CANADIAN OCCIDENTAL PETROLEUM LTD.
MINERALS DIVISION

PROJECT SCOTTIE - YUKON TERRITORY

CHURN DRILL PROGRAMME - 1979

N.T.S. 115 K/15

PLACER LEASES SCOT #1 and SCOT #2

by:

M.P. Henrick, Ph.B. and J.R. Houle, B.A.Sc.

Covering Work Carried out During the Period
May 24 to June 30, 1979
SUMMARY

A Keystone drilling programme was completed on the Scottie property between June 1-28th, 1979, to assess the potential of the auriferous gravel within the Valley.

Five holes were drilled for a total footage of 151 feet by Canadian Occidental Petroleum Ltd. personnel. Holes were located on or near to all major tributaries draining into Scottie Creek from the Moosehorn range to the North. All of the holes contained neither gravel nor gold.

There was no accumulation of gravel noted in any of the holes drilled. The material above bedrock was comprised of mainly silt, loam organic material, peat and ice. Bedrock was encountered at between 16 and 30 feet with the shallower depth occurring nearer the headwaters. Bedrock consisted of altered granodiorite which drilled very well. Every hole was drilled into bedrock to check for the occurrence of possible lode gold within the area.

There was no evidence of any enrichment at all.

INTRODUCTION

The objective of the 1979 churn drill programme was to determine whether gold was present on Scottie Creek in sufficient grades to support a dredging operation.

Free gold occurs in quartz veins on Brandt Peak to the north of Scottie Creek. This is the local lode source for the eluvial gold presently being mined at Kenyon Creek.
on the southwest side of the Moosehorn Range. As Scottie Creek and its tributaries drain the south end of the Moosehorn Range, it was felt that this may be an ideal location for the accumulation of either eluvial or alluvial gold. The broad valley and low gradient of Scottie Creek would provide ideal conditions for a dredging operation.

The Scottie property consists of two five-mile leases, Scot #1 and Scot #2, located at the headwaters of Scottie Creek and extending downstream for a total distance of ten miles.

LOCATION AND ACCESS

The property is located in the Ladue River area of the Whitehorse Mining District in the Yukon Territory, N.T.S. K/15 map sheet - Wienerwurst Mountain. Scottie Creek flows south parallel to the Alaska border. Summer access to the property is via charter wheeled aircraft from Whitehorse (255 miles) or Dawson (90 miles) to the airstrip at Claymore Resources Ltd. Kenyon Creek Mine. A road suitable for tracked vehicles leads from the Kenyon Creek airstrip south to the south end of lease Scot #2 directly below Wienerwurst Mountain, a distance of 9.5 miles. Access via float equipped aircraft from Whitehorse to Wienerwurst Lake, a distance of 245 miles, is also available. The winter road used by Claymore Resources follows Scottie Creek and passes through lease Scot #2 giving winter access from Beaver Creek 40 miles to the south on the Alaska Highway.
PHYSIOGRAPHY

The Scottie Creek area is located within an unglaciated portion of the Yukon known as the Klondike Plateau. This region has undergone uplift and erosion since mid-Tertiary time which has produced a topography of smooth rounded ridges of similar attitude separated by deep broad U-shaped valleys. Relief is approximately 2500 feet with summit elevations at 4500 feet.

Scottie Creek flows southward and forms the drainage for the southern end of the Moosehorn Range within the lease area.

South-facing slopes are well wooded with poplar, birch and spruce and have deep active zones and soil development. North-facing slopes have more extensive permafrost and generally consist of block talus covered by a layer of moss and scattered, stunted spruce trees.

The valley floor is covered by a swampy meadow of grass and sedge tussocks which make travel on foot difficult. Slightly higher, better drained pods of silt are commonly found alongside the creek. These areas support the heaviest growth of timber within the valley floor with spruce and poplar reaching up to 60 feet in height. Permafrost is ever-present about six inches below the grass roots.
PREVIOUS WORK

No record or evidence of previous work exists within the lease area. A roughly constructed rocker box was located on the upper reaches of Swamp Creek alongside the Claymore winter road approximately 1.5 miles northwest of the corner of Scot #1 and Scot #2 leases. The rocker box appeared to have not been used as the paint was not worn off of it.

WORK COMPLETED

Transporting Equipment

During the period April 1 through April 4, the equipment required for the project including the reconditioned Nodwell, camp gear, plywood and fuel were hauled on the Nodwell from the off loading area near the Alaska boundary north of Beaver Creek on the Alaska highway to the south end of lease Scot #2, and stored for use during the summer programme. At this time the drill rig which had been stored alongside the Kenyon Creek airstrip was moved onto the property in the vicinity of the camp equipment. The Nodwell was returned to the airstrip for use in transporting the remaining equipment from the airstrip to Scottie Creek at the start of the summer programme. Between May 25 and May 27th all remaining gear stored at the Kenyon Creek airstrip was transported to lease Scot #2 in the vicinity of Keystone hole S-1-79.
Camp Construction

During the period May 27 through May 31 the camp was constructed at drill hole location S-1-79. Three tents and a wash house were constructed on large, heavy log skids which enabled them to be easily towed between drill sites behind the Nodwell.

Road and Construction - Camp and Drill Site Preparation

A total of 8.4 miles of road were constructed from the point where the Claymore Resources winter road cuts lease Scot #2 at drill hole location S-1-79 to the headwaters of Scottie Creek at drill hole location S-5-79. This road was broken and tramped down with the Nodwell and cleared of snags of downfall by hand using a power saw.

Drill and camp site locations were cleared in a similar manner using a power saw.

Keystone Drilling

Five holes were drilled for a total of 151 feet between June 1 and June 28, 1979. The location of the holes are shown on plan #1.

The holes were drilled by Canadian Occidental Petroleum Ltd. personnel using a modified Bucyrus-Erie T-22 cable tool drill owned by Canadian Occidental Petroleum Ltd. The names of Canadian Occidental Petroleum Ltd. personnel involved in the programme are listed in Appendix II.

Casing

All the holes were cased from surface to bedrock. When it was determined that the hole did not have any values it was continued into bedrock utilizing an open hole method
to determine if the underlying rocks contained any economic mineralization.

Prior to removal a steamer was used to loosen the frozen casing. This system worked extremely well and allowed all casing to be quickly and easily removed.

Sampling

A two foot sample interval was used. The casing was driven for two feet. The material within the casing was drilled loose and bailed into a bailing trough for collection. A six inch plug was left in the casing at all times. The bailed sample was run through the gold saver and concentrated. The concentrate was panned, cleaned and checked. None of the samples were amalgamated or digested in \( 0.5 \text{ mole } \text{HN0}_3 \) as they did not contain any gold at all.

**DRILL RESULTS**

**Keystone Drill Hole S-1-79**

Keystone drill hole number S-1-79 was drilled to a depth of 36 feet on placer lease SCOT # 2 to test for auriferous gravels on Scottie Creek. No gold was encountered within the hole. The hole was drilled using casing. A minimum 6 inch plug was maintained within the casing after bailing. This method was used until bedrock was penetrated to a depth of one foot. The hole was then continued open until it was terminated.

From 0 to 28 feet the hole encountered fine silt, loam and ice with sections of peat moss. At 28 feet the hole entered bedrock which consisted of highly altered granodiorite with abundant magnetite. The hole continued in granodiorite to its completion at 36 feet.
No values were encountered throughout the hole.

**Keystone Drill Hole S-2-79**

Keystone drill hole number S-2-79 was drilled to a depth of 29 feet on placer lease SCOT # 2 to test for auriferous gravels on Scottie Creek. No gold was encountered within the hole. The hole was drilled using casing. A minimum six inch plug was maintained within the casing after bailing. This method was used until bedrock was penetrated to a depth of one foot. The hole was then continued open until it was terminated.

From 0 to 18 feet the hole encountered fine silt, loam and ice with sections of peat moss. At 18 feet the hole entered bedrock which consisted of highly altered granodiorite. The hole continued in granodiorite to its completion at 29 feet. No values were encountered throughout the hole.

**Keystone Drill Hole S-3-79**

Keystone drill hole number S-3-79 was drilled to a depth of 38 feet on placer lease SCOT # 1 to test for auriferous gravels on Scottie Creek. No gold was encountered within the hole. The hole was drilled using casing. A minimum 6 inch plug was maintained within the casing after bailing. This method was used until bedrock was penetrated to a depth of one foot. The hole was then continued open until it was terminated.

From 0 to 30 feet the hole encountered loam, ice and frozen silt. At 30 feet the hole entered bedrock which consisted of highly altered granodiorite. The hole continued in granodiorite to its completion at 29 feet.

No values were encountered throughout the hole.
Keystone Drill Hole S-4-79

Keystone drill hole number S-4-79 was drilled to a depth of 25 feet on placer lease SCOT #1 to test for auriferous gravels on Scottie Creek. No gold was encountered within the hole. The hole was drilled using casing. A minimum 6 inch plug was maintained within the casing after bailing. This method was used until bedrock was penetrated to a depth of one foot. The hole was then continued open until it was terminated.

From 0 to 17 feet the hole encountered minor granodiorite fragments, loam and decomposed wood. At 17 feet the hole entered granodiorite bedrock and remained in granodiorite to its completion at 25 feet.

No values were encountered within the hole.

Keystone Drill Hole S-5-79

Keystone drill hole number S-5-79 was drilled to a depth of 23 feet on placer lease SCOT #1 to test for auriferous gravels on Scottie Creek. No gold was encountered within the hole. The hole was drilled using casing. A minimum 6 inch plug was maintained within the casing after bailing. This method was used until bedrock was penetrated to a depth of one foot. The hole was then continued open until it was terminated.

From 0 to 10 feet the hole encountered heavy ice and loam. Between 10 and 16 feet ice and possible boulder chips were cut. At 16 feet the hole encountered bedrock which was less altered, darker and possibly consisted of volcanic porphyry. The hole remained in bedrock to a depth of 23 feet.

No values were encountered within the hole.
CONCLUSION
The Churn Drill Programme did not delineate any gravels or gold values.

RECOMMENDATIONS
It is recommended that no further work be performed on this property and the property should be allowed to lapse.

Michael P. Henrick
APPENDIX I

DRILL LOGS
### Project: SCOTTIE

| Elev. Surface | ft. | Coordinates | Date Started | June 1 | 1979 |
| Elev. Bottom HS | ft. | | Date Finished | June 5 | 1979 |

#### DRILL DATA

| Make | Modified B.Cylinder | Overburden | ft. | | |
| CASING ID | Gravel | ft. | | Drilling | hrs |
| Casing Area | Top Bedrock | ft. | | Pulling | hrs |
| Drive Outside | In Bedrock | ft. | | Delays | hrs |
| Shoe Finish | Total drilled | ft. | | Total | hrs |

#### CALCULATED VALUES

- Au Wt. Aver. mg per cu yd
- Raw Gold Value c U.S. per mg
- Au Aver. Value c per cu yd

#### FORMATION SYMBOLS

- L loam
- C clay
- Ls loose G gravel
- F fine B bedrock
- S sand
- C coarse

#### Theor. Rise of Core

- ft per ft of drive

#### Theor. Box Vol.

- cu ft per ft of drive pumped

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#### Volumes About E. Estimated

- WASHED CURDOROYS - NO GOLD

#### Weight of Magnetic Material:

#### Notes:

- Drive Shoe Factor = area within effective cutting edge of shoe/area inside of casing.
- Casing Factor = unit of volume/area within effective cutting edge of shoe.

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**CALCULATED VALUES**

- Au Wt. Aver. 
- No. Au mg per cu yd
- Raw Cold Value AU mg per cu yd
- Au Aver. Value _U.S. per mg
- Au Aver. Value _C per cu yd

**FORMATION SYMBOLS**

- L loam
- C clay
- Ls loose
- G gravel
- E BR bedrock
- S sand
- C coarse
- A angular
- B boulder
- Ce cemented
- R rounded

**Remarks**

- Worked La.m.
- L - fresh
- L
- Ice
- Ice Moss
- Ice & Grass
- Ice & Old Organic
- L
- Bedrock ? Granodiorite
- "
- "
- Worked coldly
- No gold

**Weight of Magnetic Material:**

**Notes:**
- Drive Shoe Factor = area within effective cutting edge of shoe/area inside of casing.
- Casing Factor = unit of volume/area within effective cutting edge of shoe.

**Driller:** Brendan White  
**Panner:** Jack Ratliff  
**Engr.:** J.P. Herwick

**Calculated by:**  
**Date:**  
**Line No.:**  
**Hole No.:**
Elev. Surface ______ ft. Coordinates ______
Elev. Bottom MS ______ ft. DEPTH ______

DRILL DATA
Make ______ Bucyrus-Erie 7-7M
Overburden ______ ft
Casing ID ______ in. Gravel
Casing Area ______ sq ft Top Bedrock ______ ft
Drive Outside ______ in. In Bedrock ______ ft
Shoe Start ______ in. Total drilled ______ ft
Dia Finish ______ in. MINING SECTION ______ ft

CALCULATED VALUES
Au Wt. Aver. ______ No ______ gold, mg per cu yd
Raw Cold Value ______ c U.S. per mg
Au Wt. Actual ______ mg
Au Wt. Corrected ______ mg

FORMATION SYMBOLS
L loam C clay Ls loose G gravel
F fine BR bedrock S sand C coarse
A angular B boulder Ce cemented
R rounded

Drill Shoe ______
Casing ______ Au Value ______ $US/fine oz
Theor. Rise of Core ______ ft per ft of drive
Theor. Box Vol. ______ cu ft per ft of core pumped

Date Sample Depth Core Before After Meas. Colors Est. Wt. Au Remarks
Number Drive Drive Meas. Pumping Pt. Cu.Ft. 1 2 3 mg Field Corr Eng

0-4 0 4 0.25 N.G. Loom + ice
A-7 6.3 6.6 0.25 N.G.
7-8 5.3 7.6 0.25 N.G.
B-10 8.5 8.6 0.14 N.G.
10-12 10.5 11.6 0.17 N.G.
12-15 9.7 14.6 0.15 N.G.
15-18 12.5 17.6 0.23 N.G.
13-20 15.7 12.6 0.35 N.G.
20-22 18.1 21.6 0.25 N.G.
22-24 20.8 23.6 0.15 N.G.
24-26 22.0 25.6 0.23 N.G.
26-28 24.4 27.6 0.23 N.G.
28-30 26.2 29.6 0.23 N.G.
30-32 27.3 31.6 0.52 N.G.
32-34 28.3 31.6 0.23 N.G.
32-36 Drilled ahead of casing N.G.

Weight of Magnetic Material:
Notes: Drive Shoe Factor = area within effective cutting edge of shoe/area inside of casing. Casing Factor = unit of volume/area within effective cutting edge of shoe.

Weight of Magnetic Material:

Notes: Drive Shoe Factor = area within effective cutting edge of shoe/area inside of casing. Casing Factor = unit of volume/area within effective cutting edge of shoe.

Driller: Bunny White  
Fanner: Jack Roth  
Engr. Jacques Houle  
Calculated by:  
Date:  
Line No.  
Hole No. 4-79.
### Project: Slocan Creek, Y.T.
#### Location: N.T.S. 15 X-18

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#### Date Log:
- **Date Started**: June 23, 1972
- **Date Finished**: 19

#### Calculated Values:
- **Au Wt. Aver.**: mg per cu yd
- **Raw Gold Value**: c U.S. per mg
- **Au Wt. Actual**: mg
- **Au Wt. Corrected**: mg

#### Formation Symbols:
- L loam
- C clay
- Ls loose
- G gravel
- F fine
- BR bedrock
- S sand
- C coarse
- A angular
- B boulder
- Ce cemented
- R rounded

#### Weight of Magnetic Material:

#### Notes:
- Drive Shoe Factor = area within effective cutting edge of shoe/area inside of casing.
- Casing Factor = unit of volume/area within effective cutting edge of shoe.

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- Loam
- Heavy ice
- **L 1q**
- **L 1q**
- Some rock cutting
- + ice
- Bedrock - Valuable position
- 5' hard drilling
- Washed corduroy
- no gold ( = N.G.)

#### Driller:
- Brandon White

#### Panner:
- Jack Rain

#### Engr. Engineers Hole:
- Calculated by

#### Date

#### Line No.: Hole No. 5-79
APPENDIX II

PERSONNEL

Brenden White - Driller
Jack Pratt - Panner
Richard Craft - Camp Constructor
Lilian Penner - Cook
Gail Hashimoto - Cook
Jacques Houle - Geologist
M. P. Henrick - Project Manager
APPENDIX III

EQUIPMENT

A modified Bucyrus-Erie T-22 cable tool drill rig powered by a gasoline Continental Red Seal six cylinder fixed power plant, with a 38 foot collapsable Mast, mounted on a rubber-tired flex track bombardier trailer was used.

A Canadian Occidental Petroleum Ltd. modified Yukon Model Nodwell powered by a General Motors diesel engine with an external metal tool box, electric boom winch and hoist, deck side railings and tailgate, and a heavy duty towing bracket was also utilized on the project.
APPENDIX IV

SAMPLE METHOD

A sample interval of 2 feet was used. Each 2 foot sample was bailed into the bailing trough and collected in a 3-gallon galvanized pail placed inside a large galvanized wash tub trap. The material collected in the pails and the tub was washed into a one cubic foot measurement bucket and the volume was recorded. All slimes that floated and could not be readily measured were allowed to escape. The measured sample was run through the gold saver which was set to vibrate the riffle at 120-130 strokes per minute and rotate the trommel at 17-20 revolutions per minute. All the discharge material from the gold saver ran over wide wale cotton corduroy blankets placed in a 10" X 5" X 10' galvanized sluice box set at a grade of 1" to the foot.

All of the heavy concentrate collected in the gold saver riffles from each 2 foot drill run was panned by the panner working over a water-filled wash tub trap. When the concentrate was sufficiently reduced and all the colours were counted and recorded, the concentrate was washed in a caustic soda solution and several drops of Mercury were added to the pan. The sample was then panned and further reduced and the remaining concentrate was agitated in the pan to allow all the gold in the pan to come into contact with the Mercury. When amalgamation was completed, the amalgam was collected and placed in pre-numbered sample bottles. The remaining heavy concentrate was dumped into the panning tub trap.
After completion of each hole the concentrate from the panner's tub trap was again run through the gold saver. This sample was panned and amalgamated. The blankets were carefully washed and the concentrate panned and amalgamated in the manner previously mentioned.
APPENDIX V

REPORT BY J. R. HOULE, B.A.Sc.
CANADIAN OCCIDENTAL PETROLEUM LTD.
MINERALS DIVISION

SCOTTIE - 79

REPORT ON HOLES

#3-79
#4-79
#5-79

July 5, 1979

by:

J.R. Houle, B.A.Sc.
**STATISTICAL DATA FOR 1979**

**Properties_willy summer exploration**

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<th>Legal Surveys (Miles)</th>
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<th>Magnetic (miles)</th>
<th>Input (miles)</th>
<th>Other</th>
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<th>Scintillometer (&quot;&quot;&quot;)</th>
<th>Spectrometer (&quot;&quot;&quot;)</th>
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<th>Alphameter (&quot;&quot;)</th>
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**NAME OF GEOLOGIST:** ___________________________
Results for Holes #3-79, #4-79, #5-79

None of these holes showed any mineralization whasover, just as #1 and #2 holes did not. All gravel recovered in the panning process or found along Scottie Creek at surface showed low sphericity and moderate to low roundness. This suggests short transport distances for country rock, and presumably for gold as well.

Bedrock geology for Holes #3 and #4 consists of altered granodiorite, while that of #5 consists of a harder, fine-grained mafic rock, either volcanic or possibly hypabyssal in origin. These two rock types were abundant in Scottie Creek at surface.

Recovery of Materials

The total absence of gold mineralization in the drill cuttings led to suspicion among the crew in the effectiveness of the recovery equipment, particularly that of the bailer assembly. Therefore, 4, 0.5 cm diameter lead pellets were dropped into Hole #5 during various depths of drilling. All 4 pellets were eventually recovered in the trommel of the gold saver.

Abundant magnetite fines and metallic bit fragments were recovered by the gold saver and related equipment. Also recovered were some brass fragments from the bailer assembly. These caused some inconvenience in that they vaguely resemble gold, requiring the use of mercury to distinguish them from the 'real thing'. In the future, the bailer used on gold operations should not contain brass or gold-coloured metals or alloys.
The Churn Drill

The churn drill was used quite effectively at Scottie Creek in 1979. The casing was always driven ahead of the churn bit while unconsolidated material was being drilled. The churn bit was never driven closer than 6" from the casing shoe until bedrock was reached. Then, the churn bit was driven ahead of the casing for a few feet.

The main problems with the churn drill were:
1) Mobility on soft or uneven terrain - unstable.
2) Cranking tower from horizontal to vertical position - difficult and time-consuming.

Suggested modifications for churn drill:
1) Larger tracks, similar to those on the Nodwell, would make the drill more stable and buoyant on muskeg terrain.
2) An electric winch in place of the hand crank would facilitate setting up the rig in preparation for drilling.

The Nodwell

The Nodwell performed satisfactorily at Scottie. However, some maintenance work is required, some of which must be performed before the vehicle is used to move heavy equipment. These are as follows:
1) Replace engine fan (1 blade cracked)
2) Replace air cleaner filter

Dry type - cylindrical

Dimensions: O.D. - 9.5"
I.D. - 5"
Length - 12"

+ Spunfiber fiberglass cover
3) Get new wheel and tire for spare.
   (Spare is flat; right rear rim cracked)
4) Replace electric deck winch (Burnt out; temporarily replaced
   Super winch by hand winch)
   Model P.M. 4000
   with cable
   - Check oil level in differential gear box.
   - Replace windshield (cracked) (Red Ram SAE 80/90)

Locations
- Drill sites - refer to topo map and claim map
- Claim posts - " " " " " " "
- Winter camp - drill site Scot #1-79
- Drill Rig - drill site Scot #4-79
- Spare tire for Nodwell - Weinerwurst lake shore on fuel drum

Diagrams (copies in cab of Nodwell)
1) Drill Site #1-79 (winter cmap) (page 6)
2) Nodwell detailed packing (page 7)

Scottie Claim Post Data

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