to detect geological structures and coal seam continuity within the resource area.
Sample security	• *The measures taken to ensure sample security.*	• Core when removed from the borehole remains in the core splits until identified and photographed. • All coal samples are then bagged and labelled both internally and externally, then placed in heavy duty sealed plastic tubs (2013) or a secure refrigerated trailer (2018). • Samples are transported to laboratory on a regular basis approximately corresponding to the completion of each drill hole. A list of samples is created and a receipt is provided by the local courier. • A chain-of-custody form is shipped with the samples and audited by the laboratory upon unloading. • All of the un-sampled 2013 core was placed in heavy duty sealed wooden boxes and placed on pallets, strapped with metal banding and stored on-site. There was no material amount of unsampled core in 2018.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• Jameson together with independent third party consultants and Birtley Coal & Minerals Laboratory were responsible for implementing and developing the sampling techniques and data capture. • Birtley adheres to ASTM and ISO preparation and testing specifications and has Quality Control processes in place. • All drill hole and analytical data is stored and retained by Jameson and independent third party consultants in a database. Jameson has retained copies of all analytical reports and data in excel format. Birtley also retains all its analytical reports. • In-field sampling techniques have been audited every drilling campaign by the Competent Person or his/her designee, as well as by Jameson, and in 2018, Bathurst Resources Limited.

Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *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.* • *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.*	• Jameson through its Canadian subsidiary NWP Coal Canada Ltd ("NWP Coal") has a 92% interest in the ten granted coal licenses covering the Crown Mountain project. The licenses 418150, 418151, 418152, 418153, 418154, 418966, 419272, 419273, 419274, and 419275 cover a combined area of 5,630 ha. • NWP Coal acquired certain coal license rights from Robert J Morris in 2011. On completion of the transaction, Jameson acquired a 90% interest in the property, the remaining 10% being retained by Mr Robert J Morris as an undivided 10% interest (non-profit sharing) • Jameson holds an option to acquire the remaining 10% interest. The option agreement requires that Jameson pay an annual rental fee of C$100,000. If Jameson elects to exercise the option and acquire the remaining 10% interest in the property it is obliged to pay Mr Robert J Morris a fee of C$2,000,000 which may take the form of a series of staged payments. • In 2018 a subsidiary of Bathurst Resources Limited acquired an 8% interest in NWP with the option to increase that interest to up to 50% provided certain future milestones and payments occur. • The only other payment that the property is subject to is the annual rental fee and statutory production royalties to the BC Provincial government. • The licences are in good standing and Jameson is unaware of any impediments to the security of tenure.

Criteria	JORC Code explanation	Commentary
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• In 1969, Crowsnest Industries Ltd. completed a drilling program of 11 holes for a total of 1,668m. Geophysical logs and survey data of the hole collars are the only records that remain from this drill program. • In 1979, Crowsnest Resources Ltd / Shell Canada completed a drilling program of 7 holes for a total of 901m. Core drilling was attempted in two shallow holes. • In 1980 and 1981, exploration using other methods was completed • Only minimal coal quality data is available from the historical exploration programs. • The drilling by the above entities is included in Table 1 at the end of this document.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The Crown Mountain Coal project lies within the Elk Valley coal field in southeast British Columbia, Canada. • The property is divided into three structural domains with separate geological attributes. The domains are referred to as the North Block, South Block, and Southern Extension. The Crown Mountain thrust fault ("CMF") separates the North Block from the South Block and Southern Extension. • Coal seams are hosted within the Jurassic to Lower Cretaceous Mist Mountain Formation. The coal bearing Mist Mountain Formation is underlain by the Morrissey Formation which includes the regional cliff forming Moose Mountain Member. • Drilling has intersected three principal seams, named 8 Seam, 9 Seam and 10 Seam. The 8 and 10 Seams consist of three major plies. The term major seam has been defined to include all seven seams in order to distinguish them from other coal horizons referred to as rider seams. • The seven major seams have combined average net coal zone thickness of 35.32m in the North Block, 15.04m in the South Block and 14.79m in the Southern Extension as of the 2017 PFS update. 2018 drilling results are still being compiled, and these averages will be revised accordingly.

Criteria	JORC Code explanation	Commentary
Drill hole Information	• *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:* ○ *easting and northing of the drill hole collar* ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* ○ *dip and azimuth of the hole* ○ *down hole length and interception depth* ○ *hole length.* • *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.*	• At Crown Mountain 104 holes have been drilled on site totaling 14,610 meters . Jameson drilled 33 holes in 2018, 13 in 2013, and 40 in 2012. There are 18 holes drilled by others between 1969 and 1979. Some of the holes were drilled as angle holes. • All of the pre-2018 holes excluding CMR79-104 were used in the 2012 resource model. The 2018 holes are being reviewed and will be entered into the geologic model. In addition, 12 trenches, 39 outcrop points with coal description and 203 outcrop points with dip and dip direction data were used in the 2012 resource model. • A full list of the drill holes including easting, northing, elevation, dip and azimuth, downhole depth and coal zone combined thickness and hole length is presented at the end of Table 1.
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* • *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.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• For Crown Mountain a minimum coal thickness of 0.5m and a maximum non-separable parting thickness of 0.5m was used for coal and waste discrimination • The compositing of the Reverse Circulation (RC) samples was done by checking the thicknesses and depths of the recorded sample intervals against the depths on the geophysical logs. The sample intervals were then corrected to the logs, where needed. The composites of the 0.5m samples were assembled based on the sample description and the seam limits of the coal interval from the geophysical logs. • The compositing of the core samples was completed in a similar manner as the RC samples; the first step was to adjust the sample depths to those of the geophysical logs and then prepare the composites based on sample description, seam limits of the coal interval from the geophysical logs, and, additionally, from information on the core photographs. Rock of approximately 20cm thickness was sampled above and below the coal seams to evaluate the potential out-of-seam dilution. Depending on the parting thicknesses they were included or excluded in the composites. Selected rock parting, roof, and floor samples were analyzed separately from the coal.

Criteria	JORC Code explanation	Commentary
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	• All 2013 and 2018 holes were drilled vertical. Drill holes had a natural tendency to deviate from vertical because of the varying dips of strata and also variance in competency between coal seams and harder sandstone partings. • Any bias in apparent thickness was eliminated using geophysical logs. • Differentiation of coal of mineable thickness from separable waste intervals is based on true thickness. Using the down-hole survey for each drill hole, in combination with footwall polylines of each seam, an algorithm was used to convert down-hole lengths into true thickness for each of the intervals in a given coal zone.
Diagrams	• *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.*	• Formal resource and other technical reports containing diagrams drawn to JORC listed requirements were prepared in 2014 by independent consulting firm, Norwest Corporation, and will be updated by an independent consulting firm once the 2018 data has been evaluated. • Diagrams include location maps, drill hole location plans and appropriate sectional views. • Jameson has also prepared diagrams for external reporting according to JORC listed requirements.
Balanced reporting	• *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.*	• Norwest completed a resource estimate for Crown Mountain based on Jameson's 2012 drilling campaign. The resource estimate was released in February 2013 and expressed the opinion that the majority of Crown Mountain coal is expected to be hard coking coal similar to that shipped from neighbouring mines. • Norwest also identified the need to perform additional exploration, including bulk sampling, before definitive clean coal quality (and plant yield) can be determined. Results from the coal quality test work from the 2013 drilling campaign met that need, and were incorporated into the PFS, which will be updated with the results from the 2018 drilling.

Criteria	JORC Code explanation	Commentary
Other substantive exploration data	• *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.*	• Crown Mountain seams appear to have more non-separable partings than nearby mines; plant yield will be below the prevailing yields of 60 to 70 % in the Elk Valley. • Some groundwater has been encountered in drill holes. Multiple ground water monitoring stations (piezometers) have been installed in selected LDC holes or in drilled-for-purpose monitoring wells. • As a requirement of the Environmental Assessment process, significant rock core and cuttings have been collected from the 2013 and 2018 drilling campaigns to assess potential metal leaching and acid rock drainage issues. The consultant (SRK) concluded from the 2013 analyses the Crown Mountain overburden has similar leaching characteristics to the other nearby operating mines in the Elk Valley: lab analysis of the 2018 samples is underway.
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• Jameson completed a pre-feasibility study following revision of the geological model. The PFS was issued in 2014 and updated in 2017. • A bankable feasibility study "BFS" has commenced. • Further drilling will be required to upgrade the resource status in the Southern Extension from Inferred to Indicated or Measured. That area is not included in the PFS or the in-progress BFS.

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	• *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.* • *Data validation procedures used.*	• Data is recorded manually onto log sheets in the field. Information is entered into the coal exploration database. Data correction and validation checks are undertaken both internally and by external consultants before the data is used for modelling purposes. • During modeling, several data-check routines are executed and any exceptions addressed.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• Jameson undertook several site visits during drilling, including being present for the duration of the 2012,2013 and 2018 programs. • Several reviews were conducted of the field procedures and sampling practices, and they were deemed to be of an acceptable industry standard at the time of the visit. • The Vice President of Geology and/or the Project CP of independent consultant Norwest Corporation's (now Stantec Consulting) Calgary office undertook site visits in 2012, 2013, and 2018.
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	• Geological interpretation of stratigraphy and seam continuity is at a stage where confidence is high, with some localized exceptions. • An improved interpretation of the overall strata has been undertaken based on the 3D geological model which was updated with 2013 exploration data and is being updated again with the 2018 data.

Criteria	JORC Code explanation	Commentary
Dimensions	• *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.*	• The Crown Mountain property is divided into two distinct structural domains separated by a northerly trending thrust fault or CMF. There are three prospects within the project area, the "North Block" which is positioned above the CMF and the "South Block" and "Southern Extension" which are both below the CMF. • Strike lengths for each of the three prospects are; North Block – 1.5km, South Block - 4.4km and Southern Extension – 4.1km. • The major seams in the North Block are structurally bound within a south plunging syncline, extending from surface to a maximum depth of 155m. Coal seams in the South Block and Southern Extension extend from surface to a maximum depth of 150m and are structurally bound within a dip slope monoclinal setting.
Estimation and modelling techniques	• *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.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	• The 2013 resource model for the Crown Mountain project was developed using Mintec's geological modelling and mine planning software, Minesight®. This system is widely used throughout the mining industry for digital resource model development. • The selected block size was based on the density of the drill hole dataset as well as the requirements for the mining selectivity of this deposit, in this case being 25m x 25m x 5m. • The Geological Type is classified as "Moderate" in the South Block and Southern Extension and "Complex" in the North Block. • Thickness models were prepared for the seven major seams plus the Rider Seams where appropriate. • The depth limit for the potential surface mineable resource was based on a vertical cut-off ratio limit of approximately 20:1 m^3/tonne, at the discretion of the Qualified Person. • Seam specific coal densities were used for the conversion of in-place volumes to in-place tonnes, with the average being 1.56 g/cc. • The resource areas include a provision at the coal outcrop to allow for oxidation and weathering of the coal near the surface. The oxidation limit ranges from 10 m to 30 m. • Coal thicknesses were determined from drill hole intersections on the property, as well as from geophysical logs. • The 2018 update to the model is currently underway. This section will be revised once that work is complete.

Criteria	JORC Code explanation	Commentary
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• The tonnages are reported on an As Received Basis with natural moisture included. The moisture content is determined from the results of Proximate Analysis laboratory testing.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• The resource estimate was made using a minimum thickness of 0.5 m. The estimate was used to define potential surface mineable coal in the individual seams and the results were planned for use in examining different mining options.
Mining factors or assumptions	• *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.*	• The targeted coal seams at Crown Mountain are suitable for open-cut operations using the truck/shovel mining method. It is expected that the mining conditions at Crown Mountain will be similar to those at the nearby mines which also use the truck/shovel method.
Metallurgical factors or assumptions	• *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.*	• In January 2013 the coal quality aspects of Crown Mountain were reviewed by independent consultants Kobie Koornhof Associates Inc. using public data from historic exploration, regional quality studies and data from the adjacent coal mines. They concluded that in the absence of detailed quality data which would allow a definitive classification of these coals, and based on the information available, the coking coals from Crown Mountain are considered to be similar in quality or very close to, the premium Canadian coking coals. • Norwest Corporation made recommendations in February 2013 to undertake an LDC drilling program to obtain bulk sample for washability test work to determine plant yield as well as develop a definitive understanding of the coking properties of clean coal product. • Results from the LDC test work have been completed by various laboratories (CANMET, Birtley, SGS, CoalTech, and Pearson) and have been incorporated into the PFS. • Kobie Koornhof Associates reviewed and opined on the lab results in 2014 and in 2017. • The procedures identified above are also being followed for the 2018 samples as part of the in-progress BFS.

Criteria	JORC Code explanation	Commentary
Environmental factors or assumptions	• *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.*	• The Preliminary Economic Assessment ("PEA") study showed open-pit mining would commence from the North and advance southwards to the Southern Extension over a 24 year mine life. Waste would be placed as either back-fill as mining is completed or delivered to a waste dump adjacent to the South and North pits. The PFS reduced the mine life to 16 years primarily due to eliminating the "inferred" resource category from consideration, thus removing the southern extension resource area. • The PEA and PFS show the wash plant facility will be located on the west side of the North Pit. It is proposed to deliver plant refuse to the waste dump. No slurry pond is envisioned for the project. • The greatest potential impacts of surface mining are likely to be those that affect surface water. In mines developed some years ago in similar physical locations with such topographical constraints, it was the accepted practice in waste dump areas to construct rock drains in the core of the dump as a means to conveying run-off. This method is no longer acceptable for water management since precipitation and runoff waters interact with mined materials and can thus dissolve substances that occur in those rocks. These affects can cause the surface waters to acquire elevated levels of chemicals beyond those of the original water state. Thus the mine design will require a diversion ditch and leaching mitigation strategy be employed that addresses potential water quality issues and assures compliance with effluent regulations. • Environmental baseline studies are well advanced with the BC MOE required two year monthly water sampling and quality test work achieved in April 2014. In 2016 sampling was reduced from monthly to quarterly. • Hydrological studies including the installation of several down-hole ground water monitoring stations were completed in conjunction with the LDC drilling program in September 2013. Additional ground water monitoring stations were established in 2018. • Rock samples for the purpose of geochemical analysis to evaluate the potential for metal leaching and acid rock drainage have been retained. • The comprehensive approach to environmental controls is being developed in the Application for an Environmental Assessment Certificate, which is currently in progress.

Criteria	JORC Code explanation	Commentary
Bulk density	• *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.* • *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.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• Seam specific coal densities were used for the conversion of in-place volumes to in-place tonnes, with the 2013 average being 1.56 g/cc. A similar process is in progress for the 2018 samples.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *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).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• The Resource Estimate has been prepared in accordance with the requirements of the Canadian National Instrument (NI) 43-101 and the CIM Definition Standards. NI 43-101 is the Canadian equivalent of the JORC Standard. • The mineral resources are classified as to the assurance of their existence into one of three JORC equivalent categories Measured, Indicated and Inferred. The category to which a resource is assigned depends on the level of confidence in the geological information available (CIM Definition Standards –GSC Paper 88-21). • The Competent Person prepared the estimates, which reflect his view of the deposit.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• An internal Company review of the Resource and the associated Technical Reports was undertaken prior to public release of this information.
Discussion of relative accuracy/ confidence	• *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.* • *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.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• The Categories were considered acceptable by the Competent Person during the classification of the resources. • The accuracy of resource estimates is, in part, a function of the quality and quantity of available data and of engineering and geological interpretation and judgment by the Competent Person. • Based on the historical, 2012, and 2013 drill hole data, the resource estimate is considered reasonable. Updating for the 2018 drilling information is underway.

Section 4 Estimation and Reporting of Ore Reserves (To be revised once 2018 results are incorporated into the reserve calculation)

Criteria listed in section 1, and where relevant in sections 2 and 3, also apply to this section.

Criteria	JORC Code explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	• *Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserves.* • *Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.*	• The Coal Resource Estimate was first published by Norwest Corporation on January 21, 2013 and re-estimated on March 11, 2014. • The Coal Reserves are a subset of the previously released Coal Resources.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• Jameson has undertaken several site visits including being present for the duration of the 2012 and 2013 drilling programs. • Several reviews were conducted of the field procedures and sampling practices, and they were deemed to be of an acceptable industry standard at the time of the visit. • The Vice President of Geology and/or the Project CP of independent consultants Norwest (Stantec) Corporation's Calgary office undertook several site visits in 2012, 2013, and 2018.
Study Status	• *The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.* • *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 have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.*	• The Coal Reserves were determined by execution of a Prefeasibility Study.
Cut-off parameters	• *The basis of the cut-off grade or quality parameters applied.*	• As with the resource estimate, the cut-off thickness for determining coal reserves was 0.5 meters.

Criteria	JORC Code explanation	Commentary
Mining factors or assumptions	• *The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (ie: either by application of appropriate factors by optimisation or by preliminary or detailed design.* • *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.* • *The assumptions made regarding geotechnical parameters (ie: pit slopes, stope sizes, etc), grade control and pre-production drilling.* • *The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).* • *The mining dilution factors used.* • *The mining recovery factors used.* • *Any minimum mining widths used.* • *The manner in which Inferred Mineral Resources and utilised in mining studies and the sensitivity of the outcome to their inclusion.* • *The infrastructure requirements of the selected mining methods.*	• The method of mining used in the Prefeasibility study is open cut mining, using a fleet of excavators, loaders, dozers, and trucks consistent with similar operations in the general vicinity of western Canada. • Pit slopes and berm width/spacing were determined after review of available geotechnical information. Additional geotechnical data must be collected to refine this information. • Optimisation was based on a break even stripping ratio analysis using a coal sales price of $155 USD per tonne at a USD:CAD exchange rate of 0.92. • Mining dilution is assumed to be 0.1m of out-of-seam dilution per coal/rock contact with an associated 0.15m pit loss of coal. • Mining recovery is the result of applying the dilution factors above and varies by seam thickness. • The minimum mineable seam thickness is 0.5m. • Inferred Mineral Resources are excluded from consideration. • Infrastructure required includes electrical power, natural gas, roadway, rail loop, and water supply. These items have been included in the capital cost estimate.
Metallurgical factors or assumptions	• *The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.* • *Whether the metallurgical process is well-tested or novel in nature.* • *The nature, amount, and representativeness of metallurgical test work undertaken, the nature of metallurgical domaining applied and the corresponding metallurgical recovery factors applied.* • *Any assumptions or allowances made for deleterious elements.* • *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.* • *For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?*	• Coal processing will be by heavy media washing and froth floatation. • Only well-tested coal washing processes have been incorporated into the plan. • A significant amount of coal washability testing was performed in 2013/2014 on bulk samples collected in Q3 2013 via large diameter coring. It is believed this work is representative of the project area. Recovery (plant yield) varies from area to area across the project, but averages 53 percent. • Deleterious material (out of seam reject) was assumed to comprise 0.10 meters per coal/rock contact. In addition, 0.15 meters of coal is assumed lost per contact. This is a normal occurrence during the mining process. • A rotary breaker is assumed to remove approximately 8 percent of the rock in the ROM material. • The 2013 bulk samples are considered to be representative of the coal deposits in the North and South Blocks, which form the study area for the PFS. • The coal reserve estimation has been based on producing a product that

		meets specifications for a high quality hard coking coal shipped from western Canada.
Environmental	• *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.*	• Significant work on environmental issues has been performed and/or remains in progress. The Company submitted an EA (Environmental Assessment) Project Description in Q4 2014 and is currently (Q2 2017) awaiting EAO approval of the Application Information Requirements portion of the pre-application phase of the EA process. • Waste rock characterisation was completed by SRK laboratories on selected rock core collected during the 2013 drilling campaign. That study concluded the waste at Crown Mountain is similar to waste rock found at other local mines. Additional evaluation work is required in this area. • No approvals have been sought for waste disposal methods to-date: this will be part of the EA and Mine Permit application processes.

Criteria	JORC Code explanation	Commentary
Infrastructure	• *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.*	• Power and natural gas infrastructure is located within 14 km from the project area and will be extended to site. • Rail is within 11 km of the site: the PFS provides for construction of a rail loop alongside of the existing mainline rail. • Water supply is approximately 3 km from site. A storage pond will be constructed and water will be pumped along an overland conveyor route to the plant and mine site. • Land is available within the tenured area to construct a wash plant and associated facilities. The loadout system is proposed to be constructed on land controlled by others: Jameson has meet with that party and discussions are active, however a siting agreement must still be negotiated and executed.
Costs	• *The derivation or, or assumptions made, regarding projected capital costs in the study.* • *The methodology used to estimate operating costs.* • *Allowances made for the content of deleterious elements.* • *The source of exchange rates used in the study.* • *Derivation of transportation charges.* • *The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specifications, etc.* • *The allowances made for royalties payable, both Government and private.*	• Capital costs for the project were based on actual quotations from vendors and existing comparable data maintained and updated by Norwest Corporation in Q2 2017 with input from Sedgman and Kiewit. • Unit operating costs for major equipment were estimated by Kiewit and Norwest by applying updated comparable unit costs from other operations to calculated equipment hours for the project. Sedgman provided processing cost estimates from their extensive database, which was then reviewed by Norwest and incorporated into the Update. • Deleterious elements removed in mining are costed the same as ROM material. Some of that material is rejected at the de-rocking station, while the remaining material is processed through the plant: in either case, the appropriate costs are applied. • An exchange rate of 0.75 USD per CAD has been used. This rate was obtained from a variety of published, publicly available sources. • Transportation charges were estimated through contact with the applicable rail and port facilities, as well as comparing to publicly available information from competing mines in the same area. • No allowance has been made for penalties associated with failure to meet product specifications. • All applicable Canadian taxes and royalties have been accounted for. There are no private royalties payable.

Revenue Factors	• *The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity prices, exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.* • *The derivation of assumptions made of metal or commodity prices, for the principal metals, minerals, and co-products.*	• Coal revenue estimates are based on sales prices provided by Kobie Koornhof Associates, a recognized expert in price forecasting for coal.
Market assessment	• *The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.* • *A customer and competitor analysis along with the identification of likely market windows for the product.* • *Price and volume forecasts and the basis for these forecasts.* • *For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.*	• The market assessment was performed by Norwest Corporation with input from Kobie Koornhof Associates and publicly available data from numerous sources. • The likely market for project output is the worldwide export market for two products: hard coking coal, and PCI coal. • The price and volume forecasts were prepared by Norwest Corporation from internal and external sources and updated by Kobie Koornhof Associates in Q1 2017. • Testing and acceptance criteria vary by customer. As the project is located in an area that has historically produced high quality hard coking coal for the export market, there is an established knowledge base for the predicted product. However, additional testing will be required as customer agreements are being negotiated. This would not occur until during or after a Feasibility-level study.
Economic	• *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.* • *NPV ranges and sensitivity to variations in the significant assumptions and inputs.*	• The inputs to the economic analysis are the operating costs, capital cost estimates, transportation costs, tax and royalty rates, and sales revenue. These inputs are sourced from the PFS. • There is no provision in the PFS for inflation or escalation: all economic data was prepared in 2014 dollars and Updated in Q2 2017 to 2017 dollars. • A discount rate of 10 percent was used for the NPV evaluation. Sensitivities were evaluated to sales price, operating cost, capital, and various project financing methods (ie: leasing versus purchase).
Social	• *The status of agreements with key stakeholders and matters leading to social licence to operate.*	• Jameson has developed a relationship with affected First Nations. No agreements currently exist. • Other key stakeholders include local communities, recreation groups, and special-interest organizations. Several discussions, both formal and informal, have occurred.
Other	• *To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore*	• Naturally occurring risks include environmental factors such as potential metal leaching issues, ground water, and wildlife concerns. These issues

	Reserves: • *Any identified material naturally occurring risks.* • *The status of material legal agreements and marketing arrangements.* • *The status of governmental 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 party on which extraction of the reserve is contingent.*	will be addressed during execution of the EA process. • There are no material legal or marketing agreements. • It is anticipated all required approvals can be obtained to construct and operate a mine within the timeframe specified in the PFS. There are five other operating coal mines in the area, and Crown Mountain does not possess any unique challenges to the area. • Several governmental permits are required before mine construction can begin. These have not yet been applied for; however, the Company has entered the pre-application phase of the EA process, having submitted the valued Components Document ("VCD") and an advanced draft of the Application Information Requirements ("AIR"). The next significant permitting activity is the formal Environmental Assessment process, which is estimated to take approximately two years to successfully complete. During that timeframe several other specialized permitting activities will occur. While the Company does not foresee material issues that would preclude the required permits from being issued, there is no guarantee the government will issue the permits. • Extraction of the reserve is contingent on governmental approvals. It is also contingent on successfully constructing a rail loadout facility on privately owned land (Teck) or an alternate location. Discussions are underway with multiple parties.
Classification	• *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 the Measured Mineral Resources (if any).*	• The basis for reserve classification is the NI43-101 and JORC 2012 reporting requirements. • The Competent Person is in full agreement with the results and has so indicated by written consent.
Audits or reviews	• *The results of any audits or reviews of Ore Reserve estimates.*	• The coal reserve estimates prepared by Norwest Corporation were subjected to internal peer review. Norwest is a non-related third party, and the Company has not undertaken any formal audit of the Norwest work.
Discussion of relative accuracy/ confidence	• *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 resource within stated confidence limits, or, if such an*	• The Categories were considered acceptable by the Qualified Person during the classification of the resources. • The accuracy of resource estimates is, in part, a function of the quality and quantity of available data and of engineering and geological interpretation and judgment by the Qualified Person. • Based on the historical, 2012 and 2013 drill hole data, the resource

	approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate. • *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.* • *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.* • *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.*	estimate is considered reasonable. • Additional data and analysis available subsequent to the 2013 Resource Estimate estimates has necessitated revisions. These revisions are included in the Technical Report. • There is no guarantee that all or any part of the estimated resources will be recoverable

Hole Name	Dip	Azm	Lease	Prospect	Hole Type	Coal Zone Combined Net Thickness (m)	Geological Model	Core Diameter	Geophysical Tools Run	Total Depth (m)	Year Drilled
CM18-03-GC	Vertical	-	418150	North	SDC	geotech hole	NO	75mm	CDRGNV	191	2018
CM18-04-LDC1	Vertical	-	418150	North	LDC	33.13	YES	150mm	CDRGNV	189	2018
CM18-04-LDC2	Vertical	-	418150	North	LDC	34.01	YES	150mm	CDRGNV	188	2018
CM18-04-P1	Vertical	-	418150	North	RC	pilot hole	NO	n/a	CDRGNV	189	2018
CM18-05-GC	Vertical	-	418153	North	SDC	geotech hole	NO	75mm	DGN	138	2018
CM18-05-GC2	Vertical	-	418153	North	SDC	geotech hole	NO	75mm	CDRGNV	150	2018
CM18-06-LDC1	Vertical	-	418153	North	LDC	14.57	YES	150mm	CDRGNV	102	2018
CM18-06-LDC2	Vertical	-	418153	North	LDC	14.67	YES	150mm	CDRGNV	100	2018
CM18-06-P1	Vertical	-	418153	North	RC	pilot hole	NO	n/a	CDRGNV	111	2018
CM18-07-LDC1	Vertical	-	418150	North	LDC	10.35	YES	150mm	CDRGNV	77	2018
CM18-10-GC	Vertical	-	418151	North	SDC	geotech hole	NO	75mm	CDRGNVM	126	2018
CM18-14-LDC1	Vertical	-	418151	East	LDC	9.34	YES	150mm	CDRGNV	143	2018
CM18-14-LDC2	Vertical	-	418151	East	LDC	9.83	YES	150mm	CDRGNV	143	2018
CM18-14-P1	Vertical	-	418151	East	RC	pilot hole	NO	n/a	CDRGNVM	153	2018
CM18-14-P2	Vertical	-	418151	East	RC	pilot hole	NO	n/a	CDRGNV	153	2018
CM-18-16-GC	Vertical	-	418151	South	SDC	geotech hole	NO	75mm	CDRGV	167	2018
CM-18-16-LDC1	Vertical	-	418151	South	LDC	13.83	YES	150mm	CDRGNVM	173	2018
CM-18-16-LDC2	Vertical	-	418151	South	LDC	14.72	YES	150mm	CDRGNV	173	2018
CM-18-16-LDC3	Vertical	-	418151	South	LDC	17.37	YES	150mm	CDRGNV	190	2018
CM-18-16-P1	Vertical	-	418151	South	RC	pilot hole	NO	n/a	CDRGNV	191	2018
CM-18-18-LDC1	Vertical	-	418151	South	LDC	10.02	YES	150mm	CDRGV	103	2018
CM-18-18-P1	Vertical	-	418151	South	RC	pilot hole	NO	n/a	DGNV	122	2018
CM18-21-LDC1	Vertical	-	418151	South	LDC	15.6	YES	150mm	CDRGVM	87	2018
CM18-21-P1	Vertical	-	418151	South	RC	pilot hole	NO	n/a	DGN	151	2018
CM-18-22-P1	Vertical	-	418151	South	RC	pilot hole	NO	n/a	n/a	74	2018
CM-18-23-P1	Vertical	-	418151	South	RC	pilot hole	NO	n/a	CDRGNV	127	2018
CM-18-24-LDC1	Vertical	-	418151	South	LDC	18.1	YES	150mm	CDRGNV	117	2018
CM18-25-GC	Vertical	-	418151	South	SDC	geotech hole	NO	75mm	CDRGV	135	2018
CM18-25-LDC1	Vertical	-	418151	South	LDC	17.75	YES	150mm	CDRGNV	155	2018
CM18-25-LDC2	Vertical	-	418151	South	LDC	16.86	YES	150mm	CDRGV	152	2018
CM18-26-LDC1	Vertical	-	418151	South	LDC	13.51	YES	150mm	CDRGNV	107	2018
CM18-27-GC2	Vertical	-	418151	South	SDC	geotech hole	NO	75mm	CDRGNV	189	2018
CM18-28-P1	Vertical	-	418151	South	RC	pilot hole	NO	n/a	DGN	109	2018
CM12-01-CH	Vertical	-	418150	North	LDC	32.89	YES	150mm	CDRGNVT	152	2013
CM11-12-CH	Vertical	-	418150	North	LDC	15.42	YES	150mm	CDRGNVT	73	2013
CM13-15	Vertical	-	418151	East	RC	8.8	YES	n/a	CDRGNVT	139	2013
CM13-15-CH	Vertical	-	418151	East	LDC	10.22	YES	150mm	CDRGNVT	124	2013
CM11-11-CH	Vertical	-	418151	North	LDC	13.67	YES	150mm	CDRGNVT	126	2013
CM13-06	Vertical	-	418151	North	RC	4.95	YES	n/a	CDRGNVT	54	2013
CM13-17	Vertical	-	418151	South	RC	8.35	YES	n/a	CDRGNVT	194	2013
CM11-22-CH	Vertical	-	418151	South	LDC	15.74	YES	150 mm	CDRGNVT	126	2013
CM13-25	Vertical	-	418151	South	RC	12	YES	n/a	CDRGNVT	115	2013
CM13-25-CH	Vertical	-	418151	South	LDC	10.89	YES	150mm	CDRGNVT	102	2013
CM11-19-CH	Vertical	-	418151	South	LDC	18.55	YES	150 mm	CDRGNVT	150	2013
CM13-20	Vertical	-	418151	South	RC	11.85	YES	n/a	CDRGNVT	158	2013
CM13-19	Vertical	-	418151	South	RC	4.5	YES	n/a	CDRGNVT	136	2013
CM11-02	50	60	418150	North	RC	27.1	YES	n/a	CDRGNV	174	2012
CM11-04	Vertical	-	418150	North	RC	19.45	YES	n/a	CDRGNV	184	2012
CM11-12	Vertical	-	418150	North	RC	14.8	YES	n/a	CDRGNV	116	2012
CM11-03B	50	265	418150	North	RC	23.6	YES	n/a	DGN	125	2012
CM11-03A	Vertical	-	418150	North	RC	31.9	YES	n/a	CDRGNV	186	2012
CM11-07	Vertical	-	418150	North	RC	18.8	YES	n/a	CDRGNV	163	2012
CM11-02B	Vertical	-	418150	North	RC	22.8	YES	n/a	CDRGNV	144	2012
CM11-11	Vertical	-	418151	North	RC	14.25	YES	n/a	CDRGNV	142	2012
CM11-08	Vertical	-	418150	North	RC	2.85	YES	n/a	CDRGNV	82	2012
CM11-22	Vertical	-	418151	South	RC	14.8	YES	n/a	CDRGV	166	2012
CM11-14	Vertical	-	418151	South	RC	17.1	YES	n/a	DGN	136	2012
CM11-18	Vertical	-	418151	South	RC	13.25	YES	n/a	DGNV	109	2012
CM11-16C	Vertical	-	418151	South	RC	13.8	YES	n/a	DGN	111	2012
CM11-20	Vertical	-	418151	South	RC	12.1	YES	n/a	CDRGNV	131	2012
CM11-19	Vertical	-	418151	South	RC	14.5	YES	n/a	CDRGNV	172	2012
CM11-17	Vertical	-	418151	South	RC	19.35	YES	n/a	DGN	169	2012
CM12-21	Vertical	-	418151	South	RC	0	YES	n/a	DGN	160	2012
CM11-21	Vertical	-	418151	South	RC	6.65	YES	n/a	DGN	62	2012

CM11-15	Vertical	-	418151	South	RC	11.8	YES	n/a	CDRGNV	141	2012
CM11-22B	50	75	418151	South	RC	13.35	YES	n/a	CDRGNV	160	2012
CM12-18	Vertical	-	418151	South	RC	9.7	YES	n/a	CDRGNV	231	2012
CM12-01A	Vertical	-	418150	North	RC	30.9	YES	n/a	CDRGNV	178	2012
CM12-01B	50	265	418150	North	RC	29.2	YES	n/a	CDRGNV	148	2012
CM12-09	Vertical	-	418150	North	RC	13.05	YES	n/a	CDRGNV	163	2012
CM12-10	Vertical	-	418150	North	RC	29.25	YES	n/a	CDRGNV	172	2012
CM12-17	Vertical	-	418151	South	RC	10.45	YES	n/a	CDRGNV	148	2012
CM12-19	Vertical	-	418151	South	RC	9.85	YES	n/a	CDRGNV	182.5	2012
CM12-28	Vertical	-	418151	South	RC	12.45	YES	n/a	CDRGNV	142	2012
CM12-29	Vertical	-	418151	South	RC	3	YES	n/a	n/a	64	2012
CM12-25	Vertical	-	418151	South	RC	2.8	YES	n/a	CDGN	133	2012
CM12-24	Vertical	-	418151	South	RC	0	YES	n/a	CDRGNV	157	2012
CM12-31	Vertical	-	418153	North	RC	16.95	YES	n/a	DGN	100	2012
CM12-16	Vertical	-	418151	North	RC	14.1	YES	n/a	DGN	82	2012
CM12-06	50	256	418150	North	RC	22.15	YES	n/a	CDRGNV	175.5	2012
CM12-04	Vertical	-	418150	North	RC	24.25	YES	n/a	DGN	181	2012
CM12-34A	Vertical	-	418154	Southern Exte	RC	17.5	YES	n/a	CDRGV	118	2012
CM12-34B	60	60	418154	Southern Exte	RC	17	YES	n/a	DGN	109	2012
CM12-33B	65	60	418151	Southern Exte	RC	4.6	YES	n/a	CDRGNV	123	2012
CM12-36B	70	60	418154	Southern Exte	RC	0	YES	n/a	CDRGV	75	2012
CM12-38B	50	60	418151	Southern Exte	RC	4.55	YES	n/a	DGNV	192	2012
CMD79-101B	Vertical	-	418150	North	Core	14.62	YES	Hole dia. 4 3/4"	DGN	45.2	1979
CMD79-105B	Vertical	-	418151	South	Core	4.5	YES	Hole dia. 5 1/2"	DGN	66.3	1979
CMR69-25	Vertical	-	418150	North	Rotary	25.9	YES	n/a	n/a	152.7	1969
CMR69-26	Vertical	-	418150	North	Rotary	22.12	YES	n/a	GN	147.2	1969
CMR69-27	Vertical	-	418151	South	Rotary	9.9	YES	n/a	GN	141.4	1969
CMR69-28	Vertical	-	418151	South	Rotary	13.71	YES	n/a	GN	126.8	1969
CMR69-29	Vertical	-	418151	South	Rotary	18.32	YES	n/a	GN	121.6	1969
CMR69-30	Vertical	-	418151	South	Rotary	8.3	YES	n/a	n/a	134.1	1969
CMR69-31	Vertical	-	418151	South	Rotary	11.75	YES	n/a	GN	189.6	1969
CMR69-32	Vertical	-	418151	South	Rotary	13.48	YES	n/a	GN	140.2	1969
CMR69-33	Vertical	-	418150	North	Rotary	20.34	YES	n/a	GN	189.6	1969
CMR69-34	Vertical	-	418151	South	Rotary	11.2	YES	n/a	GN	164	1969
CMR69-35	Vertical	-	418151	South	Rotary	12.19	YES	n/a	GN	161.2	1969
CMR79-101	Vertical	-	418150	North	Rotary	23.22	YES	n/a	CDRG	201.2	1979
CMR79-102	Vertical	-	418151	South	Rotary	6.2	YES	n/a	CDRGN	265	1979
CMR79-103	Vertical	-	418151	South	Rotary	9.62	YES	n/a	DGN	138.8	1979
CMR79-104	Vertical	-	418151	South	Rotary	4.8	NO	n/a	DG	140.5	1979
CMR79-106	60	250	418150	North	Rotary	15.8	YES	n/a	DGN	54	1979

Note - Geophysical Tools

- **C** Caliper
- **D** Density
- **R** Resistivity
- **G** Gamma
- **N** Neutron (through pipe)
- **V** Deviation
- **T** Temperature
- **M** Dip Meter