86-561-15108



# PROSPECTING REPORT

## STEEP 1 CLAIM

YALE DISTRICT

NEW WESTMINISTER MINING DIVISION

BRITISH COLUMBIA



LOCATED: 49 31' Latitude
121 19' Longitude
NTS 92H 11W, 92H 6W

OWNER: R. Cromb, Tor-West Exploration

WORK DONE ON: STEEP 1

WORK PERFORMED: JUNE 9-12, 1986

By: M. Ball, M.Sc.

Date: August 25, 1986

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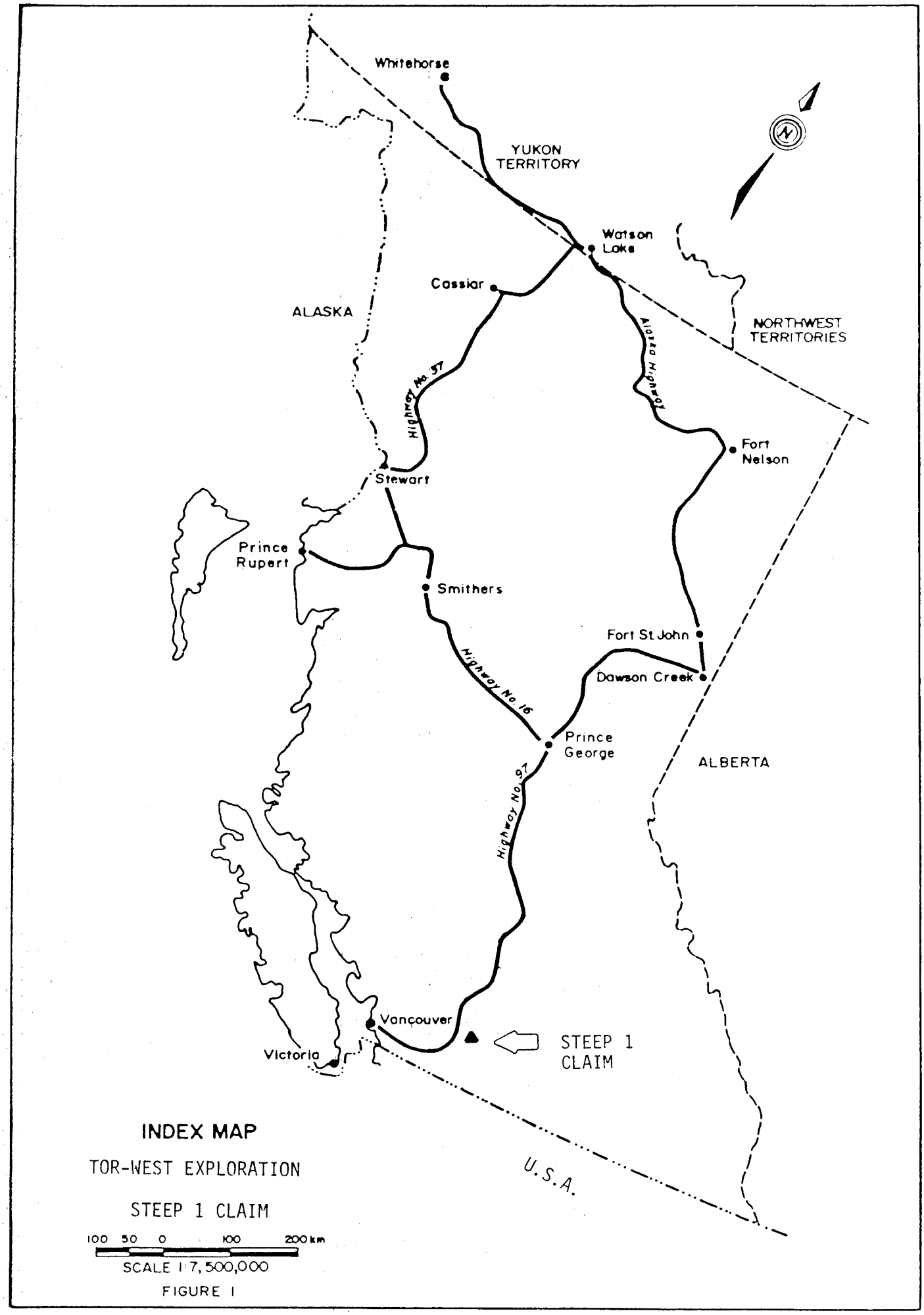



**INDEX MAP**

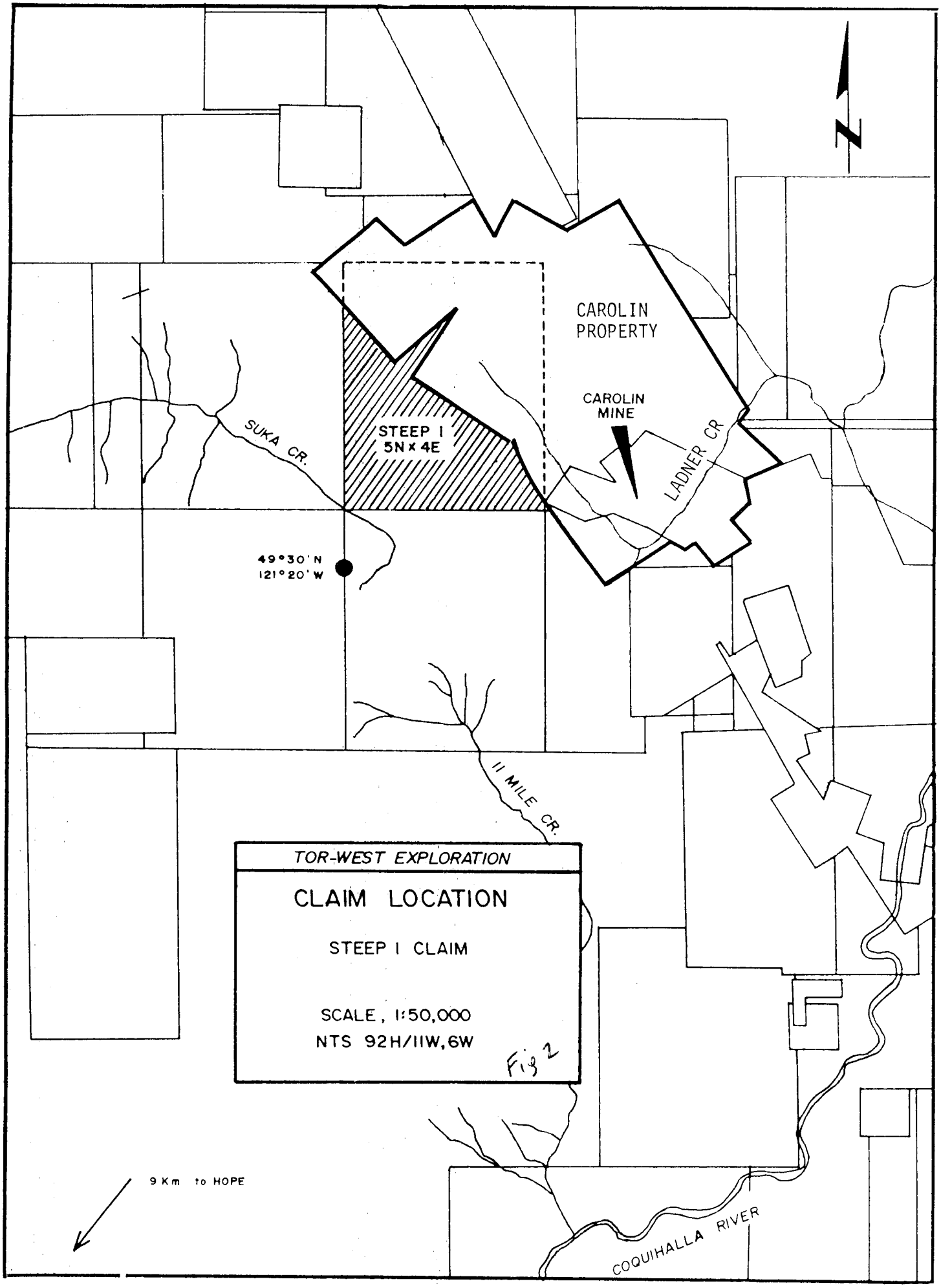
TOR-WEST EXPLORATION

STEEP 1 CLAIM

100 50 0 100 200 km

SCALE 1:7,500,000

FIGURE 1


N
CAROLIN
PROPERTY
CAROLIN
MINE
STEEP I
5N x 4E
SUKA CR.
LADNER CR
49°30' N
121°20' W
11 MILE CR.
TOR-WEST EXPLORATION
CLAIM LOCATION
STEEP I CLAIM
SCALE, 1:50,000
NTS 92H/11W,6W
Fig 2
9 Km to HOPE
COQUIHALLA RIVER

## 1.0 Claim Record

| Name | Units | Record No. | Record Date | Owner |
|---|---|---|---|---|
| STEEP 1 | 20 | 2662 | June 17, 1985 | R. Cromb |

## 2.0 Introduction

This report describes prospecting done on the STEEP 1 mineral claim in 1986.

## 3.0 Location and Access

The STEEP 1 claim is located approximately 15 kilometers northeast of the town of Hope, situated in southwestern British Colunmbia (figures 1 and 2).

Access to the claim is by four wheel drive vehicle via roads which extend northwest from the mining property of Carolin Mines Ltd. on Ladner creek, and east from the Fraser river along Suka Creek. These are old logging roads which are now severely washed out in many places.

## 4.0 History

The area in which the STEEP 1 claim is located has a relatively long history of gold exploration and mining. During the early 1900's, surface prospecting was conducted over most of the ground in the vicinity of Ladner creek. Gold was discovred on a number of properties and four mines were brought into production on a small scale (Cairnes 1923, 1929 and BCMMAR 1927).

In 1973, Carolin Mines Ltd conducted exploration on a known mineralized zone and established reserves sufficient to warrant mining. The Carolin mine commenced production in 1982 at a rate of 1500 tons per day and an average mill head grade of approximately 0.13 ounce per ton gold. Following a decrease in the price of gold, production was ceased in 1984.

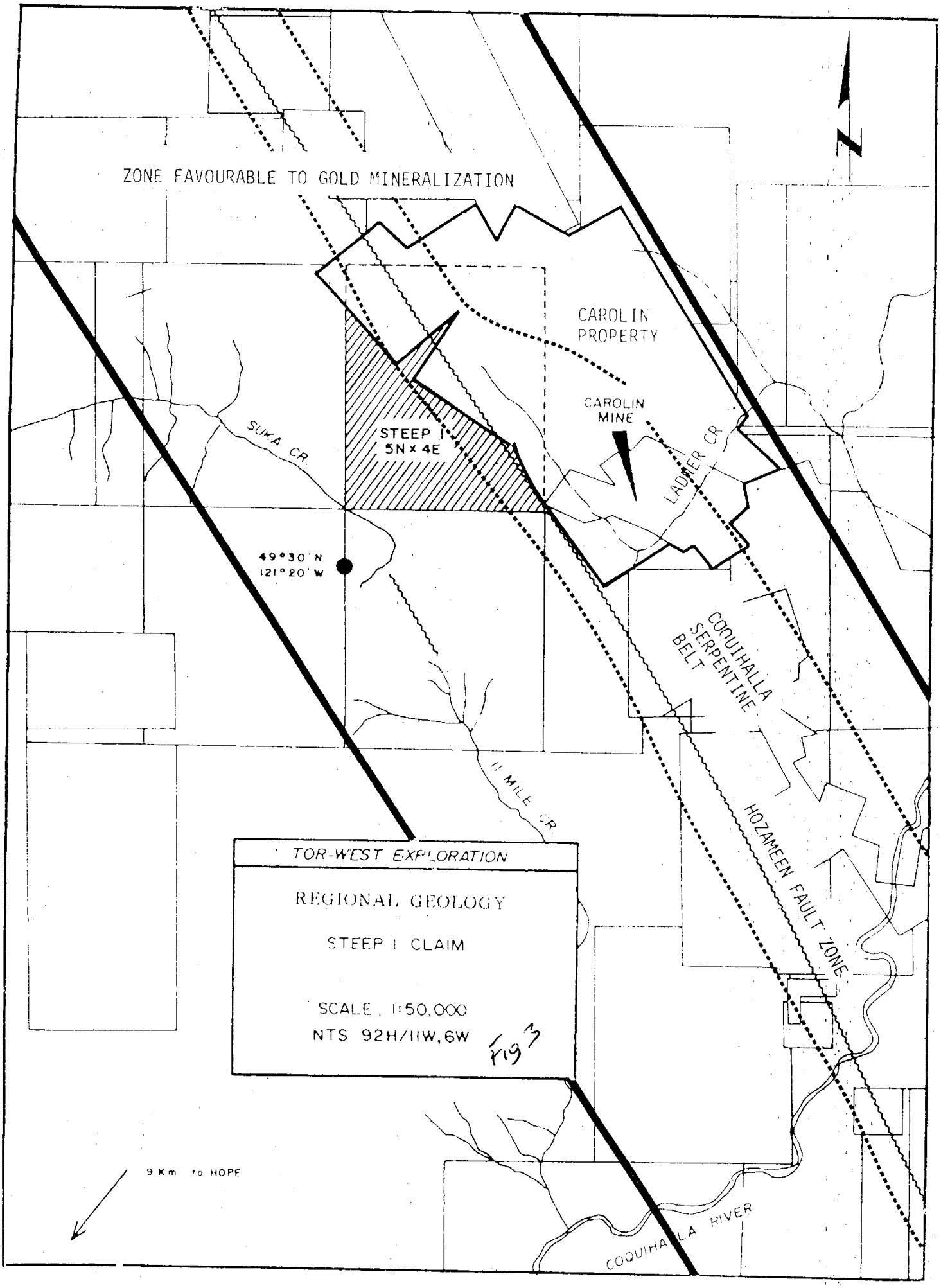
The STEEP 1 claim was located in 1985. There is no record of any exploration conducted on the ground covered by the STEEP 1 claim and no mineralized zones are known to date.

## 5.0 Summary of Work

An area of approximately 1.5 square kilometers was prospected over a period of four days. The purpose was to locate any gold occurrences or any structures which could be favorable sites for gold mineralization.

## 6.0 Regional Geology

The STEEP 1 claim is situated over the western margin of the Hozameen fault zone, a major fault structure which separates Hozameen group rocks to the west from Ladner group rocks to the east (figure 3). The Hozameen Group consists of greenschist metamorphosed mafic volcanics (greenstones), chert and local diorite.


ZONE FAVOURABLE TO GOLD MINERALIZATION
CAROLIN PROPERTY
CAROLIN MINE
STEEP I 5N x 4E
SUKA CR.
LADNER CR.
49°30'N 121°20'W
COQUIHALLA SERPENTINE BELT
HOZAMEEN FAULT ZONE
11 MILE CR.
COQUIHALLA RIVER
9 Km to HOPE
TOR-WEST EXPLORATION
REGIONAL GEOLOGY
STEEP I CLAIM
SCALE, 1:50,000
NTS 92H/11W, 6W
Fig 3

The Ladner Group consists of slaty argillite, siltstone and local greywacke. The Ladner Group is Jurassic in age and the Hozameen Group appears to be Early Triassic.

The Hozameen fault zone controls the distribution of serpentinite bodies in the region which is collectively referred to as the Coquihalla Serpentine Belt. Gold occurrences are spatially associated with the serpentine belt for approximately 29 kilometers between the town of Spuzzum and the Coquihalla river.

A variety of Gold mineralization occurs in the area surrounding the STEEP 1 claim. To the east, gold mineralization at the Carolin mine occurs in a sulphide-rich, quartz stockwork zone within intensely deformed and faulted clastic rocks of the Ladner Group.

The former Aurum and Emancipation mines are located 1 and 3 kilometers respectively southeast of the STEEP 1 claim. At Aurum, coarse visible gold was found associated with sulphides in a talcose shear along the margin of a serpentine body. Gold at the Emancipation mine was hosted by quartz veins within sheared and altered volcanic rocks near the serpentine/volcanic contact.

At the former Hillsbar creek mine, located approximately 3 km northwest of the STEEP 1 claim on what is now called Qualark creek, quartz veins containing up to 1.0 ounce/ton gold are hosted by greenstones.

To the south, exploration conducted during the early 1900's reported visible gold occurring within talcose shears in greenstone and serpentinite. These shears were also heavily mineralized with nickeliferous pyrrhotite.

North of the STEEP 1 claim, material which assayed about 0.20 oz/ton gold was taken from a strong, mineralized fault zone within green diorite. This occurrence is situated close to a relatively large body of quartz-carbonate-mariposite altered serpentinite.

## 7.0 STEEP 1 Geology

Serpentine occurs along the eastern boundary of the STEEP 1 claim. Immediately west of the serpentine the headwaters of Qualark and Ladner creeks form a northwest trending pass which is likely the site of the west margin of the Hozameen fault zone. Outcrops of greenstone and chert were noted along the banks of Qualark creek at the north boundary of the claim, west of the serpentine belt.

Intensely foliated mariposite-rich, rusty weathering, carbonate rock, cross cut by a stockwork of quartz veinlets less than 1.0 centimeter thick, was found at three localities on the claim. Boulders of this material were found in rusty soil on the north bank of Qualark creek at elevation 4100 feet. A large boulder was found in a seasonal drainage at elevation 4250 feet on the southwest flank of the ridge between Qualark and Suka creeks, and subcrop of this lithology was located on the ridge at elevation 4700 feet.

The remainder of the area traversed in 1986 is underlain by ribbon bedded chert or chlorite-rich greenstone. The chert ranges in colour from green to black and is commonly cross cut by small (less than 30 centimeter thick) discontinuous quartz veins containing no visible mineralization. The chert is locally slightly rusty weathering.

## 8.0 Results and Conclusions

No mineralization was located in the area covered by prospecting in 1986.

The quartz-carbonate-mariposite rock observed on the claim is interpreted to be a hydrothermal alteration product of serpentinite which may be associated with gold mineralization. Therefore, further work should be directed toward locating this rock type in outcrop to define areas warranting detailed exploration.

The easternmost area of the claim was not prospected due limited access and rugged terrain. This area may have a higher potential for gold mineralization than the area covered in 1986 because it' borders the west margin of the Hozameen fault zone. Therefore the eastern portion of the claim warrants further prospecting.

## 9.0 References

Cairnes, 1923; Geol. Surv. Can., Summ. Rept., Pt.A, pp 81-83

Minister of Mines, B.C., Ann. Rept., 1927, pp 209-210

Cairnes, 1929, Geol. Surv. Can.,Summ. Rept., Pt A, pp 148-195

## 10.0 Statement of Costs

| | | |
|---|---|---|
| 1 geologist (including field equipment) : | 4 days @ $350/day | $1400 |
| 1 field assistant: | 4 days @ $100/day | 400 |
| truck rental: | 5 days @ $ 50/day | 250 |
| fuel and transportation cost: | | 157 |
| supplies: | | 170 |
| report writing: | | 200 |
| | | $2577 |

## 11.0 Statement of Qualifications

I Mathew C.N. Ball, of Box 403, Cassiar, British Columbia, do hereby certify that:

1. I hold an M.Sc. degree in mineral exploration, obtained at Queen's University in Kingston, Ontario, and have practised my profession for five (5) years.

2. I am a member of the Canadian Institute of Mining and Metallurgy.

3. I am author of this report, which is based upon work conducted by myself during the 1986 field season on the STEEP 1 property of Mr. R. Cromb near Hope, B.C.

M.C.N. Ball, M.Sc.

To Hope via Fraser River Road

Gunlark Ck.

interbedded med green chlorite-rich greenstone and green to grey ribbon bedded chert

Greenstone dark green chlorite-rich blocky

Chert med grey to black ribbon bedded

Overburden

Greenstone medium green to rusty weathering, massive

Greenstone med green to light brown rusty weathering locally local quartz veins <1.0 m thick

Serpentinite dark green blocky, talcose fractures

Probable West Margin of Hozameen Fault Zone

Lithuanite Subcrop very rusty weathering mariposite talc-rich intensely foliated cross-cut by 2-5cm thick quartz stringer stockwork

Strong fault gully

Chert medium grey to black laced bedding

Lithuanite Subcrop intensely foliated mariposite-rich talcose, x-cut by <3cm quartz stringer stockwork

Greenstone chlorite-rich massive aphanitic

grey-black Ribbon bedded Chert moderately silicified with discontinuous quartz veins and lenses <0.3m thick

Predominantly Ribbon Chert with minor greenstone. Chert is slightly silicified ie. x-cutting discontinuous quartz veins and lenses parallel to bedding <0.3m thick rusty weathering grey-green

Greenstone Chlorite-rich medium green

Chert

SUKA CREEK

To Hope via Fraser River Road

DARLEY CK. N. FORK

STEEP I L.C.P.

620,000 E 620,500 E 621,000 E 621,500 E 622,000 E 622,500 E 623,000 E 623,500 E

5,487,000 N 5,486,500 N 5,486,000 N 5,485,500 N 5,485,000 N 5,484,500 N

## SYMBOLS

- Rock outcrop, area of outcrop, float
- Geological boundary (defined, inferred)
- Bedding (horizontal, inclined, vertical, overturned, dip unknown)
- Schistosity, gneissosity, cleavage, foliation (horizontal, inclined, vertical, dip unknown)
- Lineation, axis of minor folds (horizontal, inclined, vertical)
- Drag-fold (arrow indicates plunge)
- Fault (defined, interpreted)
- Fault (inclined, vertical, relative movement) U D
- Surface joint (horiz., inclined, vert., dip unknown)
- U/G joint (horiz., inclined, vert., dip unknown)
- Syncline (defined, approximate)
- Anticline (defined, approximate)
- Anticline and syncline (overturned)
- Intensity (weak, moderate, strong)
- Vein (inclined, vertical, dip unknown) 80°
- Zone of alteration
- Rock sample, X 0.324, 0.15 Assay: Au, Ag ounce/ton
- Trench
- Adit or tunnel
- Rock dump or tailings
- Shaft, raise, winze
- Diamond drill hole (entering section, leaving section) (on section / plan)
- Contours 2500 Feet
- Stream or creek (perennial, intermittent)
- Marsh
- Lake
- Road

100 75 50 0 100 200 METRES

SCALE 1:5,000



TOR-WEST EXPLORATION

STEEP I CLAIM

# GEOLOGY

Project Name STEEP I Project No.

Latitude 49° 31' Longitude 121° 19'

Mining Division NEW WESTMINISTER NTS 92 H/6W, 11W

To accompany a report by M. BALL, M.Sc.

Alpha No. Drawing No.

Date AUGUST 28, 1986 Map No. Figure 4