

# 5476

COMINCO LTD.

EXPLORATION

N.T.S. 92H/5

WESTERN DISTRICT

DIAMOND DRILLING REPORT

SENECA 1-74, AND 3-74 CLAIM GROUPS

CHEHALIS RIVER

NEW WESTMINSTER MINING DIVISION

MAY 29, 1975

D. L. Cooke, Ph.D., P.Eng.

PERIOD OF WORK

MARCH 4, 1975 to May 29, 1975

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT

NO. 5476 MAP

IN THE MATTER OF THE

B.C. MINERAL ACT

AND

IN THE MATTER OF A DIAMOND DRILL PROGRAMME CARRIED OUT ON THE MINERAL CLAIMS LUCKY JIM, AND HARRISON 2, OF THE SENECA CLAIM GROUPS 1-74, AND 3-74 RESPECTIVELY LOCATED ON THE CHEHALIS RIVER IN THE NEW WESTMINSTER MINING DIVISION OF THE PROVINCE OF BRITISH COLUMBIA

MORE PARTICULARLY N.T.S. 92H/5

A F F I D A V I T

I, DAVID L. COOKE OF THE CITY OF VANCOUVER IN THE PROVINCE OF BRITISH COLUMBIA, MAKE OATH AND SAY:

1. THAT I AM EMPLOYED AS A SENIOR GEOLOGIST BY COMINCO LTD. AND, AS SUCH, HAVE A PERSONAL KNOWLEDGE OF THE FACTS TO WHICH I HEREAFTER DEPOSE:
2. THAT ANNEXED HERETO AND MARKED AS "EXHIBIT A" TO THIS MY AFFIDAVIT IS A TRUE COPY OF EXPENDITURES INCURRED ON DIAMOND DRILLING ON THE MINERAL CLAIMS LUCKY JIM, AND HARRISON 2.
3. THAT THE SAID EXPENDITURES WERE INCURRED BETWEEN THE 4th DAY OF MARCH 1975 AND THE 29th DAY OF MAY, 1975 FOR THE PURPOSE OF MINERAL EXPLORATION ON THE ABOVE NOTED CLAIMS.

SWORN BEFORE ME AT THE CITY )  
OF VANCOUVER IN THE PROVINCE )  
OF BRITISH COLUMBIA THIS )  
          29<sup>th</sup>          DAY )  
OF MAY 1975 )

M. Brown )  
A NOTARY PUBLIC IN AND FOR )  
THE PROVINCE OF BRITISH )  
COLUMBIA. )

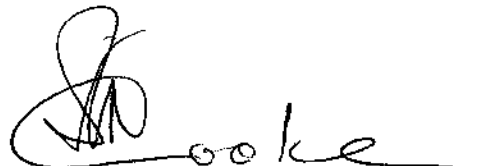
  
\_\_\_\_\_  
DAVID L. COOKE

EXHIBIT "A"

DIAMOND DRILLING COSTS ON  
THE  
SENECA 1-74 AND 3-74 CLAIM GROUPS  
SITUATE AT CHEHALIS RIVER  
49° 22' North Latitude  
122° 00' West Longitude  
N.T.S. 92H/5

SALARIES

A.C. Freeze, Geologist (Mar. 4 to May 29,1975)	74 days @ \$70.	\$ 5,180.00
R.A. Gannicott, Geologist (Apr. 21 to May 29,1975)	34 days @ \$70.	\$ 2,380.00
J.A. Turner, Assistant (Mar.19 to May 13,1975)	54 days @ \$50.	\$ 2,700.00
D.L. Cooke, Sr. Geologist (Mar. 6 to May 29,1975)	15 days @ \$110.	\$ 1,650.00

DOMICILE AND CAMP SERVICES

Hotel and Meals - 146 man days @ approx. \$22.26 \$ 3,250.00

TRANSPORTATION

Redhawk Rental - 3 months @ \$475 \$ 1,425.00  
Maintenance - Gasoline, repair, mileage charges \$ 1,005.00

DRILL SITE PREPARATION

Bulldozer costs: 111 hours @ \$28.00 \$ 3,110.00

DIAMOND DRILLING

Contract Charges/ Shepherd Enterprises Ltd. \$40,900.00

MISCELLANEOUS

Equipment, parts, etc. \$ 590.00

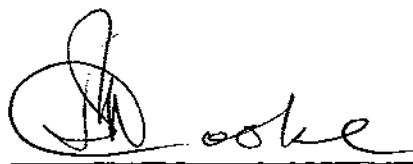
TOTAL COST OF DRILL PROGRAMME: \$62,190.00

TOTAL FOOTAGE DRILLED 3112 feet

COST PER FOOT DRILLED  $\frac{\$62,190}{3112} = \$19.98/\text{Ft.}$

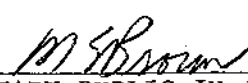
DRILLING COSTS APPLIED AS FOLLOWS

Drill Hole #75-40:	347 ft. NQ @ \$19.98	\$ 6,933.06
Drill Hole #75-41	557 ft. NQ @ \$19.98	\$11,128.86
		<u>\$18,061.92</u>

Signed: 

D. L. Cooke

THIS IS EXHIBIT "A" TO THE STATUTORY DECLARATION OF EXPENDITURES RELATING TO THE DIAMOND DRILL PROGRAMME DECLARED BEFORE ME ON THE 29<sup>th</sup> DAY OF MAY 1975, A.D.

  
A NOTARY PUBLIC IN AND FOR THE  
PROVINCE OF BRITISH COLUMBIA

DRILL DATA FOR DIAMOND DRILL HOLES

#75-40 AND #75-41

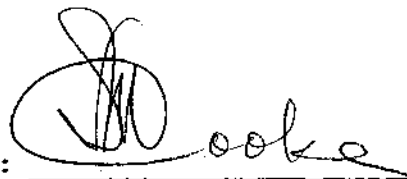
ON THE SENECA PROPERTY

<u>DRILL HOLE</u>	<u>LOCATION</u>	<u>CLAIM GROUP</u>	<u>DIP</u>	<u>BEARING</u>	<u>DEPTH</u>	<u>CORE SIZE</u>	<u>UNIT COST</u>	<u>TOTAL COST</u>	<u>CREDITS</u>
75-40	Harrison # 2	Seneca # 3-74	-90 <sup>o</sup>	--	347'	NQ	\$19.98	\$6,933.06	32yrs
75-41	Lucky Jim	Seneca # 1-74	-80 <sup>o</sup>	053 <sup>o</sup>	557'	NQ	\$19.98	\$11,128.86	50yrs
					Total:	904 ft.		\$18,061.92	82yrs

All drill cores are stored under lock and key in a shack located at the camp site on the Lucky Jim claim.

The locations of the holes have not been surveyed and their elevations are unknown.

Report by:



D. L. Cooke, Ph.D., P.Eng.

Endorsed by:



D. W. Heddle, P.Eng.

Approved for  
Release by:



W. T. Irvine, P.Eng.

DLC/pm  
29 May 1975

COMINCO LTD.

EXPLORATION

WESTERN DISTRICT

MAY 29th, 1975

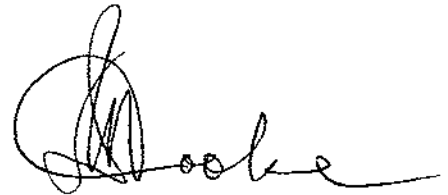
STATEMENT OF QUALIFICATIONS

I, DAVID L. COOKE, WITH BUSINESS ADDRESS AT 2200-200 GRANVILLE SQUARE, VANCOUVER 2, BRITISH COLUMBIA, DO HEREBY CERTIFY THAT I HAVE SUPERVISED THE DIAMOND DRILLING PROGRAMME, AND THE LOGGING OF THE DRILL CORE BY A.C. FREEZE AND R.A. GANNICOTT, GEOLOGISTS, INTERPRETED THE DATA RESULTING FROM SAID PROGRAMME ON THE SENECA PROPERTY.

I ALSO CERTIFY THAT:

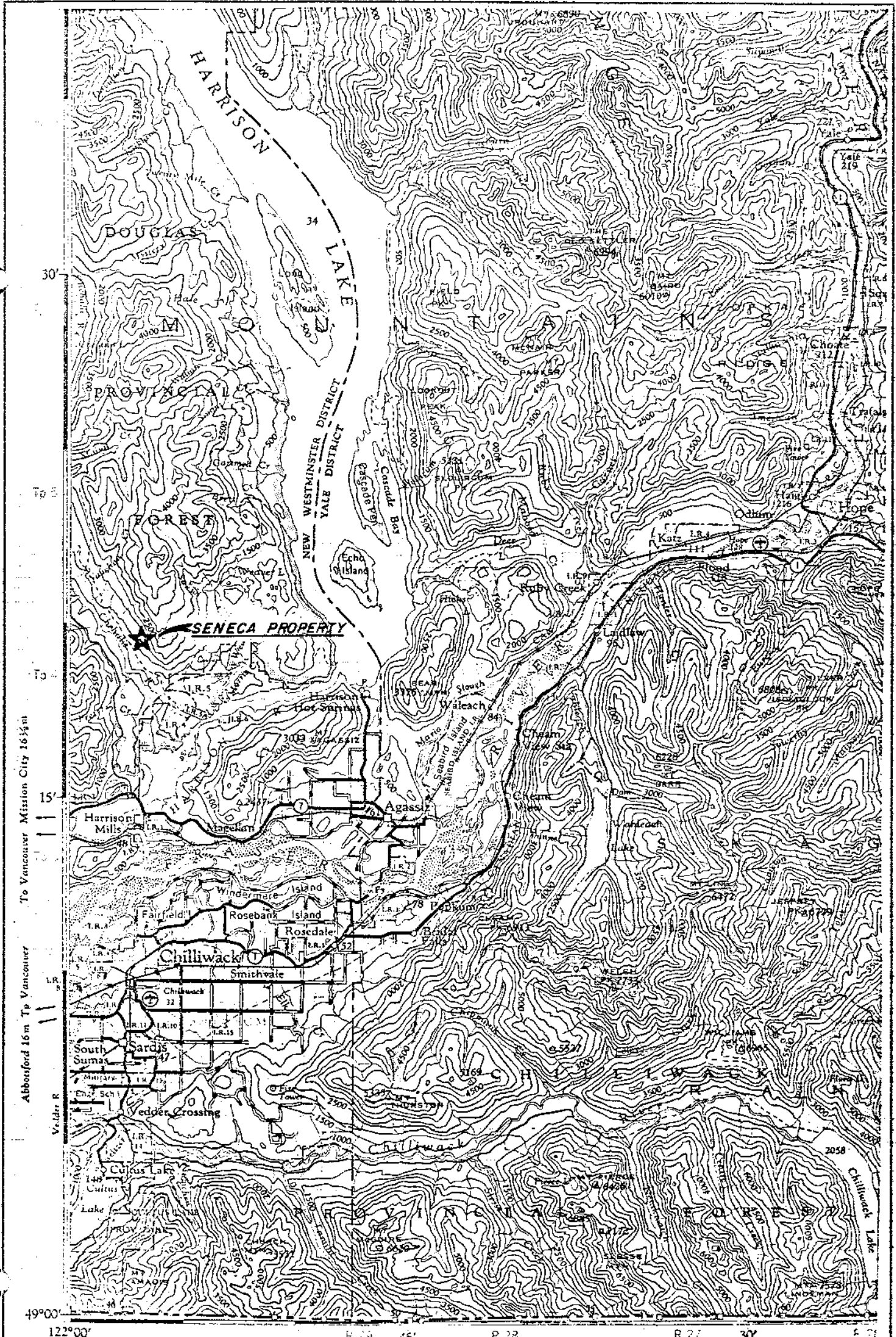
1. I AM A GRADUATE OF THE UNIVERSITY OF NEW BRUNSWICK WITH A B.Sc. DEGREE IN GEOLOGY (1959), AND OF THE UNIVERSITY OF TORONTO, WITH M.A. AND Ph.D. DEGREES IN GEOLOGY (1961 AND 1966 RESPECTIVELY).
2. I AM A MEMBER IN GOOD STANDING OF THE ASSOCIATION OF PROFESSIONAL ENGINEERS OF THE PROVINCE OF BRITISH COLUMBIA.

Respectfully submitted:



D. L. Cooke, Ph.D., P.Eng.

Vancouver, British Columbia



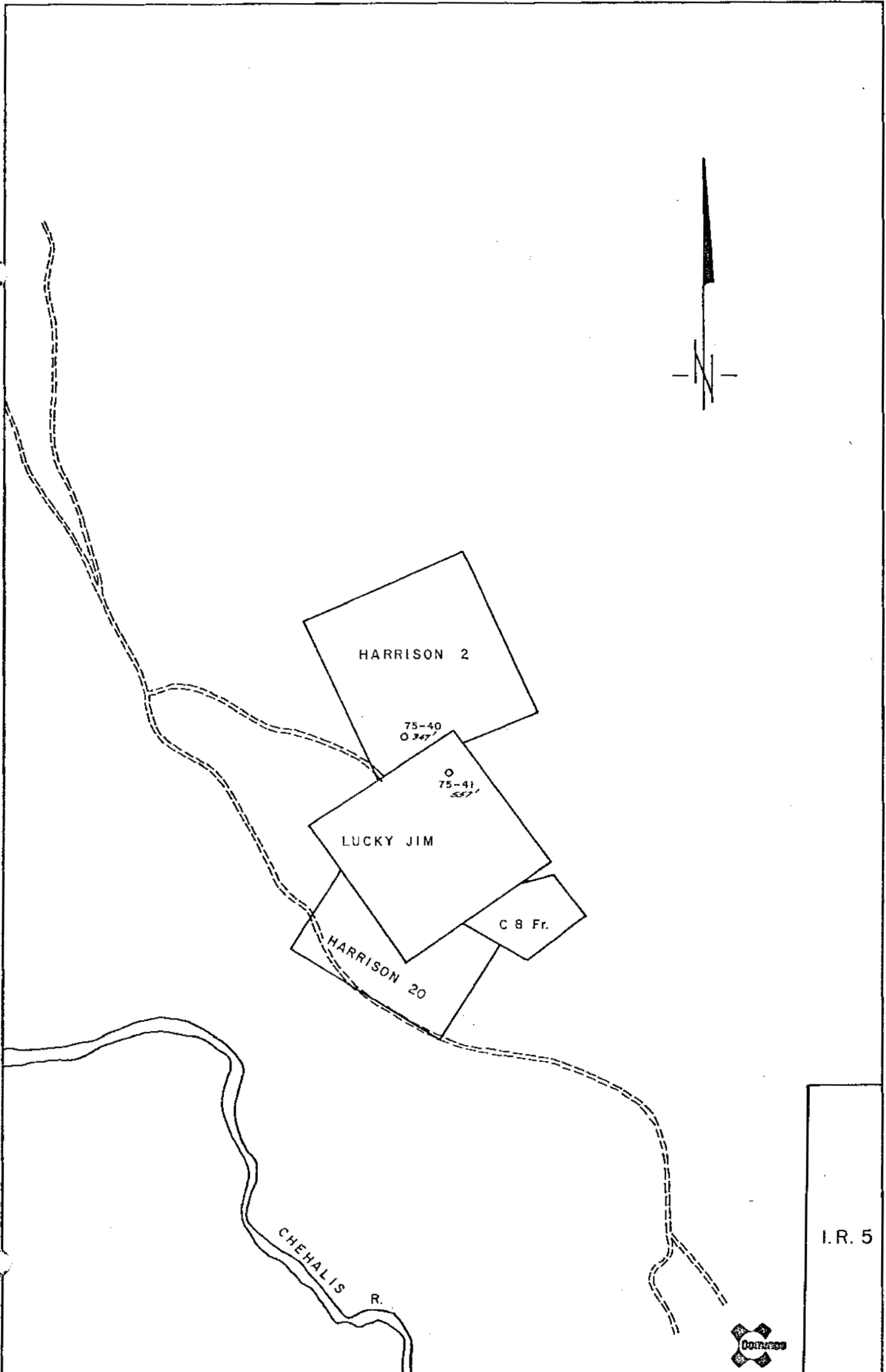
SENECA GROUP 

Drawn by:		Traced by:	
Revised by	Date	Revised by	Date

LOCATION MAP

5876  
MAP 1

Scale: 1" = 4 MILES      Date: FEBRUARY / 71      Plate:



Drawn by:		Traced by: <i>P.M.A.</i>	
Revised by	Date	Revised by	Date

SENECA OPTION **5476**  
DRILL HOLE LOCATIONS **MAP 2**  
1975

N.T.S. 92 H/5

Scale: 1" = 1000'

Date: MAY, 1975

Plate:

Scale

Colour Plot  
& Dips

## Drill Hole Record



Property	Seneca	District	New Westminster	Hole No.	75-40
Commenced	April 21/75	Location	Line 18+00S 4+65E	Tests at	Nil
Completed	April 23/75	Core Size	NQ	Corr. Dip	-90°
Co-ordinates				True Brg.	-
Objective				% Recov.	95+ %
				Logged by	A.C. Freeze
				Date	April 23/75

Claim

T Brg.

Collar Dip  
-90°Elev.  
1098.20'Length  
347'Hole No.  
75-40  
Sheet  
1

Footage From To	Description	Sample No.	Length	Analysis
0 - 13'	Overburden			
13' - 74'6"	Rhyodacite Porphyry			
	- Tr. Py. and Cpy. at (17') and (39'6" - 41')			
	- Chlorite zeolite on fractures			
74'6"- 118'	Andesite - Rhyolite Tuff Breccia			
	- Chloritic specs. not Hanging Wall Marker			
	- Large Breccia fragments of Dacite Porphyry			
	- Trace dissem. Pyrite (93' - 102')			
	- Trace Magnetite			
118' - 120'	Rhyodacite Porphyry			
	- Chlorite and Zeolite on fractures			
120' - 140'5"	Hanging Wall Marker			
	- Dacite - Andesite Tuff to Lapilli Tuff			
	- Coarse clots of Basaltic Chlorite and Zeolite			
	- Some Lapilli sized Rhyolite fragments			
140'5"-149'5"	Rhyodacite Lapilli Tuff - Tuff Breccia			
	- No visible Sulfides			
	- Matrix becomes increasingly acidic towards end			
	- @146'5" Pyritized Rhyolite fragment (1" dia.) - 50% Pyrite			
	- Locally intensely Silica Chlorite altered (Sperulitic Texture)			
149'5"- 151'9"	Chert			
	- Grey green Rubbly Lower Hanging Wall Chert			



## Drill Hole Record



Property	District	Hole No.	75-40
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Footage From To	Description	Sample No.	Length	Analysis						
				Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	
151'9"- 337'	Rhyodacite Porphyry Dyke - Fresh grey green									
	- Eliminates ore zone fragmental - Locally unit is vesicular and alternates between Siliceous and Chloritic									
337' - 347'	Footwall Breccia - Multi lithic acid Lapilli Tuff - Tuff Breccia									
	- Whisps of Chlorite (Footwall Chlorite) - Pyrite in fragments and matrix <1%									
	(344' - 345') Rhyodacite Porphyry									
	END OF HOLE AT 347'									

# Drill Hole Record



Property Seneca District New Westminster Hole No. 75-41  
 Commenced April 24/75 Location Line 24+00S 7+00E Tests at Nil Hor. Comp. 97'  
 Completed May 1/75 Core Size NQ Corr. Dip -80° Vert. Comp. 548'  
 Co-ordinates True Brg. 053° Logged by A.C. Freeze Jr.  
 Objective % Recov. 95+ % Date April 28/75

Claim  
 T Brg. 053°  
 Collar Dip -80°  
 Elev. 1189.64'  
 Length 557'  
 Hole No. 75-41 Sheet 1

Footage From To	Description	Sample No.	Length	Analysis
0 - 7'	Rhyodacite Porphyry - Inclusions of Andesite Tuff Porphyry (Spotted Hematite)			
7' - 11'	Boulder - Hornblende Biotite Granodiorite			
11' - 15'	Rubble			
15' - 27'	- Altered Sandy Andesitic Tuff mixed with Granodiorite Pebbles Alternating Sandy Andesitic Tuff and Andesite Porphyry - 20% Chert and Sandstone within section - Occasional Lapilli sized fragments (Tr. Cpy.)			
27' - 31'	@ 25' large clots of black Basaltic Chlorite Zeolitized crudely foliated Sandy Andesitic to Dacite Porphyry - Whisps to clots of Basaltic Chlorite (29' - 31') - (30.5' - 31') Mixed with grey Chert fragments			
31' - 34'	Rubble - Grey Chert			
34' - 39'	Sandy Andesitic Tuff - Lapilli Tuff intermixed with Chert and Argillaceous Tuffite - Locally Agglomeratic - Occasional Pyrite and Pyrrhotite up to 5% in Darker more Argillaceous units:			
39' - 40'6"	Andesite Feldspar Porphyry - Feldspar Kao.linized, trace Epidote - No Sulfides			

# Drill Hole Record



Property	District	Hole No.	75-41
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.
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Footage From To	Description	Sample No.	Length	Analysis														
40'6"- 43'	Transition Zone Epidotized Andesitic - Dacitic Tuff changing to Rhyodacite Porphyry																	
	- Minor blebs of Chlorite (Magnetite)																	
43' - 90'	Rhyodacite Porphyry Dyke																	
	- Grey siliceous																	
	- Zeolite-Hematite on fractures																	
	- Moderate to intense zeolitization of Feldspars																	
	- Locally crude foliation developed																	
	- 88 - 90 Contact (Hematite development)																	
90' - 94'	Andesite Tuff Breccia																	
	@ 91'6" Angular fragment of Hematized Andesite																	
	- Matrix varies from green sandy Andesitic Tuff to Andesite Porphyry																	
	- 10% Magnetite locally																	
	- Micro fractures throughout																	
94' - 95'	Andesitic Lapilli Tuff																	
	- Fragments of Siltstone within (1 - 5% Pyrite on fractures)																	
95' - 107'6"	Mudstone with lesser Silty and Sandy sections and minor Argillite																	
	- Some contorted bedding due to slumpage or mud dyking																	
	- Trace Pyrite																	

## Drill Hole Record



Property	District	Hole No.	75-41
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim

T Brg.

Collar Dip

Elev.

Length

Hole No.

Sheet 3

Footage		Description	Sample No.	Length	Analysis					
From	To									
107'6"	109'	Multi Lithic Lapilli Tuff - Rhyolite plus Feruginous Chert fragments within Andesitic Matrix - 5% Pyrite and trace Cpy.								
109'	211'	Rhyodacite Porphyry - Hematite on fractures - Scattered Agglomeratic fragments at 160'								
211'	212'	Grey green Andesitic Tuff								
212'	214'	Mudstone mixed with Andesitic Tuff - Some Slumpage Brecciation - ~1% Pyrite as lenses and on fractures								
214'	222'6"	Argillaceous Tuffite with lesser Mudstone <1% Pyrite on fractures - Bedding at 20° to normal of core axis - Local slumpage brecciation - General increase of Mudstone towards end								
222'6"	228'	Mudstone - Few slump Breccia lenses Trace Pyrite on Fractures - Bedding at 10° to normal of core axis								
228'	230'6"	Sandy Mudstone and Argillaceous Tuffite - Bedding contorted								

## Drill Hole Record



Property	District	Hole No.	75-41		Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
Commenced	Location	Tests at	Hor. Comp.								
Completed	Core Size	Corr. Dip	Vert. Comp.								
Co-ordinates		True Brg.	Logged by								
Objective		% Recov.	Date								
Footage	Description	Sample No.	Length	Analysis							
From To											
230'6"- 234'	Sedimentary Breccia - Argillite, Mudstone, Siltstone, Sandstone - Minor Pyrite <0.5% - Some Volcanic component towards end										
234' - 235'	Contorted Andesitic to Dacitic Lapilli Tuff - Grades at end into bedded Sandstone and Sandy Argillaceous Tuffite - Graded bedding @0 - 5° to normal of core axis										
235' - 236'5"	Mudstone - No Sulfides										
236'5"- 237'	Mixed Mudstone and Dacite Crystal Tuff										
237' - 242'6"	Dacite Crystal Tuff - Light green with clots of Feldspar Crystals - Similar to Crystal Tuff unit immediately overlying ore zone - Few Lapilli sized Rhyolite fragments - Bright red Laumontite on fractures										
242'6"- 255'6"	Altered Rhyodacite Porphyry - Locally sugary tuffaceous aspect										
255'6"- 258'	Grey-black Banded Chert - Bedding at 20° - 40° to normal of core axis - Introduction of Andesitic component towards end										
258' - 260'	Grey green Massive Chert										
260' - 267'	Rhyodacite Porphyry - Mixed Lapilli fragments of Chert, Rhyolite Andesite (Tr. Cpy. @ 200'6")										

## Drill Hole Record



Property	District	Hole No. 75-41	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim

T Brg.

Collar Dip

Elev.

Length

Hole No.

Sheet 5

Footage From To	Description	Sample No.	Length	Analysis					
267' - 290'	Rhyodacite Porphyry - Calcite Zeolite vug. filling - Feldspars Zeolitized - Trace Pyrite (Magnetite throughout) - Unit ends in Chloritized Dacite Crystal Tuff								
290' - 300'	Alternating bedded Sandy- Silty Cherty Argillaceous Tuffite and Mudstone - Bedding irregular generally 20° to normal of core axis - Visible cross bedding, load casts and flame textures - Trace Pyrite								
300' - 317'	Bedded Chert - Grey green, fractured 305'6" - 317' Vesicular								
317' - 320'4"	Hangingwall Marker Dacite - Andesite Lapilli Tuff - Clots of Basaltic Chlorite with Zeolite								
320'4" - 324'	Chert - Light green, fractured - Clots of Basaltic Chlorite within								
324' - 331'	Andesite Tuff (Dyke?) - Massive, fine-grained								
331' - 344'4"	Hangingwall Marker - 334'6" - 338' Rhyolite Porphyry								

## Drill Hole ReOrd



Property	District	Hole No.	75-41		Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
Commenced	Location	Tests at	Hor. Comp.								
Completed	Core Size	Corr. Dip	Vert. Comp.								
Co-ordinates		True Brg.	Logged by								
Objective		% Recov.	Date								
Footage	Description	Sample No.	Length	Analysis							
From To											
	- HWM consists of Tuff-Lapilli sized fragments of Rhyolite and Dacite in Andesitic Matrix - Chlorite clots up to 2" diameter										
344'4" - 348'	Andesite Tuff (Dyke?)										
348' - 349'	Hangingwall Marker										
349' - 354'	Andesite Tuff (Dyke?) - Few Rhyolite fragments										
354' - 356'	Hangingwall Marker										
356' - 366'	Hangingwall Marker										
	- Longitudinal fracture containing disseminated Cpy. and Pyrite in Muddy Matrix										
	361' - 363'6" Trace Cpy. and Py. in Argillaceous Matrix within fractures										
	363'6" - 366' Assay section fragmental Cpy. and Py.	9394D	2'6"								
366' - 432'	Hangingwall Marker Andesite-Dacite Lapilli Tuff - Tuff Breccia										
	367' - 374' Light green alteration of Feldspar										
	@ 373' 5" Breccia fragment of Rhyolite										
	- Chlorite clots throughout section										
	- Acid fragments throughout mainly Lapilli sized										
	@ 408' TR. Cpy. and Pyrite										
	414' - 432' Siliceous vuggy Hangingwall Marker										
	- Pyrite 10% at 416' - 416'6" and 412' - 422'										

Scale

## Drill Hole Record

Colour Plot  
& Dip

Property	District	Hole No.	75-41
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim

T Brg.

Collar Dip

Elev.

Length

Hole No.

Sheet 7

Footage From	To	Description	Sample No.	Length	Analysis					
		- Matrix locally is Tuffaceous - All acid fragments corroded and chloritized								
432'	434'	Siliceous Cherty, Chloritic Crystal Tuff - Stretched								
434'	437'	Andesitic Tuff - Poorly developed clots of Basaltic Chlorite								
437'	440'	Cherty Tuff Breccia - Well developed clots of Basaltic Chlorite								
440'	447'6"	Hangingwall Marker Andesitic Lapilli Tuff  - Clots of Basaltic Chlorite - Calcite on Fractures								
447'6"	453'6"	Hangingwall Marker Andesitic-Dacitic Lapilli Tuff - Tuff Breccia - Bedded Chert and Dacite Crystal Tuff (Lower H.W.M.)  - Matrix Argillaceous towards end								
453'6"	456'	Mixed grey Chert, Sandy Andesitic Tuff Breccia, and Dacite Crystal Tuff  - Lower Hangingwall Marker								
456'	522'4"	Ore Zone Fragmental								



## Drill Hole Record

Colour Plot  
& Dips

Property		District	Hole No.		Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet	
Commenced		Location	Tests at									Hor. Comp.
Completed		Core Size	Corr. Dip									Vert. Comp.
Co-ordinates		True Brg.		Logged by								
Objective		% Recov.		Date								
Footage		Description	Sample No.	Length	Analysis							
From	To											
522.4	527	Footwall Marker										
		Bedded Argillaceous Tuffite										
		- Bedding at 15° to normal of core axis										
		- Locally Brecciated with wispy chlorite footwall marker crystal tuff.										
527	537	Footwall Marker										
		Dominantly wispy chlorite feldspar crystal tuff interwoven with argillite and sandy andesitic tuff.										
		- some chert breccia fragments up to 8" diameter										
537	557	Rubbly tuff breccia - footwall breccia										
		- minor pyrite in matrix and fragments										
		- wispy footwall chlorite										
		END OF HOLE AT 557'										

THIS AGREEMENT made this 24th day of March 1975.

BETWEEN: COMINCO LTD.  
200 GRANVILLE SQUARE  
VANCOUVER, B.C.  
V6C 2R2

(hereinafter referred to as the "COMPANY")

AND SHEPHERD ENTERPRISES LTD.  
SUITE 804 - 470 GRANVILLE STREET,  
VANCOUVER, B.C.  
V6C 1W2

(hereinafter referred to as the "CONTRACTOR")

WHEREAS the COMPANY hereby requests that the CONTRACTOR carry out certain surface diamond drilling and other services, on the COMPANY'S properties, Seneca, Rag, and Jean, all in B.C.

AND WHEREAS the CONTRACTOR hereby agrees to perform said diamond drilling and other services requested, under the terms and conditions hereinafter contained.

1. DESCRIPTION OF WORK

The work is to consist of a series of drill holes, drilled at locations specified by the COMPANY. A total minimum footage of 6500 feet shall be drilled but, total footage may be extended by mutual consent. Holes shall be drilled with BQ tools producing 1 7/16" diameter core. Maximum depth of any hole shall not exceed 800 feet. The CONTRACTOR will not be called upon to drill any hole at a flatter angle than -45 degrees unless mutually agreed upon. Measurement of all holes shall be taken from the top of the casing pipe. If holes of a greater depth than 800 feet are desired, such drilling shall be performed only upon such conditions and at such rates as may be agreed upon before commencement of such drilling.

2. COMMENCEMENT AND EXECUTION OF WORK

Work shall be commenced: As near as possible to the limits specified by the COMPANY, i.e., Seneca to start within the first week of April, 1975, Jean and Rag to start as specified by the COMPANY. In all cases, work shall be carried out with two - ten hour shifts per day, seven days a week, or as near that schedule as can be maintained.

3. LABOR EQUIPMENT MATERIALS AND SUPPLIES AND SERVICES

All labor equipment material and supplies and services necessary to the normal operation or maintenance of the drilling equipment shall be furnished by the CONTRACTOR.

4. SCHEDULE OF RATES

Subject to all of the other provisions hereof, the COMPANY agrees to pay the CONTRACTOR for the work performed, services rendered and the materials equipment and supplies furnished by CONTRACTOR a sum as hereinafter prescribed.

(i) BQ Drilling  
From bedrock to 300 feet at \$12.00 per foot.

(ii) Overburden Drilling  
0-50 feet at \$12.00 per foot  
For overburden greater than 50 feet in depth if costs are greater than \$12.00 per foot then the rate shall be at field cost.

(iii) TRANSPORTATION AND MOVES

It is agreed that for the Seneca and Rag programs the moving of drill equipment supplies and personnel for the CONTRACTORS WAREHOUSE to the initial drill site, between drill site and return from the final drill site to the CONTRACTORS warehouse shall be for the CONTRACTORS account. Such costs shall include transportation, securing timber, site preparation, setting up laying waterline, and building camps.

In the case of the Jean program movement of drill equipment supplies and personnel from truck discharge point to initial drill site and from final drill site to truck discharge point shall be for the COMPANY'S account at field cost. Moves between drill sites, securing timber, site preparation, setting up, laying waterline etc. shall be for the CONTRACTOR'S account except for camp building on the Jean which shall be for the COMPANY'S account at field cost.

For the Jean property, required helicopter or fixed wing transportation chargeable to the COMPANY shall be only with the consent of the COMPANY representative.

Travelling time of crew in excess of 30 minutes on the Jean property shall be charged to the COMPANY at field cost. Travelling time will only be allowed at a maximum of once per drilling shift both to and from drill site.

(iv) FIELD COST

Field Cost rates will be as follows:

(a) Operating Field Costs

Labour (including supervision) \$13.00 per man hour.

Drill rental \$8.00 per drill hour.

Pumps for water and supply \$1.00 per operating hour.

Materials - Drilling mud, cement or other additives - at cost.

(b) DELAYS

Delays occasioned by COMPANY representative or engineer will be for the COMPANY'S account at the rate of \$26.00 per hour.

Delays occasioned because of setting time of cement shall be for the COMPANY'S account at \$34.00 per hour.

(c) MATERIALS

Additional material such as drilling mud, cement, or other additives required for the property drilling and completion of the job shall be furnished by the CONTRACTOR at field cost to the COMPANY.

(d) CORE BOXES

Core boxes and lids if required will be supplied by the CONTRACTOR at cost to the COMPANY.

(v) ADDITIONAL EQUIPMENT

A D6C caterpillar with blade will be supplied by the CONTRACTOR for drill site preparation and drill moving and shall be for the CONTRACTOR'S account.

Extra work for the caterpillar such as road building carried out with the engineers authority shall be charged to the COMPANY at the rate of \$29.00 per operating hour including operator or at a minimum rate of \$2,000 per month pro rata whichever is greater.

(vi) ROOM AND BOARD

Room and board for CONTRACTORS personnel will be provided by the CONTRACTOR at no cost to the COMPANY. The CONTRACTOR will provide board for COMPANY representatives at a rate of \$ 14.00 per day.

5. ACCESS AND TIMBER RIGHTS

The COMPANY shall provide at no cost to the CONTRACTOR all rights of ingress and egress to all lands that may be required to enable the CONTRACTOR to carry out the specified work.

The CONTRACTOR shall be permitted to cut and fell any timber on the COMPANY'S property as may be required in the course of the work hereunder, and the Company shall indemnify and save harmless the CONTRACTOR from any assessment for stumpage or other charges of every kind and nature whatsoever.

6. DRILLING

The CONTRACTOR agrees to case and drill on the sites and at angles and azimuths selected by the COMPANY representative and to follow the instructions of the COMPANY representative relating to place and time of drilling.

The CONTRACTOR shall at all times enforce discipline and maintain good order among its employees and shall not retain on the job any person not skilled in the work assigned to him.

Any employees of the CONTRACTOR who are objectionable or unsatisfactory to the COMPANY shall be removed from the job and replaced by an employee satisfactory to the COMPANY.

The drilling shall be conducted so as to produce as high a percentage of core as the nature of the ground being drilled shall allow. All cores recovered shall be delivered to the COMPANY at the drill site, carefully marked.

7. CAVITIES

In the event that cavities or loose and caving materials or excessive water flows are encountered of a nature so as to prevent the successful completion of any hole, 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 hole, the COMPANY agrees to pay for such uncompleted holes at the rates herein specified for all footage completed. However, should the COMPANY request that further work be carried out in the hole beyond this point, then the CONTRACTOR shall continue work in the hole, but such continuing work shall be at Field Cost rates.

8. HOLE DIRECTION AND DEPTH

The CONTRACTOR does not guarantee the direction of the hole beyond the collar nor guarantee to drill any hole to any specified depth. The CONTRACTOR will however, expend every reasonable effort to complete all holes to the satisfaction of the COMPANY.

9. SECRECY

The CONTRACTOR will not give out any information regarding drill results or permit any access to drill core to any individual other than the COMPANY'S representative, except upon specific permission of responsible officials of the COMPANY.

10. LIENS

The CONTRACTOR shall be responsible for, and will pay promptly all costs and charges, incurred by itself for labor, machinery, tools, and supplies used in completing the work hereunder so that no lien or other such charge relative to the CONTRACTOR, may be registered against the COMPANY or the property. The CONTRACTOR shall be responsible for the payment of all assessments for Workmen's Compensation, Holiday Pay, Canada Pension, Unemployment Insurance, Sales Tax, or other such applicable charges relative to its own labor and supplies purchased.

11. ECOLOGY AND SANITATION

During the course of the work, the CONTRACTOR shall keep the site of any drilling and camp areas free from accumulation of waste materials, rubbish or garbage and upon completion of the work, shall remove all tools, scaffolding, surplus materials, rubbish and garbage and leave the working and camp site in a clean condition. The CONTRACTOR shall observe and comply with all applicable Federal and Provincial laws, regulations and orders relating to prevention of forest fires and sanitation in the bush and shall bear all costs arising from any violation thereof.

12. PAYMENTS

The COMPANY shall pay CONTRACTOR for the services and/or material and equipment furnished by the CONTRACTOR at the rate stipulated in this agreement, within 30 days of invoicing. Invoices shall be submitted twice monthly.

13. INSURANCE

The Contractor shall save the Company harmless from all claims and demands arising directly or indirectly out of or in connection with the work, whether such claims or demands are made by members of the public or persons employed or engaged on or in connection with the work; and the Contractor shall compensate the Company for any damage done to its buildings, machinery, and equipment arising out of or in connection with the work.

The Contractor shall provide, maintain, and pay for Comprehensive General Liability Insurance protecting himself, his subcontractor, and the Company against damage arising from personal injury (including death) and from claims for property damage which may arise out of his operations under this contract. Such insurance shall;

- (i) Have a limit of liability of not less than \$1,000,000 inclusive for any one occurrence or such greater amount as may at the discretion of the Company, be required.
- (ii) Cover all liability arising out of products, either the Contractor's or supplied by him, completed operations, contingent employer's liability and liability assumed by the Contractor under this contract.

Evidence of insurance, in such form as may be required, shall be lodged with Insurance and Risk Manager, Cominco Ltd., Vancouver, B.C. before the work is commenced.

The Contractor shall also provide, maintain and pay for automobile insurance on his own vehicles and non-owned automobile insurance protecting himself and the Company against damages arising from personal injury (including death) and from claims for property damage arising out of their use on his operations under this contract. Such insurance shall have a limit of liability of not less than \$1,000,000 inclusive for any one occurrence or such greater amount as may, at the discretion of the Company, be required.

Evidence of insurance, in such form as may be required, shall be lodged with Insurance and Risk Manager, Cominco Ltd., Vancouver, B.C., before the work is commenced.

14. FORCE MAJEURE

Neither COMPANY nor CONTRACTOR shall be liable to the other for any delays or damages or any failure to act due, occasioned, or caused by reason of Provincial laws of the rules, regulations or orders of any public body or official purporting to exercise authority or control respecting the operations covered hereby, including the use of tools and equipment, or due, occasioned, or caused by strikes, action of the elements, or causes beyond the control of the elements, or causes beyond the control of the parties affected hereby, and delays due to the above causes, or any of them shall not be deemed to be a breach of or failure to perform under this Agreement.

15. NOT ASSIGNABLE

It is mutually agreed that this Agreement shall be binding upon and enure to the benefit of the parties hereto, their respective successors and permitted assigns, but shall not be assignable by either party without the consent in writing of the other party first had and obtained.

16. MAILING ADDRESSES

That any notice required to be given hereunder shall be properly given if mailed by registered letter addressed to the COMPANY as follows:

COMINCO LTD.  
200 GRANVILLE SQUARE  
VANCOUVER, B.C.  
V6C 2R2

or to the CONTRACTOR by registered letter addressed as follows:

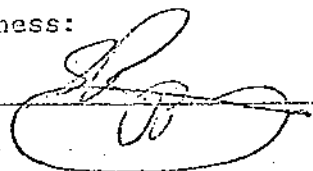
SHEPHERD ENTERPRISES LTD.  
SUITE 804 - 470 GRANVILLE STREET  
VANCOUVER, B.C.  
V6C 1W2

17. TIME IS OF THE ESSENCE

Time is expressly declared to be the essence of this Contract. If either party hereto defaults in the performance of this Contract of work commenced under work orders as provided for herein, the other party has the option to terminate this Contract and the work order involved.

IN WITNESS WHEREOF THE COMPANY AND THE CONTRACTOR set their hands this 2<sup>nd</sup> day of April 1975.

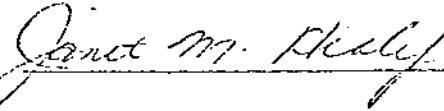
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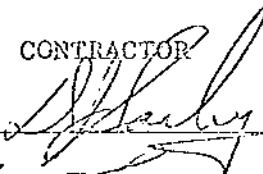
COMINCO LTD.

  
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Witness:

  
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CONTRACTOR

  
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