WR-35 Rev (9-11)

## State of West Virginia Department of Environmental Protection Office of Oil and Gas Well Operator's Report of Well Work

DATE:	10/16/2012	
API#:	47-033-03162	F_

arm name: Harron, Ray A.	Operator Well	l No.: Harron 2		·
OCATION: Elevation: 1249 GL	_ Quadrangle: _	Clarksburg 7.5		
District: Simpson	County: Har	rison		
Latitude: 8,490 Feet South of 39 Deg	. 17 Min. 30 Sec.			
Longitude 1,890 Feet West of 80 Deg	, 15 Min	Se	c.	
Company: Petroleum Development Corporation				
Address: 120 Genesis Boulevard	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Bridgeport, WV 26330	11 3/4"	15'	15'	Cement to Surface
Agent: Bob Williamson	8 5/8°	1063'	1063'	371
Inspector: Tim Bennett	4 1/2"	4593'	4593'	880
Date Permit Issued: 04/30/2009				
Date Well Work Commenced: 6/17/2009				
Date Well Work Completed: 6/18/2009				
Verbal Plugging:				
Date Permission granted on:				
Rotary Cable Rig 🗸		ļ		
Total Vertical Depth (ft): 4634				
Total Measured Depth (ft): 4634'				
Fresh Water Depth (ft.): 20', 208', 365'			ļ	
Salt Water Depth (ft.): 936'		<u> </u>		
Is coal being mined in area (N/Y)? N		1	<u> </u>	
Coal Depths (ft.): 196', 540'		<u> </u>		<u> </u>
Void(s) encountered (N/Y) Depth(s) N		1		<u> </u>
OPEN FLOW DATA (If more than two producing format Producing formation Sth Sand Pages: Initial open flow 50.4 MCF/d Oil: Initial open Final open flow 60 MCF/d Final open flow Time of open flow between initial and final tests Static rock Pressure 120 psig (surface pressure)	y zone depth (ft) flowB pwB 24Houn	2404 Bbl/d bl/d s	data on separate	shect)
Second producing formation Gordon (perf only) Pay	one depth (ft) 20	39		
Gas: Initial open flowMCF/d Oil: Initial open		3bl/d	•	
Final open flow MCF/d Final open flow Time of open flow between initial and final tests_		bl∕d *		
Static rock Pressure psig (surface pressure)				
certify under penalty of law that I have personally examine the attachments and that, based on my inquiry of those in at the information is true, accurate, and complete.	d and am familia	nr with the info	rmation submitte ble for obtaining	ed on this document the information I
Falle			V16/2012	
Cionature			Date	

Were core samples taken? YesN	lo_XX	Were cuttings caught during drilli	ing? YesNo_XX
Were Electrical, Mechanical or Geophysic tom 2440-850.	al logs recorded on this v	vell? If yes, please list Hotwell Wire	line GR/CCL/CMT Bond VDL
NOTE: IN THE AREA BELOW FRACTURING OR STIMULATING, DETAILED GEOLOGICAL RECORCOAL ENCOUNTERED BY THE WE	PHYSICAL CHANGE, D OF THE TOPS A	ETC. 2). THE WELL LOG WIND BOTTOMS OF ALL FOR	HICH IS A SYSTEMATIC
Perforated Intervals, Fracturing, or Stimul	ating:		_
6/17/2009: MIRU Weatherford & Hotwell Wireline. Run G	R/CCL log from 2440-850 & set B	ridge Plug at 2440, perf. 5th Sand from 2518-2	26 (16 holes), set frac plug at 2070 &
perf Gordon from 2039-46' w/24 holes RU Weather	rford & pump 12 bbls 15% HC	ahaad of an N2 (35Q) assist linear Aqua	Frac w/ 25,584 lbs of 20/40 sand,
101,728 SCF N2, & 348 bbls treated fluid. Break at 19	69 psi & avg treating foam rate v	vas 18.4 BPM & ATP was 2351 psl. ISIP =	1554 psi, no other pressures taken.
Did not get acid ahead of 2nd stage due to p	ump not being able to pull	prime, after several attempts to bre	ak the Gordon frac cancelled.
6/25/2009: Drilled 1st plug & 2nd plug & cle	aned to original TD @ 457	74' & TiL on 6/25/2009. Gordon wa	s perforated but never frac'd.
Plug Back Details Including Plug Type an			
Bridge plug @ 2440' & frac plu	ւց @ 2070'. Both բ	olugs drilled out & cleane	ed out to original TD.
Formations Encountered: Surface:	Top Depth		Bottom Depth
See Attached WR-35 & "Well Log"	from original comple	etion of this well (47-033-31	62).
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DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. Perforated the Benson with 13 shots (4457'-67'). Treated the well using a gelled water frac w/N2 assist using 603 bbl of sand laden fluid (15,000# of 80/100 sand and 50,000# of 20/40 sand). Also used 71,000 scf of N2.

WELL LOG

FORMATION COLOR HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
	<u> </u>	10	and sait water, coar, our aid gas
KB - GL	0	10	11.11 TOO & 201. 1-11 H20
sand, shale, redrock	10	1371	1½" stream H2O @ 20'; ½" stream H2O
big lime	1371	1448	@ 208'; 's" stream H20 @ 365'; 1"
sand, shale	1448	1460	stream H2O @ 936'
big injun	1460	1526	coal @ 196'; 540'
sand, shale	1526	1868	gas @ 1577'; 10/10= 1"w/H20
gantz	1868	1877	
sand, shale	1877	1884	
50 foot	1884	1930	
sand, shale	1930	1937	
30 foot	1937	1944	
sand, shale	1944	2024	gas @ 1983'; 6/10= 1"w/H20
gordon stray	2024	2045	<u>"</u>
sand, shale	2045	2047	
gordon	2047	2067	]
sand, shale	2067	2126	
3rd sand	2126	2146	
sand, shale	2146	2197	gas @ 2170'; 4/10= 1"w/H20
4th sand	2197	2217	
sand, shale	2217	2254	gas @ 2233'; 4/10= 1"w/H20
4th 'A'	2254	2289	
sand, shale	2289	2395	gas @ 2326'; 12/10= 1"w/H20
5th sand	2395	2425	gas @ 2420'; 14/10= 1"w/H20
sand, shale	2425	2995	
speechley	2995	3103	
sand, shale	3103	3229	gas @ 3196'; 10/10= 1"w/H20
halltown	3229	3312	
sand, shale	3312	4248	gas @ 3414'; 8/10=1" w/H20
riley	4248	4311	gas @ 4194'; 8/10=1" w/H20
sand, shale	4311	4437	gas @ 4413'; 18/10= 1"w/H20
henson	4437	4470	I -
sand, shale	4470		logger
same, smare	1		driller
		1	gas @ 4507'; 100/10= 1"w/H20
	1		gas @ TD; 6/10= 2"w/H20
	1	1	<u> </u>
	1	1	
	ļ	1	

(Attach separate sheets as necessary)

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 well, encountered in the drilling of a well."