



IMPERIAL OIL LIMITED

Minerals Section
E. L. Pekar
Chief Geologist, Western Canada

#314 - 1281 - W. Georgia Street
Vancouver 5, B. C.
Area Code 604 - 681-8231

MV-1878

August 20, 1975

File: 6053 (Jeff, Moe Claims)'

Mining Recorder
Liard Mining Division
Victoria, B.C.

Dear Sir:

I am enclosing duplicate copies of the following documents as part of a diamond drilling report on the Jeff and Moe mineral claims - Group XI.

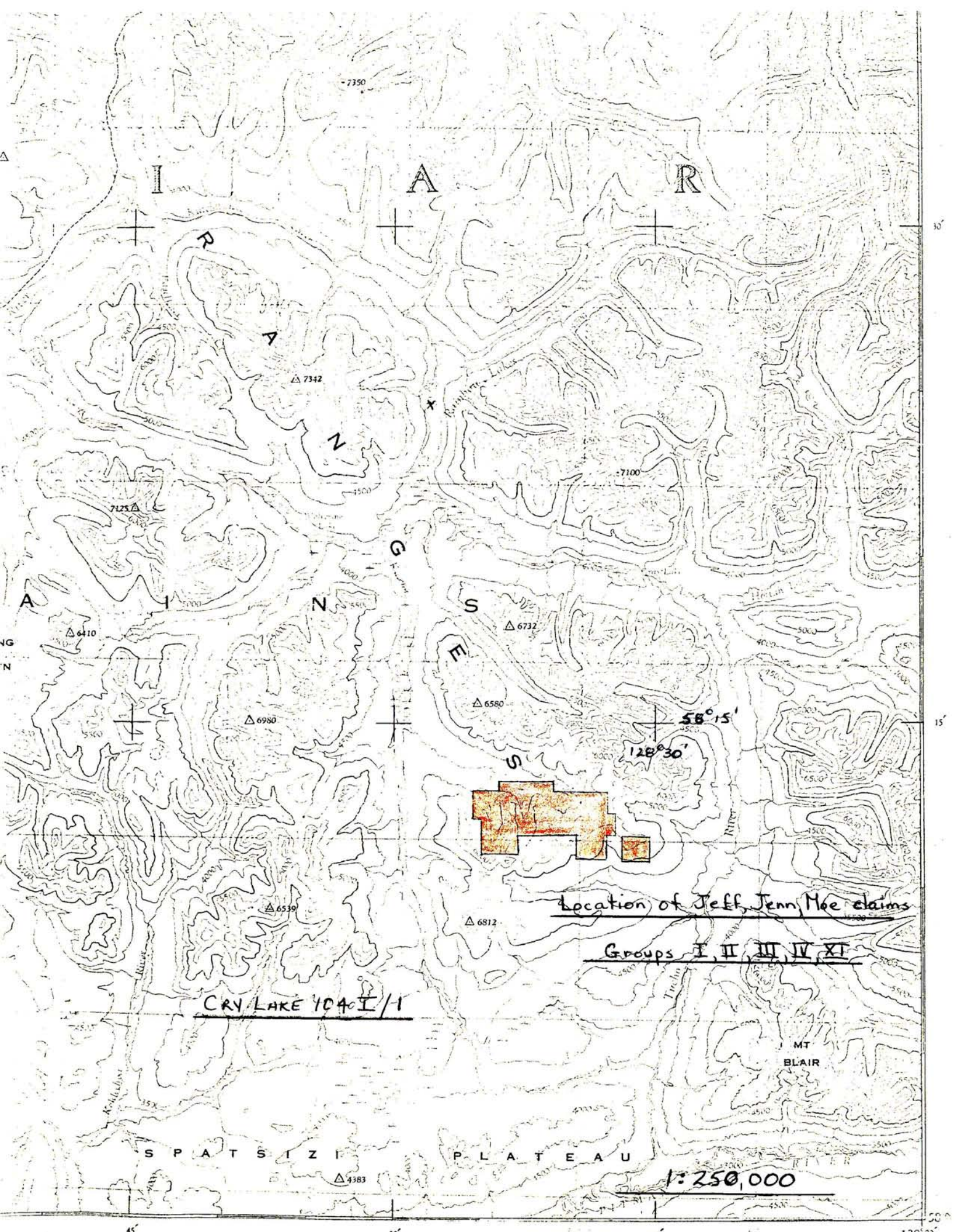
1. A 1:250,000 map showing the location of the mineral claims.
2. A claim index map at 1.2" to 1 mile showing the individual claim group.
3. A 1" to 1000' map showing the location of the drill holes and claim boundaries.
4. Drill core logs for each drill hole.
5. A table summarizing the drill holes.
6. A summary and breakdown of costs for the work performed.
7. A copy of drill contracts and invoices from Artic Diamond Drilling.
8. Notice to Group for Group XI.
9. Affidavit on Application to Record Work for Group XI.
10. Statement of Qualifications for P. Neilans.

Yours very truly,

J. Peter Neilans

JPN:JT
Encls.

Department of	
Mines and Petroleum Resources	
ASSESSMENT REPORT	
NO. 5591	MAP



I A R

P

7342

Z

7100

7125

A I

N

S

6410

6732

6980

6580

58°15'

128°30'

6812

Location of Jeff, Jenn, Moe claims

Groups I, II, III, IV, XI

CRY LAKE 104 I / I

MT
BLAIR

S P A T S I Z I P L A T E A U

4383

1:250,000

DIAMOND DRILL CORE LOG

DRILL HOLE NO. JEFF E-1 LOCATION: L60E, 22 + 50N
AZIMUTH: 203° CLAIM: Jeff #102
INCLINATION: -50° CORE SIZE: BQWL
ELEVATION:

DESCRIPTION

FROM	TO	DESCRIPTION
0	9	Overburden
9	81.5	Metagabbro: green to black, medium grained; hornblende phenocrysts in a matrix of feldspar, chlorite and epidote; minor calcite veins; weakly foliated; gradational chilled contact with underlying unit.
81.5	3288	Quartz-Feldspar Porphyritic Rhyolite: grey-green to light grey, fine grained; coarse quartz and feldspar augens in a quartz, feldspar, sericite, (chlorite) matrix; strongly foliated, minor pyrite.
		178-218; fault zone - no core.
	328	End of hole.

J. Peter Neilans

DIAMOND DRILL CORE LOG

DRILL HOLE NO. JEFF E-2 LOCATION: L104E, 13 + 25N
AZIMUTH: 203° CLAIM: Jeff #111 claim
INCLINATION: -50° CORE SIZE: BQWL
ELEVATION:

DESCRIPTION

FROM	TO	DESCRIPTION
0	12	Overburden
12	30	Chlorite Schist: dark green, fine grained; minor quartz and feldspar eyes (2 mm) in a homogeneous chloritic matrix; moderately foliated; minor pyrite.
30	71	Tuffaceous Siltstone: greenish-grey, fine grained; mostly quartzo-feldspathic debris, sericitized with minor chlorite; occasional quartz, feldspar augens; strongly foliated with minor pyrite.
71	80	Diabase dyke: grey-green, fine grained; minor feldspar phenocrysts in a dark aphanitic matrix; not foliated, massive; no sulphides.
80	153.5	Tuffaceous Siltstone-Sandstone: buff to dark grey, fine grained; interbedded, strongly foliated, coarse and fine units; some quartz eyes in a quartzo-feldspathic matrix; moderate sericitization; strong kink folding; minor pyrite.
153.5	186	Quartz-Feldspar Porphyritic Rhyolite: off-white to buff, fine grained; quartz and feldspar eyes to 3-5 mm in slightly chloritized, sericitized matrix; weakly foliated, minor calcite veinlets; trace pyrite.
186	348	Quartz Porphyritic Rhyolite: similar to above unit but no feldspar eyes, strongly foliated, strongly sericitized; pyrite, minor chalcopyrite, trace sphalerite.
	348	End of hole.

J. Peter Neilans

THIS AGREEMENT DATED THIS 18 DAY OF March 1979 *EP*

RECEIVED:

IMPERIAL OIL LIMITED,
1281 West Georgia Street,
Vancouver 5, B.C.

herein called the Company
OF THE FIRST PART

AND:

ARCOTE DIAMOND DRILLING LTD.,
134 Industrial Road,
Whitehorse, Y.T.
Y1A 2V1

herein called the Contractor
OF THE SECOND PART

WHEREAS the Company is the owner of or is otherwise well entitled to enter upon and explore groups of mining claims in the Rainbow Lake area in the Province of British Columbia and herein called the Claims.

NOW THEREFORE IT IS WITNESSED:

1. The Contractor will diamond drill or cause to be diamond drilled not less than four thousand (4,000) feet upon the Claims at drill sites to be selected by the Company.

2. The Contractor will commence drilling on a date agreed upon by the Contractor and the Company.

3. The work under this agreement will be continued with reasonable diligence until completed.

4. All holes shall be drilled with a ~~minimum~~ ^{Longyear '38} drill producing BQ Wireline size core and equipped with a steel mast. *EP*

5. The dip of all holes shall be minus 45 degrees or steeper unless otherwise agreed by both parties.

6. No hole shall exceed a length of ~~two thousand~~ ^{two thousand} ~~feet~~ feet unless otherwise agreed by both parties. *EP*

7. Measurements of all holes shall be made from the top of the casing.

8. Penetrating Overburden - The price per foot for drilling in overburden shall be \$10.20 per foot from 0 to 50 feet in depth. If the cost to the contractor of penetrating overburden deeper than 50 feet is greater than \$10.20 per foot, then the Company shall pay the Contractor at field cost for drilling in overburden below such depth.

9. The Company shall pay for all regular core drilling at the following rates:

14. The Contractor will mobilize and demobilize his men, drill and supplies to and from Base Lake and will charge ~~the Contractor~~ \$2,900.00 for same. Should the Contractor need, drill and supplies on the Summitone Hotel Mining Canada Ltd. contract become available by agreement of this contract, the Company will pay the Contractor for that portion as agreed upon by the two companies of the mobilization and demobilization ~~to be undertaken by the Contractor Ltd. This charge will be divided equally for the accounts of the Company and Summitone Hotel Mining Canada Ltd.~~

13. In the event that permafrost, cavities or loose and caving material is encountered of such a nature as to prevent the successful completion of any holes, the Contractor does not, under such conditions, guarantee to drill to a predetermined depth, and in the event that it becomes necessary to abandon the holes, the Company agrees to pay for such uncompleted holes, and the cost of all material unretreated from said holes, at the rates herein specified for all footage completed, and at eighty percent (80%) of the manufacturers cost of equipment and diamond set items unretreated.

Labour	\$10.60 per man hour
Drill Rental	\$7.00 per machine hour
Material Consumed	Cost plus 10%

12. All field cost operations will be charged to the Company employing the following applications:

- (a) All cementing operations.
- (b) All wedging operations.
- (c) The Company agrees to pay for all casing left in holes at the Company's request.
- (d) All costs arising from a mud and/or calcium chloride circulation operation at the rate of two man hours and one machine hour for every two bags of mud used or part thereof, plus the cost of mud at \$8.00 per bag.
- (e) The removal of all inserted casing and associated material upon completion of drilling on said setup.

11. The Company agrees to pay for the following operations on a field cost basis:

10. Reaming Casing - The price per foot for reaming casing in bedrock shall be \$9.00 per foot from bedrock to 20 feet in depth. If the cost to the Contractor of reaming casing deeper than 20 feet is greater than \$9.00 per foot, then the Company shall pay the Contractor at field cost for reaming casing below such depth.

Bedrock to 500 feet	\$10.20 per foot
500 feet to 1000 feet	\$10.70 per foot
1000 feet to 1500 feet	\$11.20 per foot

15. Moving in from the mobilization and demobilization point to the Company's property and setting up on hole #1 and tearing down and moving out to the same point at the completion of the contract will be charged to the Company at \$8.00 per man hour. Machine rental will not be chargeable while moving in and setting up and tearing down and moving out.

16. When water supply exceeds 2,000 feet in length and/or 500 feet in elevation, the Company agrees to pay all pumping at field cost. Delays due to frozen water lines or lack of water will be chargeable at field cost.

17. Moving between drill holes will be charged to the Company at field cost.

18. Standby time caused by the Company will be chargeable at field cost. Standby time caused by machine breakdown or lack of drill supplies and equipment will be at the Contractor's expense.

19. The Contractor agrees to assist the Company in the angle acid testing of holes as may be required and designated by the Company and the charge for this shall be \$23.00 per test.

20. The Contractor shall pay all cost and expense in connection with transportation of crews, equipment and supplies between Whitehorse and Dease Lake airstrip. Once at that point, the Company will assume all cost and expense of transportation to and from the property. The Company will supply one weekly service trip between Watson Lake and the property at no cost to the Contractor.

21. The Company will supply cook, food and camp supplies for the Contractors men at no cost to the Contractor.

22. It is agreed that the foreman's daily report will be signed by the Company's engineer and the Contractor's foreman. It is further agreed that the cost items on the signed foreman's daily reports will be invoiced to and paid for by the Company.

23. The Contractor agrees, at its own expense, to comply with all requirements of the Workmen's Compensation Act, Unemployment Insurance Act, Hours of Work and Vacations with Pay Act, and generally all Federal and Provincial Acts and Regulations applicable to the Contractor's operations.

24. Fuel, gas, oil and propane for drills, pumps, heaters and camp will be supplied by the Company at no cost to the Contractor.

25. The Company will provide radio for communication from the property.

26. ~~When travelling between drill and camp sites exceed 40 minutes, each way per day, the cost will be chargeable to the Company at \$10.00 per hour per man. Replaces note to letter of March 12, 1975 (attached)~~

27. Delays caused by lack of transportation or choppers will be chargeable to the Company at field cost.

E.H.
7/16/75

28. At the completion of four thousand feet (4,000') or more of drilling, the Company may elect to demobilize the men only and leave the drill equipment on the property to continue the programme at a later date. The Contractor will not charge machine rental or standby in that case, but the Company will pay for any extra expense incurred by the Contractor such as travelling time and expenses of the drill crew. Should drilling not recommence by June 5, 1976, the Company will pay the Contractor \$100.00 per day from June 10, 1976, until recommencement of drilling, or demobilization of equipment.

29. The Contractor will supply a core splitter for the Company's use if required at \$60.00 per month.

30. The Contractor will not give out any information regarding drill results or permit access to any drill core to any person other than the Company's accredited representative except upon specific permission of responsible officials of the Company.

31. The Contractor shall comply with all the laws, ordinances, rules, safety and other regulations bearing upon the conduct of the work and shall bear all costs arising from any violation thereof.

32. ~~The Contractor shall at all times keep all parts of the work area in a neat and orderly condition. The Contractor shall remove all rubbish as fast as it accumulates. Upon completion of the work, the Contractor shall remove all excess materials, equipment and rubbish from the camp and drill areas. The Contractor shall do everything necessary to leave the entire premises in a clean, neat and presentable condition.~~ Replaced - refer to attached letter of March 12, 1975. *SP*

33. Both the Company and the Contractor reserve the right to terminate this contract for any reason and at the absolute discretion of either party by giving the other ten (10) days written notice of such termination. If the Company so terminates this contract, it shall pay to the Contractor all amounts owing to the Contractor hereunder in respect of the diamond drilling work performed up to the date of termination.

34. Damages and Liability:

(a) The Contractor shall continuously maintain adequate protection of all the work from damage and shall protect the Company's property from injury or loss arising in connection with this contract. The Contractor shall be responsible for any such damage, injury or loss to property, except such as may be directly caused by the agents or employees of the Company.

(b) The Contractor assumes all liability and indemnifies the Company against any liability for injuries or damages to the Contractor's employees or to any other person or persons, incident to or relating from the operation of the Contractor hereunder. The Contractor specifically represents that in performing its obligations under this contract, its status is that of an independent Contractor and that its employees and the employees of the sub-contractors are not the employees of the Company for any purpose whatsoever.

35. In complying with the obligations of the agreement, neither the Company nor the Contractor shall be held responsible for strikes, fire, war or any damage or delay due to causes beyond their control.

36. The Company will pay to the Contractor for all work contemplated by this agreement as the work progresses as follows:
For all work done on and before the last day of each calendar month, not later than the 20th day of the calendar month next following; interest at 1% per month will be charged on overdue accounts.

37. The Contractor shall carry public liability and property damage insurance for an amount of not less than one million dollars (\$1,000,000.00).

38. This agreement shall be binding upon and ensure to the benefit of the parties hereto and their respective successors and assigns.

39. The commencement date of drilling shall be approximately permit, or as soon thereafter as weather conditions permit.

SIGNED BY:

IN THE PRESENCE OF:

IMPERIAL OIL LIMITED

W. J. Jamieson

Edward Petar

ARCTIC DIAMOND DRILLING LTD.

J. M. Smith

N. W. Langston



IMPERIAL OIL LIMITED

*Copy to P.M.
File with
Kutcho
Contracts*

APR 1 1975

Minerals Section
E. L. Pekar
Chief Geologist, Western Canada

#314 - 1281 -- W. Georgia Street
Vancouver 5, B. C.
Area Code 604 -- 681-8231

MV-1512

March 12, 1975

File: 6053

Mr. J.M. Smith
President
Arctic Diamond Drilling Ltd.
184 Industrial Road
Whitehorse, Yukon Territory
Y1A 2V1

Dear Sir:

Your drilling contract for the Kutcho Creek area is accepted on behalf of Imperial, subject to your agreement and acceptance of the following amendments:

Clause 26. - delete and replace with:

When travelling between drill and camp sites exceeds a total of one hour per day per man, the excess time will be charged to the Company at ~~\$8.00~~ ^{\$5.50} per man hour.

Clause 32. - delete and replace with:

The Contractor shall keep the work area and right of way in a neat and orderly condition and where possible remove all rubbish and waste as it accumulates. The Contractor agrees to comply with all the regulations provided by the surface owner and/or the Crown, including bucking, limbing, cutting and piling brush and logs, as may be specified. Upon completion of the work, the Contractor shall rake, fertilize and seed the disturbed portions of the work area and in general endeavour to leave the entire premises and associated rights of way as near to their original state as is reasonably possible, at field cost.

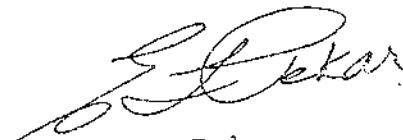
The Contractor and its employees agree to conduct their activities connected with the contract in a workman-like manner, with proper consideration and reasonable regard for the rights and privileges of third parties.

Clause 35. - should be re-worded to read:

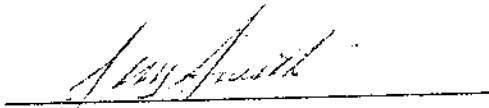
.... neither the Company nor the Contractor shall be held responsible for non-performance of the terms of the contract as a result of strikes, fire, war or any damage or delay due to causes beyond their control.

If the above meet with your approval, would you please signify your acceptance by signing this copy and returning it to this office.

Yours very truly,



E.L. Pekar



Accepted on behalf of
Arctic Diamond Drilling Ltd.

ELP:lr

DRILL COST SUMMARY

GROUP XI

HOLE NO.	DIRECT DRILL.	MOB/DEMOB	FUEL	HELICOPTER	CAMP	SALARIES SUPERVISORY/COOK	TOTAL	COST/FOOT
JEFF E-1	\$ 4,194.00	\$ 474.38	396.88	2,437.08	1,862.28	456.00	\$ 9,820.62	29.95
JEFF E-2	4,301.00	474.38	421.08	1,380.00	1,396.71	342.00	8,315.17	23.89
							\$ 18,135.79	

SUMMARY OF DRILLING - GROUP NO. XI

WELL NO.	GRID LOCATION	DATES	CONTRACTOR	DRILL TYPE	AZIMUTH	ANGLE	TOTAL LENGTH	HORIZ. PROJ.	VERT. PROJ.	TOTAL COST	COST/FOOT
JEFF E-1	L60E, 22 + 50N	14/7 - 17/7	Arctic Diamond Drilling Ltd.	Longyear 38	203°	-50°	328	211	251	\$ 9,820.62	\$ 29.95
JEFF E-2	L104E, 13 + 25N	21/7 - 23/7	"	"	203°	-50°	348	224	266	8,315.17	23.89

COST STATEMENT

A. CAMP COST CALCULATION (for entire project)

Equipment		\$ 12,989.10
Fuel		1,458.66
Food		5,226.24
Air Support		25,816.08
Fixed Wing	\$ 8,820.00	
Helicopter	16,336.08	
		<hr/>
	TOTAL:	\$ 45,490.08
		<hr/> <hr/>

\$45,490.08 ÷ 684 man-days = \$66.51 man/day
- camp costs were calculated at a rate of
\$66.51 man/day.

B. SALARY CALCULATION (Supervisory & Cook)

Group XI

HOLE NO.	DATES	PERSONNEL*	RATE	TOTAL
Jeff E-1	14/7 - 17/7	P. Neilans (G)	4d x \$39/d	\$ 456.00
		W. Dwyer (A)	4d x \$28/d	
		J. Barker (C)	4d x \$47/d	
Jeff E-2	21/7 - 23/7	P. Neilans (G)	3d x \$39/d	342.00
		W. Dwyer (A)	3d x \$28/d	
		S. McWhinnie (C)	3d x \$47/d	

* (G) Geologist, (A) Assistant, (C) Cook

ARCTIC DIAMOND DRILLING LTD.

Box 3204, 184 Industrial Rd.
Whitehorse, Yukon Territory Y1A 2V1

730 - 510 W. Hastings Street,
Vancouver, B.C.

Marwell Area - Phone 668-2440 667-6434

Phone 688-3328

July 25, 1975

INVOICE #1780

IN ACCOUNT WITH:

Imperial Oil Limited,
#314 - 1281 West Georgia Street,
Vancouver 5, B.C.

Drilling charges July 12 - 25, 1975

Hole: Jeff-E-1 - 50° x BQ

Moving

74 man hours @ \$10.60 per hour = \$784.40

Overburden

0 - 9 = 9 feet @ \$10.20 per foot = 91.80

Reaming Casing

9 - 11 = 2 feet @ \$9.00 per foot = 18.00

Core Drilling

9 - 328 = 319 feet @ \$10.20 per foot = 3,253.80

Testing

2 tests @ 7 and 328' @ \$23.00 each = 46.00 \$4,194.00

Hole: Jenn-2 - 50° x BQ

Moving

71 man hours @ \$10.60 per hour = \$752.60

Overburden

0 - 3 = 3 feet @ \$10.20 per foot = 30.60

Reaming Casing

3 - 14 = 11 feet @ \$9.00 per foot = 99.00

Core Drilling

3 - 398 = 395 feet @ \$10.20 per foot = 4,029.00

Testing

2 tests @ 14' and 398' @ \$23.00 each = 46.00 \$4,957.20

Hole: Jeff-X2 - 50° x BQ

Moving

64 man hours @ \$10.60 per hour = \$678.40

Overburden

0 - 12 = 12 feet @ \$10.20 per foot = 122.40

Reaming Casing

12 - 15 = 3 feet @ \$9.00 per foot = 27.00

Core Drilling

12 - 348 = 336 feet @ \$10.20 per foot = 3,427.20

Testing

2 tests @ 12' and 348' @ \$23.00 each = 46.00 \$4,301.00

ARCTIC DIAMOND DRILLING INC.

Page 2

Invoice #1780 - Imperial Oil Limited - Cont'd

Hole: Jeff #14 - 50° x BQ

Moving

70 man hours @ \$10.60 per hour = \$742.00

Overburden

0 - 2 = 2 feet @ \$10.20 per foot = 20.40

Reaming Casing

2 - 5 = 3 feet @ \$9.00 per foot = 27.00

Core Drilling

2 - 500 = 498 ft. @ \$10.20 per ft. = \$5,079.60

500 - 618 = 118 ft. @ \$10.70 per ft. = 1,262.60

Testing

2 tests @ 5' and 500' @ \$23.00 per test = 46.00

\$7,177.60

Materials Consumed

1 only BW casing shoe #J4ZW665 \$132.40

2 only 2' lengths BW casing @ \$15.25 ea. = 30.50

(left in hole #Jeff-14)

\$162.90

Plus 10 %

16.29

\$ 179.19

Materials delivered to property in March /75
- not there on commencement of drilling in
June /75

1 only Propane torch \$43.62

1 only 25# propane tank 36.85

\$80.47

Plus 10%

8.05

\$ 88.52

Demobilization

Re: clause #14 of contract - 1/2 x 1/2 x 2900.00 = \$725.00

Moving - from hole Jeff #14

32 man hours @ \$10.60 per hour = 339.20

\$1,064.20

TOTAL INVOICE

\$21,961.71

NOTE:

PLEASE MAKE PAYMENT TO OUR WHITEHORSE OFFICE ONLY.

STATEMENT OF QUALIFICATIONS

I, J. PETER NEILANS, of Vancouver, British Columbia, hereby certify the following qualifications:

(a) I obtained a B.A.Sc. degree in Geological Engineering (1973) from the University of British Columbia, Vancouver, B.C.

(b) I have been practising my profession as a geological engineer in Canada for two years.



J. Peter Neilans



Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 5591 MAP 3

DRILL HOLE LOCATION AND CLAIM MAP
IMPERIAL OIL LIMITED
JEFF, JENN CLAIMS-LIARD M.D. **5591**
MAP 3

SCALE-1"=1000'

1000 0 1000 2000

J. Peter Neilans Aug. 20/75