Preliminary Geomorphic Study

with

Field Support

Phase I

**Claims I - IV**

Record Nos. 4163/64 (11)
4189/90 (12)

**NTS Designation**

82F/11
473500 - 477500 E and 5498000 - 5503000 N

**Lat.** 49°38'15" - 49°40'45" North
117°18'45" -117°22'00" West

**Long.**

Owner of Record: Ralph Casselman, FMC No. 245702
PO Box 1595, Oliver, B.C.

Operator: Robert Schutz
7899 Saint Helena Road
Santa Rosa, CA 95404 USA

Authors of Report: Overall and scientific: W. Tellington
Box 1354 Auburn CA 95603 USA

Field work: Ralph Casselman
PO Box 1595, Oliver B.C.

Nov. 17, 1984
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The C.S.T. Claims comprising 4 claims of 20 units each for a total of approximately 4880 acres are located in the Solcan Provincial Forest about fifteen miles southeast of Slocan, B.C.

Located between Lemon Creek on the north and Mt. Grohman and Mt. Kubin on the south and centering more or less along Monument Creek running north into Lemon Creek, the access from Slocan would be south along Highway 6 to the forest road south of Lemon Creek bridge, thence easterly to the forest road running south along Monument Creek and another forest road running south in the valley immediately west of Monument Creek. See Index Map (page 2) and Claim Map (page 3).

* * * * * *

We have no knowledge of the history of this property.

It was staked on the basis of known showings of substance at Claims No. L 1886 and L1686 immediately to the northeast and numerous showings near the small ponds along Duhamel Creek to the east and substantial findings on Claims No. L5011,5013 and 5014 on the north flank of Mt. Grohman and Mt. Kubin to the south.

The owner or record is Ralph Casselman, PO Box 1595, Oliver, British Columbia.

The operator is Robert Schutz, 7899 Saint Helena Road, Santa Rosa CA 95404 U.S.A.

The agent for the operator and author of the technical part of this report is Wentworth Tellington, PO Box 1354 Auburn CA 95603 He is a retired geologist and Registered Professional Engineer in Alberta (License No. T51)

* * * * * *

Economic assessment: Worth looking at.

* * * * * *

The purpose of this first year's work has been to determine the most cost effective way to prospect for silver/gold bearing veins in this large, extremely rugged area by the use of photogrammetric techniques focusing on the geomorphology of the area backed up by localized field work.
This writer, agent for the operator, Mr. Robert Schutz of Santa Rosa, California, USA met Mr. Casselman at Slocan and proceeded to the area by snowmobile in late November 1983 where he was shown a vein of decomposed quartz which appeared mineralized. The width of the vein was impressive, being on the order of 12-15 feet across.

Corner posts were set and preliminary prospecting was commenced immediately in order to gain enough information to plan a program for the summer of 1984.

The snow did not leave this area until mid-July.

Meantime it was determined that a photogrametric study would be a cost effective way to proceed.

Background For The Study

It was established early that the area is in a region of relatively homogenous granite and granodiorite.

One observation triggered the resulting study.

Immediately north of this area in the rounded mountains north of Lemon Creek a pattern of probable uplift of a secondary mountain building type was noted creating the circular pattern for Lemon Creek to follow along a portion of an arc around this body.

Searching to the south a spoke like pattern of the creeks starting with Duhamel Creek to the southeast and Monument Creek to the south and continuing with the next two unnamed creeks to the west.

From these observations a structural hypothesis was generated for testing.

A localized upward movement of granite with a focal point directly north of the CST Claims by about three miles could cause stressed is the granite which should reveal themselves as radial fissures and possibly antithetic cordal fissures which, at their intersections, could contain substantial mineralization.

Detailed Photo Work

Map C attached contains significant marks resulting from the preliminary geomorphic evaluation.

Lemon Creek is clearly in an erosional pattern controlled by structural circumstances. It has much of the character of a glacier carved valley following a circular plane of weakness. See A,B,C,D, E, A'

The creeks, B-B', C-C', D-D', and E-E' are glacier...
INDEX MAP

C.S.T. CLAIMS I-IV Slocan Mining Division
Record Nos. 4163/64 (11)
4189/90 (12)
NTS Designation: 82F/11

Owner of Record:
Ralph Casselman, FMC No. 245702
Box 1595, Oliver B.C.

Operator:
Robert Schutz
7899 Saint Helena Road
Santa Rosa, CA, 95404, USA

-2- MAP A
EXTRACT FROM KOKANEE PEAK MAP 1:50,000 82P/11

C.S.T. CLAIMS I, II, III, and IV

Original discovery work done at "X"
in CLAIM I at approx. 74-99

-3- MAP B
PRELIMINARY GEOMORPHIC STUDY

with

FIELD SUPPORT

Fundamental Objective and Scope

This is very difficult topography. The homogenous character of the field rock combined with the extremes of elevation change over short distances make the use of airborne magnatometers or gravity meters quite unlikely.

Even ground observations with portable geophysical equipment of that type are thought to be unlikely sources of useful information because of the necessary corrections due to horizontal influences over relatively short distances.

Detailed field work followed up by trenching or drilling seems to be the only source of accurate exploratory data, however the character of the terrain makes this program unusually costly.

It was concluded that a combination of geomorphic analysis based upon detailed photogrammetric work on a high resolution basis backed up with field work might produce an exploration plan which could be cost effective.

This is the reasoning behind the report presented here.

Narrative

The operator was attracted to this area by information provided by the prospector, Mr. Ralph Casselman of Oliver, B.C. showing substantial mineralizations at Claims No. L1886 and L 1686 immediately to the northeast of the CST Claims. Additional showings were indicated near the small ponds along Duhamel Creek to the east. Finally well known shows were established on Claims No. L5011, 5013, and 5014 on the north flank of Mt. Grohman and Mt. Kubin to the south.
carved with text book examples of hanging valleys and other features indicated on the sketch at H and H.

The dashed line X-X' divides an area on the north which contains the glaciated streams from an area to the south characterized by high alpine weathering features resulting from the work of intersecting glaciers at high altitude.

The geomorphic study had to take into account the obvious markings of the glaciers and the marks of man due to the timbering operations in this area.

Refined study however suggested strongly that vein structures should be found trending more or less north-south in the CST Claims with hoped for antithetic veins trending east-west.

Field work was undertaken in the southwest portion of CST I which was accessible briefly during August 1964 and several interesting outcrops were unveiled.

See Map D. At Point 1 this writer had seen the wide decomposed quartz containing mineralization earlier.

At Point 2 approximately 300 feet uphill a vein of mineralized quartz trending approximately north-south was found to be an estimated 1500 feet long.

At Point 3 an additional vein was found and a hole blasted into the rock a distance of about 15'. This vein appeared to widen as the hole went deeper and contained significant mineralization.

At Point 4 a swamp was found which may be significant reinforcement for the geomorphic hypothesis. A vein of quartz was found which was examined by a major mining company geologist. A record of this observation and the assay showing over 50 ounces of silver per ton is contained in the appendix to this report.

At Point approximately 2,000 feet east another vein was found.

All veins were essentially parallel and trending north-south.

No veins, so far have been found to be antithetic to this main set.

Geomorphic analysis suggests that a good place to look for perpendicularly sets would be at the dashed line near the south side of Claim IV (See Map C)
Summary

This hastily arranged preliminary report of a combination of geomorphic study with high resolution and magnification supported by limited field work is submitted to be in time for the anniversary day of the CST I and II Claims.

It is expected to be refined and completed before the field season commences in 1985 and to serve as a guide for appropriate field work in a cost effective way.

Respectfully submitted,

Wentworth Tellington
P. Eng. Retired
T-51, Alberta

Qualifications of writer:

The writer qualified with the Association of Professional Engineers in Alberta by demonstrating sufficient geological credits at the undergraduate and graduate level at Columbia University, complete on-the-job-training at the laboratories of Socony Vacuum Oil Company, Dallas Labs (Magnolia Petroleum Company) in exploration geophysics. The writer wrote the first detailed book combining air photograph work with the general subject of geomorphology as co-author with Arno K. Lobeck, Head of Geology, Columbia University. This book was published by McGraw Hill while the writer was an instructor in these subjects at the U.S. Military Academy, West Point New York. (Photocopy of the title page is enclosed in the Appendix.

The writer was Chief Geophysicist during the late 1940s and early 1950s for Pacific Petroleums Ltd., Calgary Alta and continued to become Exploration Manager and finally Executive Vice President of Overland Industries Ltd. of Canada with extensive extractive mineral holdings of many types from James Bay in the East to the Yukon Territory in the West of Canada.

The writer has been retired from active work in this field for several years, but has been attracted by the prospects represented by the C.S.T Claims.
Statement of Expenses

Note: This statement is in two parts.

Part I submitted here deals with the lab work and extensive travel.

Part II submitted directly by the prospector, Mr. Ralph Casselman is presented separately.

December 1983

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<td>Photogrametric lab time to date 36 hours @ $70 per hour</td>
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This would approximate Canadian $6,000
APPENDIX

Contains copy of title page Military Maps and Air Photos McGraw Hill

Details of Field Work provided by Prospect

Copy of assay taken for sample at Point 3
GEOLOGICAL BRANCH
ASSESSMENT REPORT

12,907

CST CLAIMS I-IV

FIELD SKETCH MAP

Topography from KOKANEE PEAK MAP
Ref. SW Cor. CST I see Map C

MAP D
Military Maps
and Air Photographs
Their Use and Interpretation

by A. K. LOBECK
Professor of Geology, Columbia University

and WENTWORTH J. TELLINGTON
Captain, Cavalry;
Instructor, Department of Military Topography
and Graphics, United States Military Academy

WITH AN INTRODUCTION BY
JOHN K. WRIGHT

McGRAW-HILL BOOK COMPANY, INC.
NEW YORK AND LONDON
1944
ASSAY CERTIFICATE

SAMPLE TYPE: PULP

ASSAYER: DEAN TOYE, CERTIFIED B.C. ASSAYER

CANADIAN NICKEL PROJECT# 60801-12010 FILE# 84-1991B

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<tr>
<td>RX-39324</td>
<td>1.70</td>
<td>67.82</td>
<td>.236</td>
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ACHE ANALYTICAL LABORATORIES LTD.  
852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6  
PHONE 253-3158  DATA LINE 251-1011

GEOCHEMICAL ICP ANALYSIS

.500 g Raman sample is digested with 3 M HCl-3 M HNO₃-H₂O at 95 deg. C for one hour and is diluted to 10 ml with water.

- Sample type: rock
- ICP analysis by flameless AA.

DATE RECEIVED:  AUF 7 1984  DATE REPORT MAILED:  AUG 13 1984

ASSAYER:  DEAN TOYE.  CERTIFIED B.C. ASSAYER

CANADIAN NICKEL PROJECT # 60B01-12010  FILE 84-199/A

| SAMPLE | MG  | Cu  | Pb  | Zn  | Ag  | Al  | Co  | Mn  | Fe  | As  | U  | Th  | Sn  | Cd  | Zr  | Bi  | Y  | Nb  | Ta  | Al  | K  | Mg |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|-----|-----|----|-----|-----|-----|----|-----|
|        | 210  |     | 412 |     | 65  |     |     | 120 |     | 11  |     |     |     |     |     |     |     |     |     |     |     |     |

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