CANADIAN OCCIDENTAL PETROLEUM LTD.

MINERALS DIVISION

DIAMOND DRILLING OF THE GIL-LIG-LI-LG CLAIM GROUP

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

Claims:

GIL 11-12, 19-26:	31131-31132, 31139-31146
LIG 1-18:	31103-31120
LI 1-20:	31248-31267
LG 1-3:	1-3 (Units 6, 6, 4)

by:
N. Saracoglu, M.Sc., P.Eng.
Colin C. Macdonald, B.Sc.(Eng.)

Covering Work Completed During the Period
June 29, 1978 to August 28, 1978

Table of Contents

SUMMARY

The result of the 1977 drill programme in the Gil-Lig-Li-LG claim group suggests that the main source of the tungsten-molybdenum anomalies is situated to the north of Gillanders Creek.

After rebuilding the road north of Gillanders Creek where it was washed out, one drill was brought to the area.

A total of 12 km of road was rebuilt by G. Thompson of Oliver, B.C.

A drill hole (GIL 7-78) was collared at 42 + 60E: 14 + 50S and drilled at -80° on a bearing of 055°. The drill hole aimed to intersect the inferred skarn horizon beneath a Mo-W anomalous area some 290 m below the collar.

The programme was carried out between June 29 - August 28, 1978, by Herb Allen Drilling Ltd. of Merritt, B.C. A total of 162 m (531 ft.) of diamond drilling was completed during this period with an averaged daily progress of 2.8 m (9.2 ft.).

The formations traversed were extremely broken, causing loss of water circulation, jamming of the drill pipes and excessive wearing of the drill bits. Several fracture zones were sealed but all attempts to cement a 1.5 m fracture zone at 160 m failed and the hole was abandoned at the depth of 162 m without reaching its planned depth.

The overall core recovery was 73 percent.

The majority of the formations intersected consist of a breccia with chert, argillite and felsic intrusive fragments. Six narrow layers of skarn, ranging between

0.6 - 2.5 m in thickness, were intersected between the depths of 82 - 137.5 m. A section of feldspar porphyry was intersected between 144.5 - 147.5 m.

Fracturing and quartz veining range in thickness from hairline to 20 mm. They affect all rock types and are more abundant between 46 - 162 m, with locally a stockwork-like distribution.

Aided by intense fracturing, oxidization penetrated deeply. All core is weathered and fracture surfaces are coated with limonite.

Trace amount of fresh pyrite is found in most of the quartz veins. But the abundance of leached cavities and limonitic spots attest to the presence of oxidized sulphides.

Very minor euhedral crystals of scheelite were observed, occuring preferentially in narrower veins.

A total of 101 composite core-chip samples was collected. All samples were analyzed for copper, tungsten, molybdenum and zinc, for a total of 404 analyses. Eight of the samples were assayed for molybdenum.

Tungsten values ranged between 2-300 ppm with an average of 46 ppm. Two isolated sections with more than 200 ppm tungsten correspond to grains of visible scheelite.

Copper values ranged between 24 - 350 ppm with an average of 104 ppm. Only one isolated value of 2000 ppm was obtained. In all cases anomalous copper concentrations correspond to pyrite and/or limonite-rich sections.

Molybdenum values were strikingly high, ranging between 13 - 720 ppm and averaging 126 ppm. A direct proportionality was observed between the frequency and abundance of pyrite and limonite-bearing quartz veins and stockworks, and molybdenum concentrations.

All zinc values were low, ranging between 18 - 166 ppm and averaging 48 ppm.

The surface position of the main skarn horizon is only inferred in this area due to extensive loose talus so it is not possible to determine if the narrow skarn layers intersected in the hole correspond to this horizon. No scheelite was present in the skarn layers in the hole.

The typical chert-argillite succession was not present in the hole, nor was any evidence observed of an intrusive stock nearby.

Intensive fracturing and pervasive weathering appear to be responsible for the extent and intensify of the Mo-W soil anomalies in the area around the drill hole.

The position and nature of the main scheelite-bearing skarn horizon would be better determined by starting any further drilling as close to the "Union Carbide showing" as the terrain conditions would permit and then drilling gradually along strike further from the showing.

INTRODUCTION

The GIL (1-26) claims were staked in 1973 to investigate the cause of a Cu-Mo anomaly detected during the 1973 Princeton regional stream sediment programme. 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 unit found late in the 1974 survey, additional ground was acquired to the north. This consisted of claims Lig 1-18, Li 1-20, and LG 1-3. In August, 1973, a geological and geochemical survey was carried out on a 400-foot (122 m) grid covering the northern 3/4 of the property.

This survey showed the area to be underlain by a tightly folded succession of argillite, chert, greenstone, and thin limestone layers, much of which has been thermally metamorphosed to produce areas containing scheelite-bearing calc-silicate skarn. A major coincident soil anomaly for Cu, W, and Mo was outlined in a northwest-trending band roughly 3800 x 2000 feet (1159 x 610 m). Four diamond drill sites were selected using the geological and geochemical data. Two of these sites were abandoned due to difficult drilling in talus.

Three diamond drill holes were completed on the other two sites. Holes 75-3 and 75-4 intersected interbedded argillite

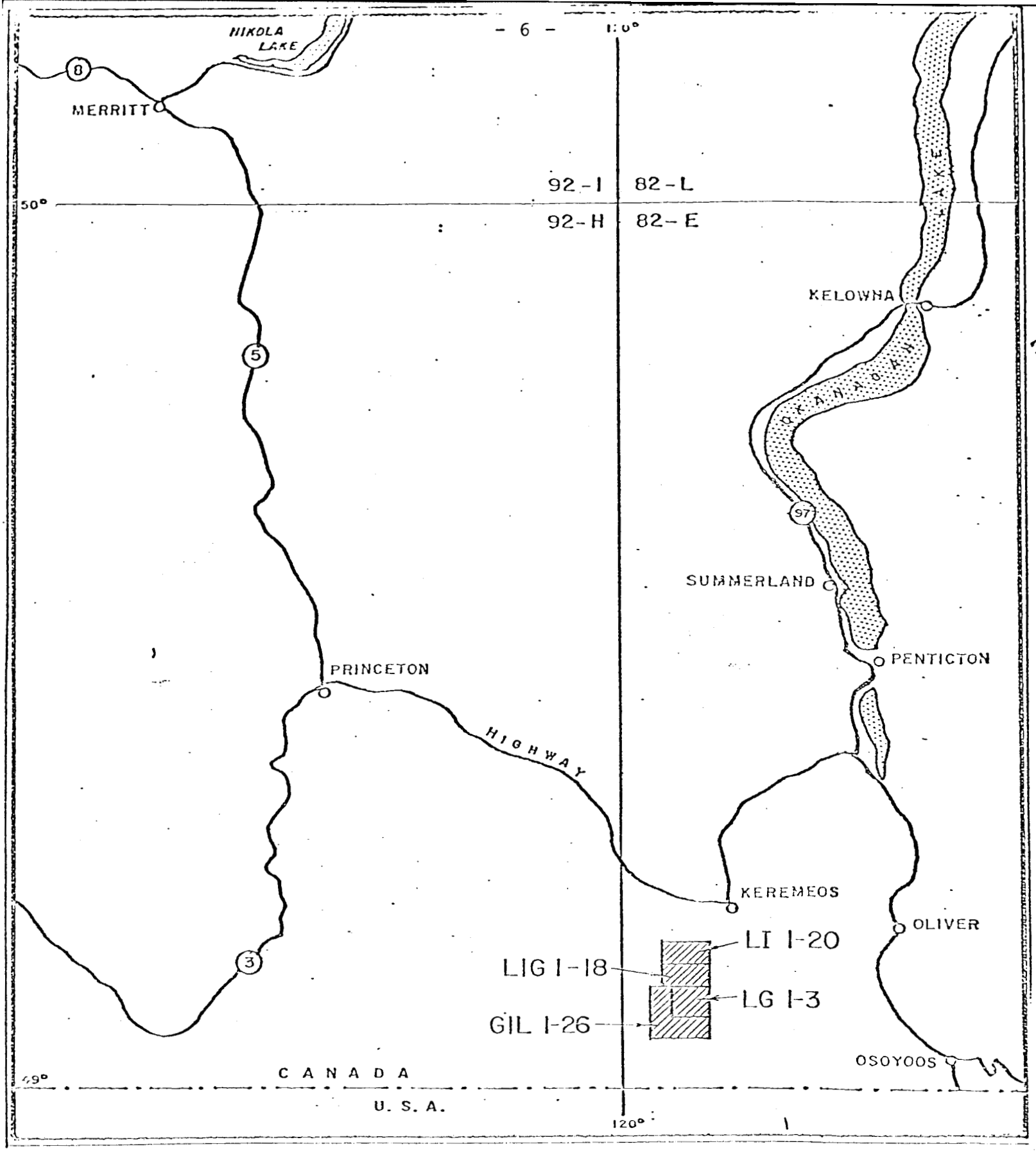
and chert, cut by frequent quartz-pyrite veins which occasionally contained scheelite. Hole 75-5 consisted of tectonic breccia cut by frequent wide quartz veins, again containing scattered scheelite crystals. The highest tungsten grade intersected was 0.59% WO_4 in hole 75-4, over five feet, 215-220'. However, the depth required to reach the projected skarn zone was not achieved.

In October, 1977, hole 6-77 was drilled to intersect the projections of exposed skarn layers south of Gillanders Creek, the area previously drilled by Union Carbide. The hole intersected interbedded chert and argillite, with two major calc-silicate skarn zones.

Minor scheelite was present in quartz veins and associated with calc-silicate minerals, but tungsten values were low, with a maximum of 780 ppm W. This supported geochemical evidence that the main source of metals is to the north of Gillanders Creek. Hence, from June 29 to August 28, 1978, hole 7-78 was drilled to intersect the projected main skarn zone beneath the geochemically anomalous area. This report will describe the results of this diamond drilling.

LOCATION AND ACCESS

The Gil-Lig-Li-LG claim group is located on claim map 92 E/4W in the Osoyoos Mining Division, British Columbia. The property is located about eleven kilometers (7 mi.) southwest of Keremeos, and adjoins the western boundary of Indian Range Reserve #13, (Fig. 1, 2). It is accessible by road from I.R. #13, a distance of 29 km (18 mi.) from Highway #3 south of Cawston.



CANADIAN OCCIDENTAL PETROLEUM LTD
MINERALS DIVISION

Location of the GIL, LI, LIG & LG claims

FIGURE 1 Scale : 1 : 600,000

PREVIOUS WORK

Union Carbide Exploration Ltd. staked claims PA 1-18 covering parts of the Gil-Lig-Li-LG property. Information from assessment work summaries and company communications indicate that Union Carbide were prospecting for tungsten only,and carried out mapping at 1" = 800' (1 cm = 96 m) over PA 1-18; detailed mapping at 1" - 50' (1 cm - 6 m) over PA 1-6; a limited geochemical survey, and 13 diamond drill holes totalling 839 feet (251 m) on PA 1. The Union Carbide claims cover most of the outcropping skarn observed in the area. This property was also staked by Kennco (Western) Exploration in 1960; no assessment records have been located.

WORK COMPLETED

Bulldozing

The portion of the road north of the Gillanders Creek crossing was washed out and covered by talus slides, necessitating a large Cat to re-open the road. This was again done by George Thompson of Oliver, British Columbia, with a Caterpillar D-7. Total operating hours spent was 32 hours, including preparation of a drill site.

A total of 12 km of road was rebuilt.

Diamond Drilling

A total of 162 m (531 ft.) of wireline BQ diamond drilling was completed by Herb Allen Drilling Ltd., of Merritt, British Columbia, between June 29 and August 28, 1978. The

equipment used was a skid-mounted Longyear 38 with hydraulic head. The drill sub-contractor, owner, and foreman was Conrad Bergeron. Geological supervision was by C.C. Macdonald until August 15, then by N. Saracoglu until August 28, 1978, both of Canadian Occidental Petroleum Ltd.

Despite efforts to collar the hole as close as possible to outcrop, 7.3 m (24 feet) of loose talus was encountered. However, the main drilling problem was caused by the unusually thick zone of fractured rock. This zone has been present to some extent in all previous holes drilled on the property, but never to this extent.

Initial attempts with 'B' casing alone was stopped at 41 m (135 feet) for two reasons:

1) Friction on the casing made it very difficult to turn, risking breaking the string.

2) Replacing worn casing shoes was proving useless, as new shoes were being worn out penetrating cave in the hole before they had reached the bottom.

Additional 'N' casing was acquired after a slight delay, and this was reamed down to 39 m (128 feet) to free the 'B' casing. Also, 'H' casing was driven through the overburden to 8.5 m (28 ft.), to stop cave from this source. Cementing and special sealing compounds were only occasionally effective in stopping caving, apparently due to the very high permeability in the fracture zones. Water return was rarely present. This, along with the typically hard chert/argillite rocks traversed, resulted in the rapid shoe and bit wear.

After the 'B' casing was extended to solid ground at about 54 m (177 ft.) normal drilling continued, but at a slow rate. An intensely fractured zone between the depths of 160-162 m (526-531 ft.) caused continuous caving. All attempts to seal this zone failed and the hole had to be abandoned at the depth of 162 m (531 ft.).

Water was hauled by truck from Gillanders Creek, a distance of about 1525 m (5000 ft.).

Logging and Sampling

The core was logged and split by N. Saracoglu and C.C. Macdonald, using the facilities at Canadian Occidental Petroleum's warehouse at 171 Estabrook Ave., Penticton, B.C. 1.5 m (5 ft.) sections of split core were sampled, and sent to Chemex Labs Ltd. in Vancouver for analysis for Cu, Zn, Mo, and W.

Geochemical Analysis

The rock samples are crushed and pulverized to -200 mesh. 0.5 grams of this material 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 valume is adjusted to 25 ml with demineralized water. This solution is then analysed (for Cu, Zn, and Mo) using a Tectron Mk V-VI atomic absorption spectrometer.

For tungsten, a 5 gram sample of -200 mesh material is fused with pyrosulphate flux in a furnace. This fused material is leached with Hcl, and complexed with a zinc dithol reagent. Analysis is done colourimetrically on a spectrophotometer.

After logging and sampling of the core, all boxes were labelled and stored at Canadian Occidental Petroleum's core racks

at Willard Loewen's yard, R.R. #2, Cedar Road, Penticton, B.C.

REGIONAL GEOLOGY

The area was mapped regionally by Bostock*, of the Geological Survey of Canada. The property is shown to be underlain by Triassic or older rocks of the Old Tom and Shoemaker Formations.

Further mapping, at 1" = 400 ft., was carried out by J. Schindler (1974) and R.H. Wallis, C.C. Macdonald, J.R. Hill, and J.C. Harrison in 1975, as part of surveys completed by Canadian Occidental Petroleum Ltd. The claims were found to be underlain by a tightly folded succession of interbedded argillite, chert, greenstone, and limestone. The rocks trend east-west to northwest-southeast and lie on the limbs of a north-plunging, reclined, closed fold, which itself has been folded around an antiform axis running roughly coincident with Gillanders Creek.

The regional metamorphic grade is upper greenschist-lower amphibolite, but superimposed on this is a thermal metamorphism related to an inferred intrusive at depth. This contact metamorphism has resulted in a hornfels texture, best exhibited by the argillites, and by the limestone layers which have recrystallized into a calc-silicate skarn.

*Bostock, H.S. - G.S.C. Map 341A, 1940

Felsic dykes of varying ages and compositions are also present. A tectonic breccia, composed of fragments of chert, argillite, and intrusive rocks in an argillaceous matrix, may be either stratigraphically or structurally controlled, as it lies in a wide zone crudely parallel to regional foliation. Of the intrusive rocks, the more felsic varieties (quartz porphyry, quartz-feldspar porphyry) appear to be all pre-tectonic breccia, as fragments of these rocks appear in the breccia, and larger intrusive masses show evidence of deformation, shearing, and alteration presumably related to the breccia deformational event. In terms of volume of rock observed, these felsic rocks are also the most abundant of the intrusive types. The more intermediate intrusive rocks (feldspar porphyry, micro-diorite) appear very fresh and undeformed, and, though no conclusive exposures were seen, are likely to post-date the tectonic breccia.

Quartz veins of at least two different ages are present. The oldest set is post-felsic intrusives but pre-tectonic breccia. These are now found as deformed, often brecciated vein quartz fragments in the breccia, and as veins within felsic intrusive masses or fragments. The second set is post-tectonic breccia, and cuts across all rock units. This second set also seems to be the most likely host for molybdenite and scheelite mineralization.

Scheelite is also associated with the calc-silicate skarn, although the grades obtained from this unit vary considerably, reaching 5.18% WO_3 in the exposure south of Gillanders Creek. This particular horizon is inferred to strike northwest under an area which is completely talus-

covered, possibly accounting for the major coincident anomalies. As the most promising layer economically, it is also the target for the drilling described in this report.

DRILLING RESULTS (Fig. 3)

Hole Gil 7-78

Drill hole Gil 7-78 was collared at 42 +60E, 14+50S and was drilled at -80° on a bearing of 055°. The collar position of the hole was 14 m (46 ft.) north of the inferred position of the main skarn horizon in this area. The interpreted dip of the horizon is steeply to the north at this position. The immediate area around the drill site is characterized by an intensive zone of coincident molybdenum (+74 ppm) and tungsten (+160 ppm) anomalies. The drill hole was expected to intersect the main skarn horizon at a drill hole depth of approximately 290 m (950 ft.).

No core was recovered between 0-7.3 m (0-24 ft.) where the drill hole traversed a loose talus. The formations intersected between 7.3-163 m (24-53 ft.) consisted principally of a thick su cession of fractured and quartz veined breccia with a section of feldspar porphyry between 144.5 - 147.5 m (474 - 484.5 ft.) and six narrow sections of calc-silicate skarn between 82 - 82.6 m (269 - 271 ft.), 86 - 86.6 m (282.5 - 284.5 ft.),. 123 - 124 m (405 - 406.5 ft.), 127 - 128.3 m (416.5 - 421 ft.), 131 - 133.5 m (429.5 - 423 ft.) and 136 - 137.5 m (447 - 451.5 ft.).

The breccia contains angular to subrounded fragments of chert, argillite and, occasionally, felsic intrusives.

Calc-silicate skarn is essentially massive, more or less, pure epidote.

Fracturing and quartz veining affect all rock types. Quartz veins range in thickness from hair-line to 20 mm. Fractures and veins are rare to the depth of about 46 m (150 ft.). But from 46 m to the end of the hole random fractures and quartz veins are very abundant and occupy a larger portion of the volume of the core. In many sections of the core stockwork-type disposition of the veins is apparent.

Trace amount of pyrite is found in almost all quartz veins. In addition to the visible pyrite occurring as small cubes, leach cavities and limonite spots in quartz veins through the entire core suggest that more pyrite and other sulphide minerals were present in the veins.

The core is intensely oxidized along its entire length and all fractures are coated with limonite.

Intense fracturing and pervasive weathering observed in the hole could explain the size of the molybdenum-tungsten anomalous area around the drill hole and the magnitude of the anomalous values for these metals. Small euhedral crystals of scheelite were found in several veins. Scheelite crystals occur preferentially in very thin quartz veins. No scheelite was observed in various calc-silicate skarn horizons.

The overall core recovery was 73 percent. In intensely fractured zones this figure was as low as 20 to 22 percent. Only one foot of core was recovered in intensely fractured zone between 526 - 531 ft. All attempts to cement this zone failed and the hole was abandoned.

A total of 101 composite chip samples was collected. All samples were analyzed for tungsten, copper, molybdenum and zinc. A total of 404 analyses was completed. Eight samples were assayed for molybdenum.

The distribution of the metal values in the core is illustrated in Figure 3.

Tungsten values ranged between 2 - 300 ppm with an average of 46 ppm. Tungsten values in excess of 200 ppm occur in two isolated 5-foot sections. Trace of visible scheelite is present in both sections. A slight increase in tungsten values is observed in the diagrams in sections containing very small crystals of scheelite.

Copper values ranged between 24 - 350 ppm and averaged 104 ppm. Only one isolated 5-ft. section between 515 - 520 ft. contained 2000 ppm Cu. In all cases of higher than the average copper values, pyrite or leach cavities are observed in quartz veins cutting the core.

Molybdenum values ranged between 13 - 720 ppm with an average of 126 ppm. Although no molybdenum concentration of any economic significance was obtained, the relative abundance of this metal in the core is the most striking result of the core geochemistry. A direct proportionality can be observed between the frequency and abundance of pyrite/limonite-bearing quartz veins or stockworks and molybdenum concentrations.

All zinc values were low, ranging between 18 - 166 ppm and averaging 48 ppm.

CONCLUSIONS AND RECOMMENDATIONS

Due to the extremely broken nature of the formations traversed, numerous difficulties were encountered during the drilling causing a very slow drill progress (an average of only 2.8 m/day). All attempts to cement an extremely broken 5-ft. section between 526-531 ft. failed and the drill hole had to be abandoned without reaching the initially planned final depth of 300 m.

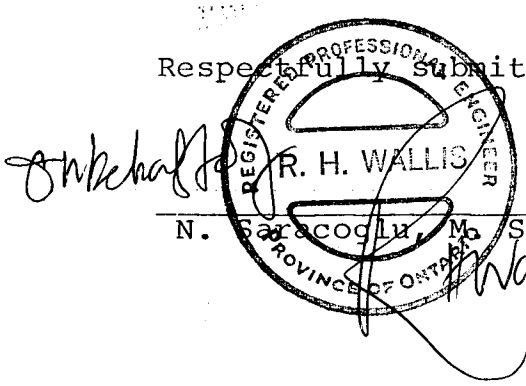
The surface position of the main skarn horizon is only inferred in this area which is heavily covered with loose talus and it is not possible to determine whether or not the narrow skarn horizons encountered in the drill hole between the depths of 123 - 138 m (405 - 451.5 ft.) correspond to the main skarn zone. No evidence of the proximity fo a felsic stock was observed in the hole. The succession of alternating chert-argillite, which is typical in the area of the "Union Carbide showing" was not present in this hole.

The extremely fractured and deeply weathered nature of the immediate area around the drill hole explains the high Mo-W concentrations in soils in this area. Metal concentrations in rocks underlying such areas are not necessarily higher than in areas with little or no fracturing.

The nature and position of the main scheelite-bearing skarn horizon could be best determined by drilling along the strike extension of the "Union Carbide showing", starting in the immediate area of this showing to drill gradually further from the outcrop as this will allow more accurate projection of the position of the skarn horizon.

It is recommended that any future drilling be carried out in a site as close to the showing as terrain conditions permit.

Respectfully submitted,



N. Saracoglu, M. Sc., P.Eng.

TORONTO

January 10, 1979

APPENDIX I

DRILL LOGS

CANADIAN OCCIDENTAL PETROLEUM LTD.

MINERALS DIVISION

DIAMOND DRILL RECORD

LOCATION Line 42+60E Station 14+50S DIRECTION 055°T DIP 80° HOLE No. 7-78

LOGGED BY N. Saracoglu C.C.Macdonald CASING 0-28(H) -128'(N)- 177'(B) SHEET No. 1

STARTED June 29, 1978 CORE SIZE BQ CORRECTED TESTS

FINISHED August 28, 1978

PROPERTY GIL

FROM	TO feet		DESCRIPTION
0	24.0		Cased overburden
24.0	269.5		Highly fractured tectonic breccia, with angular fragments of chert, argillite, and occasional felsic intrusive in a green argillaceous matrix. No measurable foliation or orientation of fragments. Occasional narrow quartz-filled fractures, some with minor Py. Poor recovery due to larger-scale fracturing. 29.5 - concentration of magnetite and quartz, about 3 cm. across. Minor scheelite. 1 mm x 2 mm crystal 58.0 - fragment of epidote-magnetite rich calc-silicate. 73' - very small crystal of scheelite in a thin, limonitic fracture with quartz. 103.0-105.0 - highly altered quartz-feldspar porphyry intrusive material, with very poor recovery (10%). Limonitic stain throughout. 124'-127'- large 2 cm. quartz vein wandering randomly through core, with rusty weathered vugs. 157' - very thin, hair-like veinlet of quartz cutting the core at 20°. Traces of pyrite crystals. 163.5' - fragments (up to 3 cm. large) of calc-silicate (epidote) and concentration of magnetite in a 6 cm. wide zone. Limonite stains along fractures. Minor scheelite in a vuggy, limonitic quartz vein, about 5 mm. wide. 167.3' - a sharp contact at 60° between a more argillaceous and a mafic tuff-like rock types. 167.7' - minor scheelite in a very thin quartz-filled fracture with some pyrite cutting the core at 37°. 168.5'- broken ground, narrow quartz vein with vugs. 176' - 2.5 mm. wide quartz veinlet. Cuts the core at 40°. Contains limonite coated leach cavities. 177' - fragment of felsic intrusive, 2,5 cm. wide. 177'-182.5' - strongly weathered zone with abundant limonite and manganese coating on joint and fracture surfaces. Minor scheelite in a fracture at 178'. 182' - broken quartz vein with stress fractures. About 3 cm. wide. Also vugs with quartz crystals. 185' - quartz veins, 7 mm. wide, cuts the core at 28°. Contains cubes of pyrite and leach cavities after pyrite. Limonite stains in fractures near the quartz vein. 186.5' - small epidotized fragments. 187.3' - 6 cm. fragment of feldspar porphyry. 189'-190' - feldspar porphyry fragments.

CANADIAN OCCIDENTAL PETROLEUM LTD.
MINERALS DIVISION

DIAMOND DRILL RECORD

LOCATION_____ DIRECTION_____ DIP_____ HOLE No. 7-78

LOGGED BY_____ CASING_____ SHEET No. 2

STARTED_____ CORE SIZE_____ CORRECTED TESTS_____

FINISHED_____

PROPERTY GIL

FROM	TO		DESCRIPTION
			193'-199' - section with abundant feldspar porphyry fragments. 193.5' - 7 mm. wide quartz vein with abundant pyrite (90%) Minor scheelite (one small crystal) 194.3' - 1 cm. wide quartz vein cutting the core at 30°. Fine quartz veinlets and vugs between the above two veins. 197.5' - 7 mm. wide quartz vein with pyrite and vugs after pyrite. Cuts across the feldspar porphyry fragment at about 20°. 198.5'-199' - 5 mm. wide quartz veins (two) cutting the core at 40°. Contain cubes of pyrite and leach cavities. Minor scheelite as very small crystals (2 mm x 1 mm). Pyrite is also present as dissemination between the veins. Partial or total epidotization is observed immediately around the borders of the porphyry fragments. 199.5 - 5 mm. wide quartz vein with cubes of pyrite and small leach cavities. Six feet wide zone between 193.5'-199.5' contains numerous narrow quartz veinlets cutting across various fragments. This zone is expected to contain some tungsten values. 201'- Very narrow quartz veinlet with pyrite and leach cavities. Cuts the core at 30°. 202'-212' - section with abundant limonite and manganese stains. Fresh pyrite (5%) between 210.5'-211.5'. 207.5', 208' = narrow (2-3 mm) quartz veinlets with pyrite and leach cavities. 210' - very fine crystal of scheelite (1 mm x 1 mm) in a hair-line fracture. 211.5' - 4-5 mm. wide quartz veinlet with pyrite and a few leach cavities. Cuts the core at 30° 212.3', 213,5', 214.3', 215.8', 216.9'- 2 mm. to 6 mm. wide quartz veinlets, cutting the core at 30° except at 215.8' where the vein (6 mm.) cuts the core at 45°. Feldspar porphyry fragment at 213.5'. A porphyritic rock with abundant mafic matrix is visible in the section between 215.8'-217'. Disseminated pyrite is common in the veinlets. 220'-222'- partial epidotization. Most obvious epidotization at 221.5', probably deriving from more calcareous layers (epidote parallels the foliation),5 cm.wide.

CANADIAN OCCIDENTAL PETROLEUM LTD.
MINERALS DIVISION

DIAMOND DRILL RECORD

LOCATION_____ DIRECTION_____ DIP_____ HOLE No. 7-78

LOGGED BY_____ CASING_____ SHEET No. 3

STARTED_____ CORE SIZE_____ CORRECTED TESTS_____

FINISHED_____

PROPERTY GIL

FROM	TO		DESCRIPTION
			222'-230', 235'-243' = hairline fractures, disseminated trace trace pyrite limonite-coated joint and fracture surfaces. In the latter section limonite tends to become more yellowish, almost like jarosite. 235' = a broken 1 cm wide quartz vein. Some euhedral, buff-coloured crystals might be scheelite. Hairline fractures with quartz are most abundant between 242'-243'. 246'-250' = random hairline fractures with quartz filling. Three larger (4-5 mm) quartz veinlets at 247', 247.5' and 248' cutting the core at random angles. Minor scheelite at 246.5'. A 5 cm section with epidote at 250'. 250.5'-263.5' = fragments are relatively rare. 265.5' = hairline quartz veinlet with pyrite cubes. Extensive limonite stains on joints and fractures throughout the core.
269.5'	271'	1.5'	CALC SILICATE (Skarn) - broken, very rare hairline quartz veinlets. Cut by a clay-filled fault gange. The actual length of the section is difficult to measure. 269.5' - a 2-5 mm quartz veinlet with pyrite and minor scheelite (as a 1 mm x 2 mm crystal), cuts the core at 32°
271'	282.5'	11.5'	Breccia - as previously described. Hairline fractures with pyrite and quartz. Rare quartz veinlets (2-3 mm wide). One such veinlet at 275.5' contains one isolated small (1 mm x 1 mm) crystal of scheelite. The vein cuts the core at about 30°. Leach cavities in the quartz.
282.5'	284.5'	2.0'	STRONGLY EPIDOTIZED ZONE. Partly pure epidote. Shows a faint banding. 282.9' = 6 mm wide quartz vein with isolated cubes of pyrite. Cuts the core at 35°. 284.5' = 6 mm quartz vein, irregular, cuts the epidote.
284.5'	289'	4.5'	BRECCIA, with narrow epidotized sections. Thin limonitic fractures and occasional thin quartz veinlets.
289'	292.5'	3.5'	CHERT with limonitic fractures and hairline quartz veinlets with pyrite. Local epidote around fractures. A major, decomposed fracture at 291.5'.
292.5'	416.5'	124'	BRECCIA as previously described. Locally very little fragments. 292.5'-304.5' = frequent quartz veins, 5 cm to 20 cm apart, hairline to 15 mm wide. Pyrite occurs as blebs and dissemination in the veins. Also abundant leach cavities. Some very small euhedral, buff crystals (scheelite). Veinlets cut the core at varying angles. Scanning with a U.V. lamp indicates the presence of minor scheelite in quartz veins at 293.5', 296' and 298.6' 309'-311' = four quartz veinlets, average 3 mm wide with rare crystals of pyrite. cut the core at varying angles.

CANADIAN OCCIDENTAL PETROLEUM LTD.

MINERALS DIVISION

DIAMOND DRILL RECORD

LOCATION_____ DIRECTION_____ DIP_____ HOLE No. 7-78

LOGGED BY_____ CASING_____ SHEET No. 4

STARTED_____ CORE SIZE_____ CORRECTED TESTS_____

FINISHED_____

PROPERTY GIL

FROM	TO		DESCRIPTION
			309'-311' (cont'd) Some alteration is visible around the vein at 309.2'. 314.' = quartz veinlet, 5 mm wide. Cuts the core at 60°. 315', 316.5' = 2 mm wide quartz veins. 317.5' = 5 mm wide quartz veinlet with rare pyrite cubes and some euhedral minerals (U.V. lamp shows minor scheelite). 319', 320' = 5 mm wide quartz veinlets with rare pyrite cubes. 320.2' = 10 mm wide quartz vein with pyrite cubes. Cuts the core at 25°. It is off-set over about 2 cm along a fracture cutting the core at 60°. 330.5' = two narrow (7 mm, 12 mm) quartz veins. Very few fragments are present between 322'=338'. Cherty interlayers are vislbly starting to break and to form fragments. The making of a tectonic breccia is illustrated in this section. 342.3' = 1-2 mm wide quartz-filled fracture, cuts the core @ 45°. 346.5' = 12 cm wide quartz vein. Shattered. Contains pyrite and leach cavities. Penetrates into a thin (3 mm) fracture in the cherty breccia. Abundant pyrite in the fracture. 347.5' =5mm wide quartz vein. Cuts the core at 35°. Contains scattered fine pyrite. Pyrite is also present as dissemination in enclosing rocks. 349.5', 350.5', 351.' = 3 mm wide quartz veinlets. Cut the core at varying angles. Some very small, buff=coloured euhedral crystals. 354'=375.5' = abundant hairline fractures. 366' = two parallel quartz veinlets, 2-3 mm wide withsome fine crystals of pyrite. 370' = small epidote fragments (2 cm wide) and a 7 mm wide, broken quartz veinlet in a 12 cm wide zone. 382.5' = 6 mm wide quartz veinlet. Cuts the core at 60°. Barren. 388' = 3 mm wide quartz veinlet. Cuts the core at 35°. Some pyrite and leach cvavities. 389'=405' = abundant hairline fractures. 405'-406.5' = CALC SILICATE (epidote) 407.5'=410' = several 2-3 mm wide quartz veinlets with pyrite). 412'=440' = the core is extremely broken. Poor core recovery.

CANADIAN OCCIDENTAL PETROLEUM LTD.

MINERALS DIVISION

DIAMOND DRILL RECORD

LOCATION_____ DIRECTION_____ DIP_____ HOLE No. 7- 78

LOGGED BY_____ CASING_____ SHEET No. 5

STARTED_____ CORE SIZE_____ CORRECTED TESTS_____

FINISHED_____

PROPERTY GIL

FROM	TO		DESCRIPTION
416.5'	421'	4.5'	CALC SILICATE (skarn) with numerous hairline fractures.
421'	422.5'	1.5'	BRECCIA with numerous epidote fragments.
422.5'	429.5'	7.0'	BRECCIA, extremely broken zone with broken quartz veinlets and some epidote between 426.5'-429.5'
429.5'	438'	8.5'	CALC SILICATE (skarn)
438'	447'	9'	BRECCIA as previously described. 440' = 6" wide calc silicate skarn. 441' = 6" wide fragment of felsic intrusive. 443'-445' = three thin (3-5 mm) quartz veinlets. Cut the core at various angles. 424'-446.5' = very broken core. Locally no recovery, just a few chips and mud.
447'	451.5'	4.5'	CALC SILICATE (skarn) - with a greenish-blue tint. All these zones of skarns from 405' are typically greenish-blue and glassy. Not epidote, although some epidote is also present. Extremely broken up, rubbly. Some thin, hairline fractures. Testing with a U.V. lamp between 438'- 451.5' did not reveal any scheelite.
451.5'	474'	22.5'	BRECCIA as previously described. Fragments generally chert. Matrix greenstone-like. Numerous hairline fractures. Intensive limonite coating on joint and fracture surfaces. Intensively broken at 453' (15 cm zone), 457'(15 cm zone), 464' (45 cm zone), 466' (15 cm zone). 455'-462' = seven 3-4 mm wide quartz veinlets. Cut the core at varying angles. Average 30 cm apart. 466.5' = fragments of medium grained granite. 3 cm in diameter. 471' = fragment of microdiorite. 10 cm in diameter. Pyrite in several fractures and as dissemination in the rocks. Also visible in some granitic fragments.
474'	484.5'	10.5'	FELDSPAR PORPHYRY = section consisting mainly of feldspar porphyry with narrow mafic zones. Feldspar porphyry is mostly typically felsic but in several zones it has a difuse, cloudy texture with abundant mafic minerals in the matrix and feldspar porphyroblasts. Some hairline fractures with pyrite. 479' = very broken for 15 cm. 482'-485' = core very broken. Poor recovery.

CANADIAN OCCIDENTAL PETROLEUM LTD.

MINERALS DIVISION

DIAMOND DRILL RECORD

LOCATION_____ DIRECTION_____ DIP_____ HOLE No. 7-78

LOGGED BY_____ CASING_____ SHEET No. 6

STARTED_____ CORE SIZE_____ CORRECTED TESTS_____

FINISHED_____

PROPERTY GIL

FROM	TO		DESCRIPTION
484.5'	531'		BRECCIA as previously described. 485.5' = 12 cm fragment of microdiorite. 488' = narrow (3 cm) section with epidote. 489' = 5 cm fragment of feldspar poprhyry. Abundant hairline fractures. 489'-496' = numerous 1 mm-4 mm wide quartz veinlets. Three generations of veinlets are visible cutting each other. Pyrite in and around the veinlets. Some Buff-coloured euhedral tiny crystals could be scheelite. 498'-500' = very broken core. Very poor core recovery. 502.5' = fragment of microdiorite 5 cm in diameter. 502.5'-507' = very broken core. Very poor core recovery. 510'-515' = very broken core, very poor recovery. 507'-513' = frequent 1 mm-4 mm quartz veinlets containing traces of pyrite. 515.5',516.5',517' = fine fractures with quartz and pyrite. 524' - " " " " " " Extremely broken, very poor core recovery between 515'-515.5', and 526'-531'. Only one foot of core recovered in the last zone which is the zone of caving. The cement is not setting in this zone. All joint and fracture surfaces are coated with limonite all the way to the end of the hole. All attempts to cement the zone of intensive fracturing and caving between 526' and 531' failed. The hole has been abandoned at 531'.

APPENDIX II

NAMES OF PERSONNEL

Canadian Occidental Petroleum Ltd.

C. C. Macdonald (June 29 - August 15, 1978)

N. Saracoglu (August 15 - August 29, 1978)

Herb Allen Drilling Ltd., - Merritt, B.C.

Conrad Bergeron	Foreman
Keith Jume	Runner
Jack Akien	"
Tom Knight	Helper
Hector Fountain	"

APPENDIX III

STATISTICAL DATA

Total footage drilled	162 m (531 ft.)
Drilling period (June 29 - August 25, 1978)	58 days
All inclusive average footage per day	2.8 m (9.2 ft.)
No. of composite core-chip samples	101
No. of analyses	404
No. of assays	8

Drill core geochemistry (ppm)

Copper	
Range	24-2000
Average	104
Molybdenum	
Range	13-720
Average	126
Tungsten	
Range	2-300
Average	46
Zinc	
Range	18-166
Average	48

APPENDIX IV

CERTIFICATES OF ANALYSIS

GIL

NS

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

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 45352

INVOICE NO. 27811

RECEIVED Aug. 22/78

ANALYSED Aug. 30/78

TO: Canadian Occidental Petroleum Ltd.
Minerals Division
311 - 215 Carlingview Drive
Rexdale, Ontario

GIL 7-78

ATTN:

DRILL CORE ROCK GEOCHEM

SAMPLE NO. :	Depths	PPM Cu	PPM Mo	PPM Zn	PPM W
44726	25' - 30'	148	26	34	85
44727	- 35	140	32	42	20
44728	- 40	80	30	30	8
44729	- 45	56	49	34	18
44730	- 50	64	35	28	12
44731	- 55	80	53	30	26
44732	- 60	74	58	24	24
44733	- 65	56	30	32	6
44734	- 70	74	105	24	75
44735	- 75	62	80	56	28
44736	- 80	32	21	38	28
44737	- 85	24	14	20	8
44738	- 90	26	13	20	20
44739	- 95	60	195	34	18
44740	- 100	38	90	34	20
44741	- 105	36	125	32	25
44742	- 110	34	33	26	50
44743	- 115	33	17	18	10
44744	- 120	64	13	30	18
44745	- 125	56	78	36	18
44746	- 130	70	> 250 +	76	36
44747	- 135	86	36	40	22
44748	- 140	44	21	32	10
44749	- 145	38	26	24	50
44750	- 150	38	16	28	16
44751	- 155	46	16	44	10
44752	- 160	66	37	46	18
44753	- 165	62	44	42	28
44754	- 170	54	25	38	28
44755	- 175	130	70	40	54
44756	- 180	215	110	52	210
44757	- 185	128	140	66	48
44758	- 190	180	150	96	80
44759	- 195	142	150	64	34
44760	- 200	58	140	24	120
44761	- 205	186	145	66	300
44762	- 210	174	56	78	80
44763	- 215	124	135	46	40
44764	- 220	34	195	28	60
44765	220' - 225'	46	190	66	85
STD.		70	5	160	2

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

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

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 45353

INVOICE NO. 27811

RECEIVED Aug. 22/78

ANALYSED Aug. 30/78

TO: Canadian Occidental Petroleum Ltd.,
Minerals Divsion
311 - 215 Carlingview Drive
Rexdale, Ontario

GIL 7-78

ATTN:

ROCK GEOCHEMS

SAMPLE NO.	Depths	PPM Cu	PPM Mo	PPM Zn	PPM W
44766	225'-230'	62	80	52	20
44767	-235	44	250 +	38	90
44768	-240	88	130	58	40
44769	-245	68	45	68	12
44770	-250	190	80	66	90
44771	-255	60	70	50	12
44772	-260	74	35	36	32
44773	-265	62	60	62	40
44774	-270	245	140	74	150
44775	-275	70	65	42	110
44776	-280	82	45	44	52
44777	-285	134	80	92	60
44778	-290	94	90	76	14
44779	-295	84	190	166	14
44780	-300	72	250 +	54	48
44781	-305	90	190	76	40
44782	-310	106	90	62	170
44783	-315	80	100	52	14
44784	-320	52	90	32	90
44785	-325	42	65	32	12
44786	-330	40	130	30	4
44787	-335	44	90	26	2
44788	-340	46	80	28	28
44789	-345	70	125	40	140
44790	-350	78	70	58	10
44791	-355	76	150	58	8
44792	-360	40	50	42	80
44793	-365	54	60	40	10
44794	-370	78	70	44	54
44795	-375	72	80	24	48
44796	-380	74	140	30	34
44797	-385	74	120	38	100
44798	-390	198	135	80	74
44799	-395	96	195	34	38
44800	-400	220	120	32	38
44801	-405	255	110	30	34
44802	-410	136	190	54	95
44803	-415	154	250 +	42	38
44804	-420	160	35	90	30
44805	420'-425	74	220	60	60
STD.		76	5	160	2

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

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. 45354

TO: Canadian Occidental Petroleum Ltd.
Minerals Division
311 - 215 Carlingview Drive
Rexdale, Ontario

GIL 7-78

INVOICE NO. 27811

RECEIVED Aug. 22/78

ATTN:

ROCK

ANALYSED Aug. 30/78

SAMPLE NO. :	Depths	PPM Cu	PPM Mo	PPM Zn	PPM W
44806	425' - 430'	68	210	54	75
44807	- 435'	56	20	36	40
44808	- 440'	88	50	40	42
44809	- 445'	40	45	44	26
44810	- 450'	38	110	96	70
STD?		70	5	160	2

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hugh Biddle

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. 45622
INVOICE NO. 28063

TO: Canadian Occidental Petroleum Ltd.,
311 - 215 Carlingview Drive
Rexdale, Ontario
M9W 5X8

ATTN:

ROCKS

PROJECT GIL 7-78

RECEIVED Sept. 5, 1978
ANALYSED Sept. 14, 1978

SAMPLE NO. :	Depths	PPM Cu	PPM Mo	PPM Zn	PPM W
44811	450'-455'	72	140	118	38
44812	-460'	74	205	66	10
44813	-465	68	< 250 +	78	26
44814	-470	124	250 ·	52	75
44815	-475	94	230	54	85
44816	-480	68	250 ·	20	30
44817	-485	80	250 ·	34	22
44818	-490	58	< 250 +	44	52
44819	-495	62	< 250 +	56	10
44820	-500	80	< 250 +	52	48
44821	-505	72	190	68	46
44822	-510	56	170	54	10
44823	-515	96	125	52	38
44824	-520	2000	160	80	28
44825	-525	178	145	52	2
44826	525'-531'	68	65	56	2

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: H. Eisbacher

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. 34315

INVOICE NO. 28074

RECEIVED Sept. 6, 1978

ANALYSED Sept. 14, 1978

TO: Canadian Occidental Petroleum Ltd.,
311 - 215 Carlingview Drive
Rexdale, Ontario
ATTN: M9W 5X8

PROJECT GIL 7-78

SAMPLE NO. :		% Molybdenum
44746	125'-130'	0.038
44767	230'-235'	0.032
44780	295'-300'	0.032
44803	410'-415'	0.044

CTA MEMBER CANADIAN TESTING ASSOCIATION

REGISTERED ASSAYER, PROVINCE OF BRITISH COLUMBIA

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. 34447

TO: Canadian Occidental Petroleum Ltd.,
Minerals Division
Ste. 311 - 215 Carlingview Dr., GIL 7-78
Rexdale, Ontario

ATTN:

INVOICE NO. 28303

RECEIVED Sept. 25/78

ANALYSED Sept. 27/78

SAMPLE NO. :	Depths	% Mo
44813	460'-465'	0.040
44818	485'-490'	0.072
44819	490'-495'	0.042
44820	495'-500'	0.048

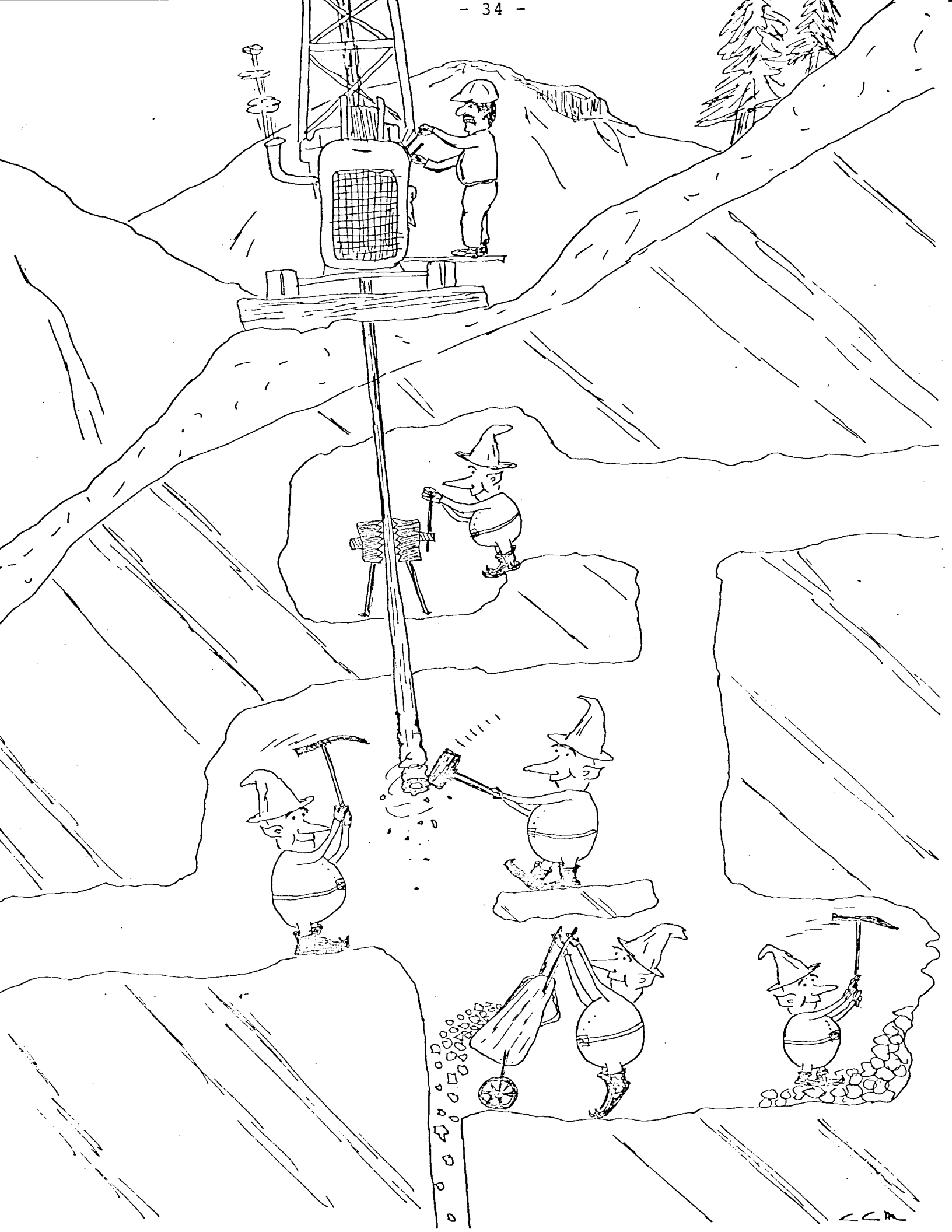
CTA MEMBER CANADIAN TESTING ASSOCIATION

REGISTERED ASSAYER, PROVINCE OF BRITISH COLUMBIA

APPENDIX V

"A Revised Cross-Section"

by C.C. Macdonald



LIG 17
31119

LIG 18
31120

LIG 6
31108

LIG 5
31107

LG - 3
3

LIG 4
31106

LIG 3
31105

GIL 26
31146

GIL 25
31145

LIG 2
31104

LIG 1
31103

BASELINE

GIL 24
31144

GIL 23
31143

75-2(33')
73-3(100')
70°
75-4(256')

BASELINE

GIL 22
31142

GIL 21
31141

LG - 2
75-1(100')2

70°
75-5(484')

80°
7-78
(531)

drill road

RESERVE

INDIAN

GIL 20
31140

GIL 19
31139

GIL 12
31132

GIL 11
31131

TIE LINE
32+00s

0+00

4E 8E 12E 16E 20E 24E 28E 32E 36E 40E 44E 48E 52E 56E 60E 64E

TIE LINE
32+00s

6-77
(617')

GIL 18
31138

GIL 17
31137

GIL 10
31130

GIL 9
31129

LG - 1
1

GIL 16
31136

GIL 15
31135

GIL 8
31128

GIL 7
31127

GIL 14
31134

GIL 13
31133

GIL 6
31126

GIL 5
31125

GIL 1
3112[illegible]

4600 4400 4800 5000 5200 5400 5600 5800 6000 6200 6400 6600 6800 7000 7200 7400

Not all posts have been located.

CANADIAN OCCIDENTAL PETROLEUM LTD.
MINERALS DIVISION

GIL - LIG - LI - LG CLAIMS

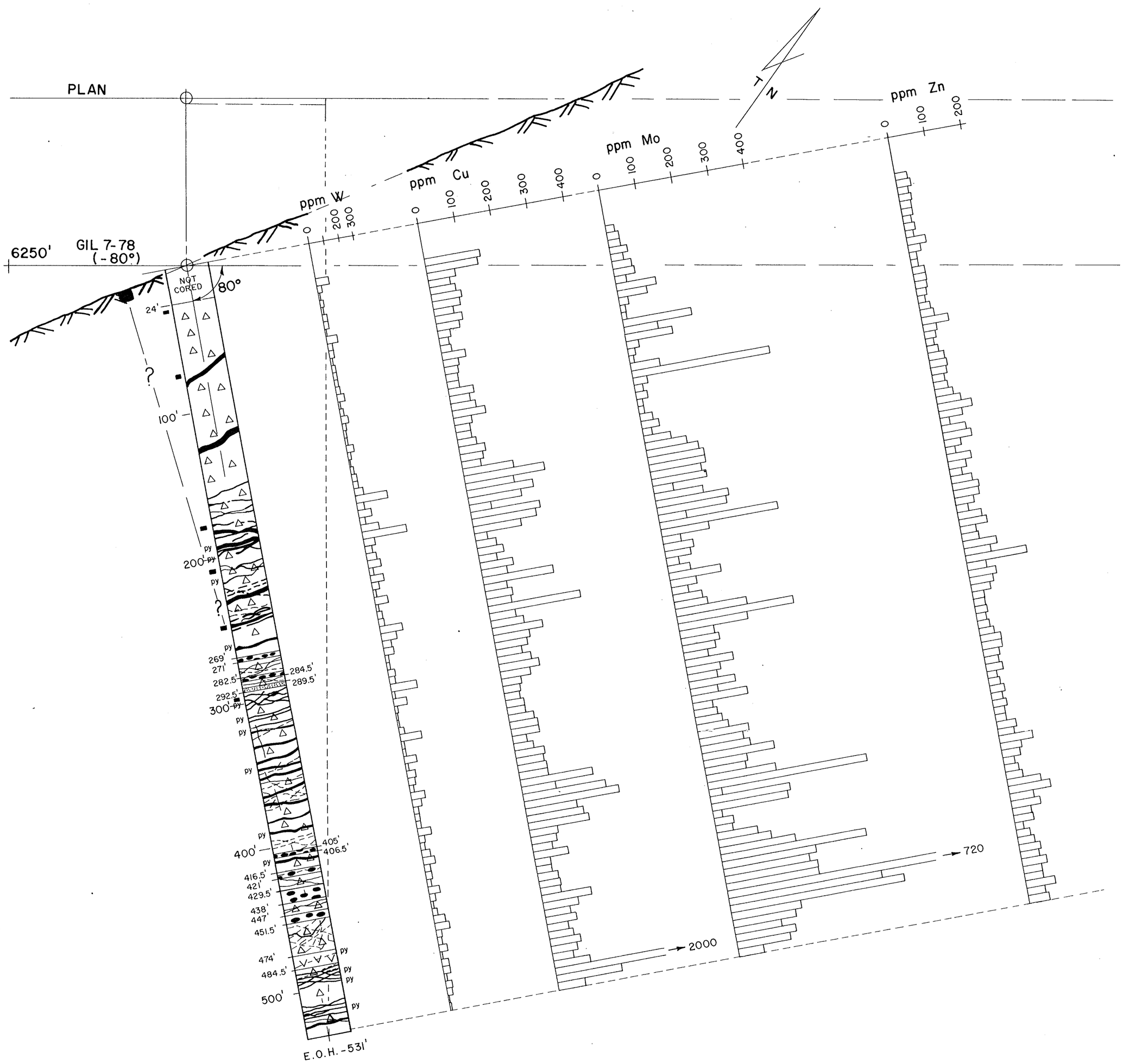
OSOYOOS MINING DIVISION, BRITISH COLUMBIA — 82 - E - 4/W

DIAMOND DRILL HOLE LOCATIONS

-N-

400 0 400 800
SCALE IN FEET

FIGURE - 2



LEGEND

- Tectonic Breccia
- Skarn
- Chert
- Feldspar Porphyry
- Quartz vein, veinlet
- Fracture
- py Pyrite
- Scheelite

CANADIAN OCCIDENTAL PETROLEUM LTD
MINERALS DIVISION

GIL - LIG - LI - LG - CLAIMS

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

DDH GIL 7-78 RESULTS

Scale - 1"=50'

FIGURE 3