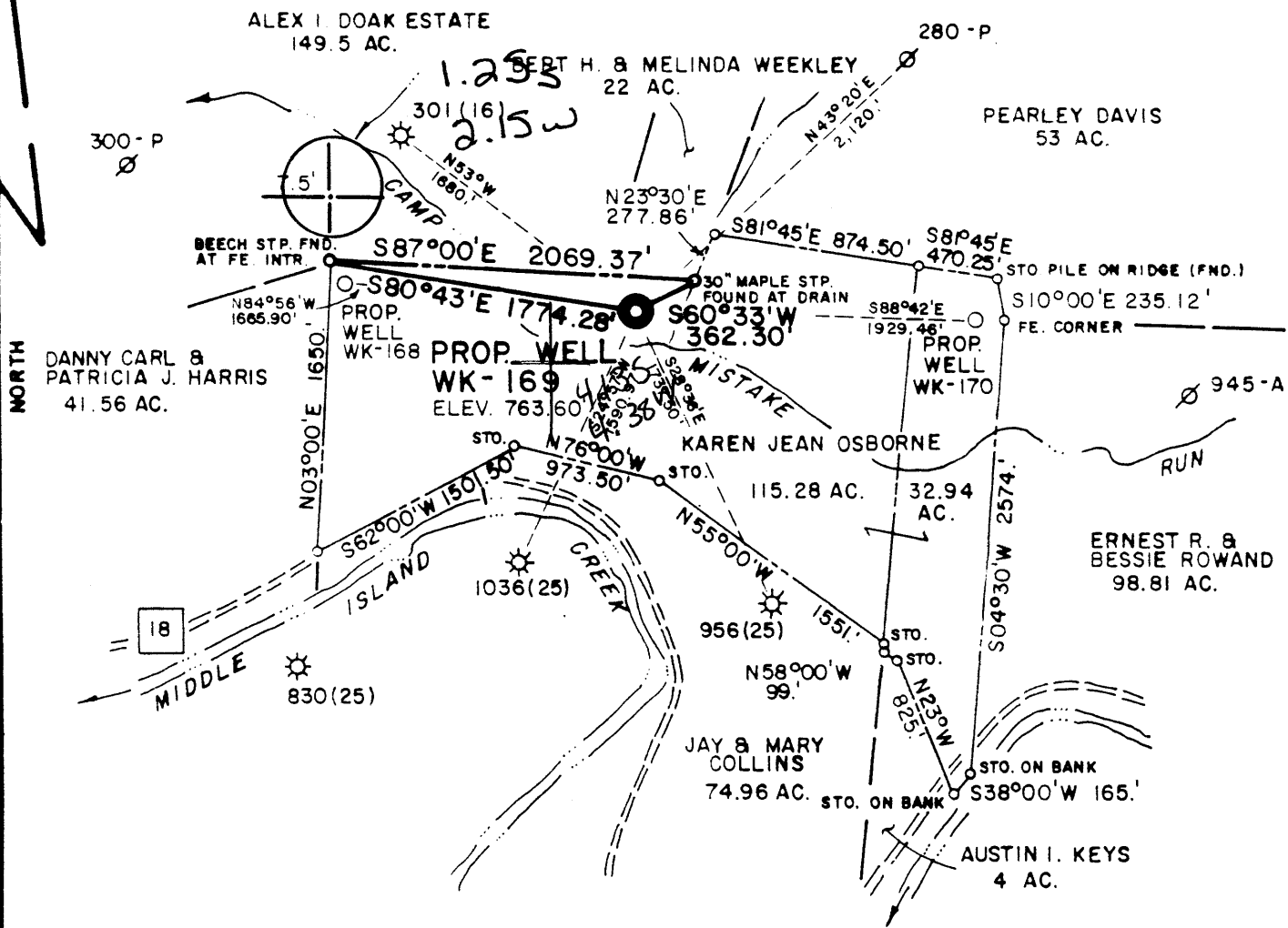


MAGNETIC REFERENCE TIES

PROPOSED WELL TO 12" TWIN BL. CHERRY N45°43'W 117.78'
PROPOSED WELL TO 16" W.O. N12°02'E 125.21'

LONGITUDE 80°47'30"
6625'



FILE NO. MSES 85-645

DRAWN BY SARC

SCALE 1" = 1000'

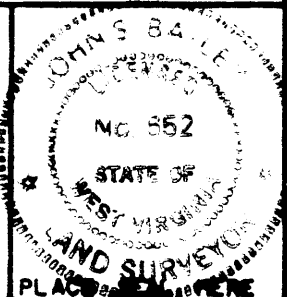
MINIMUM DEGREE OF ACCURACY 1 PART IN 200

PROVEN SOURCE OF ELEVATION INT. TYLER CO. RT. 52/1 & DODD CO. RT. 24; EL. 834'; 6750' 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) R. P. Bailey

R. P. E. _____ L. L. S. 652



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FORM IV-6
(8-78)



Department of Mines
Oil & Gas Division

DATE APRIL 24, 1985
OPERATOR'S WELL NO. WK-169
API WELL NO. 47-095-1107
STATE COUNTY PERMIT

now: Union Drilling #3 (2538)

WELL TYPE: OIL _____ GAS X LIQUID INJECTION _____ WASTE DISPOSAL _____
(IF "GAS", PRODUCTION X STORAGE _____ DEEP _____ SHALLOW X)

LOCATION: ELEVATION 763.60' WATER SHED CAMP MISTAKE RUN

DISTRICT CENTERVILLE COUNTY TYLER

QUADRANGLE WEST UNION, WV 7.5' 67/133 EC 6

SURFACE OWNER KAREN JEAN OSBORNE ACREAGE 115.28

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. 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

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

State of West Virginia
Department of Mines
Oil and Gas Division

Date July 23, 1987
Operator's
Well No. 3 - 2538
Farm Paul Hylbert #3
API No. 47 - 095 - 1107

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: 763.60 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 _____

Robert Lowther ADDRESS Gen. Del., Middlebourne, WV
26149

PERMIT ISSUED 6-17-85

DRILLING COMMENCED 5-05-87

DRILLING COMPLETED 5-11-87

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"			
9 5/8			
8 5/8	1002.80	1002.80	118 cf
7			
5 1/2			
4 1/2		4761.15	320 cf
3			
2			
Liners used	1.5"	4630.20	
	Tubing		

GEOLOGICAL TARGET FORMATION Devonian Shale Depth 5995 feet

Depth of completed well 5306 feet Rotary XXX / Cable Tools _____

Water strata depth: Fresh 73 feet; Salt 1196 feet

Coal seam depths: none Is coal being mined in the area? No

OPEN FLOW DATA

Producing formation Riley, Benson Pay zone depth 4691 feet

Gas: Initial open flow 267 Mcf/d Oil: Initial open flow _____ Bbl/d

Final open flow 852 Mcf/d Final open flow _____ Bbl/d

Time of open flow between initial and final tests 4 hours

Static rock pressure 1400 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

(Continue on reverse side)

JUL 27 1987

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

Dowell - 2 stage foam frac - 5-20-87

4273/76 - Riley - 39,000# sand, 312 Bbls. fluid, 534,000 Scf nitrogen
 4281/83
 4289/91
 4684/91 - Benson - 50,000# sand, 760 Bbls. fluid, 92,000 Scf nitrogen

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JUL 24 1987

WELL LOG

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

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	149	2 1/2" water at 73'
Red Rock			149	161	
Sand & Shale			161	425	
Shale & Red Rock			425	1141	
Sand & Shale			1141	1422	1 1/2" water at 1196'
Shale & Red Rock			1422	1614	
Big Lime			1614	1715	
Big Injun			1718	1824	
Weir			1982	2088	
Riley			4262	4295	
Benson			4674	4694	
Alexander			4988	5010	Gas check at 4992' - 40/10 thru 2" w/ water = 267 Mcf
				5306 TD	

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."



1) Date: April 11 1985, 19 85
 2) Operator's Well No. WK-169
 3) API Well No. 47 State 095 County -1107 Permit

MAY 30 1985

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

OIL & GAS DIVISION APPLICATION FOR A WELL WORK PERMIT

- 4) WELL TYPE: Oil Gas DEPT. OF MINES
 B (If "Gas", Production / Underground storage _____ / Deep _____ / Shallow /)
 5) LOCATION: Elevation: 763.60 Watershed: Camp Mistake Run
 District: Centerville County: Tyler Quadrangle: West Union 7.5'
 6) WELL OPERATOR Kepeco, Inc. 7) DESIGNATED AGENT E. L. Stuart
 Address 436 Blvd. of the Allies Address P. O. Box 1550
Pittsburgh, PA 15216 25900 Clarksburg, WV 26301
 8) OIL & GAS INSPECTOR TO BE NOTIFIED 9) DRILLING CONTRACTOR:
 Name Robert Lowther Name Unknown
 Address General Delivery Address _____
Middlebourne, WV 26149
 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, 45, 70 feet; salt, -- feet.
 14) Approximate coal seam depths: 375, 1120 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	11-3/4	H-40	42		X	100	100	CTS by rule 15.05	Kings	
Fresh water										
Coal									Sizes	
Intermediate	8-5/8	J-55	23	X		1388	1388	Circulate	Sizes	
Production	4-1/2	J-55	10.5	X			5900			
Tubing								350 sacks was required by rule	Perforations: 15.01	
Liners										
									Top Bottom	

OFFICE USE ONLY
DRILLING PERMIT

Permit number 47-095-1107 Date June 17 19 85

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:	Agent:	Plat:	Casing	Fee
87	AIB	MN	MN	4356

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