

PM

OR

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

API 47-051-01658 County Marshall District Sandhill  
Quad Majorsville Pad Name SHL-26 Field/Pool Name \_\_\_\_\_  
Farm name Russell Lee and Barbara Ann Bennett Well Number SHL26EHS  
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 4424878.016973 Easting 538581.38962  
Landing Point of Curve Northing 4424914.371254 Easting 538372.570561  
Bottom Hole Northing 4426666.976651 Easting 537045.207804

Elevation (ft) 1308.39 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 09/24/2013 Date drilling ceased 01/21/2014  
Date completion activities began 04/23/2014 Date completion activities ceased 05/17/2014  
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 198', 300' Open mine(s) (Y/N) depths \_\_\_\_\_  
Salt water depth(s) ft N/A Void(s) encountered (Y/N) depths \_\_\_\_\_  
Coal depth(s) ft 761' to 771' Pittsburgh Cavern(s) encountered (Y/N) depths \_\_\_\_\_  
Is coal being mined in area (Y/N) Y

RECEIVED  
Office of Oil and Gas  
SEP 11 2014  
Reviewed by:  
Department of Environmental Protection

09/19/2014

API 47- 051 - 01658 Farm name Russell Lee and Barbara Ann Bennett Well number SHL26EHS

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	1236	N	J-55 54.5#		Y
Intermediate 1	12 3/8	9 5/8	3223	N	K-55 36#		Y
Intermediate 2							
Intermediate 3							
Production	8 3/4	5 1/2	13919	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 <sup>3</sup> /sks)	Volume (ft <sup>3</sup> )	Cement Top (MD)	WOC (hrs)
Conductor							
Surface	Type 1	487	15.6	1.19	106	0	8
Coal	Class A	1033	15.8	1.16	214	0	14
Intermediate 1	Class A	1170	16.2	1.09	227	0	20
Intermediate 2							
Intermediate 3							
Production	Class A	2302	14.8	1.25	512	3000	8
Tubing							

Drillers TD (ft) 13,930 Loggers TD (ft) 13848

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

Plug back procedure not a pilot Hole

Kick off depth (ft) 6619

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 \_\_\_\_\_

API 47- 051 . 01658 Farm name Russell Lee and Barbara Ann Bennett Well number SHL26EHS

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
PLEASE SEE ATTACHED PERFORATION RECORD					

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Stimulations Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
PLEASE SEE ATTACHED STIMULATION INFORMATION PER STAGE SHEET								

Please insert additional pages as applicable.

**PERFORMANCE RECORD**

API: 47-051-01658

Farm name: \_\_\_\_\_

Russell Lee and Barbara  
Ann Bennett

Well Name: SHL-26E-HS

Stage No.	Stim Date	Top Perf	Bottom Perf	# of Perfs	Formation
TOE SLEEVE	3/7/2014	13801	13803		Marcellus
1	4/23/2014	13574	13791	48	Marcellus
2	5/2/2014	13273	13527	40	Marcellus
2B	5/2/2014	13304	13489	32	Marcellus
3	5/3/2014	12975	13227	48	Marcellus
6	5/4/2014	12075	12327	48	Marcellus
7	5/5/2014	11773	12027	40	Marcellus
8	5/5/2014	11473	11727	40	Marcellus
8B	5/6/2014	11463	11499	24	Marcellus
9	5/6/2014	11175	11427	48	Marcellus
10	5/6/2014	10875	11127	48	Marcellus
14	5/10/2014	9725	9927	48	Marcellus
15	5/10/2014	9425	9677	48	Marcellus
16	5/11/2014	9125	9377	48	Marcellus
16 REPERF	5/11/2014	9115	9154	24	Marcellus
17	5/12/2014	8825	9077	48	Marcellus
18	5/12/2014	8525	8777	48	Marcellus
19	5/12/2014	8225	8477	48	Marcellus
20	5/13/2014	7925	8177	48	Marcellus
21	5/14/2014	7625	7877	48	Marcellus
22	5/14/2014	7375	7577	48	Marcellus
23	5/15/2014	7125	7327	48	Marcellus

**STIMULATION INFORMATION PER STAGE**

API: 47-051-01658

Farm name: Russell Lee and Barbara Ann Bennett

Well Name: SHL-26E-HS

Stage No.	Stim Date	Avg Rate (bpm)	ATP (psi)	Max BD Pressure	ISIP (psi)	Proppant (lbs)	Water (BBLS)	Amount of N <sup>2</sup> / other (units)
1	4/23/2014	89.4	8102	6553	9118	460788	9601.213	
2	5/2/2014	59.0	8464	5652	3878	1868	2683.09	
2B	5/2/2014	84.6	7550		3946	600641	12394.75	
3	5/3/2014	85.9	7886	5392	3855	599494	11561.48	
4	5/3/2014	77.2	7571	5421	5412	540913	12711.93	
5	5/4/2014	88.4	7457	5503	3922	620454	13715.64	
6	5/4/2014	88.2	7652	5638	4012	595234	11653.52	
7	5/5/2014	76.5	7619	5667	4135	599456	15917.99	
8	5/5/2014	47.0	8554	6068	5559	1633	5141.505	
8B	5/6/2014	78.4	7655		4089	604269	14252.76	
9	5/6/2014	88.3	7457	5337	4532	593509	12064.38	
10	5/6/2014	83.9	7779	5551	4593	600000	15145.71	
11	5/7/2014	87.0	7426	5389	4318	602154	11923.33	
12	5/7/2014	87.9	7704	5508	4420	602431	11609.43	
13	5/7/2014	50.6	8420	5493	5803	606423	5831.285	
13B	5/8/2014	71.4	7523		9411		10781.87	
14	5/10/2014	88.4	7543	5240	4379	500730	11786.7	
15	5/10/2014	85.1	6985	6213	4772	601826	11360.04	
16A	5/11/2014	64.7	8651	5980	4828	4610	4174.07	
16B	5/12/2014	80.0	7385		3920	604142	12975	
17	5/12/2014	87.8	7210	6575	4089	598934	13230.64	
18	5/12/2014	89.2	6629	5934	3746	595347	11436.06	
19	5/13/2014	89.1	6620	6110	4369	601472	11480.19	
20	5/13/2014	90.0	6726	6352	4406	601013	11346.98	
21	5/14/2014	88.3	6655	6590	4298	583406	12660.74	
22	5/14/2014	74.0	5945	5155	4670	500621	9304.587	
23	5/14/2014	71.3	6012	6698	3676	498453	8144.686	

API 47- 051 - 01658 Farm name Russell Lee and Barbara Ann Bennett Well number SHL26EHS

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
<u>Marcellus</u>	<u>6627.4</u> TVD	<u>13930</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 2284 mcfpd Oil 102 bpd NGL 103 bpd Water 757 bpd GAS MEASURED BY  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,S, ETC)
	<u>0</u>		<u>0</u>		

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 DEE SWISW Telephone 724-820-3061  
Signature [Signature] Title \_\_\_\_\_ Date \_\_\_\_\_

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

## FORMATIONS

API 47-051-5101658 Farm Name Russell Lee and Barbara  
Ann Bennett Well Name SHL26E

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	1578	
1st Salt Sand	1577	1601	1578	1602	
Shale	1601	1610	1602	1611	
2nd Salt Sand	1610	1655	1611	1656	
Shale	1655	1738	1656	1739	
Maxton Sand	1738	1750	1739	1751	
Shale	1750	1793	1751	1795	
Big Lime	1793	1873	1795	1875	
Big Injun	1873	2067	1875	2069	
Price	2067	2425	2069	2428	
Murrysville	2425	2439	2428	2442	
Shale	2439	2636	2442	2639	
50' Sand	2636	2638	2639	2641	
Shale	2638	2691	2641	2694	
30' Sand	2691	2700	2694	2703	
Shale	2700	2742	2703	2745	
Gordon Stray	2742	2757	2745	2760	
Shale	2757	2793	2760	2796	
Gordon	2793	2806	2796	2809	
Shale	2806	2902	2809	2905	
Fifth Sand	2902	2936	2905	2939	
Shale	2936	3342	2939	3345	
Speechley Sand	3342	3370	3345	3373	
Shale	3370	4378	3373	4381	
Warren Sand	4378	4387	4381	4390	
Shale	4387	5045	4390	5048	
Java Shale	5045	5216	5048	5219	
Pipe Creek Shale	5216	5273	5219	5276	
Angola Shale	5273	5898	5276	5932	
Rhinestreet	5898	6314	5932	6488	
Cashaqua	6314	6405	6488	6608	
Middlesex	6405	6440	6608	6656	
West River	6440	6492	6656	6733	
Burkett	6492	6515	6733	6770	
Tully Limestone	6515	6545	6770	6820	
Hamilton	6545	6656	6820	7123	
Marcellus	6656	6706	7123	not encountered	Gas

09/19/2014



# Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	4/23/2014
Job End Date:	5/14/2014
State:	West Virginia
County:	Marshall
API Number:	47-051-01658-00-00
Operator Name:	Noble Energy, Inc.
Well Name and Number:	SHL26 E
Longitude:	-80.54839700
Latitude:	39.97310300
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	6,627
Total Base Water Volume (gal):	12,385,362
Total Base Non Water Volume:	0



51.01658

## 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	87.86294	Density = 8.340
SAND - PREMIUM WHITE	Halliburton	Proppant	Crystalline silica, quartz	14808-60-7	100.00000	9.05769	
SAND - COMMON WHITE	Halliburton	Proppant	Crystalline silica, quartz	14808-60-7	100.00000	2.30468	
HYDROCHLORIC ACID 5-10%	Halliburton	Solvent	Hydrochloric acid	7647-01-0	10.00000	0.06295	
FR-66	Halliburton	Friction Reducer	Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.01210	
LGC-36 UC	Halliburton	Liquid Gel Concentrate	Naphtha, hydrotreated heavy	64742-48-9	60.00000	0.00472	
			Guar gum	9000-30-0	60.00000	0.00472	
PermVis VFR-10	Halliburton	Friction Reducer	Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.00443	
			Alcohols, C12-16, ethoxylated	68551-12-2	10.00000	0.00148	
			Ammonium chloride	12125-02-9	10.00000	0.00148	



			9-Octadecenamide, n,n-bis-2 (hydroxy-ethyl)-(Z)	93-83-4	5.00000	0.00074	
FE-1A ACIDIZING COMPOSITION	Halliburton	Additive					
			Acetic anhydride	108-24-7	100.00000	0.00336	
			Acetic acid	64-19-7	60.00000	0.00203	
BE-9	Halliburton	Biocide					
			Tributyl tetradecyl phosphonium chloride	81741-28-8	10.00000	0.00392	
HYDROCHLORIC ACID 10-30%	Halliburton	Solvent					
			Hydrochloric acid	7647-01-0	30.00000	0.00343	
LCA-1	Halliburton	Solvent					
			Paraffinic solvent	Confidential	100.00000	0.00242	Denise Tuck, Halliburton 3000 N. Sam Houston Pkwy E, Houston, TX 77032 281-871-6226
LP-65	Halliburton	Scale Inhibitor					
			Ammonium chloride	12125-02-9	10.00000	0.00239	
LOSURF-300 NONIONIC SURFACTANT	Halliburton	Surfactant					
			sopropanol	67-63-0	60.00000	0.00069	
			Light aromatic solvent	84742-95-6	30.00000	0.00034	
			Ethoxylated nonylphenol	Confidential	10.00000	0.00012	
HAI-OS ACID INHIBITOR	Halliburton	Corrosion Inhibitor					
			Methanol	67-56-1	60.00000	0.00034	
			Propargyl alcohol	107-19-7	10.00000	0.00006	
SP BREAKER	Halliburton	Breaker					
			Sodium persulfate	7775-27-1	100.00000	0.00016	
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		0.72313	
		Other Ingredient(s)					
			Organic phosphonate	Confidential		0.01434	
		Other Ingredient(s)					
			Polyacrylamide copolymer	Confidential		0.01210	
		Other Ingredient(s)					
			Polyacrylate	Confidential		0.00443	
		Other Ingredient(s)					
			Inorganic salt	Confidential		0.00443	
		Other Ingredient(s)					
			Ammonium chloride	12125-02-9		0.00202	
		Other Ingredient(s)					
			Alcohols, C12-16, ethoxylated	68551-12-2		0.00202	
		Other Ingredient(s)					

85910-15

		Sodium chloride	7647-14-5		0.00202
	Other Ingredient(s)				
		Fatty acid tall oil amide	Confidential		0.00202
	Other Ingredient(s)				
		Fatty acid ester	Confidential		0.00074
	Other Ingredient(s)				
		Formaldehyde polymer with methyl oxirane, 4-nonylphenol and oxirane	53428-92-2		0.00069
	Other Ingredient(s)				
		Sorbitan monooleate polyoxyethylene derivative	9005-65-6		0.00040
	Other Ingredient(s)				
		Sorbitan, mono-9-octadecenoate, (Z)	1338-43-8		0.00040
	Other Ingredient(s)				
		Quaternary ammonium compounds, bis(hydrogenated tallow alkyl) dimethyl, salts with bentonite	58953-58-2		0.00039
	Other Ingredient(s)				
		Formaldehyde polymer with 4,1,1-dimethylethyl phenolmethyl oxirane	29316-47-0		0.00034
	Other Ingredient(s)				
		Formaldehyde	50-00-0		0.00024
	Other Ingredient(s)				
		Alcohols, C14-C15, ethoxylated	38951-67-7		0.00017
	Other Ingredient(s)				
		Fatty acids, tall oil	Confidential		0.00017
	Other Ingredient(s)				
		Reaction product of acetophenone, formaldehyde, thiourea and oleic acid in dimethyl formamide	58527-49-1		0.00017
	Other Ingredient(s)				
		Fatty alcohol polyglycol ether surfactant	9043-30-5		0.00008
	Other Ingredient(s)				
		Naphthalene	91-20-3		0.00006
	Other Ingredient(s)				
		Olefins	Confidential		0.00003
	Other Ingredient(s)				
		Olefins	Confidential		0.00003
	Other Ingredient(s)				
		Crystalline silica, quartz	14808-60-7		0.00001
	Other Ingredient(s)				
		Olefins	Confidential		0.00001
	Other Ingredient(s)				
		Olefins	Confidential		0.00001

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	Other Ingredient(s)				
	Sodium sulfate	7757-82-6		0.00000	

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

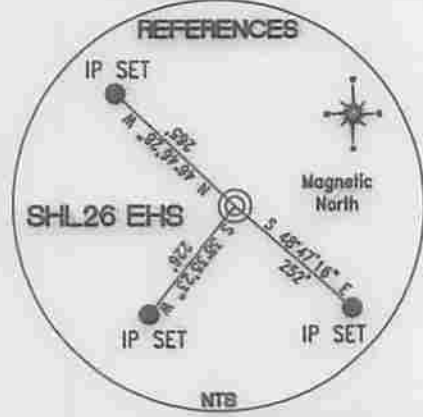
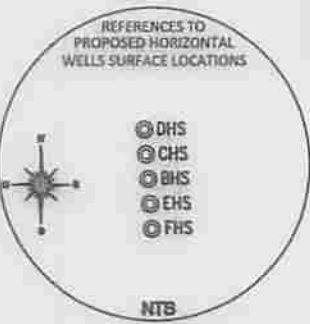
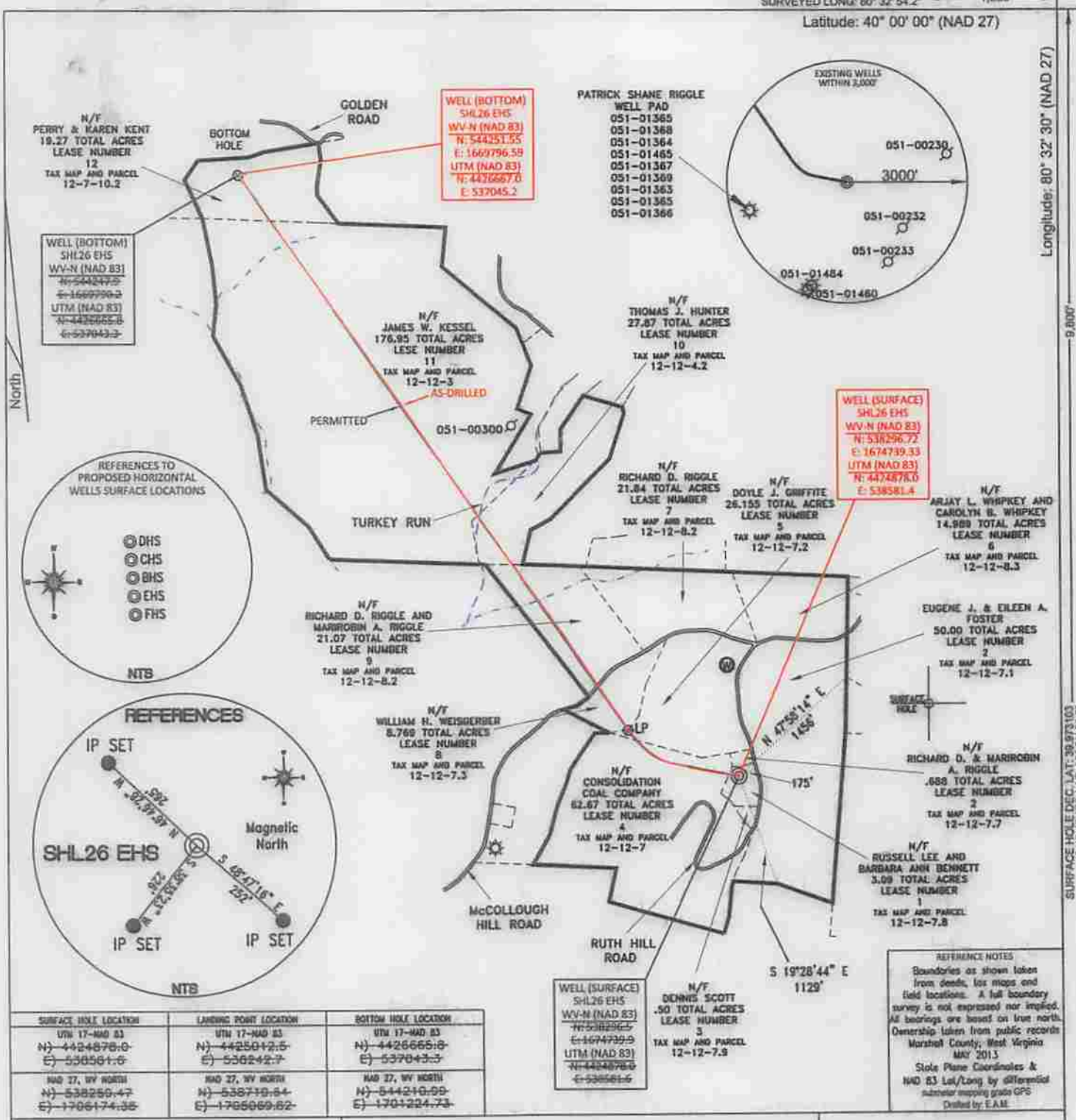
\*\* Information is based on the maximum potential for concentration and thus the total may be over 100%

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)

51-01658



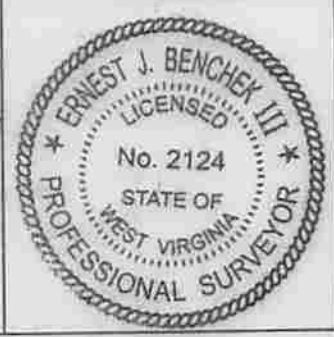


SURFACE HOLE LOCATION	LANDING POINT LOCATION	BOTTOM HOLE LOCATION
UTM 17-MAD 83 N)-4424878.0 E)-536901.0	UTM 17-MAD 83 N)-4425012.5 E)-536842.7	UTM 17-MAD 83 N)-4426665.8 E)-537043.3
NAD 27, WV NORTH N)-538250.47 E)-1706174.35	NAD 27, WV NORTH N)-538730.64 E)-1706069.62	NAD 27, WV NORTH N)-544210.99 E)-1701224.73

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. Demership taken from public records Marshall County, West Virginia MAY 2013  
State Plane Coordinates & NAD 83 Lat/Long by differential submeter mapping grade GPS  
Dated by: E.A.M.

FILE #: NOB 002  
DRAWING #: 2216  
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



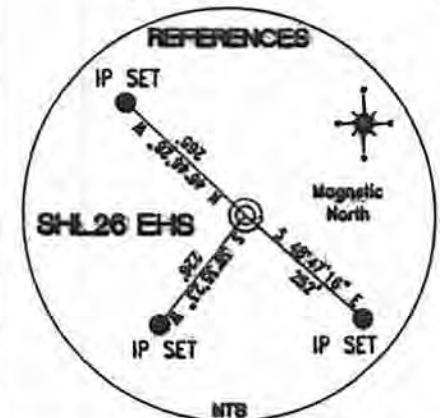
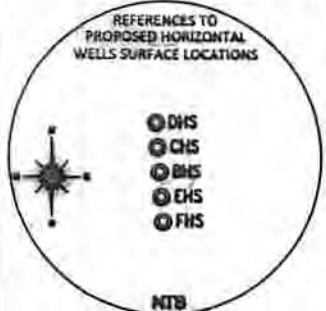
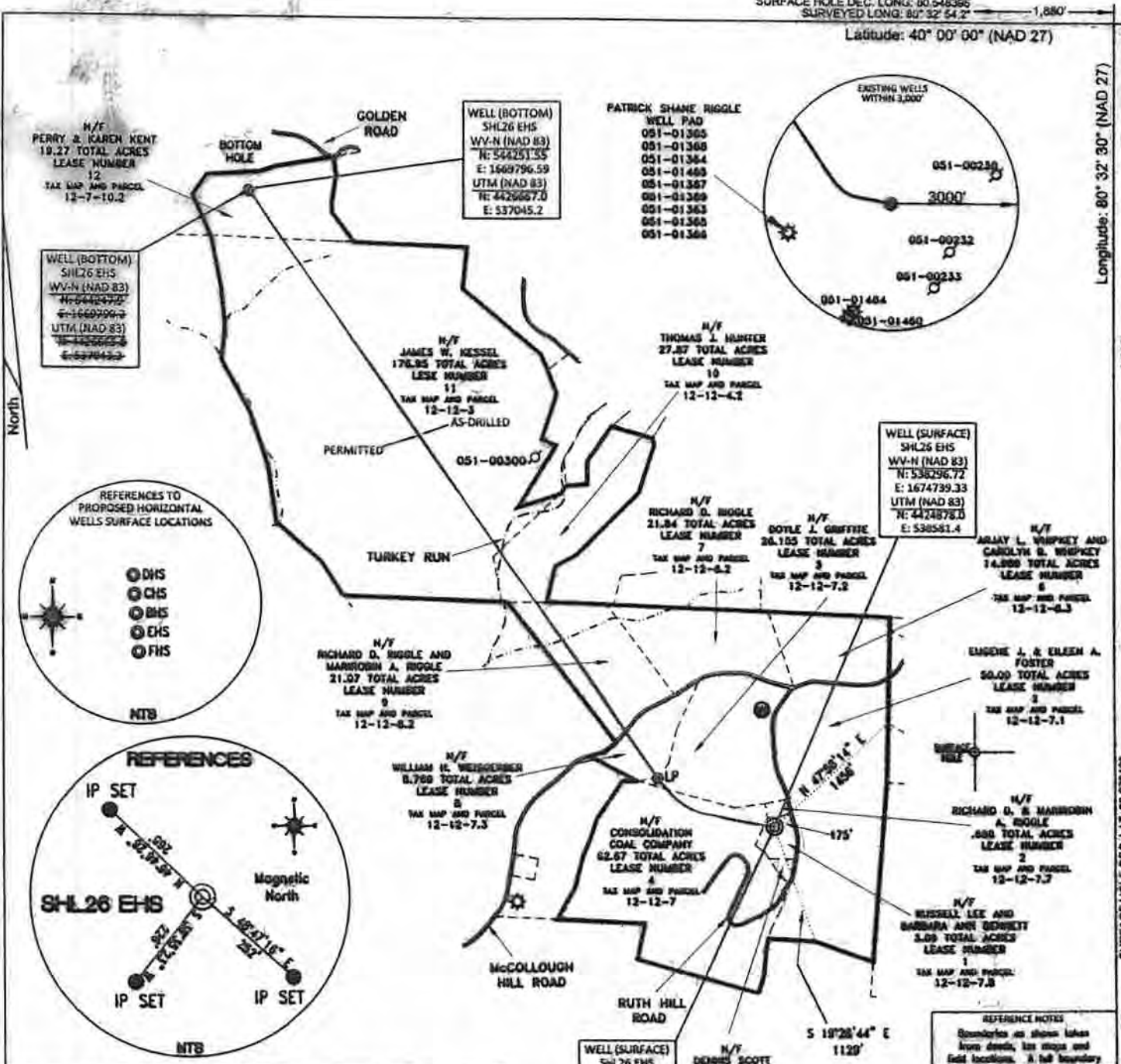
(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS WVDEP  
OFFICE OF OIL & GAS  
691 57TH STREET  
CHARLESTON, WV 25304

DATE: AUGUST 8, 2014  
OPERATOR'S WELL #: SHL26 EHS AS-DRILLED  
API WELL #: 47 STATE 51 COUNTY PERMIT 01658  
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: 326.574 +/- 09/19/2014  
LEASE NUMBERS: \_\_\_\_\_

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 ESTIMATED DEPTH: TVD: 6,698' TMD: 13,986'  
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





SURFACE HOLE LOCATION	LANDING POINT LOCATION	BOTTOM HOLE LOCATION
WV 17-800-83 N) 4424878.0 E) 520591.0	WV 17-800-83 N) 4425042.5 E) 520242.7	WV 17-800-83 N) 4426068.0 E) 527043.0
NO 27, WY 8080H N) 53090.47 E) 1706174.30	NO 27, WY 8080H N) 530710.64 E) 1706000.82	NO 27, WY 8080H N) 544240.09 E) 1701324.73

**REFERENCE NOTES**  
 Boundaries as shown takes 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 vector mapping grade GPS  
 Drafted by: EAM

FILE #: NOB 002  
 DRAWING #: 2216  
 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 WYDEP  
 OFFICE OF OIL & GAS  
 601 57TH STREET  
 CHARLESTON, WV 25304  
 Well Type:  Oil  Waste Disposal  Production  Deep  
 Gas  Liquid Injection  Storage  Shallow  
 WATERSHED: WHEELING CREEK  
 COUNTY/DISTRICT: MARSHALL / SAND HILL  
 SURFACE OWNER: RUSSELL LEE AND BARBARA ANN BENNETT ACREAGE: 3.09 +/-  
 OIL & GAS ROYALTY OWNER: JAMES O. WHIPKEY ET AL ACREAGE: 326.574 +/-  
 LEASE NUMBERS: \_\_\_\_\_  
 DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE   
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09/19/2014