Diamond Drilling

Township of STEELE
Report No: 13

Work performed by: Canadian Occidental Petroleum Limited

| Claim No | Hole NO | Footage | Date | Note |
| :--- | :--- | :--- | :--- | :--- |
| L 399956 | PA-75-1 | $379.0^{\prime}$ | - | (1) (2) |
| L 400000 | PA-75-2 | $478.0^{\prime}$ | - | (1) (2) |
| L 371834 | PA-75-3 | $434.0^{\prime}$ | - | (1) (2) |
| L 400006 | PA-75-4 | $475.0^{\prime}$ | - | (1) (2) |
| L 400024 | PA-75-5 | $564.0^{\prime}$ | - | (1) (2) |
| L 400059 | PA-75-6 | $586.0^{\prime}$ | - | (1) (2) |
| L 400067 | PA-75-7 | $575.0^{\prime}$ | - | (1) (2) |
| L 399935 | PA-75-8 | $509.0^{\prime}$ | - | (1) (2) |

12 - Autopositives Enclosed

Notes:
(1) \#250-75
(2) Junne 5, 1975 is the date given for completion of this report.

## RECEIVOS <br> UCT/2 1945

PROJECTS UNIT
A total of $4000^{\prime}$ of $A Q$ wireline (core size 1.062 inch) dianond drilling in eight holes as listed below was drilled by Hosking Diamond Drilling Co. Ltd., 20 Tardif St., Rouyn, P.Q., between the dates of January 29-April 3, 1975.
(For the names of persons involved in the diamond drilling, see Appendix III of the accompanying report)

| Drill Hole No. | Depth | Inclination | Bearing | Claim No. |
| :---: | :---: | :---: | :---: | :---: |
| PA-75-1 | $379{ }^{\prime}$ | $-45^{\circ}$ | $132^{\circ}$ | L.399956 |
| PA-75-2 | $478{ }^{\prime}$ | $-50^{\circ}$ | $132^{\circ}$ | L400000 |
| PA-75-3 | $434{ }^{\prime}$ | $-55^{\circ}$ | $132^{\circ}$ | L371834 |
| PA-75-4 | $475^{\circ}$ | $-55^{\circ}$ | $132^{\circ}$ | L400006 |
| PA-75-5 | $564^{\prime}$ | $-55^{\circ}$ | $132^{\circ}$ | L400024 |
| PA-75-6 | $586^{\prime}$ | . $60^{\circ}$ | $132^{\circ}$ | 5.400059 |
| PA-75-7 | $575^{\prime}$ | $-65^{\circ}$ | $132^{\circ}$ | L400067 |
| PA-75-8 | $509^{\prime}$ | $-60^{\circ}$ | $132^{\circ}$ | L39 9935 |

Total footage $4,000^{\prime}$

As most of the drill holes are located in water claims, in addition to individual sketches showing the location of each hole, copies of geophysical survey plans with the exact location of each hole are also attached.


CANADIAN OCCIDENTAL PETROLEUM LTD.
MINERALS DIVISION
PROJECT ABITIBI
SKETCH SHOWING THE LOCATION
OF DIAMOND DRILL HOLE PA-75-1
N. Saracoglu, Oct. 16,1975


SCALE: $1^{\prime \prime}: 400^{\prime}$

CANADIAN OCCIDENTAL PETROLEUM LTD.
MINERALS DIVISION
PROJECT ABITIBI
SKETCH SHOWING THE LOCATION
OF DIAMOND DRILL HOLE PA-75-2
N. Saracoglu, Oct. 16,1975



CANADIAN OCCIDENTAL PETROLEUM LTD.
MINERALS DIVISION
PROJECT ABITIBI
SKETCH SHOWING THE LOCATION OF DIAMOND DRILL HOLE PA.TS-4


SCALE: $1^{\prime \prime}: 400^{\prime}$

CANADIAN OCCIDENTAL PETROLEUM LTD.
MINERALS DIVISION
PROJECT ABITIBI
SKETCH SHOWING THE LOCATION OF DIAMOND DRILL HOLE PA $75-5$


SCALE: 1": 400'

CANADIAN OCCIDENTAL PETROLEUM LTD.
MINERALS DIVISION
PROJECT ABITIBI
SKETCH SHOWIING THE LOCATION
OF DIAMOND DRILL HOLE PA-75-6
N.SARACOGLU. Oct.16.1975


CANADIAN OCCIDENTAL PETROLEUM LTD.
MINERALS DIVISION
PROJECT ABITIBI
SKETCH SHOWING THE LOCATION
OF DIAMOND DRILL HOLE PA-75-7
N. Saracoglu Oct.16,1975


CANADIAN OCCIDENTAL PETROLEUM LTD. MINERALS DIVISION
PROJECT ABITIBI
SKETCH SHOW/ING THE LOCATION OF DIAMOND DRILL HOLE PA-75-8
N. Saraceglu, Oct.16, 1975

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BRANCHI
 MINERALS DIVISION

RECEIVED
OCT 211975
PROIECTS UNIT

OVERBURDEN DRILLING - 1974
DIAMOND DRILling - 1975

PROJECT ABITIBI

Larder Lake Mining Division N.T.S. Sheet No. 32D/13

By:
N. Saracoglu,
P.Eng.

Duration of Work:
January 27 - April 11, 1974 and
January 29 - April 3, 1975

$020 c$

## LIST OF PLANS

## ACCOMPANYJ.NG THE REPORT

|  |  |  |  |  |  |  | PAGE |  |
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| " | 3 | - | Progress Plan |  |  |  | 11 |  |
| " | 4 | - | Results - DDH | PA-75-1, | Scale ${ }^{1 \prime}$ | : $50{ }^{\prime}$ |  | In back pocket |
| " | 5 | - | " - DDH | PA-75-2, | " | " |  | " |
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| " | 7 | - | " - DDH | PA-75-4, | " | 1 |  | " |
| " | 8 | - | " - DDH | PA-75-5, | " | " |  | " |
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| " | 10 | - | " - DDH | PA-75-7, | 1 | " |  | " |
| " | 11 | - | " - DDH | PA-75-8, | " | 1 |  | " |
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#### Abstract

1. SUMMARY

Project Abitibi area is situated in Northeast Bay region of Lake Abitibi and covers an area of some 8,080 acres.

Outcrops of rhyolitic and dacitic tuffs and fragmentals in the eastern parts of the area are succeeded by andesitic lavas and tuffs to the west. Despite its favourable geology for a volcanogenic-type massive sulphide mineralization, the area was not adequately explored in the past. A considerable thickness of glacial clays covers the bedrock and outcrops are scarce. Lake clays form conductive layers which eliminate the use of standard airborne electromagnetic methods.

Two hundred mining claims were staked by Canadian Occidental Petroleum Ltd. during January and February, 1974. Two claims were optioned from Mr. Ty Randa. A total of 114.5 line-miles of base lines and survey lines were established during the same period.

A Turam electromagnetic and a ground magnetic survey were executed during February and March, 1974. Several NE trending banded conductive zones, 700 feet to 4 miles long, were delineated. The magnetic picture obtained was very complex. Magnetic anomalies have a general strike parallel to the direction of the local magnetic trend and appear to correspond to magnetite-rich members of the volcano-sedimentary pile in this area.


Eight of the stronger conductors were tested with a programme of 38 overburden drill holes with an effective total of 2566 feet during March-April, 1974. Overburden samples were collected from the basal till resting on the suboutcrop. Heavy mineral fraction of the samples revealed the presence of pyrite in nearly all conductors tested. No other sulphide minerals were recognized. No graphite was seen in both heavy and light fractions of the samples. In diamond drill holes conductors were proven to be largely caused by graphite. The absence of graphite in overburden samples cannot be explained. Geochemical analyses of heavy and light fractions of the samples showed that copper and zinc anomalies are only slightly above normal. No significant copper or zinc anomalies were obtained. No coincidences were observed between above normal copper and zinc values in the heavy mineral concentrates and in the light fraction of the samples.

A programme of eight diamond drill holes was completed during February-March, 1975. The total footage drilled was 4,000 feet. Seven drill holes were sited on and around Line ll2S to test significant Turam anomalies and to obtain as complete a geologic section as possible. The programme formed the first phase of a two-year drill programme and provided geological data on which to base the second phase of the programme.

An alternation of fine to medium grained andesitic lava, tuffs and graphitic slates were traversed in most of the
holes. Greywacke-type metasediments form the majority of the formations intersected in the most westerly hole. Interlayers of acidic tuffs and fragmentals were traversed only in the two most easterly holes. In each hole conductors were proven to correspond to graphitic slates with varying amounts of pyrite concentration. Information gained from the drilling suggests a subsidence basin younging to the west in which graphitic tuf:: and slate layers give rise to long formational conductors. The highest zinc (1860 ppm) and copper ( 0.22 percent.) concentrations were obtained also in the most easterly drill hole in graphitic and pyritic tuffs interlayered within intermediate to acidic banded tuffs and fragmentals.

A strong conductor in Ty Randa claims was proven to be caused by extensive graphitic slates. The option on these two claims should be terminated.

Any additional drilling should test strong Turam conductors in the eastern parts of the area where highest copper-zinc concentration and acidic fragmentals were obtained in a drill hole. Conductive zones $H 4$ and $M$ are situated near the eastern boundaries of the property and should both be tested by a diamond drill hole.

One hundred mining claims in the western half of the property should ke allowed to lapse. Assessment work credits from the diamond drilling programme should be applied to the remaining one hundred claims in the eastern half of the property to obtain an extension to February, 1977.

## 2. INTRODUCTION

Several volcanogenic-type massive sulphide deposits with important copper-zinc-silver and frequently gold concentrations are situated in the Chibougamau-Timmins volcanic belt. Recent discoveries in the belt are continuing to add new names to a list of important base metal mines of this type and are proving the importance and potential of the belt.

Because of its proven potential, the belt is one of the very extensively explored areas of eastern Canada. The least explored portions of the belt are areas covered with blankets of thick glacial lake clays forming conductive layers which eliminate the use of standard airborne electromagnetic survey methods.

Project Abitibi covers an area which, despite its favourable geology, could not be explored to any great extent due to the lack of outcorp and the thickness of clay cover.

A Turam electromagnetic survey was considered to provide adequate penetration to probe the bedrock below the blanket of clay.

Turam electromagnetic and ground magnetic surveys were carried out in February and March, 1974. Eight conductive horizons were tested in March and April, 1974, by 38 overburden drill holes and eight diamond drill holes with a total footage of 4000 feet were drilled in February and March, 1975, to test significant anomalies and to obtain a geological section along Line ll2S.

This report describes in detail results obtained in overburden and diamond drilling programmes while mentioning briefly previous work carried out by others and line cutting, claim staking and geophysical surveys performed by Canadian Occidental Petroleum Ltd.

Drill logs for eight diamond drill holes are presented at the end of the report. Geochemical analyses, semi-quantitative analyses and assay results are in Appendix IV. Sections for individual drill holes are"presented in Figures 4 to ll. A section along Line ll2S is shown in Figure 12.

## 3. LOCATION AND ACCESS

Project Abitibi is located in the Northeast Bay area of Lake Abitibi in the District of Cochrane in the Province of Ontario (Figure 1).

The property comprises 202 mining claims covering an area of some 8080 acres situated in Steele Twp., Bonis Twp, and Sulphur Island, claim maps M 593, M 42l and M 416, in Larder Lake mining division. The claims are numbered as follows:

L371831-L371832 incl. (optioned from Ty Randa)
L399902-L399962 " (staked by the Company)
L399980-L400037 " "
L400058-L400138 " "
The centre of the property is at $79^{\circ} 55^{\prime} \mathrm{W} ; .48^{\circ} 53^{\prime} \mathrm{N}$. It is situated on N.T.S. Sheet 32D/13.


CANADIAN OCCIDENTAL PETROLEUM LIMITED
northeast bay area - LAKE Abitibi, ONT.

Scale : 1: 250,000

Access to the property can be gained by:

1) aircraft from LaSarre air base, 30 air-miles to the ESE.
2) train from LaSarre to Eades whistle stop, one mile summer road from Eades to Northeast Bay.
3) vehicle from LaSarre to a point 43 miles from LaSarre on Abitibi Paper's all weather gravel road between St. Lambert and Cochrane, then a 5 -mile summer road to Northeast Bay.

Approximately $80 \%$ of the property is covered by the waters of Lake Abitibi. The remaining $20 \%$ is on lands moderately wooded with spruce, birch, jackpine and poplar.

The average depth of water in Northeast Bay is 20 feet during the summer months and drops to 7 feet during the winter.

## 4. GEOLOGY

The geology of the area was mapped in 1959 by S.B. Lumbers (O.D.M. Map No. 2018).

Rock exposures are scarce, being confined to the shorelines of Northeast Bay.

The exposures along the west shores of Northeast Bay consist of early Precambrian metasediments (metagraywackes and argillites) while along the east shores of the bay they consist of early Precambrian metavolcanics (mostly andesitic tuffs, fine grained andesitic lavas, medium grained andesitic pillow lavas with interlayers of rhyolitic tuffs and fragmentals in the eastern parts of the property) cut by

Haileyburianbasic and ultrabasic intrusives (diorite, pyroxenite, serpentinite). Narrow, barren quartz veins cut across the strike of the metavolcanics.

Formations strike in $\mathrm{N}-\mathrm{S}$ and $\mathrm{NE}-\mathrm{SW}$ directions and appear to be gently folded around NW-SE tranding fold axes. Dips are generally to the northwest and range from $50^{\circ}$ to $90^{\circ}$. Formations young also towards the northwest

Andesitic tuffs in a pit in claim No. L371835 contain slight disseminated chalcopyrite over a width of about 1.5 feet where these tuffs are cut by a barren quartz vein. Disseminated pyrite is visible in many exposures of andesitic and dacitic tuffs.

During the 1974 field season, exposures along the shorelines of Northeast Bay were examined and a careful investigation was carried out in areas where a previous geophysical survey established the presence of Turam conductors. In each instance conductive zones coincide with small bays devoid of exposures. Outcrops near siuch zones consist of tuffaceous rocks with some disseminated pyrite.

## 5. PREVIOUS WORK

West Hill Copper Mines Ltd. carried out horizontal loop E-M and ground magnetic surveys in the area. Four conductors were established ranging in strike length from 1500' to 5000'. Two of these conductors were tested by diamond drilling and were proven to correspond to graphitic
layers with pods of $P y$ within acid fragmentals and tuffs in a drill hole in the eastcentral parts of the property and to graphite and pyrrhotite within andesitic volcanics in a drill hole in the west central parts of the property. The area was prospected at several occasions for gold and copper. Prospecting pits can be seen on Sulphur Island and at Peat's Point.

6. WORK COMPLETED<br>6.1. Staking and Line Cutting<br>200 claims were staked by J. Alix Company for Canadian Occidental Petroleum Ltd. between January 27 and February 6, 1974.<br>A rectangular survey grid covering an area of $3.03 \mathrm{mi} . \times 4.84 \mathrm{mi}$. was established.<br>One base line and two tie lines, each $256,000^{\prime}$ long were set out in a $222^{\circ} 20^{\prime}$ direction. 33 lines, each 16,000' long were turned off at $800^{\prime}$ intervals from the base line. Survey stations were marked every 100 feet on the lines. The line cutting was completed, also by J. Alix Company, between January 28 and February 25, 1974. 6.2. Geophysical Surveys

Turam electromagnetic and ground magnetic surveys were executed by Scintrex Surveys Limited on behalf of Canadian Occidental Petroleum Limited.

A ground magnetometer survey was completed between


February 9 and March 30, 1974. A total 105 line miles of survey was carried out using a Scintrex MF-2 Fluxgate Magnetometer measuring the vertical component of the earth's magnetic field. 5814 magnetic readings were taken.

Survey results show several anomalous areas with magnetic relief varying from 200 gammas to 5000 gammas. The magnetic picture obtained is very complex. Anomalies trend in a general northeast direction which is also the direction of the local magnetic trend. They appear to reflect magnetite-rich members of the volcano-sedimentary pile in this area.

A Turam electromagnetic survey was performed between February 9 and March 23, 1974, using Scintrex SE-71 system. A frequency of 200 Hz was used over the entire grid. A check survey was conducted using 200,400 and 800 Hz frequencies on a short section on Line 80 A to elucidate the complex electromagnetic response obtained here with a 200 Hz frequency.

Several NE-trending conductors, ranging in length from 700 feet to 4 miles and consisting of a series of parallel bands of varying conductivity $x$ width values, were outlined. Conductivity $x$ width values as high as 120 mhos were obtained.

The results of the geophysical surveys were presented in contour and profile form in maps accompanying a report written by Jan Klein of Scintrex and dated June, 1974. This report has been filed with O.D.M. for assessment credits.

6.3 Overburden Drilling
Eight of the stronger conductors were chosen for testing by overburden drilling immediately after the completion of the Turam survey.
An overburden drilling programme was carried out by C.F. Gleeson and Associates Ltd. on behalf of Canadian Occidental Petroleum Ltd. during the period March 25-April 11, 1974. A total of 38 holes was completea. The effective total drilled was 2566 feet, without counting multiple trials in many holes (see Figure 3).
A Pionjar type light percussion drill and piston sampler was used.
Each selected target was tested by an average of 5 holes located along the survey lines. The first hole in each section was put down on the conductor axis. The remaining holes were sited every 35 feet in a down-ice direction in order to obtain an adequate coverage of metal dispersion halos emanating from probable metallic sources associated with the conductors.
Overburden samples were collected from the basal till resting on the suboutcrop.
The depth of the holes ranged between 11 feet and 95 feet. The thickness of the clay ranged between 6 and 77 feet. The average thickness of the clay was 42 feet. In most of the holes a sand layer is present between the clay and the basal till with grain sizes increasing with depth. The thickness of sand varies from 0 to 35'; with an average thickness of 15 feet. In three holes, pockets of
gravel were traversed within the sand layer.
A poorly developed basal till was intersected in 30 holes. The till is composed of medium grained sand with angular bedrock fragments. The thickness of the till ranged from 1 to 15 feet with an average thickness of 7 feet.

A heavy mineral fraction was obtained using tetrabromo-ethane. The heavy minerals were examined under a binocular microscope by C.F. Gleeson and an estimate was made of the mineralogical content of the samples. The light fraction was examined also for graphite and rock fragments. No graphite was noted in any of the samples. Fragments of chlorite-sericite schist were present in several holes sampling conductors in the east, west, north and southern portions of the grid.

Small quantities of pyrite were present in nearly all samples; 5\% fresh pyrite was seen in sample PA 74-34. Traces of what appear to be bornite or azurite were seen in sample PA 74-1. The heavy and light fractions of the samples were geochemically analyzed for $\mathrm{Cu}, \mathrm{Zn}$ and Ni .

Geochemical analyses of the heavy mineral concentrates showed that PA 74-1 (450 ppm), PA 74-2 (123 ppm), PA 74-31 (120 ppm) and PA 74-34 (238 ppm) contained above normal amounts of copper. In addition, zinc was high in PA 74-23 (1120 ppm) and PA 74-24 (393 ppm).

Geochemical analyses of the -80 mesh fraction of the samples showed that no coincidence exists between above normal Cu and Zn values in the heavy mineral concen-
trates and in the light fraction of the samples. The only significant above normal copper value was obtained in PA 74-10 ( 73 ppm as compared to a background value of 20 ppm ). Zinc was anomalous in PA 74-10 (222 ppm) and PA 74-11 (98 ppm). The background zinc value was 45 ppm .

The results of the overburden drilling are tabulated below:

| Overburden <br> Hole <br> No. | Depth to Outcrop (feet) | Organic <br> \& water <br> (feet) | $\begin{aligned} & \text { Clay } \\ & \text { (feet) } \end{aligned}$ | $\begin{aligned} & \text { Silt } \\ & \text { (feet) } \\ & \hline \end{aligned}$ | Medium Sand (feet) | Basal Sand (feet) | Basal Till (feet) | GEOCHEMICAL ANALYSES |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  | H.M | .S. | K-100 |  | Fr | Eion |
|  |  |  |  |  |  |  |  | Cu | Zn | Ni | Cu | Zn | NI |
| PA-74-1 | 69 | 4 | 26 | 20 | 10 | 9 | - | 450 | 184 | 33 | 9 | 13 | 12 |
| 2 | 72 | 10 | 15 | 15 | 20 | 12 | - | 123 | 120 | 34 | 14 | 40 | 24 |
| 3 | 94.7 | 3 | 47 | 20 | 10 | 14.7 | - | 74 | 58 | 52 | 7 | 9 | 7 |
| 4 | 84 | 3 | 47 | 10 | 10 | 14 | - | 40 | 49 | 45 | 6 | 12 | 8 |
| 5 | 85 | 3 | 47 | - | 20 | 15 | - | 40 | 50 | 38 | 7 | 12 | 7 |
| 6 | 73 | 3 | 47 | - | 10 | 13 | - | 43 | 35 | 40 | 8 | 19 | 10 |
| 7 | 82.8 | 3 | 47 | - | 30 | 2.8 | - | 49 | 31 | 45 | 8 | 9 | 7 |
| 8 | 80.7 | 3 | 47 | - | 20 | 10.7 | - | 38 | 37 | 38 | 8 | 7 | 5 |
| 9 | 76.3 | 3 | 47 | - | 20 | 6.3 | - | 35 | 29 | 32 | 11 | 19 | 12 |
| 10 | 70.8 | 3 | 47 | - | 15 | - | 5.8 |  | . (insu | icient | 73 | 222 | 46 |
| 11 | 42 | 3 | 22 | - | 15 | 2 | - | I.S | . samp |  | 38 | 98 | 48 |
| 12 | 23.5 | 3 | 12 | - | 5 | - | 3.5 | 55 | 35 | 42 | 27 | 58 | 32 |
| 13 | 67 | 3 | 47 | - | 15 | 2 | - | 48 | 36 | 40 | 19 | 39 | 28 |
| 14 | 70 | 3 | 42 | - | 20 | 5 | - | 49 | 36 | 40 | 7 | 10 | 8 |
| 15 | 57 | 3 | 37 | - | 8 | 9 | - | 29 | 37 | 37 | 28 | 69 | 39 |
| 16 | 73 | 3 | 42 | - | 25 | 3 | - | 50 | 23 | 29 | 7 | 8 | 7 |
| 17 | 73.5 | 3 | 42 | - | 25 | 3.5 | - | 42 | 28 | 28 | 8 | 11 | 12 |
| 18 | 81.7 | 3 | 47 | - | 20 | 11.7 | - | 46 | 30 | 35 | 16 | 32 | 22 |
| 19 | 75.3 | 3 | 47 | 10 | 10 | 5.3 | - | 21 | 30 | 30 | 6 | 5 | 6 |
| 20 | 76.7 | 3 | 47 | 20 | - | 6.7 | - | 46 | 32 | 36 | 8 | 16 | 13 |
| 21 | 75.3 | 3 | 47 | 20 | - | 5.3 | - | I.S |  |  | 29 | 74 | 45 |
| 22 | 85.7 | 3 | 47 | 20 | - | 15.7 | - | 29 | 50 | 45 | 32 | 83 | 43 |
| 23 | 80.8 | 3 | 47 | 20 | - | 10.8 | - | 35 | 1120 | 30 | 11 | 19 | 12 |
| 24 | 69 | 3 | 42 | 15 | - | 9 | - | 69 | 393 | 17 | 21 | 54 | 30 |
| 25 | 70 | 3 | 47 | 10 | - | 10 | - | 40 | 27 | 45 | 8 | 12 | 11 |


| Overburden <br> Hole <br> No. | Depth to Outcrop (feet) | Organic \& water (feet) | Clay <br> (feet) | $\begin{aligned} & \text { Silt } \\ & \text { (feet) } \\ & \hline \end{aligned}$ | Medium Sand (feet) | Basal Sand (feet) | $\begin{aligned} & \text { Basal } \\ & \text { Till } \\ & \text { (feet) } \end{aligned}$ | GEOCHEMICAL ANALYSES |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  | (values in ppm) |  |  |  |  |  |
|  |  |  |  |  |  |  |  | H.M.S., Rock -100 |  |  | -80 | Fraction |  |
|  |  |  |  |  |  |  |  | Cu | Zn | $\underline{\mathrm{Ni}}$ | Cu | $\underline{\mathrm{Zn}}$ | $\underline{\mathrm{Ni}}$ |
| PA-74-26 | 74.5 | 3 | 47 | 10 | - | 14.5 | - | 26 | 30 | 32 | 8 | 11 | 10 |
| 27 | 69 | 3 | 47 | 10 | - | 9 | - | 52 | 45 | 37 | 15 | 26 | 20 |
| 28 | 76 | 3 | 47 | 20 | - | 6 | - | 34 | 30 | 31 | 19 | 39 | 27 |
| 29 | 83 | 3 | 77 | - | - | - | 3 | I.S. |  |  | 31 | 79 | 41 |
| 30 | 88 | 3 | 77 | - | - | - | 8 | 20 | 30 | 30 | 22 | 59 | 30 |
| 31 | 92 | 3 | 77 | 10 | - | 2 | - | 120 | 40 | 30 | 27 | 67 | 32 |
| 32 | 90 | 3 | 77 | - | - | 10 | - | I.S. |  |  | 31 | 67 | 38 |
| 33 | 76 | 3 | 67 | - | - | 6 | - | I.S. |  |  | 31 | 74 | 43 |
| 34 | 41.5 | 3 | 22 | 10 | - | 6.5 | - | 238 | 48 | 25 | 45 | 65 | 39 |
| 35 | 30 | 3 | 17 | 5 | - | 5 | I S. | I.S. |  |  | 39 | 90 | 50 |
| 36 | 14.5 | 3 | 7 | 3 | - | - - | - | I.S. |  |  | 32 | 69 | 38 |
| 37 | 11 | 2 | 6 | 2 | - | 1 | - | 30 | 27 | 32 | 8 | 15 | 10 |
| 38 | 12 | 4 | 6 | - | - | 2 | - | 30 | 37 | 14 | 28 | 95 | 34 |

### 6.4. Diamond Drilling

Considering the number of Turam conductors and the highly disturbed nature of the magnetic responses, it was decided to select conductors for testing by diamond drilling so as to give as complete a geologic section as possible. Seven drill sites along and near Line 112 S were chosen for this purpose. An eighth hole was planned as a first priority conductor with a strong amplitude and a coincident magnetic anomaly of 105 gammas.

Base line 0 and survey lines $104 \mathrm{~S}, 112 \mathrm{~S}$ and 192 S were re-established using survey posts marked along shorelines.
N. Saracoglu and M. Hodgson were involved in the drilling programme.

A total of 4,000 feet of wireline diamond drilling was completed in eight holes ranging in depth from 379 to 586 feet. Drilling was performed by Hosking Diamond Drilling Company Ltd. of Rouyn, P.Q., between January 29-April 3, 1975.

A 5-mile-long summer road leading from Abitibi Paper Company's La Reine-Cochrane private road to Northeast Bay was ploughed and maintained during the programme by Abitibi Paper Company. Equipment and supplies were brought in by road from Rouyn and La Sarre.

A drill camp was established near Station 28 E on Line 120 S .

Three drill crews were involved in the programme each working an eight-hour shift. Operations were continuous 7 days per week.

The names of the Hosking Drilling personnel involved in the programme are included in Appendix III. The Hosking personnel were reasonably efficient, very cooperative and hard-working. An excellent core recovery was obtained in each hole.

In two holes, PA-75-3A and PA-75-7, the overburden was very thick and troublesome. PA-75-3A was lost in the overburden and $\mathrm{PA}-75-7$ could only traverse the overburden on a second try using a steeper inclination. The vertical thickness of overburden ranged from 15 to 156 feet.

Only two holes were on land. They were within 1000 feet from water.

Because of very cold temperatures and mechanical breakdowns, the progress was slow during the first one-third of the programme.

### 6.4.1. Treatment of the Core

After measuring for core recovery, the core was carefully examined. The lithology and metal content were recorded on the drill logs.

The core with sulphide mineralization was split and assayed for $\mathrm{Cu}, \mathrm{Zn}$ and, in many instances, Au . Sections with a high concentration of sulphides from five holes were spectrographically tested for 30 elements. The entire core from the eight holes was chipsampled and composited in 10-foot sections. These samples were geochemically analysed for Cu and Zn .

After sampling and logging the core, boxes were piled up and left at the camp site.

### 6.4.2 Presentation of the Results

The locations of the holes are shown on Figure 3.
A section of each hole shows the lithology together with geochemical distribution of Cu and Zn along the hole. A magnetic profile as well as the field strength ratio and phase angle of the conductors are also shown in profile form. Assay results are added at the appropriate places on the sections.

The borehole core logs are at the end of the Report. Assay and analyses result sheets from Bondar-Clegg \& Company Ltd. are in Appendix IV. 6.4.3. Drilling Results

A summary of the results of each drill hole is given in the following paragraphs. (All holes were drilled at a bearing of $132^{\circ}$ ). 6.4.3.1. Drill Hole PA-75-1 (Figure 4)

This hole was collared at L 112S; 64+80E and drilled at $-45^{\circ}$ to intersect a conductive zone between stations $67+00 E$ and $68+00 \mathrm{E}, 250$ feet vertically below surface.

Because of a coincident magnetic anomaly of 3000 gammas above background, the Turam conductor was given "first priority" rating.

Acidic to intermediate fragmentals and tuffs and basic to intermediate tuffs and fine grained lavas represent most of the core. Graphitic and pyritic tuffs with overall 7\% Py and about $1 \%$ pyrrhotite were intersected between 186'-197.5'. This section corresponds to the Turam conductor at surface. Between 218'-261' = amphibole-garnet-magnetite
schist, representing an iron formation. This section corresponds to high magnetic anomaly measured at surface. A total of 27 core-chip samples were geochemically analysed and 2 split samples were assayed for Cu and Zn . Geochemical values for copper range between 11 and 85 ppm Cu . Geochemical values for zinc range between 44 and 630 ppm zinc with three isolated values of 1500,1740 and 1860 ppm Zn in sheared dacitic fragmentals and tuffs. Assay results for a 5-foot section in graphitic and pyritic tuffs indicated $0.22 \% \mathrm{Cu}$ and $0.05 \% \mathrm{Zn}$. This copper value was the highest assay value obtained for all core samples assayed to date.

The conductor in the hole was 125 feet vertically below surface.

Core angle measurements indicate a general westerly dip.

The final depth of the hole was 379'.
The hole flattened considerably. An acid test at the end of the hole indicated an inclination of only $-24^{\circ}$. 6.4.3.2. Drill Hole PA-75-2 (Figure 5)

This hole was collared at L ll2S; 52+75E and was drilled at $-50^{\circ}$ to intersect a zone of multiple conductors between stations 53 E and 57E, some 250 feet vertically below

Fine grained andesitic and dacitic lavas and tuffs and an extensive zone of graphitic slates form the main rock types intersected in the hole. A felsic fragmental was traversed between 403'-427'. The amount of graphite varies in the slates between 119 and 337 feet, several sections are very rich in graphite, some short (average 6" thick) sections
are composed of massive graphite. The zone of graphitic slate corresponds to the conductive zone at surface.

Pyrite occurs in trace amount throughout the drill core.

41 core-chip samples were taken. Geochemical analyses indicate copper values ranging between 36 and 262 ppm copper with one value of 527 ppm copper in a quartz-veined 10 -foot section. zinc values range between 57 and 750 ppm zn with two isolated values of 1050 and 1160 ppm Zn . One split sample was assayed for copper and zinc. Another split sample was assayed for gold. Results for all metals were "trace". 6.4.3.3. Drill Hole PA-75-3 (Figure 6)

This hole was collared at L 108S; 44+00E to test a strong conductor at $46+50 \mathrm{E}$. It was drilled at $-55^{\circ}$ to intersect the conductor 250 feet vertically below surface.

Andesitic lavais with tuffaceous interlayers were intersected throughout the core.

Only traces of pyrite and pyrrhotite and very minor specks of chalcopyrite vere seen.

A 13-foot section of massive graphite and six $3^{\prime \prime}$ to 1.5 -foot interlayers of graphitic tuff explain the conductor.

33 core-chip samples were geochemically analysed. Copper values ranged between 53 and 390 ppm. Zinc values range between 44 and 225 ppm . A fourteen-foot-wide quartz vein was assayed for gold. "Trace" gold was indicated in 4 split core samples.

The hole was stopped at a final depth of 434'.

Fine to medium grained andesitic lavas were intersected throughout the hole. Three interlayers of massive graphite ranging in thickness from 1 to 4 feet and containing from 1 to 20 percent pyrite correspond to the conductive zone.

45 core-chip samples were geochemically analysed for copper and zinc. Copper values range between 42 and 364 ppm. Zinc values range between 64 and 138 ppm. Five split samples were assayed for gold. "Trace" gold contents were indicated. Two split samples were assayed for copper and zinc. $0.01 \%$ and $0.04 \%$ copper and $0.01 \%$ and $0.03 \%$ zinc were obtained.

The hole was stopped at 564 feet.
The conductors were intersected about 300 feet vertically below the surface.

Indicated dips of the formations were to the west.

### 6.4.3.6 Drill Hole PA-76-6 (Figure 9)

This hole was collared at Lll2S; $17+80 \mathrm{~W}$ and was drilled at $-60^{\circ}$ to intersect a conductive zone at $15+00 \mathrm{~W}$ some 300 feet vertically below surface.

Andesitic lavas and tuffs with interlayers of graphitic slates and tuffs were intersected to 538'. From this depth to the end of the hole (586') a magnetite-rich, massive diorite (or gabbro?) was traversed. Turam and magnetic anomalies were explained.

The conductor was intersected 280 feet vertically
below surface.
6.4.3.4. Drill Hole PA-75-4 (Figure 7)

The hole was collared at L ll2S; 23+15E and was drilled at $-55^{\circ}$ to intersect same $250^{\prime}$ vertically below surface a "first priority" Turam conductor with a coincident magnetic anomaly of 295 gammas above background between $25+00 \mathrm{E}$ and $26+00 \mathrm{E}$.

Andesitic lavas intruded by a dioritic dyke represent most of the core. Two 23 and 57-foot sections of graphitic tuffs correspond to the conductor. A highly magnetic iron formation accompanies one of these sections. A magnetic anomaly at surface corresponds to this formation.

Traces of pyrrhotite and pyrite were intersected throughout the core. Specks of chalcopyrite are present in quartz and carbonate stringers.

45 core-chip samples were collected. Geochemical results range between 8 and 316 ppm Cu and 45 and 610 ppm zn . Six split core samples we:re assayed for gold. Results were all "trace".

The hole was stopped at a final depth of 475'.
The conductor was intersected 150 feet vertically below surface.

Indicated dips of formations were all to the west. 6.4.3.5. Drill Hole PA-75-5 (Figure 8)

This hole was collared at L104S; $11+80 \mathrm{E}$ and was drilled at $-55^{\circ}$ to intersect a conductor located between $13+00 \mathrm{E}$ and $15+00 \mathrm{E}$, some 300 feet vertically below surface.

Trace to 2 percent pyrrhotite + pyrite are present in several sections of the core.

48 core-chip samples were geochemically analysed for copper and zinc. Copper values range between 4 and 383 ppm and zinc values range between 60 and 520 ppm . Three samples in graphite-rich tuffs gave 1180,1200 and 3310 ppm zinc. Eight split samples were assayed for gold and returned "nil" to "trace" gold. Three split core samples were assayed for copper and zinc and returned 0.0 . to 0.02 percent copper and 0.05 to 0.08 percent zinc.

Conductors were intersected around 350 feet vertically belon surface.

Indicated dips were to the west.
6.4.3.7. Drill Fiole PA-75-7 (Figure 10)

This hole was collared at $L$ 112S; $35+75 \mathrm{~W}$ and was drilled at $-65^{\circ}$ to intersect a weak conductor between $32+00 \mathrm{~W}$ and $33+00 \mathrm{~W}$ some 300 feet vertically below surface.

Greywacke-type metasediments with phyllitic interlayers were traversed. Andesitic tuffs and lavas are interlayered within the above formations. A one-foot graphitic tuff with concretions of pyrite corresponds to a weak EM anomaly at the surface.

Forty core-chip samples were geochemically analysed for copper and zinc. Copper values ranged between 24 and 205 ppm copper with one isolated value of 920 ppm copper in a section of andesitic lava with one bleb of chalcopyrite.

Zinc analyses ranged from 62 to 167 ppm zinc with one isolated zinc value of 266 ppm . A one-foot split core sample from the conductor was assayed for gold, zinc and copper. "Nil" gold, 0.03 percent copper and 0.15 percent zinc were obtained.

The hole was stopped at 575'.
The conductor was intersected 300 feet vertically
below surface.
Indicated dips were variable from near vertical to steeply east and steeply west. 6.4.3.8. Drill Hole PA-75-8 (Figure 11)

This hole was collared at L 192s; $21+80 \mathrm{E}$ and was drilled at $-60^{\circ}$ to intersect some 300 feet vertically below surface a "first priority" rated strong conductor with a coincident magnetic anomaly of 240 gammas above background situated between $23+00 E$ and $25+00 E$.

Andesitic lavas and tuffs were intersected throughout the hole. There are numerous 1 to 8-foot interlayers of massive graphite between 190 and 425 feet. A strong conductive zone at the surface corresponds to these sections. Pyrrhotite is present in trace amounts in andesitic tuffs and concentrations of up to 5 percent pyrrhotite were seen in graphitic sections. A magnetic anomaly at the suriace appears to correspond to pyrrhotite concentrations. 43 core-chip samples were geochemically analysed for copper and zinc. Copper values ranged from 50 to 227 ppm Cu . Zinc values vary between 44 and 331 ppm zn .

Three split core samples were assayed for copper and zinc. Copper values were trace to 0.01 percent and zinc values were 0.01 to 0.03 percent. Four core samples were assayed for gold and returned "nil" to "trace" gold.

One section with the highest sulphide concentration from drill holes PA-75-1, PA-75-2, PA-75-4, PA-75-5 and PA-75-8 was semi-quantitatively analysed for 30 elements. No concentration of major trace elements, was obtained. An upper amphibolite facies of metamorphism was observed in the drill cores.

## 7. CONCLUSIONS AND RECOMMENDATIONS

The diamond drilling programme successfully tested Turam and magnetic anomalies while providing further geological information along a section on Line ll2S (see Figure 12).

Formations intersected consist mostly of basic tuffs and fine grained lavas. The only acidic rocks encountered were interlayers of rhyolitic to dacitic tuffs and fragmentals in diamond drill holes PA-75-1 and PA-75-2, the most easterly two holes of the section. Drill hole PA-75-7, at the west end of the section consisted mostly $\notin$ of greywackes with narrow interlayers of mafic volcanic rocks, suggesting that formations to the west of this drill
hole consist mainly of greywackes. Conductors were proven to be associated with graphitic tuffs, slates and massive graphite bands with varying amounts of pyrite and pyrrhotite. Magnetic anomalies were associated with magnetite-rich chlorite-garnet schist within tuffaceous horizons (iron formations).

Results from our recent drill programme together with geological maps published by O.D.M. and logs of previous diamond drilling indicate that the Project Abitibi area covers portion of a subsidence basin in which fine grained andesitic lavas alternate with andesitic tuffs and graphitic shales topped with a thick sequence of metasediments to the west of drill hole PA-75-6. Acidic tuffs and fragmentals with small to medium fragments occur as interlayers towards the bottom of the basin (eastern parts of the project area). No rhyolitic flows or breccias were intersected in the drill holes. Late mafic and ultramafic intrusives and quartz and carbonate veins can be observed in outcrops and in some drill core. The only visible specks of chalcopyrite are found in carbonate stringers.

The large number and considerable strike length of the conductors suggest that at least the major portions of these correspond to formational conductive material of a type similar to that found in the drill holes.

The highest copper value was 0.22 percent and came from a 5 -foct section in a 12-foot interlayer of graphitic and pyritic tuff within intermediate to acidic banded tuffs and fragmentals in drill hole PA-75-1. The
sulphide amount in the pyritic tuff ranged between 2 to 30 percent.

The highest zinc values were also obtained in drill hole PA-75-1 and ranged between 1500 and 1860 ppm in three 10 -foot sections in acidic to intermediate tuffs and fragmentals. High zinc geochemical values in other holes were sporadic and associated with pyrite-pyrrhotite mineralization.

Geological and geochemical results from the drilling programme suggest that any additional drilling should be directed to the testing of Turam conductors to the east or along the strike of the conductor tested by drill hole PA-75-1. Conductive zones M and H 4 are recommended for further testing by diamond drilling. A 500' hole collared at L ll2S; 74E and drilled grid east at $-45^{\circ}$ will adequately test a moderate Turam conductor with a flanking magnetic anomaly in conductive zone M. Another hole, about 550 feet, should be collared at $L$ 72s; 57+50E and drilled grid east at $-45^{\circ}$ to test a short, moderate to strong Turam anomaly (Zone H4).

A strong conductor in Ty Randa claims was tested with drill hole PA-75-3 and was proven to be caused by an extensive zone of graphitic slates. It is recommended that the option on these two claims be terminated.

It is recommended that a total of 100 claims in the east half of the group be kept and the credit obtained by
filing the drilling work be applied to these in order to obtain an extension to February 1977.


June 5, 1975
TORONTO

CANADIAN OCCIDENTAL PETROLEUM LTD.
minerals division
DIAMOND DRILL RECORD
Claims No. L399956 LOCATION Ll12S, 64+80E $\qquad$ DIRECTION $\qquad$ DIP $\qquad$ $-45^{\circ}$ HOLE NO PA75-1 N.Saracoglu LOGGED BY M. Hodgson $\qquad$ CASINGNW: 40', AW:96' $\qquad$ SHEET No. 1
 FINISHED February 8, 1975

PROPERTY Project Abitibi

| From | то | Core <br> Angle | description |
| :---: | :---: | :---: | :---: |
| $0^{\prime}$ | $96^{\prime}$ |  | orerburden |
| $96^{\prime}$ | 112' | $52^{\circ}$ | Clay, sand and gravel. Boulders of gabbro at 44'. Intermediate Fragmentals |
|  |  | $20^{\circ}$ | with several (<l') sections of tuff. Fragments strongly stretched. Fragment size 4 mm . 1/4", faulted aplite veinlet at 97'. <br> 1/2' aplite dyke at $104^{\prime}$, cuts the core at $20^{\circ}$. cecasional blebs and disseminated pyrite, only ir. trace amount. Badly broken over 3"-6" sections at 103', $108^{\prime}$ and 111'. |
| 112' | 149: |  | Ir termediate to Acidic Banded Tuffs |
|  |  | $55^{\circ}$ to 60 20 20 | Dacitic to rhyodacitic tuffs with occasional short (<l') interlayers of mafic tuffs. Banded at $55^{\circ}-60^{\circ}$. <br> Predominant shearing at $20^{\circ}$ to the core axis. Badly broken between 115'123', at 125', 132' and between 147'-149'. 7" quartz-pegmatite vein at 127'. Aplite veinlets between 131'-133'. 1' quartz-pegmatite vein at 135'. Traces of pyrite as dissemination and coating on joint and shear planes. |
| $149{ }^{\prime}$ | $170^{\prime}$ |  | Interinediate Fragmentals and Tuffs |
|  |  |  | Some fragments are up to $1 / 4$ " thick. The rock is highly sheared and fragments are strongly stretched. Pyrite occurs throughout the rock as very fine dissemination, stringers along bedding and shear planes, blebs andicoatings on <br>  than $1 \%$. |
| $170{ }^{\prime}$ | 186' | $55^{\circ}$ | Intermediate Tuffs <br> Poorly bedded, dacitic in compos sheared and broken at 173' with pxpécoating on shear planes. Trace amount of pyrttorbroafyout the section as dissemination, blebs and cumbirgs on joint planes. $1 / 8^{\prime \prime}$ thick stringers of pyrite near the lower contact. |


|  |  |  |
| :---: | :---: | :---: |
| N.Saracoglu |  |  |
| LOGGED BY.M.Hodgson | ASINGNW:40', $2 \mathrm{~W}: 96^{\prime}$ | SHEET No.__ 2 |
| ARTED Feb. 3, 1975 | AS! | 379 ${ }^{\text {: }}-24^{\circ}$ |

FINISHED_Feb. 8, 1975
PROPERTY_ Project Abitibi


# - 32 - <br> CANADLAN OCCIDENTAL PETROLEUM LTD. <br> MINERALS DIVISION <br> DIAMOND DRILL RECORD 

|  |  |  |  |
| :---: | :---: | :---: | :---: |
| LOGGED BY__C_C_ SHEET No.__ 3 |  |  |  |
|  |  |  |  |
| FINISHED |  |  |  |
| PROPERTY |  |  |  |
| FROM | то | Core <br> Angle | DESCRIPTION |
| 218' | $247^{\prime}$ | $\begin{aligned} & 54^{\circ} \\ & \text { to } \\ & 57^{\circ} \end{aligned}$ | (IRON FORMATION) <br> Magnetite-Hornblende-Garnet schist <br> - Very finely disseminated magnetite and fine hornblende crystals in the matrix. Abundant garnet crystals (up to 4 mm .) giving to the rock a porphyritic appearance. <br> - Traces of pyrite along shears throughout the section. <br> - Very rare grains of arsenopyrite and sphalerite (.) <br> THIS SECTION APPEARS TO REPRESENT AN IRON FOPMATION, VERY RICH IN MAGNETITE AND CORRESPONDING TO HIGH MAGNETIC ANOMALIES RECORDED AT SURFACE. |

## Zone of Transition between Iron Formation and Intermediate to Basic Fragmentals

- Still very magnetite and mafic-rich, but
increasing amount of feldspars and occasional narrow sections of fragmentals.
- Carbonate as joint coating and fracture filling.
- Traces of pyrite throughout occurring as
dissemination and very thin veinlets.
- Badly broken at $258^{\prime}$ and $259^{\prime}$.

Intermediate to Mafic Fragmentals

- Acidic fragments in a basic matrix. Fragments up to l步" thick, strongly stretched.
- Magnetic.
- Trace to $1 \%$ pyrite as dissemination, stringers and coating on shear planes.
- 2" to $1^{\prime}$ wide broken zones at $263^{\prime}$ and 275'.


CANADLAN OCCIDENTAL PETROLEUM LITD.
minerals division
DIAMOI ID DRILL RECORD
1.OCATION $\qquad$ dIrection $\qquad$ DIP. $\qquad$ HOLE NO. PA-75-1

LOGGED BY $\qquad$ CASING $\qquad$ SHEET NO. 4

STARTED $\qquad$ CORE SIZE $\qquad$ CORRECTED TESTS $\qquad$
FINISHED $\qquad$
PROPERTY


CANADIAN OCCIDENTAL PETROLEUM LTD.
hinerals division
DIAMOND DRILL RECORD


STARTED Feb, 12, 1975 $\qquad$ CORE SIZE $\qquad$ CORRECTED TESTS 250!:- $-31^{\circ}$

FINISHEDEEW. 19_1975 $\qquad$ 468': $38^{\circ}$

## PROPERTY PROJECT ABITIBI

| FROM | то | $\begin{aligned} & \text { Core } \\ & \text { Angle } \end{aligned}$ | description |
| :---: | :---: | :---: | :---: |
| $0^{\prime}$ | $48^{\prime}$ |  | OVERBURDEN |
|  |  |  | Clay and sand Boulders at 42'. |
| $48^{\prime}$ | 106' |  | ANDESITIC LAVAS |
|  |  |  | Medium grained lavas with disseminated blebs of pyrite throughout. Carbonates and pyrite on shgars that cut the core at angles ranging from $10^{\circ}$ to $40^{\circ}$. |
|  |  | $40^{\circ}$ | Most shears are parallel to the foliation: Feldspars and mafic minerals are moderately altered. |
|  | $\cdots$ |  | 51'-52.5': Fine grained andesitic lavas. |
|  |  |  | 65'-69': Highly sheared andesitic tuffs with thin, 5 mm ., more felsic bands |
|  |  |  | throughout. banding. |
|  |  | $60^{\circ}$ | 1" barren quartz vein |
|  |  |  | Badly broken ground at $53.5^{\prime}, 61.0^{\prime}, 66^{\prime}, 67^{\prime}$. <br> 78': $\quad \frac{1}{2} "$ quartz vein in a $6^{\prime \prime}$ section of broken ground. |
|  |  |  | 91' and 93':Specks of Py, Po, Cp, on narrow shears, 5 mm . |
|  |  | $50^{\circ}$ | 104'-106': Highly sheared andesitic lavas. |
| $106^{\prime}$ | $119{ }^{\prime}$ |  | DACITIC LAVA |
|  |  |  | Weakly foliated, fine grained matrix with larger feldspars (up to 2 mm .). Traces of pyrite throughout |
|  |  | $45^{\circ}$ | 114'-119': Finer grained, wel1 foliated. |


$\qquad$ DIP $\qquad$ HOLE NO. 2
LOGGED BY $\qquad$ CASING $\qquad$ SHEET NO.
started
CORE: SILE CORRECTED TESTS

FINISHED $\qquad$
PROPERTY $\qquad$

$\qquad$ HOLE NO 3
LOGGED BY $\qquad$ CASING $\qquad$ SHEET No.

STARTED $\qquad$ CORE SIZE $\qquad$ CORRECTED TESTS $\qquad$
FINISHED $\qquad$
PROPERTY


## CANADIAN OCCIDENTAL PETROLEUM LTD.

MINERALS DIVISION
DIAMOND DRILL RECORD
PA-75-2
LOCATION $\qquad$ DIRECTION $\qquad$ DIP $\qquad$ HOLE NO. $\qquad$
LOGGED BY $\qquad$ CASING $\qquad$ SHEET NO. 4

STARTED. $\qquad$ CORE SIZE $\qquad$ CORRECTED TESTS $\qquad$
FINISHED $\qquad$
PROPERTY


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CANADIAN OCCIDENTAL PETROLEUM LTD.
MINERALS DIVISION
DIAMOND DRILL RECORD
Claim \#371834 LOCATION LLLO $44+00 \mathrm{E}$ $\qquad$ DIP $-55^{\circ}$ PA-75-3
Namik Saracoglu LOGGED ByMartin Hodgson_CASING_NW-86', AW-92'
$\square$ hole No. $\qquad$ SHEET No._1 STARTED Feb. 23, 1975 CORE SIZE_AQ_CORRECTED TESTS $\frac{150^{\circ}-48^{\circ}}{434^{\circ}-30^{\circ}}$ FINISHEDFeb. 26, 1975

PROPERTY PROJECT ABITIBI


CANADIAT OCCIDENTĀL VETROLEUM LTD.
minerals division
DIAMOND DRILL RECORD
location $\qquad$ DIRECTION $\qquad$ DIP $\qquad$ HOLENO-75-3 LOGGED BY $\qquad$ CASING $\qquad$ SHEET No. No. 2

STARTED. $\qquad$ _CORE SIZE $\qquad$ -CORRECTED TESTS $\qquad$
FINISHED $\qquad$
PROPERTY


## minerals division

DIAMOND DRILL RECORD
LOCATION $\qquad$ DIRECTION $\qquad$ DIP $\qquad$ Pa-75-3 HOLE No. $\qquad$
LOGGED BY $\qquad$ CASING $\qquad$ SHEET NO. $\qquad$ 3
starrted. $\qquad$ _CORE SIZE $\qquad$ _CORRECTED TESTS $\qquad$
FINISHED $\qquad$
PROPERTY

| FRTM | то |  | description |
| :---: | :---: | :---: | :---: |
| 401' | $404^{\prime}$ |  | ANDESITIC LAVA <br> Highly sheared and chloritized |
| 404 | 426' |  | ANDESITIC TUFFS <br> well bedded at $75^{\circ}$ to the core. <br> Thin, up to $6^{\prime \prime}$ graphitic sections at 406', 425', 434', badly broken throughout. |
| $426^{\prime}$ | 434' |  | ANDESITIC LAVA <br> Fine grained, foliated at $72^{\circ}$, no visible sulfides 1" quartz vein at 430'. <br> END OF HOLE AT $434^{\circ}$ |



## CANADIAN OCCIDENTAL PETIROLEUM LTD.

MINERALS DIVISION
DIAMOND DRILL RECORD
Claim \#L400007
LOCATION L 112S,23E+15 DIRECTION_132 ${ }^{\circ}$ $\qquad$ PA-75-4
No.
$\qquad$ 5 LOGGED BY Martin Hodgson CASING_-16'NW, $18^{\prime} A W$ SHEET No.__ 1
 FINISHED. $\qquad$
PROPERTY_PROJECT ABITIBI

| FROM | то | Core <br> Angle | description |
| :---: | :---: | :---: | :---: |
| 0' | 2' |  | Ice |
| $2^{\prime}$ | $10^{\prime}$ |  | Water |
| $10^{\prime}$ | $18^{\prime}$ |  | Overburden (clay) |
| $18^{\prime}$ | 1611 | $\begin{aligned} & 30^{\circ} \\ & 27^{\circ} \end{aligned}$ | Andesitic Lavas - medium to fine grained, trace of Po and Py <br> 23' - foliated at $30^{\circ}$ <br> $\frac{27}{27},-1^{\prime \prime}$ quartz vein at $27^{\circ}$ to the core. <br> 40'- $3 \times \frac{1}{4}$ " quartz veins. <br> Cas:bonate veins 1/4"- >2" <br> with trace of Po and Py as stringers and <br> blebs at 45'-57', 51'-54', 69' |
|  | - | $30^{\circ}$ 48 | 57'- Sheared at $30^{\circ}$. Strongly sheared 6" sections at 50', 671, 70' <br> 771- $2 \times$ l $^{\text {" }}$ sheared, chloritized, slightly magnetic sections. <br> 84'- 6" larren quartz vein. <br> 112'-115 - broken section <br> 118'-120.6' - barren quartz vein <br> Stringers of Po and Py in thin carbonate veins at 126', 129', 134', 143', 144'. <br> 131'-13:' $-5 \times 1 / 4^{\prime \prime}$ barren quartz veins. 146'- ${ }^{1 "}$ barren quartz vein. |
| 161' | $164^{\prime}$ | $65^{\circ}$ | $\frac{\text { Graphitic Tuff }}{163^{\prime}}-\frac{\text { Bedding at } 65^{\circ} \text {. } 108 \text { Po and Py }}{\text { Split sampled for } 32 \text { elements } \# 27435 .}$ |
| $164^{\prime}$ | 195' | $10^{\circ}$ | Andesitic Lava <br> Medium to fine grained. Trace of Po and Py. <br> 175.5'-188') Broken smoky quartz vein. |
| $195^{\prime}$ | 201' |  | Barren quartz vein, trace of Po blebsishssearmonate vein near contact. |

CANADIAN OCCIDENTAL PETROLEUM LTD.
minerals division
DIAMOND DRILL RECORD
PA-75-4
location $\qquad$ DIRECTION $\qquad$ DIP. $\qquad$ HOLE No. $\qquad$ 2 LOGGED BY $\qquad$ CASING $\qquad$ SHEET No. $\qquad$
started $\qquad$ CORE SIZE $\qquad$ CORRECTED TESTS $\qquad$
FINISHED $\qquad$ -

PROPERTY

| FROM | то | $\begin{gathered} \text { Core } \\ \text { Angle } \end{gathered}$ | description |
| :---: | :---: | :---: | :---: |
| 201' | $206^{\prime}$ |  | Graphitic Tuff - Trace of Po and Py on bedding planes and disseminated throughout. Some carbonate veins. |
| $206^{\prime}$ | 211' |  | Andesitic Lava |
| 211' | 258' | $50^{\circ}$ | Pelites. - interlayered with tuffs, fine grained, disrupted bedding. Trace to $1 \%$ Po and Py. <br> 211'-216' - graphitic pelites <br> magnetic in places, possible iron formation. <br> 227'-246' - broken section <br> Lamprophyre dikes, 10-20\% biotite crystals. <br> $1^{\prime \prime}$ at $244^{\prime}$ at $50^{\circ}$ to the core <br> $6^{\prime \prime}$ at 248' <br> 2" at 252' |
| $258{ }^{\prime}$ | 276 ${ }^{\prime}$ |  | Andesitic Lava |
| $276{ }^{\prime}$ | $383{ }^{\prime}$ | $20^{\circ}$ | Diorite - massive, coarse grained, mafic rich. Trace of sulphides, chilled margins. Some inclusions of andesitic lava near contacts. <br> 341'-348' - $5 \times 2$ " quartz veins at $20^{\circ}$ to the core Po and Py blebs in quartz and at contact |
| $383^{\prime}$ | 395' |  | Sheared Andesitic Lava - trace of Po and Py |
| 395' | $396^{\prime}$ |  | Quartz-Feldspar Pegmatite |
| 3961 | 3971 |  | Magnetic-ultramafic dike |
| 3971 | $420^{\prime}$ |  | Interlayered Intermediate Lavas and Granhitic Tuffs <br>  400'-412' - 1\% PO, speck of Cp on byejng plake. |
| $420{ }^{\circ}$ | 475' |  | Medium to fine grained, massive to wellforfated |

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CANADIAN OCCIDENTAL PETROLEUM LTD.
minerals division
DIAMOND DRILL RECORD

## LOCATION

$\qquad$ DIRECTION $\qquad$ DIP $\qquad$ PA-75-4 LOGGED BY $\qquad$ CASING $\qquad$ SHEET No 3

STARTED $\qquad$ CORE SIZE _CORRECTED TESTS $\qquad$
FINISHED $\qquad$ $\therefore$

PROPERTY


## - 44 -

CANADIAN OCCIDENTAL PETROLEUM LTD.
minerals division
DIAMOND DRILL RECORD
L.OCATION L 104S,11+80E DIRECTION $\qquad$
$\qquad$ DIP $-55^{\circ}$ PA-75-5

LOGGED BY._M. Hodgson $\qquad$ CASING $N W=80^{\prime}, ~ A W=95^{\prime}$

SHEET No._1
STARTED_March 5, 1975 $\qquad$ .-CORE SIZE $\qquad$ AQ $\qquad$ CORRECTED TESTS $\frac{237^{\prime}:-40^{\circ}}{550^{\prime}:-30^{\circ}}$
FINISHED_March_8,_1975 $\qquad$ $\dot{-}$

PROPERTY_ PROJECT ABITIBI


- 45 -

CANADIAN OCCIDENTAL PETROLEUM LTD.
MINERALS DIVISION
DIAMOND DRILL RECORD
PA-75-5
LOCATION $\qquad$ DIRECTION $\qquad$ DIP $\qquad$ HOLE NO. $\qquad$
SHEET NO. $\qquad$
LOGGED BY $\qquad$ CASING

STARTED $\qquad$ CORE SIZE $\qquad$ CORRECTED TESTS $\qquad$

FINISHED. $\qquad$
PROPERTY


- 46 -

CANADIAN OCCIDENTAL PETROLEUM LTD.
minerals division
DIAMOND DRILL RECORD
PA-75-5
LOCATION $\qquad$ DIRECTION $\qquad$ DIP $\qquad$ HOLE No $\qquad$
LOGGED BY $\qquad$ CASING $\qquad$ SHEET No. 3

STARTED $\qquad$ CORE SIZE $\qquad$ CORRECTED TESTS $\qquad$
FINISHED. $\qquad$
PROPERTY


CANADIAN OCCIDENTAL PETROLEUM L'TD.
MINERALS DIVISION
DIAMOND DRILL RECORD
LOCATION_ LI2S, $17+80 \mathrm{~W}$ DIRECTION $132^{\circ}$ DIP $-60^{\circ}$ PA-75-6 hole No.

LOGGED BY_M. Modgson $\qquad$ CASINGNW: 82' $A 2: 106^{\prime}$

SHEET No. 1
STARTED_March 10, 1275 CORE SIZE AQ AQ CORRECTED TESTS $200^{\prime}:-45^{\circ}$ FINISHED March $13,1975 \quad$ The Casing $=96.6 \%$

PROPERTY PROJECT ABITIBI


- 48 -

CANADIAN OCCIDENTAL PETROLEUM LTD.
minerals division
DIAMOND DRILL RECORD
PA-75-6
LOCATION $\qquad$ DIRECTION $\qquad$ DIP $\qquad$ hole No. $\qquad$
LOGGED BY $\qquad$ CASING $\qquad$ SHEET No. 2
started $\qquad$ _CORE SIZE _CORRECTED TESTS

FINISHED
PROPERTY

| from | то | Core Angle | description |
| :---: | :---: | :---: | :---: |
| $450^{\prime}$ | 459 ' |  | 392'-404' : sections of coarse grained andesitic lav <br> 401': 4" wide quartz vein. <br> 404': 6" broken section <br> 425': 4" wide section with $20 \%$ disseminated magnetit <br> 425'-426.5': Lapilli tuff, fragmental felsic <br> fragments in a mafic matrix <br> Sheared Andesitic Tuff - with some felsic fragments and two 2" wide graphite interlayers. |
| 459 ' | $465^{\prime}$ |  | Graphitic Tuff - bedded @ $70^{\circ}$, trace to $2 \%$ Po + Py $463^{\prime}-464^{\prime}:$ massive graphite. |
| $465^{\prime}$ | 4831 |  | Brecciated Graphitic Tuff - with trace po + Py. 470': $2^{\prime \prime}$ quartz vein. <br> 478'-483': ground core. <br> 478': some blebs of chalcopyrite. |
| $483{ }^{\prime}$ | 4961 |  | Dacitic Lava - fine grained, trace to 18 Py + Po. |
| $496{ }^{\prime}$ | 5061 | $65^{\circ}$ | Graphitic Tuff - bedded at $65^{\circ}$. 497'-500': massive graphite, about 108 Py. |
| $506^{\prime}$ | $526^{\prime}$ | $60^{\circ}$ | Andesitic Lava - fine grained (andesitic tuff?) <br> trace to $1 \%$ Po + Py disseminated throughout. Odd thin graphitig interlayers (up to 10 mm .). Foliated @ $60^{\circ}$. <br> 512'-514': graphitic tuff, 10\% Py. <br> 517': 6" of graphitic tuff and <br> 8" of calcite with trace Py. |
| 526 ${ }^{\prime}$ | $528^{\prime}$ |  | Brecciated Graphitic Tuff - 8-108 Py + Po quartz veinlets throughout. |
| 528 ${ }^{\circ}$ | $532^{1}$ |  | Interlayered Sheared Andesitic Tuff and Graphitic Tu some small fragments. |
| $532^{\prime}$ | $538^{\prime}$ |  | Andesitic Tuff - with quartz fraquinkssio (ma to 4 mm .) 536': $1^{\prime \prime}$ quartz vein. |



Claim \#L400067

N. SARACOGLU LOGGED BY-N.-HODGSOA CASING NW: $9^{\circ}$, AW:178'

SHEET No._ 1
STARTED_March 15, 1275 CORE SIZE AO
$\qquad$ CORRECTED TESTS $\frac{200^{\prime}:-55^{\circ}}{520^{\prime}}$

FINISHED__March 21, 1225
520':-28

PROPERTY_PROJECT ABITIBI
Core recovery

L.OCATION $\qquad$ DIRECTION $\qquad$ DIP $\qquad$ HOLE NO $\qquad$
LOGGED BY $\qquad$ CASING $\qquad$ SHEET No. 2
started. $\qquad$ CORE SIZE $\qquad$ CORRECTED TESTS $\qquad$
FINISHED $\qquad$
PROPERTY

 LOCATION $1925 \quad 21+80 \mathrm{E}$ DIRECTION 1320 $D I P=6.0^{\circ}$ HOLE NO.PA $=75=$
N. Saracoglu

LOGGED BY.M.-Hodgson C CASING AW-72:-NW-70:

SHEET NO. 1 STARTED_March $24 \_1975$ CORE SIZE AQ_CORRECTED TESTS $\frac{187^{\prime}}{498^{\prime}}-\frac{43^{\circ}}{-24} 0^{\circ}$
FINISHED_Aprid_1, 1975
Core Recovery
PROPERTY-PROJECT ABITIBI _ _-_


## CANADIAN OCCIDENTAL HEI KULELIVR \&\&N. <br> MINERALS DIVISION <br> DIAMOND DRILL RECORD

LOCATION $\qquad$ DIRECTION $\qquad$ DIP $\qquad$ HOLE NOPA-75-8

LOGGED BY $\qquad$ CASING $\qquad$ SHEET No._2

STAFRTED $\qquad$ CORE SIZE $\qquad$ CORRECTED TESTS $\qquad$

FINISHED. $\qquad$

PROPERTY

| From | то |  | description |
| :---: | :---: | :---: | :---: |
| 264' | 272' |  | ANDESITIC TUFFS |
|  |  | $70^{\circ}$ | A few narrow bands of graphite trace of Po bedding at $270^{\prime}$ @ $70^{\circ}$ |
| 272' | $288{ }^{\prime}$ |  | ANDESITIC TUFFS |
|  |  |  | Massive to slightly bedded |
| $288^{\prime}$ | $306^{\prime}$ |  | GRAPHITIC TUFFS |
|  |  |  | Trace to l\% Po with sections of massive graphite l' $^{\prime \prime}$ @ $288^{\prime}$ 6' $^{\prime \prime}$ @ 291', 292' $2^{\prime \prime}$ @ 293', 295' $12^{\prime \prime}$ @ 305' |
|  |  |  | 288'-290' $2-4 \mathrm{~mm}$ Felsic Fragments |
|  |  |  | Split Sampled 293'-298' for Au, Cu, Zn \#27461 <br> Split Sampled 298'-304' for Au, Cu, Zn \#27476 |
| $306^{\prime}$ | $336{ }^{\prime}$ | $30^{\circ}$ | ANDESITIC TUFF |
|  |  |  | Trace Po and Py <br> Bedding at 3491 © $30^{\circ}$ <br> Bedded to slightly sheared to brecciated <br> Massive Graphite Sections: $\begin{aligned} & 6^{\prime \prime} \text { at } 340^{\prime \prime}, 345^{\prime} \\ & 2^{\prime \prime} \text { at } 350^{\prime \prime} \\ & 4^{\prime \prime} \text { at } 352^{\prime} \end{aligned}$ |

Numerous small carbonate veins, especially in the massive graphite sections.


MINERALS DIVISION
DIAMOND DRILL RECORD
LOCATION $\qquad$ DIRECTION $\qquad$ DIP. $\qquad$ HOLE NO.PA-7

LOGGED BY $\qquad$ CASING $\qquad$ SHEET NO._3 STARTED $\qquad$ CORE SIZE $\qquad$ CORRECTED TESTS $\qquad$

FINISHED $\qquad$
PROPERTY

| from | то |  | description |
| :---: | :---: | :---: | :---: |
| 3541 | $375{ }^{\prime}$ |  | ANDESITIC TUFF |
|  |  |  | Trace of Po <br> Massive to slightly bedded <br> l' Quartz Vein at 364' ©RAPHIC TUFF |
| $375{ }^{\prime}$ | 378' |  | 376'-377 Massive Sheared Graphite trace to $1 \%$ Po and Py |
| 378' | 422 ' |  | ANDESITIC TUFF |
|  |  |  | Massive to slightly bedded |
| $422^{\prime}$ | $426{ }^{\prime}$ |  | GRAPHITIC PELITES |
|  |  | $45^{\circ}$ | $\begin{aligned} & \text { Bedding at } 424^{\prime} \text { @ } 45^{\circ} \\ & \text { 1"Quartz Vein at } 223^{\prime} \\ & \text { Grade into graphitic tuffs } 425^{\prime}-426^{\prime} \end{aligned}$ |
| $426^{\prime}$ | 431' |  | ANDESITIC TUFF |
|  |  |  | Old Graphitic Seams 426'-427' |
| 431 ' | $458{ }^{\prime}$ |  | AVDESITIC LAVAS |
|  |  |  | Medium Grained trace Po and Py coarse grained between 444'-456' |
| 458' | $460^{\prime}$ |  | AVDESITIC TUFFS |
|  |  |  | Odd Graphitic Seams <br> 1\% Po and Py |
|  |  | 1 |  |

CANADIAN ULLDDEIVAAL KERKULEUIV ARN. -ib -
MINERALS DIVISION
DIAMOND DRILL RECORD

LOCATION $\qquad$ DIRECTION $\qquad$ DIP $\qquad$ HOLE NBA-75-8 LOGGED BY $\qquad$ CASING $\qquad$ SHEET NO.- 4 $\qquad$
STARTED $\qquad$ CORE SIZE $\qquad$ CORRECTED TESTS $\qquad$
FINISHED. $\qquad$
PROPERTY



```
APPENDIX I
PROJECT ABITIBI - DIAMOND DRILLING 1975
```


## LEGEND

SYMBOLS
PA-75-6 ${ }_{-60^{\circ}}$ ( Diamond Drill Hole, No., Inclinaison
A.B.S. $=$ Corrected acid bottle survey
E.O.H. $=$ End of the hole
= Foliation, Banding, Bedding

|  | $=$ Shearing |
| ---: | :--- |
|  | $=$ Probable Fault |
|  | Narrow Veins, Veinlets |

## APPENDIX I <br> (Cont'd)

## LITHOLOGY

$6=$ Diabase
5a $=$ Diorite
5b = Gabbro
$5 \mathrm{c}=$ Serpentinite
$4=$ Granite Pegmatite, Aplite
$4 \mathrm{a}=$ Lamprophyre
$q v=$ Quartz Vein

$3 \mathrm{a}=\mathrm{Rhyolite}$
$3 \mathrm{~b}=$ Rhyodacite, Dacite
$3 c=$ Rhyolitic and Dacitic Fragmentals
$3 d=$ Acidic Banded and Bedded Tuffs

3e $=$ Massive Acidic Tuffs

2 = Basic Volcanics
$2 \mathrm{a}=$ Andesite
2b $=$ Basalt
2c = Andesitic Fragmentals
2d $=$ Andesitic Tuff
GR = Graphite, GRT = Graphitic Tuff
1 = Sediments
la := Greywacke
$\mathrm{lb}=$ Pelitic Sediments (Slates)
lc := Iron Formation

## APPENDIX II

## PROJECT ABI'SIBI - DIAMOND DRILLING 1975

## gTATISTICAL DATA

Duration of Work $=64$ days (Jan 29 - Apr 3, 1975)
No. of holes drilled $=8$
Total footage drilled $=4000$
Average daily footage $=62.5$
Average core recovery $=96.6 \%$
below casing
No. of core-chip samples collected $=322$
No. of analyses $=804$
No. of split core samples collected= 40
No. of assays $=54$

# APPENDIX III <br> HOSKING DIAMOND DRILLING PERSONNEL <br> INVOLVED IN THE PROGRAMME 

Edmond St. Gelais = foreman and runner
Claude Houlle = runner
Fernand Lafontaine
Guy Laperle
$=$ helper
Denis Lafontaine
= "
Luc Guenette
$=\quad "$

- 60 -

APPENDIX IV

## GEOCHEMICAL LAB REPORTS <br> SEMI-QUANTITATIVE ANALYSIS REPORTS <br> ASSAY REPORTS

$7 E 4$ BELFAST ROAD, OTTAWA, ONTARIO, K1G DZS PHONE: 23フ-3110 TELEX: OS3-354E

Certificate of Analysis


## BONDAR-CLEUG \& COMPANY LTD.

$7 E 4$ BELFAST ROAD, OTTAWA, ONTARIO, K1G OZ5 PHONE: 237-3110 TELEX: 053-354B
RECEIVED
Certificate of Analysis

$$
\begin{gathered}
\text { FEB } 281975 \\
\text { J. J. B. }
\end{gathered}
$$

TO
Canadian Occidental Petroleum Itd.e,
REPORT NO. . . A-96-75

Date February .21, 1975: .
161 Eglinton Avenue East, Toronto 12, Ontario.

$$
\text { _ . . . . . . .te } \quad \text {. . .......... . . }
$$

I hereby certify that the following are the results of analyses made by us upon the herein described.


NOTE:
Rejects retained two weeks
Pulps retained three months
H- Mone

## Certificate of Analysis

To $\qquad$ Suite 801-161 Eglinton Avenue East, Toronto 12, ontario.

RECEIVED
MAR 51975
J. J. B.

REPORT NO. . . A-106-75.
DATE $\qquad$ . Febrụuary. 27, 1975. . . . . .



NOTE:

## Certificate of Analysis

MAR 171975
J. J. B.

то
Canadian Occiciental Petroleum Lta.,
801 - 161 Eglinton Avenue East,

- Toronto 12, Ontario.

I hereby certify that the following are the results of analyses made by us upon the herein described ..... Core. . . . . . . . . . . samples


NOTE:
Rejects retained two weeks
Pulps retained three month
HO-CUYY

## BONDAR-CLELE \& COMPANY LTD.

764 EELFAST ROAD, OTTAWA, ONTAAIO, K1G OZ5 PHONE: 237-3110 TELEX: 053-354B
RECEIVED
MAR 181975
Certificate of Analysis

TO Canadian Occidental Petroleum Ltd.,
-801 - 161 Eginton Avenue East,
Toronto 12, Ontario.
I hereby certify that the following are the results of analyses made by us upon the hercin described.... Core
 MAR 259975
J. J. B.

Certificate of Analysis

To
Canadian Occidental Petroleum Itd.,
801-161 Eglinton Avenue East $\qquad$
REPORT NO. . . . . A- 170-75
DATE
March 24, 1975: . . . . .

Toronto 12, Ontario.
1 hereby certify that the following are the results of analyses made by us upon the herein described.... ore. dressing.... samples
CTOL DRLL HOLE PA-75-6

note:

## Certificate of Analysis

то Conaina Decidental Petroleum Lta., Suite801, ICI Fginiton Avenue East,

REPORT NO. . . . . . A-207-75.

DATE .......... Apri1. 15, 1975... . . . .
DATE .......... Apri1. 15, 1975... . . . .

I hereby certify that the following are the results of analyses made by us upon the herein described . srlit. core......... samples


$$
w-\omega \sigma
$$

7Gム BELFAST ROAD, OTTAWA, ONTAFIO, K1G DZS PHONE: 2G7-3110 TELEX: OSS-3S4B
Geochemical Lab Report

Extraction $\qquad$

Report No $\qquad$
71-5


From-Canadian Occidental Petroleum Lta.,
Method
Fraction Used A. A.
-100 rocks.
SAMPLE NO. $+$

| MPLE NO. |  | $\begin{aligned} & \mathrm{Cu} \\ & \mathrm{ppm} \end{aligned}$ | $\begin{aligned} & \mathrm{Zn} \\ & \mathrm{ppm} \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| 7301 | $96^{\prime}-105^{\prime}$ | 23 | 84 |
| 02 | 105'-115 | 22 | 98 |
| 03 | 115'. $125^{\prime}$ | 13 | 56 |
| 04 | 125 ${ }^{\circ}$-135 | 12 | 69 |
| 05 | $135^{\circ}-145^{\circ}$ | 11 | 80 |
| 06 | 145'-155' | 77 | 1860 |
| 07 | $1355^{\prime}-165^{\prime}$ | 39 | 1500 |
| 08 | $165^{\prime}-175^{\prime}$ | 67 | 630 |
| 09 | '75 ${ }^{\prime}-186^{\prime}$ | 39 | 307 |
| 10 | $197.55^{\prime}$ 210' | 28 | 2740 |
| 11 | $210^{\prime}-218^{\prime}$ | 12 | 65 |
| 12 | $218^{\prime}-230^{\circ}$ | 26 | 75 |
| 13 | 230 $244^{\circ}$ | 44 | 200 |
| 14 | $240^{\circ}$. $250^{\circ}$ | 23 | 83 |
| 15 | $250^{\circ}-261^{\prime}$ | 24 | 80 |
| 16 | $261^{\prime} .270^{\prime}$ | 35 | 64 |
| 17 | $270^{\circ}-285^{\circ}$ | 58 | 64 |
| 18 | $285^{\circ}-295^{\prime}$ | 57 | 88 |
| 19 | 295'. $305^{\prime}$ | 43 | 85 |
| 20 | $305^{\prime}-316.5$ | 44 | 66 |
| 21 | 316.5. $322^{\prime}$ | 19 | 44 |
| 22 | $322^{\prime}-330^{\prime}$ | 45 | 65 |
| 23 | $330^{\prime}-340^{\prime}$ | 67 | 78 |
| 24 | $340^{\prime}-350^{\prime}$ | 48 | 77 |
| 25 | 350, $360^{\prime}$ | 44 | 105 |
| 26 | $360^{\circ}, 370^{\prime}$ | 85 | 105 |
| 7327 | $370^{\circ}-379^{\prime}$ | 45 | 72 |

$$
\mathrm{Cu}, \mathrm{Zn}-\mathrm{HNO}_{3}-\mathrm{HCl}
$$ February 21, 1975



FEB 281975

## Geochemical Lab Report

Extraction
$\mathrm{Cu}, \mathrm{Zn}-\mathrm{HNO}_{3}-\mathrm{HCl}$
Method A.A.
Fraction Used
-100 rocks.

Report No. 87-5
From Canadian Occidental Petroleum Itd. Project: 5384

SAMPLE NO.
Date March 5 , 19.72

DRILL HOLE PA-75-2 | SAMPLE NO. |
| :---: |
| 7328 | $\square$ $\square$ $\square$

$7 B 4$ BELFAST ROAD, OTTAWA, ONTARIO, K1G OZE PHONE: Rヨ7-3110 TELEX: OBG-3BAB
Geochemical Lab Report


## BONDAR-CLEGG \& COMPANY LTD.

764 BELFAST ROAD, OTTAWA, ONTAFIO, K1G DZ5 PHDNE: 237-3110 TELEX: 053-354E
Geochemical Lab Report
RECEIVED
MAR 251975
Extraction
$\mathrm{Cu}, \mathrm{Zn}-\mathrm{HNO}_{3}-\mathrm{HCl}$
Method A.A.
Fraction Used
-100 rocks.
Report No. 121-5
Canadian Occidental Petroleum Litd.,
From Project:-5384
Date $\qquad$ March 21,
1975

| SAMPLE NO. |  | $\begin{aligned} & \mathrm{Cu} \\ & \mathrm{ppm} \end{aligned}$ | $\begin{aligned} & \mathrm{Zn} \\ & \mathrm{ppm} \end{aligned}$ | SAMPLE NO. |  | $\underset{\mathrm{ppm}}{\mathrm{Cu}}$ | $\stackrel{\mathrm{zn}}{\mathrm{ppm}}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| w 7397 | 375'-385' | 95 | 92 | 7428 | 290'-300' | 48 | 72 |  |
| 옦 98 | 385'-399 | 102 | 155 | 29 | 300', $310^{\prime}$ | 182 | 84 |  |
| 균 7399 | 399'-A18: | 65 | 136 | 30 | $3100^{\prime}-320^{\circ}$ | 230 | 70 |  |
| Ag 7400 | $412{ }^{\prime}-424{ }^{\prime}$ | 53 | 225 | 31 | 320'- $330^{\circ}$ | 127 | 66 |  |
| 01 | +24'. $+34^{\prime}$ | 96 | 205 | 32 | 330', 340' | 92 | 86 |  |
| 02 | 18-25' | 151 | 100 | 33 | $34+5.350^{\circ}$ | 87 | 83 |  |
| 03 | 25'. $35^{\prime}$ | 132 | 93 | 34 | 350'-360' | 316 | 63 |  |
| 04 | 35 - $45^{\circ}$ | 136 | 68 | 35 | 360' 300 | 158 | 76 |  |
| 05 | 45'. $55^{\prime}$ | 119 | 83 | 36 | 370'-360 | 79 | 85 |  |
| 06 | 55'-65' | 100 | 67 | 37 | $880^{\prime}-340^{\circ}$ | 84 | 88 |  |
| 07 | $65^{\prime}-75^{\prime}$ | 145 | 90 | 38 | 370'- $377^{\prime}$ | 115 | 126 |  |
| 08 | $75^{\prime}-85^{\prime}$ | 212 | 96 | 39 | 397'-405' | 88 | 375 |  |
| 09 | $85^{\prime \prime}-95^{\prime}$ | 158 | 94 | 40 | 405'-415' | 104 | 165 |  |
| 10 | 95'-105' | 124 | 129 | 41 | 415'-420' | 102 | 385 |  |
| 11 | 105'-115' | 290 | 109 | 42 | $420^{\circ}-430^{\circ}$ | 200 | 145 |  |
| 12 | 115'-125' | 101 | 69 | 43 | +30', 441 | 92 | 87 |  |
| 13 | $125^{\prime} .133^{\prime}$ | 140 | 112 | 44 | 441-45í | 142 | 87 |  |
| 山 14 | 135'-145' | 165 | 99 | 45 | $42^{\prime} .463^{\circ}$ | 130 | 82 |  |
| 15 | $145^{\prime}-157^{\prime}$ | 154 | 85 | 7446 | 265 ${ }^{\circ} 475^{\prime}$ | 254 | 98 |  |
| d 16 | 157'-167' | 176 | 95 |  |  |  |  |  |
| A 17 | 167'-175' | 102 | 67 |  | 32-eler | ent sce | to fo | low. |
| 18 | 190'- 200 | 233 | 67 |  |  |  |  |  |
| 19 | 210', 210' | 166 | 390 |  |  |  |  |  |
| 20 | 210'- $223^{\prime}$ | 179 | 610 |  |  |  |  |  |
| 21 | 220'-23: | 112 | 425 |  |  |  |  |  |
| 22 | 230' - 240' | 66 | 217 |  |  |  |  |  |
| 23 | $240^{\prime \prime}-250^{\prime}$ | 106 | 132 |  |  |  |  |  |
| 24 | 250'- 260 | 1100 | 400 |  |  |  |  |  |
| 25 | 260' $2700^{\circ}$ | 115 | 47 |  |  |  |  |  |
| 26 | 270'-280' | 8 | 45 |  |  |  |  |  |
| $\underline{27}$ | 280'-290' | 158 | 51 |  |  |  |  |  |

## BONDAR-CLEGG \& COMPANY LTD.

784 BELFAST RDAD, OTTAWA, ONTARIO, K1G DZ5 PHONE: 237-3110 TELEX: 053-354日 RECEIVED
Geochemical Lab Report
MAR 251975


764 EELFAST ROAD, OTTAWA, ONTAFIO. K1G OZ5 PHUNE: 237-3110 TELEX: O53-354E

## Geochemical Lab Report received

Extraction
$\mathrm{Cu}, \mathrm{Zn}-\mathrm{HNO}_{3}-\mathrm{HCl}$
Method
Fraction Used
SAMPLE NO.

| SAMPLE NO. |  | Cu ppm | Zn ppm |
| :---: | :---: | :---: | :---: |
| 7492 | 106'- $155^{\prime}$ | 52 | 60 |
| 93 | $115^{\prime}-125^{\prime}$ | 59 | 76 |
| 94 | 125'-135' | 97 | 78 |
| 95 | $135^{\prime}-145^{\prime}$ | 83 | 72 |
| 96 | 145' $155^{\circ}$ | 62 | 80 |
| 97 | 155'. $162^{\prime}$ | 79 | 63 |
| 98 | 162'-n0' | 81 | 100 |
| 7499 | 170'-180 | 107 | 120 |
| 7500 | 180'-190' | 148 | 92 |
| 01 | 190'- 200' | 311 | 113 |
| 02 | 200'- $210^{\circ}$ | 126 | 105 |
| 03 | 210', 220' | 68 | 80 |
| 04 | 220', 230' | 100 | 85 |
| 05 | 230'-240' | 96 | 103 |
| 06 | 240'-250' | 60 | 81 |
| 07 | 250- 260 | 85 | 107 |
| 08 | 260 $\because 270^{\circ}$ | 91 | 70 |
| 09 | 270, $200^{\circ}$ | 120 | 72 |
| 10 | 280' $290{ }^{\circ}$ | 94 | 71 |
| 11 | 290'-300 | $\therefore 18$ | 86 |
| 12 | $300 \cdot 310^{\circ}$ | 95 | 79 |
| 13 | 310' - 320' | 116 | 80 |
| 14 | $320^{\circ}-330^{\circ}$ | 156 | 88 |
| 15 | 350'. $340^{\circ}$ | 119 | 84 |
| 16 | 340'. $350^{\prime}$ | 110 | 94 |
| 17 | 350'..360 | 160 | 85 |
| 18 | 360', 370' | '2 | 108 |
| 19 | $370^{\circ} \mathrm{C} 360^{\circ}$ | 99 | 110 |
| 20 | 380'. $390^{\prime}$ | 98 | 105 |
| 21 | $390.400^{\circ}$ | 102 | 84 |
| 7522 | $400 \cdot 100^{\prime}$ | 383 | 99 |

Report No.
142-5
MAR 311975
From Canadian Occidental Petrolpum Led.
March 26, 1975.
DRILL HOLE PA-75-6


| SAMPLE NO. |  | Cu ppm | $\begin{aligned} & \mathrm{Zn} \\ & \mathrm{ppm} \end{aligned}$ | SAMPLE NO. |  | Cu ppom | 7n ppw |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 7540 | 178'-185 ${ }^{\circ}$ | $21 / 3$ | 119 | 7571 | $485 .-495^{\circ}$ | 69 | 204 |  |
| 41 | $135{ }^{\prime}-195^{\prime}$ | 102 | 92 | 72 | 495', 505 | 100 | 121 |  |
| 42 | $195^{\prime}$ - 205' | 161 | 113 | 73 | sos', $\sin ^{\prime} 5^{\prime}$ | 48 | 80 |  |
| 43 | $205^{\prime}-215^{\prime}$ | 167 | 113 | 74 | 515'. $525^{\circ}$ | 45 | 80 |  |
| 44 | 215', 225' | 16.7 | 89 | 75 | 525', 53' | 65 | 80 |  |
| 45 | 225'.235' | 134 | 83 | 76 | 535'. $545^{\prime}$ | 34 | 74 |  |
| 45 | 235', 24i' | 205 | 78 | 77 | 54 $5^{\prime}$. $55 s^{\prime}$ | 45 | 72 |  |
| 47 | 24, ${ }^{\prime} .255^{\prime}$ | 163 | 82 | $78^{\circ}$ | 555'. $565^{\prime}$ | 50 | 76 |  |
| 48 | 25s'. $265^{\circ}$ | 246 | 100 | 79 | 565'. $575^{\prime}$ | 39 | 84 |  |
| 43 | $265^{\prime \prime}-275^{\prime}$ | 125 | 75 |  |  |  |  |  |
| 50 | 275'-285' | 129 | 215 |  |  |  |  |  |
| 51 | 285'. $215^{\prime}$ | 80 | 62 |  |  |  |  |  |
| 52 | 29r'. $3.05^{\prime}$ | 81 | 92 |  |  |  |  |  |
| 53 | 305 $5^{\prime \prime}-315^{\prime}$ | 93 | 76 |  |  |  |  |  |
| 54 | 315'-325' | 101 | 90 |  |  |  |  |  |
| 55 | 325'.335 | 92 | 82 |  |  |  |  |  |
| 56 | $335^{\prime} .345^{\prime}$ | 65 | 70 |  |  |  |  |  |
| 57 | $3+5^{\prime}-355^{\prime}$ | 98 | 70 |  |  |  |  |  |
| 58 | $355^{\prime} .365^{\prime}$ | 48 | 266 |  |  |  |  |  |
| 59 | 365'-375' | 39 | 84 |  |  |  |  |  |
| 60 | 375'-395' | 39 | 91 |  |  |  |  |  |
| 61 | 355', $345^{\prime}$ | 30 | 79 |  |  |  |  |  |
| 62 | $345^{\prime}-405^{\prime}$ | 63 | 76 |  |  |  |  |  |
| 63 | $405^{\prime}-415^{\prime}$ | 920 | 76 |  |  |  |  |  |
| 64 | $715^{\prime}-425^{\prime}$ | 24 | 65 |  |  |  |  |  |
| 65 | $425^{\prime}-435^{\prime}$ | 24 | 76 |  |  |  |  |  |
| 66 | $435^{\prime}-445^{\prime}$ | 61 | 53 |  |  |  |  |  |
| 67 | $445^{\prime}-455^{\prime}$ | 62 | 60 |  |  |  |  |  |
| 68 | $455^{\prime}-46 s^{\prime}$ | 127 | 167 |  |  |  |  |  |
| 69 | $465^{\prime}-475^{\prime}$ | 79 | 113 |  |  |  |  |  |
| 70 | $475^{\prime}-485^{\prime}$ | 84 | 109 |  |  |  |  |  |

## Geochemical Lab Report Received




EAEADT AOAD, OTTAWA, ONTAFIO, K1G DZS PHONE: 2B7-3110 TELEX: OSB-GSAB MAR 51975
J. J. B.

Sample No. $\qquad$
Method: $\qquad$ XRF

No. of Elements:
Total $\mathrm{Fe}\left(\mathrm{Fe}_{2} \mathrm{O}_{3}\right)$
MgO
CaO
$\mathrm{Na}_{2} \mathrm{O}$
$\mathrm{K}_{2} \mathrm{O}$


## BDNDAR-CLEGG \& CDMPANY LTD.

7GA BELFAST ROAD, OTTAWA, ONTARID, K1G OZ5 PHONE; 237-3110 TELEX: 05G-354B
SEMI-QUANTITATIVE AMALYSIS

| Sample No. $\quad 27429$ |
| :--- | :---: |
| Method: $\quad$ XRF |

No. of Elements: $\qquad$
32
DRILL HOLE PA-75-2
FromCanadian Occidental Petroleum Itd Project: 5384
Date: March 5,
1975

| DRILL HOLE PA-75-2 Analyst 335'-340' |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| MAJOR ELEMENTS (\%) | <. 003 | .003-01 | .01.03 | .03-0.1 | 0.1.0.3 | 0.3-1.0 | 1.0-3.0 | 3,0-10.0 | $>10.0$ | REMARKS |
| $\mathrm{SiO}_{2}$ |  |  |  |  |  |  |  |  | X | 60\% |
| \% $\mathrm{Al}_{2} \mathrm{O}_{3}$ |  |  |  |  |  |  |  |  | X |  |
| rotal $\mathrm{Fe}\left(\mathrm{Fe}_{2} \mathrm{O}_{3}\right)$ |  |  |  |  |  |  |  |  | X |  |
| M90 |  |  |  |  |  |  | X |  |  |  |
| $\mathrm{CBO}_{8}$ |  |  |  |  |  |  |  | X |  |  |
| \% ${ }^{\text {a }}$ |  |  |  |  |  | X |  |  |  |  |
| $\mathrm{K}_{2} \mathrm{O}$ |  |  |  |  |  |  | X |  |  |  |
| $\mathrm{TiO}_{2}$ |  |  |  |  |  | $X$ |  |  |  |  |
| \%r :ELEMENTS (\%) |  |  |  |  |  |  |  |  |  |  |
| $\checkmark$ |  | X |  |  |  |  |  |  |  |  |
| Cr |  |  |  |  | X |  |  |  |  |  |
| M. Mn |  |  | X |  |  |  |  |  |  |  |
| C Co | X |  | F |  |  |  |  |  |  |  |
| K Ni | X |  |  |  |  |  |  |  |  |  |
| Cr |  | X |  |  |  |  |  |  |  |  |
| Zn |  | X |  |  |  |  |  |  |  |  |
| As | X |  |  |  |  |  |  |  |  |  |
| H: Sr |  | X |  |  |  |  |  |  |  |  |
| \% Y | X |  |  |  |  |  |  |  |  |  |
| - Zr |  | X |  |  |  |  |  |  |  |  |
| \% Nb | X |  |  |  |  |  |  |  |  |  |
| C. Mo |  |  | X |  |  |  |  |  |  |  |
| + Ag | X |  |  |  |  |  |  |  |  |  |
| $\cdots{ }^{4}$ | X |  |  |  |  |  |  |  |  |  |
| -o | X |  |  |  |  |  |  |  |  |  |
| H, Ba |  | X |  |  |  |  |  |  |  |  |
| L La |  | $X$ |  |  |  |  |  |  |  |  |
| H. Ce |  | X |  |  |  |  |  |  |  |  |
| + W | X |  |  |  |  |  |  |  |  |  |
| P Pb | $X$ |  |  |  |  |  |  |  |  |  |
| P Bi | X |  |  |  |  |  |  |  |  |  |
| T-Th | x |  |  |  |  |  |  |  |  |  |
| Lu | X |  |  |  |  |  |  |  |  |  |

## BONDAR-CLEGG \& COMPANY LTD.

## 764 BELFAST ROAD, OTTAWA, ONTARIO, K1G OZ5 PHONE: 237-3110 TELEX: 053-3548

SEMI-QUANTITATIVE ANALYSIS
No: 121-5


SEMI-QUANTITATIVE ANAL.YSIS

| mple No. $\qquad$ 27446 |  |  |  |  |  | From Canadian Occid |  |  |  | leum Lt <br> 1975 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No, of Elements: | No. of Elements: 32 |  |  |  |  | Analyst:$480^{\prime}-490^{\prime}$ |  |  |  |  |
| ( MAJOR ELEMENTS (\%) | <. 003 | . 003.01 | .01.03 | .03-0.1 | 0.1-0.3 | 0.3-1.0 | 1.0-3.0 | 3.0-10.0 | $>10.0$ | REMARKS |
| $\mathrm{SiO}_{2}$ |  |  |  |  |  |  |  |  | X |  |
| $4 \quad \mathrm{Al}_{2} \mathrm{O}_{3}$ |  |  |  |  |  |  |  | X |  |  |
| (Total $\mathrm{Fe}\left(\mathrm{Fe}_{2} \mathrm{O}_{3}\right)$ |  |  |  |  |  |  |  |  | $X$ |  |
| \% MgO |  |  |  |  |  |  |  | X |  |  |
| + CaO | RECE | VED |  |  |  |  |  | X |  |  |
| $4 \quad \mathrm{Na}_{2} \mathrm{O}$ |  |  |  | X |  |  |  |  |  |  |
| K $\mathrm{K}_{2}$ | MAF |  |  |  |  |  | X |  |  |  |
| \% $\mathrm{TiO}_{2}$ | .1. 0 | B. |  | . |  | X |  |  |  |  |
| If ¡ELEMENTS (\%) |  |  |  |  |  |  |  |  |  |  |
| $v$ |  | X |  |  |  |  |  |  |  |  |
| Cr |  |  |  | X |  |  |  |  |  |  |
| 1. $\quad \mathrm{Mn}$ |  |  |  |  | X |  |  |  |  |  |
| $1{ }^{\text {co }}$ |  | X |  |  |  |  |  |  |  |  |
| $1 \quad \mathrm{Ni}$ |  | X |  |  |  |  |  |  |  |  |
| Cu |  | X |  |  |  |  |  |  |  |  |
| \% $\quad \mathrm{Zn}$ |  |  | X |  |  |  |  |  |  |  |
| Li As | X |  |  |  |  | $\cdots$ |  |  |  |  |
| P $\quad \mathrm{Sr}$ |  | X |  |  |  |  |  |  |  |  |
| $Y$ | X |  |  |  |  |  |  |  |  |  |
| + Zr |  | X |  |  |  |  |  |  |  |  |
| 1 | X |  |  |  |  |  |  |  |  |  |
| Mo | X |  |  |  |  |  |  |  |  |  |
| + ${ }^{\text {Ag }}$ | X |  |  |  |  |  |  |  |  |  |
| Sn | X |  |  |  |  |  |  |  |  |  |
| P-0 | X |  |  |  |  |  |  |  |  |  |
| P Ba |  |  | X |  |  |  |  |  |  |  |
| Le Ls |  | X |  |  |  |  |  |  |  |  |
| I ${ }^{\text {Ce }}$ |  | X |  |  |  |  |  |  |  |  |
| + w | X |  |  |  |  |  |  |  |  |  |
| P Pb | X |  |  |  |  |  |  |  |  |  |
| 厚 8 i | X |  |  |  |  |  |  |  |  |  |
| + Th | X |  |  |  |  |  |  |  |  |  |
| + | X |  |  |  |  |  |  |  |  |  |

SEMI-QUANTITATIVE ANALYSIS
No: A-208-75

|  |  | L78 |  |  |  | From:Canadien oecidental Petroleum Lt |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. of Elements: 32 |  |  |  |  |  | Analyst: 10 |  |  |  |  |
| DRILL HOLE PA-75-8 460'-467 |  |  |  |  |  |  |  |  |  |  |
| Major elements (\%) | <, 003 | .003.01 | .01.03 | .03.0.1 | 0.1.0.3 | 0.3-1.0 | 1.0-3.0 | 3.0-10.0 | $>10.0$ | REMARKS |
| + $\mathrm{SiO}_{2}$ |  |  |  |  |  |  |  |  | $X$ |  |
| + $\mathrm{Al}_{2} \mathrm{O}_{3}$ |  |  |  |  |  |  |  |  | $x$ |  |
| Wotal $\mathrm{Fe}\left(\mathrm{Fe}_{2} \mathrm{O}_{3}\right)$ |  |  |  |  |  |  |  |  | Y. |  |
| \%. M9O |  |  |  |  |  |  | $x$ |  |  |  |
| W C3O |  |  |  |  |  |  |  | $X$ |  |  |
| \% $\mathrm{Na}_{2} \mathrm{O}$ |  |  |  |  |  |  | X |  |  |  |
| W ${ }^{\text {W }}$ |  |  |  |  |  |  | 8 |  |  |  |
| ${ }^{+1 \mathrm{IO}_{2}}$ |  |  |  |  |  | Y |  |  |  |  |
| If c ELEMENTS (\%) |  |  |  |  |  |  |  |  |  |  |
| +. V |  | Y |  |  |  |  |  |  |  |  |
| $\mathrm{Cr}^{\text {r }}$ |  |  |  |  | $y$ |  |  |  |  |  |
| Y Mn |  |  |  |  | X |  |  |  |  |  |
| Q Co |  | X |  |  |  |  |  |  |  |  |
| U Ni |  |  | $x$ |  |  |  |  |  |  |  |
| 4 Cu |  |  |  | X |  |  |  |  |  |  |
| 2 n |  |  | 3 |  |  |  |  |  |  |  |
| \% As | $x$ |  |  |  |  |  |  |  |  |  |
| I Sr |  | $\gamma$ |  |  |  |  |  |  |  |  |
| Y Y | x |  |  |  |  |  |  |  |  |  |
| \% Zr |  | Y |  |  |  |  |  |  |  |  |
| \%. Nb | $x$ |  |  |  |  |  |  |  |  |  |
| + Mo |  | $x$ |  |  |  |  |  |  |  |  |
| 崖. Ag | x |  |  |  |  |  |  |  |  |  |
| $n$ | $x$ |  |  |  |  |  |  |  |  |  |
| \% Sb | X |  |  |  |  |  |  |  |  |  |
| \% Ba |  |  | x |  |  |  |  |  |  |  |
| Y La |  | $\chi$ |  |  |  |  |  |  |  |  |
| \%. Ce |  | Y |  |  |  |  |  |  |  |  |
| +. W | $\gamma$ |  |  |  |  |  |  |  |  |  |
| P Pb | X |  |  |  |  |  |  |  |  |  |
| Bi | $x$ |  |  |  |  |  |  |  |  |  |
| $\mathrm{Th}^{\text {r }}$ | X |  |  |  |  |  |  |  |  |  |
| 1 | $\chi$ |  |  |  |  |  |  |  |  |  |

$\qquad$
haount tt

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\$ 32,863.65
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INSTRUCTIONS MAIL DIRECTLY RETURN TO:
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APPROYED BY $\qquad$


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steele, Bonis Twp. a Sulphur Isiand

* 250-75
canadian Occidental Petroleum Gtd.
P.O. BOX 815 - $19 \mathrm{X}=3 P 9$

Mrent TELEPHONE: 819-762-3528 - ROUYN, QUE.

Canadian Occidental Petroleum Limited Suite 801, 161 Eglinton Avenue East

- Toronto, Ontario

MLP $1 J 5$

date March 31, 2975 invoice no. 318

MARCH 16-31 SURFACE DRILLING

$306001-5395-309-11,497.62$

## 

PrO. 80X 815 - 19X - 3P9


Canadian Occidental Petroleum Limited

- Suite 801, 161 Eglinton Avenue East
- Toronto, Ontario
- NH $1 J 5$

L

date April 7, 1975
invoice no. 401
ref. no. 074-129
T/4 MM SF LAKE ABITIBI AREA QU.

## APRIL 1 - 4 SURFACE DRILLING



* Palling caving from lat hate is pact of demabilyy aton. Refer to clause 13 in contract
$306001-5385-309-\$ 897.55$
$\rightarrow \rightarrow \operatorname{lan}$


## 

PrO. BOX 815 - J9X - 3P9


Canadian Occidental Petroleum Limited

- Suite 801, 26.1 Eglinton Avenue East
- Toronto, Ontario

MP 1 J 5
invoice no. 309/2
$\square$

# Testing 


MEALS
Served to your personnel
$84 \quad 2.50$
210.00
342.00
$\$ 20,600.19$
$20,374.99$
Rinamong

$$
306001-5385-309-20,374.99
$$




P.O. B0X 815 - J9X - 3P9
$\cdots$ date March 15,1975
Canadian Occidental Petroleum Limited
NVOICE No. 309

REF. no. $074-129$
I/2 IM SF。 LAKE ABTTIBI OMTN

MARCH $1-15$ SURFACE DRILLING


Balance Carricd forward.....




HOS'RING DIANOND DRILLING CO. LiD.



From yois Mo, PA. . . .






Dapth of Teat:.......................................
yazs of Cement:
Core ratay:
Gis or Dlegel Tuel Consumed

| DRILLS (Machane) | G2s | Gals Yuel 3 |
| :---: | :---: | :---: |
| PUMPS |  |  |
| TRACTORS | 3 |  |
| corl Srove |  |  |
| masc. |  |  |



## 

PRO. BOX 815 - J9X - 3P9
LE

Canadian Occidental Petroleum Limited Suite 801 - 161 Eglinton Avenue East

- Toronto, Ontario ML 155
date March 24, 1975
Credit
invoices no. 311

RECEIVED

## MAR 271975

## J. J. B.



$\begin{array}{lr}11.00 & 660.00 \\ 14.00 & 140.00 \\ & \\ 11.00 & 770.00 \\ 14.00 & \frac{98.00}{1668.00} \\ & \frac{250.20}{1918.20}\end{array}$
1,017.91

$$
\checkmark \$ 2,695.11 \mathrm{CR}
$$





## 

P.o. B0X 815 - J9X - 3P9


- Canadian Occidental Petroleum Limited

Suite 801, 161 Eglinton Avenue East

- Toronto, Ontario
- M4P 155
date April 15, 1975
Gredit
INVOIEE No. 410
nef. no. 074-129

To credit you with the following:-
Re - Invoice No. 309

PIPING \& DRILILING
Should have been charged Oharged

MOVING
Should have been charged
Charged
Re - Invoice No. 401
PULLING CASING
Should have been charged Charged

## RECEIVED

APR $2 \hat{5} 1975$
J. J. B.

| $17557.65^{\prime}$ |  |
| :--- | :--- |
| 17557.15 |  |
|  |  |
| 1355.24 |  |
| 1588.34 | 0.10 CR |

NIL
299.00
299.00 CR

Total Credit
$\$ \$ 32.20 \mathrm{CR}$
anadian Occidental Petroleum Limited Wouite 801, 161 Eglinton Avenue East RECEIVED Koronto, ontario MLP $1 J 5$ MAR I2 1975







p.0. boX 815 . 39 X - $3 \mathrm{P9}$



TO GREDIT YOU WITH THE FOLLOWLNG


## 

P.0. B0X 815 - J9X - 3P9



- Canadian Occidental Petroleum Limited Suite 801, 161 Eglinton Avenue East
- Toronto, Ontario M4P 155
date February 28, 197
invoice no. 216

REF. no. O74-129
1/2 MM SF LAKE ABITTBI ONT

## FEBRUARY $16-28$ SURFACE DRILLITNG



$$
301,001-5385-309-9,147.40
$$





P.O. BOX 815 - J9X - 3P9


- Canadian Occidental Petroleum Limited Suite 801, 161 Eglinton Avenue East
- Toronto 12, Ontario
date February 15, 1975
invoice no. 207
Ref. no. 074-129
$1 / 2$ MM. SF LAKE ABITIBI ONT


## FEBRUARY $1-15$ SURFACE DRILLING



MOVING
From PA -75-1 to PA -75-2 (1200')


WATER SUPPLY
PA -75-1 (12001)
Man-hours to start
Man-hours to drain
IMan-hours to defrost
Fuel oil for coil stove
Plus; 15\%
$\frac{\text { Cone Prays }}{\text { "he" Size }}$
MEALS
Served to your personnel

.800 .76
$\underline{105.00}^{\circ} \quad 2,395.00$
0
$306001-5345-309-8,959.16$

$\$ 8,959.16$





To credit you with the following:-

Invoice No. 207

WATER SUPPLY

| Man-hours to drain | 17 | 11.00 | 187.00 |  |
| :--- | :---: | :---: | :---: | :--- |
| Man-hours to defrost | 28 | 11.00 | $\frac{308.00}{}$ |  |
|  |  |  | 495.00 |  |
|  | Plus $15 \%$ |  | $\$ 74.25$ | $\$ 69.25$ |
|  |  |  |  |  |



 -mowe $\quad$ wimess osts

| Canaolan occioental Petrolleum Lmiteo |  |
| :---: | :---: |
|  |  |
|  <br>  |  |
| Scale $.^{\prime \prime}=400{ }^{\text {a }}$ |  |
| (1) | PLATE |



canadian occidental petroleum lto. MINERALS DIVISION PROJECT ABITIBI

35-D-13
RESULTS - DDH PA-75-2







\footnotetext{


