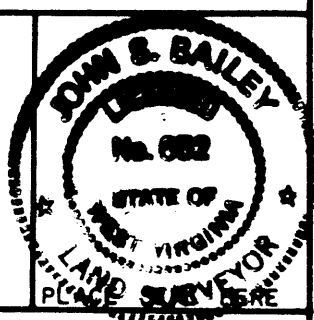


REFERENCE TIE LINES  
 PROPOSED WELL TO 15" YELLOW POP.  
 N 76°34' E 207.71 (MAG.)  
 PROPOSED WELL TO 14" YELLOW POP.  
 S 88°13' E 180.21' (MAG.)

FILE NO. MSES 84-428  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 500'  
 MINIMUM DEGREE OF ACCURACY 1 IN 200  
 PROVEN SOURCE OF ELEVATION USGS DISK @ BRIDGE ON ROUTE 78 EL. 734'

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) John S. 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 JUNE 27, 1984  
 OPERATOR'S WELL NO. WK-339  
 API WELL NO. 47-095-1087  
 STATE COUNTY PERMIT

WELL TYPE: OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
 (IF "GAS", PRODUCTION X STORAGE \_\_\_ DEEP \_\_\_ SHALLOW X)  
 LOCATION: ELEVATION 887.50' WATER SHED MIDDLE ISLAND CREEK  
 DISTRICT CENTERVILLE COUNTY TYLER  
 QUADRANGLE WEST UNION 75' (1976) 671 WEST UNION 133 C5  
 SURFACE OWNER THELMA FERGUSON ET AL. ACREAGE 49  
 OIL & GAS ROYALTY OWNER THELMA FERGUSON ET AL. LEASE ACREAGE 49  
 LEASE NO. KW-941  
 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. 15219 CLARKSBURG, W.V. 26301

AUG 13 1984

FERC



IV-35  
(Rev 8-81)

Date 2-26-85  
Operator's  
Well No. WK-339  
Farm Ferguson #2  
API No. 47 - 095 - 1087

State of West Virginia  
Department of Mines  
Oil and Gas Division

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 X / Underground Storage \_\_\_ / Deep \_\_\_ / Shallow X /)

LOCATION: Elevation: 887.5 Watershed Middle Island Creek  
District: Centerville County Tyler Quadrangle West Union

COMPANY Kepeco, Inc.  
ADDRESS 436 Blvd. of the Allies, Pgh. PA 15219  
DESIGNATED AGENT E. L. Stuart  
ADDRESS Box 1550, Clarksburg, WV 26301  
SURFACE OWNER Thelma Ferguson  
ADDRESS Rt. 2, Box 186, Pennsboro, WV 26415  
MINERAL RIGHTS OWNER Thelma Ferguson  
ADDRESS Rt. 2, Box 186, Pennsboro, WV 26415  
OIL AND GAS INSPECTOR FOR THIS WORK  
Robert Lowther ADDRESS General Delivery Middlebourne, WV 26149  
PERMIT ISSUED August 7, 1984  
DRILLING COMMENCED 1-29-85  
DRILLING COMPLETED 2-6-85  
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 Cond.			
13-10"	35'	35'	10 sx neat cement
9 5/8			
8 5/8	1552'	1552'	310 sx neat cement
7			
5 1/2			
4 1/2	5822'	5822'	395 sx pozmix
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Rhinestreet Shale Depth 5708 feet  
Depth of completed well 5840 feet Rotary X / Cable Tools \_\_\_\_\_  
Water strata depth: Fresh 200 feet; Salt None Reported feet  
Coal seam depths: None reported Is coal being mined in the area? NO

OPEN FLOW DATA

Producing formation Rhinestreet Shale, Benson, Riley Pay zone depth 5712, 4749, 4404 feet  
Gas: Initial open flow 0 Mcf/d Oil: Initial open flow 0 Bbl/d  
Final open flow 450 Mcf/d Final open flow 0 Bbl/d  
Time of open flow between initial and final tests 4 hours  
Static rock pressure 1500 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

MAY 06 1985

(Continue on reverse side)

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

Perforated 2-14-85, Perfco Wireline Co.

*Riley  
Benson  
Rhodes*

4404'-4438' Avg. Pressure = 2500 psig, Avg. rate = 30 BPM  
 4749'-4812' Avg. Pressure = 2800 psig, Avg. rate = 28 BPM  
 5712'-5776' Avg. Pressure = 2950 psig, Avg. rate = 28 BPM

Fractured 2-14-85, Halliburton Services, Waterfrac with Nitrogen Assist

1st stage 20,000 lbs., 20/40 sand  
 2nd stage 30,000 lbs., 20/40 sand  
 3rd stage 5000 lbs., 80/100 sand; 21,500 lbs., 20/40 sand

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 Rock and Shale			0	38	
Sand			38	75	Fresh water at 38'
Shale			75	90	
Sand			90	145	
Shale and Red Rock			145	200	Fresh water at 200'
Shale			200	240	
Red Rock & Shale			240	290	
Sand and Shale			290	385	
Sand			385	470	
Sand and Shale			470	580	
Red Rock and Shale			580	640	
Sand and Shale			640	790	
Sand			790	810	
Shale			810	990	
Sand			990	1050	
Shale			1050	1180	
Sand			1180	1240	
Shale			1240	1335	
Sand			1335	1430	
Shale			1430	1753	
Big Lime			1753	1804	
Big Injun			1804	1955	
Weir			2128	2242	
Berea			2316	2322	
5th			2744	2752	
Warren			3242	3288	

continued.

(Attach separate sheets as necessary)

Kepeco, Inc.

Well Operator

By: \_\_\_\_\_ Chief Geologist

Date: \_\_\_\_\_

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."

Pg 2, 095 1087

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
Speechley			3310	3356	
Balltown			3634	3641	
Bradford			4164	4174	
Riley			4404	4438	
Upper Benson			4748	4754	
Benson			4808	4814	
<u>Rhinstreet Shale</u>			5708	<u>5833</u>	<u>Total Depth</u>
					5833
					<u>888</u>
					4945

(Attach separate sheets as necessary)

Kepeco, Inc.

Well Operator

By: David Blanton Chief Geologist

Date: 2-27-85

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 coal, encountered in the drilling of a well."

MAY 06 1985



1) Date: July 2, 1984  
 2) Operator's Well No. WK-339  
 3) API Well No. 47 095 1087  
 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  / B (If "Gas", Production  / Underground storage  / Deep  / Shallow )  
 5) LOCATION: Elevation: 887.50 Watershed: Middle Island Creek (058)  
 District: Centerville County: Tyler Quadrangle: West Union 7.5' (1976)  
 6) WELL OPERATOR Kepeco, Inc. 7) DESIGNATED AGENT E. L. Stuart  
 Address 436 Blvd. of the Allies Address P. O. Box 1550  
Pittsburgh, PA 15219 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, 190, 267 feet; salt, \_\_\_\_\_ feet.  
 14) Approximate coal seam depths: \_\_\_\_\_ Is coal being mined in the area? Yes  / No

**RECEIVED**  
 JUL 18 1984  
 OIL & GAS DIVISION  
 DEPT. OF MINES

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	20	20		Kinds
Fresh water						297'	297'	CTS by rule 15.05	
Coal									Sizes
Intermediate	8-5/8	J-55	23	X		1513	1513	Circulate	
Production	4-1/2	J-55	10.5	X			5900	As req. by rule 15.01	
Tubing									
Liners									Perforations: Top Bottom

OFFICE USE ONLY  
 DRILLING PERMIT

Permit number 47-095-1087 Date August 7, 1984

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 7, 1986 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: <b>BLANKET</b>	Agent: <u>LS</u>	Plat:	Casing <u>MH</u>	Fee <u>3567</u>
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T. L. [Signature]  
 Administrator, Office of Oil and Gas

NOTE: Keep one copy of this permit posted at the drilling location. File  
 See the reverse side of the APPLICANT'S COPY for instructions to the well operator.