

GEOLOGICAL REPORT

on the

ALAMO CLAIM

LONDON RIDGE

SLOCAN MINING DIVISION

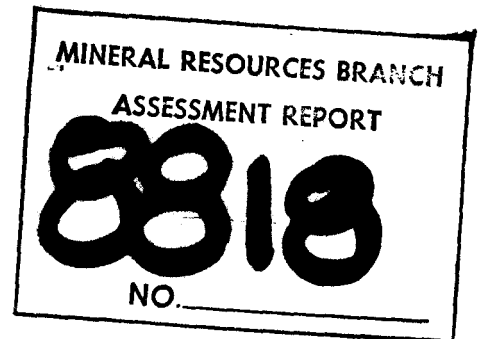
(15° 02'N - 117° 00'W)

for

KANAKA CREEK HOLDINGS LTD.

200 GRANVILLE ST.

VANCOUVER, B.C.



April 1980

James C. Snell, P. Eng.
Geological Engineer

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Air Photo Map

ALAMO PROPERTY

SLOCAN MINING DIVISION, BRITISH COLUMBIA

CONCLUSIONS AND RECOMMENDATIONS

It can be concluded from this preliminary investigation that further work should be conducted on the Alamo Property. The Geological environment is correct for the occurrence of mineralization with possible economic significance. Evidence of mineralization has been noted during field investigations, and it has been reported that mineralization occurs at other locations on the claim block.

A general program of prospecting and field reconnaissance is recommended as an initial step to further investigations. This work can be conducted on logging roads, and at higher elevations on outcrop exposures. Soil samples can be taken analyzed for silver, lead and zinc.

Lines should be cut and a systematic soil survey should be conducted at 500 foot (150 metre) intervals over the cross fault area, east of Kane Creek on the western part of the claims area. Further soil analysis should be done at close intervals over potentially anomalous areas.

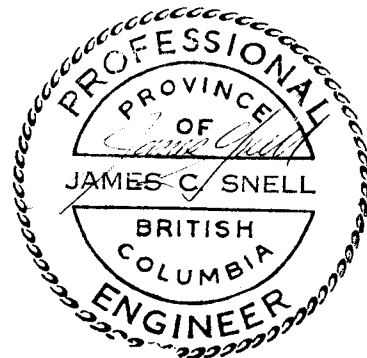
Some access road construction may be required as a follow up to this program prior to further work on areas of interest.

BUDGET

(1) Property and Field Reconnaissance	\$	
One geologist, 30 days		2,500.
(2) Line Cutting and Soil Survey		
Two men, 30 days		4,000.
Assays		2,000.

Sub Total	\$	8,500.
(3) Contingencies, 20%		1,700.

TOTAL	\$	10,200.
		=====



GEOLOGICAL REPORT

ALAMO PROPERTY

SLOCAN MINING DIVISION, BRITISH COLUMBIA

INTRODUCTION

The writer was requested by Mr. B. Ivanovic to compile a geological report on the Alamo claims located on the west end of London Ridge, just west of the old Rambler Mill site. The claims were located to cover a parcel of deeded ground, Parcel A, DLA 10, Group 1, consisting of 1,027.7 acres (416 hectares). This ground is bounded on the south by the old K & S Railway grade.

This report has been compiled from information obtained by the writer during examination of the property in April, 1980, together with information obtained from mining records and government publications.

The purpose of the examination was to determine the potential for economic mineral occurrences and to recommend a work program to investigate areas of interest.

PROPERTY

The property consists of the Alamo mineral claim 1548 (10) comprised of 18 units; 3 units north-south and 6 units east-west.

OWNERSHIP

The claims are held by Kanaka Creek Holdings Ltd.,
200 Granville Street, Vancouver, B. C.

LOCATION (15° 02' N - 117° 00' W)

The property is located on the west end of London Ridge, east of Kane Creek and north of Three Forks, in the Slocan Mining Division of southeastern B.C. The Kaslo-New Denver Highway passes through the property. The village of New Denver is four miles (6.4 km) to the west of the claim boundary. The Trail lead zinc smelter is 100 miles (129 km) to the south. Sufficient water is available for exploration, mining and milling purposes.

HISTORY

There is no history of work on the property, and no crown granted mineral claims have been located or have expired. Several old producing mines do occur, however, in the vicinity. Among these are the McCallister Mine on the east end of London Ridge and the Monitor Mine just south of Three Forks.

McCALLISTER MINE

This property was staked in 1902 and the first shipment of 21 tons (19.1 metric tons) was made in 1903. The ore carried

an average of 254 oz. (7087 g.) of silver to the ton. The heaviest production is recorded in 1925 - 1926 when a total of 6,666 tons (6070 metric tons) of ore averaging 44 oz. (1,247 g.) silver per ton was shipped. In 1928, 5,266 tons (5,787 metric tons) of 39 oz. (1,105 g.) ore was shipped.

The rocks underlying this property are chiefly Slocan Sediments which include massive quartzitic strata, as well as argillaceous and slaty strata and some limestone. The mine is developed by six levels over a vertical range of 400 feet (122 metres) below the surface. The workings develop a quartz filled fissure averaging 3 feet (.9 metre) in width and explored for a maximum length of 1,600 feet (488 metres) on No. 3 level. The mine workings occur where the vein angles across a belt of massive quartzitic rocks about 600 feet (180 metres) wide. The vein quartz carries high grade silver bearing minerals, pyrite, and a little galena and sphalerite. The principal ore mineral is grey copper (tetrahedrite). In the productive parts of the lode, the vein has a width of from 3 to 9 feet (1 to 3 metres).

MONITOR MINE

This property is at Three Forks on the lower slopes of the Carpenter Creek Valley, south of the junctions of Seaton and Kane Creeks. The Monitor Vein lode was discovered in 1895. Production began in 1895 with the shipment of a few

tons of oxidized silver-lead ore. In 1896, 107 tons (97 metric tons) were shipped and carried an average of 312 oz. per ton (8,845 g.) of silver.

The mine is developed by five adits over a vertical range of 500 feet (150 metres) below the outcrop. The lode is a strong fissure zone cutting argillaceous, carbonaceous, and calcareous sediments of the Slocan Series. The lode varies in thickness from a few inches to four feet (1.2 metres) and has been drifted on for a maximum distance of 1,300 feet (396 metres). The lode filling consists of crushed country rock with lenses and veins of quartz, siderite, calcite and ore. The ore consists of galena, sphalerite and pyrite.

REGIONAL GEOLOGY

SLOCAN SERIES (TRIASSIC)

The property is underlain by the Slocan Series of Triassic sedimentary rocks. The rock types are exposed together with a few intrusive bodies in the region between Slocan Lake and the Kaslo River north of the Nelson Batholith.

The thickness of the Slocan Series was estimated as not more than 6,800 feet (2,072 metres) (Cairnes, 1934).

The Slocan Series consists predominantly of argillaceous rocks, but fine grained quartzite and limestone are fairly abundant.

The basal part of the series has been described by Hedley, who refers to it as the "slate belt" because of the predominance of fissile, argillaceous rocks. A number of bands of limestone occur in them, and some quartzitic strata are also present. The slates and phyllites are grey to black and locally greenish. Evidence of lateral gradation of these beds toward the northwest into more arenaceous and less calcareous phases has been presented by Cairnes. Several thousand feet of strata overlying the basal belt, in general they resemble the basal beds as far west as Zincton, beyond which they are mainly grey argillaceous rocks that contrast sharply with the lower strata.

Rocks highest in the section outcrop between Idaho Peak and Slocan Lake. They are dominated by dark well-bedded quartzitic argillite in which the alternating strata of various degrees of purity range in thickness from a fraction of an inch to 2 or 3 feet. These rocks are fine grained and silty.

INTERNAL STRUCTURAL RELATIONS

On a line through Silverton and Idaho Peak and extending to Whitewater, strata of the Slocan Series outcrop for 12 miles (19.3 km) across their strike. Nearly all these strata dip southwest in the valley bottoms. Those at medium elevation dip vertically, and those on the peaks dip northeast and are overturned. They form a great recumbent syncline facing southwest.

Faults of small displacement relative to the dimensions of the fold are common.

The Slocan Series lies disconformably on the Kaslo Volcanics to the northeast. The volcanic contact trends northwest - southeast, conforming to the strike of the sedimentary bedding in the basal part of the section. Detritus of volcanic rock from the Kaslo group occurs in the basal member of the Slocan Series.

NELSON PLUTONIC ROCKS (LOWER CRETACEOUS)

The Slocan Series has been intruded by and is underlain by plutonic rocks of the Nelson Batholith. Porphyritic granite is the predominant phase. Other phases that have been identified are, in approximate order of abundance, quartz diorite, quartz monzonite, diorite, monzonite, and syenite. Nelson porphyritic granite is a coarse, grey rock that generally contains numerous white to flesh coloured phenocrysts of twinned alkali feldspar. In a few localities the phenocrysts may make up 50% of the rock, but usually much less. In size the phenocrysts range from scarcely larger than the roundmass crystals to 5 1/2 inches (14 cm) in length, the average length being perhaps 2 inches (5 cm). The groundmass of the porphyritic granite consists essentially of potash feldspar, plagioclase feldspar and quartz with hornblende and biotite. These accessories comprise 3% to 10% of the rock, but locally may be somewhat more abundant. Pyrite occurs locally, especially in and near small, irregular bodies of pegmatite. The composition of the groundmass is quartz monzonite to granodiorite, but the

overall composition of the rock including the phenocrysts is granite.

Lamprophyre dykes also are numerous, and appear to be structurally or genetically related to ore deposits, in the Slocan area.

LOCAL GEOLOGY

A preliminary geological map was constructed of rock exposure along the old railway grade. This map has been included with this report. As mapped, the property is underlain by Slocan Series sediments, consisting essentially of argillites and slates with minor inter-bedded quartzites.

The argillites are massive, thick bedded, grey to black in colour, and arenaceous (sandy) to limy in composition. The slates are thin bedded, black, and show evidence of faulting and slickensides. The quartzites are massive, grey and siliceous. Downhill slump is common and evidence of structural trends are difficult to obtain. However, at one location the slates appear to strike at about 120° and dip at 35° to the southwest.

The intrusion of dioritic dykes was noted at three locations. These dykes trend northeasterly at about 20° , cutting across the sedimentary structure, and dip generally to the west at 65° to 70° . The dykes are reddish in colour, usually fine to medium grained with some phenocrysts of feldspar.

Evidence of mineralization was noted at three locations along the railway grade and at a portal on the road. The evidence was noted as oxidation products in areas of faulting and underground seepage.

STRUCTURE

Air photo studies of the property show relatively intense cross faulting on the western part of the claim block. It is possible, the three river valleys represent major zones of structural weakness, converging in the vicinity of Three Forks. The multiplicity of convergent structures as shown on the enclosed map substantiates this theory. Parallel north-south trending faults further east on the claim block are also of interest.

MINERAL POTENTIAL

The Alamo property has potential for the occurrence of lead, zinc and silver in economic concentrations at today's metal prices. The property is situated in the heart of the Slocan Camp several miles north of Sandon. Silver has been mined from the McCallister Property further east on London Ridge as well as at the Panama. Silver has also been mined from the Monitor Property just south of Three Forks. The property is underlain by rock types that are typical host rocks to producing mines in the surrounding area. The Slocan Camp is a historical producer of silver in B.C., and although no production has come from this property, modern exploration methods have in all likelihood not been utilized to investigate this area.

The vicinity of Three Forks is likely a major point of fault intersection, as the river valleys represent zones

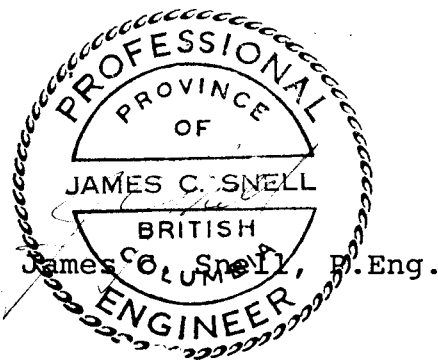
of weakness. Air photo interpretation indicates areas of intense cross faulting on the western part of the property. Some of these faults may be mineralized.

As noted on the geological map, the Slocan Series on the property has been cut by dykes, and as well, quartz veining and remnant mineralization has been noted at various locations. Such hydrothermal activity within the Slocan Series sedimentary host rock is significant and essential to the formation of mineral deposits. It is possible that silver bearing elements are inherent in the sediments and are remobilized and concentrated by the hydrothermal activity.

NOTE:

No known production of silver-lead-zinc has come from property underlying the Alamo mineral claim. One prospect tunnel was observed on the claim along the highway. A wide rhyolite dyke intruding sediments on the eastern part of the claim is mineralized with stringers of argentiferous galena. Information on the property has been acquired during geological investigations in the field and from a general knowledge of the district acquired by the writer over the past few years.

To my knowledge, no previous engineering report has been written on this property. Reference has been made to Geological Survey of Canada publications.



STATEMENT OF COST
ALAMO MINERAL CLAIM, SLOCAN MINING DIVISION
KANAKA CREEK HOLDINGS LTD.

APRIL, 1980

(1) Field investigation, geological mapping		
- 2 days @ \$200 per day		\$ 400
- transportation @ \$25 per day		50
(2) Geological report		500
- map preparation and typing		<u>50</u>
	Sub Total	\$1,000

OCTOBER, 1980

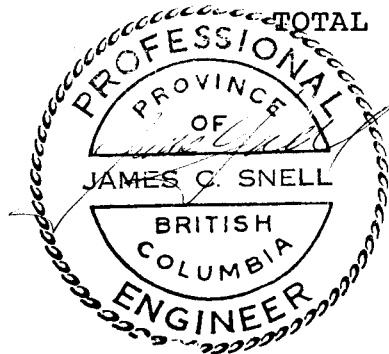
(3) Station Survey and Soil Sampling Program		
Oct 7, 1980	Geologist - 1 day	200
	Vehicle	30
Oct 8, 1980	Geologist	200
	Helper	100
	Vehicle	30
Oct 10, 1980	Geologist	200
	Helper	100
	Vehicle	30
Oct 11, 1980	Geologist	200
	Two Helpers	200
	Vehicle	30
Oct 13, 1980	Geologist	200
	Two Helpers	200
	Vehicle	30
Oct 14, 1980	Geologist	200
	Vehicle	<u>30</u>
	Sub Total	\$1,980

(4) NOVEMBER, 1980

- Soil analysis charges for silver & zinc 46 @ \$6.00	<u>276</u>
Total 1981	\$3,256

(5) FEBRUARY, 1981

- Soil survey interpretation & Engineering Report	<u>1,200</u>
TOTAL	<u>\$4,456</u>

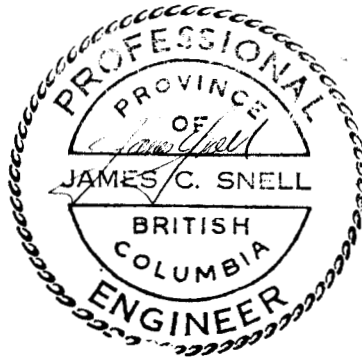


James C. Snell, P.Eng.
Geological Engineer

DECLARATION

I, James C. Snell, with business and residential address in British Columbia, do hereby certify that:

- 1) I am a geological engineer.
- 2) I am a graduate of the University of Alaska, School of Earth Science and Mineral Industry, Fairbanks, Alaska, U.S.A.
- 3) I am a graduate of the Provincial Institute of Mining, Haileybury, Ontario, Canada.
- 4) I have received a Bachelor of Science Degree in the Geological Sciences in 1964.
- 5) I am registered as a Professional Engineer of the Province of British Columbia.
- 6) I have conducted the field investigation and completed the conclusions and recommendations outlined in this report.



James C. Snell



TO: MR. JAMES C. SNELL, P. ENG.
1005 - 789 West Pender Street
Vancouver, B.C.

General Testing Laboratories
A Division of SGS Supervision Services Inc.

1001 EAST PENDER ST., VANCOUVER, B.C., CANADA, V6A 1W2
PHONE (604) 254-1647 TELEX 04-507514 CABLE: SUPERVISE

CERTIFICATE OF ASSAY

No.: 8011-0357 DATE: Nov. 17/80

We hereby certify that the following are the results of assays on: **Soil samples**

MARKED	SILVER		Zinc	XXX	XXX	SAMPLE MARKED:	Silver	Zinc
	Ag (ppm)	Zn (ppm)					Ag (ppm)	Zn (ppm)
0	0.6	> 1150				B5N	1.5	228
1E	0.7	630				B6N	1.5	339
2E	0.9	262				B7N	1.1	199
3E	8.7	1070				B8N	1.7	400
4E	1.5	291				B9N	2.0	400
5E	1.1	503				B10N	1.1	474
6E	1.5	685				B11N	3.7	556
7E	0.7	291				B12N	3.5	530
8E	0.7	217				B13N	3.7	375
9E	0.9	286						
10E	0.4	203						
11E	0.7	134						
12E	2.8	150						
13E	1.5	164						
14E	0.7	164						
15E	1.7	245						
16E	1.1	442						
17E	6.7	> 1150						
18E	3.0	569						
19E	0.6	145						
20E	0.6	112						
21E	1.4	274						
22E	1.1	198						
23E	1.7	253						
24E	0.9	140						
25E	1.4	209						
26E	5.0	> 1150						
A 5E	1.9	585						
A1.5E	0.9	124						
A1N	0.9	167						
A2N	0.7	109						
A3N	1.1	176						
A3.5N	1.2	164						
B1N	1.5	308						
B2N	1.1	245						
B3N	1.1	172						
B4N	1.1	268						

NOTE: REJECTS RETAINED ONE MONTH. PULPS RETAINED THREE MONTHS. ON REQUEST PULPS AND REJECTS WILL BE STORE FOR A MAXIMUM OF ONE YEAR.

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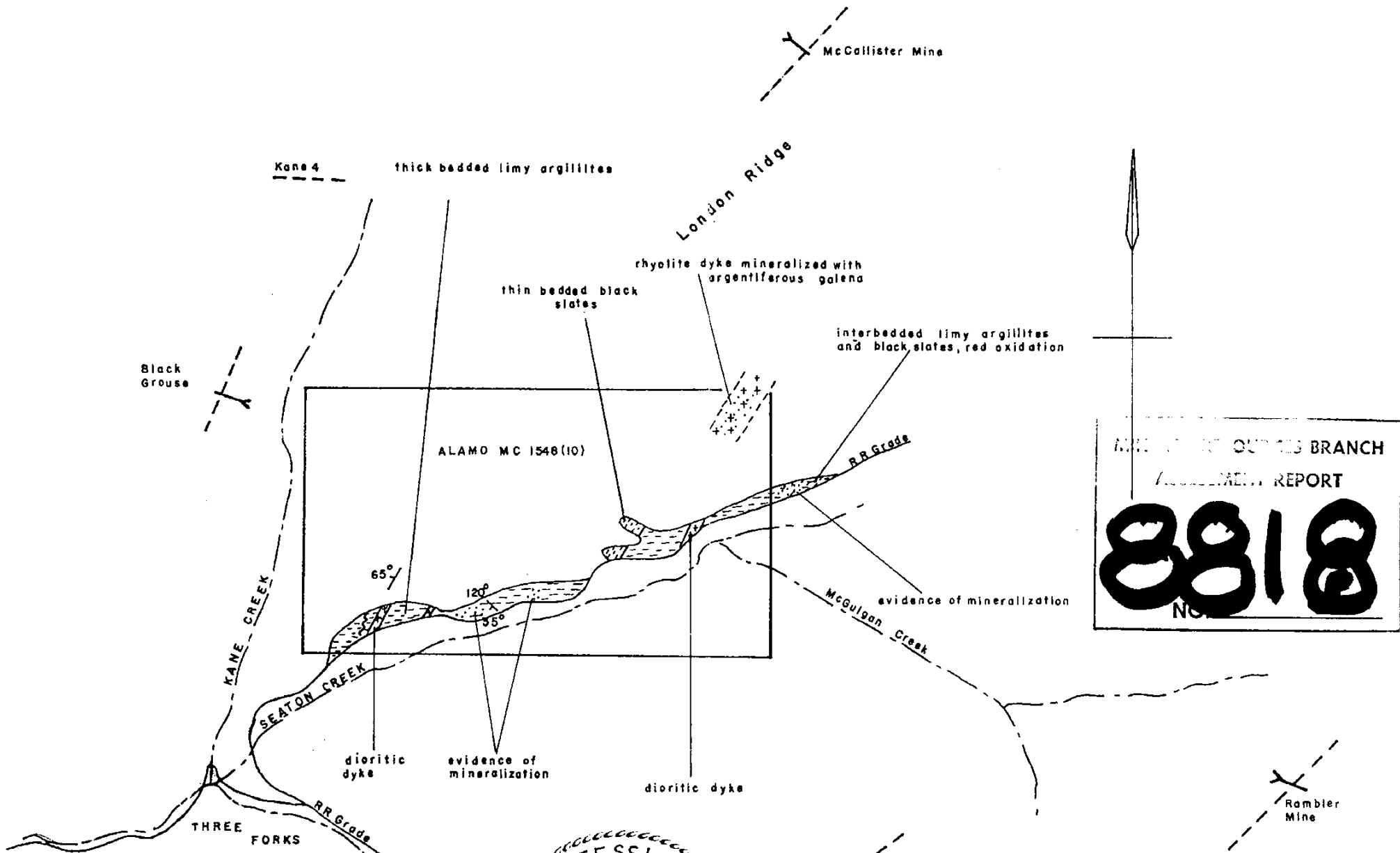
[Handwritten Signature]

R. Nadeau, Chemist

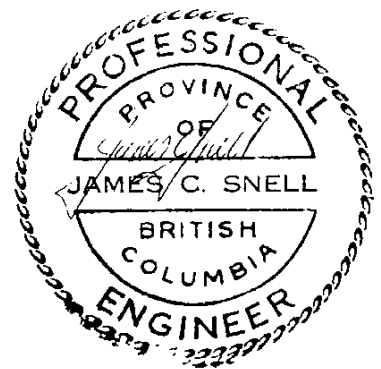
PROVINCIAL ASSAYER

Analytical and Consulting Chemists, Bulk Cargo Specialists, Surveyors, Inspectors, Samplers, Weighers

MEMBER: American Society For Testing Materials • The American Oil Chemists Society • Canadian Testing Association
REFEREE AND OR OFFICIAL CHEMISTS FOR: National Institute of Oilseed Products • The American Oil Chemists' Society
OFFICIAL WEIGHMASTERS FOR: Vancouver Board Of Trade

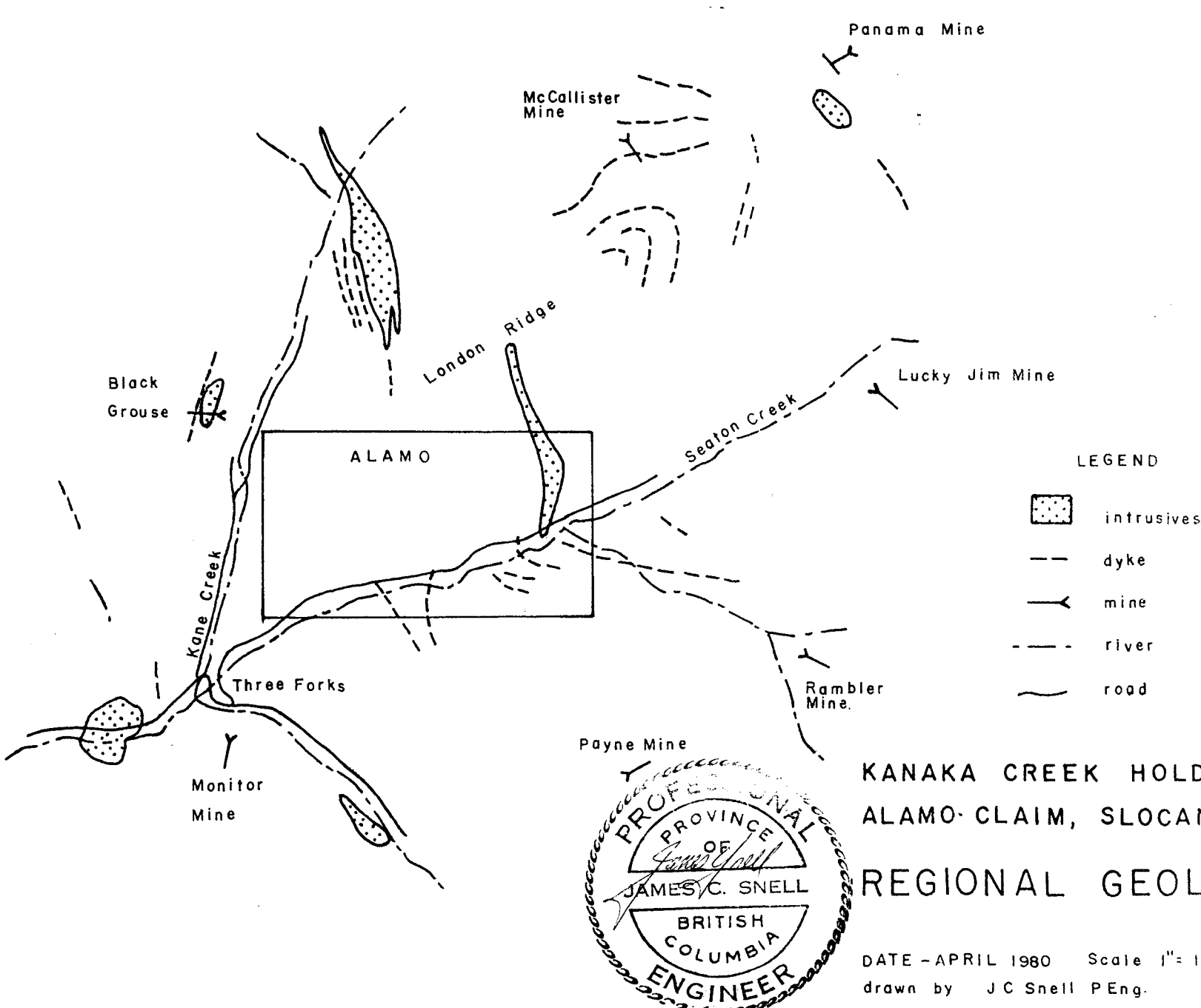


MINERAL RESOURCES BRANCH
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8818
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





KANAKA CREEK HOLDINGS LTD.
 ALAMO CLAIM, SLOCAN DISTRICT
 PRELIMINARY GEOLOGY

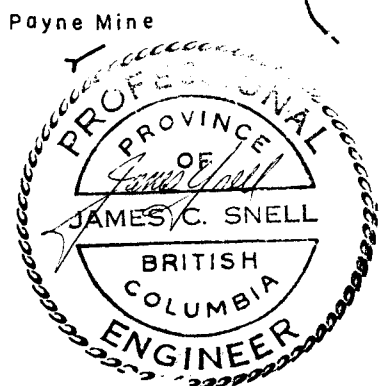
DATE - APRIL 1980 Scale - 1" = 800m (2640')
 mapped and drawn by J.C. Snell P.Eng.



LEGEND

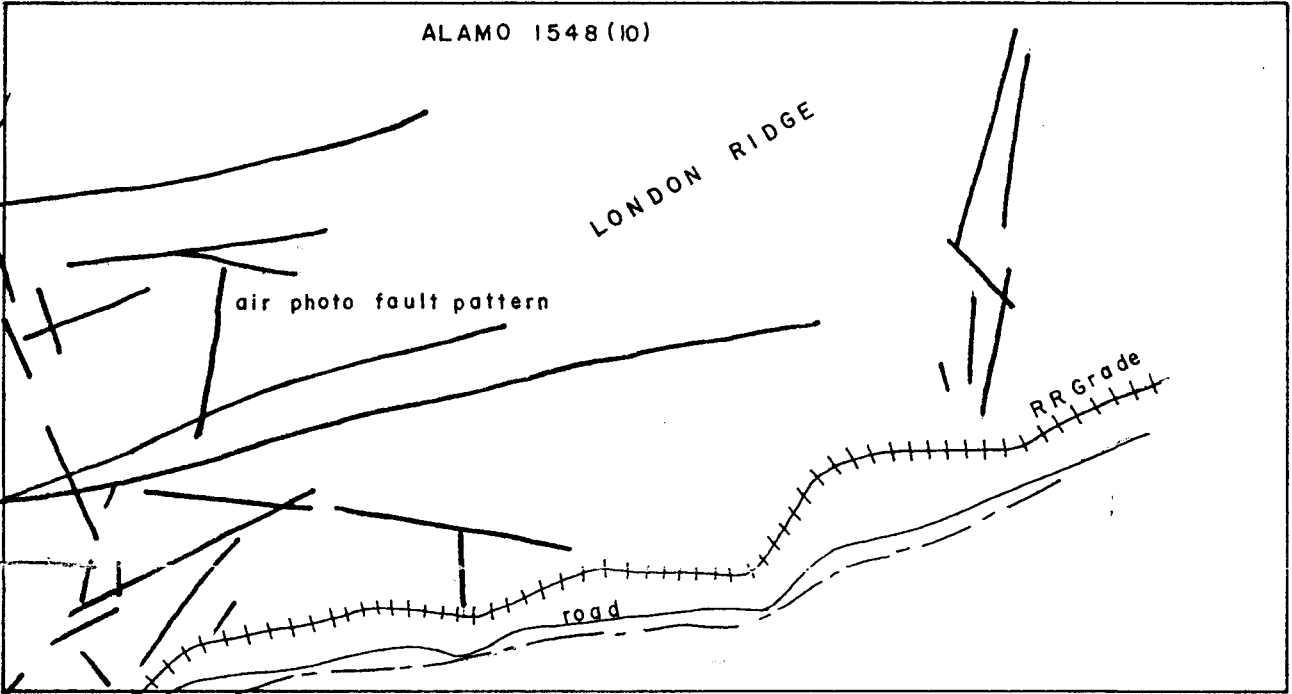
-  intrusives
-  dyke
-  mine
-  river
-  road

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
8818
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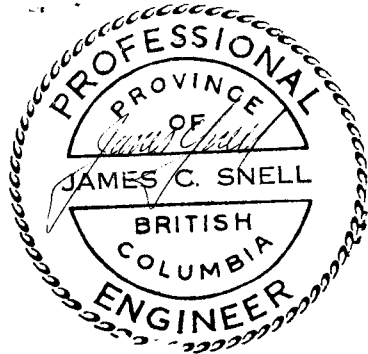


KANAKA CREEK HOLDINGS LTD.
ALAMO CLAIM, SLOCAN DISTRICT
REGIONAL GEOLOGY

DATE - APRIL 1980 Scale 1" = 1600m (1mi)
drawn by J C Snell P.Eng.



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Three Forks

KANAKA CREEK HOLDINGS LTD.
ALAMO CLAIM, SLOCAN DISTRICT BC.
AIR PHOTO GEOLOGY MAP

DATE - APRIL 1980 SCALE - 1" = 365m (1600')
interpretation by - JCSnell P.Eng.

15+00 m

10+00 m

5+00 m

0+00

5+00 m W

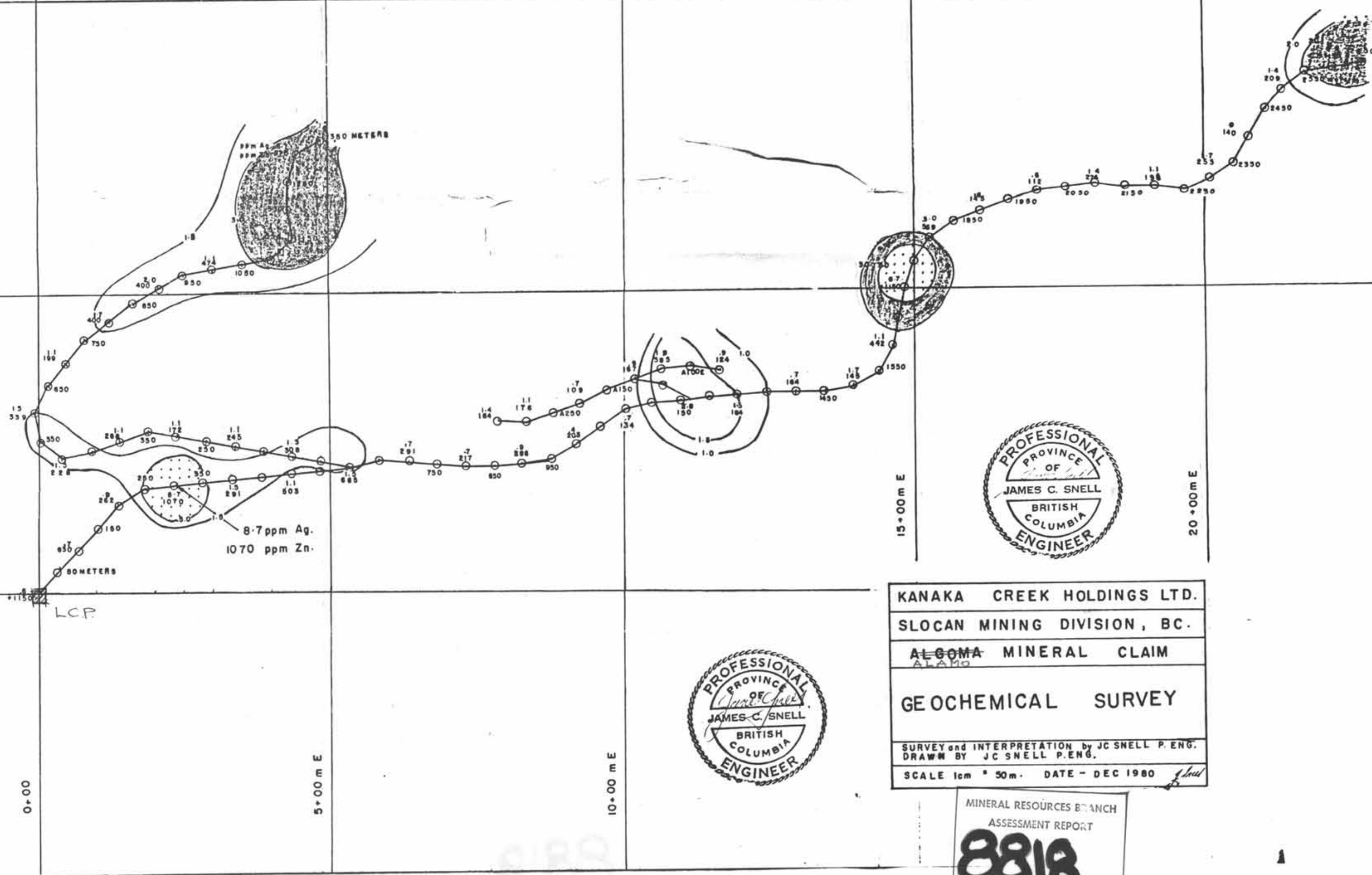
0+00

5+00 m E

10+00 m E

15+00 m E

20+00 m E



KANAKA CREEK HOLDINGS LTD.
SLOCAN MINING DIVISION, BC.
~~ALGOMA~~ MINERAL CLAIM
ALAMO
GEOCHEMICAL SURVEY
SURVEY and INTERPRETATION by JC SNELL P. ENG.
DRAWN BY JC SNELL P. ENG.
SCALE 1cm = 50m. DATE - DEC 1980

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