Occurrence Details

Occurrence Number: 115G 012
Occurrence Name: Amphitheatre
Occurrence Type: Hard-rock
Status: Showing
Date printed: 12/16/2025 6:12:47 PM

General Information

Secondary Commodities: coal
Deposit Type(s): Coal
Location(s): 61°18'26" N - -139°21'58" W
NTS Mapsheet(s): 115G06
Location Comments: .5 Kilometres
Hand Samples Available: No
Last Reviewed:

Capsule

Work History

Discovered about 1914 but investigated only by the GSC. A coal lease was staked in 1948 by Paul Birckel on Granite Creek, a tributary of Duke River. Small amounts were reportedly hauled to Burwash Landing with horses and a coal lease was staked by a group of Whitehorse businessmen in 1950. Staked as CHM cl (YA59646) in Mar/81 by F. Green.

Capsule Geology

The occurrence is located in Wrangellia, an accreted terrane extending 2340 km from Alaska to southern B.C.. In the area of the occurrence, Wrangellia is bounded to the northeast by the Denali Fault System and to the southwest by the Duke River Fault. The oldest Wrangellian rocks in the region are Pennsylvanian to Permian Skolai Group volcanic and sedimentary rocks. The Skolai Group is stratigraphically overlain by Middle(?) Triassic phyllite, Upper Triassic Nikolai formation basalt and Upper Triassic McCarthy Formation Limestone and phyllite. Tertiary volcanic and sedimentary rocks unconformably overlie the sequence.
Two major suites of intrusive rocks are present in the belt. The oldest is Triassic and includes gabbro, peridotite, dunite and clinopyroxenite of the Kluane mafic-ultramafic complex and gabbro sills and dykes of the Maple Creek Gabbro. The Maple Creek gabbro is though to be coeval with the Kluane mafic-ultramafic complex and to have acted as a feeder to the Nikolai formation. The Cretaceous Kluane Ranges suite are dioritic to granodioritic in composition and occur throughout northern Wrangellia. Minor Tertiary sills, dykes and stocks of felsic to intermediate composition are also present.
The occurrence lies within the Eocene-Oligocene Amphitheatre Formation, a package of terrestrial sediments and coal deposited in structurally controlled basins related to the Denali fault system. At least 12 seams of coal, ranging in thickness from 0.3 to 4.9 m and aggregating 9 to 15 m, occur in highly-folded sandstone and conglomerate of the Amphitheatre Formation. The coal is ranked as sub-bituminous C and B. Analysis showed fixed carbon of about 31% and gross calorific value of about 15 000 G BTU.
Ridgway et al. (1992) indicate that the coal at Amphitheatre Mountain was deposited near the centre of a small pull-apart basin along the Duke River Fault. Pollen and coal macerals indicate that the coal was derived from coniferous forest of Early Oligocene age.

References

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YUKON MINERAL INDUSTRY 1941-59, p. 52, 68.

Assessment Reports that overlap occurrence

Report Number	Year	Title	Worktypes	Holes Drilled	Meters Drilled
060988	1971	Report on Niamodlaoc Mountain Coal Prospect	Rock - Geochemistry, Silt - Geochemistry, Prospecting - Other		
092051	1950	Report on the Coal Deposits of the Granite Creek Area, near Burwash Landing, Y. T.	Rock - Geochemistry, Bedrock Mapping - Geology, Research/Summarize - Pre-existing Data		