

NAME OF PROPERTY

ADANAC (ADERA)

OBJECT LOCATED - mineralized zone.

UNCERTAINTY IN METRES 300. Lat. 59°42'40" Long. 133°24'30"

Mining Division Atlin

District

County

Township or Parish

Lot

Concession or Range

Sec

Tp.

R.

OWNER OR OPERATOR

Adanac Mining and Exploration Ltd.

DESCRIPTION OF DEPOSIT

The Adanac (Ruby Creek) molybdenum deposit is within the northeast edge of the composite, partially zoned, Early Tertiary Mount Leonard boss, a 22-square-km intrusion that injects the Jurassic (?) Fourth of July Creek batholith and the Late Paleozoic Cache Creek metovolcanics.

Of the five major rock units in the Ruby Creek area, coarse granite, medium-grained granite and crowded porphyry are host for most of the molybdenite, and the porphyritic granite of the Ruby Creek stock is the principal source. Porphyritic granite forms three stocks in the vicinity of the Ruby Creek deposit. The Ruby Creek stock is about 550 m long in outcrop, with a sub-surface shoulder extending approximately 900 m westward beneath its roof of coarse granite. Contacts of the Ruby Creek stock with medium-grained granite are always sharp, whereas contacts with crowded porphyry are in part sharp and in part gradational. Younger equigranular and fine-grained granites produced minor molybdenite. Alteration effects include mild sericite and clay after plagioclase and weak chloritization of biotite. The major

Associated minerals or products - Tungsten, tin,

see Card 2

HISTORY OF EXPLORATION AND DEVELOPMENT

This property is located at the 4,900 foot elevation at the head of Ruby Creek, about 1 mile east of the summit of Mount Leonard and 15 miles northeast of Atlin.

The occurrence has been known since about 1905 and is reported to have been staked and dropped repeatedly in the 1960's. The Adera 1-12 and Pacific 1-2 claims were staked by prospectors R. Newsom, J. Snell, and E. Mueller, principals of Adanac Metals Ltd., a private company incorporated in June 1966. The company was changed to public status under the name Adanac Mining and Exploration Ltd. in September 1967. The claims were transferred to the company in December 1967; the Key 1-44 claims were subsequently staked by the company. Exploration work by the company began in July 1968. Diamond drilling to November 1969 totalled 38,818 feet in 73 holes. This work outlined probable mineable reserves of 69,876,000 tons of 0.141% molybdenite (Adanac Mining, Third Annual Report).

In March 1970 Adanac acquired under lease 68 claims in the Hobo and Thor groups (104 N/11, MO 2) from Canadian Johns-Manville Company, Limited. Kerr Addison Mines Limited optioned the property in April 1970. A program of underground drifting was begun and a pilot mill put into operation. To the end of November 1970, 2,733 feet of drifting and crosscutting, 921 feet of raising, and 15,744 feet of exploratory and fill-in diamond drilling had been completed. Based on this work reserves were reported as 104,234,000 tons of 0.16% molybdenite (Adanac Mining 1971 Annual Report). Kerr Addison carried out bulk sampling, pilot mill tests, and a full scale feasibility study. The option agreement was terminated in June 1971.

During the period June-August 1971 Adanac carried out 2,812 feet of rotary drilling in an attempt to extend the area of higher grade mineralization. Early in 1973 the property was optioned to Climax Molybdenum Corporation of British Columbia, Limited, wholly owned subsidiary of American Metal Climax, Inc. During the year geological mapping was done on the Adera 1-12 claims, and 5,000 feet of diamond drilling in 2 holes was done on the mineralized zone. In 1974 surface diamond drilling was done in 7 holes totalling 4,900 feet on Hobo 7, 8, 20 and Adera 1 and 2. American Metal Climax, Inc. changed its name in July 1974 to Amax Inc. The Climax option was terminated at the end of 1975.

see Card 2

HISTORY OF PRODUCTION

REFERENCES

††White, W.H., Stewart, D.R., Ganster, M.W.; Adanac (Ruby Creek); Porphyry Deposits of the Canadian Cordillera; The Canadian Institute of Mining and Metallurgy, Special Volume No. 15, pp. 476-483, 1976.

†Brown, A. Sutherland; Adera; Geology, Exploration, and Mining, 1969, pp. 29-35, British Columbia Dept. of Mines.

Mineral Policy Sector; Corporation Files: "Adanac Mining and Exploration Ltd."; "Climax Molybdenum Corporation of British Columbia, Limited"; "Conwest Exploration Company Limited".

Aitken, J.D.; Atlin Map-Area, British Columbia; Memoir 307, p. 73, Geol. Surv. of Canada, 1959.

Geology, Exploration, and Mining; British Columbia Dept. of Mines: 1970, p. 28; 1971, p. 53; 1972, p. 557; 1973, p. 515; 1974, p. 351; 1977, p. E 240.

Tennant, S.J. and Pinsent, R.H.; The Geology and Mineralization of the Adanac Molybdenum Property; Geoscience Forum, Whitehorse, December 1979.

Carter, N.C.; Mineral Exploration in British Columbia; molybdenum, tungsten, uranium, tin are attractive; Western Miner, February 1979, p. 14.

Geological Fieldwork, British Columbia Dept. of Mines: 1976, p. 69; 1979, p. 75.

Exploration in British Columbia; BCDM: 1979, p. 303; 1980, p. 502.

MAP REFERENCES

Map 1082 A, Atlin, (Geol.), Sc. 1":4 miles - accomp. Memoir 307.

*Map 104 N/11 W, Surprise Lake, (Topo.), Sc. 1:50,000.

#Geology of Adera claims, Sc. 1":500 feet, Figure 4, Geology, Exploration, and Mining, 1969, British Columbia Dept. of Mines.

Generalized geological map of the Ruby Creek area, Sc. 1":1,300 ft., Fig. 2, Rept. in Special Volume No. 15.

REMARKS

Comp./Rev. By	DMacR	DMacR	DMacR				
Date	11-78	12-80	09-86				

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DESCRIPTION OF DEPOSIT (continued)

rock units, which are chemically and modally very similar, are alkali granite.

The northeast-trending 21-m-wide Adera fault transects the Mount Leonard boss and may have incorporated a small portion of the Ruby Creek deposit on its numerous slip surfaces. Most of the coarse molybdenite-bearing quartz veins appear to have developed in gently dipping tension fractures overlying the Ruby Creek stock.

The Ruby Creek deposit is approximately 1,036 m long, 550 m wide and 198 m thick. Molybdenum-bearing veins extend some distance beyond these dimensions but they contribute little to the economic viability of the deposit.

There are two vein types. The most common variety contains inward-penetrating molybdenite rosettes, as large as 20 mm, in a smoky quartz matrix. The rosettes are distributed erratically along vein boundaries, a characteristic that made accurate sampling of the Ruby Creek deposit particularly difficult. Veins are locally vuggy and rarely contain fluorite, pyrite and powellite (Sutherland Brown, 1970, p. 34). An average width is 3 mm, although 5-cm-wide veins occur in the underground workings. The veins are widely spaced and generally dip less than 30 degrees.

A second vein type averages less than 3 mm wide, contains little quartz and dips steeply. Although composed largely of molybdenite, these veins are too widely spaced to contribute significantly to the tenor of the deposit.

Areas of greater than 0.1 per cent molybdenite mineralization form blanket-like zones that reflect the gentle dips of the large molybdenite veins. Zones reach 60 m thick, but are commonly separated vertically by 15- to 30-m barren, or very low grade, intervals. Minor tin is associated with scheelite.

HISTORY OF EXPLORATION AND DEVELOPMENT (continued)

Noranda Exploration Company, Limited by an agreement dated March 25, 1976 optioned 96 claims from Adanac. Work done on the claims during the year was minimal. The option was terminated on April 20, 1977.

Placer Development Limited by an agreement dated December 21, 1978 optioned a 70% interest in the property from Adanac Mining and Exploration Ltd.; a 26% interest in Adanac Mining was held by Conwest Exploration Company Limited and subsidiary companies. During 1979 Placer carried out 5,352 metres of diamond drilling in 39 holes, and feasibility studies. Based on this work mineable reserves, at a strip ratio of 1.8 to 1, were estimated at 166,600,000 tonnes at 0.063% Mo. Tonnage at a cutoff grade of 0.03% molybdenum was estimated at 270,000,000 tonnes (Northern Miner, March 13, 1980). Work by Placer in 1980 included 4 858 m of diamond drilling in 17 holes. Mineable reserves were reported as 201 000 000 tonnes grading .059% Mo using a cut off grade .03% Mo. The high grade core of the deposit grades .108% Mo (Conwest Exploration Company Limited 1983 Annual Report). Placer abandoned its option in January 1983. Conwest purchased additional shares of Adanac, thereby increasing its total direct and indirect interest to 42%.