

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

FILE NO. _____
 DRAWING NO. _____
 SCALE 1" = 2,000'
 MINIMUM DEGREE OF ACCURACY 1:17,890
 PROVEN SOURCE OF ELEVATION U.S.C. & G.S., B.M. "Z-143"
Elev. = 971.330

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

Coordinates of Location:
 Omar Coal Company,
 S.29,955.07 ~ W.16,288.32



STATE OF WEST VIRGINIA
 DEPARTMENT OF ENERGY
 OIL AND GAS DIVISION

DATE July 15, 19 91
 OPERATOR'S WELL NO. Albert H. Cole, et al "B-16"
 API WELL NO. 47 045 1173 STATE COUNTY PERMIT
 S.N. 135691

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

LOCATION: ELEVATION 1034.25 WATERSHED Little Right Fork of Pine Creek of Island Creek
 DISTRICT Island Creek COUNTY Logan
 QUADRANGLE Holden 15'SE

SURFACE OWNER Cole & Crane Real Estate Trust ACREAGE 13,292.15
 OIL & GAS ROYALTY OWNER Cole & Crane Real Estate Trust LEASE ACREAGE 11,124.79
 LEASE NO. 080574-00

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 4,905' KB

WELL OPERATOR Ashland Exploration, Inc. DESIGNATED AGENT Forrest Burkett
 ADDRESS P.O. Box 391 ADDRESS P.O. Box 379
Ashland, Ky. 41118 Brenton, W. Va. 24818

SEP 9 1991

DEEP WELL 6-6. Magnolia (265)

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

Reviewed TMG
Recorded _____

Well Operator's Report of Well Work

Farm name: COLE & CRANE REAL ESTATE

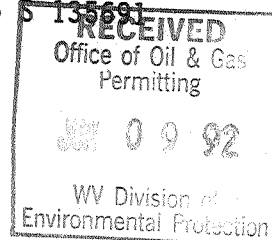
Operator Well No.: B 16

LOCATION: Elevation: 1034.25

Quadrangle: HOLDEN

District: ISLAND CREEK
Latitude: 12250 Feet South of 37
Longitude: 6100 Feet West of 82

County: LOGAN
Deg. 47 Min. 30 Sec.
Deg. 2 Min. 30 Sec.



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

Agent: FORREST BURKETT

Inspector: OFIE HELMICK

Permit Issued: 09/03/91
Well work Commenced: 04/07/92
Well work Completed: 05/22/92
Verbal Plugging: _____
Permission granted on: _____
Rotary X Cable _____ Rig _____
Total Depth (feet) 4900
Fresh water depths (ft) _____
28' 10" stream
Salt water depths (ft) _____
None noted
Is coal being mined in area (Y/N)? N
Coal Depths (ft): Open mine 314-318

Casing & Tubing	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
Size			
16"	46'	46'	59
11 3/4"	423'	423'	410
8 5/8"	2233'	2233'	635
5 1/2"	4886'	4886'	615
1.9" @ 1.9" @	4770' 2534'	KB w/ pkr	@ 2570'

OPEN FLOW DATA

Producing formation Devonian Shale/Berea Pay zone depth (ft) 3037-4826
Gas: Initial open flow -0- MCF/d Oil: Initial open flow --- Bbl/d
Final open flow * 621 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

Second producing formation Big Lime Pay zone depth (ft) 2371-2530
Gas: Initial open flow -0- MCF/d Oil: Initial open flow --- Bbl/d
Final open flow * 1081 MCF/d Final open flow --- Bbl/d
Time of open flow between initial and final tests 3 Hours
Static rock Pressure 570# 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: 6/4/92

JUN 16 1992

<u>Formation on Rock Type</u>	<u>TOP</u>	<u>BASE</u>
Sand and Shale	0	974
Lee fm	974	1712
Pennington fm.	1712	2220
U. Maxton 2022-2084		
L. Maxton 2172-2189		
Little Lime	2220	2276
Big Lime	2276	2532
Borden formation	2532	3040
Sunbury Shale	3040	3076
Berea	3076	3095
Devonian Shale	3095	4878
Onondaga Ls.	4878	TD

DTD 4900'

LTD 4895'

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

Well Treatment

Perf Rhinestreet 15H/4700-4826. N₂ frac using 500 gal 7½% fe acid, 807,000 scf N₂ @ 94,500 scf/min. BD 2989#, ATP 3871#, MTP 3967# and ISIP 2280#.

Perf L. Huron 20H/4065-4373. N₂ frac using 500 gal 7½% fe acid, 807,000 scf N₂ @ 91,000 scf/min. BD 3818#, ATP 2857#, MTP 3818#, and ISIP 2069#.

Perf U. Shale/Berea 20H/3037-3538. N₂ frac using 500 gal 7½% fe acid, 822,000 scf N₂ @ 100,000 scf/min. BD @ 2554#, ATP 3127#, MTP 3159 and ISIP 1712#.

Perf B. Lime 14H/2371-2530. Breakdown and ballout using 1000 gal 15% fe acid, BD @ 1300#, ATP 1340#, MTP 1350# and ISIP 1300#. Displace w/ 50,000 scf N₂ @ 3000 scf/min. 75 quality foam frac Big Lime using 10# gel system, 53,500 # 20/40 sand and 369,000 scf N₂ @ 12,700 scf/min. BD 2652#, ATP 2471 @ 28 BPM foam rate, MTP 3050# and ISIP 1479#.

045-1173

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

Issued 9/3/91

Expires 9/3/93

- 1) Well Operator: ^{OCU3} Ashland Exploration, Inc. 2750 (5) 401
- 2) Operator's Well Number: Albert H. Cole Trustee et al B-16 3) Elevation: 1034.25
S.N. 135691
- 4) Well type: (a) Oil / or Gas /
(b) If Gas: Production / Underground Storage /
Deep / Shallow /
- 5) Proposed Target Formation(s): Devonian Shale
- 6) Proposed Total Depth: 4,905' KB feet
- 7) Approximate fresh water strata depths: 194' KB (Map WV-12) 93', 147', 219'
- 8) Approximate salt water depths: 544' KB (Map WV-12)
- 9) Approximate coal seam depths: Lower Cedar Grove 310' Possible open mine @ 264'
- 10) Does land contain coal seams tributary to active mine? Yes / No /
- 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	--	30	30	CTS
Fresh Water						30CSR/11.3 30CSR/11.2
Coal	11 3/4"	H40	42.0	370	370	CTS
Intermediate	8 5/8"	J55	24.0	2200	2200	CTS
Production	5 1/2"	J55	15.5	4905	4905	As Needed
Tubing	1.9"	J55	2.7	--	4855	Siphon
Liners						

PACKERS : Kind _____
 Sizes _____
 Depths set _____

RECEIVED
Division of Energy

AUG 15 1991

For Division of Oil and Gas Use Only

Permitting
Oil and Gas Section

506302
22
 Fee(s) paid: Well Work Permit Reclamation Fund WPCP
 Plat WW-9 WW-2B Bond Blanket sure Agent
 (Type)

- 1) Date: August 13, 1991
- 2) Operator's well number Serial #135691
Albert H. Cole, Trustee et al # B-16
- 3) API Well No: 47 - 045 - 1173
State - County - Permit

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

RECEIVED
Division of Energy

AUG 15 1991

NOTICE AND APPLICATION FOR A WELL WORK PERMIT

- 4) Surface Owner(s) to be served:
 - (a) Name Cole & Crane Real Estate Tr.
Address P.O. Box 610
Omar, WV 25638
 - (b) Name _____
Address _____
 - (c) Name _____
Address _____
 - 5) (a) Coal Operator: Ok and ...
Name N/A
Address _____
 - (b) Coal Owner(s) with Declaration
Name Same as No. 4(a)
Address _____
 - (c) Coal Lessee with Declaration
Name _____
Address _____
- 6) Inspector Ofie Helmick
Address 525 Tiller Street
Logan, WV 25601
Telephone (304)-792-7075
 - Name W-P Coal Company - Ark Land Co.
Address P.O. Box 570 - P.O. Box 70
Omar, WV 25638 - Turtle Creek,
WV 25203

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 *W. Mark Parks*
 Its: Operations Manager
 Address P.O. Box 391
Ashland, KY 41114
 Telephone 606-329-5989

Subscribed and sworn before me this 13th day of August, 1991
Thelma W. Santa
 _____ Notary Public
 My commission expires November 23, 1994