



Occurrence Details

Occurrence Number: 115I 003
Occurrence Name: Tantalus Butte
Occurrence Type: Hard-rock
Status: Deposit
Date printed: 6/14/2025 4:54:30 PM

General Information

Primary Commodities: coal
Deposit Type(s): Coal
Location(s): 62°7'25" N - -136°15'49" W
NTS Mapsheet(s): 115I01
Location Comments: .5 Kilometres
Hand Samples Available: Yes
Last Reviewed:

Capsule

Work History

Staked as coal lease 16536 in Oct/05 by C.E. Miller and adjacent lease 19203 to the west in Aug/06 by Miss E. Eisenbeiser. The first serious development commenced in 1923 when an adit was driven by Five Fingers Coal CL, and production averaged about 454 tonnes a year until 1938. The mine was reopened in 1948 by Yukon Coal CL (a Conwest subsidiary) and mined until 1967 to provide fuel for heating plants at United Keno Hill ML. Total production between 1948-1967 was approximately 118 000 tonnes, recovered by room and pillar mining above an adit about 900 m in length. The mine was acquired by Anvil Mg Corp L in 1968, reopened in 1969 to supply fuel for plant heat and concentrate drying at the Faro Mine and to Cyprus Anvil Mg Corp in 1975. Cyprus Anvil mined about 109 770 tonnes from the underground mine between 1969 and the end of 1976, an additional 27 200 tonnes from the subcrop of the main seam about 520 m north of the portal in 1975-76, and explored extensions of the main seam with 6 underground holes (294.4 m) in 1973, bulldozer trenching and 10 surface holes (1545.3 m) in 1976, and 42 rotary percussion holes (3476.8 m) plus resistivity, IP, gravity and downhole EM surveys in 1977. An underground fire in 1978 caused the mine to be sealed and production to be shifted to the surface mine, which produced 21 410 tonnes in 1978, 22 680 tonnes in 1979, about 18 140 tonnes in 1980, and 11 790 tonnes in 1981. Local exploration consisted of 1535.9 m of rotary percussion drilling (31 holes) and bulldozer trenching in 1978.

Capsule Geology

The coal occurs in the Upper Jurassic Tantalus Formation, striking north and dipping about 55° west. The seam is displaced by northeast-striking, southeast dipping faults. The main seam ranges from 2.4 to 6 m thick and is classified as a non-coking, high-volatile bituminous B coal. An average analysis is 14% ash, 35% volatile and 51% fixed carbon, with a gross calorific value between 11 000 and 12 700 BTU. The coal is agglomerating with a swelling index of 1 and is unsuitable for metallurgical coke. The coal mined on surface had a lower calorific value, perhaps due to weathering. The 1977 drilling resulted in a large increase in proved reserves.

References

- ANVIL MINING CORPORATION LTD, 1972. Assessment Report #061104 by P.A. Hacquebard.
- BOYD, B.W., 1973. Coal Resources of the Carmacks Area, Yukon Territory. Department of Indian Affairs and Northern Development, 14 p. Filed as Assessment Report #060110.
- AURUM GEOLOGICAL CONSULTANTS INC., 1994. Yukon Coal Inventory 1994. Energy and Mines Branch, Economic Development, Yukon Territorial Government, 169 p.
- GEOLOGICAL SURVEY OF CANADA Memoir 5, p. 52-53; 189, p. 59-62.
- GEOLOGICAL SURVEY OF CANADA Paper 68-68 p. 114.
- HACQUEBARD, P.A., 1970. The correlation of the main seam in the Tantalus Butte coal mine at Carmacks, Yukon Territory. Department of Energy, Mines and Resources Canada, Topical Report No. 140, 21 p. Filed as Assessment Report #061103.
- MINERAL INDUSTRY REPORT 1969-1970, p. 155-156; 1971-1972, p. 126-127; 1774, p. 168; 1975, p. 172.
- RESEARCH COUNCIL OF ALBERTA Report 66-6, p. 16.
- YUKON COAL COMPANY LTD, 1947. Assessment Report #060736 by A. Ognatieff.
- YUKON COAL COMPANY LTD, 1948. Assessment Report #060734 by E. Swartzman.
- YUKON COAL COMPANY LTD, 1948. Assessment Report #060735 by E. Swartzman.
- YUKON COAL COMPANY LTD, 1965. Assessment Report #092073 by E.J. Wade.
- YUKON COAL COMPANY LTD and UNITED KENO HILL MINES LTD, 1965. Assessment Report #019918 by A.D. Oliver.

Work History

Date	Work Type	Comment
12/31/1978	Drilling	Thirty-one holes, 1,535.887 m.

12/31/1978	Trenching	
12/31/1978	Development, Surface	Production shifts to surface pit until 1981.
12/31/1977	Drilling	Forty-two holes, 3,476.854 m.
12/31/1977	Ground Geophysics	Also IP, gravity and downhole EM surveys.
12/31/1976	Drilling	Ten holes, 1,545.336 m.
12/31/1976	Trenching	
12/31/1973	Drilling	Six holes, 294.437 m.
12/31/1969	Development, Underground	Re-opened, mining carried out to 1976.
12/31/1948	Development, Underground	Mining until 1967.
12/31/1923	Development, Underground	Dug 152.4 m adit, mining to 1938.

Assessment Reports that overlap occurrence

Report Number	Year	Title	Worktypes	Holes Drilled	Meters Drilled
097197	2017	Memo-Division Mountain Coal Project, Yukon Territory	Property Evaluation - Other		
092031	1977	Report on Preliminary Evaluation Carmacks Coal Project	Property Evaluation - Other, Data Compilation - Pre-existing Data		
092032	1977	Report on 1977 Reconnaissance of Yukon Coal Occurrences, Report on 1977 Field Program Carmacks Coal Project	Orthophoto - Airphotography, Rotary - Drilling, Drill Cuttings - Geochemistry, Detailed Bedrock Mapping - Geology, EM - Ground Geophysics, Gravity Survey - Ground Geophysics, IP - Ground Geophysics, Resistivity - Ground Geophysics, Petrographic - Lab Work/Physical Studies, Line Cutting - Other	47	3476.85
019920	1971	1971 Report on Explorations for Coal in the Carmacks and Nordenskiold Areas	All Weather Road - Development, Surface, Rock - Geochemistry, IP - Ground Geophysics, Prospecting - Other		
060582	1971	[Report on Explorations in Nordenskiold 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		

Related References

Number	Title	Page(s)	Reference Type	Document Type
ARMC0063_63	Correspondence Re: Teslin Explorations coal leases at Carmacks		Property File Collection	Miscellaneous Company Documents
ARMC0063_65	Re: Visit to Carmacks Coal properties - Tantalus and Tantalus Butte		Property File Collection	Miscellaneous Company Documents
ARMC0063_66	Claim map - Schedule "B"		Property File Collection	Geoscience Map (General)
ARMC0063_67	Correspondence Re: Site tour of Carmacks Coal		Property File Collection	Miscellaneous Company Documents
ARMC0063_68	Correspondence Re: Carmacks rehabilitation program - 1992		Property File Collection	Miscellaneous Company Documents
ARMC0063_69	Claim map - Quarrying leases, coal mining leases, and lots and parcels		Property File Collection	Geoscience Map (General)
ARMC0063_72	Claim map showing Yukon River and coal mining lease		Property File Collection	Geoscience Map (General)
ARMC0063_73	Exploration drift map - 1972 - Tantalus Butte coal mine		Property File Collection	Geoscience Map (General)
ARMC0063_74	Correspondence Re: Curragh Resources Inc. and Little Salmon - Carmacks Indian Band		Property File Collection	Miscellaneous Company Documents
ARMC0063_87	Analysis of coal, air dried basis - Carmacks Coal		Property File Collection	Report
ARMC0035_91	Summary of exploration and development work - 1978 - Various claims		Property File Collection	Report
ARMC0035_96	Summary of exploration and development work - Tantalus Butte Mine		Property File Collection	Report
ARMC0097_11	Geological cross sections - Carmacks Coal project		Property File Collection	Geoscience Map (General)
ARMC0083_13	Plan map showing underground control survey - Tantalus Butte coal mine		Property File Collection	Geoscience Map (General)
ARMC0005			Property File	

<u>ARMC0082_04</u>	Report on geophysical tests on Carmacks coal deposit	Property File Collection	Report
<u>ARMC0082_14</u>	Geological map of open pit area - Carmacks coal project- Tantalus Butte - Map 2	Property File Collection	Geoscience Map (Geological - Bedrock)
<u>ARMC0082_15</u>	1981 proposed mine plan map - Carmacks coal properties - Tantalus Butte mine - Map 1	Property File Collection	Geoscience Map (General)
<u>ARMC0082_16</u>	Cross-section no. 614.650 - 1981 mining plan - Carmacks coal project	Property File Collection	Geoscience Map (General)
<u>ARMC0082_17</u>	Cross-section no. 613.000N - 1981 mining plan - Carmacks coal project	Property File Collection	Geoscience Map (General)
<u>ARMC0082_18</u>	Cross-section no. - 1981 mining plan - Carmacks coal project	Property File Collection	Geoscience Map (General)
<u>ARMC0082_19</u>	Cross-section no. 613.250 - 1981 mining plan - Carmacks coal project	Property File Collection	Geoscience Map (General)
<u>ARMC0082_20</u>	Cross-section no. 613.200N - 1981 mining plan - Carmacks coal project	Property File Collection	Geoscience Map (General)
<u>ARMC0082_21</u>	Cross-section no. 613.350N - 1981 mining plan - Carmacks coal project	Property File Collection	Geoscience Map (General)
<u>ARMC0082_22</u>	Cross-section no. 613.300N - 1981 mining plan - Carmacks coal project	Property File Collection	Geoscience Map (General)
<u>ARMC0082_23</u>	Cross-section no. 613.450N - 1981 mining plan - Carmacks coal project	Property File Collection	Geoscience Map (General)
<u>ARMC0082_24</u>	Cross-section no. 613.400N - 1981 mining plan - Carmacks coal project	Property File Collection	Geoscience Map (General)
<u>ARMC0082_25</u>	Cross-section no. 613.550 - 1981 mining plan - Carmacks coal project	Property File Collection	Geoscience Map (General)
<u>ARMC0082_26</u>	Cross-section no. 613.650 - 1981 mining plan - Carmacks coal project	Property File Collection	Geoscience Map (General)
<u>ARMC0082_27</u>	Cross-section no. 613.500N - 1981 mining plan - Carmacks coal project	Property File Collection	Geoscience Map (General)
<u>ARMC0082_28</u>	Cross-section no. 613.600N - 1981 mining plan - Carmacks coal project	Property File Collection	Geoscience Map (General)
<u>ARMC0082_29</u>	Cross-section no. 613.700N - 1981 mining plan - Carmacks coal project	Property File Collection	Geoscience Map (General)
<u>ARMC0082_30</u>	Cross-section no. 613.800N - 1981 mining plan - Carmacks coal project	Property File Collection	Geoscience Map (General)
<u>ARMC0082_31</u>	Cross-section no. 613.900N - 1981 mining plan - Carmacks coal project	Property File Collection	Geoscience Map (General)
<u>ARMC0082_32</u>	Cross-section no. 614.00N - 1981 mining plan - Carmacks coal project	Property File Collection	Geoscience Map (General)
<u>ARMC0082_34</u>	Cross-section no. 614.200N - 1981 mining plan - Carmacks coal project	Property File Collection	Geoscience Map (General)
<u>ARMC0082_35</u>	Cross-section no. 613.700N - 1981 mining plan - Carmacks coal project	Property File Collection	Geoscience Map (General)
<u>ARMC0082_36</u>	Cross-section no. 613.750N - 1981 mining plan - Carmacks coal project	Property File Collection	Geoscience Map (General)
<u>ARMC0082_37</u>	Cross-section no. 613.850N - 1981 mining plan - Carmacks coal project	Property File Collection	Geoscience Map (General)
<u>ARMC0082_38</u>	Cross-section no. 613.950N - 1981 mining plan - Carmacks coal project	Property File Collection	Geoscience Map (General)
<u>ARMC0082_39</u>	Cross-section no. 614.050N - 1981 mining plan - Carmacks coal project	Property File Collection	Geoscience Map (General)
<u>ARMC0082_40</u>	Cross-section no. 614.150N - 1981 mining plan - Carmacks coal project	Property File Collection	Geoscience Map (General)
<u>ARMC0082_41</u>	Cross-section no. 614.300N - 1981 mining plan - Carmacks coal project	Property File Collection	Geoscience Map (General)
<u>ARMC0082_42</u>	Cross-section no. 614.400N - 1981 mining plan - Carmacks coal project	Property File Collection	Geoscience Map (General)
<u>ARMC0082_43</u>	Cross-section no. 614.500N - 1981 mining plan - Carmacks coal project	Property File Collection	Geoscience Map (General)
<u>ARMC0082_44</u>	Cross-section no. 614.600N - 1981 mining plan - Carmacks coal project	Property File Collection	Geoscience Map (General)
<u>ARMC0082_45</u>	Cross-section no. 614.250N - 1981 mining plan - Carmacks coal project	Property File Collection	Geoscience Map (General)
<u>ARMC0082_46</u>	Cross-section no. 614.350N - 1981 mining plan - Carmacks coal project	Property File Collection	Geoscience Map (General)
<u>ARMC0082_47</u>	Cross-section no. 614.450N - 1981 mining plan - Carmacks coal project	Property File Collection	Geoscience Map (General)

<u>ARMC0082</u>	Cross-section no. 614.550N - 1981 mining plan - Carmacks coal project	Property File Collection	Geoscience Map (General)
<u>48</u>			
<u>ARMC0082</u>	Geology map of Tantalus Basin west half - Appendix 1	Property File Collection	Geoscience Map (Geological - Bedrock)
<u>49</u>			
<u>ARMC0082</u>	Plan map showing surface and underground - Tantalus Butte mine - Drawing no. 175	Property File Collection	Geoscience Map (General)
<u>50</u>			
<u>ARMC0082</u>	Geological map of open pit area - Tantalus Butte coal mine - Map 3	Property File Collection	Geoscience Map (Geological - Bedrock)
<u>51</u>			
<u>ARMC0082</u>	Geological map of open pit area - 2 of 2 - Carmacks coal project- Tantalus Butte - Map 3	Property File Collection	Geoscience Map (Geological - Bedrock)
<u>52</u>			
<u>ARMC0082</u>	Carmacks topographic map	Property File Collection	Geoscience Map (General)
<u>53</u>			
<u>ARMC0082</u>	V.L.F. electromagnetic survey map - Contours of Fraser filtered in phase - Carmacks coal project	Property File Collection	Geophysical Map
<u>54</u>			
<u>ARMC0082</u>	Reconnaissance map - Pencil manuscript - Sheet 1 of 1 - 76-67	Property File Collection	Geoscience Map (General)
<u>55</u>			
<u>ARMC0082</u>	Composite section map showing working area - underground plans - Tantalus Butte coal mine - Carmacks coal - Drawing no. WB 172A	Property File Collection	Geoscience Map (General)
<u>58</u>			
<u>ARMC0082</u>	Composite plan map - Tantalus Butte mine - Drawing no. 171	Property File Collection	Geoscience Map (General)
<u>59</u>			
<u>ARMC0082</u>	Vertical N-S long. section map - Tantalus Butte mine - Drawing no. 172	Property File Collection	Geoscience Map (General)
<u>60</u>			
<u>ARMC0082</u>	Carmacks extension map - 115I-6 - Job No. 80-157	Property File Collection	Geoscience Map (General)
<u>92</u>			
<u>ARMC0082</u>	Open pit area map - 1977 - Carmacks coal project	Property File Collection	Geoscience Map (General)
<u>93</u>			
<u>ARMC0082</u>	Topographic plan map - Tantalus Butte coal mine - Carmacks	Property File Collection	Geoscience Map (General)
<u>94</u>			
<u>ARMC0083</u>	Reconnaissance map - pencil manuscript - Sheet 1 of 2 - 76-67 - Carmacks	Property File Collection	Geoscience Map (General)
<u>05</u>			
<u>ARMC0083</u>	Reconnaissance map - pencil manuscript - Sheet 2 of 2 - 76-67 - Carmacks	Property File Collection	Geoscience Map (General)
<u>06</u>			
<u>ARMC0083</u>	Carmacks topographic map - Job No. 77-114	Property File Collection	Geoscience Map (General)
<u>07</u>			
<u>ARMC0083</u>	Preliminary plan map of Carmacks coal mine - Surface lots	Property File Collection	Geoscience Map (General)
<u>08</u>			
<u>ARMC0083</u>	Reconnaissance map - Pencil manuscript - Drawing no. 72-210 - Tantalus Butte coal mine - Carmacks	Property File Collection	Geoscience Map (General)
<u>09</u>			
<u>ARMC0083</u>	Geology map of Carmacks coal lease area, Yukon - Map no. 1	Property File Collection	Geoscience Map (Geological - Bedrock)
<u>10</u>			
<u>ARMC0083</u>	Plan map of survey of lots 23 and 24, Group 10 - Carmacks	Property File Collection	Geoscience Map (General)
<u>11</u>			
<u>ARMC0083</u>	Field notes of resurvey of certain boundaries of lots 23 and 24 - Group 10, Carmacks - Drawing #52087	Property File Collection	Miscellaneous Company Documents
<u>12</u>			
<u>ARMC0082</u>	Cross-section no. 614.100N - 1981 mining plan - Carmacks coal project	Property File Collection	Geoscience Map (General)
<u>33</u>			
<u>ARMC0083</u>	Map - Coal leases in Carmacks area - Map No. 2	Property File Collection	Geoscience Map (General)
<u>14</u>			
<u>ARMC0083</u>	Map 1 - Fall 1989 On-site inspection safety/reclamation - Carmacks Coal properties	Property File Collection	Geoscience Map (General)
<u>15</u>			
<u>ARMC0083</u>	Plan map showing coal mining leases - Carmacks area	Property File Collection	Geoscience Map (General)
<u>16</u>			
<u>ARMC0082</u>	Composite plan map of working area - Tantalus Butte coal mine - Drawing no. WB 171A	Property File Collection	Geoscience Map (General)
<u>57</u>			
<u>ARMC0086</u>	Correspondence Re: Carmack coal leases - Geophysics	Property File Collection	Miscellaneous Company Documents
<u>92</u>			
<u>ARMC0086</u>	Correspondence Re: Carmacks coal - geophysical response	Property File Collection	Miscellaneous Company Documents
<u>94</u>			
<u>ARMC0086</u>	Report on geophysical tests on Carmacks coal deposit	Property File Collection	Report
<u>15</u>			
<u>ARMC0078</u>	Geological map of open pit area - Tantalus Butte coal mine - Carmacks	Property File Collection	Geoscience Map (Geological - Bedrock)
<u>39</u>			
<u>ARMC0078</u>	Electromagnetic survey map - Contours of Fraser filtered in phase readings - Carmacks coal project	Property File Collection	Geophysical Map
<u>42</u>			
<u>ARMC0078</u>	Electromagnetic survey map - profiles of in phase and quadrature readings - Carmacks coal project	Property File Collection	Geophysical Map
<u>43</u>			
<u>ARMC0078</u>	Map 1 - 1981 proposed mine plan - Tantalus Butte mine	Property File Collection	Geoscience Map (General)
<u>44</u>			

<u>ARMC0203</u> <u>32</u>	Claim map - Sheet 115-I-1 - Carmacks - Carmacks coal leases	Property File Collection	Geoscience Map (General)
<u>ARMC0203</u> <u>34</u>	Claim map - Sheet 115-I-1 - Carmacks coal leases	Property File Collection	Geoscience Map (General)

Drill core at YGS core library

Number	Property	Year Drilled	Core Size	Photos	Data
<u>72-H1</u>	Tantalus Butte	1972	AQ	0	0
<u>72-H2</u>	Tantalus Butte	1972	AQ	0	0
<u>68-2</u>	Tantalus Butte	1968	BQ	0	0
<u>68-3</u>	Tantalus Butte	1968	BQ	0	0
<u>68-5</u>	Tantalus Butte	1968	BQ	0	0