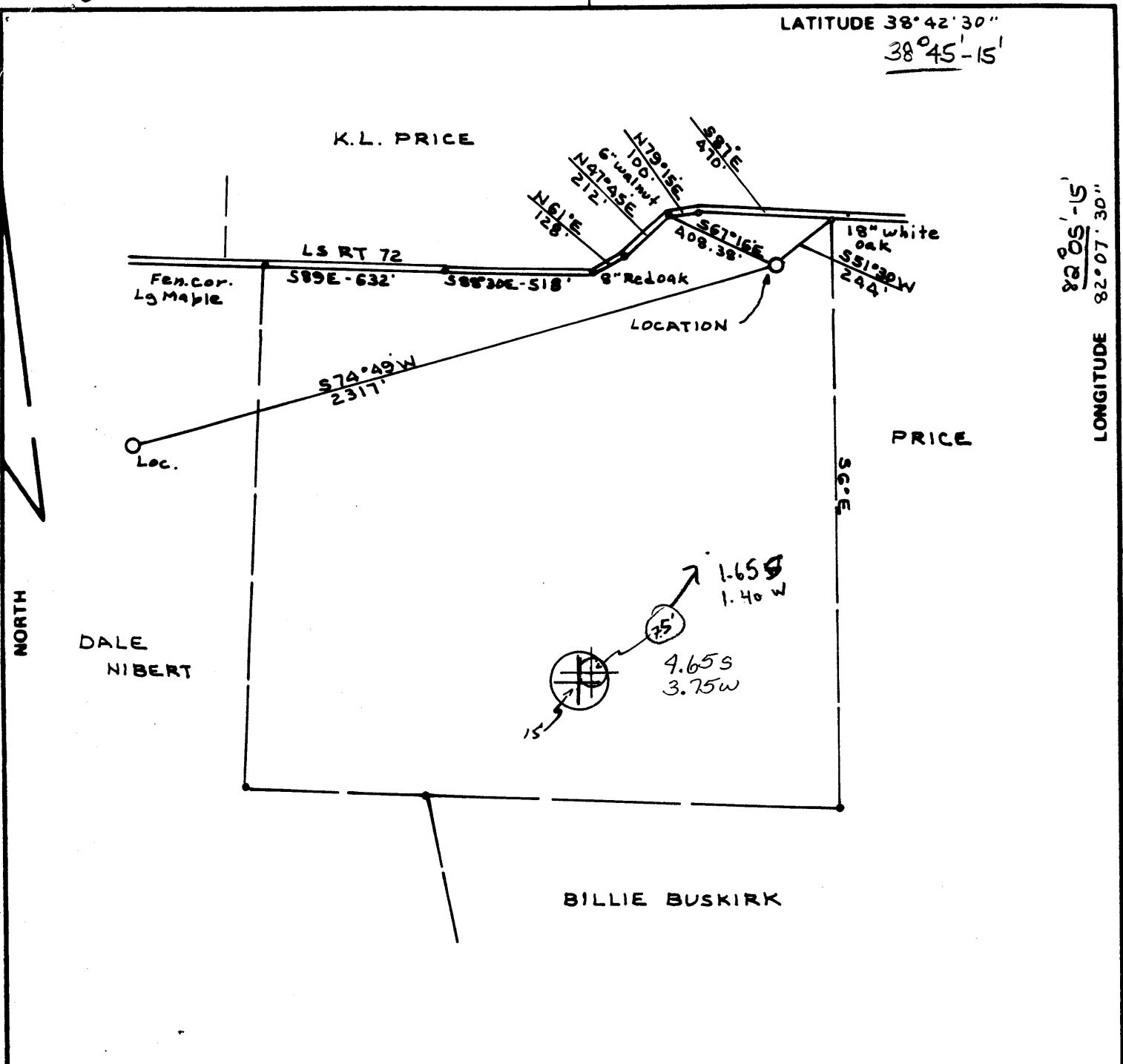


LATITUDE 38°42'30"
38°45'-15'



FILE NO. Bk 79 P 98
 DRAWING NO. _____
 SCALE 1" = 500'
 MINIMUM DEGREE OF ACCURACY 1:200
 PROVEN SOURCE OF ELEVATION UNION DRILLING
WELL 1738 PERMIT 269
E.L. 564.70'

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. Volney Jr.
 R.P.E. _____ L.L.S. 92

PLACE SEAL HERE

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



DATE OCT 31, 1983
 OPERATOR'S WELL NO. 1-1963
 API WELL NO. _____
47 - 053 - 0317
 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 712.01 WATER SHED FLATFOOT CREEK
 DISTRICT CLENDENIN COUNTY MASON
 QUADRANGLE APPLE GROVE 7.5' Glenwood 15' NW
 SURFACE OWNER COUNTY COURT OF MASON CO ACREAGE 86.03
 OIL & GAS ROYALTY OWNER COUNTY COURT OF MASON CO. LEASE ACREAGE 86.03
 LEASE NO. _____
 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 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

IV-35
(Rev 8-81)

OIL & GAS DIVISION
DEPT. OF MINES



State of West Virginia
Department of Mines
Oil and Gas Division

Date February 7, 1984
Operator's
Well No. 1 - 1963
Farm Mason County Commission
API No. 47 - 053 - 0317

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: 712' 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 County Commission Of Mason Co.
ADDRESS Court House Bldg., Point Pleasant, WV 25550
MINERAL RIGHTS OWNER Same
ADDRESS
OIL AND GAS INSPECTOR FOR THIS WORK
Jerry Tephabock ADDRESS Rt1, Box 101-A, Ripley, WV
PERMIT ISSUED 11/28/83 25271
DRILLING COMMENCED 1/26/84
DRILLING COMPLETED 2/1/84
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	Cement fill up Cu. ft.
Size 20-16 Cord.			
13-10"	27'		
9 5/8	913.85'		
8 5/8			
7	2060.3'	725.60'	59 cf
5 1/2			
4 1/2	3224.30'		146 cf
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Devonian Shale Depth 3500' feet
Depth of completed well 3378' feet Rotary x / Cable Tools
Water strata depth: Fresh 33', 1185' feet; Salt feet
Coal seam depths: 649/ 652 Is coal being mined in the area? no

OPEN FLOW DATA

Producing formation DEVONIAN Shale Pay zone depth SEE BACK feet
Gas: Initial open flow show 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 2 hours
Static rock pressure psig (surface measurement) after 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.

Halliburton - 2/4/84 - 1 stage Foam Frac

2372/3160 - 65,000# sand, 205 Bbls water and 1.041,000 scf nitrogen

2372-2210 Up Dew undiff

2510-3160 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
Red Clay			0	16	Water at 33'
Sand & Shale			16	649	
Coal			649	652	
Sand & Shale			652	1308	Water at 1185'
Big Lime			1308	1405	
Sand & Shale			1405	1440	
Big Injun			1440	1720	
Sand & Shale			1720	1958	
Berea			1958	1980 ✓	GR log
Devonian "Grey" Shale			1980	2835	
Upper Huron			2835	2850	
Shale.			2850	2882	
Lower Huron			2882	3164	original TD
Shale			3164	TD 3378	Show of gas at TD
					from GR log at 1185'
					H-2210 - 3164 (108) 33 78
					J 3164-3292 (108) 19 80
					A 3272- 1398
					830' open

(Attach separate sheets as necessary)

UNION DRILLING, INC.

Well Operator

By:

Joseph C. Pettey

Date: Joseph C. Pettey, Vice President of Production

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



1) Date: November 9, 1983
 2) Operator's Well No. 1-1963
 3) API Well No. 47 - 053 - 0317
 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: 712.01 Watershed: Flatfoot Creek
 District: Clendenin County: Mason Quadrangle: Apple Grove
- 6) WELL OPERATOR Union Drilling, Inc. 7) DESIGNATED AGENT Joseph Vanzant
 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 trata depths: Fresh, ? feet; salt, ? feet.
 14) Approximate coal seam depths: ? Is coal being mined in the area? Yes _____
- 15) CASING AND TUBING PROGRAM

RECEIVED
 NOV 10 1983

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'			
Fresh water						210'	210'			
Coal										
Intermediate	8-5/8		23		X	1000'	1000'	286 sacks		
Production	4-1/2	J-55	10 1/2	X		3500'	3500'	1013 sacks		
Tubing										
Liners										

OIL & GAS DIVISION
 DEPT. OF MINES

Cement to surface by rule 15.0

OR AS REQ BY DEPT. OF MINES

OFFICE USE ONLY
DRILLING PERMIT

Permit number 47-053-0317 Date November 28, 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 November 28, 1985 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: <u>AMET BOLD</u>	Agent: <u>✓</u>	Plat: <u>✓</u>	Casing: <u>✓</u>	Fee
<u>LA</u>	<u>MH</u>	<u>MH</u>	<u>MH</u>	<u>10574</u>

Administrator, Office of Oil and Gas

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