5691

CANADIAN OCCIDENTAL PETROLEUM LTD.

MINERALS DIVISION

DIAMOND DRILL PROGRAM ON THE TRE CLAIM GROUP

CLAIMS:
TRE 1-19, Record Numbers 25, 31232-31237
31238-31247

Osoyoos and Nicola Mining Divisions
British Columbia
N.T.S. 82E/13W

by:
Michael P. Henrick, Ph.B.

Covering Diamond Drilling Completed During the Period
February 1 to May 3
and
July 8 to July 23, 1975

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SUMMARY

During the periods April 21 through May 3 and July 8 through July 23, 1975, two vertical wireline B.Q. diamond drill holes were drilled to depths of 405 feet (123.4 m.) and 400.6 feet (122.1 m.) on the Tre Claim Group to check at depth geochemical anomalous areas within the Trepanier Creek gorge. The holes collared and continued to the bottom in a medium-grained grey granodiorite.

Abundant fracturing and alteration was noted throughout the core. The fractures appeared to be of three separate ages and were as follows:

- Large, highly altered horizontal or near horizontal fractures with small parallel seams of bluish gouge material with disseminated chalcopyrite, pyrite and molybdenum. Sericite, chlorite, hematite, carbonate and bluish quartz were noted throughout. These fractures carried the greatest percentage of mineralization and comprised about 40% of the fractures in D.D.H. Tre-75-1. In D.D.H. Tre-75-2 they were smaller, less altered and less mineralized and comprised less than 10% of the total fractures.
- Small, tight hairline horizontal or near horizontal fractures with little or no alteration and quite fresh in appearance. Minor amounts of disseminated chalcopyrite, pyrite and molybdenum were noted along all fractures. These fractures comprised another 40% of the fractures in D.D.H. Tre-75-1. In D.D.H. Tre-75-2 they comprised about 60% of the fractures.

- Small, tight hairline vertical or near vertical fractures with rather distinct small K-feldspar alteration envelopes. These fractures carried only minor disseminated chalcopyrite and pyrite and many were not mineralized at all. In D.D.H. Tre-75-2 they were somewhat more irregular and comprised about 30% of the total fracturing.

A small, highly altered vertical fracture was encountered at the bottom of Tre-75-1. This fracture was well mineralized and carried the best values found in the hole. This fracture was similar to and of the same age as the large, highly altered horizontal fractures described above.

The overall copper values for D.D.H. Tre-75-1 are lower than the values found in D.D.H. Tre-75-2. On initial visual examination it appeared that D.D.H. Tre-75-1 had the greatest percentage copper, but is now apparent from the geochemical data that a lot of copper must be associated with the (pale coloured) pyritic rich sections encountered in the lower portions of the hole. Drill hole Tre-75-1 encountered more pervasive alteration throughout and contains much higher molybdenum values than D.D.H. Tre-75-2.

Diamond drill hole Tre-75-1 had values that ranged from a low of 7 ppm to a high of 2710 ppm with an average of 272.4 ppm for copper. Molybdenum values ranged from a low of less than 1 ppm to a high of greater than 500 ppm with an average of 40.7 ppm for the entire hole. Seven interesting sections of mineralization across widths of greater than 15 feet were noted and are as follows:

- 30 feet (9.1 m.) of mineralization from 47.0 feet (14.2 m.) to 77.0 feet (23.3 m.) ran 249 ppm copper and 13 ppm molybdenum.
- 15 feet (4.5 m.) of mineralization from 97.0 feet (29.4 m.) to 112.0 feet (33.9 m.) ran 402.3 ppm copper and 120 ppm molybdenum.
- 60 feet (18.2 m.) of mineralization from 127.0 feet (38.5 m.) to 187.0 feet (56.7 m.) ran 339 ppm copper and 44 ppm molybdenum.
- 25 feet (7.5 metres) of mineralization from 197.0 feet (59.7 metres) to 222.0 feet (67.2 metres) ran 313 ppm copper and 52 ppm molybdenum.
- 25 feet (7.6 m.) of mineralization from 247.0 feet (74.8 m.) to 272 feet (82.4 m.) ran 391.2 ppm copper and 54 ppm molybdenum.
- 45 feet (13.6 m.) of mineralization from 282.0 feet (85.5 m.) to 327.0 feet (99 m.) ran 367.7 ppm copper and 59 ppm molybdenum.
- 43 feet (13.0 m.) of mineralization from 362.0 feet (109.7 m.) to the end of the hole at 405.0 feet (122.7 m.) ran 645.8 copper and 113.2 ppm molybdenum.

Diamond drill hole Tre-75-2 had values that ranged from a low of 7 ppm to a high of 1520 ppm with an average of 355.8 ppm for copper. Molybdenum values ranged from a low of less than 1 ppm to a high of 145 ppm for the entire hole. Three interesting sections of mineralization across widths of greater than 15 feet were noted and are as follows:
- 20 feet (6.1 m.) of mineralization from 63.0 feet (19.1 m.) to 83.00 feet (25.2 m.) ran 399.25 ppm copper and 3.25 ppm molybdenum.

- 15 feet (4.5 m.) of mineralization from 93.0 feet (28.2 m.) to 108.0 feet (32.7 m.) ran 839.0 ppm copper and 55 ppm molybdenum.
- 194 feet (158.8 m.) of mineralization from 203.0 feet (61.5 m.) to 397 feet (120.3 m.) ran 468.4 ppm copper and 23 ppm molybdenum.

The geochemical copper and co-incident molybdenum anomaly found in the area of the gorge was definitely verified. The mineralization found in the core along with the geochemical data verified the presence of copper and molybdenum that is interesting but not of economic significance at this time. Although the values are significantly low, the abundance of alteration encountered in the holes indicates the presence of a favourable environment.

INTRODUCTION

During the period July 7 through July 15, 1974, Canadian Occidental Petroleum Ltd. personnel under the supervision of J.B. Whalen carried out a detailed geological mapping and geochemical program over the Tre Claim Group. The survey and mapping program outlined three separate and discrete mineralized and anomalous areas designated Anomalies A, B and C.

A vertical diamond drill hole, Tre-75-1, was drilled to a depth of 405 feet (122.7 m.) to determine the extent of alteration and copper-molybdenum mineralization in the lower portion of Anomaly A. The hole was drilled within

the gorge between lines 80+00 north and 84+00 north in the vicinity of a co-incident 16+ ppm molybdenum and 160 ppm copper anomaly.

A second vertical diamond drill hole, Tre-75-2 was drilled to a depth of 400.6 feet (121.4 m.) to determine the extent of alteration and copper-molybdenum mineralization in the upper portion of Anomaly A. The hole was drilled within the gorge at the upper reaches of Trepanier Creek between lines 104+00 north and 108+00 north in the central vicinity of co-incident 16+ ppm molybdenum and 160 ppm copper anomaly.

This report describes the geology and mineralization encountered in the holes.

LOCATION AND ACCESS

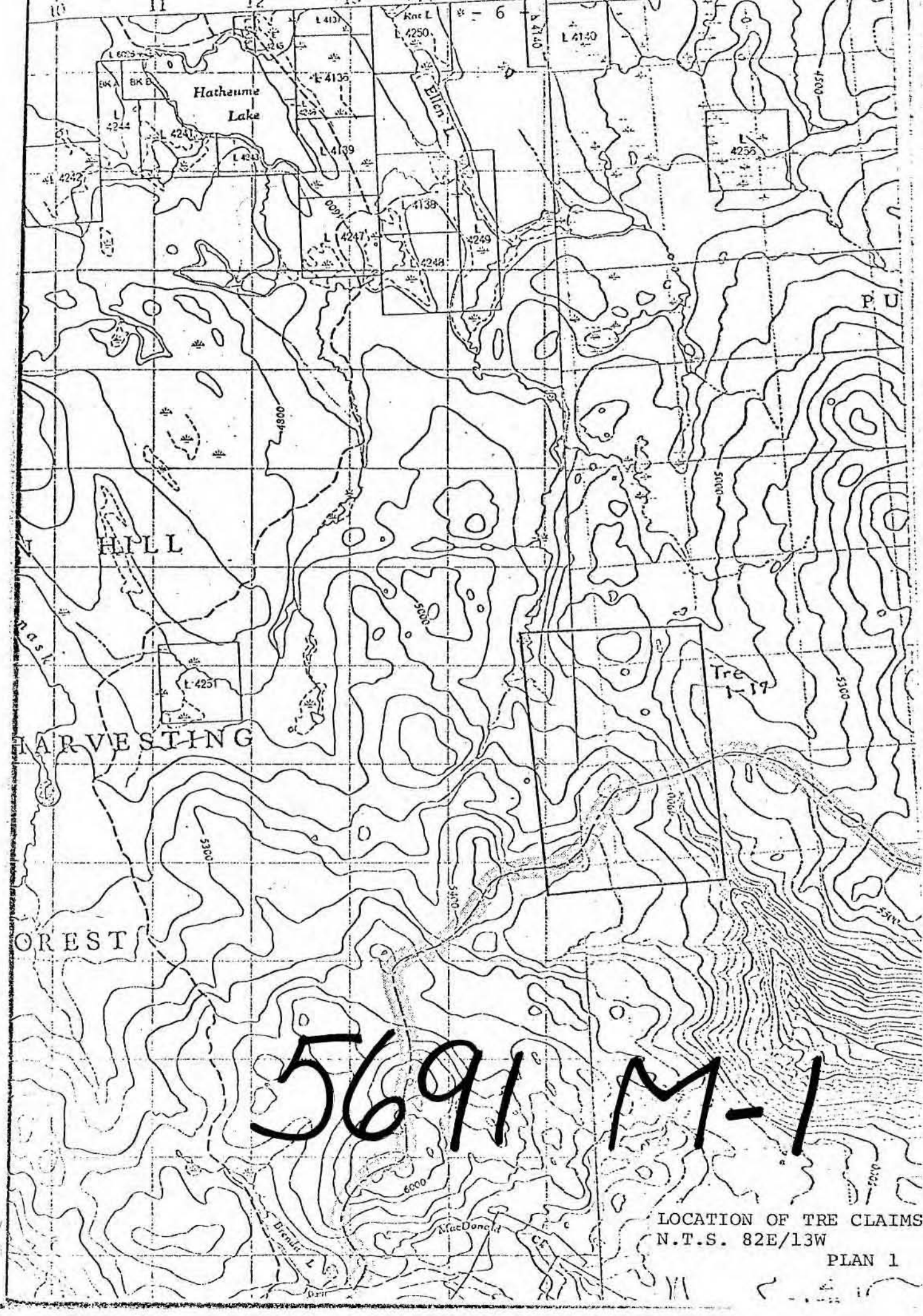
The claim group is situated in Claim Map 82E/13W(M) in the Osoyoos Mining Division, B.C. The property is located about four miles northeast of the Brenda Mine pit and covers the upper portion of Trepanier Creek.

The property is accessible by the Brenda Mine road and thence to 9.8 miles (15.77 kilometres) of 4 x 4 road.

WORK COMPLETED

Mobilization and Demobilization

To drill Tre-75-1, the drill and gear was trucked to an area above the Brenda Mine pit. A D7-E Caterpillar



5691 M-1

LOCATION OF TRE CLAIMS
N.T.S. 82E/13W

PLAN 1

tractor was used to plow a winter road and haul the drill and equipment to the first drill target area in the gorge.

The drill and equipment were hauled out of the gorge and stored on the property for later use. The D7-E Caterpillar tractor was driven back to Brenda Mine and trucked on a low bed to Okanagan Falls.

Bob Freels of Peachland Transfer used a TD-15 International Crawler to repair existing roads and construct 380 feet (115.2 m.) of new road and build a gravel rampway into the gorge. Once in the gorge the diamond drill was winched 170 feet (51.5 m.) to the set up area for D.D.H. Tre-75-2.

A 950 Caterpillar Cat owned by Dave Miller Trucking Ltd. of Summerland was used to pull the diamond drill and equipment out of the gorge, where it was loaded and trucked to Trout Creek by Interior Diamond Drilling.

Site and Road Preparation

A D7-E Caterpillar, owned and operated by the Thompson Brothers of Oliver, British Columbia, was used to construct 1150 feet (348.5 m.) of new road to the set up area of D.D.H. Tre-75-1. The road was constructed from an old diamond drill site above the gorge between lines 88+00 north and 92+00 north to the first drill set up in the bottom of the gorge between lines 84+00 north and 88+00 north.

A drill site was constructed at the end of the road in the bottom of the gorge.

The Caterpillar tractor was also used to plow 9.7

miles of winter access road from Brenda Mine to Trepanier Creek gorge. A total of 87 hours of tractor time was used for a total cost of $2,523.00.

A TD-15 International Crawler owned and operated by Bob Freels of Peachland Transfer was used to repair existing roads and construct 350 feet (115.2 m.) of new road and build a gravel rampway into the gorge. The Crawler was used to pull the skid mounted diamond drill into the gorge. The diamond drill was then winched 170 feet (51.5 m.) to the set up area for Tre-75-2. The site was levelled by hand and the diamond drill was cribbed and levelled with timber.

A 950 Caterpillar Cat owned by Dave Miller Trucking Ltd. of Summerland was used to pull the diamond drill and equipment out of the gorge, where it was loaded and trucked to Trout Creek by Interior Diamond Drilling.

Diamond Drilling

During the period April 21 through May 3, and July 8 through July 23, 1975, two wireline B.Q. diamond drill holes were drilled to depths of 405 feet (122.7 m.) and 400.6 feet (121.4 m.) by Interior Diamond Drilling Ltd. of Summerland, British, using a skid mounted BBS-17A drill with a hydraulic head.

The drilling program was supervised by M.P. Henrick of Canadian Occidental Petroleum Ltd., Minerals Division, R.R. #1, Okanagan Falls, British Columbia.

The names of the Interior Diamond Drilling personnel involved in the drilling program are given in Appendix III. Core recovery was excellent with recovery averaging better than 98% for both holes.

Overburden was shallow and did not prove to be a problem.

Water was not readily available for diamond drill hole Tre-75-1 and drilling was delayed until runoff water could be used. The water for diamond drill hole Tre-75-2 was pumped directly from Trepanier Creek.

The casing for D.D.H. Tre-75-1 was left in the hole because of interesting mineralization encountered in the last twenty five feet of the hole. The hole was abandoned and the drill moved out of the gorge because of the extremely dangerous condition caused by the deep, wet snow on the steep cliffs above the drill site and drill access road in the gorge. All casing was removed from D.D.H.-75-2.

Acid tests were not taken at the bottom of the holes.

Logging and Sampling of Core

The core from D.D.H. Tre-75-1 was logged, split and sampled by M.P. Henrick and Martin Hodgson in the Canadian Occidental Petroleum Ltd. warehouse at 171 Estabrook Avenue in Penticton, B.C. The core from D.D.H. Tre-75-2 was logged, split and sampled by M.P. Henrick at the Canadian Occidental Petroleum Ltd. warehouse.

The entire core was split and each five-foot section was bagged and shipped via Grey Hound Bus Lines to Chemex Labs Ltd., 212 Brooksbank Avenue, North Vancouver, B.C., for analysis.

The remaining split core from both holes was labelled and transported to storage in Canadian Occidental Petroleum Ltd. core racks at Cedar Avenue, R.R. #2, Penticton, B.C.

Geochemical Analysis

The 81 chip core samples from D.D.H. Tre-75-1 and 75 chip core samples from D.D.H. Tre-75-2 were ground to a uniform -100 mesh pulp and were analysed for copper and molybdenum using a Tectron Model AA-5 atomic absorption spectrometer after digestion in hot HNO_3-HCl.

GEOLOGY

A detailed geological description of the claim group was presented in a report by J.B. Whalen, B.Sc., dated November 5, 1974 and Colin Macdonald, B.Sc., dated September, 1975.

A description of rock types and alteration encountered in the drill holes is given in the drill logs and sections of the holes in the portion of the report under Diamond Drilling, Appendix I and Plan 3 and Plan 4.

DRILLING RESULTS

Diamond drill hole Tre-75-1 was collared in the Trepanier Creek gorge midway between lines 84+00 north and 88+00 north in the central portion of drill target area Number 1. It was drilled at 90^{o} to a depth of 405 feet (122.7 m.)

to check a geochemical anomalous area within the gorge. The hole was drilled on mineral claim Tre #1 tag number 463107(M).

The hole collared and continued in a typical medium-grained grey granodiorite to the bottom of the hole. The hole traversed many horizontal or near horizontal fractures with highly altered sections. These sections were sericitic, kaolin, silicified with carbonate, quartz and disseminated chalcopyrite and molybdenum. A blue-black gouge material and bluish quartz were noted in the best mineralized sections. These fractures appeared to carry the greatest percentage of the mineralization and constituted about 40% of the fractures. Another age of fractures was encountered. These tended to be horizontal or near horizontal and quite fresh with little or no alteration. They were very small, hairline fractures. The third set of fractures appeared to be vertical or near vertical. These were tight hairline fractures with K-feldspar alteration envelopes. Some fractures carried disseminated chalcopyrite and pyrite with very little molybdenum being noted. Many of these fractures were not mineralized at all. This age of fractures constituted the remaining 10% of the fractures.

The last 28.5 feet of core was highly altered and silicified with sericite, blue quartz, chlorite and many small horizontal fractures with blue-black gouge material and disseminated chalcopyrite and molybdenum. A vertical fracture was intersected and followed for the last 6.8 feet

of the core. This was the only highly altered vertical fracture encountered. It consisted of a ¼" inch of blue-black gouge material with disseminated chalcopyrite and molybdenum. The granodiorite was leached and silicified throughout. This section of the core carried the best values and reached highs of 2710 ppm copper and greater than 500 ppm molybdenum.

Values throughout the core ranged from a low of 7 ppm to a high of 2710 ppm with an average of 272.42 ppm for copper. Molybdenum values ranged from a low of less than 1 ppm to a high of greater than 500 ppm with an average of 40.70 ppm for the entire hole.

Seven interesting sections of mineralization across widths of greater than 15 feet were noted and are as follows:

- 30 feet (9.1 m.) of mineralization from 47.0 feet (14.2 m.) to 77.0 feet (23.3 m.) ran 249 ppm copper and 13 ppm molybdenum.
- 15 feet (4.5 m.) of mineralization from 97.0 feet (29.4 m.) to 112.0 feet (33.9 m.) ran 402.3 ppm copper and 120 ppm molybdenum.
- 60 feet (18.2 m.) of mineralization from 127.0 feet (38.5 m.) to 187.0 feet (56.7 m.) ran 339 ppm copper and 44 ppm molybdenum.
- 25 feet (7.5 metres) of mineralization from 197.0 feet (59.7 m.) to 222.0 feet (67.2 metres) ran 313 ppm copper and 52 ppm molybdenum.
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The geochemical copper and co-incident molybdenum anomaly found in this area of the gorge was definitely verified. The mineralization and alteration found in the core along with the geochemical data verified the presence of copper and molybdenum that is interesting but not of economic significance at this time.

Diamond drill hole Tre-75-2 was collared in the upper reaches of Trepanier Creek gorge between lines 104+00 north and 108+00 north in the central portion of drill target area Number 2. It was drilled at 90^{o} to a depth of 400.6 feet (121.4 m.) to check a geochemical anomalous area within the gorge. The hole was drilled on mineral claim Tre #11, tag number 463115(M).

The hole collared and continued in a typical medium-grained, grey granodiorite to the bottom of the hole. The hole traversed many horizontal or near horizontal fractures with highly altered sections. These sections were sericitic, kaolin, silicified with carbonate, quartz and disseminated chalcopyrite, pyrite and molybdenum. A blue-black gouge material and bluish quartz were noted in the best mineralized sections. These fractures appeared to carry the greatest percentage of the mineralization and constituted about 10% of the fractures. Another age of fractures was encountered. These tended to be horizontal or near horizontal and quite

fresh with little or no alteration. They were very small, hairline fractures. The third set of fractures appeared to be vertical or near vertical. These were tight hairline fractures with K-feldspar alteration envelopes. Some fractures carried disseminated chalcopyrite and pyrite with very little molybdenum being noted. Many of these fractures were not mineralized at all. This age of fractures constituted the remaining 30% of the fractures.

There was a definite marked increase in the percent of pyrite from 107.0 feet (32.4 m.) onwards to the bottom of the hole at 400.6 (121.4 m.). Although chalcopyrite was not readily noticeable in the pyritic sections, these sections ran quite high in copper values as substantiated by the geochemical data.

Diamond drill hole Tre-75-2 had values that ranged from a low of 7 ppm to a high of 1520 ppm with an average of 355.8 ppm for copper. Molybdenum values ranged from a low of less than 1 ppm to a high of 145 ppm for the entire hole. Three interesting sections of mineralization across widths of greater than 15 feet were noted and are as follows:

- 20 feet (6.1 m.) of mineralization from 63.0 feet (19.1 m.) to 83.0 feet (25.2 m.) ran 399.25 ppm copper and 3.25 ppm molybdenum.
- 15 feet (4.5 m.) of mineralization from 93.0 feet (28.2 m.) to 108.0 feet (32.7 m.) ran 839.0 ppm copper and 55 ppm molybdenum.
- 194 feet (158.8 m.) of mineralization from 203.0 feet (61.5 m.) to 397 feet (120.3 m.) ran 468.4 ppm copper and 23 ppm molybdenum.

The geochemical copper and co-incident molybdenum anomaly found in this area of the gorge was definitely verified. The mineralization and alteration found in the core along with the geochemical data verified the presence of copper and molybdenum that is interesting but not of economic significance at this time.

PRESENTATION OF RESULTS

The location of diamond drill holes Tre-75-1 and Tre-75-2 are shown on the attached location map, Plan 2.

The sections of Tre-75-1 and Tre-75-2 show geology and geochemical distribution of copper and molybdenum, Plan 3 and Plan 4.

The diamond drill record logs for the holes are included at the end of the report - Appendix I.

Analysis result sheets from Chemex Labs Ltd. are included in Appendix II.

Summary of petrography of selected samples from diamond drill hole Tre-75-2 is included in Appendix III.

CONCLUSIONS

The drilling program on the Tre claim group successfully explained the geochemical copper and co-incident molybdenum anonaly found in this area of the gorge. The mineralization found in the core coupled with the geochemical

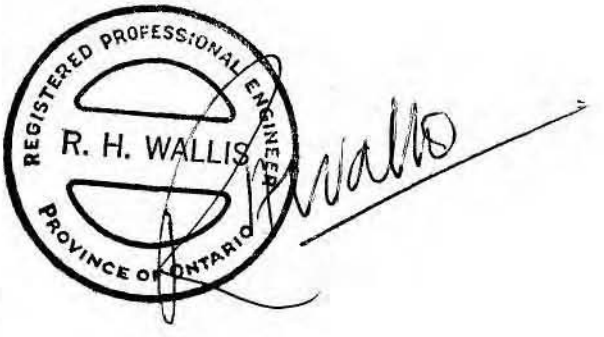
data verifies the presence of minor, yet somewhat significant, amounts of copper and molybdenum mineralization within the gorge. The best grades encountered were 0.271% copper and 0.05% molybdenum across a five-foot section - in D.D.H. Tre-75-1. Although the values are significantly low, the abundance of alteration encountered in the holes indicates that they were drilled in a favourable environment and more work will have to be done to appropriately assess the property that lies to the north.

RECOMMENDATIONS

An I.P. survey should be carried out over any geochemical anomalous areas. If successful the survey should be followed by more diamond drilling to determine the strike and extent of the alteration and mineralization to the north of the grid.

Respectfully submitted,

M.P. Henrick, Ph.B.



TORONTO

November 12, 1975

CANADIAN OCCIDENTAL PETROLEUM LTD. APPENDIX I

MINERALS DIVISION

DIAMOND DRILL RECORD

LOCATION Drill Area No. 1 DIRECTION Vertical DIP Vertical HOLE No. TRE-75-1

LOGGED BY M.P. Henrick CASING 0-4' SHEET No. 1

STARTED CORE SIZE B.Q. CORRECTED TESTS No Test

FINISHED May 3, 1975

PROPERTY TREPANIER CREEK

FROM	TO		DESCRIPTION
0	4'		CASING
4	405'		Light grey to flesh colored in sections, medium grained granodiorite. Sections included highly altered and rusty stained with limonite. Chlorite and sericite also noted. Minor tiny fractures at 85°-90° to the long core axis with disseminated Cpy, Py and Moly. Majority of fractures at 80°-90° to long core axis. 4-32.5 - highly altered, rust stained. Sericite, limonite sections throughout. 33.5 - tiny stringer at 85° to long core axis. Smeared with Cpy and Moly. 38.0-38.1 - specks Cpy in horneblende in granodiorite 58.0 - tiny hairline fracture at 80° to L.C.A., disseminated Cpy and Moly. Little alteration, minor K-feldspar. 59.9-61.6 - highly altered minor K-feldspar sericite, minor chlorite carbonate. This section more friable and kaolin in appearance. 60.0 - tiny 1/16" fracture at 85° to L.C.A. Finely disseminated Py, blue black fault gouge silicified. 66.5-80. - this section K-feldspar rich with several small fractures running nearly parallel to core Minor disseminated Py and Cpy as at 70.5, 73.5. 71.9 - chloritic stain 77.0 - mafic inclusion about 1" in diameter. 85.6-86.1 - tiny fracture nearly parallel to core Tiny K-feldspar alteration envelope. No mineralization. 88.2 - tiny hairline fracture at 80° toL.C.A. Finely disseminated Cpy and smears Moly.

CANADIAN OCCIDENTAL PETROLEUM LTD.

MINERALS DIVISION

DIAMOND DRILL RECORD

LOCATION_____ DIRECTION_____ DIP_____ HOLE No. Tre-75-1

LOGGED BY_____ CASING_____ SHEET No. 2

STARTED_____ CORE SIZE_____ CORRECTED TESTS_____

FINISHED_____

PROPERTY_____

FROM	TO		DESCRIPTION
			100.3-101.7 - highly altered K-feldspar.
			101.0 - silicified fracture almost banded at 85° to L.C.A., Cpy and moly
			101.3-101.7 - K-feldspar alteration in fracture nearly parallel to L.C.A. Disseminated Cpy throughout.
			101.7-102.9 - fracture parallel to L.C.A., limonite and carbonate filling. No mineralization.
			104-104.4 - K-feldspar alteration with disseminated Py and Cpy in fracture nearly parallel to L.C.A.
			105.4-109.2 - core this section highly altered, friable, almost kaolin, white in color with tiny hairline fractures at 80°-85° to L.C.A. with blackish blue gouge, disseminated Cpy and Py and moly at 106-106.5 and 109. Several other extremely small fractures with odd specks Cpy and moly noted. A rougy red alteration stain noted throughout, gives feldspar the appearance of K-feldspar, possible hematite? staining.
			110-112.6 - K-feldspar rich section with several small ½" in diameter mafic inclusions with disseminated Py. Minor epidote staining in tiny hairline fractures throughout.
			113 - fracture at 85°-L.C.A., silicifed money and Cpy. Minor tiny hairline fractures at 80°-85° to L.C.A. and at 80°-90° to L.C.A. with mony and Cpy and Py at: 181.1, 119.5, 126.4, 129.9, 130.0, 130.3. Core highly altered, friable kaolin, white in color with rougy red stain hematite from 130.6-131.2.
			131.6-137 - core K-feldspar rich chlorite, sericite, carbonate along fractures nearly parallel to L.C.A.

CANADIAN OCCIDENTAL PETROLEUM LTD.

MINERALS DIVISION

DIAMOND DRILL RECORD

Tre-75-1

LOCATION_____ DIRECTION_____ DIP_____ HOLE No._____

LOGGED BY_____ CASING_____ SHEET No. 3

STARTED_____ CORE SIZE_____ CORRECTED TESTS_____

FINISHED_____

PROPERTY_____

FROM	TO		DESCRIPTION
			137.0-148 - core altered with fleck like flesh colored feldspar, alteration noted throughout with several small fractures at 80°-90° to L.C.A. with moly and Cpy as at 137.3, 145.1, 147.3, 153 .3, 154.2, 156.4 157.6 150.8 - small mafic inclusion 168.0 " " Tiny fractures as above with moly and Cpy at 164 .0, 165.0, 169.7,174.2, 175.6, 177.2, 179.0, 179.9, 181.0, 182.6. 175.2-175.7 - core highly altered friable kaolin with rouge red staining. 187.8 - 198.4 - core badly broken and kaolin altered throughout. Carbonate and sericite noted. Sections appear silicified. Minor tiny mineralized shears noted. 198.4-215.4 - core slightly altered with section silicified. Small sections included badly broken with minor sections friable. Carbonate, on near vertical fractures. Small mineralized fractures at 80°-90° to L.C.A. noted at 202.6, 207.1 and 207.5. (215.4-260.8) rather typical granodiorite, quite uniform and only slightly altered, odd minor inclusions mafic as at 235.0 with tiny hairline fractures at 80°-90° to L.C.A. with Cpy and MoS_2 noted as at 212.5. Sericite, flesh colored flecks noted throughout. K-feldspar altered also noted 213.5, 214,5, 215.5, 217.2 , 219.5. 235.0 - mafic inclusion. 243.5 - mafic inclusion - 1" in diameter. Tiny fractures at 80°-90° to L.C.A.with Cpy and moly noted at 253.3, 253.7, 255.7, 258.4, 259.0, 259.3. 260.8-262.1 - core altered this section. Sericite, carbonate, odd non mineralized fracture, nearly parallel to core.

CANADIAN OCCIDENTAL PETROLEUM LTD.

MINERALS DIVISION

DIAMOND DRILL RECORD

Tre-75-1

LOCATION_____ DIRECTION_____ DIP_____ HOLE No._____

LOGGED BY_____ CASING_____ SHEET No. 4

STARTED_____ CORE SIZE_____ CORRECTED TESTS_____

FINISHED_____

PROPERTY_____

FROM	TO		DESCRIPTION
			262.1 - 263.8 - core highly altered white kaolin minor sericite. Silicifed with stringer moly and chalcopyrite at 80°-85° toL.C.A. throughout at 262.2, 263.0, 263.3, 263.5, 263.8 263.8-264.2 - core altered and highly silicified sericite, blue quartz, tiny stringers at 80° to L.C.A. throughout with tinely disseminated moly and Cpy and odd specks Py 266.0 - 267 - fracture nearly parallel to core with K-feldspar alteration, no mineralization. 267.1 - 2 hairline fractures in fresh granodiorite at 80° toL.C.A. with disseminated chalcopyrite. Similar fractures as above at 267.1 at: 268.9, 269.5, 270.6, 274.8, 282.4, 284.2. 286.8, 287.0, 288.2, 285.3, 292.0. several tiny hairline fractures as at 80° toL.C.A. with disseminated chalcopyrite and moly. 292.1-293.1 - nearly vertical fracture with minor K-feldspar alteration envelope up to ½" in width with disseminated Py and Cpy . 299.4-301.4 - core highly altered white kaolin silicified with several stringers moly and Cpy up to ¼" in width with blue quartz at: 299.8, 300.5, 300.7, 301.0, 301.3, 301.4. 300.8-301 - vertical hairline fracture with blue black gouge and finely disseminated Cpy. 301.4-303.8 - core altered. Silicified with serecitic, quartz, minor carbonate. 304-305 - vertical fracture K-feldspar pyrite, carbonate. 305.4-307 - vertical fracture as above. 309.2 - mafic inclusion chloritic 1" in diameter.

CANADIAN OCCIDENTAL PETROLEUM LTD.

MINERALS DIVISION

DIAMOND DRILL RECORD

LOCATION_____ DIRECTION_____ DIP_____ HOLE No. Tre-75-1

LOGGED BY_____ CASING_____ SHEET No. 5

STARTED_____ CORE SIZE_____ CORRECTED TESTS_____

FINISHED_____

PROPERTY_____

FROM	TO		DESCRIPTION
			307.4-308.4 - tiny vertical fracture, K-feldspar 307.0 - epidote over 3" 308.5-309.2 - core altered, sericitic, K-feldspar. 309.2-219.1 - core highly altered white to light grey flesh colored. Kaolin carbonate, K-feldspar quartz, with fractures at 80°-90° to L.C.A. with moly and Cpy at: 315.3, 316.4 , 316.5, 316.8. 319.1-327.3 - core altered, sericitic, chloritic, carbonate, kaolin. 321.3 - hairline fracture with disseminated Py and Cpy. 333.2 - 80° - fracture with blue black gouge epidote. 341.0-342.0 - sericitic. 349.1 - hairline fracture at 75° to L.C.A. with disseminated Cpy. 357 - 358.1 - vertical fracture, carbonate, pyrite. 364.0-364.4 - as above at 357'. Small hairline fractures at 80°-90° to L.C.A., fresh with disseminated Cpy and Mo at 366.5, 371.4, 376.7, 377.6 and 378.2. 377.5-383.4 - core altered. Sericitic, biotite altered to chlorite, carbonate, sections chloritic. 383.4-385.9 - core silicified, altered, sheared. 385.9-387.0 - core altered. Sericite, quartz, chlorite.

CANADIAN OCCIDENTAL PETROLEUM LTD.

MINERALS DIVISION

DIAMOND DRILL RECORD

Tre-75-1

LOCATION_____ DIRECTION_____ DIP_____ HOLE No._____

LOGGED BY_____ CASING_____ SHEET No. 6

STARTED_____ CORE SIZE_____ CORRECTED TESTS_____

FINISHED_____

PROPERTY_____

FROM	TO		DESCRIPTION
			3870-389.3 - highly altered and silicified, tiny hairline fractures of moly throughout, minor disseminated Cpy. 389.3-390.8 - altered sericitic biotite--chlorite 390.8-398.2 - highly altered and silicified with tiny hairline fractures throughout, the majority at 80°-90° to L.C.A. with odd minor short fractures nearly parallel and some oblique to core, disseminated Cpy and moly on all fractures, density of one even 4". 398.2-405 - core intersected and followed a vertical fracture, highly altered, quartz, carbonate, ¼" blue black gouge with blue quartz. Mo and disseminated Cpy throughout, possibly 1% Cu and as good moly. 405 - END OF HOLE NO ACID TEST TAKEN

CANADIAN OCCIDENTAL PETROLEUM LTD.

MINERALS DIVISION

DIAMOND DRILL RECORD

LOCATION Drill Area #2 DIRECTION Vertical DIP Vertical HOLE No. Tre-75-2

LOGGED BY M.P. Henrick CASING 0-28' SHEET No. 1

STARTED July 8, 1975 CORE SIZE B.Q. CORRECTED TESTS

FINISHED July 23, 1975

PROPERTY Trepanier Creek

FROM	TO		DESCRIPTION
0	28.0		CASING
28.0	400.6		Light grey to flesh coloured in sections, medium-grained granodiorite. Altered throughout with sections highly altered. Chlorite limonite sericite and carbonate noted in varying amounts throughout. Many minor tiny fractures rather fresh in appearance at 85°-90° to the long core axis with disseminated Cpy, Py and specks of Mo noted throughout. Majority of fractures at 75°-90° to long core axis. 28.0-46.8. Core this section weathered and altered with chloritized biotite, limonite sericite, quartz and minor carbonate present. Many tiny hairline fractures with minor diss. Py and Cpy noted at 80° to long core axis. 45.0-45.8 - heavy bull quartz section with only minor specks Py noted. Sections either side highly altered, friable kaolin over 1 foot. 46.8-87.0. Core this section less altered. Fresher with small,irregular hairline fractures throughout with odd tiny up to 1/8" K-feldspar alteration envelopes. Several small hairline fractures at 75°-90° to long core axis, plated with Py and Cpy and specks of Mo noted throughout at 48.1, 53.0, 70.3, 70.8, 73.3, 73.5, 79.0, 86.0, 83.4. 74.5 - hematite stained fracture at 30° to P.C.A. 74.8-75.0 - hairline fracture at 30° to long core axis with 1/16" K-feldspar envelopes and diss. Py, Cpy noted throughout. 87.0-93.5 - core highly broken, fractured, altered. Sericite, carbonate, chlorite, K-feldspar and minor hematite noted throughout. Small hairline fractures with Cpy, Py and Mo noted throughout at 80° to the long core axis. 93.5-100.3 - core highly altered, kaolinic, chloritic, with minor limonite hematite staining.

CANADIAN OCCIDENTAL PETROLEUM LTD.
MINERALS DIVISION
DIAMOND DRILL RECORD

Tre-75-2

LOCATION_____ DIRECTION_____ DIP_____ HOLE No._____

LOGGED BY_____ CASING_____ SHEET No. 2

STARTED_____ CORE SIZE_____ CORRECTED TESTS_____

FINISHED_____

PROPERTY_____

FROM	TO		DESCRIPTION
			97.0-97.1 - highly kaolin - slickensides chlorite, blackish gouge material, cubes Py and specks Cpy and Mo noted. 100.3-109.6 - Core broken, fractured, altered - abundant sericite, minor fractures with Moly and Cpy as at 105.8. 109.6-160.3 - core fresher, less fractured and altered with numerous,irregular,small hairline fractures with K-feldspar envelopes. Minor chlorite, sericite and hematite. Several fresh fractures at 80° to long core axis contain cubes Py, Cpy and Mo, as at 127.0, 111.2, 115.1, 117.8, 123.2, 131.8, 133.0, 134.6, 143.4, 153.0. A definite increase in percent of pyrite noted from 107.0 onwards. 160.3-162.4 - core highly fractured and weathered to a light greenish-sericite. Minor chlorite and odd cubes Py noted. 162.4-203.3 - as above (109.6-162.4) with randomly spaced, near horizontal fractures with Py, Cpy and Mo as at 169.0, 170.2, 203.2. Randomly fractured throughout with hairline fractures, minor K-feldspar alteration envelopes. Minor sericite, chlorite and carbonate also noted. 169.8 - 1/4" horizontal fracture with near massive Cpy. 184 - 1" mafic inclusion. 203.3-205.4 - core fractured and altered throughout, sericite and quartz with bluish quartz and Mo smears and diss. Cpy and Py noted throughout. 205.4-206.5 - core fresher less altered with irregular hairline fractures with Cpy, Py and bluish quartz. Minor K-feldspar also noted. 206.5-207.5 as above (203.3-205.4) with a marked increase in Py, 1 Py and 1 Cpy noted this section.

CANADIAN OCCIDENTAL PETROLEUM LTD.

MINERALS DIVISION

DIAMOND DRILL RECORD

Tre-75-2

LOCATION_____ DIRECTION_____ DIP_____ HOLE No._____

LOGGED BY_____ CASING_____ SHEET No. 3

STARTED_____ CORE SIZE_____ CORRECTED TESTS_____

FINISHED_____

PROPERTY_____

FROM	TO		DESCRIPTION
			207.5-212.5 - as above (205.4-206.5) with odd small up to 2" sections included more altered and sericitic. 212.5-214.8 - more altered sericitic as above (206.5-207.5) with a blue-black gouge and (kaolin-like material at 213.0. 214.8-217.9 - less altered, minor sections sericitic. Near horizontal fracture at 217.3 with Cpy, Py and Mo. Minor hematite stain noted. 217.9-219.1 - highly altered and fractured, sericitic with abundant Cpy, Py and Mo from (219.0-219.1) along small, nearly horizontal, fractures. 219.1-224.5 - fresher, less alteration, only minor sericite, carbonate and chlorite 224.5-229.2 - altered, sericitic, chloritic, very little sulfides. Light greenish in appearance. 229.2-242.7 - fresher, less altered or fractured as above. 242.7-244.3 - highly altered greenish chloritic sericitic, hornblende altered to biotite throughout. 244.3-252.7 - core more fractured and altered with abundant carbonate chlorite, minor sericite, quartz and minor hematite staining with a marked increase in Py. Minor Cpy and Mo noted at 249.5, 251.0 and 252.3 along near horizontal fractures. 252.7-281.0 - moderately altered throughout, similar but less alteration than above (244.3-252.7) with a very definite marked increase in Py. Cubes of Py on nearly every mineralized fracture. Minor Py, Cpy and Mo noted throughout. In sections 2 Py to 1 Cpy noted as at 252.8, 257.8, 261.0, 261.5, 272.0 273.0, 277.5. 280.0-281.5 - highly fractured and altered sericite, carbonate, kaolin in sections with blue-black gouge material diss. Py, Cpy and smears of Mo.

CANADIAN OCCIDENTAL PETROLEUM LTD.

MINERALS DIVISION

DIAMOND DRILL RECORD

LOCATION_____ DIRECTION_____ DIP_____ HOLE No. Tre-75-2

LOGGED BY_____ CASING_____ SHEET No. 4

STARTED_____ CORE SIZE_____ CORRECTED TESTS_____

FINISHED_____

PROPERTY_____

FROM	TO		DESCRIPTION
			282 - 1/8" horizontal fracture with Cpy, Py and Mo. 281.5-337.0 - core moderately altered. sericite, carbonate, odd hematite stain with cubes Py, minor Cpy and Mo also noted throughout. Sections badly fractured and broken with K-feldspar alteration envelopes and minor chlorite noted. 289.0-290.5 - abundant Py with a near massive section over 1" at 289.8. Near horizontal fractures throughout with Cpy and Mo as at 309, 315.0, 317.0, 321.5. 337.0-354.2 - Core highly altered and fractured with sericite, chlorite, quartz and carbonate. Greenish in colour, abundant Py throughout. Near horizontal fractures with minor Py, Cpy and Mo noted throughout. 338.0-341.7 - abundant quartz, sericite and pyrite, with sections up to 3" near massive Py and some Cpy as at 338.5, 339.3 and 341.0. Rock this section composed mainly of quartz, sericite, pyrite and chlorite. 341.7-353.2 - core less altered than above but still highly altered with an increase in Cpy noted as at (347.8-348.2). 353.2-380.8 - highly fractured and highly altered to mainly quartz and sericite with minor carbonate cubes of Py and vuggy sections throughout. 353.6- massive Py over 3". 354.2 - 1/4" near horizontal fracture with Mo and Cpy. Minor tiny up to 1/16" quartz filled fractures at 30°-45° to the long core axis with minor Py as at 376.0 376.0 368.6 -/white gouge material and slickensides noted. Near horizontal fractures with Mo and odd specks of Cpy noted at 374.6, 374.8, 379.5

CANADIAN OCCIDENTAL PETROLEUM LTD.

MINERALS DIVISION

DIAMOND DRILL RECORD

Tre-75-2

LOCATION_____ DIRECTION_____ DIP_____ HOLE No._____

LOGGED BY_____ CASING_____ SHEET No. 5

STARTED_____ CORE SIZE_____ CORRECTED TESTS_____

FINISHED_____

PROPERTY_____

FROM	TO		DESCRIPTION
			380.8-386. Core less altered than above, yet highly altered and fractured. Sericite, chlorite with minor cubes Py throughout. Altered to a light greenish throughout. All hornblende altered to biotite. Fractures with Cpy,Mo and Py at 384.3 and 385.1 388.4 - near vertical fracture with slickensides and minor white kaolin gouge. No mineralization. 386.-400.6 - Moderately altered with minor sections included. More highly altered. Chlorite,carbonate and minor sericite noted throughout. Odd minor, near horizontal fractures with Mo and odd speck Cpy noted at 302.3 and 392.5. 395.0 - near horizontal, irregular hairline fracture with diss. Cpy and cubes of Py about 1 Py to 1 Cpy. Minor K-feldspar alteration. 400.6 - End of hole.

Michael P. Henrick

APPENDIX II

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

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 29038

INVOICE NO. 13761

RECEIVED May 23/75

ANALYSED May 26/75

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

"TRE"
d.d.h.#1

ATTN: Dr. J.J.Brummer

cc: Mr. Henrick

SAMPLE NO. :	PPM Copper	PPM Molybdenum	Footages	Rock geochem
25376	22	< 1	4- 9	
25377	31	< 1	9-13	
25378	7	< 1	13-17	
25379	68	< 1	17-22	
25380	90	< 1	22-27	
25381	56	< 1	27-32	
25382	98	11	32-37	
25383	28	10	37-42	
25384	36	1	42-47	
25385	138	43	47-52	
25386	18	1	52-57	
25387	165	22	57-62	
25388	635	7	62-67	
25389	379	6	67-72	
25390	160	< 1	72-77	
25391	66	4	77-82	
25392	56	1	82-87	
25393	63	1	87-92	
25394	16	< 1	92-97	
25395	156	1	97-102	
25396	920	355	102-107	
25397	131	4	107-112	
25398	86	7	112-117	
25399	80	13	117-122	
25400	255	32	122-127	
25401	465	78	127-132	
25402	313	3	132-137	
25403	175	7	137-142	
25404	108	9	142-147	
25405	110	33	147-152	
25406	540	41	152-157	
25407	34	1	157-162	
25408	165	6	162-167	
25409	62	16	167-172	
25410	304	105	172-177	
25411	1400	205	177-182	
25412	392	23	182-187	
25413	30	2	187-192	
25414	28	12	192-197	
25415	450	64	197-202	
Std.	68	25		

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: B.S.Twaite

CHEMEX LABS LTD.

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

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 29039

TO: Canadian Occidental Petroleum Ltd.
Minerals Division
801 - 161 Eglinton Ave. East
Toronto

INVOICE NO. 13761

"TRE"
d.d.h.#1

RECEIVED May 23/75

ANALYSED May 26/75

ATTN: Dr. J. J. Brummer cc: Mr. Henrick

SAMPLE NO. :	PPM Copper	PPM Molybdenum	Footages	Rock geochem
25416	295	62	202-207	
25417	465	84	207-212	
25418	222	72	212-217	
25419	379	6	217-222	
25420	10	1	222-227	
25421	52	1	227-232	
25422	63	2	232-237	
25423	42	1	237-242	
25424	42	1	242-247	
25425	215	4	247-252	
25426	209	9	252-257	
25427	313	30	257-262	
25428	800	220	262-267	
25429	419	9	267-272	
25430	72	4	272-277	
25431	80	< 1	277-282	
25432	562	64	282-287	
25433	235	13	287-292	
25434	482	110	292-297	
25435	670	230	297-302	
25436	286	4	302-307	
25437	215	10	307-312	
25438	670	84	312-317	
25439	76	10	317-322	
25440	114	6	322-327	
25441	48	1	327-332	
25442	84	2	332-337	
25443	68	1	337-342	
25444	44	5	342-347	
25445	44	3	347-352	
25446	48	16	352-357	
25447	18	2	357-362	
25448	405	12	362-367	
25449	344	5	367-372	
25450	78	18	372-377	
25451	465	18	377-382	
25452	56	< 1	382-387	
25453	450	275	387-392	
25454	1160	28	392-397	
25455	720	250	397-400	
Std.	70	26		

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: B. Stewart

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

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 29040
INVOICE NO. 13761
RECEIVED May 23/75
ANALYSED May 26/75

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

"TRE"
d.d.h.#1

ATTN: Dr. J.J.Brummer cc: Mr. Henrick

SAMPLE NO. :	PPM Copper	PPM Molybdenum	Footages
25456	2710	> 500	400-405

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: B. L. Swaites

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

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 35645

INVOICE NO. 14768

RECEIVED August 18, 1975

ANALYSED August 20, 1975

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

"TRE"
d.d.h.#2

ATTN: Mr. B. Cook

cc: Dr. R. Wallis

SAMPLE NO. :	PPM Copper	PPM Molybdenum	Footages	Rocks
9801	450	31	323-328	
9802	197	20	-333	
9803	880	82	-338	
9804	1400	100	-343	
9805	1000	11	-348	
9806	1200	23	-353	
9808	540	7	-358	
9809	30	2	-363	
9810	125	9	-368	
9811	228	5	-373	
9812	521	20	-378	
9813	323	9	-383	
9814	103	14	-388	
9815	465	13	-393	
9816	500	< 1	-397	
9817	129	< 1	-400	
9863	262	7	148-153	
9864	170	5	-158	
9865	215	18	-163	
9867	31	< 1	-168	
9868	587	18	-173	
9869	10	< 1	-178	
9870	120	3	-183	
9871	7	< 1	-188	
9872	100	5	-193	
9873	248	9	-198	
9874	70	1	-203	
9875	700	19	-208	
9876	52	< 1	-213	
9877	613	8	-218	
9878	286	27	-223	
9879	152	1	-228	
9881	392	8	-233	
9882	70	< 1	-238	
9883	700	25	-243	
9884	215	3	-248	
9885	1320	46	-253	
9886	587	12	-258	
STD.	70	26		

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: H. Leuschner

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. 35646

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

"TRE"
d.d.h.#2

INVOICE NO. 14768

RECEIVED August 18, 1975

ANALYSED August 20, 1975

ATTN: Mr. B. Cook cc: Dr. R. Wallis

SAMPLE NO. :	PPM Copper	PPM Molybdenum	Rocks Footages
9887	587	11	258-263
9888	142	5	-268
9889	482	17	-273
9890	241	3	-278
9891	392	21	-283
9892	587	70	-288
9893	587	88	-293
9894	112	7	-298
9895	344	13	-303
9896	587	33	-308
9897	333	4	-313
9898	419	30	-318
9899	405	98	-323
9981	161	1	88-93
9982	840	19	-98
9983	157	1	-103
9984	1520	145	-108
9985	46	1	-113
9986	134	22	-118
9987	191	10	-123
9988	191	22	-128
9989	379	20	-133
9990	43	< 1	-138
9991	55	3	-143
9992	186	27	-148
9969	344	<1	28-33
9970	323	4	-38
71	96	<1	-43
72	18	<1	-48
73	34	<1	-53
74	24	<1	-58
75	30	<1	-63
76	228	3	-68
77	286	3	-73
78	562	7	-78
79	521	<1	-83
9980	46	<1	-88
STD.	70	26	

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: .....

APPENDIX III

SUMMARY OF PETROGRAPHY - D.D.H. TRE-75-1

To: Dr. J.J. Brummer July 10th 1975

From: S. Boutcher

Summary of Petrography - O.M.C.273-279
DDH Tre-75-1

This suite of rocks shows comparatively little variation in mineralogy and texture. They vary in composition from granodiorite (274,276,278,279) through quartz monzonite (275,277) to quartz monzodiorite (273). They are all medium grained, with similar textures, consisting of subhedral tabular crystals of plagioclase surrounded by interstitial anhedra of K-feldspar and quartz. The K-feldspar often shows microcline twinning and has a tendency to form large plates which poikilitically enclose a number of plagioclase crystals. A low proportion of biotite, and hornblende in the more basic members, is scattered throughout these rocks. No evidence of foliation was noted.

The degree of alteration in these rocks is variable. O.M.C.273,275,277 are only slightly altered, with fresh K-feldspar. Some alteration of plagioclase is evident, the alteration products being mainly a very fine grained mixture of sericite and argillaceous material. Biotite and hornbelnde are essentially fresh, but show slight replacement by chlorite and epidote. In 275 a narrow veinlet filled by quartz accompanied by a little chalcopyrite cuts across the thin section. There are a few clots of secondary looking green biotite in the vicinity of this fracture.

Specimens 276 and 278 are moderately altered. K-feldspar is still virtually unaffected, while plagiolcase is about 50% replaced. In 276 plagioclase is replaced by a mixture of sericite and argillaceous material and biotite shows slight replacement by shreddy white mica. 278 however shows replacement of plagioclase by sericite along with a little clinozoisite and carbonate, and development of clots of fine grained secondary green biotite along with clots of epidote and a little chalcopyrite.

Specimens 274 and 279 show a high degree of alteration, with virtually all of the original minerals replaced by very fine grained alteration products, with the exception of quartz. Plagioclase and biotite are pseudomorphed by sericite and carbonate, in approximately equal proportions, while K-feldspar is replaced by a fine mat of sericite. A trace of disseminated chalcopyrite is present in these rocks.

Specimen # O.M.C.273 Location - DDH Tre 75-1 at 36.0'

Rock name - quartz monzodiorite

Mineralogy - essential - plagioclase An_{43-17} - 50%
K-feldspar - 20%
quartz - 15%
hornblende - 10%
biotite - 5%

accessory - sphene
magnetite
apatite
zircon

secondary - argillaceous minerals
sericite
chlorite
epidote
carbonate

Description - this rock is medium grained, hypidiomorphic granular, with an average grain size of around 1-3 mm. It consists mainly of tabular subhedra of plagioclase, with no apparent preferred orientation, surrounded by interstitial anhedra of K-feldspar and quartz. The plagioclase is typically quite strongly zoned, ranging in composition from a core of calcic andesine to sodic oligoclase at the crystal margins. Much of the K-feldspar shows microcline twinning. The quartz is frequently quite strongly strained. A low proportion of small, rather ragged looking anhedra of biotite and hornblende are scattered throughout the rock, often tending to form clots of crystals. The biotite is pale to dark nigger brown, while the hornblende is a pale olive green variety. Accessory amounts of magnetite, apatite and sphene are usually associated with the ferro-magnesian minerals.

This rock shows slight, and rather patchily distributed, amounts of alteration. K-feldspar is essentially fresh. Plagioclase ranges from quite fresh to considerably altered. The alteration products are mainly argillaceous in nature, usually intermixed with a low proportion of very fine grained sericite. Crystal cores are preferentially altered. Occasional crystals are altered to a mixture of sericite and clinozoisite rather than argillaceous material, and sometimes a little carbonate is also present. Although some crystals show up to 75% replacement by the above minerals, the majority of plagioclase crystals contain only a very low amount of replacement minerals. Biotite is typically fresh, although some flakes show partial (and very occasionally complete) replacement by chlorite and epidote. Hornblende shows infrequent alteration to the same minerals.

Specimen # O.M.C.274 Location - DDH Tre-75-1 at 146.0'

Rock name - sericitised and carbonatised granodiorite

Mineralogy - sericite
carbonate
quartz
K-feldspar)
plagioclase) crystal remnants
hematite, chalcopyrite - trace

Description - this rock appears to have been originally granodioritic in composition, composed of abundant tabular plagioclase crystals surrounded by anhedral crystals of K-feldspar, which sometimes tended to form large plates surrounding several plagioclase crystals, and interstitial crystals of quartz. There was probably a low proportion of a ferromagnesian mineral, most likely biotite. Virtually all of the original rock minerals, with the exception of quartz, have now been pseudomorphed by alteration products, so that the original texture of the rock has been inferred from the pseudomorphs. Plagioclase has been about 90% replaced by an extremely fine grained, cloudy looking, mixture of carbonate along with a little sericite. K-feldspar, by contrast, is replaced by a very fine mat of sericite, with no carbonate; it is slightly less altered than the plagioclase, and occasional small clear patches of K-feldspar showing microcline twinning are visible. The former presence of a low proportion of biotite flakes is inferred from the presence of psuedomorphs which now consist of a mixture of sericite and carbonate, in about equal proportions, along with streaks of leucoxene which mark the former biotite cleavage planes. A little hematite staining occurs around the crystal margins in some parts of the thin section, and very rare tiny masses of chalcopyrite are disseminated across the section. By contrast to all the other minerals, quartz has been quite unaffected by the alteration. It is however quite strongly strained.

Specimen # O.M.C.275 Location - DDH Tre-75-1 at 264'

Rock name - quartz monzonite

Mineralogy - essential - plagioclase An_{35-22} - 45%
K-feldspar - 25%
quartz - 15%
biotite - 10%

accessory - hornblende
sphene
magnetite
apatite

secondary - sericite
argillaceous minerals
epidote group minerals
chlorite
carbonate
chalcopyrite and quartz (in fracture)

Description - this rock is very similar in mineralogy and texture to O.M.C. 283, but contains a slightly higher proportion of K-feldspar to plagioclase than 283. It is medium grained hypidiomorphic granular, with subhedral tabular crystals of plagioclase (frequently zoned from sodic andesine to intermediate oligoclase) surrounded by interstitial K-feldspar and quartz. The K-feldspar frequently shows microcline twinning and tends to form relatively large plate like crystals which surround several plagioclase crystals, and sometimes crystals of other minerals. Occasionally quartz shows a similar habit. There is a low proportion of biotite, in compact flakes which are pleochroic from light to dark nigger brown. Occasional crystals of pale olive green hornblende tend to be rather fragmented looking and irregular in form. The quartz in this rock is highly strained looking. Accessory amounts of magnetite, apatite and sphene are disseminated throughout the rock.

This rock is only slightly, and rather patchily, altered. K-feldspar is to all intents and purposes fresh. Plagioclase ranges from fresh to considerably altered (up to about 60%), but the majority of crystals show only a low amount of alteration products. The predominant alteration product is sericite, in tiny flakes, but this is usually intermingled with subsidiary amounts of argillaceous material Occasionally a little clinozoisite, and/or carbonate, were also noted within plagioclase. Hornblende is usually fresh, but sometimes shows a little chloritisation along cleavages and is sometimes associated with clots of epidote. Biotite is also typically fresh, but more frequently is partly chloritised, particularily the smaller crystals. This rock is traversed by a fracture filled by highly strained quartz, accompanied by a little chalcopyrite. Several clots of fine grained green biotite, intermingled with chlorite, and sometimes epidote and chalcopyrite occur adjacent to this fracture and are probably of secondary origin. No increase in the alteration of the remainder of the rock was noted near the fracture.

Specimen # O.M.C.276 Location - DDH Tre-75-1 at 379.5'

Rock name - moderately argillised and sericitised granodiorite

Mineralogy - essential - plagioclase An_{30-15} -45%
quartz - 25%
K-feldspar - 20%
biotite - 10%

accessory - magnetite
apatite

secondary - sericite
argillaceous material
clinozoisite
epidote
chlorite, carbonate

Description - this rock is medium grained, hypidiomorphic granular, very similar in texture and mineralogy to O.M.C. 273 and 275. It consists mainly of subhedral tabular crystals of plagioclase, showing no apparent preferred orientation, surrounded by interstitial anhedra of K-feldspar and quartz. The K-feldspar sometimes shows microcline twinning and is sometimes slightly perthitic. It shows a tendency to form relatively large crystals which partially or completely surround a number of crystals of plagioclase. The plagioclase is frequently zoned and ranges in composition from a core of andesine-oligoclase to a margin of sodic oligoclase. The quartz forms very irregularily shaped anhedra which are typically highly strained. A low proportion of biotite, in compact flakes which are pleochroic from pale to dark nigger brown, is scattered throughout the rock, as are very small grains of magnetite and apatite in accessory amounts.

This rock shows a moderate amount of alteration. The K-feldspar is essentially fresh, the only visible alteration being a very slightly turbid appearance of some crystals. Plagioclase ranges from almost fresh to densely altered, but the majority of crystals show about 50% replacement by alteration products, concentrated preferentially in the crystal cores. This consists of a mixture of fine sericite flakes and extremely fine grained indefinable material which is probably argillaceous in nature. These occur in approximately equal amounts. Occasional small grains of clinozoisite were also noted within plagioclase crystals. Biotite flakes are typically over 90% unaltered, but often show slight replacement by shreddy looking white mica along cleavages and at the ends of crystals. Occasional small biotite flakes are considerably, and rarely completely, replaced by this white mica. One elongate pseudomorph, now composed of a mixture of colourless chlorite and very fine carbonate, may represent the former site of a hornblende crystal. A trace of epidote is present, in small granules scattered throughout the rock.

Specimen # O.M.C.277 Location - DDH Tre-75-1 at 287.0'

Rock name - quartz monzonite

Mineralogy - essential - plagioclase An_{32-18} - 45%
quartz - 20%
K-feldspar - 20%
biotite - 10%
hornblende - 5%

accessory - sphene
magnetite
apatite
zircon

secondary - sericite
argillaceous minerals
epidote group minerals
chlorite
carbonate

Description - this rock is very similar in texture and mineralogy to O.M.C. 273, 275 and 276. It is medium grained, hypidiomorphic granular and consists mainly of subhedral tabular crystals of plagioclase surrounded by interstitial anhedra of K-feldspar and quartz. The K-feldspar sometimes shows microcline cross-hatching, and has a tendency to be slightly perthitic. It tends to form relatively large crystals which surround several plagioclase subhedra. Very occasionally there are slight indications that there has been a little marginal replacement of the plagioclase by the surrounding K-feldspar, but this must have taken place on a very minor scale, probably at a late stage of crystallisation. The plagioclase is frequently zoned, from a core of sodic andesine to a rim of intermediate oligoclase. A low proportion of biotite, typically in compact flakes, and hornblende, in rather fragmented looking anhedra, is scattered throughout the rock. The biotite is pleochroic from pale to dark nigger brown, while the hornblende is a pale olive green variety. The latter often includes small crystals of biotite and plagioclase. Accessory amounts of sphene and magnetite tend to be associated with the ferro-magnesian minerals.

This rock is only slightly, and rather patchily, altered. K-feldspar is essentially fresh. Plagioclase ranges from virtually fresh to quite considerably altered, but most crystals show only a low proportion of alteration products, which tend to be concentrated in the crystal cores. These consist of tiny flakes of sericite intermingled with an extremely fine grained material which appears to be argillaceous in nature.. In some crystals sericitic material is predominant, and occasional small crystals of clinozoisite and rare patches of carbonate also occur. Biotite and hornblende are mainly fresh, but do show slight alteration to chlorite, accompanied by some epidote, and a little carbonate in the case of hornblende.

Specimen # O.M.C.278 Location - DDH Tre-75-1 at 293.5'

Rock name - moderately altered granodiorite

Mineralogy - essential - plagioclase An_{34} - 45%
K-feldspar - 25%
quartz - 20%
biotite - 10%

accessory - hornblende
sphene
magnetite
apatite

secondary - sericite
epidote group minerals
green biotite
chlorite
chalcopyrite
carbonate

Description - this rock has a similar original texture and mineralogy to O.M.C.273, 275, 276 and 277, but shows a greater degree of alteration. It is medium grained, hypidiomorphic granular, with subhedral tabular crystals of plagioclase surrounded by interstitial K-feldspar and quartz. The K-feldspar frequently shows microcline twinning and tends to poikilitically surround a number of plagioclase crystals. The plagioclase shows very little zoning, and consists of sodic andesine, sometimes with a narrow maringal zone of calcic oligoclase. There are occasional, fairly large, compact flakes of deep brown biotite and a few ragged crystals of pale green hornblende.

The alteration in this rock is rather patchily developed. K-feldspar is fresh or very slightly turbid. There is little evidence to suggest that it may be, even in part, of secondary origin. Plagioclase ranges from fresh to considerably altered; most crystals are about 50% replaced, mainly by very fine sericite accompanied by small amounts of carbonate and/or clinozoisite. The most distinctive alteration mineral in this rock is biotite, which occurs in clots of fine grained bright green flakes. These sometimes fringe upon the primary biotite and may. at least in part, be derived from it. Fairly large clots of epidote tend to associated with this secondary biotite. There are very occasional small masses of chalcopyrite, which again tend to be associated with epidote. The hornblende is essentially fresh. Occasional small clots of chlorite and flakes of the secondary biotite, were noted within plagioclase crystals. The quartz in this rock is highly strained, and a zone of fracture cuts across the thin section, in which the rock minerals are partially broken up and the texture becomes very confused. This zone is only about 1 mm wide.

Specimen O.M.C.279 Location - DDH Tre-75-1 at 399.0'

Rock name - sericitised and carbonatised granodiorite

Mineralogy - sericite
carbonate
quartz
K-feldspar) crystal remnants
plagioclase)
chalcopyrite)
rutile) accessory
apatite)
zircon)

Description - this rock appears to have been originally granodioritic in composition, with a texture similar to the other rocks of this suite. It consisted mainly of medium grained subhedral tabular crystals of plagioclase surrounded by interstitial K-feldspar and quartz. The K-feldspar tended to form large plates which surrounded several plagioclase crystals. There was a low proportion of a ferromagnesian mineral, probably biotite, and accessory amounts of apatite and zircon. Although virtually all of the original minerals, with the exception of quartz, have been pseudomorphed by very fine grained alteration products, the original texture is still visible, as a result of the differential replacement of the original minerals.

Plagioclase has been about 90% replaced by a very fine grained mixture of tiny sericite flakes and finely disseminated carbonate. The proportions are somewhat variable from crystal to crystal, but they are present in approximately equal amounts in the average crystal. Occasionally small remnants of the original plagioclase crystal are visible, particularily around the crystal margins, indicating that the crystals were zoned. K-feldspar shows a somewhat lower degree of alteration than the plagioclase, with fairly abundant small patches of relatively aunaltered material. It is replaced by a mat of very fine grained sericite, lacking the intermixed carbonate of the plagioclase. No biotite at all remains, but the presumed biotite pseudomorphs are composed of a mixture of varying proportions of sericite and carbonate, with abundant tiny criss crossing needles of rutile, and limonite marking the original cleavage directions.
A few small masses of chalcopyrite are disseminated across the thin section. Quartz is quite strongly strained, but quite unaffected by the alteration process. A few narrow carbonate filled stringers cut across one side of the thin section

This rock is very similar to O.M.C.274.

APPENDIX VI

Cost of Diamond Drilling

Preparation of roads & drill site	$3,651.50
Diamond Drilling	12,550.00
Transportation	333.60
Analytical costs	283.00
Drafting & reproduction	417.69
Camp supplies & equipment	94.69
Tenure	874.00
Management cost @ 10%	1,820.45
Total	$20,024.93

Average cost per foot (805.6 ft.)	$ 24.86

APPENDIX IV

Interior Diamond Drilling Ltd. Personnel

Ron Mraz	Driller
Dennis Mraz	Driller-foreman
Harold McLachlan	Helper
Dave Canjeveld	Helper
J. Sather	Helper
John Minardi	Helper-driller
Bob Rudiger	Helper
Ed McHollister	Helper

APPENDIX V

Statistics of Work Completed

Diamond Drilling

Number of holes	1
Total footage drilled	405
Number of days spent drilling	12
Average daily footage drilled	33.75
Number of days spent moving and setting up	11
Number of core chip samples	81
Number of geochemical analyses	162
Number of core boxes used	16

TRE 18
31247

TRE 16
31245

TRE 14
31243

TRE 12
31241

TRE 17
31246

TRE 15
31244

TRE 13
31242

TRE 11
31240

TRE 10
31239

TRE 6
31237

TRE 4
31235

TRE 2
31233

TRE 7
31000

TRE 8
31001

TRE 9
31238

TRE 5
31236

TRE 3
31234

TRE 1
31232

NICOLA MINING DIVISION
OSOYOOS MINING DIVISION

COLD GROUP
5 CLAIMS

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 5691 MAP 2

5691 M-2

ROCK UNITS

- Ia Porphyritic quartz diorite
- Ib Brecciated porphyritic quartz diorite
- Geological contact

SYMBOLS

- Outcrop
- Talus
- Trench
- Fracture
- cp Chalcopyrite
- mal Malachite

LEGEND

- Tre claims – Occidental
- Pan claims – Occidental
- Cold claims – Rio Tinto
- TRE 6 463112 M — Tag number
- Topographic contour
- Stream
- Swamp
- Claim post, inferred
- Claim post, known
- Diamond drill hole, vertical
- Diamond drill hole, trend known
- Road, track

CANADIAN OCCIDENTAL PETROLEUM LTD
MINERALS DIVISION

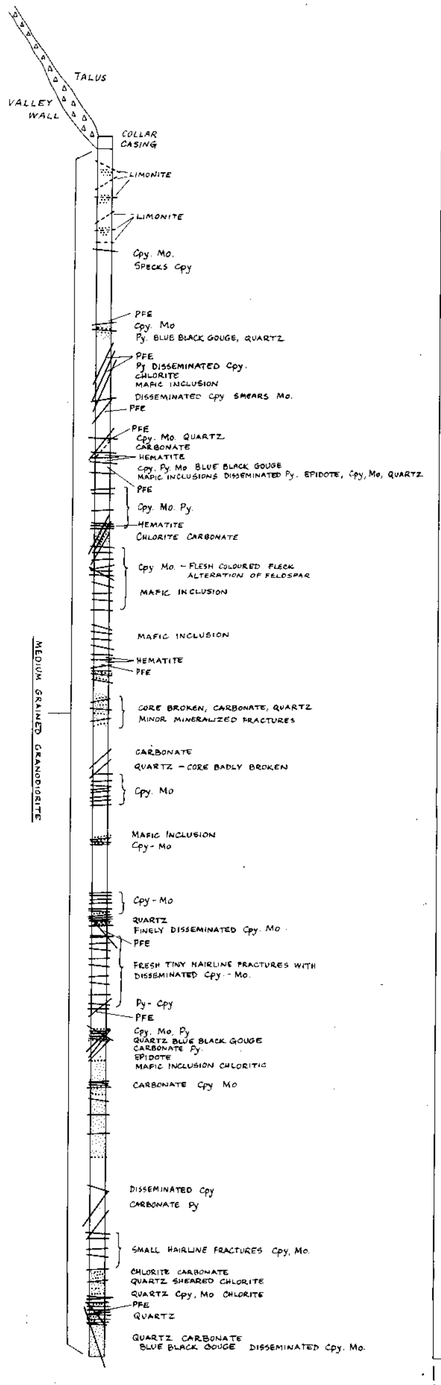
TRE CLAIMS

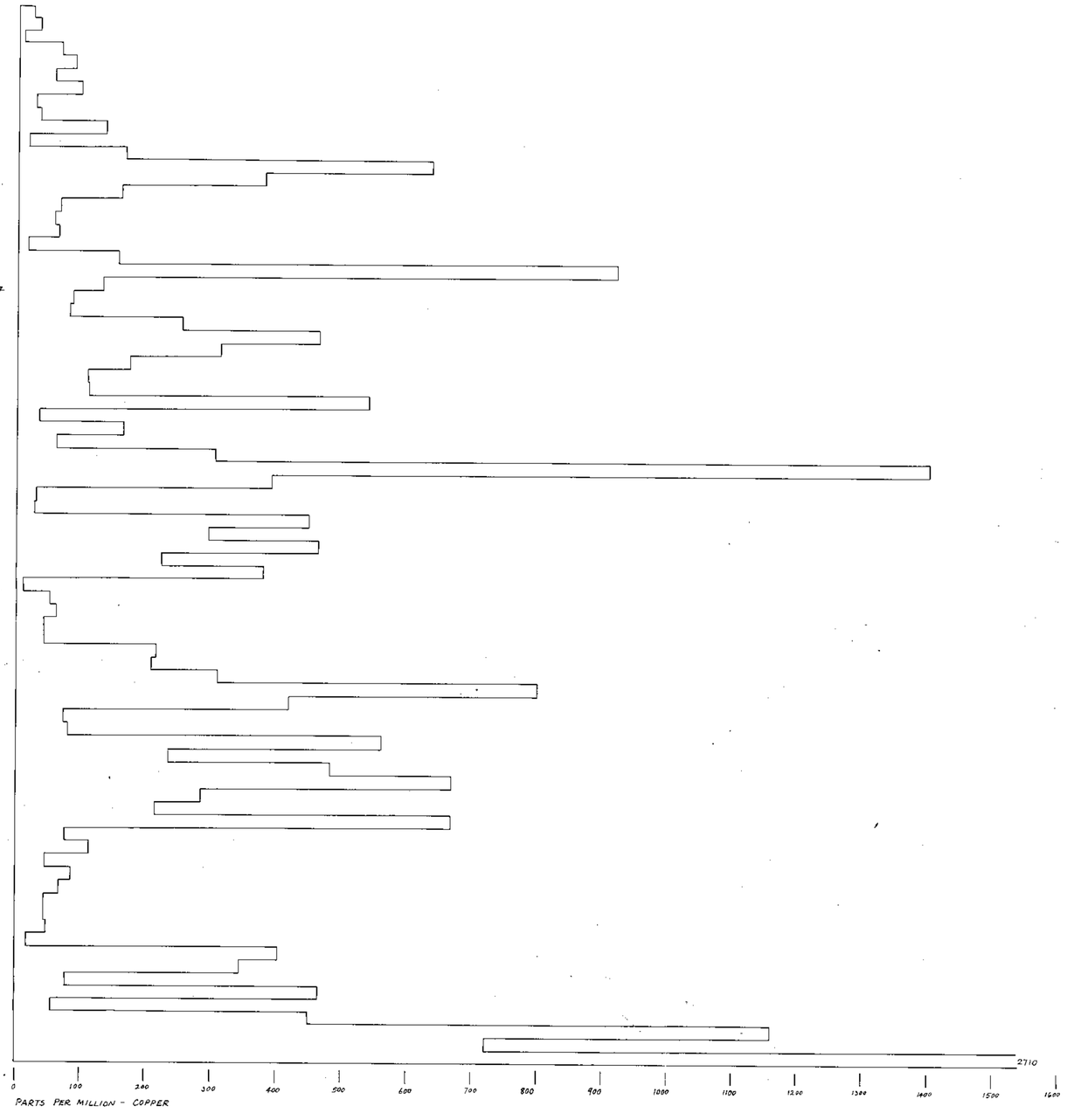
OSOYOOS & NICOLA MINING DIVISIONS, BRITISH COLUMBIA
82-E-13/W & 92-H-16

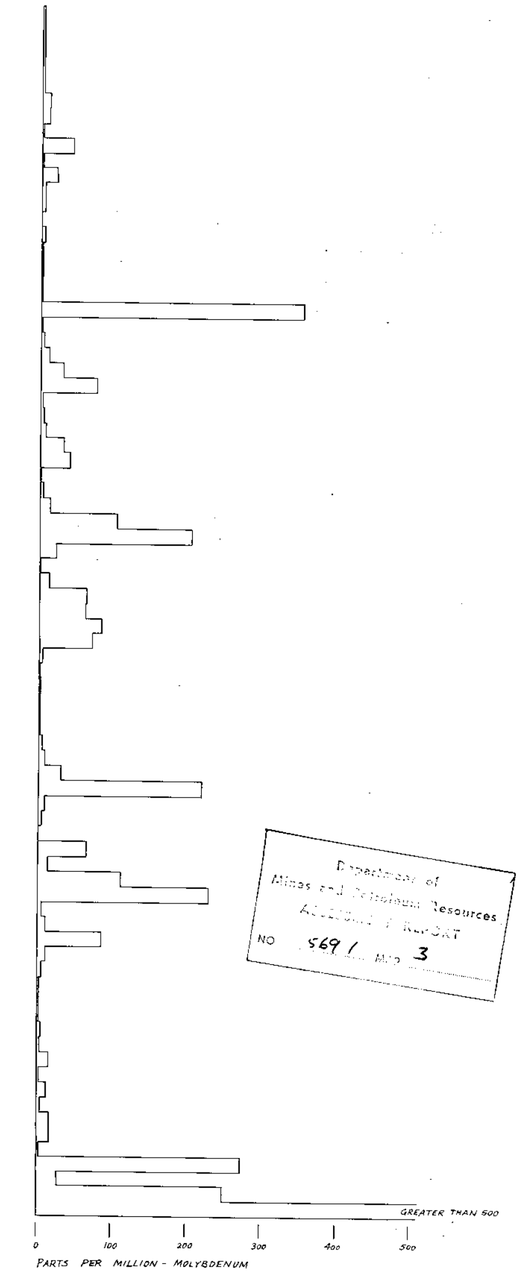
GEOLOGY AND LOCATION OF DRILL HOLES

SCALE 1" = 400'

PLAN 2







LEGEND

FRACTURES - SHOWING ROUGH DIP DIRECTION

TALUS

ALTERATION

KAOLIN

SERICITE

PFE POTASSIUM FELDSPAR ENVELOPES

LIMONITE

CANADIAN OCCIDENTAL PETROLEUM LTD.
MINERALS DIVISION

TRE CLAIMS

OSOYOOS & NICOLA MINING DIVISIONS, BRITISH COLUMBIA
82-E-13/W & 92-H-16

DIAMOND DRILL HOLE
TRE 75-1

SCALE: 1 inch = 25 feet

PLAN 1

JUNE 1975

COLLAR

OVERBURDEN
TALUS
SAND
GRAVEL

CASING

DISSEMINATED Py CPy
CARBONATE - MINOR SERICITE & CHLORITE

BULL QUARTZ
DISSEMINATED Py CPy + SPECKS Mo.

Py CPy

R.F.E.
DISSEMINATED Py CPy + SPECKS Mo.

HIGHLY ALTERED AND BROKEN
CARBONATE - CHLORITE - DISSEMINATED Py - CPy + Mo.
KAOLIN - CHLORITIC CPy - Mo.

INCREASE IN % Py NOTED

P.F.E

P.F.E
CUBES Py CPy + Mo.

P.F.E

P.F.E

CUBES Py.

Py (CPy NEAR MASSIVE CUBE ¼")
P.F.E

Py CPy
MAFIC INCLUSION

P.F.E.

Py CPy
QUARTZ CPy - Py + SPECKS Mo.
P.F.E.
Py - CPy (1Py - 1CPy)

BLUE BLACK GOUGE
CPy - Py - Mo.
CPy - Py - Mo.

CARBONATE - CHLORITE

Py

CHLORITIC - BIOTITE

HIGHLY FRACTURED + ALTERED
CARBONATE - CHLORITE - QUARTZ
CPy - Mo. + Py

Py - CPy

Py
CPy

Py

Py CPy
Py CPy CARBONATE - BLUE BLACK GOUGE
Mo KAOLIN

ABUNDANT Py MASSIVE CUBE 1"

CPy - Py

CPy - Mo. Py

CPy - Mo. - Py

QUARTZ - 3" SECTIONS NEAR MASSIVE Py
Py - CPy - CHLORITE

CPy - Py
CARBONATE

CPy - Py (MASSIVE Py CUBE ¾")
Mo.

SLICKENSIDES - GOUGE
MAINLY QUARTZ + SERICITE - Py THROUGHOUT
CARBONATE - VUGGY SECTIONS

QUARTZ - Py - CPy - Mo.

Py - CPy - Mo.

SLICKENSIDES - WHITE GOUGE
CHLORITIC - CARBONATE CPy - Py - Mo.
P.F.E

MEDIUM GRAINED GRANODIORITE

LEGEND

FRACTURES
SHOWING ROUGH DIP DIRECTION

IRREGULAR HAIRLINE FRACTURES

ALTERATION

KAOLIN

SERICITE

P.F.E. POTASSIUM FELDSPAR ENVELOPES

LIMONITE-HEMATITE

AVERAGE COPPER VALUE

1520

1320

1400

1200

0 100 200 300 400 500 600 700 800 900 1000

PARTS PER MILLION - COPPER

AVERAGE MOLYBDENUM VALUE

0 100 200

PARTS PER MILLION - MOLYBDENUM

CANADIAN OCCIDENTAL PETROLEUM LTD.
MINERALS DIVISION

TRE CLAIMS

OSOYOOS & NICOLA MINING DIVISIONS, BRITISH COLUMBIA
82-E-13/W & 92-H-16

DIAMOND DRILL HOLE
TRE 75-2

PLAN 4

SCALE 1 inch = 25 feet

SEPTEMBER - 1975