

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

FILE NO. \_\_\_\_\_  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 2,000'  
 MINIMUM DEGREE OF ACCURACY 1:15,546  
 PROVEN SOURCE OF ELEVATION Armco Mine Datum

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

PLACE SEAL HERE

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



DATE July 3, 19 90  
 OPERATOR'S WELL NO. SILER COAL & LAND  
 API WELL NO. CO., NO. 31, S.N. 126601

47 005 1520  
 STATE COUNTY PERMIT

WELL TYPE: OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
 (IF "GAS,") PRODUCTION \_\_\_ STORAGE X DEEP \_\_\_ SHALLOW X  
 LOCATION: ELEVATION 953.1 WATERSHED River Fork of Fork Creek of Big Coal River  
 DISTRICT Peytona COUNTY Boone  
 QUADRANGLE Julian Madison #15 NE  
 SURFACE OWNER Drummond Company, Inc. ACREAGE 13,000 +  
 OIL & GAS ROYALTY OWNER Ashland Exploration, Inc. LEASE ACREAGE 9,629  
 LEASE NO. Fee 376

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 4,468' K.B.  
 WELL OPERATOR Ashland Exploration, Inc. DESIGNATED AGENT Forrest Burkett  
 ADDRESS P.O. Box 391 ADDRESS P.O. Box 156  
Ashland, KY 41114 Brenton, WV 24818

AUG 6 1990

DEEP WELL 6-6 Hornshaw-Bull Creek (238)

**RECEIVED**  
Division of Energy

NOV 28 90

Permitting  
and Gas Section

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

31-Jul-90  
API # 47- 5-01520

Well Operator's Report of Well Work

Farm name: DRUMMOND CO., INC

Operator Well No.: 31S#126601

LOCATION: Elevation: 952.10      Quadrangle: JULIAN

District: PEYTONA      County: BOONE  
Latitude: 9160 Feet South of 38 Deg. 12Min. 30 Sec.  
Longitude 520 Feet West of 81 Deg. 45 Min. 0 Sec.

Company: ASHLAND EXPLORATION PROPE  
P. O. BOX 391  
ASHLAND, KY 41114-0391

Agent: FORREST E. BURKETT

Inspector: JERRY HOLCOMB  
Permit Issued: 08/01/90  
Well work Commenced: 9/21/90  
Well work Completed: 11/8/90  
Verbal Plugging  
Permission granted on:  
Rotary X Cable Rig  
Total Depth (feet) 4460'  
Fresh water depths (ft) 2" stream @  
Salt water depths (ft) 644' CI @ 4000

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
16"	35'	35'	7.08
8 5/8"	335'	335'	395
5 1/2"	4418'	4418'	698
1.9" @ 4231'	w/ADL-1 Pkr @ 2100'		KB
1.9" @ 2042'			KB

Is coal being mined in area (Y/N)? N  
Coal Depths (ft): Not noted while drilling

OPEN FLOW DATA

Producing formation Devonian Shale Pay zone depth (ft) 3226-4336  
Gas: Initial open flow 0/133 MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow 696/1014 MCF/d Final open flow \_\_\_\_\_ Bbl/d  
Time of open flow between initial and final tests 3 Hours  
Static rock Pressure 710 psig (surface pressure) after 72 Hours  
Berea 2034-2038  
Second producing formation Big Lime/Injun Pay zone depth (ft) 1489-1596  
Gas: Initial open flow 133 MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow 318 MCF/d Final open flow \_\_\_\_\_ Bbl/d  
Time of open flow between initial and final tests 3 Hours  
Static rock Pressure 230 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 PROPERTIES, INC.

By: James L. Stephens James L. Stephens, Engr. Tech.  
Date: November 26, 1990

DEC 5 1990

FORMATION OR ROCK TYPE

TOP

BASE

Sand & Shale	0	574
Lee Sand	574	1174
Sand & Shale	1174	1276
Lower Maxton	1276	1310
Little Lime	1310	1378
Big Lime	1378	1560
Shale	1560	1580
Injun Shale	1580	1600
Shale	1600	2017
Coffee Shale	2017	2032
Berea	2032	2043
Devonian Shale	2043	4450
Onondaga LS	4450	TD

DTD 4460

LTD 4470

DFT

WELL TREATMENT

Perf L. Dev. Shale 20H/4126-4336. <sup>LH</sup> N<sub>2</sub> frac using 500 gal 8% inh Fe acid, 1,000,005 SCF N<sub>2</sub> @ 95,000 SCF/min. BD @ 2290#, ATP 3550#, MTP 3610#, ISIP 2200# & 15 min 1240#.

Perf U. Dev. Shale 22H/3276-3715. <sup>LH</sup> N<sub>2</sub> frac using 500 gal 8 1/2% Fe inh acid, 1,000,060 SCF N<sub>2</sub> @ 95,000 SCF/min. BD @ 1260#, ATP 2800#, MTP 2910#, ISIP 1200#, 15 min 1100#.

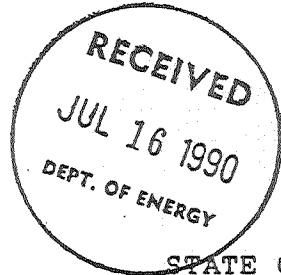
Perf Berea 16H/2034-2038. 75 quality foam frac using 30,000# 20/40 sand, 187,000 SCF N<sub>2</sub> @ 7,000 SCF/min. BD @ 2531#, ATP 2338# @ 20 bpm foam rate, MTP 4290#, ISIP 4290# & 15 min 4073#.

Perf Big Lime & Injun 14H/1489-1596. Breakdown perms w/750 gal 15% inh Fe acid & 25 perf balls. Ball out completely. 75 quality foam frac using 45,100# 20/40 sand, 243,000 SCF N<sub>2</sub> @ 11,000 SCF/min and 5% acid solution. BD @ 1800#, ATP 2458# @ 40 bpm foam rate, ISIP 1617#, 15 min 1257# & TF 277 bbls.

UD 2032  
 LH 3250

J 4320





- 1) Date: July 13, 1990
- 2) Operator's well number Siler Coal & Land Co. #31, Serial #126601
- 3) API Well No: 47 - 005 - 1520  
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:</p> <p>(a) Name <u>Drummond Company, Inc.</u><br/>Address <u>P.O. Box 1549</u><br/><u>Jasper, AL 35501</u></p> <p>(b) Name <u>WV-DNR Office of Real Est Mgmt</u><br/>Address <u>1900 Kanawha Blvd. East</u><br/><u>Charleston, WV 25305</u></p> <p>(c) Name _____<br/>Address _____</p> | <p>5) (a) Coal Operator:</p> <p>Name <u>None</u><br/>Address _____</p> <p>(b) Coal Owner(s) with Declaration</p> <p>Name <u>Drummond Company, Inc.</u><br/>Address <u>P.O. Box 1549</u><br/><u>Jasper, AL 35501</u></p> <p>Name _____<br/>Address _____</p> <p>(c) Coal Lessee with Declaration</p> <p>Name <u>None</u><br/>Address _____</p> |
| <p>6) Inspector <u>Jerry Holcomb</u><br/>Address <u>Rt. 2 Box 159, Hwy. 34</u><br/><u>Hamlin, WV 25523</u><br/>Telephone (304)- <u>894-5963</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: J. T. Mellinger  
 Its: Manager Eastern Region  
 Address P.O. Box 391  
Ashland, KY 41114  
 Telephone 606/329-5450

Subscribed and sworn before me this 13th day of July, 1990

Thelma M. Smith Notary Public  
 My commission expires November 23, 1990