

CANADIAN OCCIDENTAL PETROLEUM LTD.

MINERALS DIVISION

DIAMOND DRILL PROGRAMME
ON THE
LODESTAR OPTION AND COL CLAIM GROUP

Claim Sheet No. 82E/12W(M)

Lat. : 49°37'N
Long.: 119°59'W

Claims:

John 1, 2, 3 and 8 - Record Numbers 26607-09 and 28288
Arnie 4 to 7 - Record Numbers 30032-35
Col 1-30 - Record Numbers 31162-91
Col 35-98 - Record Numbers 31321-31384
Col 31F and 32F - Record Numbers 31412-31413

Osoyoos Mining Division, British Columbia

5571

by:

Michael P. Henrick, Ph.B.

Covering Diamond Drilling Completed During the Period
November 11th to December 18th, 1974

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SUMMARY

During the period November 11 through December 18, 1974, a total of 1,667.6 feet of wireline B.Q. diamond drilling was completed at four locations on the Lodestar Option and Col Claim Group to check at depth four discrete Induced Polarization anomalies. Several varieties of granodiorite varying in colour and grain size were noted in the drill core. The granodiorite was cut and laced with pegmatitic and aplitic dykes. Finely disseminated chalcopyrite and molybdenite occurred randomly throughout, usually in a darker, more mafic, finer grained variety of granodiorite, often associated with several fine grained, non mineralized aplite dykes.

Diamond drill hole Lod 74-1 drilled to check a very weak Induced Polarization anomaly intersected 15 feet of mineralization which averaged 0.431% copper and 0.0082% molybdenum with a five foot section included running 0.94% copper and 0.23% molybdenum. Molybdenum values were very low throughout with the highest value being 0.075% over five feet.

The program verified the presence of finely disseminated chalcopyrite in a finer grained granodiorite as originally noted in the old drill core. A very small localized section of less than 1% copper and less than 500 feet in strike length may be inferred using diamond drill hole Lod.74-1

and the suspected location of the original Lodestar drilling. The other 3 holes did not intersect any significant similar mineralization.

The area is still of interest and could be better evaluated after a detailed mapping and geochemical program was completed.

INTRODUCTION

Canadian Occidental Petroleum Ltd., Minerals Division, optioned the original Lodestar property consisting of 8 mineral claims, John 1, 2, 3 and 8 record numbers 26607-09 and 28288 and Arnie 4 to 7 record numbers 30032-35 from Cro-Mur Mining and Exploration Ltd. As part of the initial agreement, Canadian Occidental Petroleum Ltd., Minerals Division, staked an additional 30 mineral claims, Col 1-30, record numbers 31162-91. Fractional mineral claims Col 31F and Col 32F, record numbers 31412 and 31413 were staked to ensure that the two groups were contiguous. After the initial diamond drill hole the block was expanded by staking a double row of claims around the existing claim blocks. A total of 64 new claims were staked, Col 35-98, record numbers 31321-31384.

This agreement was entered into because of the proximity of the Lodestar property to a high geochemical anomalous area outlined by stream silt sampling during Princeton Project 1973 and the presence of abundant finely disseminated chalcopyrite found in core from the property.

A grid consisting of 41.6 miles of base picket and tie lines was cut by Roger Voisine and four assistants from Eastern Associates Reg'd. during late September and October, 1974.

An induced polarization survey by Peter E. Walcott and Associates Limited was completed between October 7th and October 21st, 1974, on a portion of the grid from 25+00 East

to 25+00 west on lines 0+00 through 60+00 south covering the original Lodestar Option ground and a portion of the Col claims. This survey outlined several discrete weak anomalies. Four of these anomalies were tested by diamond drill holes. This report describes the results of the drill program.

LOCATION AND ACCESS

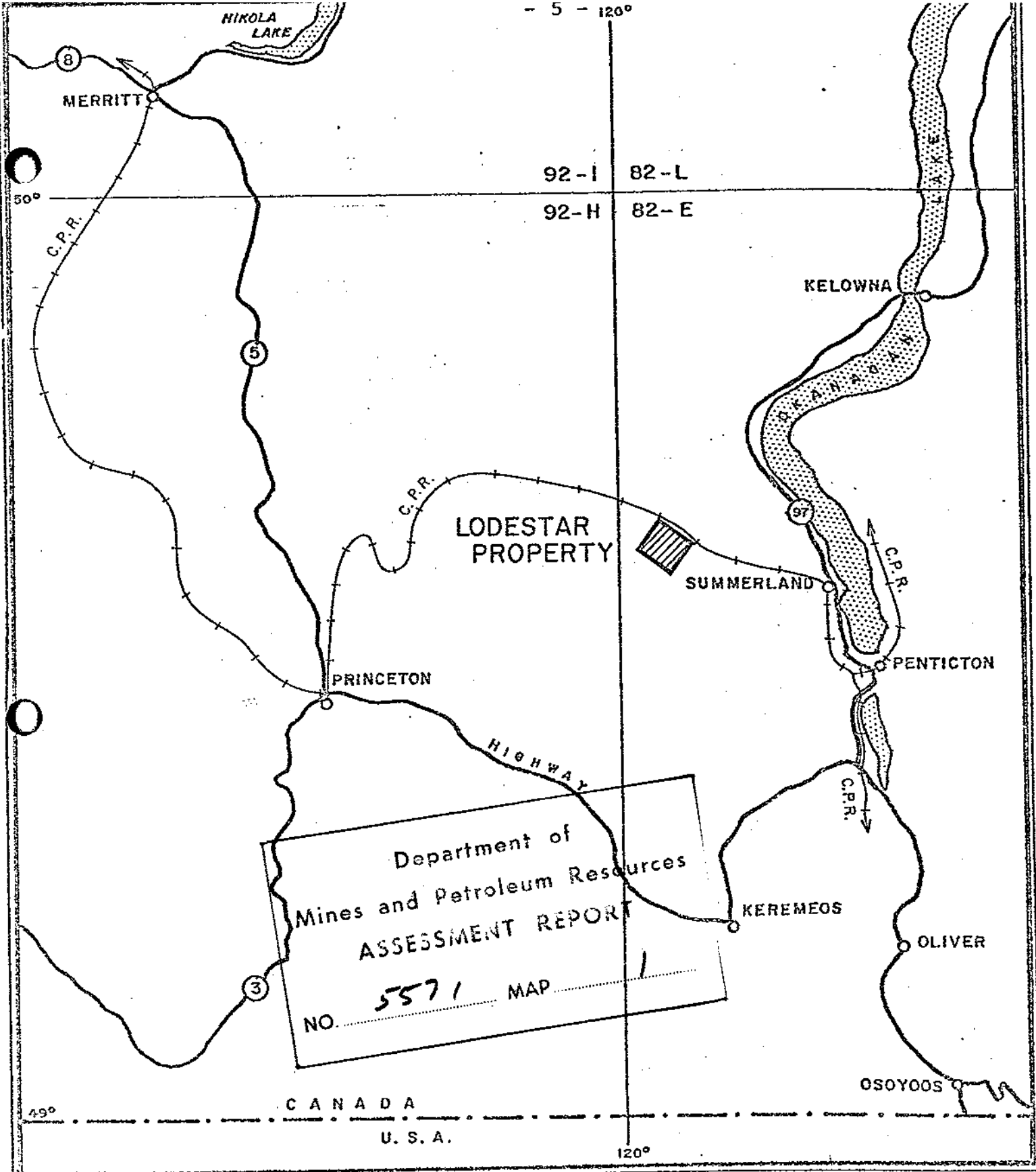
The Lodestar Option and Col claim group is shown on claim map 82-E-12/W in the Osoyoos Mining Division. The property is 12 air miles west northwest of the town of Summerland on British Columbia Provincial Highway 97 and 1 air mile southwest of Kirton on the Canadian Pacific Railway lines, see Figure 1.

The drill site is accessible by a poorly maintained secondary road from Summerland via the Teepee Lake gravel road, a distance of 16 miles, and thence by logging road to the property, a distance of 4.9 miles from the Canadian Pacific Railway crossing below Kirton.

WORK COMPLETED

Road and Site Preparation

Between November 12th and December 5th, 1974, a TD-9B International Crawler operated by Bob Freels of Peachland Transfer was used to construct 3,150 feet of access and turn



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LOCATION OF LODESTAR PROPERTY

FIG. 1

around road at all four drill locations. Drill site number 1 required a total 350 feet of road. Drill site number 2 required 1,080 feet of road. Drill site number 3 required 790 feet of road. Drill site number 4 required 930 feet of road. The Crawler was also utilized to repair and cut down grades on existing roads and prepare drill sites and water supply ponds at all 4 drill locations.

The total Crawler cost for all work was \$799.15.

Water Haulage

Due to extremely low rainfall, all creeks and swamps in the drill area dried up and water had to be hauled to all sites. Interior Diamond Drilling Ltd. used a 1954 General Motors 8-ton tandem dump truck with a 1200 gallon water tank to haul from Trout Creek to supply ponds at all drill sites, an average distance of 4.7 miles.

Particular care was taken to maintain return water. All return water was collected and re-circulated into the supply ponds to lessen the amount of water required.

Total cost of water haulage was 202.5 hours at \$15.00 per hour or \$3,337.50.

Diamond Drilling

During the period November 11 through December 18, 1974, 1,667.6 feet of wireline B.Q. diamond drilling was completed at four locations by Interior Diamond Drilling of Summerland, British Columbia, using a truck mounted B.B.S.-2 with a hydraulic head and powered by a Ford 17A diesel.

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. All Interior personnel were resourceful and cooperative and did an excellent job on core recovery averaging better than 98.37% recovery on all four holes. The average footage drilled per drill operation day was 58.5 feet including casing. Extremely blocky ground and winter conditions caused delays and kept the daily footage low.

A TD-9B International Crawler was used to clear roads and drill sites and construct water supply ponds and anchors for the drill.

Overburden was not a problem as 3 of the holes had 18 feet or less. Hole No. Lod.74-1 encountered 69 feet of overburden and mud was used to aid in reaching bedrock.

Water was hauled to supply ponds at each site. Re-cycling of return water kept water haulage to a minimum.

Acid tests were taken at the bottom of each hole.

Logging and Splitting of Core

The entire core was logged and hole # Lod.74-1 was split by M.P. Henrick using the facilities in the Canadian Occidental Petroleum Ltd. warehouse at 171 Estabrook Avenue, Penticton, British Columbia. Martin Hodgson of Canadian Occidental Petroleum Ltd. split the core from the remaining 3 drill holes. All samples were shipped via Greyhound Bus Lines to Bondar-Clegg and Company Ltd., 1500 Pemberton Avenue, North Vancouver, British Columbia for analysis. The remaining boxes of split core were labelled and transported to storage in Canadian Occidental Petroleum Ltd. core racks at R.R. #2, Cedar Road, Penticton, British Columbia.

Geochemical Analyses

The 298 split core samples were ground to a uniform -100 mesh pulp and analysed for copper and molybdenum using a Tectron Model AA5 atomic absorption spectrometer after digestion in hot HNO_3 -HCL.

REGIONAL GEOLOGY

The entire property is underlain by plutonic rocks of the granite suite. According to Little (G.S.C. Pa. 15-1961) these would belong to the Nelson plutonic suite and Little shows them to be foliated about NE and NW strikes in the vicinity of Kirton. The Nelson plutonic rocks are of early Jurassic age.

More detailed mapping by Peto (C.J.E.S. 1973) subdivided the Nelson plutonic suite into numerous individual plutonic bodies. John and Arnie claims and the northern Col claims are underlain by the Kirton diorite, according to Peto an early mafic member of the plutonic suite. The southern Col claims are underlain by the younger, Similkameen quartz diorite; and the westerly Col claims by the even younger Jura granodiorite. To some extent these three different rocktypes are recognized in drill core.

A detailed description of the rocktypes encountered in each drill hole is given in the drill logs and sections and in the portion of the report entitled "Drilling Results".

DRILLING RESULTS

A brief summary of the results of each drill hole is given in the following paragraph.

Diamond drill hole Lod.74-1 was collared at station 61+00E on Line 24+00S. It was drilled grid south at an inclination of -45° to a depth of 462.0 feet to check a weak induced polarization anomaly. The hole was drilled on mineral claim Arnie #5, record number 30033.

The hole encountered 69 feet of overburden. From 69 feet to 194.0 feet the hole cut a uniform unit of grey to flesh-coloured medium to coarse grained granodiorite with an odd speck of finely disseminated chalcopryrite being noted. This section of core was laced with several small, less than 1 foot, and the odd larger aplite and pegmatite dykes. These dykes cut the core at between 40° and 50° to the long core axis. The core was badly fractured and broken and altered in sections.

From 194 to 290.3 feet the granodiorite became finer grained, darker, more mafic with sections having minor magnetite. It was vaguely banded with segregated quartz rich sections. This section of core was badly fractured and broken and sheared and was laced with minor small pegmatitic and aplitic dykes all at 45° to 55° to the long core axis.

A highly mafic granodiorite section, vaguely foliated and with quartz rich segregated sections was intersected between 290.3 and 295.2 feet. This section contained disseminated pyrite and chalcopryrite and an 8" section at 292.2 feet contained a possible 20% chalcopryrite with very minor pyrite.

From 295.2 to 300.8 feet the core intersected a fine to medium grained quartz rich granodiorite vaguely foliated with a marked increase in K-feldspar and minor disseminated chalcopyrite throughout. Between 300.8 and 308.3 feet a flesh coloured pegmatite with darker mafic sections was intersected. Specks of chalcopyrite was noted within the pegmatite at 301.8 feet. The granodiorite from 300.8 to the end of the hole at 462 was similar to the granodiorite at the start of the hole with sections fractured and altered and slightly more mafic with minor magnetite noted. Patchy disseminated chalcopyrite was noted throughout. The granodiorite was cut at 45° - 55° by several aplite and pegmatite dykes of varying size usually 1 foot or less. Odd specks of chalcopyrite was noted in one pegmatite dyke with minor chalcopyrite noted along fractures in one aplite dyke at 312.4.

The core from 378.3 to 462.0 feet was badly sheared and broken with abundant alteration and kaolin sections noted. Altered sections throughout the hole contained abundant chlorite, hematite, epidote and carbonate with an increase in K-feldspar. Many highly altered sections were kaolin and slightly conductive when checked with an ohm meter.

Geochemical analyses show peaks at the locations where sulphides were noted in the core. A section between 289.0 and 304.0 with 15 feet of mineralization averaged 0.431% copper and 0.0082% molybdenum with a five-foot section included running 0.94% copper and 0.023% molybdenum. The molybdenum values were very low throughout with the highest value being 0.075% across 5 feet.

The drill hole verified the presence of finely disseminated chalcopyrite with minor molybdenum in a finer grained granodiorite as originally noted in the drill core found on the property. The weak induced polarization anomaly was verified by the presence of a small near massive section of chalcopyrite at 292.2 and several small sections of disseminated chalcopyrite found throughout the core. The anomaly was also due in part to the heavy shearing and kaolin sections found in the core. Although the occurrence of chalcopyrite and minor molybdenum in this geological environment is interesting, at no point does the drill core or analytical geochemical data suggest the existence of copper or molybdenum to be of any economic importance at this time.

Core recovery on this hole averaged 94.4% recovered.

Diamond drill hole Lod.74-2 collared at station 15+00 west on line 12+00 south. It was drilled grid west at an inclination of -45° to 405 feet to check at depth a weak induced polarization anomaly. The hole was drilled on mineral claim Col # 3, record number 31164.

Eight feet of casing was used to reach bedrock. The hole collared in a coarse grained, grey to flesh coloured granodiorite. The granodiorite appeared pegmatitic in sections with euhedral feldspar crystals up to $\frac{1}{2}$ " in size. Only minor alteration and pyrite were noted in this section to 87.5 feet. One small section of typical fine to medium grained granodiorite was cut between 75.7 and 76.1 feet. This section contained minor disseminated pyrite and molybdenum.

From 87.5 to 90.0 feet a typical flesh coloured aplite dyke was cut. Between 90 and 405 feet the hole traversed mainly a typical uniform grey granodiorite with minor aplitic and pegmatitic dykes at 20° - 60° to the long core axis. From 198.1 to the end of the hole at 405 the core became highly fractured, broken and sheared with abundant alteration and kaolin sections. Major shears with slickensides and conductive gouge material were noted at 251.8-282.6, 278.6-304.3 and 376.9-394.7. Altered sections throughout the hole contained abundant chlorite, hematite, epidote and carbonate. Many highly altered sections were kaolin and slightly conductive when checked with an ohm meter.

Geochemical analysis show very minor peaks at the locations where sulphides were noted in the core. Values for both copper and molybdenum are extremely low with the highest values being 0.0068% copper and 0.0033% molybdenum across five feet.

The weak induced polarization anomaly was due to the heavy shearing as several larger shears displayed slightly conductive fault gouge material. Several kaolin sections were also slightly conductive when wet.

The analytical geochemical data and drill core show that this hole has no economic importance at this time.

Core recovery on this hole was excellent, averaging 99.1% recovered.

Diamond drill hole Lod.74-3 collared at station 5+00 east on line 36+00 south. It was drilled grid west at an inclination of -45° to 400 feet to check at depth a weak induced polarization anomaly. The hole was drilled on mineral claim Arnie Number 4, record number 30032.

The hole required 15 feet of casing to reach bedrock. It collared in a medium grained grey uniform granodiorite and for the most part continued in this to the end of the hole at 400 feet. Sections of the granodiorite were altered (hornblende altered to biotite) with minor friable slightly kaolin sections and abundant carbonate. Several small aplite and pegmatite dykes cut the granodiorite at 30° - 70° to the long core axis.

Only minor pyrite and very minor specks of chalcopyrite were noted in the core.

The core in sections was sheared and broken with minor kaolin sections included as between 206.5 and 209.4, 245 to 282.6 and 291.2 to 312.8. This hole did not display the abundance of fracturing and shearing found in the other holes. It did have significant shears and minor conductive kaolin sections.

Geochemical analysis and drill core data show only very minor copper values and significantly nil molybdenum values, with copper having a high of 0.0046% and molybdenum having a high of 0.0013% over 5 feet.

The weak induced polarization anomaly was due to shearing and alteration with several kaolin sections being

slightly conductive when wet.

The analytical geochemical data and drill core show that this hole has no economic importance at this time.

Core recovery on this hole was excellent, averaging 100% recovered.

Diamond drill hole Lod.74-4 collared at station 5+00east on line 16+00 south. It was drilled grid west at an inclination of -45° to 400.6 feet to check at depth a weak induced polarization anomaly. The hole was drilled on mineral claim Arnie #5 , record number 30033.

Eighteen feet of casing was required to reach bedrock. The hole collared and continued in an aplite dyke to a depth of 20.2 feet. From 20.2 to the end of the hole at 400.6 feet the hole traversed mainly a dark to medium grey granodiorite with minor irregular fractures at 40° to 50° to the long core axis. Several small aplite and pegmatite dykes cut the granodiorite at 35° - 80° to the long core axis.

Only minor pyrite and the odd minor speck of chalcopryrite was noted as at 35.8 feet.

The core in sections was heavily sheared and broken with kaolin sections. Minor shears had slickensides and gouge as at 141 to 145, 150, 155, 156, 153.5, 165.6, 189.2, 190.4 and 199 to 233.4.

Geochemical analysis and drill core data show only very minor copper values and significantly nil molybdenum values, with copper having a high of 0.0046% and molybdenum having a high of 0.0004% over 5 feet.

The weak induced polarization anomaly was due to shearing and alteration as several shears displayed slightly conductive fault gouge material. Several kaolin sections were also slightly conductive when wet.

The analytical geochemical data and drill core show that this hole has no economic importance at this time.

Core recovery on this hole was excellent averaging 100% recovered.

PRESENTATION OF RESULTS

The location of all four drill sites are shown on the attached location map, Fig. 2.

Sections of each drill hole show lithology geochemical distribution of Cu and Mo, co-ordinates bearing, corrected dip, and plots of geophysical data, Figs. 3, 4, 5 and 6.

Diamond drill record logs for each hole are included at the end of the report: Appendix I.

Analyses result results from Bondar-Clegg and Company Ltd. are included in Appendix II.

CONCLUSION

The drilling program on the Lodestar option and Col claim group did explain the weak induced polarization anomalies.

The anomalies were caused by excessive shearing and alteration and not by disseminated chalcopryrite as originally interpreted after completing diamond drill hole Lod.74-1. The copper-molybdenum mineralization encountered in Lod.74-1 was coincident with the shearing that caused the weak anomaly. A small localized section of less than 1% copper and less than 500 feet in strike length may be inferred using diamond drill hole Lod.74-1 and the suspected locations of the original Lodestar drilling. This is not an economic mineralized section but with the limited knowledge we now have, the property is still of interest.

RECOMMENDATIONS

It is recommended that a detailed mapping and geochemical program be completed early in the 1975 field season. If this program outlines any anomalous areas, a geophysical survey should be undertaken to delineate these anomalies using the existing grid lines.



Respectfully submitted,

R. H. Wallis
for M.P. Henrick
M.P. Henrick, Ph.B.

February 20th, 1975

TORONTO

CANADIAN OCCIDENTAL PETROLEUM LTD.

MINERALS DIVISION

DIAMOND DRILL RECORD

Appendix I

Line 24+00S@6+00E LOCATION DIRECTION Grid West DIP 45° HOLE No. Lod. 74-1

LOGGED BY M.P. Henrick CASING 0.69' SHEET No. 1

STARTED Nov. 13, 1974 CORE SIZE B.O. CORRECTED TESTS 462.0 = 39°

FINISHED Nov. 23, 1974

PROPERTY LODESTAR OPTION, southern, B. C. (94.4% recovery)

FROM	TO	DESCRIPTION
0	69'	Casing, boulders and coarse gravel
69	81.2	Grey to flesh coloured to dark grey, medium to coarse grained granodiorite. Sections included slightly finer grained and more mafic with minor amounts of very finely disseminated Cpy. Very minor pegmatitic sections included. Minor hematite, limonite and epidote staining to 79.6 feet. 70-71.5 - core badly broken 72.5-73.4 - " " " , hematite and epidote staining 74.0-76.0- finer grained, slightly more mafic with sections within slightly quartz rich (vaguely banded) with very finely disseminated Cpy throughout 76.1- 1/2" pegmatitic stringer @ 40°-L.C.A. with one speck Cpy in pegmatite!
81.2	83	Fine grained flesh coloured aplite dyke @ 45°-L.C.A. Minor sections within appear pegmatitic. Minor tiny cubes Py at contacts.
83	104.0	Granodiorite as above, slightly more Hb. Hb altered in sections to chlorite. 85.4 - 3" pegmatite stringer @ 45°-L.C.A. 85-86.5 - minor pegmatitic section with highly mafic section, faintly foliated with minor diss. Cpy at upper contact 92.0 - epidote along fracture at 25°-L.C.A. 94.6 - 1" pegmatitic section @ 45°-L.C.A. 98.8-104.0 - core this section highly altered, chloritic, friable, leached and sheared. Slickensides @ 99.0 and 103.0
104	105.8	Aplite dyke as above, lower contact at 40°-L.C.A.

CANADIAN OCCIDENTAL PETROLEUM LTD.

MINERALS DIVISION

DIAMOND DRILL RECORD

LOCATION _____ DIRECTION _____ DIP _____ HOLE No. Lod. 74-1
 LOGGED BY _____ CASING _____ SHEET No. 2
 STARTED _____ CORE SIZE _____ CORRECTED TESTS _____
 FINISHED _____
 PROPERTY _____

FROM	TO	DESCRIPTION
105.8'	135.6'	Granodiorite as above with sections altered Hb to biotite. Minor limonite staining in sections. Odd minor $\frac{1}{4}$ " pegmatite stringer @ 45°-L.C.A. as at 128.7. Minor blebs chlorite and minor carbonate, odd minor cubes of Py. 125.8-130.0 - Core this section finer grained, darker in colour, more mafic, possibly slightly foliated. No Cpy noted. Appears to be banded due to a segregation of mafic and quartz rich sections. Slight increase in K-feldspar after 124.0.
135.6	137.2	Aplite dyle. Slightly porphyritic in appearance.
137.2	159.8	Granodiorite as above. Coarse grained sections included altered friable and kaolin at 140.6, 142.2 and 146.0, with carbonate and chlorite sections finer grained and mafic included. 146.0-146.2 - pegmatite stringer epidote staining, blebs of chlorite. 146.2-147.3 - core broken friable, with kaolin sections and tiny cubes of Py. 148.8-149.9 - minor tiny irregular hairlike fractures with chlorite and tiny cubes Py throughout. Minor epidote stain and carbonate. 155.0 - 2 specks Cpy.
159.8	160.1	Coarse grained pegmatite stringer @ 55°-L.C.A.
160.1	161.6	Granodiorite as above broken.
161.6	162.5	Very coarse grained pegmatite stringer, blebs of chlorite and K-feldspar crystals up to $\frac{1}{2}$ ", euhedr
162.5	164.8	Core this section broken, consists of 50% altered granodiorite - highly chloritic with carbonate and epidote and 5% pegmatite (coarse grained). K-feldspar rich.
164.8	166.0	Core badly ground, about 3" recovered, consists of ground chunks of pegmatite and aplite.

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CANADIAN OCCIDENTAL PETROLEUM LTD.
 MINERALS DIVISION
DIAMOND DRILL RECORD

Lod. 74-1

LOCATION _____ DIRECTION _____ DIP _____ HOLE No. _____

LOGGED BY _____ CASING _____ SHEET No. 3

STARTED _____ CORE SIZE _____ CORRECTED TESTS _____

FINISHED _____

PROPERTY _____

FROM	TO	DESCRIPTION
166.0	178.4	Grey-flesh coloured fine grained aplite dyke. Slightly fractured with carbonate along some fractures. Odd section crumbly, friable, even kaolin at 174.2-174.3, and 175.6-176.8 Both contacts ground with chunks of pegmatite, probably both contacts were pegmatitic.
178.4	191.1	Granodiorite as above, medium to coarse grained. Broken in sections, friable with chlorite, carbonate, minor limonite and hematite staining at 182.2-182.3, 184.5-184.6 and 186.4-187.2 Possible pegmatite stringer at 187.0 (few chunks of ground pegmatite in box) 189.1-189.9 - highly altered friable kaolin with remnant euhedral K-feldspar crystals over 1" @ 189.7 (possible pegmatitic stringer) 190.8-191.1 - Core irregularly and randomly fractured with tiny hairlike fractures, epidote and carbonate and blebs Py. Small K-feldspar alteration envelopes.
191.1	192.0	Fine grained flesh coloured aplitic section @ 45°-L.C.A. Tiny small hairlike fractures, irregular carbonate and epidote staining.
192	193.3	Granodiorite as above, slightly darker, more mafic with abundant biotite.
193.3	194.0	Aplite dyke as above upper contact, slightly pegmatitic over 3", contacts @ 50°-L.C.A.
194.0	207.8	Granodiorite medium grained, slightly darker in colour, slightly more mafic and slightly banded (vaguely). Odd fracture chloritic at 202 with minor quartz carbonate. Included are ½" pegmatitic sections at 45°-L.C.A. at 197.1, 199.1, 199.8, 200.2-200.6 and 203.8-204.0. 204.3-208.0 - core this section randomly and irregularly fractured with tiny hairlike fractures. Core altered (biotite-chlorite). Colour fesh colour due to hematite staining, epidote and carbonate in fractures and blebs of Py. Flesh colour due also to alteration envelopes (small K-feldspar envelopes).

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CANADIAN OCCIDENTAL PETROLEUM LTD.
 MINERALS DIVISION
DIAMOND DRILL RECORD

Lod. 74-1

LOCATION _____ DIRECTION _____ DIP _____ HOLE No. _____

LOGGED BY _____ CASING _____ SHEET No. _____ 4

STARTED _____ CORE SIZE _____ CORRECTED TESTS _____

FINISHED _____

PROPERTY _____

FROM	TO	DESCRIPTION
207.8	210.8	Granodiorite as above.
210.8	217.1	Fine grained flesh coloured aplite dyke, sections slightly coarser grained and appearing porphyritic. Upper contact pegmatitic over 1". Upper contact hround. Lower contact @ 55° - L.C.A.
217.1	217.4	Medium to fine grained granodiorite, darker in colour and more mafic - magnetic in mafic sections, very fine magnetiite.
217.4	217.9	Aplite fine grained. Contacts sharp at 45° - L.C.A.
217.9	224.9	Darker grey, fine to medium grained granodiorite with sections quartz rich, fractured in places @ 45° - L.C.A. Vaguely foliated @ 45° - L.C.A. Magnetic in mafic sections. Quartz rich sections at: 222.5, 223.8, with minor epidote stain.
224.9	225.2	Porphyritic section. Slightly more porphyritic than aplite above.
225.2	237.1	Granodiorite as above with sections finer grained, darker and more mafic. Other sections quartz rich (segregation) with minor diss. Cpy throughout. 229.2-230.0 - mafic, finer grained sections with quartz rich section included. Odd specks finely diss. Cpy and tiny hairlike fracture, irregular, running parallel to core with patchy diss. Mo (very shiny and fresh in appearance). 231.0 - minor Cpy and epidote along tiny irregular fracure parallel to core. 233.8-234 - minor hematite staining. 231-231.8 - quartz rich and appearing foliated this section - 231.8. Tiny fracture @ 70° - L.C.A. with epidote and small K-feldspar alteration envelope.

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CANADIAN OCCIDENTAL PETROLEUM LTD.
 MINERALS DIVISION
DIAMOND DRILL RECORD

Lod. 74-1

LOCATION _____ DIRECTION _____ DIP _____ HOLE No. _____
 LOGGED BY _____ CASING _____ SHEET No. 5
 STARTED _____ CORE SIZE _____ CORRECTED TESTS _____
 FINISHED _____
 PROPERTY _____

FROM	TO	DESCRIPTION
237.1'	237.6'	Highly mafic section, 15% biotite and minor chlorite, patches and blebs of pyrite. 5% Cpy over 1" at 237.1 in quartz rich area between mafic sections, blebs of magnetite with Cpy.
237.6	255.0	Massive fine to medium grained granodiorite (vaguely foliated?) fractured in sections @ 45°-L.C.A. (237.6-238.1) Many tiny irregular random fractures with epidote and carbonate along fractures. Altering the core making it appear porphyritic and altering it to a flesh colour. Tiny K-feldspar alteration envelopes. Minor small sections included appear porphyritic, as at 244.7 and 249.5. 252.7 - small fracture at 50°-L.C.A. with epidote and K-feldspar alteration envelope.
255.0	255.5	Pegmatitic stringer at 45°-L.C.A.
255.5	282.8	Granodiorite as above slightly coarser Hb altered to biotite. Sections altered and chloritic. Odd remnant euhedral Hb crystal. Minor epidote and carbonate along odd fracture as at 262.2 and 261.7 with tiny K-feldspar alteration envelopes. 256.5-257.3 - finely disseminated Cpy in core (appearing here for no particular reason), core same on either side. Sections throughout with tiny, very tight small fractures, some irregular and hairlike, others definite, all with epidote and tiny K-feldspar alteration envelopes at at 265.6, 268.0, 269.2, 270.1, 271.0. 272-272.8 - Vaguely foliated, mafic with a quartz rich segregation section and diss. Cpy throughout. Minor K-feldspar alteration. 274.5-275.5 - minor fractures with K-feldspar alteration and epidote with diss. Cpy, Cpy not in fractures but finely diss. throughout. 277.5-278.5 - core this section altered chlorite, carbonate. Kaolin in minor section 279.7-281.8 - K-feldspar alteration (enrichment) with diss. Cpy throughout.

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CANADIAN OCCIDENTAL PETROLEUM LTD.
 MINERALS DIVISION
DIAMOND DRILL RECORD

Lod. 74-1

LOCATION _____ DIRECTION _____ DIP _____ HOLE No. _____

LOGGED BY _____ CASING _____ SHEET No. 6

STARTED _____ CORE SIZE _____ CORRECTED TESTS _____

FINISHED _____

PROPERTY _____

FROM	TO	DESCRIPTION
281.8	282.8	Pegmatite stringer with blebs of magnetite up to 1/8"
282.8	290.3	Granodiorite - slightly coarser. All Hb altered to biotite. Chloritic in sections somewhat broken.
290.3 (Conductor)	295.2	Finer grained and highly mafic, sections segregated and quartz rich. Diss. Py throughout 8" section at 292.2 possibly 20% Cpy. Highly mafic sections 30% biotite and minor chlorite, finely disseminated throughout and minor specks Mo. Minor tiny, irregular fractures with minor K-feldspar alteration and epidote. Minor hematite stain at 291.8 294.1 - hairline fracture with epidote. Minor K-feldspar alteration envelope with Cpy fracture at 55° -L.C.A.
295.2	300.8	Granodiorite lighter coloured, medium to fine grained, quartz rich (vaguely foliated) in sections. Slight increase in K-feldspar throughout with diss. Cpy throughout.
200.8	308.3	Mainly flesh coloured pegmatite with minor stringers highly mafic. Biotite rich sections. Odd minor specks of Cpy right in the pegmatite at 301.8 and scattered elsewhere throughout.
308.3	310.8	Medium grained granodiorite - light to medium grey Hb altered to biotite, sections slightly chloritic. This section noticeably K-feldspar rich
310.8	313.4	Light grey to flesh coloured quartz rich aplite? dyke. (310.8-311.5) sections with inclusions of granodiorite (311.5-313.4) Aplitic with wispy very tight fractures with Cpy and diss. Cpy throughout. Lower portion near contact slightly pegmatitic and K-feldspar rich. Lower contact at 30° -L.C.A.
* very interesting!		

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CANADIAN OCCIDENTAL PETROLEUM LTD.
 MINERALS DIVISION
DIAMOND DRILL RECORD

Lod. 74-1

LOCATION _____ DIRECTION _____ DIP _____ HOLE No. _____
 LOGGED BY _____ CASING _____ SHEET No. 7
 STARTED _____ CORE SIZE _____ CORRECTED TESTS _____
 FINISHED _____
 PROPERTY _____

FROM	TO	DESCRIPTION
313.4	322.0	Granodiorite typical medium grained slightly more mafic and darker grey with possible increase in K-feldspar. 318.1 - 2" pegmatitic stringer at 45°-L.C.A.
322.0	322.5	Aplite dyke as described above, both contacts sharp at 45°-L.C.A. Slightly fractured with no Cpy noticed.
322.5	331.1	Granodiorite as above (313.4-322.0). Slightly darker, more mafic and chloritic from 327.0 onwards. 325.8-328.0 - fracture running parallel to core highly chloritic. 325.2 - specks diss. Cpy.
331.1	334.2	Extremely mafic granodiorite. Dark grey fine grained section up to 15%. Biotite sections rather chloritic with minor ½" aplitic sections. at 50°-L.C.A. Highly mafic granodiorite.
334.2	372.3	Medium to fine grained granodiorite. Sections included finer grained and slightly more mafic. Minor pegmatitic and aplitic sections included up to ½". Odd hairline fracture with epidote and very minor K-feldspar alteration envelope. Odd fracture with quartz carbonate filling. Core from 337.0 onwards broken, nearly all (fractures) breaks at (45°-55°)-L.C.A. Very minor carbonate along some breaks. 342.5- 3" pegmatitic section. Little or no diss. Cpy noted in core. Very finely diss. magnetite noted throughout. 337.0 and 337.8 hairline fractures with epidote K-feldspar envelopes @ 55°-L.C.A. 364-366 - several light fractures with quartz carbonate.
372.3	373.8	Fine grained grey-flesh coloured aplite dyke contacts sharp at 65°-L.C.A.

CANADIAN OCCIDENTAL PETROLEUM LTD.

MINERALS DIVISION

DIAMOND DRILL RECORD

Lod. 74-1

LOCATION _____ DIRECTION _____ DIP _____ HOLE No. _____

LOGGED BY _____ CASING _____ SHEET No. 8

STARTED _____ CORE SIZE _____ CORRECTED TESTS _____

FINISHED _____

PROPERTY _____

FROM	TO	DESCRIPTION
373.8	395.8	Granodiorite as previously described at 334.2-372.3. Slightly more chloritic in sections. 378.3-381.5 - core this section highly altered chloritic, large percentage kaolin. Core from 378.3 onwards is very badly sheared and broken with no piece exceeding 2" in length.
395.8	396.5	Aplite dyke as before upper contact pegmatitic over 1"
396.5	402.9	Granodiorite as above very badly broken and sheared, altered, more chloritic, minor sections with K-feldspar rich sections, chlorite carbonate and epidote and hematite along fracture faces.
402.9	406.0	This section mainly pegmatitic, badly broken, altered minor sections kaolin. Sections carbonate rich.
406.0	424.5	Altered and broken granodiorite - K-feldspar increase. Sections highly altered and kaolin as at 411.0. Minor hairlike fractures throughout at 45°-55°-L.C.A. Displaying minor K-feldspar alteration envelopes. 415-417.0 - numerous hairlike fractures @ 55°-L.C.A. Epidote minor K-feldspar alteration, minor carbonate.
424.5	425.0	Aplite Dyke.
425.0	448.3	Granodiorite as described above. All fractures at 45°-L.C.A. Very badly broken. 430.9-431.2 - numerous tiny hairline fractures at 45°-55°-L.C.A. Epidote and chlorite stained. 431.2 - patch of disseminated Cpy 5% Cpy over 1½" odd specks of Py also noted this section. 443.0 - tiny hairline fracture nearly parallel to core - chloritic.
448.3	453.2	Greyish - flesh coloured aplite dyke. Both contacts ground. Upper contact pegmatitic over 3".

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CANADIAN OCCIDENTAL PETROLEUM LTD.
 MINERALS DIVISION
DIAMOND DRILL RECORD

Lod. 74-1

LOCATION _____ DIRECTION _____ DIP _____ HOLE No. _____

LOGGED BY _____ CASING _____ SHEET No. 9

STARTED _____ CORE SIZE _____ CORRECTED TESTS _____

FINISHED _____

PROPERTY _____

FROM	TO	DESCRIPTION
453.2	456.6	Granodiorite as described above. Odd section included slightly more mafic and finer grained.
456.6	457.6	Pegmatite stringer - badly broken.
457.6	462.0	Granodiorite as before (above) 459.5-460.5 - altered, highly chloritic, minor hematite staining and tiny cubes Py. 460.5-461.0 - hairline fractures at 55°-L.C.A. Epidote and minor K-feldspar alteration.
		End of hole - 462.0
		Acid Test Taken

CANADIAN OCCIDENTAL PETROLEUM LTD.

MINERALS DIVISION

DIAMOND DRILL RECORD

Line 12+00S @ 15+00W
 LOCATION _____ DIRECTION Grid West DIP -45° HOLE No. 74-2
 LOGGED BY M.P. Henrick CASING 0-8' SHEET No. 1
 STARTED Nov. 26, 1974 CORE SIZE B.O. CORRECTED TESTS 405=42°
 FINISHED Nov. 29, 1974
 PROPERTY LODESTAR OPTION 99.1% recovery

FROM	TO	DESCRIPTION
0'	8'	Casing
8	75.7	Pegmatitic variety, coarse grained granodiorite. Grey to flesh coloured, less mafic than other granodiorite. Odd highly mafic segregated section throughout. Very minor up to 4" maximum. Rather uniform with minor irregular hairline fractures, very little alteration. Odd minor patches Py throughout. Minor CaCO ₃ . Rather pegmatitic throughout with large euhedral feldspar crystals -up to ½" in size. Several feldspar phenocrysts twinned. Minor limonite staining in upper footages. Minor sections with diss. Py throughout.
75.7	76.1	Grey to flesh coloured fine grained granodiorite, less mafic, more siliceous, very fine diss. Py and very fine diss. Mo noted.
76.1	87.5	Granodiorite as above (8-75.7)
87.5	90.0	Aplite dyke. Badly broken and ground. Upper portion pegmatitic porphyritic texture throughout
90.0	104.6	Granodiorite as above, slightly less pegmatitic with only odd larger feldspar phenocrysts.
104.6	104.8	Pegmatitic stringer @ 20°-L.C.A.
104.8	107.2	Granodiorite as above. Uniform minor irregular fractures. Minor alteration (CaCO ₃) along fractures. Odd minor sections included are finer grained and more siliceous up to 1" in Py.
107.2	107.3	Pegmatitic stringer @ 30°-L.C.A. Odd minor section slightly porphyritic with plagioclase phenocrysts up to 1/16" in size. Minor shears nearly parallel to core with chlorite along shears. Sections broken with minor hematite staining.
107.3	198.1	Uniform granodiorite as above with minor up to 2", more siliceous sections throughout.

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CANADIAN OCCIDENTAL PETROLEUM LTD.
 MINERALS DIVISION
DIAMOND DRILL RECORD

Lod. 74-2

LOCATION _____ DIRECTION _____ DIP _____ HOLE No. _____

LOGGED BY _____ CASING _____ SHEET No. 2

STARTED _____ CORE SIZE _____ CORRECTED TESTS _____

FINISHED _____

PROPERTY _____

FROM	TO	DESCRIPTION
198.1	210.7	Light grey to flesh coloured (slightly porphyritic) silica rich granodiorite with euhedral to subhedral plagioclase phenocrysts - less mafics. Biotite appearing as tiny flecks. Minor up to 1" quartz rich section, randomly and irregularly fractured, no alteration. Noted tiny cubes of Py throughout.
210.7	229.8	Medium grained, grey to medium grey typical uniform granodiorite. Upper contact highly mafic over 1". Minor irregular fractures between 45° and 30° to L.C.A. with minor epidote and limonite staining very minor CaCO ₃ .
229.8	232.6	Fine grained flesh coloured quartz rich aplite dyke contacts @ 40°-L.C.A.
232.6	234.0	Granodiorite as above.
234.0	234.2	Aplite as above. Contacts @ 35°-L.C.A.
234.2	249.6	Granodiorite as above (198.1-210.7) randomly and irregularly fractured, with alteration along fractures. Minor epidote and CaCO ₃ .
249.6	256.6	Typical granodiorite highly sheared and altered sections, highly chloritic, minor slickensides, hematite stain in sections, fractured and broken irregularly and randomly. Odd fracture with minor K-feldspar alteration envelopes. Very fine cubes of Py throughout. 251.8-252.6 - fault gouge kaolin material, highly chloritic, hematite staining, minor slickensides. Slightly conductive when checked with ohm meter.
256.6	265.8	Light grey to flesh coloured granodiorite as above (198.1-210.7), badly broken and sheared sections kaolin, minor limonite and CaCO ₃ , tiny cubes Py.

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CANADIAN OCCIDENTAL PETROLEUM LTD.
 MINERALS DIVISION
DIAMOND DRILL RECORD

Lod. 74-2

LOCATION _____ DIRECTION _____ DIP _____ HOLE No. _____
 LOGGED BY _____ CASING _____ SHEET No. 3
 STARTED _____ CORE SIZE _____ CORRECTED TESTS _____
 FINISHED _____
 PROPERTY _____

FROM	TO	DESCRIPTION
265.8	268.3	Typical grey uniform medium grained granodiorite, randomly and irregularly fractured with minor CaCO ₃ (broken and fractured) badly throughout.
268.3	278.6	Granodiorite as above (256.6-265.8) Badly broken and fractured. Minor CaCO ₃ .
278.6	304.3	Typical granodiorite as above (265.8-268.3) Irregularly and randomly fractured with several shears running nearly parallel to core. Shears with slickensides, minor Py and chlorite on planes. Minor hematite and quartz carbonate. Sections badly broken and kaolin included. Core highly altered from 278.6 onward. 290.2-290.9 - 3 - 1" stringers aplite @ 60°-L.C.A. Bottom 3" at contact friable and kaolin.
304.3	314.3	Granodiorite as above (256.6-265.8) flesh coloured, finer grained. Specks biotite. Quartz rich. Bottom contact pegmatitic over 1" sections slightly porphyritic with euhedral plagioclase crystals up to 1/8" in size. Badly broken and randomly and irregularly fractured with minor CaCO ₃ .
314.3	325.8	Typical granodiorite as above (278.6-304.3) with minor CaCO ₃ .
325.8	351.5	Granodiorite as above (304.3-314.3) badly broken. Leucocratic with minor CaCO ₃ . Odd minor up to 2" pegmatitic stringers included. Core in sections badly broken and altered with minor sections friable and kaolin. CaCO ₃ throughout
351.5	351.8	Aplite dyke @ 45°-L.C.A.
351.8	376.4	Grey medium grained typical granodiorite, sections highly altered, friable and kaolin. Core quite badly broken with numerous irregular and random fractures with CaCO ₃ , chlorite, minor hematite. Odd fractures with minor K-feldspar salvages very small and slight.
376.4	376.9	Aplite grey fine grained contacts @ 40°-L.C.A.

CANADIAN OCCIDENTAL PETROLEUM LTD.

MINERALS DIVISION

DIAMOND DRILL RECORD

Lod. 74-2

LOCATION _____ DIRECTION _____ DIP _____ HOLE No. _____

LOGGED BY _____ CASING _____ SHEET No. 4

STARTED _____ CORE SIZE _____ CORRECTED TESTS _____

FINISHED _____

PROPERTY _____

FROM	TO	DESCRIPTION
376.9	394.7	Granodiorite as above (351.8-376.4) Minor shears with hematite and slickensides. Sections highly altered and chloritic near lower contact lower contact ground.
394.7	399.7	Grey to flesh coloured aplite dyke, upper contact slightly porphyritic, broken and fractured with minor CaCO ₃ .
399.7	405	Granodiorite as above, possibly foliated at 40° - L.C.A. 405 - End of Hole

CANADIAN OCCIDENTAL PETROLEUM LTD.

MINERALS DIVISION

DIAMOND DRILL RECORD

Line 36+00S ± 5+00E LOCATION DIRECTION Grid West DIP -45° Lod. 74-3
 HOLE No. LOGGED BY M.P. Henrick CASING 0-15 SHEET No. 1
 STARTED Dec. 1, 1974 CORE SIZE B.O. CORRECTED TESTS 400=37°
 FINISHED Dec. 7, 1974
 PROPERTY LODESTAR OPTION 100% Recovery

FROM	TO	DESCRIPTION
0'	15'	Casing
15	24.8	Medium grained, grey to dark grey, uniform, quite mafic granodiorite. Hornblende altered to biotite in sections. Sections where fractured are altered SI, friable, abundant CaCO ₃ . Minor up to 4" aplite dykes throughout, the majority fine grained and slightly porphyritic in sections, sharp contacts at 60°-L.C.A. Minor odd fracture with minor epidote and very minor K-feldspar, salvages. Very odd minor speck Cpy noted.
24.8	25.1	Flesh colored to light grey, fine grained aplite dyke @ 60°-L.C.A. Lower contact fractured with minor CaCO ₃
25.1	35.8	Granodiorite as above.
35.8	36.0	Aplite as above. Slightly more porphyritic @ 60°-L.C.A.
36.0	68.7	Granodiorite as above. 45.4-49.5 - core this section broken and fractured, CaCO ₃ and minor epidote. Many hairline fractures nearly parallel to core. 50-68.7 - several minor fractures throughout at 25°-L.C.A. Minor epidote and very minor K-feldspar salvages.
68.7	68.9	Aplite as above. Slightly more porphyritic contacts @ 60°-L.C.A.
68.9	77.8	Granodiorite as above. Only slightly fractured with minor CaCO ₃ , epidote and K-feldspar, salvages.
77.8	77.9	Aplite dyke @ 60°-L.C.A. Slightly more porphyritic with large cubes Py up to 1/16" in size.
77.9	80.8	Uniform granodiorite as above
80.8	80.9	Aplite dyke pegmatitic @ 60°-L.C.A.

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CANADIAN OCCIDENTAL PETROLEUM LTD.
 MINERALS DIVISION
DIAMOND DRILL RECORD

Lod. 74-3

LOCATION _____ DIRECTION _____ DIP _____ HOLE No. _____
 LOGGED BY _____ CASING _____ SHEET No. 2
 STARTED _____ CORE SIZE _____ CORRECTED TESTS _____
 FINISHED _____
 PROPERTY _____

FROM	TO	DESCRIPTION
80.9	81.5	Highly altered chloritic granodiorite. Minor CaCO ₃ and epidote, fine grained, dark grey to greenish, highly chloritic.
81.5	94.8	Grey to dark grey, medium grained, uniform granodiorite - this section slightly more fractured with minor CaCO ₃ . Minor epidote and minor K-feldspar salvages. Majority of hairline fractures are at 15°-30° to the L.C.A. Odd section altered with minor limonite staining.
		(more fracturing)
94.8	95.2	Aplite dyke @ 60° to L.C.A.
95.2	99.2	Granodiorite as above.
99.2	99.4	Aplite as above
99.4	111.4	Granodiorite as above with minor fractures at 60° to L.C.A. Epidote, CaCO ₃ and minor K-feldspar salvages.
111.4	111.5	Aplite as above @ 60° to L.C.A.
111.5	189	Granodiorite as above, very similar fractures. with a slightly greater frequency of fractures. 178.5-179.5 - 3 - 1/4" pegmatitic stringers evenly spaced and at 30°-L.C.A.
189.0	189.8	Pegmatite stringer @ 35°-L.C.A. Fractured slightly with chlorite along fractures. Large blebs chlorite throughout up to 1/16" in size.
189.8	243.8	Granodiorite as above, uniform colour, texture and composition. Odd section fractured with epidote, minor hematite. Quartz and CaCO ₃ sections with greater % fractures slightly altered. All fractures this section @ 30°-L.C.A. 206.5-209.4 - section altered and sheared. Numerous minor tiny hairline fractures randomly throughout (epidote CaCO ₃ and K-feldspar minor). Kaolin sections included.
243.8	245	Pink pegmatitic stringer randomly fractured with epidote and CaCO ₃ . Contacts @ 30°-L.C.A.

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CANADIAN OCCIDENTAL PETROLEUM LTD.
 MINERALS DIVISION
DIAMOND DRILL RECORD

Lod. 74-3

LOCATION _____ DIRECTION _____ DIP _____ HOLE No. _____

LOGGED BY _____ CASING _____ SHEET No. 3

STARTED _____ CORE SIZE _____ CORRECTED TESTS _____

FINISHED _____

PROPERTY _____

FROM	TO	DESCRIPTION
245	282.6	Granodiorite as above slightly more altered, laced with numerous hairline fractures, irregular and randomly spaced epidote, CaCO ₃ and K-feldspar Alteration in sections throughout ³ kaolin.
282.6	282.9	Aplite dyke @ 45°-L.C.A. Upper contact porphyritic
282.9	290.1	Uniform dark grey, medium grained granodiorite.
290.1	291.2	Aplite dyke with minor inclusions granodiorite. Contacts @ 45°-L.C.A.
291.2	312.8	Granodiorite as above with minor sections altered chloritic with minor CaCO ₃ . Minor kaolin sections.
312.8	313.6	Aplite dyke @ 30°-L.C.A.
313.6	380.6	Granodiorite with sections up to 6" altered, finer grained, chloritic, hairline fractures throughout. Minor CaCO ₃ . Minor muscovite.
380.6	381.0	Fine grained aplite dyke, badly broken and slightly ground.
381.0	384.6	Granodiorite as above
384.6	386	Aplite as above fine grained. Contacts at 40°-L.C.A.
386.0	391.9	Medium grained uniform granodiorite with minor hairline fractures, majority irregular with minor CaCO ₃ , epidote and K-feldspar salvages. Slightly less mafic than granodiorite above.
391.9	392.4	Fine grained aplite @ 70°-L.C.A.
392.4	400.0	Granodiorite, uniform, less mafic, very minor fracturing, very minor CaCO ₃ and K-feldspar alteration.
		End of Hole 400' Acid Test Taken

CANADIAN OCCIDENTAL PETROLEUM LTD.

MINERALS DIVISION

DIAMOND DRILL RECORD

Line 16+00S @ 5+00E
 LOCATION _____ DIRECTION Grid West DIP -45° Lod. 74-4
 HOLE No. _____

LOGGED BY M.P. Henrick CASING 0-18' SHEET No. 1

STARTED Dec. 10, 1974 CORE SIZE B.O. CORRECTED TESTS 400.6=38°

FINISHED Dec. 17, 1974

PROPERTY LODESTAR OPTION 100% core recovery

FROM	TO	DESCRIPTION
0'	18'	Casing
18	20.2	Flesh coloured aplite dyke. Slightly porphyritic Contact @ 40°-L.C.A.
20.2	122.3	Grey to dark grey medium grained granodiorite, uniform throughout. Near massive with minor irregular and random fractures. Majority of fractures @ 40°-50°-L.C.A. Minor epidote, limonite and CaCO ₃ . Very minor, small K-feldspar alteration. Salvages along odd fracture. Minor patch and specks Cpy as at 35.8 Several hairlike fractures and nearly parallel to core between 60' and 65'. Odd minor pegmatite stringer as at 44.8'. Minor sections altered in areas of intense fracturing. Odd minor sections vaguely foliated at 45°-L.C.A. Majority of fractures at 45°-L.C.A.
122.3	132.3	Aplite dyke randomly and irregularly fractured sections, porphyritic in sections, upper contact pegmatitic over 1 foot. Contacts at 45°-L.C.A. Minor epidote along odd fractures. Minor quartz carbonte.
132.3	146.2	Granodiorite as described above wsth shears and alteration. 141-145 - core this section altered with 4 shear zones (tiny) @ 45°-L.C.A. Hematite CaCO ₃ and quartz in shears. All shear zones about 1" in size. Minor epidote and chlorite and minor K-feldspar salvages.
146.2	146.5	Aplite dyke at 45°-L.C.A., lower ½ of dyke porphyritic.

CANADIAN OCCIDENTAL PETROLEUM LTD.

MINERALS DIVISION

DIAMOND DRILL RECORD

Lod. 74-4

LOCATION _____ DIRECTION _____ DIP _____ HOLE No. _____

LOGGED BY _____ CASING _____ SHEET No. 2

STARTED _____ CORE SIZE _____ CORRECTED TESTS _____

FINISHED _____

PROPERTY _____

FROM	TO	DESCRIPTION
146.5	199.0	Granodiorite as above, foliated vaguely with minor shears as described above at 45°-L.C.A. at 150.0 155.0 (shears chloritic with CaCO ₃ and 156.0 epidote in sections, very minor Py) 153.5 165.6 189.2 190.4 Minor hematite and odd shear with slickensides and minor gouge slightly.
199.0	199.4	Aplitic dyke @ 45°-L.C.A., fine grained at contacts and pegmatitic in centre.
199.4	233.4	Granodiorite as above with minor fracturing and shearing at 45°-L.C.A.
233.4	233.5	Aplite stringer @ 60°-L.C.A.
233.5	237.8	Granodiorite as above.
237.8	249.8	Grey to flesh coloured aplite dyke, broken and randomly fractured, minor epidote and CaCO ₃ . Upper contact pegmatitic over 4". Sections porphyritic throughout. Contacts at 35°-L.C.A.
249.8	256.2	Granodiorite as above, uniform, dark grey, minor fractures, majority of fractures at 45°-L.C.A. Vaguely foliated, minor CaCO ₃ .
256.2	272.6	Aplite dyke, slightly porphyritic, fine grained sections slightly porphyritic. Broken and slightly fractured CaCO ₃ on odd minor fracture. Broken, contacts at 30°-L.C.A.
272.6	275.3	Granodiorite as above, slightly darker and more mafic. Massive (little fracturing)
275.3	275.6	Aplite stringer @ 80°-L.C.A.
275.6	279.9	Granodiorite as above.

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CANADIAN OCCIDENTAL PETROLEUM LTD.
 MINERALS DIVISION
DIAMOND DRILL RECORD

Lod. 74-4

LOCATION _____ DIRECTION _____ DIP _____ HOLE No. _____
 LOGGED BY _____ CASING _____ SHEET No. 3
 STARTED _____ CORE SIZE _____ CORRECTED TESTS _____
 FINISHED _____
 PROPERTY _____

FROM	TO	DESCRIPTION
279.9	280.9	Aplite dyke. Contacts at 45°-L.C.A.
280.9	295.5	Granodiorite as above with odd minor small hairline fracture at 45°-L.C.A. with minor epidote and pyrite.
295.5	308.7	Aplite dyke. Greyish to flesh coloured, fine grained, broken, and minor fractures (epidote minor). Cubes Py on lower contact.
308.7	321.3	Granodiorite as above
321.3	326.0	Aplite dyke, upper contact pegmatitic over 3". Contacts @ 35°-L.C.A.
326.0	326.8	Granodiorite as above, altered slightly and fractured slightly with chlorite and CaCO ₃ along irregular fractures.
326.8	327.3	Pegmatite stringer at 45°-L.C.A.
327.3	331.7	Massive to near massive uniform granodiorite as above. Vaguely foliated at 45°-L.C.A., very minor fractures with minor epidote and very minor Py.
331.7	331.8	Aplite stringer at 75°-L.C.A.
331.8	388.0	Granodiorite as above, just slightly fractured. Minor epidote CaCO ₃ , quartz, majority of fractures at 45°-60°-L.C.A. 356.7-378.0 - core this section highly altered 50% friable and highly chloritic and kaolin abundant slickensides.
388.0	388.3	Pegmatitic stringer, contacts at 45°-L.C.A.
388.3	390.3	Fine grained aplite dyke, contacts at 45°-L.C.A.
390.3	400.6	Granodiorite as above, rather uniform, slightly fractured with random irregular hairline fractures, minor CaCO ₃ .
		400.6 - End of HOLE
		Acid Test Taken

Appendix III

Interior Diamond Drilling Personnel

Norman Mraz	Foreman
Dennis Mraz	Running Foreman
Harry McLachlan	Helper (Runner)
Ronald Mraz	Runner
Eric Hardwick	Helper (water truck driver)
Stan Etter	Helper
Ralph Ajas	Helper

Appendix IV

Statistics of Work Completed

Diamond Drilling

Number of holes	4
Total footage drilled	1667.6
Number of days spent drilling	28
Number of days spent moving and setting up	11
Number of hours spent hauling water	202.5
Number of truck hours spent hauling Crawler	10.5
Number of hours of Crawler work	38.5
Number of Split core samples	298
Number of geochemical analyses	596
Number of core boxes used	71

Costs of Diamond Drilling

Mobilization and Demobilization	\$	250.00
Preparation of roads and drill sites		799.75
Water haulage 202.5 hrs.		3,037.50
Diamond drilling		21,671.00
Acid dip tests		80.00
Analytical costs and freight		841.10
Transportation		263.28
Supervision		<u>2,058.00</u>
Total drilling cost	\$	<u>28,980.63</u>
Average total cost per foot	\$	<u>17.38</u>



BONDAR-CLEGG & CO. COMPANY LTD.

1500 PEMBERTON AVE., NORTH VANCOUVER, B.C. PHONE: 985-0681 TELEX: 04-54554

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Geochemical Lab Report

DEC 9 1974

Extraction Hot Aqua Regia Report No. 24 - 916 PROJECT 5754
 Method Atomic Absorption From Canadian Occidental Petroleum
 Fraction Used -100 mesh Date Dec. 4 19 74

Lod. 74-1

Lod. 74-1

SAMPLE NO.	Cu ppm	Mo ppm	FOOTAGES		SAMPLE NO.	Cu ppm	Mo ppm	FOOTAGES	
26524	16	5	184-	189	26554	88	4	334-	339
26525	24	5	-	194	26555	129	1	-	344
26526	112	7	-	199	26556	25	2	-	349
26527	60	7	-	204	26557	194	5	-	354
26528	58	33	-	209	26558	117	7	-	359
26529	16	4	-	214	26559	125	7	-	364
26530	7	2	-	219	26560	20	7	-	369
26531	19	11	-	224	26561	20	6	-	374
26532	128	160	-	229	26562	26	6	-	379
26533	240	280	-	234	26563	164	10	-	384
26534	200	5	-	239	26564	430	12	-	389
26535	49	3	-	244	26565	156	750	-	394
26536	10	1	-	249	26566	200	14	-	399
26537	8	2	-	254	26567	275	27	-	404
26538	268	3	-	259	26568	960	105	-	409
26539	21	3	-	264	26569	37	24	-	414
26540	330	4	-	269	26570	24	13	-	419
26541	320	31	-	274	26571	12	12	-	424
26542	192	7	-	279	26572	8	11	-	429
26543	680	3	-	284	26573	410	19	-	434
26544	18	4	-	289	26574	57	17	-	439
26545	9400	230	-	249	26575	39	15	-	444
26546	1080	8	-	299	26576	20	66	-	449
26547	2450	7	-	304	26577	12	3	-	454
26548	28	1	-	309	26578	17	13	-	459
26549	200	2	-	314	26579	16	13	-	462
26550	139	4	-	319					
26551	13	1	-	324					
26552	149	1	-	329					
26553	72	2	-	334	cc Mr. M. Henrick				



BONDAR-CLEGG & CO. COMPANY LTD.

1500 PEMBERTON AVE., NORTH VANCOUVER, B.C. PHONE: 985-0881 TELEX: 04-54554

Geochemical Lab Report

JAN 10 1975

Extraction Hot Aqua Regia

Report No. 24 - 936 PROJECT: 5754

Method Atomic Absorption

From Canadian Occidental Petroleum Ltd.

Fraction Used -100 mesh

Date Jan. 7 19 75

Lod. 74-3

SAMPLE NO.	Cu ppm	Mo ppm	FOOTAGES	SAMPLE NO.	Cu ppm	Mo ppm	
26580	16	3	15-20	26610	18	13	-170
26581	18	3	-25	26611	21	3	-175
26582	17	2	-30	26612	20	2	-180
26583	17	2	-35	26613	20	2	-185
26584	19	1	-40	26614	31	3	-190
26585	16	1	-45	26615	22	2	-195
26586	18	1	-50	26616	21	2	-200
26587	18	1	-55	26617	19	2	-205
26588	18	2	-60	26618	38	2	-210
26589	16	3	-65	26619	18	2	-215
26590	18	1	-70	26620	20	3	-220
26591	24	2	-75	26621	18	3	-225
26592	36	2	-80	26622	16	2	-230
26593	23	2	-85	26623	39	3	-235
26594	21	3	-90	26624	20	2	-240
26595	19	2	-95	26625	18	1	-245
26596	18	2	-100	26626	26	2	-250
26597	24	1	-105	26627	27	2	-255
26598	19	2	-110	26628	16	2	-260
26599	16	1	-115	26629	22	2	0265
26600	15	3	-120	26630	19	3	-270
26601	20	3	-125	26631	18	2	-275
26602	18	2	-130	26632	19	2	-280
26603	28	3	-135	26633	18	2	-285
26604	26	2	-140	26634	23	3	-290
26605	17	2	-145	26635	16	2	-295
26606	25	3	-150	26636	22	3	-300
26607	18	2	-155	26637	22	6	-305
26608	16	2	-160	26638	12	3	-310
26609	15	2	-165	26639	15	3	-315

Geochemical Lab Report

Report No. 24 - 936

Page No. 2

Lod. 74-3

SAMPLE NO.	Cu ppm	Mo ppm	FOOTAGES	SAMPLE NO.	Cu ppm	Mo ppm		
26640	18	3	315- 320	26675	22	3	98	-103
26641	26	2	-325	26676	10	2		-108
26642	20	2	-330	26677	26	1		-113
26643	13	4	-335	26678	22	3		-118
26644	46	3	-340	26679	28	4		-123
26645	24	3	-345	26680	26	5		-128
26646	23	3	-350	26681	24	3		-133
26647	23	3	-355	26682	13	2		-138
26648	24	3	-360	26683	21	2		-143
26649	27	4	-365	26684	21	3		-148
26650	25	4	-370	26685	22	3		-153
26651	21	4	-375	26686	14	14		-158
26652	14	2	-380	26687	27	7		-163
26653	15	2	-385	26688	27	8		-168
26654	14	4	-390	26689	24	4		-173
26655	30	3	-395	26690	30	4		-178
26656	37	3	-400	26691	21	4		-183
26657	14	1	Lod. 8 74-2 - 13	26692	26	6		-188
26658	20	2	13 - 18	26693	22	3		-193
26659	68	2	18 - 23	26694	17	1		-198
26660	11	1	23 - 28	26695	1	1		-203
26661	17	2	28 - 33	26696	1	1		-208
26662	14	2	- 38	26697	11	1		-213
26663	22	2	- 43	26698	28	1		-218
26664	20	3	- 48	26699	24	5		-223
26665	12	1	- 53	26700	14	1		-228
26666	16	1	- 58	26701	4	1		-233
26667	37	1	- 63	26702	3	1		-238
26668	13	1	- 68	26703	2	2		-243
26669	24	8	- 73	26704	3	1		-248
26670	19	33	- 78	26705	14	ND		-253
26671	32	2	- 83	26706	9	1		-258
26672	26	3	- 88	26707	2	1		-263
26673	18	2	- 93	26708	6	1		-268
26674	22	5	- 98	26709	7	1		-273

Geochemical Lab Report

 Report No. 24 - 936

 Page No. 3

Lod. 74-2

Lod. 74-4

SAMPLE NO.	Cu ppm	Mo ppm	FOOTAGES	SAMPLE NO.	Cu ppm	Mo ppm	FOOTAGES
26710	1	1	273 -278	26745	30	4	-63
26711	6	ND	-283	26746	17	3	-68
26712	21	2	-288	26747	36	2	-73
26713	22	1	-293	26748	15	2	-78
26714	21	1	-298	26749	18	2	-83
26715	7	1	-303	26750	19	2	-88
26716	10	2	-308	26751	16	3	-93
26717	6	3	-313	26752	27	2	-98
26718	24	2	-318	26753	18	3	-103
26719	20	1	-323	26754	19	4	-108
26720	9	1	-328	26755	15	2	-113
26721	8	1	-333	26756	10	2	-118
				26757	13	3	-123
26722	7	3	-338	26758	3	2	-128
26723	4	1	-343	26759	2	1	-133
26724	2	6	-348	26760	13	2	-138
26725	4	2	-353	26761	36	3	-143
26726	16	2	-358	26762	42	2	-148
26727	8	3	-363	26763	21	3	-153
26728	10	ND	-368	26764	41	4	-158
26729	22	1	-373	26765	26	3	-163
26730	14	2	-378	26766	11	2	-168
26731	23	2	-383	26767	8	4	-173
26732	22	1	-388	26768	23	3	-178
26733	17	1	-393	26769	16	2	-183
26734	6	2	-398	26770	28	2	-188
26735	28	2	398 -402	26771	23	2	-193
26736	18	2	402 -405	26772	17	2	-198
26737	Lod. 74-4 13	1	18 - 23	26773	15	2	-203
26738	26	2	- 28	26774	16	4	-208
26739	20	2	- 33	26775	14	2	-213
26740	22	3	- 38	26776	15	2	-218
26741	16	2	- 43	26777	22	2	-223
26742	16	3	- 48	26778	20	2	-228
26743	21	3	- 53	26779	21	2	-233
26744	23	3	- 58	26780	24	1	-238

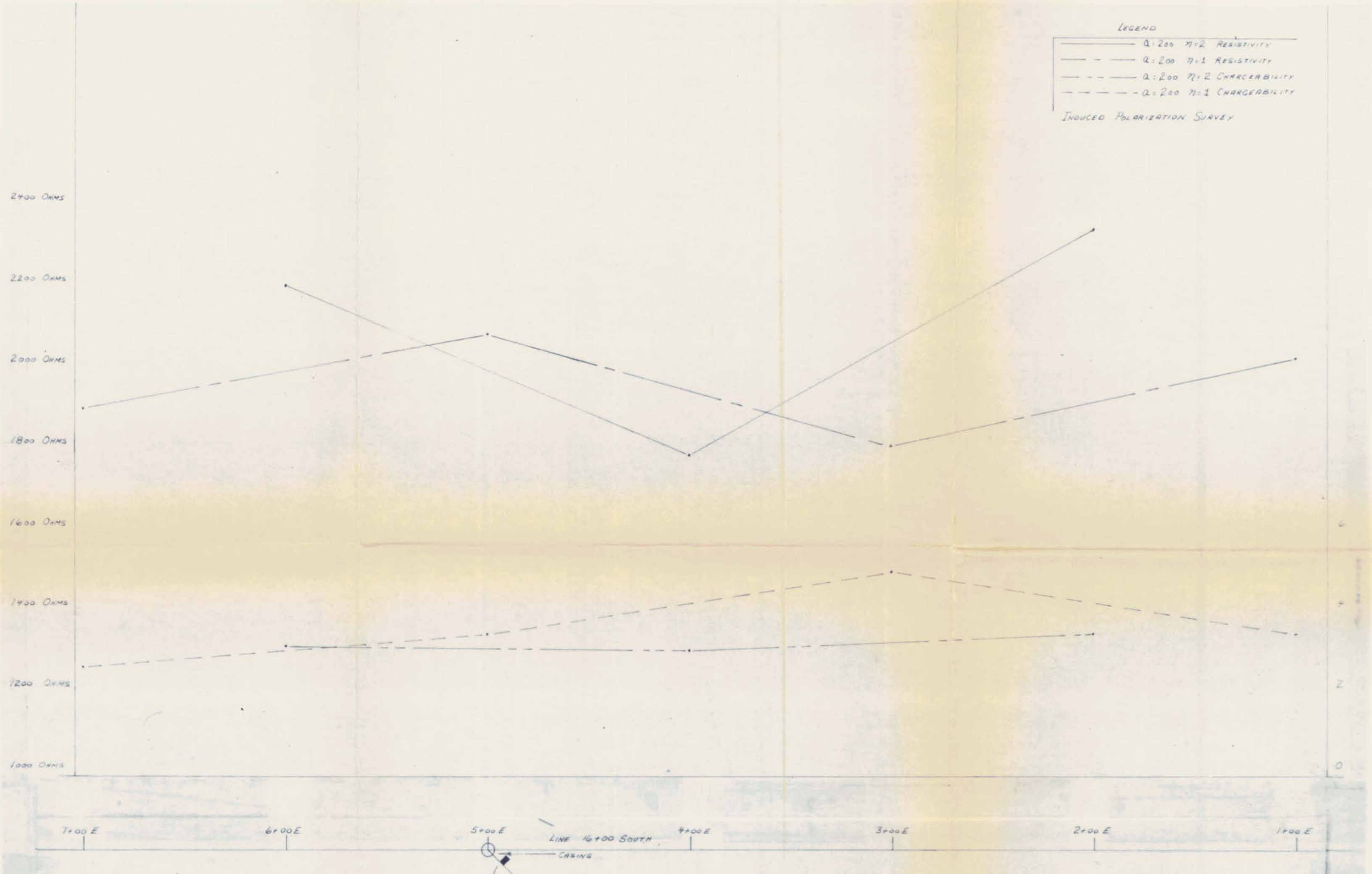
Geochemical Lab Report

Report No. 24 - 936

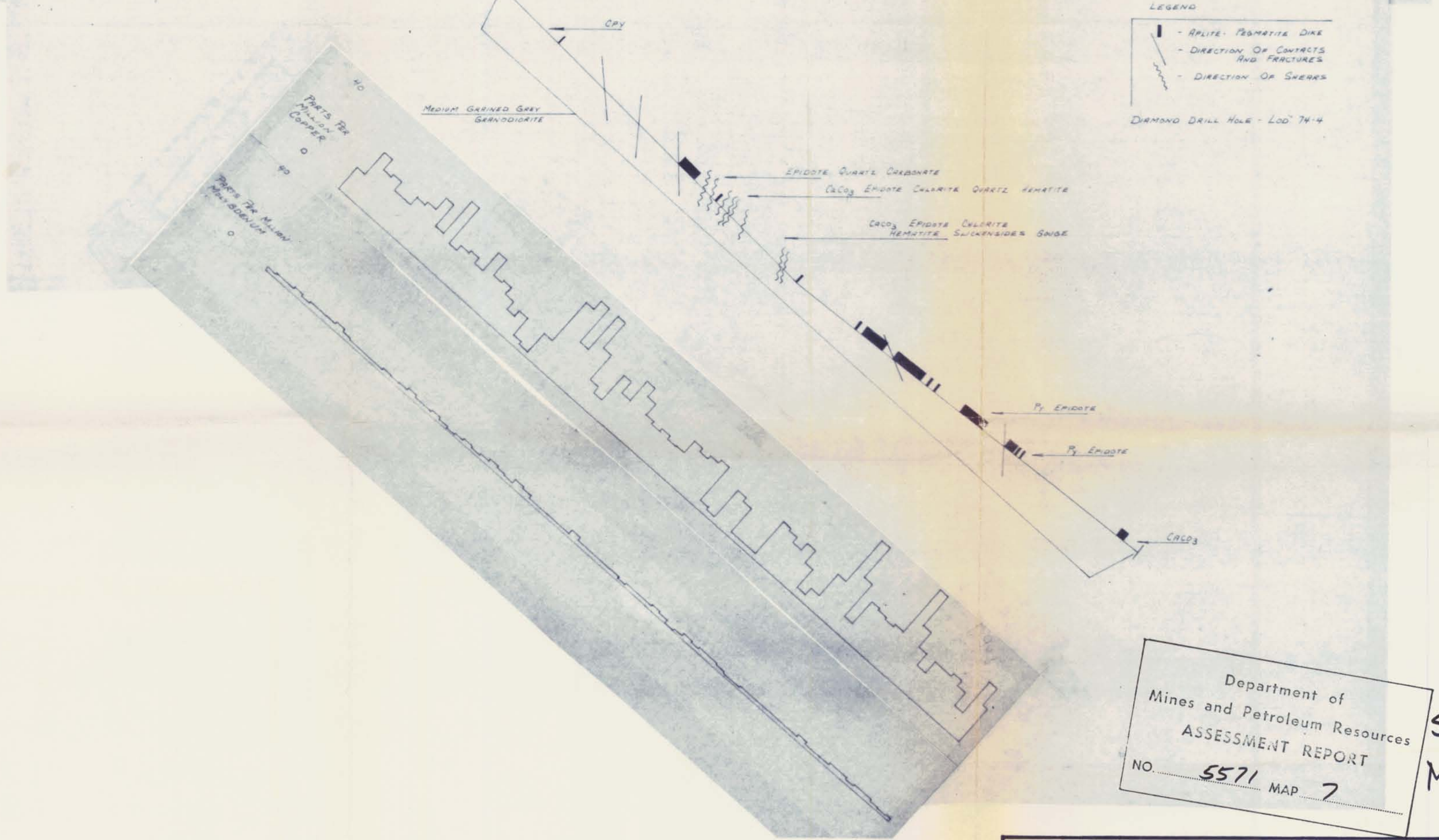
Page No. 4

Lod. 74-4

SAMPLE NO.	Cu ppm	Mo ppm	FOOTAGES	SAMPLE NO.			
26781	3	2	238 -243				
26782	2	2	-248				
26783	18	2	-253				
26784	16	3	-258				
26785	2	2	-263				
26786	2	ND	-268				
26787	2	1	-273				
26788	21	3	-278				
26789	20	2	-283				
26790	17	3	-288				
26791	21	3	-293				
26792	14	2	-298				
26793	3	1	-303				
26794	7	1	-308				
26795	20	2	-313				
26796	45	2	-318				
26797	27	2	-323				
26798	8	2	-328				
26799	21	2	-333				
26800	20	2	-338				
26801	19	2	-343				
26802	20	3	-348				
26803	46	2	-353				
26804	28	2	-358				
26805	20	2	-363				
26806	14	3	-368				
26807	20	3	-373				
26808	20	2	-378				
26809	21	3	-383				
26810	19	3	-388				
26811	11	2	-393				
26812	30	1	-398				
26813	20	2	-405				
26756*	10	2	113 -118	* This sample out of order			
				ND denotes 'not detected'			
				cc Mr. M. P. Henrick			



LEGEND
 - - - - Q=200 M=2 RESISTIVITY
 - - - - Q=200 M=1 RESISTIVITY
 - · - · Q=200 M=2 CHARGEABILITY
 - - - - Q=200 M=1 CHARGEABILITY
 INDUCED POLARIZATION SURVEY

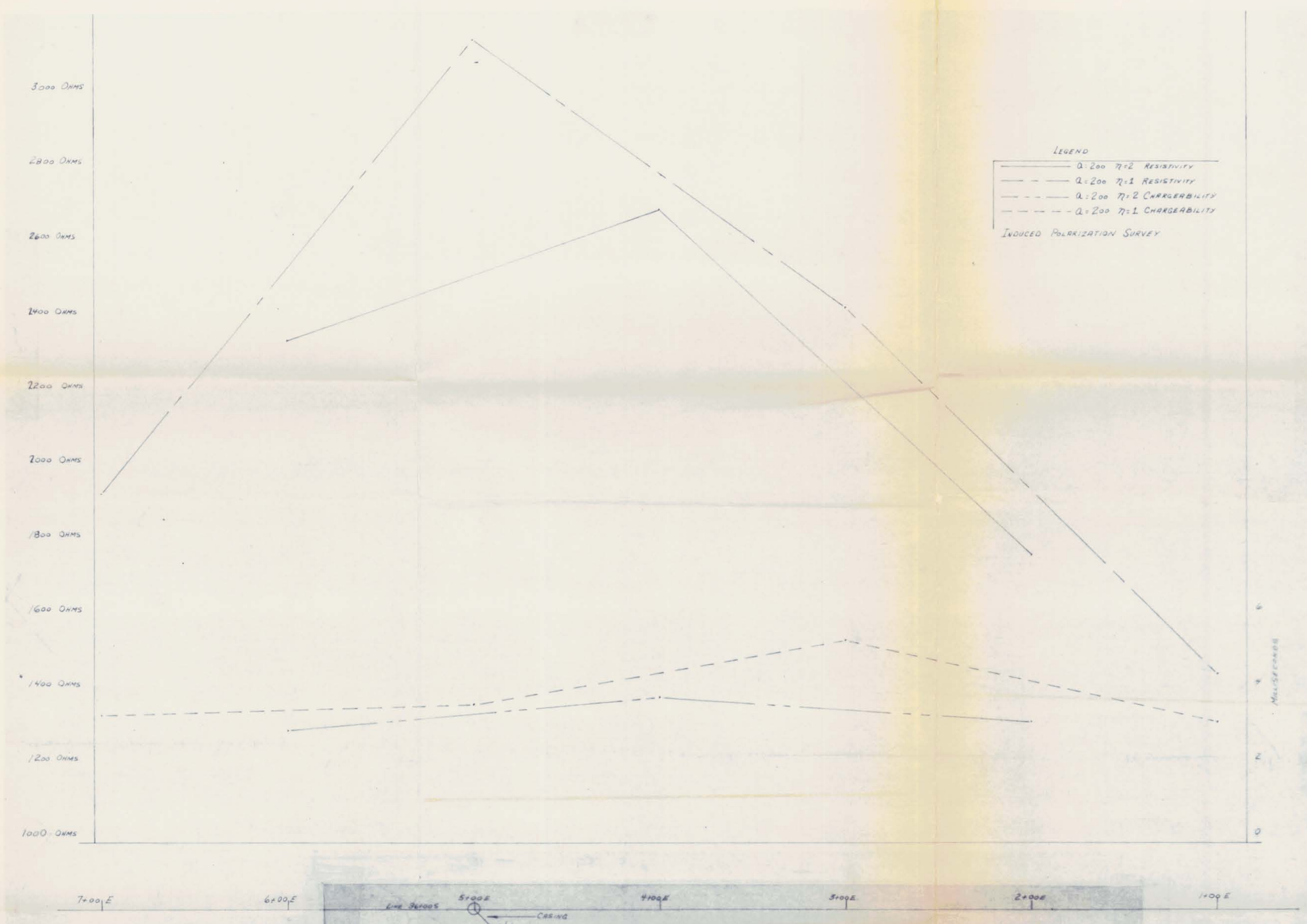


LEGEND
 - APLITE PERMITE DIKE
 - DIRECTION OF CONTACTS AND FRACTURES
 - DIRECTION OF SHEARS
 DIAMOND DRILL HOLE - LOD 74-4

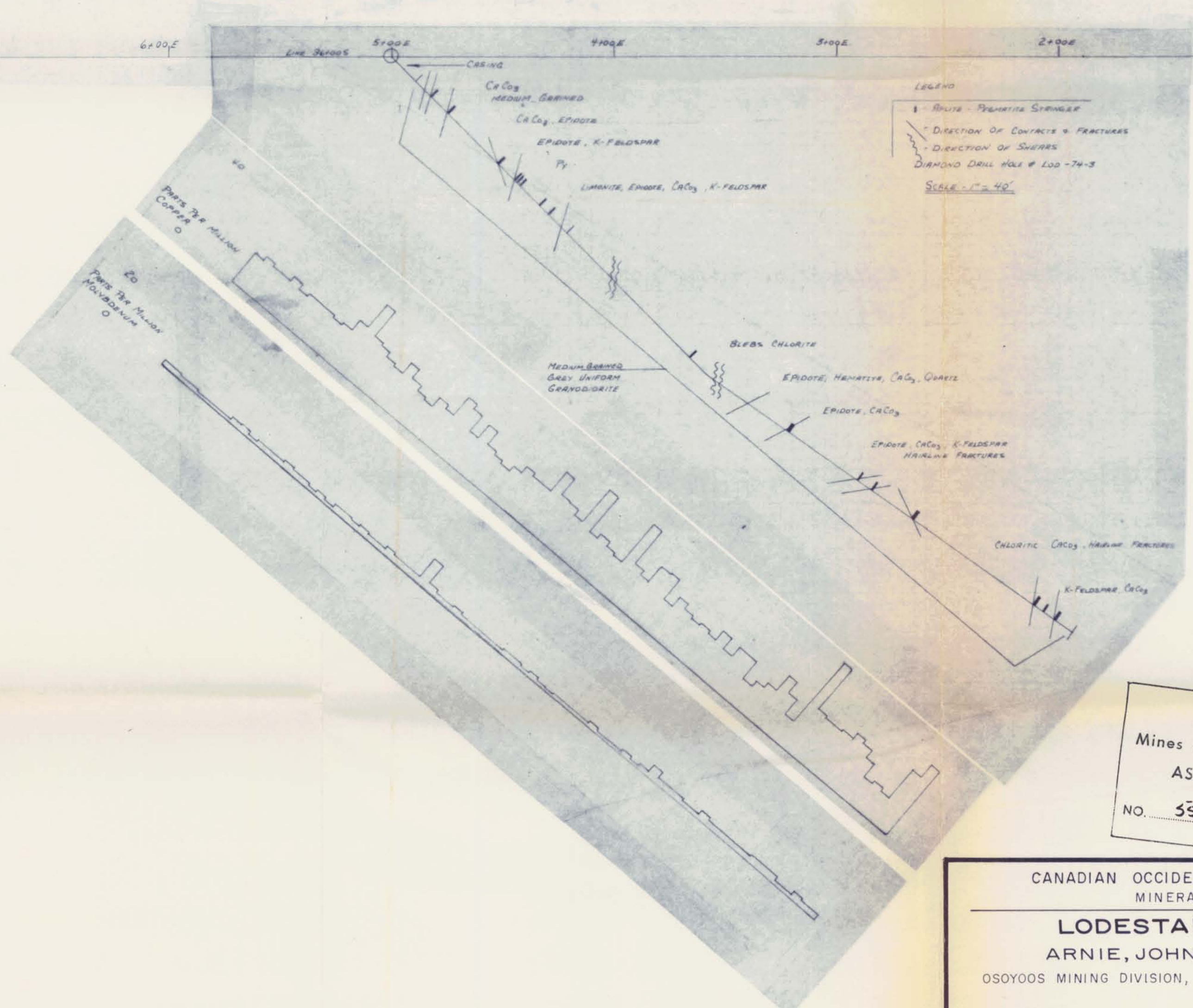
Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. 5571 MAP 7

5571
 MAP 7

CANADIAN OCCIDENTAL PETROLEUM LTD.
 MINERALS DIVISION
 LODESTAR PROPERTY
 ARNIE, JOHN & COL CLAIMS
 OSOYOOS MINING DIVISION, BRITISH COLUMBIA - 82-E-12/W
 RESULTS, DDH LOD-74-4
 SCALE - 1" = 40'



LEGEND
 — a=200 m=2 RESISTIVITY
 - - - a=200 m=1 RESISTIVITY
 - · - a=200 m=2 CHARGEABILITY
 · · · a=200 m=1 CHARGEABILITY
 INDUCED POLARIZATION SURVEY

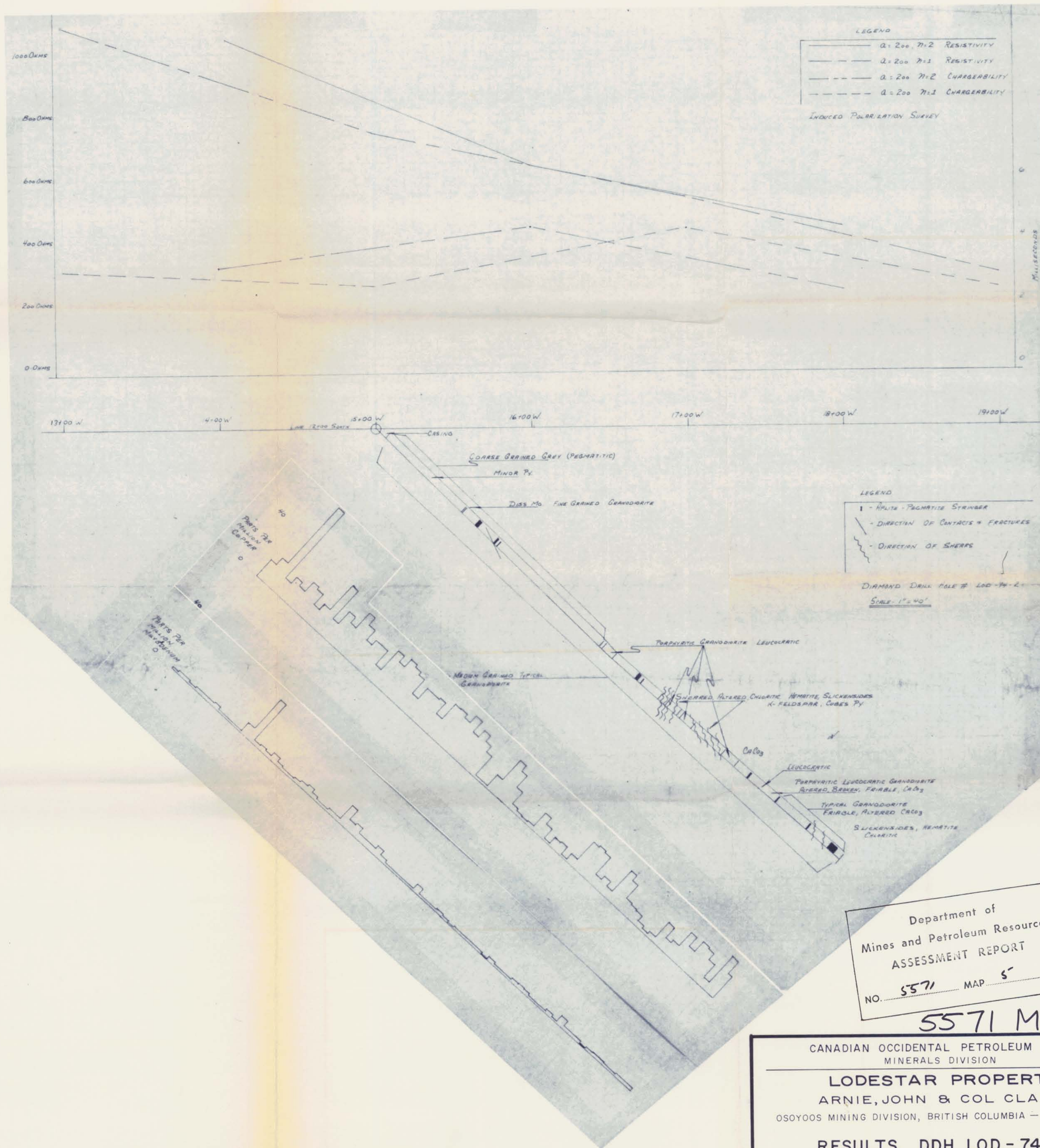


LEGEND
 — BLEBS - PYRITIC SPINDLES
 - - - DIRECTION OF CONTRACTS & FRACTURES
 · · · DIRECTION OF SLIP
 DIAMOND DRILL HOLES # LOD-74-3
 SCALE - 1" = 40'

5571
 MAP 6

Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. 5571 MAP 6

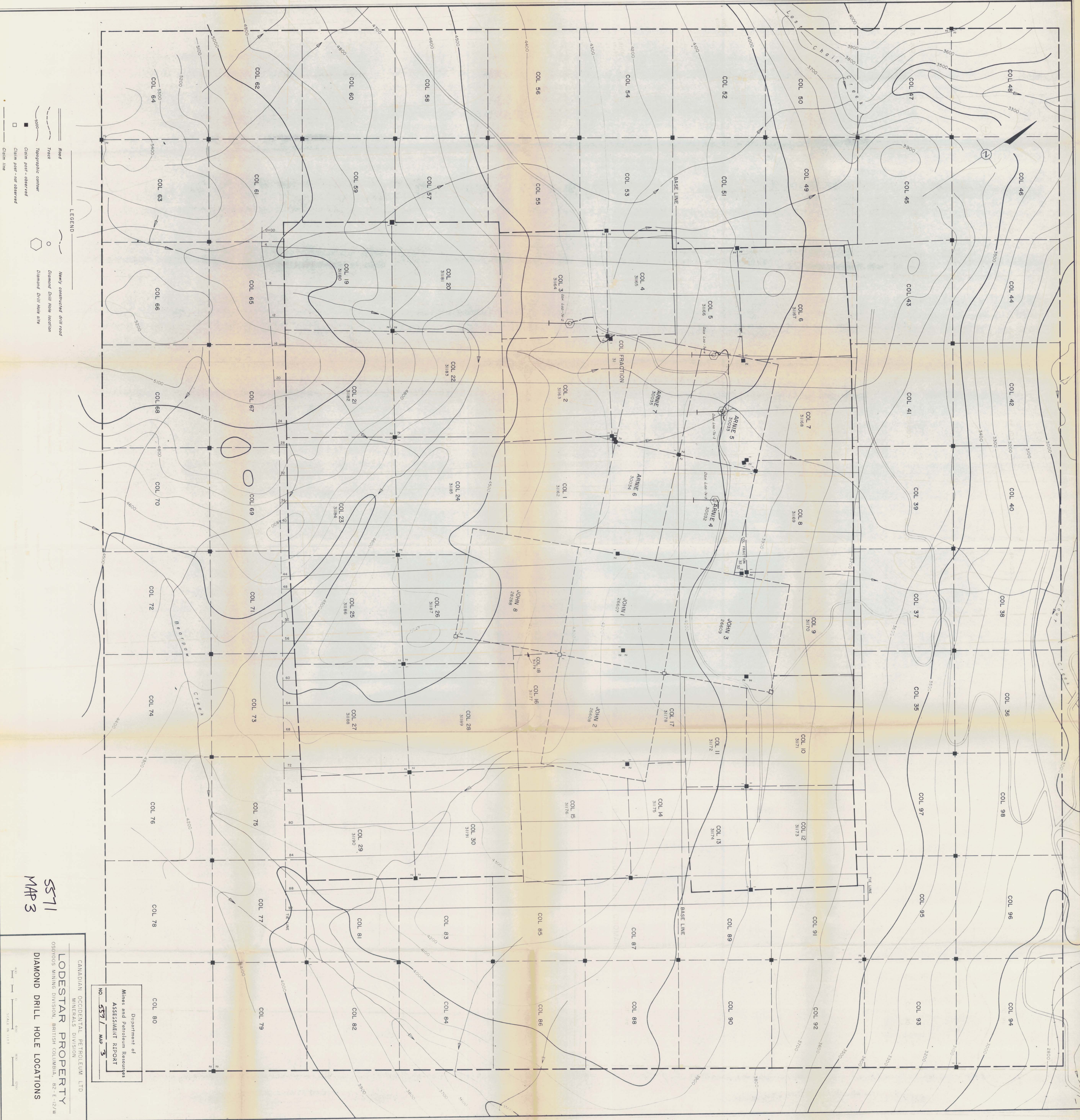
CANADIAN OCCIDENTAL PETROLEUM LTD.
 MINERALS DIVISION
LODESTAR PROPERTY
 ARNIE, JOHN & COL CLAIMS
 OSOYOOS MINING DIVISION, BRITISH COLUMBIA — 82-E-12/W
RESULTS, DDH LOD - 74-3
 SCALE — 1" = 40'



Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 5571 MAP 5

5571 MAPS

CANADIAN OCCIDENTAL PETROLEUM LTD.
MINERALS DIVISION
LODESTAR PROPERTY
ARNIE, JOHN & COL CLAIMS
OSOYOOS MINING DIVISION, BRITISH COLUMBIA - 82-E-12/W
RESULTS, DDH LOD-74-2
SCALE - 1" = 40'



SS71
MAP 3

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 5371 MAP 3

CANADIAN OCCIDENTAL PETROLEUM LTD.
MINERALS DIVISION
LODESTAR PROPERTY
OSD7005 MINING DIVISION, BRITISH COLUMBIA, 82-E-127W
DIAMOND DRILL HOLE LOCATIONS



