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COPY

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MCNEIL ENTERPRISES' PROPERTIES,
Olalla-Penticton Area, Southern B.C.

November 19, 1971.

Herewith John Lund's summary of the properties of McNeil Enterprises which he either visited in person or perused the available literature.

McNeil Enterprises had some form of agreement regarding the following properties: Golconda, Bullion, Homestead and Great Eastern. All of these properties are situated within a radius of one mile of the town of Olalla, B.C.

In the Anderson Mountain area, 7 miles northwest of Olalla, McNeil Enterprises had options on 16 square miles of claims and they refer to these claims as the Apex-Dividend-Anderson Mountain claims.

The Rusty group is located 20 miles north of Westbridge, B.C. on the East Kettle River.

The deposits in the immediate vicinity of Olalla are either vein type or skarn deposits consisting of chalcopyrite and pyrrhotite, and all of them were considered too small to justify work on our part.

The Apex-Dividend-Anderson Mountain deposits again are small skarn types occurring near the contact of porphyries with volcanic rocks. The Rusty deposit consists of shear zones located near the contact between diorites on the west and meta-volcanic rocks on the east. Northerly trending dykes of feldspar porphyry occur at or near the contact. Within the shear zones the mineralization is pyrite and arsenopyrite carrying chalcopyrite and some gold values. The rocks between the shear zones are essentially unmineralized except for weak pyritization.

None of the McNeil Enterprises properties examined were considered sufficiently interesting to justify further work on our part.

WMS/jm
Encls.

W.M. Sirola.

Report on an Examination of Properties
held by McNeil Enterprises in the
Olalla-Penticton Area of Southern, B.C.

Introduction:

McNeil Enterprises, a private company with head office in Penticton, B.C., has acquired through option and staking a number of old prospects in an area extending from Olalla northward to Apex Mountain. Included among the properties held are the Golconda Mine, and the Bullion, Homestead and Great Eastern prospects all situated in Olalla, B.C. A large block of claims north of Olalla encompasses showings on Apex, Dividend and Anderson mountains. In addition, a small claim group known as the "Rusty" group, situated about eight miles east of Beaverdell, is held by McNeil Enterprises.

The Golconda and Great Eastern properties at Olalla and "Tim Tunnel" at Anderson Mountain were examined. There was about 1½ inches of fresh snow on the Apex-Anderson-Dividend mountains, consequently, the higher prospects were not visited. Clint Hord, President of McNeil Enterprises, acted as guide. Examination was made between October 18 and 21, 1971. Weather during this period was unsettled.

Apex-Dividend-Anderson Mountains Area:

This area covers approximately 16 square miles centered 7 miles north-northwest of Olalla. Highest point is Apex Mountain (elevation 7,372') - relative relief is approximately 2,500 to 3,000 feet. The claims area can be reached by any one of three roads: (a) the road up Keremeos Creek; (b) a good gravel road up Loak Creek, or (c) a road up Olalla Creek. These all branch off the main Princeton-Penticton highway near Olalla.

Snow prevented a thorough examination of showings in this area. However, I did examine three bulldozer trenches and road cuts near Anderson Mountain on the old Tim Tunnel showing. In 1963 I had looked at several showings on Dividend Mountain for Empire Development Company Ltd. The conclusions arrived at here are based on notes from that visit and from present observations at the Tim Tunnel showing.

Regionally, the area is underlain mainly by Triassic(?) cherts, argillites, limestones and tuffaceous sediments of the Shoemaker formation that are in part overlain by northeasterly trending belts of andesites and basalts of the Old Tom formation. The Old Tom is also of Triassic(?) age. All the above rocks have been intruded by granitic rocks of Jurassic age believed to be related to the Okanagan intrusions. Composition of the granitic rocks vary from gabbro to light coloured siliceous granites. The more basic intrusions tend to be peripheral to the larger more acid intrusion and as dykes cutting sedimentary and volcanic rocks. Mineralization tends to occur in, or on, the margins of the Old Tom formation.

The Tim Tunnel showing lies between 4,500 and 5,000 feet in elevation between Cedar and Look Creeks. Mineralization consists of chalcopyrite with pyrite and pyrrhotite in garnet skarn along the contacts between altered volcanic rocks of the Old Tom formation and Shoemaker cherts. The volcanic and sedimentary rocks are cut by a basic feldspar porphyry dyke. The skarn zone is spacially close to the porphyry dyke and may be genetically related. Snow conditions prevented a good examination of the rock relations.

Deposits on Dividend Mountain are similar to the Tim Tunnel showing. They consist mainly of small skarn zones containing pyrrhotite, pyrite and chalcopyrite. Grab samples taken by myself from one of the trenches gave 0.57% Cu. My conclusion in 1963 was that these occurrences are not economically important in themselves, but illustrate the presence of copper mineralization in small occurrences over a broad area. The skarn zones on both Dividend and Anderson Mountains do not always contain chalcopyrite. Mineralization is erratic, therefore, within the skarn zones.

Apex Mountain was not visited. A number of exploratory tunnels totaling about 1,600' and a 120' shaft have been driven on this property prior to 1945. From these workings 109 tons of ore were extracted which produced 185 ounces of Au, 54 ounces of Ag and 1,518 pounds of Cu. The different showings are well described in the B.C. Minister of Mines Annual Report for 1967, and rather than reproduce it here, a copy of that report is attached. It does appear that the deposits are in places high grade, but unfortunately discontinuous. Any further work here should be directed toward establishing mineral controls and a search for larger ore zones. Mineralization here also appears to be related to Old Tom rocks.

All the above deposits are related to the Old Tom formation. Additional exploration therefore should be directed toward a delineation of Old Tom rocks. Since the Old Tom is predominantly andesitic and basaltic in composition, and is bounded by sedimentary rocks, the formation could likely be delineated by a low level airborne magnetometer survey in conjunction with geological mapping. Volcanic rocks of the Old Tom examined are slightly to moderately magnetic, and hence would be susceptible to this type of survey. It would be difficult, however, to distinguish between variations in magnetic intensity caused by the lavas and anomalies caused by skarn zones carrying pyrrhotite and chalcopyrite.

In view of the work done to date in this area, I must conclude that the probability of finding a mineralized zone large enough to be economic is not great. I do not feel it justifies a major exploration project as would be necessary to find a "hidden" ore deposit.

Homestead-Great Eastern Properties:

These properties are at Olalla lying on the west side of the Penticton highway. Only the more southerly Great Eastern claims were examined. Topography is steep and any development would be underground.

Underlying rocks are pyroxinite. These have been intruded by a syenite intrusion and leuco-syenite dykes. North of the syenite-pyroxinite contact the rock is brecciated and coarse grained, consisting mainly of coarse plates of black biotite with olivine and scattered chalcopyrite. This zone is narrow and nowhere carries sufficient chalcopyrite to be of economic interest.

The Homestead showings were not examined. They were reported by the owner, Clint Hord, to be similar to those on the Golconda. A large gossan area on the bluffs above the highway is reported to carry some copper. A number of showings occur around the pyroxinite stocks and gabbro-diorite masses on the peripheries; all appear to be narrow zones. Average width to the veins developed in the Golconda is less than 3 feet with values insufficient to support an underground operation.

Bullion Property:

This area was not examined. Topography is rugged and mineral occurrences and old workings are about 800-1,000 feet above the valley floor. It is a skarn type deposit in argillites and limestones near a diorite-gabbro intrusion. The zones are not continuous and the greatest width to economic grade mineralization is 6 feet. There are five adits and an inclined winze on the property driven prior to 1908. No additional work has been done since that time to my knowledge.

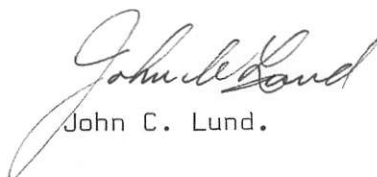
Summary and Conclusions:

The Apex-Dividend-Anderson Mountain deposits are small skarn type deposits within or near the Old Tom volcanic rocks. Mineralization consisting of pyrrhotite, pyrite and chalcopyrite is erratically distributed within the skarn zones. Although the relation is not obvious where porphyry dykes occur, there is usually some skarn with or without chalcopyrite. The size of known deposits is small - any further exploration would have to be directed at finding new and larger deposits. The probability of finding such a deposit is remote.

The Homestead-Great Eastern deposits are related to the Olalla pyroxinite intrusion. The Great Eastern consists of some scattered chalcopyrite in a coarse biotite-pyroxinite breccia near a syenite dyke. The Homestead is a vein type deposit, as of yet unexplored. The Bullion, east of Olalla, is a skarn deposit in argillites and limestones near the diorite-gabbro contact. Chalcopyrite and pyrrhotite are irregularly distributed in the skarn zone.

All of the Olalla deposits are small in size and would be underground operations. The size and grade potential based on early work, precludes the possibility of supporting an underground operation.

I cannot see any justification for any further work at this time and recommend that Kerr not pursue this any further. The owners should be notified of our decision.


John C. Lund.

1967 surface geological mapping was done over an area half a square mile, and three surface drill-holes totalling 637 feet and 14 underground drill-holes totalling 2,319 feet were diamond drilled. Six men worked a six-month period under the direction of A. G. Ditto, project manager.

Gold-Molybdenum

Nighthawk, Good Hope (49° 120° S.E.) Company office, 1500, 355 Burrard Street, Vancouver 1. The Nighthawk and Good Hope groups of 31 Crown-granted claims are 4 miles by road from Hedley. During 1967 some geological mapping and 500 feet of bulldozer trenching were done. Two men worked for two weeks under the direction of John Lamb, consultant.

[Reference: Assessment Report No. 971.]

Copper

KEREMEOS

Kopr, Papex, Paychex (49° 119° S.W.) Company office, 306 Martin Street, Penticton. *Apex Exploration and Mining Company, Ltd.* By N. D. McKechnie. N. E. Giddy, president; H. S. Wish, secretary; W. J. Weymark, consulting engineer. The property comprises 107 recorded mineral claims, the Kopr, Papex, Paychex, Wampus, Jill, Prosper, Stormy, Summit, and Giddy groups, and four mineral leases, Nos. 49, 50, 52, and 53, situated on the southeastward slope of Apex Mountain at the headwaters of Cedar, Loak, and Keremeos Creeks and about 25 miles southwest of Penticton. The claims are crossed by a forestry access road which leads from the Keremeos-Penticton highway along Cedar and Loak Creeks to the cirque below Apex Mountain lookout and thence to the lookout road about 1 mile north of the summit.

In 1967 work consisted of trenching and diamond drilling at the Papex showing and on the Australian claim (Lot 690 (S.), Mineral Lease 50), about 3 miles north and west of the Papex, at the northeast corner of the claim group. On the Apex claim (Lot 659 (S.), Mineral Lease 53) about 3,000 feet southwest of the Australian showings, there are some 1,600 feet of interconnected horizontal workings from a southwestward-trending adit which connects with a 120-foot shaft. Work was planned here but had not begun at the time of the writer's visit. The Apex workings in 1945 produced, from stoping at the side of the shaft, 109 tons of ore, from which were obtained 185 ounces of gold, 54 ounces of silver, and 1,518 pounds of copper.

The Papex showing is described in the 1966 Annual Report, page 189; the following remarks are supplementary. The unmineralized fault zone, which is the principal structural feature now, is exposed for widths of 80 to 100 feet in two trenches of 100 feet difference in elevation and about 120 feet apart horizontally. The dominant plane of faulting strikes north 45 degrees east and dips 75 degrees to 80 degrees northwestward. The strike and dip given for this fault in the 1966 report prove to be of subsidiary planes. In the footwall of the north 45 degrees east fault, a 10-foot-wide unmineralized fault strikes north 80 degrees east and dips 75 degrees northward. It is exposed at two points on strike about 300 feet apart; the intersection with the north 45 degrees east fault is not exposed. The strike and dip are parallel to those of the principal unmineralized fault exposed at the Kopr showing (*see Ann. Rept., 1966, p. 189*) some 2,000 feet to the south-southwest.

Two intrusive rocks now are exposed at the Papex showing. Syenite porphyry forms the hangingwall of the north 80 degrees east fault at its eastward exposure and

the footwall is hornblende monzonite. Sheared hornblende monzonite also is exposed in the north 45 degrees east fault. The hornblende monzonite is similar to the "diorite" of the Kopr showings. Both rocks show some development of saussurite and uralite, more so in the hornblende monzonite than in the syenite porphyry. Disseminated pyrite is the only mineralization.

At 120 feet in the footwall of the north 45 degrees east fault a 10-foot width of skarn carrying magnetite and sparse chalcopyrite is bounded by two faults which are subparallel to the north 45 degrees east fault. The fault contacts are with Shoemaker chert.

Although the relationship between the faulting at the Papex and Kopr showings apparently is less direct than was suggested in the 1966 report, the prospecting situation remains that the mineralized blocks within the fault zone represent segments of mineralization in the Old Tom greenstones and that, in consequence, the most likely rocks to prospect are the Old Tom greenstones along but outside the fault structures.

Attempts to drill through the fault structure at the Papex were abandoned because of mechanical difficulties.

The mineral showings on the Australian claim are on the north side of the cirque, near the top of Apex Mountain at about 6,300 feet elevation. These and showings on neighbouring claims have been known since about 1900 and are mentioned in Annual Reports of 1900 to 1902, 1911, and 1945. All of them lie within a generally northeasterly striking band of Old Tom greenstones lying east of the summit of Apex Mountain. The Old Tom rocks there are underlain by highly siliceous rocks of the Independence Formation (*Geol. Surv., Canada, Map 628A, Olalla*).

The Australian workings consist of three trenches ranging in length from 100 to 300 feet and lying about 30 feet in elevation one above the other. At about 60 feet below the lowest trench an old adit has been driven some 125 feet northeastward to a point under the lowest trench. Thirty feet higher in elevation a second old adit has been driven about 10 feet northeastward.

The principal rock type is a volcanic breccia altered variously to amphibolite-biotite-andesine assemblages; there is some minor garnet-epidote skarn at limestone contacts. Two thin beds of limestone striking north 10 to 20 degrees east and dipping about 45 degrees eastward, and 4 and 8 feet thick respectively, cross the trenches. Two thin beds of a light-coloured siliceous breccia now composed chiefly of two generations of quartz which replace hornblende and clinopyroxene may represent old bedding faults, although they are not mineralized with sulphides. Sulphide mineralization occupies two fracture zones in the amphibolite breccia; one, exposed in the middle trench, strikes north 3 degrees east, dips 50 degrees westward, and is 2 feet wide; the other, in the lowest trench, strikes north 75 degrees east, dips 75 degrees southward, and is 4 feet wide. This mineralization is exposed also at the portal of the 10-foot adit which, however, trends across instead of along it. The sulphides in both fractures are pyrrhotite with minor chalcopyrite. At the portal of the 10-foot adit the sulphides are cut by stringers of augite diorite striking north 5 degrees west and dipping 80 degrees eastward, striking north 20 degrees east and dipping 60 degrees northwestward.

Westward about 100 feet from the 10-foot adit a northward-striking fault, confirmed by a diamond-drill hole, truncates the amphibolite breccia. Westward the rock is a coarse agglomerate composed of large siliceous blocks, up to several feet across, in a dark matrix. It is intruded by augite diorite. Outcrop distribution indicates that the augite diorite contact is offset along a northwestward-striking fault

which, however, is an area widening northwestward and 6,550 feet siliceous breccia. Unmineralized degrees. In the exposed in an outcrop and is 6 feet wide exposures in chalcopyrite with feet west-northwest.

The workings in the vicinity on south side containing diorite dipping 65 degrees limestone, and showings; in proportions. indicated by while to attentional mapping [Reference] Report

Copper

Homestead

G.M. EX

By David S.

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Silver

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By N. D. M

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which, however, is not exposed. The agglomerate exposures show that it underlies an area widening northward from 400 to 800 feet and bordered by an again inferred northwestward-striking fault. West of this fault and at elevations between 6,500 and 6,550 feet are northeastward-striking agglomerate, limestone, basalt flow, siliceous breccia, and carbonaceous shale dipping 60 to 65 degrees southeastward. Unmineralized faults here strike northeastward and dip southeastward at 60 to 75 degrees. In the footwall of a faulted limestone contact a mineralized skarn is exposed in an old shaft; it strikes north 70 degrees east, dips 75 degrees southeastward, and is 6 feet wide. It pinches out about 20 feet southwest of the shaft; there are no exposures in line of strike to the northeast. The sulphide mineralization is chalcocopyrite with pyrrhotite. This is the old Acadia showing, and it is about 1,700 feet west-northwest by west of the Australian showing.

The writer made a brief reconnaissance through the Apex adit and in the vicinity on surface. The rocks are Old Tom greenstones, locally well silicified, and containing discontinuous beds of limestone striking north 80 degrees west and dipping 65 degrees southward. Sulphide mineralization occurs near but not in the limestones, and it is different from that at the Australian, Acadia, Papex, and Kopr showings; it is arsenopyrite, chalcocopyrite, bornite, pyrrhotite, and pyrite, in varying proportions. Unmineralized faults are well developed. In view of the grade indicated by the small tonnage produced from these workings, it may be worthwhile to attempt to work out the post-mineral fault movements by detailed geological mapping of the workings and their vicinity.

[References: *Minister of Mines, B.C.*, Ann. Rept., 1966, pp. 188-189; Assessment Report No. 1044.]

Copper

Homestead

G.M. Explorations Limited
By David Smith

(49° 119° S.W.) Company office, 1825, 355 Burrard Street, Vancouver 1. G.M. Explorations Limited holds Mineral Lease M47, which consists

of the Homestead Fraction, Warrior Fraction, and Rear Guard Fraction. These and other claims held by the company are near Olalla, and access is by road from Highway No. 3A, a distance of one-quarter mile. Work was done on the Homestead Fraction during 1967 and consisted of soil-sampling and two X-ray drill-holes totaling 170 feet. Three men worked for a period of one month under the supervision of S. Terry, geologist.

Silver

Horn Silver Mine

Utica Mines Ltd.
By N. D. McKechnie and David Smith

(49° 119° S.W.) Company office, 904, 510 West Hastings Street, Vancouver 2; mine office, P.O. Box 47, Keremeos. Isaac Shulman, presi-

dent; S. Radvak, manager; Egil Lygvard, geologist. The property comprises two Crown-granted and 41 recorded mineral claims situated on the western slope of Mount Richter, 16 miles south and east of Keremeos and 4 miles north of the International Boundary. Access to the mine plant at 2,622 feet elevation is by a 2½-mile road which leaves the Keremeos-Richter Pass highway at the foot of Mount Richter.

During the year a 300-tons-per-day mill was erected near the foot of the mountain, at about 1,700 feet elevation. Toward the end of the year the capacity had been raised to 400 tons per day.

In the course of mill construction a silver-bearing vein was discovered at the site. It is called the "H" vein, and from projection could be part of the mine



Approx. Area Held by
McNeil Enterprises.

Scale 1" = 1 mile

MAP 628A

OLALLA

82 E/5 west half.

SIMILKAMEEN, OSOYOOS, AND KAMLOOPS DISTRICTS