

# 5061

94D/10E

REPORT ON

- DIAMOND DRILLING

SUSTUT RIVER - MOOSEVALE CREEK AREA

SUSTUT, WILLOW AND ASITKA MINERAL CLAIMS

OF THE

ALPHA GROUP

56°35'N, 126°40'W

WESFROB MINES LIMITED

MAY 13, 1974 - JULY 26, 1974

Vancouver, B.C.  
July 26, 1974

G. Harper  
D. H. Brown, P.Eng.

Department of	
Mines and Petroleum Resources	
ASSESSMENT REPORT	
NO. 5061	MAP .....

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## INTRODUCTION

The "Sustut" and adjoining claims lie in rugged mountainous country of the Swannell Range, 250 miles northwest of Prince George, B.C. Access to the property is exclusively by helicopter the last 20 miles either from Johanson Lake or Moose Valley. N.T. Air runs a fixed wing plane service (from Prince George) into each of these places to small gravel airstrips. Alternative supply routes are by the Mining Access Road from Fort St. James to Johanson Lake or up the B.C. Railroad construction grade from Fort St. James to Bear Lake. Heavy freight, fuel and equipment have been brought up the railroad or road, while personnel and urgent supplies are carried by air direct from Prince George.

## SCOPE OF DIAMOND DRILLING PROGRAM

After an encouraging reconnaissance in 1972, Wesfrob Mines Limited decided to mount a major, continuing drilling program in the area during 1973/74. A camp was constructed at the centre of the property in the spring of 1973 and subsequently three machine drilling programs conducted in succeeding summers.

The short summer season, excessive snow and severe weather requires that the operation be undertaken as fast as possible with several drill machines and adequate air support. S & H Drilling Co. Ltd. had the contract both years as they proved themselves efficient and reasonably priced. In excess of 20,000 feet of core drilling have been/will be completed each season. All core is stored in racks at the camp on the property.

ASSESSMENT APPLICATION AND COSTS USED

As required by the recently modified Mineral Act of B.C., enclosed are: location plans, copies of diamond drill logs, and the drill contract and financial statements itemizing the costs. The direct costs of drilling each hole are presented but it should be noted that these are only a partial cost as camp construction, supply and technical services can not be separated for individual drill holes. Therefore, a detailed statement is presented of the composition of these indirect costs, the total reduced to a unit cost per foot. Invoices to support these stated expenditures are available in the Company's Vancouver office for inspection.

Vancouver, B.C.  
July 26, 1974

G. Harper

  
D. H. Brown, P.Eng.



DEPARTMENT OF MINES AND PETROLEUM RESOURCES

MINERAL ACT (Section 51) FORM B

Affidavit on Application for Certificate of Work

1. I, D. H. Brown, Agent for Wesfrob Mines Limited. #500 - 1112 West Pender St. Vancouver, B.C. V6E 2S3. Free miner's Certificate No. 120677. Date issued May 15/73.

make oath and say:

2. I have done, or caused to be done, work on the Alpha Group Sustut 7 Mineral Claim(s)

Record No.(s) 103203 situate at 56°35N, 126°40W in the Omineca Mining Division, to the value of at least 15,100 dollars. Work was done from the 28th day of May 1974, to the 25th day of June 1974.

3. The following is a detailed statement of such work done in the twelve months in which such work is required to be done.

(COMPLETE APPROPRIATE SECTION(S) A, B, C, BELOW)

A. PHYSICAL (Trenching, drilling, tunnelling, and overburden removal.) (State dimensions of trenching, open pits, etc., footage drilled, and diameter of hole for drilling.)

Table with 2 columns: Description of work and COST. Includes rows for Direct costs (May 28 - June 1/74, June 20 - June 22/74, June 23 - June 25/74) and Indirect Costs (1085 ft. @ \$6.54/ft.). Total cost: \$15,182.78.

I wish to apply \$ 15,000 of this work to the claims listed below. (State number of years to be applied to each claim.)

2 years to be applied to: 21 claims - Willow 58, 71-82; Asitka 145, 147, 153. Record Nos. 116335, 120927-120938; 121318, 121320-121326. \$ 8,400.00. 3 years to be applied to: 11 claims - Willow 61-70; Asitka 154. Record Nos. 120917-120926; 121327. 6,600.00. \$15,000.00

# WESFROB MINES LIMITED

1112 WEST PENDER STREET

VANCOUVER 1, B. C., CANADA

TELEPHONE: 682-6242  
TELEX 04-53245

July 24, 1974

The Mining Recorder,  
Omineca Mining Division,  
Smithers, B.C.

Dear Sir,

Re : Statements of Qualifications

This is to certify that the work covered under the attached report was carried out under the supervision of Dr. Gerald Harper, and under my direction. Dr. Harper is a graduate (B.Sc.) of University College of Rhodesia where he also studied for his Ph.D. degree under the affiliate sponsorship of the University of London.

Core logging was carried out by Mr. B. Downing B.Sc., University of Toronto, M.Sc. Queens University and by Mr. J. Wilson B.Sc., University of British Columbia. Both geologists have worked within the Falconbridge Nickel organization since 1972. Surveying and drill hole layout and control was carried out by G. Thomassen a qualified surveyor trained within the Falconbridge organization during the past eight years. D. Rondeau is his student assistant.

I am a graduate in engineering geology from the University of British Columbia, and a member of the Association of Professional Engineers of Ontario and British Columbia.

Yours very truly,  
WESFROB MINES LIMITED,



D.H. Brown, P. Eng.

Att.

A P P E N D I X A

DIRECT DRILL HOLE INVOICES

# S & H DRILLING COMPANY LTD.

13.01.1974

13135 - 20th Avenue  
SURREY, B.C. V4A 1Z1  
Phone 531-4134

June 11, 1974

Mr. J. J. McDougall  
Exploration Manager  
Westrob Mines Ltd.  
1112 West Pender Street  
Vancouver, B. C.

Dear Mr. McDougall:

Re: Sustut 1974

Invoice for travelling, mobilization and drilling as follows:

Travelling:

H. Schieweck - May 30th - Travelling Vanc'r, Bear Lake to Sustut - 8 hrs. @ \$8.25	55 <sup>1/2</sup> 164 <sup>1/2</sup> 403 173.05 125.95	\$ 66.00 ✓
A. Quesnel - May 30th - Travelling Vanc'r, Bear Lake to Sustut - 8 hrs. @ \$8.25 ✓ Air Fare		\$ 66.00 ✓ <u>97.00</u> ✓
		<u>163.00</u> ✓
		\$ 229.00 ✓

Drilling:

✓ Hole #91	- A.W. Casing - 144' @ \$8.00	\$ 112.00	
	Core Drilling - 321' @ \$7.20	2,311.20	403
	1 Dip Test	20.00	
	A.W. Casing left in hole - 144' @ \$4.30	60.20	
	1 New A.W. Casing Shoe left in hole	<u>63.25</u>	2,566.65 ✓
Hole #92	- A.W. Casing - 61' @ \$8.00	\$ 48.00	
	Core Drilling - 411' @ \$7.20	2,959.20	403
	1 Dip Test	20.00	
	A.W. Casing left in hole - 61' @ \$4.30	<u>25.80</u>	3,053.00 ✓
Hole #93	- A.W. Casing - 81' @ \$8.00	\$ 64.00	
	Core Drilling - 465' @ \$7.20	3,348.00	403
	1 Dip Test	20.00	
	A.W. Casing left in hole - 81' @ \$4.30	<u>17.20</u>	3,419.20 ✓

Mobilization: Jean-Guy Jolette - May 17th - 9 Hrs. @ \$8.25

Total

E. M. Schussler \$ 9,372.10

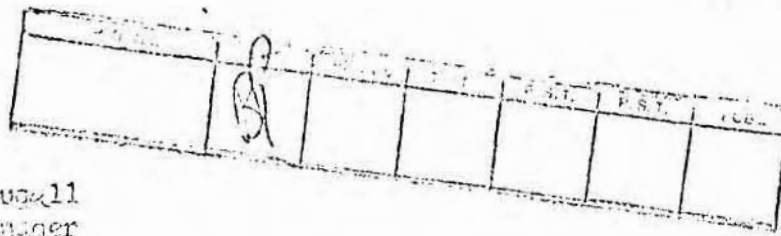
E. M. Schussler  
Sec. Treas.  
S & H Drilling Co. Ltd.



# S&H DRILLING COMPANY LTD.

13135 - 20th Avenue  
 SURREY, B.C. V4A 1Z1  
 Phone 531-4134

June 29, 1974



Mr. J. J. McLougall  
 Exploration Manager  
 Nesfrob Mines Ltd.  
 500 - 1112 West Fender Street  
 VANCOUVER, B.C.

-3.00.00

Dear Mr. McLougall:

Re: Sustut 1974

Following is invoice for further diamond drilling:

✓ Hole #116	✓ Drilling Casing - 10' @ \$8.00	\$ 80.00 ✓	403
	Core Drilling - 362' @ \$7.20	2,606.40 ✓	
	Lip Test	20.00 ✓	\$ 2,706.40 ✓
✓ Hole #117	✓ Drilling Casing - 12' @ \$8.00	\$ 96.00 ✓	
	Core Drilling - 483' @ \$7.20	3,513.60 ✓	
	109' @ \$7.80	850.20 ✓	403
	Lip Test	20.00 ✓	
	✓ PW Casing left in hole - 4' @ \$4.30	17.20 ✓	4,497.00 ✓
✓ Hole #118	✓ Drilling Casing - 6' @ \$8.00	\$ 48.00 ✓	
	Reaming Casing - 4' @ \$2.50	10.00 ✓	
	Core Drilling - 372' @ \$7.20	2,678.40 ✓	
	Lip Test	20.00 ✓	403
	✓ PW Casing left in hole - 6' @ \$4.30	25.80 ✓	
	1 Worn Casing Shoe - 50% of \$63.25	31.63 ✓	2,813.83 ✓
Tractor Time - J.I. 350 for May 1974 - rent		\$ 200.00	
	M. McFen-16 - May 11, 15 & 16 @ 9 hrs. = 27 hrs.		
	May 17 5 hrs. 5 "		
	May 27 & 28 6 hrs.		
	May 29, 30 & 31 21 hrs.		
	27 hrs. @ \$8.00 per hr.	216.00 ✓	
		32 hrs 256.00 ✓	
			672.00 *
			\$ 10,669.23
			-100.00
			\$ 10,289.23

Less rent for J.I. 350 shown on invoice of June 21/74

Total this invoice

\$ 10,289.23

Copy Made

Yours truly,

*E. M. Schussler*  
 (Mrs.) E. M. Schussler  
 ec. Treas.

DISTRIBUTION

& H Drilling Company Ltd.

A P P E N D I X    B

DERIVATION OF INDIRECT COSTS OF SUSTUT DRILLING

DERIVATION OF INDIRECT COSTS OF SUSTUT DRILLING

	<u>As Paid to June 30</u>	<u>Est. to Completion of Job August 15</u>	<u>Total</u>
1) <u>1974 Season Operating Expenses</u>	\$	\$	\$
<u>General and Geology</u>			
A) Salaries and wages for G. Harper, supervision; B. Downing and J. Wilson, qualified geologists logging core; G. Thomassen and D. Rondeau, surveyor and helper controlling DDH layout; R. Macphee, camp manager - expediter.	25,709	10,000	35,709
B) Field expenses - sundry supplies, repairs and communications.	914	200	1,114
C) Local transportation - 206B helicopter support for camp.	1,215	1,000	2,215
D) Travelling and expenses to and from Sustut - Vancouver for ancillary staff - C.P. Air, N.T. Air.	451	450	901
<u>Diamond Drilling</u>			
E) Field expenses - core boxes.	3,339	700	4,039
F) Local transportation - 206B, FH1100, S58T helicopters for moving drills between set-ups.	21,537	5,000	26,537
G) Travelling expenses: Vancouver - Sustut for drill crew, mobilization time for snow removal opening camp, maintenance of equipment, C.P. Air/ N.T. Air tickets, helicopter transportation of personnel - airstrip to camp.	18,593	7,000	25,593
<u>Camp Operation</u>			
H) Salaries and wages - cooks X 2.	3,280	2,000	5,280
I) Camp supplies, less meal charge-outs to S & H Drilling Co.	6,763	5,000	11,763
Totals	<u>\$81,801</u>	<u>\$31,350</u>	<u>\$113,151</u>

2) 1973 Stockpile of Fuel for 1974

A) Transportation - truck Fort St. James - Johanson Lake.	\$ 2,506	
B) Helicopter (S58T and 206B) Johanson Lake - Sustut.	4,496	
C) Labour for loading and unloading	500	
Total	\$ 7,502	= \$6.53

Drilled footage in 1974:

to June 30	-	15,000 ft.
to July 24	-	19,000 ft.
est. to completion	-	25,000 ft.

∴ Unit indirect cost per foot ('74 costs) = \$4.83

3) Capital Cost of Camp Construction in 1973 \$72,250

4) <u>Initial Mobilization of Drilling Equipment in 1973</u>	10,000
Total	\$82,250

Total drilling on property '73 and '74 48,000 ft.

∴ Unit indirect cost per foot ('73 costs) = \$1.71

Total indirect costs/ft.	=	\$6.54
=====		=====

A P P E N D I X C

DRILLING CONTRACT

DRILLING CONTRACT

FORM 2

THIS AGREEMENT made as of the 22nd day of March, 1974

BETWEEN:

WESFROB MINES LIMITED

#500 - 1112 West Pender Street  
Vancouver 1, B.C.

V6E, 2S3.

(hereinafter called "the Company")

OF THE FIRST PART

- and -

S & H Drilling Company Limited,

13135 - 20th Avenue,

Surrey, B.C. V4A, 1Z1.

(hereinafter called "the Contractor")

OF THE SECOND PART

WITNESSETH that in consideration of the payments to be made by the Company and of the premises and mutual promises and agreements herein contained, the parties hereto agree as follows:

1. Introduction

The Contractor agrees to perform forthwith certain piping and diamond drilling (hereinafter sometimes called the "Work") on the land of the Company situated in the District of Comex Mining Division in the Province of British Columbia and known as the Sustut Property.

2. Property

The Company shall allow the Contractor, at the Contractor's discretion, to look over the property and area to be drilled, and where possible shall indicate the position of set-ups. The Company shall at its own expense provide all rights of way, all rights of ingress or egress and all real property that may be required in connection with the Work including real property upon which all necessary temporary buildings may be erected, and other facilities required, and shall also warrant the quiet and peaceful possession of all such real property.

During the course of the Work, the Contractor shall at all times keep the Company's premises free from accumulation of waste material or rubbish and upon completion of the Work shall remove all tools, scaffolding, surplus materials and rubbish and leave the premises in a clean condition. It is the Contractor's responsibility to comply with the standards specified in the B.C. Litter Act to the satisfaction of the Company's representative.

3. Diamond Drills

The Contractor agrees to supply four diamond drilling outfits together with the necessary men and supplies to carry on the Work to operate 20 hours per day 7 days per week and to pay all expenses of the Work not otherwise provided for in this Agreement. All machines must be mobilized and ready to start drilling at the site not later than July 1st 19 74.

4. Footage

The Contractor agrees to sink by piping and/or bore by core drilling 16,000 lineal feet of AQ core drilling and the Company guarantees to the Contractor an aggregate minimum footage only of 16,000 lineal feet, holes to be not less than 150 lineal feet or not greater than 2000 lineal feet in depth, measurements to be taken from the top of the casing pipe.

It is agreed that no hole shall be flatter than fortyfive (45) degrees.

If the Contractor and the Company's Representative mutually agree that loose and caving material will prevent successful completion of a hole, the Contractor shall not be obligated to drill to any specified depth.

5. Price per Foot for Piping

The price per foot for piping in overburden for AQ drilling shall be charged at the following rates:

From 0 feet to 25 feet in depth..... \$8.00 per foot  
Beyond 25 feet is cost plus 15%



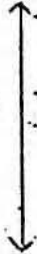
6. Pipe and Casing

It is agreed that the cost of all material lost or left in holes while driving pipe or drilling shall be borne by the Contractor.

However should the Company's Representative instruct the Contractor to leave any pipe or casing in the holes, the Company will pay for the same at cost per foot, FOB drill site.

It is agreed that if a hole requires reaming to allow drilling to proceed, the Company will pay the Contractor at the following rates:

From 0 feet to 500 feet in depth.....\$2.50.....per foot



*CH*  
*AS*

7. Price per Foot for Core Drilling

The price per foot for AQ core drilling shall be charged at the following rates:

From 0 feet to 500 feet in depth.....\$7.20.....per foot

500 feet to 1000 feet in depth.....\$7.80.....per foot

1000 feet to 1500 feet in depth.....\$8.80.....per foot

1500 feet to 2000 feet in depth.....\$9.80.....per foot

For holes at the 6300 ft. elevation or higher, there will be an additional charge of 25¢ per lineal foot of core drilling.



*CH*  
*AS*

(a) When the total footage drilled exceeds 16,000 feet, the above prices may be reconsidered.



CH  
JH



(c) Costs: Any reference to COST in the Agreement shall be interpreted as follows: All labour provided by the Contractor will be at the all-inclusive rate of \$8.25 per manhour. All material and supplies provided by the Contractor will be at cost, plus a nominal 15% for handling, accounting, et cetera.

8. Mobilization and Demobilization

It is agreed the cost and expense of moving the Contractor's drills, as well as all equipment, parts, supplies and personnel necessary for the work from Vancouver, British Columbia, to the initial drill site and return thereof from the final drill site to Vancouver, British Columbia, shall be for the Company's account. It is also agreed that the Contractor will supervise operations involved if at all possible, and the Company will remunerate the Contractor for expenses. This includes wages at \$8.25 per man hour and a maximum of one day's travelling time for the Contractor's crews to the first drill site. The above transportation at the Company's expense does not include transportation charges for unscheduled replacement labour or replacement parts, the cost of which shall be borne by the Contractor.

9. Water Supply

The Contractor agrees to pump water against pressures of up to 325 pounds per square inch over distances up to 2000 feet. Pumping over distances and heads in excess of this will be at cost plus 15%.

10. Surveying Holes

The Contractor agrees to supply an Inline Clinometer; test tubes and four percent Hydrofluoric Acid and take tests, for dip angle only, that may be required

by the Company, and the charge per test shall be as follows:

From 0 feet to 1000 feet in depth.....\$20.00.....per test

However should the Company request the use of other types of surveying equipment such as a Pajari Bore Hole Surveying instrument, the Company agrees to have an Engineer on the job and pay the Contractor \$16.50 per hour for the men and equipment for the time required to do the survey and \$8.25 per hour per man while waiting for instructions.



*[Handwritten signature]*

12. Extra Footage

If the Contractor sees fit to back up a hole for reasons of its own and starts to re-drill the hole, such drilling shall be at the Contractor's expense until the hole arrives at the depth previously turned in to the Company.

13. Cementing

(a) It is agreed that the return flow of water must be kept in all drill holes. If a hole requires cementing due to lost water or rock cave the drilling may be stopped to permit cementing but such stoppages shall be only with the consent

of the Company's Representative.

The cost of cement and cementing shall be paid for by the Company at the following rates:

From 0 feet to 1000 feet in depth.....\$200.00.....per cement job

It is agreed that a "cement job" shall include up to three bags of cement; quantities of cement in excess of three bags will be chargeable to the Company at COST.

(b) If it is mutually agreed that drilling mud or drilling mud additives are required, the extra cost of using mud or drilling mud additives will be invoiced to the Company at COST.

(c) It is agreed that any unreasonable delay caused by the necessity of waiting for instructions shall be paid for by the Company at COST.

14. Moving

It is agreed that all costs, other than helicopter charges, of moving from hole to hole shall be borne by the Contractor, except when the move is less than 150 feet when the cost is for the Company's account. No further consideration of costs of moving and setting up shall be given, but the Company agrees to co-operate in every way possible to avoid difficult moves and set-ups.

15. Core

It is agreed that the core shall be kept in boxes provided by the Company and the Contractor shall cover, wire and transport all core from the drill site to a location, designated by the Company's Representative at the time of the site inspection described in Clause 2, at no cost to the Company, except that the Company will pay for helicopter time.

16. Daily Reports

The Contractor agrees to give the Company's Representative carbon copies of all daily diamond drill reports, daily.

17. Camps

The Company will provide camps, and-cookery and will provide board for the Contractor's Representative(s) at \$3.50 per meal.

18. Workmen's Compensation

The Contractor agrees, at its own expense, to comply with all requirements of the Mechanic's Lien Act, Workmen's Compensation Act, Unemployment Insurance Act, Hours of Work and Vacations with Pay Act and generally all Federal and Provincial Acts and Regulations concerning employment applicable to the Contractor's operations, including obtaining all necessary permits and licenses, and agrees to indemnify the Company against all claims, loss, damages and expenses incurred by the Contractor's failure to make the necessary returns or payments or by any violation of any such Acts and/or Regulations.

19. Payment

Invoices will be rendered twice monthly, and will be due and payable in full in Canadian funds within 30 days after receipt thereof by the Company.

20. Performance and Efficiency

It is mutually agreed that the Company's Representative and Contractor's Foreman will co-operate so that as high a percentage of core recovery will be made as due diligence will allow.

The Contractor shall at all times enforce strict discipline and maintain good order among its employees and shall not retain on the Work, any unfit person or anyone not skilled in the work assigned to him. Any employee of the Contractor who is objectionable or unsatisfactory to the Company shall be removed from the Work and replaced by an employee satisfactory to the Company.

21. Drill Results

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.

22. Regulations

The Contractor shall comply with all laws, ordinances, rules, safety and other regulations bearing on the conduct of the Work and shall bear all costs arising from any violation thereof. The Contractor shall comply with all laws, ordinances and rules concerning pollution.

The Company agrees to consider an adjustment in the prices set forth in Clauses 5, 6 and 7 of this Agreement in the event that the Contractor incurs

additional costs attributable to laws which were not in effect at the date of execution of this Agreement.

23. Protection of Persons and Property

(a) The Contractor shall take all reasonable precautions against risks of loss of life or injury to its employees or the Company's employees or any other person employed at the site of the Work, or to authorized visitors.

(b) The Contractor shall take all responsible precautions to protect the property of the Company and of other Contractors, if any, from all injury arising in connection with this Agreement and the performance of the Work.

(c) The Contractor shall indemnify and save harmless the Company from and against any and all claims, damages, loss, cost, expenses, actions and suits arising as a consequence of any illness, injury or death of any employees of the Contractor, however caused. The Contractor shall hold the Company harmless from any third party claims or personal injuries, death or property damage arising out of the failure of the Contractor, its Sub-Contractors, agents or employees to fully comply with any term or condition of this Agreement or caused by or arising out of or in connection with, whether directly or indirectly, the Work under this Agreement, or by reason of any matter or thing done, permitted or omitted to be done by the Contractor, its Sub-Contractors, agents or employees and whether or not occasioned by the negligence of the Contractor, its Sub-Contractors, agents or employees.

(d) The Contractor shall be liable for all loss and damage to the property of the Company, including property of the Company in the care, custody or control of the Contractor or occupied or used by it, caused by or arising out of directly or indirectly the negligence of the Contractor, its Sub-Contractors, agents or employees.

24. Employees

(a) The Contractor shall comply with all provisions of the Annual Holidays Act, Hours of Work Act, Human Rights Act, Labour Regulations Act, Male Minimum Wage Act, Payment of Wages Act, and Workmen's Compensation Act, the Unemployment Insurance Act, the Income Tax Act of Canada and all other applicable statutes and regulations of Canada and its executive and administrative agencies and all applicable trade and union agreements respecting wages and working conditions of the Contractor's employees engaged on the Work, and make all payments, contributions;

deductions and other remittances and all reports, returns and statements required of employers under such laws and agreements, and cause its Sub-Contractor(s), if any, to comply with the foregoing requirements with respect to such Sub-Contractor(s) employees.

(b) The Contractor shall indemnify and save harmless, the Company from and against any costs, loss, liability, obligation or lien which may arise as a consequence of or grow out of any failure by the Contractor or any of its Sub-Contractor(s) fully to comply with the provisions of Clause 24 (a) hereof.

25. Notices

Any notice desired or required to be given hereunder may be sent by pre-paid registered mail addressed:

- (a) To the Contractor at: 13135 - 20th Avenue,  
Surrey, B.C., V4A,1Z1.
- (b) To the Company at: #500 - 1112 West Pender Street  
Vancouver 1, B.C., V6E,2S3.

or may be delivered to such respective addresses and any such notice shall be deemed to have been received on the day of its mailing or delivery.

26. Insurance

The Contractor shall at its own expense maintain such insurance as will protect it from all claims and damages for personal injury, including death resulting therefrom, and from all claims for property damage arising from the operations under this Agreement in an amount not to exceed five-hundred-thousand dollars (\$500,000.00) inclusive for personal injury and two-hundred-fifty-thousand dollars (\$250,000.00) for property damage for all liabilities for any one accident or occurrence. Certificates of such insurance shall be filed with the Company upon request.

27. Obligation of Contract

This Agreement shall be binding upon the parties hereto, their respective heirs, personal representatives, successors and permitted assigns, but shall not be assigned by the Contractor without the written consent of the Company.

28. Time is of the essence of this Agreement.

29. Delays

In complying with the obligations of this Agreement neither the Company nor the Contractor shall be responsible for delays caused by labour disputes, strikes, fire, unusual delay by common carriers or unavoidable casualties, or

without limitation to any of the foregoing, by any cause of any kind whatsoever beyond their control.

IN WITNESS WHEREOF the Parties hereto have executed this Agreement under their respective corporate seals and the hands of their respective proper officers duly authorized in that behalf.

SIGNED, SEALED AND DELIVERED  
in the presence of:

F. Mitchell

WESROB MINES LIMITED

By \_\_\_\_\_

By \_\_\_\_\_

By [Signature]

S & H Drilling Company Limited

By [Signature]

A P P E N D I X D

DIAMOND DRILL HOLE LOGS

Nos. 91, 116, 118



NORTH 48,635.40 STARTED May 28, 1974  
 EAST 50,680.60 COMPLETED June 1, 1974  
 ELEV. 5,697.52 LENGTH 335'

# FALCONBRIDGE DIAMOND DRILL RECORD

PURPOSE To determine Cu. HOLE No. # 91  
grade through pyroclastic CLAIM # 7

SUCCESSION \_\_\_\_\_ SECTION \_\_\_\_\_

LOGGED BY J. Wilson OFFSET \_\_\_\_\_

BEARING \_\_\_\_\_

PROPERTY  
SUSTUT CLAIMS P.N. 403

DIP Collar -90°, Acid test @ 335' = -90°

S & H BBS 1 - AQ

*W. Brown* P. Eng. PLOTTED \_\_\_\_\_

FOOTAGE	DESCRIPTION	SAMPLE	FOOTAGE	C. L.				
0 - 14'	Casing; bedrock @ 13; 13' of snow.							
13 - 39'	RRG aggl. (40-50-10). Rounded to angular clasts, mostly sub-rounded; to 25 cm, mostly 3 cm. Andesites, chloritized clasts, augite ppy, minor trachyandesites.							
Core Recovery 13-335' = 100%	Fractures : 13-39' 2-3/ft. 5°, 25°, 55° 10% w. calc-qtz. (15' 5 mm. qz vein @ 5°; 17-22 5/ft. 50°; 26.5-27.5 9/ft. 40°).							
	Epidote Alt. Mod. 22-23, 25-26, 27-31, 34-35.							
39 - 112'	GG aggl. (60-40). 5% red clasts in top 3 ft. Clasts as above plus felsic fragments, fs. ppy.							
	Fractures : 39-40' 4/ft. 50° 45-46 4/ft. 25° 40° 51-80' 1-2/ft. 35° 40° 10% with calc-qz veins. (64-66 1-2 in blocks; 82-84 2 in. blocks; 90-92 6/ft. 50°; 94' - 10° 2 mm. calc-qtz. fracture).							
	Epidote Alt. Weak 107-112 Moderate 41-43							
112 - 288'	GGR aggl. (50-45-5). Clasts as above. Large fs. ppy clasts : 193.7-195.6							
	Fractures : 125-136 0.5/ft. 10° 45° 136-160 2-3/ft. 45° 60° (139.5-140 15° fracture zone w. calc. qtz. pink mineral; 142.5-143 epi.-qtz-calc. shear @ 50°; 149 5 mm qz-epi. vein @ 45°)							

FOOTAGE	DESCRIPTION	SAMPLE	FOOTAGE	C.L.				
170-190'	2-3/ft. 55° 75° minor calc. qtz. (176-3 cm. epi-qz shear @ 70°).							
190-201'	1/ft. 55° (200' 5 cm. epi-qz. shear @ 75°)							
201-204'	4/ft. 65°							
204-207'	epidotized shear w. 2 mm. qtz. veins							
207-258'	1-2/ft. 30° 70° w. calc. qtz. (238-240 8/ft. 65° w. pink min, calc; 241 10° fr; 246-248 5/ft. 65°).							
258-268'	4-5/ft. 45° 80° w. qtz. calc. pink mineral							
268-288'	1-2/ft. 35° 55° w. epidote							
<u>Epidote Alt.</u>								
Weak	112-113, 120-122, 240.5-241.5							
Mod.	151.8-152, 215-222, 257-265							
Strong	142.5-143, 151.2-151.4, 204-207.5, 234.7-235.1, 265-285							
288-335'	GGR aggl. (60-30-10). Usual clast dia. = 1 cm.							
<u>Fractures :</u>								
288-299'	2-3/ft. 40° w. pink mineral							
299-310'	6/ft. 30° 45° w. epidote, qtz. (304.7 2 cm. epi. vein @ 45°.							
310-316'	1/2-1 in. blocks, epidotized shear.							
318-318.4	epidotized shear? @ 75°							
319-335'	0.5-1/ft. 30° 50° w. epi, pink min. calc. (332' 5° fracture; 334.8)							
<u>Epidote Alt.</u>								
Weak	323-333							
Moderate	297-300, 304-305, 333-335							
Strong	311-314, 318-318.4, 319.7-321.5 80° slickenside on qtz-epi.							
335'	END OF HOLE							

NORTH 48,603.94 STARTED June 20, 1974  
 EAST 50,275.30 COMPLETED June 22, 1974  
 ELEV. 5,574.51' LENGTH 372'  
 BEARING \_\_\_\_\_

# FALCONBRIDGE DIAMOND DRILL RECORD

PROPERTY

SUSTUT CLAIMS P.N. 403

PURPOSE To determine Cu. grade through pyroclastic succession. HOLE No. # 116  
 CLAIM Sustut # 7  
 SECTION \_\_\_\_\_

LOGGED BY J. Wilson OFFSET \_\_\_\_\_

DIP Collar: -90°; Acid Test 372' = 88° 30'

S & H BBS-1 AQ Core

*J. Wilson P. Eng.* PLOTTED \_\_\_\_\_

FOOTAGE	DESCRIPTION	SAMPLE	FOOTAGE	C. L.		
0 - 10'	Casing. Bedrock @ 9', 4' of snow. Casing removed 5' of l/b. = boulders of Aggl.					
9 - 252'	GGR Aggl. (50-45-5). w. 10% red clasts : 13'-18'. Clasts rounded to sub-angular; to 40 cm. usually 2 cm dia. Andesites, augite ppy. trachyandesite, chloritized clasts.					
Core Recovery 9-360' = 100% 360-370 = 85% 370-372 = 100%	Fractures: 9-67' 2-3/ft. 5° 15° 60° w. minor qtz. pink coatings. 67-71' stockworks, shear? w. qtz. epi. 71-102' 4/ft. 15° 40° 60° w. qtz. calc. (92-93 shear @ 25°) 102-180' 1-2/ft. 30° 55° 70° w. qtz. (112-114 1 cm. qtz. vein @ 5°; 152.3 cm qtz.-epi. vein @ 50°; 159.5 1 cm. qtz. epi. vein @ 50°). 180-196' 4/ft. 30° 70° w. qtz. calc. epi. 196-219' 2/ft. 55° 75° w. qtz. 219-252' 4/ft. 20° 40° 70° w. qtz. epi. (242.5-244 1/2 to 2 inch blocks)					
	Epidote Alt. Weak 51-69' Mod. 69-73' Strong 242-244; 247-249					
252 - 285'	RRG Agglomerate (50-45-5)					
285 - 372'	GG Agglomerate (70-30) w. less than 5% red fragments. Reddish matrix : 285-301					

FOOTAGE	DESCRIPTION	SAMPLE	FOOTAGE	C.L.				
	<p><u>Fractures :</u></p> <p>252-287' 1/ft. 20° 50° minor pink coatings, qtz.</p> <p>287-294' 10/ft. 25° 55° 65° calc-qtz.veins to 2 mm.</p> <p>294-363' 4/ft. 45° 75° (303-304 1 cm. qtz.-calc.-epi. vein @ 5°; 320-321 10/ft. 50° w. epi.; 325 2 cm. qtz.-epi. vein @ 80° ).</p> <p>363-372' 1/2 - 2 in. blocks, chips. fractures @ 15° 45° 80°</p> <p><u>Epidote Alt.</u></p> <p>Weak 356-361</p> <p>Mod. 303-304</p>							
372'	END OF HOLE							

NORTH 48,208.35 STARTED June 23, 1974  
 EAST 50,279.35 COMPLETED June 25, 1974  
 ELEV. 5,564.33' LENGTH 378'  
 BEARING \_\_\_\_\_

# FALCONBRIDGE DIAMOND DRILL RECORD

PROPERTY

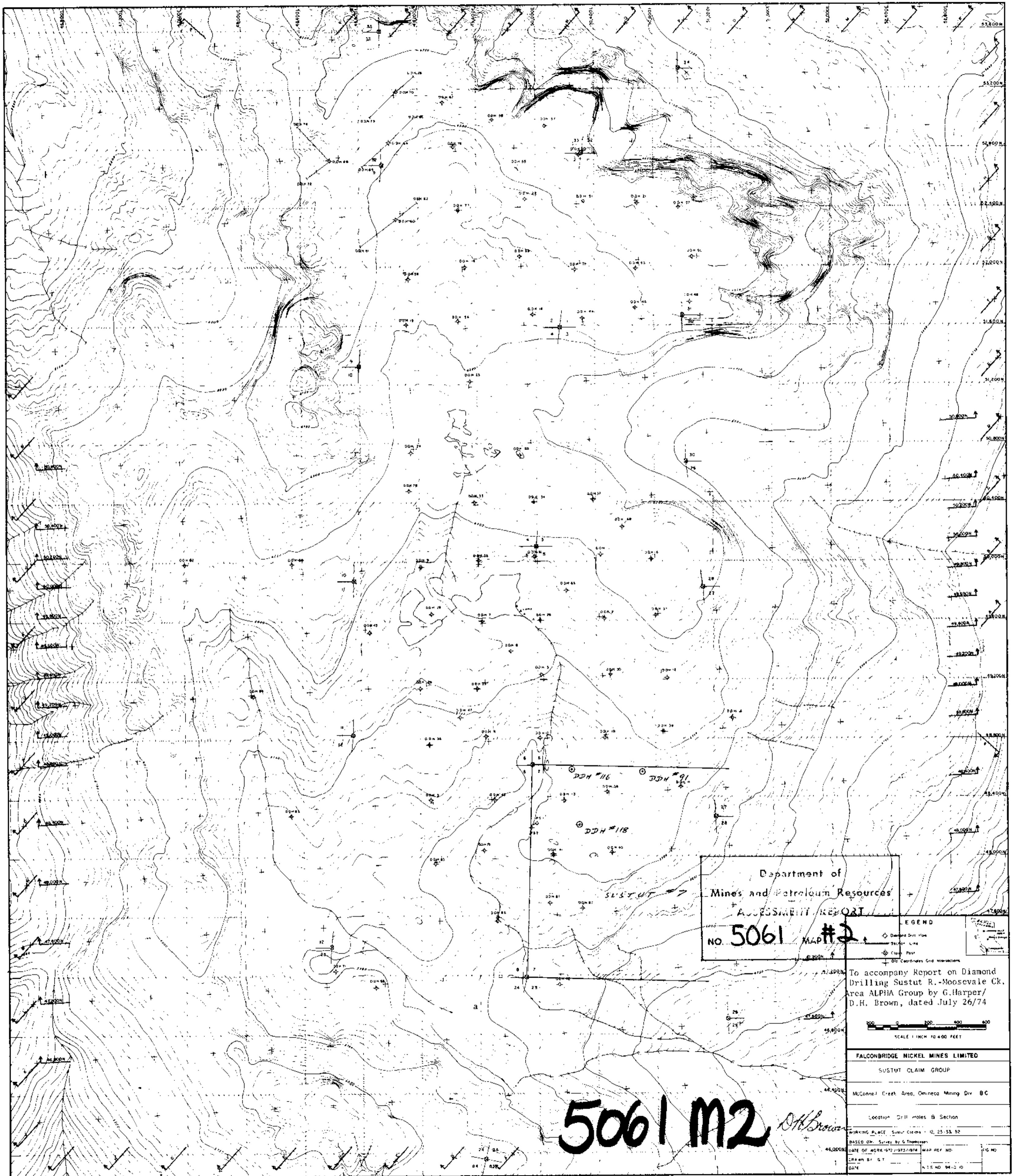
PURPOSE To determine Cu. HOLE No. # 118  
grade through pyroclastic CLAIM Sustut # 7  
 succession. SECTION \_\_\_\_\_  
 LOGGED BY B. Downing OFFSET \_\_\_\_\_  
*N.H. Brown* PLOTTED \_\_\_\_\_

DIP Collar : -90°; Acid Test 378', -90°

SUSTUT CLAIMS P.N. 403  
S & H. B.B.S. 1, AQ Core

FOOTAGE	DESCRIPTION	SAMPLE	FOOTAGE	C. L.				
<u>0 - 10'</u>	Casing. 0 - 8.5' snow. Bedrock at 8.5'. Casing pulled.							
<u>8.5 - 72'</u>	RRG agglomerate (50-40-10). Sub-angular to sub-rounded clasts up to 10 cm. across, predominantly < 4 cm. of variable composition, basalt, andesite, aug. porph. basalt plag. porph. basalt, felsic, anygdaloidal volcanic. 9-20; 24-54', wk-mod. epidotized matrix. Fractures : Open 8.5-76' 10-30°. 1-2/5 ft.; 30-50°, 6-8/5 ft.							
<u>72 - 76'</u>	GGR agglomerate (50-40-10) as above. 73-73.5' sheared agglomerate at 30°							
<u>76 - 139'</u>	RRG agglomerate (50-40-10) as above. 79-80' interstitial qtz. 82-120' wk. mod. epidotized matrix 123-125' wd. epidotized matrix 100-108' minor graded bedding at 70°, tops upright, hem. partings at top. Fractures : Open 76-180' 10-30' 2-3/5 ft.; 30-50°, 3-4/5 ft.							
<u>139 - 209'</u>	GRG agglomerate (50-30-20) 148-153.3' network ep. veinlets 210.5-218'; 219-220', wk. ep. matrix 209.5-216.5'; 218-219'; 220-223.5'; mod. ep. matrix							
<u>209 - 265'</u>	RRG agglomerate (50-40-10) as above. 226-232' wk. epidotized matrix							

FOOTAGE	DESCRIPTION	SAMPLE	FOOTAGE	C.L.				
	<p><u>Fractures</u> : Open</p> <p>180-243' 10-30<sup>0</sup>, 2-3/5 ft.; 30-50<sup>0</sup>, 3-4/5 ft. 50-90<sup>0</sup>, 2-3/5 ft.</p> <p>243-270' 10-30<sup>0</sup>, 2-3/5 ft.; 30-50<sup>0</sup>, 3-4/5 ft.</p>							
<u>265 - 360'</u>	<p><u>GGR agglomerate</u> (50-40-10) as above.</p> <p>330-360' diabase clasts prominent, not altered.</p> <p>350-358' wk. epidotized agglomerate.</p> <p>331-332'; 333-341'; 346-350'; mod. epidotized/altered agglomerate.</p> <p><u>Fractures:</u> Open</p> <p>270-320' 10-30<sup>0</sup>, 3-4/5 ft.; 30-50<sup>0</sup>, 6-7/5 ft. (many frs. show slip planes with chl. slickensides).</p> <p>272-278' brecciated agglomerate, wkly. altered.</p> <p>304.4-304.6' carb.-qtz. vein, vuggy, cal. xtals.</p> <p>271.3'; 273.5'; 277.3'; 283'; 285'; 302'; intense shearing at 45<sup>0</sup>; 20<sup>0</sup>; 20<sup>0</sup>; 20<sup>0</sup>; 20<sup>0</sup>; 30<sup>0</sup> respectively.</p>							
<u>360 - 378'</u>	<p><u>RRG agglomerate</u> (50-45-5)</p> <p>362.5-364.5'; mod-intense altered/epidotized agglomerate</p> <p>368-370' wk. - mod. ep. matrix</p> <p><u>Fractures</u> : Open</p> <p>320-378' 10-30<sup>0</sup>, 2-3/5 ft.; 30-50<sup>0</sup>, 3-4/5 ft.</p>							
<u>378'</u>	<p><u>END OF HOLE</u></p>							
	<p><u>CORE RECOVERY</u></p> <p>8.5 - 20' 95%</p> <p>20 - 35' 100%</p> <p>35 - 38' 75%</p> <p>38 - 60' 100%</p> <p>60 - 70' 90%</p> <p>70 - 130' 100%</p>							



Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. 5061 MAP #2

LEGEND  
 ◊ Diamond Drill Hole  
 --- Section Line  
 ⊕ Claim Post  
 + D.M.C. Coordinates Grid Intersections

To accompany Report on Diamond Drilling Sustut R.-Moosevale Ck. Area ALPHA Group by G. Harper/D.H. Brown, dated July 26/74



FALCONBRIDGE NICKEL MINES LIMITED  
 SUSTUT CLAIM GROUP  
 McConnell Creek Area, Omineca Mining Div. BC  
 Location: Drill holes B Section  
 WORKING PLACE: Sustut Claims - 12, 25-53, 52  
 BASED ON: Survey by G. Thompson  
 DATE OF WORK: 1972-1973-1974  
 DRAWN BY: G.T.  
 DATE: N.T.S. NO. 94-10

5061 M2 *D.H. Brown*

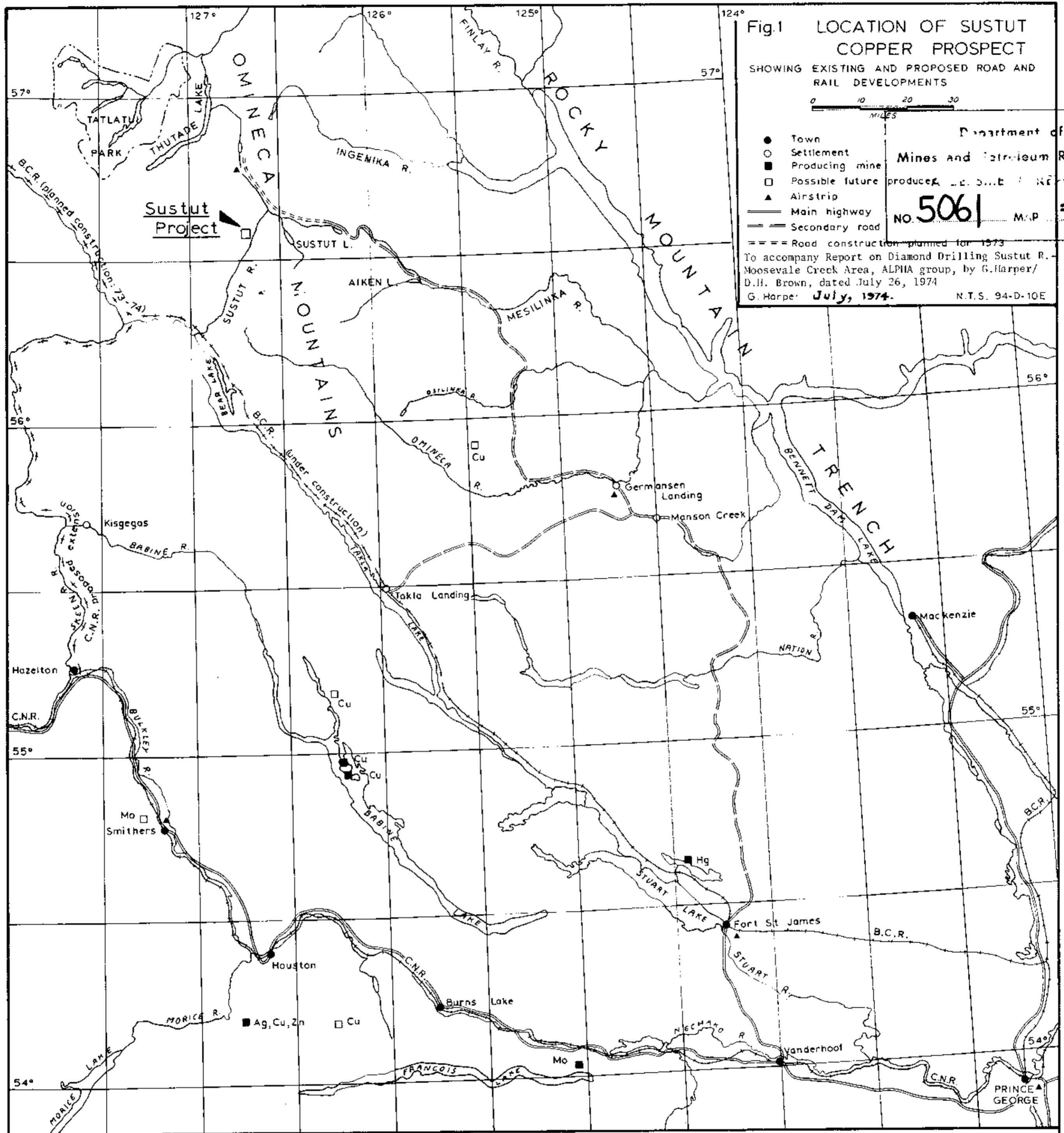


Fig.1 LOCATION OF SUSTUT COPPER PROSPECT

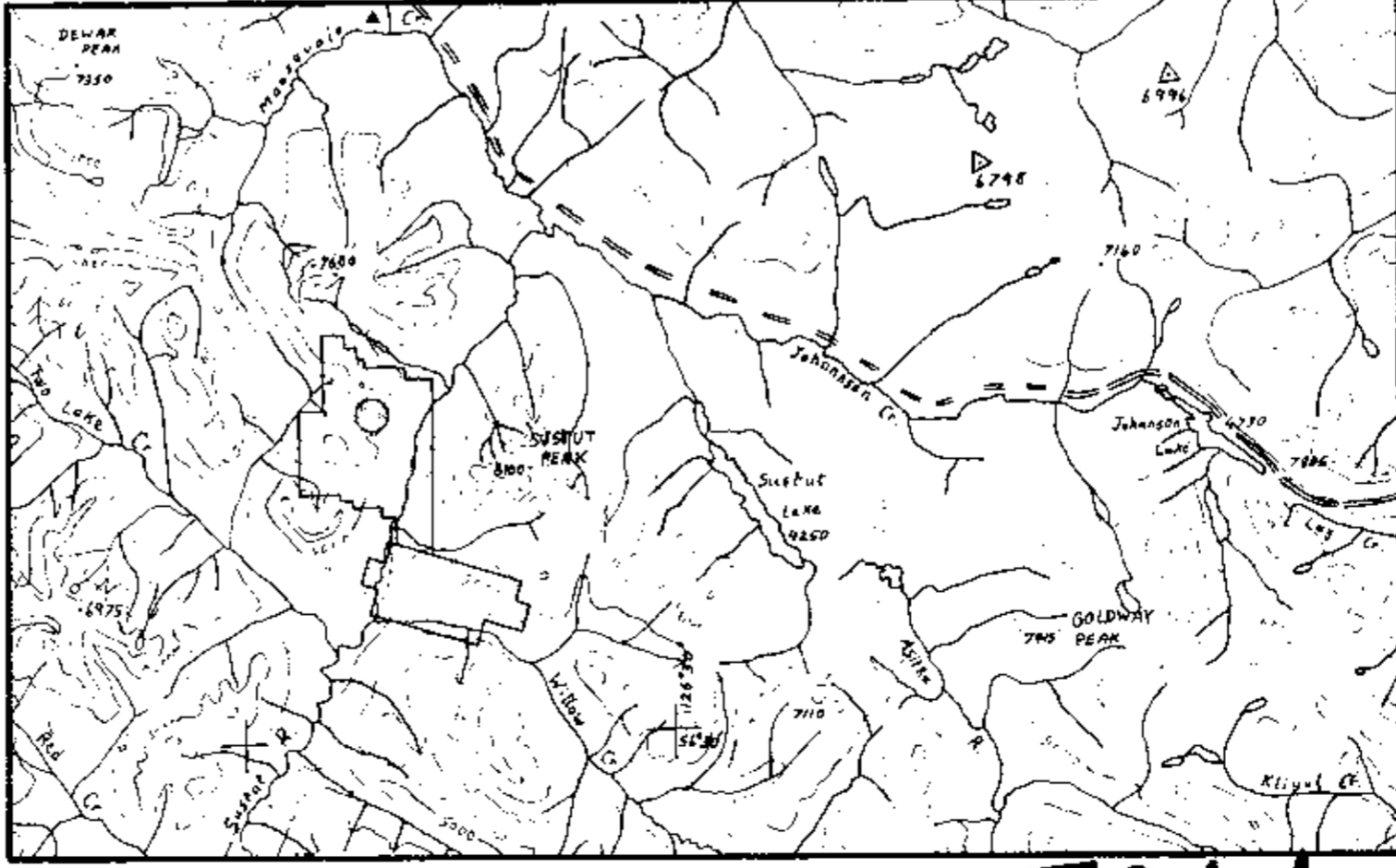
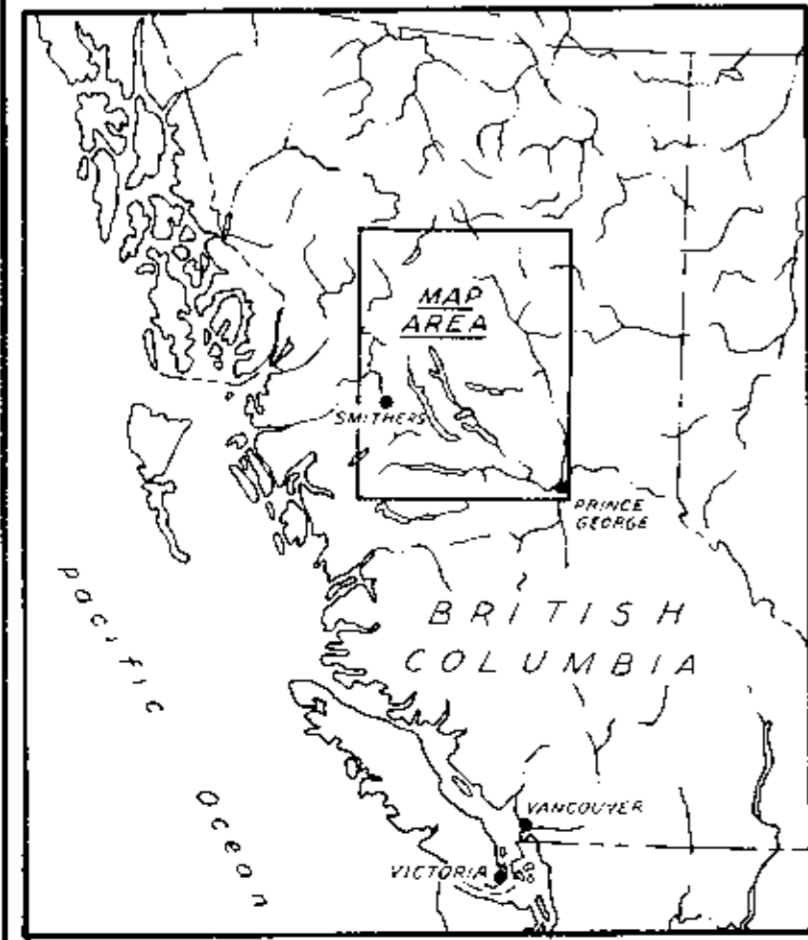
SHOWING EXISTING AND PROPOSED ROAD AND RAIL DEVELOPMENTS



Department of  
Mines and Petroleum Resources  
Productive Resource Report  
NO. 5061 M.P. #1

● Town  
○ Settlement  
■ Producing mine  
□ Possible future  
▲ Airstrip  
— Main highway  
— Secondary road  
- - - Road construction planned for 1973

To accompany Report on Diamond Drilling Sustut R. Moosevale Creek Area, ALPHA group, by G. Harper/D.H. Brown, dated July 26, 1974  
G. Harper: July, 1974. N.T.S. 94-D-10E



LOCATION OF SUSTUT CLAIM BLOCK  
Area of 1974 diamond drilling shown by circle

*D.H. Brown*

5061 M1