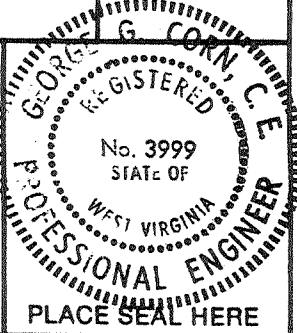


FILE NO. 62-72
 DRAWING NO. ~
 SCALE 2000
 MINIMUM DEGREE OF ACCURACY 1:4,140
 PROVEN SOURCE OF ELEVATION BM 1301 on Spruce Laurel Fork

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) George G. Corn
 R.P.E. 3999 L.L.S.



STATE OF WEST VIRGINIA
 DEPARTMENT OF ENERGY
 OIL AND GAS DIVISION

DATE December 13, 19 89
 OPERATOR'S WELL NO. 18, Ser. No. 120031
 API WELL NO. 47 005 1550

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

LOCATION: ELEVATION 1473.0 WATERSHED Dennison Fork of Spruce Laurel Fork
 DISTRICT Washington 5 COUNTY Boone
 QUADRANGLE Lorado Bald Knob SW

SURFACE OWNER The Southern Land Company, et al ACREAGE 7,000.
 OIL & GAS ROYALTY OWNER The Southern Land Co., et al LEASE ACREAGE 15,404.
 LEASE NO. 33666

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 5,778. KB

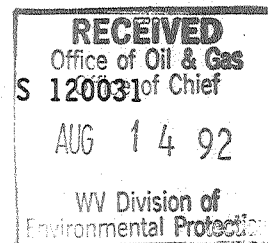
WELL OPERATOR Ashland Exploration, Inc. DESIGNATED AGENT B. E. Widener
 ADDRESS P.O. Box 391 Ashland, Ky. 41114 ADDRESS P.O. Box 379 Brenton, W. Va. 24618

DEEPWELL 6-6 Man Ocean (216)

COUNTY NAME _____ PERMIT _____

State of West Virginia
Division of Environmental Protection
Section of Oil and Gas
Well Operator's Report of Well Work

Reviewed FMG
Recorded _____



Farm name: SOUTHERN LAND COMPANY Operator Well No.: 18 S
LOCATION: Elevation: 1473 Quadrangle: LORADO
District: WASHINGTON County: BOONE
Latitude: 1150 Feet South of 37 Deg. 50 Min. 0 Sec.
Longitude: 5000 Feet West of 81 Deg. 42 Min. 30 Sec.

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

Agent: B. E. WIDENER

Inspector: OFIE HELMICK

Permit Issued: 02/11/92
Well work Commenced: 04/29/92
Well work Completed: 07/17/92
Verbal Plugging: _____
Permission granted on: _____
Rotary X Cable _____ Rig _____
Total Depth (feet) 5844
Fresh water depths (ft) _____
5" stream 50'
Salt water depths (ft) _____
Damp 1032'
Is coal being mined in area (Y/N)? N
Coal Depths (ft): None noted

Casing & Tubing	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
Size			
16"	29'	29'	11.8
11 3/4"	210'	210'	356
8 5/8"	1917'	1917'	607
5 1/2"	5806'	5806'	1129
1.9" @ 1.9" @	5667' w/ 3473'	R-4 pkr @	3495

OPEN FLOW DATA

Producing formation Dev. Shale Pay zone depth (ft) 3979-5731
Gas: Initial open flow 0 MCF/d Oil: Initial open flow --- Bbl/d
Final open flow *451 MCF/d Final open flow --- Bbl/d
Time of open flow between initial and final tests 3 Hours
Static rock pressure 625# psig (surface pressure) after 72 Hours
Berea 3442-3451
Big Lime/Injun 2910-2997
Second producing formation Maxton Pay zone depth (ft) 2334-2340
Gas: Initial open flow 223 MCF/d Oil: Initial open flow --- Bbl/d
Final open flow *1057 MCF/d Final open flow --- Bbl/d
Time of open flow between initial and final tests 3 Hours
Static rock Pressure 650# psig (surface pressure) after 72 Hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1. DETAILS OF PERFORATED INTERVALS, FRACTURING OF STIMULATING, PHYSICAL CHANGE, ETC. 2.) THE WELL LOG WHICH IS A SYSTEMATIC DETIALED 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: 8/10/92

AUG 21 1992

<u>Formation on Rock Type</u>	<u>TOP</u>	<u>BASE</u>
Sand and Shale (Base Lee Fm)	0	1918
Pennington formation	1918	2544
Ravenscliff 1986-2000		
U. Maxton 2114-2198		
M. Maxton 2241-2352		
L. Maxton 2494-2532		
Little Lime	2544	2606
Big Lime	2606	2947
Borden formation	2947	3403
Sunbury Shale	3403	3423
Berea	3423	3452
Devonian Shale	3452	5839
Onondaga Ls	5839	TD

DTD 5844

LTD 5852

11 $\frac{3}{4}$ " casing cemented to surface by grouting 80 sx after primary job.
8" casing cemented to surface on primary job.

Well Treatment

Perf Rhinestreet 21H/5434-5731. N₂ frac using 500 gal 8% fe acid, 803,000 scf N₂ @ 36,950 scf/min. BD @ 3810#, ATP 3963#, MTP 4094# and ISIP 3792.

Perf L. Huron 27H/4522-5053. N₂ frac using 500 gal 8% fe acid, 864,000 scf N₂ @ 110,730 scf/min. BD @ 3456#, ATP 3466#, MTP 3708# and ISIP 2097#.

Perf U. Dev. Shale 20H/3979-4246. N₂ frac using 500 gal 8% HCL w/ fe acid, 809,000 scf N₂ @ 111,578 scf/min. BD @ 3498#, ATP 3285#, MTP 3600# and ISIP 2037#.

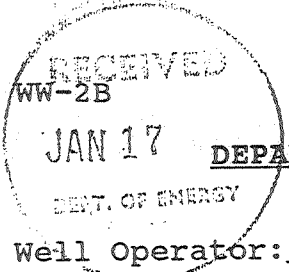
Perf Berea 19H/3442-3451. 75 quality foam frac using 250 gal 15% fe acid, 70,900# 20/40 sand and 311,630 scf N₂ @ 10,400 scf/min. BD @ 1351#, ATP 1347# @ 25 BPM foam rate, MTP 1556# and ISIP 1241#.

Perf Injun/Big Lime 12H/2910-2997. 65 quality foam acidize using 500 gal 15% fe acid, 8000 gals. 28% acid and 280,000 scf N₂ @ 6900 scf/min. BD @ 1150#, ATP 1500# @ 21 BPM, MTP 1870# and ISIP 1210#.

Perf M. Maxton 13H/2334-2340. 75 quality foam frac using 500 gal 14% fe acid, 74,400# 20/40 sand and 474,000 scf N₂ @ 10,000 scf/min. BD 3060#, ATP 3650# @ 25 BPM foam rate, MTP 3870# and ISIP 2600#.

005-1550

FORM WW-2B



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

Issued Page 1 of 1 2/11/92 Expires 2/11/94 2750(5) 445

- 1) Well Operator: Ashland Exploration, Inc. Southern Land Co., et al
2) Operator's Well Number: 18, Serial #120031 3) Elevation: 1473.0'
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: 5778'KB feet
7) Approximate fresh water strata depths: Base 530'KB
8) Approximate salt water depths: Top 920'KB
9) Approximate coal seam depths: Solid - None Operated
10) Does land contain coal seams tributary to active mine? Yes / No X/
11) Proposed Well Work: Drill and Stimulate New Well
12)

CASING AND TUBING PROGRAM

Table with 7 columns: TYPE, SPECIFICATIONS (Size, Grade, Weight per ft.), FOOTAGE INTERVALS (For drilling, Left in well), CEMENT (Fill-up (cu.ft.)). Rows include Conductor, Fresh Water, Coal, Intermediate, Production, Tubing, and Liners.

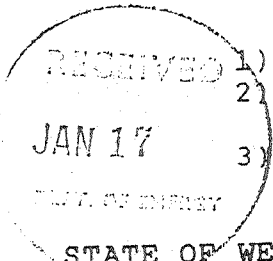
PACKERS : Kind Sizes Depths set

For Division of Oil and Gas Use Only

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

14121

506427



Date: January 16, 1992
Operator's well number
The Southern Land Co. #18, Serial #120031
API Well No: 47 - 005 - 1550
State - County - Permit

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

- | | |
|--|--|
| <p>4) Surface Owner(s) to be served:
 (a) Name <u>The Southern Land Co., etal</u>
 Address <u>P.O. Box 1385</u>
 <u>Charleston, WV 25325</u>
 (b) Name _____
 Address _____
 (c) Name _____
 Address _____</p> | <p>5) (a) Coal Operator:
 Name <u>Peabody/Eastern Associated Coal</u>
 Address <u>P.O. Box 29</u>
 <u>Wharton, WV 25208</u>
 (b) Coal Owner(s) with Declaration
 Name <u>Same as No. 4(a)</u>
 Address _____
 Name _____
 Address _____
 (c) Coal Lessee with Declaration
 Name <u>Peabody Coal Company</u>
 Address <u>P.O. Box 1233</u>
 <u>Charleston, WV 25334</u></p> |
| <p>6) Inspector <u>Richard S. Campbell</u>
 Address <u>Box 163</u>
 <u>Hamlin, WV 25523</u>
 Telephone (304)-<u>824-5828</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 606-329-5450

Subscribed and sworn before me this 16th day of January, 1992

Theresa W. Sponta Notary Public
 My commission expires November 23, 1994

Jamie Stevens
January 16, 1992
Page 2

005-1550

DISTRIBUTION

Don Pauley, Mining Engr.
The Southern Land Company, et al
P.O. Box 1385
Charleston, WV 25323

Gary Halstead, Manager Engr.
Peabody Coal Company
P.O. Box 1233
Charleston, WV 25334

Darrell Trent, Mining Engr.
Peabody/Eastern Associated Coal
P.O. Box 29
Wharton, WV 25208