

79-#73-#7181

COMINCO LTD.

SULLIVAN MINE

KIMBERLEY, B.C.

DRILLING REPORT

DDCH 6431

FAL 5 GROUP

RECEIVED

FEB 22 1979

GOLD COMMISSIONER
FORT STEELE MINING DIVISION
CRANBROOK, B.C.

7181



MINERAL ACT
FORM I

RECEIVED

NOTICE TO GROUP

SEP 25 1978
Group # 665012E
GOLD COMMISSIONER
FORT STEELE MINING DIVISION
CRANBROOK, B.C.

Mining Division Fort Steele Location near Kimberley, B.C.
Name of group FAL5 324 Map No. 82G/MW

We, the undersigned owners* of the following adjoining mineral claims, desire to group them according to the provisions of the *Mineral Act*—

NAME OF CLAIM	No. of Units	Record No. or Lot No.	Month of Record	SIGNATURE OF OWNER*	Free Miner's Certificate No.
FAL5	6	324	Oct.		
* GOL3	6	563	Oct.		
* GOL2	3	562	Oct.		
FAL6	6	325	Oct.	<i>A.L. Burrows</i>	
FAL7	6	328	Oct.	A.L. BURROWS	166107
FAL8	6	329	Oct.		
FAL9	6	330	Oct.	Agent For	
				COMINCO LTD.	161641
TOTAL	39				

* Fal3 and Fal4 were abandoned in October 1978 and with the written consent of the Gold Commissioner, these mineral claims were immediately relocated in the name of Golf2 and Golf3. Unexpired exploration expenditures were credited to the relocated claims.

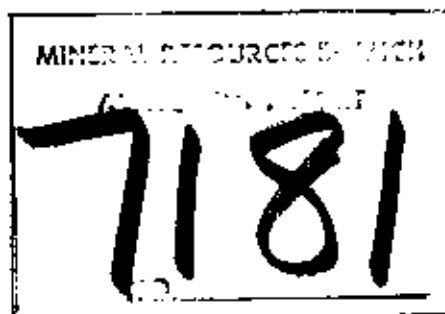
AMERICAN BRASS CO. (BRANCH)
7181

* May be signed by agent on behalf of owner.

ab

TABLE OF CONTENTS

	<u>Page</u>
1. Introduction	1
2. Detailed Technical Data and Interpretation	3
3. Author's Qualifications	5
4. Index and Location Maps	6 - 7
5. Diamond Drill Log	8 - 14
6. Itemized Cost Statement and Contract Invoices	15



COMINCO LTD.

SULLIVAN MINE

KIMBERLEY, B.C.

FAL 5 GROUP ASSESSMENT REPORT

The following report describes the results of drilling diamond drill hole 6431, a 513 metre hole, in the Kimberley area on the FAL 5 mineral claim located in the Fort Steele Mining Division.

The N.T.S. location is 82 G/12

Latitude 49° 37' 15" North

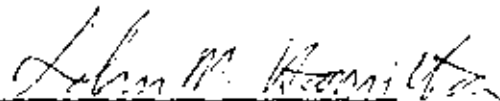
Longitude 115° 55' 45" West

Cominco Ltd., owner of the claims, was the operator of the exploration program.

A.S. Hagen is author of this report.

Date of Submission: January 1979.

Endorsed for
Release by :



J.M. Hamilton, P. Eng.
Chief Geologist, Kimberley

i) Specific Location

Exploration hole No. 6431 is located between the C.P.R. tracks and the St. Mary River, 1.3 kilometres south of the Purcell Drive-In which is situated in the Marysville subdivision of Kimberley.

An index map showing the location of the exploration hole is attached (Figure 1).

ii) Property Definition

The property being investigated forms part of the Sullivan Mine claim group owned by Cominco Ltd. Cominco Ltd. has operated the mine for about 71 years. The Sullivan orebody is one of the largest base metal deposits in British Columbia and it has contributed a major portion of the mineral wealth generated in the province.

iii) The first stage of drilling, to 134 metres, was reported on previously in a submission by geologist P.W. Ransom dated September, 1978.

The hole was continued to bedrock at 201 metres using a tricone bit 11.7 cm in diameter. The hole was cased from collar to bedrock with H wireline rods 8.9 cm in diameter and completed in bedrock to 513 metres using N wireline tools 7.57 cm in diameter.

iv) D.D.H. 6431 was collared on the FAL 5 mineral claim.

i) Purpose

The purpose of exploration hole 6431 was to test stratigraphy immediately north of the St. Mary Fault and east of the St. Mary River.

ii) Results

Various amounts of silts, sands and gravels were encountered to a depth of 201 metres where bedrock was struck. Coring began in gabbro at 201 metres. The gabbro-sediment contact was intersected at 378 metres and coring continued in bedded sediment to 513 metres.

iii) Interpretation

0-201m

Overburden, consisting of silts, sands and gravels.

201m-378m

Gabbro, coarse grained at contact becoming finer grained to 378m. Some notably porous zones resulting in broken core. Very minor fracture and disseminated pyrrhotite, pyrite and chalcopyrite noted.

378m-513m

Sediments. Quartzitic units ranging from thin (3cm-10cm) to thick (30cm-100cm) beds, predominantly graded.

Argillaceous units ranging from laminated (0.3cm-1cm) to thin bedded (3cm-10cm).

Distinct chlorite alteration throughout the sediments, especially within the more argillaceous zones.

Minor pyrite, pyrrhotite and chalcopyrite mineralization throughout.

Conclusion

The type of sedimentation encountered in this hole is, with the exception of the distinctive chlorite alteration, characteristic of Middle Aldridge sediment. The distinctive colour alteration could be related to the St. Mary Fault, a regional fault whose plane is interpreted from regional data to lie about 335 metres south of this drill hole.

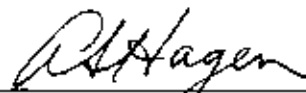
No mineralization of economic value was intersected.

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 22 years.



A.S. Hagen
Sr. Geological Technician

MT. DUNN

MARK CREEK

499 454



MA1

CEK TIE RESERVE
BLOCK F

SULLIVAN HILL

KIMBERLEY

NORTH HILL

MATTHEW CREEK TIE RESERVE

KIMBERLEY

BOOTLEG ROAD MTN.

Marystown

LOCATION OF
DOCH G431

WYCLIFFE REGIONAL PARK

Miles 1



Scale of Kilometres



COMINCO LTD.

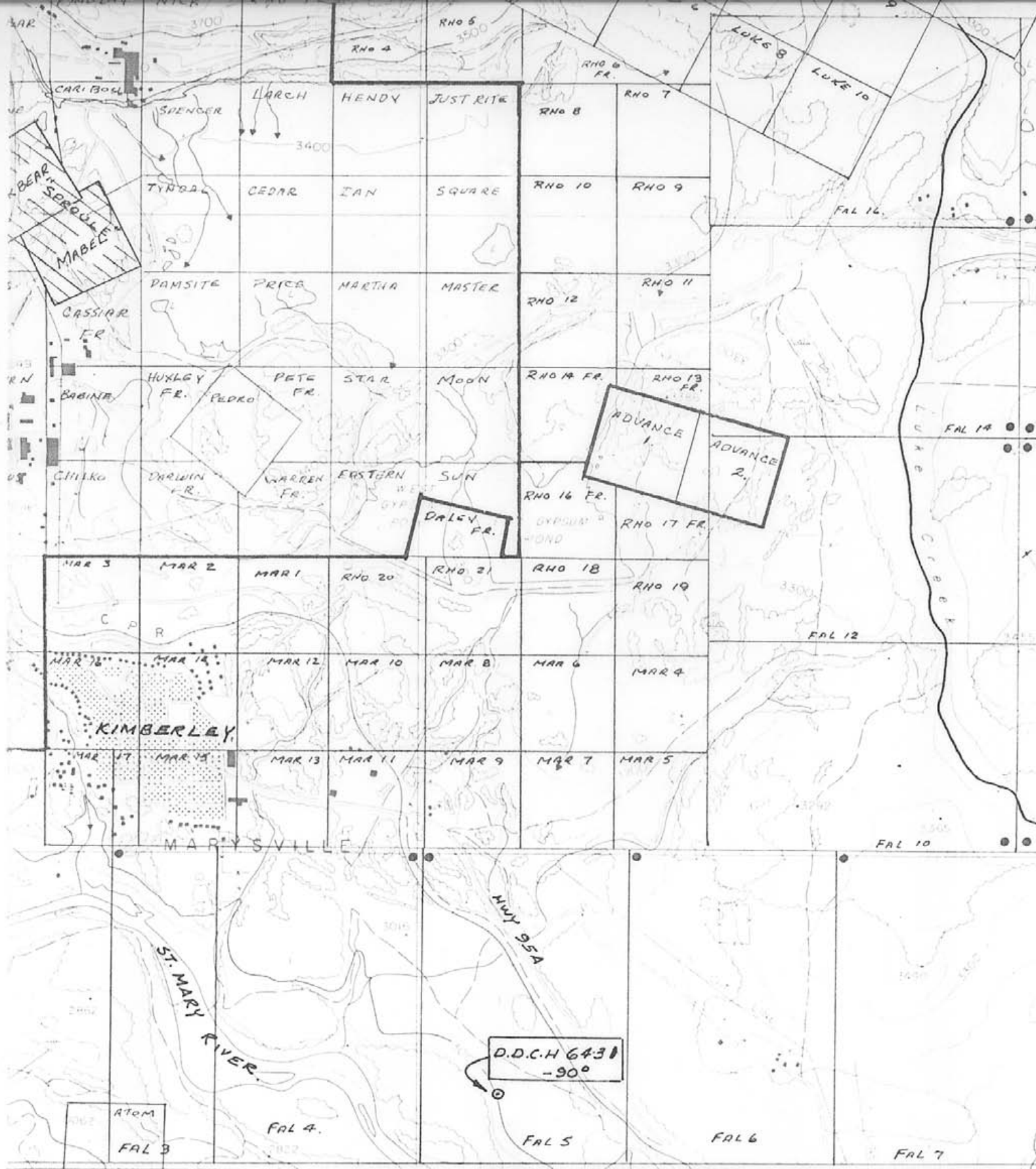
SULLIVAN MINE

KIMBERLEY, B.C.

Scale 1:125,000

Ref.: 82 F/NE, 82 G/NW (73-74)

ALB 2/78



SCALE 1:24000



FAL 5 GROUP

Sullivan Mine

Diamond Drill Geological Log

FOR D.D.V. 6431



LOG # - 23, 811, 31 (Mine Geol)	DEP. 21, 257.06 (Mine Geol)	ELEV. 3016.99	GENERAL COMMENTS:
DIP - 50 (See survey)	AZIM. See Survey	LENGTH 652'	
HORIZ. CORR. 238.5'		VERT. CORR. 1655.4'	With the exception of a distinctive chloritization effect, the bedded sediment is characteristic of Middle Aldridge geology. The core indicates the beds have experienced some early form of disturbance by faulting and/or slumping.
DATE COLLECTED: H&W Aqua - Aug. 19/78 Tonto-Nov. 3/78		DATE COMPLETED: Nov 26/78	
CORE STORAGE: Open Pit			
DRILLED ON CLAIM(S): Pat 5			
OBJECTIVE: Exploration Southeast Area			
PLANNED LENGTH: 1,490'			
TERMINATION COMMENTS: Hole stopped 9' short of proposed 200' extent on from planned length of 1,490', due to stuck core barrel problem.			
DRILLED BY: H&W Aqua Drilling (casing to 440'), Tonto Drilling to 1682'			
TYPE DRILL: Tonto - Type 44			
CORE SIZE(S): 42			
PERFORMANCE COMMENTS: Drilling performance was satisfactory. Delays were caused by waterline freeze ups and a transmission breakdown.			
CASING REMAINING IN HOLE (LENGTH & SIZE): 440' of 6" I.D. & 5/8" O.D. 660' of HQ Rods			
TYPE OF CAP & METHOD OF SEALING: Metal Cap (casing), spot welded			
OTHER MATERIAL REMAINING IN HOLE: nil.			
SURVEY INSTRUMENT USED: Sperry Sun Single Shot			
ADDITIONAL DOWN HOLE TESTS: None			

LOG LEGEND

BED THICKNESS CLASSIFICATION

BEDS	Very Thick Bedded	100 cm
	Thick Bedded	30 cm
	Medium Bedded	10 cm
	Thin Bedded	3 cm
	Very Thin Bedded	1 cm
	LAMINAE	Laminated
Thinly Laminated		

LITHOLOGY ABBREVIATIONS

DQ - Orthoquartzite
QA - Quartz Arsenite
QW - Quartz Wacke
QSW - Quartzitic Wacke
W - Wacke
SW - Sub wacke
AG - Argillite

Diamond Drill Geological Log



Objective		EXPLORATION SOUTHEAST AREA		Sampled: NIL		40 Scale	
Logged By		A.S. KAGEN		Date NOVEMBER, 1978		Composites: N.L.	
Block	Sheet	Place	App. Dip	App. Dip	Length	Color Plot & Cuts (On Cases & Log)	
		FAL S MINERAL CLAIM	-90°	-90°	682'		
From	To	Interval	Reason				
0.0	660.0		Overburden. Driller's note, "Triconed from 650' in apparent solid bedrock, began coring at 660 feet."				
660.0	1239.5		Gabbro, coarse grained to 7" becoming medium to fine grained at contact. Minor fractures and/or shears 669'-687' at 25° - 40° to core and 706' - 708' at 25° - 50° to core. Porous textured, broken core 653' - 867' and 1045.5' - 1051.0'. Foliated zones at 1280' - 1137' (porous), and 120' - 1204' at 30° - 40° to core, broken core in more porous sections. Possible fault at 1119' - 1122' with quartz and chlorite. Numerous narrow, erratic quartz carbonate veins throughout the gabbro from 869' downwards. Minor pyrrhotite and chalcocopyrite in narrow veins at 877.5' and 878.8'. Very fine grained, medium to light green, section lacking homblende from 843.5' to 845.5', well-spaced with clear quartz healed erratic fractures. Intensely calcaceous from 1202' to 1212'. Abundant fine pyrite flecks throughout light grey to white porous zone from 1228' to 1231'. Base contact at 65° to core. Small, chlorite halved quartz fragments in bottom 3".				
1239.5	1265.0		Medium - thick, chlorite altered, graded beds of Qtz-W:54, some laminated tops and/or interbeds. Alteration makes rock distinctively green, particularly in more calc. laceous sections. Some healed shattered sections and slicken indicators such as at 1242', 1247' (in contact) and 1251'. Minor pyrite mineralization. Bdg. to core at 1253' - 44°, 1256' - 50°, 1257' - 33° and 1259' - 50°.				
1265.0	1267.0		Healed shatter and breccia zone, angular to sub-rounded fragments. Suggestion of early fault, possibly along bedding plane.				
						Gore Size	
						50	
						Core No	Page
						6431	1

Diamond Drill Geological Log



Objective: _____ Sampled: _____

Logged By: A.S. HAGEN Date: NOVEMBER, 1978 Composites: _____

Block: _____ Sect: _____ Piece: _____ App Bear: _____ App Dip: _____ Length: _____

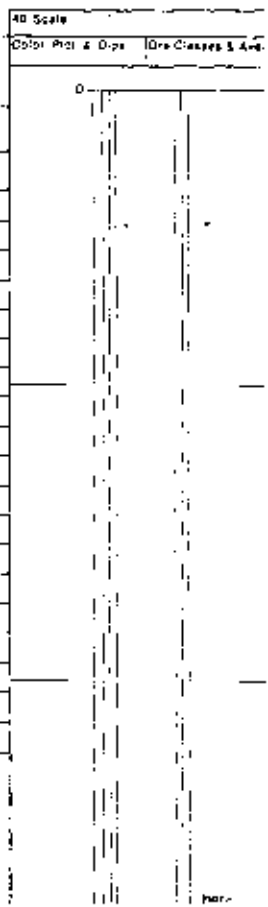
From: _____ To: _____ Record: _____ Reason: _____

1262.0 1321.5 Similar beds and rock types as from 1239.5' - 1255.0'. Rock is altered and silicious with distinctive quartz grains very rare. Disrupted, shattered beds are indicated to 1292' with some portions breccia-like. First distinct bed noted at 1291', 35° to core. Steep dipping beds indicated below by the following angles to core: 1287'-30°, 1302'-20°, 1309' to 1302' bds. parallels core, 1309' - 15° and 1318' - 12°. Other bds. angles above are 1267' - 20°, 1273' - 15°. Very distinct quartz grains from 1315' - 1317' (100). Spratic, thin (up to 3") brecciated zone at 1317.5'. Very minor mineralization with occasional fine pyrite, chalcocite noted in fracture at 1292'. Leadcasts at 1318'.

1321.5 1401.0 Thick bedded sediments, ranging from orthoquartzites to argillites. This zone is predominantly quartzitic with much less chlorite alteration and zoning than previous footages. Changes from quartzitic to argillaceous material are abrupt within beds. Rocks show a healed shattered effect in part. Steep dipping beds are indicated by the following angles to core: 1327'-25°, 1330'-20°, 1342'-20°, 1363'-45°, 1372'-50°, 1382'-40°, 1389'-30° and 1397'-45°. Possible slump features noticeable from 1327'-1330'. Core is repeatedly broken apart, some minor gouge at 1359. In 1 foot. of well broken core (minor break suggested). Wuggy in part. Very minor pyrite mineralization.

1401.0 1425.0 Similar beds and rock types as previous footage (1321.5' to 1401.0') however, with distinctive green colour alteration (chloritization) for most part. Highly silicious zone, finer grained quartz than previous footages. Minor pyrite and chalcocite mineralization. Bds. angles to core were: 1410'-20°, 1414'-45°. Occasional sandy alteration (feldspar).
Core Size: 40

1425.0 1460.0 Laminated very thin bedded zone bedded sediments. L.S.M.M. Rock is distinctly green tinged (chloritization) for most part.
Core No: 643 Page: 2



Diamond Drill Geological Log



Objective		Sampled		Color Phot & Draw		Core Classes & Assay	
Logged By		Date		Composites			
Block	Section	Face	App Bear	App Dip	Length		
From	To	Core	Reason				
1460	1484	(Iron'd)	Some alteration effects megascopically, in low- α chloritization. Considerable fine, light spotting throughout (feldspar). Unusual angular to subangular spotted effects at 1425' and 1429'-1429' (medium to dark green spots in light matrix). Sediment from 1452' - 1454' spgr. laminated, is very hard. Two graded QW-A beds 1434' - 1435' similar bed with base at 1442'. Beds of QO from 1444.5' to 1445.6' with abrupt contacts. Beds from 1425' - 1428' are silicious with breasted shatter effects. Contacts are irregular. Bdg. angles to core are 1433'-50°, 1441'-65°, 1448'-55°, 1452'-60°, 1456'-45°.				
1460.0	1484.0		Medium-thick bedded sediment [predominantly thick] ranges from QO through to argillite. Well defined quartzitic sections, some grading to green tinged argillite, others changing abruptly to same. Unconformable contacts common. Light spotting (feldspar) in argillaceous sections. Argillite dyke at 1425.5'. Rock is vuggy in part. 1" pyrite-chalcopyrite blob at 1427.5'. Bdg. 55° to core at 1483'.				
1484.0	1485.0		Healed breccia (1") cutting core at 15°. QW fragments in a chloritized argillite matrix.				
1485.0	1532.0		Medium-thick bedded sediment, ranges from QW through to argillite. Similar type beds as from 1460.0' to 1484.0'. Occasional healed shatter effects, some healed brecciated zones such as 1488.5' to 1489.2', 1497', 1502', 1507', 1521', 1524', and 1528'. Slumping or collapse effects suggested from 1522' to 1505'. 2" gouge in breaks 30° to core at 1532'.				
			Core Size				
			4Q				
			Core No.				
			6431				
			Page				
			3				

Diamond Drill Geological Log

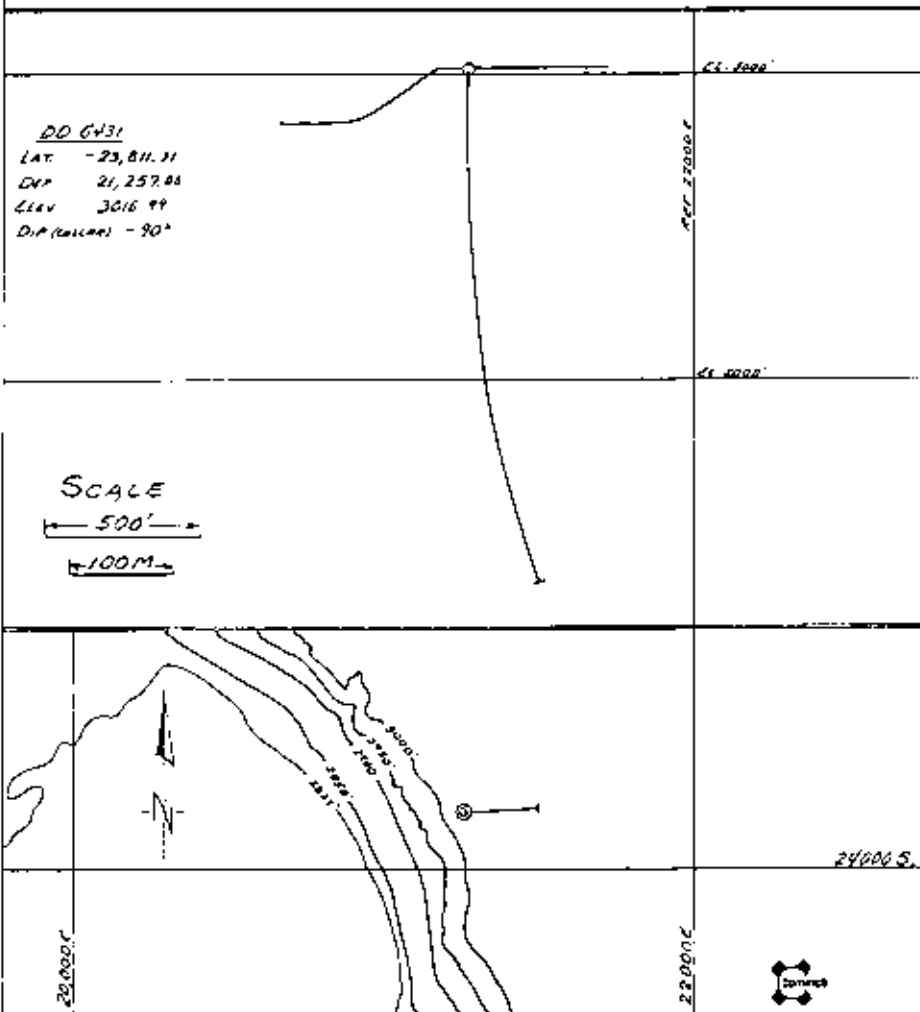


Objective:		Sampled:					No Scale	
Logged By	Date:	Composites:					Color, Prob. & Dip	Dr. Classes & Aves
Block	Section	Block	App. Bear	App. Dip	Length	0		
From	To	Reason:						
1547.0	1583.0	Thin-medium-thick bedded, graded sediments, becoming increasingly argillaceous and green (clayed chloritic) ranging from wackes through to argillites. One thick bed QGW from 1552' to 1555'. Some irregular features most notable in argillaceous zones (current, slumping and/or sloughing and slight offsets along healed, tight fracturing). Healed breccia 55° to core at 1574'. Irregular bases are common. Iron pyrite mineralization throughout. Ddg. angles to core are: 1550'-60°, 1560'-50°, 1570'-60°.						
1583.0	1602.0	Very thick beds (2), ranging from quartzitic wacke through to argillites. Beds appear subtly graded, however, there is some variation in hardness throughout. Irregular contacts (1590' & 1594') parallel to core suggest slumping. Some coarser material partially waxy. Chloritization effect less disruptive than previous footage.						
1602.0	1624.0	Similar rock types as above. Actual bed thicknesses undeterminable due to disturbed nature of beds such as slumping effects with associated healed brecciation at 1612' and irregular contact features at 1617'. Some coarser material bedded with fine, tight fracturing.						
1624.0	1650.0	This zone grades nearly argillite, thinly laminated to laminated with disturbed and/or irregular beds of coarser material (e.g. orthoquartzite at 1630') of undeterminable thicknesses. Irregular contacts common throughout. Slumping suggested at 1636' with bedding paralleling core (60'). Offsets along healed tight fracturing common. 1.5' breccia (quartz matrix) 55° to core at 1632'. Soft, talc-like argillite for a few inches immediately above and 6" quartzitic wacke immediately below. Ddg. at 1637' is 55° to core.						
1650.0	1650.0	Thick bedded sediment, subtly graded in part ranging from orthoquartzite through to argillite, coniform basal contacts. Irregular lens-like features in argillaceous tops. Some suggestion of disturbances within coarser material of beds. Fine, tight spotting occasionally (feldspar). Green lined.					Core Size	
							40	
							Note No	Page
							6431	4

SURVEY

SURVEY FOOTAGE	DIP	AZIMUTH
450'	-86 1/2°	(CASING)
845'	-83 1/2°	090°
1420'	-73 1/2°	086°

EXTRAPOLATION				
FOOTAGE	DIP	AZIMUTH	HORIZ. COMP.	VERT. COMP.
0-225'	-90°	-	-	225.0'
225-608'	-86 1/2°	090 (assumed)	27.7'	422.1'
608-1133'	-83 1/2°	090	54.9'	481.9'
1133-1682'	-73 1/2°	086°	155.9'	526.4'
TOTALS			238.5'	1655.4'



Drawn by: <i>AS. Hagan</i>		Traced by:	
Revised by:	Date:	Revised by:	Date:
D.D. 6431		SPERRY SUN SINGLE SHOT SURVEY	
Scale:	Date: <i>NOV. 1978</i>	Page:	

COMINCO LTD.

SULLIVAN MINE

KIMBERLEY, B.C.

COST SUMMARY
DDCH 6431
FALS GROUP

FOOTAGE

0' - 440'	Costs approved on Group No. 2030		
431' - 944'	Inv. 4412C	\$ 5,335.00	
944' - 1682'	Inv. 4417C	<u>15,565.50</u>	
			\$20,900.50

HOURLY CHARGES

Inv. 4406		\$ 768.00	
Inv. 4412		6,036.00	
Inv. 4417		<u>1,603.50</u>	
			8,407.50

MATERIALS

Inv. 4412		\$ 3,779.55	
Inv. 4432		6,840.82	
Inv. 4417		<u>719.89</u>	
			11,340.26

COMINCO CHARGES - Cat rental, core storage, etc. 2,426.00

CGRE BOXES 52 x \$4.35 226.20

MOB/DEMOB Prorated @ \$.245/ft. drilled 412.00

WATER HAULING INV. 4425C 1,380.00

Cominco Supervision, truck rental, core logging- 1978 cost \$1.50/ft. drilled: 2,523.00

TOTAL COST \$47,615.46

A.L. Burrows/db
February 13th 1979

THE TONKO GROUP OF COMPANIES
SHEPHERD ENTERPRISES LTD.
1215 WEST 7TH AVENUE

VANCOUVER, B.C. V6H 1B7

ACCOUNT WITH

DOMINCO LTD.
BOX 2000
KIMBERLEY, B. C. VIA 2G3

CONTRACT NO. 309
INVOICE NO. 4432C
DATE 31/12/78

PROPERTY KIMBERLEY 16/12/78 TO 31/12/78

OTHER CHARGES

DD 6431 1.00 RE INV 43770 CHARGES 6369.57 6369.57
FOR SHOES & ROUS SEE ATT.

✓ 6369.57

THIRD PARTY CHARGES

THIESSEN EQUIPMENT LTD.
4434
W. R. JOHNSON
47669
PLUS 10.00 %

(361.50)
36.25

155.00 ✓
287.50 650.00 287.50
80.50
44.25
496.75 885.50

TOTAL AMOUNT OF INVOICE

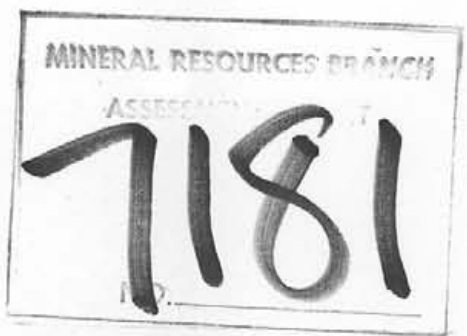
(442.50)

7255.07
6840.8
= 6856.32

They should be 6856.32

6369.57
155.00
287.50
44.25
6856.32
6840.82
15.50

442.50



15.50

44.25
28.75
15.50

HW shoe s/n 1570	320.47
Plus 10%	<u>32.05</u>
Hole 6431	352.52

PW shoe s/n 1556	193.00
Plus 10%	<u>19.30</u>
hole 6431	212.30

HW shoe s/n 1630	186.90
Plus 10%	<u>18.69</u>
6431	205.59

HW shoe s/n 1440	312.12
Plus 10%	<u>31.21</u>
Hole 6431	343.33

HWL shoe s/n 1580	248.33
Plus 10%	<u>24.83</u>
6431	273.16

66 HWL rods (casing) at \$100.66 =	6643.56
less 25%	<u>(1660.89)</u>
6431	4982.67

TOTAL CHARGES	\$ 6369.57
---------------	------------

DATE: December 7, 1978

INVOICE TO: Tonto Drilling Company
 1215 West 7th Avenue
 Vancouver, B.C. V6H 1B7

CONSIGNEE TO:
 Above @ Kimberley, B.C.

INVOICE No 4434

SHIPPED VIA
 Picked up @ Kiki, Sparwood, B.C.

PREPAID COLLECT

SHIPPING ORDER No. D 15777

SHIPPING DATE
 Nov. 17/78

FEDERAL SALES TAX
 Exempt

PROVINCIAL SALES TAX
 5% Extra

CUSTOMER'S ORDER No. S 0697

Quantity	Unit	Description	Unit Price	Amount
		To Invoice you for freight re Invoice #4375 dated November 27, 1978, as per copy enclosed.		\$155.00

PAID

645 000 309

155.00

ALL INVOICES NET 30 DAYS
 REMIT FROM THIS INVOICE -- NO STATEMENTS ISSUED

7
 5
 50
 07
 .8
 7
 0
 0
 5
 2
 2
 0

SOLD TO *Shepherd Enterprises Ltd.*
Van B.

SHIPPED TO

ADDRESS

VIA

41005
CUSTOMER'S ORDER *50767*
DATE
TERM
T.O.B.

INVOICE

*10 hr for D7 cat work at Kimberly
@ \$25.00*
*3 months rental on 1000 gal tank
rented on Aug 11 by year from Mr.
Mike Kowich & returned on Dec 10
by year from Mr. Doug H. H.
This rate is based on what I was
paid for same tank while it was
in Kowich's hands. \$100 a month.*

CO.	ACC.	NO.	Description	Amount	DATE
710	017	309		350.00	1/25
710	005	309		300.00	1/25

<i>287.50</i>
<i>710.00</i>
<i>575</i>
<i>700.00</i>
<i>650.00</i>

FORM 10 22

ADW

300.00

287.50

4 (4) *Demo*

8a *Contract with Sunrise to wipe out rental 300.00*

18 *sub contract*

*add further charge of
\$225.00 for "cat" hauling
+ \$350.00 = \$575.00 and
split 50/50 between
Shepherd.*

SHEPHERD INDUSTRIES LTD.
1215 WEST 7TH AVENUE

VANCOUVER, B.C. V6H 1B7

COUNT WITH

COMINCO LTD.
BOX 2000
KIMBERLEY, B.C. V1A 2B3

CONTRACT NO. 307
INVOICE NO. 4406C
DATE 01/10/78
TO 01/10/78

PROPERTY KIMBERLEY

FOOTAGE BILLED

WELL	HOLE	SIZE	PROG	FT	PROG - RATE	TOTAL
44-2	6433	28.00 FEET HW	72.00	1008.00	20.25	867.00 /
44-2	6433	50.00 FEET HW	100.00	1000.00	21.75	1087.50 /
44-2	6433	50.00 FEET HW	110.00	1100.00	22.75	1107.50 ✓
44-2	6433	10.00 FEET HW	200.00	200.00	23.75	237.50
44-2	6433	290.00 FEET HQ	210.00	2100.00	17.75	3147.50
44-2	6433	500.00 FEET HQ	300.00	1500.00	13.75	9375.00
44-2	6433	67.00 FEET HQ	1000.00	1000.00	20.75	1892.25
TOTAL						18942.25
U.B. FOOTAGE			130.00			
CORED FOOTAGE			807.00			
TOTAL FOOTAGE			937.00			

FOR # 6431

To warehouse

For 20/78

Charge 6112 33

SHEPHERD DRILLING SERVICES LTD.
1215 WEST 7TH AVENUE

VANCOUVER, B.C. V6H 1B7

ACCOUNT WITH

COMINCO LTD.
BOX 2000
KIMBERLEY, B.C. VIA 2B3

CONTRACT NO. 309
INVOICE NO. 44060
DATE 31/10/78
TO 31/10/78

PROPERTY KIMBERLEY

HOURLY CHARGES

16/10/78 6433	✓ 2.00 HOURS	REPAIRING	57.00	114.00
16/10/78 6433	✓ 2.00 HOURS	CONDITION HOLE	57.00	171.00
16/10/78 6433	✓ 5.00 HOURS	MUD - GROUTING	57.00	228.00
17/10/78 6433	✓ 2.00 HOURS	REPAIRING	57.00	114.00
17/10/78 6433	✓ 1.00 HOURS	CONDITION HOLE	57.00	57.00
17/10/78 6433	✓ 2.00 HOURS	MUD - GROUTING	57.00	114.00
17/10/78 6433	✓ 2.00 HOURS	WATERLINE - MAINT.	57.00	259.00
17/10/78 6433	✓ 3.00 HOURS	REDUCE HOLE	57.00	171.00
17/10/78 6433	✓ 2.00 HOURS	CONDITION HOLE	57.00	114.00
18/10/78 6433	✓ 1.00 HOURS	TESTING/LOG/SURVEY	57.00	85.50
21/10/78 6433	✓ 2.00 HOURS	WAITING TIME	50.00	100.00
22/10/78 6433	✓ 3.00 HOURS	WAITING TIME	50.00	150.00
23/10/78 6433	✓ 1.00 HOURS	WAITING TIME	50.00	50.00
24/10/78 6433	✓ 3.00 HOURS	WAITING TIME	50.00	150.00
25/10/78 6433	✓ 10.00 HOURS	CEMENT - ALL OPERATIONS	57.00	912.00
27/10/78 6433	✓ 1.00 HOURS	CEMENT - ALL OPERATIONS	57.00	57.00
27/10/78 6433	✓ 1.00 HOURS	WAITING TIME	50.00	50.00
28/10/78 6433	✓ 1.00 HOURS	MUD - GROUTING	57.00	57.00
28/10/78 6433	✓ 1.00 HOURS	WAITING TIME	50.00	50.00
30/10/78 6433	✓ 1.00 HOURS	SURVEY	57.00	114.00
30/10/78 6433	✓ 2.00 HOURS	MUD - GROUTING	57.00	171.00
31/10/78 6433	✓ 2.00 HOURS	PULLING CASING	57.00	114.00
31/10/78 6433	✓ 2.00 HOURS	MOVING	18.50	518.50
31/10/78 6433	✓ 2.00 HOURS	WAITING TIME	50.00	286.50

50 54
11 @ 37

9768.00

4170.50

MUD CALCULATION PRODUCTS

140	145.00	BOG.	QUICK-OFF	5.19	596.85	726.61
37	45.00	BOG.	QUICK-TRAC	6.85	518.75	595.75
	18.00	BOG.	CELLEX	6.09	109.62	
	1.00	PAIL	POLY DRILL 300	160.50	160.50	
125	165.00	BOG.	DIESEL	.64	67.20	70.00
	8.00	BOG.	FORDI CEMENT	17.83	107.10	
	2.00	PAIL	POLY DRILL 300	85.20	170.40	
	21.00	PAIL	POLY DRILL 300	118.00	2378.00	
PLUS	10.00	X			467.84	432.24

4508.26

4755.49

CASINGS

18/10/78 6433	1.00 HW CASING (30 FT)	✓	123.85	123.85
PLUS	10.00	X		12.39

136.24

31/10/78
6433

210' HWK Rod
1 HWK Rod

AMOUNT OF INVOICE

27757.25

27.23

~~27784.48~~

27784.48

SW 4412

SHEPHERD ENTERPRISES LTD.
1215 WEST 7TH AVENUE

VANCOUVER, B.C. V6H 1B7

ACCOUNT WITH

MINCO LTD.
IX 2000
KIMBERLEY, B. C. V1A 2B3

CONTRACT NO. 309
INVOICE NO. 44120
DATE 15/11/78

PARTY KIMBERLEY PO# 515817 L 01/11/78 TO 15/11/78

FOOTAGE DRILLED

LOG#	HOLE	SIZE	FROM	TO	ANGLE RATE	TOTAL
4-2	6431	229.00 FEET TRI	431.00	660.00		
4-2	6431	284.00 FEET NR	660.00	944.00	18.75	5325.00
		TOTAL				5325.00
		O. B. FOOTAGE	229.00			
		CORED FOOTAGE	284.00			
		TOTAL FOOTAGE	513.00			

Distribution

6112 . 31	\$ 15,140.55
. 32	\$ 6080.94
. 33	\$ 2004.21
	<hr/>
	\$ 23,225.70

To Warehouse Rec 6/178

SHEPHERD ENTERPRISES LTD.
1215 WEST 7TH AVENUE

VANCOUVER, B.C. V6H 1B7

NT WITH

MINCO LTD.
X 2000
KIMBERLEY, B. C. V1A 2G3

736-2641

CONTRACT NO. 309
INVOICE NO. 44120
DATE 15/11/78
TO 15/11/78

PROPERTY KIMBERLEY

01/11/78 TO 15/11/78

HOURLY CHARGES

11/78 6431	✓ 18.00 HOURS MOVING	18.50	✓ 333.00
11/78 6431	✓ 6.00 HOURS WAITING TIME	50.00	✓ 300.00
11/78 6431	✓ 24.00 HOURS MOVING	18.50	✓ 444.00
11/78 6431	✓ 9.00 HOURS DRILLING - O. B.	57.00	✓ 513.00
11/78 6431	✓ 4.00 HOURS SETTING CASING	57.00	✓ 228.00
11/78 6431	✓ 6.00 HOURS TRIPPING RODS	57.00	✓ 342.00
11/78 6431	✓ 1.00 HOURS REAMING	57.00	✓ 57.00
11/78 6431	✓ 14.00 HOURS DRILLING - O. B.	57.00	✓ 798.00
11/78 6431	✓ 3.00 HOURS TRIPPING RODS	57.00	✓ 171.00
11/78 6431	✓ 1.00 HOURS REAMING	57.00	✓ 57.00
11/78 6431	✓ 5.00 HOURS DRILLING - O. B.	57.00	✓ 285.00
11/78 6431	✓ 3.00 HOURS TRIPPING RODS	57.00	✓ 171.00
11/78 6431	✓ 2.00 HOURS REAMING	57.00	✓ 114.00
11/78 6431	✓ 5.00 HOURS DRILLING - O. B.	57.00	✓ 285.00
11/78 6431	✓ 3.00 HOURS TRIPPING RODS	57.00	✓ 171.00
11/78 6431	✓ 2.00 HOURS REAMING	57.00	✓ 114.00
11/78 6431	X 2.00 HOURS MUD - GROUTING	57.00	114.00
11/78 6431	✓ 17.00 HOURS DRILLING - O. B.	57.00	✓ 969.00
11/78 6431	✓ 1.00 HOURS REAMING	57.00	✓ 57.00
11/78 6431	✓ 1.00 HOURS DRILLING - O. B.	57.00	✓ 57.00
11/78 6431	✓ 2.00 HOURS SETTING CASING	57.00	✓ 114.00
11/78 6431	✓ 1.00 HOURS REAMING	57.00	✓ 57.00
11/78 6431	✓ 1.00 HOURS CONDITION HOLE	57.00	✓ 57.00
11/78 6431	✓ 4.00 HOURS REDUCING HOLE	57.00	✓ 228.00
11/78 6431	✓ 2.00 HOURS SURVEY	57.00	✓ 114.00

Diff 114.00 ✓ 6150.00 ✓ 6036.00

MUD CIRCULATION PRODUCTS

169	479.00 BGS.	QUICK-GEL	27.93	929.01	877.11
	70.00 BGS.	QUICK-TROL	6.85	479.50	479.50
60	61.00 BGS.	CELLEX	6.09	371.49	365.40
	60.00 GALS	DIESEL	.64	38.40	38.40
PLUS	10.00 %			181.84	178.83

diff 33.07 ✓ 2000.24 ✓ 1967.17

MATERIALS CONSUMED

11/78 6431	1.00 3 15/16 TRICONE	✓ 107.70	107.70
11/78 6431	1.00 3 15/16 TRICONE	✓ 107.70	107.70
11/78 6431	1.00 3 15/16 TRICONE	✓ 107.70	107.70
PLUS	10.00 %		32.31

✓ 355.41 ✓

RODS

11/78 6432	75.00 HWL RODS (10 FT)	6432 ✓	100.66	7549.50
1/10/78 6433	21.00 HWL RODS (10 FT)	6433 ✓	100.66	2113.86
MINUS	25.00 %			2415.84

7247.52

Charge rods 6112 31
32
33

SHEPHERD ENTERPRISES LTD.
1215 WEST 7TH AVENUE

VANCOUVER, B.C. V6H 1B7

NT WITH

MINCO LTD.
X 2000
KIMBERLEY, B.C. V1A 2G3

CONTRACT NO. 309
INVOICE NO. 4412C
DATE 15/11/78

PERIOD: KIMBERLEY 01/11/78 TO 15/11/78

CASING SHOES

7/09/78 6432	1.00 HWL ROD SHOE	6432	380.74	380.74
7/10/78 6433	1.00 HWL ROD SHOE	6433	380.74	380.74
	PLUS 10.00 %			76.15

837.63 ✓

BITS SHELLS

7/78 6431	1.00 HQ BIT S/W 40955	6431	973.51 ✓	973.51
	PLUS 10.00 %			97.34

✓ 1070.75

THIRD PARTY CHARGES

KIKI AND SONS TRANSFER LTD.				175.00
	9733			176.11
	1071			35.11
PLUS 10.00 %				

✓ 386.22

TOTAL AMOUNT OF INVOICE

23372.77

23,225.70



Adjustment Advice

Attention Accounts Receivable

To adjust the account of:

Trail, B.C.

SHEPHERD ENTERPRISES LTD Date DEC 1 1978
1215 WEST 7TH AVE Our ref. PO # 515317L
VANCOUVER BC V6H 1B7

Your billing ref.: INVOICE NO. 4412 C Date 15/11/78
 Total credit debit to us \$ 23,372.77
 Should be \$ 23,225.10
 We have deducted from added to your acct. \$ 147.07

The above invoice has been corrected and is now being processed for payment. Our cheque statement will show the original invoice total plus or minus this adjustment. Please correct your records accordingly.

Explanation:

1) HOURLY CHARGES
6/11/78 2 HRS 1700 BROOKLYN \$ 114.00
SHOULD BE DELETED

2) MUD PRODUCTS
 SHOULD READ

1 TANNEK	@	27.93	\$ 27.93
164 G-GEL	@	5.17	377.11
70 G-TRAIL	@	6.85	479.50
60 CELLUX	@	6.09	365.40
60 DIESEL	@	1.64	38.40
			<u>178.83</u>
			\$ <u>1967.17</u>

2 none call to N. KARSSEN confirming. Am. Contract just 6/12/78

DEBIT ① 114.00
 ② 33.07
 \$ 147.07

Noted John Reinhardt 2/18/86

Original (mail immediately to payee)

SHEPHERD ENTERPRISES LTD.
1215 WEST 7TH AVENUE

VANCOUVER, B.C. V6H 1B7

COUNT WITH

COMINCO LTD.
BOX 2000
KIMBERLEY, B.C. VIA 2G3

CONTRACT NO. 309
INVOICE NO. 4417C
DATE 30/11/78
TO 30/11/78

5 15817 L

PROPERTY KIMBERLEY

16/11/78

TO

30/11/78

FOOTAGE DRILLED

RIG#	HOLE	SIZE	FROM	TO	ANGLE RATE	TOTAL
44-2	6431	56.00 FEET NO	954.00	1000.00 ✓	18.75	1050.00
44-2	6431	500.00 FEET NO	1000.00	1500.00 ✓	20.75	10375.00
44-2	6431	182.00 FEET NO	1500.00	1682.00 ✓	22.75	4140.50
TOTAL						15565.50 ✓
O. E. FOOTAGE					.00	
CORED FOOTAGE					733.00	
TOTAL FOOTAGE					733.00	

OK.

change 1112.31

550.00 charge

for water.

To Warehouse Dec 19

SHEPHERD ENTERPRISES LTD.
1215 WEST 7TH AVENUE

VANCOUVER, B.C. V6H 1B7

COUNT WITH

COMINCO LTD.
BOX 2000
KIMBERLEY, B. C. V1A 2G3

CONTRACT NO. 309
INVOICE NO. 4417C
DATE 30/11/78

PROPERTY KIMBERLEY 16/11/78 TO 30/11/78

HOURLY CHARGES

18/11/78 6431	✓ 2.00 HOURS RECOVER EQUIP/FISHING	57.00	114.00
19/11/78 6431	✓ 1.00 HOURS CONDITION HOLE	57.00	57.00
20/11/78 6431	✓ .50 HOURS TESTING	57.00	28.50
21/11/78 6431	✓ 2.00 HOURS PULLING CASING	57.00	114.00
21/11/78 6431	✓ 16.00 HOURS TRIPPING RODS	57.00	912.00
21/11/78 6431	✓ 2.00 HOURS WAITING TIME	50.00	100.00
26/11/78 6431	✓ 4.00 HOURS PULLING CASING	57.00	228.00
26/11/78 6431	✓ 1.00 HOURS WAITING TIME	50.00	50.00

✓ 1603.50

MUD CIRCULATION PRODUCTS

103.00 BBS.	QUICK-GEL ✓	5.19	560.52
3.00 BBS.	ASBESTOS ✓	12.33	36.99
PLUS 10.00 %			59.75

✓ 657.26

OTHER CHARGES

6431	1.00	DEMOBILIZATION ✓ SITE TO KAMLOOPS	1500.00	1500.00
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✓ 1500.00

THIRD PARTY CHARGES

OLDHAM'S TRANSPORT LTD. ✓			56.94
KAP30 ✓			5.69
PLUS 10.00 %			

✓ 62.63

TOTAL AMOUNT OF INVOICE

19388.89

ACCOUNT WITH

COMINCO LTD.
BOX 2000
KIMBERLEY, B.C. VIA 2G3

CONTRACT NO. 309
INVOICE NO. 44250
DATE 15/12/78

PROPERTY KIMBERLEY *515517L* 01/12/78 TO 15/12/78

THIRD PARTY CHARGES

SUNRISE EXCAVATING LTD.		
1742		180.00
1738	<i>6431</i>	510.00
		✓ 690
TOTAL AMOUNT OF INVOICE		690

Change 6112-31

To wire house Jan 3/78

650