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

API 47-051-01661 County Marshall District Sandhill
Quad Majorsville Pad Name SHL-26 Field/Pool Name _____
Farm name Russell Lee and Barbara Ann Bennett Well Number SHL26DHS
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 4424891.684611 Easting 538580.197224
Landing Point of Curve Northing 538580.197224 Easting 539048.424375
Bottom Hole Northing 4427463.655124 Easting 537598.009712

Elevation (ft) 1310.00 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 08/19/2013 Date drilling commenced 10/8/2013 Date drilling ceased 12/9/2013
Date completion activities began 03/16/2014 Date completion activities ceased 5/27/2014
Verbal plugging (Y/N) N Date permission granted _____

RECEIVED
Office of Oil and Gas
SEP 11 2014
WV Department of Environmental Protection

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug
Freshwater depth(s) ft 198', 300' Open mine(s) (Y/N) depths N
Salt water depth(s) ft N/A Void(s) encountered (Y/N) depths N
Coal depth(s) ft 761' to 771' Pittsburgh Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) Y

Reviewed by: _____

09/19/2014

API 47- 051 - 01661 Farm name Russell Lee and Barbara Ann Bennett Well number SHL26DHS

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	K-55 94#		
Surface	24	20	414.9	N	J-55 94#		Y
Coal	17 1/2	13 3/8	1217.9	N	J-55 54.5#		Y
Intermediate 1	12 3/8	9 5/8	3234.8	N	J-55 36#		Y
Intermediate 2							
Intermediate 3							
Production	8 3/4	5 1/2	16108	N	P-110 20#		Y
Tubing							
Packer type and depth set							

Comment Details 2 Baskets on Surface Casing

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 1	487	15.6	1.18	103	0	8
Coal	Type 1	1027	15.6	1.2	220	0	8
Intermediate 1	Type 1	1265	15.6	1.2	301	0	12+
Intermediate 2							
Intermediate 3							
Production	Class A	2820	14.8	1.25	628	916	8
Tubing							

Drillers TD (ft) 16,108 Loggers TD (ft) 16073

Deepest formation penetrated Marcellus Plug back to (ft) not a pilot Hole

Plug back procedure not a pilot Hole

Kick off depth (ft) 7976

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 casing, 10 Centralizers on Coal casing, 40 Centralizers on Intermediate casing, 253 Centralizers on Production casing.

On the Surface, Coal, and Intermediate Strings, the centralizers are on every 3 joint of casing.

On the Production String, they are on every 3rd from Surface to Top of Curve, then every joint until 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 _____

PERFORATION RECORD

API: 47-051-01661

Farm name: _____

Russell Lee and Barbara
Ann Bennett

Well Name: SHL-26D-HS

Stage No.	Stim Date	Top Perf	Bottom Perf	# of Perfs	Formation
TOE SLEEVE	3/7/2014	15976	15978		Marcellus
1	3/17/2014	15724	15948	48	Marcellus
2	3/17/2014	15423	15677	40	Marcellus
3	3/18/2014	15123	15377	40	Marcellus
4	3/19/2014	14823	15077	40	Marcellus
5	3/20/2014	14523	14777	40	Marcellus
6	3/20/2014	14223	14477	40	Marcellus
7	3/21/2014	13923	14177	40	Marcellus
8	3/22/2014	13623	13877	40	Marcellus
9	3/23/2014	13323	13577	40	Marcellus
10	3/23/2014	13023	13277	40	Marcellus
11	3/24/2014	12723	12977	40	Marcellus
12	3/24/2014	12423	12677	40	Marcellus
12 REPERF	3/25/2014	12413	12467	24	Marcellus
13	3/26/2014	12123	12377	40	Marcellus
13 REPERF	3/27/2014	12111	12202	32	Marcellus
14	3/27/2014	11823	12077	40	Marcellus
15	3/28/2014	11523	11777	40	Marcellus
16	3/29/2014	11223	11477	40	Marcellus
17	3/29/2014	10975	11177	40	Marcellus
18	3/30/2014	10673	10927	40	Marcellus
19	3/30/2014	10373	10627	40	Marcellus
19 REPERF	3/31/2014	10355	10416	24	Marcellus
20	3/31/2014	10073	10327	40	Marcellus
21	4/1/2014	9773	10027	40	Marcellus
22	4/1/2014	9711	9729	16	Marcellus
22 2ND RUN	4/2/2014	9473	9664	32	Marcellus
23	4/2/2014	9170.5	9427	40	Marcellus
24	4/3/2014	8925	9127	40	Marcellus
25	4/3/2014	8623	8877	40	Marcellus
26	4/4/2014	8323	8577	40	Marcellus
27	4/5/2014	8023	8277	40	Marcellus
28	4/5/2014	7723	7977	40	Marcellus

STIMULATION INFORMATION PER STAGE

API: 47-051-01661

Farm name: _____

Russell Lee and Barbara Ann
Bennett

Well Name: SHL-26D-HS

Stage No.	Stim Date	Avg Rate (bpm)	ATP (psi)	Max BD Pressure	ISIP (psi)	Proppant (lbs)	Water (BBLs)	Amount of N ² / other
1 Inj Test	3/17/2014		7427		6070	0	514.00	
1.1	3/17/2014	86.0	8548	5467		169,058	6600.60	
1.2	3/17/2014	86.4	8538	5467		165,687	5990.05	
1.3	3/18/2014	88.4	8491	5400	3665	164,798	4912.12	
2.1	3/18/2014	82.7	8254	6024		167,673	6766.53	
2.2	3/18/2014	86.1	8385	5319		168,349	5889.24	
2.3	3/19/2014	88.1	8590	5233	4164	167,441	5638.43	
3.1	3/19/2014	87.6	8267	5609		202,095	7071.14	
3.2	3/19/2014	88.2	8065	5315		198,908	5954.45	
3.3	3/19/2014	88.1	8869	5217	3942	197,386	5251.31	
4.1	3/20/2014	87.4	8275	5870		198,965	6998.61	
4.2	3/20/2014	87.9	8266	5714		199,935	5621.69	
4.3	3/20/2014	90.7	8316	5727	3997	201,591	5300.26	
5.1	3/20/2014	88.7	8253	6036		201,402	6366.37	
5.2	3/20/2014	86.8	7918	5172		204,360	6888.81	
5.3	3/20/2014	86.4	8002	5310	3999	204,595	6416.95	
6.1	3/21/2014	81.5	9068	5994		167,198	7134.94	
6.2	3/21/2014	83.6	8270	6338		168,225	5201.40	
6.3	3/21/2014	87.9	8339	6002	4063	164,059	6097.57	
7.1	3/22/2014	87.5	8157	5808		199,733	6414.47	
7.2	3/22/2014	86.0	8125	5957		199,058	5365.12	
7.3	3/22/2014	87.9	8145	6156	3876	202,823	5379.88	
8.1	3/23/2014	85.1	7952	5324		168,379	6074.98	
8.2	3/23/2014	88.1	8097	4499		168,958	5344.17	
8.3	3/23/2014	88.4	7978	5788	4305	164,464	5131.31	
9.1	3/23/2014	88.7	9007	5498		205,479	6011.02	
9.2	3/23/2014	89.0	7772	5073		195,681	6372.12	
9.3	3/23/2014	88.4	7784	4927	4150	198,666	5240.83	
10.1	3/24/2014	87.8	8820	5288		200,070	5792.81	
10.2	3/24/2014	88.8	7685	5346		200,012	5095.45	
10.3	3/24/2014	88.7	7809	5645	4158	188,666	4903.81	
11.1	3/25/2014	86.1	7965	5681		208,477	6029.54	
11.2	3/25/2014	74.6	8451	6152		202,117	5534.17	
11.3	3/25/2014	82.9	8438	6205	4094	202,744	5271.90	
12.1	3/25/2014	86.7	7605	5679		208,193	5853.95	
12.2	3/26/2014	86.7	8643	5767		195,411	5858.52	
12.3	3/26/2014	86.9	7574	5584	3999	193,796	3852.07	
13.1	3/26/2014	85.8	7829	5833		201,320	6381.59	
13.2	3/26/2014	87.4	8064	5944		204,668	5662.64	
13.3	3/26/2014	87.0	7456	5351	4570	194,216	6252.46	
14.1	4/22/2014	87.0	7230	5802		201,760	5929.62	

09/19/2014

STIMULATION INFORMATION PER STAGE

API: 47-051-01661

Farm name: _____

Russell Lee and Barbara Ann
Bennett

Well Name: SHL-26D-HS

Stage No.	Stim Date	Avg Rate (bpm)	ATP (psi)	Max BD Pressure	ISIP (psi)	Proppant (lbs)	Water (BBLs)	Amount of N ² / other
14.2	4/22/2014	86.6	7665	6182		202,421	5787.61	
14.3	4/22/2014	87.1	7461	5917	4065	198,448	5303.98	
15.1	4/22/2014	87.4	7797	5686		202,150	5106.85	
15.2	4/22/2014	84.9	8295	5854		199,069	5443.69	
15.3	4/22/2014	31.1	9245	6706	5911	204,500	5472.79	
15B	4/23/2014	83.8	7973		4040		5509.10	
16.1	4/23/2014	90.3	7607	5438		201,298	5703.43	
16.2	4/23/2014	90.1	7779	5670		199,838	5549.00	
16.3	4/24/2014	90.6	7835	5187	4446	200,188	4906.33	
17.1	4/24/2014	90.1	7577	5031		198,040	5070.68	
17.2	4/24/2014	47.1	8835	8478		918	4725.17	
17B.2	4/24/2014	87.1	7494	6265		200,933	4582.57	
17B.3	4/24/2014	87.5	7355	5607	4507	203,544	5318.50	
18.1	4/24/2014	90.0	7088	5466		200,774	4864.67	
18.2	4/24/2014	90.4	7400	4891		200,384	4820.55	
18.3	4/24/2014	90.2	7253	4505	4503	201,030	6595.93	
19.1	4/25/2014	90.7	7178	5456		200,117	1289.02	
19.2	4/25/2014	90.4	7460	5011		200,344	342.79	
19.3	4/25/2014	88.3	7677	6080	4469	199,821	9447.83	
20.1	4/25/2014	85.8	7080	5465		200,400	5203.93	
20.2	4/25/2014	86.9	7219	5398		201,219	5254.14	
20.3	4/25/2014	87.2	7162	5812	4613	201,501	5231.33	
21.1	4/25/2014	86.5	7187	5295		201,346	5176.19	
21.2	4/25/2014	83.2	7448	5143		199,870	5041.95	
21.3	4/25/2014	88.3	6751	5272	4506	199,496	5006.00	
22.1	4/25/2014	89.2	6986	5511		200,665	5890.45	
22.2	4/25/2014	88.9	7363	5716		200,346	5203.59	
22.3	4/25/2014	72.5	8501	5646	4353	199,798	5189.14	
23.1	4/26/2014	80.1	7842	4864		200,198	6793.74	
23.2	4/26/2014	77.9	7892	6685		199,714	5536.26	
23.3	4/26/2014	83.5	7643	6113	4390	201,316	5006.88	
24.1	4/26/2014	87.7	6834	5586		200,764	4814.97	
24.2	4/26/2014	87.7	7309	5544		199,628	4888.64	
24.3	4/26/2014	88.8	7357	5233	3976	198,957	4508.02	
25.1	4/27/2014	86.2	6943	6183		189,743	5111.00	
25.2	4/27/2014	87.9	7255	8062		207,843	5011.26	
25.3	4/27/2014	88.2	7483	5767	4198	206,836	5015.74	
26.1	4/27/2014	83.5	6914	5039		195,253	5174.22	
26.2	4/27/2014	79.5	7545	5955		206,245	5348.79	
26.3	4/27/2014	87.4	7523	6044	4195	197,509	5277.50	
27.1	4/27/2014	88.3	6847	6406		200,459	7203.81	

STIMULATION INFORMATION PER STAGE

API: 47-051-01661 Farm name: Russell Lee and Barbara Ann Bennett Well Name: SHL-26D-HS

Stage No.	Stim Date	Avg Rate (bpm)	ATP (psi)	Max BD Pressure	ISIP (psi)	Proppant (lbs)	Water (BBLS)	Amount of N ² / other
27.2	4/27/2014	88.1	7399	5939		200,411	5307.86	
27.3	4/27/2014	88.1	7831	5862	4300	199,996	5301.88	
28.1	4/28/2014	88.7	6559	5680		200,646	5231.93	
28.2	4/28/2014	89.2	6645	5154		199,820	5138.60	
28.3	4/28/2014	88.9	6650	5011	4467	200,898	5102.88	

API 47- 051 - 01661 Farm name Russell Lee and Barbara Ann Bennett Well number SHL26DHS

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
<u>Marcellus</u>	<u>6665.1</u> TVD	<u>16108</u> 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 2815 mcfpd Oil 60 bpd NGL 127 bpd Water 1088 bpd GAS MEASURED BY Estimated Orifice Pilot

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

Please insert additional pages as applicable.

Drilling Contractor Nabors Drilling USA, LP
Address 515 West Greens Rd, Suite 1000 City Houston State TX Zip 77067-4525

Logging Company Horizon Well Logging, LLC
Address 7136 S. Yale Ave. Suite 414 City Tulsa State OK Zip 74136

Cementing Company CalFrac
Address 717 17th St., Suite 1445 City Denver State CO Zip 80202

Stimulating Company Halliburton Energy Services
Address 121 Champion Way, Suite 210 City Canonsburg State PA Zip 15317

Please insert additional pages as applicable.

Completed by DES Sugar Telephone 724-820-3061
Signature [Signature] Title Log Analyst Date 8.5.14

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

FORMATIONS

Russell Lee and Barbara					
API 47-051-5101661		Farm Name		Ann Bennett	
			Well Name		SHL26D
Lithology/Formation	Top Depth in FT 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, H2S, ETC)
Shale	0	808	0	808	
Pittsburgh Coal	808	817	808	817	
Shale and Sandstone	817	1264	817	1264	
Dunkard Sand	1264	1275	1264	1275	
Shale	1275	1446	1275	1446	
Gas Sand	1446	1485	1446	1485	
Shale	1485	1577	1485	1577	
1st Salt Sand	1577	1601	1577	1601	
Shale	1601	1610	1601	1610	
2nd Salt Sand	1610	1655	1610	1655	
Shale	1655	1738	1655	1738	
Maxton Sand	1738	1750	1738	1750	
Shale	1750	1793	1750	1793	
Big Lime	1793	1873	1793	1873	
Big Injun	1873	2067	1873	2067	
Price	2067	2425	2067	2425	
Murrysville	2425	2439	2425	2439	
Shale	2439	2636	2439	2636	
50' Sand	2636	2638	2636	2638	
Shale	2638	2691	2638	2691	
30' Sand	2691	2700	2691	2700	
Shale	2700	2742	2700	2742	
Gordon Stray	2742	2757	2742	2757	
Shale	2757	2793	2757	2793	
Gordon	2793	2806	2793	2806	
Shale	2806	2902	2806	2902	
Fifth Sand	2902	2936	2902	2936	
Shale	2936	3342	2936	3342	
Speechley Sand	3342	3370	3342	3370	
Shale	3370	4378	3370	4484	
Warren Sand	4378	4387	4484	4497	
Shale	4387	5045	4497	5362	
Java Shale	5045	5216	5362	5584	
Pipe Creek Shale	5216	5273	5584	5657	
Angola Shale	5273	5898	5657	6461	
Rhinestreet	5898	6314	6461	7022	
Cashaqua	6314	6405	7022	7149	
Middlesex	6405	6440	7149	7201	
West River	6440	6492	7201	7281	
Burkett	6492	6515	7281	7319	
Tully Limestone	6515	6545	7319	7371	
Hamilton	6545	6656	7371	7629	
Marcellus	6656	6706	7629	not encountered	Gas

09/19/2014

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	3/16/2014
Job End Date:	4/5/2014
State:	West Virginia
County:	Marshall
API Number:	47-051-01661-00-00
Operator Name:	Noble Energy, Inc.
Well Name and Number:	SHL26 D
Longitude:	-80.54840800
Latitude:	39.97322500
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	6,665
Total Base Water Volume (gal):	19,898,789
Total Base Non Water Volume:	0



51-01661

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	90.18708	Density = 8.330
SAND - PREMIUM WHITE	Halliburton	Proppant	Crystalline silica, quartz	14808-60-7	100.00000	7.07275	
SAND - COMMON WHITE	Halliburton	Proppant	Crystalline silica, quartz	14808-60-7	100.00000	1.75641	
HYDROCHLORIC ACID 5-10%	Halliburton	Solvent	Hydrochloric acid	7647-01-0	10.00000	0.08430	
FDP-S1078-12	Halliburton	Friction Reducer	Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.02049	
			Alcohols, C12-16, ethoxylated	58551-12-2	10.00000	0.00683	
			Ammonium chloride	12125-02-9	10.00000	0.00683	
			N-Octadecenamide, n,n-bis-2-hydroxy-ethyl-, (Z)	93-83-4	5.00000	0.00342	
FE-1A ACIDIZING COMPOSITION	Halliburton	Additive	Acetic anhydride	108-24-7	100.00000	0.00437	
			Acetic acid	64-19-7	60.00000	0.00262	

51-01661

BE-9	Halliburton	Biocide					
			Tributyl tetradecyl phosphonium chloride	81741-28-8	10.00000	0.00377	
Biovert NWB	Halliburton	Viscosifier					
			Poly lactide resin	Confidential	100.00000	0.00307	
LP-65MC Scale Inhibitor	Halliburton	Scale Inhibitor					
			Ammonium chloride	12125-02-9	10.00000	0.00234	
LoSurf-300D	Halliburton	Non-ionic Surfactant					
			Ethanol	64-17-5	60.00000	0.00088	
			Heavy aromatic petroleum naphtha	64742-94-5	30.00000	0.00044	
			Naphthalene	91-20-3	5.00000	0.00007	
			Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy-, branched	127087-87-0	5.00000	0.00007	
			1,2,4 Trimethylbenzene	95-63-6	1.00000	0.00001	
FR-66	Halliburton	Friction Reducer					
			Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.00088	
HAI-OS ACID INHIBITOR	Halliburton	Corrosion Inhibitor					
			Methanol	67-56-1	60.00000	0.00043	
			Propargyl alcohol	107-19-7	10.00000	0.00007	
CALCIUM CHLORIDE FLAKE	Halliburton	Additive					
			Calcium chloride	10043-52-4	100.00000	0.00031	
			Potassium chloride	7447-40-7	5.00000	0.00002	
			Sodium chloride	7647-14-5	2.00000	0.00001	
FDP-S1125-14	Halliburton	Diverter					
			Contains no hazardous substances	NA	100.00000	0.00005	
D-AIR 3000L	Halliburton	Defoamer					
			Alkenes	Confidential	100.00000	0.00001	Denise Tuck, Halliburton 3000 N. Sam Houston Pkwy E., Houston, TX 77032 281-871-6226
			Silica, amorphous precipitated	67762-90-7	30.00000	0.00000	
Ingredients shown above are subject to 29 CFR 1910.1200(l) and appear on Material Safety Data Sheets (MSDS). Ingredients shown below are Non-MSDS.							
		Other Ingredient(s)					
			Water	7732-18-5		0.91710	
		Other Ingredient(s)					
			Inorganic salt	Confidential		0.02049	
		Other Ingredient(s)					
			Organic phosphonate	Confidential		0.01406	
		Other Ingredient(s)					
			Fatty acid ester	Confidential		0.00342	
		Other Ingredient(s)					

		Polyacrylamide copolymer	Confidential		0.00088
	Other Ingredient(s)				
		Oxyalkylated phenolic resin	Confidential		0.00044
	Other Ingredient(s)				
		Formaldehyde	50-00-0		0.00023
	Other Ingredient(s)				
		Fatty acids, tall oil	Confidential		0.00022
	Other Ingredient(s)				
		Reaction product of acetophenone, formaldehyde, thiourea and oleic acid in dimethyl formamide	58527-49-1		0.00022
	Other Ingredient(s)				
		Alcohols, C14-C15, ethoxylated	58951-67-7		0.00022
	Other Ingredient(s)				
		Alcohols, C12-16, ethoxylated	58551-12-2		0.00015
	Other Ingredient(s)				
		Fatty acid tall oil amide	Confidential		0.00015
	Other Ingredient(s)				
		Sodium chloride	7647-14-5		0.00015
	Other Ingredient(s)				
		Ammonium chloride	12125-02-9		0.00015
	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)				
		Sorbitan monooleate polyoxyethylene derivative	9005-65-6		0.00003
	Other Ingredient(s)				
		Sorbitan, mono-9-octadecenoate, (Z)	1338-43-8		0.00003
	Other Ingredient(s)				
		Strontium chloride	10476-85-4		0.00002
	Other Ingredient(s)				
		Olefins	Confidential		0.00001
	Other Ingredient(s)				
		Olefins	Confidential		0.00001
	Other Ingredient(s)				
		Polypropylene glycol	25322-69-4		0.00000

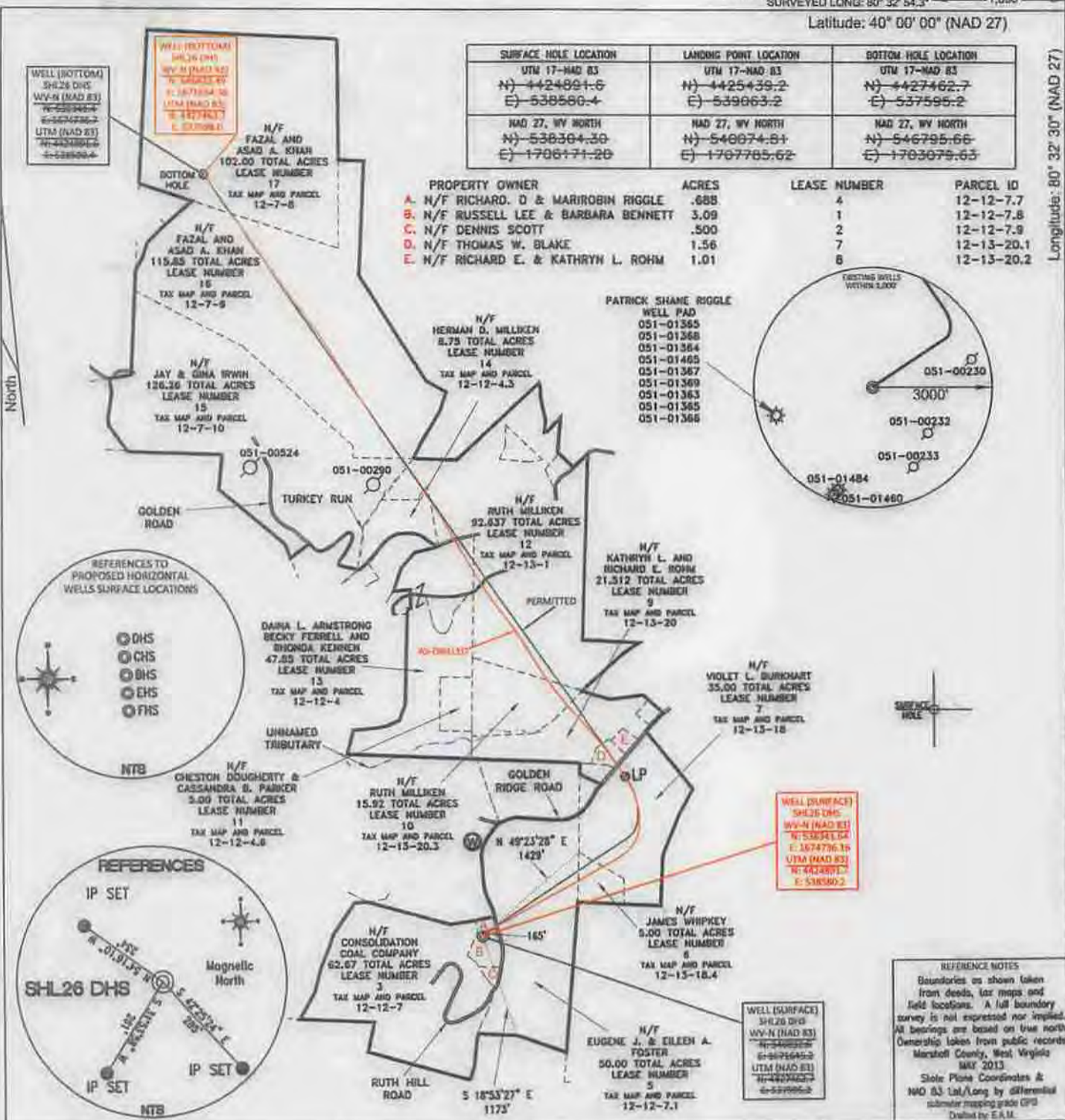
51-01661

* 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)

SURFACE HOLE LOCATION	LANDING POINT LOCATION	BOTTOM HOLE LOCATION
UTM 17-NAD 83 N) 4424891.6 E) 538580.4	UTM 17-NAD 83 N) 4425439.2 E) 539663.2	UTM 17-NAD 83 N) 4427462.7 E) 537595.2
NAD 27, WV NORTH N) 538304.30 E) 1706171.20	NAD 27, WV NORTH N) 540074.81 E) 1707765.62	NAD 27, WV NORTH N) 546795.66 E) 1703079.65

PROPERTY OWNER	ACRES	LEASE NUMBER	PARCEL ID
A. N/F RICHARD. D & MARIROBIN RIGGLE	.688	4	12-12-7.7
B. N/F RUSSELL LEE & BARBARA BENNETT	3.09	1	12-12-7.8
C. N/F DENNIS SCOTT	.500	2	12-12-7.9
D. N/F THOMAS W. BLAKE	1.56	7	12-13-20.1
E. N/F RICHARD E. & KATHRYN L. ROHM	1.01	8	12-13-20.2



FILE #: NOB 002
 DRAWING #: 2217
 SCALE: PLAT - 1" = 1600'
 TICK MARK - 1" = 2000'
 MINIMUM DEGREE OF ACCURACY: 1/200
 PROVEN SOURCE OF ELEVATION: SUBMETER MAPPING GRADE GPS

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]*
 L.L.S. #2124 : Ernest J. Benchek III



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

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

WATERSHED: WHEELING CREEK
 COUNTY/DISTRICT: MARSHALL / SANDHILL
 SURFACE OWNER: RUSSELL LEE AND BARBARA ANN BENNETT
 OIL & GAS ROYALTY OWNER: JAMES O. WHIPKEY ET AL
 LEASE NUMBERS: _____

DATE: AUGUST 8, 2014
 OPERATOR'S WELL #: SHL26 DHS AS-DRILLED
 API WELL #: 47 51 01061
 STATE COUNTY PERMIT

ELEVATION: 1,320'
 QUADRANGLE: MAJORSVILLE WV-PA
 ACREAGE: 3.09 +/-
 ACREAGE: 695.298 + 09/19/2014

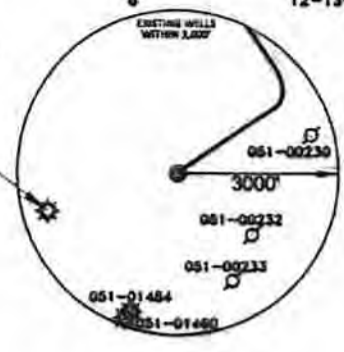
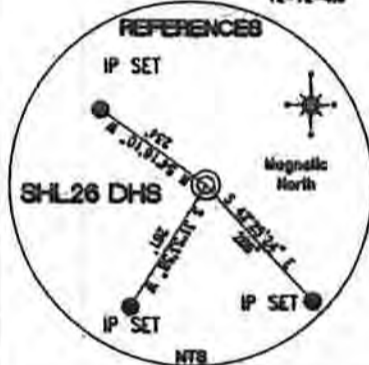
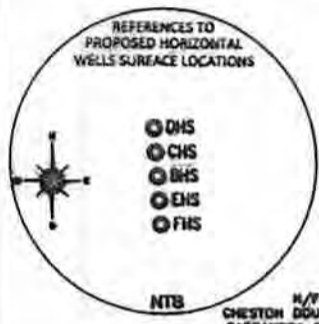
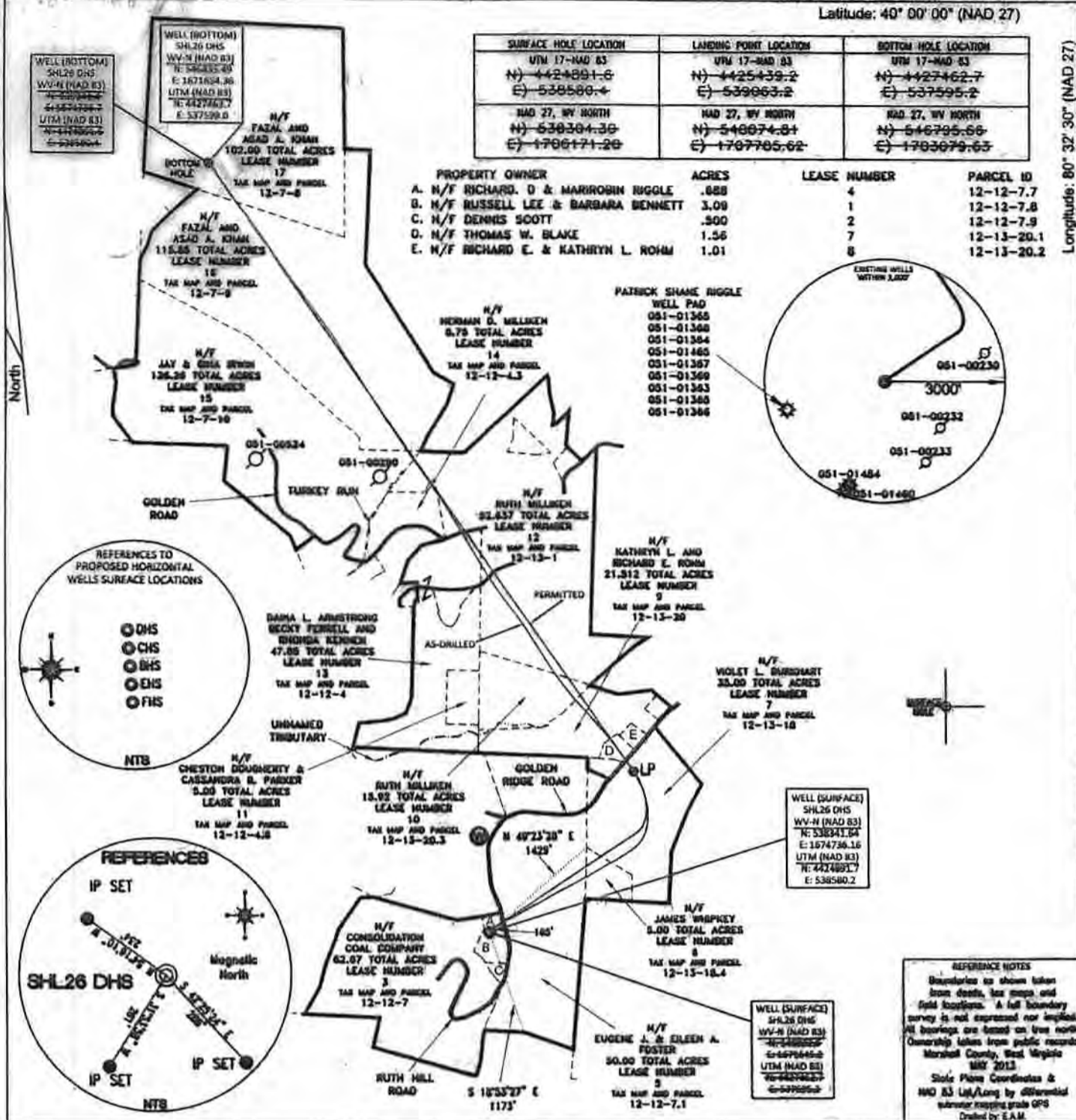
TARGET FORMATION: MARCELLUS
 WELL OPERATOR: NOBLE ENERGY, INC.
 ADDRESS: 333 TECHNOLOGY DRIVE SUITE 116
 CITY: CANONSBURG STATE: PA ZIP CODE: 15317

ESTIMATED DEPTH: TVD: 6,698' TMD: 16,052'
 DESIGNATED AGENT: STEVEN M. GREEN
 ADDRESS: 500 VIRGINIA STREET EAST
 CITY: CHARLESTON STATE: WV ZIP CODE: 25301

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

SURFACE HOLE LOCATION	LANDING POINT LOCATION	BOTTOM HOLE LOCATION
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NAD 27, WV NORTH N) -538384.39 E) -1786171.28	NAD 27, WV NORTH N) -540674.81 E) -1787785.62	NAD 27, WV NORTH N) -546795.68 E) -1783879.65

PROPERTY OWNER	ACRES	LEASE NUMBER	PARCEL ID
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C. N/F DENNIS SCOTT	.500	2	12-12-7.9
D. N/F THOMAS W. BLAKE	1.56	7	12-13-20.1
E. N/F RICHARD E. & KATHRYN L. ROHM	1.01	8	12-13-20.2



REFERENCE NOTES
 Boundaries as shown taken from deeds, tax maps and field locations. A full boundary survey is not expressed nor implied. All bearings are based on true north. Ownership taken from public records, Marshall County, West Virginia MAY 2013.
 State Plane Coordinates & NAD 83 Utilized by differential whenever possible grade GPS. Drawn by E.A.M.

FILE #: NOB 002
 DRAWING #: 2217
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 TICK MARK - 1" = 2000'
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(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
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