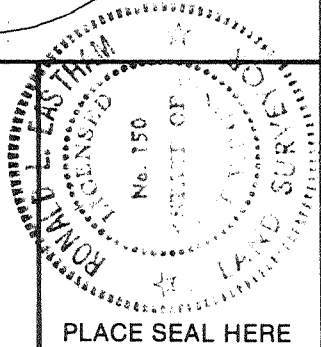


Coordinates of Location:
Imperial Colliery Coordinates
N. 21,113.62 ~ E. 24,708.47

FILE NO. _____
DRAWING NO. _____
SCALE 1" = 2,000'
MINIMUM DEGREE OF ACCURACY 1:40,144
PROVEN SOURCE OF ELEVATION U.S.G.S., B.M. "85K5"
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. Carl
R.P.E. _____ L.L.S. 150



STATE OF WEST VIRGINIA
DEPARTMENT OF ENERGY
OIL AND GAS DIVISION



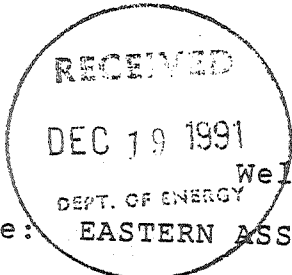
DATE May 17, 19 91
OPERATOR'S WELL NO. Eastern Associated Coal Corp.
API WELL NO. No. 98 S.N. 135191
47 - 039 - 4832
STATE COUNTY PERMIT

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
(IF "GAS,") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X
LOCATION: ELEVATION 1738.04 WATERSHED Fourmile Fork of Paint Creek
DISTRICT Cabin Creek 2 COUNTY Kanawha
QUADRANGLE Eskdale Montgomery C
SURFACE OWNER Eastern Associated Coal Corp. ACREAGE 22,000 +
OIL & GAS ROYALTY OWNER Eastern Associated Coal Corp. LEASE ACREAGE 22,521
LEASE NO. 11909
PROPOSED WORK: DRILL X CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE X 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 6,488' 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
DEEP WELL 6-6 Burnwell (267)

AUG 12 1991

COUNTY NAME
PERMIT



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

TMC

Well Operator's Report of Well Work

Farm name: EASTERN ASSOC. COAL CORP Operator Well No.: EACC 98 S135191

LOCATION: Elevation: 1738.04 Quadrangle: ESKDALE

District: CABIN CREEK County: KANAWHA
Latitude: 12600 Feet South of 38 Deg. 7 Min. 30 Sec.
Longitude 8450 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: 09/26/91
Well work Completed: 12/3/91
Verbal Plugging _____
Permission granted on: _____
Rotary X Cable _____ Rig _____
Total Depth (feet) 6527
Fresh water depths (ft) None noted

Salt water depths (ft) Damp @ 1621'

Is coal being mined in area (Y/N)? N
Coal Depths (ft): 124-128, 135-140
573-576

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
16"	30'	30'	11.8
11 3/4"	649'	649'	426
8 5/8"	2515'	2515'	764
5 1/2"	6410'	6410'	662
2 3/8" @	6150' KB w/ PKR @ 2980'		

OPEN FLOW DATA

Producing formation Devonian Shale and Gordon Pay zone depth (ft) 3747-6227
Gas: Initial open flow 0/25 MCF/d Oil: Initial open flow 0 Bbl/d
Final open flow 848/1048 MCF/d Final open flow 0 Bbl/d
Time of open flow between initial and final tests 3 Hours
Static rock Pressure 395# psig (surface pressure) after 72 Hours

Second producing formation Injun/Weir/Big Lime Pay zone depth (ft) 2858-2942
Gas: Initial open flow 25 MCF/d Oil: Initial open flow 0 Bbl/d
Final open flow 1200 MCF/d Final open flow 0 Bbl/d
Time of open flow between initial and final tests 3 Hours
Static rock Pressure 260# 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: 12-16-91

Formation on Rock Type	<u>TOP</u>	<u>BASE</u>
Sand and Shale (Base Lee Sands)	0	1828
Pennington formation	1828	2483
Ravenscliff 1868-1895		
U. Maxton 1952-1986		
L. Maxton 2422-2488		
Little Lime	2483	2566
Big Lime	2566	2820
Borden formation	2820	3281
Injun 2826-2868		
U. Weir 2931-2950		
L. Weir 3017-3066		
Sunbury Shale	3281	3297
Berea	3297	3352
Devonian Shale	3352	6517
Gordon 3535-3549		
Onondaga Ls.	6517	TD

DTD 6527
LTD 6523

UD 3352
LH 4300
J 5300
A 5650
Rh 5950

Well Treatment

Perf Rhinestreet Shale 19H/5919-6227. N₂ frac using 500 gal. 7 1/2% inh fe acid, 805,000 scf N₂ @ 95,000 scf/min. BD @ 2880#, ATP 3600#, MTP 3630#, and ISIP 2800#.

Perf Huron Shale 20H/4796-5195. N₂ frac using 500 gal. 8% inh fe acid, 806,000 scf N₂ @ 98,000 scf/min. BD @ 2900#, ATP 3100#, MTP 3460#, ISIP 1900#.

Perf U. Shale and Gordon 18H/3442-3747. N₂ frac using 426,500 scf N₂ @ 25,000 scf/min. BD @ 1420#, ATP 1350#, MTP 1420#, ISIP 1150#. Well circulated. Squeeze off top section and re-frac using 844,000 scf N₂ @ 70,000 scf/min. BD @ 1900#, ATP 2300#, MTP 3050#, ISIP 1800# and 15 min. 960#.

Perf Injun, Weir and Borden 16H/2858-2942. 75 Quality foam frac using 1000 gal 15 1/2% inh. fe acid, 411,106 scf N₂ @ 14,100 scf/min. and 85,900# 20/40 sand. BD 600# with treated Wtr, ATP 1287 @ 40 bpm foam rate MTP 1360#, ISIP 813, 15 min. 703 and TF 405 bbls.

55251

039-4832
Issued 8/8/91
Expires 8/8/93
Page 1 of 1

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
Eastern Associated Coal Corp.
- 2) Operator's Well Number: 98, Serial #135191 3) Elevation: 1738.04'
- 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: 6488'KB feet
- 7) Approximate fresh water strata depths: 1123'KB (Map WV-12 1 of 2)
- 8) Approximate salt water depths: 1073'KB (Map WV-12 2 of 2)
- 9) Approximate coal seam depths: No. 2 Gas Elev. 1160' Top Mined Out
- 10) Does land contain coal seams tributary to active mine? Yes / No X/
- 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	638	638	CTS
Intermediate	8 5/8	J-55	24.0	1793	1793	CTS
Production	5 1/2	J-55	15.5	6488	6488	As Needed
Tubing	1.9	J-55	2.76	-	6438	Siphon
Liners						

PACKERS : Kind _____
Sizes _____
Depths set _____

RECEIVED
Division of Energy
JUL 23 91

For Division of Oil and Gas Use Only

506275
20 Fee(s) paid: Well Work Permit Reclamation Fund WPCP
 Plat WW-9 WW-2B Bond Security Agent
(Type)

- 1) Date: July 22, 1991
- 2) Operator's well number Serial #135191
Eastern Associated Coal Corp. #98
- 3) API Well No: 47 - 039 - 4832
State - County - Permit

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

NOTICE AND APPLICATION FOR A WELL WORK PERMIT

RECEIVED
Division of Energy
JUL 23 1991

- | | |
|--|---|
| <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>None</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 Hively</u>
Address <u>223 Pinch Ridge Road</u>
<u>Elkview, WV 25071</u>
Telephone (304)-<u>877-2912</u></p> | <p>(c) Coal Lessee with Declaration
Name <u>MX 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
 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)
- 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 22nd day of July, 1991

W. B. W. Parks Notary Public
My commission expires November 23, 1994

Schlumberger

TEMPERATURE & LITHO-DENSITY LOG

COMPANY ASHLAND EXPLORATION, INC.
WELL EASTERN ASSOCIATED COAL # 98
FIELD ESKDALE QUADRANGLE
COUNTY KANAWHA **STATE** WEST VIRGINIA

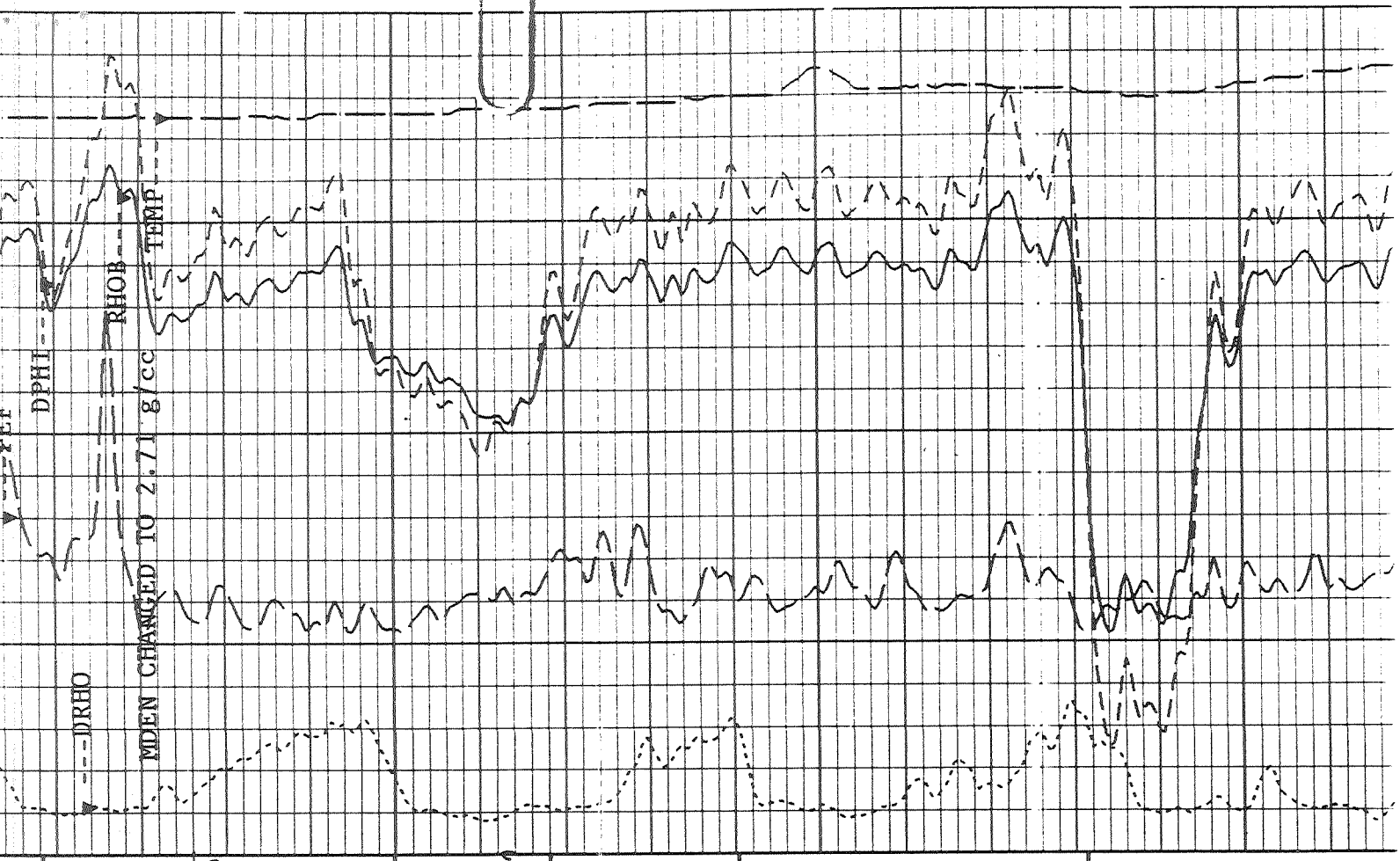
LOCATION	12600'FSL 8450'FWL	38° 07' 30"			Other Services: TEMP LDT DIL GR
	CABIN CREEK DISTRICT	81° 22' 30"			
API SERIAL NO.	SECT.	TWP.	RANGE		
47-039-4832	N/A	N/A	N/A		

Permanent Datum	GROUND LEVEL	Elev.	1738.0 F	Elev.: K.B.1748.0 F
Log Measured From	KELLY BUSHING	10.0 F	above Perm. Datum	D.F.1747.0 F
Drilling Measured From	KELLY BUSHING			G.L.1738.0 F

Date	4-OCT-1991		
Run No.	ONE		
Depth Driller	6526.0 F		
Depth Logger (Schl.)	6523.0 F		
Btm. Log Interval	6516.0 F		
Top Log Interval	2515.0 F		
Casing-Driller	8 5/8"	@ 2515.0 F	@
Casing-Logger	2515.0 F		
Bit Size	7 7/8"	@ 6526.0 F	@
Type Fluid in Hole	AIR / GAS		
Dens.	Visc.	0.0 LB/G	
pH	Fid. Loss		
Source of Sample			
Rm @ Meas. Temp.	@	@	
Rmf @ Meas. Temp.	@	@	
Rmc @ Meas. Temp.	@	@	
Source: Rmf	Rmc		
Rm @ BHT	@	127. DEGF	@

TIME	Circulation Ended	9:30 OCT 4
	Logger on Bottom	17.15 OCT 4
Max. Rec. Temp.	127. DEGF	
Equip.	8291	PAINTSILLE, KY
Recorded By	B. WICHMANN	
Witnessed By	T. WHITE	

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



Top of Injw
2846'

Base of Injw
2868'

2900

