

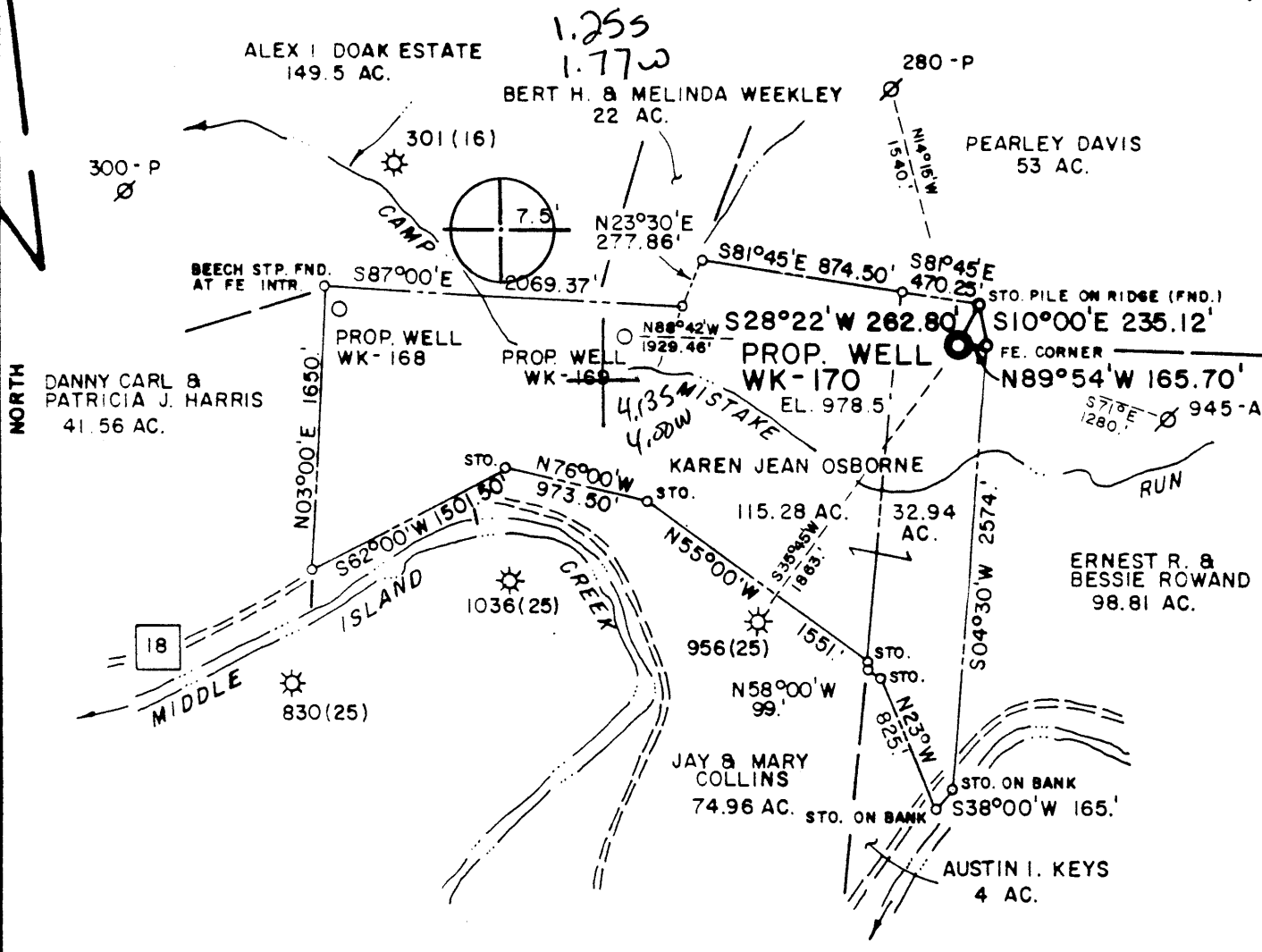
LATITUDE 39°22'30"  
2500

CODE \_\_\_\_\_ CARD \_\_\_\_\_

**MAGNETIC REFERENCE TIES**

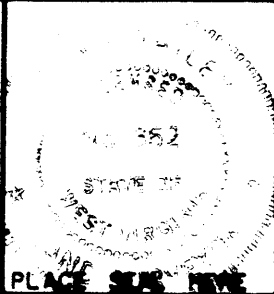
PROPOSED WELL TO STO. PILE ON RIDGE AT FE. INT. N38°49'E 262.8'  
PROPOSED WELL TO POST IN FE. LINE AT FE. INT. S73°23'E 169.8'

LONGITUDE 80°47'30"  
4.500  
6.625



FILE NO. MSES 85-646  
DRAWN BY SARC  
SCALE 1" = 1000'  
MINIMUM DEGREE OF ACCURACY 1 PART IN 200  
PROVEN SOURCE OF ELEVATION INT. TYLER CO. RT. 52/1 & DODD CO. RT. 24; EL. 834'; 4750' SE

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) J. S. Bailey  
R. P. E. \_\_\_\_\_ L. L. S. 652



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



DATE APRIL 24, 19 85  
OPERATOR'S WELL NO. WK-170  
API WELL NO. \_\_\_\_\_  
47 - 095 - 1108  
STATE COUNTY PERMIT

Department of Mines  
Oil & Gas Division

WELL TYPE: OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
(IF "GAS", PRODUCTION X STORAGE \_\_\_ DEEP \_\_\_ SHALLOW X)  
LOCATION: ELEVATION 978.5' WATER SHED CAMP MISTAKE RUN  
DISTRICT CENTERVILLE COUNTY TYLER  
QUADRANGLE WEST UNION, WV 7.5' 671 133 ECG  
SURFACE OWNER KAREN JEAN OSBORNE ACREAGE \_\_\_\_\_  
OIL & GAS ROYALTY OWNER PAUL W. & CHARLOTTE J. HYLBERT LEASE ACREAGE 140 ±  
LEASE NO. KW-546  
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 5995'  
WELL OPERATOR KEPCO, INC. 472 DESIGNATED AGENT E. L. STUART  
ADDRESS 436 BLVD. OF THE ALLIES ADDRESS P.O. BOX 1550  
PITTSBURGH, PA 15216 CLARKSBURG, WV 26301

JUL 01 1985



IV-35  
(Rev 8-81)

**RECEIVED**  
JUL 24 1987

State of West Virginia  
Department of Mines  
Oil and Gas Division

Date July 23, 1987  
Operator's  
Well No. 1 - 2520  
Farm Paul Hylbert #1  
API No. 47 - 095 - 1108

DIVISION OF OIL & GAS  
DEPARTMENT OF ENERGY

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: 978.5' Watershed Camp Mistake Run  
District: Centerville County Tyler Quadrangle West Union

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 see back  
ADDRESS \_\_\_\_\_  
MINERAL RIGHTS OWNER see back  
ADDRESS \_\_\_\_\_  
OIL AND GAS INSPECTOR FOR THIS WORK \_\_\_\_\_

Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cord.			
13-10"	22.00	pulled	
9 5/8			
8 5/8	1210.35	1210.35	266 cf
7			
5 1/2			
4 1/2		4976.55	252 cf
3			
2			
Liners used	1.5" Tubing	4835.6	

Robert Lowther ADDRESS Gen Del., Middlebourne, WV 26149  
PERMIT ISSUED 6-17-85  
DRILLING COMMENCED 4-28-87  
DRILLING COMPLETED 5-04-87

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

GEOLOGICAL TARGET FORMATION Devonian Shale Depth 5995 feet  
Depth of completed well 5240 feet Rotary XXX / Cable Tools \_\_\_\_\_  
Water strata depth: Fresh none feet; Salt none feet  
Coal seam depths: 436/439 Is coal being mined in the area? No

OPEN FLOW DATA

Producing formation Riley, Benson Pay zone depth 4916 feet  
Gas: Initial open flow 335 Mcf/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow 746 Mcf/d Final open flow \_\_\_\_\_ Bbl/d  
Time of open flow between initial and final tests 4 hours  
Static rock pressure 1350 psig (surface measurement) after 48 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

(Continue on reverse side)

JUL 27 1987


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

Halliburton - 1 stage water frac w/ nitrogen assist, 1 stage foam frac - 5-14-87

4494/99 - Riley - 50,000# sand, 725 Bbls. fluid, 521,000 Scf nitrogen

4909/16 - Benson - 50,000# sand, 569 Bbls. fluid, 89,500 Scf nitrogen

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	299	 DIVISION OF OIL & GAS DEPARTMENT OF ENERGY
Shale & Red Rock			299	436	
Coal			436	439	
Red Rock			439	476	
Red Rock & Shale			476	483	
Sand			483	550	
Red Rock & Shale			550	614	
Sand & Shale			614	1836	
Big Lime			1836	1949	
Big Injun			1952	2044	
Weir			2201	2309	
5th Sand			2608	2632	
Warren			2824	2834	
Sand & Shale			2834	4490	
Riley			4490	4504	
Benson			4908	4919	Gas check at 4913' - 60/10 thru 2" w/ water = 335 Mcf
Alexander			5220	5235 <u>5240 TD</u>	

Surface Owners:

Karen J. Osborne  
13405 Kingsman Road  
Woodbridge, VA 22193

Fred Dotson c/o K.J. Osborne  
13405 Kingsman Road  
Woodbridge, VA 22193

Rodney Dotson c/o K.J. Osborne  
13405 Kingsman Road  
Woodbridge, VA 22193

Kerin Dotson c/o K.J. Osborne  
13405 Kingsman Road  
Woodbridge, VA 22193

Mineral Rights Owners:

Sam Horton  
807 Victoria Avenue  
Williamstown, WV 26187

Edward Mullooly  
P.O. Box 883  
Weston, WV 26452

Frank Butler  
Route 5, Box 215  
Staunton, VA 24401

(Attach separate sheets as necessary)

Union Drilling, Inc.  
Well Operator

By: Joseph C. Pettey

Date: Joseph C. Pettey, Vice President of Production  
7-23-87

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."

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MAY 30 1985



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

CIL & GAS DIVISION

APPLICATION FOR A WELL WORK PERMIT

DEPT. OF MINES

- Gas  /
- B (If "Gas", Production  / Underground storage \_\_\_\_\_ / Deep \_\_\_\_\_ / Shallow  )
- 5) LOCATION: Elevation: 978.5' / Watershed: Camp Mistake Run  
District: Centerville / County: Tyler / Quadrangle: West Union 7.5'
- 6) WELL OPERATOR: Kepco, Inc. / Address: 436 Blvd. of the Allies, Pittsburgh, PA 15216 25900
- 7) DESIGNATED AGENT: E. L. Stuart / Address: P.O. Box 1550, Clarksburg, WV 26301
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED: Name: Robert Lowther / Address: General Delivery, Middlebourne, WV 26149
- 9) DRILLING CONTRACTOR: Name: Unknown / Address: \_\_\_\_\_
- 10) PROPOSED WELL WORK: Drill  / Drill deeper \_\_\_\_\_ / Redrill \_\_\_\_\_ / Stimulate  / 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, 5995 feet
- 13) Approximate trata depths: Fresh, 260, 285 feet; salt, -- feet.
- 14) Approximate coal seam depths: 590, 1335 / Is coal being mined in the area? Yes \_\_\_\_\_ / No  /
- 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	1-3/4	H-40	42		X	315 20	315 20	CTS by rule 15.05	
Fresh water									
Coal									Sizes
Intermediate	8-5/8	J-55	23	X		1603	1603	Circulate	
Production	4-1/2	J-55	10.5	X			5900	350 SX as required by rule 15.01	Perforations: Top Bottom
Tubing									
Liners									

OFFICE USE ONLY  
DRILLING PERMIT

Permit number 47-095-1108 / Date June 17 1985

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 June 17, 1987 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: 87	Agent: AIB	Plat: MH	Casing: MH	Fee: 4357
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Margaret J. Hesse  
Administrator, Office of Oil and Gas

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

See the reverse side of the APPLICANT'S COPY for instructions to the well operator.

File