6191

CANADIAN OCCIDENTAL PETROLEUM LTD.

MINERALS DIVISION

ROCK GEOCHEMISTRY OF THE LG-1 CLAIM

Claim Sheet No.: 82 E/4W
Lat.: 49°07'
Long.: 119°55'

Claims:
LG-1: Record Number 1
Osoyoos Mining Division
British Columbia

by:
Colin C. Macdonald, B.Sc.(Eng.)

Covering Work Completed on September 4, 1976

Contents

SUMMARY

The Gil-Lig-Li-LG claim group is located about seven miles (11 km) southwest of Keremeos, British Columbia. The property was staked in August and October, 1974, and March, 1975, to more fully investigate the cause and extent of a major copper-molybdenum-tungsten soil geochemical anomaly outlined as part of previous work completed in 1974 on the Gil (1-26) claims.

INTRODUCTION

In 1973 the Gil (1-26) claims were staked to investigate the cause of a Cu-Mo anomaly detected during the 1973 Princeton regional stream sediment project. The original staking was carried out in November, 1973, and re-staking was done in August, 1974, all by employees of Canadian Occidental Petroleum Ltd. A major soil anomaly for copper, molybdenum and tungsten was outlined in the northern part of the claim group. To more fully investigate the extent of this anomaly and a tungsten-bearing skarn found late in the 1974 survey, additional ground was acquired to the north. This consisted of the claims Lig 1-18, staked on August 24, 1974, and Li 1-20, staked on October 10-11, 1974; and LG 1-3, staked on March 16, 1975. The former two claim groups were staked by M.P. Henrick of Canadian Occidental Petroleum Ltd., and the Li claims by R. Voisine of Eastern Associates Reg'd.

A geological and geochemical survey was completed over the Lig-Li-LG and part of the Gil claims in August, 1975. This outlined a major area with coincident Cu-W-Mo anomalies on the north side of Gillanders Creek. This area was diamond drilled in October, 1975.

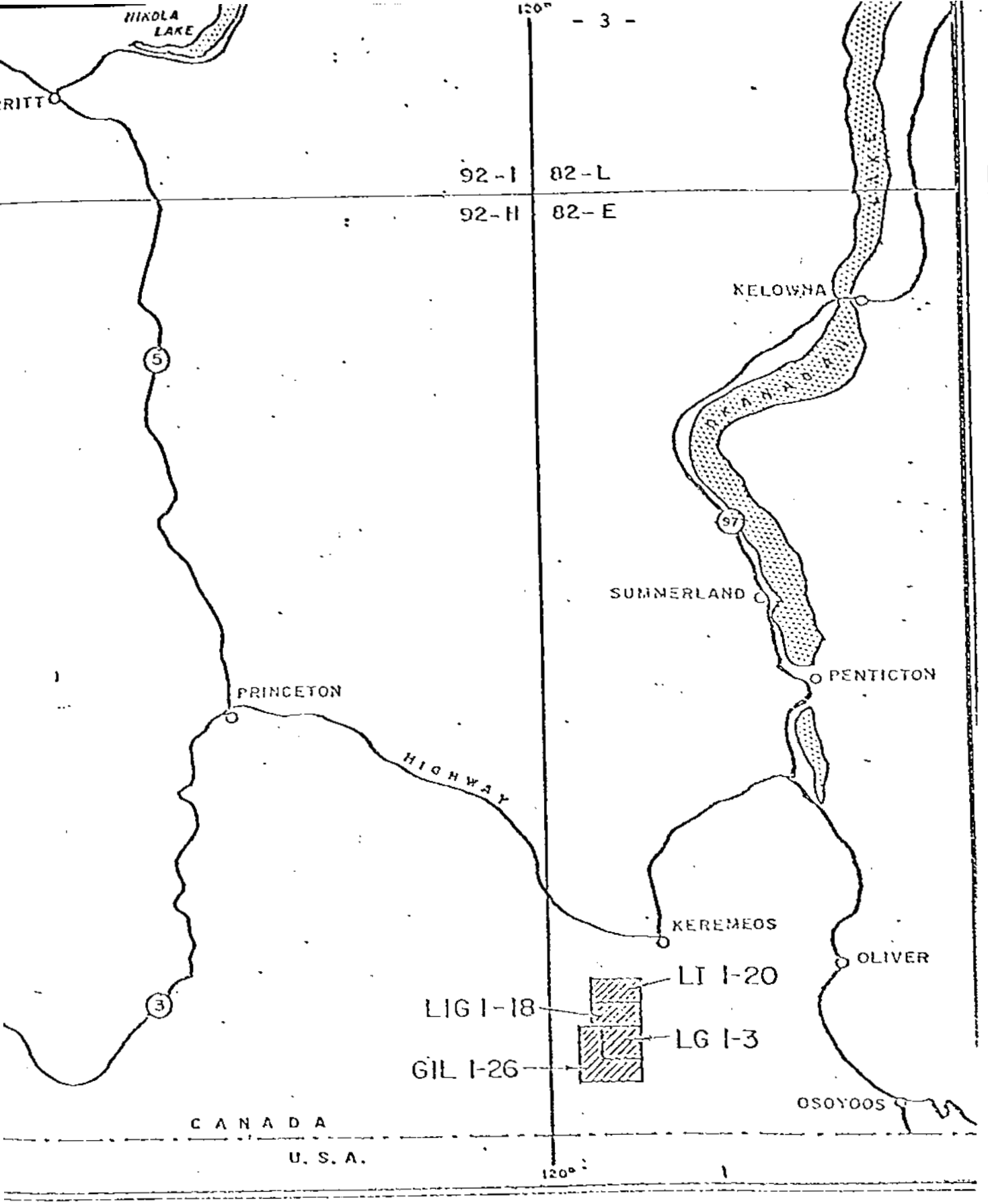
This report will describe the results of a rock geochemical sampling carried out on the exposed calc-silicate skarn beds by Canadian Occidental Petroleum Ltd., Minerals Division, the holder of the claims.

LOCATION AND ACCESS

The Gil-Lig-Li-LG claim group is recorded on claim map 82 E/4W in the Osoyoos Mining Division, British Columbia. The property is located about seven miles (11 km) southwest of Keremeos, and adjoins the western boundary of Indian Reserve No. 13 (Figures 1, 2). Access is by road from the main logging road through I.R. #13.

VEGETATION

The property is largely below timber line, which is at about 7000 feet (2,135 m). Above this elevation, vegetation consists only of short grass and low bushes. Below the timber line, spruce and pine forest predominates, being poorly developed on the south-facing talus-covered slopes, and more dense on the north-facing slopes. The valley bottoms are



CANADIAN OCCIDENTAL PETROLEUM LTD
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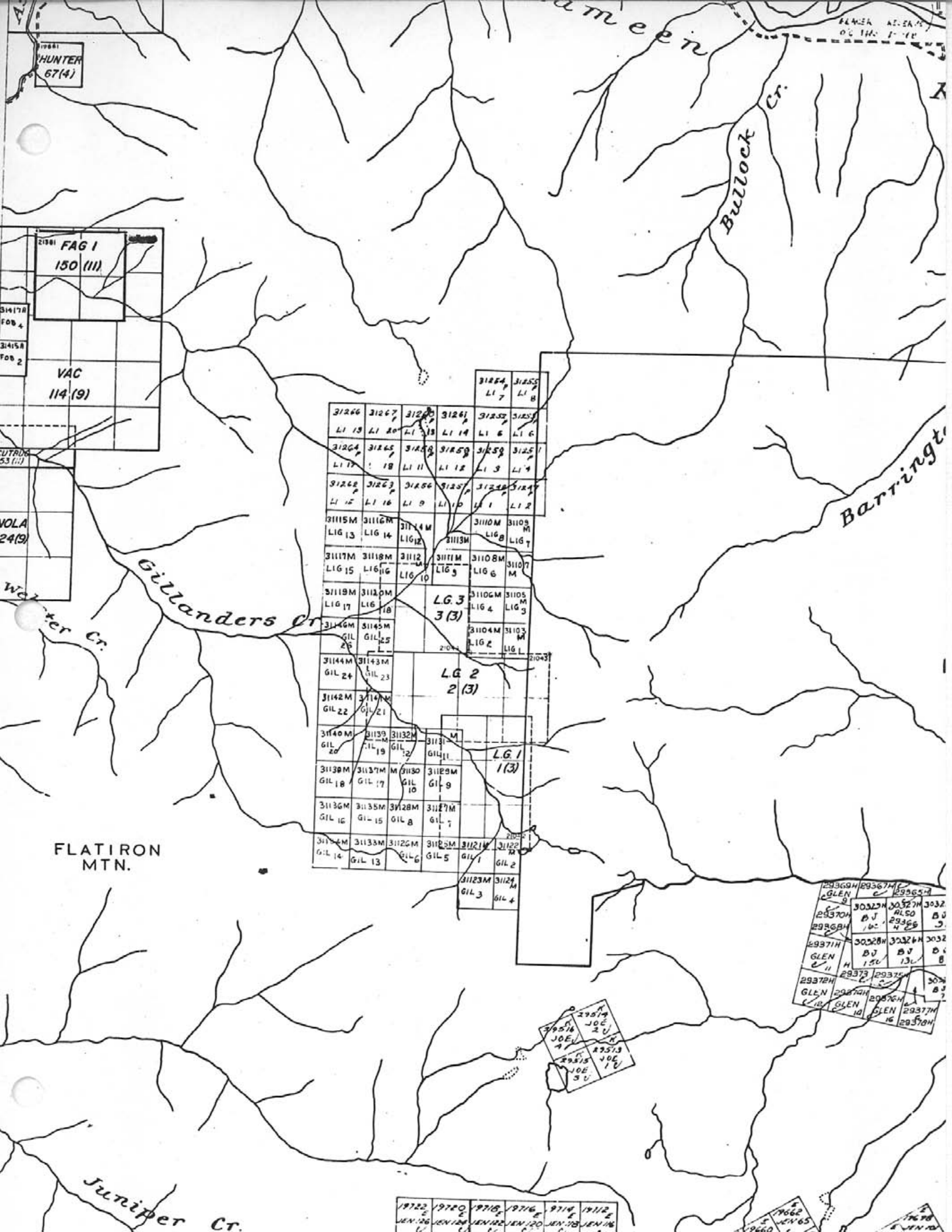
Location of the GIL, LI, LIG & LG claims

FIGURE 1


Figure
Gil - Lig - Li - Lg
Claims (1975)
INDIAN RESEI
311
O K A N A G A N
R A N G E
L 2624S
L 2621S
L 2622S
Juniper
Creek


Bullock Cr.
Barringt
Gillanders Cr
FLATIRON MTN.
Juniper Cr.
HUNTER 67(4)
FAG I 150 (II)
VAC 114 (9)
LG 3 3 (3)
LG 2 2 (3)
LG 1 1 (3)

usually the site of mature, open spruce forests. Deciduous trees (mainly birch and alders) are present only on the talus slopes.

PREVIOUS WORK

Union Carbide Exploration had staked claims PA 1-18 on parts of the Gil-Lig-Li-LG property. Information from assessment summaries indicates that Union Carbide were prospecting for tungsten only, and had carried out a program of areally limited but detailed geological mapping, a limited geochemical survey and 13 diamond drill holes totalling 827 feet. In 1960, the property was staked by Kennco(Western) Exploration; however, no assessment work has been located.

WORK COMPLETED

Rock Geochemistry

Dr. C.F. Gleeson Ph.D.,P.Eng.	(Sept. 4, 1976)	Geochemical Consultant, Sampling
M.P. Henrick	(Sept. 4, 1976)	Geochemical Sampling
C.C. Macdonald	(Sept. 4, 1976)	Geochemical Sampling

A total of 25 samples were taken and analysed geochemically for Cu and Mo, and assayed for WO_3, for a total of 75 determinations.

Names and Addresses of Personnel

Dr. C.F. Gleeson	764 Belfast Rd., Ottawa, Ont.
M.P. Henrick	R. R. #1, Okanagan Falls, B.C.
C.C. Macdonald	Canadian Occidental Petroleum Ltd. Minerals Division #801-161 Eglinton Ave. E. Toronto, Ont.

PHYSIOGRAPHY

The Gil-Lig-Li-LG claims lie on the Okanagan Range of the Cascade Mountains. Relief on the property is fairly high, with the minimum elevation at the junction of the two main branches of Gillanders Creek, at 4,400 feet (1342 m). Maximum elevation is 7,400 feet (2257 m) on the northern boundary of the grid. All major creeks on the property terminate in large cirque valleys. South-facing slopes are characterized by cliff-forming outcrops at higher elevations, with less outcrop and an increase in talus with decreasing elevation. North-facing slopes are generally well forested.

GEOLOGY

Mapping completed in the 1974 and 1975 surveys has shown the property to be underlain by a tightly folded succession of interbedded argillite, chert, greenstone and limestone. A more complete description of the geology is given in the report by C.C. Macdonald, 1975: "Geology and Geochemistry of the Gil-Lig-Li-LG Claim Group.

ROCK GEOCHEMISTRY

Introduction

Channel sampling of the most prominent exposures of calc-silicate skarn was carried out to give a better estimate of grade obtainable in 5-foot widths.

Sampling Procedures

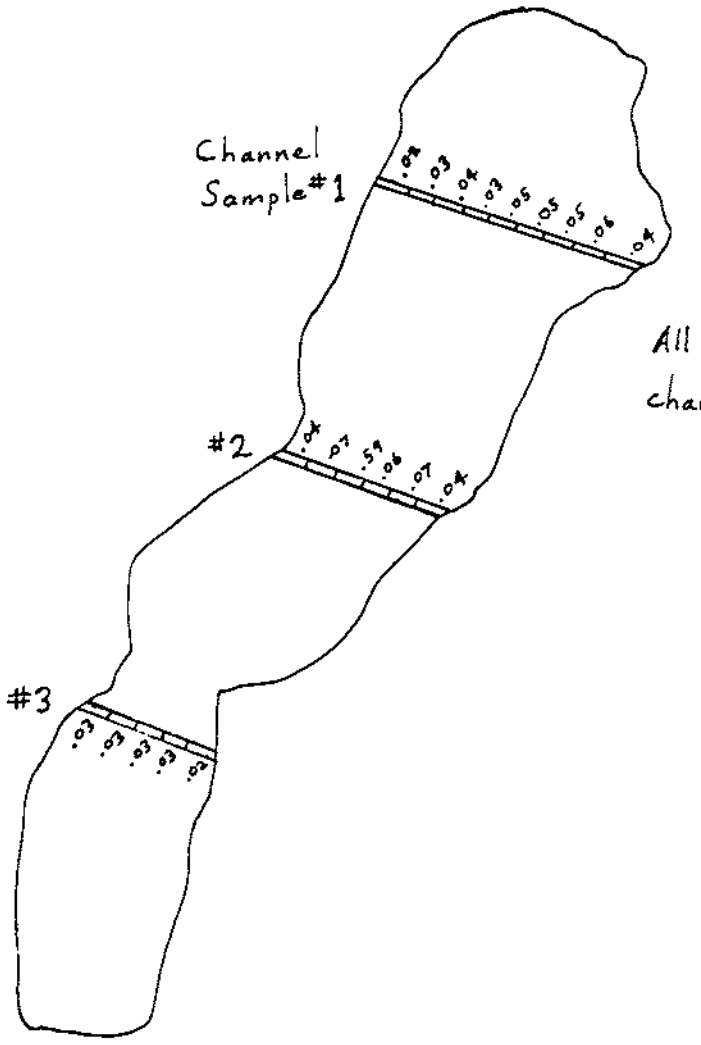
Continuous channel samples were taken with hammer and chisel on three outcrops, for a total of 5 channels and 25 5-foot (1.5 m) samples. These channels were oriented as close as possible to right angles with the layering. The samples were placed in polyethylene bags and shipped to Chemex Labs Ltd., in Vancouver, for geochemical analysis for copper and molybdenum and assay for tungsten. Locations and values are shown on Plan 1 and Figure 3.

Laboratory Procedures

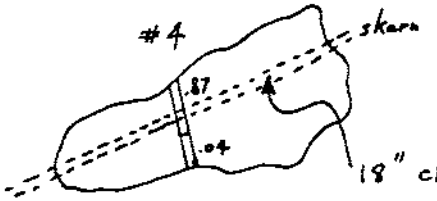
The samples are dried and sieved to -80 mesh. 0.5 grams of this fraction is digested in 5 ml of a 3:2 mixture of 70% $HClO_4$ and concentrated HNO_3 for 2.5 hours at 200°C. The final volume is adjusted to 25 ml with demineralized water. This solution is then analysed for Cu and Mo using a Tectron Mk V-VI atomic absorption spectrometer. Tungsten is assayed using a wet chemical procedure.

Discussion of Results

The largest outcrop sampled consisted of elongated lenses of calc-silicate within the argillite, with no definite carbonate layer visible. Of the three channel samples taken on this outcrop, the highest was .59% WO_3, but the rest were around .04% WO_3 (Figure 3). It is thought that this outcrop



All samples are 5' continuous channel samples across outrop.



18" channel sample across thickness of main skarn bed - 3.85% WO_3

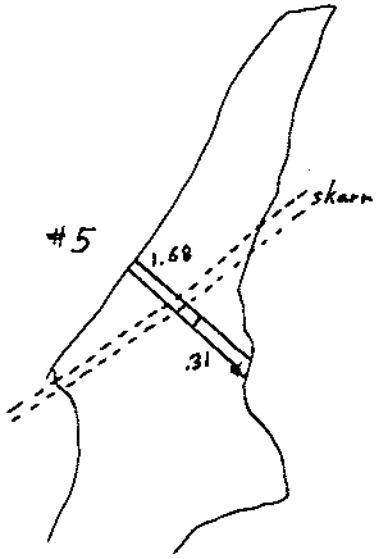


Figure 3
GIL-LIG-LG-LI CLAIMS
Blow-up of Channel-Sampled Skarn Outcrops, with values (% WO_3)
1" = 20'

lies above the main skarn bed.

The second outcrop sampled (Sample 4) was considerably smaller, but contained an 18" (46 cm) thickness of the main skarn layer. This layer, where channel sampled across its entire width, assays 3.85% WO_3. The two five-foot (1.5 m) channel samples across the outcrop average 0.455% WO_3 over 10 feet (3 m).

The third outcrop samples (Sample 5) was about 50 feet (15 m) westward along the strike trace of the main skarn layer from channel Sample 4. Although the skarn layer itself is only 8" thick at this outcrop, the overall grade across the outcrop is higher than channel Sample 4. Assays of channel Sample 5 show that it averages 1.0% WO^3 over 10 feet (3 m).

CONCLUSIONS

Of the three outcrops and five channels sampled, only the samples crossing the main calc-silicate layer gave economically significant grades and lengths. The two channels taken over this main bed averaged 0.46 and 1.00% WO_3 each over 10 feet (3 m).

RECOMMENDATIONS

The above results are encouraging, and they give a better estimate of grade over mineable widths. Further diamond drilling is recommended, both on the south side of Gillanders Creek to test the exposed skarn at greater depths, and on the north side to determine the skarn's strike extension.

Respectfully submitted,

Colin C. Macdonald, B.Sc.

TORONTO

October 5, 1976

APPENDIX I

GEOCHEMICAL VALUES

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 985-0648
AREA CODE: 604
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 38580

INVOICE NO. 18232

RECEIVED Sept. 9/76

ANALYSED Sept. 13/76

TO: Canadian Occidental Petroleum Ltd.
Minerals Division
801 - 161 Eglinton Ave. East
Toronto, Ont. M4P 1J5

"Project Gil"

ATTN: P.E. Nicholls Samples from Colin McDonald

SAMPLE NO. :	PPM Copper	PPM Molybdenum	PPM Zinc	PPM Silver	PPB Gold
38672	152	1	16	2.0	5480
38673		6	98		
38674		<1	11		
38676		32	72		
38677		<1	47		
38678		<1	30		
38679		325	62		
38680	41	5			
38681	141	7			
38682	70	2			
38683	50	3			
38684	46	2			
38685	21	24			
38686	16	27			
38687	18	23			
38688	30	1			
38689	26	3			
38690	31	5			
38691	31	2			
38692	60	15			
38693	21	2			
38694	24	3			
38695	36	1			
38696	31	2			
38697	42	<1			
38698	46	<1			
38699	34	<1			
38700	76	<1			
44276	112	33			
44277	51	22			
44278	102	11			
44279	116	20			
Std	104	8	200		

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: H. Pinkle

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 985-0648
AREA CODE: 604
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ASSAY

CERTIFICATE NO. 31753

INVOICE NO. 18206

RECEIVED

ANALYSED Sept. 10/76

TO: Canadian Occidental Petroleum Ltd.,
Minerals Div.
801 - 161 Eglinton Ave. East
Toronto Ont.

ATTN: P.E.Nicholls Proj. Gil

SAMPLE NO. :	% WO_3
38680	0.04
38681	0.06
38682	0.05
38683	0.05
38684	0.05
38685	0.03
38686	0.04
38687	0.03
38688	0.02
38689	0.04
38690	0.07
38691	0.06
38692	0.59
38693	0.07
38694	0.04
38695	0.02
38696	0.03
38697	0.03
38698	0.03
38699	0.03
38700	0.04
44276	0.87
44277	3.85
44278	0.31
44279	1.68

CTA MEMBER CANADIAN TESTING ASSOCIATION

REGISTERED ASSAYER, PROVINCE OF BRITISH COLUMBIA

Statement of Expenditures

L.G.1 Claim

Salaries: M.P.Henrick, C.C.Macdonald 6 man days 43.18/man day	$ 259.08
Geochemical Analysis	242.84
Consultant	360.95
Travel & Transportation	413.93
Reproduction & Drafting	52.14
Total	$ 1,328.94

L 60E

L 64E

Gillanders Creek

4a

Channel Sample
1
2
3

N

CANADIAN OCCIDENTAL PETROLEUM LTD
MINERALS DIVISION

GIL-LIG-LI-LG CLAIMS

OSOYOOS MINING DIVISION, BRITISH COLUMBIA — 82-E-4 W

DETAILED PLAN OF LG-1 SKARN

SCALE 1"=50'

LEGEND

- OUTCROP
- COMPOSITIONAL LAYERING
- GEOLOGICAL CONTACT-INFERRED
- MAIN CALC-SILICATE SKARN BED

ROCK UNITS

- 1 ..... CHERT, WITH SOME ARGILLITE INTERBEDS
- 2 ..... ARGILLITE, WITH SOME CHERT INTERBEDS
- 4a ..... CALC-SILICATE SKARN

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M-1