



FILE NO. BK 82 P 1
 DRAWING NO. _____
 SCALE 1" = 500'
 MINIMUM DEGREE OF ACCURACY 1:200
 PROVEN SOURCE OF ELEVATION USGS B.M. S-111 EL 567'

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) C. S. Volley Jr.
 R.P.E. A.L.S. 92

PLACE SEAL HERE

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



DATE FEB 10, 1984
 OPERATOR'S WELL NO. 2013 - 1
 API WELL NO. _____
47 - 053 - 0341
 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 567.00 WATER SHED CRAB CREEK
 DISTRICT CLENDENIN COUNTY MASON
 QUADRANGLE APPLE GROVE 7.5' Glenwood 15' NW
 SURFACE OWNER KARL U. BLAINE ACREAGE 122.5
 OIL & GAS ROYALTY OWNER KARL U. BLAINE LEASE ACREAGE 122.5
 LEASE NO. C-2-774
 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 3500'
 WELL OPERATOR UNION DRILLING INC. DESIGNATED AGENT JOSEPH VANZANT
 ADDRESS P.O. DRAWER 40 ADDRESS P.O. DRAWER 40
BUCKHANNON WVA 26201 BUCKHANNON WVA 26201

APR 2 1984

RECEIVED



IV-88
(Rev 8-81) NOV 7 - 1984

OIL & GAS DIVISION
DEPT. OF MINES

State of West Virginia
Department of Mines
Oil and Gas Division

Date November 2, 1984
Operator's
Well No. 1 - 2013
Farm Karl Blaine #1
API No. 47 - 053 - 0341

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 / Underground Storage / Deep / Shallow X /)

LOCATION: Elevation: 567' Watershed Crab 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 Karl Blaine
ADDRESS Rt. #1, Box 284, Millfield, Ohio 45761
MINERAL RIGHTS OWNER same
ADDRESS
OIL AND GAS INSPECTOR FOR THIS WORK
Jerry Tephabock ADDRESS Rt.1, Box 101-A, Ripley, WV
PERMIT ISSUED 3/26/84 25271
DRILLING COMMENCED 10/17/84
DRILLING COMPLETED 10/21/84
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	Corent fill up Cu. ft.
Size 20-16 Cord.			
13-10"			
9 5/8	614.30'	614.30'	247 cf
8 5/8			
7	1899.80'	686.05	59 cf
5 1/2			
4 1/2		3177.15'	152 cf
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Devonian Shale Depth 3500' feet
Depth of completed well 3200' feet Rotary XX / Cable Tools
Water strata depth: Fresh 765' feet; Salt none feet
Coal seam depths: none Is coal being mined in the area? no

OPEN FLOW DATA

Producing formation Upper & Lower Huron Pay zone depth 2904' feet
Gas: Initial open flow show Mcf/d Oil: Initial open flow Bbl/d
Final open flow (133) Mcf/d Final open flow Bbl/d
Time of open flow between initial and final tests 3 days ~~hours~~
Static rock pressure 600# psig (surface measurement) after 3 days ~~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

DEC 03 1984

(Continue on reverse side)

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

Dowell - 1 stage Foam Frac - 10/26/84

2595/2904 Upper Huron - 60,000# sand, 310 Bbls water and 850,000 scf nitrogen
~~Lower Huron~~

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
Sand & Shale			0	1752	1/2" stram water @765'
Berea			1752	1778	
Top of Devonian Shale			1778		
Upper Huron Shale			2581	2604	
Lower Huron Shale			2643	2914	
Angola Shale			2914	3098	
				3200'	T.D.

Handwritten notes:
 from GR 100... (333)
 30...
 500' up...

(Attach separate sheets as necessary)

Handwritten numbers:
 2581
 1778
 200

UNION DRILLING, INC.

Well Operator

By: *Joseph C. Pettey*

Date: Joseph C. Pettey, Vice President of Production

11/02/84

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."



1) Date: February 24, 19 84
 2) Operator's Well No. 2013
 3) API Well No. 47 - 053 - 0341
 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 X /
 B (If "Gas", Production X / Underground storage _____ / Deep _____ / Shallow X /)
- 5) LOCATION: Elevation: 567' Watershed: Crab Creek
 District: Clendenin County: Mason Quadrangle: Apple Grove
- 6) WELL OPERATOR Union Drilling, Inc. 7) DESIGNATED AGENT Joseph C. Vanzant, Jr.
 Address Post Office Drawer 40 Address Post Office Drawer 40
Buckhannon, WV 26201 Buckhannon, WV 26201
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED 9) DRILLING CONTRACTOR:
 Name Jerry Tephabock Name Union Drilling, Inc.
 Address Route 1, Box 101-A Address Post Office Drawer 40
Ripley, WV 25271 Buckhannon, WV 26201
- 10) PROPOSED WELL WORK: Drill X / Drill deeper _____ / Redrill _____ / Stimulate X
 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 X
- 15) CASING AND TUBING PROGRAM

RECEIVED
 FEB 27 1984
 OIL & GAS DIVISION
 DEPT. OF MINES

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	11-3/4		32	X		30'	30'		Kinds
Fresh water									
Coal						<u>767'</u>	<u>767'</u>		Sizes
Intermediate	8-5/8		23	X		<u>1000'</u>	<u>1000'</u>	to surface	<u>NEAT</u>
Production	4-1/2	J	10 1/2	X		3500'	3500'	as required	Depths set
Tubing								<u>by rule 15.0'</u>	
Liners									Perforations:
									Top Bottom

OFFICE USE ONLY
 DRILLING PERMIT

Permit number 47-053-0341 March 26, 19 84
 Date

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 March 26, 1986 unless well work is commenced prior to that date and prosecuted with due diligence.

BLANKET	Agent: <u>✓</u>	Plat: <u>MH</u>	Casing: <u>MH</u>	Fee: <u>014 527</u>
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T. J. ...
 Administrator, Office of Oil and Gas

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