



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

FILE NO. _____
 DRAWING NO. _____
 SCALE 1" = 2000'
 MINIMUM DEGREE OF ACCURACY 1: 11325
 PROVEN SOURCE OF ELEVATION T.B.M. for Pardes #73
 Elev. = 14821

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 THE LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENERGY.
 (SIGNED) Ronald L. Eastman
 R.P.E. _____ L.L.S. 150

PLACE SEAL HERE

STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY OIL AND GAS DIVISION

DATE October 23 19 92
 OPERATOR'S WELL NO. Southern Lands Co., at #21, S.N. 14270.1
 API WELL NO. 47-005-1569

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___ STATE COUNTY PERMIT
 (IF "GAS,") PRODUCTION ___ STORAGE X DEEP ___ SHALLOW X

LOCATION: ELEVATION 149560 WATER SHED Spruce Laurel Fork of the Little Coal River
 DISTRICT Washington S COUNTY Boone
 QUADRANGLE Lorado Bald Knob W.C.

SURFACE OWNER The Southern Lands Company, et al ACREAGE 7000
 OIL & GAS ROYALTY OWNER The Southern Lands Company, et al LEASE ACREAGE 15404

LEASE NO. 33666
 PROPOSED WORK: DRILL ___ CONVERT X 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 INFORMATION Devonian Shale ESTIMATED DEPTH 5870' KB

WELL OPERATOR Ashland Exploration, Inc. DESIGNATED AGENT Bobby E. Widener
 ADDRESS P.O. Box 391 ADDRESS P.O. Box 379
DEEPWELL Ashland, Ky. 41114 6-6 Ashland Man-Oceana Brenton, W.V. 24818 (266)

FORM WW-6

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.

Operator Well No.: 21-S-142701

LOCATION: Elevation: 1495.60

Quadrangle: LORADO

District: WASHINGTON

County: BOONE

Latitude: 14750 Feet South of 37 Deg. 52 Min. 30 Sec.

Longitude: 1150 Feet West of 81 Deg. 42 Min. 30 Sec.

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

Agent: B. E. WIDENER

Inspector: RICHARD CAMPBELL

Permit Issued: 11/24/92
Well work Commenced: 12/29/92
Well work Completed: 2/26/93

Verbal Plugging:
Permission granted on:
Rotary x Cable _____ Rig _____
Total Depth (feet) 5895
Fresh water depths (ft) _____
5" stream @ 50'
Salt water depths (ft) 1030'

Is coal being mined in area (Y/N)? N
Coal Depths (ft): _____
118-120, 192-203

Casing & Tubing	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
Size			
20"	17'	17'	driven
16"	35'	35'	13
11 3/4"	181'	181'	224
8 5/8"	1963'	1963'	641
5 1/2"	5889'	5889'	634
1.9" @	5646'	w/ pkr @	3549
1.9" @	3482		

OPEN FLOW DATA

2983 MCF Total

Producing formation Berea M. Maxton Pay zone depth (ft) 3452-3466
 Gas: Initial open flow 0 MCF/d Oil: Initial open flow --- Bbl/d
 Final open flow 2203 MCF/d Final open flow --- Bbl/d
 Time of open flow between initial and final tests 3 Hours
 Static rock pressure 630# psig (surface pressure) after 72 Hours

Second producing formation Dev. Shale Pay zone depth (ft) 3770-5719
 Gas: Initial open flow 0 MCF/d Oil: Initial open flow --- Bbl/d
 Final open flow 780 MCF/d Final open flow --- Bbl/d
 Time of open flow between initial and final tests 3 Hours
 Static rock Pressure 835# 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.

TM6

For: ASHLAND EXPLORATION, INC.
By: James L. Stephens James L. Stephens
Date: 3-11-93

<u>Formation on Rock Type</u>	<u>TOP</u>	<u>BASE</u>
Sand and Shale (Base Lee Sand)	0	1955
Pennington	1955	2558
U. Maxton 2072-2166		
M. Maxton 2272-2376		
L. Maxton 2500-2532		
Little Lime	2558	2637
Big Lime	2637	2960
Borden	2960	3424
Sunbury Shale	3424	3438
Berea	3438	3467
Devonian Shale	3467	5900
Onondaga Lime	5900	TD

DTD 5895
LTD 5914

DF-461
DFT-830

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

Well Treatment

Perf Rhinestreet Shale w/ 3 1/2" HCG 1SPF SF @ 5719, 5710, 5706, 5687, 5666, 5664, 5657, 5646, 5641, 5608, 5603, 5595, 5585, 5581, 5579, 5574, 5571, 5559, 5553 (19 shots total). Dumped 200 gal 10% HCl-Fe acid. N₂ frac'd the Rhinestreet w/ 801,000 scf N₂ @ 58,000 - 74,000 scf/min. BD 3910, ATP 4150, MTP 4280, ISIP 3600.

Perf L. Huron w/ SF HCG 1SPF: 5090, 5088, 5064, 5050, 5046, 5021, 5018, 5016, 5002, 4998, 4955, 4932, 4929, 4926, 4882, 4772, 4703, 4663, 4660, 4646, 4616, 4612, 4603 (23 holes total). N₂ frac'd the L. Huron w/ 500 gal 10% HCl-Fe acid and 810,000 scf N₂ @ 95,000 - 102,000 scf/min. BD 2180, ATP 2800, MTP 2850, ISIP 1950.

Perf the U. Dev. Shale w/ SF HCG 1SPF: 4176, 4173, 4102, 4100, 4004, 4000, 3986, 3977, 3956, 3954, 3936, 3881, 3843, 3829, 3813, 3785, 3783, 3780, 3770 (19 holes total). N₂ frac U. Dev. Shale using 450 gals 10% HCl-Fe acid 805,000 scf N₂ @ 98,000 - 100,000 scf/min. BD 2050, ATP 2500, MTP 2620, ISIP 1700.

Perf Berea using 4" HCG 2SPF 14H/3452-3458, 14H/3460-3466 (28 total shots). RU DS and dump 250 gal 20% HCl-Fe acid. 75Q foam frac Berea using 68,500# 20/40 sand ramped from 4-16 ppg; 295,000 scf N₂ @ 8200 scf/min. BD 1150, ATP 1050, MTP 1264, ISIP 1130, 15 min 1000#, TF 173 bbls.

Perf Middle Maxton using 4" HCG 2 SPF @ 2329-2348 (40 shots total). Dump 200 gal 16% HCl-Fe. 75Q ramp frac M. Maxton 4-12#/gal using 17,000# 20/40 sand and 178,000 scf N₂ @ 8600 and 5200 scf/min. BD @ 3314, ATP 3310 @ 20 and 12 B/M foam, MTP 3590, ISIP screen out, TF 76 bbl. Dump 200 gal 19% HCl-Fe. 75Q foam frac M. Maxton using 55,650# 20/40 sand; 493,000 scf N₂ @ 11,000 scf/min. BD @ 3712, ATP 3200 @ 20 B/M foam, MTP 3712, ISIP 3300, 15 min 2800, TF 259 bbl.

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11/24/92

11/24/94

Permitting Office of Oil & Gas

STATE OF WEST VIRGINIA

DEPARTMENT OF ENERGY, DIVISION OF OIL AND GAS

WELL WORK PERMIT APPLICATION

2750 (5) 445

- 1) Well Operator: Ashland Exploration, Inc., Southern Land Co., et al
- 2) Operator's Well Number: 21, Serial No. 142701 3) Elevation: 1459.6
- 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: 5870' KB feet
- 7) Approximate fresh water strata depths: 50
- 8) Approximate salt water depths: 1032
- 9) Approximate coal seam depths: Solid-no mineable seams
- 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	42.0	30	30	CTS.
Fresh Water	11 3/4	H40	42.0	100	100	CTS
Coal						38 CSRA-11.3
Intermediate	8 5/8	J55	24.0	2015	2015	38 CSRA-11.2-2 CTS
Production	4 1/2	J55	10.5	5870	5870	As Needed
Tubing	2 3/8	J55	4.7	-	5750	Siphon
Liners						38 CSRA-11.1

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 Blanket Sure Agent
 (Type)

507880/36

Environment
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Office of Oil & Gas

- 1) Date: November 9, 1992
- 2) Operator's well number
The Southern Land Co., et al #21, Serial#142
- 3) API Well No: 47 - 005 - 1569
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 Peabody/Eastern Associated Coal
Address P.O. Box 29
Wharton, WV 25208
- (b) Coal Owner(s) with Declaration
Name same as No. 4(a)
Address _____
- Name _____
Address _____
- (c) Coal Lessee with Declaration
Name Peabody Coal Company
Address P.O. Box 1233
Charleston, WV 25334

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 OXC
Its: Operations Manager
Address P.O. Box 391
Ashland, KY 41114
Telephone (606) 329-5450

Subscribed and sworn before me this 9th day of November, 19 92

Tricki W. Nanta Notary Public
My commission expires November 23, 1994