

ASSESSMENT REPORT COVER SHEET

Name Fig. No.

Mining Inventory Nos. NTS

Lat. 50° 09' Long. 115° 46' NTS 82J/4W

Mining Division Golden Location 7 Km ESE of

Canal Flats, 6 Km NNE of the confluence
of Friday Creek & Kootenay River

Claims (Central Records) Koot. 1 & 2

Claims (total) Koot. 1 & 2 (4 & 2 units)

Owner 1 Cominco Ltd. 2.

Address Box 2000, Kimberly BC, V1A 2G3

Operator 1 Same 2.

Address

MINERAL RESOURCES DIVISION
10,160

SULLIVAN MINE

COMINCO LTD.

KIMBERLEY, B.C.

KOOT GROUP ASSESSMENT REPORT

The following report describes the results of drilling Diamond Drill Hole K-81-4, a 81.10 metre hole; D.D.H. K-81-5, a 19.51 metre hole; D.D.H. K-81-5A, a 67.38 metre hole; D.D.H. K-81-6, a 81.69 metre hole and D.D.H. K-81-7, a 77.72 metre hole in the Canal Flats area on the Koot mineral claims located in the Golden Mining Division.

The N.T.S. location is 82J/4.

D.D.H. K-81-4	U.T.M.	Easting	589080 m
		Northing	5555350 m
D.D.H. K-81-5	U.T.M.	Easting	589020 m
K-81-5A		Northing	5555370 m
D.D.H. K-81-6	U.T.M.	Easting	589060 m
		Northing	5555400 m
D.D.H. K-81-7	U.T.M.	Easting	589000 m
		Northing	5555450 m

Gold Commissioner

FEB 24 1982

GOLDEN, B.C.

Cominco Ltd., owner of the claims, was the operator of the exploration program.
N. R. Watson is author of this report.

Date of submission: November 1981.

Endorsed For
Release By:



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

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INTRODUCTION

i/ Specific Location

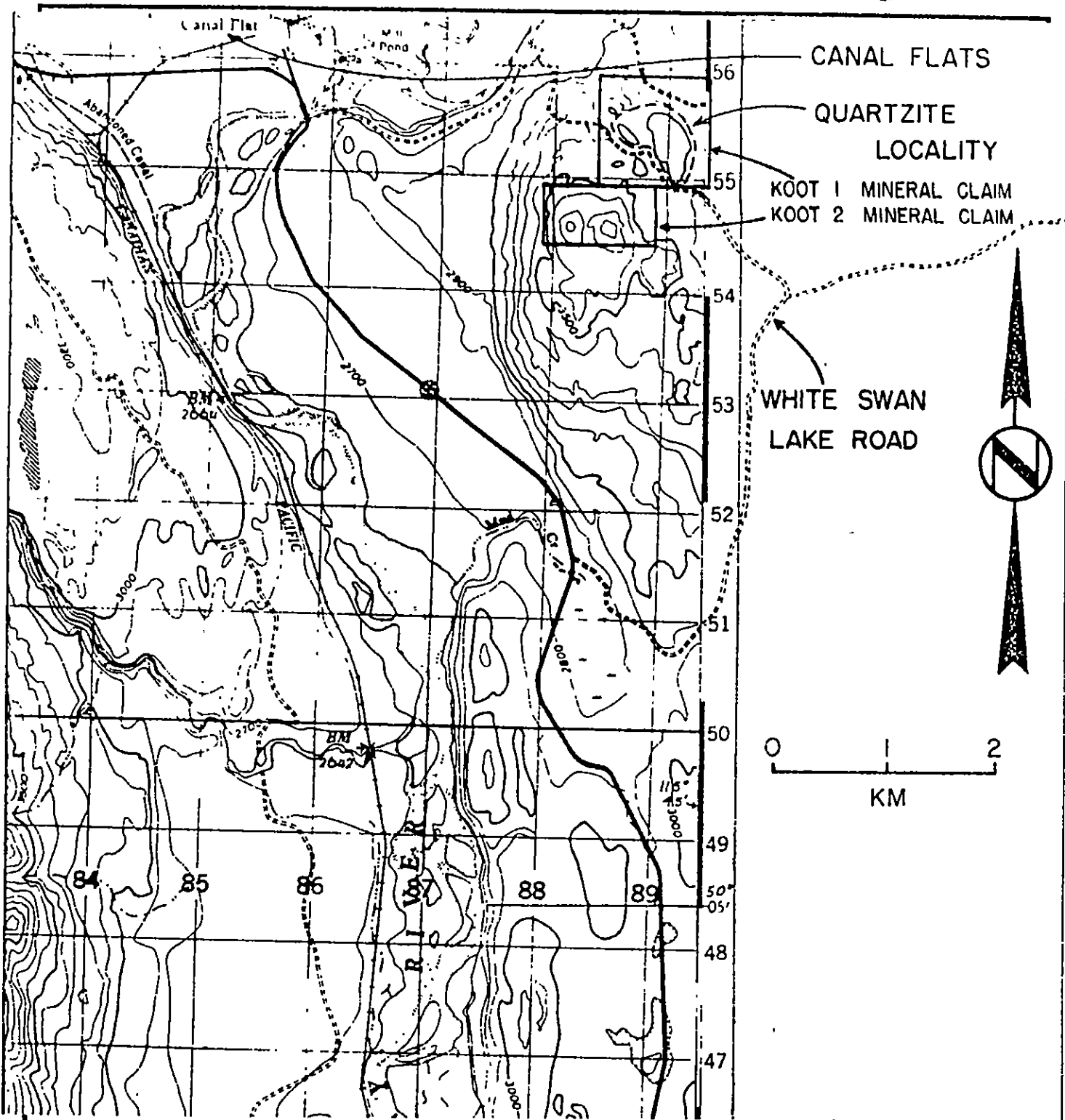
D.D.H.s K-81-4, K-81-5, K-81-5A, K-81-6 and K-81-7 are located east southeast of Canal Flats. Access to the drill sites is via Highway 95, the White Swan Lake Road and 2 km of bush road.

ii/ Property Definition

The property being investigated is the Koot group of mineral claims acquired in 1980 and owned by Cominco Ltd.

iii/ Five diamond drill holes are being reported on in this report: D.D.H. K-81-4 was drilled to a depth of 81.10 metres using N wireline tools, 7.6 cm in diameter. D.D.H. K-81-5 was drilled to a depth of 19.51 metres using N wireline tools, 7.6 cm in diameter. D.D.H. K-81-5A was drilled to a depth of 67.38 metres using N wireline tools, 7.6 cm in diameter. D.D.H. K-81-6 was drilled to a depth of 81.69 metres using N wireline tools, 7.6 cm in diameter and D.D.H. K-81-7 was drilled to a depth of 77.72 metres using N wireline tools, 7.6 cm in diameter.

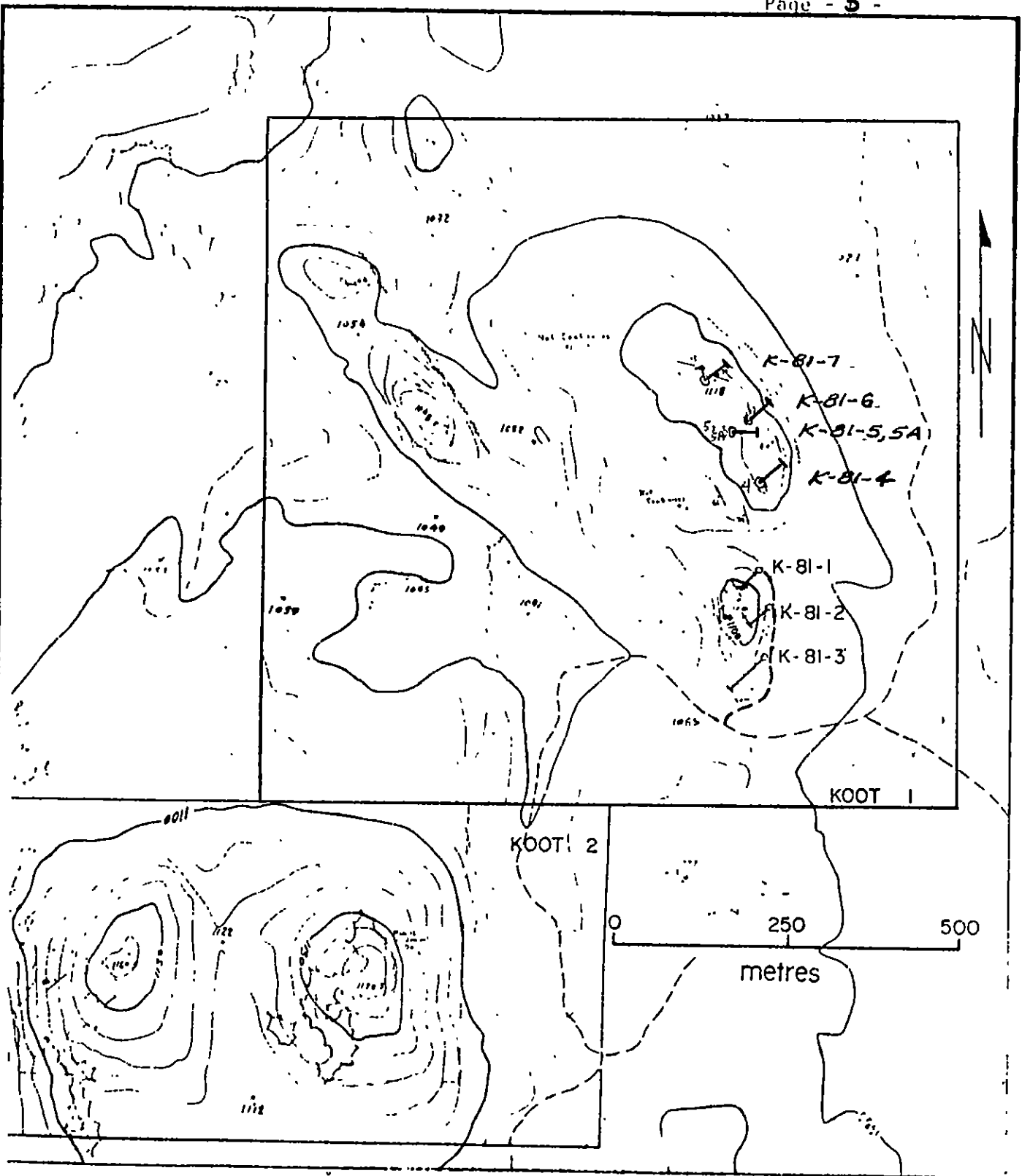
iv/ D.D.H.'s K-81-4, K-81-5, K-81-5A, K-81-6 and K-81-7 were drilled on the Koot 1 Mineral Claim.



Iss'd To:	Date:

INDEX MAP
LOCATION OF KOOT GROUP MINERAL CLAIMS
NTS 82 J/4

Drawn by: PK Scale: 1:50,000 Date: February, 1981 Plate: Fig. 1



Iss'd To:	Date:

LOCATION MAP

D.D.H.'s K-81-4, K-81-5, K-81-5A, K-81-6, K-81-7
KOOT GROUP MINERAL CLAIMS

Drawn by: PK	Scale: 1:8000	Date: February 1981	Plate: 514 2
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DETAILED TECHNICAL DATA AND INTERPRETATION

D.D.H. K-81-4

i/ Purpose

The purpose of D.D.H. K-81-4 was to sample the quartzite rock and test for continuity and extent of high silica quartzite.

ii/ Results

Quartzite was cored from the base of overburden at 1.22 metres to the end of the hole at 81.10 metres.

iii/ Interpretation

0-1.22 m Overburden

1.22-81.10 m Quartzite

Dense, poorly bedded milky grey quartzite; fine-grained with common medium quartz grains. The rock is competent although there are numerous hairline fractures. Limonite and trace hematite occurs on most fracture surfaces.

iv/ Conclusions

Below overburden to the end of the hole at 81.10 metres, D.D.H. K-81-4 was drilled in Cranbrook Formation quartzite.

DETAILED TECHNICAL DATA AND INTERPRETATION

D.D.H. K-81-5

i/ Purpose

The purpose of D.D.H. K-81-5 was to sample the quartzite rock and test for continuity and extent of high silica quartzite.

ii/ Results

Quartzite was cored from the base of overburden at 3.05 metres to 19.51 metres where the hole was stopped because of stuck drill rods.

iii/ Interpretation

0 - 3.05 m Overburden

3.05-19.51 m Quartzite

Dense, poorly bedded milky grey quartzite; fine-grained with common medium grains. Numerous hairline fractures occur over this interval with several highly fractured zones. Limonite occurs interstitially to the quartz grains as well as on numerous fracture surfaces.

iv/ Conclusions

Below overburden to the end of the hole at 19.51 metres, D.D.H. K-81-5 was drilled in Cranbrook Formation quartzite.

DETAILED TECHNICAL DATA AND INTERPRETATION

D.D.H. K-81-5A

i/ Purpose

The purpose of D.D.H. K-81-5A was to sample the quartzite rock and test for continuity and extent of high silica quartzite.

ii/ Results

Quartzite was cored from the base of overburden at 3.05 metres to the end of the hole at 67.38 metres.

iii/ Interpretation

0-3.05 m Overburden

3.05-67.38 m Quartzite

Dense, poorly bedded milky grey quartzite; fine-grained with common medium grains. Numerous hairline fractures occur over this interval with several highly fractured zones with trace gouge down to 25 metres. The interval below 25 metres is much more competent. Limonite occurs interstitially to the quartz grains as well as on numerous fracture surfaces.

iv/ Conclusions

Below overburden to the end of the hole at 67.38 metres K-81-5A was drilled in Cranbrook Formation quartzite.

DETAILED TECHNICAL DATA AND INTERPRETATION

D.D.H. K-81-6

i/ Purpose

The purpose of D.D.H. K-81-6 was to sample the quartzite rock and test for continuity and extent of high silica quartzite.

ii/ Results

Quartzite was cored from the base of overburden at 2.44 metres to the end of the hole at 81.69 metres.

iii/ Interpretation

0-2.44 m Overburden

2.44-81.69 m Quartzite

Dense, poorly bedded milky grey quartzite; fine-grained with common medium quartz grains. The rock is competent although there are numerous hairline fractures with the exception of the interval from 18.90-30.78 m; it is more fractured and crumbly. Limonite and trace hematite occurs on most fracture surfaces.

iv/ Conclusions

Below overburden to the end of the hole at 81.69 metres D.D.H. K-81-6 was drilled in Cranbrook Formation quartzite.

DETAILED TECHNICAL DATA AND INTERPRETATION

D.D.H. K-81-7

i/ Purpose

The purpose of D.D.H. K-81-7 was to sample the quartzite rock and test for continuity and extent of high silica quartzite.

ii/ Results

Quartzite was cored from the base of overburden at 2.13 metres to the end of the hole at 77.72 metres.

iii/ Interpretation

0-2.13 m Overburden

2.13-77.72 m Quartzite

Dense, poorly bedded milky grey quartzite; medium to coarse-grained. The rock is generally competent although there are numerous hairline fractures. Limonite and trace hematite occurs on most fracture surfaces.

iv/ Conclusions

Below overburden to the end of the hole at 77.72 metres, D.D.H. K-81-7 was drilled in Cranbrook Formation quartzite.

AUTHOR'S QUALIFICATIONS

As author of this report, I, Nancy R. Watson, certify that I am employed by Cominco Ltd. as a geologist active in minerals exploration.

I am a graduate of the University of Washington with a degree of Bachelor of Science.

I have been engaged in geology and mining exploration for four years.

Nancy R. Watson.
Nancy R. Watson

COMINCO LTD.

Kimberley, B.C.

COST SUMMARY

KOOT 1 MINERAL CLAIM
DDCH'S K-81-4,5,5A,6,7

Frontier Drilling Ltd. Invoice dated 81/10/08	\$48,989.66
Frontier Drilling Ltd. Invoice dated 81/10/10 less DDCH # P81-8	\$34,704.88 -\$20,977.90
pro-rated $\frac{379'}{627'}$ x \$34,704.88 =	
Drill Water Tank Truck Rental	\$ 6,470.00
Cominco Charges:	
Cat & Operator for Site Preparation and Drill Moves	\$ 7,574.00
Geology Supervision	\$ 2,451.00
Truck Rental (Sept.16-Oct.9/81)	\$ 700.00
Core Boxes	\$ 563.00
Analysis Charges	\$ <u>1,675.00</u>
 TOTAL EXPENDITURE	 \$81,149.00 <u><u> </u></u>

Arthur L. Burrows

Arthur L. Burrows

A.L. Burrows/ml
February 11th 1982

*File - 10/1/81
lib*

Sullivan Mine
Oct. 22, 1981



Kimberley Operations

Mr. Harold Harvey, President
Frontier Drilling Ltd.
Box 689
Winfield, B.C.
VOH 2C0

S 01987 R

Dear Sir:

Re: Your invoices dated October 8 and 10, 1981.

I have today approved the above invoices for payment in the following amounts:

Inv. Date	Amt. Invoiced	Amt. Approved	Difference
Oct. 8/81	\$50,263.96	\$48,989.66	\$1,274.30
Oct. 10/81	\$35,062.92	\$34,704.88	\$ 358.04
Totals	\$85,326.88	\$83,694.54	\$1,632.34

Reasons for these differences are as follows:

October 8 Invoice

On part one page one hole K81-4 is shown as being drilled to 264 ft. but it was only drilled to 262 ft., resulting in a decreased coring charge of \$41.80

On part two page one, two man hours and one drill hour on Sept. 25 night shift are payable but not invoiced, resulting in an increased charge of \$80.00. However, on Sept. 27 a three-man crew was charged for stabilizing, while only a two-man crew is chargeable, resulting in a decreased man-hour charge of \$112.50. Charges for repairs to the drill on Sept. 30 in our opinion, should not be for our account (ref. letter P.W. Ransom to you, Oct. 13) resulting in a decrease of 30 man hours and 15 drill hours or \$1200. Total net decrease \$1232.50

Total difference, October 8 invoice \$1274.30



Kimberley Operations

H. Harvey/J.M. Hamilton/page 2

October 10 Invoice

A footage compensation of \$974.99 is charged,
and we feel a fair compensation is \$616.95
(ref. letter, P.W. Ransom to you Oct. 13),
resulting in a decrease in amount approved
at this time of

\$358.04

Total difference, both invoices

\$1632.34

I trust these differences and the reasons for them are satisfactory.

Yours truly,

J.M. Hamilton
Chief Geologist, Kimberley

cc: Accounts Payable
File

PERIOD: September 15 - 30, 1981

DATE: October 8, 1981

FIELD INVOICE STATEMENT

FRONTIER DRILLING LTD.
P.O. Box 689
Winfield, B.C., V0H 2C0

JOB: Cominco 81-8

LOCATION: Skookumchuck, B.C.

IN ACCOUNT WITH: Cominco Ltd.

P.O. Box 2000

Kimberly, B.C.

P.O. 501987R

PART ONE:	TOTAL DRILL FOOTAGE COST	<u>\$17,158.90</u>	<i>17,117.10</i>
PART TWO:	TOTAL EXTRA CONTRACT CHARGES	<u>\$31,905.06</u>	<i>30,672.56</i>
PART THREE:	TOTAL MOBILIZATION - DEMOBILIZATION CHARGES	<u>\$ 1,200.00</u>	
	TOTAL INVOICE	<u>\$50,267.96</u>	<i>48,989.66</i>

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PART ONE - PAGE ONE

DRILL FOOTAGE CHARGES

CASING			CORING			REAMING CASING			
HOLE NUMBER	FROM	TO	TOTAL	FROM	TO	TOTAL	FROM	TO	TOTAL
K81-6	0	8	8 ✓	8 ✓	268 ✓	260 ✓			
K81-4	0	4	4 ✓	4 ✓	266 ✓	264 262 ✓			
K81-5	0	11	11 ✓	11 ✓	64 ✓	53 ✓			
K81-5A	0	10	10 ✓	10 ✓	221 ✓	211 ✓			
Total			33	Total		786 788			
	33 feet	X 20.90	= \$689.70	786	X \$20.90	\$16,469.20			
						16,427.40			
CASTING TOTAL				CORING TOTAL			REAMING TOTAL		

TOTAL CASING CHARGES

\$ 689.70 ✓

TOTAL CORING CHARGES

~~\$16,469.20~~ \$16,427.40

TOTAL REAMING CHARGES

-

TOTAL DRILL FOOTAGE CHARGES

~~\$17,158.90~~ \$17,117.10

PART TWO - PAGE ONE

EXTRA CONTRACT CHARGES

(A) FIELD COST CHARGES

DATE	SHIFT	MAN HOURS	DRILL HOURS	TRACTOR HOURS	TRUCK HOURS	MUD-MIXER	TRAVEL TIME
MO.		RATE 22.50	RATE 35.00	RATE	RATE	RATE	RATE 22.50
Sept.							
16	D	36 ✓	9 -				2 ✓
17	D	15 ✓	5 ✓				1.5 ✓
17	N	6 ✓	3 ✓				1 ✓
18	D	10 ✓	5 ✓				1 ✓
18	N	6 ✓	3 ✓				1 ✓
19	D	4 ✓	2 ✓				1 ✓
19	N	4 ✓	2 ✓				1 ✓
20	D	4 ✓	2 ✓				1 ✓
21	D	16 ✓	4 ✓				2 ✓
22	D	6 ✓	3 ✓				1 ✓
22	N	4 ✓	2 ✓				1 ✓
23	D	6 ✓	3 ✓				1 ✓
23	N	8 ✓	4 ✓				1 ✓
24	D	8 ✓	4 ✓				1 ✓
24	N	4 ✓	2 ✓				1 ✓
25	D	-	-				1 ✓
25	N	2 ✓	1 ✓	<i>missed</i>			1 ✓
26	D	18 ✓	9 ✓				1 ✓
26	N	8 ✓	4 ✓				1 ✓
27	D	14 14 ✓	7 ✓	<i>2 men critical</i>			1 ✓
27	N	14 ✓	7 ✓				1 ✓
28	D	16 ✓	8 ✓				1 ✓
28	N	8 ✓	4 ✓				1 ✓
29	D	4 ✓	2 ✓				1 ✓
29	N	12 ✓	6 ✓				1 ✓
30	D	4 4 ✓	2 2 ✓	<i>Repairs</i>			1 ✓
30	N	20 20 ✓	10 10 ✓	<i>Repairs</i>			1 ✓
	Total	270	117			Total	28.5 ✓
		237	103				
		237	103				

MAN-HOURS 270 X \$22.50 = ~~\$6,075.00~~

DRILL HOURS 117 X \$35.00 = ~~\$4,095.00~~

TRACTOR HOURS 103 = 3605.00

TRUCK HOURS

MUD-MIXER

TRAVEL TIME 28.5 X \$22.50 = \$641.25 ✓

(A) TOTAL 70,411.25

PART TWO - PAGE TWO

SUPPLIES AND OTHER SERVICES

B. SERVICES:

HOLE TESTING	TESTS @	_____
MEALS (CAMP)	@	_____
MISC. RENTALS	@	_____
OTHER	@	_____
TOTAL SERVICES		_____

C. SUPPLIES:

1) DRILL BITS CHARGED:

accept as stated

33 NQ bits used @ \$522.00 = \$17,226.00	_____
786 feet @ \$2.80 per foot = \$2,200.80	_____
Cost over \$2.80/ft. = \$15,025.20 plus 15% =	\$17,278.98
TOTAL BITS	<u>\$17,278.98</u>

ii) OTHER DIAMOND PRODUCTS:

1 NW casing shoe @ \$293.09 plus 15%	337.05
2 NQ reamer shells @ \$367.56 plus 15% = \$422.69	845.38
(1 lost in hole, 1 worn out in sand)	
TOTAL OTHER DIAMONDS	<u>\$ 1,182.43</u>

iii) DRILLING TOOLS LOST OR DAMAGED:

8 NQ 10' rods @ \$127.50 plus 15% = \$146.63	\$ 1,173.04
1 NQ adaptor & lock coupling @ \$243.50 plus 15%	280.02
1 NQ outer tube assembly @ \$436.50 plus 15%	501.96
2 3.15/16 tricones @ \$188.00 plus 15% = \$216.20	432.40
TOTAL TOOLS	<u>\$ 2,387.42</u>

PART TWO - PAGE THREE

iv) MUD AND ADDITIVES:

✓ 6 pails soluble oil @ \$35.50 plus 15% = \$40.83	\$244.98
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
TOTAL MUD	<u>\$244.98</u>

v) FUEL, CORE BOXES, OTHER:

FUEL _____	_____
_____	_____
CORE BOXES _____	_____
_____	_____
_____	_____
_____	_____
TOTAL FUEL, CORE BOXES, ETC.	_____

TOTAL SECTION A.	310,512.25 9578.78
TOTAL SECTION B.	-
TOTAL SECTION C.	<u>321,003.81</u> ✓
TOTAL SECTIONS A, B, C	<u>\$31,905.06</u> 30672.50

PART THREE

MOBILIZATION - DE-MOBILIZATION CHARGES

CHARGES AS PER AGREEMENT 50% of flat rate fee

TOTAL MOB-DEMOB CHARGES

\$1,200.00

PERIOD: October 1 - 9, 1981

DATE: October 10, 1981

FIELD INVOICE STATEMENT

FRONTIER DRILLING LTD.
P.O. Box 689
Winfield, B.C., V0H 2C0

JOB: Cominco 81-8

LOCATION: Skookemchuck, B.C.

IN ACCOUNT WITH: Cominco Ltd.
P.O. Box 2000
Kimberly, B.C.

Handwritten signature/initials

P.O. 501987R

PART ONE:	TOTAL DRILL FOOTAGE COST	<u>\$13,961.20</u>	✓
PART TWO:	TOTAL EXTRA CONTRACT CHARGES	<u>\$18,926.73</u>	✓
PART THREE:	TOTAL MOBILIZATION - DEMOBILIZATION CHARGES	<u>\$ 1,200.00</u>	✓
	TOTAL INVOICE	<u><u>\$34,087.93</u></u>	✓

Footage Compensation	\$ 574.39 616.95
Total Invoice	<u><u>335,062.92 34,704.88</u></u>

PART TWO - PAGE ONE

EXTRA CONTRACT CHARGES

(A) FIELD COST CHARGES

DATE	SHIFT	MAN HOURS	DRILL HOURS	TRACTOR HOURS	TRUCK HOURS	MUD-MIXER	TRAVEL TIME
MO.		RATE	RATE 22.50	RATE 35.00	RATE	RATE	RATE 22.50
Oct.							
1	D	33 ✓	11 ✓				1.5 ✓
1	N	4 ✓	2 ✓				1 ✓
2	D	8 ✓	4 ✓				1 ✓
2	N	4 ✓	2 ✓				1 ✓
3	D	4 ✓	2 ✓				1 ✓
3	N	12 -	6 -				1 -
4	D	10 ✓	5 ✓				1 ✓
4	N	10 ✓	5 ✓		Hole # K 81-7		1 ✓
5	D	45 ✓	11 ✓		Hole # P 81-8		2.5 ✓
6	D	27 ✓	5 ✓				
8	D	2 ✓	1 ✓				
8	N	8 ✓	4 ✓				
9	D	36 ✓	6 ✓				
	Total	203 ✓	64 ✓				11 ✓

MAN-HOURS 203 X \$22.50 = \$4,567.50 ✓

TRUCK HOURS

DRILL HOURS 64 X \$35.00 = \$2,240.00 ✓

MUD-MIXER

TRACTOR HOURS

TRAVEL TIME 11 X \$22.50 = \$247.50 ✓

(A) TOTAL \$7,055.00

PART TWO - PAGE TWO

SUPPLIES AND OTHER SERVICES

B. SERVICES:

HOLE TESTING	TESTS @	_____
MEALS (CAMP)	@	_____
MISC. RENTALS	@	_____
OTHER	@	_____
TOTAL SERVICES		=====

C. SUPPLIES:

i) DRILL BITS CHARGED:

13 NQ bits @ \$522.00 = \$ 6,786.00	_____	_____
248 feet @ \$2.80 = \$694.40	_____	_____
Cost over \$2.80 = \$ 6,091.60 plus 15%=\$7,005.34	_____	\$7,005.34
TOTAL BITS		=====

accept as stated

ii) OTHER DIAMOND PRODUCTS:

✓ 2 NW casing shoes @ \$337.05	_____	\$ 674.10
2 NQ reamer shells @ \$422.69	_____	\$ 845.38
TOTAL OTHER DIAMONDS		=====

iii) DRILLING TOOLS LOST OR DAMAGED:

✓ 11 NQ 10' drill rods @ \$146.63	_____	\$1,612.93
✓ 1 10' NW casing (81-5A) @ \$153.50 plus 15%	_____	176.53
✓ 1 complete NQ outer tube assembly @ \$501.96	_____	501.96
✓ 1 5' NW casing (81-7) @ \$83.25 plus 15%	_____	101.49
TOTAL TOOLS		=====

PART TWO - PAGE THREE

iv) MUD AND ADDITIVES:

✓	4 alcomer polymer @ \$186.00 plus 15%=\$213.90	\$ 855.60
✓	8 quil gel @ \$10.70 plus 15% = \$12.30	\$ 98.40
	_____	_____
	_____	_____
	_____	_____
	_____	_____
	TOTAL MUD	\$ 954.00

v) FUEL, CORE BOXES, OTHER:

FUEL _____

CORE BOXES _____

TOTAL FUEL, CORE BOXES, ETC.

TOTAL SECTION A.

~~\$ 7,055.00~~ ✓

TOTAL SECTION B.

-

TOTAL SECTION C.

\$11,871.73 ✓

TOTAL SECTIONS A, B, C

\$18,926.73 ✓

PART THREE

MOBILIZATION - DE-MOBILIZATION CHARGES

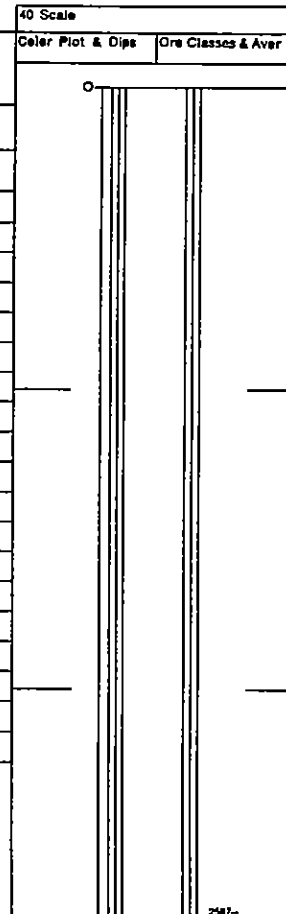
CHARGES AS PER AGREEMENT 50% of \$2,400.00 flat rate

TOTAL MOB-DEMOB CHARGES \$1,200.00

Diamond Drill Geological Log



Objective:		Sampled:						
Logged By: NRM		Date: Oct./81		Composites:				
Block:		Sect.:		Place: Kootenay Quartzite Local		App. Bear: AZ 060°	App. Dip: -45°	Length: 81.10 m
From	To	Reason:						
		The Kootenay Quartzite Locality is located approx. 4 km east of Canal Flats and is reached by following the						
		White Swan logging road for 2 1/2 miles from highway 95, then turning left along a bush road for approx. 2 miles.						
0	1.22m	Overburden, no core						
1.22	1.83m	Top of rock shattered with only a few rock fragments recovered.						
1.83	3.50m	Quartzite						
		Milky gray colored with variations from white to light gray. Moderate to heavy limonite staining on most but not all fracture surfaces and also some surficial staining. Hematite occurs on some fractures. The quartzite is fine grained to very fine grained with several lenses of medium to coarse quartz grains. This is presumed to be bedding and occurs at 55° to c.a. at 2.67m and 3.43m. The core is broken into pieces 10-20cm long by fractures at 45° - 90° to c.a.						
3.50	4.88m	Quartzite, milky gray colored, dense, fine to very fine grained with lenses of medium to coarse grained quartz; trace to moderate limonite staining on fracture surfaces. This interval appears less competent than the previous one with several hairline fractures, two small pieces of breccia at 3.94m and a network of open fractures near 4.59m. The first 50cm of this interval is broken into small pieces and the rest is broken by fractures 50° to 85° to c.a. into pieces 10-15cm long. Gouge 1mm thick occurs on fracture surfaces at 4.00, 4.04, 4.26, 4.32 m.						
4.88	7.50m	Quartzite; some milky gray intervals but most of this interval has an orange tinge. Medium to coarse grained with a few sections of very fine grained quartz. Predominantly limonite, with some hematite, occurs in moderate to heavy amounts on fracture surfaces. Numerous white quartz veinlets 1 mm wide crisscross the core. The last 75cm of this interval contains numerous hairline fractures. The core is broken into pieces 10 - 30 cm by fractures 45° to 75° to c.a.						
7.50	11.10m	Quartzite, milky grey with orange tinges. Mostly medium to coarse grained, dense with limonite staining interstitially and on fractures. Numerous hairline fractures occur in this interval and the core is broken into small pieces 8.00 - 8.10m, 8.75 - 9.00m, 9.60 - 11.00m. At 8.53m occurs a carbonaceous (?) wispy 2cm					Core Size NQ	
							Hole No K-81-4	
							Page 1	



Diamond Drill Geological Log



Objective:		Sampled:		40 Scale		
Logged By: NRW		Date: Oct. /81		Color Plot & Dips		
Block:		Composites:		Ore Classes & Aver.		
From	To	Sect.	Place:	App Bear:	App Dip:	Length
			Kootenay Quartzite Local	AZ 060 ⁰	-45 ⁰	81.10m
		Discard	Reason:			
			Partially open fractures, one with gouge occur over interval 9.12 - 9.30 m. Several 3mm wide white quartz veins also are present.			
11.10	14.58m		Quartzite, milky grey with intense limonite staining at 11.72, 11.96 -12.00, 12.47 -12.56, and 14.45 - 14.58m.			
			Fine to very fine grained with occasional lenses of medium to coarse grained quartz.			
			Numerous hairline fractures occur and are concentrated over intervals 11.70 - 11.95m and 12.68 - 13.28 m. The core is broken by fractures 35 ⁰ to 85 ⁰ to c.a. into pieces 15-35 cm long with the exception of two zones, 12.73 - 13.00m and 13.89 - 14.09 m. Mostly limonite but some hematite occurs on fracture surfaces. One mm. wide bands containing carbonaceous (?) specks occur at 11.15 and 11.26 m. Bedding was noted to be 50 ⁰ to c.a. at 11.96 m.			
14.58	26.52m		Quartzite, milky grey with orange tinges in the first part of this interval down to 19.30 m and 21.92 - 23.35 m, then medium gray with orange tinges to the end of the interval. Fine to very fine grained with common medium grains and lenses of coarse grained quartz presumed to be bedding - predominately limonite with hematite occurs on most but not all fractures. A few hairline fractures occur other than those where the core is broken but the core is generally very dense and competent. It is broken into pieces mostly 20 - 30cm long with a couple of pieces up to 60 cm. The fractures range from 30 ⁰ to 90 ⁰ to c.a. with 90 ⁰ breaks common.			
			15.58-15.70 m. intense hematite staining.			
			15.83 - 16.28 m - several partially open limonite filled fractures.			
			17.73-17.79 m - piece of core highly fractured with very granular appearance.			
			19.75 m Grey quartzite band 2 mm wide with black blebs (carbonaceous?) occurring interstitially.			
			21.19 m - grey quartzite band 3 mm wide with 50% black blebs at 75 ⁰ to C.A .			
			23.55 - 23.73 m - ten grey quartzite bands 2-3 mm wide at 45 ⁰ to c.a. with 25% black blebs.			
			24.03 m - grey quartzite band 1 cm wide at 55 ⁰ to c.a. There is less than 1% pyrite over this interval.			
			25.03 m - grey quartzite band 1 cm wide at 55 ⁰ to c.a. with 25% interstitial black blebs.			
				Core Size		
				NQ		
				Hole No		
				K-81-4		
				Page		
				2		

2507-

Diamond Drill Geological Log



Objective: _____ Sampled: _____
 Logged By: NRM Date: Oct/81 Composites: _____

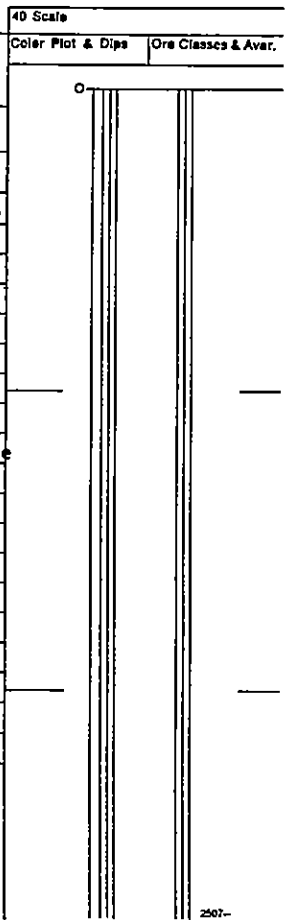
Block: _____ Sect.: _____ Place: Kootenay Quartzite Local App. Bear: AZ 060° App. Dip: -45 Length: 81-10m

From: _____ To: _____ Discard Reason: _____

26.52 - 28.35m No substantial core from this interval, only a few rock fragments mixed with light brown silty material. Observation at job site during drilling of this interval showed big chunks of gouge on the end of the core barrel.

28.35 - 56.17m Quartzite, generally milky grey with variation from white to light grey with alot of the core having an orange cast due to iron staining of interstitial material. Fine to very fine grained with common medium grains and occasional lenses of coarse grains. Moderate to heavy limonite with some hematite, occurs on almost all fractures. These fractures occur in two distinct groups, near 55° or 80°, and break most of the core into pieces 15-20 cm, with several pieces up to 50 cm and one piece 80 cm long. The rock is dense and seems competent. White quartz veinlets 1 mm wide crisscross most of the core. Hematite is noted in heavy amounts on fracture surfaces 29.81 - 36 m. Intense limonite staining occurs over intervals 28.50-28.95 m, 32.48-32.54 m, 35.30-36.20 m, 41.32- 41.65 m, 42.63-43.82 m, 49.06 - 49.49 m, 50.97 - 51.45 m and 56.20 - 56.32 m.
 28.95 - 29.25 m - breccia with a true width of 15 cm cuts core at 55° to c.a.
 30.55 m - slickensides on fracture surface at 40° to c.a.
 35.50 - 35.60 m - scattered blebs made up of massive oxidized pyrite up to 1 mm diameter. There is less than 1% pyrite over this interval.
 36.07 m - 1 cm wide breccia made up of angular fragments 2-5 cm diameter with 30% limonite matrix.
 39.40 - 39.60 m - porous looking interval with some limonite staining and fracture filling.
 44.68 - 45.12 m - medium grey colored quartzite with some intense hematite staining.
 45.12 - 47.38 m - heavy limonite staining with some hematite and scattered small pyrite blebs.
 50.32 m - breccia 10 cm wide with angular fragments up to 1 cm wide with 20% limonite matrix cuts core at 40° to c.a.
 50.60 - 50.70 m, 50.87 - 50.97 - small discrete black blebs (carbonaceous?), less than 1% over interval.

Core Size: NQ
 Hole No. K-81-4 Page 3



Diamond Drill Geological Log



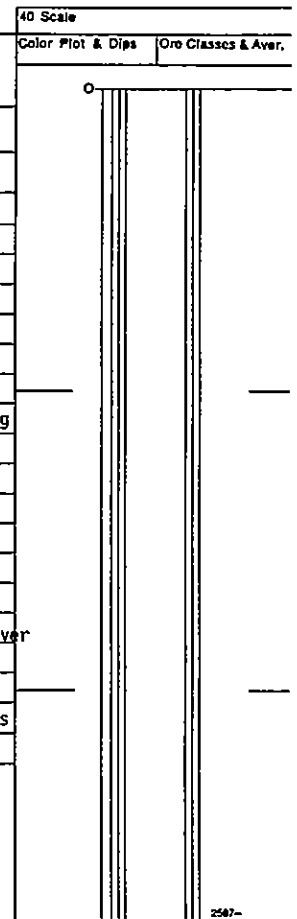
Objective: _____ Sampled: _____
 Logged By: NRM Date: Oct /81. Composites: _____

Block: _____ Sect: _____ Place: Kootenay Quartzite Local App. Bear: Az. 060° App. Dip: -45° Length: 81.10 m

From	To	Discard Reason
28.35	56.17m	53.47 m - polished fracture surface at 35° to c.a. with slickensides. 54.67 m - polished fracture surface at 60° to c.a. with slickensides. 55.95 - 56.10 m - small black (carbonaceous ?) blebs occurring interstitially to grey quartz grains and making up less than 1% over interval
56.17	58.72 m	Quartzite, light orange, fine to very fine grained, dense. Numerous hairline fractures occur over this interval and several white, 1 mm wide, quartz veinlets. The core is broken along some but not all the fractures at 40°-60° to c.a. into pieces 5-10 cm long. Moderate to heavy limonite occurs on all fractures and intense limonite staining gives the core its orange color.
58.72	63.50m	Quartzite, milky grey the first 40 cm then light gray colored fine to very fine grained with common medium grains, dense. Minor limonite staining on fractures which occur between 40°- 60° to c.a. Core lengths vary from 30-50 cm. 59.56 m - small black discrete blebs (carbonaceous?) in 1 cm wide band at 50° to c.a. The band is about 20% black grains between quartz grains. 59.95 - 60.20 m - small pyrite grains occurring in iron stained bands at 50° c.a. There is less than 1% pyrite over interval. 61.53, 61.66 m - 20% small black blebs between grains in a band 2 mm wide. 61.80 - 63.23 m - less than 1% pyrite over this interval occurring as discrete grains in 1mm wide iron stained bands at 50° to c.a., 2-10 cm apart.

63.50	69.70m	Quartzite, light orange colored due to limonite staining of interstitial material fine to very fine grained with common medium grains and a lens of coarse grains presumed to be bedding at 40° to c.a. The core is broken into pieces 2-10 cm long and has moderate to heavy limonite staining on fractures. Numerous white (1mm wide) quartz veinlets occur over this interval.
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Core Size: NQ
 Hole No: K-81-4
 Page: 4



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Diamond Drill Geological Log



Objective: _____ Sampled: _____
 Logged By: NRW Date: Oct/81. Composites: _____

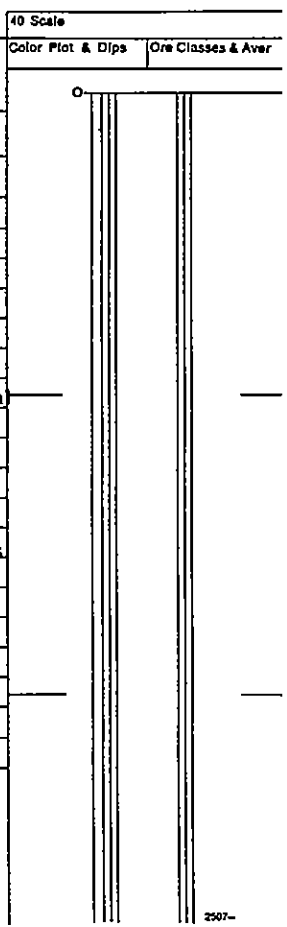
Block: _____ Sect.: _____ Place: Kootenay Quartzite Local App. Bear: AZ 060⁰ App Dip: -45⁰ Length: 81.10 m

From	To	Discard.	Reason.
63.50	69.70m		64.15 m - less than 1% black blebs in area 2 cm wide.
			64.28 - 64.36 m - less than 1% black blebs along a grey quartz band.
			64.67 m - wisp 3 mm wide of 10% black blebs occurring interstitially.
			64.97 m - three 1 mm wide wisps of 10% black blebs.
			68.72 m - streak 1x3 cm of 5% black blebs concentrated along a quartz vein.

69.70 81.10m Quartzite, light orange colored the first 1.50 m due to limonite staining then milky grey to the end of this interval. Fine grained to very fine grained with common medium grains and occasional lenses of coarse grained quartz up to 2 mm diameter. Bedding is noted at 60⁰ to c.a. at 75.69 m and 80.18 m. The core is dense with numerous hairline fractures the first 4.50 m of the interval and decreasing in number with depth. White quartz veinlets, 1 mm wide, occur throughout. There is more carbonaceous (?) material in this interval than all the previous intervals in this hole. It occurs interstitially in the quartz veinlets and in some grey quartz bands. The black blebs make up less than 1% of the rock in the following intervals - 71.39 - 71.70 m, 72.09-72.16 m, 72.26-72.32m, 75.64-75.71, 76.11 - 76.17m, 76.23 - 76.34m, 77.60 - 77.69 m, and 79.11-79.13m.
 74.48m gouge, with minor limonite staining, 1 cm wide at 50⁰ to c.a.
 79.86 - 79.95 m - several partially open fractures with some gouge fillings.
 fractures at 35⁰ to c.a.

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Core Size: 11Q
 Hole No.: K-81-4 Page: 5



Diamond Drill Geological Log



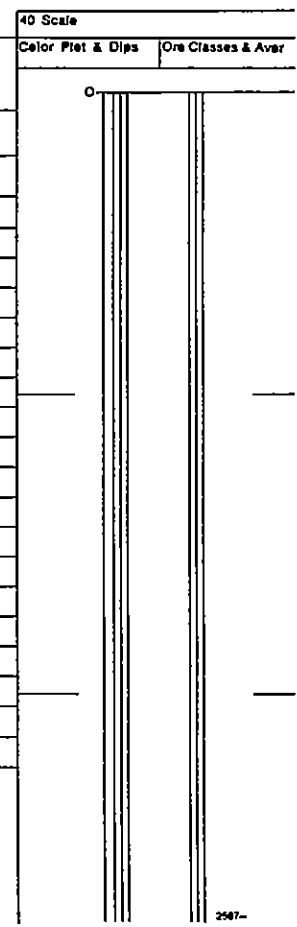
Objective: _____ Sampled: _____
 Logged By: NRW Date: Oct/81 Composites: _____

Block: _____ Sect.: _____ Place: Kootenay Quartzite Local App Bear. AZ 060° App Dip -45° Length: _____

From	To	Discard	Reason	From	To	Length	Recovered	Short	From	To	Length	Rec.	Short
Core Recovery: Shown in Feet													
4	6	2	1/2	1 1/2	90	93	3	-	3	246	256	10	10
6	7 1/2	1 1/2	1	1/2	93	95	2	2	-	256	266	10	10
7 1/2	8	1/2	1/2	-	95	105	10	10	-				
8	10	2	2	-	105	115 1/2	10 1/2	4	1/2				
10	11 1/2	1 1/2	1 1/2	-	115 1/2	120	4 1/2	4	1/2				
11 1/2	16	4 1/2	4	1/2	120	130	10	10	-				
16	17 1/2	1 1/2	1	1/2	130	137	7	7	-				
17 1/2	22	4 1/2	4 1/2	-	137	146	9	9	-				
22	32 1/2	10 1/2	10	1/2	146	156	10	10	-				
32 1/2	34	1 1/2	1/2	1	156	166	10	10	-				
34	36	2	1/2	1 1/2	166	176	10	10	-				
36	46	10	9 1/2	1/2	176	186	10	10	-				
46	51	5	5	-	186	194	8	8	-				
51	56	5	5	-	194	204	10	10	-				
56	66	10	9	1	204	214	10	10	-				
66	67 1/2	1 1/2	1 1/2	-	214	215	1	1	-				
67 1/2	76	8 1/2	8 1/2	-	215	222	7	5 1/2	1 1/2				
76	86	10	10	-	222	226	4	4	-				
86	87	1	1	-	226	236	10	10	-				
87	90	3	-	3	236	246	10	10	-				

Core Size
NQ
Hole No
K-81-4

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Diamond Drill Geological Log



Objective: _____ Sampled: _____
 Logged By: **NRW** Date: **Oct /81** Composites: _____

Block: _____ Sect.: _____ Place: **Kootenay Quartzite Local** App Bear: **AZ 090⁰** App Dip: **-45⁰** Length: **19.66 m**

From To Diacard: _____ Reson. _____

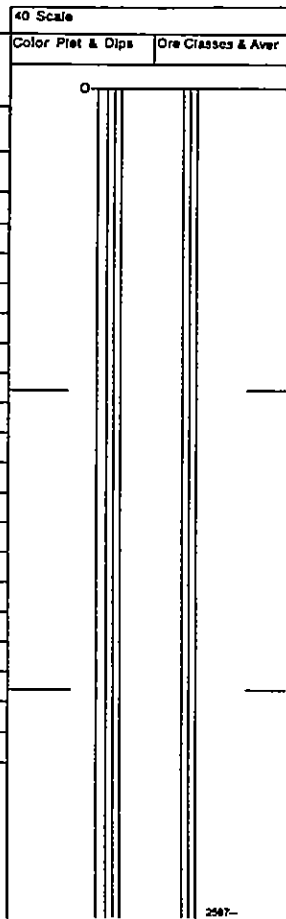
Hole K-81-5 abandoned at 19.66 m when rods stuck permanently in the hole.

0 3.35m Overburden.

3.35 19.66m Quartzite, milky grey colored quartz grains with limonite stained matrix, fine to very fine grained with common medium grains and occasional lenses of coarse grained quartz. Trace to moderate amounts of limonite staining occur on most fracture surfaces. Numerous hairline fractures occur throughout this interval but are most abundant down to 9.70 m. Competent pieces of core 10-20 cm long alternate with broken zones. Substantial core losses occur probably over the broken zones, down to 7 m. Gauge is minor or absent on rock fragments compared with k-81-5A. The fractures vary from 35⁰ - 55⁰ to c.a. Numerous white quartz veinlets 1 mm wide crisscross the core.
 9.96 m - small discrete pyrite grains occur in an iron stained band 1 mm wide at 40⁰ to c.a.
 11.88-12.05 m - less than 1% pyrite occurring in iron stained bands 1 mm wide to c.a.
 13.22 m - a breccia with a true width of 6 cm cuts the core at 30⁰ to c.a. and consists of angular rock fragments up to 2 cm and 50% limonite matrix.
 13.74 m - bedding at 50⁰ to c.a.
 15.13 - 16.34 m - some hematite staining on fracture surfaces.
 16.38 m - pyrite grain along 1 mm wide iron stained band at 50⁰ to c.a.
 17.44, 18.58-18.69 - some intense hematite staining on core surface.

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Core Size: **HQ**
 Hole No.: **K-81-5** Page: **1**



2587-

Diamond Drill Geological Log



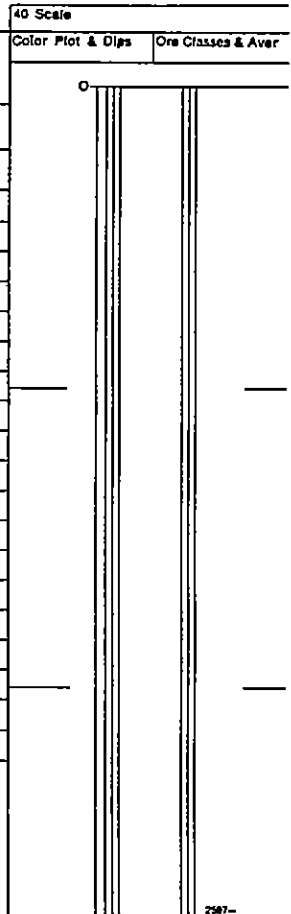
Objective: _____ Sampled: _____
 Logged By: **NRW** Date: **Oct/81** Composites: _____

Block: _____ Sect.: _____ Place: **Kootenay Quartzite local** App. Bear: **1 090°** App. Dip.: **-45°** Length: **19.66 m**

From To Discard Reason

Core Recovery: Shown in feet

From	To	Discard	Length	Recovered	Short
11	21	10	6½	3½	
21	23½	2½	-	2½ only core recovered	
23½	28½	5	4	1	
28½	35½	7	7	-	
35½	36½	1	1	-	
36½	46	9½	9½	-	
46	56	10	9½	½	
56	64	8	7½	½	
64	64½	½	½	-	

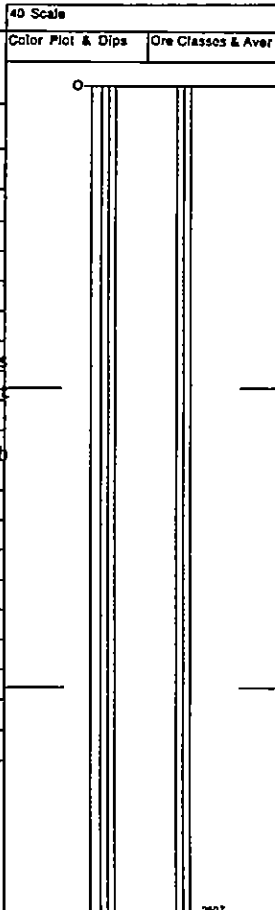


Core Size
NQ
 Hole No **K-81-5** Page **2**

Diamond Drill Geological Log



Objective:		Sampled:		40 Scale	
Logged By: NRM		Date: Oct/81		Color Plot & Dips	
Composites:				Ore Classes & Aver	
Block:	Sect.	Place:	App Bear:	App Dip:	Length:
		Kootenay Quartzite Local	Az. 090°	-50°	57.38 m
From	To	Discard	Reason.		
			Hole K-81-5 was drilled at -45° to 19.66 m when the hole was abandoned due to drill rods stuck in the hole. K-81-5A was then drilled at -50°.		
0	3.05	Overburden			
3.05	25.30m	Quartzite, milky grey quartz grains with limonite stained matrix, fine to very fine grained with common medium grains and occasional lenses of coarse quartz grains. The core is dense and has numerous hairline fractures in the largest pieces of core down to 8 m. The hairline fractures decrease with depth and the solid pieces of core are generally competent. These more competent zones alternate with badly broken zones where only rock fragments, some covered with trace amounts of gouge, were recovered. The pieces of solid core range in length from 10-30 cm and are broken by fractures 35° - 65° to c.a. limonite, trace to heavy amounts, with some hematite occurs on most fracture surfaces. Numerous white quartz veinlets, 1 mm wide, crisscross the core.			
		4.50 m - near this depth is 3 mm of gouge on a rock fragment.			
		6.55-7 m - fracture parallel to c.a., that is polished and has slickensides at 55° to c.a.			
		9.28 m - bedding at 30° to c.a. Also there are two iron stained bands 1 mm wide at 30° to c.a. containing discrete pyrite blebs.			
		10 m - bigger rock fragments near this depth are brecciated and crumbly.			
		12.65 m - heavy coating of gouge mixed with small rock chips coating the larger rock fragments near this depth.			
		14.32 m - 1 cm wide breccia along joint with chunks of limonite sitting in the box.			
		15.78 - 20.82 m - in addition to the limonite, this interval has hematite staining on the core surface as well as on the fracture surfaces.			
		17.45 - 17.60 m - dark gray bands at 30° to c.a. containing small black blebs.			
		The carbon (?) content is less than 1% over this interval.			
			Core Size		
			HQ		
			Hole No.		
			K-81-5A	Page	1



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Diamond Drill Geological Log



Objective:		Sampled:	
Logged By: NRW		Date: Oct/81	
Block:		Composites:	
From	To	Diagrad.	Reason
3.05	25.30	18.75 m	- a breccia with angular rock fragments to 1 cm and 30% limonite matrix cuts the core at 35° to c.a. and is 10 cm wide.
25.30	53 m		Quartzite, generally milky grey with variations of white to grey. Intense limonite staining occurs throughout the interval giving the core an orange appearance but is most predominate down to 35 m. The rock is dense and appears competent. It is fine to very fine grained with common medium grains and occasional lenses of coarse grains. A few hairline fractures cross the core. Not all cross the core completely, nor have iron oxides on them. The pieces of core range from 15-50 cm, long with over half being close to 50 cm and fractures cut the core at 35°-65° to c.a.
		28.10 - 28.27 m	- grey quartz bands at 35° to c.a. with black blebs occurring interstitially which make up less than 1% over interval.
		28.44m	- heavy hematite staining on fracture surface
		29.46 - 29.53 m	- less than 1% pyrite occurring in some iron stained bands 2 mm wide at 40° to c.a.
		30.92 m	- 1 cm, wide chunks of limonite gouge
		33.36 m	- dark grey quartzite wisps with interstitial black blebs
		34.12-34.48 m and 35.48-35.78 m	- pyrite grains in iron stained bands 1 mm wide at 35° to c.a. There is less than 1% pyrite over each interval.
		36.68 m	- two partially open joints with some limonite filling
		36.84-36.92 m	- lens of breccia with subrounded fragments up to 1 cm across.
		36.94 m	- chunk of gouge 4 mm wide on fracture at 35° to c.a.
		38.50 - 38.90 m	- less than 1% pyrite over interval occurring in iron stained bands 2 mm wide at 35° to c.a.
		40.14 - 40.35 m, 40.73 - 40.87 m	- less than 1% pyrite over these intervals

40 Scale
Color Plot & Dips
Ore Classes & Aver
Core Size
NQ
Core No.
K-81-5A
Page
2
2587-

Diamond Drill Geological Log



Objective:		Sampled:	
Logged By: NRW		Date: OCT/81	
Block:		Composites:	
Sect.:	Place:	App. Bear.	App. Dip
	Kootenay Quartzite Local	AZ 090⁰	- 50⁰
Reason:	Length 67.38 m		

From	To	Discard.
25.30	53m	<p>occurring as discrete grains in iron stained band 2 mm wide.</p> <p>44.52 - 44.92 m, 45.27 - 45.39 - less than 1% pyrite in iron stained bands 2 mm wide at 30⁰ to c.a. over each of these two intervals.</p> <p>44.79 m - amorphous looking black fracture filling 1 mm wide at 75⁰ to c.a.</p> <p>47.19 - 47.20 m - a few black grains concentrated along 2 mm wide white quartz veins at 50⁰ to c.a.</p> <p>47.49 - 50.90 m - intense limonite staining over several intervals</p> <p>49.75 - 49.96 m - breccia cuts the core at 35⁰ to c.a. loose gouge and rock fragments also recovered.</p>
53 m	59.12	<p>Quartzite, milky grey quartz grains with limonite staining of the matrix giving the core an overall light orange cast. Fine to very fine grained with common medium grains. One lens of coarse grains up to 1 mm at 35⁰ to c.a. at 58.84 m. The core is dense and generally competent looking although there are numerous hairline fractures over some intervals. Limonite staining occurs on almost all fractures in moderate to heavy amounts. This interval is more broken up than the previous interval with pieces 10 - 30 cm and a few 30 cm long. Fractures range from 35⁰ - 65⁰ to c.a.</p> <p>53.11 m - 2 cm of white gouge on fracture surface at 60⁰ to c.a.</p> <p>55.42 m - 7 mm wide white gouge seam at 40⁰ to c.a.</p> <p>56.63 m - less than 1% pyrite grains concentrated along three 2 mm wide iron stained bands at 30⁰ to c.a.</p> <p>58 m - gouge 2 mm thick on fracture at 30⁰ to c.a.</p> <p>58.13 m - gouge 1 mm thick on fracture at 35⁰ to c.a.</p> <p>58.95 m - area 3cm diameter with some black grains occurring interstitially to grey quartz grains.</p>

59.12 - 67.38m Quartzite, milky grey to medium grey colored, dense, fine to very fine grained

Core Size

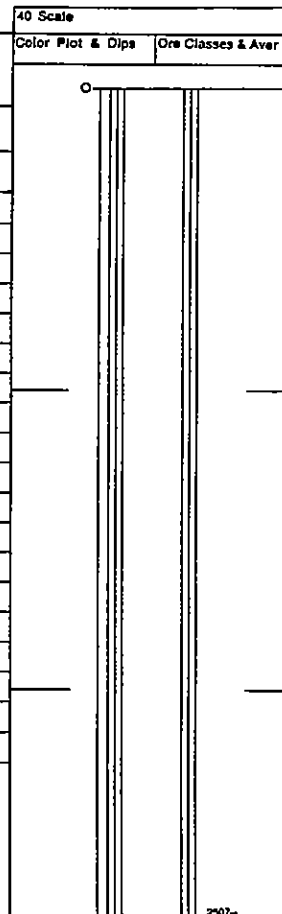
NQ

Hole No.

K- 81 - 5A

Page

3



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Diamond Drill Geological Log



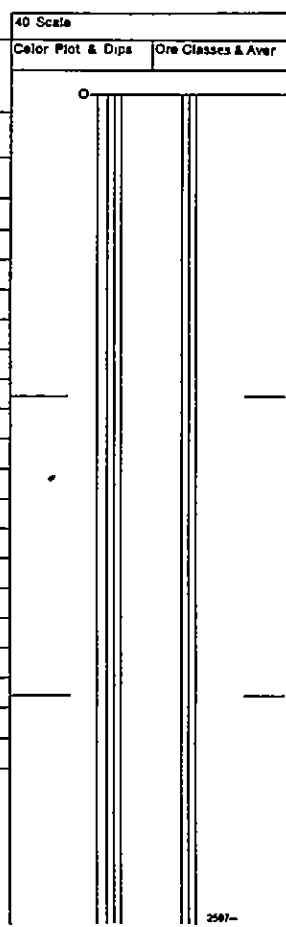
Objective: _____ Sampled: _____
 Logged By: NRW Date: OCT/81 Composites: _____

Block: _____ Sect: _____ Place: Kootenay Quartzite Local App. Bear: AZ 090° App. Dip: -50° Length: 67.38 m

From	To	Discard	Reason
59.12	57.38m		with common medium grains. Limonite occurs in trace amounts or is absent completely on most fracture surface. Several 3 mm wide quartz veins also occur. Numerous iron stained bands 1 mm wide, some containing pyrite, occur 1 - 3 cm apart and are 35° to c.a.
			59.24 m - amorphous looking black band 1 cm wide at 40° to c.a. The band contains some quartz fragments.
			59.35 m - gouge 3 mm wide on fracture surface at 35° to c.a.
			60.72 - 60.81 m - less than 1% black blebs in two 3 mm wide bands
			67.08 - 67.10 m - pyrite and black blebs occur interstitially between grey quartz grains in amounts less than 1%.

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Core Size: NQ
 Hole No.: K-81-5A Page: 4



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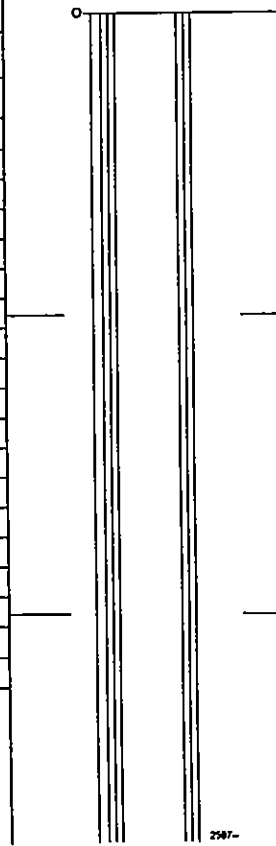
Diamond Drill Geological Log



Objective: _____ Sampled: _____
 Logged By: NMR Date: OCT/81 Composites: _____
 Block: _____ Sect. _____ Place: Kootenay Quartzite local App. Bear: AZ 090⁰ App. Dip: -50⁰ Length: 67.38 m

40 Scale
 Color Plot & Dips Ore Classes & Aver.

From	To	Discard	Reason	From	To	Length	Recovered	Short	
Core Recovery: Shown in feet									
10	21	11	5½	175	180	5	5	-	
21	26	5	-	180	186	6	6	-	
26	36	10	3	186	196	10	10	-	
36	46	10	-	196	203	7	7	-	
46	56	10	-	203	206	3	3	-	
56	59	3	-	206	216	10	10	-	
59	66	7	6½	216	221	5	5	-	
66	73	7	6						
73	83	10	5½						
83	86	3	4						
86	96	10	10						
96	106	10	10						
106	116	10	10						
116	126	10	10						
126	136	10	10						
136	137	1	1						
137	146	9	9½						
146	154	8	8						
154	165	11	11						
165	175	10	10						



Core Size: NQ
 Hole No.: K-81-5A
 Page: 5

Diamond Drill Geological Log



Objective:			Sampled:		
Logged By: HRW			Date: SEPT/81		
Block:			Composites:		
Sect.		Place:	App. Bear	App. Dip.	Length
		Kootenay Quartzite Local	AZ 060 ⁰	- 45 ⁰	81.71 m
From	To	Discard	Reason		
0	2.44m	Overburden, no core			
2.44	18.90m	<p>Quartzite milky grey colored, variably weakly mottled by slight variations in color from light milky white to medium grey. Weak indiscriminate iron oxide staining other than that along fractures give the core in the interval 6.97 - 7.79 m, 8.31 m, 10.16 - 10.37 m, 11.82 - 11.97 m, 12.63 - 12.82 m, 14.02-14.17 m, 14.62- 15.50 m overtones of light orange. The quartzite has a dense appearance and is typically fine grained to very fine grained with common medium and occasional coarse grains. Lenses of larger grains within the fine grains and lenses of varying colored quartz grains define "bedding" at 50⁰ to c.a. at 7.21 m and 15.25 m. Numerous hairline fractures cross the core at 30⁰ to 55⁰ to c.a. The core is broken along some but not all these fractures into pieces which average 25 cm with several longer pieces up to 75 cm long. Moderate to heavy limonite staining occurs on 95% of the fracture surfaces with hematite on a few fractures. Numerous white criss crossing veinlets of quartz 2 mm wide, occur in the first 6 m of this interval. Six isolated vugs 2-5 mm diameter occur in the first 10 m of this interval one of which is half filled with limonite. Pyrite in the interval down to 15 m occurs as discrete grains in some iron stained bands 2 mm wide at 50⁰ to c.a. Such bands contain blebs of gold colored pyrite 1 mm diameter occurring interstitially to large quartz grains. The pyrite blebs make up less than 1% of the band. These bands occur singly 50 to 150 cm apart. The interval 15- 18.90 m contains several iron stained bands with pyrite occurring in groups up to five over 2 cm, 25-50 cm apart.</p> <p>Black amorphous looking material (carbonaceous?) occurs in small amounts concentrated along bluish-grey lenses of quartzite which reach a maximum thickness of 5 mm and are usually 50⁰ to c.a.</p> <p>6.21 m - open fracture 4 cm long filled with gouge like material.</p> <p>15.18 to 15.25 - there is heavy limonite and hematite staining in this interval with blebs 1mm diamter of what is probably oxidized pyrite.</p> <p>Carbonaceous (?) material occurs in minor amounts at 5.85 m and over the interval</p> <p>5.55 - 5.66 m</p>			

40 Scale	
Color Plot & Dip	Ore Classes & Aver.
Core Size	Page
HQ	1
Hole No	
K-81-6	

2587-

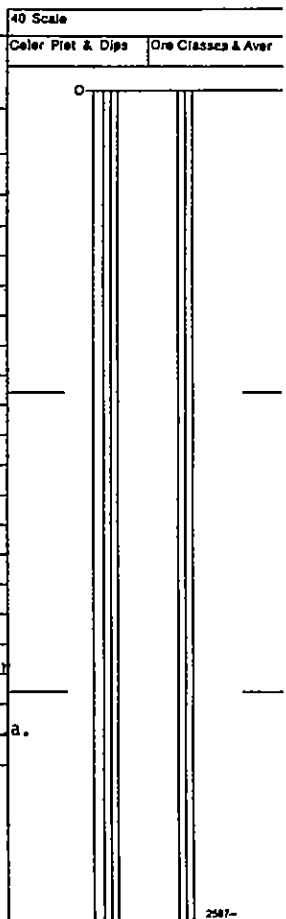
Diamond Drill Geological Log



Objective:		Sampled:	
Logged By: NRM, PWR		Date: SEPT/81	
Block:		Composites:	
Sect.:	Place: Kootenay Quartzite Local	App Bear: AZ 060°	App Dip: - 45°
Length: 81.71 m			

From	To	Discard Reason
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18.90m	30.78m	<p>Quartzite</p> <p>Rock is more fractured and crumbly with a white powder on some fracture surfaces; massive to weakly layered milky grey somewhat mottled, dense, mostly medium to coarse grained. Numerous hairline fractures cross the core. It is broken along some but not all the fractures at an angle of 25° - 55° to c.a. Heavy core losses occur in the interval 24.08 to 30.78 m. A 5 cm of breccia at 28.50 is made up of 60% limonite matrix and 40% angular to subrounded quartzite fragments 3-5 mm diameter, at 30.00 m a breccia with a true width of 6 cm cuts the core at 35° to c.a. and has angular fragments separated by 1mm wide limonite fractures. It is possible that the core lost was limonitic breccia and was washed away. Moderate to heavy limonite staining (yellowish to rusty brown) occurs on most but not all the fracture surfaces. Most of the core is in pieces 12 cm and less with much of the core broken into pieces 2 cm long.</p> <p>21.20 m - fracture face, polished with slickensides at 45° to c.a.</p> <p>Patches of intense hematite staining 2-3 cm diameter, occur at 23.31 and over the intervals 23.43 - 23.54 m, 23.67 - 23.80 m. Most of the pyrite found is in single 5 mm wide iron stained bands as described in the previous interval occurring 5-50 cm apart.</p>
30.78	56.58	<p>Quartzite, milky grey colored, fine to very fine grained, with common medium grains and occasional lenses of coarser grains, dense. Moderate to heavy limonite staining occurs on most but not all fractures surfaces and up to 5 mm from the fracture in some spots. Pyrite occurs as discrete grains in some iron stained bands 2 mm wide at 50° to c.a. These bands occur most often as single bands 20-50 cm apart. Occasional white quartz veins 3 mm wide cut the core at 25-40° to c.a. Carbonaceous (?) blebs occur interstitially to quartz grains in medium grey, coarse grained quartz lenses from 5-15 mm wide at 45° to 70° to c.a. Carbon also occurs as a wispy streak with black blebs present interstitially to the quartz grains and is usually 2 mm wide by 3 cm long. The grey quartz lenses and wisps contain less than 1% black blebs. Grey quartz lenses or wisps occur every 10-50 cm.</p>



Core Size NQ
 Note No K-81-6
 Page 2

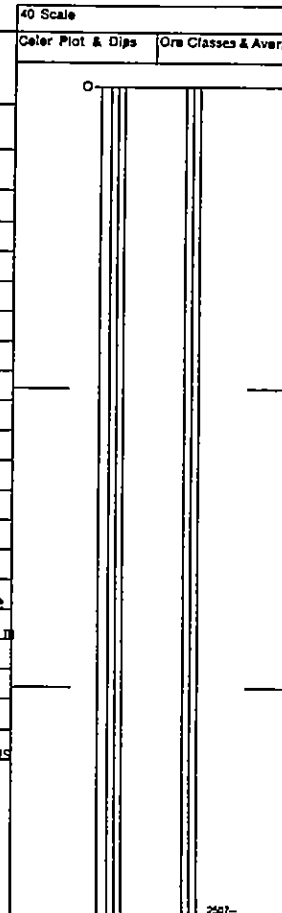
Diamond Drill Geological Log



Objective: _____ Sampled: _____
 Logged By: NRH Date: SEPT/81 Composites: _____

Block: _____ Sect: _____ Place: Kootenay Quartzite Local App. Bear: AZIM 060° App Dip: - 45° Length: 81.71

From	To	Discard Reason
30.78	66.58	33.47 - 33.58 m, 35.92 - 35.95 m - intense hematite staining on core. 35.29 m - breccia 1 cm wide along a fracture made up of 40% angular quartz fragments and 60% limonite matrix. 43.72 m - bedding noted at 40° to c.a. 49.06 m - slickensides on fracture 57.44 - 58.28 m - shattered appearance with 1-2 mm fracture filling - feldspathic? 58.51 - limonite fracture filling 2 cm wide 58.56 - 58.72 m - numerous hairline fractures and heavy hematitic staining 58.76 m - bedding noted at 50° to c.a. 59-59.15 m - lens of medium to coarse grained quartz with several grains up to 2 mm wide (feldspar?) 63.12 m - gouge on a fracture surface at 50° to c.a. 64.40 65.29 m - limonite stained matrix between quartz grains with some hematite staining also; numerous hairline fractures
66.58	73.58	C.g. quartzite, some very coarse grains to 3 mm noted. A few angular feldspathic grains noted (less than .01%). The first 0.6 meter of this interval is characterized by hematite staining and fine limonitic fractures. The next 1.5 m to 68.88 consists of broken core in fragments from 2 cm to 10 cm. Fractures are at 10° and 40° to core and are limonite stained. From 69.3 to 69.8 core has porous appearance with limonite filling most of the large pores, estimated at 5% by volume. From 71.0 to 73.58 core is moderately to badly broken with limonitic fractures at 40° and less to core. These fractures occur on average every 5 cm. The only hematite staining is observed in two porous zones from 71.1 to 71.2 and 71.85 to 72.08. These porous zones contain approx. 10% limonite. The bedding core angle in one of these zones is 55°.
73.58	81.71	C.g. quartzite with lenses of very c.g. quartzite up to 20 cm. thick occupying about 15% of this interval. The core though slightly broken in the first



Core Size

NQ

Note No.

Page

K-81-6

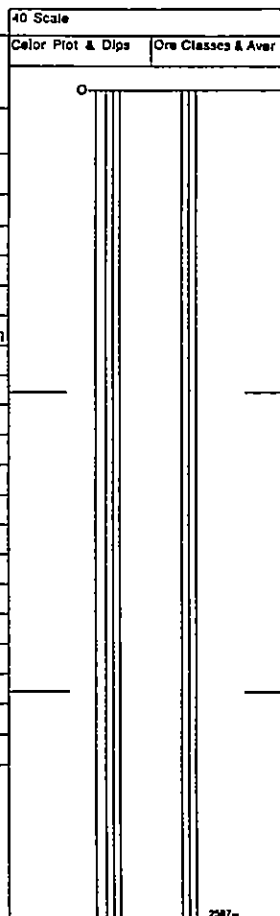
3

2507-

Diamond Drill Geological Log



Objective:			Sampled:			40 Scale	
Logged By: NRW			Date: SEPT/81			Color Plot & Dips	
Composites:			App. Bear:		App. Dip		Ore Classes & Aver
Block:	Sect.:	Place:	App. Bear:	App. Dip	Length:		
		Kootenay Quartzite Local	AZIM 060 ⁰	- 45 ⁰	81.71		
From	To	Discard	Reason:				
73.58	81.71		two metres has a slightly yellow tone reflecting limonitic staining. Limonitic fractures occur at 5 to 10 cm intervals in the first 2 meters then at 20 to 40 cm intervals after that to the end. In the last 3 m the limonite in the fractures is yellow rather than the usual rusty brown colour. There is some faint hematite staining over 5 - 30 cm intervals at 75, 76.5 and 78.5. Bedding core angle is 52 ⁰ at 77, 62 ⁰ at 79, 40 ⁰ at 81.1. The very coarse grained lenses contain quartz grains up to 5 mm in diameter. A few white, probably feldspathic grains were noted in these lenses. One black grain 3x5 in size was also observed.				
			<i>Nancy Watson</i>				
			Core Size				
			NQ				
			Hole No.		Page		
			K-81-6		4		



2587-

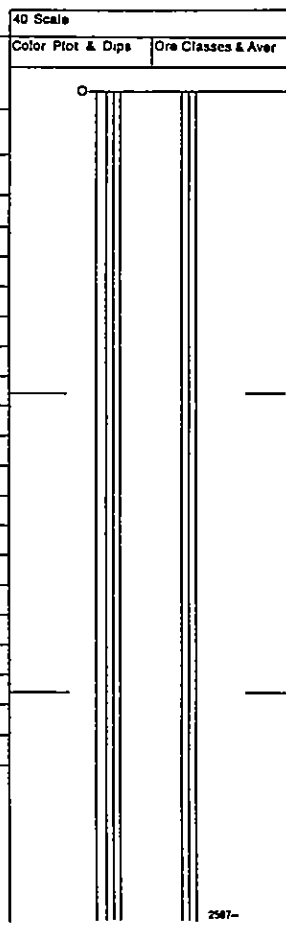
Diamond Drill Geological Log



Objective:		Sampled:	
Logged By: NRH		Date: Sept/81	
Block:		Composites:	
Sect.:	Place:	App. Bear:	App. Dip:
	Kootenay Quartzite Local	060°	-45°
Length:			

From	To	Discard			Reason		From	To	Length	Recovered	Short			
Core Recovery: Shown in Feet														
		Length	Recovery	Short	From	To	Length	Recovered	Short	From	To	Length	Recovered	Short
8	12	4	3½	½	134	144	10	10	-	256	266	10	10	-
12	22	10	10	-	144	154	10	10	-	266	268	2	2	-
22	33½	11½	11½	-	154	158	4	4	-					
33½	43½	10	10	-	158	166	8	8	-	end of hole				
43½	45	1½	1½	-	166	171	5	5	-					
45	47	2	2	-	171	174	3	3	-					
47	56	9	9	-	174	184½	10½	8	2½					
56	62	6	6	-	184½	195	10½	13	(+2½)					
62	64	2	2	-	*note: drillers error when									
64	70½	6½	6½	-	placing blocks									
70½	79	8½	8	½	195	202	7	7	-					
79	86	7	3½	3½	202	206	4	4	-					
86	90½	4½	4	½	206	216	10	10	-					
90½	101	10½	4½	6	216	223	7	6	1					
101	101½	½	½	-	223	226	3	3	-					
101½	107	5½	5½	-	226	234	8	7	1					
107	107½	½	½	-	234	236½	2½	2	½					
107½	116	8½	8½	-	236½	246	9½	9	½					
116	126	10	10	-	246	248½	2½	2	½					
126	134	8	8	-	248½	256	7½	7½	-					

Core Size	
NQ	
Hole No.	Page
K-81-6	5



Diamond Drill Geological Log



VC 1-2mm
C .5-1
M .25-.5
f

Objective: Sampled. 2.88-7.88 17.88-22.88 32.88-37.88 47.88-52.88 62.88-67.88
7.88-12.88 22.88-27.88 37.88-42.88 52.88-57.88 67.88-72.88
Logged By: PWR Date: October 1981 Composites: 12.88-17.88 27.88-32.88 42.88-47.88 57.88-62.88 72.88-77.72

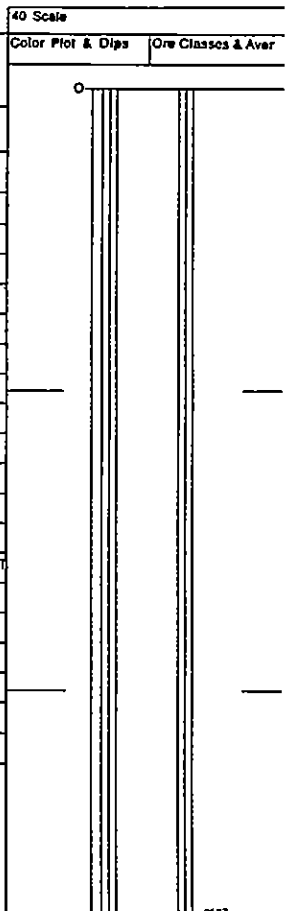
Block: Sect: Place: Kootenay App Bear: Azim. 060° App. Dip: -50° Length: 77.72m
Quartzite Local

From Metres	To	Discard Reason
0	2.88	Overburden and rubble.
2.88	13.10	Med.-grained quartzite, creamy white to grey in colour, limonitic and lesser, hematitic staining throughout. Fractures are typically 10° and 50° to core, most of which have some limonite or hematite on the fractures and up to 5 mm from the fractures. There are a few intervals up to 10 cm long that comprise a network of stained veins. A few narrow white quartz veins occur (less than 5 mm wide). Suspect a few weathered pyrite grains scattered in narrow zones. No bedding noted. Core is good except first 0.5 metre.
13.10	14.33	Medium grey, medium to coarse grained quartzite. A 0 to 1 cm darker, c.g. lens occurs at 14m. A few pyrite grains occur in and adjacent to this lens. Lens has a 70° core angle. Core is solid, no fractures.
14.33	18.31	Coarse-grained quartzite, creamy in colour. Creamy colour is probably effect of iron oxide staining. Moderate limonitic staining on fractures both parallel and 30° to core. About 20% of the staining is hematitic. A few 1-2 mm wide tension fractures occur at 17.50 and 18.30.
18.31	19.82	Coarse-grained quartzite, medium grey in colour. Dark grey bands occur in interval 19.0 to 19.3. The bands range in width from 2mm to a lens 1cm to 3cm wide. Black, probably carbonaceous, material occurs interstitially to some of the quartz grains in these bands. Pyrite grains occur in and adjacent to these bands.
19.82	24.30	Coarse grained creamy white quartzite. Moderate limonite staining, most intense in widely-spaced intervals containing numerous cross fractures. Very minor hematite staining in the most heavily fractured areas. Core is solid; there is no evidence why minor core losses occurred in this interval. Carbonaceous wisps

Core Size

Hole No K-81-7

Page 1



2587-

Diamond Drill Geological Log



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

Block: _____ Sect.: _____ Piece: _____ App. Bear. _____ App. Dip: _____ Length 77.72 m

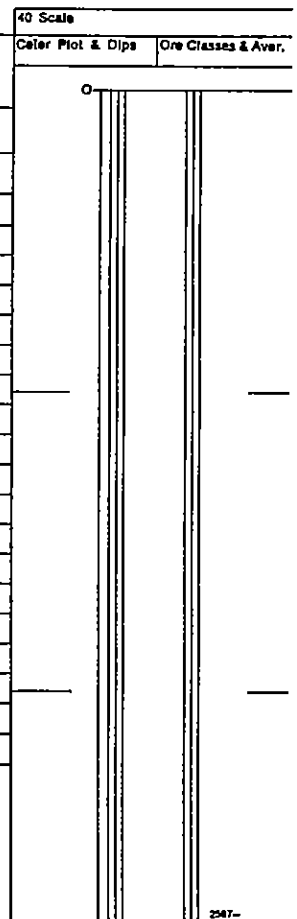
From	To	Discard.	Reason
19.82	24.30	(Cont'd.)	at 45° core angle at 22.2.
24.30	26.15	Coarse-grained medium grey quartzite with a few weakly limonitic stained fractures at start. The last 30cm contains 50% dark grey bands at 34° core angle, there is no pyrite associated with these bands.	
26.15	39.20	Lightly-stained medium grey and creamy coarse and medium-grained quartzite. Core is solid except at 27.0 to 27.1, 27.5 and 35.2 to 35.3 where 1-2 mm gouge surfaces contain talcy feeling rock flour. Also at 27.5 is a 2 cm wide fracture network containing about 20% limonite. In general fractures containing limonite staining cut core at 10° to 20° and occur, on average every 2 or 3 cm. There are finer creamy stained fractures in patches giving core a mottled appearance. At 30.05 is a 1 cm quartz vein with 2-3 mm quartz crystals. From there to 30.1, 2x5 cm dark grey bands at 35°. From 32.73 to 32.83 is an intensely limonitic zone, limonite matrix is 30 to 50% of the volume of this zone, interstitial to round quartz grains and in the centre possibly breccia (broken and not all preserved). Similar material over perhaps 1 or 2 cm (broken and ground) occurs at 37.3.	
39.20	41.80	Moderate to heavy limonite stained coarse grained quartzite. Staining after 40.4 is light. Fractures are 0 to 15°. Some medium grey bands occur 1 to 2 cm wide at 15° to core.	
41.80	53.64	Coarse and medium-grained quartzite characterized by 1 and 2 mm wide quartz veinlets forming a network throughout much of this interval. Dark grey (carbonaceous?) lenses and bands occur as follows: lens 1-2 cm with 15° core angle at 42.5, lens 1-2 cm with 15° core angle at 44.6, two lenses up to 1 cm at	

Core Size

Hole No.

K-81-7

Page 2



Diamond Drill Geological Log



Objective:		Sampled:				40 Scale	
Logged By:		Date:		Composites:		Color Plot & Dips Ore Classes & Avar	
Block:		Sect.	Place:	App Bear:	App Dip:	Length: 77.72 m	
From	To	Discard.		Reason			
41.80	53.64	(Cont'd.)					
		45.4, irregular network of 1 to 3 mm wide zones at 47.2 - 47.3.					
		A 1.5 cm wide massive limonite-filled fracture with 20° core angle occurs at 43.5, limonitic-staining occurs from 43.4 to 44.5, being moderate from 43.4 to 43.95 and weak to 44.5. A 3 cm wide quartzite breccia with black quartz matrix occurs at 43.7.					
53.64	63.70	Coarse-grained quartzite with limonitic staining. Intervals up to 20 cm without significant staining occur. Staining is light to moderate to 60.4 then intense to 61.2 following which it is moderate to 63.7. In the 60.4 to 61.2 interval is a 1 cm brown gouge zone in fracture at 10° to core. Two other gouge zones less than 0.5 cm wide occur nearby. Black bands a few mm to 1 cm wide occur in groups between 54.0 to 54.1 (38° core angle), 55.7 - 55.75 (30° core angle) and 57.7 - 58.3 (30°). Staining is most intense along fracture cutting core at 20-30°, some stained fractures at high angles to those mentioned.					
63.70	71.63	4.57 metres short in this interval. Core in the interval 63.7 - 65.84 is good, just over 1 metre short; lengths are 10-25 cm except a few broken pieces at start. Remainder is broken, ground or in lengths less than 10 cm to 71.63. Coarse-grained quartzite. Colour is creamy indicating only slight oxidation except 63.7 - 65.84 where moderate oxidation staining noted, most intense in 30° to 35° fractures. Quartz vein with remnants of crystals to 5 mm at 69.2					
71.63	77.72	Light creamy grey coarse-grained quartzite. Core varies from good and solid (one 60 cm length) to breaking apart on fractures (still fairly good). Orange to yellow staining (light oxidation) on fractures spaced on average 5 cm apart. Irregular dark grey zone 75.2 to 75.3 with core angle trends 20-30° not considered as definite bedding. End.		Core Size		Hole No. K-81-7 Page 3	

Nancy Watson

Diamond Drill Geological Log



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

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

From	To	Discard	Reason	Runs	Shorts
		0	casing	196	0
		16		206	0
		26	0.5	209	0.5
		36	0	216	3.5
		46	0	220	3.5
		55	0	224	2.5
		65	0	226	1.5
		72	0.5	235	4.0
		77	0.5	246	1.0
		87	0.5	255	(1.0 ft. extra)
		97	0		
		107	0.5		
		117	0		
		127	1.8		
		131	(1.2 extra)		
		136	(0.4 extra)		
		146	0 v		
		156	C		
		157	C		
		167	C (0.6 extra)		
		176	0.7		
		186	C		

40 Scale
 Color Plot & Dips
 Ore Classes & Avar.

0

Core Size

Hole No

Page

K-81-7

4

2597-

45

Magnesium Feasibility
(Kootenay Quartzite)

V81-1157R

7 December 1981
Page 1

Component (Element)	Field Number Composite: R81:18478 1826-1829 20m			Component (Element)	Field Number Composite: R81:18479 1830-1833 20m		
	Composite (A)	Duplicate Com. (B)	Replicate Analysis		Composite (A)	Duplicate Com. (B)	Replicate Analysis
DD. K-81-7 2.88 to 22.88 m				K-81-7 22.88 to 42.88 m			
1. SiO ₂ %	99.05			1. SiO ₂ %	98.34		
2. Al ₂ O ₃ %	0.28			2. Al ₂ O ₃ %	0.33		
3. Fe ₂ O ₃ %	0.24			3. Fe ₂ O ₃ %	0.62		
4. CaO %	0.010			4. CaO %	0.011		
5. MgO %	0.011			5. MgO %	0.011		
6. S(total) %	0.056			6. S(total) %	0.096		
7. P %	0.004			7. P %	0.007		
8. L.O.I. %	0.23			8. L.O.I. %	0.37		
9. As ppm	4			9. As ppm	6		
10. Moisture %	0.01			10. Moisture %	0.03		
TOTAL %	99.891			TOTAL %	99.815		

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Magnesium Feasibility
(Kootenay Quartzite)

V81-1157R

Page2

Component (Element)	Field Number Composite: R81:18480 1834-1837 20m			Component (Element)	Field Number Composite: R81:18481 1838-1840 14.8m		
	Composite (A)	Duplicate Com. (B)	Replicate Analysis		Composite (A)	Duplicate Com. (B)	Replicate Analysis
K-81-7 42.88 to 62.88 m				K-81-7 62.88 - 77.72			
1. SiO ₂ %	98.67	98.68		1. SiO ₂ %	99.24		
2. Al ₂ O ₃ %	0.47	0.49		2. Al ₂ O ₃ %	0.28		
3. Fe ₂ O ₃ %	0.40	0.42		3. Fe ₂ O ₃ %	0.14		
4. CaO %	0.010	0.008		4. CaO %	0.010		
5. MgO %	0.015	0.013		5. MgO %	0.012		
6. S(total) %	0.034	0.030		6. S(total) %	0.022		
7. P %	0.006	0.006		7. P %	0.006		
8. L.O.I. %	0.30	0.30		8. L.O.I. %	0.17		
9. As ppm	5	8		9. As ppm	<2		
10. Moisture %	0.03	0.02		10. Moisture %	0.03		
TOTAL %	99.935	99.967		TOTAL %	99.910		

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Magnesium Feasibility
(Kootenay Quartzite)

V81-1157R

Page3

Component (Element)	Field Number Composite: R81:18482 1841-1844 20m			Component (Element)	Field Number Composite: R81:18483 1845-1848 20m		
	Composite (A)	Duplicate Com. (B)	Replicate Analysis		Composite (A)	Duplicate Com. (B)	Replicate Analysis
K-81-4 1.83 - 21.83 m				K-81-4 21.83 - 41.83 m			
1. SiO ₂ %	98.97		98.99	1. SiO ₂ %	99.15		
2. Al ₂ O ₃ %	0.47		0.47	2. Al ₂ O ₃ %	0.30		
3. Fe ₂ O ₃ %	0.17		0.17	3. Fe ₂ O ₃ %	0.29		
4. CaO %	0.008		0.008	4. CaO %	0.008		
5. MgO %	0.013		0.012	5. MgO %	0.010		
6. S(total) %	0.024		0.026	6. S(total) %	0.040		
7. P %	0.006		0.004	7. P %	0.005		
8. L.O.I. %	0.24		0.25	8. L.O.I. %	0.21		
9. As ppm	4		4	9. As ppm	8		
10. Moisture %	0.03			10. Moisture %	0.02		
TOTAL %	99.931		99.930	TOTAL %	100.033		

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Magnesium Feasibility
(Kootenay Quartzite)

V81-1157R

Page4

Component (Element)	Field Number Composite: R81:18484 1849-1852 20m			Component (Element)	Field Number Composite: R81:18485 1853-1856 19.17		
	Composite (A)	Duplicate Com. (B)	Replicate Analysis		Composite (A)	Duplicate Com. (B)	Replicate Analysis
K-81-4 41.83 to 61.83m				K-81-4 61.83 to 81.10m			
1.SiO ₂ %	99.07	98.97		1.SiO ₂ %	98.78		
2.Al ₂ O ₃ %	0.31	0.33		2.Al ₂ O ₃ %	0.51		
3.Fe ₂ O ₃ %	0.24	0.26		3.Fe ₂ O ₃ %	0.28		
4.CaO %	0.007	0.007		4.CaO %	0.010		
5.MgO %	0.007	0.007		5.MgO %	0.012		
6.S(total) %	0.052	0.050		6.S(total) %	0.052		
7.P %	0.005	0.004		7.P %	0.006		
8.L.O.I. %	0.24	0.26		8.L.O.I. %	0.33		
9.As ppm	5	3		9.As ppm	4		
10.Moisture %	0.02	0.02		10.Moisture %	0.04		
TOTAL %	99.951	99.908		TOTAL %	100.020		

Magnesium Feasibility
(Kootenay Quartzite)

V81-1157R

Page 5

Component (Element)	Field Number Composite: R81:18486 1857-1860 20m			Component (Element)	Field Number Composite: R01:18487 1861-1864 20m		
	Composite (A)	Duplicate Com. (B)	Replicate Analysis		Composite (A)	Duplicate Com. (B)	Replicate Analysis
K-81-5A 3.05 to 23.05m				K-81-5A 23.05 to 43.05m			
1. SiO ₂ %	99.07		99.02	1. SiO ₂ %	98.91		
2. Al ₂ O ₃ %	0.42		0.41	2. Al ₂ O ₃ %	0.51		
3. Fe ₂ O ₃ %	0.22		0.22	3. Fe ₂ O ₃ %	0.23		
4. CaO %	0.014		0.014	4. CaO %	0.12 ^{.012 ✓}		
5. MgO %	0.015		0.015	5. MgO %	0.014		
6. S(total) %	0.056		0.056	6. S(total) %	0.052		
7. P %	0.005		0.004	7. P %	0.006		
8. L.O.I. %	0.24		0.26	8. L.O.I. %	0.25		
9. As ppm	5		8	9. As ppm	3		
10. Moisture %	0.03		0.03	10. Moisture %	0.03		
TOTAL %	100.070		100.029	TOTAL %	100.014		

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Component (Element)	Field Number Composite:R81:18488 1865-1868 20m			Component (Element)	Field Number Composite:R81:18489 1870-1872 16.31-		
	Composite (A)	Duplicate Com. (B)	Replicate Analysis		Composite (A)	Duplicate Com. (B)	Replicate Analysis
<i>K-81-5A</i> <i>42.05 to 63.05m</i>				<i>K-81-5</i> <i>3.35m to 19.66m</i>			
1.SiO ₂ %	98.70	98.80		1.SiO ₂ %	99.10		
2.Al ₂ O ₃ %	0.69	0.71		2.Al ₂ O ₃ %	0.38		
3.Fe ₂ O ₃ %	0.25	0.25		3.Fe ₂ O ₃ %	0.19		
4.CaO %	0.013	0.011		4.CaO %	0.010		
5.MgO %	0.022	0.020		5.MgO %	0.012		
6.S(total) %	0.054	0.050		6.S(total) %	0.032		
7.P %	0.006	0.006		7.P %	0.004		
8.L.O.I. %	0.27	0.28		8.L.O.I. %	0.26		
9.As ppm	5	8		9.As ppm	3		
10.Moisture %	0.03	0.03		10.Moisture %	0.02		
TOTAL %	100.035	100.167		TOTAL %	100.008		

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Component (Element)	Field Number Composite:R81-18490 1573-1575 16.31m			Component (Element)	Field Number Composite:R81:18491 86-96 20m		
	Composite (A)	Duplicate Com. (B)	Replicate Analysis		Composite (A)	Duplicate Com. (B)	Replicate Analysis
<u>HIDDEN</u> K-81-5 3.35 to 19.66m	<u>DUPLICATE</u>			K-81-6 2.44 to 22.44m			
1.SiO ₂ %	99.24		98.94	1.SiO ₂ %			99.27
2.Al ₂ O ₃ %	0.36		0.42	2.Al ₂ O ₃ %			0.30
3.Fe ₂ O ₃ %	0.18		0.17	3.Fe ₂ O ₃ %			0.14
4.CaO %	0.008		0.009	4.CaO %			0.014
5.MgO %	0.012		0.012	5.MgO %			0.011
6.S(total) %	0.030		0.026	6.S(total) %			0.026
7.P %	0.004		0.004	7.P %			0.003
8.L.O.I. %	0.26		0.002	8.L.O.I. %			0.18
9.As ppm	2		3	9.As ppm			4
10.Moisture %	0.02		0.02	10.Moisture %			0.02
TOTAL %	100.114		99.861	TOTAL %			99.964

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Component (Element)	Field Number Composite: R81:18492 97-100 20m			Component (Element)	Field Number Composite: R81:18493 1801-1804 20m		
	Composite (A)	Duplicate Com. (B)	Replicate Analysis		Composite (A)	Duplicate Com. (B)	Replicate Analysis
<i>K-81-6</i> <i>2244 to 42.44m</i>				<i>K-81-6</i> <i>42.44 to 62.44</i>			
1. SiO ₂ %	99.25			1. SiO ₂ %	98.87	98.90	
2. Al ₂ O ₃ %	0.34			2. Al ₂ O ₃ %	0.42	0.41	
3. Fe ₂ O ₃ %	0.11			3. Fe ₂ O ₃ %	0.34	0.30	
4. CaO %	0.009			4. CaO %	0.011	0.011	
5. MgO %	0.010			5. MgO %	0.012	0.011	
6. S(total) %	0.016			6. S(total) %	0.056	0.058	
7. P %	0.004			7. P %	0.007	0.006	
8. L.O.I. %	0.18			8. L.O.I. %	0.30	0.30	
9. As ppm	<2			9. As ppm	3	3	
10. Moisture %	0.02			10. Moisture %	0.03	0.02	
TOTAL %	99.939			TOTAL %	100.046	100.016	

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Component (Element)	Field Number Composite: R81:18494 1805-1808 19.27m			Component (Element)	Composite:		
	Composite (A)	Duplicate Com. (B)	Replicate Analysis		Composite (A)	Duplicate Com. (B)	Replicate Analysis
<i>K-81-6</i> <i>62.44 to 81.71m</i>							
1.SiO ₂ %	98.93			1.SiO ₂ %			
2.Al ₂ O ₃ %	0.40			2.Al ₂ O ₃ %			
3.Fe ₂ O ₃ %	0.33			3.Fe ₂ O ₃ %			
4.CaO %	0.011			4.CaO %			
5.MgO %	0.012			5.MgO %			
6.S(total) %	0.032			6.S(total) %			
7.P %	0.006			7.P %			
8.L.O.I. %	0.26			8.L.O.I. %			
9.As ppm	6			9.As ppm			
10.Moisture %	0.02			10.Moisture %			
TOTAL %	100.001			TOTAL %			

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Component (Element)	Field Number Composite: R81:18455 1869-2084			Component (Element)	Composite:		
	Composite (A)	Duplicate Com. (B)	Replicate Analysis		Composite (A)	Duplicate Com. (B)	Replicate Analysis
K-81-5A 62.05 to 67.38m							
1.SiO ₂ %	98.19			1.SiO ₂ %			
2.Al ₂ O ₃ %	0.52			2.Al ₂ O ₃ %			
3.Fe ₂ O ₃ %	0.67			3.Fe ₂ O ₃ %			
4.CaO %	0.012			4.CaO %			
5.MgO %	0.012			5.MgO %			
6.S(total) %	0.53			6.S(total) %			
7.P %	0.006			7.P %			
8.L.O.I. %	0.49			8.L.O.I. %			
9.As ppm	6			9.As ppm			
10.Moisture %	0.03			10.Moisture %			
TOTAL %	99.970			TOTAL %			

*Note: the loss on ignition (L.O.I) is not included in the total. The high L.O.I. is mainly due to the high sulphur content. Including it in the total would be counting the sulphur twice.