6060

CANADIAN OCCIDENTAL PETROLEUM LTD.

MINERALS DIVISION

GEOLOGY, GEOCHEMISTRY AND DIAMOND DRILLING OF THE HED CLAIMS

HED

Claim Sheet No. 92 H/8E
Lat.: 49°21'
Long.: 120°09'

92 H/8E

Claims:
HED 1-5, Record Numbers 50, 94-97
Similkameen Mining Division
British Columbia

by:
Colin C. Macdonald, B.Sc. (Eng.)

Covering Work Completed During the Period
July 21 to August 29, 1976

Contents

SUMMARY

The Hed claim group is located 1.4 miles (2.3 km) west of Hedley, British Columbia. The property was staked in June and July, 1976, to more fully evaluate the economic potential of an area with one promising exposed gossan, as well as stream sediment values which were anomalous in arsenic. The property was geologically mapped at a scale of 1"=400' (1 cm=48 m) and soil geochemistry was carried out on 400 foot (122 m) flagged lines. In addition, three BQ wireline diamond drill holes totalling 801.5 feet (244 m) were drilled to investigate the main gossan.

The property is underlain by a turbidite succession of argillite and greywacke, with some chert and limestone, and one mappable submarine slump breccia. This sequence has been gentley folded into an open anticline, plunging vertically in the eastern half and overturned to the west of the claims. Two types of dykes, a hornblende porphyry and a felsite, are found in several locations, and seem to be directly associated with the hydrothermal event which has resulted in the quartz-carbonate-sulphide mineralization.

Two of the three drill holes intersected a quartz-carbonate-sulphide vein breccia containing minor gold in the sulphide. The highest grade was .1 oz/ton over 2 feet (.6 m). Soil geochemistry outlined one major coincident Au-As anomaly in the northeast corner of the property. One initial diamond drill hole is recommended to evaluate this anomaly

INTRODUCTION

The 1973 Princeton project, a regional stream sediment program, covered the area surrounding the Hedley, B.C. gold camp. Dr. C.F. Gleeson, Consulting Geochemist, suggested that stream samples in the vicinity of the gold camp be analysed for arsenic. Much of the gold in the Hedley cmap is associated with arsenopyrite, so arsenic would thus make a good pathfinder element. Various discrete, high-level anomalies were outlined, so the streams involved were sampled in greater detail in 1975. From this information, reconnaissance soil geochemistry was carried out over the two most promising areas as interpreted from arsenic in the streams.

The Hed 1 claim was staked on June 9, 1976, to cover an exposed gossan, one sample of which showed 2.046 oz/ton. A one-unit perimeter, Hed 2-5, was staked around this claim on July 29-30, 1976, also by C.C. Macdonald of Canadian Occidental Petroleum Ltd., Minerals Division. Diamond drilling of the gossan zone was carried out between July 21 and August 7, 1976. A soil geochemical and geological survey was also carried out between July 31 and August 21, 1976. This report will describe the results obtained from the diamond drilling, soil geochemistry, and geological mapping of the Hed 1-5 claims.

LOCATION AND ACCESS

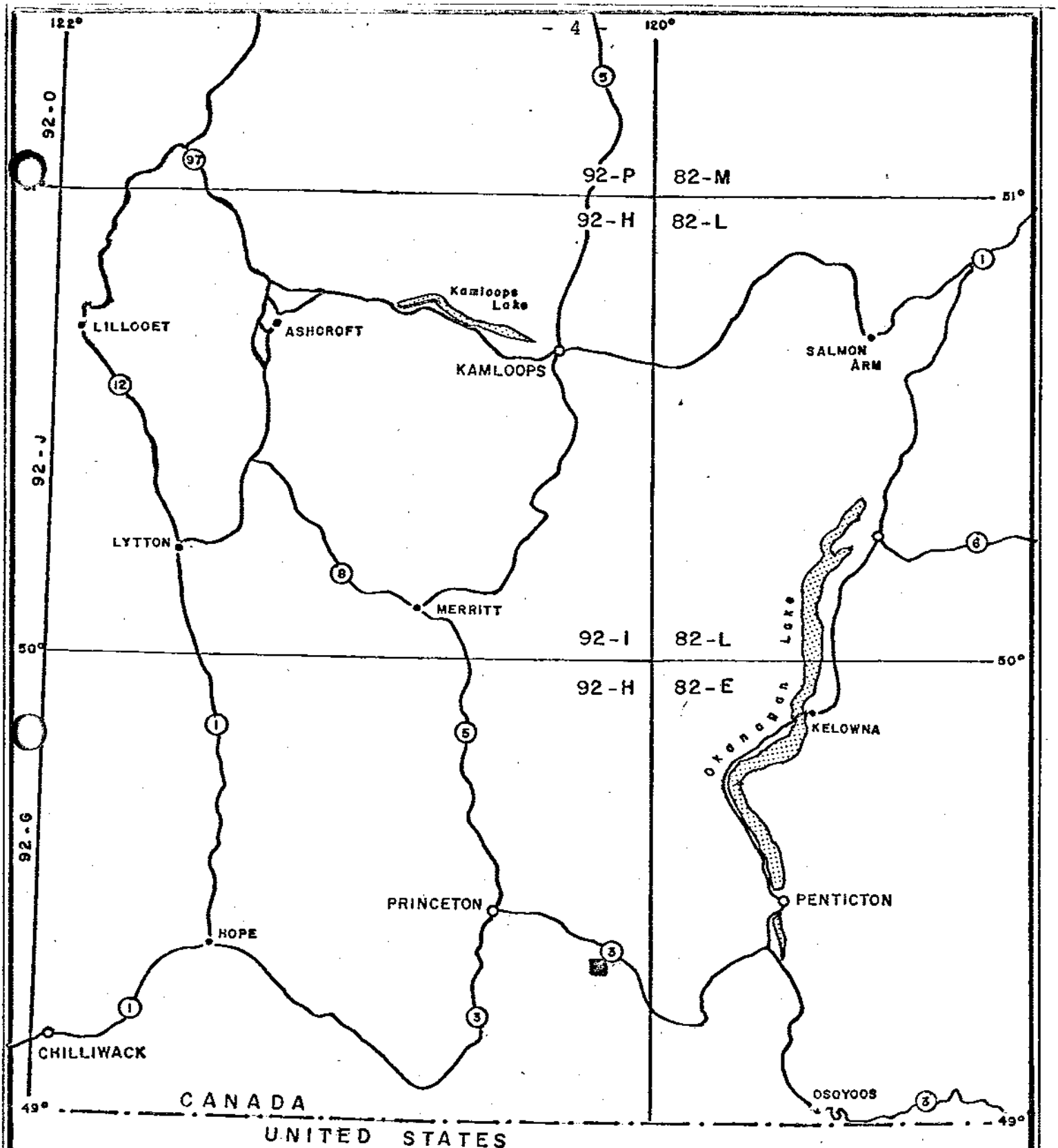
The Hed claims are located 1.4 miles (2.3 km) due east of Hedley, British Columbia, on the south side of the Similkameen River. The property is recorded on claim map 92 H/8 in the Similkameen Mining Division, British Columbia. Access is by logging roads from Highway #3, two miles (3.2 km) west of Hedley.

VEGETATION

The entire property is below the tree line, with maximum elevation at 4700 ft. (1434 m). The area is about 80% forested and 20% open pasture, with Douglas fir, ponderosa pine, and spruce being the predominant conifers. The bush is generally open, with little underbrush.

PREVIOUS WORK

The Hedley area has been the site of abundant mining activity for many years. Most of this work has been carried out on the north side of the Similkameen, the site of several operating mines in the past. However, evidence of some work has been found on the Hed claims. At L2N/14E, three short adits have been excavated to try to test a quartz-carbonate-pyrite zone containing gold. Two other small adits, along with a trench, were found at L 12N/ 13W, one of which contains



CANADIAN OCCIDENTAL PETROLEUM LTD.
MINERALS DIVISION

LOCATION OF HED 1-5 CLAIMS

SCALE 1 in. = 20 mi.

FIGURE 1.

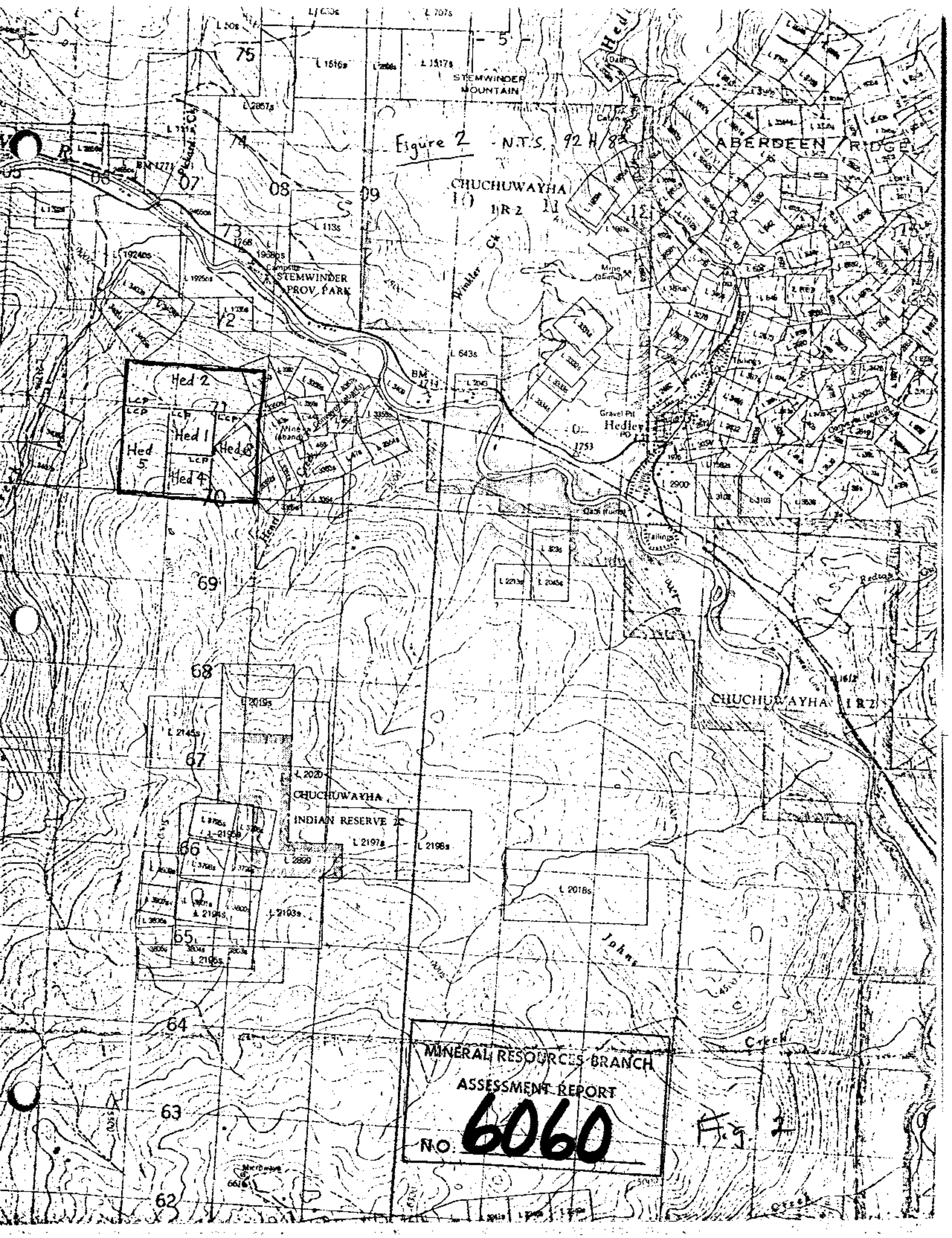


Figure 2 N.T.S. 92 H/8
STEMWINDER MOUNTAIN
ABERDEEN RIDGE
CHUCHUWAYHA I.R. 2
STEMWINDER PROV. PARK
Hed 2
Hed 1
Hed 3
Hed 5
Hed 4
LCP
Hedley
Winkler Ck
CHUCHUWAYHA INDIAN RESERVE 2C
CHUCHUWAYHA I.R. 2
Johns Creek
Tailings
Gravel Pit
MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 6060
Fig. 2

a weathered vein of quartz-epidote-sulphide, which gives 5480 ppb Au. It is also suspected that the gossan at L24N/4E has been bulldozed and perhaps percussion drilled.

WORK COMPLETED

Bulldozing

Access roads to drill sites Hed 2-76 and 3-76 were prepared using a John Deere bulldozer, operated by Herb Allen Drilling Ltd.

Diamond Drilling

A total of 801.5 feet (244 m) of wireline B Q diamond drilling was completed between July 21 and August 7, 1976. The equipment used was a skid-mounted Boyles with a hydraulic head, powered by a Ford diesel. Geological supervision was by C.C. Macdonald of Canadian Occidental Petroleum Ltd.

A total of three holes, Hed 1-76, 2-76, and 3-76, were completed, with recovery for the three holes being 79.6%, 89.1%, and 76.0% respectively. Recovery was poor (about 50%) for the first 70-100 feet (21-30 m) due to intensely fractured and weathered ground, but improved considerably with depth. The average rate of drilling was 57.3 ft./day (17.5 m/day). Water was pumped about 800 feet from a small pond.

Logging and Sampling

The core was logged, split and sampled in the field by employees of Canadian Occidental Petroleum Ltd. Five-foot (1.5 m) sections of split core were sampled, except in the

sulphide zone, where two-foot (.6 m) samples were taken to more closely define the grade.

Soil Geochemistry

Dr. C.F. Gleeson, Consulting Geochemist

Steve A. McIntyre	(July 31-Aug.3, 1976)	Geochemical Sampling
Richard M. Nodder	(July 31-Aug.3, 1976)	" "
Allen A. Seaman	(July 31-Aug.3, 1976)	" "

A total of 265 soil samples were taken and analysed for Au and As, for a total of 530 determinations.

Geological Mapping

Colin C. Macdonald (Aug. 1, Aug.26-29,1976)

Names and Addresses of Personnel

Colin C. Macdonald	Canadian Occidental Petroleum Ltd. Minerals Division #801-161 Eglinton Ave. E. Toronto, Ont. M4P 1J5
Steve A. McIntyre	"
Richard M. Nodder	"
Allen A. Seaman	"
Dr. C.F. Gleeson	764 Belfast Rd. Ottawa, Ont.

DRILLING RESULTS

A brief summary of the results of each hole is given in the following section. Diamond drill logs are in Appendix I. For hole locations, see Figure 3, Plan 1.

Hole Hed 1-76

This hole was collared on the logging road running through the gossan exposure, drilled at azimuth 245°T with 45° dip to intersect the unoxidized gossan at depth, and hence give a more accurate estimate of grade. The core consisted mainly of interbedded dark grey argillite and sandy greywacke.

A quartz-carbonate vein breccia was intersected from 43.7 to 92.0 feet (13-28 m). This consists of a graphitic argillite, brecciated in place and surrounded by the vein material. Pyrite makes up 1-5% of this section, as scattered grains and rare massive sections up to 6 inches (15 cm). Fine-grained felsic dykes are also found, some of which have been bleached white due to the hydrothermal alteration which either accompanied or was localized by the vein breccia system.

The geochemical analyses showed gold values to correspond very well to the vein breccia section. They reached a maximum of 3400 ppb (.1 oz/ton) between 55 and 57 feet (16.8 and 17.4 m). Copper, zinc and arsenic are also higher in this zone, though not as consistently. The high arsenic correlates well with the high gold sections, indicating that arsenopyrite is an important gold-bearing mineral. It must be very fine-grained, possibly intermixed with the pyrite, since it is not visible as discrete grains.

The hole was ended at 251 feet (76.6 m), when through the breccia.

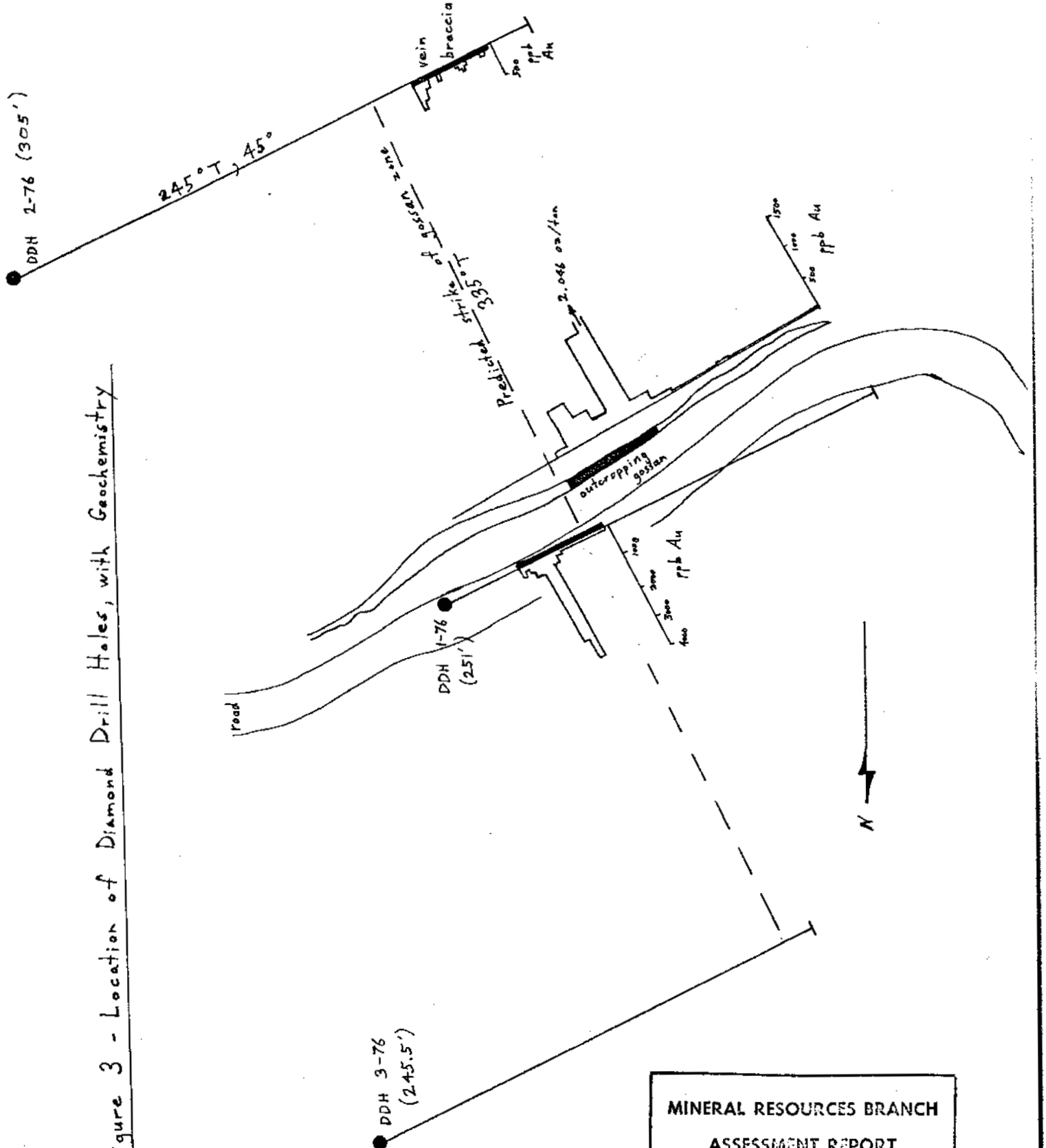


Figure 3 - Location of Diamond Drill Holes, with Geochemistry

Hole Hed 2-76

This hole was collared about 200 feet (61 m) southeast of Hed 1-76, drilled at azimuth 245°T at a 45° dip to test the southeast extension of the breccia zone.

Again, the dominant lithology is the interbedded argillite and greywacke, cut by occasional dykes of dacite-felsite composition which may be pre-breccia or post-breccia. The quartz-carbonate vein breccia was intersected, between 236.0 and 277.4 ft. (72-84 m). This intersection produced much better core recovery than did the breccia from hole 1-76, since it was deeper. Pyrite was again the major sulphide present, but in much coarser grains than in Hed 1-76, making up 3-20% of the section. Sphalerite was also found over a few inches; however, analysis showed >4000 ppm Zn for 12 feet (3.7 m). Gold showed a general increase in the first six feet (2 m) of the breccia zone, but reached only 450 ppb, or .013 oz/ton, much lower than the maximum value reached in Hed 1-76. Arsenic showed a detectable but imperfect correlation with gold values, with the three >4000 ppm Zn samples also showing >500 ppm As, but very little Au. The hole was ended when through the breccia zone, at 305 ft.(93 m).

Hole Hed 3-76

This hole was collared about 200 feet (61 m) northwest of Hed 1-76, drilled at azimuth 245°T at 45° dip to test the northwest extension of the breccia zone. This breccia zone was not intersected in 245.5 ft. (75 m) of drilling, so

the hole was ended here. The main rock type encountered was a dark grey argillite with greywacke interbeds. Syngenetic pyrite is abundant in the argillite. A weak veining zone was the only breccia-type mineralization noted, at 68.0-73.5 ft. (21-23 m) and 102.6-107.1 ft. (31-33 m). Two felsite dykes are also present, crosscutting the stratigraphy, but are not bleached as were some from the first two holes.

GEOLOGY

Introduction

This area has been mapped by the G.S.C. (Bostock, 1940, G.S.C. Map 568A), but most of the area of interest was either unmapped or left undivided.

General Geology

The Hed claims were mapped at a scale of 1"=400' (1 cm=48 m). The major rock unit on the property is a turbidite sequence of interbedded argillite and greywacke, derived from an environment of alternate rapid deposition from an eroded, possibly volcanic source, and shows deposition of silty muds. Chert and limestone interbeds are less common but present. Submarine slump breccia, or olistostrome, was found on the eastern part of the claims. Igneous dykes, usually a hornblende porphyry or plagioclase-hornblende porphyry are also found, but with no obvious distribution pattern. The largest of these dykes may be closer to a small stock, in the northeast corner of the claim group (Plan 1).

The sedimentary rocks have been folded into a vertically-plunging, open anticline which becomes overturned to the west of the claims. The folding is not intense or tight enough to produce a dominant foliation or cleavage in the rocks, and original sedimentary features are well-preserved. Alteration is restricted to a flinty hornfels texture in most of the argillites. Mineralization on the property is largely as veins and occasional larger masses of quartz-carbonate-sulphide. Gold is largely in fine-grained arsenopyrite which itself is associated with pyrite, the most common sulphite.

Description of Rock Units

Unit 1

This is a sequence of limestone, argillaceous limestone, and calcareous argillites. It was found during the first reconnaissance mapping, and lies lower in the overall sedimentary sequence than Unit 2, which places it farther to the east in outcrop. Pyrite is very common as tiny disseminated grains in selected beds. However, no gold values were obtained in these sulphide-rich rocks, probably since the sulphides are syngenetic. This unit is slightly hornfelsed, with sugary-textured limestone and flinty argillite.

Unit 2

This is the predominant unit on the Hed claims, and is composed of interbedded silty, grey argillite and sandy green greywacke. Sedimentary structures indicative of a turbidite environment are fairly common, such as cross-bedding, flame structures, and truncated and scoured bedding. When clearly exposed, these, along with graded beds, give an indication

of sedimentary tops. Occasional interbeds of white to green chert and a sugary limestone are also present. Like Unit 1, this unit has undergone moderate thermal metamorphism, as shown by the tough, flinty argillite.

Unit 3

This unit, also mapped by Bostock, is a medium-grained diorite, composed of 80% plagioclase, 10% K-feldspar, and 30% euhedral to acicular hornblende. This rock could conceivably be related to the Unit 4 porphyritic dykes, possibily a parent magma. It was mapped by Bostock as two small stocks near the Similkameen River; one of these was found.

Unit 4

This rock was found largely as dykes of up to 10 feet (3 m), except for one fairly large dyke or small stock in the northeast corner of the Hed claims (see Plan 1). It consists of euhedral hornblende crystals up to 1.5 cm in an aphanitic green matrix. In the stock of Unit 4, grain size decreases away from the outside contacts. This unit has considerable variety, as one dyke at line 8N/9E is close to a coarse-grained gabbro, as the groundmass feldspars have increased in size to form a more equigranular rock.

Unit 5

This is a fine-grained felsite dyke, light green when fresh, as was found in the diamond drill core. This was found exposed on surface in one area, near the adits at L 2N/14E, but was bleached to a chalky white, very similar to the pre-breccia dykes found in the drill core. However, when

fresh, this rock is difficult to distinguish from the more massive greywacke beds.

Unit 6

This unit is a coarse, submarine slump breccia, or olistostrome, composed of a chaotic mixture of argillite, limestone, and greywacke fragments in a sandy greywacke matrix. It was formed by gravity sliding or slumping of unconsolidated sediments after they had reached an unstable angle. Fragments were observed up to 8 feet (2.4 m) in length, and some showed deformed bedding at their edges, implying that they were not fully consolidated at the time of slumping.

Structure

Interpretation from measured bedding attitudes shows that the rocks in the Hed area have been folded into a large vertically-plunging, open anticline, which becomes slightly overturned to the west of the claims. Stratigraphic tops are to the west. Lineations are not well-developed in the rocks, but the few present trend to the west with a shallow plunge. Foliations or axial planar cleavages are also very rare, due to the apparently gentle nature of the folding. Late-stage joint sets are more common, penetrating all rock types, but are not dominating features. An east-west trend in foliation, lineations, and some joints seems to be the most common directional feature. Further mapping of the structure in the area surrounding the Hed claims could help complete the fold, and give a better picture of the main stress directions causing the deformation.

Metamorphism

Metamorphism on the property is restricted to a moderate thermal metamorphic event, resulting in a hornfels texture in the argillite. Original mafics in the greywacke and some of the dykes have been chloritized enough to show a greenish tint, but the large hornblende phenocrysts of Unit 4 are quite fresh.

Alteration

The most important alteration on the claim group is associated with a hydrothermal event which accompanies the emplacement of the dykes, as there are both altered and unaltered dykes within wider altered argillite zones in the drill core. The solutions from this event are probably also the source of the quartz-carbonate-pyrite-arsenopyrite (Au) vein fillings seen both in core and on surface. The altered dykes, one of which is part of the old workings at L2N/14E, have been completely bleached to a bright white colour, with the exception of a mineral which has altered to a brilliant green - possibly mariposite. The argillites express this alteration through remobilization of carbon in the more graphitic beds, which gives a dusty graphitic texture, and some graphitic shear zones.

ECONOMIC GEOLOGY

General Statement

The claim group was examined for the presence of gold mineralization. At least three areas on the property have been worked on in the past, all of these being vein deposits with quartz-carbonate-pyrite-arsenopyrite as the primary assemblage. Evidence of this type of mineralization was found in numerous locations as small veins and vein sets.

Mineralization

At least three locations on the property have been worked on in the past. The first and largest of these is at L2N/14E, where three adits have been excavated to intersect an outcropping exposure of quartz-carbonate vein breccia. The excavated rock contains sections of massive sulphide, massive calcite, and both bleached felsite and hornblende porphyry dykes. A sample of partly leached gossan ran 6320 ppb Au (.186 oz/ton) and .48% As and a sample of massive sulphide ran 4320 ppb Au (.127 oz/ton) and .64% As. The sulphide appeared to be pyrite, but the high As content, especially the higher As/Au ratio in the fresh sulphide, indicates the presence of some arsenopyrite admixed in the pyrite. From the adit locations, this zone is inferred to strike about 030^{o}T.

Another working at L12N/13W consisted of two shallow trenches and two small adits. These intersected a hydrothermal vein 8" (20 cm) thick which itself had been altered to a friable siliceous green material containing fine-grained sulphides. When analysed, this vein material ran 5480 ppb Au

(.161 oz/ton). The measured strike on the vein was 030°T, vertically dipping.

The third worked area is the exposed gossan at L24N/4E. A grab sample of this gossan assayed at 2.046 oz/ton, however, this was not a truly representative sample as it had been leached of everything except the gold and silica. Diamond drilling to determine the extent of this gossan has shown that when fresh it is a quartz-carbonate vein breccia, striking 338°T and dipping approximately vertically. The highest section of core was 3400 ppb (.1 oz/ton) over two feet (.6 m), directly beneath the exposed gossan on the road.

Only one of these three workings would have been even partly exposed without the trenching and adits. No veins of this magnitude were observed in undisturbed outcrop, but numerous occurrences of smaller quartz-carbonate-pyrite veins were seen, with a slight concentration in the north-eastern corner of the claim group. This is also the location of the largest hornblende porphyry stock. These dykes are found in two of the three worked areas, and one gabbroic dyke at L8N/9E was seen with irregular calcite lenses scattered through it. Hence, these dykes and stocks are thought to be the heat source and probably the metal source for the late-stage veining throughout the property. This theory also agrees well with the ore genesis of the Hedley gold mines, in which gabbroic sills and intrusions are directly associated with the mineralized skarns.

Summary of Geology and Mineralization

The property is underlain by a turbidite succession of argillite and greywacke, with occasional chert and limestone and one mappable submarine slump breccia. This sequence has been gently folded into an open anticline plunging vertically in the eastern half and overturned to the west of the claims. The trace of the axial plane is thought to be roughly east-west. Dykes of two main types, felsites and a more mafic hornblende porphyry, are found in several locations and seem to be directly associated with the hydrothermal event which has resulted in the quartz-carbonate-sulphide mineralization. This mineralization has been found in three worked locations and numerous smaller veins in outcrop. The highest grade found in fresh rock has been .186 oz/ton, but a leached gossan has values up to 2.046 oz/ton.

SOIL GEOCHEMISTRY

Introduction

The Hed claims lie on the steep, north-facing slope of the Similkameen Valley. The more gently-sloping areas to the south are largely open grassland with sparse conifer forest. The lower elevations have steeper slopes, and are generally the site of mature fir forest. Soils on these steep slopes often show signs of creep, and are mixed with talus fragments. Soils on the open, higher areas tend to be gravelly and dry, but are more stable.

Sampling Procedures

B-horizon samples were taken at 200 foot (61 m) intervals on east-west flagged lines spaced 400 feet (122 m) apart. All samples were stored in special, heavy-duty, high wet-strength Kraft envelopes, and then sent to Chemex Labs Ltd. in Vancouver for analysis for gold and arsenic. Actual geochemical reports are in Appendix II.

Laboratory Procedures

For arsenic, .5 grams of -80 mesh sample are digested in a 3:1 radio of $HClO_3$ and HNO_3 for 2 hours. This is diluted to 50 ml., and to this is added 5 ml. HCl, 2 ml. 15% KI solution, .5 ml 66% $SnCl_2$. This solution distilled for 30 minutes in a distillation apparatus, then analysed colourimetrically.

For gold, 5 grams of -80 mesh sample is ashed in a crucible for 1 hour at 550°C. This is digested, first with 10 ml. aqua regia, evaported to dryness, then with 25 ml. HCl, heated, then with an additional 25 ml. 25% HCl.

This solution is mixed, in a separatory funnel, with 2 ml. HBr, 5 ml. MIBK, and the aqueous layer is drained off. The organic layer is washed with HCl-HBr solution, to remove the iron, and the aqueous layer again drained off. The remaining solution is analysed for gold by atomic absorption.

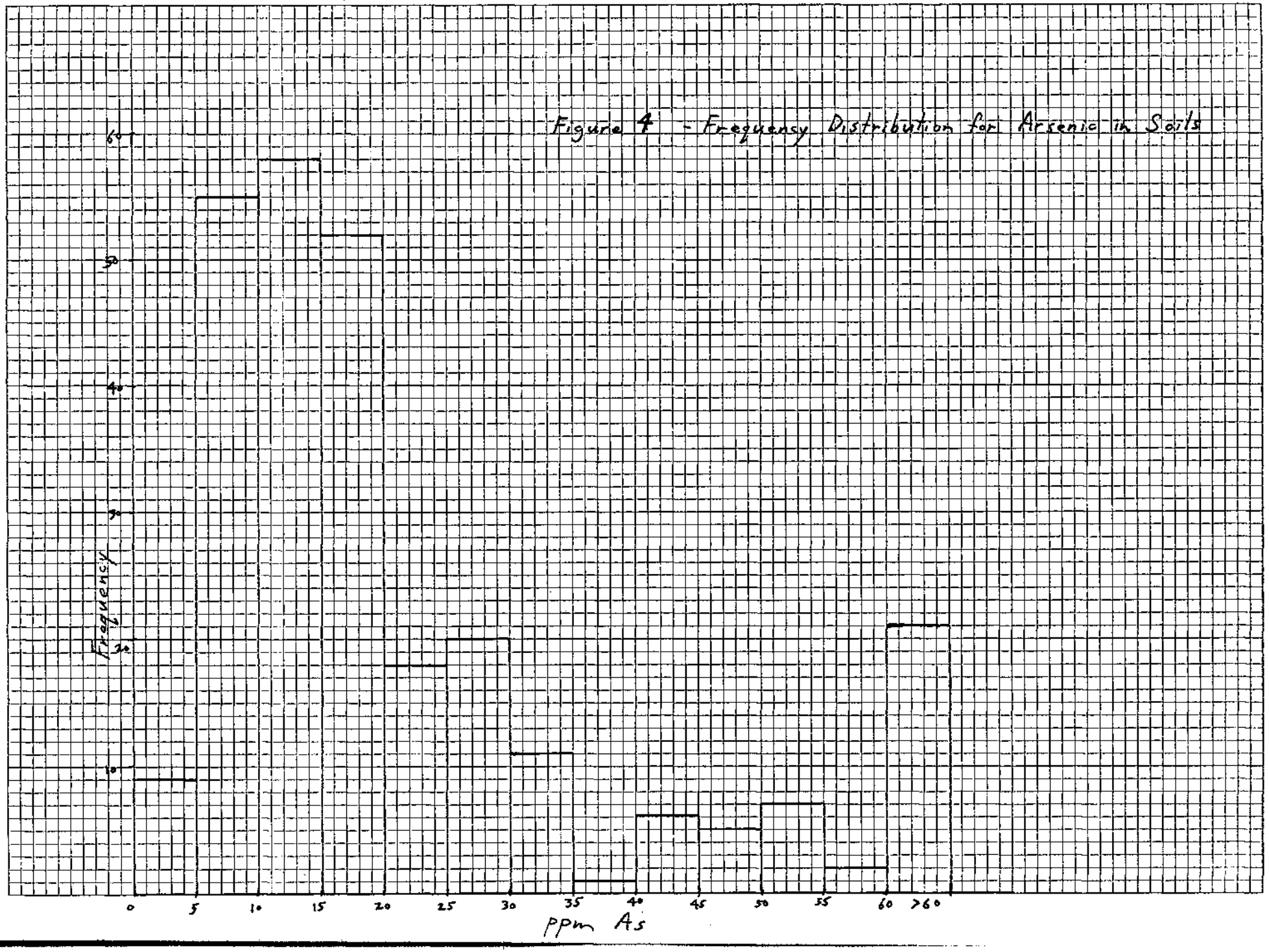
Statistical Treatment of Results

The arsenic values in the soils were grouped into fixed ranges, and a histogram was drawn to show the total number of values within each group (Figure 4). The anomalous level was defined as the upper limit of the main normal population, in this case 45 ppm As. Threshold was estimated from the histogram, at 38 ppm As, and contour intervals were also selected using the range of values and frequency distribution. Since gold has an apparent lognormal distribution due to the low number of samples in the detectable range, threshold was set at just detectable 15 ppb Au, and anomalous at any value greater than 15 ppb Au.

SUMMARY AND DISCUSSION OF ANOMALIES

The contouring of Au and As anomalies on the Hed claims has outlined several anomalies, which will be discussed here for arsenic and gold (Contoured As, Au on Plans 3, 4).

Figure 4 - Frequency Distribution for Arsenic in Soils



Arsenic

Anomaly A

Location: Centred at L36N/26E

Trend of Anomaly: roughly circular, but open to the east.

Range of Values, As: 40- > 500 ppm

Dimensions of Anomaly: 1400 x at least 1500 ft. (427 x 457 m)

Coincident Anomalies for Elements, Relationships to Geology,etc.

Coincident with the more scattered Anomaly A for gold, and with occurrences of carbonate veins with some pyrite in the bedrock. Also, a major hornblende porphyry dyke/stock is located in the centre of this anomaly.

Intensity of Anomaly: High

Cause of Anomaly: Most likely cause is Au-As mineralization in quartz-carbonate veins, which in turn are associated with the hornblende porphyry intrusive.

Recommendations: One initial exploratory diamond drill hole is recommended, located at L41+00N/22+30E. This would be drilled to about 450 feet (137 m) at 225^{o}T, 45^{o} dip, to determine the extent of mineralization at depth, and its relationship with the intrusive rock. Possible second and third holes would be contingent on the first hole.

Anomaly B

Location: L4N/7W

Trend of Anomaly: roughly N-S, open to the south.

Range of Values, As: 45-110 ppm

Dimensions of Anomaly: 300 x at least 1400 ft. (92 x 427 m).

Coincident Anomalies for Elements, Relationships to Geology,etc.

This has no coincident gold anomaly, but is near some trenched and worked gold showings at L12N/13W.

Intensity of Anomaly: Moderate

Cause of Anomaly: Probably caused by gold mineralization similar and related to that mentioned above, which seems to be fracture or shear-controlled.

Recommendations: No further work is recommended.

Anomaly C

Location: Centred at L2N/12E

Trend of Anomaly: Scattered high values.

Range of Values, As: 45-120 ppm.

Dimensions of Anomaly: Extent of high values - 1000 x at least 600 ft. (305 x 183 m)

Coincident Anomalies for Elements, Relationships to Geology,etc.

The group of scattered high values lies directly over the gold workings at L2N/14E.

Intensity of Anomaly: low-moderate.

Cause of Anomaly: Probably related to mineralization associated with the more obvious mineralization trenched at L2N/14E. However, no anomaly directly overlies the exposed and trenched mineralization.

Recommendations: No further work is recommended.

Gold

Anomaly A

Location: Centred at L36N/26E.

Trend of Anomaly: three grouped high values.

Range of Values, Au: 230-1110 ppb.

Dimensions of Anomaly: Extent of high values: 800 x 1400 ft. (244 x 427 m).

Coincident Anomalies for Elements, Relationships to Geology,etc.

Coincident with the much larger and more well-defined Anomaly A for arsenic, and with several occurrences of carbonate veins, some with pyrite. The three high values lie adjacent to a major dyke/stock of hornblende porphyry.

Intensity of Anomaly: High.

Cause of Anomaly: As for Anomaly A for As, probably due to mineralization with sulphides in quartz-carbonate veins, which in turn are related to the intrusive rock.

Recommendations: One initial exploratory diamond drill hole is recommended at L41+00N/22+30E, drilled at 225°T, 45° dip, to about 450 feet (137 m). A possible second and third holes would be contingent on the first hole.

Anomaly B

Location: L16N/30E

Trend of Anomaly: circular (one sample)

Range of Values, Au: 230 ppb

Dimensions of Anomaly: 200 x 200 ft. (61 x 61 m)

Coincident Anomalies for Elements, Relationships to Geology,etc.

No coincident As anomaly, nor visible mineralization, though a small hornblende porphyry dyke was seen 300 feet (91 m) to the west.

Intensity of Anomaly: moderate.

Cause of Anomaly: Possibly due to vein Au-As mineralization at a shallower depth than the surrounding bedrock.

Recommendations: Additional sampling and prospecting should be carried out around the anomalous sample, to check its reproducibility and extent, and to determine any possible relationship to geology.

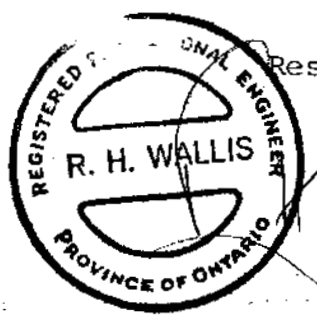
CONCLUSIONS

The property is underlain by a turbidite succession of argillite and greywacke, with occasional chert and limestone and one mappable submarine slump breccia. This sequence has been gently folded into an open anticline plunging vertically in the eastern half and overturned to the west of the claims. Dykes of two main types, felsites and a more mafic hornblende porphyry, are found in several locations, and seem to be directly associated with the hydrothermal event which has resulted in quartz-carbonate-sulphide mineralization. Examples of this type of mineralization were found in three previously-worked locations and numerous smaller veins in outcrop. One of these previously-known locations, an exposed gossan, was tested with three diamond drill holes. The source of the gossan was found to be a quartz-carbonate vein breccia, intersected in two of the three holes. The best intersection achieved was two feet (.61 m) of .1 oz/ton Au.

Soil geochemistry outlined a major coincident gold-arsenic anomaly on the north-east corner of the claim group. This anomaly is likely caused by quartz-carbonate-sulphide veins associated with a small stock of hornblende porphyry at the centre of the anomaly.

RECOMMENDATIONS

One initial exploratory diamond drill hole is recommended, collared at L41N/22+30E, drilled to about 450 feet (137 m) at 225°T, 45° dip. This would drill beneath the highest gold value in the soils (1110 ppb Au) and determine the extent of mineralization at depth and its relationship to the intrusive rock which should also be intersected. A second and third hole would be contingent on results from the first hole.



Respectfully submitted,

Colin C. Macdonald, B.Sc.(Eng.)

TORONTO

October 13, 1976

Statement of Expenditures

HED Claims (1-5)

July 21 - Aug. 29, 1976

Salaries: C.C. Macdonald, A.A. Seaman R. Nodder, S. McIntyre 35 man days, 26.37/man day		$ 922.81
Camp Costs		421.74
Geochemical Analysis - 265 samples, 530 determinations		1,887.20
Vehicle usage - 4-wheel-drive		257.95
Diamond Drilling		10,746.75
Camp Costs		787.00
	Total	$15,023.45

CANADIAN OCCIDENTAL PETROLEUM LTD.
MINERALS DIVISION

APPENDIX I

DIAMOND DRILL RECORD DIAMOND DRILL LOGS

LOCATION _____ DIRECTION 245°T DIP 45° HOLE No. 1-76

LOGGED BY C.C.Macdonald CASING 0-85' SHEET No. 1

STARTED July 24,1976 CORE SIZE BQ CORRECTED TESTS _____

FINISHED July 28,1976

PROPERTY HED CLAIMS(core recovery 79.6%)

FROM	TO		DESCRIPTION
0	8.0		Overburden, road fill.
8.0	11.1		Light green greywacke (is this a crystall tuff, sill or dyke - post breccia, or is this an altered dacite/andesite unit), with silt-sand, size clastic material, and a few scattered fragments up to 8 mm. of euhedral plagioclase, chloritized mafic minerals, and rock fragments. RHW would interpret as a post-breccia andesite/dacite porphyry duke (or sill) or less probably a crystal tuff.
11.1	34.0		Dark grey argillite, finely laminated, with some interbeds of light-coloured sandy greywacke up to 3 cm. Sediments show abundant micro-faulting, truncated and scoured bedding, and occasional flame structures and graded beds. 11.4 - bedding 36° LCA. 19.0-26.0 - numerous carbonate veinlets.
34.0	43.7		Greywacke as above (dyke?). RHW would interpret as a post-breccia porphyry dacite dyke. 43.7 - clay shear zone, 32° LCA.
43.7	92.0		Vein breccia, with quartz-carbonate-Py veining making up 10-70% of the core section. The host rock is a dusty graphitic argillite, often brecciated in place and surrounded by the vein material. Py occurs as scattered grains up to 5 mm., from 1-5% of the section. Poor recovery for most of this section due to broken ground. 46.0-48.0 - bleached white greywacke (?felsite) pre breccia, RHW would interpret as a pre-breccia porphyritic felsite dyke, with scattered phenocrysts altered to a bright green mineral (?fuchsite) (?fuchsite/mariposite?) 56.3-56.5 - section contains 30% Py over 3". 79.0-83.0 - no core recovery due to sandy ground. 58.0-58.5 - 80% Py over 6"

CANADIAN OCCIDENTAL PETROLEUM LTD.
MINERALS DIVISION

DIAMOND DRILL RECORD

1-76

LOCATION_____ DIRECTION_____ DIP_____ HOLE No._____

LOGGED BY_____ CASING_____ SHEET No. 2

STARTED_____ CORE SIZE_____ CORRECTED TESTS_____

FINISHED_____

PROPERTY HED CLAIMS

FROM	TO		DESCRIPTION
92.0	151.8		Dark grey argillite as above. 93.6-95.1 - bleached white greywacke. 95.5-139.1 - this section has abundant Py as disseminated tiny flecks in the argillite Occasional beds (1-2 per foot) are very rich in Py, up to 70%, reaching 1 cm. thickness. Py grain size and proportion is different in each distinct argillite layer, and some pyritic beds have been displaced by the micro-faulting, suggesting that they are syngenetic sulphides. 139.1-251.0 - abundant Py as above, but as discrete, often euhedral grains up to 2 mm., usually <1%. 129.0- Bedding 60° LCA.
151.8	156.8		Light green greywacke, cut by occasional calcite-Py veins, with rare cubes of Py.
156.8	186.8		Interbedded argillite/greywacke. 157.5 - bedding 51° LCA, tops toward bottom of hole. 170.2-170.5 - vein breccia with 2% Py.
186.8	193.8		Greywacke as above.
193.8	251.0		Interbedded argillite/greywacke. 204.0 - bedding 60° LCA, tops toward bottom of hole. 246.0 - bedding 42° LCA. 251.0 - END OF HOLE.

CANADIAN OCCIDENTAL PETROLEUM LTD.

MINERALS DIVISION

DIAMOND DRILL RECORD

LOCATION _____ DIRECTION 245°T DIP 45° HOLE No. 2-76

LOGGED BY C.C.Macdonald CASING 0-10' SHEET No. 1

STARTED July 29,1976 CORE SIZE BQ CORRECTED TESTS _____

FINISHED August 3,1976

PROPERTY HED CLAIMS (core recovery 89.1%)

FROM	TO		DESCRIPTION
0	10		Overburden.
10	74.0		Light green, sandy greywacke with some interbeds of grey, silty greywacke. Both contain random fragments of plagioclase, rock fragments and mafic minerals, up to 8 mm. 42.1-43.0 - slight concentration of quartz-calcite veins, making up 10-15% of the section.
74.0	86.8		Coarse greywacke slump breccia, with heavily deformed dark grey argillite fragments up to 7" in a sandy greywacke matrix.
86.8	236.0		Interbedded argillite/greywacke, with abundant soft sediment deformation such as faulting and slumping. Occasional quartz-carbonate veins contain minor Py. 100.1 - 2" of quartz-carbonate vein breccia. 144.5 - bedding 24° LCA. 155.3-155.9 - porphyritc microdacite green dyke w/ chilled contact. 179.6 - 2 quartz vein, with a few grains Cp, Py 228-233 - a porphyritic feldspar felsite dyke euhedral plag-chilled margins unaltered. 234.6,235.2 - quartz-carbonate-Py veins, 2 and 4 cm. wide, with 5-10% Py.
236.0	253.7		Quartz-carbonate vein breccia, with vein material making up 50-80% of the section. Host rock is dark grey argillite, often brecciated in place and surrounded by fine-grained, anhedral quartz-carbonate. Py as coarse grains and stringers up to 5 cm. makes up about 3-20% of the section. 239.8-240.8 - unbrecciated fresh greywacke (RHW porphyritic dacite). Post breccia - cuts breccia and is not itself veined.
253.7	257.5		Fresh light green greywacke (RHW-porpyritic dacite)

CANADIAN OCCIDENTAL PETROLEUM LTD.
MINERALS DIVISION

DIAMOND DRILL RECORD

2-76

LOCATION_____ DIRECTION_____ DIP_____ HOLE No._____

LOGGED BY_____ CASING_____ SHEET No. 2

STARTED_____ CORE SIZE_____ CORRECTED TESTS_____

FINISHED HED CLAIMS

PROPERTY_____

FROM	TO		DESCRIPTION
257.5	277.4		Quartz-carbonate vein breccia as above. 267.0-268.8 - this section contains visible sphalerite in the vein material, with one cluster of grains 3 cm. in diameter.
277.4	282.4		Bleached white greywacke (RHW-pre breccia felsite)
282.4	302.1		Dark grey graphitic argillite, cut by frequent tiny veins of quartz-carbonate, and with minor Py.
302.1	305.0		Bleached white greywacke (RHW- green felsite) 305.0 - END OF HOLE

CANADIAN OCCIDENTAL PETROLEUM LTD.
MINERALS DIVISION

DIAMOND DRILL RECORD

LOCATION _____ DIRECTION 245°T DIP 45° HOLE No. 3-76

LOGGED BY C.C.Macdonald CASING 0-55' SHEET No. 1

STARTED August 4,1976 CORE SIZE BQ CORRECTED TESTS _____

FINISHED August 6,1976

PROPERTY HED CLAIMS (core recovery 76.0%)

FROM	TO		DESCRIPTION
0	33		Overburden
33	35		Sandy, light green greywacke (RHW-limonite stained greenish felsite dykes)
35	245.5		Dark grey argillite, with some interbeds of sandy greywacke. Fine-grained Py is abundant in the argillite beds. Occasional thin calcite and quartz-calcite veins also contain some Py. 68.0- 1" concentration of fine-grained Py) weak breccia 73.5- 3 x 1" lens of fine-grained Py) zone 83.5 - bedding 40° LCA) 92.0 - bedding 72° LCA, tops to bottom of hole, from flame structure and cross-bedding. 102.6-107.1 - weak vein breccia, with quartz-calcite veining making up 5-20% of the section, cutting grey argillite. Py is rare, as scattered grains. 160.7 - Bedding 46° LCA. 161.0 - two lenses of Py in greywacke ~1" diameter. 166.5 - bedding 49° LCA, tops toward bottom of hole, from flame structures. 231.5-233.5 - feldspar porphyry felsite dyke - chilled contacts, excellent phenocrysts. 245.5 - END OF HOLE

APPENDIX II

GEOCHEMICAL VALUES

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

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 37989

INVOICE NO. 17680

RECEIVED Aug.6/76

ANALYSED Aug.10/76

TO: Canadian Occidental Petroleum Ltd.,
801 - 161 Eglinton Ave. E.,
Toronto, Ontario

ATTN: Hedley Drill cc:Penticton, Rocks

SAMPLE NO.	FOOTAGE	PPM Copper	PPM Zinc	PPM ARSENIC	PPB Gold
44126	8-13				< 15
44127	13-18				< 15
44128	18-23				60
44129	23-33				280
44130	33-38				< 15
44131	38-43				< 15
44132	43-45	76	92	> 500	500
44133	45-47	52	225	400	85
44134	47-51	40	275	140	230
44135	51-53	96	218	230	820
44136	53-55	92	218	250	2920
44137	55-57	180	760	> 500	3400
44138	57-59	116	164	> 500	620
44139	59-61	42	580	110	205
44140	61-63	38	640	55	15
44141	63-65	36	560	45	15
44142	65-67	34	206	42	< 15
44143	67-69	48	640	105	< 15
44144	69-74	86	1440	165	< 15
44145	74-79	28	140	70	< 15
44146	83-88	24	115	65	15
44147	88-93				< 15
44148	93-98				< 15
44149	98-103				< 15
44150	103-108				< 15
44151	108-113				< 15
44152	113-118				< 15
44153	118-123				< 15
44154	123-128				< 15
44155	128-133				< 15
44156	133-138				< 15
44157	138-143				< 15
44158	143-148				< 15
44159	148-153				< 15
44160	153-158				< 15
44161	158-163				< 15
44162	163-168				< 15
44163	168-173				< 15
44164	173-178				< 15
44165	178-183				< 15

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Jon Armanini

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

CHEMEX LABS LTD.

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 37990
INVOICE NO. 17661
RECEIVED Aug.6/76
ANALYSED Aug.10/76

TO: Canadian Occidental Petroleum Ltd.,
801 - 161 Eglinton Ave. E.,
Toronto, Ontario

ATTN: Hedley Drill cc:Penticton

SAMPLE NO.	FOOTAGE	PPB Gold
44166	183-188	< 15
44167	188-193	< 15
44168	193-198	< 15
44169	198-203	< 15
44170	203-208	< 15
44171	208-213	< 15
44172	213-218	< 15
44173	218-223	< 15
44174	223-228	< 15
44175	228-233	< 15
44176	233-238	< 15
44177	238-243	< 15
44178	243-248	< 15
44179	248-251	< 15

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hartley Buckle

CHEMEX LABS LTD.

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

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 38049

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

INVOICE NO. 17728

RECEIVED Aug. 11/76

ANALYSED Aug. 12/76

ATTN: P.E. Nicholls cc: C. MacDonald

SAMPLE NO. :	FOOTAGE	PPB Gold	Rocks
38641	115-120	< 15	
38642	120-125	< 15	
38643	125-130	< 15	
38644	130-135	< 15	
38645	135-140	< 15	
38646	140-145	< 15	
38647	145-150	< 15	
38648	150-155	< 15	
38649	155-160	< 15	
38650	160-165	< 15	
38651	165-170	< 15	
38652	170-175	< 15	
38653	175-180	< 15	
38654	180-185	< 15	
38655	185-190	< 15	
38656	190-195	< 15	
38657	195-200	< 15	
38658	200-205	< 15	
38659	205-210	< 15	
38660	210-215	< 15	
38661	215-220	< 15	
38662	220-225	< 15	
38663	225-230	< 15	
38664'	230-235	< 15	
38665	235-240	< 15	
38666	240-246.5	< 15	
44180	10-15	< 15	
44181	15-20	< 15	
44182	20-25	< 15	
44183	25-30	< 15	
44184	30-35	< 15	
44185	35-40	< 15	
44186	40-45	< 15	
44187	45-50	< 15	
44188	50-55	< 15	
44189	55-60	< 15	
44190	60-65	< 15	
44191	65-70	< 15	
44192	70-75	< 15	
44193	75-80	< 15	

CERTIFIED BY: J. Kuzenko

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

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 38050

INVOICE NO. 17728

RECEIVED Aug. 11/76

ANALYSED Aug. 12/76

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

ATTN: P.E. Nicholls cc - C. MacDonald

SAMPLE NO.	FOOTAGE	PPB Gold	Rocks
44194	80-85	< 15	
44195	85-90	< 15	
44196	90-95	< 15	
44197	95-100	< 15	
44198	100-105	< 15	
44199	105-110	< 15	
44200	110-115	< 15	
44201	115-120	< 15	
44202	120-125	< 15	
44203	125-130	< 15	
44204	130-135	< 15	
44205	135-140	< 15	
44206	140-145	< 15	
44207	145-150	< 15	
44208	150-155	< 15	
44209	155-160	< 15	
44210	160-165	< 15	
44211	165-170	< 15	
44212	170-175	< 15	
44213	175-180	< 15	
44214	180-185	< 15	
44215	185-190	< 15	
44216	190-195	< 15	
44217	195-200	< 15	
44218	200-205	< 15	
44219	205-210	< 15	
44220	210-215	< 15	
44221	215-220	< 15	
44222	220-225	< 15	
44223	225-230	< 15	
44224	230-235	< 15	

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: B. Grantes

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

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 38048
INVOICE NO. 17728
RECEIVED Aug. 11/76
ANALYSED Aug. 12/76

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

PROJECT HEDLEY
DRILL

ATTN: P.E. Nicholls cc: C. MacDonald

SAMPLE NO.	FOOTAGE	PPM Copper	PPM Zinc	PPM Arsenic	PPB Gold	Rocks
38601	235-237	36	36	470	450	
38602	237-239	36	60	>500	300	
38603	239-241	8	67	230	100	
38604	241-243	12	83	410	15	
38605	243-245	8	13	310	< 15	
38606	245-247	14	13	>500	155	
38607	247-249	8	11	450	< 15	
38608	249-251	16	18	220	15	
38609	251-253	21	25	90	< 15	
38610	253-255	26	89	70	85	
38611	255-257	10	98	55	30	
38612	257-259	18	83	90	70	
38613	259-261	21	14	240	15	
38614	261-263	14	18	230	< 15	
38615	263-265	344	>4000	>500	60	
38616	265-270	1000	>4000	>500	15	
38617	270-275	156	>4000	>500	< 15	
38618	275-280				< 15	
38619	280-285				< 15	
38620	285-290				< 15	
38621	290-295				< 15	
38622	295-300	86	1600	50	< 15	
38623	300-305	80	2000	25	< 15	
38624	33-35				< 15	
38625	35-40				< 15	
38626	40-45				< 15	
38627	45-50				< 15	
38628	50-55				< 15	
38629	55-60				< 15	
38630	60-65				< 15	
38631	65-70				< 15	
38632	70-75				< 15	
38633	75-80				< 15	
38634	80-85				< 15	
38635	85-90				< 15	
38636	90-95				< 15	
38637	95-100				< 15	
38688	100-105				< 15	
38639	105-110				< 15	
38640	110-115				< 15	
STD.		100	200	30		

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: D. Fraser

Rowe

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

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 38181

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

INVOICE NO. 17859

RECEIVED Aug. 19/76

ANALYSED Aug. 23/76

ATTN: P.E. Nicholls cc: C. MacDonald

SAMPLE NO. :	PPM Arsenic	PPB Gold
16960	14	<15
16961	6	<15
16962	7	<15
16963	6	<15
16964	6	<15
16965	8	<15
16966	7	<15
16967	17	<15
16968	19	<15
16969	7	<15
16970	55	<15
16971	> 500	1110
16972	230	<15
16973	55	<15
16974	30	<15
16975	> 500	425
16976	225	<15
16977	220	<15
16978	55	<15
16979	65	<15
16980	75	<15
16981	14	<15
16982	85	<15
16983	55	<15
16984	60	<15
16986	14	<15
16987	13	<15
16988	32	<15
16989	6	<15
16990	11	<15
16991	11	<15
16992	12	<15
16993	14	<15
16994	6	<15
16995	18	<15
16996	19	<15
16997	50	<15
16998	16	<15
16999	15	<15
17559	3	<15

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Richards

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

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 38182

INVOICE NO. 17859

RECEIVED Aug. 19/76

ANALYSED Aug. 23/76

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

ATTN: P.E. Nicholls cc: C. MacDonald

SAMPLE NO. :	PPM Arsenic	PPB Gold
17561	16	<15
17562	2	<15
17563	7	<15
17564	8	<15
17565	6	<15
17566	13	<15
17567	12	<15
17568	12	<15
17569	38	<15
17570	8	<15
17571	60	<15
17572	19	<15
17573	18	<15
17574	16	<15
17575	14	<15
17576	13	<15
17577	30	<15
17578	30	<15
17579	55	<15
17580	75	<15
17581	85	<15
17582	13	<15
17583	3	<15
17584	12	<15
17586	15	<15
17587	6	<15
17588	8	<15
17589	17	<15
17590	7	<15
17591	8	<15
17592	7	<15
17593	13	<15
17594	8	<15
17595	12	<15
17596	50	<15
17597	6	<15
17598	20	<15
17599	12	<15
17600	6	<15
17601	6	<15

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Richards

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

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 38183

INVOICE NO. 17859

RECEIVED Aug. 19/76

ANALYSED Aug. 23/76

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

ATTN: P. E. Nicholls cc: C. MacDonald

SAMPLE NO. :	PPM Arsenic	PPB Gold
17602	12	<15
17603	2	<15
17604	13	<15
17605	3	<15
17606	14	<15
17607	14	<15
17608	8	<15
17609	7	<15
17610	14	15
17611	25	<15
17612	170	<15
17613	85	230
17614	45	15
17615	185	15
17616	210	15
17617	85	30
17618	45	<15
17619	30	<15
17620	22	<15
17622	45	<15
17623	14	<15
17624	12	<15
17625	9	30
17626	12	<15
17627	7	<15
17628	30	<15
17629	7	<15
17630	12	15
17631	6	<15
17632	14	<15
17633	25	<15
17634	12	<15
17635	130	<15
17636	135	<15
17637	8	<15
17638	13	<15
17639	30	<15
17640	25	<15
17641	25	15
17642	14	<15

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Rudler

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

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 38184

INVOICE NO. 17859

RECEIVED Aug. 19/76

ANALYSED Aug. 23/76

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

ATTN: P.E. Nicholls cc: C. MacDonald

SAMPLE NO. :	PPM Arsenic	PPB Gold
17643	16	<15
17644	7	<15
17645	6	<15
17646	12	<15
17647	14	<15
17648	15	<15
17649	18	15
17650	30	<15
17651	9	<15
17652	12	<15
17653	17	<15
17654	18	<15
17655	35	30
17656	25	<15
17657	13	15
17658	7	<15
17660	22	<15
17661	16	<15
17662	18	230
17700	6	<15
17701	6	<15
17702	8	<15
17703	3	<15
17704	12	<15
17705	16	<15
17706	25	<15
17707	11	<15
17708	12	<15
17709	13	<15
17710	13	<15
17711	30	<15
17712	7	<15
17713	7	<15
17714	15	<15
17715	17	<15
17716	6	15
17717	5	<15
17718	18	<15
17719	30	<15
17720	13	<15

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Stewart Ridler

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

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 38185

INVOICE NO. 17859

RECEIVED Aug. 19/76

ANALYSED Aug. 23/76

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

ATTN: P.E. Nicholls cc: C. MacDonald

SAMPLE NO. :	PPM Arsenic	PPB Gold
17721	7	<15
17722	11	30
17723	14	<15
17724	7	<15
17725	16	<15
17726	30	<15
17727	30	<15
17728	25	<15
17729	55	<15
17730	30	<15
17731	20	<15
17732	18	<15
17733	35	<15
17734	30	<15
17735	25	15
17736	45	<15
17737	20	<15
17738	25	30
17739	9	<15
17741	16	<15
17742	55	15
17743	45	<15
17744	30	<15
17745	12	<15
17746	18	<15
17747	13	<15
17748	19	<15
17749	45	<15
17750	70	<15
17751	22	<15
17752	20	<15
17753	10	<15
17754	18	15
17755	35	<15
17756	50	<15
17757	35	<15
17758	25	<15
17759	110	<15
17761	100	<15
17762	35	<15
STD.	25	

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biller

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

AUG 26 1976
J. J. B.

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 38186

INVOICE NO. 17932

RECEIVED Aug. 19/76

ANALYSED Aug. 25/76

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

"HEDLEY"

ATTN: P. E. Nicholls cc: C. MacDonald

SAMPLE NO. :	PPM Arsenic	PPB Gold
17763	16	<15
17764	22	<15
17765	14	<15
17766	50	<15
17767	10	15
17768	30	<15
17771	18	<15
17772	16	<15
17800	21	<15
17801	35	<15
17802	15	<15
17803	35	<15
17804	25	<15
17805	18	<15
17806	12	15
17807	19	<15
17808	7	<15
17809	17	<15
17810	10	<15
17811	20	<15
17812	16	<15
17813	25	<15
17814	7	<15
17815	30	<15
17816	18	<15
17817	18	<15
17818	35	<15
17819	16	<15
17820	30	<15
17821	18	<15
17822	35	<15
17824	50	<15
17825	15	15
17826	30	<15
17827	17	<15
17828	16	15
17829	17	<15
17830	35	<15
17831	30	<15
17832	8	<15

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: B. Swaine

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

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 38187

INVOICE NO. 17932

RECEIVED Aug. 19.76

ANALYSED Aug. 25/76

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

"HEDLEY"

ATTN: P.E. Nicholls cc: C. MacDonald

SAMPLE NO. :	PPM Arsenic	PPB Gold
17833	6	<15
17834	22	<15
17835	20	<15
17836	2	<15
17837	8	<15
17838	17	<15
17839	8	<15
17840	7	<15
17841	12	<15
17842	18	<15
17843	17	<15
17844	18	<15
17845	13	<15
17846	12	<15
17847	16	<15
17848	16	<15
17849	15	<15
17850	9	<15
17851	7	<15
17852	6	<15
17853	< 1	<15
17854	30	<15
17856	120	<15
17857	12	<15
17858	20	<15

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: B. Fwarter

T. N.

HED 1
HED 2
HED 3
HED 4
HED 5

1
2
3

GEOLOGICAL LEGEND

1. ..... Argillaceous Limestone, Limestone.
2. ..... Greywacke, Argillite, some Chert and Limestone.
3. ..... Diorite.
4. ..... Hornblende Porphyry.
5. ..... Felsite.
6. ..... Submarine Slump Breccia.

SYMBOLS

- ..... Outcrop
- ..... Bedding – no tops indication
- ..... – tops indicated by arrow
- ..... – overturned
- ..... Foliation
- ..... Lineation
- ..... Vein attitude
- ..... Adit
- ..... Geological Contact – inferred
- ..... – dikes
- ..... Road
- qtz ..... Quartz veins
- car ..... Carbonate veins
- py ..... Pyrite
- Au ..... Gold (in sulphides)
- ep ..... Epidote

N

CANADIAN OCCIDENTAL PETROLEUM LTD.
MINERALS DIVISION

HED CLAIMS

SIMILKAMEEN MINING DIVISION, BRITISH COLUMBIA – 92 H/8

GEOLOGY

OCTOBER 1976 SCALE 1" = 400' PLAN 1

6060

T. N.

HED 1

HED 2

HED 3

HED 4

HED 5

LCP

L 0+00 N

LEGEND

METALS — As, Au — Sample No

THRESHOLD — +38, 15

ANOMALOUS — +45, +15

CANADIAN OCCIDENTAL PETROLEUM LTD.
MINERALS DIVISION

HED CLAIMS

SIMILKAMEEN MINING DIVISION, BRITISH COLUMBIA — 92 H/8

SOIL GEOCHEMISTRY

OCTOBER 1976 SCALE 1" = 400' PLAN 2

6060

T. N.

HED 1
HED 2
HED 3
HED 4
HED 5
LCP
A
B
C

ARSENIC CONTOURS IN P.P.M.

160
80
40
20
10

-N-

CANADIAN OCCIDENTAL PETROLEUM LTD.
MINERALS DIVISION

HED CLAIMS

SIMILKAMEEN MINING DIVISION, BRITISH COLUMBIA - 92 H/8

CONTOURED ARSENIC VALUES IN SOILS

OCTOBER 1976 SCALE 1" = 400' PLAN 3

6060

T. N.

HED 1
HED 2
HED 3
HED 4
HED 5

A
B

LCP

GOLD CONTOURS IN P.P.M.

200
100
15

-N-

CANADIAN OCCIDENTAL PETROLEUM LTD
MINERALS DIVISION

HED CLAIMS

SIMILKAMEEN MINING DIVISION, BRITISH COLUMBIA 92 H/8

CONTOURED GOLD VALUES IN SOILS

OCTOBER 1976 SCALE 1" = 400' PLAN 4

6060