

NAME OF PROPERTY BIG ONION (ASTLAIS) (CIMBRIA)

OBJECT LOCATED - showing.

UNCERTAINTY IN METRES 300. Lat. 54°48'35" Long. 126°53'40"

Mining Division Omineca District Coast, Range 5

County Township or Parish

Lot Concession or Range

Sec Tp. R.

OWNER OR OPERATOR AND ADDRESS

DESCRIPTION OF DEPOSIT

The Big Onion property is underlain principally by Hazelton volcanic rocks that are intruded by an elongated complex pluton. The Hazelton Group here is mapped as the lowest volcanic division and is overlain on the property by part of the lower sedimentary division. The volcanic rocks, which are the site of the intrusion of the pluton, consist of green and maroon andesites. Reliable bedding attitudes are rare, but in the volcanic rocks areal distribution indicates they form a northeasterly trending anticline into the core of which the pluton is intruded.

The Big Onion pluton is formed of two phases—an early quartz feldspar porphyry and a later quartz diorite porphyry. In general the quartz feldspar porphyry forms a sheath around the quartz diorite. Dykes of quartz feldspar porphyry are common in the andesites near the margin of the pluton, and a few dykes of quartz diorite extend into the quartz feldspar porphyry.

see Card 2

Associated minerals or products of value - Molybdenum.

HISTORY OF EXPLORATION AND DEVELOPMENT

The property is located at about the 4,000 foot elevation on the south side of Astlais Mountain, 11 miles east-northeast of Smithers.

Hanson, in 1924, described the showings under the name "Haig's property". The workings at that time included open cuts and 2 crosscut adits 120 and 40 feet in length. The Cimbria group of claims was owned in 1927 by A. Elmstead. The adits by that time had been extended to lengths of 165 and 50 feet.

Noranda Exploration Company, Limited, held 45 claims in the Astlais, Ast, Billie, Ralph and other groups in 1963-64. Geological mapping, geochemical and geophysical surveys, trenching, and 250 feet of diamond drilling in 2 holes was carried out. The option was subsequently dropped.

Texas Gulf Sulphur Company acquired 81 recorded claims under option in 1965. Seasonal exploration work continued into 1967 and included detailed geological mapping, geochemical and induced potential surveys, stripping, and 2,511 feet of diamond drilling in 5 holes. The option was subsequently dropped.

Blue Rock Mining Corporation Ltd., of Nevada, held the Jack, Ralph, and Jill claim groups in 1970. Geological mapping, induced potential, resistivity, magnetometer, electromagnetic, and geochemical surveys were carried out.

Twin Peak Resources Ltd. optioned the above claims in about 1973. Canadian Superior Exploration Limited optioned the property from Twin Peak in 1974. Work by Canadian Superior during the year included a magnetometer survey and diamond drilling in 4 holes totalling 1,500 feet on Jack 3 Fr. The property was restaked in 1975 under the Modified Grid system as the JA, JB, and JC to JH groups comprising about 111 units. Work by Canadian Superior during 1975-76 included geological mapping, geochemical rock surveys (179 samples), diamond drilling in 18 holes totalling 2,431 metres, and percussion drilling in 66 holes totalling 4,743 metres.

Reserves have been reported at 18 million tonnes averaging 0.36% copper (CIM Spec Vol 15, Table 1 in pocket, showing #73).

see Card 2

HISTORY OF PRODUCTION

REFERENCES

Brown, A. Sutherland; Big Onion; Report of Minister of Mines, 1966, p. 83, British Columbia Dept. of Mines.

Reports of Minister of Mines, British Columbia: 1927, p. 138; 1932, p. 85; 1964, p. 52; 1965, p. 73; 1967, p. 90.

Geology, Exploration, and Mining; British Columbia Dept. of Mines: 1970, p. 164; 1974, p. 263; 1975, pp. E143, G66; 1976, p. E152; 1977, p. E 198.

Hanson, George; Driftwood Creek Map-Area, Babine Mountains, British Columbia; Summary Report 1924, Pt. A., p. 34, Geol. Surv. of Canada.

Mineral Policy Sector; Corporation Files: "Twin Peak Mines Ltd"; "Twin Peak Resources Ltd".

Carter, N.C.; Porphyry Copper and Molybdenum deposits, West-Central British Columbia; Bulletin 64, p. 126, B.C. Dept. of Mines, 1981.

MAP REFERENCES

Geology of the Big Onion, Sc. 1":500 ft., Fig. 9 - accomp. Report of Minister of Mines, British Columbia, 1966.

Map 69-1, Smithers, Hazelton, and Terrace Areas, (Geological compilation), Sc. 1":4 miles, British Columbia Dept. of Mines.

Map 671 A, Houston, (Geol.), Sc. 1":4 miles (1942).

Map 2048, Driftwood Creek, (Geol.), Sc. 1":1 mile - accomp. Summary Report 1924, Pt. A.

Map 5318 G, Driftwood Creek, (Aeromag.), Sc. 1":1 mile.

*Map 93 L/15, Driftwood Creek, (Topo.), Sc. 1:50,000.

#Geology of the Big Onion prospect, Sc. 1 cm:80 m (approx.), Fig. G-31, Geology, Exploration, and Mining, 1975, British Columbia Dept. of Mines.

General Geology West-Central British Columbia, Sc. 1":5 miles, Fig. 8, Bulletin 64.

REMARKS

Comp./Rev. By	DMacR	DMacR	DMacR	DMacR			
Date	12-75	1-79	12-83	05-87			

PRODUCT

COPPER

PROVINCE OR
TERRITORY

British Columbia

N.T.S. AREA

93 L/15

Card 2 -
REF. CU 1

NAME OF PROPERTY

BIG ONION (ASTLAIS) (CIMBRIA)

HISTORY OF EXPLORATION AND DEVELOPMENT (continued)

DESCRIPTION OF DEPOSIT (continued)

In addition to the main plutonic rocks, there is a wide post-mineralization quartz monzonite dyke and several varieties of small late hornblende andesite dykes.

Copper and molybdenum mineralization is widely distributed in minor amounts in the Big Onion pluton, particularly near the contacts of the two phases and of the peripheral volcanic rocks. Ore minerals present include chalcopyrite, molybdenite, and minor bornite. Pyrite is ubiquitous but most abundant in volcanic rocks near the contact. The mineralization is contained largely in a stockwork of fine quartz-filled fractures but is also disseminated. In general, the best copper mineralization occurs in the quartz diorite near the quartz feldspar porphyry contact. It also occurs selectively along the quartz feldspar porphyry contact. Molybdenite occurs chiefly in stockworks in the quartz feldspar porphyry near the quartz diorite contact.

Copper and molybdenum mineralization appear to be intimately associated with the quartz diorite and is best developed along its sheared southeastern contact with andesite. Two main elongate mineralized zones with northeasterly trends parallel to Astlais Creek have been recognized: the South zone (approximately 1,200 metres by 300 metres) and the North zone (approximately 840 metres by 120 metres).

Further work by Canadian Superior in 1977 included a geochemical survey comprising 137 rock samples and an induced potential survey over 97.6 km. All shares of Canadian Superior Exploration, a jointly owned subsidiary of Canadian Superior Oil and Superior Oil Company, were acquired by the latter company as of January 3, 1980. Superior Oil was wound up in 1982 and the mining activities were taken over by Falconbridge Limited and McIntyre Mines Ltd. Reserves are reported as 90 000 000 tonnes at 0.3% Cu (Preliminary Map 65, BCDM, 1986).