



FILE NO. _____
DRAWING NO. _____
SCALE 1" = 500'
MINIMUM DEGREE OF ACCURACY 1:95,825
PROVEN SOURCE OF ELEVATION U.S.C.E. BM
"SR-19R" Elev. = 1169.07

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. Smith
R.P.E. _____ L.L.S. 150

PLACE SEAL HERE

STATE OF WEST VIRGINIA
DEPARTMENT OF ENERGY
OIL AND GAS DIVISION

DATE February 1, 19 90

OPERATOR'S WELL NO. W.M. Ritter Lumber Co.

API WELL NO. No. 257, S.N. 120331

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

LOCATION: ELEVATION 1225.11 WATER SHED Pigeon Creek of the Guyandotte River
DISTRICT Baileysville COUNTY Wyoming
QUADRANGLE Baileysville Pineville W.C.

SURFACE OWNER United States of America ACREAGE 18,917

OIL & GAS ROYALTY OWNER Georgia-Pacific Corporation LEASE ACREAGE 67,244.09
LEASE NO. 4157

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 5,890.KB

WELL OPERATOR Ashland Exploration, Inc. DESIGNATED AGENT Forrest Burkett

ADDRESS P.O. Box 391, Ashland, KY, 41114 ADDRESS P.O. Box 379, Brenton, WV, 24818

COUNTY NAME _____ PERMIT _____

43
Deep well 6-6 Baileysville (272)

109-1146
Issued 4/24/90

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

Exposes Page 1 of 1
4/24/92

- 1) Well Operator: Ashland Exploration, Inc. ⁰⁰⁴³ 2750 (1) 238
W. M. Ritter Lumber Co.
- 2) Operator's Well Number: 257, Serial No. 120331 3) Elevation: 1225.11
- 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: 5890'KB feet
- 7) Approximate fresh water strata depths: 93'
- 8) Approximate salt water depths: 1265'KB
- 9) Approximate coal seam depths: None Operated - Solid 352'-355'
- 10) Does land contain coal seams tributary to active mine? Yes / No X /
- 11) Proposed Well Work: Drill & Stimulate New Well
- 12)

CASING AND TUBING PROGRAM

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT
	Size	Grade	Weight per ft.	For drilling	Left in well	
Conductor	16	LS	42.0	30	30	CTS
Fresh Water						38CSR18.1.3
Coal						38CSR18.1.2.2
Intermediate	8 5/8	J55	24.0	1315	1315	CTS
Production	5 1/2	J55	15.5	5890	5890	As Needed
Tubing	1.9	J55	2.76	-	5840	38CSR18.1.1 Siphon
Liners						

PACKERS : Kind
Sizes
Depths set

RECEIVED
APR 06 1990

For Division of Oil and Gas Use Only DEPARTMENT OF ENERGY

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

506867

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APR 06 1990

Page 1 of 2
Form WW2-A
(09/87)
File Copy

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

Date: April 4, 1990
Operator's well number
W.M. Ritter Lumber Co. No. 257, Serial #12033
API Well No: 47 - 109 - 1146
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 U.S. Army Corps of Engineers
Address 502 Eighth Street
Huntington, WV 25701-2070

(b) Name _____
Address _____

(c) Name _____
Address _____

6) Inspector Rodney Dillon
Address P.O. Box 1526
RX Sophia, WV 25921
Telephone (304)-683-3989

5) (a) Coal Operator:
Name None
Address _____

(b) Coal Owner(s) with Declaration
Name U.S. Army Corps of Engineers
Address 502 Eighth Street
Huntington, WV 25701-2070

Name _____
Address _____

(c) Coal Lessee with Declaration
Name None
Address _____

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 4th day of April, 1990

Vicki W. North Notary Public
My commission expires November 23, 1990

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

Well Operator's Report of Well Work

Farm name: .U.S. ARMY CORP OF ENG. Operator Well No.: 257-S-120331

LOCATION: Elevation: 1225.11 Quadrangle: BAILEYSVILLE

District: BAILEYSVILLE County: WYOMING
Latitude: 12355 Feet South of 37 Deg. 37Min. 30 Sec.
Longitude 7375 Feet West of 81 Deg. 40 Min. 0 Sec.

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

Agent: FORREST BURKETT

Inspector: RODNEY G. DILLON
Permit Issued: 04/24/90
Well work Commenced: 6/6/90
Well work Completed: 11/13/90
Verbal Plugging
Permission granted on: _____
Rotary x Cable _____ Rig _____
Total Depth (feet) 5852'
Fresh water depths (ft) 93'

Salt water depths (ft) _____
Approx. 1265'

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

Casing & Tubing	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
Size			
16"	31'	31'	82
8 5/8"	1343'	1343'	531
5 1/2"	5824'	5824'	938'

OPEN FLOW DATA

Producing formation Devonian Shale Pay zone depth (ft) 4574-5735
Gas: Initial open flow 0/39 MCF/d Oil: Initial open flow _____ Bbl/d
Final open flow 133/888 MCF/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests 3 Hours
Static rock Pressure 790 psig (surface pressure) after 72 Hours

Second producing formation Big Lime Ravenscliff Pay zone depth (ft) 2520-2775
Gas: Initial open flow 59 MCF/d Oil: Initial open flow _____ Bbl/d
Final open flow 725 MCF/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests 3 Hours
Static rock Pressure 260# 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, INC.

By: James L. Stephens James L. Stephens, Engr. Tech.
Date: December 10, 1990

FORMATION OR ROCK TYPETOPBASE

<u>FORMATION OR ROCK TYPE</u>	<u>TOP</u>	<u>BASE</u>
Sand & Shale	0	784
Lower Lee Sand	784	1222
Sand & Shale	1222	1344
Princeton	1344	1375
Sand & Shale	1375	1504
Ravenscliff Sand	1504	1575
Avis LS.	1575	1627
Sand & Shale	1627	1676
Upper Maxton	1676	1776
Sand & Shale	1776	1948
Middle Maxton	1948	2094
Sand & Shale	2094	2326
Little Lime	2326	2400
Pencil Cave	2400	2436
Big Lime	2436	2858
Shale	2858	2974
Weir Section	2974	3079
Shale	3079	3410
Coffee Shale	3410	3430
Berea	3430	3477
Devonian Shale	3477	5844
Onondaga LS	5844	TD

UD 3477
 LH 4500
 S 5100
 A 5300
 Rh 5500

DTD 5852

LTD 5857

WELL TREATMENT

Perf L. Dev. Shale 34H/5388-5735. N₂ frac using 750 gal 15% Inh fe acid, 1,010,000 SCF N₂ @ 102,000 SCF/min. BD @ 3104#, ATP 3753#, MTP 3849#, ISIP 2760# & 15 min 2147#.

Perf U. Dev. Shale 23H/4574-5029. N₂ frac using 1000 gal 7.1/2% inh fe acid, 1,000,000 SCF N₂ @ 79,500 SCF/min. BD @ 3946#, ATP 3872#, MTP 3950#, ISIP 2804# & 15 min 2252#.

Perf Berea 40H/3440-3472. 75 Quality foam frac using 300 gal 15% inh fe acid, 60,000# 20/40 sand, 409,000 SCF N₂ @ 18,100 SCF/min. BD @ 1620#, ATP 1865# @ 41.2 bpm foam rate, MTP 2019#, ISIP 1459#, 15 min 1124# & TF 244 bbls. Berea was tested to be wet. Squeezed off.

Perf Big Lime 40H/2520-2775. Acidize using 5000 gal 15% inh fe acid w/30 Lo Dense perf balls. BD @ 220#, ATP 300# @ 6 bpm, MTP 400#, ISIP 0# & TF 204 bbls.

Perf Ravenscliff 45H/1540-1570. 75 Quality foam frac using 300 gal 16% fe inh acid, 48,800# 20/40 sand and 630,000 SCF N₂ @ 14,651 SCF/min. BD @ 2010#, ATP 1950# @ 30 bpm foam rate, MTP 2030#, ISIP 1650#, 15 min 1540# & TF 306 bbls.

9/1/91