ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

FILE NO.
LSD
SEC
TWP
RGE
W ____ M

COMPANY DENISON COAL LIMITED
WELL QMD 76-20
LOCATION
FIELD SHERIFF PIT
PROVINCE BRITISH COLUMBIA

Other Services: DENS-CAL, TEMP

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

Run. No.	ONE		
Date	20 AUGUST 1976		
First Reading	248 M		
Last Reading	0		
Footage Logged	248		
Depth Reached	249		
Depth Driller			
Casing Roke			
Casing Driller			
Fluid Type	GEL		
Liquid Level	9.5		
Min. Diam.	HQ		
Rm @ °F			
Operating Time	1 1/2 HOURS		
Truck No.	102		
Recorded By	SUNDGAARD	Witnessed By	GORMLY

EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	74	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO.	74
DETECTOR MODEL NO.		DIAMETER	1 11/16
TYPE	GEIGER	DETECTOR MODEL NO.	
LENGTH	18 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	8.55 FT.	LENGTH	6 INCH
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	606
HOIST TRUCK NO.	102	SPACING	17 INCH
INSTRUMENT TRUCK NO.		TYPE	AmBe
TOOL SERIAL NO.	74	STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	0	9.5	12	4	100	0	15	3	1000	13 L	160
	9.5	248	12	4	100	0	15	3	1000	0	160

REMARKS

GAMMA RAY	DEPTHS	NEUTRON
GAMMA RAY INCREASES →		NEUTRON INCREASES →
API →|15|←		API →|160|←
0 — 150		2080 — 3680 — 5280

ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

SIDEWALL DENSILOG
CALIPER

FILE NO.

LSD
SEC
TWP
RGE
W ____ M

COMPANY DENISON COAL LIMITED

WELL QSD 76-19

LOCATION

FIELD SUNRIFF PIT

PROVINCE BRITISH COLUMBIA

Permanent Datum: GROUND LEVEL Elev. ____
Log Measured from: GROUND LEVEL Ft. Above Perm. Datum
Elev.: K.B. ____ GRD ____ G.L. ____

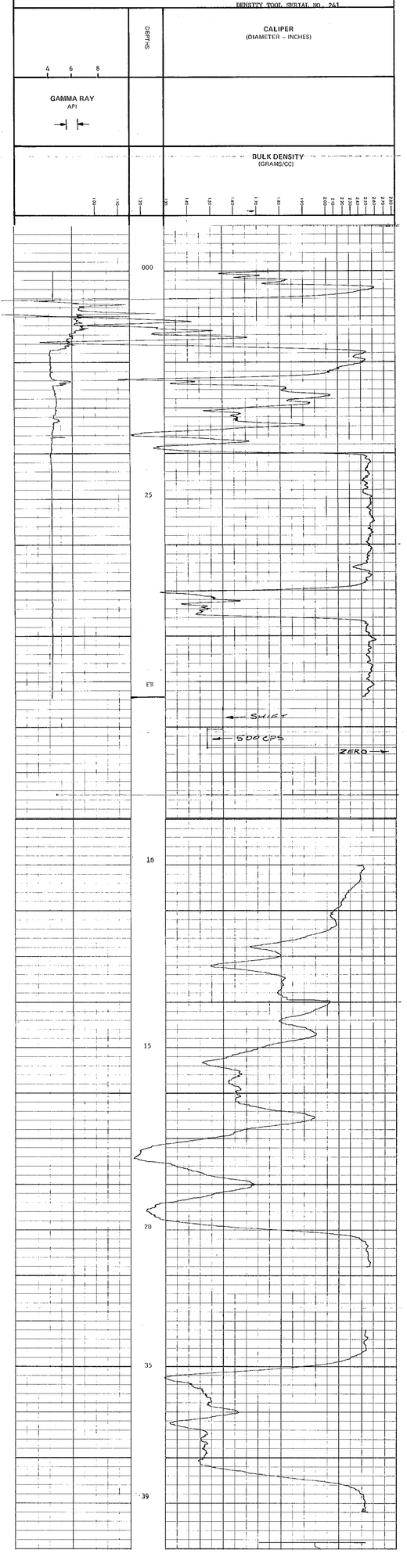
Other Services: GRN

GENERAL				GAMMA RAY				SIDEWALL DENSILOG			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	API G.R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	CPS/ DIV
1	0	46.5	12					3	1000	1.3 R	30.51
2	10	21	- EXPANDED SCALE 50 M/M								
	34	39	-								

REMARKS

CALIPER TOOL SERIAL NO. 785
DENSITY TOOL SERIAL NO. 241

Run No.	ONE
Date	20 AUGUST 1976
Log Reading	46.5 M
Last Reading	0
Footage Logged	46.5
Depth Reached	46.5
Max. Temp. Recorded	72.5
Casing Size	
Casing Depth	
Fluid Type	AIR
Liquid Level	
Min. Diam.	BK
Operating Time	1 HOUR
Truck No.	102
Recorded By	STUDDARD
Witnessed By	GOSSOY



ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

FILE NO.

LSD
SEC
TWP
RGE
W ____ M

COMPANY DENISON COAL LIMITED

WELL QMD 76-19

LOCATION

FIELD SHERIFF PIT

PROVINCE BRITISH COLUMBIA

Other Services: DENS-CAL

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

Run. No.	ONE
Date	20 AUGUST 1976
First Reading	47.5 M
Last Reading	0
Footage Logged	47.5
Depth Reached	48
Depth Driller	72.5
Casing Roke	
Casing Driller	
Fluid Type	AIR
Liquid Level	
Min. Diam.	HQ
Rm @ °F	
Operating Time	1/2 HOUR
Truck No.	102
Recorded By	SUNDGAARD
Witnessed By	GORMLY

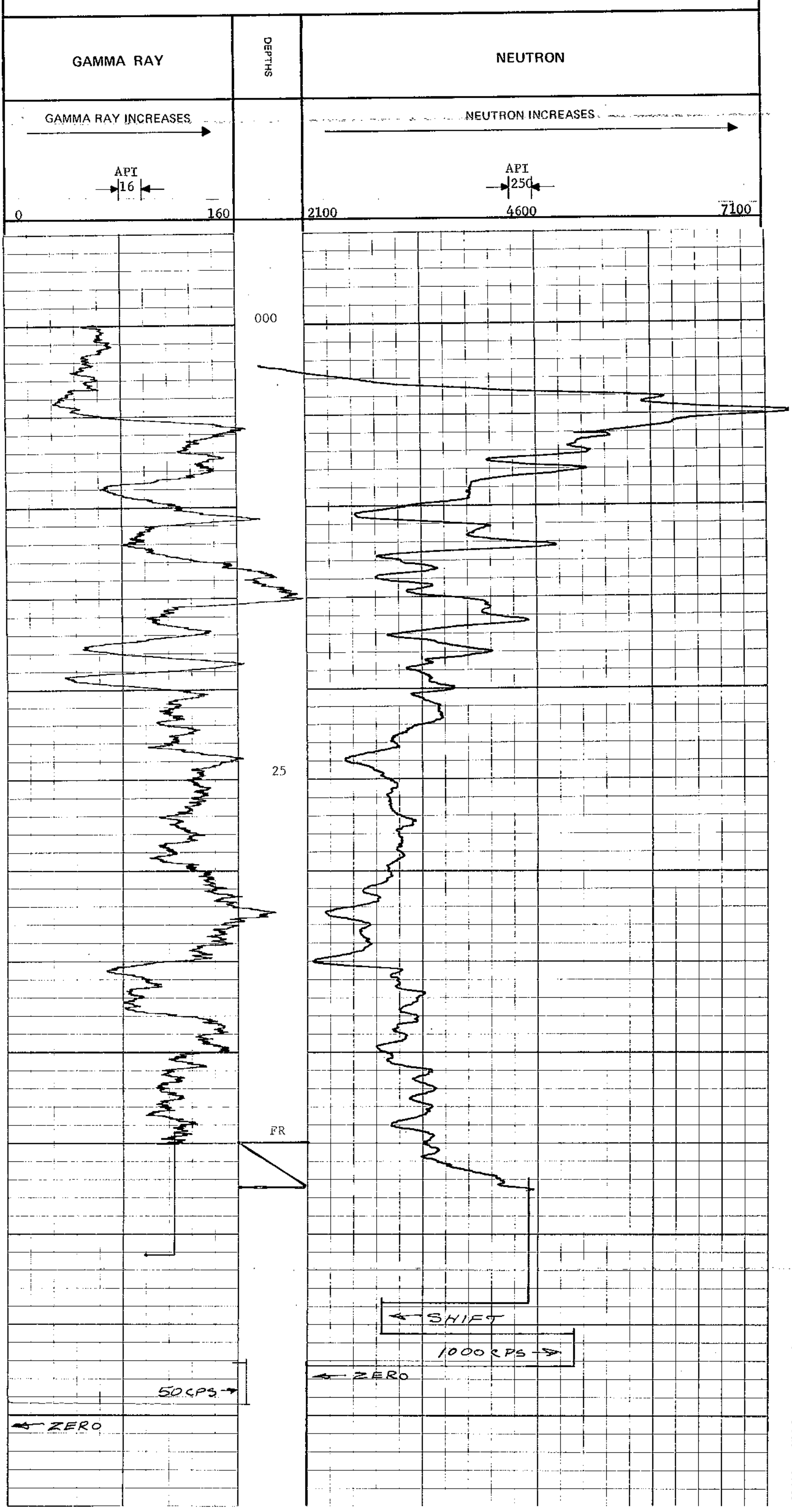
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	74	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	$1\frac{11}{16}$	TOOL MODEL NO.	74
DETECTOR MODEL NO.		DIAMETER	$1\frac{11}{16}$
TYPE	GEIGER	DETECTOR MODEL NO.	
LENGTH	18 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	8.55 FT.	LENGTH	6 INCH
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	606
HOIST TRUCK NO.	102	SPACING	17 INCH
INSTRUMENT TRUCK NO.		TYPE	AmBe
TOOL SERIAL NO.	74	STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	0	47.5	12	4	100	0	16	3	1000	8.4 L	250

REMARKS



ROKE TECHNOLOGIES

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.
LSD
SEC
TWP
RGE
W.M.

COMPANY: INTERNAT. COAL LIMITED

WELL: 009 76-18

LOCATION:

FIELD: SEKERES PIT

PROVINCE: BRITISH COLUMBIA

Permanent Datum: GROUND LEVEL
Log Measured from: GROUND LEVEL
Drill Measured from: GROUND LEVEL

Elev.: _____ ft. Above Perm. Datum
G.L. _____
K.B. _____

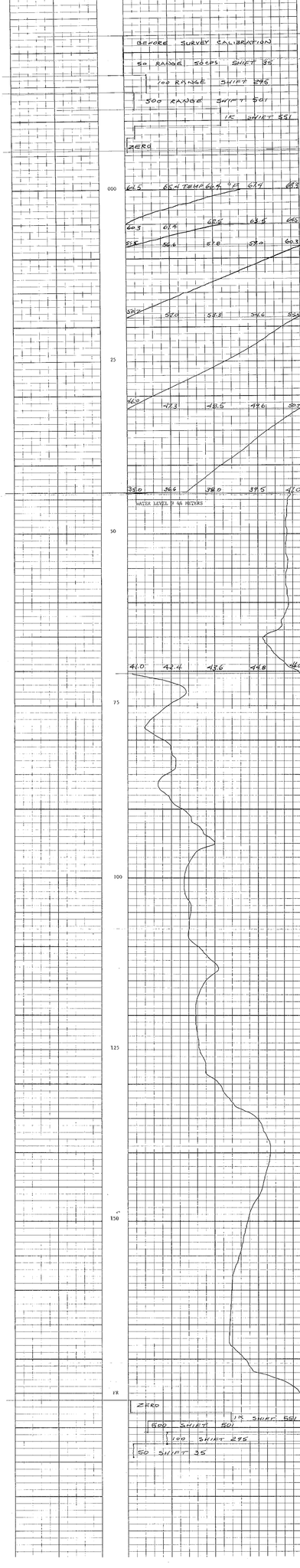
Other Services: 009 BRIGHAM

Run No.	009
Date	11 AUGUST 1976
Type Log	1ST RUN
Bottom Driller	176 M
Bottom Logger	176
Depth Reached	176
Casing Driller	
Casing Logger	
Bit Size	6 3/4
Type Fluid in Hole	GEL
Dens.	1.04
Visc.	40
Pm @ °F	
Pf	
Mf	
Chl	
Ca	
Source of Sample	
Rm @ °F	44
Rmf @ °F	NO
Rmc @ °F	
Source Rmf/Rmc	
Rm @ BHT	
Time Since Circ.	
Max. Rec. Temp.	
Equipment No.	
Location	
Recorded By	STEVENSON
Witnessed By	GOODSON

Operating Time	3 HOURS
Truck No.	56

Remarks: SURVEY RUN 12 HOURS AFTER DRILLING COMPLETED.
RUN 207
LOGGING SPEED 15 FT/MIN

TEMPERATURE TOOL SERIAL NO. CT23C116



ROKE

SHORWELL GEOLOGICAL
CLIENT
CALGARY ALBERTA

Date	1-12-81
Run No.	ONE
Depth Driller	1000
Depth Logger	1000
Bottom Log Interval	1000
Top Log Interval	0
Casing Driller	13 3/8 @ 0
Casing Logger	13 3/8 @ 0
Bit Size	12 1/4
Type Fluid in Hole	GEL CHEM
Density	9.2
Viscosity	45
Fluid Loss	8.0
Source of Sample	PUMPS
Rm @ Measured Temp	.75 @ 70
Rmf @ Measured Temp	.60 @ 70
Rmc @ Measured Temp	.90 @ 70
Source: Rmf / Rmc	MEASURED / CALC
Rm @ BHT	.30 @ 200
Time Since Circulation	6 HRS
Time Since Logged	1 HR
Max. Rec. Temp.	200
Equipment Number	1013
Location	5 MILES SOUTH OF ACME
Recorded By	D. MCCARTHY
Witnessed By	MR. TAYLOR

COMPANY: DOME PETROLEUM LTD.
WELL: DOME ACME 5-36-29-24
FIELD: WILDCAT
COUNTY: BADLANDS
STATE: ALBERTA

RUN NO.	DEPTH FROM	DEPTH TO	SPEED FT/MIN	L.S.	DENS DETECTOR	DENS SOURCE	AVG.B.H. CALIPER MAX.CALIPER	B.S.	DENS DETECTOR	DENS SOURCE	CAL BLK
1	0	112.5	11					1	3000	1.12 S	21.49
2	26	95	-								
	107	112	-								
	127	136	-								
	144	172	-								

REMARKS: REPEATED DENSITY TO 200.

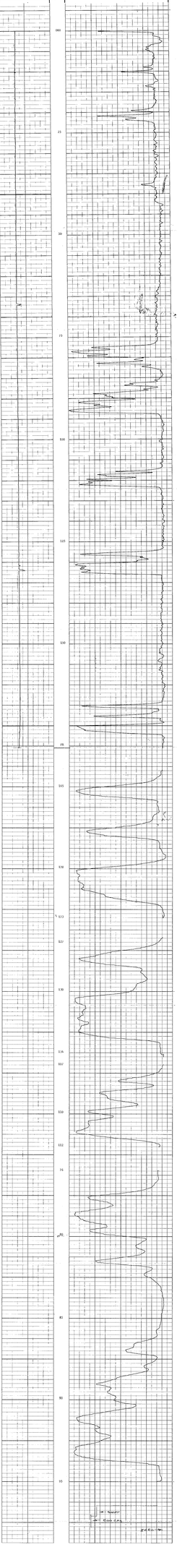
MERGETT DIGR. SERIES NO. 241
GALEDRA DIGR. SERIES NO. 293

GAMMA RAY
API

CALIPER
(DIAMETER - INCHES)

DENSITY

BULK DENSITY
(GRAMS/CC)



ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

FILE NO. 606
LSD
SEC
TWP
RGE
W.M.
COMPANY INTERCOL COAL LIMITED
WELL CRD 75-18
LOCATION
FIELD SCHAFER PIT

PROVINCE SASKATCHEWAN

Permanent Datum GROUND LEVEL Elev.
Log Measured From GROUND LEVEL 0 Above Perm. Datum
Drill Stem Measured From GROUND LEVEL

Other Services
CAL
CCL
GR

Date 11 AUGUST 1976
Run No. ONE
First Reading 170 ft
Last Reading 176
Logged Interval 176
Depth Reached 177
Casing Driller
Casing Logger
Bottom Log 41
Top Log 35
Min. Diam.
Max. Diam.
Operating Time 1 1/2 HOURS
Truck No. 34

Recorded By SEDGWICK
Witnessed By CONROY

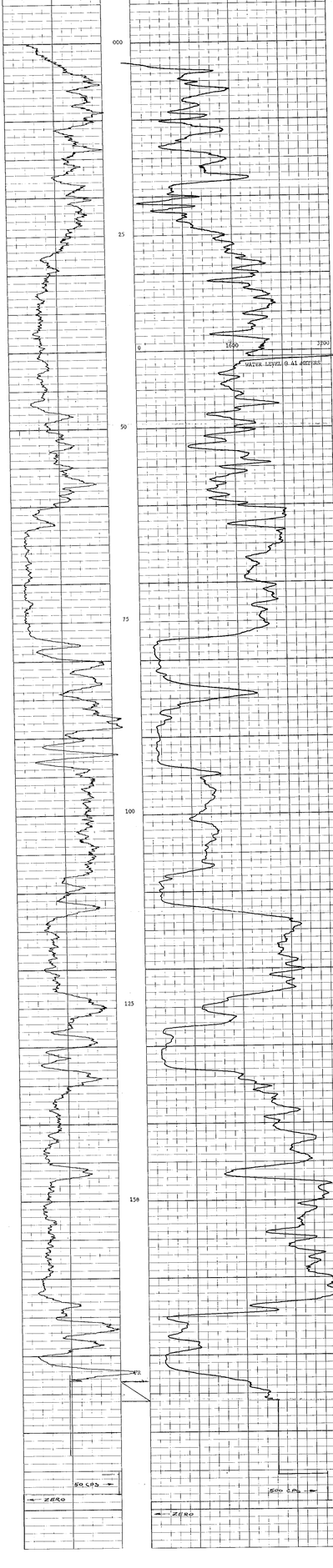
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	74	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 1/2	TOOL MODEL NO.	74
DETECTOR MODEL NO.		DIAMETER	1 1/2
TYPE	GEIGER	DETECTOR MODEL NO.	
LENGTH	18 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	8.55 FT.	LENGTH	6 INCH
GENERAL		SOURCE MODEL NO.	MRC N-85-W
HOIST TRUCK NO.	34	SERIAL NO.	606
INSTRUMENT TRUCK NO.	34	SPACING	17 INCH
TOOL SERIAL NO.	74	TYPE	AmBe
		STRENGTH	3 CURIES

LOGGING DATA

GENERAL						GAMMA RAY			NEUTRON		
RUN NO.	DEPTH FROM	DEPTH TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	0	41	12	4	100	0	17	4	1000	10 L	160
	41	176	12	4	100	0	17	4	1000	0	160

REMARKS



ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

SIDEWALL DENSILOG
CALIPER

FILE NO.	
LSD	
SEC	
TWP	
RGE	
W____M	
COMPANY	DENISON COAL LIMITED
WELL	QJD 76 - 43
LOCATION	
FIELD	JOHNSON PIT
PROVINCE	BRITISH COLUMBIA
Other Services:	GRN
Permanent Datum	GROUND LEVEL Elev.
Log Measured from	GROUND LEVEL Ft. Above Perm. Datum
Well Depths Measured from	GROUND LEVEL
K.B.	
CSG	
G.L.	

Run. No.	ONE
Date	19 OCTOBER 1976
First Reading	263 M
Last Reading	0
Footage Logged	263
Depth Reached	264
Depth Driller	264.5
Casing Roke	7
Casing Driller	
Fluid Type	WATER
Liquid Level	27.5
Min. Diam.	HQ
Operating Time	2 HOURS
Truck No.	102
Recorded By	SUNDGAARD
Witnessed By	BAKER

GENERAL				GAMMA RAY				SIDEWALL DENSILOG			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M /MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	API G.R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	CPS/ DIV
1	0	263	12					3	1000	1.3 R	30.51
2	121	124	-	EXPANDED SCALE 50 M/M							
	210	215	-								

REMARKS

CALIPER TOOL SERIAL NO. 776
DENSITY TOOL SERIAL NO. 241

	DEPTHS	
4 6 8		CALIPER (DIAMETER – INCHES)
GAMMA RAY API		
1.00 1.10	1.20	BULK DENSITY (GRAMS/CC) 1.30 1.40 1.50 1.60 1.70 1.80 1.90 2.00 2.10 2.20 2.30 2.40 2.50 2.60 2.70 2.80

ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

FILE NO. 3000/000 0000 LOG0000
COMPANY 3000/000 0000 LOG0000
WELL C.D.P. 74 - 43
LOCATION
FIELD 3000/000 EFE

PROVINCE 3000/000 COLUMBIA
Lat Deg Min Sec Long Deg Min Sec
Meas. Depth Datum Elev. Perm. Datum Elev. Log Meas. Elev.
GROUND LEVEL
KB
DF
GL

Other Services
CCL
GR
FL

Date	24 OCTOBER 1975
Run No.	26&27,28
Log Interval	2500,2
Casing Driller	2500,2
Casing Logger	2500,2
Bottom Driller	2500,2
Bottom Logger	2500,2
Top Log Int.	SURFACE
Open Hole Size	7 7/8
Type Fluid in Hole	WATER
Density	27.5
Viscosity	30
Max. Rec. Temp.	
Equipment No.	3000/000
Location	
Recorded By	3000/000
Witnessed By	

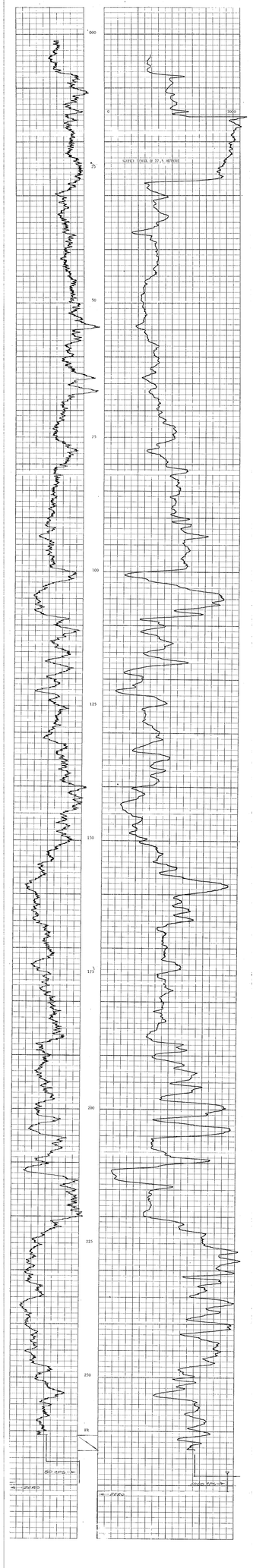
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	000	RUN NO.	000
TOOL MODEL NO.	74	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO.	74
DETECTOR MODEL NO.		DIAMETER	1 11/16
TYPE	GEIGER	DETECTOR MODEL NO.	
LENGTH	18 INCH	TYPE	PROPORTIONAL
DISTANCE TO SOURCE	8.65 FT.	LENGTH	6 INCH
		SOURCE MODEL NO.	MRC R.65.W
GENERAL		SERIAL NO.	600
HOIST TRUCK NO.	102	SPACING	17 INCH
HOISTWEIGHT TRUCK NO.		TYPE	AmBe
TOOL SERIAL NO.	74	STRENGTH	3 CURIES

LOGGING DATA

GENERAL					GAMMA RAY				NEUTRON			
RUN	DEPTH		SPEED	T.C.	SENS	ZERO	API G. R. UNITS	T. C.	SENS	ZERO	API N. UNITS	
NO.	FROM	TO	FT/MIN	SEC.	SETTINGS	DIV. L OR R	PER LOG DIV	SEC.	SETTINGS	DIV. L OR R	PER LOG DIV.	
4	0	15,2	12	4	100	0	16	3	10,000	0	300	
	15,2	302,5	12	4	100	0	16	3	5000	0	150	

REMARKS



ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.
SEC
TWP
RGE
W4 ____M

COMPANY: DENTSKO COAL LIMITED

WELL: OLD - Page

LOCATION: DENTSKO PIT

FIELD: DENTSKO PIT

PROVINCE: BRITISH COLUMBIA

Other Services: DENSITY-CAL

Permanent Datum: GROUND LEVEL
Log Measured from: GROUND LEVEL
Drill Depths Measured from: GROUND LEVEL

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

Date: 8 OCTOBER 1976
Run No.: ONE
Depth-Driller: 178.5
Depth-Logger: 178.5
Bottom Log Interval: 178.5
Top Log Interval: 102.88
Casing-Driller: NO CASING
Casing-Logger: NO CASING
Bit: NONE
Type Fluid in Hole: AIR
Dens.: NO LIQUID
Visc.: NO LIQUID
Level: FULL
Max. Recorded Temp.: NO LIQUID

Operating Time: 2 HOURS
Truck No.: 102
Operator: J. Hennessy

Recorded By: JORGES
Witnessed By: BARRIS

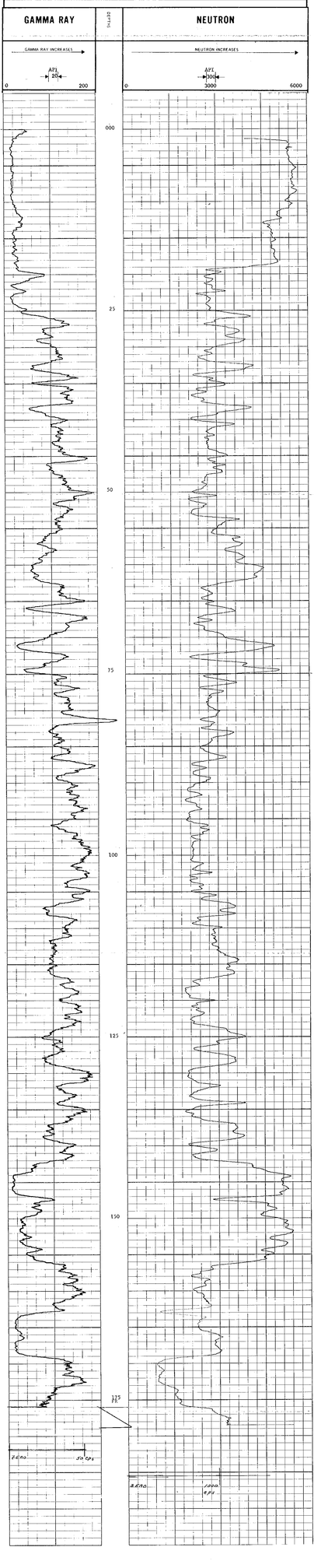
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO	ONE	RUN NO	ONE
TOOL MODEL NO	74	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO	74
DETECTOR MODEL NO		DIAMETER	1 11/16
TYPE	GEIGER	DETECTOR MODEL NO	
LENGTH	18 INCH	TYPE	PROPORTIONAL
DISTANCE FROM SOURCE	8.55 FT	LENGTH	9 INCH
		SOURCE MODEL NO	MRC-N-SS-W
GENERAL		SERIAL NO	606
HOIST TRUCK NO	102	SPACING	17 INCH
INSTRUMENT TRUCK NO		TYPE	AmBe
TOOL SERIAL NO	74	STRENGTH	3 Curies

LOGGING DATA

GENERAL				GAMMA RAY					NEUTRON				
RUN NO	DEPTHS FROM	DEPTHS TO	SPEED M/MIN	T C SEC	SENS SETTINGS	ZERO DIV. L OR R	API G R UNITS PER LOG DIV.	T C SEC	SENS SETTINGS	ZERO DIV. L OR R	API N UNITS PER LOG DIV.
1	0	178.5	4	4	100	0	20	3	1000	0	300

REMARKS:



ROKE

SIDEWALL NEUTRON LOG

CALGARY

OIL ENTERPRISES LTD. CALGARY ALBERTA

COMPANY: ROKE OIL LTD.

WELL: 102-7-27

FIELD: WILDCAT

COUNTY: BANFF

STATE: ALBERTA

Other Services: DIPLOG, SONIC, GR, CALIPER, BULK DENSITY

Permanent Datum: GROUND LEVEL

Elevation: K.B. 4000 D.F. G.L. 3990

Log Measured From: K.B. 10 Ft. Above Perm. Datum

Drilling Measured From: K.B.

Date: 9-Nov-1981

Run No.: ONE

Depth-Driller: 3300

Depth-Logger: 3300

Bottom Log Interval: 3300

Top Log Interval: 60

Casing-Driller: 9 5/8 @ 177 ft

Casing-Logger: NONE

Bit Size: 8 3/4

Type Fluid in Hole: GEL CHEM

Density: 9.4 Viscosity: 40

pH: 10

Fluid Loss: 8.0 ml

Source of Sample: CIRCULATION

Rm @ Meas. Temp.: 0.75 @ 70 °F

Rmf @ Meas. Temp.: 0.60 @ 70 °F

Rmc @ Meas. Temp.: 1.0 @ 70 °F

Source: Rmf Rmc: MEASURED MEASURED

Rm @ BHT: 0.45 @ 125 °F

Time Since Circ.: 3 HRS

Time Logger on Bottom: 0400 HRS

Equipment No.: 10001

Recorded By: TODAY

Witnessed By: TODAY

GENERAL				GAMMA RAY				NEUTRON-NEUTRON			
RUN NO.	CASING FROM	TO	SPEED (FEET/HR)	T.C. SETTINGS	GAIN SETTINGS	ZERO (DIV.)	API U.A. UNITS PER DIV.	T.C. SETTINGS	GAIN SETTINGS	ZERO (DIV.)	CPS/DIV
1	0	177.6	6					1	500X	1.3	30.31
	57	37									
	32	60	-	SEPARATE SCALE		50 N/M					
	60	30	-								

REMARKS:

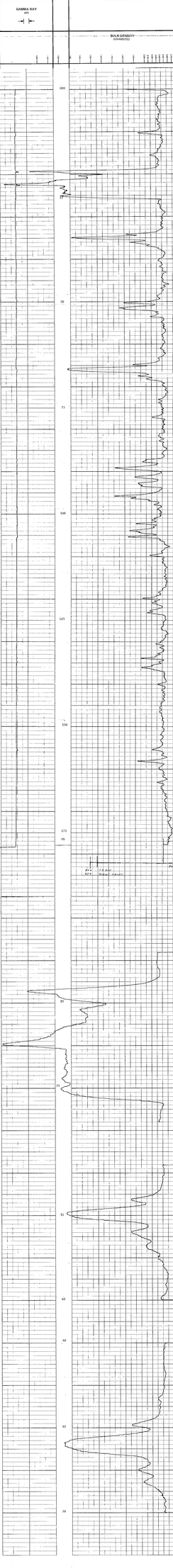
CALIPER TOOL SERIAL NO. 785
BENLEY TOOL SERIAL NO. 351

CALIPER (DIAMETER - INCHES)

6" 7" 8"

GAMMA RAY API

BULK-DENSITY (GRAMS/CC)



ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO
SEC
TWP
RGE
W.
M.

COMPANY HERCULES COAL LIMITED

WELL QDT 74 - 41

LOCATION

FIELD JOHNSONS FIT

Other Services: NONE

Permanent Datum: GROUND LEVEL Elev. 2212.5 ft.
Log Measured From: GROUND LEVEL 15 ft. Above Perm. Datum
Drilling Measured From: GROUND LEVEL

Elev.: K.B. 2227.5
D.F. 2213
G.L. 2212.5

Date: 20 NOVEMBER 1976
Run No.: ONE
Depth Driller: 212.5
Depth Logger: 213
Bottom Logged Interval: 212.5
Top Log Interval: SURFACE
Casing Size: 7 INCH
Casing Depth: 212.5
Type Fluid in Hole: WATER
Dens.: NA
Visc.: NA
pH: NA
Fluid Loss: NA
Source of Sample: CIRCULATION
Rm @ Meas. Temp.: NA
Rmf @ Meas. Temp.: NA
Rmc @ Meas. Temp.: NA
Source: Rmf: NA Rmc: NA
Rm @ BHT: NA
Time Since Circ.: 1 HOUR
Max. Rec. Temp.: 12 C
Equipment No.: 102
Location: ARMBRUSTER
Recorded By: BRUCE
Witnessed By: BRUCE

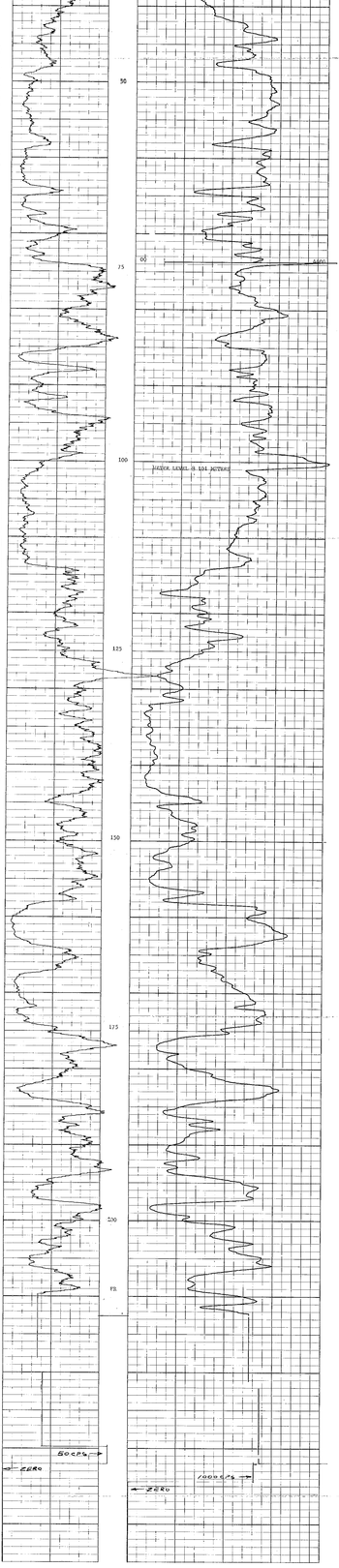
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO	ONE	RUN NO	ONE
TOOL MODEL NO	74	LOC TYPE	NEUTRON/NEUTRON
DIAMETER		TOOL MODEL NO	74
DETECTOR MODEL NO		DIAMETER	1 11/16
TYPE	CIFICEM	DETECTOR MODEL NO	
LENGTH	18 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	8.55 FT	LENGTH	4 INCH
GENERAL		SOURCE MODEL NO	MRC-N-SS-W
HOST TRUCK NO	102	SERIAL NO	606
ASTRONUT TRUCK NO		SPACING	17 INCH
TOOL SERIAL NO	74	TYPE	AmBe
		STRENGTH	3 Curies

LOGGING DATA

GENERAL					GAMMA RAY				NEUTRON		
RUN NO	DEPTHS FROM	TO	SPEED F/MIN	T C SEC	SENS SETTINGS	ZERO DIV. LOG R	API G R UNITS PER LOG DIV	T C SEC	SENS SETTINGS	ZERO DIV. LOG R	API N UNITS PER LOG DIV
1	0	74	12	4	100	0	15	3	5000	10.1	220
	74	212.5	12	4	100	0	15	3	5000	0	110

REMARKS



ROKE

OIL ENTERPRISES LTD.

CALGARY ALBERTA

SIDEWALL ARCHIVE DENSILOG

WELL: ROKE OIL ENTERPRISES LTD. HOLE: 7-7-26-14 W4M

COMPANY: ROKE OIL ENTERPRISES LTD. CALGARY, ALBERTA

WELL: 7-7-26-14 W4M

FIELD: WILDCAT

LOCATION: 7-7-26-14 W4M

PROV.: ALBERTA

COUNTRY: CANADA

PERM. DATUM	ELEV.	K.B.	D.F.	G.L.
G.L.	2319	12		

LOG MEASURED FROM	DRILLING MEASURED FROM	K.B.
K.B.	K.B.	12

RUN NO.	DATE	DEPTH DRILLER	DEPTH LOGGER	BTM. LOG INTERVAL	TYPE FLUID IN HOLE	DENSITY	VISCOSITY
1	8-7-73	2319	2319	2316	WATER	8.4	28

CASING RECORD	SIZE	WGHT. LB/FT.	GRADE	TOP	BTM.
SURFACE STRING	8 5/8"	24	J-55	KB	300
PRODUCTION STRING	5 1/2"	14	J-55	KB	2319

BIT RECORD	SIZE	TYPE	FROM	TO
1	7 7/8"	HTC	300	2319

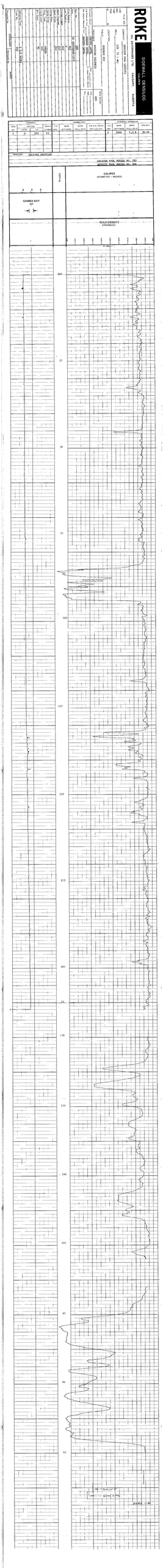
EQUIPMENT & OPERATING HOURS	NAME	SERIAL NO.	HOURS
Recording Unit	SCHLUMBERGER DENSILOG	1	1.5
Sonde	SCHLUMBERGER DENSILOG	1	1.5
Caliper	SCHLUMBERGER DENSILOG	1	1.5
Gamma Ray	SCHLUMBERGER DENSILOG	1	1.5
Other			

RECORDED BY	WITNESSED BY
D. CLARKE	

REMARKS: CALIPER TOOL BROKE

CALIPER TOOL SERIAL NO. 283

DENSITY TOOL SERIAL NO. 261



ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

FILE NO.	
LSD	
SEC	
TWP	
RGE	
W.....M.	
COMPANY	BRITISH COAL LIMITED
WELL	GBD 76-62
LOCATION	BADCOCK MOUNTAIN
FIELD	BOWAN MOUNTAIN
PROVINCE	BRITISH COLUMBIA
Permanent Datum	GROUND LEVEL
Log Measured from	GROUND LEVEL
Depths Measured from	K.B. / GRD. / G.L.
Other Services	NEUTRON-CAL

Run No.	ONE
Date	19 MAY 1976
First Reading	157.32
Last Reading	157.32
Depth Logged	157
Depth Reached	158
Depth Drilled	162
Casing Size	6.
Casing Depth	6.
Fluid Type	GAS
Liquid Level	51.5
Max. Diam.	3½
Rm @ °F	
Operating Time	3 HOURS
Truck No.	34
Recorded By	SEDGOLAND
Witnessed By	FERRY

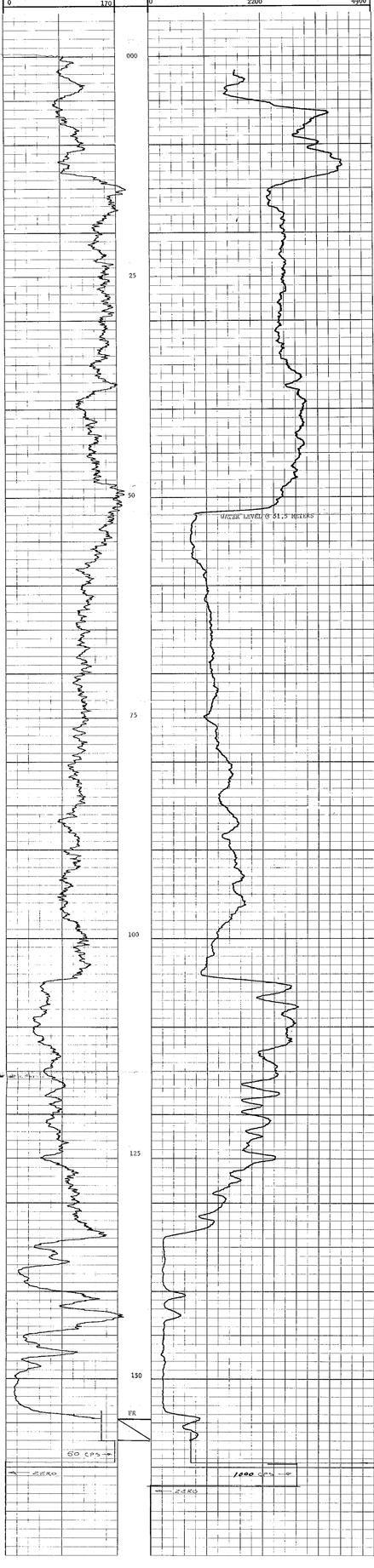
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	74	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 1/16	TOOL MODEL NO.	74
DETECTOR MODEL NO.		DIAMETER	1 1/16
TYPE	GEIGER	DETECTOR MODEL NO.	
LENGTH	18 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	8.65 FT.	LENGTH	6 INCH
GENERAL		SOURCE MODEL NO.	MRC-N-SS-W
HOIST TRUCK NO.	34	SERIAL NO.	606
INSTRUMENT TRUCK NO.	34	SPACING	17 INCH
TOOL SERIAL NO.	74	TYPE	AmBe
		STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO. DIV. L OR R	API N. UNITS PER LOG DIV.
1	0	157	12	4	100	0	17	3	1000	0	220

REMARKS HOLE DEPTHS ON LOG ARE 3% LESS THAN ACTUAL, E.G. LOG REGISTERS 97 METERS ACTUAL DEPTH IS 100 METERS.



ROKE OIL ENTERPRISES LTD. CALGARY, ALBERTA

SIDEWALL DENSILOG
CALIPER

FILE NO.
LSD
SEC
TWP
RGE
W___M

COMPANY: DENISON COAL LIMITED
WELL: QBD 76-62
LOCATION: BABCOCK MOUNTAIN
FIELD: ROMAN MOUNTAIN
PROVINCE: BRITISH COLUMBIA
Other Services: GRN

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

Run. No.	ONE		
Date	19 JULY 1976		
First Reading	156 M		
Last Reading	0		
Footage Logged	156		
Depth Reached	157		
Depth Driller	162		
Casing Roke			
Casing Driller	6		
Fluid Type	GEL		
Liquid Level	51.5		
Min. Diam.	HQ		
Operating Time	1 1/2 HOURS		
Truck No.	34		
Recorded By	SUNDGAARD	Witnessed By	PERRY

GENERAL				GAMMA RAY				SIDEWALL DENSILOG			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	API G.R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	CPS/ DIV
1	0	156	12					3	1000	1.12 R	31.69
2	133	155	EXPANDED SCALE 50 M/M								

REMARKS HOLE DEPTHS ON LOG ARE 3% LESS THAN ACTUAL. E.G. LOG REGISTERS 97 METERS ACTUAL DEPTH IS 100 METERS.

DENSITY TOOL SERIAL NO. 241
CALIPER TOOL SERIAL NO. 785

	DEPTHS	CALIPER (DIAMETER – INCHES)
4 6 8		
GAMMA RAY API		
1.00 1.10	1.20	BULK DENSITY (GRAMS/CC) 1.30 1.40 1.50 1.60 1.70 1.80 1.90 2.00 2.10 2.20 2.30 2.40 2.50 2.60 2.70 2.80

ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

FILE NO.
LSD
SEC
TWP
RGE
W. M.

COMPANY DENISON COAL LIMITED
WELL GBD 76-61
LOCATION BADCOCK MOUNTAIN
FIELD ROMAN MOUNTAIN
PROVINCE BRITISH COLUMBIA

Other Services: DENS-CAL.

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

K.B.
CSG.
G.L.

Run No.	ONE
Date	13 JULY 1976
First Reading	101 M
Last Reading	101
Footage Logged	102
Depth Reached	104
Depth Driller	
Depth Logger	
Casing Driller	
Fluid Type	GEL
Liquid Level	5
Min. Diam.	HQ
Rm @ °F	
Operating Time	1 HOUR
Truck No.	34
Recorded By	STURGAARD
Witnessed By	PERRY

EQUIPMENT DATA

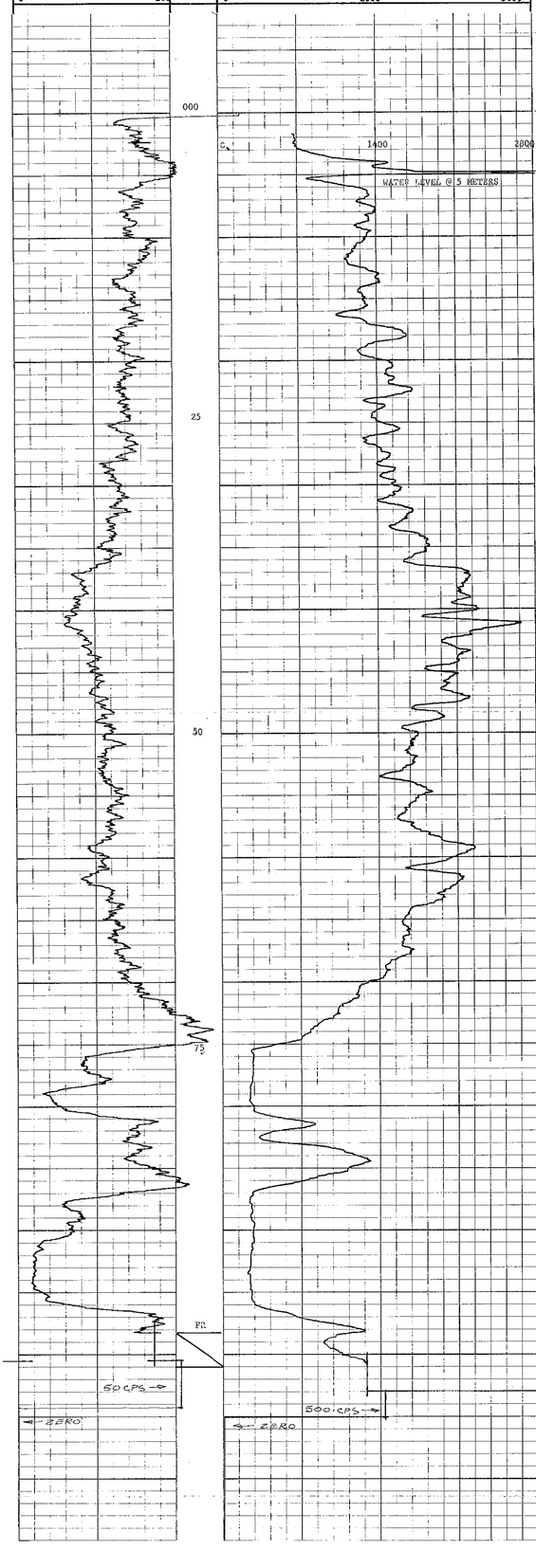
GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	74	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	$1\frac{11}{16}$	TOOL MODEL NO.	74
DETECTOR MODEL NO.		DIAMETER	$1\frac{11}{16}$
TYPE	GEIGER	DETECTOR MODEL NO.	
LENGTH	18 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	8.55 FT.	LENGTH	6 INCH
		SOURCE MODEL NO.	MRC-N-SS-W
		SERIAL NO.	606
		SPACING	17 INCH
		TYPE	AmBe
		STRENGTH	3 CURIES

GENERAL	
HOIST TRUCK NO.	34
INSTRUMENT TRUCK NO.	34
TOOL SERIAL NO.	74

LOGGING DATA

GENERAL						GAMMA RAY			NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV	
1	0	5	12	4	100	0	16	3	1000	0	280	
	5	101	12	4	100	0	16	3	500	0	140	

REMARKS HOLE DEPTHS ON LOG ARE 3% LESS THAN ACTUAL. E.G. LOG REGISTERS 97 METERS ACTUAL DEPTH IS 100 METERS.



ROWE ENTERPRISES OF CALGARY

CALGARY, ALBERTA

SIDEWALL DENSILOG
CALIPER

Company	ROWE ENTERPRISES OF CALGARY
Well	
Field	
County	
Province	ALBERTA
Location	
Other Services	
Permanent Datum	GROUND LEVEL
Log Measured From	GROUND LEVEL
Drilling Measured From	GROUND LEVEL
Elevation	
Date	7-10-74
Run Number	ONE
Depth Driller	1000'
Depth Logger	1000'
Bottom Logged Interval	1000'
Top Logged Interval	SURFACE
Casing Driller	8 5/8" @ 20'
Casing Logger	
Bit Size	7 7/8"
Type Fluid in Hole	WATER
Density	
Viscosity	
Fluid Loss	
Source of Sample	
Rm @ Meas. Temp.	
Rmf @ Meas. Temp.	
Rmc @ Meas. Temp.	
Source Rmf / Rmc	
Rm @ BHT	
Time Since Circulation	
Max. Rec. Temp.	
Equipment Location	
Recorded By	
Witnessed By	

Run No.	Nominal Depths From	To	Speed FT/MIN	T.C. SEC.	Gamma Ray Sens Settings	Zero Dev. OR R	API G.R. UNITS PER LOG DIV.	T.C. SEC.	Nominal Density Sens Settings	Zero Dev. OR
1	0	1000	15					1.0	1000	
2	74	97	30							

REMARKS: HOLE DEPTHS ON LOG ARE 2' LESS THAN ACTUAL. K.B. LOG MEASURED 97 METRES ABOVE GROUND.
DEPTH IS LOG DEPTH.

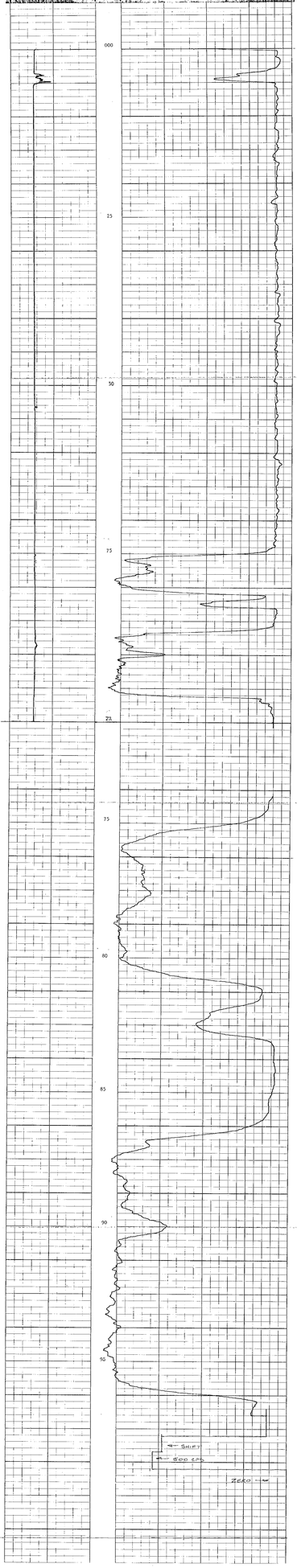
DENSITY TOOL SERIAL NO. 783
CALIPER TOOL SERIAL NO. 783

DEPTHS

CALIPER
(DIAMETER – INCHES)
4 6 8

GAMMA RAY
API

BULK DENSITY
(GRAMS/CC)



ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.
LSD
SEC
TWP
RGE
W ____ M

COMPANY BRENSON COAL LIMITED
WELL GRD 75-60
LOCATION BABCOCK MOUNTAIN
FIELD NORMAN MOUNTAIN

PROVINCE BRITISH COLUMBIA

Permanent Datum GROUND LEVEL Elev. ____
Log Measured from GROUND LEVEL ____ Ft. Above Perm. Datum
Not Depths Measured from GROUND LEVEL

Other Services:
K.B.
CSG
G.L.
BRNS-CAL

Run. No.	ONE
Date	15 JULY 1976
First Reading	122 M
Last Reading	0
Footage Logged	122 M
Depth Reached	123
Depth Driller	124
Casing Size	
Casing Driller	26.5
Fluid Type	GEL
Liquid Level	10
Min. Diam.	HQ
Rm. @ °F.	
Operating Time	1 HOUR
Truck No.	34

Recorded By STROGALSD
Witnessed By PERRY

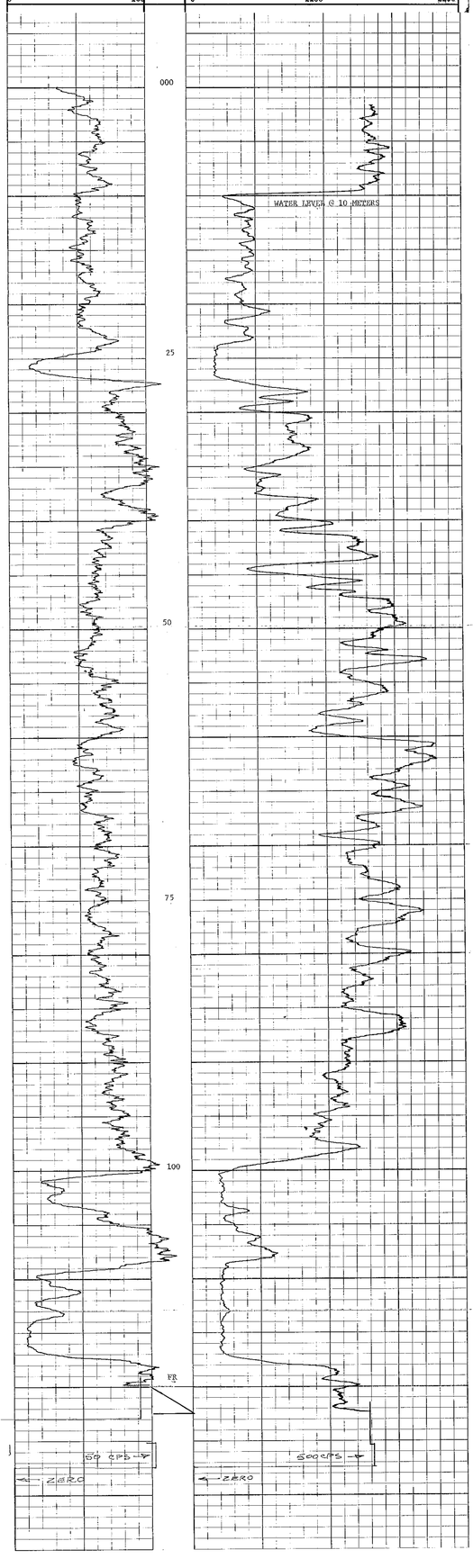
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	74	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO.	74
DETECTOR MODEL NO.		DIAMETER	1 11/16
TYPE	GEIGER	DETECTOR MODEL NO.	
LENGTH	18 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	8.55 FT.	LENGTH	6 INCH
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	606
HOIST TRUCK NO.	34	SPACING	17 INCH
INSTRUMENT TRUCK NO.	34	TYPE	AmBe
TOOL SERIAL NO.	74	STRENGTH	3 CURIES

LOGGING DATA

GENERAL						GAMMA RAY		NEUTRON		
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV
1	0	122	12	4	100	0	16	3	500	0	110

REMARKS HOLE DEPTHS ON LOG ARE 3% LESS THAN ACTUAL, E.G. LOG REGISTERS 97 METERS ACTUAL DEPTH IS 100 METERS.



ROKE

SIDEWALL DENSILOG
CALIPER
OIL ENTERPRISES LTD.
CALGARY ALBERTA

LSD. 15
SEC.
TWP.
RGE.
M.
FILE NO.

COMPANY: MOBIL OIL LIMITED
WELL: GRA 75-60
FIELD: BOOM MOUNTAIN
LOCATION: BADDOCK MOUNTAIN
PROVINCE: ALBERTA
COUNTRY: CANADA

Permanent Datum: GROUND LEVEL
Log Measured From: KB
Drilling Measured From: KB
Elevation: K.B. 1000 ft. Above Perm. Datum
D.F. ft.
G.L. 1000 ft.
Other Services: GDT

RUN NO.	GENERAL DEPTHS FROM	TO	SPEED FT/MIN	T.C. SEC.	GAMMA DAY STATIONS	ZERO DIVS. OR R	API CLR. UNITS PER DIV. OR	SIDEWALL DENSILOG T.C. SEC.	SENS STATIONS	ZERO DIVS. OR R	CPS/ DIV
1	0	122	12					3	1000	1.12 R	31.69
2	23	28	-	STANDARD SCALE 50 N/M							
	99	118	-								

REMARKS: HOLE DEPTH ON LOG ARE 25 LESS THAN ACTUAL, E.G. LOG ENGLISHES 97 METERS ACTUAL DEPTH IS 100 METERS.

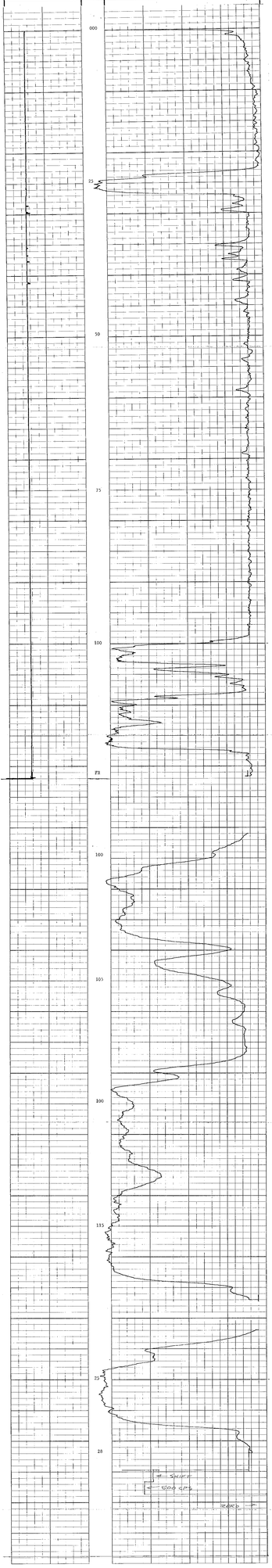
DENSITY TOOL SERIAL NO. 341
CALIPER TOOL SERIAL NO. 752

Date: 1971 01 11
Time: 1132 M
Job No.
Zero Reading
Amps Reading
Amps Calibration
Counts Zero
Counts Calibration
Counts Time
Mud Type
Mud Weight
Max. Temp.
Operating Time
Logging Time
Recorded By: SCHOMAKER
Witnessed By: FORBES

CALIPER
(DIAMETER – INCHES)

GAMMA RAY
API

BULK DENSITY
(GRAMS/CC)



ROKE OIL ENTERPRISES LTD. CALGARY, ALBERTA

SIDEWALL DENSILOG
CALIPER

FILE NO.

LSD
SEC
TWP
RGE
W4 M

COMPANY DENISON COAL LIMITED

WELL GBJ 76-59

LOCATION BABCOCK MOUNTAIN

FIELD ROMAN MOUNTAIN

PROVINCE BRITISH COLUMBIA

Other Services:
GRN

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

K.B.
CSG
G.L.

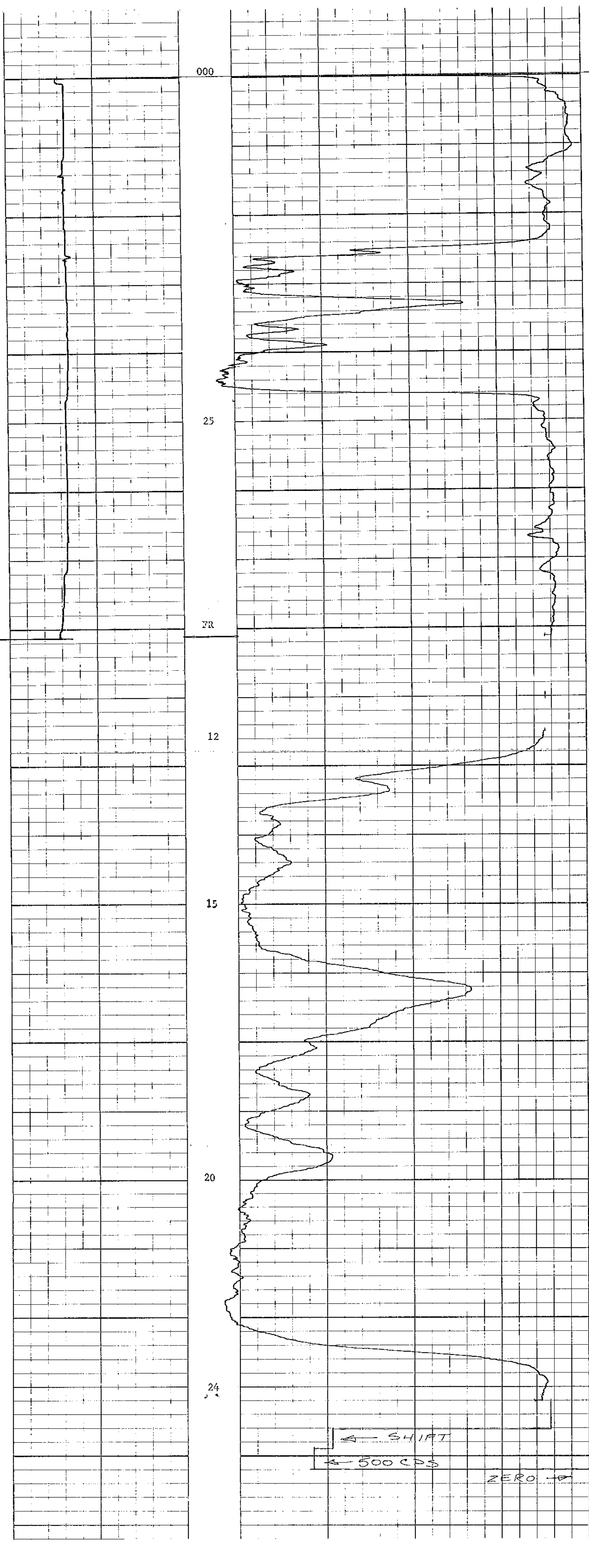
Run. No.	ONE
Date	16 JULY 1976
Eng. Reading	40 M
Lst. Reading	0
Footage Logged	40
Depth Reached	41
Depth Driller	44
Casing Rate	
Fluid Type	GEL
Liquid Level	
Min. Diam.	HQ
Operating Time	1/2 HOUR
Truck No.	34

Recorded By STRICKLAND
Witnessed By PERRY

GENERAL				GAMMA RAY				SIDEWALL DENSILOG			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	API G.R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	CPS/DIV
1	0	40	12					3	1000	1.12 R	31.69
2	12	24	EXPANDED SCALE 50 M/M								

REMARKS 70° ANGLE HOLE

DENSITY TOOL SERIAL NO. 241
CALIPER TOOL SERIAL NO. 785



ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.

LSD
SEC
TWP
RGE
W ____ M

COMPANY DENISON COAL LIMITED

WELL QBD 76-59

LOCATION BABCOCK MOUNTAIN

FIELD ROMAN MOUNTAIN

PROVINCE BRITISH COLUMBIA

Other Services: DENS-CAL

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

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

Run. No.	ONE
Date	16 JULY 1976
First Reading	41 M
Last Reading	0
Footage Logged	41
Depth Reached	42
Depth Driller	44
Casing Roke	
Casing Driller	
Fluid Type	GEL
Liquid Level	
Min. Diam.	HQ
Rm @ °F	
Operating Time	1 1/2 HOURS
Truck No.	34
Recorded By	SUNDGAARD
Witnessed By	PERRY

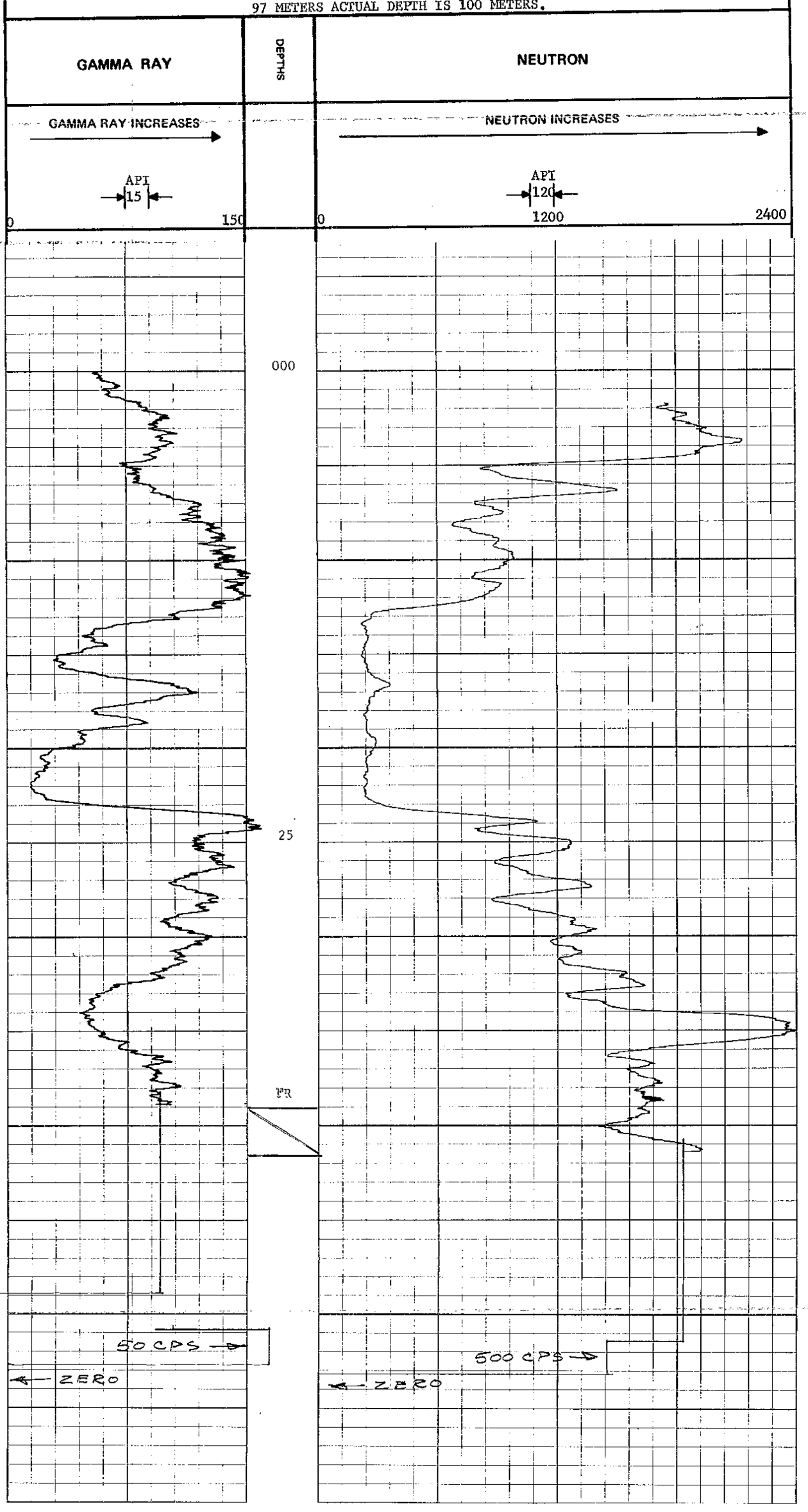
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	74	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	$1\frac{11}{16}$	TOOL MODEL NO.	74
DETECTOR MODEL NO.		DIAMETER	$1\frac{11}{16}$
TYPE	GEIGER	DETECTOR MODEL NO.	
LENGTH	18 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	8.55 FT.	LENGTH	6 INCH
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	606
HOIST TRUCK NO.	34	SPACING	17 INCH
INSTRUMENT TRUCK NO.	34	TYPE	AmBe
TOOL SERIAL NO.	74	STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	0	41	12	4	100	0	15	3	500	0	120

REMARKS 70° ANGLE HOLE HOLE DEPTHS ON LOG ARE 3% LESS THAN ACTUAL. E.G. LOG REGISTERS 97 METERS ACTUAL DEPTH IS 100 METERS.



ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.
LSD
SEC
TWP
RGE
W.M.

COMPANY: SUNTRACK COAL LIMITED

WELL: OBD 76-18

LOCATION: BADGER MOUNTAIN

FIELD: ROMAN MOUNTAIN

PROVINCE: BRITISH COLUMBIA

Permanent Datum: GROUND LEVEL
Log Measured from: GROUND LEVEL
Drill Depths Measured from: GROUND LEVEL

Elev.: K.B. 2225.5—CALC.
GRD.
G.L.

Other Services:

EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	74	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO.	74
DETECTOR MODEL NO.		DIAMETER	1 11/16
TYPE	GEIGER	DETECTOR MODEL NO.	
LENGTH	18 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	8.55 FT.	LENGTH	6 INCH
GENERAL		SOURCE MODEL NO.	MRC-N-SS-W
HOIST TRUCK NO.	34	SERIAL NO.	606
INSTRUMENT TRUCK NO.	34	SPACING	17 INCH
TOOL SERIAL NO.	74	TYPE	AmBe
		STRENGTH	3 CURIES

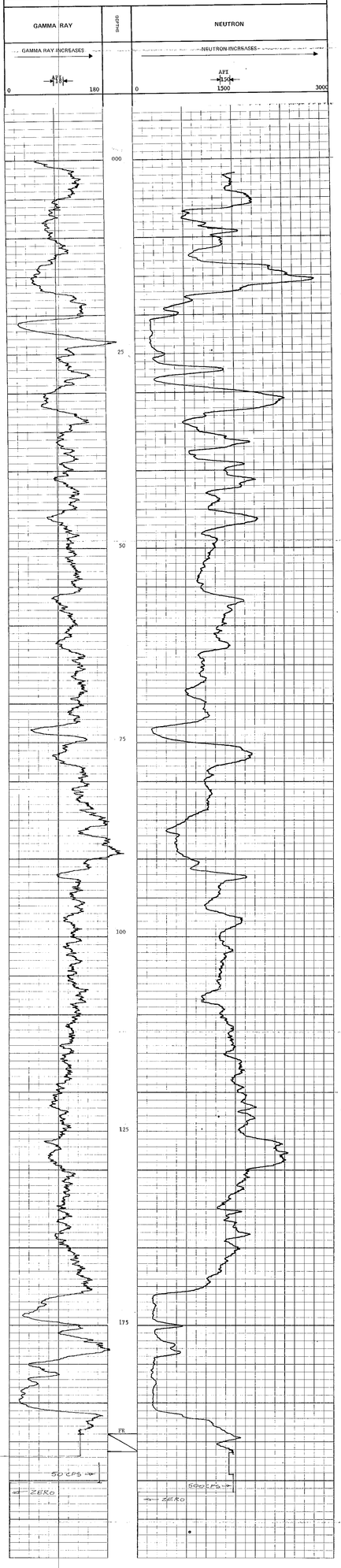
LOGGING DATA

GENERAL				GAMMA RAY					NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	0	166	12	4	100	0	18	3	500	0	150

REMARKS: 70° ANGLE HOLE

Date No.: ONE
Date: 17 JULY 1976
First Reading: 166 ft
Last Reading: 0
Footage Logged: 166
Depth Reached: 167
Depth Driller: 172
Casing Driller: 0
Casing Logger: 0
Fluid Type: DRY
Max. Temp.: 0
Max. Chart: NO.
Scale: 1" = 5'
Opening Time: 1 1/2 HOURS
Total No.: 34

Recorded By: SUNDARARAJ
Witnessed By: PEDRO



ROKE OIL ENTERPRISES LTD.

SIDEWALL DENSILOG

FILE NO. 1127
PAGE NO. 1
DATE 1-Dec-78

COMPANY: ROKEDEN ZONE LIMITED
WELL: 00/ 10-24-9
LOCATION: BANDON NORTHEAST
FIELD: BANDON NORTHEAST
COUNTY: CALGARY
PROVINCE: ALBERTA

Permanent Datum: GROUND LEVEL
Log Measured From: 10 ft. Above Perm. Datum
Drilling Measured From: KB
Elevation: K.B. 3000 ft. / D.F. ft. / G.L. 2990 ft.
Date: 1-Dec-78
Run No.: ONE
Depth Driller: 3000
Depth Logger: 3000
Bottom Log Interval: 3000
Top Log Interval: 0
Casing Driller: 8 5/8 @ 0
Casing Logger: 8 5/8 @ 0
Bit Size: 7 7/8
Type Fluid in Hole: GEL CHEM
Density: 9.2
Viscosity: 52
pH: 9.5
Fluid Loss: 5.6
Source of Sample: FLOWLINE
Rm @ Meas. Temp.: .080 @ 70 F
Rmf @ Meas. Temp.: .065 @ 70 F
Rmc @ Meas. Temp.: .06 @ 70 F
Source: Rmf Rmc: MEASURED
Rm @ BHT: .035 @ 200 F
Time Since Circ.: 12 HRS
Max. Rec. Temp.: 200 F
Equipment No.: 2001
Location: 10-24-9
Recorded By: A. BURNS
Witnessed By: DEL

Recorded By: A. Burns
Witnessed By: Del

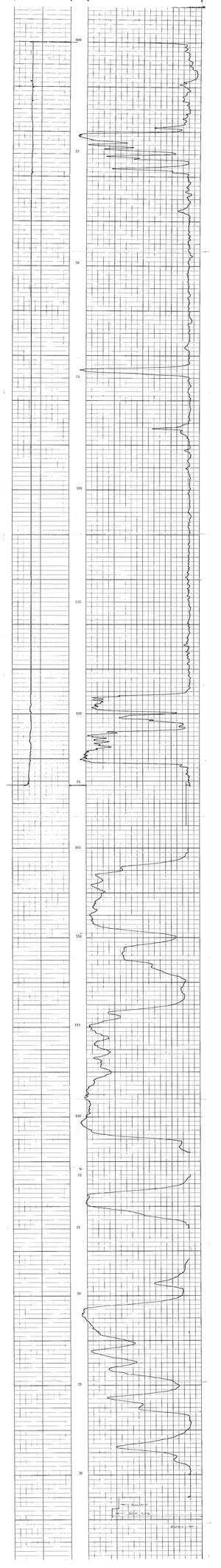
RUN NO.	GENERAL INTERVAL FROM	TO	SPEED FT/MIN	T.C. NO.	GAMMA RAY SCALE	API U.A. LIMITS PER LOG DIV.	T.C. NO.	SIDEWALL DENSILOG SCALE	CPS/DIV
1	0	166	12	-			1	5000	3.137 X 31.25
2	148	30	-	-					
	22	21	-	62	NONE	SCALE DO NOT			
	165	222	-	-					

REMARKS: 78" ANGLE HOLE
HOLE DEPTHS IN ROD ARE 31 LESS THAN ANTHAL. X.Z.L. ARE EQUIVALENT 93 METERS ACTUAL DEPTH
REMOVED 2000. SIZEAS 30. 241.
CALIPER RING SIZEAS 30. 240.
92 240 METERS.

GAMMA RAY API

CALIPER (DIAMETER – INCHES)

BULK DENSITY (GRAM/CC)



ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.	
LSD	
SEC	
TWP	
RGE	
W M	
COMPANY	DENISON COAL LIMITED
WELL	QBD 76-57
LOCATION	BABCOCK MOUNTAIN
FIELD	ROMAN MOUNTAIN
PROVINCE	BRITISH COLUMBIA
Other Services:	DENS-CAL

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

Run. No.	ONE		
Date	16 JULY 1976		
First Reading	81 M		
Last Reading	0		
Footage Logged	81		
Depth Reached	82		
Depth Driller	83		
Casing Roke			
Casing Driller			
Fluid Type	WATER		
Liquid Level	FULL		
Min. Diam.	HQ		
Rm @ °F			
Operating Time	1 HOUR		
Truck No.	34		

Recorded By SUNDGAARD Witnessed By PERRY

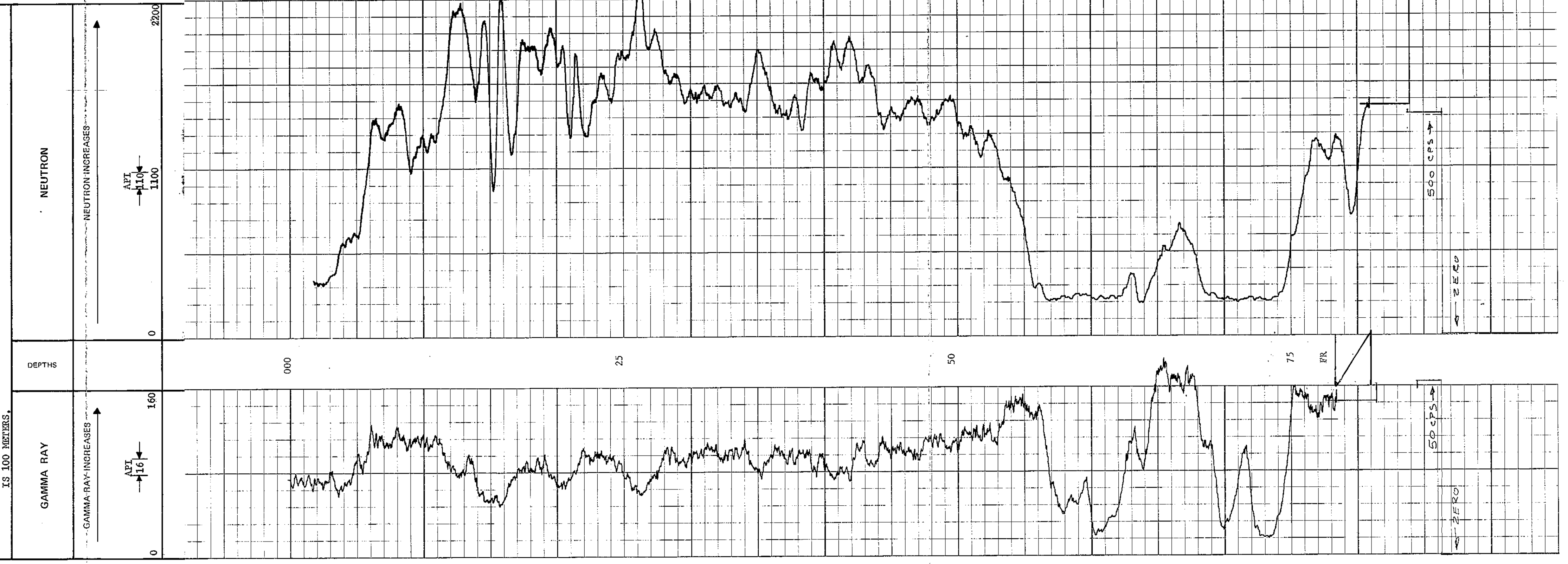
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN. NO.	ONE	RUN. NO.	ONE
TOOL MODEL NO.	74	TOOL MODEL NO.	NEUTRON/NEUTRON
DIAMETER	1 11/16	DIAMETER	1 11/16
DETECTOR MODEL NO.	GEIGER	DETECTOR MODEL NO.	74
TYPE	18 INCH	TYPE	PROPORTIONAL
LENGTH	8.55 FT.	LENGTH	6 INCH
DISTANCE TO N. SOURCE		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	606
HOIST TRUCK NO.	34	SPACING	17 INCH
INSTRUMENT TRUCK NO.	34	TYPE	AmBe
TOOL SERIAL NO.	74	STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY					NEUTRON				
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	0	81	12	4	100	0	16	3	500	0	110

REMARKS HOLE DEPTHS ON LOG ARE 32 LESS THAN ACTUAL. E.G. LOG REGISTERS 97 METERS ACTUAL DEPTH IS 100 METERS.



ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

SIDEWALL DENSILOG
CALIPER

FILE NO.
COMPANY BEFORE OIL LIMITED
WELL 08-7-57
LOCATION SARDOCK MORINVILLE
FIELD BOGAN MORINVILLE
PROVINCE WESTERN CANADA

Elev. Reference: GROUND LEVEL
Log Measured from: GROUND LEVEL
All Depths Measured from: GROUND LEVEL

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

Other Services: CBL

Date Run No. Date: 1st JULY 1976
Bit Size: 6 3/4 N
Fluid Density: 9.0
Fluid Level: 60
Fluid Loss: 8.0
Max. Temp. Recorded: 83
Max. Temp. Circulated: 83
Casing Size: 8 5/8
Casing Driver: WELDED
Casing Shoe: 75
Liquid Level: FULL
Min. Diam.: NA

Operating Time: 1 HOUR
Truck No.: 34

Recorded By: SCHOUKALO
Witnessed By: FERRY

GENERAL RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	GAMMA RAY T.C. SEC.	SENS SETTINGS	ZERO DIV.A. OR R	API G.R. UNITS PER LOG DIV.	SIDEWALL DENSILOG T.C. SEC.	SENS SETTINGS	ZERO DIV.A. OR R	CPS/DIV
1	0	80	12					3	1000	1.12 R	31.69
2	55	75	EXTENDED SCALE 50 ft/M								

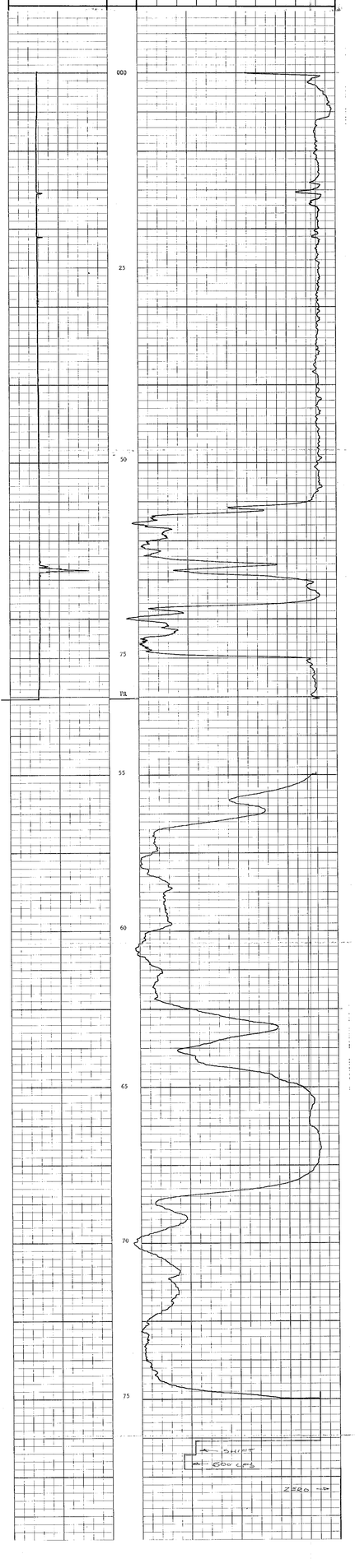
REMARKS HOLE DEPTHS ON LOG ARE 3% LESS THAN ACTUAL, E.G. 100 METHTERS 97 METERS ACTUAL DEPTH IS 100 METERS.
DENSITY TOOL SERIAL NO. 241
CALIPER TOOL SERIAL NO. 785

DEPTHS

CALIPER
(DIAMETER – INCHES)
4 6 8

GAMMA RAY
API

BULK DENSITY
(GRAMS/CC)
2.00 2.10 2.20 2.30 2.40 2.50 2.60 2.70 2.80 2.90 3.00



ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

FILE NO.

LSD
SEC
TWP
RGE
W ____ M

COMPANY: DENISON COAL LIMITED

WELL: QSD 76-56

LOCATION: BABCOCK MOUNTAIN

FIELD: ROCKY MOUNTAIN

PROVINCE: BRITISH COLUMBIA

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

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

Other Services: DENS-CAL

Run No.	ONE
Date	16 JULY 1976
Last Reading	108 M
Footage Logged	0
Depth Reached	108
Depth Driller	109
Casing Size	111
Casing Thickness	
Field Type	GEIGER
Liquid Level	5.5
Min. Diam.	HQ
Rm @ Rf	
Operating Time	1 HOUR
Truck No.	34
Recorded By	SUNDGAARD
Witnessed By	PERRY

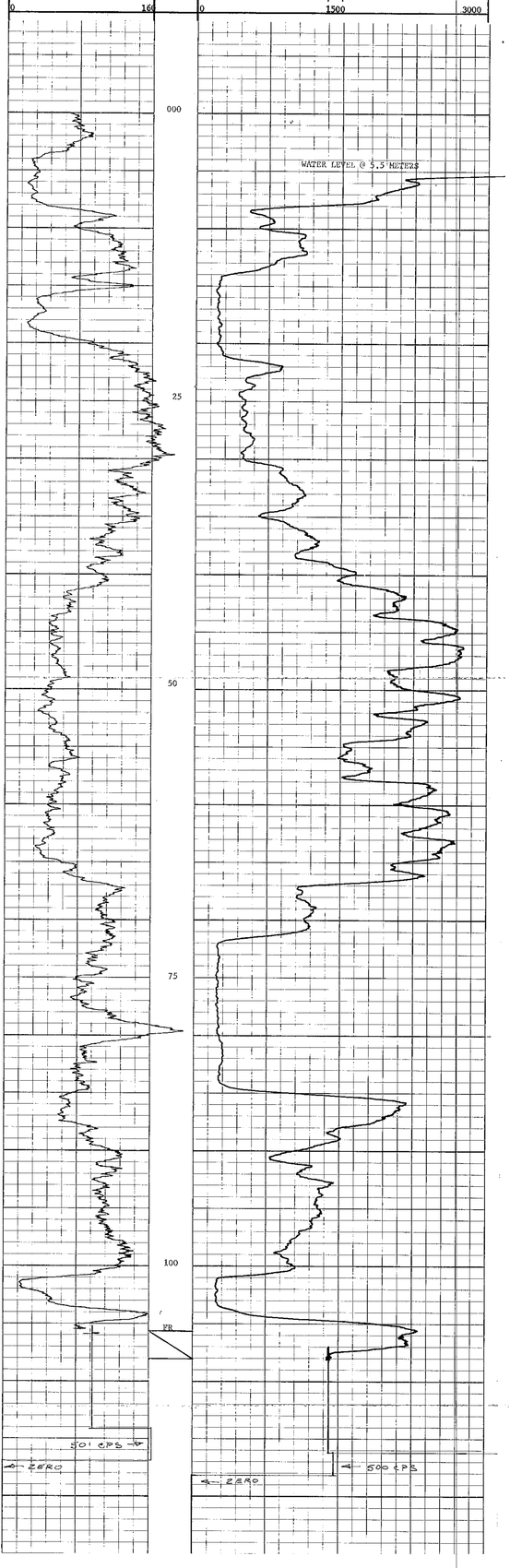
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	74	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO.	74
DETECTOR MODEL NO.		DIAMETER	1 11/16
TYPE	GEIGER	DETECTOR MODEL NO.	
LENGTH	18 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	8.55 FT.	LENGTH	6 INCH
GENERAL		SOURCE MODEL NO.	MRC-N-SS-W
HOIST TRUCK NO.	34	SERIAL NO.	606
INSTRUMENT TRUCK NO.	34	SPACING	17 INCH
TOOL SERIAL NO.	74	TYPE	AmBe
		STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV
1	0	108	12	4	100	0	16	3	1000	0	150

REMARKS: HOLE DEPTHS ON LOG ARE 3% LESS THAN ACTUAL, E.G. LOG REGISTERS 97 METERS ACTUAL DEPTH IS 100 METERS.



ROKE

SIDEWALL DENSILOG
CALIPER

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.
LSD
SEC
TWP
RGE
W. M

COMPANY DENSMOR COAL LIMITED

WELL QBD 76-56

LOCATION BABOOKS MOUNTAIN

FIELD BOWAN MOUNTAIN

PROVINCE BRITISH COLUMBIA

Other Services: GRN

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

Run. No.	ONE
Date	14 JULY 1976
First Reading	107 ft
Last Reading	0
Fluid Level	107
Depth Reached	109
Depth Driller	113
Casing Size	
Casing Driller	
Fluid Type	GBD
Liquid Level	5.5
Min. Diam.	8½
Operating Time	1 1/2 HOURS
Truck No.	34

Recorded By STODDARD Witnessed By FERNT

GENERAL DENSILOG			
TOOL NO.	DENSILOG	SERIAL NO.	1
CALIPER	1000	SERIAL NO.	3

GAMMA RAY			
TOOL NO.	3	SERIAL NO.	1
CALIPER	3	SERIAL NO.	1

GENERAL			
TOOL NO.	3	SERIAL NO.	1
CALIPER	3	SERIAL NO.	1
DENSILOG	1	SERIAL NO.	1
GAMMA RAY	1	SERIAL NO.	1

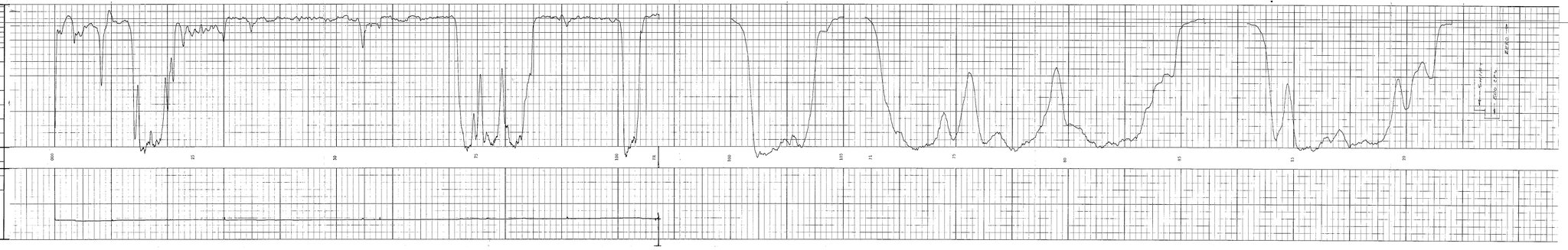
DENSITY	1.95
CALIPER	8 INCHES
GAMMA RAY	N/A

CALIPER
(SCALE 6 INCHES)

DEPTHS

GAMMA RAY
(SCALE 0 - 100)

BULK DENSITY
(SCALE 0.0 - 3.0)



ROKE

OIL ENTERPRISES LTD.
CALGARY, ALBERTA

SIDEWALL DENSILOG
CALIPER

FILE NO
LSD
SEC
TWP
RGE
M

COMPANY DENISON COAL LIMITED
WELL QBD 76-55
LOCATION BABCOCK MOUNTAIN
FIELD SUMAS MOUNTAIN
PROVINCE BRITISH COLUMBIA

Permanent Datum GROUND LEVEL Elev.
Log Measured From KB 8 Above Perm. Datum
Drill Depths Measured From GROUND LEVEL Ft. Above Perm. Datum

KB
CSG
G.L.

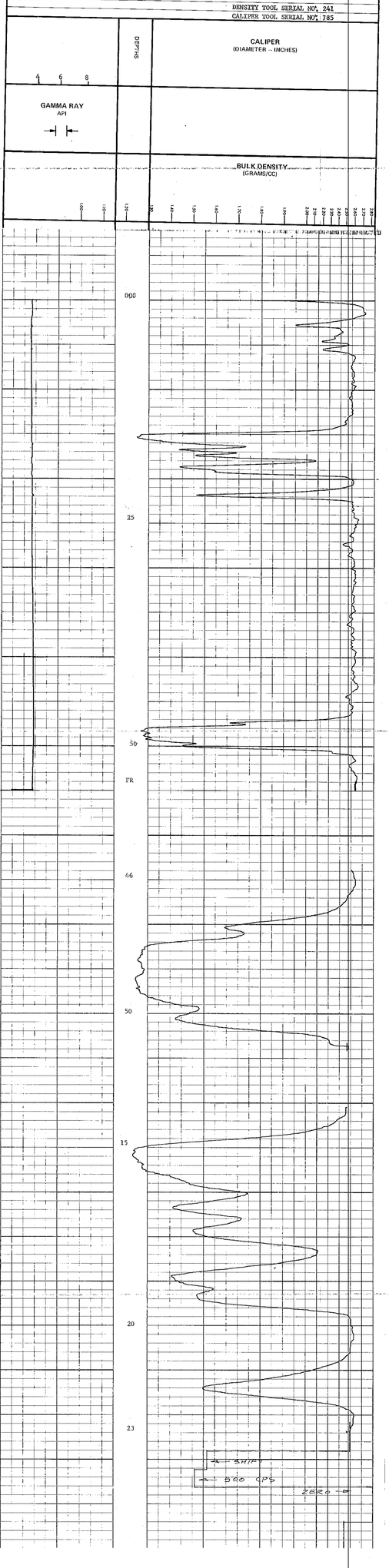
Other Services
GRN

Run No.	ONE
Date	16 JULY 1976
Last Reading	55.5
Footage Recorded	55
Depth Reached	56
Depth Driller	58
Casing Size	
Casing Driller	
Bit Size	GOOD
Liquid Level	5
Min. Ohm.	BRL
Operating Time	1 HOUR
Truck No.	34
Recorded By	STINGCARD
Witnessed By	PERRY

GENERAL				GAMMA RAY				SIDEWALL DENSILOG			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	API G.R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	CPS/ DIV
1	0	55	12					3	1000	1.12 R	31.69
2	14	23	- EXPANDED SCALE 50 M/M								
	46	51	-								

REMARKS HOLE DEPTHS ON LOG ARE 97 LESS THAN ACTUAL. E.G. LOG REGISTERS 97 METERS ACTUAL DEPTH IS 100 METERS.

DENSITY TOOL SERIAL NO. 241
CALIPER TOOL SERIAL NO. 785



ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.	
LSD	
SEC	
TWP	
RGE	
W ___ , ___ M	
COMPANY	DENISON COAL LIMITED
WELL	QBD 76-55
LOCATION	BABCOCK MOUNTAIN
FIELD	ROMAN MOUNTAIN
PROVINCE	BRITISH COLUMBIA
Permanent Datum	GROUND LEVEL Elev.
Log Measured from	GROUND LEVEL Ft. Above Perm. Datum
Well Depths Measured from	GROUND LEVEL
Other Services:	DENS-CAL
K.B.	
CSG	
G.L.	

Run. No.	ONE
Date	16 JULY 1976
First Reading	55 M
Last Reading	0
Footage Logged	55
Depth Reached	56
Depth Driller	58
Casing Roke	
Casing Driller	
Fluid Type	GEL
Liquid Level	5
Min. Diam.	HQ
Rm @ °F	
Operating Time	1 HOUR
Truck No.	34
Recorded By	SUNDGAARD
Witnessed By	PERRY

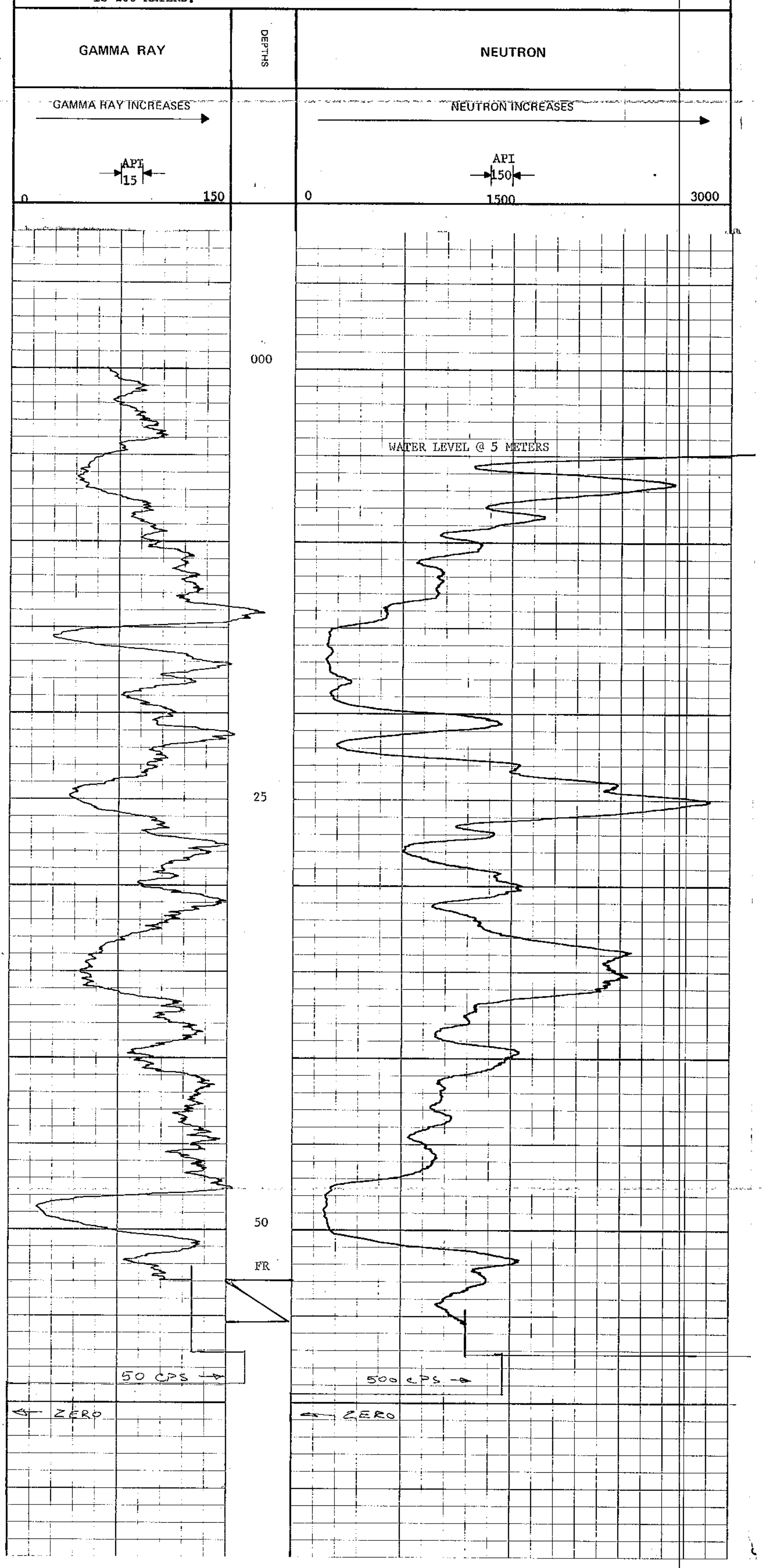
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	74	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	$1\frac{11}{16}$	TOOL MODEL NO.	74
DETECTOR MODEL NO.		DIAMETER	$1\frac{11}{16}$
TYPE	GEIGER	DETECTOR MODEL NO.	
LENGTH	18 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	8.55 FT.	LENGTH	6 INCH
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	606
HOIST TRUCK NO.	34	SPACING	17 INCH
INSTRUMENT TRUCK NO.	34	TYPE	AmBe
TOOL SERIAL NO.	74	STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	0	55	12	4	100	0	15	3	500	0	150

REMARKS HOLE DEPTHS ON LOG ARE 3% LESS THAN ACTUAL. E.G. LOG REGISTERS 97 METERS ACTUAL DEPTH IS 100 METERS.



ROKE

SIDEWALL DENSILOG
CALIPER

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.
SEC.
TWP.
RANGE
M
COMPANY DOMINION OIL LIMITED
WELL GBD 76-54
LOCATION BADDOCK MOUNTAIN
FIELD BADDOCK MOUNTAIN
PROVINCE BRITISH COLUMBIA
COUNTRY CANADA
Other Services: GR/N

Permanent Datum: GROUND ARTIFICIAL
Log Measured from: GROUND ARTIFICIAL
Drill Depths Measured from: GROUND ARTIFICIAL
Ft. Above Perm. Datum
K.B.
G.L.
G.S.

Date No.
Date: 16 JULY 1976
First Reading: 73 M
Footage Logged: 73
Depth Reached: 74
Depth Driller: 74
Casing Size: 76
Casing Depth
Fluid Type: OGC
Liquid Level: 19
Max Diam.: 3½

Operating Time
Truck No.: 1 MOTOR
34

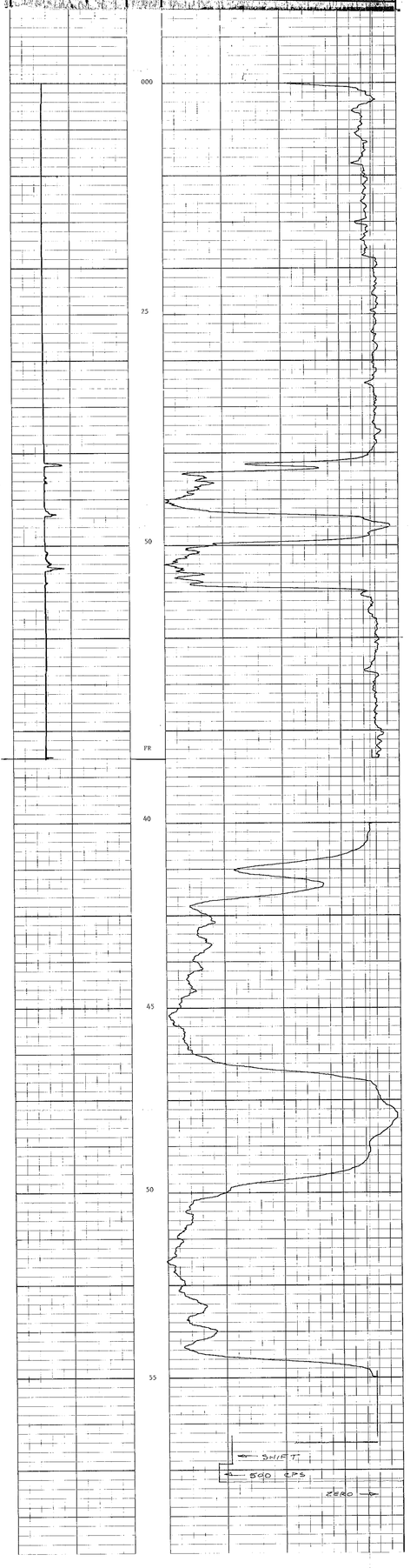
Recorded By: STODDARD
Witnessed By: PERRY

GENERAL DEPTHS FROM	TO	SPEED FT/MIN	T.C. SEC.	GAMMA RAY SENS SETTINGS	ZERO DIV.L OR R	API G.R. UNITS PER LOG DIV.	SIDEWALL DENSILOG T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	GM/CC DIV.
0	73	12					3	1000	1.12 R	31.69
40	55	12		EXPANDED SCALE 50 M/M						

RUN NO. 1, 2

REMARKS: HOLE DEPTHS ON LOG ARE 3% LESS THAN ACTUAL. E.G. LOG REGISTERS 97 METERS ACTUAL DEPTH IS 100 METERS.

CALIPER TOOL SERIAL NO. 787
DENSITY TOOL SERIAL NO. 241



ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.

LSD
SEC
TWP
RGE
W M

COMPANY DENISON COAL LIMITED

WELL QMD 76-02

LOCATION

FIELD SHERIFF PIT

PROVINCE BRITISH COLUMBIA

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

Other Services: DENS-CAL

K.B.
CSG
G.L.

Run. No.	ONE
Date	12 JULY 1976
First Reading	44 M
Last Reading	0
Footage Logged	44
Depth Reached	45
Depth Driller	46
Casing Roke	
Casing Driller	
Fluid Type	AIR
Liquid Level	
Min. Diam.	HQ
Rm @ °F	
Operating Time	1/2 HOUR
Truck No.	34
Recorded By	SUNDGAARD
Witnessed By	GORMLY

EQUIPMENT DATA

GAMMA RAY	
RUN NO.	ONE
TOOL MODEL NO.	74
DIAMETER	$1\frac{11}{16}$
DETECTOR MODEL NO.	
TYPE	GEIGER
LENGTH	18 INCH
DISTANCE TO N. SOURCE	8.55 FT.

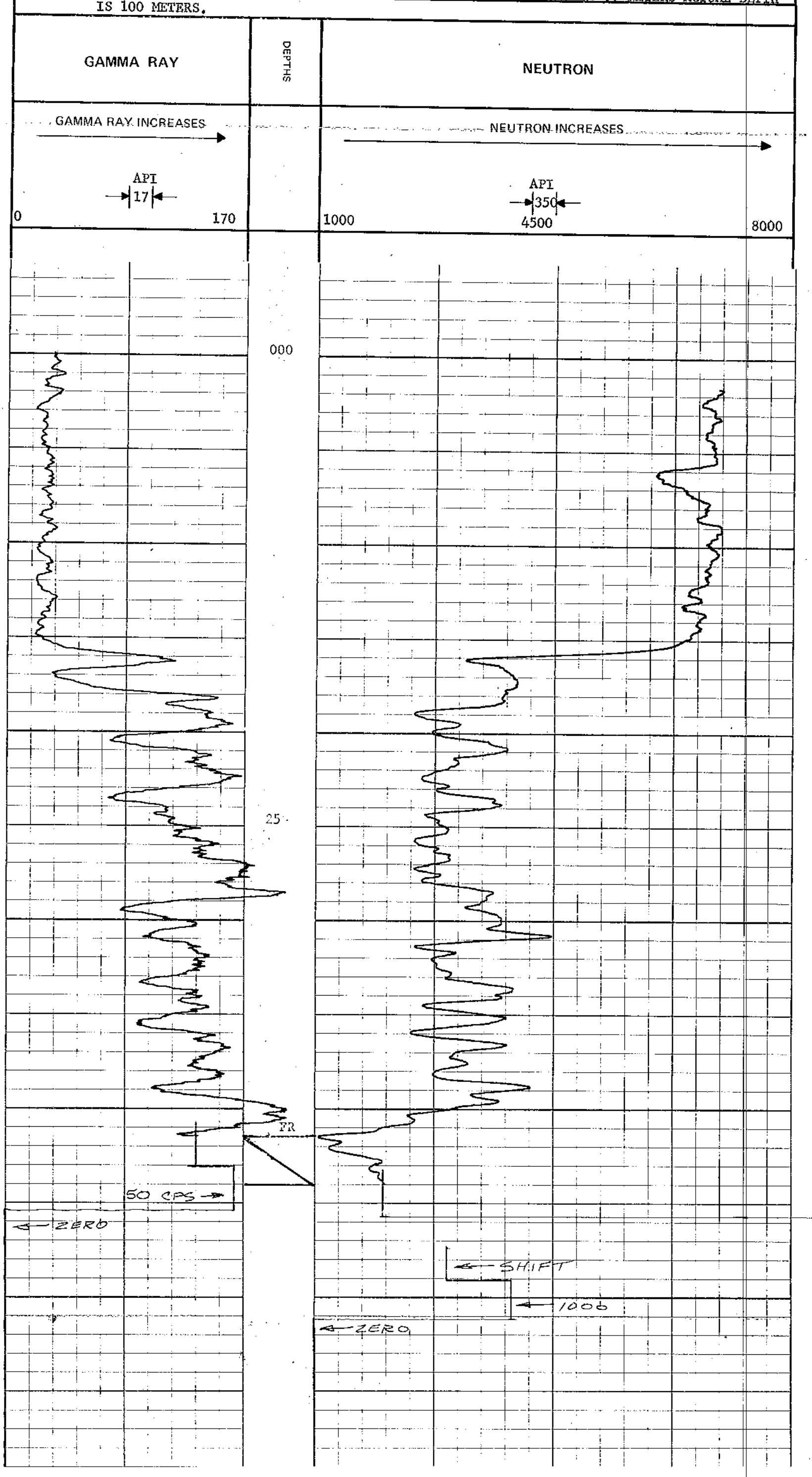
NEUTRON	
RUN NO.	ONE
LOG TYPE	NEUTRON/NEUTRON
TOOL MODEL NO.	74
DIAMETER	$1\frac{11}{16}$
DETECTOR MODEL NO.	
TYPE	PROPORTIONAL
LENGTH	6 INCH
SOURCE MODEL NO.	MRC-N-SS-W
SERIAL NO.	606
SPACING	17 INCH
TYPE	AmBe
STRENGTH	3 CURIES

GENERAL	
HOIST TRUCK NO.	34
INSTRUMENT TRUCK NO.	34
TOOL SERIAL NO.	74

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	0	44	12	4	100	0	17	3	1000	2.86 L	350

REMARKS HOLE DEPTHS ON LOG ARE 3% LESS THAN ACTUAL. E.G. LOG REGISTERS 97 METERS ACTUAL DEPTH IS 100 METERS.



ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

FILE NO.

LSD
SEC
TWP
RGE
W M

COMPANY DENISON COAL LIMITED

WELL QBD 76-54

LOCATION BABCOCK MOUNTAIN

FIELD ROMAN MOUNTAIN

PROVINCE BRITISH COLUMBIA

Other Services: DENS-CAL

K.B.
CSG
G.L.

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

Run. No.	ONE
Date	16 JULY 1976
First Reading	73 M
Last Reading	0
Footage Logged	73
Depth Reached	74
Depth Driller	76
Casing Roke	
Casing Driller	
Fluid Type	GEL
Liquid Level	19
Min. Diam.	HQ
Rm @ °F	
Operating Time	1 HOUR
Truck No.	34
Recorded By SUNDGAARD	Witnessed By PERRY

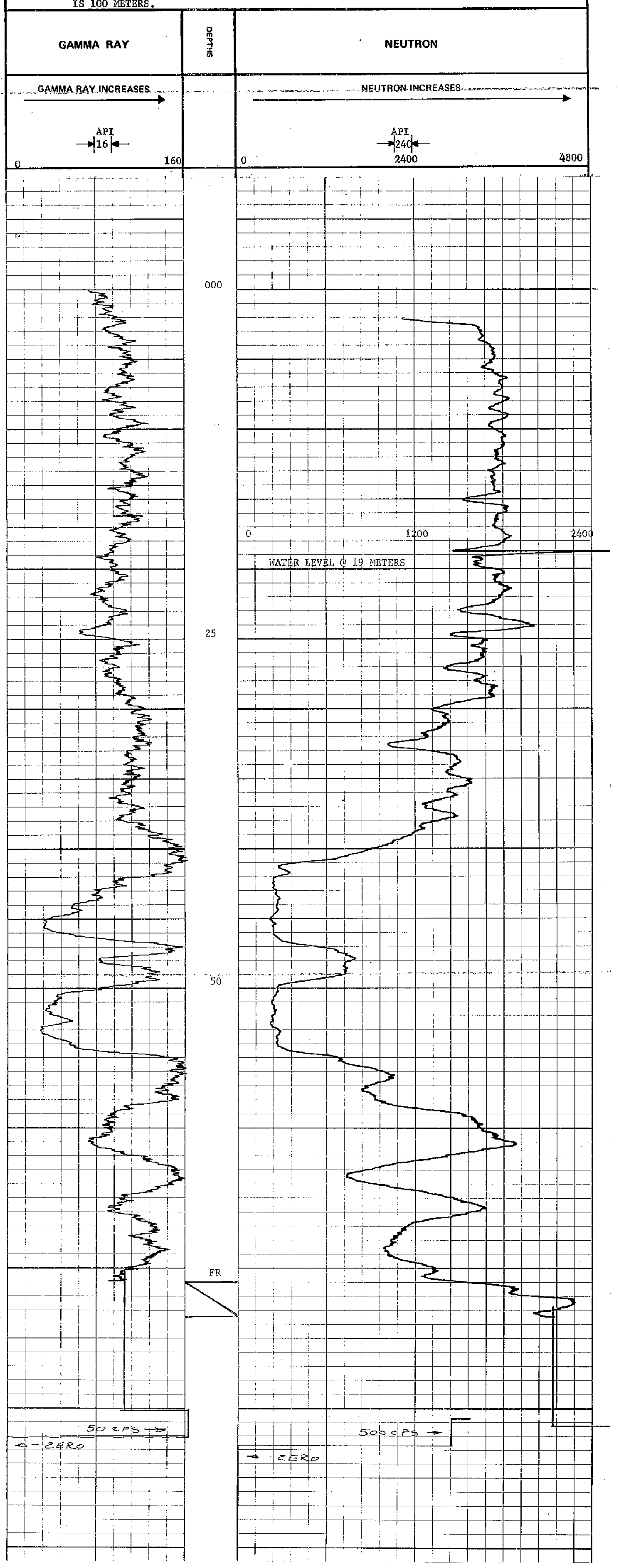
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	74	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	$1\frac{11}{16}$	TOOL MODEL NO.	74
DETECTOR MODEL NO.		DIAMETER	$1\frac{11}{16}$
TYPE	GEIGER	DETECTOR MODEL NO.	
LENGTH	18 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	8.55 FT.	LENGTH	6 INCH
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	606
HOIST TRUCK NO.	34	SPACING	17 CURIES
INSTRUMENT TRUCK NO.	34	TYPE	AmBe
TOOL SERIAL NO.	74	STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	0	19	12	4	100	0	16	3	1000	0	240
	19	73	12	4	100	0	16	3	500	0	120

REMARKS HOLE DEPTHS ON LOG ARE 3% LESS THAN ACTUAL. E.G. LOG REGISTERS 97 METERS, ACTUAL DEPTH IS 100 METERS.



ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.
LSD
SEC
TWP
RGE
W_____M

COMPANY DENISON COAL LIMITED

WELL QMD 76-17

LOCATION

FIELD SHERIFF PIT

PROVINCE BRITISH COLUMBIA

Other Services: DENS-CAL

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

Run. No.	ONE		
Date	10 AUGUST 1976		
First Reading	82 M		
Last Reading	0		
Footage Logged	82		
Depth Reached	83		
Depth Driller	83		
Casing Roke			
Casing Driller			
Fluid Type	GEL		
Liquid Level	32.5		
Min. Diam.	HQ		
Rm @ °F			
Operating Time	1 HOUR		
Truck No.	34		

Recorded By SUNDGAARD Witnessed By GORMLY

EQUIPMENT DATA

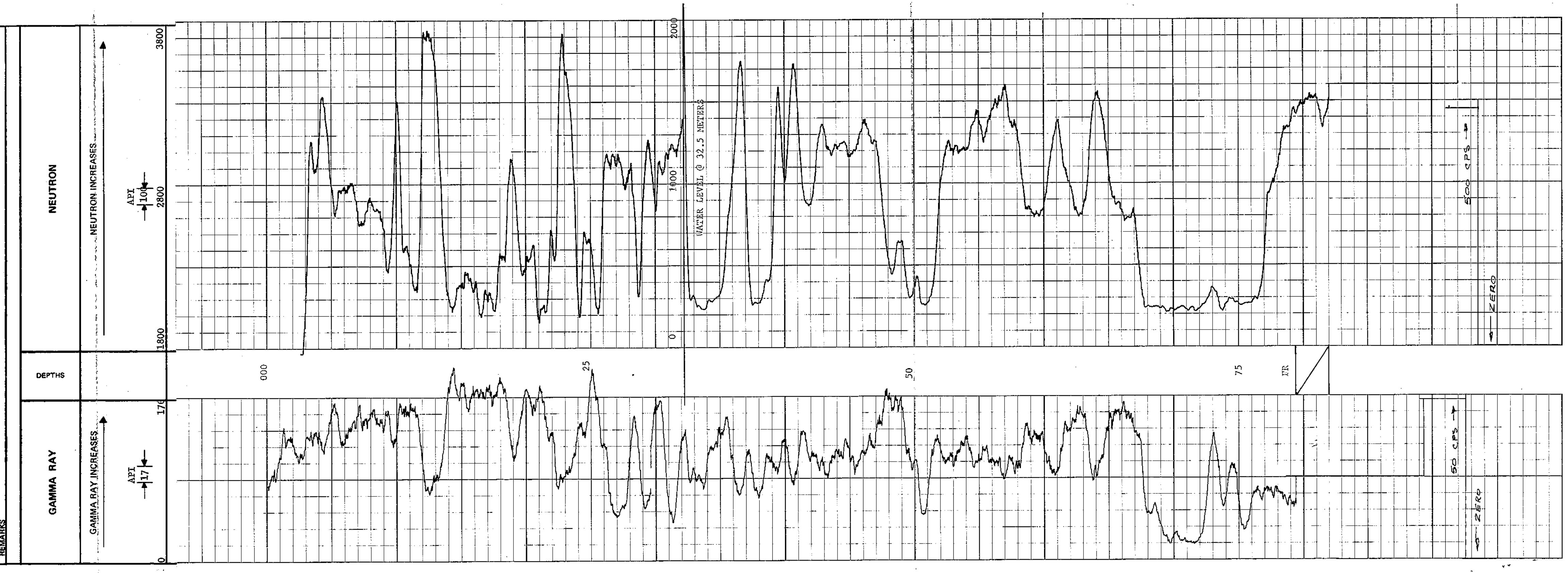
	GAMMA RAY	NEUTRON
RUN. NO.	ONE	ONE
LOG TYPE		NEUTRON/NEUTRON
TOOL MODEL NO.	74	74
DIAMETER	1 11/16	1 11/16
DETECTOR MODEL NO.	GEIGER	PROPORTIONAL
TYPE	18 INCH	6 INCH
LENGTH	8.55 FT.	MRC-N-SS-W
DISTANCE TO N. SOURCE		606
SERIAL NO.		17 INCH
SPACING	34	AmBe
TYPE	34	3 CURIES
STRENGTH	74	

GENERAL: HOIST TRUCK NO., INSTRUMENT TRUCK NO., TOOL SERIAL NO.

LOGGING DATA

GENERAL					GAMMA RAY						NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R.	API G. R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R.	API N. UNITS PER LOG DIV.
0	0	32.5	12	4	100	0	17	3	1000	18	100
1	32.5	82	12	4	100	0	17	3	1000	0	100

REMARKS



ROKE

SIDEWALL DENSILOG
CALIPER~

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.	
LSD	
SEC	
TWP	
RGE	
W M	
COMPANY	DENISON COAL LIMITED
WELL	QMD 76-17
LOCATION	
FIELD	SHERIFF PIT
PROVINCE	BRITISH COLUMBIA
Other Services:	GRN
Permanent Datum	GROUND LEVEL
Elev.	
Log Measured from	GROUND LEVEL
Ft. Above Perm. Datum	
Well Depths Measured from	GROUND LEVEL
K.B.	
CSG	
G.L.	

Run. No.	ONE		
Date	10 AUGUST 1976		
First Reading	81.5 M		
Last Reading	0		
Footage Logged	81.5		
Depth Reached	82.5		
Depth Driller	83		
Casing Roke			
Casing Driller			
Fluid Type	GEL		
Liquid Level	32.5		
Min. Diam.	HQ		
Operating Time	1 HOUR		
Truck No.	34		

Recorded By SUNDGAARD Witnessed By GORMLY

GENERAL				GAMMA RAY				SIDEWALL DENSILOG			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	API G.R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	CPS/ DIV
1	0	81.5	12					3	1000	1.12 R	31.69
2	23	40	-								
	48	52	-	EXPANDED SCALE 50 M/M							
	66	78	-								

REMARKS

DENSITY TOOL SERIAL NO. 241
CALIPER TOOL SERIAL NO. 785

CALIPER
(DIAMETER – INCHES)

DEPTHS

GAMMA RAY
API

4 6 8

BULK-DENSITY
(GRAMS/CC)

2.80 2.70 2.60 2.50 2.40 2.30 2.20 2.10 2.00 1.90 1.80 1.70 1.60 1.50 1.40 1.30 1.20 1.10 1.00

ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

TEMPERATURE

FILE NO.
LSD
SEC
TWP
RGE
W ____ M

COMPANY: DENSEN COAL LIMITED

WELL: QDD 76-16

LOCATION:

FIELD: SEKWEPE PTT

PROVINCE: BRITISH COLUMBIA

Permanent Datum: Log Measured From: Well Depths Measured From: GROUND LEVEL

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

Other Services: CDS; IEDS-CAL

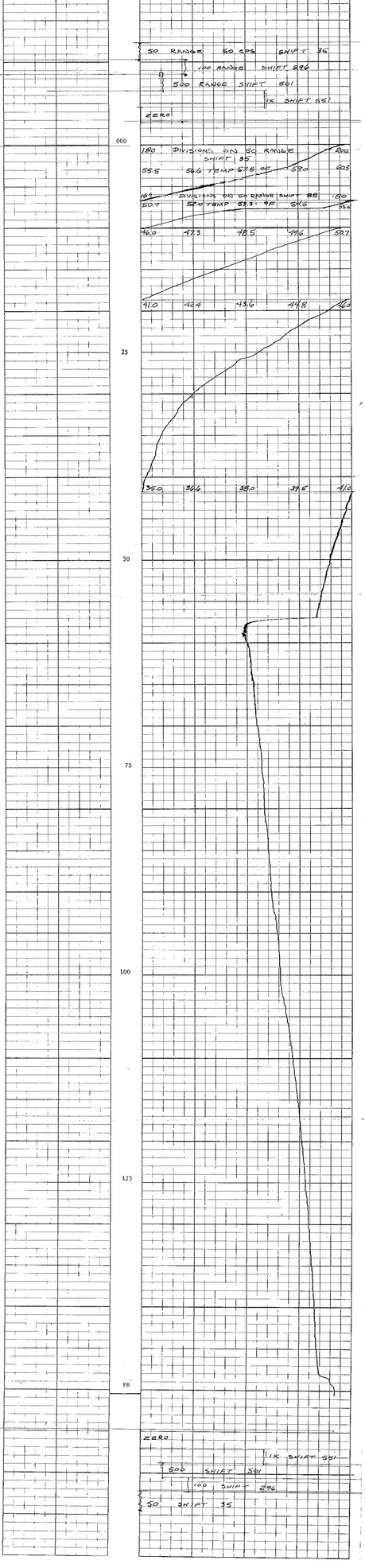
Run No. ONE
Date 11 AUGUST 1976
First Reading 0.0 M
Last Reading 150.5 M
Depth Logged 150.0
Depth Driller 151.5
Casing Size
Casing Depth
Fluid Type OIL
Liquid Level 37
Max. Temp. 38
Rm @ °F
Operating Time
Truck No. 1 UNITS
34

Recorded By: STOCKLAND

Witnessed By: GUIDLY

Remarks: RM4 207
LOGGING SPEED 15 FT/MIN

TEMPERATURE TOOL SERIAL NO. CT23C116



ROKE

SIDEWALL DENSILOG
CALIPER

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.	COMPANY DENLSON COAL LIMITED
LSD	WELL QMD 76-16
SEC	
TWP	LOCATION
RGE	
W ___ M	FIELD SHERIFF PIT
	PROVINCE BRITISH COLUMBIA

Other Services: GRN, TEMP

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

Run: No.	ONE		
Date	11 AUGUST 1976		
First Reading	149.5 M		
Last Reading	0		
Footage Logged	149.5		
Depth Reached	150.5		
Depth Driller	151.5		
Casing Roke			
Casing Driller			
Fluid Type	GEL		
Liquid Level			
Min. Diam.	HQ		
Operating Time	1 1/2 HOURS		
Truck No.	34		

Recorded By SUNDGAARD Witnessed By GORMLY

GENERAL				GAMMA RAY				SIDEWALL DENSILOG			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	API G.R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	CPS/DIV
1	0	149.5	12					3	1000	1.12 R	31.69
2	25	47	"								
	65	90	"	EXPANDED SCALE 50 M/M							
	141	146	"								

REMARKS

DENSITY TOOL SERIAL NO. 241
CALIPER TOOL SERIAL NO. 785

CALIPER (DIAMETER – INCHES)

BULK DENSITY (GRAMS/CC)

DEPTHS

GAMMA RAY API

ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

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

FILE NO. ____

COMPANY: DENSRAN COAL LIMITED

WELL: OXO 76-16

LOCATION: ____

FIELD: BERKLEY PIT

PROVINCE: BRITISH COLUMBIA

Permanent Datum: GROUND LEVEL Elev. ____

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

Drill Measured from: GROUND LEVEL G.L.

Other Services: RESS-COAL, TDRP

Run No.	ONE
Date	11 AUGUST 1976
Last Reading	150 M
Depth Reached	150
Depth Logged	151
Depth Driller	151.5
Casing Size	____
Casing Depth	____
Fluid Type	____
Fluid Level	____
Max. Temp.	6°C
Rm @ °F	____
Operating Time	1 HOUR
Truck No.	34

Recorded By: SKIDDOWAND

Witnessed By: GORDLY

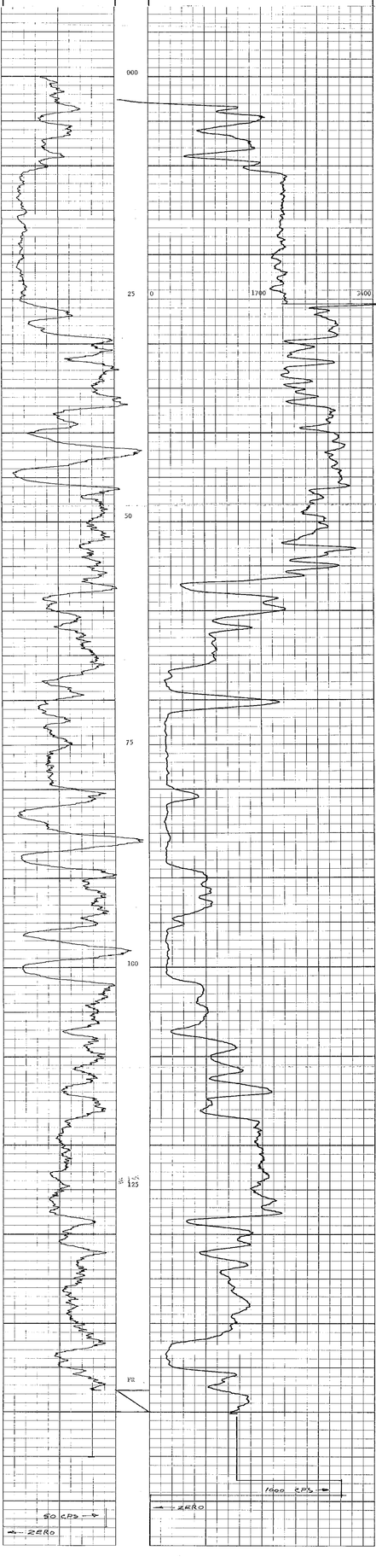
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	74	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO.	74
DETECTOR MODEL NO.		DIAMETER	1 11/16
TYPE	GEIGER	DETECTOR MODEL NO.	
LENGTH	18 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	8.66 FT.	LENGTH	6 INCH
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	506
HOIST TRUCK NO.	34	SPACING	17 INCH
INSTRUMENT TRUCK NO.	34	TYPE	AmBe
TOOL SERIAL NO.	74	STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	0	25.5	12	4	100	0	18	3	1000	10 L	170
	25.5	150	12	4	100	0	18	3	1000	0	170

REMARKS



ROKE

OIL ENTERPRISES LTD.
CALGARY, ALBERTA

SIDEWALL DENSILOG
CALIPER

FILE NO.
LSD
SEC
TWP
RGE
W of 4 M

COMPANY SUNCOR COAL LIMITED
WELL 00D 76-15
LOCATION
FIELD SUNCOR PIT

PRODUCING INTERVAL GREENHORN
Permanent Datum GROUND LEVEL
Log Measured From GROUND LEVEL
Drill Measured From GROUND LEVEL
Elev.
K.B.
D.F.
G.L.

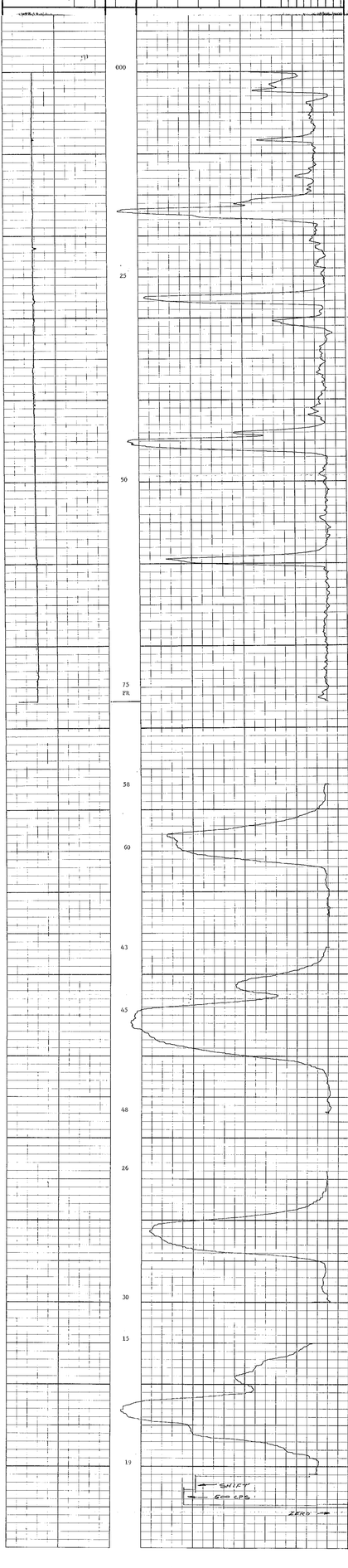
Other Services
CDU

Run. No.	1
Date	10 AUGUST 1976
Depth Driller	77
Depth Logged	0
Bottom Log Interval	77
Top Log Interval	12
Casing Driller	78.3
Casing Logger	
Bit Size	7 7/8
Type Fluid in Hole	GEL
Density	10
Viscosity	
Max. Rec. Temp.	
Equipment Size	1 1/8
Truck No.	34
Recorded By	SIDDAAKD
Witnessed By	GUSSEY

GENERAL				GAMMA RAY				SIDEWALL DENSILOG			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED F/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	API G.R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	CPS/DIV
1	0	77	12					3	1000	1.12 R	31.69
2	38	62	-								
	43	48	- EXPANDED SCALE 50 M/M								
	26	30	-								
	15	19	-								

REMARKS

DENSITY TOOL SERIAL NO. 241
CALIPER TOOL SERIAL NO. 285



ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.
LSD
SEC
TWP
RGE
W M

COMPANY DENISON COAL LIMITED

WELL QMD 76-15

LOCATION

FIELD SHERIFF PIT

PROVINCE BRITISH COLUMBIA

Other Services: DENS-CAL

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

K.B.
CSG
G.L.

Run. No.	ONE		
Date	10 AUGUST 1976		
First Reading	77.5 M		
Last Reading	0		
Footage Logged	77.5		
Depth Reached	78.		
Depth Driller	78.5		
Casing Roke			
Casing Driller			
Fluid Type	GEL		
Liquid Level			
Min. Diam.	HQ		
Rm @ °F			
Operating Time	1 HOUR		
Truck No.	34		

Recorded By SUNDGAARD Witnessed By GORMLY

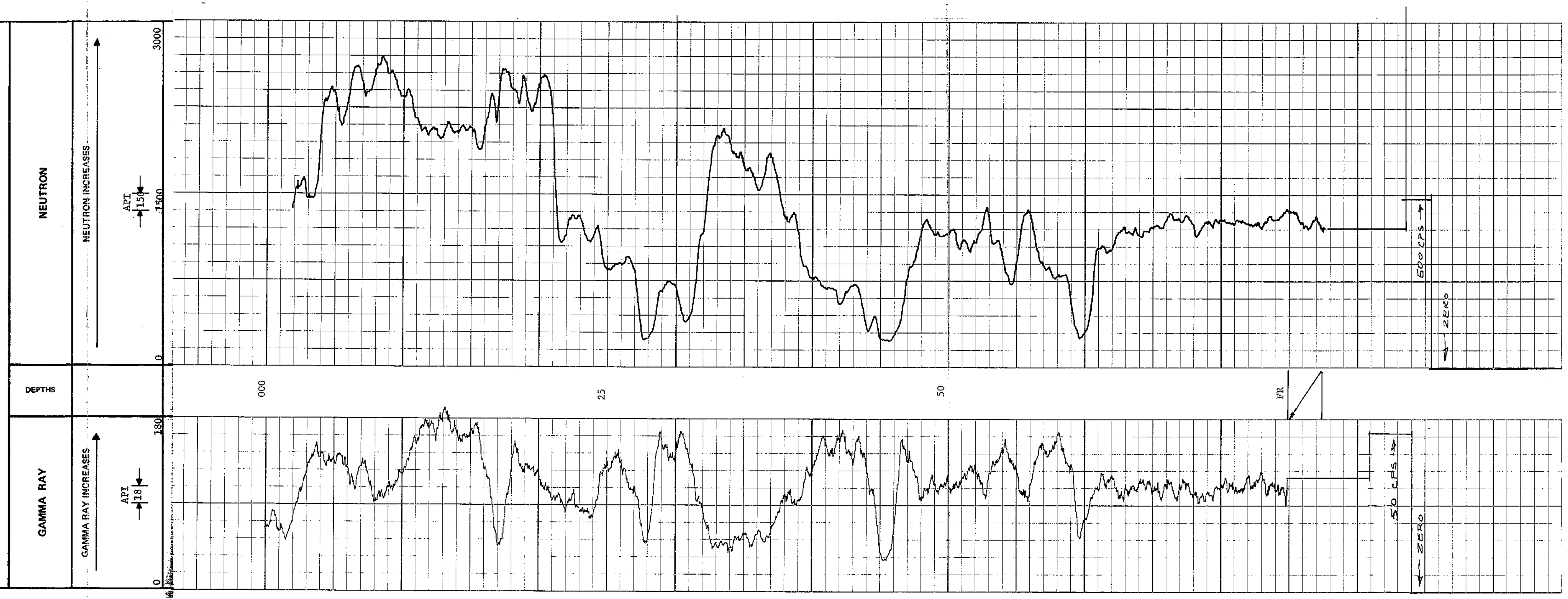
EQUIPMENT DATA

	GAMMA RAY	NEUTRON
RUN NO.	ONE	ONE
LOG TYPE		NEUTRON/NEUTRON
TOOL MODEL NO.	74	74
DIAMETER	1 11/16	1 11/16
DETECTOR MODEL NO.	GEIGER	PROPORTIONAL
TYPE	18 INCH	6 INCH
LENGTH	8.55 FT.	MRC-N-SS-W
DISTANCE TO N. SOURCE		606
SOURCE MODEL NO.		17 INCH
SERIAL NO.		AmBe
SPACING		3 CURIES
TYPE		
STRENGTH		

GENERAL

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	NEUTRON ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	0	77.5	12	4	100	0	18	3	1000	0	150

REMARKS



ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

TEMPERATURE

FILE NO.
LSD
SEC
TWP
RGE
W M

COMPANY DENISON COAL LIMITED
WELL QDD 76-14
LOCATION
FIELD SERAFF PTC
PROVINCE BRITISH COLUMBIA

Other Services:
GRN DENS-CAL

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

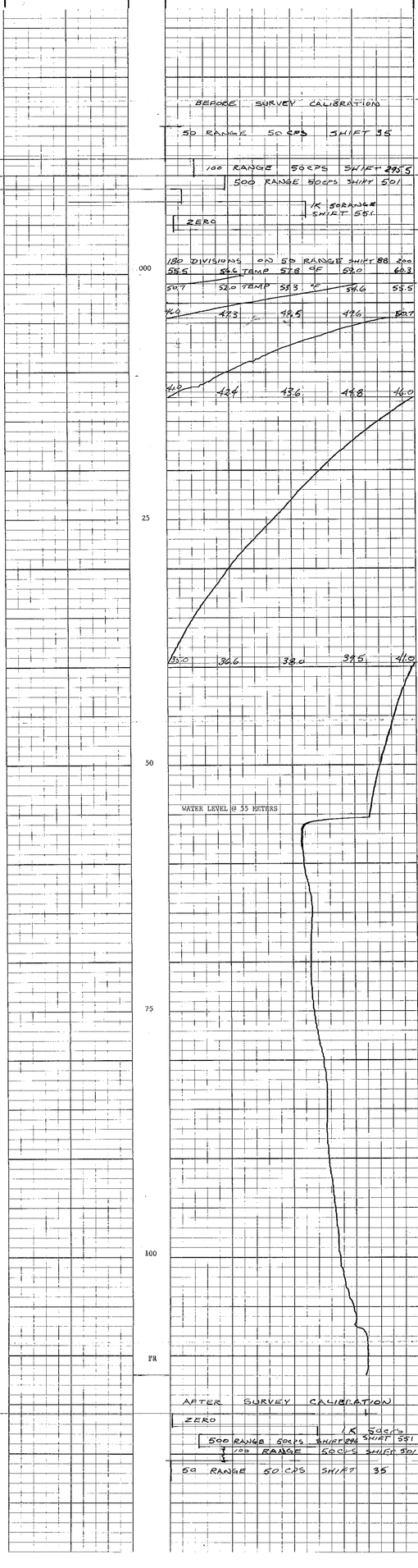
Elev.: K.B.
GR
G.L.

Run. No.	ONE
Date	10 AUGUST 1976
First Reading	112.25
Last Reading	0.0
Footage Logged	112
Depth Reached	112
Casing Driller	118
Casing Logger	
Fluid Type	GEL
Fluid Level	55
Max. Temp.	RO
Min. Dtem.	
Rm @ °F	
Operating Time	1 HOUR
Truck No.	34
Recorded By	STRIGGALSD
Witnessed By	GORSLY

Remarks LOGGING SPEED 15 FT/MIN
RMM 207

TEMPERATURE TOOL SERIAL NO. CT23C116

Depths



ROKE

OIL ENTERPRISES LTD. CALGARY ALBERTA

SIDEWALL DENSILOG
CALIPER

LSD
SEC
TWP
RGE
M.

FILE NO.

COMPANY: HOOKER COAL LIMITED

WELL: GDD 75-14

LOCATION:

FIELD: BRIGHT PIT

PROVINCE: BRITISH COLUMBIA

Other Services: GR, TEMP

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

Elevation: Perm. Datum G.L.
K.B. Above Perm. Datum G.L.

Run No. ONE
Date 10 AUGUST 1976
First Reading 0 M
Last Reading 110
Footage Logged 110
Bottom Reading 110
Casing Driller
Casing Logger
Fluid Type DRY
Max. Temp. 25°C
Max. Press. 50 PSI

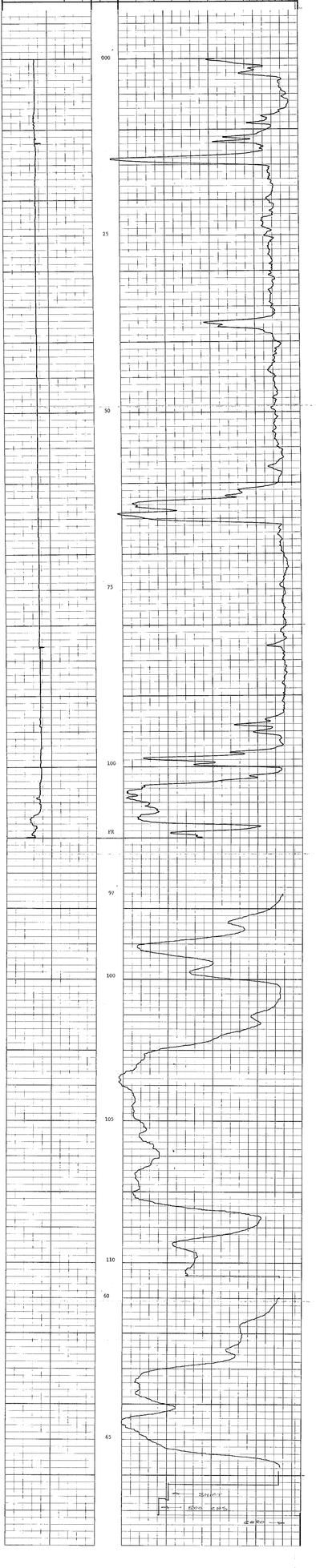
Operating Time
Truck No. 1 NOVA
Truck No. 34

Recorded By: BURGHARD
Witnessed By: GUNDRY

GENERAL				GAMMA RAY				SIDEWALL DENSILOG			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SECS.	SENS SETTINGS	ZERO DIV. OR R.	API G.R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV. OR R.	CPS/DIV
1	0	110	12					3	1000	1.12 R	31.69
2	60	66	-								
	97	110	-	EXPANDED SCALE 50 M/M							

REMARKS

DENSITY TOOL SERIAL NO. 241
CALIPER TOOL SERIAL NO. 785



ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

LSD ____ SEC ____ TWP ____ RGE ____ W ____ M

FILE NO.

COMPANY: WESTSON COAL LIMITED

WELL: QDD 75-24

LOCATION

FIELD: SEKWKIP PIT

PROVINCE: BRITISH COLUMBIA

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

Log Measured from: GROUND LEVEL 2.40 Ft. Above Perm. Datum

Well Depths Measured from: GROUND LEVEL K.B. ____ DRG. ____ G.L. ____

Other Services: NEUTRON-CALL, TEMP

Run. No.	ONE
Date	10 AUGUST 1976
First Reading	0.
Last Reading	111 M
Footage Logged	111
Depth Measured	111
Max. Depth Reached	118
Casing Size	
Casing Driller	
Casing Roke	
Fluid Type	GEL
Liquid Level	55
Min. Diam.	HQ
Rm @ °F	
Operating Time	1 HOUR
Truck No.	34
Recorded By	SUNDARARAJ
Witnessed By	GOODLY

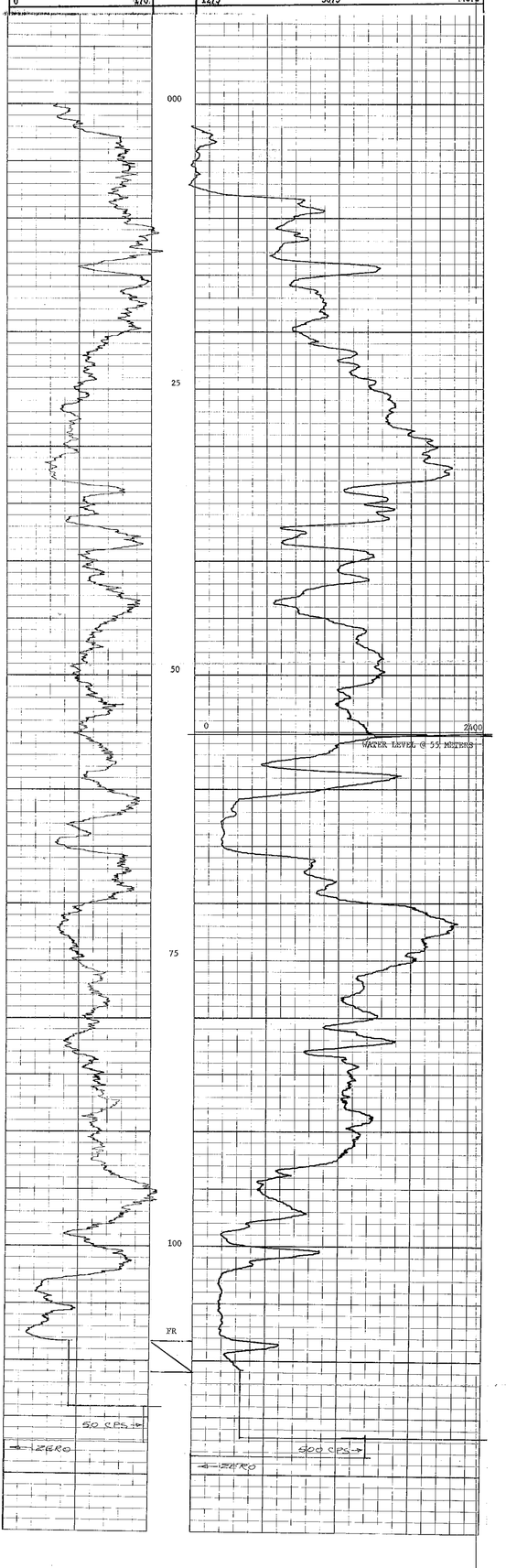
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	74	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	$1\frac{11}{16}$	TOOL MODEL NO.	74
DETECTOR MODEL NO.		DIAMETER	$1\frac{11}{16}$
TYPE	GEIGER	DETECTOR MODEL NO.	
LENGTH	18 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	8.55 FT.	LENGTH	6 INCH
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	606
HOIST TRUCK NO.	34	SPACING	17 INCH
INSTRUMENT TRUCK NO.	34	TYPE	AmBe
TOOL SERIAL NO.	74	STRENGTH	3 CURIES

LOGGING DATA

GENERAL					GAMMA RAY			NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	0	55	12	4	100	0	17	3	1000	7.8 L	180
	55	111	12	4	100	0	17	3	1000	0	120

REMARKS



ROKE

SIDEWALL DENSILOG
CALIPER
GAMMA RAY

OIL ENTERPRISES LTD.
CALGARY, ALBERTA

LSD 15
SEC 35
TWP 24
RGE 3
M.....W

FILE NO.
COMPANY: MERLAND OIL LIMITED
WELL: OSD 15-15
FIELD: WIMBERLY EXT
LOCATION:
PROVINCE: ALBERTA CANADA
Permanent Datum: GROUND LEVEL
Log Measured from: GROUND LEVEL
Drilling Measured from: KB
Elev.: Permanent Datum: 0
Elev.: K.B. 0
Elev.: D.F. .....
Elev.: G.L. 0

Other Services: CBHC

Date	29 DEC 1976
Run No.	ONE
Depth Driller	99.5 M
Depth Logger	99.5 M
Bottom Log Interval	99.5
Top Log Interval	0
Casing Driller	177.8
Casing Logger	177.8
Bit Size	152
Type Fluid in Hole	WATER
Dens.	1.12
Visc.	50
pH	9
Fluid Loss	10
Source of Sample	FLOWLINE
Rm @ Meas. Temp.	0.6 @ 24 C
Rmf @ Meas. Temp.	0.5 @ 24 C
Rmc @ Meas. Temp.	0.7 @ 24 C
Source: Rmf / Rmc	MEASURED / CALCULATED
Rm @ BHT	0.3 @ 66 C
Time Since Circ.	3 HRS
Time Since Stopped	1 HR
Max. Recorded Temp.	66 C
Equipment Location	3
Recorded By	BOUCHARD
Witnessed By	SAXES

GENERAL				GAMMA RAY					SIDEWALL DENSILOG			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	API/RD DIV.L OR R	API CLR. UNITS PER LOG DIV.		T.C. SEC	SENS SETTINGS	ZERO DIV.L OR R	CPS/ DIV
1	0	99.5	32						1	3000	1.12 R	31.69
2	49	66	-	EXPANDED SCALE 20 H/M								
	7	20	-									

REMARKS

DENSITY TOOL SERIAL NO. 241
CALIPER TOOL SERIAL NO. 195

DEPTH

CALIPER
(DIAMETER – INCHES)

4 6 8

GAMMA RAY
API

BULK DENSITY
(GRAMS/CC)

1.8 2.0 2.2 2.4 2.6 2.8 3.0 3.2 3.4 3.6 3.8 4.0 4.2 4.4 4.6 4.8 5.0 5.2 5.4 5.6 5.8 6.0 6.2 6.4 6.6 6.8 7.0 7.2 7.4 7.6 7.8 8.0

000
25
50
75
99
50
55
60
65
70
75
80
85
90
95
100
105
110
115
120

ZERO

ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

FILE NO.
LSD
SEC
TWP
RGE
W M

COMPANY DENTSON COAL LIMITED
WELL QSD 76-13
LOCATION
FIELD SHERIFF PTE
PROVINCE BRITISH COLUMBIA

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

Other Services: DIRIS-CAL

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

Run No. ONE
Date 29 JULY 1976
Depth Driller 100 M
First Reading 0
Last Reading 100
Footage Logged 101
Depth Reached 101
Depth Driller 101
Casing Size
Casing Driller
Fluid Type GEL
Liquid Level 29.5
Min. Diam. HQ
Rm @ °F
Operating Time 1 HOUR
Truck No. 34

Recorded By SCHOCKARD
Witnessed By BAKER

EQUIPMENT DATA

GAMMA RAY	
RUN NO.	ONE
TOOL MODEL NO.	74
DIAMETER	1 11/16
DETECTOR MODEL NO.	
TYPE	GEIGER
LENGTH	18 INCH
DISTANCE TO N. SOURCE	8.55 FT.

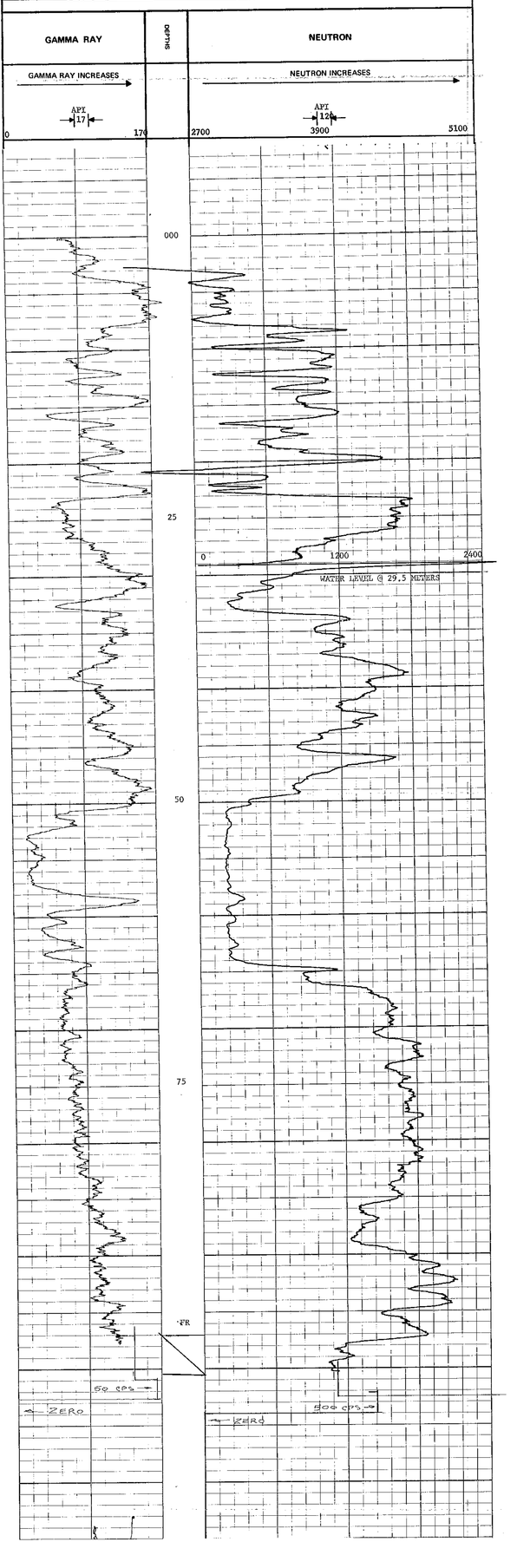
NEUTRON	
RUN NO.	ONE
LOG TYPE	NEUTRON/NEUTRON
TOOL MODEL NO.	74
DIAMETER	1 11/16
DETECTOR MODEL NO.	
TYPE	PROPORTIONAL
LENGTH	6 INCH
SOURCE MODEL NO.	MRC-N-SS-W
SERIAL NO.	606
SPACING	17 INCH
TYPE	AmBe
STRENGTH	3 CURIES

GENERAL	
HOIST TRUCK NO.	34
INSTRUMENT TRUCK NO.	34
TOOL SERIAL NO.	74

LOGGING DATA

GENERAL					GAMMA RAY			NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV
1	0	29.5	12	4	100	0	17	3	1000	22.5	120
	29.5	100	12	4	100	0	17	3	1000	0	120

REMARKS



ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

FILE NO.

LSD
SEC
TWP
RGE
W ____ M

COMPANY DENISON COAL LIMITED

WELL QMD 76-12

LOCATION

FIELD SHERIFF PIT

PROVINCE BRITISH COLUMBIA

Other Services: DENS-CAL, TEMP

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

Run. No.	ONE
Date	29 JULY 1976
First Reading	30 M
Last Reading	0
Footage Logged	30
Depth Reached	31
Depth Driller	32
Casing Roke	
Casing Driller	
Fluid Type	AIR
Liquid Level	
Min. Diam.	HQ
Rm @ °F	
Operating Time	1 1/2 HOURS
Truck No.	34
Recorded By	SUNDGAARD
Witnessed By	BAKER

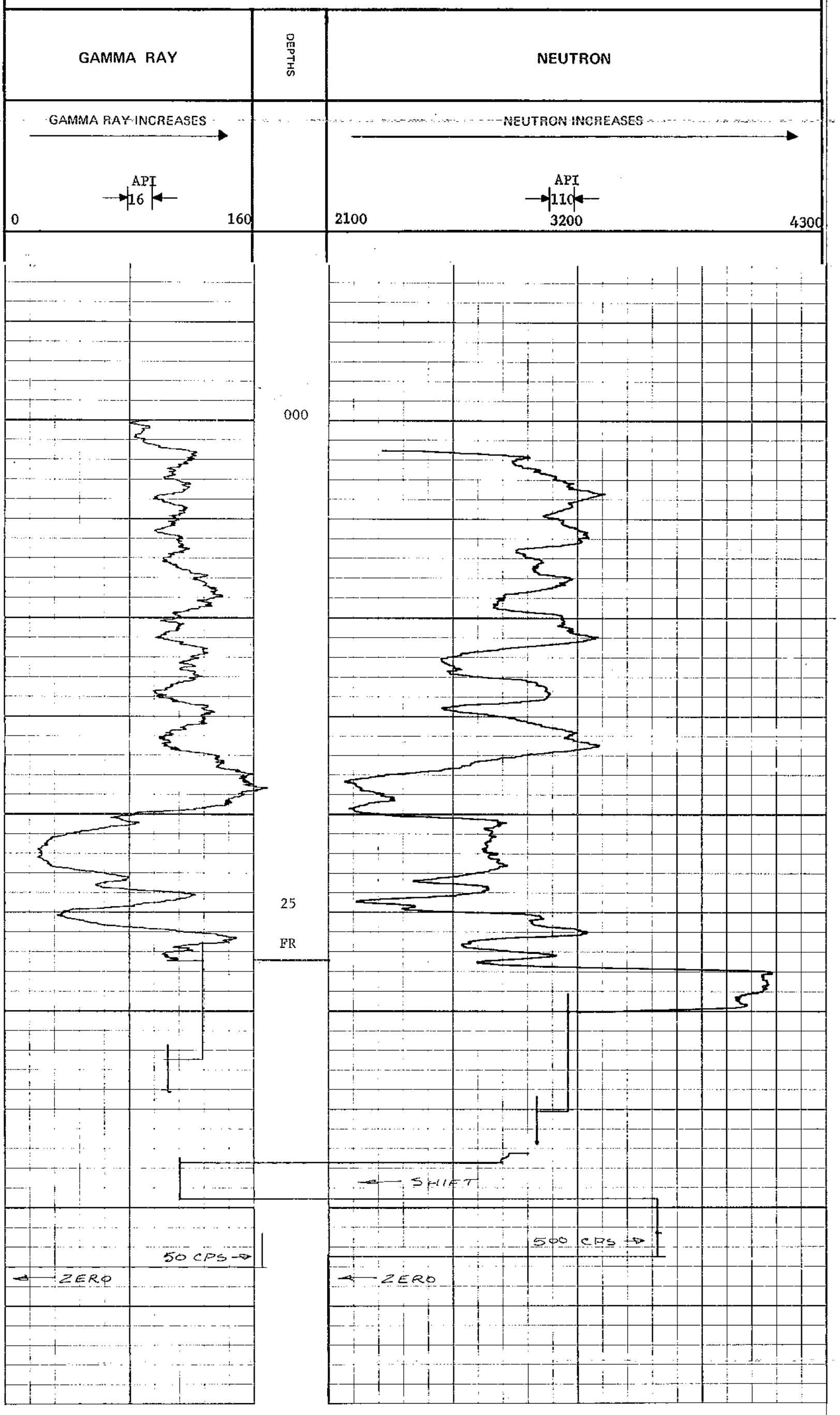
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	74	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	$1\frac{11}{16}$	TOOL MODEL NO.	74
DETECTOR MODEL NO.		DIAMETER	$1\frac{11}{16}$
TYPE	GEIGER	DETECTOR MODEL NO.	
LENGTH	18 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	8.55 FT.	LENGTH	6 INCH
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	606
HOIST TRUCK NO.	34	SPACING	17 INCH
INSTRUMENT TRUCK NO.	34	TYPE	AmBe
TOOL SERIAL NO.	74	STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	0	30	12	4	100	0	16	3	1000	19.3 R	110

REMARKS



ROKE

SIDEWALL DENSILOG
CALIPER

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.
LSD
SEC
TWP
RGE
W. M.

COMPANY DENISON COAL LIMITED

WELL QMD 76-12

LOCATION

FIELD SHERIFF PIT

PROVINCE BRITISH COLUMBIA

Other Services: GRN, TEMP

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

K.B.
CSG
G.L.

Run. No.	ONE		
Date	29 JULY 1976		
First Reading	29.5 M		
Last Reading	0		
Footage Logged	29.5		
Depth Reached	30.5		
Depth Driller	32		
Casing Roke			
Casing Driller			
Fluid Type	AIR		
Liquid Level			
Min. Diam.	HQ		
Operating Time	1 1/2 HOURS		
Truck No.	34		

Recorded By SUNDGAARD Witnessed By BAKER

GENERAL					GAMMA RAY					SIDEWALL DENSILOG				
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV'L OR R	API G.R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV'L OR R	CPS/ DIV
1	0	29.5	12					3	1000	1.12 R	31.69
2	19	27	EXPANDED SCALE 20 M/M								

REMARKS

DENSITY TOOL SERIAL NO. 241
CALIPER TOOL SERIAL NO. 785

ROKE

TEMPERATURE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.
LSD
SEC
TWP
RGE
W M

COMPANY DENISON COAL LIMITED

WELL QMD 76-12

LOCATION

FIELD SHERIFF PIT

PROVINCE BRITISH COLUMBIA

Other Services:
GRN. DENS-CAL

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

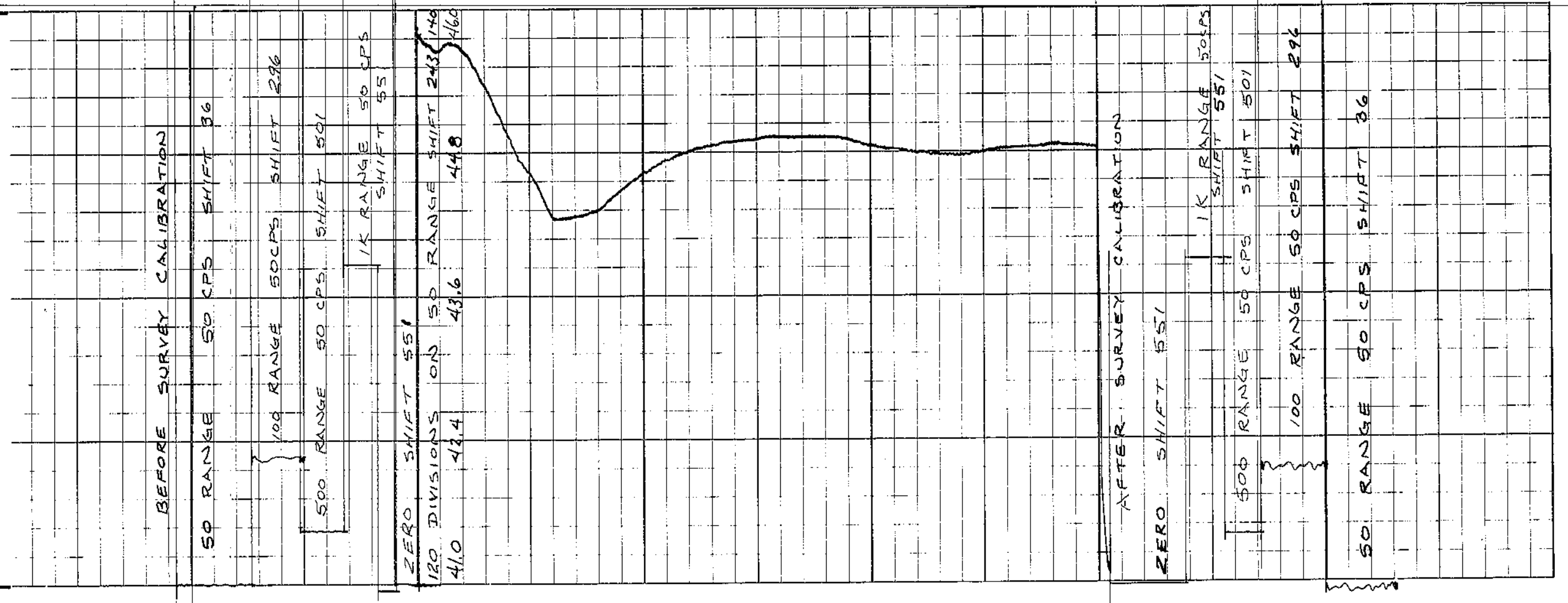
K.B.
CSG
G.L.

Run. No.	ONE		
Date	29 JULY 1976		
First Reading	30.5 M		
Last Reading	0		
Footage Logged	30.5		
Depth Reached	30.5		
Depth Driller	32		
Casing Roke			
Casing Driller			
Fluid Type	AIR		
Liquid Level			
Min. Diam.	HQ		
Rm @ °F			
Operating Time	1/2 HOUR		
Truck No.	34		

Recorded By SUNDGAARD Witnessed By BAKER

Remarks
LOGGING SPEED 15 FT/MIN
RATEMETER 207
T.C. 01
TEMPERATURE TOOL SERIAL NO. CT23C116

Depths



ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.
LSD
SEC
TWP
RGE
W ____ M

COMPANY: DOMINION OIL LIMITED
WELL: OOD 76-11
LOCATION:
FIELD: SHERIFF PTE.
PROVINCE: BRITISH COLUMBIA

Permanent Datum: GROUND LEVEL
Log Measured From: GROUND LEVEL
Drill Pipe Measured From: GROUND LEVEL
Elev. ____ Ft. Above Perm. Datum
K.B.
G.L.
C.H.

Other Services: NONE-CAL

Run. No.
Date
Time Reading
Left Reading
Footage Logged
Depth Logged
Depth Driller
Depth Logger
Casing Driller
Casing Logger
Bit Size
Liquid Level
Max. Temp.
Min. Diam.
Rm @ Tf

ONE		
29 JULY 1976		
0 - M		
151		
151		
152		
152		
OPEN		
OPEN		
7 7/8		
38		
80		
80		

Operating Time
Truck No.

1 1/2 HOURS		
34		

Recorded By: STOUDAMIRE
Witnessed By: BAKER

EQUIPMENT DATA

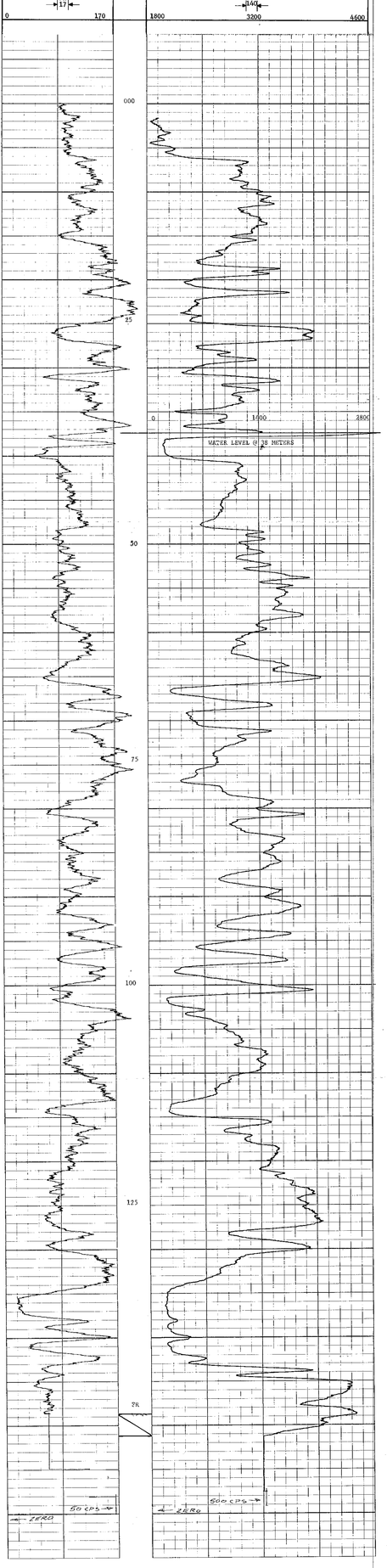
GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	74	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO.	74
DETECTOR MODEL NO.		DIAMETER	1 11/16
TYPE	GEIGER	DETECTOR MODEL NO.	
LENGTH	18 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	8.55 FT.	LENGTH	6 INCH
		SOURCE MODEL NO.	MRC-N-SS-W
		SERIAL NO.	606
		SPACING	17 INCH
		TYPE	AmBe
		STRENGTH	3 CURIES

GENERAL	
HOIST TRUCK NO.	34
INSTRUMENT TRUCK NO.	34
TOOL SERIAL NO.	74

LOGGING DATA

GENERAL					GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	0	38	12	4	100	0	17	3	500	12.85 L	140
	38	151	12	4	100	0	17	3	500	0	140

REMARKS



ROKE OIL ENTERPRISES LTD. CALGARY, ALBERTA

SIDEWALL DENSILOG
CALIPER

FILE NO

LSD
SEC
TWP
RGE
W M

COMPANY DENISON COAL LIMITED

WELL QMD 76-22

LOCATION

FIELD SHERIFF PIT

PROVINCE BRITISH COLUMBIA

Other Services: GRN

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

KB
CSG
GL

Run No	ONE
Date	4 SEPTEMBER 1976
First Reading	222 M
Last Reading	0
Footage Logged	222
Depth Reached	223
Depth Driller	223
Casing Rulie	
Casing Driller	
Fluid Type	GEL
Liquid Level	1.5
Min Diam	HQ
Operating Time	2 HOURS
Truck No	102
Recorded By	SUNDGAARD
Witnessed By	BAKER

GENERAL				GAMMA RAY				SIDEWALL DENSILOG			
RUN NO	DEPTHS FROM	TO	SPEED FT/MIN	T C SEC	SENS SETTINGS	ZERO DIV L OR R	API G R UNITS PER LOG DIV	T C SEC	SENS SETTINGS	ZERO DIV L OR R	CPS/DIV
1	0	222	12					3	1000	1.3	30.51
2	104	123	-								
	133	138	-								
	142	146	-	EXPANDED SCALE 50 M/M							
	164	172	-								
	208	218	-								

REMARKS

CALIPER TOOL SERIAL NO. 776
DENSITY TOOL SERIAL NO. 241

	DEPTHS	CALIPER (DIAMETER – INCHES)
4 6 8		
GAMMA RAY API		
		BULK-DENSITY (GRAMS/CC)

ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO. 1-5-65
DATE 1-5-65
TIME
R.....M

COMPANY: MERIDIAN OIL LIMITED
WELL: 008 3-4-22
FIELD: BIGGETT 32
LOCATION:

PROVINCE: ALBERTA
COUNTRY: CANADA
Other services: CDSH-CAL

Depth Scale Selected: 1" = 25 Feet
Log Measured From: GROUND LEVEL
Drilling Measured From: GROUND LEVEL

Permanent Datum: GROUND LEVEL
Elev.: 0
K.B. 0
D.F. 0
G.L. 0

Elevations: K.B. Above Perm. Datum

EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	74	TOOL MODEL NO.	74
DIAMETER	1 11/16	DIAMETER	1 11/16
DETECTOR MODEL NO.	GEIGER	DETECTOR MODEL NO.	PROPORTIONAL
TYPE	1B INCH	TYPE	6 INCH
LENGTH	8.55 FT.	LENGTH	MRC-N-SS-W
DISTANCE TO R. SOURCE		SOURCE MODEL NO.	605
		SERIAL NO.	17 INCH
		SPACING	Amile
		TYPE	3 CURIES
		STRENGTH	

GENERAL

HOIST TRUCK NO.	102
WHEELBARREL TRUCK NO.	
TOOL BESPAL NO.	74

Run No.
Date
Time Log Started
Time Log Ended
Depth Driller
Depth Logger
Bottom Log Interval
Top Log Interval
Casing Size
Casing Weight
Fluid Type
Fluid Level
Max. Temp.
Equipment No.
Operator Time
Truck No.
Recorded By
Witnessed By

			ONE				
			1-5-65				
			1				
			213.5				
			213.5				
			213.5				
			213.5				
			7 5/8				
			26.4				
			CFS				
			7.5				
			90				
			74				
			1 1/2	30/59			
			102				
STODDARD							
BAKER							

LOGGING DATA

GENERAL					GAMMA RAY				NEUTRON			
RUN NO.	DEPTH FROM	DEPTH TO	SPEED F/MIN.	T.C. SEC	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T.C. SEC	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	0	213.5	12	4	100	0	15	3	1000	0	160

REMARKS

GAMMA RAY

GAMMA RAY INCREASES

API 12

0 150

Depth

NEUTRON

NEUTRON INCREASES

API 1600

0 3200

000

25

50

75

100

D

E

125

F

150

G

175

200

5

50 CPS

ZERO

1000 CPS

ZERO

ROKE

SIDEWALL DENSILOG
GAMMA RAY

OIL SUPPERVISES LTD.
CALGARY ALBERTA

FILE NO.
LSD
SEC
TWP
RGE
W.5.....M

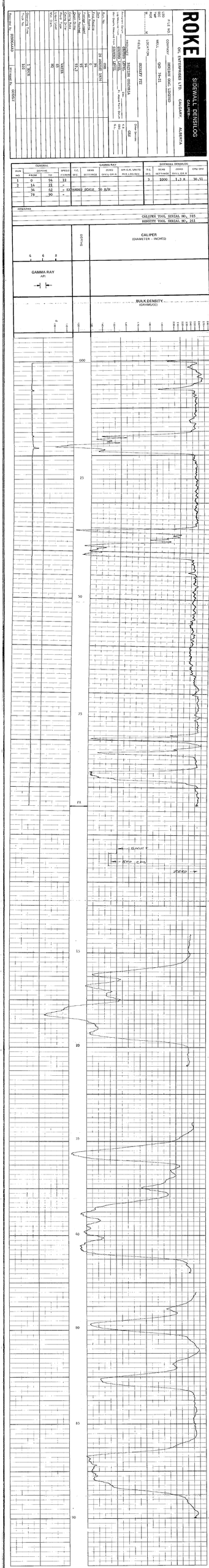
COMPANY: WESTERN OIL LIMITED
WELL: 6D8 7-4-21
LOCATION:
FIELD: SCHIFF PTE
COUNTY: PROVINCE: ALBERTA COLUMBIA
Permanent Datum: GROUND LEVEL
Log Measured from: GROUND LEVEL
Drilling Measured from: GROUND LEVEL
Elev.: K.B. 2324 D.F. G.L.
Date: 25 AUGUST 1979
Run No.: ONE
Depth Driller: 90
Depth Logger: 90
Bottom Log Interval: 90
Top Log Interval: 0
Casing Driller: 95.5
Casing Logger: 95.5
Bit Size: 7 7/8
Type Fluid in Hole: WATER
Dens.: 80
Visc.: 30
Source of Sample: PUMPED
Rm @ Meas. Temp.: 0.4 @ 80
Rmf @ Meas. Temp.: 0.3 @ 80
Rmc @ Meas. Temp.: 0.2 @ 80
Source: Rmf Rmc: MEASURED
Rm @ BHT: 0.4 @ 80
Time Since Circ.: 3 HOURS
Time On Bottom: 1012
Equipment No.: 6D8D21
Recorded By: BURKHARD
Witnessed By: GUEST

GENERAL				GAMMA RAY				SIDEWALL DENSILOG			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED F/HRS	SPEED SEC.	T.C.	SENS SETTINGS	API/G.R. UNITS DIV/G.R.R	API/G.R. UNITS PER LOG DIV.	T.C. SEC.	ZERO SETTINGS	ZERO DIV/G.R.R	CPM/DIV
1	0	34	12						3	1000	1.2 R	30.51
2	34	42	-									
	78	90	-									

EXTENDED SCALE 50 B/M

REMARKS

CALIPER TOOL SERIAL NO. 725
DENSITY TOOL SERIAL NO. 241



ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.
LSD
SEC
TWP
RGE
W M

COMPANY DENISON COAL LIMITED

WELL QMD 76-21

LOCATION

FIELD SHERIFF PIT

PROVINCE BRITISH COLUMBIA

Other Services: DENS-CAL

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

K.B.
CSG
G.L.

Run. No.	ONE	
Date	26 AUGUST 1976	
First Reading	94.5	
Last Reading	0	
Footage Logged	94.5	
Depth Reached	95	
Depth Driller	95.5	
Casing Roke		
Casing Driller		
Fluid Type	WATER	
Liquid Level	65	
Min. Diam.	HQ	
Rm @ °F		
Operating Time	1 HOUR	
Truck No.	102	

Recorded By SUNDGAARD Witnessed By GORMLY

EQUIPMENT DATA

	GAMMA RAY	NEUTRON
RUN NO.	ONE	ONE
LOG TYPE		NEUTRON/NEUTRON
TOOL MODEL NO.	74	74
DIAMETER	1 11/16	1 11/16
DETECTOR MODEL NO.	GEIGER	PROPORTIONAL
TYPE	18 INCH	6 INCH
LENGTH	8.55 FT.	MRC-N-SS-W
SOURCE MODEL NO.		606
SERIAL NO.	102	17 INCH
SPACING		AmBe
TYPE	74	3 CURIES
STRENGTH		

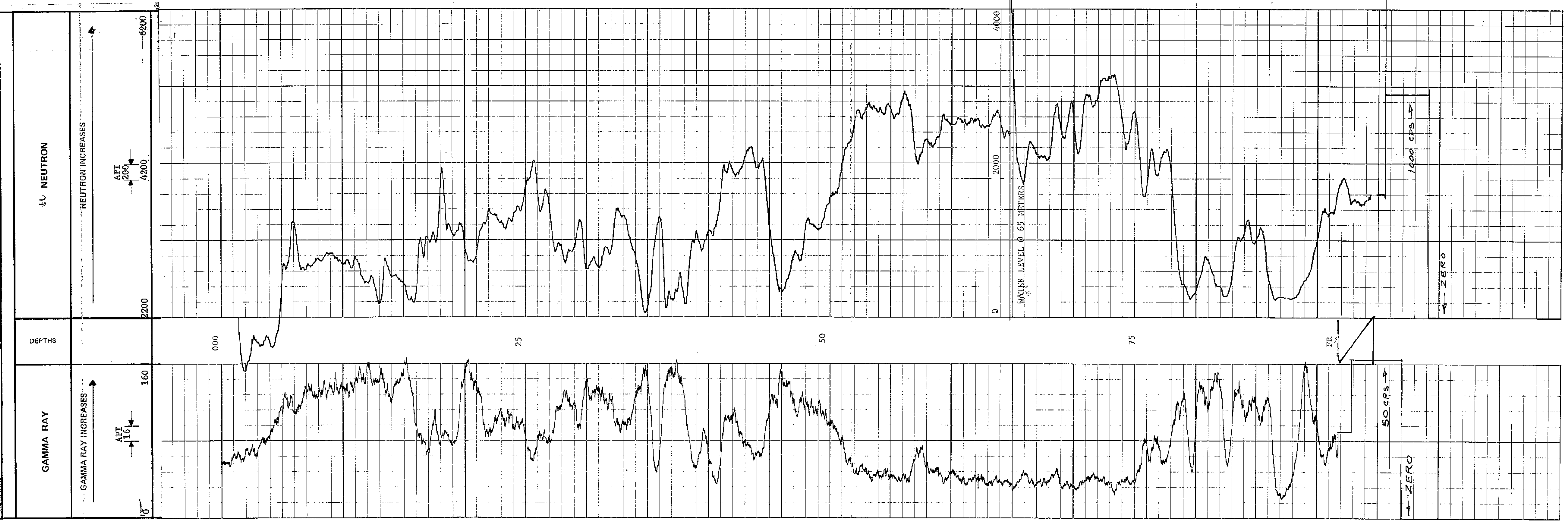
GENERAL

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

LOGGING DATA

GENERAL					GAMMA RAY				NEUTRON		
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN.	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
ONE	0	65	12	4	100	0	16	3	1000	11 L	200
	65	94.5	12	4	100	0	16	3	1000	0	200

REMARKS



ROKE

TEMPERATURE

FILE NO. 1205
DATE
TIME
M.....
W.....

COMPANY: SHELL OIL ENTERPRISES LTD.
WELL: GED 7-62
LOCATION:
FIELD: GERRITY PET

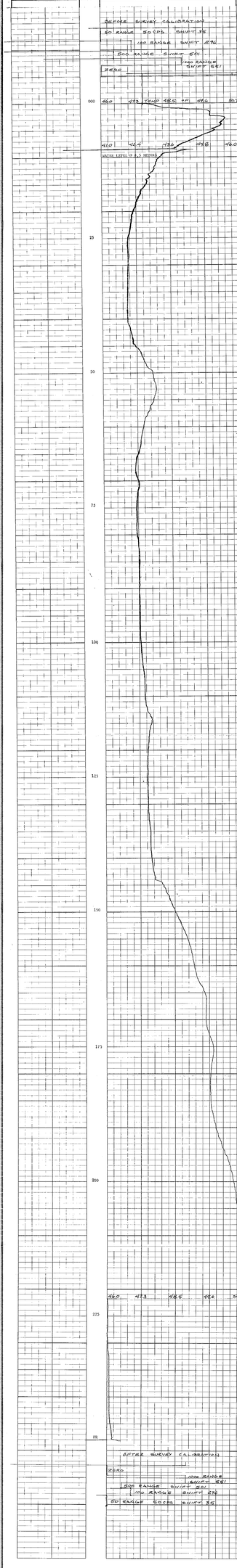
CITY: CALGARY
PROVINCE: ALBERTA

Recorded by: GORDON MOORE
Witnessed by: J. Rusk/Tom Dunn
Operator: GORDON MOORE

Date Received
CER: 2020-01
Date Received
CER: 2020-01

Date	20 OCTOBER 1971
Run No.	3
Log Reading	24.4 M
Zero Level	2.4
Zero Level Correction	0.0
Zero Error	0.0
Corrected Zero Level	2.4
Elevation	1080
Level Left	34.4
Ht. Derrick	30....
Ev. @ Ht.	
Correction Time	1 HOUR
Prod. No.	105
Recorded By	GORDON
Witnessed By	GORDON

Remarks: TEMPERATURE TOOL SERIAL NO. CT23X116
RUN 207
LOGGING SPEED 15 FT/MIN



ROKE

SIDEWALL DENSILOG
CALIPER

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.

LSD
SEC
TWP
RGE
W____M

COMPANY: DENISON COAL LIMITED
WELL: QMD 76-20
LOCATION:
FIELD: SHERIFF PIT
PROVINCE: BRITISH COLUMBIA

Other Services: GRN, TEMP

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

K.B.
CSG
G.L.

Run. No.	ONE
Date	20 AUGUST 1976
First Reading	247.5 M
Last Reading	0
Footage Logged	247.5
Depth Reached	248.5
Depth Driller	
Casing Roke	
Casing Driller	
Fluid Type	GEL
Liquid Level	9.5
Min. Diam.	HQ
Operating Time	2 HOURS
Truck No.	102
Recorded By	SUNDGAARD
Witnessed By	GORMLY

GENERAL				GAMMA RAY				SIDEWALL DENSILOG			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV.L.OR R	API G.R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	CPS/ DIV
1	0	247.5	12					3	500	1.3 R	30.51
2	142	158	-								
	165	175	- EXPANDED SCALE 50 M/M								
	192	200	-								

REMARKS

CALIPER TOOL SERIAL NO. 785
DENSITY TOOL SERIAL NO. 241

CALIPER (DIAMETER – INCHES): 4 6 8

GAMMA RAY API

DEPTHS

BULK DENSITY (GRAMS/CC): 1.00 1.10 1.20 1.30 1.40 1.50 1.60 1.70 1.80 1.90 2.00 2.10 2.20 2.30 2.40 2.50 2.60 2.70 2.80

ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

FILE NO.
COMPANY: WESTERN COAL LIMITED
LSD
SEC
TWP
RGE
W
WELL: GDT 75-10
LOCATION
FIELD: GERLITT PIT
PROVINCE: BRITISH COLUMBIA

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

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

Other Services: DENS-CAL

Run. No.	ONE
Date	29 JULY 1976
East Bearing	149.5 M
Last Bearing	0
Footage Logged	149.5
Footage Scanned	149.5
Depth Driller	150.5
Depth Logger	150.5
Casing Driller	
Casing Logger	
Casing Size	
Liquid Level	44.5
Min. Diam.	NO
Run. @ °F	
Operating Time Truck No.	3 HOUR 34

Recorded By: STODDARD
Witnessed By: BAKER

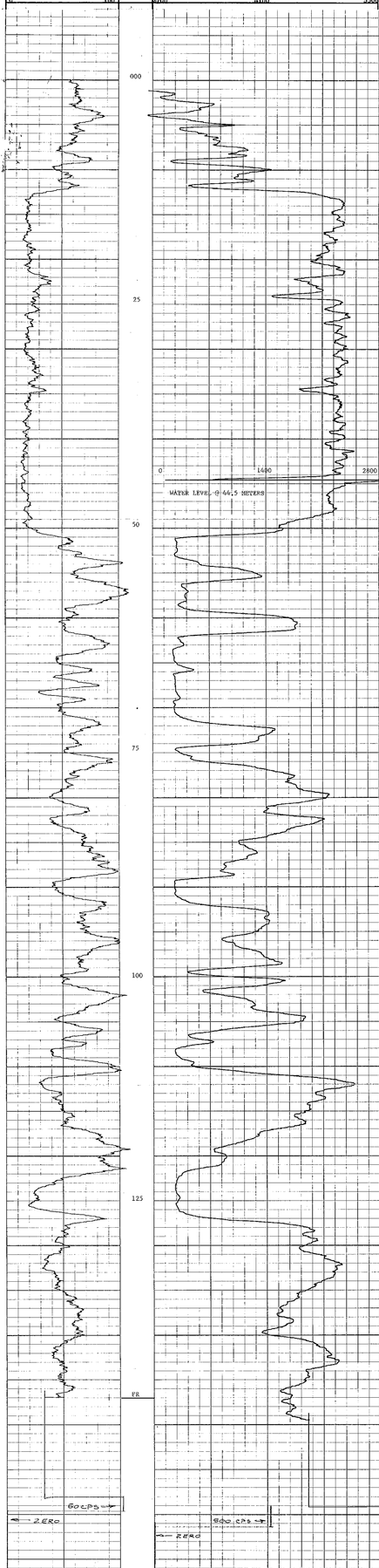
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	74	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO.	74
DETECTOR MODEL NO.		DIAMETER	1 11/16
TYPE	GEIGER	DETECTOR MODEL NO.	
LENGTH	18 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	8.65 FT.	LENGTH	6 INCH
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	606
HOIST TRUCK NO.	34	SPACING	17 INCH
INSTRUMENT TRUCK NO.	34	TYPE	AmBe
TOOL SERIAL NO.	74	STRENGTH	3 CURIES

LOGGING DATA

GENERAL					GAMMA RAY			NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	0	44.5	12	4	100	0	16	3	1000	19.3 L	140
	44.5	149.5	12	4	100	0	16	3	1000	0	140

REMARKS: 70° ANGLE HOLE



ROKE

SIDEWALL DENSILOG
CALIPER

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.
LSD
SEC
TWP
RGE
W______M

COMPANY DENISON COAL LIMITED

WELL QMD 76-10

LOCATION

FIELD SHERIFF PIT

PROVINCE BRITISH COLUMBIA

Other Services: GRN

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

K.B.
CSG
G.L.

Run. No.	ONE		
Date	29 JULY 1976		
First Reading	149 M		
Last Reading	0		
Footage Logged	149		
Depth Reached	150		
Depth Driller	150.5		
Casing Roke			
Casing Driller			
Fluid Type	GEL		
Liquid Level	44.5		
Min. Diam.	HQ		
Operating Time	1 1/2 HOURS		
Truck No.	34		

Recorded By SUNDGAARD Witnessed By BAKER

GENERAL				GAMMA RAY				SIDEWALL DENSILOG			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	API G.R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	CPS/DIV
1	0	149	12					3	1000	1.12 R	31.69
2	50	77	"								
	88	92	" EXPANDED SCALE 20 M/M								
	105	111	"								
	120	128	"								

REMARKS 70° ANGLE HOLE

DENSITY TOOL SERIAL NO. 241
CALIPER TOOL SERIAL NO. 785

CALIPER (DIAMETER – INCHES)

DEPTHS

GAMMA RAY API

BULK DENSITY (GRAMS/CC)

ROKE

TEMPERATURE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.
LSD
SEC
TWP
RGE
W M

COMPANY DENISON COAL LIMITED

WELL QMD 76-09

LOCATION

FIELD SHERIFF PIT

PROVINCE BRITISH COLUMBIA

Other Services: GRN. DENS-CAL

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

K.B.
CSG
G.L.

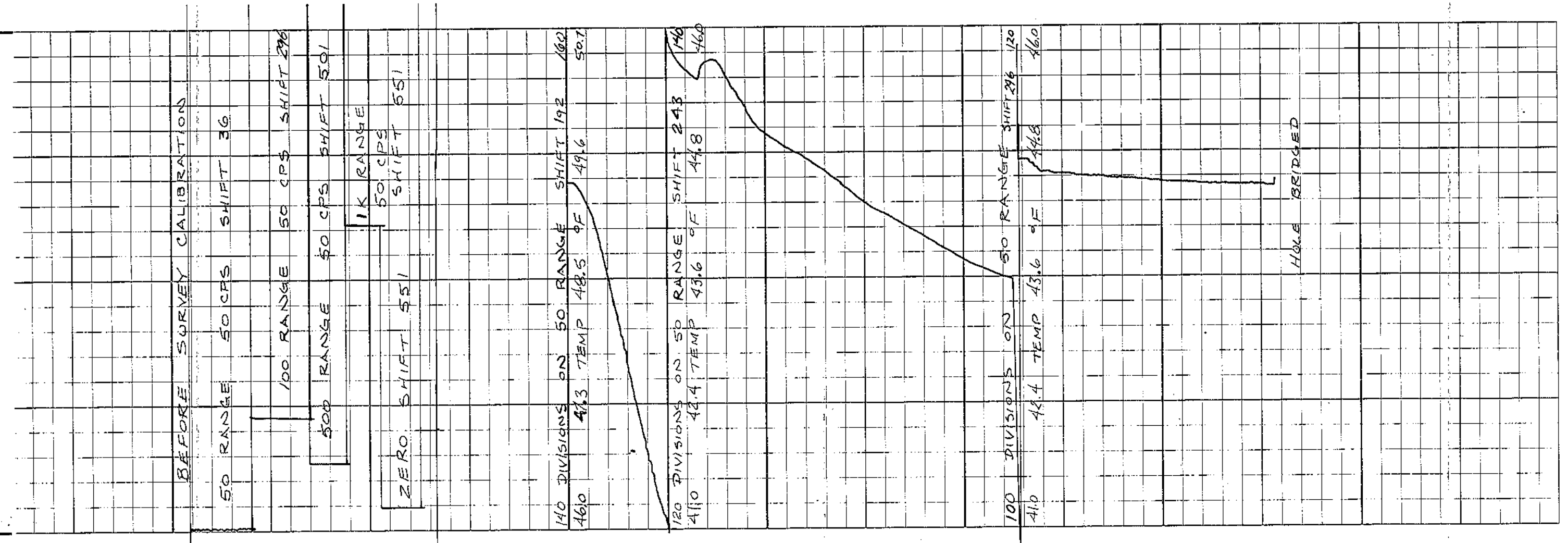
Run. No.	ONE		
Date	29 JULY 1976		
First Reading	36 M		
Last Reading	0		
Footage Logged	36		
Depth Reached	36		
Depth Driller	157		
Casing Roke			
Casing Driller			
Fluid Type	WATER		
Liquid Level	22.5		
Min. Diam.	HQ		
Rm @ °F			
Operating Time	1/2 HOUR		
Truck No.	34		

Recorded By SUNDGAARD Witnessed By BAKER

Remarks LOGGING SPEED 15 FT/MIN
RATEMETER 207
T.G. .01

TEMPERATURE TOOL SERIAL NO. CT23C116

Depths



ROKE SIDEWALL DENSILOG

CALTER

OIL INTERNATIONAL LTD. CALGARY, ALBERTA

FILE NO.

COMPANY: [illegible] (NW) LIMITED

WELL: [illegible] 7-11

LOCATION:

FIELD: [illegible] REF

PROVINCE: BRITISH COLUMBIA

Permanent Datum:	GROUND LEVEL	Elev.	
Log Measured From:	GROUND LEVEL	0.0 m Above Perm. Datum	
Drilling Measured From:	GROUND LEVEL		

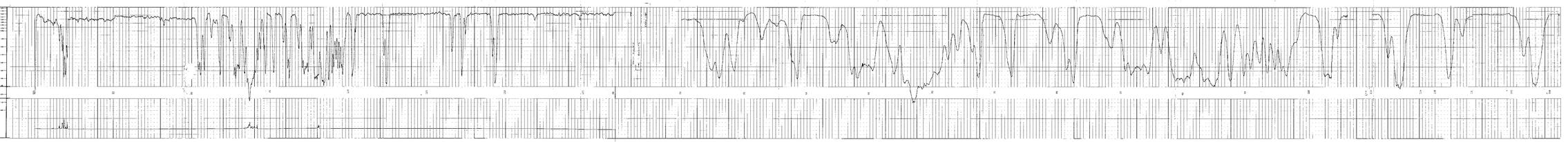
Date	[illegible]		
Run No.	ONE		
Depth-Driller	1[illegible]1.0 m		
Depth-Logger	[illegible]		
Bottom Log Int.	[illegible]		
Top Log Int.	[illegible]		
Casing-Driller	[illegible]		
Casing-Logger	[illegible]		
Bit Size	[illegible]		
Type Fluid in Hole	[illegible]		
Dens.	[illegible]	Visc.	[illegible]
pH	[illegible]	Fluid Loss	[illegible]
Source of Sample	FLOWLINE		
Rm @ Meas. Temp.	[illegible] @ [illegible]		
Rmf @ Meas. Temp.	[illegible] @ [illegible]		
Rmc @ Meas. Temp.	[illegible] @ [illegible]		
Source: Rmf / Rmc	[illegible]	Rm @ BHT	[illegible] @ [illegible]
Rm @ BHT	[illegible] @ [illegible]		
Time Since Circ.	[illegible]		
Max. Rec. Temp.	[illegible]		
Equip. Location	[illegible]		
Recorded By	[illegible]		
Witnessed By	[illegible]		

Run No.	ONE		
Bit No.	[illegible]		
Type	[illegible]		
Serial No.	[illegible]		
Size	[illegible]		
Pad Type	[illegible]		
Tool Position	[illegible]		
Max. Rec. Temp.	[illegible]		
Equip. Location	[illegible]		
Recorded By	[illegible]		
Witnessed By	[illegible]		

Run No.	ONE		
Time	[illegible]		
Tool Type	[illegible]		
Serial No.	[illegible]		
Tool Position	[illegible]		
Max. Rec. Temp.	[illegible]		
Equip. Location	[illegible]		
Recorded By	[illegible]		
Witnessed By	[illegible]		

Run No.	ONE		
Time	[illegible]		
Tool Type	[illegible]		
Serial No.	[illegible]		
Tool Position	[illegible]		
Max. Rec. Temp.	[illegible]		
Equip. Location	[illegible]		
Recorded By	[illegible]		
Witnessed By	[illegible]		

Run No.	ONE		
Time	[illegible]		
Tool Type	[illegible]		
Serial No.	[illegible]		
Tool Position	[illegible]		
Max. Rec. Temp.	[illegible]		
Equip. Location	[illegible]		
Recorded By	[illegible]		
Witnessed By	[illegible]		



ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

LSD SEC TWP RGE W.4M

FILE NO.

COMPANY JENSEN COAL LIMITED

WELL OBD 7649

LOCATION

FIELD SEEBEE PTS

PROVINCE BRITISH COLUMBIA

Permanent Datum GROUND LEVEL Elev.

Log Measured From GROUND LEVEL Ft. Above Perm. Datum

Drill Measured From GROUND LEVEL

Other Services

Run No. 1

Date 30 OCT 1976

First Reading 189 FT

Last Reading 151

Depth Reached 151

Casing Size 5.89

Casing Depth 151

Casing Driver

Hole Fluid FRESH WATER

Level Level 23

Max. Depth 151

Tm @ Tf

Operating Time 3 HOURS

Truck No. 34

Recorded By SKINNARD

Witnessed By CONRAD

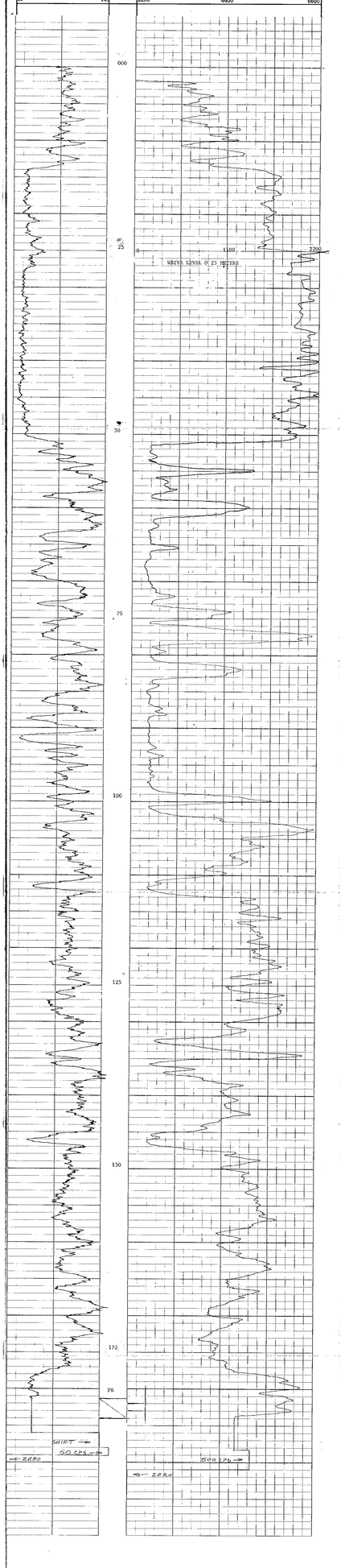
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	74	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 11/16	TOOL MODEL NO.	74
DETECTOR MODEL NO.		DIAMETER	1 11/16
TYPE	GEIGER	DETECTOR MODEL NO.	
LENGTH	18 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	8.55 FT.	LENGTH	6 INCH
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	605
HOIST TRUCK NO.	34	SPACING	17 INCH
INSTRUMENT TRUCK NO.	34	TYPE	AmBe
TOOL SERIAL NO.	74	STRENGTH	3 CURIES

LOGGING DATA

GENERAL														
RUN	DEPTH		SPEED	T.C.	SENS	ZERO	API G. R. UNITS	T. C.	SENS	ZERO	API N. UNITS
NO.	FROM	TO	F/MIN	SEC.	SETTINGS	DIV. L OR R	PER LOG DIV.	SEC.	SETTINGS	DIV. L OR R	PER LOG DIV.
1	0	23	12	4	500	1 L	15	3	1000	10 L	220
	23	189	12	4	500	1 L	15	3	500	0	110

REMARKS HOLE DEPTHS ON LOG ARE 3% LESS THAN ACTUAL, E.G. LOG REGISTERS 97 METERS ACTUAL DEPTH IS 100 METERS.



ROKE

SIDEWALL DENSILOG

CALIPER — GAMMA RAY

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO:
LSD
SEC
TWP
RGE
W.M.

COMPANY: BRUNSWICK CORE LIMITED

WELL: OBS 74-8

LOCATION: N

FIELD: SUMMIT EXT

PROVINCE: BRITISH COLUMBIA

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

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

Date Run: 11 AUG 1976
Run No.: 01
Depth Driller: 81
Depth Logger: 81
Bottom Logged Interval: 81
Top Logged Interval: 24
Casing Driller: ____
Casing Logger: ____
Bit Size: 7 7/8
Type Fluid in Hole: AIR
Max. Rec. Temp.: 78
Equipment No.: 1-12 ROKE
Truck No.: 54
Recorded By: GOBERT
Witnessed By: GOBERT

Other Services: GR

GENERAL				GAMMA RAY				SIDEWALL DENSILOG			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. OR M	API/G.R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV. OR M	CPS/DIV
1	0	81	32					3	500	1.12 R	31.69
2	55	70	-								
	25	30	-	EXPANDED SCALE 50 M/M							
	18	21	-								

REMARKS: HOLE DEPTHS ON LOG ARE 3% LESS THAN ACTUAL. E.G. LOG READINGS 97 METERS ACTUAL DEPTH IS 100 METERS.

DENSITY TOOL SERIAL NO. 241

CALIPER TOOL SERIAL NO. 785

DEPTHS

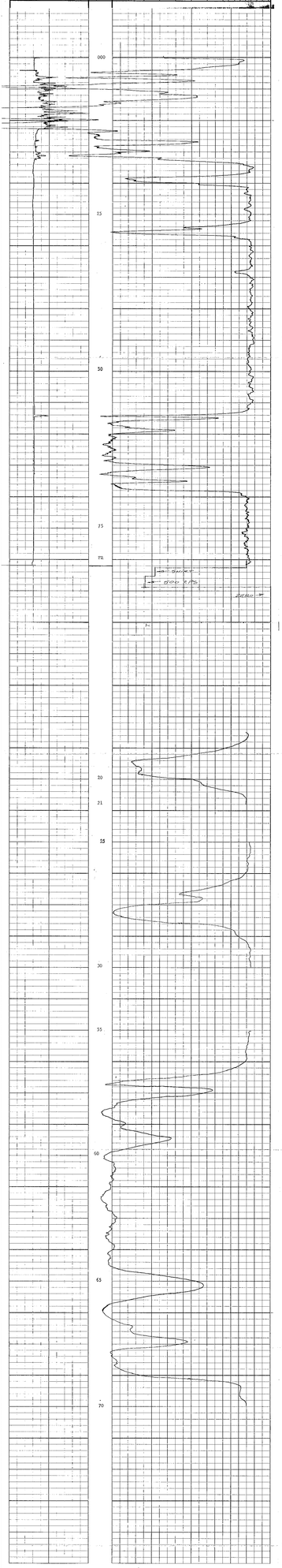
CALIPER
(DIAMETER — INCHES)

4 6 8

GAMMA RAY
API

BULK DENSITY
(GRAMS/CC)

1.00 — 0.0 — 0.1 — 0.2 — 0.3 — 0.4 — 0.5 — 0.6 — 0.7 — 0.8 — 0.9 — 1.0 — 1.1 — 1.2 — 1.3 — 1.4 — 1.5 — 1.6 — 1.7 — 1.8 — 1.9 — 2.0 — 2.1 — 2.2 — 2.3 — 2.4 — 2.5 — 2.6 — 2.7 — 2.8 — 2.9 — 3.0



ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.
LSD
SEC
TWP
RGE
W ____ M

COMPANY DENISON COAL LIMITED

WELL QMD 76-08

LOCATION

FIELD SHERIFF PIT

PROVINCE BRITISH COLUMBIA

Other Services: DENS-CAL

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

K.B.
CSG
G.L.

Run. No.	ONE		
Date	11 JULY 1976		
First Reading	81 M		
Last Reading	0		
Footage Logged	81		
Depth Reached	82		
Depth Driller	84		
Casing Roke			
Casing Driller			
Fluid Type	AIR		
Liquid Level			
Min. Diam.	HQ		
Rm @ °F			
Operating Time	1 HOUR		
Truck No.	34		

Recorded By SUNDGAARD Witnessed By GOEMLY

EQUIPMENT DATA

	GAMMA RAY	NEUTRON
RUN NO.	ONE	ONE
TOOL MODEL NO.	74	NEUTRON/NEUTRON
DIAMETER	1 11/16	74 1 11/16
DETECTOR MODEL NO.	GEIGER	PROPORTIONAL
TYPE	18 INCH	6 INCH
LENGTH	8.56 FT.	MRC-NSS-W
DISTANCE TO N. SOURCE		606
SOURCE MODEL NO.		17 INCH
SERIAL NO.		AmBe
SPACING		3 CURIES
TYPE		
STRENGTH		

GENERAL

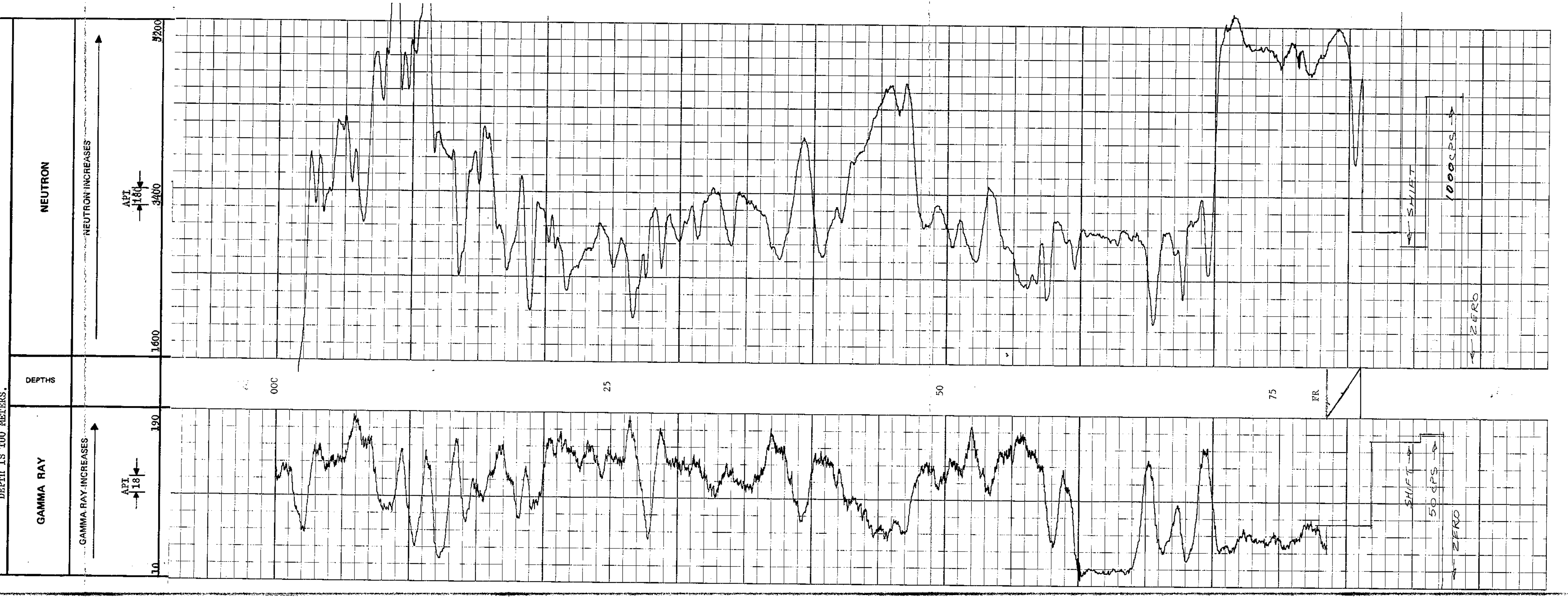
HOIST TRUCK NO.	34
INSTRUMENT TRUCK NO.	34
TOOL SERIAL NO.	74

LOGGING DATA

GENERAL

RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	GAMMA RAY SENS SETTINGS	GAMMA RAY ZERO DIV. L OR R	GAMMA RAY API G. R. UNITS PER LOG DIV.	NEUTRON T. C. SEC.	NEUTRON SENS SETTINGS	NEUTRON ZERO DIV. L OR R	NEUTRON API N. UNITS PER LOG DIV.
1	0	81	12	4	500	0.55 L	18	3	1000	8.8 L	180

REMARKS HOLE DEPTHS ON LOG ARE 3% LESS THAN ACTUAL, B.G. LOG BRIGHTENS 97 METERS ACTUAL DEPTH IS 100 METERS.



ROKE

SHERWOOD DRIVE, LTD.

SHERWOOD DENSILOG

COMPANY: ROKE OIL & GAS LTD.

WELL: GARRETT

FIELD: SHERWOOD PARK

COUNTY: ALBERTA

STATE: CANADA

PERMANENT DATUM: GROUND LEVEL

ELEV.: 0

LOG MEAS. FROM: GROUND LEVEL

ELEV.: 0

DRILL. MEAS. FROM: GROUND LEVEL

ELEV.: 0

DATE: 1984

RUN NO.: ONE

DEPTH-DRILLER: 2250

DEPTH-LOGGER: 2247

BTM. LOG INTERVAL: 2247

TOP LOG INTERVAL: SURFACE

CASING-DRILLER: 8 5/8 @ 100

CASING-LOGGER: NONE

BIT SIZE: 7 7/8

TYPE FLUID IN HOLE: FRESH WATER

DENSITY: 8.8

VISCOSITY: 35

PH: 8.5

FLUID LEVEL: FULL

MAX. REC. TEMP.: 100 F

LOGGED BY: ROKE OIL

WITNESSED BY: GARRETT

GENERAL				GAMMA RAY				NUCLEAR LOGGING			
RUN	DATE	TOTAL DEPTH	SPEED FT/MIN	T.C.	TYPE	AVG. DEV. FROM A.P.I.	AVG. DEV. PER A.P.I.	T.C.	TYPE	AVG. DEV. FROM A.P.I.	AVG. DEV. PER A.P.I.
1	0	100	12					0	SONIC	1.2 S	N/A

REMARKS

NUCLEAR TOOL SERIAL NO. 242

GAMMA TOOL SERIAL NO. 716

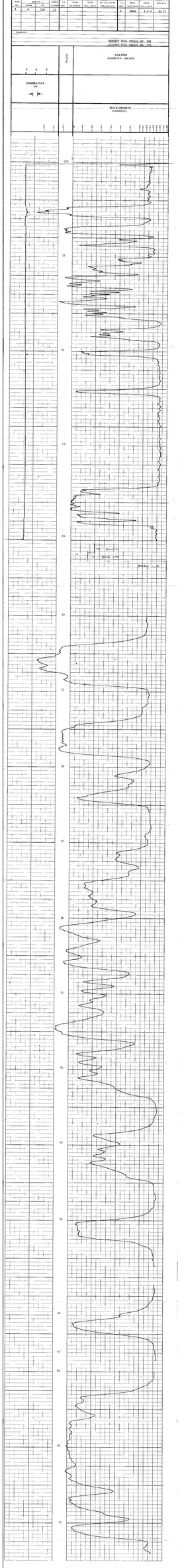
GAMMA RAY API

CALIPER (DIAMETER - INCHES)

6 6 8

BULK DENSITY (GRAMS/CC)

DEPTH



ROKE

CANADA LTD.

SIDEWALL DENSILOG
CALIPER

OIL ENTERPRISES LTD.
CALGARY, ALBERTA

FILE NO.
COMPANY: HERSON COAL LIMITED
WELL: GDD 74-02
LOCATION:
FIELD: SUMMIT PTT
PROVINCE: BRITISH COLUMBIA
Permanent Datum: GROUND LEVEL
Log Measured from: GROUND LEVEL
Elev. Perm. Datum: 0 ft. Above Perm. Datum
Elev. Derrick Measured from: G.L.
Date: JULY 1976
Run No.: ONE
Depth Driller: 41 ft.
Depth Logged: 41
Bottom Log Interval: 41
Top Log Interval: 0
Casing Size: 5 1/2
Casing Depth: 41
Fluid Type: DRY
Fluid Level: FULL
Max. Rec. Temp.: 30 C
Operating Time: 1 HOUR
Truck No.:
Recorded By: SCHOUGAARD
Witnessed By: GODSKY

Other Services: GR

GENERAL				GAMMA RAY					SIDEWALL DENSILOG			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV.S. OR R	API G.R. UNITS PER LOG DIV.		T.C. SEC.	SENS SETTINGS	ZERO DIV.S. OR R	CPM/DIV
1	0	41	12						3	1000	1.19 R	31.69
2	10	41	EXPANDED SCALE 50 M/M									

REMARKS: HOLE DEPTHS ON LOG ARE 3% LESS THAN ACTUAL. E.G. LOG REGISTERS 97 METERS ACTUAL DEPTH IS 100 METERS.

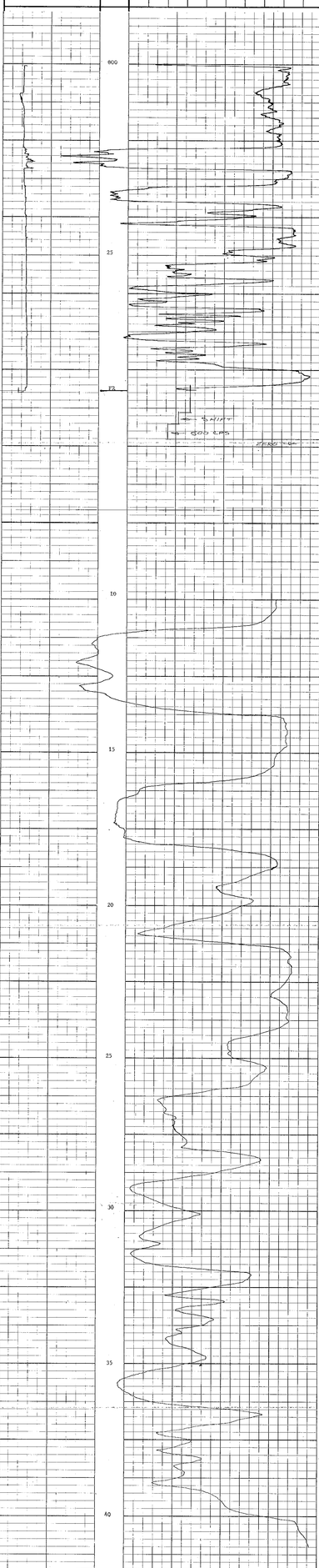
DENSITY TOOL SERIAL NO. 241
CALIPER TOOL SERIAL NO. 785

DEPTHS

CALIPER
(DIAMETER – INCHES)
4 6 8

GAMMA RAY
API

BULK DENSITY
(GRAMS/CC)
1.40 2.00 2.40 2.60 2.80 3.00 3.20 3.40 3.60 3.80 4.00



ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.

LSD
SEC
TWP
RGE
W ___ M

COMPANY DENISON COAL LIMITED

WELL QMD 76-05

LOCATION

FIELD SHERIFF PIT

PROVINCE BRITISH COLUMBIA

Other Services: DENS-CAL

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

Run. No.	ONE
Date	11 JULY 1976
First Reading	43-M
Last Reading	0
Footage Logged	43
Depth Reached	44
Depth Driller	50
Casing Roke	
Casing Driller	
Fluid Type	GEL
Liquid Level	28.5
Min. Diam.	HQ
Rm @ °F	
Operating Time	1 HOUR
Truck No.	34
Recorded By SUNDGAARD	Witnessed By GORMLY

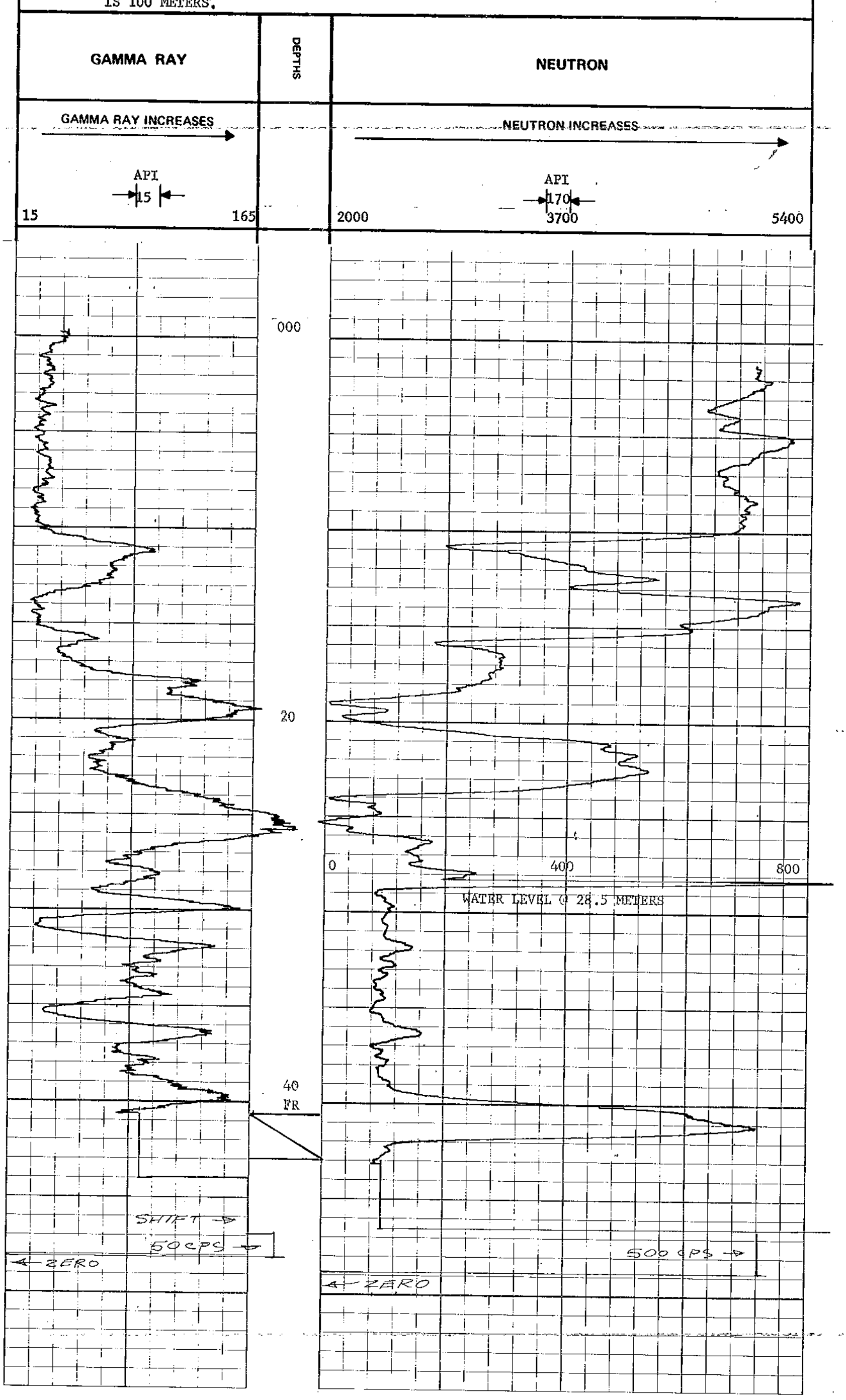
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	74	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	$1\frac{11}{16}$	TOOL MODEL NO.	74
DETECTOR MODEL NO.		DIAMETER	$1\frac{11}{16}$
TYPE	GEIGER	DETECTOR MODEL NO.	
LENGTH	18 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	8.55 FT.	LENGTH	6 INCH
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	606
HOIST TRUCK NO.	34	SPACING	17 INCH
INSTRUMENT TRUCK NO.	34	TYPE	AmBe
TOOL SERIAL NO.	74	STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	0	28.5	12	4	100	1 L	15	3	1000	11.7 L	170
	28.5	43	12	4	100	1 L	15	3	1000	0	80

REMARKS HOLE DEPTHS ON LOG ARE 3% LESS THAN ACTUAL. E.G. LOG REGISTERS 97 METERS ACTUAL DEPTH IS 100 METERS.



ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.	
LSD	
SEC	
TWP	
RGE	
W ____ M	
COMPANY	DENSON COAL LIMITED
WELL	QWD 76-05
LOCATION	
FIELD	SHERIFF PIT
PROVINCE	BRITISH COLUMBIA
Permanent Datum	GROUND LEVEL Elev.
Log Measured from	GROUND LEVEL Ft. Above Perm. Datum
Well Depths Measured from	GROUND LEVEL
Other Services:	DENSO-COL
K.B.	
DF	
G.L.	

Run No.	ONE
Date	4 SEPTEMBER 1976
Last Reading	0.00 M
Footage Logged	100
Depth Driller	100.5
Depth Logger	100.3
Casing Size	
Casing Bottom	
Fluid Type	GEL
Liquid Level	40.5
Min. Diam.	HQ
Rm @ °F	
Operating Time	3 HOUR
Truck No.	102
Recorded By	SUTHERLAND
Witnessed By	BAKER

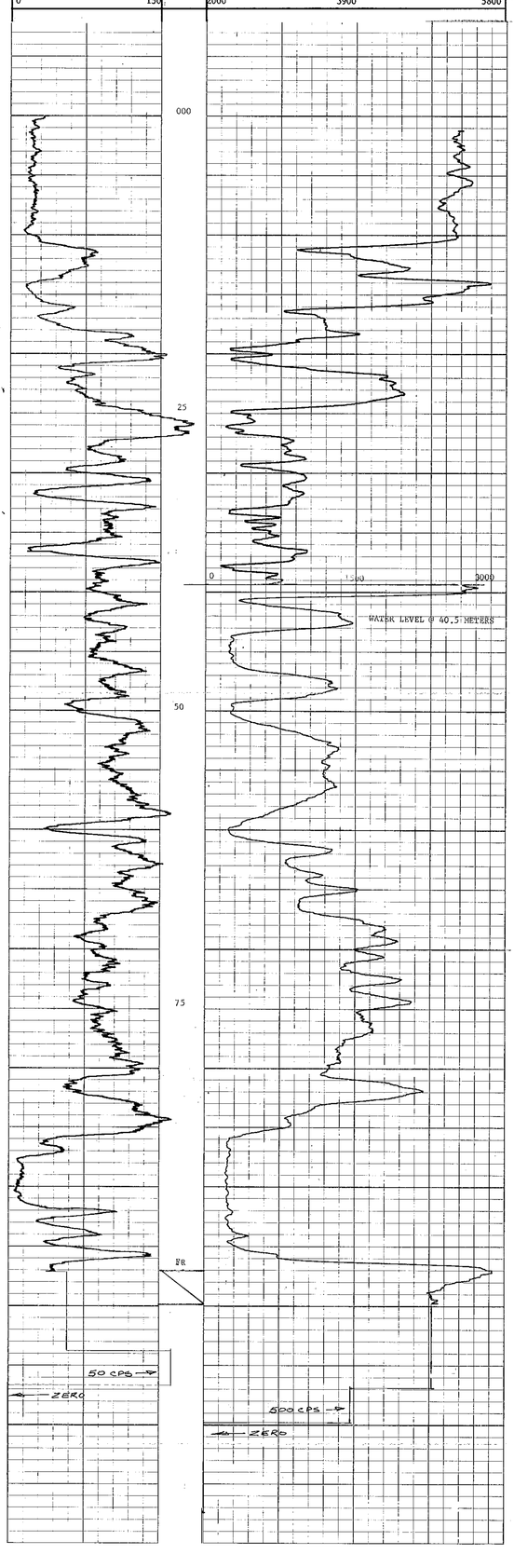
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	74	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	$1\frac{11}{16}$	TOOL MODEL NO.	74
DETECTOR MODEL NO.		DIAMETER	$1\frac{11}{16}$
TYPE	GEIGER	DETECTOR MODEL NO.	
LENGTH	18 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	8.55 FT.	LENGTH	6 INCH
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	606
HOIST TRUCK NO.	102	SPACING	17 INCH
INSTRUMENT TRUCK NO.		TYPE	AmBe
TOOL SERIAL NO.	74	STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	0	40.5	12	4	100	0	15	3	1000	10.5 L	190
	40.5	100	12	4	100	0	15	3	1000	0	150

REMARKS



ROKE

SIDEWALL DENSILOG

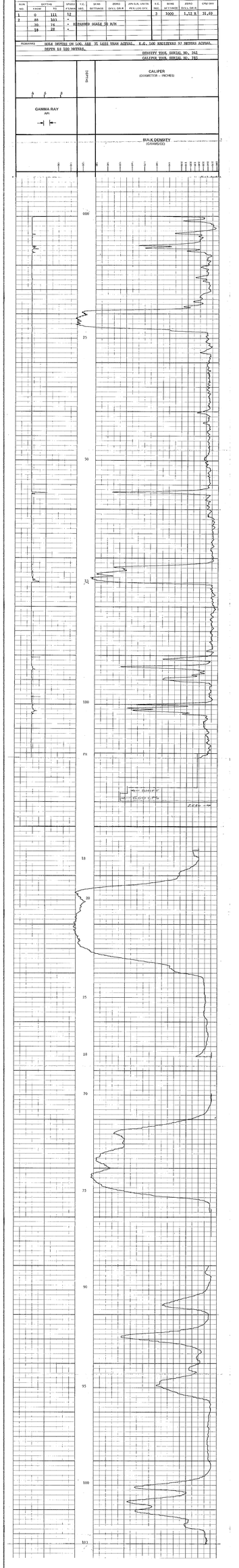
DIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.	
LSD	
SEC.	
TWP.	
RGE.	
M.	
COMPANY	MOBIL OIL CANADA
WELL	1-25 Zama
LOCATION	
FIELD	WAGAPITI CFC
PROVINCE	BRITISH COLUMBIA
Date Drilled to Total Depth	1 Jan 1976
Date Rig Released	1 Jan 1976
Total Depth Driller	2000
Total Depth Logger	2000
Bottom Log Interval	2000
Top Log Interval	0
Casing Driller	9 5/8 @ 1
Casing Logger	
Bit Size	8 1/2
Type Fluid in Hole	WATER
Dens.	10
Visc.	30
Max. Rec. Temp.	1 127 DEGREES
Operating Time	
Truck No.	
Recorded By	DEROSIAN
Witnessed By	GOBLET

GENERAL				GAMMA RAY				SIDEWALL DENSILOG			
RUN NO.	LOGGING FROM	TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIVS. OR #	API G.R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIVS. OR #	CPM/ DIV
1	0	111	12					3	1000	1.12 R	31.69
2	86	101	-								
	20	76	-								
	18	28	-								

REMARKS: HOLE DEPTHS ON LOG ARE 2% LESS THAN ACTUAL. E.G. LOG BRAIDERED 97 METERS ACTUAL DEPTH IS 100 METERS.

DENSITY TOOL SERIAL NO. 241
CALIPER TOOL SERIAL NO. 782



ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.
LSD
SEC
TWP
RGE
W ___ M

COMPANY DENTSON COAL LIMITED
WELL QND 76-04
LOCATION
FIELD SEKEPIP PTT
PROVINCE BRITISH COLUMBIA

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

Other Services:
DENS-CAL

K.B.
DF
G.L.

Run. No.	ONE
Date	11 JULY 1976
Elev. Reading	111 M
Last Reading	0
Footage Logged	111
Depth Reached	112
Casing Driller	115
Casing Logger	
Fluid Type	WATER
Liquid Level	57
Min. Diam.	HQ
Rm. @ °F	
Operating Time	1 HOUR
Truck No.	34

Recorded By STROGAARD
Witnessed By GORNIK

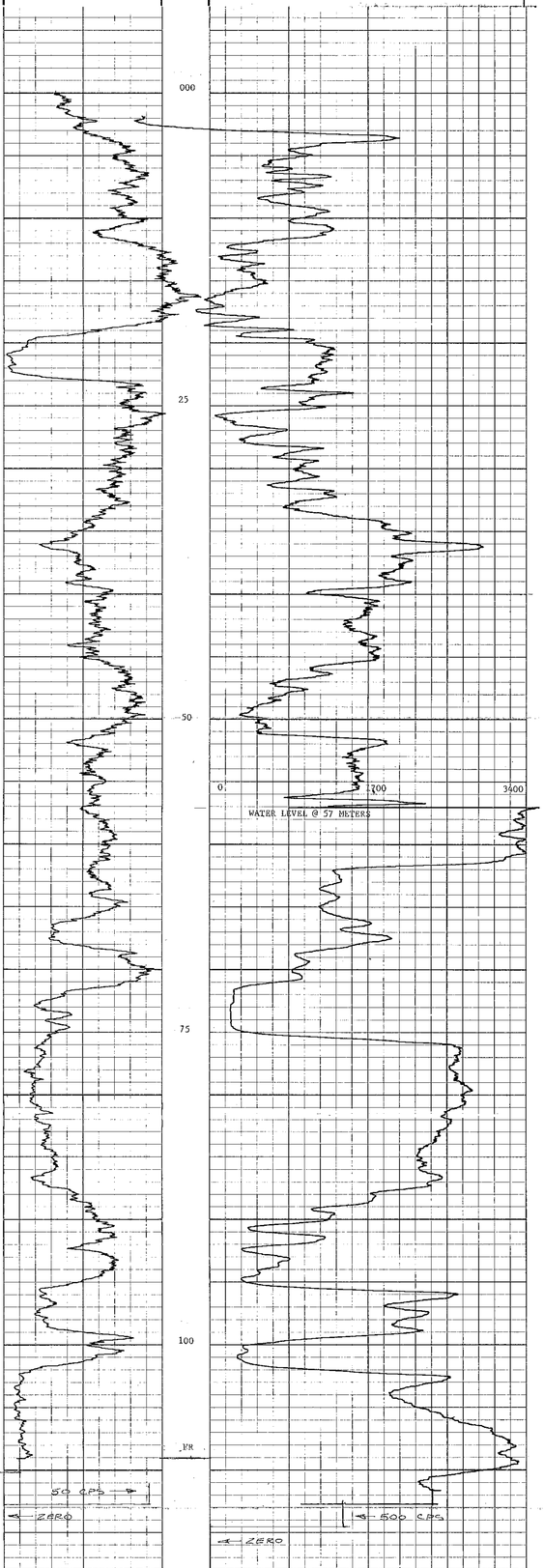
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	74	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	$1\frac{11}{16}$	TOOL MODEL NO.	74
DETECTOR MODEL NO.		DIAMETER	$1\frac{11}{16}$
TYPE	GEIGER	DETECTOR MODEL NO.	
LENGTH	18 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	8.55 FT.	LENGTH	6 INCH
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	606
HOIST TRUCK NO.	34	SPACING	17 INCH
INSTRUMENT TRUCK NO.	34	TYPE	AmBe
TOOL SERIAL NO.	74	STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	0	57	12	4	100	0	18	3	1000	20 L	120
	57	111	12	4	100	0	18	3	1000	0	170

REMARKS HOLE DEPTHS ON LOG ARE 3% LESS THAN ACTUAL. E.C. LOG REGISTERS 97 METERS ACTUAL DEPTH IS 100 METERS.



ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.
LSD
SEC
TWP
RGE
W4M

COMPANY: WESTSON COAL LIMITED

WELL: QDD 75-53

LOCATION:

FIELD: SUNCREST PIT

PROVINCE: BRITISH COLUMBIA

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

Other Services: DENSI-GAM

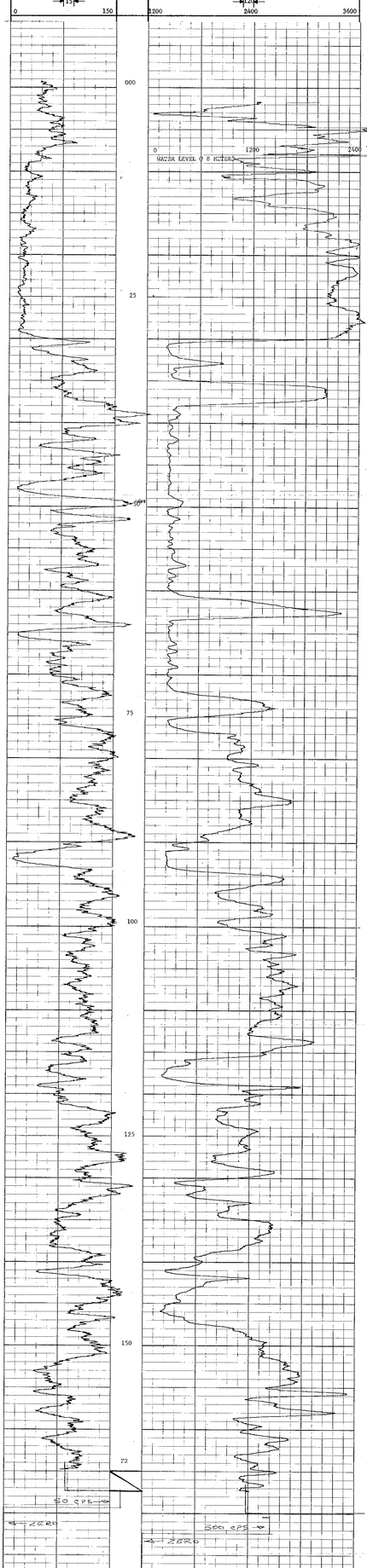
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	74	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	1 15/16	TOOL MODEL NO.	74
DETECTOR MODEL NO.		DIAMETER	1 15/16
TYPE	GEIGER	DETECTOR MODEL NO.	
LENGTH	18 INCH	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	8.55 FT.	LENGTH	6 INCH
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	606
HOIST TRUCK NO.	34	SPACING	17 INCH
INSTRUMENT TRUCK NO.	34	TYPE	AmBe
TOOL SERIAL NO.	74	STRENGTH	3 CURIES

LOGGING DATA

GENERAL					GAMMA RAY				NEUTRON			
RUN	DEPTHS		SPEED	T.C.	SENS	ZERO	API G. R. UNITS	T. C.	SENS	ZERO	API N. UNITS
NO.	FROM	TO	FT/MIN	SEC.	SETTINGS	DIV. L OR R	PER LOG DIV.	SEC.	SETTINGS	DIV. L OR R	PER LOG DIV
1	0	8	12	4	100	0	15	3	1000	10 L	120
	8	167	12	4	100	0	15	3	1000	0	120

REMARKS: HOLE DEPTHS ON LOG ARE 3% LESS THAN ACTUAL. E.G. LOG REGISTERS 97 METERS ACTUAL DEPTH IS 100 METERS.



Run No.	ONE
Date	12 APRIL 1976
Left Bearing	0.67 E
Hole Depth	167
Footage Logged	167
Depth Reached	166
Depth Logged	165
Casing Size	
Casing Depth	
Casing Driller	
Casing Logger	
Liquid Level	SURFACE
Max. Diam.	8
	NO
Rm @ °F	
Operator's Name	
Truck No.	34
Time	1.15 HOURS
Recorded By	STRICKLAND
Witnessed By	GOODRICH

ROKE

SIDEWALL DENSILOG
CALIPER

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.
LSD
SEC
TWP
RGE
W M

COMPANY DENISON COAL LIMITED
WELL QMD 76-03
LOCATION
FIELD SHERIFF PIT
PROVINCE BRITISH COLUMBIA

Other Services: GRN

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

K.B.
CSG
G.L.

Run No.	ONE
Date	12 JULY 1976
First Reading	166 M
Last Reading	0
Footage Logged	166
Depth Reached	167
Depth Driller	193
Casing Roke	
Casing Driller	
Fluid Type	WATER
Liquid Level	8
Min. Diam.	HQ
Operating Time	2 1/2 HOURS
Truck No.	34
Recorded By	SUNDGAARD
Witnessed By	GORMLY

GENERAL				GAMMA RAY				SIDEWALL DENSILOG			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	API G.R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	CPS/DIV
1	0	166	12					3	1000	1,12 R	31.69
2	29	77	-								
	89	95	- EXPANDED SCALE 50 M/M								
	115	120	-								

REMARKS HOLE DEPTHS ON LOG ARE 3% LESS THAN ACTUAL. E.G. LOG REGISTERS 97 METERS ACTUAL DEPTH IS 100 METERS.

DENSITY TOOL SERIAL NO. 241
CALIPER TOOL SERIAL NO. 785

ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

SIDEWALL DENSILOG
CALIPER

FILE NO.
LSD
SEC
TWP
RGE
M.

COMPANY BERCOR OIL LIMITED
WELL QND 74-02
LOCATION
FIELD SEDGEFF EXT

PROVINCE BRITISH COLUMBIA
COUNTRY CANADA

Permanent Datum GROUND LEVEL Elev.
Log Measured from GROUND LEVEL ft. Above Perm. Datum
Drill Measured from GROUND LEVEL

K.B.
CSG
G.L.

Other Services
GDS

Run No. ONE
Date 12 JULY 1976
Depth Driller 43
Depth Logged 42
Last Casing Size 244
Bit Size 46
Density Viscosity
Fluid Loss
Max. Rec. Temp. 80
Equip. Location
Recorded By STONGARD
Witnessed By GODSLY

Operating Time
Unit No. 34
Operator No. 1 SNYDER

GENERAL				GAMMA RAY				SIDEWALL DENSILOG			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	API O.R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	CPS/DIV
1	0	43	12								
2	15	42	EXPANDED SCALE 50 N/M					3	1000	1.12 R	31.69

REMARKS HOLE DEPTHS ON LOG ARE 3% LESS THAN ACTUAL, I.E. LOG REGISTERS 97 METERS ACTUAL DEPTH IS 100 METERS.

DENSITY TOOL SERIAL NO. 261
CALIPER TOOL SERIAL NO. 785

DEPTHS

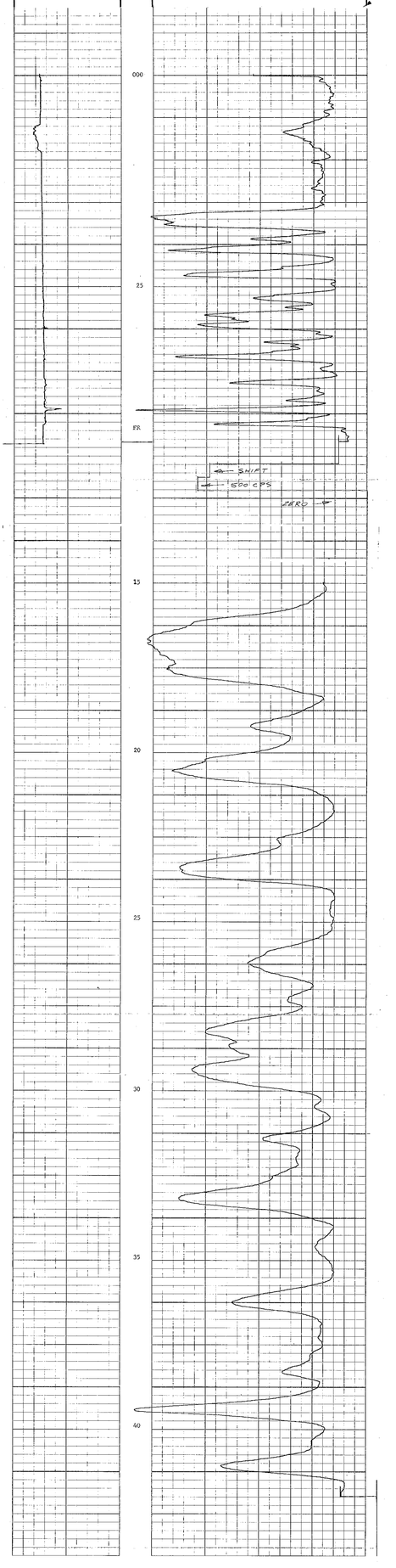
CALIPER
(DIAMETER – INCHES)

4 6 8

GAMMA RAY
API

BULK DENSITY
(GRAMS/CC)

1.20 1.30 1.40 1.50 1.60 1.70 1.80 1.90 2.00 2.10 2.20 2.30 2.40 2.50 2.60 2.70 2.80 2.90 3.00 3.10 3.20



PR-Quintette 76(5)B

OPEN FILE

December 1976.

PR-Quintette 76(5)B.

OPEN FILE

WINDY

PTE000 GRAPH WNDPRT LIB$ AT: 12/06/76 15:33:32 JOB: 6199 UU 39-09-034 4032640022 5

INPUT REPLAY WITH DETAILED CALCULATIONS

RUN TITLE :WINDY PIT DEC 06 76

SECTION: W-7608 PROPERTY: QUINTETTE PIT: WINDY PIT

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	2.48	.39	.09	2.96	1.30	2.35	2.40	1.47	70.0	94.0	70.0
E	1.91	.98	.10	2.99	1.30	2.40	2.40	1.70	68.0	144.0	100.0
F	1.77	.42	.07	2.26	1.30	2.10	2.40	1.48	82.0	193.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.016	.021	.020	.027	.021	.029	.90	.020	.026	.90	.025	.712	.016	.017
E	.017	.036	.033	.070	.035	.073	.90	.033	.066	.90	.063	.470	.028	.029
F	.019	.044	.026	.061	.027	.065	.90	.026	.058	.90	.055	.661	.035	.036

RUN TITLE :WINDY PIT DEC 06 76

SECTION: W-7609 PROPERTY: QUINTETTE PIT: WINDY PIT

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT.	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	2.48	.39	.09	2.96	1.30	2.35	2.40	1.47	119.0	288.0	100.0
E	1.91	.98	.10	2.99	1.30	2.40	2.40	1.70	120.0	437.0	100.0
F	1.97	.42	.07	2.46	1.30	2.10	2.40	1.47	210.0	503.0	100.0
G	1.49	.22	.05	1.76	1.30	1.80	2.20	1.39	73.0	615.0	100.0
J	3.69	.62	.15	4.46	1.30	2.15	2.00	1.44	0.	802.0	100.0
K	2.22	.19	.07	2.48	1.30	2.05	2.40	1.39	0.	777.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.038	.093	.049	.119	.052	.125	.90	.049	.113	.90	.108	.712	.072	.076
E	.030	.109	.058	.211	.061	.222	.90	.058	.200	.90	.190	.470	.084	.089
F	.054	.129	.072	.173	.076	.182	.90	.072	.164	.90	.156	.680	.100	.105
G	.014	.119	.017	.143	.018	.151	.90	.017	.136	.90	.129	.759	.093	.098
J	0.	.385	0.	.492	0.	.516	.90	0.	.465	.90	.443	.715	.299	.315
K	0.	.224	0.	.255	0.	.267	.90	0.	.241	.90	.229	.806	.174	.184

RUN TITLE :WINDY PIT DEC 06 76

SECTION: W-7610 PROPERTY: QUINTETTE PIT: WINDY PIT

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	2.48	.39	.09	2.96	1.30	2.35	2.40	1.47	80.0	392.0	100.0
E	1.91	.98	.10	2.99	1.30	2.40	2.40	1.70	77.0	450.0	100.0
F	1.97	.42	.07	2.46	1.30	2.10	2.40	1.47	52.0	514.0	100.0
G	1.49	.22	.05	1.76	1.30	1.80	2.20	1.39	112.0	530.0	100.0
J	3.69	.62	.15	4.46	1.30	2.15	2.00	1.44	42.0	870.0	100.0
K	2.22	.19	.07	2.48	1.30	2.05	2.40	1.39	0.	844.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS. OXID	THEORETICAL RAW COAL RSRVS. UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.026	.126	.033	.162	.035	.170	.90	.033	.153	.90	.146	.712	.098	.103
E	.019	.112	.037	.218	.039	.228	.90	.037	.206	.90	.196	.470	.087	.091
F	.013	.132	.018	.177	.019	.186	.90	.018	.167	.90	.160	.680	.102	.108
G	.022	.103	.026	.124	.027	.130	.90	.026	.117	.90	.111	.759	.080	.084
J	.020	.417	.026	.533	.027	.560	.90	.026	.504	.90	.481	.715	.325	.342
K	0.	.244	0.	.276	0.	.290	.90	0.	.261	.90	.249	.806	.189	.199

RUN TITLE :WINDY PIT DEC 06 76

SECTION: W-7611 PROPERTY: QUINTETTE PIT: WINDY PIT

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	2.48	.39	.09	2.96	1.30	2.35	2.40	1.47	64.0	363.0	100.0
E	1.91	.98	.10	2.99	1.30	2.40	2.40	1.70	67.0	416.0	100.0
F	1.97	.42	.07	2.46	1.30	2.10	2.40	1.47	62.0	474.0	100.0
G	1.49	.22	.05	1.76	1.30	1.80	2.20	1.39	56.0	518.0	100.0
J	3.69	.62	.15	4.46	1.30	2.15	2.00	1.44	0.	654.0	100.0
K	2.22	.19	.07	2.48	1.30	2.05	2.40	1.39	0.	577.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.021	.117	.026	.150	.028	.158	.90	.027	.142	.90	.136	.712	.091	.096
E	.017	.103	.032	.201	.034	.211	.90	.032	.190	.90	.181	.470	.080	.085
F	.016	.121	.021	.163	.022	.171	.90	.021	.154	.90	.147	.680	.094	.099
G	.011	.100	.013	.121	.014	.127	.90	.013	.114	.90	.109	.759	.078	.082
J	0.	.314	0.	.401	0.	.421	.90	0.	.379	.90	.361	.715	.244	.257
K	0.	.167	0.	.189	0.	.198	.90	0.	.179	.90	.170	.806	.129	.136

RUN TITLE :WINDY PIT DEC 06 76

SECTION: W-7612 PROPERTY: QUINTETTE PIT: WINDY PIT

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	2.48	.39	.09	2.96	1.30	2.35	2.40	1.47	46.0	185.0	100.0
E	1.91	.98	.10	2.99	1.30	2.40	2.40	1.70	45.0	218.0	100.0
F	1.97	.42	.07	2.46	1.30	2.10	2.40	1.47	63.0	236.0	100.0
G	1.49	.22	.05	1.76	1.30	1.80	2.20	1.39	38.0	281.0	100.0
J	3.69	.62	.15	4.46	1.30	2.15	2.00	1.44	0.	505.0	100.0
K	2.22	.19	.07	2.48	1.30	2.05	2.40	1.39	0.	479.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.015	.060	.019	.077	.020	.080	.90	.019	.072	.90	.069	.712	.046	.049
E	.011	.054	.022	.105	.023	.111	.90	.022	.100	.90	.095	.470	.042	.044
F	.016	.060	.022	.081	.023	.085	.90	.022	.077	.90	.073	.680	.047	.049
G	.007	.054	.009	.066	.009	.069	.90	.009	.062	.90	.059	.759	.042	.045
J	0.	.242	0.	.310	0.	.325	.90	0.	.293	.90	.279	.715	.188	.198
K	0.	.138	0.	.157	0.	.165	.90	0.	.148	.90	.141	.806	.107	.113

RUN TITLE :WINDY PIT DEC 06 76

SECTION: W-7613 PROPERTY: QUINTETTE PIT: WINDY PIT

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	2.48	.39	.09	2.96	1.30	2.35	2.40	1.47	31.0	145.0	100.0
E	1.91	.98	.10	2.99	1.30	2.40	2.40	1.70	42.0	176.0	100.0
F	1.97	.42	.07	2.46	1.30	2.10	2.40	1.47	74.0	191.0	100.0
G	1.49	.22	.05	1.76	1.30	1.80	2.20	1.39	62.0	223.0	100.0
J	3.69	.62	.15	4.46	1.30	2.15	2.00	1.44	6.0	458.0	100.0
K	2.22	.19	.07	2.48	1.30	2.05	2.40	1.39	0.	465.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.010	.047	.013	.060	.013	.063	.90	.013	.057	.90	.054	.712	.036	.038
E	.010	.044	.020	.085	.021	.089	.90	.020	.080	.90	.077	.470	.034	.036
F	.019	.049	.025	.066	.027	.069	.90	.026	.062	.90	.059	.680	.038	.040
G	.012	.043	.014	.052	.015	.055	.90	.014	.049	.90	.047	.759	.034	.035
J	.003	.220	.004	.281	.004	.295	.90	.004	.265	.90	.253	.715	.171	.180
K	0.	.134	0.	.152	0.	.160	.90	0.	.144	.90	.137	.806	.104	.110

SECTION: W-7614 PROPERTY: QUINTETTE PIT: WINDY PIT

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	2.48	.39	.09	2.96	1.30	2.35	2.40	1.47	55.0	118.0	100.0
E	1.91	.98	.10	2.99	1.30	2.40	2.40	1.70	42.0	166.0	100.0
F	1.97	.42	.07	2.46	1.30	2.10	2.40	1.47	38.0	176.0	100.0
G	1.49	.22	.05	1.76	1.30	1.80	2.20	1.39	52.0	195.0	100.0
J	3.69	.62	.15	4.46	1.30	2.15	2.00	1.44	50.0	423.0	100.0
K	2.22	.19	.07	2.48	1.30	2.05	2.40	1.39	0.	466.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.018	.038	.023	.049	.024	.051	.90	.023	.046	.90	.044	.712	.030	.031
E	.010	.041	.020	.080	.021	.084	.90	.020	.076	.90	.072	.470	.032	.034
F	.010	.045	.013	.061	.014	.064	.90	.013	.057	.90	.055	.680	.035	.037
G	.010	.038	.012	.045	.013	.048	.90	.012	.043	.90	.041	.759	.029	.031
J	.024	.203	.031	.259	.032	.272	.90	.031	.245	.90	.234	.715	.158	.166
K	0.	.134	0.	.153	0.	.160	.90	0.	.144	.90	.138	.806	.105	.110

RUN TITLE :WINDY PIT DEC 06 76

SECTION: W-7615 PROPERTY: QUINTETTE PIT: WINDY PIT

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	2.48	.39	.09	2.96	1.30	2.35	2.40	1.47	46.0	102.0	100.0
E	1.91	.98	.10	2.99	1.30	2.40	2.40	1.70	60.0	133.0	100.0
F	1.97	.42	.07	2.46	1.30	2.10	2.40	1.47	40.0	165.0	100.0
G	1.49	.22	.05	1.76	1.30	1.80	2.20	1.39	48.0	179.0	100.0
J	3.69	.62	.15	4.46	1.30	2.15	2.00	1.44	26.0	364.0	100.0
K	2.22	.19	.07	2.48	1.30	2.05	2.40	1.39	0.	376.0	100.0

SEAM	THEORETICAL COAL RESERVES		THEORETICAL IN-PLACE RAW COAL RSRVS		THEORETICAL RAW COAL RSRVS		GEO. FACTOR	RAW COAL RESERVES		MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
	OXID	UNOXID	OXID	UNOXID	OXID	UNOXID		OXID	UNOXID					
D	.015	.033	.019	.042	.020	.044	.90	.019	.040	.90	.038	.712	.026	.027
E	.015	.033	.029	.064	.030	.068	.90	.029	.061	.90	.058	.470	.026	.027
F	.010	.042	.014	.057	.014	.060	.90	.014	.054	.90	.051	.680	.033	.035
G	.009	.035	.011	.042	.012	.044	.90	.011	.039	.90	.038	.759	.027	.028
J	.012	.175	.016	.223	.017	.234	.90	.016	.211	.90	.201	.715	.136	.143
K	0.	.109	0.	.123	0.	.129	.90	0.	.116	.90	.111	.806	.084	.089

SECTION: W-7616 PROPERTY: QUINTETTE PIT: WINDY PIT

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	2.48	.39	.09	2.96	1.30	2.35	2.40	1.47	60.0	90.0	100.0
E	1.91	.98	.10	2.99	1.30	2.40	2.40	1.70	26.0	138.0	100.0
F	1.97	.42	.07	2.46	1.30	2.10	2.40	1.47	53.0	155.0	100.0
G	1.49	.22	.05	1.76	1.30	1.80	2.20	1.39	34.0	188.0	100.0
J	3.69	.62	.15	4.46	1.30	2.15	2.00	1.44	12.0	322.0	100.0
K	2.22	.19	.07	2.48	1.30	2.05	2.40	1.39	0.	325.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.019	.029	.025	.037	.026	.039	.90	.025	.035	.90	.034	.712	.023	.024
E	.006	.034	.013	.067	.013	.070	.90	.013	.063	.90	.060	.470	.027	.028
F	.014	.040	.018	.053	.019	.056	.90	.018	.050	.90	.048	.680	.031	.032
G	.007	.036	.008	.044	.008	.046	.90	.008	.041	.90	.040	.759	.028	.030
J	.006	.154	.007	.197	.008	.207	.90	.007	.187	.90	.178	.715	.120	.126
K	0.	.094	0.	.106	0.	.112	.90	0.	.101	.90	.096	.806	.073	.077

RUN TITLE :WINDY PIT DEC 06 76

SECTION: W-7617 PROPERTY: QUINTETTE PIT: WINDY PIT

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	2.44	.26	.08	2.78	1.30	2.35	2.40	1.43	48.0	79.0	100.0
E	2.07	.84	.10	3.01	1.30	2.40	2.40	1.64	50.0	124.0	100.0
F	2.03	.40	.07	2.50	1.30	2.10	2.40	1.46	42.0	161.0	100.0
G	1.29	.22	.05	1.56	1.30	1.80	2.20	1.40	44.0	180.0	100.0
J	3.82	.68	.16	4.66	1.30	2.15	2.00	1.45	44.0	293.0	100.0
K	1.95	.15	.06	2.16	1.30	2.05	2.40	1.38	12.0	326.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.015	.025	.018	.030	.019	.031	.87	.018	.027	.90	.026	.767	.019	.020
E	.013	.033	.024	.058	.025	.061	.87	.023	.053	.90	.051	.523	.025	.026
F	.011	.042	.015	.056	.015	.059	.87	.014	.051	.90	.049	.694	.032	.034
G	.007	.030	.009	.037	.010	.039	.87	.009	.034	.90	.033	.740	.023	.024
J	.022	.146	.028	.188	.030	.198	.87	.027	.172	.90	.164	.706	.109	.115
K	.003	.083	.003	.093	.004	.097	.87	.003	.085	.90	.081	.815	.062	.065

SECTION: W-7618 PROPERTY: QUINTETTE PIT: WINDY PIT

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	2.44	.26	.08	2.78	1.30	2.35	2.40	1.43	50.0	69.0	100.0
E	2.07	.84	.10	3.01	1.30	2.40	2.40	1.64	44.0	94.0	100.0
F	2.03	.40	.07	2.50	1.30	2.10	2.40	1.46	56.0	131.0	100.0
G	1.29	.22	.05	1.56	1.30	1.80	2.20	1.40	50.0	177.0	100.0
J	3.82	.68	.16	4.66	1.30	2.15	2.00	1.45	0.	271.0	100.0
K	1.95	.15	.06	2.16	1.30	2.05	2.40	1.38	14.0	246.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.016	.022	.019	.026	.020	.027	.87	.018	.024	.90	.023	.767	.016	.017
E	.012	.025	.021	.044	.022	.046	.87	.020	.040	.90	.039	.523	.019	.020
F	.015	.035	.019	.046	.020	.048	.87	.019	.042	.90	.040	.694	.026	.027
G	.008	.030	.010	.037	.011	.039	.87	.010	.034	.90	.032	.740	.022	.023
J	0.	.135	0.	.174	0.	.183	.87	0.	.159	.90	.152	.706	.101	.106
K	.004	.062	.004	.070	.004	.073	.87	.004	.064	.90	.061	.815	.047	.049

SECTION: W-7619 PROPERTY: QUINTETTE PIT: WINDY PIT

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WTD AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	2.44	.26	.08	2.78	1.30	2.35	2.40	1.43	32.0	77.0	100.0
E	2.07	.84	.10	3.01	1.30	2.40	2.40	1.64	40.0	111.0	100.0
F	2.03	.40	.07	2.50	1.30	2.10	2.40	1.46	52.0	129.0	100.0
G	1.29	.22	.05	1.56	1.30	1.80	2.20	1.40	60.0	165.0	100.0
J	3.82	.68	.16	4.66	1.30	2.15	2.00	1.45	2.0	290.0	100.0
K	1.95	.15	.06	2.16	1.30	2.05	2.40	1.38	0.	283.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.010	.024	.012	.029	.013	.031	.87	.012	.027	.90	.025	.767	.018	.019
E	.011	.030	.019	.052	.020	.055	.87	.018	.048	.90	.046	.523	.022	.024
F	.014	.034	.018	.045	.019	.047	.87	.018	.041	.90	.039	.694	.026	.027
G	.010	.028	.012	.034	.013	.036	.87	.012	.031	.90	.030	.740	.021	.022
J	.001	.144	.001	.186	.001	.196	.87	.001	.170	.90	.162	.706	.108	.114
K	0.	.072	0.	.080	0.	.084	.87	0.	.073	.90	.070	.815	.054	.057

RUN TITLE :WINDY PIT DEC 06 76

SECTION: W-7620 PROPERTY: QUINTETTE PIT: WINDY PIT

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	2.44	.26	.08	2.78	1.30	2.35	2.40	1.43	50.0	64.0	100.0
E	2.07	.84	.10	3.01	1.30	2.40	2.40	1.64	32.0	100.0	100.0
F	2.03	.40	.07	2.50	1.30	2.10	2.40	1.46	39.0	130.0	100.0
G	1.29	.22	.05	1.56	1.30	1.80	2.20	1.40	38.0	141.0	100.0
J	3.82	.68	.16	4.66	1.30	2.15	2.00	1.45	18.0	248.0	100.0
K	1.95	.15	.06	2.16	1.30	2.05	2.40	1.38	0.	255.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.016	.020	.019	.024	.020	.025	.87	.018	.022	.90	.021	.767	.015	.016
E	.009	.027	.015	.047	.016	.049	.87	.015	.043	.90	.041	.523	.020	.021
F	.010	.034	.014	.045	.014	.047	.87	.013	.041	.90	.039	.694	.026	.027
G	.006	.024	.008	.029	.008	.031	.87	.008	.027	.90	.025	.740	.018	.019
J	.009	.123	.012	.159	.012	.167	.87	.011	.146	.90	.139	.706	.093	.097
K	0.	.065	0.	.072	0.	.076	.87	0.	.066	.90	.063	.815	.049	.051

RUN TITLE :WINDY PIT DEC 06 76

SECTION: W-7621 PROPERTY: QUINTETTE PIT: WINDY PIT

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	2.44	.26	.08	2.78	1.30	2.35	2.40	1.43	46.0	50.0	100.0
E	2.07	.84	.10	3.01	1.30	2.40	2.40	1.64	42.0	68.0	100.0
F	2.03	.40	.07	2.50	1.30	2.10	2.40	1.46	36.0	100.0	100.0
G	1.29	.22	.05	1.56	1.30	1.80	2.20	1.40	37.0	121.0	100.0
J	3.82	.68	.16	4.66	1.30	2.15	2.00	1.45	18.0	196.0	100.0
K	1.95	.15	.06	2.16	1.30	2.05	2.40	1.38	0.	203.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.015	.016	.017	.019	.018	.020	.87	.017	.017	.90	.016	.767	.012	.013
E	.011	.018	.020	.032	.021	.034	.87	.019	.029	.90	.028	.523	.014	.014
F	.010	.026	.013	.035	.013	.037	.87	.012	.032	.90	.030	.694	.020	.021
G	.006	.020	.008	.025	.008	.026	.87	.007	.023	.90	.022	.740	.015	.016
J	.009	.097	.012	.126	.012	.132	.87	.011	.115	.90	.110	.706	.073	.077
K	0.	.051	0.	.058	0.	.061	.87	0.	.053	.90	.050	.815	.039	.041

RUN TITLE :WINDY PIT DEC 06 76

SECTION: W-7622 PROPERTY: QUINTETTE PIT: WINDY PIT

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	2.44	.26	.08	2.78	1.30	2.35	2.40	1.43	49.0	26.0	100.0
E	2.07	.84	.10	3.01	1.30	2.40	2.40	1.64	38.0	56.0	100.0
F	2.03	.40	.07	2.50	1.30	2.10	2.40	1.46	26.0	89.0	100.0
G	1.29	.22	.05	1.56	1.30	1.80	2.20	1.40	32.0	102.0	100.0
J	3.82	.68	.16	4.66	1.30	2.15	2.00	1.45	20.0	146.0	100.0
K	1.95	.15	.06	2.16	1.30	2.05	2.40	1.38	0.	156.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.016	.008	.019	.010	.019	.010	.87	.018	.009	.90	.009	.767	.006	.007
E	.010	.015	.018	.026	.019	.028	.87	.017	.024	.90	.023	.523	.011	.012
F	.007	.023	.009	.031	.009	.033	.87	.009	.028	.90	.027	.694	.018	.019
G	.005	.017	.007	.021	.007	.022	.87	.006	.019	.90	.018	.740	.013	.014
J	.010	.073	.013	.094	.013	.099	.87	.012	.086	.90	.082	.706	.054	.057
K	0.	.040	0.	.044	0.	.047	.87	0.	.041	.90	.039	.815	.030	.031

RUN TITLE :WINDY PIT DEC 06 76

SECTION: W-7623 PROPERTY: QUINTETTE PIT: WINDY PIT

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	2.44	.26	.08	2.78	1.30	2.35	2.40	1.43	37.0	20.0	100.0
E	2.07	.84	.10	3.01	1.30	2.40	2.40	1.64	24.0	34.0	100.0
F	2.03	.40	.07	2.50	1.30	2.10	2.40	1.46	26.0	47.0	100.0
G	1.29	.22	.05	1.56	1.30	1.80	2.20	1.40	38.0	70.0	100.0
J	3.82	.68	.16	4.66	1.30	2.15	2.00	1.45	12.0	110.0	100.0
K	1.95	.15	.06	2.16	1.30	2.05	2.40	1.38	0.	98.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.012	.006	.014	.008	.015	.008	.87	.014	.007	.90	.007	.767	.005	.005
E	.006	.009	.011	.016	.012	.017	.87	.011	.015	.90	.014	.523	.007	.007
F	.007	.012	.009	.016	.009	.017	.87	.009	.015	.90	.014	.694	.009	.010
G	.006	.012	.008	.015	.008	.015	.87	.008	.013	.90	.013	.740	.009	.009
J	.006	.055	.008	.071	.008	.074	.87	.007	.065	.90	.062	.706	.041	.043
K	0.	.025	0.	.028	0.	.029	.87	0.	.025	.90	.024	.815	.019	.020

RUN TITLE :WINDY PIT DEC 06 76

SECTION: W-7624 PROPERTY: QUINTETTE PIT: WINDY PIT

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	2.44	.26	.08	2.78	1.30	2.35	2.40	1.43	28.0	10.0	100.0
E	2.07	.84	.10	3.01	1.30	2.40	2.40	1.64	30.0	15.0	100.0
F	2.03	.40	.07	2.50	1.30	2.10	2.40	1.46	31.0	32.0	100.0
G	1.29	.22	.05	1.56	1.30	1.80	2.20	1.40	25.0	61.0	100.0
J	3.82	.68	.16	4.66	1.30	2.15	2.00	1.45	22.0	115.0	100.0
K	1.95	.15	.06	2.16	1.30	2.05	2.40	1.38	0.	129.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.009	.003	.011	.004	.011	.004	.87	.010	.003	.90	.003	.767	.002	.003
E	.008	.004	.014	.007	.015	.007	.87	.014	.006	.90	.006	.523	.003	.003
F	.008	.008	.011	.011	.011	.012	.87	.010	.010	.90	.010	.694	.006	.007
G	.004	.010	.005	.013	.005	.013	.87	.005	.012	.90	.011	.740	.008	.008
J	.011	.057	.014	.074	.015	.078	.87	.014	.068	.90	.064	.706	.043	.045
K	0.	.033	0.	.037	0.	.039	.87	0.	.033	.90	.032	.815	.025	.026

RUN TTTLE :WINDY PIT DEC 06 76

SECTION: W-7625 PROPERTY: QUINTETTE PIT: WINDY PIT

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	2.44	.26	.08	2.78	1.30	2.35	2.40	1.43	34.0	15.0	100.0
E	2.07	.84	.10	3.01	1.30	2.40	2.40	1.64	32.0	42.0	100.0
F	2.03	.40	.07	2.50	1.30	2.10	2.40	1.46	28.0	48.0	100.0
G	1.29	.22	.05	1.56	1.30	1.80	2.20	1.40	52.0	74.0	100.0
J	3.82	.68	.16	4.66	1.30	2.15	2.00	1.45	18.0	262.0	100.0
K	1.95	.15	.06	2.16	1.30	2.05	2.40	1.38	0.	272.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.011	.005	.013	.006	.014	.006	.87	.012	.005	.90	.005	.767	.004	.004
E	.009	.011	.015	.020	.016	.021	.87	.015	.018	.90	.017	.523	.008	.009
F	.007	.013	.010	.017	.010	.018	.87	.009	.015	.90	.015	.694	.010	.010
G	.009	.012	.011	.015	.011	.016	.87	.010	.014	.90	.013	.740	.009	.010
J	.009	.130	.012	.168	.012	.177	.87	.011	.154	.90	.147	.706	.098	.103
K	0.	.069	0.	.077	0.	.081	.87	0.	.071	.90	.067	.815	.052	.055

SECTION: W-7626 PROPERTY: QUINTETTE PIT: WINDY PIT

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	2.40	.12	.07	2.59	1.30	2.35	2.40	1.38	90.0	48.0	100.0
E	2.23	.70	.10	3.03	1.30	2.40	2.40	1.59	45.0	131.0	100.0
F	2.09	.38	.07	2.54	1.30	2.10	2.40	1.45	72.0	163.0	100.0
G	1.08	.22	.04	1.34	1.30	1.80	2.20	1.41	69.0	240.0	140.0
JQK	5.62	.83	.22	6.67	1.30	2.13	2.11	1.43	22.0	764.0	80.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.028	.015	.031	.016	.032	.017	.85	.029	.015	.90	.014	.838	.011	.012
E	.013	.038	.021	.060	.022	.063	.85	.019	.054	.90	.051	.579	.028	.029
F	.020	.044	.025	.057	.027	.060	.85	.024	.051	.90	.049	.707	.033	.034
G	.014	.047	.017	.060	.018	.064	.85	.016	.054	.90	.051	.713	.035	.036
JQK	.013	.447	.016	.555	.017	.582	.85	.015	.495	.90	.472	.736	.328	.345

SECTION: W-7627 PROPERTY: QUINTETTE PIT: WINDY PIT

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WTD AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	2.40	.12	.07	2.59	1.30	2.35	2.40	1.38	42.0	56.0	100.0
E	2.23	.70	.10	3.03	1.30	2.40	2.40	1.59	58.0	239.0	150.0
F	2.09	.38	.07	2.54	1.30	2.10	2.40	1.45	70.0	284.0	100.0
G	1.08	.22	.04	1.34	1.30	1.80	2.20	1.41	89.0	464.0	30.0
JQK	5.62	.83	.22	6.67	1.30	2.13	2.11	1.43	24.0	595.0	130.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.013	.017	.014	.019	.015	.020	.85	.014	.017	.90	.016	.838	.013	.014
E	.025	.104	.040	.164	.042	.172	.85	.038	.147	.90	.140	.579	.076	.080
F	.019	.077	.025	.100	.026	.105	.85	.023	.089	.90	.085	.707	.057	.060
G	.004	.020	.005	.025	.005	.026	.85	.005	.022	.90	.021	.713	.014	.015
JQK	.023	.565	.028	.702	.030	.737	.85	.027	.626	.90	.598	.736	.415	.437

SECTION: W-7628 PROPERTY: QUINTETTE PIT: WINDY PIT

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	2.40	.12	.07	2.59	1.30	2.35	2.40	1.38	23.0	42.0	75.0
E	2.23	.70	.10	3.03	1.30	2.40	2.40	1.59	174.0	431.0	50.0
F	2.09	.38	.07	2.54	1.30	2.10	2.40	1.45	137.0	727.0	115.0
G	1.08	.22	.04	1.34	1.30	1.80	2.20	1.41	137.0	696.0	80.0
JQK	5.62	.83	.22	6.67	1.30	2.13	2.11	1.43	0.	590.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.005	.010	.006	.011	.006	.011	.85	.006	.010	.90	.009	.838	.007	.008
E	.025	.062	.040	.099	.042	.104	.85	.038	.088	.90	.084	.579	.046	.048
F	.043	.227	.055	.294	.058	.309	.85	.052	.262	.90	.250	.707	.167	.176
G	.015	.078	.020	.100	.021	.105	.85	.019	.089	.90	.085	.713	.057	.060
JQK	0.	.431	0.	.535	0.	.562	.85	0.	.478	.90	.456	.736	.317	.333

RUN TITLE :WINDY PIT DEC 06 76

SECTION: W-7629 PROPERTY: QUINTETTE PIT: WINDY PIT

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	2.40	.12	.07	2.59	1.30	2.35	2.40	1.38	107.0	294.0	125.0
E	2.23	.70	.10	3.03	1.30	2.40	2.40	1.59	53.0	350.0	100.0
F	2.09	.38	.07	2.54	1.30	2.10	2.40	1.45	34.0	383.0	85.0
G	1.08	.22	.04	1.34	1.30	1.80	2.20	1.41	84.0	410.0	150.0
JQK	5.62	.83	.22	6.67	1.30	2.13	2.11	1.43	36.0	645.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.042	.115	.046	.125	.048	.131	.85	.043	.112	.90	.106	.838	.084	.089
E	.015	.101	.024	.160	.025	.168	.85	.023	.143	.90	.136	.579	.075	.078
F	.008	.088	.010	.114	.011	.120	.85	.010	.102	.90	.097	.707	.065	.068
G	.018	.086	.023	.111	.024	.116	.85	.021	.099	.90	.094	.713	.063	.067
JQK	.026	.471	.033	.585	.034	.615	.85	.031	.522	.90	.498	.736	.346	.364

SECTION: W-7630 PROPERTY: QUINTETTE PIT: WINDY PIT

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	2.40	.12	.07	2.59	1.30	2.35	2.40	1.38	91.0	38.0	100.0
E	2.23	.70	.10	3.03	1.30	2.40	2.40	1.59	114.0	232.0	100.0
F	2.09	.38	.07	2.54	1.30	2.10	2.40	1.45	66.0	278.0	100.0
G	1.08	.22	.04	1.34	1.30	1.80	2.20	1.41	24.0	314.0	100.0
JQK	5.62	.83	.22	6.67	1.30	2.13	2.11	1.43	10.0	309.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.028	.012	.031	.013	.033	.014	.85	.029	.012	.90	.011	.838	.009	.009
E	.033	.067	.052	.106	.055	.112	.85	.049	.095	.90	.090	.579	.049	.052
F	.018	.076	.023	.098	.024	.103	.85	.022	.087	.90	.083	.707	.055	.058
G	.003	.044	.004	.057	.005	.059	.85	.004	.050	.90	.048	.713	.032	.034
JQK	.007	.226	.009	.280	.010	.294	.85	.009	.250	.90	.239	.736	.166	.175

SECTION: W-7631 PROPERTY: QUINTETTE PIT: WINDY PIT

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	2.40	.12	.07	2.59	1.30	2.35	2.40	1.38	90.0	27.0	100.0
E	2.23	.70	.10	3.03	1.30	2.40	2.40	1.59	76.0	100.0	100.0
F	2.09	.38	.07	2.54	1.30	2.10	2.40	1.45	64.0	156.0	100.0
G	1.08	.22	.04	1.34	1.30	1.80	2.20	1.41	50.0	192.0	100.0
JGK	5.62	.83	.22	6.67	1.30	2.13	2.11	1.43	0.	347.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.028	.008	.031	.009	.032	.010	.85	.029	.008	.90	.008	.838	.006	.007
E	.022	.029	.035	.046	.037	.048	.85	.033	.041	.90	.039	.579	.021	.022
F	.017	.042	.022	.055	.024	.058	.85	.021	.049	.90	.047	.707	.031	.033
G	.007	.027	.009	.035	.009	.036	.85	.009	.031	.90	.029	.713	.020	.021
JGK	0.	.254	0.	.315	0.	.331	.85	0.	.281	.90	.268	.736	.186	.196

RUN TITLE :WINDY PIT DEC 06 76

SECTION: W-7632 PROPERTY: QUINTETTE PIT: WINDY PIT

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	2.40	.12	.07	2.59	1.30	2.35	2.40	1.38	76.0	60.0	95.0
E	2.23	.70	.10	3.03	1.30	2.40	2.40	1.59	34.0	108.0	90.0
F	2.09	.38	.07	2.54	1.30	2.10	2.40	1.45	44.0	115.0	70.0
G	1.08	.22	.04	1.34	1.30	1.80	2.20	1.41	31.0	150.0	60.0
JQK	5.62	.83	.22	6.67	1.30	2.13	2.11	1.43	0.	195.0	0.

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.023	.018	.025	.019	.026	.020	.85	.023	.017	.90	.017	.838	.013	.014
E	.009	.028	.014	.045	.015	.047	.85	.013	.040	.90	.038	.579	.021	.022
F	.008	.022	.011	.028	.011	.030	.85	.010	.025	.90	.024	.707	.016	.017
G	.003	.013	.003	.016	.004	.017	.85	.003	.014	.90	.014	.713	.009	.010
JQK	0.	0.	0.	0.	0.	0.	.85	0.	0.	.90	0.	.736	0.	0.

SUMMARY REPORT(GEOLGY)

RUN TITLE :WINDY PIT DEC 06 76

PROPERTY: QUINTETTE PIT: WINDY PIT

SEAM	AVG COAL THICK	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEO. IN-PLACE RAW COAL RESRVS OXID	THEO. IN-PLACE RAW COAL RESRVS UNOXID	*1 THEORETICAL RAW COAL RESRVS OXID	*1 THEORETICAL RAW COAL RESRVS UNOXID	GEO. FACTORED RAW COAL RESRVS OXID	GEO. FACTORED RAW COAL RESRVS UNOXID	*2 WT'D AVG SP.G OF PLANT FEED	PLANT FEED	AVG YIELD	CLEAN COAL RESERVES	PRODUCT COAL
D	2.443	.463	.889	.552	1.092	.579	1.146	.538	1.016	1.430	.969	.767	.6794	.7151
E	2.057	.368	1.169	.646	2.084	.679	2.188	.630	1.924	1.648	1.836	.519	.8861	.9327
F	2.017	.392	1.468	.519	1.940	.545	2.037	.506	1.785	1.461	1.703	.692	1.1109	1.1694
G	1.295	.218	1.026	.270	1.267	.284	1.330	.263	1.169	1.398	1.115	.738	.7798	.8209
J	3.759	.142	3.069	.182	3.937	.191	4.134	.179	3.682	1.445	3.512	.711	2.3613	2.4856
K	2.077	.007	1.742	.007	1.971	.008	2.069	.007	1.845	1.385	1.760	.811	1.3420	1.4126
JOK	5.620	.069	2.393	.086	2.972	.090	3.121	.081	2.653	1.429	2.531	.736	1.7576	1.8501
TOTAL		1.659	11.757	2.263	15.263	2.376	16.027	2.205	14.073	1.465	13.426	.701	8.9171	9.3865

*1 INCLUDES IN SEAM DILUTION ONLY

*2 INCLUDES IN SEAM AND OUT OF SEAM DILUTION

STOP END OF RUN

PTE000 GRAPH ROMPRT .LIB$ AT: 12/06/76 15:27:01 JOB: 6085 UU 39-09-034 4032640022 4

INPUT REPLAY WITH DETAILED CALCULATIONS

RUN TITLE :ROMAN

SECTION: R-7601-C PROPERTY: QUINTETTE PIT: ROMAN

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
I	2.51	.10	.09	2.69	1.30	2.40	2.00	1.36	17.0	31.0	100.0
J	4.71	.21	.16	5.07	1.30	1.86	2.00	1.35	18.0	30.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
I	.006	.010	.006	.011	.006	.011	.65	.004	.007	.90	.007	.675	.004	.005
J	.011	.018	.012	.019	.012	.020	.65	.008	.013	.90	.013	.861	.010	.011

SECTION: R-7601-B PROPERTY: QUINTETTE PIT: ROMAN

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
I	2.51	.10	.09	2.69	1.30	2.40	2.00	1.36	33.0	72.0	100.0
J	4.71	.21	.16	5.07	1.30	1.86	2.00	1.35	35.0	73.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
I	.011	.023	.012	.025	.012	.026	.65	.008	.017	.90	.016	.675	.010	.011
J	.021	.045	.023	.047	.024	.050	.65	.016	.032	.90	.031	.861	.025	.026

INPUT REPLAY WITH DETAILED CALCULATIONS
RUN TITLE :ROMAN

SECTION: R-7601-A PROPERTY: QUINTETTE PIT: ROMAN

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU.	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
I	2.51	.10	.09	2.69	1.30	2.40	2.00	1.36	38.0	112.0	100.0
J	4.71	.21	.16	5.07	1.30	1.86	2.00	1.35	32.0	138.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
I	.012	.037	.013	.039	.014	.041	.65	.010	.027	.90	.025	.675	.016	.017
J	.020	.084	.021	.090	.022	.094	.65	.015	.061	.90	.058	.861	.047	.050

SECTION: R-7601 PROPERTY: QUINTETTE PIT: ROMAN

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
I	2.51	.10	.09	2.69	1.30	2.40	2.00	1.36	33.0	175.0	100.0
J	4.71	.21	.16	5.07	1.30	1.86	2.00	1.35	33.0	201.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
I	.011	.057	.012	.061	.012	.064	.70	.009	.045	.90	.043	.675	.027	.029
J	.020	.123	.021	.131	.023	.137	.70	.017	.096	.90	.092	.861	.074	.078

RUN TITLE :ROMAN

SECTION: R-7602 PROPERTY: QUINTETTE PIT: ROMAN

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
E	2.37	.67	.10	3.13	1.30	2.48	2.40	1.59	35.0	31.0	100.0
I	2.51	.10	.09	2.69	1.30	2.40	2.00	1.36	54.0	265.0	100.0
J	4.71	.21	.16	5.07	1.30	1.86	2.00	1.35	67.0	276.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
E	.011	.010	.017	.015	.017	.015	.75	.014	.012	.90	.011	.594	.006	.007
I	.018	.086	.019	.093	.020	.097	.75	.016	.073	.90	.070	.675	.044	.047
J	.041	.169	.044	.179	.046	.188	.75	.036	.141	.90	.135	.861	.109	.115

SECTION: R-7603 PROPERTY: QUINTETTE PIT: ROMAN

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
E	2.37	.68	.10	3.15	1.30	2.48	2.40	1.59	41.0	89.0	100.0
I	2.51	.10	.09	2.69	1.30	2.40	2.00	1.36	77.0	235.0	100.0
J	4.71	.21	.16	5.07	1.30	1.86	2.00	1.35	72.0	384.0	100.0

SEAM	THEORETICAL COAL RESERVES		THEORETICAL IN-PLACE RAW COAL RSRVS		THEORETICAL RAW COAL RSRVS		GEO. FACTOR	RAW COAL RESERVES		MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
	OXID	UNOXID	OXID	UNOXID	OXID	UNOXID		OXID	UNOXID					
E	.013	.027	.020	.042	.021	.045	.83	.018	.037	.90	.035	.589	.020	.021
I	.025	.077	.027	.082	.028	.086	.83	.025	.071	.90	.068	.675	.043	.046
J	.044	.235	.047	.250	.049	.262	.83	.043	.217	.90	.207	.861	.168	.177

RUN TITLE :ROMAN

SECTION: R-7604 PROPERTY: QUINTETTE PIT: ROMAN

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D-2	3.27	.50	.11	3.88	1.30	1.85	2.40	1.40	25.0	12.0	70.0
E	2.37	.68	.10	3.15	1.30	2.48	2.40	1.59	60.0	140.0	100.0
I	2.51	.10	.09	2.69	1.30	2.40	2.00	1.36	61.0	463.0	100.0
J	4.71	.21	.16	5.07	1.30	1.86	2.00	1.35	59.0	482.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D-2	.007	.004	.009	.004	.010	.005	.85	.009	.004	.90	.004	.751	.003	.003
E	.018	.043	.029	.067	.030	.070	.85	.027	.060	.90	.057	.589	.032	.033
I	.020	.151	.021	.162	.022	.170	.85	.020	.144	.90	.138	.675	.088	.092
J	.036	.295	.038	.313	.040	.329	.85	.036	.280	.90	.267	.861	.217	.228

SECTION: R-7605 PROPERTY: QUINTETTE PIT: ROMAN

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D-2	3.27	.50	.11	3.88	1.30	1.85	2.40	1.40	61.0	70.0	100.0
E	2.31	.67	.10	3.07	1.30	2.48	2.40	1.59	61.0	171.0	100.0
I	2.52	.09	.09	2.70	1.30	2.40	2.00	1.36	54.0	458.0	100.0
J	4.47	.20	.15	4.83	1.30	1.86	2.00	1.35	52.0	191.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D-2	.026	.030	.032	.036	.033	.038	.83	.029	.032	.90	.030	.751	.021	.022
E	.018	.051	.028	.080	.030	.084	.83	.026	.069	.90	.066	.589	.037	.039
I	.018	.150	.019	.160	.020	.168	.83	.017	.140	.90	.133	.676	.085	.090
J	.030	.111	.032	.118	.034	.124	.83	.030	.103	.90	.098	.859	.080	.084

SECTION: R-7606 PROPERTY: QUINTETTE PIT: ROMAN

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D-2	3.27	.50	.11	3.88	1.30	1.85	2.40	1.40	57.0	113.0	100.0
E	2.21	.60	.09	2.94	1.30	2.48	2.40	1.59	55.0	213.0	100.0
F	1.46	.11	.04	1.61	1.30	2.20	2.40	1.39	51.0	333.0	100.0
I	2.56	.10	.09	2.75	1.30	2.40	2.00	1.36	58.0	470.0	100.0
J	3.93	.18	.14	4.25	1.30	1.86	2.00	1.35	63.0	462.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D-2	.024	.048	.030	.058	.031	.061	.85	.028	.052	.90	.050	.751	.035	.037
E	.016	.061	.024	.095	.026	.100	.85	.023	.085	.90	.081	.590	.045	.047
F	.010	.063	.011	.071	.011	.075	.85	.010	.064	.90	.061	.807	.046	.049
I	.019	.157	.021	.167	.022	.176	.85	.020	.149	.90	.142	.676	.091	.096
J	.032	.236	.034	.252	.036	.265	.85	.032	.225	.90	.214	.857	.173	.183

SECTION: R-7607 PROPERTY: QUINTETTE PIT: ROMAN

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D-2	3.27	.50	.11	3.88	1.30	1.85	2.40	1.40	48.0	144.0	100.0
E	2.11	.61	.09	2.80	1.30	2.48	2.40	1.59	54.0	228.0	100.0
F	2.03	.19	.06	2.29	1.30	2.20	2.40	1.41	58.0	320.0	100.0
I	2.61	.10	.09	2.79	1.30	2.40	2.00	1.36	54.0	484.0	100.0
J	3.39	.17	.12	3.68	1.30	1.86	2.00	1.35	54.0	506.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D-2	.020	.061	.025	.075	.026	.078	.90	.025	.070	.90	.067	.751	.048	.050
E	.015	.063	.023	.097	.024	.102	.90	.023	.091	.90	.087	.591	.049	.051
F	.015	.084	.018	.098	.019	.103	.90	.018	.093	.90	.088	.788	.066	.069
I	.018	.164	.020	.175	.021	.184	.90	.020	.166	.90	.158	.675	.101	.106
J	.024	.223	.025	.239	.027	.251	.90	.026	.226	.90	.215	.854	.173	.183

RUN TITLE :ROMAN

SECTION: R-7608 PROPERTY: QUINTETTE PIT: ROMAN

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D-2	3.34	.42	.11	3.87	1.30	1.85	2.40	1.39	36.0	153.0	100.0
E	2.09	.64	.09	2.82	1.30	2.48	2.40	1.60	33.0	254.0	100.0
F	1.93	.15	.06	2.14	1.30	2.20	2.40	1.40	38.0	336.0	100.0
I	2.65	.10	.09	2.84	1.30	2.40	2.00	1.36	29.0	476.0	100.0
J	2.90	.15	.10	3.15	1.30	1.86	2.00	1.35	34.0	498.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D-2	.016	.066	.018	.078	.019	.082	.90	.018	.074	.90	.071	.774	.052	.054
E	.009	.069	.014	.109	.015	.115	.90	.014	.103	.90	.098	.579	.054	.057
F	.010	.084	.011	.096	.011	.100	.90	.011	.090	.90	.086	.806	.066	.069
I	.010	.164	.011	.176	.011	.184	.90	.011	.166	.90	.158	.674	.101	.106
J	.013	.188	.014	.202	.014	.212	.90	.014	.191	.90	.182	.851	.146	.154

SECTION: R-7609 PROPERTY: QUINTETTE PIT: ROMAN

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D-2	3.44	.31	.10	3.85	1.30	1.85	2.40	1.37	28.0	141.0	100.0
E	2.08	.66	.09	2.83	1.30	2.48	2.40	1.61	33.0	216.0	100.0
F	1.83	.12	.05	2.00	1.30	2.20	2.40	1.38	33.0	286.0	100.0
I	2.91	.11	.10	3.12	1.30	2.40	2.00	1.36	30.0	500.0	100.0
J	3.44	.29	.13	3.85	1.30	1.86	2.00	1.36	30.0	518.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D-2	.013	.063	.014	.071	.015	.075	.85	.013	.063	.90	.060	.812	.046	.049
E	.009	.058	.014	.094	.015	.099	.85	.014	.084	.90	.080	.568	.043	.045
F	.008	.068	.009	.075	.009	.079	.85	.008	.067	.90	.064	.826	.050	.053
I	.011	.189	.012	.202	.013	.212	.85	.011	.180	.90	.172	.676	.110	.116
J	.013	.231	.015	.259	.016	.272	.85	.014	.231	.90	.221	.817	.170	.179

SECTION: R-7610 PROPERTY: QUINTETTE PIT: ROMAN

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D-2	3.53	.19	.10	3.82	1.30	1.85	2.40	1.36	32.0	142.0	100.0
E	2.06	.69	.09	2.84	1.30	2.48	2.40	1.62	35.0	216.0	100.0
F	1.73	.08	.05	1.86	1.30	2.20	2.40	1.37	65.0	287.0	100.0
I	3.17	.12	.11	3.39	1.30	2.40	2.00	1.36	34.0	476.0	100.0
J	4.17	.42	.16	4.75	1.30	1.86	2.00	1.37	32.0	495.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D-2	.015	.065	.016	.070	.017	.074	.85	.015	.063	.90	.060	.850	.048	.050
E	.009	.058	.015	.095	.016	.100	.85	.015	.085	.90	.081	.557	.042	.045
F	.015	.065	.016	.069	.017	.073	.85	.015	.062	.90	.059	.849	.047	.050
I	.014	.196	.015	.209	.016	.220	.85	.014	.187	.90	.178	.677	.114	.120
J	.017	.268	.020	.307	.021	.323	.85	.019	.274	.90	.262	.799	.197	.207

SECTION: R-7611 PROPERTY: QUINTETTE PIT: ROMAN

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D-2	3.41	.15	.10	3.65	1.30	1.85	2.40	1.35	33.0	150.0	100.0
E	2.08	.68	.09	2.85	1.30	2.48	2.40	1.62	30.0	251.0	100.0
F	1.63	.04	.05	1.72	1.30	2.20	2.40	1.35	60.0	310.0	100.0
I	3.39	.12	.12	3.63	1.30	2.40	2.00	1.36	19.0	474.0	100.0
J	4.71	.53	.18	5.41	1.30	1.86	2.00	1.38	34.0	482.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D-2	.015	.066	.016	.071	.016	.074	.90	.016	.067	.90	.064	.861	.052	.054
E	.008	.068	.013	.110	.014	.116	.90	.013	.104	.90	.099	.563	.053	.056
F	.013	.066	.013	.068	.014	.072	.90	.013	.065	.90	.062	.878	.051	.054
I	.008	.209	.009	.223	.009	.234	.90	.009	.210	.90	.201	.678	.128	.135
J	.021	.295	.024	.342	.025	.359	.90	.024	.323	.90	.309	.788	.229	.241

SECTION: R-7612 PROPERTY: QUINTETTE PIT: ROMAN

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D-2	2.99	.21	.09	3.29	1.30	1.85	2.40	1.37	33.0	163.0	100.0
E	2.20	.56	.09	2.85	1.30	2.48	2.40	1.57	37.0	271.0	100.0
F	1.68	.20	.05	1.94	1.30	2.20	2.40	1.43	41.0	345.0	100.0
I	3.46	.13	.12	3.70	1.30	2.40	2.00	1.36	39.0	499.0	100.0
J	4.73	.49	.18	5.40	1.30	1.86	2.00	1.37	42.0	521.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D-2	.013	.063	.014	.070	.015	.073	.85	.013	.062	.90	.059	.831	.046	.049
E	.011	.077	.016	.115	.017	.121	.85	.015	.103	.90	.098	.615	.057	.060
F	.009	.075	.011	.091	.011	.095	.85	.010	.081	.90	.077	.759	.055	.058
I	.018	.224	.019	.239	.020	.251	.85	.018	.213	.90	.204	.677	.130	.137
J	.026	.321	.030	.368	.031	.387	.85	.028	.329	.90	.314	.796	.235	.248

SECTION: R-7613 PROPERTY: QUINTETTE PIT: ROMAN

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D-2	2.55	.27	.08	2.90	1.30	1.85	2.40	1.38	41.0	197.0	100.0
E	2.32	.44	.09	2.85	1.30	2.48	2.40	1.51	36.0	303.0	100.0
F	1.73	.37	.06	2.16	1.30	2.20	2.40	1.48	35.0	376.0	100.0
I	3.53	.13	.12	3.78	1.30	2.40	2.00	1.36	31.0	528.0	100.0
J	4.76	.46	.18	5.39	1.30	1.86	2.00	1.37	55.0	525.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D-2	.014	.065	.016	.075	.016	.079	.80	.014	.063	.90	.060	.793	.045	.047
E	.011	.092	.015	.124	.016	.131	.80	.013	.105	.90	.100	.672	.063	.067
F	.008	.085	.011	.115	.011	.120	.80	.010	.096	.90	.092	.674	.058	.061
I	.014	.242	.015	.258	.016	.271	.80	.013	.217	.90	.207	.677	.132	.139
J	.034	.325	.039	.369	.041	.388	.80	.034	.310	.90	.296	.804	.224	.236

SECTION: R-7614 PROPERTY: QUINTETTE PIT: ROMAN

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D-2	2.55	0.	.07	2.62	1.30	1.85	2.40	1.33	34.0	201.0	100.0
E	2.26	0.	.06	2.32	1.30	2.48	2.40	1.33	33.0	312.0	100.0
F	1.81	0.	.05	1.85	1.30	2.20	2.40	1.33	35.0	388.0	100.0
I	3.38	0.	.11	3.48	1.30	2.40	2.00	1.32	35.0	518.0	100.0
J	4.78	0.	.16	4.94	1.30	1.86	2.00	1.32	58.0	533.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D-2	.011	.067	.011	.067	.012	.070	.85	.011	.060	.90	.057	.914	.049	.052
E	.010	.092	.010	.092	.010	.096	.85	.009	.082	.90	.078	.914	.067	.071
F	.008	.091	.008	.091	.009	.096	.85	.008	.081	.90	.078	.914	.067	.070
I	.015	.227	.015	.227	.016	.239	.85	.015	.203	.90	.194	.722	.132	.139
J	.036	.331	.036	.331	.038	.348	.85	.034	.296	.90	.282	.914	.243	.256

SECTION: R-7615 PROPERTY: QUINTETTE PIT: ROMAN

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D-2	2.60	.25	.08	2.93	1.30	1.85	2.40	1.38	31.0	216.0	100.0
E	2.19	.41	.08	2.68	1.30	2.48	2.40	1.52	28.0	317.0	100.0
F	1.88	.34	.07	2.29	1.30	2.20	2.40	1.47	34.0	413.0	100.0
I	3.21	.16	.11	3.48	1.30	2.40	2.00	1.37	41.0	525.0	100.0
J	4.80	.39	.17	5.36	1.30	1.86	2.00	1.36	61.0	531.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D-2	.010	.073	.012	.083	.013	.087	.85	.011	.074	.90	.071	.805	.054	.057
E	.008	.090	.011	.123	.011	.129	.85	.010	.110	.90	.104	.672	.066	.070
F	.008	.101	.011	.132	.011	.138	.85	.010	.118	.90	.112	.701	.074	.078
I	.017	.219	.019	.239	.020	.251	.85	.018	.213	.90	.203	.663	.127	.134
J	.038	.331	.042	.369	.045	.388	.85	.040	.330	.90	.314	.820	.243	.256

SECTION: R-7616 PROPERTY: QUINTETTE PIT: ROMAN

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D-2	2.65	.23	.08	2.97	1.30	1.85	2.40	1.37	24.0	261.0	100.0
E	2.11	.41	.08	2.60	1.30	2.48	2.40	1.52	25.0	356.0	100.0
F	1.96	.33	.07	2.35	1.30	2.20	2.40	1.46	30.0	433.0	100.0
I	3.05	.17	.11	3.32	1.30	2.40	2.00	1.38	30.0	585.0	100.0
J	4.83	.35	.17	5.36	1.30	1.86	2.00	1.36	36.0	600.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D-2	.008	.090	.009	.101	.010	.106	.80	.008	.085	.90	.081	.813	.062	.065
E	.007	.098	.009	.134	.010	.140	.80	.008	.112	.90	.107	.669	.068	.071
F	.008	.110	.010	.142	.010	.149	.80	.009	.119	.90	.113	.711	.076	.080
I	.012	.232	.013	.255	.014	.268	.80	.012	.215	.90	.205	.655	.126	.133
J	.023	.377	.025	.416	.026	.437	.80	.022	.350	.90	.334	.828	.260	.274

SECTION: R-7617 PROPERTY: QUINTETTE PIT: ROMAN

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D-2	2.70	.22	.08	3.00	1.30	1.85	2.40	1.37	28.0	323.0	100.0
E	2.04	.40	.08	2.52	1.30	2.48	2.40	1.52	28.0	415.0	100.0
F	2.03	.32	.07	2.42	1.30	2.20	2.40	1.45	29.0	495.0	100.0
I	2.88	.19	.10	3.17	1.30	2.40	2.00	1.39	27.0	630.0	100.0
J	4.86	.32	.17	5.35	1.30	1.86	2.00	1.36	30.0	636.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D-2	.010	.114	.011	.126	.012	.133	.80	.010	.106	.90	.101	.821	.078	.083
E	.007	.110	.010	.152	.011	.159	.80	.009	.127	.90	.122	.664	.076	.080
F	.008	.131	.010	.166	.010	.174	.80	.009	.139	.90	.133	.721	.090	.095
I	.010	.236	.011	.264	.012	.277	.80	.010	.222	.90	.211	.646	.129	.136
J	.019	.401	.021	.439	.022	.461	.80	.018	.369	.90	.352	.836	.277	.292

SECTION: R-7618 PROPERTY: QUINTETTE PIT: ROMAN

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D-2	2.75	.20	.08	3.04	1.30	1.85	2.40	1.37	26.0	348.0	100.0
E	1.97	.40	.07	2.44	1.30	2.48	2.40	1.53	29.0	742.0	100.0
F	2.11	.31	.07	2.49	1.30	2.20	2.40	1.44	24.0	523.0	100.0
I	2.71	.20	.10	3.01	1.30	2.40	2.00	1.40	26.0	642.0	100.0
J	4.88	.28	.17	5.33	1.30	1.86	2.00	1.35	29.0	657.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D-2	.009	.125	.010	.137	.011	.144	.85	.010	.123	.90	.117	.829	.091	.096
E	.007	.190	.010	.263	.011	.276	.85	.010	.235	.90	.224	.659	.139	.147
F	.007	.143	.008	.179	.009	.188	.85	.008	.160	.90	.153	.731	.105	.111
I	.009	.227	.010	.257	.011	.270	.85	.010	.230	.90	.219	.636	.131	.138
J	.018	.417	.020	.451	.021	.474	.85	.019	.403	.90	.384	.844	.306	.322

SECTION: R-7619 PROPERTY: QUINTETTE PIT: ROMAN

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D-2	2.80	.19	.08	3.07	1.30	1.85	2.40	1.36	29.0	386.0	100.0
E	1.89	.39	.07	2.36	1.30	2.48	2.40	1.53	32.0	485.0	100.0
F	2.18	.30	.07	2.56	1.30	2.20	2.40	1.44	30.0	567.0	100.0
I	2.73	.20	.10	3.03	1.30	2.40	2.00	1.40	25.0	671.0	100.0
J	5.13	.27	.18	5.58	1.30	1.86	2.00	1.35	32.0	700.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D-2	.011	.141	.012	.154	.012	.162	.85	.011	.137	.90	.131	.836	.103	.109
E	.008	.119	.011	.167	.012	.175	.85	.010	.149	.90	.142	.655	.088	.092
F	.009	.161	.011	.199	.011	.209	.85	.010	.177	.90	.169	.740	.118	.124
I	.009	.238	.010	.270	.011	.284	.85	.010	.241	.90	.230	.637	.138	.145
J	.021	.467	.023	.502	.024	.527	.85	.022	.448	.90	.428	.850	.343	.361

SECTION: R-7620 PROPERTY: QUINTETTE PIT: ROMAN

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D-2	2.86	.17	.08	3.11	1.30	1.85	2.40	1.36	31.0	409.0	100.0
E	1.82	.39	.07	2.27	1.30	2.48	2.40	1.53	30.0	519.0	100.0
F	2.26	.29	.07	2.63	1.30	2.20	2.40	1.43	32.0	577.0	100.0
I	2.84	.19	.10	3.13	1.30	2.40	2.00	1.39	27.0	742.0	100.0
J	5.50	.28	.19	5.96	1.30	1.86	2.00	1.35	27.0	743.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D-2	.012	.152	.012	.165	.013	.173	.80	.011	.138	.90	.132	.843	.105	.110
E	.007	.123	.010	.173	.010	.181	.80	.009	.145	.90	.138	.650	.085	.089
F	.009	.170	.011	.207	.012	.217	.80	.010	.174	.90	.166	.749	.117	.123
I	.010	.274	.011	.307	.012	.323	.80	.010	.258	.90	.246	.645	.150	.158
J	.019	.531	.021	.569	.022	.597	.80	.018	.478	.90	.456	.853	.367	.386

SECTION: R-7621 PROPERTY: QUINTETTE PIT: ROMAN

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D-2	2.91	.15	.06	3.14	1.30	1.85	2.40	1.36	31.0	429.0	100.0
E	1.74	.38	.07	2.19	1.30	2.48	2.40	1.54	26.0	544.0	100.0
F	2.34	.29	.08	2.70	1.30	2.20	2.40	1.43	28.0	610.0	100.0
I	2.96	.17	.11	3.23	1.30	2.40	2.00	1.38	27.0	746.0	100.0
J	5.87	.28	.20	6.35	1.30	1.86	2.00	1.35	29.0	771.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D-2	.012	.162	.013	.174	.013	.183	.85	.012	.156	.90	.148	.850	.119	.125
E	.006	.123	.008	.175	.009	.184	.85	.008	.156	.90	.149	.644	.091	.095
F	.009	.185	.010	.224	.011	.235	.85	.010	.200	.90	.190	.757	.136	.143
I	.010	.287	.011	.317	.012	.333	.85	.011	.283	.90	.270	.652	.166	.175
J	.022	.588	.024	.628	.025	.660	.85	.022	.561	.90	.535	.856	.432	.455

SECTION: R-7622 PROPERTY: QUINTETTE PIT: ROMAN

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D-2	2.90	.11	.08	3.10	1.30	1.85	2.40	1.35	31.0	451.0	100.0
E	1.68	.38	.07	2.13	1.30	2.48	2.40	1.54	46.0	535.0	100.0
F	2.41	.28	.08	2.77	1.30	2.20	2.40	1.42	52.0	612.0	100.0
I	3.07	.16	.11	3.35	1.30	2.40	2.00	1.38	28.0	765.0	100.0
J	6.24	.28	.22	6.74	1.30	1.86	2.00	1.35	25.0	780.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D-2	.012	.170	.012	.179	.013	.188	.87	.012	.164	.90	.156	.867	.128	.135
E	.010	.117	.014	.167	.015	.176	.87	.014	.153	.90	.146	.639	.088	.092
F	.016	.192	.019	.229	.020	.241	.87	.019	.209	.90	.200	.765	.144	.152
I	.011	.306	.012	.335	.013	.352	.87	.012	.306	.90	.292	.658	.182	.191
J	.020	.633	.022	.674	.023	.707	.87	.021	.615	.90	.587	.859	.476	.501

SECTION: R-7623 PROPERTY: QUINTETTE PIT: ROMAN

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D-1	1.14	.05	.03	1.23	1.30	1.85	2.40	1.35	24.0	418.0	100.0
D-2	2.86	.08	.08	3.02	1.30	1.85	2.40	1.34	24.0	418.0	100.0
E	1.67	.39	.07	2.12	1.30	2.48	2.40	1.55	47.0	519.0	100.0
F	2.49	.27	.08	2.83	1.30	2.20	2.40	1.42	46.0	602.0	100.0
I	3.18	.15	.11	3.45	1.30	2.40	2.00	1.37	52.0	698.0	100.0
J	6.46	.30	.22	6.99	1.30	1.86	2.00	1.35	44.0	731.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D-1	.004	.062	.004	.066	.004	.069	.85	.004	.059	.90	.056	.858	.046	.048
D-2	.009	.155	.009	.162	.010	.170	.85	.009	.144	.90	.138	.878	.114	.120
E	.010	.112	.015	.162	.015	.170	.85	.014	.145	.90	.138	.633	.083	.087
F	.015	.195	.018	.230	.018	.242	.85	.017	.205	.90	.196	.773	.143	.150
I	.022	.289	.023	.314	.025	.330	.85	.022	.280	.90	.267	.664	.168	.176
J	.037	.614	.039	.655	.041	.688	.85	.037	.585	.90	.558	.857	.451	.475

SECTION: R-7624 PROPERTY: QUINTETTE PIT: ROMAN

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D-1	1.30	.08	.04	1.42	1.30	1.85	2.40	1.36	28.0	352.0	100.0
D-2	2.85	.07	.08	3.00	1.30	1.85	2.40	1.34	28.0	352.0	100.0
E	1.65	.39	.07	2.11	1.30	2.48	2.40	1.55	39.0	441.0	100.0
F	2.56	.27	.08	2.91	1.30	2.20	2.40	1.41	48.0	578.0	100.0
I	3.30	.13	.11	3.54	1.30	2.20	2.00	1.35	53.0	675.0	100.0
J	6.19	.35	.22	6.76	1.30	1.86	2.00	1.35	49.0	690.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D-1	.005	.059	.005	.065	.005	.068	.80	.005	.054	.90	.052	.841	.041	.043
D-2	.010	.130	.011	.135	.011	.142	.80	.010	.113	.90	.108	.882	.090	.095
E	.008	.095	.012	.138	.013	.145	.80	.011	.116	.90	.110	.629	.066	.069
F	.016	.193	.019	.227	.020	.238	.80	.017	.190	.90	.182	.777	.133	.140
I	.023	.289	.024	.308	.025	.323	.80	.022	.259	.90	.247	.678	.158	.166
J	.039	.555	.043	.600	.045	.630	.80	.038	.504	.90	.481	.846	.384	.404

SECTION: R-7625 PROPERTY: QUINTETTE PIT: ROMAN

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D-1	1.30	.08	.04	1.42	1.30	1.85	2.40	1.36	30.0	165.0	130.0
D-2	2.85	.07	.08	3.00	1.30	1.85	2.40	1.34	30.0	165.0	130.0
E	1.65	.39	.07	2.11	1.30	2.48	2.40	1.55	30.0	347.0	100.0
F	2.56	.27	.08	2.91	1.30	2.40	2.40	1.43	52.0	506.0	100.0
I	3.38	.15	.12	3.63	1.30	2.40	2.00	1.36	49.0	626.0	100.0
J	5.71	.37	.20	6.28	1.30	1.86	2.00	1.36	52.0	630.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D-1	.007	.036	.007	.039	.008	.041	.85	.007	.035	.90	.033	.841	.027	.028
D-2	.014	.079	.015	.082	.016	.086	.85	.014	.073	.90	.070	.882	.058	.061
E	.006	.075	.009	.108	.010	.114	.85	.009	.097	.90	.092	.629	.055	.058
F	.017	.169	.021	.201	.022	.211	.85	.020	.180	.90	.171	.766	.124	.130
I	.022	.275	.023	.295	.024	.310	.85	.022	.263	.90	.251	.674	.160	.168
J	.039	.467	.042	.510	.044	.536	.85	.040	.455	.90	.434	.838	.343	.361

SECTION: R-7626 PROPERTY: QUINTETTE PIT: ROMAN

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D-1	1.30	.08	.04	1.42	1.30	1.85	2.40	1.36	22.0	0.	20.0
D-2	2.85	.07	.08	3.00	1.30	1.85	2.40	1.34	22.0	0.	20.0
E	1.65	.39	.07	2.11	1.30	2.48	2.40	1.55	37.0	171.0	130.0
F	2.56	.27	.08	2.91	1.30	2.20	2.40	1.41	56.0	331.0	100.0
I	3.40	.17	.12	3.69	1.30	2.40	2.00	1.37	52.0	524.0	100.0
J	5.46	.32	.19	5.98	1.30	1.86	2.00	1.35	51.0	551.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D-1	.001	0.	.001	0.	.001	0.	.80	.001	0.	.90	0.	.841	0.	0.
D-2	.002	0.	.002	0.	.002	0.	.80	.002	0.	.90	0.	.882	0.	0.
E	.010	.048	.015	.069	.016	.073	.80	.013	.058	.90	.056	.629	.033	.035
F	.019	.110	.022	.130	.023	.136	.80	.020	.109	.90	.104	.777	.076	.080
I	.023	.232	.025	.253	.026	.266	.80	.022	.213	.90	.203	.661	.127	.133
J	.036	.391	.039	.424	.041	.445	.80	.035	.356	.90	.340	.844	.271	.285

SECTION: R-7627 PROPERTY: QUINTETTE PIT: ROMAN

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
F	2.56	.27	.08	2.91	1.30	2.20	2.40	1.41	39.0	94.0	100.0
I	3.43	.21	.12	3.76	1.30	2.40	2.00	1.38	63.0	381.0	100.0
J	5.22	.28	.18	5.68	1.30	1.86	2.00	1.35	56.0	402.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
F	.013	.031	.015	.037	.016	.039	.80	.014	.031	.90	.030	.777	.022	.023
I	.028	.170	.031	.189	.033	.198	.80	.028	.159	.90	.151	.649	.093	.098
J	.038	.273	.041	.294	.043	.308	.80	.036	.247	.90	.235	.849	.189	.198

SECTION: R-762B PROPERTY: QUINTETTE PIT: ROMAN

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
I	3.43	.21	.12	3.76	1.30	2.40	2.00	1.38	56.0	185.0	100.0
J	5.22	.28	.18	5.68	1.30	1.86	2.00	1.35	56.0	229.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
I	.025	.082	.028	.092	.029	.096	.80	.025	.077	.90	.073	.649	.045	.047
J	.038	.155	.041	.167	.043	.176	.80	.036	.141	.90	.134	.849	.107	.113

SECTION: R-7629 PROPERTY: QUINTETTE PIT: ROMAN

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WTD AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
I	3.43	.21	.12	3.76	1.30	2.40	2.00	1.38	32.0	34.0	80.0
J	5.22	.28	.18	5.68	1.30	1.86	2.00	1.35	38.0	45.0	80.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
I	.011	.012	.013	.013	.013	.014	.80	.011	.011	.90	.011	.649	.007	.007
J	.021	.024	.022	.026	.023	.028	.80	.020	.022	.90	.021	.849	.017	.018

SUMMARY REPORT(GEOLGY)

RUN TITLE :ROMAN

PROPERTY: QUINTETTE PIT: ROMAN

SEAM	AVG COAL THICK	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEO. IN-PLACE RAW COAL RESRVS OXID	THEO. IN-PLACE RAW COAL RESRVS UNOXID	*1 THEORETICAL RAW COAL RESRVS OXID	*1 THEORETICAL RAW COAL RESRVS UNOXID	GEO. FACTORED RAW COAL RESRVS OXID	GEO. FACTORED RAW COAL RESRVS UNOXID	*2 WT'D AVG SP.G OF PLANT FEED	PLANT FEED	AVG YIELD	CLEAN COAL RESERVES	PRODUCT COAL
I	2.960	.490	5.731	.530	6.219	.557	6.530	.483	5.446	1.368	5.195	.667	3.2625	3.4342
J	4.869	.869	9.724	.939	10.543	.986	11.071	.854	9.212	1.352	8.788	.845	6.9895	7.3573
E	2.035	.253	2.068	.374	2.965	.392	3.113	.350	2.621	1.554	2.500	.631	1.5029	1.5820
D-2	2.976	.292	1.990	.328	2.174	.344	2.283	.310	1.924	1.367	1.835	.827	1.4482	1.5245
F	2.078	.247	2.571	.291	3.076	.306	3.230	.273	2.710	1.416	2.586	.775	1.8659	1.9641
D-1	1.259	.016	.158	.017	.170	.018	.179	.016	.148	1.359	.142	.845	.1132	.1192
TOTAL		2.167	22.241	2.479	25.148	2.603	26.406	2.284	22.061	1.405	21.046	.751	15.1821	15.9812

*1 INCLUDES IN SEAM DILUTION ONLY

*2 INCLUDES IN SEAM AND OUT OF SEAM DILUTION

STOP END OF RUN

PTE000 RESERV SHRCOM AT: 12/20/76 13:15:35 JOB: 20763 UU 39-09-034 4032640022 2

INPUT REPLAY WITH DETAILED CALCULATIONS

RUN TITLE :SHERIF PIT REVISION 3 COMBINED WITH DEPUTY DEC 20 76

SECTION: S-7604-S PROPERTY: QUINTETTE PIT: SHERIFF REV 3

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
J	8.57	.93	.27	9.77	1.30	2.20	2.40	1.42	39.0	44.0	120.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
J	.052	.059	.062	.070	.065	.073	.83	.057	.061	.90	.058	.772	.042	.044

RUN TITLE :SHERIF PIT REVISION 3 COMBINED WITH DEPUTY DEC 20 76

SECTION: S-7605-S PROPERTY: QUINTETTE PIT: SHERIFF REV 3

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	1.94	.15	.06	2.15	1.30	1.68	2.40	1.36	108.0	80.0	40.0
E-1	6.61	2.36	.31	9.28	1.30	1.90	2.10	1.48	57.0	82.0	100.0
E-1A	1.98	.95	.10	3.03	1.30	1.90	2.10	1.52	39.0	72.0	100.0
G	.97	.09	.03	1.09	1.30	2.00	2.15	1.38	82.0	208.0	110.0
J	8.57	.93	.27	9.77	1.30	2.20	2.40	1.42	41.0	100.0	100.0
E-2	.87	0.	.02	.89	1.30	2.00	2.30	1.33	57.0	82.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.011	.008	.012	.009	.013	.009	.90	.012	.008	.90	.008	.831	.006	.007
E-1	.049	.070	.075	.107	.078	.113	.90	.075	.101	.90	.097	.601	.055	.058
E-1A	.010	.019	.017	.032	.018	.033	.85	.016	.028	.90	.027	.537	.014	.014
G	.011	.029	.013	.033	.014	.035	.85	.012	.029	.90	.028	.800	.021	.022
J	.046	.111	.054	.132	.057	.138	.87	.052	.120	.90	.115	.772	.084	.088
E-2	.006	.009	.006	.009	.007	.010	.85	.006	.008	.90	.008	.914	.007	.007

RUN TITLE :SHERIF PIT REVISION 3 COMBINED WITH DEPUTY DEC 20 76

SECTION: S-7606-S PROPERTY: QUINTETTE PIT: SHERIFF REV 3

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	2.14	.31	.07	2.52	1.30	1.68	2.40	1.38	119.0	166.0	140.0
E-1	3.60	2.58	.23	6.41	1.30	1.90	2.10	1.57	24.0	195.0	100.0
E-1A	1.98	.95	.10	3.03	1.30	1.90	2.10	1.52	0.	52.0	100.0
G	.97	.09	.03	1.09	1.30	2.00	2.15	1.38	78.0	242.0	100.0
J	8.12	1.15	.27	9.54	1.30	2.20	2.40	1.44	54.0	145.0	100.0
E-2	.87	.25	.04	1.16	1.30	2.00	2.30	1.48	24.0	195.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.046	.065	.055	.077	.058	.081	.90	.055	.073	.90	.069	.770	.050	.053
E-1	.011	.091	.023	.187	.024	.196	.90	.023	.177	.90	.168	.447	.071	.075
E-1A	0.	.013	0.	.023	0.	.024	.85	0.	.020	.90	.019	.537	.010	.010
G	.010	.031	.011	.035	.012	.037	.87	.011	.032	.90	.030	.800	.023	.024
J	.057	.153	.071	.190	.074	.199	.87	.068	.173	.90	.165	.738	.115	.121
E-2	.003	.022	.004	.032	.004	.033	.85	.004	.028	.90	.027	.634	.016	.017

RUN TITLE :SHERIF PIT REVISION 3 COMBINED WITH DEPUTY DEC 20 76

SECTION: S-7607-S PROPERTY: QUINTETTE PIT: SHERIFF REV 3

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	1.69	.20	.05	1.94	1.30	1.68	2.40	1.37	160.0	120.0	100.0
E-1	5.24	1.67	.24	7.15	1.30	1.90	2.10	1.47	75.0	181.0	100.0
G	.93	.08	.03	1.04	1.30	2.00	2.15	1.38	65.0	181.0	100.0
J	7.66	1.36	.27	9.29	1.30	2.20	2.40	1.46	2.0	185.0	100.0
E-2	1.19	0.	.03	1.22	1.30	2.00	2.30	1.33	75.0	181.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.035	.026	.041	.030	.043	.032	.90	.041	.029	.90	.027	.793	.021	.022
E-1	.051	.123	.075	.181	.079	.190	.90	.075	.171	.90	.163	.624	.096	.101
G	.008	.022	.009	.025	.009	.026	.85	.008	.022	.90	.021	.807	.016	.017
J	.002	.184	.003	.240	.003	.252	.87	.003	.219	.90	.209	.703	.138	.146
E-2	.012	.028	.012	.028	.012	.029	.85	.011	.025	.90	.024	.914	.021	.022

RUN TITLE :SHERIF PIT REVISION 3 COMBINED WITH DEPUTY DEC 20 76

SECTION: S-7608-S PROPERTY: QUINTETTE PIT: SHERIFF REV 3

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	1.76	.17	.05	1.98	1.30	1.68	2.40	1.36	199.0	65.0	100.0
E-1	6.30	1.89	.28	8.47	1.30	1.90	2.10	1.46	128.0	130.0	100.0
G	.86	.06	.03	.95	1.30	2.00	2.15	1.37	146.0	170.0	100.0
J	7.21	1.58	.27	9.06	1.30	2.20	2.40	1.49	10.0	235.0	100.0
E-2	1.06	.07	.03	1.16	1.30	2.00	2.30	1.37	128.0	130.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.046	.015	.051	.017	.054	.018	.90	.051	.016	.90	.015	.814	.012	.012
E-1	.105	.106	.151	.153	.158	.161	.87	.146	.140	.90	.133	.636	.080	.084
G	.016	.019	.018	.021	.019	.022	.85	.017	.019	.90	.018	.826	.014	.015
J	.009	.220	.013	.302	.013	.317	.90	.013	.285	.90	.272	.667	.171	.180
E-2	.018	.018	.019	.020	.020	.021	.82	.018	.017	.90	.016	.830	.013	.013

RUN TITLE :SHERIF PIT REVISION 3 COMBINED WITH DEPUTY DEC 20 76

SECTION: S-7609-S PROPERTY: QUINTETTE PIT: SHERIFF REV 3

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	2.10	.15	.06	2.31	1.30	1.68	2.40	1.35	210.0	14.0	100.0
E-1	7.37	2.12	.32	9.81	1.30	1.90	2.10	1.46	72.0	184.0	100.0
G	.86	.05	.03	.94	1.30	2.00	2.15	1.36	89.0	232.0	100.0
J	7.44	1.57	.27	9.28	1.30	2.20	2.40	1.48	86.0	272.0	100.0
E-2	.94	.17	.03	1.14	1.30	2.00	2.30	1.43	72.0	184.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.057	.004	.063	.004	.066	.004	.87	.061	.004	.90	.004	.837	.003	.003
E-1	.069	.176	.098	.250	.103	.263	.90	.098	.237	.90	.226	.644	.137	.144
G	.010	.026	.011	.028	.011	.030	.85	.010	.025	.90	.024	.839	.019	.020
J	.083	.263	.113	.357	.119	.375	.90	.113	.337	.90	.322	.674	.205	.215
E-2	.009	.022	.011	.029	.012	.030	.82	.010	.025	.90	.024	.715	.016	.017

RUN TITLE :SHERIF PIT REVIBION 3 COMBINED WITH DEPUTY DEC 20 76

SECTION: S-7610-S PROPERTY: QUINTETTE PIT: SHERIFF REV 3

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	2.68	.14	.08	2.90	1.30	1.68	2.40	1.35	211.0	19.0	80.0
E-1	8.43	2.34	.37	11.14	1.30	1.90	2.10	1.45	94.0	148.0	100.0
G	.87	.04	.03	.94	1.30	2.00	2.15	1.36	93.0	290.0	100.0
J	7.67	1.56	.28	9.51	1.30	2.20	2.40	1.48	9.0	389.0	100.0
E-2	.82	.31	.04	1.17	1.30	2.00	2.30	1.52	94.0	148.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.059	.005	.063	.006	.066	.006	.90	.063	.005	.90	.005	.856	.004	.004
E-1	.103	.162	.145	.228	.152	.239	.87	.140	.208	.90	.199	.650	.122	.128
G	.011	.033	.011	.035	.012	.037	.85	.011	.031	.90	.030	.854	.024	.025
J	.009	.388	.012	.521	.013	.547	.87	.012	.476	.90	.454	.680	.292	.307
E-2	.010	.016	.016	.025	.017	.026	.82	.014	.021	.90	.020	.578	.011	.012

RUN TITLE :SHERIF PIT REVISION 3 COMBINED WITH DEPUTY DEC 20 76

SECTION: S-7411-S PROPERTY: QUINTETTE PIT: SHERIFF REV 3

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
E-1	7.90	2.53	.36	10.79	1.30	1.90	2.10	1.47	209.0	0.	100.0
G	.87	.03	.03	.93	1.30	2.00	2.15	1.35	184.0	189.0	100.0
J	7.90	1.55	.29	9.74	1.30	2.20	2.40	1.48	1.0	385.0	100.0
E-2	.70	.45	.04	1.19	1.30	2.00	2.30	1.60	209.0	0.	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
E-1	.215	0.	.315	0.	.331	0.	.85	.298	0.	.90	0.	.623	0.	0.
G	.021	.021	.022	.023	.023	.024	.90	.022	.021	.90	.020	.868	.017	.017
J	.001	.395	.001	.527	.001	.553	.87	.001	.481	.90	.459	.686	.297	.313
E-2	.019	0.	.038	0.	.040	0.	.82	.035	0.	.90	0.	.460	0.	0.

RUN TITLE :SHERIF PIT REVISION 3 COMBINED WITH DEPUTY DEC 20 76

SECTION: S-7612-S PROPERTY: QUINTETTE PIT: SHERIFF REV 3

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
E-1	7.37	2.72	.35	10.44	1.30	1.90	2.10	1.48	207.0	0.	100.0
G	.96	.06	.03	1.05	1.30	2.00	2.15	1.37	61.0	174.0	100.0
J	8.00	1.51	.29	9.80	1.30	2.20	2.40	1.47	1.0	402.0	100.0
E-2	.70	.38	.04	1.12	1.30	2.00	2.30	1.57	207.0	0.	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
E-1	.198	0.	.305	0.	.321	0.	.85	.289	0.	.90	0.	.594	0.	0.
G	.008	.022	.008	.024	.009	.025	.90	.008	.022	.90	.021	.834	.017	.018
J	.001	.418	.001	.552	.001	.579	.87	.001	.504	.90	.481	.693	.314	.331
E-2	.019	0.	.035	0.	.036	0.	.82	.032	0.	.90	0.	.498	0.	0.

RUN TITLE :SHERIF PIT REVISION 3 COMBINED WITH DEPUTY DEC 20 76

SECTION: S-7613-S PROPERTY: QUINTETTE PIT: SHERIFF REV 3

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
E-1	6.84	2.92	.34	10.10	1.30	1.90	2.10	1.50	228.0	0.	100.0
G	1.06	.10	.04	1.20	1.30	2.00	2.15	1.38	62.0	305.0	100.0
J	7.95	1.47	.28	9.70	1.30	2.20	2.40	1.47	12.0	439.0	100.0
E-2	.71	.31	.03	1.05	1.30	2.00	2.30	1.54	228.0	0.	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
E-1	.203	0.	.329	0.	.346	0.	.85	.311	0.	.90	0.	.563	0.	0.
G	.009	.042	.010	.048	.010	.051	.87	.009	.044	.90	.042	.798	.032	.033
J	.012	.454	.016	.596	.017	.625	.90	.016	.563	.90	.537	.696	.353	.371
E-2	.021	0.	.035	0.	.037	0.	.82	.032	0.	.90	0.	.547	0.	0.

INPUT REPLAY WITH DETAILED CALCULATIONS
RUN TITLE :SHERIF PIT REVISION 3 COMBINED WITH DEPUTY DEC 20 76

SECTION: S-7614-S PROPERTY: QUINTETTE PIT: SHERIFF REV 3

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	1.90	.64	.07	2.61	1.30	1.68	2.40	1.42	157.0	118.0	100.0
E-1	6.31	3.11	.34	9.76	1.30	1.90	2.10	1.52	53.0	249.0	100.0
G	1.15	.13	.04	1.32	1.30	2.00	2.15	1.40	60.0	236.0	100.0
J	7.90	1.43	.28	9.61	1.30	2.20	2.40	1.47	8.0	298.0	100.0
E-2	.72	.24	.03	.99	1.30	2.00	2.30	1.50	53.0	249.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.039	.029	.056	.042	.058	.044	.90	.056	.040	.90	.038	.637	.023	.024
E-1	.043	.204	.075	.351	.079	.369	.87	.072	.321	.90	.306	.531	.154	.162
G	.009	.035	.011	.041	.011	.043	.90	.011	.039	.90	.037	.779	.027	.029
J	.008	.306	.011	.400	.011	.420	.90	.011	.378	.90	.360	.700	.238	.251
E-2	.005	.023	.008	.035	.008	.037	.82	.007	.030	.90	.029	.604	.017	.017

RUN TITLE :SHERIF PIT REVISION 3 COMBINED WITH DEPUTY DEC 20 76

SECTION: S-7615-S PROPERTY: QUINTETTE PIT: SHERIFF REV 3

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	1.71	.76	.07	2.54	1.30	1.68	2.40	1.45	38.0	204.0	100.0
E-1	5.78	3.30	.33	9.41	1.30	1.90	2.10	1.54	80.0	225.0	100.0
G	1.25	.17	.05	1.47	1.30	2.00	2.15	1.41	97.0	210.0	100.0
J	7.85	1.38	.28	9.51	1.30	2.20	2.40	1.46	34.0	232.0	100.0
E-2	.72	.17	.03	.92	1.30	2.00	2.30	1.46	80.0	225.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.008	.045	.013	.071	.014	.075	.90	.013	.067	.90	.064	.581	.035	.037
E-1	.060	.169	.110	.310	.116	.326	.90	.110	.293	.90	.280	.498	.131	.138
G	.016	.034	.019	.041	.020	.043	.90	.019	.039	.90	.037	.756	.027	.028
J	.035	.237	.045	.307	.047	.323	.90	.045	.290	.90	.277	.705	.184	.194
E-2	.007	.021	.010	.029	.011	.030	.85	.010	.026	.90	.024	.671	.015	.016

RUN TITLE :SHERIF PIT REVISION 3 COMBINED WITH DEPUTY DEC 20 76

SECTION: S-7616-S PROPERTY: QUINTETTE PIT: SHERIFF REV 3

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	1.44	.77	.07	2.28	1.30	1.68	2.40	1.46	60.0	251.0	100.0
E-1	5.97	2.53	.30	8.80	1.30	1.90	2.10	1.50	61.0	258.0	100.0
G	1.34	.20	.05	1.59	1.30	2.00	2.15	1.41	75.0	229.0	100.0
J	7.81	1.34	.27	9.42	1.30	2.20	2.40	1.46	24.0	241.0	100.0
E-2	.73	.10	.02	.85	1.30	2.00	2.30	1.41	61.0	258.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.011	.047	.019	.079	.020	.083	.90	.019	.075	.90	.072	.541	.037	.038
E-1	.047	.200	.077	.324	.080	.340	.90	.077	.306	.90	.292	.565	.156	.164
G	.013	.040	.016	.049	.017	.052	.90	.016	.046	.90	.044	.744	.031	.033
J	.024	.245	.031	.316	.033	.332	.90	.031	.298	.90	.285	.709	.190	.200
E-2	.006	.024	.007	.030	.007	.031	.85	.007	.026	.90	.025	.755	.018	.019

RUN TITLE :SHERIF PIT REVISION 3 COMBINED WITH DEPUTY DEC 20 76

SECTION: S-7617-S PROPERTY: QUINTETTE PIT: SHERIFF REV 3

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	1.17	.78	.06	2.01	1.30	1.68	2.40	1.48	63.0	296.0	100.0
E-1	6.15	1.76	.27	8.18	1.30	1.90	2.10	1.46	58.0	301.0	100.0
G	1.44	.24	.05	1.73	1.30	2.00	2.15	1.42	51.0	280.0	100.0
J	7.76	1.30	.27	9.33	1.30	2.20	2.40	1.46	24.0	214.0	100.0
J-1	1.40	.87	.08	2.35	1.30	2.20	2.40	1.67	9.0	48.0	100.0
E-2	.73	.03	.02	.78	1.30	2.00	2.30	1.35	58.0	301.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.010	.045	.018	.084	.019	.088	.90	.018	.079	.90	.076	.491	.035	.037
E-1	.046	.241	.066	.341	.069	.358	.90	.066	.323	.90	.308	.645	.187	.197
G	.010	.052	.012	.066	.013	.069	.90	.012	.062	.90	.059	.728	.041	.043
J	.024	.216	.031	.277	.033	.291	.90	.031	.262	.90	.250	.712	.168	.177
J-1	.002	.009	.003	.018	.004	.019	.90	.003	.017	.90	.016	.446	.007	.007
E-2	.006	.029	.006	.030	.006	.032	.85	.006	.027	.90	.026	.860	.021	.022

RUN TITLE :SHERIF PIT REVISION 3 COMBINED WITH DEPUTY DEC 20 76

SECTION: S-7618-S PROPERTY: QUINTETTE PIT: SHERIFF REV 3

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	1.13	.33	.04	1.50	1.30	1.68	2.40	1.41	48.0	288.0	100.0
E-1	5.10	1.60	.23	6.93	1.30	1.90	2.10	1.47	61.0	301.0	100.0
G	1.53	.27	.06	1.86	1.30	2.00	2.15	1.43	54.0	257.0	100.0
J	7.71	1.26	.27	9.24	1.30	2.20	2.40	1.45	19.0	174.0	100.0
J-1	1.40	.87	.08	2.35	1.30	2.20	2.40	1.67	16.0	42.0	100.0
E-2	.73	.03	.02	.78	1.30	2.00	2.30	1.35	61.0	301.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.007	.042	.010	.058	.010	.061	.90	.010	.055	.90	.053	.664	.033	.035
E-1	.040	.200	.059	.291	.062	.306	.90	.059	.275	.90	.262	.627	.155	.163
G	.011	.051	.014	.065	.014	.068	.87	.013	.059	.90	.057	.719	.038	.040
J	.019	.174	.024	.223	.026	.234	.90	.024	.210	.90	.201	.716	.136	.143
J-1	.003	.008	.006	.016	.006	.016	.90	.006	.015	.90	.014	.446	.006	.006
E-2	.006	.029	.006	.030	.006	.032	.85	.006	.027	.90	.026	.860	.021	.022

RUN TITLE :SHERIF PIT REVISION 3 COMBINED WITH DEPUTY DEC 20 76

SECTION: S-7619-S PROPERTY: QUINTETTE PIT: SHERIFF REV 3

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	.68	.20	.03	.91	1.30	1.68	2.40	1.41	64.0	339.0	100.0
E-1	5.10	1.60	.23	6.93	1.30	1.90	2.10	1.47	68.0	269.0	100.0
G	1.30	.18	.05	1.53	1.30	2.00	2.15	1.41	49.0	229.0	100.0
J	7.78	1.60	.28	9.66	1.30	2.20	2.40	1.48	32.0	200.0	100.0
J-1	1.40	.87	.08	2.35	1.30	2.20	2.40	1.67	1.0	39.0	100.0
E-2	.73	.03	.02	.78	1.30	2.00	2.30	1.35	68.0	269.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.006	.030	.008	.041	.008	.043	.80	.007	.035	.90	.033	.662	.021	.022
E-1	.045	.178	.066	.260	.069	.273	.87	.064	.238	.90	.227	.627	.134	.141
G	.008	.039	.010	.047	.011	.049	.87	.010	.043	.90	.041	.754	.029	.031
J	.032	.202	.044	.273	.046	.286	.90	.044	.258	.90	.246	.678	.157	.166
J-1	.000	.007	.000	.015	.000	.015	.90	.000	.014	.90	.013	.446	.006	.006
E-2	.006	.026	.007	.027	.007	.028	.82	.006	.023	.90	.022	.860	.018	.019

RUN TITLE :SHERIF PIT REVISION 3 COMBINED WITH DEPUTY DEC 20 76

SECTION: S-7620-S PROPERTY: QUINTETTE PIT: SHERIFF REV 3

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
E-1	5.10	1.60	.23	6.93	1.30	1.90	2.10	1.47	19.0	328.0	100.0
G	1.07	.08	.04	1.19	1.30	2.00	2.15	1.37	30.0	295.0	100.0
J	7.85	1.83	.30	9.98	1.30	2.20	2.40	1.50	29.0	220.0	100.0
E-2	.73	.03	.02	.78	1.30	2.00	2.30	1.35	19.0	328.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
E-1	.013	.217	.018	.317	.019	.333	.85	.017	.283	.90	.270	.627	.160	.168
G	.004	.041	.005	.046	.005	.048	.90	.005	.043	.90	.041	.820	.032	.034
J	.030	.225	.041	.313	.043	.329	.87	.040	.286	.90	.273	.656	.169	.178
E-2	.002	.031	.002	.033	.002	.035	.80	.002	.028	.90	.027	.860	.022	.023

RUN TITLE :SHERIF PIT REVIBION 3 COMBINED WITH DEPUTY DEC 20 76

SECTION: S-7621-S PROPERTY: QUINTETTE PIT: SHERIFF REV 3

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
E-1	5.10	1.60	.23	6.93	1.30	1.90	2.10	1.47	31.0	280.0	100.0
G	1.07	.13	.04	1.24	1.30	2.00	2.15	1.40	46.0	245.0	100.0
J	7.92	2.27	.32	10.51	1.30	2.20	2.40	1.53	40.0	225.0	100.0
E-2	.73	.03	.02	.78	1.30	2.00	2.30	1.35	31.0	280.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
E-1	.021	.186	.030	.271	.031	.284	.85	.028	.242	.90	.231	.627	.136	.144
G	.006	.034	.008	.040	.008	.042	.90	.008	.038	.90	.036	.770	.027	.028
J	.041	.232	.061	.344	.064	.361	.85	.058	.307	.90	.293	.616	.170	.179
E-2	.003	.027	.003	.028	.003	.030	.80	.003	.024	.90	.023	.860	.018	.019

RUN TITLE :SHERIF PIT REVISION 3 COMBINED WITH DEPUTY DEC 20 76

SECTION: S-7622-S PROPERTY: QUINTETTE PIT: SHERIFF REV 3

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
E-1	5.10	1.60	.23	6.93	1.30	1.90	2.10	1.47	24.0	225.0	150.0
G	1.28	.30	.05	1.63	1.30	2.00	2.15	1.46	31.0	238.0	80.0
J	8.05	1.67	.29	10.01	1.30	2.20	2.40	1.48	36.0	240.0	100.0
E-2	.73	.03	.02	.78	1.30	2.00	2.30	1.35	24.0	225.0	150.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
E-1	.024	.224	.035	.326	.037	.343	.80	.031	.274	.90	.262	.627	.155	.163
G	.004	.032	.006	.043	.006	.045	.85	.005	.038	.90	.037	.672	.023	.024
J	.038	.251	.051	.339	.053	.356	.80	.045	.285	.90	.272	.677	.174	.183
E-2	.003	.032	.004	.034	.004	.036	.85	.003	.030	.90	.029	.860	.024	.025

RUN TITLE :SHERIF PIT REVISION 3 COMBINED WITH DEPUTY DEC 20 76

SECTION: S-7623-S PROPERTY: QUINTETTE PIT: SHERIFF REV 3

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
E-1	5.10	1.60	.23	6.93	1.30	1.90	2.10	1.47	90.0	0.	10.0
G	1.49	.46	.07	2.02	1.30	2.00	2.15	1.49	123.0	135.0	130.0
J	8.18	1.08	.27	9.53	1.30	2.20	2.40	1.43	29.0	177.0	100.0
E-2	.73	.03	.02	.78	1.30	2.00	2.30	1.35	90.0	0.	10.0

SEAM	THEORETICAL COAL RESERVES		THEORETICAL IN-PLACE RAW COAL RSRVS		THEORETICAL RAW COAL RSRVS		GEO. FACTOR	RAW COAL RESERVES		MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
	OXID	UNOXID	OXID	UNOXID	OXID	UNOXID		OXID	UNOXID					
E-1	.006	0.	.009	0.	.009	0.	.70	.007	0.	.90	0.	.627	0.	0.
G	.031	.034	.046	.050	.048	.053	.80	.041	.042	.90	.040	.620	.023	.025
J	.031	.188	.038	.230	.040	.242	.80	.034	.193	.90	.185	.747	.130	.137
E-2	.001	0.	.001	0.	.001	0.	.85	.001	0.	.90	0.	.860	0.	0.

RUN TITLE :SHERIF PIT REVISION 3 COMBINED WITH DEPUTY DEC 20 76

SECTION: S-7624-S PROPERTY: QUINTETTE PIT: SHERIFF REV 3

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
J	8.18	1.08	.27	9.53	1.30	2.20	2.40	1.43	36.0	73.0	50.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
J	.019	.039	.023	.047	.025	.050	.80	.021	.040	.90	.038	.747	.027	.028

RUN TITLE ;SHERIF PIT REVISION 3 COMBINED WITH DEPUTY DEC 20 76

SECTION: S-7621-0 PROPERTY: QUINTETTE PIT: SHERIFF REV 3

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
J	8.41	1.55	.30	10.26	1.30	2.20	2.40	1.47	91.0	138.0	120.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
J	.119	.181	.157	.238	.164	.249	.85	.148	.212	.90	.202	.697	.133	.140

RUN TITLE :SHERIF PIT REVISION 3 COMBINED WITH DEPUTY DEC 20 76

SECTION: S-7622-D PROPERTY: QUINTETTE PIT: SHERIFF REV 3

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
G	.88	.10	.03	1.01	1.30	2.00	2.15	1.40	217.0	67.0	100.0
J	8.41	1.55	.30	10.26	1.30	2.20	2.40	1.47	174.0	294.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
G	.025	.008	.029	.009	.031	.009	.85	.028	.008	.90	.008	.778	.006	.006
J	.190	.321	.250	.422	.262	.443	.87	.242	.385	.90	.367	.697	.242	.254

RUN TITLE :SHERIF PIT REVISION 3 COMBINED WITH DEPUTY DEC 20 76

SECTION: S-7623-D PROPERTY: QUINTETTE PIT: SHERIFF REV 3

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
E-1	6.69	2.19	.31	9.19	1.30	1.90	2.10	1.47	73.0	160.0	100.0
G	1.24	.32	.05	1.61	1.30	2.00	2.15	1.47	244.0	359.0	100.0
J	8.41	1.55	.30	10.26	1.30	2.20	2.40	1.47	143.0	549.0	100.0
E-2	.84	.01	.02	.87	1.30	2.00	2.30	1.34	73.0	160.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
E-1	.063	.139	.094	.206	.099	.216	.90	.094	.194	.90	.185	.618	.108	.114
G	.039	.058	.055	.081	.058	.085	.87	.053	.074	.90	.070	.654	.044	.046
J	.156	.600	.205	.787	.215	.827	.85	.194	.703	.90	.670	.697	.441	.464
E-2	.008	.017	.008	.018	.009	.019	.90	.008	.017	.90	.016	.898	.014	.014

RUN TITLE :SHERIF PIT REVISION 3 COMBINED WITH DEPUTY DEC 20 76

SECTION: S-7624-D PROPERTY: QUINTETTE PIT: SHERIFF REV 3

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
E-1	7.34	1.76	.31	9.41	1.30	1.90	2.10	1.44	56.0	282.0	100.0
G	1.70	.39	.07	2.16	1.30	2.00	2.15	1.45	158.0	418.0	100.0
J	8.21	1.46	.29	9.96	1.30	2.20	2.40	1.46	103.0	620.0	100.0
E-2	1.20	.10	.04	1.34	1.30	2.00	2.30	1.38	56.0	282.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
E-1	.053	.269	.072	.363	.076	.382	.87	.070	.332	.90	.317	.677	.202	.213
G	.035	.092	.047	.125	.050	.131	.83	.044	.109	.90	.104	.676	.066	.070
J	.110	.662	.143	.861	.150	.904	.85	.135	.768	.90	.733	.703	.486	.512
E-2	.009	.044	.010	.050	.010	.052	.87	.010	.045	.90	.043	.810	.033	.035

RUN TITLE :SHERIF PIT REVISION 3 COMBINED WITH DEPUTY DEC 20 76

SECTION: S-7625-D PROPERTY: QUINTETTE PIT: SHERIFF REV 3

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
E-1	4.87	1.12	.20	6.19	1.30	1.90	2.10	1.43	36.0	202.0	100.0
G	1.39	.14	.05	1.58	1.30	2.00	2.15	1.39	65.0	287.0	110.0
J	8.01	1.37	.28	9.66	1.30	2.20	2.40	1.46	95.0	385.0	100.0
E-2	1.37	.09	.04	1.50	1.30	2.00	2.30	1.37	36.0	202.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
E-1	.023	.128	.030	.171	.032	.179	.90	.031	.161	.90	.154	.684	.099	.105
G	.013	.057	.015	.066	.016	.069	.83	.014	.057	.90	.055	.792	.041	.043
J	.099	.401	.128	.517	.134	.543	.87	.124	.472	.90	.451	.709	.301	.317
E-2	.006	.036	.007	.040	.007	.042	.90	.007	.037	.90	.036	.830	.028	.029

RUN TITLE :SHERIF PIT REVISION 3 COMBINED WITH DEPUTY DEC 20 76

SECTION: S-7626-D PROPERTY: QUINTETTE PIT: SHERIFF REV 3

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
G	.96	.05	.03	1.04	1.30	2.00	2.15	1.36	263.0	0.	50.0
J	8.01	1.37	.28	9.66	1.30	2.20	2.40	1.46	131.0	325.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
G	.016	0.	.018	0.	.019	0.	.80	.016	0.	.90	0.	.846	0.	0.
J	.136	.338	.176	.436	.185	.458	.75	.147	.344	.90	.328	.709	.219	.231

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INPUT REPLAY WITH DETAILED CALCULATIONS

RUN TITLE :FRAME PIT REVISION 2 DEC 22 76

SECTION: F-7611 PROPERTY: QUINTETTE PIT: FRAME PIT

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
G	2.92	.36	.10	3.38	1.30	2.10	2.20	1.41	27.0	6.0	95.0
J	3.04	.35	.10	3.49	1.30	1.90	2.30	1.39	20.0	17.0	95.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
G	.010	.002	.012	.003	.012	.003	.80	.010	.002	.90	.002	.762	.001	.002
J	.008	.006	.009	.007	.009	.008	.75	.007	.006	.90	.006	.783	.004	.004

RUN TITLE :FRAME PIT REVISION 2 DEC 22 76

SECTION: F-7612 PROPERTY: QUINTETTE PIT: FRAME PIT

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
G	3.11	.30	.11	3.52	1.30	2.10	2.20	1.40	30.0	58.0	100.0
J	3.04	.35	.10	3.49	1.30	1.90	2.30	1.39	22.0	70.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	IN-PLACE RAW COAL RSRVS OXID	IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
G	.012	.023	.014	.027	.015	.028	.85	.013	.024	.90	.023	.791	.017	.018
J	.009	.028	.010	.032	.011	.034	.77	.009	.026	.90	.025	.783	.018	.019

RUN TITLE :FRAME PIT REVISION 2 DEC 22 76

SECTION: F-7613 PROPERTY: QUINTETTE PIT: FRAME PIT

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
E	4.29	.34	.14	4.77	1.30	1.92	2.30	1.37	19.0	0.	100.0
F	1.00	.61	.06	1.67	1.30	2.10	2.30	1.63	27.0	88.0	100.0
G	3.11	.30	.11	3.52	1.30	2.10	2.20	1.40	16.0	114.0	100.0
J	3.04	.35	.10	3.49	1.30	1.90	2.30	1.39	17.0	124.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
E	.011	0.	.012	0.	.012	0.	.80	.011	0.	.90	0.	.818	0.	0.
F	.004	.011	.007	.023	.007	.024	.75	.006	.018	.90	.017	.461	.007	.008
G	.006	.046	.007	.053	.008	.056	.90	.007	.050	.90	.048	.791	.036	.038
J	.007	.049	.008	.057	.008	.060	.80	.007	.048	.90	.046	.783	.034	.036

RUN TITLE :FRAME PIT REVISION 2 DEC 22 76

SECTION: F-7614 PROPERTY: QUINTETTE PIT: FRAME PIT

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	.75	.24	.03	1.02	1.30	1.95	2.40	1.49	48.0	44.0	100.0
E	4.29	.34	.14	4.77	1.30	1.92	2.30	1.37	31.0	83.0	100.0
F	1.00	.61	.06	1.67	1.30	2.10	2.30	1.63	25.0	136.0	100.0
G	3.36	.30	.11	3.77	1.30	2.10	2.20	1.39	17.0	159.0	100.0
J	3.04	.35	.10	3.49	1.30	1.90	2.30	1.39	16.0	170.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.005	.004	.007	.006	.007	.007	.70	.005	.005	.90	.004	.618	.003	.003
E	.017	.046	.019	.052	.020	.054	.83	.018	.045	.90	.043	.818	.033	.035
F	.003	.018	.006	.035	.007	.037	.80	.006	.029	.90	.028	.461	.012	.013
G	.007	.069	.008	.079	.009	.083	.90	.009	.075	.90	.072	.799	.054	.057
J	.006	.067	.007	.078	.008	.082	.80	.007	.066	.90	.063	.783	.046	.049

RUN TITLE :FRAME PIT REVISION 2 DEC 22 76

SECTION: F-7615 PROPERTY: QUINTETTE PIT: FRAME PIT

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	.99	.24	.04	1.27	1.30	1.95	2.40	1.45	53.0	75.0	100.0
E	4.20	.42	.14	4.76	1.30	1.92	2.30	1.38	55.0	106.0	100.0
F	1.06	.61	.06	1.73	1.30	2.10	2.30	1.62	21.0	178.0	100.0
G	3.34	.33	.11	3.78	1.30	2.10	2.20	1.40	66.0	151.0	100.0
J	3.52	.68	.13	4.33	1.30	1.90	2.30	1.42	17.0	211.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.007	.010	.009	.013	.010	.014	.75	.008	.010	.90	.010	.670	.006	.007
E	.030	.058	.034	.066	.036	.070	.80	.031	.056	.90	.053	.797	.040	.042
F	.003	.025	.006	.047	.006	.050	.80	.005	.040	.90	.038	.474	.017	.018
G	.029	.066	.033	.076	.035	.080	.88	.033	.070	.90	.067	.788	.050	.052
J	.008	.097	.010	.124	.010	.130	.85	.009	.111	.90	.105	.713	.071	.075

RUN TITLE :FRAME PIT REVISION 2 DEC 22 76

SECTION: F-7616 PROPERTY: QUINTETTE PIT: FRAME PIT

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	1.23	.24	.04	1.51	1.30	1.95	2.40	1.43	57.0	103.0	100.0
E	4.11	.49	.14	4.74	1.30	1.92	2.30	1.39	39.0	145.0	100.0
F	1.13	.62	.06	1.81	1.30	2.10	2.30	1.61	21.0	199.0	100.0
G	3.32	.34	.11	3.77	1.30	2.10	2.20	1.40	61.0	175.0	100.0
J	3.19	.50	.11	3.80	1.30	1.90	2.30	1.41	15.0	243.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.009	.016	.012	.021	.012	.022	.75	.010	.017	.90	.016	.707	.011	.011
E	.021	.077	.025	.091	.026	.096	.80	.022	.077	.90	.073	.777	.054	.056
F	.003	.029	.006	.055	.006	.058	.75	.005	.043	.90	.041	.485	.019	.020
G	.026	.076	.031	.088	.032	.092	.85	.029	.079	.90	.075	.785	.055	.058
J	.006	.101	.008	.124	.008	.130	.80	.007	.104	.90	.099	.744	.070	.073

RUN TITLE :FRAME PIT REVISION 2 DEC 22 76

SECTION: F-7617 PROPERTY: QUINTETTE PIT: FRAME PIT

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G. OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	1.47	.23	.05	1.75	1.30	1.95	2.40	1.42	126.0	279.0	100.0
E	4.02	.56	.14	4.72	1.30	1.92	2.30	1.40	300.0	353.0	100.0
F	1.40	.64	.07	2.11	1.30	2.10	2.30	1.58	239.0	597.0	100.0
G	3.26	.36	.11	3.73	1.30	2.10	2.20	1.40	283.0	544.0	100.0
J	2.86	.33	.09	3.28	1.30	1.90	2.30	1.39	70.0	435.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.024	.053	.030	.066	.031	.069	.77	.025	.053	.90	.051	.740	.035	.037
E	.157	.184	.189	.222	.198	.234	.75	.158	.175	.90	.167	.758	.120	.126
F	.043	.109	.076	.189	.079	.198	.77	.065	.153	.90	.146	.526	.072	.076
G	.120	.231	.141	.272	.148	.285	.83	.131	.237	.90	.226	.776	.165	.174
J	.026	.162	.030	.189	.032	.198	.80	.027	.159	.90	.151	.782	.112	.118

RUN TITLE :FRAME PIT REVISION 2 DEC 22 76

SECTION: F-7618 PROPERTY: QUINTETTE PIT: FRAME PIT

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	1.86	.29	.06	2.21	1.30	1.95	2.40	1.42	345.0	430.0	100.0
E	3.93	.64	.14	4.71	1.30	1.92	2.30	1.41	294.0	549.0	100.0
F	1.57	.67	.07	2.31	1.30	2.10	2.30	1.56	124.0	974.0	100.0
G	3.20	.31	.11	3.62	1.30	2.10	2.20	1.40	131.0	1004.0	100.0
J	2.89	.35	.10	3.34	1.30	1.90	2.30	1.39	84.0	1246.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.083	.104	.103	.128	.108	.135	.80	.092	.108	.90	.103	.741	.072	.076
E	.150	.280	.186	.348	.196	.365	.80	.166	.292	.90	.279	.737	.194	.204
F	.025	.199	.043	.336	.045	.353	.77	.037	.272	.90	.259	.541	.132	.139
G	.054	.418	.063	.483	.066	.507	.83	.058	.421	.90	.402	.791	.300	.315
J	.032	.468	.037	.551	.039	.579	.80	.033	.463	.90	.442	.777	.324	.341

SECTION: F-7619 PROPERTY: QUINTETTE PIT: FRAME PIT

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	2.25	.36	.08	2.69	1.30	1.95	2.40	1.42	155.0	733.0	100.0
E	3.84	.71	.14	4.69	1.30	1.92	2.30	1.42	144.0	793.0	100.0
F	1.75	.68	.08	2.51	1.30	2.10	2.30	1.55	139.0	1014.0	100.0
G	3.15	.27	.11	3.53	1.30	2.10	2.20	1.39	111.0	951.0	100.0
J	2.91	.35	.10	3.36	1.30	1.90	2.30	1.39	60.0	1286.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.045	.214	.056	.266	.059	.279	.80	.050	.223	.90	.213	.737	.148	.156
E	.072	.396	.092	.504	.096	.529	.80	.081	.423	.90	.404	.718	.274	.288
F	.032	.231	.051	.375	.054	.394	.80	.046	.315	.90	.301	.562	.159	.168
G	.045	.389	.052	.443	.054	.466	.80	.046	.372	.90	.355	.803	.269	.283
J	.023	.486	.027	.572	.028	.601	.77	.023	.462	.90	.441	.778	.324	.341

RUN TITLE :FRAME PIT REVISION 2 DEC 22 76

SECTION: F-7620 PROPERTY: QUINTETTE PIT: FRAME PIT

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	2.43	.33	.08	2.84	1.30	1.95	2.40	1.41	137.0	850.0	100.0
E	3.52	.71	.13	4.36	1.30	1.92	2.30	1.43	121.0	893.0	100.0
F	1.79	.87	.09	2.75	1.30	2.10	2.30	1.59	127.0	1039.0	100.0
G	3.17	.27	.11	3.55	1.30	2.10	2.20	1.39	89.0	1118.0	100.0
J	3.02	.36	.10	3.48	1.30	1.90	2.30	1.39	67.0	1305.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.043	.269	.052	.323	.055	.339	.83	.048	.282	.90	.269	.760	.193	.203
E	.055	.409	.072	.530	.075	.557	.83	.066	.462	.90	.441	.704	.293	.308
F	.030	.242	.053	.432	.055	.453	.80	.047	.363	.90	.346	.512	.167	.176
G	.037	.461	.042	.524	.044	.550	.80	.037	.440	.90	.420	.804	.318	.335
J	.026	.512	.031	.602	.032	.632	.75	.026	.474	.90	.452	.779	.332	.349

RUN TITLE :FRAME PIT REVISION 2 DEC 22 76

SECTION: F-7621 PROPERTY: QUINTETTE PIT: FRAME PIT

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	2.44	.28	.08	2.80	1.30	1.95	2.40	1.40	253.0	788.0	100.0
E	3.19	.71	.12	4.02	1.30	1.92	2.30	1.44	282.0	815.0	100.0
F	1.82	.75	.09	2.66	1.30	2.10	2.30	1.56	191.0	1006.0	100.0
G	3.20	.30	.11	3.61	1.30	2.10	2.20	1.39	160.0	1145.0	100.0
J	3.10	.36	.10	3.56	1.30	1.90	2.30	1.39	93.0	1387.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.080	.250	.094	.293	.099	.308	.83	.087	.255	.90	.244	.780	.179	.189
E	.117	.338	.155	.449	.163	.472	.83	.144	.391	.90	.373	.688	.242	.255
F	.045	.238	.075	.396	.079	.416	.80	.067	.333	.90	.318	.549	.165	.173
G	.067	.476	.077	.548	.080	.576	.83	.071	.478	.90	.456	.794	.342	.360
J	.037	.559	.044	.654	.046	.687	.75	.037	.515	.90	.491	.782	.362	.381

RUN TITLE :FRAME PIT REVISION 2 DEC 22 76

SECTION: F-7622 PROPERTY: QUINTETTE PIT: FRAME PIT

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	2.45	.23	.08	2.76	1.30	1.95	2.40	1.38	253.0	872.0	100.0
E	2.86	.71	.11	3.68	1.30	1.92	2.30	1.48	230.0	928.0	100.0
F	1.60	.50	.07	2.17	1.30	2.10	2.30	1.52	151.0	1147.0	100.0
G	3.23	.37	.11	3.71	1.30	2.10	2.20	1.41	137.0	1267.0	100.0
J	3.20	.37	.11	3.68	1.30	1.90	2.30	1.39	127.0	1423.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.081	.278	.092	.317	.097	.333	.83	.085	.276	.90	.263	.801	.199	.210
E	.086	.345	.117	.472	.123	.495	.83	.108	.411	.90	.392	.669	.247	.260
F	.031	.239	.047	.359	.050	.377	.85	.045	.320	.90	.306	.608	.175	.184
G	.058	.532	.068	.630	.072	.662	.85	.064	.563	.90	.537	.772	.391	.411
J	.053	.592	.062	.692	.065	.727	.73	.050	.530	.90	.506	.782	.373	.393

RUN TITLE :FRAME PIT REVISION 2 DEC 22 76

SECTION: F-7623 PROPERTY: QUINTETTE PIT: FRAME PIT

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	2.42	.25	.08	2.75	1.30	1.95	2.40	1.39	242.0	976.0	100.0
E	2.93	.75	.11	3.79	1.30	1.92	2.30	1.45	159.0	1091.0	100.0
F	1.62	.39	.06	2.07	1.30	2.10	2.30	1.48	147.0	1235.0	100.0
G	3.26	.29	.11	3.66	1.30	2.10	2.20	1.39	134.0	1360.0	100.0
J	3.29	.37	.11	3.77	1.30	1.90	2.30	1.39	115.0	1520.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.076	.307	.088	.355	.092	.372	.85	.083	.317	.90	.302	.792	.225	.237
E	.061	.416	.083	.573	.088	.601	.85	.079	.511	.90	.488	.663	.305	.321
F	.031	.260	.043	.361	.045	.379	.85	.041	.322	.90	.308	.658	.191	.201
G	.057	.576	.065	.659	.068	.692	.85	.061	.588	.90	.561	.799	.423	.446
J	.049	.650	.057	.757	.060	.795	.75	.048	.596	.90	.569	.785	.421	.443

RUN TITLE :FRAME PIT REVISION 2 DEC 22 76

SECTION: F-7624 PROPERTY: QUINTETTE PIT: FRAME PIT

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	2.39	.27	.08	2.74	1.30	1.95	2.40	1.39	328.0	983.0	100.0
E	2.94	.68	.11	3.73	1.30	1.92	2.30	1.44	59.0	1275.0	100.0
F	1.60	.28	.06	1.94	1.30	2.10	2.30	1.45	79.0	1412.0	100.0
G	3.23	.39	.11	3.73	1.30	2.10	2.20	1.41	52.0	1482.0	100.0
J	3.38	.38	.11	3.87	1.30	1.90	2.30	1.39	67.0	1639.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.102	.305	.119	.357	.125	.375	.85	.113	.319	.90	.304	.782	.224	.236
E	.023	.487	.030	.654	.032	.686	.83	.028	.570	.90	.544	.681	.349	.368
F	.016	.294	.021	.377	.022	.396	.85	.020	.336	.90	.321	.713	.216	.227
G	.022	.622	.026	.744	.027	.781	.85	.025	.664	.90	.633	.765	.457	.481
J	.029	.720	.034	.839	.036	.880	.80	.031	.704	.90	.672	.785	.498	.524

RUN TITLE :FRAME PIT REVISION 2 DEC 22 76

SECTION: F-7625 PROPERTY: QUINTETTE PIT: FRAME PIT

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	2.33	.28	.07	2.68	1.30	1.95	2.40	1.40	59.0	1195.0	100.0
E	2.94	.64	.11	3.69	1.30	1.92	2.30	1.44	126.0	1266.0	100.0
F	1.57	.30	.06	1.93	1.30	2.10	2.30	1.45	79.0	1413.0	100.0
G	3.23	.45	.12	3.80	1.30	2.10	2.20	1.42	59.0	1505.0	100.0
J	3.21	.48	.11	3.80	1.30	1.90	2.30	1.40	65.0	1609.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.018	.362	.021	.427	.022	.449	.87	.020	.390	.90	.372	.775	.272	.286
E	.048	.484	.064	.639	.067	.671	.85	.060	.571	.90	.544	.692	.355	.374
F	.016	.288	.021	.377	.022	.396	.85	.020	.337	.90	.321	.699	.212	.223
G	.025	.632	.030	.774	.032	.813	.85	.029	.691	.90	.659	.746	.464	.489
J	.027	.671	.033	.818	.035	.859	.80	.029	.687	.90	.656	.750	.464	.489

RUN TITLE :FRAME PIT REVISION 2 DEC 22 76

SECTION: F-7626 PROPERTY: QUINTETTE PIT: FRAME PIT

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	2.27	.27	.07	2.61	1.30	1.95	2.40	1.40	79.0	1012.0	100.0
E	2.94	.59	.11	3.64	1.30	1.92	2.30	1.43	88.0	1185.0	100.0
F	1.55	.31	.06	1.92	1.30	2.10	2.30	1.46	68.0	1275.0	100.0
G	3.10	.39	.11	3.60	1.30	2.10	2.20	1.41	91.0	1325.0	100.0
J	3.03	.58	.11	3.72	1.30	1.90	2.30	1.42	77.0	1528.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.023	.299	.027	.352	.029	.370	.90	.028	.333	.90	.317	.776	.232	.244
E	.034	.483	.044	.587	.046	.617	.90	.044	.555	.90	.529	.705	.352	.371
F	.014	.257	.018	.340	.019	.357	.85	.017	.303	.90	.289	.691	.189	.199
G	.037	.534	.044	.642	.046	.675	.85	.042	.573	.90	.547	.760	.392	.413
J	.030	.602	.039	.770	.041	.809	.80	.035	.647	.90	.617	.714	.416	.438

RUN TITLE :FRAME PIT REVISION 2 DEC 22 76

SECTION: F-7627 PROPERTY: QUINTETTE PIT: FRAME PIT

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	2.19	.26	.07	2.52	1.30	1.95	2.40	1.40	63.0	1017.0	100.0
E	3.28	.73	.12	4.13	1.30	1.92	2.30	1.44	85.0	1071.0	100.0
F	1.50	.36	.06	1.92	1.30	2.10	2.30	1.48	67.0	1172.0	100.0
G	2.77	.32	.10	3.19	1.30	2.10	2.20	1.41	93.0	1181.0	100.0
J	3.27	.59	.12	3.98	1.30	1.90	2.30	1.42	205.0	1203.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.018	.290	.021	.341	.022	.358	.90	.021	.322	.90	.308	.776	.225	.237
E	.036	.457	.048	.607	.051	.637	.90	.048	.573	.90	.547	.688	.355	.374
F	.013	.229	.018	.317	.019	.333	.85	.017	.283	.90	.270	.659	.168	.177
G	.033	.425	.040	.505	.042	.530	.85	.038	.450	.90	.430	.770	.312	.329
J	.087	.511	.110	.646	.116	.679	.80	.098	.543	.90	.518	.723	.353	.372

RUN TITLE :FRAME PIT REVISION 2 DEC 22 76

SECTION: F-7628 PROPERTY: QUINTETTE PIT: FRAME PIT

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	2.19	.32	.07	2.58	1.30	1.95	2.40	1.41	56.0	816.0	100.0
E	3.28	.73	.12	4.13	1.30	1.92	2.30	1.44	50.0	878.0	100.0
F	1.45	.41	.06	1.92	1.30	2.10	2.30	1.50	53.0	943.0	100.0
G	2.92	.31	.10	3.33	1.30	2.10	2.20	1.40	72.0	1017.0	100.0
J	3.50	.60	.12	4.22	1.30	1.90	2.30	1.41	162.0	1022.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.016	.232	.019	.283	.020	.297	.90	.019	.268	.90	.255	.750	.181	.190
E	.021	.374	.028	.497	.030	.522	.87	.027	.454	.90	.434	.688	.281	.296
F	.010	.178	.015	.259	.015	.272	.83	.013	.226	.90	.215	.628	.127	.134
G	.027	.386	.032	.452	.034	.475	.83	.030	.394	.90	.376	.780	.277	.291
J	.074	.465	.092	.582	.097	.611	.80	.082	.488	.90	.466	.731	.321	.338

RUN TITLE :FRAME PIT REVISION 2 DEC 22 76

SECTION: F-7629 PROPERTY: QUINTETTE PIT: FRAME PIT

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	2.18	.38	.07	2.63	1.30	1.95	2.40	1.42	39.0	628.0	100.0
E	3.28	.73	.12	4.13	1.30	1.92	2.30	1.44	45.0	655.0	100.0
F	1.40	.47	.06	1.93	1.30	2.10	2.30	1.53	57.0	742.0	100.0
G	3.02	.28	.10	3.40	1.30	2.10	2.20	1.39	64.0	823.0	100.0
J	3.74	.61	.13	4.48	1.30	1.90	2.30	1.41	54.0	977.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.011	.178	.014	.225	.015	.236	.90	.014	.212	.90	.202	.725	.138	.146
E	.019	.279	.025	.371	.027	.390	.87	.025	.339	.90	.323	.688	.210	.221
F	.010	.135	.016	.208	.017	.219	.83	.015	.182	.90	.173	.593	.097	.102
G	.025	.323	.029	.372	.030	.390	.83	.027	.324	.90	.309	.795	.232	.244
J	.026	.475	.033	.588	.034	.618	.80	.029	.494	.90	.471	.738	.328	.346

RUN TITLE :FRAME PIT REVISION 2 DEC 22 76

SECTION: F-7630 PROPERTY: QUINTETTE PIT: FRAME PIT

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	2.18	.43	.08	2.69	1.30	1.95	2.40	1.44	32.0	422.0	100.0
E	3.28	.73	.12	4.13	1.30	1.92	2.30	1.44	38.0	380.0	100.0
F	1.35	.52	.06	1.93	1.30	2.10	2.30	1.55	48.0	504.0	100.0
G	3.10	.26	.10	3.46	1.30	2.10	2.20	1.39	57.0	580.0	100.0
J	3.97	.62	.14	4.73	1.30	1.90	2.30	1.41	63.0	757.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.009	.120	.012	.155	.012	.163	.90	.012	.146	.90	.140	.706	.093	.098
E	.016	.162	.022	.215	.023	.226	.90	.022	.203	.90	.194	.688	.126	.133
F	.008	.088	.014	.143	.014	.151	.85	.013	.128	.90	.122	.564	.065	.068
G	.023	.234	.026	.265	.027	.279	.85	.025	.237	.90	.226	.805	.172	.181
J	.033	.391	.040	.480	.042	.504	.85	.038	.428	.90	.409	.744	.287	.302

RUN TITLE :FRAME PIT REVISION 2 DEC 22 76

SECTION: F-7631 PROPERTY: QUINTETTE PIT: FRAME PIT

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
D	2.18	.49	.08	2.75	1.30	1.95	2.40	1.45	29.0	211.0	100.0
E	3.28	.73	.12	4.13	1.30	1.92	2.30	1.44	34.0	227.0	110.0
F	1.29	.57	.06	1.92	1.30	2.10	2.30	1.57	53.0	274.0	120.0
G	3.19	.29	.11	3.59	1.30	2.10	2.20	1.39	61.0	349.0	100.0
J	4.21	.63	.15	4.99	1.30	1.90	2.30	1.40	47.0	505.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
D	.008	.060	.011	.080	.012	.084	.90	.011	.076	.90	.072	.684	.046	.049
E	.016	.106	.021	.141	.022	.149	.90	.021	.134	.90	.128	.688	.083	.087
F	.011	.055	.018	.094	.019	.099	.90	.018	.089	.90	.085	.533	.043	.045
G	.025	.145	.029	.166	.030	.174	.90	.029	.157	.90	.150	.797	.113	.118
J	.026	.276	.031	.337	.033	.354	.90	.031	.318	.90	.304	.750	.215	.226

RUN TITLE :FRAME PIT REVISION 2 DEC 22 76

SECTION: F-7632 PROPERTY: QUINTETTE PIT: FRAME PIT

SEAM	COAL THICK	IN SEAM DILU THICK	OUT SEAM DILU. THICK	MINE SECT. THICK	SP.G COAL	SP.G IN SEAM DILU	SP.G OUT SEAM DILU	WT'D AVG SP.G OF MINE SECT	SEAM LEN. OXID	SEAM LEN. UNOXID	SECTION WIDTH
G	3.27	.21	.11	3.59	1.30	2.10	2.20	1.37	198.0	0.	60.0
J	4.44	.64	.15	5.23	1.30	1.90	2.30	1.40	17.0	302.0	100.0

SEAM	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEORETICAL IN-PLACE RAW COAL RSRVS OXID	THEORETICAL IN-PLACE RAW COAL RSRVS UNOXID	THEORETICAL RAW COAL RSRVS OXID	THEORETICAL RAW COAL RSRVS UNOXID	GEO. FACTOR	RAW COAL RESERVES OXID	RAW COAL RESERVES UNOXID	MINING FACTOR	PLANT FEED	YIELD %	CLEAN COAL RESERVES	PRODUCT COAL
G	.051	0.	.056	0.	.059	0.	.90	.056	0.	.90	0.	.828	0.	0.
J	.010	.174	.012	.211	.012	.222	.90	.012	.199	.90	.190	.755	.136	.143

SUMMARY REPORT(GEOLGY)

RUN TITLE :FRAME PIT REVISION 2 DEC 22 76

PROPERTY: QUINTETTE - PIT: FRAME PIT

SEAM	AVG COAL THICK	THEORETICAL COAL RESERVES OXID	THEORETICAL COAL RESERVES UNOXID	THEO. IN-PLACE RAW COAL RESRVS OXID	THEO. IN-PLACE RAW COAL RESRVS UNOXID	*1 THEORETICAL RAW COAL RESRVS OXID	*1 THEORETICAL RAW COAL RESRVS UNOXID	GEO. FACTORED RAW COAL RESRVS OXID	GEO. FACTORED RAW COAL RESRVS UNOXID	*2 WT'D AVG SP.G OF PLANT FEED	PLANT FEED	AVG YIELD	CLEAN COAL RESERVES	PRODUCT COAL
G	3.157	.796	6.666	.925	7.807	.971	8.197	.869	6.890	1.398	6.573	.786	4.8403	5.0950
J	3.313	.631	8.064	.764	9.710	.802	10.196	.674	8.070	1.400	7.699	.761	5.5098	5.7998
E	3.495	.989	5.353	1.267	7.020	1.330	7.371	1.158	6.243	1.423	5.956	.719	3.9141	4.1201
F	1.445	.349	3.123	.554	4.725	.582	4.961	.502	4.093	1.542	3.904	.574	2.2335	2.3511
D	2.011	.659	3.351	.788	4.009	.827	4.209	.731	3.612	1.417	3.445	.740	2.4838	2.6145
TOTAL		3.425	26.557	4.298	33.271	4.513	34.934	3.933	28.907	1.434	27.578	.719	18.9814	19.9805

*1 INCLUDES IN SEAM DILUTION ONLY

*2 INCLUDES IN SEAM AND OUT OF SEAM DILUTION

STOP END OF RUN