PRODUCT	COPPER	PROVINCE OR TERRITORY	British Columbia	N.T.S. AREA	93 L/9	REF. CU 1

NAME OF PROPERTY TOPLEY RICHFIELD (RICHFIELD) (RED TOP)

OBJECT LOCATED – northeast corner of Red Top claim (Recorded No. 2924).

UNCERTAINTY IN METRES 100. Lat. 54°35'27" Long. 126°15'30"

Mining Division Omineca District Range 5 Coast

County Township or Parish

Lot Concession or Range

Sec Tp. R.

OWNER OR OPERATOR AND ADDRESS

DESCRIPTION OF DEPOSIT

The country rock is Jurassic basaltic and andesitic flows, tuffs, and breccias, which are intruded, on the northerly slopes of Tachek Mtn, by Jurassic and (?) Cretaceous granitic rocks. The volcanics are strongly sheared locally. One zone of post-ore shearing is so far known. It is exposed by the mine workings and lies chiefly west of the mineral deposits, but also includes them in some places. The sheared zone has not been completely crosscut, but it is more than 75 feet wide. The sheared rock is a fissile, soft, chlorite schist. Some shearing probably took place prior to mineral deposition and some, if not all, certainly took place later.

Near the mineral deposits the volcanics are intensely altered to a soft rock consisting chiefly of quartz, calcite, and dolomite, and showing pronounced epidotization; the altered rock is known locally as "topleyite".

In places alteration is spread over wide areas; elsewhere it is confined to numerous narrow zones along fractures. The fractures are in places occupied by veins and in places there

see Card 2 ....

Associated minerals or products of value – Gold, silver, zinc, lead.

HISTORY OF EXPLORATION AND DEVELOPMENT

The property is located at the 3,600 foot elevation on the southwesterly slope of Tachek Mountain, 6 miles north of Topley.

The Red Top group, comprising the Red Top, Last Chance, Francis, Lucky Boy, and Wesley claims, was staked in June 1926 by F.H. Taylor and Wesley Banta. A crosscut adit was driven about 60 feet at that time. Surrounding claims were acquired in November 1926 through option and staking, by The Porcupine Goldfields Development & Finance Company, Limited; trenching was reported.

Standard Silver-Lead Mining Co., of Spokane, optioned the Red Top group in December 1926. An inclined shaft was sunk to 100 feet and about 600 feet of crosscutting and drifting was carried out from the bottom; the option was given up in July 1927.

Owner F.H. Taylor and associates in October 1927 incorporated Topley Richfield Mining Company, Limited, to continue the exploration and development work. Underground work began late in 1927 and continued until October 1929. On the "North vein" the inclined shaft was deepened to the 220 foot level and drifting and crosscutting carried out at the 200 foot level; the workings on the two levels were extended to a total of over 5,000 feet of drifts and crosscuts. A raise was put up to the surface for ventilation purposes. A crosscut was driven east for 400 feet from the workings on the "North vein" to intersect the "East vein" about 150 feet below its outcrop. Diamond drilling during this period apparently included 8 underground holes totalling 1,847 feet, and 8 surface holes.

The property was restaked in 1934 as the Topley and Richfield groups by R.W. Innes, of Topley, and L.B. Warner and A. Chisholm of Smithers. On the newly discovered "Innes vein", about 900 feet northeast of the old workings, an inclined shaft was sunk on the vein for 35 feet, and from the bottom of the shaft about 60 feet of drifting was carried out. A small amount of ore was shipped to the Provincial Government Sampling plant at Prince Rupert in 1941.

Owner R.W. Innes reportedly optioned the property to Goodrich Mining Co., Ltd., in 1946 but no work was reported under the agreement. Topley Mining Syndicate Ltd., incorporated April 1951, optioned from R.W. Innes the 4 claims

see Card 2 ....

Mineral Development Sector, Department of Energy, Mines and Resources, Ottawa.
503304 *

HISTORY OF PRODUCTION

A shipment of 0.32 tons to the Provincial Government Sampling plant at Prince Rupert in 1941 assayed: gold, 0.72 ounce and silver 26.2 ounces per ton, copper, 4.7%, lead, 2.5%, zinc 4.6%.

MAP REFERENCES

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

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

Map 5312 G, Topley, (Aeromag.), Sc. 1":1 mile.

#Map 93 L/9 W, Topley, (Topo.), Sc. 1:50,000.

REMARKS

Comp./Rev. By	DMacR	DMacR	DMacR				
Date	12-75	03-80	08-86				

REFERENCES

Reports of Minister of Mines, British Columbia: 1926, p. 138; 1927, pp. C-140-147 +, 398; 1928, p. 173; 1929, p. 179; 1930, p. 363; 1935, p. C-39; 1937, p. C-26; 1941, p. 43; 1946, p. 89; 1951, p. 117; 1952, p. 95; 1955, p. 25; 1956, p. 28.

++Hanson, George and Phemister, T.C.; Topley Map-Area, British Columbia; Summary Report 1928, Pt. A., pp. 71-74, Geol. Surv. of Canada.

Kerr, F.A.; Preliminary Report, Mineral Resources along the Canadian National Railway between Prince Rupert and Prince George, British Columbia; Paper 36-20, p. 154, Geol. Surv. of Canada.

Lang, A.H.; Houston Map-Area, British Columbia; Paper 40-18, p. 13, Geol. Surv. of Canada.

Galloway, John D.; Summary of Mining Operations for 6 Months Ended June 30, 1929; Bulletin No. 1, 1929, p. 26, British Columbia Dept. of Mines.

Mineral Policy Sector; Corporation Files: "Topley Richfield Mining Company, Limited"; "Seemar Mines Limited"; "Cobre Exploration Limited".

Whiting, F.B.; Geological Report on the Richfield Property; 24/01/80 - in VSE, SMF 22/02/80, Cobre Exploration Limited.

Geology, Exploration and Mining; British Columbia Dept. of Mines: 1975, pp. E 140, G 65.

Exploration in British Columbia, BCDM: 1979, p. 228; 1980, p. 343; 1981, p. 142; 1983, pp. 443, 444.

George Cross News Letter: 20/10/83.

PRODUCT	COPPER	PROVINCE OR TERRITORY	British Columbia	N.T.S. AREA	93 L/9 -	Card 2 - REF. CU 1

NAME OF PROPERTY TOPLEY RICHFIELD (RICHFIELD) (RED TOP)

DESCRIPTION OF DEPOSIT (continued)

are tabular replacement deposits. All appear to be somewhat lenticular. They show great irregularity in attitude from flat to vertical, though there is a more common strike direction. Several occurrences, including what was known locally as the "North vein" and the "East vein", have been explored.

The development has shown that the "North vein" is not a single mineral deposit, but consists of veins and replacement deposits. The northern part of the workings expose a definite quartz sulphide vein striking north 30 degrees east and dipping 45 degrees west. The vein is 280 feet long and 3 to 12 feet wide. It consists essentially of quartz and pyrite and where exposed in the workings is below commercial grade. About 220 feet north of the shaft, near the south end of the quartz-pyrite vein first mentioned, a horizontal quartz sulphide vein has been followed east for 100 feet. South of the shaft a drift driven south for 100 feet encounters two vein-like replacement deposits each several feet wide and about 5 feet apart. They strike north 30 degrees east and dip 45 degrees to 10 degrees west. They may be faulted portions of a single deposit. In any case the deposits appear to enter the east wall of the drift and the northward continuation should pass east of the shaft. Another definite vein is exposed in the crosscut to the east, 60 feet north of the shaft. The strike of this vein is about north 30 degrees east and the dip is vertical. Between the shaft and the flat vein 220 feet farther north are at least three tabular replacement deposits, each several feet thick and 2 to 6 feet apart. They strike roughly north 30 degrees east and dip at varying angles west. The southward continuation of these deposits should pass west of the shaft. These deposits are folded and broken.

The replacement deposits are dark in colour, in general darker than the enclosing rock. The material of the deposits is hard and consists of quartz and calcite or dolomite and the sulphides pyrite, arsenopyrite, sphalerite, chalcopyrite, galena, and tetrahedrite. The sulphides are fairly uniformly distributed through the gangue.

The "East vein" is about 370 feet east of the most northerly known point on the "North vein". It strikes north and dips 65 degrees west. Open-cuts prove a length of 100 feet and a width of 3 feet. This is a clear-cut vein occupying a single fissure.

see reverse Card 2 ....

HISTORY OF EXPLORATION AND DEVELOPMENT (continued)

(Red Top group) covering the main workings, and staked 12 adjacent claims (North Star group). Geological mapping, trenching, and sampling were carried out in 1951-52.

Silver Standard Mines Limited in 1955 optioned the 18 claim property and during 1955-56 carried out 955 feet of diamond drilling in 3 holes. Early in 1958 the workings were unwatered and sampled, and some underground diamond drilling was carried out. The option was apparently given up in 1959.

Seemar Mines Limited in March 1967 acquired from Ethel Short, of Vancouver, an option to purchase the Red Top 1-7 and Short 1-7 claims, which had been recorded in May 1966. The company staked the adjacent H.H. 1-33 claims. Work to September 1967 included magnetometer and electromagnetic surveys, and 2,700 feet of diamond drilling in 10 holes; drilling was continued to a total of about 14 holes. The option was subsequently given up.

Canadian Superior Exploration Limited held the property in 1975 as the Richfield 1-4, Red Top, and TR 1-36 claims. Work included geological mapping, an induced potential survey over 4.6 line-kilometres, a silt geochemical survey (99 samples), and surface diamond drilling in 4 holes totalling 405 metres on the Red Top claim; 3 of the holes failed to reach bedrock.

The ground was restaked in May 1979 by F.B. Whiting of West Vancouver as the CDF 1-4 claims and the Richfield 1 and 2 claims (40 units), which encompass the CDF group. Cobre Exploration Limited optioned a 100% interest in the property by an agreement dated August 1979. Reserves developed in the old workings were reported at 15,000 tons at 0.25 oz/t Au and 9.5 ozs/t Ag (NM 13/03/80). Work by Cobra in 1980-81 included a magnetometer survey, 5 410 m of dd in 29 holes, 151 m of percussion drilling and 141 m of rotary drilling. Based on 1980 work, drill indicated reserves were reported as 170,000 tons at 0.124 oz/t Au, 5.6 oz/t Ag (Northern Miner, Feb 12, 1981); Cobre earned a 92.5% interest in the property.

Cominco Ltd optioned a 20% interest in the property in 1983. Work that year included an induced polarization survey over 14 km, an electromagnetic survey over 12.5 km and 656 m of diamond drilling in 5 holes.

The company name (Cobra) was changed in December 1983 to Mountain-West Resources Inc.

DESCRIPTION OF DEPOSIT (continued)

It is roughly banded in that one of the constituents, tetrahedrite, is commonly present in narrow bands a quarter of an inch or more wide. The vein consists of quartz and the sulphides, pyrite, chalcopyrite, sphalerite, galena, and tetrahedrite. Two diamond drill holes drilled to intersect the "East vein" showed narrow mineral deposits slightly below commercial grade from 100 to 200 feet below the surface. These, although not commercial, contain 0.6 to 0.2 ounce of gold and from 1 to 4 ounces of silver per ton.

In 1934 a discovery was made about 900 feet northeast of the old workings. This consists of a shear zone about 5 feet wide striking north to north 45 degrees east and dipping 45 degrees southeast. This zone contains a lenticular quartz vein up to 2 feet wide, well mineralized with pyrite, chalcopyrite, sphalerite, and galena.

The mineralization is erratic, the gold ranging up to 0.5 ounce a ton and the silver up to 35 ounces a ton. The altered wall-rock in places carries gold up to 0.13 ounce a ton with some silver. However, the high-grade deposits are too small and irregular to be of economic value and no zone is indicated that might be workable as a whole. The induced potential survey carried out in 1975 indicated the overall host alteration zone has a probable width of 1,300 to 1,400 feet and extends north-south for at least 2,000 feet.