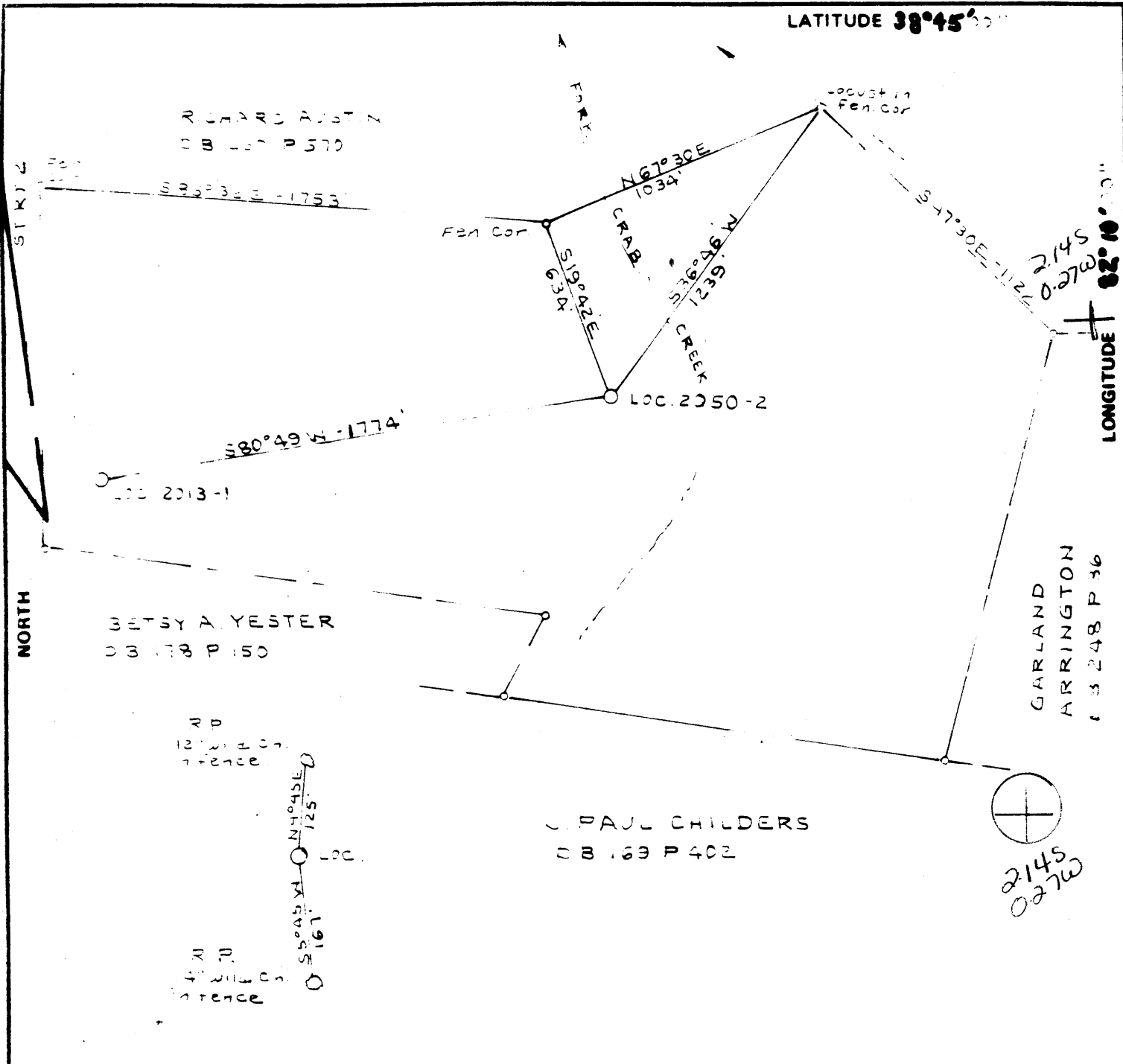


LATITUDE 38°45'00"



RICHARD AUSTIN  
DB 157 P 570

BETSY A. YESTER  
DB 178 P 150

PAUL CHILDERS  
DB 169 P 402

GARLAND  
ARRINGTON  
DB 248 P 36

2145  
0270

FILE NO. 3K 84 P 43  
DRAWING NO. \_\_\_\_\_  
SCALE 1" = 500'  
MINIMUM DEGREE OF ACCURACY 1:200  
PROVEN SOURCE OF ELEVATION USGS BM S-111  
E1 567.0'

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. J. Valley Jr.  
R.P.E. \_\_\_\_\_ L.S. 92

PLACE SEAL HERE

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



DATE APRIL 13, 1984  
OPERATOR'S WELL NO. 2050-2  
API WELL NO. \_\_\_\_\_  
47-053-0358  
STATE COUNTY PERMIT

STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS DIVISION

GRI study well  
"Mason 16"

WELL TYPE: OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
(IF "GAS,") PRODUCTION \_\_\_ STORAGE X DEEP \_\_\_ SHALLOW X  
LOCATION: ELEVATION 555.0' WATER SHED CRAB CREEK  
DISTRICT GLENDENIN 2 COUNTY MASON 53  
QUADRANGLE APPLE GROVE 216 GLENWOOD 15°05' NW 1  
SURFACE OWNER KARL U BLAINE ACREAGE 122.5  
OIL & GAS ROYALTY OWNER KARL J. BLAINE LEASE ACREAGE 122.5  
LEASE NO. C-2-774  
PROPOSED WORK: DRILL X CONVERT \_\_\_ DRILL DEEPER \_\_\_ REDRILL \_\_\_ FRACTURE OR STIMULATE \_\_\_ 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 PO DRAWER 40 893 ADDRESS PO DRAWER 40  
BUCKHANNON WV, 26201 BUCKHANNON WV 26201

21 1984



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DEC 10 1985

DIVISION OF OIL & GAS  
DEPT. OF ENERGY

State of West Virginia

Department of Mines  
Oil and Gas Division

Date December 9, 1985  
Operator's  
Well No. 2 - 2050  
Farm Karl Blaine #2  
API No. 47 - 053 - 0358

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: 555' 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. Pettey  
ADDRESS P.O. Drawer 40, Buckhannon, WV 26201  
SURFACE OWNER Karl Blaine, Rt.1, Box 284,  
ADDRESS Millfield, Ohio 45761 and William Blaine  
MINERAL RIGHTS OWNER Star Rt., Box 4,  
ADDRESS Gallipolis, Ferry, WV 25515  
OIL AND GAS INSPECTOR FOR THIS WORK      
Jerry Tephabock ADDRESS Rt.1, Box 101A, Ripley, WV  
25271  
PERMIT ISSUED 5/15/84  
DRILLING COMMENCED 10/11/85  
DRILLING COMPLETED 10/16/85  
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"	40.50'	40.50	
9 5/8	508.65'	508.65'	200 cf
8 5/8			
7	1855.80'	711.45'	59 cf
5 1/2			
4 1/2		3062.30'	170 cf
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Devonian Shale Depth 3500' feet  
Depth of completed well 3128' feet Rotary xxx / Cable Tools      
Water strata depth: Fresh 48,342' feet; Salt 706, 967 feet & 1310'  
Coal seam depths:     none Is coal being mined in the area? no

OPEN FLOW DATA  
Producing formation Upper & Lower Huron, Devonian Shale Pay zone depth 2913' feet  
Gas: Initial open flow     odor     Mcf/d Oil: Initial open flow     Bbl/d  
Final open flow (42) Mcf/d Final open flow     Bbl/d  
Time of open flow between initial and final tests 2 hours  
Static rock pressure 350# 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.

10/23/85 - Nowsco - 1 stage Foam Frac

2388/2913 - Devonian Shale - 90,000# sand, 140 Bbls water and 813,600 scf nitrogen

Up Dev → 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
Brown Sand			0	30	1" stream fresh water @48'
Sand & Shale			30	963	1/2" stream fresh water @342'
Big Lime			963	1064	1/2" stream salt water @706'
Injun P			1070	1219	1" stream salt water @967'
Berea			1750	1772	1" stream salt water @1310'
Top of Devonian Shale			1775		
<del>Upper</del> Huron			2602	2643	
Lower Huron			2645	2916	
Angola Shale			2916	3110	Gas Check @T.D. = odor

From nearby well:  
 Java 2916 thickness 100  
 Angola 3016

TD 3128

800' up Dev.

(Attach separate sheets as necessary)

Union Drilling, Inc.

Well Operator

By:

*Joseph C. Petty*

Date: Joseph C. Petty, Vice President of Production

12/9/85

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: April 24, 1984  
 2) Operator's Well No. 2050 - 2  
 3) API Well No. 47 - 053 - 0358  
 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: 555.0' 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 \_\_\_\_\_

**RECEIVED**  
 APR 25 1984

OIL & GAS DIVISION /  
 DEPT. OF MINES

15) CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS					FOOTAGE INTERVALS		CEMENT FILLED OR SACKS (Cubic feet)	PACKERS
	Size	Grade	Weight per ft.	New	Used	For drilling	Left in well		
Conductor	13-3/8	H-40	48	X		30'	30'	to surface	Kinds
Fresh water	9-5/8	K-55	30	X		600'	600'	as required	
Coal									Sizes
Intermediate	7	K-55	23	X		1800'	800'	50 sacks	
Production	4-1/2	J	10 1/2	X		3500'	3500'	90 sacks	Depths set
Tubing									
Liners									Perforations: Top Bottom

OFFICE USE ONLY  
**DRILLING PERMIT**

Permit number 47-053-0358 Date May 15, 19 84

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 May 15, 1986 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: <u>BLANK</u>	Agent: <u>TS</u>	Plat: <u>TS</u>	Casing: <u>TS</u>	Fee: <u>616-834</u>
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*[Signature]*  
 Administrator, Office of Oil and Gas