REEF PROPERTY

Vernon Mining Division
British Columbia

Union Oil Company of Canada Limited
Calgary, Alberta

82L/3W

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PROJECT SUMMARY

Union Oil Company of Canada Limited
Calgary, Alberta

M.J. Gidluck
February 6, 1979

PROJECT SUMMARY

PROPERTY: REEF CLAIMS

LOCATION: The property is situated on the east side of Okanagan Lake, 20 km due south of Vernon, B.C. The claims are easily accessible from Highway #97 at Winfield via a network of rural and logging roads.

CLAIMS: The Reef Property was staked by Union Oil in 1976 as a result of a regional reconnaissance program designed to locate Tertiary channel-type uranium deposits in southern British Columbia.

The claim block includes 11 contiguous claims, Reef 1 to Reef 11, comprised of 105 units, covering an area of 2,625 hectares. The schedule of claims is given below.

Mining Division	Claim	Units	Record No.	Record Date	Expiry Date
Vernon	Reef 1 to 3	50	202 - 204	Dec. 8, 1976	Dec. 8, 1979
	Reef 4 to 8	34	238 - 242	Feb. 25, 1977	Feb. 25, 1980
	Reef 9	1	371	Aug. 22, 1977	Aug. 22, 1980
	Reef 10	15	406	Feb. 10, 1977	Feb. 10, 1980
	Reef 11	5	469	June 15, 1978	June 15, 1979
		105			

GEOLOGY: The stratigraphic column for the rocks underlying the property is:

Rock Type/Formation	Age
Plateau basalts	Miocene
Clay, sand, quartz pebble conglomerate	Miocene (?)
Felsic volcanic pyroclastic rocks	Eocene (?)
Nelson Intrusives (quartz monzonite and granodiorites)	Late Cretaceous and Mid-Jurassic
Monashee Group (metamorphic rocks)	

The property straddles an elongate series of south trending Miocene basalt flows estimated to have a maximum thickness of 500 feet. The flows have an estimated average thickness of 200 feet in the main area of interest.

Tertiary stream sediments are exposed on the southwest margin of, and directly beneath, the basalt flows. The Tertiary sediments are composed of poorly to semi-consolidated sand, clay and quartz pebble conglomerates. Generally the finer grained grit and clay horizons

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contain carbonaceous material or coaly fragments. A number of old adits, driven to investigate the placer gold potential of these sediments, still exist on the claim group.

In the southern half of the property the basement rocks are composed of granodiorite and anomalously radioactive, porphyritic, quartz monzonite both of which are probably part of the Nelson intrusives. In the north half of the property, the basement is comprised of gneisses, amphibolite and metasedimentary rocks of the Monashee Group.

WORK COMPLETED: The property has been radiometrically prospected, sampled and geologically mapped at a scale of 1:10,000 using air photo and topographic map enlargements for ground control. An airborne magnetic survey was conducted over the entire property. A systematic radiometric survey has been performed on widely spaced lines adjacent to the south margin of the basalt cap. A drainage geochemical survey was conducted, and several lines of soil samples were taken across overburden covered areas along the projection of the paleo-channel. Outcrop sampling and sectional sampling of the channel sediments has also been done.

RESULTS: Carbonaceous Tertiary paleo-channel sedimentary rocks have been mapped for a strike length of 2,800 meters. These sediments could extend for at least four kilometers along the western margin of the basalt flows. The exposed thickness of the sediments is at least 12 meters and the carbonaceous material exhibits high radioactivity.

The quartz monzonite basement has above background radioactivity and local hotspots. A sample taken at its upper contact produced 94 ppm uranium (total).

PROPOSED PROGRAM: Drill testing is necessary to determine the extent, depth and uranium-bearing potential of the Tertiary channel sediments below the basalt cap rocks. Initially three diamond drill holes are recommended, at approximately 1100 meter spaced intervals, along the trace of the interpreted channel. This program would be followed by a minimum of 2500 meters of rotary-percussion holes along the sections of the diamond drill holes. All the holes would be tested with a multi-channel down hole radiometric probe, and all intersections of channel sediments analyzed for uranium.

ESTIMATED COSTS:

Year 1 (1979)

Diamond drilling - 350 meters @ $100/m	$ 35,000

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Rotary-percussion drilling - 800 meters @ $45/m	$ 36,000
Reports, drafting and administration	$ 9,000
TOTAL YEAR 1	$ 80,000

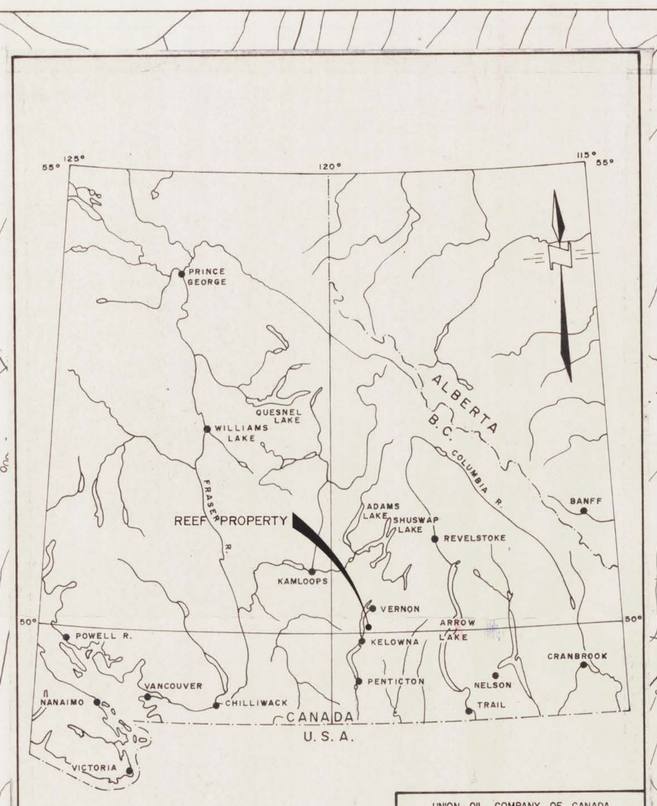
Year 2 (1980)

Rotary drilling - 1700 meters @ $45/m	$ 76,500
Reports, drafting and administration	$ 8,500
TOTAL YEAR 2	$ 85,000

PROPOSED TERMS OF JOINT VENTURE: A participant would commit to the proposed 1979 program. In order to earn a 50% undivided interest in the claims the participant must carry out an additional 1250 meters of diamond or rotary drilling before the end of 1980. Thereafter, all expenditures will be shared by Union and the participant on a 50/50 basis.

	1979	1980	1981
Participant	1150 meters of drilling as noted	1700 meters of drilling 50% of costs thereafter	50%
Union	---	--- (50% of costs incurred after drilling completed)	50%

NOTE: These claims are subject to a 2½% Net Smelter Return after payback (maximum 1 million dollars) and annual payments of $5,000 per year beginning on December 8, 1982 to a third party.



UNION OIL COMPANY OF CANADA	
LOCATION MAP REEF CLAIM GROUPS VERNON MINING DIVISION BRITISH COLUMBIA	
Date: October, 1978	Scale: 1" = 64 Miles
Dwn by: TOM RAVENHILL	Dwg no. 174D-1

N

GREEN-GREY IMPURE QUARTZITE

GNEISS

GRANITE AUGEN GNEISS

GRANITIC GNEISS

AND AMPHIBOLITE

DIORITE

TELEPHONE LINE

REEF 8

OYAMA LAKE

REEF 5

REEF 4

REEF 9

FRIABLE FELSIC VOLCANICS

AMPHIBOLITE

GNEISS & AMPHIBOLITE

CAVED SHAFT

FELSIC TUFF

FELSIC TUFF FOLIATED GRANODIORITE

APPROXIMATE LOCATION OF ATTENS & PAPLEY WORKINGS

REEF 3

EC 78-2

OUTCROPS OF FLOW BANDED RHYOLITE & FELSIC TUFF

PORPHYRITIC QUARTZ MONZONITE

RUBBLE CROP OF CHANNEL MATERIAL

FOLIATED GRANODIORITE

REEF 6

REEF 2

ECHO LAKE

AREA OF ELEY & HALL LEASES

EC 78-1

LINE OF SECTION

REEF 7

REEF 1

REEF 10

TO SHELL WELL

SCALE 1:10,000

0 100 200 300 400 500 600 METERS

LEGEND

- 5 — MIOCENE — FINE GRAINED, MASSIVE TO PORPHYRITIC DARK GRAY BASALT.
- 4 — MIOCENE — QUARTZ PEBBLE CONGLOMERATE, COARSE SANDSTONE, POORLY SORTED SILTSTONE WITH MUDSTONE AND CARBONACEOUS LAYERS.
- 3 — EOCENE? — FELSIC VOLCANICS: FLOW BANDED RHYOLITE, WELDED TUFF; SOFT, POROUS, WHITE TO BUFF ASH BEDS.
- 2A / 2B — (A) FOLIATED AND SLIGHTLY CHLORITIZED GRANODIORITE. (B) PINKISH, COARSELY PORPHYRITIC QUARTZ MONZONITE.
- 1 — GRANITIC GNEISS, AUGEN GNEISS, AMPHIBOLITE, QUARTZITE AND META-ARGILLITE.
- CONCENTRATIONS OF QUARTZ PEBBLES IN OVERBURDEN.
- OUTCROP AREA
- GEOLOGICAL CONTACT - APPROXIMATE
- TUNNEL
- BUILDING
- ROAD
- SITE OF DIAMOND DRILL HOLE
- INTERPRETED COURSE OF PALEOCHANNEL
- CLAIM BOUNDARY
- PROPOSED DIAMOND DRILL HOLE
- PROPOSED ROTARY-PERCUSSION DRILL HOLE

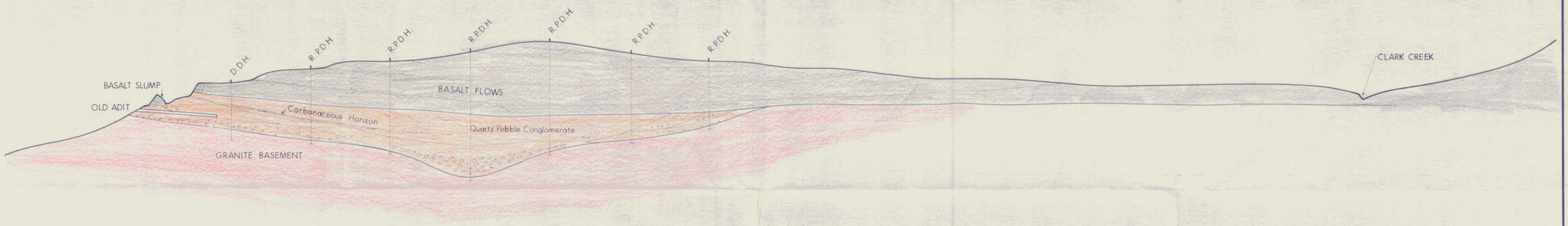
To Accompany a Report by J.M. DAWSON P.Eng.

UNION OIL COMPANY OF CANADA

GEOLOGY PLAN
REEF CLAIM GROUPS
VERNON MINING DIVISION
BRITISH COLUMBIA

TECH WORK BY: KERR DAWSON & ASSOCIATES LTD	SCALE: 1:10,000
DRAWN BY: TOM RAVENHILL 78-119	DATE: OCTOBER, 1978
APPROVED BY: J.M. DAWSON P.Eng.	DRAWING Nº 174D-3

REEF CLAIMS SECTION



PROPOSED DRILLING

D.D.H. = Diamond Drill Hole

R.P.D.H. = Rotary Percussion Drill Hole

SCALE 1: 2,500

25 0 25 50 75 100 125 150 175 METERS

union 76

OKANAGAN
BRITISH COLUMBIA

REEF CLAIMS SECTION

AUTHOR	M. GIDLUCK
DATE	FEB. 1979
SCALE	1:2500
CONTOUR INTERVAL	
DRAWN BY	VE
APPROVED	

UNION OIL COMPANY OF CANADA LIMITED
CALGARY ALBERTA

FILE NO. XX-210
N.T.S. NO.