



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

FILE NO. _____
 DRAWING NO. _____
 SCALE 1" = 2000'
 MINIMUM DEGREE OF ACCURACY 1:43130
 PROVEN SOURCE OF ELEVATION U.S.G.S. 'UE-1044.1'
Elev. 1244.62'

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. 180



PLACE SEAL HERE

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



DATE March 3, 1993
 OPERATOR'S WELL NO. Rowland Land Co. #103
 API WELL NO. 9N 143391

47-081-0950
 STATE COUNTY PERMIT

WELL TYPE: OIL _____ GAS X LIQUID INJECTION _____ WASTE DISPOSAL _____
 (IF "GAS,") PRODUCTION _____ STORAGE X DEEP _____ SHALLOW X
 LOCATION: ELEVATION 1266.85 WATER SHED Sycamore Creek of Clear Fork of Big Coal River
 DISTRICT Clear Fork COUNTY Raleigh
 QUADRANGLE Dorothy Evelyn NC
 SURFACE OWNER Rowland Land Company ACREAGE 6305.37
 OIL & GAS ROYALTY OWNER Rowland Land Company LEASE ACREAGE 47340.87
 LEASE NO. 80594
 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 5,050' KB
 WELL OPERATOR Ashland Exploration, Inc. DESIGNATED AGENT Bob Hill
 ADDRESS P.O. Box 391 4619 Ashland, Ky. 41114 ADDRESS Rt. 6 P.O. Box 178 Charleston, W.V. 25311

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: ROWLAND MANAGEMENT CORP. Operator Well No.: 103-S-143391

Location: Elevation: Quadrangle:

District: CLEAR FORK County: RALEIGH
Latitude: Feet South of Deg. Min. Sec.
Longitude: Feet West of Deg. Min. Sec.

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

Agent: B. E. Widener

Inspector: RODNEY DILLON

Permit Issued: 05-10-93
Well Work Commenced: 01-20-93
Well Work Completed: 07-20-93

Verbal Plugging
Permission granted on: _____

Rotary Cable _____ Rig _____
Total Depth (feet) 4736

Fresh water depths (ft) 2" stream 68'
1" stream 131' 1/2" stream 300'

Salt water depths (ft) None noted

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

Coal Depths (ft): 1617 - 1618

Casing & Tubing	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
Size 16"	40'	40'	59
11 3/4"	265'	265'	
8 5/8"	1189'	1189'	
5 1/2"	4736'	4736'	
1.9" @ 4620' KB w/R-4 pkr @ 2384'			
1.9" @ 2328' KB			

*Note: 3 Hr. WHOF were estimated.

OPEN FLOW DATA

Producing formation Dev. Shale 3799-4671
Gordon Pay zone depth (ft) 2879-2992
Gas: Initial open flow 0 MCF/d Oil: Initial open flow --- Bbl/d
Final open flow 1416 MCF/d Final open flow --- Bbl/d
Time of open flow between initial and final tests 3 Hours
Static Rock Pressure 650# psig (surface pressure) after 72 Hours

Second producing formation M. Weir Pay zone depth (ft) 2296-2339
Gas: Initial open flow 0 MCF/d Oil: Initial open flow --- Bbl/d
Final open flow 145 MCF/d Final open flow --- Bbl/d
Time of open flow between initial and final tests 3 Hours
Static Rock Pressure 250# 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.

Reviewed TMG
Recorded _____

For Ashland Exploration, Inc. JUL 30 1993
By: James L. Stephens James L. Stephens, Eng. Tech.
Date: 7-21-93

RECEIVED

WV Division of Environmental Protection

081-0950

FORM WW-2B

APR 23 93

Page 1 of 1

STATE OF WEST VIRGINIA

DEPARTMENT OF ENERGY, DIVISION OF OIL AND GAS

Office of Oil & Gas WELL WORK PERMIT APPLICATION

Issued 05/10/93
Expires 05/10/95
① 325

17118

- 1) Well Operator: Ashland Exploration, Inc 2750
Rowland Land Company
- 2) Operator's Well Number: 103, Serial #143391 3) Elevation: 1266.8
- 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
- 6) Proposed Total Depth: 5050'KB feet
- 7) Approximate fresh water strata depths: 120' 202, 500, 659
- 8) Approximate salt water depths: 289' ? 191'-197' 605'-608' 954'
- 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) See Inspector's Note

CASING AND TUBING PROGRAM

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT
	Size	Grade	Weight per ft.	For drilling	Left in well	
Conductor	16	LS	42	30	30	CTS
Fresh Water	11 3/4	H-40	42	170	170	CTS
Coal						380578-113
Intermediate	8 5/8	J-55	24	1160	1160	380578-113 CTS
Production	5 1/2	J-55	15.5	5050	5050	As Needed
Tubing	1.9	J-55	2.76	-	4900	SIPHON
Liners						380578-113

PACKERS : Kind _____
 Sizes _____
 Depths set _____

For Division of Oil and Gas Use Only

506896
7

Fee(s) paid Well Work Permit Reclamation Fund WPCP
 Flat WW-9 WW-2B Bond Surety Clerk Agent
 (Type)

RECEIVED
WV Dept.
Environmental Protection
APR 23 93
Permitting
Office of Oil & Gas

- 1) Date: April 19, 1993
- 2) Operator's well number
Rowland Land Co. #103, Serial #143391
- 3) API Well No: 47 - 081 - 0950
State - County - Permit

**STATE OF WEST VIRGINIA
DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS**

NOTICE AND APPLICATION FOR A WELL WORK PERMIT

- 4) Surface Owner(s) to be served:
 - (a) Name Rowland Management Corp.
Address 103 Quarrier St., Room 301
Charleston, WV 25301
 - (b) Name _____
Address _____
 - (c) Name _____
Address _____
- 5) (a) Coal Operator:
 - Name N/A
Address _____
 - (b) Coal Owner(s) with Declaration
Name Same as No. 4(a)
Address _____
 - Name _____
Address _____
 - (c) Coal Lessee with Declaration
Name Consolidation Coal Company
Address 898 Workman Creek Road
Beckley, WV 25801
- 6) Inspector Rodney Dillon
Address P.O. Box 131
Bradley, WV 25818
Telephone (304)- 877-2912

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: Don K. Cunningham *Don K. Cunningham*
Its: Professional Surveyor
Address P.O. Box 391
Ashland, KY 41114
Telephone 606-329-3870

Subscribed and sworn before me this 19th day of April, 1993

Cliff W. Nantz Notary Public
My commission expires November 23, 1994

081-0950

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

- 1) Well Operator: Ashland Exploration, Inc
Rowland Land Company
2) Operator's Well Number: 103, Serial #143391 3) Elevation: 1266.8
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
6) Proposed Total Depth: 5050'KB feet
7) Approximate fresh water strata depths: 120' 202, 500, 659
8) Approximate salt water depths: 289'
9) Approximate coal seam depths: 191-197 665-668 954
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
Large amounts of fresh water may be encountered while drilling the subsurface hole.
12) Arrangements should be made to contain the water or to drill on fluid, should this happen.

CASING AND TUBING PROGRAM

Table with 7 columns: TYPE, SPECIFICATIONS (Size, Grade, Weight per ft.), FOOTAGE INTERVALS (For drilling, Left in well), CEMENT (Fill-up). Rows include Conductor, Fresh Water, Coal + Freshwater, Intermediate, Production, Tubing, and Liners.

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 Agent
(Type)

<u>Formation or Rock Type</u>	<u>Top</u>	<u>Base</u>
Sand and Shale (base Lee Sand)	0	866
Pennington	866	1747
Avis Lime	1157	1193
M. Maxton	1426	1441
L. Maxton	1704	1728
Little Lime	1747	1835
Big Lime	1835	2166
Borden	2166	2658
M. Weir	2292	2345
Sunbury Shale	2658	2675
Berea	2675	2710
Devonian Shale	2710	T.D.
Gordon	2872	2997

DF 822

Drillers TD 4736

DFT 813

Loggers TD 4744

85/8 cmt'd to surface on primary job.

113/4 grouted with 20 sx cmt immediately after primary job.

Perf L. Huron using .33 jets SF 1spf @ 4671, 4617, 4591, 4563, 4559, 4549, 4543, 4527, 4487, 4483, 4467, 4451, 4435, 4417, 4363, 4337, 4323, 4311, 4309, 19H total. N₂ frac L. Huron using 400 gal 7½% HCl-Fe acid & 858,000 scf N₂ @ 99,316 scf/m. BD @ 3537, ATP - 4062, MTP - 4199, ISIP - 2260.

Perf U. Dev. Shale using .33 jets 10 gram SF 1 spf @ 4093, 4083, 4079, 4033, 4023, 4000, 3990, 3983, 3979, 3959, 3953, 3927, 3904, 3898, 3891, 3851, 3837, 3824, 3799, 19H total. N₂ frac U. Dev. Shale using 350 gal 7½% HCl-Fe acid, 858,240 scf N₂ @ 98,500 scf/m. BD @ 3833, ATP - 3997, MTP - 4151, ISIP - 2056.

Perf Gordon using 4" HSC .44 jets 19 grams as follows: 14H/2986-2992, 8H/2979-2982, 12H/2886-2891, 8H/2879-2882, 12H total. 75Q FF Gordon, 500 gal 7½% HCl-Fe acid, 61,800# 20/40 sand, 213,000 scf N₂ @ 6623 scf/min. BDP - 1070, ATP - 1124 @ 20 B/M, MTP - 125, ISIP - 1100.

Perforate M. Weir w/4" HCG 1 Hole @ 2332 & 2336, 14H/2314-2320, 6H/2327-2339, 10H/2306-2310 & 14H/2296-2302, Total 48 shots. 75 Quality Foam Frac using 500 gal 15½% HCl-Fe acid, 75,400# 20/40 sand & 282,000 scf N₂ @ 7950 scf/min. BD - 1453, ATP - 1211 @ 20 BPM foam rate, MTP - 1453, ISIP - 1220.

811/1