

K-FORDING RIVER 69(1)A

FORDING RIVER COAL

SUMMARY REPORT

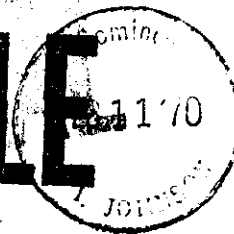
OPINION FILE

DOMINCO LTD

311

FORDING OPERATIONS
SUMMARY REPORT OF 1969 EXPLORATION

OPEN FILE



I DIAMOND DRILLING

(A) Eagle Mountain

D.D.H. 44 was considered mainly as an exploration hole as only Seam 7 was exposed by trenching and/or seam roads at this southwest corner of Eagle Mt. This hole provided important information on Seam 4 at depth and confirmed that Seam 5 consisted of several thin seams separated by significant thicknesses of siltstone.

Twelve engineering type D.D.H.'s were also completely in the Eagle Pit Area. Numbers 101,102,103, and 104 were drilled as H.Q. core holes, and provided good core samples for analyses, as well as data on seam locations. The other eight engineering type holes were drilled as N.Q. size holes by Inspiration Ltd., with a modified drill using air flushing to core the coal seams and to "tricone" the intervening sediments. Coal recovery was negligible and only data on seam elevations was obtained from these holes, but this data was essential for mine planning studies. Several other engineering type holes were proposed for the west side of Eagle Mt. and sites were prepared, but these were not completed by November 30th, 1969. The engineering type holes showed considerable variations in the individual seam projections, but thicknesses were generally confirmed and the overall reserve picture was considered to be unchanged, except by revised mining limits.

(B) Greenhills Area

The exploration holes drilled in the Greenhills Area were mainly to test the upper seams-"F,G,H,I"-for thickness and for coal quality. Holes 57,58,59A,60,61 had these objectives. Their respective intersections and analyses indicate significant thicknesses of high volatile bituminous coal, with excellent coking properties. Holes 47A, and 48 were drilled to fill in a 4,000 foot gap in D.D.H. coverage. Only one seam (B?) was intersected in 47A and 48 intersected only basal sandstone underlain by Fernie Formation. Because of the urgency of engineering type drilling in the Greenhills Area south of D.D.H. 44, the area to the north of this was left for future exploration. This northern portion was not explored further during 1969.

GEOLOGICAL BRANCH
ASSESSMENT REPORT

00 311

I DIAMOND DRILLING (CONT'D)(B) Greenhills Area (Cont'd)

From mid-August through to near the end of October, a Longyear Model 38 drill completed seventeen engineering type holes (5,782.5 feet). N.Q. core recovery in the coal was only fair, but the seam intersections were essential for mining studies. This programme was far from complete and an additional 5,000 feet are planned for the period November 1st, 1969 to May 1st, 1970.

Freezing water lines curtailed the core drilling at the end of October, but a programme of centre-return rotary drilling was proposed to continue during the winter. The engineering-type drilling completed in the Greenhills appeared to confirm the general reserves, although detailed sections varied considerably from the original interpretations.

(C) Upper Clode Creek Area

In upper Clode Creek valley, exploration holes, 64, 67, 69 and 71 were drilled for a total of 3,117 feet. Holes 64 and 67 were drilled at -60° easterly and overlapped each other so that together they penetrated approximately 2,000 feet of section. Gamma-ray neutron logs of these holes and mapping of trenches in this vicinity indicate that repetitions by bedding thrusts are common along this portion of the east limb of the Eagle-Turnbull syncline. Seams 7, 5 and 4 are present above the basal sandstone in the lower part of D.D.H. 67. The upper part of D.D.H. 64 and the adjacent trench intersect what is interpreted as No. 7 seam overthrust above stratigraphically higher seams. D.D.H. 69 was collared at the base of seam 4 and intersected mainly basal sandstone with thin seams 1 and 2. D.D.H. 71 was drilled at -65° easterly to test a dip-slope situation on the northeast shoulder of Eagle Mt. The first significant seam intersected was at 441.5 feet to 474 feet; this does not appear to be of further interest at present.

(D) Lower West Slope of Mt. Turnbull

Holes 45 and 46 were drilled early in July in this area. The thick coal intersections in D.D.H. 45, while at considerable depth, were sufficiently attractive to warrant further testing. The single thick seam intersected in D.D.H. 46 was interpreted as seam 4, with the possibility that the low angle thrust interpreted by C.P.O.G. is not present. Drilling of holes 68, 70 and 80 indicated a substantial tonnage potential in a relatively flat structure (sections A-A, B-B; Lower West Turnbull). Approximately 5,000 feet of additional drilling is proposed for this area, together with

I DIAMOND DRILLING (CONT'D)

(D) Lower West Slope of Mt. Turnbull (Cont'd)

geophysical logging to aid in seam correlations. The favourable seams occur mainly in a sandstone environment and appear to "lens out" quite rapidly, as indicated by holes 81 and 82.

II CENTRE-RETURN ROTARY DRILLING

In November, 1969, Becker Drills Ltd. started on a winter programme of rotary drilling of engineering type holes required for planning on Eagle Mt., lower West Turnbull and in the Greenhills Area. Rotary Holes 131, 132 and 133 were drilled for a total of 898 feet, and tested seams 11, 9, 8 and 7 on the north end of Eagle Mt.

III ADIT DEVELOPMENT AND BULK SAMPLING

Two mining crews, each consisting of two experienced miners and a fire-boss, were used to extend adit 9 (seam 7), adit 2 (seam 4) and to drive new raises to obtain bulk samples for quality and various treatment tests. A new adit, No. 14, was driven on seam 5 and two more raises were driven for the same purpose.

The mining crews were under the overall supervision of Mr. R.D. LIVINGSTONE, Manager of Lethbridge Collieries. The writer supervised the collection of bulk samples which were taken in barrels and trucked to the testing labs at the Sullivan Concentrator, Kimberley.

IV BULLDOZER TRENCHING, EXPLORATION ROADS, ETC.

An average of two rented bulldozers were used throughout the season. These were either D-7E or D-8 machines, supplied by Nohels Logging and/or Fernie Enterprises Ltd. of Fernie, B. C.

The respective seam prospect trenches on Eagle Mt., Turnbull Mt. and Castle Mt. are shown on the accompanying 1,000 scale General Geological Plan.

The three Longyear drill rigs (two model 44's, one model 38) plus Inspiration's drill and Becker's drill required many hours of bulldozer time for site and road preparation, water lines, drill moves, etc.

V REGIONAL MAPPING

In September and October, a programme of regional reconnaissance mapping was undertaken, using a helicopter, for transportation. Two crews were used; each consisted of an experienced geologist and a technician-assistant. Mapping at one inch to 1/2 mile scale was done along the east limb of the

V REGIONAL MAPPING (CONT'D)

major syncline of Kootenay Formation, from the south end of Castle Mt. to the north of Aldridge Creek. Seven stratigraphic sections were measured along this east limb. Additional traverses were made on the west slope of the Greenhills Range. Aerial photos were used for field locations of the Kootenay-Fernie contact and key points in the stratigraphic sections.

VI PERSONNEL

The exploration and geological staff initially consisted of the writer plus graduate student, S. WINZER and student assistant R. REID for June and July. When the number of drills was increased in mid-August, additional junior geologists and/or technicians were loaned by the Geology Department at the Sullivan Mine.

The Western Exploration division of Cominco supplied two geologists to assist with the reconnaissance mapping programme; a technician was also loaned by this division to help with the core logging, drill moves, etc.

During the latter half of September and early October, a peak staff of nine were involved in the various phases of the exploration programme. The excellent work and co-operation contributed by the Sullivan Mine and Exploration Division staff was highly appreciated.

ACTaplin/emp

February 9, 1970

Submitted by:



A.C. Taplin, P. Eng.
Mine Geologist,
Fording Operations.

Attachments: Diamond Drill Hole Logs
Sample Records, Analyses
General Geological Plan
Capsize Sections, "A-A", "B-B"

Copies: File (2)



FORDING OPERATIONS

DRILL HOLE ANALYSES

NOTE:-

D.D.H.'s 44,45,46, and 47A samples used for washing and flotation tests. Composites to be reported later.

Individual sampled sections not yet reported for many drill holes.

Holes 108,111,113,114, and 115 to 118 inclusive were not sampled because of very high core losses.

A.C. Taplin,
Fording Operations.

/emp
February 9th. 1970.

*Dr. Hedley
May I have
your approval
of the expenditure
element*

FORDING OPERATIONS

**Department of Mines and Petroleum Resources
Victoria, B. C.**

25 February 1970

**Attention: Mr. R. H. McCrimmon
Chief Gold Commissioner**

Dear Mr. McCrimmon:

**Re: Coal Licenses 314-364, incl., 419, 420, 507-511 incl.,
536-538, incl., and 554-560 incl.**

This is in response to your January 5 letter requesting more detail about the 1969 exploration and development program on the subject coal licenses.

The 1969 exploration program, summarized in the attachment to Mr. Rushton's letter to you dated December 29, was intended to refine the data on coal reserves and quality that was accumulated by CPOG in 1967 and 1968, as well as to extend our knowledge about the potential of the property. This is being accomplished. Field work began in May and has continued without interruption since that time, hence an arbitrary cutoff date of November 30 for costs and progress was chosen for this report. A comprehensive report of the drilling, adit development, trenching and mapping is attached. Analytical results as appended are incomplete but final results will be submitted as they become available.

Fording Coal Limited entered into a sales agreement in June under which 3,000,000 long tons of clean coal will be supplied annually to the Japanese steel industry. Since that time steady progress has been made in the engineering aspects of mining, services and process plant requirements to fulfill this contract.

In the field the plant site has been cleared and roughly graded, installation of a camp to accommodate construction workers is underway and access roads to the mining areas, as well as to the site from the Elk Valley, are being built.

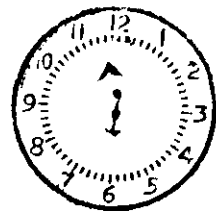
Please treat all data confidentially as agreed in our phone conversation of February 26.

REFERRED BY	DATE	INITIALS
D.M.		
C.G.C.		
J.C.		
J.G.C.		
J.L.		
ACD		
M.B.		
C.L.		
R. T.		
C.P.E.		



2500

MAR 2 '70 AM



DEPT. OF MINES
AND PETROLEUM RESOURCES

Page 2/Mr. R. H. McCrimmon/25 February 1970

If any further questions arise please do not hesitate to contact me.

Yours truly,

A handwritten signature in cursive script, appearing to read "O. I. Johnson".

O. I. Johnson, P.Eng.
General Superintendent

OLJ:sn
attachments

CanPac Minerals Limited

December 29, 1969.

RECEIVED BY	DATE	INITIAL
D.M.		
G.G.C. ✓		
H.G.		
J.C.		
K.C.		
L.S.B. ✓		
M.B.		
N.L.		
O.A.		
R.T.		
C.P.E.		

Department of Mines and
Petroleum Resources,
Victoria, B.C.

Attention: Mr. R. McKinnon,
Chief Gold Commissioner

Dear Sirs:

Re: Coal Licenses 314 to 364 (incl.), 419 and 420, 507 to 511 (incl.),
536 to 538 (incl.) and 554 to 560 (incl.)

Please find enclosed a summary of work on the above licenses from January 1, 1969 to November 30, 1969, together with an affidavit of expenditures made in this period of \$390,067.12.

We wish to have this expenditure credited to our balance of work outstanding, to be debited to future rental renewals on the above licenses.

If you have any questions regarding this expenditure, or wish further information, please contact Mr. O.I. Johnson, Fording Coal Limited, c/o Cominco Ltd., Trail, B.C.

done

CanPac Minerals Limited hereby requests a renewal of coal licenses 554 to 560 inclusive for the period from January 30, 1970 to January 30, 1971. We wish to have the annual rental for these licenses rebated, and the required amount debited against the work credit filed above at \$7.50 per acre. Our cheque for \$175, being the required renewal fee of \$25 for each of seven licenses, is enclosed herewith. A statement of debits made, and of our outstanding balance of work credits, would be appreciated when these renewals have been made.

Yours very truly,

H.G. Rushton

H.G. RUSHTON,
Chief Geologist.

DEC 31 '69 AM ✓

*rec'd \$175.00
J.M.*



14739

HGR:LS
Encl.

DEPT. OF MINES
AND PETROLEUM RESOURCES

January 5, 1970

Mr. O. I. Johnson,
Fording Coal Limited,
c/o Cominco Ltd.,
Trail, B. C.

Dear Mr. Johnson:

Re: Coal Licences 314-364 inc., 419, 420, 507-511 inc.,
536-538 inc., and 554-560 inc.

This refers to a letter dated December 29th from Mr. R. G. Rushton, Chief Geologist, enclosing summary of work on the above licences from January 1, 1969, to November 30th, 1969, together with an affidavit of expenditures in the amount of \$390,067.12 for the same period; \$175.00 to cover renewal fees for Coal Licences Nos. 554 to 560 inclusive was also enclosed.

Before the above expenditures may be approved and credited to your balance of excess work to be debited against future rental requirements, we will require, as per the proviso in the above licences, plans showing the position of all workings and drill holes, logs of drill holes, analyses of coal and technical reports pertaining to the exploration and development of coal within the licenced area.

In the meantime Coal Licences Nos. 554 to 560 inclusive will be renewed. *finished*

Yours very truly,

R. H. McCrimmon
for
Deputy Minister

RHM/cf
cc.: Mr. H. G. Rushton,
Chief Geologist,
CanPac Minerals Limited.

SUMMARY OF EXPLORATION ACTIVITY
MAY 1st to DECEMBER 30th 1969

I. DIAMOND DRILLING:

A) Eagle Mountain:

1 Exploration DDH)	1,850 ft., HQ core.
4 Engineering Type DDH)	
8 Engineering Type DDH	2,440 ft., NQ core.

B) Greenhills Area:

7 Exploration DDH completed	5,425 ft., HQ core.
2 Exploration DDH abandoned in overburden	177 ft., HQ hole.
17 Engineering type DDH	5,782.5 ft., NQ core.

C) Upper Clode Creek Area:

4 Exploration DDH	3,117 ft., HQ core.
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D) Lower West Slope of Mt. Turnbull:

7 Exploration DDH	5,597 ft., HQ core.
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TOTAL DIAMOND DRILLING	24,388.5 Ft.
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Summary of Exploration Activity
May 1st to December 30th 1969

- 2 -

II. CENTRE-RETURN ROTARY DRILLING:

(Engineering type Holes)

November 1969	- 3 holes	-	895 ft.
December 1969	- forecast 6 holes	-	<u>1,800 ft.</u>
			2,695 ft. (incl. Dec. F.C.)

III. ADIT DEVELOPMENT and
BULK SAMPLING:

#9 Adit:-

Adit advance	-	25.5 ft.
Raise advance	-	23.0 ft.
Bulk Sample	-	6½ tons (approx.)

#2 Adit:-

Adit advance	-	25.0 ft.
Raise advance	-	38.0 ft.
Bulk Sample	-	7 tons (approx.)

#14 Adit:-

Adit advance	-	148.5 ft.
Raises (2) advance-	-	53.5 ft.
Bulk Samples	-	5 tons (approx.)

Total Adit advances = 199.0 ft.

Total Raise advances = 114.5 ft.

Bulk samples = 18½ tons (approx.)

ACT/lid

Summary of Exploration Activity
May 1st to December 30th 1969

- 3 -

IV. BULLDOZER TRENCHING & ROAD
BUILDING, MOVING DRILLS, etc.:

Average of 2 machines full time, June 1st to December 30th 1969.

ACTaplin/ld
December 15th 1969

CANADA	)	IN THE MATTER OF THE
PROVINCE OF BRITISH COLUMBIA	)	COAL ACT AND CANPAC
TO WIT:	)	MINERALS LIMITED

I, OSCAR IRWIN JOHNSON, of 3802 Dogwood Drive, Engineer, in the City of Trail, in the Province of British Columbia, make OATH AND SAY.

1. THAT I AM GENERAL SUPERINTENDENT OF FORDING OPERATIONS WITH COMINCO LTD. WHICH HAS ENTERED INTO AN AGREEMENT WITH CANPAC MINERALS LIMITED TO DEVELOP AND MINE THE COAL LICENCES OWNED BY CANPAC MINERALS LIMITED DESCRIBED ON THE SCHEDULE ANNEXED HERETO AND MARKED EXHIBIT "A" TO THIS MY AFFIDAVIT.

2. THAT I HAVE BEEN ADVISED BY JOHN ROBERT BARR, CONTROLLER OF FORDING COAL LIMITED, AND VERILY BELIEVE THAT THE SUM OF \$390,067.12 WAS EXPENDED BY FORDING COAL LIMITED ON THE CANPAC COAL LICENCES SET OUT IN EXHIBIT "A" BETWEEN THE 1ST DAY OF JANUARY, 1969 AND THE 30TH DAY OF NOVEMBER, 1969.

3. THAT CANPAC MINERALS LIMITED DESIRES TO GROUP ALL THE COAL LICENCES SET OUT IN EXHIBIT "A" UNDER THE PROVISIONS OF SUBSECTION (3) OF SECTION 7 OF THE COAL ACT BEING CHAPTER 60 OF THE REVISED STATUTES OF BRITISH COLUMBIA.

AND I MAKE THIS SOLEMN DECLARATION CONSCIENTIOUSLY BELIEVING IT TO BE TRUE AND KNOWING THAT IT IS OF THE SAME FORCE AND EFFECT AS IF MADE UNDER OATH AND BY VIRTUE OF THE "CANADA EVIDENCE ACT."

DECLARED BEFORE ME AT THE CITY OF TRAIL, IN THE PROVINCE OF BRITISH COLUMBIA, THIS DAY OF DECEMBER, 1969.

[Signature]
 A COMMISSIONER FOR TAKING AFFIDAVITS FOR BRITISH COLUMBIA.

S C H E D U L E

COAL LICENCES SITUATE IN THE KOOTENAY LAND DISTRICT IN THE NAME OF
CANPAC MINERALS LIMITED:

LICENCES 314 TO 364 (INCLUSIVE)

LICENCES 419 AND 420

LICENCES 507 TO 511 (INCLUSIVE)

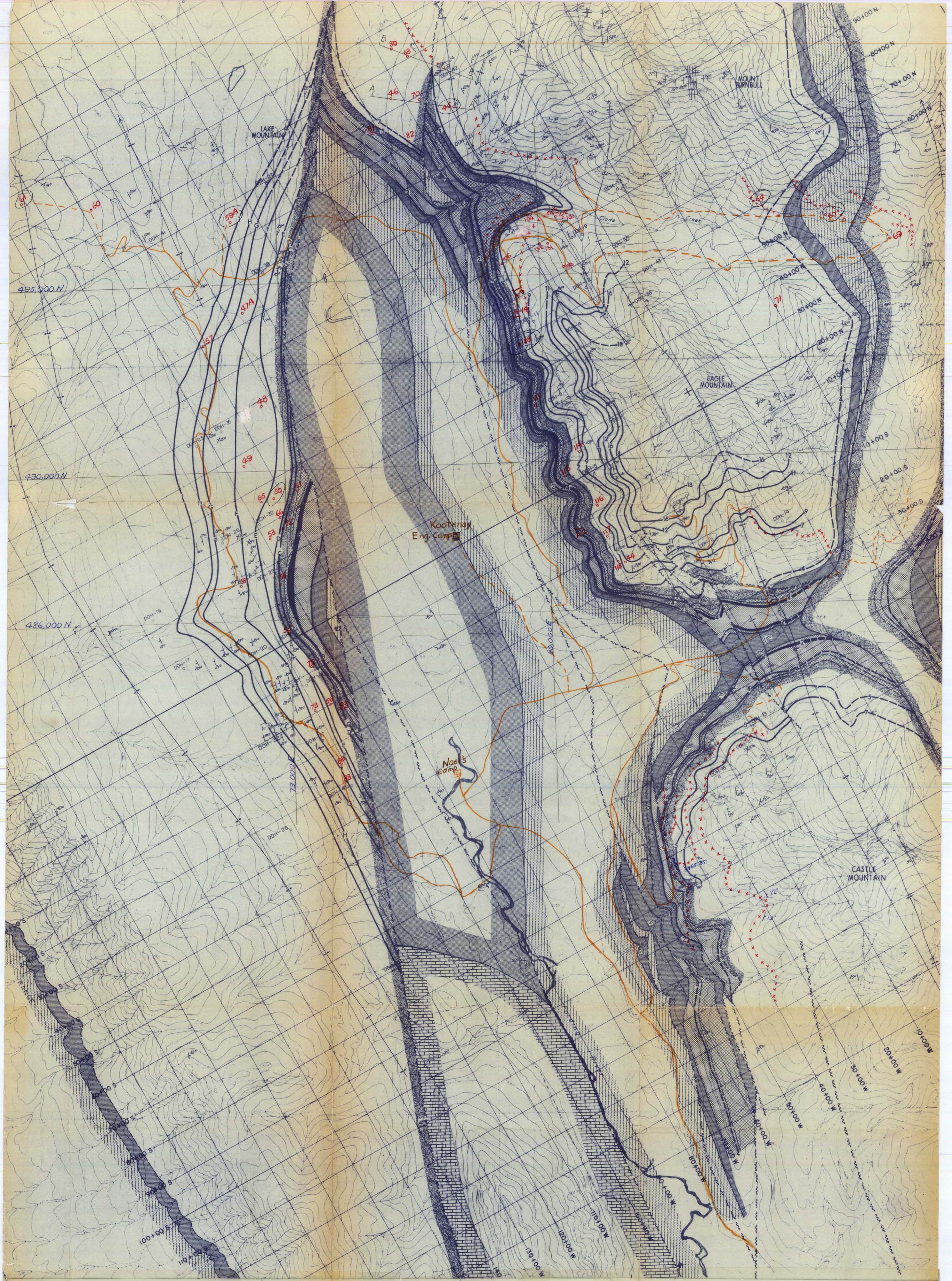
LICENCES 536 TO 538 (INCLUSIVE)

LICENCES 554 TO 560 (INCLUSIVE)

THIS IS EXHIBIT "A" REFERRED TO IN THE AFFIDAVIT OF OSCAR IRWIN
JOHNSON SWORN BEFORE ME THE 19TH DAY OF DECEMBER, 1969 AT TRAIL,
BRITISH COLUMBIA.



A COMMISSIONER FOR TAKING AFFIDAVITS
FOR BRITISH COLUMBIA



GEOLOGICAL LEGEND

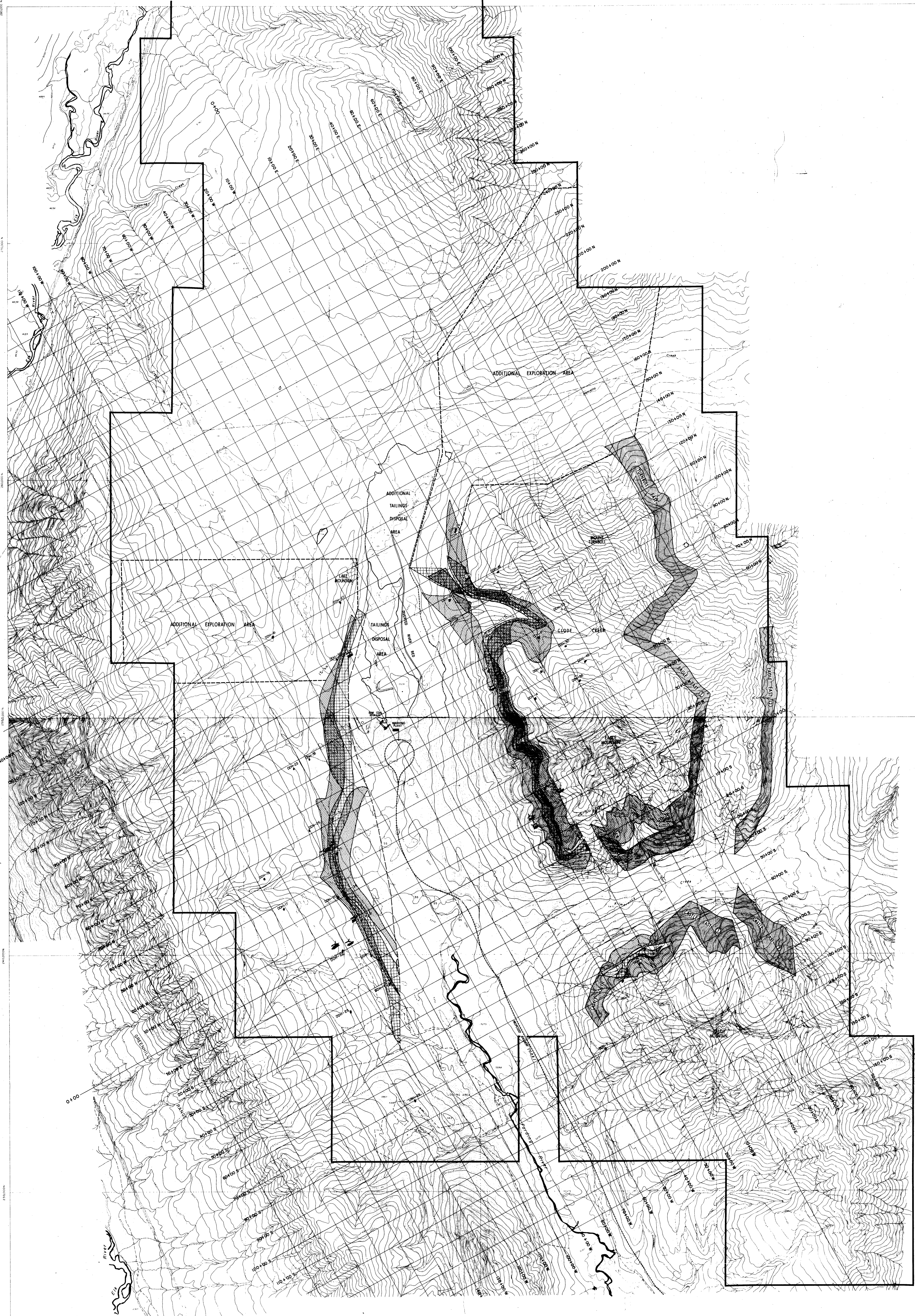
	CONGLOMERATE	BLAIRMORE	} CRETACEOUS
	CONFORMABLE CONTACT		
	INTERBEDDED SILTSTONE, SANDSTONE AND SHALE - COAL BEARING IN LOWER HALF	ELK & MUTZ SERIES	} KOOTENAY
	SANDSTONE - CURRENT BEDDED	HILLCREST SERIES	
	SILTSTONE AND SANDSTONE - CURRENT BEDDED	ADANAC SERIES	
	SANDSTONE - CURRENT BEDDED	MOOSE MOUNTAIN	
	TRANSITIONAL CONTACT		
	SHALE AND MUDSTONE	FERNIE	JURASSIC
	UNCONFORMITY		
	QUARTZITIC SILTSTONE	SPRAY RIVER	TRIASSIC
	UNCONFORMITY		
	LIMESTONE	RUNDLE	MISSISSIPPIAN

SYMBOLS

	FAULT
	THRUST
	FLAT LYING STRATA
	STRIKE AND DIP
	ANTICLINAL AXIS AND PLUNGE
	SYNCLINAL AXIS AND PLUNGE
	CONTACT - DEFINED
	CONTACT - ASSUMED
	COAL SEAM - OUTCROP
	COAL SEAM - OUTCROP - ASSUMED
	DDH 10
	DDH 5
	ADIT LOCATION
	Seam Prospect Trench (1969 Work)
	Pioneer Access Road (pre 1969)
	New Access Roads - 1969 - excl. drill roads

311

Canadian Pacific	
OIL AND GAS LIMITED	
MINING DIVISION	
FORDING RIVER PROJECT	DATE: <i>Revised Jan 1970</i>
GENERAL GEOLOGICAL MAP	CONT. INT.:
	AUTHOR: H.S.R.
	APPROVAL BY: H.S.R.
	SCALE: 1" = 1000'
	FILE NO.:



RLC

TOPOGRAPHIC LEGEND

[Symbol]	WATER
[Symbol]	RAILROAD
[Symbol]	ROAD
[Symbol]	POWER LINE
[Symbol]	BOUNDARY
[Symbol]	PROPERTY
[Symbol]	CONTOUR
[Symbol]	SPOT ELEVATION
[Symbol]	INDEX
[Symbol]	UTM GRID
[Symbol]	UTM ZONE
[Symbol]	UTM EASTING
[Symbol]	UTM NORTHING

LEGEND

[Symbol]	PROVEN STRIPPABLE RESERVES
[Symbol]	SEAM 7 (E)
[Symbol]	SEAM 5 (D)
[Symbol]	SEAM 4 (B)
[Symbol]	INFERRED STRIP RESERVES
[Symbol]	OUTLINE OF PROPERTY BOUNDARY

311

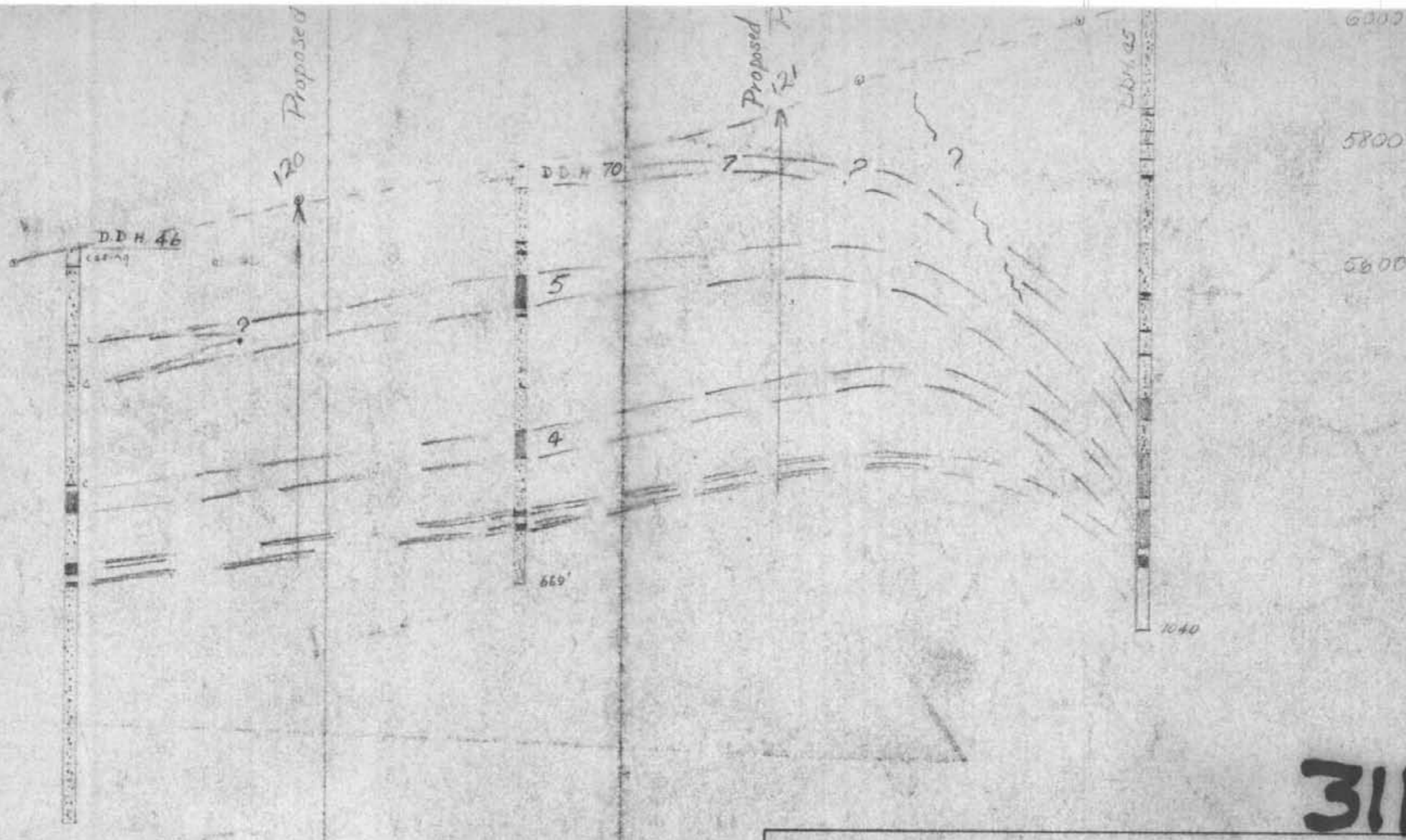
Canadian Pacific
OIL AND GAS LIMITED GR-1
MINING DIVISION

FORDING RIVER PROJECT

GENERAL RESERVE and LAYOUT PLAN	DATE: 11/20/2008 DRAWN BY: J.S.B. APPROVAL BY: J.S.B. SCALE: 1:50,000 FILE NO.:
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FR-6924

PC



69S-1

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FR-69(2)A

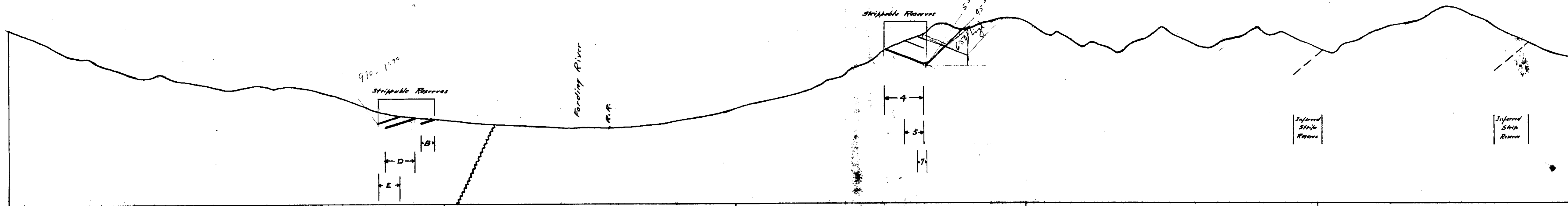


Drawn by: A & H	Traced by:
Revised by: Date:	Revised by: Date:

Sect A-A on General Geological Map
 1000 scale
 -Lower W. Turmbull

Scale: 1" = 200' Date: Sept 29/69 Plat:

4000'



Section 0+00

H and V Scales 1" = 1000'

311

69-CS-1

FR-69(2)A

1" = 1000'

L- FORDING RIVER 65(3)A-1

ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

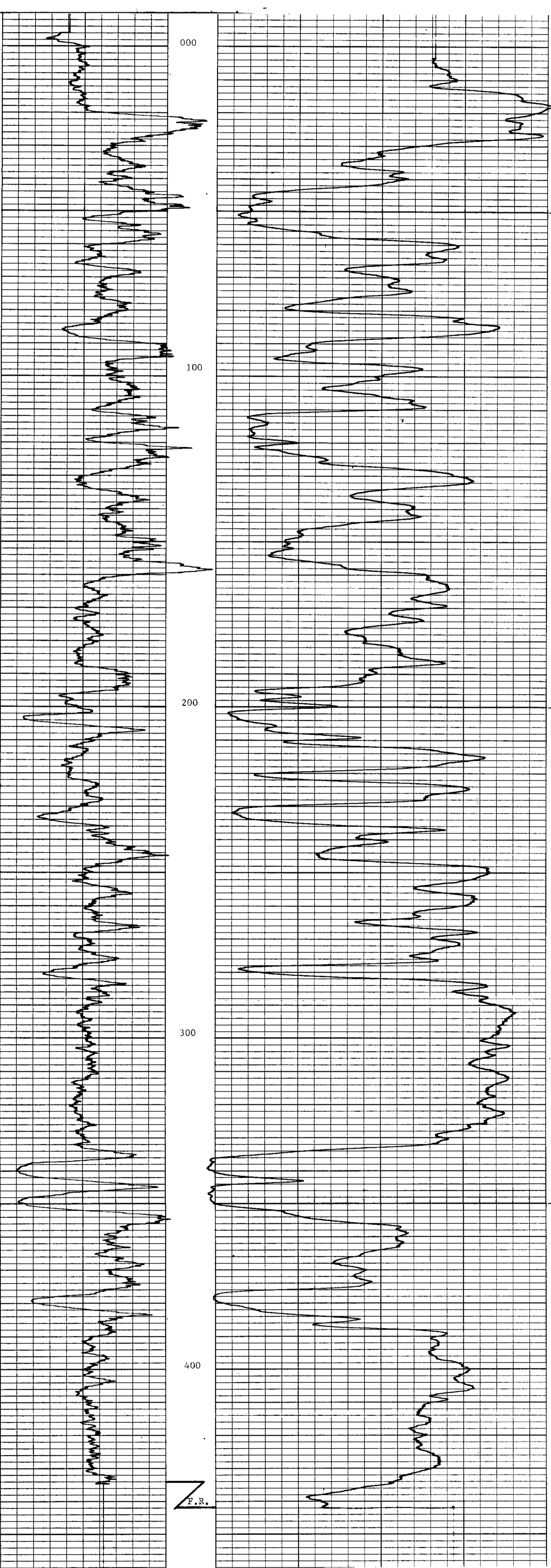
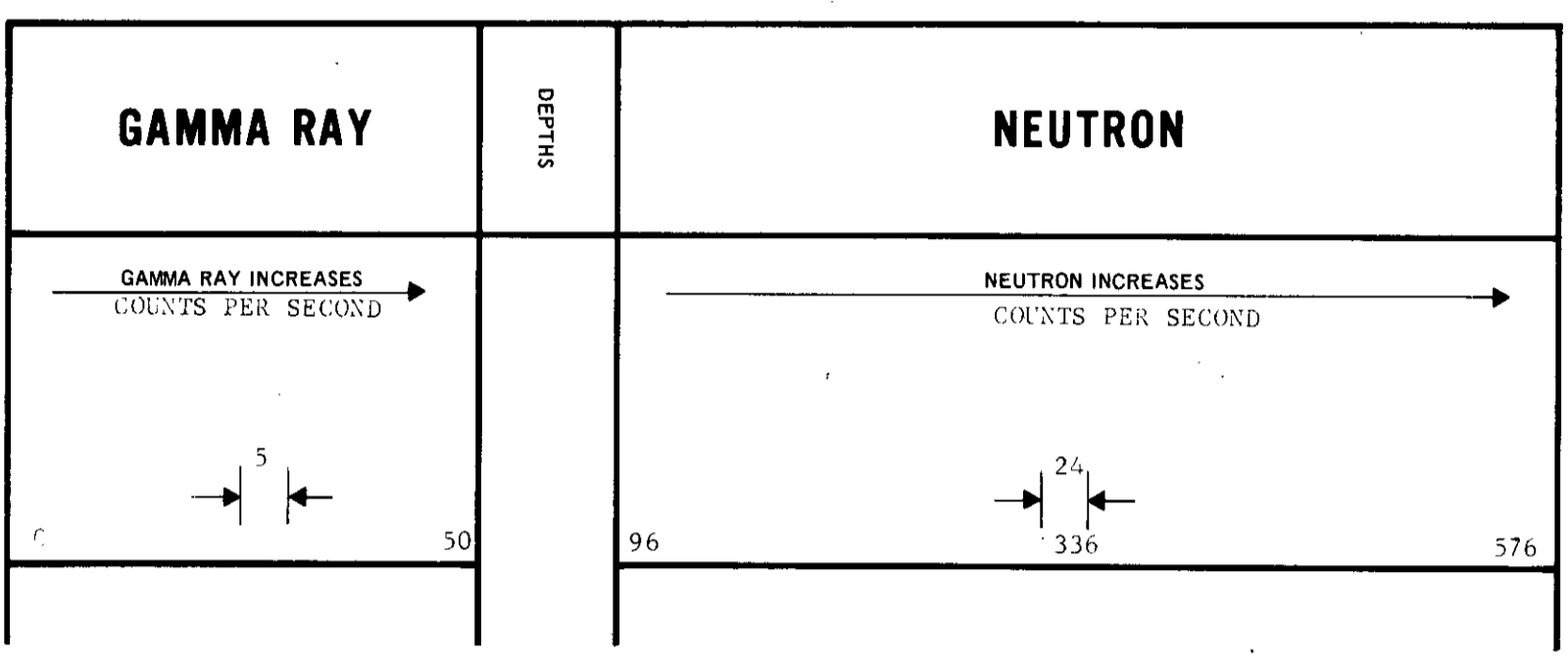
FILE NO.	COMPANY	FORDING COAL CO. LTD.
LSD	WELL	NO 60
SEC	TWP	GREEN HILLS
RGE	RGE	FORDING RIVER
W	M	FIELD
M		PROVINCE
		BRITISH COLUMBIA
Permanent Datum	GROUND LEVEL	Elev.
Log Measured from	FL. Above Perm. Datum	D.F.
Well Depths Measured from		C.L.

311

Run No.	ONE
Date	27/9/69
First Reading	442'
Last Reading	000'
Footage Logged	4/2'
Depth Reached	4/3'
Depth Driller	-
Casing Hole	-
Casing Driller	-
Fluid Type	WATER
Liquid Level	FULL
Min. Diam.	3 5/8"
Operating Time	2 HOURS
Truck No.	10
Recorded By	R. PETERSON
Witnessed By	A. TAPLIN

EQUIPMENT DATA		GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.		LOG TYPE		LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16"	TOOL MODEL NO.		DIAMETER	1 11/16"
DETECTOR MODEL NO.		DETECTOR MODEL NO.		DETECTOR MODEL NO.	
TYPE	GEIGER	TYPE		TYPE	PROPORTIONAL
LENGTH	18"	LENGTH		LENGTH	6"
DISTANCE TO N. SOURCE	8.55'	SOURCE MODEL NO.		SOURCE MODEL NO.	MRC-N-SS-W
		SERIAL NO.		SERIAL NO.	598
HOIST TRUCK NO.	10	SPACING		SPACING	15"
INSTRUMENT TRUCK NO.		TYPE		TYPE	AmBe
TOOL SERIAL NO.	CGN2714665	STRENGTH		STRENGTH	6.94 X 10 ⁶ N/SEC

LOGGING DATA		GAMMA RAY		NEUTRON						
RUN NO.	DEPTHS		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.
	FROM	TO								
ONE	000	442	13	4	25	0	4	5	4L	



ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO. COMPANY **FORDING COAL CO. LTD.**
 WELL NO. **64** (ANGLED 60°)
 LOCATION **CLODE CREEK**
 FIELD **FORDING RIVER**

PROVINCE **S.C.**
 LOG MANAGER FROM **G. GARDNER LEMER**
 LOG DEPTHS MANAGER FROM

LOG NO. **ONE**
 DATE **20.9.53**
 TIME STARTING **12.31**
 LAST READING **12.31**
 FORWARD LOGGED **12.31**
 DEPTH STARTED **12.31**
 DEPTH STOPPED **12.31**

GEIGER **18"**
 GEIGER TUBE NO. **1231**
 GEIGER TUBE SERIAL NO. **1231**
 GEIGER TUBE TYPE **WATER**
 GEIGER TUBE LIQUID LEVEL **3 5/8"**
 GEIGER TUBE MIN. DIAM. **3 5/8"**
 GEIGER TUBE OPERATING TIME **4 1/2 HRS.**

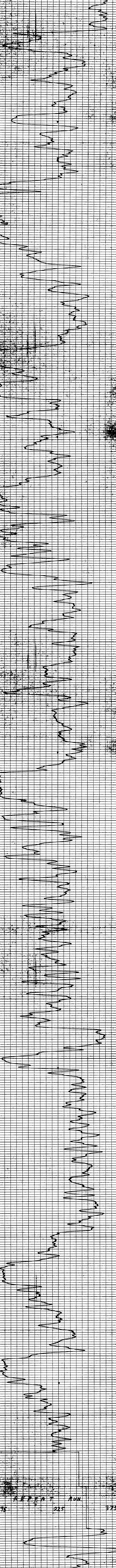
Checked by **A. GUSTAVSON** Witnessed by **A. TAPLIN**

GAMMA RAY		NEUTRON	
LOG NO.	ONE	LOG NO.	ONE
LOG TYPE	GEIGER	LOG TYPE	NEUTRON/NEUTRON
GEIGER TUBE NO.	1231	GEIGER TUBE NO.	1231
GEIGER TUBE SERIAL NO.	1231	GEIGER TUBE SERIAL NO.	1231
GEIGER TUBE TYPE	WATER	GEIGER TUBE TYPE	WATER
GEIGER TUBE LIQUID LEVEL	3 5/8"	GEIGER TUBE LIQUID LEVEL	3 5/8"
GEIGER TUBE MIN. DIAM.	3 5/8"	GEIGER TUBE MIN. DIAM.	3 5/8"
GEIGER TUBE OPERATING TIME	4 1/2 HRS.	GEIGER TUBE OPERATING TIME	4 1/2 HRS.

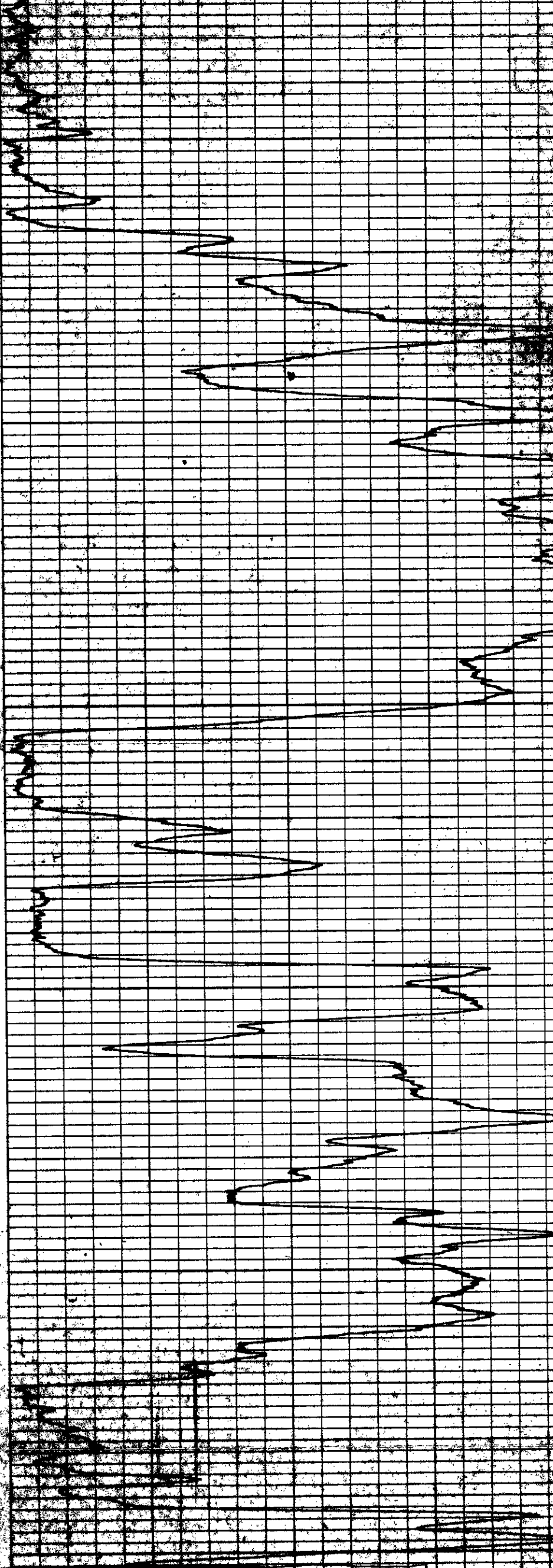
LOGGING DATA											
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT./MIN	T.C. SEC.	SENS. SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T.C. SEC.	SENS. SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
ONE	100	1231	13	4	25	0		4	5	0	52

REMARKS **SLANT HOLE 60°**

GAMMA RAY		NEUTRON	
GAMMA RAY INCREASES	→	NEUTRON INCREASES	→
COUNTS PER SEC		COUNTS PER SECOND	
0	50	96	576



APPEAL JUN 75 225 375



COMPANY: **FORDING COAL CO. LTD.**
 WELL: **No 68**
 LOCATION: **MOUNT TURNBULL**
 HEADS: **FOODING AVERN**
 PROVINCE: **B.C.**

LOG NO. **ONE**
 LOG TYPE **NEUTRON/NEUTRON**
 DETECTOR MODEL NO. **1 1/16**
 DIAMETER **1 1/16**
 TYPE **GEIGER**
 LENGTH **18"**
 DISTANCE TO N. SOURCE **8.55'**

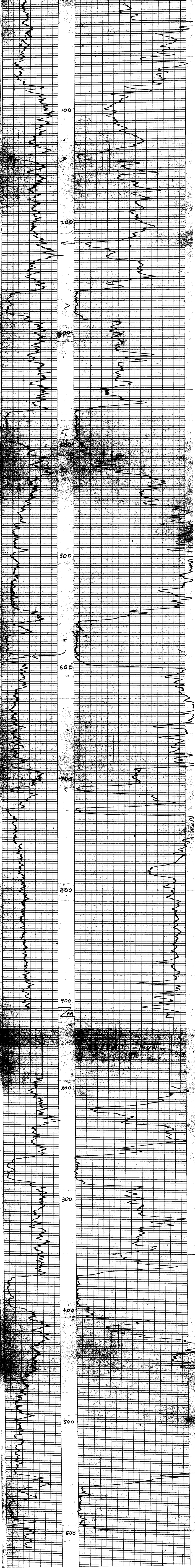
GENERAL
 TRUCK NO. **10**
 INSTRUMENT TRUCK NO.
 TOOL SERIAL NO. **CGN27U9A65**

LOGGING DATA
 RUN NO. **ONE**
 LOG TYPE **NEUTRON/NEUTRON**
 DETECTOR MODEL NO. **1 1/16**
 DIAMETER **1 1/16**
 TYPE **PROPORTIONAL**
 LENGTH **6"**
 SOURCE MODEL NO. **MRC-N-SS-W**
 SERIAL NO. **598**
 SPACING **15"**
 TYPE **AM BE**
 STRENGTH **6.94 x 10⁴ N/SEC**

GENERAL
 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.

RUN NO.	DEPTHS		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.
	FROM	TO									
ONE	000	913	13	4	25	0		4	6	41	
	200	600	13	4	25	0		4	10	61	

LOGGED TRAY DRILL STEM - VERTICAL HOLE



LOGGED TRAY DRILL STEM - VERTICAL HOLE

(K-Fording River 69(4)A N

CONFIDENTIAL

311

FORDING OPERATIONS
DRILL CORE WASHABILITY RECORD
TURNBULL MINING BLOCK

311

FORDING OPERATIONS

DRILL CORE WASHABILITY RECORD

Hole Number: 80 Seam: "g" Drill Type: DIAMOND

Sections: 2886 Missing: NONE

Footage: From: 94.0' Missing: _____
 To: 101.5' _____
 Total: 7.5' _____

Partings: From: NONE _____
 To: _____
 Total _____

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	5.502	77.1			
	- 28 Mesh	1.630	22.9			
	Raw Coal	7.132	100.0			
Sink and Float	Float	3.280	59.6	8.2		7,7,7
	Sink	2.222	40.4			
	+ 28 Mesh	5.502	100.0			
Flotation	Concentrate	1.255	77.1	8.1		9,9,9
	Tailings	.374	22.9			
	- 28 Mesh	1.630	100.0			
Overall	Clean Coal	4.536	63.6	8.2	17.0	7 $\frac{1}{2}$, 7 $\frac{1}{2}$, 7 $\frac{1}{2}$
	Waste	2.595	36.4	69.8	83.0	0,0,0
	Raw Coal	7.132	100.0	30.6	100.0	

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist. %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal			0.48	32.6	18.7	48.2	0.83	3 $\frac{1}{2}$, 3 $\frac{1}{2}$, 4
Float	3.280	72.3	0.30	8.2	22.3	69.2	0.79	7,7,7
Concentrate	1.256	27.7	0.10	8.1	23.5	68.3	0.85	9,9,9
Clean Coal	4.536	100.0	0.20	8.2	22.6	69.0	0.81	7 $\frac{1}{2}$, 7 $\frac{1}{2}$, 7 $\frac{1}{2}$

FORDING OPERATIONS

DRILL CORE WASHABILITY RECORD

Hole Number: 80 Seam: "7" Drill Type: DIAMOND

Sections: 2887 Missing: NONE

Footage: From: 169.0' Missing: _____
 To: 173.0' _____
 Total: 4.0' _____

Partings: From: NONE _____
 To: _____
 Total: _____

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	3.804	72.8			
	- 28 Mesh	1.440	27.2			
	Raw Coal	5.244	100.0			
Sink and Float	Float	1.504	39.5	4.9		8½, 9.9
	Sink	2.300	60.5			
	+ 28 Mesh	3.804	100.0			
Flotation	Concentrate	.836	58.1	9.6		9.9, 9
	Tailings	.604	41.9			
	- 28 Mesh	1.440	100.0			
Overall	Clean Coal	2.340	44.7	6.6	6.0	9.9, 9
	Waste	2.904	55.3	83.2	94.0	0, 0, 0
	Raw Coal	5.244	100.0	49.0	100.0	

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist. %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal			0.46	42.1	17.2	40.2	0.66	4, 4½, 4½
Float	1.504	64.3	0.60	4.9	24.9	69.6	0.87	8½, 9.9
Concentrate	.836	35.7	0.20	9.6	23.2	67.0	0.74	9.9, 9
Clean Coal	2.340	100.0	0.50	6.6	24.3	68.7	0.82	9.9, 9

FORDING OPERATIONS

DRILL CORE WASHABILITY RECORD

Hole Number: 80 Seam: "7" Drill Type: DIAMOND

Sections: 2888-2894 Missing: 2888

Footage: From: 176.5' Missing: 176.5'
 To: 210.0' 181.5'
 Total: 33.5' 5.0'

Partings: From: NONE
 To: _____
 Total: _____

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	12.903	66.7	24.2	83.6	
	- 28 Mesh	6.430	33.3	9.5	16.4	
	Raw Coal	19.333	100.0	19.3	100.0	
Sink and Float	Float	9.096	70.2	8.4	24.4	4½, 4.4
	Sink	3.807	29.8	62.1	75.6	1, 1, 1
	+ 28 Mesh	12.903	100.0	24.2	100.0	
Flotation	Concentrate	5.270	82.0	6.5	55.7	8½, 8½, 8
	Tailings	1.160	18.0	23.4	44.3	3, 3½, 3½
	- 28 Mesh	6.430	100.0	9.5	100.0	
Overall	Clean Coal	14.366	74.4	7.7	29.5	7, 7, 6½
	Waste	4.967	25.6	53.1	70.5	
	Raw Coal	19.333	100.0	19.4	100.0	

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist. %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal			0.39	18.2	20.8	60.6	0.58	3½, 3½, 3½
Float	9.096	63.2	0.30	8.4	21.1	70.2	0.44	4½, 4.4
Concentrate	5.270	36.8	0.30	6.5	22.8	70.4	0.36	8½, 8½, 8
Clean Coal	14.366	100.0	0.30	7.7	21.7	70.3	0.41	7, 7, 6½

FORDING OPERATIONS

DRILL CORE WASHABILITY RECORD

Hole Number: 80 Seam: "5" Drill Type: DIAMOND

Sections: 2895 - 2903 Missing: 2901

Footage: From: 281.5' Missing: 309.5'
 To: 321.0' 314.0'
 Total: 39.5' 4.5'

Partings: From: NONE
 To: _____
 Total _____

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	22,415	72.6	18.0	72.6	
	- 28 Mesh	8,450	27.4	13.7	27.4	
	Raw Coal	30,865	100.0	16.8	100.0	
Sink and Float	Float	17,838	79.6	8.2	36.2	1½, 1, 1
	Sink	4,577	20.4	56.5	63.8	1, 1, 1
	+ 28 Mesh	22,415	100.0	18.0	100.0	
Flotation	Concentrate	6,800	80.5	8.1	47.7	5½, 5, 5
	Tailings	1,650	19.5	36.6	52.3	1, 1, 1
	- 28 Mesh	8,450	100.0	13.7	100.0	
Overall	Clean Coal	24,638	79.8	8.2	33.8	1½, 1½, 1½
	Waste	6,227	20.2	51.2	61.2	
	Raw Coal	30,865	100.0	16.9	100.0	

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist. %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal			0.38	15.8	19.3	64.5	0.38	2½, 2½, 2½
Float	17,838	72.4	0.30	8.2	20.0	71.5	0.30	1½, 1, 1
Concentrate	6,800	27.6	0.50	8.1	20.3	71.1	0.38	5½, 5, 5
Clean Coal	24,638	100.0	0.56	8.2	20.1	71.4	0.32	1½, 1½, 1½

FORDING OPERATIONS

DRILL CORE WASHABILITY RECORD

Hole Number: 80 Seam: "4" Drill Type: DIAMOND

Sections: 2904-2908 Missing: NONE

Footage: From: 479.0' Missing: _____
 To: 504.0' _____
 Total: 25.0' _____

Partings: From: NONE _____
 To: _____
 Total _____

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	14.204	67.0	28.6	80.1	
	- 28 Mesh	6.520	33.0	14.4	19.9	
	Raw Coal	20.724	100.0	22.9	100.0	
Sink and Float	Float	9.644	72.7	8.9	22.7	6½, 6½, 6
	Sink	4.560	27.3	64.1	77.3	0, 0, 0
	+ 28 Mesh	14.204	100.0	28.6	100.0	
Flotation	Concentrate	4.480	68.7	6.4	30.5	9, 9, 8½
	Tailings	2.040	31.3	32.0	69.5	2, 2, 2
	- 28 Mesh	6.520	100.0	14.4	100.0	
Overall	Clean Coal	14.124	66.4	8.1	24.2	7, 7, 7
	Waste	6.600	33.6	54.2	75.8	
	Raw Coal	20.724	100.0	22.8	100.0	

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist. %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal			0.48	17.3	19.4	62.8	0.45	6½, 6½, 7
Float	9.644	73.3	0.40	8.9	20.3	70.4	0.82	6½, 6½, 6
Concentrate	4.480	26.7	0.40	6.4	20.8	72.4	0.47	9, 9, 8½
Clean Coal	14.124	100.0	0.40	8.1	20.5	71.0	0.71	7, 7, 7

FORDING OPERATIONS

DRILL CORE WASHABILITY RECORD

Hole Number: 82 Seam: "4" Drill Type: DIAMOND

Sections: 2912 - 2918 Missing: NONE

Footage: From: 362.0' Missing: _____
 To: 397.5' _____
 Total: 35.5' _____

Partings: From: NONE _____
 To: _____
 Total _____

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	24.850	74.8	17.9	84.3	
	- 28 Mesh	8.350	25.2	9.9	15.7	
	Raw Coal	33.200	100.0	15.9	100.0	
Sink and Float	Float	20.350	81.9	7.7	35.2	5,4½,4½
	Sink	4.500	18.1	64.0	64.8	0,0,0
	+ 28 Mesh	24.850	100.0	17.9	100.0	
Flotation	Concentrate	7.010	84.0	5.8	49.3	8½,8,8½
	Tailings	1.340	16.0	31.2	50.7	1,1½,1
	- 28 Mesh	8.350	100.0	9.88	100.0	
Overall	Clean Coal	27.360	82.4	7.2	37.4	7,7,7
	Waste	5.840	17.6	56.5	62.6	
	Raw Coal	33.200	100.0	15.9	100.0	

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist. %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal			0.35	14.1	21.0	64.6	0.36	7,7,7½
Float	20.350	74.4	0.50	7.7	20.8	71.0	0.36	5,4½,4½
Concentrate	7.010	25.6	0.3	5.8	22.3	71.6	0.27	8½,8,8½
Clean Coal	27.360	100.0	0.44	7.2	21.2	71.2	0.34	7,7,7

FORDING OPERATIONS
DRILL CORE WASHABILITY RECORD

Hole Number: 68 Seam: "7" Drill Type: DIAMOND

Sections: 2802-2806, 2808 Missing: NONE

Footage: From: 264.5' Missing: _____
To: 291.0' _____
Total: 26.5' _____

Partings: From: 287.0' _____
To: 291.0' _____
Total: 4.0' _____

Corrected Recovery:-
 $72.3\% \times \frac{26.5'}{26.5' - 4.0'} = 85.2\%$

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	20.835	72.3			
	- 28 Mesh	8.000	27.7			
	Raw Coal	28.835	100.0			
Sink and Float	Float	13.937	66.9	8.5		7½, 7½, 7½
	Sink	6.898	33.1			
	+ 28 Mesh	20.835	100.0			
Flotation	Concentrate	6.900	85.3	9.6		8½, 8½, 9
	Tailings	1.100	13.7			
	- 28 Mesh	8.000	100.0			
Overall	Clean Coal	20.837	72.3	8.9	26.0	7½, 8, 8
	Waste	7.998	27.7	66.1	74.0	1, 1, 1
	Raw Coal	28.835	100.0	24.8	100.0	

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist. %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal			0.42	20.1	21.1	58.4	0.55	7, 7½, 7
Float	13.937	66.9	0.4	8.5	22.5	68.6	0.49	7½, 7½, 7½
Concentrate	6.900	33.1	0.1	9.6	22.6	67.7	0.41	8½, 8½, 9
Clean Coal	20.837	100.0	0.3	8.9	22.5	68.3	0.46	7½, 8, 8

FORDING OPERATIONS

DRILL CORE WASHABILITY RECORD

Hole Number: 68 Seam: "5" Drill Type: DIAMOND

Sections: 2809-2815 Missing: NONE

Footage: From: 372.0' Missing: _____
 To: 408.0' _____
 Total: 36.0' _____

Partings: From: 404.0' _____
 To: 408.0' _____
 Total 4.0' _____

Corrected Recovery:-
 $75.7\% \times \frac{36.0' - 4.0'}{36.0' - 4.0'} = 85.2\%$

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	24.032	66.1			
	- 28 Mesh	12.300	33.9			
	Raw Coal	36.332	100.0			
Sink and Float	Float	17.178	71.5	9.1		2,2,2½
	Sink	6.854	28.5			
	+ 28 Mesh	24.032	100.0			
Flotation	Concentrate	10.320	83.9	8.7		5½, 5½, 5½
	Tailings	1.980	16.1			
	- 28 Mesh	12.300	100.0			
Overall	Clean Coal	27.498	75.7	8.9	29.5	3,3,3
	Waste	8.834	24.3	66.3	70.5	0,0,0
	Raw Coal	36.332	100.0	22.9	100.0	

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist. %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal			0.40	12.3	20.9	66.4	0.38	4, 3½, 4
Float	17.178	62.5	0.50	9.1	19.8	70.6	0.44	2, 2, 2½
Concentrate	10.320	37.5	0.20	8.7	20.4	70.7	0.30	5½, 5½, 5½
Clean Coal	27.498	100.0	0.40	8.9	20.0	70.6	0.39	3, 3, 3

FORDING OPERATIONS

DRILL CORE WASHABILITY RECORD

Hole Number: 68 Seam: "4" Drill Type: DIAMOND

Sections: 2816-2823 Missing: NONE

Footage: From: 563.0' Missing: _____
 To: 603.5' _____
 Total: 40.5' _____

Partings: From: NONE _____
 To: _____
 Total _____

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	30.951	83.6			
	- 28 Mesh	16.080	16.4			
	Raw Coal	37.031	100.0			
Sink and Float	Float	18.517	59.8	8.0		4,4,4½
	Sink	12.434	40.2			
	+ 28 Mesh	30.591	100.0			
Flotation	Concentrate	13.750	85.5	10.3		8,8½,8½
	Tailings	2.330	14.5			
	- 28 Mesh	16.080	100.0			
Overall	Clean Coal	32.267	68.6	9.0	28.7	6½,6½,6½
	Waste	14.764	31.4	66.5	71.3	0,0,0
	Raw Coal	47.031	100.0	27.1	100.0	

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist. %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal			0.71	23.5	19.5	56.3	0.36	5,5,5
Float	18.517	57.4	0.70	8.0	19.6	71.7	0.36	4,4,4½
Concentrate	13.750	42.6	0.30	10.3	21.1	67.3	0.38	8,8½,8½
Clean Coal	32.267	100.0	0.50	9.0	20.2	70.3	0.37	6½,6½,6½

FORDING OPERATIONS

DRILL CORE WASHABILITY RECORD

Hole Number: 70 Seam: "5"? Drill Type: DIAMOND

Sections: 2834-2835 Missing: 2835

Footage: From: 174.0' Missing: 181.0'
 To: 187.0' 187.0'
 Total: 13.0' 6.0'

Partings: From: NONE
 To: _____
 Total _____

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	1.570	51.3			
	- 28 Mesh	1.490	48.7			
	Raw Coal	3.060	100.0			
Sink and Float	Float	1.405	89.5	10.8		2½, 2, 2
	Sink	.165	10.5			
	+ 28 Mesh	1.570	100.0			
Flotation	Concentrate	1.300	87.2	7.8		8, 8, 8
	Tailings	.190	12.8			
	- 28 Mesh	1.490	100.0			
Overall	Clean Coal	2.705	88.4	9.4	54.8	3½, 4, 4
	Waste	.355	11.6	58.9	45.2	0, 0, 0
	Raw Coal	3.060	100.0	15.1	100.0	

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal			0.45	13.4	19.6	66.6	0.27	4½, 4½, 4
Float	1.405	51.9	0.30	10.8	19.5	69.4	0.49	2½, 2, 2
Concentrate	1.300	48.1	0.30	7.8	20.8	71.1	0.30	8, 8, 8
Clean Coal	2.705	100.0	0.30	9.4	20.1	70.2	0.40	3½, 4, 4

FORDING OPERATIONS

DRILL CORE WASHABILITY RECORD

Hole Number: 70 Seam: "5" Drill Type: DIAMOND

Sections: 2836-2839 Missing: NONE

Footage: From: 197.0' Missing: _____
 To: 223.0' _____
 Total: 26.0' _____

Partings: From: NONE _____
 To: _____
 Total: _____

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	12.668	66.6			
	- 28 Mesh	6.400	33.4			
	Raw Coal	19.068	100.0			
Sink and Float	Float	9.380	74.0	9.2		2,2 $\frac{1}{2}$,2 $\frac{1}{2}$
	Sink	3.288	26.0			
	+ 28 Mesh	12.668	100.0			
Flotation	Concentrate	5.330	83.3	7.9		8,8 $\frac{1}{2}$,8
	Tailings	1.070	16.7			
	- 28 Mesh	6.400	100.0			
Overall	Clean Coal	14.710	77.3	8.7	31.8	5 $\frac{1}{2}$,5 $\frac{1}{2}$,3
	Waste	4.358	22.7	63.2	68.2	0,0,0
	Raw Coal	19.068	100.0	21.2	100.0	

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist. %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal			0.46	17.2	19.6	62.7	0.27	3 $\frac{1}{2}$,3,3
Float	9.380	63.6	0.30	9.2	19.2	71.3	0.30	2,2 $\frac{1}{2}$,2 $\frac{1}{2}$
Concentrate	5.330	36.4	0.10	7.9	21.1	70.9	0.44	8,8 $\frac{1}{2}$,8
Clean Coal	14.710	100.0	0.20	8.7	19.9	71.2	0.35	5 $\frac{1}{2}$,5 $\frac{1}{2}$,3

FORDING OPERATIONS

DRILL CORE WASHABILITY RECORD

Hole Number: 70 Seam: "4" Drill Type: DIAMOND

Sections: 2841-2847 Missing: NONE

Footage: From: 425.5' Missing: _____
 To: 466.5' _____
 Total: 41.0' _____

Partings: From: NONE _____
 To: _____
 Total: _____

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	34.151	74.5			
	- 28 Mesh	11.680	25.5			
	Raw Coal	45.831	100.0			
Sink and Float	Float	25.463	74.6	7.8		5½, 5, 5½
	Sink	8.668	25.4			
	+ 28 Mesh	34.151	100.0			
Flotation	Concentrate	10.510	90.0	7.8		8½, 9, 8½
	Tailings	1.170	10.0			
	- 28 Mesh	11.680	100.0			
Overall	Clean Coal	35.973	78.5	7.8	31.8	6½, 7, 6½
	Waste	9.658	21.5	60/9	63.2	0, 0, N.A.
	Raw Coal	45.831	100.0	19.2	100.0	

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist. %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal			0.41	16.7	20.8	62.1	0.40	6½, 6½, 7
Float	25.463	70.8	0.30	7.8	21.3	70.5	0.30	5½, 5, 5½
Concentrate	10.510	20.2	0.20	7.8	21.4	70.6	0.36	8½, 9, 8½
Clean Coal	35.973	100.0	0.30	7.8	21.3	70.5	0.32	6½, 7, 6½

FORDING OPERATIONS
DRILL CORE WASHABILITY RECORD
CLODE CREEK MINING BLOCK

311

FORDING OPERATIONS

DRILL CORE WASHABILITY RECORD

Hole Number: 105 Seam: n7m Drill Type: ROTARY DIAMOND

Sections: 2977-2980 Missing: NONE

Footage: From: 285.0' Missing: _____
 To: 305.0' _____
 Total: 20.0' _____

Partings: From: _____
 To: _____
 Total: _____

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	5.748	19.9	32.7	32.4	
	- 28 Mesh	23.154	80.1	16.9	67.6	
	Raw Coal	28.902	100.0	20.0	100.0	
Sink and Float	Float	3.556	61.9	10.2	19.3	5½, 5½, 5½
	Sink	2.192	38.1	69.3	80.7	0, 0, 0
	+ 28 Mesh	5.748	100.0	32.7	100.0	
Flotation	Concentrate	19.700	85.3	9.6	48.4	8, 8, 8
	Tailings	3.454	14.7	58.4	51.6	0, 0, 0
	- 28 Mesh	23.154	100.0	16.9	100.0	
Overall	Clean Coal	23.256	80.5	9.7	39.0	7½, 7½, 8
	Waste	5.646	19.5	62.6	61.0	
	Raw Coal	28.902	100.0	20.0	100.0	

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist. %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal			1.1	17.8	21.0	60.1	0.74	7½, 8, 7½
Float	3.556	15.3	0.4	10.2	22.6	66.8	0.49	5½, 5½, 5½
Concentrate	19.700	84.7	0.4	9.6	23.3	66.7	0.38	8, 8, 8
Clean Coal	23.256	100.0	0.4	9.7	23.2	66.7	0.40	7½, 7½, 8

FORDING OPERATIONS

DRILL CORE WASHABILITY RECORD

Hole Number: 105 Seam: "5" Drill Type: ROTARY

Sections: 2987-2988 Missing: NONE

Footage: From: 345.0' Missing: _____
 To: 382.0' _____
 Total: 36.0' _____

Partings: From: _____
 To: _____
 Total: _____

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	6.987	28.8	59.5	48.7	
	- 28 Mesh	17.252	71.2	25.4	51.3	
	Raw Coal	24.239	100.0	35.2	100.0	
Sink and Float	Float	1.919	27.5	11.3	5.2	2,1 $\frac{1}{2}$,1 $\frac{1}{2}$
	Sink	5.068	72.5	77.7	94.8	0,0,0
	+ 28 Mesh	6.987	100.0	59.5	100.0	
Flotation	Concentrate	14.101	82.0	13.8	44.5	2 $\frac{1}{2}$,3,2 $\frac{1}{2}$
	Tailings	3.151	18.0	77.1	55.5	0,0,0
	- 28 Mesh	17.252	100.0	25.4	100.0	
Overall	Clean Coal	16.020	66.1	13.5	25.3	2 $\frac{1}{2}$,2 $\frac{1}{2}$,2 $\frac{1}{2}$
	Waste	8.219	33.9	77.5	74.7	
	Raw Coal	24.239	100.0	35.2	100.0	

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist. %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal			1.1	25.8	18.6	53.5	0.82	1 $\frac{1}{2}$,1 $\frac{1}{2}$,1 $\frac{1}{2}$
Float	1.919	12.0	0.3	11.3	20.3	68.1	0.44	2,1 $\frac{1}{2}$,1 $\frac{1}{2}$
Concentrate	14.101	88.0	0.3	13.8	21.2	64.7	0.47	2 $\frac{1}{2}$,3,2 $\frac{1}{2}$
Clean Coal	16.020	100.0	0.3	13.5	21.1	65.1	0.47	2 $\frac{1}{2}$,2 $\frac{1}{2}$,2 $\frac{1}{2}$

FORDING OPERATIONS

DRILL CORE WASHABILITY RECORD

Hole Number: 106 Seam: "7" Drill Type: ROTARY

Sections: 2989 - 2994 Missing: NONE

Footage: From: 5.0' Missing: _____
 To: 35.0' _____
 Total: 30.0' _____

Partings: From: _____
 To: _____
 Total: _____

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	6.783	42.8	22.9	55.5	
	- 28 Mesh	9.080	57.2	13.7	44.5	
	Raw Coal	15.863	100.0	17.6	100.0	
Sink and Float	Float	4.823	71.1	8.6	26.7	4.3½, 3½
	Sink	1.960	28.9	58.1	73.3	0.0, 0.0
	+ 28 Mesh	6.783	100.0	22.9	100.0	
Flotation	Concentrate	3.050	33.6	5.5	15.5	8½, 8, 8½
	Tailings	6.030	66.4	17.8	86.5	3½, 3, 3
	- 28 Mesh	9.080	100.0	13.7	100.0	
Overall	Clean Coal	7.873	49.6	7.4	26.8	5½, 6, 5½
	Waste	7.990	50.4	27.7	79.2	
	Raw Coal	15.863	100.0	17.6	100.0	

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist. %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal			1.0	17.0	21.2	60.8	0.41	4, 4, 4½
Float	4.823	61.3	0.4	8.6	23.3	67.7	0.38	4, 3½, 3½
Concentrate	3.050	38.7	0.3	5.5	24.3	69.9	0.55	8½, 8, 8½
Clean Coal	7.873	100.0	0.4	7.4	23.7	68.6	0.46	5½, 6, 5½

FORDING OPERATIONS
DRILL CORE WASHABILITY RECORD

Hole Number: 106 Seam: "5" Drill Type: ROTARY

Sections: 2995 - 3000 Missing: NONE
2151 - 2152

Footage: From: 88.0' Missing: _____
To: 118.0' _____
Total: 30.0' _____

Partings: From: _____
To: _____
Total _____

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	4.540	23.3	35.4	38.3	
	- 28 Mesh	14.982	76.7	17.3	61.7	
	Raw Coal	19.522	100.0	21.5	100.0	
Sink and Float	Float	2.429	53.5	10.7	16.2	2½, 2½, 2
	Sink	2.111	46.5	63.8	83.8	0, 0, 0
	+ 28 Mesh	4.540	100.0	35.4	100.0	
Flotation	Concentrate	12.562	83.9	9.6	46.5	4½, 5, 4½
	Tailings	2.420	16.1	57.4	53.5	0, 0, 0
	- 28 Mesh	14.982	100.0	17.3	100.0	
Overall	Clean Coal	14.991	76.8	9.8	34.9	3½, 3½, 3½
	Waste	4.531	23.2	60.4	63.1	
	Raw Coal	19.522	100.0	21.5	100.0	

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist. %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal			0.6	19.4	19.4	60.6	0.33	3, 3, 3
Float	2.429	16.2	0.3	10.7	20.6	68.4	0.44	2½, 2½, 2
Concentrate	12.562	83.8	0.3	9.6	21.2	68.9	0.41	4½, 5, 4½
Clean Coal	14.991	100.0	0.3	9.8	21.1	68.8	0.41	3½, 3½, 3½

FORDING OPERATIONS

DRILL CORE WASHABILITY RECORD

Hole Number: 106 Seam: "4" Drill Type: ROTARY

Sections: 2153-2165 Missing: NONE

Footage: From: 325.0' Missing: _____
 To: 378.0' _____
 Total: 53.0' _____

Partings: From: _____
 To: _____
 Total: _____

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	10.900	41.4	19.2	48.1	
	- 28 Mesh	15.436	58.6	14.6	51.9	
	Raw Coal	26.336	100.0	16.5	100.0	
Sink and Float	Float	8.610	79.0	7.8	32.1	3,3,3
	Sink	2.290	21.0	61.9	67.9	0,0,0
	+ 28 Mesh	10.900	100.0	19.2	100.0	
Flotation	Concentrate	14.070	91.1	9.1	56.8	7,7,7
	Tailings	1.366	8.9	71.4	43.2	0,0,0
	- 28 Mesh	15.436	100.0	14.6	100.0	
Overall	Clean Coal	22.680	86.1	8.6	44.9	5½,5,5
	Waste	3.656	13.9	63.4	55.1	
	Raw Coal	26.336	100.0	16.5	100.0	

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist. %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal			0.50	11.9	21.2	66.4	0.33	7,7,6½
Float	8.610	38.0	0.90	7.8	21.2	70.1	0.69	3,3,3
Concentrate	14.070	62.0	0.40	9.1	21.6	68.9	0.33	7,7,7
Clean Coal	22.680	100.0	0.60	8.6	21.4	69.4	0.47	5½,5,5

FORDING OPERATIONS

DRILL CORE WASHABILITY RECORD

Hole Number: 130 Seam: "g" Drill Type: ROTARY

Sections: 2166 - 2169 Missing: NONE

Footage: From: 22.0' Missing: _____
 To: 40.0' _____
 Total: 18.0' _____

Partings: From: _____
 To: _____
 Total: _____

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	11.413	43.2	30.3	75.2	
	- 28 Mesh	14.982	56.8	7.6	24.8	
	Raw Coal	26.395	100.0	17.4	100.0	
Sink and Float	Float	6.945	60.9	8.3	16.7	1½, 1½, 1½
	Sink	4.468	39.1	64.5	83.3	0, 0, 0
	+ 28 Mesh	11.413	100.0	30.3	100.0	
Flotation	Concentrate	1.390	9.4	10.3	12.6	2½, 2½, 2½
	Tailings	13.592	90.6	7.3	87.4	2, 2½, 2½
	- 28 Mesh	14.982	100.0	7.6	100.0	
Overall	Clean Coal	8.335	31.6	8.6	15.6	1, 1, 1
	Waste	18.060	68.4	21.5	84.4	
	Raw Coal	26.395	100.0	17.4	100.0	

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist. %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal			1.0	24.9	21.5	52.6	0.52	1½, 2, 2
Float	6.945	83.3	1.2	8.3	22.8	67.7	0.55	1½, 1½, 1½
Concentrate	1.390	16.7	1.0	10.3	23.4	65.3	0.69	2½, 2½, 2½
Clean Coal	8.335	100.0	1.2	8.6	22.9	67.3	0.57	1, 1, 1

FORDING OPERATIONS

DRILL CORE WASHABILITY RECORD

Hole Number: 130 Seam: "7" Drill Type: ROTARY

Sections: 2171 - 2173 Missing: NONE

Footage: From: 300.0' Missing: _____
 To: 320.0' _____
 Total: 20.0' _____

Partings: From: _____
 To: _____
 Total: _____

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	9.373	47.3	26.5	49.2	
	- 28 Mesh	10.442	52.7	24.5	50.8	
	Raw Coal	19.815	100.0	25.4	100.0	
Sink and Float	Float	6.419	68.5	10.4	26.9	5½, 5, 5½
	Sink	2.954	31.5	61.5	73.1	0, 0, 0
	+ 28 Mesh	9.373	100.0	26.5	100.0	
Flotation	Concentrate	8.920	85.4	15.0	52.2	7½, 7½, 7½
	Tailings	1.522	14.6	80.4	47.8	0, 0, 0
	- 28 Mesh	10.442	100.0	24.5	100.0	
Overall	Clean Coal	15.339	77.4	13.1	39.8	6, 6½, 6
	Waste	4.476	22.6	67.9	60.2	
	Raw Coal	19.815	100.0	25.4	100.0	

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist. %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal			0.7	28.9	19.8	50.6	0.35	5½, 5, 5
Float	6.419	41.8	0.7	10.4	22.7	66.2	1.04	5½, 5, 5½
Concentrate	8.920	58.2	0.4	15.0	22.8	61.8	0.77	7½, 7½, 7½
Clean Coal	15.339	100.0	0.5	13.1	22.8	63.6	0.88	6, 6½, 6

FORDING OPERATIONS

DRILL CORE WASHABILITY RECORD

Hole Number: 130 Seam: "5" Drill Type: ROTARY

Sections: 2174 - 2182 Missing: NONE

Footage: From: 350.0' Missing: _____
 To: 383.0' _____
 Total: 33.0' _____

Partings: From: _____
 To: _____
 Total: _____

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	21.806	46.2	32.0	55.5	
	- 28 Mesh	25.424	53.8	22.0	44.5	
	Raw Coal	47.230	100.0	25.6	100.0	
Sink and Float	Float	12.616	57.9	9.2	16.6	1 $\frac{1}{2}$, 2, 2
	Sink	9.190	42.1	63.4	83.4	1, 1, 1
	+ 28 Mesh	21.805	100.0	32.0	100.0	
Flotation	Concentrate	21.180	83.3	13.1	49.6	6, 6 $\frac{1}{2}$, 6 $\frac{1}{2}$
	Tailings	4.244	16.7	66.3	50.4	0, 0, 0
	- 28 Mesh	25.424	100.0	22.0	100.0	
Overall	Clean Coal	33.795	71.6	11.6	31.2	4, 4 $\frac{1}{2}$, 4 $\frac{1}{2}$
	Waste	13.434	28.4	64.3	68.8	
	Raw Coal	47.230	100.0	25.6	100.0	

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal			1.6	27.9	19.8	50.7	0.36	3 $\frac{1}{2}$, 3, 3 $\frac{1}{2}$
Float	12.616	37.3	0.3	9.2	22.2	68.3	0.74	1 $\frac{1}{2}$, 2, 2
Concentrate	21.180	62.7	0.3	13.1	23.2	63.4	0.58	6, 6 $\frac{1}{2}$, 6 $\frac{1}{2}$
Clean Coal	33.795	100.0	0.3	11.6	22.8	65.2	0.64	4, 4 $\frac{1}{2}$, 4 $\frac{1}{2}$

FORDING OPERATIONS

DRILL CORE WASHABILITY RECORD

Hole Number: 130 Seam: "2" Drill Type: ROTARY

Sections: 2183 - 2185 Missing: NONE

Footage: From: 410.0' Missing: _____
 To: 425.0' _____
 Total: 15.0' _____

Partings: From: _____
 To: _____
 Total: _____

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	6.110	43.9	44.2	56.0	
	- 28 Mesh	7.718	56.1	27.5	44.0	
	Raw Coal	13.928	100.0	34.6	100.0	
Sink and Float	Float	2.432	39.8	12.5	11.3	2,2½,2
	Sink	3.678	60.2	65.2	88.7	0,0,0
	+ 28 Mesh	6.110	100.0	44.2	100.0	
Flotation	Concentrate	6.120	79.5	16.4	47.3	4½,5,4½
	Tailings	1.598	20.5	69.9	52.7	0,0,0
	- 28 Mesh	7.718	100.0	27.5	100.0	
Overall	Clean Coal	8.552	61.4	15.3	27.1	3½,3,3½
	Waste	5.376	38.6	65.4	72.9	
	Raw Coal	13.928	100.0	34.6	100.0	

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist. %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal			0.6	31.9	18.4	49.1	0.33	2½,2½,3
Float	2.432	28.4	0.2	12.5	21.2	66.1	0.60	2,2½,2
Concentrate	6.120	71.6	0.4	16.4	21.3	61.9	0.49	4½,5,4½
Clean Coal	8.552	100.0	0.3	15.3	21.3	63.1	0.52	3½,3,3½

FORDING OPERATIONS

DRILL CORE WASHABILITY RECORD

Hole Number: 132 Seam: "g" Drill Type: ROTARY

Sections: 2968 - 2971 Missing: NONE

Footage: From: 247.0' Missing: _____
 To: 262.0' _____
 Total: 15.0' _____

Partings: From: _____
 To: _____
 Total: _____

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	2,500	8.7	55.6	18.7	
	- 28 Mesh	26,332	91.3	23.0	81.3	
	Raw Coal	28,832	100.0	25.8	100.0	
Sink and Float	Float	.741	29.6	12.9	6.9	1,1,1
	Sink	1,759	70.4	73.7	93.1	0,0,0
	+ 28 Mesh	2,500	100.0	55.6	100.0	
Flotation	Concentrate	22,600	86.0	14.6	54.5	4½,5,5
	Tailings	3,732	14.0	73.7	45.5	0,0,0
	- 28 Mesh	26,332	100.0	23.0	100.0	
Overall	Clean Coal	23,341	81.0	14.5	45.5	4,4,4½
	Waste	5,491	19.0	73.7	54.5	
	Raw Coal	28,832	100.0	25.8	100.0	

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal			1.3	24.0	20.7	53.0	.44	4½,4½,5
Float	.741	3.2	0.4	12.9	21.0	65.7	.49	1,1,1
Concentrate	22,600	96.8	0.8	14.6	22.6	62.0	.58	4½,5,5
Clean Coal	23,341	100.0	0.8	14.5	22.5	66.1	.58	4,4,4½

FORDING OPERATIONS
DRILL CORE WASHABILITY RECORD
GREENHILLS MINING BLOCK

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FORDING OPERATIONS

DRILL CORE WASHABILITY RECORD

Hole Number: 50 Seam: "E" Drill Type: Diamond

Sections: 1885 - 1890 Missing: None

Footage: From: 68.0' Missing: _____
 To: 104.0' _____
 Total: 36.0' _____

Partings: From: None _____
 To: _____
 Total _____

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	4.594	47.1			
	- 28 Mesh	5.150	52.9			
	Raw Coal	9.744	100.0			
Sink and Float	Float	3.072	67.0	9.9		5.5 $\frac{1}{2}$, 5 $\frac{1}{2}$
	Sink	1.522	33.0			
	+ 28 Mesh	4.594	100.0			
Flotation	Concentrate	4.155	60.7	13.6		8 $\frac{1}{2}$, 8 $\frac{1}{2}$, 8 $\frac{1}{2}$
	Tailings	.995	19.3			
	- 28 Mesh	5.150	100.0			
Overall	Clean Coal	7.227	74.3	12.0	35.4	8.8 $\frac{1}{2}$, 8 $\frac{1}{2}$
	Waste	2.517	25.7	68.8	66.6	0, 0, 0
	Raw Coal	9.744	100.0	26.7	100.0	

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist. %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal	-	-	0.50	22.5	22.4	54.6	0.42	7.7 $\frac{1}{2}$, 7
Float	3.072	42.5	0.4	9.9	24.4	65.3	0.73	5.5 $\frac{1}{2}$, 5 $\frac{1}{2}$
Concentrate	4.155	57.5	0.9	13.6	23.8	61.7	0.58	8 $\frac{1}{2}$, 8 $\frac{1}{2}$, 8 $\frac{1}{2}$
Clean Coal	7.227	100.0	0.7	12.0	24.1	63.2	0.49	8.8 $\frac{1}{2}$, 8 $\frac{1}{2}$

FORDING OPERATIONS

DRILL CORE WASHABILITY RECORD

Hole Number: 50 Seam: "D" Drill Type: Diamond

Sections: 1891 - 1900 Missing: 1900

Footage: From: 156.0' Missing: 197.0' - 201.0'
 To: 201.0'
 Total: 45.0' 4.0'

Partings: From: 193.0'
 To: 201.0'
 Total 8.0' 8.0'

Corrected Recovery:
 $60.0\% \times \frac{45'}{45'-3'} = 73.0\%$

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	11.874	58.5			
	- 28 Mesh	8.395	41.5			
	Raw Coal	20.269	100.0			
Sink and Float	Float	6.374	53.7	7.6		2 $\frac{1}{2}$, 2 $\frac{1}{2}$, 3
	Sink	5.500	46.3			
	+ 28 Mesh	11.874	100.0			
Flotation	Concentrate	5.900	70.4	10.7		5, 5 $\frac{1}{2}$, 5 $\frac{1}{2}$
	Tailings	2.495	29.6			
	- 28 Mesh	8.395	100.0			
Overall	Clean Coal	12.274	60.0	9.1	16.7	4, 5 $\frac{1}{2}$, 5 $\frac{1}{2}$
	Waste	7.995	40.0	70.2	83.3	0, 0, 0
	Raw Coal	20.269	100.0	33.0	100.0	

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist. %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal	-	-	0.52	32.2	17.9	49.4	0.30	2 $\frac{1}{2}$, 2, 2
Float	6.374	51.9	1.3	7.6	21.8	69.3	0.33	2 $\frac{1}{2}$, 2 $\frac{1}{2}$, 3
Concentrate	5.900	48.1	1.3	10.7	22.0	66.0	0.33	5, 5 $\frac{1}{2}$, 5 $\frac{1}{2}$
Clean Coal	12.274	100.0	1.3	9.1	21.9	67.7	0.33	4, 5 $\frac{1}{2}$, 5 $\frac{1}{2}$

FORDING OPERATIONS

DRILL CORE WASHABILITY RECORD

Hole Number: 50 Seam: 770 Drill Type: Diamond

Sections: 1576 - 1583 Missing: None

Footage: From: 244.0' Missing: _____
 To: 287.0' _____
 Total: 43.0' _____

Partings: From: None _____
 To: _____
 Total _____

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	3.095	34.2			
	- 28 Mesh	5.952	65.8			
	Raw Coal	9.048	100.0			
Sink and Float	Float	2.225	72.0	7.7		71.3 71.3
	Sink	.870	28.0			
	+ 28 Mesh	3.095	100.0			
Flotation	Concentrate	4.780	80.0	7.5		2, 2, 2
	Tailings	1.172	20.0			
	- 28 Mesh	5.952	100.0			
Overall	Clean Coal	7.005	77.6	7.6	25.6	6, 6, 6
	Waste	2.042	22.4	75.1	74.4	0, 0, 0
	Raw Coal	9.048	100.0	22.8	100.0	

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist. %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal	-	-	0.50	18.3	20.6	60.6	0.37	4, 4, 4
Float	2.225	31.8	0.6	7.7	21.6	70.1	0.27	31, 31, 31
Concentrate	4.780	68.2	1.3	7.5	25.6	65.6	0.33	2, 2, 2
Clean Coal	7.005	100.0	1.1	7.6	24.3	67.0	0.31	6, 6, 6

FORDING OPERATIONS

DRILL CORE WASHABILITY RECORD

Hole Number: 51 Seam: "B" Drill Type: Diamond

Sections: 1587 - 1588 Missing: None

Footage: From: 97.0' Missing: _____
 To: 107.0' _____
 Total: 10.0' _____

Partings: From: _____
 To: _____
 Total: _____

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	3.965	51.7	88.3	50.2	
	- 28 Mesh	3.698	48.3	94.5	49.8	
	Raw Coal	7.663	100.0	91.3	100.0	
Sink and Float	Float	Nil	0.0	0	0	
	Sink	3.965	100.0	88.3	100.0	0,0,0
	+ 28 Mesh	3.965	100.0	88.3	100.0	
Flotation	Concentrate	trace	0.0	7.0	0	0,0,0
	Tailings	3.698	100.0	94.5	100.0	0,0,0
	- 28 Mesh	3.698	100.0	94.5	100.0	
Overall	Clean Coal	Nil	0.0	0	0	0,0,0
	Waste	7.663	100.0	91.3	100.0	0,0,0
	Raw Coal	7.663	100.0	91.3	100.0	

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist. %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal	-	-	0.12	91.3	8.7	Nil	H.A.	0,0,0
Float	Nil	-	-	-	-	-	-	-
Concentrate	Trace	-	1.0	7.0	12.0	80.0	2.22	0,0,0
Clean Coal	Nil	-	1.0	7.0	12.0	80.0	2.22	0,0,0

FORDING OPERATIONS

DRILL CORE WASHABILITY RECORD

Hole Number: 52 Seam: "B" Drill Type: Diamond

Sections: 1551 - 1561 Missing: 1552, 1556, 1561

Footage: From: 64.6' Missing: 66.0' - 71.0'; 85.0' - 90.0'
 To: 117.0' 110.0' - 117.0'
 Total: 52.4' 17.0'

Partings: From: 95.0' 110.0' Corrected Recovery:
 To: 105.0' 117.0' $52.7\% \times \frac{52.4'}{52.4' - 17.0'} = 78.0\%$
 Total 10.0' 7.0' 17.0'

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	10.416	49.7			
	- 28 Mesh	10.576	50.3			
	Raw Coal	20.992	100.0			
Sink and Float	Float	3.553	34.0	6.3		5.5, 4.1
	Sink	6.853	66.0			
	+ 28 Mesh	10.416	100.0			
Flotation	Concentrate	7.470	70.7	12.1		6.7, 7.7
	Tailings	3.105	29.3			
	- 28 Mesh	10.576	100.0			
Overall	Clean Coal	11.023	52.7	10.2	12.6	6.5, 5.5
	Waste	9.969	47.3	78.6	87.4	0, 0, 0
	Raw Coal	20.992	100.0	42.8	100.0	

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist. %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal	-	-	0.60	40.3	16.0	43.1	0.34	2.3, 3.2
Float	3.553	32.2	1.9	6.3	22.4	69.4	0.38	5.5, 4.1
Concentrate	7.470	67.8	1.3	12.1	21.1	65.5	0.52	6.7, 7.7
Clean Coal	11.023	100.0	1.5	10.2	21.5	66.8	0.48	6.5, 5.5

FORDING OPERATIONS

DRILL CORE WASHABILITY RECORD

Hole Number: 55 Seam: "C" Drill Type: DIAMOND

Sections: 2236 - 2237 Missing: NONE

Footage: From: 60.0' Missing: _____
 To: 70.0' _____
 Total: 10.0' _____

Partings: From: NONE _____
 To: _____
 Total _____

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	1.834	75.2			
	- 28 Mesh	.605	24.8			
	Raw Coal	2.439	100.0			
Sink and Float	Float	.614	33.5	9.5		2,2,2
	Sink	1.220	66.5			
	+ 28 Mesh	1.834	100.0			
Flotation	Concentrate	.272	45.0	14.5		5,4½,4½
	Tailings	.333	55.0			
	- 28 Mesh	.605	100.0			
Overall	Clean Coal	.836	36.4	11.0	7.3	2½,3,2½
	Waste	1.553	63.6	80.2	92.7	0,0,0
	Raw Coal	2.439	100.0	55.0	100.0	

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal			0.50	45.2	14.4	39.9	0.46	1,1,1
Float	.614	69.3	1.0	9.5	21.1	68.4	0.41	2,2,2
Concentrate	.272	30.7	1.3	14.5	20.6	63.6	0.58	5,4½,4½
Clean Coal	.866	100.0	1.1	11.0	20.9	66.9	0.46	2½,3,2½

FORDING OPERATIONS

DRILL CORE WASHABILITY RECORD

Hole Number: 55 Seam: "B" Drill Type: DIAMOND

Sections: 2338 - 2345 Missing: NONE

Footage: From: 137.5' Missing: _____
 To: 198.0' _____
 Total: 60.5' _____

Partings: From: NONE _____
 To: _____
 Total _____

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	18.700	64.7			
	- 28 Mesh	10.245	35.3			
	Raw Coal	28.945*	100.0			
Sink and Float	Float	10.989	58.8	7.7		4,4,4
	Sink	7.711*	41.2			
	+ 28 Mesh	18.700	100.0			
Flotation	Concentrate	8.350	81.5	8.5		7 $\frac{1}{2}$, 7 $\frac{1}{2}$, 8
	Tailings	1.895	18.5			
	- 28 Mesh	10.245	100.0			
Overall	Clean Coal	19.339	66.5	8.0	18.3	6,6,6
	Waste	9.606	33.2	72.4	81.7	0,0,0
	Raw Coal	28.945	100.0	29.4	100.0	

*Calculated from Raw Coal Sectional Assays.

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal			0.46	18.5	20.1	69.9	0.39	4,4,4
Float	10.989	56.8	1.3	7.7	21.5	69.5	0.38	4,4,4
Concentrate	8.350	43.2	1.3	8.5	22.8	67.4	0.41	7 $\frac{1}{2}$, 7 $\frac{1}{2}$, 8
Clean Coal	19.339	100.0	1.3	8.0	22.0	68.6	0.39	6,6,6

FORDING OPERATIONS

DRILL CORE WASHABILITY RECORD

Hole Number: 56 Seam: "C" Drill Type: DIAMOND

Sections: 2854 Missing: NONE

Footage: From: 115.0' Missing: _____
 To: 131.0' _____
 Total: 16.0' _____

Partings: From: NONE _____
 To: _____
 Total _____

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	2.580	63.5			
	- 28 Mesh	1.487	39.5			
	Raw Coal	4.067	100.0			
Sink and Float	Float	.925	35.8	8.8		3,3,3
	Sink	1.655	64.2			
	+ 28 Mesh	2.580	100.0			
Flotation	Concentrate	1.072	72.3	13.0		5,5,5
	Tailings	.415	27.7			
	- 28 Mesh	1.487	100.0			
Overall	Clean Coal	1.997	49.1	11.0	11.8	4,4,4
	Waste	2.070	50.9	79.5	89.2	0,0,0
	Raw Coal	4.067	100.0	46.0	100.0	

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal			0.3	53.6	15.4	68.7	0.33	1,1,1
Float	.925	46.3	1.1	8.8	20.8	69.3	0.33	3,3,3
Concentrate	1.072	53.7	1.2	13.0	20.6	65.2	0.77	5,5,5
Clean Coal	1.997	100.0	1.2	11.0	20.7	67.1	0.57	4,4,4

FORDING OPERATIONS

DRILL CORE WASHABILITY RECORD

Hole Number: 56 Seam: "D" Drill Type: DIAMOND

Sections: 2851 - 2853 Missing: NONE

Footage: From: 47.0' Missing: _____
 To: 73.0' _____
 Total: 26.0' _____

Partings: From: NONE _____
 To: _____
 Total _____

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	5.939	60.4			
	- 28 Mesh	3.915	39.6			
	Raw Coal	9.854	100.0			
Sink and Float	Float	4.073	68.5	8.8		2,2,2
	Sink	1.856	31.5			
	+ 28 Mesh	5.939	100.0			
Flotation	Concentrate	3.390	86.7	8.8		5 $\frac{1}{2}$,5,5
	Tailings	.525	12.3			
	- 28 Mesh	3.915	100.0			
Overall	Clean Coal	7.463	75.6	8.8	30.1	3,3 $\frac{1}{2}$,3 $\frac{1}{2}$
	Waste	2.391	24.4	63.1	69.9	
	Raw Coal	9.854	100.0	21.8	100.0	

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal			0.32	19.1	20.5	60.2	0.33	2 $\frac{1}{2}$,2 $\frac{1}{2}$,2 $\frac{1}{2}$
Float	4.073	54.6	1.0	8.8	20.9	69.3	0.30	2,2,2
Concentrate	3.390	45.4	1.2	8.8	21.8	68.2	0.49	5 $\frac{1}{2}$,5,5
Clean Coal	7.463	100.0	1.1	8.8	21.3	68.8	0.39	3,3 $\frac{1}{2}$,3

FORDING OPERATIONS

DRILL CORE WASHABILITY RECORD

Hole Number: 56 Seam: "C"? Drill Type: DIAMOND

Sections: 2855 Missing: NONE

Footage: From: 137.5' Missing: _____
 To: 146.0' _____
 Total: 8.5' _____

Partings: From: NONE _____
 To: _____
 Total _____

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	.777	47.5			
	- 28 Mesh	.860	52.5			
	Raw Coal	1.637	100.0			
Sink and Float	Float	.632	81.4	8.5		2,2½,2
	Sink	.145	18.6			
	+ 28 Mesh	.777	100.0			
Flotation	Concentrate	.740	86.0	7.8		5½,5½,5½
	Tailings	.120	14.0			
	- 28 Mesh	.860	100.0			
Overall	Clean Coal	1.372	84.0	8.1	44.4	4,4,3½
	Waste	.265	16.0	52.8	55.6	0,0,0
	Raw Coal	1.637	100.0	15.3	100.0	

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist. %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal			0.3	15.9	19.4	64.7	0.41	3,3,3
Float	.632	46.1	0.5	8.5	19.3	71.7	0.44	2,2½,2
Concentrate	.740	53.9	1.2	7.8	21.3	69.7	0.63	5½,5½,5½
Clean Coal	1.372	100.0	0.8	8.1	20.4	70.6	0.54	4,4,3½

FORDING OPERATIONS

DRILL CORE WASHABILITY RECORD

Hole Number: 56 Seam: "B" Drill Type: DIAMOND

Sections: 2856 - 2857 Missing: _____

Footage: From: 238.0' Missing: _____
 To: 271.5' _____
 Total: 33.5' _____

Partings: From: NONE _____
 To: _____
 Total _____

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	2.431	44.1			
	- 28 Mesh	3.081	55.9			
	Raw Coal	5.512	100.0			
Sink and Float	Float	1.819	74.8	8.1		2½, 2½, 2
	Sink	.612	25.2			
	+ 28 Mesh	2.431	100.0			
Flotation	Concentrate	2.100	68.1	5.2		6½, 6½, 6½
	Tailings	.981	31.9			
	- 28 Mesh	3.081	100.0			
Overall	Clean Coal	3.919	71.0	6.5	21.2	4½, 4½, 5
	Waste	1.593	29.0	59.8	78.8	0, 0, 0
	Raw Coal	5.512	100.0	21.9	100.0	

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal			1.68	17.2	21.2	59.9	0.31	3, 3, 2½
Float	1.819	46.4	1.2	8.1	21.3	69.4	0.33	2½, 2½, 2
Concentrate	2.100	53.6	1.0	5.2	22.0	71.8	0.44	6½, 6½, 6½
Clean Coal	3.919	100.0	1.1	6.5	21.7	70.7	0.39	4½, 4½, 5

FORDING OPERATIONS

DRILL CORE WASHABILITY RECORD

Hole Number: 58 Seam: F, E, D, C, Drill Type: Diamond
Mixed

Sections: 2351-2355, 2356, 2360 Missing: None
2361-2366, 2368, 2369

Footage: From: 101.0' 410.5' 507.5' 569.0' Missing: _____
To: 132.0' 456.0' 541.0' 579.0'
Total: 31' + 45.5' + 33.5' + 10.0' = 120.0'

Partings: From: _____
To: _____
Total _____

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	31.974	72.0			
	- 28 Mesh	12.450	28.0			
	Raw Coal	44.424	100.0			
Sink and Float	Float	20.652	64.7	8.4*		N.A.
	Sink	11.322	35.3	67.3*		N.A.
	+ 28 Mesh	31.974	100.0			
Flotation	Concentrate	11.380	91.3	9.4*		N.A.
	Tailings	1.070	8.7	52.2*		N.A.
	- 28 Mesh	12.450	100.0			
Overall	Clean Coal	32.032	72.1	8.8*	25.5	N.A.
	Waste	12.392	27.9	66.1*	74.5	N.A.
	Raw Coal	44.424	100.0	24.7	100.0	

* Average Values

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist. %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal	-	-	0.72	18.6	22.0	58.7	0.45	N.A.
Float	20.652	64.5	1.2	8.4	22.3	67.9	0.37	N.A.
Concentrate	11.380	35.5	0.5	9.4	23.3	65.8	0.43	N.A.
Clean Coal	32.032	100.0	0.9	8.8	22.7	67.2	0.39	N.A.

FORDING OPERATIONS

DRILL CORE WASHABILITY RECORD

Hole Number: 58 Seam: Minor Drill Type: Diamond

Sections: 2367 Missing: None

Footage: From: 550.5' Missing: _____
 To: 556.0' _____
 Total: 5.5' _____

Partings: From: None _____
 To: _____
 Total _____

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	2.320	63.4			
	- 28 Mesh	1.342	36.6			
	Raw Coal	3.662	100.0			
Sink and Float	Float	1.517	65.4	12.0		2,2,2
	Sink	.803	34.6	52.3		1,1,1
	+ 28 Mesh	2.320	100.0			
Flotation	Concentrate	1.215	90.6	11.4		5½, 5½, 5½
	Tailings	.127	9.4	53.3		0,0,0
	- 28 Mesh	1.342	100.0			
Overall	Clean Coal	2.732	74.5	11.8	39.6	3,3½, 3½
	Waste	.930	25.5	52.5	60.4	1,1,1
	Raw Coal	3.662	100.0	22.0	100.0	

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist. %	Ash %	VM %	FC %	S %	F. S. I.
Raw Coal	-	-	0.3	26.0	18.8	54.9	0.52	2½, 3, 3
Float	1.517	55.5	1.1	12.0	20.7	66.2	0.69	2,2,2
Concentrate	1.215	44.6	0.5	11.4	20.7	68.6	0.52	5½, 5½, 5½
Clean Coal	2.732	100.0	0.8	11.8	20.7	66.7	0.61	3,3½, 3½

FORDING OPERATIONS
DRILL CORE WASHABILITY RECORD

Hole Number: 65 Seam: np Drill Type: Diamond

Sections: 1562 - 1566 Missing: 1563

Footage: From: 70.0' Missing: 74.0'
To: 91.5' 79.0'
Total: 21.5' 5.0'

Partings: From: 90.0'
To: 91.5'
Total: 1.5' 1.5'

Corrected Recovery:
 $56.8\% \times \frac{21.5'}{21.5' - 1.5'} = 64.3\%$

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	5.473	52.0			
	- 28 Mesh	5.044	48.0			
	Raw Coal	10.517	100.0			
Sink and Float	Float	2.373	43.3	10.2		7.7 ¹ / ₇
	Sink	3.100	56.7			
	+ 28 Mesh	5.473	100.0			
Flotation	Concentrate	3.614	71.7	11.6		8 ¹ / ₉
	Tailings	1.430	28.3			
	- 28 Mesh	5.044	100.0			
Overall	Clean Coal	5.987	56.8	11.0	18.5	8.8 ¹ / ₈
	Waste	4.530	43.2	64.2	81.5	0.0.0
	Raw Coal	10.517	100.0	33.9	100.0	

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist. %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal	-	-	0.50	28.2	21.2	50.1	0.37	6.6 ¹ / ₆
Float	2.373	39.6	1.1	10.2	24.1	64.6	0.35	7.7 ¹ / ₇
Concentrate	3.614	60.4	1.0	11.6	24.5	62.9	0.38	8 ¹ / ₉
Clean Coal	5.987	100.0	1.0	11.0	24.3	63.6	0.38	8.8 ¹ / ₈

FORDING OPERATIONS

DRILL CORE WASHABILITY RECORD

Hole Number: 65 Seam: "D" Drill Type: Diamond

Sections: 1567 - 1575 Missing: 1575

Footage: From: 164.0' Missing: _____
 To: 201.0' _____
 Total: 37.0' _____

Partings: From: _____
 To: _____
 Total: _____

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	7.101	65.3			
	- 28 Mesh	3.815	34.7			
	Raw Coal	10.916	100.0			
Sink and Float	Float	4.545	64.0	7.3		2, 2, 2
	Sink	2.555	36.0			
	+ 28 Mesh	7.101	100.0			
Flotation	Concentrate	2.600	68.1	5.9		7½, 7, 7½
	Tailings	1.215	31.9			
	- 28 Mesh	3.815	100.0			
Overall	Clean Coal	7.146	65.5	6.8	14.6	4, 3½, 3½
	Waste	3.770	34.5	75.0	85.4	0, 0, 0
	Raw Coal	10.916	100.0	30.3	100.0	

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist. %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal	-	-	0.43	21.4	19.4	58.7	0.25	2½, 3, 3
Float	4.545	63.6	1.4	7.3	21.3	70.0	0.38	2, 2, 2
Concentrate	2.600	36.4	1.2	5.9	22.8	70.1	0.36	7½, 7, 7½
Clean Coal	7.146	100.0	1.3	6.8	21.8	70.0	0.38	4, 3½, 3½

FORDING OPERATIONS

DRILL CORE WASHABILITY RECORD

Hole Number: 65 Seam: "C" Drill Type: Diamond

Sections: 2201-2202 Missing: None

Footage: From: 212.0' Missing: _____
 To: 219.6' _____
 Total: 7.6' _____

Partings: From: None _____
 To: _____
 Total _____

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	1,116	75.2			
	- 28 Mesh	.370	24.8			
	Raw Coal	1,486	100.0			
Sink and Float	Float	.880	78.8	11.2		2½, 2½, 2½
	Sink	.236	21.2			
	+ 28 Mesh	1,116	100.0			
Flotation	Concentrate	.239	64.6	8.3		6½, 6, 6
	Tailings	.131	35.4			
	- 28 Mesh	.370	100.0			
Overall	Clean Coal	1,119	75.3	10.5	37.7	3½, 3, 3
	Waste	.367	24.7	53.3	62.3	1½, 1½, 1½
	Raw Coal	1,486	100.0	21.0	100.0	

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist. %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal	-	-	0.34	19.5	18.7	61.5	0.50	2, 2, 2½
Float	.880	78.6	1.0	11.2	19.7	68.1	0.55	2½, 2½, 2½
Concentrate	.239	21.4	1.0	8.3	22.4	68.3	0.60	6½, 6, 6
Clean Coal	1,119	100.0	1.0	10.5	20.3	68.1	0.56	3½, 3, 3

FORDING OPERATIONS

DRILL CORE WASHABILITY RECORD

Hole Number: 65 Seam: "B" Drill Type: Diamond

Sections: 2226-2231 Missing: None

Footage: From: 228.0' Missing: _____
 To: 318.0' _____
 Total: 30.0' _____

Partings: From: 309.5' _____
 To: 318.0' _____
 Total 8.5' _____

Corrected Recovery:
 $36.6\% \times \frac{30.0'}{30.0' - 8.5'} = 51.1\%$

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	7.227	56.0			
	- 28 Mesh	5.671	44.0			
	Raw Coal	12.898	100.0			
Sink and Float	Float	1.662	23.0	9.9		7½, 7½, 7
	Sink	5.565	77.0			
	+ 28 Mesh	7.227	100.0			
Flotation	Concentrate	3.040	53.7	13.0		3½, 4, 3½
	Tailings	2.631	46.3			
	- 28 Mesh	5.671	100.0			
Overall	Clean Coal	4.702	36.6	11.9	7.0	4½, 4, 4
	Waste	8.196	63.4	90.2	93.0	0, 0, 0
	Raw Coal	12.898	100.0	61.6	100.0	

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist. %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal	-	-	0.78	34.1	17.0	51.9	0.34	2, 2, 2½
Float	1.662	35.3	1.0	9.9	24.0	65.1	0.33	7½, 7½, 7
Concentrate	3.040	64.7	1.2	13.0	21.8	64.0	0.77	3½, 4, 3½
Clean Coal	4.702	100.0	1.1	11.9	22.6	64.4	0.61	4½, 4, 4

FORDING OPERATIONS

DRILL CORE WASHABILITY RECORD

Hole Number: 65 Seam: Minor Drill Type: Diamond

Sections: 2232-2233 Missing: None

Footage: From: 375.3' Missing: _____
 To: 300.0' _____
 Total: 4.7' _____

Partings: From: _____
 To: _____
 Total: _____

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	1.676	73.6			
	- 28 Mesh	.600	26.4			
	Raw Coal	2.276	100.0			
Sink and Float	Float	.500	29.6	9.9		7½, 7½, 7
	Sink	1.176	70.4			
	+ 28 Mesh	1.676	100.0			
Flotation	Concentrate	.433	72.1	15.6		8½, 8½, 8½
	Tailings	.167	27.9			
	- 28 Mesh	.600	100.0			
Overall	Clean Coal	.933	41.0	12.5	11.8	8, 8½, 8
	Waste	1.343	59.0	65.0	88.2	1, 1, 1½
	Raw Coal	2.276	100.0	43.6	100.0	

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist. %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal	-	-	0.53	33.3	17.7	51.3	0.36	4, 4½, 4½
Float	.500	53.6	0.5	9.9	22.4	67.2	0.41	7½, 7½, 7
Concentrate	.433	46.4	1.0	15.6	21.0	62.4	0.49	8½, 8½, 8½
Clean Coal	.933	100.0	0.7	12.5	21.8	65.0	0.45	8, 8½, 8

FORDING OPERATIONS

DRILL CORE WASHABILITY RECORD

Hole Number: 65 Seam: Minor Drill Type: Diamond

Sections: 2234 Missing: None

Footage: From: 387.0' Missing: _____
 To: 393.0' _____
 Total: 6.0' _____

Partings: From: None _____
 To: _____
 Total _____

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	.689	54.6			
	- 28 Mesh	.571	45.4			
	Raw Coal	1.260	100.0			
Sink and Float	Float	.412	59.8	14.4		6½, 7.7
	Sink	.277	40.2			
	+ 28 Mesh	.689	100.0			
Flotation	Concentrate	.422	73.5	11.1		9, 9, 9
	Tailings	.149	26.5			
	- 28 Mesh	.571	100.0			
Overall	Clean Coal	.834	66.0	12.7	25.6	8, 8, 8½
	Waste	.426	34.0	72.2	74.4	0, 0, 0
	Raw Coal	1.260	100.0	32.8	100.0	

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal	-	-	0.10	30.6	21.9	47.4	0.60	7½, 7½, 7½
Float	.412	49.4	0.5	14.4	22.6	62.5	0.44	6½, 7.7
Concentrate	.422	50.6	1.1	11.1	24.2	63.6	0.69	8, 8, 8½
Clean Coal	.834	100.0	0.6	12.7	23.4	63.9	0.57	8, 8, 8½

FORDING OPERATIONS

DRILL CORE WASHABILITY RECORD

Hole Number: 66 Seam: "B" Drill Type: Diamond

Sections: 2280-2288 Missing: None

Footage: From: 147.0' Missing: _____
 To: 193.0' _____
 Total: 46.0' _____

Partings: From: None _____
 To: _____
 Total _____

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	3.303	34.4			
	- 28 Mesh	6.299	65.6			
	Raw Coal	9.602*	100.0			
Sink and Float	Float	2.953	90.5	7.0		4,4,4
	Sink	.350	9.5			
	+ 28 Mesh	3.303	100.0			
Flotation	Concentrate	4.960	79.0	7.3		4½,5,5
	Tailings	1.339	21.0			
	- 28 Mesh	6.299	100.0			
Overall	Clean Coal	7.913	82.4	7.2		4½,4½,4½
	Waste	1.689	17.6	N.A.		
	Raw Coal	9.602	100.0			

*Calculated from sectional weights (±10%)

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist. %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal	-	-	1.00	13.0	21.3	64.7	0.24	4,4½,4½
Float	2.953	37.3	1.2	7.0	22.7	69.1	0.30	4,4,4
Concentrate	4.960	62.7	0.2	7.3	22.7	69.8	0.22	4½,5,5
Clean Coal	7.913	100.0	0.6	7.2	22.7	69.5	0.25	4½,4½,4½

FORDING OPERATIONS

DRILL CORE WASHABILITY RECORD

Hole Number: 72 Seam: Upper "C" Drill Type: Diamond

Sections: 2346 Missing: None

Footage: From: 91.5' Missing: _____
 To: 102.0' _____
 Total: 10.5' _____

Partings: From: None _____
 To: _____
 Total: _____

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	3.391	70.0			
	- 28 Mesh	1.458	30.0			
	Raw Coal	4.849	100.0			
Sink and Float	Float	1.343	39.6	10.1		2 $\frac{1}{2}$, 3, 2 $\frac{1}{2}$
	Sink	2.048	60.4			
	+ 28 Mesh	3.391	100.0			
Flotation	Concentrate	.894	61.3	9.4		8, 8, 8
	Tailings	.564	38.7			
	- 28 Mesh	1.458	100.0			
Overall	Clean Coal	2.237	46.2	9.8	11.0	5, 5, 4 $\frac{1}{2}$
	Waste	2.612	53.8	76.3	39.0	0, 0, 0
	Raw Coal	4.849	100.0	41.6	100.0	

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist. %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal	-	-	0.20	21.2	16.2	64.2	0.55	3 $\frac{1}{2}$, 3 $\frac{1}{2}$, 3 $\frac{1}{2}$
Float	1.343	60.0	0.3	10.1	20.1	69.5	0.80	2 $\frac{1}{2}$, 3, 2 $\frac{1}{2}$
Concentrate	.894	40.0	0.3	9.4	21.2	69.1	0.58	8, 8, 8
Clean Coal	2.237	100.0	0.3	9.8	20.5	69.3	0.71	5, 5, 4 $\frac{1}{2}$

FORDING OPERATIONS
DRILL CORE WASHABILITY RECORD

Hole Number: 72 Seam: "B" Drill Type: Diamond

Sections: 2348-2350 Missing: None

Footage: From: 236.5' Missing: _____
To: 251.0' _____
Total: 14.5' _____

Partings: From: 242.0' _____
To: 251.0' _____
Total: 9.0' _____

Corrected Recovery:
 $14.1\% \times \frac{14.5'}{14.5' \times 9.0'} = 37.2\%$

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	6.861	81.1			
	- 28 Mesh	1.606	18.9			
	Raw Coal	8.467	100.0			
Sink and Float	Float	.465	6.9	9.5		7,7,7½
	Sink	6.396	93.1			
	+ 28 Mesh	6.861	100.0			
Flotation	Concentrate	.730	45.5	16.5		9,8½,9
	Tailings	.876	54.5			
	- 28 Mesh	1.606	100.0			
Overall	Clean Coal	1.195	14.1	13.8	2.5	5,5,4½
	Waste	7.272	85.9	88.6	97.5	0,0,0
	Raw Coal	8.467	100.0	78.1	100.0	

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist. %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal	-	-	0.39	54.8	11.7	33.1	0.50	1½,2,1½
Float	.465	38.9	0.2	9.5	20.4	69.9	0.63	7,7,7½
Concentrate	.730	61.1	0.3	16.5	19.8	63.4	0.66	9,8½,9
Clean Coal	1.195	100.0	0.3	13.8	20.0	65.9	0.65	5,5,4½

FORDING OPERATIONS

DRILL CORE WASHABILITY RECORD

Hole Number: 73 Seam: "E" Upper Drill Type: Diamond

Sections: 2952-2953 Missing: None

Footage: From: 143.0' Missing: _____
 To: 163.0' _____
 Total: 20.0' _____

Partings: From: None _____
 To: _____
 Total _____

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	7.227	74.4			
	- 28 Mesh	2.488	25.6			
	Raw Coal	9.715	100.0			
Sink and Float	Float	2.372	32.8	9.5		7½, 7½, 7½
	Sink	4.855	67.2			
	+ 28 Mesh	7.227	100.0			
Flotation	Concentrate	1.579	63.4	8.1		9, 8½, 9
	Tailings	.909	36.6			
	- 28 Mesh	2.488	100.0			
Overall	Clean Coal	3.951	40.7	8.8	7.4	8½, 8, 8½
	Waste	5.764	59.3	76.7	92.6	0, 0, 0
	Raw Coal	9.715	100.0	49.0	100.0	

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal	-	-	0.62	43.1	23.4	32.9	0.43	3, 3, 3½
Float	2.372	60.0	0.3	9.5	23.2	67.0	0.49	7½, 7½, 7½
Concentrate	1.579	40.0	0.4	8.1	24.3	67.6	0.52	9, 8½, 9
Clean Coal	3.951	100.0	0.3	8.8	23.6	67.3	0.50	8½, 8, 8½

FORDING OPERATIONS

DRILL CORE WASHABILITY RECORD

Hole Number: 73 Seam: "E" Lower Drill Type: Diamond

Sections: 2954 - 2955 Missing: None

Footage: From: 171.5' Missing: _____
 To: 191.5' _____
 Total: 20.0' _____

Partings: From: None _____
 To: _____
 Total _____

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	5.888	73.1			
	- 28 Mesh	2.160	26.9			
	Raw Coal	8.048	100.0			
Sink and Float	Float	4.365	74.2	10.0		7½, 7½, 7½
	Sink	1.523	25.8			
	+ 28 Mesh	5.888	100.0			
Flotation	Concentrate	1.710	79.3	6.7		9, 9, 9
	Tailings	.450	20.7			
	- 28 Mesh	2.160	100.0			
Overall	Clean Coal	6.075	75.6	9.1	30.2	8½, 8, 8½
	Waste	1.973	24.4	64.4	69.8	1, 1½, 1
	Raw Coal	8.048	100.0	22.7	100.0	

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist. %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal	-	-	0.48	20.7	21.7	57.1	0.45	8, 8, 8½
Float	4.365	71.9	0.6	10.0	23.8	65.6	0.47	7½, 7½, 7½
Concentrate	1.710	28.1	0.3	6.7	24.1	68.9	0.52	9, 9, 9
Clean Coal	6.075	100.0	0.9	9.1	25.9	66.5	0.48	8½, 8, 8½

FORDING OPERATIONS

DRILL CORE WASHABILITY RECORD

Hole Number: 73 Seam: "D" Drill Type: Diamond

Sections: 2956 - 2957 Missing: 2956

Footage: From: 280.0' Missing: 280.0'
 To: 308.5' 294.0'
 Total: 28.5' 14.0'

Partings: From: None
 To: _____
 Total _____

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	3.037	79.4			
	- 28 Mesh	.796	20.6			
	Raw Coal	3.833	100.0			
Sink and Float	Float	2.710	89.5	10.0		7,7,7
	Sink	.327	10.5			
	+ 28 Mesh	3.037	100.0			
Flotation	Concentrate	.498	62.6	7.0		5½, 5½, 5
	Tailings	.298	37.4			
	- 28 Mesh	.796	100.0			
Overall	Clean Coal	3.208	81.3	9.5	59.6	6½, 7, 6½
	Waste	.625	18.7	33.0	40.4	1½, 1½, 1½
	Raw Coal	3.833	100.0	13.3	100.0	

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal	-	-	0.48	12.2	20.6	66.7	0.44	3, 3, 3½
Float	2.710	84.5	.8	10.0	22.4	66.8	.53	7, 7, 7
Concentrate	.498	15.5	1.2	7.0	21.9	69.9	0.30	5½, 5½, 5
Clean Coal	3.208	100.0	.9	9.5	22.3	67.3	.50	6½, 7, 6½

FORDING OPERATIONS

DRILL CORE WASHABILITY RECORD

Hole Number: 74 Seam: "B" Drill Type: Diamond

Sections: 2885 Missing: None

Footage: From: 74.5' Missing: _____
 To: 82.0' _____
 Total: 7.5' _____

Partings: From: None _____
 To: _____
 Total: _____

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	3.902	89.0			
	- 28 Mesh	.496	11.0			
	Raw Coal	4.398	100.0			
Sink and Float	Float	2.710	69.4	10.8		2½, 2½, 3
	Sink	1.192	30.6			
	+ 28 Mesh	3.902	100.0			
Flotation	Concentrate	.334	67.3	10.7		7½, 7½, 7½
	Tailings	.162	32.7			
	- 28 Mesh	.496	100.0			
Overall	Clean Coal	3.044	69.4	10.8	24.3	3, 3, 3
	Waste	1.354	30.6	75.8	75.7	0, 0, 0
	Raw Coal	4.398	100.0	30.9	100.0	

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist. %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal	-	-	0.47	42.6	18.9	38.0	0.38	1, 1½, 1
Float	2.710	89.0	0.1	10.8	21.6	67.5	0.44	2½, 2½, 3
Concentrate	.334	11.0	0.2	10.7	22.0	67.1	0.47	7½, 7½, 7½
Clean Coal	3.044	100.0	.11	10.8	21.6	67.5	0.44	3, 3, 3

FORDING OPERATIONS
DRILL CORE WASHABILITY RECORD

Hole Number: 83 Seam: "B" Drill Type: Diamond

Sections: 2919-2921 Missing: None

Footage: From: 78.0' Missing: _____
 To: 123.0' _____
 Total: 45.0' _____

Partings: From: None _____
 To: _____
 Total _____

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	3.973	40.9			
	- 28 Mesh	5.799	59.1			
	Raw Coal	9.772	100.0			
Sink and Float	Float	3.450	87.0	7.1		5½, 6, 5½
	Sink	.523	13.0			
	+ 28 Mesh	3.973	100.0			
Flotation	Concentrate	4.760	82.2	7.1		8, 8½, 8½
	Tailings	1.039	17.8			
	- 28 Mesh	5.799	100.0			
Overall	Clean Coal	8.210	84.5	7.1	40.3	6½, 7, 6½
	Waste	1.562	15.5	55.2	59.7	0, 0, 0
	Raw Coal	9.772	100.0	14.9	100.0	

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist. %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal	-	-	0.58	12.7	20.4	66.3	0.34	2½, 2, 2½
Float	3.450	42.0	2.3	7.1	22.0	68.6	0.33	5½, 5, 5½
Concentrate	4.760	58.0	1.0	7.1	21.7	70.2	0.33	8, 8½, 8½
Clean Coal	8.210	100.0	1.5	7.1	21.8	69.5	0.33	6½, 7, 6½

FORDING OPERATIONS
DRILL CORE WASHABILITY RECORD

Hole Number: 75 Seam: "B" Drill Type: Diamond

Sections: 2951 Missing: None

Footage: From: 79.5' Missing: _____
 To: 91.0' _____
 Total: 11.5' _____

Partings: From: None _____
 To: _____
 Total _____

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	5.072	73.8			
	- 28 Mesh	1.789	26.2			
	Raw Coal	6.811	100.0			
Sink and Float	Float	3.136	62.5	10.5		4, 3½, 3½
	Sink	1.886	37.5			
	+ 28 Mesh	5.022	100.0			
Flotation	Concentrate	1.130	63.3	3.0		7½, 8, 7½
	Tailings	.659	36.7			
	- 28 Mesh	1.789	100.0			
Overall	Clean Coal	4.266	62.5	9.9	22.8	4, 4½, 4½
	Waste	2.545	37.5	55.9	77.2	1, 1½, 1½
	Raw Coal	6.811	100.0	27.0	100.0	2½, 2, 2

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist. %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal	-	-	0.29	21.6	20.5	57.6	0.41	2½, 2, 2
Float	3.136	73.5	1.1	10.5	20.5	67.9	0.52	4, 3½, 3½
Concentrate	1.130	26.5	1.1	8.0	22.4	68.5	0.52	7½, 8, 7½
Clean Coal	4.266	100.0	1.1	9.9	21.0	68.1	0.52	4, 4½, 4½

FORDING OPERATIONS

DRILL CORE WASHABILITY RECORD

Hole Number: 88 Seam: "F" Drill Type: Diamond

Sections: 2866 - 2867 Missing: None

Footage: From: 4.0' Missing: _____
 To: 19.5' _____
 Total: 15.5' _____

Partings: From: None _____
 To: _____
 Total _____

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	4.722	58.9			
	- 28 Mesh	3.312	41.1			
	Raw Coal	8.304	100.0			
Sink and Float	Float	2.427	51.5	5.0		0,0,0
	Sink	2.295	48.5			
	+ 28 Mesh	4.722	100.0			
Flotation	Concentrate	0.052	1.4	21.0		0,0,0
	Tailings	3.260	98.6			
	- 28 Mesh	3.312	100.0			
Overall	Clean Coal	2.479	30.8	5.4	3.5	0,0,0
	Waste	5.555	69.2	65.4	96.5	0,0,0
	Raw Coal	8.034	100.0	46.8	100.0	

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist. %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal	-	-	2.2	38.3	31.7	27.8	0.43	0,0,0
Float	2.427	97.9	3.0	5.0	28.9	63.1	0.63	0,0,0
Concentrate	.052	2.1	3.6	21.0	32.3	36.2	0.52	0,0,0
Clean Coal	2.479	100.0	3.0	5.4	28.9	62.2	0.63	0,0,0

FORDING OPERATIONS

DRILL CORE WASHABILITY RECORD

Hole Number: 88 Seam: "A" Drill Type: Diamond

Sections: 2868 Missing: None

Footage: From: 214.0' Missing: _____
 To: 234.0' _____
 Total: 20.0' _____

Partings: From: None _____
 To: _____
 Total _____

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	2.249	67.7			
	- 28 Mesh	1.072	32.3			
	Raw Coal	3.321	100.0			
Sink and Float	Float	1.152	52.3	10.9		7,7,7
	Sink	1.097	48.7			
	+ 28 Mesh	2.249	100.0			
Flotation	Concentrate	.686	64.0	8.8		9,9,9
	Tailings	.386	36.0			
	- 28 Mesh	1.072	100.0			
Overall	Clean Coal	1.838	55.3	10.1	15.6	8½,8,8
	Waste	1.483	44.7	67.7	84.4	0,0,0
	Raw Coal	3.321	100.0	35.8	100.0	

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist. %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal	-	-	0.40	34.5	18.7	46.4	0.55	1,1,1
Float	1.152	62.7	1.5	10.9	22.9	64.7	0.82	7,7,7
Concentrate	.686	37.3	1.0	8.8	24.3	65.9	0.58	9,9,9
Clean Coal	1.838	100.0	1.3	10.1	23.4	65.1	0.72	8½,8,8

FORDING OPERATIONS

DRILL CORE WASHABILITY RECORD

Hole Number: 88 Seam: "3" Drill Type: Diamond

Sections: 2869 - 2872 Missing: None

Footage: From: 258.0' Missing: _____
 To: 350.0' _____
 Total: 92.0' _____

Partings: From: None _____
 To: _____
 Total: _____

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	5.837	43.6			
	- 28 Mesh	7.533	56.4			
	Raw Coal	13.370	100.0			
Sink and Float	Float	3.560	61.0	9.3		6½, 6½, 7
	Sink	2.277	39.0			
	+ 28 Mesh	5.837	100.0			
Flotation	Concentrate	3.520	46.8	6.7		9, 9, 9
	Tailings	4.013	53.2			
	- 28 Mesh	7.533	100.0			
Overall	Clean Coal	7.080	53.0	8.0	15.3	7, 7, 7½
	Waste	6.290	47.0	50.3	84.7	1½, 1, 1½
	Raw Coal	13.370	100.0	27.8	100.0	

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist. %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal	-	-	0.4	26.5	21.2	52.8	0.37	2½, 2, 2½
Float	3.560	50.3	1.8	9.3	22.9	66.0	0.44	6½, 6½, 7
Concentrate	3.520	49.7	1.3	6.7	24.2	67.8	0.41	9, 9, 9
Clean Coal	7.080	100.0	1.6	8.0	23.5	66.9	0.43	7, 7, 7½

FORDING OPERATIONS

DRILL CORE WASHABILITY RECORD

Hole Number: 89 Seam: "E" Drill Type: DIAMOND

Sections: 2873 Missing: NONE

Footage: From: 24.0' Missing: _____
 To: 33.0' _____
 Total: 9.0' _____

Partings: From: NONE _____
 To: _____
 Total _____

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	2,020	51.6			
	- 28 Mesh	1,891	48.4			
	Raw Coal	3,911	100.0			
Sink and Float	Float	1,485	73.5	7.5		2,2,2
	Sink	.535	26.5			
	+ 28 Mesh	2,020	100.0			
Flotation	Concentrate	n i l	n i l			
	Tailings	1,891	100.0	12.2		0,0,0
	- 28 Mesh	1,891	100.0			
Overall	Clean Coal	1,485	38.0	7.5	11.0	2,2,2
	Waste	2,426	62.0	37.2	89.0	0,0,0
	Raw Coal	3,911	100.0	25.9	100.0	

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist. %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal			0.39	13.9	25.4	60.3	0.55	0,0,0
Float	1,485	100.0	1.3	7.5	25.6	65.6	0.47	2,2,2
Concentrate	n i l	n i l	-	-	-	-	-	-
Clean Coal	1,485	100.0	1.3	7.5	25.6	65.6	0.47	2,2,2

FORDING OPERATIONS

DRILL CORE WASHABILITY RECORD

Hole Number: 89 Seam: "E"? Drill Type: DIAMOND

Sections: 2874 Missing: NONE

Footage: From: 95.0' Missing: _____
 To: 105.5' _____
 Total: 10.5' _____

Partings: From: NONE _____
 To: _____
 Total _____

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	1.340	66.2			
	- 28 Mesh	.682	33.8			
	Raw Coal	2.022	100.0			
Sink and Float	Float	1.010	75.4	8.3		6,6,6
	Sink	.330	24.5			
	+ 28 Mesh	1.340	100.0			
Flotation	Concentrate	.577	84.6	5.8		8½,9,8½
	Tailings	.105	15.2			
	- 28 Mesh	.682	100.0			
Overall	Clean Coal	1.587	78.5	7.4	29.9	7½,7,7
	Waste	.435	21.5	63.1	70.1	1,1½,1
	Raw Coal	2.022	100.0	19.3	100.0	

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist. %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal			0.59	17.9	21.3	60.2	0.58	6,6½,6
Float	1.010	63.6	0.50	8.3	22.8	68.4	0.41	6,6,6
Concentrate	.577	36.4	1.2	5.3	24.2	68.3	0.36	8½,9,8½
Clean Coal	1.587	100.0	0.7	7.4	23.3	68.5	0.39	7½,7,7

FORDING OPERATIONS

DRILL CORE WASHABILITY RECORD

Hole Number: 89 Seam: "D"? Drill Type: DIAMOND

Sections: 2875 - 2876 Missing: NONE

Footage: From: 188.0' Missing: _____
 To: 204.0' _____
 Total: 16.0' _____

Partings: From: NONE _____
 To: _____
 Total _____

PRODUCT		Weight Kgm.	Weight %	Ash %	Ash Dist. %	F. S. I.
Preparation	+ 28 Mesh	3.062	58.3			
	- 28 Mesh	2.190	41.7			
	Raw Coal	5.252	100.0			
Sink and Float	Float	2.647	86.6	8.9		2½, 3, 3
	Sink	.415	13.4			
	+ 28 Mesh	3.062	100.0			
Flotation	Concentrate	1.480	67.6	6.3		7½, 7½, 8
	Tailings	.710	32.4			
	- 28 Mesh	2.190	100.0			
Overall	Clean Coal	4.127	78.5	8.0	36.1	4½, 4½, 4½
	Waste	1.125	21.5	51.9	63.9	1½, 1, 1½
	Raw Coal	5.252	100.0	17.2	100.0	

PROXIMATE ANALYSES:

Product	Weight Kgm.	Weight %	In Moist. %	Ash %	VCM %	FC %	S %	F. S. I.
Raw Coal			0.56	12.7	21.6	65.1	0.39	4, 4, 4
Float	2,647	64.1	1.3	8.9	21.1	68.7	0.36	2½, 3, 3
Concentrate	1,480	35.9	1.4	6.3	22.6	69.7	0.36	7½, 7½, 8
Clean Coal	4,127	100.0	1.3	8.0	21.6	69.1	0.36	4½, 4½, 4½

Core Hole

1	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80							
2	Property Name				Area Name			Hole Identifier			Easting		Northing		Coord. System	Elev.	F or M	Hole Azimuth	Hole Plunge				
3	FORDING RIV				DDH-47A																		
4	1		12	13		24	25		36	37		44	45		62	53	56	57	61	62	63	65	66
5	Hole depth	F or M	Sequence Number																				
6	7.19	F																					
7	68	71	72	75	80																		
8	Date	yr	MO	day	Water Table depth	F or M	Type of Drill	Hole Diameter	CM or In	Core Type	Core diameter	CM or In	Drill Contractor	Log Type	# of Coal Intersections	# of Sampled Intervals	Total Sampled Thickness						
9	69						DIAM								E	1							
10	1	3	5	7		11	12	16	20	21	25	29	30		41	42		53	54	57	60	63	
11	F or M	Max. Coal Intersection	F or M	Sequence Number																			
12		30.0	F																				
13	64	65	69	75	80																		
14																							
15																							
16																							
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311

Diamond Drill Geological Log



R - TORONTO 67131A-2

Checked

Objective:

Sampled: July 4, 1969

Logged By: S. Winzer

Date: July 5th, 1969

Composites:

Block:

Sect.:

Place:

App. Bear:

App. Dip.:

Length:

From To Discard: Reason:

0	13'	Casing.
13'	16'	Bedded siltstone, small fractures replaced by calcite. Broken.
16'	20'	Shaley siltstone, softer, no calcite. Highly broken.
20'	23'	Shaley siltstone grading to bedded siltstone, includes plant remains, coaly partings and iron concretions.
23'	23.3'	Contact, siltstone and x-bedded silty sandstone, some fine laminated.
23.3'	25.6'	X-bedded silty sandstone.
25.6'	27'	X-bedded silty sandstone.
27'	27.9'	Light coloured, coarser x-bedded sandstone, high % disseminated iron oxide particles.
27.9'	28.8'	Darker silty sandstone.
28.8'	31.3'	Harder, light x-bedded sandstone, fractures and fracture planes contain Fe ₂ O ₃ . Finely disseminated Fe ₂ O ₃ .
31.3'	31.6'	Silty sandstone.
31.6'	36'	X-bedded sandstone, thin fractures replaced with calcite.
36'	39'	Silty sandstone and siltstone, some x-bedding.
39'	41.7'	Fine laminated siltstone, broken from 40-43'.
41.7'	42'	X-bedded sandstone lense, broken.
42'	45.5'	Fine laminated siltstone, numerous cracks some filled with Fe ₂ O ₃ .
45.5'	53'	Feldspathic sandstone, pinkish x-bedded grading to dark grey, there is a break at 47' filled with pebbles of the same sandstone, rounded as if water transported.
53'	54'	Fine laminated siltstone, fractured in places.
54'	62'	X-bedded or laminated sandstone with occasional siltstone, fractured.
62'	67'	Laminated sandy siltstone, occasional x-bedding, fractured.

Core Size

Hole No. 44

Page 1

40 Scale
Color Plot & Dips
Ore Classes & Aver.

311

Diamond Drill Geological Log



40 Scale

Objective:

Sampled:

Color Plot & Dips Ore Classes & Aver.

Logged By: S. Winzer

Date: July 6, 1969

Composites:

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

From	To	Discard:	Reason:
67'	81'		Fine laminated grading to slightly coarser x-bedded sandstone, few fractures.
81'	85'		Fine laminated siltstone, no x-bedding. Some fractures.
85'	86'		Coaly partings, some pyrite along fracture planes.
86'	87'		Coarser, harder x-bedded silty sandstone.
87'	89.5'		Fine laminated siltstone.
89.5'	91'		Coarser, x-bedded silty sandstone.
91'	93'		Fine laminated siltstone.
0.3' 93'	93.3'		Coal, soft, dull.
93.3'	93.5'		Fine bedded siltstone.] #1901
0.5' 93.5'	96'		Coal, semi vitrain to clarain with some interbedded durain, sulphides apparant]
4' 96'	100'		Coal, clarain to clarodurain, sulphides apparant #1902
2' 100'	107'		Coal, crushed clarain #1903=100-105'
0.2' 107'	107.2'		Coal, durain. Sulphides (pyrite) present >1% #1904=105-110'
1' 107.2'	108.2'		Coal, crushed clarain, no apparant sulphides.
1.8' 108.2'	110'		Coal, clarodurain. Sulfides present (pyrite).
2' 110'	112'		Coal, clarodurain. No apparant sulfides.] #1905
3' 112'	115'		Coal, clarain to vitroclarain, some sulfides present. Crushed in places]
115'	116.5'		lost.
2.5' 116.5'	119'		Coal crushed clarain, some pyrite.
1.5' 119'	120.5'		Coal, clarain, occasional thin band of vitrain, sulfides present.
0.1' 120.5'	120.6'		Coal, mixed with sand and abundant pyrite.
0.9' 120.6'	121.5'		Coal, clarain, sulfides present.
0.3' 121.5'	121.8'		Coal, vitrain, sulfides absent.

Core Size

Hole No. 44

Page 2

Diamond Drill Geological Log



40 Scale

Objective:

Sampled:

Color Plot & Dips Ore Classes & Aver.

Logged By: **S. Winzer**

Date: **July 6, 1969**

Composites:

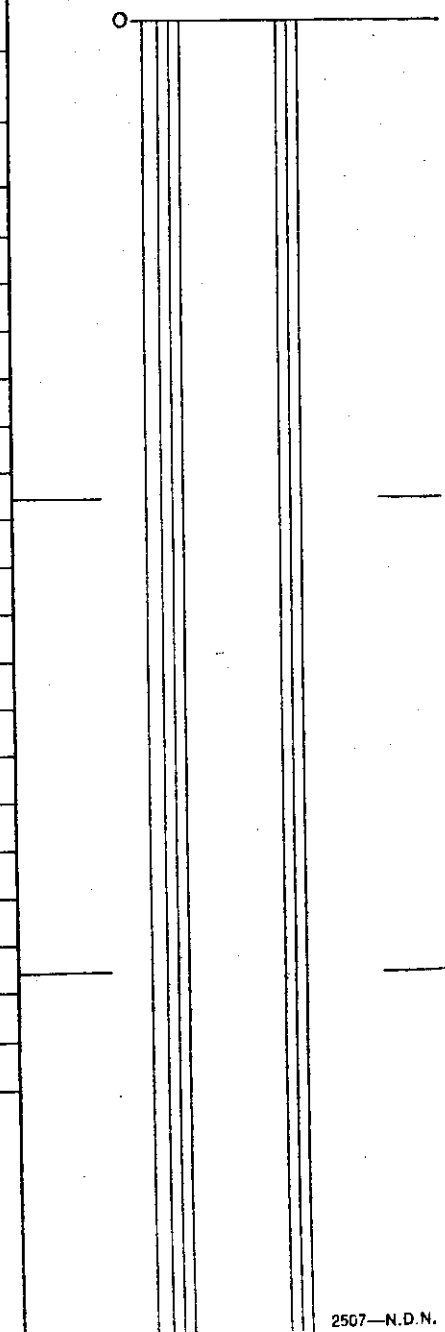
Block: Sect.: Place: App. Bear: App. Dip.: Length:

From To Discard: Reason:

27	121.8'	125.5'	Coal, clarain, sometimes crushed, sulfides present #1907	
05	125.5'	126'	Coal and siltstone, crushed. #1908]
	126'	126.5'	Fine laminated siltstone]
10	126.5'	127.5'	Coal, clarodurain. Crushed, some sulfide.]
	127.5'	128'	Fine laminated siltstone.]
04	128'	128.4'	Coal crushed, clarodurain (?) and siltstone.]
	128.4'	130'	Fine laminated siltstone with occasional bands of coal.]
	130'	136'	Coal fine laminated siltstone, coaly partings #1909	
	136'	136.5'	Crushed coal and siltstone #1910]
	136.5'	136.8'	Fine laminated siltstone (30%) coal]
	136.8'	137'	Crushed coal and siltstone]
3	137'	140'	Coal, vitrain, clarain and fusain mixed with siltstone (up to 50%)	
15	140'	141.5'	Coal, vitrain and fusain, no apparant sulfides.	
15	141.5'	143'	Coal, interbedded with siltstone.	
	143'	144'	Fine laminated siltstone with occasional very thin bands of coal.	
	144'	146.5'	Fine laminated siltstone.	
	146.5'	150'	Coarser, x-bedded silty sandstone.	
	150'	151.5'	Fine laminated siltstone.	
	151.5	152'	Crushed siltstone.	
	152'	154'	Fine laminated siltstone.	
	154'	157'	Fine laminated siltstone.	
	157'	160.5'	Silty sandstone, x-bedded, occasional fractures filled with calcite and Fe ₂ O ₃ .	

Core Size

Hole No. **DDH-44** Page **3**



Diamond Drill Geological Log



40 Scale

Objective: _____ Sampled: _____ Color Plot & Dips _____ Ore Classes & Aver. _____

Logged By: **S. Winzer** Date: **July 6, 1969** Composites: _____

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

From _____ To _____ Discard: _____ Reason: _____

160.5'	164.5'	Fine laminated siltstone.	
164.5'	165'	Crushed coal and siltstone.	
165'	166'	Fine laminated siltstone.	
166'	175'	Fine laminated siltstone with numerous well preserved plant remains. Occasional fractures are filled with iron oxide.	
175'	175.5'	Coal interbedded with finely laminated siltstone.	
175.5'	180'	Fine laminated siltstone, occasionally x-bedded. Broken in places.	
180'	195'	Siltstone, finely laminated occasionally x-bedded and increasing slightly in grain size, occasionally fractured. Some fractures are filled with calcite or iron oxide.	
195'	202.5'	Sandy siltstone, bedded and occasionally x-bedded.	
202.5'	206'	Sandstone, x-bedded, even grained, hard salt and pepper type.	
206'	206.5'	Fine bedded sandy siltstone, coal parting at top.	
206.5'	209'	Sandstone, bedded and cross bedded, occasionally coarse. Fractured in places.	
209'	210.5'	Lost.	
210.5'	214.5'	Sandstone, medium grained quartzo-feldspathic, x-bedded. Severely fractured.	
214.5'	214.6'	Siltstone, fine laminated.	
214.6'	220'	Sandstone, medium grained quartzo-feldspathic, banded and occasionally x-bedded.	
220'	221'	Silty sandstone, x-bedded.	
221'	225'	Sandstone, medium grained "salt and pepper", x-bedded, broken in places. Hard.	
225'	229.3'	Sandstone, fractured medium grained quartzo-feldspathic, banded and hard.	
0.3'	229.3'	229.6'	Coal parting.
229.6'	231.8'	Sandstone, finer grained, less fractured.	
231.8'	232.8'	Silty sandstone, fine lamination.	

Core Size

Hole No. **DDH-44**

Page **4**

Diamond Drill Geological Log



40 Scale

Objective: _____ Sampled: _____
 Color Plot & Dips _____ Ore Classes & Aver. _____

Logged By: **S. Winzer** Date: **July 7, 1969** Composites: _____

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

From To Discard: Reason:

232.8'	235'		Sandstone, Banded quartzo-feldspathic, medium grained, no x-bedding. Fractured in places.
235'	235.6'		Lost.
235.6'	237.5'		Sandstone, fine grained, banded, hard.
237.5'	239'		Sandstone, somewhat coarser, x-bedded, salt and pepper type.
239'	241.5'		Sandstone, banded, fine grained, no x-bedding.
241.5'	243.7'		Sandstone, x-bedded, medium grained "salt and pepper", type. Siderite (?) band at 243.5'.
243.7'	244.5'		Sandstone, fine grained, banded.
244.5'	246.5'		Sandstone, medium grained, x-bedded.
246.5'	250'		Sandstone, fine grained, banded.
250'	253'		Sandstone, fine grained, banded with areas of iron accumulation. Fractured, some fractures filled with iron oxide.
253'	253.3'		Sandstone, coarser, x-bedded quartzose.
253.3'	254'		Sandstone, medium grained, x-bedded.
254'	255.2'		Sandstone, banded, fine grained.
255.2'	260.5'		Sandstone, medium grained, x-bedded quartzo-feldspathic. B roken at 257'.
260.5'	264'		Sandstone, in places sandy siltstone, thin bedded but no x-bedded.
264'	267'		Sandstone, fine grained, banded and occasionally x-bedded.
267'	268.5'		Silty sandstone, laminated and occasionally x-bedded.
268.5'	276'		Sandstone, medium grained x-bedded quartzose.
276'	278'		Siltstone grading to a mudstone with conformed bedding. Resembles a turbidite.
278'	283.5'		Sandstone, occasionally banded, mostly x-bedded, medium grained. Fractured.
283.5'	287'		Lost.
287'	291.2'		Sandstone, x-bedded, medium grained quartzo-feldspathic with occasional 1/2-1/8" thick coal bands.

Core Size

Hole No. 44

Page 5

Diamond Drill Geological Log



40 Scale

Objective: _____ Sampled: _____
 Color Plot & Dips _____ Ore Classes & Aver. _____

Logged By: **S. Winzer** Date: **July 7, 1969** Composites: _____

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

From To Discard Reason:

291.2'	296'		Silty sandstone with occasional lenses of siltstone and coal partings 1-3" thick, grades to siltone at 296'.
296'	297'		Coal, mostly clarain with occasional bands of vitrain 1/2-1/4" thick]
297'	297.8'		Coal, clarain, no apparant sulfides.]
297.8'	298'		Coal, vitrain, no apparant sulfides.]
298'	299'		Coal, crushed clarain. Tr. sulfies.] #1912
299'	299.5'		Coal, clarain with 1/4" bands of vitrain, sulfides present.]
299.5'	300'		Coal, claradurain. Sulfides present.]
300'	300.6'		Coal, clarain, bands of vitrain, sulfides present.]
300.6'	301'		Coal, durain grading into coal and siltstone.]
301'	302'		Coal, 50%, fine laminated siltstone, 50%] #1913
302'	303.5'		Coal, clarain and fusain, crushed.]
303.5'	305'		Siltstone, occasional coal partings.
305'	306.3'		Siltstone, fine laminated.
306.3'	306.6'		Sandy siltstone.
306.6'	314'		Fine laminated siltstone, coal parting at 308'.
314'	314.6'		Mudstone.
314.6'	317'		Coal, high % silstone.
317'	319'		Fine laminated siltstone.
319'	319.5'		Fine laminated siltstone.
319.5'	321'		Coal.
321'	327.5'		Fine laminated siltstone.
322.5'	328'		Crushed siltstone and coal
328'	330.6'		Fine laminated siltstone, crushed, with occasional coal partings.

Core Size

Hole No. 44

Page 6

Diamond Drill Geological Log



40 Scale
Color Plot & Dips Ore Classes & Aver.

Objective:

Sampled:

Logged By: **S. Winzer**

Date: **July 7, 1969**

Composites:

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

From To Discard: Reason:

330.6'	331.3'	X-bedded, fine grained sandy siltstone.	
331.3'	332'	Fine laminated siltstone.	
332'	333'	Coal, fusain, some durain.]
333'	335'	Coal, clarain with 1/4-1/2" bands of vitrain] #1914	
335'	336'	Fine laminated siltstone.	
336'	337'	Coal, Fusain, some thin bands of clarain.]
337'	338.3'	Coal, clarain, sulfides present.]
338.3'	339.5'	Coal, mixed with fine laminated siltstone.	] #1915
339.3'	339.8'	Fine laminated siltstone.]
339.8'	341.6'	Coal, durain, some fusain.	] #1916
341.6'	344'	Coal and finely laminated sandy siltstone']
344'	345.3'	Interbedded coal and siltstone.	
345.3'	347.3'	Siltstone to silty mudstone, finely laminated, soft.	
347.3'	351.5'	Sandy siltstone, laminated to thin bedded.	
351.5'	351.8'	Coal.	
351.8'	354'	Sandy siltstone, laminated to thin bedded.	
354'	354.5'	Mixed coal and siltstone.	
354.5'	356'	Siltstone, fine laminated.	
356'	356.5'	Coal parting.	

Core Size

Hole No. #44

Page 7

Diamond Drill Geological Log



40 Scale
Color Plot & Dips Ore Classes & Aver.

Objective:

Sampled:

Logged By: **S. Winzer**

Date: **July 8, 1969**

Composites:

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

From To Discard: Reason:

357'	364'		Fine laminated sandy siltstone. Siderite band at 360'.
364'	367'		Somewhat coarser silty sandstone, x-bedded.
367'	370'		Sandstone, x-bedded occasionally laminated quartzose.
370'	371.3'		Sandstone, x-bedded. Bedding = 25°)w core axis
371.3'	384'		Silty sandstone, laminated to x-bedded.
384'	386'		Massive, dense black mudstone, coal parting at 384'.
385'	393'		Fine laminated, dense siltstone.
3.5' 393'	396.5'		Coal and siltstone, sulfides present.
0.5' 396.5'	397'		Coal, crushed clarain and durain.
397'	399'		Siltstone, coaly partings.
399'	402'		Siltstone, dense with coal partings, broken. Bedding = 30° W core axis.
1.5' 402'	403.5'		Coal, durain with a high % siltstone.
403.5'	404'		Siltstone, laminated, dense.
0.7' 404'	404.7'		Coal, crushed.
404.7'	408.6'		Fine laminated siltstone, coal partings, fractured along entire footage.
408.6'	410.1'		Coarser sandy siltstone, x-bedded.
410.1'	413'		Fine laminated siltstone, occasional coal partings.
413'	415'		Siltstone, laminated.
415'	417.5'		Silty sandstone, x-bedded - Bedding = 20° W core axis.
417.5'	423.3'		Siltstone, occasionally sandy, laminated to thin bedded.
423.3'	424.5'		Silty sandstone, x-bedded.
424.5'	427'		Siltstone, occasional bands of silty sandstone.
427'	430.3'		Sandy siltstone, laminated and occasionally x-bedded.

Core Size

Hole No. 44

Page 8

Diamond Drill Geological Log



40 Scale

Color Plot & Dips Ore Classes & Aver.

Objective:

Sampled:

Logged By: **S. Winzer**

Date: **July 9, 1969**

Composites:

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

From To Discard: Reason:

430.3'	432.2'	1' lost.	Siltstone, dense.
432.2'	439.6'		Silty sandstone, x-bedded.
439.6'	441'		Sandstone - x-bedded, fractures filled with Fe ₂ O ₃ - Bedding 24° W core axis.
441'	446.6'		Sandstone - quartzo-feldspathic, x-bedded.
446.6'	450'		Siltstone, dense (mudstone in places).
450'	451.5'		Silty sandstone, fractured.
451.5'	455'		Siltstone, laminated.
455'	455.3'		Siltstone, laminated.
455.3'	457.8'		Sandy siltstone, thin bedded, some quartz stringers.
457.8'	459.6'		Sandstone, fine grained thin bedded to x-bedded, Dip = 30° W core axis
459.6'	466.1'		Siltstone, dense laminated to thin bedded.
466.1'	468'		Sandstone, coarse near 466 grading to finer, thick bedded near 468'.
468'	470.6'		Silty sandstone, laminated and x-bedded.
470.6'	473'		Sandstone, medium grained, x-bedded quartzose.
473'	476'		Silty sandstone, grading gradually into a hard sandstone at 476'.
476'	483'		Sandstone, medium grained, x-bedded quartzose 55.
483'	489.9'		Silty sandstone, thin bedded and x-bedded, with siltstone lenses, Dip 35° W core axis.
489.9'	495.5'		Sandstone, quartzo-feldspathic, medium grained grading to fine, x-bedded. Bottom 1' contains pebbles and displays contorted bedding indicative of underwater slumping.
495.5'	496.4'		Siltstone, laminated.
496.4'	496.8'		Sandstone, x-bedded, fine grained.
496.8'	497.5'		Sandy siltstone, even bedded at the top, x-bedded at bottom.

Core Size

Hole No. 44

Page 9

Diamond Drill Geological Log



40 Scale

Objective: _____ Sampled: _____
 Color Plot & Dips _____ Ore Classes & Aver. _____

Logged By: **S. Winzer** Date: **July 9, 1969** Composites: _____

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

From _____ To _____ Discard: _____ Reason: _____

497.5'	506'	Sandstone, medium grained grading to fine, x-bedded, entire section is fractured, fractures dip at a high (70°)
506'	511'	Silty sandstone, thin bedded, occasionally x-bedded.
511'	525.5'	Sandstone, medium grained, quartzose, x-bedded, hard, Dip 30° 6" short, 517'
525.5'	527'	Sandstone, fine grained. 6" short.
527'	541'	Sandstone, medium grained, thin bedded grading to a coarser, thick bedded salt and pepper type. Broken, crushed from 527'-536'.
541'	544.8'	Sandstone, medium coarse, quartzo-feldspathic thin bedded. Dip = 30°.
544.8'	551'	Silty sandstone, thin bedded, broken in 6" intervals.
551'	553'	Siltstone, fine laminated to thin bedded. Crushed and broken.
553'	555.5'	Silty sandstone, x-bedded also shows contorted bedding indicative of sliding or slumping.
555.5'	561'	Silty sandstone, x-bedded, Dip = 30°.
561'	561.8'	Sandy siltstone, x-bedded.
561.8'	565.7'	Silty sandstone, x-bedded.
565.7'	566.3'	Siltstone.
566.3'	570'	Sandstone, bedded and x-bedded. Crushed at 567'.
570'	585'	Silty sandstone, x-bedded, some slump structures present. Dip = 35°.
585'	591'	Sandstone, fine grained, fractured and broken.
591'	593.5'	Sandy siltstone.
593.5'	596.5'	Silty sandstone, x-bedded.
596.5'	598'	Sandy siltstone.

Core Size

Hole No. 44

Page 10

Diamond Drill Geological Log



40 Scale

Objective: _____ Sampled: _____ Color Plot & Dips _____ Ore Classes & Aver. _____

Logged By: **S. Winzer** Date: **July 10, 1969** Composites: _____

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

From	To	Discard:	Reason:
------	----	----------	---------

1.3	598'	599.3'	Coal, clarain.
	599.3'	600'	Siltstone and coal.
	600'	613.7'	4' short 603-607. Sandy siltstone, finely laminated to x-bedded, coal partings 612-613.
4' coal	613.7'	616'	Siltstone, laminated.
6'	616'	627'	Coal, mostly clarain with vitrain bands (4' long) 623-627 1917 Footage error 612-616
7.5'	627'	628.5'	Coal, clarain, occasional vitrain bands 612-616) 1918 1919-612-616 coal 617-623
1'	628.5'	629.5'	Coal, durain, some clarain 626-631-1920.
4.5'	629.5'	636'	Coal, clarain, vitrain bands 631-635 - #1921
2'	636'	638'	Coal, durain 635-640 - #1922
0.5'	638'	638.5'	Coal, durain, some vitrain bands.
1.5'	638.5'	640'	Coal, clarain and vitrain 640-645 - #1923
1.5'	640'	641.5'	Coal, clarain with vitrain bands 645-647 - #1924
	641.5'	643'	Siltstone, fine laminated, coal partings 647-650 - #1925
	643'	645.5'	Siltstone, coal partings.
8.7'	645.5'	654.2'	Coal, clarain with thin vitrain bands and durain 650-654 = #1926
6.4'	654.2'	660.6'	Coal, clarain, crushed in places, vitrain bands 654-659 = #1927
	660.6'	668.7'	Sandstone, medium grained, x-bedded dip = 25° 659-660 = #1928
	668.7'	671'	Silty sandstone, thin bedded, x-bedded at bottom.
	671'		Hole ends

Core Size

Hole No. 44

Page 11

TRAVERSE SHEET

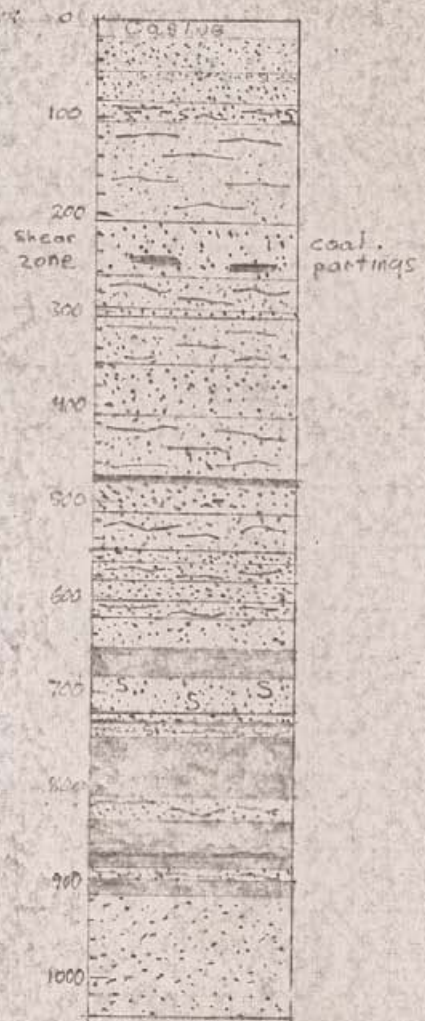
<u>STN. TO STN.</u>	<u>HOR. ANGLE</u>	<u>BEARING</u>	<u>HOR. DIST.</u>	<u>COS.</u>	<u>SIN.</u>	<u>NORTH</u>	<u>SOUTH</u>	<u>EAST</u>	<u>WEST</u>	<u>TOTAL LAT.</u>	<u>TOTAL DEP.</u>	<u>STN. EL.</u>
5252		S55° 48' 15" E								486,685.4	81,932 ⁵⁰	6770.4
Stn. #1	85° 47' 40"	N29° 59' 25" E	273.9	86611	49985	237.23		136.91		486,922 ⁶³	82,069 ⁴¹	6820.2
DH #44	171° 23' 00"	N21° 22' 25" E	169.9	93122	36445	158.21		61.92		487,080 ⁸⁴	82,131 ³³	6830.5

311

1" = 200'

DDH

45



311

Diamond Drill Geological Log



R-1001NG 65(S)A-2

Objective:

Sampled:

Logged By: **S. WINZER**

Date: **JULY 22, 1969**

Composites:

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

From To Discard: Reason:

SUMMARY: D.D.H.-45 was drilled to help determine uncertain structure between D.D.H.-42 and D.D.H.-21, West Turnbull Mountain. The hole was spudded on July 14th at 4:00 P.M. The hole proceeded rapidly to over 500' and slowed as harder rock was encountered. The first significant coal was encountered at 654'. The seam is 26' thick, coal is crushed and pulpy in many places. An abrupt increase in dip is noted before the seam is encountered, from 10 to 45 degrees. The next significant seam is encountered at 748'. It runs to 815', with three small partings. Coal is again intersected at 838'. This coal is about 75' thick, but 15' is taken up with sandstone and siltstone partings. The hole terminates in the basal sandstone at 1,040'.

Recovery in Coal: 183/190.1 = 96.3%

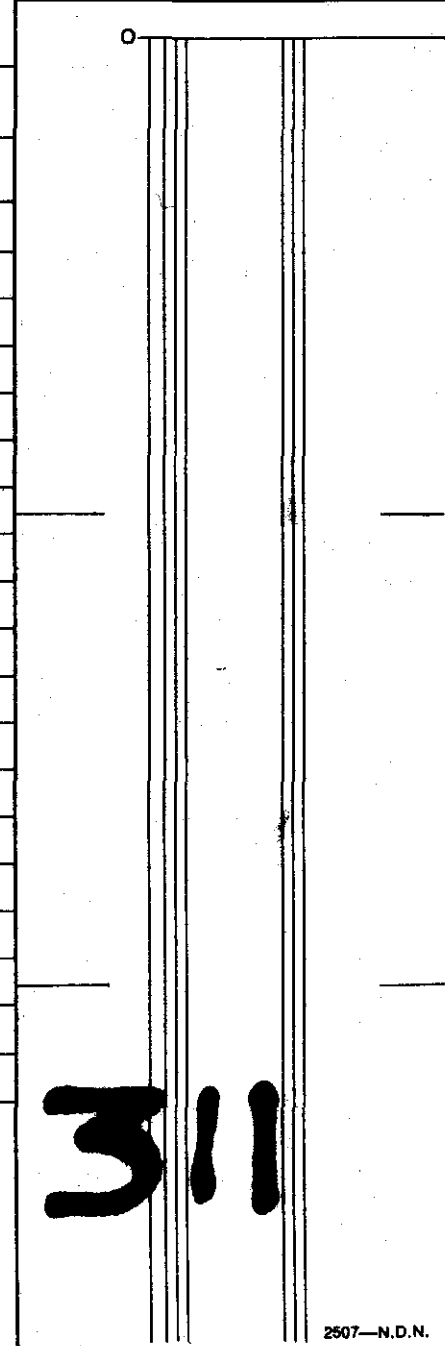
Total Recovery: 1017/1040 = 97.8%

Core Size

Hole No. **45**

Page

40 Scale
Color Plot & Dips Ore Classes & Aver.



Diamond Drill Geological Log



Objective: _____ Sampled: _____

Logged By: **S. WINZER** Date: **JULY 16, 1969** Composites: _____

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

From	To	Discard:	Reason:
0	17	Casing	
17	23.5	Sandstone, highly broken. X-bedded. Also shows graded bedding.	
23.5	25	(Short one foot.) Siltstone, dense laminated.	
25	27.2	Silty sandstone. X-bedded. Thin bedded at 27 feet.	
27.2	30	Sandstone, x-bedded. Also shows graded bedding.	
30	43	Sandstone, grading to fine at 39 feet. X-bedded occasionally thin bedded. Angle Dip = 0 to 5 degrees.	
43	46.9	Sandstone, medium to fine grained. X-bedded and thin bedded.	
46.9	50	Sandy siltstone. Softer. Dense. No apparent bedding.	
50	52.8	Siltstone, grading to a sandy siltstone. X-bedded at the bottom. Dip Angle = 20 degrees.	
52.8	55	Silty sandstone. X-bedded. Fractured and cemented in places.	
55	56.5	Siltstone or sandy siltstone. Broken.	
56.5	58.5	Silty sandstone. Laminated.	
58.5	62	Sandstone, fine grained, x-bedded. Broken every six inches.	
62	68	Sandstone, medium grained with wavy coal partings. Badly crushed and broken.	
68	82	Sandstone, bedded and x-bedded. Crushed and broken. Coal partings.	
82	92	Silty sandstone. Competent. X-bedded.	
92	93.7	Sandstone, medium coarse. Salt and pepper type. Dip Angle = 10 degrees.	
93.7	97	Silty sandstone. Coal parting at 96 feet. Laminated.	
97	97.6	Silty sandstone, laminated.	
97.6	98.2	Sandstone, bedded, x-bedded. Grading to contorted slump bedding at 98 feet. Coal parting at 98.2'. Dip Angle = 28°.	
98.2	106	Siltstone and sandy siltstone. Fine laminated to thin bedded. Carbonate stringer at 101'. Fractured from 103-106', some slickensides.	

40 Scale

Color Plot & Dips Ore Classes & Aver.

0

Core Size

Hole No. **45** Page **1**

Diamond Drill Geological Log



Objective:			Sampled:			40 Scale	
Logged By: S. WINZER			Date: JULY 16, 1969			Color Plot & Dips	
Block:			Composites:			Ore Classes & Aver.	
Sect.:		Place:		App. Bear:	App. Dip.:	Length:	0
From	To	Discard:		Reason:			
106	110	Lost (footage error).					
110	113.5	Sandy siltstone, dense, bedded and in some places slide or slump bedding.					
113.5	114.6	Sandstone, bedded and x-bedded.					
114.6	117	Sandy siltstone. Contorted bedding.					
117	122.5	Silty sandstone, bedded and x-bedded. Some carbonate fracture fillings.					
122.5	125	Siltstone, bedded. Dip Angle = 40 degrees.					
125	134	(Or 120-134) siltstone and mudstone. Dense slump structures. Footage error of 5' in box 9 - too long. Evident.					
134		Broken throughout length.					
134	138	Lost.					
138	140	Siltstone dense. No observable bedding. Crushed and broken.					
140	143	Sandy siltstone. Shows contorted bedding.					
143	151.6	Siltstone dense. Coal partings 148-149". Large % pyrite disseminated at 149.5".					
151.6	158	Siltstone, laminated.					
158	162.8	Sandstone fine grained, bedded. Dip Angle = 20 degrees.					
162.8	166	Siltstone dense.					
166	172	Siltstone with occasional 2" lenses of sandstone. Seems x-bedded.					
172	173.5	Sandy siltstone, bedded.					
173.5	180	Siltstone, broken. Dense in last two feet.					
180	184.5	Siltstone, fine laminated.					
184.5	186	Coal durain at top and clarain with vitrain bands at bottom.		Core Size			
186	194	Siltstone, broken in many places. Thin bedded. Dip Angle = 20 degrees.		Hole No. 45			
194	198	Coal mostly fairly hard, brilliant vitrain. Grades through clarain to durain and small vitrain bands at 188 feet. #1929.					Page 2

Diamond Drill Geological Log



40 Scale

Objective:

Sampled:

Color Plot & Dips

Ore Classes & Aver.

Logged By: S. WINZER

Date: JULY 16, 1969

Composites:

Block:

Sect.:

Place:

App. Bear:

App. Dip.:

Length:

From	To	Discard:	Reason:
198	206.5		Siltstone breccia, heavily laced with quartz stringers about 1/8" wide. No other apparent structure.
206.5	221		Sheared sandstone and sandy siltstone with coal partings. Bedding ranges from 20 degrees to vertical, fractures are filled with quartz.
221	221.5		Brecciated sandstone. Carbonate stringers.
221.5	222.5		Coal parting. 50% sandy siltstone.
222.5	226		Sandy siltstone. Laminated. Stringers of quartz and carbonate.
226	231		Brecciated silty sandstone. Confused and juxtaposed bedding.
231	232.4		Sandstone, brecciated, x-bedded.
232.4	235		Siltstone, dense broken.
235	240.5		Sandy siltstone. Thin bedded, also with contorted bedding.
240.5	243		Sandstone, x-bedded. Dip Angle = 25 degrees.
243	244.5		Coal durain and crushed clarain.
244.5	247.8		Siltstone - dense.
247.8	250.2		Sandstone, brecciated, x-bedded.
250.2	250.6		Siltstone, fine laminated.
250.6	255.6		Sandstone, fine grained, coal parting at 253 feet.
255.6	265		Siltstone, coal partings.
265	266		Coal, crushed clarain.
266	266.5		Siltstone, fine laminated.
266.5	270.7		Siltstone, dense, fractured, Fractures are replaced by calcite.
270.7	275		Sandstone, x-bedded, fractured.
275	280		Coal and siltstone.

Core Size

Hole No. 45

Page 3

Diamond Drill Geological Log



Objective:

Sampled:

Logged By: S. WINZER

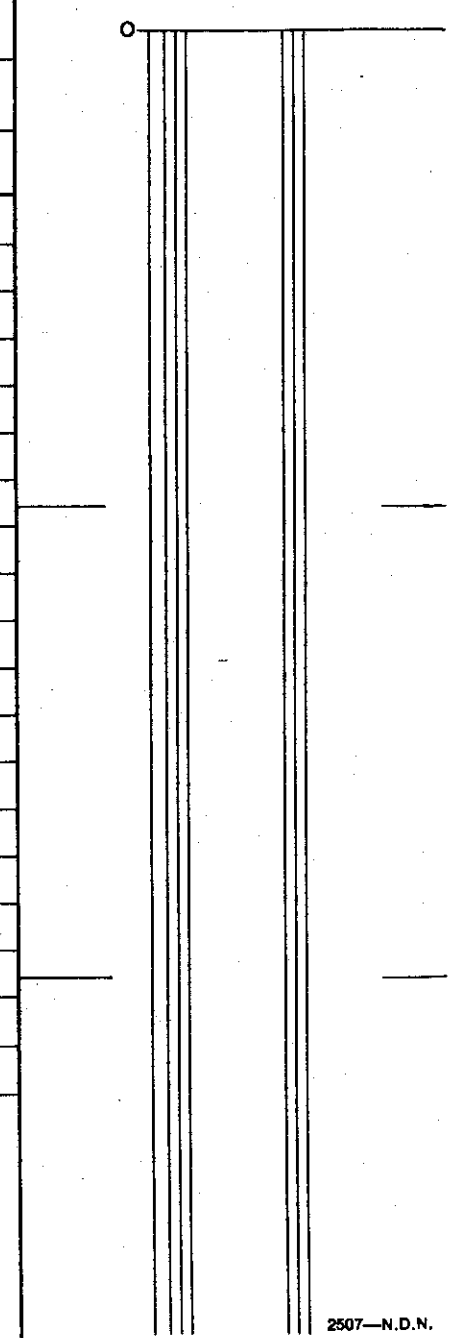
Date: JULY 17, 1969

Composites:

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

From	To	Discard:	Reason:
280	281.5	Coal crushed clarain.	
281.5	290	Siltstone - dense with coal partings and plant remains.	
290	295	Coal - crushed clarain and clarodurain. #1930.	
295	296	Coal and siltstone - crushed.	
296	297	Siltstone - laminated.	
297	304	Sandstone x-bedded. Dip Angle = 10 degrees.	
304	306.5	Siltstone, dense or finely laminated.	
306.5	308	Coal and siltstone, crushed and broken.	
308	310	Siltstone - fine laminated.	
310	322	Two feet short. Sandy siltstone. X-bedded, coal partings.	
322	324	Siltstone - dense.	
324	334	Siltstone, occasionally sandy. Dense to finely laminated.	
334	339	Sandy siltstone. Thin bedded. In places shows slump bedding.	
339	354	Siltstone, thin bedded. Occasionally x-bedded. Dip Angle = 30 degrees.	
354	358	Siltstone, dense, bedding not apparent.	
358	359.2	Sandy siltstone. Fine laminated.	
359.2	365	Silty sandstone. Thin bedded and x-bedded. Dip Angle = 15 degrees.	
365	369	Sandstone, medium grained grading to fine. X-bedded.	
369	374	Sandy siltstone. Thin bedded.	
374	375	Siltstone - dense.	
375	383	Sandy siltstone. Thin bedded - occasionally x-bedded.	
383	384	Silty sandstone.	

40 Scale
Color Plot & Dips
Ore Classes & Aver.



Core Size

Hole No. 45

Page 4

Diamond Drill Geological Log



40 Scale

Objective:

Sampled:

Color Plot & Dips

Ore Classes & Aver.

Logged By: S. WINZER

Date: JULY 18, 1969

Composites:

Block:

Sect.:

Place:

App. Bear:

App. Dip.:

Length:

From	To	Discard:	Reason:
384	389		Silty sandstone. Thin bedded and x-bedded.
389	392		Dense siltstone with coal partings.
392	399		Silty sandstone, thin bedded and x-bedded.
399	400.8		Sandstone, thin bedded with some x-bedding.
400.8	408.2		Silty sandstone, thin bedded and x-bedded. Dip Angle = 5 degrees.
408.2	411.3		Sandstone, bedded medium grained.
411.3	414		Siltstone (sandstone) thin bedded to fine laminated.
414	428		Siltstone, occasionally sandy. Thin bedded, x-bedded where sandy.
428	442		Siltstone dense and competent. Bedding is not visible.
442	447		Siltstone, dense to finely laminated.
447	457		Sandy siltstone, occasionally x-bedded. Dip Angle = 10 degrees.
457	472		Sandy siltstone, broken from 464-467. Sandy and x-bedded from 457-461.
472	474		Siltstone with coal (bright vitrain bands).
474	475.6		Siltstone coalified plant remains.
475.6	479		Silty sandstone, coarse bedding.
5.0 479	484		Coal clarodurain and fusain for first 2.5'. Grades to crushed clarain with occasional vitrain bands. No apparent sulphides. #1951
484	486		Siltstone coalified plant remains.
3.7 486	489.7		Coal durain. Very small vitrain. High % of silt.
489.7	500		Sandstone medium grained x-bedded.
500	505.8		Sandstone x-bedded. Dip Angle = 20 degrees.
505.8	510.8		Sandy siltstone. Fine laminated.
510.8	510		Sandstone, x-bedded.

Core Size

Hole No. 45

Page 5

Diamond Drill Geological Log



40 Scale
Color Plot & Dips Ore Classes & Aver.

Objective:

Sampled:

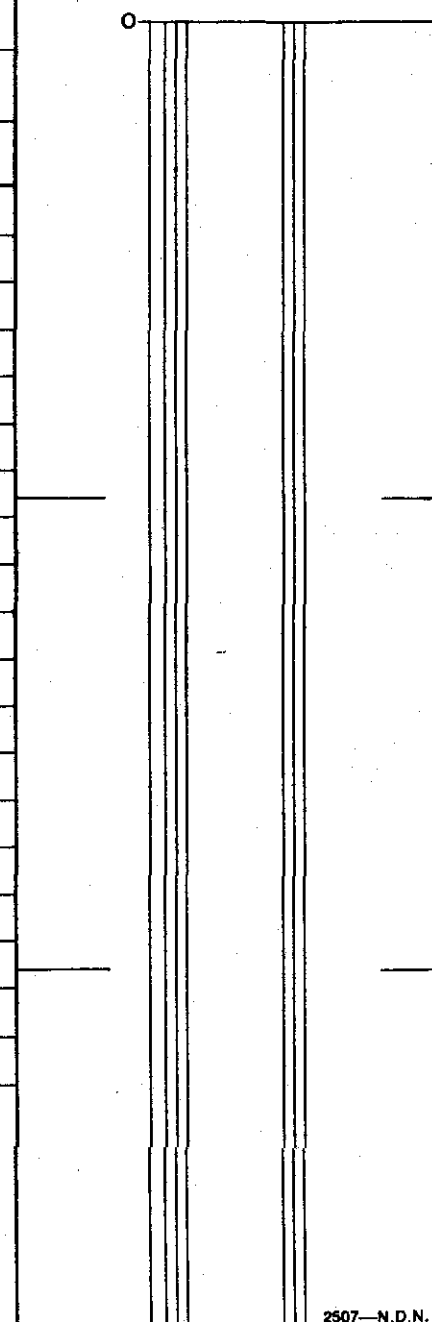
Logged By: **S. WINZER**

Date: **JULY 18, 1969**

Composites:

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

From	To	Discard:	Reason:
510	514	Siltstone, fine laminated.	
514	528	Sandy siltstone, occasional sandstone lenses 4" thick, broken from 526-528'.	
528	542	Siltstone (mudstone) black, dense. No visible bedding, some coal partings.	
542	544	Coal, crushed clarain and durain.	
544	551.2	Siltstone, dense and soft.	
551.2	556	Sandstone, bedded and x-bedded. Dip Angle = 15 degrees.	
556	565	Sandy siltstone, laminated and x-bedded.	
565	570	Siltstone - dense.	
570	577	Siltstone, occasional coal partings.	
577	581	Sandstone, x-bedded. Dip Angle = 20 degrees.	
581	582.4	Coal - crushed durain and clarain.	
582.4	584	Sandstone - x-bedded.	
584	598.5	Sandstone, medium grained, x-bedded. Dip Angle varies from 10 to 40 degrees.	
598.5	605	Silty sandstone, x-bedded.	
605	613	Siltstone - occasional coal parting. Dense.	
613	623	Siltstone - occasional 6-8" coal parting. Dense to laminated.	
623	627	Silty sandstone, x-bedded and thin bedded. Fractured. Slickensided? Dip angle = 35 to 45 degrees.	
627	631	Sandstone, x-bedded. Badly fractured and broken.	
631	637.5	Siltstone, thin bedded to laminated.	
637.5	641	Silty sandstone, broken. Dip angle = 40 degrees.	
641	654.5	One foot short. Silty sandstone, x-bedded, thin bedded. Dip Angle = 45 degrees.	
654.5	655	Coal mostly durain. Some clarain. #1932	



Core Size

Hole No. **45**

Page **6**

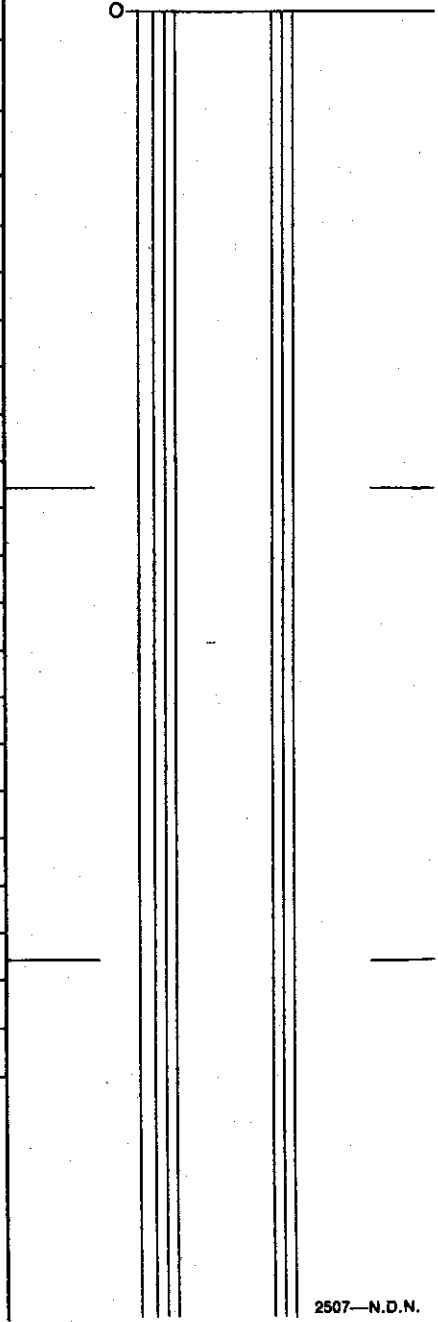
Diamond Drill Geological Log



Objective: _____ Sampled: _____
 Logged By: S. WINZER Date: JULY 19, 1969 Composites: _____
 Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip: _____ Length: _____

40 Scale
 Color Plot & Dips
 Ore Classes & Aver.

From	To	Discard:	Reason:	
20' 655	657	Coal clarain, crushed.	"Pulpy".	#1932 = 654 - 660
80' 657	665	Coal Clarain with occasional 4" bands of durain.		#1933 = 660 - 665
20' 665	667	Coal clarain, some small vitrain bands.		#1934 = 668 - 669
20' 667	669	Coal durain and clarain.		#1935 = 669 - 673
212.5' 669	681.5	Three feet short. Coal mostly unidentifiable due to crushed soupy nature. Some durain.		#1936 = 673 - 681
681.5	684	Siltstone with coal partings.		
684	686	Lost.		
686	688	Sandstone, x-bedded. Cut by minor faults.		
15' 688	689.5	Coal clarain and vitrain.		
689.5	692.5	Sandstone, x-bedded. Cut by minor faults. Broken. Dip L = 45 degrees.		
692.5	700	Seems one foot lost. Siltstone, fine laminated, occasional coal partings.		
700	705	Silty sandstone, bedded. Coal parting at 702'.		
705	709	Siltstone, coal partings 8" thick. Coal is vitrinoid with lots of carbonate laced through it.		
709	713.5	Silty sandstone, bedded. Dip L = 40 degrees.		
713.5	718	Silty sandstone, bedded.		
718	721.5	Sandy siltstone, coal partings.		
721.5	724	Siltstone, coal partings.		
10' 724	725	Coal clarain (crushed).		
725	727	Sandy siltstone, coal partings.		
727	729.5	Siltstone, broken, coal partings.		
729.5	736	One foot lost. Sandstone, thin bedded. Dip Angle = 45 degrees.		
736	738.4	Coal, mixed with siltstone, broken and crushed.		



Core Size

Hole No. 45

Page 7

Diamond Drill Geological Log



40 Scale
Color Plot & Dips Ore Classes & Aver.

Objective: _____ Sampled: _____

Logged By: **S. WINZER** Date: **July 20, 1969** Composites: _____

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

From	To	Discard:	Reason:
738.4	742		Sandy siltstone, laminated and fairly hard.
742	748		Sandy siltstone, laminated. Dip L = 45 degrees.
748	754.5		Coal, with a high % of ash and siltstone, also some carbonated. The coal is hard, bright vitrain and clarain. Nos. 748 - 752 = 1937. Nos. 752 - 754 = 1938.
754.5	757		One foot short. Coal silty, bright hard vitrain with some clarain. #1939 = 754.5 - 760.
757	761		Coal, clarain with a few vitrain bands. Crushed. No sulphides apparent. #1940 = 760 - 765.
761	766.5		Coal, clarodurain, some fusain. No sulphides apparent. #1941 = 765 - 770.
766.5	767		Siltstone.
767	770		Coal, durain, some clarain (crushed). No apparent sulphides.
770	785		Coal mostly clarain with some bright bands of vitrain. The entire length is broken and the coal is fairly soft. No apparent sulphides. 770 - 775 = #1942. 775 - 780 = #1943. 780 - 785 = #1944.
785	800		Coal clarodurain with some signs of fusain and occasional bands of vitrain. All coals are Wolsen and crushed, but little sulphide is apparent. 785 - 790 = #1945. 790 - 795 = #1946. 795 - 800 = #1947. True length may be under 15' due to crushed nature of the coal.
800	805.5		Coal, clarain, crushed, occasional vitrain bands, no apparent sulphides. #1948
805.5	806		Siltstone.
806	808.7		Coal, crushed. Six inches of durain identifiable. No apparent sulphides. #1949 = 805 - 809.
808.7	809		Siltstone.
809	815		One foot short. Coal occasionally silty. Mainly clarodurain and durain. No apparent sulphides. #1950.
815	830		Siltstone dense and hard with occasional 6" coal partings.
830	838.5		Silty sandstone, bedded and x-bedded grading to silty coal.
838.5	843		Coal high % of siltstone. Coal is vitrain and durain. #1801
843	850		Coal soft clarain with vitrain bands.

2.5'
4.0'
5.5'
3.0'
6.0'
15.0'
5.5'
2.2'
6.0'
4.5'
7.0'

Core Size _____
Hole No. **45** Page **8**

Diamond Drill Geological Log



40 Scale
Color Plot & Dips Ore Classes & Aver.

Objective: _____ Sampled: _____

Logged By: S. WINZER Date: JULY 20, 1969 Composites: _____

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

From	To	Discard:	Reason:
44' 850	855.4		One foot short. Coal durain with thin bands of vitrain and clarain. 1802 = 843 - 848.
16' 855.4	857		Coal, clarain with vitrain bands. 1803 = 848 - 852. 1804 = 852 - 857.
30' 857	861		One foot short coal. Clarain and clarodurain. 857 - 862 = 1806.
27' 861	863.7		Coal, fusain and clarain. 862 - 867 = 1806.
32' 863.7	872		Coal, clarain and clarodurain, clarodurain is competent, clarain is crushed. 867 - 872 = 1807.
22' 872	874.2		Coal, clarain and clarodurain. 872 - 875 = 1808.
	874.2	875	Siltstone, laminated.
27' 875	877.9		Coal, clarodurain. 875 - 877.9 = 1809.
	877.9	882	Sandstone, bedded and x-bedded. Dip L = 15 degrees.
33' 882	885.8		Coal, clarain and claredurain. 882 - 885 = 1810.
	885.8	886.5	Sandy siltstone, laminated.
	886.5	892.5	Siltstone, laminated with many small coal partings.
	892.5	896	Two feet missing. Coal and siltstone in approximately equal amounts.
	896	899	Sandy siltstone, laminated to thin bedded.
20' 899	901		Coal, soft clarain. 899 - 904 = 1811.
34' 901	904.4		Coal, durain and clarain, high % ash or silt.
20' 904.4	906.4		Coal and siltstone. Carbonate is also present. 904 - 909 = 1812.
22' 906.4	908.7		Coal, clarain and durain, with siltstone.
	908.7	910	Siltstone, heavily laced with coalified plant remains. 909 - 912 = 1813
30' 910	913		Coal, clarain and durain, occasional siltstone partings.
	913	917.7	Siltstone, laminated with coal partings.
	917.7	919.7	Sandstone, silty thin bedded.
	919.7	922	Siltstone, laminated.

Core Size

Hole No. 45

Page 9

Diamond Drill Geological Log



40 Scale

Objective:

Sampled:

Color Plot & Dips

Ore Classes & Aver.

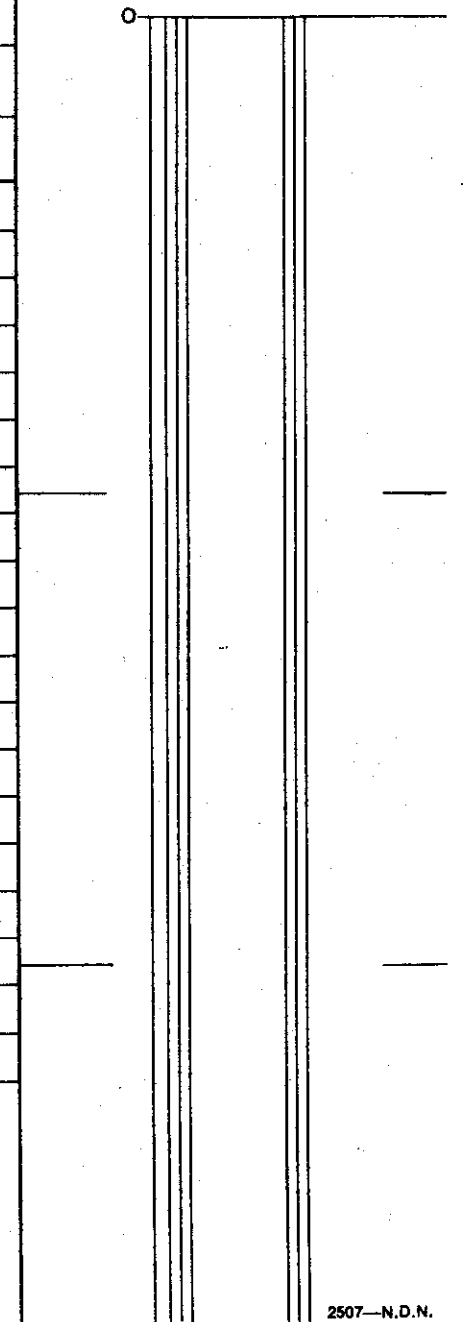
Logged By: S. WINZER

Date: JULY 21, 1969

Composites:

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

From	To	Discard:	Reason:
922	927		Sandstone, thin bedded, occasionally x-bedded. Dip L < 5 degrees.
927	931.5		Silty sandstone, bedded and x-bedded.
931.5	934.4		Sandy siltstone, some x-bedding visible.
934.4	941		Sandstone, fractured, x-bedded. Fractures are replaced with carbonate. Dip L = < 5 degrees.
941	951.3		Sandstone, fine grained occasionally silty, x-bedded.
951.3	954		Siltstone, finely laminated.
954	967		Sandstone, x-bedded, broken especially between 962 - 964 feet. Dip L = 18 degrees.
967	981		Sandstone, medium coarse at the top grading to fine at the bottom, x-bedded.
981	993		Sandstone, highly broken, some appears crushed, thin bedded fine to medium grained.
993	999.4		Sandstone, broken, thin bedded or x-bedded. Occasional 1/4" coal partings.
999.4	1002.4		Sandy siltstone, shows evidence of fracture.
26' 1002.4	1005		Coal, crushed vitrain with many sandstone and siltstone partings.
1005	1006.5		Sandstone, fractured, replaced by carbonate.
1006.5	1019		Sandstone, fractured and slickensided, medium to medium coarse grained.
1019	1033		Sandstone, medium grained, bedded and x-bedded, hard.
1033	1040		Sandstone, medium coarse, bedded and x-bedded.



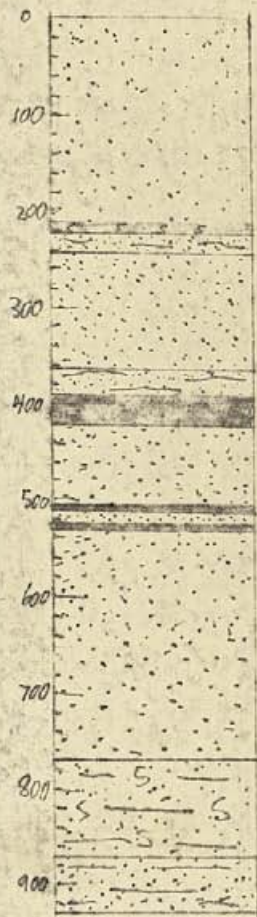
Core Size

Hole No. 45

Page 10

DDH-46

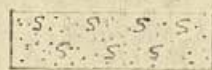
1" = 200'



Key



Sandstone



Silty sandstone



siltstone



sandy siltstone



shale



Coal, undifferentiated

311

Diamond Drill Geological Log

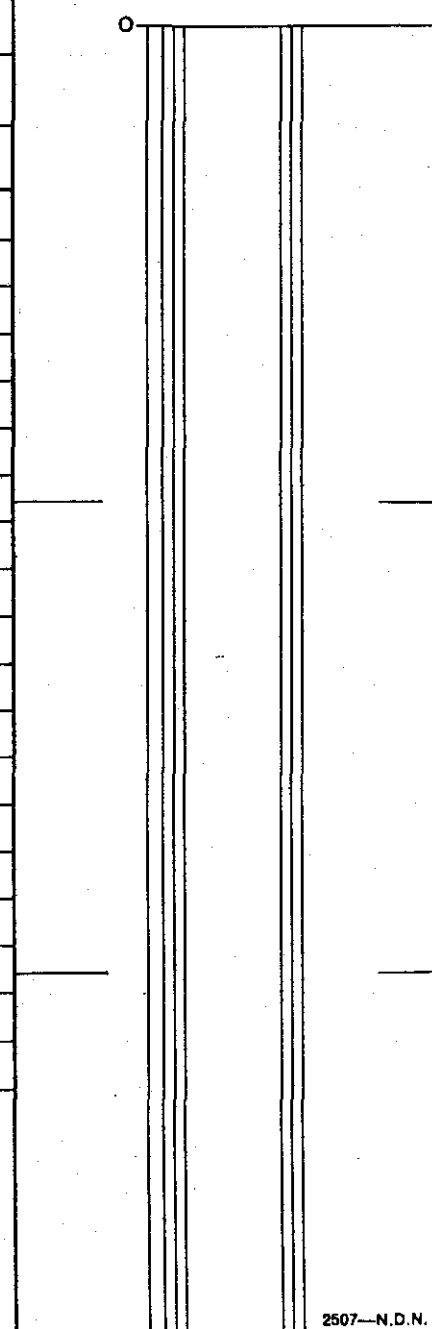


40 Scale

Objective: _____ Sampled: _____
 Logged By: S. WINZER Date: JULY 23, 1969 Composites: _____
 Color Plot & Dips Ore Classes & Aver.

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

From	To	Discard:	Reason:
0	25		Casing.
25	39		One foot short. Sandstone, bedded and medium grained. Highly broken.
39	54		Sandstone, medium grained, bedded. Dip Angle = < 5 degrees.
54	67		Sandstone, hard medium grained, broken at 55 feet and 67 feet.
67	80.2		Sandstone, medium grained. Thick bedded. Highly fractured between 67 and 71 feet.
80.2	94.5		Sandstone, showing some graded bedding, thin bedded in places. Dip Angle = 10 degrees.
94.5	107		Sandstone, medium grained. Hard, fractured and slickensided.
107	110.9		Sandstone, medium grained. Hard. Highly fractured.
110.9	111.8		Sandstone and coal partings. Broken and crushed.
111.8	115.5		Sandstone, hard even bedded. Medium grained. Fractured.
115.5	117		1/2 foot short. Sandstone and coal. Fractured highly.
117	120.6		Sandstone, bedded. Fractured. Dip Angle = 80 degrees.
120.6	132.4		1 1/2 feet long. Sandstone, bedded. Medium grained. Fractured and broken. Dip Angle = 80 degrees.
132.4	147		Sandstone, bedded. Medium grained. Fractured and slickensided. Carbonate fracture fillings.
147	151.2		1 1/2 feet long. Sandstone, medium coarse. Fractured.
151.2	152.2		Coal vitrain. Hard with some silt.
152.2	158		Sandstone, medium grained. Thin bedded. Dip Angle 10 - 30 degrees.
158	172		Sandstone, thin bedded. Medium grained. Dip Angle = 15 degrees. Competent.
172	186		Sandstone, fine grained and thin bedded.
186	199		Sandstone, fine to medium. Fine grained. Crushed and broken from 195-199 feet.
199	214		Sandstone, medium grained. Broken with coal partings from 213-214 feet.



Core Size

Hole No. 46

Page 1

Diamond Drill Geological Log



40 Scale
Color Plot & Dips Ore Classes & Aver.

Objective: _____ Sampled: _____

Logged By: S. WINZER Date: JULY 28, 1969 Composites: _____

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

From To Discard: _____ Reason: _____

214	217.7	Sandstone grading to silty sandstone. Broken.
217.7	221.7	Coal and siltstone. Siltstone % varies unevenly throughout the seam.
221.7	223	Siltstone fine laminated.
223	223.5	Coal vitrain.
223.5	229	1 1/2 feet short. Sandy siltstone. Fine laminated.
229	237	Silty sandstone. Occasionally x-bedded. Dip Angle = 20 degrees.
237	243	Siltstone. Crushed and broken at 239 feet. Dense.
243	258	Box unmarked. Footage uncertain. Sandstone bedded and x-bedded. Broken.
258	260	Sandstone, fine grained. X-bedded. Dip Angle = 18 degrees.
260	266	Silty sandstone. Thin bedded. X-bedded. Near 266 feet.
266	270	Sandstone - x-bedded, medium grained. Entire core is fractured.
270	282	Sandstone, thin bedded, x-bedded and massive. Medium grained. Broken. A few coal partings. Dip Angle = 32 degrees.
282	296	Sandstone, massive and bedded. Medium coarse. Numerous coal partings 1/8" thick.
296	296.7	Sandstone coarse.
296.7	298	Silty sandstone. Contact sharp. Thin bedded. Carbonate.
298	308.5	Sandstone, massive. Coarse "salt and pepper" type. Bedded at the top. Dip Angle = 30 degrees.
308.5	323	Sandstone, coarse bedded grading "salt and pepper type". Dip Angle = 28 degrees.
323	337	Sandstone, coarse, bedded grading to fine at 337. Dip Angle = 24 degrees.
337	347	Sandstone, fine grained, x-bedded. Dip Angle = 8 degrees.
347	350.6	Siltstone grading to sandy siltstone. Bedded, x-bedded at 350 feet.
350.6	351.6	Sandstone, fine grained. Bedded and x-bedded.
351.6	362	Sandstone, fine grained, x-bedded.
362	364.7	Siltstone to sandy siltstone.

Core Size

Hole No. 46

Page 2

Diamond Drill Geological Log



40 Scale
Color Plot & Dips Ore Classes & Aver.

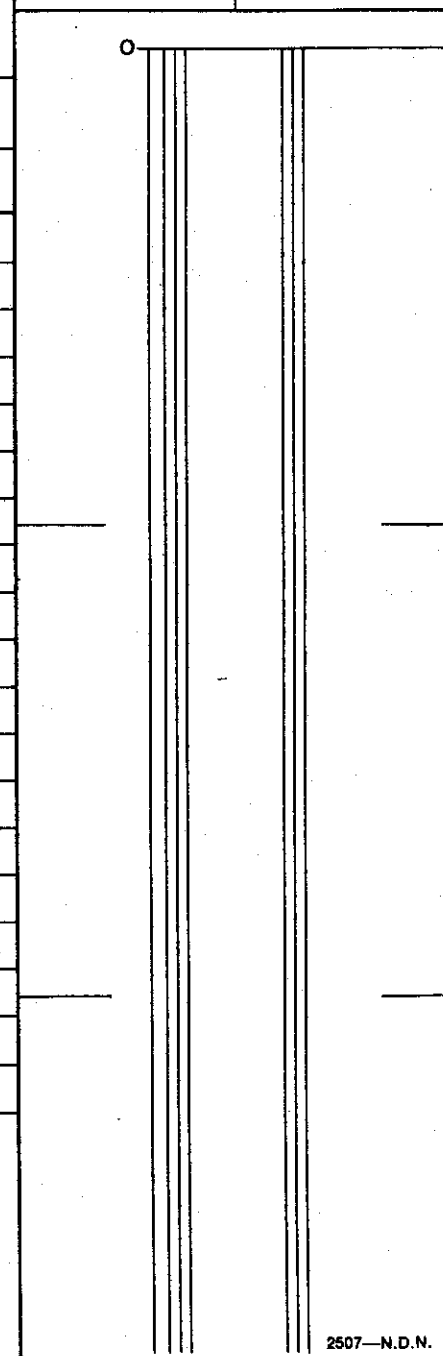
Objective: _____ Sampled: _____

Logged By: **S. WINZER & H. HOLLANDS** Date: **JULY 25, 1969** Composites: _____

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

From To Discard: Reason: _____

364.7	365.2		Sandstone. Fine grained. X-bedded.	
365.2	374.5		Silty sandstone. Bedded and x-bedded. Dip Angle = 20 degrees.	
374.5	376.3		Siltstone - dense.	
376.3	378		Coal crushed clarain and durain with vitrain bands.	
378	378.5		Siltstone - dense.	
378.5	380		Siltstone - dense.	
380	386.8		Sandy siltstone. Thick bedded.	
386.8	388		Siltstone and coal.	
388	390		Coal - clarodurain with vitrain bands.	#1814 = 388-393
390	390.9		Coal - durain and silt.	
390.9	393		Coal clarain and vitrain. Crushed section contains fusain.	
393	397		Coal crushed clarain and vitrain bands.	#1815 = 393 - 397
397	398		Coal durain and vitrain bands.	
398	402		Coal clarain and vitrain bands.	#1816 = 397 - 402
402	407		Coal clarodurain, durain with vitrain bands. Crushed near 407.	#1817 = 402 - 407
407	409		Coal clarodurain with vitrain bands.	#1818 = 407 - 411 #1819 = 411 - 415 #1820 = 415 - 420
409	420		Coal clarain with vitrain bands. Occasionally crushed. Small bands of hard durain.	
420	421		Coal unidentifiable due to soupy nature.	
421	435		Sandstone occasionally silty. Thin bedded. Crushed and broken from 430 - 435.	
435	448		One foot short. Sandstone medium to coarse grained. Bedded. Core is highly fractured and crushed.	Core Size
448	448.5		Breccia, angular sandstone fragments in a sandstone matrix.	Hole No. 46 Page 3



Diamond Drill Geological Log



Objective:		Sampled:		Color Plot & Dips		Ore Classes & Aver.	
Logged By: S. WINZER		Date: JULY 28, 1969		Composites:			
Block:		Sect.:		Place:		App. Bear:	
						App. Dip:	
						Length:	
From	To	Discard: Reason:					
448.5	461	Sandstone. Medium grained, x-bedded. Dip Angle = 15 degrees. Highly fractured, occasionally crushed.					
461	474.6	Sandstone. Medium coarse grained. Bedded and x-bedded. Small irregular coal partings. Broken.					
474.6	488	Sandstone. Medium coarse, bedded. Dip Angle = 15 degrees. Occasional lenses of "turbidite".					
488	496.6	Sandstone. Medium grained. Grading to fine grained. Bedded.					
496.6	498	Sandy siltstone. Thin bedded.					
498	501	Sandstone. Coal partings. Crushed 500 to 501 feet. Medium grained. Bedded and x-bedded.					
501	508.2	Sandstone. Bedded and x-bedded. Broken.					
508.2	510.3	Coal and siltstone. 508.2 - 511 = #1821.					
510.3	513.5	Coal. Mostly clarain with vitrain bands. Some crushed.					
513.5	514.5	Coal and siltstone.					
514.5	524	Sandstone. Fine grained. Occasionally silty. X-bedded. Grades to siltstone at 524 feet.					
524	528.5	Coal, clarain and clarodurain with vitrain bands. #1823. Sulphides present.					
528.5	531	Coal, crushed sandy clarodurain. #1824.					
531	544	Sandstone, coarse, massive. Broken from 539-544.					
544	558	Sandstone, medium grained. Bedded and occasionally x-bedded.					
558	571	Sandstone, bedded and x-bedded. Medium grained.					
571	585.5	Sandstone, bedded and x-bedded. Medium grained. Dip Angle = 10 degrees.					
585.5	599.5	Sandstone, same as above.					
599.5	614	Sandstone, bedded and massive. Medium grained. Dip Angle = <10 degrees.					
614	628	Sandstone, broken. Medium to fine grained. Bedded.				Core Size	
628	642	Sandstone, medium grained. Bedded and x-bedded.					
642	656	Sandstone, same as above.					
				Hole No. 46		Page 4	

Diamond Drill Geological Log



Objective:			Sampled:			40 Scale	
Logged By: S. WINZER			Date: JULY 28, 1969			Color Plot & Dips	
			Composites:			Ore Classes & Aver.	
Block:		Sect.:	Place:	App. Bear:	App. Dip:	Length:	
From	To	Reason:					
656	669	Sandstone. Medium grained. X-bedded. Dipt Angle = 5 degrees.					
669	683	Sandstone becoming more silty towards the bottom. X-bedded. Thin bedded.					
683	691.5	Sandstone. Occasionally silty. Bedded and x-bedded. Dip Angle = 8 degrees.					
691.5	696	Lost.					
696	702.6	Sandstone. Thin bedded. Occasionally silty. Dip Angle = 17 degrees.					
702.6	703	Siltstone. Thin bedded.					
703	711	Sandstone. Thin bedded and x-bedded. Occasionally silty.					
711	715.4	Sandstone. Fine grained. Occasional silt bands. Thin bedded.					
715.4	717	Siltstone. Thin bedded. Muddy.					
717	719.4	Sandstone. Fine grained. Thin bedded.					
719.4	721	Siltstone. Thin bedded. Occasionally sandy.					
721	726	Sandstone. Occasional silt bands. Thin bedded and x-bedded.					
726	736	Sandstone. Fine grained. Bedded, some x-bedding. Dip Angle = 12 degrees.					
736	741	Silty sandstone. Thin bedded.					
741	743.9	Sandstone. Fine grained. Thin bedded, some x-bedding.					
743.9	744	Siltstone. Contorted bedding.					
744	747.7	Sandstone. Thin bedded. Fine grained. Dip Angle = 20 degrees.					
747.7	748.2	Siltstone, dense.					
748.2	748.7	Sandstone.					
748.7	749.2	Siltstone.					
749.2	755	Sandstone. Thin bedded. Occasional silt bands.				Core Size	
755	769	Silty sandstone. Thin bedded also shows contorted bedding. Dip Angle = 10 degrees.					
769	770	Siltstone. Dense to thin bedded.					
				Hole No. 46		Page 5	

Diamond Drill Geological Log



K-1002ENG 69131A-2

Objective:

Sampled:

Logged By: S. WINZER

Date: AUGUST 5, 1969

Composites:

Block:

Sect.:

Place:

App. Bear:

App. Dip.:

Length:

From To Discard:

Reason:

SUMMARY: Drilling commenced at 1,500 feet on July 31st. Heavy overburden was encountered and trouble began on the 1st. Rods had to be pulled and the tricone sent down after an unsuccessful try at running casing. The tricone went down to 62 feet, but there was insufficient casing, so it was decided to use 6 inch pipe with 5 inch casing welded to it. This was sent down to 40 feet, and the tricone drilled beyond it to 92 feet. The hole collapsed in behind the bit, making it difficult to pull rods. During the pull, the welded pipe and casing broke in the hole. This occurred on Monday morning. The hole was abandoned at 12:00 noon and the rig moved 450 feet north in hopes of getting out of the heavy overburden.

40 Scale

Color Plot & Dips

Ore Classes & Aver.

0

Core Size

Hole No. 47

Page

311

Diamond Drill Geological Log



40 Scale

Objective:

Sampled:

Color Plot & Dips

Ore Classes & Aver.

Logged By: S. WINZER

Date: AUGUST 12, 1969

Composites:

Block:

Sect.:

Place:

App. Bear:

App. Dip.:

Length:

From To

Discard:

Reason:

SUMMARY: D.D.H.-47A was proposed to fill in the gap in drilling between D.D.H.-38 and D.D.H.-26. Drilling commenced at 0900 hours, Tuesday, August 5th. Forty feet of casing was placed in the hole. Drilling progressed quite rapidly, intersecting the first Seam (F) at 148.5 feet. Thirty feet of coal was drilled and cored with 95 percent recovery. Drilling continued in medium coarse sandstone to 520 feet, with no coal intersected. The sandstone was heavily fractured along much of the distance, indicating one or more fault zones. At 520 feet, a lithologic change occurred. Shale and siltstone was intersected and continued to 719 feet. This shale and siltstone closely resembles the Fernie. The hole was ended at 719 feet.

Recovery in Coal: 95.0%

Total Recovery: 96.8%

Core Size

Hole No. 47-A

Page

Diamond Drill Geological Log



Objective: _____ Sampled: _____

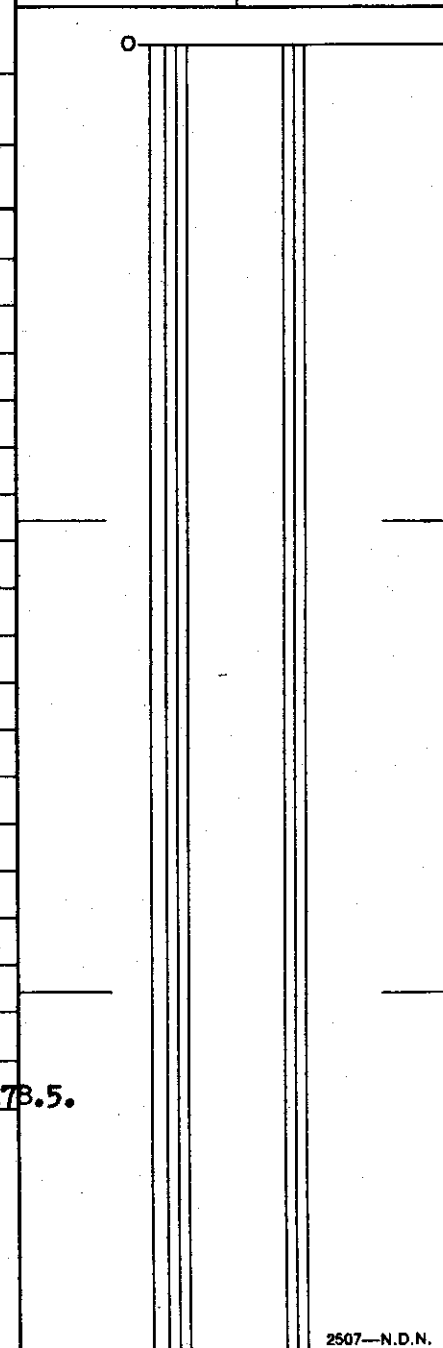
Logged By: **S. WINZER** Date: **AUGUST 6, 1969** Composites: _____

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

From _____ To _____ Discard: _____ Reason: _____

From	To	Discard:	Reason:
0	40	Casing.	
40	53	Crushed sandstone. Coarse grained. Some clay is present.	
53	73	Ten feet missing, crushed coarse grained sandstone.	
73	75	Lost.	
75	83	Three feet missing. Medium grained thin bedded sandstone. Crushed.	
83	84	Coal.	
84	87	One foot missing. Sandstone broken and crushed.	
87	101	Sandstone, medium to fine grained. Bedded and x-bedded with thin coal partings.	
101	112	Sandstone, medium grained. Dip Angle = 25 degrees. (From horizontal) Some very thin coal partings.	
112	117	Sandstone, medium grained. Small coal partings.	
117	126	Siltstone, broken, slump structures near 117 feet. Small coal partings.	
126	134.5	Siltstone, some sandy lenses. Dip Angle = 35 degrees.	
134.5	140	Sandstone, interbedded with siltstone lenses. Slump structures evident.	
140	140.8	Siltstone (mudstone).	
140.8	144	Sandstone, fine grained, x-bedded. Thin coal partings. Dip Angle = 28 degrees.	
144	148.5	Siltstone, thin bedded, soft.	
148.5	154	Coal, clarain (crushed) with thin vitrain bands. #1825	
154	169	Coal, crushed clarain. Thin vitrain bands. 1 1/2 feet missing. 154-160 = #1826, 160-164 = #1827, 164-169 = #1828.	
169	178.5	Coal, clarain and fusain. Crushed. Some thin vitrain bands. Some thin siltstone partings. #1829-169-174.5, #1830-174.5-178.5.	
178.5	183.5	Siltstone, some thin coal partings.	Core Size
183.5	185	Siltstone, broken. Fairly dense.	

40 Scale
Color Plot & Dips
Ore Classes & Aver.



Hole No. **47-A** Page **1**

Diamond Drill Geological Log



40 Scale
Color Plot & Dips Ore Classes & Aver.

Objective: _____ Sampled: _____
 Logged By: **S. WINZER, H. HOLLANDS** Date: **AUGUST 7, 1969** Composites: _____

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

From	To	Discard:	Reason:
185	186	Coal, largely crushed clarodurain.	
186	196	Siltstone, sandy massive and dense.	
196	207	Sandstone, silty for the first two feet, grading to fine grained. Medium Bedded. Dip Angle = 15 degrees.	
207	220	Sandstone - grading from fine to coarse. Highly broken. Massive to thin bedded.	
220	232	Sandstone, crushed. Some coal partings. Sandstone is medium grained.	
232	248	Two feet missing. Sandstone - medium coarse. Dip Angle = 20 degrees. Bedded and x-bedded.	
248	253	One foot missing. Sandstone - coarse.	
253	257	One foot missing. Siltstone - sandy and thin bedded.	
257	263	Sandstone, fine grained, X-bedded. Thin coal partings.	
263	265	Lost.	
265	271.5	Siltstone. Occasional sandy lenses. Thin bedded and x-bedded.	
271.5	274	Sandstone - fine grained. Thin bedded and x-bedded. Dip Angle = 35 degrees (West Horizontal).	
274	279	Siltstone - massive, shaley and broken. 278 - 279 feet.	
279	284	One foot missing. Coal - durain and fusain. Interbedded with shale. Crushed.	
284	294	Sandstone - coarse grained. Thin bedded and cross bedded. Numerous small fractures.	
294	309	Sandstone - coarse grained. Fairly massive with thin partings of coal. Dip Angle = 40 degrees. Broken.	
309	323	Sandstone, - coarse grained. Thin bedded from 309 grading to massive at 317 feet.	
323	334	Sandstone - Medium grained. Thin bedded. Dip Angle = 20 degrees.	
334	345	Sandstone - medium grained. Very highly fractured and crushed. Fractures run along and across c/a.	
345	360	Sandstone - medium grained to 348 feet. Grading to a massive fine grained sandstone. Good core.	Core Size
360	374	Sandstone - thin bedded. Broken. Dip Angle = 18 degrees.	

Hole No. 47-A

Page 2

Diamond Drill Geological Log



40 Scale

Objective:

Sampled:

Color Plot & Dips

Ore Classes & Aver.

Logged By: S. WINZER

Date: AUGUST 8, 1969

Composites:

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

From	To	Discard:	Reason:
374	385		Sandstone - medium grained. Fractured and slickensided throughout.
385	395		Sandstone - highly broken. Medium grained.
395	397		Lost.
397	409		Sandstone - highly broken. Fine grained.
409	424		Sandstone - highly broken. In places brecciated. Slickensided. Fine grained. Dip Angle = 24 degrees.
424	436.5		Sandstone - broken and crushed. Fine grained.
436.5	448.5		Sandstone. Occasional siltstone lenses. Highly fractured.
448.5	462		Sandstone - fine grained. Grading to silty. Dip Angle = 28 degrees. Some x-bedding.
462	472		Sandstone - fine grained. Thin bedded.
472	474		Siltstone - thin bedded.
474	477		Sandstone - fine to medium grained. Replaced by carbonate in numerous fractures.
477	492		Sandstone - fine grained. Fractured. Occasional silt bands. Dip Angle = 35 degrees.
492	506		Sandstone - fine grained. Thin bedded and x-bedded. Thin siltstone bands.
506	519.5		Sandstone - broken and crushed. Fine grained. Replaced by carbonates.
519.5	532		Siltstone (shale) - broken and crushed. Generally massive.
532	543.5		Siltstone - massive generally, but bedded in places.
543.5	557		Siltstone - fractured and broken. Thin sandy lenses.
557	572		Siltstone - bedded with coal partings.
572	584		Siltstone - massive with shaley partings.
584	596		Siltstone - bedded. Fractured and slickensided. Dip Angle = 20 degrees.
596	611		Siltstone - bedded with sandy lenses. Fractured.
611	615		Siltstone - fractured.

Core Size

Hole No. 47-A

Page 3

Diamond Drill Geological Log



40 Scale

Objective:

Sampled:

Color Plot & Dips

Ore Classes & Aver.

Logged By: S. WINZER

Date: AUGUST 13, 1969

Composites:

Block:

Sect.:

Place:

App. Bear:

App. Dip.:

Length:

From	To	Discard:	Reason:
0	108		Casing.
108.	112.5		Sandstone - fine grained. Hundreds of minute fractures. Thin bedded.
112.5	122.5		Shale - highly fractured. Bedding varies from flat to vertical over 3 feet of core. Fissile.
122.5	126		Sandstone - fine grained. Thin siltstone bands (1/2"). Dip Angle varies from 18-30 degrees. Bedding is contorted.
126	133		Shale - with sand lenses. Fractured and contorted. Ptygmatic folds. $\lambda = 2$ inches. Fissile.
133	137		Sandstone (or shaley sandstone). Thin bedded, also shows contorted bedding. Shale partings 1/4 - 1/2 inch thick.
137	151		Sandstone - fine grained with shale partings. Thin bedded and massive.
151	157		One foot missing. Sandstone - fine grained, thin bedded. Shale partings.
157	161		Shale - fractured, sandy. Thin bedded and fissile.
161	161.5		Sandstone - fine grained. Massive.
161.5	163.4		Shale - fissile.
163.4	164.3		Sandstone - thin bedded. Silty lenses 1/2" thick. Dip Angle = 2 degrees.
164.3	166		Siltstone - massive. Fairly soft.
166	166.8		Silty sandstone - massive.
166.8	168.4		Sandy shale - thin bedded. Dip Angle = > 5 degrees. Fissile.
168.4	172		Shaley sandstone - microfractures cut bedding. Parts along thin shale bands.
172	174		Sandstone - very fine grained, massive. Numerous small fractures.
174	179		Shaley sandstone - thin bedded. Parts at thin shale seams.
179	194		Siltstone - massive at the top. Bedded towards the bottom.
194	208.5		Sandy shale - fine grained sandstone lenses 4 to 6 inches thick. Dip Angle = $< 5^{\circ}$.
208.5	221		Sandy shale - occasional sandstone lenses. Dip Angle = < 5 degrees.
221	235		Shaley sandstone - minor fractures replaced by carbonate. Bedding is tightly folded in some places. Dip Angle = 40 degrees near the bottom.

Core Size

Hole No. 48

Page 1

311

Diamond Drill Geological Log



40 Scale
Color Plot & Dips Ore Classes & Aver.

Objective:

Sampled:

Logged By: S. WINZER

Date: AUGUST 14, 1969

Composites:

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

From	To	Discard:	Reason:
235	248		Shaley sandstone - very fine grained. Silty in places. Tight folds. Coal partings.
248	257		Carbonaceous, shaley-silty coal. Numerous very small folds. The core has a banded nature due to light carbonate and sandy bands alternating with dark coal or silty bands.
257	262		Siltstone - bedded with sandy lenses.
262	271		Sandy shale - calcite lenses and coal partings. Dip Angle = < 5 degrees. (Long by 5 feet).
271	290		Five feet short (due to above mistake). Siltstone - bedded. Sandstone lenses 1/2 inch thick. Dip Angle = < 5 degrees.
290	303		Siltstone - fractured. Sandy lenses. Dip Angle = 5 degrees.
303	307		Sandstone - contorted bedding. Siltstone or shale lenses.
307	313		Siltstone - fairly massive with fine sandy lenses.
313	317		Shaley siltstone, thin bedded, some contortions. Dip angle 15°.
317	331		Siltstone and sandstone - 1 inch beds, interbedded. Dip Angle = 10 degrees.
331	346		Sandy siltstone - discrete lenses of sandstone 1/2" thick.
346	355.5		Sandy siltstone - thin bedded. Dip Angle = 15 degrees.
355.5	356.7		Coal - very dirty with silt and carbonates.
356.7	359		Siltstone - thin bedded.
359	373		Sandy siltstone - massive with occasional sandy lenses. Dip Angle = 12 degrees.
373	388		Siltstone - interbedded with thin lenses of sand.
388	403		Siltstone.
403	417.5		Sandstone - silty with very fine laminations of sand and silt. Dip Angle = 5 degrees.
417.5	427		Sandstone - fine grained, occasional silty lenses.
427	430		Mudstone - carbonate (calcite) veins.
430	432		Silty sandstone - bedded.

Core Size

Hole No. 48

Page 2

Diamond Drill Geological Log



Objective: _____ Sampled: _____

Logged By: **S. WINZER** Date: **AUGUST 14, 1969** Composites: _____

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

From To Discard Reason

432	447		Siltstone - massive. Occasionally bedded.
447	457		Sandy siltstone - massive, thin sandstone lenses. Dip Angle = 15 degrees.
457	462		Siltstone - black, dense, fine sandstone lenses.
462	464.4		Siltstone - thin bedded. Sandy.
464.4	465.2		Sandstone, fine grained. X-bedded first two inches. Massive the rest.
465.2	476		Sandy siltstone - thin bedded. Dip Angle = 15 degrees.
476	484		Sandy siltstone - thin bedded. Carbonate stringers.
484	485.5		Sandy siltstone - crushed and healed section laced with carbonate veinlets. Some slippage on the thin beds.
485.5	489.5		Sandy siltstone - thin bedded. Shaley partings from 488 - 489.
489.5	503.5		Sandy siltstone - massive, black and fairly soft.
503.5	517.7		Sandy siltstone - massive.
517.7	532		Sandy siltstone - massive at the top becoming interbedded with sandstone lenses. Dip Angle = 12 degrees. Up to 4" thick.
532	547		Sandy siltstone - fine sandy lenses containing pyrite. Dip Angle = 10 degrees. Carbonate stringers.
547	551.3		Silty sandstone - very fine grained. Thin bedded.
551.3	556		Sandstone - grading to a very hard, medium grained sandstone. Massive.
556	561		Cherty limestone/Dolomite (?). Possibly sandy. Crushed, brecciated, but annealed. Very hard.
561	567		Cherty limestone/Dolomite (?). Carbonates in the form of calcite and others are present. Crushed.

Core Size _____
 Hole No. **48** Page **3**

40 Scale

Color Plot & Dips Ore Classes & Aver.

2507-N.D.N.

Diamond Drill Geological Log



Objective:

Sampled:

Logged By: S. WINZER & H. HOLLANDS Date: AUGUST 19, 1969.

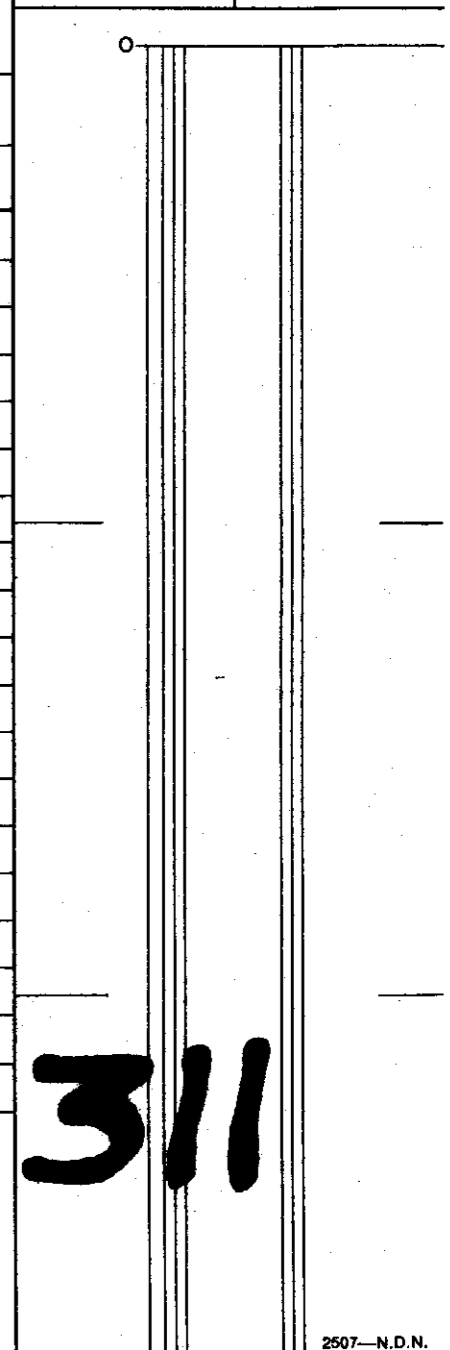
Composites:

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

From To Discard: Reason:

SUMMARY: D.D.H.-49 was drilled to aid in spotting the positions of seams "B", "C", "D" and "E". The hole was started on Friday, August 15th. The first coal seam was encountered at 193 feet, total thickness was 32.5 feet. This seam could have been Seam "E". The next seam was encountered at 300 feet, somewhat above the expected location of Seam "D". 31 feet of coal was drilled. Coal was again encountered at 349 feet. Eight feet of coal was drilled. This coal corresponds with Seam "C". 160 feet of siltstone/sandstone sequence was intersected before the next coal. The last coal intersected was at 520 feet. 15 feet of coal and siltstone was drilled. All sandstone, siltstone and coal was extensively brecciated. The hole ended in siltstone at 697 feet, after drilling 165 feet of highly brecciated sandstone. It is probable that the last coal encountered was Seam "B", and that a great deal of it had been faulted out. The brecciated sandstone strongly resembles the basal.

40 Scale
Color Plot & Dips Ore Classes & Aver.



Core Size

Hole No. 49

Page

Diamond Drill Geological Log



40 Scale
Color Plot & Dips Ore Classes & Aver.

Objective: **To test for Seams "B", "D" and "E" in the Green-hills.**

Sampled:

Logged By: **H.J. HOLLANDS**

Date: **AUGUST 16, 1969**

Composites:

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

From	To	Discard:	Reason:
0	20		Casing.
20	34.5		Sandstone - thin bedded (dip 20 degrees from horizontal). 20 - 25 feet, 1/4 - 1/2 inch coal partings. Angular shaley, nodules up to one inch diameter.
34.5			
34.5	50		Mudstone - black, silty sections, massive.
50	59		Mudstone - black, silty sections, massive. 56.5 - 57 coal partings broken core (2 1/2 feet short).
59	60		Crushed shale and coal.
60	62.5		Siltstone - vaguely bedded.
62.5	70		Siltstone - vaguely bedded, black shaley sections. Coal partings up to 1 inch.
70	76.5		Sandy siltstone grades to a siltstone back to a sandy siltstone at 74 feet. (1 foot core short).
76.5	77.5		Sandy siltstone.
77.5	78.5		Shale and coal seams - 1/2 inch.
78.5	86		Mudstone with shaley sections. 16 massive. One foot core short.
86	102.		Siltstone - massive short sandy sections.
102	119		Siltstone - thin bedded. Current bedding. Dip 16 degrees. Sandy in places.
119	124.5		Sandy siltstone - x-bedded. Alternating sandy and silty beds.
124.5	130		Sandstone occasionally silty bed. Dip 16 degrees. X-bedded.
130	134		Sandy siltstone.
134	136.5		Sandstone T.B. dip = 20 degrees.
136.5	146		Sandy siltstone with silty sections. X-bedded, thin bedded. Dip - 20 degrees.
146	147.5		Sandy siltstone with silty sections.
147.5	153.5		Sandstone. Thin bedded. Dip 15 degrees.
153.5	160.5		Siltstone - sandy siltstone, alternating beds. X-bedded.
160.5	172.5		Sandy siltstone, x-bedded. Dip = 15 degrees.

Core Size

Hole No. 49

Page 1

Diamond Drill Geological Log



40 Scale

Objective:

Sampled:

Color Plot & Dips

Ore Classes & Aver.

Logged By: H.J. HOLLANDS

Date: AUGUST 17, 1969

Composites:

Block:

Sect.:

Place:

App. Bear:

App. Dip.:

Length:

From	To	Discard:	Reason:
172.5	182.7		Siltstone - vaguely bedded in sections. Dip 12 degrees. One foot core short.
182.7	188.5		Sandy siltstone - vaguely thin bedded.
188.5	191.5		Siltstone - fracturing at 190 feet. Slickensider. Dip 85 degrees to horizontal.
191.5	193.5		Mudstone - soft and shaley. Slightly brecciated.
193.5	225.5		Coal - crushed, soft durain and fassin. 195-197 some vitrain and clarain. 197-204 clarodurain and durain. 204-212 mostly clarain. Streaks of fassin. 212-215 durain - hard and granular, dull. 215-225,5 vitrain and clarain with bands of durain.
225.5	233		Shale with coal partings. Estimated 15 percent coal.
233	246		Siltstone with shaley partings. Grades to a sandy siltstone back to a siltstone. Thin bedded sections. Two feet short.
246	248		Sandy siltstone - current bedded.
248	255.5		Siltstone dark and massive.
255.5	257.5		Sandy siltstone - current bedded.
257.5	272.5		Siltstone - sandy siltstone alternating. Thin bedded and x-bedded. Dip 8 to 10 degrees.
272.5	279.5		Shaley mudstone.
279.5	286.5		Sandy siltstone - siltstone at 285 degrees tight fr. // angle to core. Slickensides - 4 inches broken core.
286.5	291.5		Sandy siltstone - x-bedded. Silty fragments along certain beds. Dip - 14 degrees.
291.5	296.5		Silty mudstone with coal partings. Massive.

Core Size

Hole No. 49

Page 2

Diamond Drill Geological Log



40 Scale

Objective:

Sampled:

Color Plot & Dips

Ore Classes & Aver.

Logged By: H..J. HOLLANDS

Date: AUGUST 17, 1969

Composites:

Block:

Sect.:

Place:

App. Bear:

App. Dip.:

Length:

From To Discard: Reason:

296.5	300		Coal clarain and durain. Some vitrain at 298.5 feet.
300	301		Vitrain. 301-309 clarain and clarodurain, occasional fusain stringer. 309-312.5 clarain and vitrain.
301	323		Coal. 312.5-315 clarain and vitrain. 315-323 clarodurain with scattered vitrain bands.
323	324.5		Shale.
324.5	329.5		Coal - clarain and clarodurain.
329.5	330.5		Shale.
330.5	331.3		Coal - clarodurain.
331.3	337.		Siltstone - sandy siltstone - siltstone. Current bedded.
337	341		Shaley mudstone with coal partings. One foot core short.
341	344		Siltstone - massive broken core. One foot short.
344	345		Crushed shale.
345	349		Mudstone - shaley mudstone. Broken core. \neq massive. 1/2 foot short.
349	357		Coal - crushed and striated durain and clarodurain. 354-357 shaley sections, small vitrain bands.
357	358.5		Shale - mudstone. .3 foot short.
358.5	359.5		Coal - durain, clarain, some vitrain.
359.5	365		Mudstone - massive, black. 3 inch coal at 364.5. 1 1/2 feet short.
365	369		Siltstone - massive.
369	376		Siltstone - massive.
376	383		Sandy siltstone - thin bedded. Dip - 15 degrees. Pink and white veinlets. One foot short.

Core Size

Hole No. 49

Page 3

Diamond Drill Geological Log



40 Scale

Objective: _____ Sampled: _____
 Color Plot & Dips _____ Ore Classes & Aver. _____

Logged By: **H.J. HOLLANDS** Date: **AUGUST 18, 1969** Composites: _____

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

From	To	Discard:	Reason:
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383	390.3		Siltstone - thin bedded. Vague in places. Dip 12 degrees.
390.3	394.5		Sandy siltstone - massive, black flecks. Cut by criss-crossing quartz. Veinlets (white).
394.5	397.5		Mudstone - shale.
397.5	410.0		Siltstone - massive with shaley partings. Cut by numerous carbonate veinlets. (dolomite? Soft - does not figure with acid).
410.	413		Siltstone - massive with shaley partings.
413	420		Sandy siltstone - thin bedded. Generally shattered core. One foot short - core.
420	482.5		Sandstone - coarse texture. "Salt and pepper" appearance. Shattered core, massive.
	432.5-436.5		rubble fragments of sandstone core. One foot core short.
	436.5-450.0		sandstone highly shattered and broken. Cut by veinlets of carbonates. Two foot core short.
	450.0-459.0		sandstone highly shattered and broken. Thin bedded. Dip - 20 degrees.
	459.0-473.0		sandstone highly shattered and broken. Thin bedded. Hillcrest. One foot core short.
	473.0-482.5		sandstone highly shattered and broken. Thin bedded. Dip - 23 degrees.
482.5	483		Coal crushed, dull soft.
483	484.5		Sandstone, shattered, broken, thin bedded. Hillcrest.
484.5	502		Sandstone, brecciated. Medium to coarse grained. Thin bedded. Three feet missing.
502	514		Sandstone, crushed. Medium to coarse grained. Thin bedded. Dip Angle = 10 degrees.
514	520		Sandstone, crushed medium to coarse grained.
520	527.5		Coal - sandstone contacts at 520-520.8, 521.5-521.6, 522-522.5. The coal is mostly clarain and fusain. Crushed with some durain bands, #1847 - 520-523. #1848 - 523-527.5.

527.5	528.5	Coal - crushed durain and fusain.	Core Size
528.5	529.5	Silty sandstone.	
529.5	535	Coal and siltstone - crushed.	

Hole No. 49

Page 4

Diamond Drill Geological Log



40 Scale

Objective:

Sampled:

Color Plot & Dips

Ore Classes & Aver.

Logged By: S. WINZER

Date: AUGUST 19, 1969

Composites:

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

From	To	Discard:	Reason:
535	536.5		Sandstone - crushed. Medium grained. #1850 = 537-539
536.5	538.5		Coal - crushed clarain and fusain.
538.5	541		Sandstone - highly fractured. Medium to coarse grained.
541	555		Sandstone - highly fractured. Crushed in places. Coarse grained. Thin bedded.
555	567.5		Sandstone - coarse grained and thin bedded. Crushed between 566 - 567.5.
567.5	581		Sandstone - crushed and pulpy. Coarse. Massive (?).
581	591		Sandstone - brecciated. Crushed and recemented in lower five feet. Fairly massive.
591	603		One foot short. Sandstone. Highly fractured, crushed in places. Medium grained, massive.
603	614		Sandstone - brecciated and crushed. Some of the crushed rock is muddy and re-lithified.
614	627.5		Sandstone - medium grained. Good core for 9 feet, then crushed to 627.5.
627.5	640		Sandstone - fine grained, muddy in spots. Crushed. Numerous carbonate veinlets.
640	642		Sandstone, fine grained, thin bedded. Dip Angle = 20 degrees.
642	649.5		Silty sandstone. Crushed. Carbonate stringers in many cracks.
649.5	661.5		Sandstone - silty. Thin bedded and highly fractured.
661.5	674		Sandstone - fine grained. Silt lenses 1/4 to 1/2 inch thick. Some x-bedding.
674	683.5		Sandstone - fine grained. Occasionally silty. Brecciated. Thin bedded.
683.5	686.7		Sandy siltstone. Thin bedded. Dip Angle = <5 degrees.
686.7	697		Siltstone - thin bedded. Fractured and slickensided, 1/2 inch sandstone lenses.

Core Size

Hole No. 49

Page 5

Diamond Drill Geological Log



N. TROING 69131A-2

Objective:	Sampled:	Color Plot & Dips	Ore Classes & Aver.
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Logged By: S. WINZER	Date: AUGUST 26, 1969	Composites:			
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Block:	Sect.:	Place:	App. Bear:	App. Dip:	Length:
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From	To	Discard:	Reason:
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SUMMARY: D.D.H. 50 is the first of a series of short holes designed to aid in constructing the pit layout. The hole began on August 23rd, with 30 feet of overburden triconed. It was necessary to pull the rods and re-drill the overburden. 43 feet of casing was placed in gravel and clay, as well as weathered rock. Coring began at 43 feet, and the first coal Seam "E" was intersected at 68 feet. 36 feet of coal was drilled, but 11 feet were lost due to the crushed and pulpy nature of the coal. The second Seam "D", was intersected at 156 feet. 37 feet of coal was drilled. The third seam "B" was intersected at 244 feet. 43 feet of coal were drilled with 9 feet missing. The hole was stopped at 394 feet in sandstone.

40 Scale

0

311

Core Size	N.Q.
Hole No. 50	Page

Diamond Drill Geological Log



40 Scale

Objective:

Sampled:

Color Plot & Dips

Ore Classes & Aver.

Logged By: S. WINZER

Date: AUGUST 25, 1969

Composites:

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

From To Discard: Reason:

0	43		Casing. Gravel and clay, then broken and weathered rock constitute cased overburden.	
43	61		Siltstone - fractured and broken. Massive.	
61	68		One foot missing. Siltstone - massive.	
68	71		Coal - clarodurain and fusain with vitrain bands.	#1885
71	77		One foot missing. Coal - soft clarain with a high % of fusain. Thin vitrain bands.	#1886
77	81		Coal - crushed clarain and fusain.	#1887
81	104		Ten feet missing. Pulpy coal - crushed and unidentifiable. #1888-81-89. #1889-89-96. #1890-96-104.	
104	111		Four feet missing. Crushed shaley siltstone.	
111	131		Two feet missing. Sandy siltstone - highly fractured. Dip Angle = 22 degrees.	
131	148		Sandy mudstone. In places it is thin bedded. Dip Angle = 22 degrees.	
148	156		Siltstone - broken throughout core.	
156	159.5		Coal - clarodurain with a high % fusain and thick vitrain bands.	#1891
159.5	164.5		Coal - clarodurain with vitrain bands.	#1892
164.5	181		Coal - clarain and clarodurain, thin vitrain bands. #1893 = 164.5 - 169.5	#1894 = 169.5 - 174.5
181	182		Siltstone - massive with carbonate stringers.	#1895 = 174.5 - 179.5
182	183		Coal - bony at first. Grades to clarain with thin vitrain bands.	#1896 = 179.5 - 183
183	193		Coal - crushed clarain and fusain with vitrain bands 1 inch thick. #1897 = 183 - 188	#1898 = 188 - 193
193	194.6		Siltstone - massive. Fractured parallel to core axis. #1899 = 193 - 197	#1900 = 197 - 201
194.6	200		Coal - crushed clarain and clarodurain with vitrain bands.	
200	201.5		Siltstone - coalified plant remains.	Core Size N.Q.
201.5	220		Sandy siltstone - crushed, slickensided. Carbonate stringers.	
220	238		Sandstone - fine grained. X-bedded. Dip Angle = 12 degrees.	Hole No. 50

Diamond Drill Geological Log



40 Scale
Color Plot & Dips Ore Classes & Aver.

Objective:

Sampled:

Logged By: S. WINZER

Date: AUGUST 27, 1969

Composites:

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

From To Discard: Reason:

0	66	Casing. Consider O.B. 0-56 feet. (ASH January 5/70).	
66	87	Mud - crushed siltstone?	
87	97	Mud - unidentifiable.	
97	107	Coal - badly crushed. Mud and silt in high %. Coal is unidentifiable. #1587 = 97 - 102 #1588 = 102 - 107.	
107	126	Coal? Looks like mud with a high % of coal fragments.	
126	145	Siltstone? Completely crushed. Appears muddy.	
145	165	Siltstone? Most of the core is a coherent mud, some 6 inch sections of broken siltstone.	
165	186	Braociated, crushed, siltstone.	
186	208	Crushed siltstone? Some coal and some carbonate is present.	
208	209	Crushed siltstone.	

209 degrees END.

≅ 50% Recovery.

Core Size N.Q.

Hole No. 51

Page 1

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Diamond Drill Geological Log



40 Scale
Color Plot & Dips Ore Classes & Aver.

Objective:

Sampled:

Logged By: S. WINZER

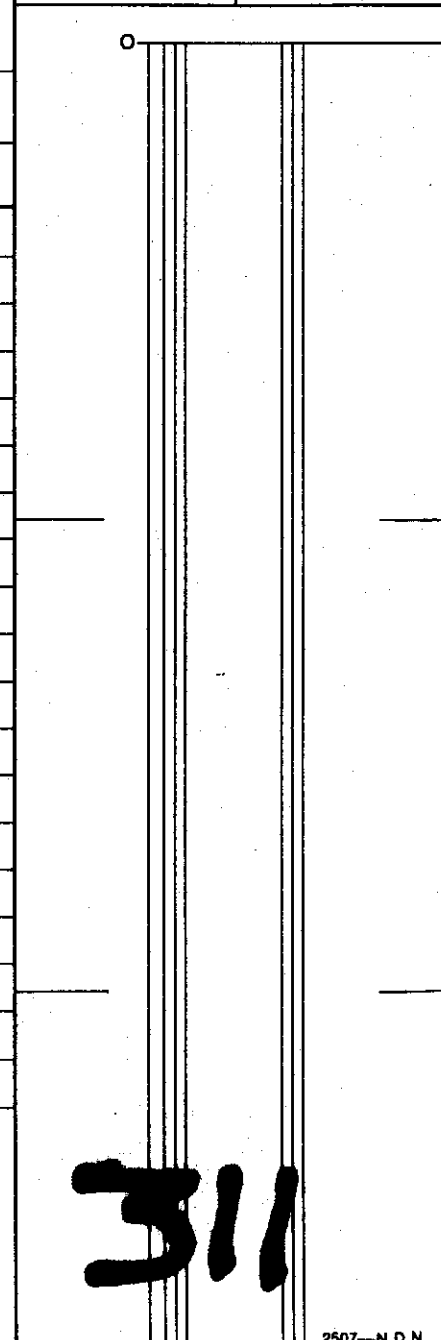
Date: AUGUST 29, 1969

Composites:

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

From To Discard: Reason:

0	30	Casing. Boulders, clay and gravel. Consider 0-20 feet O.B. (ASH January 6/70)	
30	39	Sandstone - crushed, medium grained. Two feet short.	
39	47	Siltstone - fine, soft. Coal partings, highly broken.	
47	64.6	Siltstone - occasional sandy lenses. Dip Angle = 5 degrees.	
64.6	66	Coal - clarain, with a high % of fusain. Some minor vitrain. #1551	
66	85	Coal - mostly crushed clarain and fusain, little vitrain. Becomes more vitrain rich in the last 2 feet. #1552 = 66-71. #1553 = 71-76. #1554 = 76-81. #1555 = 81-85.	
85	94	Coal - clarain with vitrain bands, some fusain. #1556 = 85-90. #1557 = 90-95.	
94	105	Coal - impure durain and clarain. #1558 = 95-100. #1559 = 100-105.	
105	117	Coal - clarain and vitrain. Siltstone partings. #1560 = 105-110. #1561 = 110-117.	
117	125	Siltstone - coal partings.	
125	143	Sandstone - fine grained grading to medium. Crushed in places.	
143	159	Sandstone - medium grained. Highly fractured.	
159	162	Sandstone - medium grained. Bedded.	
Hole Ends.			
85% Recovery in Coal.			
Geology Section 50 + OOW @ 94 + OOW			



Core Size N.Q.

Hole No. 52

Page 1

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Diamond Drill Geological Log



K - TARDING 49131A-2

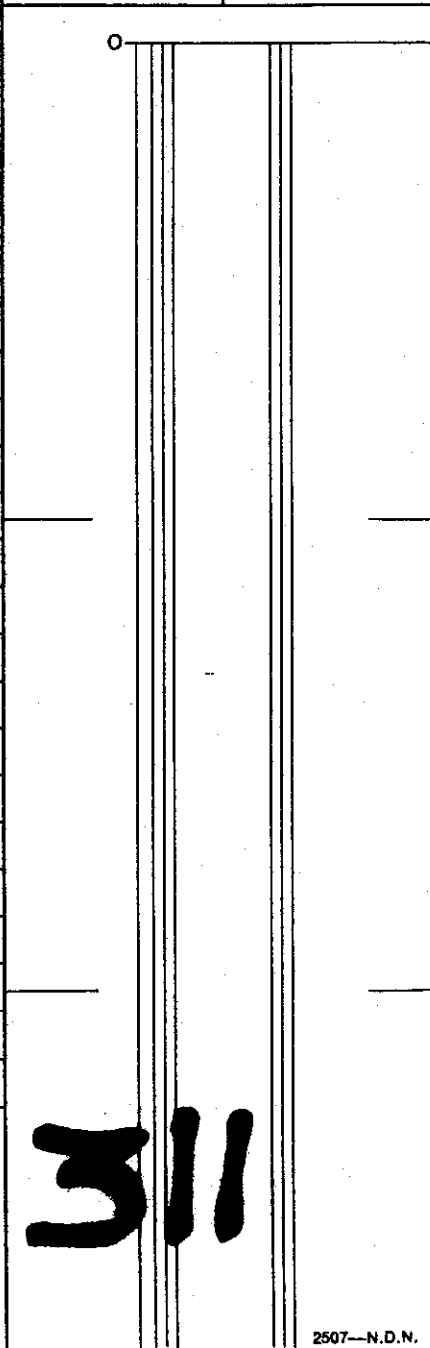
Objective: _____ Sampled: _____

Logged By: H.J. HOLLANDS Date: SEPTEMBER 7, 1969 Composites: _____

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

From	To	Discard:	Reason:
0	78		Overburden. Boulder clay and sandy clay to 70 feet. 70-78 feet some siltstone chips in the silt.
78	82		Casing.
82	100		Siltstone - sandy. Broken core. Six feet core short.
100	116		Sandstone - silty. Thin bedded. Fine grained. Dip Angle = 80 degrees.
116	134.		Sandy siltstone - siltstone, numerous shaley partings. Some carbonate veining. Slickensided. Core is quite broken.
134			Estimated 1 1/2 feet core short.
134	147		Sandstone - fine grained. Silty sandstone fractured with shaley partings and carbonate veining.
147	150		Siltstone.
150	160		Sandy siltstone - silty sandstone. Fine grained. Thin bedded and x-bedded. Dip Angle = 60 degrees.
160	164.5		Siltstone - sandy sections. 164 to 164.5 shaley. 1/2 foot core short.
164.5	185.5		Coal - crushed pulverized, but dry. Durain and Fusain, little clarodurain. Estimated two feet short.
185.5	186		Siltstone. #2253 = 164.5 - 170.
186	190		Siltstone vaguely bedded, Fractured. #2254 = 170 - 175
190	197		Mudstone - massive 1/4 to 1/2 inch coal partings. Fractured. 1/2 inch core short. #2255 = 175 - 180
197	206		Sandy siltstone - thin bedded. Dip Angle = 62 degrees. Some x-bedding. #2256 = 180 - 185.5
206			The core is highly fractured at 199 feet. Six inches crushed zone. Carbonate veinlets. Same at 204. (1' core short).
206	224		Sandstone - medium grained. Thin bedded. Dip Angle = 65 degrees. Some x-bedding. Core broken to less than 6 inches. Three feet of core short.
224	230		Sandstone same as above.
230	233.5		Siltstone. Core Size N.Q.
233.5	248		Sandstone - medium grained, thin bedded. Dip Angle = 65 degrees. Broken core.
248	266.5		Sandstone - medium to coarse grained. Thin bedded. Dip Angle 75 degrees.
			Geology Section 50 +00 N @ 100 +00 W. Hole No. 53 Page 1

40 Scale
Color Plot & Dips
Ore Classes & Aver.



Diamond Drill Geological Log



40 Scale
Color Plot & Dips Ore Classes & Aver.

Objective:

Sampled:

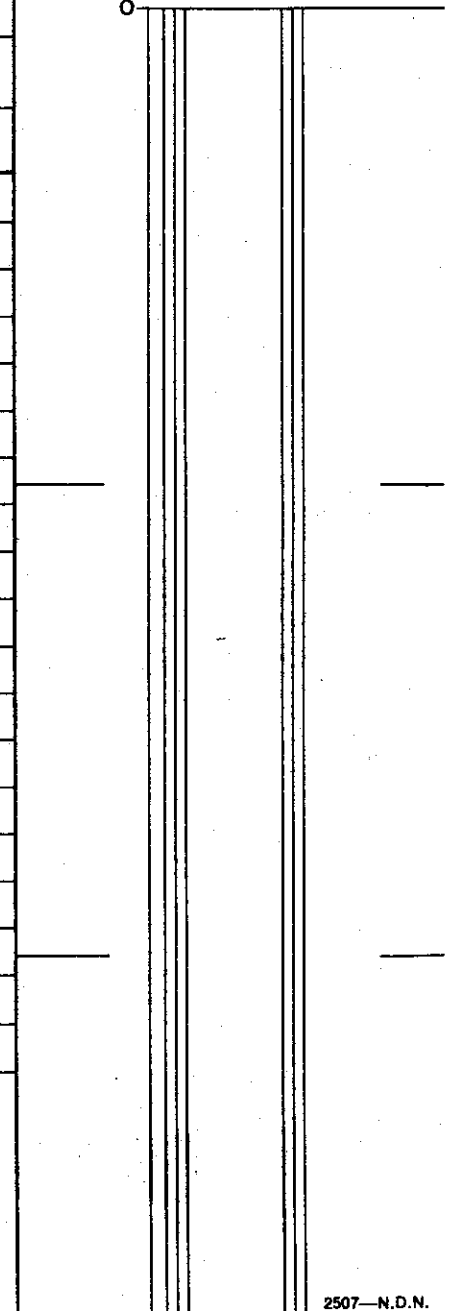
Logged By: H..J. HOLLANDS

Date: SEPTEMBER 8, 1969

Composites:

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

From	To	Discard:	Reason:
266.5	273	Coal - crushed and pulverized.	Clarodurain and durain. Considerable fusain. Moist. #2261
273	279	Sandstone - medium to coarse grained.	Broken, but solid.
279	292.5	Sandstone - coarse grained. All broken. Longest piece 4 inches.	Considerable machine breakage. 1 1/2 feet core short.
	290 - 291.5	siltstone and sandstone mixed.	
292.5	298	Coal - crushed, soft and pulpy.	Clarodurain, durain and fusain. One foot short. #2262
298	301.5	Siltstone - thin bedded.	Dip Angle = 65 degrees. #2263
301.5	304	Coal - crushed, soft pulpy, wet.	Clarodurain and fusain. 1/2 foot core short. #2264
304	314	Mudstone - massive.	Broken by 1/4 to 1/2 inch coal seams. Some "bone" coal and leaf moulds. Slickensided.
314	314.5	Coal shale - crushed and pulpy.	
314.5	321	Sandy siltstone. X-bedded.	Some carbonate veinlets.
321	323	Coal - clarain.	Crushed pulpy, silty impurities. #2265
323	332	Sandstone - massive, coarse grained.	Fractured. 1/2 foot core short.
332	354	334-341 = 4 feet short (core).	Sandstone - thin bedded, coarse grained. Dip Angle = 70 degrees.
354	373	Sandstone, coarse grained.	Broken core. 354-356 one foot core short, at 357 1/2 inch coal and shale. Thin bedded sandstone. Dip Angle = 62 degrees to 373 feet.
	373	End.	



Core Size N.Q.

Hole No. 53

Page 2

Diamond Drill Geological Log



K - Fording River 69(3)A-2

Objective:		Sampled:				40 Scale
Logged By: M.R. MURRELL		Date: SEPTEMBER 13, 1969		Composites:		Color Plot & Dips
Block:		Sect.:		Place:		Ore Classes & Aver.
				App. Bear:		
				App. Dip: -90°		
				Length:		
From	To	Discard:		Reason:		
0	73			Overburden. Allow 10 feet for casing. Therefore OB = 0 - 63 feet (ASH January/70).		
73	78			Sandstone and minor siltstone. Very badly broken. Recovery = 50%. Slightly current bedded.		
78	82			Siltstone - badly broken, black, carbonaceous.		
82	91			Lost core drillers report. Eight feet ground.		
91	113			Coal - completely broken to 1/4 inch chunks and smaller. Mainly clarain with up to 15 percent vitrain. Weathered and oxidized.		
		Recovery: (73 - 91 - 12/24 = 50%)		#2312 = 91 - 96		
				#2313 = 96 - 101		
				#2314 = 101 - 106		
				#2315 = 106 - 113		
113	116			Sandy siltstone - carbonaceous, thin mine - vitrain stringers.		
116	117			Sandstone - slightly silty, current bedded at 80 degrees.		
117	118			Bone coal with numerous partings of thin vitrain and trace of durain. (Recovery 97-118 11.5/21 = 55%).		
118	130			Coal - durain and bone coal in about equal proportions with numerous thin partings of vitrain. Very poor looking coal.		
				#2316 = 118 - 124. #2317 = 124 - 130.		
130	132			Siltstone - black, soft, uniform.		
132	133			Sandy siltstone - black.		
133	140			Sandstone - black and dark grey. Current bedded slightly medium grained, except at 138 where there is 6 inches of coarse grained.		
		Recovery 118 - 139 16/21 = 78%		Core Size N.Q.		
				Hole No. 54		
				Page 1		

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Diamond Drill Geological Log



40 Scale

Objective:

Sampled:

Color Plot & Dips

Ore Classes & Aver.

Logged By: M.R. MURRELL

Date: SEPTEMBER 13, 1969

Composites:

Block:

Sect.:

Place:

App. Bear:

App. Dip.:

Length:

From	To	Discard:	Reason:
140	204		Basal sandstone - coarse grained, white and black, speckled. Gross cross bedding. Numerous low angle fractures, becoming quite fractured by 148. Bedding at 150 - 75 degrees.
			150 - 154: Broken brecciated core. Followed by one foot broken core. Recovery 139 - 153 16/24 = 68%.
			154 - 166: Broken, but not badly. Odd piece of core to one foot long. Slightly limonitic 163 - 164. Stringer durain at 164.5
			166: Becomes very good basal by 166, then has a few low angle fractures with coal partings by 167. (Tar appearance) Recovery 153 - 169 16/16 = 100%.
			173: Broken zone with coal parting over one foot.
			178: Coal partings.
			179: Breccia zone - basal sandstone with irregular angular fragments silty sandstone.
			180 - 184: Broken core with many partings of vitrain with clarain to 1/4 inch thick.
			184 - 189: Typical basal sandstone. Many low angle (5 - 10 degrees). Fractures. Bedding at 70 degrees. Recovery 171 - 189 - 15/18 = 83%.
			189 - 204: Core quite broken, large chunks (1 to 2 inches). Fractures at 10 to 20 degrees, often with trace silty sandstone. 196 - muddy sandstone. Possible fault (minor). Bedding at 65 to 70 degrees. Current bedded. Recovery 189 - 204. 11/15 = 73%.
			204 End of H ole.

Core Size N.Q.

Hole No. 54

Page 2

Diamond Drill Geological Log



K - TARDING 69(31A-2

Objective:

Sampled:

Logged By: H.J. HOLLANDS

Date: SEPTEMBER 24, 1969

Composites:

Block: Sect.: Place: App. Bear: App. Dip: -90° Length:

From	To	Discard:	Reason:
0	42	Overburden casing.	(Consider O.B. 0 - 32' ASH Jan. 5/70).
42	47	Sandstone - medium grained, broken and porous.	Cracks filled with mud.
47	54	Sandy siltstone - current bedded, mud cracks.	42-45 degrees. One foot core short.
54	60	Siltstone, faintly bedded. Some sedimentary breccia.	48-55 degrees. 1/2 foot core short.
60	70	Coal - crushed, soft and pulpy, wet.	55-60 degrees. Two feet core short. Looks like clarain and clarodurain with fusain.
			#2336 = 60 - 65.
		60 to 70 feet. Six feet of coal short,	#2337 = 65 - 70.
70	73	"Bone" coal and shale.	
73	85	Siltstone - chopped and broken core. Occasional 1/4 inch coal parting.	70 - 78 degrees. One foot core short.
85	90	Sandy siltstone - thin bedded. Dip Angle = 60 degrees.	Broken core, shale and mud partings.
90	100	Siltstone - thin bedded. Numerous mud cracks and shaley sections.	85 - 91 degrees. 1/2 foot core short.
100	110	Silty sandstone. Current bedded, shattered, broken core.	
110	114	Sandy siltstone. Current bedded, shattered, broken core.	103-114 degrees. One foot short (core).
114	137.5	Sandstone, thin bedded. Current bedded. Dip Angle = 58 degrees.	Medium grained. One foot core short. 136-137.5 shale and mud partings.
137.5	198	Coal - crushed, pulverized wet. Looks like a clarain and durain with considerable fusain.	Scattered vitrain? One foot coal short. The whole seam is crushed, pulverized coal. 165-173 degrees. One foot core short. The fusain increases at depth. 137.5 - 188 = #2338 to #2344. 188 - 198, 2 to 6 inches shale partings #2345.
198	205	Siltstone, faint bedding, black.	
205	217.5	Sandy siltstone, thin bedded. Dip Angle = 78 degrees.	Current bedded.
217.5	219.5	Sandstone - medium grained. Thin bedded. Dip Angle = 60 degrees.	
		Geology Section 20 +00 N	100 +00N 110 +00W

40 Scale
Color Plot & Dips
Ore Classes & Aver.

0

Core Size N.Q.

Hole No. 55

Page 1

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Diamond Drill Geological Log



40 Scale
Color Plot & Dips Ore Classes & Aver.

Objective: D. H. LANCASTER

Sampled:

Logged By: H..J. HOLLANDS

Date: SEPTEMBER 26, 1969

Composites:

Block: Sect.: Place: App. Bear: App. Dip: **-90°** Length:

From	To	Discard:	Reason:
0	32		Overburden. Boulder clay. Casing. Consider 0-22 feet O.B. (ASH January/70).
32	39		A few fragments of sandstone. Silty sandstone. Current bedded. Dip Angle. Broken core.
39	47		Siltstone - faintly bedded. Black, Dip Angle = 67 degrees. Coal partings. One foot core short.
47	58		Coal - little bone coal, clarodurain, durain with vitrain bands. Quite hard. 48 to 58 degrees. Five feet core short.
58	73		Coal - clarodurain. Some clarain, durain and vitrain bands. 58 to 63 degrees crushed. One foot core short.
73	92		Siltstone - faintly bedded. Dip Angle = 70 degrees. Highly fractured core. Mud-filled fractures. Sandy sections and shaley sections.
92	104		Sandy siltstone - thin bedded and current bedded. Dip Angle Broken core, 88 to 97. - 1' core short. 97 - 104 - 1' core short.
104	106		Siltstone - faintly bedded.
106	114		Siltstone - four feet lost core.
114	115		Sandy siltstone - current bedded.
115	128		Coal - mushy - clarain and durain. Some fusain. #2854
128	129		Coal - durain. "
129	131		Coal - mushy. Clarain and durain. "
131	132		Bone coal and siltstone.
132	135		Sandy siltstone - faulty bedded.
135	136		Coal - mushy - durain?
136	137.5		Siltstone.
137.5	146		Coal - mushy. One foot lost core. #2855
146	151		Coal - w/ silty (3 inches). Partings.

Core Size N.Q.

Hole No. 56

Page 1

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Diamond Drill Geological Log



Objective:		Sampled:				40 Scale	
Logged By: S. WINZER		Date: AUGUST 21, 1969		Composites:		Color Plot & Dips	Ore Classes & Aver.
Block:	Sect.:	Place:	App. Bear:	App. Dip.:	Length:		
From	To	Discard:		Reason:			
0	28	Casing in bedrock (broken shale and sandstone, some coal).					
28	40	Siltstone, massive. Highly broken.					
40	41	Coal - clarain with bright vitrain bands.		#1851.			
41	44	Coal - clarain with bright vitrain bands. Grades to a more fusain rich coal.					
44	45.2	Siltstone - fairly hard. Some coalified plant remains.		#1852 = 41 - 46 feet.			
45.2	47.7	Coal - durain and clarodurain.		#1853 = 46 - 51 feet.			
47.7	52	Coal - clarain with vitrain bands.		#1854 = 51 - 56 feet.			
52	54.9	Coal - durain and clarodurain with bright vitrain bands.					
54.9	56	Siltstone, massive and fairly hard.					
56	56.6	Siltstone - massive.					
56.6	57.9	Sandstone - thin bedded and x-bedded. Fine grained.					
57.9	64.7	Siltstone - dense and soft.					
64.7	65.5	Coal - clarodurain with vitrain bands.					
65.5	67.7	Siltstone - bedded, fairly soft.					
67.7	72.7	Siltstone - finely laminated.					
72.7	74	Sandstone - thin bedded and x-bedded. Fine grained.					
74	77.5	Siltstone - bedded with sandy lenses. Dip Angle = 10 degrees.					
77.5	82	Silty sandstone - bedded.					
82	93	Sandstone - medium grained grading to a dirty sandstone with many coal partings. Bedded and x-bedded.					
93	97	Coal - clarain with vitrain bands.		#1855 = 93 - 95 feet.			Core Size
97	100	Coal - clarain with vitrain bands.		#1856 = 95 - 100 feet.			
100	110	Siltstone.					
110	114	Siltstone - fairly dense.					

Hole No. 57

Page 1

Diamond Drill Geological Log



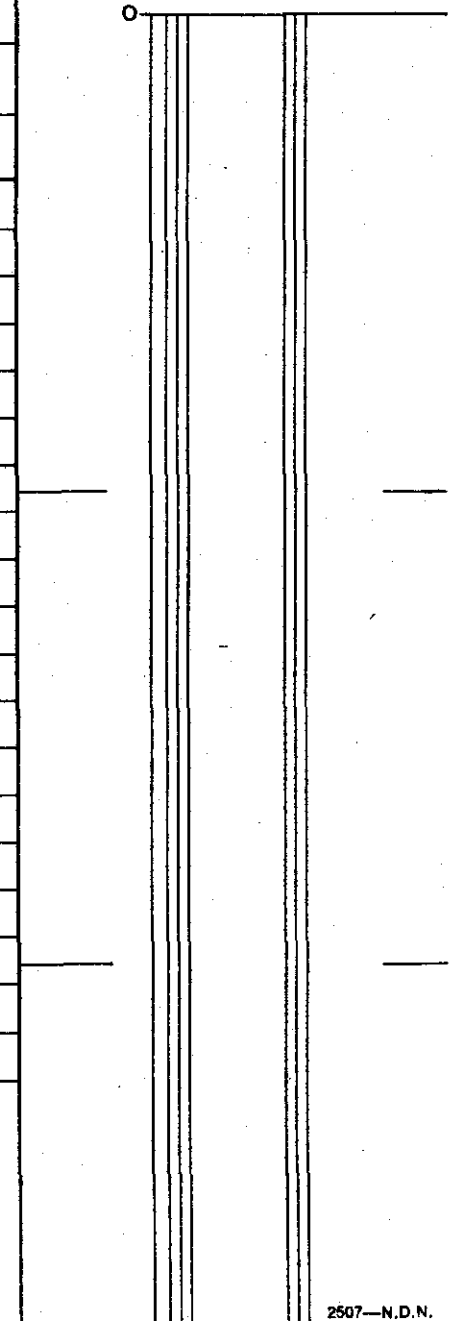
40 Scale
Color Plot & Dips Ore Classes & Aver.

Objective: _____ Sampled: _____

Logged By: S. WINZER Date: AUGUST 21, 1969 Composites: _____

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

From	To	Discard:	Reason:
114	117		Sandstone - thin bedded and x-bedded. Fine grained.
117	123		Siltstone - fairly dense and soft.
123	126.8		Sandy siltstone - thin bedded. Dip Angle = 23 degrees.
126.8	132		Sandstone - fine grained. Thin bedded and x-bedded.
132	137		Siltstone - massive for 2 feet grading to thin bedded and sandy.
137	151		Siltstone - occasionally dense, black mudstone. Massive.
151	165		Sandy siltstone - bedded. Also shows contorted bedding. Very hard in places. Dip Angle = 25°. Fractured in places.
165	178		Siltstone - bedded with occasional sandy lenses.
178	185.7		Sandy siltstone with fine sandy lenses. X-bedded.
185.7	191.5		Coal, clarain and clarodurain with thin vitrain bands. #1857
191.5	194.5		Coal, clarain and clarodurain. Very thin vitrain bands. #1858
194.5	200		Siltstone - massive and dense.
200	205		Coal and siltstone. "Bone" coal.
205	219		Sandy siltstone - bedded at the top. Massive and hard at the bottom.
219	230.8		Sandy siltstone - massive and hard.
230.8	233.6		Sandstone - fine grained. X-bedded. Dip Angle = 18 degrees.
233.6	247.5		Sandstone - bedded and x-bedded, with occasional silty lenses.
247.5	262		Sandstone - medium to fine grained. Silty at the bottom. Some very thin coal partings. Dip Angle = 17 degrees.
262	275		Sandstone - medium grained, bedded and x-bedded. Broken entire core length.
275	287		Sandstone - medium grained. Crushed and broken. Calcite stringers.
287	288		Sandy siltstone - fairly massive.
288	293		Siltstone - thin bedded. Fractured and slickensided. Dip Angle = 45 degrees.
293	294		Sandstone - medium grained.



Core Size

Hole No. 57

Page 2

Diamond Drill Geological Log



Objective:		Sampled:		40 Scale		
Logged By: S. WINZER		Date: AUGUST 22, 1969		Color Plot & Dips		
Block:		Sect.:		Ore Classes & Aver.		
Place:		App. Bear:		Length:		
Composites:		App. Dip.:		From		
From		To		Discard:		
				Reason:		
294	299	Sandy siltstone - thin bedded.				
299	305.7	Sandy mudstone shows contorted bedding.				
305.7	307.5	Dense black mudstone.				
307.5	311	Sandy mudstone. Shows bedding and contorted bedding.				
311	314	Coal - impure durain, some vitrain bands.				#1859
314	317	Coal - mostly durain with vitrain bands, also some clarain bands.				#1860 = 314 - 318.5 feet.
317	320.2	Coal - clarain and clarodurain with vitrain bands.				#1861 = 318.5 - 323 feet.
320.2	322	Coal - durain with many vitrain bands.				#1862 = 323 - 327.5 feet.
322	323	Siltstone - some vitrain bands in the siltstone.				
323	326.7	Coal - clarain and clarodurain with vitrain bands. Becomes more impure towards bottom.				
326.7	327.5	Siltstone with vitrain and clarain bands.				
327.5	341	Carbonaceous siltstone with coal partings. Broken. Some calcite stringers.				
341	352.4	Siltstone - occasionally sandy. Fairly massive.				
352.4	355	Coal - clarain with vitrain bands.				#1863.
355	363	Siltstone - dense and massive grading to sandy at 363 feet.				
363	368	Sandstone - medium grained. X-bedded. Dip Angle = 5 degrees.				
368	377	Sandstone - fine grained. Bedded and x-bedded.				
377	383	Sandy siltstone - thin bedded and x-bedded. Coal parting at 382 feet.				
383	387	Sandstone - x-bedded. Fractured almost parallel to the core axis.				
387	397	Coal - clarodurain with thick bands of clarain. Thin vitrain bands. Some siltstone wired. #1864 = 387 - 392 feet. #1865 = 392 - 397 feet.				Core Size
397	399	Coal - durain and clarain. Thin vitrain bands. Crushed at bottom. #1866				
399	407	"Bone" coal - siltstone.				

Hole No. 57

Page 3

Diamond Drill Geological Log



40 Scale

Objective: _____ Sampled: _____
 Logged By: S. WINZER Date: AUGUST 22-23, 1969 Composites: _____
 Color Plot & Dips _____ Ore Classes & Aver. _____

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

From	To	Discard:	Reason:
407	409.4		Siltstone - massive and fairly hard.
409.4	412		Coal - clarain, crushed. Some durain.
412	417		Sandstone - x-bedded. Dip Angle = < 5 degrees.
417	421		Sandy siltstone - thin bedded to laminated.
421	434		Siltstone - soft and massive.
434	449.4		One foot missing. Siltstone - massive with occasional four inch sandstone lenses.
449.4	450		Coal - durain and fusain. #1867
450	453.5		Coal - clarodurain and fusain with thin vitrain bands. #1867
453.5	456.8		Sandy siltstone - thin bedded, Dip Angle = 15 degrees.
456.8	463		Coal - crushed clarodurain and fusain. Few vitrain bands. #1868
463	465		Siltstone
465	467.5		Siltstone, massive, broken.
467.5	474.4		Coal - bony at the top, clarain and clarodurain with bands of vitrain. 469-474 feet. #1869 = 467.5 - 469 feet.
474.4	476.2		Coal - high % siltstone. Coal is durain with clarain bands. #1870 = 469 - 474 feet.
476.2	477.5		Siltstone - many coalified plant remains. #1871 = 474 - 476.2 feet.
477.5	482		Siltstone - massive and dense.
482	490.5		Sandstone - fine grained, Thin bedded and x-bedded.
490.5	502		One foot missing. Sandstone - fine grained, Thin bedded and x-bedded. Dip Angle = 18 degrees. Crushed 500-502 feet.
502	505		Sandy siltstone - massive.
505	507		Sandy siltstone - massive.
507	517		Sandstone - medium grained, fairly massive, crushed and broken.
517	527.2		Siltstone - coal partings and plant remains. Massive.
527.2	531		Silty sandstone - thin bedded.

Core Size

Hole No. 57

Page 4

Diamond Drill Geological Log



40 Scale
Color Plot & Dips Ore Classes & Aver.

Objective:

Sampled:

Logged By: S. WINZER

Date: AUGUST 23, 1969

Composites:

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

From	To	Discard:	Reason:
531	540		Siltstone - occasionally sandy. Massive except where sandy.
540	545		Coal - clarain and fusain with vitrain bands. #1872
545	554.5		Coal - durain with vitrain bands. Occasional 6 inch clarain and vitrain crushed. #1873 = 545-550'. #1874 = 550-554'.
554.5	562		Coal - clarain and fusain with vitrain bands. #1875 = 554 - 562 feet.
562	569		"Bone" coal and siltstone. #1876 = 562 - 568 feet.
569	572		Coal - durain with some clarain and vitrain bands. #1877 = 568 - 572 feet.
572	574		Coal - clarain and fusain. Thin vitrain bands. #1878
574	586		Siltstone - occasionally sandy. Dip Angle = > 5 degrees.
586	595		Sandy siltstone - thin bedded or x-bedded.
595	600		Siltstone - massive and fairly soft.
600	607.5		Siltstone - massive.
607.5	614		Sandy siltstone - bedded and x-bedded. Dip Angle = 15 degrees.
614	628		Sandy siltstone - bedded, occasionally x-bedded.
628	633		Siltstone - thin bedded.
633	638.8		Sandstone - fine grained, x-bedded.
638.8	642		Dense mudstone - coal parting at 642 feet.
642	644		Siltstone - broken with carbonate stringers.
644	647		Coal and siltstone. Mainly durain. Impure. #1879 = 644 - 647 feet.
647	657		Coal - clarain and clarodurain. One inch or thicker vitrain bands. Good core. #1880 = 647 - 652'. #1881 = 652-657'!
657	670		Coal - crushed clarain, some vitrain. #1882 = 657-661'
			#1883 = 661-665'
			#1884 = 665-670'.

Core Size

Hole No. 57

Page 5

Diamond Drill Geological Log



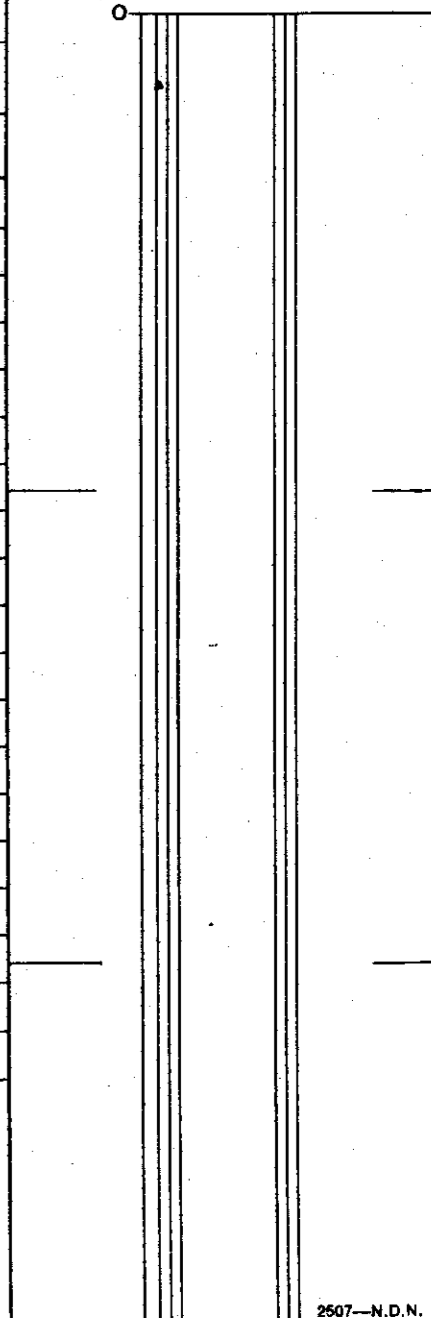
40 Scale
Color Plot & Dips Ore Classes & Aver.

Objective: _____ Sampled: _____

Logged By: S. WINZER Date: AUGUST 24, 1969 Composites: _____

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

From	To	Discard:	Reason:
670	680		Three feet footage error. Siltstone - bedded at the top, massive towards the bottom. Sand lenses.
680	680.8		Siltstone.
680.8	682.5		Coal - fragmented clarain, some vitrain.
682.5	684		Siltstone - massive.
684	686		Coal - clarain and fusain, some vitrain.
686	687		Siltstone.
687	692		Sandy siltstone - thin bedded and broken. Sandstone contact at the bottom.
692	698		Sandstone - thin bedded and x-bedded. Fine grained.
698	699.6		Siltstone - massive.
699.6	706		Sandstone - thin bedded and x-bedded. Dip Angle = 12 degrees.
706	708.4		Sandy siltstone.
708.4	713		Coal - impure, mostly durain and silt. #1584 = 708 - 711.
713	718		Coal - clarodurain, some clarain. #1585 = 711 - 715.
718	720.5		Sandstone - fine grained. X-bedded. #1586 = 715 - 718.
720.5	734.5		Carbonaceous Siltstone - massive and soft.
734.5	747.5		Sandy siltstone - some sandstone lenses. Folded. Dip Angles range from 40 degrees to vertical.
747.5	759.5		Sandy siltstone - fractured. Carbonate stringers and contorted bedding.
759.5	761		Carbonaceous siltstone - highly fractured.
761	762		XXXXXXXXXXXX Coal, clarain with thin vitrain bands.
762	765		Sandy siltstone.
765	773		Sandstone - fine grained. X-bedded. Dip Angle = 15 degrees.
773	787		Sandy siltstone - occasional sandy lenses. Good core.



Core Size

Hole No. 57 Page 6

Diamond Drill Geological Log



40 Scale
Color Plot & Dips Ore Classes & Aver.

Objective: _____ Sampled: _____

Logged By: S. WINZER Date: AUGUST 26, 1969 Composites: _____

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

From To Discard: _____ Reason: _____

787	801.5	Sandy siltstone - massive except where sand lenses predominate. Dip Angle = 30 degrees.
801.5	816.5	Silty sandstone - contorted bedding, sandstone "dykes!"
816.5	831	Sandstone - medium grained. Thin bedded and x-bedded.
831	843.5	Sandstone - fine grained, bedded grading to a medium grained more massive variety.
843.5	845.5	Siltstone with sand lenses.
845.5	857	Sandstone - medium to coarse grained. Bedded. Slump structures with siltstone pebbles. Coal partings.
857	870.5	Siltstone - some sandy lenses. Dip Angle = 10 degrees. Contorted bedding.
870.5	885	Sandy siltstone - contorted bedding and x-bedding. Carbonate stringers. Coal partings.
885	894	Siltstone - massive.
894	898	Silty sandstone - x-bedded. Dip Angle = 12 degrees.
898	899	Siltstone - fairly massive.
899	913	Sandstone - silty. X-bedded.
913	928	Silty sandstone - x-bedded and thin bedded. Dip Angle = 10 to 20 degrees.
928	933	Sandy siltstone - bedded.
933	942	Sandstone - bedded at the top. Grades to massive.
942	957	Sandstone - medium grained. Bedded. Dip Angle = 22 degrees.
957	969	Sandstone - silty in spots. Pyrite veins. Massive the last 5 feet.
969	980	Sandstone - thin bedded. Medium grained.
980	984	Siltstone - finely laminated.
984	999	Siltstone - occasional sandy lenses.
999	1012.5	Siltstone - massive and black. Coal partings lost 2 feet.

Core Size H. Q.

Hole No. 57

Page 7

Diamond Drill Geological Log



40 Scale

Objective:

Sampled:

Color Plot & Dips

Ore Classes & Aver.

Logged By: S. WINZER

Date: AUGUST 27, 1969

Composites:

Block:

Sect.:

Place:

App. Bear:

App. Dip:

Length:

From	To	Discard:	Reason:
1012.5	1028		Coal - soupy first 5 feet. Clarain with vitrain bands and some fusain. Dies out in partings. 1027 - 1028 feet. #1589 = 1012.5 - 1017.5. #1590 = 1017.5 - 1022.5. #1591 = 1022.5 - 1028.
1028	1040		Siltstone - highly broken. Many coal partings and some "bone" coal.
1040	1054		Siltstone - highly broken. Coal partings.
1054	1068		Siltstone - crushed. Some coal partings.
1068	1069.6		Siltstone - crushed. #1592 = 1069.6 - 1073. #1593 = 1073 - 1077.
1069.6	1079		Coal - clarain and fusain, crushed. #1594 = 1077 - 1079.
1079	1092		Coal - clarain and durain with very thin vitrain bands. Fusain rich sections are crushed. #1595 = 1079 - 1083. #1596 = 1083 - 1088. #1597 = 1088 - 1092.
1092	1101		Coal - crushed clarain and fusain, minor durain. Almost no vitrain. #1598 = 1092 - 1098.5.
1101	1102		Siltstone - high % coal. #1599 = 1098.5 - 1101.5
1102	1103.5		Coal - crushed clarain and fusain. #1600 = 1101.5 - 1104
1103.5	1104		Siltstone - crushed.
1104	1118		Sandy siltstone - broken for the first foot, then good core. Dip Angle = 10 degrees. X-bedded.
1118	1119		Sandy siltstone - bedded and x-bedded.

Core Size

H.C.

Hole No. 57

Page 8

Diamond Drill Geological Log



15 - HARDING 69(3)A-2

Objective: _____ Sampled: _____

Logged By: **D. LANCASTER** Date: **SEPTEMBER 16, 1969** Composites: _____

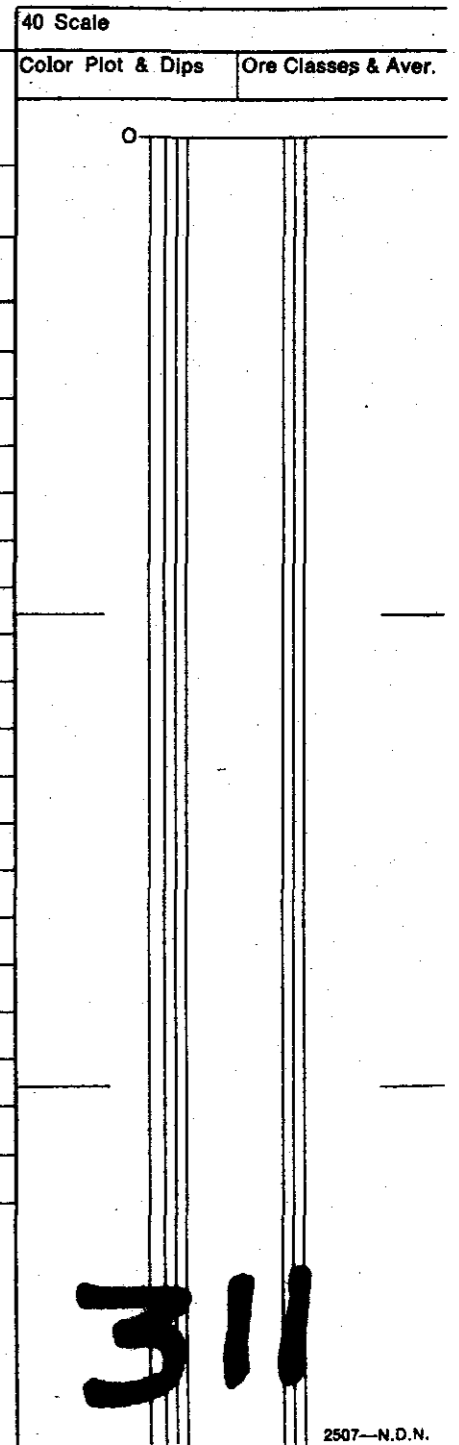
Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: **-90°** Length: _____

From	To	Discard:	Reason:
0	22	O.B.	
22	27	Sandy siltstone - sandy interbeds are frequent. Some x-bedding and current bedding.	
27	40	Sandy siltstone - current bedded. Two inches. More sandy than 22-27. 18/20 = 80% Recovery.	
40	59	Sandy siltstone with frequent sandy layers - 2" with current bedding. Some carbonate stringers at 46 and 54 feet. 19/20 = 80% Recovery.	
59	68	Sandy siltstone - sandy layers alternating every two inches with current bedding and x-bedding at 65 degrees.	
68	71	Silty sandstone with pyrite "seam" parallel to bedding and some 1/4" carbonate stringers.	
71	77	Sandy siltstone. 18/20 = 80% Recovery.	
77	97	Sandy siltstone with frequent 2" sandy current bedded sections. 20/20 = 100% Recovery.	
97	101	Siltstone with sandy interval - 2".	
101	108	Coal with siltstone impurities. Bone coal.	#2551
108	116	Coal - clarain with some fusain and vitrain. 19/20 = 90% Recovery.	#2552.
116	128	Coal - clarain with some vitrain.	#2553 - 116 - 122 feet. #2554 - 122 - 128 feet.
128		Core is badly broken and may contain some fusain.	
128	132	Coal - clarain, scattered vitrain and fusain.	#2555 - 130 - 132 feet.
132	162.5	Siltstone - black, thin bedded. Scattered. Shaley partings and coal partings. Bedding is vague. Dip Angle = 85°.	
162.5	165.5	Coal - clarain. 165 - 165.5 shale impurities.	
165.5	172	Siltstone - thin bedded.	
172	181	Sandy siltstone. Thin bedded. Dip Angle = 72 degrees. Scattered Carbonate veinlets with small cavities.	

Core Size **H.Q.**

Hole No. **58**

Page **1**



Diamond Drill Geological Log



Objective: _____ Sampled: _____

Logged By: **D. LANCASTER** Date: **SEPTEMBER 17, 1969** Composites: _____

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

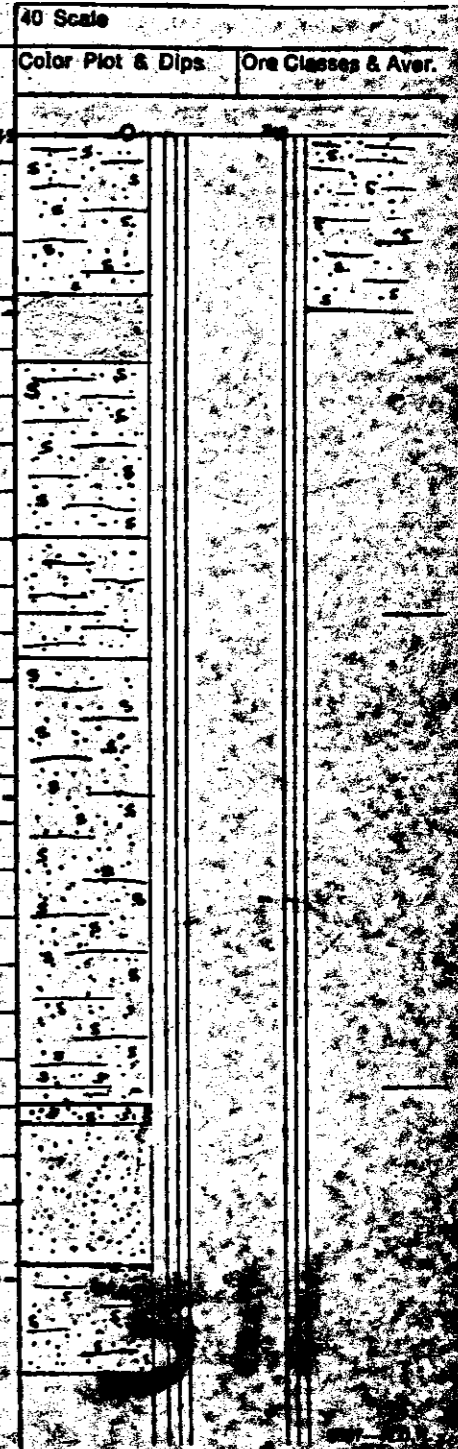
From To Discard Reason:

181.5	198		Sandy siltstone with mudstone partings (2").
198	203		Coal - vitrain and clarain - possibly some fusain. Badly broken (2 feet lost core).
203	205		Coal - clarain, some durain at 205. Badly broken (1 foot broken lost core).
205	209		Sandy siltstone with 1/2 inch coal partings.
209	223		Sandy siltstone with current bedding from 220 - 223. 1/2 feet lost core.
223	235.5		Siltstone with mud partings (1/2 to 2 inches). Sparse carbonate stringers.
235.5	240		Sandy siltstone. 17/20 = 85% Recovery.
240	258		Sandy siltstone with sparse carbonate stringers. Some small 2 inch silty sections. 90% Recovery.
258	276.5		Sandy siltstone. (T.B.?) 92% Recovery.
276.5	282		Sandy siltstone with 2 inch sandy current bedded sections.
282	284		Silty sandstone. Note core is stretched two feet in this interval.
284	292		Sandstone with silty layers (1/4") and two 2 inch coal partings at 288 and 291 feet. Bedding at 55 degrees. 87% Recov
292	298.5		Sandstone with T.B. silty layers.
298.5	310		Sandy siltstone. 90% Recovery.
310	313		Sandy siltstone with 1/2 inch coal partings.
313	328		Sandy siltstone - current bedded section 2 inches. Bedding at 75 degrees? 90% Recovery.

Core Size **N.Q.**

Hole No. **58**

Page **2**



Diamond Drill Geological Log



Objective: _____ Sampled: _____

Logged By: **D. LANCASTER** Date: **SEPTEMBER 18, 1969** Composites: _____

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

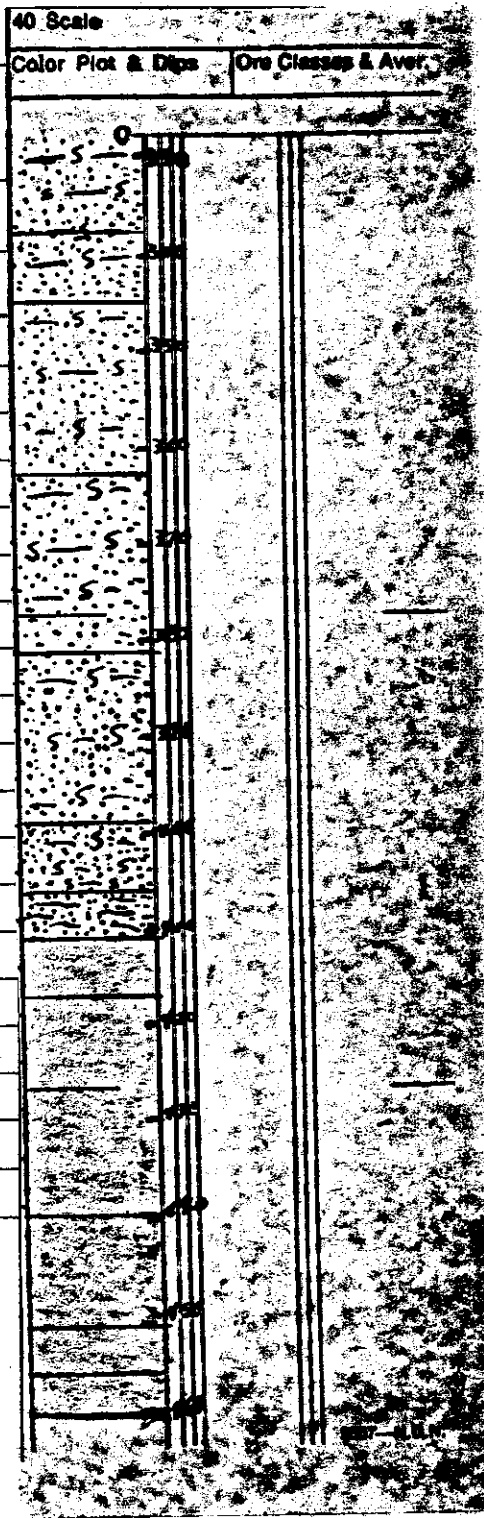
From To Discard: Reason:

328	345		Sandy siltstone with carbonate stringers. Less sandy near 345 feet.
345	363		Sandy siltstone with current bedding.
363	381		Sandy siltstone with current bedding at 90 degrees. No core.
381	399		Sandy siltstone with silty 3 inch sections and becoming less sandy.
399	406		Sandy siltstone. Current bedded.
406	410.5		Siltstone - 2 inch sandy section.
410.5	417		Coal - vitrain - sparse durain. 50% fusain. #2556
417	440		Coal - dominantly clarain with vitrain partings and considerable durain and fusain. Core is badly crushed and shows evidence of silty partings as well. Three feet lost core? #2557 = 417 - 428 feet. #2558 = 428 - 440 feet.
440	451		Coal - dominantly clarain and as above - badly crushed.
451	456		Coal - durain - silty partings.
456	460		Coal - siltstone with durain. #2559 = 440 - 450 feet. #2560 = 450 - 456 feet.
460	472.5		Sandy siltstone - thin bedded. Dip Angle = 80 degrees. Current bedding.
472.5	480.5		Siltstone - massive, black broken core. Longest piece 6 inches. Some faintly bedded sections 472.5 - 479 feet. One foot core short.
480.5	487		Sandy siltstone. Thin bedded. Dip Angle = 78 degrees. 479 - 487 feet. One foot short.
487	491		Siltstone, black - faintly bedded. Broken core.

Core Size N.Q.

Hole No. 58

Page 3



Diamond Drill Geological Log



40 Scale
Color Plot & Dips Ore Classes & Aver.

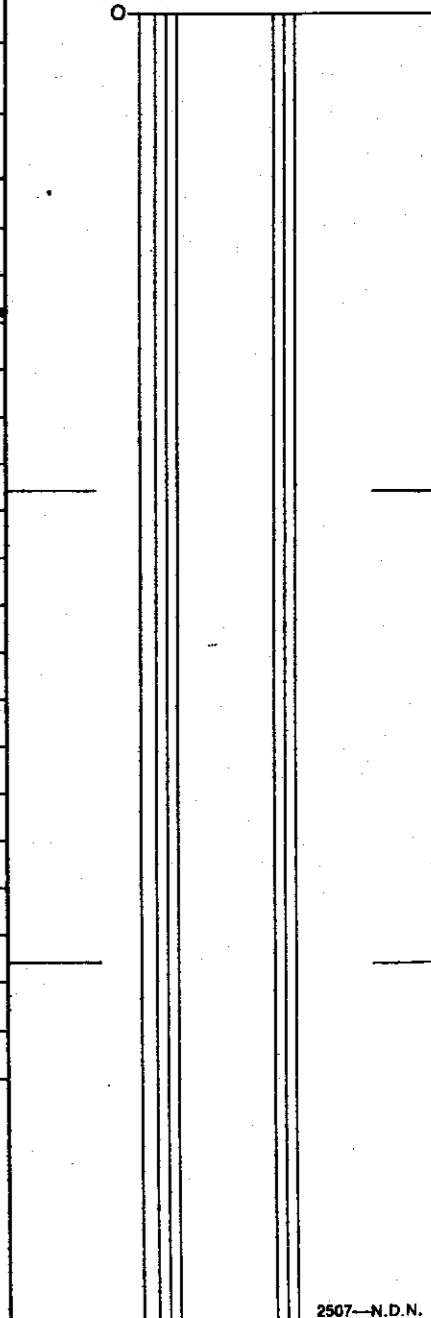
Objective: _____ Sampled: _____

Logged By: **D. LANCASTER** Date: **SEPTEMBER 19, 1969** Composites: _____

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

From To Discard: _____ Reason: _____

491	507.5	Sandy siltstone - some 2 inch siltstone layers and sparse carbonate stringers.
507.5	509	Coal - dominantly clarain with vitrain partings.
509	528	Coal - dominantly clarain with vitrain partings. Possibly sparse fusain. #2361 - 507.5 - 513 feet. #2362 - 513 - 519 ft. #2363 = 519 - 523 feet. #2364 = 523 - 528 feet. One foot lost core.
528	541	Coal - clarain with vitrain partings and fusain. #2365 = 528 - 534 feet. #2366 = 534 - 541 feet.
541	548	Siltstone with 1/2 - 2 inch coal partings and 2 inch sandy sections.
548	550.5	Siltstone with 1/2 inch coal partings.
550.5	556	Coal - clarain, vitrain. #2367.
556	564	Siltstone with coal partings and "tarry" stringers.
564	569	Siltstone becoming sandy down.
569	579	Coal - clarain and vitrain scattered fusain and possibly durain. Core is very badly ground. #2368 = 569-574 feet. #2369 = 574-579 feet.
579	590	Sandy siltstone - current bedded with muddy partings. 2 inch bedding at 60 degrees.



Core Size **H.Q.**

Hole No. **58**

Page **4**

Diamond Drill Geological Log



40 Scale

Objective: _____ Sampled: _____

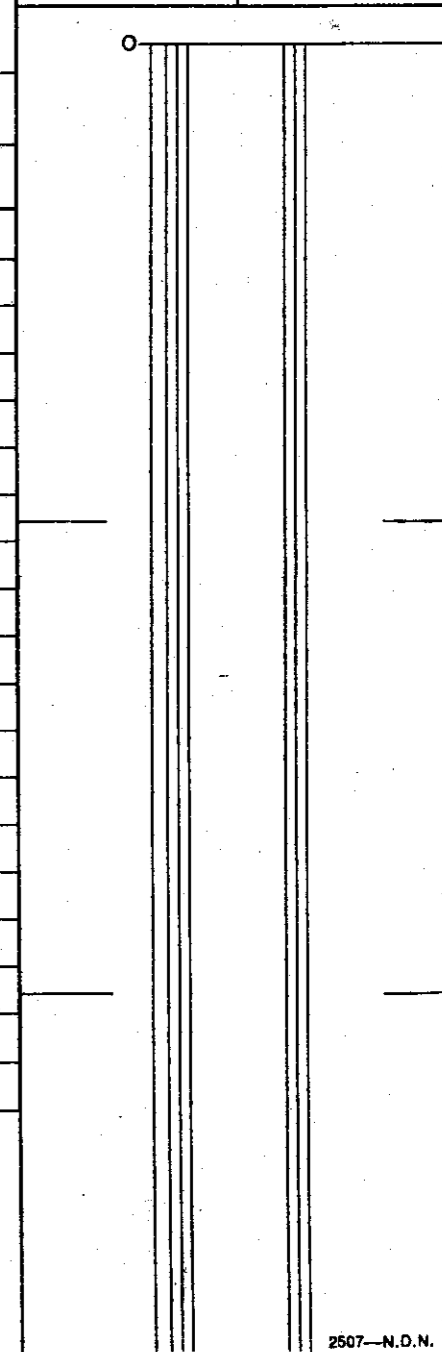
Logged By: **H.J. HOLLANDS** Date: **SEPTEMBER 20, 1969** Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip: **-90°** Length: _____

From To Discard Reason:

590	608	Sandy siltstone - thin bedded. Dip Angle = 65 degrees. Broken core. 601-606 - 2 feet short core.
608	622	Siltstone - vaguely bedded. Sandy sections. 608-618 - 1 foot core short.
622	634	Sandy siltstone - thin bedded. Dip Angle 60 degrees. Short sandstone intervals.
634	644	Sandstone - thin bedded. Silty bands, 2-4 inches thick. Dip Angle = 62 degrees. Fine grained.
644	672	Sandstone - medium to semi-coarse grained. Thin bedded. Fractured core. 1/8 to 1/4 inch irregular coal partings from 658 feet on. Prominently bedded. Dip Angle = 76 degrees.
672	681.5	Sandstone - same as above.
681.5	682.5	Siltstone.
682.5	701	Coal - clarain, durain, considerable fusain. 686-699 is crushed and pulverized, with some pulpy sections. 699-701 is coal shale partings. 682.5 to 687 is 1 1/2 feet core short. #2570 = 682.5 - 687. 687 - 693 - one foot core short. #2571 = 687 - 693. 693 - 701 - one foot core short. #2572 = 693 - 699. #2573 = 699 - 701.
701	716	Sandy siltstone. Thin bedded Dip Angle.
	716	End of hole.

Color Plot & Dips Ore Classes & Aver.



Core Size **H.Q.**

Hole No. **58**

Page **5**

Diamond Drill Geological Log



K-Fording River 69 (3) A-2

Objective:		Sampled:				40 Scale	
Logged By: H. HOLLANDS S. WINZER		Date: SEPTEMBER 2, 1969		Composites:		Color Plot & Dips Ore Classes & Aver.	
Block:	Sect.:	Place:	App. Bear:	App. Dip.:	Length:		0
From	To	Discard: Reason:					
SUMMARY:							
D.D. Hole 59 was drilled in the Greenhills at approximately 127 +00 N and 65 + 00 W. This is an <u>exploration</u> hole. Drilling commenced August 30, 1969 and drilled in heavy overburden for 85 feet. The drillers had trouble with the casing, so the hole was abandoned and moved 300 feet northeast up the hill from the creek. The new hole 59-A was cased to 36 feet. The hole was drilled in a rotation of siltstone and sandstone beds.							
Coal was encountered at:							
108.4 - 118 feet - clarain and fusain "crushed."							
137.5 - 153 feet - clarain, vitrain and fusain.							
317.7 - 333 feet - clarain, vitrain and fusain.							
461.5 - 473.5 feet - clarain, vitrain "crushed".							
504.3 - 519 feet - "bone" coal, clarain and fusain.							
572 - 576 feet - clarodurain, vitrain.							
592 - 586 feet - clarain, fusain, "crushed".							
The hole was stopped at 634 feet in sandstone.							
Recovery in Coal: 74/75 = 98.6 percent.							
Recovery: 626/634 = 98.1%.							
						Core Size	
						Hole No. 59-A Page	

311

Diamond Drill Geological Log



40 Scale

Objective: **H.J. HOLLANDS**

Sampled:

Color Plot & Dips

Ore Classes & Aver.

Logged By: **S. WINZER**

Date: **SEPTEMBER 2, 1969**

Composites:

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

From	To	Discard:	Reason:
0	36		Casing. Blocky ground, boulders and clay.
36	38		Sandstone.
38	40.5		Coal - clarodurain.
40.5	42		Siltstone - coal partings.
42	45		Siltstone - massive.
45	45.5		Sandy mudstone.
45.5	49.5		Siltstone - laminated.
49.5	58		Siltstone - massive and in some places, thin bedded. Also shows contorted bedding.
58	60		Sandstone - fine grained. Thin bedded, contorted bedding. Dip Angle = 30 degrees.
60	63		Siltstone - one 5 inch sandy lense. Contorted bedding.
63	75		Siltstone - highly fractured. Slickensides. Places are crushed to a mud.
75	76.5		Sandstone - silty. Dip Angle = 55 degrees. Thin bedded.
76.5	87.8		Siltstone - massive, some contorted bedding. Hard.
87.8	94		Siltstone - thickly bedded, soft. Dip Angle = 35 degrees.
94	94.5		Sandstone - shows highly contorted bedding.
94.5	102		Siltstone - thick bedded. Some contorted bedding. Soft.
102	108.4		Siltstone.
108.4	117		Coal - clarain with some fusain. Crushed 110 - 111 feet. Little vitrain.
117	118		Coal - crushed fusain, clarain.
118	130		Siltstone - coal partings and "bone" coal.
130	131.5		Coal - clarain with fusain. Good core.

#2203 = 108.4 - 112

#2204 = 112 - 117.

Core Size
H.O.

Hole No. 59-A

Page 1

Diamond Drill Geological Log



40 Scale

Objective:

Sampled:

Color Plot & Dips

Ore Classes & Aver.

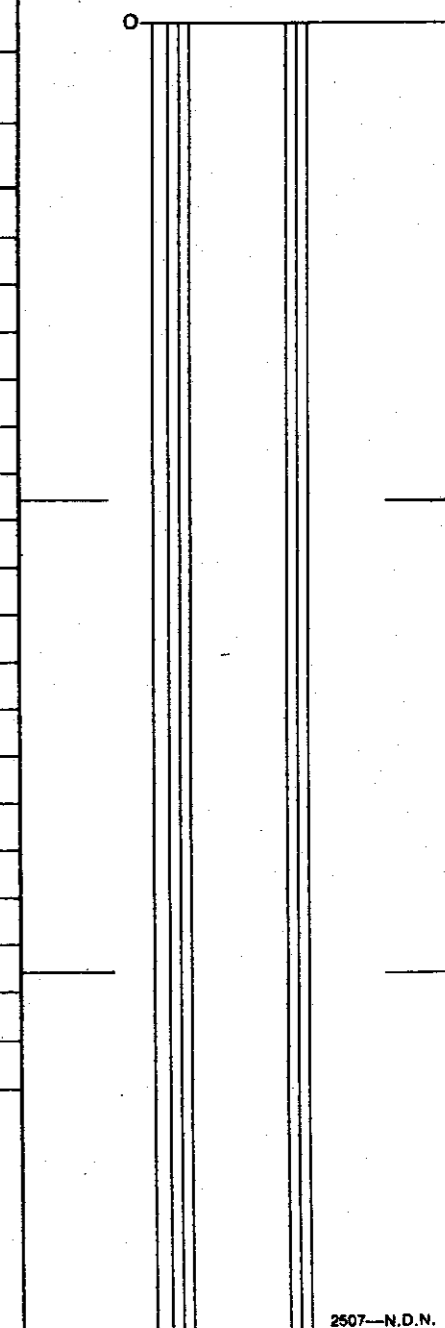
Logged By: H.J. HOLLANDS

Date: SEPTEMBER 3, 1969

Composites:

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

From	To	Discard:	Reason:
131.5	137.5		"Bone coal - shaley and silty impurities. One foot core short.
137.5	138.5		Coal - durain and clarain. #2205 = 137.5 - 142
138.5	141		Coal - durain with shale impurities. #2206 = 142 - 147.
141	147		Coal - clarain and clarodurain.
147	151		Coal - clarodurain and durain.
151	153		Coal - crushed durain and fusain. #2207 = 147 - 153
153	162		Siltstone - sandy siltstone. Laminated sections. Dip Angle = 20 degrees.
162	170		Siltstone.
170	175		Sandy siltstone - x-bedded. Dip Angle = 36 degrees.
175	183.5		Siltstone. Thin bedded sections.
183.5	188		Sandy siltstone. Thin bedded and x-bedded. Dip Angle = 20 degrees.
188	189		Siltstone.
189	191.5		Mudstone - shaley and massive.
191.5	199.5		Siltstone - thin bedded. Short sandy sections. Current bedded.
199.5	203		Sandy siltstone. X-bedded. Sandy lenses and fragments. One foot core short.
203	210		Sandy siltstone - thin bedded. Dip Angle 32 - 35 degrees. Carbonate fractures 1/8" parallel the core.
210	212		Siltstone - soft minute coal partings.
212	213.5		Sandstone - x-bedded. Carbonate veinlets.
213.5	216		Siltstone.
216	217.5		Sandy siltstone.
217.5	220.5		Siltstone - minute coal partings. Sandy sections.
220.5	222.5		Mudstone - silty massive.
222.5	229		Sandy siltstone - x-bedded and lensey.



Core Size

Hole No. 59-1

Page 2

Diamond Drill Geological Log



Objective: _____ Sampled: _____
 Logged By: **H.J. HOLLANDS** Date: **SEPTEMBER 3, 1969** Composites: _____

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

From	To	Discard:	Reason:
229	231	Siltstone. Fractured. Sandy beds.	Some fracturing healed.
231	237	Sandstone - fractured. X-bedded.	Lenses and fragments.
237	241	Sandy siltstone - thin bedded.	Dip Angle = 25 degrees.
241	247	Sandstone - current bedded.	Some contortions and fragments. Some fracturing healed.
247	252	Sandy siltstone.	
252	254.5	Sandstone - current bedded.	Fine grained.
254.5	267.3	Sandstone - coarse grained. Thin bedded.	Dip Angle - 24 degrees. 1/4" coal partings.
267.3	273.5	Sandstone - coarse grained. Thin bedded and massive sections.	1 inch or less coal partings.
273.5	277	Siltstone.	
277	281	Siltstone - soft crushed zone.	Carbonate fracture veinlets. Fine laminates at 280 - 281 degrees.
281	284.5	Siltstone - contorted laminates, carbonate veinlets.	Sandy lense and fragments. (fracture zone). 4" crushed core at 283.
284.5	289.5	Sandy siltstone - contorted and fragmental bedding.	Current bedded. 1' core short.
289.5	292	Siltstone vaguely bedded - massive.	
292	296	Siltstone - thin bedded.	Dip Angle = 30 degrees.
296	306	Sandy siltstone - current bedded.	
306	317.7	Siltstone - thin sandy lenses first 8 feet.	Dip Angle = approximately 30 degrees.
317.7	319	Coal - clarain with vitrain bands.	#2208
319	333	Coal - clarain with thick (1") vitrain bands.	Some fusain. #2209 = 319-324. #2210 = 324-329. #2211 = 329-333.
333	347	Siltstone - coal partings.	"Bone" coal and siltstone 342-347.
347	351	Siltstone, coal partings and "bone" coal.	
351	352	Sandstone - thin bedded.	Dip Angle = 30 degrees.

40 Scale

Color Plot & Dips Ore Classes & Aver.

0

Core Size

Hole No. **59-A** Page **3**

2507-N.D.N.

Diamond Drill Geological Log



40 Scale

Objective:

Sampled:

Color Plot & Dips

Ore Classes & Aver.

Logged By: S. WINZER

Date: SEPTEMBER 3, 1969

Composites:

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

From	To	Discard:	Reason:
352	355.5		Siltstone - massive, soft.
355.5	361.5		Silty sandstone, bedded, some x-bedding.
361.5	366		Siltstone - dense, soft and massive.
366	367.4		Coal - crushed clarain and fassin.
367.4	374		Siltstone and mudstone with coal partings.
374	376.5		Coal and siltstone.
376.5	377		Siltstone - somewhat sandy, massive.
377	392		Siltstone - thin bedded, becoming coarser and more sandy from 387-392.
392	405		Sandy siltstone. X-bedded, some contorted bedding.
405	419		Sandy siltstone. X-bedded. Dip highly variable, up to 90 degrees. Contorted bedding.
419	433.5		Siltstone - sandy. Bedded, some x-bedding.
433.5	447		Siltstone - fairly massive. Occasional sandy lenses. Dip Angle = 30 degrees.
447	460		Siltstone - massive. Fractured and slickensided at 459 - 460 feet.
460	461.5		Siltstone - massive, soft.
461.5	473.5		Coal - clarain with vitrain bands. Much of the core is crushed. #2212 = 461.5 to 465. #2213 = 465 - 469. #2214-469-473.5.
473.5	478		One foot missing, silty sandstone. Thin bedded, coal partings. Dip Angle = 22 degrees.
478	480		Coal - crushed.
480	489		One foot missing. Siltstone - numerous thin coal partings.
489	490.7		Siltstone, thin bedded.
490.7	493.5		Sandstone - thin bedded and x-bedded.
493.5	497.5		Silty sandstone - thin bedded and x-bedded.
497.5	499		* Siltstone - coal partings.

Core Size H.Q.

Hole No. 59-A

Page 4

Diamond Drill Geological Log



40 Scale

Objective:

Sampled:

Color Plot & Dips

Ore Classes & Aver.

Logged By: S. WINZER

Date: SEPTEMBER 4, 1969

Composites:

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

From	To	Discard:	Reason:
499	503		One foot missing. Silty sandstone. Thin bedded and x-bedded.
503	504.3		Siltstone - massive, fairly soft. #2215 = 504.3 - 507. #2216 = 507 - 512.
504.3	506.8		"Bone" coal, carbonate stringers.
506.8	517.7		Coal - clarain, some fusain. Very thin vitrain bands. #2217 = 512 - 517.7.
517.7	519		Coal - clarain with vitrain bands. #2218
519	521.5		Siltstone - coal partings.
521.5	522.3		Sandstone - x-bedded.
522.3	526.5		Siltstone - thin bedded.
526.5	529		Silty sandstone - thin bedded. Dip Angle = 35 degrees.
529	531		Siltstone - thin bedded at top, becomes massive.
531	535		Siltstone, massive. Broken every six inches.
535	537		Sandstone - fine grained and thin bedded.
537	545		Siltstone - thin bedded.
545	559		Silty sandstone - thin bedded and x-bedded. Dip Angle = 24 degrees.
559	562.5		Siltstone - thin bedded.
562.5	565		Sandstone - thin bedded.
565	568.5		Siltstone.
568.5	572		Coal - clarain and clarodurain, vitrain bands. #2219 = 568.2 - 572.

Core Size H.C.

Hole No. 59-A

Page 5

Diamond Drill Geological Log



40 Scale

Objective:

Sampled:

Color Plot & Dips

Ore Classes & Aver.

Logged By: S. WINZER

Date: SEPT EMBER 4, 1969

Composites:

Block:

Sect.:

Place:

App. Bear:

App. Dip.:

Length:

From	To	Discard:	Reason:
572	576		Coal - clarodurain with vitrain bands.
576	587		Siltstone - thin bedded, sand lenses.
587	592		Siltstone with coal partings and "bone coal".
592	596		Coal - crushed clarain and fusain. Thin vitrain bands. #2221
596	598.5		Sandy siltstone. Contorted bedding.
598.5	599.6		Coal - crushed clarain and fusain.
599.6	602.5		Two feet missing. Siltstone - massive and dense.
602.5	616.5		Siltstone - massive to thin bedded.
616.5	618		Sandstone - thin bedded. Dip Angle = 60 degrees.
618	634		Silty sandstone - thin bedded. Dip Angle = 45 degrees.
			End of hole.

Core Size H.O.

Hole No. 59-A

Page 6

Diamond Drill Geological Log



K - FROZING 69(3)A-2

Objective: **EXPLORATION HOLE**

Sampled:

Logged By: **H. J. HOLLANDS**

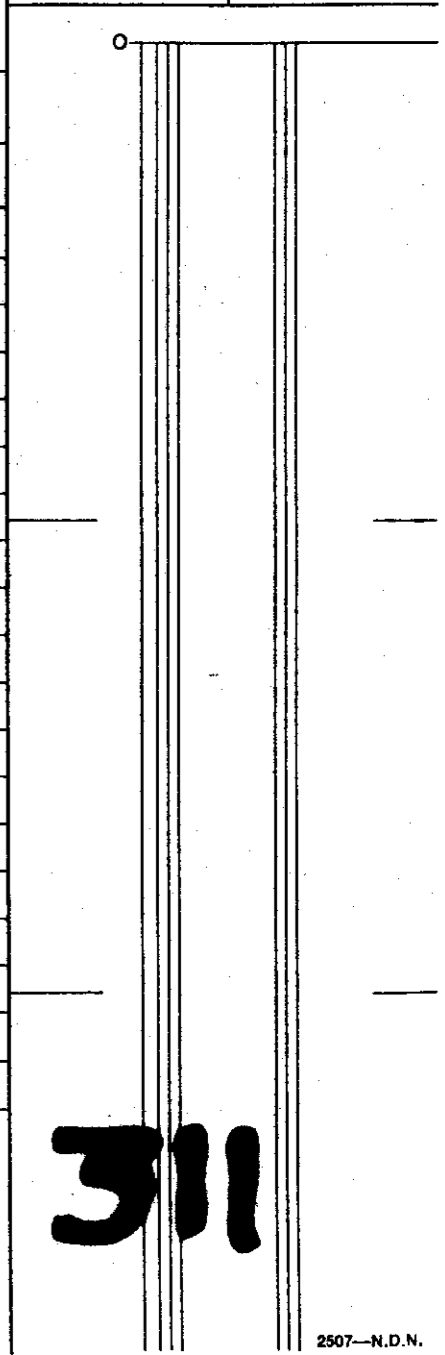
Date: **SEPTEMBER 6, 1969**

Composites:

Block: Sect.: Place: **GREENHILLS** App. Bear: App.: Dip.: **-90°** Length:

From	To	Discard:	Reason:
0	20		Casing.
20	24.5		Sandstone - thin bedded and x-bedded.
24.5	30		Siltstone - shaley partings.
30	46		Sandy siltstone. X-bedded from 39 to 41.5. 1/4 inch coal partings.
46	48.5		Siltstone - bedding vague coal partings.
48.5	55		"Bone" coal. 1/4 to 1/2 inch coal partings.
55	56.5		Coal - clarain and durain with vitrain bands.
56.5	60		"Bone" coal with coal partings. Slickensided. Some crushing.
60	63.5		Siltstone with 4" coal partings at 62 feet. Bedding vague.
63.5	70.5		Silty sandstone. X-bedded, thin bedded. Dip Angle = 75 degrees to the core. At 66 foot fracture, dip = 25 degrees.
70.5			Carbonate filling. 2 feet core short.
70.5	75.		Siltstone - massive, fractured.
75	80		Sandy siltstone. X-bedded.
80	84		Siltstone - massive. 1/2 foot core short.
84	86		"Bone" coal with soft muddy coal seams.
86	89		Siltstone - sandy siltstone.
89	93		Sandstone - thin bedded and x-bedded. Coal partings. 98.7 - 100 "bone" coal.
93	103.5		Siltstone - thin bedded, carbonate veinlets. Bedding dip = 72 degrees.
103.5	115		Sandy siltstone - thin bedded. Dip Angle = 68 degrees. Shaley partings and 1/4" coal partings. Last 1 1/2' quite sandy. One foot short.
115	117		Siltstone - coal partings.
117	118		Coal - claredurain. 1/2 foot short.

40 Scale
Color Plot & Dips
Ore Classes & Aver.



Core Size

H.Q.

Hole No. 60

Page 1

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Diamond Drill Geological Log



Objective:

Sampled:

Logged By: E.J. HOLLANDS

Date: SEPTEMBER 7, 1969

Composites:

Block:

Sect.:

Place:

App. Bear:

App. Dip.:

Length:

From	To	Discard:	Reason:
118	122.5	"Bone" coal 1/2 inch coal seams.	Broken core, some slickensides.
122.5	124	Coal - clarodurain, vitrain bands.	
124	131	Mudstone - siltstone with "bone" coal partings.	126-127 broken core. 1/2 foot short.
131	131.5	Durain coal - clarain partings.	
131.5	134	Siltstone.	
134	140.5	Sandy siltstone with thin (1") bands slumped sandstone.	
140.5	149	Siltstone with very thin coal partings. Thin sandy lenses. Bedding at 10 degrees. Grading to sandy siltstone by 145.	
149		Scattered coal partings.	
149	157	Siltstone.	
157	157.5	Coal - clarain.	
157.5	160.5	Siltstone with coal partings. Bedding at 10 degrees.	
160.5	162.5	Coal - clarain.	
162.5	167.5	Siltstone with narrow (1/2") coal parting. Infrequent to 164. Thin scattered specks of coal.	
167.5	173	Sandy siltstone. Bedding at 10 degrees.	
173	173.5	Silty sandstone.	
173.5	175.5	Siltstone.	
175.5	176.5	Silty sandstone.	
176.5	177.5	Siltstone.	
177.5	182	Sandstone - current bedded, with 2 inch durain at 178. Trace - coal partings.	
182	184	Siltstone - broken. Contains thin sandy lenses.	
184	192	Mudstone - minor coal partings. 192 - 3" breccia zone with calcite infillings.	
192	193.5	Silty sandstone. Bedding at 20 degrees.	

40 Scale

Color Plot & Dips

Ore Classes & Aver.

0

Core Size

Hole No. 60

Page 2

Diamond Drill Geological Log



40 Scale

Objective:

Sampled:

Color Plot & Dips

Ore Classes & Aver.

Logged By: M.R. MURRELL

Date: SEPTEMBER 7, 1969

Composites:

Block:

Sect.:

Place:

App. Bear:

App. Dip.:

Length:

From To Discard Reason:

193.5	200.5	Siltstone - broken core between 194 - 196. (Recovery 184-199 = 100%).	
200.5	202.5	Coal - mainly clarain. Scattered vitrain.	
202.5	203.5	Sandstone - slightly silty. Grades to siltstone ore - last two inches.	
203.5	205	Coal - clarain.	#2257 = 200.5 - 205
205	207	Sandy siltstone - shows cross bedding.	
207	210.5	Coal - clarain. Vitrain to 5% as isolated 1/4" bands.	#2258 = 207 - 210.5
210.5	213	Siltstone. (Recovery 199 - 213 = 100%).	
213	213.5	Coal - durain.	
213.5	218	Sandy siltstone.	
218	219	Coal - clarain-vitrain = 50:50.	
219	220	Siltstone - sandy with trace coal partings.	
220	226	Sandstone - thin shale partings. Bedded at 15 degrees. (Recovery 213 - 227 = 13/14 = 93%)	
226	228	Coal - clarain.	#2259 = 226 - 228
228	232	Sandstone - bedded. Showing slump and cross-bedding.	
232	234.5	Silty sandstone.	
234.5	240.5	Coal - clarain. Minor vitrain.	#2260 = 234.5 - 240.5
240.5	241.5	Siltstone - many coal partings. (Recovery 227 - 240 - 13/13 = 100%).	
241.5	244	Silty sandstone - bedded, fine grained.	
244	245	Bone coal with minor vitrain partings.	
245	246	Silty sandstone.	
246	252.5	Siltstone - carbonaceous. Conchoidal fracturing. Bedding at 15°. (Recovery =	
252.5		240 - 253.5 = 13.5/13.5 = 100%).	
252.5	259.5	Silty sandstone - very silty.	

Core Size H, Q.

Hole No. 60

Page 3

Diamond Drill Geological Log



Objective: D.G. D		Sampled:		40 Scale	
Logged By: M.R. MURRELL		Date: SEPTEMBER 7, 1969		Color Plot & Dips	
Block:		Sect.:		Ore Classes & Aver.	
Place:		App. Bear:		App. Dip.:	
Length:					
From	To	Discard:	Reason:		
259.5	262.5	Siltstone.			
262.5	266	Silty sandstone - contorted at 265.5 to 266.			
266	268	Sandy siltstone. (Recovery 253.5 - 267 = 13.5/13.5 = 100%)			
268	281	Silty sandstone thin bedded and x-bedded. Styalitic bedding contacts. Dip Angle = 70 degrees.			
281	285	Siltstone, x-bedded.			
285	287.5	Coal - clarodurain and durain. Soft, crushed.	#2266		
287.5	295	Silty sandstone, x-bedded. Thin bedded. Dip Angle = 66 degrees.			
295	312	Sandstone - thin bedded, x-bedded. Dip Angle = 68 degrees.			
312	323	Silty sandstone - thin bedded, x-bedded.			
323	339	Sandstone - medium grained. Current bedded. Occasional silty bed.			
339	340.5	Mudstone.			
340.5	347	Coal - clarain, some durain - good coal.			
347	348.5	Siltstone.	#2267, 2268, 2269.		
348.5	351	Coal - clarodurain and fusain. Shaley impurities.	(
351	356	Coal - clarodurain and durain. Little fusain.	(
356	374	Siltstone - massive. 1/2 foot core short.			
374	380.5	Sandy siltstone - vaguely bedded. Dip Angle = 78 degrees at 380 feet carbonate veining.			
380.5	386.5	Coal - clarodurain and durain with scattered vitain bands.	#2270		
386.5	389.5	Mudstone - massive coal partings.			
389.5	391.5	Sandy siltstone with carbonate veinlets.	Core Size H.Q.		
391.5	392	Coal - crushed durain.			
392	409	Sandy siltstone - current bedded. Scattered carbonaceous veinlets.			
409	428	Sandstone - medium grained. Current bedded. From 417' on 1/4" coal partings.	Hole No. 60		Page 4

Diamond Drill Geological Log



40 Scale

Objective:

Sampled:

Color Plot & Dips

Ore Classes & Aver.

Logged By: H.J. HOLLANDS

Date: SEPTEMBER 8, 1969

Composites:

Block:

Sect.:

Place:

App. Bear:

App. Dip.:

Length:

From	To	Discard:	Reason:
428	442		Sandy siltstone - sharp contact with the overlying sandstone. Current bedded. Dip Angle = 67 degrees.
442	447		Sandstone - medium grained. Broken core. Carbonate veinlets. 1 foot core short.
447	477		Sandstone - numerous calcium carbonate veinlets running parallel to the core, caused the core to break up. Highly shattered. A calcium sandstone breccia in places. Bedding Dip 58 degrees. Medium grained. Thin bedded sandstone.
477			Core losses; 447 - 451 = 2 1/2 feet. 451 - 456 = 1 foot.
477	478		Coal - clarodurain, some fusain, soft. 456 - 458 = 1/2 foot. 458 - 467 = 1 foot short.
478	482.5		Siltstone - too sandy siltstone - siltstone.
482.5	483.5		Coal - clarodurain and durain. Some fusain, impurities.
483.5	499		483.5 - 487 = 2 1/2 feet core short. Siltstone - mudstone, numerous coal partings 1/2 to 6 inches. Coal is a clarain with vitrain bands.
499	515		Sandy siltstone - thin bedded. Dip = 78 degrees. Scattered 1/8 to 1/4 inch coal partings.
515	530		Siltstone - with mudstone bands, occasional sandy bed. Thin bedded wavy contacts. Scattered concretions. 524 - 527 had 3 to 1/2 inch coal partings.
530	544		Sandy siltstone - thin bedded and x-bedding slump features. (local) Dip Angle = 75 degrees. 1/2 foot core short.
544	560.5		Sandy siltstone - thin bedded and x-bedding slump features. (local) Carbonate veinlets, parallel the core or at less than 20 degrees. Some bedding swirls.
560.5	563		Mudstone - massive.
563	567		Coal - clarain and durain scattered vitrain bands. #2277
567	573		Siltstone - muddy, occasional sandy bed. 1/2 inch coal partings at 570 - 6 inches of coal.
573	584.5		Silty mudstone - shaley sections
584.5	615.5		Sandstone - thin bedded, x-bedded stylitic bedding contacts, light and dark laminations. Dip = 70 degrees. 1 foot core short. Medium grained, 611-614 core broken along the laminations.

Core Size

Hole No. 60

Page 5

Diamond Drill Geological Log



Objective: _____ Sampled: _____

Logged By: **D. PHILLIPS**
H.J. HOLLANDS Date: **SEPTEMBER 11, 1969**

Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip: **-90°** Length: _____

From	To	Discard:	Reason:
------	----	----------	---------

615.5	634		Sandstone - same as above. Fairly numerous 1/2 to 1/4 inch coal partings.
634	641		Siltstone - sandy sections - at 638 there is 4 inches of coal. 640 - 641 sandstone.
641	643.5		Coal - clarain and durain with vitrain bands. Little fusain. #2289
643.5	660		Siltstone - massive. Black, coal partings and shale partings. Some sandy sections.
660	682.5		Sandy siltstone - thin bedded. Dip Angle = 78 degrees. X-bedded, slump features.
682.5	684.5		Shale.
684.5	689		Sandy siltstone - thin bedded.
689	698.5		Siltstone - thin bedded and x-bedded. Massive sections, short sandy sections.
698.5	707.5		Coal - clarain and vitrain, some durain. Good coal. #2290 and #2291
707.5	723		Mudstone - black, massive silty sections at 712 - 721.5 shale and coal crushed.
723	734.5		Siltstone vaguely bedded to 729.5. 729.5 - 730 carbonate cemented breccia. Healed fracture.
734.5	747		Sandy siltstone, thin bedded. Dip Angle = 75 degrees. Current bedded, 1/8 - 1/4 inch shale partings.
747			745 - 747 two feet core short.
747	749		Siltstone - one foot core short.
749	750		Sandstone - thin bedded.
750	767.5		Sandy siltstone - current bedded.
767.5	797		Sandstone, fine grained, thin bedded. Dip Angle = 65 degrees. Current bedded, bedding swirls. Fine black shaley lenses scattered throughout.
797	801.5		Sandy siltstone - thin bedded.

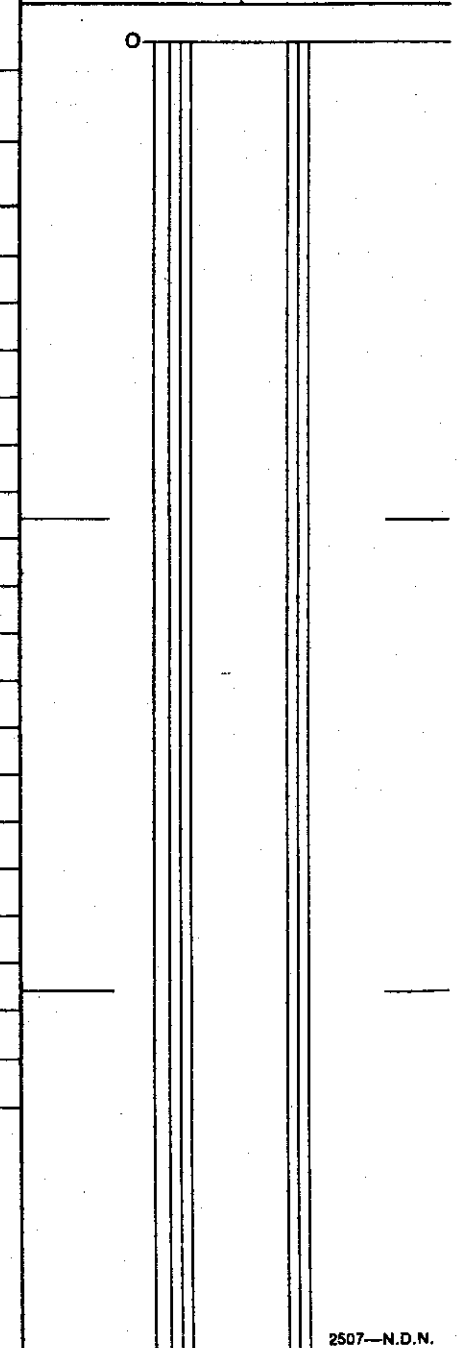
801.5	825.5	Coal - mostly vitrain and clarain, some fusain, 801.5 - 803.5 shale impurities.
		815 - 823 durain with vitrain bands, some impurities.
		823 - 825.5 vitrain with shale, 50% shale.

Core Size

Core No. 60

Page 6

40 Scale
 Color Plot & Dips
 Ore Classes & Aver.



Diamond Drill Geological Log

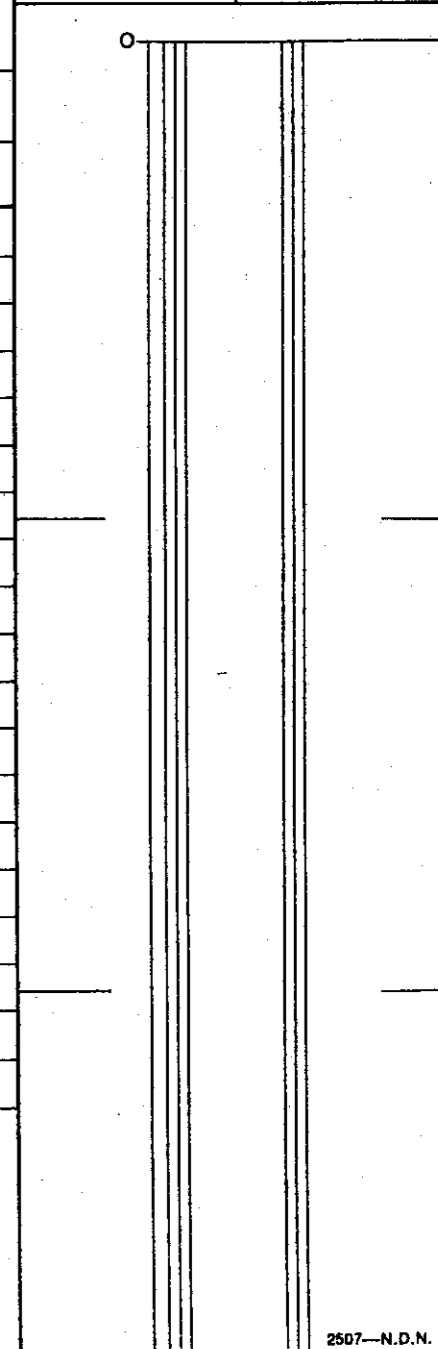


40 Scale

Objective: **M.R. MURRELL** Sampled: _____
 Logged By: **H.J. HOLLANDS** Date: **SEPTEMBER 12, 1969** Composites: _____
 Color Plot & Dips _____ Ore Classes & Aver. _____

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

From	To	Discard:	Reason:
825.5	836		M udstone - massive, black, silty sections 1/4 inch coal partings. One foot short (core).
836	836.5		Coal - clarain and fusain.
836.5	856		Silty mudstone - shaley sections, coal partings, 850 - 852 coal - clarain with shale.
856	888		Siltstone - current bedded, Sandy sections, thin bedded, Dip Angle = 70 degrees.
888	890.5		Mudstone - black, massive coal veinlets.
890.5	911.5		Coal - mostly clarain with estimated 25% vitrain, little fusain. Good coal.
911.5	917.5		Silty mudstone - massive and black.
917.5	920		Coal - crushed, pulpy.
920	928.5		Siltstone - muddy sections, faintly bedded at 927 6 inch carbonate veinlets. Brecciated.
928.5	932		Siltstone - as above.
932	933		Sandy siltstone - bedding at 85 degrees.
933	938		Siltstone - very soft, contains coal partings on polished slickensides at 45 to 50 degrees and as thin vitreous bands. Siltstone is very carbonaceous to bone coal with many bands vitreous coal within low grade durain sections to 938.
938	940		Siltstone - very carbonaceous with narrow clarain partings.
940	944		Broken zone - very poor core recovery. Chunks are silty sandstone with vitrain bands. Recovery 928.5 - 945 = 13.5/16.5 = 82 percent.
944	947		Bone coal with clarain on fracture surfaces and as thin bands.
947	956		Sandy siltstone - current bedded. Bedding at 80 degrees. Thin calcite at 953 - 1/2 inch at 90 degrees. Several stringers calcite to 956 in good siltstone.
956	958		Sandy siltstone with thin band siltstone with coal partings. Recovery: 945 - 959 14/14.5 = 100%.



Core Size

Hole No. 60

Page 7

Diamond Drill Geological Log



40 Scale
Color Plot & Dips Ore Classes & Aver.

Objective:

Sampled:

Logged By: **M.R. MURRELL**

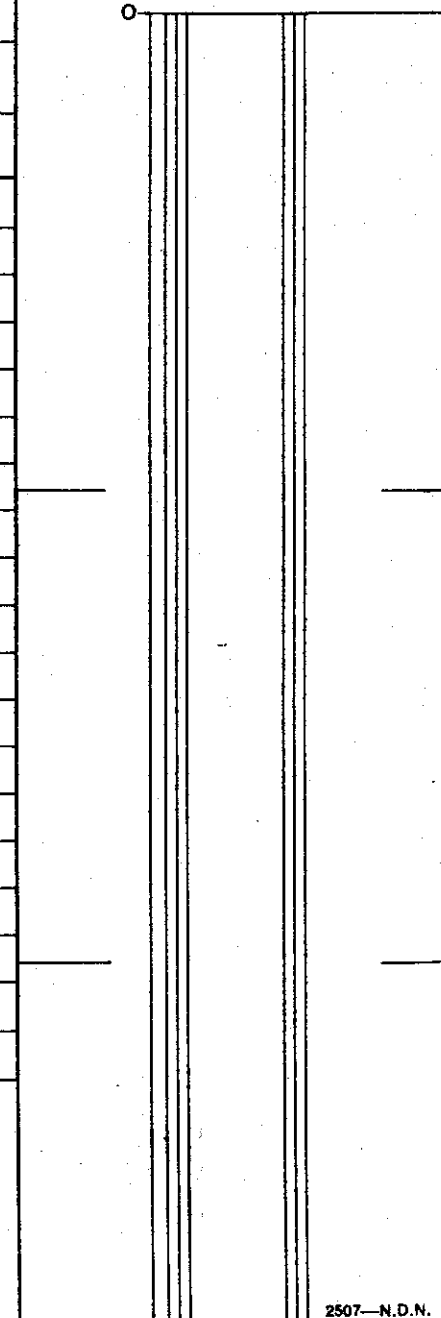
Date: **SEPTEMBER 13, 1969**

Composites:

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

From To Discard: Reason:

958	960	Silty sandstone - slight current bedding. Thin bands siltstone minor. Bedding = 85 degrees.	
960	962.5	Siltstone - black, carbonaceous becomes sandy over the last 1/2 foot.	
962.5	964.5	Sandstone - current bedded, thin calcite on fracture surface at 20 inches, followed by thin, wispy stringers at 70 to 80 feet. Grades to silty sandstone by 964.5	
964.5	967	Sandy siltstone - very slightly current bedded.	
967	968.5	Broken zone - siltstone, black, carbonaceous, thin vitrain coal parting over last 1/2 foot.	
968.5	970	Silty sandstone - current bedded, interbedded with siltstone.	
970	972	Siltstone - thin vitrain stringers, soft, black, broken over last foot.	
		Recovery: 959.5 - 972 = 11.5/12.5 = 92%.	
	972	End of Hole.	



Core Size **H.Q.**

Hole No. **60**

Page **8**

Diamond Drill Geological Log



40 Scale
Color Plot & Dips Ore Classes & Aver.

Objective: **H.J. HOLLANDS**

Sampled:

Logged By: **D. LANCASTER**

Date: **SEPTEMBER 16, 1969**

Composites: .

Block: Sect.: Place: App. Bear: App. Dip: **-90°** Length:

From	To	Discard:	Reason:
0	27		Overburden. Boulder clay. Casing.
27	41		Siltstone, current bedded, shaley intervals, some sandy sections. 1' core short.
41	45		Sandy siltstone.
45	49.5		Shaley mudstone with coal partings. 45.5-46 coal - clarodurain.
49.5	84		Sandy siltstone. Shaley intervals and coal partings up to 6 inches thick. (68 - 75 feet - 1' core short). Thin bedded. Dip Angle = 75 degrees. Current bedded.
84	97		Siltstone - shaley intervals. Limonite, carbonate veinlets. 93 - 94 mud. (6" core short) Broken core. Scattered coal partings - 1/2". Current bedded.
97	120		Siltstone - massive, black occasional coal parting. Compact.
120	140		Sandy siltstone. Current bedded, x-bedded. Dip Angle = 80 degrees. (solid core)
140	156		Sandstone - current bedded, thin bedded. Coal partings. Medium grained.
156	167.5		Siltstone - vague bedding, fine grained, compact.
167.5	172		Siltstone - same as above.
172	175		Coal - clarain, vitrain bands 1/4 to 1/2 inch.
175	177		Sandy siltstone, thin bedded. Broken core (machine breakage). 1' core short.
177	185.5		Coal - clarain and durain (50-50). #2521, #2522.
185.5	204		Shale and mudstone. Massive black, soft sections. At 198 feet, 2" coal seam. 200-205 broken shale and coal, soft crushed. 1/2" core short.
204	225		Siltstone, fine grained compact. Faintly bedded. Dip Angle = 54 degrees. Core is broken along the bedding from 1-6" sections (machine breakage).
225	250		Siltstone - same as above with numerous hair-like carbonate veinlets.
250	253.5		Shale and bone coal.

Core Size **H.Q.**

Hole No. **61**

Page **1**

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Diamond Drill Geological Log



Objective: **D. LANCASTER** Sampled:

Logged By: **H.J. HOLLANDS** Date: **SEPTEMBER 16, 1969** Composites:

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

From	To	Discard:	Reason:
253.5	255	Coal - crushed clarain.	
255	266	Shale and bone coal, some 1/2" coal seams broken and crushed. Mudstone sections.	
266	278	Siltstone - massive 2-3" shale partings, scattered carbonate veinlets.	
278	294	Sandy siltstone - bedding vague compact. Scattered carbonate veinlets.	
294	305	Silty sandstone, fine grained, thin bedded. Dip Angle 75°. Current bedded.	
		304-306 compact fragmental appearance, hairlike carbonate veinlets.	
305	317	Siltstone, 2-3" shale partings, short sandy sections, thin bedded. Dip Angle = 67°. At 316' - 1" coal.	
317	322	Sandy siltstone - current bedded and x-bedded.	
322	323	Coal - durain.	
323	328	Siltstone - massive with carbonate veinlets.	
328	330	Coal - mostly durain, little clarain.	
330	337	Mudstone - soft, shaley sections.	
337	337.5	Coal - clarain and fusain.	
337.5	339.5	Siltstone - thin bedded.	
339.5	344	Coal - clarain and durain, mostly durain. Soft.	#2521
344	347	Siltstone.	
347	366	Sandy siltstone, thin bedded and x-bedded. At 354 some tight slickenside, fractures.	
366	393	Silty sandstone - fine grained, current bedded. 378-380' scattered pebbles in the sandstone.	
393	401	Sandstone medium grained. Thin bedded and x-bedded. Dip Angle = 66°. Light and Dark laminates.	
401	411	Sandstone - coarse grained. Salt and pepper texture, appearance thin bedded.	
		Dip Angle = 70 degrees.	

40 Scale

Color Plot & Dips Ore Classes & Aver.

Core Size

Hole No. **61** Page **2**

Diamond Drill Geological Log



40 Scale
Color Plot & Dips Ore Classes & Aver.

Objective:

Sampled:

Logged By: H.J. HOLLANDS

Date: SEPTEMBER 16, 1969

Composites:

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

-90°

From	To	Discard:	Reason:
411	429		Sandy siltstone, thin bedded with x-bedding and bedding swirls. Dip Angle = 58°.
429	435.5		Silty mudstone with shale and coal partings.
435.5	441.5		Siltstone - thin bedded. At 439, 2" shale parting at 440, 3" coal parting.
441.5	480		Sandy siltstone, current bedded, some silty sections at 446.5 1/2" pyrite vein fragment.
480	487.5		Siltstone, thin bedded, slightly sandy.
487.5	508		Sandy siltstone - thin bedded. Dip Angle = 72°. Scattered silty concretions. X-bedded.
508	526		Sandstone - fine grained. Thin bedded and x-bedded. 1/4" coal partings. Irregular. Gives a tarry appearance. Dip Angle = 65 degrees. Silty concretions. Slump features.
526	542.5		Sandstone - medium-coarse grained. Thin bedded. Dip Angle 68°. X-bedded. Occasional silty bed. 539 laced with irregular 1/8 to 1/4 inch coal partings.
542.5	553		Sandstone - fine grained. Thin bedded, x-bedded. Scattered 1/4" coal partings. 452-453 1/4" carbonate veinlets.
553	568		Sandy siltstone - thin bedded, wavy current bedding atypical contacts. Dip Angle = 75°.
568	574.5		Siltstone, thin bedded.
574.5	576		Sandy siltstone.
576	577		Coal - clarain.
577	578		Sandy siltstone.
578	581.5		Shale and coal mixed, crushed and muddy. 578-586 - 1 1/2' core short.
581.5	586		Coal - mostly clarain, little durain. #2578.
586	588.5		Shale. #2579.
588.5	590.5		Coal - clarain, vitrain bands. #2580.

Core Size

Hole No. 61

Page 3

Diamond Drill Geological Log



40 Scale

Objective: _____ Sampled: _____
 Color Plot & Dips _____ Ore Classes & Aver. _____

Logged By: **R.J. HOLLANDS** Date: **SEPTEMBER 17, 1969** Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: **-90°** Length: _____

From	To	Discard:	Reason:
59015	601.5		Silty mudstone - massive, black.
601.5	606		Sandy siltstone - thin bedded. Dip Angle = 80°. X-bedded.
606	610		Siltstone - massive, black, shaley partings.
6 10	623.5		Sandy siltstone - thin bedded. Current bedded. Scattered carbonate veinlets. Bedding swirls. Dip Angle 80°
623.5	624		Coal - clarain, vitrain bands.
624	624.5		Sandy siltstone.
624.5	626.5		Coal - clarain, little fusain.
6 26.5	627.5		Shale - coal veinlets.
627.5	633		Sandy siltstone - 1/4" coal partings, wavy current bedding, stylitic contacts.
633	639		Siltstone - massive black, 1/4" shale and coal partings.
639	641		Bone coal and coal mixed (clarain, vitrain bands).
641	666		Sandy siltstone - thin bedded. Dip Angle = 75°. Current bedded. Silty concretions? 1/4" coal partings.
666	672		Coal - clarodurain, vitrain bands. 669-672, soft and pulpy crushed. #2329
672	675		Siltstone.
675	684		Sandy siltstone - thin bedded, current bedded. Dip Angle = 70°.
6 84	690		Sandstone - fine grained, current bedded.
690	692		Sandy siltstone - broken core. 690-695, 1' core short.
692	695		Coal - clarain, clarodurain, vitrain bands, little fusain.
695	707		Siltstone - massive, black, 1/2" coal and shale partings.
707	717		Sandy siltstone - faintly bedded. Current bedding. 707-717 = 1 1/2' core short.
	717		End of Hole.

Core Size H.Q.

Hole No. 61

Page 4

Diamond Drill Geological Log

Becker Drilling Co.



K-TORONTO 69(3)A-2

Objective:

Sampled:

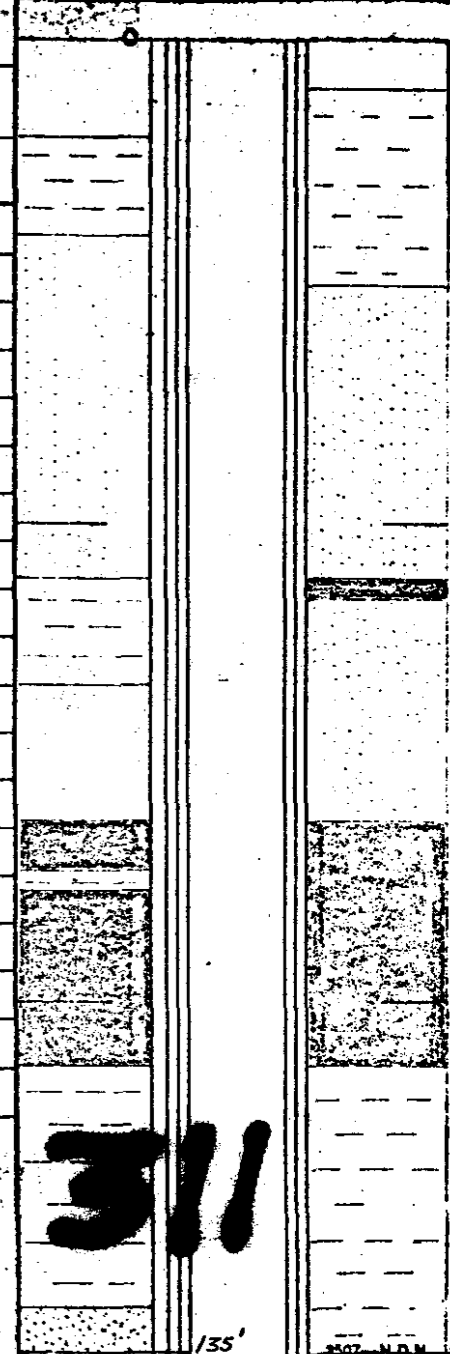
Logged By: S.B. Butrenchuk Date: March 1970

Composites:

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

From	To	Discard:	Reason:
0	10	Overburden	
10	20	Shale	
20	25	Shattered Sandstone	
25	55	Sandstone	
55	60	Brown Shale	
60	64	Shale Trace of Coal	
64	66	Shale	
66	80	Sandstone	
80	85	Coal	
85	87	Shale	
87	105	Coal	No 104-110 Good Coal (Seam #9)
105	130	Shale	
130	140	Sandstone	
140	160	Shale	
160	190	Sandstone	
190	192	Coal	
192	200	Sandstone	
200	215	Sandstone	
215	240	Coal	210-230 Actual, Good Quality (Seam #7)
240	310	Shale	
310	327	Coal	305-320 Good Coal } Seam 5
327	330	Sandstone	328-331.0 " " }
330	337	Coal	

Scale
Color Plot & Dips
Ore Classes & Aver.



Core Size 7/8"

Hole No. RH 62

Page 1

311

135'

3507 N.D.M. 270'

Diamond Drill Geological Log

Becker Drilling Co.



20

40x Scale

Objective:

Sampled:

Color Plot & Dip

Ore Classes & Aves.

Logged By: W.E. Pearson

Date: March, 1970

Composites:

270'

Block:

Sect.:

Place:

App. Bear:

App. Dip.:

Length:

Turnbull Mtn.

From

To

Discard:

Reason:

337 340 Sandstone

337-339 poor coal, shaly.

340 345 Coal

345 360 Shale trace coal

347-350 very poor coal

360 370 Sandstone

370 420 Sandstone

420 455 Sandstone with traces of coal st 426', 428', 435' and 444'

455 470 Sandstone - very hard

470' End of Hole

Core Size 47/8"

Hole No. RH 62

Page 2

105'

2507-N.D.N.

DIAMOND DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	SHORTS FEET	WIDTH	M	A	VM	FC	FSI	S	REMARKS
105.0	110.0	Seam 9	5067		50'	3.2	40.9	14.8	41.1	4, 3 $\frac{1}{2}$, 3 $\frac{1}{2}$	0.80	
		CLEAN COAL				0.6	20.0	21.2	58.2	5 $\frac{1}{2}$, 6, 6	0.66	65.1 % Recovery
215.0	235.0	Seam 7	5068 -5071		20.0	0.8	34.1	18.4	46.7	2, 2 $\frac{1}{2}$, 2 $\frac{1}{2}$	0.36	
		CLEAN COAL				0.48	10.8	22.4	66.4	7, 7, 6 $\frac{1}{2}$	0.44	62.1 % Recovery
235.0	240.0	Part 7	5072		5.0	0.8	57.4	13.7	28.1	2 $\frac{1}{2}$, 3, 2	0.27	
		CLEAN COAL				0.4	15.5	21.5	62.6	8 $\frac{1}{2}$, 8 $\frac{1}{2}$, 8	0.52	36.7 % Recovery
310.0	325.0	Seam 5	5073 -5076		15.0	0.8	34.2	18.7	46.3	3 $\frac{1}{2}$, 3 $\frac{1}{2}$	0.27	
		CLEAN COAL				0.5	14.4	21.2	63.8	5, 5 $\frac{1}{2}$, 5	0.31	78 % Recovery
325.0	333.0	Shale Mainly	5077 -5079		8.0	0.8	63.3	12.1	23.8	0 N A	0.27	
		CLEAN COAL				0.3	16.2	20.1	63.4	4, 4, 4	0.44	20.2 % Recovery
333.0	335.0	? Seam			2.0	0.7	50.4	13.8	35.1	1, 1, 1	0.27	
		CLEAN COAL				0.3	14.5	20.0	65.2	7, 7, 7	0.55	41.8 % Recovery

Diamond Drill Geological Log



McAuley Drilling Co.

20 ~~10~~ Scale

Objective:

Sampled:

Color Plot & Dips Ore Classes & Aver.

Logged By: S.B. Butrenchuk

Date: March, 1970

Composites:

Block:

Sect.:

Place:

App. Bear:

App. Dip.:

Length:

Turnbull

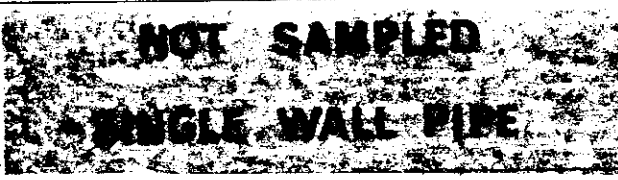
From To Discard:

Reason:

0	8	Clay and rocks - coal chips
8	20.5	Fractured black shale - coal traces
20.5	24.3	Coal - few shale traces
24.3	40.5	Grey shale - soft bands
40.5	47.5	Coal - few carbonaceous shale bands
47.5	61	Grey shale
61	64.5	Shale
64.5	65.5	Sandstone
65.5	79.5	Shale
79.5	81.5	Siltstone
81.5	84.5	Shale
84.5	88	Interbedded sandstone and shale
88	94	Shale
94	116	Sandstone
116	124	Shale
124	126.5	Carbonaceous shale
126.5	133	Sandstone
133	134.5	Shale
134.5	166.5	Sandstone
166.5	176	Shale
176	189.3	Black shale
189.3	191.3	Coal
191.3	193.5	Grey shale

Revised by Gamma-Neutron Log

40° - 47° Good coal seam 9



Core Size

4 1/2" n

Hole No.

RH 63

Page 1

311

Diamond Drill Geological Log



McAuley Drilling Co.

20 Scale

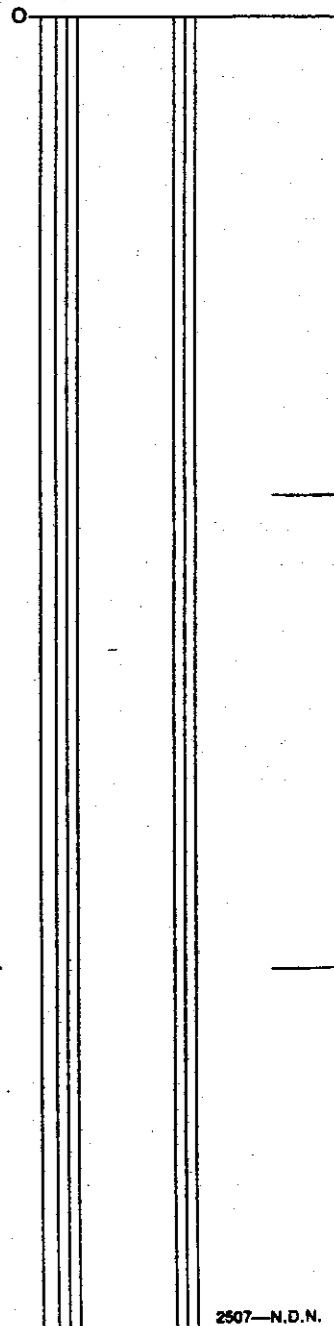
Objective: _____ Sampled: _____

Logged By: **S.B. Butrenchuk** Date: **March, 1970** Composites: _____ 270°

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

From	To	Discard:	Reason:
193.5	195	Coal	<i>Seam 7</i> 194.5 - 197.0 - Good coal 197.0 - 204.0 - Shale 204.0 - 218.0 - Good coal 218.0 - 221.0 - Shaly coal
195	195.8	Grey shale	
195.8	199.5	Coal - shaly bands	
199.5	205	Grey shale - coal bands - at 201.5 - 015' coal	
205	224	Coal	
224	225	Shaly coal	
225	271	Grey shale - soft bands	
271	308	Coal	<i>2 268.0 Top of seam 5 from Radiation Log</i>
308	311	Grey shale - coaly	
311	316	Coal - shaly	<i>Seam 5 268 - 305°</i>
316	335	Grey shale	
335	344.5	Siltstone	
344	379	Sandstone (fine-grained, very hard)	
379	396	Grey sandstone - very hard	
396	411	Sandstone - very hard	
411	412	Shale	
412	415.5	Sandstone - very hard	
415.5	416.5	Shale	
416.5	431	Sandstone - very hard	Core Size 4 1/2" Hole No. RH 63 Page 2
431	443	Sandstone - very hard	
443	446	Sandstone - with some shale bands	
446	448	Sandstone	

Color Plot & Dips Ore Classes & Aver.



Diamond Drill Geological Log



McAuley Drilling Co.

Objective: _____ Sampled: _____

Logged By: **S.B. Butrenchuk** Date: **March, 1970** Composites: _____

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

From	To	Discard:	Reason:
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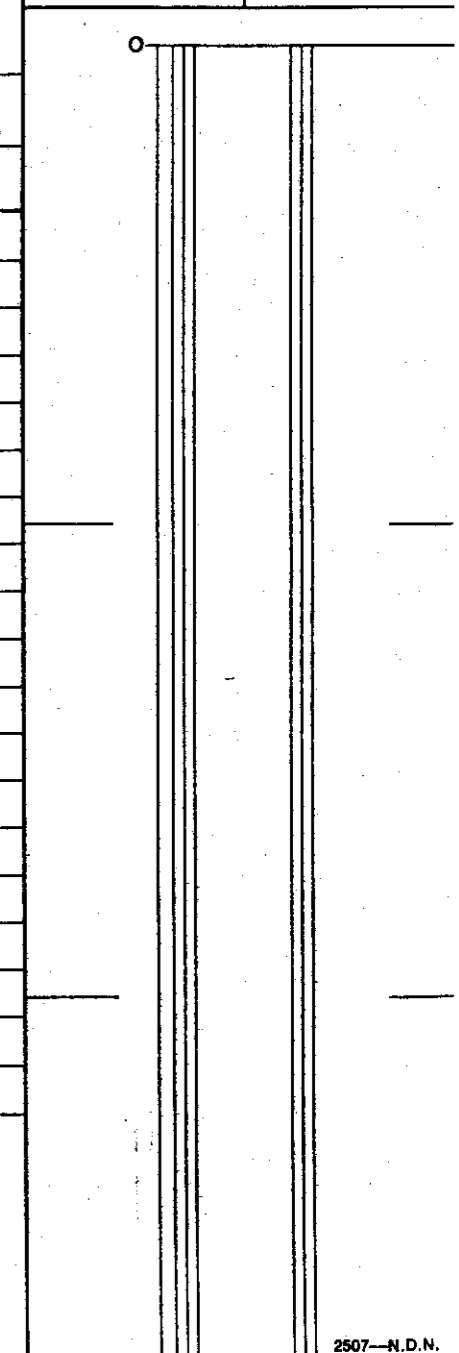
448	462	Sandstone - very hard	
462	464	Shale	
464	464.5	Sandstone	
464.5	469	Grey shale	
469	471	Siltstone	
471	478	Grey shale	
478	479	Shale	
479	483	Coal	} seam 4 estimate @ 475' - 513.0'
483	487	Shaly coal	
487	517.5	Coal	shale 479. - 483.0'
517.5	520.5	Shale (some carbonaceous shale)	
520.5	534	Sandstone (fine-grained)	
		534' End of hole	

Core Size **4 1/2"**

Hole No. **RH 63**

Page **3**

40 Scale
Color Plot & Dips
Ore Classes & Aver.



Diamond Drill Geological Log



K - TARDING 67131A-1

Objective:		Sampled:				40 Scale	
Logged By: S. WINZER		Date: SEPTEMBER 4, 1969		Composites:		Color Plot & Dips	Ore Classes & Aver.
Block:	Sect.:	Place:	App. Bear:	App. Dip.:	Length:		
From	To	Discard:		Reason:			
0	10	Casing - bottom of a coal seam. Coal & siltstone.					
10	14	Siltstone - finely laminated.					
14	16	Sandstone - thin bedded. Dip Angle = 90° (core axis = 0°).					
16	21.4	Sandy siltstone - thin bedded, some contorted bedding.					
21.4	24.5	Coal - clarodurain, vitrain bands.		#2222			
24.5	26	Siltstone, coal partings.					
26	29	Sandstone, weathered, rust-red, bedded and medium grained.					
29	36	Siltstone, massive.					
36	38	Coal - clarain and clarodurain.					
38	53	Siltstone, coal partings. Some thin bedding is present.					
53	55	"Bone!" coal and siltstone, good core.					
55	66.5	Silty sandstone, thin bedded and x-bedded. Dip Angle = 75 degrees.					
66.5	73	Silty sandstone, thinly bedded, some x-bedding.					
73	81	Siltstone (mudstone) massive and dense.					
81	86	Siltstone, contorted bedding.					
86	91	Sandy siltstone, thin bedded.					
91	96	Silty sandstone, thin bedded.					
96	97.5	Sandy siltstone, current bedded. At 97 - 6" core short.					
97.5	98	Mud, possibly a mud filled fraction.					
98	107	Sandy siltstone, wispy current bedding sandy. At 104.5, 2" mudseam.		Core Size A.Q.			
107	110.5	Silty sandstone, current bedding.					
110.5	112	Sandstone, current bedded, local slump features.					
112	115.5	Mudstone, 6" shaley, rest massive.		Hole No. 64 Angled 60°			

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Diamond Drill Geological Log



40 Scale
Color Plot & Dips Ore Classes & Aver.

Objective:

Sampled:

Logged By: H.J. HOLLANDS

Date: SEPTEMBER 5, 1969

Composites:

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

-60°

From	To	Discard:	Reason:
115.5	121.5		Siltstone, vaguely bedded, some pyrite veinlets.
121.5	123		Sandstone, x-bedded, local slump features.
123	125.5		Sandstone, x-bedded, local slump features. Pink carbonate veinlets.
125.5	136.5		Sandy siltstone, thin bedded and x-bedded. Dip angle = 14°.
136.5	144		Sandy siltstone, thin bedded and x-bedded. Grades to a silty sandstone.
144	148		Sandstone, 6" fracture and oxidized, current bedded. At 144.5, 6" fracture zone, slickensides. Dip 28° from horizontal. Coal partings.
148	150		Silty sandstone, thin bedded. Dip Angle = 80° to the core.
150	157		Sandy siltstone, current bedded. At 151 carbonate veinlets, pyrite veinlets.
157	163.5		Sandstone, fine grained, wavy current bedded, silty sections, fractured core, approximately 6" apart.
163.5	164		Sandstone, fine grained, wavy current bedded, silty sections, fractured core, approximately 6" apart.
164	167.5		Sandy siltstone, current bedded.
167.5	169.3		Bone coal - shaley impurities. Pyrite specks.
169.3	174.5		Coal - clarain, vitrain bands. Some clarodurain at 172' and scattered pyrite specks. 1/2' short.
174.5	177		Siltstone. 169.3-173 - #2223, 173-177 - #2224, 177-181 - #2225.
177	183.5		Coal - clarain and vitrain and clarodurain, some scattered pyrite specks.
183.5	186.5		Coal - clarodurain and durain, crushed scattered pyrite. 1/2' core short. #2235 = 181-186.
186.5	191		Coal - clarodurain and vitrain bands. #2236 = 186-191.
191	194.5		Coal - clarain and vitrain bands. #2237 = 191-195.
194.5	195		Siltstone. #2238 = 195-200
195	204		Bone coal with some ocal partings. #2239 = 200-204
204	211.5		Coal - clarodurain and vitrain, short section 6" of porous clarodurain at 205'. Clarain and vitrain to 211.5'.

Core Size

H.Q.

Hole No. 64

Page 2

Diamond Drill Geological Log



40 Scale

Objective:

Sampled:

Color Plot & Dips

Ore Classes & Aver.

Logged By: H.J. HOLLANDS

Date: SEPTEMBER 6, 1969

Composites:

Block:

Sect.:

Place:

App. Bear:

App. Dip.: -60°

Length:

From	To	Discard:	Reason:
211.5	214.5		Bone coal with clarain and vitrain coal partings. #2240 = 204-210. #2241 = 210-214.5.
214.5	219		Coal - clarodurain and durain, some crushing, slickensides, 1' coal short. #2242 = 214.5-219.
219	235		Siltstone - massive at 229. Fracture 1" mud seam. Dip Angle = 30° to core. 1' short.
235	238		2' core short sandy siltstone, current bedded. At 237 highly contorted and brecciated.
238	241		Sandstone, current bedded. Dip carbonate veining parallels the core.
241	242.5		Sandy siltstone.
242.5	250.5		Siltstone - 2" mud seams at 243' and 244'. Thin bedded. (Dip Angle 80° to the core).
250.5	252		Siltstone.
252	263		Sandy siltstone, thin bedded. Dip Angle 80° to core. At 255-258' carbonate veinlets. (does not fig. with acid).
263	277		Silty sandstone, thin bedded. Dip Angle 70° to core, x-bedded. Pyrite on the bedding planes.
277	292		Silty sandstone, wavy bedding, carbonate veinlets parallel the core, scattered pyrite. Dip Angle 82° to core. Some minute coal partings.
292	304.5		Sandy siltstone, thin bedded. Dip Angle 90° to the core.
304.5	306.5		Sandy siltstone.
306.5	309		Siltstone, massive.
309	324		Coal - clarodurain and durain, some fusain (all crushed). #2244 = 309-314.
324	329		Bone coal with silty impurities (slickensides). 1.5' short. #2245 = 314-318.
329	333.5		Siltstone, thin bedded. Dip Angle 72° to the core. #2246 = 318-324.
333.5	336		Sandy siltstone - thin bedded.
336	346		Coal - clarodurain and durain, crushed - 2 1/2' core short.
346	357		Sandy siltstone, x-bedded. #2246 = 336-346
357	365		Siltstone - vaguely bedded, 1/4" coal partings.
365	380		Siltstone - sandy siltstone, vague bedding, scattered carbonate veinlets.

Core Size H.Q.

Hole No. 64

Page 3

Diamond Drill Geological Log



40 Scale

Objective:

Sampled:

Color Plot & Dips

Ore Classes & Aver.

Logged By: H.J. HOLLANDS

Date: SEPTEMBER 7, 1969

Composites:

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

From	To	Discard:	Reason:
380	397		Siltstone, thin bedded, Dip Angle 78°, occasional swirl in the bedding. 2' short.
397	407		Sandy siltstone, thin bedded. Dip 78°.
407	418.5		Siltstone, vaguely bedded, wavy, wispy beds.
418.5	425.5		Mudstone, massive, black. Minute coal parting.
425.5	432.5		Coal - clarain with vitrain bands, little durain. 1/2' short.
432.5	441		Coal - durain with vitrain bands. Short section of bone coal. #2247 = 425-431.
441	442.5		Mudstone - siltstone. #2248 = 431-436. #2249 = 436-441. #2250 = 441-446.
442.5	446		Coal - clarain, vitrain bands. Some durain, little fusain. Scattered bone coal.
446	456		Sandy siltstone, thin bedded. Dip Angle 62°. Some x-bedding. 1' short.
456	459		Siltstone with coal and bone coal partings up to 6" thick.
459	463.5		Coal - clarain and durain, crushed. 1' short. #2251 = 459.5-465
463.5	469.5		Coal - durain, with bone coal impurities. #2252 = 465-469.5
469.5	474		Sandy siltstone, thin bedded.
474	474.5		Coal, clarain and vitrain.
474.5	482		Siltstone, coal partings. 480.5 - 482 coal seams and bone coal in siltstone.
482	494		Sandy siltstone, thin bedded, x-bedded. Some pyrite veining.
494	500		Siltstone with coal partings. 1/4" to 1" partings every 6 inches.
500	500.5		Coal - clarain and durain.
500.5	509		Siltstone quite sandy, bedding vague. carbonate stringers.
509	515		Siltstone, sandy siltstone. Thin bedded, wavy bedding.
515	536		Sandy siltstone, thin bedded. Dip 75°. X-bedded, carbonate veinlets. 1/2" coal seam at 532.
536	537.5		Siltstone, carbonate veinlets, brecciated zone.

Core Size

Hole No. 64

Page 4

Diamond Drill Geological Log



40 Scale

Objective: _____ Sampled: _____
 Color Plot & Dips _____ Ore Classes & Aver. _____

Logged By: H.J. HOLLANDS Date: SEPTEMBER 7, 1969 Composites: _____

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

From	To	Discard:	Reason:
537.5	547	Siltstone, massive broken. 539.5 - 542 fracture zone, coaly material, slickensides, broken ground. 1 1/2' short.	
		Fractured core to 543.5.	
547	575	Sandy siltstone, thin bedded, x-bedded.	
575	598.5	Siltstone, faintly bedded, 1/4" coal partings. 1' core short.	
598.5	599	Coal - durain with vitrain bands.	
599	600	Siltstone.	
6 00	602.5	Coal - clarain and durain with vitrain bands. Silty impurities.	#2271
602.5	612	Sandy siltstone, current bedded.	
612	622	Siltstone, faintly bedded.	
622	635	Sandy siltstone, thin bedded, Dip Angle 82°. X-bedded.	
635	642	Siltstone, faintly bedded. Dip Angle 75°.	
6 42	658	Sandy siltstone, prominently bedded. Dip Angle 73°. At 70°. X-bedding and stylitic bedding contacts.	
658	667	Siltstone, faintly bedded at 662.5. A 2" nodule of pyrite, fine grained.	
667	673	Coal - clarodurain and fusain, some durain, little vitrain/)	
673	680	Coal - clarain, vitrain bands,) #2272, #2273, #2274, #2275	
680	688.5	Coal - clarain and clarodurain, scattered fusain.)	
688.5	694.5	Siltstone, thin bedded, Dip Angle 70°. Some sandy beds. 689.5-690.5. 1/2" coal partings.	
6 94.5	702	Sandy siltstone, current bedded. Dip Angle 60°.	
702	704	Coal - clarain, vitrain bands, durain.	
704	705	Siltstone.	
705	707	Coal - durain, vitrain bands. Shaley impurities. #2276	
707	716.5	Siltstone, thin bedded. 712-714 shaley parting, 1 1/4" coal bands.	
716.5	728	Sandy siltstone, thin bedded. Dip Angle 70°.	

Core Size

Hole No. 64

Page 5

Diamond Drill Geological Log



40 Scale
Color Plot & Dips Ore Classes & Aver.

Objective: _____ Sampled: _____

Logged By: H.J. HOLLANDS Date: SEPTEMBER 9, 1969 Composites: _____

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

From	To	Discard:	Reason:
728	737		Siltstone, faintly bedded, numerous coal seams 1/2" and 2" thick.
737	754		Sandy siltstone, thin bedded. Dip Angle 76° some wavy current bedding. 1/8" coal seams.
754	755.5		Coal - clarodurain, fusain and some bone coal.
755.5	757		Siltstone.
757	769.5		Silty sandstone, thin bedded, some x-bedding.
769.5	787		Siltstone - sandy siltstone with occasional shaley partings.
787	794		Sandy siltstone, thin bedded and current bedding. Dip Angle 70°. 793-794 carbonate veinlets and coal seams. Healed fracture zones, not significant.
794	808		Siltstone, occasional sandy bed, bedding vague. Scattered 1/4" coal seams.
808	815		Sandy siltstone, x-bedded. Bedding vague.
815	825		Siltstone, muddy siltstone, small 1/4" coal partings.
825	839.5		Sandy siltstone, thin bedded, x-bedded. Dip Angle 70°. Shaley partings. 1/4" coal partings at 829'. 1/2" pyrite vein fine grained.
839.5	842		Mudstone, shaley with coal partings.
842	868		Sandy siltstone. Thin bedded. Dip Angle 75°. Current bedded. 852-853 shaley mudstone partings.
868	882		Mudstone - silty mudstone. Thin bedded. Dip Angle 65°. At 871', 4" of coal.
882	897		Sandstone, medium to coarse grained, pepper and salt appearance. Thin bedded. Dip Angle 75°. Some x-bedding. 1/8-1/4" coal partings.
897	900		Sandstone, same as above.
900	905		Mudstone, shaley partings.
905	911.5		Coal - clarain with vitrain bands, some durain, shale impurities. 1 1/2' core short. Crushed sections. #2278.
911.5	914		Mudstone, massive, shale and coal partings.

Core Size

Hole No. 64

Page 6

Diamond Drill Geological Log



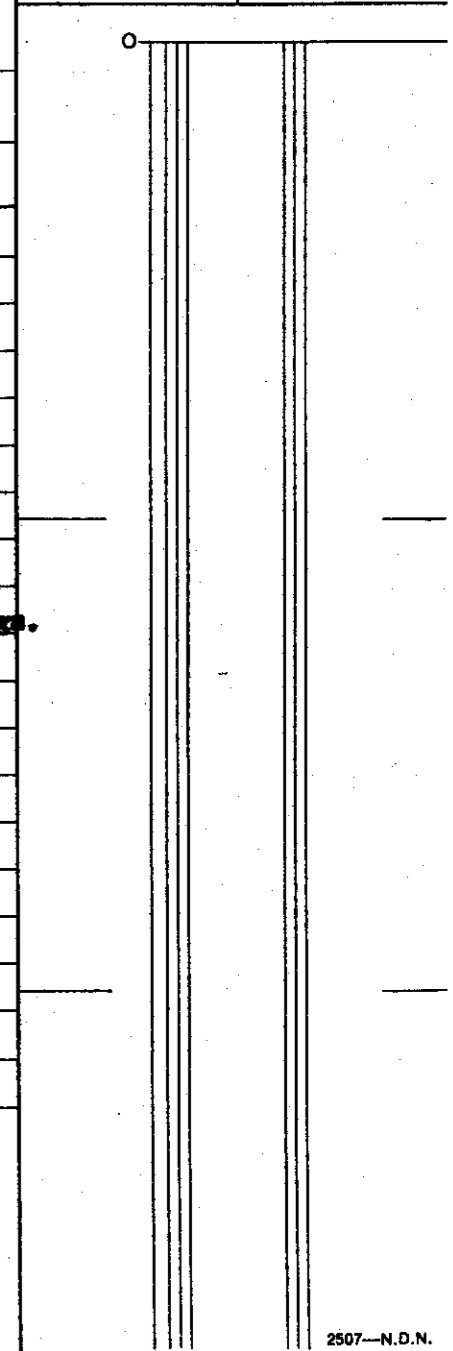
40 Scale

Objective: _____ Sampled: _____
 Color Plot & Dips _____ Ore Classes & Aver. _____

Logged By: H.J. HOLLANDS Date: SEPTEMBER 10, 1969 Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App.: Dip.: -60° Length: _____

From	To	Discard:	Reason:
914	944		Sandy siltstone, thin bedded, Dip Angle 66°. X-bedded. Occasional 2 to 6" sandstone bed.
944	970		Sandstone, fine grained, thin bedded. Dip Angle 72°. X-bedded. Occasional silty bed 2-4" light and dark laminated core. Good recovery.
970	990.5		sandstone, same as above. 1/2" and 1/4" coal partings. Compare with D.D.H. 60, 625 ca)
990.5	1000.6		Silty sandstone, thin bedded. Dip Angle 70°. Prominently T.B. Fine grained.
1000.6	1015		Sandy siltstone, thin bedded, less prominent. Dip Angle 67°.
1015	1025		Sandstone, fine to medium grained. Thin bedded. Dip Angle 75°. 1011 and 1020 1/2 to 1" coal partings. 1023-1025 shale fragments in sandstone, brecciated appearance.
1025	1051		Sandstone, medium to coarse grained. Thin bedded. Numerous 1/2" coal and shale partings. Irregularly laced, coal partings. Core is broken every 3 to 6 inches. Tarry appearance.
1051	1069		Siltstone, faintly bedded. Dip Angle 78°. Black, compact.
1069	1078		Mudstone, black, faintly bedded, silty sections.
1078	1079		Coal - clarain with vitrain bands.
1079	1082		Mudstone, broken. 1/2" coal seams.
1082	1096.5		Coal - clarain and vitrain. Some durain. Good coal. #2292, 2293, 2294.
1096.5	1118		Silty mudstone, massive, black, coal partings at 1099-1100. Concretions? 1100-1110 1 1/2' short. More coal partings 1114-1116.
1118	1130		Siltstone, faintly thin bedded. Dip Angle 76°.
1130	1133.5		Mudstone, black, massive.
1133.5	1152		Siltstone, thin bedded. Dip Angle 80°. Current bedded.
1152	1159		Mudstone - scattered shaley and 1/2" coal partings, massive.
1159	1168		Coal - mostly clarain, scattered vitrain bands. Little durain. Minor fusain. 1167-1169 shaley impurities. #2295 and #2296



Core Size

Hole No. 64

Page 7

Diamond Drill Geological Log



40 Scale
Color Plot & Dips Ore Classes & Aver.

Objective:

Sampled:

Logged By: M.R. MURRELL

Date: SEPTEMBER 13, 1969

Composites:

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

From	To	Discard:	Reason:
1168	1175.5	Coal - clarodurain grading to clarain by 1172. Fusain apparent. Becomes good clarain, with narrow durain bands to 1175.5.	
1175.5	1177.5	Siltstone - numerous 1/2" coal parting, every 1'.	#2309 = 1168-1173 #2310 = 1173-1175.5.
1177.5	1179	Coal - good clarain, slight fusain. Good recovery, trace durain at bottom, contact.	#2311 = 1177.5 - 1179.
1179	1184	Siltstone - 1/2" clarain at 1180.5 and 1182, becomes slightly sandy by 1181. Recovery 1168-1182 - 11.5/14 = 82%.	
1184	1185	Siltstone - slightly sandy, coal partings.	
1185	1194.5	Siltstone - thin (1/8"). Coal partings, scattered. A 2" seam clarain with vitrain at 1189, followed by a few narrow partings.	
1194.5	1196	Silty sandstone - 1/2" sandstone - bedded at 70° to core axis. Recovery 1182-1197 = 13.5/15 = 90%.	
1196	1220	Siltstone - thin bedded with narrow lenses of silty sandstone and sandstone. Current bedded. 1204 - thin coal seam. Completely broken, ground, difficult to say how much core this represents, but most likely 2 to 3 inches. Bedding at 80 degrees. 1209 - 1210 quite sandy, several narrow fractures infilled with light coloured calcareous s.s. bands. Recovery 1197 - 1211 - 13.8/15 = 92%. Becomes equally banded with silty sandstone by 1211.	
1220	1222	Siltstone.	
1222	1229	Silty sandstone with siltstone bands, trace coal partings. Bedding at 1225 is 60° but may be local contortions. Recovery 1211 - 1225.5 = 90 percent.	
1229	1230	Siltstone.	
1230	1236	Siltstone with thin sandy siltstone lenses and rare coal partings. Recovery 1225.5 - 1236 = 100%.	
1236		End of Hole.	

Core Size

Hole No.

64

Page

8

Diamond Drill Geological Log



Objective: _____ Sampled: _____

Logged By: S. WINZER Date: SEPTEMBER 3, 1969 Composites: _____

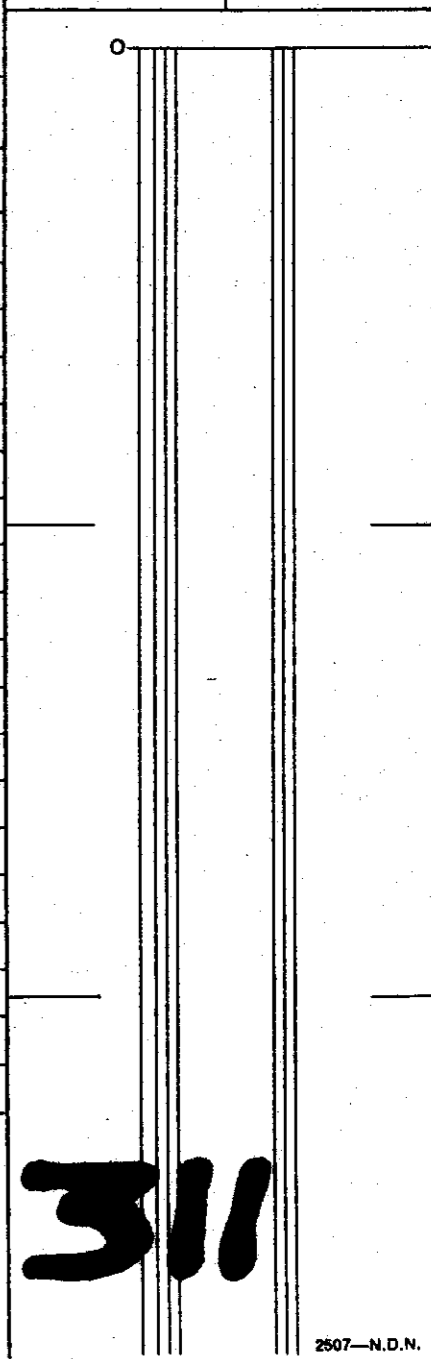
Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App.: Dip.: _____ Length: _____

From _____ To _____ Discard: _____ Reason: _____

SUMMARY: D.D.H.-65 was drilled to gain further knowledge of the nature of coal seams "B-E", in this area. The hole began August 30th, but because of problems with deep overburden and machine breakdowns, no core was recovered until September 1st. The first coal was found directly beneath the casing at 70'. 21.5' of coal was drilled and recovered. The next seam, seam "D" was intersected at 164 feet. 34' of coal was drilled. The last major seam was intersected at 288'. 30' of coal, including a 3 foot parting was drilled. One more minor seam was intersected at 375 feet. 6' of coal was drilled. The hole ended in a brecciated sandstone at 425 feet.

Coal Recovery: 88%
Overall Recovery: 92%

40 Scale
Color Plot & Dips
Ore Classes & Aver.



Core Size

N.Q.

Hole No.

65

Page

Diamond Drill Geological Log



Objective:		Sampled:		40 Scale	
Logged By: D. DUPIRE S. WINZER		Date: SEPTEMBER 1, 1969		Color Plot & Dips	
Block:		Composites:		Ore Classes & Aver.	
Sect.:		Place:		App. Bear:	
App. Dip:		Length:			
From	To	Discard:		Reason:	
0	72	Casing. Boulders and clay. Sand at 52 feet.			
70	87.4	Coal - clarain and fusain, some crushed. No vitrain. #1562 = 70-74. #1563 = 74-79. #1564 = 79-84. #1565 = 84-87.4			
87.4	89.9	Coal - clarain and fusain, crushed.			
89.9	91.5	Coal - clarain and fusain, with some durain, crushed, impure. #1566 = 87.4 - 91.5			
91.5	95	Lost.			
95	101.3	2' lost, Siltstone, occasionally sandy. Crushed and broken, coal partings and plant remains.			
101.3	102.9	Silty sandstone, x-bedded.			
102.9	109	2' missing, sandy siltstone, massive, some parts thin bedded.			
109	122	Siltstone, broken, carbonate stringers, massive.			
122	125	Sandstone, fine grained, x-bedding and contorted bedding apparent. Dip Angle = 35°. (From horizontal)			
125	127	Siltstone, massive.			
127	137	Siltstone, occasionally shaley.			
137	141.3	Silty sandstone, bedded. Dip Angle 32°.			
141.3	146	2' missing. Siltstone sandy, thin bedded, some x-bedding.			
146	162	Siltstone, occasionally sandy. Crushed. Carbonate stringers.			
162	164	Siltstone, highly broken.			
164	166	Coal - durain and clarain, thin vitrain bands. #1567			
166	180	3' missing (at least). Coal, crushed and pulpy. Durain and clarain are identifiable, high % fusain. Probable. Some vitrain bands. #1568 = 166-170. #1569 = 170-175. #1570 = 175-180.			
180	186.4	Coal - crushed and pulpy, clarain, high % fusain. #1571 = 180-185.		Core Size	
186.4	188	Siltstone. #1572 = 185-190.		N.Q.	
188	198	Coal - crushed clarain, high % fusain. 2' missing. #1573 = 190-195.		Hole No.	
		#1574 = 198-198		Page	
				65	
				1	

Diamond Drill Geological Log



40 Scale
Color Plot & Dips Ore Classes & Aver.

Objective: _____ Sampled: _____

Logged By: **H.J. HOLLANDS** Date: **SEPTEMBER 2, 1969** Composites: _____
 S. WINZER

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

From	To	Discard:	Reason:
198	198.5	Coal - impure, crushed.)
198.5	199.2	Mudstone.	)#1575
199.2	201	Coal - 1' missing, crushed and impure.)
201	212	Siltstone, occasional sandy lenses. Massive except where sandy.	
212	214	Coal - crushed and pulpy.	#2201
214	219.6	3' missing. Coal - durain and crushed clarain and fusain.	#2202
219.6	234	Brecciated siltstone. Occasionally sandy and thin bedded.	
234	239.5	Sandstone, thin bedded, brecciated. 1' or more missing.	
239.5	243.5	Siltstone, good core first 2', then highly broken.	
243.5	246	Sandstone, highly broken. Fine grained, thin bedded.	
246	250	Sandy siltstone, good core. Dip Angle 22° (with horizontal).	
250	252	Siltstone, broken.	
252	253	Siltstone, broken.	
253	259	Sandstone, very fine grained, occasionally silty.	
259	262	1' missing, sandy siltstone.	
262	268	Sandstone, thin bedded and x-bedded. Silty in places.	
268	271.5	Sandstone, fine grained, thin bedded. Dip Angle $\approx 5^\circ$.	
271.5	274.8	Siltstone, thin bedded, occasional sandy lenses.	
274.8	279.5	Sandstone, medium grained, massive.	
279.5	281.5	Silty sandstone, thin bedded, highly broken.	Core Size
281.5	284.5	Sandstone, occasionally silty, brecciated.	M.Q.
284.5	288	Sandstone and sandstone breccia, carbonate stringers. Grades to have coal at 288.	Hole No.

Core Size

M.Q.

Hole No.

65

Page

2

Diamond Drill Geological Log



Objective:

Sampled:

Logged By: S. WINZER

Date: SEPTEMBER 3, 1969

Composites:

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

From	To	Discard:	Reason:
288	302	Coal - clarain with a very high % fusain. Crushed.	#2226-288-295, #2227-295-296, #2228-296-302.
302	309.5	Coal - 3' missing, crushed clarain with a high % fusain.	#2229
309.5	310.5	Siltstone - soft.	#2230-309.5-314.5
310.5	312	Sandstone - medium grained, fractured. Dip Angle 28° (with horizontal).	#2231-314.5-318
312	318	Coal - impure clarodurain and fusain, crushed.	
318	322	Sandstone, crushed and brecciated.	
322	340.8	Sandstone, highly broken crushed in places. Medium to coarse grained, mainly massive.	
340.8	358	2' missing, sandstone, highly broken, crushed in places. Coarse grained, massive.	
358	367	Sandstone, coarse grained, brecciated.	
367	371	Lost.	
371	375.3	Sandy siltstone, alternating bedded sand and silt lenses.	
375.3	377	Coal - durain with thin clarain and vitrain bands.	#2232
377	377.5	Bone coal.	#2233
377.5	380	Coal - crushed fusain and clarodurain.	#2233
380	381	Coal - 1/2' missing.	
381	387	Silty sandstone, brecciated.	
387	393	1' missing, coal - crushed and pulpy, fusain and clarain(?).	#2234
393	396.5	Sandstone, coarse grained, brecciated.	
396.5	415	Sandstone, medium to coarse grained, massive. Highly fractured.	
415	425	Sandstone, highly fractured.	
	425	End of Hole.	

Core Size

N.Q.

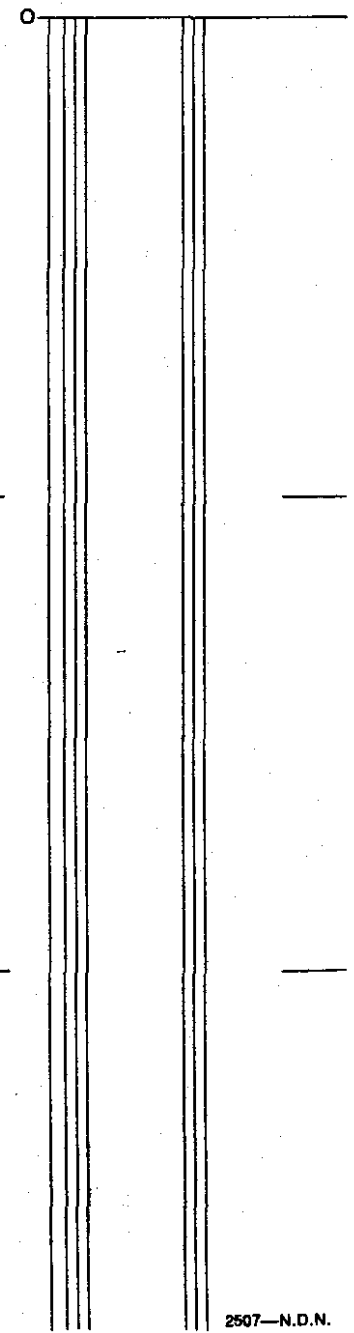
Hole No.

65

Page

3

40 Scale
Color Plot & Dips Ore Classes & Aver.



Diamond Drill Geological Log



40 Scale
Color Plot & Dips Ore Classes & Aver.

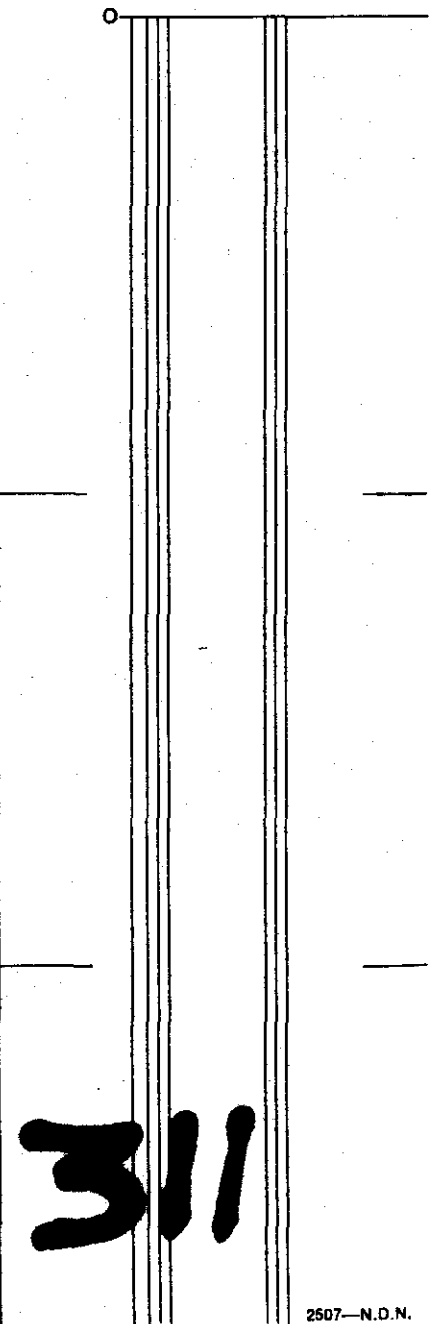
Objective: _____ Sampled: _____

Logged By: **H.J. Hollands**
Dave Phillips Date: **Sept. 10/69**

Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip: **-90°** Length: _____

From	To	Discard:	Reason:
0.0	53.5	Overburden and casing	Boulder clay overburden
53.5	54.0	Siltstone	
54.0	57.0	Coal: Clarain with vitrain bands some fusain, broken and crushed, 1½' core short #2279	
57.0	80.5	Mudstone vaguely bedded some silty beds broken core, longest piece 8"	
		(57' - 76' 7½' short)	Coal partings up to 6" wide
80.5	91.0	Sandy siltstone thin bedded dip angle 70°	92-92.5 mud with siltstone chips
		86 - 97.0	4' core short
91.0	99.0	Siltstone	
99.0	104.5	Sandy siltstone thin bedded dip angle 67°	
104.5	111.0	Silty sandstone, fine grained, thin bedded dip angle	104.5 - 105.5 crushed zone
		carb veinlets, fracture dip = 25°	
111.0	125.5	Sandy siltstone, shaley partings, carbonate veinlets, cause breakage of the core	
		thin bedding dip angle 57°	
125.5	128.0	Sandstone broken fine grained	
128.0	137.0	Siltstone, broken occasional shaley parting, thin bedded	
137.0	138.5	Sandstone crushed carb veinlets	
138.5	141.0	Siltstone, broken shaley partings	
141.0	147.0	Shale, crushed	2' core short
40.0 147.0	193.0	Coal: crushed, pulverized - dry, claro durain, lot of fusain some durain 3' coal short	
		scattered vitrain bands	Core Size
		Sample numbers: #2280 - 2288	N.Q.
193.0	210.0	Siltstone, crushed & broken with shaley sections	
		197 - 202 1' core short; 202 - 210 1' core short	Hole No. 66



Diamond Drill Geological Log



K-FACING 69(3)A-2

Objective: _____ Sampled: _____

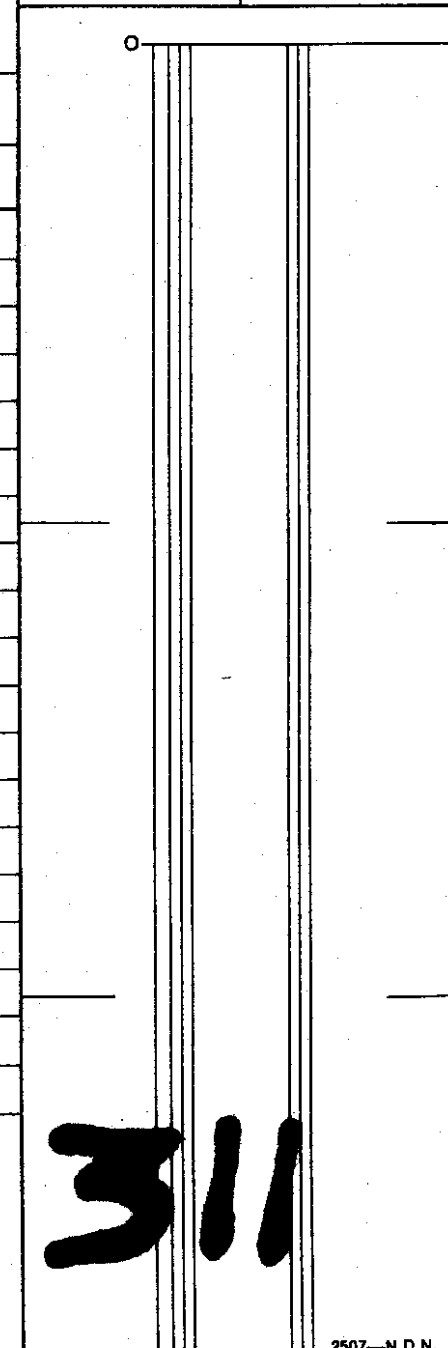
Logged By: M.R. MURRELL Date: SEPTEMBER 15, 1969 Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip: -60° Length: _____

From _____ To _____ Discard: _____ Reason: _____

From	To	Discard:	Reason:
0	8	Overburden. Casing.	
8	8.5	Sandy siltstone - slightly current bedded.	
8.5	9	Sandstone. Basal looking, coarse, speckled texture.	
9	11.5	Siltstone, broken, mud seam (2") at 11 feet.	
11.5	14	Mudstone, dark brown, vary soft.	
14	20	Sandy siltstone with thin bands mudstone 2 to 3 inches thick, spaced at 1 1/2 foot intervals. Grades to siltstone by 20°.	
20	20.5	Very broken core. Carbonaceous siltstone.	
20.5	29	Siltstone, soft, thin seams mudstone. Recovery 8 - 22.5 - 11/14.5 = 77%.	
29	38	Siltstone with lenses of sandy siltstone up to 1' in width. (10 at 36'). Recovery 22.5 - 36 = 12.5/13.5 = 93%.	
38	41	Coal - 6" durain with clarain bands. 3" clarain, followed by bone coal and durain with clarain, on fractures.	
41	48	Siltstone - black. 4" broken zone at 41.5. 2" limonitic concretion at 43. 46 broken clarain over 3".	
48	50	Sandy siltstone, broken at 50'. Recovery 36 -	
50	56	Siltstone, muddy, shaley bands, 1/2" coal partings.	
56	67.5	Coal - clarain with scattered vitrain bands, fusain.	
67.5	69	Coal - clarain and durain shale impurities. #2297, 2298, 2299.	
69	76.5	Sandy siltstone, current bedding. 1/2" coal and shale partings.	
76.5	77.5	Coal - durain and fusain. 1' core short.	

40 Scale
Color Plot & Dips
Ore Classes & Aver.



Core Size

Hole No.

67

Page

1

Diamond Drill Geological Log



40 Scale

Objective: **D. LANCASTER**

Sampled:

Logged By: **H.J. HOLLANDS**

Date: **SEPTEMBER 16, 1969**

Composites:

Color Plot & Dips

Ore Classes & Aver.

Block: Sect.: Place: App. Bear: App. Dip: **-60°** Length:

From	To	Discard:	Reason:
77.5	93		Siltstone - current bedded, thin bedded. Dip angle 55°. Short sandy sections. Shale intervals. 1' core short.
93	103.5		Siltstone, same as above. Dip angle 72°.
103.5	105		Coal, clarain and fusain.
105	115		Sandy siltstone, thin bedded. 1" coal parting at 114'.
115	119		Siltstone, massive and soft.
119	125.5		Coal, mostly clarain, scattered vitrain bands, some fusain. #2300, 2326.
125.5	144		Siltstone, thin bedded. Dip angle 55°. Sandy sections, 2 to 3" coal partings.
144	145		Coal, clarain, some fusain.
145	161		Siltstone, thin bedded, Dip angle 70°. Short section of mudstone.
161	163		Coal, crushed, clarain and fusain.
163	188		Siltstone, thin bedded, 167-168 med. soft. At 173', 3" coal. Dip angle 68°. Black with 1/2" coal and shaley partings. Scattered carbonate veinlets.
188	212.5		Siltstone, as above, but no coal partings.
212.5	222		Siltstone, black, thin bedded. Dip angle 70°. Scattered 1/4" coal partings.
222	226		Shale and coaly material. 224.5 - 225 coal, durain.
226	236		Siltstone, black, thin bedded. Dip angle 68°. At 233-233.5' shaley with slickensides.
236	246		Sandy siltstone, thin bedded. Dip angle 52°. Some current bedding.
246	262		Siltstone, black, thin bedded. Dip angle 72°. Soft, some shaley sections, scattered carbonate veinlets.
262	274.5		Sandy siltstone, bedding vague. Very compact. 273.5-274.5, 1/4" carbonate veinlets, broken core.
274.5	286		Sandstone, fine grained, thin bedded. Dip angle 65°. Scattered silty bands.

Core Size
H.Q.

Hole No.
67

Page
2

Diamond Drill Geological Log



40 Scale
Color Plot & Dips Ore Classes & Aver.

Objective:

Sampled:

Logged By: H..J. HOLLANDS

Date: SEPTEMBER 17, 1969

Composites:

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

From	To	Discard:	Reason:
286	292.5		Sandy siltstone, current bedded. Bedding vague. Shaley partings.
292.5	303.5		Sandstone, fine to medium grained. Thin bedded, Dip angle 70°. Some current bedding.
303.5	311		Siltstone, black, bedding vague. 110-111' fractured core.
311	316		Sandy siltstone, thin bedded, dip angle 65°. Current bedded. Scattered carbonate veinlets.
316	320		Sandstone, fine grained, thin bedded. 1/4" coal partings.
320	328		Sandy siltstone, bedding is vague.
328	349		Siltstone, black, massive, becomes slightly sandy, becomes very vaguely bedded at 341'. Dip angle 62°. 1/4" coal partings (scattered). 336-346, 1' core short.
349	364.5		Sandy siltstone, thin bedded, dip angle 72°. Current bedded, some silty beds.
364.5	372		Siltstone, massive, black.
372	385		Sandy siltstone, thin bedded. Dip angle 65°. Current bedded.
385	386		Coal, clarain, slickensides, partly crushed.
386	389		Siltstone, massive.
389	392		Coal, clarain, vitrain bands.
392	394.5		Siltstone.
394.5	407		Sandy siltstone, thin bedded, current bedded.
307	415		Silty mudstone, 1/4" coal partings. 411 feet - 4" coal.
415	427		Siltstone, black, coal partings 1/4" massive.
427	455		Sandy siltstone, thin bedded. Dip Angle 77°. Occasional silty bed.
455	460		Coal, clarain and durain. Little fusain. #2228.
460	470		Siltstone, thin bedded. Dip angle 68°. Sandy sections.
470	470.5		Coal, clarodurain.

Core Size

H.Q.

Hole No.

67

Page

3

Diamond Drill Geological Log



40 Scale

Objective:

Sampled:

Color Plot & Dips

Ore Classes & Aver.

Logged By: H.J. HOLLANDS

Date: SEPTEMBER 18, 1969

Composites:

Block:

Sect.:

Place:

App. Bear:

App.: Dip.:

Length:

From	To	Discard:	Reason:
470.5	472.5		Siltstone.
472.5	474		Coal; durain, sheared. To a bone coal.
474	479		Siltstone, thin bedded.
479	508		Sandy siltstone, thin bedded. Dip angle 70°. Current bedded. 1/4" coal and shale partings.
508	509.5		Sandstone, fine grained.
509.5	518		Sandy siltstone, thin bedded. Dip angle 65 degrees.
518	528		Siltstone, faintly bedded.
528	535		Sandy siltstone, current bedded.
535	541		Siltstone, faintly bedded. Dip angle 80 degrees.
541	547		Silty sandstone, fine grained. current bedded.
547	566		Sandy siltstone, current bedded. Thin bedded. Dip angle 67°.
566	571.5		Siltstone, black, massive.
571.5	584		Coal, clarodurain, with scattered vitrain bands. Little fusain. 574-580 crushed. 571.5-581 1' short core. #2330, 2331.
584	596		Siltstone, coal partings up to 4", shaley sections, black faintly bedded.
596	597		Bone coal.
597	601		Mudstone, silty massive, black.
601	611		Sandy siltstone, current bedded. Scattered carbonate veins.
611	614		Siltstone.
614	621.5		Sandy siltstone, thin bedded. Dip angle 75 degrees.
621.5	635.5		Mudstone, coal partings at 623. 4" coal (clarodurain). Thin bedded, dip angle 76°. becomes silty.
635.5	640		Sandy siltstone.

Core Size

H.Q.

Hole No.

67

Page

4

Diamond Drill Geological Log



40 Scale

Objective:

Sampled:

Color Plot & Dips

Ore Classes & Aver.

Logged By: H.J. HOLLANDS

Date: SEPTEMBER 19, 1969

Composites:

Block:

Sect.:

Place:

App. Bear:

App. Dip:

Length:

-60°

From	To	Discard:	Reason:
640	648		Siltstone, massive?
648	664		Sandy siltstone, thin bedded. Dip angle 72°. Current bedded, at 652' 1/2" quartz vein.
664	673		Siltstone, bedding, vague, shaley sections. At 671', 4" coal crushed.
673	687		Siltstone, with sandy bands up to 3" thick and shaley partings, 1' core short.
687	694		Mudstone, massive, some silty bands.
694	704		Coal, clarain with vitrain bands. #2332 = 694-699. #2333 = 699-704 - some shale impurities.
704	706		Mudstone.
706	708		Coal, clarain, vitrain bands. Some fusain.
708	742		Siltstone, thin bedded. Dip angle 70°. Scattered sandy beds up to 3" thick.
742	756		Sandstone, fine grained current bedded, silty beds. Silty sandstone.
756	774		Sandstone, medium to coarse grained. Thin bedded. Dip angle 70°. (prominent).
774	778		Sandy siltstone. Thin bedded. Becomes shaley.
778	783.5		Coal - clarain, clarodurain, vitrain bands. 782-783.5 coal with shale impurities.
783.5	793		Siltstone, thin bedded. Bone coal partings up to six inches.
793	799		Mudstone, numerous 1/4 to 1" coal partings, some slickensides.
799	806		Siltstone current bedded. Sandy section.
806	816		Silty sandstone, fine grained, current bedding.
816	827		Sandstone, thin bedded. Dip angle 75 degrees. Current bedded. Fine grained.
827	827.5		Bone coal.
827.5	833		Coal, clarain, clarodurain, little fusain. #2234.

Core Size

H.Q.

Hole No.

67

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5

Diamond Drill Geological Log



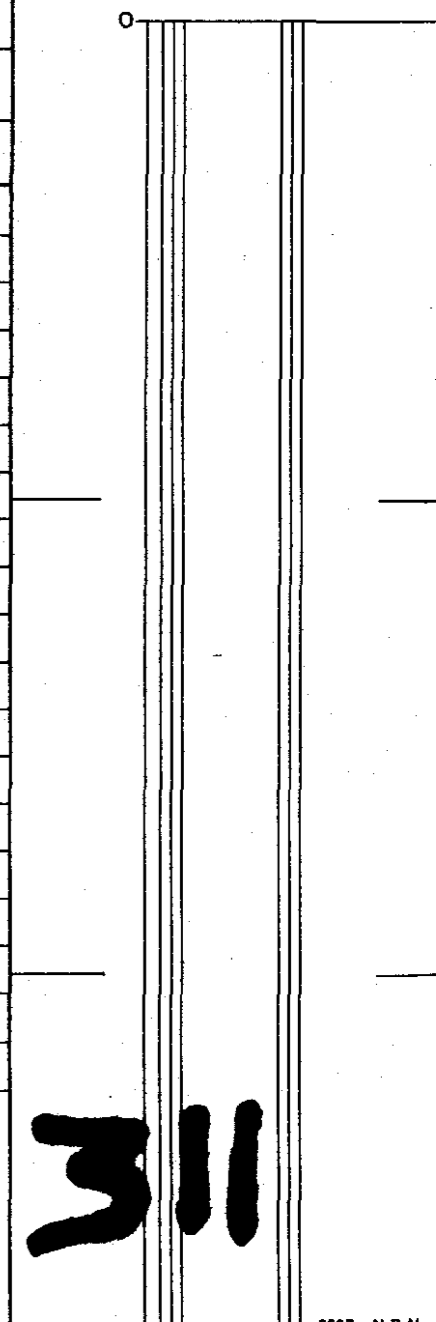
K-FORING 69(3)A-2

Objective: _____ Sampled: _____
 Logged By: H. J. HOLLANDS Date: SEPTEMBER 21, 1969 Composites: _____
 Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip: -90° Length: _____

40 Scale
 Color Plot & Dips
 Ore Classes & Aver.

From To Discard: Reason:

0	14	O.B. Casing.	
14	32	Sandstone, medium to coarse grained, pebbly, elongated, fragments of siltstone in the sandstone. Thin bedded. Dip angle 45°. Carbonate veinlets. 27 to 32 feet, 1/8" to 1/2" coal seams.	
32	47	Sandy siltstone, thin bedded, x-bedded. Light and dark laminates. Carbonate veinlets.	
47	80	Sandstone, medium grained, current bedded, broken with 1/8 to 1/2" coal partings, in an irregular pattern. Give a tarry appearance, short curved sections. Dip angle 76 degrees.	
80	99	Siltstone, sandy sections, thin bedded. At 88', 4" bone coal, 77 to 86 feet 1' core short. 93 to 95 feet shaley mud. Dip angle 60°.	
99	126	Siltstone, black faintly bedded, dip angle 68°. At 99.5', 1/2" bleb of pyrite. Occasional 2 to 6" sandy band. Dip at 119' = 60 degrees.	
126	137	Sandy siltstone, thin bedded. Dip angle 70°. Current bedding.	
137	143.5	Siltstone, black, faintly bedded. Shaley and coal partings.	
143.5	148.5	Coal, 1/2' of bone coal; rest clarain and vitrain, little fusain. 145.5 to 148 crushed, soft. #2801.	
148.5	172	Siltstone, faintly bedded, some sandy sections, 1/8" shale and coal partings. Dip angle 72°. 148-158', 1' core short.	
172	189	Sandy siltstone, current bedded. Thin shale partings. Thin bedded. Dip angle 70°. Occasional carbonate veinlet.	
189	202	Siltstone, black faintly bedded, fine grained, compact.	
202	219	Sandy siltstone, current bedded. Thin bedded. Dip angle 70 to 80 degrees.	
219	223.5	Siltstone, shale partings.	
223.5	225	Coal, claredurain, crushed, soft.	



Core Size
 H.Q.
 Hole No. 68 Page 1

Diamond Drill Geological Log



Objective: _____ Sampled: **Boxes #21 to 26 - footage 293' to 378.5' taken for sampling.**

Logged By: **H.J. HOLLANDS** Date: **SEPTEMBER 21, 1969** Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: **-90°** Length: _____

From	To	Discard:	Reason:
------	----	----------	---------

225	229		Bone coal, shale and coal mixed, broken and crushed. 223-227', 1 1/2' core short.
229	238		Shale, shattered, bone coal and coal partings, 1/4" to 4".
238	264.5		Siltstone, faint bedding, dip angle 72°. Fine grained, compact, sandy in places. Becomes shaley, 261' on.
264.5	277		Coal, crushed, clarain and clarodurain. 264.5 to 267', 1' coal short.
277	287		Coal, fairly solid hard coal; clarain, clarodurain, vitrain bands. Little fusain. 273-277', 1/2' coal short.
287	291		Coal, clarain and vitrain, with a little durain and fusain. Fairly extensive shaley bands.
291	320.5		Siltstone, faintly bedded, compact dip angle 62°. Soft shaley sections. Occasional small coal partings.
320.5	322.5		Sandy siltstone.
322.5	347		Siltstone, fine compact, faintly bedded. Dip angle 75°. 2 to 6 inches sandy bands. 245-245.5' shaley bone coal.
347			246-247 carbonate and quartz veins and tight fractures. Dip 40°. Slickensides "sandy".
347	351		Sandy siltstone.
351	372		Siltstone, shaley sections, 1/4" coal partings. Soft, faintly bedded. Dip angle 76°. 365-366 sandy. 369-372 shale and coal partings.
372	408		Coal, clarodurain and clarain, scattered vitrain bands. (Fairly hard coal). 379-389' clarain, more vitrain. 389-398' clarodurain with vitrain bands. 398 - 404' crushed, wet, coal. Clarodurain, scattered vitrain. Little fusain. (1' coal short). 404-408' crushed coal, shale partings, clarain and durain. 407-408' bone coal and shale.

40 Scale

Color Plot & Dips Ore Classes & Aver.

Core Size
H.Q.

Hole No. Page
68 2

Diamond Drill Geological Log



40 Scale

Objective:

Sampled:

Color Plot & Dips

Ore Classes & Aver.

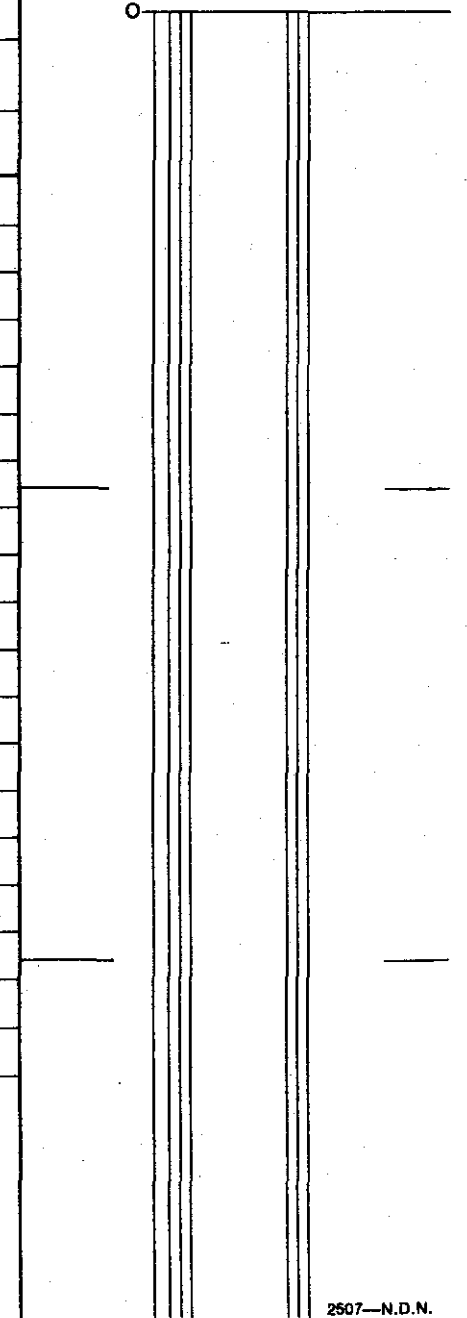
Logged By: H.J. HOLLANDS

Date: SEPTEMBER 22, 1969

Composites:

Block: Sect.: Place: App. Bear: App. Dip: -90° Length:

From	To	Discard:	Reason:
408	411		Shaley mudstone with coal partings up to 2", massive.
411	412		Coal, crushed, soft, clarain.
412	414		Shale with coal partings.
414	428.5		Siltstone, soft, faintly bedded, shale partings. Dip angle 65° . Scattered 1 to 4" coal seams.
428.5	454		Sandy siltstone, massive, becomes thin bedded at 440'. Dip angle 72° . At 438, 1" carbonate and quartz vein dip and striations, right angle to the core. 452-454', sedimentary breccia, broken silty sandstone in a siltstone matrix. Dip angle 50° .
454	465		Sandy siltstone, thin bedded and current bedded.
465	477		Sandstone, fine to medium grained, prominently thin bedded. Dip angle 63° . Some x-bedding. Dip at $477^{\circ}-55^{\circ}$.
477	534		Sandstone, medium grained, thin bedded. Dip 58° at 489'. 1/8-1/2" irregular coal partings. 498-500 siltstone bands, scattered siltstone fragments in sandstone. 506-520 prominently thin bedded sandstone. Dip angle 62° . Occasional x-bed. 520-534 medium to coarse grained, light and dark grey beds. Dip angle 67° .
534	553		Sandstone, medium to coarse grained. Core is fractured and pitted. Thin bedded. Dip angle 55° . Occasional siltstone bed up to 2" thick. 1' core short.
553	563		Sandy siltstone, thin bedded with current bedding. Dip angle 75° . Grades to a shaley siltstone at 562'.
563	573		Coal, clarodurain and durain with some vitrain bands, scattered bone coal. Hard. #2816, 2817, 2818, 2819, 2820, 2821. (softer)
573	588		Coal, clarain and clarodurain in with scattered vitrain, little durain and fusain.
588	600		Coal, clarain with vitrain bands, some clarodurain and fusain. #2822.



Core Size

H.Q.

Hole No.

68

Page

3

Diamond Drill Geological Log



40 Scale

Objective:

Sampled:

Boxes 43 to 47 - footage 604' to 673'. Taken for testing.

Color Plot & Dips

Ore Classes & Aver.

Logged By: H.J. HOLLANDS

Date: SEPTEMBER 23, 1969

Composites:

Block:

Sect.:

Place:

App. Bear:

App. Dip:

Length:

-90°

From	To	Discard:	Reason:
600	601	Bone coal.	#2823
601	603.5	Coal, clarodurain, durain and fusain. A little bone coal. 2' coal short.	
603.5	605	Siltstone.	
605	623	Sandstone, medium to fine grained, thin bedded. Dip angle 77°. Occasional x-bedding.	
623	658	Sandstone, medium grained, friable, pitted and broken core, salt and pepper appearance. Small scattered angular siltstone fragments. Thin bedded. 630-645' prominent bedding, occasional x-bedding. At 644', 1" pyrite bleb. 645-658' scattered irregular 1/4 to 1/2" coal and siltstone partings, some siltstone fragments.	
658	694.5	Sandstone, medium to coarse grained, thin bedded. Dip angle 60°. 1/2 to 1" coal partings. Scattered irregular siltstone fragments and bands.	
694.5	711	Siltstone, black, massive looking, soft. 707.5-711' sandstone bands or boulders? in siltstone, irregular shape up to 4" diameter.	
711	716.5	Coal, clarodurain, clarain with vitrain bands, some fusain, partly crushed.	#2824
716.5	718	Siltstone, massive, black.	
718	728	Sandstone, thin bedded, fine grained, numerous 1/4" siltstone beds to 724'. Dip angle 78°.	
728	730.5	Sandstone with siltstone bands.	
730.5	736	Coal, clarain with vitrain bands, a little fusain.	#2825 1' coal short.
736	743	Sandstone, medium to fine grained. 736-738 broken core. 1/2' short.	
743	800	Sandstone, medium to coarse grained, thin bedded. Dip angle 68°. Some x-bedding, light and dark grey beds. From 757' scattered 1/4 to 1/2" siltstone beds. At 765' dip 67°. Dip at 780' 65°. 786-787' shattered core. 787-791' broken core, carbonate veins, sil / bands. 2 1/2' core short. Fracture zone?	

Core Size

H.Q.

Hole No.

68

Page

4

Diamond Drill Geological Log



40 Scale

Objective:

Sampled: Boxes 43 to 47, footage 604' to 673' taken for testing.

Logged By: D. LANCASTER
H.J. HOLLANDS

Date: SEPTEMBER 23, 1969

Composites:

Block: Sect.: Place: App. Bear: App. Dip.: Length:
-90°

From	To	Discard:	Reason:
800	887		Sandstone, medium grained, thin bedded. Dip angle 72°. Occasional x-bedding. Scattered carbonate veins. Light and dark grey beds. 852 to 868 longitudinal carbonate fractures in the core. 1/8 to 1/4" dip of the beds at 885'=74°.
887	888.5		Sandy siltstone, current bedded.
888.5	900		Sandstone with 1/2 to 4" silty partings.
900	914.5		Silty sandstone, some carbonate stringers and 2" silty sections. Dip 15°.
914.5	928		Silty sandstone, thin bedded, alternate current bedded layers of 1/4" silty bands and one 3" section of silty fragments 1/16" diameter.
928	930		Sandy siltstone, thin bedded.
930	932		Silty sandstone, thin bedded, current bedded.
932	944		Sandstone, coarse grained, with some narrow silty partings and carbonate stringers. Bedding 22°.
944	946		Sandstone, coarse grained with some narrow silty partings.
946	947		Fine grained sandstone.
947	957		Silty sandstone, thin bedded, carbonate partings and stringers, current bedded.
957	958		Silty sandstone.
958	959		Sandy siltstone.
959	962		Sandstone (silty). Thin bedded.
962	963		Sandy siltstone, thin bedded.
963	972		Silty sandstone.
972	979		Silty sandstone, some carbonate partings and stringers.
979			End of hole.

Coal Core Recovery: 93%

Total Core Recovery: 86%

Core Size

H.Q.

Hole No.

68

Page

5

Color Plot & Dips

Ore Classes & Aver.

Diamond Drill Geological Log



K - FRODING LA (S)A-2

Objective:		Sampled:		40 Scale	
Logged By: H.J. HOLLANDS		Date: SEPTEMBER 25, 1969		Color Plot & Dips	
Block:		Sect.:		Ore Classes & Aver.	
Place:		App. Bear:		Composites:	
App. Dip:		Length:			
-60°					
From	To	Discard:	Reason:		
0	13				
13	66	Sandstone, coarse to medium grained, thin bedded. Dip angle 58°. X-bedded. Light and dark grey beds.			
66		15-28' broken core with mud filling in the cracks. Salt and pepper appearance, dip at 57° - 66°.			
66	72	Sandstone as above but with siltstone partings and fragments, scattered 1/8 to 1/4" coal partings. 71-72' siltstone;			
		70 to 71', 2 inch pyrite blebs.			
72	76	Siltstone, current bedded.			
76	80.5	Coal, clarain with vitrain bands. #2829			
80.5	99.5	Siltstone, thin bedded, dip angle 80°. Current bedding.			
99.5	112	Sandy siltstone, current bedded. Thin bedding. Dip angle 78°.			
112	118.5	Coal, clarain, claredurain, scattered vitrain bands. Some durain. Crushed, wet. #2830.			
118.5	125	Siltstone, faintly bedded, black. 1/2" coal short.			
125	127	Sandy siltstone, thin bedded. Dip angle 78 degrees.			
127	134.5	Coal, clarodurain, some clarain scattered vitrain. 131-134.5' crushed durain and fusain. #2831 and 2832.			
134.5	138	Siltstone, sandy siltstone, current bedded.			
138	173	Sandstone, medium to coarse grained thin bedded. Dip angle 75°. Current bedding. Light and dark grey bands. Fine hair-like coal seams. Scattered siltstone. Beds 1 to 3 inches. Dip angle at 171° - 78°.			
173	188	Sandstone, medium grained.			
188	203	Sandstone, alternate medium and coarse grained, current bedded.			
203	218	Sandstone, alternate medium and coarse grained, current bedded.			
				Core Size	
				H.Q.	
				Hole No.	Page
				69	1

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Diamond Drill Geological Log



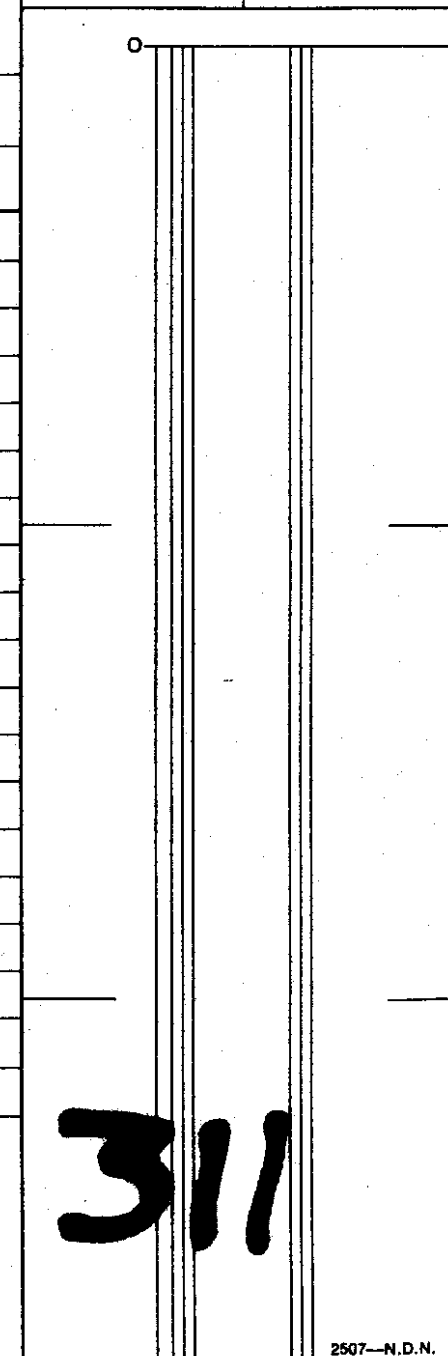
K - FROING 69(3)A-2

Objective: _____ Sampled: _____
 Logged By: D.P. LANCASTER Date: SEPTEMBER 29, 1969 Composites: _____
 Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip: -90° Length: _____

40 Scale
 Color Plot & Dips
 Ore Classes & Aver.

From To Discard: Reason:

0	33	Casing.	
33	46.5	Sandstone, coarse grained with siltstone. Mudstone partings.	
46.5	60.5	Sandstone, medium grained, alternating with coarser grained layers and silty partings. Bedding at 15 degrees.	
60.5	74.5	Sandstone with silty partings (3") and a 1" coal band at 71'.	
74.5	87	Sandstone - coarse grained with 1/4 to 3" siltstone and coal partings.	
87	87.5	Sandstone.	
87.5	90.5	Mudstone with silty sections.	
90.5	100	Sandstone, coarse grained with silty sections and current bedding.	
100	114.5	Sandstone, medium grained, massive, thick bedded.	
114.5	118.5	Sandstone, 3" siltstone parting.	
118.5	121	Coal, clarain, durain and fusain. Mushy badly broken. 1/2' lost core.	
121	123	Siltstone with coal partings.	
123	129	Silty sandstone with shale partings.	
129	133.5	Silty sandstone, badly broken, possibly some coal partings.	
133.5	141	Coal, clarain and vitrain, badly crushed.	#2833
141	144	Silty sandstone with 3" coal parting.	
144	159	Sandstone, medium grained, bituminous? Fractures? Bedding at 35 degrees.	
159	167	Sandstone, medium grained, silty partings and no apparent bedding.	
167	172	Silty sandstone, carbonate stringers and silty 2" sections.	
172	174	Crushed, slickensided, bone coal plus some crushed pulverized coal. Fracture zone?	



Core Size
 H.Q.
 Hole No. 70 Page 1

Diamond Drill Geological Log

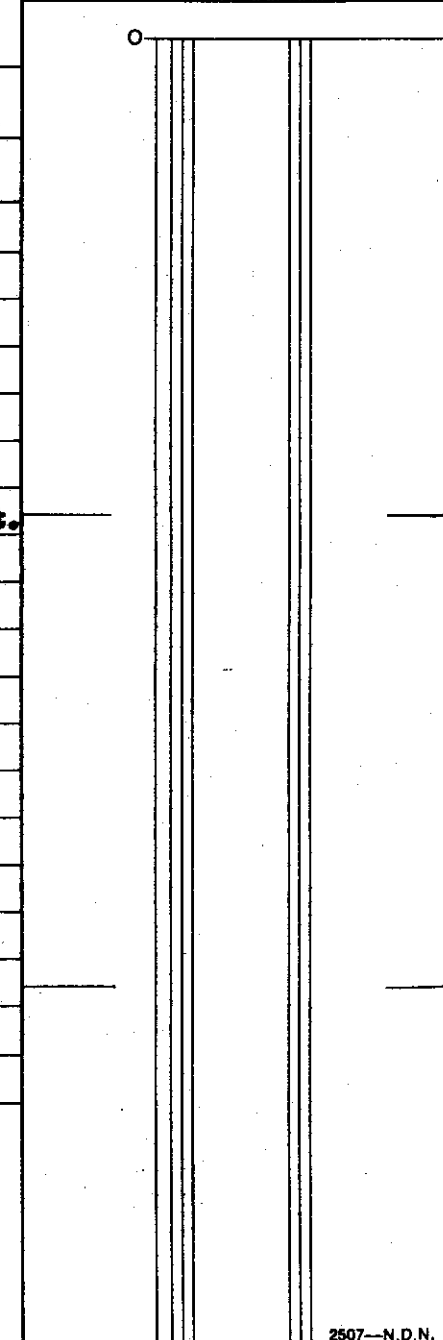


40 Scale
Color Plot & Dips Ore Classes & Aver.

Objective: _____ Sampled: _____
 Logged By: **H.J. HOLLANDS** Date: **SEPTEMBER 29, 1969** Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip: **-90°** Length: _____

From	To	Discard:	Reason:
174	187		Coal, crushed and pulverized, difficult to identify the types. Looks like clarain and durain with scattered vitrain and considerable fusain. 3' coal short (est.). #2854, 2875.
187	197		Coal, 10 feet of core short, dropped out of the core barrel.
197	213		Coal, crushed with wet pulpy section clarain, durain and fusain, scattered vitrain. 2' core short.
213	223		Coal, solid pieces, clarain with vitrain band and durain, a little fusain.
223	234.5		Shale with coal partings, 1 to 6 inches. 1' core short.
234.5	240		Coal, clarain with vitrain bands. Considerable durain, some crushed sections, also scattered shale partings. 1/2" coal short.
240	254		Siltstone, thin bedded. Dip angle 67°. Soft with shaley and coal partings.
254	290.5		Sandy siltstone, current bedded, occasional silty section.
290.5	298		Silty sandstone, fine grained, thin bedded, x-bedded. Bedding vague, dip angle 72 degrees.
298	325		Sandy siltstone, occasional sandstone bed up to 6", scattered siltstone fragments (sedimentary breccia) localized. From 320 on 1/8 to 1/4" coal partings.
325	326.5		Sandstone.
326.5	334		Sandy siltstone, thin bedded. Dip angle 75 degrees. Some current bedding.
334	343.5		Sandstone, medium-coarse grained, thin bedded, x-bedded, scattered siltstone fragments. 1/8-1/4" irregular coal veinlets.
343.5	350		Siltstone, fine, compact, muddy inclusions, at 346-347 tight slickensided fractures. Occasional sandstone fragment. At 349, 6" fine grained bleached silty bed.
350	352.5		Sandstone, sedimentary breccia, angular siltstone fragments in a sandstone matrix.
352.5	382		Sandstone, medium-coarse grained, thin bedded. Light and dark grey beds. Dip angle 55 degrees. Sections of shattered core. 356-366 - 1' core short. X-bedding.



Core Size
H.Q.
Hole No. Page
70 2

Diamond Drill Geological Log



Objective: _____ Sampled: _____
 Logged By: **H.J. HOLLANDS** Date: **SEPTEMBER 30, 1969** Composites: _____
 Color Plot & Dips _____ Ore Classes & Aver. _____

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

From	To	Discard:	Reason:
382	386		Sandstone sedimentary breccia, coarse grained, dark grey sandstone matrix with black siltstone fragments and light brown cherty dolomite? fragments, rounded and elongated.
386	400		Sandstone, fine grained, prominently thin bedded. Dip angle 72°. Light and dark beds. Light grey.
400	407		Sandstone, medium grained, bedding vague, numerous 1/8 to 1/2" irregular coal veinlets.
407	420		Sandy siltstone, current bedded, bedding swirls. Bedding dip at 417' = 55 degrees.
420	425		Siltstone, black, vaguely bedded from 423 on, coal and shale partings.
425	466.5		Coal, clarain with vitrain bands, plus clarodurain. 432-433.5 crushed zone with shale impurities. #2841-2847. 433.5-440 clarain, clarodurain and vitrain bands. 440-449 durain and clarain with vitrain bands, some clarodurain. 449-466.5 more clarain with vitrain bands. 455-457 some shale impurities and crushing.
466.5	469		Siltstone.
469	471		Siltstone.
471	473		Silty sandstone, silty fragments in sandstone, sedimentary breccia.
473	527.5		Sandstone, medium grained, thin bedded. Dip 80 degrees. Light and dark grey beds. Dip at 196' = 60°; 504 on numerous 1/4" irregular coal veinlets. Some silty beds and concretions.
527.5	551		Sandstone, fine-medium grained, prominently thin bedded and x-bedded. Dip angle 60 degrees. Alternate light and dark grey beds.
551	555		Siltstone, massive mottled appearance with concretions?
555	555.5		Sandstone with siltstone fragments.
555.5	557		Coal, clarodurain and vitrain.
557	558.5		Siltstone.

Core Size
 H.Q.
 Hole No. 70 Page 3

Diamond Drill Geological Log



40 Scale

Objective: _____ Sampled: _____ Color Plot & Dips _____ Ore Classes & Aver. _____

Logged By: **H.J. HOLLANDS** Date: **OCTOBER 1, 1969**
SEPTEMBER 30, 1969

Composites: _____

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

From To Discard Reason:

558.5	562.5	Coal, clarodurain, 50% vitrain.	
562.5	564.5	Siltstone.	
564.5	575	Sandstone, fine grained with numerous silty beds, black and grey banded appearance.	
575	581	Coal, clarodurain and durain with vitrain bands.	#2848
581	622	Sandstone, medium to coarse grained, thin bedded, dip angle 58°. Light and dark grey beds. Occasional 1/2" siltstone bed. Dip at 612' = 65 degrees. At 615' some shattering of the core.	
622	652	Sandstone, fine to medium grained, light grey. Thin bedded. Dip angle 72 degrees. Dip angle at 650' = 76 degrees.	
652	669	Sandstone, fine to medium grained, massive or very faintly bedded.	
		End of Hole.	

% Coal Recovery: 87.2

% Core Recovery: 97.3

Core Size

H.Q.

Hole No.

70

Page

4

Diamond Drill Geological Log



K - FRODING 65131A2

Objective: _____ Sampled: _____

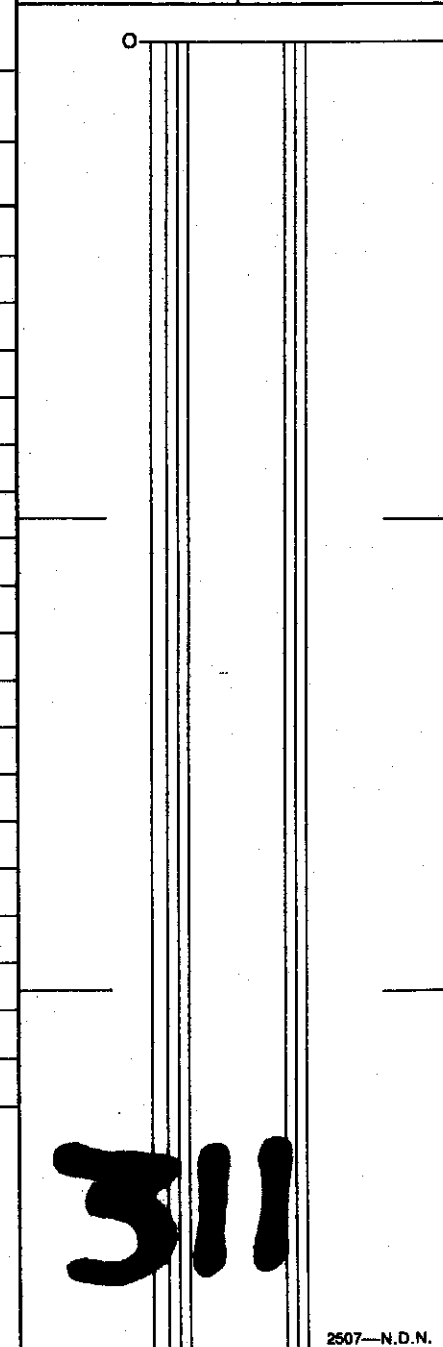
Logged By: H.J. HOLLANDS Date: SEPTEMBER 30, 1969 Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip: -60° Length: _____

From To Discard Reason:

0	18	Overburden, casing.	
18	24	Sandy siltstone, current bedded.	
24	25.5	Sandstone, fine grained, thin bedded. Angle 83 degrees.	
25.5	27.2	Sandy siltstone, thin bedded, some current bedding.	
27.2	28	Coal, clarain.	
28	39	Sandy siltstone.	
39	51.5	Mudstone, black, massive 1/4" coal and shale partings. 37-47" - 1' core short.	
51.5	54.5	Siltstone.	
54.5	73	Sandy siltstone, thin bedded. Dip 73 degrees. Current bedding.	
73	78	Mudstone, black, massive, coal partings. Grades to a siltstone.	
78	80.5	Coal, clarain, durain mostly with scattered vitrain bands.	
80.5	82	Mudstone.	
82	89	Siltstone, sandy sections.	
89	99	Sandy siltstone.	
99	107	Silty sandstone, thin bedded. Dip angle 84°. Current bedding.	
107	108	Sandy siltstone.	
108	112	Silty sandstone, fine grained. Current bedded.	
112	140	Sandstone, fine grained, thin bedded, x-bedding. Some massive, medium grained sections. 1/4" coal and shale partings. Some porous sections.	
140	163	Sandstone, fine grained, thin bedded. Dip angle 64°. Siltstone beds 1/2" to 2" thick. Scattered siltstone and mudstone? fragments and pebbles. X-bedding, 1/4" coal partings, give a broken tarry appearance. Dipe at 161' = 67°.	Core Size H.Q. Hole No. 71

40 Scale
Color Plot & Dips
Ore Classes & Aver.



311

Diamond Drill Geological Log



40 Scale

Objective:

Sampled:

Color Plot & Dips

Ore Classes & Aver.

Logged By: H.J. HOLLANDS

OCTOBER 1, 1969

Date: SEPTEMBER 30, 1969

Composites:

Block:

Sect.:

Place:

App. Bear:

App. Dip.:

Length:

-60°

From	To	Discard:	Reason:
163	174		Sandstone, medium to coarse grained, bedding is vague. Numerous, irregular 1/8 - 1/2" coalveins, results in broken core with a tarry appearance. Sharp contact with the siltstone at 174'. 1' core short.
174	184.5		Siltstone, black, Massive? Faintly bedded, Grades to a mudstone.
184.5	191		Coal, durain and fusain, somewhat soft and crushed. #2876
191	199.5		Shale with thin coal seams laced through it, a type of bone coal.
199.5	201		Coal, clarain and durain.
201	207		Siltstone, black, faintly bedded with broken and realigned beds. 1' core short.
207	222		Sandy siltstone, current bedded, pronounced and x-bedding, carbonate veinlets.
222	242		Silty sandstone, fine grained, laced with irregular 1/4" coal seams and carbonate veinlets. 227-227.5 coal, durain. At 234.5, 2" seam of clarain and vitrain. X-bedding.
242	247		Sandy siltstone, thin bedded, x-bedded.
247	249		Siltstone, black, massive.
249	260		Sandy siltstone, current bedded, some irregular sandstone beds.
260	262		Siltstone.
262	295		Silty sandstone. First foot is brecciated, fine grained, current bedded. Alternating sandy and silty beds. Light and dark colour. 283-292' numerous 1/4" irregular coal seams. At 289' four inches of coal.
295	296		Mudstone.
296	298.5		Coal, crushed, clarain, durain and fusain. 1' of coal short.
298.5	317		Sandy siltstone, alternate sandy and silty beds, wavy current bedded, light and dark colours.
317	319		S haley bone coal.

Core Size

H.Q.

Hole No.

71

Page

2

Diamond Drill Geological Log



40 Scale
Color Plot & Dips Ore Classes & Aver.

Objective: _____ Sampled: _____
 Logged By: H .J. HOLLANDS Date: OCTOBER 2, 1969 Composites: _____

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

From	To	Discard:	Reason:
319	331		Siltstone, black, faintly bedded. Dip angle 84 degrees.
331	344		Sandy siltstone, thin bedded, current bedded. Dip angle 85 degrees.
344	349		Siltstone.
349	356		Coal, 6" of bone coal to durain and clarain with vitrain bands. #2877
356	358		Sandy siltstone.
358	360		Shale and coal mixed, banded.
360	361.5		Siltstone.
361.5	365		Sandy siltstone, current bedded.
365	378		Sandstone, current bedded, fine grained, wavy, wis py siltstone laminates in sandstone.
378	385		Mudstone, with shaley and coal partings, massive black, 1 1/2' of coal short.
385	390		Coal, clarain and durain, scattered vitrain, crushed sections, shaley partings at 389' - 1' of core short. #2878
390	395		Siltstone, black, massive? 1/4" coal partings, 1" bleached silty bed.
395	398.5		Sandy siltstone, current bedded.
398.5	400.5		Siltstone.
400.5	419.5		Sandy siltstone, thin bedded, current bedded, occasional silty bed. Scattered carbonate veinlets. 1' core short.
419.5	423.5		Mudstone, massive, black.
423.5	430.5		Siltstone, thin bedded. Dip angle 85°. Current bedded.
430.5	434		Sandy siltstone.
434	438		Silty sandstone, alternating bands of fine grained sandstone and siltstone.
			Wispy, wavy, x-lams of siltstone and sandstone.
438	441.5		Siltstone, shaley partings

Core Size
H.Q.
Hole No. Page
71 3

Diamond Drill Geological Log



40 Scale
Color Plot & Dips Ore Classes & Aver.

Objective: _____ Sampled: _____

Logged By: **H.J. HOLLANDS** Date: **OCTOBER 2, 1969** Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip: **-60°** Length: _____

From To Discard: _____ Reason: _____

441.5 474 Coal, clarain and vitrain, durain, some fusain. Crushed, some pulverized sections.

449-451 shale partings and siltstone (Sample Nos. 3879 to 2884).

451-464 more durain, less clarain and vitrain, some clarodurain, shale partings, crushed sections.

464-474 more clarain and vitrain, good core, some durain and silty impurities. (1' core short).

474 500 Siltstone, faintly bedded, black with coal and shale partings. Dip angle 65 degrees.

500 557 Sandy siltstone, thin bedded, current bedding. Dip angle 68 degrees. Silty sections. Light and dark beds, scattered

carbonate veinlets, also pyrite blebs and veinlets. Dip angle 78° at 549'.

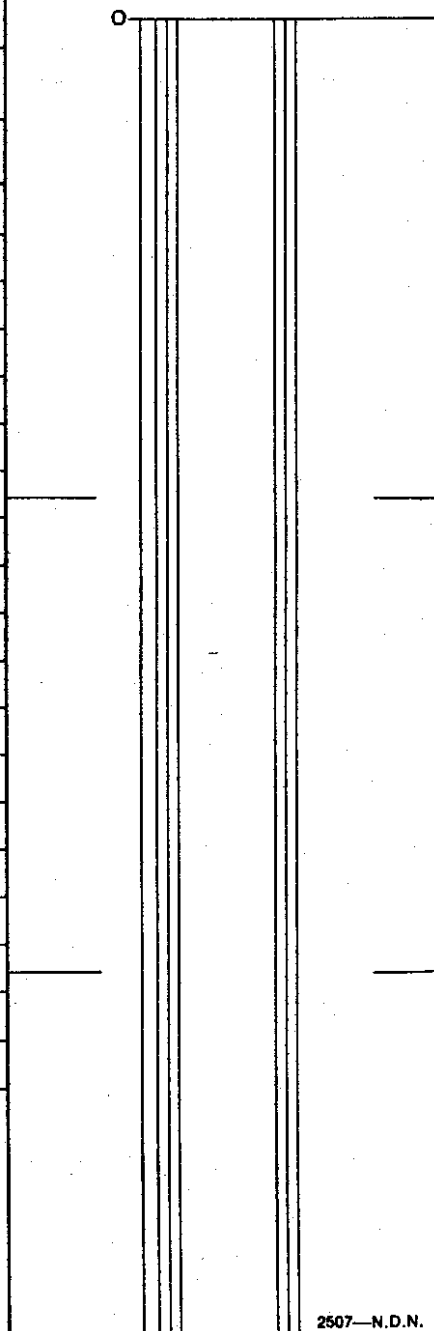
End of Hole.

% Coal Recovery: 92%.

% Core Recovery: 95%.

Core Size
H.O.

Hole No. Page
71 4



Diamond Drill Geological Log



K-FAROEENK 69(3)A-2

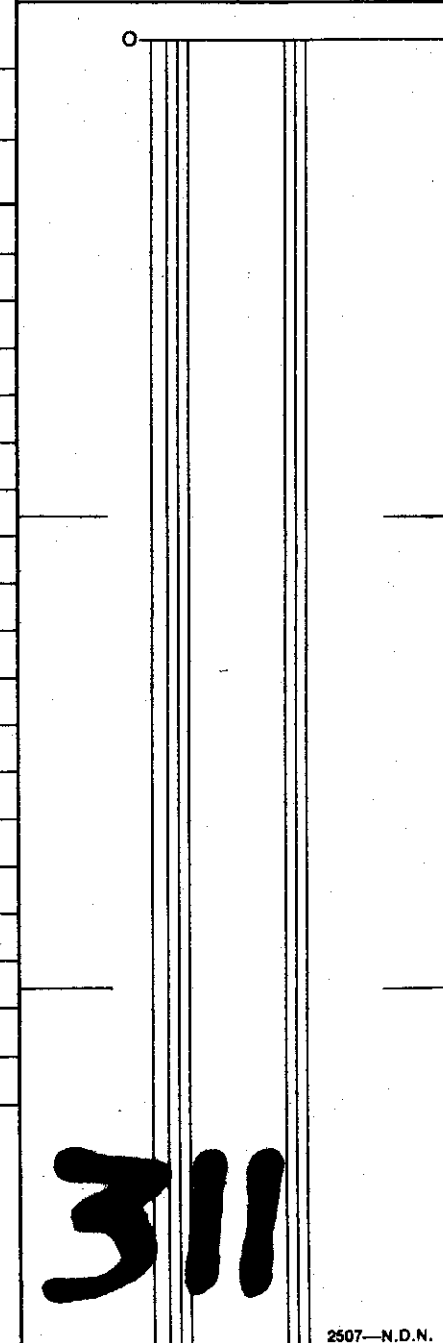
Objective: _____ Sampled: _____

Logged By: H.J. HOLLANDS Date: SEPTEMBER 30, 1969 Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip: -90° Length: _____

From	To	Discard:	Reason:
0	50	Overburden and casing.	
50	57	Sandy siltstone fragments plus soft crushed muddy coal. Fusain? 5' core short.	
57	68	Siltstone, sandy sections and soft shaley sections, mud seams, broken core. 1 1/2' core short.	
68	74	Sandstone, fine grained, silty sections.	
74	91.5	Sandy siltstone, thin bedded and current bedded. Mud filled fractures. Quite numerous, shale partings, core is quite broken. 1' core short.	
91.5	102	Coal, clarain with vitrain bands. Some soft pulpy sections, fusain. 1.5' coal short. #2346.	
102	104.5	Siltstone with shale and coal partings.	
104.5	114.5	Coal, crushed mixed with shale, like a mud. Short (4") sandstone fragments. 3' core short. #2347.	
114.5	120.5	Siltstone.	
120.5	154	Sandy siltstone, thin bedded. Dip angle 70 degrees. Some current bedding. Dip at 139° = 62 degrees.	
154	169	Sandstone, thin bedded. Dip angle 65 degrees. Some current bedding. Scattered angular fragments of siltstone and the occasional 6" sandstone bed.	
169	179.5	Sandy siltstone, current bedded, scattered shale partings, occasional 6" sandstone bed.	
179.5	201	Sandstone, medium grained, thin bedded with current bedding. Dip angle 76 degrees. Light and dark grey beds. Shattered sections of core, machine break? 1.5' core short.	
201	204	Sandstone, as above.	
204	230	Sandy siltstone, thin bedded. Dip angle 62 degrees. 2' core short.	
230	236.5	Siltstone.	
236.5	242	Coal, pulverized and pulpy coal, 4' of coal short. #2348.	Core Size
242	244.5	Shale with coal partings. #2349.	N.Q.
244.5	246	Coal, partly crushed, clarain with vitrain bands. #2350.	Hole No.
246	254	Sandstone with crushed soupy coal partings and shaley partings.	72

40 Scale
Color Plot & Dips
Ore Classes & Aver.



Page 1

Diamond Drill Geological Log



K-FACDING 69(3)A-2

40 Scale

Objective: Sampled:

Logged By: **T.D.G.**

Date: **Oct. 8/69**

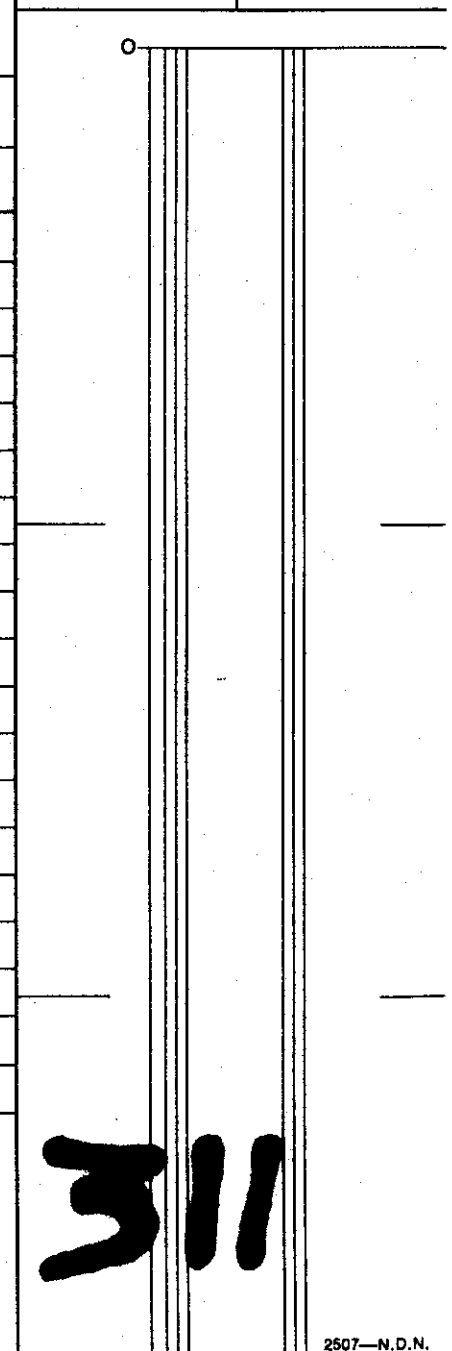
Composites:

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

From To Discard: Reason:

0.0	24.0	Casing	
24.0	38.0	Silty sandstone, thin bedded, dip 30°	
38.0	39.0	Siltstone with calcite stringer	(1.5' core short)
39.0	43.0	Silty sandstone with coal partings and calcite stringers	
43.0	44.0	Silty sandstone with coal partings and calcite stringers	
44.0	60.0	Siltstone with sparse coal, abundant calcite, badly broken	
60.0	70.0	Sandy siltstone, sparse thin bedding, dip 30°	
70.0	78.0	Siltstone, calcite stringers, badly broken	
78.0	93.0	Siltstone, calcite stringers, badly broke, shearing @ 70°	
93.0	100.0	Siltstone, minor calcite, shearing 70°, graphite slickensides	
100.0	110.0	Sandy siltstone, thin bedded, dip 15°, abundant calcite stringers	
110.0	123.0	Sandy siltstone, thin bedded, abundant calcity stringers	
123.0	127.0	Siltstone, badly broken	
127.0	143.0	Sandy siltstone, sparse calcite	
143.0	146.0	Coal, clairain (143.0-156.0 Sample 2952)	(.5' core short)
146.0	152.0	Coal, clairain	
152.0	153.0	Siltstone	
153.0	158.0	Coal, clairain, badly broken	(2.5' core short)
158.0	159.0	Sandy siltstone, coal partings	
159.0	159.6	Coal, clairain (156.0-163.0 Sample 2953) badly broken	Core Size
159.6	161.0	Siltstone, coal partings	N.Q.
161.0	163.0	Coal clairain, badly broken	Hole No.
163.0	166.0	Siltstone, coal partings	73

Color Plot & Dips Ore Classes & Aver.



Diamond Drill Geological Log



40 Scale

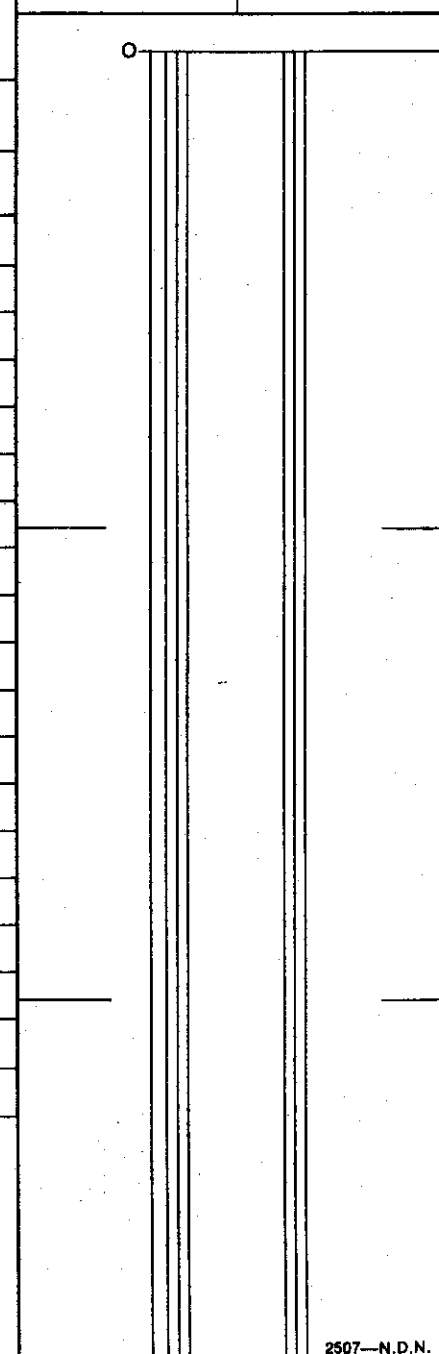
Objective: **T.D.G.** Sampled:

Logged By: **D.J.P.** Date: **Oct. 8/69** Composites:

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

From	To	Discard:	Reason:
166.0	171.6	Siltstone, with sandy siltstone partings	(2.0' core short)
171.6	186.0	Coal, dominately clairain, minor vitrain and fusain (171.5-180.0 Sample 2954) (180.0-191.5 Sample 2955)	
186.0	191.0	Coal, clairain, much, one 3" siltstone parting	
191.0	197.0	Siltstone, sparse calcite, no coal partings	
197.0	205.0	Sandy siltstone, thin bedded, coal partings	
205.0	209.0	Siltstone	
209.0	213.0	Siltstone, carbonaceous fragments, one 4" coal parting @ 212.0'	
213.0	228.0	Sandy siltstone, thin bedded, dip 20°, silty partings, minor coal partings and calcite veinlets	
228.0	247.0	Sandy siltstone, thin bedded, dip 38°, minor calcite veinlets	
247.0	264.5	Sandy siltstone, thin bedded, silty partings, carbonaceous films, calcite veinlets	
264.5	271.0	Sandy siltstone, thin bedded, silty partings	
271.0	279.0	Siltstone	
279.0	280.0	Bone coal	
280.0	283.0	Clairain, minor fusain (280.0-294.0 Sample 2956) (294.0-308.5 Sample 2957)	
283.0	304.0	Clairain, minor fusain and uifrain, badly broken	(5.0' core short)
304.0	308.5	Clairain, minor fusain, badly broken	(1.0' core short)
308.5	326.0	Siltstone	(2.0' core short)
326.0	345.5	Siltstone, sparse calcite, several 4" fine grained sandstone partings	
345.5	357.5	Sandy siltstone, sparse calcite, dip 18	

Color Plot & Dips Ore Classes & Aver.



Core Size

N.Q.

Hole No.

73

Page

2

Diamond Drill Geological Log



40 Scale

Objective:

Sampled:

Color Plot & Dips

Ore Classes & Aver.

Logged By: T.D.G.

Date: Oct. 11/69

Composites:

Block:

Sect.:

Place:

App. Bear:

App. Dip.:

Length:

From To Discard: Reason:

45	357.5	362.0	Bone coal, very poor	
	362.0	367.0	Sandy siltstone	
	367.0	372.0	Bone coal, very poor	6.0' core short
	372.0	381.5	Siltstone, v. carbonaceous, badly broken	
	381.5	391.0	Sandy siltstone, thin bedded	
	391.0	393.0	Siltstone	
	393.0	396.0	Sandy siltstone, thin bedded	
	396.0	411.0	Sandy siltstone, thin bedded, dip 20°, several 4" siltstone partings	
	411.0	416.0	Silty sandstone, thin bedded, numerous very thin coal partings	
	416.0	434.5	Sandstone, medium grained, thin bedded, thin carbonaceous siltstone partings	
	434.5	447.5	Sandstone, medium grained, current bedding, thin bedded, dip 17°	
	447.5	449.0	Sandstone, medium grained, numerous coal lenses and partings	
	449.0	453.0	Sandstone, medium grained, thin bedded	
	453.0	464.0	Sandstone, medium grained, thin bedded, sparse coal partings	
	464.0	472.0	Silty sandstone, thin bedded, dip 22°, periodic siltstone partings	1.0 core short
	472.0	476.0	Sandy siltstone, thin bedded	
	476.0	479.0	Siltstone	
	479.0	491.0	No core recovered possibly mushy coal	
20	491.0	499.0	Bone coal, poor and badly broken	21.0' core short
	499.0	510.0	Siltstone, very carbonaceous	

Core Size

N.Q.

Hole No.

73

Page

3

Diamond Drill Geological Log



40 Scale

Objective:

Sampled:

Color Plot & Dips

Ore Classes & Aver.

Logged By: T.D.G.
D.J.P.

Date: Oct. 12/69

Composites:

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

From To Discard: Reason:

510.0	512.0	Sandy siltstone, thin bedded, badly crushed	
512.0	514.0	Siltstone	
514.0	516.0	Coal, (two 6" seams poor bone coal with siltstone partings) badly broken	
516.0	519.0	Silty sandstone, several calcite veins	

End of Hole

Core Size

N.Q.

Hole No.

73

Page

4

Diamond Drill Geological Log



K-FROZING 69(3)A2

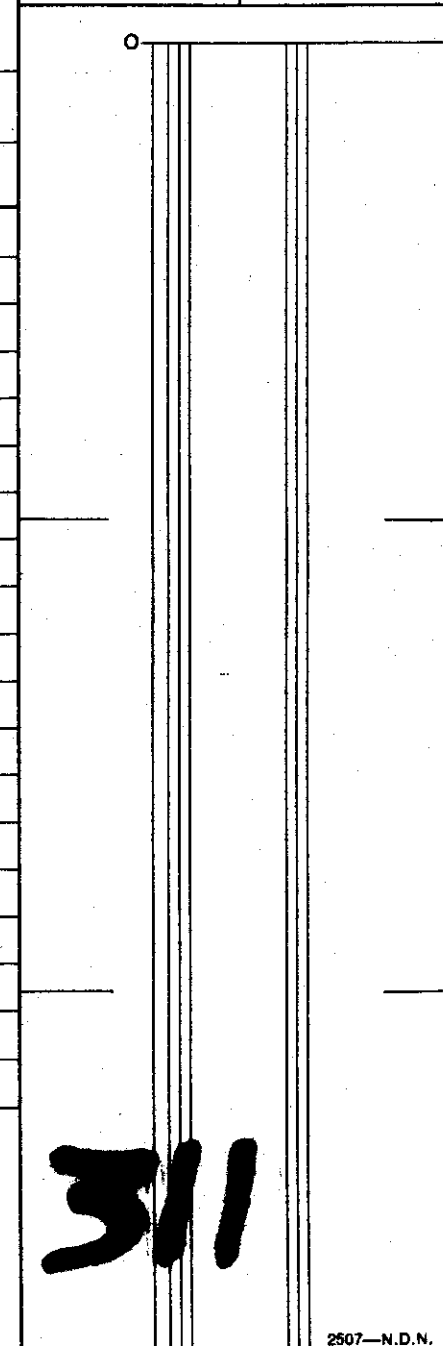
Objective: **D. LANCASTER** Sampled:

Logged By: **H.J. HOLLANDS** Date: **OCTOBER 2, 1969** Composites:

Block: Sect.: Place: App. Bear: App. Dip.: **-90** Length:

From	To	Discard:	Reason:
0	23	Overburden. 5-15' drillers note, coal, muddy and soft. Unable to core and recover. Casing.	
23	23.4	Two, 1" fragments of coal, clarain.	
23.4	26	Siltstone.	
26	31	Sandy siltstone, thin bedded, dip angle 70 degrees. Highly fractured. Core 1" size.	
31	43.5	Siltstone, small fragments of core. 29-39 feet, 5' core short.	
43.5	64	Siltstone, some sandy sections, 4' lost core. 39-43.5 1 1/2' core short.	
64	67	Sandy siltstone.	
67	71	Coal, clarain, vitrain, 2' lost core.	
71	74.5	Sandstone, siltstone, coal partings.	
74.5	82	Coal, clarain, vitrain, some durain.	
82	84	Bone coal and durain partings.	#2885
84	87	Sandy siltstone with coal, 1/4" partings? Broken core.	
87	92	Siltstone with coal (4" parting).	
92	94	Sandy siltstone.	
94	106.5	Silty sandstone, current bedded.	
106.5	124	Sandstone, current bedded. Some 4-5" silty sections.	
124	140.5	Sandstone, bedding at 25 degrees. Coal 1/2" parting.	
140.5	161.5	Sandstone, lost core - 1'.	
161.5	174.5	Sandstone, hairlike and 2" coal partings.	
174.5	181	Sandstone - coarse grained.	
		End of Hole	

40 Scale
Color Plot & Dips
Ore Classes & Aver.



Core Size
N.Q.
Hole No. **74** Page **1**

Diamond Drill Geological Log



K-FROENGE 69(3)A-2

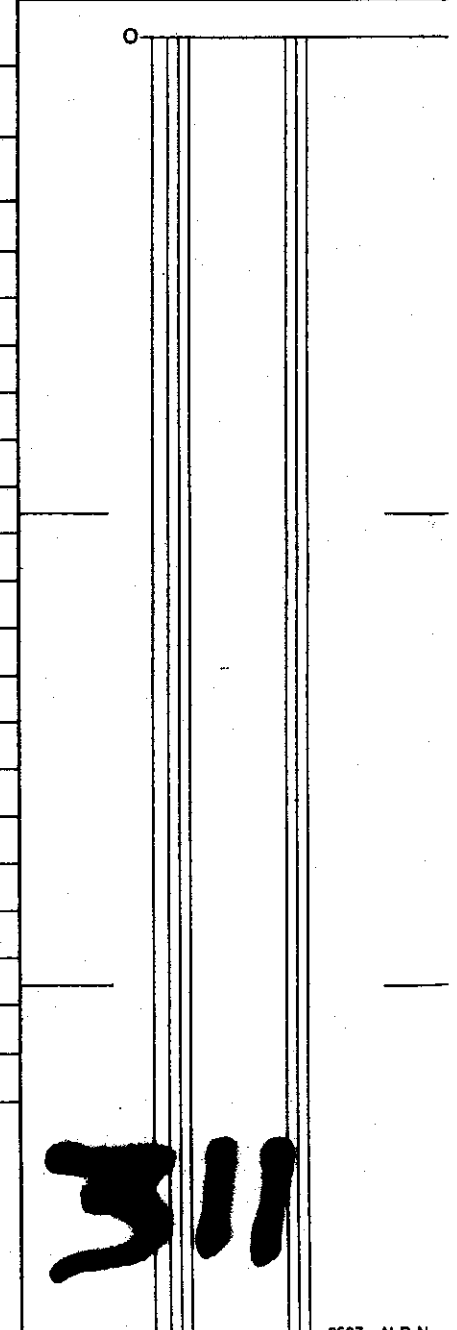
Objective: _____ Sampled: _____

Logged By: H.J. HOLLANDS Date: OCTOBER 6, 1969 Composites: _____

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

From	To	Discard:	Reason:
0	36		Overburden, casing.
36	59		Siltstone, black, soft, thin bedded, dip angle 65°. Current bedded. Broken sections of core. 40-43 1 1/2' core short.
59	75.5		Sandy siltstone, thin bedded. 43-46 1' core short. Current bedded. Dip angle 70°. 46-55.5 1' core short.
75.5	79.5		Siltstone. 68-74.5 1/2' core short.
79.5	91		Coal, clarodurain, clarain and durain. Scattered vitrain bands. Short sections of crushed coal. #2951 - 1' core short.
91	93.5		91-94.5 - 1/2' core short. Siltstone with coal partings.
93.5	96.5		94.5-101 - 1' core short. Siltstone with coal partings.
96.5	97.5		101 - 108 - 1/2' core short, 1' coal, clarain with vitrain bands.
97.5	106		Siltstone, faintly bedded. Dip angle 68°. Coal partings.
106	123		Sandy siltstone, thin bedded. Dip angle 72 degrees. Mud seams and coal partings. Broken core. 1/2' core short.
123	158		Sandstone, fine grained, thin bedded, current bedded. Dip angle 75 degrees.
158	164.5		Sandstone, medium grained, thin bedded. Dip angle 72 degrees.
164.5	196		Sandstone, medium grained, thin bedded. Dip angle 68 degrees. Scattered 1/4" coal partings. Sections of shattered and crumbly core. 1' core short.
196	198.5		Siltstone.
198.5	217		Sandy siltstone, thin bedded. Dip angle 68 degrees. Sections of siltstone.
217	234.5		Siltstone, thin bedded. Dip angle 74 degrees. Sections of current bedding.
234.5	238		Shaley mudstone, 1/4" coal partings. 224-233' - 1' core short.

40 Scale
Color Plot & Dips
Ore Classes & Aver.



Core Size
H.Q.
Hole No. 75
Page 1

Diamond Drill Geological Log



40 Scale

Objective:

Sampled:

Color Plot & Dips

Ore Classes & Aver.

Logged By: H.J. HOLLANDS

Date: OCTOBER 7, 1969

Composites:

Block:

Sect.:

Place:

App. Bear:

App.: Dip.:

Length:

From	To	Discard:	Reason:
238	239.5	Coal, crushed, clarain and fusain.	
239.5	242.5	Crushed, shale with scattered coal partings. 241.5 - 242.5, mostly crushed coal with some shale partings.	
242.5	257.5	Siltstone, thin bedded. Dip angle 72°. Black, broken core. 250 - 255, 1' core short.	
257.5	266	Sandy siltstone, faintly bedded.	
		End of Hole.	
		Coal Recovery: 91.3%	
		Overall Core Recovery: 96.1%	

Core Size

H.Q.

Hole No.

75

Page

2

Diamond Drill Geological Log



K-FORDING 67(3)A-2

Objective:		T. GARROW		Sampled:		40 Scale	
Logged By: H.J. HOLLANDS		Date: OCTOBER 3, 1969		Composites:		Color Plot & Dips Ore Classes & Aver.	
Block:		Sect.:		Place:		App. Bear:	
						App. Dip: -30°	
						Length:	
From	To	Discard:		Reason:			
0	12	Casing.					
12	23	Sandstone, thin bedded. Dip angle 60°. Broken numerous 1/8 to 1/4" coal seams. 1/2' core short. Medium grained.					
23	26	Shale, soft, mud seams and coal seams, grades to a siltstone.					
26	54	Sandstone, medium grained, thin bedded, x-bedding. Numerous irregular 1/4" coal seams. Bedding dip 82°. Occasional siltstone bed.					
54	57	Sandy siltstone.					
57	65	Siltstone.					
65	94	Sandy siltstone - minor siltstone layers - 5.5 layers, dip 74°. Mud flakes.					
94	101.5	Clarain with minor vitrain and fusain (mucky core).				#2886	
101.5	169	Sandy siltstone with siltstone partings and carbonate stringers and pyrite blebs. Thin bedded. Dip angle 78 degrees.					
169	173	Clarain with minor scattered vitrain, badly crushed.				#2887	
173	173.6	Shaley sandy parting.					
173.6	176.6	Mush coal with shaley partings?					
176.6	191	Clarain with vitrain? mush. #2888 = 176.5-181.5, #2889 = 181.5-186.5, #2890 = 186.5 - 191.0. 4' core short.					
191	207	Clarain with vitrain. #2891 = 191 - 196.5, #2892 = 196.5 - 201.5, #2893 = 201.5 - 207. 1' core short.					
207	210	Clarain with vitrain. #2894 = 207 - 210.					
210	211	Clarain with shaley partings. 1' core short.					
211	222	Sandy siltstone with shaley partings.					
222	227	Sandy siltstone with coal partings (1/2 to 3").					
				Core Size			
				H.Q.			
				Hole No. 80			
				Page 1			

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Diamond Drill Geological Log



40 Scale

Objective:

Sampled:

Color Plot & Dips

Ore Classes & Aver.

Logged By: T.D. GARROW

Date: OCTOBER 4, 1969

Composites:

Block:

Sect.:

Place:

App. Bear:

App. Dip:

-90°

Length:

From	To	Discard:	Reason:
227	250		Sandy siltstone.
250	254.6		Sandy siltstone.
254.6	263		Sandy siltstone with 4-6" coal partings.
263	268		Sandy siltstone with 4-6" coal partings.
268	276		Sandy siltstone, thin bedded, dip angle 69 degrees. X-bedding. 2' core short.
276	277.6		Sandy siltstone, thin bedded, dip angle 69 degrees, x-bedding.
277.6	281.6		Sandy siltstone with several 4-10" coal partings.
281.6	290.6		Clarain with minor vitrain. Badly shattered. #2895 = 281.5 - 287. #2896 = 287 - 290.6.
290.6	304.6		Clarain with minor vitrain. Badly shattered. #2897 = 290.6 - 296.6. #2898 = 296.6 - 301.6. #2899 = 301.6 - 304.6. 1' core short.
304.6	319.6		Clarain with minor vitrain. Badly shattered. #2900 = 304.6 - 309.6. #2901 = 309.6 - 314. #2902 = 314 - 319.6.
319.6	321.6		Clarain with minor vitrain. Badly shattered. #2903 = 319.6 - 321.
321.6	333		Sandy siltstone with coal partings. 4-10" mainly clarain. (1.6' core short).
333	348		Sandy siltstone with several 2-4" coal and siltstone partings.
348	362		Sandy siltstone, thin bedded. Dip angle 89 degrees. 1' core short.
362	384		Sandy siltstone, thin bedded. 3' core short.
384	386		Sandstone, thin bedded, dip angle 75 degrees. X-bedding.
386	387		Sandy siltstone.
387	396.6		Sandstone, coarse grained, coal partings 1/2 to 3 inches.
396.6	397.6		Durain and vitrain.
397.6	401		Sandstone with coal partings, coarse, coal partings. Dip angle 10 degrees.

Core Size

H.Q.

Hole No.

80

Page

2

Diamond Drill Geological Log



40 Scale

Objective:

Sampled:

Color Plot & Dips

Ore Classes & Aver.

Logged By: T.D. GARROW

Date: OCTOBER 4, 1969

Composites:

Block:

Sect.:

Place:

App. Bear:

App.: Dip.:

Length:

From	To	Discard:	Reason:
401	415		Sandstone with silty shale partings and medium grain.
415	428		Sandstone, medium grain, x-bedding. Dip angle 20 degrees.
428	433		Sandstone, medium grain, x-bedding. Dip angle 20 degrees.
433	439.6		Sandy siltstone, massive, thick bedded.
439.6	441		Sandstone, coarse grained.
441	450.6		Sandstone, coarse grained (scattered coal partings at 450').
450.6	452.6		Sandy siltstone with coal partings, 1/4 to 1/2".
452.6	456		Sandstone with coal partings.
456	457.6		Sandstone with coal partings.
457.6	469		Sandy siltstone, sparse coal partings.
469	477		Siltstone.
477	479.6		Siltstone with one 2" coal parting.
479	497		Coal - dominantly clarain (vitrain partings? mush). #2904 = 479 - 485. #2905 = 485 - 488. At 488 coal more consolidated and more vitrain and fusain. #2906 = 488 - 493. #2907 = 493 - 497.
497	499.6		Coal dominantly vitrain.
499.6	504		Coal with siltstone partings. 1-3". #2908 = 499.6 - 504.
504	511.6		Silty sandstone.
511.6	521		Silty sandstone, thin bedded. Dip angle 11°. Current bedding. 1/4" coal parting at 521.
521	526.6		Sandstone, medium grained, thick bedded. Current bedded.
526	537		Sandstone, medium grained, thick bedded. Dip angle 12 degrees.
			End of Hole

Core Size

H.Q.

Hole No.

80

Page

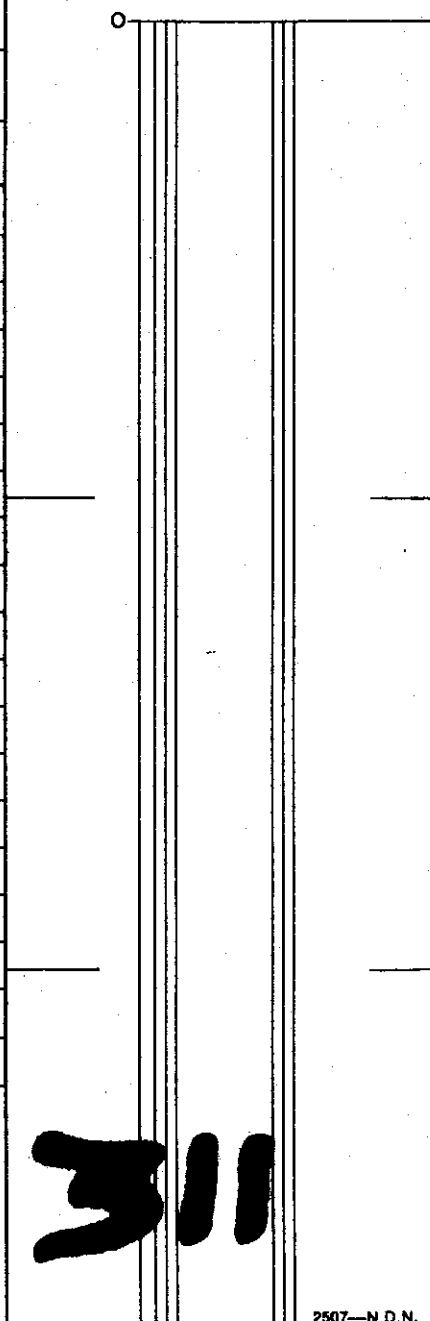
3

Diamond Drill Geological Log



K-FORONG 69(3)A-2

Objective:		Sampled:		40 Scale	
Logged By: T.D.G.		Date: Oct. 7/69		Color Plot & Dips	
Block:		Sect.:		Ore Classes & Aver.	
Place:		App. Bear:		Composites:	
App. Dip.:		Length:			
From	To	Discard:	Reason:		
0.0	52.0	Casing)		
52.0	63.0	Sandy siltstone	)	1 box core thrown out	
63.0	65.0	Mudstone)		
65.0	66.6	Sandy siltstone, laced with calcite stringers, badly crushed, 1.0' core lost			
66.6	70.0	Sandy siltstone			
70.0	80.6	Sandstone, medium grained, medium bedded, dip 22°			
80.6	95.0	Sandstone, medium grained, medium bedded, dip 22°, sparse calcite stringers			
95.0	108.0	Sandstone, medium grained, medium bedded, dip 28°, sparse calcite stringers			
108.0	122.0	Sandstone, medium grained, medium bedded, sparse calcite stringers			
122.0	136.0	Sandstone, medium grained, medium bedded, dip 30°, sparse calcite stringers			
136.0	150.0	Sandstone, medium grained, medium bedded, dip 35°, sparse calcite stringers			
150.0	163.6	Sandstone, medium grained, medium bedded, dip 20°, sparse calcite stringers			
163.0	176.0	Sandstone, becoming slightly finer grained, much more abundant calcite			
176.0	186.0	Sandstone? shearing with coal slickensides and calcite			
		folding of sandstone bedding dip 70°			
186.0	189.0	Sandstone, thin bedded, dip 28°			
189.0	192.0	Sandstone, thin bedded, dip 28°			
192.0	193.0	Coal, sheared and slickensided			
193.0	198.0	Sandstone, thin bedded, dip 47°			
198.0	199.0	Coal, sheared			
199.0	202.6	Sandstone, laced with calcite			
				Core Size	
				H.Q.	
				Hole No.	81
				Page	1



Diamond Drill Geological Log



40 Scale
Color Plot & Dips Ore Classes & Aver.

Objective:

Sampled:

Logged By: T.D.G.

Date: Oct. 8/69

Composites:

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

From To Discard: Reason:

202.6	205.6		Sandstone, numerous coal and calcite partings and stringers, dip 20°
205.6	214.6		Sandstone, fractured dip 66°, medium grained, thin bedded
214.6	219.0		Sandstone, fractured dip 66°, thin bedded
219.0	225.0		Coal clairain, badly fractured (219.0-220.0 Sample 2910) (5.0' core short)
225.0	234.0		Sandstone, coarse grain, thick bedded
234.0	248.0		Sandstone, coarse grain, thick bedded, dip 32°
248.6	263.6		Sandstone, coarse grain, thick bedded, dip 32°, sparse calcite and graphite
263.6	276.6		Sandstone, coarse grain, thin bedded, dip 30°, fracture planes dip 45° with graphite slickensides
276.6	290.6		Sandstone, coarse grain, medium bedded
290.6	305.0		Sandstone, coarse grain, thick bedded
305.0	317.0		Sandstone, coarse grain, thick bedded
317.0	332.0		Sandstone, coarse grain, thin bedded dip 30°
332.0	347.0		Sandstone, medium grained, thin bedded
347.0	357.0		Sandstone, medium grained, thin bedded
357.0	372.0		Sandstone, medium grained, thin bedded
372.0	387.0		Sandstone, medium-fine grain, thin bedded, dip 35°, 4" coal parting and slickenslides 382.0
387.0	391.0		Sandstone, medium-fine grain, thin bedded
391.0	392.0		Siltstone, broken
392.0	398.0		Sandstone, medium-fine grain, thin bedded
398.0	412.0		Silty sandstone, thin bedded, sparse calcite veinlets graphite on bedding slickenslides

Core Size

H.Q.

Hole No.

81

Page

2

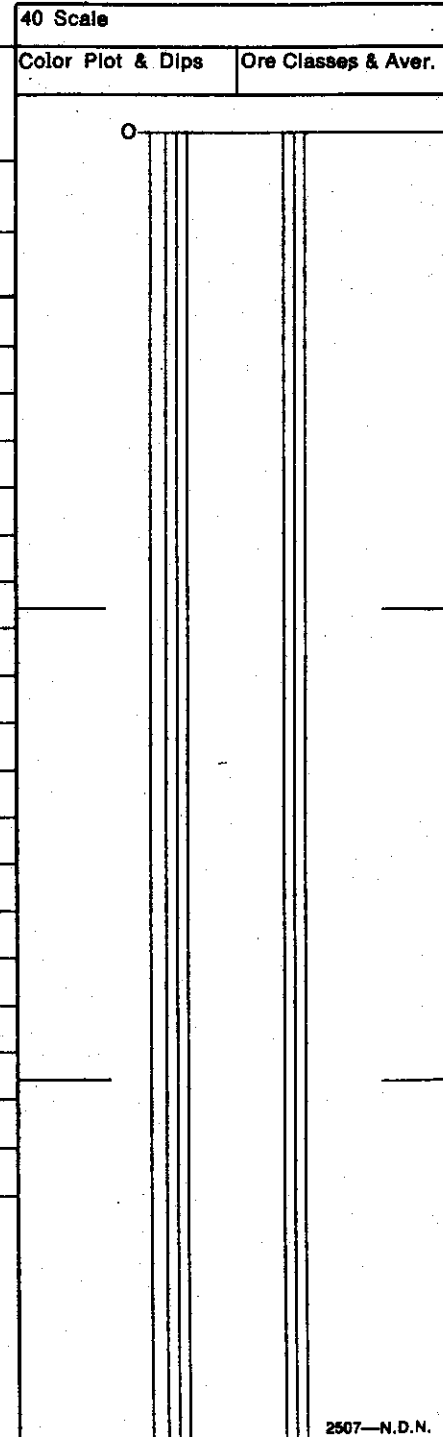
Diamond Drill Geological Log



Objective: _____ Sampled: _____
 Logged By: **T.D.G.** Date: **Oct. 8/69** Composites: _____
 Color Plot & Dips _____ Ore Classes & Aver. _____

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

From	To	Discard:	Reason:
412.0	426.0		Silty sandstone, thin bedded, sporadic calcite stringers
426.0	440.0		Silty sandstone, thin bedded, dip 26°, several good calcite veinlets
440.0	441.6		Silty sandstone, thin bedded
441.6	454.0		Sandstone, fracture and graphite slickensides dip 76°, abundant calcite stringers
454.0	467.0		Silty sandstone, thin bedded, fractured with graphite slickensides, calcite stringers bedding dip 30°, also fracture dip 35°
467.0	482.0		Silty sandstone, thin bedded, dip 40°, abundant graphite slickensides on partings
482.0	495.0		Silty sandstone, thin bedded, abundant calcite stringers
495.0	509.6		Sandy siltstone (thin bedded?) abundant calcite stringers
509.6	523.6		Sandy siltstone (thin bedded) dip 35°, sparse calcite stringers
523.5	538.0		Siltstone - note carbonaceous films and plant remains (.5' core lost) also 1/4" coal parting at 528.0' - abundant calcite stringers
538.0	553.0		Siltstone, carbonaceous films and sporadic calcite, sporadic sandy siltstone partings, thin bedded dip 35°
553.0	567.0		Siltstone, sporadic sandy siltstone partings, abundant calcite stringers
567.0	582.0		Siltstone, sporadic sandy siltstone partings, carbonaceous films
582.0	596.0		Siltstone, sporadic sandy siltstone partings, thin bedded, dip 35°
596.0	610.0		Siltstone, sporadic sandy siltstone partings, very sparse carbonaceous partings, calcite
610.0	623.6		Siltstone, sporadic sandy siltstone partings, 1" coal parting, sparse calcite
623.6	637.6		Siltstone, sporadic sandy siltstone several coal partings



Core Size _____
 H.Q. _____
 Hole No. **81** Page **3**

Diamond Drill Geological Log



K. TROING 69(3)A-2

Objective:		Sampled:		Color Plot & Dips		Ore Classes & Aver.	
Logged By: T.D. Garrow		Date: Oct. 11/69		Composites:			
Block:	Sect.:	Place:	App. Bear:	App. Dip:	Length:		
From	To	Discard:		Reason:			
0.0	16.0	Casing					
16.0	33.0	Sandstone, coarse grained, thick bedded, dip 12°					
33.0	47.0	Sandstone, coarse grained, thick bedded, dip 0.0°					
47.0	62.0	Sandstone, coarse grained, thick bedded					
62.0	77.0	Sandstone, coarse grained, thick bedded, dip 0.0°					
77.0	91.0	Sandstone, medium-coarse grained, thick bedded					
91.0	106.0	Sandstone, Medium-coarse grained, thick bedded, at 105 & 106 2" carbonateous mudstone partings					
106.0	118.0	Sandstone, medium-fine grained, med. bedded, dip 25° minor fracturing & calcite dip 40°					
118.0	132.0	Sandstone, medium-fine grained, thin bedding, dip 2°, abundant calcite minor fracturing and calcite dip 80°					
132.0	146.0	Sandstone, medium-fine grained, thin bedded, dip 12°, sparse calcite					
	159.0	Sandstone, medium-fine grained, thin bedded, dip 2°, locally abundant calcite					
	174.0	Sandstone, medium-fine grained, thin bedded, @ 168' coal partings 6" abundant calcite veinlets					
	189.0	Sandstone, fine grained, thin bedded, dip 2°, abundant calcite					
	197.0	Sandstone, fine grained, thin bedded, thin coal partings, abundant calcite 2" of mudstone at 195'					
197.0	198.0	Coal clairain, badly crushed (Sample 2911)					
198.0	202.0	Coal (bone coal + 1.5 feet of clairain) several 4"-6" silty partings, badly broken					
				Core Size			
				H.Q.			
				Hole No.	Page		
				82	1		

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Diamond Drill Geological Log



40 Scale

Objective: T.D.G.

Sampled:

Logged By: D.J.P.

Date: Oct. 12/69

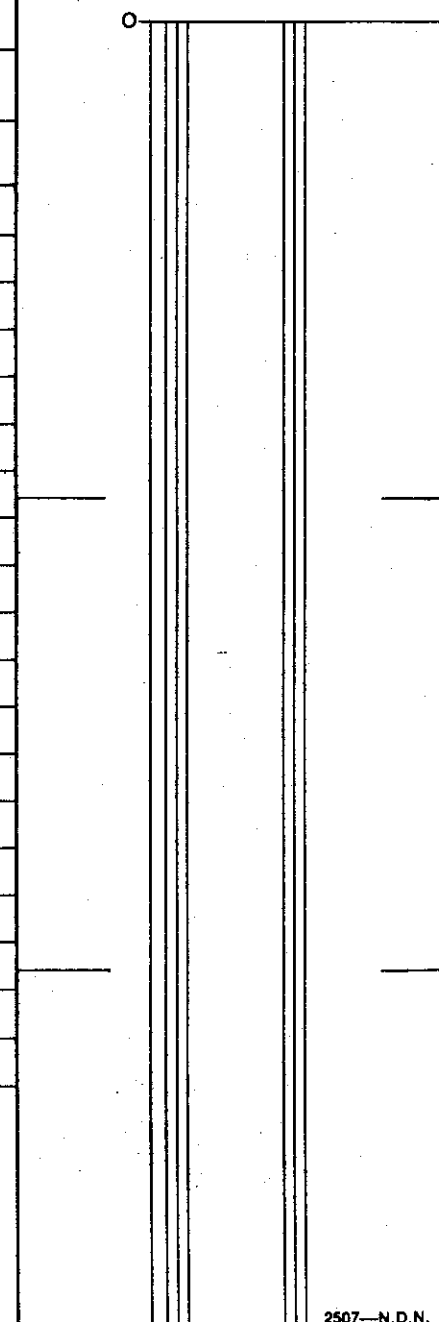
Composites:

Color Plot & Dips

Ore Classes & Aver.

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

From	To	Discard:	Reason:
202.0	207.0		Siltstone, very high carbon content, slickenslides numerous
207.0	210.0		Sandy siltstone
210.0	217.0		Silty sandstone, fine grain, thin bedded, dip 2°, sparse calcite
217.0	229.0		Silty sandstone, fine grain, thin bedded, sparse coal and calcite partings
229.0	243.5		Silty sandstone, fine grain, thin bedded, sparse coal and calcite partings current bedding, several sandy siltstone partings
243.5	257.5		Silty sandstone, thin bedded, fine grained, very minor thin coal partings
257.5	259.0		Silty sandstone, thin bedded, fine grained, very minor thin coal partings
259.0	260.0		Sandstone, med.-coarse grained, thin coal lenses and partings
260.0	271.5		Silty sandstone, fine grained, thin bedded
271.5	285.5		Silty sandstone, fine grained, thin bedded, dip 0° (horizontal) sparse calcite
285.5	287.0		Silty sandstone, fine grained, thin bedded
287.0	296.5		Sandstone, medium-coarse grained, thin bedded, dip 9°, very numerous coal partings & lenses
296.5	299.5		Sandy siltstone
299.5	300.0		Sandy siltstone
300.0	308.0		Sandstone, medium-fine grain, calcite partings and coal lenses
308.0	313.0		Sandstone, medium-coarse grained, thin bedded, 25°
313.0	328.0		Sandstone, medium-coarse grained, sparse coal partings
328.0	342.0		Sandstone, medium-coarse grained, thin bedded, dip 9°, very few coal partings



Core Size

H.Q.

Hole No.

82

Page

2

Diamond Drill Geological Log



40 Scale

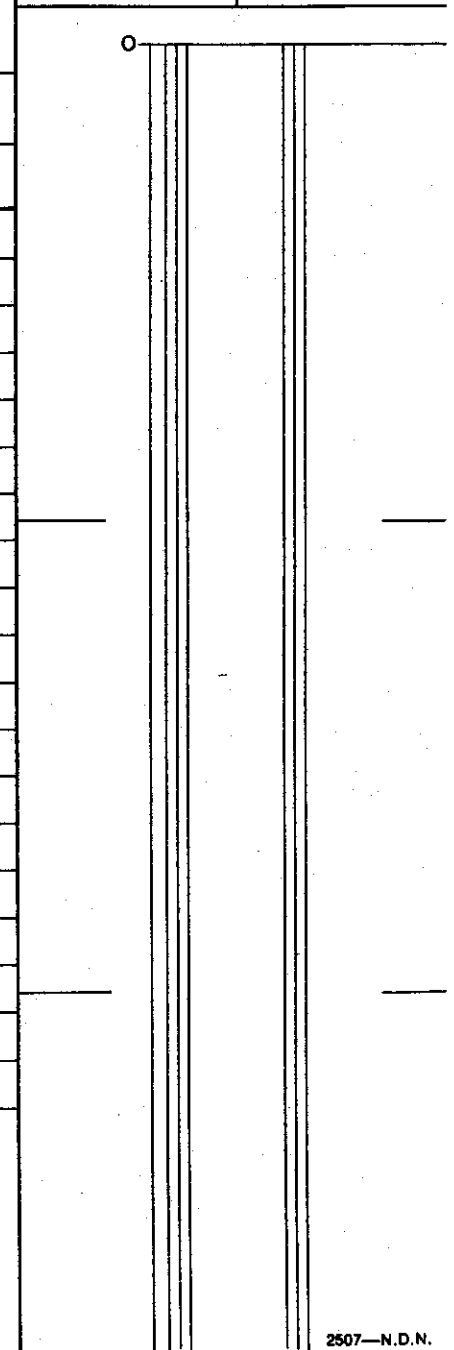
Objective: T.D.G. Sampled:
 Logged By: D.J.P. Date: Oct. 12/69 Composites:

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

From To Discard: Reason:

342.0	353.5	Sandstone, medium grained, thin bedded, dip 7°, numerous irregular coal lenses	
353.5	356.5	Silty sandstone, thin bedded, 55°, eroded contact	
356.5	357.5	Coal, clairain and vitrain	
357.5	362.0	Siltstone	
362.0	371.0	Coal, 50/50 clairain vitrain, very good coal, solid core (362-367 Sample 2912) (367.0-372.0 2913) 1.0' 1st core	
371.0	387.0	Coal, 50/50 clairain vitrain, very good coal, solid core (372-377 Sample 2914) (377.0-382.0 2915)	
387.0	394.0	Coal, 50/50 clairain vitrain, very good coal, solid core (382-387 Sample 2916) (387.0-392.0 2917)(392-397.6 2918)	
394.0	395.5	50/50 coal and siltstone partings	
395.5	397.5	Coal, clairain	
397.5	401.5	Sandy siltstone, thin bedded, dip 18°	
401.5	406.0	Silty sandstone, thin bedded	
406.0	416.0	Sandstone, medium-fine grained, thin bedded, dip 18°	
416.0	430.5	Sandstone, medium-fine grained, thin bedded, dip 18°, very sparse coal partings	
430.5	445.5	Sandstone, medium-fine grained, thin bedded, evidence of extreme dip change possibly bedding overturned - sparse coal partings	
445.5	460.0	Sandstone, medium-fine grained, thin bedded, dip from 45°-10°, one 2" coal parting	
460.0	475.0	Sandstone, medium-coarse grained, thin bedded, sparse coal partings, dip 10°	

Color Plot & Dips Ore Classes & Aver.



Core Size Page
 H.Q. 3
 Hole No. 82

Diamond Drill Geological Log



40 Scale
Color Plot & Dips Ore Classes & Aver.

Objective: T.D.G.

Sampled:

Logged By: D.J.P.

Date: Oct. 14/69

Composites:

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

From	To	Discard:	Reason:
475.0	487.0		Sandstone, medium-coarse, thin bedded, dip 22°, locally numerous coal partings
487.0	488.0		Coal, clairain, vitrain, good coal
488.0	489.0		Sandy siltstone
489.0	490.5		Sandy siltstone
490.5	493.0		Coal, clairain, badly broken
493.0	497.0		Sandy siltstone, thin bedded
497.0	503.5		Sandstone, medium-fine grained, thin bedded, 2" of bone coal at bottom
503.5	504.0		Sandstone, coarse grained
504.0	512.0		Sandstone, medium-coarse grained, thin bedded, dip 10°, numerous erratic coal lenses
512.0	515.0		Siltstone
515.0	518.0		Coal, clairain and vitrain, good coal (515.0 - 519.0 #2922)
518.0	519.0		Coal, clairain & vitrain, good coal
519.0	520.0		Siltstone
520.0	527.0		Sandstone, fine grained, thin bedded
527.0	530.0		Coal, clairain vitrain, good coal (527.0 - 533.5 #2923)
530.0	533.5		Coal, clairain vitrain, good coal
533.5	546.0		Sandstone, coarse grained, thick bedded
546.0	561.0		Sandstone, coarse grained, thick-medium bedded, very sparse coal partings
561.0	582.0		Sandstone, medium-coarse grained, thin bedded
582.0	597.0		Sandstone, medium-coarse grained, thin bedded
597.0	611.0		Sandstone, medium-coarse grained, thin bedded

Core Size

H.Q.

Hole No.

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Diamond Drill Geological Log



K - FORTING 69(3)A-2

Objective:			Sampled:			40 Scale	
Logged By: T.D.G. D.J.P.			Date: Oct. 14/69			Color Plot & Dips	
Block:			Place:			Ore Classes & Aver.	
Sect.:		App. Bear:		App. Dip.:		Length:	
Composites:		From		To		Discard:	
						Reason:	
		0.0		24.0		Casing	
		24.0		34.0		Silty sandstone, thin bedded, dip 25° (7.0' core short)	
		34.0		49.0		Sandstone, thin bedded, sparadic sparse coal and siltstone partings	
		49.0		78.0		Sandstone, thin bedded, several sandy siltstone partings, thin bedded, dip 18°	
		78.0		85.0		Coal, mushy clairain and furain? (78.0 - 90.0 Sample 2919) (2.0' core short)	
		85.0		106.0		Coal, mushy clairain and furain (90.0-106.0 Sample 2920) (3.0' core short)	
		106.0		123.0		Coal, mush clairain and furain (106.0-123.0 Sample 2921)	
		123.0		133.0		Sandstone, very carbonaceous, badly broken 9.0' core short	
		133.0		137.0		Siltstone, very carbonaceous, badly broken	
		137.0		147.0		Siltstone, minor sandy partings, dip 22°, minor coal partings	
		147.0		154.0		Sandy siltstone, sparse calcite and coal partings	
		154.0		167.5		Sandy siltstone, sparse calcite and coal partings	
		167.5		170.5		Siltstone, sparse calcite and coal partings	
		170.5		182.0		Siltstone, sparse calcite and coal partings	
		188.5				Sandy siltstone, thin bedded, dip 38°	
		190.0				Sandy siltstone, thin bedded	
		207.0				Sandstone, medium-fine grained, very sparse coal partings, 4" bone coal @ 203'	
		224.0				Sandstone, medium-fine grained, thin bedded, dip 40°, sparse coal partings	
		238.0				Sandstone, medium-fine grained, thin bedded, sparse coal partings	
						Core Size	
						N.Q.	
						Hole No.	
						83	
						Page	
						1	

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Diamond Drill Geological Log



K-FORGING 69 (3) A-2

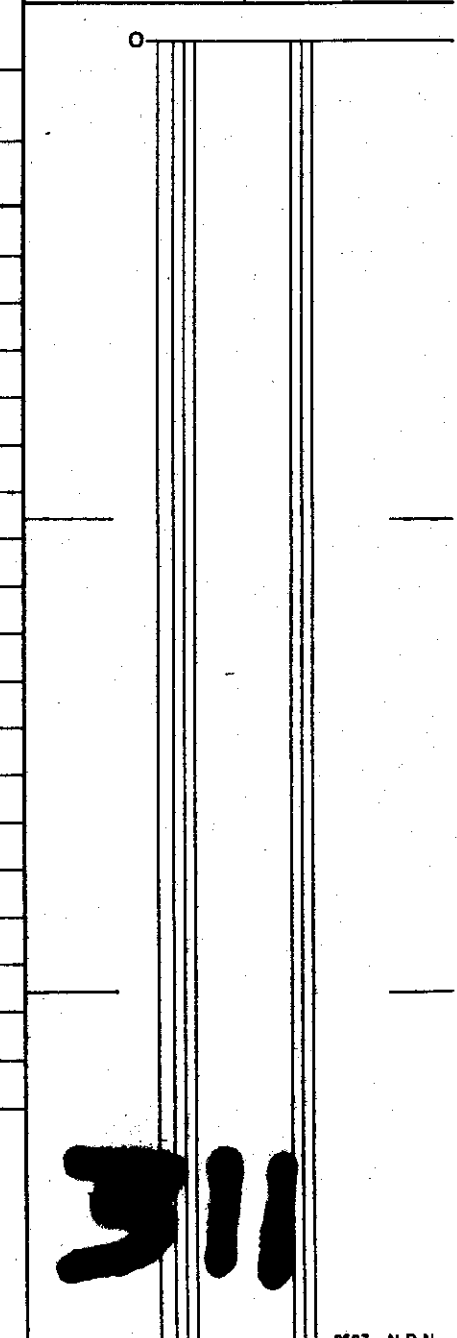
Objective: Sampled:

Logged By: **D.J.P.** Date: **October 17/69** Composites:
 T.D.G.

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

From	To	Discard:	Reason:
0	4	Casing.	
4	19.5	Coal, dominantly vitrain? mush. #2866 = 4 - 12. #2867 = 12 - 19.5.	
19.5	20.5	Siltstone.	
20.5	21.5	Sandstone, fine grained.	
21.5	23.	Siltstone.	
23	27	Siltstone with coal partings.	
27	29	Sandstone, fine grained, very carbon rich.	
29	30	Coal, bone coal.	
30	34	Siltstone, coal partings. Badly broken. 4' core short.	
34	35	Coal, bone coal. Badly broken. 4' core short.	
35	43	Siltstone, coal partings. Badly broken. 4' core short.	
43	47	Sandy siltstone. Thin bedded. Dip angle 36 degrees.	
47	52.5	Siltstone, minor calcite.	
52.5	60	Mudstone.	
60	66	Siltstone, minor coal partings.	
66	68	Siltstone, minor coal partings.	
68	84.5	Sandy siltstone, thin bedded. Dip angle 30 degrees.	
84.5	85	Siltstone.	
85	99	Sandy siltstone, thin bedded. Dip angle 36°. Current bedding. 8' core short.	
99	108.5	Siltstone with numerous coal partings.	
108.5	115	Coal, clarain, good coal, badly broken. 4' core short.	

40 Scale
 Color Plot & Dips Ore Classes & Aver.



Core Size
 N.Q.
 Hole No. Page
 88 1

Diamond Drill Geological Log



Objective: _____ Sampled: _____

Logged By: **T.D.G.** Date: **October 19/69** Composites: _____

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

From To Discard Reason:

115	118	Sandy siltstone, abundant irregular coal partings.	
118	119	Sandy siltstone, abundant irregular coal partings.	
119	120	Mudstone, carbonaceous, flaky and crushed.	
120	122	Siltstone, thin irregular, coal partings.	
122	127	Bone coal with partings of clarain and vitrain.	
127	139	Siltstone, numerous, thin coal partings. Several 2" bone coal seams.	
139	146.5	Sandy siltstone, thin bedded. Dip angle 36°. Sparse calcite and coal partings.	
146.5	149	Siltstone with sparse coal partings.	
149	153	Sandy siltstone.	
153	155	Siltstone.	
155	159	Sandy siltstone, thin bedded.	
159	167	Sandy siltstone, thin bedded. Dip angle 40 degrees.	
167	170	Sandstone, fine grained, numerous irregular calcite veins.	
170	178.5	Sandy siltstone, thin bedded.	

40 Scale

Color Plot & Dips Ore Classes & Aver.

0

Core Size
N.Q.

Hole No. 88 Page 2

Diamond Drill Geological Log



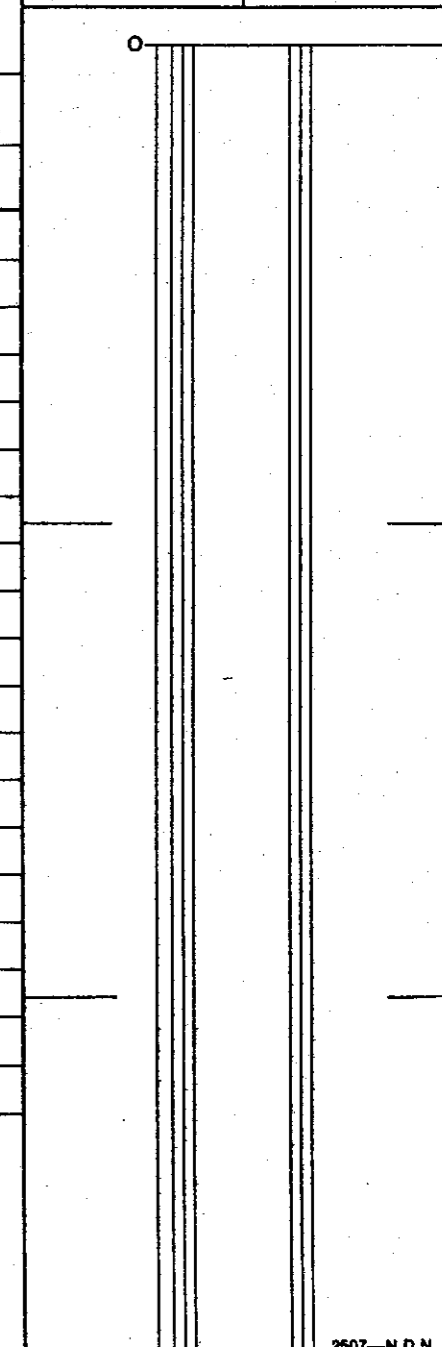
40 Scale
Color Plot & Dips Ore Classes & Aver.

Objective: _____ Sampled: _____

Logged By: **T.D.O.** Date: **October 19/69** Composites: _____

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

From	To	Discard:	Reason:
178.5	181		Sandy siltstone, thin bedded.
181	192		Silty sandstone, thin bedded. Dip angle 38 degrees.
192	198		Sandy siltstone, thin bedded. Minor calcite in-jointing.
198	210.5		Sandy siltstone, thin bedded. Minor calcite in-jointing. Sparse coal partings.
210.5	212		B one coal, badly broken, very poor coal.
212	214		Siltstone.
214	216		Coal, clarain, good coal, badly crushed, 4" siltstone at 215'.
216	234		Coal, badly crushed, clarain? silty? mush. 7' core lost. #2868 = 214 - 234.
234	255		Mudstone completely incompetent and crushed, except for interval 240 - 242 feet.
255	258.5		Mudstone, minor calcite and coal partings. 12' core short.
258.5	319		Coal, dominantly clarain, completely crushed and mushy. 44' core short. #2869 = 258 - 288. #2870 = 288 - 319.
319	350		Coal dominantly clarain, completely crushed. 11' core short. #2871 = 319 - 334. #2872 = 334 - 350.
350	356		Coal, dominantly clarain? completely crushed, 2' core short.
356	361		Siltstone, very carbonaceous, badly crushed.
361	362		Coal, silty, poor coal, badly crushed.
362	369		Sandy siltstone, moderately crushed, coal partings?
369	400		Siltstone, badly crushed, coal rich partings, 6" at 373', 379', 385'.



Core Size
N.Q.

Hole No. Page
88 3

Diamond Drill Geological Log



40 Scale

Objective:

Sampled:

Color Plot & Dips

Ore Classes & Aver.

Logged By: **D.J.P.**
T.D.G.

Date: **October 21/69**

Composites:

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

From To Discard: Reason:

400	421	Siltstone, sparos, coal partings.
421	440	Siltstone, numerous coal partings, and slickensides. Sporadic calcite veins at 431'.
440	455	Siltstone, numerous coal partings and slickensides, sporadic calcite in joints.

End of Hole.

Core Size

N.Q.

Hole No.

88

Page

4

Diamond Drill Geological Log

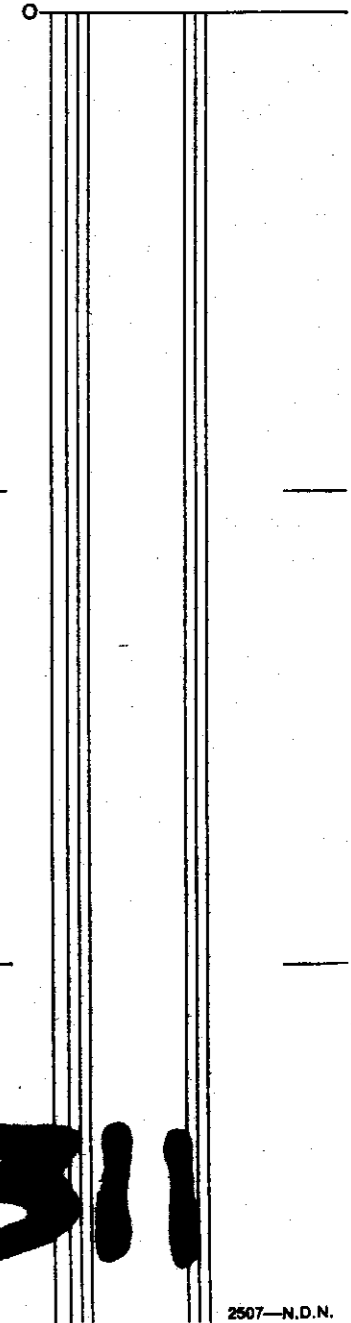


K-FAROEING 69(3)A-2

Objective: _____ Sampled: _____
 Logged By: T.D. GARROW Date: OCTOBER 23, 1969 Composites: _____
 Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

From	To	Discard:	Reason:
0	17	Casing.	
17	33	Coal, dominantly clarain, good coal, moderately broken. #2873 = 24-33. Core short. Several silty partings.	
33	38	Sandy siltstone with coal partings. 3' core short.	
38	39	Coal, dominantly clarain, minor vitrain? Mushy.	
39	48	Siltstone with one 4" coal parting. Clarain.	
48	49	Mudstone, very carbonaceous, badly crushed.	
49	51	Siltstone, crushed. 1' core short.	
51	56	Siltstone, very minor calcite and coal partings.	
56	57	Sandstone, medium grained.	
57	66	Siltstone, coal partings.	
66	72	Sandstone, medium to fine grained, thin bedded.	
72	72.5	Mudstone.	
72.5	78	Siltstone with thin mudstone seams.	
78	89.5	Sandstone, medium to fine grained, also thin sandy siltstone, thin bedded parting. Dip 20°. Also thin mudstone seams. 1' core short.	
89.5	95	Siltstone, very thin coal partings.	
95	105.5	Coal, dominantly clarain with minor vitrain. Coal, coal. Crushed for last 8'. #2874-95-105.5. 5' core short.	
105.5	115	Siltstone numerous coal partings and lenses.	

40 Scale
 Color Plot & Dips
 Ore Classes & Aver.



Core Size	N.Q.
Hole No.	89
Page	1

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Diamond Drill Geological Log



Objective: _____ Sampled: _____

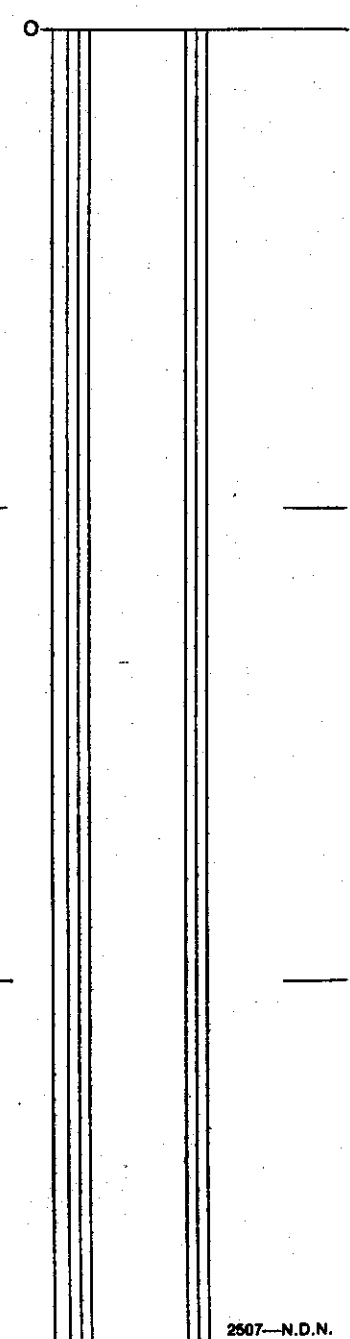
Logged By: **T.D. GARROW** Date: **OCTOBER 23, 1969** Composites: _____

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

From To Discard: Reason:

115	117.5	Siltstone, numerous thin coal lenses.
117.5	133	Sandy siltstone, thin bedded, dip 30°. Three 3" coal partings and sparse thin coal and calcite partings. 2' core short.
133	151	Sandy siltstone, thin bedded, sparse coal partings and calcite.
151	170	Sandy siltstone, thin bedded, locally abundant calcite. Bedding dip 35°. Several 4" sandy layers.
170	174	Sandy siltstone, thin bedded.
174	188	Siltstone, very carbon-rich, moderately crushed. 1' core short.
188	193	Coal, dominantly clarain, minor fusain, good coal, completely crushed. 1' core short. #2875 = 188-198.6.
193	204	Coal, clarain and fusain, good coal, completely crushed. #2976 = 198 - 204.
204	207	Siltstone, with several wispy sandy partings.
207	208	Coal, clarain? very crushed.
208	217	Sandy siltstone, dip angle 30°, with 3-4" sandy and silty partings, also 5" mudstone at 216'.
217	219	Mudstone, badly crushed.
219	220	Siltstone, minor calcite and coal partings.
220	221	Siltstone, minor calcite and coal partings. Slickensalides, crushed.
221	223	Mudstone or badly crushed siltstone?
223	238	Siltstone with minor calcite and coal partings. Sporadically thin crushed mudstone? partings.

40 Scale
Color Plot & Dips
Ore Classes & Aver.



Core Size
N.Q.

Hole No. 89 Page 2

Diamond Drill Geological Log



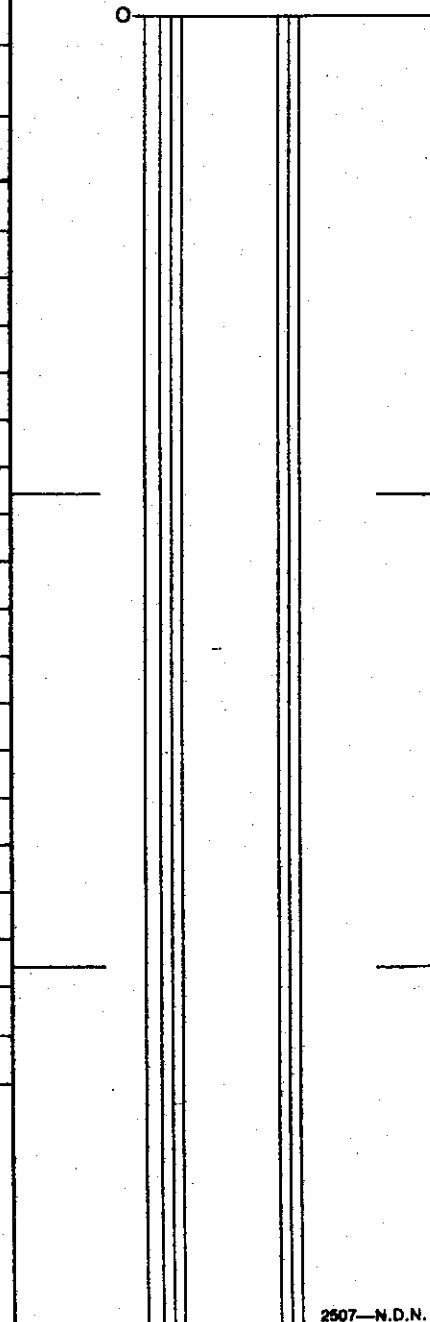
40 Scale
Color Plot & Dips Ore Classes & Aver.

Objective: _____ Sampled: _____

Logged By: T.D. JARROW Date: OCTOBER 24, 1969 Composites: _____

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

From	To	Discard:	Reason:
238	251		Siltstone, 6" laced with calcite at 244', several sections of very carbon rich slickensided siltstone at 245'.
251	252		Silty sandstone, thin bedded. Dip angle 15 degrees.
252	255		Core lost, except for 2" of coal, clarain and vitrain. 30' core short.
255	264		Siltstone, numerous carbon slickensided surfaces, minor calcite.
264	265		Coal, clarain and vitrain. Good coal.
265	285		Siltstone, 4" mudstone at 272'. Sporadic wispy sandy partings, dip angle 38°?
285	291		Silty sandstone.
291	295		Sandstone, fine grained.
295	298		Silty sandstone, minor calcite.
298	300		Mudstone, with small sandstone partings, badly crushed. 3' core short.
300	320		Sandstone, coarse grained, thin bedded. Dip 32°. Numerous coal partings and lenses.
320	332		Sandstone, coarse grained, thin bedded. Dip 26°. Numerous coal partings and lenses.
332	333.5		Sandy siltstone.
333.5	335		Silty sandstone, thin bedded, dip angle 32°.
335	353		Silty sandstone, thin bedded. Dip angle steepens to 52°. Several silty layers.
353	355		Silty sandstone, thin bedded. Dip 50 to 32 degrees. Very abundant calcite veinlets.
355	360		Siltstone, thin coal slickenslides.
360	361		Sandstone, fine grained. Thin coal slickenslides.
361	362		Siltstone. Thin coal slickenslides.



Core Size
N.Q.

Hole No. Page
89 3

Diamond Drill Geological Log



40 Scale

Objective:

Sampled:

Color Plot & Dips

Ore Classes & Aver.

Logged By: T.D. GARROW

Date: OCTOBER 25, 1969

Composites:

Block:

Sect.:

Place:

App. Bear:

App.: Dip.:

Length:

From	To	Discard:	Reason:
362	372.5		Silty sandstone, sporadic fine grained sandstone layers, moderate number of calcite veinlets.
372.5	384		Sandstone, v. fine grained, sparse coal and calcite partings.
384	391		Silty sandstone, calcite and coal partings and slickenslides.
391	405		Silty sandstone, calcite and coal partings and slickenslides, thin bedded. Dip 23°. Laced with calcite veinlets at 396'. Several fine grained sandstone layers.
405	424		Sandstone, fine grained, sporadic thin bedded dip 35° portions, moderate calcite veins.
424	427		Siltstone, numerous coal partings and slickenslides, badly broken.
427	435		Sandstone, fine grained, medium to thick bedded, sparse calcite and coal partings.
435	444		Sandstone, medium grained, thin bedded, dip 50°. Sparse calcite and coal.
444	446		Sandstone, coarse grained (white specks), numerous coal lenses and partings (broken).
446	450		Sandy siltstone, sporadic thin bedding locally laced with calcite, some coal partings.
450	454		Sandstone, coarse grained (white specks), abundant calcite.
454	458		Mudstone, incompetent, numerous coal partings?
458	471		Sandy siltstone, thin bedded, dip angle 9°, numerous coal partings and slickenslides.
471	487		Sandy siltstone, thin bedded, numerous coal partings and fine calcite veinlets.
487	500		Sandy siltstone, thin bedded, numerous coal partings and fine calcite veinlets.
500	502		Sandstone, fine grained, laced with fine calcite.
502	506		Sandy siltstone, thin bedded, dip angle 42°. Numerous coal partings and slickenslides.
			End of Hole.

Core Size

N.Q.

Hole No.

89

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Diamond Drill Geological Log



K. FROING 65(3)A-2

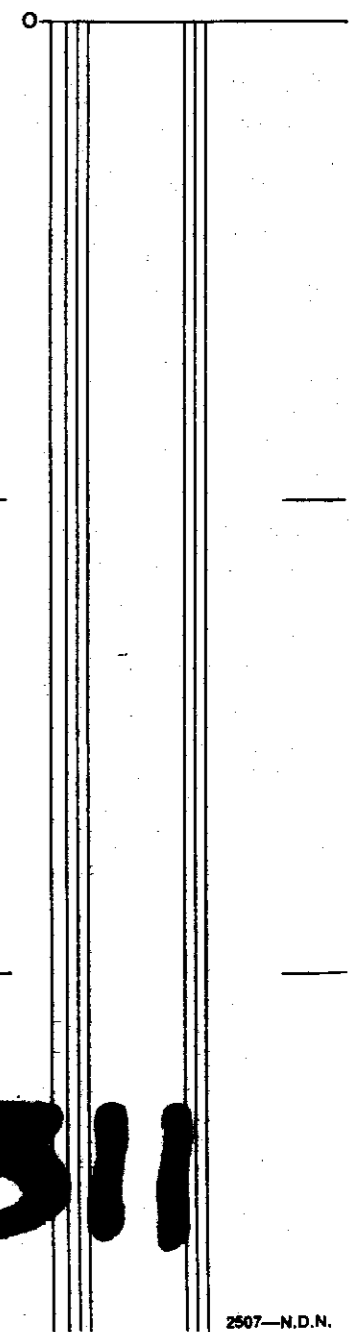
Objective: _____ Sampled: _____

Logged By: T.D. GARROW Date: OCTOBER 5, 1969 Composites: _____

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

From	To	Discard:	Reason:
0	12		Casing.
12	16		Sandstone, badly broken. 3' core short.
16	29		Siltstone, badly broken with mudstone partings.
29	31		Siltstone, badly broken with mudstone partings.
31	44		Silty sandstone, moderately broken, thin bedded, dip angle 15°. X-bedding, 1' core short.
44	58		Silty sandstone, thin bedded, dip angle 35°. 1' core short.
58	73		Silty sandstone, thin bedded, dip angle 30°.
73	88		Silty sandstone, thin bedded, dip angle 22°.
88	93.6		Silty sandstone, thin bedded, dip angle 20°.
93.6	102		Clarain with minor durain and vitrain. Abundant pyrrhotite. #2926-93.6-99. #2927-99-102.
102			4" silty parting at 98' and 101'. 93.6 - 96 bone coal.
102	118		Clarain with vitrain partings, minor pyrrhotite. #2928-102-107. #2929-107-112. #2930-112-118.
			2" shale partings at 111', 113' and 117'.
118	121		Clarain with minor vitrain. #2931 = 118 - 121.
121	125		Siltstone with several 2" clarain seams.
125	132		Silty sandstone, thin bedded, dip angle 23°.
132	134		Bone coal, clarain, abundant pyrrhotite. #2932-132-135.6
134	135.6		Bone coal, clarain, abundant pyrrhotite.
135.6	149		Sandy siltstone, calcite stringers, numerous coal partings, very thin bedded, dip angle 8°.

40 Scale
Color Plot & Dips
Ore Classes & Aver.



Core Size
H.Q.
Hole No. 101
Page 1

Diamond Drill Geological Log

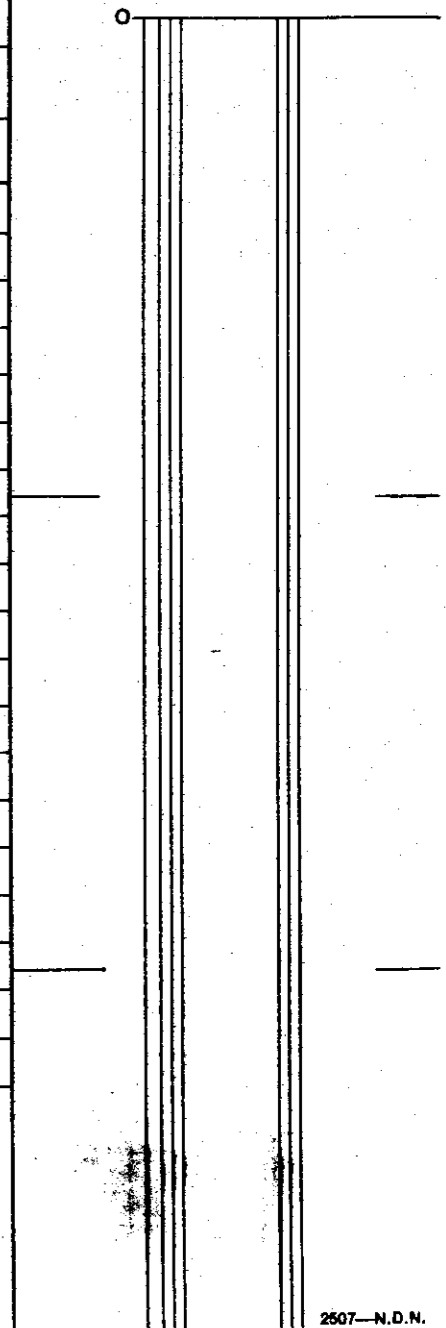


40 Scale

Objective: _____ Sampled: _____
 Logged By: T.D. GARROW Date: OCTOBER 6, 1969 Composites: _____
 Color Plot & Dips Ore Classes & Aver.

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

From	To	Discard:	Reason:
149	164		Silty sandstone, thin bedding, dip angle 20°, x-bedding.
164	179		Silty sandstone, thin bedding, dip angle 20°, sparse coal lenses.
179	194		Silty sandstone, thin bedding, dip angle 12°.
194	200.6		Silty sandstone, thin bedding, x-bedding.
200.6	205		6" interlayers of sandstone and silty sandstone.
205	209		Sandstone, thin bedded, one 1/4" coal lense.
209	217		Sandstone, thin bedded, dip angle 20°. Several 1/8" coal partings.
217	224		Sandstone with numerous 2" coal partings.
224	237		Sandstone with numerous 1/4" coal partings, and several 2" coal partings.
237	250		Sandstone with numerous coal partings, and several 2" coal partings.
250	256.6		Sandstone with numerous coal partings, and several 2" coal partings.
256.6	265		Sandstone, thin bedded, dip angle 22°. X-bedding, no coal partings.
265	274		Sandstone, thin bedded, dip angle 22°. X-bedding, no coal partings.
274	280		Sandstone, thin bedded, sparse coal partings.
280	290		Sandstone, thin bedded.
290	292		Siltstone.
			End of Hole.



Core Size
 H.Q.
 Hole No. 101 Page 2

Diamond Drill Geological Log



K-FIELDING 69(3)A-2

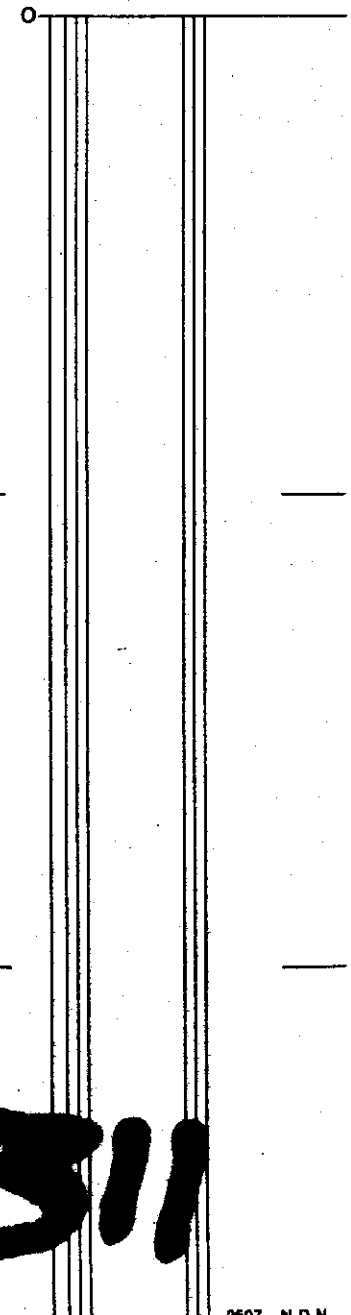
Objective: _____ Sampled: _____

Logged By: T.D. GARROW Date: OCTOBER 7, 1969 Composites: _____

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

From	To	Discard:	Reason:
0	26		Silty sandstone with siltstone and sandstone partings. Thin bedded. Dip angle 24°.
26	40		Silty sandstone tending to siltstone thin bedded, dip angle 28°.
40	44		Siltstone? 3.5' core short.
44	50		Clarain, clarodurain, minor vitrain and bone coal. #2933 = 44-54.5. #2934 = 54.5 - 61.
60	61		Bone coal.
61	64		Siltstone, 1/4" coal partings. 3' core short.
64	79		Siltstone. 6" of poor bone coal at 63' and 71'.
79	95		Siltstone, 1/2" coal partings. Dip angle 26°. 2' core short.
96	101.6		Siltstone, no coal partings, but carbonaceous.
101.6	110		Sandy siltstone, thin bedded 20°.
110	125		Sandy siltstone, several 3 to 4" sandstone and siltstone partings.
125	133		Sandy siltstone, thin bedded 55°?
133	140		Sandstone, thin bedded, one 2" siltstone.
140	146		Sandstone, thin bedded, dip angle 18°.
146	155		Sandstone with numerous coal partings.
155	166.6		Sandstone with numerous coal partings.
166.6	170		Sandy siltstone, thin bedded, slightly contorted, numerous coal partings. 1' core short.
170	171		Sandy siltstone, thin bedded, slightly contorted.
171	176		Siltstone.
176	185		Sandstone, medium grain, thin bedded, sparse coal partings. 1' core short.
185	189		Sandstone, medium grain, numerous coal partings, one 4" siltstone.
189	192		Siltstone.

40 Scale
Color Plot & Dips
Ore Classes & Aver.



Core Size
H.Q.
Hole No. 102
Page 1

Diamond Drill Geological Log



40 Scale
Color Plot & Dips Ore Classes & Aver.

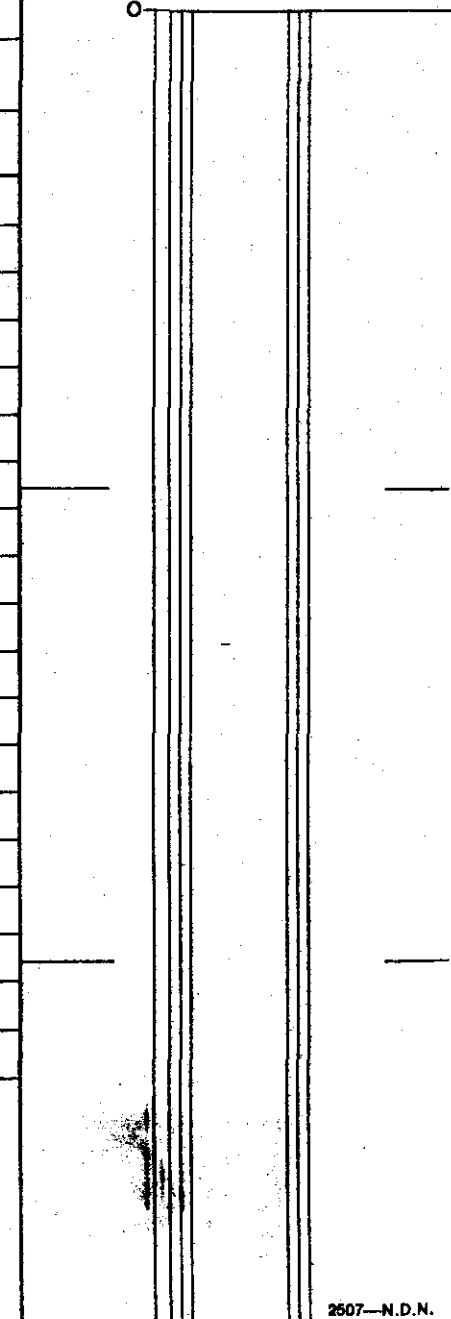
Objective: _____ Sampled: _____

Logged By: T.D. GARROW Date: OCTOBER 10, 1969 Composites: _____

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

From To Discard: _____ Reason: _____

192	196	Sandstone, coal partings.
196	196.6	Sandstone, coal partings.
196.6	198	Silty sandstone, thin bedded, dip angle 30°. Sparce coal partings.
198	208.5	Silty sandstone, thin bedded, dip angle 30°. Sparce coal partings.
208.5	223.5	Sandstone, medium grained, thin bedded. Dip angle 20°. Sparce coal partings.
223.5	238	Sandstone, medium grained, thin bedded, Dip angle 30°. Sparce coal partings. Minor pyrite.
238	241	Sandstone, medium grained, thin bedded. Dip angle 30°. Sparce coal partings.
241	247.5	Sandstone, medium grained, thin bedded, Dip angle 30°. Numerous coal lenses and 1/2 to 1 inch coal partings.
247.5	253	Sandstone, medium grained, thin bedded, very sparce coal partings.
253	267	Silty sandstone, thin bedded. Dip angle 25°. Very sparce coal partings.
		End of Hole.



Core Size
H.Q.

Hole No. Page
102 2

Diamond Drill Geological Log



K. FARROW 69(3)A-2

Objective: _____ Sampled: _____

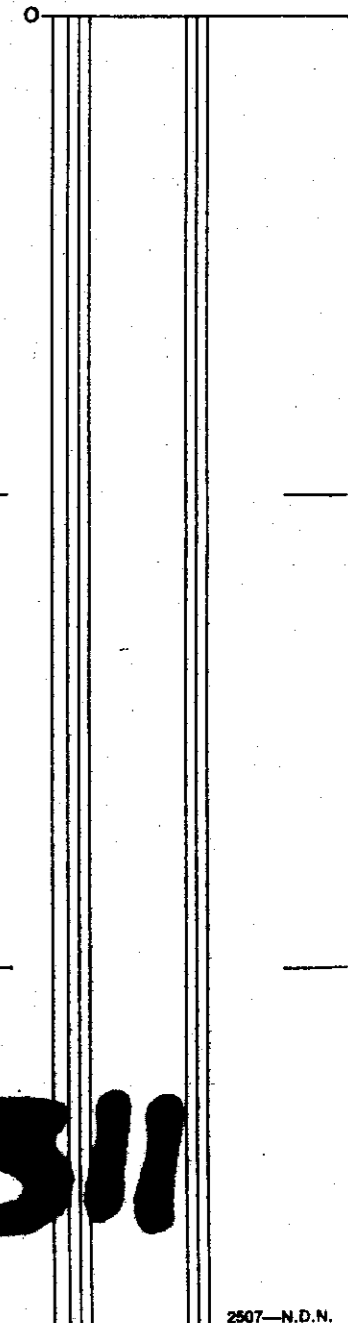
Logged By: T.D. GARROW Date: OCTOBER 11, 1969

Composites: _____

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

From	To	Discard:	Reason:
0	23		Casing, soft and mushy coal from 0 to 23 feet?
23	29		Coal, clarain and minor vitrain. Badly broken.
29	39		Sandy siltstone.
39	42		Coal, bone coal, clarain broken.
42	46.5		Sandy siltstone.
46.5	54		Sandy siltstone with 4" coal parting at 50', 51', 53'.
54	61		Silty sandstone, thin bedded, dip angle 28°.
61	73		Sandy siltstone, thin bedded, dip angle 20°.
73	89		Silty sandstone, thin bedded, dip angle 25°, minor current bedding.
89	103		Silty sandstone, thin bedded, dip angle 25°.
103	109		Silty sandstone, thin bedded, silty partings.
109	110.5		Siltstone, silty partings.
110.5	118		Silty sandstone, thin bedded, thin siltstone parting and lenses.
118	132.6		Sandstone, medium grained, several thick beds with siltstone lenses, breccia. 125-130 numerous thin coal partings.
132.6	148		Sandstone, coarse grained, thin bedded, thin lensoid partings of coal and siltstone at 130, 140 and 145 feet.
148	157		Sandstone, coarse grained, thick bedded, numerous thin coal partings at 152 feet.
157	162.5		Sandy siltstone.
162.5	171		Sandy siltstone, tending towards silty sandstone. Thin bedded. Dip angle 20°.

40 Scale
Color Plot & Dips
Ore Classes & Aver.



Core Size
H.Q.
Hole No. 103
Page 1

Diamond Drill Geological Log



Objective: Sampled:

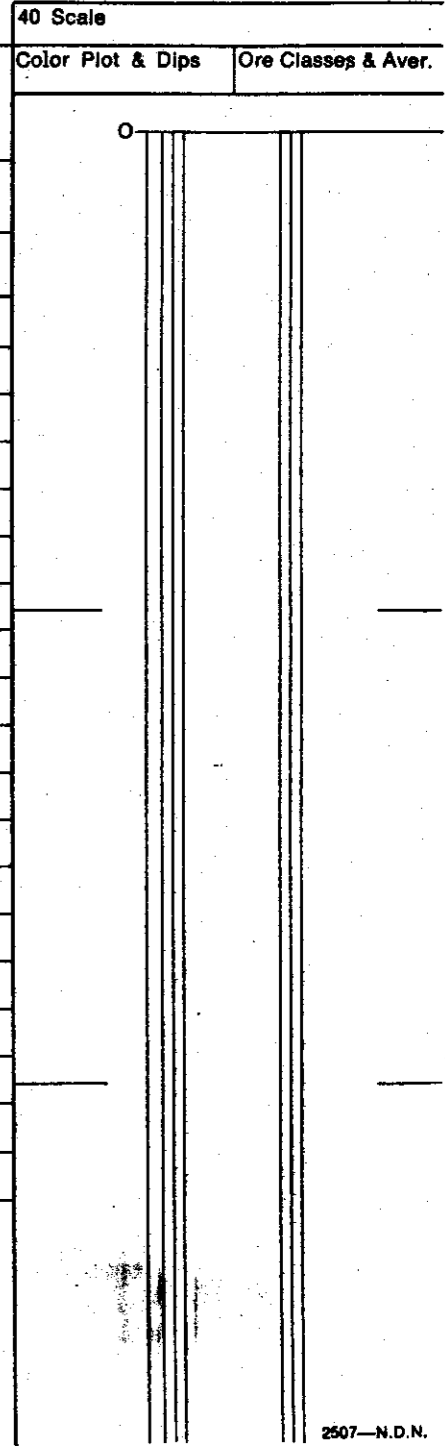
Logged By: **D.T. P.** Date: **OCTOBER 12, 1969**
 Logged By: **T.D. GARRON** Composites:

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

From To Discard: Reason:

171	177.5	Sandstone, medium to fine grained. Thin bedded.
177.5	192.5	Sandstone, medium to fine grained, thin bedded, several 1' coarse grained beds. Several 2" sandy siltstone partings. Siltstone fragments at 191 feet.
192.5	208.5	Sandstone, coarse grained, medium to thin bedded, several 2" silty partings and numerous thin coal partings at 199-202'.
208.5	219	Sandstone, coarse grained, thin bedded. Very numerous irregular coal lenses from 216 to 219 feet.
219	222	Siltstone, very carbonaceous with numerous plant fragments.
222	237	Siltstone, very carbonaceous, numerous plant fragments.
237	241	Siltstone.
241	247	Sandy siltstone, sporadic thin bedded partings, dip angle 17 degrees.
247	252	Siltstone, numerous plant fragments.
252	267	Siltstone, locally numerous coal partings and slickensides surfaces (conformable?).
267	273	Sandy siltstone, thin bedded, dip angle 20°. Current bedding.
273	281	Silty sandstone, thin bedded, very sparse calcite veinlets.
281	286	Silty sandstone, thin bedded, very sparse calcite veinlets.
286	294	Sandy siltstone, sporadic sandy layers. Dip angle 16 degrees.
		End of Hole.

Core Size
 H.Q.
 Hole No. Page
 103 2



Diamond Drill Geological Log



K-FAROTING 69(3)A-2

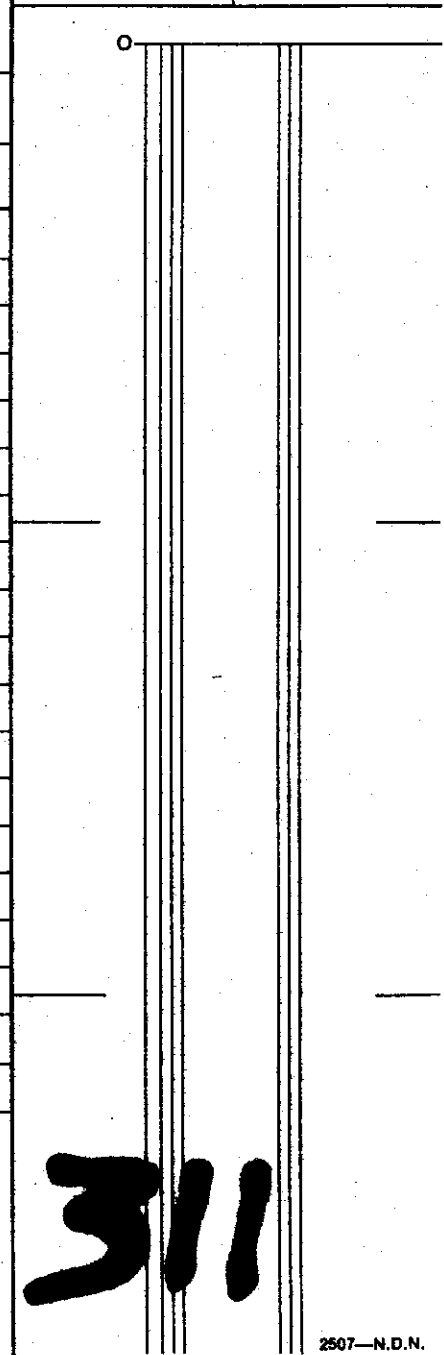
Objective: _____ Sampled: _____

Logged By: **P.J. P.** Date: **OCTOBER 14, 1969** Composites: _____
T.D. GARROW

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

From	To	Discard:	Reason:
0	27	Casing.	
27	41	Coarse grained sandstone, mostly thick bedded.	
41	53.5	Coarse grained sandstone, mostly thick bedded. Dip angle 18°. Numerous erratic coal partings.	
53.5	55	Siltstone.	
55	67	Sandy siltstone, minor siltstone partings. Thin bedded.	
67	72.5	Sandy siltstone, minor siltstone partings, thin bedded.	
72.5	82	Sandstone, fine grained, thin bedded, sparse calcite.	
82	97	Sandstone, medium to fine grained, thin bedded, dip angle 26°.	
97	111.5	Sandstone, medium to fine grained, thin bedded. Very thin coal partings.	
111.5	126	Sandstone, medium to fine grained, thin bedded. Dip angle 29°. Very thin coal partings.	
126	129.5	Sandstone, medium to fine grained, thin bedded. Dip angle 29°. Very thin coal partings.	
129.5	141	Siltstone, several thin coal partings and sporadic wispy sandy partings.	
141	156	Sandy siltstone, several thin coal partings and sporadic wispy sandy partings.	
156	170	Siltstone, several thin coal partings and sporadic wispy sandy partings.	
170	171	Siltstone, very carbonaceous.	
171	172	Siltstone, very carbonaceous.	
172	183.5	Siltstone, very carbonaceous.	
183.5	198	Siltstone, very carbonaceous.	
198	199	Siltstone, very carbonaceous.	
199	207	Sandy siltstone.	
207	208	Coal, bone coal. #2975 = 208 - 212.	
208	210	Coal, clarain and minor vitrain.	
210	211	Siltstone, with coal partings.	

40 Scale
 Color Plot & Dips
 Ore Classes & Aver.



Core Size
 H.Q.
 Hole No. 104
 Page 1

Diamond Drill Geological Log



Objective:

Sampled:

Logged By: **D.J.P.**
T.D. GARRON

Date: **OCTOBER 15, 1969**

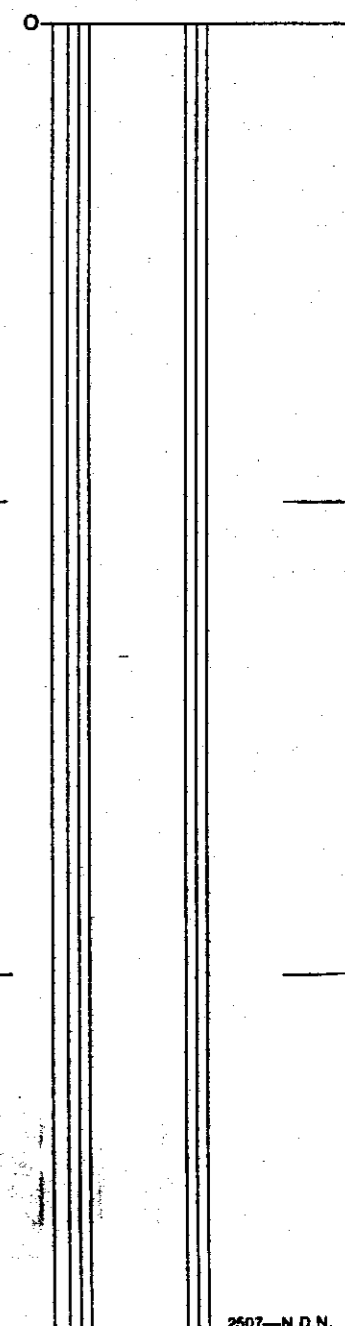
Composites:

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

From To Discard: Reason:

211	212		Coal, clarain and minor vitrain, good coal, moderately crushed.
212	218		Siltstone with several 5" partings of poor bone coal.
218	227		Coal, clarain, very minor durain and fusain, good coal relatively uncrushed.
227	245		Coal, clarain, very minor durain and fusain, good coal relatively uncrushed. 3' core short.
245	260		Siltstone, minor calcite and coal partings. #2936-218-223. #2937-223.-227. #2938-227-232. #2939-232-238. #2940-238-245
260	263		Siltstone.
263	275		Silty sandstone, thin bedded. Dip angle 25°. Minor calcite.
275	288		Silty sandstone, thin bedded, dip angle 25°. Several 4" coal partings and a few thin coal partings.
288	291		Coal, dominantly clarain, good coal, moderately crushed. #2941 = 288 - 291.
291	305		Coal, dominantly clarain, good coal, mostly crushed. #2942 = 291 - 297. #2943 = 297 - 302.
305	314		Coal, dominantly clarain, good coal, mostly crushed. #2944 = 302 - 305. #2945 = 305 - 314. #3' core short.
314	317		Siltstone with numerous coal partings.
317	320		Coal, dominantly clarain, good coal? mainly wash. #2946 = 317 - 320.
320	326		Siltstone with numerous coal partings. 2' core short.

40 Scale
Color Plot & Dips Ore Classes & Aver.



Core Size
H.Q.
Hole No. Page
104 2

Diamond Drill Geological Log



K-FACING 69(3)A-2

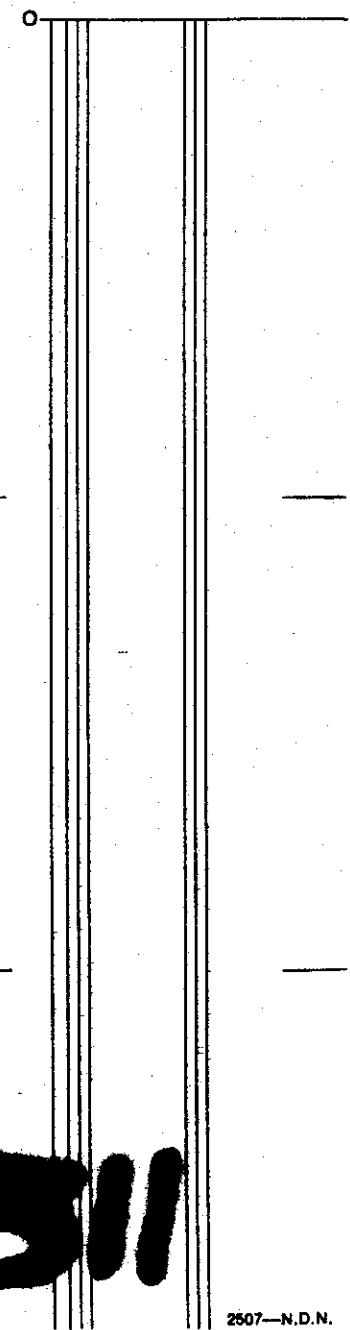
Objective: Sampled:

Logged By: **S.C. T.D. GARROW** Date: **OCTOBER 17, 1969** Composites:

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

From	To	Discard:	Reason:
0	20	Collared in coal.	No samples.
193	199	Siltstone.	
199	204	Coal, clarain, vitrain, 70/30 good coal, moderately broken.	(199 - 204). #2947.
204	216	Siltstone with several 6" coal partings.	
216	219	Coal clarain and bone coal 70/30 good coal, moderately broken.	
219	221	Siltstone with coal partings.	
221	224	Coal, clarain and vitrain, good coal, moderately broken.	2' core short.
224	226	Bone coal.	
226	231	Siltstone, with coal partings.	
231	236	Coal, clarain, good coal, very lightweight.	
236	266	Siltstone.	
266	321	Sandstone, medium grained thin bedded.	Dip angle 25 degrees.
321	337	Sandstone, medium to coarse grained, thick and thin bedded sections.	dip 39 degrees.
337	352	Sandstone, medium to coarse grained, thin bedded.	Dip angle 5°. Coal partings at 351 feet.
352	365	Sandstone, medium grained, thick bedded.	Locally numerous irregular coal lenses.
365	380	Silty sandstone, thin bedded, dip 0°.	(Horizontal). Very sparse calcite. 1' core short.
380	382	Siltstone.	
382	390	Silty sandstone, thin bedded.	Dip 28°.
390	393	Siltstone, very carbonaceous.	

40 Scale
Color Plot & Dips
Ore Classes & Aver.



Core Size
N.Q.
Hole No.
114
Page
1

Diamond Drill Geological Log



K-logging 69(3)A-2

Objective: **PRE*PRODUCTION DRILLING** Sampled:

Logged By: **H. J. HOLLANDS** Date: **SEPTEMBER 23, 1969** Composites:

Block: Sect.: Place: **Eagle Mt. (West)** App. Bear: App. Dip.: **-90°** Length: **177'**

From	To	Discard:	Reason:
0	78	Tri-oced, siltstone and sandy siltstone and sandstone.	
78	85	Coal, coal ground away, no core.	
85	95	Coal, only 2' of core recovered, it is pulverized and in small fragments. Clarain, a little vitrain and fusain. Some shaly partings.)
95	105	Coal, only 2' core recovered, pulverized and in small fragments. Claredurain, durain and fusain, some clarain.)
105	107.5	Coal, 1/2' of core recovered. Clarain and durain plus shale impurities.)
107.5	108.5	Shale, 1/2' of core recovered. Shale with coal partings.)
108.5	113	Coal, claredurain and clarain with some bone coal, 2' of core recovered. Larger pieces 1" to 2". Scattered vitrain bands.)
113	114	Coal, 1/2' core recovered, pebbly size, durain, fusain plus bone coal.)
114	118	Siltstone, sandy siltstone. 4' core recovered.)
118	144.6	Tri-oced.)
144.6	148.5	Coal, impure bone coal with shale, some clarain and vitrain, core broken into thin disc shaped pieces. Full core recovery.)
148.5	150	Siltstone.)
150	154	Sandy siltstone, full core recovery.)
154	167	Tri-oced.)
167	171	Sandy siltstone.)
171	177	Siltstone, irregular shaped concretions? 167-177 there is 1' core short.)

End of Hole.

Note: No samples were taken in the coal because of the poor recovery.

Core Size

N.Q.

Hole No.

115

Page

1

40 Scale
Color Plot & Dips
Ore Classes & Aver.

0

SEAM NO.

311

Diamond Drill Geological Log



K-FIELDING 67(31A-2

Objective: **PRE-PRODUCTION HOLE**

Sampled:

Logged By: **M.R. MURRELL**

Date: **SEPTEMBER 13, 1969**

Composites:

Block:

Sect.:

Place:

App. Bear:

App. Dip.:

Length:

From	To	Discard:	Reason:
0	15		Overburden.
15	23		Siltstone, very broken, rusty, weathered zone, trace calcareous specks over first foot has trace vitrain stringers over more carbonaceous lower three feet.
23	29		Coal, clarain with vitrain in equal amounts. Vitrain is well banded in 1/4" to 1/2" bands. Limonite (weathering product) indicates pyrite was present. Not badly weathered. #2518 = 23 - 29. (Recovery 15-32 = 13/17 = 77%).
29	35		Sandstone, current bedded, limonitic, still in oxidized zone.
35	37		Siltstone, black, soft, trace coal partings, broken at 36", 4", slickensides.
37	38		Sandstone, slightly current bedded.
38	42		Siltstone interbanded with sandy siltstone.
42	44		Broken zone - 1/2' chunks of durain with clarain and predominance of fusain, followed by broken durain and bone coal to 44'. Very poor recovery.
44	46		Siltstone gradint to sandy siltstone by 45, showing current bedding.
46	58		No core.
58	62		Coal, clarain with vitrain bands. High percentage of fusain. #2519. 6" siltstone band 60.5 to 61. 61-62 durain with thin vitrain stringers, plant fragments. (Recovery 52-62 = 14/30 = 47%).
62	65.8		Siltstone, black massive, 62-64.6. 1.3' core short.
65.8	67		Shale and bone coal material, broken into thin lens.
67	68.5		Coal, clarain, scattered vitrain bands, a little fusain.
68.5	71.5		Silty mudstone, black, massive.

40 Scale

Color Plot & Dips

Ore Classes & Aver.

0

Core Size

N.Q.

Hole No.

116

Page

1

311

Diamond Drill Geological Log



40 Scale
Color Plot & Dips Ore Classes & Aver.

Objective:

Sampled:

Logged By: H.J. HOLLANDS

Date: SEPTEMBER 17, 1969

Composites:

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

From	To	Discard:	Reason:
71.5	76		Siltstone, thin bedded, dip angle 70°. Slightly sandy. Note: End of the N.Q. Core.
76	82.5		Start of the 3" core. Sandy siltstone, thin bedded. Dip angle 75 degrees. Some current bedding.
82.5	90		Siltstone, black, soft, faintly bedded. Coal partings, 1" thick. Note: 76 to 83.6 1/2' core short.
90	102.5		Sandy siltstone, faintly bedded. Dip angle 76°. 1/2" coal partings. At 92' a 3" coal parting (clarain).
102.5			83.5 - 101 no block. 1.5' core short.
102.5	103.5		Shale and coal.
103.5	106		Coal, clarain, scattered vitrain, some fusain.
106	112		Coal, clarain, numerous shale bands up to 1.5' thick. Nos. 2323, 2324, 2325.) Seam "5".
112	117.5		Coal, clarain and durain, vitrain bands, little fusain. "Nos. 2376, 2377.) These samples were contaminated with
117.5	119		Shale.) oil, therefore were not used.
119	120.5		Coal, clarain, a little vitrain and fusain.)
120.5	131.6		Siltstone, faintly bedded. Dip angle 72 degrees. Sandy sections.
131.6	284		Tri-cone.
284	293.5		Sandy siltstone, thin bedded. Dip angle 55°. Silty intervals.
293.5	300		Siltstone, faintly bedded, black, occasional 1/4" coal seam.
300	338		Coal, clarain and clarodurain with vitrain bands. (Good Coal) Little fusain.) SEAM 4 300-335.5, 12.5' of coal short. 300-310 #2400, 310-320 #2374. 320-330 #2375. 330-335.6 #2826.)
338	355		Coal, clarain and durain, shale and siltstone partings. Some fusain, crushed and pulverized sections. 338-343, 3.5' coal short. 343-349, 1' short, 349-355, 1' short.
355	355.5		Shale and coal partings. #2827 = 335.5 - 345. #2828 = 345 - 355.
355	360		Sandy siltstone, faintly bedded, current bedding.
			End of Hole

Core Size

3" Core

Hole No.

116

Page

2

Diamond Drill Geological Log



K-BEDDING 61(3)A-2

Objective: **PRE-PRODUCTION** Sampled:

Logged By: **H.J. HOLLANDS** Date: **SEPTEMBER 30, 1969** Composites:

Block: Sect.: Place: App. Bear: App. Dip.: **-90°** Length:

From	To	Discard:	Reason:
0	82		Casing and Tri-cone bit.
82	85		Sandy siltstone, thin bedded. Dip angle 70 degrees.
85	105		Siltstone, faintly bedded, dip angle 64 degrees. 2' core short.
105	105		Sandstone, thin bedded.
105	147.5		Siltstone with an occasional sandy bed. Thin bedded. Occasional x-bedding, dip angle 75°. 98-114 - 1.5' core short. 129-144 - broken core, 2' core short.
147.5	154.5		Coal, clarain and clarodurain with vitrain bands. 151-154 - coal, shale partings, clarain, durain, some bone coal. 1/2' core short.
154.5	165		Mudstone, black, massive.
165	179		Siltstone, thin bedded, current bedded.
179	187.5		Sandy siltstone, thin bedded. Dip angle 70 degrees.
187.5	204.5		Sandy siltstone, thin bedded. Dip angle 66 degrees. 1 1/2' core short.
204.5	207		Coal, clarain, vitrain bands. 1' coal short. #2859.
207	212.5		Shale, coal partings. 2 1/2' core short. #2859.
212.5	219		Coal, clarain, vitrain bands, some durain, numerous shale inclusions. 2' core short. #2860.
219	282		Sandy siltstone, thin bedded, Dip angle 76°. Dip at 248° = 60°. Occasional silty sections.
282	299		Siltstone.
299	317		Sandy siltstone, thin bedded. Dip angle 70°. Occasional sandstone bed.
317	363.5		Sandstone, medium grained. Light and dark grey, occasional siltstone bed. 1/4" coal partings. Dip at 338° = 73°. Dip at 355° = 57°. Some siltstone fragments at 362.

40 Scale

Color Plot & Dips Ore Classes & Aver.

0

Core Size

H.Q.

Hole No. Page

117 1

311

Diamond Drill Geological Log

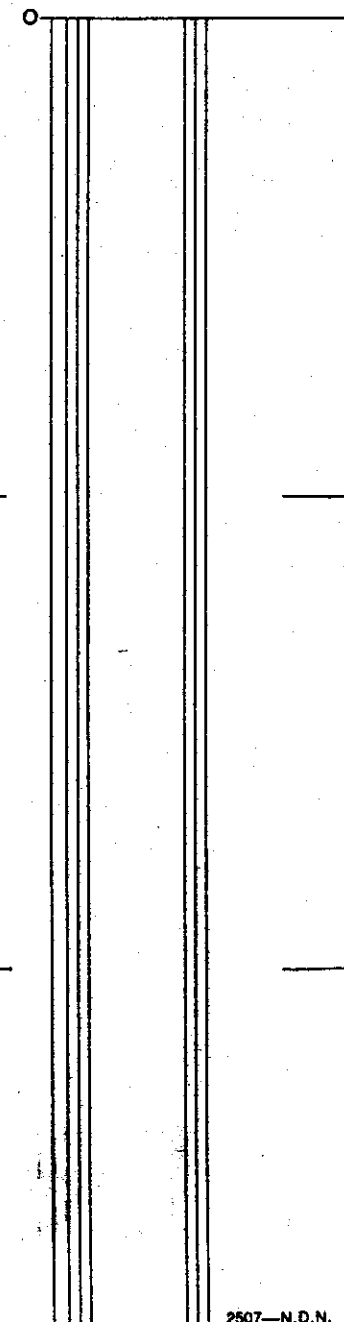


Objective: _____ Sampled: _____
 Logged By: **D.J. P.** Date: **OCTOBER 9, 1969** Composites: _____
 Logged By: **T.D. GARROW**

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

From	To	Discard:	Reason:
363.5	371		Sandstone, medium grained. Siltstone partings and fragments. 1' core short.
371	378		Siltstone, several sandy partings.
378	392.5		Siltstone, several sandy siltstone units 4" to 5". 1/2' core short.
392.5	398		Siltstone, several sandy siltstone units.
398	400		Sandstone, thick bedded, medium to fine grain.
400	405.6		Siltstone, sparse thin beds of silty sandstone, dip angle 35°.
405.6	412		Siltstone, very sparse coal stringers.
412	418		Coal 50-50, clarain and vitrain. #2861 = 412 - 423. 1' core short.
418	432		Coal, dominantly clarain. #2862 = 423 - 432. 1' core short.
432	447		Coal, clarain and minor vitrain. #2863 = 431 - 450.
447	450		Coal, clarain and clarodurain. 9' core short.
			End of Hole.

40 Scale
 Color Plot & Dips
 Ore Classes & Aver.



Core Size _____
 Hole No. **117** Page **2**

Diamond Drill Geological Log



K-TRONING 69(3)A-2

Objective:

Sampled:

Logged By: J.J. P.
T.D. GARROW

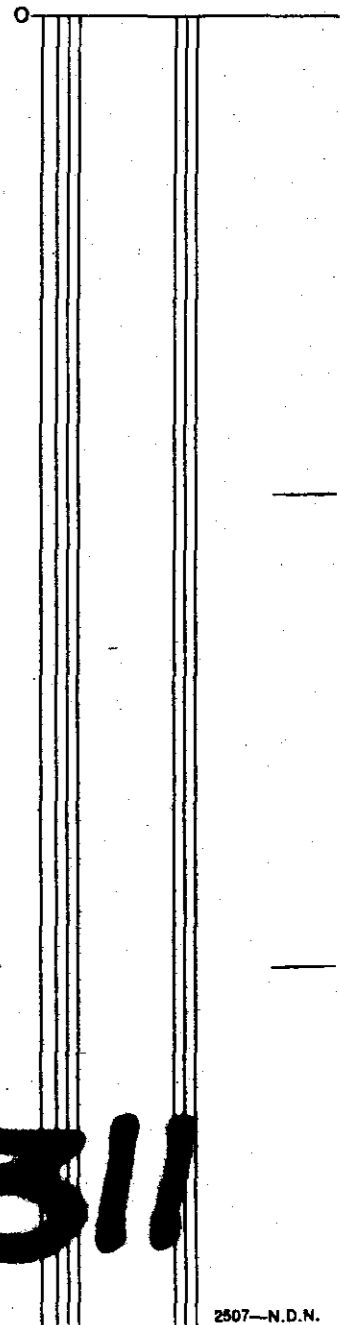
Date: OCTOBER 13, 1969

Composites:

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

From	To	Discard:	Reason:
65	65.6	Coal, clarain and vitrain.	
65.6	66	Siltstone.	
66	69	Interlayered bone coal and siltstone. 50/50.	
69	76	Coal, clarain, durain, vitrain. (Not sampled, too many shorts). 4' core short.	
76	80	Siltstone with several 2" bone coal partings.	
177	178	Siltstone, thin coal partings and slickenslides.	
178	181	Sandstone, medium to fine grained. Thin bedded. Dip angle 24°.	
181	185	Sandstone, medium to fine grained, thin bedded.	
185	189	Siltstone, minor coal partings.	
189	195	Silty sandstone, fine grained, tends to become sandy siltstone.	
195	198	Sandstone, medium to fine grained.	
198	226	Sandstone, medium to fine grained. Thin bedded. Dip angle 26°.	
226	237	Siltstone.	
237	307	Sandstone, medium to fine grained, thin bedded. Dip angle 30°.	
307	320	Silty sandstone.	
320	356	Siltstone, sporadically sandy.	
356	368	Silty sandstone. Thin bedded.	
368	378	Siltstone.	
378	421	Coal, dominantly clarain and vitrain. Good coal. #2864 = 378-408. #2865 = 408-421.	Core Size
421	427	Silty sandstone.	N.Q.
			Hole No.
			118
			Page
			1

40 Scale
Color Plot & Dips
Ore Classes & Aver.



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FORDING OPERATIONS
DRILL HOLE SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	LAB. No.	SHORTS	WIDTH	INH M	A	VM	FC	FSI	S	REMARKS
93	96	Coal	1901										
96	100	Coal, clarain and clarodurain	1902										
100	105	Coal, crushed clarain	1903										
105	110	Coal, durain, sulfides present	1904										
110	115	Coal, clarain with occasional vitrain	1905										Seam 7
115	120	Coal, clarain, bands of vitrain, sulfides	1906										
120	125	Coal, crushed clarain, pyrite	1907										
125	130	Siltstone and coal	1908										
130	135	Siltstone, coaly partings	1909										
135	140	Coal and siltstone	1910										
140	145	Coal, some siltstone	1911										
296	300.6	Coal, crushed clarain w/ vitrain pyrite bands	1912										} Upper Part of Seam 5
301	303.5	Coal, durain mixed w/siltstone	1913										

FORDING OPERATIONS
DRILL HOLE SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	LAB. No.	SHORTS	WIDTH	INH M	A	VM	FC	FSI	S	REMARKS
332	335	Coal, fusain, some durain	1914										
335	340	Coal and siltstone	1915										} Lower part seam 5
340	344	Coal, durain, some fusain and siltstone	1916										
623	627	Coal	1917										
617	623	Coal	1918										
612	616	Coal	1919										
626	631	Coal	1920										
631	635	Coal	1921										
635	640	Coal	1922										} Seam 4
640	645	Coal	1923										
645	647	Coal	1924										
647	650	Coal	1925										
650	654	Coal	1926										
654	659	Coal	1927										
659	660	Coal	1928										

FORDING OPERATIONS
DRILL HOLE SAMPLING RECORD

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FROM	TO	DESCRIPTION	SAMPLE NUMBER	LAB. No.	SHORTS	WIDTH	INH M	A	VM	FC	FSI	S	REMARKS
194	198	Coal, vitrain through clarain to durain	1929			4.0							Minor Seam
290	295	Coal, crushed clarain and clarodurain	1930			5.0							Minor Seam
479	484	Coal, clarodurain and fusain, vitrain bands	1931			5.0							Minor Seam
654	660	Coal, mostly clarodurain, some clarain	1932			6.0							
660	665	Coal, clarain, occasional durain	1933			5.0							
665	669	Coal, clarain with vitrain bands	1934			4.0							Seam 7?
669	673	Coal, durain, clarain	1935			4.0							
673	681	Coal, crushed, little durain	1936			8.0							

FORDING OPERATIONS
DRILL HOLE SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	LAB. No.	SHORTS	WIDTH	INH M	A	VM	FC	FSI	S	REMARKS
748	752	Coal, vitrain and clarain	1937			4.0							
752	754	Coal, vitrain and clarain	1938			2.0							
754	760	Vitrain with some clarain	1939			6.0							
760	765	Clarain with few vitrain bands.	1940			5.0							
765	770	Coal, clarodurain, some fusain	1941			5.0							
770	775	Coal, clarain with vitrain bands	1942			5.0							
775	780	Coal, clarain with vitrain bands	1943			5.0							Some S?
780	785	Coal, clarain with vitrain bands	1944			5.0							- Banded?
785	790	Coal, clarodurain, fusain & small vitrain bands	1945			5.0							
790	795	Coal, clarodurain, some fusain bands and vitrain	1946			5.0							
795	800	Coal, clarodurain, some fusain bands and vitrain	1947			5.0							
800	8055	Coal, clarain-occasional vitrain bands	1948			5.0							
8055	809	Coal, badly crushed durain	1949			3.5							
809	815	Coal, mainly clarodurain and durain	1950			6.0							

FORDING OPERATIONS
DRILL HOLE SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	LAB. No.	SHORTS	WIDTH	INH M	A	VM	FC	FSI	S	REMARKS
838.5	843	Coal, vitrain, durain.	1801			4.5							
843	848	Coal, soft clarain with vitrain bands	1802			5.0							
848	852	Coal, soft clarain with vitrain bands	1803			4.0							
852	857	Coal, clarain with vitrain bands	1804			5.0							Seam 4?
857	861	Coal, clarain and clarodurain	1805			4.0							
861	863.7	Coal, fusain and clarain	1806			4.0							
863.7	872	Coal, clarain and clarodurain	1807			2.7							
872	874.2	Coal, clarain and clarodurain	1808			2.2							
875	877.9	Coal, clarodurain	1809			2.9							
882	885.8	Coal, clarain and clarodurain	1810			3.8							Minor Seam

FORDING OPERATIONS
DRILL HOLE SAMPLING RECORD

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FROM	TO	DESCRIPTION	SAMPLE NUMBER	LAB. No.	SHORTS	WIDTH	INH M	A	VM	FC	FSI	S	REMARKS
508.2	510.3	Coal and siltstone	1821	374b		2.1	1.8	67.3	11.0	78.3	1½, 1½, 1½	.25	Minor Seam
513.5	514.5	Coal and siltstone	1822	381b		1.0	.76	56.5	12.9	30.6	1, 1, 1	.47	Minor Seam
524	528.5	Coal-clarain and clarodurain	1823	389b		4.5	.43	5.6	20.9	73.5	7½, 7½, 8	.49	Seam 3
528.5	535	Coal-crushed sandy clarodurain	1824	387b		3.5	.47	15.9	23.7	60.4	7½, 8, 8	.45	

FORDING COAL

DIAMOND DRILL SAMPLING RECORD

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FROM	TO	DESCRIPTION	Sample NUMBER	C.E. SENT	WIDTH	T	A	VM	FC	PSI	S	REMARKS	
148.5	154.0	Coal, clarain crushed, thin vitrain	1825									} Seam B?	
154.0	160.0	" " "	154-160=1826										
			160-164=1827										
			164-169=1828										
169	178.5	Coal, clarain & fusain, crushed - some thin vitrain - minor siltstone partings											
			169-174.5=1829										
			174.5-178.5=1830										

FORDING OPERATIONS
DRILL HOLE SAMPLING RECORD

311

FROM	TO	DESCRIPTION	SAMPLE NUMBER	LAB. No.	SHORTS	WIDTH	INH M	A	VM	FC	FSI	S	REMARKS
193.5	199	Seam #E durain, clarain, fusain and vitrain	1831	303		5.5	.49	26.7	21.5	51.31	7-7	.44	
199	204	Clarodurain and durain	1832	279		5	.68	16.5	23.3	59.52	5½-6½	.52	
204	209	Seam E clarain streaks of fusain	1833	285		5	.56	15.6	22.9	60.94	6-6	.57	
209	214	Seam E durain, hard granular	1834	291		5	.67	18.8	22.5	58.03	5-5½	.31	
214	218	Seam E vitrain, clarain, durain	1835	322		4	.52	9.0	25.2	65.28	8-8	.31	
218	222	Seam E vitrain, clarain, durain	1836	313		4	.30	15.4	23.8	60.5	5½-6	.22	
222	225.5	Seam E vitrain, clarain, durain	1837	272		3.5	.54	21.1	23.8	54.56	7-7½	.30	
296.5	300	Seam D clarain, durain, some vitrain	1838	302		3.5	.77	64.2	13.5	21.53	1-1½	.32	
300	304	Seam D clarain and clarodurain, fusain strg.	1839	344		4	.52	11.7	22.4	65.38	5½-5½	.19	
304	308	Seam D clarain and clarodurain, fusain strg.	1840	309		4	.46	8.0	22.2	69.34	4½-5	.23	
308	312.5	Seam D clarain and vitrain	1841	316		4.5	.42	11.8	22.3	65.48	5-5½	.12	
312.5	317.5	Seam D clarain and vitrain	1842	320		5	.49	11.8	21.7	66.01	3-3½	.27	
317.5	323	Seam D clarodurain, scattered vitrain	1843	229		5.5	.45	8.4	22.5	68.65	6-6½	.32	
323	329.5	Seam D clarain and clarodurain	1844	315		6.5	.50	15.1	20.7	63.7	2½-3	.33	

FORDING OPERATIONS
DRILL HOLE SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	LAB. No.	SHORTS	WIDTH	INH M	A	VM	FC	FSI	S	REMARKS
349	354	Seam C durain and clarodurain	1845	312		5	.32	16.1	20.4	63.18	3-4	.33	
354	357	Seam C durain, clarodurain, some vitrain	1846	310		3	.38	22.8	20.8	56.02	5-6	.32	
520	523	Coal-clarain and fusain, some durain	1847	276		3	.31	92.1	5.5	2.09	0-0	.23	
523	527.5	Coal-clarain and fusain, some durain	1848	294		4.5	.56	63.9	12.0	23.54	1-1	.25	Seam B
527.5	532	Coal-crushed durain and fusain	1849	282		4.5	.69	81.1	10.7	7.51	0-0	.82	
537	539	Coal-crushed durain and fusain	1850	298		2	.75	51.6	15.8	31.85	1-1 1/2	.52	Minor Seam

FORDING OPERATIONS
DRILL HOLE SAMPLING RECORD

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FROM	TO	DESCRIPTION	SAMPLE NUMBER	LAB. No.	SHORTS	WIDTH	INH M	A	VM	FC	FSI	S	REMARKS
68	71	Coal-clarodurain, fusain with vitrain bds 1' missing, soft clarain with a	1885	253		3.0	.50	29.4	21.2	48.90	6½, 6, 6	.55	
71	77	Coal- high % fusain, thin vitrain bands	1886	257		6.0	.46	26.7	22.3	50.54	5½, 6, 6	.56	
77	81	Coal-crushed clarain and fusain	1887	271		4.0	.61	11.0	23.1	65.29	6, 5½, 5½	.39	Seam E
81	89	Coal-pulpy coal, crushed & unidentifiable	1888	216		8.0	.51	16.9	24.0	58.60	7, 7½, 7½	.32	
89	96	Coal same as above	1889	254		7.0	.39	13.5	23.9	62.21	7½, 8, 7½	.43	
96	104	Coal-same as above	1890	256		8.0	.55	35.9	19.6	43.95	5½, 5½, 5	.39	
156	159.5	clarodurain, high % fusain and Coal-thick vitrain bands	1891	209		3.5	.59	28.3	20.9	50.20	3½, 3½, 4	.34	
159.5	164.5	Coal-clarodurain with vitrain bands	1892	218		5.0	.43	13.5	21.9	64.2	5½, 5, 5	.32	
164.5	169.5	Coal-clarain & clarodurain, thin vitrain bands	1893	260		5.0	.25	10.6	21.9	67.25	4, 4½, 4	.26	
169	174.5	Coal, same as above.	1894	252		5.0	.44	12.7	22.4	64.46	4, 4½, 4	.28	
174.5	179.5	Coal, same as above.	1895	253		5.0	.50	29.4	21.2	48.90	6½, 6, 6	.55	
179.5	183	Coal, bcne high % siltstone	1896	255		3.5	.39	52.9	13.6	33.11	N.A.	.28	Seam D
183	188	Coal-crushed clarain & fusain, vitrain 1" thick	1897	261		5.0	.49	10.7	21.2	67.61	4½, 5, 4½	.34	
188	193	Coal-same as above	1898	265		5.0	.37	56.5	12.8	30.33	1, 1, 1	.34	
193	197	Coal-crushed clarain and clarodurain Vitrain bands,	1899	212		4.0	.98	75.0	10.3	13.7	N.A.	.34	
197	201	Coal-same as above.	1900	211		4.0	.87	78.0	9.6	11.5	N.A.	.22	

FORDING OPERATIONS
DRILL HOLE SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	LAB. No.	SHORTS	WIDTH	INH M	A	VM	FC	FSI	S	REMARKS
244	249	Coal-unidentifiable	1576	263		5.0	.44	9.7	22.3	67.56	7,7 $\frac{1}{2}$,7	.60	
249	254	Coal-unidentifiable	1577	266		5.0	.35	18.3	21.3	60.05	6,6 $\frac{1}{2}$,6	.28	
254	259	Coal-unidentifiable	1578	259		5.0	.42	14.1	21.0	64.48	4 $\frac{1}{2}$,4,4	.30	
259	264	Coal-unidentifiable	1579	214		5.0	.61	10.6	21.2	67.6	3 $\frac{1}{2}$,4,3 $\frac{1}{2}$	.22	Sample B
264	269	Coal-unidentifiable	1580	215		5.0	.51	7.6	22.1	69.8	5 $\frac{1}{2}$,5 $\frac{1}{2}$,5 $\frac{1}{2}$	.21	
269	274	Coal-unidentifiable	1581	264		5.0	.45	6.4	21.7	71.45	6,6,6 $\frac{1}{2}$	.22	
274	279	Coal-unidentifiable	1582	210		5.0	.59	10.1	21.6	67.7	3 $\frac{1}{2}$,3,3 $\frac{1}{2}$	.24	
279	287	Coal-unidentifiable	1583	258		8.0	.58	50.3	16.3	32.82	1,1,1	.69	

FORDING OPERATIONS
DRILL HOLE SAMPLING RECORD

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FROM	TO	DESCRIPTION	SAMPLE NUMBER	LAB. No.	SHORTS	WIDTH	INH M	A	VM	FC	FSI	S	REMARKS
64.6	66	Coal-clarain, high% fusain, minor vitrain	1551	340		1.4	.81	29.7	18.7	50.79	2½, 2.2	.40	
66	71	Coal-crushed clarain & fusain, minor vitrain	1552	343b		5	.46	16.7	19.7	63.14	3.3, 2½	.30	
71	76	Coal: same as above	1553	355		5	.51	18.6	19.5	61.39	1½, 1½, 1½	.33	
76	81	Coal: same as above	1554	354		5	.50	8.0	23.0	68.5	8.8, 8	.32	
81	85	Coal: same as above	1555	356		4.	.46	8.3	22.3	68.94	7.7, 7½	.29	
85	90	Coal-clarain w/ vitrain bands, some fusain	1556	332		5	.69	40.2	16.6	42.51	2½, 2½, 2½	.36	"B" Band
90	95	Coal: same as above	1557	384		5	1.4	48.7	14.7	35.2	3½, 3½, 3	.37	
95	100	Coal: impure durain and clarain	1558	386		5	.63	81.7	8.1	9.57	C.N.A.	.28	
100	105	Coal: same as above	1559	360		5	.63	84.5	7.3	7.57	N. A.	.14	
105	110	Coal-clarain, vitrain, siltstone partings	1560	361		5	.45	21.4	20.0	58.15	7.7, 7½	.73	
110	117	Coal: same as above	1561	357		7	.32	62.3	11.1	26.28	1½, 1½, 1½	.29	
		Raw Composite (64.6 to 117)					.60	40.3	16.0	43.1		.34	
		Clean Composite (S.F.F.)						10.2			6, 5½, 5½		

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FORDING OPERATIONS
DRILL HOLE SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	LAB. No.	SHORTS	WIDTH	INH M	A	VM	FC	FSI	S	REMARKS
164.5	170	Coal-pulverized dry durain and fusain	2253	414		5.5	.39	20.7	19.9	59.01	3,3,3	.36	
170	175	Coal-pulverized dry, some clarodurain	2254	408		5	.36	13.0	20.8	65.84	4½,4,4½	.33	Seam D
175	180	Coal-pulverized dry, some clarodurain	2255	409		5	.34	14.3	20.1	65.26	4,3½,3½	.33	
180	185	Coal-pulverized dry, some clarodurain	2256	423		5	.41	25.6	18.6	55.39	4,4,4	.27	
		Raw Composite (164.5 to 185)					.38	18.5	19.9	61.22		.32	"D"
		Clean Composite (S.F.F.)						10.0			5,4½,5		
266.5	273	Coal-clarodurain, durain, considerable fusain	2261	444		6.5	.33	40.6	16.4	56.67	1,1,1½	.47	Minor Seam
		Raw Composite (266.5 to 273)											
		Clean Composite (S.F.F.)						9.9			6½,6,6½		
292.5	296.5	Coal-clarodurain, durain and fusain	2262	415		4	.41	34.5	17.4	47.69	2½,2½,2½	.36	
296.5	299	Siltstone, thin bedded	2263	418		2.5	.60	47.9	15.2	36.3	1,1,1	.38	Seam B
299	304	Coal-pulpy, wet clarodurain and fusain	2264	417		5	.47	57.7	14.6	27.23	1,1,1	.69	
		Raw Composite (292.5 to 304)					.48	47.5	15.7	36.12			"B"
		Clean Composite (S.F.F.)						12.7			7½,8,7½		

FORDING OPERATIONS
DRILL HOLE SAMPLING RECORD

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FROM	TO	DESCRIPTION	SAMPLE NUMBER	LAB. No.	SHORTS	WIDTH	INH M	A	VM	FC	FSI	S	REMARKS
60	65	Crushed coal-clarodurain, clarain & fusain	2336	528		5	.63	68.1	10.1	21.17	N. A.	.52	} "C"
65	70	Coal-crushed, clarodurain, clarain & fusain	2337	524		5	.38	22.4	18.1	58.52	1,1,1	.41	
		Raw Composite (60 to 70)					.50	45.2	14.4	39.9			
		Clean Composite (S.F.F.)						11.0			2½, 32½		"C"
137.5	145	Coal-crushed clarain, durain and fusain	2338	555		7.5	.43	14.8	21.2	63.57	6, 6½, 6½	.27	} Section B
145	152	Coal-crushed clarain, durain and fusain	2339	552		7	.41	11.8	21.0	66.79	3, 3, 3½	.47	
152	159	Coal-crushed clarain, durain and fusain	2340	546		7	.45	10.4	21.3	67.85	6, 6, 5½	.22	
159	166	Coal-crushed, clarain, durain and fusain	2341	545		7	.51	6.3	22.3	70.89	7½, 7½, 7½	.44	
166	173	Coal-crushed, clarain, durain and fusain	2342	548		7	.42	11.3	22.3	65.98	7½, 7, 7½	.33	
173	180	Coal-crushed, clarain, durain and fusain	2343	527		5	.37	12.1	21.1	66.43	3½, 3½, 3½	.27	
180	188	Coal-crushed, clarain, durain and fusain	2344	556		8	.43	9.7	21.8	68.07	5, 5, 5	.25	
188	198	Coal-as above with 2-6 inches shale	2345	547		10	.62	57.0	12.9	29.48	1,1,1	.38	
		Raw Composite (137.5 to 198)					.46	18.5	20.1	69.94			
		Clean Composite (S.F.F.)						8.0			6, 6, 6		"B"

FORDING OPERATIONS
DRILL HOLE SAMPLING RECORD

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FROM	TO	DESCRIPTION	SAMPLE NUMBER	LAB. No.	SHORTS	WIDTH	INH M	A	VM	FC	FSI	S	REMARKS
47	58	Coal-bone, clarodurain, durain, vitrain bands	2851	470		11.0	.3	18.9	21.7	59.1	3½, 3½	.36	D
58	68	Clarodurain, clarain, durain, vitrain bands	2852	469		10.0	.3	11.9	20.9	66.9	2½, 2½	.33	
68	73	Clarodurain, clarain, durain, vitrain bands	2853	473		5.0	.4	35.8	17.1	48.7	2, 2½	.25	
		Raw Composite (47 to 73)					.32	19.1	20.5	60.18		.33	
		Clean Composite (S.F.F.)						8.8			3, 3½, 3½		
115	131	Coal-mushy clarain, durain, some fusain	2854	472		16.0	.3	53.6	15.4	68.7	1.1	.33	C
		Raw Composite (115 to 131)											
		Clean Composite (S.F.F.)						11.0			4, 4, 4		
137.5	146	Coal - mush	2855	471		8.5	.3	15.9	19.4	64.7	3, 3	.41	C"?
		Raw Composite (137.5 to 146)											
		Clean Composite (S.F.F.)						8.1			4, 4, 3½		
238	248	Coal - mush, some fusain	2856	481		10.0	1.4	13.7	21.1	65.2	3½, 4	.25	Seam B
248	271	Coal - mush, vitrain and fusain	2857	480		23.0	1.8	18.7	21.2	60.1	2, 2	.33	
		Raw Composite (238 to 271) Clean Composite (S.F.F.)					1.68	17.2 6.53	21.2	59.92	4½, 4½, 5	.31	

FORDING OPERATIONS
DRILL HOLE SAMPLING RECORD

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FROM	TO	DESCRIPTION	SAMPLE NUMBER	LAB. No.	SHORTS	WIDTH	INH M	A	VM	FC	FSI	S	REMARKS
40	41	Coal, clarain with bright vitrain bands	1851	289		1.0	1.1	27.9	27.7	43.3	4.4, 4.4	1.3	
41	46	Coal, clarain with vitrain bands, grades to a fusain rich coal. 2' siltstone.	1852	277		5.0	1.07	70.6	13.9	14.43	1.1, 1.1	.44	Seam I
46	51	Coal-clarain, clarodurain w/ vitrain bands	1853	275		5.0	1.1	47.2	18.1	33.6	1.1, 1.1	.66	
51	56	Coal, durain, clarodurain w/ vitrain bands	1854	281		5.0	1.1	75.3	15.2	8.4	0, 0, 0	.44	
		Raw Composite (40 to 56)					1.09	62.1	16.5	20.31		.56	
93	98	Coal-clarain with vitrain bands	1855	292		2.0	1.02	20.8	28.1	50.08	7½, 7½, 8	.69	Unknown
98	100	Coal-clarain with vitrain bands	1856	268		5.0	.98	14.4	31.8	52.82	7, 6½, 7	.69	"
		Raw Composite (93 to 100)					.9	16.2	30.7	52.11		.69	
185.7	191.5	Coal-clarain, clarodurain, thin vitrain bands	1857	286		5.8	.97	14.6	27.6	56.83	7½, 7½, 7½	.96	Unknown
191.5	194.5	Coal-clarain, clarodurain, very thin vitrain bands	1858	273		3.0	.97	11.0	29.6	58.43	8, 8, 8½	.61	"
		Raw Composite (185.7 to 194.5)					.97	13.4	28.3	57.33		.84	

FORDING OPERATIONS
DRILL HOLE SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	LAB. No.	SHORTS	WIDTH	INH M	A	VM	FC	FSI	S	REMARKS
311	314	Coal-impure durain, some vitrain bands mostly durain with clarain and vitrain bands.	1859	274		3.0	.78	68.8	15.1	15.32	1,1,1	.31	"H"
314	318.5	Coal-vitrain bands.	1860	287		4.5	.86	53.4	19.6	26.14	3,3,3	.59	
318.5	323	Coal-clarain, clarodurain w/vitrain bands	1861	269		4.5	.79	67.1	16.5	15.61	1,1,1	.35	
323	327	Coal-clarain, durain, vitrain bands	1862	233		4.0	.65	53.0	19.6	26.75	3,3,3 $\frac{1}{2}$	.48	
		Raw Composite (311 to 327)					.77	60.0	17.9	21.33		.44	
352.4	355	Coal-clarain with vitrain bands	1863	235		2.6	.51	18.6	30.7	50.19	9,9,8 $\frac{1}{2}$	.83	Minor Seal
387	392	Clarodurain with thick clarain	1864	241		5.0	1.1	68.5	13.9	16.5	1,1,1	.31	"G"
392	397	Clarodurain with thick clarain	1865	288		5.0	1.1	76.9	12.0	10.0	0,0,0	1.18	
397	407	Coal, durain and clarain	1866	236		10.0	.87	71.3	12.5	15.33	1	.44	

FORDING OPERATIONS
DRILL HOLE SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	LAB. No.	SHORTS	WIDTH	INH M	A	VM	FC	FSI	S	REMARKS
449.4	453	Coal-durain, clarodurain, fusain, thin vitrain	1867	341a		3.6	1.74	12.8	27.3	58.16	8,8,7½	.75	<i>Mirror Seam</i>
456.8	463	Coal-crushed clarodurain, fusain, ^{few vitrain} bands.	1868	314		6.2	.85	32.9	22.3	43.95	6,6,6½	.58	<i>Mirror Seam</i>
467.5	469	Coal-thin vitrain bands. ^{boney, also clarain, clarodurain with}	1869	278		1.5	1.1	75.0	13.3	10.6	0,0,0	.35	} "F"
469	474	Coal-same as above, less bone	1870	267		5.0	.56	17.7	25.9	55.84	8,8,7½	.81	
474	476.2	Coal-of siltstone. ^{durain with clarain bands. High %}	1871	308		2.2	.69	56.6	15.1	27.61	1,1,1	.42	
		Raw Composite (469 to 476.2)					.60	29.6	22.6	47.2		.69	
540	545	Coal-clarain, fusain with vitrain bands	1872	284		5.0	.66	24.1	24.0	51.14	5,5,4½	1.0	<i>Seam E</i>
545	550	Coal-6" crushed clarain and vitrain. ^{durain with vitrain bands. Occasional}	1873	283		5.0	.79	46.7	18.1	34.41	2½, 3, 2½	.59	
550	554	Coal-same as above.	1874	319		4.0	.63	76.2	11.7	11.47	0,0,0	.36	

FORDING OPERATIONS
DRILL HOLE SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	LAB. No.	SHORTS	WIDTH	INH M	A	VM	FC	FSI	S	REMARKS
554	562.5	Coal-clarain, fusain with vitrain bands	1875	306		8.5	.59	9.2	29.8	60.41	7 $\frac{1}{2}$, 7, 7	.85	E (cont'd)
562.5	568	Coal-bone, coal and siltstone	1876	244		5.5	.90	72.0	12.9	14.2	1, 1, 1	.34	
568	572	Coal-durain, some clarain & vitrain bands	1877	245		4.0	.75	52.5	17.3	29.45	2 $\frac{1}{2}$, 2, 2	.58	
572	574	Coal-clarain, fusain, thin vitrain bands	1878	217		2.0	.50	37.2	21.0	41.3	4 $\frac{1}{2}$, 5, 4 $\frac{1}{2}$	.73	
		Raw Composite (540 to 574)					.70	41.7	20.4	37.2		.65	"E"
644	647	Coal-high $\frac{1}{2}$ siltstone, durain	1879	242		3.0	.92	69.5	12.8	16.78	1, 1, 1	.42	
647	652	Coal-clarain, clarodurain, 1" thick vitrain	1880	311		5.0	.52	9.7	23.9	65.88	4, 4, 4	.49	
652	657	Coal-same as above	1881	280		5.0	.65	19.9	22.2	57.25	2 $\frac{1}{2}$, 2, 2 $\frac{1}{2}$	.43	"D"
657	661	Coal-crushed clarain, some vitrain	1882	270		4.0	.70	24.8	23.4	51.1	3 $\frac{1}{2}$, 3 $\frac{1}{2}$, 4	.33	
661	665	Coal-same as above.	1883	290		4.0	.84	29.8	22.1	47.26	1, 4, 4 $\frac{1}{2}$	.91	
665	670	Coal-crushed clarain, some vitrain	1884	295		5.0	.76	14.6	24.9	59.74	7 $\frac{1}{2}$, 7, 7	.42	
		Raw Composite (644 to 670)					.71	24.9	22.1	52.29		.50	"D"
708	711	Coal-impure, durain and silt	1584	262		3.0	.76	91.5	7.3	.44	0, 0, 0	.50	
711	715	Coal-impure clarain and durain	1585	246		4.0	.81	72.1	14.2	12.89	0, 0, 0	.50	"C?"

FORDING OPERATIONS
DRILL HOLE SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	LAB. No.	SHORTS	WIDTH	INH M	A	VM	FC	FSI	S	REMARKS
715	718	Coal-clarodurain and durain	1586	243		3.0	.92	41.8	20.8	36.48	3,3,3½	.55	
1012.5	1017.5	Coal-soupy unidentifiable	1589	342a		5.0	.75	45.8	19.8	33.65	2½,2,2½	.34	
1017.5	1022.5	Coal-clarain w/vitrain bands, some fusain	1590	343a		5.0	.58	12.9	23.7	62.82	3½,4,4	.36	
1022.5	1028	Partings of siltstone. Coal-clarain w/vitrain bands, some fusain.	1591	226		5.5	.58	54.2	16.7	28.52	2½,2,2½	.27	
1069.6	1073	Coal-clarain and fusain, crushed	1592	223		3.4	.68	42.5	17.4	39.42	2½,2,2	.35	
1073	1077	Coal-clarain and fusain, crushed	1593	331		4.0	.37	16.0	22.3	61.33	6,6,6	.32	
1077	1079	Coal-same as above	1594	227		2.0	.46	10.0	23.2	66.34	3½,4,4	.35	
1079	1083	clarain & durain, very thin vitrain bands, some fusain	1595	224		4.0	.87	9.2	22.2	67.73	4½,5,4½	.28	B
1083	1088	Coal-same as above	1596	222		5.0	.57	12.2	22.0	65.23	3½,4,4	.36	
1088	1092	Coal-same as above	1597	234		4.0	.43	11.5	22.3	65.77	3,3,3	.53	
1092	1098.5	Coal-crushed clarain & fusain, minor durain	1598	228		6.5	.50	9.8	21.9	67.8	4,4½,4½	.36	
1098.5	1101.5	Coal-same as above	1599	305		3.0	.55	9.4	20.7	69.35	3,3½,3½	.66	

FORDING OPERATIONS
DRILL HOLE SAMPLING RECORD

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FROM	TO	DESCRIPTION	SAMPLE NUMBER	LAB. No.	SHORTS	WIDTH	INH M	A	VM	FC	FSI	S	REMARKS
101	108	Coal-siltstone impurities and bone coal	2351	373		7	.5	41.0	18.3	40.2	3, 5½, 3	.72	
108	116	Coal-clarain, vitrain, fusain	2352	371		8	.51	15.0	22.8	61.69	4½, 4½, 4½	.51	
116	122	Coal-clarain, vitrain, fusain	2353	367		6	.41	16.4	22.3	60.89	4½, 4½, 4½	.95	"F"
122	128	Coal-clarain, vitrain, fusain	2354	365b		6	.4	19.9	21.8	57.9	4½, 5, 4½	.96	
128	132	Coal-clarain, vitrain, fusain	2355	372		4	.46	16.7	24.3	58.54	9, 8½, 8½	.52	
		Raw Composite (101 to 132)					.46	22.3	21.7	55.54		.73	
		Clean Composite (S.F.F.)									N.A.		
410.5	417	Coal-vitrain, little durain, 50% fusain	2356	386b		6.5	.48	24.1	20.7	54.72	6, 6, 5½	.42	
417	428	Coal-clarain, vitrain partings, durain-fusain	2357	394		11	.71	11.8	24.3	63.19	7½, 7½, 7½	.33	
428	440	Coal-clarain, vitrain partings, durain-fusain	2358	342		12	1.4	12.1	23.9	62.60	5½, 7, 7	.32	
440	450	Coal-clarain dominant and bone	2359	343		10	.62	9.1	25.3	64.98	7½, 8, 7½	.36	"E"
450	456	Coal-durain, silty partings	2360	381		6	1.7	72.2	13.2	12.9	N.A.	.25	
		Raw Composite (410.5 to 456)					.97	21.0	22.4	55.63		.34	
		Clean Composite (S.F.F.)									N.A.		
507.5	513	Coal-dominantly clarain with vitrain parting	2361	391		5.5	1.5	16.3	21.6	60.6	7, 7, 7	.33	
513	519	Coal-dominantly clarain w/ vitrain parting	2362	377		6	.41	7.8	23.0	68.79	1½, 7½, 7½	.36	"D"

FORDING OPERATIONS
DRILL HOLE SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	LAB. No.	SHORTS	WIDTH	INH M	A	VM	FC	FSI	S	REMARKS	
519	523	Coal-dominantly clarain w/ vitrain partings	2363	362		4	.25	8.1	22.9	68.75	5.5 $\frac{1}{2}$, 5 $\frac{1}{2}$.42	<i>"D" cont'd.</i>	
523	528	Coal-dominantly clarain w/ vitrain partings	2364	390		5	1.6	9.3	22.7	66.4	5.5, 4 $\frac{1}{2}$	.23	
528	534	Coal-clarain with vitrain partings	2365	368		6	.33	3.5	22.9	73.27	7 $\frac{1}{2}$, 7, 7 $\frac{1}{2}$	.30	
534	541	Coal-clarain with vitrain partings	2366	522		7	.26	12.5	21.6	65.64	2 $\frac{1}{2}$, 2 $\frac{1}{2}$, 3	.36		
Raw		Raw Composite (519 to 541)					.70	9.7	22.4	67.2		.34		
		Clean Composite (S.F.F.)									N. A.			
550.5	556	Coal, clarain and vitrain	2367	363		5.5	.3	26.0	18.8	54.9	2 $\frac{1}{2}$, 3, 3	.52	<i>Minor Seam</i>	
		Raw Composite (550.5 to 556)												
		Clean Composite (S.F.F.)						11.8			3, 3 $\frac{1}{2}$, 3 $\frac{1}{2}$			
569	574	Coal-clarain, vitrain, some fusain	2368	516		5	.38	14.3	22.0	63.32	4.4, 4	.49	<i>J.C.</i>	
574	579	Coal-clarain, vitrain, some fusain	2369	518		5	.50	37.8	18.0	43.7	4 $\frac{1}{2}$, 4, 4	.44		
		Raw Composite (569 to 579)					.44	26.0	20.0	53.56		.446		
		Clean Composite (S.F.F.)	(2351-60, 2368, 2369, 2361-2366)							8.8 Avg.		N. A.		

FORDING OPERATIONS
DRILL HOLE SAMPLING RECORD

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FROM	TO	DESCRIPTION	SAMPLE NUMBER	LAB. No.	SHORTS	WIDTH	INH M	A	VM	FC	FSI	S	REMARKS		
108.4	112	Coal-clarain, some fusain	2203	372		3.6	2.3	9.8	28.7	59.2	6½, 7, 7	.52	}		
112	117	Coal-clarain, little vitrain	2204	388		5	.18	39.9	22.8	37.12	5½, 4, 3½	.64		} <i>Minor Seam</i>	
		Raw Composite (108.4 to 117)					1.07	27.3	25.3	46.33					
		Clean Composite (S.F.F.)													
137.5	138.5	Coal-durain and clarain	2205	348		1	.92	47.6	19.7	31.78	3½, 3½, 3½	.46	}		
138.5	141	Coal-durain, shale impurities	2206	382		2.5	.80	11.0	28.3	59.9	8½, 8½, 8½	.68		} <i>Minor Seam</i>	
		Raw Composite (137.5 to 141)					.83	21.5	25.8	51.87					
		Clean Composite (S.F.F.)													
151	153	Crushed durain and fusain	2207	341		2	2.1	26.2	26.2	45.5	7, 7, 7 8, 8, 8	.93	} <i>Minor Seam</i>		
		Raw Composite (151 to 153)													
		Clean Composite (S.F.F.)													
317.7	319	Clarain with vitrain bands	2208	336		1.3	1.56	10.9	30.0	57.54	8, 8, 8	.79	} <i>Unidentified</i>		
319	324	Coal-clarain with thick one inch vitrain bands, some fusain.	2209	368		5	.62	19.2	27.8	52.38	7½, 7, 7½	.54		} <i>- upper seam</i>	

FORDING OPERATIONS
DRILL HOLE SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	LAB. No.	SHORTS	WIDTH	INH M	A	VM	FC	FSI	S	REMARKS
324	329	clarain w/thick 1" vitrain bands, some Coal-fusain.	2210	373		5	.70	22.4	27.5	49.4	7½, 7½, 7	.52	Unidentified
329	333	Coal-same as above	2211	366		4	.54	8.3	30.6	60.56	8½, 8½, 8½	.88	"
		Raw Composite (324 to 333)					.71	16.7	28.6	53.99			
		Clean Composite (S.F.F.)											
461.5	465	Clarain with vitrain bands, crushed core	2212	334		3.5	.62	11.6	26.3	61.48	7½, 8, 7½	.58	} Upper?
465	469	Clarain with vitrain bands, crushed core	2213	359		4	.71	23.6	24.9	50.79	8, 7½, 7½	.82	
469	473.5	Clarain with vitrain bands, crushed core	2214	367		4.5	.63	29.6	23.8	45.97	7, 7, 7	.47	
		Raw Composite (461.5 to 473.5)					.65	22.3	24.9	52.15			
		Clean Composite (S.F.F.)											
504.3	507	Bone Coal	2215	317		2.7	.69	80.9	11.2	7.21	0, 0, 0	.03	} Upper?
507	512	Clarain, some fusain	2216	321		5	.62	16.8	24.1	58.48	6½, 7, 6½	.75	
512	517.7	Clarain, fusain, vitrain bands	2217	357		5.7	.40	15.4	23.6	60.6	8, 7½, 7½	.68	
517.7	519	Coal-clarain, vitrain bands	2218	327		1.3	.60	60.7	13.8	24.9	1½, 1½, 1½	.35	
		Raw Composite (504.3 to 519)					.55	31.9	20.6	46.95			
		Clean Composite (S.F.F.)											

FORDING OPERATIONS
DRILL HOLE SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	LAB. No.	SHORTS	WIDTH	INH M	A	VM	FC	FSI	S	REMARKS
568.2	572	Clarain, clarodurain, vitrain bands	2219	318		3.8	.91	16.2	24.1	58.79	7, 7 $\frac{1}{2}$, 7	.62	} <i>Minor Seam</i>
572	576		2220	307		4.0	.48	17.1	22.1	60.32	3 $\frac{1}{2}$, 4, 4	.60	
		Raw Composite (568.2 to 576)											
		Clean Composite (S.F.F.)											
592	596	Coal, crushed clarain & fusain, thin vitrain bands	2221	330		4	.52	36.0	19.7	43.78	2, 2, 2	.44	} <i>Minor Seam</i>
		Raw Composite (592 to 596)											
		Clean Composite (S.F.F.)											

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DRILL HOLE SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	LAB. No.	SHORTS	WIDTH	INH M	A	VM	FC	FSI	S	REMARKS
200.5	205	Coal - clarain	2257	426		4.5	.86	54.9	20.2	24.04	3½, 3.3½	.69	} Upper Seam
207	210.5	Coal - clarain, vitrain, 5½in-1/4" bands	2258	431		3.5	1.34	9.1	36.0	53.56	6½, 6½, 6½	.63	
		Raw Composite (200.5 to 210.5)											
		Clean Composite (S.F.F.)											
226	228	Coal - clarain	2259	432		2	1.19	32.0	28.3	38.51	4, 4, 4	.74	} Thin Seam
		Raw Composite (226 to 228)											
		Clean Composite (S.F.F.)											
234.5	240.5	Coal-clarain, minor vitrain	2260	421		6	.81	18.0	32.4	48.79	6½, 6½, 6½	.74	} Minor Seam
		Raw Composite (234.5 to 240.5)											
		Clean Composite (S.F.F.)											
285	287.5	Clarodurain & durain, soft crushed	2266	445		2.5	1	17.2	31.1	50.7	5, 5½, 6	.71	} Thin Seam
		Raw Composite (285 to 287.5)											
		Clean Composite (S.F.F.)											

FORDING OPERATIONS
DRILL HOLE SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	LAB. No.	SHORTS	WIDTH	INH M	A	VM	FC	FSI	S	REMARKS
340.5	345.5	Coal-clarain, some durain	2267	422		5	.78	10.2	31.3	57.72	5 $\frac{1}{2}$, 7.7	.58	} Upper Seam
345.5	351	Clarodurain, fusain, shale impurities	2268	424		5.5	1.06	6.3	17.3	18.64	1, 1, 1	.63	
351	356	Clarodurain, durain, little fusain	2269	457		5	1.11	13.5	33.9	51.49	7 $\frac{1}{2}$, 7 $\frac{1}{2}$, 7 $\frac{1}{2}$	.52	
		Raw Composite (340.5 to 356)					.99	30.0	27.2	41.81		.58	
		Clean Composite (S.F.F.)											
380.5	386.5	Clarodurain, durain, vitrain bands	2270	454		6	.09	26.8	26.3	46.81	4 $\frac{1}{2}$, 5, 4 $\frac{1}{2}$	.32	Thin, upper
		Raw Composite (380.5 to 386.5)											
		Clean Composite (S.F.F.)											
563	567	Clarain, durain, scattered vitrain bands	2277	476		4	.3 1.8	13.9 5.5	33.3 5.2	52.5	8, 8, 8	.82	Thin, upper
		Raw Composite (563 to 567)											
		Clean Composite (S.F.F.)											
641	643.5	Clarain, durain, vitrain bands, some fusain	2289	389		2.5	1.03	12.0	33.2	53.77	8 $\frac{1}{2}$, 8, 8	.68	Thin, upper

FORDING OPERATIONS
DRILL HOLE SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	LAB. No.	SHORTS	WIDTH	INH M	A	VM	FC	FSI	S	REMARKS
		Raw Composite (641 to 643.5)											
		Clean Composite (S.F.F.)											
698.5	703	Coal-clarain, vitrain, some durain	2290	456		4.5	.91	20.9	27.9	50.29	7½, 7½, 7½	.66	} Unknown Seam
703	707.5	Coal-clarain, vitrain, some durain	2291	458		4.5	1.1	39.1	23.2	36.6	5, 5, 4½	.55	
							1.00	30.0	25.5	43.5			
		Raw Composite (698.5 to 707.5)					1.00	30.0	25.5	43.5		.60	
		Clean Composite (S.F.F.)											
801.5	807	Coal-mostly vitrain, clarain, & fusain	2301	437		5.5	.95	21.0	27.6	50.45	7, 7, 7½	.52	
807	812	Coal-mostly vitrain, clarain, & fusain	2302	475		5	.6	7.1	29.3	63.0	8, 8, 8	.45	
812	817	Durain, with vitrain bands	2303	380		5	1.16	15.4	28.0	55.44	7½, 7½, 8	.47	} Unknown Seam - upper ?
817	822	Durain with vitrain bands	2304	441		5	.91	44.6	21.2	33.29	3½, 3, 3½	.47	
822	825.5	Vitrain, 50 percent shale	2305	392		3.5	1.24	77.0	12.0	9.76	1, 1, 1	.22	
							.95	30.0	24.4	45.65			
		Raw Composite (801.5 to 825.5)					.95	30.0	24.4	45.65		.43	
		Clean Composite (S.F.F.)											
890.5	904	Coal, mostly clarain	2306	385b		13.5	.66	17.4	28.0	53.94	8½, 8, 8½	.68	} Unknown Seam
904	909	Coal, mostly clarain	2307	345		5	1.88	17.4 15.3	30.0	62.82	9, 9, 8½	.52	

Upper section
@ 4.
way west of
Lake #4

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FORDING OPERATIONS
DRILL HOLE SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	LAB. No.	SHORTS	WIDTH	INH M	A	VM	FC	FSI	S	REMARKS
177	180	Coal - clarain and durain, 50% each	2321	370a		3.0	.86	8.5	36.5	54.14	61.7, 61	1.0	} unknown, upper
180	183.5	Coal - clarain and durain, 50% each	2322	366b		3.5	.70	44.2	24.2	30.9	5.5, 5	.77	
		Raw Composite (177 to 183.5)					.77	27.7	29.9	41.63		.88	
339.5	344	Coal, mostly durain, some clarain	2327	364b		4.5	.64	37.2	28.7	33.46	61.6, 6	.99	} Thin, upper
581.5	586	Coal-clarain	2378	361b		4.5	.79	22.5	32.2	44.51	7.7, 7	1.2	} unknown, upper type
586	588.5	Coal-shale impurities	2379	355b		2.5	2.1	72.0	15.3	10.6	1.1, 1	1.02	
588.5	590.5	Coal-clarain, vitrain bands	2380	356b		2.0	.66	20.9	33.0	45.44	61.6, 61	.72	
		Raw Composite (581.5 to 590.5)					1.12	35.9	27.7	35.28		1.04	
666	672	Coal-clarodurain, vitrain crushed	2329	517		6.0	.98	13.2	31.3	54.52	61.6, 6	.27	} Thin, upper type

Clarke
Creek

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FORDING OPERATIONS
DRILL HOLE SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	LAB. No.	SHORTS	WIDTH	INH M	A	VM	FC	FSI	S	REMARKS
21.4	24.5	Coal-clarodurain and vitrain	2222	339		3.1	1.93	67.4	13.4	17.27	1,1,1	.54	Minor Seam
169.3	173	Coal-clarain and vitrain	2223	338		3.7	1.49	13.0	27.4	58.11	7½,7,7	.63	
173	177	Coal-siltstone, clarodurain	2224	335		4.0	.55	68.9	11.7	18.85	2,2,2	.36	
177	181	Coal, clarain and vitrain	2225	374a		4.0	.55	8.4	27.8	63.25	8½,8½,9	.64	
181	186	Coal, clarain and vitrain	2235	329		5.0	.54	23.2	24.5	51.76	7,7,7½	.51	
186	191	Coal-clarodurain and vitrain	2236	337		5.0	1.67	9.4	27.6	61.33	8½,8,8	.74	Seam 7?
191	195	Coal-clarodurain and vitrain	2237	363a		4.0	.51	13.9	28.3	57.29	8,8,8	.91	-Oxidized?
195	200	Coal and bone coal	2238	377b		5.0	1.8	58.8	16.5	22.8	2,2½,2½	.50	
200	204	Coal and bone coal	2239	333		4.0	1.86	60.7	16.2	21.24	2,2,1½	.54	
204	210	Coal-clarodurain and vitrain	2240	388b		6.0	.85	8.3	28.1	62.75	8½,8½,8	.53	
210	214.5	Coal-clarain, vitrain and bone coal	2241	340		4.5	2.75	59.2	16.0	22.05	2,2½,2	.45	
214.5	219	Coal-clarodurain and durain	2242	362a		4.5	.53	27.6	22.5	49.37	7,7,7½	1.00	
		Raw Composite (169.3 to 219)					1.19	31.2	22.6	45.01		.62	

FORDING OPERATIONS
DRILL HOLE SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	LAB. No.	SHORTS	WIDTH	INH M	A	VM	FC	FSI	S	REMARKS
309	314	Coal-clarodurain, durain	2243	430		5.0	.87	15.4	25.9	57.83	8½, 8½, 8½	.60	} Seam 9?
314	318	Coal-clarodurain, durain	2244	371b		4.0	1.8	6.2	28.2	63.8	8½, 8½, 9	.50	
318	324	Coal-clarodurain, durain	2245	358a		6.0	.71	16.1	25.9	57.29	8½, 8, 8	.60	
		Raw Composite (309 to 324)					1.05	13.2	26.5	59.25		.57	
336	346	Coal-clarodurain, durain, crushed	2246	427		10.0	.86	11.5	23.9	63.74	8, 8, 8	.71	No. 2?
425.5	431	Coal-clarain, vitrain bands	2247	370b		5.5	.53	19.1	23.2	57.17	5, 5, 5½	.69	} Shear - unknown
431	436	Coal-durain, vitrain bands	2248	379b		5.0	.58	54.8	18.2	26.42	1½, 1½, 1½	.61	
436	441	Coal-durain, vitrain bands	2249	378b		5.0	2.0	57.7	15.9	24.4	1½, 1½, 1½	.69	
441	446	Coal, clarain, vitrain, mudstone	2250	375b		5.0	.79	71.1	12.2	15.91	1, 1, 1	.45	
		Raw Composite (425.5 to 446)					1.12	61.2	15.4	22.28		.58	

FORDING OPERATIONS
DRILL HOLE SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	LAB. No.	SHORTS	WIDTH	INH M	A	VM	FC	FSI	S	REMARKS
459.5	465	Coal, clarain and durain, crushed	2251	380b		5.5	1.8	46.0	17.6	61.8	4.3 ¹ , 3 ¹ / ₂	.77	Sheared
465	469.5	Coal, clarain and durain, crushed	2252	474		4.5	.5	65.5	13.3	20.7	1.1, 1.1	.71	
600	602.5	Coal, clarodurain-vitrain bands	2271	436		2.5	.65	45.9	17.8	35.65	4.4, 4.4	1.3	Minor Seam
667	673	Coal, clarodurain, fusain, little vitrain	2272	435		6.0	.69	25.1	20.1	54.11	2.2 ¹ / ₂ , 2	.38	No. 7
673	678	Coal, clarain, vitrain bands	2273	428		5.0	.76	12.8	22.0	64.44	5.5, 5.5	.36	
678	682	Coal, clarain-clarodurain, little fusain	2274	440		4.0	.52	16.4	26.9	56.18	3.3, 3.3	.33	
682	688.5	Coal, clarain-clarodurain	2275	419		6.5	.70	14.1	22.4	62.8	5 ¹ / ₂ , 5.5	.47	
		Raw Composite (667 to 688.5)					.68	17.3	22.5	59.52		.39	
702	707	Clarain-vitrain bands, durain	2276	407		5.0	.61	61.4	14.9	23.09	N. A.	.53	Minor Seam

FORDING OPERATIONS
DRILL HOLE SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	LAB. No.	SHORTS	WIDTH	INH M	A	VM	FC	FSI	S	REMARKS
905	911.5	Clarain, vitrain bands, durain, shale	2278	411		6.5	.55	55.6	15.2	28.65	2.2, 2	.51	<i>Minor Seam</i>
1082	1087	Coal, clarain-vitrain, minor durain	2292	398		5.0	.44	9.2	20.4	69.96	2.2, 2	.52	<i>Unknown, lower type seam.</i>
1087	1092	Coal, clarain-vitrain, minor durain	2293	394b		5.0	.78	17.5	21.0	60.72	7.7, 7	.38	<i>- correlates with top seam in B.D.H. 67</i>
1092	1096	Coal, clarain-vitrain, minor durain	2294	433		4.0	.58	18.4	28.8	60.22	1.1, 1	.36	
		Raw Composite (1082 to 1096)					.60	14.8	20.7	63.9		.42	
1159	1164	Coal, mostly clarain, vitrain bands, minor durain	2295	406		5.0	.41	13.8	19.5	66.29	3.3, 3	.41	<i>Unknown.</i>
1164	1168	Coal, mostly clarain, minor fusain	2296	446		4.0	.57	40.1	16.7	42.63	2.2, 2.2	.44	<i>lower type seam</i>
1168	1173	Coal, clero-durain to clarain, some fusain	2309	412		5.0	.37	16.2	19.7	63.73	3.3, 3	.51	<i>- equiv. in B.D.H. 67</i>
1173	1175.5	Good clarain with durain bands	2310	425		2.5	.71	23.5	19.8	54.2	4.2, 4.5	.49	

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FORDING OPERATIONS
DRILL HOLE SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	LAB. No.	SHORTS	WIDTH	INH M	A	VM	FC	FSI	S	REMARKS
70	74	Coal-clarain and fusain, some crushed, ^{no} vitrain	1562	345		4.0	.62	29.7	21.3	48.38	6,6,6	.35	
74	79	Coal-clarain and fusain, some crushed	1563	365		5.0	.54	18.0	23.0	58.46	7½, 7½, 6½	.55	} Section E
79	84	Coal-clarain and fusain, some crushed	1564	382		5.0	.65	14.1	22.5	62.75	7,7,7	.33	
84	87.4	Coal-clarain and fusain, some crushed	1565	349		3.4	.10	25.8	24.9	49.2	4½, 5, 5	.34	
87.4	91.5	Coal-clarain & fusain, some durain, ^{impure} crushed	1566	352		4.1	.49	58.2	14.4	26.91	2½, 2½, 2½	.24	
		Raw Composite (70 to 91.5)					.50	28.2	21.2	50.1		.37	"E"
		Clean Composite (S.F.F.)						11.0			8, 8½, 8		
164	166	Coal-durain, clarain, vitrain bands	1567	344		2.0	1.5	29.4	22.3	56.8	2, 2½, 2	.19	
166	170	Coal-durain, clarain, high fusain	1568	328		4.0	.31	9.1	21.9	68.69	3½, 3½, 3½	.19	
170	175	Coal-durain, clarain, high fusain	1569	359		5.0	.24	10.2	20.6	68.96	3, 2½, 3	.34	
175	180	Coal-durain, clarain, high fusain	1570	326		5.0	.33	6.9	22.2	70.57	7, 7, 7	.15	
180	185	Coal-durain, clarain, high fusain	1571	351		5.0	.37	9.7	21.1	68.83	5½, 5½, 5	.27	
185	190	Coal-durain, high % fusain	1572	360		5.0	.52	68.6	11.4	19.48	N. A.	.19	"D"
190	195	Coal-durain, high % fusain	1573	369		5.0	.30	9.2	20.4	70.1	2, 2½, 2½	.38	
195	198	Coal-clarain, high % fusain	1574	354		3.0	.29	9.2	20.8	69.71	3½, 3½, 3½	.40	
198	201	Coal-impure and mudstone	1575	342b		3.0	.70	48.1	15.1	36.1	1, 1, 1½	.14	

FORDING OPERATIONS
DRILL HOLE SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	LAB. No.	SHORTS	WIDTH	INH M	A	VM	FC	FSI	S	REMARKS
		Raw Composite (164 to 201)					.43	21.4	19.4	58.73		.25	"D"
		Clean Composite (S.F.F.)						6.8			4, 3½, 3½		
212	214	Coal - crushed, pulpy	2201	346		2.0	.46	15.6	19.8	64.14	2½, 2½, 2½	.47	} "G"
214	219.6	Coal - durain, clarain and fusain	2202	353		5.6	.29	21.1	18.3	60.31	3, 3, 3	.51	
		Raw Composite (212 to 219.6)					.34	19.5	18.7	61.46		.50	
		Clean Composite (S.F.F.)						10.5			3½, 3, 3		
288	293	Coal-clarain, high % fusain	2226	364a		5.0	.29	10.2	21.4	68.11	4, 4, 4	.49	
293	298	Coal-clarain, high % fusain	2227	325		5.0	.32	11.4	20.5	67.78	3, 3, 3½	.38	
298	302	Coal-clarain, high % fusain	2228	383b		4.0	1.5	18.4	21.3	58.8	5½, 5, 5½	.32	"B"
302.5	309.5	Coal-clarain, high % fusain	2229	385a		7.0	.50	12.8	21.2	65.5	7, 7, 7	.40	
309.5	314.5	Coal-impure clarodurain, fusain	2230	345		5.0	1.6	87.9	6.6	3.9	0, 0, 0	.17	
314.5	318	Coal-impure clarodurain, fusain	2231	376b		3.5	.68	84.6	7.3	7.42	0, 0, 0	.19	
		Raw Composite (288 to 318)					.78	34.1	17.0	51.88		.341	"B"
		Clean Composite (S.F.F.)						11.9			4½, 4, 4		
375.3	377.5	Coal-clarain, durain, vitrain	2232	347		2.2	.49	20.7	19.8	59.01	7, 6½, 7	.47	

FORDING OPERATIONS
DRILL HOLE SAMPLING RECORD

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FROM	TO	DESCRIPTION	SAMPLE NUMBER	LAB. No.	SHORTS	WIDTH	INH M	A	VM	FC	FSI	S	REMARKS
54	57	Coal-clarain, vitrain bands, some fusain	2279	379a		3.0	.65	47.4	17.6	34.35	1.1, 1.1	.45	<i>Mirror Seam - oxidized, dirty.</i>
147	152	Coal-pulverized dry clarodurain, fusain	2280	349		5.0	.62	26.7	17.8	54.88	2, 1½, 2	.23	
152	157	Coal-pulverized dry clarodurain, fusain, durain	2281	346		5.0	1.6	17.3	20.4	60.7	4, 4, 4	.22	
157	162	Coal-pulverized dry clarodurain, fusain	2282	395a		5.0	.86	7.0	22.2	69.94	6½, 6½, 6½	.22	
162	167	Coal-pulverized dry clarodurain, durain	2283	340		5.0	1.5	7.6	22.6	68.3	7½, 7½, 7½	.18	"B"
167	172	Coal-pulverized dry clarodurain, durain	2284	429		5.0	.63	12.1	21.4	65.87	6½, 6, 6½	.22	
172	177	Coal-pulverized dry clarodurain, durain	2285	347		5.0	1.6	10.5	21.7	66.2	6½, 6, 6½	.22	
177	182	Coal-pulverized dry clarodurain, durain	2286	395b		5.0	.48	7.3	21.1	71.12	2½, 2½, 2½	.26	
182	187	Coal-pulverized dry clarodurain, durain	2287	341		5.0	1.5	12.4	22.1	64.0	3, 3, 3	.22	
187	193	Coal-pulverized dry clarodurain, durain	2288	410		6.0	.32	15.9	22.1	61.68	4, 4½, 4½	.38	
		Raw Composite (147 to 193)					1.00	13.0	21.3	64.7		.24	"B"
		Clean Composite (S.F.F.)						N. A.			N. A.		

E. C. ...

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FORDING OPERATIONS
DRILL HOLE SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	LAB. No.	SHORTS	WIDTH	INH M	A	VM	FC	FSI	S	REMARKS
56	60	Clarain, vitrain bands, fusain	2297	375		4.0	.44	8.9	21.3	69.36	3 ¹ / ₂ , 3 ¹ / ₂	.47	Unknown, lower
60	65	Clarain, vitrain bands, fusain	2298	358		5.0	.41	27.9	19.1	52.59	1, 1, 1	.55	Yost type
65	69	Clarain, durain shale impurities	2299	383		4.0	.77	34.9	17.3	47.03	2 ¹ / ₂ , 2, 2	.36	
		Raw Composite (56 to 69)					.53	24.2	19.2	56.07		.47	
119	123	Coal-mostly clarain, vitrain bands, fusain	2300	376		4.0	.43	24.9	20.0	54.67	6, 6, 6	.53	Minor Seam
123	125.5	Coal-mostly clarain, vitrain bands, fusain	2326	378		2.5	.30	14.2	20.1	65.4	4, 4, 4	.49	
		Raw Composite (119 to 125.5)					.38	20.8	20.0	58.82		.51	
455	460	Coal-clarain, durain, little fusain	2328	387		5.0	.32	17.3	19.1	63.28	2 ¹ / ₂ , 2 ¹ / ₂ , 3	.53	Minor Seam
571.5	577.5	Coal-clarodurain, scattered vitrain, fusain	2330	498		6.0	.36	16.2	20.5	62.94	4, 4 ¹ / ₂ , 4 ¹ / ₂	.41	} Seam 7
577.5	584	Coal-clarodurain, scattered vitrain, fusain	2331	499		6.5	.33	14.5	20.2	64.97	4 ¹ / ₂ , 4, 4	.38	
		Raw Composite (571.5 to 584)					.34	15.3	20.3	64.06		.39	

Turn field

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FORDING OPERATIONS
DRILL HOLE SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	LAB. No.	SHORTS	WIDTH	INH M	A	VM	FC	PSI	S	REMARKS
143.5	148.5	Coal-bone coal, clarain, vitrain, fusain	2801	501		5.0	.42	14.8	22.0	62.78	8,7 ¹ / ₇	.69	<i>Minor Seam</i>
264.5	270	Coal-crushed clarain & clarodurain	2802	503		5.5	.38	15.2	21.2	63.22	6,6,6	.93	
270	275	Coal-crushed clarain & clarodurain	2803	504		5.0	.37	9.9	22.2	67.53	7,7 ¹ / ₇	.63	
275	280	Coal-hard, clarain, clarodurain, vitrain bands	2804	509		5.0	.41	13.0	21.5	65.09	6,6 ¹ / ₆	.41	<i>Seam 7</i>
280	284	Coal-hard, clarain, clarodurain, vitrain bands	2805	510		4.0	.38	11.1	23.7	64.82	8,8,8	.55	
284	287	Coal-hard, clarain, clarodurain, vitrain bands	2806	507		3.0	.42	13.3	23.8	62.48	9,9,9	.49	
287	291	Coal-clarain, vitrain, durain and fusain	2808	511		4.0	.56	62.3	14.3	22.84	1,1,1	.16	
		Raw Composite (264.5 to 291)					.42	20.1	21.1	58.38		.555	<i>No. 7</i>
372	377	Coal-clarodurain, clarain, vitrain bands	2809	491		5.0	.33	20.8	20.3	58.57	5 ¹ / ₂ , 5, 5	.58	
377	382	Coal-clarain, more vitrain	2810	500		5.0	.40	9.6	21.9	68.1	5 ¹ / ₂ , 5 ¹ / ₂ , 6	.49	
382	387	Coal-clarain, more vitrain	2811	490		5.0	.45	8.7	21.99	68.85	4,4,4	.25	<i>Seam 5</i>
387	392	Clarodurain with vitrain bands	2812	494		5.0	.35	9.3	21.3	69.05	6 ¹ / ₂ , 6 ¹ / ₂	.33	
392	397	Clarodurain with vitrain bands	2813	505		5.0	.44	14.2	20.0	65.36	2 ¹ / ₂ , 2 ¹ / ₂	.38	

FORDING OPERATIONS
DRILL HOLE SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	LAB. No.	SHORTS	WIDTH	INH M	A	VM	FC	FSI	S	REMARKS
397	404	Clarodurain, scattered vitrain, fusain	2814	502		7.0	.43	11.3	20.3	67.97	4½, 4½, 5	.30	) No.5 cont'd.
404	408	Crushed, shale partings, clarain, durain	2815	506		4.0	.52	49.4	13.8	36.28	1½, 1½, 1½	.33	
		Raw Composite (372 to 404)					.40	12.3	20.9	66.4		.38	No.5
563	568	Coal-clarodurain, durain, vitrain bands	2816	487		5.0	1.3	17.9	19.0	61.8	5½, 5.5	.36	
568	573	Coal-clarodurain, durain, vitrain bands	2817	486		5.0	1.3	45.7	15.1	37.9	1.1, 1.1	.30	
573	578	Coal-clarain, clarodurain, vitrain, fusain traces of	2818	492		5.0	.40	23.1	18.9	57.6	5½, 5½, 6	.33	
578	583	Clarain, clarodurain, vitrain, fusain traces	2819	493		5.0	.41	7.6	20.3	71.69	6.6½, 6½	.44	Seam 4
583	588	Clarain, clarodurain, vitrain, fusain traces	2820	508		5.0	.40	8.1	22.0	69.5	6½, 6½, 6½	.36	
588	593	Coal-clarain with vitrain bands, & fusain clarodurain	2821	477		5.0	1.3	8.1	21.3	69.3	8½, 8½, 8½	.36	
593	598	Coal-clarain with vitrain bands, & fusain clarodurain	2822	484		5.0	.47	45.7	19.6	34.23	4½, 4, 4½	.44	
598	603.5	Clarodurain, durain, fusain, some bone coal	2823	483		5.5	.14	30.7	18.5	50.66	3½, 3½, 3½	.38	
		Raw Composite (563 to 603.5)					.71	23.5	19.5	56.29		.36	
711	716.5	Coal-clarodurain, clarain with vitrain bands	2824	479		5.5	1.33	15.2	20.2	62.97	7½, 7½, 7½	.44	Seam 3

FORDING OPERATIONS
DRILL HOLE SAMPLING RECORD

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FROM	TO	DESCRIPTION	SAMPLE NUMBER	LAB. No.	SHORTS	WIDTH	INH M	A	VM	FC	FSI	S	REMARKS
76.	80.5	Coal, clarain with vitrain	2829	478		4.5	1.36	28.5	19.0	51.14	4.5	.47	Seam 3
112.	118.5	Coal, clarain, clarodurain, vitrain bands	2830	489		6.5	.35	12.2	21.4	66.05	8.9, 9	.49	Seam 2
127.	131	Coal, clarodurain, some clarain, little vitrain	2831	482		4.0	.47	14.3	19.9	65.39	5.5, 5.6	.55	Minor coal
131	134.5	Coal, clarodurain, some clarain, little vitrain	2832	485		3.5	1.5	39.1	17.8	41.60	1.2	.38	

FORDING OPERATIONS
DRILL HOLE SAMPLING RECORD

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FROM	TO	DESCRIPTION	SAMPLE NUMBER	LAB. No.	SHORTS	WIDTH	INH M	A	VM	FC	FSI	S	REMARKS
133.5	141	Clarain, vitrain, badly crushed	2833	589		7.5	.46	10.5	22.7	66.34	8,8,8	.49	Minor Seam
174	181	Crushed, clarain, durain, little vitrain	2834	593		7.0	.50	13.5	19.8	66.7	4,4,4	.25	} Seam 7?
181	187	Crushed, clarain, durain, little vitrain	2835	626		6.0	.40	13.2	19.4	66.6	3,3,3	.30	
197	204	Crushed, clarain, durain, little vitrain	2836	595		7.0	.48	13.7	18.8	67.02	1,1,2	.25	} Seam 8
204	211	Crushed, clarain, durain, little vitrain	2837	594		7.0	.51	11.1	20.2	68.19	4,4,3	.14	
211	218	Crushed, clarain, durain, little vitrain	2838	590		7.0	.47	18.4	18.4	62.73	2,2,2	.41	
218	223	Clarain with vitrain bands	2839	597		5.0	.37	29.2	21.6	48.83	1,1,1	.27	
234.5	240	Clarain, vitrain bands, durain	2840	591		5.5	.40	30.4	18.3	50.9	5,5,5	.52	Minor Seam

FORDING OPERATIONS
DRILL HOLE SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	LAB. No.	SHORTS	WIDTH	INH M	A	VM	FC	FSI	S	REMARKS
425.5	431	Clarain with vitrain bands-clarodurain	2841	581		5.5	.48	18.4	19.4	61.72	51.515	.36	
431	437	Clarain with vitrain bands-clarodurain	2842	588		6.0	.43	17.5	19.7	62.37	44.44	.55	
437	443	Clarain with vitrain bands-clarodurain	2843	585		6.0	.37	7.9	21.8	69.93	71.7.7	.52	
443	449	Durain and clarain with vitrain bands	2844	596		6.0	.41	7.9	21.5	70.19	6.6.61/2	.19	Seam 7
449	456	Durain and clarain with vitrain bands	2845	592		7.0	.32	13.5	24.5	61.68	71.7.71/2	.25	
456	462	Durain and clarain with vitrain bands	2846	598		6.0	.51	31.9	18.2	49.31	41.4.4	.38	
462	466.5	Durain and clarain with vitrain bands	2847	586		4.5	.40	22.1	19.5	58.0	7.7.7	.66	
575	581	Coal-clarodurain,durain,vitrain bands	2848			6.0	M I S S I N G						

FORDING OPERATIONS
DRILL HOLE SAMPLING RECORD

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FROM	TO	DESCRIPTION	SAMPLE NUMBER	LAB. No.	SHORTS	WIDTH	INH M	A	VM	FC	FSI	S	REMARKS
184.5	191	Coal-durain, fusain, soft and crushed	2876			6.5							
349	356	Coal-6" bone coal, durain, clarain w/vitrain	2877			7.0							
385	390	Clarain, durain, scattered vitrain	2878			5.0							
441.5	447	Clarain, vitrain, durain, some fusain	2879	553		5.5	.66	18.2	25.5	55.64	7½, 77½	.74	} <i>Unknown seam</i>
447	454	Clarain, vitrain, durain, some fusain	2880	554		7.0	.62	45.3	24.4	29.68	4½, 4½	.77	
454	460	More durainless clarain and vitrain	2881	567		6.0	.66	46.1	17.8	35.44	4, 4½	.77	
460	466	More durain less clarain and vitrain	2882			6.0							
466	470	More clarain, vitrain, some durain	2883			4.0							

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FORDING OPERATIONS
DRILL HOLE SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	LAB. No.	SHORTS	WIDTH	INH M	A	VM	FC	FSI	S	REMARKS
143	156	Coal-clarain	2952	580		13	.63	38.2	26.6	34.57	2½, 2½, 3	.44	} "E" upper
156	163	Coal-clarain	2953	583		7	.61	52.1	17.4	29.89	3, 3, 3½	.41	
171.5	180	Coal-dominantly clarain w/vitrain, fusain	2954	582		8.5	.42	15.6	22.6	61.38	7, 7, 7	.47	} "E" lower
180	191.5	Coal-dominantly clarain w/vitrain, fusain	2955	584		11.5	.53	24.5	21.1	53.87	7½, 7½, 7½	.44	
280	294	Clarain, minor fusain and vitrain	2956			14.0							} "D"
294	308.5	Clarain, minor fusain and vitrain	2957	578		14.5	.48	12.2	20.6	66.72	3, 3, 3½	.44	

FORDING OPERATIONS
DRILL HOLE SAMPLING RECORD

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FROM	TO	DESCRIPTION	SAMPLE NUMBER	LAB. No.	SHORTS	WIDTH	INH M	A	VM	FC	FSI	S	REMARKS
94	101.5	Clarain, minor vitrain and fusain	2886	559		6.5	.48	32.6	18.7	48.22	3 1/3 1/4	.88	Minor Seam
169	173	Clarain, minor vitrain	2887	533		4.0	.46	42.1	17.2	40.24	7.7 1/2 7 1/2	.66	Part # 7?
176.5	181.5	Clarain with vitrain	2888			5.0							
181.5	186.5	Clarain with vitrain	2889	566		5.0	.38	17.7	20.6	61.32	3 2 1/2 2 1/2	.49	
186.5	191	Clarain with vitrain	2890	529		4.5	.39	8.2	20.5	70.91	2 1/2 2 1/2 2 1/2	.36	
191	196.5	Clarain with vitrain	2891	561		5.5	.40	10.6	22.5	66.5	7 1/2 7 1/2 7 1/2	.66	
196.5	201.5	Clarain with vitrain	2892	557		5.0	.39	10.5	20.6	68.51	3.3 3 1/3 1/4	.63	Seam 7
201.5	207	Clarain with vitrain	2893	558		5.5	.42	41.8	19.0	38.78	1 1/2, 2 1/2	.66	
207	210	Clarain with vitrain	2894	562		3.0	.30	9.7	22.9	67.1	8, 8, 8	.63	

FORDING OPERATIONS
DRILL HOLE SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	LAB. No.	SHORTS	WIDTH	INH M	A	VM	FC	FSI	S	REMARKS
281.5	287	Clarain with vitrain	2895	560		5.5	.38	24.4	19.4	55.82	3,3,3,	.52	
287	290.5	Clarain with vitrain	2896	563		3.5	.38	13.2	19.9	66.52	2½2½	.38	
290.5	296.5	Clarain with vitrain	2897	565		6.0	.37	8.4	20.4	70.83	3,3,3	.44	
296.5	301.5	Clarain with vitrain	2898	564		5	.39	13.2	19.6	66.81	2½2½,3	.36	Seam 5
301.5	304.5	Clarain with vitrain	2899	525		3.0	.38	13.1	18.9	67.62	1½1½1½	.25	
304.5	309.5	Clarain with vitrain	2900	531		5.0	.40	9.8	19.6	70.2	1½21½	.22	
309.5	314	Clarain with vitrain	2901	526		4.5	.38	9.3	19.6	70.72	4,3½,4	.41	
314	319.5	Clarain with vitrain	2902	534		5.5	.36	29.4	12.1	53.14	2,2,1½	.41	
319.5	321	Clarain with minor vitrain	2903	541		1.5	.47	19.4	19.3	60.83	2½2½,3	.41	
479	483	Clarain with minor vitrain	2904	542		4.0	.44	15.9	1.9.7	63.96	7,7,7	.52	
483	488	Clarain with minor vitrain	2905	543		5.0	.51	8.1	20.5	70.89	6½,7,7	.33	
488	493	Clarain with minor vitrain	2906	540		5.0	.45	11.1	20.0	68.05	6½,7,7	.25	Seam 7
493	497	Vitrain	2907	544		4.0	.39	16.6	20.2	62.81	7,7½,7	.74	
499	504	Clarain with vitrain	2908	539		5.0	.60	36.7	16.7	46.0	3½,4,4	.49	

FORDING OPERATIONS
DRILL HOLE SAMPLING RECORD

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FROM	TO	DESCRIPTION	SAMPLE NUMBER	LAB. No.	SHORTS	WIDTH	INH M	A	VM	FC	FSI	S	REMARKS
198	200	Coal-clarain, badly crushed	2911	577		2.0	.69	90.3	6.7	2.31	N.A.	.14	<i>Minor Seam</i>
362	367	Coal-clarain/vitrain, good coal	2912	571		5.0	.36	16.5	21.0	62.14	5,5½,5½	.27	
367	372	Coal-clarain/vitrain, good coal	2913	572		5.0	.34	11.7	19.7	68.26	4,4,4	.27	
372	377	Coal-clarain/vitrain, good coal	2914	575		5.0	.32	8.5	21.9	69.28	7,7,7	.25	
377	382	Coal-clarain/vitrain, good coal	2915	573		5.0	.36	9.2	21.5	68.94	7,6½,7	.22	<i>Seam 9</i>
382	387	Coal-clarain/vitrain, good coal	2916	574		5.0	.30	10.6	23.3	65.8	7½,7½,7½	.36	
387	392	Coal-clarain/vitrain, good coal	2917	569		5.0	.36	12.2	21.4	66.04	8½,8,8	.44	
392	397.5	Coal-clarain, good coal	2918	568		5.5	.43	28.7	18.3	52.57	5,5½,5½	.71	
		Raw Composite (362 to 397.5)					.35	14.1	21.0	64.55		.36	
		Raw Composite (362 to 397.5)					.35	14.1	21.0	64.55		.36	<i>No. 4</i>
515	519	Coal-clarain, vitrain, good coal	2922	576		4.0	.34	11.9	21.0	66.76	8,8,8½	.49	<i>Seam 3</i>

FORDING OPERATIONS
DRILL HOLE SAMPLING RECORD

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FROM	TO	DESCRIPTION	SAMPLE NUMBER	LAB. No.	SHORTS	WIDTH	INH M	A	VM	FC	PSI	S	REMARKS
4	12.0	Coal, dominantly vitrain, mush	2866	631		8.0	4.0	27.8	37.1	31.1	N.A.	.55	} "F" ?
12	19.5	Coal, dominantly vitrain, mush	2867	629		7.5	.33	49.6	26.0	24.1	N.A.	.33	
214	234	Coal, clarain, good coal, mush	2868	648		20.0	.40	34.5	18.7	46.4	1,1,1	.55	E
258	288	Coal, dominantly clarain, completely	2869	647		30.0	.40	31.6	19.9	48.1	2,1,1,1	.41	} "D"
288	319	Coal, dominantly clarain, completely crushed	2870	644		31.0	.40	35.3	19.2	45.1	2,2,2,2	.33	
319	334	Coal, dominantly clarain crushed	2871	628		15.0	.40	15.0	26.2	58.4	5,5,2,6	.38	
334	350	Coal, dominantly clarain	2872	643		16.0	.40	10.8	22.6	66.2	2,2,2	.36	

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FORDING OPERATIONS
DRILL HOLE SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	LAB. No.	SHORTS	WIDTH	INH M	A	VM	FC	FSI	S	REMARKS
94	99	Clarain with vitrain and durain	2926	515		5	.57	52.0	17.2	30.23	1,1 $\frac{1}{2}$,1	.33	
99	102	Clarain with vitrain and durain	2927	514		3	.47	40.7	20.5	38.53	1 $\frac{1}{2}$,1,1 $\frac{1}{2}$	.47	
102	107	Clarain with vitrain partings	2928	513		5	.50	11.0	23.7	64.8	6,6 $\frac{1}{2}$,6	.47	<i>Seam 9</i>
107	112	Clarain with vitrain partings	2929	532		5	.43	23.4	22.7	53.47	3 $\frac{1}{2}$,3,3	.44	
112	117	Clarain with vitrain partings	2930	535		5	.54	48.4	18.5	32.56	1 $\frac{1}{2}$,1 $\frac{1}{2}$,1 $\frac{1}{2}$	.33	
118	121	Clarain with minor vitrain	2931	530		3	.39	23.0	22.0	54.61	4,3 $\frac{1}{2}$,3 $\frac{1}{2}$	.58	<i>No. 9 base</i>
132	135	B one coal with little clarain	2932	614		3	.61	44.4	17.8	37.19	1,1,1	.74	<i>No. 7</i>

FORDING OPERATIONS
DRILL HOLE SAMPLING RECORD

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FROM	TO	DESCRIPTION	SAMPLE NUMBER	LAB. No.	SHORTS	WIDTH	INH M	A	VM	FC	FSI	S	REMARKS
208	212	Clarain with minor vitrain	2935	606		4.0	.44	33.1	20.8	45.66	6.6, 5 $\frac{1}{2}$	.55	Top part No. 7
218	223	Clarain with minor durain and fusain	2936	608		5.0	.39	12.8	23.8	63.01	65 $\frac{1}{2}$ 6	.47	} Segm 7
223	227	Clarain with minor durain and fusain	2937	607		4.0	.41	32.9	27.1	39.59	7.7, 7	.33	
227	232	Clarain with minor durain and fusain	2938	615		5.0	.60	11.5	24.7	63.2	2, 2 $\frac{1}{2}$, 2	.38	
232	238	Clarain with minor durain and fusain	2939	600		6.0	.50	17.3	24.5	57.7	7 $\frac{1}{2}$, 8, 8	.38	
238	245	Clarain with minor durain and fusain	2940	617		7.0	.72	48.1	16.7	34.48	N.A.	.25	
288	291	Dominantly clarain, good coal.	2941	605		3.0	.39	11.4	22.4	65.81	4, 4, 4 $\frac{1}{2}$	.47	
291	297	Dominantly clarain, good coal	2942	601		6.0	.52	8.5	24.0	66.92	4 $\frac{1}{2}$, 5, 5	.63	
297	302	Dominantly clarain, good coal	2943	616		5.0	1.15	8.2	24.3	66.35	1 $\frac{1}{2}$, 2, 1 $\frac{1}{2}$	.36	
302	305	2944-dominantly clarain, good coal.	2944	604		3.0	.35	14.5	26.1	59.05	4, 4, 4 $\frac{1}{2}$	.36	Segm 5
305	314	Dominantly clarain, good coal.	2945	602		9.0	.29	34.4	18.9	46.41	1 $\frac{1}{2}$, 2, 2	.33	

FORDING OPERATIONS
DRILL HOLE SAMPLING RECORD

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FROM	TO	DESCRIPTION	SAMPLE NUMBER	LAB. No.	SHORTS	WIDTH	INH M	A	VM	FC	FSI	S	REMARKS
285	290	Coal	2977			5.0							
290	295	Coal	2978			5.0							Seam 7
295	300	Coal	2979			5.0							
300	305	Coal	2980			5.0							
346	350	Coal	2981			4.0							
350	355	Coal	2982			5.0							
355	360	Coal	2983			5.0							
360	370	Two Samples	2984			10.0							
360	370	" "	2985			10.0							Seam 5
370	380	Two samples	2986			10.0							
370	380	Two samples	2987			10.0							
380	382		2988			2.0							

FORDING OPERATIONS
DRILL HOLE SAMPLING RECORD

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FROM	TO	DESCRIPTION	SAMPLE NUMBER	LAB. No.	SHORTS	WIDTH	INH M	A	VM	FC	FSI	S	REMARKS
5.0	10.0	Coal	2889			5.0							
10.0	13.0		2890			3.0							
15.0	20.0		2891			5.0							
20.0	25.0		2892			5.0							Seam 7
25.0	30.0		2893			5.0							
30.0	35.0		2894			5.0							
35.0	37.0		2895			2.0							
88.0	90.0		2896			2.0							
90.0	95.0		2897			5.0							
95.0	100.0		2898			5.0							
100.0	105.0		2899			5.0							Seam 5
105.0	110.0		3000			5.0							
110.0	115.0		2151			5.0							
115.0	118.0		2152			3.0							

FORDING OPERATIONS
DRILL HOLE SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	LAB. No.	SHORTS	WIDTH	INH M	A	VM	FC	FSI	S	REMARKS
325	330		2153			5.0							
330	335		2154			5.0							
335	340		2155			5.0							
340	345	Coal	2156			5.0							
345	350	Coal	2157			5.0							
350	355	Coal	2158			5.0							
355	360	Coal	2159			5.0							Seam 7
360	365	Coal	2160			5.0							
365	370	Coal	2161			5.0							
365	370	Coal	2162			5.0							
370	375	Coal	2163			5.0							
370	375	Coal	2164			5.0							
375	378		2165			3.0							

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SUPPLEMENTARY SUMMARY OF ANALYTICAL DATA - FORDING PROPERTY

MINING BLOCK EAGLE MOUNTAIN

COAL SEAM NO. "4"

Adit 2, Bulk Sample

FIGURE III -3A

SOURCE OF SAMPLE	"A" Test	Cascade Tests			"Z" Test													
		I	II	I+II														
THICKNESS OF SEAM	Ft.	40.0	40.0	40.0	40.0	40.0												
THICKNESS OF COAL	Ft.																	
ORE RECOVERY	%																	
WEIGHTED AVERAGE ANALYSIS																		
RAW COAL (AIR DRIED BASIS)																		
Moisture	%	0.7	0.7	0.7	0.7	0.7												
Ash	%	16.5	16.5	16.5	16.5	16.5												
Volatiles	%	22.0	22.0	22.0	22.0	22.0												
Fixed Carbon	%	60.8	60.8	60.8	60.8	60.8												
F.S.I.		4-4½	4-4½	4-4½	4-4½	4-4½												
Sulphur	%	0.41	0.41	0.41	0.41	0.41												
WET SCREEN ANALYSIS																		
+28 Mesh Weight	%	75.0	82.0	81.5	81.8	86.5												
-28 Mesh Weight	%	25.0	18.0	18.5	18.2	13.5												
RECOVERY AT 1.5 SP. GR. CP																		
+28 MESH FRACTION	%	82.2 ¹	86.3 ²	85.3 ³	85.9	83.7 ⁴												
RECOVERY FROM FLOTATION CP																		
-28 MESH FRACTION	%	83.5	89.6	94.0	91.1	87.9												
OVERALL RECOVERY	%	82.6	86.9	86.7	86.8	84.2												
CLEAN COAL ANALYSIS																		
Moisture	%	0.27	0.78	1.37	0.98	1.1												
Ash	%	7.7	9.5	6.7	8.5	8.1												
Volatiles	%	21.9	21.6	21.8	21.6	20.7												
Fixed Carbon	%	70.1	68.1	70.1	68.8	70.1												
F.S.I.		5-5	6-6½	6-6½	6-6	6-6												
Sulphur	%	0.48	0.36	0.38	0.37	0.38												

¹Separation at 1.46 Specific Gravity.

²Separation at 1.48 Specific Gravity.

³Separation at 1.46 Specific Gravity.

⁴Separation at 1.46 Specific Gravity.

SUPPLEMENTARY SUMMARY OF ANALYTICAL DATA - FORDING PROPERTY

MINING BLOCK EAGLE MOUNTAIN

COAL SEAM NO. "7"

Figure III - 5A

Adit 9 - Bulk Samples

SOURCE OF SAMPLE		"A"	Cascade Tests			"Z"																
		Test	I	II	I+II	Test																
THICKNESS OF SEAM	Ft.	24	24	24	24	24																
THICKNESS OF COAL	Ft.																					
CORE RECOVERY	%																					
WEIGHTED AVERAGE ANALYSIS																						
RAW COAL (AIR DRIED BASIS)																						
Moisture	%	0.31	0.31	0.31	0.31	0.31																
Ash	%	17.0	17.0	17.0	17.0	17.0																
Volatiles	%	21.2	21.2	21.2	21.2	21.2																
Fixed Carbon	%	61.5	61.5	61.5	61.5	61.5																
F.S.I.		6-6½	6-6½	6-6½	6-6½	6-6½																
Sulphur	%	0.47	0.47	0.47	0.47	0.47																
WET SCREEN ANALYSIS																						
+28 Mesh Weight	%	74.7	84.5	83.2	84.2	89.2																
-28 Mesh Weight	%	25.3	15.5	16.8	15.8	10.8																
RECOVERY AT 1.5 SP. GR. OF																						
+28 MESH FRACTION	%	67.1 ¹	69.3 ²	65.4 ³	68.3	53.3 ⁴																
RECOVERY FROM FLOTATION OF																						
-28 MESH FRACTION	%	93.5	91.9	96.7	93.2	95.5																
OVERALL RECOVERY	%	73.1	72.8	70.7	72.2	57.8																
CLEAN COAL ANALYSIS																						
Moisture	%	0.70	1.5	1.4	1.5	1.3																
Ash	%	7.9	8.7	8.5	8.7	7.9																
Volatiles	%	24.4	23.1	24.5	23.4	22.6																
Fixed Carbon	%	67.0	66.7	65.6	66.4	68.2																
F.S.I.		7-7½	7-7	7½-8	7-7½	8-8																
Sulphur	%	0.41	0.40	0.42	0.40	0.40																

1 Separation at 1.38 Specific Gravity.
 2 Separation at 1.38 Specific Gravity.
 3 Separation at 1.38 Specific Gravity.
 4 Separation at 1.36 Specific Gravity.