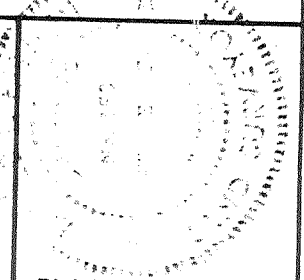


FILE NO. _____
 DRAWING NO. _____
 SCALE 1" = 2,000'
 MINIMUM DEGREE OF ACCURACY 1:105,377
 PROVEN SOURCE OF ELEVATION Colony Bay Coal Co.
Sta. "V-594-C", Elev. = 2255.68

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

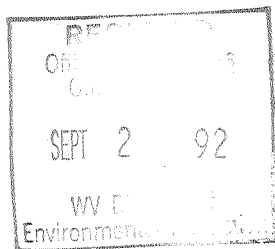


STATE OF WEST VIRGINIA
DEPARTMENT OF ENERGY
OIL AND GAS DIVISION

DATE November 8, 19 91
 OPERATOR'S WELL NO. 20, S.N. 140131
 API WELL NO. _____

WELL TYPE: OIL _____ GAS LIQUID INJECTION _____ WASTE DISPOSAL _____
 (IF "GAS,") PRODUCTION STORAGE _____ DEEP _____ SHALLOW
 LOCATION: ELEVATION 2137.71 WATERSHED Cow Creek of Pond Fork of Little Coal River
 DISTRICT Crook COUNTY Boone
 QUADRANGLE Lorado Bald Knob WV
 SURFACE OWNER The Southern Land Company, etal ACREAGE 7,000
 OIL & GAS ROYALTY OWNER The Southern Land Company, etal 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 6478 KB
 WELL OPERATOR Ashland Exploration, Inc. DESIGNATED AGENT Bobby E. Widener
 ADDRESS P.O. Box 391 ADDRESS (247) P.O. Box 379
Ashland, Ky. 41114 6-6 unannounced (6) Brenton, W.Va. 24818

COUNTY NAME _____
 PERMIT _____



State of West Virginia
Division of Environmental Protection
Section of Oil and Gas

Well Operator's Report of Well Work

Farm name: SOUTHERN LAND CO, THE Operator Well No.: 20-S-140131

LOCATION: Elevation: 2137.71 Quadrangle: LORADO
District: CROOK County: BOONE
Latitude: 6650 Feet South of 37 Deg. 52 Min. 30 Sec.
Longitude: 300 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: RICHARD CAMPBELL

Permit Issued: 03/27/92
Well work Commenced: 05/18/92
Well work Completed: 08/20/92

Verbal Plugging:
Permission granted on: _____
Rotary X Cable _____ Rig
Total Depth (feet) 6496
Fresh water depths (ft) _____
None
Salt water depths (ft) _____
1738' damp

Is coal being mined in area (Y/N)? N
Coal Depths (ft): 123-128, 132-142,
220-224, 332-336, 404-411, 420-423,
600-608, and 1090-1095

| Casing & Tubing Size | Used in Drilling | Left in Well | Cement Fill Up Cu. Ft. |
|----------------------|------------------|--------------|------------------------|
| 16" | 28' | 28' | 17.7 |
| 8 5/8" | 2620' | 2620' | 594 |
| 5 1/2" | 6476' | 6476' | 1009 |
| 1.9" @ | 6235'KB | w/ R-4pkr @ | 4104'KB |
| 1.9" @ | 4041'KB | | |

OPEN FLOW DATA

Producing formation Devonian Shale Pay zone depth (ft) 4377-6275
Gas: Initial open flow 0 MCF/d Oil: Initial open flow --- Bbl/d
Final open flow *712 MCF/d Final open flow --- Bbl/d
Time of open flow between initial and final tests 3 Hours
Static rock pressure 850# psig (surface pressure) after 72 Hours

Second producing formation Berea Pay zone depth (ft) 4040-4052
Injun 3632-3644
Gas: Initial open flow 0 MCF/d Oil: Initial open flow --- Bbl/d
Final open flow *2949 MCF/d Final open flow --- Bbl/d
Time of open flow between initial and final tests 3 Hours
Static rock Pressure 685# 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.

Reviewed TMG
Recorded _____

By: James L. Stephens James L. Stephens, Eng. Tech.
Date: 8/31/92

SEP 21 1992

| <u>Formation on Rock Type</u> | <u>TOP</u> | <u>BASE</u> |
|-------------------------------|------------|-------------|
| Sand and Shale (Base Lee Fm) | 0 | 2413 |
| Pennington formation | 2413 | 3159 |
| U. Maxton 2705-2843 | | |
| M. Maxton 2916-2978 | | |
| Little Lime | 3159 | 3239 |
| Big Lime | 3239 | 3552 |
| Borden formation (Big Injun) | 3552 | 4006 |
| Sunbury Shale | 4006 | 4026 |
| Berea | 4026 | 4053 |
| Devonian Shale | 4053 | 6485 |
| Onondaga Ls | 6485 | TD |

DTD 6496

LTD 6499

8 1/2" casing cemented to surface on primary job.

Well Treatment

Perf Rhinestreet 19H/5930-6275. N₂ frac using 450 gal 8% fe acid, 806,000 scf N₂ @ 101,000 scf/min. BD @ 2350#, ATP 3800#, MTP 3830# and ISIP 3000#.

Perf L. Huron 22H/5172-5640. N₂ frac using 500 gal 8% fe acid, 806,000 scf N₂ @ 106,000 scf/min. BD @ 3640#, ATP 3250#, MTP 3940# and ISIP 2200#.

Perf U. Dev. Shale 17H/4377-4763. N₂ frac using 550 gal 8% fe acid, 989,000 scf N₂ @ 107,000 scf/min. BD @ 2210#, ATP 3500#, MTP 4280# and ISIP 1800#.

Perf Berea 25H/4040-4052. 75 quality foam frac using 500 gal 14 1/2% fe acid, 73,500# 20/40 sand, 421,000 scf N₂ @ 12,700 scf/min. BD @ 1252#, ATP 1250# @ 25 BPM foam rate, MTP 1362# and ISIP 1362#.

Perf Injun 12H/3632-3644. N₂ frac using 500 gal 15% fe acid, 809,000 scf N₂ @ 98,835 scf/min. BD @ 2307#, MTP 4080#, ATP 3810#, ISIP 2261#.

*Smyso 100' thick
Marcellus 30' thick*

RECEIVED

MAR 11 1992
DEPT. OF ENERGY

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

77-005-1500 1560
Page 1 of 1
Issued 3/27/92
Expires 3/27/94

- 1) Well Operator: Ashland Exploration, Inc. ⁴³ Southern Land Company, et al
- 2) Operator's Well Number: 20, Serial #140131 3) Elevation: 2137.7
- 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 ⁴⁴¹
- 6) Proposed Total Depth: 6478'KB feet ^{641', 886'}
- 7) Approximate fresh water strata depths: Base 1050'KB (Map WV-12)
- 8) Approximate salt water depths: Top 1650'KB (Map WV-12) ^{2841', 2166'}
- 9) Approximate coal seam depths: Solid - No Seams Operated
- 10) Does land contain coal seams tributary to active mine? Yes / No X/ ^{441'-443', 705'-708', 806'-871', 2410'-2416'}
- 11) Proposed Well Work: Drill and Stimulate New Well
- 12)

CASING AND TUBING PROGRAM

| TYPE | SIZE | GRADE | WEIGHT PER FT. | FOOTAGE | INTERVALS | CEMENT |
|---|-------|-------|----------------|---------|-----------|------------------------|
| Conductor | 16 | LS | 36.91 | 30 | 30 | CTS |
| Fresh Water | | | | | | 380SR/18/13 |
| Coal <i>Fresh Water & Coal</i> | | | | | | 380SR/18/22 |
| Intermediate | 8 5/8 | J55 | 24.0 | 2600 | 2600 | CTS |
| Production | 5 1/2 | J55 | 15.5 | 6478 | 6478 | AS NEEDED |
| Tubing | 1.9 | J55 | 2.76 | - | 6428 | SIPHON |
| Liners | | | | | | 380SR/18/11 |

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 James Blankenship Agent
(Type)

506
to

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

RECEIVED
Office of Oil & Gas
1992

MAR 13 92

WV Division of
Oil and Gas
2137
Martinsburg, WV

- 1) Well Operator: Ashland Exploration, Inc.
- 2) Operator's Well Number: Southern Land Company, et al
20, Serial #140131 3) Elevation: 2137
- 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: 6478'KB feet
- 7) Approximate fresh water strata depths: Base 1050'KB (Map WV-12)
- 8) Approximate salt water depths: Top 1650'KB (Map WV-12)
- 9) Approximate coal seam depths: Solid - No Seams Operated
- 10) Does land contain coal seams tributary to active mine? Yes / No X/
- 11) Proposed Well Work: Drill and Stimulate New Well
- 12)

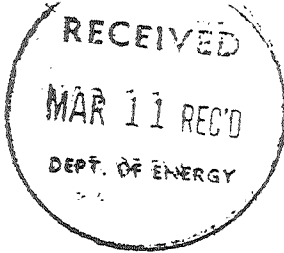
CASING AND TUBING PROGRAM

| TYPE | SPECIFICATIONS | | | FOOTAGE INTERVALS | | CEMENT | |
|---|-------------------|---|----------------|-------------------|--------------|----------------------------------|--|
| | Size | Grade | Weight per ft. | For drilling | Left in well | Fill-up (cu.ft.) | |
| Conductor | 16 | LS | 36.91 | 30 | 30 | CTS | |
| Fresh Water | | | | | | | |
| Coal | | | | | | | |
| <i>Fresh Wtr + Coal</i> Intermediate | 8 5/8 | J55 | 24.0 | 2600 | 2600 | <i>Figure 35% Excess.</i> CTS | |
| Production | 5 1/2 | J55 | 15.5 | 6478 | 6478 | AS NEEDED | |
| Tubing | 1.9 | J55 | 2.76 | - | 6428 | SIPHON | |
| Liners | <i>AC</i> 3-11-92 | <i>Note: Recommend 9" for thru fresh water.</i> | | | | | |

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 _____ Agent
 (Type)



1) Date: March 6, 1992
2) Operator's well number
Southern Land Co., et al #20, Serial #14013
3) API Well No: 47 - 005 - 1560
State - County - Permit

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

NOTICE AND APPLICATION FOR A WELL WORK PERMIT

4) Surface Owner(s) to be served:
(a) Name The Southern Land Co., et al
Address P.O. Box 1385
Charleston, WV 25325
(b) Name _____
Address _____
(c) Name _____
Address _____
6) Inspector Richard S. Campbell
Address Box 163
Hamlin, WV 25523
Telephone (304)-824-5828

5) (a) Coal Operator:
Name Perry & Hylton, Inc.
Address P.O. Drawer AR
Beckley, WV 25802-2840
(b) Coal Owner(s) with Declaration
Name Same as No. 4(a)
Address _____
Name _____
Address _____
(c) Coal Lessee with Declaration
Name Peabody/Eastern Associated Coal
Address P.O. Box 29
Wharton, WV 25208

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 6th day of March, 1992

Neil W. South
My commission expires November 23, 1994 Notary Public