



8,700'

Minimum Error of Closure 1 in 500  
 Source of Elevation SECT. OF ROADS 0.9 MILE NORTH OF LOCATION EL. = 1168  
 "I, the undersigned, hereby certify that this map is correct to the best of my knowledge and belief and shows all the information required by paragraph 6 of the rules and regulations of the oil and gas section of the mining laws of West Virginia." Thomas F. Weaver, Jr.

New Location   
 Drill Deeper   
 Abandonment

Company UNION DRILLING, INC.  
 Address PO. DRAWER 40, BUCKHANNON, W.V.A.  
 Farm VIRGIL L. MARKS REPUBLIC STEEL  
 Tract 1 Acres 79 3/4 Lease No. 8399  
 Well (Farm) No. 1 Serial No. 441-CH  
 Elevation (Spirit Level) 1360 NE  
 Quadrangle PHILIPPI 7.5 MIN. SERIES  
 County BARBOUR District PLEASANT  
 Engineer THOMAS F. WEAVER, JR.  
 Engineer's Registration No. L.L.S. 410  
 File No. UDR-1-46 Drawing No. 78-31  
 Date JULY 24, 1978 Scale 1" = 500'

STATE OF WEST VIRGINIA  
 DEPARTMENT OF MINES  
 OIL AND GAS DIVISION  
 CHARLESTON

WELL LOCATION MAP  
 FILE NO. BAR-1035

+ Denotes location of well on United States Topographic Maps, scale 1 to 62,500 latitude and longitude lines being represented by border lines as shown.

- Denotes one inch spaces on border line of original tracing.

47-001 AUG 16 1978



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NOV - 4 1978

STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
Oil and Gas Division

OIL & GAS DIVISION  
DEPT. OF MINES

WELL RECORD

Quadrangle Philippi

Permit No. BAR-1035

Rotary  Oil \_\_\_\_\_  
Cable \_\_\_\_\_ Gas   
Recycling \_\_\_\_\_ Comb. \_\_\_\_\_  
Water Flood \_\_\_\_\_ Storage \_\_\_\_\_  
Disposal \_\_\_\_\_ (Kind)

Company <u>Union Drilling, Inc.</u>	Casing and Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft. (Sks.)
Address <u>P.O. Drawer 40, Buckhannon, WV 26201</u>	Size			
Farm <u>Virgil Marks</u> Acres <u>79 3/4</u>	20-16			
Location (waters) <u>Drain into Pleasant Creek</u>	Cond.			
Well No. <u>(1) 441-CH</u> Elev. <u>1360'</u>	13-10" 11 3/4	42.10'	42.10'	
District <u>Pleasant</u> County <u>Barbour</u>	9 5/8			
The surface of tract is owned in fee by <u>Republic Steel,</u>	8 5/8	962.80'	962.80'	210 sks common
Attn: <u>Troy Wills, TRIPP, RD#3, Box 146, Philippi,</u>	7			
Address <u>West Virginia, 26416</u>	5 1/2			
Mineral rights are owned by <u>Virgil L. &amp; Mary Marks</u>	4 1/2	4566.75'	4566.75'	370 50/50 poz
Address <u>1 Maple Ave., Philippi, WV</u>	3			100 sks. common
Drilling Commenced <u>9/23/78</u> <u>26416</u>	2			
Drilling Completed <u>9/29/78</u>	Liners Used			
Initial open flow <u>33,330</u> cu. ft. _____ bbls.				
Final production <u>1,073M</u> cu. ft. per day _____ bbls.				
Well open _____ hrs. before test <u>1400#</u> RP.				

Well treatment details:

Attach copy of cementing record.

10/26/78 - Halliburton - 3 stage water fracture
1st stage - Benson - 490 BBL - 13,000# 80/100 - 30,000# 20/40 sand
2nd Stage - Riley - 440 BBL - 13,000# 80/100 - 30,000# 20/40 sand
3rd Stage - Bayard - 435 BBL - 13,000# 80/100 - 30,000# 20/40 sand

Coal was encountered at None Feet \_\_\_\_\_ Inches  
Fresh water @ 77' 1 1/2", @ 769' 1/2" & ~~xxx~~ @ 1161' 1/4"  
Producing Sand Benson 4480/4550 Riley 4094/4102 Salt Water \_\_\_\_\_ Feet \_\_\_\_\_  
Bayard 2706/2730 Depth \_\_\_\_\_

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Fill dirt			0	55		
Clay, Shale			55	77		
Shale and Red Rock			77	245	@77' 1 1/2" water	
Sand and Shale, Red Rock			245	351		
Sand			351	370		
Sand and Shale, Red Rock			370	796	@769' 1/2" water	
Sand			796	985		
Shale			985	1044		
Sandy Shale			1044	1161	@1161' 1/4" water	
Sand and Shale, Red Rock			1161	1481		
Big Lime			1481	1597		
Injun			1597	1677		
Sand and Shale			1677	1878		
Weir			1878	1898		
Sand and Shale			1898	2486		
4th Sand			2486	2526		
Sand and Shale			2526	2706		
Bayard			2706	2730		
Sand and Shale			2730	2799		
Lower Bayard			2799	2814		
Sand and Shale			2814	4094		
1st Riley			4094	4102		
Sand And Shale			4102	4198		
2nd Riley			4198	4256		

(over)

\* Indicates Electric Log tops in the remarks section.

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Sand and Shale			4256	4480	Gas check @4395' - 10/10 - 1" water	
Benson			4480	4550		
Sand and Shale			4550	TD 4646		

Date November 8, 1978

APPROVED UNION DRILLING, INC. Owner

By Joseph Pettey  
Joseph Pettey (Title) Production Manager



STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES

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JUL 27 1978

Oil and Gas Division

OIL & GAS DIVISION  
DEPT. OF MINES

OIL AND GAS WELL PERMIT APPLICATION

TO THE DEPARTMENT OF MINES,  
Charleston, W. Va.

DATE July 26, 1978

Surface Owner Republic Steel, Attn: Troy Wills, Company UNION DRILLING, INC.  
 Address TRIPP, RD #3, Box 146, Philippi, WV 26416 Address P.O. Drawer 40, Buckhannon, WV 26201  
 Mineral Owner Virgil L. & Mary Marks Farm Virgil L. Marks Acres 79 3/4  
 Address 1 Maple Ave., Philippi, WV 26416 Location (waters) Drain into Pleasant Creek  
 Coal Owner Republic Steel, Attn: Troy Wills, TRIPP Well No. (1) 441-CH Elevation 1360'  
 Address RD #3, Box 146, Philippi, WV 26416 District Pleasant County Barbour  
 Coal Operator \_\_\_\_\_ Quadrangle Philippi  
 Address \_\_\_\_\_

THIS PERMIT MUST BE POSTED AT THE WELL SITE

Provisions being in accordance with Chapter 22, the W. Va. Code, the location is hereby approved for drilling. This permit shall expire if operations have not commenced by 11-27-78.

INSPECTOR  
 TO BE NOTIFIED Robert Stewart  
 ADDRESS P.O. Box 345, Jane Lew, WV 26378  
 PHONE 884-7782

*Robert Stewart*  
Deputy Director, Oil & Gas Division

GENTLEMEN: U.D.I. Lease #A-8399

The undersigned well operator is entitled to drill upon the above named farm or tract of land for oil and gas, having fee title thereto, (or as the case may be) under grant or lease dated September 9, 1975 by Virgil L. & Mary Marks (wife) made to U.D.I. and recorded on the 11th day of September 1975, in Barbour County, Book 74 Page 492

NEW WELL  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE  
 OIL AND GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1969.

The enclosed plat was prepared by a registered engineer or licensed land surveyor and all coal owners and/or operators have been notified as of the above date.

The above named coal owners and/or operator are hereby notified that any objection they wish to make, or are required to make by Section 3 of the Code, must be received by, or filed with the Department of Mines within ten (10) days. \*

Copies of this notice and the enclosed plat were mailed by registered mail, or delivered to the above named coal operators or coal owners at their above shown respective address this day \_\_\_\_\_ before, or on the same day with the mailing or delivery of this copy to the Department of Mines at Charleston, West Virginia.

Very truly yours, UNION DRILLING, INC.

PLEASE SUBMIT COPIES OF ALL GEOPHYSICAL LOGS DIRECTLY TO:

(Sign Name) Joseph Pettey Well Operator Production Manger

WEST VIRGINIA GEOLOGICAL AND ECONOMIC SURVEY  
P. O. BOX 879  
MORGANTOWN, WEST VIRGINIA 26505  
AC-304 - 292-6331

Address of Well Operator

P. O. Drawer 40  
Street  
Buckhannon,  
City or Town  
West Virginia 26201  
State

\*SECTION 3 . . . If no objections are filed or found by the Department of mines, within said period of ten days from the receipt of notice and plat by the department of mines, to said proposed location, the department shall forthwith issue to the well operator a permit reciting the filing of such plat, that no objections have been made by the coal operators or found thereto by the department and that the same is approved and the well operator authorized to proceed.

PERMIT NO.

BAR- 1035 PERMIT NUM  
47-001

"I have read and understand the reclamation requirements as set forth in Chapter 22, Article 4, Section 12-b and will carry out the specified requirements."

Signed by \_\_\_\_\_

**THIS IS AN ESTIMATE ONLY**  
**ACTUAL INFORMATION WILL BE SUBMITTED ON OG-10 UPON COMPLETION**

PROPOSED WORK ORDER TO  DRILL \_\_\_\_\_ DEEPEN \_\_\_\_\_ FRACTURE-STIMULATE \_\_\_\_\_  
 DRILLING CONTRACTOR: (If Known) RESPONSIBLE AGENT: Joseph Pettey, Production Manager  
 NAME UNION DRILLING, INC. NAME UNION DRILLING, INC.  
 ADDRESS P.O. Drawer 40, Buckhannon, WV 26201 ADDRESS P.O. Drawer 40, Buckhannon, WV 26201  
 TELEPHONE 472-4610 TELEPHONE 472-4610  
 ESTIMATED DEPTH OF COMPLETED WELL: 4500' ROTARY  CABLE TOOLS \_\_\_\_\_  
 PROPOSED GEOLOGICAL FORMATION: Benson  
 TYPE OF WELL: OIL \_\_\_\_\_ GAS  COMB. \_\_\_\_\_ STORAGE \_\_\_\_\_ DISPOSAL \_\_\_\_\_  
 RECYCLING \_\_\_\_\_ WATER FLOOD \_\_\_\_\_ OTHER \_\_\_\_\_

**TENTATIVE CASING PROGRAM:**

CASING AND TUBING SIZE	USED FOR DRILLING	LEFT IN WELL	CEMENT FILL UP OR SACKS - CUBIC FT.
20 - 16			
13 - 10			
9 - 5/8			
8 - 5/8	800'	800'	300 sacks.
7			
5 1/2			
4 1/2	4500'	4500'	180 sacks.
3			Perf. Top
2			Perf. Bottom
Liners			Perf. Top
			Perf. Bottom

APPROXIMATE FRESH WATER DEPTHS ? FEET SALT WATER FEET  
 APPROXIMATE COAL DEPTHS ?  
 IS COAL BEING MINED IN THE AREA? ? BY WHOM?

**TO DRILL:**

SUBMIT FIVE (5) COPIES OF OG - 1, \$100.00 PERMIT FEE, PERFORMANCE BOND AND PERMANENT COPY OF PLAT.

**TO DRILL DEEPER OR REDRILL:**

SUBMIT FIVE (5) COPIES OF OG - 1, SHOWING ORIGINAL PERMIT NUMBER AND PERFORMANCE BOND. ON WELLS DRILLED PRIOR TO 1929, A PERMANENT COPY OF THE PLAT AND THE ORIGINAL WELL RECORD MUST ALSO BE SUBMITTED.

**TO FRACTURE - STIMULATE:**

OIL AND/OR GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1929, FIVE (5) COPIES OG - 1, PERFORMANCE BOND, PERMANENT PLAT AND ORIGINAL WELL RECORD.

OIL AND/OR GAS WELL ORIGINALLY DRILLED ON AND/OR AFTER JUNE 5, 1929, FIVE COPIES OG - 1, SHOWING ORIGINAL PERMIT NUMBER, AND PERFORMANCE BOND.

Required forms must be filed within ninety (90) days of completion for bond release. Inspector to be notified twenty-four (24) hours in advance.

The following waiver must be completed by the coal operator if the permit is to be issued within ten days of receipt thereof.

**WAIVER:** I the undersigned, Agent for \_\_\_\_\_ Coal Company, Owner or Operator of the coal under this lease have examined and place on our mine maps this proposed well location.

We the \_\_\_\_\_ Coal Company have no objections to said well being drilled at this location, providing operator has complied with all rules and regulations in Articles 4, 5, and 7, Chapter 22 of the West Virginia Code.

\_\_\_\_\_  
 For Coal Company

\_\_\_\_\_  
 Official Title