

5937

A REPORT ON THE GEOLOGY OF

THE DONNA CLAIMS

43 km. North of Germansen Landing
Omineca Mining Division
British Columbia

Mineral Claim Map
NTS 94 C/2W

Latitude $56^{\circ}30'$ ⁰⁹
Longitude $124^{\circ}55'$

for

CANEX PLACER LIMITED

by

IGNACIJE BOROVIĆ, P. Eng.
Geologist

Field Work: June 23 - 29, 1976
Report: August, 1976

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 5937 MAP

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A Report on the Geology of
the Donna Claims
Omineca Mining Division, British Columbia

INTRODUCTION

This report describes the exploration work done to date and describes the latest results of the detailed mapping of the property and surrounding area. The area was mapped in the scale 1" = 1,000'.

PROPERTY & OWNERSHIP (Fig. 2)

The Donna group of claims was located by Canex Placer's personnel in the summer of 1968. It consists of the following claims:

Donna #19 with record # 54153

Donna #21 with record # 54155

Donna #23 with record # 54157 to 54160 (incl.)
to #26 (incl.)

The group is owned by Canex Placer Limited of 800 Burrard Building, 1030 West Georgia Street, Vancouver, B.C.

LOCATION & ACCESS (Fig. 1)

The property is at latitude $56^{\circ}30'$, longitude $124^{\circ}55'$ on mineral claim map NTS sheet 94-C-2W, in the Omineca Mining Division (see Fig. 2).

The Donna group is located 43 km. north of Germansen Landing and is covering part of the flank of a mountain range rising to the west of the Osilinka River. Elevations range from 2,800' in the river

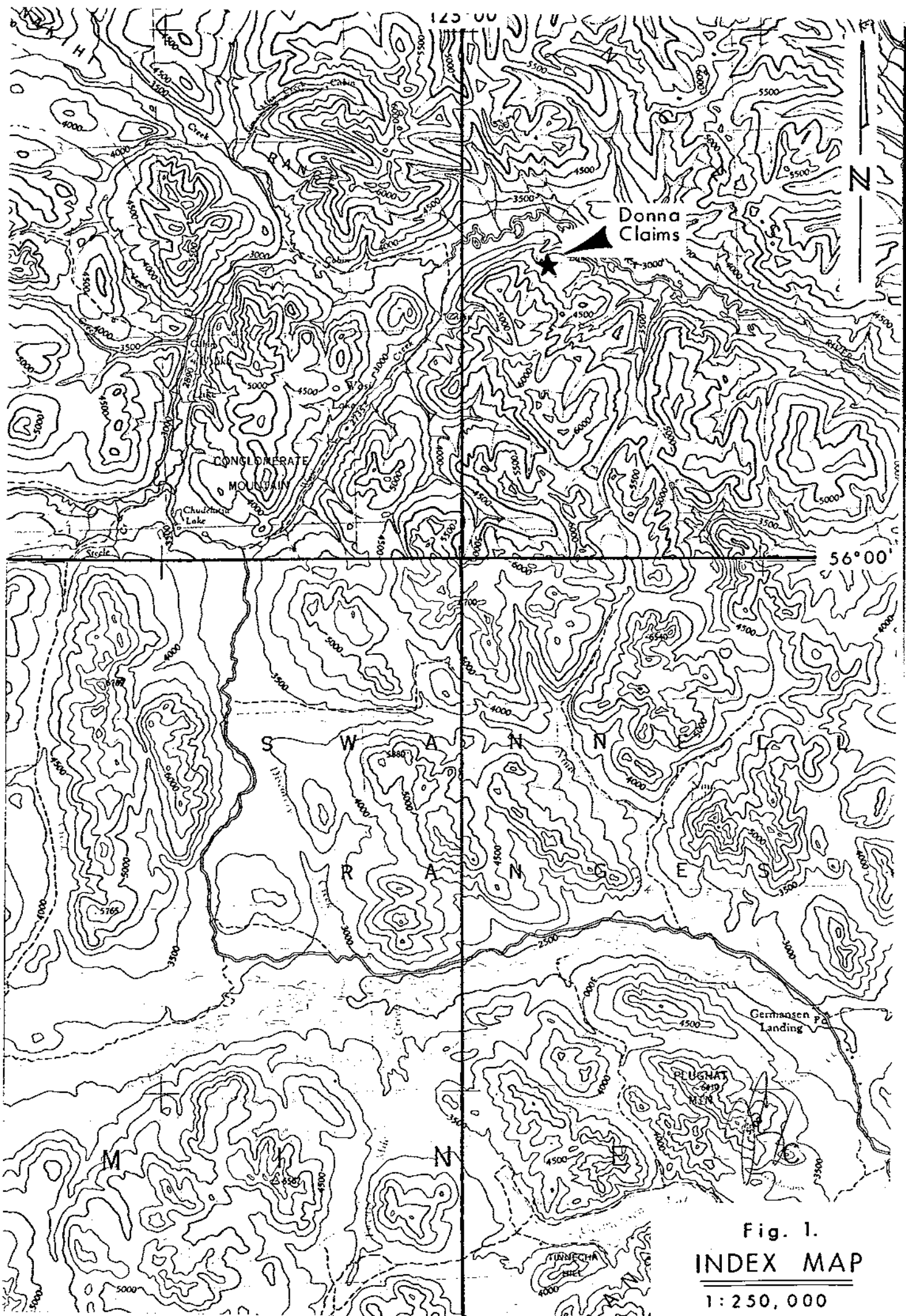


Fig. 1.
INDEX MAP
1:250,000

125°00'

M^W 94C/2W

5

N 56°10'

4

TO WEST SEE MAP 94C/3E

3

56°05'

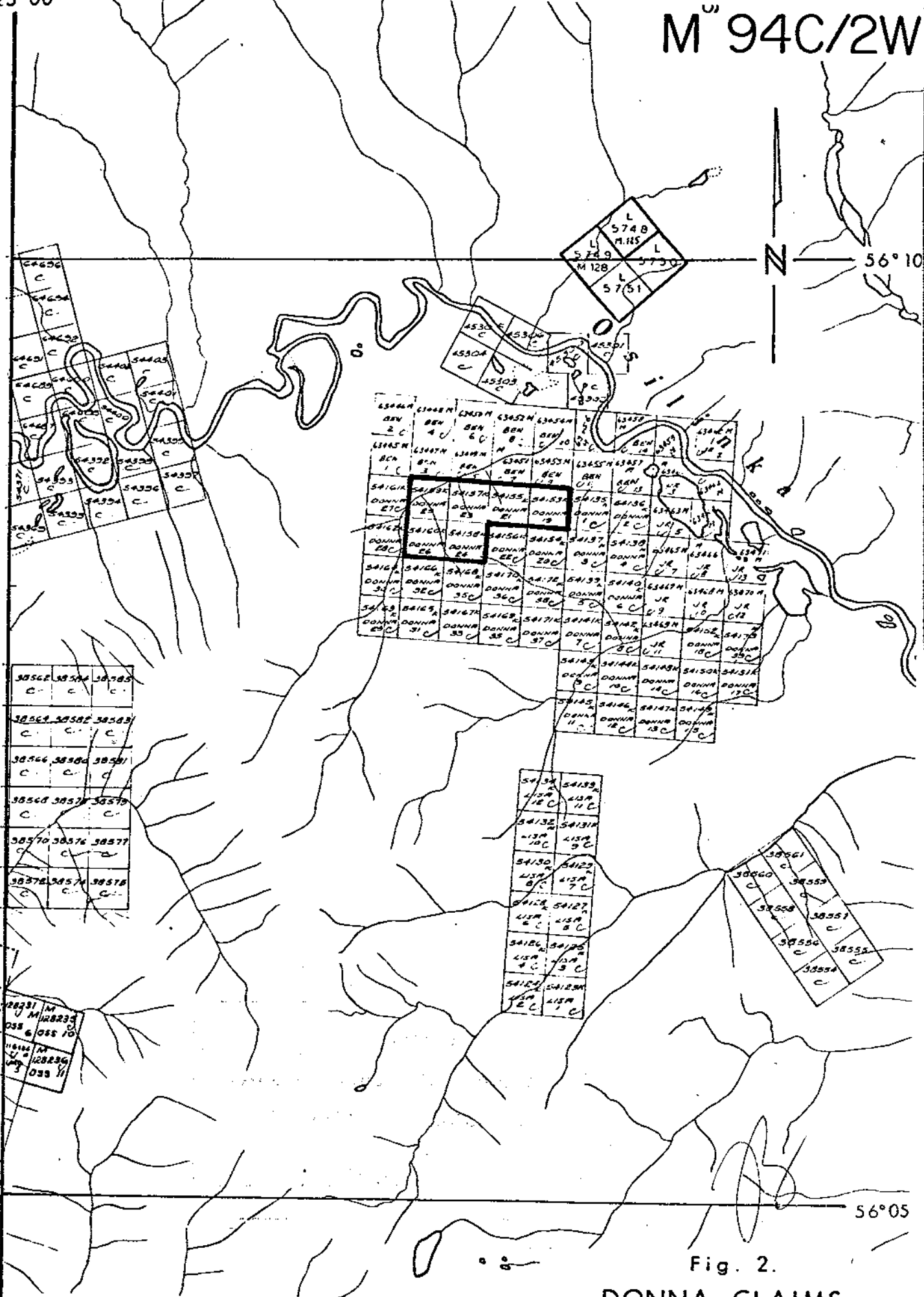


Fig. 2.

DONNA CLAIMS LOCATION MAP
Scale 1" = 1 mile

valley to about 5,000' on the mountain. The area is densely covered with jackpine, spruce and balsam trees. Access to the property is by helicopter from Germansen Landing, a small community located some 200 miles north of Prince George.

HISTORY OF EXPLORATION

The area of the Donna group was first staked as the Gordon and Davies claims by Ernest and Gordon Davies, and optioned to Northwestern Explorations Limited of Vancouver in 1951.

The first explorationists in 1951 considered the mineralization to be of the replacement type in limestones and all the work (mostly trenching) was done on the extension of the strike of those "to be replacement 'vein-type' bodies". The samples assayed contained less than 0.5% Pb, 2.1 to 4.9% Zn and 3.4 to 10.8% barium. Gold was not found and only 0.1 to 0.2 oz/t silver.

During 1966 and 1967 a reconnaissance geochemical survey was undertaken in the area of the Davies group of claims by Canex Placer Limited. The survey indicated a widespread area of lead and zinc mineralization. The area was subsequently covered by 39 Donna claims.

- A. Detailed soil sampling was carried out and samples assayed for lead, zinc and silver. Two anomalous areas were indicated.
- B. The E.M. survey was performed on the same grid as that used for soil geochemistry.

Four anomalies with positive resultant dip angles occur, probably reflecting the top of a conductive body close to surface. They

are not coincident with geochemical anomalies.

- C. Following geochemical and geophysical surveys, some 2,500' of trenching was cut through the old Davies workings in order to determine the extent and controls of Pb and Zn mineralization.
- D. The area's mineral potential was re-examined and claims were geologically mapped in June, 1976.

GEOLOGY

Regional

The area of the northern end of Manson Creek is underlain by limestones, dolomites, argillites and shales of Pensilvanian (?) Permian Cache Creek group (Armstrong, J.E. (1945) and Roots, E.F. (1946, 1947, 1948)).

The most recent investigations by J.W.H. Monger (1972, 1973, 1974) show that the group is of Ordovician (?) and Silurian (?) to Middle Devonian and not of younger Permian age. The group is about 3,000 feet thick and very deformed. The lowest 1,000 feet of foliated, fine-grained crystalline limestone, platy argillaceous limestone and phyllite, lithologically resembles some Ordovician and Silurian carbonates in the eastern Cordillera. The remainder is algalaminated dolomite overlain by dolomitic limestone that in places contains round, etched quartz grains and Lower Middle or Upper Devonian fossils. Algalaminated textures and algal balls at some horizons in the carbonate indicate shallow water deposition, probably within the intertidal zone - reef environment. Lower

Middle or possible late Lower Devonian fossils occur just below the slate, in a dolomite horizon that locally contains galena and sphalerite.

Structure

The strata in this area appears to form a homoclinal succession interrupted by faulting and local folding, that dips westwards from the high-grade metamorphic axis of the Wolverine Complex.

Detail (see Fig. 3)

Only two stratigraphic units were recognized and mapped: 1. the older carbonate unit, and 2. the younger slate, shale, chert unit.

1. The carbonate unit underlying the property is composed of massive light grey fossiliferous, reef, subreef limestones and dolomitic limestones, dark grey corral limestones, grey dolomites and dolomitic limestone breccias.

This unit is believed to be the upper part of 3,000 feet thick group of Ordovician (?) Silurian (?) to Middle Devonian rocks as mapped by J.W.H. Monger (1972, 1973, 1974).

The lower portion of the group was not observed on the property.

2. The younger unit exposed on the western side of the property consists of fissile, grey to dark grey silicious slates and black shales with intercalated thin-bedded ($\frac{1}{2}$ to 1 cm.) cherts. The unit is superimposed on the older carbonate unit. Direct contact in between these units is covered.

Structure (see Fig. 4)

The general monoclinical succession with westward dips of carbonate rocks appears partly changed in the area of the Donna claims. In the central part of the property, the strata form an anticlinal structure with steep dipping limbs, probably due to some local faulting.

Mineralization

The carbonate rocks with sphalerite, galena, pyrite, barite and hematite minerals are located throughout the area of the Donna claims.

The best showings are found in old trenches and creek canyons, and rock cliffs on the north side of Donna #19 and #21 overlooking the Osilinka River Valley.

Coarse galena and honey-coloured sphalerite with barite rosettes were observed in dolomitic limestone breccias in trenches (Samples #10, 13, 14, 16, 19, 20, 25) and on the cliffs (Sample #32) (see fig. 3).

Very fine galena and sphalerite occur in porous coral limestones filling space inside the corals.

Taking the area as a whole, sulphide mineralization appears to be widespread, patchy and concentrated in one or more favourable horizons.

The eight grab samples were assayed for lead and zinc. The table shows the assay results (Rock analyses by Placer Research Lab, Vancouver).

Sample # (See map, fig. 3)	Assay Tag #	Pb %	Zn %
10	28981	0.09	1.04
13	28982	0.10	1.84
14	28983	3.88	20.00
16	28984	0.70	13.20
19	28985	0.90	19.00
20	28986	0.02	5.15
25	28987	0.03	1.14
32	28988	1.09	3.85

REFERENCES

Armstrong, J.E.

1949: Fort St. James map-area, Cassiar and Coast Districts, British Columbia; Geol. Surv. Can., Mem. 252.

Lord, C.S.

1948: McConnell Creek map-area, Cassiar District, British Columbia; Geol. Surv. Can., Mem. 251.

Monger, J.W.H.

1973: Upper Paleozoic Rocks of the Western Canadian Cordillera; in Report of Activities, April to October 1972, Geol. Surv. Can., Paper 73-1, Part A, p. 27-28.

Roots, E.F.

1954: Geology and mineral deposits of Aiken Lake map-area, British Columbia; Geol. Surv. Can., Mem. 251.

Minister of Mines Report (1952)

ANNEXE I

STATEMENT OF EXPENSES

The following is a breakdown of expenses incurred in carrying out the work on the Donna group of claims in June and August, 1976.

1. FIELD WORK (June 23-29, 1976)

PERSONNEL:

I Borovic - geologist	June 23-29	7 days @ \$150/day	\$1,250.00
J Kowalchuk - geologist	June 23-29	7 days @ \$100/day	\$ 700.00
PERSONNEL TOTAL			<u>\$1,950.00</u>

CAMP OPERATIONS

Room & board at Gillilands' Lodge, Germansen Landing	<u>\$ 289.55</u>
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TRANSPORTATION

Helicopter (pilot's wages incl.)		
13.92 hrs. @ \$220/hour	\$3,062.40	
Fuel - 5 drums @ \$56/drum	\$ 280.00	
<u>TRANSPORTATION TOTAL</u>		<u>\$3,342.40</u>

2. OFFICE WORK

PERSONNEL

I Borovic Aug 3-6, Aug 9	5 days @ \$150/day	\$ 750.00
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SAMPLE ASSAYING (Placer Research Lab)

8 samples @ \$13/ea.	<u>\$ 104.00</u>
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<u>OFFICE WORK TOTAL</u>		<u>\$ 854.00</u>
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3. RECAPITULATION

<u>Field Work</u>	- Personnel	\$1,950.00
	Camp operations	289.55
	Transportation	3,342.40
<u>Office Work</u>		<u>854.00</u>

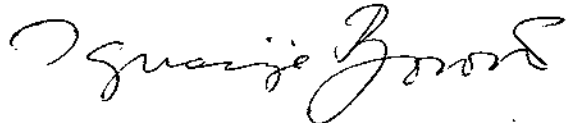
<u>TOTAL EXPENDITURES</u>		<u>\$6,435.95</u>
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C E R T I F I C A T E

I, I. BOROVIC, with business address in Vancouver, British Columbia, DO HEREBY CERTIFY:

1. That I have personally examined and mapped the area of the Donna claims located at $56^{\circ}30'$ latitude and $124^{\circ}55'$ longitude in the Omineca Mining Division, Province of British Columbia.
2. That the expenditures claimed for the performance of the work are correct.

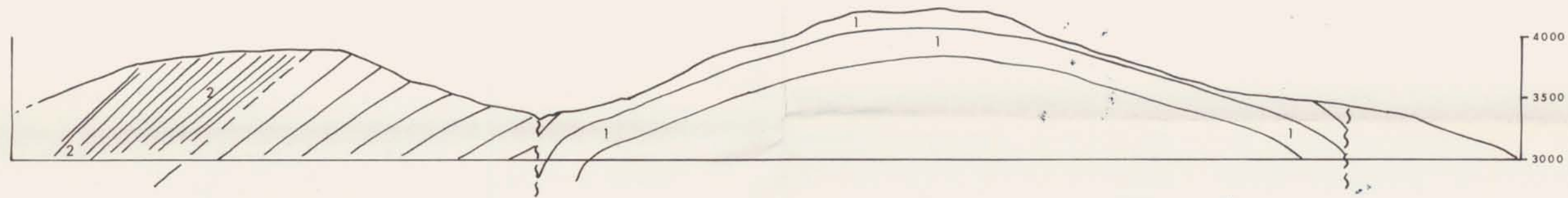
Respectfully submitted

A handwritten signature in cursive script, appearing to read 'I. Borovic', written in dark ink.

I. BOROVIC, P. Eng.

W.

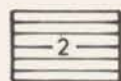
E.



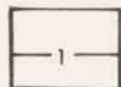
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Department of
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Legend



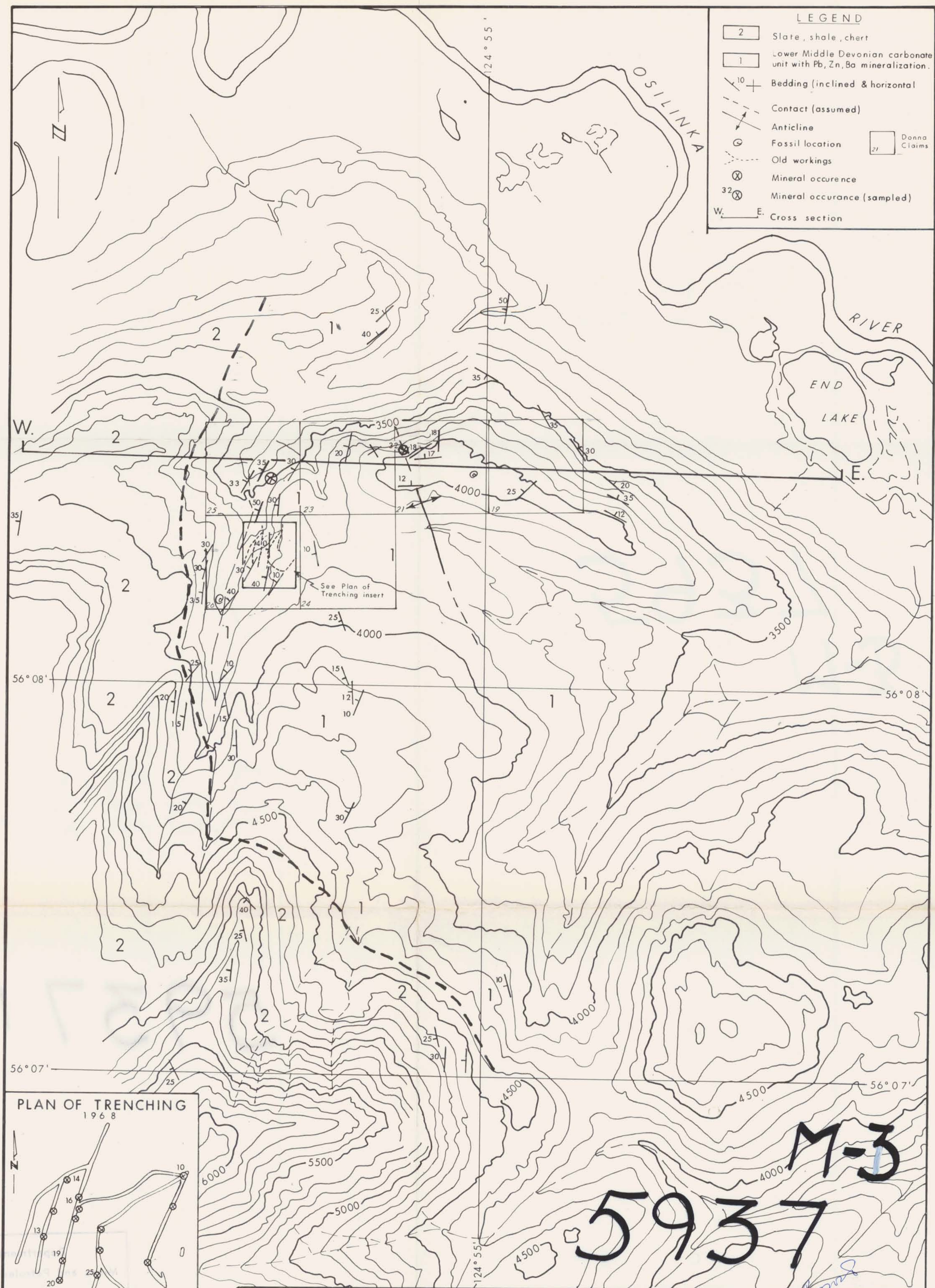
Slate, Shale, Chert.



Lower to Middle Devonian
Carbonate Unit

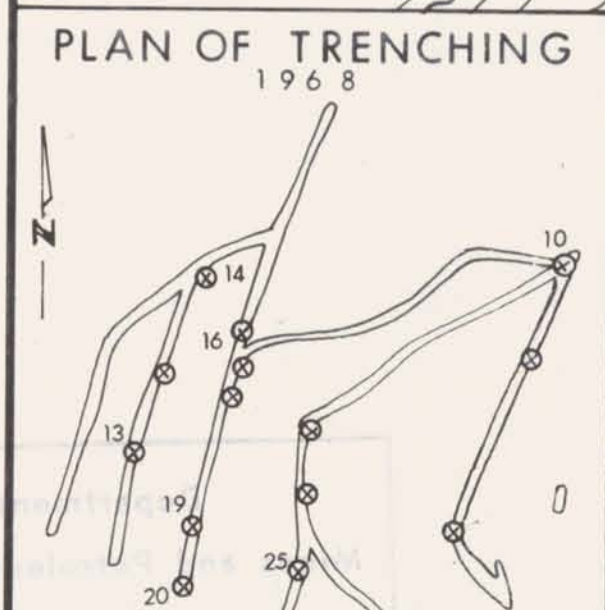
DRAWN: I. B.	SCALE: 1" = 1000'	CANEX PLACER LIMITED	E. -W. CROSS - SECTION through Donna 19,21,23.
TRACED: A.K.	DATE: AUG. 5, 1976	DONNA CLAIM GROUP	
APPROVED:	REVISED:	V-97	FILE No.

FIG #4



LEGEND

2	Slate, shale, chert
1	Lower Middle Devonian carbonate unit with Pb, Zn, Ba mineralization.
10 +	Bedding (inclined & horizontal)
- - -	Contact (assumed)
↖ ↗	Anticline
⊙	Fossil location
- - -	Old workings
⊗	Mineral occurrence
⊗	Mineral occurrence (sampled)
W. — E.	Cross section



M-3
5937

DRAWN: I. B.	SCALE: 1"=1000'	CANEX PLACER LIMITED
TRACED: A. K.	DATE: AUG. 4, 1976	DONNA CLAIM GROUP
APPROVED:	REVISED:	V-97

FIG. #3
Geology Map
FILE No. V-97 *5937- *3