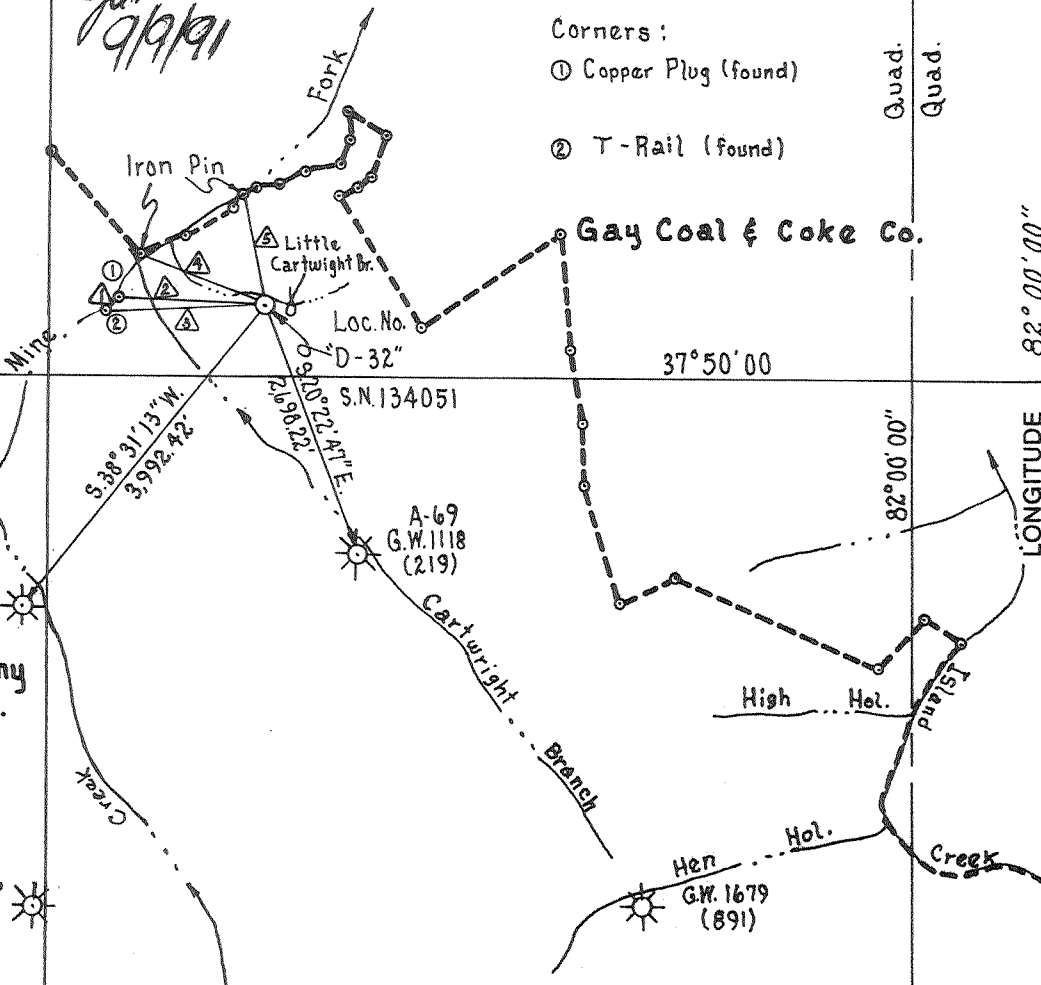
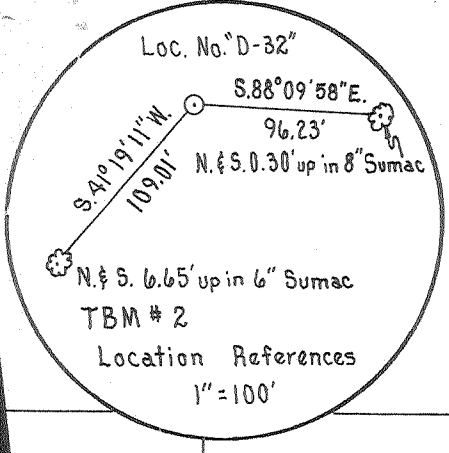


Jamie
9/19/91

- Corners:
- ① Copper Plug (found)
 - ② T-Rail (found)

Quad. Quad.



Island Creek Coal Company
80662 35,053.47 Ac.

Island Creek Coal Company
Coordinates for Loc. D-32
S. 957.71 ~ E. 244.18

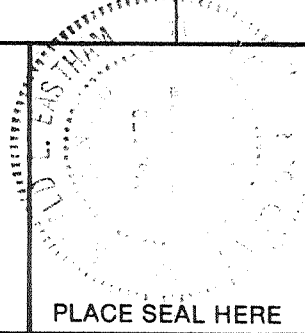
Line Chart		
Line	Bearing	Distance
△	N. 47° 46' 00\"E.	~ 184.00'
△	S. 88° 28' 06\"E.	~ 1,521.63'
△	S. 87° 07' 59\"W.	~ 1,659.40'
△	N. 70° 51' 46\"W.	~ 1,392.40'
△	N. 17° 57' 18\"W.	~ 1,063.10'

2.74 S
1.26 W
5.62 S
1.26 W

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE NO. _____
 DRAWING NO. _____
 SCALE 1" = 2,000'
 MINIMUM DEGREE OF ACCURACY 1:161,172
 PROVEN SOURCE OF ELEVATION U.S.C. & G.S. B.M. "K-144"
 Elev. = 686.724

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENERGY.
 (SIGNED) Ronald L. Easton
 R.P.E. _____ L.L.S. 150



STATE OF WEST VIRGINIA
 DEPARTMENT OF ENERGY
 OIL AND GAS DIVISION



DATE July 1, 19 91
 OPERATOR'S WELL NO. Island Creek Coal Co. D-32
 API WELL NO. S.N. 134051

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS,") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X
 LOCATION: ELEVATION 813.72 WATER SHED Little Cartwright Branch of Copperas Mine Fork of Island Creek
 DISTRICT Island Creek 4 COUNTY Logan

QUADRANGLE Holden
 SURFACE OWNER Virginia M. Patterson ACREAGE 120
 OIL & GAS ROYALTY OWNER Island Creek Coal Company LEASE ACREAGE 35,053.47
 LEASE NO. 80662

PROPOSED WORK: DRILL X CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE ___ PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION ___ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____

PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___
 TARGET FORMATION Devonian Shale ESTIMATED DEPTH 4,454' KB
 WELL OPERATOR Ashland Exploration, Inc. DESIGNATED AGENT Forrest Burkett
 ADDRESS P.O. Box 391, Ashland, Ky. 41114 ADDRESS P.O. Box 379, Brenton, W.V. 24818

SEP 16 1991

DEEP WELL 4669
b-b Logan-Holden District (274)

State of West Virginia
DEPARTMENT OF ENERGY
Division of Oil and Gas

RECEIVED
JAN 14 92

Reviewed by: TMG
Recorded: _____

Well Operator's Report of Well Work

Farm name: GEORGIA-PACIFIC Operator Well No.: D-32 S N 134051

LOCATION: Elevation: 813.72 Quadrangle: HOLDEN

District: ISLAND CREEK County: LOGAN
Latitude: 14400 Feet South of 37 Deg. 52Min. 30 Sec.
Longitude 6700 Feet West of 82 Deg. 0 Min. 0 Sec.

Company: ASHLAND EXPLORATION, INC.
P.O. BOX 391, A1-6
ASHLAND, KY 41114-0391

Agent: FORREST BURKETT

Inspector: OFIE HELMICK
Permit Issued: 09/13/91
Well work Commenced: 10/19/91
Well work Completed: 12/19/91
Verbal Plugging
Permission granted on: _____
Rotary X Cable _____ Rig
Total Depth (feet) 4508
Fresh water depths (ft) _____
Damp 325' (Map WV-12) 99', 221, 35, 40
Salt water depths (ft) None noted
(Map WV-12) 908', 1045, 1642
Is coal being mined in area (Y/N)? N
Coal Depths (ft): 70-73, 220-224

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
16"	48'	48"	11.8
11 3/4"	295'	295'	165
8 5/8"	1771'	1771'	539
5 1/2"	4483'	4483'	633
1.9" @	4344' KB w/ ADL-1 PKR	@ 2629'	
1.9" @	2604' KB		

OPEN FLOW DATA

Producing formation Dev. Shale Pay zone depth (ft) 3284-4432
 Gas: Initial open flow 0 MCF/d Oil: Initial open flow -0- Bbl/d
 Final open flow 750 MCF/d Final open flow -0- Bbl/d
 Time of open flow between initial and final tests -0- Hours
 Static rock Pressure 750 psig (surface pressure) after -0- Hours
 Berea 2597-2605
 Second producing formation Injun/Big Lime Pay zone depth (ft) 1891-2101
 Gas: Initial open flow -0- MCF/d Oil: Initial open flow -0- Bbl/d
 Final open flow 550 MCF/d Final open flow -0- Bbl/d
 Time of open flow between initial and final tests -0- Hours
 Static rock Pressure 600 psig (surface pressure) after -0- Hours

Due to safety of nearby residents a 3 HR open flow was estimated and not taken.

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

For: ASHLAND EXPLORATION, INC.

By: James L. Stephens James L. Stephens, Eng. Tech
Date: 11/13/91

1300

JAN 27 1992

<u>Formation on Rock Type</u>	<u>TOP</u>	<u>BASE</u>
Sand and Shale (Base Lee Sand)	0	1295
Pennington formation	1295	1762
Maxton 1568-1635		
Little Lime	1762	1816
Big Lime	1816	2048
Borden formation	2048	2561
Injun 2094-2120		
Weir 2160-2252		
Sunbury Shale	2561	2593
Berea	2593	2625
Devonian Shale	2625	4487
Onondaga Ls.	4487	TD

DTD 4508' KB
LTD 4504' KB

11 3/4" and 8 5/8" csg was cemented to the surface on the primary job.

Well Treatment

Perf Rhinestreet Shale 20H/4186-4432. N₂ frac using 500 gal. 7 1/2% inh fe acid, 836,000 scf N₂ @ 97,000 scf/min. BD @ 2700#, ATP 3400#, MTP 3510#, and ISIP 2500#.

Perf Huron Shale 20H/3626-3936. N₂ frac using 500 gal. 7 1/2% inh fe acid, 815,000 scf N₂ @ 98,500 scf/min. BD @ 3540#, ATP 2850#, MTP 3540#, and ISIP 1900#.

Perf Chagrin 20H/2894-3284, N₂ frac Chagrin using 820,000 scf N₂ @ 99,000 scf/min. BD @ 2150#, ATP 2700#, MTP 2740#, ISIP 1800#.

Perf Berea 15H/2597-2605. 75 Quality ramp frac using 250 gal 15% inh. fe acid, 61,600# 20/40 sand and 336,000 scf N₂ @ 6978 scf/min. BD @ 1469#, ATP 1278# @ 20 BPM, MTP 1548#, ISIP 850#, 15 min. 701 and TF 260 bbls.

Perf Big Lime and Injun 16H/1891-2101. 75 Quality foam frac after breakdown and ballout using 1000 gal. 15% inh fe acid, 92,000 scf N₂ @ 14000 scf/min. BD @ 3242# and ISIP 1812. Foam frac using 80,000 # 20/40 sand and 408,000 scf N₂ @ 14,000 scf/min., ATP 1812 @ 40 BPM foam rate, MTP 1860#, ISIP 1109# and TF 309 bbls.

045-1176
Issued 09/13/91

FORM WW-2B

Page 1 of 1

STATE OF WEST VIRGINIA
DEPARTMENT OF ENERGY, DIVISION OF OIL AND GAS
WELL WORK PERMIT APPLICATION

Expires 09/13/93

- 1) Well Operator: Ashland Exploration, Inc. 2750 (5) 401
- 2) Operator's Well Number: Island Creek Coal Co. D-32 S.N. 134051 3) Elevation: 813.72
- 4) Well type: (a) Oil / or Gas x /
(b) If Gas: Production x / Underground Storage /
Deep / Shallow x /
- 5) Proposed Target Formation(s): Devonian Shale
- 6) Proposed Total Depth: 4,454' KB feet
- 7) Approximate fresh water strata depths: 99' KB (Map WV-12) 221', 35'-40'
- 8) Approximate salt water depths: 908' ? 150' KB (Map WV-12) 1045', 1642'
- 9) Approximate coal seam depths: No Seams Operated - Solid
- 10) Does land contain coal seams tributary to active mine? Yes / No x /
- 11) Proposed Well Work: Drill & Stimulate New Well
- 12) From Well # 045-219
045-187

CASING AND TUBING PROGRAM

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT
	Size	Grade	Weight per ft.	For drilling	Left in well	Fill-up (cu. ft.)
Conductor	16" ?	L5	----	30	30	CTS
Fresh Water	11" - what was size exposed				260' CTS	
Coal						38x38/11.3 30x30/11.2
Intermediate	8 5/8"	J55	24.0	1765 ?	1765 ?	CTS
Production	5 1/2"	J55	15.5	4454	4454	As Needed
Tubing	1.9"	J55	2.76	---	4404	38x38/11.1 Siphon
Liners						

PACKERS : Kind _____
 Sizes _____
 Depths set _____

RECEIVED
Division of Energy

AUG 13 91

For Division of Oil and Gas Use Only Oil and Gas Section

Fee(s) paid: Well Work Permit Reclamation Fund WPCP
 Plat WW-9 WW-2B Bond Sandra Blankett Agent
 (Type)

12766

506298
22

- 1) Date: August 9, 1991
- 2) Operator's well number
Island Creek Coal Co. #D-32, Serial #134051
- 3) API Well No: 47 - 045 - 1176
State - County - Permit

STATE OF WEST VIRGINIA
DEPARTMENT OF ENERGY, DIVISION OF OIL AND GAS

RECEIVED
Department of Energy

NOTICE AND APPLICATION FOR A WELL WORK PERMIT

AUG 13 91

- 4) Surface Owner(s) to be served:
 - (a) Name Georgia-Pacific Corp.
Address Jerry Crouse
Wyoming, WV 24898
 - (b) Name _____
Address _____
 - (c) Name _____
Address _____
 - 5) (a) Coal Operator: Oil and Gas Section
Name N/A
Address _____
 - (b) Coal Owner(s) with Declaration
Name Island Creek Coal Company
Address P.O. Box 840
Holden, WV 25625
Name _____
Address _____
 - (c) Coal Lessee with Declaration
Name N/A
Address _____
- 6) Inspector Richard Campbell
Address Box 163
Hamlin, WV 25523-0163
Telephone (304) 824-7138

TO THE PERSON(S) NAMED ABOVE TAKE NOTICE THAT:

_____ Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil and gas OR
x Included is the information required by Chapter 22B, Article 1, Section 8(d) of the Code of West Virginia (see page 2)
I certify that as required under Chapter 22B of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through 2 on the above named parties, by:
_____ Personal Service (Affidavit attached)
x _____ Certified Mail (Postmarked postal receipt attached)
_____ Publication (Notice of Publication attached)

I have read and understand Chapter 22B and 38 CSR 11-18, and I agree to the terms and conditions of any permit issued under this application.
I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete.
I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Well Operator Ashland Exploration, Inc.
By: W. Mark Parks
Its: Operations Manager
Address P.O. Box 391
Ashland, KY 41114
Telephone 606-329-5989

Subscribed and sworn before me this 9 day of August, 1991

Jelle C. Barber Notary Public

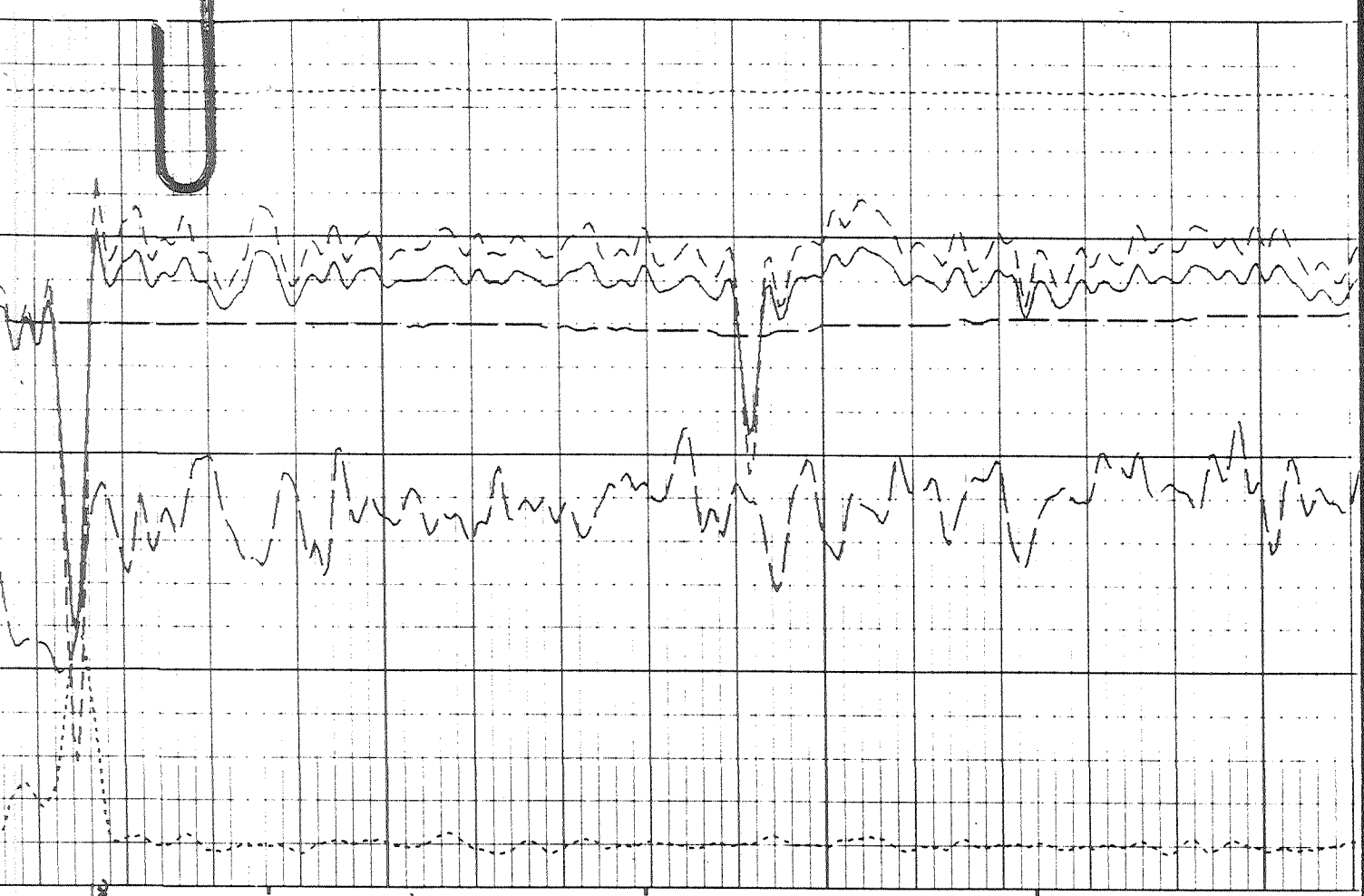
My commission expires 9/18/91

Schlumberger

LITHO-DENSITY / TEMPERATURE / GR

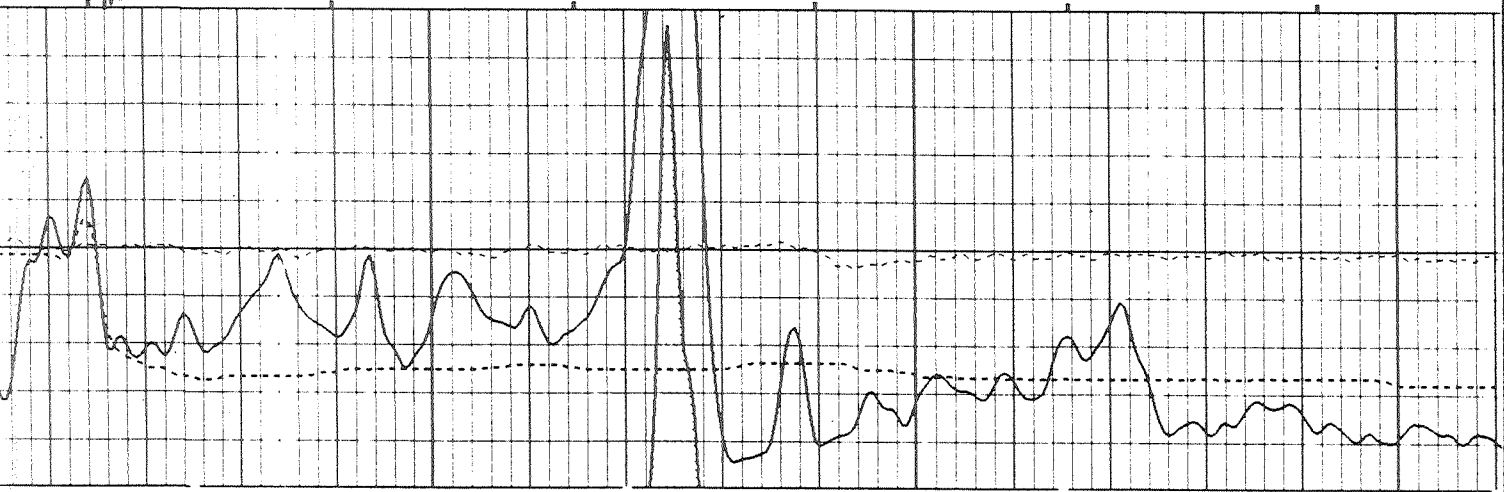
COUNTY LOGAN FIELD HOLDEN QUAD LOCATION 14,400' SOUTH OF WELL ISLAND CREEK COAL CO. NO. D-32(OXY) COMPANY ASHLAND EXPLORATION, INC.	COMPANY ASHLAND EXPLORATION, INC.			
	WELL ISLAND CREEK COAL CO. NO. D-32(OXY)			
	FIELD HOLDEN QUAD			
	COUNTY LOGAN	STATE WEST VIRGINIA		
LOCATION	14,400' SOUTH OF 37-52-30	Other Services:		
LOCATION	6,700' WEST OF 82-00-00			
API SERIAL NO.	SECT.	TWP.	RANGE	DIL
47-045-01176	-	-	-	
Permanent Datum	GROUND LEVEL	Elev.	814.0 F	Elev.: K.B.824.0 F
Log Measured From	KELLY BUSHING	10.0 F	above Perm. Datum	D.F.823.0 F
Drilling Measured From	KELLY BUSHING			G.L.814.0 F
Date	OCT. 24, 1991			
Run No.	ONE			
Depth Driller	4508.0 F			
Depth Logger (SchL)	4504.0 F			
Btm. Log Interval	4503.0 F			
Top Log Interval	1770.0 F			
Casing-Driller	8 5/8"	@1771.0 F	@	@
Casing-Logger	1770.0 F			
Bit Size	7 7/8"			
Type Fluid in Hole	AIR / GAS			
Dens.	Visc.			
pH	Fld. Loss			
Source of Sample				
Rm @ Meas. Temp.		@		@
Rmf @ Meas. Temp.		@		@
Rmc @ Meas. Temp.		@		@
Source: Rmf	Rmc			
Rm @ BHT		@	106. DEGF	@
TIME	Circulation Ended	10:30, OCT. 24		
	Logger on Bottom	15:30, OCT. 24		
Max. Rec. Temp.	106. DEGF			
Equip.	Location	8507	FAIRMONT WV	
Recorded By	DAVE RAPP			
Witnessed By	TOM WHITE			

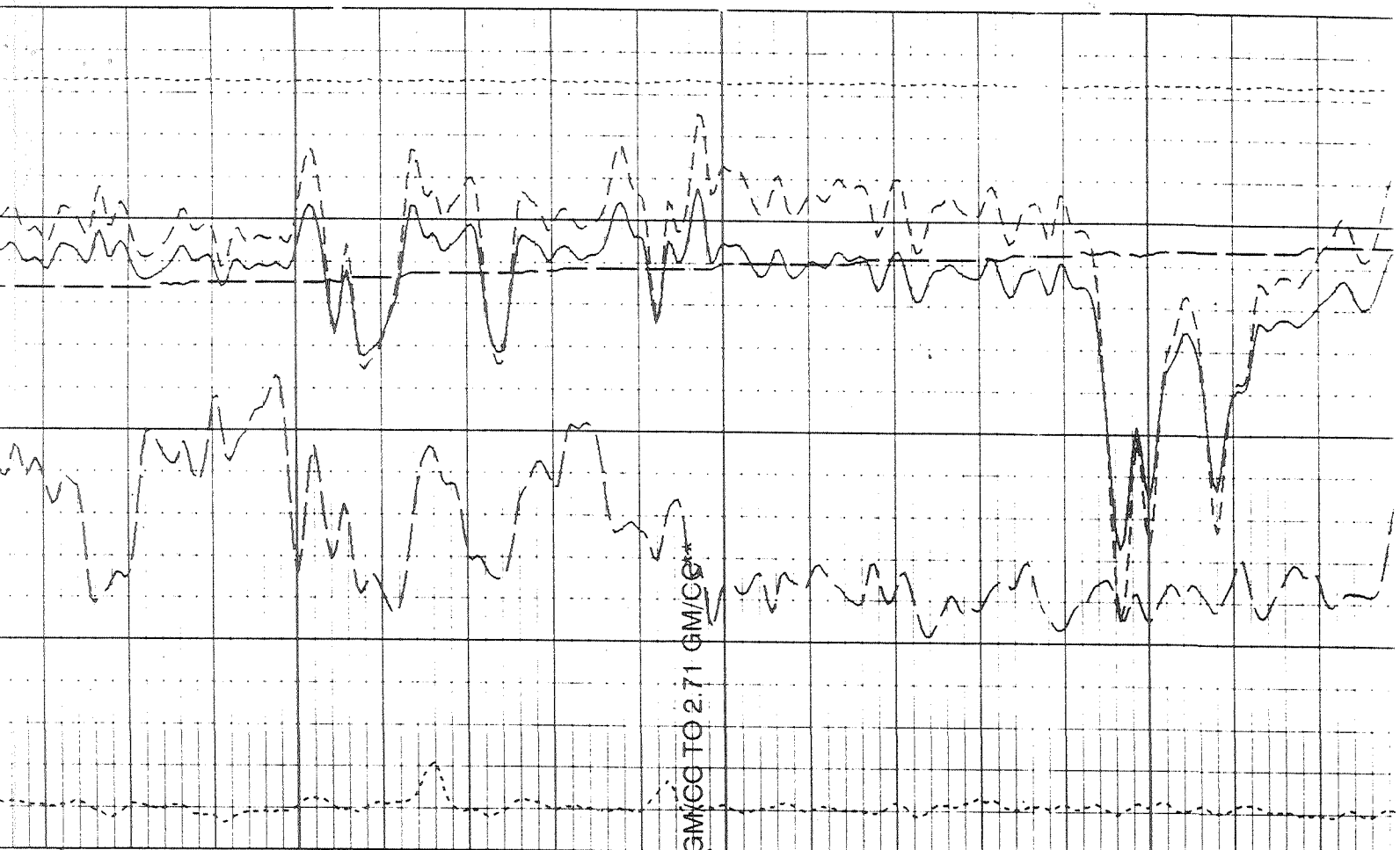
The well name, location and borehole reference data were furnished by the customer.



Top of Big Line
1816'

1900





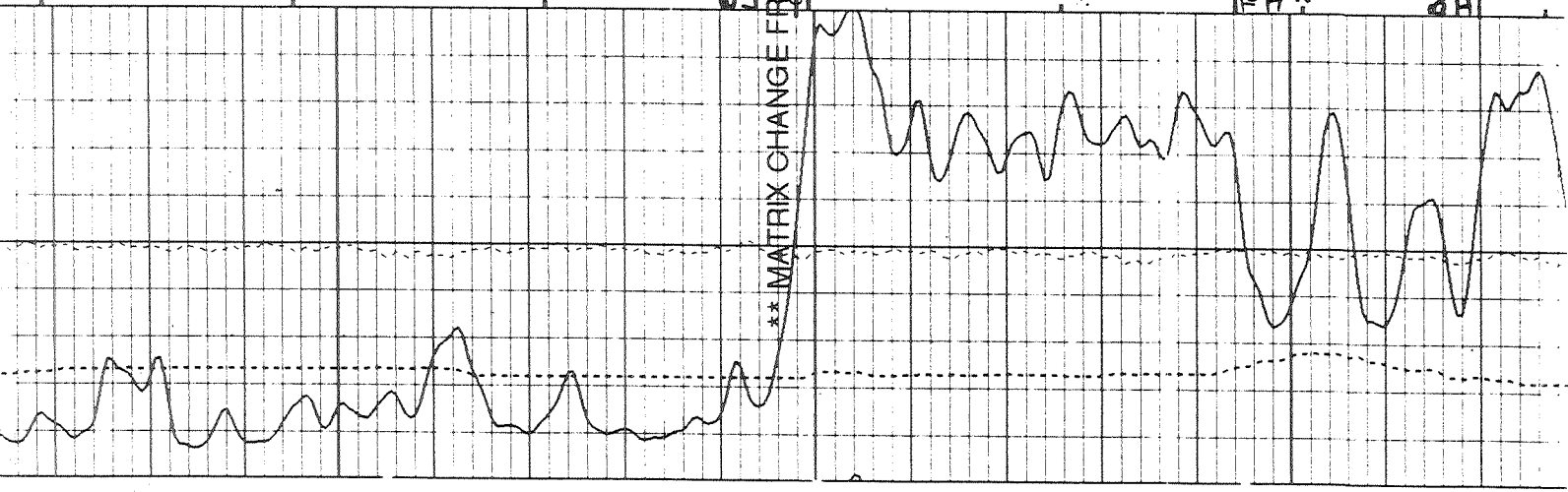
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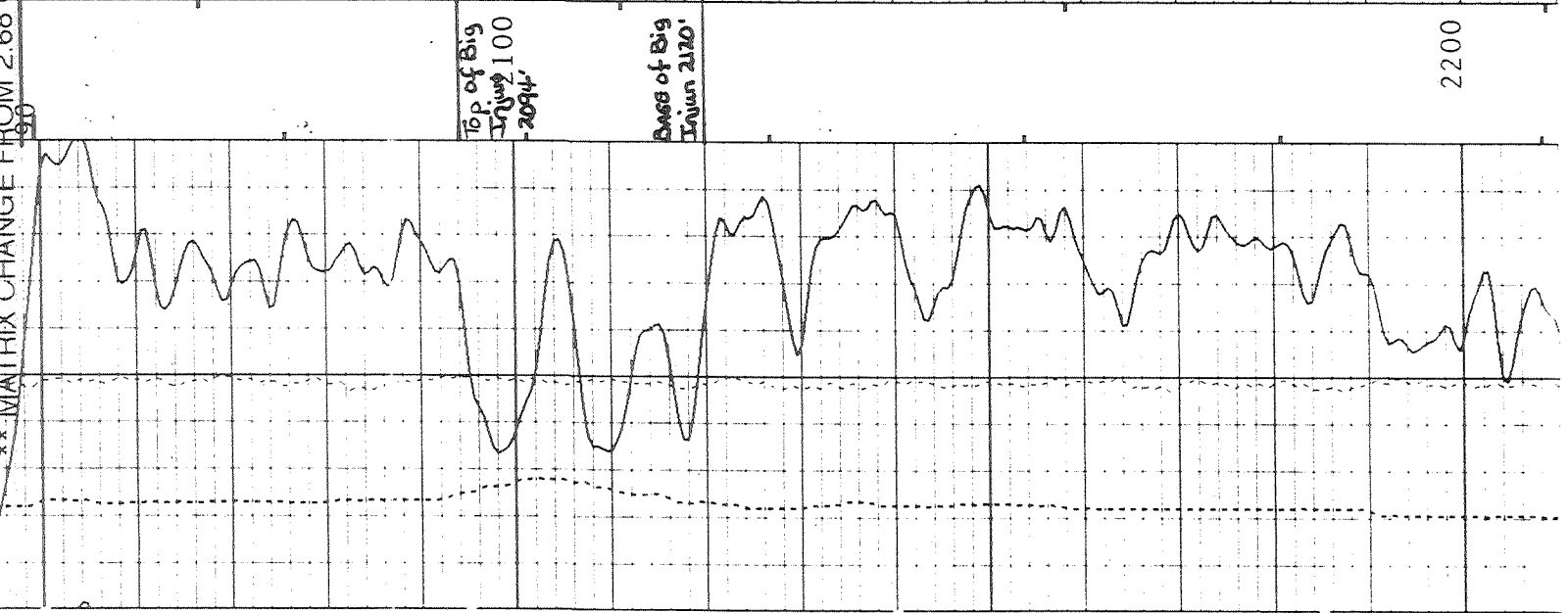
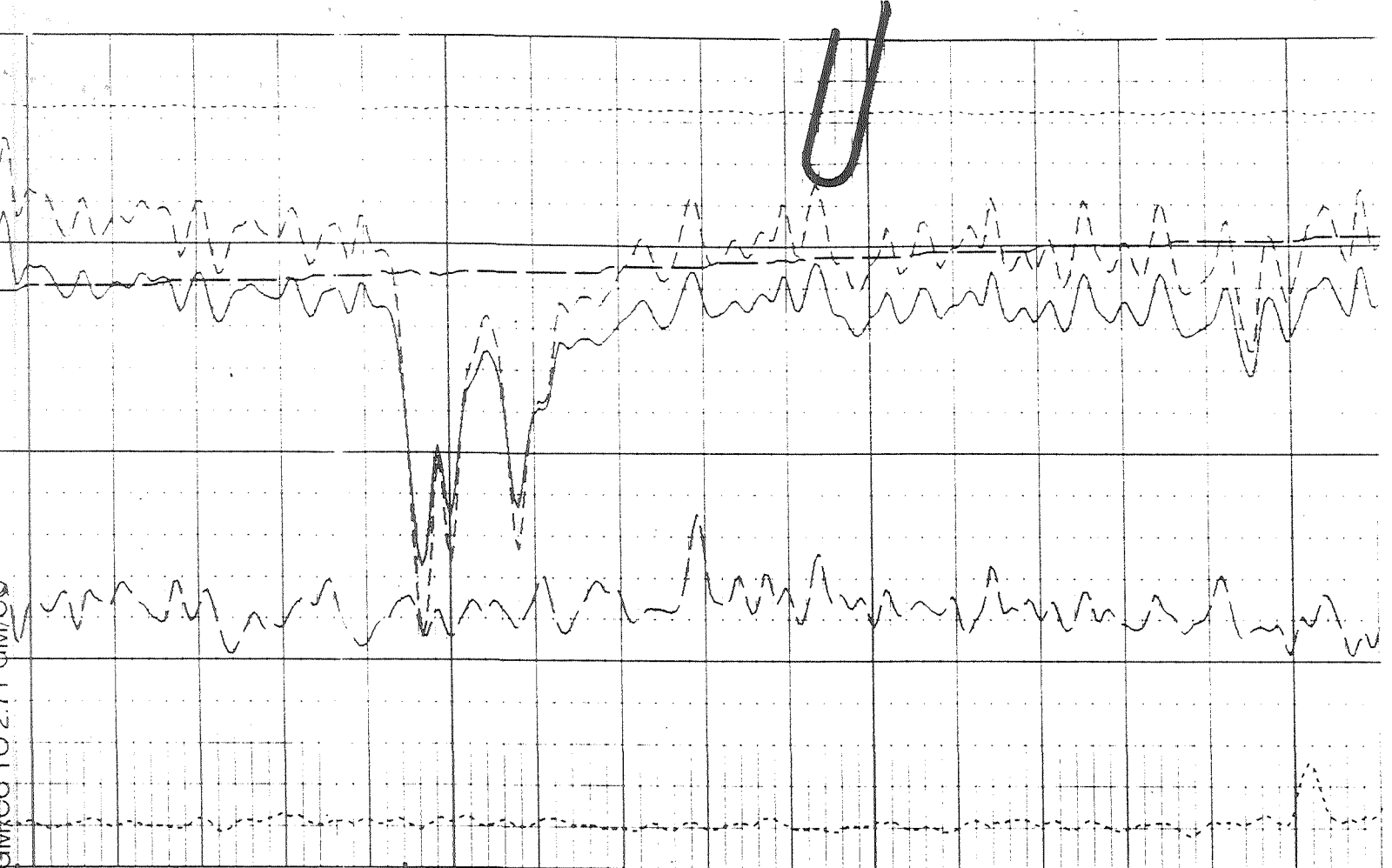
50

Base of Big Line 2018
 ** MATRIX CHANGE FROM 2.68 GM/CC TO 2.71 GM/CC **

Top of Big
 In Jun 2014

Base of Big
 In Jun 2120



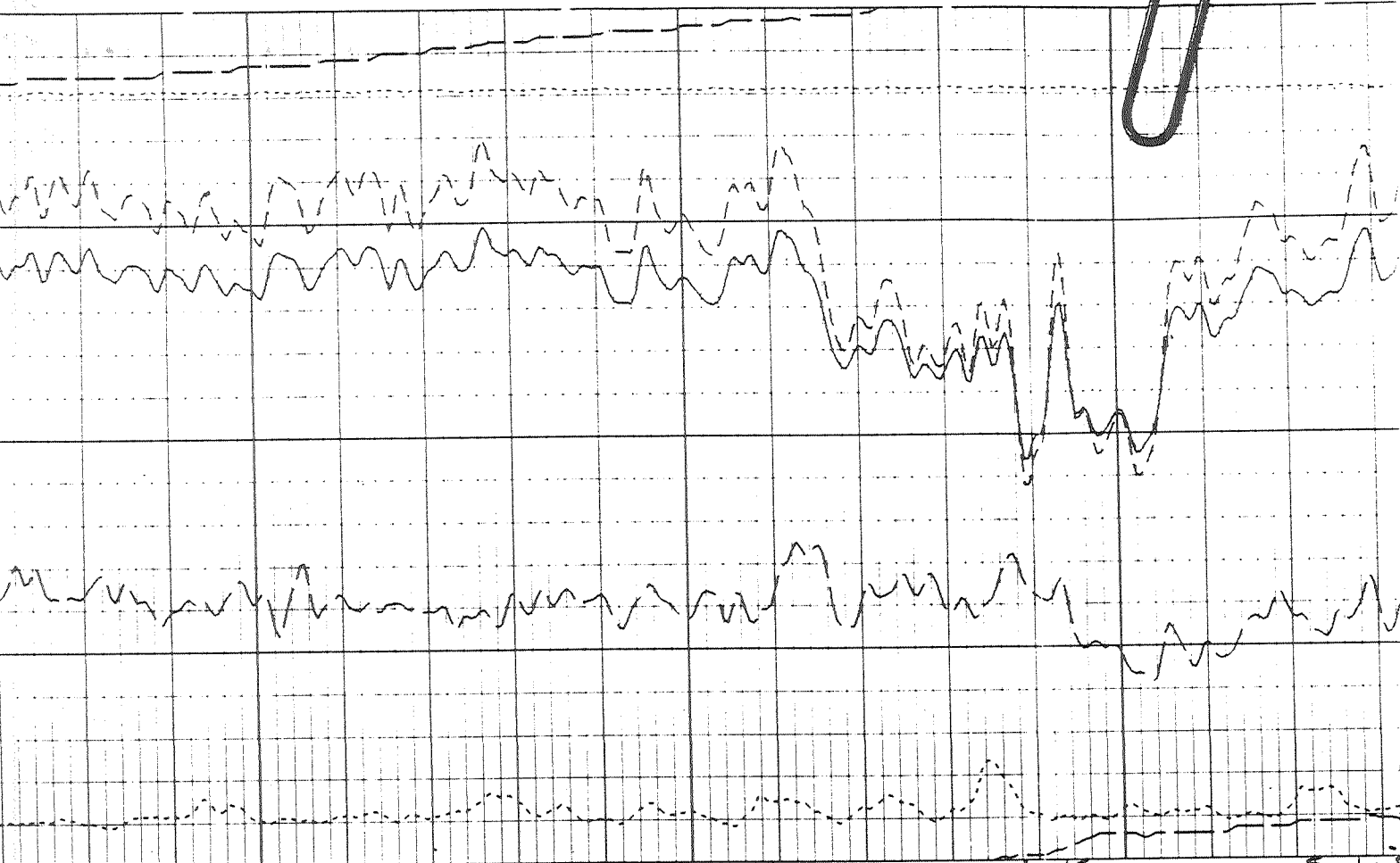


2.5 MATRHX CHANGE FROM 2.68 GIMROO TO 2.71 GIMROO

Top of Big
Injun 100
- 2094'

Base of Big
Injun 2120'

2200



2500

70

Top of Berea
2598'
2600

Base of Berea
2627'

Top of Dev.
SHALE 71.25'

