

PRODUCT SILVER  
PRODUIT

PROVINCE OR PROVINCE OU  
TERRITORY TERRITOIRE

British Columbia

N.T.S. AREA 93 L/1  
RÉGION DU S.N.R.C.

REF. AG 1  
RÉF.

NAME OF PROPERTY  
NOM DE LA PROPRIÉTÉ S.G., SAM GOOSLY (EQUITY SILVER)

OBJECT LOCATED - Main zone.  
OBJET LOCALISÉ

UNCERTAINTY 300 m FACTEUR D'INCERTITUDE	Lat. 54°11'20" Lat.	Long. 126°15'40" Long.
Mining Division Omineca Division minière	District District	Coast, Range 5
County Comté	Township or Parish Canton ou paroisse	
Lot Lot	Concession or Range Concession ou rang	
Sec Sect.	Tp. Ct.	R. R.

OWNER OR OPERATOR/PROPRIÉTAIRE OU EXPLOITANT  
Equity Silver Mines Limited

DESCRIPTION OF DEPOSIT/DESCRIPTION DU GISEMENT

The Goosly Lake area is underlain by a diverse suite of Mesozoic and Tertiary volcanic rocks and a number of small intrusions. The main stratigraphic divisions comprise a lower sequence of metamorphic strata, believed to be Early Mesozoic age, and an upper sequence of cover rocks of Tertiary and possibly Lake Mesozoic age. The oldest stratigraphic unit is exposed in a number of small windows eroded in the Tertiary cover rocks. The largest exposure, on the SG property, consists of a thick section of steeply dipping dacitic tuff, tuff breccias, and cherty conglomerate. Locally this succession is capped by Eocene feldspar porphyry lavas. Igneous intrusions on this property include the Goosly biotite granitic stock and, about ½ mile to the east, a gabbro-syenomonzonite stock. An east-west section of the intervening area shows a thickness of about 2,500 feet of steep, westerly dipping Mesozoic volcanic and sedimentary beds which are intruded by a swarm of nearly vertical Tertiary dykes with an apparent total thickness of about 500 feet. The upper and most westerly Mesozoic beds are tuffs and lapilli tuffs with a new zones of  
see Card 2 ....

HISTORY OF EXPLORATION AND DEVELOPMENT  
HISTORIQUE DE L'EXPLORATION ET DE LA MISE EN VALEUR

The showings are located at the 4,300 foot elevation about 3 miles east-northeast of Goosly Lake and 21 miles southeast of Houston.

In 1961, Kennco Explorations (Western) Limited, undertook regional geochemical surveys in the Central Interior of B.C. In the Houston area, particular note was taken of a window of Hazelton rocks surrounded by Tertiary volcanic rocks, shown on Map 671 A. The sediments of a stream east of Goosly Lake were found to be slightly anomalous in zinc and copper. With other priorities, nothing was done with the information at that time. Sometime later Kennco's geochemist, J. Barakso, suggested that the use of fluorine in prospecting should be investigated. He set up a method for the routine analysis of fluorine, and tried it on a number of geochemical samples, including some from the Houston area. Sediments from the same creek that was slightly anomalous in zinc and copper, also proved anomalous in fluorine, with a value of 635 ppm in comparison with a local background of 400 ppm.

On the basis of these few geochemical facts, a definite program to investigate the area east of Goosly Lake was launched in 1967. Prospecting disclosed evidence of quartz monzonite containing chalcopyrite in the drainage of the anomalous creek and the SG group of 58 claims was located. During 1968 the company carried out geological mapping, magnetometer and induced polarization surveys, a geochemical soil survey, trenching and stripping, and 1,200 feet of diamond drilling in 4 holes. The property was expanded to 307 claims in the SG, Snow and T groups. Work during 1969 included a total coverage by airborne magnetometer and electromagnetic surveys, further ground magnetometer and induced polarization surveys, a geochemical soil and silt survey, and 16,905 feet of diamond drilling in 26 holes. Exploration work during 1970 included detailed geological mapping, magnetometer and induced polarization surveys, a geochemical soil survey, and diamond drilling totalling 22,277 feet in 28 holes. During 1971 further geochemical soil surveying (1,129 samples) and 2,437 feet of diamond drilling in 3 holes was carried out.

Equity Mining Capital Limited, a private company, in 1972 acquired from Kennco an option on a 50% interest in the property. Equity, on a 50-50 basis with Congdon and Carey Ltd.,  
see Card 2 ....

Associated minerals or products - Copper, gold, antimony, arsenic., fluorite.  
Minéraux ou produits associés

+Ney, C.S.; Anderson, J.M.; Panteleyer, Andre; Discovery, Geological Setting and Style of Mineralization, Sam Goosly Deposit, B.C.; The Canadian Institute of Mining and Metallurgy, Bulletin, Vol. 65, No. 723, July 1972, pp. 53-64.

Report of Minister of Mines, British Columbia: 1968, p. 137.

Mineral Policy Sector; Corporation Files: "Equity Mining Capital Limited"; "S.G. Mining Inc."; "Granby Mining Corporation"; "Equity Silver Mines Limited"; "Placer Development Limited".

Mines Branch, Ottawa; Investigations in Ore Dressing and Metallurgy; 1971, Investigation Report 71-3.

Enthusiasm at Equity mine as startup nears; Western Miner, July 1980, p. 19.

Geology, Exploration, and Mining; British Columbia Dept. of Mines: 1969, pp. 142-147; 1970, pp. 119-127<sup>++</sup>; 1971, p. 168; 1973, p. 335; 1974, p. 255; 1975, p. E 138; 1977, p. E 189; 1978, p. E 215.

Geological Fieldwork, British Columbia Dept. of Mines: 1976, p. 55; 1978, pp. 132-137 (Paper 1979-1); 1979, pp. 123-125 (Paper 1980-1)<sup>+++</sup>.

Wetherell, D.G.; Geology and Ore Genesis of the Sam Goosly Copper-Silver-Antimony Deposit, British Columbia; M.Sc. Thesis, U. British Columbia, 1979. (Abstract in CIM Bull., Nov. 1980, p. 31).

MAP REFERENCES/RÉFÉRENCES CARTOGRAPHIQUES

Geology of the Owen Lake, Parrott Lakes, Goosly Lake Area, Sc. 1":1.6 miles, Fig. 10, Geology, Exploration, and Mining in British Columbia, 1970, British Columbia Dept. of Mines.

#Geological map of the Sam Goosly property, Sc. 1":900 ft., Fig. 26, Geology, Exploration and Mining, 1973, p. 334, British Columbia Dept. of Mines.

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

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

Map 5302 G, Colleymount, (Aeromag.), Sc. 1":1 mile.

\*Map 93 L/1, Colleymount, (Topo.), Sc. 1:50,000.

REMARKS/REMARQUES

Comp./Rev. By Comp./rév. par	DMacR	DMacR	DMacR	DMacR			
Date Date	11-75	04-78	08-79	05-81			

PRODUCT SILVER PRODUIT	PROVINCE OR TERRITORY PROVINCE OU TERRITOIRE	British Columbia	N.T.S. AREA 93 L/1 RÉGION DU S.N.R.C.	REF. AG 1 RÉF.
NAME OF PROPERTY NOM DE LA PROPRIÉTÉ	HISTORY OF EXPLORATION AND DEVELOPMENT (continued) HISTORIQUE DE L'EXPLORATION ET DE LA MISE EN VALEUR			
<p data-bbox="378 170 913 203">S.G., SAM GOOSLY (EQUITY SILVER)</p> <p data-bbox="21 235 1018 267">DESCRIPTION OF DEPOSIT/DESCRIPTION DU GISEMENT (continued)</p> <p data-bbox="21 284 1018 1047">chert pebble conglomerate and laminar bedded tuffaceous argillite. The center part of the section shows a progressive increase stratigraphically downward in the volume of tuff breccia and coarse volcanic debris. In the lower part of the succession, dacitic tuff breccia with some intercalated chert pebble conglomerate is found overlying a tongue-like body of shattered dacite. The base of the stratigraphic section is composed of several hundred feet of chert pebble conglomerate. Pyrite occurs throughout the section in joint and cleavage fillings and less commonly as disseminations. Specularite and sphalerite accompany the pyrite locally. A replacement sulphide deposit consisting of lenses of pyrite-chalcopyrite-pyrrhotite and disseminations of pyrite-chalcopyrite-tetrahedrite occurs in the Mesozoic strata adjacent to the west side of the gabbro-syenomonzonite stock. The main mineralized zone, about 175 feet thick, is composed of finely disseminated sulphides and coarse-grained sulphide replacement bodies located in the central part of the dacite tongue. The disseminated sulphide phase forms the bulk of the mineralized zone. The coarse sulphide replacements are irregularly distributed in the zone of intense sulphide disseminations. These structures are lens-like bodies as much as 10 feet thick. Fluorite, tourmaline, and scorzalite are the most conspicuous accessory minerals in the sulphide zone and adjacent host rock.</p>	<p data-bbox="1018 235 2060 527">of Denver, carried out a diamond drill program during 1972-73 to outline the limits of the mineralized zone; some 44,800 feet of drilling was done in 100 holes. Open pit reserves were estimated at 43,511,000 tons averaging 0.026 ounce gold per ton, 2.78 ounces silver per ton, 0.33% copper, and .085% antimony (NM 06/03/75). Also during 1973 a decline was driven 369 feet and 212 feet of crosscutting carried out to obtain a bulk sample from near the centre of the proposed open pit.</p> <p data-bbox="1018 527 2060 950">S.G. Mining Inc. was incorporated in March 1974 by Equity Mining Capital (50%) and Congdon and Carey (50%) to acquire the 50% interest in the property held under the Kennco option; through subsequent expenditures on exploration and development S.G. Mining increased its interest in the property to 70%. Work during 1974-76 included a geochemical survey over 8 line-miles, trenching, 8,200 feet of diamond drilling on SG 28, and feasibility studies. In April 1976 Equity Mining Capital Limited amalgamated with S.G. Mining Inc. under the name Equity Mining Corporation, the new company retaining the 70% interest. Exploration work during 1977 included a gravity survey over 5.6 km, trenching, and 2,000 metres of diamond drilling in 32 holes.</p> <p data-bbox="1018 950 2060 1112">Granby Mining Corporation in 1977 acquired an option to purchase the 30% royalty interest retained by Kennco. A proposal whereby Granby would put the mine into production, dependent on the sale of the concentrates to Boliden Aktiebolag, of Stockholm Sweden, was not carried out.</p> <p data-bbox="1018 1112 2060 1437">Placer Development Limited in June 1978 purchased the 30% royalty interest from Kennco for \$5,100,000, and also purchased an undivided 70% interest in the property from Equity Mining Corporation for \$2,300,000. In December 1978 Placer transferred these interests to a newly formed wholly owned subsidiary, Equity Silver Mines Limited. In February 1979 Equity Mining Corporation amalgamated with Equity Silver Mines Limited under the latter name; under the amalgamation agreement Placer Development retained a 70% interest in Equity Silver Mines Limited.</p> <p data-bbox="1018 1437 2060 1534">Reserves mineable in two open pits were reported as 27,970,000 tonnes averaging 3.10 oz/ton silver, 0.028 oz/ton gold, 0.384% copper (Northern Miner 03/07/80). Reserves in</p> <p data-bbox="1417 1550 1890 1583" style="text-align: right;">continued reverse Card 2 ....</p>			

HISTORY OF EXPLORATION AND DEVELOPMENT (continued)  
HISTORIQUE DE L'EXPLORATION ET DE LA MISE EN VALEUR

the Main zone were estimated at 21.2 million tonnes at 98.4 gms/tonne Ag, 0.825 gm/tonne Au, 0.353% Cu, and in the South Tail zone 6.8 million tonnes at 131 gms/tonne Ag, 1.38 gms/tonne Au, 0.48% Cu (Western Miner, July 1980, p. 22). Construction of mining facilities began in April 1979 and the 4,500 ton per day mill began commercial production of unleached concentrate on October 1, 1980, after a brief tuneup period. Mining began in the South Tail zone open pit. A leach plant to recover arsenic and antimony from the complex concentrates was placed in operation in 1981.