

521154
82K/3

GEOLOGICAL REPORT

on the

DOLLY VARDEN PROPERTY

SLOCAN MINING DISTRICT, B.C.

for

Mike McCrory

New Denver, B.C.

117° 16' W - 50° 07' N

September, 1980

James C. Snell, P.Eng.
Geological Engineer.

TABLE OF CONTENTS

	Page
INTRODUCTION	1
PROPERTY	2
LOCATION	2
ACCESS	3
TOPOGRAPHY	3
WATER AND POWER	4
CLIMATE	4
TRANSPORTATION AND SUPPLIES	5
HISTORY	5
GENERAL GEOLOGY	7
PROPERTY GEOLOGY	9
RECOMMENDATIONS AND CONCLUSIONS	12
PROGRAM AND BUDGET	14
CERTIFICATE	16

INTRODUCTION

The writer was requested by Mr. Mike McCrory of New Denver, B. C., to make a field trip to the Dolly Varden Property north of New Denver and to complete a geological report with recommendations for development. It was mentioned by Mr. McCrory that this is the first time a geologist has visited the location to his knowledge, and almost nothing is mentioned in government reports.

The property consists of two reverted crown grants and a block of located mineral claims of 20 units. The mineral zone is located on Mount Dolly Varden north and east of New Denver, B. C. Only one small working was observed on the property which was a prospect crosscut 60 feet in length and a drift on a quartz vein about the same length.

A good logging road has been constructed to within two kilometers of the occurrence. The property has not been developed in the past due to difficult access conditions. This is no longer a major problem.

This report includes observations made and recommendations for development of what appears to be a substantial mineralized structure.

PROPERTY

<u>Claim Name</u>		<u>Number</u>
Dolly Varden	- reverted crown grant	L 4101
Archie	- reverted crown grant	L 3631A
Dolly	- located claim, 20 units	151070

LOCATION (117°16'W - 50°07'N)

The property is located in the Slocan Mining District of southeastern British Columbia on Mount Dolly Varden, 16 kilometers northeast of the village of New Denver, B. C.

ACCESS

Access is by paved road from the village of New Denver north to the Wilson Creek cutoff at Rosebery (a distance of 5 kilometers), then by good gravel road along Wilson Creek for 5 kilometers, then by good gravel forestry access road to within 2 kilometers of the property (a distance of approximately 15 kilometers). Total distance from New Denver is about 27 kilometers.

New Denver can be reached by paved road either from Revelstoke in the north or Castlegar in the south. Castlegar is serviced by aircraft from Vancouver or Calgary.

TOPOGRAPHY

The property is located on the southwest flank of Mount Dolly Varden. The mineralized structure can be observed running across the flank of the mountain beginning at an elevation of 7,000 feet. Topography is steep and mountainous; however, access roads follow contours.

WATER AND POWER

Two Lakes exist just to the east and southeast of the property. These are drained by a stream flowing down into Marten Creek. Ample water would be available from this reservoir area for underground development and production purposes.

Diesel-electric power would be required during development stages.

CLIMATE

The area is within a relatively heavy snowfall belt and the property would be snow free for about 3½ months. The heavy snowfall would not prevent underground operations although clearing access roads during periods of maximum snowfall might be costly. Initial surface work such as establishing portal sites and completion of access roads could be accomplished during the summer months.

TRANSPORTATION AND SUPPLIES

The highway from Trail to New Denver, a distance of approximately 130 kilometers, is paved and maintained throughout the year. Most supplies would be purchased in New Denver, Trail or Nelson. Castlegar, 32 km north of Trail, has daily airline service from Vancouver and Calgary.

HISTORY

The Slocan mining camp has been a producer of silver-lead-zinc ores for approximately ninety years. Production commenced in 1890 with the greatest activity being reached in the 1920's. Production declined during the ensuing depression period as metal markets declined. Presently, there is one steady producer in the area, Silvana Mines Ltd. at Sandon, B. C.

Due to the present high metal prices there is a great deal of activity in the district by individuals as well as by large companies such as ASARCO, Riocanex, AMOCO, and British Petroleum.

The property was staked in 1900, and a small prospect tunnel was driven on the northwest exposure of the mineral zone at the lowest exposed elevation. The only comments found in government publications are as follows.

B.C.M.M. 1901, p. 827

"The season has been one of the best the division has seen as far as development and ore shipments are concerned. No less than 16 prospects have become shipping mines, including the Sweetgrass, Turris and Pinto which are situated on Goat Mountain about one mile to the northeast of New Denver, and the Dolly Varden and Rolett situated on the north fork of Carpenter Creek. These two last run very high in silver values with about \$8.00 in gold per ton."

GENERAL GEOLOGY

The property is unique to the district in that mineralization has been localized over a long strike length along the geological contact between the Slocan Series of sediments and the Kaslo Volcanics. This is a disconformable contact which has been faulted, forming a zone of weakness into which have been intruded quartz and silver bearing minerals.

The Kaslo Volcanics are Permian to Triassic in age and consist of meta-andesite, flows, tuff and breccia.

The Slocan Group consists of a series of sedimentary units of Triassic age: grey to black phyllite, argillite, slate and quartzite. The oldest member of the Slocan Group which abuts the Kaslo Volcanics is a thick section of black slates with minor bands of limestone. This rock type is well exposed at the Whitewater Mine to the southeast near Retallack, approximately 20 kilometers east of New Denver. The Slocan Series overlies the Kaslo Volcanics. The formations have been upturned during plutonic activity, and now dip to the southwest at 40° to 50° and strike northwesterly.

Both the sediments and volcanic units have been intruded by stocks, plugs and dykes related to the Kuskanax Batholith to the north. This batholith is of Jurassic age and consists essentially of leuco quartz monzonite. The related stocks, plugs and dykes are of variable composition, including diorite and feldspar porphyry.

PROPERTY GEOLOGY

The zone of mineralization is reported to be over three miles (4,873 meters) in length, of which approximately 4,000 feet (1,230 meters) lie within the claim boundaries included in this report. Approximately 3,000 feet (923 meters) of the zone was observed by the writer from a distance, and 1,500 feet (461 meters) was inspected on the ground. The zone of alteration is generally about 100 feet (30 meters) in width and consists of rusty green phyllitic schist, intruded by quartz stringers running in various directions. The mineral zone lies along the contact between the Kaslo Volcanics and the Slocan Sediments within the volcanic horizon. The actual contact is marked by an abrupt change in topography as the sediments weather quite readily and provide a milder relief. The phyllitic schist and sheared volcanics strike at 110° and dip to the north at 80° .

A main quartz vein appears to be centered within the zone of alteration, dipping to the north at 55° . This quartz vein, where observed, is from 2 feet to 10 feet (0.6 meters to 3 meters) in width. These observations,

were made over a length of 1,500 feet (461 meters). The average width is probably 4.5 feet (1.38 meters).

The vein quartz, where observed, carries disseminated silver bearing tetrahedrite, minor antimony, and pyrite in greater or lesser amounts. The tetrahedrite exhibits surface oxidation; blue and green copper stain is common. It is quite possible that some areas of quartz stockwork in association with the main vein will provide large quantities of low grade ore. The main vein appears to run almost due east, trending slightly to the north of the main formational contact as one progresses in an easterly direction.

1,500 feet (461 meters) east of the prospect tunnel, the vein reaches a width of 10 feet (3 meters) and is at this location quite heavily mineralized with pyrite. Adjacent to the vein an intrusive stock of fine grained diorite was observed. Considerable mineralization was noted in the area; however, no surface or underground work has been done. It is suggested that this location would be a good target for initial development.

The zone was not observed to the west of the prospect tunnel as the topography is lower and the overburden is heavier. The main formational contact, however, does continue on in a northwesterly direction for several kilometers. Dixey and Monitor Creeks should be prospected along the vein projection.

RECOMMENDATIONS AND CONCLUSIONS

Due to the present high price of gold and silver, and the projected increase in these prices, this property should be considered as an exceptionally good development project with production potential. The structure is strong and continuous, and mineralization is exhibited over good mining widths throughout the strike length observed. The main drawback to development of the project has been its elevation and the difficult access situation. Good roads now exist to within a mile of the mineral zone and in fact these roads enter the claim area. Approximately two kilometers of road must be constructed from the existing roads to the mineral showing. Winter snow conditions will be heavy, and therefore portal and site construction as well as access construction should be completed during the summer months. Underground development and production throughout the year should not present a great problem once the operation has been established.

Due to the strength and extent of the geological structure, it is proposed that underground development will, be required to adequately explore for ore bodies within

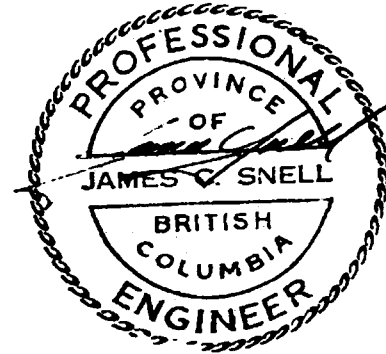
this structure. It is doubtful that the entire length of the quartz vein will be ore grade, and it is presumed that ore bodies must be defined by underground development and underground diamond drilling.

Topography is such that a proper surface drilling program would not be possible. A program of underground drifting and diamond drilling is therefore proposed and recommended. In conclusion, it can be said that this property has some of the best potential of any property observed by the writer in the Slocan district. Present access roads make it possible to investigate this potential.

PROGRAM AND BUDGET

(1) Access road construction (2 km)	-	\$ 100,000.00
(2) Portal site preparation	-	\$ 25,000.00
(3) Portal installation	-	\$ 25,000.00
(4) Crosscut		
1,000 feet @ \$200.00/foot	-	\$ 200,000.00
(5) Drift on vein		
2,000 feet @ \$200.00/foot	-	\$ 400,000.00
(6) Diamond drill crosscuts		
500 feet @ \$200.00/foot	-	\$ 100,000.00
(7) Diamond drilling		
5,000 feet @ \$20.00/foot	-	\$ 100,000.00
(8) Supervision, engineering	-	\$ 100,000.00
		<hr/>
Sub Total	-	\$1,050,000.00
(9) Contingencies and miscellaneous (20%)	-	\$ 200,000.00
		<hr/> <hr/>
Total	-	\$1,250,000.00

Respectfully submitted,



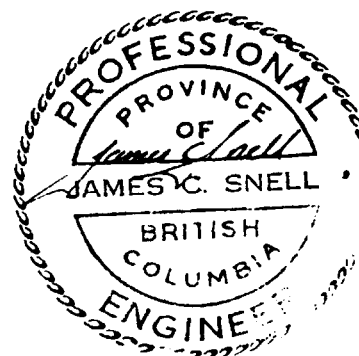
James C. Snell, P.Eng.

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.



MINERAL ACT - PROVINCE OF BRITISH COLUMBIA

Record of Mineral Claim

FORM G

MAP NO. _____ RECORD NO. _____

MINING RECEIPT NO. _____ RECORDED AT _____ B.C. THIS _____ DAY OF _____ 19__

DO NOT WRITE IN
SHADED AREAS

MINING RECORDER _____

MINING DIVISION _____

**Affidavit
for
Mineral
Claim**

I, MICHAEL McCREARY AGENT FOR _____ NAME _____

Box 301, New Denver B.C. ADDRESS _____

VALID SUBSISTING F.M.C. NO. 14372 VALID SUBSISTING F.M.C. NO. _____

MAKE OATH AND SAY I COMMENCED LOCATING THE REELLY MINERAL CLAIM

ON THE 14 DAY OF SEPT 1980 AT 10:00 AND COMPLETED THE LOCATION
TIME INDICATE A.M. OR P.M.

ON THE 14 DAY OF SEPT 1980 AT 6:30 CONSISTING OF
TIME INDICATE A.M. OR P.M.

1 UNIT LENGTHS EAST AND 4 UNIT LENGTHS NORTH AND I HAVE IMPRESSED ALL THE REQUIRED INFORMATION
NUMBER DIRECTION NUMBER DIRECTION

ON METAL TAGS NO. 40533 WHICH HAS BEEN SECURELY FASTENED TO THE POSTS AS REQUIRED UNDER THE REGULATIONS.

IDENTIFICATION POST(S) NOT PLACED WERE E5, ESN1, ESN2, ESN3

N2, N3, N4, N4E1, N4E2, N4E3, N4E4 CLIFFS.

CHECK APPLICABLE SQUARE THE LEGAL CORNER POST IS SITUATED 17 MILES
 THE WITNESS POST FOR THE LEGAL CORNER POST

ON HICKS CREEK ROAD OFF WILSON CREEK, HEADQUARTER OF
MOUNTAIN CREEK, ON MT. TELLY MOUNTAIN
PRECISELY DESCRIBE POSITION OF POST RELATIVE TO KNOWN TOPOGRAPHICAL OR SURVEYED FEATURES THAT RELATE TO FEATURES ON A MAP.

† BEARING AND DISTANCE TO TRUE POSITION OF LEGAL CORNER POST FROM THE WITNESS POST _____

BEARING AND DISTANCE FROM IDENTIFICATION POST TO WITNESS POST _____

I HAVE COMPLIED WITH ALL THE TERMS OF THE MINERAL ACT AND REGULATIONS PERTAINING TO THE STAKING OF MINERAL CLAIMS AND HAVE ATTACHED A PLAN, ACCEPTABLE TO THE MINING RECORDER, OF THE LOCATION

SWORN AND SUBSCRIBED TO AT _____

THIS _____ DAY OF _____ 19__ BEFORE ME

[Signature]
SIGNATURE

* THIS AFFIDAVIT MAY BE TAKEN BY A PERSON EMPOWERED TO TAKE AFFIDAVITS BY THE EVIDENCE ACT OF BRITISH COLUMBIA.

Gold Commissioner
RECEIVED
SEP 23 1980
M.R. #151070 \$130.00
KASLO, B.C.
MR OR SMR STAMP

NO. OF UNITS _____ WORK REQUIREMENT \$ _____ PER YEAR RENTAL REQUIREMENT - \$10.00 PER \$200.00 WORK. \$20.00 PER \$200.00 C/L

WORK NUMBERS	C/L IN \$	MINING RECEIPT AND DATE RECORDED	TYPE OF WORK	YEAR OF EXPIRY	CREDIT		TRANSFERS (B/S'S, ASSIGNMENTS, CONVEYANCES)
					WORK UNIT(S)	RENTAL IN \$	

O T T O F F I C E

Mineral Act - Province of British Columbia
Form A

MAP NO 82K/3W

RECORD OF MINERAL CLAIM

MINING RECEIPT NO. 88829-E



RECORD NO. 611

RECORDED AT KASLO, B.C., THIS 3rd DAY OF APRIL 19 78,

DO NOT WRITE IN
SHADED AREAS
FOR OFFICE USE ONLY

[Signature]
MINING RECORDER
SLOCAN
MINING DIVISION

APPLICATION FOR REVERTED CROWN-GRANTED MINERAL CLAIM
(Mineral Act)

I, Michael McCreary AGENT FOR _____ (NAME)
Box 301, New Denver B.C. (ADDRESS)

VALID SUBSISTING F.M.C. No. 163977 VALID SUBSISTING F.M.C. No. _____

make application for a record of a mineral claim of the following reverted Crown-granted mineral claim(s).

If more than one claim appears in this application, the applicant(s) hereby certifies (certify) that the claims all adjoin and do not collectively exceed 40 acres.

Name of Claim	Lot No.	Mining Division	Land District	Acreage
ARCHIE FR	3631A	Slocan	Kootenay	48.34

Total 48.34

The prescribed fee, in the amount of \$ 25.00, is submitted herewith.

[Signature] Signature

Time A.M. 11:00 P.M. _____

OFFICE USE ONLY

Gold Commissioner
RECEIVED
APR 3 1978
M.R. # 88829-E \$ 50.00
MR STAMP KASLO, B.C.

Work No.'s	Recorded	M.R.	Year of Expiry	Transfers (Bills of Sale, Assignments, Conveyances)
2789	Mar. 26/79	129430-E	Apr. 3/80	
4556	Mar 28/80	143587-E	Apr. 3/81	

Mineral Act — Province of British Columbia
Form A

MAP NO 82K/3W

RECORD OF MINERAL CLAIM

MINING RECEIPT NO. 88829-E



RECORD NO. 612

RECORDED AT KASLO, B.C., THIS 3rd DAY OF APRIL 1978.

DO NOT WRITE IN
SHADED AREAS
FOR OFFICE USE ONLY

[Signature]
MINING RECORDER MINING DIVISION SLOCAN

APPLICATION FOR REVERTED CROWN-GRANTED MINERAL CLAIM
(Mineral Act)

I, Michael McCree AGENT FOR _____
(NAME) (NAME)
Box 301, New Denver B.C. (ADDRESS) (ADDRESS)

VALID SUBSISTING F.M.C. No. 163777 VALID SUBSISTING F.M.C. No. _____

make application for a record of a mineral claim of the following reverted Crown-granted mineral claim(s).

If more than one claim appears in this application, the applicant(s) hereby certifies (certify) that the claims all adjoin and do not collectively exceed 40 acres.

Name of Claim	Lot No.	Mining Division	Land District	Acres
<u>Dolly Varden</u>	<u>4101</u>	<u>Slocan</u>	<u>Kootenay</u>	<u>51.65</u>

The prescribed fee, in the amount of \$ 25.00, is submitted herewith. Total 51.65

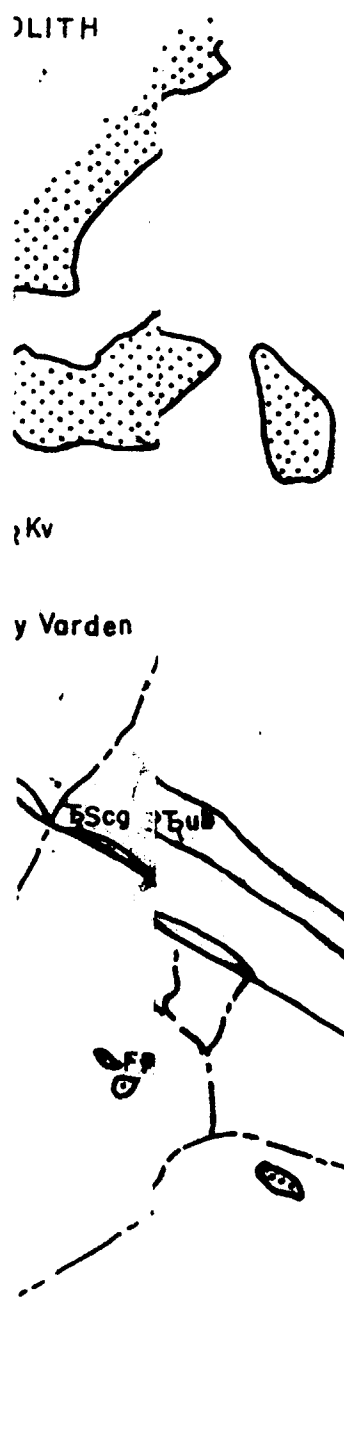
[Signature] Signature

OFFICE USE ONLY

Time A.M. 11:00
P.M. _____

Gold Commissioner
RECEIVED
APR 3 1978
M.R. # 88829-E \$ 50.00
MR STAMPKASLO, B.C.

Work No.'s	Recorded	M.R.	Year of Expiry	Transfers (Bills of Sale, Assignments, Conveyances)
<u>2790</u>	<u>Mar. 26/79.</u>	<u>129430-E</u>	<u>Apr. 3/80.</u>	
<u>4555</u>	<u>Mar 28/80</u>	<u>143587-E</u>	<u>Apr 3/81</u>	



LEGEND

INTRUSIONS of UNKNOWN AGE

- g- granite quartz monzonite
- qmbh - Mount Carpenter Stock - biotite hornblend quartz monzonite
- fp - feldspar porphyry

CRETACEOUS

- Kqmb - Wragge Creek Stock - hornblend biotite quartz monzonite

JURASSIC

- JKX - Kuskanax Batholith - leucoquartz monzonite

TRIASSIC

- TSp - Slokan Group - gray to black phyllite, argillite, quartzite
- TScg - conglomerate

PERMIAN

- PEub - serpentine
- PEK - Kaslo Group - meta-andesite, flows, tuff, breccia

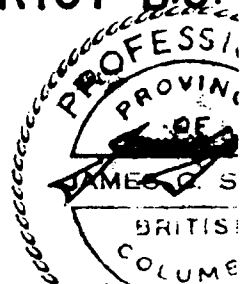
Fig. 2

**GEOLOGICAL MAP,
NORTH SLOKAN DISTRICT B.C.**

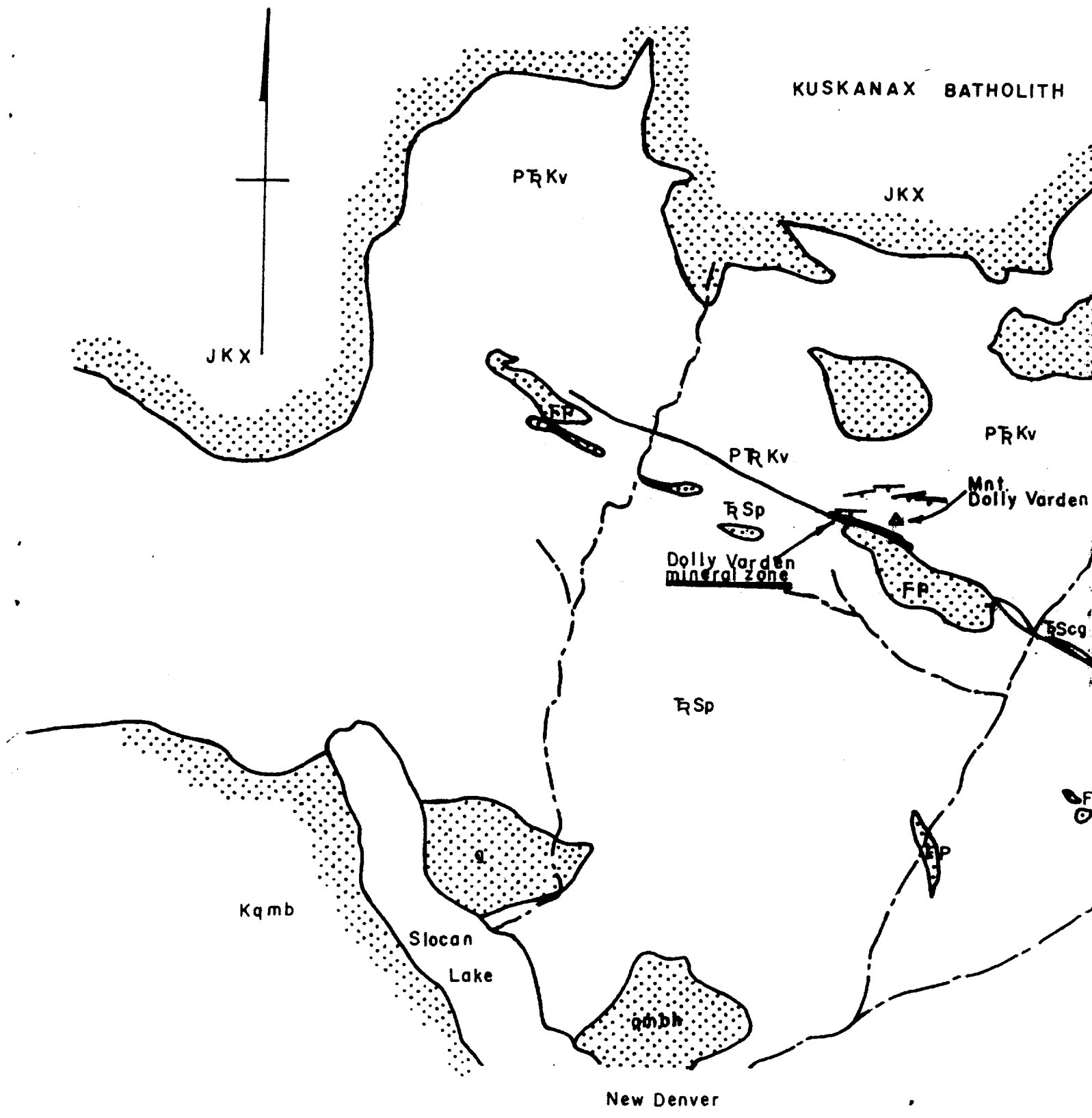
Scale - 2.5 cm. = 1 Km

1 in = 2 mi

Drawn By - James C. Snell P. Eng.



KUSKANAX BATHOLITH



PRKv

JKX

JKX

FP

PRKv

PRKv

Mnt. Dolly Varden

RSp

Dolly Varden mineral zone

FP

RScg

RSp

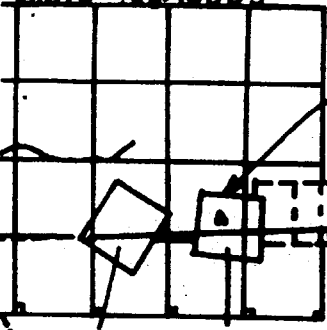
Kqmb

Slovan Lake

qmbh

New Denver

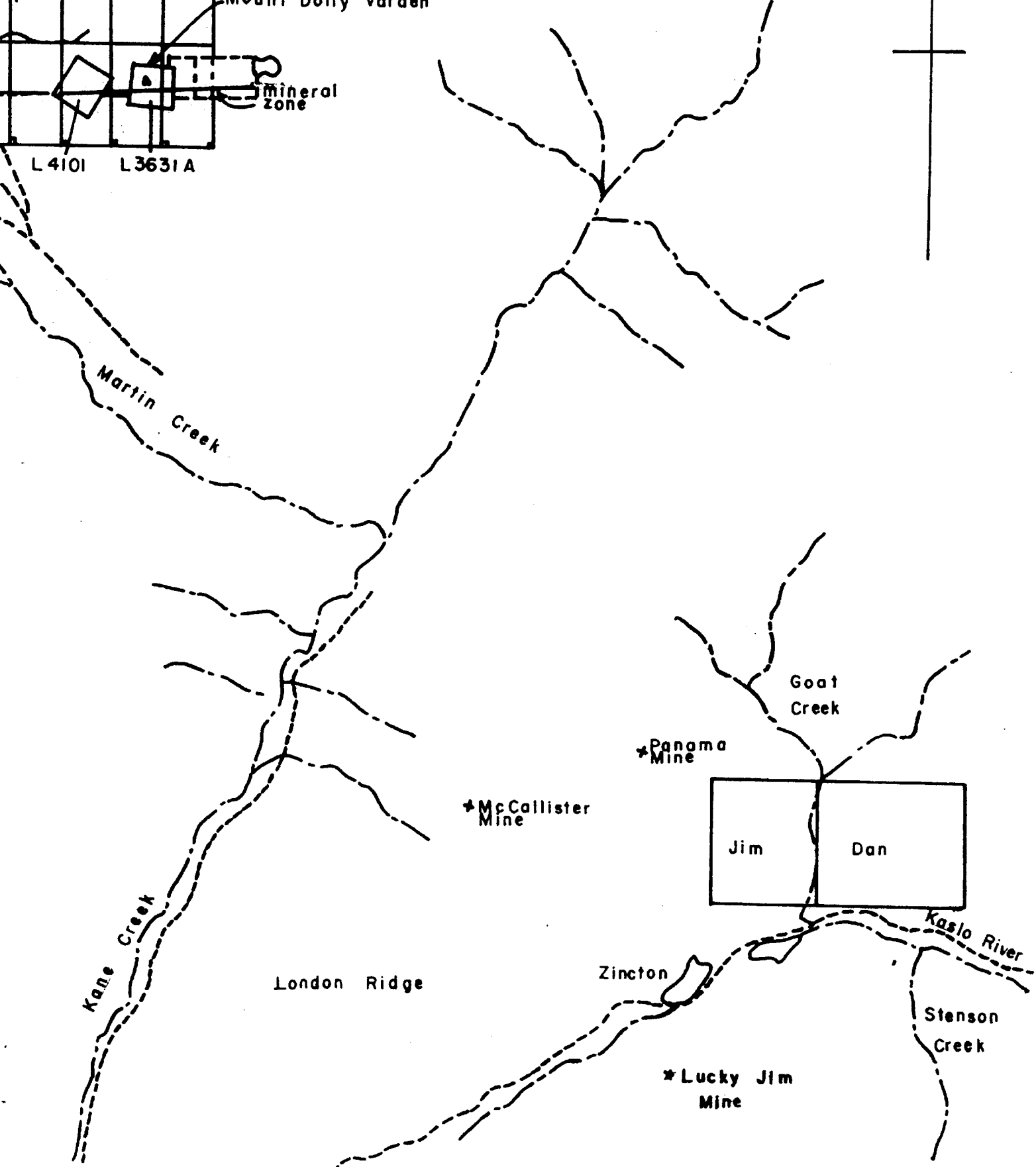
lly mineral claim
51070 tag 40533



Mount Dolly Varden

Mineral zone

L410I L363IA



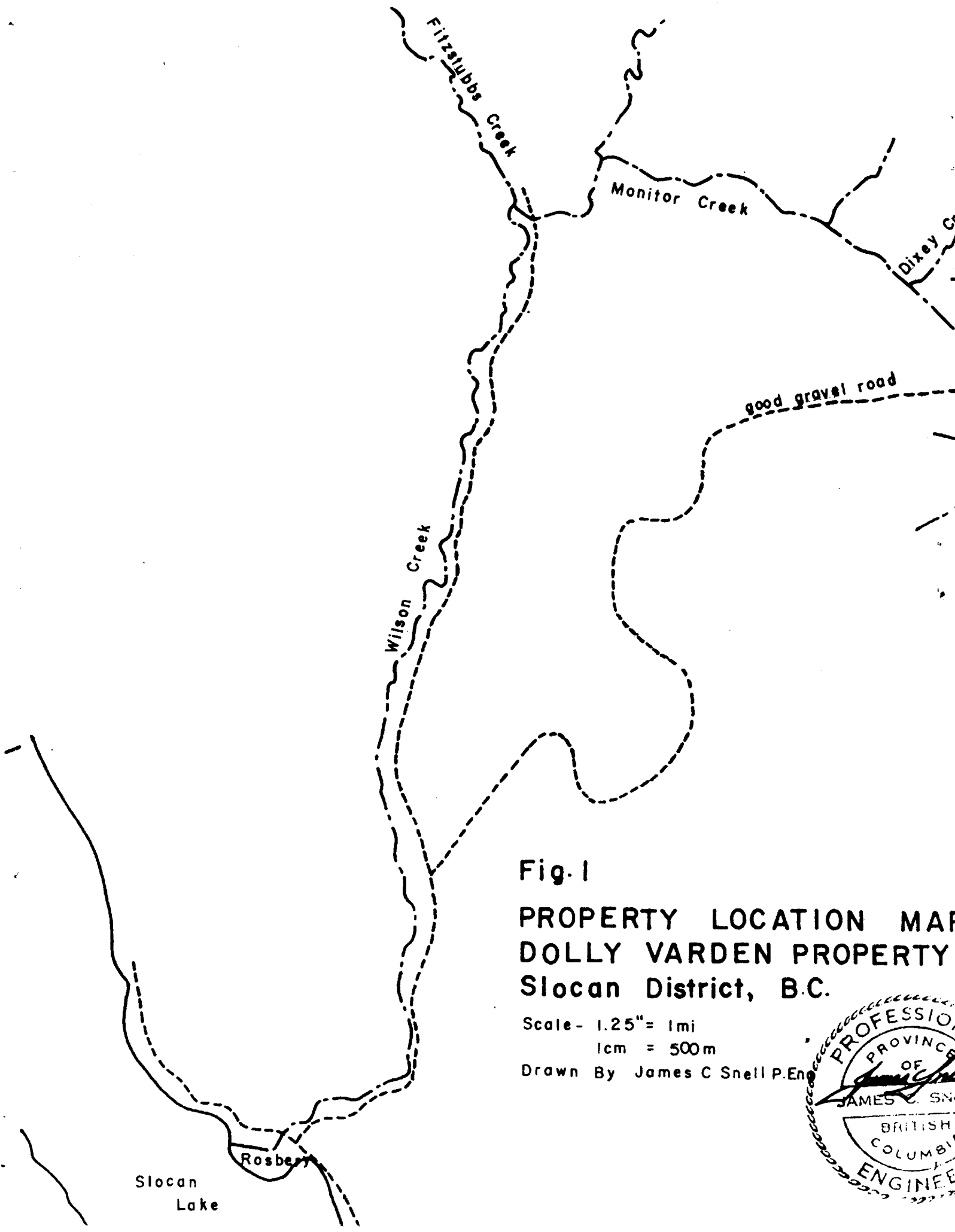


Fig. 1

**PROPERTY LOCATION MAP
DOLLY VARDEN PROPERTY
Slokan District, B.C.**

Scale - 1.25" = 1mi
1cm = 500m

Drawn By James C Snell P.Eng.

