



Occurrence Details

Occurrence Number: 115H 013

Occurrence Name: Division

Occurrence Type: Hard-rock

Status: Deposit

Date printed: 6/14/2025 4:54:32 PM

General Information

Primary Commodities: coal

Deposit Type(s): Coal

Location(s): 61°20'45" N - -136°5'27" W

NTS Mapsheet(s): 115H08

Location Comments: .5 Kilometres

Hand Samples Available: No

Last Reviewed:

Capsule

Work History

Staked as coal leases 8176 and 8177 in Jul/03 by John Quinn and H.E. Porter and examined by the Geological Survey of Canada in 1907. Acquired in Apr/70 as part of Coal Exploration Licence No. 10 by Arjay Kirker Resources Ltd for Teslin Exploration Ltd, which conducted limited bulldozer trenching, road construction, sampling and a test IP survey in 1970 and 1971, drilled 6 holes (1 047.0 m) and conducted further limited trenching in 1972. The property was staked as two coal leases (2960 and 2962) in Dec/73 and these were transferred to Braeburn Coal Ltd in May/76. Reacquired as coal exploration licences Y416 and Y417 in Apr/89 by All-North Resources Ltd and by the W4 Joint Venture (Y434 and Y435) in Apr/90. W4 Joint Venture performed trenching and mapping in 1990 and 1991 and a 1972 trench exposure was sampled in detail and analyzed by the Geological Survey of Canada. A 1991 excavator trench testing for a strike extension of the Cairnes seam failed to reach bedrock. In Dec/92, the coal licences were transferred to Cash Resources Ltd, which explored with 16 diamond drill holes totaling 1 826 m in 1993. The drill core was tested for coal bed methane potential by the Geological Survey of Canada in Aug/93. In 1994 Cash Resources completed extensive trenching and drilled 23 diamond drill holes totaling 4 054 m. In Mar/95 the company was granted a 100% interest in an additional 18 Coal Exploration Licenses following which the company announced a \$ 3.5 million diamond drill and excavator trenching exploration program. The company also initiated environmental, archeological and sociological studies in preparation for permitting. In the spring of 1995 Cash Resources approached the Yukon Territorial Government with a plan to build a mine mouth coal fired electrical generation plant on the property. During the 1995 field season Cash Resources drilled 9 diamond drill holes (1 980 m) and carried out extensive excavator trenching and environmental surveys on the property. In 1997 the company drilled 10 diamond drill holes (1 667 m) and dug 21 excavator trenches (2 695m). In 1998 the company continued excavator trenching, and in Nov/98 entered into an option agreement with Usibelli Coal Mine Inc of Healy, Alaska allowing the company to acquire a 50% interest in the project subject to certain work conditions. In Mar/99 Usibelli funded 8 hole reverse circulation drill holes (614.5 m), excavator trenching and down-hole geophysical logging of 3 holes. In May/99 Usibelli dropped its option on the property due to low world prices for thermal coal. Cash Resources changed its name to Cash Minerals Ltd in May/2001. Cash Minerals received a positive scoping study dated April 13, 2005, that supported the potential for economic development of an open pit coal mine.

Capsule Geology

Over 30 coal seams occur within a 400 m sandstone and shale interval which forms part of the Lower to Middle Jurassic Laberge Group. The coal reserves are concentrated in a 50 m interval in the uppermost member of the Tanglefoot formation, approximately 210 to 240 m stratigraphically below the base of the Tantalus Formation (Allen, 2000). The best potential to date lies in the Cairnes seam which has an average thickness of 12.5 m and extends for a minimum of 1 500 m along strike. Teslin Exploration discovered another coal exposure on Red Ridge (Minfile Occurrence # 115H 012), 5 km to the northwest and 244 m stratigraphically below the base of the Tantalus Formation. The main Cairnes seam occurs near the base of the sequence, on the northeast limb of a northwest-trending syncline. Where exposed in a surface trench it is 15.6 m thick and contains two partings, 92 and 54 cm thick. Drilling in 1972 showed that a 2 m thick coal seam occurs in the footwall 7.5 m stratigraphically below the Cairnes seam, and at least 27 other seams, ranging in thickness from 0.2 to 2.5 m, lie stratigraphically above it. The hanging wall seams appear to be less continuous than the Cairnes and footwall seams, but aggregate thickness of all the seams wider than 1.0 m is 10.4 m. Analyses, petrologic and geochemical studies by the Geological Survey of Canada in 1972, show that the Cairnes seam has an ASTM rank of High Volatile Bituminous B and a calorific value of about 31 401 kJ/kg (13 500 BTU/lb). Weighted ash content for the seam exclusive of major partings is 21.8%. Sulphur content is 0.3% and trace element contents are very low (0.6 ppm Se; 0.5 ppm Sb; 3.0 ppm As). Potential for coal bed methane is indicated by a high proportion of spores, cuticular plant matter, resins and waxes, and a high volatile rank. However, Beaton et al. (1992) suggested the coal bed methane potential is low based on Rock-Eval pyrolysis. Drilling in 1993, outlined measured open-pit reserves of 2 600 000 tonnes with a stripping ratio of 10 bank cubic metres per tonne of coal, indicated underground reserves of 2.9 million tonnes and inferred underground reserves of 5.7 million tonnes, for a total of 11.2 million tonnes. The seams are open at depth and along strike. The first eleven, 1993 drill holes outlined a zone of high volatile bituminous B coal which averaged 26.2% ash, 26.7% volatiles, 44.6% fixed carbon, 0.47% sulphur and a calorific value of 5476 cal/g (9779 BTU/lb). The 1994 drill program increased total reserves to 31.7 million tonnes of high Volatile Bituminous "B" coal. The 18 new coal licenses gave Cash Resources rights to a large area which contains a number of other coal occurrences associated with the same sedimentary units that host the Division Mountain coal. In May/95 the company announced that a preliminary eight hole, 2 000 m diamond drill and excavator trenching program had extended the known coal measure for an additional strike length of 6.5 km. Total reserves in all categories were increased to 45 million tonnes of high Volatile Bituminous "B" coal. The 1997, 98 and 99 work programs concentrated on expanding known reserves on the property. At the end of 1998 Cash Resources estimated total reserves at 52 900 000 tonnes with a stripping ratio of 3.5:1 bank cubic metres of waste per tonne of raw coal. Usibelli agreed with Cash's reserve numbers, but suggested that the economically mineable reserve might be less and based on geotechnical observations they made in 1999, they recalculated the mineable reserves as 17 236 510 tonnes.

References

- ALLEN, T.L., 2000. An evaluation of coal-bearing strata at Division Mountain (115H/8 east-half, 105E/5 west-half), south-central Yukon. In: Yukon Exploration and Geology 1999, D.S. Emond and L.H. Weston (eds.), Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada, p. 177-198.
- ALLEN, T.L., AND WESTON, L.H., 2001. Preliminary map of Division Mountain area (NTS 105E/5 W1/2 & 115H/8 E1/2), central Yukon. Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada, Open File 2001-3.
- ARJAY KIRKER RESOURCES LTD, Jan/73. Assessment Report #019790 by M.P. Phillips.

ARJAY KIRKER RESOURCES LTD, 1973. Assessment Report *#061169 by M.P. Phillips.

AURUM GEOLOGICAL CONSULTANTS INC., 1994. Yukon Coal Inventory 1994. Energy and Mines Branch, Economic Development, Yukon Territorial Government, 169 p.

BEATON, A.P., CAMERON, A.R., AND GOODARZI, F., 1992. Petrography, geochemistry and utilization potential of the Division Mountain coal occurrence, Yukon Territory. In: Current Research, Part E, Geological Survey of Canada Paper 92-1E, p. 23-32.

CAIRNES, D.D., 1910. Lewes and Nordenskiold Rivers Coal District, Yukon Territory. Geological Survey of Canada Memoir 5, 70 p.

CASH RESOURCES LTD, News Release, 8 Mar/95; 11 May/95; 12 May/97; 22 Oct/97; 31 Mar/99; 4 May/99; 13 May/99; 31 Mar/05; 18 Apr/05

CASH RESOURCES LTD, Apr/95. Assessment Report #093307 by R.F. Gish.

CASH RESOURCES LTD, Aug/96. Assessment Report #093508 by R.F. Gish.

CASH RESOURCES LTD, May/98. Assessment Report #093824 by R.F. Gish.

CASH RESOURCES LTD, Apr/2000. Assessment Report #094129 by R.F. Gish.

GEORGE CROSS NEWSLETTER, 27 Aug/93; 22 Oct/93; 17 May/95; 7 Feb/96; 15 Apr/96; 31 Oct/97.

GEOLOGICAL SURVEY OF CANADA Summary Report 1907

NORTHERN MINER, 6 Mar/95; 10 Apr/95.

RESEARCH COUNCIL OF ALBERTA Report 66-6, p. 15.

TESLIN EXPLORATIONS LTD, 17 Jan/72. Brief submitted to Yukon Territory Water Board Hearing, Whitehorse.

TESLIN EXPLORATIONS LTD, Aug/70. Assessment Report #060584 by R.J. Kirker.

W4 JOINT VENTURE, 1990. Assessment Report *#092937 by R.C. Carne.

W4 JOINT VENTURE, Apr/91. Assessment Report #092970 by R.C. Carne.

W4 JOINT VENTURE, Apr/92. Assessment Report #093032 by R.C. Carne.

WHITEHORSE STAR, 30 Sep/71; 25 Aug/72; 19 Jan/73; 25 Nov/93; 10 Mar/95; 15 May/95; 31 May/95.

YUKON EXPLORATION & GEOLOGY 1994, p. 5-6. 1995, p. 15-16. 1997, p. 32-33, 35, 38. 1998, p. 25, 27. 1999, p. 26, 29, 31, 177-198.

Work History

Date	Work Type	Comment
12/31/1999	Drilling	Number of holes drilled: 8 Amount of work done: 614.5 METRES
12/31/1999	Trenching	
12/31/1999	Ground Geophysics	
12/31/1998	Trenching	
12/31/1997	Drilling	Ten holes, 1,667 m.
12/31/1997	Trenching	
12/31/1995	Drilling	Nine holes, 1,980 m.
12/31/1995	Studies	
12/31/1995	Trenching	
12/31/1994	Drilling	Twenty-three holes, 4,054 m.
12/31/1994	Trenching	
12/31/1993	Drilling	Sixteen holes, 1,826 m.
12/31/1990	Geology	
12/31/1990	Trenching	
12/31/1972	Drilling	Six holes, 1,047 m.
12/31/1972	Trenching	
12/31/1971	Geochemistry	
12/31/1971	Ground Geophysics	
12/31/1970	Geochemistry	

12/31/1970	Ground Geophysics	
12/31/1970	Trenching	
12/31/1970	Development, Surface	

Assessment Reports that overlap occurrence

Report Number	Year	Title	Worktypes	Holes Drilled	Meters Drilled
097188	2017	NI43-101 Technical Report on the Division Mountain Coal Property and Related Exploration Licences, Yukon Territory, Canada	Data Compilation - Pre-existing Data		
097196	2017	Report on Preliminary Reconnaissance of Coal Exploration Licence Areas in the Whitehorse Trough, North-Central Yukon, 2017	Property Evaluation - Other		
093824	1997	1997 Final Report	Diamond - Drilling, Backhoe - Trenching	10	1667
093508	1995	Assessment Report 1995 Field Work	Diamond - Drilling, Bedrock Mapping - Geology, Backhoe - Trenching	9	1979.70
093307	1994	1994 Final Report	Diamond - Drilling, Detailed Bedrock Mapping - Geology, EM - Ground Geophysics, Seismic - Ground Geophysics, Line Cutting - Other, Environmental Assessment/Impact - Studies, Mechanical - Trenching	23	4054
095317	1993	1993 Final Report on the Division Mountain Coal Property	Diamond - Drilling, EM - Ground Geophysics, Magnetism - Ground Geophysics, Line Cutting - Other	16	1810.50
093032	1991	Summary Report on the Division Mountain Coal Project, Southern Yukon for W4 Joint Venture on Coal Exploration Licenses Y434 and Y435	Regional Bedrock Mapping - Geology, Prospecting - Other, Mechanical - Trenching		
092937	1990	Summary Report on the Division Mountain Coal Prospect Southern Yukon for W4 Joint Venture	Research/Summarize - Pre-existing Data		
019790	1972	Report on 1972 Diamond Drilling and Trenching Program	Diamond - Drilling, Mechanical - Trenching	6	1047
019920	1971	1971 Report on Explorations for Coal in the Carmacks and Nordenskiöld Areas	All Weather Road - Development, Surface, Rock - Geochemistry, IP - Ground Geophysics, Prospecting - Other		
060582	1971	[Report on Explorations in Nordenskiöld and Carmacks Area]	Diamond - Drilling, Rock - Geochemistry, Detailed Bedrock Mapping - Geology	1	94.50
060897	1970	Exploration Activities of Norman H. Ursel Associates Ltd.	Rock - Geochemistry, Gamma-ray Spectrometry - Ground Geophysics, Prospecting - Other, Handblast - Trenching		
060584	1970	Nordenskiöld Coal Area Yukon Territory	Hydraulic - Trenching		

Related References

Number	Title	Page(s)	Reference Type	Document Type
ARMC006612	Correspondence Re: Nordenskiöld coal area - Division Mountain		Property File Collection	Miscellaneous Company Documents
ARMC016652	Geochemical map - 115H/8 - Vowel Mountain		Property File Collection	Geochemical Map

Resource/Reserve

Year	Zone	Type	Commodity	Grade	Tonnage	Amount	Reported Amount	43-101 Compliant	Cut-off
2005	DIVISION MOUNTAIN (OPEN PIT)	Measured	coal	5159 kJ/kg	38,600,000		No	Yes	Unknown
High Volatile "B" Bituminous coal. Calculated weighted average for Division Mountain raw coal, on an air dried basis is Calorific value = 5159 cal/g, Residual Moisture = 2.8%, Ash = 27.6%, Volatile Matter = 26.3% Fixed Carbon = 43.7 and Sulphur = 0.45%; Update on the NI 43-101 Geological Evaluation and Resource calculation on the Division Mountain Property, Yukon Territory, Canada by Northwest Corporation. Available on SEDAR.									
1999	DIVISION MOUNTAIN (OPEN PIT)	Historical Estimate	coal	31401 kJ/kg	17,236,510		No	No	Unknown
Reanalysis of 1997 data based on 1999 results using a shallower mining depth cutoff and a less aggressive highwall angle.; Assessment Report #094129 by R.F. Gish, correspondence from A.E. Renshaw of Usibelli Coal Mine Inc.									
1998	DIVISION MOUNTAIN (OPEN PIT)	Historical Estimate	coal	31401 kJ/kg	52,900,000		No	No	Unknown
Coal contains an average calorific value of 31 401 kJ/kg, 2.3% residual moisture, 27.9% ash, 26.8% volatile matter, 43.7% fixed carbon and 0.44% sulphur.; Assessment Report #093824 by R.F. Gish.									

Drill core at YGS core library

Number	Property	Year Drilled	Core Size	Photos	Data
97-60	Division Mountain	1997	HQ	4	1
72-01	Division Mountain	1972	HQ	0	2
72-02	Division Mountain	1972	HQ	16	2
72-03	Division Mountain	1972	HQ	26	2

72-04	Division Mountain	1972	HQ	4	1
72-05	Division Mountain	1972	HQ-NQ	0	2
72-06	Division Mountain	1972	NQ	16	2
DDH-1	Teslin	1971	NQ	0	1