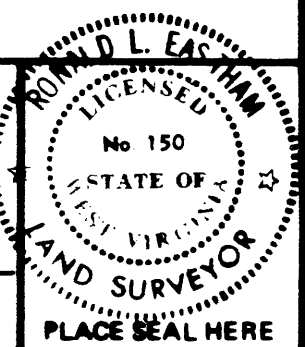


FILE NO. \_\_\_\_\_  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 1000'  
 MINIMUM DEGREE OF ACCURACY 1:200  
 PROVEN SOURCE OF ELEVATION NGS B.M. "F-118"  
 Elev. = 582.233

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 MINES.  
 (SIGNED) Ronald L. Eastham  
 R.P.E. \_\_\_\_\_ L.L.S. 180



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS  
 FORM IV-6 (8-78)



DATE July 19, 1983  
 OPERATOR'S WELL NO. 1915  
 API WELL NO. \_\_\_\_\_  
 47 - 053 - 0302  
 STATE COUNTY PERMIT

STATE OF WEST VIRGINIA  
 DEPARTMENT OF MINES  
 OIL AND GAS DIVISION

WELL TYPE: OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
 (IF "GAS,") PRODUCTION X STORAGE \_\_\_ DEEP \_\_\_ SHALLOW X  
 LOCATION: ELEVATION 579.14 WATER SHED Flatfoot Creek  
 DISTRICT Clendenin COUNTY Mason  
 QUADRANGLE Apple Grove Glenwood 15' NW  
 SURFACE OWNER William E. Kirk ACREAGE 174  
 OIL & GAS ROYALTY OWNER William E. Kirk LEASE ACREAGE 174  
 LEASE NO. C-2-181  
 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 3,500'  
 WELL OPERATOR Union Drilling, Inc. DESIGNATED AGENT Joseph C. Veazant, Jr.  
 ADDRESS Drawer 40 ADDRESS Drawer 40  
Buckhannon, WV 26201 Buckhannon, WV 26201

MASON 0302



Date November 1, 1983

Operator's

Well No. 1 - 1915

Farm William E. Kirk

API No. 47 - 053 - 030

**RECEIVED**

NOV 29 1983

State of West Virginia

Department of Mines  
Oil and Gas Division

OIL & GAS DIVISION

DEPT. OF MINES

WELL OPERATOR'S REPORT  
OF

DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

*changed*  
**((CORRECTED on 11/28/83))**

WELL TYPE: Oil  / Gas  / Liquid Injection  / Waste Disposal   
(If "Gas," Production  / Underground Storage  / Deep  / Shallow )

LOCATION: Elevation: 579.14 Watershed Flatfoot Creek  
District: Clendenin County Mason Quadrangle Apple Grove

COMPANY Union Drilling, Inc.

ADDRESS P. O. Drawer 40, Buckhannon, WV 26201

DESIGNATED AGENT Joseph C. Vanzant, Jr.

ADDRESS P. O. Drawer 40, Buckhannon, WV 26201

SURFACE OWNER William E. Kirk

ADDRESS Gallipolis Ferry, WV 25515

MINERAL RIGHTS OWNER William E. Kirk

ADDRESS Gallipolis Ferry, WV 25515

OIL AND GAS INSPECTOR FOR THIS WORK

Jerry Taphaloh ADDRESS Route 31, Box 101A, Ripley, WV 25271

PERMIT ISSUED August 17, 1983

DRILLING COMMENCED 09/12/83

DRILLING COMPLETED 09/19/83

IF APPLICABLE: PLUGGING OF DRY HOLE ON CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED ON \_\_\_\_\_

Casing Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cord.			
13-10"			
9 5/8	497.90	497.90	212 cf
8 5/8			
7	<del>1896.15</del> 3314	678.55	<del>212</del> 212 cf
5 1/2			
<del>4 1/2</del>	<del>3314</del>	<del>3314</del>	<del>161</del> 161 cf
4 1/2	3277.60	3277.60	161 cf
2			
Liners used			

GEOLOGICAL TARGET FORMATION Devonian Shale Depth 3300 feet  
Depth of completed well 3300 feet Rotary  / Cable Tools \_\_\_\_\_  
Water strata depth: Fresh \_\_\_\_\_ feet; Salt 615.8 feet  
Coal seam depths: 275/281 Is coal being mined in the area? no

OPEN FLOW DATA -  
Producing formation Devonian Shale Pay zone depth 2968 feet  
Gas: Initial open flow show Mcf/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow 146 Mcf/d Final open flow \_\_\_\_\_ Bbl/d  
Time of open flow between initial and final tests ? hours  
Static rock pressure 400 psig (surface measurement) after 24 hours shut in  
(If applicable due to multiple completion--)  
Second producing formation \_\_\_\_\_ Pay zone depth \_\_\_\_\_ feet  
Gas: Initial open flow \_\_\_\_\_ Mcf/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow \_\_\_\_\_ Mcf/d Oil: Final open flow \_\_\_\_\_ Bbl/d  
Time of open flow between initial and final tests \_\_\_\_\_ hours  
Static rock pressure \_\_\_\_\_ psig (surface measurement) after \_\_\_\_\_ hours shut in

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

On 10/5/83 Halliburton Foam Fractured the Devonian Shale  
with 60,000 # sand, 212 BBL Water, 1,009,000 SCF Nitrogen

Perforations at 2366/2968 (49 shots)

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all and salt water, coal, oil and
Clay			0	10	
River Gravel			10	95	Water at 615' 1 1/2" stream
Sand and Shale			95	275	Water at 1130' 3" stream
Coal			275	281	
Sand and Shale			281	1145	
Big Lime			1145	1205	
Sand and Shale			1205	1808	
Berea			1808	1834	
Devonian Shale			1834	TD 3300	

(Attach separate sheets as necessary)

UNION DRILLING, INC.

Well Operator  
By: *Joseph C. Pettey*  
Date: 11/1/83

Joseph C. Pettey  
Vice President of Prod.

Note: Regulation 2.02(i) provides as follows:  
"The term 'log' or 'well log' shall mean a systematic  
detailed geological record of all formations, including  
... encountered in the drilling of a well."



IV-35  
(Rev 8-81)

Date November 1, 1983  
Operator's  
Well No. 1 - 1915  
Farm William E. Kirk  
API No. 47 - 053 - 0302

**RECEIVED**  
NOV 16 1983  
State of West Virginia  
Department of Mines  
Oil and Gas Division

**DEPT. OF MINES**  
**WELL OPERATOR'S REPORT**  
**OF**  
**DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE**

WELL TYPE: Oil \_\_\_ / Gas x / Liquid Injection \_\_\_ / Waste Disposal \_\_\_ /  
(If "Gas," Production x / Underground Storage \_\_\_ / Deep \_\_\_ / Shallow xx)

LOCATION: Elevation: 579.14 Watershed Flatfoot Creek  
District: Clendenin County Mason Quadrangle Apple Grove

COMPANY Union Drilling, Inc.  
ADDRESS P. O. Drawer 40, Buckhannon, WV 26201  
DESIGNATED AGENT Joseph C. Vanzant, Jr.  
ADDRESS P. O. Drawer 40, Buckhannon, WV 26201  
SURFACE OWNER William E. Kirk  
ADDRESS Gallipolis Ferry, WV 25515  
MINERAL RIGHTS OWNER William E. Kirk  
ADDRESS Gallipolis Ferry, WV 25515  
OIL AND GAS INSPECTOR FOR THIS WORK  
Jerry Tapbaloh ADDRESS Route 31, Box 101A Ripley, WV 25271  
PERMIT ISSUED August 17, 1983  
DRILLING COMMENCED 09/12/83  
DRILLING COMPLETED 09/19/83

Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cord.			
13-10"			
9 5/8	497.90	497.90	
8 5/8			
7	678.55	678.55	212 cf
5 1/2			
4 1/2	3314	3314	161 cf
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Devonian Shale Depth 3300 feet  
Depth of completed well 3300 feet Rotary x / Cable Tools \_\_\_  
Water strata depth: Fresh \_\_\_ feet; Salt 615.8 / 1130 feet  
Coal seam depths: 275/281 Is coal being mined in the area? no

OPEN FLOW DATA

Producing formation Devonian Shale Pay zone depth 2968 feet  
Gas: Initial open flow show Mcf/d Oil: Initial open flow \_\_\_ Bbl/d  
Final open flow 146 Mcf/d Final open flow \_\_\_ Bbl/d  
Time of open flow between initial and final tests ? hours  
Static rock pressure 400 psig (surface measurement) after 24 hours shut in  
(If applicable due to multiple completion--)  
Second producing formation \_\_\_ Pay zone depth \_\_\_ feet  
Gas: Initial open flow \_\_\_ Mcf/d Oil: Initial open flow \_\_\_ Bbl/d  
Final open flow \_\_\_ Mcf/d Oil: Final open flow \_\_\_ Bbl/d  
Time of open flow between initial and final tests \_\_\_ hours 28 1983  
Static rock pressure \_\_\_ psig (surface measurement) after \_\_\_ hours shut in

(Continue on reverse side)

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

On 10/5/83 Halliburton Foam Fractured the Devonian Shale  
with 60,000 # sand, 212 BBL Water, 1,009,000 SCF Nitrogen

Perforations at 2366/2968 (49 shots)

*Sp. 2366-2968  
Plan 2020-2968*

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fr and salt water, coal, oil and
Clay			0	10	
River Gravel			10	95	Water at 615' 1½" stream
Sand and Shale			95	275	Water at 1130' 3" stream
Coal			275	281	
Sand and Shale			281	1145	
Big Lime			1145	1205	
Sand and Shale			1205	1808	
Berea			1808	1834	
Devonian Shale			1834	TD <u>3300</u>	Rhinesth@TD from GR log of 590' x 28' Sp. 2366 (1983) 3300 1834 <hr/> 1466

(Attach separate sheets as necessary)

UNION DRILLING, INC.

Well Operator  
By: *Joseph C. Pettey*  
Date: 11/1/83

Joseph C. Pettey  
Vice President of Prod.

Note: Regulation 2.02(i) provides as follows:  
"The term 'log' or 'well log' shall mean a systematic detailed geological record of all formations, including coal, encountered in the drilling of a well."

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

On 10/5/83 Halliburton Foam Fractured the Devonian Shale  
with 60,000 # sand, 212 BBL Water, 1,009,000 SCF Nitrogen

Perforations at 2366/2968 (49 shots)

*Wells 2366-2968  
Huron 2020-2968*

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fr and salt water, coal, oil and
Clay			0	10	
River Gravel			10	95	Water at 615' 1 1/2" stream
Sand and Shale			95	275	Water at 1130' 3" stream
Coal			275	281	
Sand and Shale			281	1145	
Big Lime			1145	1205	
Sand and Shale			1205	1808	
Berea			1808	1834	
Devonian Shale			1834	TD <u>3300</u>	Rhinessh@TD from CR log of 590-88 Huron 2630 (200) A-3080 Rhinessh Up 200-7. Rhinessh

*300  
1834  
-----  
1466*

(Attach separate sheets as necessary)

UNION DRILLING, INC.

Well Operator  
By: *Joseph C. Pettey*  
Date: 11/1/83

Joseph C. Pettey  
Vice President of Prod.

Note: Regulation 2.02(i) provides as follows:  
"The term 'log' or 'well log' shall mean a systematic detailed geological record of all formations, including coal, encountered in the drilling of a well."



1) Date: August 1, 1983  
 2) Operator's Well No. 1 - 1915  
 3) API Well No. 47 - 053 - 0302  
 State County Permit

STATE OF WEST VIRGINIA  
 DEPARTMENT OF MINES, OIL AND GAS DIVISION  
 APPLICATION FOR A WELL WORK PERMIT

- 4) WELL TYPE: A Oil  / Gas   
 B (If "Gas", Production  / Underground storage  / Deep  / Shallow )  
 5) LOCATION: Elevation: 579.14 Watershed: Flatfoot Creek  
 District: Clendenin County: Mason Quadrangle: Apple Grove  
 6) WELL OPERATOR Union Drilling, Inc. 7) DESIGNATED AGENT Joseph C. Vanzant, Jr.  
 Address P. O. Drawer 40 Address P. O. Drawer 40  
Buckhannon, WV 26201 Buckhannon, WV 26201  
 8) OIL & GAS INSPECTOR TO BE NOTIFIED 9) DRILLING CONTRACTOR:  
 Name Kenneth Butcher 736-4885 Name Union Drilling, Inc.  
 Address RED #1 Address P. O. Drawer 40  
Barboursville, WV 25504 Buckhannon, WV 26201  
 10) PROPOSED WELL WORK: Drill  / Drill deeper  / Redrill  / Stimulate   
 Plug off old formation  / Perforate new formation   
 Other physical change in well (specify) \_\_\_\_\_  
 11) GEOLOGICAL TARGET FORMATION, Devonian Shale  
 12) Estimated depth of completed well, 3500 feet  
 13) Approximate strata depths: Fresh, ? feet; salt, ? feet.  
 14) Approximate coal seam depths: ? Is coal being mined in the area? Yes  / No

15) CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS					FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cubic feet)	PACKERS
	Size	Grade	Weight per ft.	New	Used	For drilling	Left in well		
Conductor	9 5/8		36#	x		300	300	to surface	Kinds
Fresh water									
Coal									Sizes
Intermediate	7		20#	x		2250	2250	400 sks.	
Production	4 1/2		10.5#	x			3500	350 sks. or as required	Depths set
Tubing									
Liners									Perforations:
									Top Bottom

OFFICE USE ONLY  
 DRILLING PERMIT

Permit number 47-053-0302 Date August 17 19 83

This permit covering the well operator and well location shown below is evidence of permission granted to drill in accordance with the pertinent legal requirements subject to the conditions contained herein and on the reverse hereof. Notification must be given to the District Oil and Gas Inspector, (Refer to No. 8) Prior to the construction of roads, locations and pits for any permitted work. In addition, the well operator or his contractor shall notify the proper district oil and gas inspector 24 hours before actual permitted work has commenced.)

The permitted work is as described in the Notice and Application, plat, and reclamation plan, subject to any modifications and conditions specified on the reverse hereof. Permit expires August 17, 1985 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: <u>[Signature]</u>	Agent: <u>[Signature]</u>	Plat: <u>[Signature]</u>	Casing: <u>[Signature]</u>	Fee: <u>7552</u>
--------------------------	---------------------------	--------------------------	----------------------------	------------------

[Signature]  
 Administrator, Office of Oil and Gas

NOTE: Keep one copy of this permit posted at the drilling location.

See the reverse side of the APPLICANT'S COPY for instructions to the well operator.

File