

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

API 47-051-01682 County Marshall District Sandhill
Quad Valley Grove Pad Name SHL25 Field/Pool Name NA
Farm name David Rutherford Well Number SHL25 CHS
Operator (as registered with the OOG) Noble Energy, Inc.
Address 333 Technology Drive, Suite 116 City Canonsburg State PA Zip 15317

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4427951.08 Easting 538172.17
Landing Point of Curve Northing 4428285.75 Easting 538294.16
Bottom Hole Northing 4430293.94 Easting 536837.05

Elevation (ft) 1344.44 GL Type of Well New Existing Type of Report Interim Final
Permit Type Deviated Horizontal Horizontal 6A Vertical Depth Type Deep Shallow
Type of Operation Convert Deepen Drill Plug Back Redrilling Rework Stimulate
Well Type Brine Disposal CBM Gas Oil Secondary Recovery Solution Mining Storage Other _____
Type of Completion Single Multiple Fluids Produced Brine Gas NGL Oil Other _____
Drilled with Cable Rotary

Drilling Media Surface hole Air Mud Fresh Water Intermediate hole Air Mud Fresh Water Brine
Production hole Air Mud Fresh Water Brine
Mud Type(s) and Additive(s)
Synthetic Oil Based

Date permit issued 11/18/2013 Date drilling commenced 3/18/2014 Date drilling ceased 5/30/2014
Date completion activities began 8/6/2014 Date completion activities ceased 10/4/2014
Verbal plugging (Y/N) N Date permission granted _____ Granted by _____

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

Freshwater depth(s) ft 213 Open mine(s) (Y/N) depths N
Salt water depth(s) ft None noted for Offsets Void(s) encountered (Y/N) depths N
Coal depth(s) ft 810', 866' Pittsburgh Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) Y, Shoemaker Mine 866'

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Reviewed by: _____
01/16/2015

API 47-051 - 01682 Farm name David Rutherford Well number SHL25 CHS

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/ N) * Provide details below*
Conductor	36	30	40	N			
Surface	24	20	418.3	N	J-55 94#		Y
Coal							
Intermediate 1	17 1/2	13 3/8	1253.85	N	J-55 54.5#		Y
Intermediate 2	12 1/4	9 5/8	3232.70	N	K-55 36#		Y
Intermediate 3							
Production	8 3/4	5 1/2	15464.5	N	P-110 20#		Y
Tubing							
Packer type and depth set							

Comment Details Surface Casing 4 centralizer and 2 baskets, Intermediate 1 11 Centralizers, Intermediate 2 42 Centralizers, Production 251 Centralizers

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor							
Surface	Type I	604	15.60	1.20	104.0	0	8
Coal							
Intermediate 1	Type I	1027	15.60	1.20	220.0	0	8
Intermediate 2	Class A	1160	16.20	1.09	225.0	0	8
Intermediate 3							
Production	Class A	2681	14.80	1.26	597.0	3000	8
Tubing							

Drillers TD (ft) 15,474 Loggers TD (ft) 15,449

Deepest formation penetrated Marcellus Plug back to (ft) Not a Pilot Hole

Plug back procedure Not a Pilot Hole

Kick off depth (ft) 6114

Check all wireline logs run caliper density deviated/directional induction
 neutron resistivity gamma ray temperature sonic

Well cored Yes No Conventional Sidewall Were cuttings collected Yes No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING _____

4 Centralizers on Surface (1 every 3rd joint) and 2 baskets 11 Centralizers on Intermediate 1 (1 every 3rd joint) 42 Centralizers on Intermediate 2 (1 every 3rd joint)
251 Centralizers on Production (1 every 3rd to Curve, then 1 every joint to TD)

WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS _____

WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____

WERE TRACERS USED Yes No TYPE OF TRACER(S) USED _____

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Perforation Record

David & Joy Rutherford
ET AL

API: 47-051-01682

Farm name: _____

Well Name: SHL-25C-HS

Stage No.	Stim Date	Top Perf	Bottom Perf	# of Perfs	Formation
Toe Sleeve	8/4/2014	15331	15334		
Toe Sub Inj Test	8/6/2014	15215	15,307	-	Marcellus
1.1	8/6/2014	15096	15,307	50	Marcellus
1.2	8/7/2014				Marcellus
1.3	8/7/2014				Marcellus
2.1 Over Pressure	8/8/2014	-	-	-	Marcellus
2.1	8/16/2014	14739	15,010	50	Marcellus
2.2	8/16/2014				Marcellus
2.3	8/17/2014				Marcellus
3.1	8/17/2014	14443	14,714	50	Marcellus
3.2	8/17/2014				Marcellus
3.3	8/17/2014				Marcellus
4.1	8/18/2014	14147	14,418	50	Marcellus
4.2	8/18/2014				Marcellus
4.3	8/18/2014				Marcellus
5.1	8/18/2014	13851	14,122	50	Marcellus
5.2	8/18/2014				Marcellus
5.3	8/18/2014				Marcellus
6.1	8/19/2014	13555	13,826	50	Marcellus
6.2	8/19/2014				Marcellus
6.3	8/19/2014				Marcellus
7 (Diff PTR Format)	8/19/2014	13259	13,530	50	Marcellus
8	8/20/2014	12963	13,234	50	Marcellus
9	8/21/2014	12667	12,938	50	Marcellus
10	8/21/2014	12371	12,642	50	Marcellus
11	8/22/2014	12075	12,346	50	Marcellus
12	8/22/2014	11780	12,049	50	Marcellus
13	8/22/2014	11483	11,753	50	Marcellus
14	8/23/2014	11187	11,458	50	Marcellus
15	8/23/2014	10891	11,161	50	Marcellus
16	8/23/2014	10595	10,866	50	Marcellus
17	8/24/2014	10299	10,570	50	Marcellus
18	8/24/2014	10003	10,274	50	Marcellus
19	8/25/2014	9707	9,977	50	Marcellus
20	8/25/2014	9411	9,680	50	Marcellus
21	8/27/2014	9115	9,386	50	Marcellus
22	8/27/2014	8819	9,090	50	Marcellus
23	8/28/2014	8523	8,794	50	Marcellus
24	8/29/2014	8227	8,498	50	Marcellus
24B (Reperf)	8/29/2014	8216	8,247	36	Marcellus
25	8/29/2014	7931	8,202	50	Marcellus

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Perforation Record

David & Joy Rutherford
ET AL

API: 47-051-01682

Farm name: _____

Well Name: SHL-25C-HS

Stage No.	Stim Date	Top Perf	Bottom Perf	# of Perfs	Formation
26	8/30/2014	7635	7,903	50	Marcellus
27	8/30/2014	7339	7,610	50	Marcellus
27B (Reperf)	8/31/2014	7380	7,412	48	Marcellus
28	8/31/2014	7043	7,314	50	Marcellus

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STIMULATION INFORMATION PER STAGE

API: 47-051-01682

Farm name:

David & Joy Rutherford ET AL Well Name: SHL-25C-HS

Stage No.	Stim Date	Avg Rate (bpm)	ATP (psi)	Max BD Pressure	ISIP (psi)	Proppant (lbs)	Water (BBLS)	Amount of N ² / other (units)
Toe Sub Inj Test	8/6/2014	16.8	8,005	9,138	5,794	-	-	
1.1	8/6/2014	86.7	7,541	5,733	3,979	199,757	6,462.14	
1.2	8/7/2014	87.7	7,480	5,603	-	201,772	6,698.90	
1.3	8/7/2014	87.8	7,626	5,361	-	198,514	6,601.57	
2.1 Over Pressure	8/8/2014	14.9	5,421	-	-	-	125.50	
2.1	8/16/2014	78.6	7,861	5,850	4,340	196,332	6,911.33	
2.2	8/16/2014	83.2	7,987	5,382	-	199,975	7,463.61	
2.3	8/17/2014	80.2	8,256	5,210	-	206,648	7,076.07	
3.1	8/17/2014	78.4	8,203	5,774	4,372	200,021	7,029.07	
3.2	8/17/2014	77.1	8,033	5,695	-	186,457	5,881.80	
3.3	8/17/2014	76.1	7,937	6,202	-	217,712	6,904.71	
4.1	8/18/2014	78.4	8,002	5,731	4,049	201,024	8,837.54	
4.2	8/18/2014	75.6	8,007	5,634	-	200,653	7,004.78	
4.3	8/18/2014	77.6	8,138	5,396	-	199,192	8,970.92	
5.1	8/18/2014	78.6	7,847	6,021	4,463	198,310	6,639.06	
5.2	8/18/2014	79.3	7,786	5,689	-	198,662	6,913.71	
5.3	8/18/2014	75.4	7,689	5,641	-	202,337	6,801.19	
6.1	8/19/2014	80.5	7,495	5,898	4,654	197,789	6,086.00	
6.2	8/19/2014	78.1	7,447	5,695	-	202,224	6,608.45	
6.3	8/19/2014	75.7	7,519	5,575	-	199,870	6,582.74	
7 (Diff PTR Format)	8/19/2014	76.3	7,395	5,698	4,538	596,500	18,744.18	
8	8/20/2014	72.5	7,608	5,444	4,169	600,254	20,033.63	
9	8/21/2014	68.9	7,189	5,821	4,241	601,817	19,422.80	
10	8/21/2014	68.4	7,428	6,250	4,426	600,002	20,383.71	
11	8/22/2014	70	7,359	5,668	4,583	604,548	19,314.31	
12	8/22/2014	71.6	6,961	5,560	4,306	603,920	18,631.25	
13	8/22/2014	73.4	6,693	5,209	4,522	603,047	18,669.60	
14	8/23/2014	73	6,879	5,758	4,584	599,724	19,320.01	
15	8/23/2014	73.6	6,602	5,586	4,430	602,172	18,107.61	
16	8/23/2014	73.7	6,956	5,585	4,277	599,894	18,684.39	
17	8/24/2014	72.7	6,388	5,746	4,748	605,572	18,428.67	
18	8/24/2014	73.1	6,737	5,279	4,570	601,509	18,218.05	
19	8/25/2014	75.9	6,738	5,676	4,322	601,505	18,776.20	
20	8/25/2014	65.6	7,217	5,515	5,510	544,809	18,346.90	
21	8/27/2014	76.4	6,596	5,666	4,336	643,705	18,496.26	
22	8/27/2014	73.4	6,826	5,463	4,307	600,850	17,669.00	
23	8/28/2014	74.8	6,605	5,864	4,290	606,158	17,466.02	
24	8/29/2014	61.8	7,626	5,884	5,291	212,006	12,803.90	
24B (Reperf)	8/29/2014	45.9	7,459	6,506	5,850	200,654	8,255.48	
25	8/29/2014	76.5	6,406	5,139	4,605	601,477	17,683.52	
26	8/30/2014	70.2	7,205	5,960	5,673	600,000	21,484.72	

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STIMULATION INFORMATION PER STAGE

API: 47-051-01682

Farm name:

David & Joy Rutherford ET AL Well Name: SHL-25C-HS

Stage No.	Stim Date	Avg Rate (bpm)	ATP (psi)	Max BD Pressure	ISIP (psi)	Proppant (lbs)	Water (BBLS)	Amount of N ² / other (units)
27	8/30/2014	63.8	7,522	5,661	6,219	405,516	18,045.55	
27B (Reperf)	8/31/2014	87.8	6,878	5,799	4,347	198,203	5,674.17	
28	8/31/2014	89	6,855	6,320	3,973	601,334	17,133.75	

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API 47- 051 - 01682 Farm name David Rutherford Well number SHL25 CHS

<u>PRODUCING FORMATION(S)</u>	<u>DEPTH(S)</u>	
<u>Marcellus</u>	<u>6,681</u>	<u>15,474</u> TVD MD
_____	_____	_____
_____	_____	_____
_____	_____	_____

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface _____ psi Bottom Hole _____ psi DURATION OF TEST _____ hrs

OPEN FLOW Gas Oil NGL Water GAS MEASURED BY
6375 mcfpd 51 bpd 310 bpd 654 bpd Estimated Orifice Pilot

LITHOLOGY/ FORMATION	TOP DEPTH IN FT NAME TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FT MD	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H ₂ S, ETC)
	0		0		
PLEASE SEE ATTACHED FORMATION SHEET					

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Please insert additional pages as applicable.

Drilling Contractor Nomac Drilling Company
 Address 171 Locust Avenue Ext. City Mt. Morris State PA Zip 15349

Logging Company _____
 Address _____ City _____ State _____ Zip _____

Cementing Company Schlumberger
 Address 4600 J Barry Court, Suite 200 City Canonsburg State PA Zip 15317

Stimulating Company Halliburton Energy SRCS
 Address 121 Champion Way, Suite 110 City Canonsburg State PA Zip 15317

Please insert additional pages as applicable.

Completed by Regina A. Logue Telephone 724-820-3559
 Signature Regina A. Logue Title Regulatory Analyst Date 12/10/14

Submission of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Registry

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SHL25 CHS
47-051-01682

Formations	Top TVD	Base TVD	Top MD	Base MD	Fluid
Shale	0	812	0	812	
Pittsburgh Coal	812	822	812	822	
Shale and Sandstone	822	1420	822	1420	
Gas Sand	1420	1473	1420	1473	
Shale	1473	1517	1473	1517	
1st Salt Sand	1517	1595	1517	1595	
2nd Salt Sand	1595	1606	1595	2944	
3rd Salt Sand	1606	1665	1606	2977	
Shale	1665	1700	1665	3364	
Maxton Sand	1700	1838	1700	3388	
Shale	1838	1860	1838	4281	
Big Lime	1860	1946	1860	4295	
Big Injun	1946	2126	1946	5211	
Price	2126	2465	2126	5282	
Murrysville	2465	2488	2465	5326	
Shale and Sandstone	2488	2715	2488	5959	
50' Sand	2715	2728	2715	3388	
Shale	2728	2814	2728	4281	
Gordon Stray	2814	2821	2814	4295	
Shale	2821	2836	2821	5211	
Gordon	2836	2854	2836	5282	
Shale	2854	2944	2854	5326	
Fifth Sand	2944	2977	2944	2977	
Shale	2977	3363	2977	3364	
Speechley Sand	3363	3387	3364	3388	
Shale	3387	4271	3388	4281	
Warren Sand	4271	4285	4281	4295	
Shale	4285	5192	4295	5211	
Java Shale	5192	5262	5211	5282	
Pipe Creek Shale	5262	5306	5282	5326	
Angola Shale	5306	5932	5326	5959	
Rhinestreet	5932	6346	5959	6404	
Cashaqua	6346	6438	6404	6533	
Middlesex	6438	6475	6533	6597	
West River	6475	6516	6597	6684	
Burkett	6516	6549	6684	6774	Gas
Tully Limestone	6549	6577	6774	not encountered	
Hamilton	6577	6691	not encountered	not encountered	
Marcellus	6691		not encountered	not encountered	

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	8/6/2014
Job End Date:	8/31/2014
State:	West Virginia
County:	Marshall
API Number:	47-051-01682-00-00
Operator Name:	Noble Energy, Inc.
Well Name and Number:	SHL 25 C
Longitude:	-80.55300900
Latitude:	40.00080900
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	6,681
Total Base Water Volume (gal):	22,671,300
Total Base Non Water Volume:	0

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Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Fresh Water	Operator	Base Fluid					
			Fresh Water	7732-18-5	100.00000	91.01489	Density = 8.340
SAND - PREMIUM WHITE	Halliburton	Proppant					
			Crystalline silica, quartz	14808-60-7	100.00000	6.40738	
SSA-2	Halliburton	Proppant					
			Crystalline silica, quartz	14808-60-7	100.00000	1.60379	
HYDROCHLORIC ACID 5-10%	Halliburton	Solvent					
			Hydrochloric acid	7647-01-0	10.00000	0.07920	
FR-66	Halliburton	Friction Reducer					
			Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.02050	
HYDROCHLORIC ACID 10-30%	Halliburton	Solvent					
			Hydrochloric acid	7647-01-0	30.00000	0.01163	
FE-1A ACIDIZING COMPOSITION	Halliburton	Additive					
			Acetic anhydride	108-24-7	100.00000	0.00446	
			Acetic acid	64-19-7	60.00000	0.00268	
BE-9	Halliburton	Biocide					

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			Tributyl tetradecyl phosphonium chloride	81741-28-8	10.00000	0.00409	
LP-65	Halliburton	Scale Inhibitor					
			Ammonium chloride	12125-02-9	10.00000	0.00250	
Biovert NWB	Halliburton	Viscosifier					
			Poly lactide resin	Confidential	100.00000	0.00212	Denise Tuck, Halliburton 3000 N. Sam Houston Pkwy E., Houston, TX 77032 281-871-6226
LoSurf-300D	Halliburton	Non-ionic Surfactant					
			Ethanol	64-17-5	60.00000	0.00090	
			Heavy aromatic petroleum naphtha	64742-94-5	30.00000	0.00045	
			Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy-, branched	127087-87-0	5.00000	0.00007	
			Naphthalene	91-20-3	5.00000	0.00007	
			1,2,4 Trimethylbenzene	95-63-6	1.00000	0.00001	
HAI-OS ACID INHIBITOR	Halliburton	Corrosion Inhibitor					
			Methanol	67-56-1	60.00000	0.00044	
			Propargyl alcohol	107-19-7	10.00000	0.00007	
LGC-36 UC	Halliburton	Liquid Gel Concentrate					
			Naphtha, hydrotreated heavy	64742-48-9	60.00000	0.00010	
			Guar gum	9000-30-0	60.00000	0.00010	
SP BREAKER	Halliburton	Breaker					
			Sodium persulfate	7775-27-1	100.00000	0.00000	
Ingredients shown above are subject to 29 CFR 1910.1200(i) and appear on Material Safety Data Sheets (MSDS). Ingredients shown below are Non-MSDS.							
		Other Ingredient(s)					
			Water	7732-18-5		0.92761	
		Other Ingredient(s)					
			Polyacrylamide copolymer	Confidential		0.02050	
		Other Ingredient(s)					
			Organic phosphonate	Confidential		0.01500	
		Other Ingredient(s)					
			Alcohols, C12-16, ethoxylated	68551-12-2		0.00342	
		Other Ingredient(s)					
			Sodium chloride	7647-14-5		0.00342	
		Other Ingredient(s)					
			Fatty acid tall oil amide	Confidential		0.00342	
		Other Ingredient(s)					
			Ammonium chloride	12125-02-9		0.00342	
		Other Ingredient(s)					
			Sorbitan, mono-9-octadecenoate, (Z)	1338-43-8		0.00068	
		Other Ingredient(s)					

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		Sorbitan monooleate polyoxyethylene derivative	9005-65-6		0.00068
	Other Ingredient(s)				
		Oxyalkylated phenolic resin	Confidential		0.00045
	Other Ingredient(s)				
		Formaldehyde	50-00-0		0.00025
	Other Ingredient(s)				
		Reaction product of acetophenone, formaldehyde, thiourea and oleic acid in dimethyl formamide	68527-49-1		0.00022
	Other Ingredient(s)				
		Fatty acids, tall oil	Confidential		0.00022
	Other Ingredient(s)				
		Alcohols, C14-C15, ethoxylated	68951-67-7		0.00022
	Other Ingredient(s)				
		Oxyalkylated phenolic resin	Confidential		0.00015
	Other Ingredient(s)				
		Olefins	Confidential		0.00004
	Other Ingredient(s)				
		Olefins	Confidential		0.00004
	Other Ingredient(s)				
		Quaternary ammonium compounds, bis(hydrogenated tallow alkyl) dimethyl, salts with bentonite	68953-58-2		0.00001
	Other Ingredient(s)				
		Olefins	Confidential		0.00001
	Other Ingredient(s)				
		Olefins	Confidential		0.00001
	Other Ingredient(s)				
		Fatty alcohol polyglycol ether surfactant	9043-30-5		0.00000
	Other Ingredient(s)				
		Crystalline silica, quartz	14808-60-7		0.00000
	Other Ingredient(s)				
		Sodium sulfate	7757-82-6		0.00000

* Total Water Volume sources may include fresh water, produced water, and/or recycled water

** Information is based on the maximum potential for concentration and thus the total may be over 100%

Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.

Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

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Well is located on topo map 14,876' feet south of Latitude: 40° 02' 30"

Well is located on topo map 3,152' feet west of Longitude: 80° 32' 30"

AS DRILLED PLAT

PERMITTED APPROX. LANDING POINT
 UTM 17-NAD83
 N:4428285.64
 E:538298.93
 NAD27, WV NORTH
 N:549457.38
 E:1705433.94

AS DRILLED APPROX. LANDING POINT
 UTM 17-NAD83
 N:4428285.75
 E:538294.16
 NAD27, WV NORTH
 N:549458.02
 E:1705418.29

PERMITTED BOTTOM HOLE LOCATION (BHL)
 UTM 17-NAD83
 N:4430295.60
 E:536840.76
 NAD27, WV NORTH
 N:556133.21
 E:1700759.47

- NOTES:
1. There are no water wells or developed springs within 250' of proposed well.
 2. There are no existing buildings within 625' of proposed well. Proposed well is greater than 100' from perennial stream, wetland, pond, reservoir or lake.
 3. There are no native trout streams within 300' of proposed well. Proposed well is greater than 1000' from surface/groundwater intake or public water supply.
 4. It is not the purpose or intention of this plat to represent surveyed locations of the surface or mineral parcels depicted hereon. The location of the boundary lines, as shown, are based on record deed descriptions, field evidence found and/or tax map position, unless otherwise noted.

PARCEL	LESSOR
1	DAVID RUTHERFORD ET UX.
2	STEPHEN YOURKOVICH ET AL.
3	JOHN R. GRAY ET UX.
4	CNX GAS COMPANY LLC ET AL.
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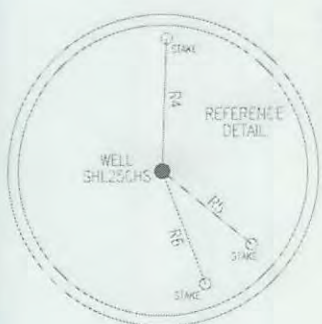
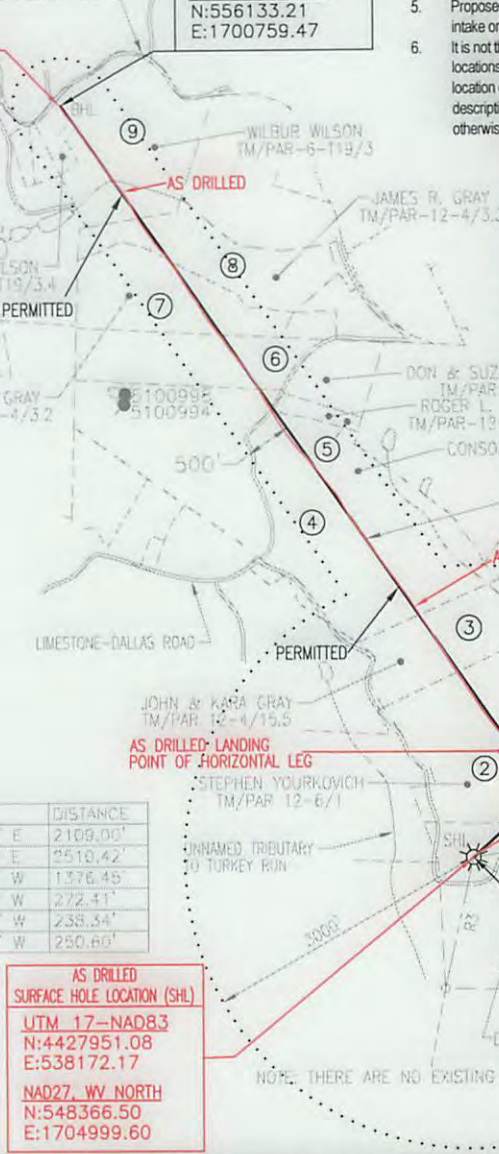
LEGEND

- INFO MAP POINT
- WELL
- ALL ARE POINTS UNLESS OTHERWISE NOTED
- LEASE NUMBER
- MINERAL TRACT BOUNDARY
- PARCEL LINES
- WELL REFERENCE
- PROPOSED HORIZONTAL WELL
- ROAD
- STREAM CENTER LINE
- AS DRILLED

EXISTING WELLS

- EXISTING WELLS
- PLUGGED WELLS

AS DRILLED BOTTOM HOLE LOCATION (BHL)
 UTM 17-NAD83
 N:4430293.94
 E:536837.05
 NAD27, WV NORTH
 N:556127.97
 E:1700747.21



LINE	BEARING	DISTANCE
R1	N 81°27'14" E	2109.00'
R2	S 96°11'56" E	9510.42'
R3	S 10°31'26" W	1376.45'
R4	S 02°15'46" W	272.41'
R5	N 50°00'22" W	238.34'
R6	N 20°17'47" W	250.66'

AS DRILLED SURFACE HOLE LOCATION (SHL)
 UTM 17-NAD83
 N:4427951.08
 E:538172.17
 NAD27, WV NORTH
 N:548366.50
 E:1704999.60

PERMITTED SURFACE HOLE LOCATION (SHL)
 UTM 17-NAD83
 N:4427951.00
 E:538172.26
 NAD27, WV NORTH
 N:548366.23
 E:1704999.89

Blue Mountain Inc.
 10125 MASON DIXON HIGHWAY
 BURTON, WV 26562
 PHONE: (304) 662-6486

FILE #: SHL25CHS-AS DRILLED
 DRAWING #: SHL25CHS-AS DRILLED
 SCALE: 1" = 2000'
 MINIMUM DEGREE OF ACCURACY: 1/2500
 PROVEN SOURCE OF ELEVATION: U.S.G.S. MONUMENT THOMAS 1498.81'

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 ENVIRONMENTAL PROTECTION.

Signed: *[Signature]*
 R.P.E.: _____ L.L.S.: P.S. No. 2000

GEORGE D. SIX
 LICENSED
 No. 2000
 STATE OF
 WEST VIRGINIA
 PROFESSIONAL SURVEYOR

PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS WVDEP
 OFFICE OF OIL & GAS
 601 57TH STREET
 CHARLESTON, WV 25304

DATE: DECEMBER 8, 2014
 OPERATOR'S WELL #: SHL25CHS-AS DRILLED
 API WELL #: 47 51 01682
 STATE COUNTY PERMIT

Well Type: Oil Waste Disposal Production Deep
 Gas Liquid Injection Storage Shallow

WATERSHED: WHEELING CREEK ELEVATION: 1344.44'
 COUNTY/DISTRICT: MARSHALL / SAND HILL QUADRANGLE: VALLEY GROVE, WV 7.5'
 SURFACE OWNER: DAVID RUTHERFORD ACREAGE: 95.912±
 OIL & GAS ROYALTY OWNER: DAVID RUTHERFORD ET UX. ACREAGE: 485.576±

DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
 PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG & ABANDON
 CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY): _____

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: TVD: 6,823'± TMD: 15,630'±
 WELL OPERATOR NOBLE ENERGY, INC. DESIGNATED AGENT STEVEN M. GREEN
 Address 333 TECHNOLOGY DRIVE, SUITE 116 Address 500 VIRGINIA STREET EAST, UNITED CENTER SUITE 590
 City CANONSBURG State PA Zip Code 15317 City CHARLESTON State WV Zip Code 25301

01/16/2015

Well is located on topo map 14,876' feet south of Latitude: 40° 02' 30"

AS DRILLED PLAT

Well is located on topo map 3,152' feet west of Longitude: 80° 32' 30"

PERMITTED APPROX. LANDING POINT
 UTM 17-NAD83
 N:4428285.64
 E:538298.93
 NAD27_WV NORTH
 N:549457.38
 E:1705433.94

AS DRILLED APPROX. LANDING POINT
 UTM 17-NAD83
 N:4428285.75
 E:538294.16
 NAD27_WV NORTH
 N:549458.02
 E:1705418.29

PERMITTED BOTTOM HOLE LOCATION (BHL)
 UTM 17-NAD83
 N:4430295.60
 E:536840.76
 NAD27_WV NORTH
 N:556133.21
 E:1700759.47

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 N:4430293.94
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PARCEL	LESSOR
1	DAVID RUTHERFORD ET UX.
2	STEPHEN YOURKOVICH ET AL.
3	JOHN R. GRAY ET UX.
4	CHX GAS COMPANY LLC ET AL.
5	ROGER L. WHITE ET UX.
6	DON N. BRYANT ET UX.
7	JAMES A. GRAY ET UX.
8	JAMES A. GRAY ET UX.
9	WILBUR F. WILSON ET UX.

- NOTES:
- There are no water wells or developed springs within 250' of proposed well.
 - There are no existing buildings within 625' of proposed well.
 - Proposed well is greater than 100' from perennial stream, wetland, pond, reservoir or lake.
 - There are no native trout streams within 300' of proposed well.
 - Proposed well is greater than 1000' from surface/groundwater intake or public water supply.
 - It is not the purpose or intention of this plat to represent surveyed locations of the surface or mineral parcels depicted hereon. The location of the boundary lines, as shown, are based on record deed descriptions, field evidence found and/or tax map position, unless otherwise noted.

Received
 Office of Oil & Gas
 DEC 15 2014

Blue Mountain Inc.
 10125 MASON DIXON HIGHWAY
 BURTON, WV 26562
 PHONE: (304) 662-6486

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Signed: *George A. Six*
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