

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

API 47-095-02114 County Tyler District Centerville
Quad Shirley Pad Name SHR 1 Field/Pool Name _____
Farm name Noble Energy, Inc Well Number SHR 1FHS
Operator (as registered with the OOG) Noble Energy, Inc
Address 333 Technology Drive Suite 110 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 4362824.01 Easting 513250.17
Landing Point of Curve Northing 436258.73 Easting 513019.93
Bottom Hole Northing 4360175.62 Easting 513959.36

Elevation (ft) 1013.55' 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 5/23/2013 Date drilling commenced 9/9/2013 Date drilling ceased 1/26/2014
Date completion activities began 4/9/2014 Date completion activities ceased 7/4/2014
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 321', 351', 599' Open mine(s) (Y/N) depths N
Salt water depth(s) ft 1501' Void(s) encountered (Y/N) depths N
Coal depth(s) ft _____ Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

RECEIVED
Office of Oil and Gas

Reviewed by: _____

SEP 15 2014

API 47-095 - 02114 Farm name Noble Energy, Inc Well number SHR 1FHS

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	24	20	120	N	J-55 133#		
Surface	17-1/2	13-3/8	725	N	J-55 54.5#		Y
Coal							
Intermediate 1	12-3/8	9/9/2013	2422	N	J-55 36#		Y
Intermediate 2							
Intermediate 3							
Production	8-3/4	5-1/2	15618	N	P-110 20#		Y
Tubing							
Packer type and depth set							

Comment Details _____

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	609	15.6	1.2	130	0	8
Coal							
Intermediate 1	Class A	930	15.6	1.19	197	0	8
Intermediate 2							
Intermediate 3							
Production	Class A	2624	14.8	1.41	691	0	8
Tubing							

Drillers TD (ft) 15622 Loggers TD (ft) _____
 Deepest formation penetrated Marcellus Plug back to (ft) _____
 Plug back procedure _____

Kick off depth (ft) 6030

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 Surface: 6 Centralizers, On every 3 joints of casing;
 Intermediate: 37 Centralizers, On every 3 joints of casing; Production: 264 Centralizers, On every 3rd joint from surface to Top of Curve, then a centralizer on 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 _____

API 47- 095 - 02114 Farm name Noble Energy, Inc Well number SHR 1FHS

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
		Please See Attached			

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						

Please insert additional pages as applicable.

API 47- 095 - 02114 Farm name Noble Energy, Inc Well number SHR 1FHS

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
<u>Marcellus</u>	<u>6558.3'</u> TVD	<u>15622'</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 _____ mcfpd Oil _____ bpd NGL _____ bpd Water _____ bpd GAS MEASURED BY
 Estimated Orifice Pilot

<u>LITHOLOGY/ FORMATION</u>	<u>TOP DEPTH IN FT NAME TVD</u>	<u>BOTTOM DEPTH IN FT TVD</u>	<u>TOP DEPTH IN FT MD</u>	<u>BOTTOM DEPTH IN FT MD</u>	<u>DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H₂S, ETC)</u>
	<u>0</u>		<u>0</u>		

Please See Attached

Please insert additional pages as applicable.

Drilling Contractor Precision Drilling Rig #542
 Address 10350 Richmond Ave City Houston State TX Zip 77042

Logging Company Diversified Well Logging
 Address 440 Pennsylvania 519 City Eighty Four State PA Zip 15330

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

Stimulating Company FTS International
 Address 6000 Town Center Boulevard, Suite 120 City Canonsburg State PA Zip 15317

Please insert additional pages as applicable.

Completed by Regina Logue Telephone 724-820-3559
 Signature Regina Logue Title Regulatory Analyst Date 9/11/14

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

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	4/9/2014
Job End Date:	5/23/2014
State:	West Virginia
County:	Tyler
API Number:	47-095-02114-00-00
Operator Name:	Noble Energy, Inc.
Well Name and Number:	SHR 1F
Longitude:	-80.84608900
Latitude:	39.41474400
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	6,558
Total Base Water Volume (gal):	15,290,888
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
Water	Operator	Carrier	Water	7732-18-5	100.00000	88.81245	
40/70 White	FTSI	proppant	Silica, Quartz	14808-60-7	100.00000	7.88538	
100 Mesh Sand	FTSI	proppant	Silica, Quartz	14808-60-7	100.00000	1.98195	
Hydrochloric Acid (HCl)	FTSI	Acid	Water	7732-18-5	92.50000	1.08620	
			Hydrogen Chloride	7647-01-0	7.50000	0.08807	
FRW-600	FTSI	Friction Reducer	Acrylamide Polymer	Trade Secret	75.00000	0.03981	
			Hydrotreated light distillate	54742-47-8	20.00000	0.01062	
			Ammonium acetate	531-61-8	5.00000	0.00265	
CS-500 SI	FTSI	Scale inhibitor	Water	7732-18-5	55.00000	0.02590	
			Acrylic Polymer	Proprietary	24.00000	0.01130	
			Ethylene glycol	107-21-1	10.00000	0.00471	
			Sodium chloride	7647-14-5	6.00000	0.00283	
			Sodium Polyacrylate	9003-04-7	5.00000	0.00235	

95.02114

CI-3240	FTSI	Biocide				
			Water	7732-18-5	53.00000	0.02030
			Dazomet (Tetrahydro-3, 5-dimethyl-2H-1, 3, 5-thiadiazine-2-thione.	533-74-4	24.00000	0.00919
			Sodium Hydroxide	1310-73-2	23.00000	0.00881
FE-100L	FTSI	Iron control				
			Citric acid	77-92-9	55.00000	0.00203
			Water	7732-18-5	45.00000	0.00166
CI-150	FTSI	Acid Corrosion Inhibitor				
			Isopropanol	67-63-0	24.70000	0.00051
			Organic amine resin salt	Proprietary	24.00000	0.00049
			Ethylene Glycol	107-21-1	20.00000	0.00041
			Alkylene Oxide Block Polymer	Proprietary	10.00000	0.00021
			Quaternary ammonium compound	Proprietary	5.00000	0.00010
			Dimethylformamide	68-12-2	5.00000	0.00010
			Water	7732-18-5	5.00000	0.00010
			Aromatic aldehyde	Proprietary	5.00000	0.00010
			Diethylene glycol	111-46-6	1.00000	0.00002
			Fatty Acid Salt	Proprietary	0.10000	0.00000
			Fatty Acid	Proprietary	0.10000	0.00000
			Aliphatic alcohol	Proprietary	0.10000	0.00000
NE-100	FTSI	Non-emulsifier				
			Water	7732-18-5	71.50000	0.00074
			2-Propanol	67-63-0	10.00000	0.00010
			2-Butoxyethanol	111-76-2	10.00000	0.00010
			Dodecylbenzenesulfonic acid	27176-87-0	5.00000	0.00005
			Sulfur Dioxide	7446-09-5	1.00000	0.00001
			Unsulphonated Matter	Proprietary	1.00000	0.00001
			Benzene, C10-16 Alkyl Derivatives	58648-87-3	1.00000	0.00001
			Sulfuric Acid	7664-93-9	0.50000	0.00001
HVG-1	FTSI	Water Gelling Agent				
			Guar Gum	9000-30-0	35.00000	0.00024
			Petroleum Distillate	64742-47-8	30.00000	0.00020
			Raffinates (Petroleum), Sorption Process	64741-85-1	25.00000	0.00017
			Clay	1302-78-9	3.00000	0.00002
			Clay	14808-60-7	2.00000	0.00001
			Surfactant	Proprietary	2.00000	0.00001
			Surfactant	24938-91-8	1.00000	0.00001
			Surfactant	154518-36-2	1.00000	0.00001
			Surfactant	9043-30-5	1.00000	0.00001
APB-1	FTSI	Gel breaker				

95-02114

95-02114

		Ammonium Persulfate	7727-54-0	100.0000d	0.00004
--	--	---------------------	-----------	-----------	---------

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.

* 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)

SHR 1F
47-095-02114

Formations	Top TVD	Base TVD	Top MD	Base MD	Fluid
Shale	0	1205	0	1205	
Shale and Sandstone	1205	1928	1205	1928	
Big Lime	1928	2056	1928	2056	
Big Injun	2056	2163	2056	2163	
Price	2163	2314	2163	3470	
Weir	2314	2418	2314	2418	
Shale	2418	2505	2418	2505	
Berea	2505	2513	2505	2513	
Shale	2513	2694	2513	2694	
Sandstone	2694	2796	2694	2796	
Shale	2796	2932	2796	2932	
Sandstone	2932	2950	2932	2950	
Shale	2950	3424	2950	3424	
Warren	3424	3470	3424	3470	
Shale and Sandstone	3470	3822	3470	3830	
Lower Huron	3822	4580	3830	4630	
Sandstone	4580	4618	4630	4670	
Shale	4618	4812	4670	4876	
Sandstone	4812	4868	4876	4936	
Shale	4868	4992	4936	5068	
Benson	4992	5036	5068	5114	
Shale	5036	5236	5114	5328	
Alexander	5236	5294	5328	5390	
Shale	5294	6235	5390	6394	
Cashaqua	6235	6346	6394	6536	
Middlesex	6346	6380	6536	6586	
West River	6380	6448	6586	6706	
Burkett	6448	6482	6706	6783	
Tully	6482	6485	6783	6790	
Hamilton	6485	6502	6790	6830	
Marcellus	6502	6566	6830	not encountered	Gas
Onondaga	6566	6573	not encountered	not encountered	
Huntersville	6573	not encountered	not encountered	not encountered	

PERFORMANCE RECORD

API: 47-095-02114

Farm name: Noble Energy, Inc

Well Name: SHR 1F-HS

Stage No.	Perf Date	Top Perf	Bottom Perf	# of Perfs	Formation
TOE SLEEVE	3/26/2014	15490	15492	0	Marcellus
1 A	4/8/2014	15418	15470	40	Marcellus
1 B	4/9/2014	15338	15381	32	Marcellus
2	4/9/2014	15195	15313	40	Marcellus
3	4/10/2014	15045	15175	40	Marcellus
4	4/11/2014	14895	15025	40	Marcellus
5	4/11/2014	14745	14875	40	Marcellus
6	4/12/2014	14595	14725	40	Marcellus
7	4/12/2014	14445	14575	40	Marcellus
8	4/13/2014	14295	14425	40	Marcellus
9	4/13/2014	14145	14275	40	Marcellus
10	4/14/2014	13995	14125	40	Marcellus
11	4/15/2014	13845	13975	40	Marcellus
12	4/16/2014	13695	13825	40	Marcellus
13	4/16/2014	13545	13675	40	Marcellus
14	4/16/2014	13395	13525	40	Marcellus
15	4/17/2014	13245	13375	40	Marcellus
16	4/18/2014	13095	13225	40	Marcellus
17	4/18/2014	12945	13075	40	Marcellus
18	4/18/2014	12795	12925	40	Marcellus
19	4/19/2014	12645	12775	40	Marcellus
20	4/20/2014	12495	12625	40	Marcellus
21	4/20/2014	12345	12475	40	Marcellus
22	4/21/2014	12195	12325	40	Marcellus
23	4/23/2014	12045	12175	40	Marcellus
24	4/23/2014	11895	12025	40	Marcellus
25	4/23/2014	11745	11875	40	Marcellus
26	4/24/2014	11595	11725	40	Marcellus
27	4/24/2014	11445	11575	40	Marcellus
28	4/24/2014	11295	11425	40	Marcellus
29	4/24/2014	11145	11275	40	Marcellus
30	4/25/2014	10995	11125	40	Marcellus
31	4/25/2014	10845	10975	40	Marcellus
32	5/10/2014	10695	10825	40	Marcellus
33	5/11/2014	10545	10675	40	Marcellus
34	5/11/2014	10395	10525	40	Marcellus
35	5/11/2014	10245	10375	40	Marcellus
36	5/12/2014	10095	10225	40	Marcellus

10/03/2014

STIMULATION INFORMATION PER STAGE

API: 47-095-02114

Farm name: Noble Energy, Inc

Well Name: SHR 1F-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)
1 Inj Test	4/8/2014	28.0				0	1,504	
1	4/9/2014	85.4	8685	5706	4969	246200	7,256	
2	4/10/2014	79.3	8760	5767	4427	250300	7,528	
3	4/11/2014	82.2	8677	5914	5390	250300	6,588	
4	4/11/2014	88.7	8823	5756	5168	247822	6,868	
5	4/12/2014	83.9	7934	5307	6195	247500	6,571	
6	4/12/2014	90.0	8603	5598	4920	246300	6,718	
7	4/13/2014	88.5	8362	5528	5413	251217	6,622	
8	4/13/2014	91.2	8458	5545	4821	249500	6,529	
9	4/14/2014	88.2	8131	5483	4774	249800	6,328	
10	4/15/2014	89.7	8058	5305	4066	253900	6,856	
11	4/15/2014	87.8	8255	5717	4712	246200	6,363	
12	4/16/2014	81.4	8101	5453	4883	246300	6,368	
13	4/16/2014	85.6	8271	5813	5630	248732	6,445	
14	4/17/2014	87.7	8509	6012	4493	248828	6,693	
15	4/17/2014	86.9	8512	5766	4747	248600	6,408	
16	4/18/2014	88.9	8223	5999	5095	258307	6,382	
17	4/18/2014	90.1	8318	5285	5359	252760	6,283	
18	4/19/2014	89.2	8019	5473	5269	245882	6,376	
19	4/20/2014	89.7	7696	5418	5295	249361	6,235	
20	4/20/2014	89.6	7957	5695	4352	248362	6,379	
21	4/21/2014	90.5	7831	5450	4557	248820	6,229	
22	4/21/2014	67.1	8710	6613	4307	236516	10,736	
23 Inj Test	4/21/2014					0	734	
23 Inj Test	4/22/2014					0	417	
23	4/23/2014	88.7	7783	5365	4831	257500	7,536	
24	4/23/2014	89.7	7630	5728	4920	249300	5,961	
25	4/23/2014	89.3	7286	5140	3809	251033	6,144	
26	4/24/2014	90.1	7463	5989	4765	247900	6,058	
27	4/24/2014	89.2	7617	5645	4952	247700	6,012	
28	4/24/2014	88.9	7924	5775	4512	245700	5,965	
29	4/25/2014	89.3	7644	5752	4753	249029	5,963	
30	4/25/2014	90.8	7836	5689	4928	249369	7,284	
31	4/25/2014	88.6	7760	5467	5300	247800	5,791	
32 + 2 Inj Test	5/10/2014	90	7668	5387	4758	249500	8,068	
33	5/11/2014	90.7	7499	5998	4897	249501	5,863	
34	5/11/2014	88.1	7116	5720	4515	249600	6,899	
35	5/12/2014	89.2	7251	6075	4539	245100	5,774	

10/03/2014

95-02114

STIMULATION INFORMATION PER STAGE

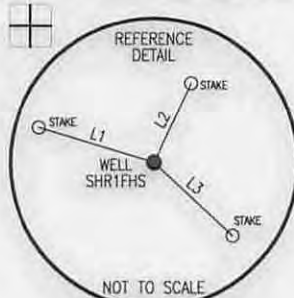
36	5/12/2014	89.2	7193	5576	4402	243400	6,319
37	5/13/2014	88	7102	5470	4475	245800	5,790
38	5/13/2014	89.2	6861	5862	4764	249100	5,940
39	5/13/2014	87.7	7094	5778	4691	245900	5,718
40	5/14/2014	91.1	7048	6704	4707	246400	5,354
41	5/15/2014	88.2	7198	6676	4823	246300	5,831
42	5/16/2014	90.2	6896	5445	4394	250800	5,711
43	5/16/2014	84.7	7165	5901	4815	247139	6,079
44	5/16/2014	85.7	7086	5421	4680	251500	5,661
45	5/18/2014	91	7385	5540	4734	247448	5,685
46	5/18/2014	91	6928	5661	5177	248336	5,531
47	5/19/2014	88.6	7322	5989	5008	248053	5,754
48	5/20/2014	82.7	7420	5617	4643	250000	5,811
49	5/20/2014	87	7091	6174	5228	248300	5,506
50	5/20/2014	74.3	7723	5989	4499	248000	9,193
51	5/21/2014	89.5	6990	5940	5121	250500	5,551
52	5/21/2014	89.1	6931	6527	4942	248900	5,542
53	5/22/2014	90.7	6889	6222	5322	251300	6,027
54	5/22/2014	88.8	7264	5978	5978	246800	5,448
55	5/22/2014	88.8	7246	6478	4740	244100	5,629
56	5/22/2014	90.7	6667	5999	4548	252100	5,739
57	5/23/2014	89.4	6664	5827	4739	247800	5,515

10/03/2014

Well is located on topo map 700' feet south of Latitude: 39° 25' 00"

SURFACE HOLE LOCATION (SHL)
 UTM 17-NAD83
 N:4362824.01
 E:513250.17
 NAD27, WV NORTH
 N:336021.812
 E:1619654.644

SURFACE HOLE LOCATION (SHL)
 UTM 17-NAD83
 N:4362824.007
 E:513250.168
 NAD27, WV NORTH
 N:336021.512
 E:1619654.644



Well is located on topo map 3,604' feet west of Longitude: 80° 50' 00"

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.
3. Proposed well is greater than 100' from perennial stream, wetland, pond, reservoir or lake.
4. There are no native trout streams within 300' of proposed well.
5. Proposed well is greater than 1000' from surface/groundwater intake or public water supply.
6. 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.

TRACT	LESSOR
1	DAVID L. MAPLE, ET AL
2	HARLAN HEADLY, ET AL
3	PETER D. JARRETT, ET AL
4	EDWARD UNDERWOOD, ET AL
5	GLEN D. CURRY
6	LARESSA D. FARRELL, ET AL
7	AMP FUND II, LP, ET AL
8	ALLEN SMITH, ET AL

LEGEND

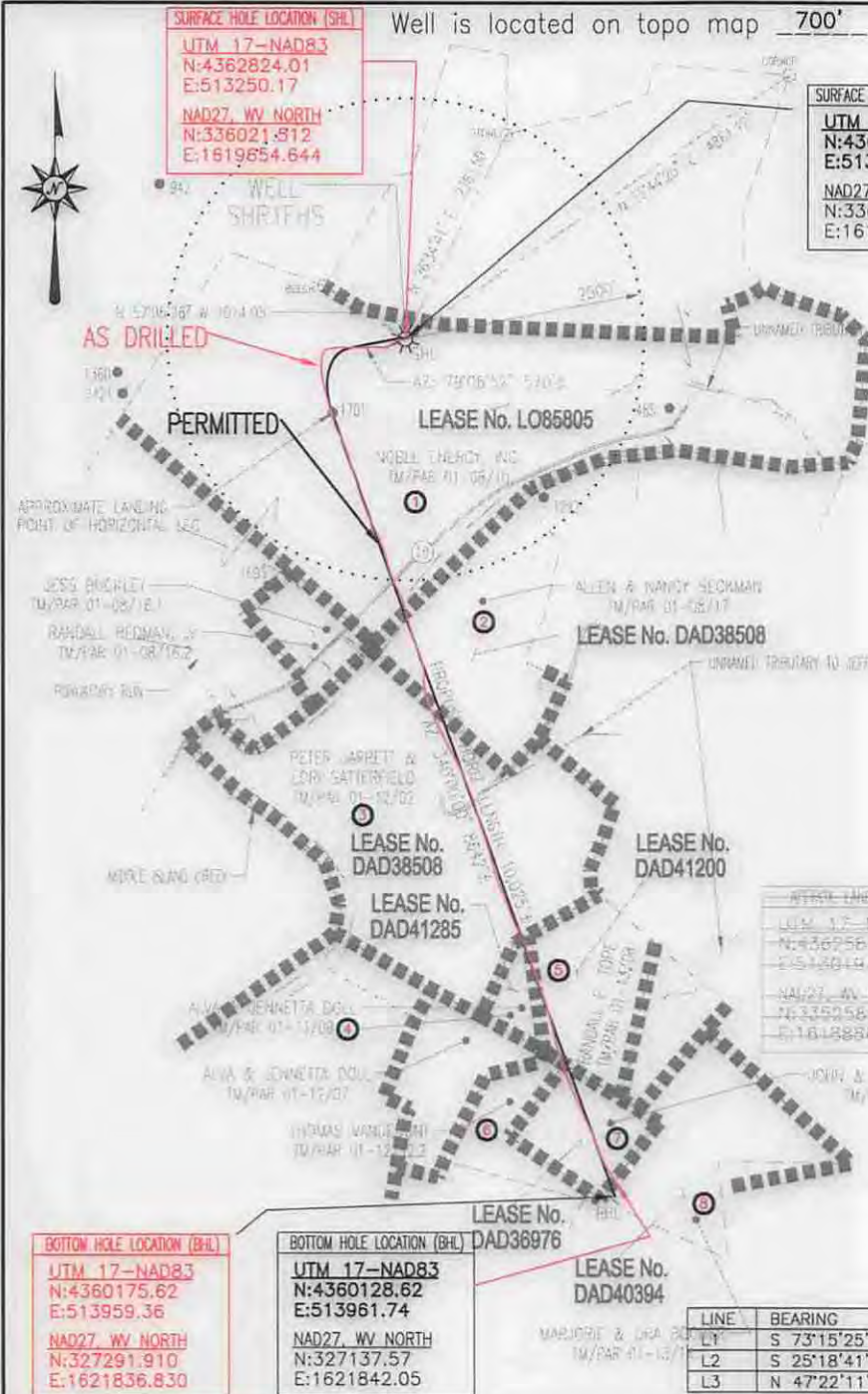
- TOPO MAP POINT
- PROPOSED GAS WELL
- ALL ARE POINTS UNLESS OTHERWISE NOTED.
- WATER SOURCE
- SURFACE BOUNDARY
- LEASE BOUNDARY
- PARCEL LINES
- WELL REFERENCE
- PROPOSED HORIZONTAL WELL
- ROAD
- STREAM CENTER LINE
- AS DRILLED

WELLS WITHIN 3000'

- EXISTING WELLS
- PLUGGED WELLS

APPROXIMATE POINT
 UTM 17-NAD83
 N:4362567.75
 E:513249.93
 NAD27, WV NORTH
 N:335958.84
 E:1618886.17

LINE	BEARING	DISTANCE
L1	S 73°15'25" E	251.12'
L2	S 25°18'41" W	181.75'
L3	N 47°22'11" W	223.12'



FILE #: SHR1FHS-AS DRILLED
 DRAWING #: SHR1FHS-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:

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: AUGUST 26, 2014
 OPERATOR'S WELL #: SHR1FHS-AS DRILLED
 API WELL #: 47 95 02114H6A
 STATE COUNTY PERMIT

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

WATERSHED: MIDDLE ISLAND CREEK ELEVATION: 1016.74'
 COUNTY/DISTRICT: TYLER COUNTY / CENTERVILLE DISTRICT QUADRANGLE: SHIRLEY, WV 7.5'
 SURFACE OWNER: NOBLE ENERGY, INC. ACREAGE: 580.207±
 OIL & GAS ROYALTY OWNER: SEE ATTACHED WW-6A1 ACREAGE: 948.797±

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: 6,621'± TMD: 15,907'±
 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

10/03/2014