K - Fording River 76(1)A

FORDING COAL LIMITED

SUMMARY REPORT

1976 COAL RESERVE DEVELOPMENT PROGRAM

January 28, 1977

By: A.C. Taplin, P. Eng.
Senior Mine Geologist
Fording Operations

&

P.M. Daignault
Mine Geologist,
Fording Operations

Operator: Fording Operations
Cominco Ltd.

Coal License Owners and Numbers

CanPac Minerals Limited: 314-364 incl., 419, 420, 507-511 incl., 536-538 554-560 incl.
Total: 32,735 acres

Fording Coal Limited: 801-804 incl., 943, 944 964
Total: 7,765 acres

N.T.S. 82 J2W J7W

319

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FORDING COAL OPERATIONS

SUMMARY REPORT

1976 EXPLORATION AND DEVELOPMENT PROGRAM

I INTRODUCTION

An extensive drilling plan was undertaken in 1976 within a two mile radius of the plant site, as part of Fording's continuing Coal Reserve Development program. The majority of the work was to upgrade geological information in areas for which there is already a preliminary pit design. Due to a four and one half month strike (May 5 - Sept. 15) the bulk of the year's drilling was done from late September to mid-December. Eighty-three holes were completed and 38,463 ft. drilled; included is footage for incompleted holes. Ten thousand feet of the drilled footage was in twelve H.Q. diamond core holes and 28,309 ft. in sixty-nine 4 7/8" diameter rotary holes with centre return sampling of the coal seams intersected. Coal analysis were done for all significant seam intersections at Fording's Process Plant Laboratory. Coal seam samples taken at two foot intervals, were analysed for % Ash and F. S. I. values. Weighted seam composites were tested for Proximate Analysis plus F. S. I. and % Sulphur. Washability tests remain to be done on the cored seam samples.

Connors Drilling Ltd. contracted the core drilling. S.D.S. Drilling Ltd. were the contractors for the centre return rotary drilling with one track-mounted (Nodwell F N 110 carrier) Gardner Denver 1000 H.D. drill, and one truck-mounted (Kenworth Tandem) Sanderson T.H. 70 drill with top drive. Carriers for the dual wall drill pipe were a tracked F N 800 Nodwell carrier and a Kenworth Tandem for the respective drill rigs. Kerpan & Delfs Ltd. provided water haulage service to the two diamond drill rigs on Eagle Mtn. (Taylor Pit area). Hollowink Contracting of Fernie supplied a D-7 bulldozer and operator for preparation of drill access roads, drill sites and trenching for the main portion of the drill program. Gallant Trucking supplied water to Connors diamond drill rig operating in the K-4 pit area of Eagle Mtn. and Jamesfield Construction Ltd. provided a D-7 bulldozer for seam trenching and drill site preparation. All exploration holes were logged either by Roke Oil Enterprises of Calgary using a gamma ray-neutron log combination, or by Geology Dept. personnel using a Widco logging unit to give a gamma ray log only. Fording geologists mapped the various rock outcrops and seam exposures; staff surveyors provided the necessary mapping control and location of drill holes. Two temporarily employed geologists did the geological and structural logging of diamond drill cores obtained from the Taylor Pit drilling program.

Summary statements of work done and the results obtained are included for the various areas, together with radiation logs, diamond drill hole logs, plans and representative sections and a general geological map showing location of drill holes.

II INDIVIDUAL AREA PROGRAMS AND RESULTS

A. EAGLE MTN.: K-4 PIT AREA

Based on results of 1975 rotary drilling and previous exploration work, a small pit (630,000 L.T.R.C.) was designed to mine "4" seam in this area on the south end of Eagle Mtn. The proximity to the proposed highwall of an inferred flat thrust fault indicated a potential slope stability problem; therefore, a limited diamond drilling program was conducted in the spring of 1976 on the recommendation of Golder Associates, geotechnical consultants, to further define the structure of the area.

Four diamond drill holes (D.D.H. 455-458), three vertical and one angle hole (D.D.H. 456, Az187, Dip 64°S) where drilled for a total of 2034 ft.

Two standard rotary drill holes (3 7/8" diam.) were completed by the Geology Dept.'s B-50 drill rig for a total of 154 ft. of fill-in drilling. In addition one double wall rotary drill hole (R.H. 443) was drilled to 573 ft. in November.

Hydrology tests were carried out on drill holes D.D.H. 456 and R.H. 443 by Golder Associates Ltd. of Vancouver. Packing tests were used to determine the piezometric head above and below "4" seam coal. Total permeability of the sequence drilled below the coal was also determined. Two piezometers were installed in each drill hole to determine whether artesian pressures exist below "4" seam coal.

Exposures were made along "4" seam, suspected fault areas and at various horizons above "4" seam. This extensive trenching was carried out to delineate major and minor structural features. The structural mapping was also required for geotechnical data as well as for additional stratigraphic information.

Mapping and drilling information indicates that "4" seam is relatively flat lying except where it is intersected by faulting. The eastern and western boundaries of the proposed pit are cut by high angle normal and by both westerly and easterly dipping thrust faults. On grid line 84,500 E a high angle normal fault displaces (strike-slip) "4" seam approximately 200 ft. The western area of the proposed pit is bound by east-dipping flexural slip faulting and later west-dipping thrust faults. Complex minor thrusting occurs in the mid-pit area.

The major thrust faults (Refer to Top of Seam Contours: Seam 4, K-4 Pit area) divide "4" seam into three sub-areas according to thickness. Between No. 1 and No. 2 thrusts "4" seam averages 35 ft. in thickness. Additional thickening occurs in this area where the thrusting intersects the seams. Drill holes 405 and 443 indicate thickness of 76.5 ft. and 82 ft. respectively. On either side of these faults "4" seam is normal in thickness (Refer to section 486,250 N).

Total expenditures of the above work: $77,851.73.

B. WESTFACE & NORTHWEST EAGLE MTN: TAYLOR PIT AREA

A total of 18,995 ft. in twenty-nine holes were drilled in the Taylor Pit area between sections 491,000 N. and 492,250 N. on the northwestern flank of Eagle Mtn. Eight diamond drill core holes (D.D.H.'s 438-442, 444,447 & 471) for a total of 7966 ft. were drilled to test for continuity, thickness and quality of seams "14" to "4", and to provide structural and geotechnical information for pit highwall design purposes. Diamond drill holes 438-440 and 471 were drilled at an angle (approx. 60^{o} from horizontal) to test seams 14 lower to 5 in the area covered by No. 1 spoil dump; these holes were surveyed using a Sperry-Sun single shot down-the-hole instrument. Piezometers were installed and permeability tests were done in D. D.H. 447 by Golder Associates Ltd. In addition, twenty-one centre-return rotary holes (R.H.'s 462-470, 472-474 and 476-484) for a total of 11,029 ft. were drilled to provide thickness, continuity, and quality information for seams 14 to 4. Permeability tests were done on rotary holes 480 and 484 by Golder Associates Ltd. Seam sub-crops were mapped and surveyed on new and previously existing drill site access roads. Surface structural mapping pertinent to pit highwall design was done by Golder Associates' geologist A. Holmes.

The 1976 drilling results for the Taylor Pit area, correlated with previous work, shows the coal seams dipping at 20^{o} to 21^{o} easterly on the western face, flattening to 8^{o} to 10^{o} easterly in the axial region of the major syncline through Eagle Mtn. Refer to sections 493, 500 N: Eagle Mtn (No Name Gulch Area) and 493, 500 N: West Face Eagle Mtn. The average thicknesses are as follows: 14 seam - split into two to four widely separated seams of varying thickness (1.5 to 10 ft); 13 seam - 14.5 ft. (often split seams); 12 seam - 17.5 ft. (thinning to 7 ft average east of No Name Gulch and north of 493,000N); 11 upper seam - 10.5 ft.; 11 seam - 15.5 ft (sometimes split); 9 seam (incl. lower 9) - 19.5 ft.; 7 seam - 20.5 ft; 5 seam - 22.5 ft; 4 seam - 32 ft.

Thrust faults as mapped in outcrop trenches and road cuts, and indicated by increased stratigraphic sections in some areas, are present in the Taylor Pit area, but appear to have a minor effect on the coal seams. Seam thinning and splitting may be partly due, to minor thrust faulting.

The thinning and splitting of 12 seam east of No Name Gulch and north of 493,000N (refer to Longitudinal Geological Section: Eagle Mt. West Face and Geological Map: Eagle Mtn.) may result in 12 seam not being mineable in certain areas. Further drilling will be required to further define these areas.

Total expenditure on the Taylor Pit program: $393,039.22.

C. CLODE CK. AREA: EXTENSION TO CLODE PIT

Five centre return rotary drill holes (1393 ft.) were completed to obtain additional information on the location and structure of 9 seam

in the north-east corner of Clode Pit. Drill results indicated a flattening of the seam as it approaches the axis of the Eagle Mtn. - Turnbull Mtn. syncline, and also structural dislocation due to inferred thrust faulting. Section 496,250N: Clode Pit, illustrates the structures.

Total drilling costs for the above program: $17,788.95.

D. TURNBULL MTN.

Thirteen center return rotary holes (Nos. 605, 609-620) were drilled on Turnbull Mtn. for a total of 6331 ft. Nine of these holes were drilled to extend the "14" to "9" seam information to the north. (Refer to Section 501,250N) The remaining four holes (Nos. 616-619) were drilled to further define the proposed Turnbull Main Pit area; "Repeat 7" to "Repeat 4" seams were intersected in these latter holes. Refer to Section 500,750N.

Minor trenching was carried out as lower relief and gentle slopes provide little information due to the thick glacial and river terrace material.

The low angle west-dipping thrust fault has been correlated with the Clode Pit major thrust. This thrust is approximately at the 5600 ft. elevation in the northern most area of Turnbull as opposed to 5800 ft. where exposed on the Clode haulage road.

The preliminary drilling in the northern extension indicates a normal succession from "14" to "9" seam. This information can be correlated with the drilling done on the nose area of Turnbull.

Total expenditure on the above program: $91,665.34

E. GREENHILLS AREA

The 1975 Reserve Development Program continued into January 1976 with the completion of 1188 ft. of rotary drilling in the northern Greenhills area. Seven holes were completed in an effort to obtain sufficient information for the design of a low ratio drag-line pit to mine "F" seam. A mud pump was used to facilitate the setting of casing in these holes which had to penetrate thirty feet or more of water saturated sands and gravels; in spite of this effort, four holes had to be 'skidded' because of caving overburden.

Total cost of this "F" seam drilling program: $27,870.24

In the October-November, 1976 period an additional eight centre return rotary holes (1567 ft.) were completed to provide data for the final design of the "F" seam drag-line pit. Refer to Section 492,250N & 492,500N Greenhills.

A further fourteen holes (6229 ft.) were drilled to improve seam definition in planned truck-shovel pits involving seams "F" to "H". Location thickness and quality of seams were about as expected.

Minor structural dislocations in the form of thrust and normal faulting are indicated. Refer to Section 491,000N.

Total cost of the fall season Greenhills drilling program: $91,604.47.

A.C.T., P.M.D.:sjb
January 24, 1977

A. C. Taplin, P. Eng.,
Senior Mine Geologist.

P. M. Daignault,
Mine Geologist.

III LIST OF ILLUSTRATIONS & APPENDICES

A. MAPS & SECTIONS

- 1976 Exploration & Development General Geology Map
  1" = 1000 ft.

- General Geology and Coal Properties Map
  1:50,000 Scale Index Map

- Section 486,250N, West Face Eagle Mtn.
  1" = 100 ft.

- Top of Seam Contours: Seam 4 Eagle Mtn. South (k-4 Pit Area)
  1" = 100 ft.

- Section 493,500N West Face Eagle Mtn.
  1" = 100 ft.

- Section 493,500N Eagle Mtn. (No Name Gulch Area)
  1" = 100'ft.

- Longitudinal Geological Section, Eagle Mtn. West Face
  Vertical Scale 1" = 100 ft. Horizontal Scale 1" = 200 ft.

- Geological Map: Eagle Mtn.
  1" = 200 ft.

- Section 496,250N, Clode Pit
  1" = 100 ft.

- Section 500,750N Turnbull Mtn.
  1" = 100 ft.

- Section 501,250N Turnbull Mtn.
  1" = 100 ft.

- Sections 492,250N & 492,500N Greenhills
  1" = 100 ft.

- Section 491,000N Greenhills
  1" = 100 ft.

B. APPENDICES

Appendix 1*	Copies of drill hole logs, including assays & washability tests.
Appendix 2	Copies of gamma ray-neutron logs.
Appendix 3	Copies of diamond drill core structural logs.
Appendix 4	Copies of Invoices for Supporting Cost Statement.

* At time of report washability tests on core remained to be done and some assay results had not been received. This data will be forwarded when it becomes available.

TABLE OF CONTENTS

IV VALUATION OF WORK

A. SUMMARIES

1. TOTAL EXPENDITURES PER TYPES OF WORK

Drilling	Dozer Work	Radiation Logs	Assays	Geological Supervision & Mapping	Truck Rentals	Misc. Equip. & Supplies	Consultant Fees	Piezometer Instal-lations
$580,588.49	$39,630.33	$28,909.49	$11,612,80	$13,450.97	$9,905.12	$11,652.48	$24,321.31	$4,316.04

TOTAL EXPENDITURES $724,387

2. PRORATED EXPENDITURES PER INDIVIDUAL LICENSES

C.L. 345	$ 72,723.00
C.L. 341	$ 50,347.00
C.L. 352	$ 86,597.00
C.L. 346	$378,374.00
C.L. 349	$ 4,928.00
C.L. 350	$ 31,714.00
C.L. 354	$ 10,110.00
C.L. 351	$ 8,745.00
C.L. 335	$ 65,541.00
C.L. 336	$ 7,608.00
C.L. 419	$ 7,700.00

Note all [illegible], such as [illegible], are [illegible] application [illegible].

VALUATION OF WORK: COST STATEMENT
(Sec. 27, B.C. Reg. 436/75)

ON-PROPERTY COSTS: For period from January 1 to December 31, 1976

1. OPERATOR'S FEES, SALARIES, AND WAGES:

	Average Number of Employees	Average Rate	Average Number of Days	Amount
Professional and technical				13,207.47
Machine operators and support				
Miners				
Other Fording Personnel				1,698.50

Total operator's costs $ 14,905.97

2. CONTRACTORS AND CONSULTANTS:

Name	Service	Contract Amount
Refer to attached list of "Contractors and Consultants"		

Total contractor and consultant costs $ 676,536.72

3. EQUIPMENT AND INSTRUMENTS USED: Owned X Rented

Type	Rented From	Amount
B-50 Drill	Fording Coal Ltd.	159.57
D9 Bulldozer & Napco Compressor	Fording Coal Ltd.	1,943.78

Total equipment and instrument rentals $ 2,103.35

4. FIELD CAMP COSTS:

		Amount
Food	Paid by contractors at Elkford Camp	
Accommodation		
Fuel		
Other		

Total field camp costs $

5. SAMPLING, ANALYSIS, AND TESTING:

Service	Performed by	Amount
Proximate Analyses	Fording Coal Ltd.	$11,612.78

Totals, samplings, analysis, and testing $ 11,612.78

6. SUPPLIES AND MATERIALS COSTS:

		Amount
Process supplies	Polybags, wire ties, tags, etc.	4,181.12
Operating and maintenance supplies	Truck repairs, insurance	621.20
Office and technical supplies	Repairs to Widco radiation logger.	243.26
Other supplies and materials	Drill casing, etc.	4,655.21

Total, supplies and materials $ 9,700.79

7. TRANSPORTATION COSTS (Ground transportation details):

Vehicles	Owner	Rental Rate	Amount
Two 3/4 ton 4x4's	Rentway Canada Ltd.	$508.25/mo/vehicle	$9,283.92

Air support details:

Aircraft Type	Owner	Charter

Total transportation costs $ 9,283.92

8. RECLAMATION WORK:

$

9. TRAVEL EXPENDITURES (operator's costs only):

Number of Personnel	Number of Trips	Amount

Total travel expenditures $

Total costs $ 724,143.53

(Secs. 28 and 29, B.C. Reg. 436/75)

OFF-PROPERTY COSTS: Period from January 1 to December 31, 19 76

	Amount
(a) Logistics and field support	$
(b) Technical and feasibility studies	
(c) Preparation of reports	
(d) Supplies and services	
(e) Mobilization and demobilization of equipment	
(f) Travelling expenses (Itemize)	243.50

Total $ 243.50

Supporting Cost Statements Attached

	Amount
Refer to attached "Supporting Cost Statement"	
and Invoice List	

Total supporting costs $ 692,542.33

SUMMARY

On-property costs	$ 724,143.53
Off-property costs	$ 243.50
Total costs	$ 724,387.03

Statement of costs verified by

(Date) (Signature and position)

ATTACHMENT TO "VALUATION OF WORK: COST STATEMENT"

2. CONTRACTORS AND CONSULTANTS

NAME & ADDRESS	SERVICE	CONTRACT AMOUNT
- Roke Oil Enterprises Ltd. 516 Moraine Rd., N.E., Calgary, Alberta T2A 2P2	Radiation Logging	$ 28,122.83
- Connors Drilling Ltd., 201-1201 West Pender Street, Vancouver, B. C. V6E 2V2	Drilling Contractor	233,519.57
- S.D.S. Drilling Ltd., 4636 - 1st St. N.E., Calgary, Alberta. T2G 2L3	Drilling Contractor	316,478.83
- Kenting Petrolia Drilling Ltd., 700 - 6th Avenue, S.W., Calgary, Alberta. T2P 0T8	Drilling Contractor	20,553.10
- Hollowink Contracting Ltd., Box 1274 Fernie, B. C. V0B 1M0	Bulldozer Rental	28,907.15
- Jamesfield Construction Ltd., 1321 Spruce Drive. Cranbrook, B. C.	Bulldozer Rental	10,283.59
- Golder, Brawner & Assoc. Ltd., 224 West 8th Avenue Vancouver, B. C. V5Y 1N5	Geotechnical Consulting	24,321.31
- Kerpan & Delfs Ltd., Box 742 Kamloops, B. C.	Water Haulage	14,350.00

ATTACHMENT TO"SUPPORTING COST STATEMENTS"

Roke Oil Enterprises Ltd.	$ 28,122.63
Connors Drilling Ltd.	234,131.94
S.D.S. Drilling Ltd.	316,478.83
Kenting Petrolia Drilling Ltd.	20,553.10
Hollowink Contracting Ltd.	28,907.15
Jamesfield Construction Ltd.	10,283.59
Golder, Brawner & Associates Ltd.	24,321.31
Kerpan & Delfs Ltd.	14,350.00
Thiessen Equipment Ltd.	778.43
Rentway Canada Ltd.	7,127.45
Widco (Canada) Sales & Service Ltd.	579.50
Cominco (Expense Accounts)	313.20
Cranbrook Photo Ltd.	106.62
Kits Cameras	131.24
Millar & Brown Ltd.	56.28
Kiki & Sons Transfer Ltd.	37.00
Advance Plastics Ltd.	603.24
Nelson Daily News	95.50
Simplex Burcraft Industries	81.27
Sperry - Sun of Canada Ltd.	13.50
Russelsteel Ltd.	4,655.51
Elk Valley Bldg. Supply Ltd.	84.38
Norman Wade Co. Ltd.	730.66
	$692,542.33

INVOICE LIST

COMPANY	INVOICE NOS.
Golder, Brawner & Assoc. Ltd.	2-123, 2-122, 2-137, 3-96, 4-88, 3-125, 4-109, 5-100, 5-78, 3-126, 6-119, 3-162, 4-150, 9-168, 9-87, 10-86, 4-110
Kenting Petrollia Drilling Ltd.	0585, 0587
Hollowink Contracting Ltd.	161, 134, 129, 105, 124, 089, 039
Roke Oil Enterprises Ltd.	872, 863, 864, 1015, 1029, 1027, 1025, 1021, 1005, 1002, 991, 980
S.D.S. Drilling Ltd.	187, 205, 204, 206, 197, 185, 184, 183, 182, 176, 177, 178, 170, 173, 164, 165, 166, 163, 153, 147, 146
Jamesfield Construction Ltd.	9, 13, 24, 21
Connors Drilling Ltd.	6693, 6684, 6635, 7340, 7301, 7262, 7321, 7184, 6788, 7371
Kerpan & Delfs Ltd.	782, 759, 763, 761, 747, 743
Thiessen Equipment Ltd.	825, 17444
Rentway Canada Ltd.	24504, 24516, 37818, 37809, 36934, 37814, 22498, 20531, 20565, 20539, 9478, 18577, 18582, 39722, 39726
Widco (Canada) - Sales & Services	1153, 1229, 1300, 1102
Cominco	F-718, 09/356
Gallant Trucking Ltd.	20542, 20543
Cranbrook Photo Ltd.	1374, 1568
Kits Cameras	4867
Millar & Brown Ltd.	103 - 208057
Kiki & Sons Transfer Ltd.	1102
Advance Plastics Ltd.	03289
Nelson Daily News	1137
Simplex Burcraft Industries	7541, 7618
Sperry Sun of Canada Ltd.	C06790

Invoices List con't.

Russelsteel Ltd.	91076
Elk Valley Bldg. Supply Ltd.	C4608
Norman Wade Co. Limited	21191

MONTH	DRILLING COSTS: FOOTAGE RATE ---- 100	DRILLING COSTS: DAY WORK & DRILL MOBILIZATION ---- 110	BULLDOZER RENTAL ACCESS ROADS & SITES ---- 200	RADIATION LOGS ---- 300	ASSAYS ---- 400	GEOLOGY & SUPERVISION ---- 500	SURVEYING ---- 600	TRUCK RENTALS ---- 700	MISCELLANEOUS EQUIPMENT & SUPPLIES ---- 800
JAN.	8104.60 INV.# 587	6000.00 INV.# 585	872.18 INV.# 039		746.97	192.50 INV. F-718 106-0.04 JAN. STAFF WAGES		498.75 INV.#18577 498.75 INV.# 18582 498.75 INV.# 9478 256.85 CHARGE FROM 98206	-38.75 CREDIT ON DEC '1975 OVERCHARGE (HUGH OWENS)
FEB					348.81			498.75 INV.#20539 138.41 INV.#20531 727.15 CHARGE FROM 98206	89.25 SAMPLE TAGS
MARCH								1005.75 RENTAL REPAIR etc	
ADJUSTMENTS	8104.60	6000.00	872.18	- 27.22 EXCESS CLAIM IN 1975	1095.78	1252.54		4123.36 - 50.00 EXCESS CLAIM IN 1975	50.50
TOTAL	$ 8104.60	$ 6000.00	$ 872.18	$ - 27.22	$ 1095.78	$ 1252.54		$ 4073.36	$ 50.50

$ 21,421.74

B-CAPITAL COST CONTROL LISTINGS

MONTH	DRILLING COSTS: FOOTAGE RATE ---- 100	DRILLING COSTS: DAY WORK & DRILL MOBILIZATION ---- 110	BULLDOZER RENTAL ACCESS ROADS & SITES ---- 200	RADIATION LOGS ---- 300	ASSAYS ---- 400	GEOLOGY & SUPERVISION ---- 500	SURVEYING ---- 600	TRUCK RENTALS ---- 700	MISCELLANEOUS EQUIPMENT & SUPPLIES ---- 800	
JAN.								162.84 CHARGE FROM 98215		
FEB.								96.80 CHARGE FROM 98215		
MARCH								116.13 CHARGE FROM 98215		
								375.77		
DJUSTMENTS				-130.00 EXCESS CLAIM IN 1975						
TOTAL				$ -130.00				$ 375.77		$ 245.77

1976

EAGLE MT. - ROTARY DRILLING PROGRAM

MONTH	BULLDOZER WORK ACCESS RDS & SITE PREPARATION NR 035 09	SEAM OUTLINE TRENCHING NR 035 10	DIAMOND DRILLING COSTS: FOOTAGE RATE NR 035 11	DIAMOND DRILLING COSTS: DAY WORK & SUPPLIES NR 035 11	RADIATION LOGS NR 035 12	ASSAYS NR 035 13	TRUCK RENTALS & REPAIRS NR 035 14	CONSULTANT SERVICES NR 035 15	MISC. SUPPLIES & SERVICES NR 035 16	PIEZOMETER INSTALLATION NR 035 17	SEAM OUTLINE DRILLING NR 035 18
NOV '76	1190.00 FIELD INVOICE # 24				225.00 S.D.S. INVOICE #204-205 500.40 ROKB INVOICE #1015					3000.00 S.D.S. INVOICE #204-205 406.60 S.D.S. INVOICE #187	6292.00 S.D.S. INVOICE #204-205
DEC' 76				14.18 SPERRY SUN INVOICE # C06790					34.39 KRANBROOK PHOTO INVOICE # 1374	2.64 REPAIR SUPPLIES	
TOTAL	$ 6838.18	$ 3885.00	$ 26,640.15	$ 19,924.80	$ 4043.80	$ 55.30	$ 997.50		$ 1812.70	$ 4316.04	$ 9338.24

$ 77,851.73
GRAND TOTAL

MONTH	BULLDOZER WORK ACCESS RDS & SITE PREPARATION NR 035 09	SEAM OUTLINE TRENCHING NR 035 10	DIAMOND DRILLING COSTS FOOTAGE RATE NR 035 11	DIAMOND DRILLING COSTS DAY WORK & SUPPLIES NR 035 11	RADIATION LOGS NR 035 12	ASSAYS NR 035 13	TRUCK RENTALS & REPAIRS NR 035 14	CONSULTANT SERVICES NR 035 15	MISC. SUPPLIES & SERVICES NR 035 16	PIEZOMETER INSTALLATION NR 035 17	SEAM OUTLINE DRILLING NR 035 18	
MAR '76	280.02 G.KELM LABOUR 159.57 B-50 DRILL EQUIP RENTAL					55.30			48.21 {SUPPLIES ELECT.	32.00 ELECTRICIAN	247.50 124.72 997.23 174.76	EQUIP. RENTAL
APRIL '76	1533.79 FIELD INVOICE # 13 3674.80 FIELD INVOICE # 9		11,094.00 CONNORS INVOICE #6635 9932.35 CONNORS INVOICE #6684 5613.80 CONNORS INVOICE #6693	2726.90 -266.00 CREDIT INV. #6635 9809.54 -367.05 CREDIT INV. #6684 8007.23	725.00 ROKE INVOICE #863 725.00 ROKE INVOICE #864 318.40 CONNORS INV. #6693 1550.00 ROKE INVOICE #872		498.75 RENTWAY INV. #24504 498.75 RENTWAY INV. #24516		160.00 MACHINISTS 380.70 CEMENT 114.40 CONNORS INV. #6693 1070.00 CONNORS INV. #6635	221.54 CEMENT 1.89 ROUND 1020 3.85 BATTERIES 5.68 TAPE 636.80 CONNORS INV. #6693 5.04 SUPPLIES	864.16 CLASS 100 163.26 CLASS 308 75.06 LABOURERS 399.57 EQUIP. RENTAL	
SEPT '76												
OCT '76		3885.00 FIELD INVOICE # 21										

MONTH	DRILLING FOOTAGE RATE	DRILLING DAY WORK	BULLDOZER WORK	GEOL. SUPERVISION	SURVEYING	TRUCK RENTALS	ASSAYS	MISC. EQUIPMENT (CASING, SAMPLE BAGS etc.)	RADIATION LOGS,
	------100		-----200	-----300	-----400	-----500	-----600	-----700	-----800
DEC 76						$63.00 SHOP LABOUR 13.32 PARTS. CHARGE FROM 58223.	1778.01	38.21 SIMPLEX - BURCRAFT INV.# 7618	350.60 ROKE INV.# 1025 484.30 ROKE INV.# 1021 243.26 W.DCO LOGGER REPAIRS INV.# 1300
TOTAL	$3,383.25	$5892.97	$2674.30			$1381.29	$3171.84	$1618.56	$4024.76

$86,146.97

GRAND TOTAL

P 3290 --- GREENHILLS UPPER SEAMS 1976 COAL RESERVE DEVELOPMENT PROGRAM

MONTH	DRILLING		BULLDOZER	GEOL.	SURVEYING	TRUCK	ASSAYS	MISC.	RADIATION
	FOOTAGE RATE	DAY WORK	WORK	SUPERVISION		RENTALS		EQUIPMENT (CASING, SAMPLE BAGS etc.)	LOGS
	-----100		-----200	-----300	-----400	-----500	-----600	-----700	-----800
						40.00 SHOP LABOUR FROM 98223 CHARGE		100.00 CHART FILM INV.# 1229	
SEPT. 76								603.24 PLASTICS INV.# 3289	
								518.95 QUIK-GEL THYESSEN EQUIP. INV.# 17444	
OCT. 76		3500.00 S.D.S. INV.# 147	276.75 HOLLOWINK INV.# 124			106.52 {SHOP LABOUR-100.00 & PARTS-6.52 CHARGE FROM 98223}		56.28 MILLER & BROWN INV.# 208057	
		3149.22 S.D.S. INV.# 153							
	8741.25 S.D.S. INV.# 166	450.00							
NOV. 76	37,537.50 S.D.S. INV.# 182-183	1200.00	2397.55 HOLLOWINK INV.# 134			650.20 INCLUDES 623.05 RENTAL-RENTWAY INV.# 37809 37818 22.75 SHOP LABOUR 4.40 PARTS CHARGE FROM 98223	1393.85	5.40 REPAIR SUPPLIES	1756.60 ROKE INV.# 1005
		225.00 S.D.S. INV.# 204-205						259.48 THIESSEN EQUIP. INV.# 825 QUIK-GEL	730.00 ROKE INV.# 1002
								37.00 KIKI & SONS INV.# 1102	460.00 ROKE INV.# 1015
	17,102.50 S.D.S. INV.# 197	1368.75				508.25 RENTWAY INV.# 37722			

MONTH	DRILLING		BULLDOZER	GEOL.	SURVEYING	TRUCK	ASSAYS	MISC.	RADIATION
	FOOTAGE RATE	DAY WORK	WORK	SUPERVISION		RENTALS		EQUIPMENT (CASING, SAMPLE BAGS etc.)	LOGS
	-----100		-----200	-----300	-----400	-----500	-----600	-----700	-----800
NOV '76	17,346.75 S.D.S INV.#	2591.00 184-185	5196.37 HOLLOWINK INV.# 134				1393.82	95.50 SAMPLE TAGS NELSON DAILY NEWS INV.# 1137	926.10 ROKE INV.# 1005
	24,981.00 S.D.S. INV.# 206	825.00							1024.30 ROKE INV.# 1015
	25,916.00 S.D.S. INV.#	4950.00 204-205						5.00 CATSKINNER'S OVERTIME MEAL	
DEC '76			255.00 HOLLOWINKS INV.# 161	1640.59 STAFF WAGES.			1778.01		1929.60 ROKE INV.# 1025
									811.30 ROKE INV.# 1021
TOTAL	$ 68,243.75	$ 8366.00	$ 5451.37	$ 1640.59			$ 3171.83	$ 100.50	$ 4691.30

$ 91,665.34
GRAND TOTAL

MONTH	DIAMOND DRILLING FOOTAGE RATE ----100	DIAMOND DRILLING DAY WORK ----100	ROTARY DRILLING FOOTAGE RATE ----150	ROTARY DRILLING DAY WORK ----150	BULLDOZER WORK -----200	GEOL. SUPERVISION -----300	SURVEYING -----400	TRUCK RENTALS -----500	ASSAYS -----600	MISC. EQUIPMENT (CASING, SAMPLE BAGS etc.) ----700	RADIATION LOGS -----800	
DEC '76										29.60 MILLAR & BROWN PARTS 72.23 CRANBROOK PHOTO INV. # 1568 26.85 W.H. SHAW EXPENSE ACC. 61.80 W.H. SHAW EXPENSE ACC.		
TOTAL	135,441.10	63,137.26	120,366.80	12,897.25	19,293.05	10,557.84	—	3,077.20	4,118.05	8,070.22	16,080.45	393,039.22 GRAND TOTAL

P 3270 --- EAGLE MT. BLOCK II EXT. 1976 COAL RESERVE DEVELOPMENT PROGRAM

MONTH	DIAMOND DRILLING		ROTARY DRILLING		BULLDOZER	GEOL.	SURVEYING	TRUCK	ASSAYS	MISC.	RADIATION
	FOOTAGE RATE	DAY WORK	FOOTAGE RATE	DAY WORK	WORK	SUPERVISION		RENTALS		EQUIPMENT (CASING, SAMPLE BAGS etc.)	LOGS
	-----100		-----150		-----200	-----300	-----400	-----500	-----600	-----700	-----800
										64.30 MILLAR & BROWN P3270700	
										13.96 MILLAR & BROWN	
NOV '76	26,187.50 CONNORS	8435.70 INV. #7301	10,591.25 S.D.S. INV.# 184-185	1125.00	2406.75 HOLLOWINK INV.#134	4177.14 STAFF WAGES		508.25 RENTWAY INV. #35726		5.00 CATSKINNER OVERTIME MEAL	8258.32 ROKE INV.# 591
		2800.00 KERPAN & DELFS INV.# 763								54.00 MACH. & WELDERS	1179.00 ROKE INV.# 1005
		3000.00 KERPAN & DELFS INV.# 759								1.38 REPAIR SUPPLIES	2398.50 ROKE INV.# 1002
		2000.00 KERPAN & DELFS INV.# 782								60.38 GRAND TOY	
	18,353.95 CONNORS INV.# 7310	11,801.76									
DEC '76	31,493.00 CONNORS INV.# 7371	6609.40			1618.80 HOLLOWINK INV.# 161	1723.15 STAFF WAGES		699.74 CHARGE FROM 58222		4655.51 STEEL CASING RUSSEL STEEL INV.# 91076	1919.63 ROKE INV.# 1025
						34.60 A. SLINGSBY EXPENSE ACC.				90.29 ELK VALLEY INV# 4608	775.00 ROKE INV.# 1027
						66.50 R. CHAPMAN EXPENSE ACC.				730.00 NORMAN WADE INV# 21191	775.00 ROKE INV.# 1029
										79.99 MILLAR & BROWN SERVICES	

P 3270 --- EAGLE MT. BLOCK II EXT. 1976 COAL RESERVE DEVELOPMENT PROGRAM

MONTH	DIAMOND DRILLING		ROTARY DRILLING		BULLDOZER WORK	GEOL. SUPERVISION	SURVEYING	TRUCK RENTALS	ASSAYS	MISC. EQUIPMENT (CASING, SAMPLE BAGS etc.)	RADIATION LOGS
	FOOTAGE RATE	DAY WORK	FOOTAGE RATE	DAY WORK							
	-----100		-----150		-----200	-----300	-----400	-----500	-----600	-----700	-----800
MAY '76					4374.30 HOLLOWINK INV.#					103.70 CHART FILM INV.# 1227	
AUG '76										134.06 WIDCO INV.# 1153	
SEPT '76		750.00 KERPAN & DELFS INV.# OC143			2677.50 HOLLOWINK INV.# 105	120.70 R. CHAPMAN EXPENSE ACC.				43.06 SIMPLEX BURCRAFT WIRE TIES INV.# 7541	
OCT '76	6646.50 CONNORS INV.# 7184	3600.00 MOB. & DEMOBL.	10,381.80 S.D.S. INV.# 153	3500.00 S.D.S. INV.# 146		21.70 A. SLINGSBY EXPENSE ACC.		371.21 CHARGE FROM 98222 INSURANCE 82.50 SUPPLIES 149.21 LABOUR 140.00	4118.03	496.32 CONNORS INV.# 6788	775.00 ROKE INV.# 980
		5532.99 DAY WORK CONNORS INV.# 7184	6168.75 S.D.S. INV.# 163	375.00	8215.70 HOLLOWINK INV.# 129					629.16 S.D.S. INV.# 170	
		1296.71 CONNORS INV.# 6788	32,527.00 S.D.S. INV.# 164-165	3622.25		4,414.05 STAFF WAGES.				371.75 S.D.S. INV.# 173	
		3000.00 KERPAN & DELFS INV.# OC147								3.08 REPAIR SUPPLIES	
	23,829.25 CONNORS	4036.00 INV.# 7231								19.50 CATSKINNER OVERTIME MEALS	
		2800.00 KERPAN & DELFS INV.# 741	41,129.00 S.D.S. INV.# 176	1462.50				1458.00 CHARGE TO 98222		22.88 W.H. SHAW EXPENSE ACC.	
	28,930.00 CONNORS 7262	9474.70 INV.#	19,569.00 S.D.S. INV.# 177-178	2812.50						131.24 KITS CAMERA FILM & FILTER	
										99.52 CONNORS INV.# 7262	
										70.00 MACHINISTS	

P 3270 --- EAGLE MT. BLOCK II EXT. 1976 COAL RESERVE DEVELOPMENT PROGRAM

512,000 N

507,000 N

502,000 N

497,000

492,000

487,000

482,000

477,000

472,000

70,000 E

80,000 E

85,000 E

90,000 E

95,000 E

FORDING RIVER

HENRETTA CREEK

MOOSE CREEK

SEC. 501,250 N

SEC. 500,750 N

TURN BULL M T.

LAKE mountain

CLODE PIT

SEC. 496,250 N

SEC. 493,500 N

SEC. 492,500 N

SEC. 492,250 N

SEC. 491,000 N

EAGLE MT.

LONGITUDINAL GEOL. SECTION

SEC. 486, 250 N

RANGE

GREEN HILLS

PLANT SITE AREA

RAILWAY LOOP

KILMAPNOCK CREEK

CASTLE MOUNTAIN

MOUNT TURNBULL

PROSPECT TRENCHE

BARR FORDING

LEGEND

- Adits
- Drill Holes
- Railway
- Main & Haul Roads
- Cleared Mining & Plant Areas
- Fording Property Boundary (coal licence)
- Coal Seams
- Synclinal Axis
- Faults – defined, assumed
- Strike & Dip of Bedding
- 1976 DRILLING – DIAMOND, ROTARY
- 1976 SEAM OUTCROP TRENCHING

GEOLOGY – ROCK TYPES

- Sandstone – Current bedded, Moose mtn. Basal kootenay
- Shale & Mudstone – Fernie formation
- Limestone – Rundle formation
- Blairmore – Conglomerate

N

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FORDING OPERATIONS FR 76(2)A

1976 EXPLORATION & DEVELOPMENT

GENERAL GEOLOGY MAP #76-2

By – RBA	Scale – 1" = 1000'	Date – DEC. 1975 / DEC. '1976	Plate –

115° 00'
50° 25'
114° 45'
50° 20'
50° 15'
50° 10'
50° 05'

TRENCH
BASAL KOOTENAY
FERNIE SHALES
TREN.
APPROX. TOP OF KOOTENAY FM.
BLAIRMORE CONGLOMERATE
TRENCH
TREN.
BLEASDELL CREEK
LATE PALEOZOIC (OVER THRUST BLOCK) AND SPRAY RIVER FORMATIONS
BORGEAUX THRUST (ELK RIVER THRUST)
MOUNT BLEASDELL
ELK RIVER
RIDGE
ALDRIDGE CREEK
ROCK
WEARY RIDGE
HIGH
QUARRIE CREEK
ALBERTA
BRITISH COLUMBIA
RANGE
MOUNT CORNWELL
COURCELETTE PEAK
MOUNT TUXFORD
BLAYLOCK CR.
LEONARD CR.
DEVITT CR.
MILLER CR.
FORDING RIVER
CAN PAC MINERALS
FORSYTH CREEK
OSBORNE CREEK
BALT CREEK
HENRETTA CREEK
HORNICKEL CREEK
MOUNT TURNBULL
BINGAY CREEK
GREEN HILLS
EAGLE MT.
PLANT SITE
MARNOCK CREEK
CASTLE MOUNTAIN
B.C. FOREST SERVICE ROAD
CHURCHER CREEK
CNI LTD.

L 6385 314
L 6381 315
L 6825 801
L 6824 316
L 6823 317
L 6822
L 6384 318
L 6377
L 6053 320
L 6820 321
943
944
L 6052 322
L 6827 323
L 6819 324
L 6648 803
L 6051 541
L 6828 325
L 6829 326
L 6647 327
L 6721
L 6732
L 6050 543
L 6830 328
L 6972 329
L 6643 330
L 6719 331
L 6784 557
L 6718
L 6049 545
L 6978 333
L 6641 334
L 6642 335
L 6711 336
L 6645 338
L 6048 547
L 6979 339
L 6640 340
L 6710 537
L 6709 341
L 6708 342
L 6646 343
L 6047 549
L 6639 344
L 6699 345
L 6700 420
L 6701 346
L 6702 347
L 6703 348
L 6706 560
L 6694
L 6681
L 3424 551
L 6981 349
L 6638 350
L 6698 507
L 6697 508
L 6696 351
L 6695 352
L 3423 553
L 6982 354
L 6637 609
L 6688 510
L 6689 355
L 6690 356
L 6686 357
L 6685
L 6684
L 3422 358
L 6687 511
L 6728 363
L 6729 364
L 6733 266
L 6734 267
L 6735 272
L 6738 271
L 4588

AREA COVERED BY 1"=1000' SCALE
1976 EXPLORATION & DEVELOPMENT MAP

LEGEND

GEOLOGY - ROCK TYPES

- SANDSTONE - BASAL KOOTENAY
- SHALE - FERNIE FM.
- LIMESTONE - RUNDLE FM.
- CONGLOMERATE - BLAIRMORE FM.

LEGEND

- CONTACT - KNOWN, ASSUMED
- FAULTS - NORMAL, THRUST
- SYNCLINAL AXIS
- ANTICLINAL AXIS
- PLATY SILTSTONE, SILTY SHALE } SPRAY RIVER FM.
- SILTY DOL. DOLOMITIC S.S. QTZITE } ROCKY MOUNTAIN FM.

LEGEND

COAL LICENSES, NOS., OWNERSHIP

- 346 CANPAC MINERALS LTD
- COAL LICENSES APPLIED FOR (Aug 28'1975)
- 547 COMINCO LTD.
- 804 FORDING COAL LTD
- L 6048 LOT NO, COMINCO CROWN GRANTS
- MINING AREAS
- RAILROAD
- EXISTING HIGHWAYS

FR-76(2)A

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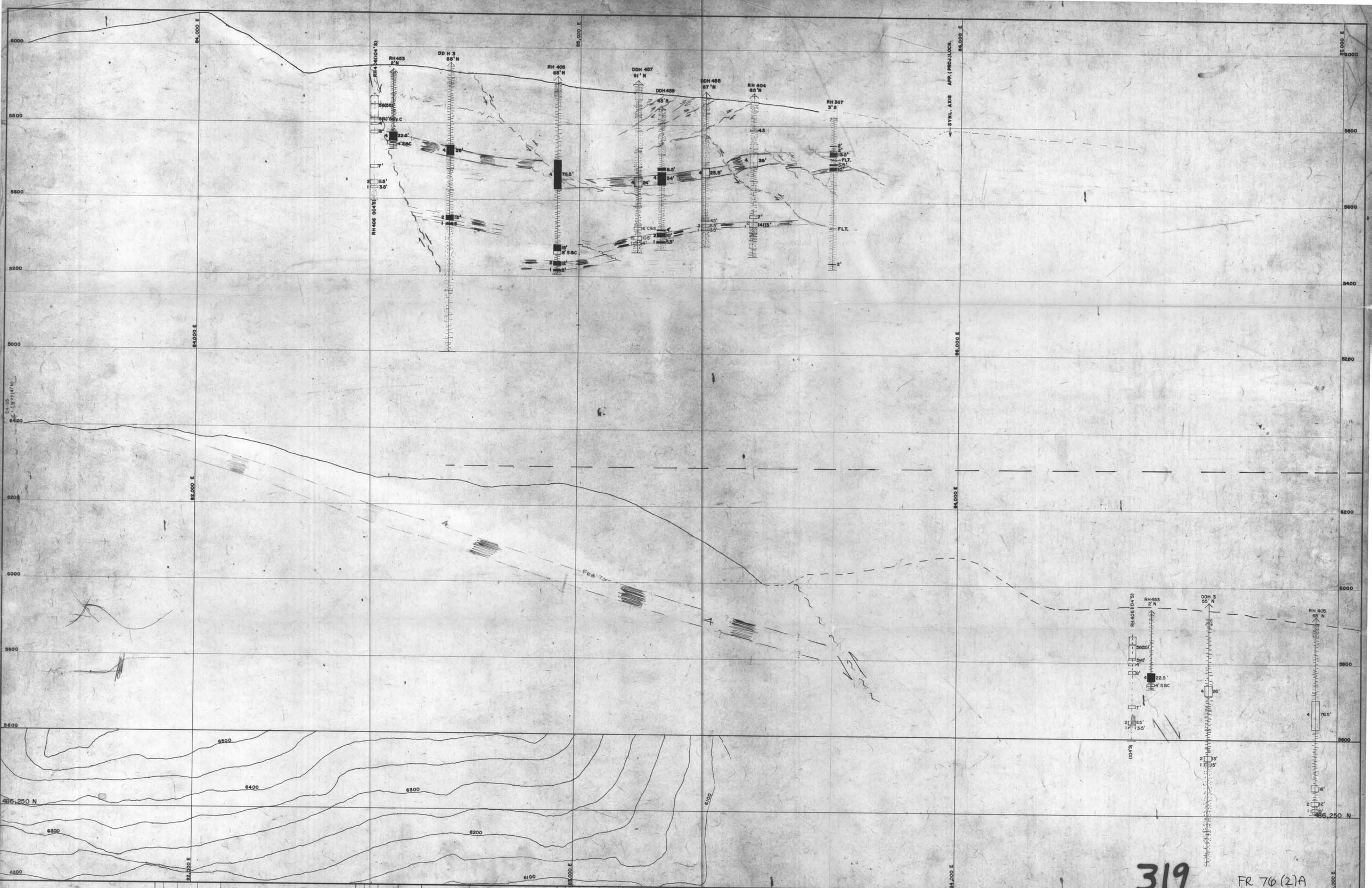
GENERAL GEOLOGY
COAL and PROPERTIES
FORDING COAL LIMITED
1 : 50,000 DATE OCT. 7 '1975
#76-1



Revisions			
No.	Made by	Date	Description

Revisions			
No.	Made by	Date	Description

Revisions			
No.	Made by	Date	Description

Drawn by R K FEB. 6, 73

Fording Operations

Cominco

GEOLOGY 486,250 N

WEST FACE EAGLE MT.

Scale 1 Inch = 100 Feet

Drawing No.

319

FR 76 (2) A

487,500 N

84,000 E

85,000 E

487,000 N

486,500 N

486,000 N

485,500 N

84,000 E

85,000 E

86,000 E

2
5933-28'

456
05647-23.5'

443
5702-32.5
5644-30'

457
5662-34'

#2 THRUST

405 FLTD.
5707-78.5'

3
5742-26'

453
5775-22.5'

455
5688-23.5'
K4-6.3

404
5730-38'
K4-7

367
5738-17(15.5)'
5704-18.5(15.5)'?

458
5689-8.5'(Pt.)
5677-34'

#1 THRUST

406
FLTD.
=5870-58(55')
85(41)' 4.9°C

451
5729-26'

454
5703-27'

452
5699-38'

460
5924-27'

459
No'4'
5800-14'

365
5699-29'

450
5699-33.5'

366
5693-33.5(30.5)'
K4-2

403
5676-28(27)'

364
No'4'
5675 El.

1 2 3 4 5 6

N

Revisions

No.	Made by	Date	Description
1	K K	DEC '75	
2	WH S	APR '76	
3	WH S	OCT '76	

Drawn by R. K. OCT. '75

Fording Operations

Cominco

TOP OF SEAM CONTOURS
SEAM - 4
EAGLE MT. SOUTH
(K4-PIT AREA)

KEY MAP

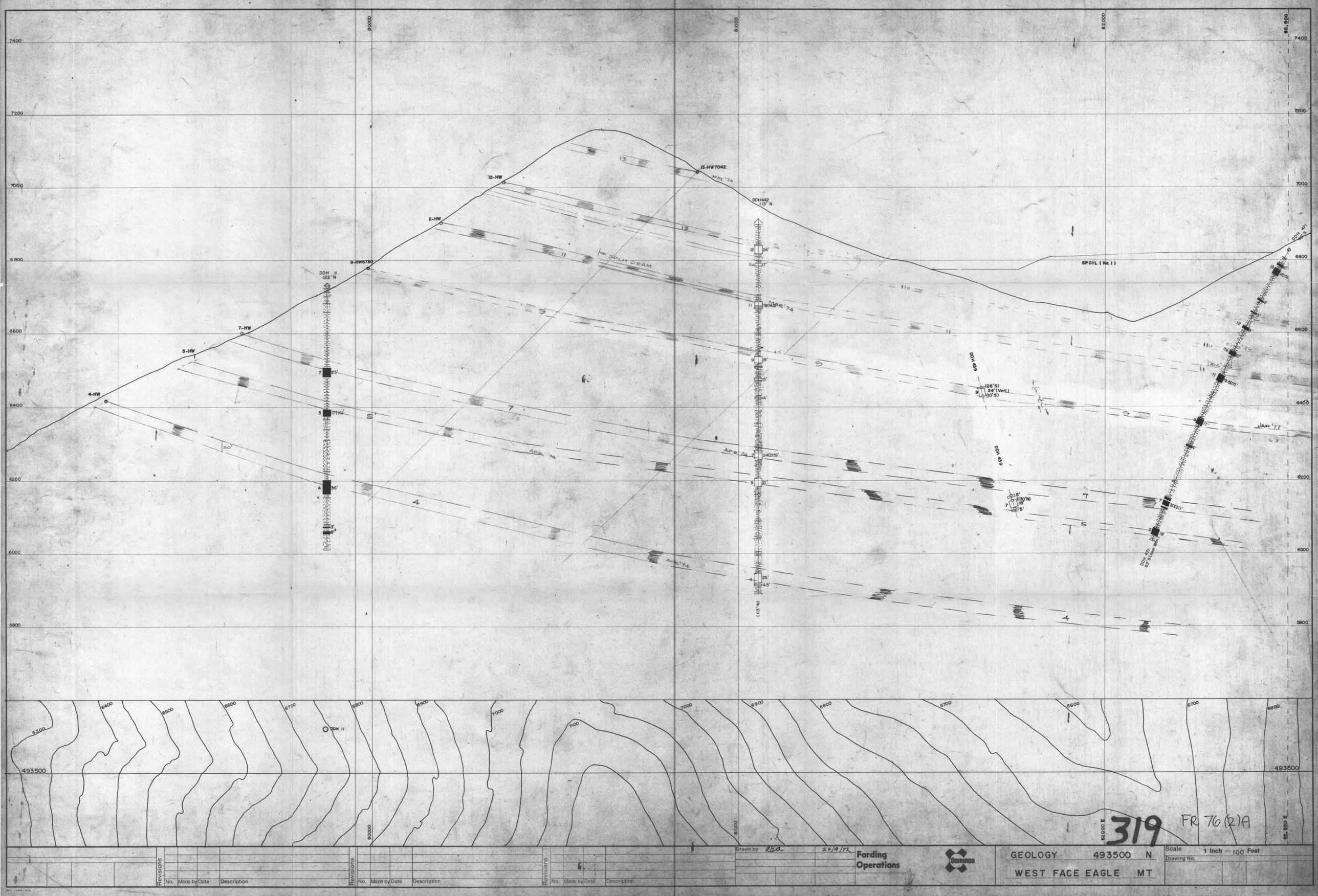
Scale 1 Inch = 100 Feet

Drawing No. 76-3

8 & 12

319 FR 76(2)A

SCIL 5622 D - F.C.



Revisions				Revisions				Revisions			
No.	Made by	Date	Description	No.	Made by	Date	Description	No.	Made by	Date	Description

Drawn by RDA 20/9/72

Fording Operations

Dominion

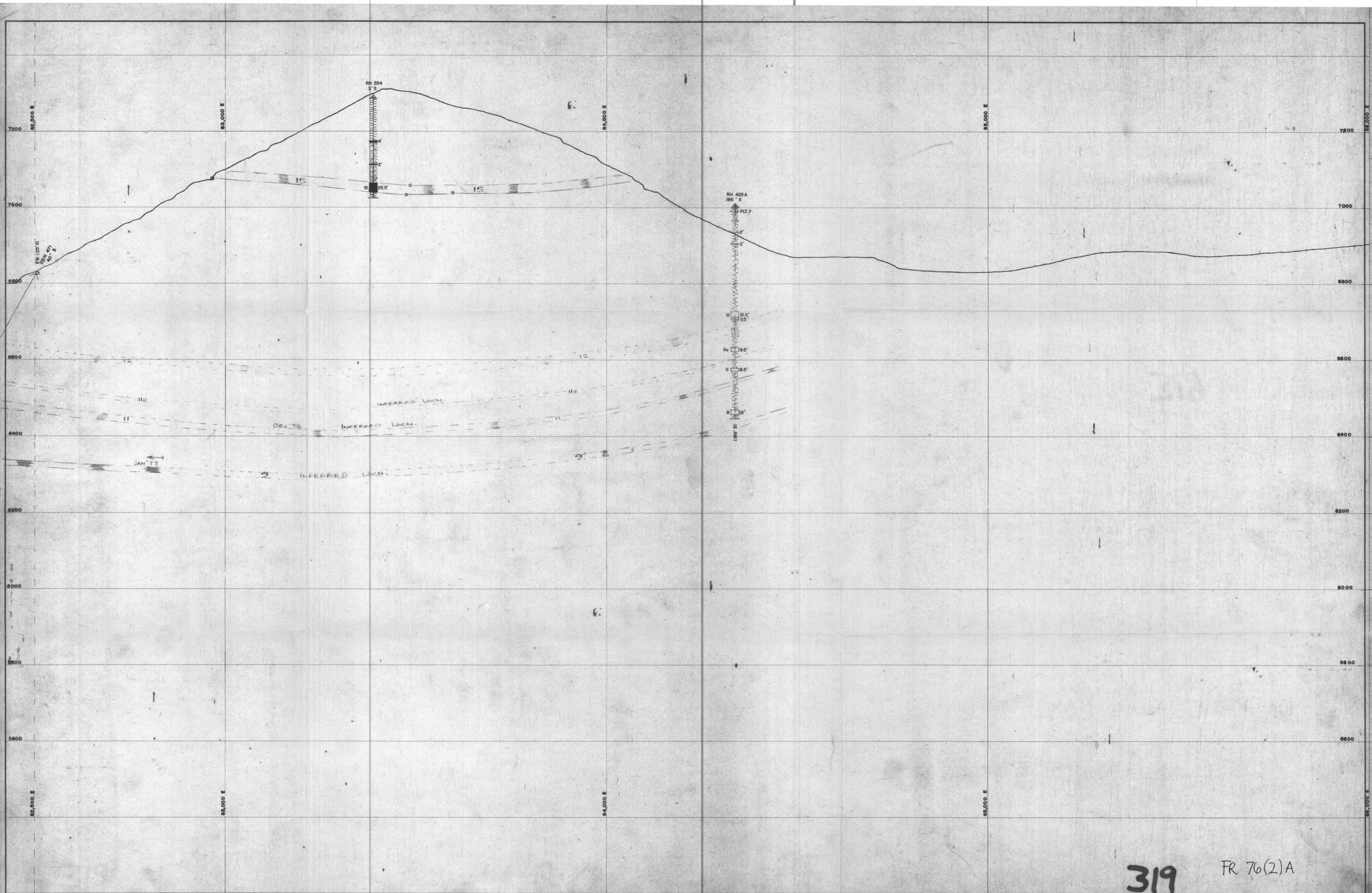
GEOLOGY 493500 N

WEST FACE EAGLE MT

Scale 1 Inch = 100 Feet

Drawing No.

319 FR 76 (2) A



Revisions				
No.	Made by	Date	Description	

Revisions				
No.	Made by	Date	Description	

Revisions				
No.	Made by	Date	Description	

Drawn by R K JAN '76

Fording Operations

COMINCO

GEOLOGICAL SECTION - 493,500 N

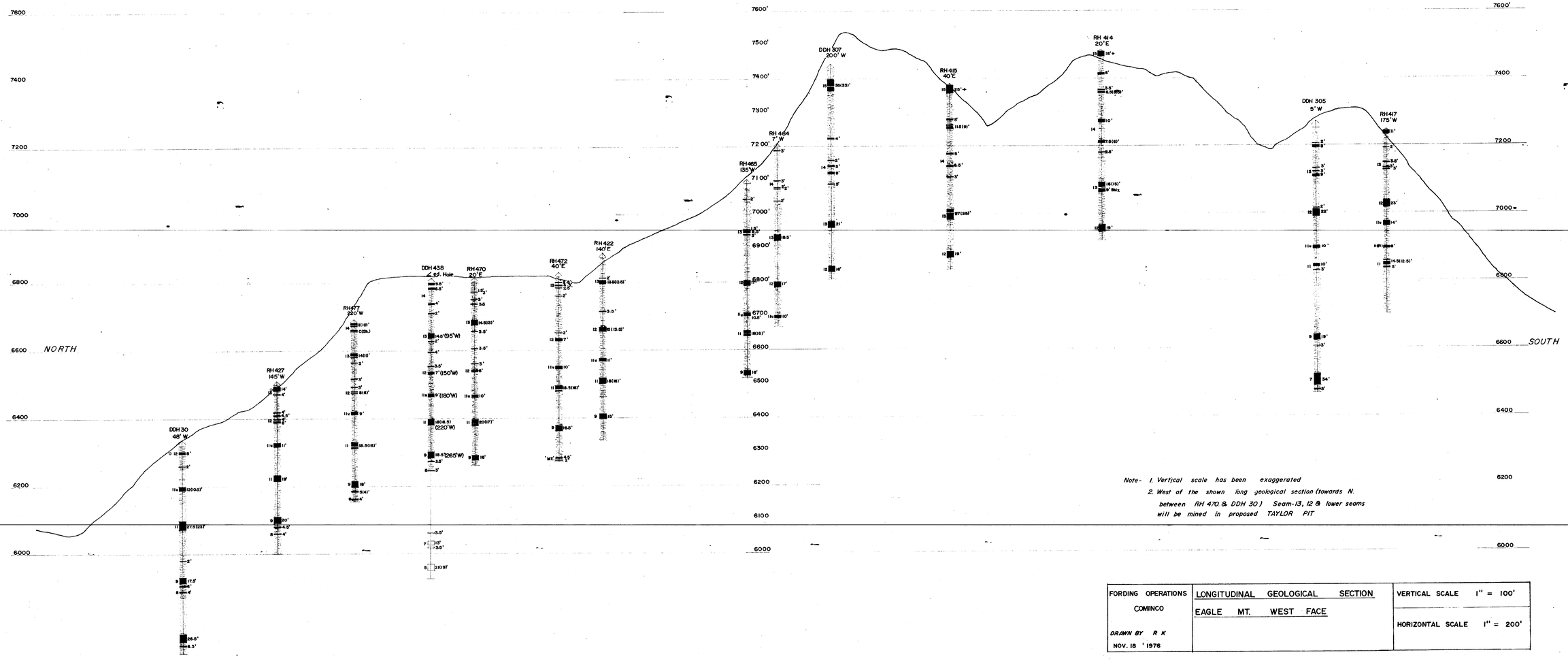
EAGLE MT. (NO-NAME GULCH AREA)

Scale 1 Inch = 100 Feet

Drawing No.

319

FR 76(2)A



Note- 1. Vertical scale has been exaggerated
2. West of the shown long geological section (towards N. between RH 470 & DDH 30) Seam-13, 12 & lower seams will be mined in proposed TAYLOR PIT

FORDING OPERATIONS COMINCO DRAWN BY R K NOV. 18 '1976	LONGITUDINAL GEOLOGICAL SECTION EAGLE MT. WEST FACE	VERTICAL SCALE 1" = 100' HORIZONTAL SCALE 1" = 200'

319 FR-76(2)A
#76-5

SEAM 13 & 12 DISLOCATED BY FAULT

LONGITUDINAL GEOLOGICAL SECTION

LEGEND

- STRIKE, DIP
- FAULT
- SYNCLINE (Arrow indicates plunge)
- ANTICLINE
- SURVEYED SEAM HW OUTCROP
- PROJECTED OUTCROP LOCN. - APPROX.

GEOLOGICAL MAP
EAGLE MT. 1" = 200'
R.K. SEPT. , 1975
OCT. , 1976
COMINCO - FORDING OPERATIONS

FR-76(2)A
#76-4

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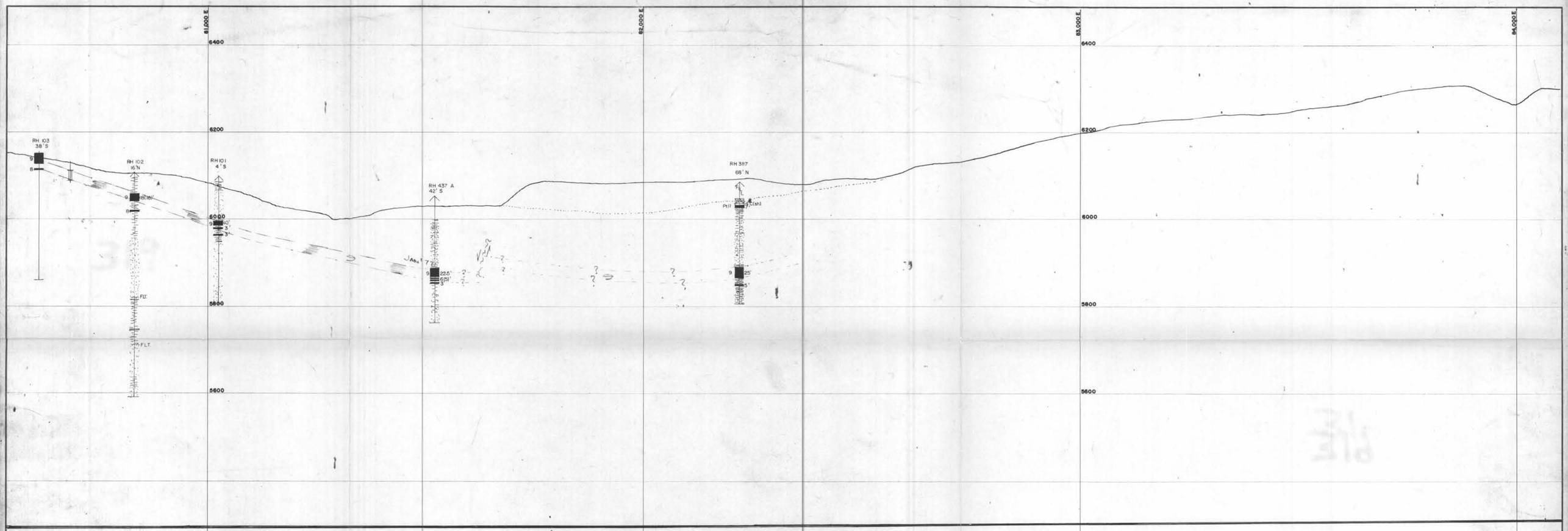
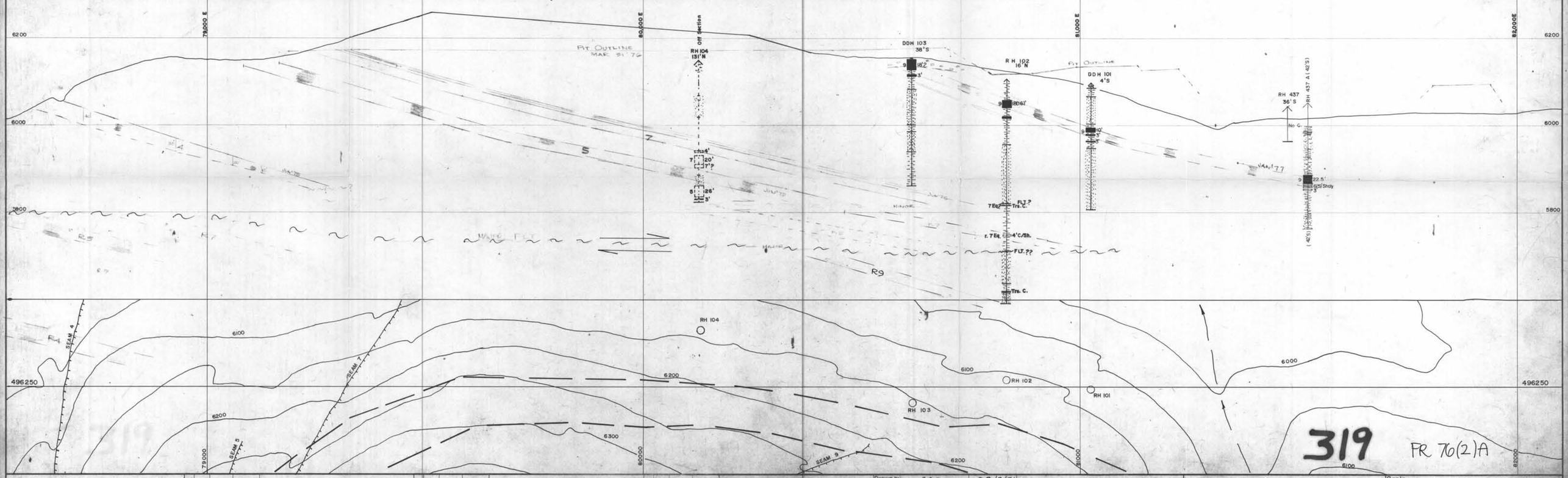




319 FR 76(2)A

Revisions				Revisions				Revisions			
No.	Made by	Date	Description	No.	Made by	Date	Description	No.	Made by	Date	Description

Drawn by RBO 2-9/7/71

Fording Operations

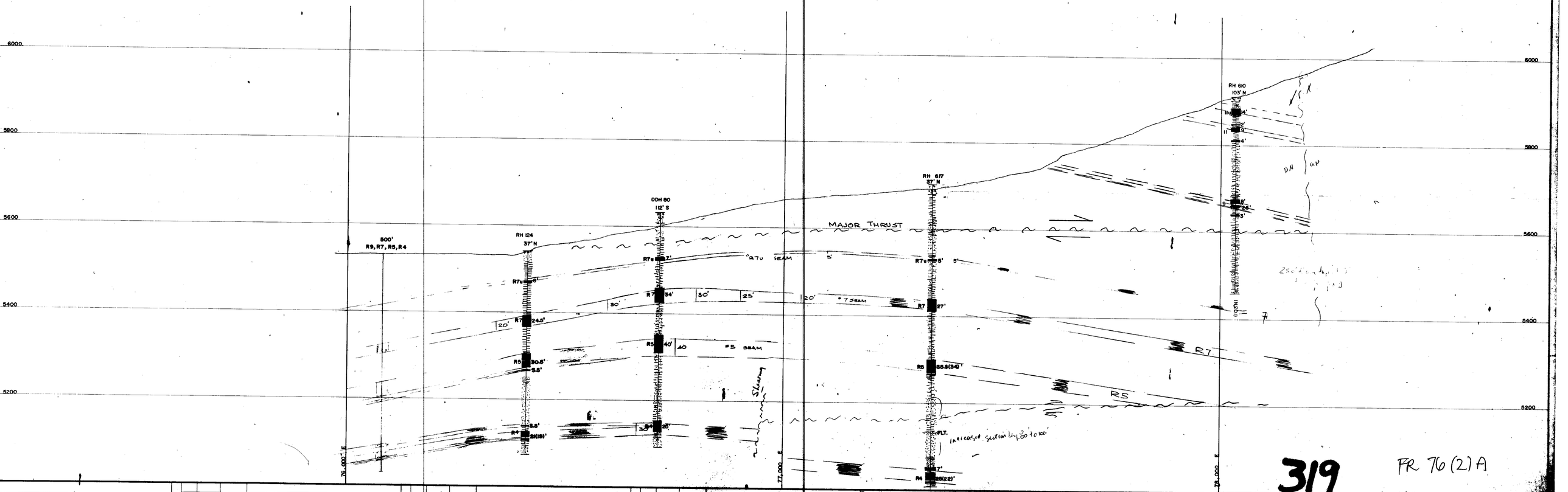
Cominco

GEOLOGICAL SECTIONS

CLODE PIT = 496250 N

Scale 1 Inch = 100 Feet

Drawing No.



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FR 76(2)A

Revisions				
No.	Made by	Date	Description	

Revisions				
No.	Made by	Date	Description	

Revisions				
No.	Made by	Date	Description	

Drawn by R.H. NOV. 10 72

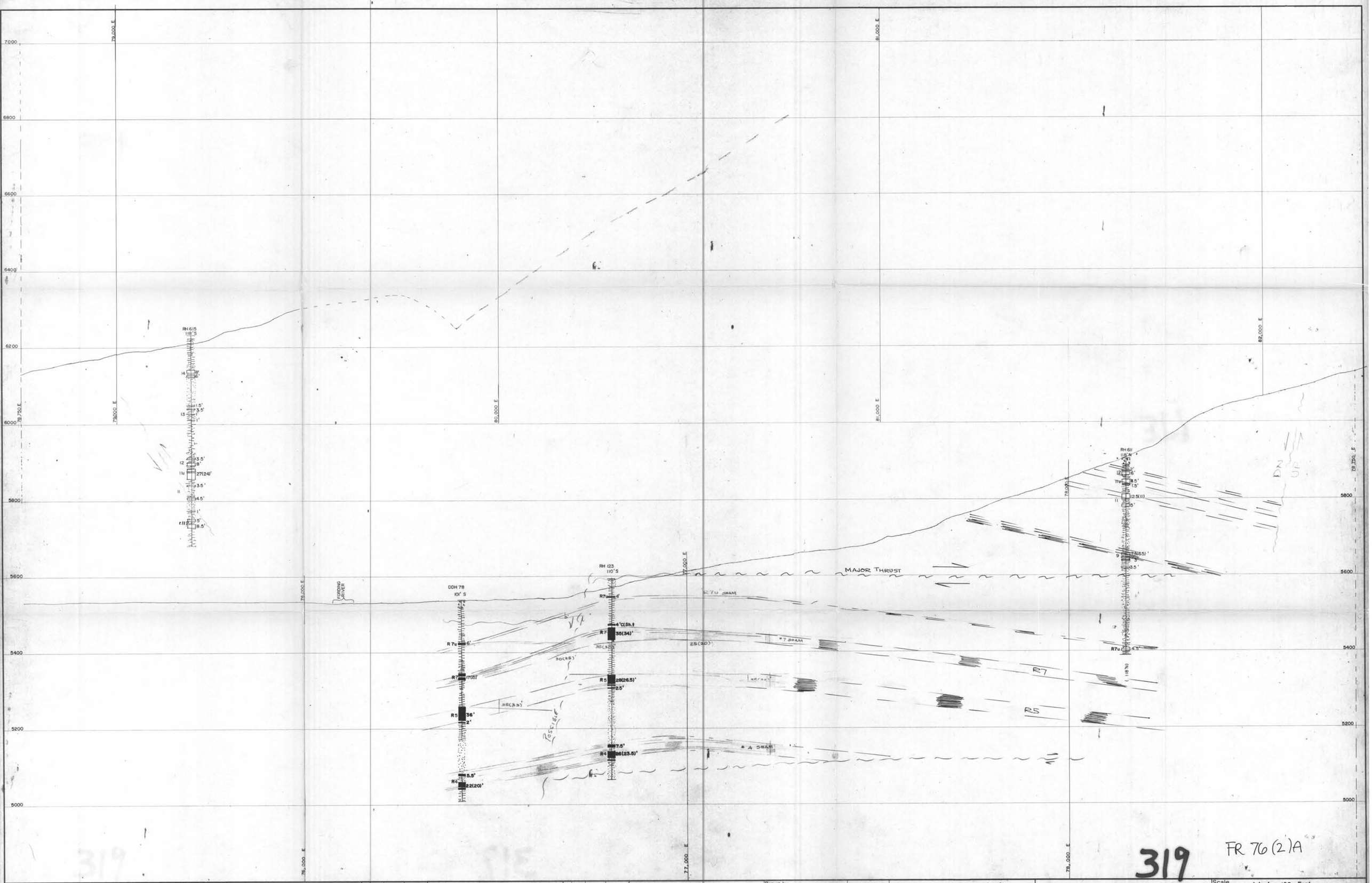
Fording Operations

GEOLOGICAL SECTIONS

TURNBULL 500, 750 N

Scale 1 Inch = 100 Feet

Drawing No.



Revisions				
No.	Made by	Date	Description	

Revisions				
No.	Made by	Date	Description	

Revisions				
No.	Made by	Date	Description	

Drawn by R.K. Nov. 10, 72

Fording Operations

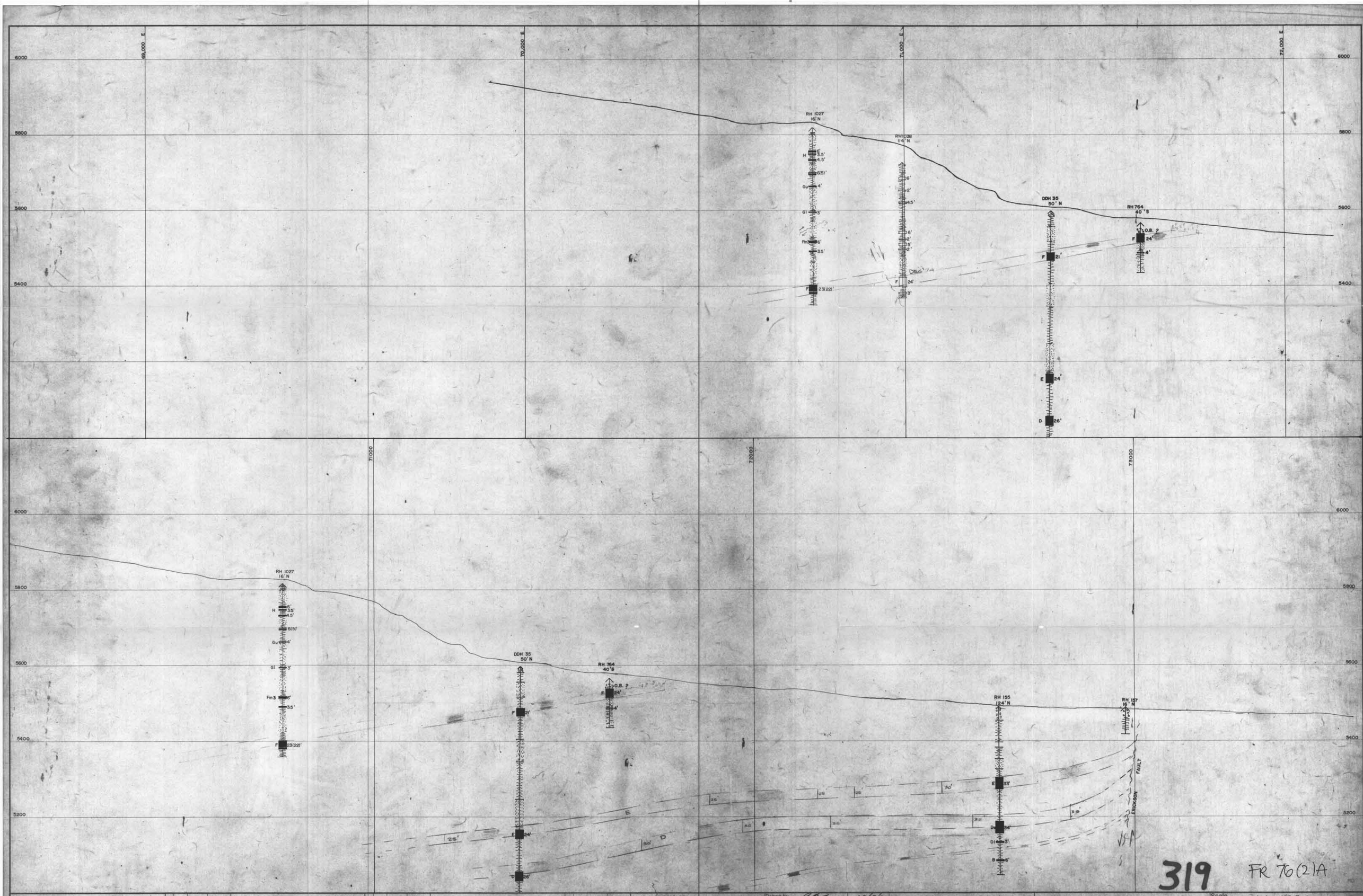
Cominco

GEOLOGICAL SECTIONS

TURNBULL 501,250 N

Scale 1 Inch = 100 Feet

Drawing No.



319 FR 76(2)A

Revisions No.	Made by	Date	Description
1	R.K	June 73	Oct 72 TOPOGRAPHY

Drawn by ABd 19/12/72

Fording Operations

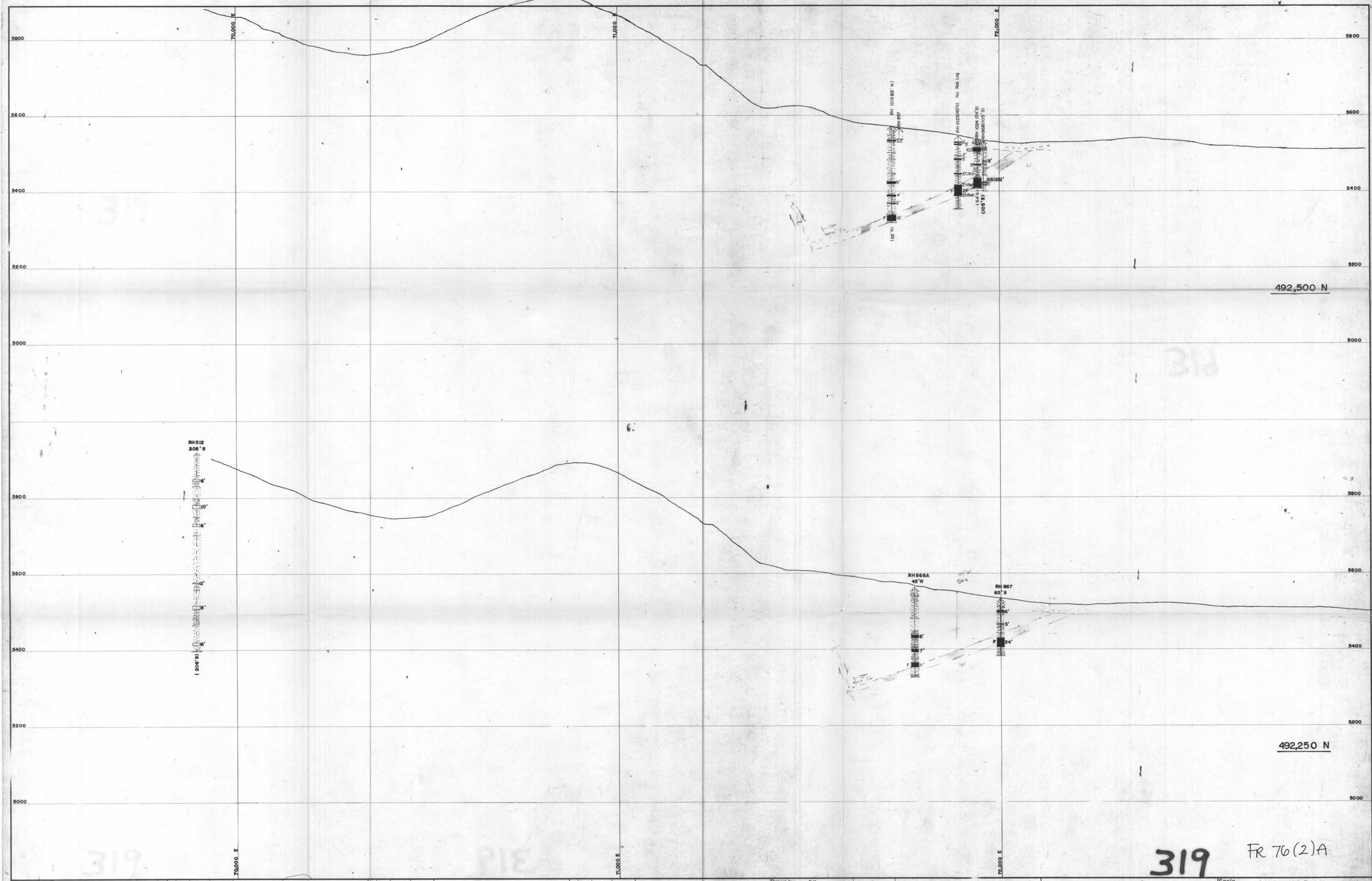
Cominco

GEOLOGICAL SECTIONS

GREENHILLS = 491,000 N

Scale 1 Inch = 100 Feet

Drawing No.



319

FR 76(2)A

Revisions				
No.	Made by	Date	Description	

Drawn by	RK	JAN '76
Fording Operations		

Cominco

GEOLOGICAL SECTIONS
492,250N & 492500N
GREENHILLS

Scale 1 Inch = 100 Feet
Drawing No.

K-fording 76(3)A-1

ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

319

FILE NO.		COMPANY FORDING COAL LIMITED	
LSD	SEC	WELL RH - 373	
TWP	RGE	LOCATION CLODE PIT	
W	M	FIELD FORDING	
		PROVINCE BRITISH COLUMBIA	Other Services: NONE

Permanent Datum GROUND LEVEL Elev. K.B.
Log Measured from GROUND LEVEL Ft. Above Perm. Datum CSG
Well Depths Measured from GROUND LEVEL G.L.

Run. No.	ONE			
Date	28 OCT 1976			
First Reading	252			
Last Reading	0			
Footage Logged	252			
Depth Reached	253			
Depth Driller	255			
Casing Roke				
Casing Driller				
Fluid Type	AIR/WATER			
Liquid Level	75			
Min. Diam.	4 7/8			
Rm @ °F				
Operating Time	½ HOUR			
Truck No.	33			
Recorded By JOHNSON	Witnessed By DAIGNAULT			

EQUIPMENT DATA

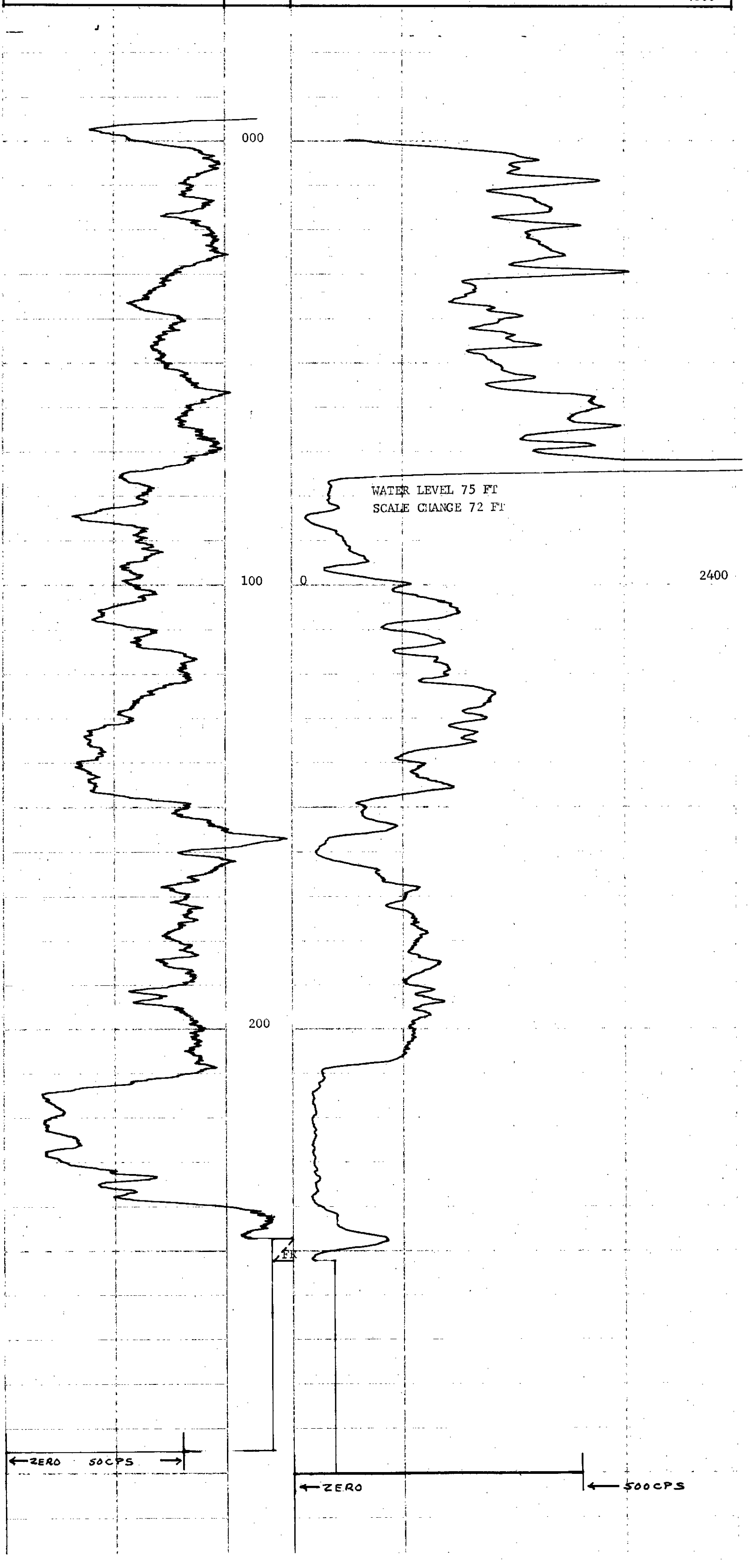
GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.		LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO.	
DETECTOR MODEL NO.		DIAMETER	1 11/16
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	4 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	8.5 FT	LENGTH	6 INCH
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	598
HOIST TRUCK NO.	33	SPACING	17 INCH
INSTRUMENT TRUCK NO.		TYPE	AmBe
TOOL SERIAL NO.	R - 155	STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	0	72	12	5	100	OL	8 API	3	1000	OL	240 API
	72	252	12	5	100	OL	8 API	3	500	OL	120 API

REMARKS LOGGED THROUGH DOUBLE WALL DRILL STEM

GAMMA RAY	DEPTHS	NEUTRON
GAMMA RAY INCREASES →		NEUTRON INCREASES →
API 8		API 240
0 80		0 2400 4800



CLODE PIT
RH 387

319

RH 387

K-Formation 76(3)A-1

W.H.S.

10 A.P.I. THROUGH DRILL PIPE.

000'

100'

200'

SEAM-9

T.D. - 279'

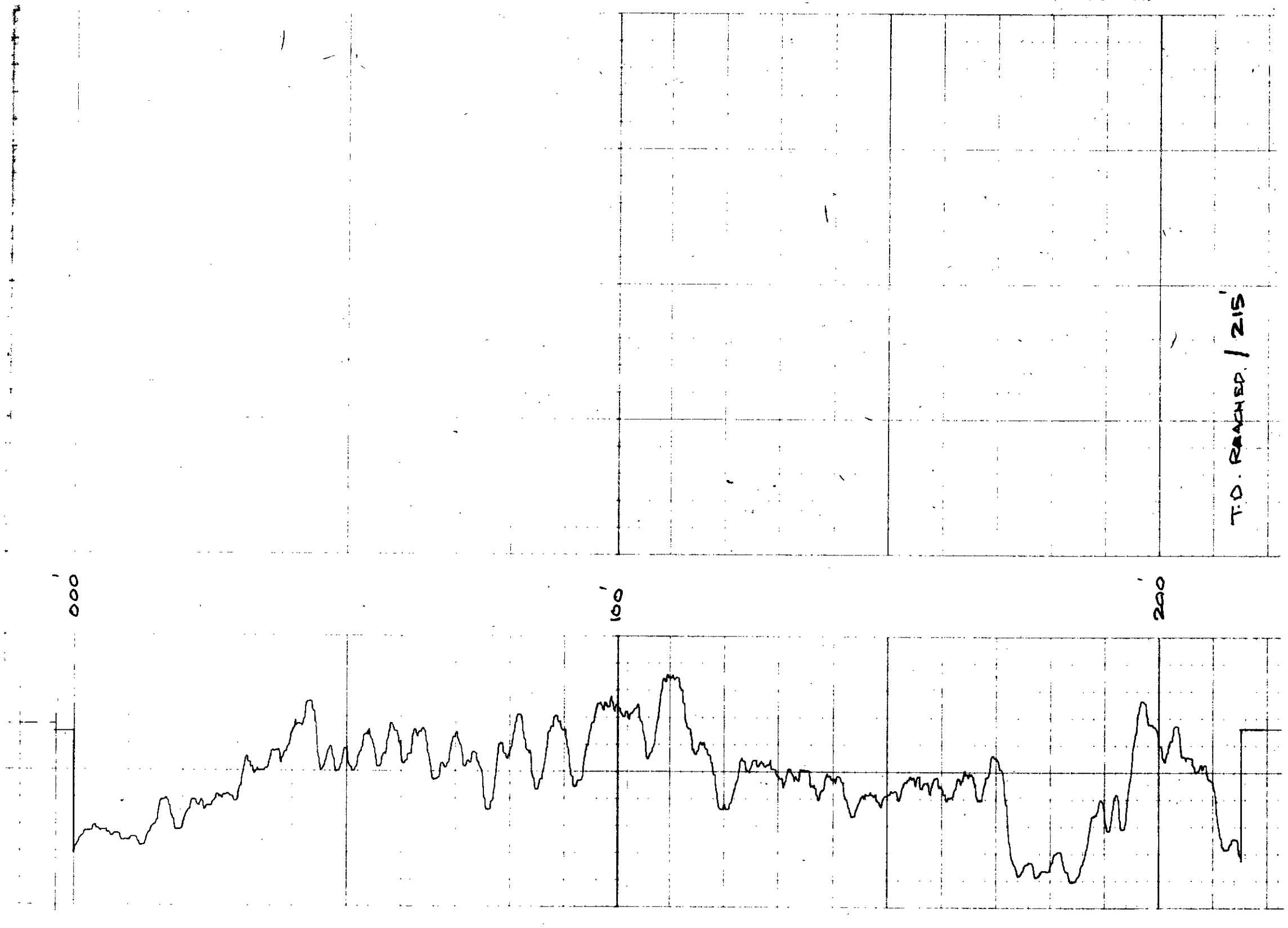
K-FORDING 76(3)A-1

RH 389

CLODE PIT.

319

CLODE PIT.
KH 389



UNICO WELL LOG

RH 396

CLODE
RH 396

319

		Nature		
		Density		
		Viscosity	@ F	@ F
		Resistivity	@ F	@ F
		Res. @ BHT	@ F	@ F
		pH		
		Circ. Temp		
		BH Temp		
		Logged by	R.B.A.	
		Witnessed by		

REMARKS 10 A.P.I 1 DIV. SHIFT (LEFT)
LOGGED THROUGH DRILL PIPE

K-FORDING 765(3)A-1

Reg. U.S. Pat. Off.

100'

200'

SEAM-9

T.D. 260'

Widco* WELL LOG

COMPANY

AREA CLODE PIT

WELL RH 437 A

COUNTY STATE

319

COORDINATES
N
S
ELEVATION
D F
K.B
G L

COMPANY
WELL RH 437 A.
LOCATION CLODE PIT

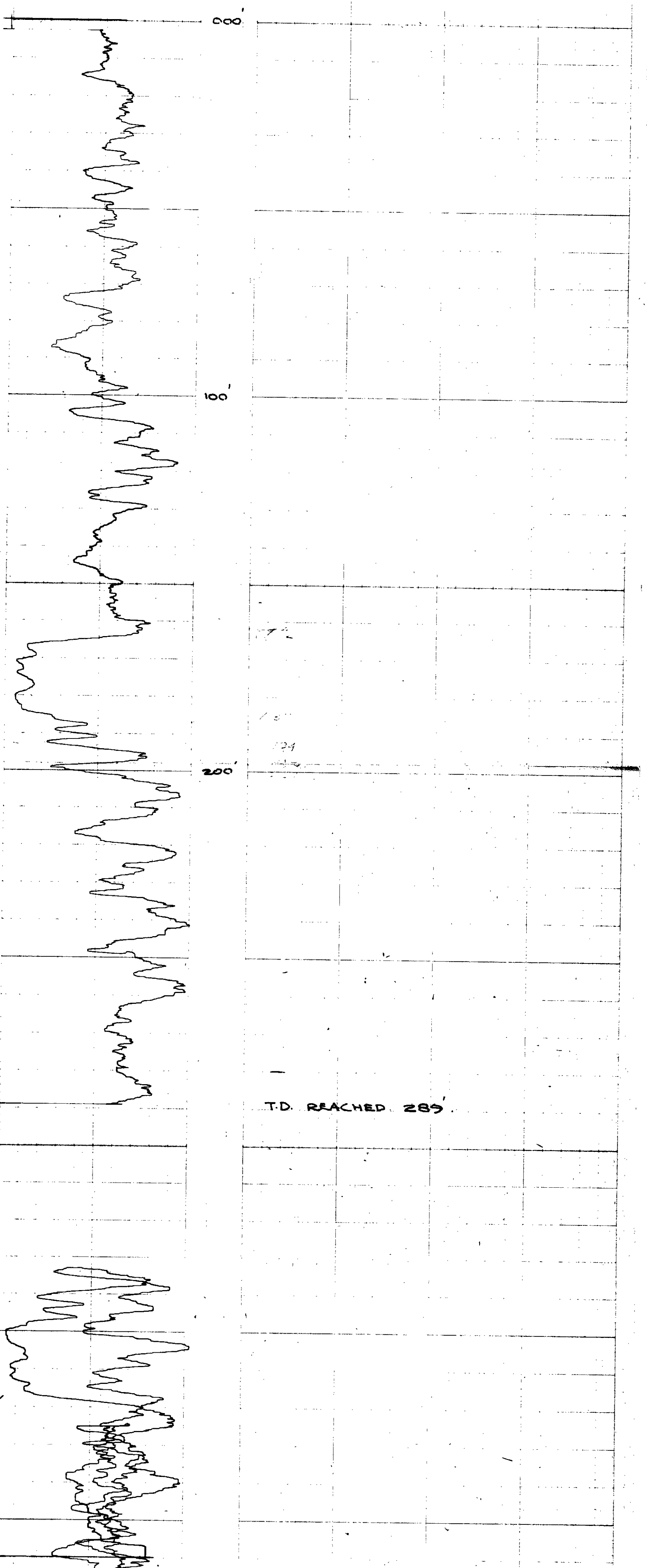
K-forrest 76(3A-1

	Run No	Run No 2	MUD	Run No 1		Run No 2	
Date			Nature				
First Reading			Density				
Last Reading			Viscosity	@	F	@	F
Footage Logged			Resistivity	@	F	@	F
Bottom Driller			Res. @ BHT	@	F	@	F
Casing From Log			pH				
Casing (Driller)			Circ Temp				
Casing Size			B.H Temp				
Bit Size							
Bit Size			Logged by	W. SHAW.			
			Witnessed by				

REMARKS 10·2 API OCT 28 '76.

LOGGED THROUGH DRILL PIPE

* Reg. U.S. Pat. Off.



ROKE OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

FILE NO. 319

COMPANY ROKE OIL ENTERPRISES LTD.

WELL 10-25-30-5W4

FIELD WILDCAT

LOCATION 10-25-30-5W4

COUNTY/PARISH OLDS

STATE/PROVINCE ALBERTA

OTHER SERVICES

Recorded By	JOHNSON	Witnessed By	MCKINNEY
Run No.	ONE		
Depth Driller	1175		
Depth Logger	1175		
Bottom Logged Interval	1175		
Top Logged Interval	0		
Casing Driller	8 5/8 @ 1175		
Casing Logger	1175		
Bit Size	7 7/8		
Type Fluid in Hole	GEL CHEM		
Density / Viscosity	9.2		
PH / Fluid Loss	10.5		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp.	1.1 @ 70		
Rmf @ Meas. Temp.	.9 @ 70		
Rmc @ Meas. Temp.	.8 @ 70		
Source of Rmf / Rmc	CALC		
Rm @ BHT	.6 @ 100		
Time Since Circulation	6 HRS		
Time Since Logger at Bottom	7 HRS		
Max. Rec. Temp.	100		
Equipment No.	5376		
Location	10-25-30-5W4		
Recorded By	JOHNSON		
Witnessed By	MCKINNEY		

LOCATION: 10-25-30-5W4

Other Services: NONE

Permanent Datum: GROUND LEVEL Elev.: 3376 K.B. 3376 D.F. 3375 G.L. 3376

Log Measured From: K.B. 1 FT. Above Perm. Datum

Drilling Measured From: K.B.

EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.		LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO.	
DETECTOR MODEL NO.		DIAMETER	1 11/16
TYPE	SCINTILLATOR	DETECTOR MODEL NO.	
LENGTH	4 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	1.1 FT.	LENGTH	6 INCH
		SOURCE MODEL NO.	MNC-N-55-W
GENERAL		SERIAL NO.	127
MOBIT TRUCK NO.	33	SPACING	17 INCH
INSTRUMENT TRUCK NO.		TYPE	Amb
TOOL SERIAL NO.	NCSS 169 + 002	STRENGTH	3 CURIES

LOGGING DATA

Run No.	GENERAL FROM	TO	SPEED FT/MIN	T.C. SEC	GAMMA RAY SENS SETTINGS	ZERO DIV. / DIV.	API G. R. UNITS PER LOG DIV.	T.C. SEC	NEUTRON SENS SETTINGS	ZERO DIV. / DIV.	API N. UNITS PER LOG DIV.
1	0	971	12	3	100	OIL	12 API	3	500	OIL	120 API

REMARKS: LOGGED TOWARDS 90 DEGS AUG

GAMMA RAY

GAMMA RAY INCREASES

API

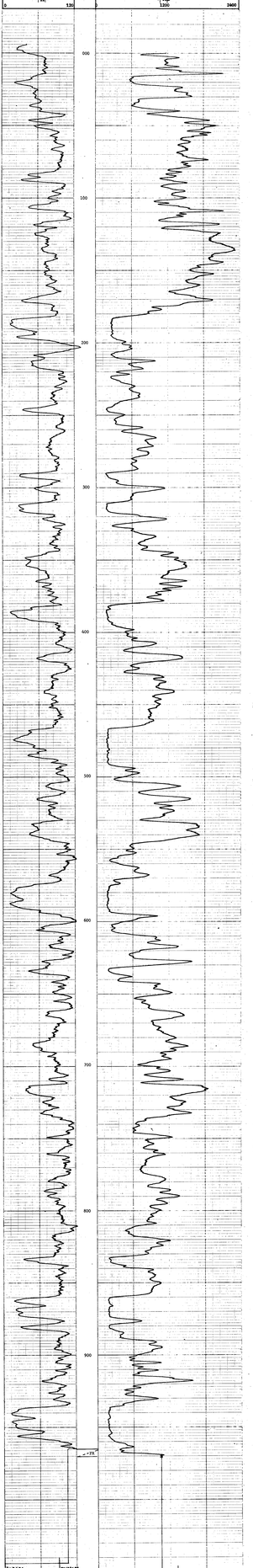
0 120

NEUTRON

NEUTRON INCREASES

API

1200 2400



ROKE

ROKE OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

Company	ROKE OIL ENTERPRISES LTD.
Well	16-25-27-3W4
Field	PEDDIE
Location	16-25-27-3W4
Province	ALBERTA
Country	CANADA
Permanent Datum	GROUND LEVEL
Elevation	2230 FT.
Log Measured From	KELLY BUSHING
Drilling Measured From	KELLY BUSHING
Date	3-10-74
Run No.	ONE
Depth-Driller	2230 FT.
Depth-Logger	2230 FT.
Bottom Logged Interval	2230 FT.
Top Logged Interval	0 FT.
Casing-Driller	8 5/8 @ 272 FT.
Casing-Logger	272 FT.
Bit Size	7 7/8 INCH
Type Fluid in Hole	GEL CHEM
Density	10.0
Viscosity	50
Fluid Loss	6.0
Source of Sample	CIRCULATION
R_m @ Meas. Temp.	1.0 @ 70 °F
R_mf @ Meas. Temp.	0.8 @ 70 °F
R_mc @ Meas. Temp.	1.2 @ 70 °F
Source R_mf / R_mc	CALCULATED
R_m @ BHT	0.5 @ 150 °F
Time Since Circ.	24 HRS
Time Log Started	06:00
Time Log Completed	08:00
Max. Rec. Temp.	150 °F
Equipment No.	319
Location	
Recorded By	STOCKDALE
Witnessed By	

EQUIPMENT DATA

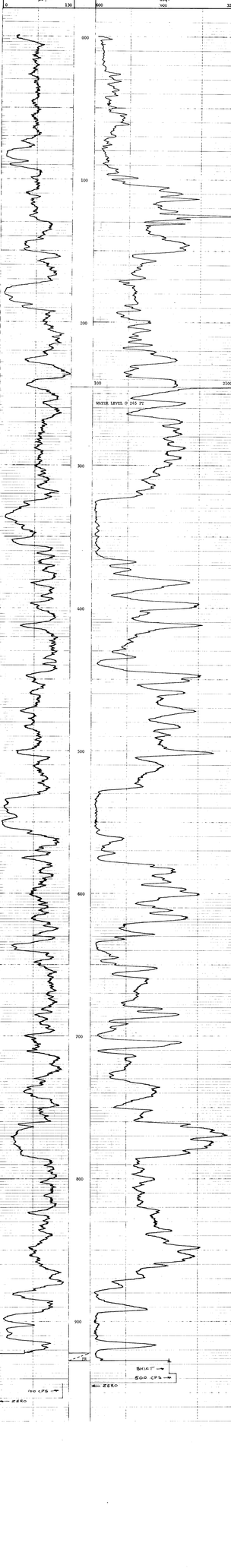
GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	123 - 003	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1½	TOOL MODEL NO.	123 - 003
DETECTOR MODEL NO.		DIAMETER	1½
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	4 INCH	TYPE	PROPORTIONAL
DISTANCE TO SOURCE	6.8 FT.	LENGTH	8 INCH
		SOURCE MODEL NO.	MRCN-SE-W
GENERAL		SERIAL NO.	256
HOIST TRUCK NO.	34	SPACING	17 INCH
INSTRUMENT TRUCK NO.	34	TYPE	AmBe
TOOL SERIAL NO.	123 - 003	STRENGTH	3 CURIES

LOGGING DATA

GENERAL					GAMMA RAY				NEUTRON			
RUN NO.	INTERVAL FROM	INTERVAL TO	SPEED FT/MIN.	T.C. SEC.	SENS. SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T.C. SEC.	SENS. SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	0	265	12	4	100	0	13	3	1000	31	200
1	265	927	12	4	100	0	13	3	200	31	100

REMARKS: LOGGED THROUGH 3½ BOD

ANGLE HOLE



ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

K. Kosanke 7/25/81

FILE NO.
SEC. TWP. RGE. M.
COMPANY ROKE OIL ENTERPRISES LTD. CALGARY, ALBERTA
WELL 300' - 660' (S) OF SW/4
LOCATION BASIL MORRISEY
FIELD STOLBERG
PROVINCE, COUNTY, WATER BOREHOLE COLORADO
Permanent Datum: GROUND LEVEL Elev.: 2850
Log Measured from: KELLY BUSHING 10 Ft. Above Perm. Datum
Drilling Measured from: KELLY BUSHING
Date: 8-10-81
Run No.: ONE
Depth-Driller: 2850
Depth-Logger: 2846
Bottom Logged Interval: 2846
Top Logged Interval: 0
Casing-Driller: 8 5/8 @ 1975
Casing-Logger: 1975
Bit Size: 7 7/8
Type Fluid in Hole: WATER
Dens.: 8.4
Visc.: 28
PH: 10
Fluid Loss: 10
Source of Sample: PUMP
Rm @ Meas. Temp.: .8 @ 70°
Rmf @ Meas. Temp.: .7 @ 70°
Rmc @ Meas. Temp.: .9 @ 70°
Source of Rmf & Rmc: CALC
Rm @ BHT: .5 @ 120°
Time Since Circ.: 3 HOURS
Time on Bottom: 0600 8-10-81
Unit No.: 2
Recorded By: JOHNSON
Witnessed By: MR. MORRISEY

319

EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.		TOOL TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO.	
DETECTOR MODEL NO.		DIAMETER	1 11/16
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	4 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	8.5 FT	LENGTH	8 INCH
GENERAL		SOURCE MODEL NO.	MRC-N-66-W
		SERIAL NO.	598
HOIST TRUCK NO.	33	SPACING	17 INCH
INSTRUMENT TRUCK NO.		TYPE	Amb
TOOL SERIAL NO.	N - 155	STRENGTH	3 CURIES

LOGGING DATA

RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	GAMMA RAY SENS SETTING	GAMMA RAY ZERO DIV. L OR R	GAMMA RAY API G. R. UNITS PER 1.00 DIV.	NEUTRON T.C. SEC.	NEUTRON SENS SETTING	NEUTRON ZERO DIV. L OR R	NEUTRON API N. LOG DIV.
1	0	950	12	5	100	CL	12	3	500	CL	120 API

REMARKS LOGGED THROUGH NO DRILL ROD

GAMMA RAY

GAMMA RAY INCREASES

API

0 120

DEPTH

NEUTRON

NEUTRON INCREASES

API

0 2400

000
100
200
300
400
500
600
700
800

-75

1 SEC

40 FPS

1 SEC

40 FPS

ROKE

OIL ENTERPRISES LTD.
GAMMA RAY NEUTRON LOG
CALGARY, ALBERTA

FILE NO. 319

COMPANY: FAIRFIELD CORAL LIMITED
WELL: 13-21-47-15W3
LOCATION: KAYBOB SOUTH
FIELD: FAIRFIELD

PROVINCE BRITISH COLUMBIA
CASING 13 3/8" @ 1000'
BTD. 10,000'

Other Services: DIL

Sec. 21 Twp. 47 Rge. 15 W. 3 M.

Permanent Datum: GROUND LEVEL
Elev.: K.B. 2,000
D.F.
G.L. 1,974

Log Measured From: K.B.
26 Ft. Above Permanent Datum

Date: 1-2-75
Run No.: ONE
Depth-Driller: 10,000
Depth-Logger: 10,000
Bottom Logged Interval: 10,000
Top Logged Interval: 1,000
Type Fluid in Hole: GEL CHEM
Salinity, PPM Cl: 4,000
Density: 10.0
Viscosity: 45
Fluid Loss: 6.0
Source of Sample: CIRC. SAMPLE
Rm @ Meas. Temp.: .65 @ 70°
Rmf @ Meas. Temp.: .52 @ 70°
Rmc @ Meas. Temp.: .85 @ 70°
Source of Rmf and Rmc: CALC.
Rm @ BHT: .38 @ 180°
Time Since Circ.: 12 HRS.
Max. Rec. Temp.: 180°
Equip. No. & Location: 1202 - 1203
Recorded By: ZAWADSKI
Witnessed By: MR. MARTIN

K. Fairfield (Coral)

EQUIPMENT DATA

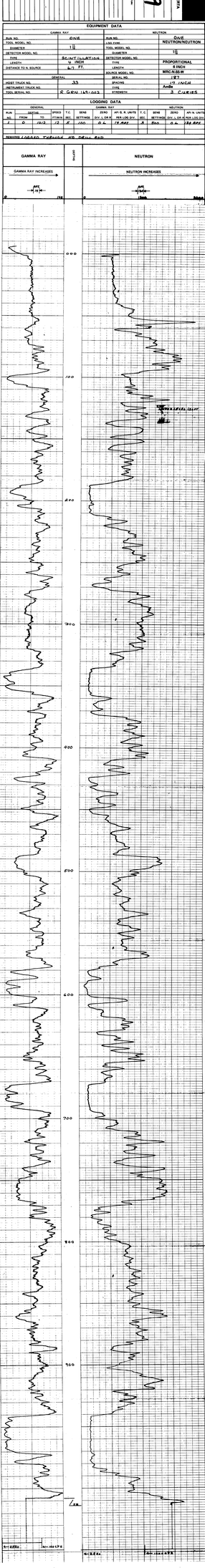
GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.		LOG CODE	NEUTRON/NEUTRON
DIAMETER	1 3/8	TOOL MODEL NO.	
DETECTOR MODEL NO.		DIAMETER	1 3/8
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	4 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	6.7 FT.	LENGTH	6 INCH
GENERAL		SOURCE MODEL NO.	MRC-N-55-M
HOIST TRUCK NO.	33	SERIAL NO.	127
INSTRUMENT TRUCK NO.		SPACING	17.1 INCH
TOOL SERIAL NO.	R GRN 147-003	TYPE	Am Be
		STRENGTH	5 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON		
RUN NO.	DEPTH FROM	DEPTH TO	SPEED FT/MIN	T.C. SEC.	SENS SETTING	ZERO BOV & OR R	API G. R. UNITS PER LOG DIV	T.C. SEC.	SENS SETTING	ZERO BOV & OR R
1	0	1003	12	2	100	0.2	15 API	2	800	0.2

API G. R. UNITS PER LOG DIV: 15 API
ZERO BOV & OR R: 0.2
SENS SETTING: 800
T.C. SEC: 2
SPEED FT/MIN: 12
DEPTH TO: 1003
DEPTH FROM: 0
RUN NO.: 1

REMARKS: LOGGED THROUGH KB DRILL ROD



ROKE

OIL DEVELOPMENTS LTD.

CALGARY ALBERTA

GAMMA RAY NEUTRON LOG

K. Gravenor (N.W.)

319

COMPANY PIONEER OIL LIMITED

WELL SEC. 4-44

FIELD PIONEER

LOCATION ROCKY MOUNTAIN HOUSE

PROVINCE ALBERTA

Other Services

Permanent Datum: GROUND LEVEL Elev.: 3295

Log Measured From: KB 10 FEET Above Permanent Datum

Drilling Measured From: KB

Elev.: K.B. 3305 D.F. G.L. 3295

Date: 2 OCTOBER 1974

Run No. ONE

Depth-Driller 5345

Depth-Logger 5345

Bottom Logged Interval 5339

Top Logged Interval 1000

Casing-Driller 9 5/8 @ 1001

Casing-Logger 1001

Bit Size 8 1/2

Type Fluid in Hole GEL CHEM

Dens. Visc. 9.6 45

pH Fluid Loss 10.5 6.4

Source of Sample FLOWLINE

Rm @ Meas. Temp. .88 @ 70°F

Rmf @ Meas. Temp. .66 @ 70°F

Rmc @ Meas. Temp. .44 @ 70°F

Source of Rmf & Rmc MEASURED

Rm @ BHT .44 @ 140°F

Time Since Circ. 14 HRS

Max. Rec. Temp. 140°F

Equip. No. & Location 1003 CALGARY

Recorded By ANDERSON

Witnessed By GRAVENOR

EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO	ONE	RUN NO	ONE
TOOL MODEL NO		TOOL TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO	
DETECTOR MODEL NO		DIAMETER	1 11/16
TYPE	SCINTILLATION	DETECTOR MODEL NO	
LENGTH	5 INCH	TYPE	PROPORTIONAL
DISTANCE TO N SOURCE	6.7 FT	LENGTH	8 INCH
GENERAL		SOURCE MODEL NO	MNC-N 5 Curie
SERIAL NO		SPACING	18"
HOST TRUCK NO	33	TYPE	1" DIA
INSTRUMENT FAULT NO		STRENGTH	Am-Be
TOOL SERIAL NO			5 Curies
	B GRE 169-002		

LOGGING DATA

RUN NO	GENERAL SETTING FROM	TO	SPEED F/MIN	T-C SEC	SENS SETTINGS	GAMMA RAY SENS Div. | GR/IN	API-GR UNITS PER LOG DIV	NEUTRON T-C SEC	SENS SETTINGS	NEUTRON ZERO Div. | CM/IN	API-N UNITS PER LOG DIV
1	0	1004	32	5	108	0 5	12	3	300	0 5	120

REMARKS LOGGED THROUGH 9 5/8 CSG SHOE

GAMMA RAY

Gamma Ray INCREASES

API

0 120

NEUTRON

NEUTRON INCREASES

API

0 120

WATER LEVEL @ 134 FEET

100 FT/IN

0

100

200

300

400

500

600

700

800

900

1000

TD

← ZERO

← 100 CPS

← ZERO

← 1000 CPS

ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

TITLE NO. LSD SEC TWP RGE W M

COMPANY POUDRE OIL LIMITED

WELL EA - 443

FIELD POUDRE LOCATION EAGLE MOUNTAIN

319

PROVINCE BRITISH COLUMBIA

Permanent Datum: GROUND LEVEL Elev.

Log Measured From: GROUND LEVEL Ft. Above Perm. Datum

Other Services: NONE

K.B.

D.F.

G.L.

Date: 18 NOV 1976

Run No. ONE

First Reading 572

Last Reading 0

Depth Logged 572

Depth Driller 574

Casing Size 10"

Casing Bottom 574

Fluid Type AIR/WATER

Liquid Level 322

Max. Diam. 4 7/8

Rm @ °F

Truck No. 1 WSTR. 33

Operating Time

Recorded By JOHNSON

Witnessed By SAUNDERS

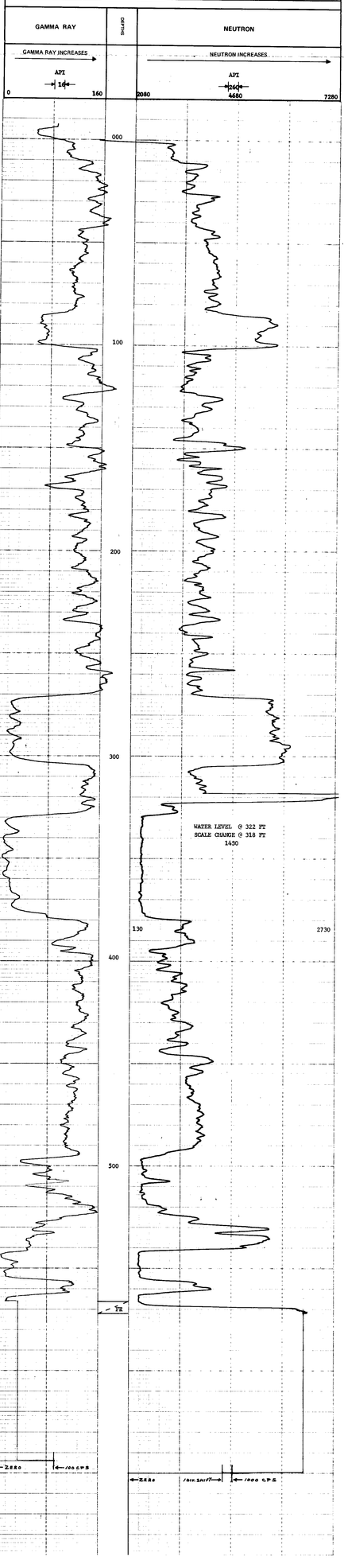
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.		LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO.	
DETECTOR MODEL NO.		DIAMETER	1 11/16
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	4 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	6.7 FT.	LENGTH	6 INCH
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	187
HOIST TRUCK NO.	33	SPACING	17 INCH
INSTRUMENT TRUCK NO.		TYPE	AmBe
TOOL SERIAL NO.	R GRN 169 - 002	STRENGTH	3 CURIES

LOGGING DATA

RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	GAMMA RAY T.C. SEC	GAMMA RAY SENS SETTINGS	GAMMA RAY ZERO DIV. L OR R	GAMMA RAY API G. R. UNITS PER LOG DIV.	NEUTRON T.C. SEC	NEUTRON SENS SETTINGS	NEUTRON ZERO DIV. L OR R	NEUTRON API N. UNITS PER LOG DIV.
1	0	318	12	5	100	OL	16	3	1000	RL	260
2	318	572	12	5	100	OL	16	3	500	1L	130

REMARKS



K-FORDING 76(3)A-1

ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

FILE NO.

LSD
SEC
TWP
RGE
W M

COMPANY FORDING COAL LIMITED

WELL DDH-447

319

LOCATION EAGLE MTN

FIELD FORDING

PROVINCE BRITISH COLUMBIA

Permanent Datum GROUND LEVEL Elev.
Log Measured from RIG FLOOR 2 Ft. Above Perm. Datum
Well Depths Measured from RIG FLOOR

Other Services: DENS

K.B.
CSG
G.L.

Run. No.	ONE
Date	27 NOV 1976
First Reading	1209
Last Reading	0
Footage Logged	1209
Depth Reached	1210
Depth Driller	1212
Casing Roke	
Casing Driller	20
Fluid Type	AIR/WATER
Liquid Level	400
Min. Diam.	HQ
Rm @ °F	
Operating Time	2½ HOURS
Truck No.	33

Recorded By JOHNSON

Witnessed By DAIGNAULT

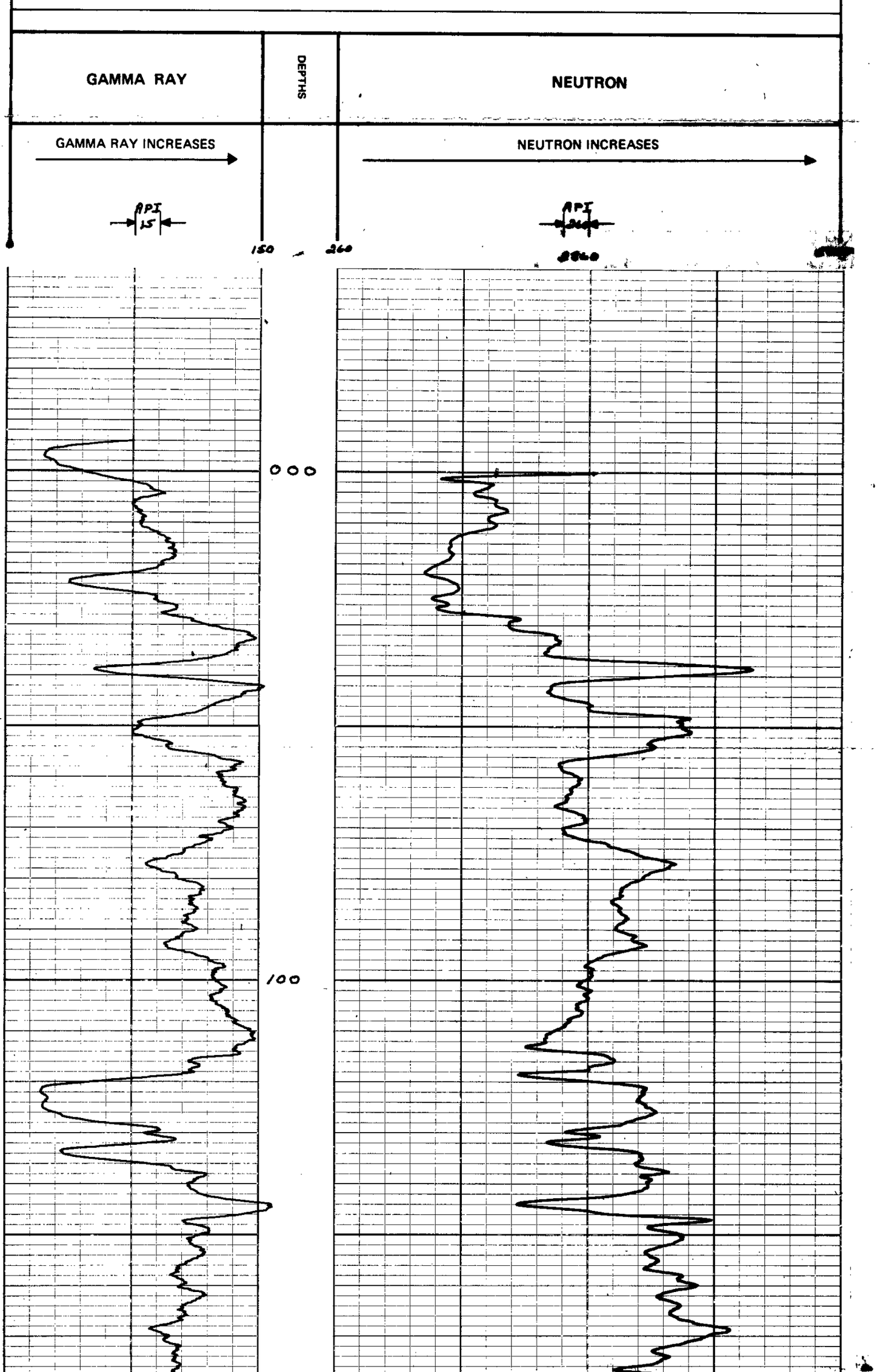
EQUIPMENT DATA

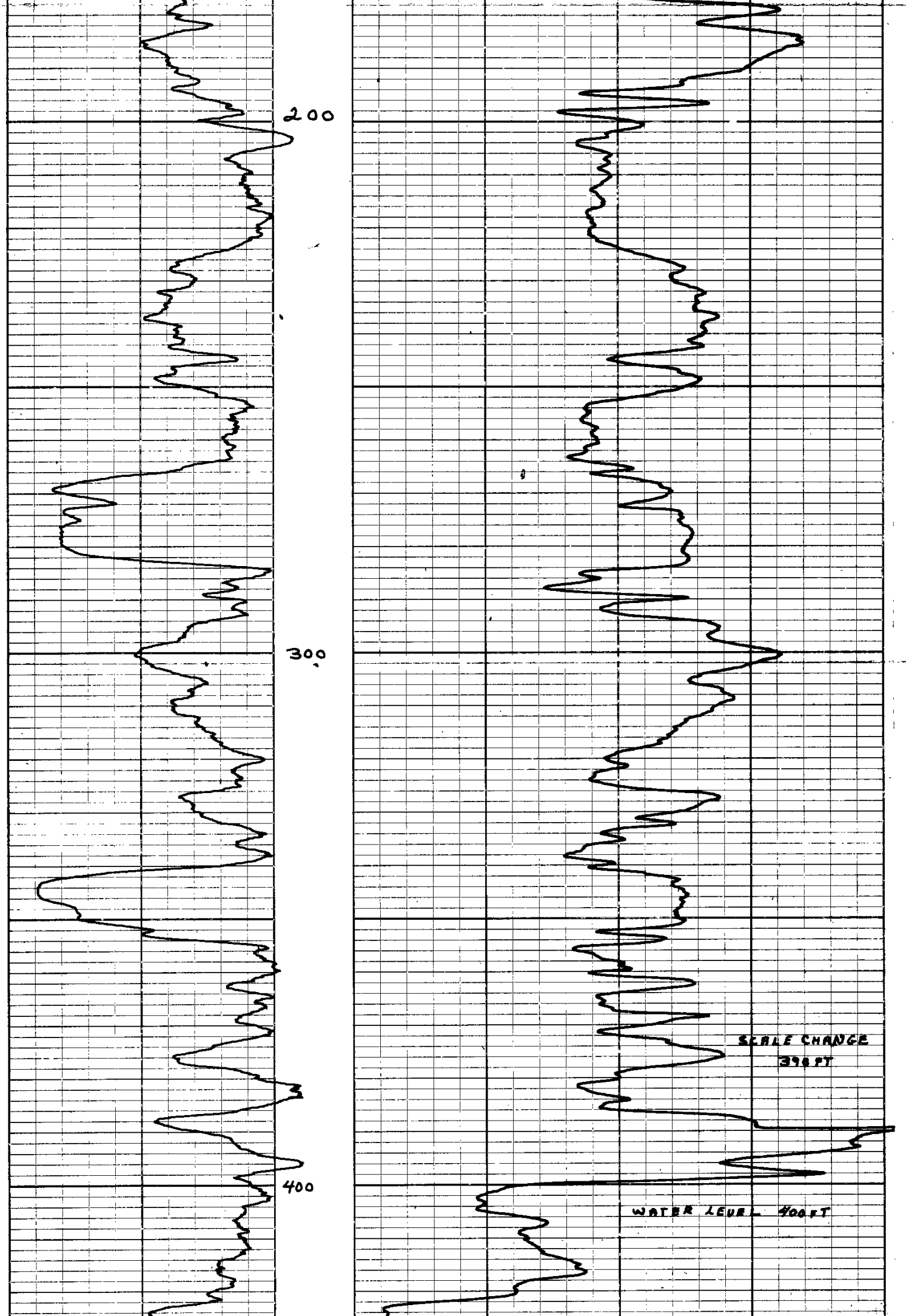
GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.		LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO.	
DETECTOR MODEL NO.		DIAMETER	1 11/16
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	4 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	6.7 FT.	LENGTH	6 INCH
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	187
HOIST TRUCK NO.	33	SPACING	17 INCH
INSTRUMENT TRUCK NO.		TYPE	AmBe
TOOL SERIAL NO.	R GRN 169-002	STRENGTH	3 CURIES

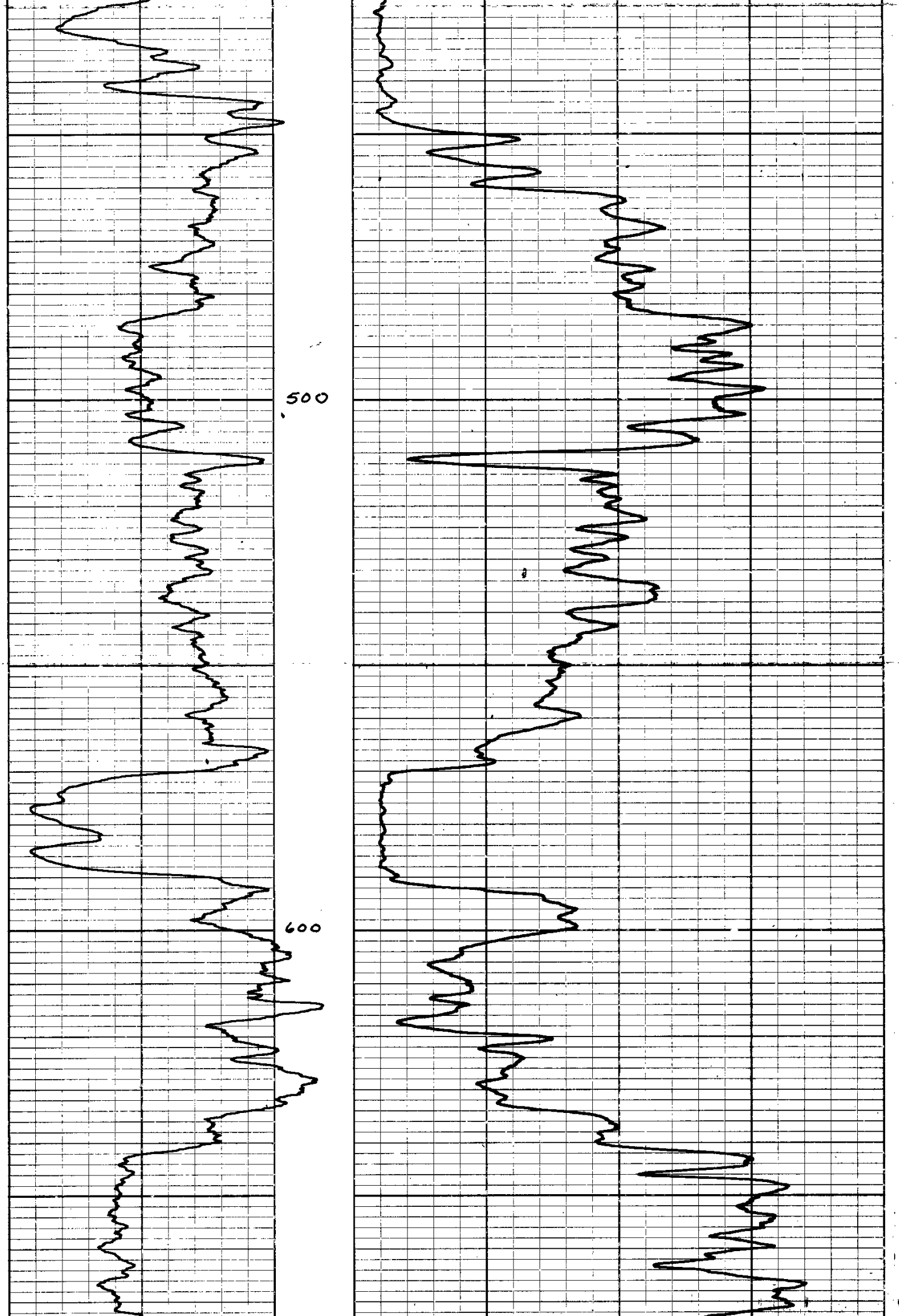
LOGGING DATA

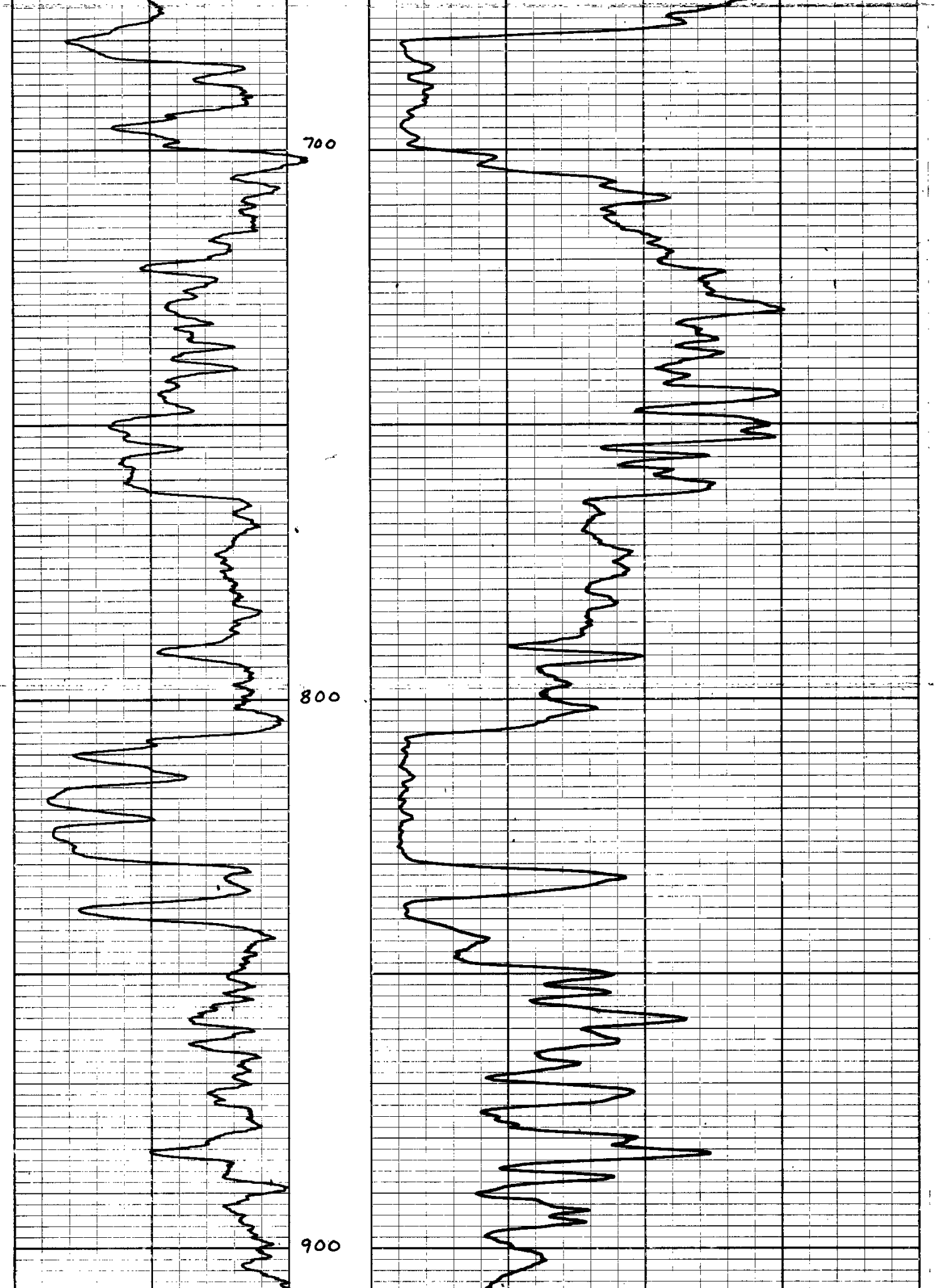
GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	0	390	12	5	100	OL	15 API	3	1000	14	260 API
	390	1209	12	5	100	OL	15 API	3	500	14	130 API

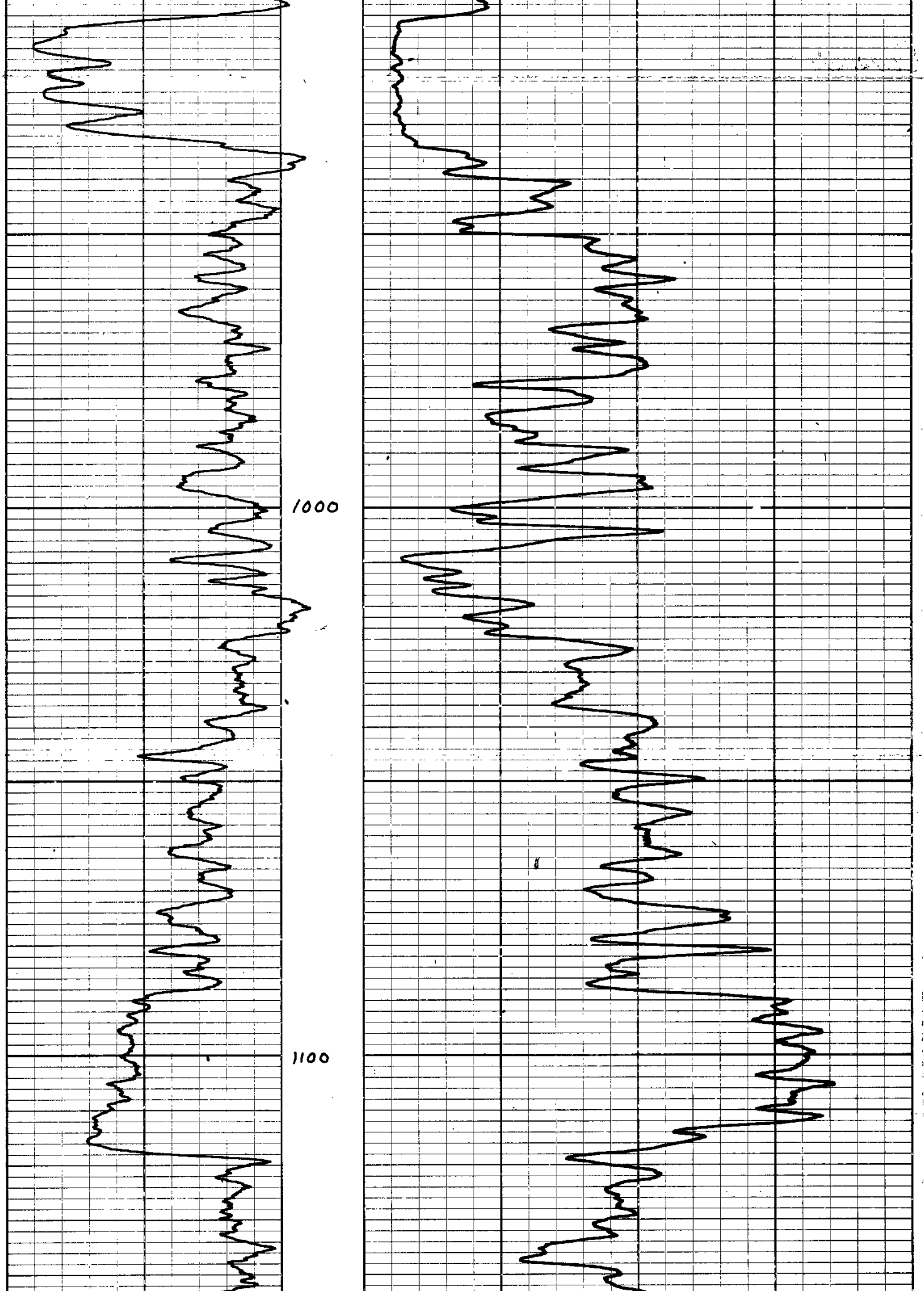
REMARKS

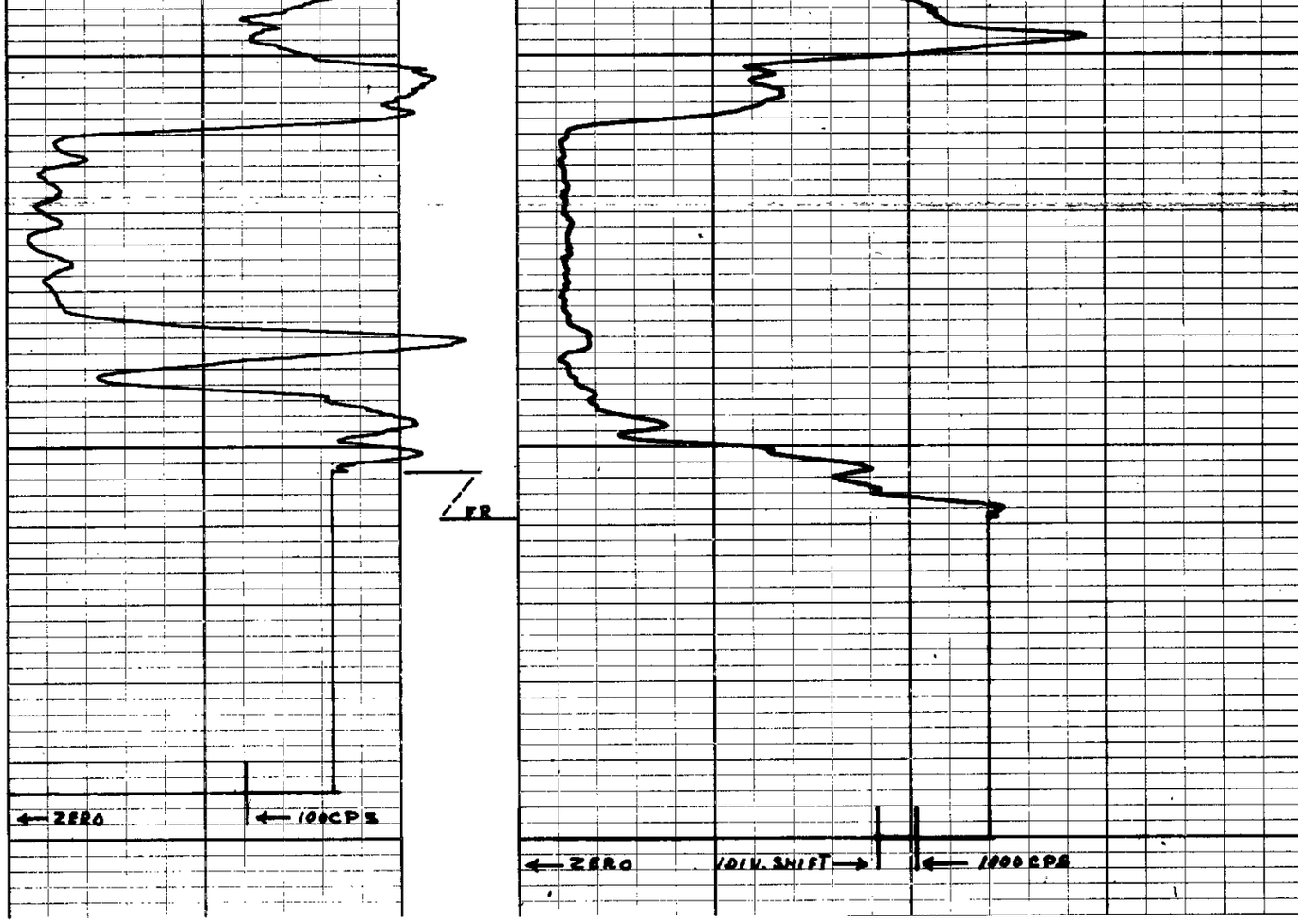

GAMMA RAY
DEPTHS
NEUTRON
GAMMA RAY INCREASES
NEUTRON INCREASES
API
15
API
150
200
000
100


200
300
400
SCALE CHANGE
398 FT
WATER LEVEL 400 FT


500
600


700
800
900


1000
1100


FR
← ZERO
← 100CPS
← ZERO
1DIV. SHIFT →
← 1000 CPS

K-Fording 76(3)A-1

ROKE

SIDEWALL DENSILOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.
LSD
SEC
TWP
RGE
W M

COMPANY FORDING COAL LIMITED
WELL DDH - 447
LOCATION EAGLE MOUNTAIN
319
FIELD FORDING
PROVINCE BRITISH COLUMBIA
Other Services: GRN

Permanent Datum GROUND LEVEL Elev.
Log Measured from RIG FLOOR 2 Ft. Above Perm. Datum
Well Depths Measured from RIG FLOOR
K.B.
CSG
G.L.

Run. No.	ONE
Date	27 NOV 1976
First Reading	1200
Last Reading	110
Footage Logged	330
Depth Reached	333
Depth Driller	1212
Casing Roke	
Casing Driller	20
Fluid Type	AIR/WATER
Liquid Level	400
Min. Diam.	HQ
Operating Time	2 HOURS
Truck No.	33
Recorded By	JOHNSON
Witnessed By	DAIGNAULT

GENERAL				GAMMA RAY				SIDEWALL DENSILOG			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	API G.R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	CPS/ DIV
1	110	140	5					3	1000	2.53 R	61,952
	260	290	5					3	1000	2.53 R	61,952
	330	360	5					3	1000	2.53 R	61.952
	420	450	5					3	1000	2.53 R	61.952
	560	590	5					3	1000	2.53 R	61,952
	670	710	5					3	1000	2.53 R	61,952
REMARKS	800	850	5					3	1000	2.53 R	61.952
	900	940	5					3	1000	2.53 R	61.952
	1150	1200	5					3	1000	2.53 R	61.952

TOOL # 249

GAMMA RAY
API

DEPTHS

CALIPER
(DIAMETER – INCHES)

BULK DENSITY
(GRAMS/CC)

ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

FILE NO. 319

LSD ____ SEC ____ TWP ____ RGE ____ W ____ M

COMPANY FORDING COAL LIMITED

WELL DDH - 455

LOCATION EAGLE MOUNTAIN

FIELD FORDING

PROVINCE BRITISH COLUMBIA

Permanent Datum: GROUND LEVEL Elev. ____

Log Measured from: GROUND LEVEL Ft. Above Perm. Datum

Well Depths Measured from: GROUND LEVEL

Other Services: DENS

K.B. ____

CSG ____

G.L. ____

Run. No.	ONE
Date	11 MARCH 1976
First Reading	380
Last Reading	000
Footage Logged	380
Depth Reached	381
Depth Driller	418
Casing Rake	
Casing Driller	
Fluid Type	AIR/WATER
Liquid Level	259
Min. Diam.	HO
Rm @ °F.	
Operating Time	1-1/4 HOURS
Truck No.	33

Recorded By JOHNSON Witnessed By DAIGNAULT

K-Fording 76(34)-1

EQUIPMENT DATA

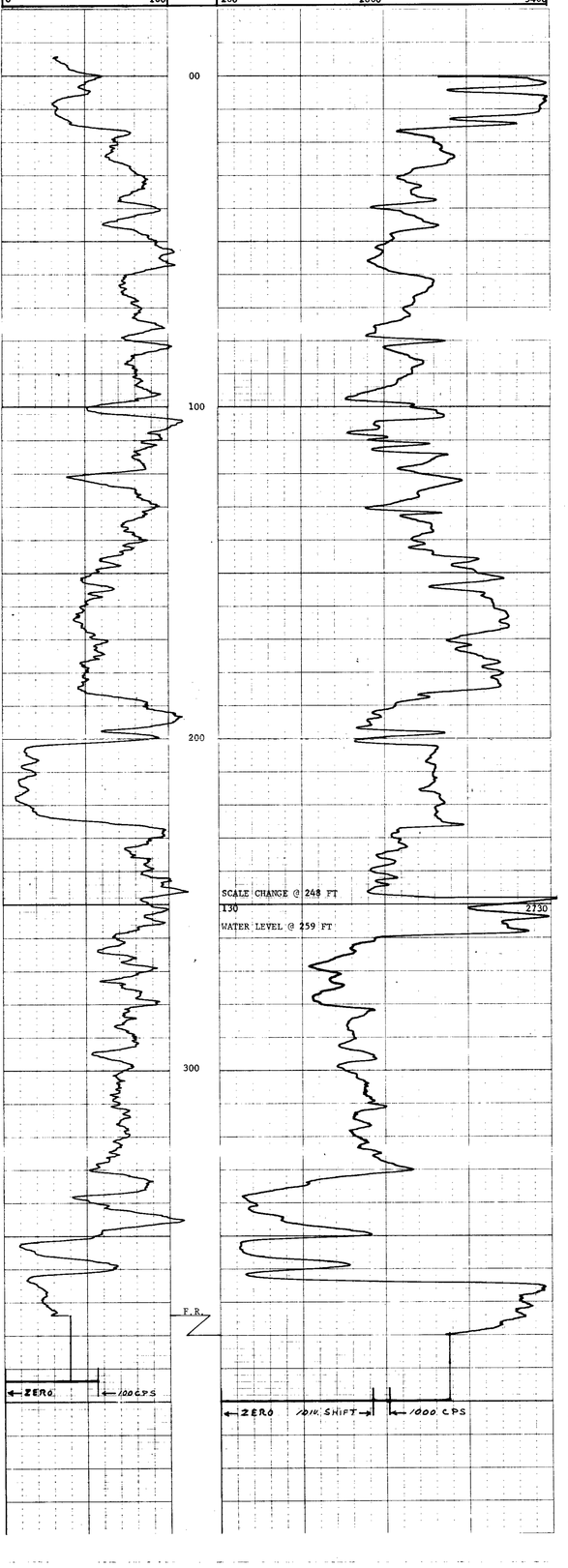
GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.		LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO.	
DETECTOR MODEL NO.		DIAMETER	1 11/16
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	4 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	6.7 FT.	LENGTH	6 INCH
		SOURCE MODEL NO.	MRC-N-SS-W
		SERIAL NO.	187
		SPACING	17 INCH
		TYPE	AmBe
		STRENGTH	3 CURIES

GENERAL	
HOIST TRUCK NO.	33
INSTRUMENT TRUCK NO.	
TOOL SERIAL NO.	R GRN 169-002

LOGGING DATA

RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	GAMMA RAY T.C. SEC.	GAMMA RAY SENS SETTINGS	GAMMA RAY ZERO DIV. L OR R	GAMMA RAY API G. R. UNITS PER LOG DIV.	NEUTRON T. C. SEC.	NEUTRON SENS SETTINGS	NEUTRON ZERO DIV. L OR R	NEUTRON API N. UNITS PER LOG DIV.
1	00	248	12	5	100	0L	16 API	3	1000	1L	260 API
	248	380	12	5	100	0L	16 API	3	500	1L	130 API

REMARKS HOLE BRIDGED AT 380 FEET



ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

SIDEWALL DENSILOG

FILE NO.

COMPANY FORDING COAL LIMITED

WELL DDH - 455

LOCATION EAGLE MOUNTAIN

FIELD FORDING

PROVINCE BRITISH COLUMBIA

Permanent Datum GROUND LEVEL Elev.

Log Measured from GROUND LEVEL Ft. Above Perm. Datum

Well Depths Measured from GROUND LEVEL

Other Services: GRN

K.B.

DRL

G.L.

LSD SEC TWP RGE W M

319

K. Forsdyke 74/3/21

Recorded By JOHNSON Witnessed By DAVENPORT

Run No.	ONE
Date	11 MARCH 1975
First Reading	370
Last Reading	150
Footage Logged	80
Depth Reached	373
Depth Driller	438
Depth Logger	
Casing Driller	
Fluid Type	AIR/WATER
Liquid Level	259
Max. Temp.	RQ
Min. Diam.	
Operating Time	1 HOUR
Truck No.	33

GENERAL

RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN
1	190	230	5
	330	370	5

GAMMA RAY

T.C. SEC.	SENS SETTINGS	ZERO DIV'L OR R	API G.R. UNITS PER LOG DIV.

SIDEWALL DENSILOG

T.C. SEC.	SENS SETTINGS	ZERO DIV'L OR R	CPS/DIV
3	1000	2.53R	61.952
3	1000	2.53R	61.952

REMARKS HOLE BRIDGED AT 380 FEET

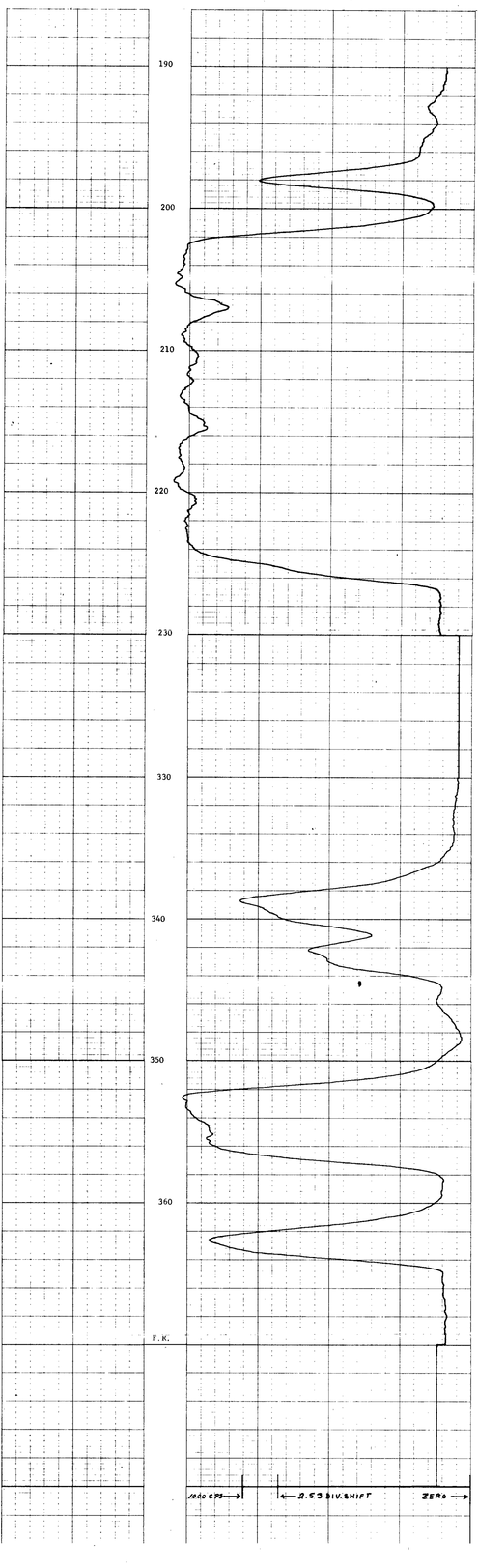
DENSITY TOOL SERIAL NO 249

DEPTHS

CALIPER
(DIAMETER – INCHES)

GAMMA RAY
API

BULK DENSITY
(GRAMS/CC)



ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

COMPANY ROKE OIL LIMITED

WELL NW ¼ SEC. 6 TWP. 49 RGE. 6 W5M

FIELD PEMBINA LOCATION MARK MOUNTAIN

Permanent Datum: GROUND ELEV. 3,819 FEET

Log Measured from: KB 7 FEET ABOVE PERM. DATUM

Drilling Measured from: KB

Elev.: K.B. 3826 D.F. G.L.

Date: MARCH 29, 1979

Run No.: ONE

Depth-Driller: 795

Depth-Logger: 795

Bottom Logged Interval: 795

Top Logged Interval: 295

Type Fluid in Hole: AIR/WATER

Salinity, PPM Cl: MIST

Density: 8.4 PPG

Level: FULL

Max. Rec. Temp. Deg. F: 70

Operating Time: 3 HOURS

Recorded By: JACKSON

Witnessed By: MACKENZIE

EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.		LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO.	
DETECTOR MODEL NO.		DIAMETER	1 11/16
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	6 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	6.7 FT.	LENGTH	6 INCH
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	187
HOIST TRUCK NO.	33	SPACING	17 INCH
INSTRUMENT TRUCK NO.		TYPE	AmBe
TOOL SERIAL NO.	R-GRN 169-002	STRENGTH	3 CURIES

LOGGING DATA

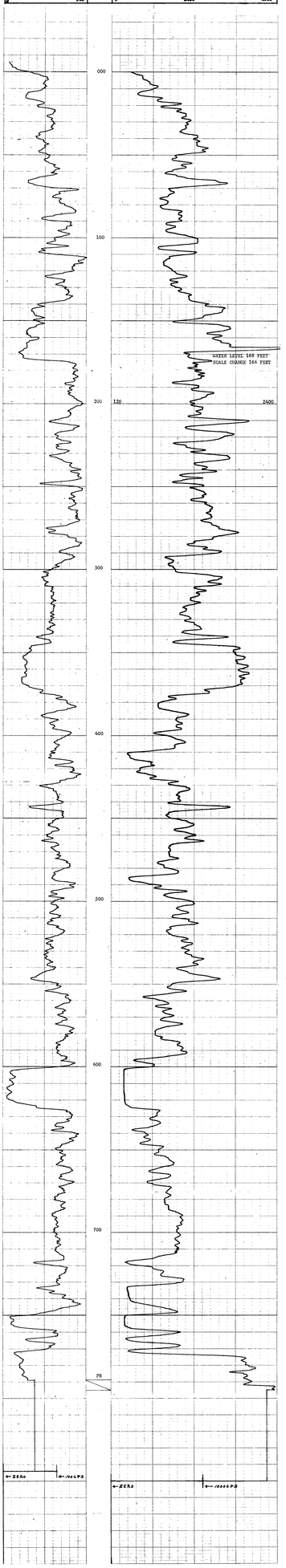
GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTH FROM	DEPTH TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER 100 DIV	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER 100 DIV
1	0	166	12	5	100	0 L	14 API	3	1000	0 L	240 API
	166	795	12	5	100	0 L	14 API	3	500	0 L	120 API

REMARKS: LOGGED THROUGH HQ DRILLHEAD.

GAMMA RAY — DEPTH — NEUTRON

GAMMA RAY INCREASES → API 14 (0 — 140)

NEUTRON INCREASES → API 2880 (0 — 4800)



ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

K-Roke 76 6961

FILE NO. 319

COMPANY FORDING COAL LIMITED

WELL DDH - 457

LOCATION EAGLE MOUNTAIN

FIELD FORDING

PROVINCE BRITISH COLUMBIA

Permanent Datum: GROUND LEVEL — Elev. K.B. / DERRICK FLOOR

Log Measured from: GROUND LEVEL — Ft. Above Perm. Datum — G.L.

Other Services

LSD SEC TWP RGE W. M

Run No. ONE
Date 16 MARCH 1976
First Reading 469
Last Reading 000
Footage Logged 469
Depth Reached 450
Depth Driller 450
Depth Logger
Casing Driller
Casing Logger
Fluid Type AIR/WATER
Liquid Level 22
Max. Diam. HQ
Rm. @ °F

Operating Time 1 HOUR
Truck No. 33

Recorded By JOHNSON
Witnessed By MACKAULAY

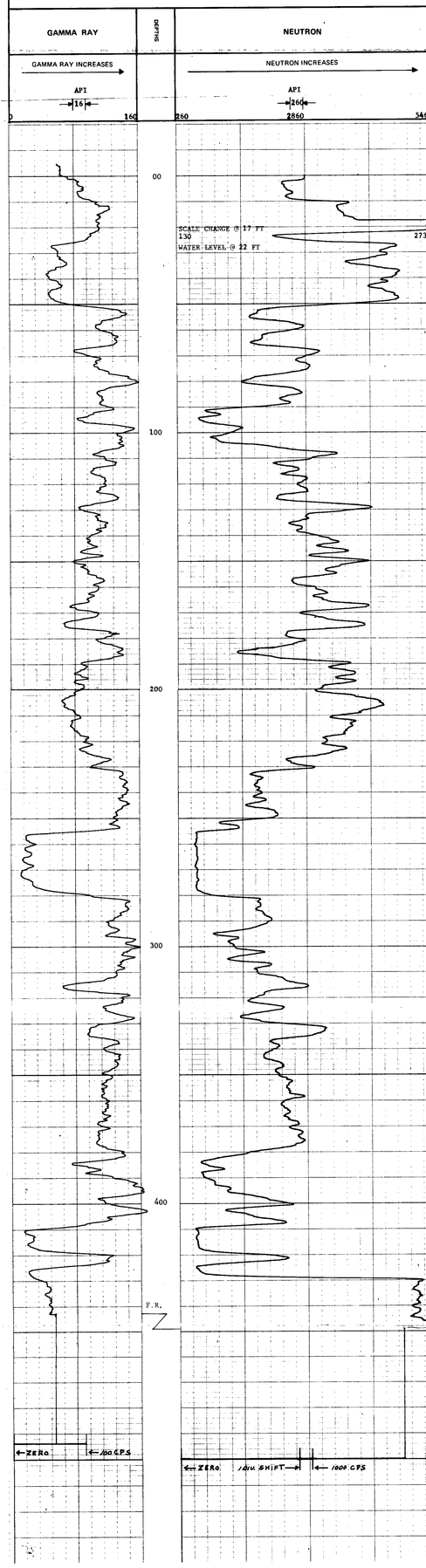
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.		LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO.	
DETECTOR MODEL NO.		DIAMETER	1 11/16
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	4 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	6.7 FT.	LENGTH	6 INCH
GENERAL		SOURCE MODEL NO.	MRC-N-SS-W
HOIST TRUCK NO.	33	SERIAL NO.	187
INSTRUMENT TRUCK NO.		SPACING	17 INCH
TOOL SERIAL NO.	R GRN 169-002	TYPE	Amse
		STRENGTH	3 CURIES

LOGGING DATA

GENERAL					GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	00	17	12	5	100	0L	16 API	3	1000	1L	260 API
	17	449	12	5	100	0L	16 API	3	500	1L	130 API

REMARKS



ROKE OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

FILE NO. 319

LSD SEC TWP RGE W ____ M

COMPANY ROKE OIL (CANADA) LIMITED

WELL DRL - 458

LOCATION EAGLE MOUNTAIN

FIELD BERRIDG

PROVINCE ALBERTA

Permanent Datum: GROUND LEVEL — Elev. 4 ft.

Log Measured from: KB FLOOR — 2 Ft. Above Perm. Datum

Other Services: DENS

KB ____ DRL ____ G.L. ____

Run No. ONE

Date ... APRIL 17 1976

First Reading 376

Last Reading 0

Footage Logged 376

Depth Reached 377

Depth Driller 377

Depth Logger 377

Casing Driller 8

Fluid Type AIR/WATER

Liquid Level 76

Min. Diam. HQ

Rm @ °F

Operating Time 1 1/2 HOURS

Truck No. 33

Recorded By JOHNSON

Witnessed By DAENAULT

Run No. ONE

Date APRIL 17 1976

First Reading 376

Last Reading 0

Footage Logged 376

Depth Reached 377

Depth Driller 377

Depth Logger 377

Casing Driller 8

Fluid Type AIR/WATER

Liquid Level 76

Min. Diam. HQ

Rm @ °F

Operating Time 1 1/2 HOURS

Truck No. 33

Recorded By JOHNSON

Witnessed By DAENAULT

EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.		LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO.	
DETECTOR MODEL NO.		DIAMETER	1 11/16
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	4 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	6.7. FT.	LENGTH	6 INCH
		SOURCE MODEL NO.	MRC-N-SS-W
		SERIAL NO.	187
		SPACING	17 INCH
		TYPE	AmBe
		STRENGTH	3 CURIES

GENERAL	
HOIST TRUCK NO.	33
INSTRUMENT TRUCK NO.	
TOOL SERIAL NO.	R GRN 169-002

LOGGING DATA

RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	GAMMA RAY SENS SETTINGS	GAMMA RAY ZERO DIV. L OR R	GAMMA RAY API G. R. UNITS PER LOG DIV.	NEUTRON T. C. SEC.	NEUTRON SENS SETTINGS	NEUTRON ZERO DIV. L OR R	NEUTRON API N. UNITS PER LOG DIV.
1	0	74	12	5	100	0 L	16 API	3	1000	1 L	260 API
	74	376	12	5	100	0 L	16 API	3	500	1 L	130 API

REMARKS

WATER LEVEL 76 FEET

SCALE CHANGE 74 FEET

GAMMA RAY	DEPTHS	NEUTRON
GAMMA RAY INCREASES →		NEUTRON INCREASES →
API 16		API 260
0 — 160		260 — 2860 — 3460

000

100

130 — 2730

200

300

FR

← ZERO ← 100 CPS

← ZERO 10% SHIFT → ← 1000 CPS

ROKE

SIDEWALL DENSLOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.

COMPANY ROKOIL COAL LIMITED

WELL ROKE - 456

LOCATION EAGLE MOUNTAIN

FIELD ROKOIL

PROVINCE BRITISH COLUMBIA

Other Services: CBHD

Permanent Datum: GROUND LEVEL Elev.: 3830 FT.

Log Measured from: K.B. 2 FT. Above Perm. Datum

Drilling Measured from: G.L.

Date: APRIL 7, 1976

Run No.: ONE

Depth Driller: 370

Depth Logger: 370

Bottom Logged Interval: 370

Top Logged Interval: 150

Casing Size: 8

Casing Depth: 370

Fluid Type: ATTAPULGITE

Fluid Level: FULL

Max. Rec. Temp.: 76

Equip. Location: 761

Recorded By: JOHNSON

Witnessed By: MCDOWELL

Operating Time: 13

Date: 4-7-76

Time: 1 HOUR

319

K factors 2/(2)(7)

GENERAL				GAMMA RAY				SIDEWALL DENSLOG			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN.	T.C. SEC.	SENS SETTINGS	ZERO DIV'S. ON R	API G.R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV'S. ON R	CPS/DIV
1	150	210	5					3	1000	2.53 R	61.952
	310	370	5					3	1000	2.53 R	61.952

REMARKS

DENSITY TOOL SERIAL NO. 269

DEPTHS

CALIPER
(DIAMETER – INCHES)

GAMMA RAY
API

BULK DENSITY
(GRAMS/CC)

150
160
170
180
190
200
210
310
320
330
340
350
360

FR

.1000CPS → ← 4.63 DIV. SHIFT → ZERO

ROKE
OIL ENTERPRISES LTD. CALGARY, ALBERTA

SIDEWALL DENSILOG

K. Fedorak 24/6/81

FILE NO. 319

COMPANY PEMBINA COAL LIMITED

WELL 1BH - 453

LOCATION SAULT MOUNTAIN

FIELD PEMBINA

Other Services: GRN

Elev.: K.B. GRD. D.F.

Permanent Datum: GROUND LEVEL

Log Measured from: GROUND LEVEL 2 ft. Above Perm. Datum

Drilling Measured from: KB RIG

Rge. 5 W

Twp. 47

Sec. 36

Bore No.

Date: APRIL 7, 1976

Run No. ONE

Depth-Driller 370

Depth-Logger 373

Bottom Logged Interval 370

Top Logged Interval 130

Casing-Driller 9

Casing-Logger 9

Bit Size 8 1/2" ROTARY

Type Fluid in Hole GEL

Density 9.0

Viscosity 50

pH

Fluid Loss

Source of Sample

Rm @ Meas. Temp.

Rmf @ Meas. Temp.

Rmc @ Meas. Temp.

Source of Rmf

Source of Rmc

Rm @ BHT

Time Since Circ. 3 HRS.

Max. Rec. Temp. Deg. F

Equip. No. 1976

Location

Recorded By JOHNSON

Witnessed By MACKENZIE

Operating Time 1 HOUR

Truck No. 23

GENERAL				GAMMA RAY				SIDEWALL DENSILOG			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV/L OR R	API G.R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV/L OR R	CPS/ DIV
1	130	310	5					3	1000	2.53 R	61,952
	310	370	5					3	1000	2.53 R	61,952

REMARKS

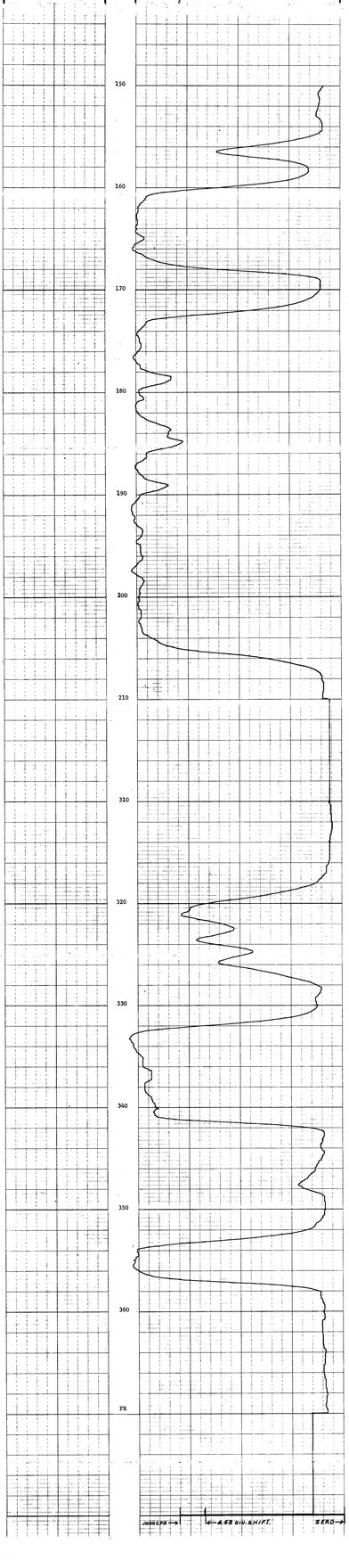
DENSITY TOOL SERIAL NO. 249

DEPTHS

CALIPER
(DIAMETER – INCHES)

GAMMA RAY
API

BULK DENSITY
(GRAMS/CC)



Widco* WELL LOG

COMPANY

AREA EAGLE MT SOUTH (K-4 PIT)

WELL RH 459 319

COUNTY STATE

COORDINATES
N
E
ELEVATION
D F
K B
G L

COMPANY
WELL RH 459
LOCATION EAGLE MT. S. (K-4 PIT. AREA)

	Run No. 1	Run No. 2	MUD	Run No. 1	Run No. 2
Date			Nature		
First Reading			Density		
Last Reading			Viscosity	@ °F	@ °F
Footage Logged			Resistivity	@ F	@ °F
Bottom (Driller)			Res. @ BHT	@ °F	@ °F
Casing (From Log)			pH		
Casing (Driller)			Circ. Temp.		
Casing Size			B.H. Temp.		
Bit Size					
Bit Size					
			Logged by K.A.K.		
			Witnessed by		

K-formline 76(319-1

REMARKS

* Reg. U.S. Pat. Off.

RE-RUN FOR DEEPENED HO

319

319

T59

ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.

COMPANY FORDING COAL LIMITED

WELL BH - 469

LOCATION BALMER MOUNTAIN

FIELD FORDING

PROVINCE BRITISH COLUMBIA

Permanent Datum GROUND LEVEL Elev.

Log Measured from KELLY BUSHING Ft. Above Perm. Datum

Drilling Measured from GROUND LEVEL

K.B.

D.F.

G.L.

Other Services

319

Recorded By	JOHNSON	Run No.	ONE
Witnessed By	TAYLOR	Date	8 OCTOBER 1976
		Depth-Driller	477
		Depth-Logger	477
		Bottom Logged Interval	0
		Top Logged Interval	477
		Casing-Driller	477
		Casing-Logger	477
		Bit Size	4 7/8
		Type Fluid in Hole	WATER
		Salinity, PPM Cl	
		Density	
		Level	FULL
		Max. Recorded Temp.	
		Estimated Temp.	
		Source of Sample	
		Rm @ Meas. Temp.	
		Rmf @ Meas. Temp.	
		Rmc @ Meas. Temp.	
		Source of Rmf and Rmc	
		Rm @ BHT	
		Time Since Circ.	
		Max. Rec. Temp.	
		Equip. Location	
		Recorded By	
		Witnessed By	
Operating Time From No.	1 1/2 HOURS		
	31		

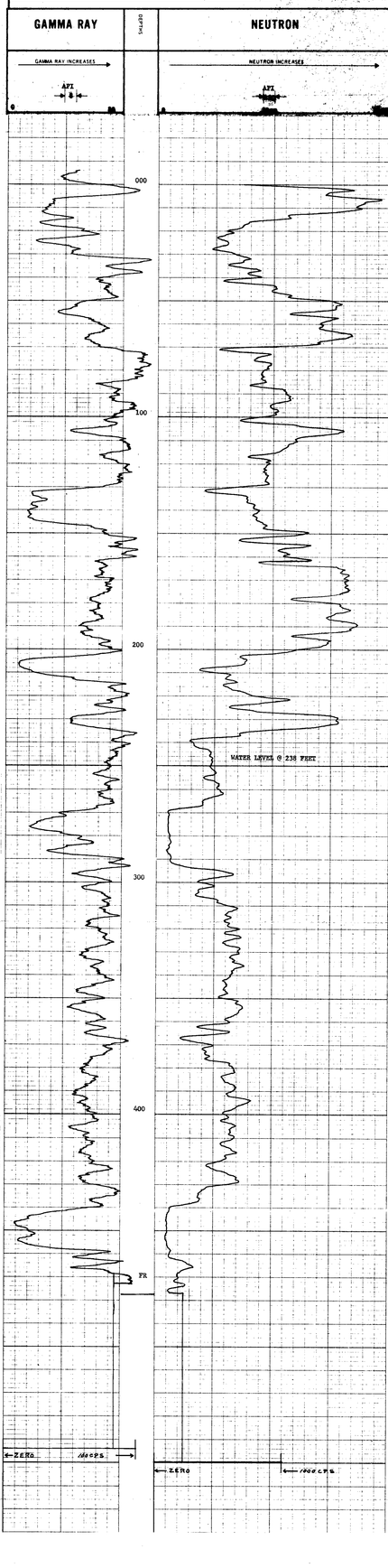
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO	ONE	RUN NO	ONE
TOOL MODEL NO		LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO	
DETECTOR MODEL NO		DIAMETER	1 11/16
TYPE	SCINTILLATION	DETECTOR MODEL NO	
LENGTH	4 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	6.7 FT	LENGTH	6 INCH
		SOURCE MODEL NO	MRC-N-89-W
GENERAL		SERIAL NO	187
HOIST TRUCK NO	33	SPACING	17 INCH
INSTRUMENT TRUCK NO		TYPE	AmBe
TOOL SERIAL NO	[illegible] 469-002	STRENGTH	3 Curies

LOGGING DATA

GENERAL			GAMMA RAY					NEUTRON				
RUN NO	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T C SEC	SENS SETTINGS	ZERO DIV. L OR R	API G.R. UNITS PER LOG DIV	T C SEC	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV
1	0	477	12	5	100	0 L	8	3	500	0 L	120

REMARKS: LOGGED THROUGH DOUBLE WALL DRILL STEM



MARKED

ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO. 319

COMPANY FORDING COAL LIMITED

WELL RH-463

LOCATION EAGLE PROJ.

FIELD FORDING

PROVINCE BRITISH COLUMBIA

Permanent Datum: GROUND LEVEL — Elev. 0

Log Measured from: GROUND LEVEL — Ft. Above Perm. Datum

Other Services: —

Recorded By: JOHNSON

Witnessed By: MARLIN

	Run No.	ONE
	Date	1 OCT 1976
	First Reading	450
	Last Reading	0
	Depth Reached	455
	Depth Driller	455
	Depth Logger	455
	Casing Driller	
	Casing Logger	
	Fluid Type	DRY WATER
	Liquid Level	334
	Max. Temp.	4°5K
	Rm. @ °F	
	Operators Time	1 HOUR
	Truck No.	33

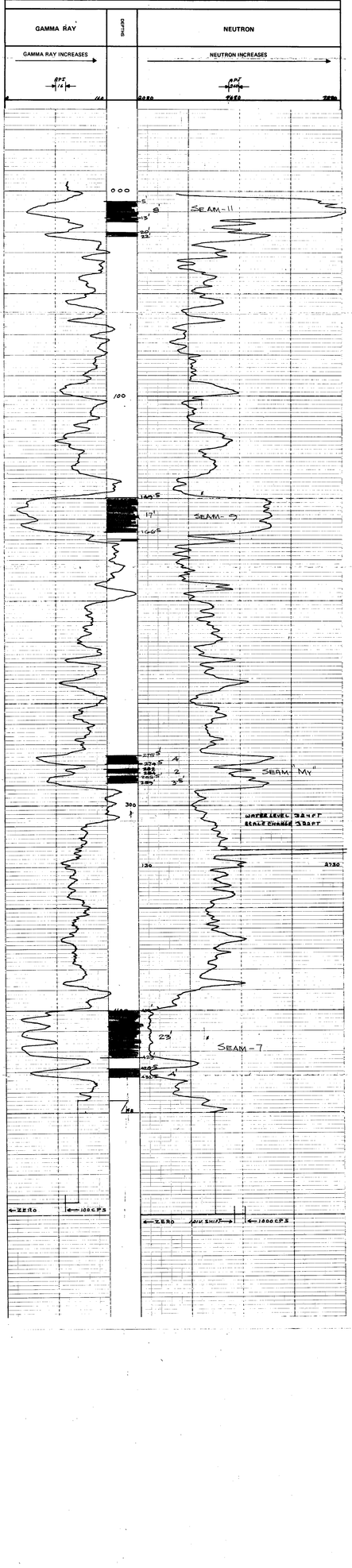
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.		LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO.	
DETECTOR MODEL NO.		DIAMETER	1 11/16
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	4 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	6.7 FT.	LENGTH	6 INCH
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	187
HOIST TRUCK NO.	33	SPACING	17 INCH
INSTRUMENT TRUCK NO.		TYPE	AmBe
TOOL SERIAL NO.	R GRN 169-002	STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	0	322	12	5	100	04	10 API	3	1000	8L	200 API
	322	458	12	5	100	04	10 API	3	500	1L	100 API

REMARKS



ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.

LSD SEC TWP RGE W. ____ M

COMPANY FORDING COAL LIMITED

WELL RN-HM 319

LOCATION EAGLE MTN

FIELD FORDING

PROVINCE BRITISH COLUMBIA

Permanent Datum: GROUND LEVEL Elev.: K.B. ____ D.F. ____ G.L. ____

Log Measured from: GROUND LEVEL Ft. Above Perm. Datum

Other Services: CBL

Rec. No. ____

Date: 12 OCT 1976

Run No.: ONE

First Reading: 538

Last Reading: 0

Hole Record: 538

Depth Reached: 539

Casing Record: 541

Depth Driller: ____

Casing Driller: ____

Fluid Type: BAR/WATER

Liquid Level: 325

Mud Chem.: 4 1/2

Rm @ Rf: ____

Operating Time: 1 HOUR

Truck No.: 33

Recorded By: JOHNSON

Witnessed By: RAIGNAULT

EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.		LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO.	
DETECTOR MODEL NO.		DIAMETER	1 11/16
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	4 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	6.7 FT.	LENGTH	6 INCH
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	187
HOIST TRUCK NO.	33	SPACING	17 INCH
INSTRUMENT TRUCK NO.		TYPE	AmBe
TOOL SERIAL NO.	R GRN 169-002	STRENGTH	3 CURIES

LOGGING DATA

GENERAL			GAMMA RAY					NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	0	223	12	5	100	0 L	15 API	3	1000	8 L	260 API
	223	538	12	5	100	0 L	15 API	3	500	1 L	130 API

REMARKS

GAMMA RAY | DEPTHS | NEUTRON

GAMMA RAY INCREASES → 0 … 150

NEUTRON INCREASES → 2850 … 3230

WATER LEVEL 325 FT.
SCALE CHANGE 323 FT

ZERO ← 100 C.P.S.

ZERO ← 100 C.P.S.

ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

K. Fernandes 76/5/21

LSD SEC TWP RGE M | FILE NO

COMPANY FORDING COAL LIMITED

WELL HH 465

LOCATION EAGLE MOUNTAIN

FIELD FORDING

PROVINCE BRITISH COLUMBIA

Permanent Datum: GROUND LEVEL — Elev.

Log Measured from: TOP OF CASING — 30 ft Above Perm. Datum

Drilling Measured from: GROUND LEVEL — K.B. / D.F. / G.L.

Other Services: NONE

Recorded By	CARLSON
Witnessed By	SHAW
Truck No.	
Operating Time	
Run No.	ONE
Date	16 OCTOBER 1976
Depth Driller	584
Last Reading	0
Footage Logged	584
Depth Recorded	584
Depth Blanked	585
Casing Size	585
Casing Driller	
Casing Logger	
Fluid Type	FRESH WATER
Fluid Level	294
Max. Recorded Temperature	4 7/8

Run No.	Bit From	Bit To	Size	Type	Fluid in Hole	Density	Viscosity	pH	Fluid Loss	Source of Sample	R @ Meas. Temp.	@ °F	R @ Meas. Temp.	@ °F	R @ Meas. Temp.	@ °F
1	0	584														

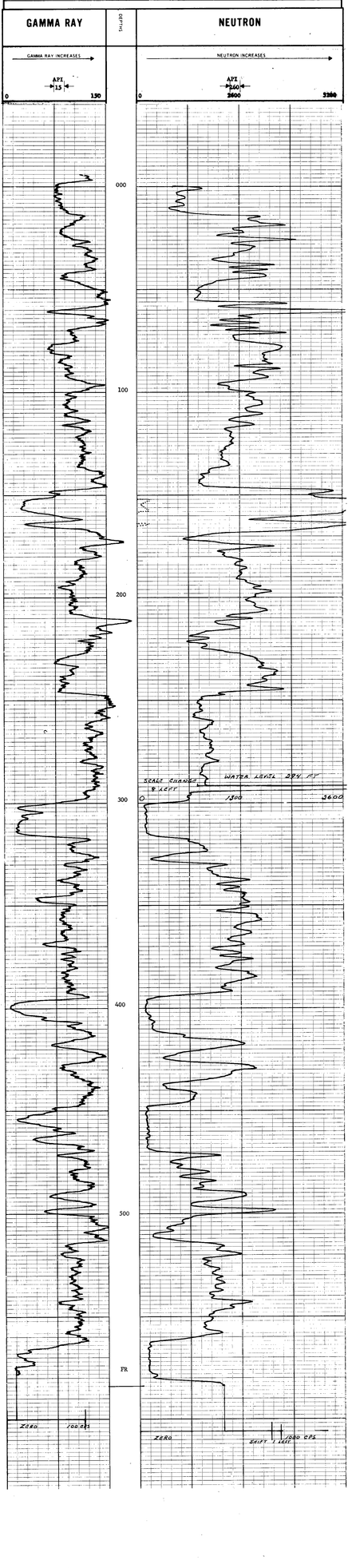
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO	ONE	RUN NO	ONE
TOOL MODEL NO		LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO	
DETECTOR MODEL NO		DIAMETER	1 11/16
TYPE	SCINTILLATION	DETECTOR MODEL NO	
LENGTH	16 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	6.7 FT	LENGTH	6 INCH
GENERAL		SOURCE MODEL NO	MRC-N-SS-W
HOIST TRUCK NO		SERIAL NO	265
INSTRUMENT TRUCK NO	36	SPACING	17 INCH
TOOL SERIAL NO	125-002	TYPE	AmBe
		STRENGTH	3 Curies

LOGGING DATA

RUN NO	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	GAMMA RAY T C SEC	GAMMA RAY SENS SETTINGS	GAMMA RAY ZERO DIV. L OR R	GAMMA RAY API G R UNITS PER LOG DIV	NEUTRON T C SEC	NEUTRON SENS SETTINGS	NEUTRON ZERO DIV. L OR R	NEUTRON API N UNITS PER LOG DIV
1	0	292	12	4	100	0	15	3	1000	8 L	260
	292	584	12	4	100	0	15	3	500	1 L	130

REMARKS



ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.

LOG SEC TWP RGE M

COMPANY: ROKE OILS LIMITED

WELL: WR - 446

LOCATION: BEAVER MOUNTAIN

FIELD: PEMBINA

PROVINCE: BRITISH COLUMBIA

Permanent Datum: GROUND LEVEL — Elev.: 2375

Log Measured from: GROUND LEVEL — 16 FT. Above Perm. Datum

Drilling Measured from: KELLY BUSHING — K.B.

Date: 14 OCTOBER 1976

Run No.: ONE

Depth Driller: 580

Depth Logger: 580

Bottom Logged Interval: 580

Top Logged Interval: SURFACE

Casing Driller: 8 5/8 @ 36

Casing Logger: 8 5/8 @ 36

Bit Size: 7 7/8

Type Fluid in Hole: AIR/WATER

Dens. Visc.:

pH: Fluid Loss:

Source of Sample:

Rm @ Meas. Temp.: @ °F

Rmf @ Meas. Temp.: @ °F

Rmc @ Meas. Temp.: @ °F

Source of Rmf & Rmc:

Rm @ BHT: @ °F

Time Since Circ.: 3 HOURS

Max. Rec. Temp. Deg. F: 90°F

Equip. Location: MOOSE

Recorded By: CARLSON

Witnessed By: ROKE

Operating Time: 1 HOUR

Truck No.: 36

3/9

K. Roke 76-1

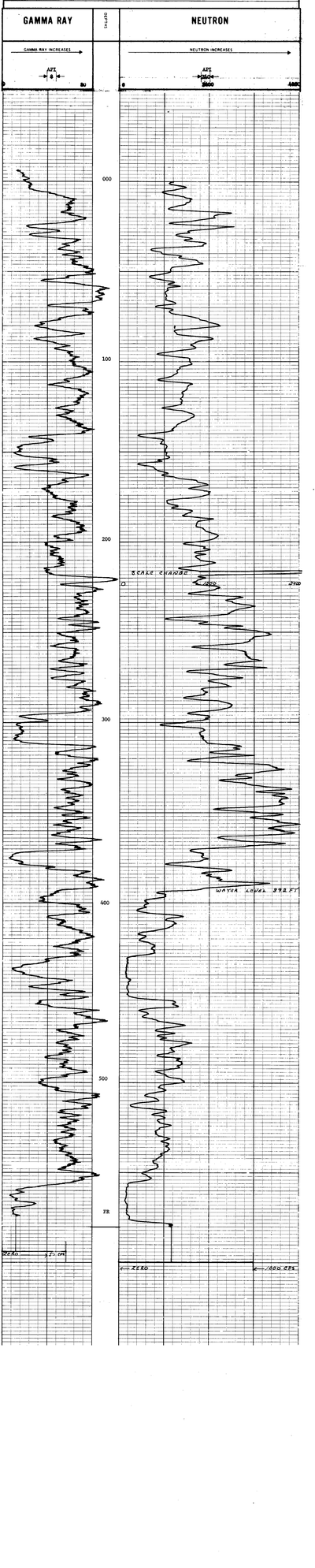
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO		LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO	
DETECTOR MODEL NO		DIAMETER	1 11/16
TYPE	SCINTILLATION	DETECTOR MODEL NO	
LENGTH	4 INCH	TYPE	PROPORTIONAL
DISTANCE TO N SOURCE	6.7 FT	LENGTH	6 INCH
GENERAL		SOURCE MODEL NO	MRC-N-88-W
HOIST TRUCK NO	36	SERIAL NO	265
INSTRUMENT TRUCK NO		SPACING	15 INCH
TOOL SERIAL NO	125-002	TYPE	Amble
		STRENGTH	3 Curies

LOGGING DATA

GENERAL			GAMMA RAY				NEUTRON			
RUN NO	DEPTHS FROM	DEPTHS TO	SPEED F/MIN	T.C. SEC	SENS SETTINGS	ZERO DIV. L OR R	API G.R. UNITS PER LOG DIV.	T.C. SEC	SENS SETTING	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	0	216	12	4	100	0	8	3	1800	0	240
	216	580	12	4	100	0	8	3	500	0	120

REMARKS: LOGGED THROUGH DOUBLE WALL DRILL STEM



Widco* WELL LOG

COMPANY K-[illegible] Inc. (3)

WELL RH 467

LOCATION EAGLE MT. W. FACE

COMPANY

AREA EAGLE MT. WEST FACE

WELL RH 467

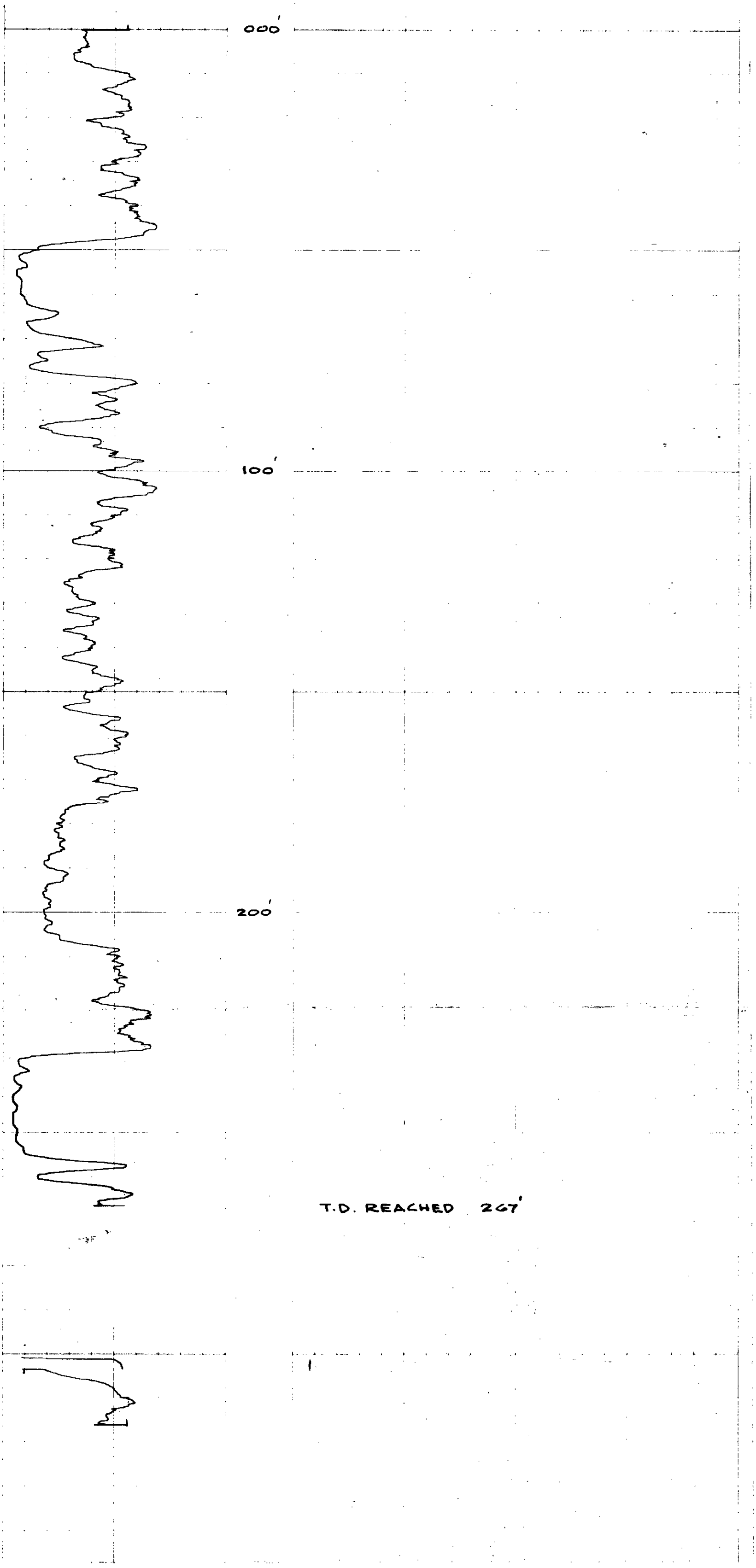
COUNTY STATE

319

COORDINATES:
N
S
ELEVATION 52
D F
K B
G L

	Run No. 1	Run No. 2	MUD	Run No. 1	Run No. 2
Date			Nature		
First Reading			Density		
Last Reading			Viscosity	@ F	@ F
Footage Logged			Resistivity	@ F	@ F
Bottom (Driller)			Res @ BHT	@ F	@ F
Casing (From Log)			pH		
Casing (Driller)			Circ Temp		
Casing Size			B H Temp		
Bit Size					
Bit Size					
			Logged by	K.A.K.	
			Witnessed by		

REMARKS 14 A.P.I. OCT. 5 '76
LOGGED THROUGH DRILL PIPE



T.D. REACHED 267'

ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

K. Beattie 74/8/21

FILE NO.

COMPANY ROBERTS COAL LIMITED

WELL # 468

LOCATION EAGLE MOUNTAIN

FIELD FERNIE

PROVINCE BRITISH COLUMBIA

Permanent Datum GROUND LEVEL Elev. 0

Log Measured from GROUND LEVEL 0 Ft. Above Perm. Datum

Drlg. Measured from GROUND LEVEL

Other Services: NIL

LSD SEC TWP RGE W ____ M

319

Run No. ONE

Date 4 OCTOBER 1976

First Reading 398

Last Reading 0

Footage Logged 398

Depth Reached 399

Depth Driller 399

Casing Driller 400

Casing Weight

Fluid Type AIR/WATER

Liquid Level 158

Max. Diam. 4 7/8

Min. Diam.

Operating Time

Truck No. 2 HOURS 32

Recorded By GISBAU

Witnessed By TAPLIN

EQUIPMENT DATA

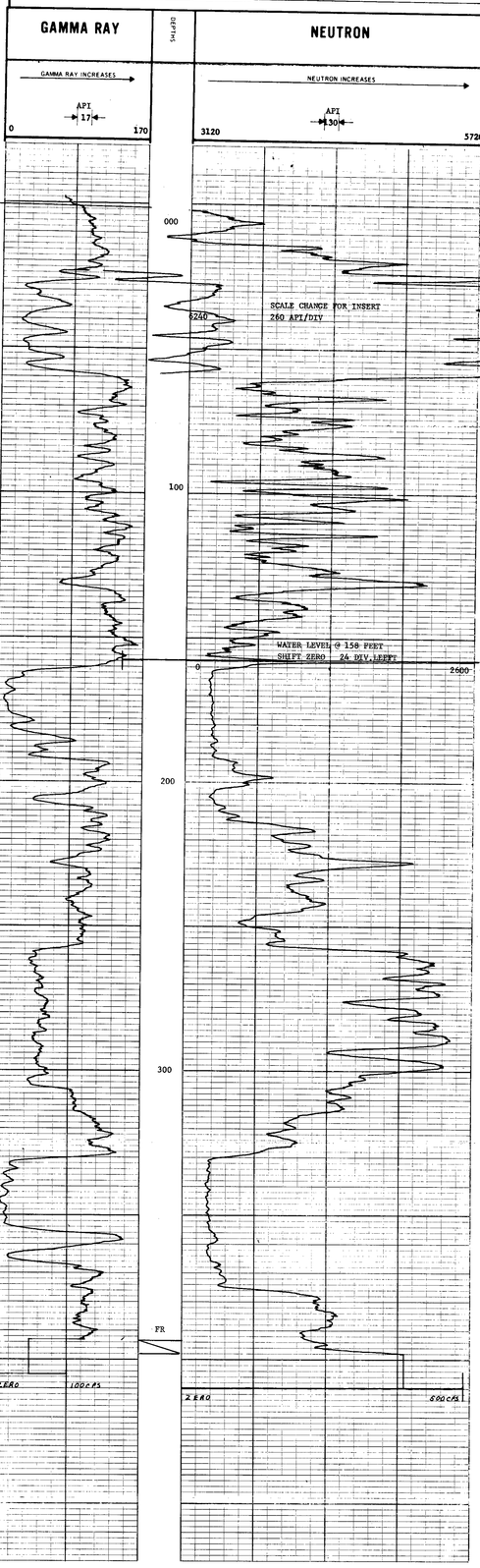
GAMMA RAY		NEUTRON	
RUN NO	ONE	RUN NO	ONE
TOOL MODEL NO		LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO	
DETECTOR MODEL NO		DIAMETER	1 11/16
TYPE	SCINTILLATION	DETECTOR MODEL NO	
LENGTH	4 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	5.4 FT	LENGTH	6 INCH
		SOURCE MODEL NO	MRC-N-SS-W
		SERIAL NO	171
		SPACING	17 INCH
		TYPE	AmBe
		STRENGTH	3 Curies

GENERAL	
HOIST TRUCK NO	32
INSTRUMENT TRUCK NO	32
TOOL SERIAL NO	340

LOGGING DATA

RUN NO	GENERAL DEPTHS FROM	GENERAL DEPTHS TO	SPEED FT/MIN	GAMMA RAY T C SEC	GAMMA RAY SENS SETTINGS	GAMMA RAY ZERO DIV L OR R	GAMMA RAY API/G R UNITS PER LOG DIV	NEUTRON T C SEC	NEUTRON SENS SETTINGS	NEUTRON ZERO DIV L OR R	NEUTRON API/N UNITS PER LOG DIV
1	0	158	12	5	100	0	17	3	500	24 L	130
	158	398	12	5	100	0	17	3	500	0	130

REMARKS



K-FORDING 76(3)A-1

ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.	COMPANY FORDING COAL LIMITED		
LSD	WELL # 469	319	
SEC			
TWP			
RGE	LOCATION EAGLE MOUNTAIN		
W M	FIELD FORDING		Other Services:
	PROVINCE BRITISH COLUMBIA		NIL
Permanent Datum GROUND LEVEL		Elev.	K.B.
Log Measured from GROUND LEVEL		Ft. Above Perm. Datum	CSG
Well Depths Measured from GROUND LEVEL			G.L.

Run. No.	ONE			
Date	4 OCTOBER 1976			
First Reading	175			
Last Reading	0			
Footage Logged	175			
Depth Reached	176			
Depth Driller	180			
Casing Roke				
Casing Driller				
Fluid Type	AIR			
Liquid Level				
Min. Diam.	4 7/8			
Operating Time	1 HOUR			
Truck No.	32			
Recorded By GIBEAU		Witnessed By TAPLIN		

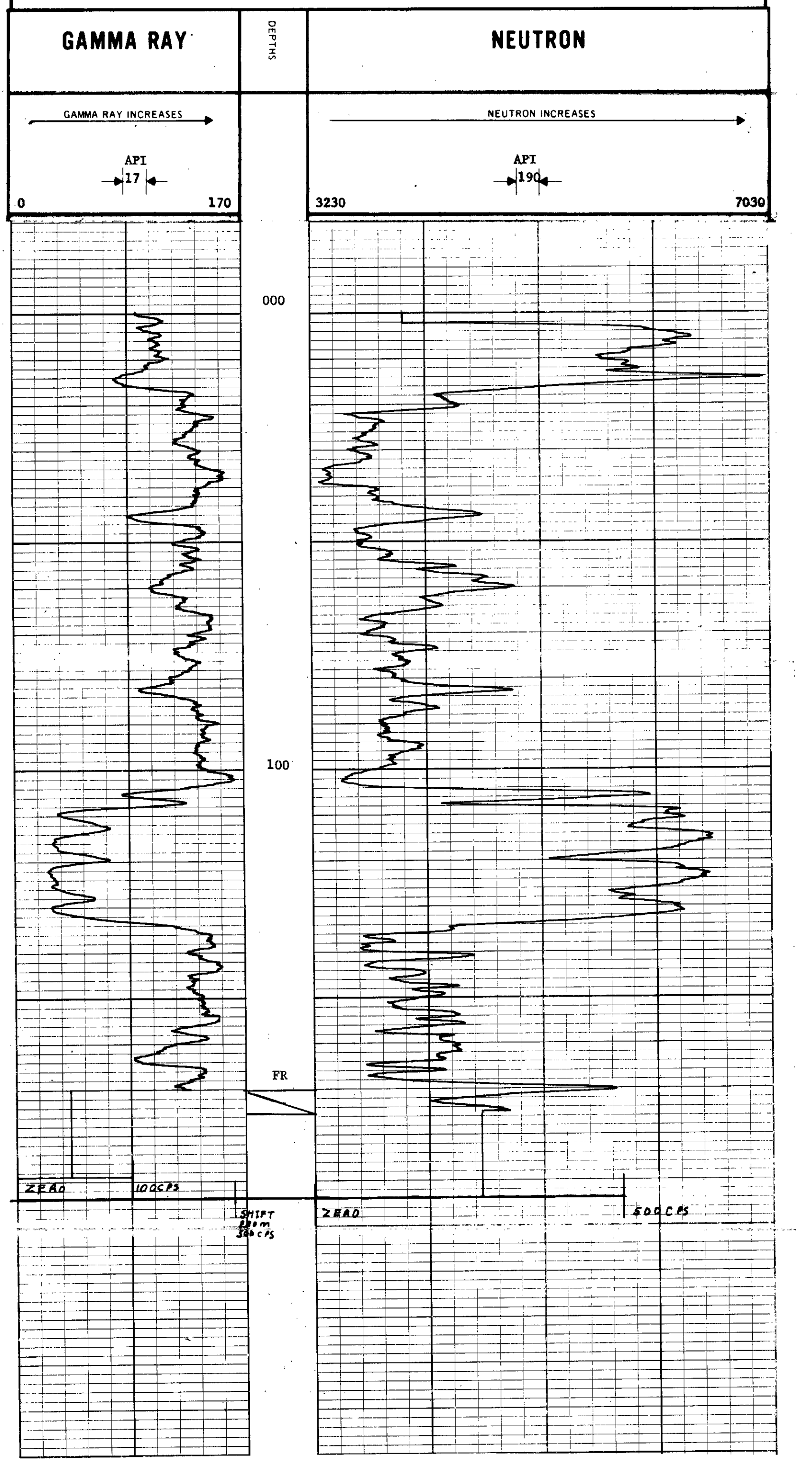
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO	ONE	RUN NO	ONE
TOOL MODEL NO		LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO	
DETECTOR MODEL NO		DIAMETER	1 11/16
TYPE	SCINTILLATION	DETECTOR MODEL NO	
LENGTH	4 INCH	TYPE	PROPORTIONAL
DISTANCE TO N SOURCE	5.5 FT	LENGTH	6 INCH
		SOURCE MODEL NO	MRC-N-SS-W
GENERAL		SERIAL NO	171
HOIST TRUCK NO	32	SPACING	17 INCH
INSTRUMENT TRUCK NO	32	TYPE	AmBe
TOOL SERIAL NO	340	STRENGTH	3 Curies

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T C SEC	SENS SETTINGS	ZERO DIV L OR R	API G R UNITS PER LOG DIV	T C SEC	SENS SETTINGS	ZERO DIV L OR R	API N UNITS PER LOG DIV
1	0	175	12	5	100	0	17	3	500	17 L	190

REMARKS



ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

FILE NO. 319

COMPANY PRINCE RAIL LIMITED

WELL No. 469 - A

LOCATION PEACE MOUNTAIN

FIELD WILDCAT

PROVINCE BRITISH COLUMBIA

Permanent Datum: GROUND LEVEL — Elev. —

Log Measured from: GROUND LEVEL — Ft. Above Perm. Datum

Drilling Measured from: ROKE

K.B. —

D.F. —

G.L. —

Run No. ONE

Date 7 OCTOBER 1976

Depth Driller 520

Depth Logger 0

Bottom Logged Interval 520

Top Logged Interval 320

Casing Driller 7" @ 320

Casing Logger 7" @ 320

Bit Size 6 1/4"

Type Fluid in Hole WELL

Salinity, PPM Cl —

Density, Lb/Gal —

Max. Rec. Temp. —

Operating Time —

Truck No. 33

Recorded By JACKSON

Witnessed By MACDONALD

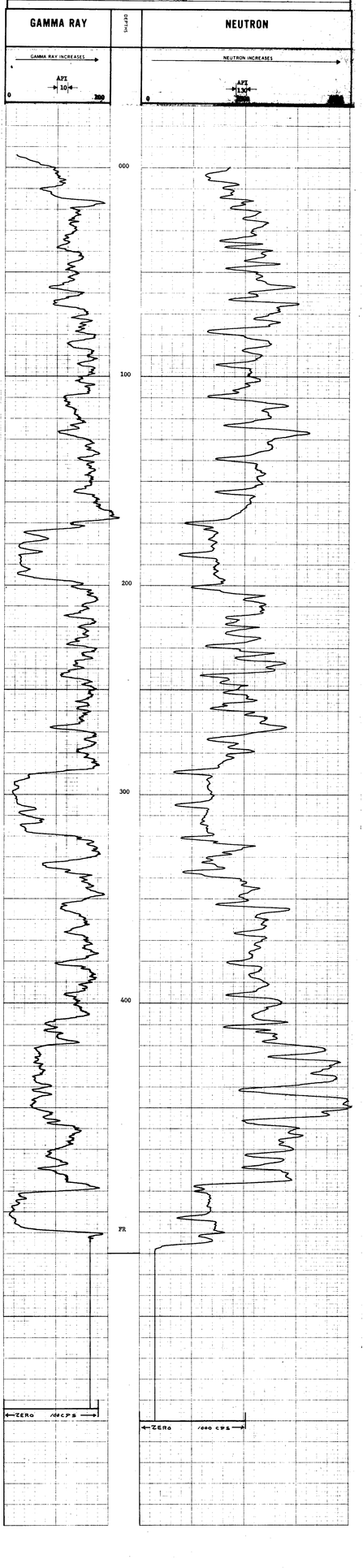
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO	ONE	RUN NO	ONE
TOOL MODEL NO		LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO	
DETECTOR MODEL NO		DIAMETER	1 11/16
TYPE	SCINTILLATION	DETECTOR MODEL NO	
LENGTH	4 INCH	TYPE	PROPORTIONAL
DISTANCE TO N SOURCE	6.7 FT	LENGTH	6 INCH
GENERAL		SOURCE MODEL NO	MRC-N-SS-W
HOIST TRUCK NO	33	SERIAL NO	187
INSTRUMENT TRUCK NO		SPACING	17 INCH
TOOL SERIAL NO	R GRN 169-002	TYPE	AmBe
		STRENGTH	3 Curies

LOGGING DATA

GENERAL			GAMMA RAY			NEUTRON		
RUN NO	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC	SENS SETTINGS	ZERO DIV. L OR R	API/GR UNITS PER LOG DIV	T.C. SEC	SENS SETTINGS	ZERO DIV. L OR R	API/N UNITS PER LOG DIV
1	0	520	12	5	100	0 L	10	3	500	0 L	150

REMARKS LOGGED THROUGH DOUBLE WALL DRILL STEM



ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.

LSD SEC TWP RGE W.M.

COMPANY PEMBINA OIL ATHABASCA

WELL HR - 670

LOCATION DAVIS NORTHERN

FIELD PEMBINA

PROVINCE ALBERTA COMPANY

GROUND LEVEL (G.L.)

Elevations: K.B. D.F. G.L.

Log Measured from GROUND LEVEL

Drilling Measured from KELLY BUSHING

Permanent Datum GROUND LEVEL

Elev.: K.B. D.F. G.L.

Other Services: NONE

Date 20 OCTOBER 1974

Run No. ONE

First Reading 553

Last Reading 0

Feet Logged 553

Depth Reached 556

Depth Driller 555

Casing Size 5½"

Casing Depth 555

Fluid Type AIR/WATER

Liquid Level 201

Max. Recorded Temp. 4 778

Operating Time

Truck No. 33

Recorded By JOHNSON

Witnessed By DAIGNAULT

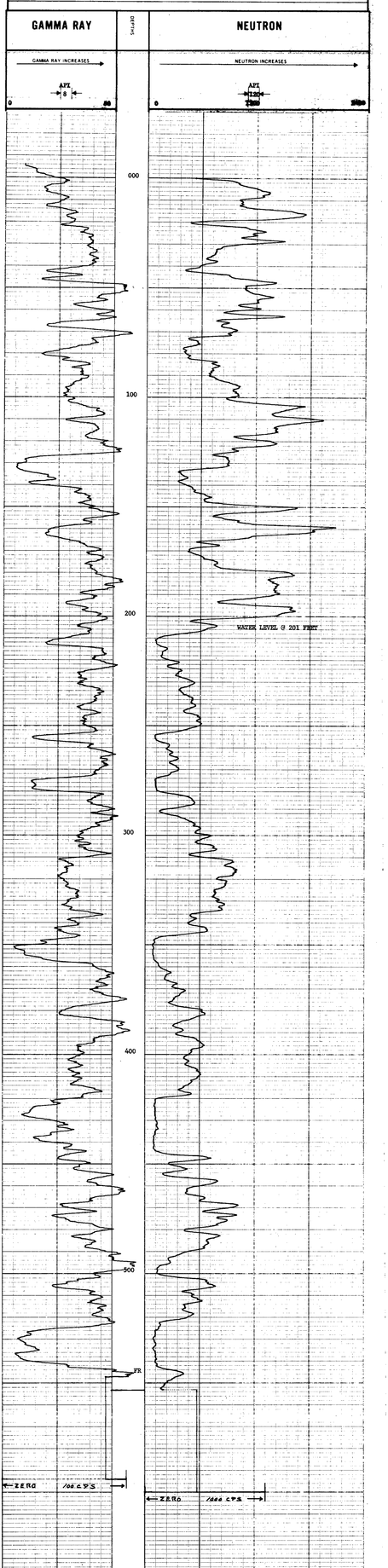
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO	ONE	RUN NO	ONE
TOOL MODEL NO		LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO	
DETECTOR MODEL NO		DIAMETER	1 11/16
TYPE	SCINTILLATION	DETECTOR MODEL NO	
LENGTH	4INCH	TYPE	PROPORTIONAL
DISTANCE TO N SOURCE	6.7 FT	LENGTH	6 INCH
		SOURCE MODEL NO	MRC-N-SS-W
GENERAL		SERIAL NO	187
HOIST TRUCK NO	33	SPACING	17 INCH
INSTRUMENT TRUCK NO		TYPE	AmBe
TOOL SERIAL NO	2 CSW 169-002	STRENGTH	3 Curies

LOGGING DATA

GENERAL			GAMMA RAY				NEUTRON			
RUN NO	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC	SENS SETTINGS	ZERO DIV. L OR R	API G.R. UNITS PER LOG DIV	T.C. SEC	SENS SETTINGS	ZERO DIV. L OR R	API N UNITS PER LOG DIV
1	0	553	12	5	100	0 L	8	3	500	0 L	100

REMARKS



ROKE

OIL SERVICES LTD.
CALGARY, ALBERTA

COMPANY PRAIRIE OWL LIMITED
WELL 08-25-031-05W4
FIELD LOCATION PRAIRIE OWL
COUNTY/PARISH BEAVER HILL
STATE/PROVINCE ALBERTA
SEC. TWP. RGE. 25 31 5W
PERMANENT DATUM GROUND LEVEL
ELEV. K.B. 1975
D.F. G.L. 1971
Date 1-3-83
Run No. ONE
Depth-Driller 1200
Depth-Logger 1200
Bottom Logged Interval 1200
Top Logged Interval SURFACE
Type Fluid in Hole WATER
Salinity, PPM Cl 1000
Density 8.4
Level FULL
Max. Rec. Temp. 90 DEG F
Equipment No. 319
Recorded By BRIAN
Witnessed By BRIAN

EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.		LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO.	
DETECTOR MODEL NO.		DIAMETER	1 11/16
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	6 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	5.5 FT.	LENGTH	6 INCH
GENERAL		SOURCE MODEL NO.	MRC-N-55-W
HOIST TRUCK NO.	32	SERIAL NO.	171
INSTRUMENT TRUCK NO.		SPACING	17 INCH
TOOL SERIAL NO.	360	TYPE	AmBe
		STRENGTH	5 CURIES

LOGGING DATA

RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	GAMMA RAY SENS SETTING	GAMMA RAY ZERO DIV. L OR R	GAMMA RAY API G. R. UNITS PER LOG DIV	NEUTRON T.C. SEC.	NEUTRON SENS SETTING	NEUTRON ZERO DIV. L OR R	NEUTRON API N. UNITS PER LOG DIV
1	0	880	32	3	100	0	12	3	500	0	120
2	94	1216						3	1000	0	240

REMARKS LOGGED THROUGH NO UNITS ROD
NOT ABLE UNITS ROD

GAMMA RAY | DEPTH | NEUTRON

GAMMA RAY INCREASES → API 0 — 120

NEUTRON INCREASES → API 0 — 1200 — 2400

0
100
200
300
400
500
600
700
800

MAIN UP PASS 94 FT TO 1216 FT
AT 240 API/DIV NO UNITS

ZERO 100 CPS

ZERO 1000 CPS

ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.

COMPANY — FORDING COAL LIMITED

WELL — HR - 472

LOCATION — EAGLE MOUNTAIN

FIELD — FORDING

PROVINCE — BRITISH COLUMBIA

Permanent Datum: GROUND LEVEL — Elev. —
Log Measured from: KELLY BUSHING — Ft. Above Perm. Datum
Drilling Measured from: GROUND LEVEL — K.B. —
D.F. —
G.L. —

Other Services: NONE

SEC — TWP — RGE — M

319

Run No.	ONE
Date	20 OCTOBER 1976
Last Reading	555
First Reading	0
Footage Logged	555
Depth Drilled	556
Depth Driller	556
Depth Logged	
Casing Driller	
Casing Logged	
Bit Size	7 7/8
Fluid Type	AIR/WATER
Fluid Level	206
Max. Rec. Temp.	
Equip. Location	
Recorded By	JOHNSON
Witnessed By	SAUVAGEAU

Operating Time	
Truck No.	
	1 WEEK
	33

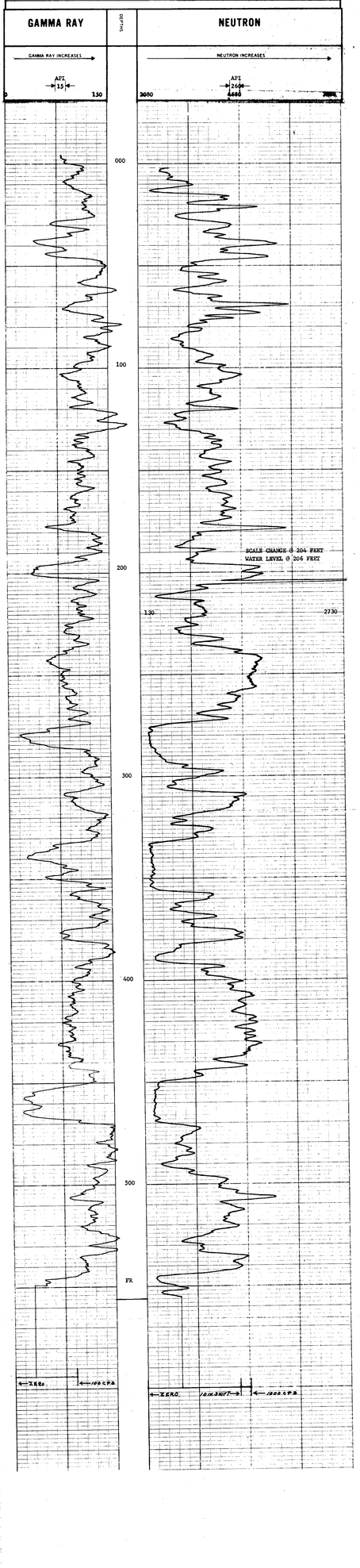
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO	ONE	RUN NO	ONE
TOOL MODEL NO		LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO	
DETECTOR MODEL NO		DIAMETER	1 11/16
TYPE	SCINTILLATION	DETECTOR MODEL NO	
LENGTH	4 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	6.7 FT	LENGTH	6 INCH
		SOURCE MODEL NO	MRC-N-SS-W
GENERAL		SERIAL NO	187
HOIST TRUCK NO	33	SPACING	17 INCH
INSTRUMENT TRUCK NO		TYPE	AmBe
TOOL SERIAL NO	R GRN 169-002	STRENGTH	3 Curies

LOGGING DATA

RUN NO	GENERAL DEPTHS FROM	TO	SPEED FT/MN	GAMMA RAY T-C SEC	SENS SETTINGS	ZERO DIV. L OR R	API G.R. UNITS PER LOG DIV.	NEUTRON T-C SEC	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	0	204	12	5	100	0 L	15	3	1000	8 L	260
	204	555	12	5	100	0 L	15	3	500	1 L	130

REMARKS



Widco WELL LOG

COMPANY: _____

AREA: EAGLE MT. (NO-NAME GULCH AREA)

WELL: RH 47-2

COUNTY: _____ STATE: _____

319

COORDINATES:
N _____
S _____
ELEVATION:
D.F. _____
K.B. _____
G.L. _____

COMPANY _____
WELL RH 47-2
COUNTY EAGLE MT.
NO-NAME GULCH AREA

	Run No. 1	Run No. 2
Date		
First Reading		
Last Reading		
Footage Logged		
Bottom (Driller)		
Casing (From Log)		
Casing (Driller)		
Casing Size		
Bit Size		
Bit Size		

MUD	Run No. 1	Run No. 2
Nature		
Density		
Viscosity	@ °F	@ °F
Resistivity	@ °F	@ °F
Res. @ BHT	@ °F	@ °F
pH		
Circ. Temp.		
B.H. Temp.		
Logged by	RK	
Witnessed by		

REMARKS: 11 A.P.I. Logged through Drill pipe

000'

#13

100'

200' #12

#110

300'

#11

400'

#9

500'

T.D. REACHED. 555'

ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

FILE NO.

COMPANY ROKE OIL ENTERPRISES LTD. CALGARY, ALBERTA

WELL HR - 423

LOCATION EAGLE MOUNTAIN

FIELD

PROVINCE SASKATCHEWAN

Permanent Datum: GROUND LEVEL Elev. 3775 ft. Above Perm. Datum

Log Measured from: KELLY BUSHING Ft. Above Perm. Datum

Drilling Measured from: GROUND LEVEL

Other Services: NONE

LSD SEC TWP RGE W M

319

Recorded By: CAMERON

Witnessed By: SHAW

Run No.	ONE
Date	16 OCTOBER 1974
First Reading	3536
Last Reading	0
Logged Interval	3536
Depth Reached	3525
Casing Driller	
Casing Logged	
Fluid Type	SALT WATER
Fluid Level	2200
Max. Recorded Temp.	4 778
Operating Time	
Truck No.	36
	1 HOUR

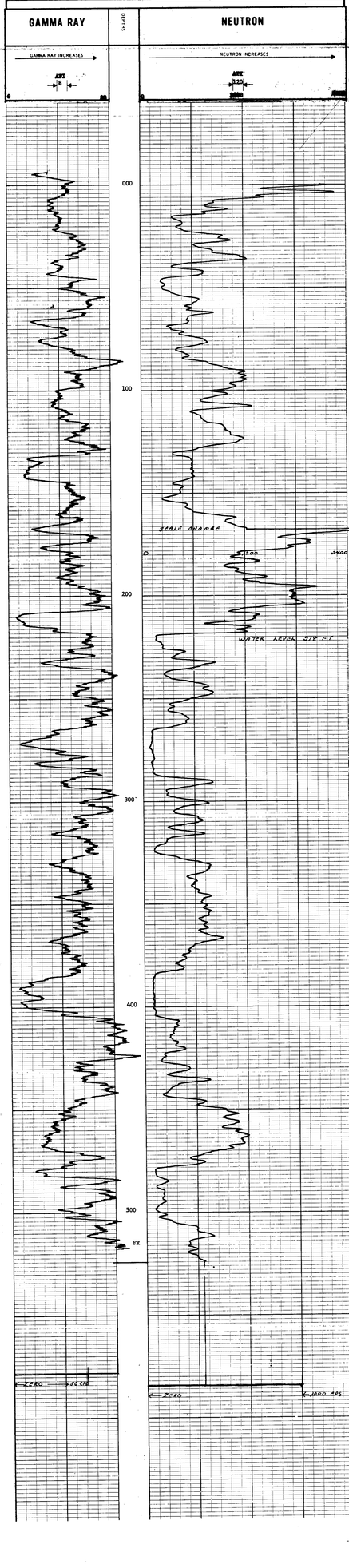
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO	ONE	RUN NO	ONE
TOOL MODEL NO		TOOL TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO	
DETECTOR MODEL NO		DIAMETER	2 11/16
TYPE	SCINTILLATION	DETECTOR MODEL NO	
LENGTH	4 INCH	TYPE	PROPORTIONAL
DISTANCE TO N SOURCE	6.7 FT	LENGTH	6 INCH
GENERAL		SOURCE MODEL NO	MNC-N-69-W
HOIST TRUCK NO		SERIAL NO	[illegible]
INSTRUMENT TRUCK NO	36	SPACING	18 INCH
TOOL SERIAL NO	125-982	TYPE	AmBe
		STRENGTH	3 Curies

LOGGING DATA

GENERAL					GAMMA RAY			NEUTRON			
RUN NO	DEPTHS FROM	DEPTHS TO	SPEED F/MIN	T C SEC	SENS SETTINGS	ZERO DIV. L OR R	API G R UNITS PER LOG DIV	T C SEC	SENS SETTINGS	ZERO DIV. L OR R	API N UNITS PER LOG DIV
3	0	168	12	4	100	0	8	3	1000	0	240
	168	524	12	4	100	0	8	3	500	0	120

REMARKS: LOGGED THROUGH DOUBLE WALL DRILL STEM



ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY VERIFICATION LOG

FILE NO. 319

SEC. TWP. RGE. M

COMPANY ROKE OIL LIMITED

WELL No. 2 - 423

LOCATION SASKATCHEWAN

FIELD PRIMROSE

PROVINCE SASKATCHEWAN

Permanent Datum: GROUND LEVEL — Elev.: K.B. ROKE

Log Measured from: TOP OF METAL RAD 3"PL — 6 Ft. Above Perm. Datum — G.L.

Drilled Measured from: GROUND LEVEL — CSG.

Date: 15 OCTOBER 1976

Run No.: ONE

Depth Driller: 524

Depth Logger: 524

Bottom Logged Interval: 524

Top Logged Interval: SURFACE

Casing Driller: 7" @ SURFACE

Casing Logger: 7" @ SURFACE

Bit Size: 6 1/4

Type Fluid in Hole: GEL CHEM

Max. Rec. Temp.: 75°F

Equipment No.: 319

Location: 2 - 423

Recorded By: CARLSON

Witnessed By: SHAW

Operating Time: 1 HOUR

Truck No.: 30

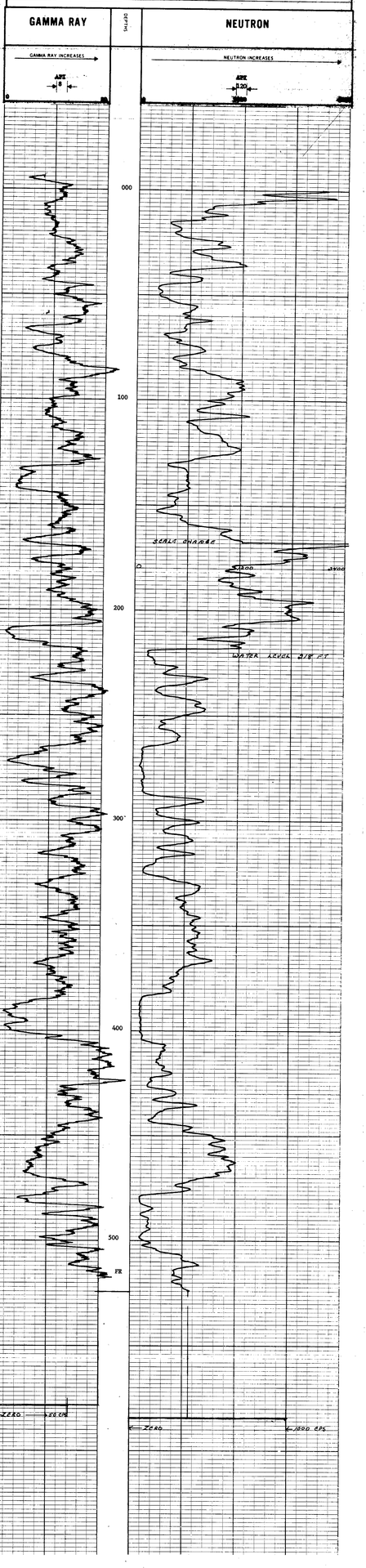
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO	ONE	RUN NO	ONE
TOOL MODEL NO		LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO	
DETECTOR MODEL NO		DIAMETER	2 11/16
TYPE	SCINTILLATION	DETECTOR MODEL NO	
LENGTH	4 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	6.7 FT	LENGTH	6 INCH
GENERAL		SOURCE MODEL NO	MRC-N-SS-W
HOIST TRUCK NO		SERIAL NO	301
INSTRUMENT TRUCK NO	30	SPACING	20 INCH
TOOL SERIAL NO	125-202	TYPE	AmBe
		STRENGTH	3 Curies

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T C SEC	SENS SETTINGS	ZERO DIV. L OR R	API G R UNITS PER LOG DIV	T C SEC	SENS SETTINGS	ZERO DIV. L OR R	API N UNITS PER LOG DIV
3	0	168	12	4	100	0	8	3	1000	0	160
	168	524	12	4	100	0	8	3	500	0	120

REMARKS: LOGGED THROUGH DOUBLE WALL DRILL STEM



ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

FILE NO.

COMPANY POMEROY COAL LIMITED

WELL BH - 876

LOCATION SASKA MOUNTAIN

FIELD POMEROY

PROVINCE BRITISH COLUMBIA

Permanent Datum GROUND LEVEL — Elev. —
Log Measured From GROUND LEVEL — Ft. Above Perm. Datum
Drilling Measured From GROUND LEVEL — G.L.

K.B. —
D.F. —
G.L. —

Other Services NONE

319

Recorded By JOHNSON

Witnessed By LAWLOR

Run No. ONE
Date Recorded 20 OCTOBER 1976
Last Reading 544
Footage Logged 544
Bottom Driller 544
Bottom Logger 550
Casing Size 30
Casing Driller 30 @ SURFACE
Casing Logger 390
Liquid Level 6.7/8
Max. Diam.

Operating Time 1 HOUR
Truck No. 33

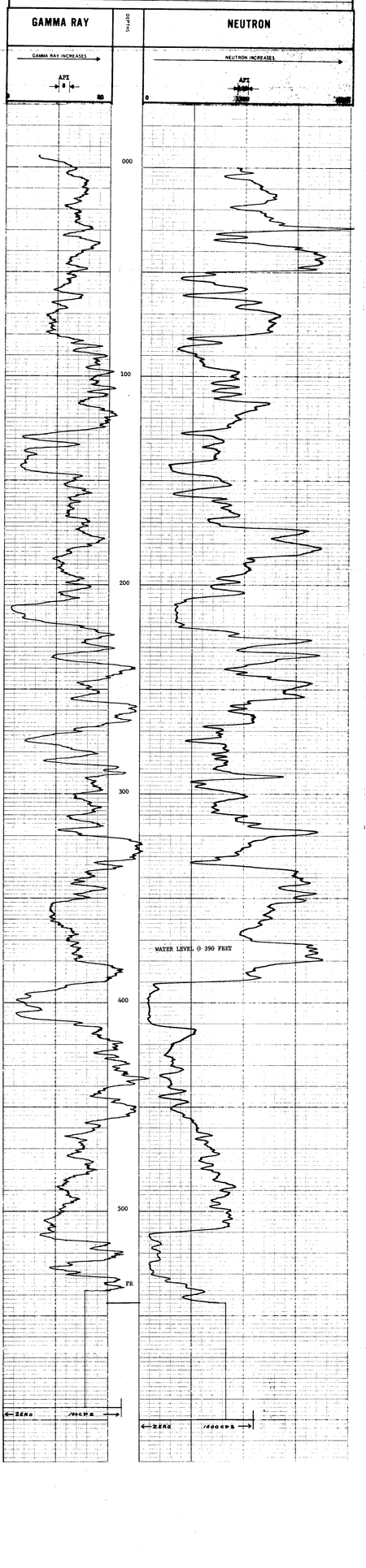
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO	ONE	RUN NO	ONE
TOOL MODEL NO		LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO	
DETECTOR MODEL NO		DIAMETER	1 11/16
TYPE	SCINTILLATION	DETECTOR MODEL NO	
LENGTH	4 INCH	TYPE	PROPORTIONAL
DISTANCE TO N SOURCE	6.7 FT	LENGTH	4 INCH
GENERAL		SOURCE MODEL NO	MRC-N-SS-W
		SERIAL NO	187
HOIST TRUCK NO	33	SPACING	- 17 INCH
INSTRUMENT TRUCK NO		TYPE	AmBe
TOOL SERIAL NO	R GRN 169-002	STRENGTH	3 Curies

LOGGING DATA

GENERAL			GAMMA RAY				NEUTRON			
RUN NO	DEPTHS FROM	DEPTHS TO	SPEED F/MIN	T C SEC	SENS SETTINGS	ZERO DIV. L OR R	API G R UNITS PER LOG DIV	T C SEC	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV
1	0	544	12	5	100	0 L	8	3	300	0 L	120

REMARKS LOGGED THROUGH DOUBLE WALL DRILL STEM



ROKE

OIL ENTERPRISES LTD.

GAMMA RAY NEUTRON LOG

FILE NO. K-GAL-GARY-76-2(3)-J

COMPANY: ROKE OIL LIMITED

WELL: BIG + 476

LOCATION: BAKER MOUNTAIN

FIELD: ROKING

PROVINCE: BRITISH COLUMBIA

Permanent Datum: GROUND LEVEL — Elev.: — Ft. Above Perm. Datum

Log Measured from: GROUND LEVEL — Ft. Above Perm. Datum

Drilling Measured from: GROUND LEVEL — Ft. Above Perm. Datum

Other Services: BOREHOLE COMPENSATED SONIC

Run No.	ONE
Date	20 OCTOBER 1976
Last Reading	0
Footage Logged	547
Depth Reached	547
Casing Size	10
Casing Driller	360
Casing Logger	360
Bit Size	9 7/8
Type Fluid in Hole	SALT WATER
Max. Dens.	
Operating Time	1 HOUR
Truck No.	33

Recorded By: JOHNSON

Witnessed By: TAYLOR

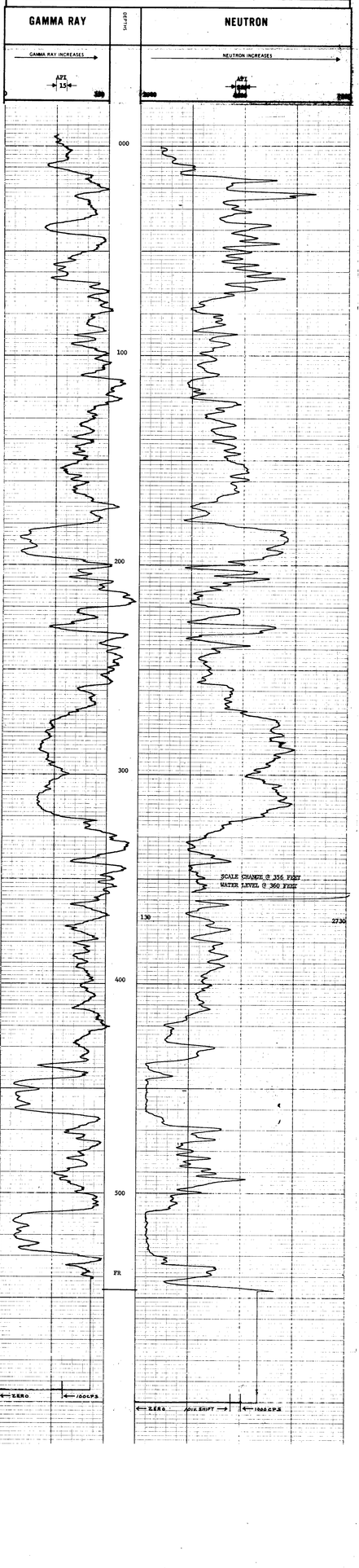
EQUIPMENT DATA

GAMMA RAY	ONE	NEUTRON	ONE
RUN NO		RUN NO	
TOOL MODEL NO		LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO	
DETECTOR MODEL NO		DIAMETER	1 11/16
TYPE	SCINTILLATION	DETECTOR MODEL NO	
LENGTH	4INCH	TYPE	PROPORTIONAL
DISTANCE TO N SOURCE	9.7 FT	LENGTH	6 INCH
		SOURCE MODEL NO	MRC-N-SS-W
GENERAL		SERIAL NO	187
HOIST TRUCK NO	33	SPACING	17 INCH
INSTRUMENT TRUCK NO		TYPE	AmBe
TOOL SERIAL NO	B GRN 169-002	STRENGTH	3 Curies

LOGGING DATA

GENERAL			GAMMA RAY			NEUTRON			
RUN NO	DEPTHS FROM	DEPTHS TO	SPEED F/MIN	T C SEC	SENS SETTINGS	ZERO DIV. L OR R	API G R UNITS PER LOG DIV	T C SEC	SENS SETTINGS	ZERO DIV. L OR R	API N UNITS PER LOG DIV
1	0	356	12	5	100	0 L	15	3	1000	8 L	260
	356	547	12	5	100	0 L	15	3	500	1 L	130

REMARKS



ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.

LSD SEC TWP RGE W M

COMPANY PIONEER GOLD LIMITED

WELL NO. 1 - 477

LOCATION PEACE MOUNTAIN

FIELD TORBITO

PROVINCE BRITISH COLUMBIA

Permanent Datum GROUND LEVEL Elev. 0

Log Measured From GROUND LEVEL 0 Ft. Above Perm. Datum

Drilling Measured From GROUND LEVEL

Other Services NONE

319

Recorded By JOHNSON

Witnessed By DALTONGUTZ

Run No.	ONE
Date	26 OCTOBER 1976
Depth-Driller	538
Depth-Logger	538
Bottom Logged Interval	538
Top Logged Interval	0
Casing-Driller	540
Casing-Logger	540
Bit Size	10"
Type Fluid in Hole	AIR/WATER
Level	253
Max. Recorded Temp.	4 778
Max. Diam.	
Operating Time	1 HOUR
Truck No.	33

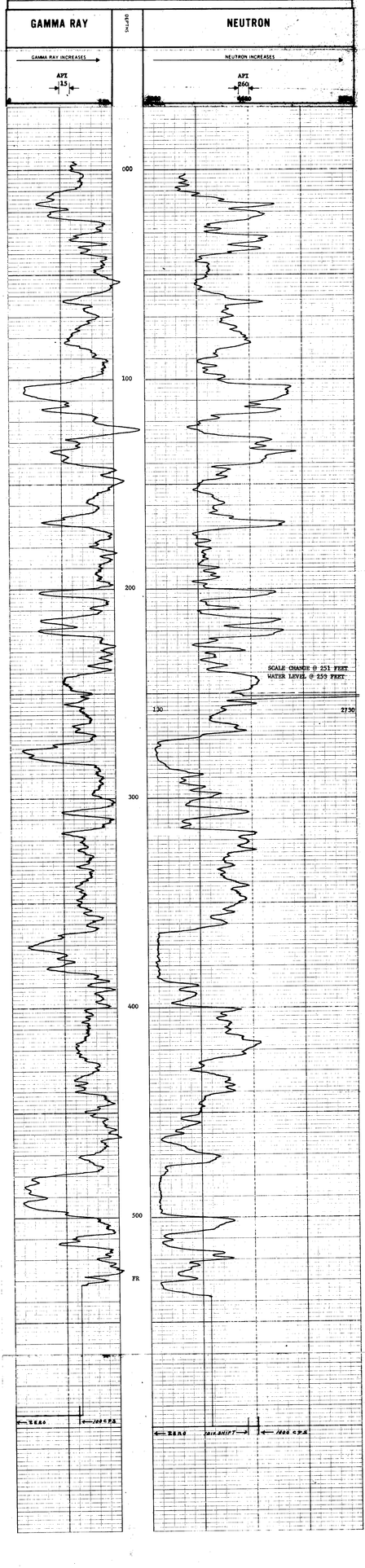
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO	ONE	RUN NO	ONE
TOOL MODEL NO		LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO	
DETECTOR MODEL NO		DIAMETER	1 11/16
TYPE	SCINTILLATION	DETECTOR MODEL NO	
LENGTH	4 INCH	TYPE	PROPORTIONAL
DISTANCE TO N SOURCE	6.7 FT	LENGTH	6 INCH
		SOURCE MODEL NO	MRC-N-SS-W
GENERAL		SERIAL NO	187
HOIST TRUCK NO	33	SPACING	17 INCH
INSTRUMENT TRUCK NO		TYPE	AmBe
TOOL SERIAL NO	R GRN 169-002	STRENGTH	3 Curies

LOGGING DATA

GENERAL RUN NO	DEPTHS FROM	DEPTHS TO	SPEED F/MIN	GAMMA RAY T C SEC	GAMMA RAY SENS SETTINGS	GAMMA RAY ZERO DIV. L OR R	GAMMA RAY API G R UNITS PER LOG DIV	NEUTRON T C SEC	NEUTRON SENS SETTINGS	NEUTRON ZERO DIV. L OR R	NEUTRON API N UNITS PER LOG DIV
1	0	251	12	5	100	0 L	15	3	1000	8 L	260
	251	538	12	5	100	0 L	15	3	500	1 L	130

REMARKS



ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.

COMPANY: TRIDENT OIL LIMITED

WELL: 88 - 429

LOCATION: EAGLE MOUNTAIN

FIELD: PEACE

PROVINCE: BRITISH COLUMBIA

Other Services: NONE

Permanent Datum: GROUND LEVEL — Elev.

Log Measured from: GROUND LEVEL — 6 Ft. Above Perm. Datum

Drill Depth Measured from: GROUND LEVEL — Elev.: K.B. / D.F. / G.L.

LSD / SEC / TWP / RGE / M

319

Recorded By: JOHNSON

Witnessed By: MACDONALD

Run No.	ONE
Date	26 OCTOBER 1976
First Reading	379
Last Reading	0
Footage Logged	379
Depth Driller	380
Depth Logger	
Casing Driller	10
Casing Logger	
Fluid Type	AIR/WATER
Liquid Level	212
Max. Hole Diam.	4 7/8
Operating Time	1 HOUR
Truck No.	33 -

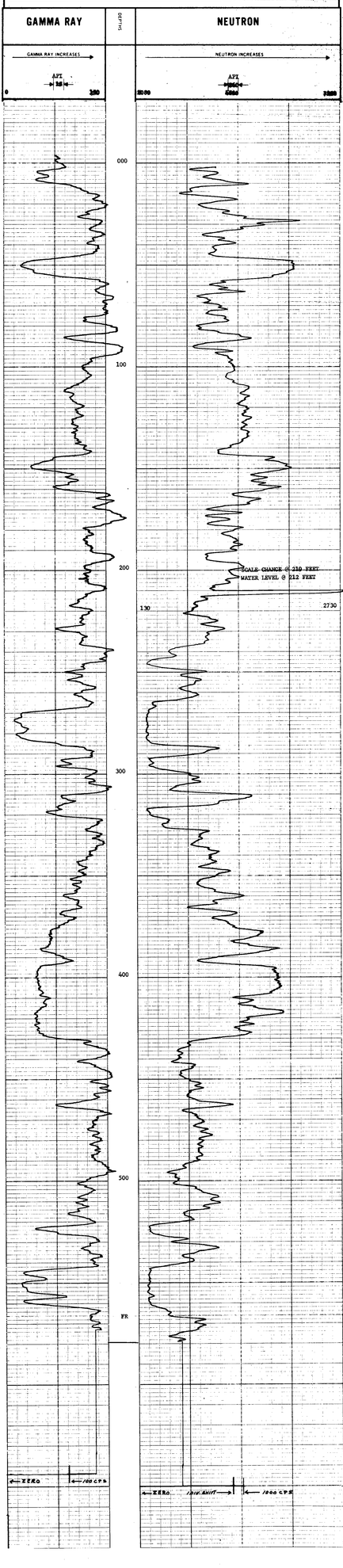
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO	ONE	RUN NO	ONE
TOOL MODEL NO		LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO	
DETECTOR MODEL NO		DIAMETER	1 11/16
TYPE	SCINTILLATION	DETECTOR MODEL NO	
LENGTH	4 INCH	TYPE	PROPORTIONAL
DISTANCE TO N SOURCE	6.7 FT	LENGTH	6 INCH
		SOURCE MODEL NO	MRC-N-SS-W
GENERAL		SERIAL NO	102
HOIST TRUCK NO	33	SPACING	17 INCH
INSTRUMENT TRUCK NO		TYPE	AmBe
TOOL SERIAL NO	R GRN 169-002	STRENGTH	3 Curies

LOGGING DATA

GENERAL RUN NO	DEPTHS FROM	DEPTHS TO	SPEED F/MIN	GAMMA RAY T.C. SEC	GAMMA RAY SENS SETTINGS	GAMMA RAY ZERO DIV. L OR R	GAMMA RAY API/G.R. UNITS PER LOG DIV	NEUTRON T.C. SEC	NEUTRON SENS SETTINGS	NEUTRON ZERO DIV. L OR R	NEUTRON API/N UNITS PER LOG DIV
1	0	210	12	5	100	0 L	15	3	1000	8 L	260
	210	379	12	5	100	0 L	15	3	500	1 L	130

REMARKS



ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

LOC
SEC
TWP
RGE
M

FILE NO

COMPANY: ROKETTE COAL LIMITED

WELL: DH 4-83

LOCATION: EAGLE MOUNTAIN

FIELD: ROKETTE

PROVINCE: BRITISH COLUMBIA

Permanent Datum: GROUND LEVEL — Elev.
Log Measured from: GROUND LEVEL — Ft. Above Perm. Datum
Drilling Measured from: GROUND LEVEL

K.B.
D.F.
G.L.

Other Services: NONE

319

Run No.	ONE
Date	20 OCTOBER 1976
First Reading	483
Last Reading	0
Footage Logged	483
Casing Record	483
Depth Driller	483
Depth Logger	483
Casing Driller	10
Fluid Type	AIR/WATER
Liquid Level	176
Max. Recorded Temp.	4 176
Operating Time	1 HOUR
Truck No.	33
Recorded By	JOHNSON
Witnessed By	TAYLOR

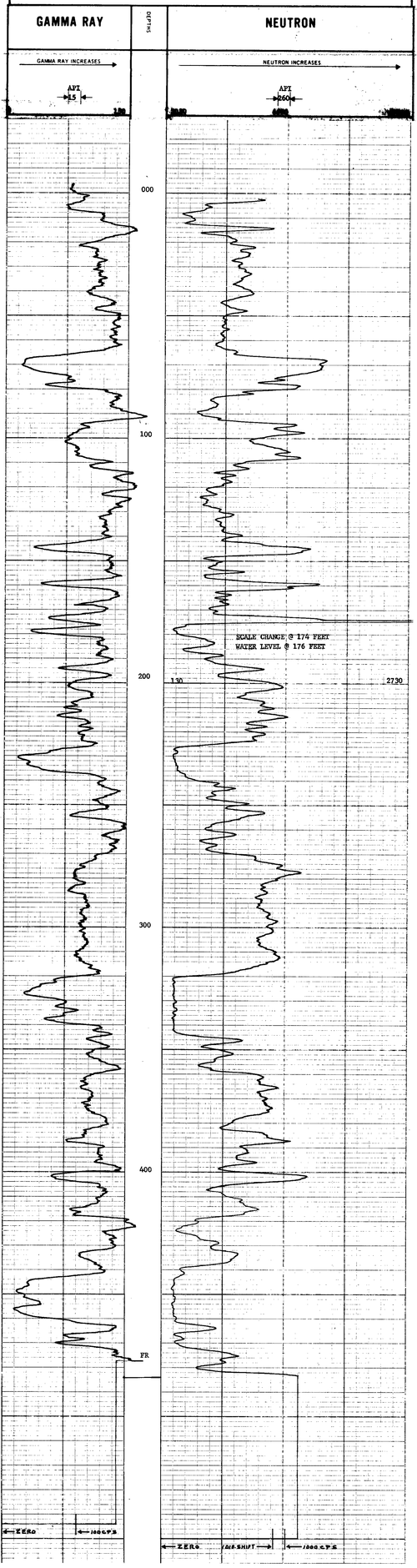
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO	ONE	RUN NO	ONE
TOOL MODEL NO		LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO	
DETECTOR MODEL NO		DIAMETER	1 11/16
TYPE	SCINTILLATION	DETECTOR MODEL NO	
LENGTH	6 INCH	TYPE	PROPORTIONAL
DISTANCE TO N SOURCE	6.7 FT	LENGTH	6 INCH
		SOURCE MODEL NO	MAC-N-SS-W
GENERAL		SERIAL NO	137
HOIST TRUCK NO	33	SPACING	17 INCH
INSTRUMENT TRUCK NO		TYPE	AmBe
TOOL SERIAL NO	R GRN 169-002	STRENGTH	3 Curies

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T C SEC	SENS SETTINGS	ZERO DIV L OR R	API G R UNITS PER LOG DIV	T C SEC	SENS SETTINGS	ZERO DIV L OR R	API N UNITS PER LOG DIV
1	0	174	12	5	100	0 L	15	3	1400	8 L	260
	174	483	12	5	100	0 L	15	3	500	1 L	130

REMARKS



K-Fordings 76(3)(a)-1.

ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

FILE NO.

LSD
SEC
TWP
RGE
W M

COMPANY FORDING COAL LIMITED

WELL RH - 480

LOCATION EAGLE MOUNTAIN

FIELD FORDING

319

PROVINCE BRITISH COLUMBIA

Other Services: NONE

Permanent Datum GROUND LEVEL Elev.
Log Measured from GROUND LEVEL Ft. Above Perm. Datum
Well Depths Measured from GROUND LEVEL

K.B.
CSG
G.L.

Run. No.	ONE
Date	2 NOV 1976
First Reading	503
Last Reading	0
Footage Logged	503
Depth Reached	504
Depth Driller	505
Casing Roke	
Casing Driller	
Fluid Type	AIR/WATER
Liquid Level	114
Min. Diam.	4 7/8
Rm @ °F	
Operating Time	1 HOUR
Truck No.	33
Recorded By JOHNSON	Witnessed By TAPLIN

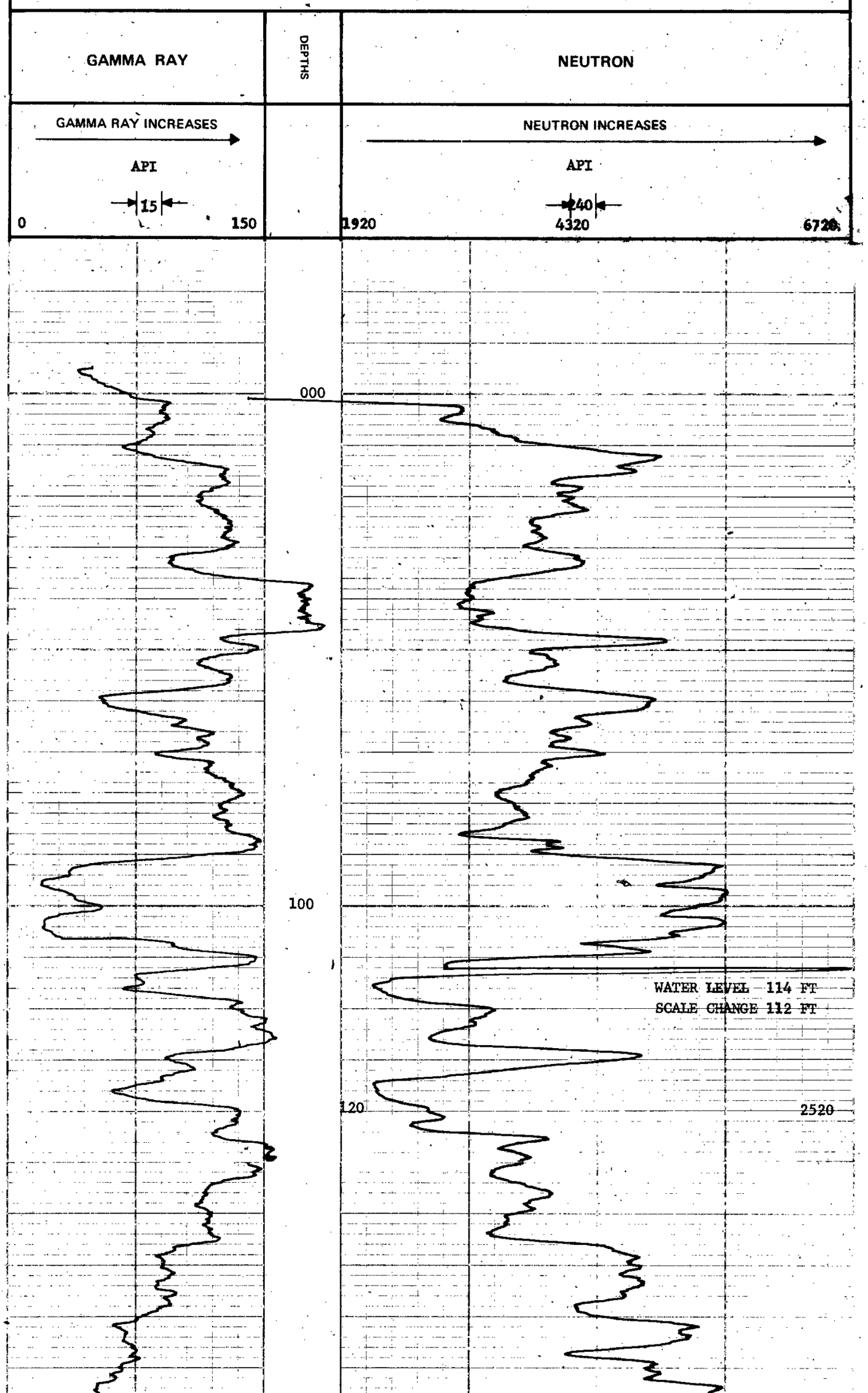
EQUIPMENT DATA

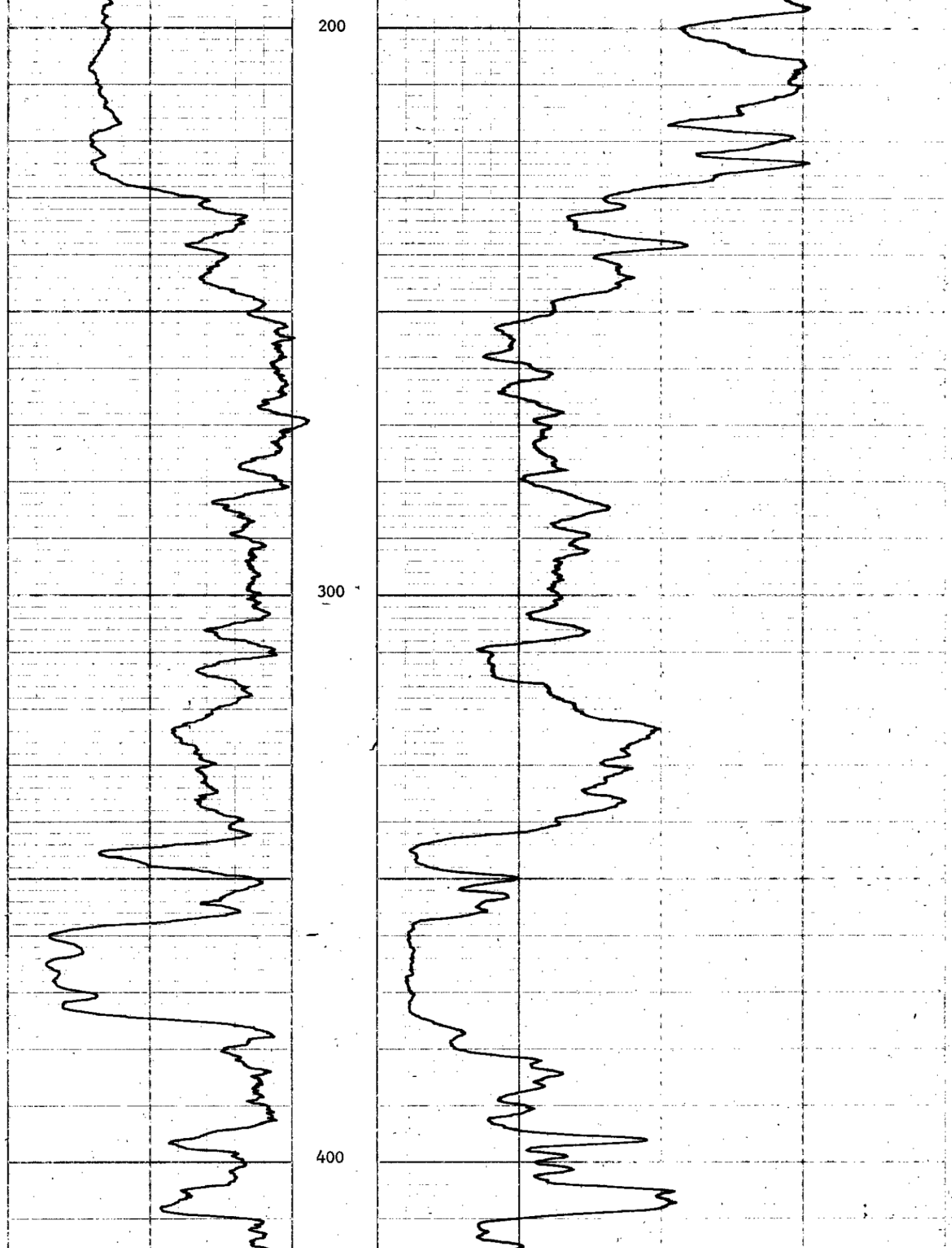
GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.		LOG TYPE	NEUTRON/NEUTRON
DIAMETER	$1\frac{11}{16}$	TOOL MODEL NO.	
DETECTOR MODEL NO.		DIAMETER	$1\frac{11}{16}$
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	4 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	6.7 FT	LENGTH	6 INCH
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	187
HOIST TRUCK NO.	33	SPACING	17 INCH
INSTRUMENT TRUCK NO.		TYPE	AmBe
TOOL SERIAL NO.	R GRN 169 - 002	STRENGTH	3 CURIES

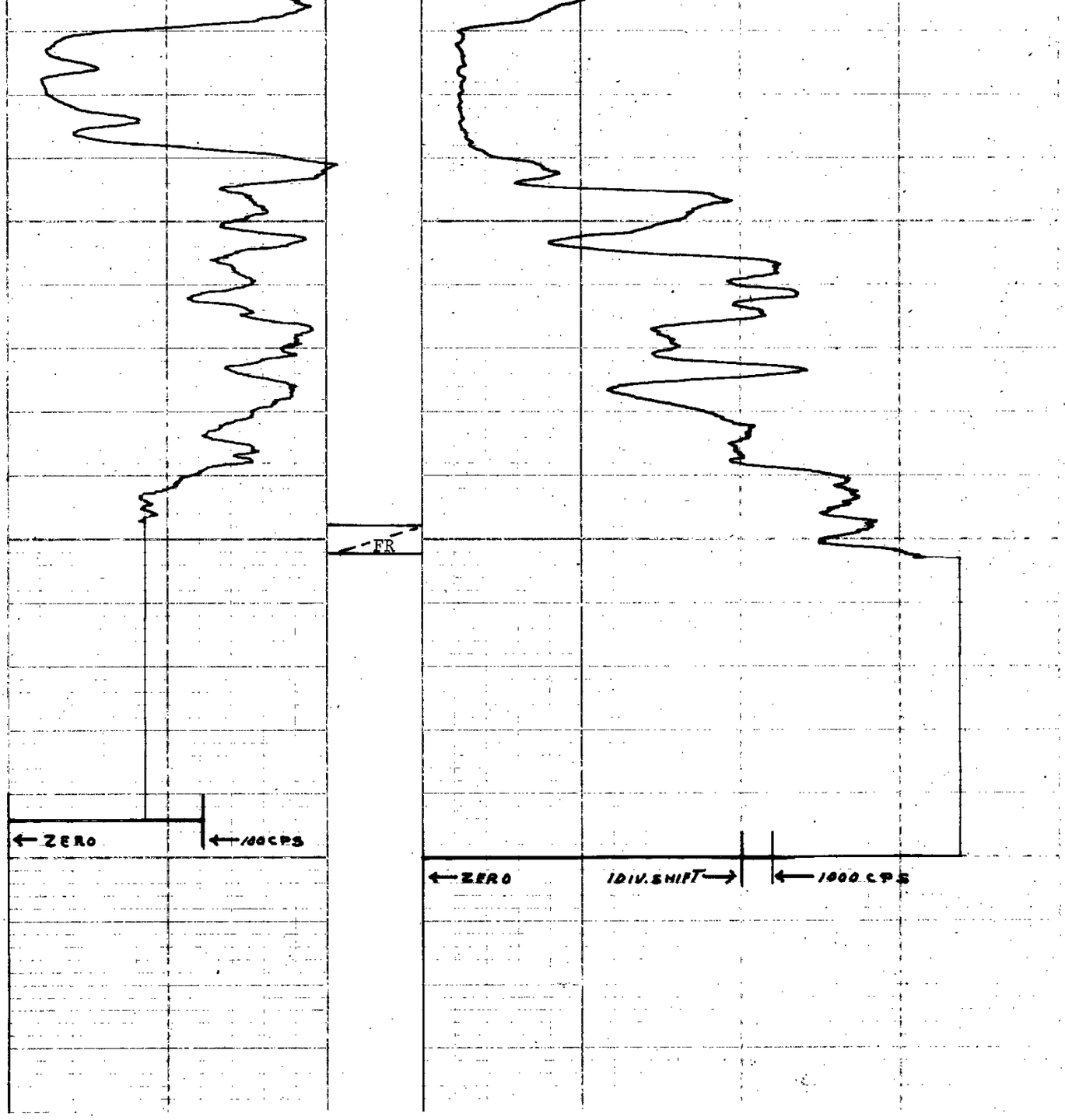
LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	0	112	12	5	100	0L	15 API	3	1000	8L	240 API
	112	503	12	5	100	0L	15 API	3	500	1L	120 API

REMARKS


GAMMA RAY
DEPTHS
NEUTRON
GAMMA RAY INCREASES
API
15
0
150
NEUTRON INCREASES
API
240
1920
4320
6720
000
100
120
WATER LEVEL 114 FT
SCALE CHANGE 112 FT
2520


200
300
400


FR
ZERO
100 CPS
ZERO
1 DIV. SHIFT
1000 CPS

K-FORDING 76(3)A-1

ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

FILE NO.

LSD
SEC
TWP
RGE
W ____ M

COMPANY FORDING COAL LIMITED

WELL RH - 481

319

LOCATION EAGLE MOUNTAIN

FIELD FORDING

PROVINCE BRITISH COLUMBIA

Other Services: NONE

Permanent Datum GROUND LEVEL Elev. ____ K.B. ____
Log Measured from GROUND LEVEL Ft. Above Perm. Datum CSG ____
Well Depths Measured from GROUND LEVEL G.L. ____

Run. No.	ONE	
Date	8 NOV 1976	
First Reading	499	
Last Reading	0	
Footage Logged	499	
Depth Reached	500	
Depth Driller	500	
Casing Roke		
Casing Driller	10	
Fluid Type	AIR/WATER	
Liquid Level	4 7/8	
Min. Diam.		
Rm @ °F		
Operating Time	1 HOUR	
Truck No.	33	
Recorded By JOHNSON	Witnessed By DAIGNAULT	

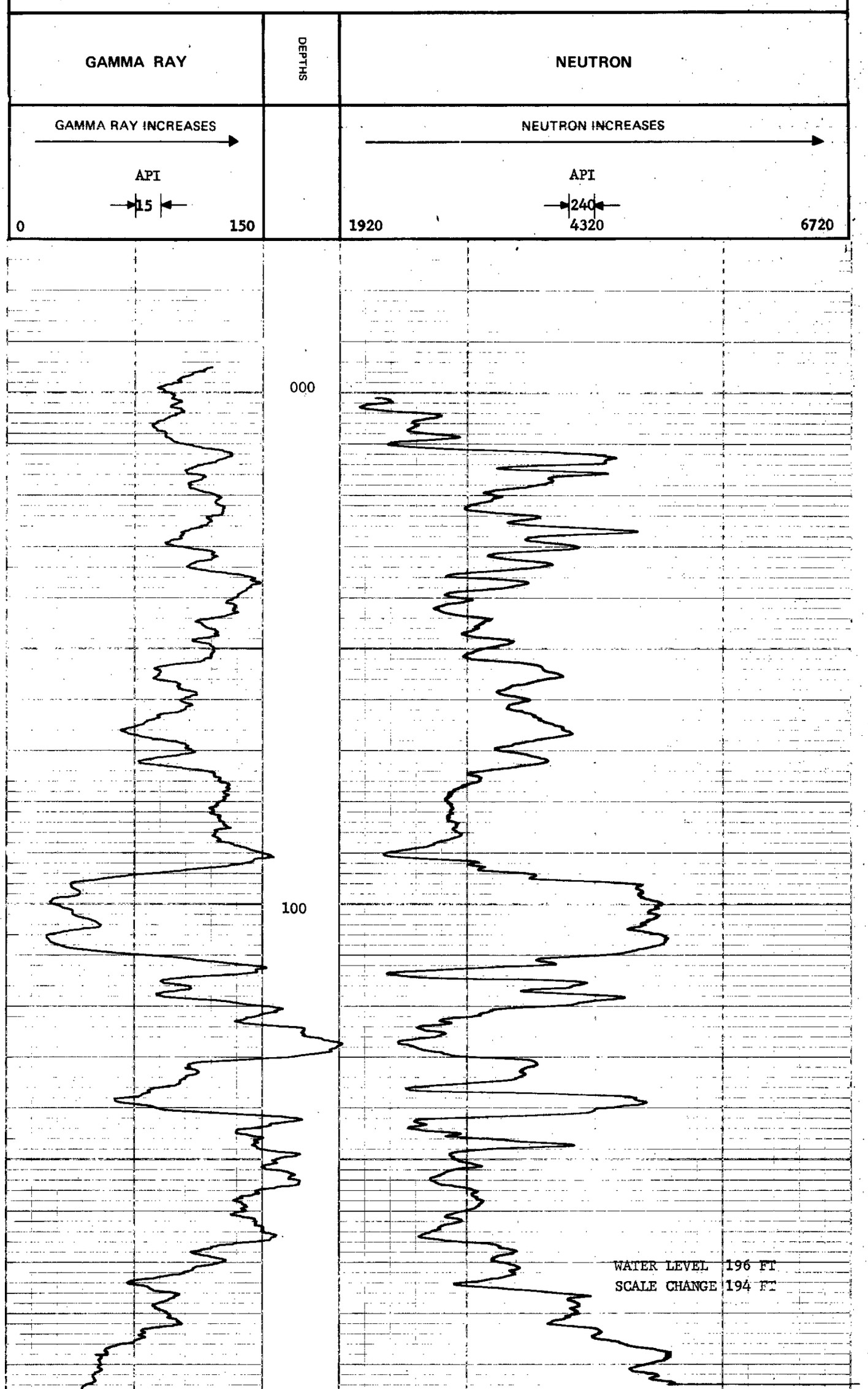
EQUIPMENT DATA

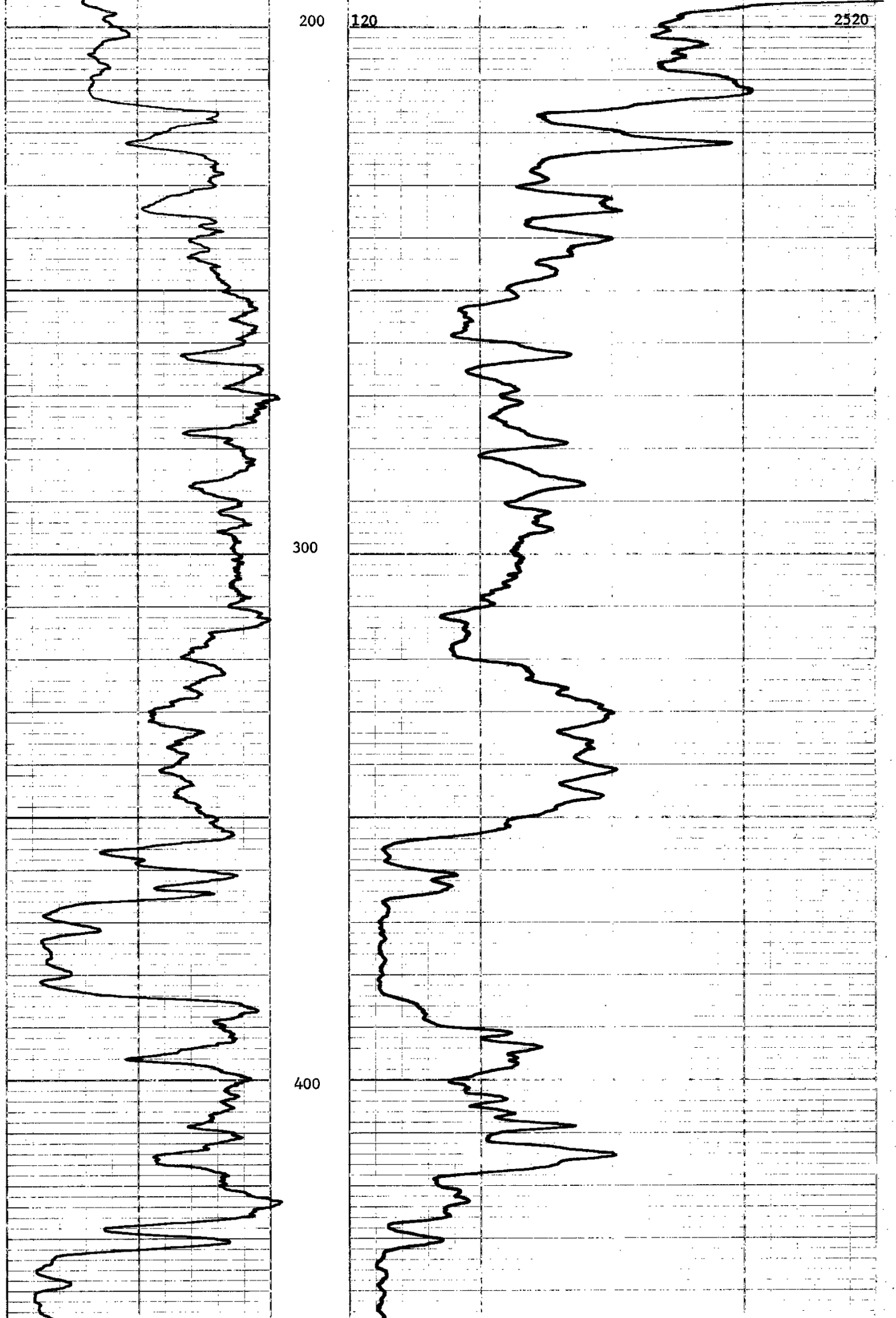
GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.		LOG TYPE	NEUTRON/NEUTRON
DIAMETER	$1\frac{11}{16}$	TOOL MODEL NO.	
DETECTOR MODEL NO.		DIAMETER	$1\frac{11}{16}$
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	4 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	6.7 FT	LENGTH	6 INCH
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	187
HOIST TRUCK NO.	33	SPACING	17 INCH
INSTRUMENT TRUCK NO.		TYPE	AmBe
TOOL SERIAL NO.	RGRN 169 - 002	STRENGTH	3 CURIES

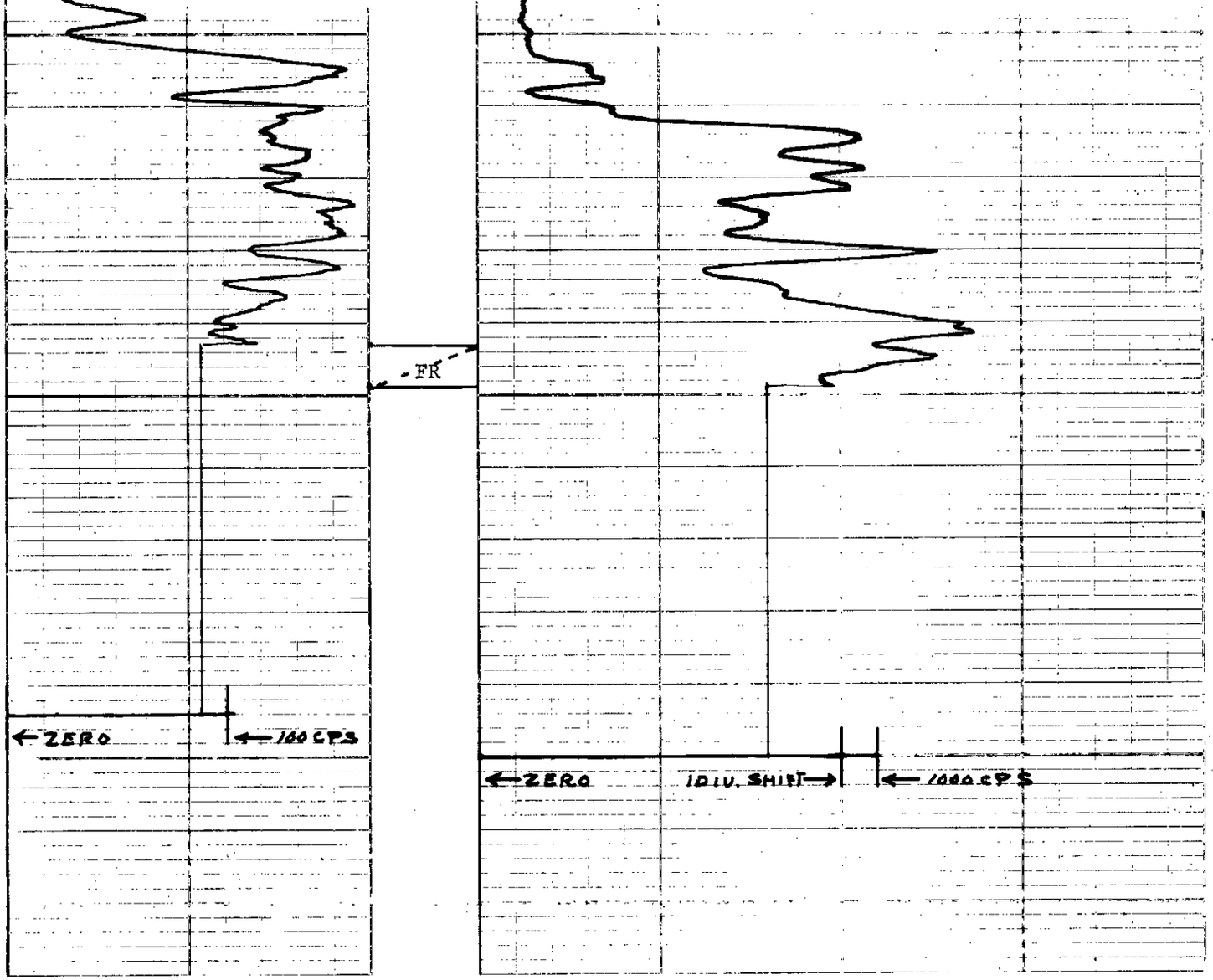
LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	0	194	12	5	100	0L	15 API	3	1000	8L	240 API
	194	499	12	5	100	0L	15 API	3	500	1L	120 API

REMARKS


GAMMA RAY
DEPTHS
NEUTRON
GAMMA RAY INCREASES
API
15
0
150
NEUTRON INCREASES
API
240
1920
4320
6720
000
100
WATER LEVEL 196 FT
SCALE CHANGE 194 FT


200
120
2520
300
400


FR
ZERO
100 CPS
ZERO
1D1V. SHIFT
1000 CPS

ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

X-reference 76(3)(b)-1

319

LSD ____ SEC ____ TWP ____ RGE ____ M

FILE NO.

COMPANY FORDING COAL LIMITED

WELL EH - 482

LOCATION EAGLE MTN.

FIELD FORDING

PROVINCE BRITISH COLUMBIA

Permanent Datum GROUND LEVEL Elev. ____

Log Measured From GROUND LEVEL ____ Ft. Above Perm. Datum

Drill Measured From GROUND LEVEL ____ Elev.: K.B. ____ D.F. ____ G.L. ____

Other Services NONE

Run No.	ONE
Date	28 OCT 1976
Last Reading	433
First Reading	0
Footage Logged	433
Depth Reached	434
Depth Driller	434
Casing Size	438
Casing Fluid Level	
Fluid Type	AIR/WATER
Liquid Level	198
Min. Diam.	4 7/8
Tim @ °F	
Operating Time	1 HOUR
Truck No.	33
Recorded By	JOHNSON
Witnessed By	DALZIEL/LITZ

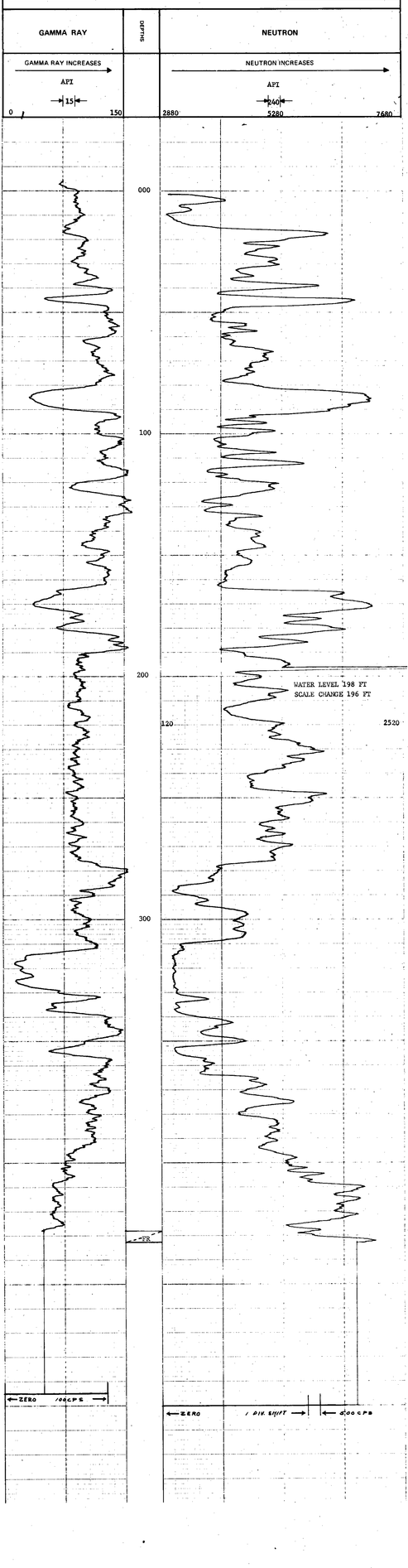
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.		LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO.	
DETECTOR MODEL NO.		DIAMETER	1 11/16
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	4 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	8.5 FT	LENGTH	6 INCH
GENERAL		SOURCE MODEL NO.	MRC-N-SS-W
HOIST TRUCK NO.	33	SERIAL NO.	598
INSTRUMENT TRUCK NO.		SPACING	17 INCH
TOOL SERIAL NO.	R - 155	TYPE	AmBe
		STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	0	196	12	5	100	OL	15	3	1000	12L	240 API
	196	433	12	5	100	OL	15	3	500	1 L	120 API

REMARKS



ROKE

GAMMA RAY NEUTRON LOGS

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.

LSD SEC TWP RGE M

COMPANY: ROSEDALE COAL LIMITED

WELL: RGI - 403

LOCATION: EAGLE MOUNTAIN

FIELD: ROSEDALE

PROVINCE: BRITISH COLUMBIA

Permanent Datum: GROUND LEVEL
Log Measured From: GROUND LEVEL
Drilling Measured From: GROUND LEVEL

Elev.: K.B. / D.F. / G.L.

Other Services: NONE

319

Run No.	ONE
Date	2 NOV 1976
Last Reading	513
First Reading	0
Footage Logged	513
Bit From	SURFACE
Bit To	513
Casing Driller	513
Casing Logger	513
Bottom Driller	
Bottom Logger	
Liquid Level	132
Max. Recorded Temp.	
Max. Deptn.	4 1/16
Rm. @ °F	

Recorded By: ROBINSON

Witnessed By: TAYLOR

Operating Time	
Truck No.	
	33

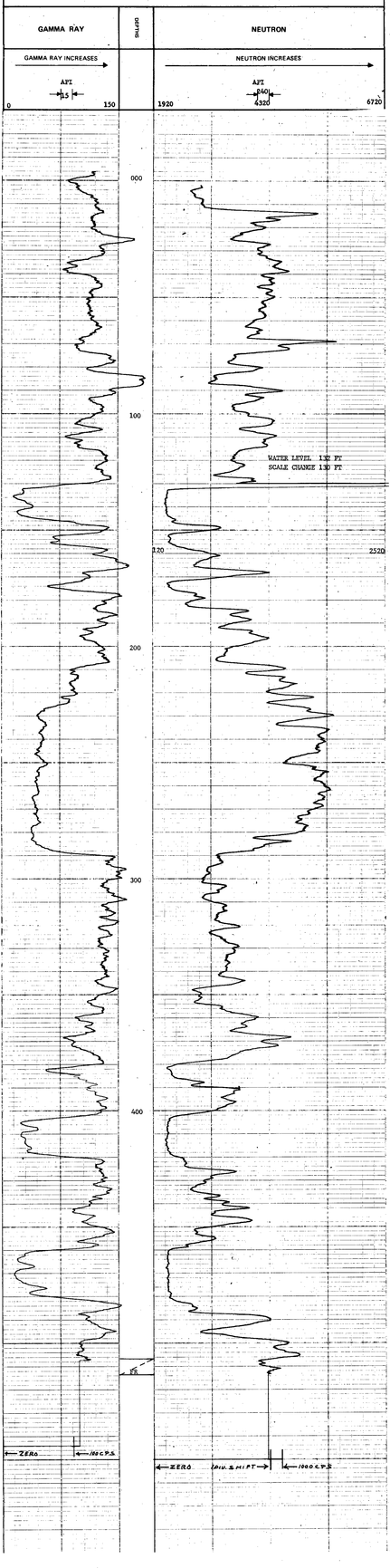
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	
TOOL MODEL NO.		LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO.	
DETECTOR MODEL NO.		DIAMETER	1 11/16
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	4 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	6.7 FT	LENGTH	6 INCH
GENERAL		SOURCE MODEL NO.	MRC-N-SS-W
HOIST TRUCK NO.	33	SERIAL NO.	187
INSTRUMENT TRUCK NO.		SPACING	17 INCH
TOOL SERIAL NO.	NGRN 169 - 002	TYPE	AmBe
		STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY			NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV
1	0	130	12	5	100	OL	15 API	3	1000	12L	240 API
	130	513	12	5	100	OL	15 API	3	500	1L	120 API

REMARKS



ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

319

SEC. TWP. RGE. W.M.

FILE NO.

COMPANY: KOOTENAY COAL LIMITED

WELL: BH - 493

LOCATION: EAGLE MOUNTAIN

FIELD: FORDING

PROVINCE: BRITISH COLUMBIA

Other Services: NONE

Permanent Datum: GROUND LEVEL

Log Measured from: GROUND LEVEL

Drilling Measured from: GROUND LEVEL

Elev.: K.B. / D.F. / G.L.

Run No. ONE

Date 3-8-1978

Depth-Driller 513

Depth-Logger 513

Bottom Logged Interval 513

Top Logged Interval 0

Casing Rdrs. 5 1/2 @ 513

Casing Type

Fluid Type AIR/WATER

Fluid Level 132

Max. Diam. 4 7/8

Rm. @ °F

Operating Time

Truck No. 33

Recorded By ROBINSON

Witnessed By TAYLOR

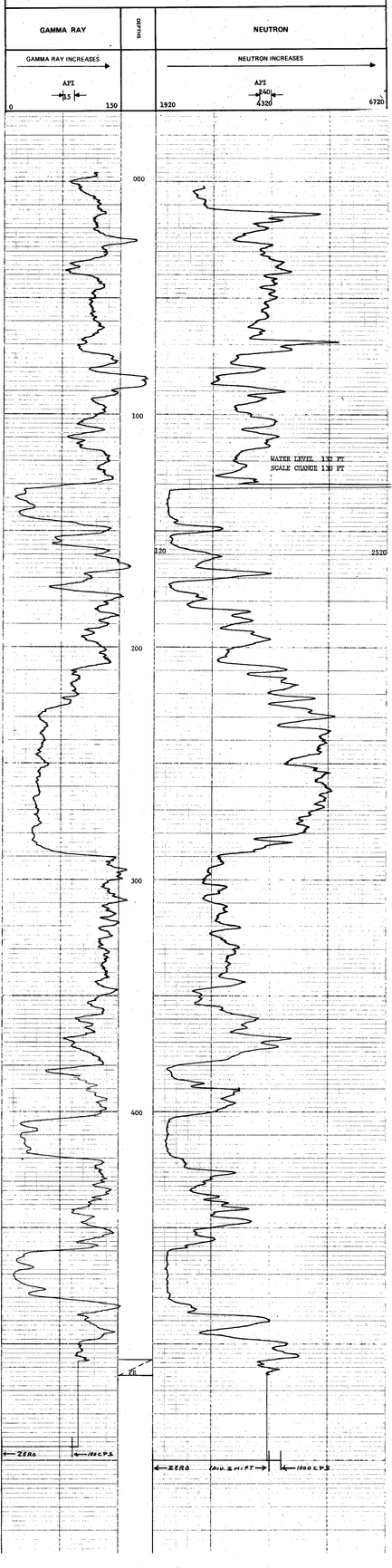
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	
TOOL MODEL NO.		LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO.	
DETECTOR MODEL NO.		DIAMETER	1 11/16
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	4 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	6.7 FT	LENGTH	8 INCH
GENERAL		SOURCE MODEL NO.	MRC-N-SS-W
HOIST TRUCK NO.	33	SERIAL NO.	187
INSTRUMENT TRUCK NO.		SPACING	17 INCH
TOOL SERIAL NO.	RGSN 169 - 002	TYPE	Am-Be
		STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	0	130	12	5	100	OL	15 API	3	1000	12L	240 API
	130	513	12	5	100	OL	15 API	3	500	1L	120 API

REMARKS



ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

K-FORDING 74(3)A-1

FILE NO.

LSD
SEC
TWP
RGE
W ____ M

COMPANY FORDING COAL LIMITED

WELL RH - 483

LOCATION EAGLE MOUNTAIN

FIELD FORDING

319

PROVINCE BRITISH COLUMBIA

Other Services: NONE

Permanent Datum GROUND LEVEL Elev. ____

Log Measured from GROUND LEVEL Ft. Above Perm. Datum

Well Depths Measured from GROUND LEVEL

K.B. ____
CSG ____
G.L. ____

Run. No.	ONE
Date	2 NOV 1976
First Reading	513
Last Reading	0
Footage Logged	513
Depth Reached	514
Depth Driller	515
Casing Roke	
Casing Driller	
Fluid Type	AIR/WATER
Liquid Level	132
Min. Diam.	4 7/8
Rm @ °F	
Operating Time	1 HOUR
Truck No.	33
Recorded By	JOHNSON
Witnessed By	TAPLIN

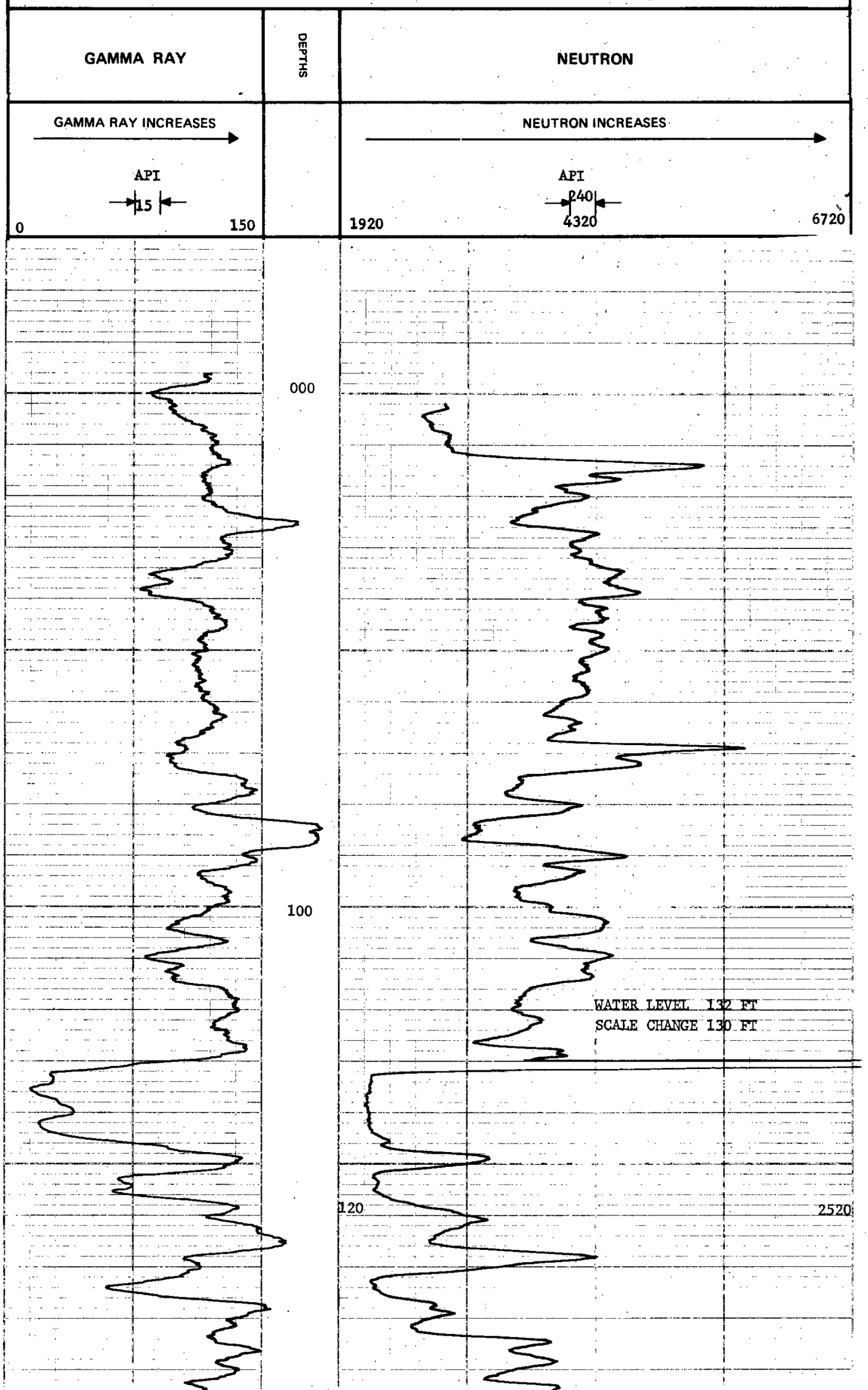
EQUIPMENT DATA

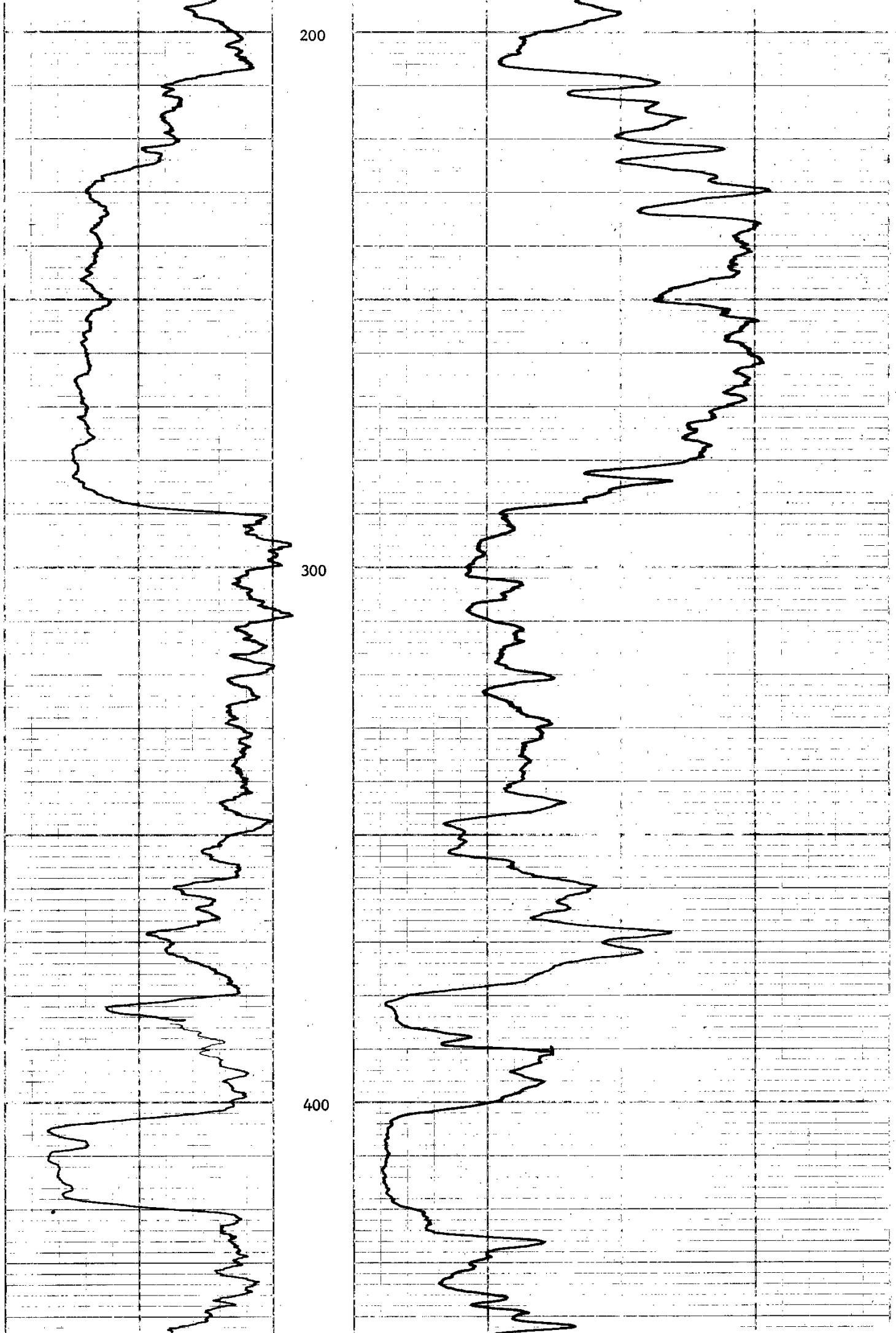
GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	
TOOL MODEL NO.		LOG TYPE	NEUTRON/NEUTRON
DIAMETER	$1\frac{11}{16}$	TOOL MODEL NO.	
DETECTOR MODEL NO.		DIAMETER	$1\frac{11}{16}$
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	4 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	6.7 FT	LENGTH	6 INCH
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	187
HOIST TRUCK NO.	33	SPACING	17 INCH
INSTRUMENT TRUCK NO.		TYPE	AmBe
TOOL SERIAL NO.	RGRN 169 - 002	STRENGTH	3 CURIES

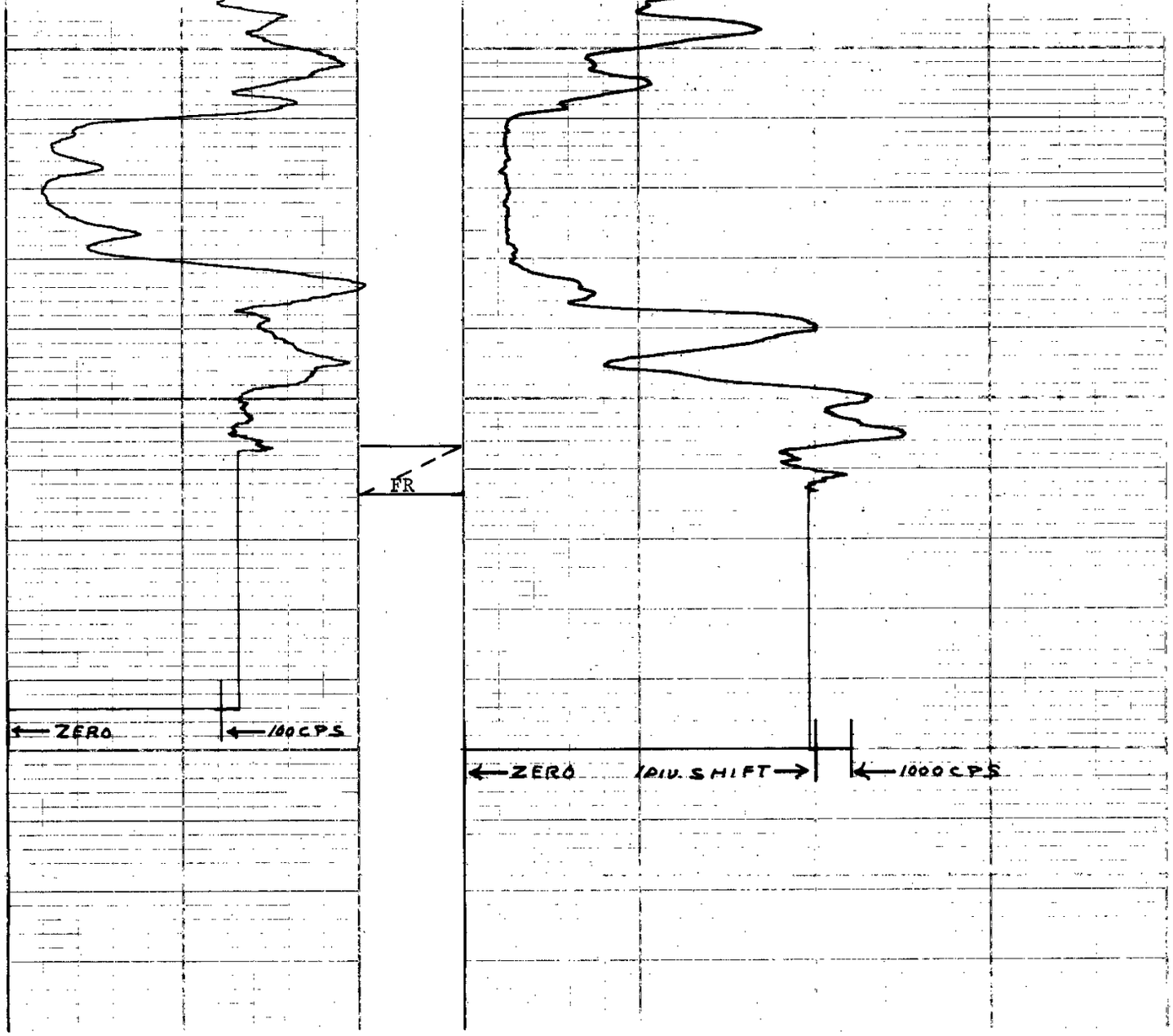
LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	0	130	12	5	100	0L	15 API	3	1000	12L	240 API
	130	513	12	5	100	0L	15 API	3	500	1L	120 API

REMARKS


GAMMA RAY
DEPTHS
NEUTRON
GAMMA RAY INCREASES
NEUTRON INCREASES
API
15
0
150
API
240
1920
4320
6720
000
100
120
2520
WATER LEVEL 132 FT
SCALE CHANGE 130 FT


200
300
400


FR
ZERO
100 CPS
ZERO
1 DIV. SHIFT
1000 CPS

ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.

COMPANY FORDING COAL LIMITED

WELL E21-323

LOCATION EAGLE BUTTE

FIELD FORDING

PROVINCE BRITISH COLUMBIA

Permanent Datum: GROUND LEVEL Elev.
Log Measured From: GROUND LEVEL Ft. Above Perm. Datum

Elev.: K.B.
D.F.
G.L.

Date: JUNE

Other Services

Rec. No.
Date Recorded
Last Reading
Logged Interval
Footage Logged
Bottom Driller
Bottom Logger
Casing Rdrs.
Casing Driller
Casing Logger
Liquid Level
Max. Diam.
Rm @ °F

Operating Time
Truck No.

Recorded By JEWELL/SEAL

Witnessed By TAPLIN

EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	
TOOL MODEL NO.		LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO.	
DETECTOR MODEL NO.		DIAMETER	1 11/16
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	4 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	4.7 FT.	LENGTH	6 INCH
GENERAL		SOURCE MODEL NO.	MRC-N-SS-W
SERIAL NO.		SERIAL NO.	183
HOIST TRUCK NO.	33	SPACING	12 INCH
INSTRUMENT TRUCK NO.		TYPE	AmBe
TOOL SERIAL NO.	RGRN 169-002	STRENGTH	3 CURIES

LOGGING DATA

RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	GAMMA RAY T.C. SEC.	GAMMA RAY SENS SETTINGS	GAMMA RAY ZERO DIV. L. OR R.	GAMMA RAY API G. R. UNITS PER LOG DIV.	NEUTRON T.C. SEC.	NEUTRON SENS SETTINGS	NEUTRON ZERO DIV. L. OR R.	NEUTRON API N. UNITS PER LOG DIV.
1	0	130	18	5	100	04	10 API	3	1000	16L	400 API
1	130	518	18	5	100	04	10 API	3	600	1L	120 API

REMARKS

GAMMA RAY | DEPTHS | NEUTRON

GAMMA RAY INCREASES

NEUTRON INCREASES

API

100

0

API

4000

3200

WATER LEVEL 132FT.
SCALE CHANGE 130FT.

3350

000

100

200

300

400

518

ZERO

150 C.P.S.

ZERO

10 DIV. 2 KILO FT

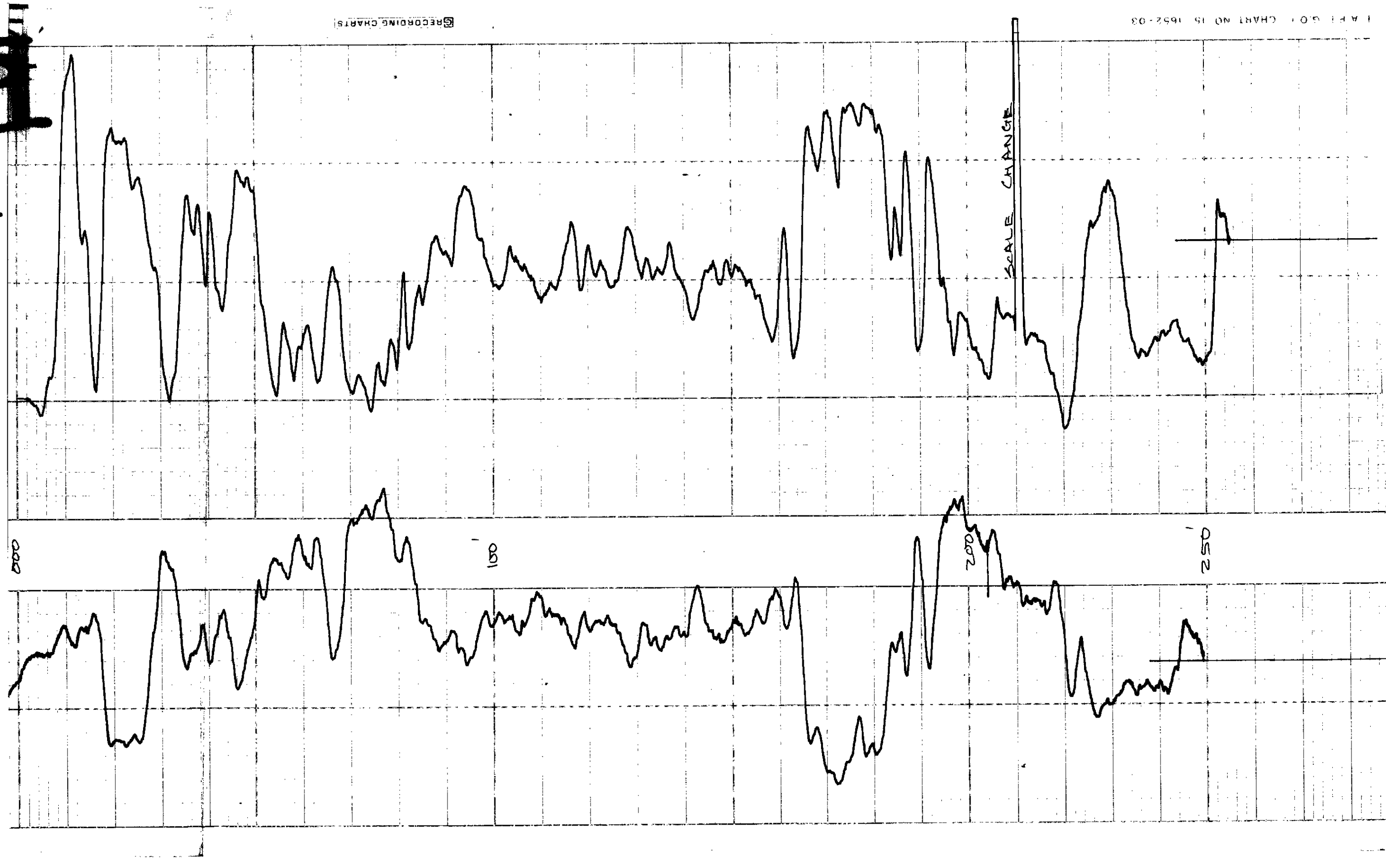
1000 C.P.S.

K-FORDING 76(3)A1

RH 605
TORNBULL
GM-NT.LOG

319

RH 605



ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.	
LSD	
SEC	
TWP	
RGE	
W M	

COMPANY FORDING COAL LIMITED

WELL RH - ~~604~~ 605 319

LOCATION TURNBULL MOUNTAIN

FIELD FORDING

PROVINCE BRITISH COLUMBIA

Other Services: NONE

Permanent Datum GROUND LEVEL Elev.

Log Measured from GROUND LEVEL Ft. Above Perm. Datum

Well Depths Measured from GROUND LEVEL

K.B.

CSG

G.L.

Run. No.	ONE										
Date	18 NOV 1976										
First Reading	255										
Last Reading	0										
Footage Logged	255										
Depth Reached	256										
Depth Driller	258										
Casing Roke											
Casing Driller	10										
Fluid Type	AIR/WATER										
Liquid Level	212										
Min. Diam.	4 7/8										
Rm @ °F											
Operating Time	1 HOUR										
Truck No.	33										
Recorded By JOHNSON	Witnessed By DAIGNAULT										

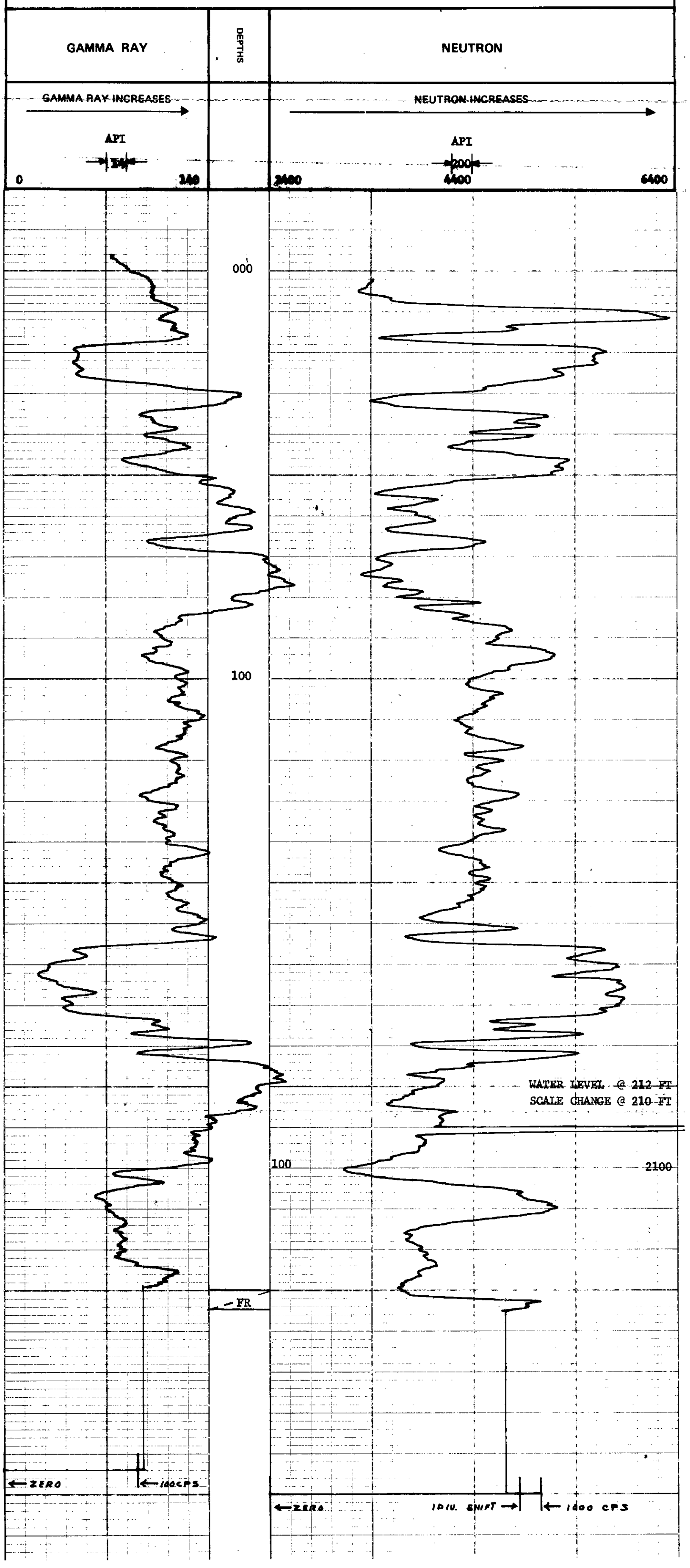
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.		LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO.	
DETECTOR MODEL NO.		DIAMETER	1 11/16
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	4 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	6.7 FT.	LENGTH	6 INCH
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	187
HOIST TRUCK NO.	33	SPACING	17 INCH
INSTRUMENT TRUCK NO.		TYPE	AmBe
TOOL SERIAL NO.	R GRN 169 - 002	STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	0	210	12	5	100	OL	14	3	1000	12 L	200
	210	255	12	5	100	OL	14	3	500	1 L	100

REMARKS



ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

K-(Tentative) 74(5)-1

FILE NO.

LSD SEC TWP RGE W M

COMPANY ROCKIES COAL LIMITED

WELL RE - 609

LOCATION

FIELD FORDING

PROVINCE BRITISH COLUMBIA

Permanent Datum GROUND LEVEL Elev.

Log Measured from GROUND LEVEL ft. Above Perm. Datum

Other Services: DENS. CAL. FDL.

Elev.: K.B. D.F. G.L.

Run No. ONE

Date 13 NOV 1976

First Reading 555

Last Reading 0

Feet Logged 555

Depth Reached 555

Depth Driller 555

Depth Logged 555

Casing Driller

Casing Logged

Fluid Type AIR/WATER

Liquid Level 150

Max. Temp. 4 7/8

Rec. @ 97

Operating Time 11 HOURS

Truck No. 34

Recorded By STROMMAN

Witnessed By MACKINNON

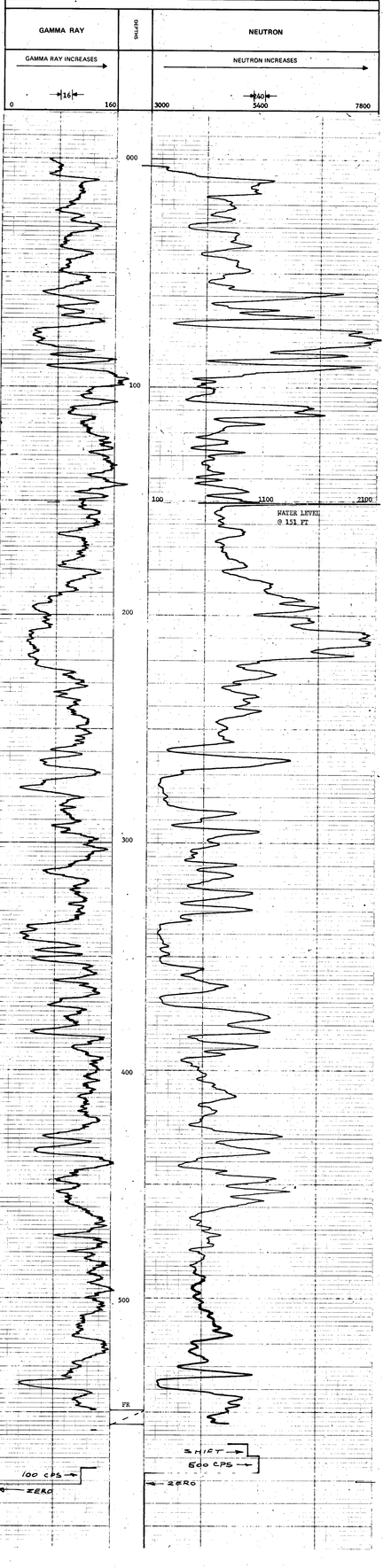
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	125-003	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1¼	TOOL MODEL NO.	125-003
DETECTOR MODEL NO.		DIAMETER	1¼
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	4 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	6.4 FT	LENGTH	6 INCH
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	256
HOIST TRUCK NO.	34	SPACING	17 INCH
INSTRUMENT TRUCK NO.	34	TYPE	AmBe
TOOL SERIAL NO.	125 - 003	STRENGTH	3 CURIES

LOGGING DATA

GENERAL					GAMMA RAY			NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	0	150	12	4	100	0	16	3	1000	12.5L	240
	150	555	12	6	100	0	16	3	500	1L	120

REMARKS



K - formerly 76(3)B-1

ROKE

FOCUSED RMAN LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.

LSD
SEC
TWP
RGE
W ____ M

COMPANY FORDING COAL LIMITED

WELL RE - 609

319

LOCATION

FIELD FORDING

PROVINCE BRITISH COLUMBIA

Other Services: CDN, DENS CAL

Permanent Datum	GROUND LEVEL	Elev.
Log Measured from	GROUND LEVEL	Ft. Above Perm. Datum
Rec. Depths Measured from	GROUND LEVEL	

K.B. ____
DRG ____
G.L. ____

Run No.	ONE		
Date	13 NOV 1976		
First Reading	154		
Last Reading	566		
Footage Logged	408		
Depth Reached	555		
Depth Driller	553		
Casing Rules	8		
Casing Driller			
Fluid Type	AIR/WATER		
Liquid Level	146		
Min. Diam.	6 7/8		
Run @ °F	19 0 72°		
Operating Time	1 HOUR		
Truck No.	34		

Recorded By SUNDGAARD Witnessed By McKINNY

Density

PSL # 1

CDN 3000 — 0

Depths

CDN 3000 — 0

WATER LEVEL 146

CAL ZERO

REC ZERO

CAL ZERO

REC ZERO

BACK SCAT CAL

BACK SCAT REC

150 200 300 400 500 555

250 300 330 355 373 390

K-Surface 2-007

ROKE RESISTIVITY SERIES

COMPANY	ROKE OIL INVESTMENTS LTD.
WELL	319
FIELD	
LOCATION	
COUNTY	CALGARY
PROVINCE	ALBERTA

Permanent Datum	GROUND LEVEL
Log Measured From	K.B.
Drilling Measured From	K.B.
Elev. Perm. Datum	1200
Elev. K.B.	1210
Elev. D.F.	
Elev. G.L.	1200

Date	1-6-61
Run No.	ONE
Depth-Driller	553
Depth-Logger	553
Bottom Logged Interval	553
Top Logged Interval	10
Type Fluid in Hole	WATER
Salinity, P.P.M. Cl	
Density	
Level	FULL
Max. Rec. Temp. Deg. F.	
Operating Rig Time	
Recorded By	
Witnessed By	

Run No.	ONE
Type Log	GAMMA RAY
Depth-Driller	553
Depth-Logger	553
Bottom Logged Interval	553
Top Logged Interval	10
Casing-Driller	8 5/8" @ 30'
Casing-Logger	
Bit Size	7 7/8"
Type Fluid in Hole	WATER
Dens. Visc.	
pH Fluid Loss	
Source of Sample	
Rm @ Meas. Temp.	
Rmf @ Meas. Temp.	
Rmc @ Meas. Temp.	
Source of Rmf & Rmc	
Rm @ BHT	
Time Since Circ.	
Max. Rec. Temp. Deg. F.	
Equip. Location	
Recorded By	
Witnessed By	

319

GENERAL				GAMMA RAY			NORMAL RESISTIVITY		
RUN NO.	DEPTH-DRILLER / DEPTH-LOGGER	SPEED (FEET PER MIN.)	T.C. (SEC.)	SCALE (METTLER)	SCALE (Log Cycle)	API A.N. UNITS PER LOG DIV.	RUN NO.	SCALE (METTLER)	SCALE (Log Cycle)	SPACING
1	553	10					1	1200	1.26	30.31
	10	120								
	250	300		EXPANDED SCALE 25 to 250 FT						
	530	272								
	330	543								

REMARKS

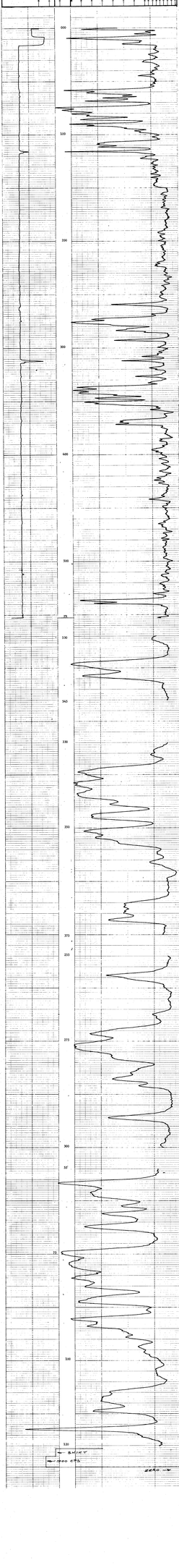
CAL TAG # 181
CAS TAG # 543
P.C. 0.04 gm/cc

DEPTHS

CALIPER
(DIAMETER - INCHES)

GAMMA RAY
API

BULK DENSITY
(GRAMS/CC)



ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

K-Fokeek 76(5)A-1

FILE NO.

COMPANY FORDING COAL LIMITED

WELL RE - 610

LOCATION TURNBULL MOUNTAIN

FIELD FORDING

PROVINCE BRITISH COLUMBIA

Permanent Datum GROUND LEVEL Elev.

Log Measured from GROUND LEVEL Ft. Above Perm. Datum

Well Depth Measured from GROUND LEVEL K.B.

D.F.

G.L.

Other Services

319

Rec. No.	ONE
Date	26 APR 1976
Last Reading	452
First Reading	0
Footage Logged	452
Depth Reached	453
Casing Driller	
Casing Logged	
Fluid Type	AIR/WATER
Liquid Level	107
Min. Diam.	4 7/8
Rm. @ °F	
Operating Time	1 HOUR
Truck No.	33

Recorded By JOHNSON

Witnessed By MACDONALD

EQUIPMENT DATA

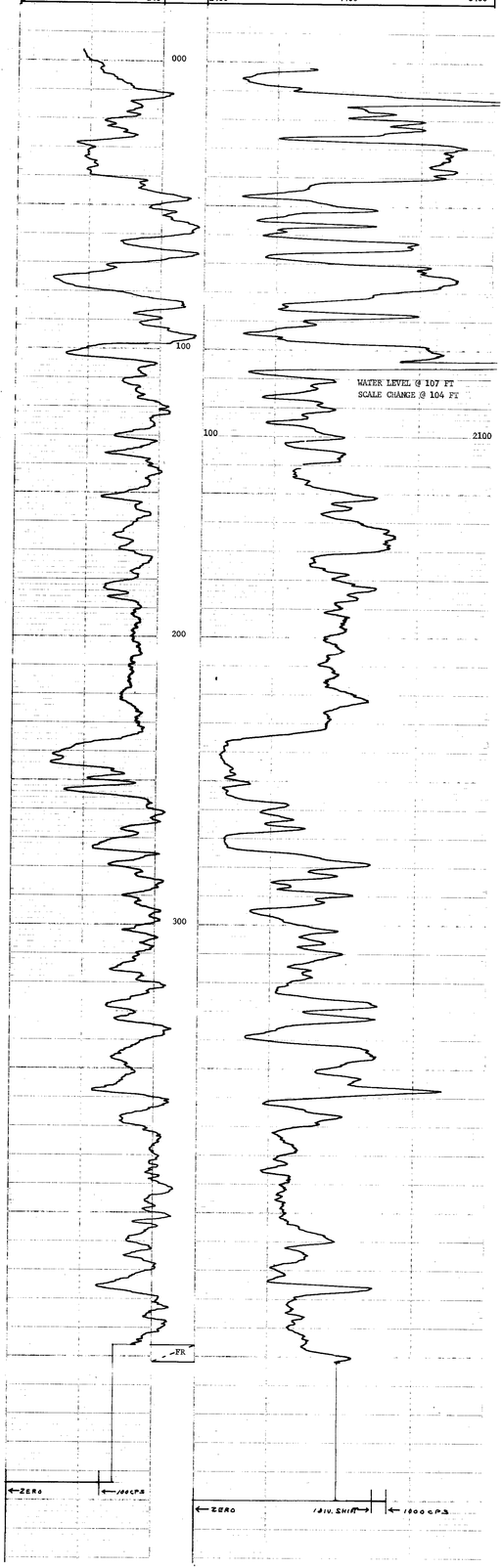
GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.		LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO.	
DETECTOR MODEL NO.		DIAMETER	1 11/16
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	4 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	6.7 FT.	LENGTH	6 INCH
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	187
HOIST TRUCK NO.	33	SPACING	17 INCH
INSTRUMENT TRUCK NO.		TYPE	AmBe
TOOL SERIAL NO.	R GRN 169 - 002	STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY			NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	0	104	12	5	100	OL	14	3	1000	12L	200
	104	452	12	5	100	OL	14	3	500	1 L	100

REMARKS

GAMMA RAY	DEPTHS	NEUTRON
GAMMA RAY INCREASES		NEUTRON INCREASES
API 14		API 200
0 — 140		2400 — 4400 — 6400



ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

K - Fordonia 76/5/04

FILE NO.

COMPANY FORDONIA COAL LIMITED

WELL RH - 611

LOCATION 319

FIELD FORDONIA

PROVINCE BRITISH COLUMBIA

Permanent Datum GROUND LEVEL — Elev. K.B.

Log Measured from GROUND LEVEL — D.F.

Perm Datum — G.L.

Other Services: DIPOL DIP, TRI

Run No.	ONE
Date	13 MAY 1976
Last Reading	0
Footage Logged	518
Depth Reached	518
Casing Size	5½
Casing Driller	7
Casing Logged	
Fluid Type	AIR/WATER
Liquid Level	41
Min. Diam.	4 7/8
Rm @ °F	
Operating Time	1 HOUR
Truck No.	36

Recorded By: SONDRAARD

Witnessed By: MACKINNY

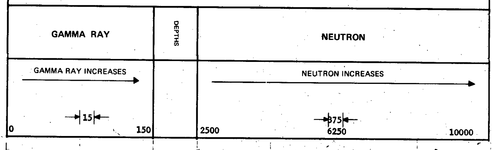
EQUIPMENT DATA

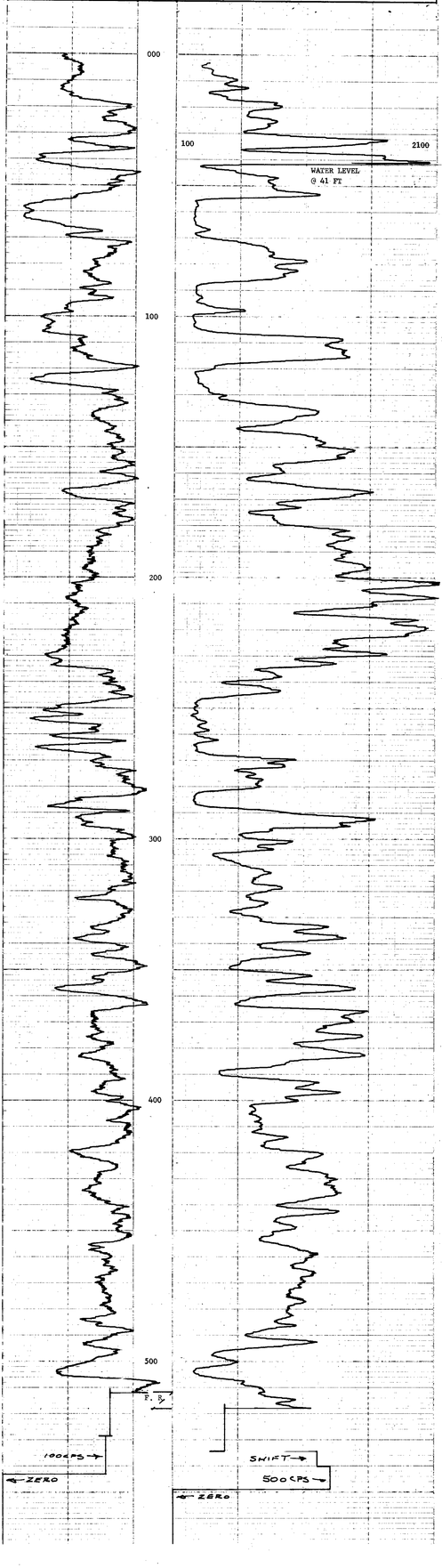
GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	125-003	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1¼	TOOL MODEL NO.	125-003
DETECTOR MODEL NO.		DIAMETER	1¼
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	4 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	6.8 FT	LENGTH	6 INCH
GENERAL		SOURCE MODEL NO.	MRC-N-SS-W
HOIST TRUCK NO.	34	SERIAL NO.	256
INSTRUMENT TRUCK NO.	34	SPACING	17 INCH
TOOL SERIAL NO.	125-003	TYPE	AmBe
		STRENGTH	3 CURIES

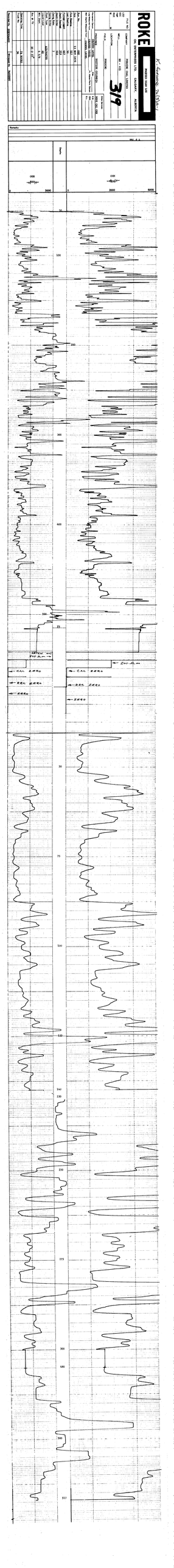
LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV
1	0	41	12	4	100	0	15	3	1000	6.7L	375
	41	518	12	4	100	0	15	3	1000	1L	100

REMARKS






ROKE
ROKE OIL EXPLORATIONS LTD.
CALGARY ALBERTA
316
Remarks
CAL ZERO
REC ZERO
ZERO
2nd SLOW
CAL ZERO
REC ZERO
ZERO

ROKE
SPECIAL DRILLING SERVICES

RIG No. 319 | COMPANY: ROKE OIL LIMITED | COUNTY: CALGARY | PROVINCE: ALBERTA

WELL NAME: [illegible] | LOCATION: [illegible] | FIELD: [illegible]

DRILLING RECORD

DEPTH	BIT No.	TYPE	SIZE	MAKE	JETS	DEPTH OUT	FOOTAGE	HOURS	ROP	WEIGHT	RPM	REMARKS

MUD RECORD

DEPTH	WEIGHT	VISCOSITY	WATER LOSS	CAKE	SOLIDS	SAND	PH	ALKALINITY	CHLORIDES	CALCIUM	REMARKS

DEVIATION RECORD

DEPTH	DEGREES

CASING RECORD

SIZE	WEIGHT	GRADE	THREAD	DEPTH

CEMENTING RECORD

SIZE OF HOLE	SIZE OF CASING	WEIGHT & GRADE	NEW OR USED	DEPTH SET	SACKS CEMENT	TYPE CEMENT	ADDITIVES

DRILL STEM TESTS

No.	FROM	TO	TIME OPEN	FLOW PRESSURES	SHUT-IN PRESSURES	RECOVERY

FORMATION TOPS

FORMATION	DEPTH

REMARKS

GENERAL

RUN NO.	INTERVAL FROM	INTERVAL TO	SPEED FT/MIN	REMARKS
1	0	100		
	100	500		ESTIMATED CHALK IN 4½"CSG PT
	500	610		

GAMMA RAY

RUN NO.	INTERVAL FROM	INTERVAL TO	SCALE	SCALE DEFLECTION	SCALE SETTING	CPS/API

GAMMA RAY

RUN NO.	INTERVAL FROM	INTERVAL TO	SCALE	SCALE DEFLECTION	SCALE SETTING	CPS/API
1	1000	0.00				34.75

REMARKS

CAL SCAL 4 .731
DEN SCAL 4 .611
DL 2.65% AN/m

Depth

CALIPER
(DIAMETER - INCHES)

GAMMA RAY
API

BULK DENSITY
(GRAM/CC)

100
200
300
400
500
600
700
800
900
1000
1100
1200
1300
1400
1500
1600
1700
1800
1900
2000
2100
2200
2300
2400
2500
2600
2700
2800
2900
3000
3100
3200
3300
3400
3500
3600
3700
3800
3900
4000

ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.

COMPANY FORDERER COAL LIMITED

WELL NO. 82 - 612

LOCATION TUMBLING MOUNTAIN

FIELD FORDING

PROVINCE BRITISH COLUMBIA

Other Services: NONE

LSD SEC TWP RGE W ... M

Permanent Datum: GROUND LEVEL — Elev. 0 Ft. Above Perm. Datum

Log Measured from: GROUND LEVEL — 0 Ft. Above Perm. Datum

Well Depths Measured from: GROUND LEVEL — KB ... DF ... GL ...

319

K. FORDING 76/3/24

Rec. No.	ONE
Date	18 MARCH 1976
Last Reading	502
First Reading	0
Footage Logged	502
Depth Reached	503
Depth Driller	504
Casing Type	-
Casing Size	10
Fluid Type	AIR/WATER
Liquid Level	129
Max. Diam.	4 7/8
Rm @ °F	
Operating Time	1 HOUR
Truck No.	33

Recorded By JOHNSON

Witnessed By DAVENPORT

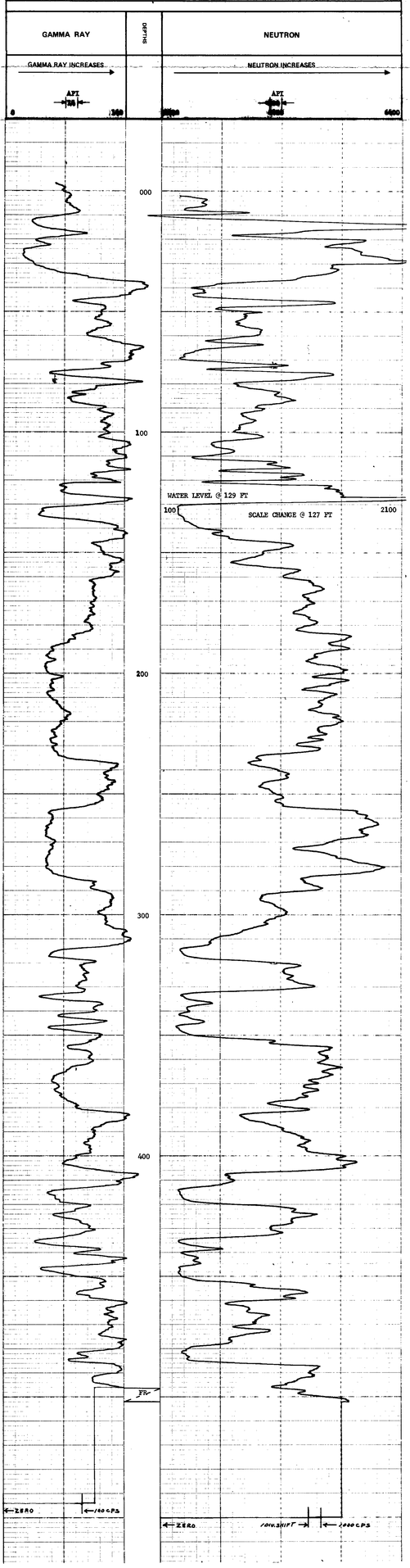
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.		LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO.	
DETECTOR MODEL NO.		DIAMETER	1 11/16
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	4 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	6.7 FT	LENGTH	6 INCH
GENERAL		SOURCE MODEL NO.	MRC-N-SS-W
HOIST TRUCK NO.	33	SERIAL NO.	187
INSTRUMENT TRUCK NO.		SPACING	17 INCH
TOOL SERIAL NO.	RGEN 169 - 002	TYPE	AmBe
		STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	0	127	12	5	100	OL	14	3	1000	12 L	200
	127	502	32	5	100	OL	14	3	500	1 L	100

REMARKS



ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

K-Fortune 76(3)A-1

FILE NO. 319

COMPANY FORDING COAL LIMITED

WELL EXT - 613

LOCATION TERRACE MOUNTAIN

FIELD FORDING

PROVINCE BRITISH COLUMBIA

Permanent Datum: GROUND LEVEL — Elev. 4440 — K.B. — Ft. Above Perm. Datum

Log Measured from: GROUND LEVEL — 10 Ft. Above Perm. Datum — C.S.G. —

Well Depths Measured from: GROUND LEVEL — G.L. —

Other Services: NONE

LSD SEC TWP RGE W ____ M

Recorded By: JOHNSON

Witnessed By: HAUGHAUGE

Run No.	ONE
Date	28 MAY 1976
First Reading	488
Last Reading	0
Footage Logged	488
Depth Reached	488
Depth Driller	490
Casing Driller	
Casing Logged	10
Fluid Type	AIR/WATER
Liquid Level	132
Max. Recorded Temp.	4.7/8
Rm @ °F	
Operating Time	1 HOUR
Truck No.	33

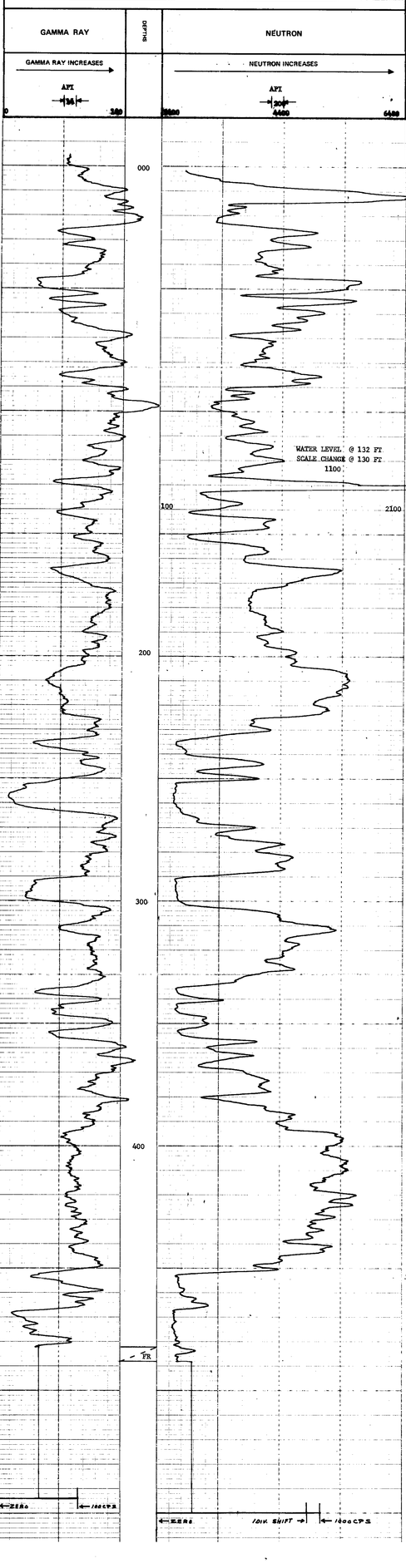
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.		LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO.	
DETECTOR MODEL NO.		DIAMETER	1 11/16
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	4 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	6.7 FT.	LENGTH	6 INCH
GENERAL		SOURCE MODEL NO.	MRC-N-SS-W
HOIST TRUCK NO.	33	SERIAL NO.	187
INSTRUMENT TRUCK NO.		SPACING	17 INCH
TOOL SERIAL NO.	R GRN 169 - 002	TYPE	AmBe
		STRENGTH	3 CURIES

LOGGING DATA

GENERAL			GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	0	130	12	5	100	OL	14	3	1000	12 L	200
	130	488	12	5	100	OL	14	3	500	11 L	100

REMARKS



ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.

COMPANY: PEKISKO COAL TESTED

WELL: 211 - 624

LOCATION: TERRABELL MOUNTAIN

FIELD: PEKISKO

PROVINCE: BRITISH COLUMBIA

Permanent Datum: GROUND LEVEL — Elev.: 0

Log Measured from: GROUND LEVEL — 7 ft. Above Perm. Datum

Drlg. Measured from: GROUND LEVEL

Other Services: NONE

Run No.	ONE
Date	22 NOV 1976
Last Reading	548
First Reading	0
Footage Logged	548
Depth Reached	548
Casing Driller	520
Casing Logger	
Bit Size	
Fluid Type	
Fluid Level	
Max. Rec. Temp.	57
Equip. Location	3 / 18
Rec. #	92
Operating Time	1 HOUR
Truck No.	34

Recorded By: STEPANAKIS

Witnessed By:

K - Pekisko 74 (3) A-1

319

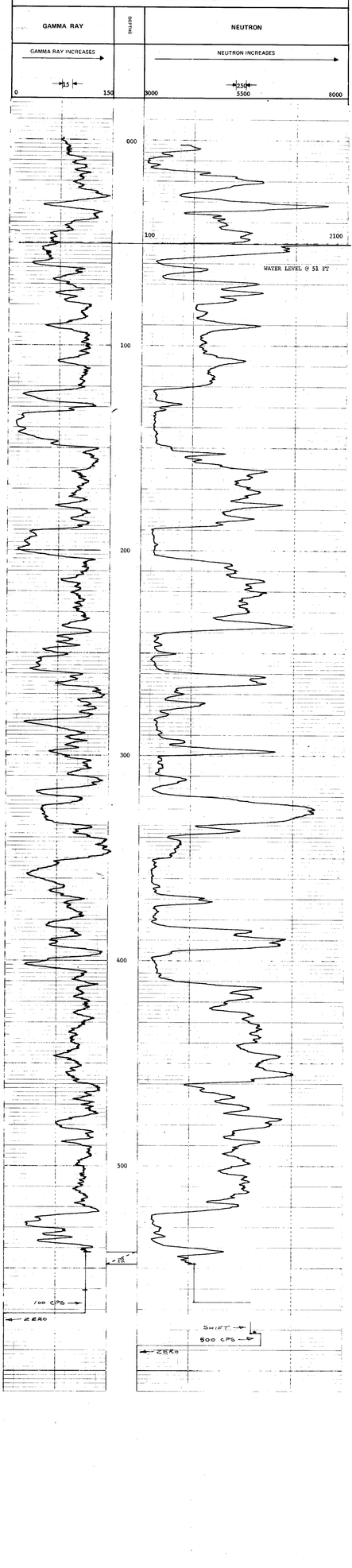
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	125 - 003	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1¼	TOOL MODEL NO.	125 - 003
DETECTOR MODEL NO.		DIAMETER	1¼
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	6 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	6.8 FT.	LENGTH	6 INCH
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	256
HOIST TRUCK NO.	34	SPACING	17 INCH
INSTRUMENT TRUCK NO.	34	TYPE	AmBe
TOOL SERIAL NO.	125 - 003	STRENGTH	3 CURIES

LOGGING DATA

GENERAL			GAMMA RAY				NEUTRON		
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T.C. SEC	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	0	51	12	4	100	0	15	3	1000	1 L	250
	51	548	12	4	100	0	15	3	500	1 L	100

REMARKS



ROKE OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

FILE NO.

COMPANY: FORDING COAL LIMITED

WELL: RH - 615

LOCATION: TENNILLE MOUNTAIN

FIELD: FORDING

PROVINCE: BRITISH COLUMBIA

Other Services: NONE

Permanent Datum: GROUND LEVEL — Elev. —
Log Measured from: GROUND LEVEL — Ft. Above Perm. Datum
Drl. Engrs Measured from: GROUND LEVEL — K.B. —
G.L. —

SEC. — TWP. — RGE. — M

319

Run. No.	ONE
Date	22 NOV 1976
First Reading	525
Last Reading	0
Footage Logged	525
Depth Reached	525
Casing Shoe	530
Casing Rider	
Casing Driller	
Hole Diameter	4 1/2 INCH
Liquid Level	50
Max. Diam.	4 7/8
Rm. @ °F	
Operating Time	
Truck No.	34
	1 RIDER

Recorded By: STODDARD

Witnessed By:

EQUIPMENT DATA

GAMMA RAY

RUN NO.	ONE
TOOL MODEL NO.	125 - 003
DIAMETER	1¼
DETECTOR MODEL NO.	
TYPE	SCINTILLATION
LENGTH	4 INCH
DISTANCE TO N. SOURCE	6.8 FT.

GENERAL

HOIST TRUCK NO.	34
INSTRUMENT TRUCK NO.	34
TOOL SERIAL NO.	125 - 003

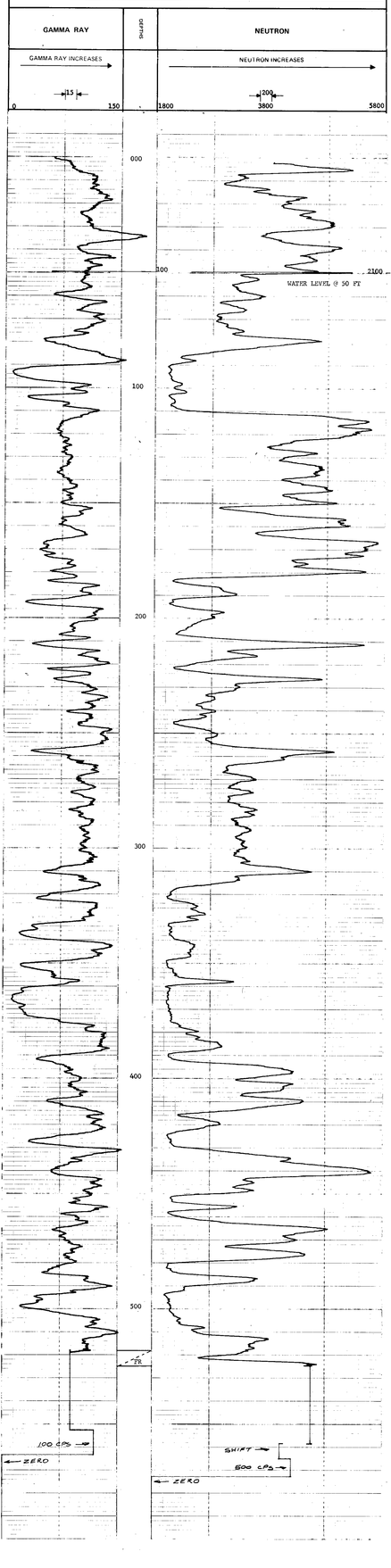
NEUTRON

RUN NO.	ONE
LOG TYPE	NEUTRON/NEUTRON
TOOL MODEL NO.	125 - 003
DIAMETER	1¼
DETECTOR MODEL NO.	
TYPE	PROPORTIONAL
LENGTH	6 INCH
SOURCE MODEL NO.	MRC-N-SS-W
SERIAL NO.	256
SPACING	17 INCH
TYPE	AmBe
STRENGTH	3 CURIES

LOGGING DATA

RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	GAMMA RAY T.C. SEC.	GAMMA RAY SENS SETTINGS	GAMMA RAY ZERO DIV. L OR R	GAMMA RAY API G. R. UNITS PER LOG DIV.	NEUTRON T.C. SEC.	NEUTRON SENS SETTINGS	NEUTRON ZERO DIV. L OR R	NEUTRON API N. UNITS PER LOG DIV.
1	0	50	12	4	100	0	15	3	1000	9½	200
	50	525	12	4	100	0	15	3	500	11	100

REMARKS



ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

K-Formula 7k(3)21

FILE NO. 319

COMPANY FORDING COAL LIMITED

WELL RE - 66-616

LOCATION TURBOULL MOUNTAIN

FIELD FORDING

PROVINCE BRITISH COLUMBIA

Other Services: NONE

Run No.	ONE		
Depth Driller	454		
Depth Logger	454		
Bottom Logged Interval	454		
Top Logged Interval	0		
Casing Driller	10		
Casing Logger	454		
Bit Size	4 7/8		
Type Fluid in Hole	AIR/WATER		
Max. Rec. Temp.			
Est. Cement Top			
Time Well Ready			
Time Logger on Bottom			
Date	26 JUNE 1976		
Recorded By	JOHNSON	Witnessed By	DAIGNAULT
Truck No.			
Operating Time	1 HOUR	33	

Permanent Datum: GROUND LEVEL — Elev.: — K.B.: — D.F.: — G.L.:

Log Measured from: GROUND LEVEL — Ft. Above Perm. Datum

Well Depths Measured from: GROUND LEVEL

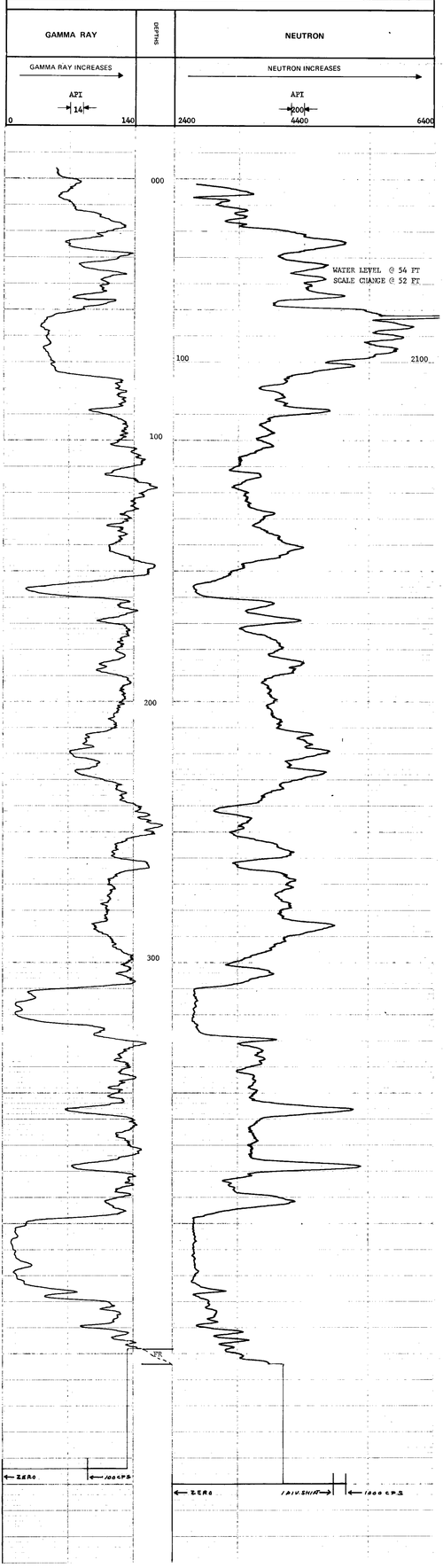
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.		LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO.	
DETECTOR MODEL NO.		DIAMETER	1 11/16
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	4 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	6.7 FT.	LENGTH	6 INCH
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	187
HOIST TRUCK NO.	33	SPACING	17 INCH
INSTRUMENT TRUCK NO.		TYPE	AmBe
TOOL SERIAL NO.	R GRN 169 - 002	STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY					NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	0	52	12	5	100	OL	14	3	1000	12L	200
	52	454	12	5	100	OL	14	3	500	1 L	100

REMARKS



ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

FILE NO. 319

LSD
SEC.
TWP.
RGE.
W ... M

COMPANY FORDING COAL LIMITED

WELL RE - 618

LOCATION TURBULL MOUNTAIN

FIELD FORDING

PROVINCE BRITISH COLUMBIA

Permanent Datum GROUND LEVEL Elev.

Log Measured from GROUND LEVEL Ft. Above Perm. Datum

Well Depths Measured from GROUND LEVEL K.B.

D.F.

G.L.

Other Services: NONE

Run. No.	ONE
Date	27 NOV 1976
First Reading	349
Last Reading	0
Footage Logged	349
Depth Reached	350
Depth Driller	350
Casing Driller	
Casing Rake	
Fluid Type	AIR/WATER
Liquid Level	12
Min. Diam.	4 7/8
Rm @ °F	
Operating Time	1 HOUR
Truck No.	33

Recorded By JOHNSON

Witnessed By DAIGNAULT

K-forcing 76(5)Q-1

EQUIPMENT DATA

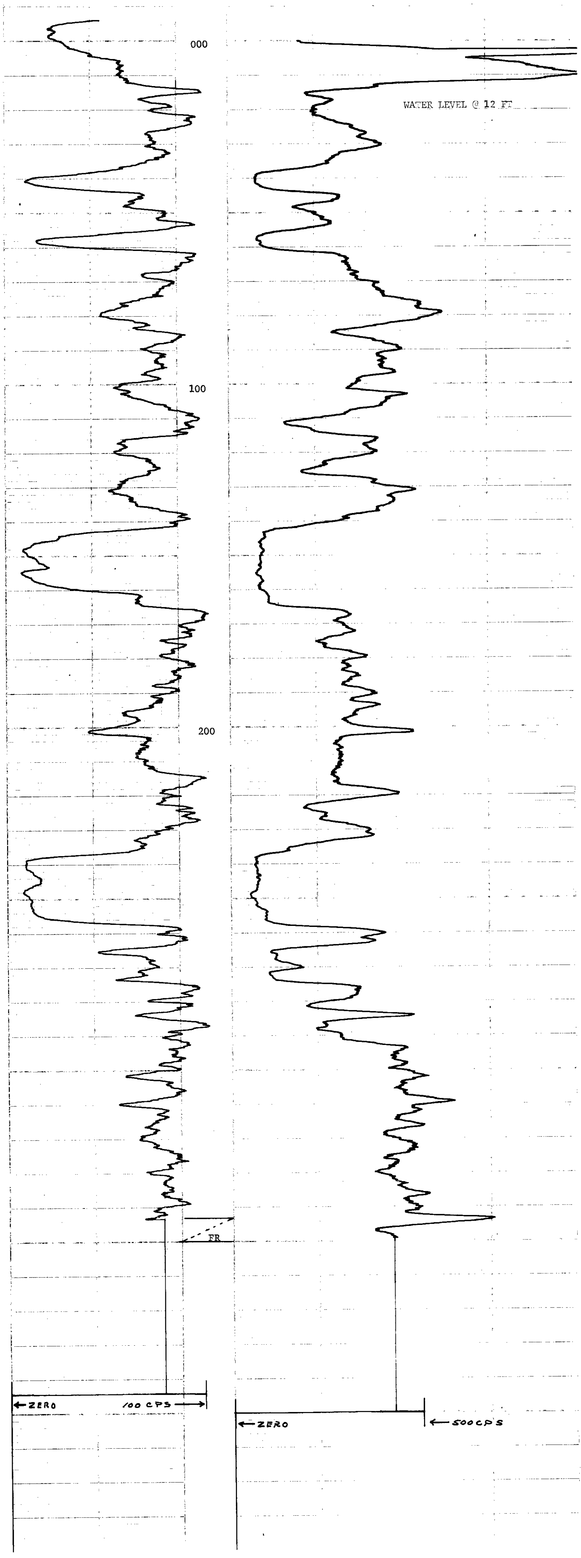
GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.		LOG TYPE	NEUTRON/NEUTRON
DIAMETER	$1\frac{11}{16}$	TOOL MODEL NO.	
DETECTOR MODEL NO.		DIAMETER	$1\frac{11}{16}$
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	4 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	6.7 FT.	LENGTH	6 INCH
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	187
HOIST TRUCK NO.	33	SPACING	17 INCH
INSTRUMENT TRUCK NO.		TYPE	AmBe
TOOL SERIAL NO.	R GRN 169 - 002	STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	0	349	12	5	100	OL	8	3	500	OL	60

REMARKS LOGGED THROUGH DOUBLE WALL DRILL STEM

GAMMA RAY	DEPTHS	NEUTRON
GAMMA RAY INCREASES →		NEUTRON INCREASES →
API ← 8 →		API ← 60 →
0 80		0 600 1200



ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

K. Koepke 72/8/1

319

FILE NO.

COMPANY TRIONIC OIL LIMITED

WELL RR - 619

FIELD

LOCATION TERRITORIAL MOUNTAIN

PROVINCE BRITISH COLUMBIA

Other Services: NONE

Permanent Datum: GROUND LEVEL — Elev. 0

Log Measured from: GROUND LEVEL — 0 Ft. Above Perm. Datum

Elev.: K.B. — G.L.

LSD SEC TWP RGE W of M

Recorded By JOHNSON

Witnessed By SLAVKIN

Run No.	ONE
Date	5 DEC 1976
First Reading	509
Last Reading	0
Casing Record	508
Depth Reached	330
Depth Driller	330
Depth Logger	330
Casing Driller	
Casing Logger	
Fluid Type	AIR/WATER
Liquid Level	40
Max. Temp.	4 7/8
Rm @ °F	
Operating Time	3 HOUR
Truck No.	33

EQUIPMENT DATA

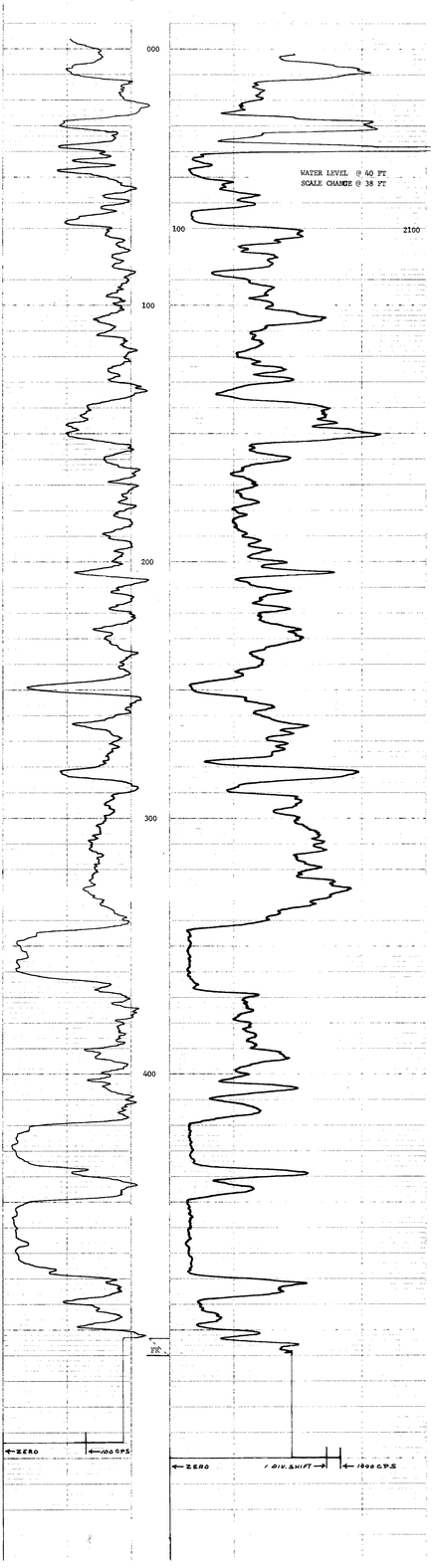
GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.		LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO.	
DETECTOR MODEL NO.		DIAMETER	1 11/16
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	4 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	6.7 FT.	LENGTH	6 INCH
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	187
HOIST TRUCK NO.	33	SPACING	17 INCH
INSTRUMENT TRUCK NO.		TYPE	AmBe
TOOL SERIAL NO.	R GRN 169 - 002	STRENGTH	3 CURIES

LOGGING DATA

RUN NO.	GENERAL DEPTHS FROM	GENERAL DEPTHS TO	SPEED FT/MIN	GAMMA RAY T.C. SEC.	GAMMA RAY SENS SETTINGS	GAMMA RAY ZERO DIV. L OR R	GAMMA RAY API G. R. UNITS PER LOG DIV.	NEUTRON T.C. SEC.	NEUTRON SENS SETTINGS	NEUTRON ZERO DIV. L OR R	NEUTRON API N. UNITS PER LOG DIV.
1	0	38	12	5	100	OL	14	3	1000	12L	200
	38	509	12	5	100	OL	14	3	500	1 L	100

REMARKS

GAMMA RAY	DEPTHS	NEUTRON
GAMMA RAY INCREASES →		NEUTRON INCREASES →
API 14		API 200
0 — 140		2400 — 4400 — 6400



ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.

COMPANY ROCKIES COAL LIMITED

WELL BH - 620

LOCATION TUMBULL MOUNTAIN

FIELD ROCKIES

PROVINCE BRITISH COLUMBIA

Permanent Datum GROUND LEVEL Elev.

Log Measured from GROUND LEVEL Ft. Above Perm. Datum

Drilling Measured from GROUND LEVEL G.L.

LSD SEC TWP RGE W4M

Other Services:

NOTE: K.B. CSG G.L.

319

Run. No.	ONE
Date	5 JUNE 1976
Last Reading	400
First Reading	0
Footage Logged	400
Depth Reached	401
Depth Driller	401
Depth Logger	401
Casing Driller	10
Casing Logger	
Fluid Type	AIR/WATER
Liquid Level	22
Min. Diam.	4 7/8
Rm @ °F	
Operating Time	1 HOUR
Truck No.	33
Recorded By	JOHNSON
Witnessed By	TAYLOR

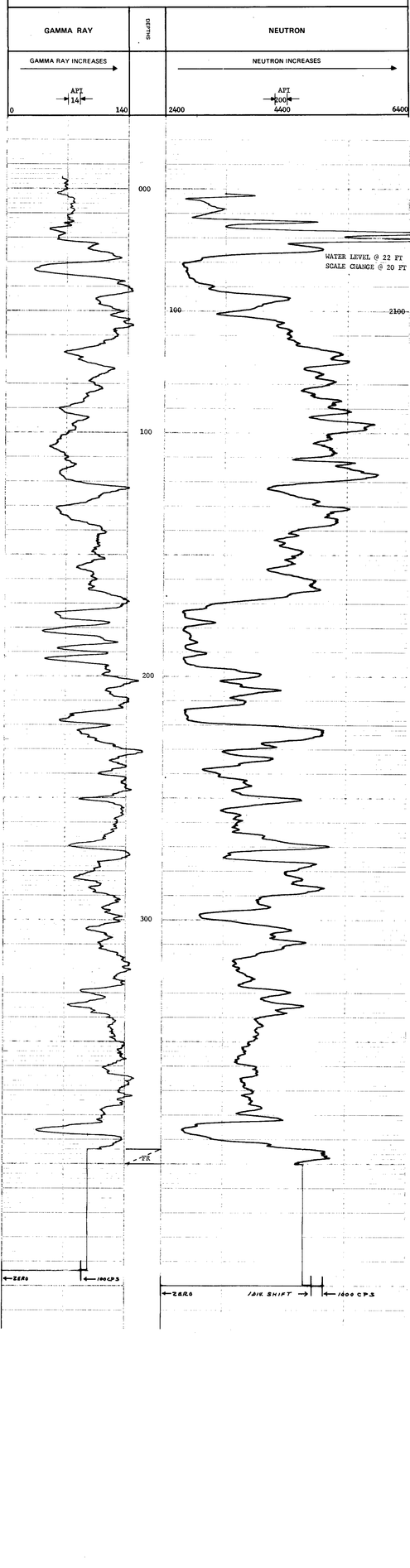
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.		LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO.	
DETECTOR MODEL NO.		DIAMETER	1 11/16
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	4 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	6.7 FT.	LENGTH	6 INCH
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	187
HOIST TRUCK NO.	33	SPACING	17 INCH
INSTRUMENT TRUCK NO.		TYPE	AmBe
TOOL SERIAL NO.	R GRN 169 - 002	STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	0	20	12	5	100	OL	14	3	1000	12 L	200
	20	400	12	5	100	OL	14	3	500	1 L	100

REMARKS



Widco* WELL LOG

COMPANY

WELL RH 1013 & RH 1014

LOCATION GREENHILLS

COMPANY

AREA GREENHILLS

WELL RH-1013 , RH-1014

COUNTY STATE

COORDINATES
N
S
ELEVATION
DF
KB
GL 319

	Run No 1	Run No 2
Date		
1st Reading		
2nd Reading		
Stage Logged		
Bottom (Driller)		
Casing (From Log)		
Casing (Driller)		
Casing Size		
Bit Size		
Bit Size		

MUD	Run No 1	Run No. 2
Nature		
Density		
Viscosity	@ °F	@ °F
Resistivity	@ °F	@ °F
Res @ BHT	@ °F	@ °F
pH		
Circ Temp		
B H Temp.		
Logged by	C. Mck.	
Witnessed by	R. B. A.	

REMARKS MAY 4 '76

B-50 DRILL ; "G" SEAM AREA

RH-1013

20'

T.D. 92'

100'

RH-1014

00'

T.D. 85'

Widco* WELL LOG

COMPANY 1015

WELL RH ~~1022~~

LOCATION GREENHILLS

COMPANY

AREA GREENHILLS

WELL RH ~~1022~~ 1015

COUNTY STATE

319

COORDINATES:
N
S
ELEVATION:
D.F.
K.B.
G.L.

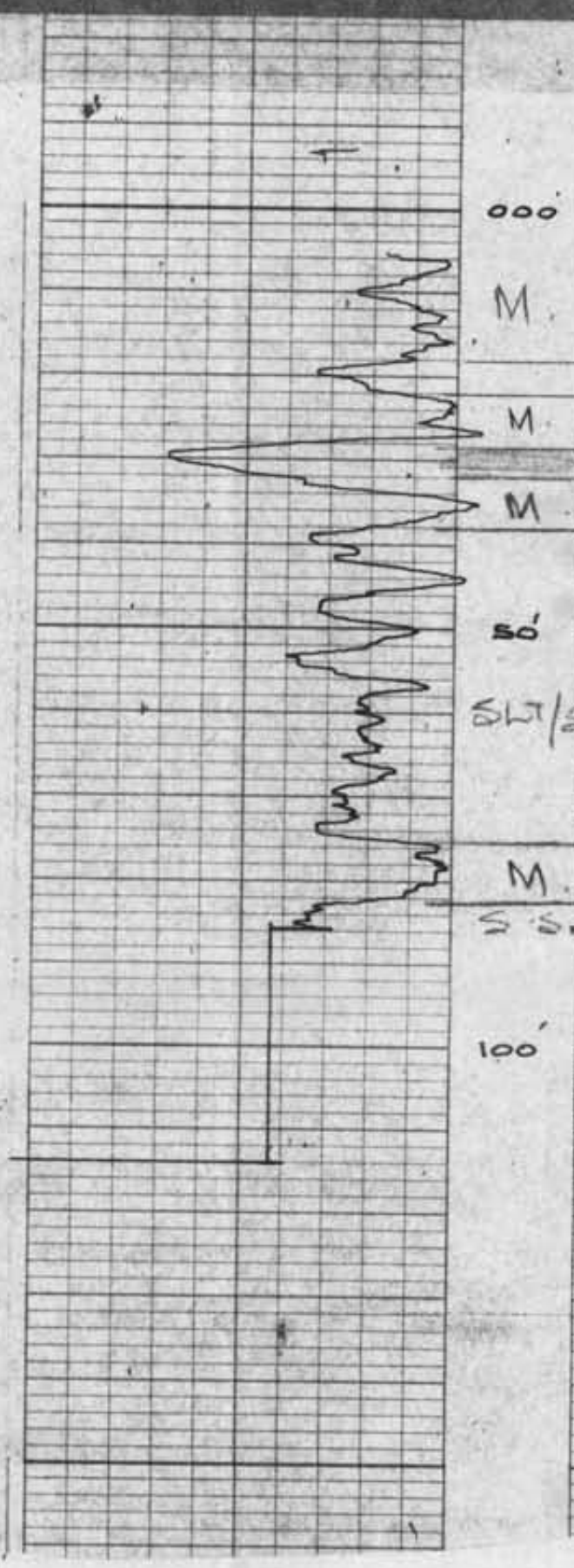
	Run No. 1	Run No. 2	MUD	Run No. 1	Run No. 2
Date			Nature		
First Reading			Density		
Last Reading			Viscosity	@ F	@ F
Footage Logged			Resistivity	@ F	@ F
Bottom (Driller)			Res. @ BHT	@ F	@ F
Casing (From Log)			pH		
Casing (Driller)			Circ. Temp.		
Casing Size			B.H. Temp.		
Bit Size					
Bit Size					
			Logged by	C. Mck.	
			Witnessed by		

REMARKS B-50 DRILL "GL" SEAM AREA.

OCT. 20 '76

K-FORDYCE 26(5)9-1

* Reg. U.S. Pat. Off.



ABAZED N

T. 12 S., R. 32 W., 4th P.M.

TOP = 721 - 3.5'

SAME SEAM AS IN RH 1013

ENGLISH 5 INCH A.P.I. G.O.I. TYPE NO. 15-1552-03

Widco* WELL LOG

COMPANY
AREA GREENHILLS
WELL RH 1016
COUNTY STATE

319

COORDINATES
N
S
ELEVATION
D F
K B
G L

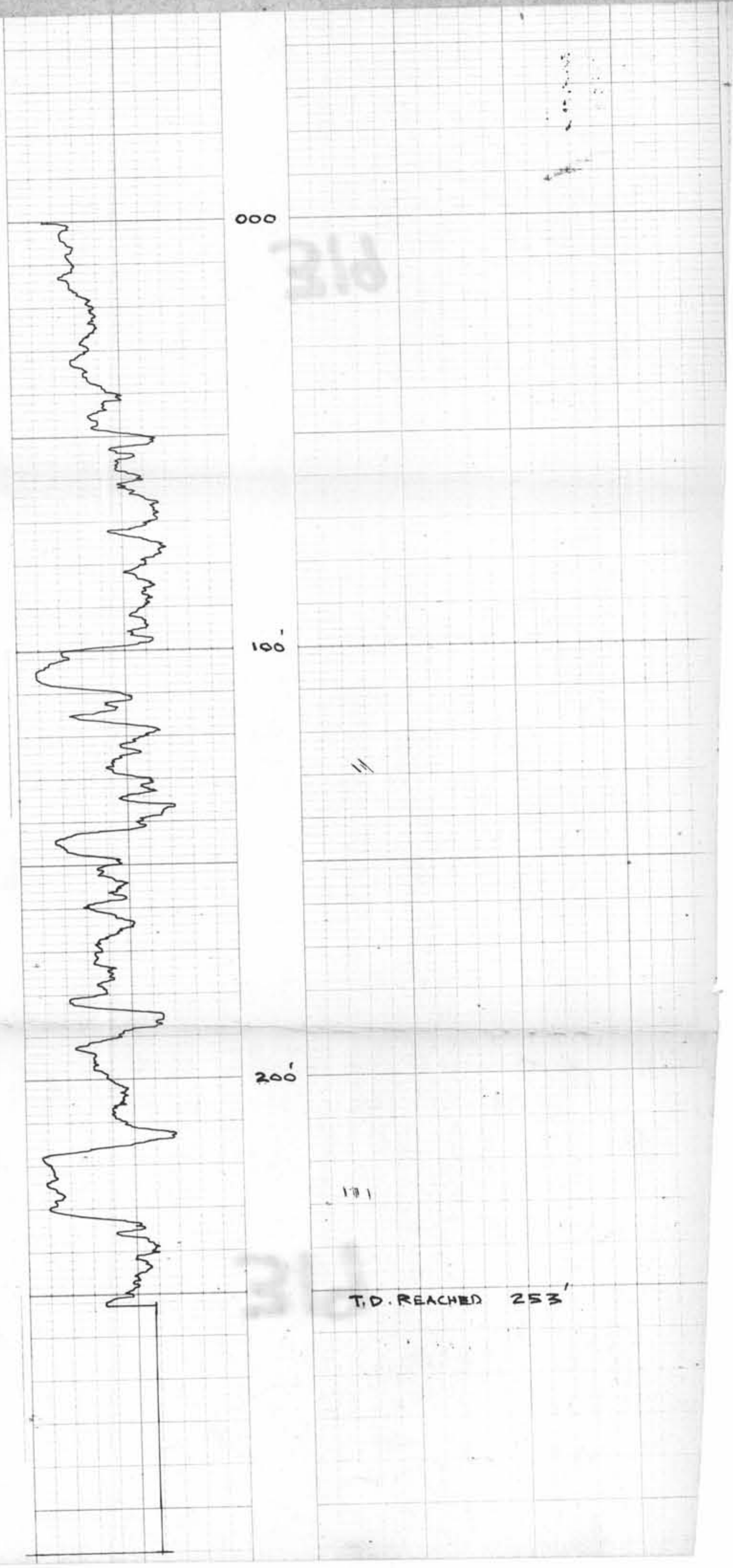
COMPANY
WELL RH 1016
LOCATION GREENHILLS

	Run No 1	Run No 2	MUD	Run No 1	Run No 2
Date			Nature		
First Reading			Density		
Last Reading			Viscosity	@ F	@ F
Footage Logged			Resistivity	@ F	@ F
Bottom (Driller)			Res @ BHT	@ F	@ F
Casing (From Log)			pH		
Casing (Driller)			Circ. Temp.		
Casing Size			B H Temp		
Bit Size					
Bit Size					
			Logged by	C.McK.	
			Witnessed by		

REMARKS 14 A.P.I. OCT. 8'76
Logged through drill pipe

* Reg U.S Pat. Off.

K-Fox 2 Eng 76(3)A-1



Widco* WELL LOG

COMPANY

AREA GREENHILLS

WELL RH 1017

COUNTY STATE

319

COORDINATES
N
S
ELEVATION
D F
K B
G L

COMPANY
WELL RH 1017
LOCATION GREENHILLS

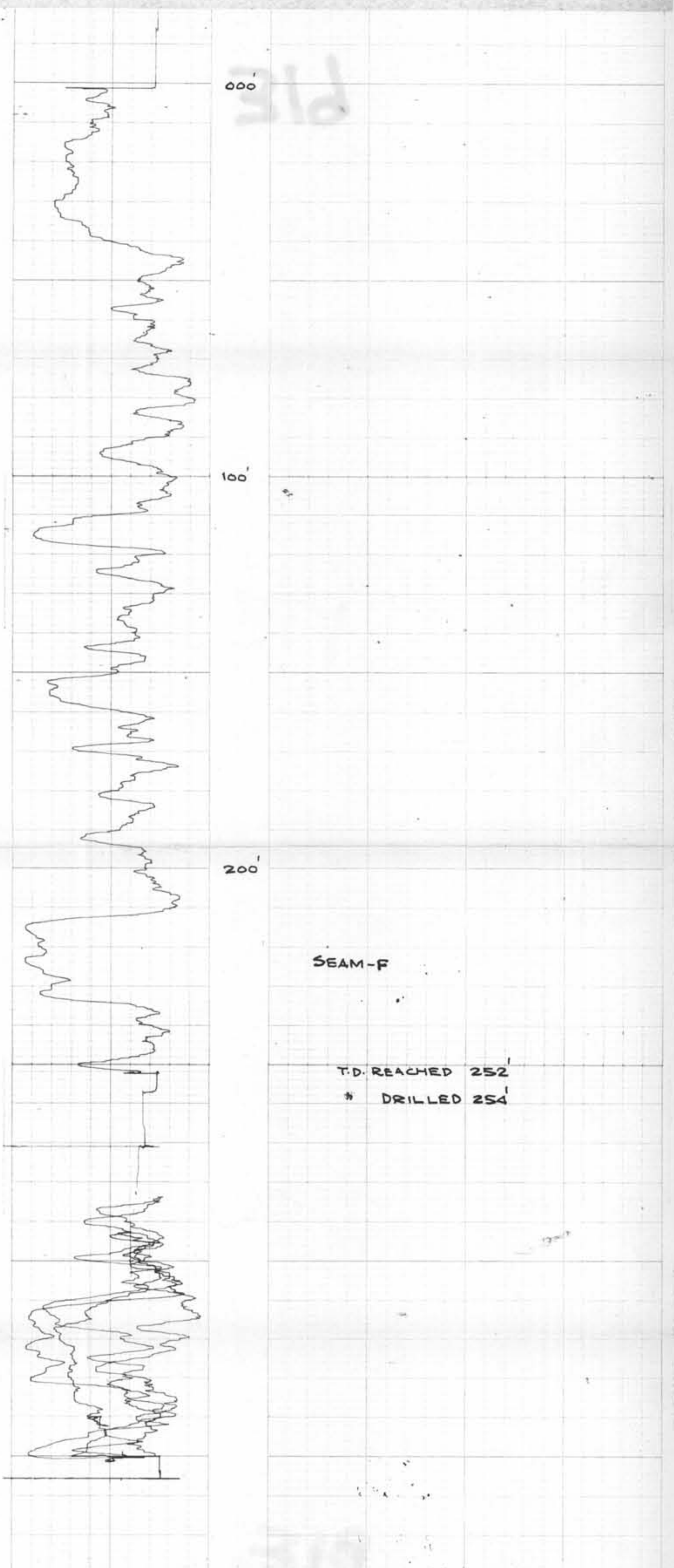
K-forming 76(3)A-1

	Run No. 1	Run No. 2	MUD	Run No. 1	Run No. 2
Date			Nature		
First Reading			Density		
Last Reading			Viscosity	@ F	@ F
Footage Logged			Resistivity	@ F	@ F
Bottom (Driller)			Res. @ BHT	@ F	@ F
Casing (From Log)			pH		
Casing (Driller)			Circ. Temp.		
Casing Size			B.H. Temp.		
Bit Size					
Bit Size			Logged by	RK.	
			Witnessed by		

REMARKS Oct. 9'76 11 A.P.I.

Logged through drill pipe.

* Reg U.S. Pat. Off.



Widco* WELL LOG

COMPANY

AREA GREENHILLS

WELL RH 1018

COUNTY STATE

319

COORDINATES:
N
S
ELEVATION:
D.F.
K.B.
G.L.

COMPANY
WELL RH 1018
LOCATION GREENHILLS

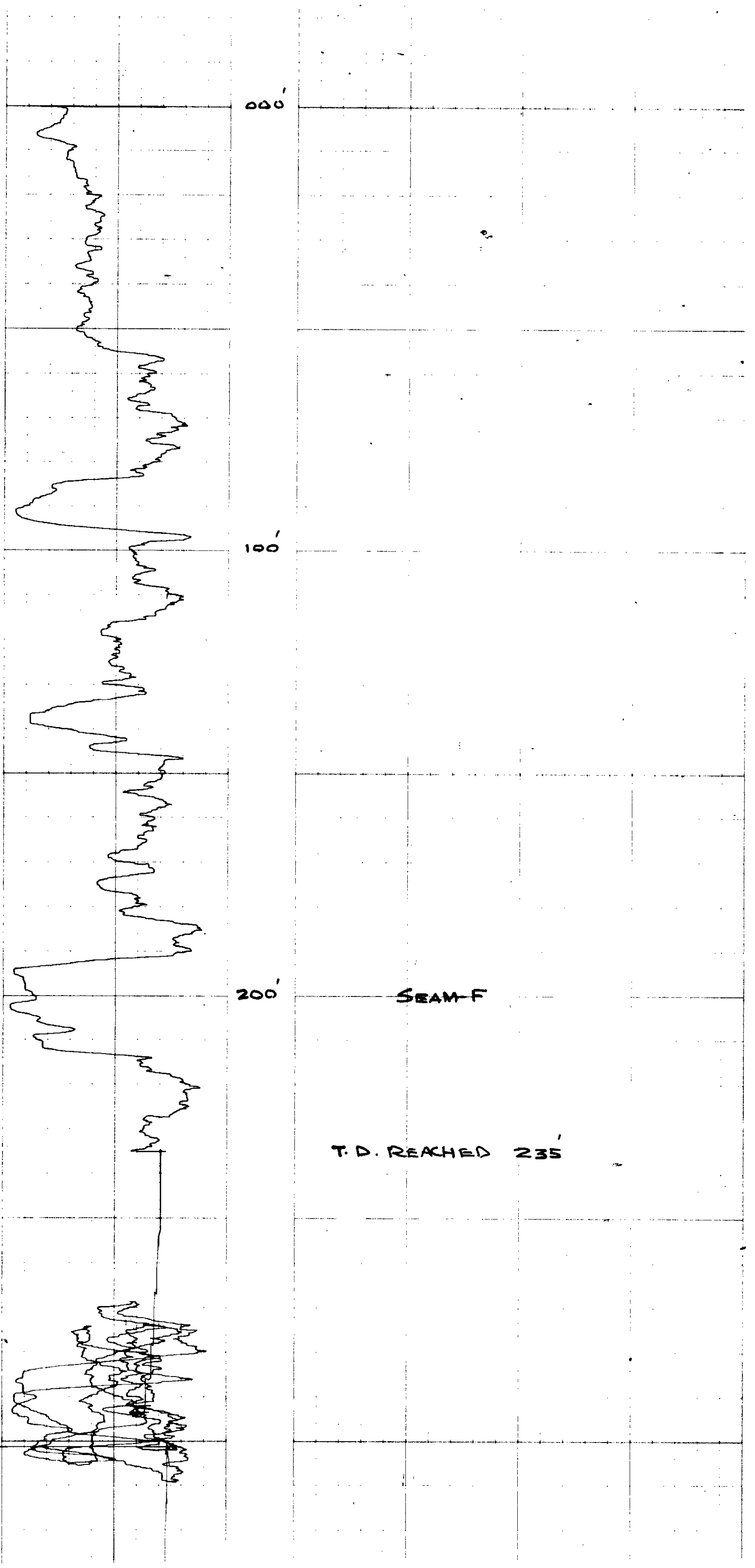
	Run No. 1	Run No. 2
Date		
First Reading		
Last Reading		
Footage Logged		
Bottom (Driller)		
Casing (From Log)		
Casing (Driller)		
Casing Size		
Bit Size		
Bit Size		

MUD	Run No. 1	Run No. 2
Nature		
Density		
Viscosity	@ °F	@
Resistivity	@ °F	@
Res. @ BHT	@ °F	@
pH		
Circ. Temp.		
B.H. Temp.		
Logged by	R.K.	
Witnessed by		

REMARKS 11. A.P.I Oct. 10'76.

Logged through drill pipe.

* Reg. U.S. Pat. Off.



Widco* WELL LOG

COMPANY
AREA GREENHILLS
WELL RH 1019
COUNTY STATE

319

COORDINATES
N
S
ELEVATION
D F
K B
G L

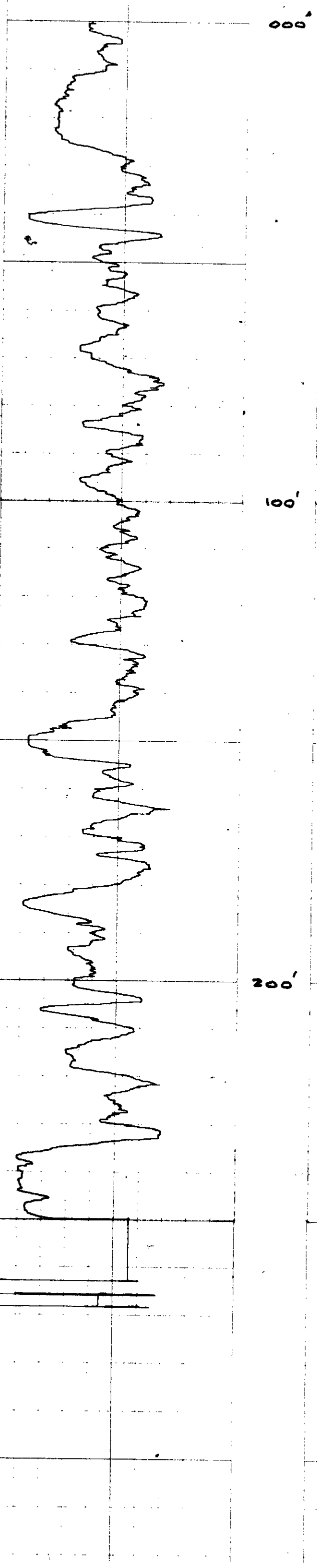
COMPANY
WELL RH 1019
LOCATION GREENHILLS

	Run No 1	Run No 2	MUD	Run No 1	Run No 2
Date			Nature		
First Reading			Density		
Last Reading			Viscosity	@ F	@
Footage Logged			Resistivity	@ F	@
Bottom (Driller			Res. @ BHT	@ F	@
Casing (From Log			pH		
Casing (Driller)			Circ Temp		
Casing Size			BH Temp		
Bit Size					
Bit Size					
			Logged by	C. Mck.	
			Witnessed by		

K-FORDING 76 (3) A-1

REMARKS "F" SEAM HOLE OCT 6'76. 12 A.P.I.
LOGGED THROUGH DRILL PIPE

* Reg. U.S. Pat. Off.



≈ 160'

T.D. REACHED 250'

T.D. DRILLED 253'

Widco* WELL LOG

COMPANY
AREA GREENHILLS 319
WELL RH 1020 & 1021
COUNTY STATE

COORDINATES:
N
S
ELEVATION:
D F
K.B.
G.L.

COMPANY
WELL RH 1020 & 1021
LOCATION GREENHILLS

	Run No. 1	Run No. 2
Date		
First Reading		
Last Reading		
Footage Logged		
Bottom (Driller)		
Casing (From Log)		
Casing (Driller)		
Casing Size		
Bit Size:		
Bit Size:		

MUD	Run No. 1	Run No. 2
Nature		
Density		
Viscosity	@ F	@ F
Resistivity	@ F	@ F
Res. @ BHT	@ F	@ F
pH		
Circ. Temp.		
B.H. Temp.		
Logged by	C. Mck.	
Witnessed by		

REMARKS B-50, DRILL HOLES OCT. 13'76.
4" AREA

K. Fordens 7.6(3)A7

* Reg. U.S. Pat. Off.

RH 1020

000'

7' "GL" AS IN RH1014 & T.H. 7

17.5' 10.5'

100'

T.D. REACHED 86'

RH 1021

000'

7' 2.5'
30

100'

T.D. REACHED 87'

Wirdco

GREENHILLS
RH 1024

319

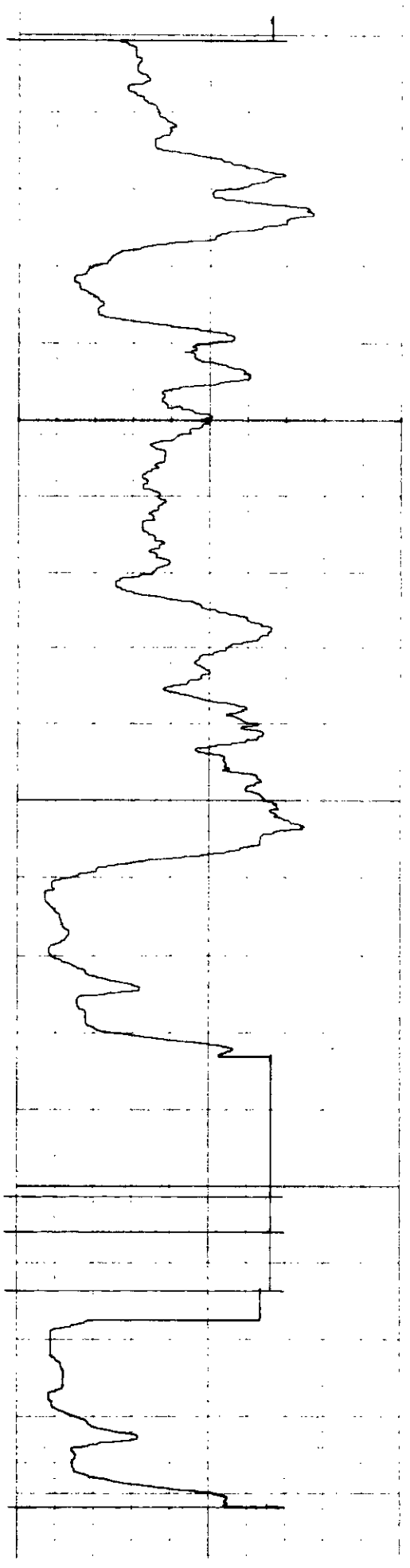
RH 1024
GREENHILLS.

K-forms 76(3)A-1

P.M.D

LOGGED THROUGH DRILL PIPE.

* Reg U.S Pat Off



SEAM "F"

T.D. REACHED 133'

WELL LOG

GREENHILLS.
RH 1025

319

RH 1025
GREENHILLS.

K-forcing 76(3)A-1

P.M.D.

LOGGED THROUGH DRILL PIPE
12 A.P.I NOV. 7'76

* Reg U S Pat Off

SEAM "F"

T.D. REACHED 129'

ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

K-foothills 769-01

FILE NO. 319

COMPANY FORDING COAL LIMITED

WELL HR - [illegible] 10-26

FIELD FORDING

LOCATION GREEN HILLS

SEC TWP RGE M

Other Services: NONE

Permanent Datum	GROUND LEVEL
Log Measured From	GROUND LEVEL
Drill Measured From	GROUND LEVEL
Elev. K.B.	
Ft. Above Perm. Datum G.L.	
Date	2 NOV 1976
Run No.	ONE
First Reading	442
Last Reading	0
Log Measured	442
Drill Measured	443
Depth Driller	443
Casing Driller	443
Casing Logged	
Fluid Type	AIR/WATER
Fluid Level	
Max. Rec. Temp.	
Min. Diam.	4 7/8
Rm @ °F	
Operating Time	1 HOUR
Truck No.	33
Recorded By	JOHNSON
Witnessed By	TAYLOR

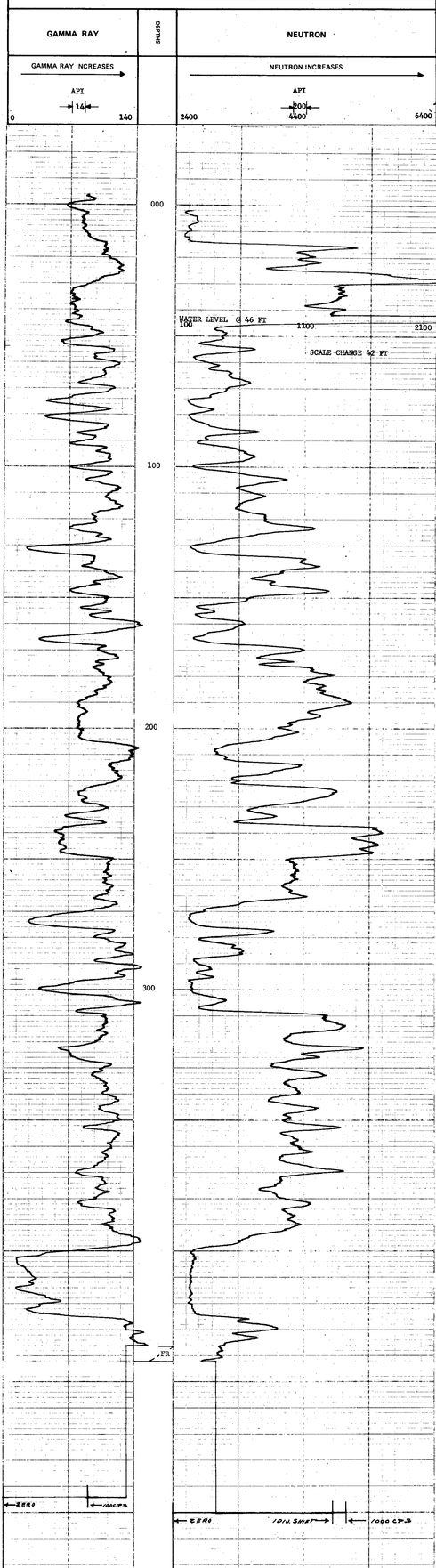
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.		LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO.	
DETECTOR MODEL NO.		DIAMETER	1 11/16
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	4 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	6.7 FT	LENGTH	8 INCH
GENERAL		SOURCE MODEL NO.	MRC-N-SS-W
HOIST TRUCK NO.	33	SERIAL NO.	187
INSTRUMENT TRUCK NO.		SPACING	17 INCH
TOOL SERIAL NO.	R GRN 169 - 002	TYPE	AmBe
		STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	0	42	12	5	100	0L	14 API	3	1000	12L	200 API
	42	442	12	5	100	0L	14 API	3	500	1L	100 API

REMARKS



ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

K-Formerly 74(5)P-1

FILE NO. 319

COMPANY FORDING COAL LIMITED

WELL KM - 1686

LOCATION GREEN HILLS

FIELD FORDING

PROVINCE BRITISH COLUMBIA

Permanent Datum: GROUND LEVEL Elev. K.B.

Log Measured from: GROUND LEVEL Ft. Above Perm. Datum

Well Depths Measured from: GROUND LEVEL G.L.

Other Services: NONE

LSD SEC TWP RGE W. M

Run No. ONE

Date 2 NOV 1976

Last Reading 458

First Reading 0

Footage Logged 458

Depth Reached 459

Bottom Driller 459

Bottom Logger 452

Casing Driller

Casing Logger

Fluid Type AERATED WATER

Liquid Level 40

Max. Diam.

Min. Diam. 4 7/8

Rm @ °F

Operating Time 1 HOUR

Truck No. 33

Recorded By JOHNSON

Witnessed By TAYLOR

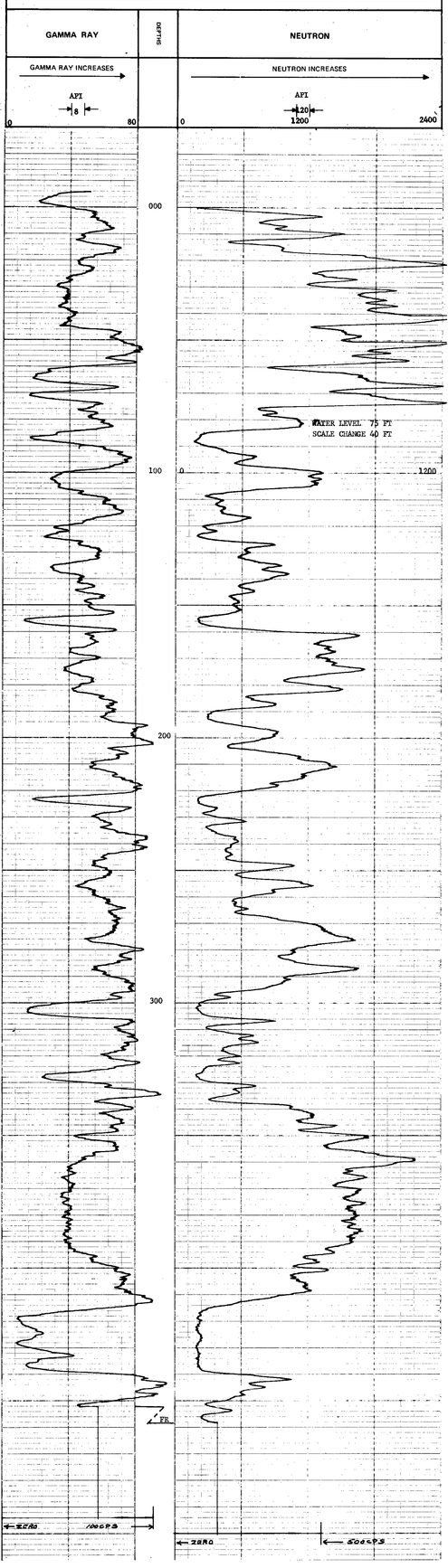
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.		LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO.	
DETECTOR MODEL NO.		DIAMETER	1 11/16
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	4 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	6.7 FT	LENGTH	6 INCH
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	187
HOIST TRUCK NO.	33	SPACING	17 INCH
INSTRUMENT TRUCK NO.		TYPE	AmBe
TOOL SERIAL NO.	R GBN 169 - 002	STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	0	40	12	5	100	OL	8 API	3	1000	OL	120 API
	40	458	12	5	100	OL	8 API	3	500	OL	60 API

REMARKS LOGGED THROUGH DOUBLE WALL DRILL STEM



WELL LOG

GREENHILLS.
RH 1028

319

RH 1028

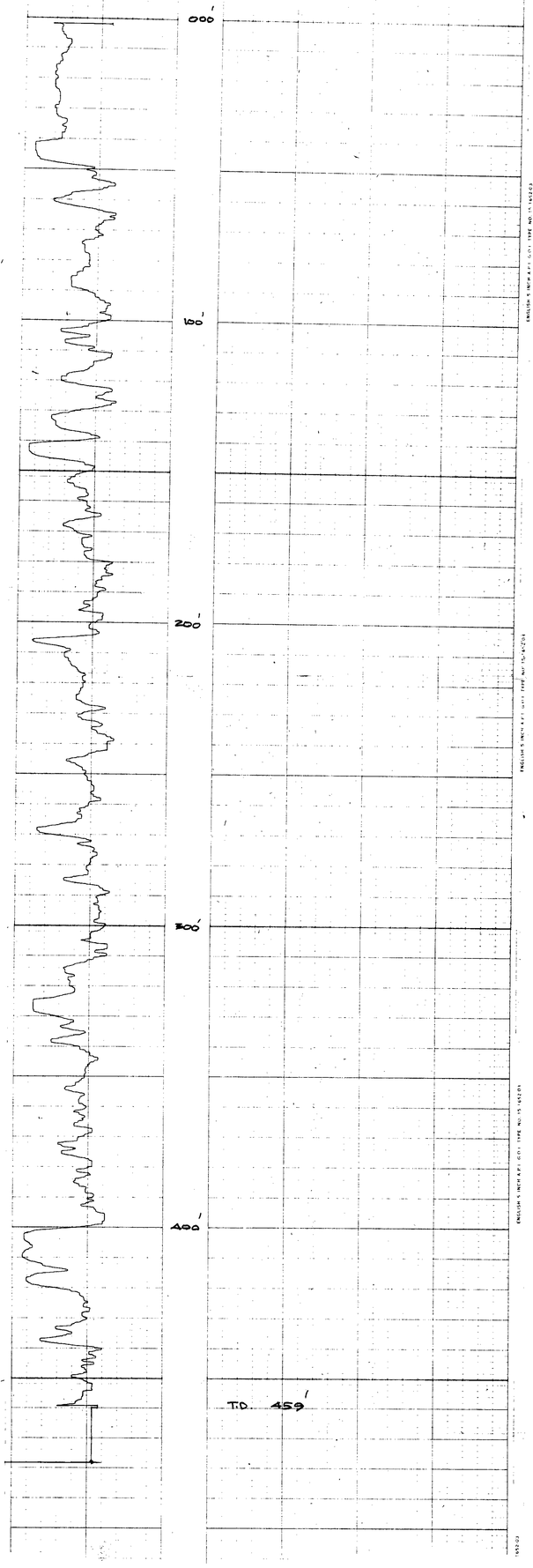
Run No. 2

Logged by
Witnessed by

REMARKS

14 A.P.I

* Reg. U.S. Pat. Off.



ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

K-Roke 76(3)A-1

FILE NO.

LSD SEC TWP RGE W ... M

COMPANY FORDING COAL LIMITED

WELL BH-1029

LOCATION GREEN HILLS 319

FIELD FORDING

PROVINCE BRITISH COLUMBIA

Permanent Datum: GROUND LEVEL Elev.

Log Measured From: GROUND LEVEL Ft. Above Perm. Datum

Well Depth Measured From: GROUND LEVEL

Other Services: NONE

K.B.

CSG

G.L.

Run. No.	ONE
Date.	8 NOV. 1974
First Reading	242
Last Reading	2148
Footage Logged	2148
Depth Reached	2148
Depth Driller	430
Casing Rake	
Casing Driller	
Fluid Type	
Liquid Level	8'8"/WATER
Min. Diam.	9/16 1 7/16
Rm @ °F	
Operating Time	3 HRS
Truck No.	33

Recorded By: JOHNSTON

Witnessed By: DOUCHAULT

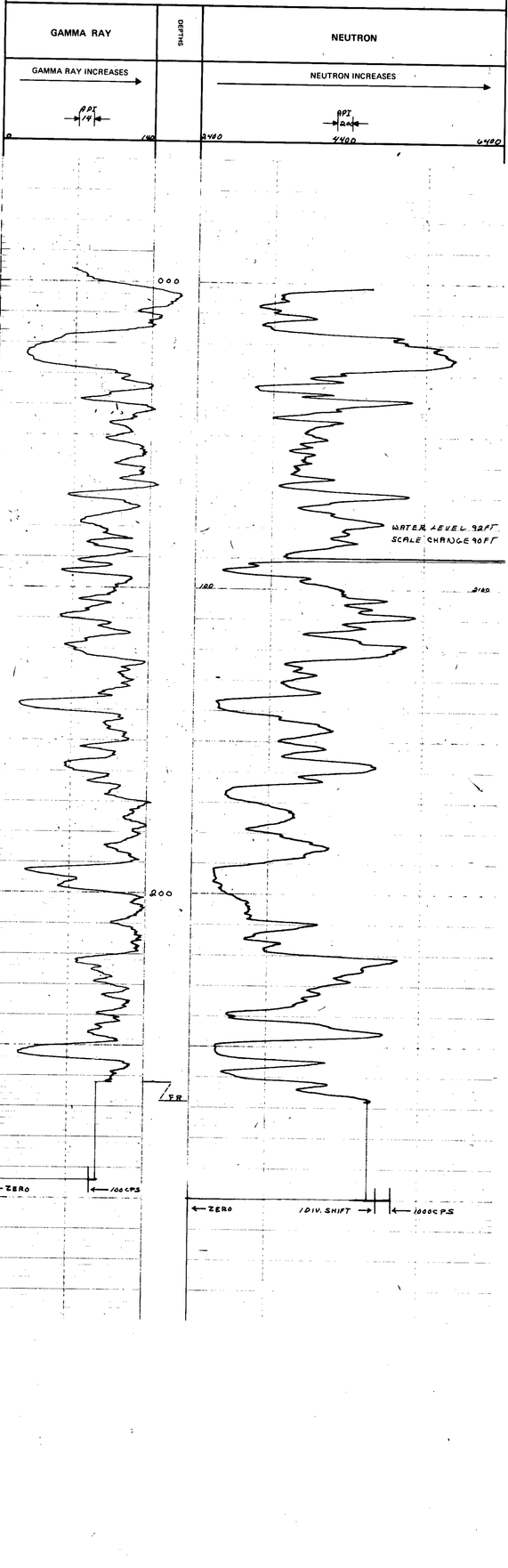
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.		LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO.	
DETECTOR MODEL NO.		DIAMETER	1 11/16
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	4 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	6.7 FT.	LENGTH	6 INCH
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	187
HOIST TRUCK NO.	33	SPACING	17 INCH
INSTRUMENT TRUCK NO.		TYPE	AmBe
TOOL SERIAL NO.	RERN 169-002	STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	0	92	12	5	100	0 L	14API	3	1000	12 L	200API
	92	268	12	5	100	0 L	14API	3	500	1 L	100API

REMARKS



ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

K-fostastic 76(3)2-1

FILE NO. 319

COMPANY FORDING COAL LIMITED

WELL RE - 1000

LOCATION GREEN HILLS

FIELD FORDING

PROVINCE BRITISH COLUMBIA

Other Services: NONE

Permanent Datum: GROUND LEVEL — Elev. K.B.

Log Measured from: GROUND LEVEL — Ft. Above Perm. Datum — C.S.G.

Drill Measured from: GROUND LEVEL — G.L.

LSD SEC TWP RGE W ____ M

Recorded By: JOHNSON

Witnessed By: MACDONALD

Run No.	ONE
Date	8 NOV 1976
First Reading	426
Last Reading	0
Footage Logged	426
Depth Driller	426
Depth Logger	426
Casing Rdrs	
Casing Driller	
Fluid Type	AIR/WATER
Liquid Level	244
Max. Diam.	4 7/8
Rm @ °F	
Operating Time	1 HOUR
Truck No.	33

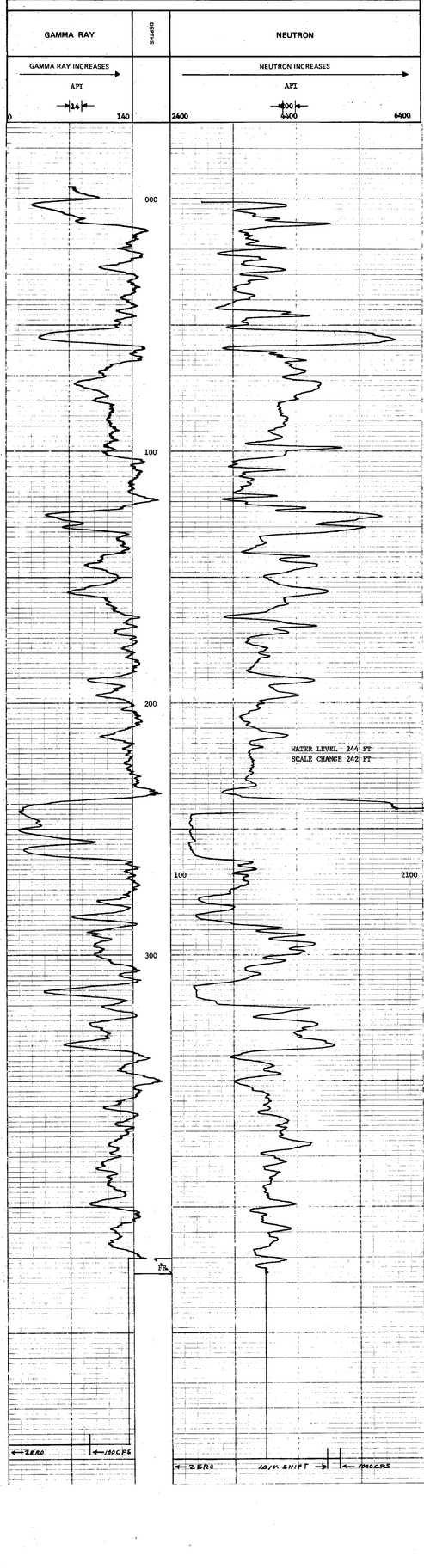
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.		LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO.	
DETECTOR MODEL NO.		DIAMETER	1 11/16
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	4 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	6.7 FT	LENGTH	6 INCH
GENERAL		SOURCE MODEL NO.	MRC-N-SS-W
HOIST TRUCK NO.	33	SERIAL NO.	187
INSTRUMENT TRUCK NO.		SPACING	17 INCH
TOOL SERIAL NO.	RGRN 169 - 002	TYPE	AmBe
		STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV
1	0	242	12	5	100	OL	14 API	3	1000	12L	200 API
	242	426	12	5	100	OL	14 API	3	500	11L	100 API

REMARKS



ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

K-Fernie-74(3)P-1

FILE NO.

COMPANY FORDING COAL LIMITED

WELL No. 1031

LOCATION FORDING

FIELD FORDING

PROVINCE BRITISH COLUMBIA

LSD SEC TWP RGE W M

319

Other Services: NONE

K.B.
D.F. Elev.
G.L.

Permanent Datum GROUND LEVEL
Log Measured from GROUND LEVEL Ft. Above Perm. Datum
Well Depths Measured from GROUND LEVEL

Run No.	ONE
Date	14 NOV 1976
First Reading	429
Last Reading	0
Footage Logged	429
Depth Driller	429
Depth Logger	429
Casing Rdrs	
Casing Driller	
Fluid Type	AIR/WATER
Liquid Level	175
Max. Temp.	4 7/8
Rm @ °F	
Operating Time	1 HOUR
Truck No.	34
Recorded By	SKIRROARD
Witnessed By	MACKENZIE

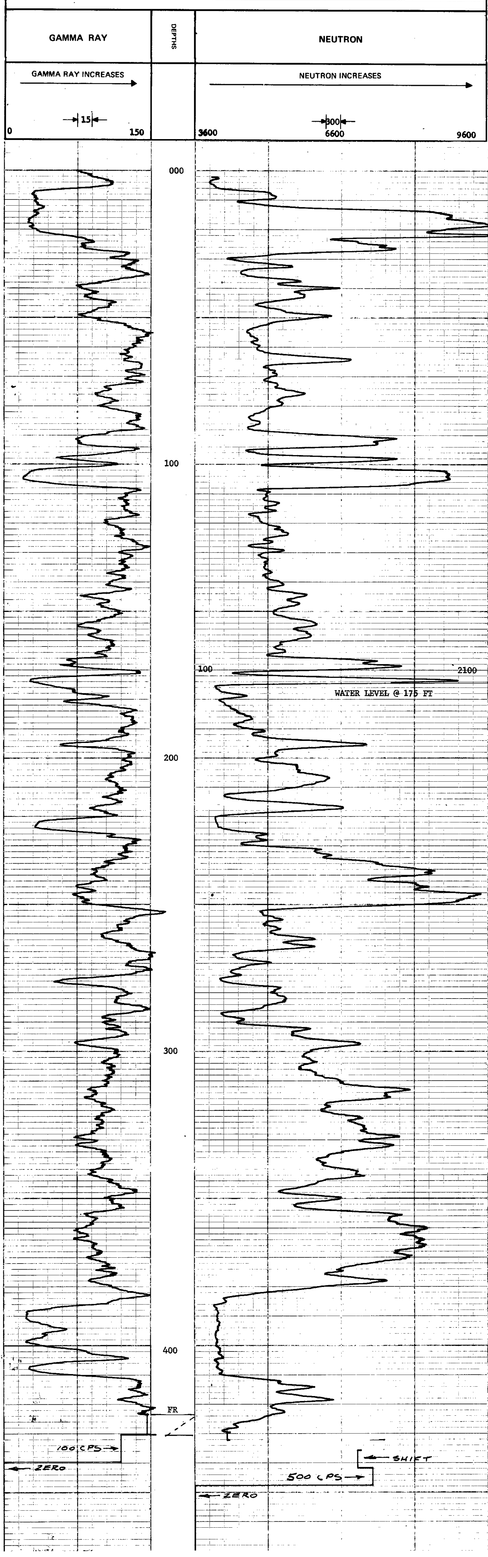
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	125-003	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1¼	TOOL MODEL NO.	125-003
DETECTOR MODEL NO.		DIAMETER	1¼
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	4 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	6.8 FT	LENGTH	6 INCH
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	256
HOIST TRUCK NO.	34	SPACING	
INSTRUMENT TRUCK NO.	34	TYPE	AmBe
TOOL SERIAL NO.	125-003	STRENGTH	3 CURIES

LOGGING DATA

GENERAL					GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	0	175	12	4	100	0	15	3	1000	12L	300
	175	429	12	4	100	0	15	3	500	1 L	100

REMARKS



WELL LOG

GREENHILLS
RH 1032

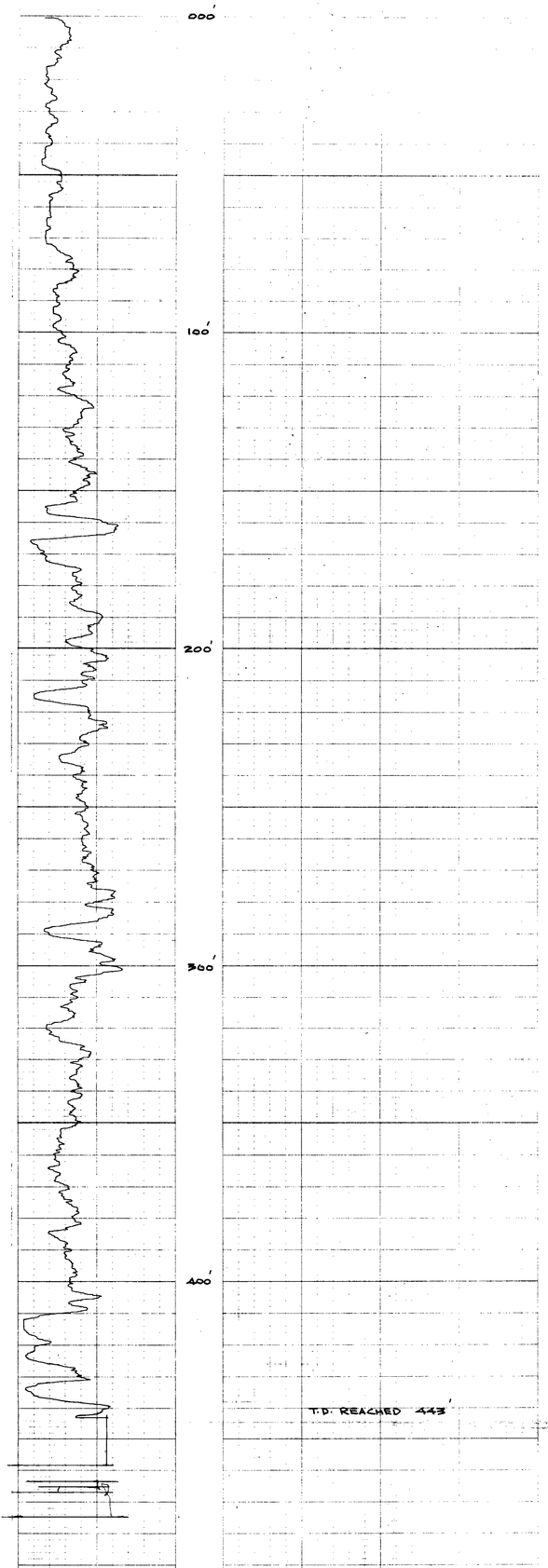
319

RH 1032
GREENHILLS.

K-Geoscience (1)

C.Mck.

14 A.P.I. LOGGED THROUGH DRILL PIPE
NOV. 11 '76.



ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.

COMPANY FORDING COAL LIMITED

WELL DH - 1033

LOCATION

FIELD FORDING

PROVINCE BRITISH COLUMBIA

Permanent Datum GROUND LEVEL Elev.

Log Measured from GROUND LEVEL Ft. Above Perm. Datum

Well Depth Measured from GROUND LEVEL

K.B.

D.F.

G.L.

Other Services: NONE

LSD SEC TWP RGE W M

319

Run No. ONE

Date 14 MAY 1976

First Reading 469

Last Reading 0

Footage Logged 469

Depth Driller 469

Depth Logger 469

Casing Rate

Casing Driller

Fluid Type AIR/WATER

Liquid Level 23

Max. Diam. 4 7/8

Rm @ °F

Operating Time

Truck No. 1 HOUR

Recorded By SHEPPARD 34

Witnessed By McKINNEY

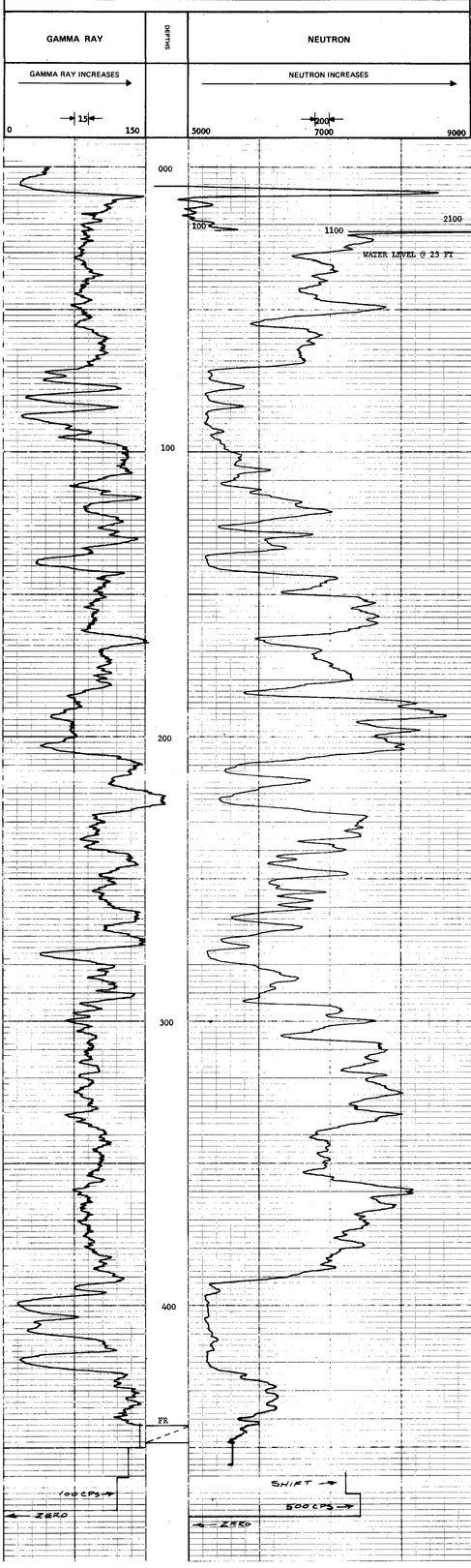
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	125-003	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1¼	TOOL MODEL NO.	125-003
DETECTOR MODEL NO.		DIAMETER	1¼
TYPE		DETECTOR MODEL NO.	/
LENGTH	4 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	6.8 FT	LENGTH	6 INCH
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	256
HOIST TRUCK NO.	34	SPACING	
INSTRUMENT TRUCK NO.	34	TYPE	AmBe
TOOL SERIAL NO.	125-003	STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	0	23	12	4	100	0	15	3	1000	25L	200
	23	459	12	4	100	0	15	3	500	1L	100

REMARKS



ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

K-Fosbrooke 76(3)A-1

FILE NO. 319

LSD
SEC
TWP
RGE
W ____ M

COMPANY FORDING COAL LIMITED

WELL RE - 1034

LOCATION

FIELD FORDING

PROVINCE BRITISH COLUMBIA

Other Services: NONE

Run. No.	ONE
Date	14 NOV 1976
First Reading	367
Last Reading	0
Footage Logged	366
Depth Reached	367
Depth Driller	367
Casing Rake	
Casing Driller	
Fluid Type	AIR/WATER
Liquid Level	43
Min. Diam.	4 7/8
Rm @ °F	
Operating Time	1 HOUR
Truck No.	34

Permanent Datum GROUND LEVEL Elev.
Log Measured from GROUND LEVEL Ft. Above Perm. Datum
Was Depths Measured from GROUND LEVEL K.B.
D.F.
G.L.

Recorded By STONGAARD
Witnessed By McKINNEY

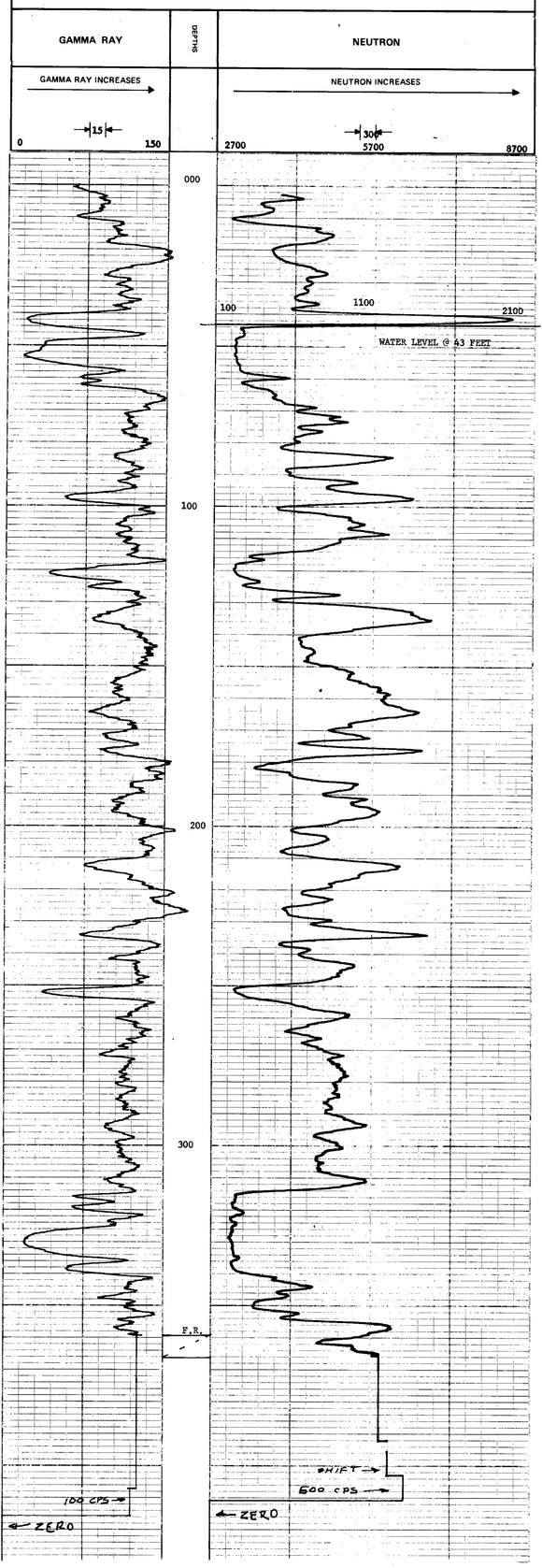
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	125-003	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1½	TOOL MODEL NO.	125-003
DETECTOR MODEL NO.		DIAMETER	1½
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	4 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	6.8 FT	LENGTH	6 INCH
GENERAL		SOURCE MODEL NO.	MRC-N-SS-W
HOIST TRUCK NO.	34	SERIAL NO.	256
INSTRUMENT TRUCK NO.	34	SPACING	
TOOL SERIAL NO.	125-003	TYPE	AmBe
		STRENGTH	3 CURIES

LOGGING DATA

GENERAL					GAMMA RAY			NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	0	43	12	4	100	0	15	3	1000	9L	300
	43	367	12	4	100	0	15	3	500	11L	100

REMARKS



ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

K-1-6-79-26-19-1

FILE NO.

COMPANY PRODUCE GOAL LOCATED

WELL BH - 1035

LOCATION GREEN HILLS

FIELD PROVIDENCE

PROVINCE EASTERN COLUMBIA

Permanent Datum GROUND LEVEL Elev. K.B. ___ D.F. ___ G.L. ___

Log Measured from GROUND LEVEL ___ Ft. Above Perm. Datum

Other Services NONE

LSD SEC TWP RGE W ___ M

319

Recorded By MACKENZIE

Witnessed By MACKENZIE

Run No.	ONE				
Date	18 OCT 1976				
Last Reading	550				
First Reading	0				
Casing Logged	550				
Depth Reached	550				
Bit Record	550				
Casing Driller	10				
Fluid Type	AIR/WATER				
Fluid Level	DRY				
Max. Temp.	84 F/R				
Rm @ °F					
Operating Time	1 HOUR				
Truck No.	33				

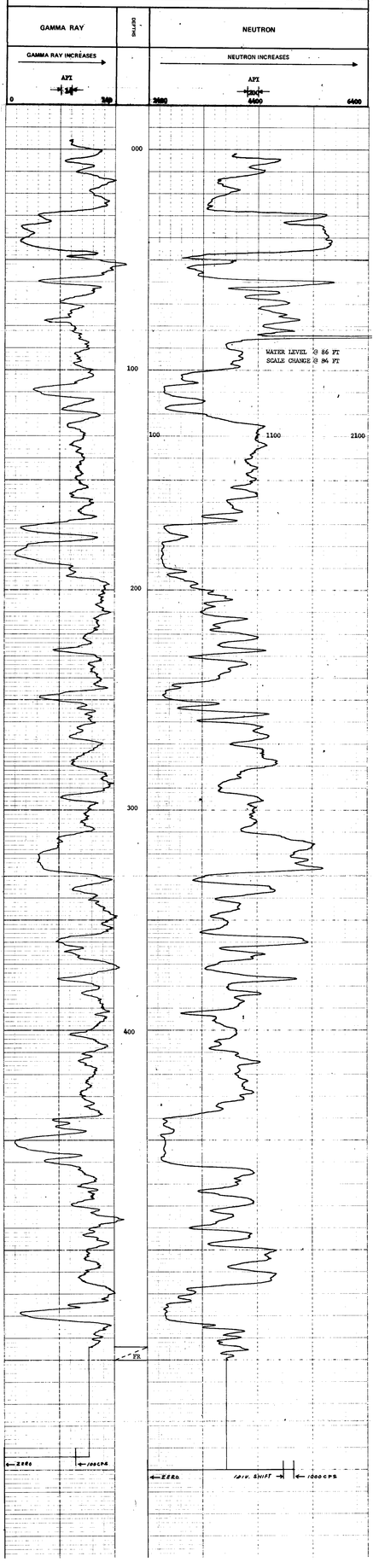
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.		LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO.	
DETECTOR MODEL NO.		DIAMETER	1 11/16
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	4 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	6.7 FT.	LENGTH	6 INCH
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	187
HOIST TRUCK NO.	33	SPACING	17 INCH
INSTRUMENT TRUCK NO.		TYPE	AmBe
TOOL SERIAL NO.	R GRH 169 - 002	STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV
1	0	84	12	3	100	OL	14	3	1000	1.7L	200
	84	550	12	5	100	OL	14	3	500	1.7	100

REMARKS



K-FORDING 76(3)A-1

ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.

LSD
SEC
TWP
RGE
W M

COMPANY FORDING COAL LIMITED

WELL RH - 1036

319

LOCATION GREEN HILLS

FIELD FORDING

PROVINCE BRITISH COLUMBIA

Other Services: NONE

Permanent Datum GROUND LEVEL Elev.

Log Measured from GROUND LEVEL Ft. Above Perm. Datum

Well Depths Measured from GROUND LEVEL

K.B.
CSG
G.L.

Run. No.	ONE		
Date	2 DEC 1976		
First Reading	549		
Last Reading	0		
Footage Logged	549		
Depth Reached	550		
Depth Driller	550		
Casing Roke			
Casing Driller	10		
Fluid Type	AIR/WATER		
Liquid Level	237		
Min. Diam.	4 7/8		
Rm @ °F			
Operating Time	1½ HOURS		
Truck No.	33		

Recorded By JOHNSON Witnessed By TAPLIN

EQUIPMENT DATA

	GAMMA RAY	NEUTRON
RUN NO.	ONE	ONE
TOOL MODEL NO.		NEUTRON/NEUTRON
LOG TYPE		
DIAMETER	1 11/16	1 11/16
DETECTOR MODEL NO.		
TYPE	SCINTILLATION	PROPORTIONAL
LENGTH	4 INCH	6 INCH
DISTANCE TO N. SOURCE	6.7 FT.	
SOURCE MODEL NO.		MRC-N-SS-W
SERIAL NO.		187
SPACING	33	17 INCH
TYPE		AmBe
STRENGTH	R GRN 169 - 002	3 CURIES

GENERAL

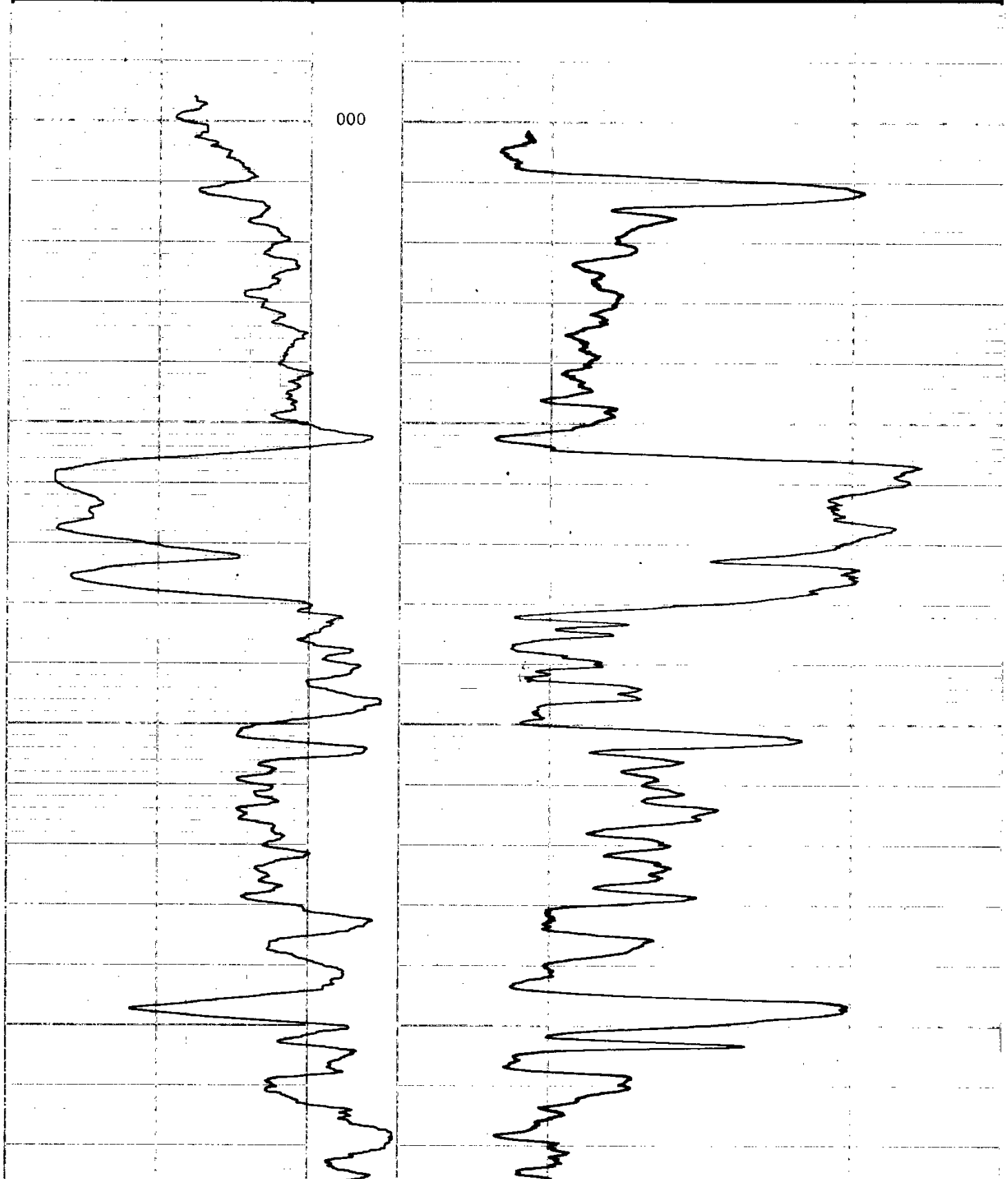
HOIST TRUCK NO.
INSTRUMENT TRUCK NO.
TOOL SERIAL NO.

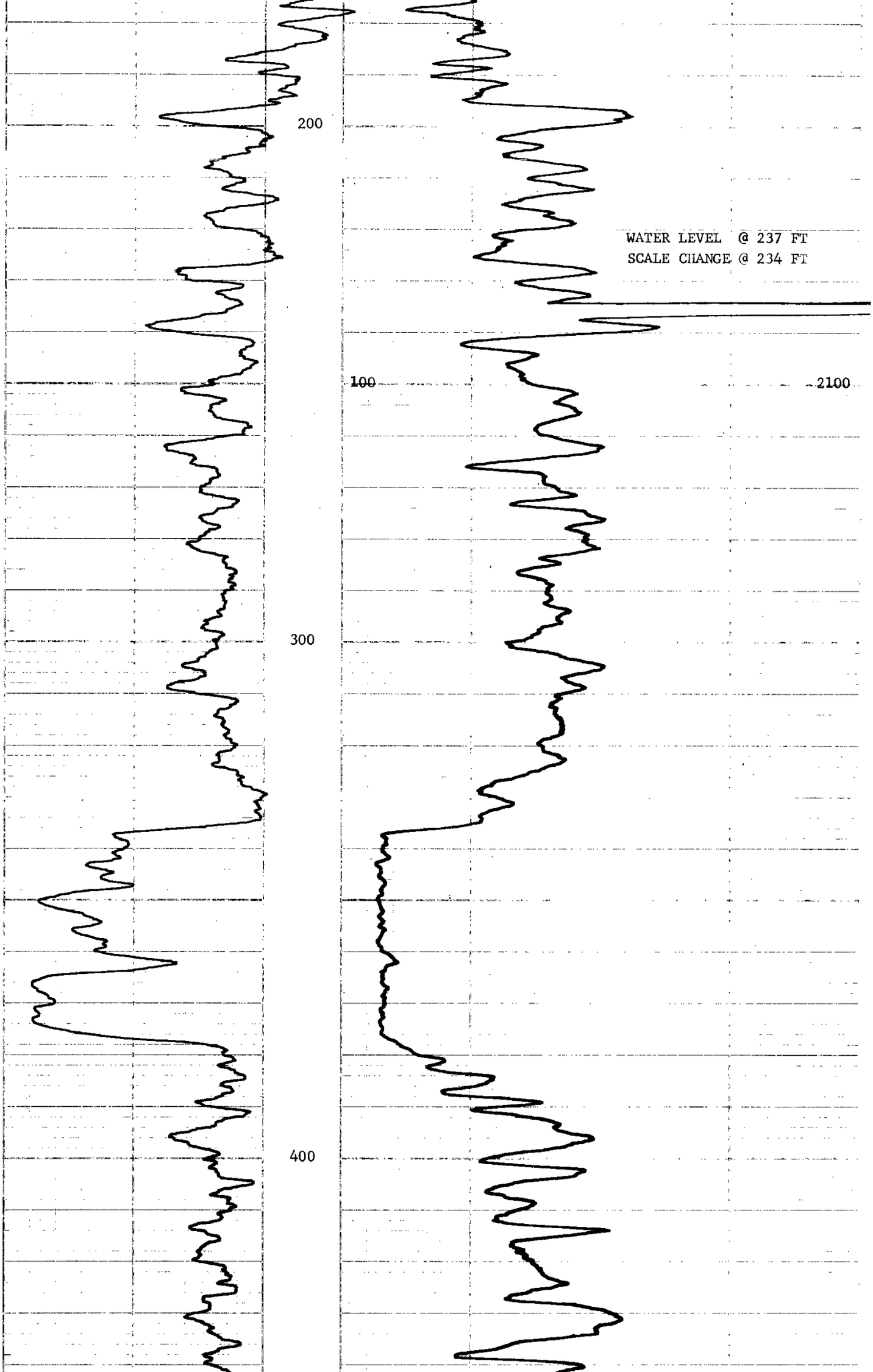
LOGGING DATA

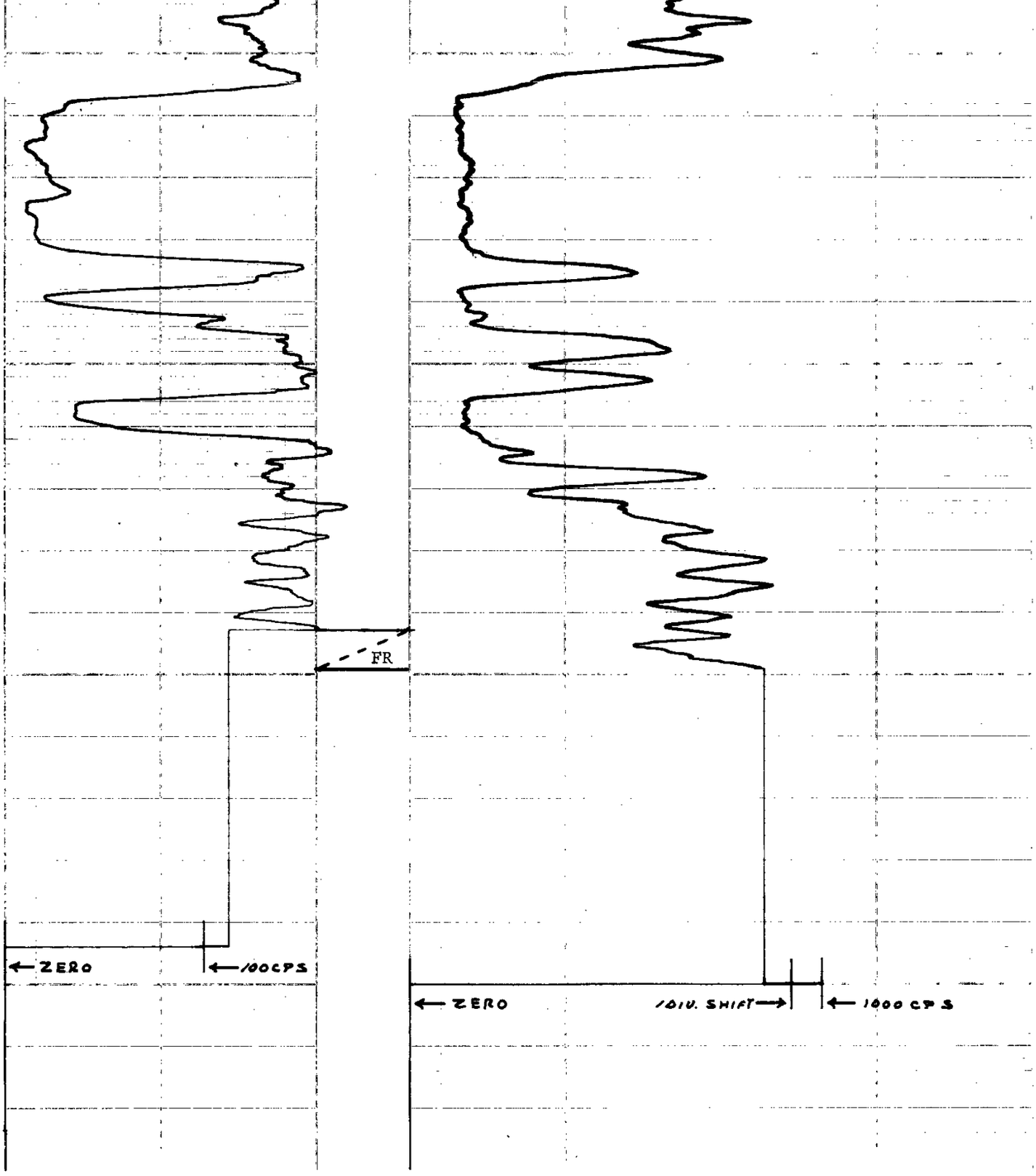
GENERAL				GAMMA RAY						NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	0	234	12	5	100	OL	14	3	1000	12L	200
	234	549	12	5	100	OL	14	3	500	1 L	100

REMARKS

GAMMA RAY	DEPTHS	NEUTRON
GAMMA RAY INCREASES →		NEUTRON INCREASES →
API 14		API 200
0 — 140		2400 — 4400 — 6400




200
300
400
100
2100
WATER LEVEL @ 237 FT
SCALE CHANGE @ 234 FT


FR
ZERO
100CPS
ZERO
1DIV. SHIFT
1000 CPS

Widco* WELL LOG

COMPANY:

AREA: GREENHILLS

WELL: RH 1037

COUNTY: STATE

319

COORDINATES: N S

ELEVATION: DF KB GL

LOCATION: COMPANY WELL RH 1037

K-Forando 7631-A

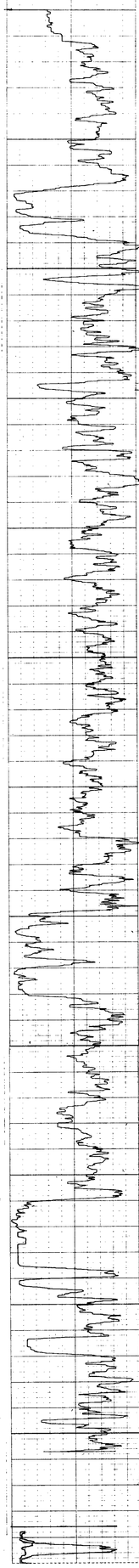
	Run No. 1	Run No. 2	MUD	Run No. 1	Run No. 2
Date			Nature		
First Reading			Density		
Last Reading			Viscosity	@ F	F
Footage Logged			Resistivity	@ F	F
Bottom (Driller)			Res. @ BHT	@ F	F
Casing -from Log			pH		
Casing (Driller)			Circ. Temp.		
Casing Size			B.H. Temp.		
Bit Size					
Bit Size			Logged by	W. SHAW	
			Witnessed by		

REMARKS: 10 A.P.I. LOGGED THROUGH DRILL STEM.

Nov. 28 '74

NO GM-NT. LOG. AVAILABLE.

* Reg. U.S. Pat. Off.



T.D. 557'

K-Forestvale 76(5)A-1

ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

FILE NO. 319

COMPANY FORDING COAL LIMITED

WELL RH-10-38

LOCATION GREEN HILLS

FIELD FORDING

PROVINCE BRITISH COLUMBIA

LSD SEC TWP RGE W. M

Permanent Datum GROUND LEVEL Elev.

Log Measured from GROUND LEVEL Ft. Above Perm. Datum

Well Depths Measured from GROUND LEVEL

K.B. CSG. G.L.

Other Services: NONE

Run No.	ONE			
Date	24 MAY 1974			
First Reading	358			
Last Reading	0			
Footage Logged	358			
Depth Reached	359			
Depth Driller				
Casing Rote				
Casing Driller	10			
Fluid Type	DRILLWATER			
Liquid Level	64			
Min. Diam.	4 7/8			
Rm @ °F				
Operating Time	1/2 HOUR			
Truck No.	33			

Recorded By JOHNSON

Witnessed By DALGARNO

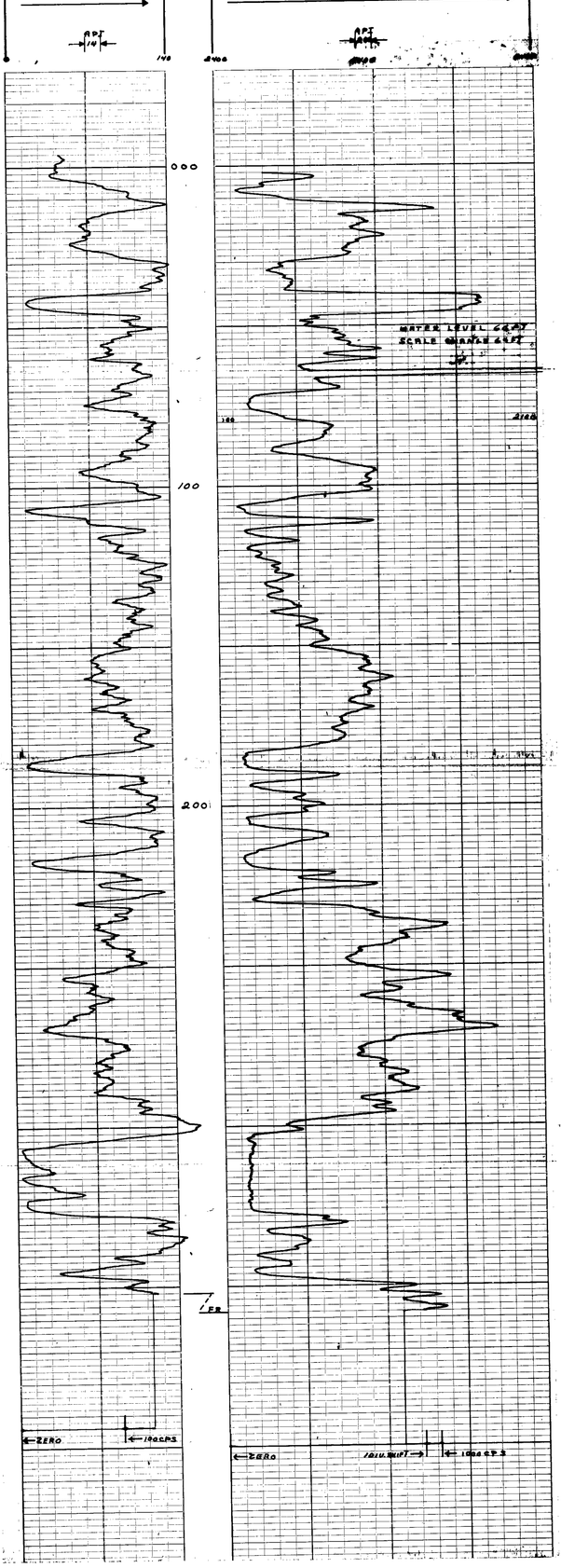
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.		LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO.	
DETECTOR MODEL NO.		DIAMETER	1 11/16
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	4 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	6.7 FT.	LENGTH	6 INCH
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	187
HOIST TRUCK NO.	33	SPACING	17 INCH
INSTRUMENT TRUCK NO.		TYPE	AmBe
TOOL SERIAL NO.	R GRN 169-002	STRENGTH	3 CURIES

LOGGING DATA

GENERAL			GAMMA RAY					NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV
1	0	64	12	5	100	0L	14API	3	1000	12L	200API
	64	358	12	5	100	0L	14API	3	500	1L	100API

REMARKS



RH 1040 & 1041
GREENHILLS.

319

GREENHILLS
RH 1040 & 1041

K-formations 76(3)A-1

C. McK.

1040 B-50 HOLE "GL" SEAM AREA
NOV. 4'76

1041 " " " " "
NOV. 8'76

RH 1040
NOV. 4'76.

RH 1041
NOV. 8'76.

RQ-100 WELL LOG

RH 1042

GREENHILLS.

RH 1042

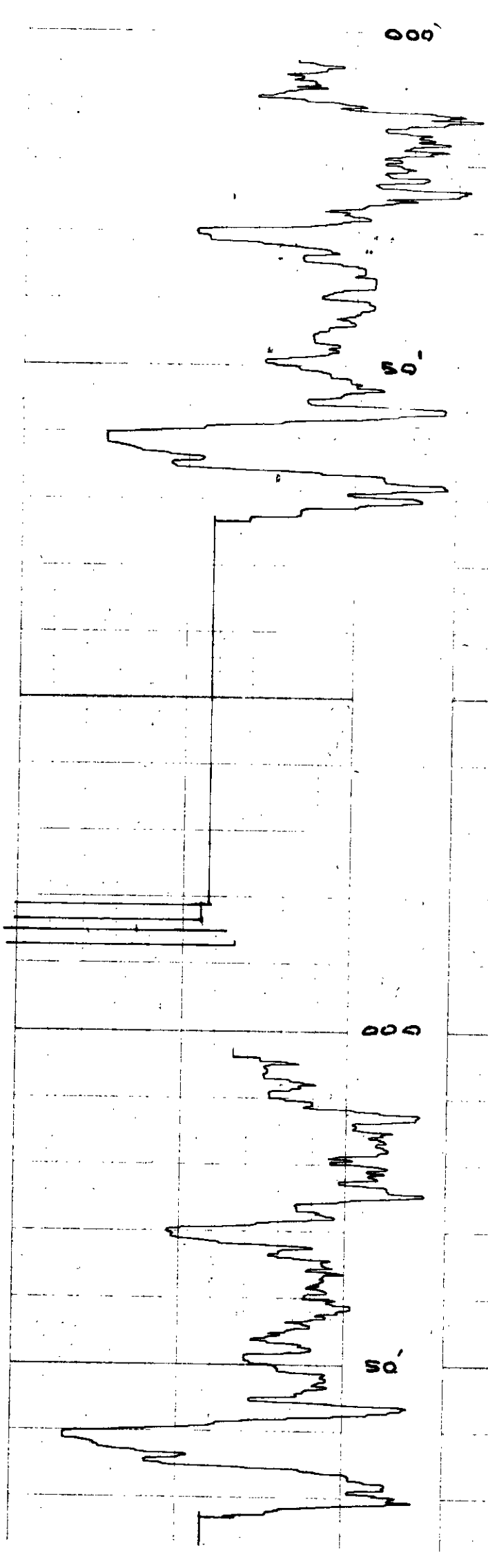
319

K-Forcing 76(3)A-1

CMCK.

B-50 HOLE

G SEAM AREA



GREENHILLS.

RH 1042 & 1043

319

RH 1042 & 1043

K- Foxdens 76(34-)

Logged by CMCK.
Witnessed by

RKS

B - 50 HOLES

G SEAM AREA

* Reg. U.S. Pat. Off.

Diamond Drill Geological Log

Cominco

K-Fording 76(3)A-2

Objective:

Sampled:

Logged By: R. Krishan Date: Nov. 76

Composites:

Block: | Sect.: | Place: Clode Pit (Clode Creek Area) | App. Bear: | App.: Dip.: | Length:

Reason:

From	To	Discard: Intersections taken from Gamma - Ray - Neutron Log
0	74.5	Fill and overburden, possibly some mudstone near bottom
74.5	77.5	Coaly shale and some shaley coal
77.5	82.5	Shale
82.5	86.5	Coal 4'
86.5	103	Mudstone, 2' coaly shale band at 97.5'
103	109	Silty sandstone
109	122	Mudstone and siltstone interbeds
122	148	Mostly sandstone, some siltstone'
148	212.5	Mostly mudstone with siltstone interbeds.
212.5	232.5	Coal 20' Seam 9
232.5	234	1.5' Shale
234	236	Coal 2'
236	237.5	1.5 Shale'
237.5	238.5	Shaley Coal 1'
238.5	263	Mudstone
		End of hole at 263'
		Oct. 28/76

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

Core Size

Hole No. RH 373 Page 1 of 1

2507—N.D.N.

Diamond Drill Geological Log

K-Fording 76(3)A-1

379

Objective:			Sampled:		
Logged By: R. Krishan	Date: Jan. 8/77		Composites:		
Block:	Sect.:	Place: Clode Pit Area	App. Bear:	App.: Dip.:	Length: 282'

From	To	Discard: Intersections taken from GAmma Ray Log. Reason:
0	37	Fill
37	48	Overburden
48	59	4' Coaly shale and 7' coal lower part seam 11
59	66	Siltstone
66	80	siltstone and mudstone interbeds
80	116	Silty sandstone
116	190	Sandstone
190	196	Mudstone
196	221	Coal 25' seam 9
221	227	Mudstone
227	232	Siltstone
232	234	Shale
234	239	Coale 5' seam 8
239	254	Mudstone
254	282	Siltstone
		End of hole at 282
		Nov. 22/76

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

Core Size

Hole No. RH 387

Page 1 of 1

2507-

Diamond Drill Geological Log

K. FORDING 76(3)A-1

Cominco

Objective:

Sampled:

Logged By: R. Krishan Date: Nov. 76

Composites:

Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length:
		Clode Pit (Clode Creek Area)			215'

Reason:

Intersections taken from Gamma Ray Log

From	To	Discard:
0	40	Fill and overburden
40	45	Mudstone
45	95	Mostly siltstone, with thin bands of mudstone and sandstone
95	115	Mudstone
115	168	Silty Sandstone
168	172	Mudstone
172	194	Coal with two one foot shale bands at 189' and 191.5' respectively 22(20)' Seam 9
194	204	Mudstone
204	215	Siltstone and silty sandstone near bottom.
		End of hole at 215'
		NOV. 6/76

40 Scale

Color Plot & Dips	Ore Classes & Aver.

0

Core Size

Hole No. RH 389

Page 1 of 1

2507—N.D.N.

Diamond Drill Geological Log

Cominco

K-Fording 76(3)A-1

379

Objective: To determine locaton and thickness of Seam 9

Sampled:

Logged By: R. Krishan Date: Jan. 6/77

Composites:

Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length:
		Clode Pit Area			266'

From	To	Discard: Reason: Intersections taken from Gamma Ray Log
0	32	Overburden or fill
32	57	Mudstone
57	60	Coal 3'
60	64	Mudstone
64	65	Coal 1'
65	77	Mudstone
77	105	Siltstone
105	125	Sandstone
125	142	Mudstone
142	196	Siltstone some sandstone near top
196	202	Mudstone
202	225.5	Coal 23.5 Seam 9
225.5	227	1.5' Shale
227	229	Coal 2'
229	230.5	1.5 Shale seam 9 lower 31.5(28.5)'
230.5	233.5	Coal 3'
233.5	256	Mudstone grading to siltstone towards bottom
256	266	Mudstone with coal stringers near bottom
		End of hole at 266'
		Nov. 20/76

Core Size

RH 396 Hole No.

1 of 1 Page

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

2907-

Diamond Drill Geological Log

Cominco

K - Fording 76(3)A-1

Objective:

Sampled:

Logged By: R. Krishan Date: NOV. 15/76

Composites:

Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length:
		Clode Pit (Clode Creek Area)			289'

From	To	Discard: Reason:
		Intersections taken from Gamma Ray Log
0	17	Fill and Overburden
17	38	Siltstone, sandy siltstone near bottom
38	57	Sandstone
57	66	Siltstone
66	72	Mudstone
72	106	Sandstone with several bands of siltstone and mudstone
106	124	Mostly mudstone, some siltstone
124	160	Siltstone and sandstone interbeds
160	164.5	Mudstone
164.5	194	Coal with 1' and 1.5' shale bands at 187' and 190' respectively 29.5(27)' Seam 9
194	198	4' Shale
198	201	Coal 3'
210	215	Mudstone with thin interbeds of siltstone
215	219	Coal 4'
219	245	Mostly mudstone, some siltstone and coal stringers at 232'
245	261	Interbedded siltstone and mudstone
261	289	Sandy siltstone
		End of hole at 289'
		Oct. 26.76

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

Core Size

Hole No. RH 437A Page 1 of 1

2507—N.D.N.

Diamond Drill Geological Log

Cominco

K - Fording 76(3)A-1

Objective:

Sampled:

Logged By: R. Chapman Date: 25/10/76

Composites:

377

Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length:
				30°	976'

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

GM-NT Log Intersections
16-22' Coal 6'
31-38' Coal 7'
Bands of Seam 14

From	To	Discard: Reason:
0	36'	Tricone
36.0	58.3	Slst 36.0-42.5' fg. slst, light grey to light brown (due to limonite staining); thinly bedded to coarser lighter grey beds up to 2" @39'-bdg 70-75° over 6"; slightly carbonaceous - soft sed structures, broken core 36.0-38.5' appears to be rounded and drill induced 42.5-46.0' mdst, light brown (due to limonite), mod. carbonaceous grades to slst. @46.0' over 1' - massive; broken core 43.0-46.0' due to drilling. 46.0-58.3' c.g. slst. light grey, parrallel bedded, beds up to 2"; bdg @ 52'-62°; fault?? at 53-54' contains limonite strained and broken core
58.3	87.5	Mdst; med. grey and in some localities it is orange brown w black carbon laminations; slightly carbon; generally it is laminated w thin discontinuous laminations - grades to a fg-mg slst locally but beds of slst are less than 1' thick, core is broken from 72-81' due to intense jointing at 10° and 35° - this section shows strong limonite staining from 83-87.3 - core is pulverized 1-2" square pieces w flat faces.
		Core lost
87.5	90.7	Coal, vitrain w pyrite along seams and in fracture planes, solid core in 6" pieces
90.7	119.8	Mdst, light grey and locally light brown; slightly carbon grading to very carbon at lower contact; massive, blocky, contains laminated slst. interbeds; at 97.3-98.9' - mg slst, bdg ~ 101.8-103.4' c.g. laminated slst; bdg - is wavy and shows soft sed. structures - 101-102' intensly leached and limonite stained rock
		98-103 badly jointed zone; joints sub parallel to core axis - faces are often limonite stained
		103-112 pulverized core - 5½' core lost
		112-123 broken core due mainly to coal seams ~ 6' core lost
119.8	124.0	Coal - 3" pieces of core to pulverized mud; high vitrain content; 2" solid pyrite seam at 121.3-121.4½' w pyrite replacing phosphatic (?) oolites
124.0	135.0	slst, m.g., light grey w more carbon laminations; bedding ranges from fine laminations to 2½" beds; convolute bedding and soft sed. structures are abundant; ingeneral bedding is irregular and discontinuous w trend of 60°, contac
		w coal grades thru 1.5' of mdst.

Core Size: HQ

Hole No.: 438

Page: 1

2507—N.D.N.

Diamond Drill Geological Log

Cominco

Objective:

Sampled:

Logged By: R. Chapman Date:

Composites:

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

From	To	Discard: Reason:
135.0	138.8	Sdst. f.g., light grey w salt and pepper texture; thinly bedded w a fine silt; bedding is often convolute w abundant flame ups and soft sed. structures - beds range from fine laminations to 3" beds - irregular & discontinuous - trend @ 138-72°; contacts are both gradational over 1½'
138.8	158.3	slst-interbedded fine, dark grey and mg - cg light grey silts; bedding is parallel to discontinuous and wavy-localized x-bedding; it ranges from fine laminations to 1" beds-soft sed. structures and load casts; m.g. sdst. intercalations at 147.7-148.8; 152.0-155.2 broken core from 151-155 due to joints - limonite stained joint faces joints are 5-10° to core axis
158.2	187.1	mdst, med. grey; slightly carbon grading to carbonaceous at lower contact; generally massive, but has minor intercalations of c.g. slst - f.g. sdst. from 160.5-161.2'; sdst is x-bedded; lost of limonite stained joints (20°) @ 164', broken core from 166.5-176' lost 1.5'; breccia from 172.5-174.0- calcite cemented, limonite stained slst. from 181-183.7', laminated w convolute bedding ~70°
187.1	200.4	Coal mostly clarain, 3.5" pieces of core, 90% recovery, mdst. partings 194-194.7'
200.4	210.5	mdst. black, carbonaceous, massive, limonite staining on joint planes contains numerous minor ¼" coal seams along bedding; at lower contactcontains a 6" zone of disseminated pyrite 15% of rock.
210.5	215.3	Coal low quality, fairly muddy w pyrite on fracture planes - not sampled; has several 2" partings of mdst.
215.3	222.0	slst. - v.c.g., massive, light grey - very limonite stained on fracture surfaces.
222.0	238.0	mdst, dark grey, carbon, w numerous ¼" coal seams; massive, limonite stained on fractured surfaces; laminated m.g. slst. interbed from 225.0-225.8'
238.0	243.0	slst, fine-grained, dark grey, slightly carbon; massive; grades over 1' to mdst at both contacts
293.0	246.8	Coal, clarain, 3-5" pieces of core; zone of denser, finer and more even textured coal at 249.5-249.9' - semi spherulitic
251.0	273.4	mdst, med. grey, moderately carbonaceous, massive, limonite stained joint faces at 5-10° and 20-25° that are at 110° from each other in the core. coal seam

Core Size

Hole No. 488 Page 2

40 Scale

Color Plot & Dips	Ore Classes & Aver.

0

GN-NT Log Intersections

Seam - 13

182-198 Coal 16'

(191.5-194.5 shaley)

208-210' Coal

244-248' Coal 4'

2507—N.D.H.

Diamond Drill Geological Log

Cominco

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

From	To	Discard: Reason:
		from 262.0-262.1; laminated m.g. slst interbed from 268.0-269.5' bdg-70°
273.4	281.4	slst, f.g., med. grey, massive to very locally laminated; both contacts are gradional over 1.5'
281.4	300.5	mdst, med. grey, slightly carbon to very carbon at the lower contact, massive;coal seams at 298.2-298.5' and 298.9-
		299.2' , broken core from 294.0-301.5' due to carbon bedding planes and minor coal seams; metallic, lowdensing mdst
		from 294.7-295.7'
300.5	302.8	Coal, Witrain,90% recovery, sampled
302.8	306.4	slst, med. grained, laminated, w load casts, and convolate bedding; bdg - 83°
306.4	346.9	mdst, dark grey carbon grading to very carbon near coal seam; massive and locally blocky; carbon on fracture
		planes; limonite stained joints,trending ~0°, coal seam from 315.5 - 321.5-clarain, good core recovery (but 1' lost)
		sampled, coal seam 330.4 - 330.6' minor slst interbeds occur at: 321.9 - 322.2-laminated, m.g. slst, load casts
		present;324.5 - 326.2 - c.g., laminated slst, w load casts and soft sed. structures,slickensides at 321' on a 20°
		joint going~80° from core axis across the face.
		335.4 - 337.3 - m.g. laminated slst, parrallel and wavy bedding bdg - 73°
		340.1 - 342.7 - m.g. laminated slst. parallel bedding.
346.9	350.3	slst., light grey w carbon laminations, m.g. - c.g., carbon and pyrite on bedding planes, parallel and wavy bedding
		- 55°, contact is gradional over 3" w sdst.
350.3	359.8	sdst, fig., light grey, salt and pepper texture, w carbon laminae, mod. well sorted, firmly indurated, quartz rich,
		goes from consistantly parallel bedded to x - bedded at~358' bdg - 357' - 50° ,353'-61°. joints at 30°, dipping in
		opposite direction from bedding
359.8	382.8	slst, med. to coarse grained but grading to f.g. at lower contact; light grey w carker carbon. laminations; unit contains mudst. interbeds up to 1.5' thick, as well as
		minor fine sdst. interbeds less than 1' thick; bedding is parallel and or wavy
		w localized x-bedding. bdg. 365-75°, 325' - 65°, contact w sdst is abrupt - over
		3"; after 375' rocks are f.g. slst

40 Scale

Color Plot & Dips	Ore Classes & Aver.
0	
GM-NT Log Intersections	
290-294' Coal 4' low density	
310-318' Coal 8' Seam 12	

Core Size

Hole No. 459

Page 3

2507—N.D.N.

Diamond Drill Geological Log

Cominco

Objective: | Sampled:

Logged By: R. Chapman | Date: 1/11/76 | Composites:

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

From	To	Discard: Reason:
		with minor coarser, light grey slst. lamination; coarser laminations became scarser gradually until a massive fine slst. at lower contact; ~~blacky~~ blocky
382.8	387.7	mdst, dark black , carbonaceous, blocky, contact w above slst, is gradational over 1', coal seam 384.6-386.0
386.7	395.1	coal, hard, vitrain, 90% recovery in 5-7" pieces of core, 1 grite on fracture planes, mdst. parting 392.8 - 393.2'
395.1	417.5	mdst, dark grey, very carbon w numberous ¼" coal seams until 405' where the mdst. becomes less carbon, more silty and massive., broken zone w coal at 414-415.5 w about 1.5' core lost in that run (404-414')
417.5	424.0	slst, medium-grained, light grey, laminated w finer material; bedding is discontinuous and wavy; blocky, both contacts are over 6"
424.0	431.5	mdst, med. grey, moderately carbon, massive and blocky; concentrations of plant fossils on fracture planes; coal seam 430.4-430.7
431.5	451.4	slst, med. grained grading to a fine slst at lower contact; generally massive but contains localized laminations of light grey, coarser material; mod. carbon; near lower contact; bedding is wavy w some x-bedding present at 448'
451.4	470.1	mdst, ~~silsty~~, med. grey, carbon. on fracture planes, massive and blocky; grades into a f.g. slst. locally, and the unit contains several minor med. grained laminated slst. interbeds which are usually 1' thick, bedding in these is wavy and load casts exist at contact w the mdst; upper contact of this unit is gradational over 6"; intense jointing exists at lower contact from 468' on, joints at 0 & 5° to core axis.
470.1	494.8	Coal, vitrain, 2-3" pieces of core, upper contact uncertain because they lost 8' of core from 868-878' w 1.5' being mdst at the start of the run, coal contains numerous mdst. partings: 480.6-481.2; 482.6-483.6; 485.5-486.3; 491.0-493. coal is muddy locally. ~15' coal; lost 10/25' ~40%
494.8	507.0	mdst, med. grey, carbonaceous becoming less so away from the upper contact massive, mumerous ¼" coal seams, lower contact gradational over 6".

Core Size

Hole No. 438 | Page 4

40 Scale

Color Plot & Dips | Ore Classes & Aver.

GM - NT LOG INTERSECTIONS

382-392' Coal 10'
Seam - 11U

467-487' Coal
(480-482' Shale)
20 (18)" - Seam 1

2507—N.D.N.

Diamond Drill Geological Log

Cominco

Objective:		Sampled:			
Logged By: R. Chapman Date: 1/11/76		Composites:			
Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length:

From	To	Discard: Reason:
507.0	548.3	slst; med. to coarse-grained, light grey w finer, carb. slst. laminations; parallel and wavy bedding, load casts, convolute bedding, locally x-bedded; bedding 508'-63°; 528'-50°; 538-70°' 545'-70°; unit is interbedded w mdst; and sandst.; mdst: 512.5-516.0'; 532.0-534.3; sdst: 534.8-539.2' - f.g. sdst w excellent x-bedding; salt and pepper texture, light grey; quartzose; slst. is carbon on fracture surfaces and has calcite following joint and bedding surfaces.
548.3		mdst, med. grey, moderately carbon. to very carbon. from 558'-564' (w numerous ¼-½" coal seams); rest is carb. mainly on fracture surfaces; blocky;
	574.1	silty laminations occur and are very localized.
574.1	579.0	mdst. metallic light grey, low density, conchoidal fracture, brittle, well defined & closely spaced fracture planes parallel to core axis; blocky; carbonaceous on fracture planes; mdst breccia, green mdst. clasts w light brown mdst. matrix; dense- from 576.7-577.8; metallic mdst. is sampled (not breccia)
579.0	598.0	coal - vitrain and clarain; well cored w up to 15" peices of core; lost 6' in 19' (~30% loss); mdst partings at 582.2-582.3' and 588.5-589.2'.
598.0	600.4	slst; medium grained, light grey, laminated to thinly bedded w beds up to 1" thick; parallel bedding and at 599' bdg. is 70°
600.4	608.9	mdst, medium grey, carbonaceous w abundant plant fossils on fracture planes, massive, coal seams from 605.2-605.9 and 606.5-608.0 (coal is clarain) contact w above slst, is gradational over 5"
608.9	612.3	Coal, hard and muddy, good recovery (no core lost), high vitrain content, mdst, partings from 610.9-611.1 and 611.8 612.0'
612.3	634.5	slst, light grey; grades from a mdst, just below the coal seam for 2.0' thru a fine ~~sdst~~ and a medium slst to a very coarse-grained slst. at the lower contact; thinly laminated to bedded w a dark grey, carbonaceous mdst; beds up to 4' thick (622.6-626.7 mdst. interbed); bedding is predominately.

Core Size

Hole No. 438 Page 5

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

574-592' Coal
592-594 Shaley Coal
20' Seam - 9

603-607 Poor coal and shale 4'

2307—N.D.N.

Diamond Drill Geological Log

Cominco

Objective:			Sampled:		
Logged By: R. /Chapman	Date: 4/11/76		Composites:		
Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length:

From	To	Discard: Reason:
		parallel and wavy with load casts in the fine-med. slst. but becomes mostly x-bedded in the coarse slst from 630-
		633' bdg: 620'-80°, 630'-83°, 633-75° carbon. on fracture planes
634.5	640.5	coal, generally muddy with locallized vitrain-rich zones; good recovery, (no loss) mdst. partings from 636.1-636.8';
		638.0-638.2', 639.2-640.1- all sampled together
640.5	645.8	mdst; med. grey, carbonaceous, blocky, w numerous minor ¼" coal seams, and a larger coal seam from: 644.2-645.3'
645.8	686.8	slst, fine to medium grained slst, generally medium grey and massive; interbedded w both med. grey, mdst. and lamin-
		ated, light grey, coarser slst; slightly carbonaceous for 5' after upper contact, decreasing away from the contact.
		thickest mdst. bed is 2½' starting at approx 665'; where it occurs, bedding is parallel or wavy bdg - 653'-75°;
		667'-60°; 686'-55°; both upper and lower contacts are sharp
686.8	693.4	sdst, medium grained, salt and pepper texture, light grey, contains quartz and chert grains; grains are moderately
		well sorted, subrounded and strongly indurated; massive w very irregularly distributed minor ¼-1/8" coal seams;
		very carbon on fracture planes.
693.4	717.0	slst., medium to fine-grained, medium grey, ranges from massive to locally laminated (over 1-3') laminated areas show
		wavy bedding, load casts, and other soft sed. structure; grades to a slightly carbon. mdst at 714-715'; fracture
		surfaces.
		generally lack any carbonaceous matter; upper and lower contacts very abrupt.
717.0	724.4	sdst, medium-grained, salt and pepper texture, light grey, mod. well sorted, subrounded grains, very stronly
		indurated, massive w occasional coal partings (less than ¼")
724.4	739.8	slst. initially coarse grained, grading to fine-grained at the lower contact; light grey coarsely laminated to thin
		bedded, parallel to wavy bedded (Bdg. at 730'-72°) grades to a f.g. , x-bedded
		sdst/ [illegible], 735.0-736.5'; broken and badly jointed core from 725' to 729 with 3½'
		core lost between 728-738; upper contact is gradational w minor intercqlations
		of sdst. for 3'; lower ctontact is very gradational from fine slst. to silty mdst.

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

GM-NT LOG INTERSECTIONS

633-636 Coal 3'

Seam - 8

Core Size

Hole No. 438

Page 6

2307—N.D.M.

Diamond Drill Geological Log

Cominco

Objective:		Sampled:			
Logged By: R.Chapman Date: 8/11/76		Composites:			
Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length:

From	To	Discard: Reason:
		to a mdst; grades over 1.5'
739.8	780.8	mdst, medium grey, generally silty, carbonaceous, grading to very slightly carbonaceous at lower contact; blocky; interbedded locally w a m.g., light grey, laminated slst. (beds up to 2' thick)
780.8	813.0	interbedded slst and mdst.; unit consists of regularly interbedded, light grey, medium to coarse-grained laminated slst. and a medium grey, slightly carbonaceous, blocky, and silty mdst; beds range from 1" - 2', initally predominantly muddy, becoming mainly slst @792' and then predominantly mdst. again @ 806'; bedding in slst. is generally wavy w abundant soft sed. structure; bdg at 782'-76°, 789'-77°; 794'-76°; 805'-75°; 810'-75°
813.0	821.5	mdst., dark grey, initially very carbon-but decreasing in carbonaceous content away from the upper contact; blocky
821.5	830.4	slst, light grey medium-grained slst. interbedded w a dark grey, fine-grained, slst; beds range from 1/8" laminae to 3' beds. bedding is distorted and wavy; slst is locally blocky and carbon-on fracture planes; contact w upper mdst. is gradational over 1'.
830.4	836.7	mdst; dark grey, silty near upper contact grading to a very fine, pure mdst. w conchoidal fracture by 834.5'; very slightly carbonaceous, massive; broken core due to 14° joints (clean) from 83.5' on
836.7	840.6	coal, carain, broken core fro entire lentth of seam; lost 2' core from 836-846'; distances uncertain due to broken and lost core; mdst, parting from 839.2-839.3
840.6	862.0	mdst, medium grey, becoming dark grey within 1' of upper and lower contacts, generally silty and grades to a fine slst. in several locations; slightly carbonaceous w plant fossils on fracture planes - these become much more abundant within 1-2' of both contacts; blocky; unit contains occasional light grey coarser silt intercalations that are less than 3" thick; contacts are gradational over 6"
862.6	878.4	coal (#7 seam) soft, vitreous-calrain; fairly broken core, lost 6' in 15' (40%) mdst. partings: 863.5-863.7'; 867.4'-869.6'; dense, semi-spherulitic coal from 877.2-877.6'
878.4	892.9	mdst; dark grey, very carbonaceous, blocky; contains abundant plant fossils and

Core Size

Hole No. 438 Page 7

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

GM-NT LOG INTERSECTIONS

832-836' Coal 4'

860-874' Coal with one foot shale band at 865.5'

14(13)' Seam 7

879-883' Coal 4'

2507—N.C.N.

Diamond Drill Geological Log

Cominco

Objective:

Sampled:

Logged By: R. Chapman Date: 9/11/76

Composites:

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

From	To	Discard: Reason:
minor ½" coal		seams from 886' to lower contact; larger coal seam from 885.4-885.5
892.9	927.0	interbedded lsst. and mdst; slst. is geneally light grey, laminated, medium to coarse-grained; bedding in the slst is parallel and/or wavy with load casts and other soft sed. features, where coarser grained, silts show x-bedding bdg- 895'-72°; 900'-70°, 909'-69°; 920-73°; slst is carbon on fracture planes . mdst is dark grey, very carbonaceous massive and locally blocaky; often minor ½" coal seams are present in the mdst; mdst. is interbedded w f.g., light grey, x-bedded sdst. at 918.9'-920.1' and from 921.0-923.3'; beds alternate continuously thru-out unit and range from 1" to 3' being generally in the order of 1'-1.5' thick
927.0	939.7	mdst; dark grey and carbonaceous becoming darker in colour and more carbonaceous towards lower contact; massive, contains abundant plant fossils on fracture planes and minor ½" coal seams are common; unit contains occasional slst. intercalations at 928.5-929.4' and 932.7-934.1'
939.7	963.1	coal, moderately hard, very vitreous, high vitrain content; poor recovery lost 9.5' in 23' 45%; mdst. partings @956.0-956.5; 958.0-958.6; 961.8-962.0; phospahtic oolites, dense and very hard at 961.0-961.6'
963.1	976.0	mdst., dark grey; very carbonaceous becoming less carbon and silty away from the upper contact; ½" coal seams are common and a larger coal seam is found from 971.9'; occasional slst. intercalations are found (less than 6" thick) bedding at 975' is 67°.
		T.D.

Core Size

Hole No. 438 Page 8

40 Scale

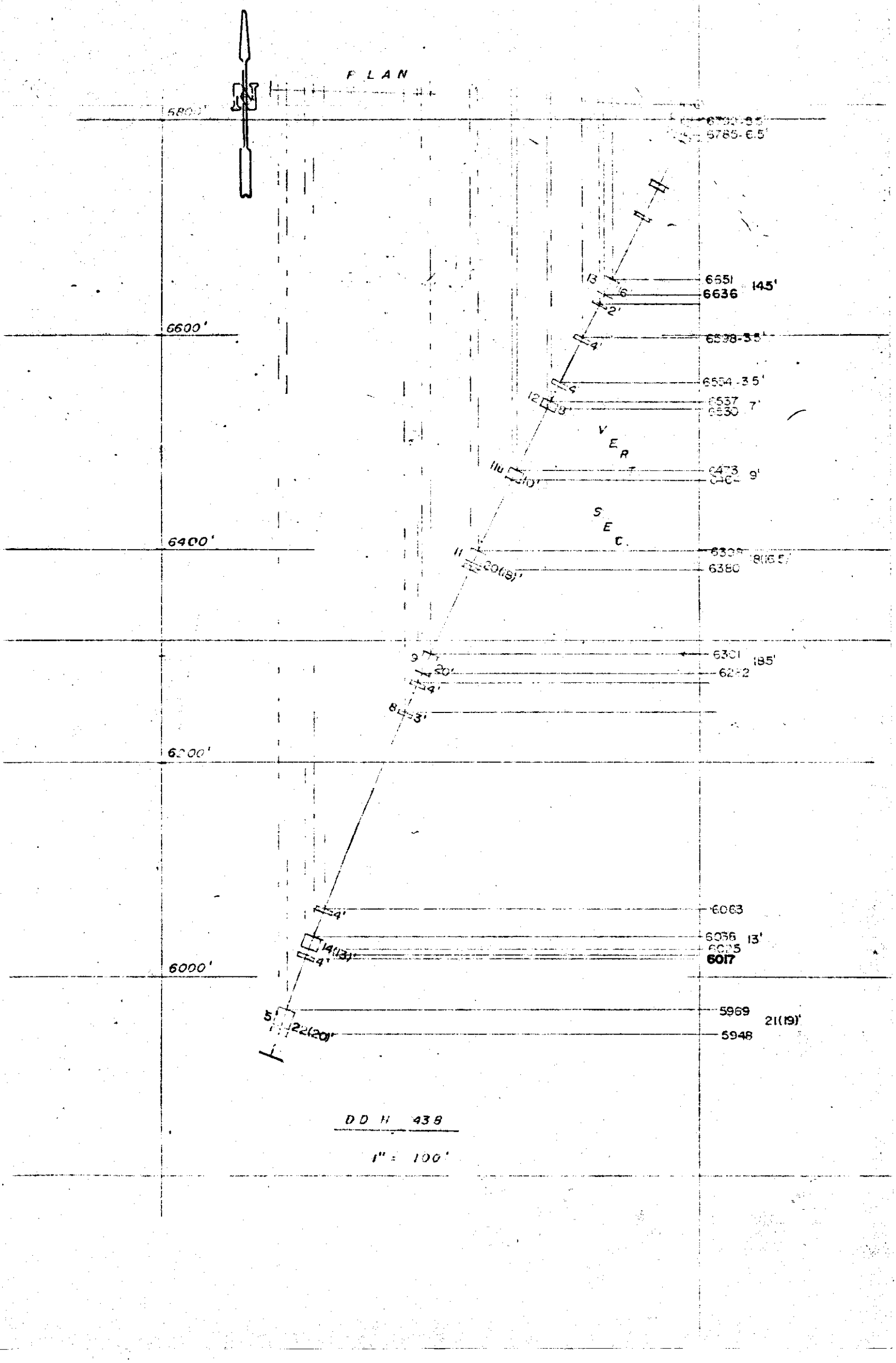
Color Plot & Dips | Ore Classes & Aver.

0

GM - NT LOG INTERSECTIONS

936-958 Coal
(952-554' Shale)
22(20) Seam - 5

2507—N.D.N.


PLAN
6600'
6400'
6200'
6000'
6551
6636
145'
6538-3.5'
6554-3.5'
6537
6530
7'
6473
9'
6301
185'
6116
6063
6036
6005
13'
6017
5969
5948
21(19)'
DDH 438
1" = 100'

Diamond Drill Geological Log

Cominco

K. Fording 76(3)A-1

379

Objective:

Logged By: A. Slingsby Date: Nov. 6/76

Sampled:

Composites:

Block: Sect.: Place: Eagle Mnt. App. Bear: 042.5° / 024.0° / 016.0° / 033.0° App. Dip.: 30° @ 0' / 35° @ 275' / 32° @ 475' / 29° @ 675' Length: 917 FT.

40 Scale

Color Plot & Dips | Ore Classes & Aver.

From	To	Discard: Reason:
0	60	Tricone
60	100	Mudstone dark grey-black possible carbonaceous layers core badly broken. calcrete coating joints & bdg. first 15 ft. after, oxide coating.
100	114	Siltstone grey, fine-med grained, poorly laminated with mud some oxide coating on joints.
114	121	Sandstone grey med grained abundant carb. partings and some oxide coatings bdg 120'90°
121	132	Siltstone grey-dark grey, fine-med grained, laminated with mud one sdst. intercalation at 127' bdg 126'80° mdst intercalation 130' bdg 131'25° (?)
132	141	Siltstone dark grey, fine grained, very poorly laminated, contorted bdg 138' rare coaly partings & occasional fossil fragments.
141	153.5	Siltstone light grey, coarse grained, well laminated, some contorted bdg, some xbdg. bdg 142'40° oxidation along joints extend 1" from joint plane. Fe oxide common on joint and bedding planes.
153.5	176	mdst. dark grey massive, blocky fracture silty 158'-165' occasional laminations of light grey silt fossil fragments common. minor silt laminations 172', 172-176' very highly carb. to muddy coal immediately above coal seam pyrite common on joint &bedding planes 175 bdg 172'40°
176	193	Coal, hard clarine mudstone parting 188-189
193	201	Mudstone black-brown block, highly carb, common coaly partings (<¼") pyrite common on bdg & joint planes
201	231	Siltstone initially dark grey, massive, abundant fossil frag., occasional coaly partings fine grained coarsens slightly and becomes poorly laminated at 207' rare xbdg. occasional coaly partings fines & becomes highly carb. 212'-216 pyrite common on bdg & joint planes lighter in colour and laminated 216'-218', then fine & highly carb. to 224' coarsens & is well laminated & commonly xbdg to 231

GM-NT Log Intersections
71-75.5' Coal
2' Shale 75.5-77.5'
77.5-92.5' Coal
21.5(18) Seam 12

GM-NT Log Intersections
173-191.5' Coal
18.5 Seam 11U

Core Size: HQ

Hole No.: 439 Page: 1

2507-

Diamond Drill Geological Log

Cominco

Objective:

Sampled:

Logged By: A. Slingsby Date:

Composites:

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

40 Scale

Color Plot & Dips | Ore Classes & Aver.

From	To	Discard: Reason:
231'	272	Mudstone, initially dark grey, massive, with rare carb partings & fossil fragments. Carb content increases sharply at 238' mdst becomes black, occasional coaly partings, abundant plant fragments light grey, siltst interbed 242 to 250' fining downwards, well laminated, abundant xbdg in upper partings returns to high carb; black mdst with common coaly partings (< ½") bdg 243'40° dark grey, massive, siltstone 257'-263' sharp contact with underlying mdst black, highly carb, massive, blocky fracture, coarsens & becomes poorly laminated, grades to siltst 272'
		Siltstone with mdst laminations & intercalations. Slts, light grey-dark grey coarse to fine, laminated-well laminated some xbdg & soft sed. structures (load casts, convoluted bdg) layers of fine silts tend to be massive, mdst, intercolations dark grey, massive, black fracture, up to 2' thick. fossil fragments & coaly partings abundant thru out except in coarse silts, rare calcite infillings of joints & along
272	327	bedding planes bdg. 286'35° , 302'45°, 318'40°, 327'35°
327	360	coal hard, vitrine bands common. Thin mdst partings: 333', 2"; 334, 4"; 349,6"; 353.5,6" 8.5" of core lost thru out seam.
360	366	Mudstone black, very highly carb, abundant coaly partings (< ½")
366	367	Sandstone, broken core, iron oxide staining & coating on joints possible fault zone.(?)
367	381	mdst. grey-washed out brown appears highly oxidized, occasional coaly partings washed out layers may be leached, have minute, randam carb. stringers, may be rooty beds, 377'-379' bedding & joint planes polished grades to silt over 2'.
381	422	Siltstone, grey, laminated common bdg., med. grained, muddy carb. layer 393'-395' occasional calcite infilling of bedding planes, at 400' becomes, darker massive to poorly laminated 404'-412', fossil frag.abundant, common carb partings, rare coaly partings, Calcite infilling joints 414'-420' bdg 415'-58° fines over last 3 ft to mdst.

GM NT Log Intersections

324.5-356.5' Coal

(347-350' Shaley)

32' Seam - II

360.5-362.5' Coal 2

Core Size: HQ

Hole No.: 439 Page: 2

2507-

Diamond Drill Geological Log

Cominco

5

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

From	To	Discard: Reason:
422	447	Mdst. dark grey to black abundant plant fossils, abundant carb partings, common coaly partings (<¼") massive with
		rare carb laminations & silt laminations. bdg 438'45°. coaly mud 439'-442.5'. broken core at 443', polished sur-
		faces common grade to silt over last 2'
447	517	Slst. grey-light grey, med-grained, thickly laminated with mud some mudst. intercalations up to 3' abundant plant
		fossils in intercalations. Siltstone occasionally xbdd, occasional contorted bdg. bdg 463'50° xbdg abundant 473'-475'
		bdg 480'40° intercalations persist thru to base of unit common calcite infilling of joints common 502'-505' mdst
		slst increases toward base grades to mdst over 3 ft. bdg. 512'45°
517	531	Mdst, dark grey-black, initially silty, poorly laminated, rare pyrite blebs becomes massive at base, blocky fracture
		in lower part of unit abundant fossil fragments occasional carb partings, rare coaly partings bdg 525'-40° fossil
		fragment etc. absent in last 3'/
531	536.5	Mdst. black light metallic luster concoidal fracture
536.5	561.5	Coal, moderately hard, vitreous, only locally banded - clarain mdst parting 548.0-548.2'; 554.6-554.8'; 559.3-559.6;
		lost 5' core in 25' (~20% loss)
561.5	582	mdst., med. grey, carbonaceous, massive; minor ¼" coal seams are common and larger seams occur at 568.2-568.5';
		570.5-572.7'; 576.3-576.8' and 577.2-579.2'; lower contact is gradational over 4"
582	623	Siltstone grey-light grey, med. grained, well laminated, some convolute bedding, bdg. 593'40°, 620'40° rare plant
		frag. in finer portions grades to mdst. over 1 ft.
623	635.5	Mudstone dark grey-black, highly carb. very abundant fossil frag. carb partings occasional coaly partings (< ¼")
		blocky fracture
635.5	644	Coal; vitrine,mdst. partings 2" at 637', 9" at 640, 1" at 643'
644	682	Fine slst. mudst. dark grey, massive, blocky fracture abundant plant fragments
		rare carb partings. 2 large coaly partings 2" at 680

Core Size: HQ

Hole No.: 439 Page: 3

40 Scale

Color Plot & Dips	Ore Classes & Aver.

0

GM-NT Log Intersections

529-531' Coaly shale 2'
531-559' Coal
28' Seat ?
569-571' Coaly Shale 2'
574-576.5 Coal 2.5'

634-641' Coal 7'

2507-

Diamond Drill Geological Log

Comineo

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

From	To	Discard: Reason:
682	690	Siltstone grey, fine med. grained well laminated with muddy materials one inch coaly parting in fine grained portion.
		plant fragments, common thru' out bdg. 688'45°
690	704	Mdst grey-brown very carb. abundant coaly partings thru;out, coal seam 701.5'-702.5' sharp contact with underlying silt
704	710	Silst., grey, upper 3 ft massive, med. grained, lower 3 ft. poorly laminated with mud plant fossils absent, In sharp
		contact with underlying mdst.
710	712	Mudstone, light grey-brown, massive, occasional plant frag. sharp increase in carb content 6" above coal
712	714	Coal, vitrain, hard, with numerous mdy partings.
714	763	Mudstone, initially black-brown, highly carb. Silty laminations at 716' with very little plant material becomes
		massive at 717' dark grey-black, blocky fracture thru out common-abundant plant fossils, occasional carb. partings
		increasing carb. content to 732' coaly partings become common carb content drops sharply below 736' Some silty
		laminations below this plant fossils rare-occasional. Core broken 737'-745' Massive mdst below 745' with occasion-
		al plant fossils and very rare coaly partings. blocky fracture thru out some very small silt laminations 3 ft.
		above base of unit very sharp contact with sdst.
763	789	Sdst. light grey, coarse grained, (chert areinite) Initially massive to 3" intercalation of mdst (765.5') below
		this poorly laminated. abundant carb parting on joints & bdg. planes above mdst intercalation. on bdg planes
		only below mdst. bdg. 778'40° mdst clasts at 783'.
789	832	Mdst. brownish grey poorly laminated with carb. material some pyrite growth causing bleaching of surrounding rock
		to pale brown grey pyrite appears stratform laminations of silt at 802' bdg 802'40° silt laminations occasional
		thru out unit, bdg 812'45° common 822'-827'. blacky fracture thru out coarsenes over last 5 ft.
832	866	Sdst. light grey, well laminated fine-med grained. Silty over upper 5 ft. with
		small 1" intercalationsof mdst. thu out entire unit. mdst intercalations
		have blocky fracture & become thicker near base. Plant fossil very rare, carb
		parting rare-occasional some convolute bedding, very rare bdg. sharp contact
		with mdst. bdg 852'45°

Core Size: HQ

Hole No. 439 Page 4

40 Scale

Color Plot & Dips	Ore Classes & Aver.

0

GM-NT Log Intersections

698.5-701.5 Coal 3'

710-711.5 Coal 1.5'

2567-

Diamond Drill Geological Log

Cominco

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

From	To	Discard: Reason:
866	881.5	Mdst. dark grey-black, massive, blocky fracture, initially slightly carb with occasional plant fossils, steadily increases in carb content to contact with coal.
881.5	888.5	Coal hard, vitrine, no md partings
888.5	897.5	Mdst. dark grey intially highly carb with abundant carb partings (< ½") becoming laminated with silt thru out rest of unit plant fossils abundant thru out.
897.5	917	Coal core badly broken some vitrine bands no apparent partings phospahate 906.5'-907' slightly muddy over last foot.
917	923	Mdst grey-brown grey highly carb., occasional coaly partings, some silt laminations bdg. 921-40°
923	929	Coal core badly broken rare vitrine bands - amy be slightly muddy no apparent partings.
929	971	MDST. highly carb. black, common coaly partings (< ¼") very abundant fossil fragments possible phosphate 936-937' silty laminations 952'-954' coarse siltstone interbed 963'-968' well laminated, highly jointed, carb. partings 11 to bdg. bdg. 953'45°, 965'25°. poorly laminated with silt to T.D. bdg 971'50°

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

GM-NT Log Intersections

878-884.5 Coal 6.5'

894-914 Coal 20' Seam 7

920-926 Coal 6'

Core Size: HQ

Hole No.: 439

Page: 5

2507-

PLAN

ELEV6861'

42 1/2° AZM.

6806.5 17.5'
12 FW6789

6728 15'
11u FW6713

6610 26'
11 FW6584

6453 24'
9 FW6429

6369 6'
FW 6363

6157 8'
7 6145 FW6127 18'
6122 FW6117 5'

6800'

6800'

12 21.5'

12

18.5'
11u

12

6600'

6600'

32'
4 2'

11

VERT. SECTION

6400'

6400'

9 28'
9 2.5'

9

7'
MY.

3'
2'

6200'

6200'

6.5'
9 20'
7 6' 6'

(ELEVS. ADJUSTED FOR AZ. CHANGE)

(SEC. AZ. CHANGE NOT CONSIDERED

6000'

6000'

DDH 439 EAGLE MT.
1" = 100'

...rid Drill Geological Log

Comineo

K- FORDING 76(3)A-1

Objective:

Logged By: A. Slingsby Date: Oct. 76

Sampled: 96'25@ surface 35° @ surface
93' @ 320' 34° @ 320'
Composites: 95° @ 620' 32° @ 620'
94° @ 957' 27° @ 957'

379

Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length:
		EAgle Mtn.			957.0' ft.

40 Scale

Color Plot & Dips | Ore Classes & Aver.

From	To	Discard: Reason:
0	91.6	Tricone
91.6	92	mdst. broken core
92	96	coal, pulverized core, fusain 1 ft lost core
96	98	mdst black highly oxidized and broken
98	151.5	siltstone dark grey poorly laminated with interbedded black mdst with abundant plant fossils and intercalated, xbd sdst, light grey, fine-med. gr. sltst has occasional plant fossils, fine- med grained. mdst is massive block, fractur sdst bodies <1' bdg 123'45° 142'40° mdst immediately below coal, increasing in carb. content toward coal, mdst interbeds 117.5-119' 126'-127.5' 132'-136 144'-148' sdst intercalations 122' 124' 128' and 133' iron oxide common on bdg planes and joint surfaces, sdst oxidized 1" either side of joint, oxidation becomes less intense 135'
151.5	166.6	coal vitrine hard mdst parting 164'-165', 1" at 166.2 1 ft lost over seam.
166.6	176	mdst brown block very highly carb. carb content decreasing away from coal seam. 4" coal seam 170' smaller seams abundant but decreasing in frequency and size away from overlying seam. plant fossils very abundant thru out, grades to fine grained slst over 3 ft.
176'	199.5	siltstone fine grained grey-darker grey, initially massive, becomes laminated around 184' plant fossils abundant as well as carbonaceous and coaly partings (178.5' and 182') bdg 184'40° ocasional bdg. laminated with mdst near base
199.5'	209	mdst grey-black carb. massive, abundant plant fragments and carb parting, blocky fracture, rare coaly partings (<½") silty laminations near base, pyrite ferous on joint and bdg planes. pyrite globs (201')
209	216	silt st. grey-light grey med-fine gr. well laminated, abundant soft sed. structures (ie load coasting) and xbdg, cortarted bdg and rare slippage planes. occasional plant fragments bdg 212 50°
216	244	mdst dark grey-grey initially highly carb with abundant coal partings (<½") parallel to

Rad. Log Intersection
Part 12 56.5-62.5 7 ft
Seam 12 80.0-93.3 ft.

Seam 11U 147.8-162.0
13.5

Core Size HQ

Hole No. 440

Page 1

2507-

Diamond Drill Geological Log

Cominco

Objective:			Sampled:				
Logged By: A. Slingsby	Date: Oct. 76		Composites:				
Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length:		

From	To	Discard: Reason:
		bdg. zone of broken core with some slicken sides (229'-230) poor laminations of silt common 232.5'-238' plant fossils occasional thru out. blocky fracture thru out.
244	269	siltstone, med. fine grained, grey dark grey, poorly laminated, rare-occasional plant fragments, zone of intense jointing 249'-255' some broken core and intense calcite infilling 250'-251', siltstone appears more fine grained below this zone and plant fossils are more abundant, occasional bloacky fracture, grades to mdst immediately above coal.
269'	297'	coal 4' lost in run 267'-273' probably coal. 7 ft lost over rest of seam. clayine, soft core badly broken mdst partings. 1" at 278.5' (pyrite) 9" at 284.7-285.5' 287.7-293 (2ft core loss over section) 2" at 294'
297	320	mdst highly carb. to 304' minor seams common (core broken) 4" breccia zone at 305.5' calcite and pyrite infilling, silty laminations 306'-307' very carb layer 309.5'310.5' bdg 207'-42° grades over 6" to silt 320'
320	323.5	siltstone, grey laminated med-fine grained bdg 321'45° calcite infilling of joints common, grades to mdst over 1'
323.5	333.8	mudstone dark grey-black, rare coaly partings (<1/8") occasional fossil frag. silty laminations around 331' sharp contact with slst at 333.8'
333.8	340.5	mudstone, black, first 5 ft black-brown highly carb, common coaly partings, becomes laminated with silt at 345', silt interbeds 351'-353' laminations continue to 354' Reutrn to black mdst, rare carb partings, common plant fragments. silty laminations over 1' at 369'. immediately under silt mdst becomes highly carb. black-brown with abundant coal seams up to 1" thick (core partial broken) carb content decreases slightly over last 3' to 377'
377	455.5	siltstone grey, med-fine grained, laminated, contorted bedding, some slippage planes, muddy intercalations 385'-387 and 388-393', ocasioanal carb partings, rare calcite filled joints. Fine grained dark grey, poorly laminated, carb partings more common 432'-455
455.5	459	mdst black metallic luster , light
459	483.7	coal hard vitrine mdy parting 2" at 463' mdy coal 468'-469 ' 2" spherulitic parting

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

Rad Log intersections

Seam 11 266.0-293.5
275.5 (23')

Core Size: HQ

Hole No.: 440

Page: 2

2507-

Diamond Drill Geological Log

Cominco

Objective:			Sampled:			
Logged By: A. Slingsby	Date: Oct. 76		Composites:			
Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length:	

From	To	Discard: Reason:
		475' 2" md parting 479', 4" parting 481', 1" parting 483' 4½' core loss thru seam.
483.7	506	mdst, black, massive, poorly bdd in carb rich areas. abundant fossil fragments minor small seams (<½" 492'-498' muddy coal 501-504' becomes silty over 1'
506	551	silt st. light grey-dark grey, fine to coarse grained initially fine, poorly laminated, coarsens to sdst (for 1') at 517' and becomes better laminated, intense jointing and slickensides 521' interlayering of coarse material in five bdg. 515'45° 530'50° section becomes more fine grained below 530', fossil fragments appear; become common, rare coally partings, grades to mdst over 3 ft.
551	566	mdst dark grey, massive, occasion layers of abundant fossil fragments, rare coally partings, sharp contact with slts.
566	577	siltstone grey light grey. med grained, occasional thick laminations of mdst. bdg 572'55° generally poorly laminated except 1' at 575' with abundant xbdg and large load casts. grades to mud over 6" to 577'
577	581.5	coal fairly hard clarine, 2½ ft core loss
571.5	622	mdst dark grey-black highly carb. abundant plant fragments, carb partings and coally partings (<¼") slightly brecciated and infilled with calcite 598' 602-607 minor coal seams (<3") very abundant. semi spherulitic 605.5' mdy coal 609.5'-611' below mdy coal less carb, fossil fragments rare. grades to slst over 2', blocky fractures thru out
622	638	siltstone dull grey, med. grained, highly quartzoze, massive, very rare plant fossils, becomes poorly laminated at base, blocky fracture
638	678.5	sdst light grey, med-coarse grained, poorly laminated, mdst interclation 642'-643.5', bdg 645-60° rare coally partings 661; rare xbdg and mud or silt laminations (<¼") coally partings start 666' becoming more common to 674' grades thru silt to mdst over 3'
678.5'	723.5	mdst dark grey, massive, occasional carb partings and fossil fragments, some blocky fracture. siltstone laminations and inter calactions rare to 698' fairly common 712' then more to base, carb coating on joints and bedding common in lost 10' but

Core Size: HQ

Hole No.: 440 Page: 3

40 Scale

Color Plot & Dips | Ore Classes & Aver.

Rad Log Intersections
Seam 9 474.5-479.5 (25')

573-578 5 ft

2507-

Diamond Drill Geological Log

Comunco

Objective:

Sampled:

Logged By: A. Slingsby Date: Oct. 76

Composites:

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

From	To	Discard: Reason:
		plant fossils are rare bdg 700'-55° abundant calcite filled joints 712'
723.5	726.2	sdst grey med grained, laminated, abundant muddy partings, rare coally partings.
726	749.8	interbedded block mdst and grey, laminated slsts. bed thickness varies from 3" to 2' sharp contacts mdst/slst increasing to last of silt 743' carb increases markedly over last 3'
749.8	754.8	coal very slightly muddy, mud parting 753' lost 1'
754.8	769	mudstone initially highly carb decreasing in carb content to 758' then increasing in carb content to 769' plant fossils very abundnat .thru out
769	777	coal clarine, core badly broken, lost 4'
777	794	mdst block carb. massive, blocky fracture grades over 6" thur mdy coal to coal (md parting 1" at 785.9) (784.4-786.5) mdst below coal highly carb abundant minor coal seams (<1") to 794' at 792' coal squeezed into joints, abundant plant fossils and fossil fragments.
794'	848'	siltstone, grey-dark grey, fine grained. often laminated with mdy material. common fossil fragments, rare bdg and contorted bdg. some blocky fracture. occasional , black mdst intercalations. (<1') bdg 797'-52° 819'-55° sandy interbed 1' at 820' zone of intense jointing 825'-827'. below 827' poorly laminated, some blocky fracture, plant fossil fragments rare-occasional, some highly carb layers immediately above base of unit, blocky fracture common bdg 844'60°
848	861.3	mdst dark grey-black, common plant fragments, rare coally partings (<¼") scattered thru out. massive, very poorly laminated with silt, blocky fracture thru out, bottom 1' very highly carb-muddy coal
861.3	884.5	coal hard, catrine with rare to occasion vitrine bands. mud parting: 869'-870.5' 6 ft core loss over seam actual recovery 17' 878.7'-881.5' includes light grey brown, semi spherulitic parting 880.8'-881.2' 884 5" parting
884.5	921.5	mdst black highly carb to 897 abundant fossil fragments, carb and coaly (<¼") partings coal seam 894.5'-895.5' bdg 896'60° below 897' mdst grey light grey

Core Size: HQ

Hole No.: 440 Page: 4

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

Rad Log Intersections

Seam 7
746.0-751.0 5 ft.
756-762.0- 16(14')
764.0-772.0-16(14')
778.5-782.5 = 4 ft

Seam 5 856.0-880.5
(24.5')

2507-

Diamond Drill Geological Log

Compince

Objective:			Sampled:		
Logged By: A. Slingsby	Date: Oct. 76 –		Composites:		
Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length:

From	To	Discard:	Reason:
		grey massive with rare silt lamination. plant fossils and carb partings absent to 911', below 911' carb partings and plant fossil fragments increase to base. grades to fine silt over 3 ft to contact with sdst, coally partings common 2 ft above base.	
921.5	to end	sdst. light grey, ~~to~~ coarse grained. quartzose, mudstone intercalations (to 1' thick) to 930' mdst dark grey-black highly carb, common coally partings (to ¼") thick) sandstone laminated with abundant carb partings and occasional coally partings (< 1/8") rare xbdg. sets to 1" thick. bdg 947' 60 957' total depth.	

40 Scale

Color Plot & Dips	Ore Classes & Aver.
0	
Rad Log Intersections	

Core Size HQ

Hole No. 440 Page 5

2507–

PLAN

El. 6861'

6811
6.5' 6864
11' 6791
6780

13.5' 6734
6721

VERT. 24(22)'
6634
6610

SEC.

21.5' 6477
6456

4.5'

14(12)' 6236
3.5' 6203

21' 6140
6119

6800

6300'

DDH 440

1" = 100'

Diamond Drill Geological Log

Cominco

K-FORDING 76(3)A-1

39

Objective: R. Chapman

Logged By: A. Slingsby Date:

Sampled:

Composites:

Block: Sect.: Place: Eagle Mtn. App. Bear: App.: Dip.: 90° Length: 1017 ft.

From	To	Discard: Reason: GM-NT Log Intersections
0	64	Tricone
64	96.0	Sandst., f.g., laminated with bands of light grey and black; beds up to .5" wide @87.5' grades to a laminated f.g.
		silt w sandst. interbed to.5" wide - gradational contact; bedding is wavy and parrallel bedding at 70' - 90°,
		87'60°
96.0	99.6	mudstone, carbonaceous, dark brown to black, massive contains plant fossils
99.6	112.4	coal (clarain) @109.0-110.1 carbonaceous mdst interbed (partings) 97-108.5 Coal 11.5' Seam-11bL
112.4	118.2	mudst., carbonaceous, dark brown to black with minor coal seams 1.0-1.5" thick (vitrinite)
118.2	128.0	mudst., dark grey, moderately carbonaceous, massive @ 120' several minor 2" coal seams, 63°
128.0	134.6	sandst., light grey, l.g. with dark laminations of black silt st.,; wavy and parallel bedding @ 133'-83°
		with over lying unit;
134.6	140.0	mudst. carbonaceous, black, massive, contact with sandst 1" wide
140.0	150.0	silt st., black, massive, m.grained, @199' several ½" minor coal seams
150.0	153.0	sandst., f.g., light grey interlaminated with black siltst., wavy bedding contact .5'
153.0	161.0	mudst., carbonaceous, black, massive
161.0	178.5	siltst., interliaminated dark and light band grading to massive siltst., @163' .5' contact, dark grey, bedding
		at 163'-85°
178.5	187.5	mudstone, carbonaceous, dark grey, abundant plant fossils contact gradational over 1' 20(19)' Seam-11 186.5-206.5
		coal 200-201 shale
187.5	211.5	coal 187.5-196.6 mostly vitrain in 4-8" pieces 196.6-211.5 clarain; 201.5-202.4 carb. must., interbed (included in
		sample); 207.0-208.9 car. mudst. parting
211.8	212.3	mudst. highly carbonaceous, dark black, partings
212.3	215.8	mudst., moderately carbonaceous, dark brown; sharp contact w overlying unit.
215.8	227.0	mudst., dark grey, massive, carbonaceous on partings.

Hole No. 441 Elev. 6861

Lat. 493.207 Dep. 81.511

Elev. Th.

Top of contact @

Top of @

Top of @

Top of @

Top of 5" @ 6182 21'

Top of "A" @ 5926 31'6"

Core Size

Hole No. 441 Page 1

2507-

Diamond Drill Geological Log

Cominco

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

From	To	Discard: Reason:
227.0	237.5	siltst., laminated $\overline{w}$ light grey and black bands, m. grained, bedding is wavy @227-73° @236'-80°
237.5	238.5	mudst., highly carbonaceous, greasy black
238.5	248.0	siltst; laminated light and dark bands; carbonaceous and plant fossils on partings bedding @248'-65°
248	262.0	mudst., dark grey, massive
262.0	272.8	mudst., very carbonaceous, dark black, minor silty interbed from 266-267 coal seam @267.8-269.4 clarain; minor .5"
		coal seams @272-272.8 dipping 80°
272.8	319.2	siltst., c.grained, thinly laminated $\overline{w}$. light grey, black bands ranging from 1/32" - ½" laminae are wavy and parallel
		bedded; convolute bedding and soft sediment structures present @277'-65°' 287'-75°; 297-88°; 308'-70°; 316'-75°
		carbonaceous and plant fossils present or parting planes, parallel to bedding contact gradational over 1.0' mudst.
		muddy silt st., - sitlst.
319.2	323.6	sandst., light grey, f. grained; with minor black siltst. laminations up to ½" beds cross bedded and parrallel
		bedding @ 324-75° contact $\overline{w}$ above gradational over 1'
323.6	335.2	siltst., f.g. dark grey thinly and evenly laminated with lighter silts - grades very gradually over 8' to a black
		laminataed mudst. @334'; parrallel bedding @324-75° 336'83° vert. carbonaceous on parting planes
335.2	340.4	mudst., very carbonaceous, dark black, massive; contains several ¼" coal seams thru-out - contact sharp over 2"; light
		weight i.e. low density from 337-340.4
340.4	359.0	coal, clairain, mostly 4-6" pieces; oolites (Phosphate?) @ 44.8-45.5' included in sample #10459 mudst. parting-
		carbonaceous 356.0-357.3'; broken core 356.8-357.3' high vitrain content 340.4-348.5 336-355' coal 19'
		355-357' Poor coal (shaley) Seam - 9
359.0	373.2	black carb. mdst. abundant plant fossils, massive broken core 368-369.5 coal seam
		371.2-372.8 vitrine, monor coal seams (¼") at 362'70°
373.2	411.5	dark grey-black thin, laminated fine siltstone, plant fossils on bedding planes
		and coal in joints (375.5) coal seam (375.9-376.6) bdg 377'76°, 386'75° grades

Core Size

Hole No. 441

40 Scale

Color Plot & Dips	Ore Classes & Aver.

0

2507-

Diamond Drill Geological Log

Cominco

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

40 Scale

Color Plot & Dips | Ore Classes & Aver.

From	To	Discard: Reason:
		to fine grained sdst. (378') with muddy parting. crossbedded. ½" sets at 383.1 fines at 387.5' (mud intercalation)
		4' core less in run 387'-397' light and dark laminations bedding 396'-85° xbd. bdg 405.5'-70° calcite vein 408.3'
		1/8" 30°
411.5	421.1	mudstone black, massive, increasing carb content to 415.1 (highly carb) decreasing carb content to 416.2', 416.6'
		interbed fine slst black; poorly laminated 417.6'-421.1' black, massive mdst. carb, coal partings sharp contact at
		421.1' with sdst bdg 421.7' 85°
421.1	424.4	fine sdst grey with dark laminations and xbd grading quickly to black, massive slst, carb with plant fossils partings
424.4	429.1	coal clavine, with muddy layers (226.4'-226.9') (227.3-227.7') (.2" at 428.5') size of coal core ~2-3in
		423-428' coal 5' 431-433 Coaly shale
429.1	449.6	mdst, massive black, carb abundant minor coal seams (< ½") decreasing in size and frequency away from main seam.
		7½' core missing to 432'-442' 442 mdst, black brown, minor coal seams still present, fossil plant fragments on
		parting planes. 2" seam 445.5' bdg 448'66°
449.6	454.4	coal and mudstones (coal core ~3") clavrine 447-451 Coal 4' 449.6-450.8 (8"missing) coal 450.8-452.7 carb
		mudstone, brown numerous coal seams (< 2") 452.7 - 454.4 coal, carine 2 small mud bands (< 1")
454.4	466	slst. grey, laminated fine grained quickly grading to mdst (455) mdst brownish black, massive, blacky, no fossils
		grades to fine slst over 2 ft.
466	487.8	fine slst. black occasional laminations, occasional plant fossils parting planes, small sdst interbed 481.5' bedding
		convoluted. large pyrite lense (1"x2") at 486.5' sharp contact with sdst.
487.8	504.5	sdst, grey medium grained, well indurated lithareinte, coal on occasional bedding planes and joints rare sbds, bdg
		495'75°, 501'73° jointing 501'12° to core axis; several minor (< .5") coal seams
		502'
504.5	519.0	slst. f.g., dark grey, occasional light laminations, carbonaceous and plant
		fossils or parting fracture planes, broken and lost core 508'-509'

Core Size: HQ

Hole No.: 441 Page: 3

2507-

Diamond Drill Geological Log

Cominco

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

40 Scale — Color Plot & Dips | Ore Classes & Aver.

From	To	Discard: Reason: GM-NT Log Intersections
519.	521.5	mdst. med grey massive, contact gradational over 2'
521.5	536.5	slst. f.g.-m.g. well laminated w alternating grey and black bands; parallel, wavy and convolute bedding; @522'84° 526'-80°, 535'65° minor jointing @ 535'30 ; content $\overline{w}$ above is gradational over 6" - carbonaceous on fracture planes
536.5	544.7	mdst, med. grey $\overline{w}$ occasiona light grey silt beds up to 1" thick; soft sed. structures.
544.7	548.8	sdst, fg-mg, light grey w thin mudst. laminae; parallel bedding @547-85°; minor ½" coal seam at 547.3' soft sed structures at upper and lower contacts; both gradatinal over 1'
549.8	552.7	mdst, black, massive; ground and broken core 551.7-552.7
552.7	565.5	slst, f.g.-mg thin laminated; minor x bedding, mostly ll bedding; @554'75°; 564'78° becomes c.g. progressively until contact with unit below..
565.5	572.4	sdst - mdg-mg. light grey; $\overline{w}$ uniform orgaic black lamination; x-bedding prominent, parallel bedding also present; 570'87°; contact w above unit grad. over 6"
572.4	575.3	slst, mg-fg, med. grey $\overline{w}$ minor thin beds of f.g. sdst; thinly and uniformly laminated, parallel bedding @90°; soft bed. and flame up structure; contact $\overline{w}$ sdst abrupt over 3"
575.3	580.0	mdst, dark grey to black, med carboneceous becoming very carbonaceous at 577'; minor slst. laminations at upper contact for 2'; @577' broken core in coal bearing mudst. to end of mdst.
580.0	581.0	lost core?? coal mud, gouge 579-584' and 587-601.5' Coal 22.5 (19.5)' Seam 7
581.0	601.0	coal; 25% core is gouge; mashed most of cored coal in 3" or less pieces; crumples easily (clarain, fusain?) mdst, partings at 581.0 - 581.5, 585.1-585.8; 587.0-589.6; ground core at 587'-588.8
601.0	609.5	mdst. carbonae. $\overline{w}$ abundant plant fossils, jet clack; massive; $\overline{w}$ an interbed of m.g., laminated, slst at 604.7-606.0 bedding very irregular jointed and broken core (drill induced) from 607-610.0')
609.5	611.8	coal, (clarain); crumpled, lost 1' core; 80% coal 2" long 606-610 Coal 4' mudst. 610.0-610.2"
611.8	619.5	mdst, dark grey, carbonaceous with abundant plant fossils on parting planes; ½"

Core Size

Hole No. 441 Page 4

2507-

Diamond Drill Geological Log

Cominco

Objective:

Logged By: R. Chapman / A. Slingsby Date: Oct. 76

Sampled:

Composites:

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

40 Scale

Color Plot & Dips | Ore Classes & Aver.

From	To	Discard: Reason: GM-NT Log Intersections
		coal seams scattered thru-out section dipping generally @ 75°
619.5	635.7	slst, mg-fg, thinly laminated w light and dark grey alternating bands w local coarser beds; bedding 90°; carbonaceous
		and abundant plant fossils on fracture planes.
635.7	648.0	mdst. carbonaceous w abundant plant fossils, dark grey-black massive; numerous small slst-sdst interbeds; 635.7-636.6
		sdst, m.g., x bedded @ 60° light grey 638.1-639.2 sdst m.g. x bedded @ 85° light grey 644.2-645.1 sdst, mg.g,
		laminated w parallel bedding, light grey minor coal occurances on fracture planes (1/8" wide) in several places;
		contancts between beds over 4-5" usually
648.0	654.8	slst- mg-cg, thinly laminated w light grey black bands; moderately indurated bedding mostly parallel @85° broken core
		650.8-653.0 along predomjoint @10-15° calcite filled joints @ 653.5
654.8	673.5	mdst, carbonaceous, dark grey w numerous plant fossils; massive w minor interbeds of mg-cg slst @657.3-657.9 and
		670.8-672.0-laminated bedding @ 70°; occasional coarsening to f.g. slst, but locallized; minor ½" coal seams 663'
		#5 seam
673.5	695.5	Coal, high content of vitrain to 688' - mostly clarain after that - well indurated - core up to 2½' majority 6-8"
		pieces; minor mdst, parting 680.0 680.5'
695.5	711.8	mdst. carbonaceous, dark grey, massive w abundant plant fossils - numeraous samll 1½-¼" coal seams in 1' zone near
		contact w coal unit blocky fracture
711.8	741.2	slst, fine grained dark grey block fracture, coarsening downward to sdst (fine, light grey, sharp contact with mud
		interlayer 716.2'-718.5 mud dark greymassive, black fracture. fossil fragments, absent. coarsens to (720.5) to lithic
		sdst carb on joints light grey laminated, med-fine grained fines to siltst 722' laminated grey rare carb parting
		blocky fracture carb parting and plant fragments more common toward 730'-730.2'
		sharp contact fine grained sdst (730.2'-732.2') light grey xbd bdg 731'-80°
		732.2-741.2 dark grey-black silt, occasional, carb painting and rar fossil frag-
		ments (plant) blocky fracture sharp contact with sdst 741.2'

672-693' Coal21'

Seam - 5

Core Size

Hole No. 441 Page 5

2507-

Diamond Drill Geological Log

Cominco

Objective:		Sampled:			
Logged By: R. Chapman A. Slingsby	Date: Oct. 76	Composites:			
Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length:

40 Scale — Color Plot & Dips | Ore Classes & Aver.

From	To	Discard: Reason: GM-NT Log Intersections
741.2'	770.3	sdst light grey med grained lithic, wavy bedding rare xbd. bdg 744'80° 745.7'-746.5' mudst interlayer, black, carb. occasional plant fragments, blocky fracture. 747.7, silt laminations, some carb material some xbdg silt out 749' bdg 755'85° carb parting becoming more common: bdg 764'85° 768 very common (1' core lost) 6" mdst interlayer 769.5'-770 sdst-770.3'
770.3'	779.8	mdst, dark grey going to back (773') and highly carb small coal seams (<¼") common carb partings and fossil fragments (blocky fracture)
770.3	779.8	very abundant slicken sides on joints and some bdg very finely laminated bdg 775'85° 775.5' 776.5' coal seam hard vitrine contact coal 779.8'
779.8	784	coal hard upper section soft lower clavine and fusain 1' core lost 781'-783 783'-789' core pulverized 3" mud parting 780.5'
784	802	mdst black, highly carb abundant coal partings and plant fossils, decreasing carb content toward underlying slst. blocky fracture bdg 797'-80°
802	857	siltstone grey, fine grained, parly laminated occasional carb parting, rare plant fragments (rum ends 810) grades to to mdst over 1' (811') for 4' (to 815) rare fossil fragments (817). Thin laminations (822') coarse, light grey well laminated slst 824'-825.5' wavy bdg. bdg 825'75° thickly laminated - intercolated fine and coarse silts rare plant fragments and coal infulling goints the coarser fraction becoming less abundant to 842' soft seds structures 840' (possible load casts?) abundant mud partings and laminations of fine material 850' coarser with thick laminations of coarse and fine to 857'
857	866.9	sdst, qtg, light grey carb partings (¼") poorly laminated xbd 8.65'70° interlayer of mdst (1') at 859' sharp contact with mdst. 866.9'
866.9	822.8	grey black mdst grades immediately to slst, grey fine grained, laminated occasional calcite infulling of joints slightly carb, mud partings 876' abundant soft sed structure 879.5'-881.5' (load casting) sdst interlayer (6")

Core Size: HQ

Hole No.: 441 Page: 6

2507-

Diamond Drill Geological Log

Cominco

Objective:		Sampled:				40 Scale
Logged By: R. Chapman / A. Slingsby	Date: Oct. 76	Composites:				Color Plot & Dips / Ore Classes & Aver.
Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length:	

From	To	Discard:	Reason:

GM-NT Log Intersections

		at 882' with mdst clasts sdst immediately underlayen by mdst
882.5		mdst black carb. occasional coal and carb partings occasional silt and sand laminations. blocky fracture
882.5	906	highly carb sdst 891.2'-892.5' rip up clasts underlying mdst laminated with silt, carb partings occasional plant fragments and small md clasts in the slst laminations bdg 894.5' 75° minor coal seams (¼") 894'-896'
906	913	siltstone fine, black grey over first 2 ft coarsening and becoming laminated to 913. small xbdg calcite infilling joints bdg 910'80°
913	922.7	sdst fine-med qtz laminated with silt xbdg wavy bdg tip up clasts near base calcite infilled joints
922.7	942.5	interbedded silt and mudstone 922.7-923.2' silt dark grey med grained laminated 923.2-924.3 mdst dark grey, carb, abundnat plant fragments 924.3'-935.2' silt fine med grained, grey laminated wavy bdg, rare small xbd 935.2'-942.5' mdst dark grey, massive-poorly laminated rare carb parting, abundant plant fossils
942.5	973.5	coal soft, same vitraine bands, care pulverized 947.6-951 mud parting 2" at 954.5' 947-957' 6" core lost 957'-965' 1 ft core lost 965'-973.5 2 ft core lost clarine over most of seam
973.5	985.7	mdst very highly carb. lost core may rpresent coal 973.5'-979' 3 ft lost 979'-983' 2 ft lost 983'-987' 2.5 ft lost
985.7	991	mdst black highly carb (decreasing a way from coal) carb partings (common slickensides) and very abundant plant fossil fragments, massive blacky fracture
991	1007.8	siltstone, grades from mdst over 1' very massive, small amount of block frcture, very high qtz content small fossil fragments (rootlets?) soft sed structures and rare xbdg (1006') small sand layer with clay clasts (1006.8') carb fine and block over 1' at base
1007.8	1017	sdst med grained qtz, rip up cloast and silty layers near top poorly laminated rare xbdg, mdst clasts 1015' bdg 1012' 78°

941-972' and 975.5-980 Coal 39 (35.5') Seam 4

Core Size: HQ

Hole No.: 441

Page: 7

2507-

Diamond Drill Geological Log

Cominco

K-Fording 76(3)A-1

319

Objective: A. Slingsby

Logged By: R. Chapman Date: Oct /76

Sampled:

Composites:

Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length:
		Eagle Mtn.		90°	1024

From	To	Discard: / Reason:
0 -	99'	tricone
99'	116'	black siltstone, coarse grained, becomes calcareous (with stylatites)
		106' - 108' fines and becomes brown grey 110' , few dark lamination carbonaceaus on parting planes, plant fossils,
		calcareaus in fillings 113' dark laminations common, wavy and camvoluted bdg. iron oxide coating on joints and
		bdg planes, small band (4") qt. sdst in contact with mud st. 116'
116'	129.8'	mdst black carb, plant fossils on parting planes. bdg 120', 78° laminated with silt at 120', increasing carb. content
		to contact with coal.
129.8'	131'	Clavine, soft, cave up to 4" average < 2" some crushed.
131'	136'	mudstone, very carb iron oxide coating joint and parting places core badly broken to 136', unconsolidated
136'		slst, dark brown black, fine to medium, Fe oxide on joints etc. abundant plant fragments bdg 139' 75° laminated
		(141') and (143') mdst interbed 149.2' Iron oxide coating on joints and bdg planes 1' core loss 141'-146'
		occasional carb parting and plant fragments blacky fracture (152') coal in joints, Muddy partings 155' - 158' to
		1' mudstone layer. Fe oxides, in joints. Laminated (161) wavy bdg and cross bdg. bdg 161' - 75°. 169'-171' muddy
		partings laminations (173') carb bdg planes occasional plant fragments rare coal seams (<½") on bdg planes.
		block fracture with abundant carb partings and plant fossils 174' - 178 some pyrite on bdg planes
136'	189'	fine-med slst blacky fracture (179') laminated 180' occasional carb parting and plant fragments bdg 181' 55° black
		mdst interbed 182.6' - 185' blacky fracture, carb and plant fragments on bdg. 185'-188' laminated silt st. occasional
		carb parting. grades over 1' (to 189') to sdst.
189'	211'	sdst. med grained, xbdg and wavy bdg light grey lithri bdg 196' 65° occasional carb partings and rare plant fragments
		fines toward 211' breaming thickly laminated occasional oxidation along joints. Chematized.
211'	229'	med slst dark grey - black abundant carb partings and laminations abundant
		plant fragments and fossels, fines toward 127' (127'-129' 1' core lost)
229'	252.5	229' - 229.7' black massive mdst. 229.7 coal clavine with vitrine bands mud
		parting 238.7' (3") 246.7' parting silty and heavily pyritized 250' mud parting.

Core Size: HQ

Hole No. 442 Page 1

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

GM - NT. Log Intersection

72 - 96' Coal 24'
Seam - 12

122 - 129' Coal 7'
Seam - 11V

228.5-236' Coal 9.5

240 - 241' Coal 1'

242.5 - 246.5 Coal 4

18 (14.5)' Seam - 11

2507-

Diamond Drill Geological Log

Cominco

Objective:

Logged By: R. Chapman, A. Slingsby Date: Oct. 76

Sampled:

Composites:

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

Discard: | Reason:

40 Scale

Color Plot & Dips | Ore Classes & Aver.

From	To	
		fusaim 250' - 252.5'
252.5	265.5	mdst black highly carb, carb content decreasing rapidly to 255'. carb partings and plant fragments common. coarsening downward, grading to slst 265.5
265.5	293.0	fine silt st, grey, laminated wavy bdg. muddy and carb partings occasional plant fragments bdg 270'- 70° Broken core 287.5-292.5- jointing @ 10'
293.0	305.5	slst, f.g. dark grey, massive blocky, carb partings and minor ¼" coal seams 301' broken core 294-299'
305.5	313.8	mdst, dark black, carbonaceous, massive - grades from slst over 5', laminated slst interbed @ 310.3-311.2 bdg - 87°
313.8	316.4	coal poor quality, muddy and crumpled. fusain, mdst. parting @ 316.0' - 316.2
316.4	322.0	mdst, carbonaceous, w abundant plant fossils, dark grey; laminated slst interbed @ 318.5-320.0 broken core 317'-322.5'; 1.5' lost core, badly jointed @ 15.20° and has assoc. minor 1/16" calcite veinlets
322.0	328.1	slst, mg-cg. thinly and regularly laminated, parallel bedding @ 87°
328.1	336.0	mdst, dark grey, massive grading gradually over 2' to a f.g. massive slst @336.0
336.0	364.4	slst. v f.g-fg. medium grey; most is massive but laminated in localized areas bdg. 361' 78° broken core 349-355.5' due to jointing 10-15° to core axis 2-4" pieces, carbonaceous on fractures
364.4	378.0	mdst., dark grey, carbonaceous on fractures, massive very carbonaceaus inlocalized areas, broken core 363-372' 3' lost. 1-3" pieces shows intensive jointing and irregular breaks also breaks on carb. partings.
378.0	380.0	mdst, dark, grey; carbonaceaus, pyrite bearing, "Low density" top of 9 seam?? massive w jointing. 5-10' to core axis; small coal seam 3" thick?
380.0	403.0	coal 3-5" pieces (clarain, localized high vitrain) carb mdst parting @398.5-401.5 sampled separately (#9 seam?)
403.0	412.5	slst, fg-mg. laminated to thinly bedded (up to 2" beds) soft sediment structures; bedding @ 410-70°, broken core 403-405' due to intense jointing sub parallel to core axis.
412.5	415.5	mdst, carbonaceous w minor ¼" coal seams, dark black, contact w above is sharp.

377.5-395.5' Coal 18

395.5-397.5' Shale

Coal 2'

Seam - 9

405.5-407.5 coal 2'

Core Size

Hole No. 442 Page 2

2507-

Diamond Drill Geological Log

Cominco

Objective:

Logged By: R. Chapman, A. Slingsby Date: Oct. 76

Sampled:

Composites:

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

From	To	Discard: Reason:
415.5	420.0	Coal, low rank - clarain, majority is in 1"-2" pieces - lost core about 2'
		Fractured and broken core from 421-439' breakage due to grinding in
		drill and carbon partings. subparallel to bedding.
420.0	427.5	slst., f.g.m.g., light grey, poorly laminated - massive in places - intensively jointed
427.5	438.0	mdst., mod. carbonaceous at contact and increasing to very carbon a+ lower contact, medium grey, massive with some
		silty interbeds @437.5-438.0; 434.7-436.2 bdg. 75°.
438.0	443.9	coal, (#8seam?) mod. vitrain content; 1-3" pieces lost core 1½'
443.9	449.7	mdst, carbon., medium grey, massive blocky, jet black and shiny on fractures; numerous minor ¼-½" coal seams occuring
		as lenses in the mdst.; coal seam 446.0-446.5'
449.7	465.2	slst. fine grained, medium grey, massive but occasionally weakly laminated witha mg., grey silt st., bdg @452'-78°,
		carbon on fractures, blocky.
465.2	477.6	slst. - mg-cg. light grey, continuously and thinly laminated w carbon layers; predom wavy bedding and abundant soft
		sed. structures,; mdst rip up clasts; bdg. 470'-72°, 475-73° massive slst. interbed @ 467-469.7, mg. sdst. interbeds
		(5") near lower contact.
477.6	482.8	sdst - mg., light grey w very minor carbon. laminate, x-bedded and parallel bedded, bdg. 480'-83°; contact w slst is
		gradational over 1½'; carbon on fracture planes.
482.8	488.4	mdst. carbon., dark grey w jet black, shiney fracture surfaces, occasional light grey silty interbeds, blocky,; conta
		ct w sdst is sharp and illustrates load cast structures
488.4	494.1	coal, vitrain 3"-1' pieces well cores.; muddy coal 489.4-490.6, sample #10433; 491.5 - 491.7 included w coal.
494.1	496.0	mdst. very carbon w abundant plant fossils, dark grey, shiney black on fracture
		surfaces; massive
496.0	508.5	slst. mg-cg. medium grey, massive w occasional dark silty interbeds up to ½"
		thick; contact w above is sharp

Core Size: HQ

Hole No.: 442 Page: 3

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

GM-NT Log Intersections

436.5-441.5 Coal 5'

488-492 Coal 4

2507-

Diamond Drill Geological Log

Cominco

Objective:

Logged By: R. Chapman, A. Slingsby Date: Oct. 76

Sampled:

Composites:

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

From	To	Discard: Reason:
508.5	525.0	sdst, m.g., light grey with minor carbon laminae.; x bedds and parrallel bedded bedding 510'-70°; 517'-75°, 524-76°
		unit contains many silts, interbeds that are quite substantial. @ 510.7 - 514.1 massive, coarse-grained slst.
		@ 518.1-522.1 - mg-cg. slst, dark grey w some sdst, interbeds. upper contact is gradational over 1'
525.0	534.6	slst. - coarse grained grading gradually thru to line grained at lower contact. medium grey, generally massive w
		several 6"-1' interbeds of f.g. sdst.
534.6	560.0	mdst. - dark grey, moderately carbonac., blocky, generally massive with occasional silty interbeds that show soft.
		sediment structure; contact w above is gradational over 1'; 543.4-547.0 f,g.-mg laminated silt st., wavy bedding 85°
		carbon on fracture planes.
560.0	568.2	sdst, f.g., light grey w carbon laminations; contact is fairly sharp grading thru a mg slst, in 1'; wavy and parallel
		bedding 80° @ 567; grades down to a c.g. slst locally.
568.2	592.5	mdst. black grey, carb partings rare fossile fragments (plant) block fracture. 580.5'-589' silt and sand interlayers.
		x bdg and highly canvoluted bdg. (slump feature?) small silt bands 584.8' and 586.7' and 592, bdg 587-80°
592.5	610	slst, md gr. laminated grey and grey black x bdg. coaly partings (<¼") 594.5 same muddy inter calations (~2")
		under coaly partings plant fragements rare. 1' highly carb. zone 599' poorly laminated to 610' at 610 2" sand calation
		under layen by mdst bdg 608'-80°
610	616	mdst. grey black. same blocky fracture, abundant plant fragments, massive
616	624	siltstone grey-dark grey. poorly laminated. crushed core. highly convoluted bedding at base. occasional carb
		partings and some sandy layers (622')
624	636.8	mdst. black, massive, some laminations carb content low at top, increases rapidly toward coal 628'-630 3' lost
636.8	658.3	coal core crushed 638-648' 4' lost 648'-653 15 ft lost soft clavine 638'-640.2
		mdst. 651'-651.5 mdst 653.5'-654.1' mdst. 2" md parting 656.7' 648.3 3"
		parting spherulitic looking, heavy 651 3" parting sherulitic, light
658.3	664	mdst black highly carb., decreasing in carb content and coarsening away from

Core Size: HQ

Hole No.: 442 Page: 4

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

GM-NT Log Intersections

633-636.5' Coal 3.5'

2.5' Shale

639-657 Coal 18'

24(21.5)' Seam - 7

2507-

Diamond Drill Geological Log

Objective:

Logged By: R. Chapman / A. Slingsby Date: Oct. 76

Sampled:

Composites:

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

From	To	Discard: Reason:
		coal small seams <¼" common thru out.
664	674.2	siltstone, fine-med gr. dark grey poorly laminated muddy calations x bdg abundant fossil fragments. rare coal
		seams <1/8" occasiona carb partings bdg 673'85°
674.2	710.7	Mudstone. black, carb. with intercalated siltstone. mdst. poorly laminated - massive abundant plant fossils and
		fragments rare coal partings ¼" carb. partings with slicken sides silt intercalations grey, lamanated 3".
		bdg. 686'-78° carb content increasing toward coal seam coal partings become thicker and move common.
710.7	737.7	Coal hard vitrine upper part of seam clavine at base, muddy parting (2") at 717.8' muddy coal (~6") at 731'
		712'-723' 1 ft care lost 733'-743 2½ ft lost in coal lower most 1'6" mud parting over 6" coal.
737.7	743.2	slst, med. g. , thinly bedded w̄ finer grained, more carbon. beds up to 4" thick; contains minor m.g. sdst. inter
		calations 1-2" thick; load cast structures at 742', bdg. -85°
743.2	746.7	mdst, dark grey, mod. carbon. w̄5" coal seam at 746-746.4' massive; minor coal seams make b. fracture planes; contact
		w above slst is sharp - over 3"
746.7	760.5	thickly interbedded slst. and sdst; 746.7-748.2 slst - m.g. medium grey, massive w 5" iinterbed of f.g. sdst.
		748.2=751.5 sdst - mg light grey, thin bedded w̄ 1-1.5 beds, parallel bedding at 82° soft sed. structures at upper
		and lower contacts; both contacts are very sharp 751.5-760.5 slst - grades from a f.g. slst, at contact to a very
		c.g. slst. (f.g. sdst?) at lower contact - medium grey; thin bedded at upper contact - beds up to 6" thick to thinly
		laminated at lower contact; bdg. is predom. parallel but is x bedded in coarser - grained areas bdg 755'-80°;
		760'-87°
760.5	764.5	mdst, med. grey, massive, slightly carbon on fracture planes upper contact is sharp; lower contact grades over
		3½' to a fig. slst. at 768.0'
764.5	778.2	slst, laminated f.g. and m.g. slst; fig. slst, predom w̄ ½" dark beds and 1/16"
		light, coarser laminated - bdg is parallel and continuous bdg. 775'-86°
778.2	802.0	sdst, light grey; contact w̄ slst, is gradational to 784.0 w interbedded slst,

Core Size

Hole No. 442 Page 5

40 Scale

Color Plot & Dips | Ore Classes & Aver.

709.5-730.5 Coal 21'

Seam - 5

2507-

Diamond Drill Geological Log

Cominco

Objective:		Sampled:				
Logged By: R. Chapman, A. Slingsby	Date: Oct. 76	Composites:				
Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length:	

From	To	Discard: Reason:
		f,g. sdst bedding is parallel $\overline{w}$ minor x bedding along contact; after 784.0 sdst is m.g. and massive $\overline{w}$ sparse carbon
		laminae x-bedded. pronounced jointing from 787.0-792' - cross jointed at 6° and 10° in perpendicular directions
		joints are clean sdst is carbon. on fracture planes; bdg. 784'71°; 795' 82°
802.0	829.5	mdst; very carbon $\overline{w}$ abundant plant fossils and jet clack, shiney fracture planes, dark grey; 810.8-812.2; 817.5-
		817.5 coal seams; - minor coal seams ½" are abundant from 817.0-826; contains, sparse and localized silt laminations
		generally massive. broken core from 802-811' due to intense jointing and shears - slickensides; joints 35°and 10°
		in perpen. directions; slickensides die 25° on joint faces.
829.5	874.8	slst. 829.5-850.4 f.g. slst, med, grey massive $\overline{w}$ 2-3 localized coarser silt beds. jointing from 241-247 2 directions
		perpend. to one another @ 5° and 30° calcite infilling assoc. $\overline{w}$ joints at 5°. 850.4-857.5 mg-cg. slst, laminated,
		lisght grey - laminations are thin and continuous; conualute bedding 851'; wavy and parallel bedding; bdg @ 851-80°
		856'-73° carb. on parting planes. 857.5-874.8 mg, mod, grey slst. massive $\overline{w}$ lacalized coarser silt laminations;
		f.g. sdst inter bed @ 864.3-865.3; contains several small (6"0 sdst. interbeds; soft sed. structures.
874.8		sdst. c.g., light grey w minor carb. laminations; predom massive, but locally parallel and x-bedded; distorted
		bedding along minor (¼") coal seams is fairly common;
	912.0	contains subrounded quartz and chert; mod. well sorted; firmly indurated; salt and pepper texture; carbon onfracture
		surfaces; bedding @896'-87°; 896.5'-80° from 898'-912' lost 12' core- fractures rounded and frill induced
912	914	lost core- contains med. grey slst fragments of core.
914.0	921.2	slst, f.g. mildly carbonaceous, dark grey; massive w minor coarser and laminated zone from 915.8-917-bedding is wavy an
		and parallel - 78°; soft sed. structures; upper contact is uncertain (in lost core); lower contact is abrupt and
		sharp.
921.2	931.8	Sdst, c.g., salt and pepper tecture, mod. well sorted, subrounded qtz and chert
		grains. massive with weakly developed parallel bedding over 1' at 927' (bdg 65°)
		numerous minor coal lenses and seams from 930'-931.8'; carbon on most fracture

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

Core Size

Hole No. 442

Page 6

2507-

Diamond Drill Geological Log

Comaco

Objective:

Sampled:

Logged By: R. Chapman, A. Slingsby Date: Oct. 76

Composites:

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

From	To	Discard: Reason:
		planes; very c. g. and load cases at lower contact; very abrupt.
931/8	964.0	slst. 931.8-934.5 - slst, m.g. - c.g. medium grey; massive, but locally thinly anc continuously laminated; average bdg - 70° @ 935'; carbon on fracture planes. 936.5 - 940.1 sdst. f.g. light grey w carbon laminations; parallel and continuous bedding @ 70°; salt and pepper tecture, abrupt contacts. 940.1-964.0 slst. f.g. carbonaceous, medium grey; massive to thinly bedded w coarser silts locally; when present bedding is inconsistant and wavy w soft sed. structures and load casts; rip up clast breccia zone from 946.4 - 950.0
964.0	971.5	mdst,. dark grey, mod. carbon at contact and progressively increasing going twards coal, massive w occasional coarser silty interbeds; carbon on fracture planes.
971.5	1004	coal, crumpled and broken from 979'-984'; 3-4' pieces of core for the rest; vitreous, soft, not banded - clarain 974-984 - 3½' core lost 984 - 994 - 1' core lost. 994-1104 - 7½' core lost bottom contact of coal not accurate due to large % of core lost in that run.
1004	1024	mdst, dark grey, carbonaceous, abundant plant fossils and very carbon fracture planes, massive w interbeds of coarser laminated slst. from 1008 - 1010' that show wavy bedding and soft sed. structures, - interbed of fig. sdst. 1016-1019.5 salt and pepper texture; massive firmly indurated, - 4" coal seam at 1014.5 - 1014.8; 1' coal seam from 1021' - 1022'

Core Size

Hole No. 442 Page 7

40 Scale

Color Plot & Dips | Ore Classes & Aver.

GM-NT Log Intersections

969-994 Coal 25'

4' Shale

998 - 1002.5 Coal 4.5'

Seam - 4

2507-

Diamond Drill Geological Log

COMINCO

K-FORDING 76 (3)A-1

377

Objective:			Sampled:		
Logged By: R. Krishan	Date: Jan. 6/77		Composites:		
Block:	Sect.:	Place: K4 Pit Eagle Mt. South	App. Bear:	App.: Dip.:	Length: 572'

From	To	Discard: Intersections taken from Gamma Ray - Neutron Log. Reason:
0	11	Overburden
11	43	Mudstone
43	85	Siltstone
85	101	Sandstone
101	123	Mudstone with several bands of siltstone
123	150	Siltstone with thin interbeds of sandstone, coal stringers at 148'
150	162	Mudstone
162	170	Siltstone
170	235	Mostly mudstone, with interbeds of siltstone.
235	271	Mudstone
271	303	Coal 32' Seam 4
303	329	Mudstone
329	379	Coal 50' Faulted Seam 4
379	445	Mudstone with several siltstone interbeds
445	492	Siltstone
492	496	Mudstone
496	500	Coal 4'
500	503	3' Shale
503	505	Coal 2'
505	508.5	3.5' shale
508.5	511	Coal 2.5'
511	512	1' shale
512	513.5	Shaley coal 1.5'

Core Size

Hole No. RH 443 Page 1of2

40 Scale

Color Plot & Dips	Ore Classes & Aver.

0

2507-

Diamond Drill Geological Log

Cominco

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

40 Scale

Color Plot & Dips | Ore Classes & Aver.

From	To	Discard: Reason:
513.5	525	Mudstone
525	541.5	Sandstone some siltstone near top
541.5	555.5	Coal 14' Seam 2
555.5	562.5	Mudstone
562.5	569	Coal 6.5' Seam 1
569	572	Basal sandstone
		End of hole at 572'
		Nov. 18/76

Core Size

Hole No. RH 443 Page 2 of 2

2507-

Diamond Drill Geological Log

K-FORDINE 76(3)A-1

Objective:

Sampled:

Logged By: A. Slingsby Date: 30/11/76

Composites:

379

Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length:
				90°	907'

From	To	Discard:	Reason:
0	12	Tricone	
12	98	Siltstone grey-dark grey med.-fine grained, poorly-well laminated initailly very muddy & carb. common coaly partings (<½") blocky fracture. becomes well laminated (24') Intense fracturing 25'-28' & 33'-35' thse zones are heavily oxidized along joint bedding surfaces oxides on surfaces present to 60'. Strataform pyrite 65.5' bdg. 23'75°, 32'75°, 38'80° 75'75° small intercaltions of med. gr. sand start at 82' and continue to 97' Fe oxides are common as coating on joints & bedding planes oxidation extends up to 1" in from joints mud/silt increases over last 5 ft to 98'.	
98	120	Mudstone dark grey-black with occasional silt laminations & bands. plant fragments common carb. content increase downward, coaly partings became common.	
120	126	Coal core badly broken claystone 3' core lost	
126	143	Mudstone very highly carb. black, abundant coaly partings coarsens downwards with decreasing carb. content. Silt laminations appear tension gashes (?) at 138' filled with calcite & Pyrite	
143	163	Siltstone, grey dark grey, fine-med. grained, generally well laminated occasional intercalations of block mdst & rarely of coarse silt or sand. Wavy bedding thru out some bdg. bdg 143'75°, 161'75° unit becomes less & less laminated with depth	
163	210	Silty mudstone very poorly laminated initially then massive black-washed brown. grain size varies around mdst fine silt plant fragments common rare pyrite lenses, coaly partings appear 184', silty laminated layer 187.5' 4 inch coal seam 190' underlain by highly carb material & mdst laminated with carb material highly pyriteferous zone 196-198. Some silt laminations appear at 196'and become more common & coarser downwards bioturbation 200'	
210	262.5	Siltstone with mud intercalations light grey-black. wavy & xbdg same possible warm burrows. silt/mud decreases downward as mudst. interbeds increase in thickness. Lower 5' of unit mudstone. Lower most 1' black, metalic, light mdst. bdg. 220'-75° 250'80°	

Core Size: HQ

Hole No. 444 Page 1

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

GM-NT Log Intersections

107-123.5 Coal with 1.5' shale parting at 118'.

16.5(15) Seam 11

260.5-279.5' Coal

19' Seam 9

2507-

Diamond Drill Geological Log

Cominco

Objective:

Sampled:

Logged By: Date:

Composites:

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

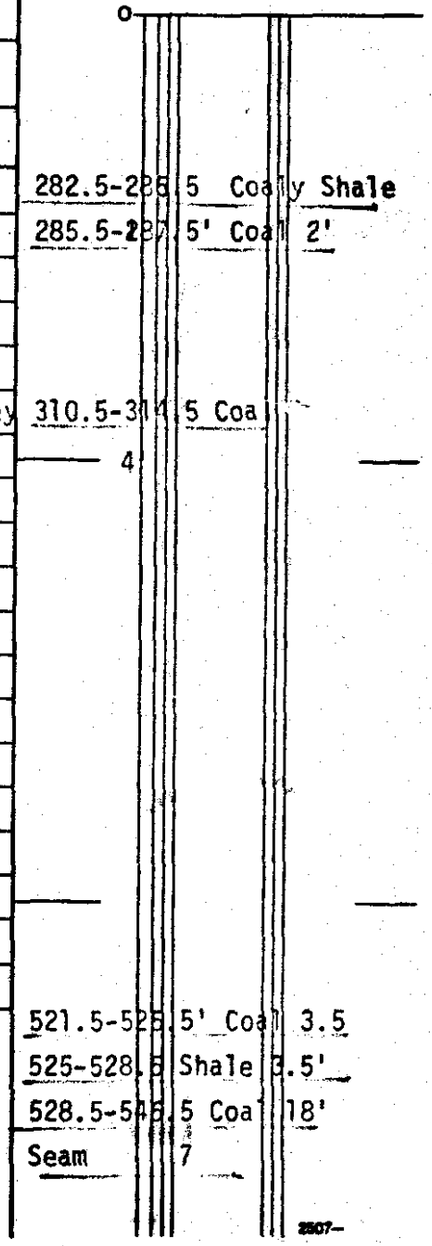
From	To	Discard: Reason:
262.5	280	Coal hard vitrain pyrite parting at 265' no apparent phospatic partings 4½ ft core loss over seam mdst. parting 6" at 266'
280	291	Mudstone highly carb. black coaly partings common 8 inch seam 287'
291	312	Siltstone with interbedded mudst. slst med-fine gr. light grey laminated. mdst. interbeds to 1 ft. thick, black, abundant plant fragments bdg. 300'80° coaly partings occasional in finer grained portions.
312	340	Mudstone initially black, highly carb. 1.5 ft. coal seam 314'-315.5' 6" ma coal at 320', massive becomes washed grey around 327 remains massive with rare plant frag. & carb. partings becomes laminated with fine silt near base.
340	379	Sdst. initially fine laminated silt grading from overlying unit. grades over 10 ft. to med. gr. light, grey, poorly laminated chert sdst. with very rare muddy partings or lamelli & coaly partings below 360' bdg. 344'75° 362'75° 369-372.5 highly carb mudstone, block upper contact sharp but lower one graded over 1 ft. Below mudstone is very coarse grained, massive sdst. (lithic arenite)
379	412	Siltstone very fine grained. washed brownish grey massive or occasionally laminated with coarser silt fossil fragments rare laminations more frequent below 400'
412	462	Mudstone dark grey to black, initially massive but well laminated with silt from 447' some silt above that block fracture thru out but better developed in upper part. plant frag. & carb. partings common thru out occasional thin coaly partings
462	506	Siltstone grey-dark grey initially with high mud/silt but grades toward a less muddy coarse silt (477'-484') mud content incraeses downward below this plant fossils common in upper & lower portions but nearly absent in coarse silt some blocky fracture in muddiest sections. Lowest part of unit massive, dark grey siltstone.
506	532	Mudstone dark grey-black, initially silty but fines down wards carb content increases with depth. 1' coal seam at 526'. grades to muddy coal at lower contact

Core Size
HQ to 417'
NQ thereafter

Hole No. 444 Page 21

40 Scale

Color Plot & Dips	Ore Classes & Aver.



Diamond Drill Geological Log

Cominco

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

From	To	Discard: Reason:
532	548.5	Coal upper part soft, badly broken clarain 6" md parting 54.3' lower part hard, vitrain, no toher partings
		apparent. 6' core loss thru seam.
548.5	564	Mudstone dark grey-black very highly carb caoly partings abundant thru out 1' silty interbed at 556' bdg. 556-80°
564	580	Interbedded silt & mud stone. siltstone med-fine grained, grey dark grey well laminated. Mudstone dark grey to
		black very highly carb. coaly partings common, plant frag. & carb partings abundant bdg. 567'80°, 578'75°
580	596	Mudstone dark grey-black massive common coaly partings very abundant plant frag. & carb. partings grades to muddy coal
		at lower contact.
596	614	Coal hard vitrain thru most of section very minor (1") muddy partings at 597, 601', 6.5 ft core loss
614	665	Siltstone, dark grey, first 10' very muddy, high carb. small bands of fine-med., grey sdst appear at 620' ,becoming
		thicker & more numerous to 631' thereafter decreasing in number & size rapidly but still present to 639'. Siltstone
		fine-med. grained thru out. Common coal in upper portion, rare lower in section bdg. 623'85°, 645'85° becomes
		more fine grained with laminations of med grained material from 646-665 one zone of grey, med gr. sdst. at 663'
		bdg. 665'-85°
665	696	Sdst. light grey, well laminated med-coarse grained coaly partings appear at 692' & are abundant to base of unit
696	722	Mudst-fine siltstone; dark grey-black initially quite silty but grades to carb mdst by 702' crosses mdst, slst
		boundry numerous times, the silty portion usually less carb. block fracture thru out but most pronounced in mdst.
		coaly partings rare in mdst.
722	771	Siltstone grey med grained initially massive to 727 at which paint rip up clasts of mdst. appear clasts disappear
		by 733' Siltst becomes poorly laminated with very rare plant fossils to 747'. Below 747' laminations much better
		developed, with xbdg and some canvol;ute bdg. bdg. 696'75° 742'85° 765'80°
		grade to fine grained sdst or fast 5'
771	792	Sdst. light grey med grained lithic arenite well laminated coaly partings
		abundant along bdg & joints 6" mudst intercalation at 791' sharp contacts sdst
		bdg. 792'80°

40 Scale

Color Plot & Dips	Ore Classes & Aver.
592.5-612 Coal	
19.5 Seam 5	

Core Size NQ

Hole No. 444 Page 3

2507-

Diamond Drill Geological Log

Commco

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

From	To	Discard: Reason:
792	805	Mudst. dark grey to black highly car.b. sharp contact with overlaying sdst. silt laminations appear at 795' &
		increase in size & frequency with depth.
805	842	Siltst. grey to dark grey generally fine grained, with muddy & coarse grained interbeds poorly laminated except
		where muddy (massive or coarse (well laminated). Med. grained sdst. interbed 836'-838' grades to mudstone over
		4' fossil frag. common thru out bdg. 820'85^0 840'80^0
842	862	Mdst. grey-black massive carb. content very low in upper portion, increases quickly with depth. carb partings rare
		thru out same slickensided joint surfaces near base.
862	890	Coal soft clarain no apparent partings. 12' core lossthru seam
890	TD	Mdst. grey-dark grey initial 2 ft. highly carb. rare silt laminationsfossil frag. abundant coaly partings rare in
	907	lower portion

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

GM-NT Log Intersections

860'-881.5 Coal 21.5'

881.5'-885.5 Shale 4'

885.5-889 Coal 3.5'

Seam 4

Core Size: NQ

Hole No.: 444 Page: 4

2507-

Diamond Drill Geological Log

Cominco

K-FORDING 76(3)A-1

319

Objective: W. H. Shaw

Logged By: K. A. Komenac Date: March 15, 1976

Sampled:

Composites:

Block:	Sect.:	Place:	App. Bear: Rock	App.: Dip.: Rock	Length
		K-4 (SOUTH EAGLE)	130	10° SW	408.0'

40 Scale — Color Plot & Dips | Ore Classes & Aver.

From	To	Discard: / Reason:
0	6.0	Tricone
6.0	19.0	Chert arenite, grey, coarse grained
		jointing 10° calcite filled
		sharp contact bedding 60
19.0	23.0	Mudstone, black carbonaceous, silty sharp contact
23.0	28.0	Sandstone, grey, fine to medium grained, with interbeds of
		dark grey, coarse grained siltstone, coarsely laminated, wavy soft sediment deformation
28.0	43.0	Lithic sandstone, medium to coarse grained interbeds with fine, dark grey silt
		calcite infilling along bedding planes.
43.0	43.3	Coal, vitrain, clarain, soft
43.3	44.0	Mudstone, black, slickensides, broken core, lens of FeS_2
44.0	55.0	Mudstone, black, carbonaceous, grading to interbedded fine sand and silt coarsely laminated, blocky.
55.0	55.6	Broken zone, mudstone, black carbonaceous, slickensides, blocky numerous joints 57° - 60°
55.6	60.0	Mudstone, black, carb.
60.0	60.4	Mudstone, brown, soft, brecciated (fault zone)
60.4	64.0	Mudstone, grey, blocky, highly fractured @ 20° calcite in filling

Hole No. DDH 455 Elev. 5880.9

Lat. 486,316.9 Dep. 85 32 E

	E'lev.	Th.
Top of 4	@ 5638.4	43.5,
Top of 3	@ 5532.4	44.5,
Top of 2	@ 5511.4	45,
Top of 1	@ 5529.4	35,

Core Size HQ

Hole No. DDH 455 Page 1

2507—N.D.N.

Diamond Drill Geological Log

Cominco

Objective:

Sampled:

Logged By:

Date:

Composites:

Block:

Sect.:

Place:

App. Bear:

App.: Dip.:

Length:

From	To	Discard: Reason:
64.0	72.0	graded to interbedded fine sandstone and silty mudstone.
		coarsely laminated, soft sediment structures
		calcite infilling along bedding plane - bedding 70°
72.0	76.0	gradual transition, mudstone, grey
76.0	101.6	Siltstone, grey, interbedded with mudstone, dark grey, blocky 1 in sq. bedding 65°
		82.0 - 84.0 crushed, highly carbonaceous mudstone, slickensides @ 45° bedding 60°
		fault zone ends in jointed zone 30°
		93.0 - 94.5 jointing numerous calcite infilled 20° bedding 50°
		98.0 - 101.6 highly broken and sheared core, slickensides
101.6	105.4	Coal and carbonaceous mudstone bedding 105.4 - 85°
105.4	108.3	Mudstone, black, carbonaceous
108.3	108.7	Coal, vitrain
108.7	110.0	Mudstone, silty, carbonaceous
110.0	112.0	Mudstone, grey-black, slightly carb.
112.0	111.0	Mudstone, black, carb. with interbeds of coal (.4")
111.0	112.7	Coal, vitrain, hard
112.7	116.0	Mudstone, grey-black, moderately carbonaceous, blocky bedding 61°
116.0	127.0	Distinct contact, sandstone, grey, fine grained with interbeds of fine to coarse blue-grey silt.
		grading to medium grained sand convolute lamination folded bedding 63°

Core Size

Hole No. 455 Page 2

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

2507—N.D.N.

Diamond Drill Geological Log

Cominco

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

40 Scale

Color Plot & Dips | Ore Classes & Aver.

From	To	Discard: Reason: RADIATION LOG INTERSECTIONS
		Irregular contact
127.0	138.0	Mudstone, silty with interbeds of coarse silt and fine sand blocky bedding 55°
138.0	143.0	Mudstone, blue-grey, blocky 1 in. sq. bedding 70°
143.0	145.0	Mudstone, blue-grey, hard, with interbeds of fine sand grading to
145.0	152.0	sandstone, dark grey with brown bands, interbeds of medium to coarse siltstone
		bedding - 70°
152.0	179.5	Sandstone, medium grained, grey, ripple laminations, carbonaceous laminations
		jointing prominate in sand with clean fracture faces
		bedding 155-77°, 166-55°, 167-75°, 173-50° numerous calcite stringers
		Fault @ 176' crushed core and highly porous sandstone 4' zone 176'-40° fault dip
179.5		Sandstone, medium to coarse grained, bedding changes @ 178' from 65° to 87°
		186 - 90°, 187 - 81°
		@ 187.5 rip-up clasts
		contact sharp
188.6	191.2	Mudstone, grey to black, carbonaceous with interbeds of silt and sand.
191.2	197.3	Mudstone, grey-black, carbonaceous increasely carb. as coal is approached
197.3	199.5	Mudstone, black, highly carb. fissile
199.5	200.9	Coal, clarain, vitrain - hard
200.9	203.2	Mudstone, black, carb.
203.2	227.8	Coal, clarain 201.5 - 225.0 Coal 23.5 Seam 4
227.8	280.0	Mudstone, black with silty blocks, brown, irregular shape
280.0		grading to mudstone, with coarse silt laminations

Core Size

Hole No. 455 Page 3

2507—N.D.N.

Diamond Drill Geological Log

Cominco

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

40 Scale

Color Plot & Dips | Ore Classes & Aver.

From	To	Discard: Reason: RAD. LOG INTER.
		266.0 - 267.0 tabular siltstone.
		Slickensides 255.0; 256.0 - 257.0; 267.0 - 268.0; 271.5 - 272.0
		bedding 257 - 71°, 266 - 64°, 280 - 79°
		Siltstone dark grey, fine to medium grained, with interbeds of coarsely laminated sand
		bedding 297 - 79°, 313 - 75°, 327 - 80°: Minor slickensides @ 303 + 327
340.0	342.9	Coal, clarain with bands of silt and mud 337.5 - 342.0 Coal 4.5'
342.9	344.8	Mudstone, black, carb.
344.8	346.0	Coal, clarain, with interbands of silt
346.0	351.6	Mudstone, grey-black, silty
351.6	351.8	Mudstone, black carb.
351.8	356.2	Coal, vitrain, clarain 350.5 - 357.0 Coal 6.5' Seam 2
356.2	357.2	Coal, clarain hard
357.2	359.3	Coal, soft clarain and fusain bedding 70°
359.3	363.0	Siltstone, coarse grained, sandy, carbonaceous, with interbeds of sand, medium grained
363.0	365.8	Coal, clarain 360.5 - 364.0 Coal 3.5 Seam 1
365.8	408.0	Sandstone, grey, medium grained massive, carbonaceous (Basal ss)
		Sandstone grading coarser from 382.0 bedding 369 - 68°, 375 - 66°, 402 - 82°, 408 - 88°
		tabular cross-bedding below 382.0
		calcite filled jointing, numerous orientated jointing planes
		380 - 10°, 380 - 24°, 400 - 0° to 10°, 406 - 60°
		CORE RECOVERY >95% in all seams

Core Size

Hole No. 455 Page 4

2507—N.D.N.

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS
101·6	105·4		10201			3·8		48·4			1		
199·3	200·9	P.A. ¼ S & F.S.I. →	10202			1·4	0·1	28·8/ 27·0	18·0	52·0	7/6½	0·23	
203·2	207·0		10203			3·8		11·5			4		201·5-225 (CAL 23·5
207·0	212·0	SEAM - A.	10204			5		11·3			7		
212·0	217·0		10205			5		7·5			6½		
217·0	222·0		10206			5		7·4			6		
222·0	227·8		10207			5·8		10·5			6		
203·2	227·8	SEAM - A (COMPOSITE 10203-207				24·6	0·1	9·7	21·7	68·5	6·12	0·20	CALC AVE 9·6%
340·0	342·9		10208			2·9		47·3			3		337·5-342 CAL 4·5'
343·9	346·0		10209			2·1		56·1			1		
351·6	359·3	SEAM - 2 P.A. ¼ S & FSI →	10210			7·5		19·8			6		350·5-357 CAL 6·5'
			10210				0·1	19·8	21·2	58·8	6½	0·21	
363·0	365·8	SEAM - 1 P.A. ¼ S. & FSI →	10211			2·8		36·4			5		360·5-364 CAL 3·5'
			10211				0·2	36·0	17·3	46·5	5	0·20	

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS
101·6	105·4		10201			3·8		48·4			1		
199·3	200·3	P.A. ½ S & FSI →	10202			1·4	0·1	28·8/ 20·0	18·0	52·5	7/6½	0·23	
203·2	207·0		10203			3·8		11·5			4		201·2-205 COAL 2·8
207·0	212·0	SEAM - A	10204			5		11·3			7		
212·0	217·0		10205			5		7·5			6½		
217·0	222·0		10206			5		7·4			6		
222·0	227·8		10207			5·8		10·5			6		
203·2	227·8	SEAM - A (COMPOSITE 10203 - 207				24·6	0·1	5·7	21·7	69·5	6·12	0·30	ALL ASH 5·6%
340·0	342·9		10208			2·9		47·3			3		337·5-342 COAL 4·5'
343·9	346·0		10209			2·1		56·1			1		
351·6	359·5	SEAM - 2 P.A. ½ S & FSI →	10210			7·5		19·8			6		350·5-357 COAL 6·5'
			10210				0·1	10·0	21·2	58·8	6½	0·21	
363·0	365·8	SEAM - 1 P.A. ½ S. & FSI →	10211			2·8		36·4			5		360·3-364 COAL 3·5'
			10211				0·2	36·0	17·3	46·5	5	0·20	

Diamond Drill Geological Log

Cominco

K-FORDING 76(3)A-)

Objective:

Logged By: K. A. Komenac, W. H. Shaw Date: March

Sampled:

Composites:

379

Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length:
		K-4 SOUTH EAGLE			797.0

Discard: Oxidized to 170 ft. Reason:

From	To	
0	18.0	Tricone
18.0	42.0	Siltstone, coarse grained, dark grey bedding 31 - 54°, 32 - 48°, 36-55°
		coarse sand laminations
		gradition 41-42
42.0	72.7	Lithic sandstone, grey, coarse, carbonaceous bedding planes highly fractured 52.5 - 57.8
		bedding 59 - 37°, 65 - 47°
		59 - 61 siltstone, dark grey, coarse
		71 - 72.7 carbonaceous sandstone, calcite stringers - sharp contact
72.7	74.2	Argillite, greenish grey @ 72.7 slickensides 54° - fracture 10° (non carbonaceous)
		sharp contact
74.2	88.0	Siltstone, grey coarse grained, blocky 84.0 - 84.8 - soft silt slickensides, fault zone
88.0	92.5	Grading 86 to 88 sandstone, fine grained with silt interbeds.
		soft sediment structures.
92.5	102	Grading siltstone, grey, coarse grained graditional transition 100-102
102.0	106	Sand. coarse lithic grained coarsely laminated with silt, grading to carbonaceous sandstone 104-56° contact
		sharp
106.0	109.5	Mudstone crushed 108 - 73°
109.5	111.0	Sandstone, grey, medium grained, rip-up clasts 40% of rock clasts - mudstone bedding 39°
111.0	111.8	Sandstone, grey, carbonaceous, contact sharp
111.8	116.0	Mudstone, blue-grey - fracture 0° slickensides 22°
116.0	116.8	Coal - soft fusain

Core Size HQ

Hole No. DDH 456 Page 1

40 Scale

Color Plot & Dips	Ore Classes & Aver.

Hole No. DDH 456 Elev. 6203

Lat. 486,826.5 Dep. 85,056.5

	Elev.	Tilt
Top of PARTS	@ 6017	7°,
Top of " 5	@ 5793	4°,
Top of " 5	@ 5706	15,
Top of 4	@ 5602	24°
3	54858	2°
3	54708	2.0
2	54548	10.0
PART 2	54403	3°
1	54328	3°

DIP CORRECTION SHOULD BE APPLIED

2507—N.D.N.

Diamond Drill Geological Log

Cominco

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

From	To	Discard: Reason: RADIATION LOG INTERSECTIONS
116.8	121.0	Mudstone, dark grey
121.0	132.0	Siltstone, blue-grey, fine grained graditional transition.
132.0	170.2	Siltstone, blue-grey, fine grained with interbeds of sand
		soft sediment structures, cross-laminated 138 - 45, 139 - 70°
		clean, massive 142 - 42° tabular massive - cross bedding
		- porous, freckled (oxidized) sandstone (148 - 150)
		rip-up clasts 160 - 164
		151-56, 155-56, 162-62, 160-70, 170-66°
		@ 164 to 170.2 coarse grained freckled sand
170.2	177.0	Coal clarain 166.0 - 173.0 Coal 7.0' (Part Seam 5)?
177.0	183.0	Mudstone, black carbonaceous with 1/2" coal bands sharp contact
183.0	189.1	Mudstone, silty, black-grey sharp contact
189.1	192.0	Mudstone, black, carb. 1/2" coal bands
192.0	212.4	Siltstone, grey-black, fine grained, 212462° gradual transition sharp contact
212.4	216.0	Sandstone, grey, fine grained, convoluted, ripple laminations sharp contact
216.0	222.0	Mudstone, concretions @ 216.0 gradual transition
222.0	225.2	Siltstone, grey dark, fine grained, ripple laminations, minor sand
		laminations 220 - 68°, 225 - 64°
225.2	231.6	Argillite, black conchoidal fracture S.C.
231.6	249.0	Siltstone, fine to coarse grained, grey black
		sandy laminations 240 - 55°
249.0	251.2	Coal, clarain 247.0 - 249.0 Coal 2.0' Part Seam 5

Core Size

Hole No. 456 Page 2

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

2507—N.D.N.

Diamond Drill Geological Log

Cominco

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

40 Scale

Color Plot & Dips | Ore Classes & Aver.

From	To	Discard:	Reason: RADIATION LOG INTERSECTIONS
251.2	263.5	Mudstone, black, carbonaceous	
263.5	301.0	Siltstone, grey, coarse grained 301-68° over 4 ft. to grey, medium, sand, carb. laminations, crossbedded, wavy laminations	
		312-68, 317-72°	
	@	317.8 coarse sand S.C.	
325.0	339.0	Siltstone, dark grey, fine grained grading to sand 335-339	
339.0	348.0	Sandstone, medium grained, interbedded with silt.	
348.0	377.0	Sandstone, " to coarse grained massive tabular cross-bedding	359.2-362.0 broken core - irregular fracture patterns 375 - 376 rip-up clasts sharp contact
377.0	402.0	Siltstone, dark grey, fine blocky grading over 3'	
402.0	413.0	Mudstone, black, carb. 406-70°	
413.0	416.0	Coal and carb. mud. vitrain 414.4-415.5	410.0 - 414.0 Coal 4.0
416.0	419.6	Siltstone, brown-grey, carb. S.C.	
419.6	423.6	Mudstone, black, slickensides, broken core.	
423.6	424.1	Coal, vitrain slickensides.	417.0 - 418.5 Coal 1.5'
424.1	427.7	Mudstone, carb. black	
427.7	440.0	Siltstone, grey, coarse, minor sand laminations	quart veins FeS2 @ 432.0
440.0	461.0	Sandstone, grey, fine grained with interbeds of siltstone 430-55°, 435-62°, 440-56°, 448-48°	
461.0	487.0	Sandstone, grey, carb. wavy laminations with interbedded silt 456-52°, 462-76°, 465-48°	
		472-71°, 480-62°	

Core Size

Hole No. 456 Page 3

2507—N.D.N.

Diamond Drill Geological Log

Cominco

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

40 Scale — Color Plot & Dips | Ore Classes & Aver.

From	To	Discard: Reason:
487.0	488.0	Coal - soft.
488.0	491.0	Mudstone, carb. 497-63°
491.0	523.0	Siltstone, grey, coarse grained, sand laminations 497-63°, 505-67° soft coal 493.3-497.7
		510-67, 516, 69 to 58, 510-513 = small scale cross-lamination 513-515 - convolute lamination
523.0	552.0	Sandstone, grey, fine grained, wavy carb. lamination, convoluted - 540-64°
552.0	601.9	Siltstone, fine-medium grained, dark grey, blocky, minor sand laminations
		552-62°, 560-66°, 575-71°, 587-75°, 592-75°, 602-58°
601.9	625.8	Coal, durain minor clarain parting 607.0-607.2 600.5-625.0 Coal 24.5 Seam 4
625.8	667.0	Mudstone, silty, grey, carbonaceous, calcite filled jointing - 28°
		625 - 48° graditional contact over 2' 665-667
667.0	717.8	Siltstone, dark grey, fine grained, faintly banded fine sand laminations /cm
717.8	720.8	Coal, clarain 717.5 - 719.5 Coal 2.0 Seam 3
720.8	727.0	Mudstone, black, carb. blocky
727.0	733.9	Siltstone, fine-med. grained, sand lamination minor
733.9	737.2	Coal, durain, mudstone partings 732.5 - 734.5 Coal 2.0 Seam 3
737.2	742.3	Mudstone, black coal lens and partings
742.3	744.6	Shaly coal.
744.6	747.0	Mudstone, black carb. sharp contact
747.0	748.7	Siltstone, grey, med. grained, fractured, slickensides, sharp contact
748.7	751.0	Sandstone, grey, fine-med. grained, wavy lamination graded bedding
		702-62°, 687-59°, 710-58°, 752, 70°

Core Size

Hole No. 456 Page 4

2507—N.D.N.

Diamond Drill Geological Log

Cominco

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

40 Scale

Color Plot & Dips | Ore Classes & Aver.

From	To	Discard: Reason: RAD. LOG INTERS.	
751	759.3	Coal - clarain, durain	748.5 - 758.5 Coal 10.0' Seam 2
759.3	764.5	Siltstone, grey, laminated, carb.	
764.5	767.3	Coal, clarain	763.0 - 766.0 Coal 3.0' PART 2
767.3	771.8	Mudstone, silty, carbonaceous	
771.8	773.4	Coal, clarain	770.5 - 773.5 Coal 3.0' Seam 1
773.4	797.0	Sandstone, med-coarse grained, grey	
		to 787 massive	
		787 - carbonaceous lamination	
		785 - 47° 797-62° jointing 21°	
		CORE RECOVERY > 95% in all seams	

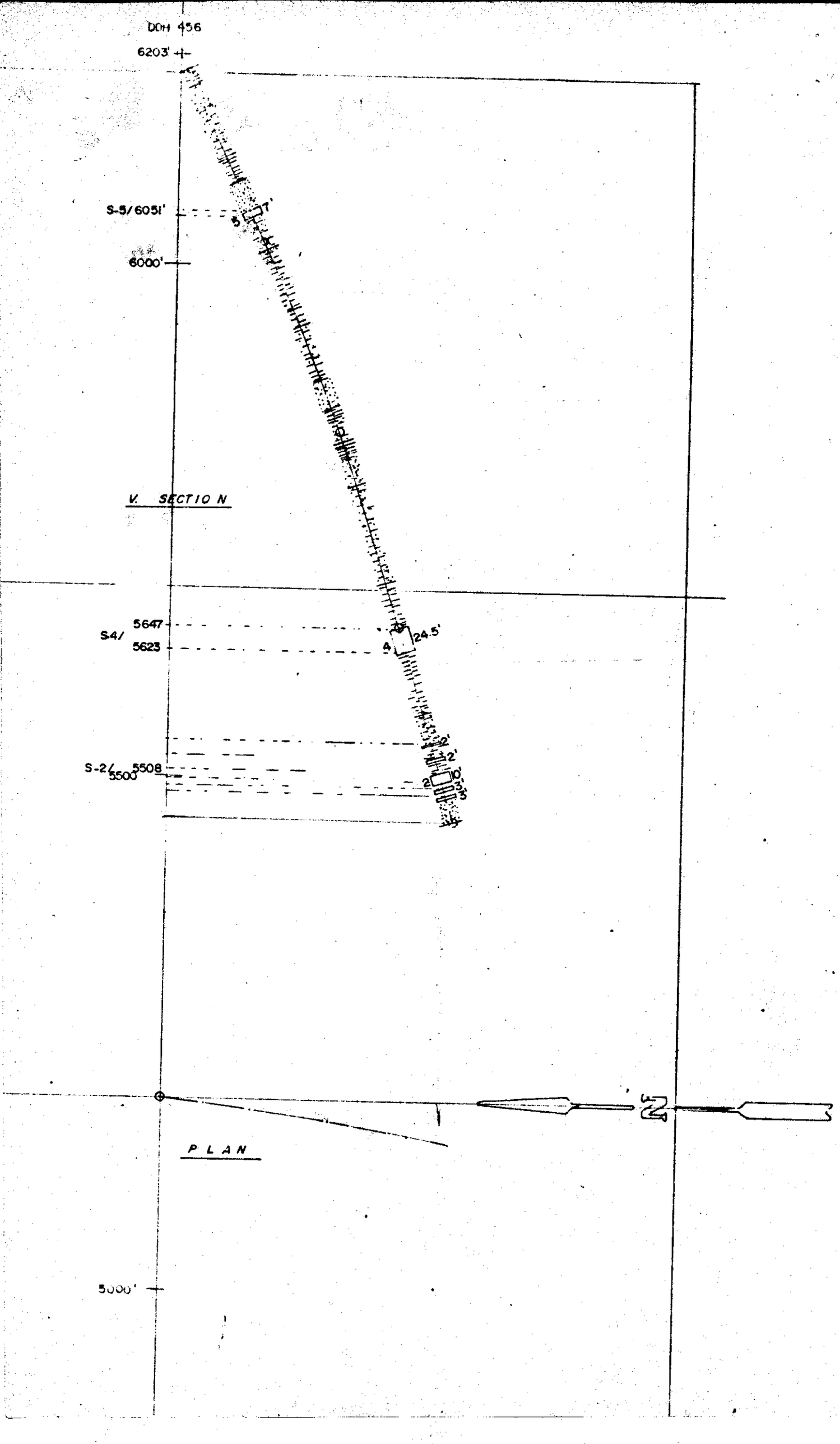
Core Size

Hole No. 456 Page 5

2507—N.D.N.

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS
170.2	177	P.A. M.S & FSI	10221			6.8	0.5	22.1 21.7	22.7	55.1	4 3½	0.23	
607	607	SEAM-4	10226			5.1		10.2			6½		
607	612		10227			5		14.6			6		
612	617		10228			5		10.8			6½		
617	625.8		10229			8.8		12.0			6½		
607	625.8	COMPOSITE SEAM-4				23.9	0.4	12.4	21.2	66.0	6	0.30	
717.8	726.0	P.A. M.S & FSI	10223			3	0.6	24.1 24.7	21.7	53.0	5 5	0.29	
733.9	737.2		10224			3.3		50.5			1		
751.0	759.3	SEAM-2 P.A. M.S & FSI	10230			8.3	0.5	13.8 13.7	21.3	64.5	7½ 8½	0.21	
764.5	767.0	SEAM-1 P.A. M.S & FSI	10232			2.5	0.6	20.3 20.9	20.2	58.3	7 8½	0.35	
771.8	773.4		10231			1.6		33.1			7		


DDH 456
6203'+-
S-5/6051'
5
7'
6000'
V. SECTION
5647
S-4/
5623
4
24.5'
2'
2'
S-2/
5508
5500
2
10'
3'
3'
PLAN
5000'

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS
170.2	177	P.A. M.S & FSI	10221			6.8	0.5	22.1 21.7	22.7	55.1	4 3½	0.23	
601.9	607	SEAM -4	10226			5.1		10.2			6½		
607	612		10227			5		14.6			6		
612	617		10228			5		10.8			6½		
617	625.8		10229			8.8		12.0			6½		
601.9	625.8	COMPOSITE SEAM-4				23.9	0.4	12.4	21.2	66.0	6	0.30	
717.8	720.8	P.A. M.S & FSI	10223			3	0.6	24.1 24.7	21.7	53.0	5 5	0.29	
733.9	737.2		10224			3.3		50.5			1		
751.0	759.3	SEAM- 2 P.A. M.S & FSI	10230			8.3	0.5	13.8 13.7	21.3	64.5	7½ 8½	0.21	
764.5	767.0	SEAM- 1 P.A. M.S & FSI	10232			2.5	0.6	20.3 20.9	20.2	58.3	7 8½	0.35	
771.8	773.4		10231			1.6		33.1			7		

Diamond Drill Geological Log

Commco

K. FORDING 76(3)A-1

319

Objective: W. H. Shaw

Logged By: K. A. Komenac Date: March 22, 1976

Sampled:

Composites:

Block:	Sect.:	Place:	App. Bear: Rock	App.: Dip.: Rock	Length:
		K-4 (SOUTH EAGLE)	220°	4° NE	452.0'

Reason: JOINTING - 220° - 82° NE, 130-76° SW

From	To	Discard:
0.0	4.0	Tricone.
4.0	5.6	Broken core, siltstone, grey oxidized iron oxide bedding 80°
5.6	27.5	Siltstone, sandy, dark grey, with interbeds of fine grained, grey sandstone.
		Soft sediment structures; dewatering, micro faulting, rip-up clasts from 8-9 ft.
		bedding - 11 - 65°, 12 - 85°, 17 - 81°, 21 - 84°, 22.5 - 60°
		graditional contact from 26.5 - 27.5
27.5	51.0	Chert arenite, grey, medium grained, tabular cross-bedding
		rip-up clasts 27.0 - 27.5; bedding 28' - 55°, 32 - 71°, 36 - 76°, 42 - 65°, 45 - 66°- 50 - 83°
51.0	53.0	Lithic arenite, grey, medium grained, carbonaceous laminations, gradual transition
53.0	67.0	Mudstone, black, carbonaceous, blocky 1/2", bedding 65 - 71° slickensides @ 56.0
		transition gradual
67.0	77.0	Siltstone, coarse grained, light grey ripple laminations, transition gradual
77.0	95.0	Siltstone, dark grey, fine grained, carbonaceous , grading to black mudstone, blocky from 94-95'
95.0	99.4	Mudstone, black, highly carb. with coal stringers and bands (vitrain) .1"
99.4	115.0	Grading to siltstone, blue-grey, fine grained, blocky bedding 70°
		contact sharp
115.0		Siltstone, grey, fine to coarse grained, soft sediment structures
		bedding 64°

Core Size HQ

Hole No. DDH 457 Page 1

Hole No. ~~DDH~~ 457 Elev. 5917.1

Lat. 4863N.3 Dep. 8515E.3

		Elev.	Th.
Top of 4	@	5662.	124'
Top of 3	@	5533	15.1'
Top of 2	@	5509	10.5'
Top of 1	@	5493	14.0'

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

2507—N.D.N.

Diamond Drill Geological Log

Cominco

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

40 Scale

Color Plot & Dips | Ore Classes & Aver.

From	To	Discard: Reason:
		gradually coarser silt with interbedded grey, fine to med. sand, convolute lamination,
		sole casts. 122 - 87°
		grading 128 - 130 - to sandstone, grey, cross laminations
		123 - 86°, 127 - 89°, 131 - 68°, 132 - 60°
		@ 132.0 sand interlaminated with dark, fine, silt parallel lamination 136 - 88°
		155 - 60°, 160 - 80°, 170 - 82°, 175 - 58°
		grading to more siltstone with sand interbeds
		182 - 187 jointing numerous, calcite + quartz infilled
		187 - 188 carbonaceous zone, slickensides
		195 - 71°, 198 - 76°
		W E Slump structure & faulting and jointing along near vertical bedding
		76°-198 coavolute lamination
		51° 202-203
		bedding near horizontal 209 - 86°
		calate stringers @ 69° in vertical zone.
203.0	212.0	lithic sandstone, grey, medium grained, massive tabular cross-bedding
		gradual transition
212,0	227.0	Silt soft-sediment structures, convolute lamination 227-85°

Core Size

Hole No. 457 Page 2

2507—N.D.M.

Diamond Drill Geological Log

Cominco

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

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

From	To	Discard: Reason: RADIATION LOG INTERSECTIONS
	-	transition gradual over 5 ft.
299.0	252.8	Siltstone, dark grey, fine grained, sand lens
		235.0 - 235.3 sheared zone bedding 230 - 79° 240 - 71°, 250 - 72°
		irregular contact
		Siltstone, dark grey, medium grained interbedded with fine grey
		sand.
252.8	253.6	Mudstone, black, carbonaceous (255.0 - 279.0 Coal 24' Seam 4)
253.6	254.1	Coal soft
254.1	257.0	Mudstone, black, carb.
257.0	277.0	Coal, clarain
277.0	282.2	Coal, fusain, clarain
282.2	296.5	Siltstone, dark grey, fine grained, blocky 290-90°
296.5	297.0	Coal, vitrain
297.0	314.0	Mudstone, black, carb.
314.0	337.0	dark grey, coarse grained interbedded with black, carb. mudstone 315 - 78°, 325 - 80°
337.0	383.8	Siltstone, steel-grey, with sand laminations, small scale, cross-beddding
		340 - 77°, 358 - 79°, 365 - 77°, 380 - 79°, 374 - 85°
383.8	387.8	Coal, clarain 383.5 - 390.0 6.5' Coal (5.1')
387.8	389.2	Mudstone, black, carb.
389.2	392.0	Coal, clarain
392.0	393.0	Mudstone, metallic black, light concodial fracture
393.0	394.0	Mudstone, silty, carb.
394.0	397.7	Mudstone, black, carb. coal streaks and bands.

Core Size

Hole No. 457 Page 3

2507—N.D.N.

Diamond Drill Geological Log

Cominco

40 Scale

Color Plot & Dips | Ore Classes & Aver.

Objective: | Sampled:

Logged By: Date: | Composites:

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

Discard: Reason: RAD. LOG INTER.

From	To		
397.7	408.5	Siltstone, argillaceous, grey-blue. fine-grained, graditional contact	398 - 76°
408.5	410.3	Siltstone, dark grey, medium grained with interbedded sand	
		cross-bedding I small scale	
410.3	411.0	Coal, soft	408.0 - 418.5 Coal 10.5' Seam 2
411.0	421.0	Coal, clarain	
421.0	425.9	Siltstone, grey, coarse grained	
425.9	430.2	Coal, soft	424.0 - 428 Coal 4.0' Seam 1
430.2	452.0	Sandstone, grey, medium grained, large tabular cross-bedding (Basalss)	
		430 - 71°, 445 - 56°, 452 - 63°	
		CORE RECOVERY > 95% in all seams.	

Core Size

Hole No. 457 Page 4

2507—N.D.N.

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS
257	261	SEAM-4.	10212			10		16·0			6		255-274 COAL
261	272		10213			5		10·3			6		261
272	277		10214			5		8·1			3		
277	282		10215			5·2		19·6			6 1/2		
257	282	COMPOSITE 10212-215				25·2	0·1	13·1	19·9	66·1	6 1/2	0·26	CALC AVG
343·6	347·6		10216			4		67·7			1		
389	392	P.A. #5 & FSI →	10217			2·8	0·1	27·8/ 27·4	16·6	55·7	3 1/2 3 1/2	0·53	
403	417	SEAM-2.	10218			6·7		13·5			6 1/2		408-416·5 COAL (8·5')
417	421		10219			4		7·7			7 1/2		
		COMPOSITE 10218-219				10·7	0·2	11·2	20·3	68·1	7 1/2	0·40	CALC AVG 11·3
425	430	SEAM-1 P.A. #5 & FSI →	10220			4·3	0·2	14 1/4	21·3	64·4	7/7	0·27	424-428 COAL

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS
257	267	SEAM-4.	10212			10		16.0			6		255-279 COAL 24'
267	272		10213			5		10.3			6		
272	277		10214			5		8.1			3		
277	282.2		10215			5.2		19.6			6 1/2		
257	282.2	COMPOSITE 10212-215				25.2	0.1	13.9	19.9	66.1	6 1/2	0.26	CALC AVE 4%
383.8	387.8		10216			4		67.7			1		
389.2	392	P.A. #'s & FSI →	10217			2.8	0.1	27.8/27.6	16.6	55.7	3 1/2 / 3 1/2	0.33	
410.3	417		10218			6.7		13.5			6 1/2		408-418.5 COAL 10.5'
417	421	SEAM-2.	10219			4		7.7			7 1/2		
		COMPOSITE 10218-219				10.7	0.2	11.2	20.3	68.1	7 1/2	0.41	CALC AVE 11.3%
425.9	430.2	SEAM-1 P.A. #'s & FSI →	10220			4.3	0.2	14.1/14.1	21.3	64.4	7/7	0.27	424-428 COAL 4'

Diamond Drill Geological Log

Cominco

K. FORDING 76(3)A-1

379

Objective: K. A. Komenac
Logged By: W. H. Shaw Date: April 9, 1976

Sampled:
Composites:

Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length:
		K-4 SOUTH EAGLE			377.0

Discard: Reason: RADIATION LOG INTERSECTIONS

From	To	
0	8.4	Tricone.
8.4	32.0	Siltstone, dark grey, medium grained.
32.0	34.5	Siltstone, steel grey, fine grained gradual transition 2'
34.5	45.9	Mudstone.
45.9	46.6	Coal.
46.6	50.5	Mudstone, black carb. blocky 49.5 - 49.9 coal bands, transition gradual .5'
50.5	102.0	Siltstone, dark grey, medium grained minor sand laminations grading to fine sandstone over 10 ft. with interbedded siltstone cross-bedded 58-79°, 63-76°, 74-74°, 81-88°
		Slump structure @ 94.5 - 95.5 bedding vertical (not as pronounced as in DDH 457)
102.0	155.5	Sandstone grey, coarse grained, wavy carb. laminations 109-82°, 117-90°, 119-90°
		Siltstone, dark grey, fine grained
		@ 139.0 carb. grading to highly carb.
155.5	155.8	Coal durain.
155.8	157.7	Mudstone, black, carb.
157.7	169.8	Coal, clarain. 160.0 - 168.5 Coal 8.5 Seam 4
169.8	173.6	Siltstone, grey sto steel grey, soft, numerous SS. surfaces and calcite stringers
173.6	208.1	Coal, clarain numerous slickensides surfaces @ 60° 172.0 - 206.0 Coal 34.0' Seam 4
208.1	210.0	Mudstone, carb. coal partings
210.0	262.2	Siltstone, dark grey, carb. blocky broken zones 212.5 - 214.3, 226.6, 256.0 - 257.0

Core Size HQ

Hole No. DDH 458 Page 1

40 Scale

Color Plot & Dips	Ore Classes & Aver.

0

Hole No. DH 457 Elev. 5384.2
Lat. 484 707.3 Dep. 85 215'

		Elev.	Th.
Top of PART 4	@	5689.2	18.5'
Top of 4	@	5677.2	37.9
Top of 3	@	5527.7	14.9
Top of 2	@	5516.7	10.9
1		5495.7	5.5

2507—N.D.M.

Diamond Drill Geological Log

Cominco

40 Scale

Color Plot & Dips | Ore Classes & Aver.

Objective:

Sampled:

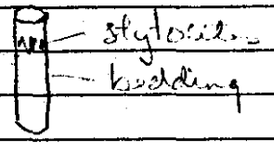
Logged By: Date:

Composites:

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

Discard: Reason: RAD. LOG INTER.

From	To		
		208 - 74°, 238 - 87°, 260 - 86°	
262	267	Sandstone, grey, medium grained	
267	323.2	Siltstone, dark grey, coarse with sand laminations	
323.2	330.5	Coal, soft, shaly	321.5 - 325.5 Coal 4.0 Seam 3
330.5	332.6	Siltstone, coarse grained, grey	
332.6	342.3	Coal, hard, vitrain, clarain laminations wavy	332.5 - 342.5 Coal 10.0 Seam 2
342.3	353.7	Sandstone, grey, fine grained, with carb. mud	
353.7	358.8	Coal, hard, vitrain	353.5 - 359.0 Coal 5.5 Seam 1
358.8	377.0	Sandstone, coarse grained, massive basaless coal lenses coal sytolites	359 - 362.0



Core Size

Hole No. 458 Page 2

2507—N.D.N.

Diamond Drill Geological Log

Cominco

40 Scale

Color Plot & Dips | Ore Classes & Aver.

Objective:

Sampled:

Logged By: Date:

Composites:

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

From | To | Discard: Reason:

CORE RECOVERY

Rad, Log Intersection	Footage (Ft.)	Core Lost	Percentage	
160.0-168.5	8.5	-4.3'	49%	Seam 4
172.0-206.0	34.0	-11.2	67%	
			<50%	
321.5-325.5	4.0	0	100%	Seam 3
332.5-342.5	10.0	0	100%	Seam 2
353.5-359.0	5.5	0	100%	Seam 1

Core Size

Hole No. 458 Page 3

2507—N.D.N.

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS
1-0'7	169'8		10233			10·1	0·3	21·9	18·0	60·3	3	0·31	
		P.A. 0.5 & FSI						21·4			3		
173·6	180	SEAM-4.	10234			14·4		18·4			4 1/2		
180	192		10235			10		14·1			6		
192	206		10236			8		14·4			6		
173·6	206	COMPOSITE SEAM-4				32·4	0·4	15·8	20·3	63·5	5	0·34	
323·7	332·5		10237			7·3		53·2			1 1/2		
332·6	342·3	SEAM-2 P.A. 0.5 & FSI	10238			9·7	0·6	13·2 / 13·8	22·5	63·1	7 1/2 / 8	0·24	
353·7	358·8	SEAM-1 P.A. 0.5 & FSI	10239			5·1	0·4	9·3 / 9·6	23·5	66·5	8 1/2 / 9	0·20	

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS
159.7	169.8		10233			10.1	0.3	21.9 21.4	18.0	60.3	3 3	0.34	
		P.A., 0.05 & FSI											
173.6	188	SEAM-4.	10234			14.4		18.4			4½		
188	198		10235			10		14.1			6		
198	206		10236			8		14.4			6		
173.6	206	COMPOSITE SEAM-4				32.4	0.4	15.8	20.3	63.5	5	0.34	
323.2	330.5		10237			7.3		53.2			1½		
332.6	342.3	SEAM-2 P.A. 0.05 & FSI	10238			9.7	0.6	13.2 13.8	22.5	63.1	7½ 8	0.24	
353.7	358.8	SEAM-1 P.A. 0.5 & FSI	10239			5.1	0.4	9.3 9.6	23.5	66.5	8½ 9	0.20	

Diamond Drill Geological Log

Cominco

K-FORDING 76(3)A-1

Objective:

Sampled:

Logged By: R.K. Date: March 30, 1976

Composites:

377

Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length:
		EAGLE MT. S. (K-4 PIT AREA)			

Reason: INTERSECTIONS TAKEN FROM GAMMA RAY LOG.

From	To	Discard:
-0-	29	Mostly siltstone some mudstone.
29	50	Mudstone.
50	53	Coaly shale.
53	57.5	Mudstone.
57.5	71.5	Coal 14' SEAM-2
71.5	78.5	6' Mudstone.
78.5	84.5	Coal 6' SEAM-1
84.5	87	Sandstone.

Hole No. 459 Elev.

Lat. Dep.

	Elev.	Th.
Top of ____ @ ____		14'
Top of ____ @ ____		'
Top of ____ @ ____		'
Top of ____ @ ____		'

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

Core Size B-50 DRILL
NO SAMPLES

Hole No. RH 459 Page 10F1

2507—N.D.N.

Diamond Drill Geological Log

Cominco

K-Fording 76(3)A-1

319

Objective:

Sampled:

Logged By: R.K. Date: April 20, 1976

Composites:

Block:	Sect.:	Place: K-4 PIT AREA EAGLE MT.	App. Bear:	App.: Dip.:	Length:

From	To	Discard:	Reason: NO RADIATION LOG/INTERSECTIONS FROM DRILLER'S REPORT
0	27	Rock/sandstone.	
27	54	Coal 27' Seam-4	
54	60	Mudstone, with two one foot coal bands.	
60	77	Rock.	
		End of hole at 77'.	

Hole No. 460 Elev. 5950.8
Lat. 486,107 Dep. 84,175

	Elev.	Th.
Top of "4" @	5924	27'
Top of @		'
Top of @		'
Top of @		'

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

Core Size B-50 DRILL
NO SAMPLES

Hole No. RH 460 Page 1 OF 1

2507—N.D.N.

Diamond Drill Geological Log

Cominco

K- FORDING 76(3)A-1

377

Objective:		Sampled:			
Logged By: R. Krishan Date: Oct. 76		Composites:			
Block:	Sect.:	Place: Eagle MT. West FAce	App. Bear:	App.: Dip.:	Length: 485'

From	To	Discard: Intersections taken from Gamma Ray - Neutron Log	Reason:
0	5	Mudstone	
5	18.5	Coaly with one footshale parting at 14'	13.5(12.5)
18.5	23	Shale	
23	27	Coal 4'	Seam 13
27	30	Shaley Coal	
30	40	Mudstone	
40	50	Siltstone	
50	70	Sandstone	
70	85	Mudstone	
85	119	Interbedded mudstone and siltstone	
119	131	Mudstone	
131	146	Coal 15'	Seam 12
146	161	Mudstone and siltstone	
161	199	Sandstone	
199	203	Mudstone	
203	212	Coal 9'	Seam 11U
212	213	Shaley Coal	
213	221	Mudstone	
221	228	Siltstone	
228	235	Sandstone	
235	269.5	Mostly mudstone, with several siltston interbeds	
269.5	279.5	Coal 10'	Seam 11
279.5	284.0	Mudstone	

Core Size

Hole No. RH 462

Page 1 of 2

40 Scale

Color Plot & Dips	Ore Classes & Aver.

0

2507-

Diamond Drill Geological Log

Cominco

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

40 Scale

Color Plot & Dips | Ore Classes & Aver.

From	To	Discard:	Reason:
284	288	Coal 4'	Part Seam 11
288	295	Mudstone	
295	298	Siltstone	
298	309	Mudstone	
309	357	Siltstone, sandstone near bottom	
357	375	Mudstone	
375	430	Sandy siltstone and siltstone	
430	441.5	Mudstone	
441.5	458	Coal 16.5	Seam 9
458	460.5	Shale	
460.5	462	Shaley Coal	
462	474.5	Shale with coaly shale bands	
474.5	477	Coal 2.5'	
477	485	Shale	
		End of hole at 485'	

Core Size

Hole No. RH 462

Page 2 of 2

2507-

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS
													5-18.5 13.5(12.5)
15	17	C & Sh.	15126			2		49.7			A		
17	19	" "	15127			2		12.3			8		
19	21	" "	15128			2		44.9			3 1/2		
21	23	" "	15129			2		36.7			3		
25	27	" "	15130			2		4.0			8 1/2		23-27 4'
27	29		15131			2		17.4			7 1/2		
29	31		15132			2		43.6			4		
31	33		15133			2		54.5			2 1/2		
33	35	C & Sh.	15134			2		43.0			5		
25	29	COMPOSITE				4	0.2	10.6	29.2	60.0	8	0.82	
36	38	C & Sh.	15135			2		70.2			1		
133	135	C & Sh.	15136			2		28.5			6		131-146 15
135	137		15137			2		37.5			4		
137	139		15138			2		9.4			8		
139	141		15139			2		16.6			7 1/2		
141	143		15140			2		11.1			6 1/2		
143	145		15141			2		8.9			7 1/2		
145	147		15142			2		7.4			8 1/2		
147	148	C & Sh.	15143			2		60.7			3		
133	147	COMPOSITE SEAM-12				14	0.5	16.9	25.0	57.1	7	0.60	
206	208		15144			2		9.8			7 1/2		203-218 5'
208	210		15145			2		7.4			7		
210	212		15146			2		18.4			6 1/2		
212	214		15147			2		38.8			2		
214	216	C & Sh.	15148			2		50.6			1 1/2		
216	218	" "	15149			2		63.2			1		
218	220	" "	15150			2		57.4			2 1/2		

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS
206	214	COMPOSITE SEAM - III				8	0·2	19·2	24·5	56·1	6	0·56	
270	272		15001			2		41·5			3 1/2		269·5 - 279·5 10
272	274		15002			2		30·8			5 1/2		
274	276		15003			2		23·0			3 1/2		
276	278		15004			2		8·7			7		
278	280		15005			2		19·2			7		
280	282		15006			2		42·3			3 1/2		
282	284	C & Sh.	15007			2		57·8			2 1/2		
284	286	" "	15008			2		31·3			5 1/2		
286	288		15009			2		12·9			7		284 - 288 4
288	290		15010			2		30·0			6		
290	292		15011			2		74·2			1/2		
292	294		15012			2		43·4			2 1/2		
294	295	C & Sh.	15013			1		79·3			1/2		
272	290	COMPOSITE SEAM - II				8	0·4	20·4	23·6	55·6	6	0·55	
254	290	COMPOSITE				6	0·1	24·8	22·8	52·3	6	0·73	
442	444		15014			2		59·0 ✓			1 ✓		441·5 - 452
444	446		15015			2		42·0 ✓			1 ✓		Checked Co
446	448		15016			2		57·7 ✓			1 ✓		
448	450		15017			2		14·5			3 1/2		
450	452		15018			2		16·4			6		
452	454		15019			2		18·4 ✓			1 ✓		
454	456		15020			2		35·7			1 1/2		
456	458		15021			2		11·7			5 1/2		
448	458	COMPOSITE				10	0·3	19·2	21·8	58·7	3 1/2	0·32	
459	461		15023			2		59·9			1		
461	463	C & Sh.	15024			2		74·7			1/2		
463	465		15025			2		67·4			1		

Diamond Drill Geological Log

Cominco

K. FORDING 76(3)A-1

319

Objective:

Sampled:

Logged By: R.K. Date: October 4, 1976

Composites:

Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length:
		EAGLE MT. WEST FACE			455'

Reason: INTERSECTIONS TAKEN FROM GAMMA RAY-NEUTRON LOG

From	To	Discard:
0	5	Fill or overburden, some rock near bottom.
5	13	Coal 8' Seam-11
13	15	Coaly shale.
15	20	Mudstone.
20	22	Coal 2'.
22	40	Mudstone.
40	64	Interbedded mudstone, and siltstone.
64	93	Mustone.
93	101	Sandstone.
101	117	Mudstone, some siltstone near bottom.
117	149.5	Silty sandstone.
149.5	166.5	Coal 17' Seam-9.
166.5	200	Mudstone, thin shaley coal band at 169.5'
200	275.5	Mostly siltstone with mudstone interbeds.
275.5	279.5	Coal 4'
279.5	282	2.5' Mudstone.
282	284	Shaley coal 2' } Seam-"MY" - 13.5 (9.5)'
284	285.5	1.5' Mudstone.
285.5	289	Coal 3.5'
289	309	Mudstone.
309	388	Siltstone, some silty sandstone.
388	400	Mudstone.
400	423	Coal, with thin bands (less than one foot) at 407' & 413'. 23'

Seam -7

Core Size

Hole No. RH 463 Page 10F2

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

2507—N.D.N.

Diamond Drill Geological Log

Cominco

Objective:

Logged By: Date:

Sampled:

Composites:

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

40 Scale

Color Plot & Dips | Ore Classes & Aver.

From	To	Discard: Reason:
423	428.5	Mudstone.
428.5	432.5	Coal 4'
432.5	442	Mudstone.
442	455	Siltstone.
		End of hole at 455'
		September 30, 1976

Core Size

Hole No. RH 463 Page 2 OF 2

2507—N.D.N.

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS
17	19	C & Sh.	15026			2		70.9			0		
19	21	" "	15027			2		37.9			1/2		
21	23	" "	15028			2		62.0			0		
23	25	" " PART	15029			2		58.3			0		
25	27	" "	15030			2		12.6			5		
27	29	" " SEAM-11	15031			2		41.1			2		
29	31	" "	15032			2		76.4			0		
31	33	" "	15033			2		53.7			1/2		
33	35	" "	15034			2		65.3			1/2		
35	37	" "	15035			2		74.8			1/2		
37	39	" "	15036			2		79.4			0		
25	29	COMPOSITE LWR PT. SEAM-11				4	0.2	26.7	21.8	51.3	4	0.72	
151	153	SAMPLE LOST											
153	155		15038			2		19.2			3 1/2		149.5-166.5 FT
155	157		15039			2		20.4			4 1/2		
157	159		15040			2		16.9			5		
159	161	SEAM-9	15041			2		7.4			6 1/2		
161	163		15042			2		21.1			3		
163	165		15043			2		17.8			4		
165	167		15044			2		14.7			6		
167	169		15045			2		29.0			4 1/2		
169	171		15046			2		75.3			1/2		
171	173		15047			2		45.8			4		
173	174		15048			1		87.5			1		
153	169	COMPOSITE SEAM-9				16	0.4	18.6	22.3	58.7	5	0.44	
194	196		15049			2		52.9					
278	280		15051			2		26.3			3 1/2		275.5-279.5 FT
280	282		15052			2		42.6			3 1/2		
278	282	COMPOSITE				4	0.11	34.0	19.0	46.9	3 1/2	0.35	

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS
282	284	SEAM - "MY"	15053			2		48.0			2		
284	286		15054			2		57.7			1 1/2		
286	288		15055			2		48.9			2 1/2		
288	290		15056			2		44.4			3 1/2		282.5 - 289.5
290	292		15057			2		42.3			2		
292	294		15058			2		36.8			3		
294	296	C & Sh.	15059			2		64.5			1		
296	298	" "	15060			2		42.8			3 1/2		
278	282					4	0.1	34.0	19.0	46.9	3 1/2	0.35	
402	404		15061			2		29.8			3 1/2		400 - 423 23'
404	406	C & Sh.	15062			2		48.8			1 1/2		
406	409		15063			3		10.9			5 1/2		
409	411		15064			2		52.4			1		
411	413	SEAM - 7	15065			2		24.9			1 1/2		
413	415		15066			2		16.5			6 1/2		
415	417		15067			2		18.0			6		
417	419		15068			2		40.4			3 1/2		
419	421		15069			2		16.4			6		
421	423		15070			2		16.0			6 1/2		
423	425		15071			2		46.0			1		
425	427		15072			2		72.3			1 1/2		
427	428	C & Sh.	15073			1		88.4			0		
402	423	COMPOSITE SEAM - 7				21	0.1	24.6	19.4	55.9	4	0.14	
432	434		15074			2		16.6			6		428.5 - 432.5
434	436	C & Sh.	15075			2		44.9			4 1/2		
432	436	COMPOSITE				4	0.3	30.3	18.5	50.9	5	0.38	

Diamond Drill Geological Log

Cominco

K - Fording 76(3)A-1

379

Objective:

Sampled:

Logged By: R. Krishan Date: Oct. 76

Composites:

Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length:
		Eagle mt West Face			

From	To	Discard: Reason: Intersections taken from Gamma Ray - Neutron Log
0	20.5	Mudstone
20.5	23.5	Coal 3'
23.5	88	Mudstone with occasional silty sandstone bands
88	90	Coaly shale
90	108.5	Mudstone
108.5	111.5	Coal 3'
111.5	117	Mudstone
117	122	Sandstone
122	129	Mudstone
129	131.5	Coal 2'
131.5	133.5	2 ' Shale
133.5	135.5	Coal 2'
135.5	140	Mudstone
140	156	Siltstone and mudstone interbeds
156	169	Mudstone
169	171	Coal 2'
171	182	Sandstone
182	193	Mudstone
193	237	Sandstone
237	257	Siltstone
257	269	Mudstone
269	287.5	Coal with thin (less than one foot) shale bands at 271' and 283' 18.5' Seam 13

40 Scale

Color Plot & Dips	Ore Classes & Aver.
0	

Core Size

Hole No. RH 464

Page 1 of 2

2507-

Diamond Drill Geological Log

Cominco

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

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

From	To	Discard: Reason:
287.5	301	Mudstone with 1.5' coaly shale band at 293'
301	311	Sandstone
311	322	Mudstone
322	332	Siltstone
332	356	Mostly sandstone with silty sandstone intervals.
356	409	Mudstone
409	426	Coal 17' Seam 12
426	438	Mudstone with 1' coaly shale band at 437'
438	459	Siltstone and some silty sandstone
459	471	Sandstone
471	483	Siltstone
483	495	Sandstone
495	504	Siltstone
504	507	Mudstone
507	517	Coal 10' Seam 11U
517	519	Shale
519	521	Shaley Coal
521	527	Mudstone
527	531	Siltstone
531	541	Mudstone, some siltstone near bottom
		End of hole at 541'
		Oct 11/76

Core Size

Hole No. RH 464 Page 2 of 2

2507-

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS
21	23	C & Sh.	13265			2		10.1			8 1/2		
23	25	" "	13266			2		55.2			3		
25	26	" "	13267			1		75.2			0		
87	89		13268			2		46.1			3 1/2		
89	91	C & Sh.	13269			2		82.8			0		
110	112		13271			2		34.4			A		
112	114		13272			2		44.3			3 1/2		
114	116	C & Sh.	13273			2		70.3			1/2		
131	133		13274			2		50.1			3 1/2		
133	135		13275			2		32.9			5		
135	137		13301			2		26.3			7		
137	139	C & Sh.	13302			2		86.3			0		
133	137	COMPOSITE				A'	0.3	32.5	23.0	44.2	7	0.55	
172	174	C & Sh.	13303			2		72.7			1/2		
174	176	" "	13304			2		67.7			1		

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	RAD. LOG. REMARKS
271	273	C & Sh.	13305			2		26.8			6		269-287.5 COAL
273	275		13306			2		33.7			6 1/2		18.5'
275	277		13307			2		6.6			7 1/2		
277	279	SEAM-13	13308			2		11.9			7 1/2		
279	281		13309			2							
281	283		13310			2		21.9			7 1/2		
283	285		13311			2		65.5			1		
285	287		13312			2		35.8			7		
287	289		13313			2		9.1			8		
289	291	C & Sh.	13314			2		46.5			4		
271	289	SEAM-13 COMPOSITE			16/	18'	0.5	25.8	23.6	51.1	7	0.34	
													405-426 COAL
412	414		13317			2		9.4			6 1/2		17'
414	416		13318			2		24.0			6		
416	418		13319			2		17.5			7 1/2		
418	420	SEAM-12	13320			2		10.3			7		
420	422		13321			2		5.7			6 1/2		
422	424		13322			2		7.0			8		
424	426		13323			2		4.5			8		
424	426	A C & Sh.	13324					43.3			6		
			1										
412	426	SEAM-12 COMPOSITE				14'	0.3	12.3	26.8	62.6	7 1/2	0.68	
508	510		13325			2		8.5			9		507-517 COAL
510	512		13276			2							10'
512	514	SEAM-11U	13277			2		23.3			7 1/2		
514	516		13278			2		34.2			2 1/2		
516	518		13279			2		68.8			1		
518	520		13280			2		71.6			1 1/2		

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS
520	522		13281			2		55·2			2		
522	524	C & Sh.	13282			2		85·2			0		
508	516	SEAM - IIU COMPOSITE			6/	8	0·4	22·3	24·5	51·7	6½	0·48	

Diamond Drill Geological Log

Cominco

K-FORDING 76(3)A-1

319

Objective:

Logged By: R. Krishan Date: Oct. 76

Sampled:

Composites:

Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length:
		Eagle Mt. West Face			

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

From	To	Discard: Reason: For 0 - 578' Intersections taken from GAmma Ray - Neutron Log
0	13	Overburden
13	26	Sandstone, some siltstone near top
26	41	Mudstone and siltstone, coal stringers at 28'
41	59.5	Mudstone
59.5	61.5	Coal 2'
61.5	68	Mudstone
68	137	Sandstone, grading progressively to siltstone towards botom.
137	147.5	Mudstone
147.5	149	Shaley Coal 1.5'
149	150.5	Shale
150.5	160	Coal 9.5' — Seam 13
160	163	3' shale
163	166	Coal 3'
166	181	Mudstone, some siltstone near bottom
181	210	Sandstone, some siltstone near top
210	227	Mudstone, grading to siltstone near bottom
227	247	Sandstone
247	299.5	Mudstone
299.5	316.5	Coal 17' Seam 12
316.5	336	Mudstone and siltstone interbeds
336	392	Mostly sandstone, several sandy siltstone interbeds
392	395.5	Mudstone
395.5	406	Coal 10.5' Seam 11U

Core Size

Hole No. RH 465

Page 1 of 2

2507-

Diamond Drill Geological Log

Cominco

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

From	To	Discard: Reason:
406	416	Mudstone
416	434	Sandstone, mudstone from 420' to 426'
434	448	Mudstone
448	466	Coal, with 2' shale band from 456' to 458' 18 (16)' Seam 11
466	489	Mudstone with siltstone interbeds
489	500	Sandstone with mudstone interbeds
500	514	Mudstone
514	521	Sandstone
521	559	Siltstone with silty sandstone interbeds
559	564	Mudstone
564	580	Coal 16' (Bottom of Seam-estimated from Rad. Log.) Seam 9
580	585	Mudstone or siltstone
		End of hole at 585'

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

Core Size

Hole No. RH 465

Page 2 of 2

2507-

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	RAD. LOG. REMARKS
37	39	C & Sh.	13283			2		85.2			0		
60	62		13284			2		41.9			0		
62	64		13285			2		35.8			0		
64	66	C & Sh.	13286			2		69.8			0		
145	147		13287			2		25.1			7		147.5 – 149 }
147	149		13288			2		19.9			6 1/2		150.5 – 160 } Coal
149	151		13289			2		27.4			6 1/2		163 – 166 }
151	153	SEAM	13290			2		9.5			8		1.5, 9.5, 3
153	155		13291			2		9.5			7 1/2		
155	157		13292			2		7.8			7		
157	159	-13	13293			2		16.4			8		
159	161	C & Sh.	13294			2		49.6			4 1/2		
161	163		13295			2		6.3			6 1/2		
163	165		13296			2		17.2			7		
165	167	C & Sh.	13297			2		70.2			1/2		
145	165	SEAM-13 COMPOSITE				20	0.4	18.8	25.3	55.5	8	0.52	
209	211	C & Sh.	13298			2		18.6			1/2		
211	213	Shale - Sample not taken.	13299			2							
213	215	C & Sh.	13300			2		75.6			1/2		
215	216	C & Sh.	16351			1		88.8			0		
301	303	SEAM-12	16352			2		11.2			6 1/2		299.5 – 316.5 Coal
303	305		16353			2		32.8			6		
305	307		16354			2		18.9			7		17.

CONTD.

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	RAD. LOG REMARKS
307	309		16355			2		7.2			6		
309	311		16356			2		7.7			7		
311	313		16357			2		7.3			8 1/2		
301	313	SEAM-12 COMPOSITE				12'	0.4	14.5	24.8	60.3	8	0.59	
315	317		16358			2		6.8			8		
317	319		16359			2		AD.3			6 1/2		
315	319	COMPOSITE				4	0.6	24.4	23.3	51.7	8 1/2	0.42	
394	396		16360			2		9.5			8		395.5 - 406 COAL
396	398		16361			2		5.5			8 1/2		10.5'
398	400		16362			2		10.3			8		
400	402	SEAM - 1111	16363			2		42.8			3		
402	404		16364			2		25.3			3		
404	406		16365			2		67.7			1		
406	408		16366			2		54.3			2 1/2		
408	410		16367			2		69.2			1		
410	412	C & Sh.	16368			2		81.2			0		
394	404	SEAM - 110 COMPOSITE				10'	0.4	17.7	23.8	58.1	8	0.57	CALC ASH. ASH 18.6
445	447		16369			2		34.0			7		
447	449		16370			2		34.9			3 1/2		448-456 8'
449	451		16371			2		20.8			8		
451	453		16372			2		18.0			7 1/2		462-466 4'
453	455		16373			2		34.5			3 1/2		
455	457	SEAM - 11	16374			2		50.1			3		
457	459		16375			2		55.1			1		
459	461		16326			2		34.0			6 1/2		
461	463	C & Sh.	16327			2		32.7			6 1/2		
463	465	" "	16328			2		38.4			5 1/2		
465	467	" "	16329			2		55.2			3		

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS
445	455	SEAM-11 COMPOSITE.	16369-373			10'	0·3	28·2	20·0	51·5	7	0·49	
459	463	COMPOSITE.	16326-327			4'	0·2	34·0	22·3	43·5	6 1/2	0·59	
506	508		16330			2		59·1			2		
508	509		16331			1		85·8			0		
560	562		16332			2		43·5			1		
562	564		16333			2		29·6			1 1/2		564-
564	566		16334			2		13·2			2 1/2		
566	568	SEAM-9	16335			2		18·2			1 1/2		
568	570		16336			2		27·0			2		
570	572		16337			2		15·4			2		
572	574		16338			2		13·6			3		
574	576		16339			2		37·4			2		
576	578		16340			2		49·8			4 1/2		
578	579		16341			1		77·6			1/2		
562	576	SEAM-9 COMPOSITE.				14' 1	0·3	24·5	19·9	55·3	2 1/2	0·25	CALC. AVE ASH 22%

Page No. 3 OF 3 Hole No. RH 465

Diamond Drill Geological Log

Cominco

K- FORDING 76(3)A-1

317

Objective:			Sampled:		
Logged By: R. Krishan	Date: Oct. ;76		Composites:		
Block:	Sect.:	Place: Eagle Mt. West Face	App. Bear:	App.: Dip.:	Length: 581'

From	To	Discard: For 0 - 574' Intersections taken from Gamma Ray - Neutron Log. Reason:	
0	7	Overburden	
7	23	Mudstone	
23	31	Coal with 2' shale band from 26' to 28' 8(6)'	Seam 14
31	54	Mostly mudstone, some siltstone	Lower Bands
54	56	Coal 2'	
56	76	Mudstone	
76	94	MOSTLY Sandstone, some siltone	
94	103	Siltstone	
103	124	Mustone with occasional sandstone interbeds	
124	133	Siltstone	
133	140.5	Mudstone	
140.5	142.5	Shaley Coal 2'	
142.5	144	1.5' Shale	
144	153.5	Coal 9.5'	Seam 13
153.5	156.5	3' shale	
156.5	161	Coal 4.5'	
161	165	Mudstone	
165	177	Sandstone	
177	196	Mudstone, siltstone near bottom	
196	219	Sandstone	
219	230	Mudstone	
230	241	Siltstone	
241	281	Sandstone, with several siltstone interbeds	

Core Size

Hole No. RH 466

Page 1 of 2

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

2507-

Diamond Drill Geological Log

Cominco

Objective:

Sampled:

Logged By: Date:

Composites:

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

40 Scale

Color Plot & Dips | Ore Classes & Aver.

From	To	Discard: Reason:
281	295	Interbedded mudstone and siltstone
295	312	Coal with one foot shale band at 298.5' 17(16)' Seam - 12
312	316	Mudstone
316	368	Mostly sandstone with sandy siltstone interbeds
368	371	Mudstone
371	379.5	Coal 8.5' Seam 11U
379.5	381.5	Coaly shale and shaley coal
381.5	392	Mudstone
392	400	silty sandstone
400	406	Mudstone
406	414	Sandy siltstone
414	431	Mudstone
431	442	Coal (Top one foot shaley coal) 11'
442	445	3' shale — Seam 11
445	448	Coal 3'
448	454	Mudstone
454	458	Sandstone
458	468	Mudstone
468	497	Siltstone grading to sandstone towards bottom
497	505	Mudstone and silty sandstone
505	515	Mudstone
515	557	Siltstone, some mudstone near bottom
557	577	Coal 20'. (Bottom of seam estimated from Rad. Log) Seam 9
577	581	Mudstone

Core Size

Hole No. RH 466

Page 2 of 2

2507-

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS
28	30		16342			2		30.5			0		
30	32		16343			2		58.3			0		
32	34		16344			2		54.0			0		
34	36	C & Sh.	16345			2		62.9			0		
57	59	C & Sh.	16346			2		43.0			0		
59	61	" "	16347			2		75.1			0		
61	62.5	" "	16348			1.5		87.2			0		
143	145		16349			2		16.2			6 1/2		
145	147	C & Sh.	16350			2		32.9			6 1/2		
147	149	" " SEAM - 13	12726			2		24.5			6 1/2		
149	151	" "	12727			2		7.5			7 1/2		
151	153	" "	12728			2		11.7			6 1/2		
153	155	" "	12729			2		9.4			8		
155	157	" "	12730			2		35.0			6		
157	159		12731			2		53.1			3 1/2		
159	161		12732			2		11.4			7		
161	163		12733			2		10.1			7 1/2		
163	165	C & Sh.	12734			2		50.8			3 1/2		
143	163	SEAM - 13 COMPOSITE				20'	0.3	21.9	24.0	53.8	7	0.51	
225	226		12735			1		78.5			1/2		
242	244	C & Sh.	12736			2		78.9			1/2		

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS
296	298	C & Sh.	12737			2		10.6			7 1/2		
298	300		12738			2		20.1			8		
300	302		12739			2		34.7			5		
302	304	SEAM	12740			2		11.3			7		
304	306		12741			2		15.2			7 1/2		
306	308	-12	12742			2		17.7			7 1/2		
308	310		12743			2		7.2			7		
310	312		12744			2		7.8			7		
312	314		12745			2		28.10			6 1/2		
314	315	C & Sh.	12746			1							
296	314	SEAM-12 COMPOSITE				18	0.1	17.2	25.4	57.3	7 1/2	0.64	
323	324	C & Sh.	12747			1		81.3			1/2		
373	375		12748			2		14.1			8 1/2		371-379.5 (DA)
375	377	SEAM	12749			2		7.2			8 1/2		8.5
377	379		12750			2		17.2			7		
379	381	-111	16376			2		23.8			7		
381	383	C & Sh.	16377			2		47.8			1 1/2		
383	385	C & Sh.	16378			2		61.5			1		
385	387	C & Sh.	16379			2		58.9			2		
373	381	SEAM-111 COMPOSITE				8	0.5	16.0	21.5	62.0	8 1/2	0.54	
433	435	C & Sh.	16380			2		29.1			7 1/2		
435	437		16381			2		—				—	
437	439	SEAM	16382			2		—					
439	441	-11	16383			2		22.4			7		
441	443		16384			2		44.8			4		

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS
443	445		16385			2		73.6			1/2		
445	447		16386			2		27.0			6 1/2		
447	449		16387			2		23.4			7 1/2		
449	451		16388			2		52.4			2 1/2		
451	453	C & Sh.	16389			2		51.6			1 1/2		
433	449	SEAM-11 COMPOSITE			12	16	0.4	36.4	19.1	44.1	6 1/2	0.54	Comp. Anal. Nos 36-71
556	558		16390			2							
558	560		16391			2		29.0			2		
560	562		16392			2		12.6			3		
562	564	SEAM-9	16393			2		29.8			2 1/2		
564	566		16394			2		20.9			1 1/2		
566	568		16395			2		25.3			2		
568	570		16396			2		19.2			3		
570	572		16397			2		20.4			4 1/2		
572	574	C & Sh.	16398			2		70.6			1/2		
574	576	C & Sh.	16399			2		57.7			2 1/2		
558	572	SEAM-9 COMPOSITE				14'	0.3	23.0	22.6	54.1	2 1/2	0.47	

Diamond Drill Geological Log

Cominco

K-FORDING 76(3)A-1

379

40 Scale

Color Plot & Dips | Ore Classes & Aver.

Objective:

Sampled:

Logged By: R.K. Date: October 5, 1976

Composites:

Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length:
		EAGLE MT. WEST FACE			285'

Discard: Reason: FOR 0-267' INTERSECTIONS TAKEN FROM GAMMA RAY LOG.

From	To	
0	4	Overburden.
4	9	Sandstone.
9	48	Mudstone.
48	78	Coal with two feet shale parting at 70' 30 (28)' SEAM-5
78	88.5	Mudstone.
88.5	92	Coal 3.5'
92	106	Mudstone.
106	122	Interbedded mudstone and siltstone.
122	155	Mostly siltstone with sandstone interbeds.
155	175	Mudstone, some siltstone.
175	207	Sandstone.
207	221	Siltstone.
221	232	Mudstone.
232	261.5	Coal, with 2' shale parting from 256.5' to 258.5' 29.5 (27.5)' SEAM-4
261.5	285	Mudstone, some siltstone near bottom.
		End of hole at 285'
		October 5, 1976

Core Size

Hole No. RH 467 Page 10F1

2507—N.D.N.

Diamond Drill Geological Log

Cominco

Objective:

Logged By: R.K. Date: October 5, 1976

Sampled:

Composites:

Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length:
		EAGLE MT. WEST FACE			285'

Discard: Reason: FOR 0-267' INTERSECTIONS TAKEN FROM GAMMA RAY LOG.

From	To	
0	4	Overburden.
4	9	Sandstone.
9	48	Mudstone.
48	78	Coal with two feet shale parting at 70' 30 (28)' SEAM-5
78	88.5	Mudstone.
88.5	92	Coal 3.5'
92	106	Mudstone.
106	122	Interbedded mudstone and siltstone.
122	155	Mostly siltstone with sandstone interbeds.
155	175	Mudstone, some siltstone.
175	207	Sandstone.
207	221	Siltstone.
221	232	Mudstone.
232	261.5	Coal, with 2' shale parting from 256.5' to 258.5' 29.5 (27.5)' SEAM-4
261.5	285	Mudstone, some siltstone near bottom.
		End of hole at 285'
		October 5, 1976

Core Size

Hole No. RH 467 Page 1OF1

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

2507—N.D.N.

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS RAD. LOG
48	50		15160			2		34.5			2		
50	52		15161			2		22.8			4		48-78 COAL
52	54		15162			2		13.1			6 1/2		
54	56		15163			2		6.8			6 1/2		Shale 70-72
56	58		15164			2		10.8			6		
58	60	SEAM-5	15165			2		7.0			3 1/2		30 (28)
60	62		15166			2		20.9			4 1/2		
62	64		15167			2		8.7			6		
64	66		15168			2		35.3			2 1/2		
66	68		15169			2		9.0			1 1/2		
68	70		15170			2		21.4			3		
70	72	C & Sh.	15171			2		54.2			1 1/2		
72	74	" "	15172			2		30.9			2		
74	76		15173			2		29.1			4 1/2		
76	78		15174			2		14.9			5 1/2		
78	80	C & Sh.	15175			2		38.3			1 1/2		
80	82	" "	15176			2		72.9			1/2		
82	84	C & Sh. P.A. o/s. & F.S.I →	15177			2	0.4	30.4/30.3	19.8	49.5	1/2, 1	0.20	
84	86	" "	15178			2		78.1			1/2		
86	88	" "	15179			2		62.8			1		
88	90	" "	15180			2		56.2			2		88.5-92 COAL
90	92	" " P.A. o/s & F.S.I →	15181			2	0.3	20.9/21.3	20.1	58.3	.5/4	0.41	3.5
92	94	" "	15182			2		50.6			1		
94	96	" "	15183			2		46.6			1 1/2		
96	98	" "	15184			2		64.9			1		
98	100	" "	15185			2		91.5			0		
48	78	SEAM-5 COMPOSITE 15160-174.				30	0.3	22.0	19.3	58.4	4	0.46	CALC AVE ASH 21.3.
235	237		#1 15201			2		7.1			4		232-236.5 COAL
237	239		15202			2		10.1			6		236.5-238.5 SHALE
239	241		15203			2		24.5			3 1/2		29.5 (27.5)

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS
241	243	SEAM-4.	15204			2		6.2			6		
243	245		15205			2		11.0			3		
245	247		15206			2		8.4			5 1/2		
247	249		15207			2		11.5			7		
249	251		15208			2		10.0			3		
251	253		15209			2		5.2			6		
253	255		15210			2		7.8			5 1/2		
255	257		15211			2		12.4			5		
257	259		15212			2		73.2			1/2		
259	261		15213			2		34.9			3		
261	263		15214			2		53.1			1		
263	265		15215			2		4.5			6 1/2		
235	257	#1 COMPOSITE 15201-211				22'	0.5	10.6	20.5	68.4	5	0.22	CALC AVG A · 10.4
235	265	#2 COMPOSITE. 15201-215				30'	0.2	18.4	18.9	62.5	4	0.25	CALC AVG A. 19.4

Diamond Drill Geological Log

COMINCO

K. FORDINE 76(3)A-1

319

Objective:		Sampled:			
Logged By: R.K. Date: OCTOBER 4, 1976		Composites:			
Block:	Sect.:	Place: EAGLE MT. WEST FACE	App. Bear:	App.: Dip.:	Length: 400'

Discard: Reason: INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG.

From	To	
0	23	Mudstone.
23	25	Shaley coal 2'.
25	27	2' Shale.
27	58.5	Coal, with thin shaley bands at 35', 44' & 53'. 31.5' SEAM-7
58.5	73	Mudstone.
73	133	Interbedded siltstone and mudstone.
133	160.5	Mudstone.
160.5	192	Coal, with one foot coaly shale band at 185' 31.5 (30.5)' SEAM-5
192	204	Mudstone.
204	208	Coal 4'.
208	225	Mudstone.
225	245	Siltstone.
245	257	Mudstone, some siltstone.
257	306	Sandstone.
306	315	Sandy siltstone.
315	330	Mudstone.
330	356	Coal 26' SEAM-4
356	361	5' Shale.
361	367	Coal 6'.
367	375	Mudstone.
375	397	Siltstone with sandy siltstone bands.
397	400	Sandstone.
		End of hole at 400' October 3, 1976

Core Size

Hole No. RH 468 Page 10F1

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

2507—N.D.N.

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS
24	26	C & SH.	15092			2		23.4			2		23-25 2
26	28		15093			2		34.4			1		
28	30		15094			2		8.5			1 1/2		27-29.5 3.5
30	32		15095			2		51.0			1/2		
32	34		15096			2		11.1			2		
34	36		15097			2		22.8			5		
36	38		15098			2		33.1			3 1/2		
38	40	SEAM 7	15099			2		19.7			1		
40	42		15100			2		14.5			6		
42	44		15101			2		9.4			4 1/2		
44	46		15102			2		13.3			6 1/2		
46	48		15103			2		8.0			7 1/2		
48	50		15104			2		13.7			6 1/2		
50	52		15105			2		15.9			7		
52	54		15106			2		38.2			5		
54	56		15107			2		21.1			2 1/2		
56	58		15108			2		17.4			7 1/2		
58	60		15109			2		66.5			1		
60	62	C & SH.	15110			2		86.8			0		
24	58	COMPOSITE SEAM-7				34	0.3	22.2	20.5	57.0	4	0.41	
162	164		15111			2		21.4			2		160.5 -192 31.5
164	166		15113			2		11.8			1 1/2		
166	168		15114			2		24.0			3 1/2		
168	170		15115			2		9.4			4		
170	172		15116			2		9.4			5 1/2		
172	174	SEAM 5	15117			2		6.9			5 1/2		
174	176		15118			2		9.8			6		
176	178		15119			2		20.0			6 1/2		
178	160		15120			2		6.0			7		

CONTD.

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS
180	182		15121			2		16.8			6		
182	184		15122			2		25.5			2 1/2		
184	186		15123			2		74.3			1/2		
186	188		15124			2		24.0			6		
189	190		15125			2		48.8 ✓			1	✓	Checked Oct. 20
190	192		15226			2		14.5			2		
192	193	C & Sh.	15227			1		71.2			1/2		
162	192	COMPOSITE SEAM - 5				30	0.2	22.0	17.5	60.3	4	0.21	
205	207	C & Sh.	15228			2		20.7			1 1/2		204 - 208 -1
207	209	" "	15229			2		74.7			0		
209	211	" "	15230			2		60.9			1		
211	213	" "	15231			2		80.4			0		
213	215	" "	15232			2		91.4			0		
248	250	C & Sh.	15233			2		90.0			0		
250	252	" "	15234			2		89.4			0		
252	254	" "	15235			2		90.3			0		
254	256	C & Sh.	15236			2		90.5			0		
334	336		15238			2		16.0			7 1/2		330 - 336 -2
336	338		15239			2		15.3			3		
338	340		15240			2		10.1			2 1/2		
340	342	SEAM - 4	15241			2		9.7			4		
342	344		15242			2		10.0			5		
344	346		15243			2		10.9			3		
346	348		15244			2		8.6			5		
348	350		15245			2		7.1			4 1/2		

CONTD.

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS
350	352		15246			2		6.8			5		
352	354		15247			2		6.3			8		
354	356		15248			2		9.0			6		
356	358		15249			2		13.5			7		
358	360		15250			2		60.9			1		
360	362		15151			2		73.4			1/2		
362	364		15152			2		38.7			3 1/2		361 - 367
364	366		15153			2		27.8			4 1/2		
366	368		15154			2		21.8			1		
368	370		15155			2		71.1			1/2		
370	372	C & Sh.	15156			2		70.1			1/2		
372	374	" "	15157			2		74.6			1/2		
374	376	" "	15158			2		74.3			0		
376	378	" "	15159			2		84.8			0		
334	358	COMPOSITE SEAM - A				24'	0.2	10.3	19.4	70.1	5	0.28	
342	368	COMPOSITE				6	0.1	28.5	18.0	53.4	3	0.20	

Diamond Drill Geological Log

Cominco

K- Fording 76(3)A-1

319

Objective:

Sampled:

Logged By: R.K. Date: October 4, 1976

Composites:

Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length:
		EAGLE MT. WEST FACE			186'

Discard: Reason: FROM 0-175' INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG.

From	To	
0	17	Sandstone.
17	42	Mudstone.
42	84	Mudstone, with siltstone interbeds.
84	105	Mudstone.
105	106	Coal 1'.
106	108	2' Shale.
108	133	Coal with thin shale bands at 112', 119', & 127'. 25' SEAM-7
133	186	Mudstone, some siltstone near bottom.
		End of hole at 186'
		October 2, 1976

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

Core Size

Hole No. RH 469 Page 10F1

2507—N.D.N.

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS
105	107		15076			2		32.7			4 1/2		
107	108	C & Sh.	15077			1		73.8			0		105-106
108	110		15078			2		19.3			1 1/2		
110	112		15079			2		15.4			6 1/2		108-133 25'
112	114		15080			2		27.0			6 1/2		
114	116		15081			2		8.2			6 1/2		
116	118		15082			2		11.0			3		
118	120	SEAM-7	15083			2		32.3			6 1/2		
120	122		15084			2		21.4			1		
122	124		15085			2		8.8			7 1/2		
124	126		15086			2		9.1			7		
126	128		15087			2		18.1			7		
128	130		15088			2		33.1			2 1/2		
130	132		15089			2		16.2			6		
132	134	C & Sh.	15090			2		32.0			6 1/2		
134	135	C & Sh.	15091			1		60.6			2		
105	134	SEAM-7 COMPOSITE 15078-0990				26	0.4	19.4	20.6	59.6	5 1/2	0.32	

Diamond Drill Geological Log

Cominco

K-Fording 76(3)A-1

Objective:

Sampled:

Logged By: R. KRISHAN Date: Oct. 76

Composites:

Block: | Sect.: | Place: Eagle Mt. West Face | App. Bear: | App.: Dip.: | Length: 521'

From	To	Discard: From 0 - 512' Intersections taken from Gamma Ray- Neutron Log — Reason:
0	9	Overburden
9	14	Coal 5' Part seam "My."
14	55	Mudstone and siltstone
55	67	Sandy siltstone
67	111	Mostly mudstone, with some siltstone
111	129	Sandy siltstone
129	153	Siltstone with mudstone interbeds
153	173	Mudstone
173	197.5	Coal 24.5' Seam 7
197.5	289	Mostly mudstone with several siltstone interbeds
289	319	Caol 30' Seam 5
319	351	Mudstone
351	407	Mudstone with siltstone interbeds
407	419	Siltstone
419	455	Sandstone
455	486	Mudstone, and siltstone towards bottom
486	490	Mudstone
490	509	Coal 19' Seam 4
509	512	3'Shale
512	518	Coal 6'
518	520	Coal and Shale
520	521	Shale
		End of hole at 521'

Core Size

Hole No. RH 469A

Page 1 of 1

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

2507-

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS RAD. LOG
292	294		15217			2		25.1			2 1/2		289 - 319 COAL
294	296		15218			2		25.8			5		30'
296	298		15219			2		8.7			6		
298	300		15220			2		13.3			5		
300	302		15221			2		9.1			5 1/2		
302	304		15222			2		6.5			3		
304	306	SEAM - 5	15223			2		10.3			3		
306	308		15224			2		16.5			6		
308	310		15225			2		18.8			1		
310	312		15186			2		16.1			2 1/2		
312	314		15187			2		29.2			4		
314	316		15188			2		32.6			1 1/2		
316	318		15189			2		22.6			3 1/2		
318	320		15190			2		11.9			2		
320	322	C & Sh.	15191			2		79.0			0		
322	324	" "	15192			2		78.3			0		
324	326	" "	15193			2		75.5			0		
292	320	COMPOSITE SEAM-5				28	0.4	18.0	19.8	61.8	4 1/2	0.32	CALC. AVE A 17.6%
333	335		15194			2		26.8			3		
335	337	C & Sh.	15195			2		61.2			1/2		
337	339	" "	15196			2		67.6			1 1/2		
339	341	" "	15197			2		70.8			1/2		
490	492		15198			2		16.2			4		
492	494	SEAM -4	15199			2		18.0			5		
494	496		13251			2		17.3			4 1/2		
496	498		13252			2		10.9			4		

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS
498	500		13253			2		23.2			1		
500	502		13254			2		6.8			6		
502	504		13255			2		12.6			1 1/2		
504	506		13256			2		10.5			5 1/2		
506	508		13257			2		8.6			6		
508	510	C & Sh.	13258			2		33.7			5 1/2		
510	512		13259			2		63.4			1		
512	514		13260			2		16.4			5		
514	516		13261			2		17.9			3 1/2		
516	518		13262			2		56.0			1		
518	520		13263			2		66.3			1		
520	522	C & Sh.	13264			2		83.0			0		
490	516	SEAM-4 COMPOSITE				26'	0.4	19.3	18.9	61.4	5	0.20	CALC. ASH 19.7

Diamond Drill Geological Log

Cominco

K-Fording 76/3/A-1

379

Objective:			Sampled:		
Logged By: R. Krishan	Date: Oct. 76		Composites:		
Block:	Sect.:	Place: Eagle Mt. (No-Name Gulch	App. Bear: Area)	App.: Dip.:	Length: 555'

From	To	Discard: Intersections taken from Gamma Ray - Neutron Log. Reason:
0	14	Overburden or fill
14	31	Sandstone and siltstone
31	42	Mudstone
42	43	Coal 1'
43	45	2' Shale
45	47	Coal 2'
47	53	Mudstone
53	65.5	Sandstone and Mudstone
65.5	68.5	Coal 3'
68.5	78	Mudstone
78	81.5	Coal 3.5'
81.5	119	Mostly sandstone some siltstone and bands of mudstone
119	126.5	Mudstone
126.5	141	Coal with one 1.5' Shale band at 136.5' 14.5(13)' Seam 13
141	158.5	Mudstone, coal stringers at 155.5'
158.5	162	Coal 3.5'
162	188	Mostly mudstone, some siltstone, coal stringers at 167'
188	199	Sandstone, some siltstone
199	210	Mudstone
210	213.5	Coal 3.5'
213.5	225	Mudstone
225	254	Mudstone with several siltstone interbeds
254	257	Coal 3'

Core Size

Hole No. RH 470

Page 1 of 2

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

2507-

Diamond Drill Geological Log

Cominco

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

40 Scale

Color Plot & Dips | Ore Classes & Aver.

From	To	Discard: Reason:
257	274	Mudstone
274	280	Coal 6' Seam 12
280	310	Mudstone and Siltstone near bottom
310	334	Sandstone
334	342	Mudstone and siltstone near bottom
342	347.5	Mudstone, top 3' sandstone
347.5	357.5	Coal 10' Seam 11u
357.5	392	Mudstone, sandy siltstone interbed from 378 to 383'
392	420.5	Siltstone, some mudstone near bottom
420.5	440.5	Coal with 1' and 2' shale partings at 431' and 433' respectively 20(17)' Seam 11
440.5	442	Shale
442	443	Coaly Shale
443	468	Interbedded siltstone and mudstone
468	490	Sandstone and siltstone interbeds
490	525	Mudstone with siltstone interbeds, sandy siltstone from 502' to 507'
525	541	Coal 16' Seam 9
541	543	Coaly Shale 2'
543	555	Mudstone
		End of hole 555'

Core Size

Hole No. RH 470

Page 2 of 2

2567-

Diamond Drill Geological Log

Cominco

K- Fording 76(3)A-1

319

Objective:		Sampled:			
Logged By: R. Krishan	Date: Oct. 76	Composites:			
Block:	Sect.:	Place: Eagle Mt. (No-Name Gulch	App. Bear: Area)	App.: Dip.:	Length: 556'

From	To	Discard: Intersections taken from Gamma Ray - Neutron Log. Reason:
0	12	Overburden or fill
12	28	Mudstone
28	30.5	Coal 2.5'
30.5	34	3.5' Shale
34	36	Shaley Coal
36	40.5	Coal 4.5' Seam 13
40.5	43	2.5' Shale
43	45.5	Coal 2.5'
45.5	68	Mudstone with coal stringers at 64'
68	70	Coal 2'
70	72	Shale
72	73.5	Shaley Coal 1.5'
73.5	98	Mudstone
98	106	Siltstone and silty sandstone
106	121	Siltstone
121	131	Mudstone
131	176	Siltstone, grading to silty sandstone towards bottom'
176	178	Coal 2'
176	195	Mudstone
195	202	Coal 7' Seam 12
202	239	Mostly mudstone with thin interbeds of siltstone
239	257	Sandstone
257	275.5	Siltstone with several sandy siltstone intervals.

Core Size

Hole No. RH 472

Page 1 of 2

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

2507-

Diamond Drill Geological Log

Cominco

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

40 Scale

Color Plot & Dips | Ore Classes & Aver.

From	To	Discard:	Reason:
275.5	285.5	Coal 10' Seam 11u	
285.5	307	Mudstone	
307	316	Silty Sandstone	
316	332.5	Siltstone and mudstone interbeds	
332.5	351	Coal with 2.5' shale band from 344.5' to 347' 18.5(16)' Seam 11	
351	374	Mudstone, one siltstone interbed	
374	381	Sandstone	
381	398	Mudstone, siltstone near bottom	
398	443	Sandstone	
443	451.5	Mudstone	
451.5	468	Coal 16.5' Seam 9	
468	469.5	Shaley Coal 2'	
469.5	496	Mudstone	
496	522	Sandstone and siltstone interbeds.	
522	534	Mudstone	
534	542	Sandstone	
542	545	Mudstone	
545	549.5	Coal 4.5'	
549.5	552	2.5' shale	
552	554	Coal 2'	
554	556	Shale	
		End of hole at 556'	

Core Size

Hole No. RH 472

2507-

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS
28	30		13334			2		27.6			0		
30	32		13335			2		38.7			0		
32	34		13336			2		58.2			0		
34	36	SEAM-13	13337			2		52.4			0		
36	38		13338			2		13.4			0		
38	40		13339			2		12.2			0		
40	42		13340			2		37.0			6		
42	44		13341			2		28.3			0		
44	46		13342			2		34.4			0		
46	48		13343			2		79.0			0		
48	50	C & Sh.	13344			2		85.9			0		
75	77	C & Sh.	13345			2		44.3			5 1/2		
194	196	C & Sh. SEAM-12.	13346			2		19.2			5 1/2		195-202 SEAM-12
196	198	C & Sh.	13347			2		15.0			6		7'
198	200	C & Sh.	13348			2		11.2			7		
200	202	C & Sh.	13349			2		34.4			6		
194	202	SEAM-12 COMPOSITE				8	0.4	20.3	27.1	52.2	6	0.69	
275	277	C & Sh.	13350			2		85.5			0		
277	279	" "	13390			2		71.3			1/2		275.5-285.5 COAL
279	281	" " SEAM-11W.	13391			2		70.7			1		10'
281	283	" "	13392			2		42.0			1		
283	285	" "	13393			2		27.3			2 1/2		
285	287	" "	13394			2		7.8			8		
287	289	" "	13395			2		8.9			8 1/2		
283	289	SEAM-11W. COMPOSITE				6'	0.4	14.6	27.2	57.8	6 1/2	0.57	

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS
332	334	C & Sh.	13397			2		40·8			3 1/2		332'5-344'5'
334	336	SEAM-11	13398			2		40·3			1 1/2		CAL
336	338		13399			2		48·7			4 1/2		347-351'
338	340		13400			2		9·6			3		
332	340	SEAM-11 COMPOSITE				8	0·6	35·1	19·3	45·0	3	0·50	
332	334	C & Sh.	16401			2		64·4			1		
334	336	" "	16402			2		83·5			0		
336	338	" "	16403			2		79·4			0		
451	453		16404			2		56·1			1/2		
453	455		16405			2		20·5			2 1/2		
455	457		16406			2		21·7			2 1/2		
457	459	SEAM-9	16407			2		20·2			3 1/2		
459	461		16408			2		—			—		
461	463		16409			2		29·0			0		
463	465		16410			2		27·5			2		
465	467		16411			2		17·0			3 1/2		
467	469		16412			2		54·1			1 1/2		
469	471		16413			2		71·3			1		
453	467	SEAM-9 COMPOSITE				12/14	0·4	23·0	22·2	54·4	2 1/2	0·28	

Diamond Drill Geological Log

Cominco

K. Fording 76 (3) A-1

319

Objective:

Sampled:

Logged By: R. Krishan Date: Oct. 76

Composites:

Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length:
		Eagle Mt. West face			525'

From	To	Discard: Reason:
		Intersections taken from Gamma - Ray - Neuton Log
0	22	Overburden or fill
22	45	Mudstone some siltstone
45	65	Mudstone
65	69	Coal 4', and 74 to 79' Coal 5'
69	74	5' Shale
79	90	Mudstone
90	125	Sandstone, some siltstone
125	131.5	Mudstone
131.5	144	Coal 12.5' Seam 12
144	158	Mudstone
158	205	Sandstone grading to siltstone towards bottom with occasional mudstone interbeds
205	207.5	Mudstone
207.5	217.5	Coal 10' Seam 11U
217.5	230	Mudstone
230	242	Mudstone, 5' sandstone near top
242	249	Siltstone
249	265	Mudstone
265	277	Coal, bottom 2' coaly shale and shaley coal 12'
277	280	3' Sale
280	283	Coal 3'
283	327	Mostly mudstone with several thin siltstone interbeds

SEAM 11

Core Size

Hole No. RH 473

Page 1 of 2

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

2507-

Diamond Drill Geological Log

Cominco

Objective:			Sampled:			40 Scale
Logged By:	Date:		Composites:			Color Plot & Dips / Ore Classes & Aver.
Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length:	

From	To	Discard: Reason:
327	370	Siltstone with interbeds of mudstone and sandstone
370	385	Mudstone
385	402	Coal 17'
402	403	1' Shale — Seam 9
403	404	Coal 1'
404	445	Mudstone with bands of siltstone'
445	455	Siltstone
455	470	Sandstone
470	477.5	Mudstone
477.5	482.5	Coal 5'
482.5	486.5	Shale
486.5	488	Shaley Coal 1.5'
488	497.5	Shale
497.5	501.5	Shale', top 1.5' (497.5'-499) sholey coal
501.5	503	Coaly shale
503	525	Mudstone
		End of hole at 525'

Core Size

Hole No. RH 473 Page 2 of 2

2507-

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS
30	32		13499			2		56.2			0		
32	34		13500			2		58.0			0		
34	36		13351			2		.60+			0		
36	38	C & Sh.	13353			2		70.7			0		
49	51		13354			2		73.2			0		
51	53	C & Sh.	13355			2		78.8			0		
61	63		13356			2		70.7			0		
63	65		13357			2		76.7			0		
65	67		13358			2		84.0			0		67-68' Shale
68	70		13359			2		35.9			0		
70	72		13360			2		34.0			0		
72	74		13361			2		81.6			0		
134	136		13362			2		7.6				7 1/2	131.5 - 144 Coal
136	138	SEAM - 12	13363			2		21.8				6 1/2	
138	140		13364			2		11.1				7	12.5'
140	142		13365			2		12.6				6 1/2	
142	144		13366			2		9.8				8	
144	146		13367			2		8.8				6 1/2	
146	148	C & Sh.	13368			2		72.8				1	
134	146	SEAM - 12 COMPOSITE				12'	0.5	12.5	26.9	60.1	7 1/2	0.63	CALC. AVE ASH 11.9%

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS
210	212		13369			2		11.5			8 1/2		
212	214	SEAM - IIU	13370			2		8.2			7 1/2		207-217 > COAL
214	216		13371			2		10.6			8 1/2		10.5'
216	218		13372			2		16.0			5 1/2		
218	220		13373			2		35.7			1		
220	222	C & Sh.	1337A			2		58.2			2		
													CALC AVE A.
210	220	SEAM - IIU COMPOSITE				10'	0.3	16.2	24.7	58.8	6 1/2	0.55	16.4 g.
268	270		13375			2		35.9			5 1/2		
270	272		13376			2		22.8			6 1/2		
272	274		13427			2		17.2			5		265-277 } 12
274	276		13428			2		17.4			6 1/2		
276	278	SEAM - II	13429			2		41.7			5		
278	280		13430			2		41.1			4 1/2		280-283 } 3
280	282		13431			2		52.6			4		
282	284		13432			2		28.6			4 1/2		
284	286		13433			2		18.9			8		
286	288		13434			2		48.2			5		
288	290		13435			2		34.8			4 1/2		
290	292	C & Sh.	13436			2		79.1			0		
268	276	#1 COMPOSITE				8'	0.3	23.8	22.2	53.7	6 1/2	0.51	
282	286	#2 "				4'	0.4	23.7	22.7	53.2	6 1/2	0.64	CALC ASH
268	290	#3 "				22	0.5	33.3	21.0	45.2	6	0.68	— 32.7 %
325	327		13437			2		66.7			1		
327	329		13438			2		84.2			0		

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS
380	382		13439			2		62·6			1/2		
382	384		13440			2		19·6			1		
384	386		13441			2		31·2			1 1/2		
386	388		13442			2		39·6			1		385 - 402 CoAl
388	390		13443			2		17·0			4		171
390	392	SEAM	13444			2		35·4			1 1/2		
392	394		13445			2		38·3			1 1/2		
394	396	- 9	13446			2		15·2			2		
396	398		13447			2		—	—	—	—		
398	400		13448			2		61·4			1 1/2		
400	402		13449			2		61·2			1		
402	404		13450			2		—			—		
													CALC AVG A
384	398	SEAM-9 COMPOSITE				12	14	0·3	29·9	20·1	49·7	1 1/2	0·34	23.45
481	483		13451			2		36·3			1		
483	485		13452			2		37·2			1 1/2		
485	487		13453			2		71·3			1 1/2		
489	491		13454			2		72·0			1 1/2		
491	493		13455			2		86·0			6		
493	495		13456			2		83·4			0		
495	497		13457			2		83·8			0		
497	499		13458			2		79·6			0		
499	501		13459			2		51·2			1		
501	503		13460			2		62·6			1		

Diamond Drill Geological Log

Cominco

K-FORDING 76(3)A-1

317

Objective:		Sampled:			
Logged By: R. Krishan	Date: Oct. 76	Composites:			
Block:	Sect.:	Place: Eagle Mt. (No-Name Gulch Area)	App. Bear:	App.: Dip.:	Length: 551'

40 Scale

Color Plot & Dips | Ore Classes & Aver.

From	To	Discard: Intersections taken from Gamma Ray -Neutron Log — Reason:
0	32	Casing
32	36	Mudstone, coal stringers at 32'
36	49	Sandstone
49	63	Mudstone, 2' Shaley coal band at 58'
63	81	Sandstone
81	127	Mostly mudstone with siltstone interbeds, coal stringers at 84' and 87'
127	147	Coal with 2' shale band from 131.5' to 133.5' 20(18)' Seam 12
147	168	Siltstone with several mudstone bands
168	187	Some mudstone near top and sandstone
187	208	Siltstone with mudstone interbeds
208	219	Coal 11' Seam 11U
219	232	Mudstone
232	237	Sandstone
237	246	Mudstone
246	256	Siltstone with some silty sandstone
256	268.5	Mudstone
268.5	270	Shaley Coal 1.5'
270	271	Coaly Shale 1' — Seam 11
271	277	Coal 6'
277	283	6' Shale
283	285	Coal 2'
285	320	Mudstone grading to siltstone and to sandstone towards bottom.
320	336	Mudstone

Core Size

Hole No. RH 474

2507-

Diamond Drill Geological Log

Cominco

40 Scale

Objective:		Sampled:				Color Plot & Dips	Ore Classes & Aver.
Logged By:	Date:	Composites:					
Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length:		

From	To	Discard:	Reason:
336	351	Siltstone	
351	364	Sandstone	
364	381	Siltstone	
381	391.5	Mudstone	
391.5	393.5	Shaley Coal 2'	17'Seam 9
393.5	408.5	Coal	
408.5	451	Mudstone	
451	510	Siltstone grading to sandstone towards bottom	
510	514	Coal 4'	
514	524.5	Mudstone	
524.5	526	Shaley Coal 1.5'	
526	528.5	Coal 2.5'	
528.5	529.5	Coaly shale	
529.5	530.5	Shaly Coal	
530.5	551	Mudstone	
		End of hole at 551'	

Core Size

Hole No. RH 474

Page 2 of 2

2507-

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS
89	91		13461			2		63.9			1 1/2		
91	93	C & Sh.	13462			2		80.7			1/2		
93	95	" "	13463			2		83.2			0		
131	133		13464			2		20.9			8		127- 147 COAL
133	135		13465			2		14.1			8 1/2		1'
135	137		13466			2		63.4			1 1/2		20 (18)
137	139	SEAM-12	13467			2		18.0			7		
139	141		13468			2		18.4			6 1/2		
141	143		13469			2		14.0			7 1/2		
143	145		13470			2		11.4			8		
145	147		13471			2		11.1			6 1/2		
147	149		13472			2		8.3			8 1/2		
149	151		13473			2		51.7			2 1/2		
131	149	SEAM-12 COMPOSITE				18'	0.4	20.6	25.7	53.1	7 1/2	0.49	CALC. AVE A. 19.6
212	214		13474			2		19.7			7 1/2		208- 219 COAL
214	216		13475			2		12.4			8		11'
216	218	SEAM-11U	13401			2		18.0			6		
218	220		13402			2		35.2			5 1/2		
220	222	C & Sh.	13403			2		17.0			3		
212	222	SEAM-11U COMPOSITE				10'	0.3	20.6	25.2	53.9	6 1/2	0.45	
272	274		13404			2		34.0			4		
274	276		13405			2		34.7			7		
276	278	SEAM-11	13406			2		25.8			4		
278	280		13407			2		9.7			8		

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS
280	282		13408			2		40.1			5		
282	284		13409			2		32.6			6		
284	286		13410			2		46.1			5		
286	288		13411			2		12.5			8		
288	290		13412			2		15.3			7		
290	292		13413			2		68.0			1		
292	294	P.A. do S & FSI.	13414			2	0.5	35.0, 35.3	21.0	43.5	3 1/2, 4 1/2	0.66	
294	296	C & Sh.	13415			2		74.8			1/2		
272	290	SEAM-11 COMPOSITE				18	0.2	27.8	22.0	50.0	6	0.62	CALC AVE. 27.2%
396	398		13416			2		65.0			0		393.5 - 408.5
398	400		13417			2		46.7			1 1/2		
400	402		13418			2		38.4			1 1/2		17'
402	404	SEAM-9	13419			2		35.5			3		
404	406		13420			2		31.7			1		
406	408		13421			2		26.4			1		
408	410		13422			2		23.9			2 1/2		
410	412		13423			2		45.9 ✓			2 ✓		CHECKED
412	414		13424			2		39.3 ✓			3 ✓		
414	416		13425			2		54.8			3		
400	410	SEAM-9 COMPOSITE				10'	0.3	31.7	21.1	46.9	1 1/2	0.35	CALC AV. A 31.2%
517	519		13326			2		70.4			1		
519	521		13327			2		62.5			1/2		
521	523		13328			2		52.7			1		
523	525		13329			2		78.0			1 1/2		
525	527		13330			2		79.6			0		
527	529		13331			2		79.8			1 1/2		

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS
529	531		13332			2		49.4			11L		
531	533		13333			2							

Page No. 3 OF 3 Hole No. RH 474

Diamond Drill Geological Log

Cominco

K- FORDING 76(3)A-1

379

Objective:			Sampled:		
Logged By: R. Krishan	Date: Oct. 76		Composites:		
Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length:

From	To	Discard: Reason: Intersectins taken from driller's report - No radiation Log (Hole plugged at 33')
0	33	Boulders and fine sands
33	87	Broken and shattered shale
87	99	Coal 12' Seam 12
99	106	Shale and sand, and boulders
106	109	Coal and shale 3'
109	155	Shale and sandstone
155	163	Coal Seam 11U
163	188	Shattered shale and boulders
		Drill rod plugged becasue of falling boulders from the depth of 46' to 106'
		Hole abandoned at 188'
		Oct. 21/76

Core Size

Hole No. RH 475

Page 1 of 1

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

2307-

DIAMOND DRILL SAMPLING RECORD

[redacted]

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS
44	46		13377			2		75.0			0		
46	48	C & Sh.	13378			2		63.2			0		
87	89		13379			2		21.3			1/2		
89	91		13380			2		12.6			1/2		
91	93	SEAM - 12	13381			2		12.2			1/2		
93	95		13382			2		5.6			0 ✓		
95	97		13383			2		8.0			0 ✓		CHECKED
97	99	C & Sh.	13384			2		20.6			0 ✓		
87	99	COMPOSITE.				12	0.5	13.2	29.7	56.6	0	0.62	CALC AV. A. 13.4
106	108	C & Sh.	13385			2		53.2			1		
155	157	C & Sh.	13386			2		9.3			8 1/2		
157	159		13387			2		27.0			3		
159	161	SEAM - 11.0	13388			2		27.1			2 1/2		
161	163	C & Sh.	13389			2		18.8			7 1/2		
155	163	COMPOSITE				8	0.3	21.1	26.2	52.4	6	0.42	CALC AVE A 20.6

Diamond Drill Geological Log

Cominco

K. Fordinc 76(3)A-1

377

Objective:

Sampled:

Logged By: R. Krishan Date: Oct. 76

Composites:

Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length:
		Eagle Mt (No-Name Gulch Area)			550'

From	To	Discard: INTersections taken from Gamma Ray-Neutron Log	Reason:
0	9	Overburden (casing 0-15')	
9	36	Mudstone coal stringers at 23'	
36	41.5	Coal 5.5'	
41.5	52.5	Mudstone	
52.5	54 4	Shaley Coal 1.5'	
54	55	1 ' Shale	
55	64	Coal with 2' Coaly shale band at 60-62' 9(7)'	Seam 11
64	80	Mudstone	
80	110	Interbedded mudstone and siltstone'	
110	124	Mudstone	
124	167	Siltstone grading to sandstone near bottom	
167	181	Mudstone	
181	197	Coal 16' Seam 9	
197	202	Mudstone	
202	207	Dirty coal with one foot shale band at 204' 5(4)'	
207	227	Mostly mudstone some sandstone near bottom	
227	228	Shaley coal 1'	
228	231.5	Coal 3.5' Seam 8	
231.5	257	Mudstone	
257	269	Siltstone	
269	321	Sandstone	
321	361	Mudstone with several bands of siltstone	
361	413	Interbedded mudstone and siltstone	

Core Size

Hole No. RH 476

Page 1 of 2

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

2507-

Diamond Drill Geological Log

Cominco

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

From	To	Discard: Reason:
413	438	Mostly mudstone some siltstone
438	441	Coal 3'
441	445	4 ' Shale
445	462	Coal 17' Seam 7
462	509	Mostly mudstone, several siltstone interbeds
509	528.5	Coal 19.5' Seam 5
528.5	546	Mudstone
546	550	Sandstone
		End of hole at 550'

40 Scale

Color Plot & Dips	Ore Classes & Aver.

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Core Size

Hole No. RH 476

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2507-

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS
41	43	C & Sh.	16400			2		19.8			0		
43	45		14326			2		48.1			0		
45	47	C & Sh.	14327			2		71.4			6		
57	59		14328			2		27.5			0		
59	61	SEAM-11	14329			2		43.9			6		
61	63		14330			2		33.3			0		
63	65		14331			2		38.4			0		
65	67		14332			2		39.6			0		
67	69		14333			2		55.0			0		
69	71	C & Sh.	14334			2		60.0			0		
182	184	C & Sh.	14335			2		41.0			1		
184	186	C "	14336			2		17.1			2 1/2		
186	188	SEAM-9	14337			2		14.8			3		181-197 COAL
188	190		14338			2		12.4			6		16'
190	192		14339			2		12.0			.2		
192	194		14340			2		25.3			2 1/2		
194	196		14341			2		7.8			6		
196	198		14342			2		23.4			5 1/2		
198	200	C & Sh.	14343			2		49.2			3		
184	198	COMPOSITE.				14'	0.4	15.8	22.8	61.0	3 1/2	0.30	
203	205	C & Sh	14345			2		35.8			3 1/2		
206	208	COMPOSITE	14346			2		29.2			4		
208	209		14347			1		70.2			1/2		

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS
203	208	COMPOSITE			A/5'		0·3	32·8	17·8	49·1	3½	0·35	
230	232		14348			2		25·1			6		
232	234		14349			2		34·5			1		
230	234	COMPOSITE				A	0·4	30·5	19·7	49·4	3½	0·43	
439	441	C & Sh.	16251			2		15·4			5½		
441	443	C & Sh.	16252			2		—			—		
443	445	C & Sh.	16253			2		76·6			½		
447	449		16254			2		14·4			4		
449	451		16255			2		11·3			8½		
451	453		16256			2		34·8			1		
453	455		16257			2		24·4			6		445 - 462 CAL
455	457		16258			2		17·9			7½		17'
457	459		16259			2		24·4			7½		
459	461		16260			2		11·7			5		
461	463		16261			2		12·9			8½		
463	465		16262			2		58·5			3		
465	467		16263			2		78·2			½		
467	469	C & Sh.	16264			2		78·4			½		
447	467	COMPOSITE				16'	0·3	19·2	23·0	57·5	6½	0·38	
512	514		16267			2		32·7			2½		509 - 528 5
514	516		16268			2		24·0			6		19·5
516	518		16269			2		11·1			6		

AM - 7

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS
518	520		16270			2		30·6			2 1/2		
520	522		16271			2		18·1			3		
522	524	SE	16272			2		14·0			6 1/2		
524	526		16273			2		17·3			3 1/2		
526	528	C & Sh.	16274			2		33·3			1		
528	530	-5	16275			2		20·6			1 1/2		
530	532		T6451			2		43·2			2 1/2		
532	534	C & Sh.	16452			2		80·0			0		
						1							
512	530	COMPOSITE				18	0·4	22·2	21·8	55·6	3 1/2	0·34	

Diamond Drill Geological Log

Cominco

K-Fording 76(3)A-1

Objective:

Sampled:

Logged By: R. Krishan Date: Oct. 76

Composites:

Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length:
		Eagle Mt. (NO-Name Gulch Area)			540'

From	To	Discard: Reason: Intersections taken from Gamma Ray - Neutron Log
0	8	Overburden or shale
8	12	Coaly Shale
12	23	Coal with one foot shale band at 18' 11(10)'
23	30.5	Mudstone
30.5	38	Shaley coal and shale
38	60	Mudstone
60	85	Mostly sandstone with silty intervals
85	101.5	Mudstone
101.5	115.5	Coal, with 3' band of shale and coaly shale from 110' to 113' 14(11)' Seam 13
115.5	133	Mudstone with 2' shaley coal band at 128'
133	141	Sandstone
141	154	Mudstone
154	161	Siltstone
161	166.5	Mudstone
166.5	169.5	Coal 3'
169.5	200.5	Mudstone
200.5	203.5	Coal 3'
203.5	213.5	Mudstone
213.5	221.5	Coal with 2' shale band at 216.5' 8(6)' Seam 12
221.5	241	Mudstone with thin bands of siltstone
241	269	Mostly sandstone with silstone interbeds
269	273.5	Mudstone
273.5	282.5	Coal 9' Seam 11U

Core Size

Hole No. RH 477

Page 1 oif 2

40 Scale

Color Plot & Dips	Ore Classes & Aver.
0	

2507—

Diamond Drill Geological Log

Cominco

Objective:

Sampled:

Logged By: Date:

Composites:

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

40 Scale

Color Plot & Dips | Ore Classes & Aver.

From	To	Discard: Reason:
282.5	305	Mudstone
305	309	Sandstone
309	315	Mudstone
315	356	Interbedded sandstone and siltstone
356	364.5	Mudstone
364.5	383	Coal with 1' and 1.5' shale bands at 374' and 377. 18.5(16)' Seam 11
383	400	Mudstone
400	441	Mostly silstone with interbeds of sandstone
441	479	Mudstone, occasional siltstone interbeds
479	497	Coal 18' Seam 9
497	499	Shaley Coal 2'
499	508.5	Mudstone
508.5	513.5	Shaley coal, coal and shale band 5(4)'
513.5	531	Mudstone
531	535	Coal 4'
535	540	Mudstone some silstone near bottom
		End of hole at 540'

Core Size

Hole No. RH 477

Page 2 of 2

2507-

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS
15	17	Sh. & C.	12676			2		8.1			0.		
17	19	C & Sh.	12677			2		56.0			0		
19	21		12678			2		24.6			0		
21	23		12679			2		15.6			0		
23	25		12680			2		41.5			0		
25	27	C & Sh.	12682			2		74.1			0		
27	29		12683			2		48.7			0		
29	31	C & Sh.	12684			2		84.4			0		
31	33	C & Sh.	12685			2		22.9			1/2		
33	35		12686			2		15.2			1/2		
35	37		12687			2		42.1			0.		
37	39	C & Sh.	12688			2		73.0			0.		
102	104	C & Sh.	12689			2		9.1			6.		101.5 - 110 Coal
104	106		12690			2		4.5			8		
106	108	SEAM - 13	12691			2		11.4			5 1/2		113 - 115.5
108	110		12692			2		16.8			8		
110	112		12693			2		43.5			5		
112	114		12694			2		7.0			7		
114	116		12695			2		64.1			2		
116	118		12696			2		74.5			1/2		
102	114	SEAM - 13 COMPOSITE				12	0.5	15.4	26.6	57.5	7	0.46	
126	128	C & Sh.	12697			2		30.4			7		
128	130	C & Sh	12698			2		51.4			3		
130	131		12699			1		75.2			1/2		

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS
165	167		12700			2		18.7			5 1/2		
167	169	C & Sh.	12706			2		61.2			2		
199	201		12707			2		18.7			5 1/2		
201	203	C & Sh.	12708			2		60.3			2 1/2		
211	213		12709			2		14.1			8		213-2215 Coal 8(6)'
213	215	C & Sh.	12710			2		30.9			4 1/2		
215	217	C & Sh.	12711			2		52.6			1 1/2		
217	219	C & Sh.	12712			2		11.5			5 1/2		
211	219	SEAM - 12 COMPOSITE				8	0.4	27.8	24.1	47.7	6	0.65	
269	271	C & Sh.	12713			2		37.5			5 1/2		2735-2825 Coal 9'
271	273	C & Sh.	12714			2		60.2			1 1/2		
273	275		12715			2		20.3			6 1/2		
275	277		12716			2		21.7			5		
277	279	C & Sh.	12717			2		19.8			1 1/2		
279	281	C & Sh.	12718			2		—			—		
273	279	SEAM - 1111 COMPOSITE				6	0.5	20.3	23.0	56.2	5	0.50	
361	363		12719			2		40.4			A		
363	365		12720			2		28.6			A		
365	367		12721			2		26.2,17.6			2,7 1/2		
365	367		12722										

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS
367	369		12723			2		41.6			3 1/2		
369	371		12724			2		35.8			6 1/2		
371	373		12725			2		72.6			1		
373	375		14301			2		34.4			6 1/2		
375	377		14302			2		49.1			3		
377	379		14303			2		60.0			1		
379	381	C & Sh.	14304			2		44.6			4 1/2		
381	383	C & Sh.	14305			2		71.8			1		
363	367	COMPOSITE.				4	0.5	24.4	22.1	53.0	5	0.59	
361	375	SEAM-11 COMPOSITE				14	0.3	37.8	19.0	42.9	5	0.50	
471	473	C & Sh.	14306			2		79.5			0		
473	475	C & Sh.	14307			2		59.7			1		
475	477		14308			2		40.1			1		
477	479		14309			2		33.7			4 1/2		479-497' Cont.
479	481		14310			2		11.7			6 1/2		18
481	483		14311			2		24.4			3		
483	485		14312			2		28.2			1 1/2		
485	487		14313			2		28.0			1 1/2		
487	489		14314			2		18.5			5		
489	491		14315			2		11.7			4		
491	493		14316			2		42.7			5 1/2		✓ CHECKED
493	495	C & Sh.	14317			2		86.8			0		
495	497	C & Sh.	14318			2							
477	491	SEAM-9 COMPOSITE				14'	0.4	24.6	22.0	53.0	4 1/2	0.34	Inc. the. Ash 22.3%
505	507	C & Sh.	14319			2		52.0			1		

Diamond Drill Geological Log

Cominco

K. FORDING 76(3)A-1

379

Objective:

Sampled:

Logged By: R. Krishan Date: Nov. 16/76

Composites:

Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length:
		Eagle Mt. (No Name Gulch Area)			580'

From	To	Discard: Reason: Intersections taken from Gamma Ray - Neutron Log
0	3	Overburden or siltstone
3	10	Coal 7' Seam 12 Zone
10	46.5	Mudstone with several thin interbeds of siltstone
46.5	55.5	Coal 9' Seam - 11u
55.5	95	Mudstone with several bands of siltstone
95	144	Sandy siltstone
144	152	Coal 8'
152	153.5	1.5' shale
153.5	155	Shaley Coal 1.5' 16.5(13.5') Seam 11
155	156.5	1.5' shale
156.5	160.5	Coal 4'
160.5	178	Mudstone
178	238	Mostly siltstone with mudstone interbeds
238	268	Mudstone with bands of siltstone
268	285	Coal 17' Seam 9
285	292.5	Mudstone
292.5	297	Shaley coal with 1' shale band at 294' 4.5 (3.5)'
297	310	Mudstone
310	316	Siltstone
316	320.5	Coal 4.5'
320.5	337	Mudstone
337	375	Siltstone and silty sandstone
375	430	Sandstone

Core Size

Hole No. RH 478 Page 1 of 2

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

2507—N.D.N.

Diamond Drill Geological Log

Cominco

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

From	To	Discard: Reason:
430	522	Mudstone with occasional bands of siltstone
522	526	Coal 4'
526	543	Mudstone
543	561	Coal with 1' shale band at 556' 18(17)' Seam 7
561	580	Mudstone
		End of hole at 580'
		Oct. 24/76

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

Core Size

Hole No. Page

RH 478 2 of 2

2507—N.D.N.

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS
46	48		14320			2		8.8			2		
48	50		14321			2		7.7			1/2		
50	52		14322			2		4.5			2		
52	54		14323			2		20.4			1		
54	56		14324			2		43.7			0		
56	58	C & Sh.	14325			2		71.3			0		
46	54	SEAM - 11 U COMPOSITE				8	0.5	10.7	27.3	61.5	1 1/2	0.62	
143	145		16476			2		16.5			8		
145	147		16477			2		35.8			6 1/2		144-152
147	149		16478			2		14.3			8 1/2		
149	151		16479			2		8.0			7 1/2		
151	153		16480			2		37.8			6 1/2		
153	155		16481			2		58.5			2		156.5-160.5
155	157		16482			2		47.7			1/2		
157	159	C & Sh.	16483			2		64.6			4 1/2		
159	161		16484			2		26.1			2 7 1/2		CHECKED
161	163	C & Sh.	16485			2		59.4			7 1/2	1 1/2	
163	165	C & Sh.	16486			2		62.8			1		
165	167	" "	16487			2		45.0			2		
143	153	COMPOSITE				10'	0.3	23.1	23.5	53.1	7	0.66	
		SEAM-11.											
159	163	COMPOSITE				4	0.3	43.3	18.8	36.9	5	0.68	
263	265		16488			2		69.7			4		268-285 CHH
265	267		16489			2		72.1			1/2		
267	269		16490			2		30.0			1/2		17'
269	271		16491			2		25.2			1		
271	273		16492			2		30.6			1 1/2		
273	275		16493			2		13.2			3		

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS
275	277		16494			2		25.2			3		
277	279		16495			2		13.2			1 1/2		
279	281		16496			2		22.0			2		
281	283		16497			2		29.6			2 1/2		
283	285	C & Sh.	16498			2		57.1			2.		
267	283	SEAM - 9 COMPOSITE				16	0.4	22.9	20.7	56.0	2	0.34	CALC AVE. A. 23.5
292	294	C & Sh.	16499			2		69.4			1 1/2		
315	317		16276			2		53.9			1		
317	319		16277			2		50.1			2 1/2		
520	522		16278			2		46.0			2		
522	524		16279			2		47.6			1 1/2		
524	526	C & Sh.	16280			2		78.9			1/2		
541	543	C & Sh.	16281			2		17.9			2		543 - 561 CALC
543	545		16282			2		13.5			2 1/2		
545	547		16283			2		12.4			6 1/2		18(17)
547	549		16284			2		35.9			1		
549	551		16285			2		15.2			7		
551	553		16286			2		20.3			5		
553	555	C & Sh.	16287			2		69.7			1		
555	557		16288			2		36.2			1		
557	559		16289			2		25.4			7		
559	561	C & Sh.	16290			2		77.5			1/2		
541	559	SEAM - 7 COMPOSITE				18	0.3	27.7	19.6	52.4	3	0.37	

Diamond Drill Geological Log

Cominco

K-Fording 76(3) A-1

377

40 Scale

Color Plot & Dips | Ore Classes & Aver.

Objective:

Sampled:

Logged By: R. Krishan Date: Oct. 76

Composites:

Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length:
		Eagle Mt. (No-Name Gulch Area)			

Discard: Reason: Intersections taken from Gamma Ray-Neutron Log

From	To	
0	8	Overburden, 8-20' Mudstone
20	42	Siltstone some mudstone
42	66	Mudstone
66	79.5	Coal, with thin shale bands at 74.5 and 76' 13.5(12)' Seam 13
79.5	94	Mudstone
94	107	Sandstone
107	143	Mudstone
143	147	Coal 4'
147	158	Mudstone
158	161	Coal 3'
161	172	Mudstone
172	181	Coal with 2' shale band at 175' 9(7)' Seam 12
181	193	Mudstone
193	215	Mostly sandstone, some siltstone
215	227	Sandy siltstone and some mudstone
227	237	Coal 10' Seam - 11u
237	270	Mostly mudstone some siltstone
270	315	Sandstone
315	320.5	Mudstone
320.5	339.5	Coal with shaley coal and shale bands at 330' and 333' respectively 19.5(17)' Seam 11

Core Size

Hole No. RH 479 Page 1 of 2

2507-

Diamond Drill Geological Log

Cominco

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

From	To	Discard: Reason:
339.5	360	Mudstone with siltstone bands
360	418	Interbedded sandstone and siltstone
418	442.5	Mudstone and siltstone interbeds
442.5	461.5	Coal 19' Seam 9
461.5	466	4.5' Shale
466	471.5	Coal with 1.5' shale band at 467.5' 5.5(4)' Seam 9 Lower
471.5	485	Mudstone
		End of hole at 485'

40 Scale

Color Plot & Dips	Ore Classes & Aver.

O

Core Size

Hole No. RH 479 Page 2 of 2

2507-

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS
66	68		16453			2		7.0			3½		
68	70		16454			2		6.4			9		
70	72	AM-13	16455			2		7.9			6		66-79.5
72	74		16456			2		14.3			8		
74	76	C & Sh.	16457			2		41.9			4½		13.5 (12)
76	78	C & Sh.	16458			2		34.7			5½		
78	80	C & Sh.	16459			2		40.2			6		
80	82	C & Sh.	16460			2		59.6			1		
60	74	COMPOSITE				8'	.04	9.2	27.6	62.8	6½	0.46	
66	80	COMPOSITE				14'	0.2	21.8	25.3	52.7	5½	0.4	
94	96	C & Sh.	16461			2		22.9			7½		
96	98	C & Sh	16462			2		40.7			4		
145	147		16463			2		18.6			8		
147	148		16464			1		57.5			3		
160	162		16465			2		7.1			8½		
162	164	C & Sh.	16466			2		72.2			1		
164	166	C & Sh.	16467			2		82.2			0		
174	176		16468			2		25.7			4½		
176	178	C & Sh. SE AM-12	16469			2		67.5			1		173-18
178	180	C & Sh.	16470			2		40.5			6½		9 (7)
180	182	C & Sh.	16471			2		14.5			9		
182	183	C & Sh.	16472			1		71.1			2		
174	182	COMPOSITE				8	0.5	37.1	20.4	42.0	4½	0.69	

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS
227	230		16473			2		54.8			3½		227-237 Core
230	232	SEAM-11U	16474			2		13.6			8½		10
232	234		16475			2		23.0			7		
234	236		14276			2		40.6			3		
236	238		14277			2		30.5			1½		
238	240		14278			2		70.7			1		
240	242	C & Sh.	14279			2		78.4			½		
227	238	COMPOSITE				8	0.3	25.8	233	50.6	5½	0.56	CALCULATED
321	323		14280			2		19.7			7½		320.5-330 Core
323	325		14281			2		21.1			5½		
325	327		14282			2		23.8			4		
327	329	SEAM-11	14283			2		5.7			8		
329	331		14284			2		46.6			4		
331	333		14285			2		25.6			6		
333	335		14286			2		65.9			1		
335	337		14287			2		39.7			7		335-339 Core
337	339		14288			2		21.4			8½		
339	341		14289			2		50.6			4		
341	343		14290			2		36.4			6		
343	345	C & Sh.	14291			2		66.5			1		
321	333	COMPOSITE				12	0.5	24.3	220	53.2	6½	0.58	
321	343	COMPOSITE				22	0.4	32.8	207	46.1	6½	0.60	

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS
422	424	C & Sh.	14292			2		60.2			1		
439	441	C & Sh.	14293			2		69.9			1 1/2		
441	443		14294			2		52.0			1 1/2		
443	445		14295			2		28.0			3		442.5-446.5
445	447		14296			2		12.4			6		
447	449	SEAM-5	14297			2		11.5			7 1/2		
449	451		14298			2		15.3			2 1/2		17
451	453		14299			2		46.0			1		
453	455		14300			2		10.0			2 1/2		
455	457		12701			2		14.5			7		
457	459		12702			2		14.6			6		
459	461	C & Sh.	12703			2		—			—		
445	459	CONCRETE				16							
467	469	C & Sh.	12704			2		54.3			1		
469	470	C & Sh.	12705			2		75.6			1 1/2		

Diamond Drill Geological Log

Comhco

K. Foroing 76 (3) A-1

Objective:

Sampled:

Logged By: R. Krishan Date: Nov 76

Composites:

Block: | Sect.: | Place: Eagle Mt. (No-Name Gulch Area) | App. Bear: | App.: Dip.: | Length: 500

From	To	Discard: Intersections taken from Gamma - Ray - Neutron Log Reason:
0	6	Overburden
6	36	sandstone and siltstone
36	51	Mudstone
51	63	Siltstone, some sandstone near bottom
63	86	Siltstone
86	91	Mudstone
91	106.5	Coal 15.5' Seam 9
106.5	113	6.5' Shale
113	117	Coal 4'
117	134.5	Mudstone with thin bands of siltstone
134.5	137.5	Coal 3'
137.5	153	Mudstone
153	166	Siltstone
166	180	Silty sandstone
180	229	Sandstone
229	246	Siltstone
246	321	Mudstone, with occasional silty mudstone bands
321	338	Siltstone
330	344.5	Mudstone
344.5	348	Coal 3.5'
348	357.5	Mudstone
357.5	374.5	Coal 17' Seam 7
374.5	394	Mudstone

Core Size

Hole No. RH 480 Page 1 of 2

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

2507—N.D.N.

Diamond Drill Geological Log

Cominco

Objective:			Sampled:			40 Scale
Logged By:	Date:		Composites:			Color Plot & Dips / Ore Classes & Aver.
Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length:	

From	To	Discard: Reason:
394	404	Siltstone, mudstone nar bottom
404	410	Sandy siltstone, 410-419' mudstone
419	438.5	Coal 19.5' Seam 5
438.5	444	Mudstone
444	489	Mostly siltstone with interbeds of mudstone and sandstone
489	500	Sandstone

Core Size

Hole No. RH 480

Page 2 of 2

2507—N.D.N.

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS RAD LOG
46	48	C & Sh.	19266			2		52.9			4		
89	90	C & Sh.	19267			1		11.3			4 1/2		
91	93		19268			2		24.1			3		91-106.5 COAL
93	95		19269			2		21.8			2 1/2		15.5'
95	97	SEAM-9	19270			2		13.1			6		
97	99		19271			2		32.3			2		
99	101		19272			2		14.0			7		
101	103		19273			2		8.8			3		
103	105		19274			2		37.7			3		
105	107	C & Sh.	19275			2		44.7			5		
89	103	SEAM-9 COMPOSITE				13|14*	0.3	19.5	24.0	56.2	3 1/2	0.27	*1' SAMPLE NOT TAKEN CALC. AVE ASH 19.2%
112	114	C & Sh.	19301			2		74.4			1/2		113-117' COAL
114	116	" "	19302			2		37.1			3		4'
116	118	" "	19303			2		60.0			1		
132	134	C & Sh.	19304			2		33.0			2		134.5-137.5 COAL
134	136	" "	19305			2		31.3			3		3'
136	138	" "	19306			2		22.4			6 1/2		CHECKED.
132	138	COMPOSITE				6'	0.5	29.8	19.6	50.1	4	0.31	CALC. AVE. ASH 29.9%
342	344	C & Sh.	19307			2		36.2			4 1/2		
344	346	" "	19308			2		50.7			4 1/2		

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS RAD LOG
354	356		19309			2		23.6			1		
356	358		19310			2		8.5			8		357.5 - 374.5 COAL
358	360	SEAM-7	19311			2		14.8			8		17'
360	362		19312			2		23.6			2		
362	364		19313			2		17.8			7		
364	366		19314			2		16.2			6 1/2		
366	368		19315			2		29.6			6 1/2		
368	370		19316			2		19.6			5 1/2		
370	372	C & Sh.	19317			2		27.3			6 1/2		
372	374	" "	19318			2		72.5			1		
354	372	SEAM-7 COMPOSITE				18'	0.3	21.4	20.9	57.4	6 1/2	0.33	CALC. AVE ASH 20.1%
415	417		19319			2		21.4			6 1/2		1
417	419		19320			2		21.8			6 1/2		419 - 438.5 COAL
419	421	SEAM-5	19321			2		7.9			7 1/2		1
421	423		19322			2		34.5			1 1/2		19.5
423	425		19323			2		13.8			3		
425	427		19324			2		13.5			5 1/2		
427	429		19325			2		15.4			5 1/2		
429	431		19276			2		24.9			2		
431	433		19277			2		25.8			1		
433	435		19278			2		39.5 ✓			3	✓	CHECKED
435	437	C & Sh.	19279			2		72.1			1/2		
415	433	SEAM-5 COMPOSITE 19319-325, 19276-277				18'	0.4	20.4	21.0	58.2	4 1/2	0.21	CALC. AVE ASH 19.9%

Diamond Drill Geological Log

Cominco

K. Forging 76(3)A-1

379

Objective:		Sampled:			
Logged By: R. Krishan	Date: NOv. 16/76	Composites:			
Block:	Sect.:	Place: EAgle Mt. (No Name Gulch	App. Bear: Area)	App.: Dip.:	Length: 502'

From	To	Discard: Intersections taken from Gamma Ray- Netron Log Reason:
0	10	Overburden
10	35	Siltstone, with several interbeds of mudstone
35	53	Mudstone
53	74	Siltstone with mudstone interbeds
74	94	Mudstone
94	110	Coal 16' Seam 9
110	114.5	4.5 Mudstone
114.5	118.5	Shaley coal with 1' shale at 116' 4(3)'
118.5	130	Mudstone
130	137	Siltstone, bottom two feet mudstone
137	139.5	Coal 2.5'
139.5	166	Mudstone
166	176	Siltstone
176	215	Sandstone
215	248	Siltstone and sandstone interbeds, with bands of mudstone
248	320	Mudstone, with several bands of siltstone
320	352	Siltstone, some silty sandstone
352	355.5	Mudstone
355.5	359	Coal 3.5'
359	366	Mudstone
366	384	Coal 18' Seam 7
384	427	Mostly mudstone with thin interbeds of siltstone
427	429	Coal 2'

Core Size

Hole No. RH 481

Page 1 of 2

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

2507—N.D.N.

Diamond Drill Geological Log

Cominco

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

From	To	Discard: Reason:
429	432	3' Shale
432	452.5	Coal 20.5' Seam 5
452.5	462	Mudstone with 1' coal band at 458'
462	488	Mostly siltstone, some mudstone
488	502	Sandstone.
		End of hole at 502'

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

Core Size

Hole No. RH 481

Page 2 of 2

2507—N.O.N.

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS BAD LOG
37	39	C & Sh.	19280			2		42.7			5 ✓		
92	94	" "	19281			2		63.5			1/2		94-110' COAL ?
94	96	" "	19282			2		61.1			1/2		
96	98	" "	19283			2		25.5			3 1/2		
98	100		19284			2		26.4			2		
100	102		19285			2		7.8			6		
102	104		19286			2		14.0			3 1/2		
104	106		19287			2		32.6			3		
106	108	C & Sh.	19288			2		13.5			4 1/2		
108	110	" "	19289			2		9.1			7 1/2		
110	112	" "	19290			2		32.9			5 1/2		
112	114	" "	19291			2		7.8			1		
96	112	SEAM-9 COMPOSITE 19283-290				16	0.3	20.9	21.9	56.9	4 1/2	0.21	CALC ASH ALSO 20.3%
118	120	C & Sh.	19292			2		34.2			3 1/2		
120	122	" "	19293			2		60.4			1		
139	141		19294			2		23.2			6		
141	143	C & Sh.	19295			2		62.3			1		
358	360	C & Sh.	19297			2		24.0			6 1/2		355.5-359 Coal 1
360	362	" "	19298			2		29.0			6 1/2		3.5
362	364	" "	19299			2		83.4			0		
364	365	" "	19300			1		82.7			0		
358	362	COMPOSITE 19297-298				4	0.2	27.8	21.1	50.9	7	0.35	

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS RAD. LOG
369	371	C & Sh.	18201			2		15·4			1½		366-388 COAL
371	373		18202			2		20·0			7		1
373	375		18203			2		28·5			6		18
375	377		18204			2		18·2			6½		
377	379		18205			2		23·4			7½		
379	381		18206			2		12·1			7½		
381	383		18207			2		16·0			7½		
383	385		18208			2		14·8			7½		
385	387		18209			2		14·9			8½		
387	389		18210			2		44·8			5		
389	391	C & Sh.	18211			2		76·3			1		
369	387	SEAM - 7 COMPOSITE 18201 - 209				18'	0·4	18·5	21·5	59·6	7½	0·22	CALC ASH 18·1
430	432	C & Sh.	18212			2		42·3			2		
432	434	" "	18213			2		29·8			½		1
434	436		18214			2		20·1			4½		432-452·5 COAL
436	438		18215			2		73·1			4½		1
438	440		18216			2		27·3			7½		20·5
440	442		18217			2		26·4			3		
442	444		18218			2		16·9			3½		
444	446		18219			2							
446	448		18220			2		12·1			6½		
448	450		18221			2		29·4			4½		
450	452		18222			2		24·0			1½		
452	454		18223			2		27·1			2		
454	456	C & Sh.	18224			2		53·4			4		
456	458	" "	18225			2		82·6			0		
458	460	" "	19101			2		77·7			½		CALC AVE. ASH 28·6
460	463	" "	19102			2		71·5			1		*
432	454	SEAM - 5 COMPOSITE 18213 - 223			20	22'*	0·3	29·2	19·5	51·0	3½	0·30	2 SAMPLE LOST.

2 OF 2

Page No. Hole No. RH 481

Diamond Drill Geological Log

Cominco

K. Forging 76(3)A-1

Objective:

Sampled:

Logged By: R. Krishan Date: Nov 76

Composites:

Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length:
		Eagle Mt. (No-Name Gulch Area)			438'

Discard: Reason:

Intersections taken from Gamma Ray - Neutron Log

From	To	
0	9	Overburden
9	16	Mudstone
16	37.5	Interbedded mudstone and siltstone
37.5	39	Coaly shale 1.5'
39	43.5	Mudstone
43.5	46	Coal 2.5'
46	64	Mudstone
64	71	Siltstone
71	81.5	Mudstone
81.5	89.5	Coal 8' Seam 11U
89.5	119	Interbedded mudstone and siltstone
119	125	Silty sandstone
125	139	Mudstone
139	154	Siltstone
154	164	Mudstone
164	173	Coal 9'
173	178.5	5.5 Shale with coaly shale band at 175' — Seam 11
178.5	181	Coal 2.5'
181	190	Mudstone
190	226	Mostly siltstone with mudstone interbeds
226	277	Interbedded sandstone and siltstone.
277	294	Mudstone
294	308	Siltstone

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

Core Size

Hole No. RH 482 Page 1 of 2

2507—N.D.N.

Diamond Drill Geological Log

Cominco

Objective:

Sampled:

Logged By: Date:

Composites:

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

40 Scale

Color Plot & Dips | Ore C asses & Aver.

From	To	Discard: Reason:
308	313	Mudstone
313	330.5	Coal 17.5 Seam 9
330.5	334	3.5' Shale
334	338	Coal 4'
338	353.5	Mudstone with occasional siltstone interbeds.
352.5	355.5	Coal 3'
355.5	364	Mudstone
364	409	Siltstone grading progressively to silty sandstone and to sandstone towards bottom
409	425	Sandstone
425	438	Sandstone, some siltstone near top.
		End of hole at 438'
		Oct. 25/76

Core Size

Hole No. RH 482

Page 2 of 2

2507—N.D.N.

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS RAD. LOG.
17	19		16291			2		38.4			0		
19	21		16292			2		—			—		
21	23	C & Sh.	16293			2		83.5			0		
23	25	" "	16294			2		74.3			0		
25	27	" "	16295			2		76.0			0		
27	29	" "	16296			2		68.0			0		
38	40		16297			2		28.5			1/2		
40	42		16298			2		76.5			0		
45	47		16299			2		13.5			4 1/2		43.5-46 COAL
47	49	C & Sh.	16300			2		24.5			6		2.5'
45	49	COMPOSITE 16299-300				4'	0.4	19.5	24.9	55.2	5	0.44	
83	85		19201			2		17.8			3 1/2		81.5 - 89.5 COAL
85	87		19202			2		9.3			7		8'
87	89	C & Sh.	19203			2		17.7			8		
89	91	" "	19204			2		17.4			6 1/2		
91	93	" "	19205			2		15.7			2 1/2		
93	95	" "	19206			2		66.1			1/2		
83	93	SEAM IIII COMPOSITE 19201-205				10'	0.3	15.9	24.1	59.7	6 1/2	0.52	CALC ASH 15.5%
													1
165	167		19207			2		20.2			7 1/2		164-173 COAL
167	169		19208			2		28.5			7 1/2		9'
169	171		19209			2		18.5			6 1/2		
171	173		19210			2		4.7			7 1/2		
173	175	C & Sh.	19211			2		18.7			8		
175	177	" "	19212			2		57.8			1		

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS
177	179	C & Sh.	19213			2		51.0			4		
179	181	" "	19214			2		31.2			7		178.5 - 181 COAL
181	183	" "	19215			2		22.6			8		2.5'
183	185	" "	19216			2		53.6			3		
185	187	P.A. d. S. & FSI →	19217			2	0.3 25	25.8	23.3	50.8	6.6	0.55	
187	189	C. & Sh.	19218			2		58.9			2 1/2		
165	175	SEAM - 11 COMPOSITE 19207 - 211				10'	0.3	19.1	24.0	56.6	7 1/2	0.33	CALC. ASH 18.1
179	183	COMPOSITE 19214 - 215				4	0.5	27.2	22.6	49.7	7	0.45	
310	312	C & Sh.	19219			2		61.9			1/2		
312	314	" "	19220			2		73.0			1/2		
314	316	" "	19221			2		53.6			1/2		
316	318	"	19222			2		29.9			2 1/2		313 - 330.5 COAL
318	320		19223			2		19.4			4		17.5'
320	322		19224			2		16.3			3		
322	324		19225			2		27.3			2		
324	326	C & Sh.	19226			2		21.4			3		
326	328	" "	19227			2		19.3			7 1/2		
328	330	" "	19228			2		30.6			4 1/2		
330	332	" "	19229			2		36.7			5		
3													
316	332	SEAM - 9 COMPOSITE 19227 - 229				16	0.4	24.4	21.4	53.8	3 1/2	0.24	CALC. ASH 25.3
338	340	C & Sh.	19230			2		75.7			1/2		
340	342	" "	19231			2		74.1			1/2		
354	356	C & Sh.	19232			2		30.8			5		
356	357		19233			1		52.9			1		

Diamond Drill Geological Log

Cominco

K-Forging 76(3) A-1

379

Objective:

Sampled:

Logged By: R. Krishan Date: Nov 76

Composites:

Block: | Sect.: | Place: Eagle Mtn (No-Name Gulch Area) | App. Bear: | App.: Dip.: | Length: 515'

From	To	Discard: Intersections taken from Gamma Ray - Nertron Log Reason:
0	7	OVERBURDEN
7	12	Mudstone
12	21	Siltstone
21	34	Siltstone with mudstone interbeds
34	40	Silty sandstone
40	67	Siltstone
67	73	Sandstone
73	102	Interbedded mudstone and siltstone
102	115	Siltstone with silty sandstone sands
115	130.5	Mudstone
130.5	146	Coal 15.5' Seam 9
146	152	6' Shale
152	156	Coal 4'
156	173	Mudstone with occasional thin siltstone interbed.
173	175	Coal 2'
175	192	Mudstone
192	198	Siltstone
198	208	Mudstone
208	225	Silty sandstone
225	289	Sandstone
289	358	Mudstone
358	374	Mostly siltstone with interbeds of mudstone and silty sandstone
374	381	Mudstone

Core Size

Hole No. RH 483 Page 1 of 2

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

2507—N.D.N.

Diamond Drill Geological Log

Cominco

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

From	To	Discard: Reason:
381	383.5	Coal 2.5'
383	403	Mudstone
403	419.5	Coal 16.5' Seam 7
419.5	441	Mudstone
441	449	Siltstone with bands of mudstone
449	459.5	Mudstone
459.5	480.5	Coal 21' Seam 5
480.5	488	Mudstone, siltstone from 487' to 492'
488	515	Silty sandstone and siltstone
		End of hole 515'
		Oct. 30/76

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

Core Size

Hole No. RH 483 Page 2 of 2

2507—N.D.N.

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	RAD. LOG REMARKS
89	91		18133			2		45.8			3 1/2		
131	133	C & Sh.	18134			2		13.2			4 1/2		130.5 - 146
133	135	" " SEAM-9	18135			2		20.6			2		
135	137		18136			2		19.5			3		15.5
137	139	C & Sh.	18137			2		16.4			3		
139	141	C & Sh.	18138			2		23.3			4 1/2		
141	143		18139			2		9.9			6 1/2		
143	145	C & Sh.	18140			2		18.2			7		
131	145	SEAM-9 COMPOSITE				14'	0.1	17.8	21.4	60.7	4 1/2	0.35	
154	156	C & Sh.	18141			2		49.6			2		
380	382	C & Sh.	18142			2		74.7			0		
382	384	" "	18143			2		44.3			1		
384	386	" "	18144			2		58.7			1		
386	388	" "	18145			2		64.5			1		
404	406	C & Sh.	18146			2		15.6	1		2		
406	408		18147			2		11.1			7		
408	410		18148			2		24.3			1		403-419.5
410	412		18149			2		14.6			6 1/2		
412	414	SEAM-7	18150			2		20.8			4		165.
414	416		19251			2		16.9			7 1/2		
416	418		19252			2		16.1			6		
418	420	C & Sh.	19253			2		45.5			5		
420	422	" "	19254			2		82.8			0		← CHECK ←
404	418	COMPOSITE				14	0.2	17.1	21.6	61.1	4 1/2	0.30	

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS
460	462	Cc Sh.	19255			2		33.1			1		
462	464		19256			2		28.6			4½		
464	466		19257			2		12.4			5		
466	468		19258			2		39.8			1		459.5 - 480.5
468	470		19259			2		15.7			1½		
		BDM-5											21'
472	474		19260			2		13.8			2		
474	476		19261			2		17.7			1½		
476	478		19262			2		17.7			3		
478	480	Cc Sh.	19263			2		28.8			1		
480	482	" "	19264			2		26.1			1		
482	484	" "	19265			2		45.4			1		
460	482	COMPOSITE				20	22	0.3	23.5	18.5	57.8	2	0.31	

Diamond Drill Geological Log

Cominco

K-Fording 76(3)A-1

379

Objective:

Sampled:

Logged By: R. Krishan Date: Nov 76

Composites:

Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length:
		Eagle Mt. (No-Name Gulch	Area)		469'

From	To	Discard: Reason:	
		Intersections taken from Gamma Ray - Neutron Log	
0	19	Mudstone	
19	23.5	Coal 4.5'	11(8)'
23.5	26.5	3' Shale	
26.5	30	Coal 3.5'	
30	41	Mudstone	
41	43	Coal 2'	
43	53	Mudstone with thin coaly shale band at 46.5'	Seam 12 Zone
53	55	Coal 2'	
55	61	Mudstone	
61	94	Mudstone with interbeds of siltstone	
94	105	Coal 11' Seam 11U	
105	128	Mudstone	
128	145	Siltstone and mudstone, some sandstone near bottom	
145	154	Mudstone	
154	179	Siltstone and sandstone interbeds	
179	184	Mudstone	
184	202.5	Coal with 2' and 0.5' shale bands at 193' and 197.5' respectively 18.5(16)' Seam 11	
202.5	210	Mudstone	
210	297	Mostly sandy siltstone with sandstone interbeds	
297	305	Sandstone	
305	323	Mudstone	
323	329	Siltstone	
329	335	Mudstone	

40 Scale

Color Plot & Dips	Ore Classes & Aver.
0	

Core Size

Hole No. RH 484 Page 1 of 2

2507—N.D.N.

Diamond Drill Geological Log

Cominco

40 Scale

Color Plot & Dips | Ore Classes & Aver.

Objective:

Sampled:

Logged By: R. Krishan Date:

Composites:

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

From	To	Discard: Reason:
335	354	Coal 19' Seam 9
354	358.5	5.5' Shale
359.5	363.5	Coal 4'
363.5	380	Mudstone with siltstone interbed from 372 to 376'
380	383.5	Coal 3.5' Seam 8
383.5	394	Mudstone
394	438	Siltstone gradings progressively to sandstone towards bottom.
438	469	Sandstone
		End of hole at 469'
		Oct. 28/76

Core Size

Hole No. RH 484

Page 2 of 2

2507—N.D.N.

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS
19	21		19234			2		84.5			0		
21	23		19235			2		47.2			2 1/2		
23	25		19236			2		34.9			1/2		
25	27		19237			2		46.3			1/2		
27	29		19238			2		39.4			1		
29	31		19239			2		17.2			1/2		
31	32	C & Sh.	19240			1		13.1			1/2		
41	43		19241			2		68.1			1/2		
43	45	C & Sh.	19242			2		13.2			4		
45	46	" "	19243			1		76.0			0		
53	55		19244			2		9.2			3		
55	56	C & Sh.	19245			2		47.9			3 1/2		
94	96	C & Sh.	19246			2		46.5			1 1/2		
96	98	SEAM -11U	19247			2		12.7			8 1/2		94-105
98	100		19248			2		10.9			8 1/2		11'
100	102		19249			2		6.6			6 1/2		
102	104	C & Sh.	19250			2		29.4			2		
104	106	" "	18226			2		76.2			1		
96	104	COMPOSITE				8'	0.3	15.5	24.4	59.8	7	0.66	
186	188		18228			2		18.1			7		
188	190		18229			2		19.1			7 1/2		

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS
190	192		18230			2		19·8			7 1/2		
192	194		18231			2		—			—		184-193 Good Core
194	196		18232			2		77·9			1/2		
196	198		18233			2		47·8			2		
198	200	C & Sh.	18234			2		40·7	CHECK		5		
200	202	" "	18235			2		33·5			7 1/2		
202	204	" "	18236			2		21·5			7 1/2		
204	206	" "	18237			2		36·3			6		198·5 - 202·5 Good Core
206	208	" "	18238			2		61·0			1 1/2		
208	210	" "	18239			2		47·4			3 1/2		
186	192	COMPOSITE				6	0·4	19·6	23·5	56·5	7 1/2	0·64	
200	206	COMPOSITE				6	0·3	31·0	21·9	46·8	6 1/2	0·68	
331	332	C & Sh.	18241			1		65·7			1/2		
332	334	" "	18242			2		79·4			0		
336	338		18243			2		60·0			1/2		
338	340		18244			2		28·0			2 1/2		
340	342		18245			2		9·2			5 1/2		
342	344		18246			2		14·0			7 1/2		
344	346		18247			2		15·4			2		335 - 354
346	348		18248			2		32·4			3 1/2		
348	350		18249			2		14·2			2 1/2		
350	352		18250			2		17·2			7		
352	354		18126			2		13·7			3 1/2		
354	356	C & Sh.	18127			2		40·9			5 1/2		
338	356	COMPOSITE				18	0·1	20·9	20·2	58·8	4	0·28	

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET		WIDTH	M	A	VM	FC	FSI	S	REMARKS
363	365	C & Sh.	18128			2		37·8			1 1/2		
365	367	" "	18129			2		36·0			1 1/2		
367	369	" "	18130			2		74·1			1/2		
381	383	C & Sh.	18131			2		34·9			2 1/2		
383	385	" "	18132			2		47·8			1 1/2		
3	390		18240					75·3			1/2		

Diamond Drill Geological Log

Cominco

K. Foroine 76(3)A-1

379

40 Scale

Color Plot & Dips | Ore Classes & Aver.

Objective:

Sampled:

Logged By: R. Krishan Date: Dec. 9/76

Composites:

Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length:
		Turnbull Mt.			258'

Discard: Reason: Intersections taken from Gamma Ray - Neutron Log

From	To	
0	9	Overburden
9	18	Mudstone
18	27	Coal 9' Seam 11U
27	34	Mudstone
34	36.5	Coal 2.5'
36.5	39.5	3' Shale
39.5	41.5	Coal 2' Seam 11
41.5	45.5	4' Shale
45.5	48.5	Coal 3'
48.5	84	Mudstone
84	157	Mostly siltstone, some sandstone near top, occasional mudstone interbeds
157	165.5	Mudstone
165.5	182.5	Coal 17' Seam 9
182.5	186	Shale
186	187.5	Shaley Coal 1.5'
187.5	191	Shale
191	192	Shaley Coal 1'
192	220.5	Mudstone
220.5	222.5	Coal 2'
222.5	233	Sandstone
233	244	Siltstone
244	251	Mudstone
251	258	Sandstone

Core Size

Hole No. RH 605 Page 1 of 1

Nov. 17/76

2507-

Diamond Drill Geological Log

Cominco

K-Forcoine 76 (s)A-1

319

Objective:			Sampled:		
Logged By: W. H. Shaw	Date: Nov. 22, 1976		Composites:		
Block:	Sect.:	Place: Turnbull	App. Bear:	App.: Dip.:	Length: 548'

40 Scale

Color Plot & Dips | Ore Classes & Aver.

From	To	Discard:	Reason:
0	8	Overburden	
8	58	Silt, with interbedded mud	
58	60.5	Coal	
60.5	74	Mudstone, carb with interbanded coal streaks	
74	83	Coal 9'	
83	85	Mud	
85	87	Coal 2'	9 Seam
87	90.2	Mud	
90.2	92.0	Coal 1.8'	
92.0	100.5	Mud, carb.	
100.5	112.0	Coal 3.5'	
112	180	Mud, carb grading to silt, fine to coarse toward bottom	
180	224	Sand, fine, grey	
224	258	Silt	
258	260	Coal	
260	263	Silt	
263	267	Sand, med, grey, calate stringers	
267	272	Silt	
272	278	Coal 6'	7 Seam
194	33.5	Mud, carb	
333.5	344	Coal 8.5'	
344	346	Mud	

Core Size: Rotary chips

Hole No.: RH 609

Page: 1

2507—N.D.M.

Diamond Drill Geological Log

Cominco

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

From	To	Discard: Reason:
346	348	Coal 2'
348	350	Mud'
350	352.5	Coal 2.5'
352.5	368	Intergraded carb mud and silt
368	372	Coal
372	382	Mud
382	384	Coal
384	424	Mud
424	438	Sand, Fine
438	536	Mud with interbedded silt
536	540	Coal 4' R7N seam
540	548	Silt

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

Core Size

Hole No. RH 609

Page 2

2507—N.D.N.

Diamond Drill Geological Log

Cominco

K-Foroine 76 (3) A-1

319

Objective:

Sampled:

Logged By: W. H. Shaw Date: Nov. 24, 1976

Composites:

Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length:
		Turnbull			452'

From	To	Discard: Reason:
0	10	Overburden
10	20	Carboneous mudstone
20	27	Mudstone with Coal streaks
27	41	Coal 14' Flu seam
41	62	Mudstone, carb
62	64	Coal 2'
64	70	Mudstone, carb
70	79	Coal 9' 11 Seam
79	99	mudstone, with coaly bands
99	103	coal 4'
103	149	Mudstone, silty occasionaly highly carb
149	165	Silt, fine dark grey
165	175	Mudstone, highly carb.
175	225	Silt, fine-med grained, grey-dark grey, with highly carb mud. 185'-190'
225	237	Mudstone, carb.
237	245	Coal 8'
245	249	Mud
249	250	Coal 1' 9 Seam.
250	252	Mud
252	254.5	Coal 2.5'
254.5	271	Interbedded carb mud & fine med dark grey silt
271	274	Coal 3' 8 seam
274	452	Silt, fine to med, dark grey, with interbedded mud. carb.

Core Size: Rotary chips

Hole No.: RH 610

Page: 1

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

2507—N.D.N.

Diamond Drill Geological Log

Comineco

K-foroing 76(3)A-1

319

Objective:			Sampled:			
Logged By: A. Slingsby	Date: Nov. 1976		Composites:			
Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length: 512'	

From	To	Discard:	Reason:
0	16	overburden	
16	31.5	mud	
31.5	33.5	coal 2'	
33.5	37.5	mud	
37.5	43.5	coal 6' 12 seam	
43.5	55	mudst.	
55	66.5	coal 11.5'	
66.5	68.5	mudst. 11u seam	
68.5	70.0	coal 1.5'	
70.0	94.5	mudst.	
94.5	107	coal 12.5(11)' 11seam	
107	121.5	mudst, carb	
121.5	126.5	coal 5' 11 seam	
126.5	165	muds with interbedded silt fine gr.	
165	171	sand, fine, grey	
171	182	mudst.	
182	234	sand fine grading to coarse	
234	248.5	mudst.	
248.5	252	coal 4.5	
252	254	mudst	
254	256	coal 2' 9 seam	
256	259.5	mudst	
259.5	261.5	coal 2'	

Core Size: Rotary chips

Hole No.: RH 611

Page: 1

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

2507—N.D.N.

Diamond Drill Geological Log

Cominco

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

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

From	To	Discard: Reason:
264	267	coal 3' 9 SEAM
267	284	mudst, carb
284	288.5	coal 3.5' 8 seam
288.5	501.5	interbedded fine silt and carb mudst
501.5	506	coal 4.5 R7u seam
506	512	

Core Size

Hole No. RG 611

Page 2

2507—N.D.N.

Diamond Drill Geological Log

Cominco

K. Forbes 76(3)A-1

Objective:			Sampled:		
Logged By: R. Krishan	Date: Dec. 9/76		Composites:		
Block:	Sect.:	Place: Turnbull Mt.	App. Bear:	App.: Dip.:	Length: 506'

From	To	Discard: Reason: Intersections taken from Gamma Ray - Neutron Log
0	7	Overburden
7	10	Mudstone or overburden
10	34	Coal with 2' Shale parting at 16.5 24(22)' Seam 15
34	44	Mudstone
44	46	Shaley Coal 2'
46	74	Mudstone, some siltstone
74	77	Coal 3'
77	82	Mudstone
82	89	Silty sandstone
89	121.5	Mostly mudstone, some siltstone, 112-119' carbonaceous shale
121.5	125.5	Coal 4' }
125.5	130.5	5' Shale } Seam 14U
130.5	136	Co-al 5.5' }
136	154	Mudstone with one siltstone interbed
154	184	Siltstone
184	234	Sandstone
234	256	Mudstone and siltstone interbeds
256	284	Sandstone
284	314	Mostly mudstone some siltstone
314	318	Coal 4' }
318	332.5	Siltstone }
332.5	335.5	Coal 3' } Seam 14
335.5	341	5.5' Shale }

40 Scale

Color Plot & Dips	Ore Classes & Aver.
0	

Core Size

Hole No. Page

RH 612 1 of 2

2507-

Diamond Drill Geological Log

Cominco

Objective:

Logged By: R. Krishan Date:

Sampled:

Composites:

40 Scale

Color Plot & Dips | Ore Classes & Aver.

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

From	To	Discard:	Reason:
341	343	Coal 2'	
343	346	3' Shale	
346	348	Coal 2'	
348	354	Mudstone	
354	381	Sandstone	
381	387	Mudstone	
387	406	Siltstone, sandstone near bottom	
406	413.5	Mudstone	
413.5	419	Coal 5.5'	
419	433	Siltstone, mudstone near bottom	
433	437	Coal 4'	Seam 13
437	445.5	Mudstone	
445.5	449.5	Coal 4'	
449.5	455	Mudstone	
455	460	Siltstone	
460	481	Mudstone	
481	485.5	Coal 4.5'	
485.5	506	Mudstone and siltstone	
		End of hole	
		Nov. 15/76	

Core Size

Hole No. Page

RH 612 2 of 2

2507-

Diamond Drill Geological Log

Cominco

K. Forbes 76 (3)A-1

377

40 Scale

Color Plot & Dips | Ore Classes & Aver.

Objective:

Sampled:

Logged By: R. Krishan Date: Dec. 9/76

Composites:

Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length:
		Turnbull Mt.			489'

From	To	Discard: Intersections taken from Gamma Ray - Neutron Log	Reason:
0	9	Overburden	
9	24	Mudstone	
24	33	Sandstone with siltstone interbeds	
33	45.5	Mudstone	
45.5	50.5	Coal 5'	
50.5	53.5	3' Shale	Seam 14
53.5	55.5	Coal 2'	
55.5	58	2.5' Shale	
58	60.5	Coal 2.5'	
60.5	67	Sandstone and siltstone	
67	82	Mudstone	
82	90	Siltstone	
90	113	Mudstone	
113	122	Siltstone	
122	128	Mudstone	
128	130	Coal 2'	
130	140.5	Shale	
140.5	142.5	Coal 2'	Seam 13
142.5	150.5	Siltstone	
150.5	152.5	Coal 2'	
152.5	163	Mudstone and siltstone	
163	170	Sandstone	
170	182	Mudstone	

Core Size

Hole No. RH 613

Page 1 of 3

2507-

Diamond Drill Geological Log

Cominco

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

From	To	Discard:	Reason:
182	204	Siltstone	
204	225	Sandstone	
225	234	Mudstone and siltstone	
234	238	Coal 4'	
238	251.5	Mudstone	
251.5	263.5	Coal 12' Seam 12	
263.5	275	Mudstone	
275	290.5	Siltstone	
290.5	300.5	Coal 10' Seam 11U	
300.5	309	Mudstone	
309	328	Siltstone some sandstone near top	
328	335.5	mudstone	
335.5	338.5	Coal 3'	
338.5	342.5	4' Shale	
342.5	346.5	Coal 4'	
346.5	353	6.5' shale	
353	356	Coal 3'	
356	370	Mudstone	
370	394	Siltstone: with occasional thin bands of mudstone	
394	444	Sandstone	
444	452	Mudstone	
452	456	Coal 4'	
456	460	Mudstone	

40 Scale	
Color Plot & Dips	Ore Classes & Aver.

0

Core Size

Hole No. RH 613

2507-

Diamond Drill Geological Log

Cominco

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

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

From	To	Discard: Reason:
460	461	Shaley Coal
461	467	Mudstone
467	478	Coal 11' Seam 9
478	481	3' Shale
481	483	Coal 2'
483	485	2' Shale
485	488	Coal 3' (Thickness estimated)
488	489	Mudstone
		End of hole
		Nov. 16/76

Core Size

Hole No. RH 613 Page 3 of 3

2307-

Diamond Drill Geological Log

Cominco

K-Forging 76(3)e-1

319

Objective:			Sampled:		
Logged By: R. Krishan	Date: Dec. 9/76		Composites:		
Block:	Sect.:	Place: Turnbull Mt.	App. Bear:	App.: Dip.:	Length: 550'

From	To	Discard: Reason: Intersections taken from Gamma Ray Neutron Log
0	15	Overburden
15	25	Siltstone
25	31	Mudstone
31	33	Coal 2'
33	39	Mudstone
39	58	Sandstone
58	62	Coal 4'
62	66	Mudstone
66	68.5	Coal 2.5'
68.5	122	Mudstone and siltstone with several thin bands of sandstone
122	128	Coal 6'
128	132	4' Shale
132	149	Coal 17'
149	160	Mudstone
160	189.5	Siltstone, some mudstone near bottom
189.5	203	Coal 13.5'
203	213	Mudstone
213	235	Siltstone
235	238	Sandstone
238	241	Mudstone
241	242.5	Shaley Coal 1.5'
242.5	244	SHALE
244	245	Shaley Coal 1'

40 Scale

Color Plot & Dips	Ore Classes & Aver.
O	

Core Size

Hole No. , Page

RH 614 1 of 2

2507-

Diamond Drill Geological Log

Cominco

Objective:

Sampled:

Logged By: Date:

Composites:

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

40 Scale

Color Plot & Dips | Ore Classes & Aver.

From	To	Discard:	Reason:
245	247	Shale	
247	259	Coal with 1.5' shale band at 250' 12(10.5)'	
259	266	Siltstone	
266	282	Mudstone	
282	286	Coal 4'	
286	316	Mudstone with sevearl bands of sandstone and siltstone	
316	320	Coal 4'	
320	324	Mudstone	
324	333	Sandstone	
333	351	Mudstone, some siltstone near top	
351	367	Coal with two feet shale band at 262.5' 16(14) Seam 11U	
367	369	Coaly shale	
369	381	Mudstone	
381	384	Coal 3'	
384	398.5	Mudstone, sandstone from 389' to 394'	
398.5	404	Coal 5.5'	
404	413	Mudstone	
413	457	Mostly siltstone some sandstone	
457	476	Mudstone, siltstone near bottom	
476	520	Siltstone, top 6' sandstone	
520	524	Mudstone	
524	538	Coal 2' and 1' shale partings at 530.5' and 534' 14(11) Seam 9	
538	550	Mudstone	
		End of hole Nove. 20/76	

Core Size

Hole No. RH 614 Page 2 of 2

2507-

Diamond Drill Geological Log

Cominco

K. Forbing 76/3/A-1

319

Objective:			Sampled:		
Logged By: R. Krishan	Date: Dec. 9/76		Composites:		
Block:	Sect.:	Place: Turn bull Mt.	App. Bear:	App.: Dip.:	Length: 525'

40 Scale

Color Plot & Dips | Ore Classes & Aver.

From	To	Discard: Reason: Intersections taken from Gamma Ray Neutron Log
0	4	Overburden
4	7	Coal 3'
7	13	Mudstone
13	62	Siltstone with bands of mudstone
62	78	Mudstone
78	82	Sandstone
82	90	Mudstone
90	98	Coal 8'
98	100	2' Shale
100	101	Coaly shale
101	102.5	1.5' Shale
102.5	108.5	Coal 6'
108.5	111	Mudstone
111	122	Sandstone
122	165	Interbedded siltstone and sandstone
165	183	Sandstone
183	184.5	Coal 1.5'
184.5	191.5	Mudstone
191.5	195	Coal 3.5'
195	206	Mudstone
206	207	Coal 1'
207	221.5	Mudstone and siltstone with a band of sandstone
221.5	223	Coal 1.5'

Core Size

Hole No. RH 615

Page 1 of 2

2507-

Diamond Drill Geological Log

Cominco

Objective:

Logged By: Date:

Sampled:

Composites:

40 Scale

Color Plot & Dips | Ore Classes & Aver.

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

From	To	Discard:	Reason:
223	255	Mudstone with sevearl bands of sandstone and siltstone	
255	312	Siltstone with bands of sandstone and mudstone	
312	319.5	Mudstone	
319.5	323	Coal 3.5'	
323	332	9' Mudstone	Seam 12
332	340	Coal 8'	
340	349	Mudstone	
349	376	Coal with three feet shale parting at 356.5' 27(24)'	Seam 11U
376	390	Mudstone	
390	393.5	Coal 3.5'	
393.5	413	Siltstone with bands of sandstone	
413	424.5	Mudstone	
424.5	429	Coal 4.5'	
429	433	Mudstone	
433	443	Sandstone, siltstone near top	
443	458	Siltstone with mudstone interbeds	
458	459.5	Coal 1.5'	
459.5	480.5	Siltstone with sandy intervals	
480.5	493.5	Mudstone	
493.5	502	Coal 8.5'	
502	512	Mudstone	
512	525	Siltstone, sandstone near bottom	
		End of hole	
		Nov. 21/76	

Core Size

Hole No. . Page

RH 615 2 of 2

Diamond Drill Geological Log

Cominco

K-Fording 76(3)A-1

319

Objective:

Sampled:

Logged By: A. Slingsby Date: nov. 1976

Composites:

Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length:
		Turnbull			695'

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

From	To	Discard: Reason:
0	23	overburden
23	80	mdst, grey-dark grey with some fine silt
80	105	coarse silt to sand slightly limonitic 90'-100'
105	135	fine silt, grey with calcite 110'-115' muddy 125'-130'
140	170.5	mdst. grey-black with calcite 135'-140' & 165'-170, carb 170'-180' pyritiferous 155'-160'
170.5	175.5	coal 5' seam R7u
175.5	220	slst, grey med grained
220	228	sand
228	237	mudst
237	254.	silt
254	263	mudst
263	290	coal 27' seam R7
290	402	mudstone carb with interbedded silt
402	437.5	coal 35.5 (34)' seam R5
437.5	450	mdst dark grey with silt
450	485	silst. -rey dark grey with calcite 455'-465'

Core Size

Rotary chip

Hole No. RH 617

Page 1

2507—N.D.N.

Diamond Drill Geological Log

Cominco

40 Scale

Color Plot & Dips | Ore Classes & Aver.

Objective: | Sampled:

Logged By: Date: | Composites:

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

Discard: Reason:

From	To	
485	490	coarse siltst light grey
490	500	mdst dark grey
500	505	sdst limonitic light grey
505	515	slst fine grey dark grey calcite in lower 5 ft.
515	520	sdst. with calcite
510	545	slst, fine grained light grey interbedded (?) mdst & med. grained slst near base
545	555	chert avenite, limonitic
555	560	mdst dark grey
560	578	chert arenite with carb near base
578	580	mdst dark grey
580	625	chert arenite initially limonitic, some carb 595'-600'
625	630	mdst, dark grey
630	635	chert arenite
635	649.5	mdst, dark grey-black
649.5	689.5	coal with muddy section 655.5-661.5, 679-682, 686.5-688 R4 seam 40(32')
689.5	695	mdst, highly carb

Core Size

Hole No. RH 617 Page 2

0

2507—N.D.N.

Diamond Drill Geological Log

Cominco

K. Forcing 76(3)A-1

379

Objective: Rob Chapman			Sampled:		
Logged By: W. H. Shaw	Date: Nov. 76		Composites:		
Block:	Sect.:	Place: TRunbull	App. Bear:	App.: Dip.:	Length: 350'

From	To	Discard: Reason:
0	8	Overburden
8	24	Mdst, med. grey, grades silty 2' above lower contact.
24	30	slst, light grey, medium grained
30	38	mdst, med. grey, silty from 30-32
38	43.5	coal 5.5' RFU
43	51	mdst, med. grey, grades to very carbonaceous 2' above lower contact
51	56	coal; muddy from 51-53'
56	60	Coal 4' RFU
60	67	mdst, med, grey, silty within 2' of lower contact
67	81	slst, light to med. grey, fine grained grading medium grained from 75-77'
81	125	mdst, med. grey, generally silty and grades locally to fine slst, becomes a med. slst. from 95-97' carbonaceous from 119-123'
125	143	slst, light to med grey, fine to medium grained, becomes muddy & slightly carbonaceous 2' above lower contact
143	160.5	Coal; high quality, vitrain; mdst, partings at 147-149' 17.5 seam RF
161	237	mdst; initially med. grey mdst, but grades to a medium light grey silty mdst from 175-199'; becomes med. grey mdst from 199-215 and slightly carbonaceous from 215 to contact; locally silty from 225-231''
237	257	coal; moderately fair quality; mdst, chips occur from 241-243', 247-249' 20' R5 Seam
257	272	mdst, medium light grey, silty
277	350	slst, generally medium grey, fine slst; grades to light grey medium slst. from 303-307' to 327'331'; fairly frequently grades to a silty mds.

Core Size

Ship samples

Hole No. RH 618 Page 1

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

2507—N.D.N.

Diamond Drill Geological Log

Cominco

K. Forbes 76(3)A-1

379

Objective:

Sampled:

Logged By: W. H. Shaw Date: Dec. 1976

Composites:

Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length:
		Turnbull			509'

From	To	Discard:	Reason:
0	6	overburden	
6	12	sandstone, dark grey	
12	28	mud	
28	31	coal 3'	
31	37	mud	
37	39	coal 2'	9 seam
39	43	mud	
43	44	coal 1'	
44	46.5	mud	
46.5	48.5	coal 2'	
48.5	65.5	mud, carb	
65.5	68.5	coal 3'	
68.5	137	mudstone, dark grey, lower most carb	
137	152	silt, intially fine, becomes coarse, grey, towards bottom	
152	247	mudstone, dark grey, carb with interbedded silt. med grained, grey	
247	251	coal 4'	R7u
251	275	silt with interbedded sand	
275	335	silt fine grading to med. grained	
335	344	mud, carb	
344	363	coal 19'	R7
363	419	mud	
419	436.5	1-coal 17.5	R5
436.5	449	mud	

Core Size

Rotary chip

Hole No. RH 619

Page 1

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

2507—N.D.N.

Diamond Drill Geological Log

Cominco

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

From	To	Discard:	Reason:
449	479	coal 30'	R5
479	488	mud, carb.	
488	490	coal	
490	498	mud	
498	499	coal	
499	509	mudstone	

40 Scale

Color Plot & Dips	Ore Classes & Aver.

0

Core Size

Hole No. RH 619 Page 2

2507-

Diamond Drill Geological Log

Cominco

K. Froese 76 (3) A-1

319

Objective:			Sampled:			
Logged By: W. H. Shaw	Date: Dec, 1976		Composites:			
Block:	Sect.:	Place: Turnbull	App. Bear:	App.: Dip.:	Length: 409'	

From	To	Discard: Reason:
0	16.5	overburden
16.5	21.5	coal 5' 11 seam
21.5	30.5	mud
30.5	35.5	coal 5' 11 seam
35.5	65	mud
65	138	siltstone grading coarse downward
138	173	mud
173	176.5	Coal 3.5'
176.5	179.5	-ud
179.5	182.5	Coal 3'
182.5	187.5	mud
187.5	189.5	Coal 2' 9 seam
189.5	192	mud
192	194	coal 1'
194	215	mud
215	219	coal 4'
219	384.5	interledded mud and fine silt
384.5	388	coal 3.5' R7u seam
388	409	mudst.

Core Size: Rotary chips

Hole No.: RH 620 Page: 1

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

2507—N.D.N.

Diamond Drill Geological Log

Cominco

K. Fording 76(3)A-Y

Objective:

Sampled:

Logged By: R. Krishan Date: Nov. 16/76

Composites:

377

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

From	To	Discard: Intersections taken from Gamma Ray Log. Reason:
0	18	Mudstone
18	22	Silstone
22	28.5	Mudstone
28.5	32	Coal 3.5' Seam - Fm3?
32	38	Mudstone
38	75	Mostly siltstone with sands of mudstone and sandstone
75	82	Mudstone
82	86	Sandstone
		No Seam "GL" to 86' (5731' El.)
		End of hole at 86'
		Oct. 20/76

40 Scale

Color Plot & Dips	Ore Classes & Aver.
0	

Core Size: B-50 Hole

Hole No.: RH 1015

Page: 1 of 1

2507—N.D.N.

Diamond Drill Geological Log

Cominco

K. Forbes 76(3)A-1

Objective:

Sampled:

[redacted]

Logged By: R. Krishan Date: Oct. 76

Composites:

Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length:
		Greenhills (North)			253'

Discard: Reason: Intersections taken from Gamma Ray Log

From	To	
0	40	Overburden
40	47	Carbonaceous mudstone
47	49	Coaly shale
49	75	Mostly siltstone with mudstone interbeds
75	99.5	Mostly mudstone, some siltstone
99.5	109	Coal 9.5'
109	114.5	Mudstone
114.5	116.5	Coal 2'
116.5	121	Mudstone
121	130	Sandstone
130	142.5	Mudstone with 2' coaly shale band at 134'
142.5	148	Coal 5.5'
148	180	Mostly siltstone, some silty sandstone'
180	183	Coal 3'
183	190	Mudstone
190	211	Sandstone some siltstone near bottom
211	216	Mudstone
216	232	Coal 16' Seam "F"
232	253	Mudstone, some sandstone near bottom
		End of hole at 253'
		Oct 8/76

Core Size

Seam "F" not sampled

Hole No. RH 1016

Page 1 of 1

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

2507-

Diamond Drill Geological Log

Cominco

K. Forcing 76(3)A

Objective:

Sampled:

Logged By: R. Krishan Date: Oct. 76

Composites:

[redacted]

Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length:
		Greenhills (North)			253'

Discard: Reason: Intersections taken from Gamma RAy Log.

From	To	
0	41	Overburden
41	48	Mudstone
48	75	Mostly siltstone, some mudstone, 2' coaly shale band at 56.5
75	91	Mudstone
91	97	Sandstone
97	110	Mudstone
110	118	Coal 8'
118	122	Mudstone
122	127	Silty sandstone
127	133	Mudstone
133	143	Siltstone, mudstone near bottom
143	145	Coal 2'
145	150.5	Mudstone
150.5	159.5	Coal 9'
159.5	168	8.5' shale
168	171	Coal 3'
171	175	Mudstone
175	182	Siltstone
182	188	Mudstone
188	206	Sandstone grading to siltstone near bottom
206	212	Mudstone
212	234	Coal 22' Seam "F"
234	253	Mudstone, some sandstone near bottom
		End of hole at 253' Oct. 9/76

Core Size

Not sampled

Hole No. RH 1017

Page 1 of 1

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

2507-

Diamond Drill Geological Log

Comineo

K. Forstner 76(3)A-1

Objective:

Sampled:

Logged By: R. Krishan Date: Oct. 76

Composites:

[redacted]

Block: Sect.: Place: Greenhills (North) App. Bear: App. Dip.: L 240'

Reason:

Discard: Intersections taken from Gamma Ray Log

From	To	
0	55	Overburden
55	69	Siltstone
69	83.5	Mudstone
83.5	95.5	Coal 12'
95.5	99	mudstone
99	108	Siltstone
108	115	Mudstone
115	130	Sandstone
130	133	Mudstone
133	145	Coal with one foot shale parting a 142' 12'(11)'
145	168	Mudstone grading to siltstone towards bottom
168	182	Mostly sandstone with several siltstone interbeds
182	191.5	Mudstone
191.5	213.5	Coal 22' Seam "F"
213.5	227	Mudstone
227	240	Siltstone
		End of hole at 240'
		Oct. 10/76

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

Core Size

Not sampled

Hole No. RH 1018

Page 1 of 1

2507-

Diamond Drill Geological Log

Cominco

K. Forcing 76(3)A-1

Objective:

Sampled:

Logged By: R. Krishan Date: Oct 76

Composites:

[redacted]

Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length:
		Greenhills			253'

40 Scale

Color Plot & Dips | Ore Classes & Aver.

From	To	Discard: For - 0-250' Reason: Intersections taken from Gamma Ray Log
0	27	Overburden
27	32	Siltstone
32	39	Mudstone
39	42.5	Coal 3.5'
42.5	46	Mudstone
46	72	Sandstone and siltstone
72	89	Mostly mudstone some silty sandstone
89	127	Siltstone, with mudstone interbeds
127	131	Sandstone
131	147	Mudstone
147	153	Coal 6'
153	171	Interbedded siltstone and mudstone
171	182	Mudstone
182	186	Coal 4'
186	202	Siltstone and silty sandstone
202	205	Mudstone
205	207	Coal 2'
207	212	Mudstone
212	219	Sandstone
219	235	Mudstone and siltstone
235	251	Coal 16' Seam F
251	253	Mudstone
		End of hole at 253'

Core Size

Not Sampled

Hole No. RH 1019 Page 1 of 1

2507-

Diamond Drill Geological Log

Cominco

K. Forest 76(3)a

40 Scale

Color Plot & Dips | Ore Classes & Aver.

Objective:

Sampled:

Logged By: R. Krishan Date: Oct. 76

Composites:

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

From	To	Discard: Reason:
		Intersections taken from Gamma Ray Log
		RH 1020
0	7	Overburden or Rock?
7	17.5	Coal 10.5' Seam "GL"
17.5	24	Mudstone
24	26	Coal 2'
26	42	Mudstone
42	52	Sandstone, some siltstone near top
52	86	Mostly siltstone with some sandstone and siltstone
		End of hole at 86'
		RH 1021
0	9	Overburden?
9	20	Mudstone
20	24	Coaly shale or sandstone
24	27.5	Shale
27.5	30	Coal 2.5'
30	75	Interbedded mudstone and siltstone
75	87	Sandstone
		End of hole at 87' No seam "GL" to 87'

Core Size

B50 Drill - no samples

Hole No. RH 1020

RH 1021

Page 1 of 1

2507-

Diamond Drill Geological Log

Cominco

K-Forestine 76(3)A-1

Objective:

Sampled:

Logged By: R. Krishan Date: Nov 76

Composites:

Block: | Sect.: | Place: Greenhills | App. Bear: | App.: Dip.: | Length: 112'

From	To	Discard: Intersections taken from Gamma Ray Log Reason:
0	38	Overburden ?
38	39.5	Coal 1.5'
39.5	58	Mostly mudstone some siltstone
58	62	Coal 4'
62	68.5	Mudstone
68.5	93	Coal 24.5' Seam "F"
93	112	Mudstone, sandstone near bottom
		End of hole at 112'
		Oct. 29/76

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

Core Size

Hole No. RH 1022 Page 1 of 1

2507—N.D.N.

Diamond Drill Geological Log

Cominco

K. Forsyth 76(3)a-1

37

Objective:			Sampled:		
Logged By: R. Krishan	Date: Nov 76		Composites:		
Block:	Sect.:	Place: Greenhills	App. Bear:	App.: Dip.:	Length:

40 Scale

Color Plot & Dips | Ore Classes & Aver.

From	To	Discard: Reason: Intersections from Driller's report - No Radiation Log
0	18	Overburden and rock
18	21	Coal 3'
21	24	3' shale
24	27	Coal 3'
27	53	Sand and shale
53	55	Coal 2'
55	62	Mudstone
62	67	Coal 5'
67	100	Siltstone and or sandstone
100	102	Coal 2'
102	103	1' Coal and shale
103	132	Mudstone and siltstone
132	134	2' Coal and shale
134	158	Coal 24'' Seam "F"
158	160	2' Coal and shale
160	192	Mudstone
		End of hole at 192'
		Oct. 30/76

Core Size

Hole No. RH 1023

Page 1 of 1

2507—N.D.N.

Diamond Drill Geological Log

Cominco

K. Forcoine 76(3)A-1

Objective:

Sampled:

Logged By: R. Krishan Date:

Composites:

Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length:
		Greenhills (North Area)			

From	To	Discard: Reason:
		Intersections taken from Gamma Ray Log
0	16	Overburden
16	27	Mudstone
27	37.5	Coal 10.5'
37.5	46	Mudstone
46	70	Siltstone with sandy siltstone intervals
70	73	Coal 3'
73	81	Mudstone
81	87	Siltstone
87	107.5	Mudstone
107.5	131	Coal 23.5' Seam "7"
131	134	Shale
		End of hole at 134'
		November 6/76

40 Scale

Color Plot & Dips	Ore Classes & Aver.

0

Core Size

Hole No. RH1024

Page 1 of 1

2507—N.D.N.

Diamond Drill Geological Log

Cominco

K-Fording 76(3)A-1

Objective:

Sampled:

Logged By: R. Krishan Date:

Composites:

Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length:
		Greenhills (North Area)			

40 Scale

Color Plot & Dips | Ore Classes & Aver.

From	To	Discard: Reason:
		Intersections taken from Gamma Ray Log
0	21	Overburden
21	45	Mostly siltstone, some mudstone
45	48	Coal 3'
48	70	S-ltstone, 55-60' silty sandstone
70	81	Mudstone
81	105	Coal 24' Seam "F"
105	120	Mudstone
120	130	Siltstone
		End of hole at 130'
		November 5/76

Core Size

Hole No. RH 1025

Page 1 of 1

2507—N.D.N.

Diamond Drill Geological Log

Cominco

K. Forbes 76/3/A-1

Objective:

Sampled:

Logged By: R. Krishan Date: Nov. 18/76

Composites:

Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length:
		Greenhills			444'

Discard: Reason: Intersections taken from Gamma Ray-Neutron Log.

From	To	
0	15	Overburden.
15	26	Siltstone and mudstone.
26	43.5	Silty sandstone
43.5	45.5	Coal 2'
45.5	51.5	Mudstone
51.5	53.5	Coal 2'
53.5	73.5	Mudstone
73.5	76.5	Coal 3'
76.5	79.5	3' Shale
79.5	82.5	Coal 3'
82.5	99	Mudstone with 2' shaley coal band at 90'
99	101.5	Coal 2.5'
101.5	129.5	Mudstone with siltstone interbed from 117 to 125'
129.5	133.5	Coal 4'
133.5	159	Mostly siltstone with some mudstone
159	164	Mudstone with coal stringers at 153' and 156'
164	167	Coal 3'
167	186	Mudstone, siltstone near bottom
186	196	Sandstone
196	205	Silty sandstone
205	221	Mudstone with siltstone interbed from 213 to 218'
221	229	silty sandstone
229	237	Mudstone and siltstone interbeds

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

Core Size

Hole No. RH 1026 Page 1 of 2

2507-

Diamond Drill Geological Log

Cominco

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

40 Scale

Color Plot & Dips | Ore Classes & Aver.

From	To	Discard: Reason:
237	249	Sandstone
249	266	Siltstone
266	270.5	Mudstone
270.5	276	Coal 5.5'
276	297.5	Mudstone
297.5	301.5	Coal 4'
301.5	309	Mudstone
309	311	Coaly Shale
311	321	Siltstone, mudstone near bottom
321	327	Sandstone
327	393	Mostly siltstone with bands of sandstone and mudstone
393	400	Mudstone
400	425	Coal 25' Seam F
425	444	Mudstone
		End of hole at 444'
		Oct. 31/76

Core Size

Hole No. RH 1026 Page 2 of 2

2507-

Diamond Drill Geological Log

Cominco

K. Foreing 76/3/A-1

Objective:			Sampled:		319
Logged By: R. Krishan	Date: Nov. 18/76		Composites:		
Block:	Sect.:	Place: Greenhills	App. Bear:	App.: Dip.:	Length: 468'

40 Scale

Color Plot & Dips | Ore Classes & Aver.

From	To	Discard: Reason: Intersections taken from Gamma Ray - Neutron Log
0	15	CAsing
15	19	Mudstone
19	43	Siltstone and silty sandstone
43	60.5	Mudstone; coal stringer at 44'
60.5	66.5	Coal 6'
66.5	69.5	3' Shale
69.5	73	Coal 3.5'
73	84.5	Mudstone
84.5	89	Coal 4.5'
89	99	Mudstone
99	106	Sandstone
106	119.5	Mudstone
119.5	125.5	Coal with 1' shale band at 121.5' 6(5)'
125.5	134	Mudstone
134	154	Siltstone some mudstone near bottom
154	158	Coal 4;
158	183	Sandstone and siltstone interbeds, top 2' mudstone
183	222	Interbedded siltstone and mudstone
222	225	Coal 3'
225	246	Mudstone
246	289	Mostly siltstone with interbeds of mudstone
289	299.5	Mudstone
299.5	305.5	Coal 6'

Core Size

Hole No. RH 1027 Page 1 of 2

2507-

Diamond Drill Geological Log

Cominco

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

40 Scale

Color Plot & Dips | Ore Classes & Aver.

From	To	Discard: Reason:
305.5	326	Mudstone
326	329.5	Coal 3.5'
329.5	341	Mudstone
341	358	Siltstone
358	395	Sandstone
395	410	Siltstone
410	416	Mudstone
416	439	Coal with 1' shale band at 432.5' 23(22)' Seam F
439	468	Mudstone
		End of hole at 468'
		Nov. 2/76

Core Size

Hole No. RH 1027 Page 2 of 2

2507-

Diamond Drill Geological Log

Cominco

K. Fording 76-3A-1

319

Objective:

Sampled:

Logged By: R. Krishan Date: Dec. 8/76

Composites:

Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length:
		Greenhills			459'

Discard: Reason: Intersections taken from Gamma Ray Log

From	To		
0	7	Overburden	
7	12	Siltstone	
12	33	Silty sandstone	
33	40	Siltstone	
40	48	Coal 8'	Seam H
48	58	Mudstone	
58	62	Coal 4'	
62	73	Mudstone	
73	84	Siltstone	
84	93	Sandstone	
93	102.5	Mudstone	
102.5	104	Shaley Coal	
104	106	Shale	
106	107.5	Shaley Coal	
107.5	114	Mudstone	
114	122	Siltstone and sandstone	
122	130	Mudstone	
130	140	Sandstone, some mudstone near bottom	
140	146	Coal 6' Seam GU	
146	170	Mostly siltstone with sandstone interbeds	
170	205	Mudstone with siltstone interbeds	
205	208	Coal 3'	
208	209.5	Shale	

Core Size

Hole No. RH 1028

Page 1 of 2

40 Scale

Color Plot & Dips	Ore Classes & Aver.

0

2507-

Diamond Drill Geological Log

Cominco

Objective:

Sampled:

Logged By: Date:

Composites:

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

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

From	To	Discard: Reason:
209.5	211.5	Coaly shale
211.5	233	Silty sandstone
233	243	Mudstone
243	266.5	Mostly siltstone with mudstone interbeds
266.5	270.5	Coal 4' Seam FM3
270.5	287	Siltstone
287	312	Mudstone
312	324	Sandstone and siltstone
324	330	Coal 6' Seam FM2
330	343	Silty sandstone
343	346	Mudstone
346	393	Mostly siltstone with silty sandstone and mudstone intervals
393	400	Mudstone
400	420	Coal with one foot shale band at 413' 20(19)' Seam F
420	436	Mudstone with 1.5' shaley coal band at 432.5'
436	438.5	Coal 2.5'
438.5	459	Siltstone some sandstone near bottom
		End of hole at 459'
		Nov. 5/76

Core Size

Hole No. RH 1028

Page 2 of 2

2507-

Diamond Drill Geological Log

Cominco

K-Forbes 76(3)A-1

379

Objective:			Sampled:		
Logged By: R. Krishan Date: Dec. 8/76			Composites:		
Block:	Sect.:	Place: Greenhills	App. Bear:	App.: Dip.:	Length: 270'

From	To	Discard: Reason: Intersections taken from Gamma Ray - Neutron Log
0	3	Overburden
3	17	Mudstone
17	28	Coal 11' Seam H
28	68	Mudston with 1.5' shaley coal band at 37.5'
68	102	Mostly siltstone with mudstone interbeds, 1' and 1.5' shaley coal bands at 90.5' and 94' respectively
102	123	Sandstone with Mudstone bands
123	136	Mudstone
136	140.5	Coal 4.5' Seam GU
140.5	191.5	Mudstone and siltstone interbeds with silty sandstone from 151' to 164'
191.5	199	Coal with 1.5' shale band at 195'. 7.5'(6)' Seam G1
199	220	Mudstone
220	249.5	Mostly siltstone with interbeds of sandstone and mudstone
249.5	254.5	Coal 5' Seam - FM3
254.5	270	Mudstone grading to sandstone near bottom
		End of hole at 270'
		Nov. 6/76

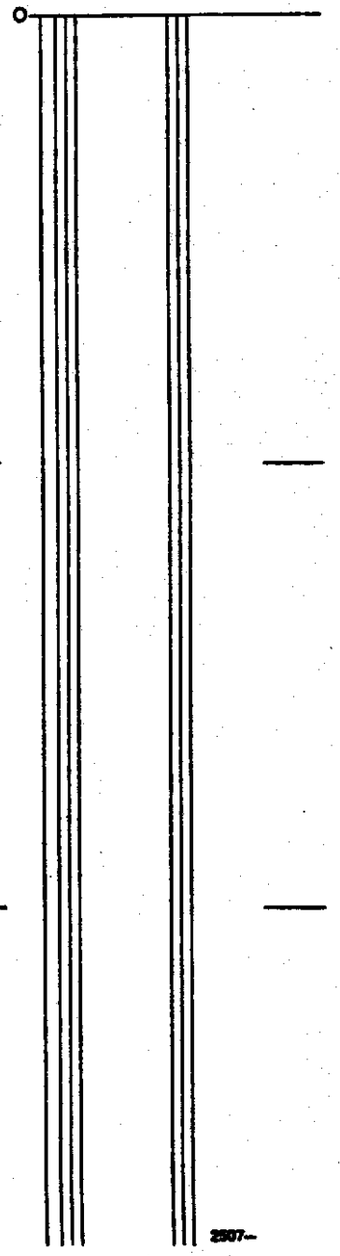
Core Size

Hole No. RH 1029

Page 1 of 1

40 Scale

Color Plot & Dips | Ore Classes & Aver.



2507-

Diamond Drill Geological Log

Cominco

K - Fording 76/3 A-1

379

Objective:			Sampled:		
Logged By: R. Krishan Date: Dec. 8/76			Composites:		
Block:	Sect.:	Place: Greenhills	App. Bear:	App.: Dip.:	Length: 429'

Discard: Reason: Intersections taken from Gamma Ray - Neutron Log

From	To	
0	1	Overburden
1	4	Coal
4	52	Mudstone
52	57.5	Coal 5.5' Seam FM3
57.5	65	Mudstone
65	103	Siltstone, sandstone from 62' to 67'
103	124	Mudstone
124	131	Coal with two feet shale parting 127.5' 7(5)' Seam FM2
131	141	Mudstone
141	163	Sandstone with mudstone interbed
163	239	Mudstone with siltstone interval from 189 to 198'
239	261	Coal with 2' shale parting of 254' 22(20)' Seam F
261	289	Mudstone with 2' coal band at 285'5;
289	313	Silty sandstone, some mudstone near bottom'
313	316	Coal 3'
316	326	Mudstone
326	338	Sandstone
338	358	Mudstone
358	429	Mostly siltstone with mudstone interbeds
		End of hole at 429'
		Nov. 8/76

Core Size

Hole No. RH 1030 Page 1 of 1

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

2507-

Diamond Drill Geological Log

Cominco

K-Fording 76(3)A-1

379

Objective:

Sampled:

Logged By: R. Krishan Date: Dec. 8/76

Composites:

Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length:
		Greenhills			430'

Discard: Reason: Intersections taken from Gamma Ray - Neutron Log

From	To	
0	3	Overburden
3	6	Mudstone
6	23	Coal 17' Seam HL
23	25	Shale 2'
25	27	Coaly shale 2'
27	37	Mudstone
37	51	Siltstone
51	73	Mudstone
73	81	Siltstone
81	90	Mudstone
90	93	Coal 3'
93	97	4' Shale
97	99	Coal 2' — Seam - GII
99	101	2' Shale
101	107	Coal 6'
107	144	Mudstone
144	166	Siltstone, some mudstone near bottom
166	169	Coal 3'
169	172	3' Shale
172	178	Coal 6' — Seam GI
178	180	2 ' Shale
180	181	Coal 1'
181	205	Mudstone with a thin band of sandstone

Core Size

Hole No. RH 1031 Page 1 of 2

40 Scale

Color Plot & Dips	Ore Classes & Aver.

0

2507-

Diamond Drill Geological Log

Cominco

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

40 Scale

Color Plot & Dips | Ore Classes & Aver.

From	To	Discard: Reason:
205	220.5	Siltstone, with some mudstone
220.5	225	Coal 4.5' Seam FM3
225	235	Mudstone, siltstone near bottom
235	251	Sandstone
251	275	Mudstone
275	277	Coal 2' Seam - FM2
277	291	Mudstone
291	310	Siltstone
310	344	Sandstone and siltstone interbeds
344	354	Mudstone, some siltstone
354	372	Sandstone
372	381	Siltstone and samdstone
381	386	Mudstone
386	402	Coal 16'
402	405	3' Shale } Seam F 24(21)'
405	410	Coal 5'
410	430	Mudstone
		End of hole at 430'
		Nove. 9/76

Core Size

Hole No. RH 1031

Page 2 of 2

2507-

Diamond Drill Geological Log

Cominco

K-Fording 76(3)A-1

Objective:			Sampled:		
Logged By: R. Krishan	Date: Dec. 8/76		Composites:		
Block:	Sect.:	Place: Greenhills	App. Bear:	App.: Dip.:	Length:

Reason: Intersections taken from Gamma Ray - Log

From	To	Discard:
0	73	Overburden (Driller reports gravel and clay to 98')
73	84	Mudstone
84	120	Siltstone
120	154	Mudstone, siltstone, from 129' to 143'
154	158	Coal 4'
158	165	7' Shale } Seam G1
165	173.5	Coal 8.5'
173.5	188	Siltstone
188	213	Mudstone with occasional siltstone interbeds
213	217.5	Coal 4.5' Seam Fm3
217.5	227	Mudstone
227	274	Siltstone with sandy intervals
274	282	Coaly shale and shale
282	287	Mudstone
287	292	Coal 5' Seam Fm2
292	303	Mudstone
303	317	Siltstone
317	325	Sandstone
325	351	Siltstone
351	403	Sandstone with sandy siltstone intervals
403	410	Mudstone
410	438	Coal with 4' shale parting at 427' 28(24)' Seam F
438	446	Mudstone
		End of hole at 446' Nov. 10/76

Core Size

Hole No. RH 1032

Page 1

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

2507-

Diamond Drill Geological Log

Cominco

K-Fording 76(3)A-1

Objective:			Sampled:		
Logged By: R. Krishan	Date: Dec. 8/76		Composites:		
Block:	Sect.:	Place: Greenhills	App. Bear:	App.: Dip.:	Length: 450'

From	To	Discard: Intersections taken from Gamma Ray - Neutron Log
0	3	Overburden
3	9	Coal 6' Part Seam - GU
9	51	Mostly siltstone, some mudstone near top and sandstone near bottom
51	71	Mudstone
71	95.5	Coal with 3', 2.5' and 2' shale partings at 78', 83' and 92' respectively. 24.5(17)' Seam G1
95.5	136.5	Mostly mudtone, some siltstone and coal stringers at 101'
136.5	141	Coal 4.5' Seam Fm3
141	186	Siltstone with occasional bands of mudstone
186	206	Sandstone
206	227	Mudstone, probable faultlocation at 212'
227	241	Sandy siltstone
241	260	Siltstone some mudstone near top
260	275	Mudstone
275	278	Coal 3' Seam Fm2
278	336	Mostly sandstone some sandy siltstone near top
336	357	mudstone and siltstone
357	388	Sandstone grading progressively, to siltstone towards bottom
388	392.5	Mudstone
392.5	394.5	Shaley Coal 2'
394.5	396.5	2' Shale
396.5	411	Coal 14.5' SEAM - F
411	416.5	5.5' Shale
416.5	422.5	Coal 6'
422.5	450	Mudstone
		End of hole at 450' Nov. 12/76

Core Size

Hole No. RH 1033 Page 1

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

2507-

Diamond Drill Geological Log

Cominco

K-Forcing 76(3)A-1

40 Scale

Color Plot & Dips | Ore Classes & Aver.

Objective:

Sampled:

Logged By: R. Krishan Date: DeC 8/76

Composites:

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

Discard: Reason:

Intersections taken from Gamma Ray - Neutron Log.

From	To	
0	11	Overburden
11	18	Siltstone
18	26	Mudstone
26	40	Siltstone
40	57	Coal with 3' shale parting at 45' 17(14)' Seam GL
57	83	Mudstone with one foot coal band at 61'
83	119.5	Mostly siltstone with bands of sandstone and mudstone
119.5	126	Coal with 1' shale parting at 123' 6.5(5.5)' Seam Fm3
126	154	Mudstone, silty sandstone band from 132' to 138'
154	196	Mostly siltstone with interbeds of mudstone and sandstone
196	210	Mudstone
210	215	Sandstone
215	232	Mudstone
232	251	Siltstone with bands of sandstone and mudstone
251	254	Coal 3' Seam Fm2
254	315.5	Interbedded mudstone and siltstone
315.5	320.5	Shaley coal with two feet shale parting 5(3)'
320.5	325.5	Mudstone
325.5	339.5	Coal with 2' shale parting at 335' 14(12)' Seam F
339.5	367	Mudstone, some siltstone near bottom
		End of hole at 367'
		Nov. 14/76

Core Size

Hole No. RH 1034 Page 1 of 1

2507-

Diamond Drill Geological Log

Cominco

K-FORDING 76(3)A-1

Objective:			Sampled:		
Logged By: R. Krishan	Date: Dec. 8/76		Composites:		
Block:	Sect.:	Place: Greenhills	App. Bear:	App.: Dip.:	Length:

Reason: Intersections taken from Gamma Ray - Neutron Log

From	To	Discard:
0	3	Mudstone
3	11	Siltstone
11	20	Mudstone
28	46	Coal 18' Seam H
46	58.5	Mudstone coal stringers at 48'
58.5	61	Coal 2.5'
61	99	siltstone with bands of sandstone and mudstone
99	107	Mudstone
107	112	Coal 5'
112	116.5	4.5' Shale
116.5	118.5	Coal 2'
118.5	124	Mudstone
124	158	Siltstone
158	169	Mudstone
169	188.5	Coal with 3' shale parting at 175' 19.5(16.5)' Seam GL
188.5	212	Mudstone
212	246.5	Siltstone with occasional thin bands of sandstone some mudstone near bottom
246.5	250.5	Coal 4' Seam FM3
250	261	Mudstone
261	311	Mostly siltstone with interbeds of mudstone
311	328	Sandstone
328	357	Mudstone with siltstone interbeds
357	368	Sandstone(Near top) and siltstone

Core Size

Hole No. RH 1035 Page 1 of

40 Scale

Plot & Dips | Ore Classes & Aver.

0

2507-

Diamond Drill Geological Log

Cominco

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

40 Scale

Color Plot & Dips | Ore Classes & Aver.

From	To	Discard: Reason:
368	440	Interbedded mudstone and siltstone
440	461	Coal with 2.5' and 2' shale partings at 444.5' and 456' 21(16.5)' Seam F
461	526.5	Mostly siltstone with interbeds of mudstone
526.5	532	Coal 5.5'
532	550	Mudstone
		End of hole at 550'
		Nov. 16/76

Core Size

Hole No. RH 1035

Page 2 of 2

2507-

Diamond Drill Geological Log

Cominco

K-FORDING 76(3)A-1

379

Objective:			Sampled:		
Logged By: R. Krishan	Date: Dec. 8/76		Composites:		
Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length: 550'

40 Scale

Color Plot & Dips | Ore Classes & Aver.

0

From	To	Discard: Reason: Intersections taken from GAmma RAy - Neutron Log
0	8	Overburden
8	56	Siltstone grading to mudstone towards bottom
56	78	Coal with 2' shale parting at 71' 22(20)' Seam F
78	100	Mudstone
100	102.5	Coaly shale
102.5	130	Siltstone with several bands of mudstone
130	146	Mudstone
146	148	Coal 2'
148	196	Mudstone
196	260	Interbedded mudstone and siltstone
260	311	Siltstone with several mudstone intervals, silty sandstone near bottom
311	324	Siltstone
324	336.5	Mustone
336.5	377.5	Coal with 2' Shale parting at 362' 41(39)' Seam E
377.5	388	Mudstone
388	456.5	Mostly siltstone with mudstone interbeds
456.5	483	Coal 26.5 Seam D
483	487.5	4.5' Shale
487.5	492	Coal 4.5'
492	505.5	Shale, top 2' coaly shale
505.5	511	Coal 5.5' Seam D1
511	550	Mudstone grading to siltstone towards bottom
		End of hole at 550'

Core Size.

Hole No. RH 1036 1 of 1 Page

2507-

Diamond Drill Geological Log

Cominco

K-formation 76(3)A-1

40 Scale

Color Plot & Dips | Ore Classes & Aver.

Objective:

Sampled:

Logged By: R. Krishan Date: Dec. 9/76

Composites:

Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length:
		Greenhills			557'

Discard: Reason:

Intersections taken from Gamma Ray LOg

From	To	
0	12	Overburden
12	61	Mudstone and siltstone interbeds
61	68	Mudstone
68	87	Coal with one foot parting at 81' 19(19)' Seam F
87	103	Mudstone
103	105	Coal 2'
105	112	Mudstone
112	134	Siltstone
134	144	Mudstone
144	147	Coal 3'
147	272	Interbedded siltstone and mudstone with several bands of sandstone
272	320	Siltstone and sandstone interbeds
320	348	Mudstone with sandstone bands
348	381	Coal with one foot parting at 367' 33(32)' Seam E
381	394	Mudstone
394	423	Siltstone
423	432	Sandstone
432	456	Siltstone
456	459.5	Mudstone
459.5	486	Coal 26.5' Seam D
486	490	Shale
490	494.5	Coal 4.5'
494.5	513	Mudstone and siltstone interbeds

Core Size

Hole No. RH 1037 Page 1 of 2

2507-

Diamond Drill Geological Log

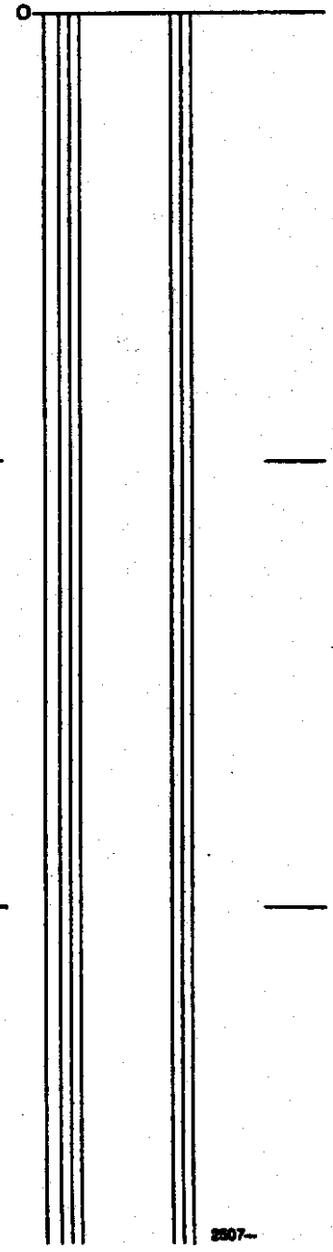
Cominco

Objective:		Sampled:		40 Scale	
Logged By: Date:		Composites:		Color Plot & Dips	Ore Classes & Aver.
Block:	Sect.:	Place:	App. Bear:	App.: Dip.:	Length:

From	To	Discard: Reason:
513	519	Coal 6' Seam D1
519	557	Mostly siltstone with mudstone bands
		End of hole at 557'
		Nov. 28/76

Core Size

Hole No. RH 1037 Page 2 of 2



2307-

Diamond Drill Geological Log

Cominco

K-FORDING 76(3)A-1

379

Objective:		Sampled:			
Logged By: R. Krishan	Date: Dec. 9/76	Composites:			
Block:	Sect.:	Place: Greenhills	App. Bear:	App.: Dip.:	Length: 358'

40 Scale

Color Plot & Dips | Ore Classes & Aver.

From	To	Discard: Reason: Intersections taken from Gamma Ray - Neutron Log
0	7	Overburden
7	14	Mudstone
14	28	Sandy siltstone
28	40	Mudstone
40	46	Coal 6' Seam GU
46	73	Mudstone, siltstone from 54-61'
73	75	Shaly Coal 2'
75	105	Mostly mudstone, siltstone from 93'-99'
105	109.5	Coal 4.5' Seam G1
109.5	151	Mudstone
151	171	Siltstone
171	183.5	Mudstone
183.5	189.5	Coal 6'
189.5	203	Mudstone
203	205	Coal 2'
205	215	Mudstone
215	220	Coal 5'
220	229	Mudstone
229	231	Coal 2'
231	251	Mostly siltstone with sandy siltstone interbeals, mudstone near bottom
251	272	Sandstone some siltstone
272	296	Siltstone
296	304	Mudstone

Core Size

Hole No. RH 1038 Page 1 of 2

2507-

Diamond Drill Geological Log

Cominco

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

From	To	Discard:	Reason:
304	328	Coal 24' Seam F	
328	344	Mudstone, one foot coal band at 340'	
344	347	Coal 3'	
347	348	Siltstone and sandstone near bottom	
		End of hole at 358'	
		Nov. 25/76	

40 Scale

Color Plot & Dips	Ore Classes & Aver.
0	

Core Size

Hole No. RH 1038 Page 2 of 2

2507-

Diamond Drill Geological Log

Cominco

K-FORDING 76(3)A-1

Objective:			Sampled:		
Logged By: R. Krishan	Date: Dec. 9/76		Composites:		
Block:	Sect.:	Place: Greenhills	App. Bear:	App.: Dip.:	Length: 203'

From	To	Discard: Reason: Intersections taken from Gamma Ray Log
0	67	Overburden
67	82	Siltstone
82	95	Mudstone
95	99	Coal 4' Minor Seam below "F"
99	119	Siltstone
119	129	Mudstone
129	162	Siltstone some sandstone near bottom
162	169	Mudstone
169	191	Siltstone
191	203	Sandstone
		End of hole at 203'
		Dec. 3/76

Core Size	
Hole No.	Page
RH 1039	1 of 1

40 Scale

Color Plot & Dips	Ore Classes & Aver.

O

2507-

Diamond Drill Geological Log

Cominco

K-FORDING 76(3)A-1

377

40 Scale

Color Plot & Dips | Ore Classes & Aver.

Objective:

Sampled:

Logged By: R. Krishan Date: Dec. 9/76

Composites:

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

Discard: Reason: Intersections taken from Gamma Ray Log

From	To	
		RH 1040
0	9	Rock or Overburden
9	14	Mudstone
14	21	Siltstone
21	26	Mudstone
26	35	Coal 9' Seam GL
35	56	Mudstone, one foot shaley coal band at 39.5'
56	70	Siltstone
70	82	Mudstone; sandstone near bottom
		End of hole at 82'. Nov. 4'76
		RH 1041
0	10	Overburden and Mudstone
10	26	Coal 16' Seam GL
26	40	Mudstone siltstone near bottom
40	75	Mudstone grading to siltstone towards bottom
		End of hole at 75' Nove. 8/76

Core Size: B-50 Drill No Samples

Hole No.: RH 1040, RH 1041

Page

2507-

Diamond Drill Geological Log

Cominco

K-FORDING 7013A-1

377

40 Scale

Color Plot & Dips | Ore Classes & Aver.

Objective:

Sampled:

Logged By: R. Krishan Date: Dec. 9/76

Composites:

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

Discard: Reason:

Intersections taken from GAmma Ray Log

From	To	
		RH 1042
0	10	Overburden
10	29.5	Mudstone
29.5	31.5	Coal 2'
31.5	59	Mudstone with bands of siltstone
59	66	Coal 7' Seam - FM 3
66	73	Mudstone, sandstone near bottom
		End of Hole at 73' Nov. 19/76
		RH 1043
0	20	Overburden or Roack
20	31	Mudstone
31	73	Mudstone and siltstone interbeds
73	78	Coal 5'
78	85	Siltstone
		End of hole at 85' Nov. 26/76

Core Size: B-50 Drill No Samples

Hole No.: RH 1042, RH 1043 Page

2507-