

KERR ADDISON MINES LIMITED

SUITE 703 - 1112 WEST PENDER STREET
VANCOUVER, B.C. V6E 2S1
PHONE 682-7401

Property Submission:
Falk #1 + Falk #2
825376

November 4, 1982
File: 82L 6W, 12E

Dr. P. Petö,
P. Peto Ltd.,
Suite 8 - 3289 Oak St.,
Vancouver, B.C. V6H 2L4

Dear Dr. Petö:

RE: FALK #1 and FALK #2 MINERAL CLAIMS
NEAR FALKLAND, B.C.,
SUBMITTED 3 NOVEMBER, 1982

Ray Dujardin requested me to carry out a brief evaluation of your properties.

Based on a literature search, the properties do not appear to have an above average potential of hosting, as proposed, a Kuroko massive sulphide Cu - Zn and/or precious metal ore deposit. Therefore, we decline with thanks your offer to option the claims to Kerr Addison Mines Ltd.

Thank you for bringing these properties to our attention. If you have any other precious metal properties, please do not hesitate to bring them to our attention.

Best regards.

Sincerely,



A.D. Clendenan,
Project Geologist,
Kerr Addison Mines Ltd.

ADC/ck

November 5, 1982

PROPERTY SUBMISSION EVALUATION

BY

A.D. CLENDENAN

PROPERTY NAME: FALK #1; FALK #2; NTS 82L 6W; 82L 12E
SUBMITTED BY: Peter Peto on November 4, 1982
Suite 8 - 3289 Oak Street,
Vancouver, B.C. V6H 2L4

CONCLUSION:

The FALK #1 or FALK #2 claims do not appear to represent an above average massive sulphide base metal or precious metal prospects.

GENERAL COMMENTS:

- The claims lie on the apparent continuation of the Pinchi fault system.
- On the FALK 2 claim a 30 foot wide zone of altered argillites was found associated with the gypsum zones along the fault/shear zones. The argillites were altered from a black to a reddish brown with pyrite and quartz veinlets. The quartz veinlets were up to 2 inches thick and parallel and perpendicular to bedding. BCDM 1952 251-257, see attached geology map. This alteration may represent plausible evidence of an epithermal system.
- The presence of gypsum is not mentioned by Buchanan as an indicator of epithermal precious metal systems. Kuroko gypsum "ore" is reported in the Kuroko Volume to contain very little sulphide, however there is occasionally an association between gypsum veins and massive Kuroko black ore.

Boyle (80) p 185 indicates gypsum, anhydrite, celestite and barite are found as minor to major gangue minerals in some gold-quartz deposits over a time span from Precambrian to Tertiary.

- The small chalcedony matte reported by Peto on the FALK 1 may be an indicator of an epithermal system.
- The FALK #2 claim over stakes one or more crown grants that cover the Falkland Gypsum Quarry.
- The FALK #1 claim appears to be staked within ½ mile of a "release required" B.C. Hydro Power line.
- No Mindep information or BCDM references to base or precious metal deposits were found for the FALK 1 or 2 claim areas.
- There are 2 showings N.W. of the FALK claims on the "Pinchi?" fault system just N.W. of the Thompson River.
 - 1) The Jumbo showing (Mindep 82L NW 29; GSC Mem 296 p 145)

An Au Ag prospect of several small quartz veins in slate and tuff with disseminated pyrite and no production.
 - 2) Kalamalka Showing (Mindep 82L NW #30, G.S.C. Mem. 296, p 145, 153)

This Au, Ag, Pb, Zn, Cu property produced about 1,350 tons during 1941 and 42 from Quartz veins up to 4 feet thick that were lenticular and discontinuous due to faulting. The quartz veins are near the contact of a small diorite plug with argillaceous sediments of the Cache Cr. group. One shipment of 917 tons returned 502 Oz Au and 247 oz Ag.
- The Vernon - Falkland area was the scene of considerable activity about 1980 when Nels Vollo of Craigmont Mines and Ken Daughtry, consultant were looking for diatremes associated with faults and gypsum. Hearsay indicated that only low copper values were found during these exploration programs.

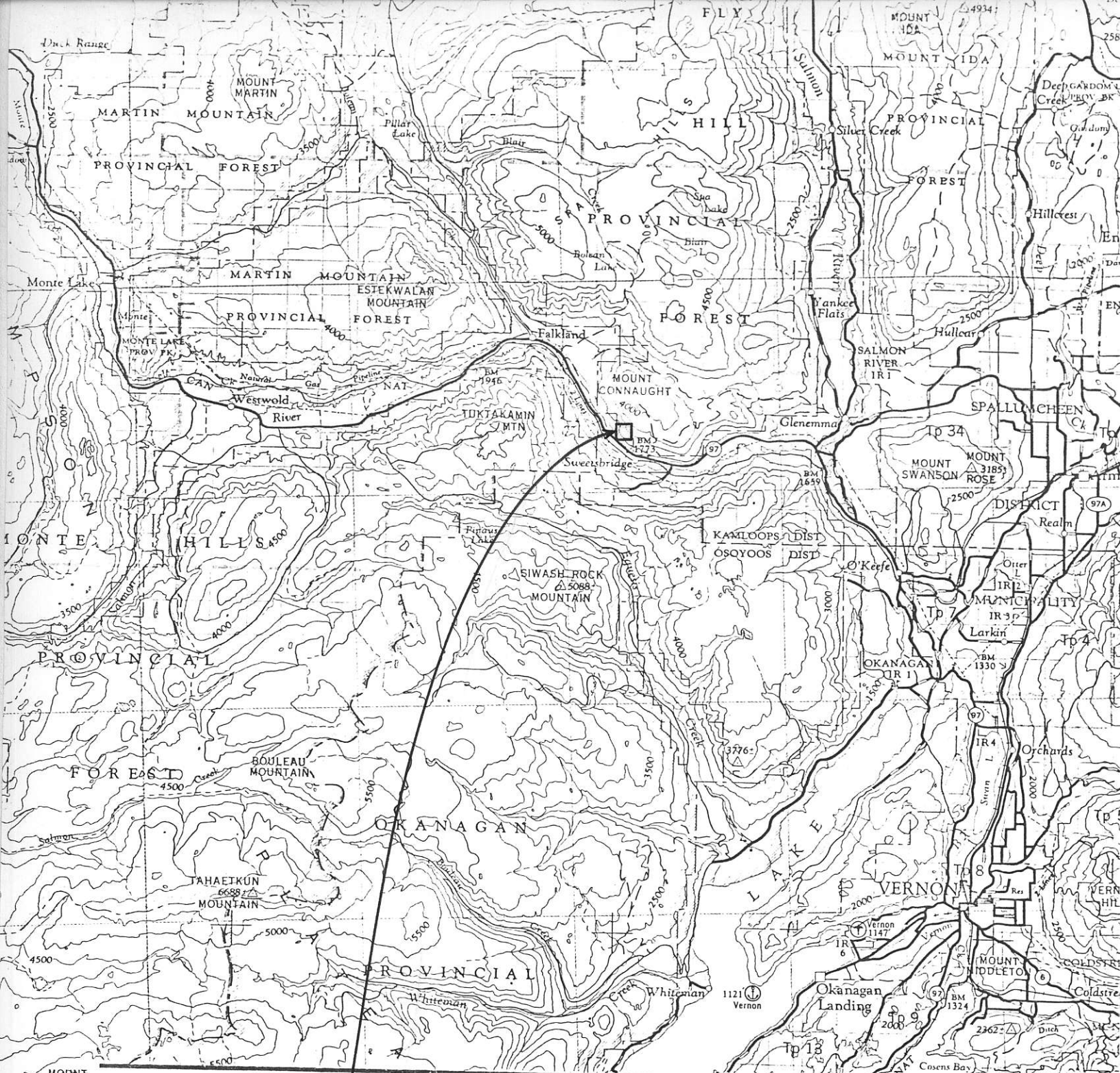
- Kerr Addison could locate from a literature search and/or regional programme in the Falkland area of the Pinchi fault continuation properties with as much or more merit than the FALK #1 and FALK #2.

Attached:

- Peto's Submission Reports & Maps
- Location Maps for FALK #1 & #2 1:250000 & 1:50000
- BCDM Falkland gypsum map

References:

6. - Peto, Peter 1982 Falkland Gypsum-Massive Sulphide Prospect incl. 1:10,000 sketch map. (FALK #2)
1. - B.C.D.M. 1953 - 190, 1952 - pp 251 - 257
4. - G.S.C. Memoir 296 - 145, 153
2. - Boyle, G.S.C. Bulletin 280 - 185
3. - Buchanan, 1981 Arizona Geol. Society Volum XIV pp 237 - 262
7. - Peto, Peter 1982 Sweetbridge Gypsum-Hematite Prospect, incl 1:10,000 sketch map (FALK #1)
5. - Kuroko Ore Deposits



FALK I CLAIM

(Approximate location)

VERNON

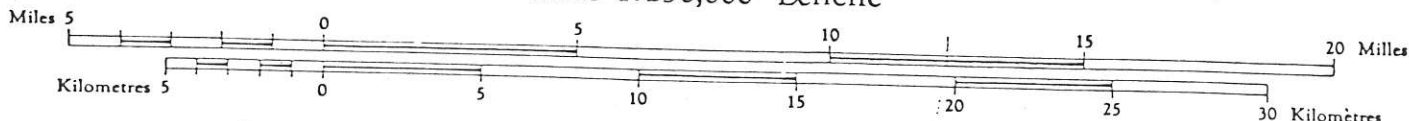
BRITISH COLUMBIA

WEST OF SIXTH MERIDIAN

82 L

A.D.C 4/XI/82

Scale 1:250,000 Échelle



Transverse Mercator Projection
North American Datum 1927

Projection transverse de Mercator
Réseau géodésique nord-américain unité 1927

Okanagan Centre

Woodside

Tp 21

Peter Petö Ph.D.

Consulting Geologist

P. Petö Ltd.

Suite 8 - 3289 Oak Street

Vancouver, B.C. V6H 2L4

(604) 734-9474

SWEETBRIDGE GYPSUM-HEMATITE PROSPECT

LOCATION: NTS 82L/5E, 6W
Namloops Mining Division

Lat. $50^{\circ}28'$ & Long. $119^{\circ}30'$
2100 ft. above sealevel

PROPERTY STATUS: The showings are covered by the FALK #1 mineral claim (2N x 2E) recorded on 8 September 1982 and are owned by P. Peto.

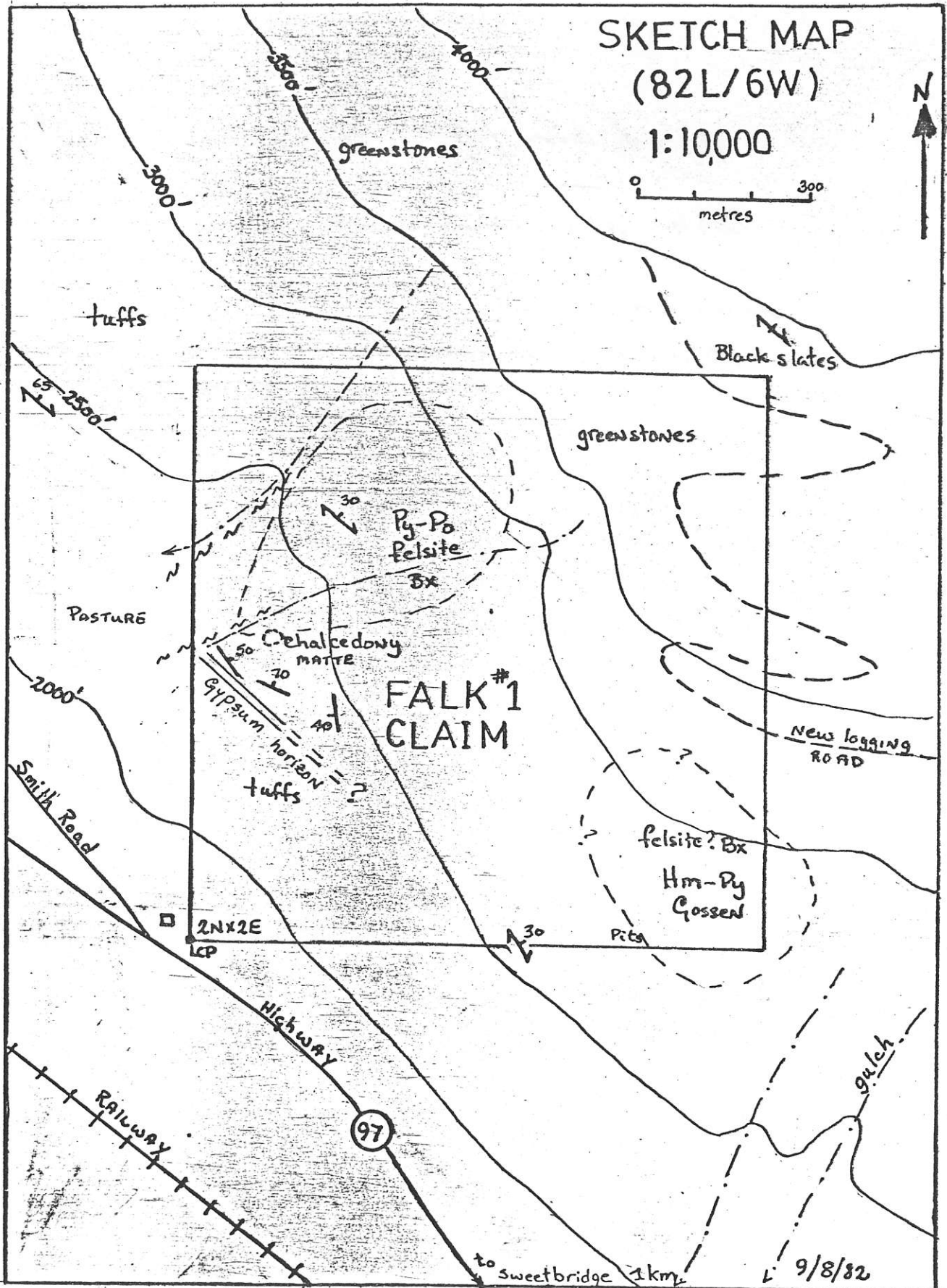
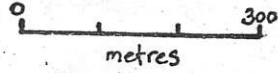
ACCESS: Claims are situated beside Highway 97, 5 km east of Falkland, immediately north of Smith Road. A newly constructed logging road provides access to the S.E. corner of the property via a powerline road.

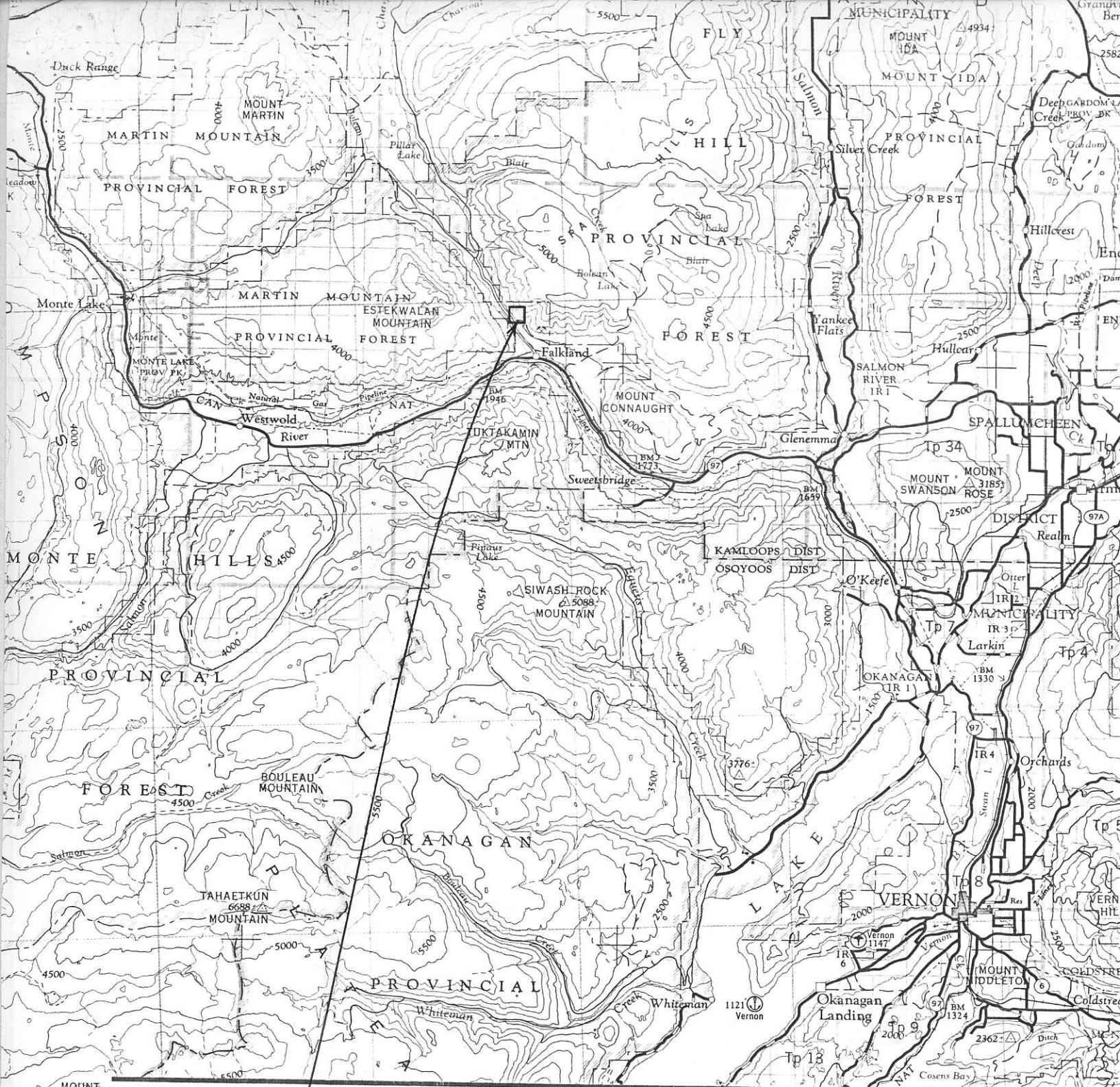
PREVIOUS HISTORY: The showings were previously staked in 1966 and 1970 but no assessment work was filed.

GEOLOGY: A well bedded gypsum horizon, about 10 metres thick striking 140° and dipping 50° NE, can be traced for at least 200 metres along the hillside. Further along the strike, to the southeast, drusy, intensely altered and fractured tuffs and felsite breccias carry specularite and pyrite as disseminations and fracture infillings. To the immediate north of the gypsum horizon, highly pyritic-pyrrhotite bearing felsite breccias cut tuffaceous phyllites and greenstones with the local development of chalcedonic matte. The geological setting is thought to represent a high level felsic volcanic centre, mantled by geothermally derived gypsum, chalcedony, specularite-pyrite envelope. This environment would also favour precious and base metal mineralization and therefore the property merits more detailed investigation.

SKETCH MAP
(82L/6W)

1:10,000



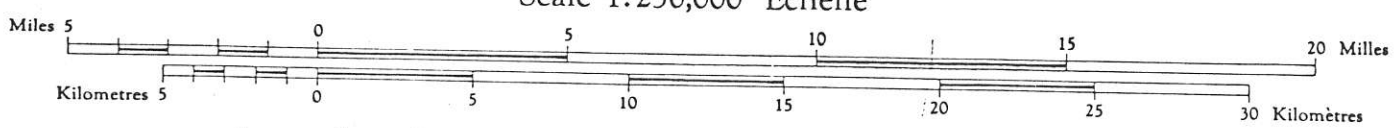


FALK 2 CLAIM
 (Approximate location)

VERNON
 BRITISH COLUMBIA
 WEST OF SIXTH MERIDIAN

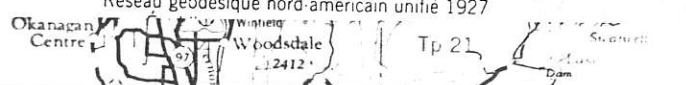
82 L
 A.D.C. 4/XI/82

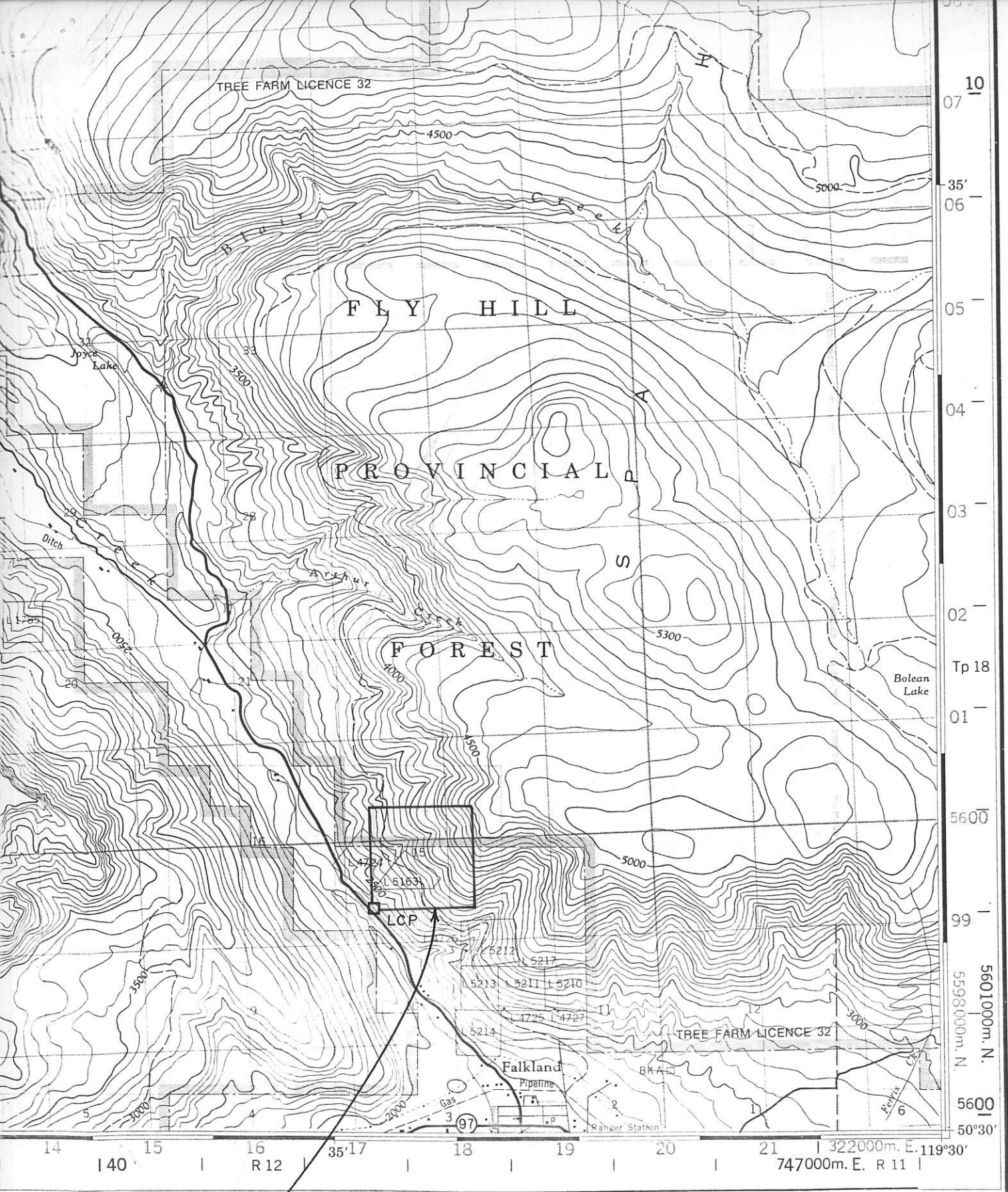
Scale 1:250,000 Échelle



Transverse Mercator Projection
 North American Datum 1927

Projection transverse de Mercator
 Réseau géodésique nord-américain unifié 1927





ON
UNIVERS

GRIP
DESIGN

TO GIVE
TH

9
9
9

REFE

EAST
ir
Es
th

NOR
ir
Es
th

EXAMPL

Nearest

BRO
T

TABL

120°30'
51°00'

82 L
12 E

50°15'
120°30'

MONTE CREEK

KAMLOOPS DIVISION OF YALE LAND DISTRICT

BRITISH COLUMBIA

FALK 2 CLAIM

WEST OF SIXTH MERIDIAN - OUEST DU SIXIÈME MÉRIDIEN

(Approximate location)

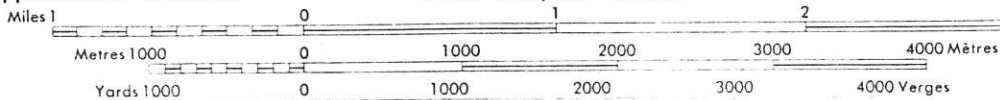
Scale 1:50,000 Échelle

82 L - 12 E

A. D. C 3/XI/82

CARTOGRAPHIE,
ES RESSOURCES.
966-1967. Vérification

Éléve
Sys



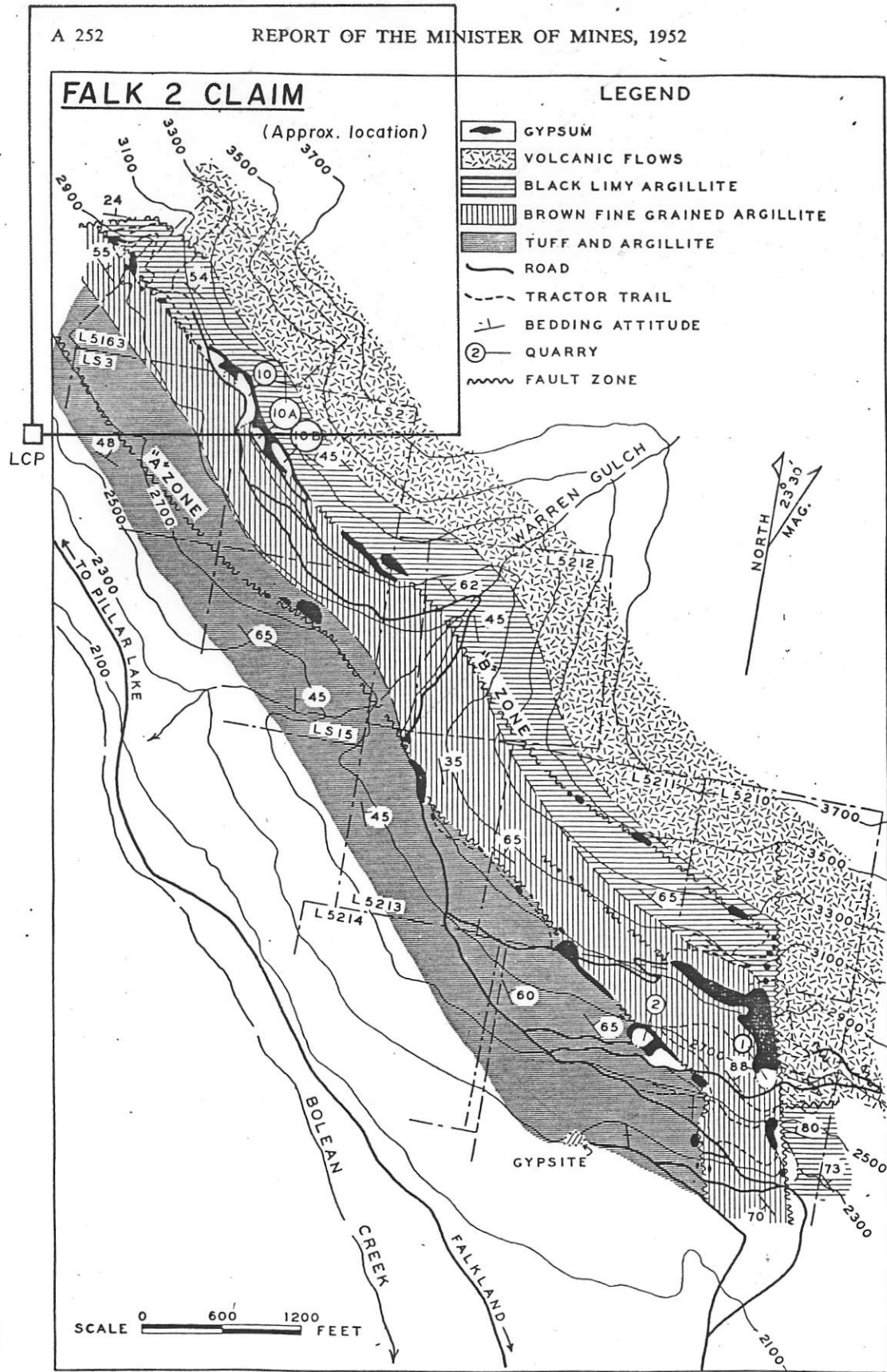


Figure 24. Geology of Falkland gypsum deposit.

FALKLAND GYPSUM-MASSIVE SULPHIDE PROSPECT

LOCATION: NTS 82L/12E Lat. 50°31' & Long 119°34'
Kamloops Mining Division 700-1400 meters asl.

PROPERTY STATUS: Gypsum showings and Cu-Zn soil anomalies are covered by the FALK #2 mineral claim (2Nx2E), recorded on 27 October 1982 and owned by P. Peto. The main gypsum showing on lot 5163 is held in perpetuity by Canada Cement Lafarge.

ACCESS: The claims are situated 2 km. north of Falkland, immediately east of Pillar Lake Road. They are accessed by a secondary road off the main Falkland gypsum quarry road.

PREVIOUS HISTORY: The gypsum quarry has been mined intermittently from 1913 to the present. In 1979 Cominco followed up a 366 ppm Zn silt anomaly with 5 recce soil lines which partially delineated a Cu-Zn anomaly adjacent to the gypsum showings but allowed the claims to eventually lapse.

GEOLOGY: The claims are underlain by a northwest trending submarine volcanic sequence which dips steeply to the northeast. The stratigraphy and nature of the gypsum deposits are described by McCammon (1952) and Baird (1964). Although the genesis of the deposit has been disputed by various investigators, there is strong evidence that the deposits represent submarine volcanogenic exhalites, which in the Japanese massive sulphide belt, are often peripherally associated with Kuroko Cu-Zn deposits. The presence of pyrite, hematite and tourmaline with stratabound gypsum beds, and the proximity of Cu-Zn soil anomalies in complexly folded and faulted volcanic stratigraphy is indicative of potential massive sulphide environment. In my estimation the property and adjacent areas merit further investigation.

REFERENCES CITED: Baird, D.M. (1964) C.J.E.S., V. 1 pp1-9
McCammon, J.W. (1953) Minister of Mines
pp A-251-257 ← No.
p 190 Falkland Gypsum.

should be

1952

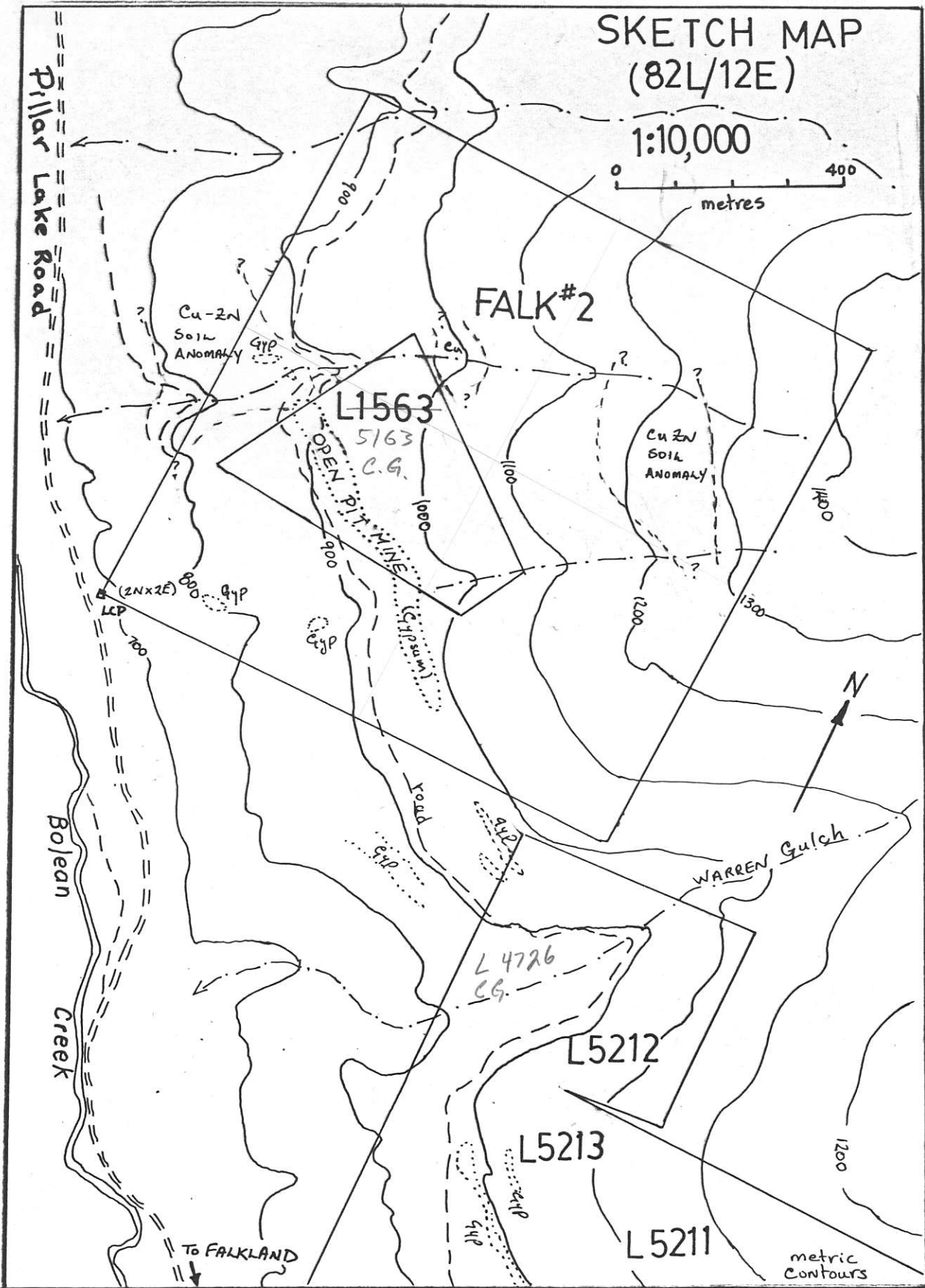
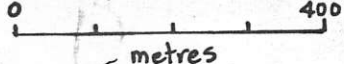
D.F. 650?

Shushway

ABC.

SKETCH MAP
(82L/12E)

1:10,000



Pillar Lake Road

FALK#2

L1563

5163
C.G.

OPEN PIT MINE

Cu Zn
SOIL
ANOMALY

(2N X 2E)

LCP

Bojean
Creek

WARREN Gulch

L 4726
C.G.

L5212

L5213

L5211

TO FALKLAND

metric
Contours

ADC 4/11/82

Falk #1

- Claim ~~is~~ appears to be staked along continuation of Pinchi fault set and at intersection of or splay point of interesting faults. BSC Mon 296 map Geology - J Coche creek submarine sediments and volcanics. Fault contact between #13 A Argillite and #14 B andesite lava + tuff is minor argillite quartzite + lst.
- Small chalcedony matte as reported by Peto may be an indicator of an epithermal system however the ^{mapped} presence of gypsum is not mentioned as an indicator of epithermal mineralization.
- Nels Vollo + Ken Daughtry carried out a search for diatreme / mafic sulphides in the area in the late 70's. The Falk #1 claim ~~appears to be staked over~~ area has been previously staked.
- There is a 1/2 mile release required town line right of way which may well cover the claims.
- Doesn't appear to be an above average project.

Falkland

3/11/82

ADC

Falkland Gypsum

82L12E

- Ref. 1933 BCMM 251-257 by McCammon

doesn't exist. 251-7 is coal section.

- BCMM 53 p190- Falkland Gypsum - xeroxed.

- BCMM 52 p119 Lempriere U_3O_8 ^{bolonitic} p115-119
by J.W. McCammon. 169 mi N of Kamloops

- BCMM '52 P251 by J.W. McCammon

map xeroxed. Gypsum in Shear Zones

- argillites altered near gypsum
zones to 30' wide reddish brown + pyrite
+ Qtz veinlets || + \perp to bdy + to 2 inch thick

- xerox of map + refs.

- Plausible Buchanan Model Au dep. <sup>But Gypsum
irrelevant.</sup>

- No very plausible at Kuroko
beside Gypsum Kuroko one contain
little sulphides one.

- C.J.E. NOT avail.

- No indication of Mindop No. on our
copy of Map. at Falkland

Mindop 82C NW 29, 30 ^{are} 15 NW across Thompson.

- GSC mem 296 p145 Jumbo #29 Au Ag

Several small quartz veins in slate + + alt
disseminated pyrite no production.

Kalahalka #30 (Chance) Au Ag Pb Zn Cu, 1941-917T
1942-433T. p145 + 153 GSC 296. Veins to 4 ft

but lenticular + discontinuous due to faulting

3 main adits, scanty sulphide include pyr pyrite gn.

917T gave 502oz Au 2470oz Ag. Qtz veins near

the contact of a small diorite plug with argillaceous
sedimentary R's of Cache or Group.

over... 2

Falk #2
Falkland Gypsum. - 4/11/82 ABC

- Diatreme area is minor Cu area of interest of Nell's Vollo + Ken Daugherty
- On possible continuation of Pinchi fault system.
- No mention of Gypsum in Buchanan.
- Falk #2 claim not an above average prospect. We can prospect along the shear/fault zone without having to option his claim.
- Boyles 80 g 185 gypsum after gold deposited and common in Au/dep from. PE to Tertiary

graded from crystals in No. 1 sample to flamboyant aggregates in No. 4 sample. Anhydrite is reported to have been encountered in the floor of the lower bench.

Some gypsum was mined from three small quarries on A zone southeast of No. 2 quarry. The grade of material is not known, and the quantity must have been small. They are now full of rubble.

Zone A has been stripped for 1,000 feet northwest from No. 2 quarry, and some local stripping has been done for 1,600 feet beyond that. Gypsum was uncovered in irregular and generally small patches along the zone. Attempts were made to open quarries at the two largest showings, but the rock was found to be too low grade to be commercial.

No exploration has been done on the gypsum outcrop on A zone north of Warren Gulch. The main outcrop exposes gypsum over an area 200 feet long by 80 feet wide.

A few samples were taken to give an indication of the grade of gypsum. No complete analysis of the white rock was made, but the partial results giving the CO₂ to SO₃ ratios previously quoted indicate how close this rock is to theoretical purity (i.e., 46.6 per cent SO₃). The following samples were all taken in 1951: No. 1 represents a chip sample across 15 feet on the surface at the top of the most northwesterly exposure on B zone, No. 2 is a chip sample across 75 feet at the base of the southeast face of No. 10 quarry, No. 3 is a chip sample across 50 feet on the surface of the large gypsum knob 600 feet north of No. 1 quarry crest, No. 4 is a chip sample across 50 feet at the centre of the quarry 300 feet south of No. 1 quarry, No. 5 is a grab sample of rock being shipped from No. 10B quarry. Analyses follow:—

Sample No.	CaO	SO ₃	CO ₂	Fe (Total)	Al ₂ O ₃	SiO ₂	H ₂ O—	H ₂ O+
	Per Cent	Per Cent	Per Cent	Per Cent	Per Cent	Per Cent	Per Cent	Per Cent
1.....	32.6	42.8	2.1	0.20	0.5	2.3	0.04	18.9
2.....	32.9	43.5	2.0	0.16	—	1.9	0.04	19.0
3.....	33.0	42.5	2.5	0.14	—	2.5	0.02	18.8
4.....	32.9	42.8	2.7	0.32	—	4.3	0.04	15.8
5.....	33.0	44.9	1.3	0.14	—	0.9	0.05	19.7

NOTE.—No trace of sodium chloride was detected in any sample.

Originally, when all the workings were at the south end of the deposit near Falkland, the gypsum was carried from a central loading terminal between the quarries to a loading-bin at the railway siding by means of an aerial tram 3,500 feet long. The tram was replaced by trucks in 1941. To-day the rock is drilled by jackhammers and air-legs, blasted with 50 per cent Dynamex explosive, loaded by diesel shovels on to trucks, and hauled to a primary crusher at the loading-bin on the railway siding. A $\frac{3}{4}$ -yard and a $\frac{1}{2}$ -yard shovel are used in the quarries to load the truck fleet that consists of one 10-ton, three 9-ton, and three $5\frac{1}{2}$ -ton trucks. From the crushing plant the gypsum is loaded on to railway gondola cars and shipped to company plants in Port Mann and Calgary.

Total production from the deposit exceeds 1,000,000 tons of rock gypsum. During 1952, production was at the rate of 300 to 400 tons per day. Twenty-six men were employed at Falkland.

[References: *Geol. Surv., Canada*, Ann. Rept., 1888–89, Vol. IV, p. 11A; Ann. Rept., 1895, p. 37A; Ann. Rept., 1931, Pt. A, pp. 96, 97; Paper 48-4, Salmon Arm Map-area, p. 7. *Dept. of Mines, Canada*, Mines Branch Pub. No. 245, 1913, pp. 91–95; Mines Branch Pub. No. 714, 1930, pp. 58–63. *Minister of Mines, B.C.*, Ann. Repts., 1913 to 1951.]

Mayook (49° 115° S.W.) This company owns a gypsum quarry on the Cranbrook–Ferne Highway, 16 miles east of Cranbrook and a quarter of a mile northeast of Mayook. A. Howard, of Wasa, continued to work the quarry under lease. Work commenced in

Canada Cement
Company*

* By H. N. Curry.

Refs

For
Falkland
Gypsum
Submission
3/11/82

blasted, and loaded by a diesel-driven shovel on to trucks and transported to markets. One man was employed.

Fairey & Company Limited.*—Vancouver (49° 123° S.E.). L. T. Fairey, manager. This company produced a variety of fireclay blocks and shapes and high-temperature cements. Local and imported raw materials were used.

Victoria (48° 123° S.E.). Office and plant, Victoria. J. V. **Baker Brick & Tile Company Limited†** Johnson and D. E. Smith, joint managers. Surface clay is mined by gas shovel and transported by trucks to storage bins. Drain-tile, hollow-ware, Roman brick, and flower-pots are formed by the soft-mud extrusion process and are dried with waste heat from kilns. Down-draught wood-fired kilns are used to burn the ware. An average of 5,000 tons of clay is mined yearly.

Bazan Bay Brick & Tile Company Limited.*—Saanichton (48° 123° N.E.). F. J. Eves, manager. This plant manufactured common brick and agricultural tile. Production was small.

GYPSUM

Gypsum Lime and Alabastine, Canada, Limited‡ Falkland (50° 119° N.W.). Head office, Paris, Ont.; British Columbia office, 1272 West Pender Street, Vancouver. Norman Jessiman, British Columbia manager; Alex. Jessiman, quarry manager; Leonard G. Hoover, quarry foreman. This company quarries gypsum at Falkland, 40 miles east of Kamloops on the Kamloops-Vernon Highway and on the Vernon branch of the Canadian National Railway. Gypsum is produced from open quarries 500 to 1,100 feet above the railway on the steep hillside north of the village. Work was continuous throughout the year, and a crew of thirty-two men was employed. The production of gypsum averaged from 300 to 400 tons daily, which was quarried from the No. 2 and No. 10 quarries and was shipped to the company processing plants at Port Mann and Calgary.

[Reference: *Minister of Mines, B.C.*, Ann. Rept., 1952, p. 119.]

Canada Cement Company§ Mayook (49° 115° S.W.). This company owns a gypsum quarry on the Cranbrook-Fernie Highway, 16 miles east of Cranbrook and a quarter of a mile northeast of Mayook. A. Howard, of Wasa, has worked the quarry under lease for a number of years.

Stripping operations were carried on in April, and quarrying at the rate of 2,000 tons per month was continuous from May until early December. The 30-foot quarry face is benched with 15-foot steel using tungsten-carbide bits; the gypsum is hand-broken to 8-inch size, and trucked to a loading-ramp on the Crowsnest line of the Canadian Pacific Railway for transshipping to the company's plant at Exshaw, Alta. Major equipment consists of a 105-cubic-foot-per-minute Ingersoll-Rand compressor and a newly purchased TD-9 Caterpillar tractor equipped with a Malo overhead shovel.

Toward the end of the season a 50-foot band of waste was encountered in the middle of the quarry face. This occurrence considerably reduced the flexibility of the operation and will necessitate an extensive stripping programme in the spring.

The number of men employed averaged six. The 1953 production was 14,274 tons.

Columbia Gypsum Products, Inc.§ Windermere (50° 115° S.W.). Head office, 425 Symon's Building, Spokane, Wash.; quarry office, Athalmer. J. M. Cummings, resident manager. This company owns a gypsum deposit on Windermere Creek. The quarrying and hauling contract is held by General Construction Company, of Vancouver and Calgary, who in turn have sublet the hauling contract.

* By J. W. McCammon.

† By R. B. King.

‡ By E. R. Hughes.

§ By H. N. Curry.