CANADIAN OCCIDENTAL PETROLEUM LTD.

MINERALS DIVISION

REPORT ON DIAMOND DRILL PROGRAM

KIPPEY CLAIMS 1-30

N.T.S. SHEET 53 G/5

30 MINING CLAIMS NOS. KRL 563970-563974 INCL.

KRL 570869-570893 INCL.

MUSKRAT DAM LAKE BELT

NORTHWESTERN ONTARIO

BY: A.W. MURDY, B.A.

COVERING WORK COMPLETED

JANUARY 16-29, 1984

MARCH 1984

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1. SUMMARY AND RECOMMENDATIONS

The 1984 winter drill program at Project Kippey involved drill testing the immediate area of the gossan zone trenching. Grab samples on this trench from the 1983 summer mapping program had returned values up to 4.06 oz/ton and a 1 metre chip sample in this area had given a gold analysis of 9,720 ppb or 0.28 oz/ton.

In the period January 16-29, 1984, Kenora Diamond Drilling completed 1,399 feet of A.Q. wireline type drilling in a three drill-hole program.

Drill holes were positioned to intersect VLF-EM conductors, anomalous magnetic units and Ah soil anomalies in the immediate area of the gossan zone from which the high gold values had been found. The drill core from these three holes was highly anomalous using the anomalous level of 20 ppb as determined from the summer mapping program. 48% of all core was anomalously high in gold. Each of the three drill holes intersected sub-economical gold values, values over 1000 ppb over minimum 5 foot width. The highlight was a small button of gold at 13.5 feet in a mafic tuff unit with minor sulphides and a fine network of quartz-carbonate stringers. This sample was kept as a hand specimen and not analysed. The other higher gold value was 2020 ppb gold or 0.06 oz/ton over 7.2 feet in drill hole KP-1-84 in a felsic tuff sericite altered with minor sulphides. Three other intersections were found, 1225 ppb over 5.0 feet in a 21.2 foot intersection of mafic tuff which averaged 500 ppb gold, 1050 ppb over 5.5 feet in an

intermediate tuff with minor feldspar porphyry and 1100 ppb over 7.8 feet in an intermediate tuff with narrow feldspar porphyry and quartz carbonate zones. Numerous intersections were found with gold values in the 200-600 ppb range.

The sub-economical values found are mainly in mafic to intermediate tuffaceous units. Sulphides are usually present in trace to 4% amounts with no correlation of higher sulphide concentration and higher gold values.

The winter drill program has been highly successful in this very small area of the Kippey property thus far tested. This is the only area of the Kippey property with outcrop exposure. The horizon tested thus far over a strike length of 300 m has a total strike length defined by geophysics of 6 km. The only method to explore this horizon will be with the diamond drill.

In the next phase of exploration approximately 3000 feet of drilling should be completed to further evaluate the area where high gold values have been found. A drill section of the Kippey property should be completed on Line 20+00N, 0+20E to 3+60E. This would use the existing drill hole, KP-2-84 but intersect the visible gold zone at depth. This would take three drill holes of approximately 1500 combined footage.

Another 1000 feet should be used to drill test under KP-1-84 and KP-3-84 backing the collar position up to intersect gold values at depth. Positions of these drill holes would be on Line 18+35N, 1+80E and Line 17+00N, 1+50E. The latter position would also intersect the sulphide zone trench where highly anomalous gold values were encountered. The last 500

foot hole, I would recommend positioning on Line 17+00N at 03+40E to intersect two VLF-EM conductors south of the gossan zone and give almost a complete drill section on Line 17+00N from 01+50E to 04+40E. This drilling should be combined with a program of surface trenching over the existing drill sections.

This drill program will only further evaluate a limited area of the Kippey property. A much more extensive program should be considered to drill test the numerous geophysical targets over the entire Kippey property.

2. INTRODUCTION

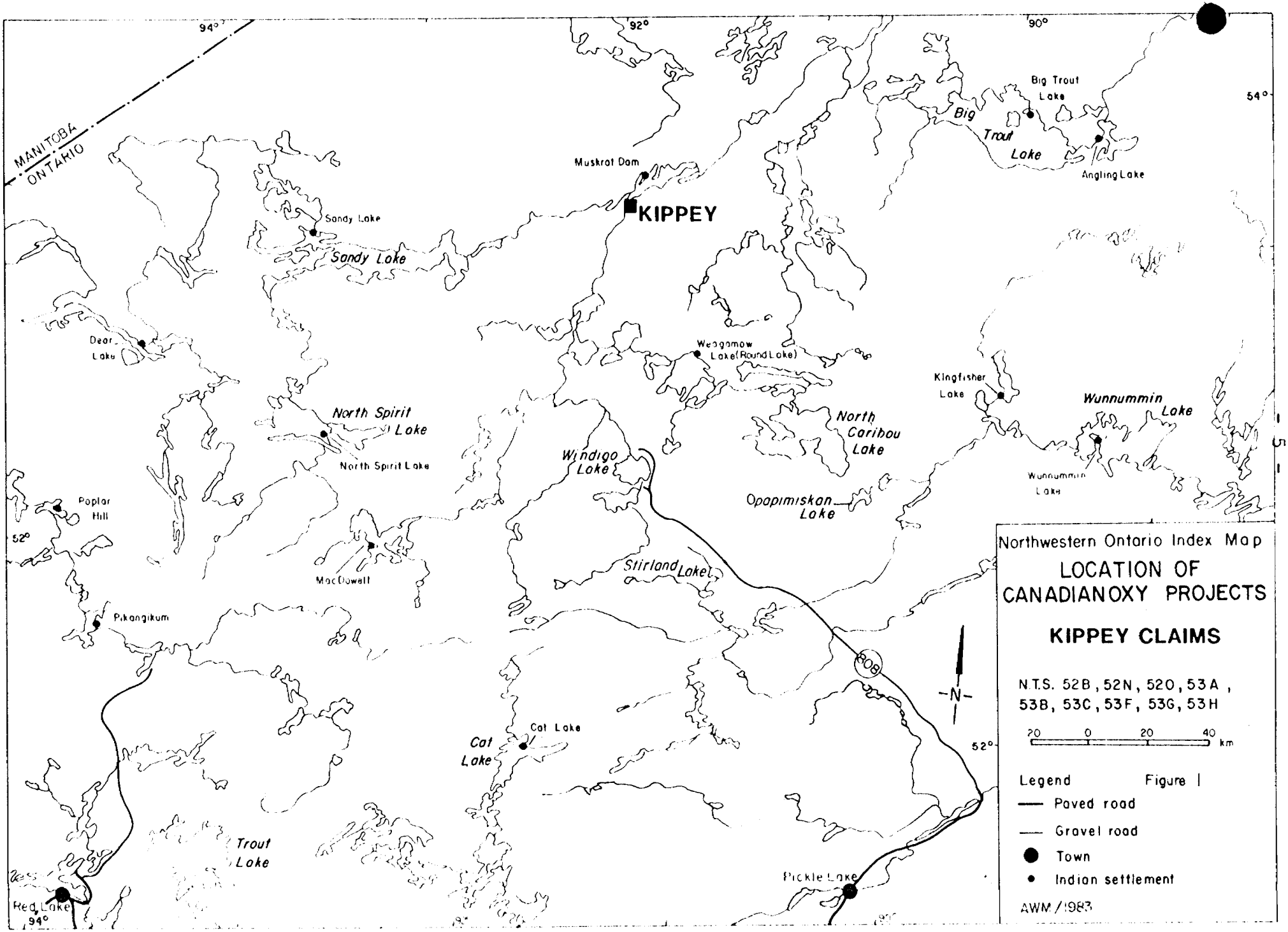
The Kippey property consists of 30 claims (480 hectares) acquired in November 1981. The claim group was acquired to cover a series of old trenches which had been visited and sampled in July and October 1981. Sample values of up to 29,500 ppb gold obtained in the trenches prompted the acquisition of the property.

In the period December 1981 - February 1982 a geophysical program was completed over the claim group.

In October 1983, a brief 3 hour visit was made to the trenches to resample the highest value of the 1981 work. Results, while being anomalous, were low. The highest analytical value obtained was 150 ppb Au.

In the period June 8-16, 1983, R.M. Kuehnbaum and A.W. Murdy mapped the Kippey property at a scale of 1:2000. Sixty-eight rock samples were collected during the mapping program. The only outcrop area was a ridge 1600 metres long by 400 metres wide on the southeast side of the Windigo River. Soil sampling was carried out on 4 lines, two on either side of the existing trenches. Ninety-eight A_h samples were taken at 10 metre intervals along these lines. The high gold value obtained in this summer program was 4.06 oz/ton over a very narrow width. This sample is from the same site as the 29,500 ppb gold sample obtained in October 1981 visit.

In January 1984, a three hole diamond drill program was completed. One drill hole was completed under the gossan zone trench. The other two were completed on strike but approximately 150 metres north and south of the gossan zone.


94°
92°
90°
54°
52°
MANITOBA
ONTARIO
Muskrat Dam
KIPPEY
Sandy Lake
Sandy Lake
Big Trout Lake
Big Trout Lake
Angling Lake
Dear Lake
Weagamow Lake (Round Lake)
Kingfisher Lake
Wunnummin Lake
North Spirit Lake
North Spirit Lake
North Caribou Lake
Windigo Lake
Wunnummin Lake
Opapimiskan Lake
Poplar Hill
MacDowell
Stirland Lake
Pikangikum
Cat Lake
Cat Lake
Trout Lake
Red Lake
Pickle Lake
808
-N-
Northwestern Ontario Index Map
LOCATION OF CANADIANOXY PROJECTS
KIPPEY CLAIMS
N.T.S. 52B, 52N, 52O, 53A, 53B, 53C, 53F, 53G, 53H
20 0 20 40 km
Legend
Figure 1
Paved road
Gravel road
Town
Indian settlement
AWM/1983

This report summarizes the results of the three drill hole program which has only partially evaluated a very small portion of the Kippey area.

2.1 Location and Access

The Kippey claims occupy approximately 1200 acres in the Muskrat Dam Lake area (N.T.S. map sheet 53G/5) in the Patricia Portion of the District of Kenora and is bounded by latitudes 53°19' and 53°21' North and by longitudes 91°47' and 91°40' West. Muskrat Dam Lake (just north of the claims area) is about 240 km (150 miles) north-northwest of Pickle Lake, about 368 km (230 miles) north of Sioux Lookout, and about 304 km (190 miles) north-northeast of Red Lake (see Figure 1).

The only rapid access to the area is by float or ski-equipped aircraft, which can be chartered at Sioux Lookout, Pickle Lake or Red Lake. A Green Airways single Otter aircraft was used for transportation.

Highway 808, a new all-weather road from Pickle Lake to Windigo Lake passes within 88 km (55 miles) to the southeast of the property. Winter haulage roads are used to transport heavy equipment into the area. The highway can be taken as far as Stirland Lake then aircraft can be chartered from either Sandy Lake or Round Lake to the claims area. Dome Mines Ltd. has asked for permission from the Ontario Ministry of Transportation to build a road from Highway 80 to their property at Opapimiskan Lake.

The Muskrat Dam Lake settlement (population 150) is located on the north shore of Muskrat Dam Lake, 6.5 km (4 miles) north-northeast of the Kippey claims. The settlement has a

nursing station and a public telephone. The Indian Reserve stretches from Sandhill Crane Island in the south, northeastwards to Smallfish Island in Spearfish Bay (see Plan 1).

2.2 Topography and Physiography

The property is on a low, flat-lying area. The Windigo River which flows northeast into Muskrat Dam Lake cuts the claim group diagonally. The maximum elevation of 294 metres above sea level occurs along a ridge 1500 m in length by 400 m in width southeast of the Windigo River. The minimum elevation is 270 metres above sea level along the Windigo River.

The claim group is covered by mature spruce forest 15-20 feet in height with jackpine, poplar, and scattered white birch on the slightly higher ridges. The river margins are quite swampy with low alders and open muskeg areas. A large open muskeg swamp is located east of the claim group.

2.3 Claims and Ownership

The Kippey property consists of 30 claims, total area of 480 hectares in the area of Kippen Lake, District of Kenora, Patricia Portion, Red Lake Mining Division, Plan No. M2902, National Topographical Sheet No. 53 G/5. The Kippey claims were acquired by staking in 1981 and are retained wholly in the interest of Canadian Occidental Petroleum Ltd.

TABLE 1

CLAIMS LIST

Claim Nos.	Date Recorded	Claims Nos.	Date Recorded
KRL 563970	Nov. 13/81	KRL 570897	Nov. 13/81
563971	"	570880	"
563972	"	570881	"
563973	"	570882	"
563974	"	570883	"
		570884	"
KRL 570869	"	570885	"
570870	"	570886	"
570871	"	570887	"
570872	"	570888	"
570873	"	570889	"
570874	"	570890	"
570875	"	570891	"
570876	"	570892	"
570877	"	KRL 570893	"
KRL 570878	"		
		TOTAL	480 hectares

2.4 Previous Work

The Muskrat Dam Lake Area (Geological Report 74) was mapped by L.D. Ayres for the Ontario Geological Survey in 1969 at a scale of 1 inch to ½ mile.

Texas Gulf Sulphur worked in the area in 1971. One drill hole report number 15 was collared in the southeast corner of the claim group. The location of the drill hole relative to the grid is Line 12+30N at 09+20E, has not been verified. This drill hole penetrated 25 feet of overburden. The rock units intersected were andesite with a narrow 6 foot felsic tuff unit which had 5% pyrrhotite over 2 feet. No analyses were given.

The area was visited in the summer and fall of 1981 by Canadian Occidental geologists. Results of their work are reported by K. Leonard in his report on the Geology and Geochemistry of the Kippey Claims, March 1982.

Ground magnetic and VLF-EM surveys were conducted by TechTerrex Inc. in the time period December 1981 to February 1982. The magnetic survey covered 154.5 line km and the VLF-EM survey covered 143.0 line km. A report by F.L. Jagodits on the Ground Geophysical Survey, Project Kippey dated December 1982, details the results of these surveys.

In the summer of 1983, R.M. Kuehnbaum and A.W. Murdy mapped and sampled the limited area of outcrop exposure on the Kippey claims southeast of the Windigo River. Results of the work are reported by A.W. Murdy in his report on the Geology and Geochemistry of the Kippey Claims September 1983.

3. WORK COMPLETED WINTER 1984

3.1 Diamond Drilling

Diamond drilling was performed by Kenora Diamond Drilling Limited of Kenora, Ontario. Two drill crews were involved in a twelve hour shift, seven days per week basis.

In the period January 16-29, 1984, the drill holes totalling 1,399 feet of A.Q. wireline type drilling were completed. The daily drilling ratio was 100 feet/day over the 14 day period.

3.2 Personnel

The winter drill program was conducted by A.W. Murdy, Project Geologist during the period January 16-29, 1984.

Personnel from Kenora Diamond Drilling Limited were:

Arnold Iverson	Foreman
Stan Comber	Runner
Ed Fontain	Runner
Lewis McMaracny	Helper
Olie Seversen	Helper

4. GEOLOGY

4.1 General Geology

Information on the regional setting of the Kippey property is taken from Geological Report 74 by L.D. Ayres (1969).

The Kippey property is located within the Muskrat Dam Lake Belt, Figure 2, Plan 1, a Precambrian metavolcanic-meta-sedimentary-metagabbroic assemblage bordered by composite granitic batholiths. The east trending Muskrat Dam Lake Belt has been mapped for a strike length of 65 miles, and generally ranges in width from 4 to 11 miles. The property is located east of the Windigo River within mafic metavolcanics near the contact of a granitic batholith. The mafic metavolcanics are on the north limb of a major syncline, the axis of which trends through the center of Muskrat Dam Lake and the eastern section of the belt.

The Windigo River Fault trending north-northwest has cut the Muskrat Dam Lake Belt into two segments. The vertical component of movement along the fault appears to have been greater than the horizontal component and the east side has apparently moved up relative to the west side. This has resulted in a topographic high of 10-30 metres with corresponding outcrops most noticeable just east of the eastern area of the Windigo River Fault. The property itself is located near the apparent termination of this eastern arm south of Muskrat Dam Lake.

The belt has been regionally metamorphosed and the grade of metamorphism ranges from the middle greenschist to the middle almandine-amphibolite facies. The granitic batholiths superimposed hornblende hornfels facies contact metamorphic

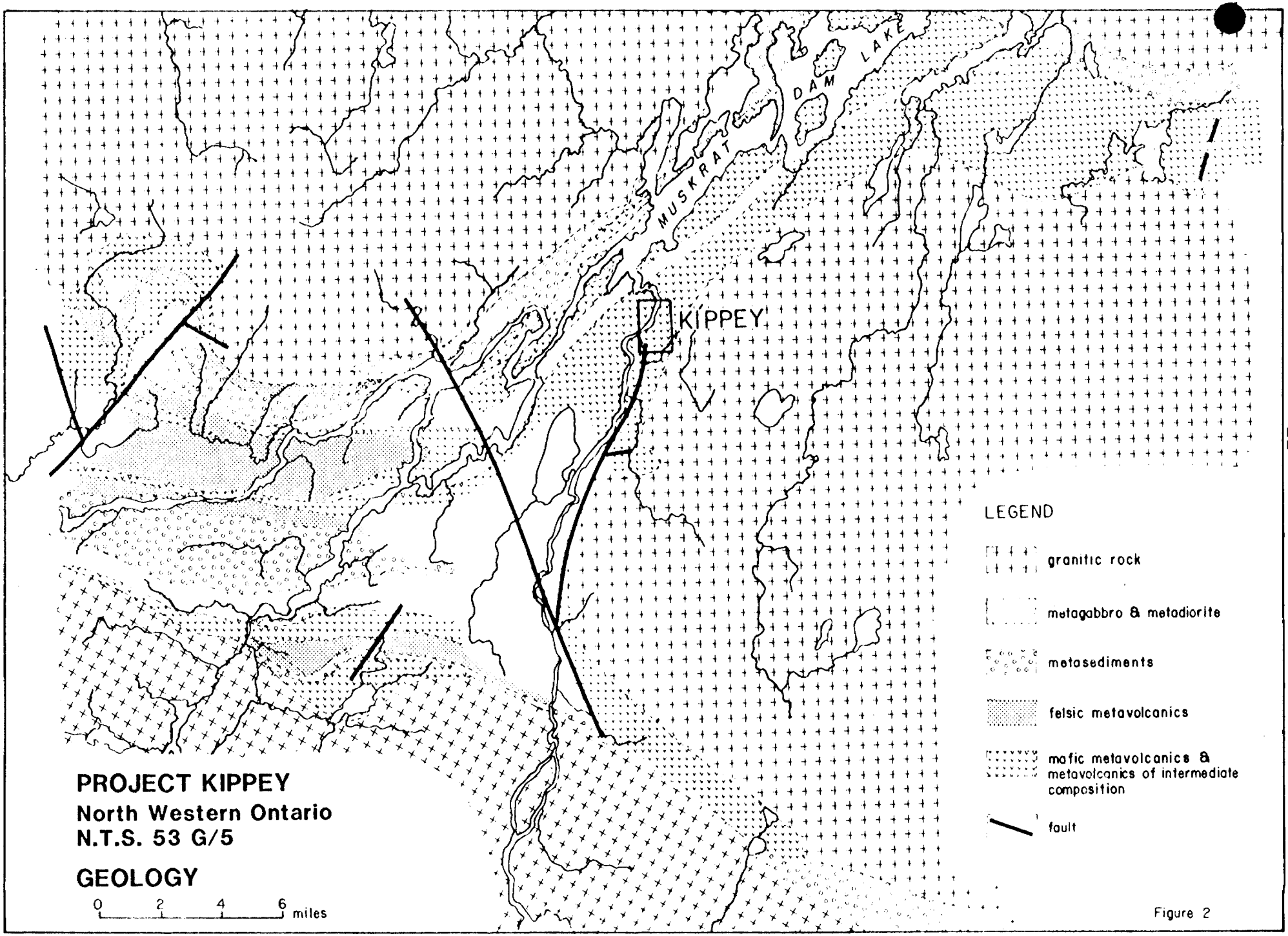

LAKE
DAM
MUSKRAT
KIPPEY
LEGEND
granitic rock
metagabbro & metadiorite
metasediments
felsic metavolcanics
mafic metavolcanics & metavolcanics of intermediate composition
fault
PROJECT KIPPEY
North Western Ontario
N.T.S. 53 G/5
GEOLOGY
0 2 4 6 miles

Figure 2

aureoles as much as 1 mile wide on the almandine-amphibolite facies zone.

4.2 Description of Lithological Units

Mapping of the Kippey property was limited to the only area of outcrop, a ridge 1600 m long by 400 m wide on the east side of the Windigo River. The outcrops observed were mainly mafic metavolcanics. The metavolcanic sequence which forms the majority of the rock type cored was subdivided into Unit 1, the felsic metavolcanic member; 1a, mafic to intermediate metavolcanic; 1b, mafic to intermediate tuff. The other outcrops observed were subdivided into: B.I.F., banded iron formation; Unit 2, a very fine-grained metasediment; Unit 3, a metagabbro and Unit 4, a feldspar porphyry intrusive.

1 Metavolcanic

This unit is the most common rock type cored and has been subdivided into three units. Unit 1 is a felsic, tuffaceous metavolcanic found only in two of the drill holes and is a very fine-grained, light-grey, siliceous unit of dacitic composition. Sericite alteration and minor quartz-carbonate alteration was present.

Unit 1a is a massive, dark green, chloritic-andesite with minor sulphides (mainly pyrite) and quartz-carbonate alteration is present.

Unit 1b is a highly foliated amphibolite biotite rich unit. A fine network of hair-like stringers of quartz-carbonate is usually present. Minor finely disseminated sulphides, usually in the form of pyrite, are present. Also within the 1b unit is a lighter grey-green unit, amphibolite biotite rich with a more intermediate composition of up to 10% very fine

disseminated feldspars.

Banded Iron Formation

This unit is the source of the VLF-EM conductor VA-7-8 and co-incident magnetic anomaly, and forms a marker horizon through the three drill holes completed. The iron formation is commonly 0.5 cm dark black magnetite bands separated by 1-1.5 cm light grey siliceous bands. Sulphide rich bands are also present with bands of up to 40% combined pyrite and pyrrhotite.

Metasediment

Unit 2 is found only in drill hole KP-2-84. This unit is a very fine-grained, light green, soft talcose argillitic metasediment.

Metagabbro

This is a massive dark green, medium-grained amphibolite rich chloritic rock with moderate amounts of plagioclase in the matrix.

Feldspar Porphyry

This rock unit is fine-grained, light whitish grey, massive to slightly foliated which is more noticeable when minor biotite is present. Typically there are up to 40% 2-3 mm feldspar present with minor quartz and biotite grains. Minor sericite alteration is present, as is pyrite in minor concentrations.

4.3 Economic Geology

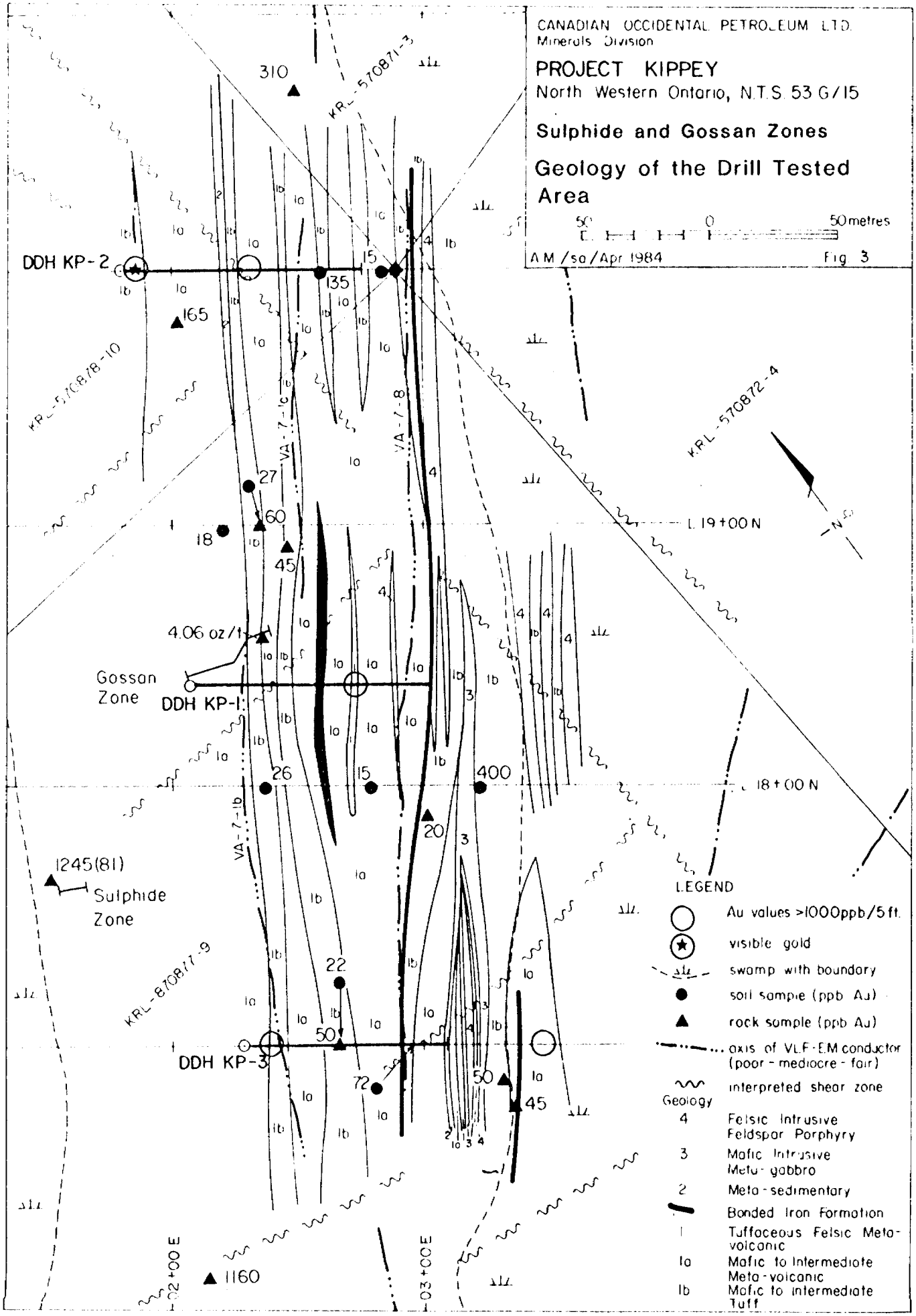
The Kippey property has excellent potential for economic gold mineralization. Only a very small portion of the property has been prospected and drill tested. The results from

these drill holes are highly encouraging. The best results of each drill hole were as follows: KP-1-84 intersected 7.3 feet of 2,020 ppb gold (0.06 oz/ton) in a tuffaceous felsic metavolcanic within well defined stratigraphic unit. The second drill hole of the program intersected visible gold at 13.5 feet. A button of core estimated to contain .25 ounce gold was taken from this point in a broadly anomalous zone averaging 100 ppb over 24.2 feet. Elsewhere in KP-2-84, a 7.8 foot intersection of 1100 ppb gold was found in a amphibolitic biotite rich, tuffaceous zone with minor pyrite and quartz-carbonate veining. Drill hole KP-3-84 intersected a highly anomalous mafic tuff horizon from 26.0 to 27.2 feet with 4% combined sulphides. This horizon averaged 500 ppb gold over 21.2 feet. Within the above anomalous zone a 5 foot section from 34.0-39.0 feet analysed 1,225 ppb gold. This drill hole has once more intersected sub-economical gold mineralization (as the previous two drill holes did). The three drill holes cored 1,399 feet. Of this 48% was anomalously high in gold. The opportunity exists within the Kippey property to find economical concentrations of gold mineralization.

5. DIAMOND DRILLING

5.1 Introduction

The 1984 winter drill program at Project Kippey tested the immediate area of the Gossan Zone trench. Gold samples collected from the trench had analysed up to 4.06 oz/ton over narrow widths. The three drill holes each intersected sub-economical gold values over significant widths. The anomalous level for gold mineralization was determined to be 20 ppb from the summer mapping program. Using this level, over


CANADIAN OCCIDENTAL PETROLEUM LTD.
Minerals Division
PROJECT KIPPEY
North Western Ontario, N.T.S. 53 G/15
Sulphide and Gossan Zones
Geology of the Drill Tested Area
50 0 50 metres
A.M./so/Apr 1984
Fig. 3
DDH KP-2
DDH KP-1
DDH KP-3
Gossan Zone
4.06 oz/t
1245(81)
Sulphide Zone
L.19+00N
L.18+00N
02+00E
03+00E
KRL-570872-4
KR-570871-3
KRL-570877-9
KR-570878-10
VA-7-8
VA-7-10
VA-7-1b
LEGEND
Au values >1000ppb/5ft.
visible gold
swamp with boundary
soil sample (ppb Au)
rock sample (ppb Au)
axis of VLF-EM conductor (poor - mediocre - fair)
interpreted shear zone
Geology
4 Felsic Intrusive Feldspar Porphyry
3 Mafic Intrusive Meta-gabbro
2 Meta-sedimentary
Banded Iron Formation
1 Tuffaceous Felsic Meta-volcanic
1a Mafic to Intermediate Meta-volcanic
1b Mafic to Intermediate Tuff

48% of all the drill core was anomalous. The results of the limited drill testing show that Kippey has excellent potential for economic gold mineralization.

5.2 Sampling and Analysis

The drill core was normally split and sampled at 5 foot intervals. When the sulphide content or lithology of the core changed, the sample interval was adjusted to reflect such changes. A total of 286 samples were taken; all samples were analysed for gold. All analyses were performed by Bondar-Clegg of Ottawa, Ontario.

5.3 Graphic Presentation of Results

The geochemical values obtained from the analyses of the drill core are plotted on cross sections (Plan 5, 6 and 7) to show the distribution of gold relative to lithologies. Alteration patterns, bedding, veining, brecciation and sulphide content are also plotted. All drill holes are plotted to scale on the geology of the drill tested area (Figure 3) and on the geology and geophysical maps of the property (Plan 2, 3 and 4).

5.4 Diamond Drilling Results

5.4.1 Drill Hole Kippey KP-1-84, Plan 5

Drill Hole	Kippey KP-1-84
Location	02+06E 18+35N
Orientation	135° Dip -50°
Depth	478 feet (146 metres)

Kippey, KP-1-84 drill tested the gossan zone trenching. The drill was also positioned to intersect two VLF-EM conductors, one with a coincident magnetic anomaly. The limited A_h soil sampling conducted on Line 17+00N to Line 20+00N inclusive showed

a strongly anomalous gold zone associated with both these conductors. Conductor VA-7-16 was coincident with sample site 14006 which analysed 4.06 oz/ton over a very narrow width.

The drill hole intersected a series of andesites and mafic tuffs with minor felsic tuff, gabbro and feldspar porphyry. Carbonate alteration was present most noticeably in the mafic tuffs and andesite as a fine network of stringers. Quartz veins and concentrations of sulphide mineralization were present over narrow widths.

Conductor VA-7-16 corresponded to a concentration of sulphide averaging 35% pyrite, 1% chalcopyrite from 18.5 to 20.3 feet as stringers and disseminations associated with quartz-carbonate in an andesitic unit. This section analysed 425 ppb gold. The possible extension of conductor VA-7-1C corresponds to a banded iron formation from 168-171 feet. The sulphide content averaged 15% pyrrhotite, 3% pyrite over the 3 foot section which analysed 45 ppb gold. Conductor VA-7-8 corresponds to a second intersection of iron formation from 315.6-321.8 feet with a sulphide content of 20% pyrite and 3% pyrrhotite which analysed 5 ppb gold.

The core analysis showed that using an anomalous level for gold at 20 ppb as determined from previous sampling 45% of the drill core from KP-1-84 was anomalous. Five sections with over 400 ppb gold were found.

The most significant result was achieved in a felsic tuff intersection from 212.3-219.5 feet, a 7.2 foot intersection which analysed 2,020 ppb gold (0.06 oz/ton). This value is in a felsic (dacitic) tuffaceous metavolcanic, sericite altered,

with minor quartz-carbonate alteration. Narrow intersections of feldspar porphyry were present within this 7.2 foot intersection.

The other four intersections were as follows: From 18-20.3 feet, a 2.3 foot section in andesite with an average sulphide content of 35% pyrite and 1% chalcopyrite analysed 425 ppb gold. Numerous fine stringers of quartz-carbonate were present in this andesite unit. From 139.5-146.5 feet, a 7 foot intersection within andesite with a 0.2 foot section of concentrated sulphides, 30% pyrrhotite, 5% pyrite and 2% chalcopyrite analysed 635 ppb gold. Minor quartz-carbonate and 1-2% sulphides were present through the entire 7 foot interval. Within another andesite unit from 171-176 feet, a five foot section analysed 670 ppb gold. The sulphide content here averaged 4% combined pyrrhotite and pyrite. Minor stringers of quartz-carbonate alteration were present. The fourth intersection occurs in feldspar porphyry at 431.5-434.3 feet, a 2.8 foot section with a gold content of 595 ppb. An 8.5 foot section from 431.5-439 feet averaged 465 ppb gold. The sulphide content of this unit averaged 15% pyrite, 2% pyrrhotite and 1% chalcopyrite from 431.5-437.0 feet.

This initial drill hole found sub-economical gold values over significant widths. More extensive testing will be required in the immediate vicinity to determine if these values and widths can be improved upon.

5.4.2 Drill Hole Kippey KP-2-84, Plan 6

Drill Hole	Kippey, KP-2-84
Location	01+80E 20+00N
Orientation	135°, -50°
Depth	503 feet (153 metres)

Drill Hole, KP-2-84 was completed on Line 20+00N, north of the gossan zone, to test three VLF-EM conductors, two of which had associated magnetic anomalies. Anomalous A_h soil samples were collected between the eastern VLF conductors.

The drill hole intersected primarily a series of andesite and mafic tuff units. The banded iron formation responsible for conductor VA-7-8 was intersected. Minor feldspar porphyry horizons and one narrow metasedimentary unit were cored.

The weak VLF-EM responses at 01+88E and 02+50E did not correspond to sulphide concentration to warrant even a weak response. Conductor VA-7-8 at 02+95E is caused by the sulphide concentration within the banded iron formation.

The highlight of this drill hole was a visible gold button estimated to contain 0.25 oz on a fracture at 13.7 feet. This sample was contained with an amphibolite-biotite, chlorite altered, mafic tuff, with a network of fine quartz-carbonate stringers. Minor sulphides, 1-2% were finely disseminated in this unit. This sample was kept as a hand specimen.

The other highly significant value in the drill core was a 7.8 foot section of 1,100 ppb gold from 173-180.8 feet. This value is within an andesite unit. Minor sulphides are

present over narrow widths. Quartz-carbonate veins are present up to 0.8 feet wide. Narrow zones of amphibolite biotite occur in the section. 179.6-180.8 feet, there is a feldspar porphyry unit.

The drill core from this hole was very anomalous with 51% of all core $\geq$ 20 ppb gold.

The drill intersected visible gold at 13.5 feet. Extensive drilling and/or trenching is needed to follow-up this particular occurrence, as well as the 7.8 foot intersection of 1100 ppb gold and other anomalous intersections.

5.4.3 Drill Hole Kippey KP-3-84, Plan 7

Drill Hole	Kippey KP-3-84
Location	02+22E 17+00N
Orientation	135° -50°
Depth	418 feet (127 metres)

Drill Hole KP-3-84 was positioned 135 metres south of KP-1-84 to drill test VLF-EM conductors VA-7-1b and VA-7-8 and the A_h soil anomalies found along this section of sampling.

The drill hole cored the same stratigraphy as the previous drill holes, mainly mafic tuffs and andesites with feldspar porphyry and gabbro in the lower section of the drill hole. Two iron formations were intersected, one of which corresponds to conductor VA-7-8. The second and lower intersection of iron formation does not appear to have a geophysical expression.

The highlight of this drill hole was a 21.2 foot core intersection which averaged 512 ppb gold with a 5 foot section analysing 1,225 ppb. This section is a mafic tuff, amphibolite biotite rich with a fine network of fine quartz-carbonate

stringers throughout. Sulphide content averaged 4% finely disseminated pyrite and pyrrhotite throughout this 21.2 foot intersection. This intersection correlates with VLF-EM conductor VA-7-1b which may be due mainly to a concentration of sulphides from 46.8-47.0 feet which had 13% sulphides.

The southern VLF-EM conductor, VA-7-8 correlates to a banded iron formation at 190.8-191.8 feet with 20% combined sulphides. Gold value of this intersection was 185 ppb.

Other significant drill core intersections include a 5.5 foot intersection of 1,050 ppb gold from 382.5-388 feet. This intersection is within a light grey-green intermediate tuff with a 0.9 foot concentrate of sulphide. 15% pyrrhotite, 2% chalcopyrite from 382.6-383.5 feet in a zone of quartz veining. Within a more massive andesitic unit from 408-413.5 feet the analysis gave a value of 510 ppb gold.

The core analysis showed that 49% of the drill core from this hole was anomalous in gold. Significant sub-economical gold intersections were found. The values in this drill hole are similar to the previous two drill holes and further enhance the value of the Kippey property.

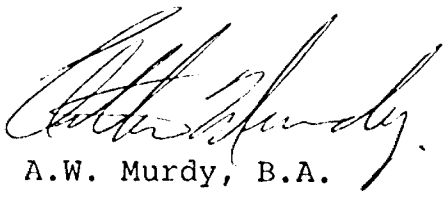
6. CONCLUSIONS

Three diamond drill holes were completed during the winter 1984 drill program at Kippey. Analysis of the drill core showed that 48% of all core was anomalous in gold. Each of the three drill holes intersected significant widths of sub-economical gold mineralization. The higher sub-economical gold values intersected > 1000 ppb gold and are not associated with iron

formation. There is no direct correlation with higher concentrates of sulphides although minor sulphides are present in all cases. These sub-economical gold values are all in tuffaceous horizons mainly in mafic units with a fine quartz-carbonate stringer network and minor sulphides. The highest intersection of 7.2 feet of 0.06 oz/ton gold is in a felsic tuff with sericite alteration and trace amounts of pyrite.

The drill program tested only a very limited area of the Kippey property in the only area of extensive outcrop on the property. Trenching could be completed over the up dip extension of the higher gold intersections at reasonable cost. The encouraging results achieved thus far from a small program show the need for extensive drill testing and trenching not only in the area drill tested but on the whole Kippey property. Geophysics has shown that the units explored on a strike length of 300 metres continue for over 6 kilometres in areas of poor to nil outcrop. Numerous VLF-EM conductors are present. The diamond drill will have to be the prime exploration tool in these areas.

Respectfully submitted,



Toronto, Ontario
April 1984

A.W. Murdy, B.A.

Author's Qualifications

Arthur W. Murdy graduated with a Bachelor of Arts (Geology) from University of Western Ontario in 1974. Since that time he has been employed as a geologist in the mineral exploration field. In this capacity he participated and/or carried out field programs in Quebec, Ontario, Saskatchewan and B.C. He has been employed by Canadian Occidental Petroleum Ltd., Minerals Division, Toronto since December, 1979 in the position of Project Geologist.

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APPENDIX I

KIPPEY 1984 DIAMOND DRILL

HOLE GEOLOGICAL LOGS

CANADIAN OCCIDENTAL PETROLEUM LTD. – Minerals Division

DIAMOND DRILL RECORD

PROPERTY	KIPPEY	LATITUDE	18+35N	STARTED	January 16/84	DIP TEST	
HOLE No.	KP-1-84	DEPARTURE	2+06E	FINISHED	January 20/84	Footage: 220'	Corrected: 48°
BEARING	135°	ELEVATION		LENGTH	478'	Footage: 478'	Corrected: 45°
DIP - COLLAR	-50°	SECTION	18+35N	LOGGED BY	A. Murdy		
CORE SIZE	AQ	SYSTEM	Metric English X	DRILLED BY	Kenora Diamond Drilling		

FOOTAGE (ft/m) FROM	TO	DESCRIPTION	MINERALIZATION SULPHIDES %	SAMPLE No.	FOOTAGE FROM	TO	LENGTH	RECOVERY	ASSAYS — ANALYSES Au
0'	5'	OVERBURDEN		37001	5.0	8.0	3.0	100%	15
5'	70.4'	META-ANDESITE. Light green, chloritic		37002	8.0	13.0	5.0	↓	20
		massive to weakly foliated. Numerous (10%)		37003	13.0	18.0	5.0		15
		hairlike cross-cutting stringers of quartz-		37004	18.0	20.3	2.3		425
		carbonate <1 mm wide @ 30°/45°/60° to		37005	20.3	25.0	4.7		60
		foliation.		37006	25.0	30.0	5.0		10
		5-28' core is broken with limonitic altered		37007	30.0	35.0	5.0		10
		surface weathering of fractures 3/5' @ 45°		37008	35.0	40.0	5.0		45
		to core.		37009	40.0	43.0	3.0		100
		10.3-10.4' quartz-carbonate vein, contacts		37010	43.0	46.1	3.1		105
		sharp @ 70° parallel to weak foliation.		37011	46.1	51.0	4.9		10
		13.7' 3 mm wide pyrite stringer.		37012	51.0	56.0	5.0		20
		18.5-19.1' - 40% pyrite 1% chalcopyrite with		37013	56.0	61.0	5.0		50
		associated quartz-carbonate.		37014	61.0	66.0	5.0		20
		19.8-20.3' - 30% py as above 18.5-19.1'.		37015	66.0	70.4	4.4		5
		32.5-47' foliated unit @ 65-70°, 10% biotite		37016	70.4	75.0	4.6		5
		throughout. 3-4% pyrite as fine stringers		37017	75.0	80.0	5.0		50
		associated with quartz-carbonate.		37018	80.0	83.0	3.0		20
		35.2' trace cpy - 10% py over 1 cm in quartz-		37019	83.0	87.0	4.0		5
		carbonate.		37020	87.0	90.0	3.0		25
		36.7' trace cpy - 0.4 mm py stringer in		37021	90.0	94.0	4.0		5
		quartz-carbonate.		37022	94.0	99.0	5.0		10
		40.5-40.8' 10% py, 1% cpy with quartz-		37023	99.0	104.0	5.0		25
		carbonate.		37024	104.0	109.5	5.5		10
		41.2-41.8' - white quartz vein contacts sharp		37025	109.5	114.5	5.0		<5
		parallel to foliation with minor pyrite.		37026	114.5	119.6	5.1		25
		41.8-43.2' - quartz-carbonate network, tuff		37027	119.6	124.5	4.9		25
		horizon.		37028	124.5	129.5	5.0		110
		43.2-43.6' - quartz-carbonate zone - 20% py,		37029	129.5	134.5	5.0		110
		2% cpy (10% biotite amphibolite <1 mm feldspar,		37030	134.5	139.5	5.0		265
		strong foliation @ 70°.		37031	139.5	146.5	7.0		635
		43.6-45.5' light grey tuff horizon-tr. cpy, 1% py.							

CANADIAN OCCIDENTAL PETROLEUM LTD. – Minerals Division

DIAMOND DRILL RECORD

				DIP TEST			
PROPERTY KIPPEY	LATITUDE	STARTED		Footage	Corrected	Footage	Corrected
HOLE No. KP-1-84 (Page 2)	DEPARTURE	FINISHED					
BEARING	ELEVATION	LENGTH					
DIP - COLLAR	SECTION	LOGGED BY					
CORE SIZE	SYSTEM Metric English	DRILLED BY					

FOOTAGE (ft/m) FROM	TO	DESCRIPTION	MINERALIZATION SULPHIDES %	SAMPLE No.	FOOTAGE FROM	TO	LENGTH	RECOVERY	ASSAYS — ANALYSES Au						
		45.5-45.8', 45.9-46.1 White quartz vein		37032	146.5	151.5	5.0	100%	30						
		contacts, sharp parallel to foliation with		37033	151.5	156.5	5.0	↓	210						
		pyrite mineralized contacts. 10% pyrite		37034	156.5	162.0	5.4		10						
		over 1 cm at contacts.		37035	162.0	168.0	6.0		40						
		47-65' 20% quartz-carbonate stringers at		37036	168.0	171.0	3.0		45						
		varying angles to core axis. Giving a		37037	171.0	176.0	5.0		670						
		brecciated texture to sections of the core.		37038	176.0	181.0	5.0		25						
		Trace pyrite.		37039	181.0	186.0	5.0		45						
		58.7-59.7' Zone of intense quartz carbonate		37040	186.0	191.0	5.0		5						
		breccia with 20% fine grained, chloritic,		37041	191.0	196.0	5.0		25						
		mafic fragments. 10% biotite, 20% po, 3-5%		37042	196.0	201.0	5.0		35						
		py associated with quartz-carbonate stringers.		37043	201.0	206.0	5.0		5						
70.4'	94'	MAFIC TUFF. Fine grained matrix with 10%		37044	206.0	212.3	6.3		20						
		dark black hornblende with 10% light brown		37045	212.3	219.5	7.2		2020	0.60 oz/ton					
		biotite, light foliation @ 75°. 10-15%		37046	219.5	222.5	3.0		40						
		quartz-carbonate throughout with 1-2% py,		37047	222.5	228.0	5.5		10						
		1% po, trace cpy @ 78.7'.		37048	228.0	233.0	5.0		5						
		87-90' - 30% disseminated po, 5% py, 1% cpy		37049	233.0	238.0	5.0		15						
		in a contorted irregular banded zone with		37050	238.0	243.0	5.0		<5						
		quartz carbonate and dark green-black		37051	243.0	248.0	5.0		10						
		magnetite rich mafic bands @ 88-90'. Siliceous		37052	248.0	253.0	5.0		15						
		bands to 2 cm.													
94'	109.5'	Typical META ANDESITE. Massive light green.		37053	253.0	258.0	5.0		10						
		100.3-103.6' Light grey, granular feldspar.		37054	258.0	263.0	5.0		20						
		Rich horizon possibly a tuff.		37055	263.0	268.0	5.0		10						
109.5'	124.5'	MAFIC TUFF. Biotite light brown-dark black		37056	268.0	271.4	3.4		15						
		mafics, hornblende ?5%. Foliated core @ 65°		37057	271.4	275.4	5.0		25						
		with sulphide mineralization associated with		37058	275.4	280.0	4.6		20						
		minor quartz carbonate alteration and as		37059	280.0	285.0	5.0		5						
		fine disseminations as below.		37060	285.0	290.0	5.0		5						
		109.5-116' - 10-15% py, 2-3% po and trace cpy.		37061	290.0	295.0	5.0		15						
		117.4-117.8' - 30% py, 5% po disseminated in		37062	295.0	300.0	5.0		<5						
		a quartz rich zone.													

CANADIAN OCCIDENTAL PETROLEUM LTD. – Minerals Division

DIAMOND DRILL RECORD

				DIP TEST			
				Footage	Corrected	Footage	Corrected
PROPERTY KIPPEY	LATITUDE	STARTED					
HOLE No. KP-1-84 (Page 3)	DEPARTURE	FINISHED					
BEARING	ELEVATION	LENGTH					
DIP - COLLAR	SECTION	LOGGED BY					
CORE SIZE	SYSTEM Metric English	DRILLED BY					

FOOTAGE (ft/m) FROM	TO	DESCRIPTION	MINERALIZATION SULPHIDES %	SAMPLE No.	FOOTAGE FROM	TO	LENGTH	RECOVERY	ASSAYS — ANALYSES Au
		118.9' - ¼" pyrite stringer		37063	300.0	305.0	5.0	100%	<5
		119.5-119.6' - Quartz vein, chloritic ground-		37064	305.0	310.0	5.0		10
		mass and 10% carbonate with 30% po.		37065	310.0	315.6	5.0		5
124.5'	168'	META-ANDESITE. Light green chloritic with		37066	315.6	321.8	5.2		5
		5-10% quartz carbonate as fine stringers.		37067	321.8	324.0	2.2		10
		1% py, 1% po, trace cpy associated with		37068	324.0	330.0	6.0		20
		above stringers. Minor sections show foliat-		37069	330.0	334.6	4.6		165
		ion with biotite. Dark amphibolite mafics,		37070	334.6	339.0	4.4		10
		trace cpy @ 131.7', 141'.		37071	339.0	344.6	5.6		100
		139.3-139.5' (2% cpy), 30% po, 5% py.		37072	344.6	348.0	3.4		10
		143-146.5' - Minor quartz carbonate stringers		37073	348.0	353.0	5.0		30
		foliated core @ 70°.		37074	353.0	358.0	5.0		35
		145.5-145.7' - Band of quartz carbonate with		37075	358.0	363.0	5.0		5
		dark amphibolitic mafics.		37076	363.0	368.0	5.0		<5
		148.7-149.7' - Foliated @ 50°. Biotite 20%.		37077	368.0	373.0	5.0		5
		Quartz-carbonate rich zone.		37078	373.0	378.0	5.0		80
		150-150.2'- Quartz-carbonate vein.		37079	378.0	383.0	5.0		75
		150.3-150.8'- 5% py, 7% po in a chloritic		37080	383.0	388.0	5.0		5
		brecciated zone with quartz-carbonate.		37081	388.0	393.0	5.0		15
		151.8-152.1' - Quartz vein with dark mafic		37082	393.0	398.0	5.0		<5
		angular andesitic inclusions. 1% cpy.		37083	398.0	403.0	5.0		<5
		152-152.4' - 5% py		37084	403.0	408.0	5.0		<5
		153-156.8' - Mineralized zone. 12% po, 5%		37085	408.0	413.0	5.0		5
		py, 1% cpy as disseminated and stringers.		37086	413.0	418.0	5.0		30
		154.4-155.3' - 30% po, 5% cpy.		37087	418.0	422.8	4.8		35
		156-156.6' - Quartz carbonate breccia zone		37088	422.8	428.0	5.2		20
		fine grained, 10% py, 3% p.		37089	428.0	431.5	3.5		40
		155' - 30° chloritic fracture.		37090	431.5	434.3	2.8		595
		156.6-168' - Minor quartz-carbonate stringers.		37091	434.3	439.0	5.7		400
168'	171'	IRON FORMATION. Cherty with sulphides as		37092	439.0	443.5	4.5		10
		stringers and disseminations.		37093	443.5	448.5	5.0		5
		168-169.3' - Scattered magnetite bands to		37094	448.5	454.0	5.5		<5

CANADIAN OCCIDENTAL PETROLEUM LTD. – Minerals Division

DIAMOND DRILL RECORD

				DIP TEST			
PROPERTY KIPPEY	LATITUDE	STARTED		Footage	Corrected	Footage	Corrected
HOLE No. KP-1-84 (Page 4)	DEPARTURE	FINISHED					
BEARING	ELEVATION	LENGTH					
DIP - COLLAR	SECTION	LOGGED BY					
CORE SIZE	SYSTEM Metric English	DRILLED BY					

FOOTAGE (ft/m) FROM	TO	DESCRIPTION	MINERALIZATION SULPHIDES %	SAMPLE No.	FOOTAGE FROM	TO	LENGTH	RECOVERY	ASSAYS — ANALYSES Au
		0.5 cm wide @ 50° to core axis. In a fine		37095	454.0	459.0	5.0	100%	15
		grained quartz matrix.		37096	459.0	462.0	3.0		30
		168-168.2' - 5% po, 1% py.		37097	462.0	467.0	5.0		30
		168.7-169.3' - 20% po, 3% py.		37098	467.0	472.0	5.0		30
		169.3-170' - Quartz vein, 7% po.		37099	472.0	478.0	6.0		175
		170-170.5' - Fine grained cherty zone with							
		25% po, 1% py.							
		170.5-171' - Dark green chloritic zone.							
		Foliated with 25% po, 1% py. 1 mm wide							
		stringer of cpy @ 171'.							
171'	212.3'	META-ANDESITE. As before. Light grey-green							
		massive with fine hairline stringers of quartz							
		carbonate (5-10%) with associated sulphides							
		@ 171-179' - 1-2% po, 1-2% py, trace cpy							
		171.3-172.2' - 7% po, trace cpy							
		172.9-173.6' - 5% po, 1% py							
		176.5-177.3' - 5% po, 1% py, trace cpy							
		179' on - trace py, po, cpy							
		180.8-181.2' - 3% po, trace cpy							
		200.5' - 1" quartz vein							
		200.5-212.7' - Increase in quartz carbonate							
		alteration to 10-15%. Network of crosscutting							
		1 mm carbonate stringers, trace py.							
212.3'	219.5'	(TUFFACEOUS) DACITIC METAVOLCANIC. Light grey							
		light foliation, minor biotite present.							
		212.7-214.7' - Feldspar porphyry up to 20%,							
		1 mm diameter feldspar.							
		214.7-218.7' - fine grained siliceous, minor							
		dark brown biotite, sericite altered, minor							
		quartz carbonate, trace py @ 215.6'.							
		218.2-219.5' - Feldspar porphyry as above.							

CANADIAN OCCIDENTAL PETROLEUM LTD. – Minerals Division

DIAMOND DRILL RECORD

				DIP TEST			
PROPERTY KIPPEY	LATITUDE	STARTED	Footage	Corrected	Footage	Corrected
HOLE No. KP-1-84 (Page 5)	DEPARTURE	FINISHED				
BEARING	ELEVATION	LENGTH				
DIP – COLLAR	SECTION	LOGGED BY				
CORE SIZE	SYSTEM Metric English	DRILLED BY				

FOOTAGE (ft/m) FROM	TO	DESCRIPTION	MINERALIZATION SULPHIDES %	SAMPLE No.	FOOTAGE FROM	TO	LENGTH	RECOVERY	ASSAYS — ANALYSES
219.5'	271.4'	META-ANDESITE Light grey-green, scattered, minor quartz-carbonate stringers. Biotite rich, lightly foliated sections 6"-1' in length. Finely disseminated 1 mm feldspar 5-10%. 219.5-222.5' - 10% pyrite. 223-225' - Minor light pink carbonate stringers and blebs. 222.5' on trace 1% py. 246.2-246.4' quartz vein. 246.4-248.5' zone of carbonate alteration, 2% pyrite. 260.5-265' - lighter grey slightly more siliceous zone (METADACITE?). 2-3% pyrite, finely disseminated throughout. 261.5-262.5' - zone of quartz stringers parallel to foliation. 1% cpy, 3-5% py. 265-271.4' Metandesite - chlorite with 10% finely disseminated feldspar. 1 mm diameter trace - 1% pyrite as before. Light foliation @ 60° to core axis.							
271.4'	275.4'	FELDSPAR PORPHYRY. 40% feldspars to 4 mm diameter in a grey siliceous matrix with 3-5% pyrite, light foliation @ 70° with minor biotite.							
275.4'	315.6'	META-ANDESITE As before. Weakly foliated section @ 65°. Minor scattered fine feldspar phenocrysts trace to 1% py. 295-298' - 30% fine <1 mm feldspars. 306.6-309 white quartz vein, 2% py, 2% po. 312-315.6' light green chloritic zone.							

CANADIAN OCCIDENTAL PETROLEUM LTD. – Minerals Division

DIAMOND DRILL RECORD

					DIP TEST			
					Footage	Corrected	Footage	Corrected
PROPERTY	KIPPEY	LATITUDE		STARTED				
HOLE No.	KP-1-84 (Page 6)	DEPARTURE		FINISHED				
BEARING		ELEVATION		LENGTH				
DIP - COLLAR		SECTION		LOGGED BY				
CORE SIZE		SYSTEM Metric	English	DRILLED BY				

FOOTAGE (ft/m) FROM	TO	DESCRIPTION	MINERALIZATION SULPHIDES %	SAMPLE No.	FOOTAGE FROM	TO	LENGTH	RECOVERY	ASSAYS – ANALYSES
315.6'	321.8'	IRON FORMATION (Mineralized Zone) Finely bedded sediments @ 65° to core axis. 315.6-316.4' - 30% pyrite mainly as stringers. 30% dark magnetite bands up to 0.5 cm width. Darker magnetite bands separated by 1-1.5 cm wide siliceous bands. 316.4-318.4' - Feldspar porphyry contacts parallel to bedding. 318.4-321.8' - Metasediment, 25% pyrite as stringers and disseminations. 5% po mainly as fine disseminations to cpy. Dark magnetite rich bands throughout. 30% separated by siliceous bands with scattered chloritic rock.							
321.8'	324.0	FELDSPAR PORPHYRY Light grey matrix with 30% 2-3 mm feldspar contacts parallel to foliation. Minor biotite and 5% trace pyrite.							
324.0	330'	MAFIC TUFF Light green chlorite. Foliated throughout @ 65°, minor quartz carbonate stringers biotite rich 10-15% with darker black, amphibole 5%.							
330'	334.6'	FELDSPAR PORPHYRY Upper contact parallel to foliation, lower contact @ 90° to core axis. Light sericite alteration trace to 1% pyrite. 30% feldspar 1-2 mm diameter.							
334.6'	361.8'	MAFIC TUFF Same as 324-330'. Dark green chloritic, weak foliation @ 65°. 5% scattered feldspars							

CANADIAN OCCIDENTAL PETROLEUM LTD. – Minerals Division

DIAMOND DRILL RECORD

PROPERTY	KIPPEY	LATITUDE		STARTED	DIP TEST Footage	Corrected	Footage	Corrected
HOLE No.	KP-1-84 (Page 7)	DEPARTURE		FINISHED				
BEARING		ELEVATION		LENGTH				
DIP - COLLAR		SECTION		LOGGED BY				
CORE SIZE		SYSTEM Metric	English	DRILLED BY				

FOOTAGE (ft/m) FROM	TO	DESCRIPTION	MINERALIZATION SULPHIDES %	SAMPLE No.	FOOTAGE FROM	TO	LENGTH	RECOVERY	ASSAYS — ANALYSES
		to 1 mm. Scattered dark black amphiboles, trace pyrite, minor brown biotite with disseminated po thoughout, 1% magnetic unit. 344.5-346.6' - lighter grey siliceous dacitic unit. 5% biotite, trace pyrite. 346.6' on minor scattered quartz veins. 352-361.8' - medium grained gabbroic sections intermixed with finer grained meta tuff. 353-354' - zone of quartz veining, 2% py.							
361.8'	374.5'	METAGABBRO Medium grained, 40% dark chloritic mafics in a light grey matrix. 363-365' - 10° to core axis. Quartz zone with mafic breccia fragments in contact with metagabbro. 371-371.7' - fine grained mafic zone, gradational contacts.							
374.5'	423.7'	MAFIC TUFF Chloritic light green to light grey-green section. Strongly foliated throughout @ 60°, scattered carbonate stringers. Biotite rich 15% dark brown minor fine stringers of quartz carbonate to 10%. 383.8-384.5' - sericite altered zone of feldspar and quartz veining. 386-389' - 10° fracture sericite altered core with vuggy quartz carbonate, trace pyrite. 389-391' - 10% feldspar phenocrysts up to 0.5 cm diameter. 397-411' - minor fine feldspar phenocrysts up to 10%.							

CANADIAN OCCIDENTAL PETROLEUM LTD. – Minerals Division

DIAMOND DRILL RECORD

				DIP TEST			
				Footage	Corrected	Footage	Corrected
PROPERTY	KIPPEY	LATITUDE	STARTED				
HOLE No.	KP-1-83 (Page 8)	DEPARTURE	FINISHED				
BEARING		ELEVATION	LENGTH				
DIP – COLLAR		SECTION	LOGGED BY				
CORE SIZE		SYSTEM Metric English	DRILLED BY				

FOOTAGE (ft/m) FROM	TO	DESCRIPTION	MINERALIZATION SULPHIDES %	SAMPLE No.	FOOTAGE FROM	TO	LENGTH	RECOVERY	ASSAYS – ANALYSES
		411-415' - 20% fine quartz carbonate stringers. 422-423.8' - quartz vein. 3% disseminated py.							
423.7'	439'	FELDSPAR PORPHYRY Light grey, siliceous unit with 15% feldspar phenocrysts up to 3 mm. Weak foliation throughout. 428.3-429.5' - Intermediate tuff unit, regular contacts with the above parallel to foliation. 5% pyrite, minor pyrrhotite. 429.5' - fine grained felsic unit, foliation more pronounced @ 70°. 431.2-431.3' - quartz vein. 431.5-437' - 15% pyrite, 2% pyrrhotite, 1% chalcopyrite as fine disseminations throughout a fine grained felsic unit. 432-434.3' - Intermediate tuff, 10% biotite, dark black hornblende. 433' - 2" quartz vein, sulphides as above.							
439'	443.5'	INTERMEDIATE TUFF Light green fine grained chloritic with 30% fine feldspar < 1mm. 439-439.5' - 10% py, 2% po, 1% cpy. Foliation @ 60° throughout, trace to 1% py. 5% biotite. 443-443.5' - 5% py.							
443.5'	454.0'	FELDSAR PORPHYRY As before. 30% feldspar to 3 mm in a light grey felsic matrix, weak foliation @ 60°. 437-438' - light green mafic tuff? horizon. 450.2-451.9' - as above - mafic tuff, light foliation, trace pyrite.							

CANADIAN OCCIDENTAL PETROLEUM LTD. – Minerals Division

DIAMOND DRILL RECORD

PROPERTY	KIPPEY	LATITUDE		STARTED	DIP TEST		
HOLE No.	KP-1-84 (Page 9)	DEPARTURE		FINISHED	Footage	Corrected	Footage	Corrected
BEARING		ELEVATION		LENGTH				
DIP - COLLAR		SECTION		LOGGED BY				
CORE SIZE		SYSTEM Metric	English	DRILLED BY				

FOOTAGE (ft/m) FROM	TO	DESCRIPTION	MINERALIZATION SULPHIDES %	SAMPLE No.	FOOTAGE FROM	TO	LENGTH	RECOVERY	ASSAYS — ANALYSES
154.0'	462.0'	INTERMEDIATE TUFF							
		Chloritic light green, weakly foliated,							
		minor quartz-carbonate stringers @ 65°.							
		458-459' - feldspar porphyry contact parallel							
		to foliation.							
462.0'	478'	FELDSPAR PORPHYRY							
		As before. Light foliation @ 65°.							
		462-466.8' - feldspar (30%), predominant in							
		a fine-grained felsic matrix.							
		466.8' - fine grained lightly foliated							
		felsic unit.							
		470.7-471.1' - Quartz vein with 45° fracture							
		pyrite coated.							
		475.8-475.9 - Quartz vein.							
		476.6-497' - Quartz-carbonate zone with							
		chloritic mafics.							
		478' END OF HOLE							

CORE INVENTORY

Box	From (ft)	To (ft)	Recovery (ft)	Box	From (ft)	To (ft)	Recovery (ft)
1	5	28	23.0	18	410.0	434.3	24.3
2	28	51.5	23.5	19	434.3	458.2	23.9
3	51.5	75.8	24.3	20	458.2	478.0	19.8
4	75.8	99.8	24.0				
5	99.8	123.5	23.7				
6	123.5	147.2	23.6				
7	147.2	171.0	23.8				
8	171.0	194.8	23.8				
9	194.8	218.6	23.6				
10	218.6	243.0	24.4				
11	243.0	266.6	23.6				
12	266.6	290.5	23.9				
13	290.5	314.3	23.8				
14	314.3	338.2	23.9				
15	338.2	362.3	24.1				
16	362.3	386.3	24.0				
17	386.3	410.0	23.7				

CANADIAN OCCIDENTAL PETROLEUM LTD. – Minerals Division

DIAMOND DRILL RECORD

PROPERTY	KIPPEY	LATITUDE	20+00N	STARTED	January 21/84	DIP TEST		
HOLE No.	KP-2-84	DEPARTURE	1+80E	FINISHED	January 25/84	Footage	Corrected	Footage	Corrected
BEARING	135°	ELEVATION		LENGTH	503'	250'	49°		
DIP - COLLAR	-50°	SECTION	20+00N	LOGGED BY	A. Murdy	503'	47°		
CORE SIZE	AQ	SYSTEM	Metric English X	DRILLED BY	Kenora Diamond Drilling				

FOOTAGE (ft/m) FROM	TO	DESCRIPTION	MINERALIZATION SULPHIDES %	SAMPLE No.	FOOTAGE FROM	TO	LENGTH	RECOVERY	ASSAYS — ANALYSES Au
0'	5'	OVERBURDEN		37100	5.0	9.8	4.8	100%	185
5'	24.2'	MAFIC TUFF		37101	9.8	13.0	3.2	↓	70
		5-9.8' - Dark green amphibolite rich		37102	13.0	14.0	1.0		205
		chloritic unit, minor crosscutting quartz-		37103	14.0	19.0	5.0		100
		carbonate stringers. Two limonitic altered		37104	19.0	24.2	4.2		145
		fracture surfaces @ 45°. Trace py+po,		37105	24.2	29.0	4.8		5
		finely disseminated.		37106	29.0	34.0	5.0		<5
		9.8-24.2' - Amphibolitic, chloritic unit		37107	34.0	39.0	5.0		25
		with 10-15% brown biotite throughout, strong		37108	39.0	44.0	5.0		30
		carbonate alteration throughout as an		37109	44.0	49.0	5.0		215
		irregular network of fine stringers		37110	49.0	54.0	5.0		10
		brecciating the core in sections 9.8-11.6',		37111	54.0	59.0	5.0		50
		14.6-18.0', 18.9-19.2', 21.2-21.3'. Light		37112	59.0	64.0	5.0		15
		green carbonate matrix with stretched and		37113	64.0	69.0	5.0		15
		angular amphibolite biotite rich clasts,		37114	69.0	74.0	5.0		35
		minor pyrite 1-2%. Foliated throughout @		37115	74.0	79.0	5.0		5
		55-60°. Quartz veins white @ 14.5-14.6',		37116	79.0	84.0	5.0		130
		20.1-20.2', 21.5-21.6' with minor pyrite		37117	84.0	89.0	5.0		80
		contacts parallel to foliation.		37118	89.0	94.0	5.0		205
		VISIBLE GOLD 13.7' - A ¼" wide button		37119	94.0	99.0	5.0		15
		chloritic altered, minor bronze chalcopyrite		37120	99.0	104.0	5.0		10
		≈ ½ ounce gold. Vuggy carbonate with		37121	104.0	109.0	5.0		5
		fine disseminated garnets?.		37122	109.0	114.0	5.0		10
		13.3' Limonite altered fracture @ 60°.		37123	114.0	119.0	5.0		50
		15.2' " " " @ 60°.		37124	119.0	124.0	5.0		80
		17.1' " " " with quartz-		37125	124.0	129.0	5.0		5
		carbonate @ 30° to core axis.		37126	129.0	132.0	3.0		10
		12-12.9' - 5% po, 2% py, 0.5% cpy associated		37127	132.0	136.2	4.2		175
		with quartz carbonate.		37128	136.2	142.0	5.8		10
		9.8-24.2' - 1% py, 1% po, trace cpy,		37129	142.0	147.0	5.0		105
		disseminated, associated with quartz carbonate		37130	147.0	153.0	6.0		50
		network.							

CANADIAN OCCIDENTAL PETROLEUM LTD. – Minerals Division

DIAMOND DRILL RECORD

				DIP TEST			
				Footage	Corrected	Footage	Corrected
PROPERTY KIPPEY	LATITUDE	STARTED					
HOLE No. KP-2-84 (Page 2)	DEPARTURE	FINISHED					
BEARING	ELEVATION	LENGTH					
DIP – COLLAR	SECTION	LOGGED BY					
CORE SIZE	SYSTEM Metric English	DRILLED BY					

FOOTAGE (ft/m) FROM	TO	DESCRIPTION	MINERALIZATION SULPHIDES %	SAMPLE No.	FOOTAGE FROM	TO	LENGTH	RECOVERY	ASSAYS — ANALYSES Au		
		19.6-19.7' - 15% py associated with a quartz vein.		37131	153.0	158.0	5.0	100%	30		
				37132	158.0	163.0	5.0	↓	205		
		21.3-22.8' - Cherty siliceous zone. Fine laminated kink folds @ 22.6'. Dark grey cherty, minor py ~1%.		37133	163.0	168.0	5.0		105		
				37134	168.0	173.0	5.0		95		
				37135	173.0	178.0	5.0		1290	1101/ 7.8	
		21.5-21.6' - quartz vein.		37136	178.0	180.8	2.8		765		
		21.8-22.0' - Brecciated carbonate zone, 3% py		37137	180.8	186.4	5.6		<5		
		darker stretched hornblende biotite with		37138	186.4	191.0	4.7		30		
		fragments in a light green chloritic carbonate		37139	191.0	196.0	5.0		65		
		matrix.		37140	196.0	201.0	5.0		75		
		22.8-23.6' - Breccia zone as above with 10% pyrite.		37141	201.0	206.0	5.0		95		
				37142	206.0	211.0	5.0		130		
24.2'	136.2'	META-ANDESITE		37143	211.0	214.6	3.6		50		
		Light green massive with weak foliation in		37144	214.6	219.0	4.4		365		
		sections, minor fine scattered stringers of		37145	219.0	224.0	5.0		40		
		quartz-carbonate 15%. Contact with above		37146	224.0	229.0	5.0		60		
		unit gradational.		37147	229.0	232.3	3.3		55		
		28.8-29.0' - 10% py, 5% po with quartz-carbonate alteration.		37148	232.3	238.0	5.7		15		
				37149	238.0	243.0	5.0		270		
		31.4-31.5 - 5% disseminated po.		37150	243.0	248.0	5.0		20		
		32.4-32.6' - 10% po, 2% py, disseminated		37151	248.0	253.0	5.0		15		
		associated with quartz-carbonate.		37152	253.0	258.0	5.0		10		
		31.4-34.0 - Light banding to the core of		37153	258.0	263.0	5.0		35		
		light and darker chloritic units with		37154	263.0	268.0	5.0		15		
		carbonate stringers.		37155	268.0	273.0	5.0		50		
		32.8-34.0' - Biotite rich bands @ 70° to core		37156	273.0	278.0	5.0		40		
		axis.		37157	278.0	283.0	5.0		40		
		48-49' - Amphibolite rich carbonate alteration		37158	283.0	288.0	5.0		20		
		zone.		37159	288.0	293.0	5.0		<5		
		48.6-49.0' - brecciated core.		37160	293.0	298.0	5.0		<5		
		51.8-52.2' - 20% py, 15% po, trace cpy in		37161	298.0	303.0	5.0		15		
		an amphibolite rich carbonate brecciated zone		37162	303.0	308.0	5.0		25		

CANADIAN OCCIDENTAL PETROLEUM LTD. – Minerals Division

DIAMOND DRILL RECORD

				DIP TEST			
PROPERTY	KIPPEY	LATITUDE	STARTED	Footage	Corrected	Footage	Corrected
HOLE No.	KP-2-84 (Page 3)	DEPARTURE	FINISHED				
BEARING		ELEVATION	LENGTH				
DIP – COLLAR		SECTION	LOGGED BY				
CORE SIZE		SYSTEM Metric English	DRILLED BY				

FOOTAGE (ft/m) FROM	TO	DESCRIPTION	MINERALIZATION SULPHIDES %	SAMPLE No.	FOOTAGE FROM	TO	LENGTH	RECOVERY	ASSAYS — ANALYSES Au
		finely laminated and folded.		37163	308.0	313.0	5.0	100%	5
		53.3-54' - quartz vein contacts, irregular.		37164	313.0	318.0	5.0		5
		56.1-56.2' - Light orange alteration of a		37165	318.0	323.0	5.0		20
		quartz-carbonate angular feldspar breccia		37166	323.0	328.0	5.0		<5
		zone.		37167	328.0	333.0	5.0		<5
		61-71' - 10% quartz-carbonate stringers.		37168	333.0	338.0	5.0		<5
		61-62' - biotite rich bands.		37169	338.0	343.0	5.0		15
		69-71' - biotite amphibolite rich bands.		37170	343.0	348.0	5.0		220
		69.7-70' - Quartz vein.		37171	348.0	353.0	5.0		20
		78.6-80' - fault zone @ 30° to core axis.		37172	353.0	358.0	5.0		20
		Carbonate alteration with long angular		37173	358.0	363.0	5.0		30
		fragments of chloritic massive andesite. 2%		37174	363.0	368.0	5.0		<5
		py, trace cpy with carbonates.		37175	368.0	373.0	5.0		15
		83-83.7' - disseminated sulphide zone. 25%		37176	373.0	378.5	5.5		10
		py, 10% po - quartz vein 83.2-83.2'.		37177	378.5	383.0	4.5		10
		84.7-88.7 - Feldspar Porphyry - light grey,		37178	383.0	388.0	5.0		15
		30% light feldspar in a darker grey fine		37179	388.0	391.6	3.6		20
		matrix, light foliation throughout contacts		37180	391.6	397.0	5.4		40
		parallel to foliation. 3% disseminated py,		37181	397.0	402.0	5.0		5
		86.4' trace cpy, 10% carbonate stringers		37182	402.0	407.0	5.0		10
		throughout.		37183	407.0	412.0	5.0		<5
		90.5-95.8' - Amphibolite rich zone with strong		37184	412.0	417.0	5.0		10
		carbonate alteration with network of cross-		37185	417.0	422.0	5.0		20
		cutting stringers from 90.5-93' on a biotite		37186	422.0	427.0	5.0		10
		amphibolite zone, giving brecciated core.		37187	427.0	432.0	5.0		10
		90.9-91.1' - Quartz vein.		37188	432.0	437.0	5.0		15
		93-95.8' - Massive amphibolite rich zone (10%)		37189	437.0	442.0	5.0		15
		106.2-106.6' - 5% disseminated po, 1% cpy.		37190	442.0	446.5	4.5		20
		106.6-107' - quartz carbonate zone @ 30° to		37191	446.5	451.5	5.0		15
		core axis with angular fragments of andesite.		37192	451.5	456.5	5.0		10
		107-109' - 10% finely disseminated		37193	456.5	461.5	5.0		20
		amphibolite.		37194	461.5	466.5	5.0		5

CANADIAN OCCIDENTAL PETROLEUM LTD. – Minerals Division

DIAMOND DRILL RECORD

				DIP TEST			
PROPERTY KIPPEY	LATITUDE	STARTED	Footage	Corrected	Footage	Corrected
HOLE No. KP-2-84 (Page 4)	DEPARTURE	FINISHED				
BEARING	ELEVATION	LENGTH				
DIP - COLLAR	SECTION	LOGGED BY				
CORE SIZE	SYSTEM Metric English	DRILLED BY				

FOOTAGE (ft/m) FROM	TO	DESCRIPTION	MINERALIZATION SULPHIDES %	SAMPLE No.	FOOTAGE FROM	TO	LENGTH	RECOVERY	ASSAYS — ANALYSES Au
		109.3-109.4' - 3% finely disseminated py.		37195	466.5	471.5	5.0	100%	15
		116.3-121.9' - Breccia zone biotite		37196	471.5	476.5	5.0		30
		amphibolite rich. Breccia produced by		37197	476.5	481.5	5.0		10
		network of quartz carbonate stringers 25%.		37198	481.5	486.5	5.0		<5
		135.5-163.2 - Quartz carbonate zone @ 10° to		37199	486.5	492.0	5.5		<5
		core axis with angular mafic fragments.		37200	492.0	497.5	5.5		<5
136.2'	146'	METASEDIMENT		37201	497.5	503	5.5		10
		Light green, massive unit, chloritic							
		scattered quartz-carbonate stringers, weakly							
		laminated in sections, trace pyrite.							
146'	158'	INTERMEDIATE TUFF							
		146.155.2' - Scattered, light grey units with							
		minor biotite possibly tuff bands @ 146-148.5',							
		150-152'.							
		155.2-158' - Massive fine grained, light grey							
		unit, sericite altered, trace pyrite.							
158'	214.6'	META-ANDESITE							
		Light grey-green, massive.							
		158-161.5' - Biotite amphibolite unit with							
		irregular quartz-carbonate stringers,							
		alteration network, trace py.							
		161.5' - massive, trace py.							
		173-179.6' - Intermediate tuff.							
		173.8-174.6' - biotite amphibolite zone with							
		2% py.							
		174.6-175.2 - Quartz and quartz carbonate							
		veining, mafic inclusions with quartz-carbonate.							
		175.2-175.9' - amphibolite biotite zone							
		175.6-175.9' - quartz carbonate							
		179.6-180.8' - Feldspar porphyry, light							
		foliation @ 50°.							

CANADIAN OCCIDENTAL PETROLEUM LTD. – Minerals Division

DIAMOND DRILL RECORD

			DIP TEST			
PROPERTY KIPPEY	LATITUDE	STARTED	Footage	Corrected	Footage	Corrected
HOLE No. KP-2-84 (Page 5)	DEPARTURE	FINISHED				
BEARING	ELEVATION	LENGTH				
DIP – COLLAR	SECTION	LOGGED BY				
CORE SIZE	SYSTEM Metric English	DRILLED BY				

FOOTAGE (ft/m) FROM	TO	DESCRIPTION	MINERALIZATION SULPHIDES %	SAMPLE No.	FOOTAGE FROM	TO	LENGTH	RECOVERY	ASSAYS — ANALYSES
		180.8-186.4' - Quartz vein, milky-white with quartz carbonate @ 182.5-183' with mafic fragments, irregular contacts.							
		186.4-188.5' - biotite rich foliated section @ 65° to core axis.							
		194-194.5' - 5% py, 3% po, associated with carbonate stringers.							
		196-197' - biotite rich, 2% py, trace cpy.							
		197-201' - Feldspar porphyry as before.							
		201-212' - Mafic tuff, lightly foliated unit @ 50°, biotite rich.							
		208' - lighter green, more massive, scattered py 1% throughout 201-212'.							
		206.2-206.4' - quartz vein, scattered quartz -carbonate alteration in zones @ 204.7-205', 208-208.5' giving a brecciated core.							
		212'-214.6' Feldspar porphyry as before. Contacts parallel to foliation @ 50°.							
		213-213.6' - Quartz vein, 2 fractures @ 60° pyrite coated.							
214.6'	232.3'	MAFIC TUFF Dark green amphibole, light biotite, foliated throughout @ 50° dark green chloritic.							
		214.6-215.4' zone of quartz-carbonate alteration							
		214.9-215.4' - 1% po, py, 1% cpy. Light green chloritic 218.5-220'.							
		222.7-224.3' - quartz carbonate stringers throughout, feldspar rich zone as fine grain parallel to foliation.							
		224.3-224.5' - quartz vein.							
		230.3-232' - quartz carbonate breccia zone. 3% po, 1% py, 1% cpy.							

CANADIAN OCCIDENTAL PETROLEUM LTD. – Minerals Division

DIAMOND DRILL RECORD

					DIP TEST			
PROPERTY	KIPPEY	LATITUDE	STARTED	Footage	Corrected	Footage	Corrected
HOLE No.	KP-2-84 (Page 6)	DEPARTURE	FINISHED				
BEARING		ELEVATION	LENGTH				
DIP - COLLAR		SECTION	LOGGED BY				
CORE SIZE		SYSTEM Metric English	DRILLED BY				

FOOTAGE (ft/m) FROM	TO	DESCRIPTION	MINERALIZATION SULPHIDES %	SAMPLE No.	FOOTAGE FROM	TO	LENGTH	RECOVERY	ASSAYS — ANALYSES
232.3'	270.4'	META-ANDESITE Dark green chloritic massive with scattered tightly foliated sections, minor quartz-carbonate, minor to 1% py associated with above. 234.1-235.1' - quartz vein. 248.6-248.9' - Light grey, fine grained feldspar unit. 248.9-250.9' - Feldspar porphyry contacts parallel to weak foliation. Feldspars 30% up to 5 mm width. 250.9-270.4' - weak foliation to the core. 253.7-255.3' - Mafic tuff amphibolite biotite rich 1% po, trace cpy. 264.5-265.2' - zone of quartz carbonate breccia, trace po. 265.1' 5 mm wide po stringer on a quartz vein 265.1-265.2'.							
270.4	289.4	MAFIC TUFF Foliated throughout @ 50°. Dark green chloritic scattered fine feldspar to 1 mm up to 5%. Biotite and amphibolite throughout. 273-274.4' - Lighter green zone of increased carbonate alteration as fine stringers. 274' po blebs, 277-279' - trace cpy. 287-289.4' - feldspar porphyry. Light foliation @ 50°, 30% feldspars, trace py.							
289.4'	330.7'	META-ANDESITE Light grey-green, fine feldspars throughout. Scattered quartz-carbonate and quartz veins. 296-297' - 10° fracture chloritic, slickensided. 289.4' - essentially a massive unit, minor biotite up to 10% fine feldspars, trace py.							

CANADIAN OCCIDENTAL PETROLEUM LTD. – Minerals Division

DIAMOND DRILL RECORD

PROPERTY	KIPPEY	LATITUDE		STARTED	DIP TEST			
HOLE No.	KP-2-84 (Page 7)	DEPARTURE		FINISHED	Footage	Corrected	Footage	Corrected
BEARING		ELEVATION		LENGTH				
DIP - COLLAR		SECTION		LOGGED BY				
CORE SIZE		SYSTEM Metric	English	DRILLED BY				

FOOTAGE (ft/m) FROM	TO	DESCRIPTION	MINERALIZATION SULPHIDES %	SAMPLE No.	FOOTAGE FROM	TO	LENGTH	RECOVERY	ASSAYS — ANALYSES
		304.5-304.6' - quartz vein							
		304.7'- trace cpy							
		305' - irregular quartz vein.							
330.7'	346.5'	INTERMEDIATE TUFF							
		Light grey-green, strongly foliated biotite							
		amphibolite @ 50°, scattered 5-10% very fine							
		feldspars.							
		336-346.5' - very strongly foliated core @							
		50°, darker chlorite bands, 3-4 mm. Lighter							
		green felsic 3-4 mm, amphibolite rich,							
		trace to 1% py.							
		341.7-342.5' - 20% py disseminated in a							
		quartz-carbonate breccia zone.							
346.5'	378.5'	META-ANDESITE							
		Light grey-green massive unit, trace py.							
		374.3-377.5' - Light foliation to a lighter							
		grey, more siliceous andesite.							
		377.5-378.5' - Light grey, fine grained							
		felsic unit.							
378.5'	391.6'	MAFIC TUFF							
		Dark grey-green, fine grained, chloritic,							
		foliated @ 50°. Biotite-amphibolite rich,							
		scattered fine feldspars throughout 10%, trace							
		to 1% pyrite.							
		390-391.6' - 3% disseminated pyrite.							
391.6'	397'	IRON FORMATION							
		Very strongly banded unit, light grey, cherty							
		layers with dark black magnetite, sulphide,							
		cherty layers to 1 cm, magnetite 5 mm widths.							
		Bands @ 70°.							
		391.6-393.5' - 20% finely disseminated py,							
		5% po with dark green chloritic magnetite bands.							

CANADIAN OCCIDENTAL PETROLEUM LTD. – Minerals Division

DIAMOND DRILL RECORD

				DIP TEST			
PROPERTY KIPPEY	LATITUDE	STARTED	Footage	Corrected	Footage	Corrected
HOLE No. KP-2-84 (Page 8)	DEPARTURE	FINISHED				
BEARING	ELEVATION	LENGTH				
DIP – COLLAR	SECTION	LOGGED BY				
CORE SIZE	SYSTEM Metric English	DRILLED BY				

FOOTAGE (ft/m) FROM	TO	DESCRIPTION	MINERALIZATION SULPHIDES %	SAMPLE No.	FOOTAGE FROM	TO	LENGTH	RECOVERY	ASSAYS — ANALYSES
		393.5-397' - 10% py, magnetite rich.							
397'	399.8'	MAFIC TUFF							
		Amphibolite biotite, chloritic, foliated @							
		65°. 3% py, trace cpy @ 399'.							
399.8'	417'	FELDSPAR PORPHYRY							
		Light green, very siliceous matrix. Lightly							
		foliated 20%, 2 mm wide feldspars.							
		393-393.6' - strongly foliated mafic tuff @							
		397-399.8'. 3% disseminated pyrite.							
417'	486.5'	INTERMEDIATE TUFF							
		Dark green-grey biotite amphibolite rich with							
		10% fine feldspars throughout. 5% disseminated							
		pyrite throughout. 20% very finely disseminated							
		magnetite throughout to 432.5'							
		420-420.3 - quartz vein.							
		432.5-469 - lighter grey, more massive unit							
		very fine grained with scattered 20% fine							
		grained feldspars. Trace pyrite, weak							
		foliation in sections.							
		441.2-441.3' - 45° carbonate fractures with							
		trace pyrite.							
		445' - 10° fracture, no alteration.							
		446.5-448.6' - Feldspar porphyry, grey,							
		siliceous contact parallel to a weak foliation.							
		464.1-464.8 - quartz vein.							
		469-473' - strongly chloritic zone with a							
		network of crosscutting carbonate stringers.							
		Foliation @ 30°.							
		473-483' - core is light grey biotite-							
		amphibolite rich @ 45° strong foliation.							
		483-486.5' - lightly foliated with 20% fine							
		feldspars							

CANADIAN OCCIDENTAL PETROLEUM LTD. – Minerals Division

DIAMOND DRILL RECORD

				DIP TEST			
				Footage	Corrected	Footage	Corrected
PROPERTY	KIPPEY	LATITUDE	STARTED				
HOLE No.	KP-2-84 (Page 9)	DEPARTURE	FINISHED				
BEARING		ELEVATION	LENGTH				
DIP – COLLAR		SECTION	LOGGED BY				
CORE SIZE		SYSTEM Metric English	DRILLED BY				

FOOTAGE (ft/m) FROM	TO	DESCRIPTION	MINERALIZATION SULPHIDES %	SAMPLE No.	FOOTAGE FROM	TO	LENGTH	RECOVERY	ASSAYS – ANALYSES
486.5'	503'	METAGABBRO							
		Light grey-green, medium grained, chlorite							
		alteration with tuffaceous sections @ 494-							
		495', 499.7-503'. Biotite rich with narrow							
		gabbroic section 500.5-501.2' over narrow							
		widths. Light foliations, contacts not							
		distinct.							
		487.8-488.5' - feldspar porphyry.							
	503'	END OF HOLE							

CORE INVENTORY

Box	From (ft)	To (ft)	Recovery (ft)
1	5.0	29.0	24.0
2	29.0	53.0	24.0
3	53.0	76.7	23.7
4	76.7	100.3	23.6
5	100.3	123.0	22.7
6	123.0	148.0	25.0
7	148.0	171.8	23.8
8	171.8	196.0	24.2
9	196.0	220.0	24.0
10	220.0	244.0	24.0
11	244.0	268.0	24.0
12	268.0	291.6	23.6
13	291.6	315.5	24.1
14	315.5	339.5	24.0
15	339.5	364.0	24.5
16	364.0	388.0	24.0
17	388.0	412.2	24.2
18	412.2	436.0	23.3
19	436.0	460.5	24.5
20	460.5	485.0	24.5
21	485.0	503.0	18.0

503' END OF HOLE

100% core recovery

CANADIAN OCCIDENTAL PETROLEUM LTD. – Minerals Division

DIAMOND DRILL RECORD

						DIP TEST			
PROPERTY	KIPPEY	LATITUDE	17+00N	STARTED	January 27/84	Footage	Corrected	Footage	Corrected
HOLE No.	KP-3-84	DEPARTURE	2+27E	FINISHED	January 29/84	200'	49°		
BEARING	135°	ELEVATION		LENGTH	418'	420'	48°		
DIP - COLLAR	-50°	SECTION	17+00N	LOGGED BY	A. Murdy				
CORE SIZE	AQ	SYSTEM	Metric English X	DRILLED BY	Kenora Diamond Drilling				

FOOTAGE (ft/m) FROM	TO	DESCRIPTION	MINERALIZATION SULPHIDES %	SAMPLE No.	FOOTAGE FROM	TO	LENGTH	RECOVERY	ASSAYS – ANALYSES Au
0'	11'	OVERBURDEN		37202	11.0	16.0	5.0'	100%	15
11'	29.3'	META-ANDESITE		37203	16.0	21.0	5.0	↓	5
		Dark green, chloritic, massive unit. Surface		37204	21.0	26.0	5.0		5
		limonite, alteration on fracture @70° to		37205	26.0	29.3	3.3		115]
		core axis. 2/5' section 28.7-29.0, 10% po,		37206	29.3	34.0	4.7		510]
		1% cpy associated with quartz-carbonate.		37207	34.0	39.0	5.0		1225] Avg. 512 ppb/21.2'
29.3'	47.2'	MAFIC TUFF		37208	39.0	44.0	5.0		35]
		Amphibolite-biotite rich unit. Light grey-		37209	44.0	47.2	3.2		555]
		green, strongly foliated @ 65°. Network of		37210	47.2	53.0	6.0		25
		fine quartz-carbonate stringers throughout.		37211	53.0	58.0	5.0		5
		Scattered sulphides associated with quartz		37212	58.0	63.0	5.0		20
		-carbonate throughout. 2% py, 2% po, trace		37213	63.0	68.0	5.0		5
		cpy.		37214	68.0	73.0	5.0		<5
		46.8-47' - 10% po, 3% py.		37215	73.0	78.0	5.0		5
47.2'	89.0'	META-ANDESITE		37216	78.0	83.0	5.0		<5
		Massive with lightly foliated biotite		37217	83.0	89.0	6.0		10
		amphibolite rich sections with minor scattered		37218	89.0	94.0	5.0		25
		quartz-carbonate.		37219	94.0	99.0	5.0		35
		150-151.4' - light green massive unit with		37220	99.0	104.0	5.0		35
		vague banding possibly a metasediment.		37221	104.0	108.0	4.0		225
		154.3-154.7' - 20% po, 10% py associated		37222	108.0	113.0	5.0		10
		with quartz-carbonate.		37223	113.0	118.0	5.0		15
		54-57', 58.3-59.4', 62.0-63.7' - foliated		37224	118.0	123.0	5.0		5
		section with 10% po, 5% py, trace cpy		37225	123.0	128.0	5.0		55
		associated with quartz-carbonate.		37226	128.0	132.8	4.8		15
		75.0-76.8' - Fine grained siliceous unit with		37227	132.8	138.0	5.2		10
		finely disseminated and stringers of sulphide.		37228	138.0	143.0	5.0		10
		10% po, 5% py stringers @ 50-60°.		37229	143.0	148.0	5.0		5
		87.2-87.6' - banded core, light grey carbonate		37230	148.0	153.0	5.0		5
		bands to 2 cm dark green chloritic bands to		37231	153.0	158.0	5.0		5
		0.5 cm @ 70°, biotite amphibolite throughout.		37232	158.0	163.0	5.0		75

CANADIAN OCCIDENTAL PETROLEUM LTD. – Minerals Division

DIAMOND DRILL RECORD

PROPERTY	KIPPEY	LATITUDE	STARTED	DIP TEST			
HOLE No.	KP-3-84 (Page 2)	DEPARTURE	FINISHED	Footage	Corrected	Footage	Corrected
BEARING		ELEVATION	LENGTH				
DIP - COLLAR		SECTION	LOGGED BY				
CORE SIZE		SYSTEM Metric English	DRILLED BY				

FOOTAGE (ft./m) FROM	TO	DESCRIPTION	MINERALIZATION SULPHIDES %	SAMPLE No.	FOOTAGE FROM	TO	LENGTH	RECOVERY	ASSAYS — ANALYSES Au
		5-7% po, 3% py as disseminations and stringers		37233	163.0	168.0	5.0	100%	10
		throughout.		37234	168.0	173.0	5.0	↓	15
		88-88.4' - 20% po, 10% py associated with		37235	173.0	178.0	5.0		15
		quartz-carbonate.		37236	178.0	183.0	5.0		<5
		89' - trace cpy		37237	183.0	188.0	5.0		55
39.0'	132.8'	MAFIC TUFF?		37238	188.0	190.8	2.8		30
		Massive, dark green core, amphibolite rich,		37239	190.8	191.8	1.0		185
		sections with fine feldspars up to 15% @		37240	191.8	196.3	4.5		200
		90-93.5'.		37241	196.3	198.3	2.0		15
		94.6' - trace cpy.		37242	198.3	203.0	4.7		<5
		115.2-116.3'- quartz vein, contacts irregular		37243	203.0	207.6	4.6		30
		116.2-116.3'- 20% po, 10% py, 1% cpy		37244	207.6	213.0	5.4		5
		118-119.2' - zone of quartz veining, 15% po,		37245	213.0	218.0	5.0		15
		5% py, trace cpy.		37246	218.0	223.0	5.0		<5
132.8'	190.8'	META-ANDESITE		37247	223.0	228.0	5.0		45
		Dark green, chloritic massive unit. Trace		37248	228.0	233.0	5.0		50
		py, 1% po, trace cpy associated with minor		37249	233.0	238.0	5.0		125
		quartz-carbonate stringers. Minor sections		37250	238.0	243.0	5.0		20
		show a weak foliation @ 70° with biotite		37251	243.0	249.0	6.0		20
		amphibolite.		37252	249.0	254.0	5.0		20
		188-190.8' - 10% biotite giving a weak		37253	254.0	259.0	5.0		20
		foliation.		37254	259.0	263.5	4.5		25
190.8'	191.8'	IRON FORMATION		37255	263.5	265.7	2.2		115
		190.8-191.2' - dark magnetite bands to 3 mm		37256	265.7	268.7	3.0		25
		with lighter grey cherty bands with minor		37257	268.7	273.0	4.3		50
		po + py.		37258	273.0	278.0	5.0		5
		191.2-191.8' - irregular, brecciated core		37259	278.0	281.0	3.0		5
		with quartz and quartz-carbonate veining.		37260	281.0	286.7	5.7		45
		15% po, 5% py, trace cpy.		37261	286.7	292.0	5.3		40
191.8'	196.3'	META-ANDESITE		37262	292.0	296.0	4.0		55
		Dark green, massive as before.		37263	296.0	301.0	5.0		245

CANADIAN OCCIDENTAL PETROLEUM LTD. – Minerals Division

DIAMOND DRILL RECORD

					DIP TESTS			
PROPERTY	KIPPEY	LATITUDE	STARTED	Footage	Corrected	Footage	Corrected
HOLE No.	KP-3-84 (Page 3)	DEPARTURE	FINISHED				
BEARING		ELEVATION	LENGTH				
DIP – COLLAR		SECTION	LOGGED BY				
CORE SIZE		SYSTEM Metric English	DRILLED BY				

FOOTAGE (ft/m) FROM	TO	DESCRIPTION	MINERALIZATION SULPHIDES %	SAMPLE No.	FOOTAGE FROM	TO	LENGTH	RECOVERY	ASSAYS — ANALYSES Au
196.3'	198.3'	FELDSPAR PORPHYRY		37264	301.0	306.0	5.0	100%	25
		Light grey, massive.		37265	306.0	311.0	5.0		50
		196.3-196.7' - massive with a weak foliation.		37266	311.0	316.0	5.0		15
		196.7-198.3' - 40% 2-3 mm feldspars in a		37267	316.0	321.0	5.0		5
		light grey matrix.		37268	321.0	326.0	5.0		10
		197.3-197.4' - quartz vein.		37269	326.0	331.0	5.0		20
198.3'	207.6'	INTERMEDIATE TUFF		37270	331.0	335.3	4.3		30
		Dark green chloritic, 10% feldspars, 1-2 mm		37271	335.3	340.9	5.6		20
		strongly magnetic unit with 10-15% dark magnetite		37272	340.9	346.0	5.1		20
		blebs.		37273	346.0	352.0	6.0		10
207.6'	249'	META-ANDESITE		37274	352.0	358.0	6.0		5
		Dark green, massive to weakly foliated, trace		37275	358.0	363.0	5.0		5
		py, narrow section up to 1 foot with minor		37276	363.0	368.0	5.0		10
		feldspars.		37277	368.0	373.0	5.0		5
		210.1-212' - Feldspar porphyry, contacts		37278	373.0	378.0	5.0		20
		parallel to weak foliation @ 60°. Occasional		37279	378.0	382.5	4.5		15
		minor quartz-carbonate. Minor narrow sections		37280	382.5	388.0	5.5		1050
		of biotite rich, weakly foliated usually <1		37281	388.0	393.0	5.0		30
		foot.		37282	393.0	398.0	5.0		10
		226.2-228.3, 23.5-237.7' - foliated sections		37283	398.0	403.0	5.0		120
		with 5% py, 2% po as disseminations and		37284	403.0	408.0	5.0		10
		stringers.		37285	408.0	413.0	5.0		510
		248.9-249' - quartz vein.		37286	413.0	418.0	5.0		50
249'	263.5'	METAGABBRO							
		Dark green, amphibolite rich, fine grained							
		feldspar rich matrix, medium grained							
		amphibolite, mottled texture.							
263.5'	265.7'	MAFIC TUFF							
		Grey-green, fine grained, biotite rich,							
		scattered amphibolite, foliation @ 65-70°,							
		trace py.							

CANADIAN OCCIDENTAL PETROLEUM LTD. – Minerals Division

DIAMOND DRILL RECORD

				DIP TEST			
PROPERTY KIPPEY	LATITUDE	STARTED	Footage	Corrected	Footage	Corrected
HOLE No. KP-3-84 (Page 4)	DEPARTURE	FINISHED				
BEARING	ELEVATION	LENGTH				
DIP - COLLAR	SECTION	LOGGED BY				
CORE SIZE	SYSTEM Metric English	DRILLED BY				

FOOTAGE (ft/m) FROM	TO	DESCRIPTION	MINERALIZATION SULPHIDES %	SAMPLE No.	FOOTAGE FROM	TO	LENGTH	RECOVERY	ASSAYS — ANALYSES
65.7'	268.7'	METADACITE TUFF							
		Light grey, minor biotite, light foliation,							
		fine grained, very siliceous, very fine							
		feldspars stretched parallel to foliation.							
68.7'	281.0'	METAGABBRO							
		268.7-269' - fine grained, strongly foliated							
		biotite rock with carbonate stringers.							
		269.2-271.2' - 30% feldspars, 1-2 mm on a							
		fine grained chloritic matrix.							
		271.2-281' - light grey matrix, fine grained							
		with 50% dark green chloritic mafics.							
		Similar to 249-263.5' where matrix was not							
		siliceous.							
281.0'	286.7'	FELDSPAR PORPHYRY							
		Light grey siliceous unit with scattered							
		feldspars to 20%.							
		281-281.5', 282-283.2' - lighter green, fine							
		grained chloritic units strongly foliated							
		biotite amphibolite with minor feldspar,							
		trace pyrite.							
286.7'	296.0'	METAGABBRO							
		Same as 268.7-281'.							
296.0'	328.5	INTERMEDIATE TUFF							
		Light grey-green, fine grained pleated @							
		55-60° throughout biotite rich, light							
		chloritic alteration, minor scattered quartz+							
		carbonate stringers.							
		Trace - 1% pyrite.							
328.5'	335.3'	META-ANDESITE							
		Massive to faint foliation, dark green							
		chloritic unit, very minor quartz-carbonate							

CANADIAN OCCIDENTAL PETROLEUM LTD. - Minerals Division

DIAMOND DRILL RECORD

					DIP TEST			
PROPERTY	KIPPEY	LATITUDE	STARTED	Footage	Corrected	Footage	Corrected
HOLE No.	KP-3-84 (Page 5)	DEPARTURE	FINISHED				
BEARING		ELEVATION	LENGTH				
DIP - COLLAR		SECTION	LOGGED BY				
CORE SIZE		SYSTEM Metric English	DRILLED BY				

FOOTAGE (ft/m) FROM	TO	DESCRIPTION	MINERALIZATION SULPHIDES %	SAMPLE No.	FOOTAGE FROM	TO	LENGTH	RECOVERY	ASSAYS — ANALYSES
		stringers with trace pyrite.							
335.3'	340.9'	IRON FORMATION							
		50% dark black magnetite bands to ½ cm wide.							
		50% light grey, siliceous bands with minor py 1%.							
		336.4-336.5' - quartz vein, 5% po.							
		337.6-339.0' - quartz vein.							
		339.0-340.9' - siliceous zone, light banding							
		of dark grey more mafic and light grey quartzitic							
		units throughout. 10% py, 5% po as fine							
		stringers.							
340.9'	387'	INTERMEDIATE TUFF							
		Light grey-green, massive to weakly foliated							
		minor quartz-carbonate stringers, trace py,							
		po and cpy associated with these stringers,							
		minor fine feldspars throughout 1mm 5-10%							
		to 387'.							
		367' - 0.2' wide quartz vein, irregular							
		contacts.							
		368.9-371.0' - Scattered, narrow 0.2-0.4							
		wide feldspar porphyry units generally a							
		lighter grey felsic unit.							
		371-387' - strong foliation with biotite							
		amphibolite.							
		375' - 2" quartz vein contacts parallel to							
		weak foliation @ 65°, trace pyrite.							
		382.6-383.5' - zone of quartz veining,							
		minor carbonate alteration. 15% po, 2% cpy.							
		387' - trace cpy.							
387'	418'	387-418 - massive andesite (as 207-249).							
	418'	END OF HOLE							

CANADIAN OCCIDENTAL PETROLEUM LTD. – Minerals Division

DIAMOND DRILL RECORD

				DIP TEST			
PROPERTY KIPPEY	LATITUDE	STARTED	Footage	Corrected	Footage	Corrected
HOLE No. KP-3-84 (Page 6)	DEPARTURE	FINISHED				
BEARING	ELEVATION	LENGTH				
DIP - COLLAR	SECTION	LOGGED BY				
CORE SIZE	SYSTEM Metric English	DRILLED BY				

FOOTAGE (ft /m) FROM	TO	DESCRIPTION	MINERALIZATION SULPHIDES %	SAMPLE No.	FOOTAGE FROM	TO	LENGTH	RECOVERY	ASSAYS — ANALYSES
		CORE INVENTORY							
Rx	From (ft)	To (ft) Recovery (ft)							
1	11	33.5 22.5							
2	33.5	57.5 24.0							
3	57.5	81.6 24.1							
4	81.6	105.0 24.4							
5	105.0	128.8 23.8							
6	128.8	152.6 23.7							
7	152.6	175.4 22.8							
8	175.4	200.3 24.9							
9	200.3	224.3 24.0							
10	224.3	248.0 23.7							
11	248.0	272.2 24.2							
12	272.2	296.2 24.0							
13	296.2	320.5 24.3							
14	320.5	345.0 24.5							
15	345.0	369.0 24.0							
16	369.0	398.0 24.0							
17	398.0	417.0 24.0							
18	417.0	418.0 1.0							
		418' END OF HOLE							

APPENDIX II

ANALYTICAL RESULTS

Bondar-Clegg Company Ltd.
764 Belfast Road
Ottawa, Ontario
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Phone: (613) 237-3110
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BONDAR-CLEGG

Geochemical Lab Report

K.P. 1

CANADIAN OCCIDENTAL PETROLEUM LIMITED
A. MURDY
180 ATTWELL DRIVE
4TH FLOOR
REXDALE, ONTARIO M9W 6A9

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BONDAR-CLEGG

Geochemical Lab Report

REPORT: 014-0351

FROM: CANADIAN OCCIDENTAL PETROLEUM LIMITED SUBMITTED BY: A. MURDY
DATE: 29-FEB-84 PROJECT: KIPDEY

ORDER	ELEMENT	LOWER DETECTION LIMIT	EXTRACTION	METHOD	SIZE FRACTION	SAMPLE TYPE	SAMPLE PREPARATION
01	Au	5 PPB	AQUA REGIA	Fire Assay AA	-200	DRILL CORE	CRUSH,PULVERIZE -200

REPORT COPIES TO: A. MURDY

INVOICE TO: A. MURDY

REMARKS: < MEANS LESS THAN
SAMPLE 37000 WAS NOT RECEIVED.
PLEASE NOTE CORRECTION TO AU VALUES FOR SAMPLES 37075 AND 37081.

DETECTION LIMITS FOR GOLD
10 gram sample: 5 ppb.
5 gram sample: 10 ppb.
1 gram sample: 50 ppb.

Sample Wt. 10 g. unless otherwise stated.

NOTE:
Check concentration/sample weight ratio for effective detection level.

Bondar-Clegg & Company Ltd.
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Ottawa, Ontario
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BONDAR-CLEGG

Geochemical Lab Report

REPORT: 014-0351 | PROJECT: KIPDEY | PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	Au PPB	wt/Au GM	NOTES	SAMPLE NUMBER	ELEMENT UNITS	Au PPB	wt/Au GM	NOTES
37001		15			37041		25		
37002		20			37042		35		
37003		15			37043		5		
37004		425			37044		20		
37005		60			37045		2020		
37006		10			37046		40		
37007		10			37047		10		
37008		45			37048		5		
37009		100			37049		15		
37010		105			37050		<5		
37011		10			37051		10		
37012		20			37052		15		
37013		50			37053		10		
37014		20			37054		20		
[illegible]5		5			37055		10		
37016		5			37056		15		
37017		50			37057		25		
37018		20			37058		20		
37019		5			37059		5		
37020		25			37060		5		
37021		5			37061		15		
37022		10			37062		<5		
37023		25			37063		<5		
37024		10			37064		10		
37025		<5			37065		5		
37026		25			37066		5		
37027		25			37067		10		
37028		110			37068		20		
37029		110			37069		165		
37030		265			37070		10		
37031		635			37071		100		
37032		30			37072		10		
37033		210			37073		30		
37034		10			37074		35		
37035		40			37075		5		
[illegible]6		45			37076		<5		
37037		670			37077		5		
37038		25			37078		80		
37039		45			37079		75		
37040		5			37080		5		

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BONDAR-CLEGG

Geochemical Lab Report

REPORT: 014-0351

PROJECT: KIPDEY PAGE 2

SAMPLE NUMBER	ELEMENT UNITS	Au PPB	wt/Au GM	NOTES
37081		15		
37082		<5		
37083		<5		
37084		<5		
37085		5		
37086		30		
37087		35		
37088		20		
37089		40		
37090		595		
37091		400		
37092		10		
37093		5		
37094		<5		
[illegible]95		15		
37096		30		
37097		30		
37098		30		
37099		175		

Bondar-Clegg [illegible]pany Ltd.
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[illegible]one: (613) 237-3110
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BONDAR-CLEGG

Geochemical Lab Report

K. P. 2

CANADIAN OCCIDENTAL PETROLEUM LIMITED
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Bondar-Clegg [illegible]pany Ltd.
764 Belfast Road
Ottawa, Ontario
[illegible]nada K1G 0Z5
[illegible]one: (613) 237-3110
Telex: 053-4455

BONDAR-CLEGG

Geochemical Lab Report

REPORT: 014-0382

FROM: CANADIAN OCCIDENTAL PETROLEUM LIMITED SUBMITTED BY: A. MURDY
DATE: 02-MAR-84 PROJECT: KIPDEY

ORDER	ELEMENT	LOWER DETECTION LIMIT	EXTRACTION	METHOD	SIZE FRACTION	SAMPLE TYPE	SAMPLE PREPARATIONS
01	Au	5 PPB	AQUA REGIA	Fire Assay AA	-200	DRILL CORE	CRUSH,PULVERIZE -200

REPORT COPIES TO: A. MURDY

INVOICE TO: A. MURDY

REMARKS: < MEANS LESS THAN
THE FOLLOWING ARE DUPLICATE AU VALUES
DETERMINED AT THE TIME OF ANALYSIS:

SAMPLE NO.	AU PPB
37100	45
37144	135
37188	20

DETECTION LIMITS FOR GOLD
10 gram sample: 5 ppb.
5 gram sample: 10 ppb.
1 gram sample: 50 ppb.

Sample Wt. 10 g. unless otherwise stated.

NOTE:
Check concentration/sample weight ratio
for effective detection level.

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Geochemical Lab Report

REPORT: 014-0382 | PROJECT: KIPDEY | PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	Au PPB	wt/Au GM	NOTES	SAMPLE NUMBER	ELEMENT UNITS	Au PPB	wt/Au GM	NOTES
37100		185			37140		75		
37101		70			37141		95		
37102		205			37142		130		
37103		100			37143		50		
37104		145			37144		365		
37105		5			37145		40		
37106		<5			37146		60		
37107		25			37147		55		
37108		30			37148		15		
37109		215			37149		270		
37110		10			37150		20		
37111		50			37151		15		
37112		15			37152		10		
37113		15			37153		35		
[illegible]		35			37154		15		
37115		5			37155		50		
37116		130			37156		40		
37117		80			37157		40		
37118		205			37158		20		
37119		15			37159		<5		
37120		10			37160		<5		
37121		5			37161		15		
37122		10			37162		25		
37123		50			37163		5		
37124		80			37164		5		
37125		5			37165		20		
37126		10			37166		<5		
37127		175			37167		<5		
37128		10			37168		<5		
37129		105			37169		15		
37130		50			37170		220		
37131		30			37171		20		
37132		205			37172		20		
37133		105			37173		30		
37134		95			37174		<5		
[illegible]		1290			37175		15		
37136		765			37176		10		
37137		<5			37177		10		
37138		30			37178		15		
37139		65			37179		20		

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Geochemical Lab Report

REPORT: 014-0382 | PROJECT: KIPDEY | PAGE 2

SAMPLE NUMBER	ELEMENT UNITS	Au PPB	wt/Au GM	NOTES
37180		40		
37181		5		
37182		10		
37183		<5		
37184		10		
37185		20		
37186		10		
37187		10		
37188		15		
37189		15		
37190		20		
37191		15		
37192		10		
37193		20		
[illegible]		5		
37195		15		
37196		30		
37197		10		
37198		<5		
37199		<5		
37200		<5		
37201		10		

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Geochemical Lab Report

K.P. 3

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Geochemical Lab Report

REPORT: 014-0415

FROM: CANADIAN OCCIDENTAL PETROLEUM LIMITED SUBMITTED BY: A. MURDY
DATE: 07-MAR-84 PROJECT: KIPDEY

ORDER	ELEMENT	LOWER DETECTION LIMIT	EXTRACTION	METHOD	SIZE FRACTION	SAMPLE TYPE	SAMPLE PREPARATIONS
01	Au	5 PPB	AQUA REGIA	Fire Assay AA	-200	DRILL CORE	CRUSH,PULVERIZE -200

REPORT COPIES TO: A. MURDY INVOICE TO: A. MURDY

REMARKS: < MEANS LESS THAN

DETECTION LIMITS FOR GOLD
10 gram sample: 5 ppb.
5 gram sample: 10 ppb.
1 gram sample: 50 ppb.

Sample Wt. 10 g. unless otherwise stated.

NOTE:
Check concentration/sample weight ratio
for effective detection level.

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Geochemical Lab Report

REPORT: 014-0415 | PROJECT: KIPDEY | PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	Au PPB	wt/Au GM	NOTES	SAMPLE NUMBER	ELEMENT UNITS	Au PPB	wt/Au GM	NOTES
37202		15			37242		<5		
37203		5			37243		30		
37204		5			37244		5		
37205		115			37245		15		
37206		510			37246		<5		
37207		1225			37247		45		
37208		35			37248		50		
37209		555			37249		125		
37210		25			37250		20		
37211		5			37251		20		
37212		20			37252		20		
37213		5			37253		20		
37214		<5			37254		25		
37215		5			37255		115		
[illegible]		<5			37256		25		
37217		10			37257		50		
37218		25			37258		5		
37219		35			37259		5		
37220		35			37260		45		
37221		225			37261		40		
37222		10			37262		55		
37223		15			37263		245		
37224		5			37264		25		
37225		55			37265		50		
37226		15			37266		15		
37227		10			37267		5		
37228		10			37268		10		
37229		5			37269		20		
37230		5			37270		30		
37231		5			37271		20		
37232		75			37272		20		
37233		10			37273		10		
37234		15			37274		5		
37235		15			37275		5		
37236		<5			37276		10		
[illegible]		55			37277		5		
37238		30			37278		20		
37239		185			37279		15		
37240		200			37280		1050		
37241		15			37281		30		

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Geochemical Lab Report

REPORT: 014-0415 | PROJECT: KIPDEY | PAGE 2

SAMPLE NUMBER	ELEMENT UNITS	Au PPB	wt/Au GM	NOTES
37282		10		
37283		120		
37284		10		
37285		510		
37286		50		

APPENDIX III

LEGEND FOR CROSS-SECTIONS

LEGEND FOR CROSS-SECTIONS

4 Felsic Intrusive
Feldspar Porphyry

3 Mafic Intrusive
Metagabbro

2 Metasedimentary

B.I.F. Banded Iron Formation

1 Meta-volcanic Rocks
- 1 Tuffaceous Felsic Meta-volcanic
- 1a Mafic to Intermediate Meta-volcanic
- 1b Mafic to Intermediate Tuff

Original Mineralogy

bi	biotite
ep	epidote
fe	felsic
ga	garnet
hb	hornblende
ta	talc
ca	carbonate
mu	muscovite
kf	potassium feldspar
pl	plagiocalse
qt	quartz
si	siliceous
st	staurolite
tr	tremolite and actinolite
am	amphibole (undetermined)
to	tourmaline
sl	sillimanite
an	andalusite
px	pyroxene
mt	magnetite
ct	chert
jp	jasper
gr	graphite

Alteration Mineralogy

si	silicified
qt	quartz
ep	epidote
ch	chlorite
sr	sericite
ca	carbonate
se	serpentine
al	albite
pa	potassic alteration
ka	kaolin
sk	skarn

Ore Minerals (percentage to be indicated)

As	arsenopyrite
Bo	Bornite
Cp	Chalcopyrite
Ga	Galena
gr	graphite
he	hematite
il	ilmenite
mc	marcasite
ma	malachite
mo	molybdenite
Pn	Pentlandite
Py	Pyrite
Po	Pyrrhotite
Sp	Sphalerite
Su	Undetermined Sulphide(s)
Au	Visible Gold
Ag	Silver

Structural Symbols


bedding


foliation


fault

Bx breccia

Bx brecciated zone

veins, normally quartz or quartz carbonate usually >6" wide


Zone of quartz or quartz carbonate veining

Note: All angles shown on cross sections are true measured angles. Where core angles are not known the feature will be shown as parallel to the prevailing bedding or foliation.

020

CANADIAN OCCIDENTAL PETROLEUM LTD.

MINERALS DIVISION

GEOLOGY AND GEOCHEMISTRY

OF THE

KIPPEY CLAIMS 1-30

N.T.S. SHEET 53 G/5

30 MINING CLAIMS NOS. KRL 563970-563974 INCL.

KRL 570869-570893 INCL.

MUSKRAT DAM LAKE BELT

NORTHWESTERN ONTARIO

BY: A.W. MURDY, B.A.

COVERING WORK COMPLETED JUNE 1983

SEPTEMBER 1983

2.6245

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PLANS (IN BACK POCKET)

PLAN	1	Geology of the Muskrat Dam Lake Belt	1:100,000
	2	Geology and Rock Geochemistry	1:2,000
	3	Compilation	1:2,000
	4	Gossan Zone	1:50

1. SUMMARY AND RECOMMENDATIONS

In June 1983 the KIPPEY property was mapped by R.M. Kuehnbaum and A.W. Murdy. Outcrop exposure was limited to a small area east of the Windigo River. Ninety-eight A_h soil samples and 68 rock samples were collected. High results were a 400 ppb gold soil sample; and a 4.06 oz/ton gold, 0.74/ton silver and 1.40% copper rock sample. There is a correlation between anomalous gold, silver and copper values within the rock samples.

Four map units were recognized; a mafic meta-volcanic, a hornblende biotite schist (possibly a metasediment), a metagabbro and a felsic meta-intrusive.

The samples collected from the Gossan Zone were generally anomalous in gold. These samples were taken from 0.05 - 0.25 metres shear zones within the hornblende biotite schist unit. The highest gold value was 4.06 oz/ton gold over 0.05 metres and a 1 metre sample over the above sample returned 0.226 oz/ton gold. Two other Gossan Zone samples returned values of 3885 ppb and 6335 ppb gold, adjacent samples over 0.20 m and 0.25 m respectively.

The VLF-EM conductors outlined in previous years work have a direct correlation with the highest gold values taken from the Gossan Zone trench. There is also a direct correlation with anomalous soil samples.

The results have shown there is a particular structure associated with the gold mineralization. A minimum four hole diamond drill program will be needed to evaluate the gold potential of the property.

2. INTRODUCTION

The KIPPEY property consists of 30 claims (480 hectares) acquired in November 1981. The claim group was acquired to cover a series of old trenches which had been visited and sampled in July and October 1981. Sample values of up to 29,500 ppb Au obtained in the trenches prompted the acquisition of the property.

In the period December 1981 - February 1982 a geophysical program was completed over the claim group.

In October 1982 a brief 3 hour visit was made to the trenches to resample the highest value of the 1981 work, results while being anomalous were low. The highest analytical value was 150 ppb Au.

In the period June 8-16, 1983, R.M. Kuehnbaum and A.W. Murdy mapped the KIPPEY property at a scale of 1:2000. Sixty-eight rock samples were collected during the mapping program. The only outcrop area was a ridge 1600 metres long by 400 metres wide on the southeast side of the Windigo River. Soil sampling was carried out on 4 lines two on either side of the existing trenches. Ninety-eight A_h samples were taken at 10 metre intervals along these lines.

2.1 Location and Access

The KIPPEY Claims occupy approximately 1200 acres in the Muskrat Dam Lake area (N.T.S. map sheet 53G/5) in the Patricia Portion of the District of Kenora and is bounded by latitudes 53°19' and 53°21' North and by longitudes 91°47' and 91°40' West. Muskrat Dam Lake (just north of the claims area) is about 240 km (150 miles) north-northwest of Pickle Lake, about 368 km (230 miles) north of Sioux Lookout, and about 304 km (190 miles) north-northeast of Red Lake (see

Figure 1).

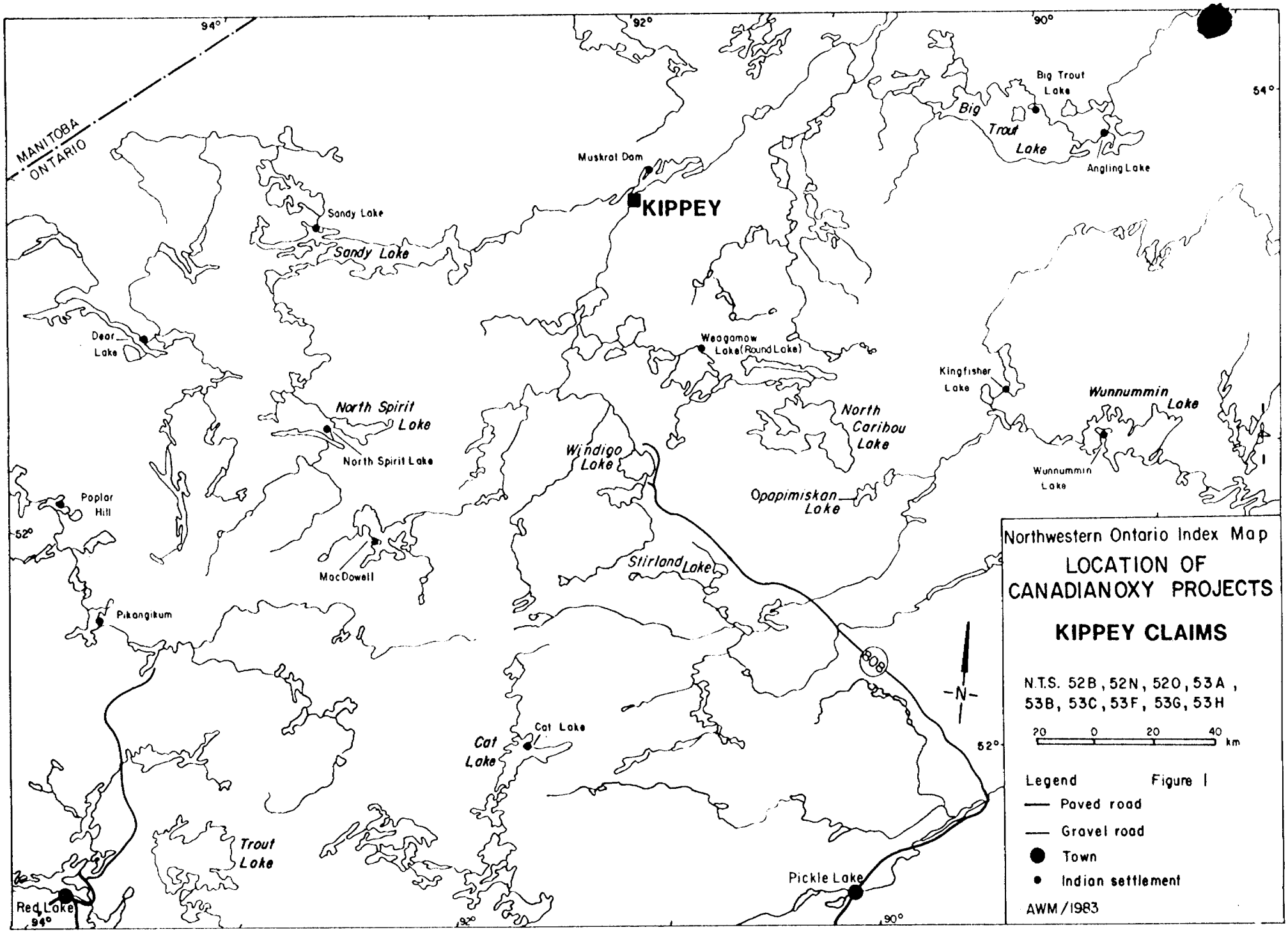
The only rapid access to the area is by float or ski-equipped aircraft, which can be chartered at Sioux Lookout, Pickle Lake or Red Lake. The 1983 summer program operated out of Red Lake. A Green Airways single Otter aircraft was used for transportation.

Highway 808, a new all-weather road from Pickle Lake to Windigo Lake passes within 88 km (55 miles) to the southeast of the property. Winter haulage roads are used to transport heavy equipment into the area. The highway can be taken as far as Stirland Lake then aircraft can be chartered from either Sandy Lake or Round Lake to the claims area. Dome Mines Ltd. has asked for permission from the Ontario Ministry of Transportation to build a road from highway 808 to their property at Opapimiskan Lake.

The Muskrat Dam Lake settlement (population 150) is located on the north shore of Muskrat Dam Lake, 6.5 km (4 miles) north-northeast of the KIPPEY Claims. The settlement has a nursing station and a public telephone. The Indian Reserve stretches from Sandhill Crane Island in the south, notheastwards to Smallfish Island in Spearfish Bay (see Plan 1).

2.2. Topography and Physiography

The property is on a low, flat-lying area. The Windigo River which flows northeast into Muskrat Dam Lake cuts the claim group diagonally. The maximum elevation of 294 metres above sea level occurs along a ridge 1500 m in length by 400 m in width southeast of the Windigo River. The minimum elevation is 270 metres above sea level along the Windigo River.


94°
92°
90°
54°
52°
MANITOBA
ONTARIO
Muskrat Dam
KIPPEY
Sandy Lake
Sandy Lake
Big Trout Lake
Big Trout Lake
Angling Lake
Dear Lake
Weagamow Lake(Round Lake)
Kingfisher Lake
Wunnummin Lake
North Spirit Lake
North Spirit Lake
North Caribou Lake
Windigo Lake
Wunnummin Lake
Opapimiskan Lake
Poplar Hill
MacDowell
Stirland Lake
Pikangikum
808
N
Cat Lake
Cat Lake
Trout Lake
Pickle Lake
Red Lake
Northwestern Ontario Index Map
LOCATION OF CANADIANOXY PROJECTS
KIPPEY CLAIMS
N.T.S. 52B, 52N, 52O, 53A, 53B, 53C, 53F, 53G, 53H
20 0 20 40 km
Legend
Figure 1
Paved road
Gravel road
Town
Indian settlement
AWM/1983

The claim group is covered by mature spruce forest 15-20 feet in height with jackpine, poplar, and scattered white birch on the slightly higher ridges. The river margins are quite swampy with low alders and open muskeg areas. A large open muskeg swamp is located east of the claim group.

2.3 Claims and Ownership

The KIPPEY property consists of 30 claims, total area of 480 hectares in the area of Kippen Lake, District of Kenora, Patricia Portion, Red Lake Mining Division, Plan No. M2902, National Topographical Sheet No. 53 G/5. The KIPPEY Claims were acquired by staking in 1981 and are retained wholly in the interest of Canadian Occidental Petroleum Ltd.

TABLE 1

CLAIMS LIST

Claim Nos.	Date Recorded	Claims Nos.	Date Recorded
KRL 563970	Nov. 13/81	KRL 570879	Nov. 13/81
563971	"	570880	"
563972	"	570881	"
563973	"	570882	"
563974	"	570883	"
		570884	"
KRL 570869	"	570085	"
570870	"	570086	"
570871	"	570087	"
570872	"	570088	"
570873	"	570089	"
570874	"	570090	"
570875	"	570091	"
570876	"	570092	"
570877	"	KRL570093	"
KRL570878	"		
		TOTAL 480 hectares	

2.4 Previous Work

The Muskrat Dam Lake Area (Geological Report 74) was mapped by L.D. Ayres for the Ontario Geological Survey in 1969 at a scale of 1 inch to 1/2 mile.

Texas Gulf Sulphur worked in the area in 1971. One drill hole report number 15 was collared in the southeast corner of the claim group. The location of the drill hole relative to the grid has not been verified. This drill hole penetrated 25 feet of overburden. The rock units intersected were andesite with a narrow 6 foot felsic tuff unit which had 5% pyrrhotite over 2 feet. No analyses were given.

The area was visited in the summer and fall of 1981 by Canadian Occidental geologists. Results of their work are reported by K. Leonard in his report on the Geology and Geochemistry of the Kippey Claims, March 1982.

Ground magnetic and VLF-EM surveys were conducted by TechTerrex Inc. in the time period December 1981 to February 1982. The magnetic survey coverd 154.5 line km and the VLF-EM survey covered 143.0 line km. A report by F.L. Jagodits on the Ground Geophysical Survey, Project Kippey dated December 1982, details the results of these surveys.

A brief 3 hour visit was made to the property in the fall of 1982. The results of that visit are incorporated into this report.

3. WORK COMPLETED 1983

3.1 Summary of Work Completed

Mapping	8.5	line km
Rock samples collected	68	
Soil sampling	0.9	line km
Soil samples collected	98	
Rocks geochemically analysed	68	
Determinations	173	68 Au, 35 Cu, 35 Zn, 35 Ag
Soils geochemically analysed	98	
Determinations	98	(Au)
Thin section descriptions	6	

3.2 Personnel Involved on the Property

NAME	POSITION	DATE
R.M. Kuehnbaum	Project Supervisor	June 8-16/83
A.W. Murdy	Project Geologist	June 8-16, July 1/83
R.H. Wallis	Chief Geologist	July 1/83

The above persons are employed by Canadian Occidental Petroleum Ltd., Minerals Division, 180 Attwell Drive, 4th Floor, Rexdale, Ontario, M9W 6A9.

Analysis and assays were performed by Bondar-Clegg Ltd. of Ottawa, Ontario.

Petrographic descriptions were completed by Dr. S. Boutcher of St. Vital, Manitoba.

4. GEOLOGY

4.1 General Geology

Information on the regional setting of the KIPPEY property is taken from Geological Report 74 by L.D. Ayres (1969).

The KIPPEY property is located within the Muskrat Dam Lake Belt, Figure 2, Plan 1, a Precambrian metavolcanic-metasedimentary-metagabbroic assemblage bordered by composite granitic batholiths. The east trending Muskrat Dam Lake Belt has been mapped for a strike length of 65 miles, and generally ranges in width from 4 to 11 miles. The property is located east of the Windigo River within mafic metavolcanics near the contact of a granitic batholith. These mafic metavolcanics are on the north limb of a major syncline, the axis of which trends through the center of Muskrat Dam Lake and the eastern section of the belt.

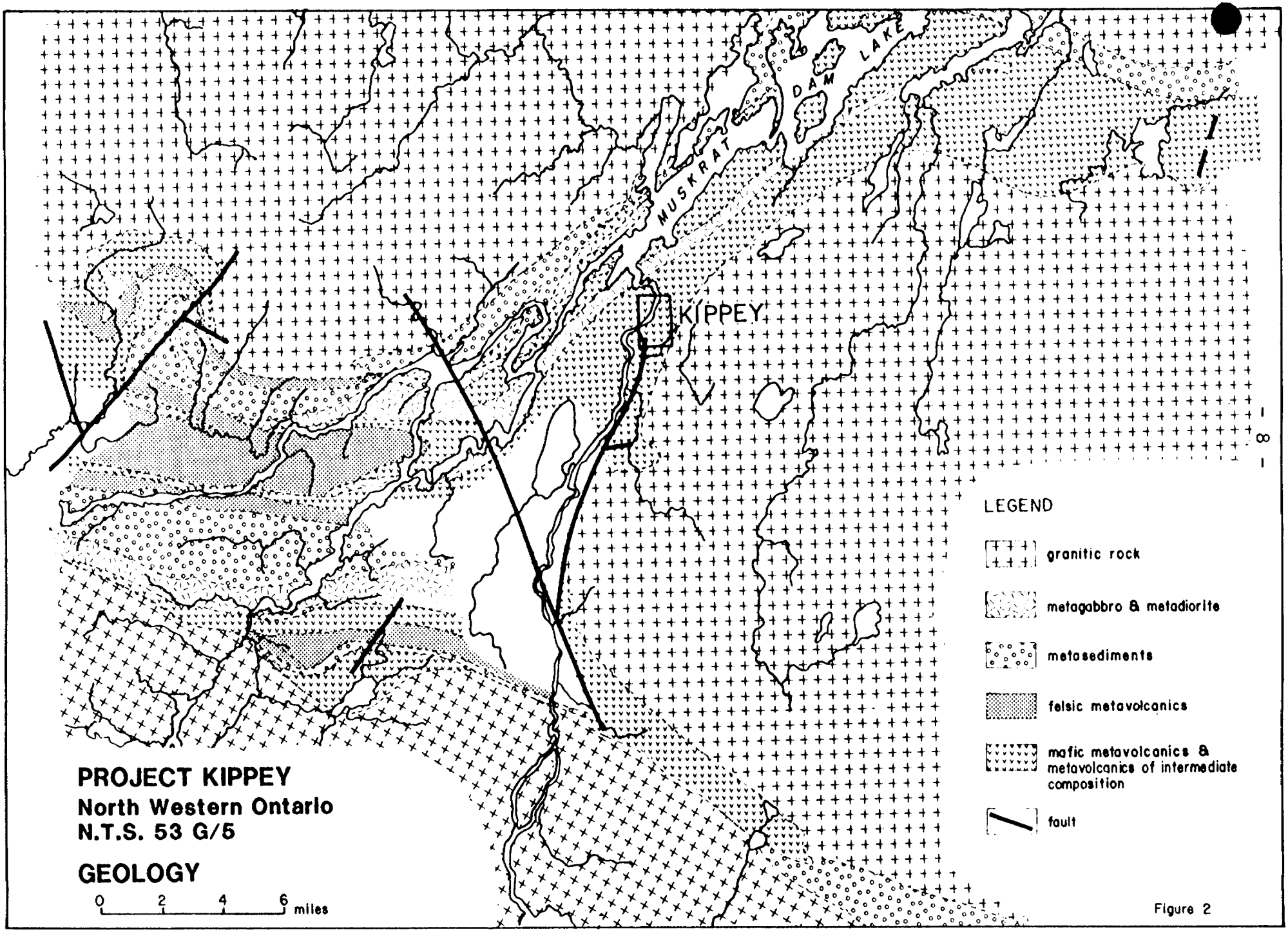

MUSKRAT DAM LAKE
KIPPEY
LEGEND
granitic rock
metagabbro & metadiorite
metasediments
felsic metavolcanics
mafic metavolcanics & metavolcanics of intermediate composition
fault
PROJECT KIPPEY
North Western Ontario
N.T.S. 53 G/5
GEOLOGY
0 2 4 6 miles

Figure 2

The Windigo River Fault trending north-northwest has cut the Muskrat Dam Lake Belt into two segments. The vertical component of movement along the fault appears to have been greater than the horizontal component and the east side has apparently moved up relative to the west side. This has resulted in a topographic high of 10-30 metres with corresponding outcrops most noticeable just east of the eastern area of the "indigo River Fault. The property itself is located near the apparent termination of this eastern arm south of Muskrat Dam Lake.

The belt has been regionally metamorphosed and the grade of metamorphism ranges from the middle greenschist to the middle almandine-amphibolite facies. The granitic batholiths superimposed hornblende hornfels facies contact metamorphic aureoles as much as 1 mile wide on the almandine-amphibolite facies zone.

4.2 Description of Lithological Units

Mapping of the KIPPEY property was limited to the only area of outcrop, a ridge 1600 m long by 400 m wide on the east side of the Windigo River. The outcrops observed were mainly mafic metavolcanics. The following subdivisions were made: Unit A, a massive non-foliated mafic metavolcanic; Unit B, a hornblende-biotite schist possibly a metasedimentary rock; Unit C a coarse-grained massive metagabbro; and Unit D, a poorly exposed felsic meta-intrusive unit. The general strike of the units is 015° dipping 80°NW.

Unit A Mafic Meta-volcanic

This unit is a massive fine-grained, grey-green "andesite". Chloritic alteration is usually present. Minor

quartz and quartz carbonate veining is found locally. Sulphides are generally rare within this unit.

The Sulphide zone, Figure 3 (a narrow discontinuous vein composed of quartz with malachite pyrrhotite, pyrite, chalcopyrite and chlorite) is located within this unit A.

Unit B Hornblende±Biotite Schist (Metasediment?)

This unit is a very schistose, dark green hornblende rich±biotite rock with usually moderate amounts of plagioclase and quartz. Some outcrops show a very vague, poorly defined banding. Minor sulphide are usually finely disseminated throughout and quartz carbonate veining is common. Chlorite and sericite alteration are also present.

The Gossan zone, Plan 4, is contained within Unit B. This zone is made up of scattered, narrow 0.05-0.25 metre wide shear zones. Limonite±malachite alterations are present as well as pyrrhotite, pyrite, minor chalcopyrite and quartz-carbonate stringers.

Unit C Metagabbro

This is a massive, dark green, medium-grained amphibolite rich chloritic rock with moderate amounts of plagioclase in the matrix.

Unit D Felsic Meta-Intrusive

This rock unit was observed in only two outcrops and is a fine-grained, whitish-grey, slightly foliated feldspar quartz biotite porphyry. Minor chlorite and sericite alteration are present.

4.3 Economic Geology

The summer mapping and sampling program has confirmed the presence of high gold values associated with narrow shear zones. The highest value found was 4.06 oz/ton

gold, 0.74 oz/ton silver and 1.40% copper over a 10 cm wide shear zone. A one metre channel sample covering this high value analysed 0.225 oz/ton. A number of other narrow shear zones in the range of 1000-6000 ppb Au with anomalous silver and copper association were found. The highest values found are coincident with a VLF-EM anomaly with a strike length of 800 metres. Anomalous soil samples were found coincident with the conductor on each line sampled. Anomalous rock samples were also found near this conductor at scattered locations. It is quite possible that a wide shear zone or a concentration of shear zones could be found along the VLF-EM conductor to outline an economically viable concentration of gold mineralization.

5. GEOCHEMISTRY

5.1 Data Manipulation

Frequency distribution diagrams were constructed (Figures 4 and 8, Tables 2 and 3) for both A_h soil and rock sample population. An arbitrary best-fit curve was drawn through the data.

Where this curve intersects the abscissa defines the "normal" population and all values lying to the right of this value are considered anomalous. Cumulative frequency curves were constructed (Figures 5 and 9) from the non-anomalous population. Mean and probably anomalous levels for each element were determined at the 50th and 97th percentile levels respectively.

5.2 Rock Geochemistry

Sixty-eight rock samples were collected during the mapping program at this project. All of the samples were analysed for gold, and in addition, 35 of these samples were

analysed for gold and silver. Twenty of these 35 samples were taken from the Gossan and Sulphide zone trenches. The other 15 were scattered across the property where visible sulphide were also present (Plan 2).

The anomalous level for gold in rock samples was determined to be 20 ppb, Table 2 and Figures 4 and 5. A strong correlation between anomalous gold, silver and copper values was found.

The highest gold values located, other than those samples from the trenches, were the following: Sample 14035, 1160 ppb gold, 2330 ppm copper, located in a narrow shear with intense carbonatization; Sample 14020 contained 310 ppb gold with a narrow shear zone with 3% pyrite. This sample was taken close to conductor V7-6; Sample 14026 analysed 165 ppb gold and 824 ppm copper in a 10 cm wide shear zone with 5% pyrite. All other samples, with exception of the trenches, were less than 75 ppb gold. Sample 14019, a 0.5 m wide quartz porphyry sill contained 65 ppb gold. Four samples with gold values from 45-60 ppb were taken near conductor V7-1 on scattered lines. Values were contained in quartz veins and shear zones. Other low values were scattered mainly within amphibolite schists.

Sulphide Zone

The Sulphide zone, Figure 3, consists of two small exposures 0.3 metres in width over a strike length of 7.5 metres. The gold values have come from this narrow 0.3 metre wide quartz vein with 15% sulphide and malachite staining. The veining has sheared margins within a mafic metavolcanic.

The highest analytical gold value recorded on the Sulphide zone was 12,445 ppb in sample 65045 taken on the

CANADIAN OCCIDENTAL PETROLEUM LTD.
minerals division

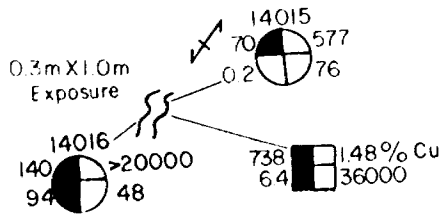
PROJECT KIPPEY

North Western Ontario NTS 53 G 15

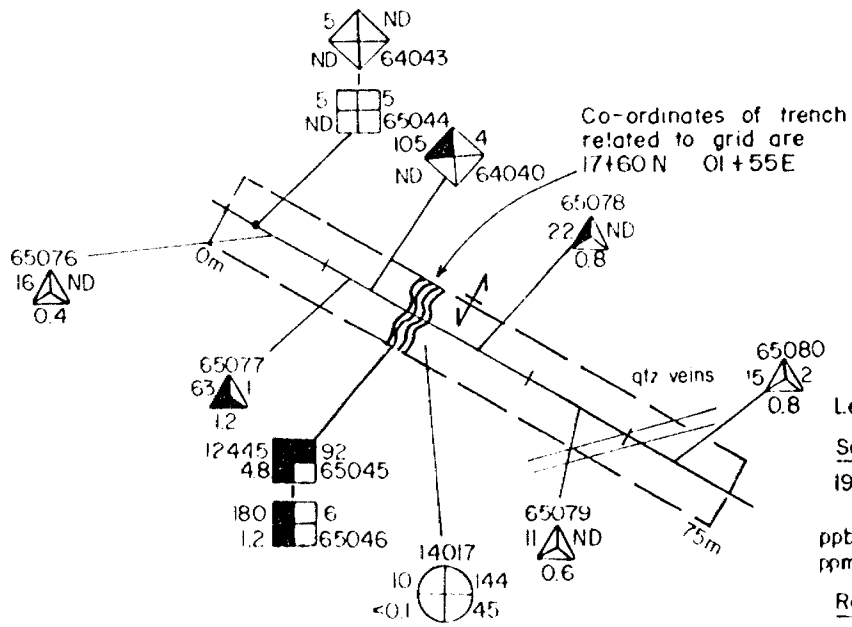
Sulphide Zone

AM / jm / Aug 83
R F 1:100

1 0 1 2 3 4 5
metres



Sulphide Zone
is located within
Map Unit A. A
basic meta-volcanic



Trench mainly drift covered

Legend

Soil Geochemistry

1983 Sample
sample no.
ppb Au / ppm Cu
ppm Ag / ppm Zn

1981 Sample
ppb Au / ppm As
ppm Ag / sample no.

Rock Geochemistry

- grab sample location shown by •
- channel sample location shown at midpoint of sample

July / Aug 1981
ppb Au / ppm As
ppm Ag / sample no

October 1981
sample no.
Au / As
Ag

all grab samples — mostly channel samples

Anomalous - 20 Au, 1 Ag, 50 As

FIG. 3

TABLE 2

Frequency Distribution of Gold in Rock

Interval ppb Au	Frequency	Cumulative Frequency	% Cumulative Frequency
0 - 5	18	18	47.3
6 - 10	15	33	86.8
11 - 15	1	34	89.5
16 - 20	4	38	100
>20	30		

Range = ND (<5 ppb Au) - >15,000 ppb Au (4.06 oz/ton)

Mean	5.5 ppb Au
Probably Anomalous	16-20 ppb
Anomalous	>20 ppb
Very Anomalous	>100 ppb

FREQUENCY DISTRIBUTION
OF GOLD IN ROCK

N = 68

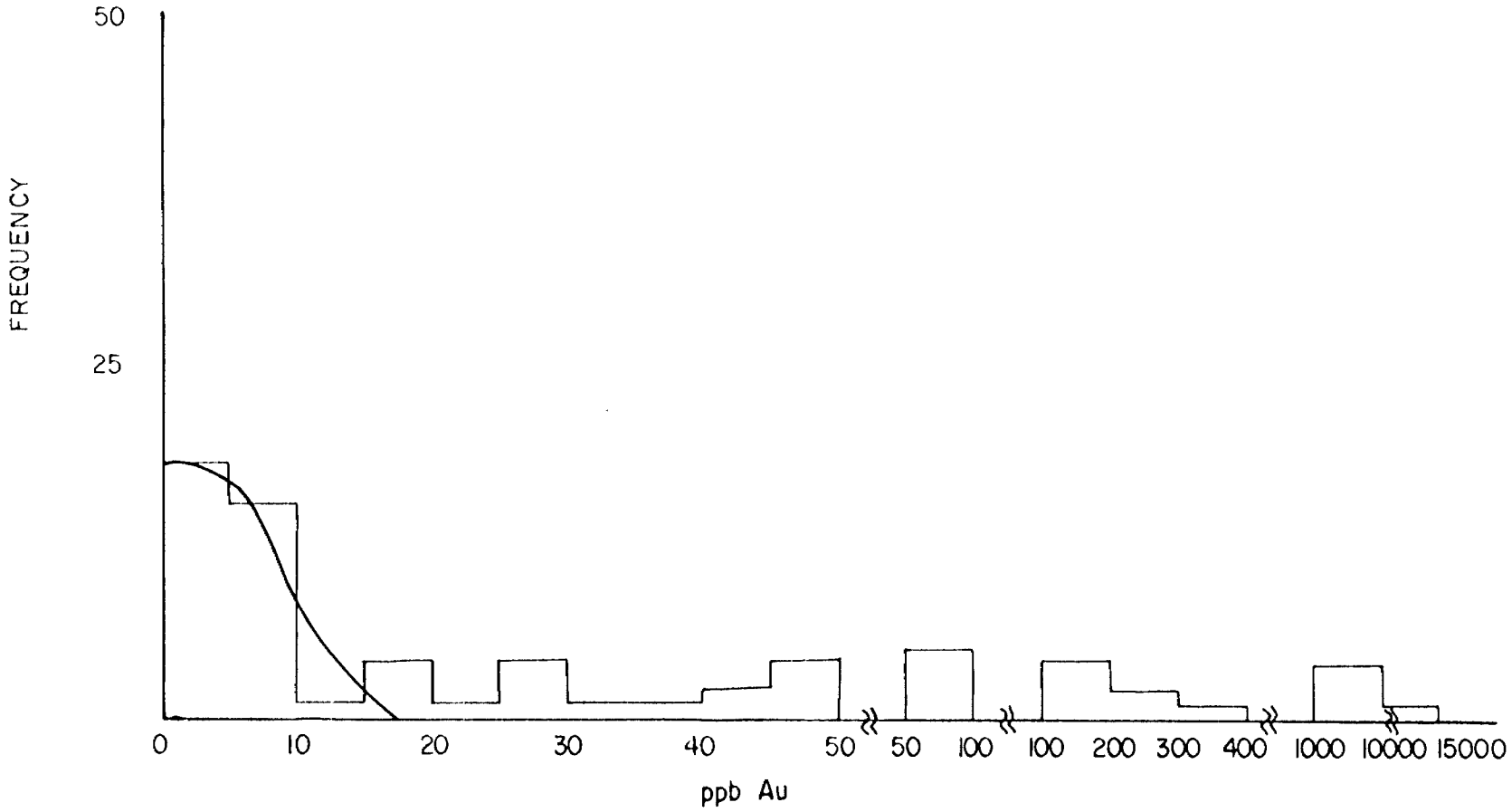


Figure 4

CUMULATIVE FREQUENCY
OF GOLD IN ROCK

N = 38

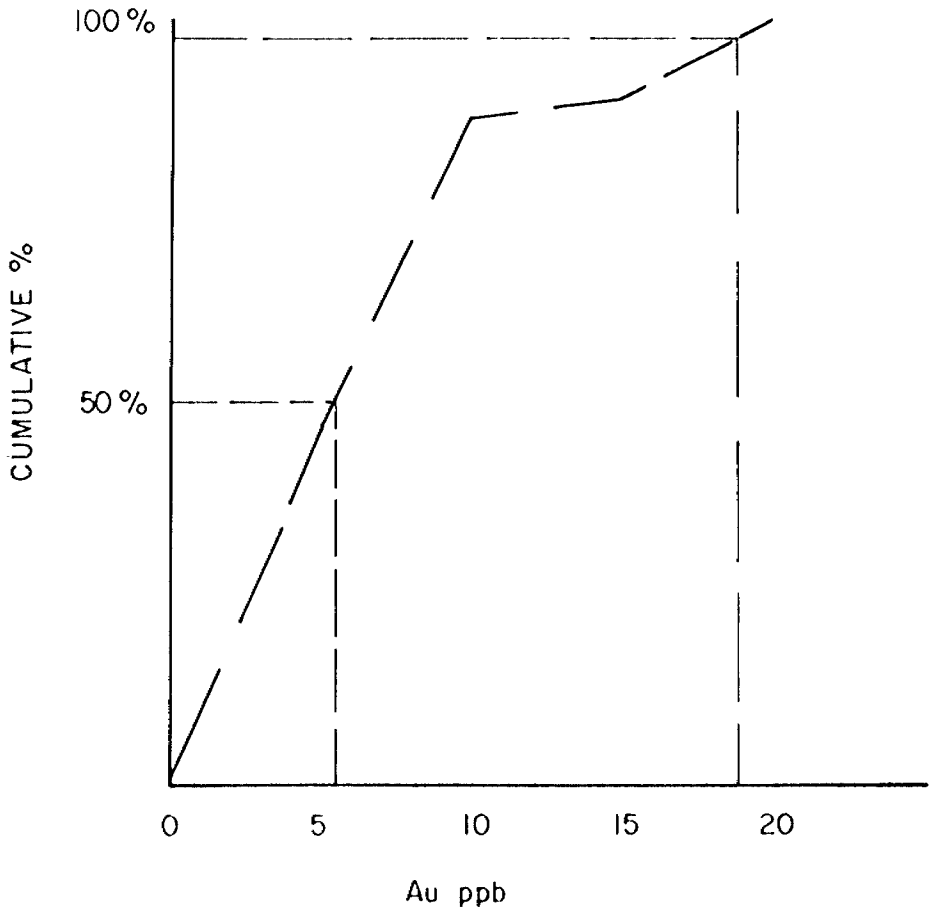


Figure 5

initial property visit in 1981. This value has not been duplicated by the 1983 sample. Sample 14017 taken from the same exposure analysed 10 ppb gold. The other two samples taken on strike but 7.5 metres northeast were anomalous in gold. Sample 14015 had a gold content of 70 ppb and copper content of 577 ppb. Sample 14016 had a gold value of 140 ppb, copper >2000 ppm, and silver 9.4 ppm.

The Sulphide zone mineralization is in a discontinuous quartz-sulphide stringer vein within a mafic metavolcanic. The lack of apparent continuity is reflected in the lack of a geophysical expression. The economic potential for a zone of such narrow width and limited strike length is very low.

Gossan Zone

Seventeen samples were collected on the Gossan zone trench (Plan 4). Fifteen of these were anomalous. The samples were taken to try to duplicate previous years sampling and to see if the higher values were related to narrow shears in the trench.

Four Gossan zone samples returned values greater than 1000 ppb gold. Samples 14011 - 3885 ppb gold, 5680 ppm copper, 9.2 ppm silver and 14012 - 6335 ppb gold, >2000 ppm copper, 69.0 ppm silver correlate with sample 65066 (1981) with a value of 3200 ppb gold. These samples come from a 0.45 metre wide zone of sheared amphibolite schist with a 0.2 m wide quartz vein. Sulphide content of the shear zone is 15% and malachite staining is abundant.

The east end of the trench was extended 6 metres and channel sampled at 1 metre intervals. Sample 14003 analysed 9,720 ppb gold, 826 ppm copper. This sample was

taken from an amphibolite schist with minor disseminated pyrite and covers a shear zone from which sample 14006 was taken. Sample 14006 assayed 4.06 oz/ton gold, 0.74 oz/ton silver, and 1.40% copper. This sample was taken from a narrow 0.05 metre wide shear zone with the amphibolite schist. This corresponds to the sample location of 65074 (1981) which analysed 29,500 ppb gold.

Five other samples were collected with gold values in the range of 100-400 ppb gold. These samples came from a narrow 0.05 - 0.22 metre wide shear zone within an amphibolite schist with sulphide content of 5-15%. Pyrite is the main sulphide but appreciable amounts of chalcopyrite are present. The shear zones are widely spaced (Plan 4) throughout the 48 metre long trench.

VLF-EM conductor V7-1 is coincident with the eastern end of the trench. Values at this end of the trench assayed up to 4.06 oz/ton. This conductor provides an excellent exploration target. Gold values over narrow widths are known to be associated with it. The conductor has a strike length of 800 metres with excellent potential for the concentration of an economically viable gold deposit.

5.3 Soil Geochemistry

Ninety-eight A_h soil samples were collected on a test area of Project KIPPEY. The samples were collected at 10 metre intervals on Lines 17+00N to 21+000N inclusive at stations 1+00E to 3+40E. The test area was chosen to cover the possible strike extension of mineralization in samples collected on the Sulphide and Gossan zone trenches. A sample from the 1981 work at the east end of the Gossan zone analysed 29,500 ppb gold while a sample from the Sulphide

zone gave a value of 12,445 ppb gold.

The area sampled has a high percentage of outcrop approximately 30% of the area. The A_h samples were taken at depths of 5-10 cm and depth to bedrock was usually less than 0.5 metres. The glacial direction in the area is southwest at or near parallel to the strike of the bedrock. The A_h soil anomalies over areas of thin overburden would be source specific.

The anomalous level for gold in soils collected was determined to be 15 ppb (Table 3 and Figures 8 and 9). Several anomalies trending 035° have been defined within this limited test area (Figures 6 and 7). These anomalous values range from 15-400 ppb gold, have strike length continuity and are coincident with VLF-EM conductors (Plan 3).

Conductor V7-1 trends through the eastern end of the gossan zone where a 1983 grab sample over 10 cm returned 4.06 oz/ton and a channel sample over 1 meter assayed 0.225 oz/ton. This conductor had anomalous soil samples associated with it on each of the three lines, it crossed in the test area. Gold values in soils coincident with conductor V7-1 ranged from 18-72 ppb gold. The rock unit under these anomalous soil values is a mafic hornblende-biotite schist with narrow sulphide lenses and shear zones. Minor disseminated pyrite was also found in the Gossan zone.

Conductor V7-6 has two anomalous soil values associated with it, 15 ppb and 135 ppb gold on the only line sampled, 20+00N. These values occur in an area where a crosscutting shear zone has been interpreted from geophysics. The conductor itself may be a conductive contact between metagabbro and hornblende-biotite schist. The rock unit

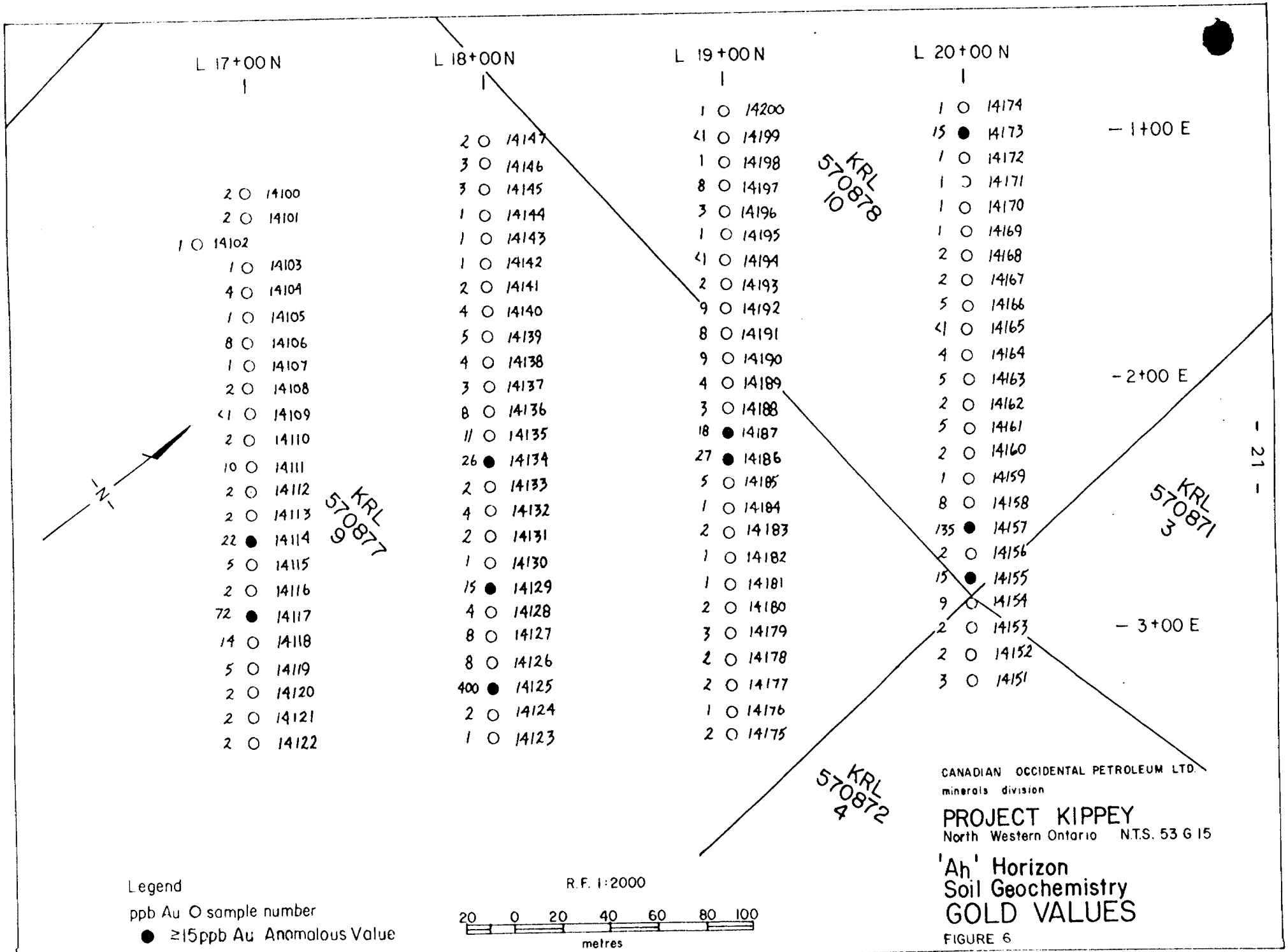
TABLE 3

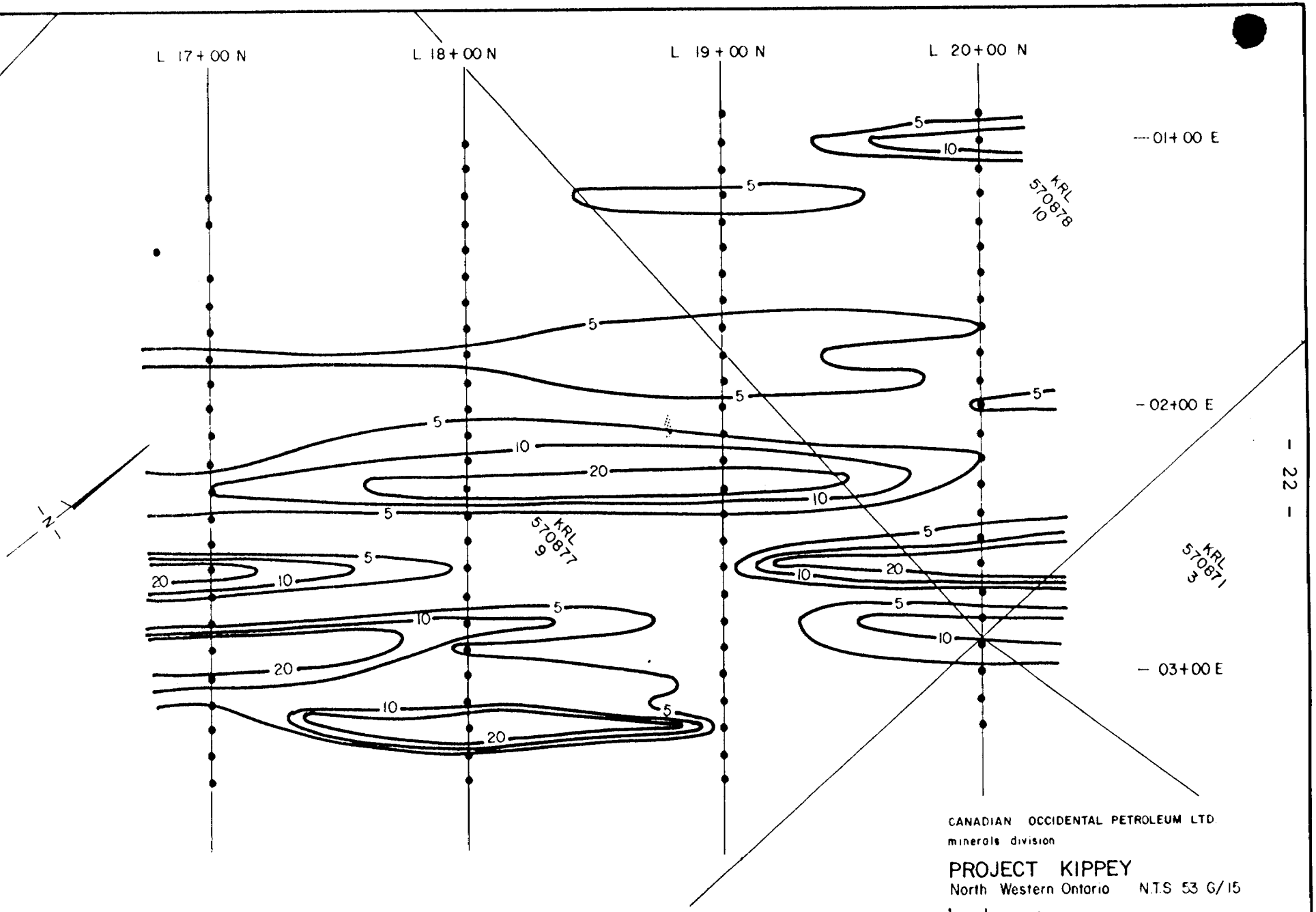
Frequency Distribution of Gold in A_h Soils

Interval ppb Au	Frequency	Cumulative Frequency	% Cumulative Frequency
0 - 5	>5	>5	82.4
6 - 10	11	86	94.5
11 - 15	5	91	100
>15	7		

Range = ND (<5 ppb Au) - 400 ppb Au

Mean	<5 ppb Au
Probably Anomalous	11-15 ppb
Anomalous	>15 ppb


L 17+00 N
L 18+00N
L 19+00 N
L 20+00 N
2 O 14100
2 O 14101
1 O 14102
1 O 14103
4 O 14104
1 O 14105
8 O 14106
1 O 14107
2 O 14108
<1 O 14109
2 O 14110
10 O 14111
2 O 14112
2 O 14113
22 ● 14114
5 O 14115
2 O 14116
72 ● 14117
14 O 14118
5 O 14119
2 O 14120
2 O 14121
2 O 14122
2 O 14147
3 O 14146
3 O 14145
1 O 14144
1 O 14143
1 O 14142
2 O 14141
4 O 14140
5 O 14139
4 O 14138
3 O 14137
8 O 14136
11 O 14135
26 ● 14134
2 O 14133
4 O 14132
2 O 14131
1 O 14130
15 ● 14129
4 O 14128
8 O 14127
8 O 14126
400 ● 14125
2 O 14124
1 O 14123
1 O 14200
<1 O 14199
1 O 14198
8 O 14197
3 O 14196
1 O 14195
<1 O 14194
2 O 14193
9 O 14192
8 O 14191
9 O 14190
4 O 14189
3 O 14188
18 ● 14187
27 ● 14186
5 O 14185
1 O 14184
2 O 14183
1 O 14182
1 O 14181
2 O 14180
3 O 14179
2 O 14178
2 O 14177
1 O 14176
2 O 14175
1 O 14174
15 ● 14173
1 O 14172
1 O 14171
1 O 14170
1 O 14169
2 O 14168
2 O 14167
5 O 14166
<1 O 14165
4 O 14164
5 O 14163
2 O 14162
5 O 14161
2 O 14160
1 O 14159
8 O 14158
135 ● 14157
2 O 14156
15 ● 14155
9 O 14154
2 O 14153
2 O 14152
3 O 14151
KRL 57087 9
KRL 57087 10
KRL 57087 3
KRL 57087 4
- 1+00 E
- 2+00 E
- 3+00 E
N
- 21 -
Legend
ppb Au O sample number
● ≥15ppb Au Anomalous Value
R.F. 1:2000
20 0 20 40 60 80 100
metres
CANADIAN OCCIDENTAL PETROLEUM LTD.
minerals division
PROJECT KIPPEY
North Western Ontario N.T.S. 53 G 15
'Ah' Horizon
Soil Geochemistry
GOLD VALUES
FIGURE 6



CANADIAN OCCIDENTAL PETROLEUM LTD.
minerals division

PROJECT KIPPEY
North Western Ontario N.T.S 53 G/15

'Ah' Horizon
Soil Geochemistry
CONTOURED GOLD VALUES

• sample location
contours in ppb Au

R.F. 1:2000

20 0 20 40 60 80 100
metres

AM/jm/Aug. 83

FIG. 7

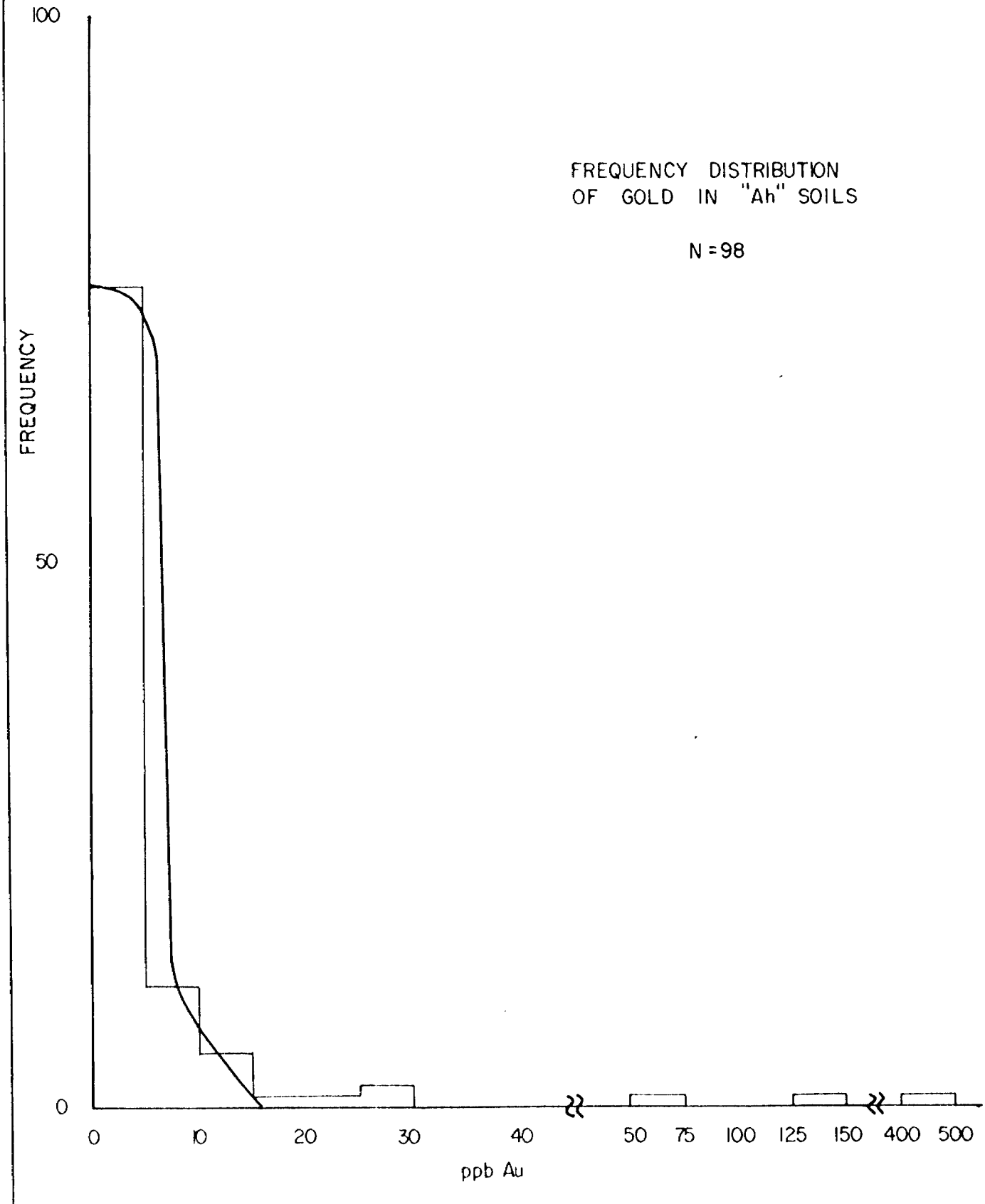

FREQUENCY DISTRIBUTION
OF GOLD IN "Ah" SOILS
N = 98
FREQUENCY
100
50
0
0
10
20
30
40
50
75
100
125
150
400
500
ppb Au

Figure 8

CUMULATIVE FREQUENCY
OF GOLD IN Ah SOILS

N = 91

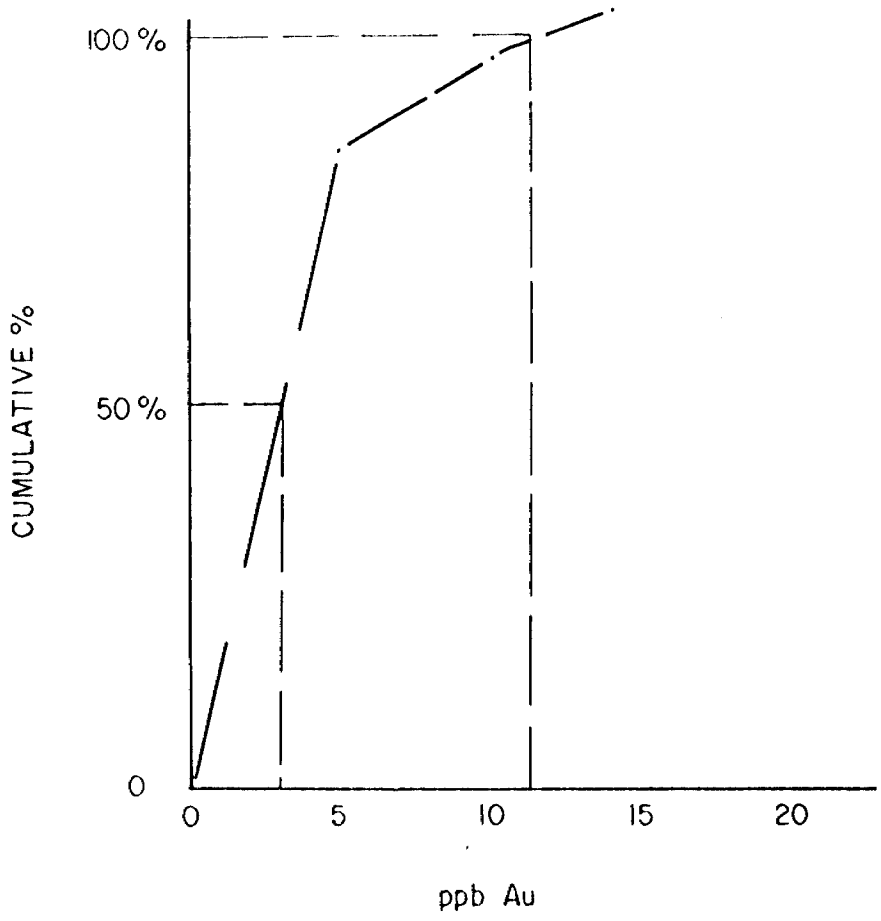


Figure 9

underlying the soil anomaly is a hornblende biotite schist.

The highest gold value analysed in soil was 400 ppb. This value occurs on 18+00N at 3+20E directly down-ice from conductor V7-8. The geophysics suggest that this anomaly is caused by sulphide mineralization. The soil sample was taken over a hornblende biotite schist near the contact with metagabbro.

Conductor V8-1 was not covered by soil sampling to any extent. One anomalous gold value of 15 ppb was collected near the conductor on line 20+00N at 1+00E. Conductor V8-1 may be a strike shear within mafic metavolcanics.

Soil sampling on lines adjacent to the sulphide zone gave no anomalous values. An A_h soil sample from the 1981 program taken in the trench itself had a value of 105 ppb gold. One rock sample taken in 1981 analysed 12,445 ppb gold, a result which was not reproduced in the 1983 program. The lack of anomalous soil values on strike with this zone and the lack of a coincident VLF-EM conductor would indicate the mineralization is in a narrow pyrite quartz lens and as such has no potential.

The results of the soil sampling has shown a strong correlation between anomalous gold values and VLF-EM conductors. This coincidence combined with rock geochemistry has produced a number of follow-up drill targets.

6. CONCLUSIONS

The KIPPEY Claims offer a high potential for an economically viable gold deposit.

Gold values up to 4.06 oz/ton over narrow widths have been taken from the east end of the gossan zone trench. This value is coincident with a VLF-EM conductor with 800

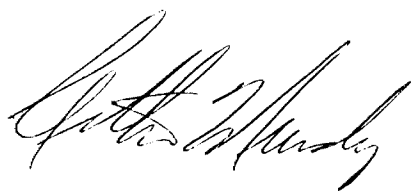
metres of strike length. Anomalous A_h soils have been collected on each line sampled coincident with this conductor. Rock samples with anomalous values have also been collected along this conductor.

A minimum of four diamond drill holes (Plan 3) will be required to initially evaluate the gold mineralization at Project KIPPEY.

Proposed Diamond Drill Holes

Drill Hole	Location	Orientation	Length
1	L19+00N, 1+85E	215° @ -50°	175 metres
2	L18+00N, 1+90E	215° @ -50°	150 metres
3	L20+00N, 2+15E	215° @ -50°	150 metres
4	L20+00N, 0+60E	215° @ -50°	125 metres

Respectfully submitted,



A.W. Murdy, B.A.

Toronto, Ontario

September, 1983

Author's Qualifications

Arthur W. Murdy graduated with a Bachelor of Arts (Geology) from University of Western Ontario in 1974. Since that time he has been employed as a geologist in the mineral exploration field. In this capacity he participated and/or carried out field programs in Quebec, Ontario, Saskatchewan and B.C. He has been employed by Canadian Occidental Petroleum Ltd., Minerals Division, Toronto since December, 1979 in the position of Project Geologist.

7. REFERENCES

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APPENDIX I

ROCK DESCRIPTIONS

ROCK DESCRIPTIONS

83-KP-14000CH-14005CH
1 metre channel sample on the eastern 6 metres of the "Gossan Zone". Samples are taken in a hornblende amphibolite schist with moderate plagioclase and quartz. Minor limonite and chlorite alteration is present. 1% pyrite is finely disseminated throughout the outcrop.

	Cu ppm	Zn ppm	Ag ppm	Au ppb	Au oz/ton
83-KP-14000	380	21	0.1	30	
83-KP-14001	40	19	<0.1	20	
83-KP-14002	23	25	<0.1	5	
83-KP-14003	826	48	2.0	9720	0.181
83-KP-14004	31	41	<0.1	210	
83-KP-14005	29	27	<0.1	20	

Samples 83-KP-14006R-14014R are within the Gossan Zone.

83-KP-14006R 0.05 metre shear zone within hornblende amphibolite schist. As above.

Cu ppm	Zn ppm	Ag ppm	Auppb	Au oz/ton
13960	86	8.8	>15000	4.06

83-KP-14007R 0.10 metre shear zone. As above.

Cu ppm	Zn ppm	Ag ppm	Au ppb
227	29	<0.1	130

83-KP-14008R 0.05 metre shear zone. As above.

Cu ppm	Zn ppm	Ag ppm	Au ppb
171	23	<0.1	25

83-KP-14009R 0.05 metre shear zone with erratic quartz veinlets. As above.

Cu ppm	Zn ppm	Ag ppm	Au ppb
341	30	0.1	35

83-KP-14010R 0.15 metre shear zone. Amphibolite schist. 5% disseminated pyrite. Limonitic with vuggy texture. Shear is silicified and bleached.

Cu ppm	Zn ppm	Ag ppm	Au ppb
334	31	0.1	205

83-KP-14011R 0.20 metre wide zone of quartz veining within a shear zone. 2% disseminated sulphides, pyrite and malachite staining.

Cu ppm	Zn ppm	Ag ppm	Au ppb	Au oz/ton
5680	50	9.2	3885	0.219

83-KP-14012R 0.20 metre wide shear zone. Rotted sulphides 15% with malachite staining with minor quartz lenses within amphibolite schist.

Cu ppm	Zn ppm	Ag ppm	Au ppb	Au oz/ton
>2000	368	69.0	6335	0.043
			(re-assay)	0.24

83-KP-14013R 0.25 metre wide shear zone. Hornblende rich amphibolite schist. Limonitic surface with malachite staining, 5% rotted sulphides.

Cu ppm	Zn ppm	Ag ppm	Au ppb
1980	54	1.1	330

83-KP-14014R 0.22 metre wide shear zone. Hornblende rich amphibolite schist, 5-10% sulphides. Limonitic rotted surface texture.

Cu ppm	Zn ppm	Ag ppm	Au ppb
2650	29	0.6	110

Samples 83-KP-14015R-14017R. Taken within sulphide zone.

83-KP-14015R 0.05 metre sheared mafic-volcanic quartz veined, limonite stained, minor pyrite.

Cu ppm	Zn ppm	Ag ppm	Au ppb
577	76	0.2	70

83-KP-14016R Composite grab sample of 0.25 metre wide zone of quartz veining. 5-10% sulphides (pyrite) with malachite staining.

Cu ppm	Zn ppm	Ag ppm	Au ppb
>20000	48	9.4	140

83-KP-14017R 0.30 metre wide shear zone (quartz veined) in chlorite altered massive andesite.

Cu ppm	Zn ppm	Ag ppm	Au ppb
144	45	<0.1	10

83-KP-14018R Green, massive to slightly schistose, metabasite. Minor, erratic, thin (<1 mm) feldspathic veinlets.

Au ppb
<5

83-KP-14019R Sill (0.5 metre) of feldspar-porphyritic biotite-granodiorite. Schistosity parallel to that of enclosing meta-volcanic rocks.

Au ppb
65

83-KP-14020R Amphibolite-chloritic shear zone in meta-basite. Very low foliated. Rare, small quartz lenses, <3% pyrite.

Au ppb
310

83-KP-14021R 0.10-0.20 m milky white quartz vein in meta-andesite. Altitude 050°/90°.

Au ppb
10

83-KP-14022R Typical chloritic meta-basite; slightly schistose, green, very fine-grained.

Au ppb
10

83-KP-14023R 20 cm milky white quartz vein parallel to schistosity of enclosing meta-andesite (060°/50°NW).

Cu ppm	Zn ppm	Ag ppm	Au ppb
7	3	<0.1	<5

83-KP-14024R Amphibole-rich, carbonatized, highly schistose, sheared zone in grey-green, slightly schistose meta-basite. Trace pyrite(?).

Cu ppm	Zn ppm	Ag ppm	Au ppb
92	15	<0.1	40

83-KP-14025R Typical metabasite. Greenish-grey, fine-grained, slightly schistose. Narrow (<<1 mm) feldspathic stringers.

Au ppb
10

83-KP-14026R Sheared zone in metabasite. Maximum 10 cm width overlain by limonite-stained soil. Strike @ 045°. Composed of amphibole-feldspar-chlorite(?) with ±5% disseminated fine-grained pyrite.

Cu ppm	Zn ppm	Ag ppm	Au ppb
876	20	0.4	165

83-KP-14027R Typical compact, schistose, green-grey meta-basite with minor (<1 mm) carbonate and feldspathic veinlets.

Au ppb
10

83-KP-14028R Highly schistose feldspar-quartz-biotite (-chlorite) rock. Grey-coloured, white weathering. Fine-grained with no pronouced textures. Probably metamorphosed intrusive rock, possibly felsic pyroclastic. Cut by rare quartz veinlets.

Au ppb
<5

83-KP-14029R From very narrow (<10 cm) shear/fracture zone in meta-gabbro. Amphibole-rick rock with <1% disseminated pyrite. Minor milky-white quartz. Overlain by limonite-stained (red) soil.

Cu ppm	Zn ppm	Ag ppm	Au ppb
151	14	<0.1	10

83-KP-14030R Medium-grained, schistose metagabbro composed of sericitized/sausuritized feldspar, amphibole and chlorite. Non-magnetic.

Au ppb
<5

83-KP-14031R Milky white, limonite-stained quartz vein 1.0 m wide. Wall-rock is gossanous, chloritic meta-basite with trace pyrite(?). Sample is of wall-rock. Vein strikes at 045°.

Cu ppm	Zn ppm	Ag ppm	Au ppb
409	33	<0.1	45

83-KP-14032R Massive, medium-grained meta-gabbro composed of altered plagioclase in amphibole-chlorite matrix. Most of outcrop is slightly schistose and resembles a coarse-grained meta-basite.

Au ppb
10

83-KP-14033R Green-grey, compact, fine-grained meta-andesite. Vaguely schistose (cleavage). Trace carbonate on fracture planes.

Au ppb
<5

83-KP-14034R As above.

Au ppb
<5

83-KP-14035R Narrow zone of schistose rock in otherwise massive meta-andesite. <1% disseminated pyrite and intense carbonatization.

Cu ppm	Zn ppm	Ag ppm	Au ppb	Au oz/ton
2330	83	1.1	1160	0.035

83-KP-14036R Narrow zone in meta-andesite adjacent to 1 metre wide sheared meta-gabbro sill. Meta-granodiorite, porphyritic-sericite textured, medium-grained, grey plagioclase phenocrysts (1-2 mm) in groundmass of feldspar, mafic minerals (including biotite) and quartz(?).

Au ppb
30

83-KP-14037R Irregular, milky-white quartz pod in meta-andesite in zone of shearing. Slightly limonite-stained and feldspathic. No sulphides.

Cu ppm	Zn ppm	Ag ppm	Au ppb
22	8	<0.1	30

83-KP-14038R Typical massive to slightlys chistose meta-andesite. Grey-green, fine-grained, compact. Minor carbonate veinlets (<<1 mm).

Au ppb
10

83-KP-14039R As above, trace disseminated pyrite.

Au ppb
20

83-KP-14047R Hornblende amphibolite schist. Minor limonite alteration. Trace pyrite surface texture is pitted.

Cu ppm	Zn ppm	Ag ppm	Au ppb
51	22	<0.1	60

83-KP-14048R Chloritic amphibolite schist, fine-grained, light green in colour.

Au ppb
5

83-KP-14049R Quartz-feldspar breccia. 0.5 m wide fault zone. Coarse angular quartz and feldspar in a fine-grained chloritic matrix. Minor pyrite. Linear depression striking 30° associated with fault zone.

Cu ppm	Zn ppm	Ag ppm	Au ppb
122	55	<0.1	5

83-KP-14050R Shear zone. Hornblende amphibolite schist with chloritic alteration, minor limonite on fractures.

Cu ppm	Zn ppm	Ag ppm	Au ppb
105	29	<0.1	50

83-KP-14051R Meta-andesite. Light grey-green, fine-grained, weakly schistose.

Au ppb
<5

83-KP-14052R Meta-andesite, light grey-green, fine-grained, weakly schistose.

Au ppb
<5

83-KP-14053R Quartz vein, 0.6 m wide, rusty limonite surface.

Cu ppm	Zn ppm	Ag ppm	Au ppb
89	3	<0.1	45

83-KP-14054R Hornblende amphibolite schist. Numerous fine quartz-carbonite stringers 1-2 cm on the outcrop. Minor limonite stains, minor pyrite specks.

Cu ppm	Zn ppm	Ag ppm	Au ppb
116	28	<0.1	50

83-KP-14055R Hornblende schist, light green, chloritic alteration. Minor limonite on fractures and minor milky quartz blebs.

Cu ppm	Zn ppm	Ag ppm	Au ppb
86	19	<0.1	10

83-KP-14056R Massive andesite, fine-grained light green, 1% pyrite, minor fine veinlets of quartz-carbonate.

Cu ppm	Zn ppm	Ag ppm	Au ppb
147	27	<0.1	10

83-KP-14057R Massive andesite, fine-grained, light green.

Au ppb
10

83-KP-14058R As above.

Au ppb
10

83-KP=14059R As above, very weakly schistose.

Au ppb
10

83-KP-14060R Amphibolite schist, medium-grained, light green, chloritic alteration.

Au ppb
5

83-KP-14061R Quartz lenses within 83-KP-14060R, 0.1 x 3.0 m milky-white with limonite staining on fractures.

Au ppb
50

83-KP-14062R Meta-gabbro. Weakly schistose, medium-grained, dark green amphibolite. Rich with finer grained feldspar. Minor chlorite alteration

Au ppb
5

83-KP-14063R Meta-gabbro, massive, medium-grained. 50% dark green amphiboles, 50% light grey plagioclase.

Au ppb
10

83-KP-14064R Amphibolite schist. Fine-medium grained, light green schistose. Minor chloritic alteration.

Au ppb
10

83-KP-14065R Hornblende amphibolite schist. Light green chloritic matrix.

Au ppb
30

83-KP-14066R Massive andesite, light grey, green, fine-grained.

Au ppb
15

83-KP-14067R Amphibolite schist, fine-grained, light green with fine irregular feldspar stringers, chloritic alteration.

Au ppb
<5

83-KP-14068R Hornblende amphibolite schist. Fine-medium grained, light grey, minor limonite alteration, minor quartz veinlets.

Au ppb
5

83-KP-14069R Amphibolite schist, massive-weakly schistose, fine-grained hornmblende needles, minor pyrite. Weak chloritic alteration.

Cu ppm	Zn ppm	Ag ppm	Au ppb
149	34	0.1	10

83-KP-14070R Massive andesite, fine-grained, light grey-green.

Au ppb
<5

83-KP-14071R Meta-gabbro, massive medium-grained, dark green, amphibolite rich, light chlorite alteration.

Au ppb
<5

83-KP-14072R Meta-andesite, massive to lightly schistose, grey-green, fine-grained.

Au ppb
50

83-KP-14073R Gosan Zone. 0.20 metre wide poddy sulphide lense, 10% sulphides within a schistose chloritic amphibolitic shear zone.

Cu ppm	Zn ppm	Ag ppm	Au ppb
448	35	0.1	90

83-KP-14074R Gossan Zone. Amphibolitic schist, fine-grained, light green, rusty, vuggy limonitic surface, minor quartz. Veins with 1% pyrite.

Cu ppm	Zn ppm	Ag ppm	Au ppb
73	19	<0.1	5

APPENDIX II

ANALYTICAL RESULTS

Bondar-Clegg & Company Ltd.
764 Belfast Road
Ottawa, Ontario
Canada K1G 0Z5
Phone: (613) 237-3110
Telex: 053-4455

BONDAR-CLEGG

Geochemical Lab Report

REPORT: 013-1343

FROM: CANADIAN OCCIDENTAL PETROLEUM LIMITED — SUBMITTED BY: A.W. MURDY
DATE: 08-JUL-83 PROJECT: [illegible]

ORDER	ELEMENT	LOWER DETECTION LIMIT	EXTRACTION	METHOD	SIZE FRACTION	SAMPLE TYPE	SAMPLE PREPARATIONS
01	Cu	1 PPM	HNO3-HCL HOT EXTR	Atomic Absorption	-200	ROCKS	CRUSH,PULVERIZE -200
02	Zn	1 PPM	HNO3-HCL HOT EXTR	Atomic Absorption	-200		
03	Ag	1 PPM	HNO3-HCL HOT EXTR	Atomic Absorption	-200		
04	Au	5 PPB	AQUA REGIA	Fire Assay AA	-200		

REPORT COPIES TO: A. MURDY — INVOICE TO: A. MURDY

REMARKS: > MEANS GREATER THAN
< MEANS LESS THAN

DETECTION LIMITS FOR GOLD
~~10 gram sample: 5 ppb.~~
5 gram sample: 10 ppb.
1 gram sample: 50 ppb.

Sample Wt. 10 g. unless otherwise stated.

NOTE:
Check concentration/sample weight ratio for effective detection level.

• Bondar-Clegg & Co[illegible] Ltd.
764 Belfast Road
Ottawa, Ontario
C[illegible]da K1G 0Z5
[illegible] (613) 237-3110
[illegible]053-4455

BONDAR-CLEGG

Geochemical Lab Report

REPORT: 013-1343 | PROJECT: KIFFEY | PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	Au PPB	wt/Au GM	NOTES
83-KP-14000		360	21	0.1	30		
83-KP-14001		40	19	<0.1	20		
83-KP-14002		23	25	<0.1	5		
83-KP-14003		826	46	2.0	5720		
83-KP-14004		31	41	<0.1	210		
83-KP-14005		29	27	<0.1	20		
83-KP-14006		13960	86	8.8	> 10000		
83-KP-14007		227	29	<0.1	130		
83-KP-14008		171	23	<0.1	25		
83-KP-14009		341	30	0.1	35		
83-KP-14010		334	31	0.1	200		
83-KP-14011		5680	50	9.2	3880		
83-KP-14012		> 20000	368	69.0	6330		
83-KP-14013		1980	54	1.1	330		
83-KP-14014		2650	29	0.6	110		
83-KP-14015		577	76	0.2	70		
83-KP-14016		> 20000	48	9.4	140		
83-KP-14017		144	45	<0.1	10		
83-KP-14018					<5		
83-KP-14019					65		
83-KP-14020					310		
83-KP-14021					10		
83-KP-14022					10		
83-KP-14023		7	3	<0.1	<5		
83-KP-14024		92	15	<0.1	40		
83-KP-14025					10		
83-KP-14026		876	20	0.4	165		
83-KP-14027					10		
83-KP-14028					<5		
83-KP-14029		151	14	<0.1	10		
83-KP-14030					<5		
83-KP-14031		409	33	<0.1	45		
83-KP-14032					10		
83-KP-14033					5		
83-KP-14034					<5		
83-KP-14035		2330	89	1.1	1160		
83-KP-14036					35		
83-KP-14037		22	8	<0.1	30		
83-KP-14038					10		
83-KP-14039					20		

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	Au PPB	wt/Au GM	NOTES
83-KP-14040		32	11	<0.1	60		
83-KP-14043					5		
83-KP-14049		122	55	<0.1	5		
83-KP-14050		165	29	<0.1	50		
83-KP-14051					<5		
83-KP-14052					5		
83-KP-14053		89	3	<0.1	45		
83-KP-14054		116	36	<0.1	50		
83-KP-14055		86	19	<0.1	20		
83-KP-14056		147	27	<0.1	10		
83-KP-14057					10		
83-KP-14058					10		
83-KP-14059					10		
83-KP-14060					5		
83-KP-14061					50		
83-KP-14062					5		
83-KP-14063					10		
83-KP-14064					10		
83-KP-14065					30		
83-KP-14066					15		
83-KP-14067					<5		
83-KP-14068					5		
83-KP-14069		149	34	0.1	10		
83-KP-14070					<5		
83-KP-14071					<5		
83-KP-14072					50		
83-KP-14073		443	35	0.1	90		
83-KP-14074		73	19	<0.1	5		

Bondar-Clegg & Co[illegible]y Ltd.
764 Belfast Road
Ottawa, Ontario
Canada K1G 0Z5
Tel: (613) 237-3110
FAX: 053-4455

BONDAR-CLEGG

Geochemical Lab Report

REPORT: 013-1344

FROM: CANADIAN OCCIDENTAL PETROLEUM LIMITED — SUBMITTED BY: A. MURDY
DATE: 11-AUG-93 PROJECT: KIPPEN

ORDER	ELEMENT	LOWER DETECTION LIMIT	EXTRACTION	METHOD	SIZE FRACTION	SAMPLE TYPE	SAMPLE PREPARATIONS
01	Au	1 PPB	AQUA REGIA	Fire Assay/Carbon Rod	-80	HUMUS	SEIVE -80

REPORT COPIES TO: A. MURDY — INVOICE TO: A. MURDY

REMARKS: < MEANS LESS THAN
PLEASE NOTE ADDITION OF AU VALUES FOR SAMPLES
B3KP14165, 171 AND 162.

Bondar-Clegg & [illegible] Ltd.
764 Belfast Road
Ottawa, Ontario
[illegible]ada K1G 0Z5
[illegible]ne: (613) 237-3110
Telex: 053-4455

BONDAR-CLEGG

Geochemical Lab Report

REPORT: 013-1344

PROJECT: NIFFEY FASE 1

SAMPLE NUMBER	ELEMENT UNITS	Au PPB	Au PPB	NOTES
83-KP-14100	1	83-KP-14145	1	
83-KP-14101	3	83-KP-14146	1	
83-KP-14102	1	83-KP-14147	1	
83-KP-14103	1	83-KP-14148	1	
83-KP-14104	4	83-KP-14149	1	
83-KP-14105	1	83-KP-14150	3	
83-KP-14106	6	83-KP-14151	3	
83-KP-14107	1	83-KP-14152	1	
83-KP-14108	2	83-KP-14153	3	
83-KP-14109	<1	83-KP-14154	2	
83-KP-14110	2	83-KP-14155	2	
83-KP-14111	10	83-KP-14156	9	
83-KP-14112	2	83-KP-14157	15	
83-KP-14113	2	83-KP-14158	2	
83-KP-14114	22	83-KP-14159	135	
83-KP-14115	5	83-KP-14160	6	
83-KP-14116	2	83-KP-14161	1	
83-KP-14117	72	83-KP-14162	2	
83-KP-14118	14	83-KP-14163	5	
83-KP-14119	5	83-KP-14164	4	
83-KP-14120	2	83-KP-14165	<1	
83-KP-14121	2	83-KP-14166	5	
83-KP-14122	2	83-KP-14167	2	
83-KP-14123	1	83-KP-14168	2	
83-KP-14124	2	83-KP-14169	1	
83-KP-14125	490	83-KP-14170	1	
83-KP-14126	8	83-KP-14171	1	
83-KP-14127	8	83-KP-14172	1	
83-KP-14128	4	83-KP-14173	15	
83-KP-14129	15	83-KP-14174	1	
83-KP-14130	1	83-KP-14175	2	
83-KP-14131	2	83-KP-14176	1	
83-KP-14132	4	83-KP-14177	2	
83-KP-14133	2	[illegible]	[illegible]	
83-KP-14134	26	[illegible]	[illegible]	
83-KP-14135	11	[illegible]	[illegible]	
83-KP-14136	8	[illegible]	[illegible]	
83-KP-14137	3	[illegible]	[illegible]	
83-KP-14138	4	[illegible]	[illegible]	
83-KP-14139	5	[illegible]	[illegible]	

Bondar-Clegg & Co. Ltd.
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BONDAR-CLEGG

Geochemical Lab Report

REPORT: 013-1344

PROJECT: KIFFEY PAGE 2

SAMPLE NUMBER	ELEMENT UNITS	Au PPB	wt/Au gm	NOTES
83-KP-14183		2		
83-KP-14184		1		
83-KP-14185		5		
83-KP-14186		27		
83-KP-14187		18		
83-KP-14188		3		
83-KP-14189		4		
83-KP-14190		9		
83-KP-14191		8		
83-KP-14192		9		
83-KP-14193		2		
83-KP-14194		<1		
83-KP-14195		1		
83-KP-14196		3		
83-KP-14197		8		
83-KP-14198		1		
83-KP-14199		<1		
83-KP-14200		1		

BONDAR-CLEGG & COMPANY LTD.

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KINSEY

Certificate of Analysis

TO Canadian Occidental Petroleum Limited

180 Attwell Drive, 4th Floor

Rexdale, Ontario M9W 6A9

REPORT NO. 413-1343 RE-ASSAY

DATE August 5, 1983

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

MARKED		oz/ton Au								
14012		0.240								

BONDAR-CLEGG & COMPANY LTD.

NOTE: N/C

Rejects retained two weeks

Pulps retained three months

unless otherwise arranged.

0-21

BONDAR-CLEGG & COMPANY LTD.

784 BELFAST ROAD, OTTAWA, ONTARIO, K1G 0Z5 PHONE: 237-3110

Certificate of Analysis

TO Canadian Occidental Petroleum Limited,
180 Attwell Drive, 4t h Floor
Rexdale, Ontario, M9W 6A9

REPORT NO. 413-1343

DATE July 25, 1983

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

MARKED		oz/ton Au								
14003		0.181								
06		4.06								
11		0.219								
12		0.043								
35		0.035								

- 46 -

BONDAR-CLEGG & COMPANY LTD.

NOTE:
Rejects retained two weeks
Pulps retained three months

BONDAR-CLEGG & COMPANY LTD.

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Certificate of Analysis

TO Canadian Occidental Petroleum Limited
180 Attwell Drive, 4th Floor
Rexdale, Ontario. M9W 6A9

REPORT NO. 413-1343
DATE August 31, 1983
Project No. 013-1343

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

MARKED		oz/ton Au	oz/ton Ag	% Cu						
14003		0.225								
14006		3.36	0.74	1.40						
14011		0.230	0.10	0.58						
14012		0.125	1.44	7.20						
14016		0.015								

BONDAR-CLEGG & COMPANY LTD.

NOTE:
Rejects retained two weeks
Pulps retained three months
unless otherwise arranged.

APPENDIX III

THIN SECTION DESCRIPTIONS

Specimen No. - 83-KP-14019R

Rock name - slightly altered feldspar porphyry of quartz diorite composition

Mineralogy - phenocrysts - plagioclase
hornblende

groundmass - plagioclase - very abundant
biotite, hornblende, quartz) moderate amounts
magnetite, apatite) very small amounts

secondary - clinozoisite
chlorite
sericite

Description - This is a slightly altered porphyry of quartz dioritic composition. It has medium grained phenocrysts of plagioclase, and slightly smaller phenocrysts of hornblende, set in a fine grained granular groundmass. The groundmass is predominantly composed of plagioclase feldspar, with moderate amounts of quartz, hornblende and biotite.

The plagioclase phenocrysts are very abundant. They range in size up to about 2.5 mm and grade in size down into the groundmass. They are typically subhedral, tabular, in outline with irregular margins in detail. The crystals are only rarely zoned, and such zoning as is present is slight and of the normal variety. The composition is about An_{30}, andesine-oligoclase. The plagioclase phenocrysts are the most heavily altered portion of the rock. They typically contain abundant small inclusions of finely granular clinozoisite, along with occasional small flakes of biotite and rarely small flakes of sericite. The amount of alteration varies greatly. Some phenocrysts are quite fresh looking, while one or two are almost completely replaced by secondary minerals. In the latter case a mass of clinozoisite is intermingled with some chlorite and a little sericite.

Hornblende phenocrysts are also very numerous. They are typically smaller than the plagioclase, reaching up to a maximum of about 1 mm. They are generally in the form of elongate anhedra and often occur in clusters of several crystals. They are a deep green, fresh looking variety and quite often have small biotite crystals associated with them.

The groundmass has a granular mosaic texture, with a base composed predominantly of small, usually roughly equidimensional, rarely twinned, plagioclase anhedra. A moderate amount of quartz is intermingled with the plagioclase. The proportion is difficult to distinguish as the refractive

(continued overleaf)

83-KP-14019R - continued

indices of the two minerals are virtually the same. The grain size of this granular mixture is about 0.03 mm, intermingled with occasional larger and better formed, anhedra of plagioclase. The larger crystals are slightly turbid, but the smaller ones remain quite fresh.

Scattered through this quartzo-feldspathic mixture there is a moderate amount of small biotite and hornblende crystals. The hornblende forms small compact anhedra. The biotite forms small, irregularily shaped, flakes most of which are disseminated throughout the groundmass. The remainder, which tend to be slightly coarser, are associated with and tend to fringe around the hornblende phenocrysts. This latter biotite is sometimes partially chloritised, and tends to occur in clots of several crystals.

Other minerals are present only in accessory amounts. Small anhedra of magnetite tend to be associated with hornblende, while tiny euhedra of apatite are scattered randomly throughout the rock. The thin section includes a couple of narrow, discontinuous, fractures filled by a fine grained quartz mosaic.

Specimen No. - 83-KP-14026

Rock name - irregularily banded hornblende amphibolite, with chlorite-epidote rich band

Mineralogy -

very abundant	- hornblende
moderate amounts	- plagioclase chlorite epidote muscovite
small amounts	- pyrite sphene apatite magnetite sericite

Description - This rock is a medium to fine grained hornblende schist, probably of sedimentary origin. It shows a rough compositional banding, with streaks and lenses relatively rich in plagioclase or hornblende. In addition the thin section includes a fairly well defined band characterised by a mixture of chlorite and epidote, and a patch which is quite rich in muscovite.

The banding in this rock is poorly defined, and the bands tend to peter out, or widen, across the thin section with rather diffuse margins. No regular pattern of folding, or distortion of the bands, can be distinguished.

Hornblende is the predominant constituent of the rock, making up almost the only essential mineral in the most amphibole rich bands. It is a deep green variety. It varies greatly in grain size, becoming relatively coarse where it is most abundant, some crystals reaching up to 2 mm in length. It forms masses of irregularily shaped but often elongate anhedra which show a fairly well developed preferred orientation in the direction of the schistosity. This is reflected both by crystal form and by a synchroneity of pleochroic scheme. Over most of the thin section the only other essential mineral is plagioclase. This forms a very fine grained mosaic of roughly equidimensional interlocking anhedra which are quite fresh and typically untwinned. The grain size of the plagioclase averages around 0.03 mm. The plagioclase mosaic infills the interstices between the hornblende crystals and crystal masses. In a few small areas the plagioclase shows slight sericitisation. Occasional small anhedral masses of sphene are scattered through the hornblende-plagioclase mixture, and a few crystals of apatite were also noted. Much of the hornblende is quite iron stained along crystal margins and cleavages, and scattered loose aggregates of pyrite anhedra occur within the hornblende rich material. These tend to be associated with clots of finely

(continued overleaf)

83-KP-14026 - continued

granular epidote and some sericitisation of adjacent plagioclase. A very little magnetite is often associated with the pyrite.

The chlorite-epidote band runs right across the thin section, It is only about 0.5 mm wide at one side, but widens to about 5 mm at the other. It is composed predominantly of very finely massed chlorite flakes with a very well developed preferred orientation which parallels the schistosity (and the compositional banding). This is a pale green variety with anomalous grey birefringence. The chlorite is intermingled with scattered crystals of epidote. These make up perhaps 20% of the band, range from anhedral to euhedral, and are up to about 0.2 mm in grain size. The only other mineral in this band is muscovite, of which occasional flakes occur in some places.

The hornblende schist adjacent to the epidote-chlorite band contains some flakes of muscovite across most of the thin section and, at the side where the epidote-chlorite band is widest, a segregation widens out to about 3 mm wide in whichthe rock is composed only of a mixture of hornblende anhedra and muscovite, with very occasional anhedra of epidote. The hornblende and muscovite are present in approximately equal proportions, the muscovite infilling the spaces between the hornblende anhedra in compact flakes which show a moderately well developed preferred orientation parallel to the schistosity. Some muscovite flakes are up to about 1 mm in length

Specimen No. - 83-KP-14028

Rock name - fine grained biotite sericite schist

Mineralogy - very abundant - quartz
feldspar

moderate amounts - biotite
sericite

small amounts - chlorite
epidote
tourmaline
sphene
apatite

Description - This is a fine grained schist, composed of a base of quartz and feldspar through which there are scattered streaks and lenses rich in biotite and/or sericite. Other minerals are present only in very small amounts.

The quartzo-feldspathic base of this rock has a fairly constant grain size throughout the thin section, with an average size of about 0.03 mm. It has a mosaic texture, with roughly equidimensional, smooth sided, untwinned, fresh looking, anhedra of both quartz and feldspar. This makes it difficult to determine the relative proportions of the two minerals. However, quartz appears to be considerably in excess of feldspar over most of the rock.
A low proportion of tiny flakes of biotite and sericite is scattered throughout the quartzo-feldspathic mixture.
In addition, there are numerous streaks and lenses which are elongated parallel to the schistosity and which are relatively rich in biotite and/or sericite. Both biotite and sericite throughout the rock show a well developed preferred orientation which gives the rock its schistosity. The mica rich streaks are typically a few millimetres long and less than 1 millimetre wide. There are no well defined, mica rich, laminae which extend right across the thin section. In some streaks, particularily sericitic ones, the mica is so abundant that the streaks become virtually monomineralic. Within the rock as a whole, miczceous minerals probably make up about one quarter of the rock. The sericite forms masses of tiny well formed flakes. Biotite is a fairly pale brown colour, sometimes grades into a little chlorite, and tends to be somewhat coarser than the sericite where it is relatively abundant.

(continued overleaf)

83-KP-14028 - continued

Chlorite is sparsely present, usually in biotite rich streaks, and typically appears to be an alteration of biotite. There is also a noticeable amount of tourmaline crystals scattered throughout the rock, mainly in micaceous streaks. These are blue-green in colour and range in size up to about 0.25 mm. Irregular masses of very dirty looking sphene, of very fine grain, tend to be included within chloritised biotite streaks. Very occasional small granular anhedra of epidote are associated with biotite and chlorite, and there is a noticeable amount of accessory apatite.

Specimen No. - 83-KP-14035

Rock name - fine grained chlorite schist, criss crossed by abundant chlorite and carbonate filled fractures

Mineralogy -

very abundant	-	chlorite
moderate amounts	-	quartz feldspar carbonate
small amounts	-	biotite sericite magnetite sphene epidote apatite pyrite) trace chalcopyrite)

Description - This rock is a very fine grained chlorite schist, composed essentially only of chlorite, quartz and feldspar. The thin section has the schsitosity somewhat irregularily disturbed by the presence of abundant fractures filled by chlorite or carbonate.

The grain size of the schist is fairly even throughout the thin section and averages around 0.02 mm. The schist shows rather poorly defined banding, reflecting slight differences in the relative proportions of the constituent minerals present. Chlorite is always abundant, frequently making up over 50% of the rock. It occurs in flakes and clots of tiny flakes which are pale green in colour, almost isotropic, and show a very well developed preferred orientation which gives the schistosity to the rock. Quartz and feldspar form a granular mosaic which is intermingled with the chlorite in somewhat varying proportions. Feldspar appears to be somewhat in excess of quartz. Both minerals occur in small, roughly equidimensional, anhedra. The feldspar is usually untwinned, but sometimes contains tiny inclusions of sericite.
A very little biotite occurs throughout the thin section, in minute, bright reddish brown, fresh looking, flakes. In one or two bands biotite becomes relatively abundant and almost as common as chlorite. Biotite also shows a preferred orientation, parallel to that of the chlorite. In some bands where both biotite and chlorite are abundant, quartz and feldspar are present only in small amounts. Small amounts of tiny sericite flakes are present in some parts of the thin section. Occasional granular anhedra of epidote occur in some particularily chlorite rich streaks.

(continued overleaf)

83-KP-14035 - continued

Tiny stringers of very fine grained sphene are scattered throughout the thin section, with their long axes paralleling the schistosity. There are also numerous tiny anhedra of magnetite. Occasional small crystals of apatite were noted, and a trace of pyrite and chalcopyrite tends to be associated with fractures.

The carbonate in this rock is mainly restricted to fractures, although some disseminated carbonate does occur in a few places, generally adjacent to fractures. The fractures form an irregular network throughout the section, but the most prominent and widest fractures tend to be oriented at approximately right angles to the schistosity. These are filled by a clear carbonate mosaic in which individual crystals reach up to 0.2 mm grain size. Discreet fractures do not cut right across the thin section. Rather, carbonate filled areas tend to be several millimetres long by one or two wide, and the carbonate is then truncated, and sidestepped to another carbonate filled fracture, further along the thin section. Chlorite filled fractures tend to be oriented at a low angle to the schistosity and to be relatively narrow. As well as the fairly well defined carbonate filled fractures described above, the rock contains numerous discontinuous, relatively narrow and rather diffuse, carbonate filled stringers which are oriented at varying angles.

Specimen No. - 83-KP-14036

Rock name - strongly foliated feldspar porphyry of quartz diorite composition

Mineralogy - phenocrysts - plagioclase - abundant
hornblende - very sparse

groundmass - plagioclase - abundant
quartz, biotite - moderate amounts
hornblende, magnetite, apatite, pyrite - small amounts

secondary - clinozoisite and epidote
chlorite
sericite
carbonate

Description - This rock has a very similar mineralogical composition to specimen 83-KP-14019R, and appears to be the sheared equivalent of that rock. Like 14019 it contains abundant plagioclase phenocrysts surrounded by a fine grained feldspathic groundmass containing quartz, biotite and hornblende. However this specimen has a pronounced schistose texture in the groundmass, which curves around the plagioclase phenocrysts and is marked mainly by streaks of biotite. It contains relatively little hornblende, in comparison to 14019, but more biotite. It seems likely that some original hornblende may have been converted to biotite and/or chlorite during the shearing and recrystallisation of the rock. The groundmass appears to have taken up the main part of the shearing stress, with the plagioclase phenocrysts being relatively resistant to it.

Plagioclase phenocrysts are abundant and range up to about 2 mm in size. They grade in size down into the groundmass. They are typically subhedral tabular in outline, with irregular margins in detail. The crystals are very rarely slightly zoned, only normal zoning being present. The majority are quite unzoned. Twinning suitable for determination of the composition is very sparse but the composition appears to be around calcic oligoclase. Most of the phenocrysts show a moderate degree of alteration to a mixture of varying proportions of clinozoisite and sericite, sometimes with a little chlorite or carbonate. The degree of alteration is quite variable from one phenocryst to another. Although the schistosity curves around the phenocrysts, the majority of them appear to be quite unstrained internally. However some do show partial breakdown into finely granular feldspathic material marginally.

Hornblende phenocrysts are very sparse and very small (up to about 0.75 mm). They are a deep blue green colour and form compact anhedra which are sometimes slightly poikiloblastic.

(continued overleaf)

83-KP-14036 - continued

They tend to occur within biotite rich streaks. The schistosity curves around them, and they tend to be margined by pressure shadows of fairly deep green penninitic chlorite. It seems likely that some original hornblende phenocrysts are now represented by streaks of biotite-chlorite-epidote which occur abundantly throughout the rock.

The groundmass has a base composed predominantly of plagioclase, intermingled with some quartz. This base has a granular mosaic texture with an average grain size of about 0.03 mm. Both quartz and plagioclase form irregularily shaped but roughly equidimensional, interlocking, anhedra which are quite fresh and rarely twinned. Scattered through this base there is a moderate amount of tiny biotite flakes, and occasional small anhedra of hormblende. The biotite shows a very well developed preferred orientation which parallels abundant biotite-rich streaks which also occur within the groundmass. Within these streaks the biotite tends to be somewhat coarser grained and is often intermingled with penninitic chlorite and occasional anhedra of hornblende. All three minerals are oriented parallel to the long axes of the streaks, and the schistosity. Scattered granules of epidote, ranging from anhedra to occasional euhedra, also tend to occur within these streaks. Occasional anhedra, and stringers, of magnetite are scattered through the rock, often associated with hornblende. In addition there are a few scattered crystals of pyrite. Accessory amounts of apatite were also noted.

The biotite and chlorite in this rock appear to be co-existing. There is no clear evidence that one is forming from the other.

Specimen No. - 83-KP-14052

Rock name - irregularily banded hornblende amphibolite, with chlorite-epidote rich bands

Mineralogy -		
	very abundant	- hornblende
	moderate amounts	- plagioclase
	small amounts	- chlorite quartz epidote biotite magnetite carbonate muscovite sphene apatite

Description - This rock is very similar in mineralogy and texture to sepcimen 83-KP-14026. It is a hornblende amphibolite which, over most of the thin section, consists essentially only of hornblende and plagioclase. Cutting across the middle of the thin section there is a zone which is quite finely banded, with a couple of chlorite-epidote rich bands, a narrow band characterised by biotite and quartz, and a band composed virtually entirely of very fine grained hornblende. The bands are of irregular width and tend to peter out within the area of the thin section. One, in particular, has a crumpled appearance, and they have poorly defined margins. No regular folding of the laminae can be distinguished.

The rock at both ends of the thin section is similar. It is composed of irregular anhedra of hornblende set in a base of very fine grained feldspar. The hornblende anhedra often reach up to about 1 mm across. These larger crystals are surrounded by smaller hornblende crystals, intermingled with the feldspar. Hornblende makes up about 70% of this portion of the rock. It is a fairly deep green, fresh looking, variety. The plagioclase which is intermingled with the hornblende is extremely fine grained, with poorly defined crystal margins. It is typically untwinned and often slightly turbid looking as well as being partly obscured by the small hornblende crystals. It tends to have mottled looking extinction patterns. A few small flakes of biotite are intermingled with the hornblende in some places, and a little finely granular epidote in others. Occasional anhedral masses of magnetite are scattered throughout the hornblende-plagioclase mixture, as are rare small crystals of apatite. The hornblende shows only a poorly defined preferred orientation parallel to the compositional banding of the rock. However, from inspection of the hand specimen it appears that the thin section has been cut at right angles to the lineation of the hornblende, and the preferred orientation

(continued overleaf)

83-KP-14052 - continued

is probably better developed than is evident from the thin section.

The compositional banding across the middle of the section is about 1 cm wide. Individual bands are of varying width and sometimes peter out within the section. One band is of similar composition to the hornblende-plagioclase mixture described above. There is also a band, about 2 mm wide, which peters out, and which is composed essentially only of extremely fine grained hornblende, in tiny massed anhedra averaging around 0.03 mm grain size. Occasionally tiny flakes of chlorite and biotite are visible in this band. A trace of plagioclase and epidote is also present. There is one narrow band, about 0.75 mm wide, which is composed mainly of biotite and quartz, with very little plagioclase and occasional flakes of chlorite. The quartz forms a granular mosaic of irregular interlocking anhedra, with a grain size of around 0.06 mm. Biotite is bright reddish brown, forms compact flakes of varying size, and shows a well developed preferred orientation parallel to the compositional banding, as does chlorite. Occasional crystals, and lenses, of hornblende occur within this band. There are also a couple of bands, one only 0.5 mm wide and the other about 4 mm wide, characterised by abundant epidote and chlorite. The epidote forms anhedral to euhedral crystals, while the chlorite flakes are very pale green with anomalous grey-green birefringence. Occasional flakes of biotite, anhedra of hornblende, and anhedra of feldspar also occur within these bands. In general, chlorite is in excess of epidote in these bands, although part of the narrow band is particularily rich in epidote.

One or two small patches of carbonate and flakes of muscovite were noted within the banded portion of the rock. Occasional stringers of very fine grained, dirty looking, sphene are scattered throughout the whole thin section.

Specimen No. - 82-KIP-7005

Rock name - limonite stained, rather patchily variable, epidote hornblende schist

Mineralogy -

very abundant	- epidote plagioclase
abundant	- hornblende
moderate amounts	- quartz biotite
small amounts	- pyrite magnetite

Description - The main part of this thin section is composed of a finely granular mixture of plagioclase, epidote and hornblende. The relative abundances of these minerals are rather patchily variable. The centre of the thin section is crossed by a heavily limonite stained zone, containing scattered remnants of pyrite intermingled with a quartz mosaic and heavily limonite stained biotite. Biotite is sparsely present in some parts of the epidote-hornblende-plagioclase mixture.

The grain size over most of the thin section is rather variable, but of the order of 0.025 mm on the average. In some places hornblende is almost absent and the rock is composed of a granular mixture of plagioclase and epidote. Overall, plagioclase is somewhat in excess of epidote. The plagioclase forms a mosaic of equidimensional, very fresh, typically untwinned, anhedra. The epidote is rather unevenly distributed through it. Hornblende is also patchily distributed, and becomes as abundant as epidote in some places. It forms fairly dark green, compact, often elongate, crystals which show a fairly well developed preferred orientation which is roughly parallel to the limonite stained zone. A little magnetite, and occasional flakes of biotite, occur rather patchily in this portion of the rock. There are also scattered clots rich in epidote, or epidote and hornblende, and a narrow zone marked by relatively coarse epidote intermingled with quartz.

The limonite stained zone which cuts across the centre of the thin section is of rather variable character. It contains lenses of relatively coarse grained quartz, scattered remnants of pyrite crystals, and streaks composed of varying proportions of epidote, hornblende and biotite with some plagioclase. The quartz is quite strongly strained looking, the zone is of variable width, and the whole is partly obscured by quite intense limonitic staining. The biotite and hornblende show a fairly well developed preferred orientation parallel to the length of this zone.

Specimen No - 82-KIP-7008

Rock name - roughly banded, biotite epidote hornblende schist

Mineralogy - abundant - biotite
epidote
hornblende

moderate amounts - chlorite
plagioclase
magnetite

small amounts - apatite
pyrite (trace)

Description - This rock is fine grained, and roughly banded, with a rather poorly developed schistosity which parallels the mineralogical banding. The rock is composed predominantly of biotite, epidote and chlorite, with smaller amounts of chlorite, plagioclase and magnetite. The banding results from varying proportions of these minerals, but the bands grade into one another, tend to lens out, are often rather patchy looking, and are generally very poorly defined. Varying proportions of the different minerals are intermingled, and it is difficult to describe specific types of band as there is no apparent regularity of association between different mineral types.

The schistosity of the rock is defined by the preferred orientation of biotite, hornblende and chlorite. It is only moderately well developed, and slightly wavy looking over much of the thin section although no regularily developed secondary cleavage can be distinguished.

Biotite and chlorite form well developed, compact, flakes which are often around 0.2 mm long. The two minerals are often intimately intermingled. The biotite is extremely fresh looking. Hornblende is also fresh, and forms compact, often elongate, crystals with a typically metamorphic appearance. Epidote forms granular anhedra of rather variable size, but usually less than 0.1 mm. Plagioclase is relatively sparse. It forms roughly equidimensional anhedra of very variable size, up to about 1 mm occasionally. These are usually untwinned, and very fresh looking, but frequently contain small inclusions of epidote, hornblende and biotite. Magnetite is scattered through the rock in tiny compact crystals which are sometimes euhedral or subhedral in outline.

As stated above, there is no regularity of association of different minerals in different bands. There are bands composed predominantly of biotite, with subsidiary epidote, hornbelnde and plagioclase. Other bands are composed predominantly of epidote and chlorite, with very little biotite and no feldspar

(continued overleaf)

82-KIP-7008 - continued

or hornblende. There are occasional narrow lenses rich in relatively coarse grained plagioclase. There are also bands predominantly composed of biotite and chlorite, and all variations of differing mineral combinations appear to be present.

Specimen No. - 82-KIP-7009

Rock name - fine grained epidote amphibolite

Mineralogy - very abundant - hornblende
moderate amounts - epidote
quartz
small amounts - chlorite
pyrite
magnetite
pyrrhotite) trace
chalcopyrite)

Description - This rock is a fine grained hornblende amphibolite with moderate amounts of rather irregularily distributed quartz and epidote. Small amounts of chlorite and opaque minerals are also scattered throughout the rock. The relative abundance of quartz suggests that this rock is probably of sedimentary, rather than igneous, origin.

The hornblende which makes up the bulk of this rock occurs in masses of small, fairly compact, often somewhat elongate, anhedra. These are extremely fresh looking, have a fairly deep green colour, and show a moderately well developed preferred orientation. Hornblende makes up around 65% of this rock. Scattered rather irregularily through the hornblende there are small anhedra and patches of quartz. This quartz forms irregularily shaped anhedra of variable size, but generally less than about 0.05 mm. The hornblende crystals are only slightly larger; usually less than 0.2 mm. There is also a noticeable amount of finely granular epidote intermingled with the hornblende. This is particularily noticeable in the vicinity of sulphide minerals, where it is often associated with a little chlorite. However, some epidote occurs throughout the rock.

A little finely granular magnetite is scattered through the rock. However, pyrite is the most abundant opaque mineral, sometimes associated with a trace of pyrrhotite and chalcopyrite. The sulphide minerals form scattered anhedra, often with several masses occurring adjacent to each other. The thin section is cut across by one narrow (0.2 mm) veinlet which is filled by a mosaic of quartz, intermixed with scattered anhedra of pyrite and epidote and occasional flakes of chlorite.

Ministry of Natural Resources
Ontario

Report of Work
(Geophysical, Geological, Geochemical and Expenditures)

#84.14
#8

FOR W. MATTHEWS

53G05SW0004 2.6245 KIPPEN LAKE

900

Type of Survey(s)
Geological

Township or Area ~~Muckrat Dam Lake Area~~, Kippen Lake M-2902

Claim Holder(s)
Canadian Occidental Petroleum Ltd.

Prospector's Licence No.
T644

Address
180 Attwell Drive, 4th Floor, Rexdale, Ontario M9W6A9

Survey Company
As above

Date of Survey (from & to) Day 08 Mo. 06 Yr. 83 / Day 16 Mo. 06 Yr. 83

Total Miles of line Cut

Name and Address of Author (of Geo-Technical report)
Arthur Murdy, as above

Credits Requested per Each Claim in Columns at right

		Days per Claim
Special Provisions For first survey: Enter 40 days. (This includes line cutting) For each additional survey: using the same grid: Enter 20 days (for each)	Geophysical	
	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	20
	Geochemical	
Man Days Complete reverse side and enter total(s) here	Geophysical	Days per Claim
	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	
	Geochemical	
Airborne Credits **Note:** Special provisions credits do not apply to Airborne Surveys.		Days per Claim
	Electromagnetic	
	Magnetometer	
	Radiometric	

Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s)

Calculation of Expenditure Days Credits

Total Expenditures $ ÷ 15 = Total Days Credits

Instructions
Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.	Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
KRL	570870				
	570871				
	570872				
	570873				
	570875				
	570876				
	570877				
	570878				
	570879				
	570883				
	570884				
	570885				
	570886				
	570887				
	570888				

RECEIVED
MAY 14 1984
MINING LANDS SECTION

RED LAKE MINING DIV. RECEIVED MAR 20 1984 P.M. A.M. 7 8 9 10 11 12 1 2 3 4 5

Total number of mining claims covered by this report of work. 15

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
300	Mar. 20/84	
	Date Approved as Recorded	Branch Director
	see revised statement	

Date	Recorded Holder or Agent (Signature)
Dec. 30/83	

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true. KRL 570870

Name and Postal Address of Person Certifying
A.W. Murdy, c/o Canadian Occidental Petroleum Ltd., Minerals Division, 4th Flr
180 Attwell Drive, Rexdale, Ont. M9W 6A9

Date Certified: Dec. 30/83

Certified by (Signature)

1362 (81/9)

Ministry of Natural Resources
Ontario

Report of Work
(Geophysical, Geological, Geochemical and Expenditures)

#84-14

The Mining Act 2.6245

Instructions: - Please type or print.
- If number of mining claims traversed exceeds space on this form, attach a list.
Note: - Only days credits calculated in the "Expenditures" section may be entered in the "Expend. Days Cr." columns.
- Do not use shaded areas below.

Type of Survey(s): Geological

Township or Area: Muskrat Dam Lake Area, Kippen Lake M-2902

Claim Holder(s): Canadian Occidental Petroleum Ltd.

Prospector's Licence No.: T644

Address: 180 Attwell Drive, 4th Floor, Rexdale, Ontario M9W6A9

Survey Company: As above

Date of Survey (from & to): 08 06 83 (Day Mo. Yr.) 16 06 83 (Day Mo Yr.)

Total Miles of line Cut:

Name and Address of Author (of Geo-Technical report): Arthur Murdy, as above

Credits Requested per Each Claim in Columns at right

Special Provisions		Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	Geophysical	
	- Electromagnetic	
	- Magnetometer	
For each additional survey: using the same grid: Enter 20 days (for each)	- Radiometric	
	- Other	
	Geological	20
	Geochemical	

Man Days		Days per Claim
Complete reverse side and enter total(s) here	Geophysical	
	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	
	Geochemical	

Airborne Credits		Days per Claim
Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	
	Magnetometer	
	Radiometric	

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
KRL	570870	
	570871	
	570872	
	570873	
	570875	
	570876	
	570877	
	570878	
	570879	
	570883	
	570884	
	570885	
	570886	
	570887	
	570888	

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.

RED LAKE MINING DIV. RECEIVED MAR 20 1984 A.M. P.M.

RECEIVED
JUL 2 1984
MINING LANDS SECTION

Total number of mining claims covered by this report of work: 15

Expenditures (excludes power stripping)

Type of Work Performed:

Performed on Claim(s):

Calculation of Expenditure Days Credits

Total Expenditures: $ ÷ 15 = Total Days Credits

Instructions: Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Lands Section
300	Mar. 20/84	
	Date Approved as Recorded	Branch Director
	see revised statement	

Date: Dec. 30/83

Recorded Holder or Agent (Signature):

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true. KRL 570870

Name and Postal Address of Person Certifying

A.W. Murdy, c/o Canadian Occidental Petroleum Ltd., Minerals Division, 4th Flr, 180 Attwell Drive, Rexdale, Ont. M9W 6A9

Date Certified: Dec. 30/83

Certified by (Signature):

1362 (81/9)

91°45'

53°22' 30"

Mushro Dom

Lake

22'

20'

19'

M-2902 KIPPEN LAKE

CANADIAN OCCIDENTAL PET. LTD.

Mar 20/84

KRL 570893	KRL 570892	KRL 570886	KRL 570880	KRL 570869
KRL 563970	KRL 570891	KRL 570885	KRL 570879	KRL 570870
KRL 563971	KRL 570890	KRL 570884	KRL 570878	KRL 570871
KRL 563972	KRL 570889	KRL 570883	KRL 570877	KRL 570872
KRL 563973	KRL 570888	KRL 570882	KRL 570876	KRL 570873
KRL 563974	KRL 570887	KRL 570881	KRL 570875	KRL 570874

(4) Report of Work

The Mining Act

Expenditures section may be entered in the "Expend. Days Cr." columns. Do not use shaded areas below.

Type of Survey(s): Geological, Geochemical

Township or Area: Muskrat Dam Lake Area
KIPPEN LAKE M-2902

Claim Holder(s): Canadian Occidental Petroleum Ltd.

Prospector's Licence No.: T644

Address: 180 Attwell Drive, 4th Floor, Rexdale, Ontario M9W 6A9

COPY

Survey Company: As above

Date of Survey (from & to): 8 Day | 06 Mo. | 83 Yr. | 16 Day | 06 Mo. | 83 Yr.

Total Miles of line Cut:

Name and Address of Author (of Geo Technical report): Arthur Murdy (as above)

Credits Requested per Each Claim in Columns at right

Special Provisions		Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	Geophysical - Electromagnetic	
	- Magnetometer	
For each additional survey: using the same grid: Enter 20 days (for each)	- Radiometric	
	- Other	
	Geological	20
	Geochemical	20

Man Days		Days per Claim
Complete reverse side and enter total(s) here	Geophysical - Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	
	Geochemical	

Airborne Credits		Days per Claim
Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	
	Magnetometer	
	Radiometric	

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
KRL	570870	20
	570871	20
	570872	20
	570873	20
	570875	20
	570876	40
	570877	40
	570878	20
	570879	20
	570883	20
	570884	20
	570885	20
	570886	20
	570887	20
	570888	20

RECORDED

RECEIVED
JAN 4 1984
MINING LANDS SECTION

Total number of mining claims covered by this report of work: 15

Expenditures (excludes power stripping)

Type of Work Performed:

Performed on Claim(s):

Calculation of Expenditure Days Credits

Total Expenditures: $ ÷ 15 = Total Days Credits

NOT

Instructions: Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
	Date Approved as Recorded	Branch Director

Date: Dec. 30/83

Recorded Holder, Agent (Signature): R.E. Evans

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying: A.W. Murdy, c/o Canadian Occidental Petroleum Ltd., Minerals Division, 4th Flr, 180 Attwell Drive, Rexdale, Ont. M9W 6A9

Date Certified: Dec. 30/83

Certified by (Signature): A.W. Murdy

1262 (81/9)

Ministry of Natural Resources
Ontario

Report of Work
(Geophysical, Geological, Geochemical and Expenditures)

#84-15

F. MATTHEWS

The Mining Act May 22/84

Instructions: - Please type or print.
- If number of mining claims traversed exceeds space on this form, attach a list.
Note: - Only days credits calculated in the "Expenditures" section may be entered in the "Expend. Days Cr." columns.
- Do not use shaded areas below.

Type of Survey(s)
Geochemical

Township or Area ~~Muskrat Dam Lake Area,~~ Kippen Lake M-2902

Claim Holder(s)
Canadian Occidental Petroleum Ltd.

Prospector's Licence No.
T644

Address
180 Attwell Drive, 4th Floor, Rexdale, Ontario M9W 6A9

Survey Company
As above

Date of Survey (from & to)
08 06 83 (Day Mo. Yr.) 16 06 83 (Day Mo. Yr.)

Total Miles of line Cut

Name and Address of Author (of Geo-Technical report)
Arthur Murdy (as above)

Credits Requested per Each Claim in Columns at right

		Days per Claim
Special Provisions For first survey: Enter 40 days. (This includes line cutting) For each additional survey: using the same grid: Enter 20 days (for each)	Geophysical	
	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	
	Geochemical	20
Man Days Complete reverse side and enter total(s) here	Geophysical	Days per Claim
	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	
	Geochemical	
Airborne Credits Note: Special provisions credits do not apply to Airborne Surveys.		Days per Claim
	Electromagnetic	
	Magnetometer	
	Radiometric	

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.	Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
KRL	570877				
	570878				

RECEIVED
MAY 14 1984
MINING LANDS SECTION

RECEIVED
MAR 20 1984
A.M. 8 9 10 11 12 1 2 3 4 5 6 P.M.

Total number of mining claims covered by this report of work: 2

Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s)

Calculation of Expenditure Days Credits
Total Expenditures $ ÷ 15 = Total Days Credits

Instructions
Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
40	Mar. 20/84	
	Date Approved as Recorded	Branch Director
	see revised statement	

Date: Dec. 30/83

Recorded Holder or Agent (Signature): A.W. Murdy

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

KRL 570877

Name and Postal Address of Person Certifying
A.W. Murdy, c/o Canadian Occidental Petroleum Ltd., Minerals Division, 4th Flr
180 Attwell Drive, Rexdale, Ont. M9W 6A9

Date Certified: Dec. 30/83

Certified by (Signature): A.W. Murdy

1362 (81/9)

Ministry of Natural Resources
Ontario

Report of Work
(Geophysical, Geological, Geochemical and Expenditures)

#84-15
2.6245

The Mining Act

Instructions: - Please type or print.
- If number of mining claims traversed exceeds space on this form, attach a list.
Note: - Only days credits calculated in the "Expenditures" section may be entered in the "Expend. Days Cr." columns.
- Do not use shaded areas below.

Type of Survey(s): Geochemical

Township or Area: Muskrat Dam Lake Area, Kippen Lake M-2902

Claim Holder(s): Canadian Occidental Petroleum Ltd.

Prospector's Licence No: T644

Address: 180 Attwell Drive, 4th Floor, Rexdale, Ontario M9W 6A9

Survey Company: As above

Date of Survey (from & to): 08 06 83 (Day, Mo., Yr.) to 16 06 83 (Day, Mo, Yr.)

Total Miles of line Cut:

Name and Address of Author (of Geo-Technical report): Arthur Murdy (as above)

Credits Requested per Each Claim in Columns at right

Special Provisions		Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	Geophysical - Electromagnetic	
	- Magnetometer	
For each additional survey: using the same grid: Enter 20 days (for each)	- Radiometric	
	- Other	
	Geological	
	Geochemical	20

Man Days		Days per Claim
Complete reverse side and enter total(s) here	Geophysical	
	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	
	Geochemical	

Airborne Credits		Days per Claim
Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	
	Magnetometer	
	Radiometric	

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
KRL	570877	
	570878	

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.

RECEIVED
MAR 20 1984
A.M. 8 9 10 11 12 1 2 3 4 5 6 P.M.

RECEIVED
JUL 23 1984
MINING LANDS SECTION

Total number of mining claims covered by this report of work.: 2

Expenditures (excludes power stripping)

Type of Work Performed:

Performed on Claim(s):

Calculation of Expenditure Days Credits

Total Expenditures: $ ÷ 15 = Total Days Credits

Instructions: Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

Date: Dec. 30/83

Recorded Holder or Agent (Signature):

For Office Use Only

Total Days Cr. Recorded: 40

Date Recorded: Mar. 20/84

Date Approved as Recorded: see revised statement

Mining Recorder:

Branch Director:

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

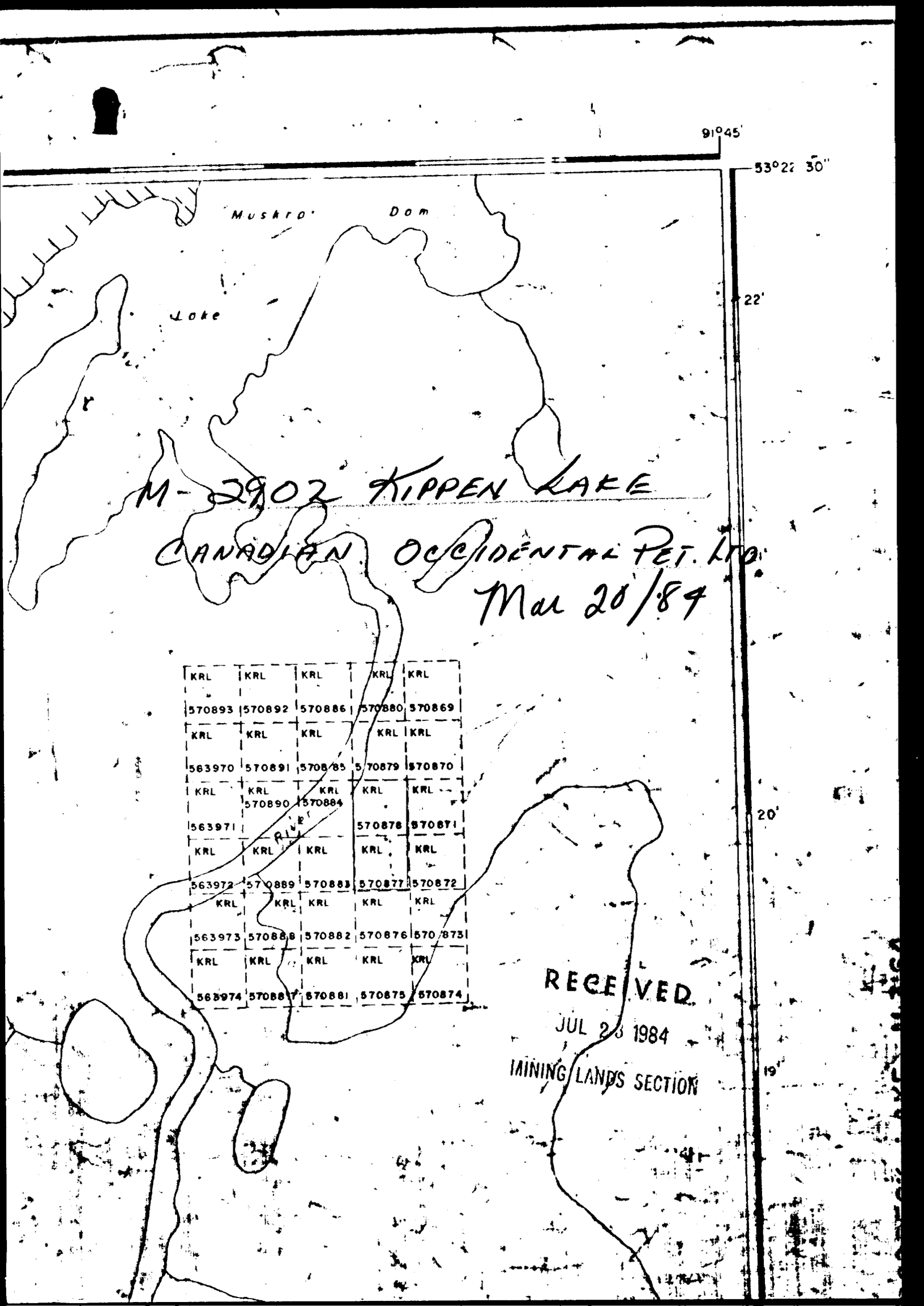
KRL 570877

Name and Postal Address of Person Certifying: A.W. Murdy, c/o Canadian Occidental Petroleum Ltd., Minerals Division, 4th Flr, 180 Attwell Drive, Rexdale, Ont. M9W 6A9

Date Certified: Dec. 30/83

Certified by (Signature):

1362 (81/9)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M-2902 KIPPEN LAKE
CANADIAN OCCIDENTAL PET. LTD.
Mar 20/84
KRL 570893 | KRL 570892 | KRL 570886 | KRL 570880 | KRL 570869
KRL 563970 | KRL 570891 | KRL 570885 | KRL 570879 | KRL 570870
KRL 563971 | KRL 570890 | KRL 570884 | KRL 570878 | KRL 570871
KRL 563972 | KRL 570889 | KRL 570883 | KRL 570877 | KRL 570872
KRL 563973 | KRL 570888 | KRL 570882 | KRL 570876 | KRL 570873
KRL 563974 | KRL 570887 | KRL 570881 | KRL 570875 | KRL 570874
RECEIVED
JUL 23 1984
MINING LANDS SECTION

Ontario

Ministry of Natural Resources

File _____

GEOPHYSICAL – GEOLOGICAL – GEOCHEMICAL TECHNICAL DATA STATEMENT

TO BE ATTACHED AS AN APPENDIX TO TECHNICAL REPORT
FACTS SHOWN HERE NEED NOT BE REPEATED IN REPORT
TECHNICAL REPORT MUST CONTAIN INTERPRETATION, CONCLUSIONS ETC.

Type of Survey(s) Geological, Geochemical

Township or Area Kippen Lake M-2902

Claim Holder(s) Canadian Occidental Petroleum Ltd.
180 Attwell Dr., 4th Flr, Rexdale, On.
"

Survey Company _____

Author of Report A.W. Murdy

Address of Author CanadianOxy - as above

Covering Dates of Survey June 8 - 16, 1983
(linecutting to office)

Total Miles of Line Cut _____

SPECIAL PROVISIONS CREDITS REQUESTED

ENTER 40 days (includes line cutting) for first survey.

ENTER 20 days for each additional survey using same grid.

	DAYS per claim
Geophysical	
–Electromagnetic	
–Magnetometer	
–Radiometric	
–Other	
Geological	20
Geochemical	20

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)

Magnetometer _____ Electromagnetic _____ Radiometric _____
(enter days per claim)

DATE: Dec. 30/83 SIGNATURE: _____
Author of Report or Agent

Res. Geol. _____ Qualifications _____

Previous Surveys

File No.	Type	Date	Claim Holder

RECEIVED
JAN 1984
MINING LANDS SECTION

MINING CLAIMS TRAVERSED
List numerically

(prefix)	(number)
KRL	570870
	570871
	570872
	570873
	570875
	570876
	570877
	570878
	570879
	570883
	570884
	570885
	570886
	570887
	570888

TOTAL CLAIMS 15

If space insufficient, attach list

OFFICE USE ONLY

837 (5/79)

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS – If more than one survey, specify data for each type of survey

Number of Stations _____ Number of Readings _____

Station interval _____ Line spacing _____

Profile scale _____

Contour interval _____

MAGNETIC

Instrument _____

Accuracy – Scale constant _____

Diurnal correction method _____

Base Station check-in interval (hours) _____

Base Station location and value _____

_____

ELECTROMAGNETIC

Instrument _____

Coil configuration _____

Coil separation _____

Accuracy _____

Method: ☐ Fixed transmitter ☐ Shoot back ☐ In line ☐ Parallel line

Frequency _____
(specify V.L.F. station)

Parameters measured _____

GRAVITY

Instrument _____

Scale constant _____

Corrections made _____

_____

Base station value and location _____

_____

Elevation accuracy _____

INDUCED POLARIZATION / RESISTIVITY

Instrument _____

Method ☐ Time Domain ☐ Frequency Domain

Parameters – On time _____ Frequency _____

– Off time _____ Range _____

– Delay time _____

– Integration time _____

Power _____

Electrode array _____

Electrode spacing _____

Type of electrode _____

SELF POTENTIAL

Instrument _____ Range _____

Survey Method _____

_____

Corrections made _____

_____

RADIOMETRIC

Instrument _____

Values measured _____

Energy windows (levels) _____

Height of instrument _____ Background Count _____

Size of detector _____

Overburden _____

(type, depth – include outcrop map)

OTHERS (SEISMIC, DRILL WELL LOGGING ETC.)

Type of survey _____

Instrument _____

Accuracy _____

Parameters measured _____

_____

Additional information (for understanding results) _____

_____

_____

AIRBORNE SURVEYS

Type of survey(s) _____

Instrument(s) _____

(specify for each type of survey)

Accuracy _____

(specify for each type of survey)

Aircraft used _____

Sensor altitude _____

Navigation and flight path recovery method _____

_____

Aircraft altitude _____ Line Spacing _____

Miles flown over total area _____ Over claims only _____

GEOCHEMICAL SURVEY – PROCEDURE RECORD

Numbers of claims from which samples taken 570876, 570877

Total Number of Samples 98

Type of Sample humus
(Nature of Material)

Average Sample Weight

Method of Collection Cut lines on 100 m centers samples collected @ 10 m intervals.

Soil Horizon Sampled Ah

Horizon Development Good

Sample Depth 10 cm

Terrain Gently sloping northwest

Drainage Development Good

Estimated Range of Overburden Thickness 10 cm to 1 m

ANALYTICAL METHODS

Values expressed in: per cent ☐
p. p. m. ☐
p. p. b. ☒

Cu, Pb, Zn, Ni, Co, Ag, Mo, As,-(circle)

Others Au

Field Analysis (_____ tests)

Extraction Method

Analytical Method

Reagents Used

Field Laboratory Analysis

No. (_____ tests)

Extraction Method

Analytical Method

Reagents Used

Commercial Laboratory (98 tests)

Name of Laboratory Bondar-Clegg

Extraction Method Aqua-Regia

Analytical Method Fire Assay - Carbon Rod

Reagents Used

SAMPLE PREPARATION
(Includes drying, screening, crushing, ashing)

Mesh size of fraction used for analysis

General

General

STATEMENT OF EXPENDITURES

PROJECT KIPPEY, ONTARIO

REGISTRATION NO. OM 83-1-C-40

Code	Item		Total
101,103,149	Salaries and Benefits	$	8,958
781, 790	Consultant Fees		1,134
787	Food Supplies		568
788	Equipment Supplies		212
786	Accommodation		1,160
785	Charter Aircraft		2,360
971	Vehicle Rental		880
729	Other Transportation		133
730	Geophysical Equipment Rental (EM-16)		54
201	Geochemical Analyses		1,715
209,211,653	Overhead (Drafting, Reproduction, Administration)		2,833
	TOTAL	$	20,007

I certify the above statement is a true and accurate record of expenditures related to the field program designated OM83-1-C-40.

R.J. Evans - Administration Manager

Dated December 30, 1983

1984 10 31

Your File: 84-15,84-14
Our File: 2.6245

Mining Recorder
Ministry of Natural Resources
Ontario Government Building
Box 324
Red Lake, Ontario
P0V 2M0

Dear Sir:

RE: Notice of Intent dated October 12, 1984
Geochemical and Geological Survey on
Mining Claims KRL 570870 et al in the
Kippen Lake Area

The assessment work credits, as listed with the above-mentioned Notice of Intent, have been approved as of the above date.

Please inform the recorded holder of these mining claims and so indicate on your records.

Yours sincerely,

S.E. Yundt
Director
Land Management Branch

Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3
Phone:(416)965-4888

D. Isherwood:mc

cc: Canadian Occidental Petroleum Ltd
180 Attwell Drive
4th Floor
Rexdale, Ontario
M9W 6A9

cc: Mr. G.H. Ferguson
Mining & Lands Commissioner
Toronto, Ontario

cc: Resident Geologist
Red Lake, Ontario

Encl.

Ministry of Natural Resources
Ontario

Technical Assessment Work Credits

File 2.6245

Date 1984 10 12

Mining Recorder's Report of Work No. 84-14

Recorded Holder: CANADIAN OCCIDENTAL PETROLEUM LIMITED

Township or Area: KIPPEN LAKE AREA

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical	KRL 570871-872 570876 to 878 inclusive 570884 to 886 inclusive
Electromagnetic ____ days	
Magnetometer ____ days	
Radiometric ____ days	
Induced polarization ____ days	
Other ____ days	
Section 77 (19) See "Mining Claims Assessed" column	
Geological 17.3 days	
Geochemical ____ days	
Man days [X] Airborne [ ]	
Special provision [ ] Ground [X]	
[X] Credits have been reduced because of partial coverage of claims.	
[ ] Credits have been reduced because of corrections to work dates and figures of applicant.	

Special credits under section 77 (16) for the following mining claims

No credits have been allowed for the following mining claims

[ ] not sufficiently covered by the survey [X] Insufficient technical data filed

KRL 570870
570873
570875
570879
570883
750887-888

The Mining Recorder may reduce the above credits if necessary in order that the total number of approved assessment days recorded on each claim does not exceed the maximum allowed as follows: Geophysical — 80; Geological — 40; Geochemical — 40; Section 77(19)—60:

828 (83/6)

Ministry of Natural Resources
Ontario

Technical Assessment Work Credits

File: 2.6245

Date: 1984 10 12

Mining Recorder's Report of Work No.: 84-15

Recorded Holder: CANADIAN OCCIDENTAL PETROLEUM LIMITED

Township or Area: KIPPEN LAKE AREA

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical	KRL 570877-878
Electromagnetic ____ days	
Magnetometer ____ days	
Radiometric ____ days	
Induced polarization ____ days	
Other ____ days	
Section 77 (19) See "Mining Claims Assessed" column	
Geological ____ days	
Geochemical 19.3 days	
Man days [X] Airborne [ ]	
Special provision [ ] Ground [X]	
[X] Credits have been reduced because of partial coverage of claims.	
[ ] Credits have been reduced because of corrections to work dates and figures of applicant.	

Special credits under section 77 (16) for the following mining claims

No credits have been allowed for the following mining claims

[ ] not sufficiently covered by the survey [ ] Insufficient technical data filed

The Mining Recorder may reduce the above credits if necessary in order that the total number of approved assessment days recorded on each claim does not exceed the maximum allowed as follows: Geophysical — 80; Geological — 40; Geochemical — 40; Section 77(19)—60:

828 (83/6)

Ministry of Natural Resources

Oct 29/84

1984 10 12

Your File: 84-15
Our File: 2.6245

Mining Recorder
Ministry of Natural Resources
Ontario Government Building
Box 324
Red Lake, Ontario
P0V 2M0

Dear Madam:

Enclosed are two copies of a Notice of Intent with statements listing a reduced rate of assessment work credits to be allowed for a technical survey. Please forward one copy to the recorded holder of the claims and retain the other. In approximately fifteen days from the above date, a final letter of approval of these credits will be sent to you. On receipt of the approval letter, you may then change the work entries on the claim record sheets.

For further information, if required, please contact Mr. R.J. Pichette at 416/965-4888.

Yours sincerely,

S.E. Yundt
Director
Land Management Branch

Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3

D. Isherwood:mc

Encls.

cc: Canadian Occidental Petroleum Ltd
180 Attwell Drive
4th Floor
Rexdale, Ontario
M9W 6A9

cc: Mr. G.H. Ferguson
Mining & Lands Commissioner
Toronto, Ontario

Ministry of Natural Resources

Ontario

Notice of Intent

for Technical Reports

1984 10 12

2.6245/84-15

An examination of your survey report indicates that the requirements of The Ontario Mining Act have not been fully met to warrant maximum assessment work credits. This notice is merely a warning that you will not be allowed the number of assessment work days credits that you expected and also that in approximately 15 days from the above date, the mining recorder will be authorized to change the entries on his record sheets to agree with the enclosed statement. Please note that until such time as the recorder actually changes the entry on the record sheet, the status of the claim remains unchanged.

If you are of the opinion that these changes by the mining recorder will jeopardize your claims, you may during the next fifteen days apply to the Mining and Lands Commissioner for an extension of time. Abstracts should be sent with your application.

If the reduced rate of credits does not jeopardize the status of the claims then you need not seek relief from the Mining and Lands Commissioner and this Notice of Intent may be disregarded.

If your survey was submitted and assessed under the "Special Provision-Performance and Coverage" method and you are of the opinion that a re-appraisal under the "Man-days" method would result in the approval of a greater number of days credit per claim, you may, within the said fifteen day period, submit assessment work breakdowns listing the employees names, addresses and the dates and hours they worked. The new work breakdowns should be submitted direct to the Lands Management Branch, Toronto. The report will be re-assessed and a new statement of credits based on actual days worked will be issued.

CANADIAN OXY

Canadian Occidental Petroleum Ltd.

September 19, 1984

Ministry of Natural Resources
Land Management Branch
Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3

Attention: Mr. S.E. Yundt, Director

Dear Sir:

Re: Geological and Geochemical Survey
submitted on Mining Claims KRL 570870
et al. in the Area of Kippen Lake

Your File: ~~2.6784~~ now 2.6245

With reference to your letter of August 27, 1984 on the above mentioned survey, enclosed we are returning the plan (in duplicate).

Mr. Art Murdy, the author of the report, is no longer employed by this company and the plans have been signed by the undersigned who directly supervised Mr. Murdy during this survey.

We hope that you will approve this arrangement.

Yours truly,

CANADIAN OCCIDENTAL PETROLEUM LTD.

N. Saracoglu
Manager, Minerals

NS:er

Enclosures

Minerals Division — 180 Attwell Drive, 4th Floor, Rexdale, Ontario M9W 6A9
(416) 675-2312 Telex 06-989493

CANADIAN OXY

Canadian Occidental Petroleum Ltd.

September 20, 1984

Ministry of Natural Resources
Land Management Branch
Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3

Attention: Mr. S.E. Yundt, Director

Dear Sir:

Re: Geological and Geochemical Survey
submitted on Mining Claims KRL 570870
et al. in the Areas of Muskrat Dam Lake
and Kippen Lake

Your File: 2.6245

With reference to your letter of August 10, 1984 on the above mentioned survey enclosed please find man-days breakdowns you requested.

Yours sincerely,

CANADIAN OCCIDENTAL PETROLEUM LTD.

N. Saracoglu
Manager, Minerals

NS:er

Enclosure

Minerals Division – 180 Attwell Drive, 4th Floor, Rexdale, Ontario M9W 6A9
(416) 675-2312 Telex 06-989493

Ministry of Natural Resources
Ontario

Assessment Work Breakdown

1. Type of Survey GEOCHEMICAL

2. Township or Area Kippen Lake M-2902

3. Numbers of Mining Claims Traversed by Survey KRL 570877-78

4. Number of Miles of Line Cut _____ Flown _____

*5. Number of Stations Established _____

*6. Make and type of Instrument Used _____

*7. Scale Constant or Sensitivity _____

*8. Frequency Used and Power Output _____

9. Summary of Assessment Credits (details on reverse side)

Total 8 hour Technical Days (Include Consultants, Draughting etc.) 5.5

Total 8 hour Line-Cutting Days _____

Calculation

5.5	x 7 =	38.5	+	-	=	38.5	÷	2	=	19.3
Technical				Line-cutting				Number of claims		Assessment credits per claim

The dates listed on this form represent working time spent entirely within the limits of the above listed claims [X] Check
If otherwise, please explain _____

Dated: September 20, 1984

Signed: _____
N. Saracoglu
Manager, Minerals

Note: (A) * Complete only if applicable.
(B) Complete list of names, addresses and dates on reverse side.
(C) Submit separate breakdown for each type of survey.
(D) Submit in duplicate.

827 (81/3)

Details of Assessment Work Breakdown

FIELD WORK

Type of Work	Name & Address	Dates Worked	Number of 8 hour days
Soil and Rock Geochemistry	A.W. Murdy 99 Allan Drive Bolton, Ontario L0P 1A0	June 8-16, 1983	2
Soil and Rock Geochemistry	R.M. Kuehnbaum 3101 O'Hagan Drive Mississauga, Ontario L5C 2C4	June 8-16,1983	2

CONSULTANTS

Name & Address	Dates Worked (specify in field or office)	Number of 8 hour days

DRAUGHTSMAN, TYPING, OTHERS (specify)

Name & Address	Type of Work	Dates Worked	Number of 8 hour days
Jeff Meek 97 Six Point Road, 2nd Floor Toronto, Ontario M8Z 2X3	Drafting	August 19, 1983	1
Elaine Ross	Typing	September 7, 1983	0.5

TOTAL 8 HOUR TECHNICAL DAYS 5.5

LINE-CUTTING

Name	Address	Dates Worked	Number of 8 hour days

TOTAL 8 HOUR LINE-CUTTING DAYS _____

Ministry of Natural Resources
Ontario

Assessment Work Breakdown

1. Type of Survey GEOLOGICAL

2. Township or Area Kippen Lake M-2902

3. Numbers of Mining Claims Traversed by Survey KRL 570870-73 incl., KRL 570875-79 incl., 570883-88 incl.

4. Number of Miles of Line Cut _____ Flown _____

*5. Number of Stations Established _____

*6. Make and type of Instrument Used _____

*7. Scale Constant or Sensitivity _____

*8. Frequency Used and Power Output _____

9. Summary of Assessment Credits (details on reverse side)

Total 8 hour Technical Days (Include Consultants, Draughting etc.) 19.8

Total 8 hour Line-Cutting Days _____

Calculation

19.8	x 7 =	138.6	+	-	=	138.6	÷	15	=	9.2
Technical				Line-cutting				Number of claims		Assessment credits per claim

The dates listed on this form represent working time spent entirely within the limits of the above listed claims [X] Check
If otherwise, please explain _____

Dated: September 20, 1984 Signed: _____
N. Saracoglu
Manager, Minerals

Note: (A) * Complete only if applicable.
(B) Complete list of names, addresses and dates on reverse side.
(C) Submit separate breakdown for each type of survey.
(D) Submit in duplicate.

827 (81/3)

2.6215

Details of Assessment Work Breakdown

FIELD WORK

Type of Work	Name & Address	Dates Worked	Number of 8 hour days
Geological Mapping	A.W. Murdy 99 Allan Drive Bolton, Ontario L0P 1A0	June 8-16, 1983	7
Geological Mapping	R.M. Kuehnbaum 3101 O'Hagan Drive Mississauga, Ontario L5C 2C4	June 8-16, 1983	7

CONSULTANTS

Name & Address	Dates Worked (specify in field or office)	Number of 8 hour days

DRAUGHTSMAN, TYPING, OTHERS (specify)

Name & Address	Type of Work	Dates Worked	Number of 8 hour days
Jeff Meek 97 Six Point Road, 2nd Floor Toronto, Ontario M8Z 2X3	Drafting	August 15-18, 1983	3.3
Elaine Ross Canadian Occidental Petroleum Ltd. 180 Attwell Dr., 4th Floor Rexdale, Ontario M9W 6A9	Typing	September 5-7, 1983	2.5

TOTAL 8 HOUR TECHNICAL DAYS 19.8

LINE-CUTTING

Name	Address	Dates Worked	Number of 8 hour days

TOTAL 8 HOUR LINE-CUTTING DAYS _____

August 10, 1984

Our File: 2.6245

Canadian Occidental Petroleum Ltd
180 Attwell Drive
4th Floor
Rexdale, Ontario
M9W 6A9

Dear Sirs:

RE: Geological and Geochemical Survey
submitted on Mining Claims KRL 570870
et al in the Areas of Muskrat Dam Lake
and Kipper Lake

The above-mentioned survey has been reviewed, and it has been determined thatthe submission does not qualify for assessment under Special Provisions as there has not been full and systematic coverage of the claim group. The survey may be assessed on a man-days basis.

Please complete the enclosed "Assessment Work Breakdown", in duplicate. A separate breakdown is required for each type of survey (geology & geochemistry).

Upon receipt of this information your submission will be assessed and a statement of Assessment Work Credits will be issued.

When returning this information, please quote file 2.6245.

For further information, please contact Mr. Ray Pichette at (416)965-4888.

Yours sincerely,

S.E. Yundt
Director
Land Management Branch

Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3
Phone:(416)965-4888

S. Hurst:mc

cc: Mining Recorder, Red Lake, Ontario

Encl.

1984 01 16 Our File: 2.6245

Mr. Albert Scott Rivett
Mining Recorder
Ministry of Natural Resources
Ontario Government Building
Box 324
Red Lake, Ontario
P0V 2M0

Dear Sir:

We have received reports and maps for a Geological and Geochemical Survey submitted under Special Provisions (credit for Performance and Coverage) on Mining Claims KRL 570870 et al in the Area of Muskrat Dam Lake and Upper Lake.

This material will be examined and assessed and a statement of assessment work credits will be issued.

We do not have a copy of the report of work which is normally filed with you prior to the submission of this technical data. Please forward a copy as soon as possible.

Yours very truly,

J.R. Morton
Acting Director
Land Management Branch

Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3
Phone:(416)965-1380

M.E. Anderson:mc

cc: Canadian Occidental Petroleum Ltd
Minerals Division
4th Floor
180 Attwell Drive
Rexdale, Ontario
M9W 6A9
Attention: A.W. Mundy

Mining Lands Section

File No 2.6245

Control Sheet

TYPE OF SURVEY

___ GEOPHYSICAL

✓ GEOLOGICAL

✓ GEOCHEMICAL

___ EXPENDITURE

MINING LANDS COMMENTS:

file 2.6784 has been combined with this one.
-2.6784 was DDH report - dup at ORSEP
2.6245 - geological & geochemical report
qualifications - Murdy 2.2006
Saracoglu 2.6241

LD

Doug

Signature of Assessor

31/10/84

Date

merged with 2.6245

Mining Lands Section

File No ~~2.6784~~

Control Sheet

TYPE OF SURVEY

____ GEOPHYSICAL

✓ GEOLOGICAL

✓ GEOCHEMICAL

____ EXPENDITURE

MINING LANDS COMMENTS:

combined with file 2.6245
- report on diamond drilling - duplicate at OMEP

L.D.

Signature of Assessor

Date

1984 06 05

Your File:14, 15
Our File:~~2.6781~~
merged with
2.6245

Albert Scott Rivett
Mining Recorder
Ministry of Natural Resources
Ontario Government Building
Box 5003
Red Lake, Ontario
P0V 2M0

Dear Sir:

We have received reports and maps for a Geological & Geochemical Survey submitted under Special Provisions (credit for Performance and Coverage) on Mining Claims KRL 570870 et al in the Areas ~~of Muskrat Dam Lake~~ and Kippen Lake.

This material will be examined and assessed and a statement of assessment work credits will be issued.

Yours sincerely,

S.E. Yundt
Director
Land Management Branch

Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3
Phone: (416) 965-6918

A. Barr:sc

cc: Canadian Occidental Petroleum, Ltd
180 Attwell Drive
4th Floor
Rexdale, Ontario
M9W 6A9
Attention: Arthur Murdy.

August 27, 1984 File: 2.6784

Canadian Occidental Petroleum Ltd
180 Attwell Drive
4th Floor
Rexdale, Ontario
M9W 6A9

Attention: Arthur Murdy

Dear Sir:

RE: Geological and Geochemical Survey submitted on Mining Claims KRL 570870 et al in the Area of Kippen Lake

---

Returned herein is the geology and rock geochemistry plan (in duplicate) for the above-mentioned survey. Please have the author of the report sign each copy and return the material to this office quoting file 2.6784.

For further information, please contact Mr. Dennis Kinvig at (416)965-4888.

Yours sincerely,

S.E. Yundt
Director
Land Management Branch

Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3

D. Kinvig:mc

cc: Mining Recorder
Red Lake, Ontario
File: 84-14

Encl.

Canadian Occidental Petroleum Ltd.

May 18, 1984

Mr. J.R. Morton
Acting Director
Land Management Branch
Ministry of Natural Resources
Rm. 6643, Whitney Block
Queen's Park
Toronto, Ontario
M7A 1W3

Dear Mr. Morton:

Re: Kippey Claims 1-30
KRL 570870-79 and 570883-88
Kippen Lake M-2902

I enclose one copy of our report entitled "Report on Diamond Drill Program, Kippey Claims 1-30", by A.W. Murdy, dated March, 1984.

This report covers work as shown on our previously submitted Report of Work form dated Dec. 30/83.

A second copy of this report has been submitted to the OMEP Administrator - F.W. Pooley (see copy of letter attached).

Thank you.

Yours truly,

CANADIAN OCCIDENTAL PETROLEUM LTD.

R.J. Evans
Administration Manager

RJE:er

Enclosure

xc: F.W. Pooley
OMEP OM83-1-C-284

Minerals Division — 180 Attwell Drive, 4th Floor, Rexdale, Ontario M9W 6A9
(416) 675-2312 Telex 06-989493

Canadian Occidental Petroleum Ltd.

May 22, 1984

Ministry of Natural Resources
Mineral Taxation and OMEP Office
Rm. 4649, Whitney Block
99 Wellesley Street West
Toronto, Ontario
M7A 1W3

Attention: F.W. Pooley
OMEP Administrator

Dear Mr. Pooley:

Re: OMEP OM83-1-C-284

I enclose one copy of our drill report entitled "Report on Diamond Drill Program, Kippey Claims", by A.W. Murdy dated March, 1984 together with the relevant completed OMEP forms.

The drill report covers work carried out under our above noted OMEP contract.

I have forwarded a second copy to the Land Management Branch for credit under the Ontario assessment regulations. Could you confirm when our previous OMEP grant (OM83-1-C-40) for $5,000 will be sent to us?

Thank you.

Yours truly,

CANADIAN OCCIDENTAL PETROLEUM LTD.

R.J. Evans
Administration Manager

RJE:er

Enclosure

xc: Director - Land Management Branch

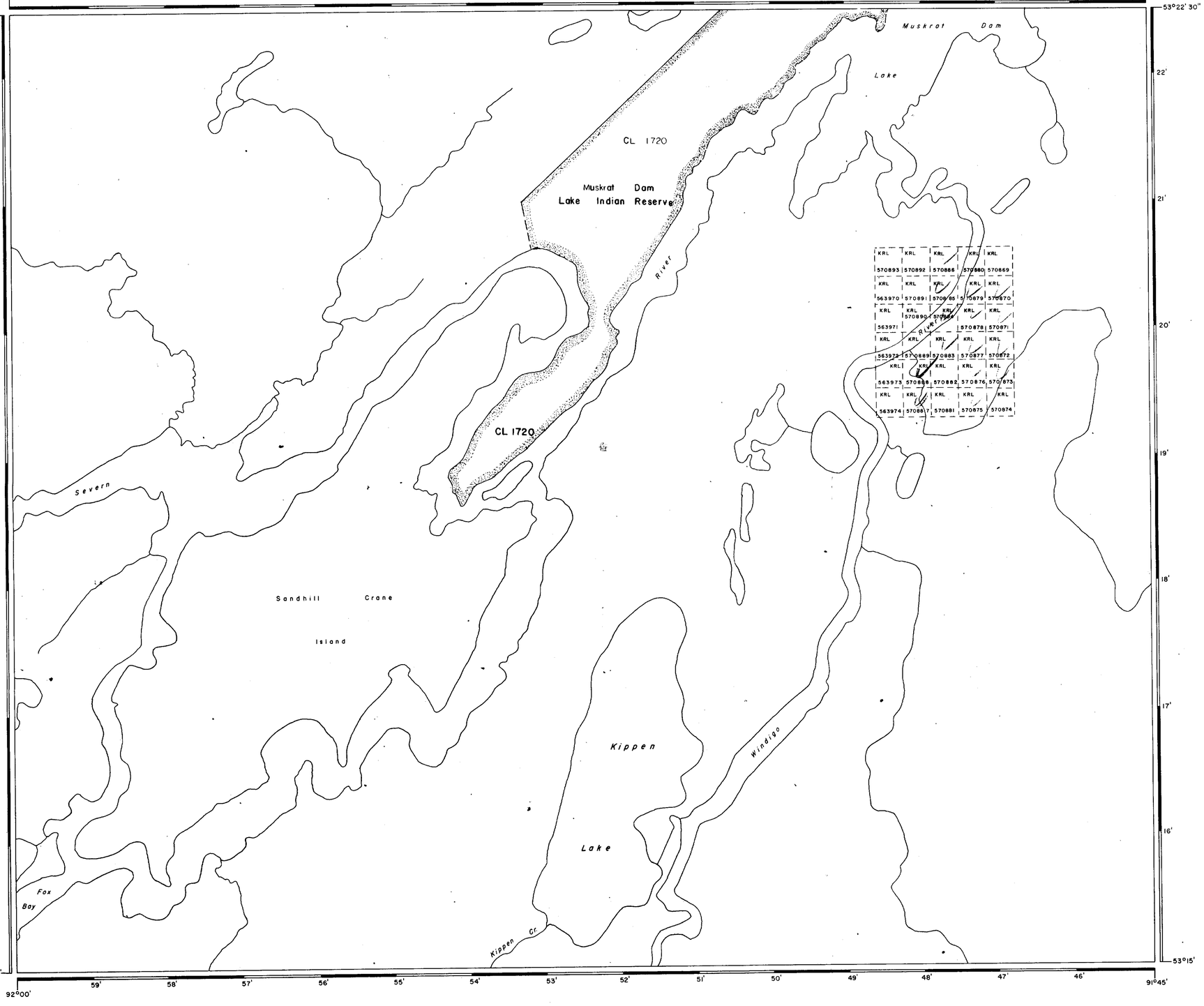
Minerals Division - 180 Attwell Drive, 4th Floor, Rexdale, Ontario M9W 6A9
(416) 675-2312 Telex 06-989493

BLACKWATER BAY - G-1959

92°00'
91°45'
53°22' 30"
53°15'

WEST OF KIPPEN LAKE G-2253

WOODPECK LAKE - G-2270



59' 58' 57' 56' 55' 54' 53' 52' 51' 50' 49' 48' 47' 46'

22' 21' 20' 19' 18' 17' 16'

LEGEND

- HIGHWAY AND ROUTE No.
- OTHER ROADS
- TRAILS
- SURVEYED LINES:
  - TOWNSHIPS, BASE LINES, ETC.
  - LOTS, MINING CLAIMS, PARCELS, ETC.
- UNSURVEYED LINES:
  - LOT LINES
  - PARCEL BOUNDARY
  - MINING CLAIMS ETC.
- RAILWAY AND RIGHT OF WAY
- UTILITY LINES
- NON-PERENNIAL STREAM
- FLOODING OR FLOODING RIGHTS
- SUBDIVISION OR COMPOSITE PLAN
- RESERVATIONS
- ORIGINAL SHORELINE
- MARSH OR MUSKEG
- MINES
- TRAVERSE MONUMENT

DISPOSITION OF CROWN LANDS

TYPE OF DOCUMENT	SYMBOL
PATENT, SURFACE & MINING RIGHTS	●
" , SURFACE RIGHTS ONLY	◒
" , MINING RIGHTS ONLY	◒
LEASE, SURFACE & MINING RIGHTS	■
" , SURFACE RIGHTS ONLY	◨
" , MINING RIGHTS ONLY	◨
LICENCE OF OCCUPATION	▼
ORDER-IN-COUNCIL	OC
RESERVATION	◔
CANCELLED	⊗
SAND & GRAVEL	◔

NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 6, 1913, VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT, R.S.O. 1970, CHAP. 380, SEC. 63, SUBSEC 1.

REFERENCES

AREAS WITHDRAWN FROM DISPOSITION

M.R.O. – MINING RIGHTS ONLY
S.R.O. – SURFACE RIGHTS ONLY
M.+ S. – MINING AND SURFACE RIGHTS

Description	Order No.	Date	Disposition	File

SCALE: 1 INCH = 40 CHAINS

FEET 0 1000 2000 4000 6000 8000
METRES 0 200 1000 (1 KM) 2000 (2 KM)

AREA

KIPPEN LAKE

M.N.R. ADMINISTRATIVE DISTRICT
SIOUX LOOKOUT
MINING DIVISION
RED LAKE
LAND TITLES / REGISTRY DIVISION
KENORA (PATRICIA PORTION)

Ministry of Natural Resources — Land Management Branch
Ontario

Date JANUARY, 1984

Number G-2092

Blow-up

Granitic Rocks

Migmatitic Rocks

ROTTENFISH RIVER BELT

MUSKRAT DAM LAKE BELT

Muskrat Dam Lake Sill

Fox Bay Sill

Rottenfish River Fault

Severn River Fault

Rottenfish Lake Fault

Hill Lake Fault

Winisk River Fault

Malachun Lake sill

CdnOxy Claims

Limit of Fig. 5 - Southern Outcrop Area

Diabase dike
Mafic to Ultramafic Rocks
Meta-Sediments
Felsic Meta-Volcanics
Mafic to Intermediate Meta-Volcanics
Geological boundary
Fault
Anticlinal axis
Synclinal axis
Sulphide mineralization
Mineral occurrence
Au -- gold gf -- graphite

Muskrat Dam Lake Indian Reserve CL 1720
Portage
River with rapids

Source: Map 2292, Big Trout Lake - North Caribou Lake, Geological Compilation Series 1973
Map 2178, Stull Lake - Sandy Lake Geological Compilation Series, 1968

CANADIAN OCCIDENTAL PETROLEUM LTD
Minerals Division

PROJECT KIPPEY

MUSKRAT DAM LAKE BELT

NORTH WESTERN ONTARIO
N.T.S. 53 G

GEOLOGY

SCALE 1:100,000

KWL/jm/ Mar 82

PLAN 1

Nov 4/83 26245 01g

CANADIAN OCCIDENTAL PETROLEUM LTD.
Minerals Division

PROJECT KIPPEY

North Western Ontario, N.T.S. 53 G/15

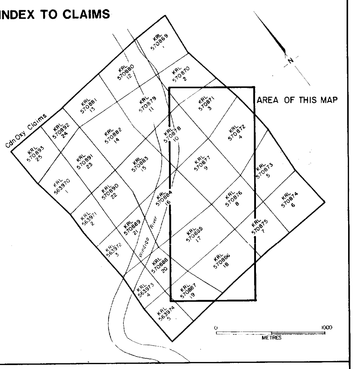
GEOLOGY & ROCK GEOCHEMISTRY

2.6245

R.F. 1:2,000

SCALE 50 0 100 200 m METRES

INDEX TO CLAIMS



Base line 00+00

01+00 E

02+00 E

03+00 E

06+00 E

L 23+00 N

L 22+00 N

L 21+00 N

L 20+00 N

L 19+00 N

L 18+00 N

L 17+00 N

L 16+00 N

L 15+00 N

L 14+00 N

L 13+00 N

L 12+00 N

L 11+00 N

L 10+00 N

L 09+00 N

L 08+00 N

L 07+00 N

L 06+00 N

L 05+00 N

KRL 570870 2

KRL 570871 3

KRL 570878 10

KRL 570872 4

KRL 570877 9

KRL 570884 16

KRL 570876 8

KRL 570885 17

KRL 570886 18

DDH KP-2

DDH KP-3

Gossan Zone Plan 4

Sulphide Zone Fig 3

CLAIM BOUNDARY APPROX.

LEGEND

- swamp (boundary approx.)
- geological boundary, definite/assumed
- rock outcrop
- strike & dip of foliation
- shear zone
- trench
- glacial direction

ROCK GEOCHEMISTRY

- 14032 sample number
- ppb Au ⊕ ppm Cu
- ppm Ag ⊕ ppm Zn

ANOMALOUS VALUES

- 20ppb Au
- 1ppm Ag

GEOLOGY

- A massive basic-intermediate meta-volcanic
- B hornblende + biotite schist (meta-sediment)
- C meta-gabbro
- D felsic meta-intrusive

PLAN 2

AM/jm/Aug. 1983

CANADIAN OCCIDENTAL PETROLEUM LTD.
Minerals Division

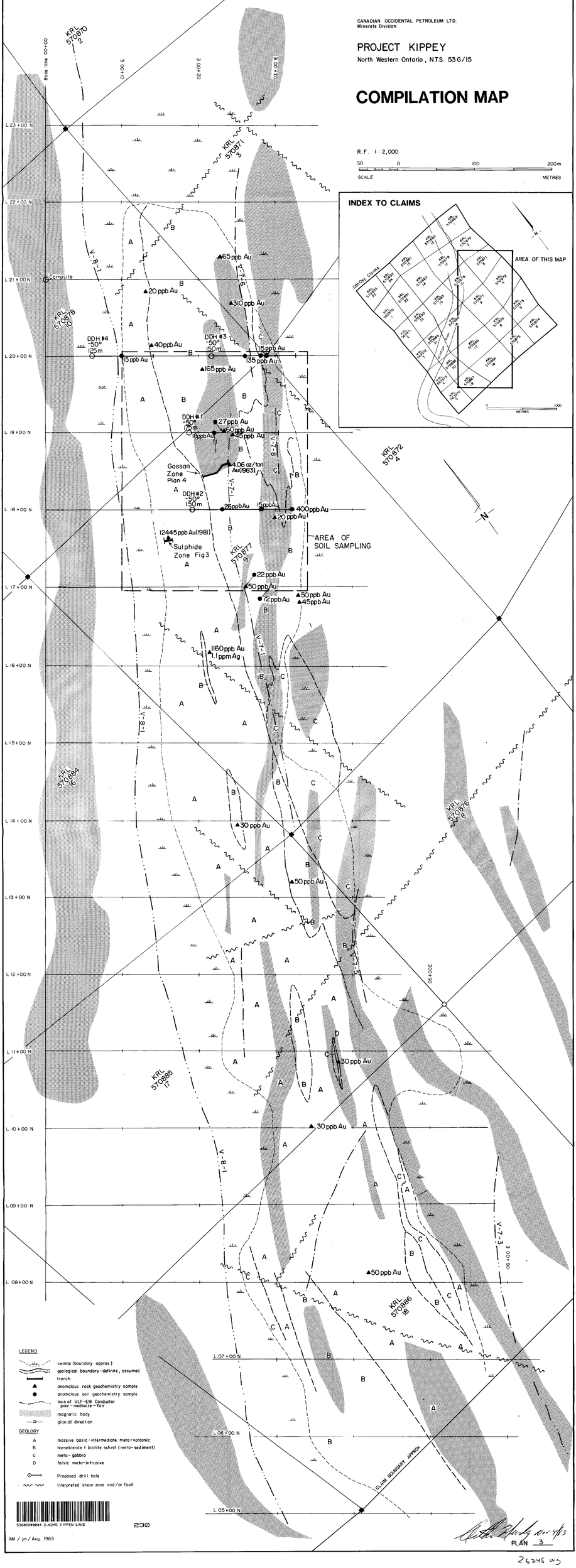
PROJECT KIPPEY

North Western Ontario, N.T.S. 53G/15

COMPILATION MAP

R.F. 1:2,000

SCALE 50 0 100 200m METRES



LEGEND

- swamp (boundary approx.)
- geological boundary - definite, assumed
- trench
- anomalous rock geochemistry sample
- anomalous soil geochemistry sample
- axis of VLF-EM Conductor poor – mediocre – fair
- magnetic body
- glacial direction

GEOLOGY

- A massive basic-intermediate meta-volcanic
- B hornebiende ± biotite schist (meta-sediment)
- C meta-gabbro
- D felsic meta-intrusive
- Proposed drill hole
- Interpreted shear zone and/or fault

53G05NW0004 2.4245 KIPPEN LAKE

230

AM / jm / Aug. 1983

PLAN 3

26248 wg

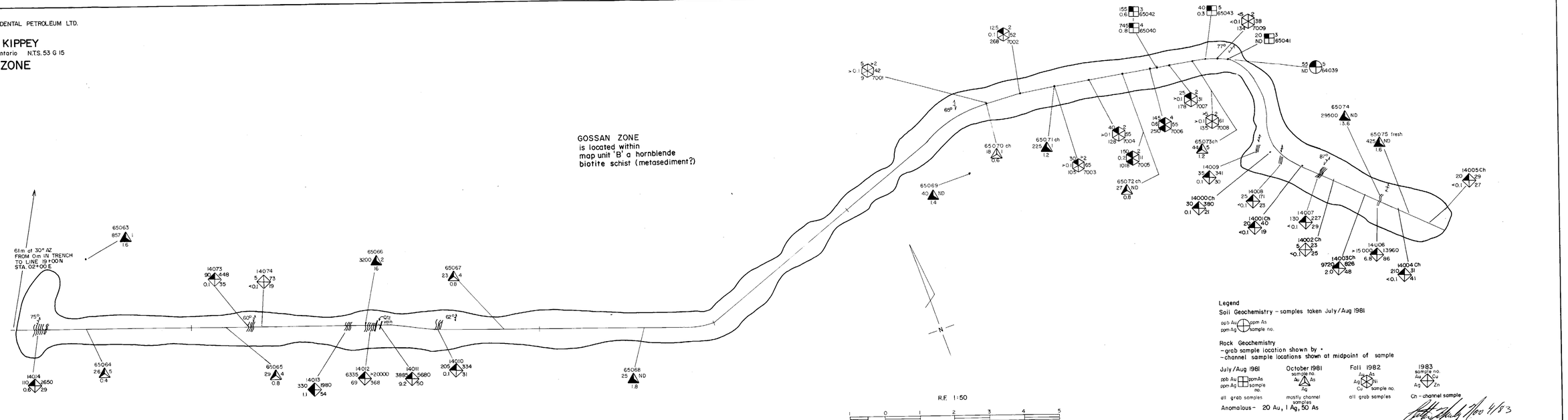
CANADIAN OCCIDENTAL PETROLEUM LTD.
minerals division

PROJECT KIPPEY

North Western Ontario N.T.S. 53 G 15

GOSSAN ZONE

A.M./jm/Aug 83



Legend

Soil Geochemistry – samples taken July/Aug 1981

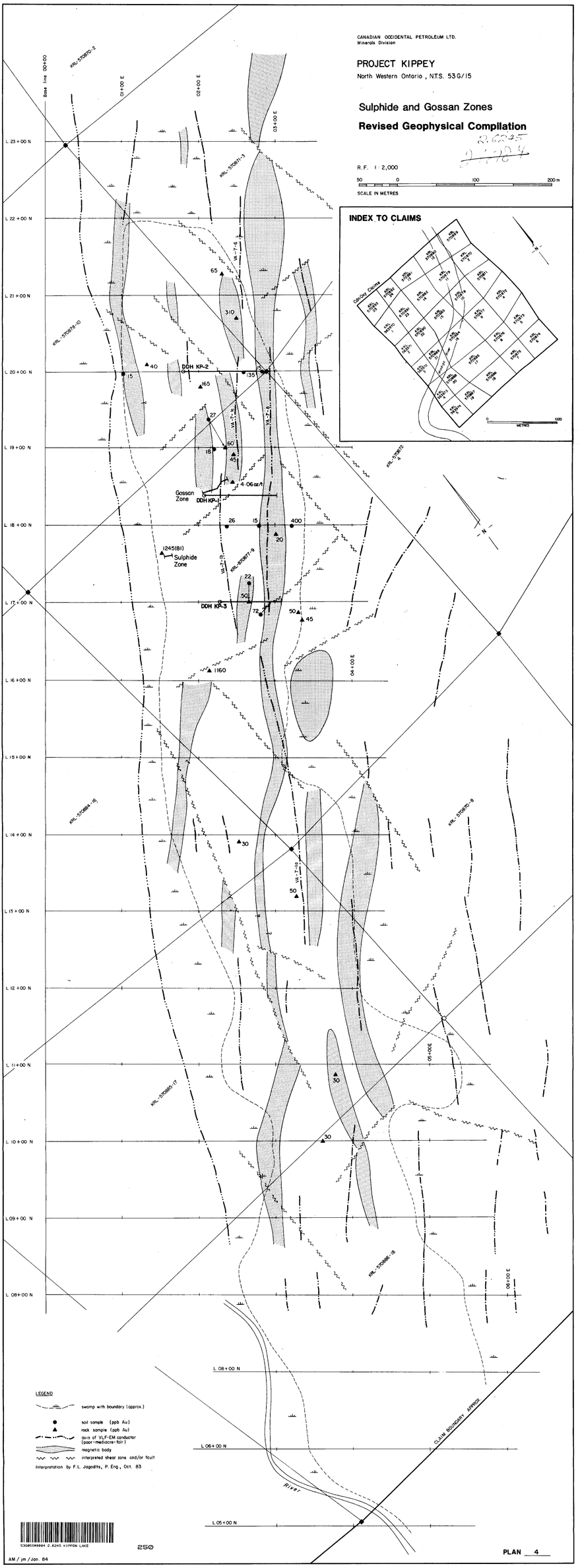
ppb Au / ppm As
ppm Ag / sample no.

Rock Geochemistry
– grab sample location shown by •
– channel sample locations shown at midpoint of sample

July/Aug 1981	October 1981	Fall 1982	1983
ppb Au / ppm As ppm Ag / sample no.	sample no. Au / As Ag	Au / As Ag / Ni Cu / sample no.	sample no. Au / Cu Ag / Zn
all grab samples	mostly channel samples	all grab samples	Ch – channel sample

Anomalous – 20 Au, 1 Ag, 50 As

PLAN 4


CANADIAN OCCIDENTAL PETROLEUM LTD.
Minerals Division
PROJECT KIPPEY
North Western Ontario, N.T.S. 53G/15
Sulphide and Gossan Zones
Revised Geophysical Compilation
R.F. 1:2,000
50 0 100 200 m
SCALE IN METRES
INDEX TO CLAIMS
Base line 00+00
01+00 E
02+00 E
03+00 E
04+00 E
05+00 E
06+00 E
L 23+00 N
L 22+00 N
L 21+00 N
L 20+00 N
L 19+00 N
L 18+00 N
L 17+00 N
L 16+00 N
L 15+00 N
L 14+00 N
L 13+00 N
L 12+00 N
L 11+00 N
L 10+00 N
L 09+00 N
L 08+00 N
L 06+00 N
L 05+00 N
DDH KP-1
DDH KP-2
DDH KP-3
Gossan Zone
1245(81) Sulphide Zone
4.06oz/t
KRL-570870-2
KRL-570871-3
KRL-570872-4
KRL-570876-10
KRL-570877-9
KRL-570878-11
KRL-570880-8
KRL-570884-16
KRL-570885-17
KRL-570886-18
VA-7-6
VA-7-7
VA-7-8
VA-7-10
VA-7-11
VA-7-12
VA-7-13
VA-7-14
VA-7-15
VA-7-16
VA-7-17
VA-7-18
VA-7-19
LEGEND
swamp with boundary (approx.)
soil sample (ppb Au)
rock sample (ppb Au)
axis of VLF-EM conductor (poor-mediocre-fair)
magnetic body
interpreted shear zone and/or fault
Interpretation by F.L. Jagodits, P. Eng., Oct. 83
CLAIM BOUNDARY APPROX.
River
250
PLAN 4
AM / jm / Jan. 84

gammas
3000
2500
2000
1500
1000
to 17408 →

02+00 E
03+00 E

Gossan Zone
Trench

MAGNETIC SURVEY PROFILE

VLF(VA-7-1b)
Fault
VLF(VA-7-1c)
VLF(VA-7-8)

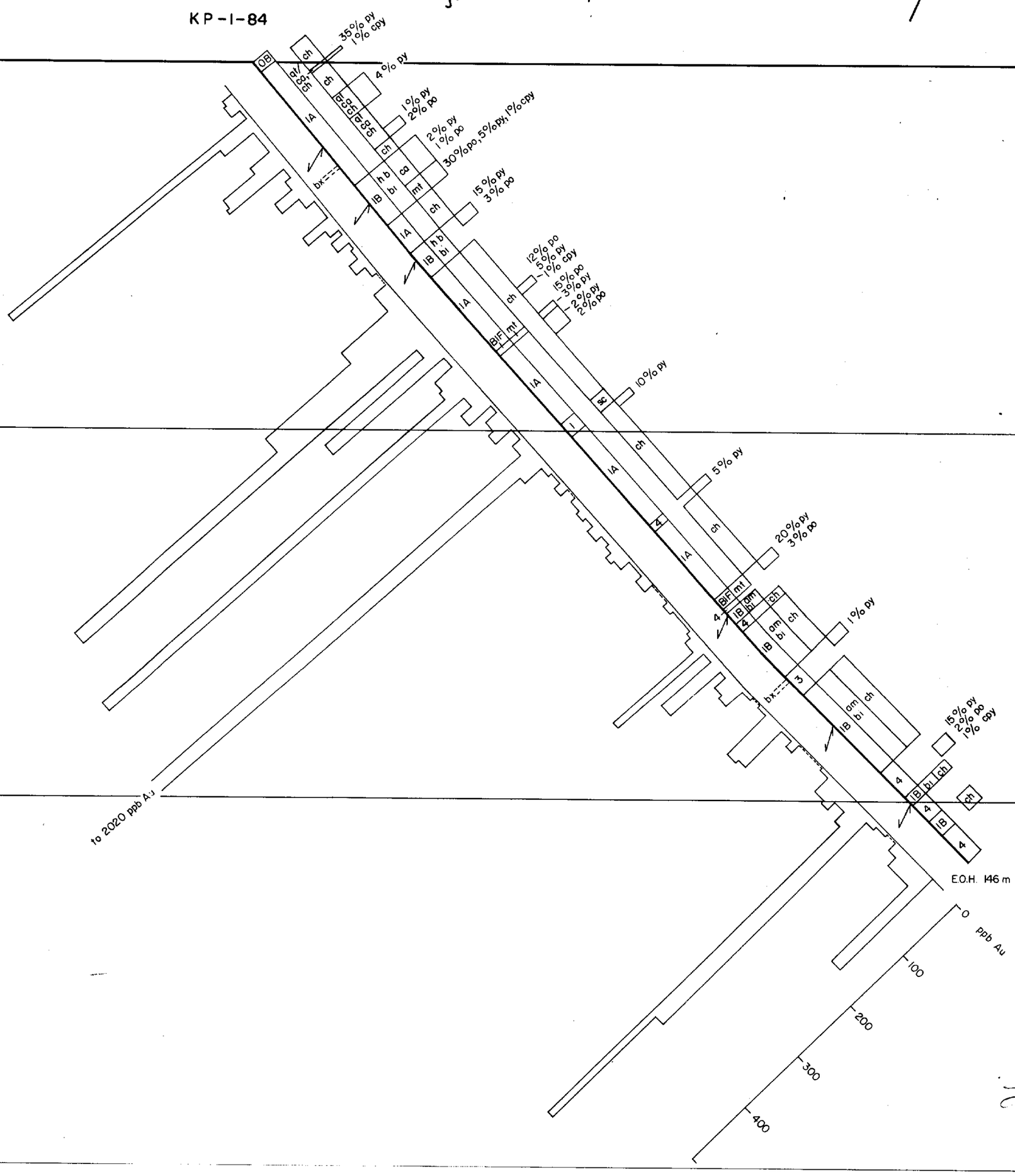
Azimuth 135°

PLAN VIEW

KP-1-84

LINE 18+35 N

SURFACE **0 m**



-50 m

-100 m

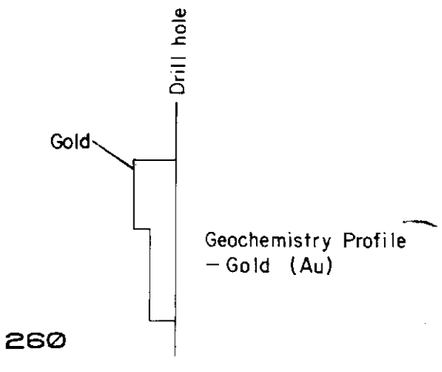
-150 m

26784
2.6245

GROUND MAGNETIC SURVEY

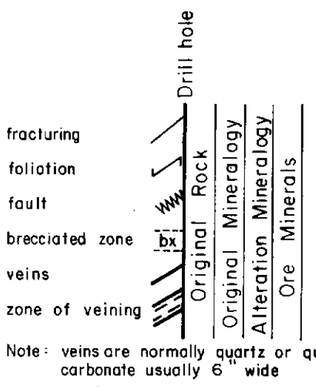
Instrument: Geometrics G-816
Base station recorder — CMG MR-10
Survey by Edwin Goucher & Associates Inc.
Values above base level of 58,000 gammas

53G05SW0004 2.6245 KIPPEN LAKE



DOWN — HOLE SAMPLING

For legend to geology abbreviations see accompanying report.



Note: veins are normally quartz or quartz carbonate usually 6" wide

All angles shown on cross-sections are true measured angles. Where core angles are not known the feature will be shown parallel to the prevailing bedding or foliation.

CANADIAN OCCIDENTAL PETROLEUM LTD.
Minerals Division

PROJECT "KIPPEY"

NORTH WESTERN ONTARIO N.T.S. 53G/15

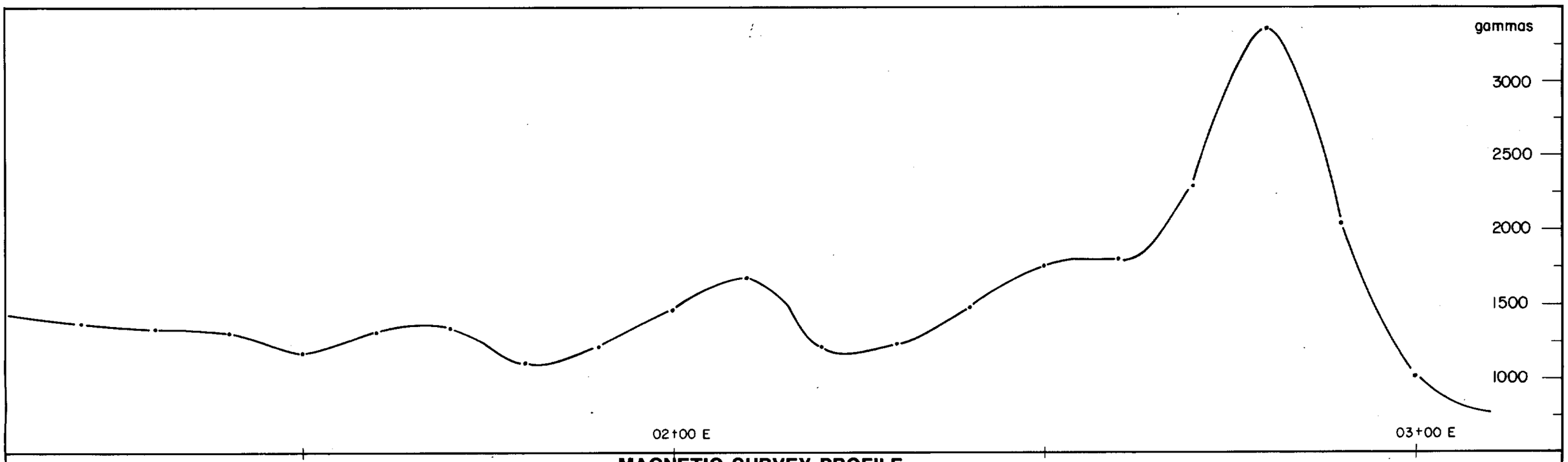
CROSS-SECTION 18+35 N

DRILL HOLE KP-1-84

10 0 50

Scale in Metres

Revised March 84 | **PLAN** 5



MAGNETIC SURVEY PROFILE

PLAN VIEW

LINE 20+00 N

VLF

Fault

VLF (VA-7-1c)

Azimuth 135°

VLF (VA-7-8)

SURFACE 0 m

KP-2-84

Au 10/0 py 10/00

OB, IB, am, bi, ch, bx, IA, cg, cd, 2% py, 3% py, sc, 2, 1% py, 15% py, 3% po, BIF, 4, mt, 5% py, 3

to 1290 ppb Au

E.O.H. 153 m

-50 m

-100 m

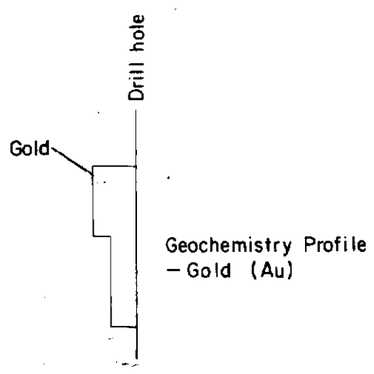
-150 m

0 ppb Au
100
200
300
400
500

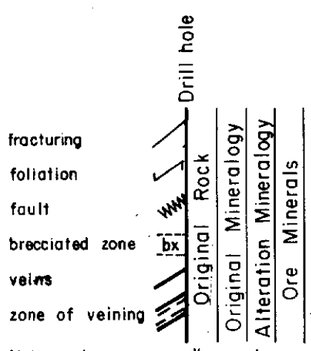
26784
2.6245

GROUND MAGNETIC SURVEY

Instrument: Geometrics G-816
Base station recorder – CMG MR-10
Survey by Edwin Goucher & Associates Inc.
Values above base level of 58,000 gammas



DOWN – HOLE SAMPLING



Note: veins are normally quartz or quartz carbonate usually 6" wide

All angles shown on cross-sections are true measured angles. Where core angles are not known the feature will be shown parallel to the prevailing bedding or foliation.

53G05SW0004 2.6245 KIPPEN LAKE

270

For legend to geology abbreviations see accompanying report.

CANADIAN OCCIDENTAL PETROLEUM LTD.
Minerals Division

PROJECT "KIPPEY"

NORTH WESTERN ONTARIO N.T.S. 53G/15

CROSS-SECTION 20+00 N

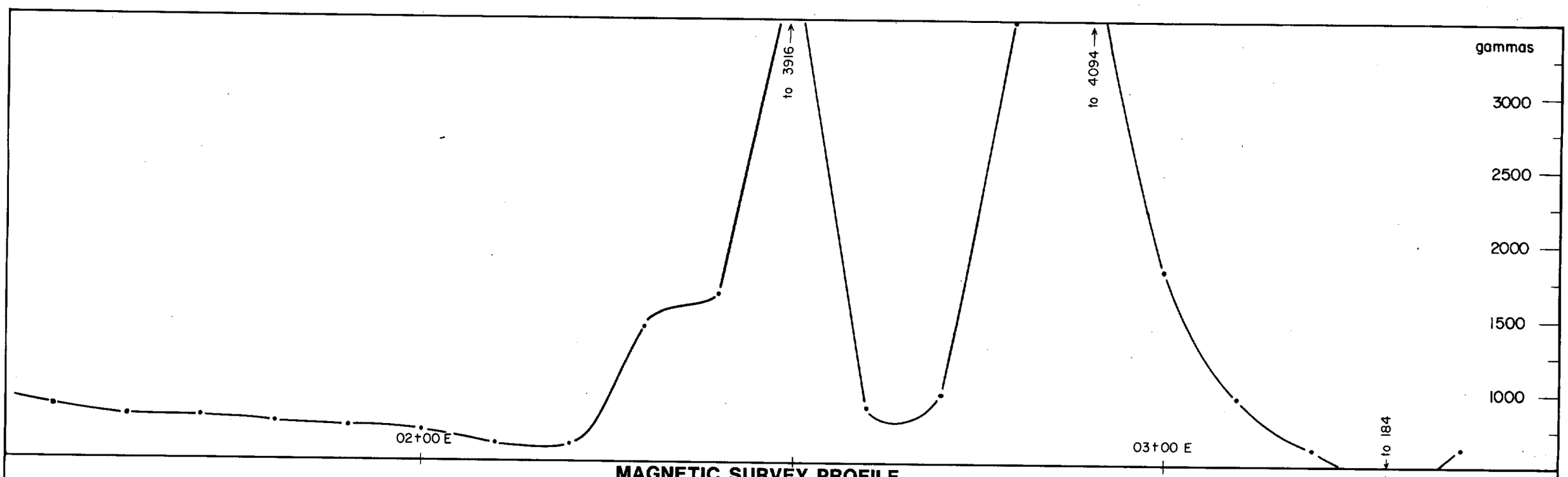
DRILL HOLE KP-2-84

10 0 50

Scale in Metres

Revised March 84

PLAN 6



MAGNETIC SURVEY PROFILE

PLAN VIEW

VLF (VA-7-1b)

VLF(VA-7-8)

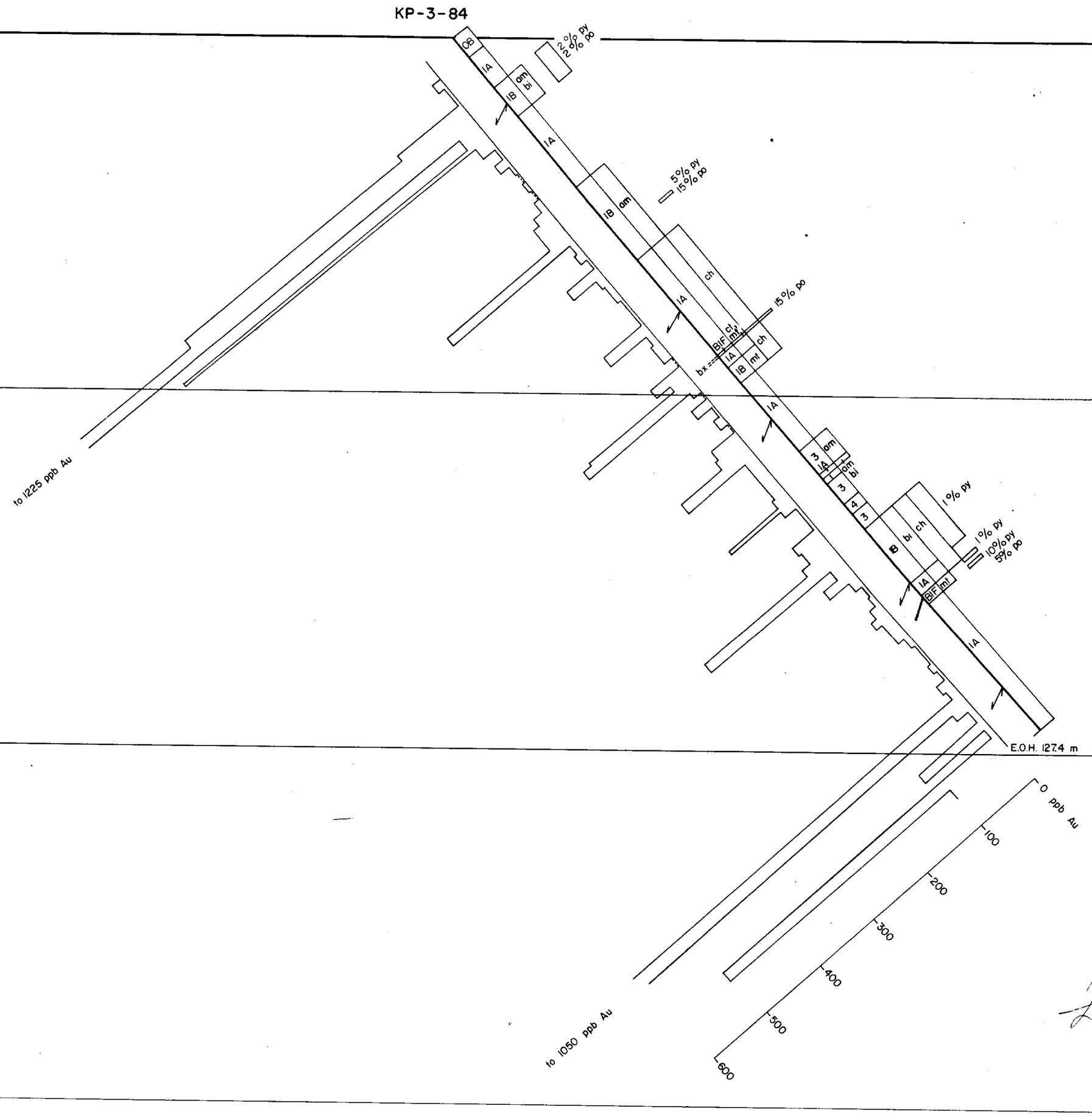
Fault

Azimuth 135°

LINE 17+00 N

KP-3-84

SURFACE 0 m



-50 m

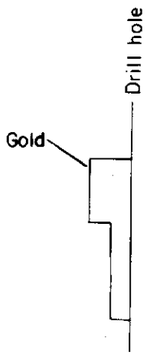
-100 m

-150 m

2.6784
2.6245

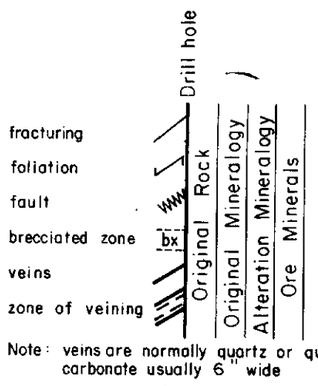
GROUND MAGNETIC SURVEY

Instrument : Geometrics G-816
Base station recorder – CMG MR-10
Survey by Edwin Goucher & Associates Inc.
Values above base level of 58,000 gammas



Geochemistry Profile – Gold (Au)

DOWN – HOLE SAMPLING



Note : veins are normally quartz or quartz carbonate usually 6" wide

All angles shown on cross-sections are true measured angles. Where core angles are not known the feature will be shown parallel to the prevailing bedding or foliation.

280

For legend to geology abbreviations see accompanying report.

CANADIAN OCCIDENTAL PETROLEUM LTD.
Minerals Division

PROJECT "KIPPEY"

NORTH WESTERN ONTARIO N.T.S. 53G/15

CROSS-SECTION 17+00 N

DRILL HOLE KP-3-84

10 0 50

Scale in Metres

Revised March 84

PLAN 7