

5653

UMEX

UNION MINIERE EXPLORATIONS
AND MINING CORPORATION LIMITED

SUITE 200 - 4770 CANAL WAY
BURNABY, B.C. V5G 1T1

TELEPHONE 437-8491

ASSESSMENT REPORT

ON

DIAMOND DRILLING

on

Claw #6, Claw #8

Mineral Claims

(Claw Group 1, 1974)

Record Numbers 70100, 70102

Liard Mining Division, British Columbia

57°37' North, 127°19' West

by

Andre M. Pauwels

Alfred A. Burgoyne

Work Dates: July 21 ~ August 15, 1975

Date: October 8, 1975

Owner: Union Miniere Explorations and
Mining Corporation Limited

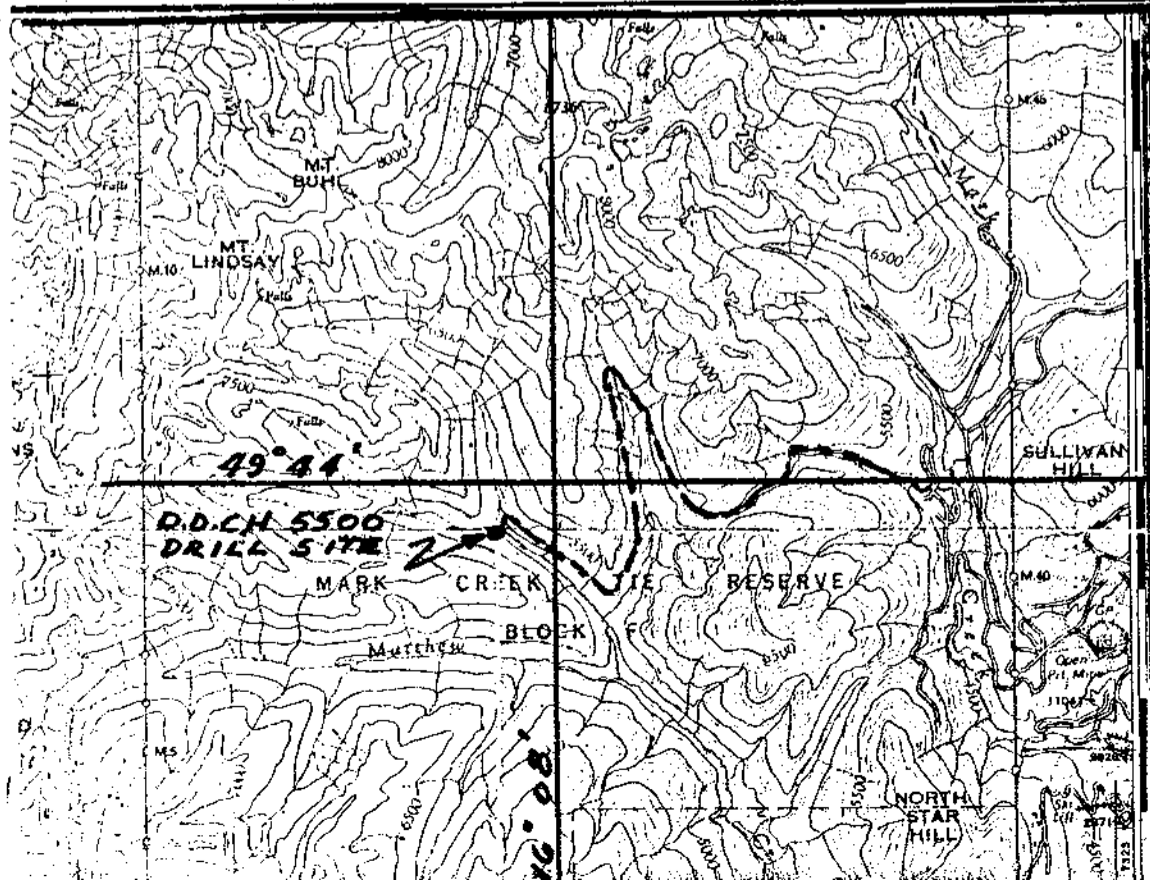
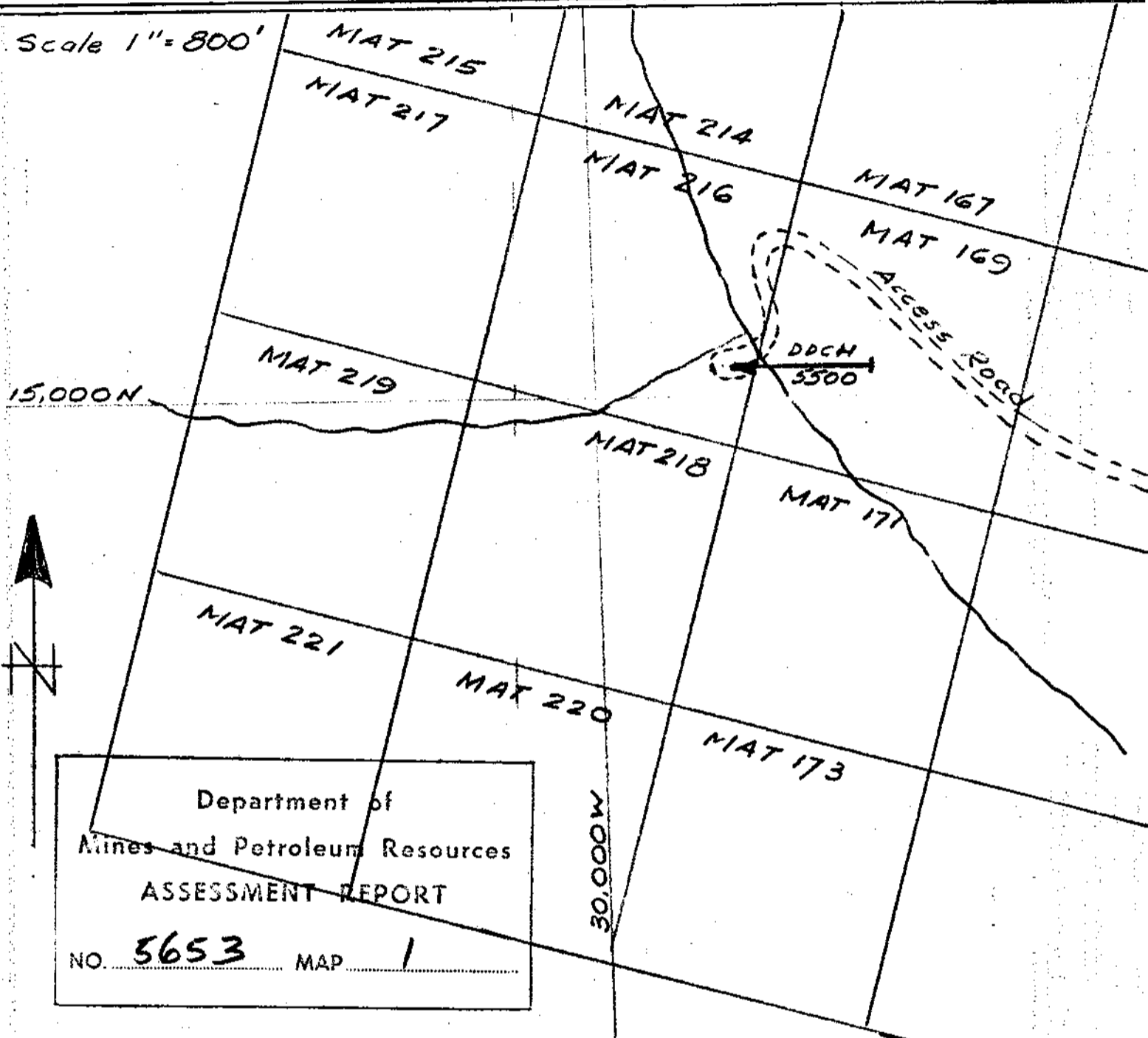
COMINCO LTD

Sullivan Mine

Kimberley B.C.

MAT 216 GROUP

Scale 1" = 800'



Scale 1" = 2 miles
Ref. SHEET 82 F/NE



Kimberley Operations

February 25, 1975

This is to certify that I, Paul Ransom, G.A.C.,
am a graduate geologist with a degree from
McGill University in 1966, and that I have
been practicing my profession in geology and
the mining industry since that time.

P. W. Ransom G.A.C.
Geologist

Diamond Drill Geological Log

INCO

Objective:		Sampled: No Sampling	
Logged By:		Date:	
Block:		Composites:	
Sect.:	Place: Emerald Creek	App. Bear: EAsT	Dip: -71
		Length: 1640.5	

40 Scale
Color Plot & Dips
Ore Classes & Aver.

From	To	Discard:	Reason:
		Approximate	Latitude: 15150 N
			Departure: 29200 W
			Elevation: 5000
LSD Readings:		Depth	Dip
		250'	-71°
		500'	-61°
		700'	-62°
		900'	-59 1/2°
		1067'	-54 1/2°
		1225'	-54°
		1385'	-50 1/2°
		1438'	-50 1/2°
		1567'	-45°
		1640'	-43°

P. W. Ransom GAC.

Core in Sullivan Mine Core Shed.

Core Size
NQ to 931
BQ 931 to 1640.5
Hole No. 5500

Page 1

Diamond Drill Geological Log



40 Scale
Color Plot & Dips Ore Classes & Aver.

Objective: _____ Sampled: _____

Logged By: _____ Date: _____ Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

From To Discard Reason:

0 26.0 Overburden

26.0 31.0 Quartzitic argillaceous siltstone and silty argillite elongate rip-up clasts of black silty argillite.

Pyrrhotite noted parallel to bedding and disseminated. Finely laminated black band at 30 feet.

31.0 34.5 Argillaceous quartzite with disseminated flecks of pyrrhotite quite abundant.

34.5 49.0 Argillite with a few finely laminated black bands of silty argillite containing fine pyrrhotite in laminations.

This is the type of pyrrhotite mineralization that is indicated on older maps.

49.0 52.0 Considerable core loss. Only a few chips argillite to silty argillite (argillite thin laminations).

52.0 54.0 Heavily silicified dark black argillite containing disseminated pyrrhotite.

54.0 60.0 Interbedded argillite, silty argillite and argillaceous quartzite. Chlorite spots noted, pyrrhotite scarce.

Fine laminations in the argillite and silty argillite.

60.0 75.5 Quartz wacke (quartzite) with a couple of short argillaceous quartzite sections. Characterized by a number of

small (0.5 to 2.0 cm) calcareous features that are ovoid in outline with ragged edges, and a continuity of fabric

with the surrounding material suggests that they are of concretionary origin.

Broken core 60 to 61.5, 73 to 75.5.

Core Size

Hole No.
5500

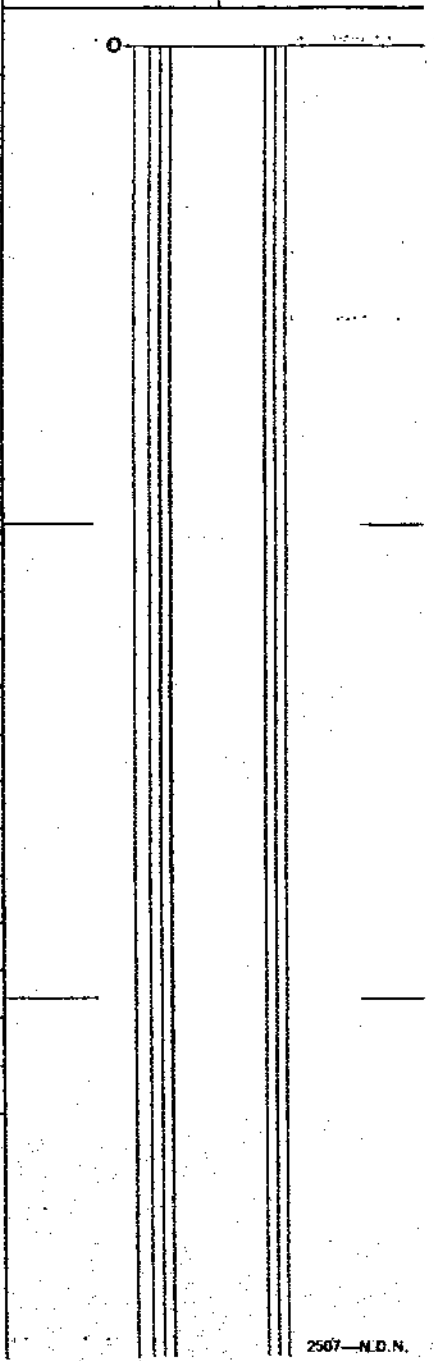
Page
2

Diamond Drill Geological Log



Objective:		Sampled:	
Logged By:		Date:	
Block:		Composites:	
Sect.:	Place:	App. Bear:	App. Dip.:
Length:			
From	To	Discard:	Reason:
75.5	83.0		Very fine-grained quartzitic and silty wackes; heavily silicified with zoned (quartz, pyrrhotite, biotite rim) non-calcareous concretions. Pale green and pink dense siliceous or albititic band at 82. Abundant chlorite in one argillaceous band.
83.0	97.0		Interbedded sphene-flecked argillite, as well it is chlorite-flecked and laminated. Impure quartz and silty wackes that are heavily silicified also occur.
97.0	109.0		Quartzitic and silty wackes, very siliceous to 99.0. Minor argillaceous siltstone containing pyrrhotite noted. Coarse pyrrhotite as blebs and irregular patches occurs. Lighter colored rounded patches may be bleached areas subjected to a concretionary process. Pyrite or chalcopryrite noted with some pyrrhotite.
109.0	117.5		Fairly thin-bedded argillaceous-quartzitic wacke pairs 3 to 5 cm thick. The coarser portion contains disseminated pyrrhotite. This is interbedded with 6" to 12" bands of dark, dense quartzitic-silty wacke, probably having a siliceous matrix and containing a little pyrrhotite and pyrite or chalcopryrite. Chlorite common in the argillite bands.
117.5	119.0		Similar to above, only a few fragments recovered. Inner tube mismatch occurred and most of core was ground away.
119.0	129.0		Quartz-wackes, CaCO ₃ noted in matrix occasionally and in healed fractures in an altered zone 123.0-124.5. Pyrrhotite is finely disseminated as well as occurring in rounded concretionary masses up to 1 cm. Minor argillite with chlorite flecks. Four altered zones. Grey argillite rip-up clasts noted near 127.

40 Scale
Color Plot & Dips
Ore Classes & Aver.

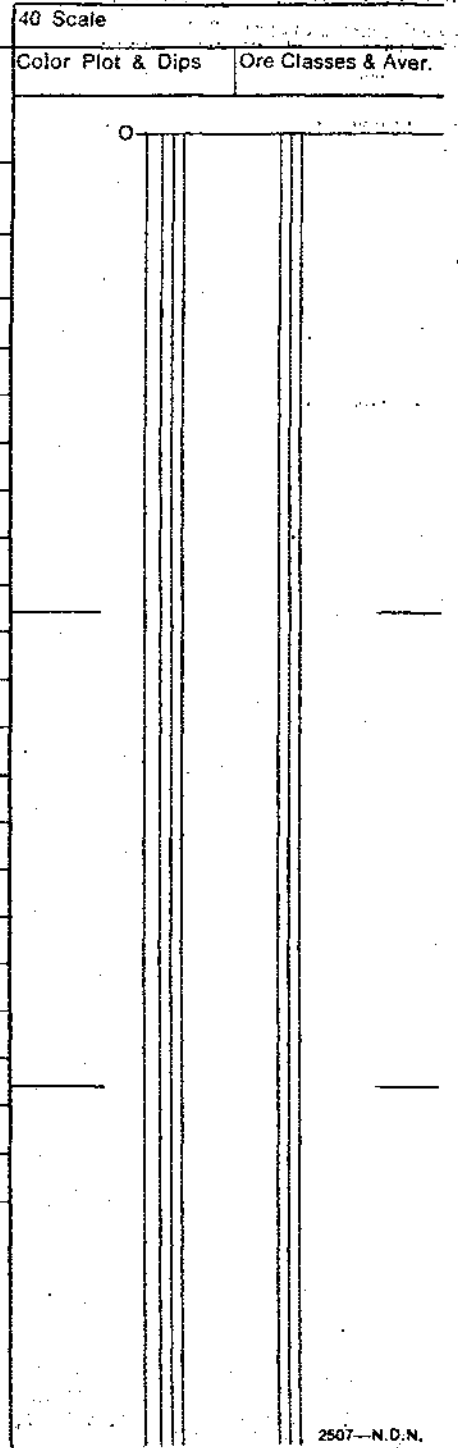


Core Size
Hole No. 5500
Page 3

Diamond Drill Geological Log



Objective:		Sampled:		Color Plot & Dips		Ore Classes & Aver.	
Logged By:		Date:		Composites:			
Block:	Sect.:	Place:	App. Bear:	App. Dip:	Length:		
From	To	Discard:		Reason:			
129.0	137.0			Quartz wackes, some quite chloritic. Minor chloritic argillite and silty argillite. Fairly thin-bedded in part, some load-cast structures and very irregular bedding occurs. One bed 134.5 to 135.5 contains what appears to be chemically precipitated silica interlayered with chlorite and quartz. Pyrrhotite irregularly disseminated throughout, typically arranged along bedding. Vein quartz at two locations contains Galena and Sphalerite.			
137.0	213.0			Thin bedded sedimentary except 181-184. Calcite, though not continuously present, is common. Initially the beds are alternating bands of grey and finely laminated black argillite. The black bands tend to be a little harder, contain more pyrrhotite and CaCO ₃ . The hardness and proportion and thickness of the black bands all increase with depth. Thin limy lens with associated pyrrhotite at 155.5-156.0. Fracturing, some broken core 170-177. From 181-184 siliceous argillite and argillaceous fine grained quartzite-silty wacke. From 184 on narrow brownish zones containing biotite appear. Narrow (1"-8") quartz bands containing biotite and pyrrhotite appear after 200 as well as coarser chlorite flakes in the argillite. Two inch concretion at 211.			
213.0	246.5			Thick-bedded (3' to 4' with a few 1' to 2' beds). Generally argillite tops 4"-10" with the remainder either quartzitic or silty wacke. Calcite 237.5-238 in pale brownish quartz similar in fractures 238-238.5. From 240-246 minor calcite throughout in dark fine grained wacke. Small black clasts 221-222. Rip up fragments of argillite at 236.5.			
246.5	298.5			Thin-bedded sequence consisting of alternating light grey argillite (rarely silty) and black finely laminated argillite to argillaceous quartzite. Thick (18") sequences of the black argillaceous siltstone may show color variation. Pyrrhotite may or may not occur in any of the beds, sometimes in fine cross-beds. CaCO ₃ rare but observed in a couple of concretions, several narrow white bands with fine brown laminations and in a couple of the black bands (sparse). Ends with 3 to 4 ft. of black, uniform argillaceous siltstone.			



Core Size
Hole No. 5500
Page 4

Diamond Drill Geological Log



Objective: _____ Sampled: _____

Logged By: _____ Date: _____ Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

From To Discard: Reason:

298.5 410.0 Similar to above but contains short sections of thin, laminated argillite.

299.1 299.7 Finely laminated argillite.

299.7 300.2 Medium grey argillaceous siltstone, faint banding and laminations.

300.8 301.05 Finely laminated silty argillite.

301.05 302.1 Medium grey argillaceous siltstone, faint banding and cross laminations.

302.1 302.4 Finely laminated silty argillite.

302.4 303.2 Graded bed argillite to silty argillite. Finely laminated.

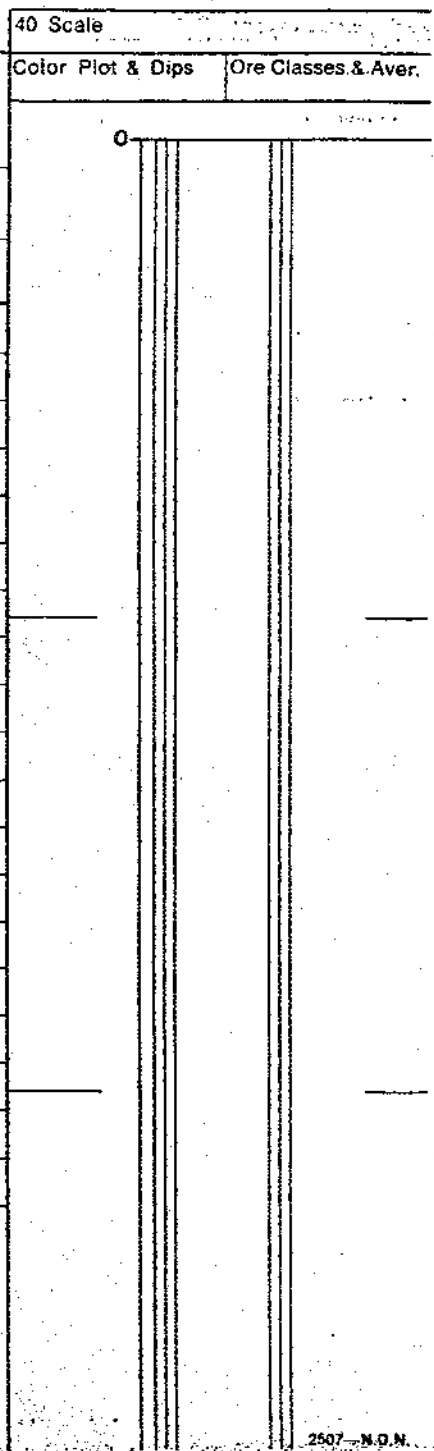
303.2 303.6 Finely laminated silty argillite.

303.6 304.9 Argillaceous siltstone more argillite in top 2". White flecks containing calcite throughout.

304.9 305.0 Finely laminated argillite.

305.0 307.3 (Core was mixed up - put in order as much as possible) Argillaceous siltstone of varying hardness. Very dark core, calcite present in minor amounts in flecks and dispersed in dark finely laminated zones.

Core Size _____
Hole No. 5500 Page 5



Diamond Drill Geological Log



40 Scale
Color Plot & Dips Ore Classes & Aver.

Objective: _____ Sampled: _____
 Logged By: _____ Date: _____ Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

From	To	Discard:	Reason:
307.3	307.6		Finely laminated argillite, CaCO ₃ trace.
307.6	316.0		Quartz-silt wackes, banded up to 8", fine laminations throughout. Very finely laminated black bands contain disseminated pyrrhotite. Very fine grained calcite present throughout except the dense black, laminated bands. Calcite most abundant in the medium grey and lighter laminated bands. Small scale cross bedding at 314'.
316.0	316.3		Finely laminated argillite.
316.3	329.0		Graded argillite to argillaceous siltstone, some of siltstone may be cemented by silica. Short sections are finely laminated. Some evidence of soft sediment deformation. A 1.5" lamprophyre dike cuts at 20° to c/a 317.5-318.3.
329.0	345.0		Thick quartz and silty wackes (2'-3') with argillite tops some thin argillaceous siltstone beds occur in groups of 2 or 3. Occasional rip-up flake noted. Alteration consists of bleaching of certain beds and patches, occasional islands of unbleached material occur. An argillaceous zone 339.5 to 341 contains small scale soft sediment deformation structures (eg. ptymatic laminae). Dark bands with irregular white segregations are probably biotite altered. A 3 cm limy zone noted at 343.5. No other CaCO ₃ .
345.0	346.0		Argillite with coarse (1 x 4 mm) chlorite flecks throughout.
346.0	346.5		Silty argillite. Black with only a few extremely fine white laminae.

346.5	387.0	Beds 6" to 3' thick, average about 1.5' to 2'. Beds are graded argillite to siltstone or quartzite. Argillite, argillaceous siltstone and silty argillite all contain coarse chlorite to 363. Top parts of beds commonly have argillite argillaceous siltstone interlayered. Good load-cast noted at 366. Two small bands of black argillaceous material noted at 353.5. Practically no pyrrhotite	Core Size	Hole No.	Page
				5500	6

Diamond Drill Geological Log



40 Scale
Color Plot & Dips Ore Classes & Aver.

Objective: _____ Sampled: _____

Logged By: _____ Date: _____ Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

From To Discard Reason:

346.5 387.0 noted, CaCO₃ occurs. Alteration: irregular bleaching in some beds and along fractures, remaining darker material more biotitic. Core short near end.

387.0 390.0 Quite a bit (50%) of core missing. Well laminated silty argillite, lower half shows evidence of soft sediment slumping and faulting.

390 400 Argillite, few minor thin sandy layers. Pyrrhotite noted, especially near 396 in bands.

400 405 Quartz to silt wacke with argillaceous interbeds -- core is grooved by bit -- bed thicknesses not determined. Two black rip-up clasts (not hard) noted (one for thin section).

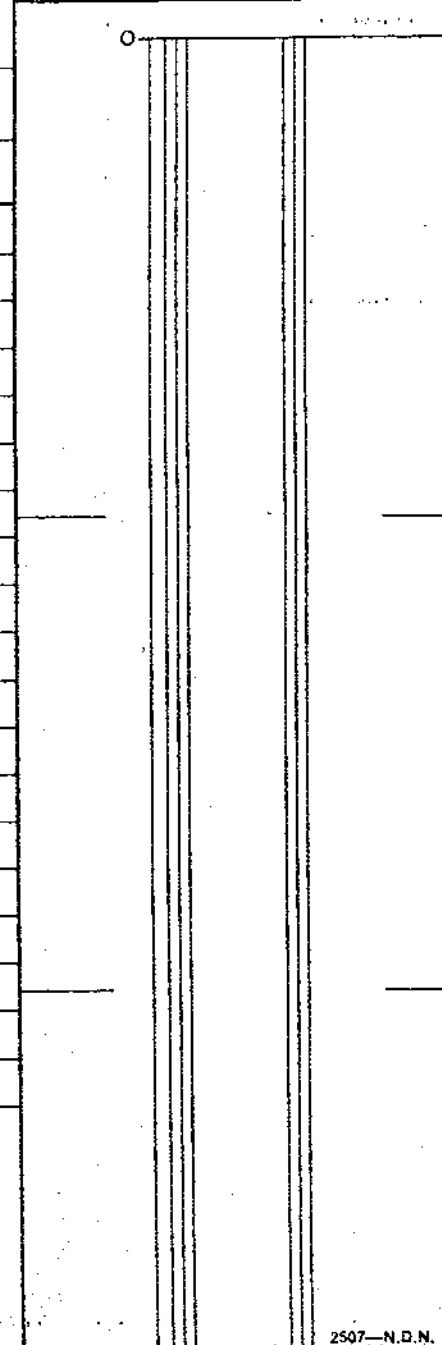
405 406 Dense black hard argillite at few specks of disseminated pyrrhotite.

406 407.5 Finely laminated argillite. CaCO₃ 387-407.

407.5 425 Argillaceous siltstone with silty argillite and argillite vaguely interlayered. White flecks 1x4 mm are dispersed throughout, consist of CaCO₃ and are likely the fillings of similar sized holes noted in the field and suspected as having originally been gypsum. Small clasts noted 420.5-422. More grit - like 420-426.

426 472 Medium to thick bedded quartzites good graded turbidites (quartz wackes and arenites). Four beds less than 1.0 ft. thick, 8 beds between 1 and 2 ft. thick, and 6 beds greater than 2 ft. thick. The six thickest beds average 5.3 feet thick and the three thickest are arenites. Intergranular calcite may

Core Size
Hole No. 5500
Page 7



Diamond Drill Geological Log



Objective:		Sampled:	
Logged By:		Date:	
Block:		Composites:	
Sect.:	Place:	App. Bear:	App. Dip:
Length:			

40 Scale
Color Plot & Dips
Ore Classes & Aver.

From	To	Discard:	Reason:
426	472		be quite abundant in some of the wackes in the first half of this section, sparse in the remainder. Interesting features; 446.0 is 0.3 ft. of elongate and angular argillite clasts (rip-ups) a foot above the base of a 5 ft. thick turbidite. A short section showing dark brown biotite alteration occurs at 468 with a little coarse pyrrhotite. Thinner beds near end, grey calcite rich laminations occur. A few grains of pyrrhotite noted at irregular intervals. Quartz veins noted in the arenites.
472	480.5		Predominantly argillite and silty argillite. A couple of small limy quartzite beds occur. About six finely laminated zones all less than half a foot in thickness occur, some are weakly calcareous.
480.5	532		Argillite, often with silty and quartzitic layers at the start giving way to more silty siliceous material at the end. Occasional thick wacke bed shows alteration phenomena. Dense dark brown bands, sometimes with accompanying CaCO ₃ , are very hard and occur from 503-507 and 522 to 532. Some limy bands are quite uniform whereas others are small interfingering lenses separated by irregular brown laminae suggestive of algal or chemical precipitate origin. At end is a narrow white quartzite band containing coarse actinolite and a trace of CaCO ₃ .
532	542		Fine grained quartz and silt wackes containing very distinctive fine laminated CaCO ₃ between 539 and 541.
542	568		Quartz wackes (turbidites -graded). Estimate average thickness 1.5 ft., maximum 3 ft. Slight hornfelsic texture characteristic of this section. Small rounded black rip-up clasts occur in 3 or 4 of the beds -- they are not abundant. In the thicker argillite intervals inter-fingering of the fine lenses is common. Alteration occurs in more quartzitic sections.

Core Size	
Hole No.	Page
5500	8

Diamond Drill Geological Log



Objective: _____ Sampled: _____

Logged By: _____ Date: _____ Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

From To Discard: Reason:

568 579 Medium-grained diorite. Initial contact nearly at right angles to the core.

579 695 Coarse-grained diorite, quartz diorite. Biotite common. Two inch quartz vein contains coarse blebs of pyrrhotite at 680. Narrow finer grained granophyric phases noted and increase in fine feldspathic fractures after 680. Gradual decrease in grain size 680-695. Coarse grained middle is lighter than the margins. Pyrrhotite is rare.

695 767 Coarse medium grained quartz diorite (low quartz). Zone with feldspathic fractures 746-748. Three feet of core ground in the run, 757 to 767.

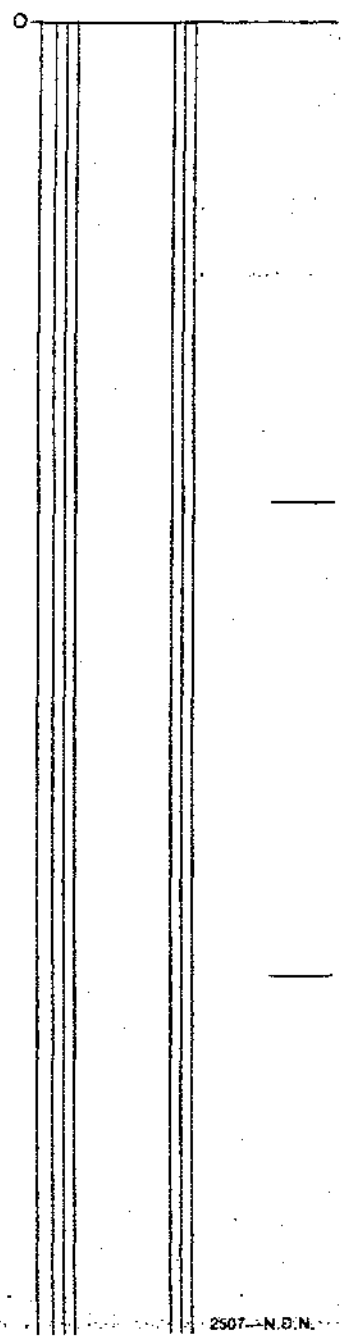
767 870 Coarse to very coarse grained diorite, minor quartz. Biotite and pyrrhotite noted but rare. A fine dark mineral, possibly an iron oxide, noted. High proportion of light to dark minerals (40% light). Quartz vein with some calcite, true width 8", from 795-797 cuts core at 20°, has noticeable biotite a few feet on either side. Unusual altered zone 832-34 contains greenish creamy minerals in a siliceous dioritic matrix. Biotite content increases with depth.

870 892.5 Medium grained becoming fine grained toward end, diorite. Dark half a foot at the end is a biotitic rock of the contact zone which contains white phenocrysts.

892.5 931 Graded beds, fine biotite present with hornfelsic texture. Brittle core. Core angle estimated as 70° to axis. Beds are graded wackes having the following thicknesses: 10 beds 1-2 feet, 4 beds 2 to 3 feet thick, 6 beds less than one foot thick. The argillite tops between 916 and 919 are spotted, laminated, and thicker than the siltstone bases. A few rip-up clasts noted. Alteration, bleaching of fractures, mainly in coarse beds.

Core Size _____
Hole No. 5500 Page 9

40 Scale
Color Plot & Dips Ore Classes & Aver.



Diamond Drill Geological Log



Objective: _____ Sampled: _____

Logged By: _____ Date: _____ Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

From: _____ To: _____ Discard: _____ Reason: _____

931 _____ End of NQ coring, start of BQ.

931 934 Argillaceous siltstone 892.5-931.

934 951 Argillite with small silty interbeds. A 6" to 24", siltstone typically 2" to 6". Two siltstone beds 2 ft. thick.

951 983 Quartzitic and silty wacke beds, generally one to two feet thick. A section up to 1.5 feet are common. Some laminated siltstone and argillite zones. Disseminated pyrrhotite noted.

983 1012 Wackes, predominantly silty, banded, occasionally laminated, almost black to light grey. Bands generally 1 to 3". Many bands are limy. Pyrrhotite occurs as disseminated grains clustered in laminations.

1012 1018 Wackes fairly argillaceous, medium grey. Estimated four beds. Pyrrhotite flecks are abundant in some sections. One dark quartzitic clast about 1 cm in diameter noted another similar feature seems to be concretionary.

1018 1030.5 Banded and laminated wackes often limy. Generally argillaceous siltstone with argillite sections.

1030.5 1192 Graded beds - argillaceous to silty, quartzitic wackes. Occasional banded and laminated zone with limy sections:

1084.4-1088.5, 1097-99, 1106.5-1116.5. A couple of predominantly argillaceous beds occur. Black argillaceous clasts, generally small, noted rarely. 1" silty argillite clast in argillaceous silt-

stone matrix at 1081. A few features suggestive of load casting noted.

Bleaching type of alteration occurs throughout. Bed thicknesses: 18 less than

0.5 feet thick; 27 from 0.5 to 1 foot; 41 from 1 to 2 feet; 14 from 2 to 3 feet;

and 8 greater than 3 feet (less than 6) thick.

Core Size _____
Hole No. 5500 Page 10

40 Scale	
Color Plot & Dips	Ore Classes & Aver.
0	

Diamond Drill Geological Log

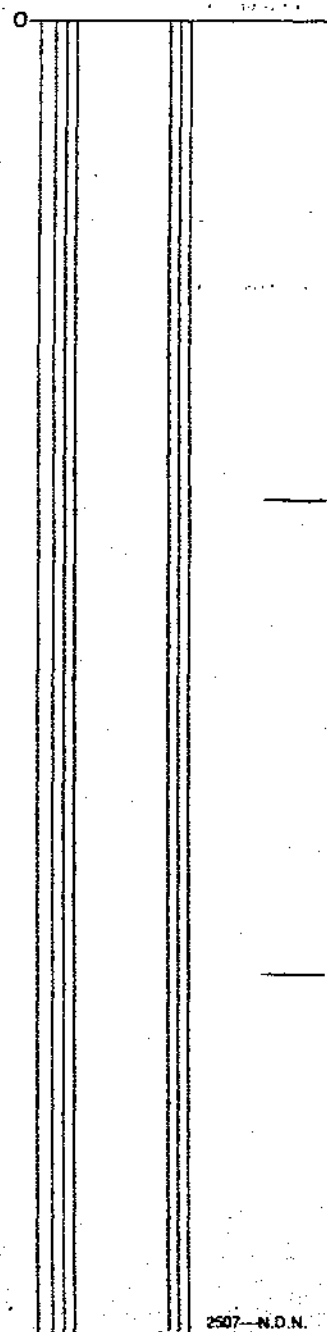


Objective: _____ Sampled: _____
 Logged By: _____ Date: _____ Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

From	To	Discard:	Reason:
1192	1330		Banded and laminated wackes, mainly argillaceous siltstone to silty argillite occasionally quartzitic, characterized throughout by varying amounts of carbonate from nil to abundant. Many of the thin beds in addition to being graded contain varying carbonate content in a systematic manner (top of bed with none, to base with abundant carbonate. Four arenaceous sections up to 2.5 ft. long containing carbonate as well occur between 1285 and 1303. Fragments and broken core of finely laminated silty argillite occurs at 1298. Pyrrhotite is rare, but seems to be most commonly disseminated in the bases of certain beds.
1330	1393		Argillite, silty argillite with occasional siltstone and quartz wacke beds. Grading is evident throughout and the argillite, silty argillite beds are often quite thick (1' to 2'). In the coarser wacke beds laminations are fairly common as is disseminated pyrrhotite rip-up clasts occur in all types of beds though fragments in the coarser beds may have been carried more as they are more rounded. The thicker wacke beds are limy frequently. Black finely laminated bands are noted. Pyrrhotite with a few specks of chalcopryrite, occurs in a 1 cm irregular band in contorted argillite at 1371. Low concentrations of pyrrhotite occasionally occur elsewhere. 1 cm quartz vein at 1346; about ten inches of gouge - type material 1346.5-1347.5.
1393	1428		Interbedded quartz wackes and arenites with a few short argillaceous intervals. Beds average 2 to 3 feet thick. Near the top a 7 and a 4.5 foot bed occur; near the base the beds are mostly 2' thick. Minor carbonate occurs.
1428	1466		Banded and well laminated argillaceous siltstone and silty argillite. Paler blue-grey bands are typically limy. Toward base some beds 0.5 to 1.5 feet thick are graded and are well banded and laminated.

40 Scale
 Color Plot & Dips
 Ore Classes & Aver.



Core Size
 Hole No. 5500
 Page 11

COMINCO LTD.

SULLIVAN MINE

KIMBERLEY, B.C.

D.D.C.H. NO. 5500 (MAT 216 GROUP)
COST SUMMARY

<u>Date</u>	<u>Invoice</u>	<u>Expenditure</u>	<u>Remarks</u>
Aug. 11/75	-	3,666.25	Road Construction
Sept. 8/75	6080	7,208.04	Set-up and drilling 0-93'
Sept. 24/75	6148	15,054.16	drilling 93'-1,067'
Aug. 25 - Sept. 26/75	-	2,003.00	Cominco Geol. Supervision core logging and report preparation.
Aug. 25 - Sept. 26/75	-	250.00	Truck rental.
Sept. 16-26/75	6215	9,197.25	Drilling 1,067' - 1,640' tear down.
Sept. 26/75	-	<u>404.25</u>	Cat and truck rental.
Total Expenditure		\$37,782.95	Hole Complete.

Signed


Supervisor, Land Administration

A.L.Burrows/es
Sullivan Mine
October 15, 1975

Attachments: Invoices
Cost Collection Sheet

Purchase Order

31 JULY 1975



Order No S 8800R

Mr. Ralph Wright
723 - 5th. Street, South
CRANBROOK, B.C.

Ship to Cominco Ltd.

Sullivan Mine
Kimberley, B.C.
VIA 263

via

① AF 277E

Item	Quantity

To cover cost of Diamond Drill Site Preparation and access commencing about 25 July 1975.

Mobilization Cost: \$175.00

Rate: \$28.50 per hour includes machine, operator, fuel, maintenance, insurance and compensation.

Cominco will supply Swamper.

All work is to be performed according to Cominco's Standard Terms and Conditions, two copies of which are attached. One is for your files and one is to be returned to us, dated and signed.

.....Continued Page Two

Trail, B.C. V1R 4L8

MR. L.R. MARK

CHG: 40 40
END USE: Exploration

INT: J.W. Cartwright

Item Nos.	P.S.	B/L	Quantity	Price	Weight	Car No.	Shipping Point	Ship't Promised	Ship't Received

MR. RALPH WRIGHT

ACK

S 8800R

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

OKANAGAN STAT	S7901M	AP04147	OP MATL	.402004		100-			
OKANAGAN STAT	S7901M	AP04147	OP MATL	.402004		200			
AIKMAIS	MW2935	AP04173	OP MATL	.402004		26			
		TOTAL OP MATL		.402000		176 *			3,886 *
KD/V04-2 WEST EXPLORAT		JE04556	MISC	.402000		375-			
		TOTAL MISC		.402000		375-*			1,015-*
		TOTAL CODE		.402000	174	1,764 **	681		10,905 **
KIM MNRLGCL STDY		TOTAL CODE		.403000		**			**
CR MONTRL & TAD		TOTAL CODE		.403100		**			**
UG EXPLORATION		LA 501 STAFF		.404000	522	4,920			
STAFF KIMB		TOTAL STAFF		.404000	522	4,920 *	3,090		30,444 *
SUR EX. DRILLING PROJ		JE04053	OP LAB	.404000		82,418-			
SUR EX. DRILLING PROJ		JE04053	OP LAB	.404005		82,418			
		TOTAL OP LAB		.404000		*	52		625 *
KIMB STATIONER	MW2828	AP04146	OP MATL	.404000		8			
VANCAL REPROD F	S8038M	AP04155	OP MATL	.404000		768			
		TOTAL OP MATL		.404000		775 *			36,243 *
		TOTAL RPR LAB		.404000		*	5		59 *
		TOTAL RPR MATL		.404000		*			102 *
CONT ACCOUNT		JE04512	MISC	.404000		145			
EXP ACC H.S. DIXON		JE04601	MISC	.404000		139			
		TOTAL MISC		.404000		284 *			11,221 *
		TOTAL CODE		.404000	522	5,979 **	3,147		78,694 **
KIMBERLEY FAULT STUDY									
STAFF KIMB		LA 501 STAFF		.405002	174	2,003			
		TOTAL STAFF		.405000	174	2,003 *	522		6,043 *
FISHER SC CO	S8006X	AP04163	OP MATL	.405000		675			
		TOTAL OP MATL		.405000		675 *			675 *
		TOTAL MISC		.405000		*			57 *

SPECIFIC MOORE BUSINESS FORMS

12
 Comico Geol.
 Supervision
 of surface
 drilling program
 (Monthly cost)

Q00000

Purchase Order

1 AUGUST 75



Order No. S 3785V

P.W. Ranson Ltd.
245 - 107 Avenue
KIMBERLEY, B.C.

Ship to Cominco Ltd
Sullivan Mine
Kimberley, BC.
VIA 263

Via

Item	Quantity

(1) AUG 26 75

To cover RENTAL of GMC 4 Wheel Drive - Lic. 550-536

Effective 1 July 1975

RENTAL \$250.00 per month

Cominco Ltd. to supply Gas and Oil only.

COPY OF INSURANCE COVERAGE ATTACHED TO THIS ORDER.

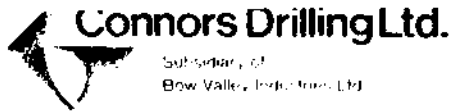
AWV:lp
Enc.

TRAIL, B.C. VTR 4LB

MR. A.W. VYSE

CHGE W405001
RFY
END USE Geological
EM Exploration
IRT Sidco

Item Nos. P.S. B-L Customs Inv. Price Weight Car No. Shipping Point Ship't Promised Ship't Received



Subsidiary of
Bow Valley Industries Ltd.

201 - 1201 WEST PENDER STREET, VANCOUVER, B.C. CANADA V6E 2V2
AREA CODE 604/683 - 2222

Job #21-615

INVOICE NO: 6080

DATE: September 8, 1975.

Cominco Limited,
Sullivan Mine,
Kimberley, B.C.

SURFACE DIAMOND DRILLING
SULLIVAN MINE
KIMBERLEY, B.C.
AUGUST 26-31, 1975

MOBILIZATION - DEMOBILIZATION (Lump Sum) 3,000.00 ✓ ✓

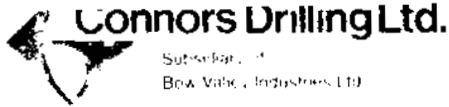
FOOTAGE FEE

D.D. Hole #5500 0' - 93' 93' @ 12.75 1,185.75 ✓ ✓

FIELD COST WORK

<u>DATE</u>	<u>SHIFT</u>	<u>TRAVEL TIME</u>	<u>MAN HRS.</u>	<u>DRILL HRS.</u>	<u>REMARKS</u>
Aug. 26/75	Day	4	36	9	Moving 10 Miles
Aug. 27/75	Day	10	36	9	Moving 10 Miles
Aug. 28/75	Day	7½	27	9	Moving 10 Miles
Aug. 29/75	Day	5	6	3	Complete Setting up
Aug. 29/75	Day	5	18	0	Complete Setting up
Aug. 30/75	Day	5	3	1½	Mixing Mud
Aug. 30/75	Night	5	0	0	
Aug. 31/75	Day	2½	0	0	
Aug. 31/75	Night	5	0	0	
		<u>49</u>	<u>126</u>	<u>31½</u>	

Invoice 6080



201 - 1201 WEST PENDER STREET, VANCOUVER, B.C. CANADA V6E 2V2
AREA CODE 604/683 - 2222

Job #21-615

INVOICE NO: 6080
DATE: September 8, 1975.

Cominco Limited,
Sullivan Mine,
Kimberley, B.C.

-2-

MAN HRS.

Credit 1 Move

- 20 ✓

106 ✓

Total Travel Time	49 @ 10.00	490.00	✓	
Total Man Hours	106 @ 13.50	1,431.00	✓	
Total Drill Hours	31½ @ 10.00	<u>315.00</u>	✓	2,236.00

CORE BOXES SUPPLIED

150 NQ Boxes	@ 3.15	472.50	✓
80 BQ Boxes	@ 3.15	252.00	✓
50 Box Lids	@ 1.00	50.00	✓
		<u>774.50</u>	

Actual Usage
81 boxes x 3.15 + 50 (lids) + 5% tax

5% Tax 38.73 ✓

320.40
813.23

MUD AND CEMENT SUPPLIED (Invoice Copies Attached)

Thiessen Equipment Invoice #16372	274.05	✓
Thiessen Equipment Invoice #16371	<u>191.84</u>	✓

465.89
7,700.87
7208.04

FT:ew

Invoice 6080

THIESSEN EQUIPMENT LTD.

1170 GLEN DRIVE, VANCOUVER, B.C. V6A 3M6 • TEL. 254-6258

TELEX 04-55221

DATE: August 21/75

INVOICE TO: Comore Drilling Ltd.
205-1201 West Pender Street
Vancouver, B.C.

CONSIGNEE TO: SAME

INVOICE No. 16-372

SHIPPED VIA T/U	PREPAID	COLLECT XXX	SHIPPING ORDER No. 13152
SHIPPING DATE AUG 20/75	FEDERAL SALES TAX EXEMPT	PROVINCIAL SALES TAX 5% SS Tax Extra	CUSTOMER'S ORDER No. 01217

Quantity	Unit	Description	Unit Price	Amount
60	50# Bags	QUIK-GEL	\$4.35/ea	\$261.00
			5% SS Tax	13.05
				<u>\$274.05</u>

ALL INVOICES NET 30 DAYS

REMIT FROM THIS INVOICE — NO STATEMENTS ISSUED

Baroid Drilling Muds & Chemicals — Rock Bolting Supplies — Sub's & Stabilizers — Drill Stems — Rotary Bits

THIESSEN EQUIPMENT LTD.

1170 GLEN DRIVE, VANCOUVER, B.C. V6A 3M6 • TEL. 254-6258
TELEX 04-55221

DATE: August 21/75

INVOICE TO: Connors Drilling Ltd.
205-1201 West Pender Street
Vancouver, B.C.

CONSIGNED TO: SAME

INVOICE No.
16-371

SHIPPING ORDER No.
13151

CUSTOMER'S ORDER No.
01217

SHIPPED VIA
P/U

PREPAID

COLLECT
XXX

SHIPPING DATE
Aug 20/75

FEDERAL SALES TAX
5% Fed Tax Extra

PROVINCIAL SALES TAX
5% SS Tax Extra

Quantity	Unit	Description	Unit Price	Amount
6	100# Bags	Cal Seal Cement	\$22.00/ea	\$132.00
	Only	Fondu Cement	\$14.00/ea	\$ 42.00
				\$174.00
			5% Fed	8.70
				\$182.70
			5% SS Tax	9.14
				\$191.84

ALL INVOICES NET 30 DAYS

REMIT FROM THIS INVOICE — NO STATEMENTS ISSUED

Barold Drilling Muds & Chemicals — Rock Bolting Supplies — Sub's & Stabilizers — Drill Stems — Rotary Bits

Job 21-615

INVOICE NO: 6148
DATE: Sept. 24/75

Cominco Limited,
Sullivan Mines,
Kimberley, B.C.

SURFACE DIAMOND DRILLING,
SULLIVAN MINES,
KIMBERLEY, B.C.
YOUR P.O. #S-8906-R
SEPTEMBER 1-15th, 1975

FOOTAGE FEE:

D.D. Hole #5500	93'- 931'	838' @ 12.75	10,684.50	
	931'-1,000'	69' @ 12.00	828.00	
	1,000'-1,067'	67' @ 13.00	871.00	12,383.50
		<u>974'</u>		

FIELD COST WORK:

<u>DATE:</u>	<u>SHIFT:</u>	<u>TRAVEL TIME:</u>	<u>MAN HRS:</u>	<u>DRILL HRS:</u>	<u>REMARKS:</u>
Sept. 2/75	Day	5			
Sept. 2/75	Night	5			
Sept. 3/75	Night	5			
Sept. 4/75	Day	5			
Sept. 4/75	Night	5			
Sept. 5/75	Day	5			
Sept. 5/75	Night	5			
Sept. 6/75	Day	5	18	9	Cementing
Sept. 6/75	Night	5			

Invoice 6148

To • Cominco Limited,
 • Sullivan Mines,
 • Kimberley, B.C.

DATE Sept. 24/75

INVOICE NO 6148
 Job 21-615

- 2 -

FIELD COST WORK - Continued

DATE:	SHIFT:	TRAVEL TIME:	MAN HRS:	DRILL HRS:	REMARKS:
Sept. 7/75	Day	1½	6	3	Drill Cement
Sept. 7/75	Night	5			
Sept. 8/75	Day	5			
Sept. 8/75	Night	5			
Sept. 9/75	Day	5	4	2	Lost Circulation
Sept. 9/75	Night	5			
Sept. 10/75	Day	5			
Sept. 10/75	Night	5			
Sept. 11/75	Day	5			
Sept. 11/75	Night	5			
Sept. 12/75	Day	5	5	2½	Hole Testing
Sept. 13/75	Day	2½			
Sept. 13/75	Night	5			
Sept. 14/75	Day	5	16	8	Reduce to BQ
Sept. 14/75	Night	5			
Sept. 15/75	Day	5			
Sept. 15/75	Night	5			
		<u>124</u> ✓	<u>49</u> ✓	<u>24½</u> ✓	

Total Travel Time 124 @ 10.00 1,240.00
 Total Man Hours 49 @ 13.50 661.50
 Total Drill Hours 24½ @ 10.00 245.00
 2,146.50 ✓

MUD SUPPLIED (Invoice Copy Attached)

Thiessen Equipment - Invoice #16464 524.16 ✓
 15,054.16

Robson

FT:ew
 Attachment



THIESSEN EQUIPMENT LTD.

1170 GLEN DRIVE, VANCOUVER, B.C. V6A 3M6 • TEL. 254-6258
TELEX 04-55221

DATE: September 3, 1975

INVOICE TO: Connors Drilling Ltd.
#201-1261 West Pender Street
Vancouver, B.C. V6E 2V2

CONSIGNEE TO: above for Job 21,615 Sparwood

INVOICE No. 16,464

SHIPPED VIA

PREPAID

COLLECT

SHIPPING ORDER No.

Picked-Up @ Kiki's

X

13256

SHIPPING DATE

FEDERAL SALES TAX

PROVINCIAL SALES TAX

CUSTOMER'S ORDER No.

Sept. 3/75

Exempt

5% GST Tax extra

13609

Quantity	Unit	Description	Unit Price	Amount
6	50#/bags	CC-16	\$19.20	\$115.20
60	2#/bags	Quik-Trol	\$6.40	384.00
				\$499.20
			5% SS Tax	24.96
				<u>\$524.16</u>

ALL INVOICES NET 30 DAYS

REMIT FROM THIS INVOICE — NO STATEMENTS ISSUED

Baroid Drilling Muds & Chemicals — Rock Bolting Supplies — Sub's & Stabilizers — Drill Stems — Rotary Bits

Job # 21-615

INVOICE NO: 6215

DATE: October 8, 1975

Cominco Limited,
 Sullivan Mines,
 Kimberley, B.C.

Surface Diamond Drilling,
 Sullivan Mines, Kimberley, B.C.
 Your P.O. # S-8906-R,
 September 16-30, 1975

FOOTAGE FEE

D. D. Hole #	5500	1067' - 1500'	433'	@	\$13.00	\$5629.00	
		1500' - 1640'	140'	@	14.00	1960.00	
#	6406	0' - 7'	7'	@	12.75	89.25	
#	6405	0' - 46'	46'	@	12.75	586.50	
	6405-A	0' - 32'	32'	@	12.75	408.00	
			658				\$8672.75
							<u>7589.00</u>

FIELD COST WORK (Drill #25A) D.D.C.H. 5500

Date	Shift	Travel Time	Man Hrs.	Drill Hrs.	Remarks
Sept. 16/75	Day	5	2	1	Sperry Survey
"	Night	5			
Sept. 17/75	Day	5			
"	Night	5			
Sept. 18/75	Day	5	1 1/2	3/4	Sperry Survey
"	Night	5			
Sept. 19/75	Day	5			
Sept. 20/75	Day	5			
"	Night	5			
Sept. 21/75	Day	5			
"	Night	5			



155 West 3rd Avenue Vancouver 10, B.C., Canada
Area Code 604/872-1675

To • Cominco Limited,
• Sullivan Mines,
• Kimberley, B.C.

• DATE October 8, 1975

• INVOICE NO. 6215

PAGE - 2 -

Job # 21-615

Date	Shift	Travel Time	Man Hrs.	Drill Hrs.	Remarks
Sept. 22/75	Day	5	4	2	Sperry Survey
"	Night	5			
Sept. 23/75	Day	5	1½	¾	Sperry Survey
"	Night	5			
Sept. 24/75	Day	5	1½	¾	Sperry Survey
"	Night	5			
Sept. 25/75	Day	5	2	1	Sperry Survey
"	Night	5			
Sept. 26/75	Day	2	22	11	Move 20 miles
Sept. 29/75	Day		43	10	Moving
Sept. 30/75	Day		30	6	Moving
"	Day		4	2	Ream Casing 0-7'
			97	111½	
CREDIT 1-move				20	
				91½	
				10	
				25½	

6406

5500

TOTAL Travel Time 97 @ \$10.00
 TOTAL Man Hours 34½ @ 13.50
 TOTAL Drill Hours 17¼ @ 10.00

\$ 970.00
 1235.25 465.75
 252.50 172.50 2,457.75
 # 1608.25

FIELD COST WORK (Drill #60) C.H. 6405

Date	Man Hrs.	Drill Hrs.	Remarks
Sept. 25/75	21	7	Moving 1½ miles
Sept. 26/75	10	5	" " "
"	24	0	" " "
Sept. 27/75	4	2	Ream casing 14'-18'
"	16	0	Moving
Sept. 28/75	12	4	Moved 1'
Sept. 29/75	7	3½	Ream 21'-28'
Sept. 30/75	12	0	Mud Disposal
		21½	
CREDIT 1-move		10	
		11½	

6215

Invoice # 6215 charges to D.D.C.H 5500 = \$ 9197.25

COMINCO LTD.

SULLIVAN MINE

KIMBERLEY, B.C.

MAT 216 GROUP
D.D.C.H. 5500

Cominco Ltd. moved the drill and equipment into and out from the
drill site (August 26, 27 and September 26, 1975).

Rental

"D-7" bulldozer plus operator		
10 hours @ \$23.55	=	\$235.55
Truck plus operator		
14 hours @ \$12.05	=	<u>\$168.70</u>
T o t a l		\$404.25

Signed *Arthur L. Burrows*
Supervisor, Land Administration

A.L. Burrows/es
Sullivan Mine
October 15, 1975

1-11-40 08

A G R E E M E N T

This A G R E E M E N T made this 25 day of July 1975.

BETWEEN: COMINCO LIMITED
P.O. Box 2000
Kimberley, B.C.

(hereinafter referred to as the "COMPANY")

AND: CONNORS DRILLING LTD.
205-1201 West Pender Street
Vancouver, B.C. V6E 2V2

(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 property in the area of Sullivan Mine, Kimberley, 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. SCOPE OF WORK

The work is to consist of series of drill holes, drilled at locations specified by the COMPANY. A total minimum footage of 5000 feet shall be drilled, but total footage may be extended beyond that amount, by mutual consent. Holes shall be drilled with NQ or BQ tools producing 1-7/8" and 1-7/16" diameter core, as far as is reasonably practical. Maximum depth of any hole may be 4000 feet, and minimum depth shall be around 800 feet. Hole angles shall be between -55 and -90 degrees.

2. COMMENCEMENT AND EXECUTION OF WORK

Work shall be commenced: Around the first week of August, 1975. Work will be carried out with two ten hour shifts working seven days a week or as near that schedule as can reasonably be maintained.

3. THE CONTRACTOR HEREBY CONVENANTS AND AGREES

- (a) To provide all of the required drilling machinery and associated tools including, but not limited to: Drill outfit capable of drilling BQ to 4000 feet, rods, casing, fuel, diamond set items, oil and grease, etc.
- (b) That drilling crews will follow good drilling practice and shall use due care and diligence as shall enable them to recover as high a percentage of core as the nature of the ground being drilled shall permit. All cores shall be delivered to the COMPANY, in boxes provided by the COMPANY at the drill sites.
- (c) That it 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.
- (d) 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 who is objectionable or unsatisfactory to the COMPANY shall be removed from the work and replaced by an employee satisfactory to the COMPANY.
- (e) The CONTRACTOR shall keep his drill sites free from waste and rubbish, and at the completion of his work he shall leave the drill sites as clean as possible.
- (f) The CONTRACTOR or its personnel shall not divulge any information concerning drilling results, or permit access to, or examination of the drill core by any person not specifically authorized by the COMPANY.
- (g) CONTRACTOR will supply 3000 feet of line and pump to keep hole cuttings and sludge clear of water supply reservoir. Installation and removal shall be at Field Cost.

4. THE COMPANY HEREBY AGREES

- (a) Should cavities, loose or caving ground or excessive water flows be encountered in a hole so that further drilling in that hole is deemed impracticable, that hole may by mutual consent, be abandoned, and, the CONTRACTOR be paid at rates so specified herein for all footage completed in that hole. 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.

- (b) That it will provide access roads to as near all drill sites as is practical, and prepare sites suitable for drill set up.
- (c) The COMPANY shall provide, at no cost to the CONTRACTOR, all rights of way of ingress and egress to all lands that may be required to enable the CONTRACTOR to carry out the work as specified. 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.

5. THE COMPANY HEREBY AGREES to pay the CONTRACTOR for footage drilled and other services performed as follows:

- (a) Mobilization and demobilization: For equipment and crews, from CONTRACTOR'S base of operations to transport discharge point and return, a total sum of \$3,000.00.
- (b) Drilling:

	NQ	BQ
0 - 1000 ft	12.75	12.00 a foot
1000 - 1500 ft	13.75	13.00 a foot
1500 - 2000 ft	14.75	14.00 a foot
2000 - 2500 ft	15.75	15.00 a foot
2500 - 3000 ft	17.00	16.25 a foot
3000 - 3500 ft	---	17.50 a foot
3500 - 4000 ft	---	19.00 a foot
- (c) Overburden penetration: 0 - 50 feet, at \$12.75 a foot. Beyond 50 feet at Field Cost, if the cost of penetration excess \$12.75 a foot.
- (d) Reaming hole, for casing and casing hole, if required, at Field Cost.
- (e) Standby, dip-testing, or delay time, or other time during which the CONTRACTOR'S crews are performing services, for the COMPANY not otherwise covered herein: at Field Cost.
- (f) Cementing of drill holes, and redrilling of cemented section of hole: if required, at Field Cost.
- (g) Water supply: CONTRACTOR will supply up to 4000 feet of water line and pump for a maximum vertical lift of 250 feet. Installation and removal time will be included in drill move and set up.
- (h) Moving of drill and equipment from site to site: From transport discharge point to first drill site, moving from site to site and return to transport loading point. Moving time in excess of 20 man hours for each move shall be at Field Cost.

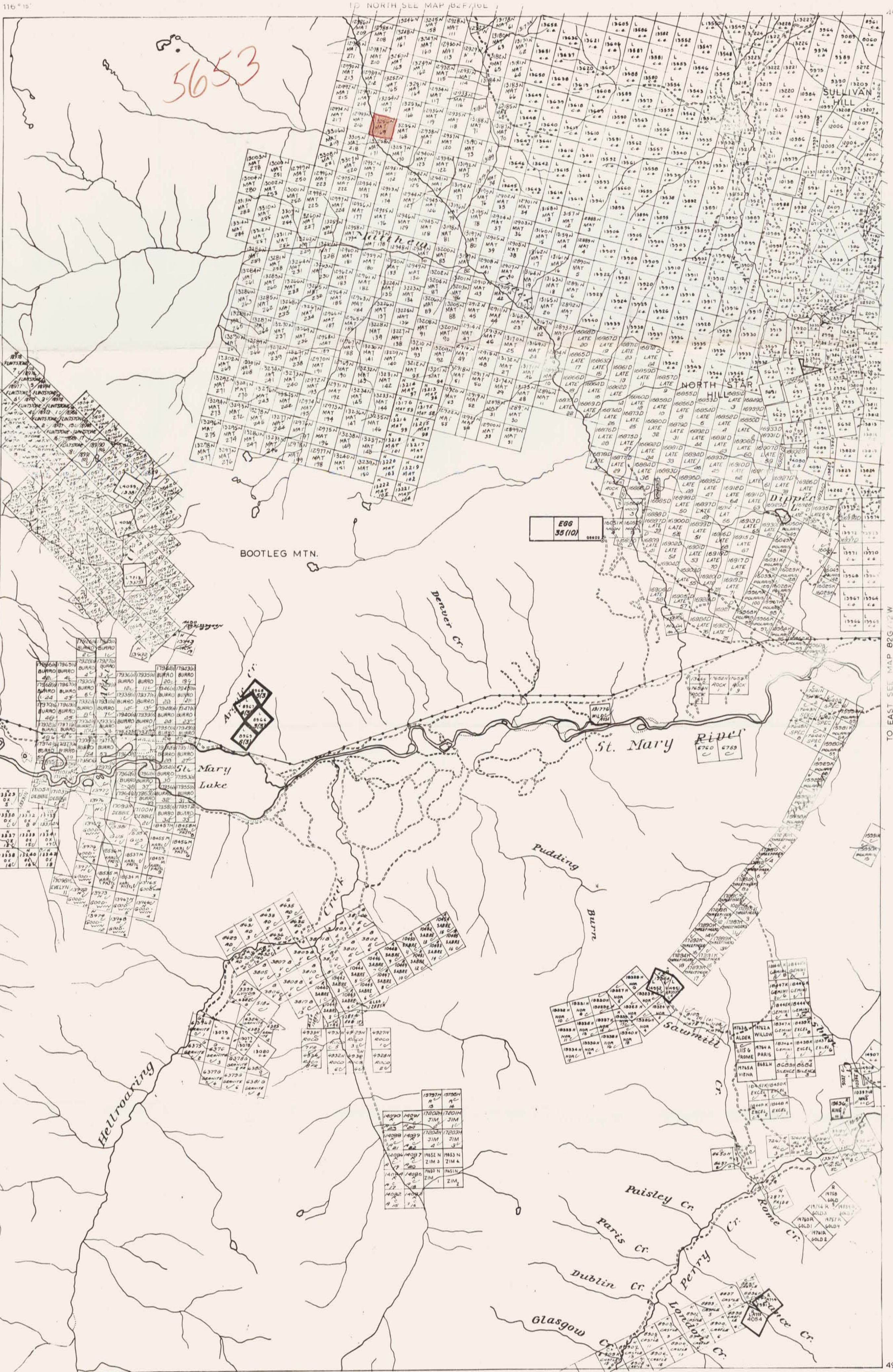
- (i) Drilling mud, additives and mixing mud, if required:
Drilling mud and additives at Cost F.O.B. the drill site.
Mixing time, if drilling operations are interrupted, at Field Cost.
- (j) Truck rental: The CONTRACTOR will provide a service vehicle for its personnel.
- (k) Tractor: The COMPANY will provide a tractor for moving drilling equipment to and from drill sites at no cost to the CONTRACTOR.
- (l) Core boxes: If supplied by the CONTRACTOR, at \$3.15 a box, plus freight.
- (m) Camp: The CONTRACTOR will provide housing and board for its personnel, at no cost to the COMPANY.
- (n) Field Cost, where applicable, shall be: Labour at \$13.50 a man hour, equipment rental at \$10.00 a drill shift hour and all the "down the hole" tools and supplies lost or consumed during the Field Cost portion of the work at cost plus ten percent.
- (o) Walking or travel time: If travel or walking time for the CONTRACTOR'S crews exceeds one half hour per man day, then all such walking time shall be chargeable at \$12.00 a man hour.

10.00 Matthew Cr.

6. INSURANCE AND GENERAL

- (a) The CONTRACTOR, at its own cost, shall maintain insurance to the following limits; Liability and Property Damage \$2,000,000., Automobile Insurance coverage \$1,000,000.00.
- (b) The CONTRACTOR shall not be held liable for any loss or damage suffered by reason of any cause beyond its active control such as riots, strikes, lockouts, Acts of God, or failure or transportation.
- (c) Under the foregoing terms and conditions the CONTRACTOR does not 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.
- (d) The CONTRACTOR shall invoice the COMPANY semi-monthly for footage drilled and other services performed. Such invoices shall be due and payable within 30 days of the invoice date.

49°45' M82F/9E



Copied Dec 5/75

116°15' FORT STEELE MINING DIVISION

TO SOUTH SEE MAP 82F/8E

116°00'

DEPARTMENT OF MINES AND PETROLEUM RESOURCES
 VICTORIA, B.C.
 MINERAL CLAIM MAP 82F/9E(M)

For up-to-date information on claims in any area you should apply to the Mining Recorder for the Mining Division conc.

This map is prepared to serve as a guide to the positions of located mineral claims and Placer Mining Leases only. Unsurveyed claims and leases are plotted from locators' sketches and are not guaranteed. Letters C & G indicate claim is Crown-Granted. Symbol 'C' indicates claim has expired.

DATE OF MICROFILM
 NOV. 20, 1973
 SEE ALSO PLACER MAP 82F/9E(M)