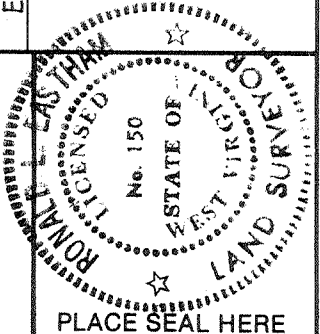


Imperial Colliery Co. Coordinates
for Loc. 97
N.16,068.02 ~ E.25,796.59

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

FILE NO. _____
DRAWING NO. _____
SCALE 1" = 1,000'
MINIMUM DEGREE OF ACCURACY 1:36.591
PROVEN SOURCE OF ELEVATION U.S.G.S. B.M. "8 SKS"
Elev. = 812.061

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. East
R.P.E. _____ L.L.S. 150



STATE OF WEST VIRGINIA
DEPARTMENT OF ENERGY
OIL AND GAS DIVISION

DATE March 21, 19 91
OPERATOR'S WELL NO. Eastern Assoc. Coal Corp #97
API WELL NO. 47-039-4831 STATE WV COUNTY Kanawha PERMIT 4831

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
(IF "GAS,") PRODUCTION STORAGE DEEP SHALLOW

LOCATION: ELEVATION 1854.06 WATERSHED Hurricane Fork of Paint Creek
DISTRICT Cabin Creek 2 COUNTY Kanawha
QUADRANGLE Eskdale Montgomery SC

SURFACE OWNER Eastern Associated Coal Corp. ACREAGE 22,000+
OIL & GAS ROYALTY OWNER Eastern Associated Coal Corp. LEASE ACREAGE 22,521
LEASE NO. 11,909

PROPOSED WORK: DRILL 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 6,434' K.B.
WELL OPERATOR Ashland Exploration, Inc. DESIGNATED AGENT Forrest Burkett
ADDRESS P.O. Box 391, Ashland, Ky. 41114 ADDRESS P.O. Box 379, Brenton, W.Va., 24818

DEEP WELL 6-6 Burnum (262)

AUG 12 1991

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

Reviewed TM6
Recorded _____

Well Operator's Report of Well Work

Farm name: EASTERN ASSOC. COAL CORP Operator Well No.: EACC 97S134901

LOCATION: Elevation: 1854.06 Quadrangle: ESKDALE

District: CABIN CREEK County: KANAWHA
Latitude: 2400 Feet South of 38 Deg. 5 Min. 0 Sec.
Longitude 7220 Feet West of 81 Deg. 22 Min. 30 Sec.

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

Agent: FORREST BURKETT

Inspector: CARLOS W. HIVELY
Permit Issued: 08/08/91
Well work Commenced: 09/17/91
Well work Completed: 01/09/92
Verbal Plugging _____
Permission granted on: _____
Rotary X Cable _____ Rig
Total Depth (feet) 6691
Fresh water depths (ft) _____
Damp @ 329' 767' KB (MAP WV-12)
Salt water depths (ft) _____
Hole damp @ 2234' 1117' (MAP WV-12)
Is coal being mined in area (Y/N)? N
Coal Depths (ft): 86-89, 116-120, 286-289,
308-312, 576-577, 582-584,
653-658

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
16"	30'	30'	11.8
11 3/4"	656'	656'	370
8 5/8"	2517'	2517'	776
5 1/2"	6498	6498	1050
1.9" @ 6137 2/ ADL-1 pkr @ 2897			
1.9" @ 2911' KB			

OPEN FLOW DATA

Producing formation Devonian Shale/Gordon Pay zone depth (ft) 3395-6206
Gas: Initial open flow 0 MCF/d Oil: Initial open flow -0- Bbl/d
Final open flow 956 MCF/d Final open flow -0- Bbl/d
Time of open flow between initial and final tests 3 Hours
Static rock Pressure 500# psig (surface pressure) after 72 Hours
Weir/Injun _____
Second producing formation Maxton Pay zone depth (ft) 2846-2935
Gas: Initial open flow 218 MCF/d Oil: Initial open flow -0- Bbl/d
Final open flow 747 MCF/d Final open flow -0- Bbl/d
Time of open flow between initial and final tests 3 Hours
Static rock Pressure 348# psig (surface pressure) after 72 Hours

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: 1-28-92

FEB 03 1992

<u>Formation on Rock Type</u>	<u>TOP</u>	<u>BASE</u>
Sand and Shale (Base Lee Fm.)	0	1747
Pennington formation	1747	2478
Ravenscliff 1883-1895		
Avis Lo. 1982-2005		
L. Maxton 2400-2478		
Little Lime	2478	2560
Big Lime	2560	2817
Borden formation	2817	3273
Injun 2823-2862		
U. Weir 2923-2940		
L. Weir 3009-3050		
Sunbury Shale	3273	3291
Berea	3291	3339
Devonian Shale	3339	6671 3339'
Onondaga	6671	TD
DTD 6691 ✓		
LTD 6688		

11 3/4" csg was cemented to the surface on the primary job.
8 5/8" cmt job locked up but was grouted to surface using 10 sx CIA.

Well Treatment

Perf Rhinestreet 19H/5780-6206. N₂ frac using 500 gal. 7 1/2% fe inh. acid, 809,000 scf N₂ @ 47,600 scf/min. BD @ 3764#, MTP 4200#, ATP 3760#, ISIP 2963.

Perf Huron 18H/3395-3843. N₂ frac using 500 gal. fe inh. acid, 806,000 scf N₂ @ 97,000 scf/min. BD @ 3368#, MTP 4000#, ATP 3665# and 5 min. 1359#.

SAME
FRACASES

Perf Gordon and U. Shale 18H/3395-3843. N₂ frac using 500 gal. 7 1/2% inh. fe acid, 806,000 scf N₂ @ 101,000 scf/min. BD @ 2762#, MTP 3600#, ATP 2805# and 5 min. 1110#.

Perf U. Weir/Injun 16H/2846-2935. 75 quality foam frac after BD and ball out with 1000 gal. 16% HCL fe-acid, 93,000 scf N₂ @ 18,000 scf/min. BD @ 1100#, MTP 3000#. Foam frac using 411,400 scf N₂ @ 14,000 scf/min. and 86,300# 20/40 sand. MTP 1580#, ATP 1450# @ 43 BPM foam rate, ISIP 1170#.

Perf L. Maxton 12H/2400-2465. 75 quality foam frac after ball out using 1000 gal. 17% inh. fe acid, 70,660 scf N₂ @ 21,000 scf/min. BD @ 2800#, MTP 3550# and ISIP 3250#. Foam frac using 880,498 scf N₂ @ 18,400 scf/min. and 71,274# 20/40 sand. ATP 3250# @ 30 BPM foam rate, MTP 3750#, ISIP 2650# and TF 400 bbls.

039-4831
Issued 8/8/91
Page 1 of 1
Expires 8/8/93

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

- 1) Well Operator: Ashland Exploration, Inc. 2750 (2) 340
- 2) Operator's Well Number: 97, Serial #134901 Eastern Associated Coal Corp. 3) Elevation: 1854.06'
- 4) Well type: (a) Oil / or Gas /
(b) If Gas: Production / Underground Storage /
Deep / Shallow /
- 5) Proposed Target Formation(s): Devonian Shale
- 6) Proposed Total Depth: 6434'KB feet
- 7) Approximate fresh water strata depths: 1214'KB (Map WV-12)
- 8) Approximate salt water depths: 1339'KB (Map WV-12)
- 9) Approximate coal seam depths: No. 2 Gas Elev. 1280' Top Mined Out
- 10) Does land contain coal seams tributary to active mine? Yes / No /
- 11) Proposed Well Work:
- 12)

CASING AND TUBING PROGRAM

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT
	Size	Grade	Weight per ft.	For drilling	Left in well	
Conductor	16	LS	36.0	30	30	CTS
Fresh Water						
Coal	11 3/4	H-40	42.0	634	634	CTS
Intermediate	8 5/8	J-55	24.0	1834	1834	CTS
Production	5 1/2	J-55	15.5	6434	6434	As Needed
Tubing	1.9	J-55	2.76	-	6384	Siphon
Liners						

PACKERS : Kind _____
Sizes _____
Depths set _____

RECEIVED
Division of Energy
JUL 23 91

For Division of Oil and Gas Use Only

Permitting
Oil and Gas Section

Fee(s) paid: Well Work Permit Reclamation Fund WPCP

12656

506275
20

- 1) Date: July 22, 1991
- 2) Operator's well number Serial #134901
Eastern Associated Coal Corp. #97
- 3) API Well No: 47 - 039 - 4831
State - County - Permit

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

RECEIVED
Division of Energy

NOTICE AND APPLICATION FOR A WELL WORK PERMIT

- | | |
|--|--|
| <p>4) Surface Owner(s) to be served:</p> <p>(a) Name <u>Eastern Associated Coal Corp.</u>
Address <u>P.O. Box 1233</u>
<u>Charleston, WV 25324</u></p> <p>(b) Name _____
Address _____</p> <p>(c) Name _____
Address _____</p> | <p>5) (a) Coal Operator:</p> <p>Name <u>N/A</u>
Address _____</p> <p>(b) Coal Owner(s) with Declaration
Name <u>Same as No. 4(a)</u>
Address _____</p> <p>Name _____
Address _____</p> |
| <p>6) Inspector <u>Carlos W. Hively</u>
Address <u>223 Pinch Ridge Road</u>
<u>Elkview, WV 25071</u>
Telephone <u>(304)-965-6069</u></p> | <p>(c) Coal Lessee with Declaration
Name <u>Imperial Colliery Company</u>
Address <u>P.O. Box 638</u>
<u>Lynchburg, VA 24505</u></p> |

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 *W. Mark Parks*

Its: Operations Manager

Address P.O. Box 391

Ashland, KY 41114

Telephone 606-329-5989

Subscribed and sworn before me this 22nd day of July, 1991

Neil W. South

Notary Public

Tight Formations Unmarked & Marked. Injun

DO NOT MARK

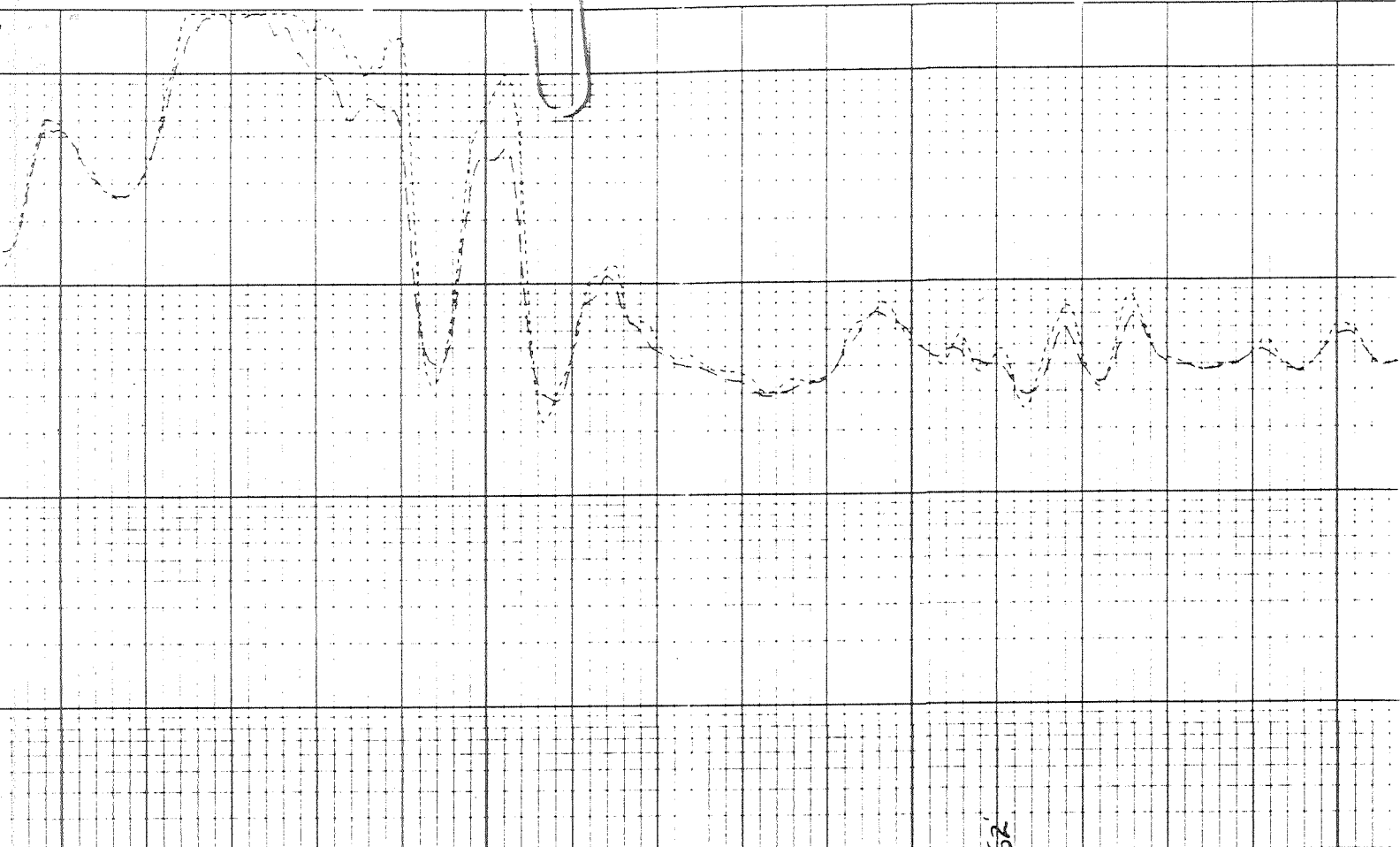
107-6

Schlumberger

DUAL INDUCTION

COUNTY		KANAHA		STATE		WEST VIRGINIA	
FIELD		ESKDALE QUADRANGLE		WELL		EASTERN ASSOCIATED COAL CORP. #97	
LOCATION		2400'S. OF 38 05' 00"		LOCATION		7220'W. OF 81 22' 30"	
WELL		EASTERN ASSOCIATED COAL CORP. #97		COMPANY		ASHLAND EXPLORATION, INC.	
API SERIAL NO.		047-039-4831		SECT.		N/A	
TWP.		N/A		RANGE		N/A	
Permanent Datum		GROUND LEVEL		Elev.		1854.0 F	
Log Measured From		KELLY BUSHING		10.0 F		above Perm. Datum	
Drilling Measured From		KELLY BUSHING				Elev.: K.B.1864.0 F D.F.1863.0 F G.L.1854.0 F	
Date		21-SEP-1991				25-SEP-1991	
Run No.		ONE				TWO	
Depth Driller		2555.0 F				6691.0 F	
Depth Logger (Schl.)		2522.0 F				6682.0 F	
Btm. Log Interval		2512.0 F				6672.0 F	
Top Log Interval		950.0 F				2512.0 F	
Casing-Driller		11 3/4" @ 656.0 F		8 5/8" @ 2517.0 F		@	
Casing-Logger		650.0 F		2512.0 F			
Bit Size		10 5/8" @ 2528.0 F		7 7/8" @ 6691.0 F		@	
Type Fluid in Hole		AIR/FOAM				AIR/GAS	
Dens.		Visc.		0.0 LB/G		0.0 LB/G	
pH		Fld. Loss					
Source of Sample							
Rm @ Meas. Temp.		@				@	
Rmf @ Meas. Temp.		@				@	
Rmc @ Meas. Temp.		@				@	
Source: Rmf		Rmc					
Rm @ BHT		@ 77.0 DEGF				@ 127. DEGF	
Circulation Ended		00:00 SEP 21				5:00 SEP 25	
Logger on Bottom		7:51 SEP 21				15:30 SEP 25	
Max. Rec. Temp.		77.0 DEGF				127. DEGF	
Equip.		Location		8272 PAINTSVILLE, KY		8291 PAINTSVILLE, KY	
Recorded By		T. THOMAS				B. WICHMANN	
Witnessed By		GARY MULLINS				MULLINS/WAGGENER	

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



2800

TOP OF
INJUN,
2823'

Base of
INJUN 2862'

2900

