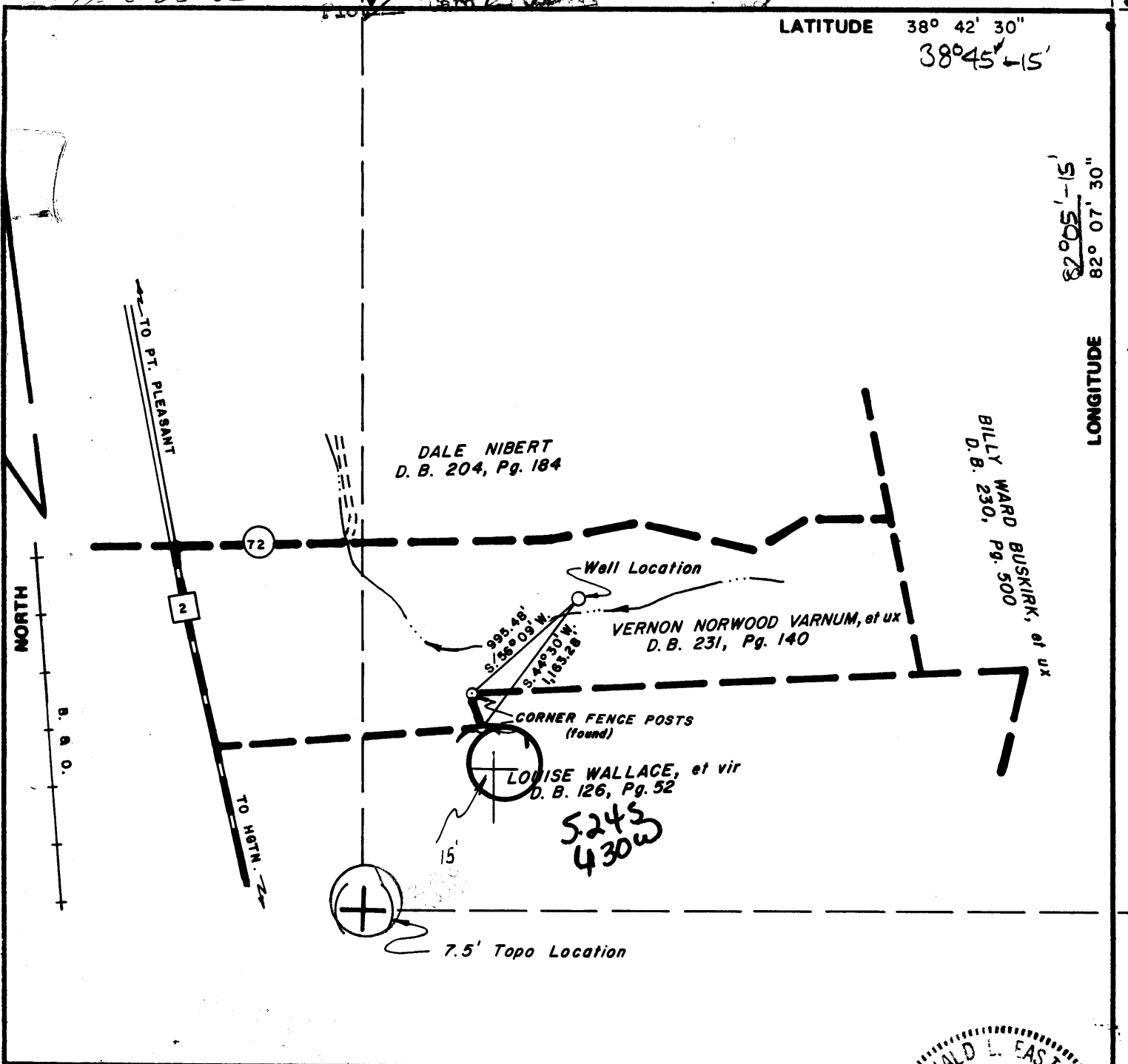


LATITUDE 38° 42' 30"
38° 45' -15'

82° 05' -15'
82° 07' 30"

LONGITUDE

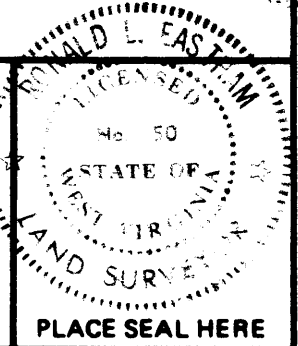
12,550'



FILE NO. _____
DRAWING NO. _____
SCALE 1" = 1,000'
MINIMUM DEGREE OF ACCURACY 1:200
PROVEN SOURCE OF ELEVATION NGS B.M. "G-118"
Elev. = 579.851

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. East
R.P.E. _____ L.L.S. 150



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



DATE July 22, 19 83
OPERATOR'S WELL NO. 1916
API WELL NO. _____
47-053-0304
STATE COUNTY PERMIT

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

WELL TYPE: OIL ___ GAS LIQUID INJECTION ___ WASTE DISPOSAL ___
(IF "GAS,") PRODUCTION STORAGE ___ DEEP ___ SHALLOW
LOCATION: ELEVATION 645.02 WATER SHED Flatfoot Creek
DISTRICT Clendenin COUNTY Mason
QUADRANGLE Apple Grove Glenwood 15' N
SURFACE OWNER Vernon Norwood Varnum, et ux ACREAGE 130
OIL & GAS ROYALTY OWNER Vernon Norwood Varnum, et ux LEASE ACREAGE 130
LEASE NO. C-2-189
PROPOSED WORK: DRILL 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 3,500'
WELL OPERATOR Union Drilling, Inc. DESIGNATED AGENT Joseph C. Vanzant, Jr.
ADDRESS Drawer 40 ADDRESS Drawer 40
Buckhannon, WV 26201 Buckhannon

AUG 29 1983

6-6 unnamed (0)

RECEIVED

NOV 29 1983

OIL & GAS DIVISION
DEPT. OF MINES



State of West Virginia
Department of Mines
Oil and Gas Division

Date November 14, 1983
Operator's
Well No. 1 - 1916
Farm Vernon M. Varnum
API No. 47 - 053 - 0304

WELL OPERATOR'S REPORT
OF

CORRECTED

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 x /)

LOCATION: Elevation: 645 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 Lucille W. & Vernon Varnum
ADDRESS 2656 Collis Avenue, Huntington, WV 25702
MINERAL RIGHTS OWNER Same as Surface
ADDRESS
OIL AND GAS INSPECTOR FOR THIS WORK Jerry Tapbaloh
ADDRESS Route #1, Box 101-A Ripley, WV 25271
PERMIT ISSUED August 23, 1983
DRILLING COMMENCED 09/21/83
DRILLING COMPLETED 09/28/83

Casing Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cond.	30'	30'	.
13-10"			
9 5/8	815.60'	815.60'	295 cf
8 5/8			
7	1984.00' 815.60'	681.50'	94 cf
5 1/2			
4 1/2		3188.75'	146 cf
3			
2			
Liners used			

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

GEOLOGICAL TARGET FORMATION Devonian Shale Depth 3394 feet
Depth of completed well 3394 feet Rotary x / Cable Tools
Water strata depth: Fresh 686 feet; Salt 845, 1230 feet
Coal seam depths: None Is coal being mined in the area? No

OPEN FLOW DATA

Producing formation Devonian Shale Pay zone depth 3394 feet
Gas: Initial open flow Shoe Mcf/d Oil: Initial open flow Bbl/d
Final open flow 169 Mcf/d Final open flow Bbl/d
Time of open flow between initial and final tests ? hours
Static rock pressure 600 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 PERFORMED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

On 10/07/83 Halliburton Foam Fractured the Devonian Shale (2770/3094) with 60,000# sand, 184 BBL Water and 1,186,000 SCF Nitrogen. lower Huron

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all free and salt water, coal, oil and c
Clay			0	3	
Sand, Shale and Red Rock			3	1260	Damp hole at 686'
Big Lime			1260	1380	Water at 845' 2"
Big Injun			1380	1684	Water at 1230' 3 to 4"
Sand and Shale			1684	1898	
Coffee Shale			1898	1908	
Berea			1908	1934	
Top of Devonian Shale to TD			1934	1934	

Handwritten notes:
 R/W...
 from GR log - 0-650 KB - 354
 H 2746
 J 3100
 A 164
 R/W 326 →

(Attach separate sheets as necessary)

UNION DRILLING, INC.

Well Operator Joseph C. Petty
 By: Joseph C. Petty Vice President of Pr
 Date: November 14, 1983

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: August 1, 1983
 2) Operator's Well No. 1 - 1916
 3) API Well No. 47 - 053 - 0304
 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: 645.02 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 Butler 736-4885 Name Union Drilling, Inc.
 Address RFD #1 Address P. O. Drawer 40
Barboursville 25504 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 trata 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

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									Sizes
Coal									
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 47-053-0304 Date August 23 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 23, 1985 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: <u>BB</u>	Agent: <u>OK</u>	Plat: <u>[Signature]</u>	Casing: <u>[Signature]</u>	Fee: <u>7533</u>
-----------------	------------------	--------------------------	----------------------------	------------------

[Signature]
 Administrator, Office of Oil and Gas

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