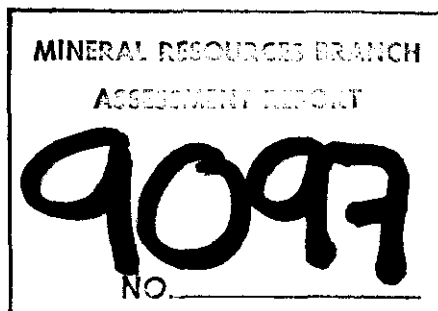


COMINCO LTD.

CAMBRIAN GROUP ASSESSMENT REPORT

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INTRODUCTION

i/ Specific Location

D.D.H. 6443 is located 4 km west of the Sullivan orebody. Access to the drill site is by road which crosses Mark Creek immediately north of #10 gravel pit.

ii/ Property Definition

The property being investigated forms part of the Sullivan Mine claim group owned by Cominco Ltd. Cominco has operated the mine for about 70 years.

The Sullivan orebody is the richest deposit in British Columbia and has contributed a major portion of the mineral wealth generated in the province.

iii/ One hole is being reported on in this report. D.D.H. 6443 was drilled using H wireline tools 9.6 cm in diameter to a depth of 81 metres.

iv/ D.D.H. 6443 was collared on the Cambrian Crown Granted mineral claim.

DETAILED TECHNICAL DATA AND INTERPRETATION

D.D.H. 6443

i/ Purpose

The purpose of D.D.H. 6443 was to test for mineralization west of the Sullivan mine.

ii/ Results

Cored 74 metres of undisturbed Middle Aldridge lithology.

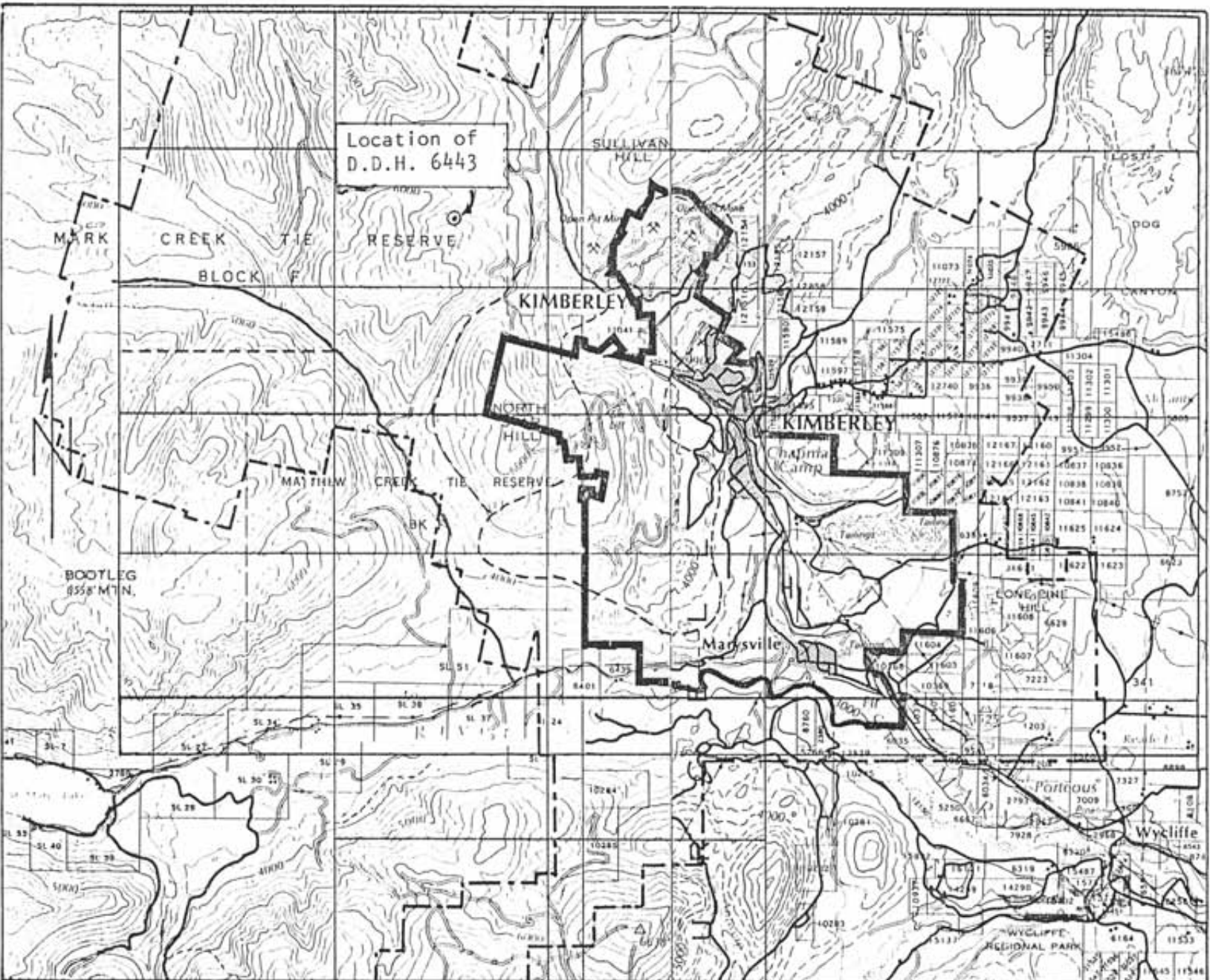
iii/ Interpretation

0 - 6.7 m	Overburden
6.7 - 81 m	Predominantly argillaceous sediments in the thinly laminated to medium bedded range. Occasional medium to thick beds ranging from wackes to quartzitic wackes.

iv/ Conclusion

No major structural features indicated in the drilling. Sediments intersected are of the Middle Aldridge.

No mineralization of economic value was intersected.



Drawn by:

Traced by:

Revised by

Revised by

Date

Date

SULLIVAN MINE - KIMBERLEY, B.C.
 INDEX MAP
 LOCATION OF D.D.H. 6443
 NTS 82 F/NE

Scale: 1:125,000

Date: February, 1981

Plate:

DEVONIAN

ARCHAEO

JURASSIC

DDCH 6443

DDCH 6442

5100

CAMBRIAN

LOT 13236

PERMIAN

5300

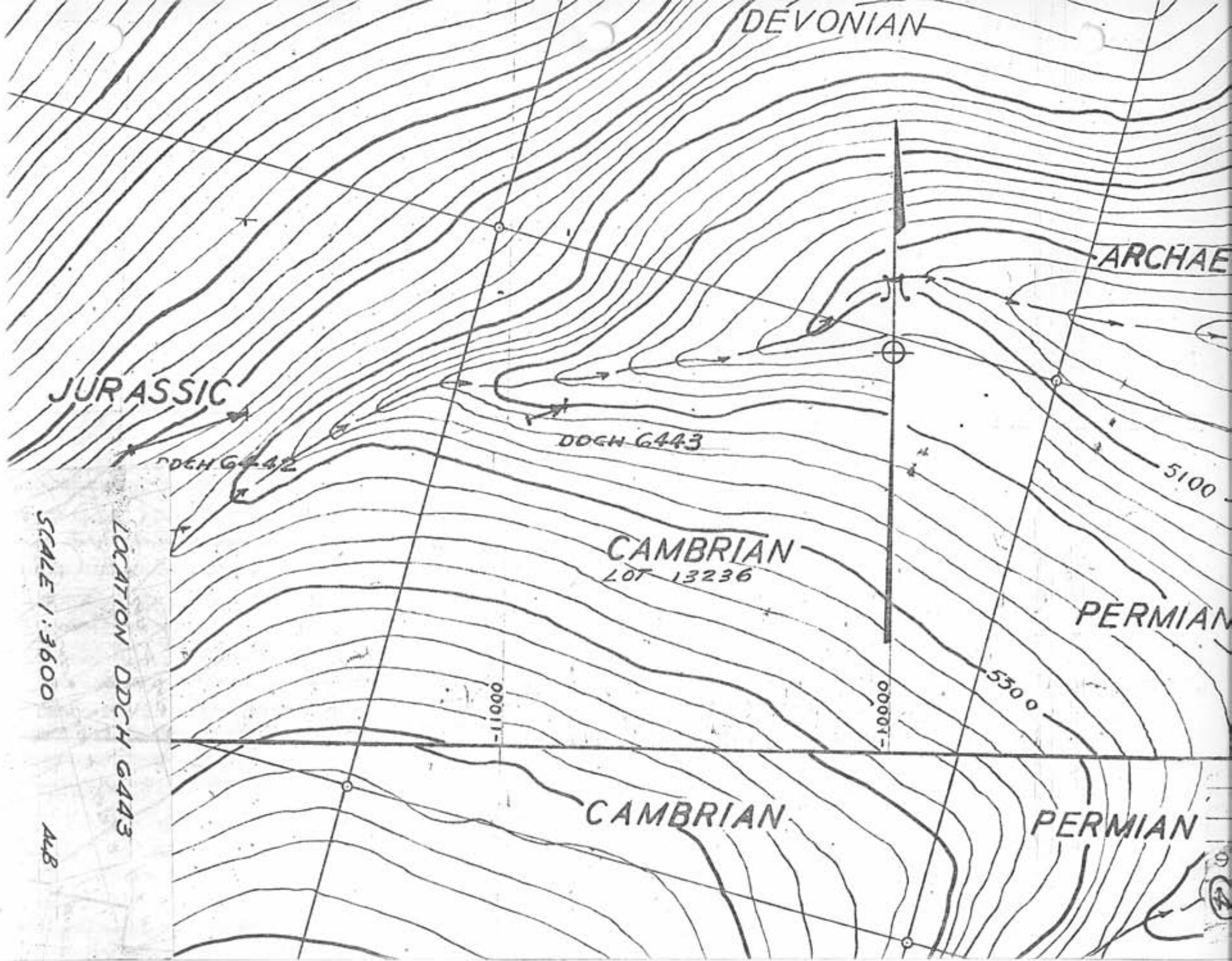
CAMBRIAN

PERMIAN

SCALE 1:3600

LOCATION DDCH 6443

44B



Author's Qualifications

As author of this report, I Arthur S. Hagen certify that:

I am employed by Cominco Ltd. as a Senior Geological Technician active in minerals exploration.

I have been continuously engaged in mining and exploration geology for the past 24 years.



A.S. Hagen

Senior Geological Technician

COMINCO LTD.

SULLIVAN MINE

KIMBERLEY, B. C.

COST SUMMARY

START:	January 28, 1981	CONTRACTOR:	Acadia Drilling Inc.
FINISH:	February 3, 1981	LOCATION:	Mark Hill (No. 6443)

Footage

0 - 22	OB @ \$21.50	\$	473.00	
22-266	HQ @ \$21.00		5,124.00	\$ 5,597.00

Hourly Charges

Hole Conditioning	116.00		
Reaming	384.00		
Laying Waterline	518.00		
Travel Time	282.00		1,300.00

Materials

Casing Shoe	335.92		
Casing	568.77		904.69

Mud or Additives

Cominco Supplied	42.00		42.00
------------------	-------	--	-------

Moving Charges

Hourly	1,520.00		
Mob/Demob	252.70		1,772.70

Cominco Charges

Operator	103.00		
Geology Supervision	600.00		703.00

Miscellaneous

Core Boxes @ \$5.09 per box	96.71		96.71
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TOTAL DIRECT DRILLING COSTS			\$ 10,416.10
-----------------------------	--	--	--------------

STATEMENT

DEC. 8 1980

IN ACCOUNT WITH

WRIGHT CONTRACTING

723 - 5th Street S. Phone 426-4958
CRANBROOK, B. C.

M. COMINCO KIMBERLEY B.C.

ORDER No. S-23368R

TERMS: 1.8% Interest on Overdue Accounts.

PWA	D6C CAT RENTAL	Nov/80
137 h.	@ \$41.00	5494.00
ROAD CONSTRUCTION		
TOTAL		\$5494.00
George Cole 6112. (Sullivan Exploration) Ph. Ramon		

DD
43/DP
10000

ACADIA DRILLING INC.
501 McBride St. W.
Cranbrook, B.C.
VIC 4H3

6

I N V O I C E

Cominco Ltd.
P.O. Box 2000
Kimberley, B.C.
VIA 2G3

Attention: Mr. John M. Hamilton
Chief Geologist, Kimberley

TERMS: 30 days
INVOICE DATE: February 3, 1981
INVOICE NO: 826
ORDER NO: S 23363 R
BILLING PERIOD: January 16 - 31, 1981
JOB LOCATION: Cranbrook area

<u>DESCRIPTION</u>	<u>AMOUNT</u>
<u>Hole # K-81-1</u>	
Drilling Detail	\$ 3,924.80
Material	3,551.75
Waiting Time	2,574.00
Other	2,175.00
	<u>12,225.55</u>
<u>Hole # K-81-2</u>	
Drilling Detail	3,142.13
Material	86.84
Waiting Time	588.00
Other	675.00
	<u>4,491.97</u>
<u>Hole # K-81-3</u>	
Drilling Detail	4,380.81
Material	3,488.89
Waiting Time	996.00
Other	2,328.00
	<u>11,193.70</u>
<u>Hole # 6443</u>	
Drilling Detail	3,224.00
Material	335.92
Waiting Time	2,295.00
	<u>5,854.92</u>
	<u>\$ 33,766.14</u>

ACADIA DRILLING INC.
Calculations
January 15 to January 31, /81 Billing

DRILLING DETAIL

Hole # K-81-1

Overburden (NW)	0 metres to (6.10) metres =	(3.05 @ \$72.60 per metre	\$ 221.43
Drilling (BQ)	3.05 metres to 8.23 metres =	5.18 @ \$65.60 per metre	339.81
(NQ)	3.05 metres to 49.38 metres =	46.33 @ \$72.60 per metre	3,363.56
<i>and 2 interval, as switched to NQ.</i>			
			<u>3,924.80</u>

Hole # K-81-2

Overburden (NW)	0 metres to 3.05 metres =	3.05 @ \$72.60 per metre	221.43
Drilling (NQ)	3.05 metres to 43.28 metres =	40.23 @ \$72.60 per metre	2,920.70
			<u>3,142.13</u>

Hole # K-81-3

Overburden (NW)	0 metres to 2.44 metres =	2.44 @ \$72.60 per metre	177.14
Drilling (NQ)	2.44 metres to 46.02 metres =	43.58 @ \$72.60 per metre	3,163.91
Drilling (BQ)	46.02 metres to 61.87 metres =	15.85 @ \$65.60 per metre	1,039.76
			<u>4,380.81</u>

Hole # 6443

Overburden (NW)	0 feet to 22 feet =	22 @ \$21.50 per foot	473.00
Drilling (HQ)	22 Feet to 153 feet =	131 @ \$21.00 per foot	2,751.00
			<u>3,224.00</u>

\$14,671.74
=====

MATERIAL

Hole # K-81-1

1 #41436 BW Imp. casing shoe	@ \$152.00 + \$ 6.08 PST	158.08
1 #46348 NQ Imp. bit (green)	@ \$415.00 + \$16.60 PST	431.60
1 #95551 BQ 75 series bit	@ \$548.15 + \$21.92 PST	570.07
1 #43617 NW casing shoe	@ \$199.00 + \$ 7.96 PST	206.96
1 #46291 NQ Imp. bit (green)	@ \$415.00 + \$16.60 PST	431.60
1 #46290 NQ Imp. bit (green)	@ \$415.00 + \$16.60 PST	431.60
1 #46294 NQ Imp. bit (green)	@ \$415.00 + \$16.60 PST	431.60
1 #94892 NQ 100 series bit	@ \$856.00 + \$34.24 PST	890.24
		<u>3,551.75</u>

Hole # K-81-2

80 gal Kutwell 45	@ \$ 78.95 + 10% (invoice attached)	<u>86.84</u>
-------------------	-------------------------------------	--------------

Hole # K-81-3

1 NW casing shoe	@ \$199.00 + \$ 7.96 PST	206.96
1 #46353 NQ Imp. bit (green)	@ \$415.00 + \$16.60 PST	431.60
1 10' HQ rod	@ \$120.35 + \$ 4.81 PST	125.16
1 #6252 NQ bit	@ \$415.00 + \$16.60 PST	431.60
1 #47761 NQ Imp. bit (green)	@ \$415.00 + \$16.60 PST	431.60
1 #41434 BW Imp. casing shoe	@ \$152.00 + \$ 6.08 PST	158.08
1 #32681 BQ Imp. bit (green)	@ \$290.00 + \$11.60 PST	301.60
1 #32682 BQ Imp. bit (green)	@ \$290.00 + \$11.60 PST	301.60

*? the chart probably be B.10.
This hole was started 23 times.*

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ACADIA DRILLING INC.
Calculations
January 15 to January 31, /81 Billing

WAITING TIME	Rig and 2 Men (\$64.00 /Hr.)	Extra Labour (\$21.00 /Hr.)	
<u>Hole # K-81-1</u>			
Jan. 15 - Move set up		40 ✓	\$ 840.00
16 - Move set up		30 ✓	630.00
18 - Reaming	5 ✓		320.00
19 - Reaming	5 ✓		320.00
20 - Reaming	2 ✓		128.00
20 - Move set up		16 ✓	336.00
	12	86	2,574.00 ✓
<u>Hole # K-81-2</u>			
Jan. 21 - Move set up		16 ✓	336.00
22 - Move set up		12 ✓	252.00
		28	588.00 ✓
<u>Hole # K-81-3</u>			
Jan. 24 - Condition hole	3 ✓		192.00
25 - Reaming	6 ✓		384.00
27 - Move set up		20	420.00
	9	20	996.00 ✓
<u>Hole # 6443</u>			
Jan. 28 - Move		33 ✓	693.00
29 - Move set up		38 ✓	798.00
30 - Reaming	5 ✓		320.00
30 - Install water line		12 ✓	252.00
30 - Travel time		4 ✓	84.00
31 - Reaming	1 ✓		64.00
31 - Travel time		4 ✓	84.00
	6	91	2,295.00 ✓
	27	225	\$ 6,453.00 ✓

OTHER

<u>Hole # K-81-1</u>			
(7 shifts) Water Truck		(3 1/2 shift days @ \$450.00)	\$ 1,575.00 ✓
Mobilization Fee		(1/2 X \$1,200.00)	600.00 ✓
			<u>2,175.00</u>

<u>Hole # K-81-2</u>			
(3 shifts) Water Truck		(1 1/2 shift days @ \$450.00)	675.00 ✓

<u>Hole # K-81-3</u>			
(3 shifts) Water Truck		(1 1/2 shift days @ \$450.00)	675.00 ✓

ACADIA DRILLING INC.
501 McBride St. W.
Cranbrook, B.C.
VIC 4H3

I N V O I C E

Five CASH

Cominco Ltd.
P.O. Box 2000
Kimberly, B.C.
VIA 2G3

Attention: Mr. John M. Hamilton
Chief Geologist, Kimberly

TERMS: 30 days
INVOICE DATE: February 3, 1981
INVOICE NO: 827
ORDER NO: S 23363 R
BILLING PERIOD: February 1 - 3, 1981
JOB LOCATION: Cranbrook Area

<u>DESCRIPTION</u> (All Charges to Hole #6443)	<u>AMOUNT</u>
Drilling Detail	\$ 2,373.00
Material	568.77
Waiting Time	1,218.00
Other	<u>1,500.00</u>
	\$ 5,659.77
	=====

ACADIA DRILLING INC.
Calculations
February 1 to February 3 /81 Billing

DRILLING DETAIL

Hole #6443

Drilling 153 feet to 266 feet = 113 @ \$21.00 per foot ✓ \$ 2,373.00

MATERIAL

4 pcs. 5' HW casing	@ \$99.20 ea. (\$496.00 + \$19.84 PST)	\$ 515.84
1 pc. 2' HW casing	@ \$50.90 + \$2.03 PST	<u>52.93</u>
		\$ <u>568.77</u> ✓

ACADIA DRILLING INC.
Calculations
February 1 to February 3 /81 Billing

<u>WAITING TIME</u>	<u>Rig and 2 Men</u> <u>(\$58.00 /Hr.)</u>	<u>Extra Labour</u> <u>(\$19.00 /Hr.)</u>	
Feb. 1 - Condition hole	2		\$ ✓ 116.00
" - Travel time		4	✓ 76.00
Feb. 2 - Drain water line		14	✓ 266.00
" - Move set up		6	✓ 114.00
" - Travel time		2	✓ 38.00
Feb. 3 - Move set up		32	✓ 608.00
	2	58	\$ 1,218.00
=====			

OTHER

Feb. 3 - Demobilization fee	(1/4 of \$3,000.00)		\$ 1,500.00
=====			

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Diamond Drill Geological Log



Objective: TEST FOR MINERALIZATION WEST OF SULLIVAN MINE		Sampled: NIL	
Logged By: A. S. Hagen		Date: February, 1981	
Block		Composites: NIL	
Sect		Place: CAMBRIAN	App. Bear: 570°W
		App. Dip: -6R°	
		Length: 266'	
From	To	Discard	Reason
0	22	Overburden	
22	266		Predominantly argillaceous sediment ranging from thinly laminated to medium bedded with occasional medium to thick beds with bases as follows: 27' (thk. W-SW), 42.5' (thk. W-SW/AG), 48' (thk. W-SW/AG), 51' (thk. QcW-SW/AG), 97' (med. QcW-SW/AG), 98' (med. QcW-SW/AG), 102' (thk. QcW-SW/AG), 105' (med. W-SW/AG), 112' (thk. QcW-SW/AG), 114' (thk. QcW-SW/AG), 122' (thk. QcW-SW/AG), 128' (med. W-SW/AG), 136' (thk. W-SW/AG), 186' (med. W-SW/AG). Badly broken core 122' to 124' and 128' to 129', gouge and fragmental 124' to 125' (fault?). Rusty fracturing common from parallel to 70° to core. Some bedding offset along calcite healed fracturing. Bedding to core as follows: 31'-36°, 71'-38°, 138'-46°, 158'-45°, 170'-50°, 200'-50°, 232'-25°, 252'-45°.
		Core Size	
		HQ	
		Hole No. 6443	
		Page 1	

A. S. Hagen

