

JA

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

API 47-051-01657 County Marshall District Sandhill
Quad Majorsville Pad Name SHL-26 Field/Pool Name _____
Farm name Russell Lee and Barbara Ann Bennett Well Number SHL26FHS
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 4424873.47062 Easting 538581.896241
Landing Point of Curve Northing 4424994.125117 Easting 538527.159658
Bottom Hole Northing 4426733.670819 Easting 537301.74582

Elevation (ft) 1314.0 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 06/26/2013 Date drilling commenced 09/19/2013 Date drilling ceased 11/21/2013
Date completion activities began 04/07/2014 Date completion activities ceased 05/24/2014
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

RECEIVED
Office of Oil and Gas

Freshwater depth(s) ft 198', 300' Open mine(s) (Y/N) depths 09/11/2014 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

WV Department of
Environmental Protection

Reviewed by: _____

09/19/2014

API 47-051 - 01657 Farm name Russell Lee and Barbara Ann Bennett Well number SHL26FHS

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	418	N	J-55 94#		Y
Coal	17 1/2	13 3/8	1220	N	J-55 54.5#		Y
Intermediate 1	12 3/8	9 5/8	3234.8	N	K-55 36#		Y
Intermediate 2							
Intermediate 3							
Production	8 3/4	5 1/2	14030.5	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	486	15.6	1.19	103	0	8
Coal	Class A	1027	15.6	1.2	220	0	8
Intermediate 1	Class A	1265	15.6	1.2	270	0	8
Intermediate 2							
Intermediate 3							
Production	Class A	2302	14.8	1.25	512	3000	8
Tubing							

Drillers TD (ft) 14,040 Loggers TD (ft) 14040
 Deepest formation penetrated Marcellus Plug back to (ft) not a pilot Hole
 Plug back procedure not a pilot Hole

Kick off depth (ft) 7053

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: 47-051-01657

Farm name:

Russell Lee and Barbara
Ann Bennett

Well Name: SHL-26F-HS

Stage No.	Stim Date	Top Perf	Bottom Perf	# of Perfs	Formation
TOE SLEEVE	3/7/2014	13903	13905	0	Marcellus
1	4/7/2014	13826	13893	48	Marcellus
2	4/7/2014	13675	13777	40	Marcellus
3	4/7/2014	13525	13627	40	Marcellus
4	4/8/2014	13375	13477	40	Marcellus
5	4/9/2014	13225	13327	40	Marcellus
6	4/9/2014	13075	13177	40	Marcellus
7	4/9/2014	12925	13027	40	Marcellus
8	4/9/2014	12775	12877	40	Marcellus
9	4/10/2014	12625	12727	40	Marcellus
10	4/10/2014	12475	12577	40	Marcellus
11	4/10/2014	12325	12427	40	Marcellus
12	4/11/2014	12175	12277	40	Marcellus
12 REPERF	4/12/2014	12151	12173	24	Marcellus
12 C	4/12/2014	12025	12127	40	Marcellus
13	4/13/2014	11875	11977	40	Marcellus
14	4/13/2014	11725	11827	40	Marcellus
15	4/14/2014	11575	11677	40	Marcellus
16	4/15/2014	11425	11527	40	Marcellus
17	4/15/2014	11275	11377	40	Marcellus
18	4/16/2014	11125	11227	40	Marcellus
19	4/16/2014	10975	11077	60	Marcellus
20	4/17/2014	10825	10927	40	Marcellus
21	4/17/2014	10675	10777	40	Marcellus
22	4/18/2014	10525	10627	40	Marcellus
23	4/18/2014	10375	10477	40	Marcellus
24	4/18/2014	10225	10327	40	Marcellus
25	4/19/2014	10075	10177	40	Marcellus
26	4/19/2014	9925	10027	40	Marcellus
27	4/20/2014	9775	9877	40	Marcellus
28	4/20/2014	9625	9727	40	Marcellus
29	4/20/2014	9475	9577	40	Marcellus
30	4/21/2014	9325	9427	40	Marcellus
30b	4/30/2014	9337	9414	32	Marcellus
30c	5/1/2014	9175	9277	40	Marcellus
31	5/2/2014	9025	9127	40	Marcellus
31 REPERF	5/3/2014	9038.5	9115	32	Marcellus
31C	5/3/2014	8875	8997	48	Marcellus
32	5/4/2014	8725	8827	48	Marcellus
33	5/10/2014	8575	8677	48	Marcellus
34	5/11/2014	8425	8527	48	Marcellus

PERFORATION RECORD

API: 47-051-01657

Farm name:

Russell Lee and Barbara
Ann Bennett

Well Name: SHL-26F-HS

Stage No.	Stim Date	Top Perf	Bottom Perf	# of Perfs	Formation
35	5/11/2014	8275	8377	48	Marcellus
35 REPERF	5/11/2014	8285	8347	32	Marcellus
36	5/12/2014	8125	8227	48	Marcellus
37	5/12/2014	7975	8077	48	Marcellus
38	5/12/2014	7825	7927	48	Marcellus
39	5/12/2014	7675	7777	48	Marcellus
40	5/13/2014	7525	7627	48	Marcellus
41	5/13/2014	7375	7477	48	Marcellus
42	5/14/2014	7225	7327	48	Marcellus
43	5/14/2014	7075	7177	48	Marcellus

STIMULATION INFORMATION PER STAGE

API: 47-051-01657

Farm name: _____

Russell Lee and Barbara Ann
Bennett

Well Name: SHL-26F-HS

Stage No.	Stim Date	Avg Rate (bpm)	ATP (psi)	Max BD Pressure	ISIP (psi)	Proppant (lbs)	Water (BBLS)	Amount of N ² / other
Inj Test	4/7/2014	15.0	7687			0	574.119	
1	4/7/2014	78.0	7808	5852	3617	302577	7701.208	
2	4/7/2014	87.3	8115	5653	3889	301750	7909.514	
3	4/8/2014	89.3	7934	5591	4337	300250	7445.602	
4	4/8/2014	84.0	8237	5827	4055	301188	6816.762	
5	4/9/2014	89.1	7938	5676	4403	302098	7145.28	
6	4/9/2014	83.3	7878	5482	4281	300668	6879.147	
7	4/9/2014	79.9	8033	5565	4398	300903	7411.176	
8	4/9/2014	88.0	8541	5642	4444	299781	7562.47	
9	4/10/2014	84.7	8097	5364	4298	299814	6919.95	
10	4/10/2014	86.1	7861	5607	4734	301101	6956.541	
11	4/10/2014	88.7	7876	5442	4461	299783	6914.961	
12	4/11/2014	35.2	8178	6110	5528	4041	4705.23	
12B	4/12/2014	68.4	8850	6834	5390	1967	5157.67	
12C	4/13/2014	88.7	8370	5517	4820	600907	15757.27	
13	4/14/2014	77.6	8422	5438	4463	249989	9222.6	
13B	4/14/2014	50.1	9033	6655	5237	195	1349.52	
14	4/14/2014	87.6	8252	5538	4228	301705	7516.091	
15	4/15/2014	87.3	8258	5213	4176	298050	7957.861	
16	4/15/2014	84.6	7848	5136	4514	301582	6727.043	
17	4/16/2014	86.8	8096	5389	4316	302989	7170.27	
18	4/16/2014	83.4	7940	5337	4242	304255	7906.393	
19	4/16/2014	88.5	7642	5238	4720	300619	6693.389	
20	4/17/2014	79.3	7404	5533	4513	300539	6424.864	
21	4/17/2014	86.1	8157	5817	4453	302204	6521.453	
22	4/18/2014	82.3	8315	5632	4248	304361	6496.429	
23	4/18/2014	86.9	7489	5380	4073	300600	6730.333	
24	4/19/2014	89.6	7701	5375	4272	297485	6430.732	
25	4/19/2014	87.0	7147	5163	4523	299461	6290.735	
26	4/19/2014	86.8	7741	5312	4382	301958	7328.654	
27	4/20/2014	86.0	7104	5374	4076	299908	6752.136	
28	4/20/2014	86.5	8152	5552	3954	297212	6722.241	
29	4/21/2014	89.0	7892	5140	4603	301959	6384.632	
30	4/21/2014	83.7	7724	5942		155828	4790.755	
30B	5/1/2014	4.6	6230			0	65.83	
30C	5/1/2014	9.7	7791		5924	0	2970.5	
30D	5/2/2014	71.2	8134		4482	445490	13851.37	
31	5/3/2014	49.2	8495	6397	5390	5405	8165.833	
31B	5/3/2014	48.6	7503		6588	147710	11193.01	
31C	5/3/2014	84.5	7167		4305	446438	9366.009	
32	5/4/2014	86.4	73557	6224	8960	166717	5413.509	

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STIMULATION INFORMATION PER STAGE

API: 47-051-01657 Farm name: Russell Lee and Barbara Ann Bennett Well Name: SHL-26F-HS

Stage No.	Stim Date	Avg Rate (bpm)	ATP (psi)	Max BD Pressure	ISIP (psi)	Proppant (lbs)	Water (BBLs)	Amount of N ² / other
32 Inj	5/5/2014	4.5	7397		9042	0	133.7619	
32 Inj 2	5/6/2014						0	
32B	5/10/2014	89.6	7278	6086	4681	132332	4554.08	
33	5/10/2014	88.2	7159	5601	4389	302823	6882.87	
34	5/11/2014	87.5	7065	6030	4630	300643	6530.95	
35	5/11/2014	86.3	7066	5754	5221	140073	8843.78	
35B	5/11/2014	86.8	7218		4883	157969	4854.317	
36	5/12/2014	88.2	7191	5883	4093	298960	7948.524	
37	5/12/2014	89.3	8544	5884	4180	299752	6234.451	
38	5/12/2014	85.4	7071	5398	4460	300180	7823.714	
39	5/13/2014	87.9	6652	5791	4346	302783	6319.786	
40	5/13/2014	87.8	6802	5432	4368	301544	6420.777	
41	5/14/2014	88.0	6779	5459	4694	302187	6712.263	
42	5/14/2014	88.9	6618	6817	4413	303298	6070.786	
43	5/15/2014	87.4	6697	5102	4480	300142	6815.926	

API 47- 051 - 01657

Farm name Russell Lee and Barbara Ann Bennett Well number SHL26FHS

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
<u>Marcellus</u>	<u>6644</u> TVD	<u>14040</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 3227 mcfpd Oil 23 bpd NGL 146 bpd Water 1139 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 FORMATIONS 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 Dee Swiger Telephone 724-820-3061
Signature Dee Swiger Title Rg Analyst Date 8-8-14

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

FORMATIONS

Russell Lee and Barbara
Ann Bennett

API 47-051-5101657 Farm Name Well Name SHL26F

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	4378	
Warren Sand	4378	4387	4378	4387	
Shale	4387	5045	4387	5045	
Java Shale	5045	5216	5045	5216	
Pipe Creek Shale	5216	5273	5216	5273	
Angola Shale	5273	5898	5273	5916	
Rhinestreet	5898	6314	5916	6339	
Cashaqua	6314	6405	6339	6436	
Middlesex	6405	6440	6436	6475	
West River	6440	6492	6475	6537	
Burkett	6492	6515	6537	6565	
Tully Limestone	6515	6545	6565	6605	
Hamilton	6545	6656	6605	6820	
Marcellus	6656	6706	6820	not encountered	Gas

09/19/2014

Hydraulic Fracturing Fluid Product Component Information Disclosure



51-01657

Job Start Date:	4/7/2014
Job End Date:	5/15/2014
State:	West Virginia
County:	Marshall
API Number:	47-051-01657-00-00
Operator Name:	Noble Energy, Inc.
Well Name and Number:	SHL26 F
Longitude:	-80.54839200
Latitude:	39.97306100
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	6,644
Total Base Water Volume (gal):	15,480,444
Total Base Non Water Volume:	0

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	89.98980	Density = 8.340
SAND - PREMIUM WHITE	Halliburton	Proppant					
			Crystalline silica, quartz	14808-60-7	100.00000	6.92758	
SAND - COMMON WHITE	Halliburton	Proppant					
			Crystalline silica, quartz	14808-60-7	100.00000	1.78628	
HYDROCHLORIC ACID 5-10%	Halliburton	Solvent					
			Hydrochloric acid	7647-01-0	10.00000	0.11397	
LGC-36 UC	Halliburton	Liquid Gel Concentrate					
			Naphtha, hydrotreated heavy	34742-48-9	60.00000	0.01305	
			Guar gum	9000-30-0	60.00000	0.01305	
PermVis VFR-10	Halliburton	Friction Reducer					
			Hydrotreated light petroleum distillate	34742-47-8	30.00000	0.00745	
			Ammonium chloride	12125-02-9	10.00000	0.00248	
			Alcohols; C12-16, ethoxylated	38551-12-2	10.00000	0.00248	
			9-Octadecenamide, n,n-bis-2 (hydroxy-ethyl)-(,Z)	93-83-4	5.00000	0.00124	
FR-66	Halliburton	Friction Reducer					

			Hydrotreated light petroleum distillate	54742-47-8	30.00000	0.01062	
FE-1A ACIDIZING COMPOSITION	Halliburton	Additive					
			Acetic anhydride	108-24-7	100.00000	0.00591	
			Acetic acid	64-19-7	60.00000	0.00355	
BE-9	Halliburton	Biocide					
			Tributyl tetradecyl phosphonium chloride	81741-28-8	10.00000	0.00407	
LP-65	Halliburton	Scale Inhibitor					
			Ammonium chloride	12125-02-9	10.00000	0.00248	
LOSURF-300 NONIONIC SURFACTANT	Halliburton	Surfactant					
			Isopropanol	67-63-0	60.00000	0.00120	
			Light aromatic solvent	54742-95-6	30.00000	0.00060	
			Ethoxylated nonylphenol	Confidential	10.00000	0.00020	Denise Tuck, Halliburton 3000 N. Sam Houston Pkwy E., Houston, TX 77032 281-871-6226
HAI-OS ACID INHIBITOR	Halliburton	Corrosion Inhibitor					
			Methanol	67-56-1	60.00000	0.00059	
			Propargyl alcohol	107-19-7	10.00000	0.00010	
SP BREAKER	Halliburton	Breaker					
			Sodium persulfate	7775-27-1	100.00000	0.00036	
Ingredients shown above are subject to 29 CFR 1910.1200(j) and appear on Material Safety Data Sheets (MSDS). Ingredients shown below are Non-MSDS.							
		Other Ingredient(s)					
			Water	7732-18-5		1.22390	
		Other Ingredient(s)					
			Organic phosphonate	Confidential		0.01488	
		Other Ingredient(s)					
			Polyacrylamide copolymer	Confidential		0.01062	
		Other Ingredient(s)					
			Inorganic salt	Confidential		0.00745	
		Other Ingredient(s)					
			Polyacrylate	Confidential		0.00745	
		Other Ingredient(s)					
			Fatty acid tall oil amide	Confidential		0.00177	
		Other Ingredient(s)					
			Sodium chloride	7647-14-5		0.00177	
		Other Ingredient(s)					
			Ammonium chloride	12125-02-9		0.00177	
		Other Ingredient(s)					
			Alcohols, C12-16, ethoxylated	58551-12-2		0.00177	
		Other Ingredient(s)					
			Fatty acid ester	Confidential		0.00124	

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	Other Ingredient(s)				
		Formaldehyde polymer with methyl oxirane, 4-nonylphenol and oxirane	53428-92-2		0.00120
	Other Ingredient(s)				
		Quaternary ammonium compounds, bis(hydrogenated tallow alkyl) dimethyl salts with bentonite	58953-58-2		0.00109
	Other Ingredient(s)				
		Formaldehyde polymer with 4,1,1-dimethylethyl phenolmethyl oxirane	29316-47-0		0.00060
	Other Ingredient(s)				
		Sorbitan, mono-9-octadecenoate, (Z)	1338-43-8		0.00036
	Other Ingredient(s)				
		Sorbitan monooleate polyoxyethylene derivative	9005-65-6		0.00036
	Other Ingredient(s)				
		Reaction product of acetophenone, formaldehyde, thiourea and oleic acid in dimethyl formamide	58527-49-1		0.00029
	Other Ingredient(s)				
		Fatty acids, tall oil	Confidential		0.00029
	Other Ingredient(s)				
		Alcohols, C14-C15, ethoxylated	58951-67-7		0.00029
	Other Ingredient(s)				
		Formaldehyde	50-00-0		0.00025
	Other Ingredient(s)				
		Fatty alcohol polyglycol ether surfactant	9043-30-5		0.00022
	Other Ingredient(s)				
		Naphthalene	91-20-3		0.00010
	Other Ingredient(s)				
		Olefins	Confidential		0.00005
	Other Ingredient(s)				
		Olefins	Confidential		0.00005
	Other Ingredient(s)				
		Crystalline silica, quartz	14808-60-7		0.00002
	Other Ingredient(s)				
		Olefins	Confidential		0.00001
	Other Ingredient(s)				
		Olefins	Confidential		0.00001
	Other Ingredient(s)				
		Sodium sulfate	7757-82-6		0.00000

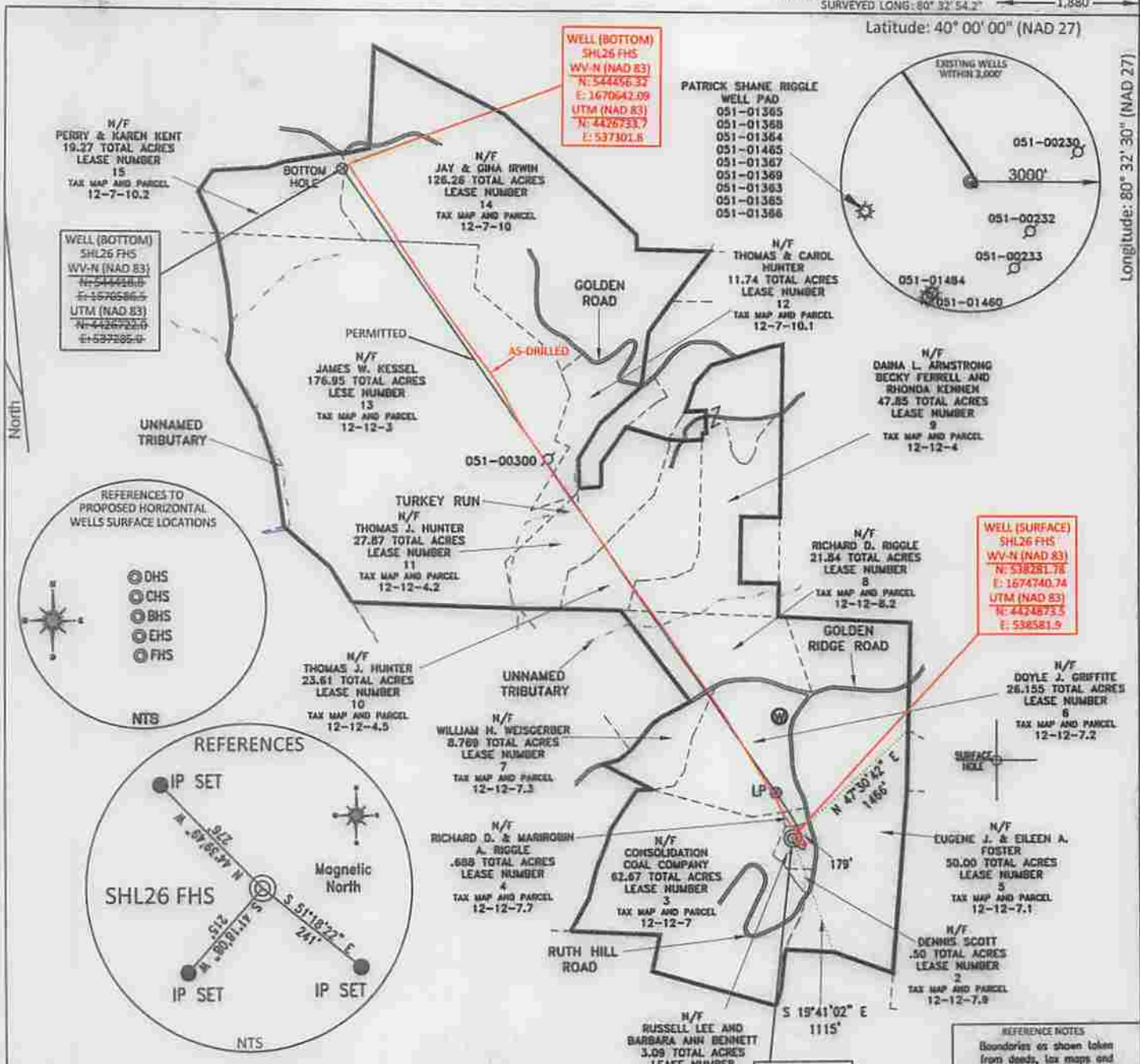
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* Total Water Volume sources may include fresh water, produced water, and/or recycled water

** 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(j) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

51.01657



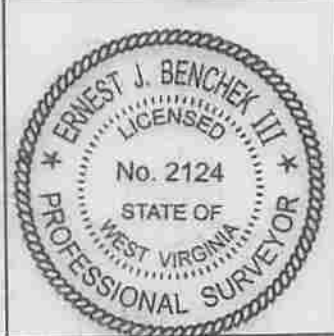
SURFACE HOLE LOCATION	LANDING POINT LOCATION	BOTTOM HOLE LOCATION
UTM 17-NAD 83 N) 4424873.4 E) 538581.9	UTM 17-NAD 83 N) 4425000.2 E) 538534.1	UTM 17-NAD 83 N) 4426722.0 E) 537285.0
NAD 27, WV NORTH N) 538244.53 E) 1706175.35	NAD 27, WV NORTH N) 538663.19 E) 1706025.23	NAD 27, WV NORTH N) 544381.06 E) 1702929.96

WELL (SURFACE)
SHL26 FHS
WV-N (NAD 83)
N: 538281.9
E: 1674740.8
UTM (NAD 83)
N: 4424873.4
E: 538581.9

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 Lat/Long by differential submeter mapping grade GPS
Created by: E.A.M.

FILE #: NOB 002
DRAWING #: 2215
SCALE: PLAT - 1" = 1400'
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

DATE: AUGUST 8, 2014
OPERATOR'S WELL #: SHL26 FHS AS-DILLED
API WELL #: 47 51 01657
STATE COUNTY PERMIT

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

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

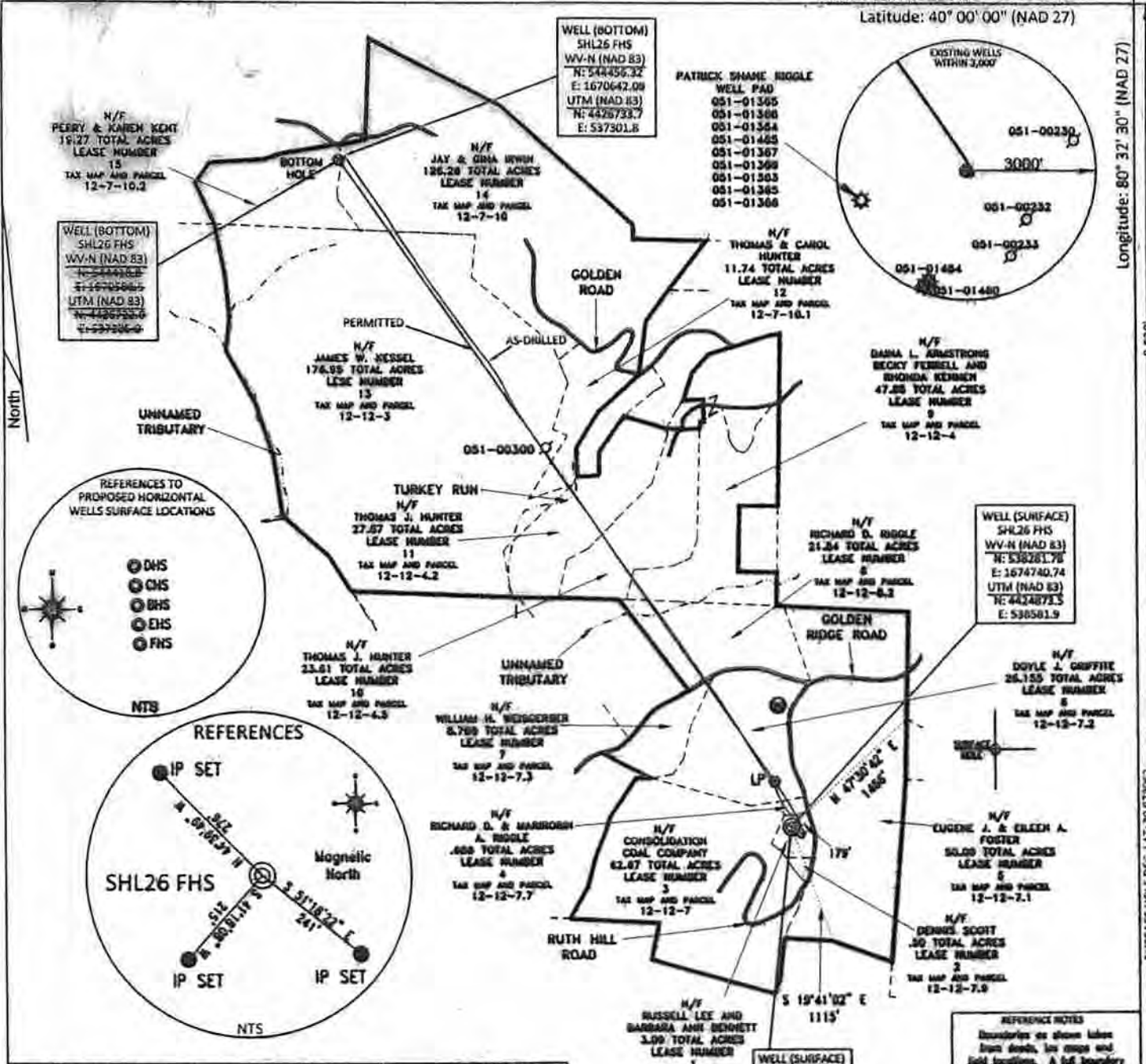
ELEVATION: 1,320'
QUADRANGLE: MAJORSVILLE WV-PA
ACREAGE: 3.09 +/-
ACREAGE: 345.844 +/-

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

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: 14,034'
DESIGNATED AGENT: STEVEN M. GREEN
ADDRESS: 500 VIRGINIA STREET EAST
CITY: CHARLESTON STATE: WV ZIP CODE: 25301

09/19/2014



SURFACE HOLE LOCATION	LANDING POINT LOCATION	BOTTOM HOLE LOCATION
UTM 17-88D 83 N) 4421073.4 E) 538561.9	UTM 17-88D 83 N) 4425066.2 E) 538534.1	UTM 17-88D 83 N) 4426722.0 E) 537885.0
NAD 27, WV NORTH N) 539244.53 E) 1766175.35	NAD 27, WV NORTH N) 538663.19 E) 1766925.23	NAD 27, WV NORTH N) 544301.89 E) 1762020.98

WELL (SURFACE) SHL26 FHS	WV-N (NAD 83)	UTM (NAD 83)	UTM (NAD 83)	E
WV-N (NAD 83)	N: 538281.78	UTM (NAD 83)	N: 4424873.5	E: 538561.9

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 807 2013
 State Plane Coordinates & MD 83 Lat/Long by differential submeter mapping grade GPS
 Drafted by: E.A.M.

FILE #: NOB 002
 DRAWING #: 2215
 SCALE: PLAT - 1" = 1400'
 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 ELEVATION: 1,320'
 COUNTY/DISTRICT: MARSHALL/SAND HILL QUADRANGLE: MAJORSVILLE WV-PA
 SURFACE OWNER: RUSSELL LEE AND BARBARA ANN BENNETT ACREAGE: 3.09 +/-
 OIL & GAS ROYALTY OWNER: JAMES O. WHIPKEY ET AL. ACREAGE: 345.844 09/19/2014
 LEASE NUMBERS: _____

DATE: AUGUST 8, 2014
 OPERATOR'S WELL #: SHL26 FHS AS-DRILLED
 API WELL #: 47 51 01657
 STATE COUNTY PERMIT

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: TVD: 8,696' TMD: 14,034'
 WELL OPERATOR: NOBLE ENERGY, INC. DESIGNATED AGENT: STEVEN M. GREEN
 ADDRESS: 333 TECHNOLOGY DRIVE SUITE 116 ADDRESS: 500 VIRGINIA STREET EAST
 CITY: CANONSBURG STATE: PA ZIP CODE: 15317 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): _____