

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

FILE NO. \_\_\_\_\_  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 1,000'  
 MINIMUM DEGREE OF ACCURACY 1:76,435  
 PROVEN SOURCE OF ELEVATION U.S.C. & G.S., BM "A-35"  
 Elev. = 843.043

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 A. East  
 R.P.E. \_\_\_\_\_ L.L.S. 150

PLACE SEAL HERE

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

DATE February 5, 1992  
 OPERATOR'S WELL NO. "A-15"  
 API WELL NO. 47 STATE 045 COUNTY 1183 PERMIT

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

LOCATION: ELEVATION 1131.14 WATERSHED Spring Branch of Little's Creek of Island Creek  
 DISTRICT Island Creek COUNTY Logan  
 QUADRANGLE Barnabus Matewan NE

SURFACE OWNER Cole & Crane Real Estate Trust ACREAGE 12,096.64  
 OIL & GAS ROYALTY OWNER Cole & Crane Real Estate Trust LEASE ACREAGE 12,096.64  
 LEASE NO. 080565

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 5111' KB

WELL OPERATOR Ashland Exploration, Inc. DESIGNATED AGENT Bobby E. Widener  
 ADDRESS P.O. Box 391 4619 ADDRESS P.O. 379  
Ashland, Ky. 41114 Brenton, W.Va. 24818

COUNTY NAME \_\_\_\_\_ PERMIT \_\_\_\_\_

*DEEP WELL L.L. Magnolia (265)*

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

Reviewed TM6  
Recorded \_\_\_\_\_

Well Operator's Report of Well Work

Farm name: COLE & CRANE REAL ESTATE

Operator Well No.: A-15 S-137871

LOCATION: Elevation: 1131.14

Quadrangle: BARNABUS

District: ISLAND CREEK

County: LOGAN

Latitude: 13200 Feet South of 37

Deg. 45 Min. 0 Sec.

Longitude: 1800 Feet West of 82

Deg. 0 Min. 0 Sec.

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

Agent: B. E. WIDENER

Inspector: OFIE HELMICK

Permit Issued: 03/13/92

Well work Commenced: 05/03/92

Well work Completed: 06/25/92

Verbal Plugging:

Permission granted on: \_\_\_\_\_

Rotary X Cable \_\_\_\_\_ Rig

Total Depth (feet) 5086

Fresh water depths (ft) \_\_\_\_\_

Damp 500'

Salt water depths (ft) \_\_\_\_\_

None noted

Is coal being mined in area (Y/N)? N

Coal Depths (ft): 85-90, open mine @

110-120

Casing & Tubing	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
Size			
20"	52'	52'	Driven
16"	76'	76'	88
11 3/4"	400'	400'	267
8 5/8"	1769'	1769'	628
5 1/2"	5048'	5048'	644

1.9" @ 4936' w/ R-4 pkr @ 2666'

1.9" @ 2621'

OPEN FLOW DATA

Producing formation Devonian Shale/Berea Pay zone depth (ft) 3176-4975

Gas: Initial open flow -0- MCF/d Oil: Initial open flow --- Bbl/d

Final open flow 1104 MCF/d Final open flow --- Bbl/d

Time of open flow between initial and final tests 3 Hours

Static rock pressure 780# psig (surface pressure) after 72 Hours

Second producing formation Big Lime Pay zone depth (ft) 2527-2598

Gas: Initial open flow 315 MCF/d Oil: Initial open flow --- Bbl/d

Final open flow 1333 MCF/d Final open flow --- Bbl/d

Time of open flow between initial and final tests 3 Hours

Static rock Pressure 575# 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: 7/13/92

JUL 24 1992

<u>Formation on Rock Type</u>	<u>TOP</u>	<u>BASE</u>
Breathitt fm.	0	772
Lee fm.	772	1649
Pennington fm.	1649	2300
U. Maxton	1946-1976	
M. Maxton	2036-2133	
L. Maxton	2242-2300	
Little Lime	2300	2357
Big Lime	2357	2638
Borden formation	2638	3139
Sunbury Shale	3139	3170
Berea	3170	3189
Devonian Shale	3189	5072
Onondaga	5072	TD
DTD 5086		
LTD 5088		

16" and 8%" cemented to surface on primary job.

11 1/4" cemented to surface by grouting 15 sx @ 8%" casing point.

Well Treatment

Perf Rhinestreet 19H/4744-4975. N<sub>2</sub> frac using 500 gal 7 1/2% fe acid, 810,000 scf N<sub>2</sub> @ 99,300 scf/min. BD @ 3267#, ATP 4049#, MTP 4062# and ISIP 2970#.

Perf Huron 20H/4194-4512. N<sub>2</sub> frac using 500 gal 7 1/2% fe acid, 807,000 scf N<sub>2</sub> @ 103,000 scf/min. BD @ 2885#, ATP 3884#, MTP 4201# and ISIP 2375#.

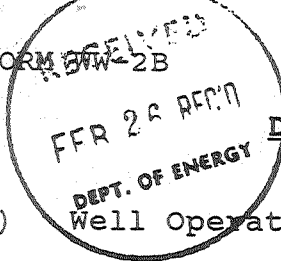
Perf U. Dev. Shale and Berea 19H/3176-3496. N<sub>2</sub> frac using 500 gal 7 1/2% fe acid, 812,000 scf N<sub>2</sub> @ 106,000 scf/min. BD @ 3977#, ATP 3525#, MTP 3997# and ISIP 2081#.

Perf Big Lime 14H/2527-2598. Acidize Big Lime using 1000 gal 15% fe acid, foamed @ 60 quality using 101,000 scf N<sub>2</sub> @ 3800 scf/min. BD 1610#, ATP 1850#, MTP 2420# and ISIP 2080#.

13th

47-045-1183

Issued 3/13/92  
Expires 3/13/94



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

- 1) Well Operator: Ashland Exploration, Inc. 2750 (5) 232  
Cole & Crane Real Estate Trust
- 2) Operator's Well Number: A-15, Serial #137871 3) Elevation: 1131.1
- 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: 5111'KB feet
- 7) Approximate fresh water strata depths: Base 241'KB (Map WV-12)
- 8) Approximate salt water depths: 1547' Top 596'KB (Map WV-12) 620', 1331'
- 9) Approximate coal seam depths: Lower Cedar Grove Seam - Elev. 1021' Mined Out
- 10) Does land contain coal seams tributary to active mine? 197'-199' 137'-139' 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	60	50	CTS
Fresh Water						38CS918-11.3 38CS918-11.2.2
Coal	11 3/4	H40	42.0	350	350	CTS
Intermediate	8 5/8	J55	24.0	2305	2305	CTS
Production	5 1/2	J55	15.5	5111	5111	AS NEEDED
Tubing	1.9	J55	2.76	-	5061	SIPHON
Liners						38CS918-11.1

PACKERS : Kind \_\_\_\_\_  
Sizes \_\_\_\_\_  
Depths set \_\_\_\_\_

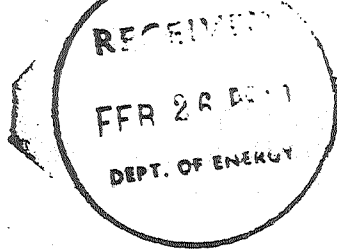
For Division of Oil and Gas Use Only

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Fee(s) paid:  Well Work Permit  Reclamation Fund  WPCP

Plat  WW-9  WW-2B  Bond surety blank  Agent

(Type)



1) Date: February 25, 1992  
2) Operator's well number Serial #137871  
Cole & Crane Real Estate Trust #A-15  
3) API Well No: 47 - 045 - 1183  
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>Cole &amp; Crane Real Estate Trust</u><br/>Address <u>Suite 215 Frederick Bldg.</u><br/><u>Huntington, WV 25701</u></p> <p>(b) Name _____<br/>Address _____</p> <p>(c) Name _____<br/>Address _____</p> | <p>5) (a) Coal Operator:</p> <p>Name <u>W-P Coal Company</u><br/>Address <u>P.O. Box 570</u><br/><u>Omar, WV 25638</u></p> <p>(b) Coal Owner(s) with Declaration<br/>Name <u>Same as No. 4(a)</u><br/>Address _____</p> <p>Name _____<br/>Address _____</p> <p>(c) Coal Lessee with Declaration<br/>Name <u>Same as No. 5(a)</u><br/>Address _____</p> |
| <p>6) Inspector <u>Ofie Helmick</u><br/>Address <u>P.O. Box 218</u><br/><u>Fanrock, WV 24834</u><br/>Telephone <u>(304)-732-9135</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: 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 25th day of February, 1992

*Richard W. Rosta*  
My commission expires November 23, 1994 Notary Public