

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

Farm Name: Riggle, Patrick Shane _____ Operator Well No: SHL-3D-HS

LOCATION: Sand Hill Elevation: 1,289.18' Quadrangle: Majorsville

District: SAND HILL County: MARSHALL
Latitude: _____ Feet South of _____ Deg. _____ Min. _____ Sec. 39.97119400
Longitude: _____ Feet South of _____ Deg. _____ Min. _____ Sec. -80.55691900

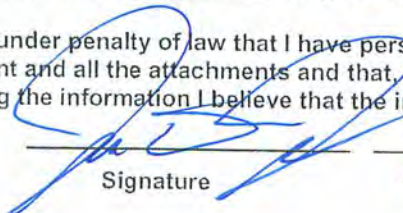
Company: CNX Gas Company LLC	Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. Ft.
Address: 200 Evergreene Drive Waynesburg, PA 15370	20	40	40	Grouted In
Agent: Ryan Morgan	13 3/8	1005	1005	Cement to surface 648 sxs (162 bbls) 18 bbls return
Inspector: Bill Hendershot	9 5/8	3095	3095	Cement to surface 980 sxs (245 bbl) 15 bbls return
Date Permit Issued: 11/1/2010	5 1/2	12946	12946	1623 sxs (367 bbls) Class A
Date Well Work Commenced: 6/11/2011				
Date Well Work Completed: 7/28/2012				
Verbal Plugging:				
Date Permission granted on: 6/11/2011				
Rotary Cable Rig X				
Total Vertical Depth (ft): Original Hole - 6,580.11'				
Total Measured Depth (ft): 12,968'				
Fresh Water Depth (ft): N/A				
Salt Water Depth (ft): N/A				
Is coal being mined in the area (N/Y)? Y				
Coal Depths (ft.): 660'-665'				
Void(s) encountered (N/Y) Depth(s) N/A				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Marcellus Pay zone depth (ft) 6620'
Gas: Initial open flow 4632 MCF/d Oil: Initial open flow 30 Bbl/d
Final open flow 0 MCF/d Final open flow 0 Bbl/d
Time of open flow between initial and final tests 24 Hours
Static rock Pressure 2700 psig (surface pressure) after 24 Hours

Second producing formation _____ Pay zone depth (ft) _____
Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d
Final open flow _____ MCF/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests _____ Hours
Static rock Pressure _____ psig (surface pressure) after _____ Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.


Signature _____ Date 1/9/14

04/04/2014

Were core samples taken? Yes__ No_x__

Were cuttings caught during drilling? Yes_x_ No__

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Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list: MWD Gamma Ray _____

NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.

Perforated Intervals, Fracturing or Stimulating: Please See Attached

Plug Back Details including Plug Type and Depth(s): Please See Attached

Surface: _____

Formations Encountered: Please See Attached

04/04/2014



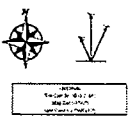
Noble Energy



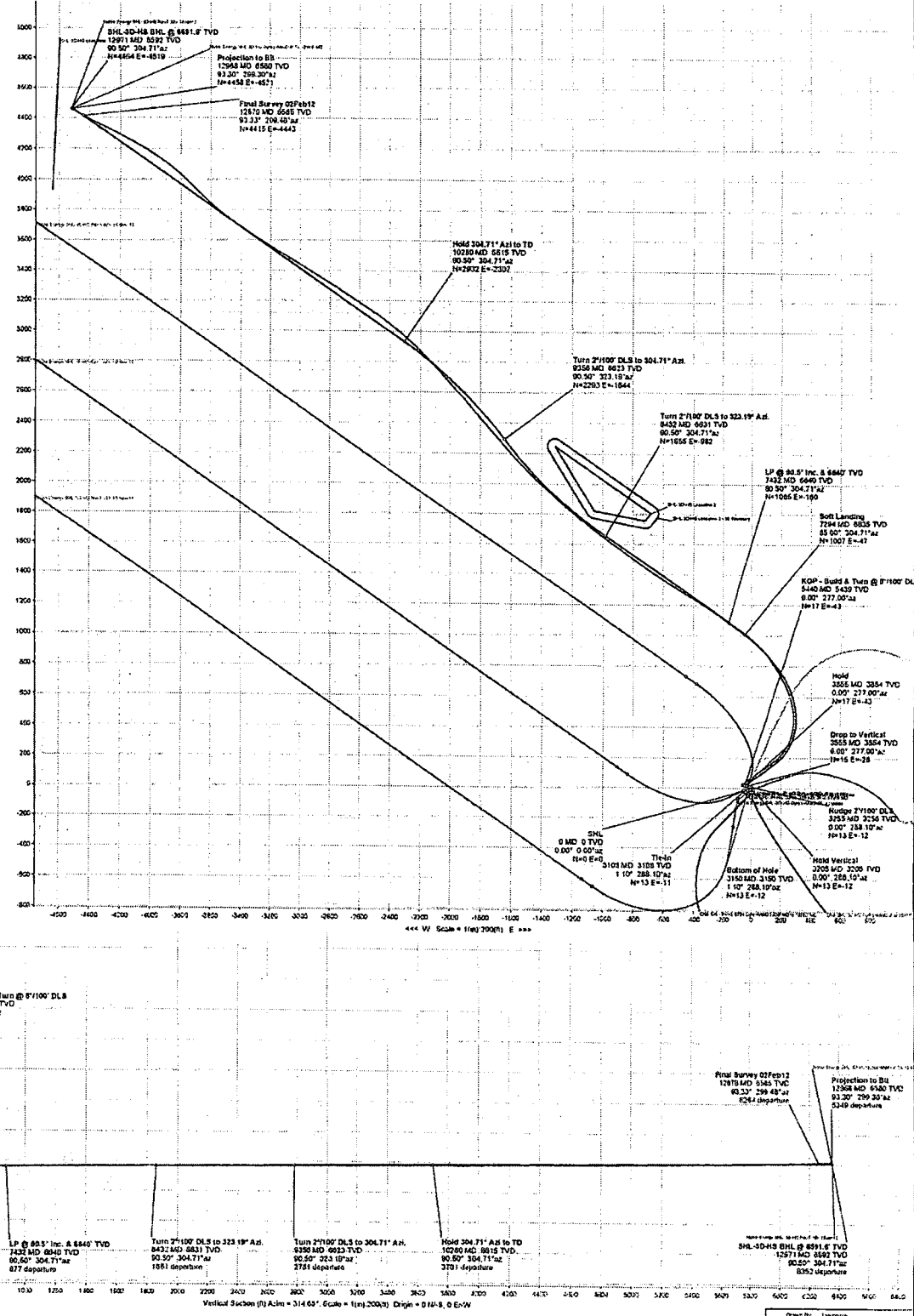
WELL	SHL-3D-HS	TITLE	WV Marshall County (NAD 27)	STRUCTURE	Nabors M59
W down	Vertical	W down	Vertical	W down	Vertical
W down	Vertical	W down	Vertical	W down	Vertical

Legend

Wellbore
 Completion
 Production
 ...



WELL	WELL TYPE	WELL STATUS	WELL DEPTH	WELL DATE	WELL NAME
SHL-3D-HS	Vertical	Active	12500	02/2012	SHL-3D-HS



WV Scale = 1:100000 E

Vertical Section (ft) Azim = 314.65°, Scale = 1:100000, Origin = 0 N=8, 0 E=W

WV Scale = 1:100000 E

Vertical Section (ft) Azim = 314.65°, Scale = 1:100000, Origin = 0 N=8, 0 E=W

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Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft)	Northing (ft)	Easting (ft)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	0.000		22.780	Act Stns	SLB_NSG+MSHOT-Depth Only					Original Borehole / Noble Energy SHL-3D-HS Gyros+MWD 0' To 12968' MD			
	22.780		3108.000	Act Stns	SLB_NSG+MSHOT					Original Borehole / Noble Energy SHL-3D-HS Gyros+MWD 0' To 12968' MD			
	3108.000		3383.000	Act Stns	SLB_NSG+SSHOT					Original Borehole / Noble Energy SHL-3D-HS Gyros+MWD 0' To 12968' MD			
	3383.000		3411.000	Act Stns	SLB_MWD-INC_ONLY					Original Borehole / Noble Energy SHL-3D-HS Gyros+MWD 0' To 12968' MD			
	3411.000		3474.000	Act Stns	SLB_NSG+SSHOT					Original Borehole / Noble Energy SHL-3D-HS Gyros+MWD 0' To 12968' MD			
	3474.000		5302.000	Act Stns	SLB_MWD-INC_ONLY					Original Borehole / Noble Energy SHL-3D-HS Gyros+MWD 0' To 12968' MD			
	5302.000		12879.000	Act Stns	SLB_MWD-STD					Original Borehole / Noble Energy SHL-3D-HS Gyros+MWD 0' To 12968' MD			
	12879.000		12968.000	Act Stns	SLB_BLIND+TREND					Original Borehole / Noble Energy SHL-3D-HS Gyros+MWD 0' To 12968' MD			

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Stage #	Plug Type	Plug Depth
1	No Plug	No Plug
2	Composite Frac Plug	12,650
3	Composite Frac Plug	12,329
4	Composite Frac Plug	12,065
5	Composite Frac Plug	11,785
6	Composite Frac Plug	11,485
7	Composite Frac Plug	11,185
8	Composite Frac Plug	10,885
9	Composite Frac Plug	10,576
10	Composite Frac Plug	10,350
11	Composite Frac Plug	10,070
12	Composite Frac Plug	9,770
13	Composite Frac Plug	9,470
14	Composite Frac Plug	9,170
15	Composite Frac Plug	8,870
16	Composite Frac Plug	8,570
17	Composite Frac Plug	8,375
18	Composite Frac Plug	8,075
19	Composite Frac Plug	7,775
20	Composite Frac Plug	7,475
21	Composite Frac Plug	7,175

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Stimulation Summary

Date	Stage #	Formation	Frac Type	Top Perf	Bottom Perf	# of Perfs	BD Press (psi)	ATP (psi)	Avg Rate (bpm)	ISIP (psi)	Frac Gradient	Sand (lbs)	Acid (gals)	Water (gals)
6/28/2012	1	Marcellus	Slickwater	12,660	12,862	48	8,000	7,643	69.6	3,510	0.97	355,341	2,000	370,482
6/30/2012	2	Marcellus	Slickwater	12,360	12,612	40	5,130	7,681	68.0	4,162	1.06	351,665	2,000	331,422
7/1/2012	3	Marcellus	Slickwater	12,110	12,312	40	5,036	7,754	64.0	3,731	1.00	346,500	2,000	444,234
7/2/2012	4	Marcellus	Slickwater	11,810	12,062	40	5,333	8,036	68.4	3,970	1.03	353,077	2,000	336,546
7/19/2012	5	Marcellus	Slickwater	11,510	11,762	40	5,489	7,731	83.0	4,161	1.06	353,502	2,000	336,798
7/20/2012	6	Marcellus	Slickwater	11,210	11,462	40	5,828	7,628	79.1	4,447	1.11	353,750	2,000	333,522
7/20/2012	7	Marcellus	Slickwater	10,910	11,162	40	5,973	7,577	82.0	4,319	1.09	355,517	2,000	332,682
7/21/2012	8	Marcellus	Slickwater	10,610	10,862	40	5,610	7,526	78.3	4,272	1.08	351,320	2,000	324,786
7/21/2012	9	Marcellus	Slickwater	10,360	10,562	40	5,901	7,650	78.3	4,201	1.07	353,119	2,000	328,566
7/21/2012	10	Marcellus	Slickwater	10,100	10,352	40	5,652	7,859	87.0	4,289	1.08	353,409	2,000	330,498
7/22/2012	11	Marcellus	Slickwater	9,800	10,052	40	6,002	8,093	88.1	4,313	1.09	375,513	2,000	328,188
7/22/2012	12	Marcellus	Slickwater	9,500	9,752	40	5,749	8,036	86.0	4,133	1.06	349,724	2,000	329,448
7/22/2012	13	Marcellus	Slickwater	9,200	9,452	40	5,752	7,301	76.0	4,626	1.13	349,033	2,000	320,124
7/22/2012	14	Marcellus	Slickwater	8,900	9,152	40	5,838	7,466	81.0	4,306	1.08	325,679	2,000	326,214
7/23/2012	15	Marcellus	Slickwater	8,600	8,852	40	5,935	7,557	80.6	4,211	1.07	355,569	2,000	331,674
7/23/2012	16	Marcellus	Slickwater	8,400	8,552	40	6,712	7,500	83.0	4,424	1.10	345,580	2,000	314,874
7/23/2012	17	Marcellus	Slickwater	8,100	8,352	40	6,177	7,519	83.0	4,530	1.12	342,607	2,000	323,568
7/26/2012	18	Marcellus	Slickwater	7,800	8,052	40	6,110	7,370	80.0	4,266	1.08	350,830	2,000	384,468
7/27/2012	19	Marcellus	Slickwater	7,500	7,752	40	5,964	7,505	89.9	4,430	1.10	348,360	2,000	329,070
7/27/2012	20	Marcellus	Slickwater	7,200	7,452	40	5,167	7,323	89.0	4,510	1.11	350,820	2,000	325,584
7/28/2012	21	Marcellus	Slickwater	7,000	7,152	40	6,392	6,929	89.0	3,995	1.04	371,642	2,000	333,606

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Formations	Top TVD	Base TVD	Top MD	Base MD	Fluid
Shale	0	660	0	660	
Pittsburgh Coal	660	665	660	665	
Shale and Sandstone	665	1222	665	1222	
Dunkard Sand	1222	1233	1222	1233	
Shale	1233	1404	1233	1404	
Gas Sand	1404	1443	1404	2397	
Shale	1443	1535	1443	2594	
1st Salt Sand	1535	1559	1535	2596	
Shale	1559	1568	1559	2649	
2nd Salt Sand	1568	1613	1568	2658	
Shale	1613	1696	1613	2700	
Maxton Sand	1696	1708	1696	2715	
Shale	1708	1751	1708	2751	
Big Lime	1751	1831	1751	2764	
Big Injun	1831	2025	1831	2860	
Price	2025	2383	2025	3300	
Murrysville	2383	2397	2383	3328	
Shale	2397	2594	2397	4338	
50' Sand	2594	2596	2594	2596	
Shale	2596	2649	2596	2649	
30' Sand	2649	2658	2649	2658	
Shale	2658	2700	2658	2700	
Gordon Stray	2700	2715	2700	2715	
Shale	2715	2751	2715	2751	
Gordon	2751	2764	2751	2764	
Shale	2764	2860	2764	2860	
Fifth Sand	2860	2894	2860	2894	
Shale	2894	3300	2894	3300	
Speechley Sand	3300	3328	3300	3328	
Shale	3328	4336	3328	4338	
Warren Sand	4336	4345	4338	4347	
Shale	4345	5003	4347	5005	
Java Shale	5003	5174	5005	5176	
Pipe Creek Shale	5174	5231	5176	5233	
Angola Shale	5231	5856	5233	5887	
Rhinestreet	5856	6272	5887	6480	
Cashaqua	6272	6363	6480	6621	
Middlesex	6363	6398	6621	6677	
West River	6398	6450	6677	6763	
Burkett	6450	6473	6763	6801	
Tully Limestone	6473	6503	6801	6854	
Hamilton	6503	6614	6854	7159	
Marcellus	6614	6664	7159	not encountered	Gas
Onondaga	6664	not encountered	not encountered	not encountered	

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