



IV-35 (Rev 8-81)

State of Mest Airginia

Bepartment of Mines Gil und Gas Awision

Date 10-12-84	
Operator's	
Well No. WK-338	
Farm Ferguson No.	1
APT No 47 - 005 -	1006

WELL OPERATOR'S REPORT

OF

DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

WELL TYPE: Oil / Gas \underline{x} / Liquid Injection (If "Gas," Production \underline{x} / Undergrou	/ Wast	e Disposa e/ Deep	l/ p/ Sha	11ow x /)
LOCATION: Elevation: 729.3 Watershed Mid				
District: Centerville County Tyler			West IIn	ion 7 5
<u> </u>		4	- West On	-
COMPANY Kepco, Inc.				
ADDRESS 436 Blvd. of Allies Pitts, PA 15219	Casing	Used in	Left	Cement
DESIGNATED AGENT E. L. Stuart	Tubing	Drilling	in Well	fill up Cu. ft.
ADDRESS Box 1550 Clarksburg, WV 26301	Size			
SURFACE OWNER Thelma Ferguson et. al	20-16 Cond.			
ADDRESS Rt. 2 Box 186 Pennsboro, WV 26415	13-10"	163	163	75 sks
MINERAL RIGHTS OWNER Thelma Ferguson et. al.	9 5/8	103	103	neat cmt
ADDRESS Rt. 2 Box 186 Pennsboro, WV 26415	8 5/8	1353	1353	310 sks
OIL AND GAS INSPECTOR FOR THIS WORK Robert General Delivery	7	1333	1333	neat cmt
Lowther ADDRESS Middlebourne, WV 26149	5 1/2			
PERMIT ISSUED August 7, 1984	4 1/2	5616	5616	400 sks
DRILLING COMMENCED September 7, 1984	3	3010	7010	pozmix
DRILLING COMPLETED September 13, 1984	2	·		
IF APPLICABLE: PLUGGING OF DRY HOLE ON				
CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED	Liners used			
ON				
GEOLOGICAL TARGET FORMATION Rhinestreet Shale		Dept	_h 5540	feet
Depth of completed well 5656 feet R				
Water strata depth: Fresh N/A feet;				
Coal seam depths: N/A			ed in the	area? No
OPEN FLOW DATA		•		
Rene	son,		5549, 4	635,
Producing formation Rhinestreet Shale, Rile Gas: Initial open flow 0 Mcf/d	oil. Tri	tial case	4231	reet
Final open flow 582 Mcf/d	OII. III Fin	al coon t	110) BDT/q
Time of open flow between initi				
Static rock pressure 1500 psig(surface				
(If applicable due to multiple completion-			<u>48</u> 100	rs sinc m
Second producing formation		zone den	-h	foot
Gas: Initial open flow Mcf/d	Oil: Ini	tial open	flow	Ph1 /d
Final open flow Mcf/d	Oil: Fin	al open f	low	Bb1 /d
Time of open flow between initi	al and fi	nal tests	ho	urs
Static rock pressurepsig(surface				

Ty. 1.76

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

Perforate 9-20-84 Perfeo Wireline Co. Rhinestant 5 549 - 5609 Avg. Press 2550 psig, Avg. Rate 25 BPM

Rhinestant 5 549 - 5609 Avg. Press 3000 psig, Avg. Rate 29 BPM

Fractured 9-20-84 Halliburton Services, Waterfrac with Nitrogen Assist

1st stage - 17,500 lbs. 20/40 sand 2nd stage - 30,000 lbs. 20/40 Sand

3rd stage - 5,000 lbs. 80/100 Sand and 20,000 lbs. 20/40 Sand

WELL LOG

		REMARKS
TOP FEET	BOTTOM FEET	Including indication of all fresh
		and salt water, coal, oil and gas
	10	
8		
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1		
E .	1	•
I	•	
-	i .	•
•	1	·
II I	4	•
L .		
		•
I I	1	
	473	
	536	
536	570	
570	630	
630	710	
710	745	•
745	975	
975	1	
•	1	•
	3 i	
1		•
1	1	From Electric Log
1		From Electric Log
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1		
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	630 710	0 10 10 20 20 65 65 80 80 130 130 145 145 165 165 175 175 195 195 215 215 225 225 235 235 315 315 473 473 536 536 570 570 630 630 710 710 745 745 975 975 1010 1010 1125 1125 1160 1160 1190 1190 1220 1220 1385 1385 1402 1402 1582 1582 1602 1602 1796 1796 1956 1956 2066 2066 2146 2146 2151 2151 2574

(Attach separate sheets as necessary)

Kepco, Inc.	
Well Operator	
By:	Chief Geologist
Date:	

Regulation 2.02(i) provides as follows: "The term 'log' or 'well log' shall mean a systematic detailed geological record of all formations, including one of the desired of a well." DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

Pg 2, 095 1086

WELL LOG

		W		
FORMATION COLOR 1	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all freshand salt water, coal, oil and gas
Riley Shale Benson Shale Rhinestreet	•	4231 4263 4636 4644 5540	4263 4636 4644 5540 5656	
		-		
			•	
				· •

(Attach separate sheets as necessary)

Kepco, Inc.
Well Operator
By: Land & Carron Chief Geologist
By: Lance & Carran Chief Geologist
Date:



1)	Date:	July 2		19 84
2)	Operator's Well No	WK-338		
3)	API Well No		095	1086
		State	County	Permit

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

12) Estimated depth of completed well, 5995 feet DEPT. OF MIN 13) Approximate trata depths: Fresh, 35, 110 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 Size Grade Weight per ft. New Used For drilling Left in well (Cabic feet) Conductor 11-3/4 H-40 42 X 20 20 Kinds Fresh water 140 140 140 CTS by rule 15.00 Intermediate 8-5/8 J-55 23 X 1354 Circulate	4) WELL TYPE: A Oil Gas	•		-			ARIME	THE OF MUNES, O	IL AND GAS DIVE	SION	1 de	
B (If "Gas", Production X Underground storage Deep Shallow X Distric: Center ville County: 729.30 Watershed: \$\frac{1}{2}\text{xign} \text{ Middle Island Creek (OSR)}\$ Distric: Center ville County: 719er Quadrangle: West Union 7.5' 6) WELL OPERATOR Kepco, Inc. Address 436 Blvd. of the Allies Pittsburgh, PA 15219 8) OIL & GAS INSPECTOR TO BE NOTIFIED Name Robert Lowther Address General Delivery Address General Delivery Middlebourne, WV 26149 10) PROPOSED WELL WORK: Drill X / Drill deeper Redrill Stimulate Unknown Plug off old formation Perforate new formation Other physical change in well (specify) 11) GEOLOGICAL TARGET FORMATION, Devonian Shale OIL & GAS DIVISION [2] Estimated depths of completed well, 5995 feet DEPT. of MiN [3] Approximate coal seam depths: Is coal being mined in the area? Yes No. X 15) CASING AND TUBING PROGRAM CASING OR TUBING PROGRAM CASING OR SECURICATIONS Securications Size Securications Size Securications Size Securications Size Securications (Cable feet) Sizes S	Social Control Section			Ms		- · <u>-A</u>	PPLICA	ATION FOR A WE	LL WORK PERMI	<u>T</u>		
B (If "Gas", Production X Underground storage Deep Shallow X Distric: Center ville County: 729-30 Watershed: \$\frac{x}{x}\frac{x}{x}\text{ Middle Island Creek (0.58)}\$ Distric: Center ville County: 719er Quadrangle: West Union 7.5' 6) WELL OPERATOR Kepco, Inc. Address 436 Blvd. of the Allies Pittsburgh, PA 15219 8) OIL & GAS INSPECTOR TO BE NOTIFIED Name Robert Lowther Address General Delivery Address General Delivery Middlebourne, WV 26149 10) PROPOSED WELL WORK: Drill X / Drill deeper Redrill Stimulate Unknown Pulsy off old formation Perforate new formation Other physical change in well (specify) 11) GEOLOGICAL TARGET FORMATION, Devonian Shale OIL & GAS DIVISION 12) Estimated depths of completed well, 5995 feet DEPT. DF MiN 13) Approximate total depths: Fresh, 35, 110 feet; salt, feet. 14) Approximate total depths: Fresh, 35, 110 feet; salt, feet. 15) CASING AND TUBING PROGRAM CASING OR SPECIFICATIONS Security For drilling Left in well Conductor 11-3/4 H-4C 42 X 20 20 CONSTACT REPORT FILLUP CONSTACT REPORT FILL	Social Control Section	4) WELL TY	YPE: A O	il _	/ 6	as ·	X,		*			
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Size Grade per ft. New Used For drilling Left in well OR SACKS (Cable feet)	Size Grade per ft. New Used For drilling Left in well OR SACKS (Cable feet)		1 .	SPEC		s		FOOTAGE	INTERVALS	CEMENT FILL-UP	PACKERS	
11-3/4	11-3/4					New	Used	For drilling	Left in well			
		onductor	11-3/4	H-40	42		X	20	20	(Outr Icti)	Vi. d.	
Sizes Size	Sizes Size	resh water						140'	140'	CTS		- 40
Note	Note	oal							1 / / -	C/3 &		7.00
	OFFICE USE ONLY DRILLING PERMIT 47-095-1086	ntermediate	8-5/8	J-55	23	Х		1354	1354	Circulate	Sizes	
ubing iners Perforations: Top Bottom	OFFICE USE ONLY DRILLING PERMIT	roduction	4-1/2	J-55	10.5	Х					0	
Perforations: Top Bottom	OFFICE USE ONLY DRILLING PERMIT	ubing							7,00	we reg	July Tull	
Top Bottom	OFFICE USE ONLY DRILLING PERMIT	iners								 	 	
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DDII I INC DEDMIT	47-095-1086											
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ermit number 47-095-1086 August 7	1.05000 / 19 04	rmit number_		47-095	-1086					August	.7	84
August / 19 8	Date									Date	e	
Permit number 47-095-1086	Date	ermit number_								Det		
				-								84
Permit number 47-095-1086		ermit number_		47-095	5–1086					August	7 10	
	Date									Det		
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his permit covering the well operator and well location shown below is suideness of	his permit covering the well operator and well location shown below is evidence of permission granted to drill in accordance with the pertinent legal re-	o. 8) Prior to t	he construct	ion of ros	ids. locati	ons and	nits for	any normitted work	In addition the	iven to the District Oil ell operator or his cont	and Gas Inspector, (Firactor shall notify the	Refer to proper
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See the reverse side of the APPLICANT'S COPY for instructions to the well operator.

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

Administrator, Office of Oil and Gas

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