

PM JK

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

API 47 - 051 - 01472W County Marshall District Sand Hill  
Quad Majorsville Pad Name SHL 6 Pad Field/Pool Name \_\_\_\_\_  
Farm name Dague, Charles W. & Elvira H. Well Number SHL 6JHS  
Operator (as registered with the OOG) CNX Gas Company LLC  
Address 200 Evergreen Drive City Waynesburg State PA Zip 15370

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey  
Top hole Northing 4422974.14 Easting 536274.26  
Landing Point of Curve Northing 4422920.90 Easting 536480.29  
Bottom Hole Northing 4422252.50 Easting 537001.62

Elevation (ft) 834.05 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)  
\_\_\_\_\_  
\_\_\_\_\_

Date permit issued 7/5/2011 Date drilling commenced \_\_\_\_\_ Date drilling ceased \_\_\_\_\_  
Date completion activities began 7/17/2014 Date completion activities ceased 7/23/2014  
Verbal plugging (Y/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 200' Open mine(s) (Y/N) depths N  
Salt water depth(s) ft None Void(s) encountered (Y/N) depths N  
Coal depth(s) ft 314' - 320' Cavern(s) encountered (Y/N) depths N

Is coal being mined in area (Y/N) Y  
Office of Oil and Gas Office of Oil and Gas Reviewed by: \_\_\_\_\_  
SEP 18 2014 *Corrected* 9/23/14

API 47- 051 - 01472W Farm name Dague, Charles W. & Elvira H. Well number SHL 6JHS

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							
Surface							
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production							
Tubing							
Packer type and depth set							

Comment Details \_\_\_\_\_

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							
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production							
Tubing							

Drillers TD (ft) \_\_\_\_\_ Loggers TD (ft) \_\_\_\_\_  
 Deepest formation penetrated \_\_\_\_\_ Plug back to (ft) \_\_\_\_\_  
 Plug back procedure \_\_\_\_\_

Kick off depth (ft) \_\_\_\_\_

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 \_\_\_\_\_

RECEIVED  
Office of Oil and Gas

WAS WELL COMPLETED AS SHOT HOLE  Yes  No DETAILS \_\_\_\_\_

SEP 18 2014

WAS WELL COMPLETED OPEN HOLE?  Yes  No DETAILS \_\_\_\_\_

WV Department of  
Environmental Protection

WERE TRACERS USED  Yes  No TYPE OF TRACER(S) USED \_\_\_\_\_

API 47- 051 - 01472W Farm name Dague, Charles W. & Elvira H. Well number SHL 6JHS

PERFORATION RECORD

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

Please See Perforation Record 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 Stimulation Page Attached

RECEIVED  
Office of Oil and Gas  
SEP 18 2014

Please insert additional pages as applicable.

WV Department of  
Environmental Protection

PERFORATION RECORD

API: 47-051-01472 W

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

Dague, Charles W. &  
Elvira H

Well Name: SHL-6J-HS

Stage No.	Perf Date	Top Perf	Bottom Perf	# of Perfs	Formation
1	7/11/2014	9083	9,190	80	Marcellus
2	7/11/2014	8933	9,040	70	Marcellus
3	7/11/2014	8771	8,875	70	Marcellus
4	7/11/2014	8621	8,725	80	Marcellus
5	7/11/2014	8473	8,575	60	Marcellus
6	7/11/2014	8323	8,425	60	Marcellus
7	7/11/2014	8173	8,275	50	Marcellus
8	7/11/2014	8023	8,127	50	Marcellus
9	7/11/2014	7873	7,975	40	Marcellus
10	7/11/2014	7723	7,825	40	Marcellus
11	7/12/2014	7573	7,675	30	Marcellus
12	7/12/2014	7423	7,525	30	Marcellus
13	7/12/2014	7273	7,375	20	Marcellus
14	7/12/2014	7123	7,225	20	Marcellus
15	7/12/2014	6973	7,075	20	Marcellus
16	7/12/2014	6824	6,925	10	Marcellus
17	7/12/2014	6674	6,775	10	Marcellus
18	7/12/2014	6524	6,625	10	Marcellus
19	7/13/2014	6374	6,475	10	Marcellus

STIMULATION INFORMATION PER STAGE

API: 47-051-01472 <sup>W</sup> Farm name: Dague, Charles W. & Elvira H Well Name: SHL-6J-H

Stage No.	Stim Date	Avg Rate (bpm)	ATP (psi)	Max BD Pressure	ISIP (psi)	Proppant (lbs)	Water (gals)	Water (BBLS)	Amount of N <sup>2</sup> / other
1	7/17/2014	85.2	6447	4775		226,222		6564.19	
2	7/17/2014	87.4	6624	6356		220,010		6361.44	
3	7/17/2014	84.1	6536	5737	4959	226,304		6422.83	
4	7/17/2014	84.7	6580	4016		225,741		6277.45	
5	7/17/2014	87.0	6832	6350	6053	225,750		6338.45	
6	7/18/2014	85.5	7602	5263		225,906		6408.12	
7	7/18/2014	72.9	7653	6997		226,876		6375.16	
8	7/18/2014	69.2	7401	8369	6627	222,120		8465.57	
9	7/18/2014	73.5	7997	5900		224,913		7258.63	
10	7/18/2014	42.8	8606	8865		225,674		10227.57	
11	7/18/2014	53.3	8395	7620	6611	225,369		7006.81	
12	7/19/2014	56.6	8264	6480		224,991		7146.99	
13	7/19/2014	23.9	8880	9292	5396	12,399		1882.54	
13B	7/21/2014	89.4	6812	4104		209,080		6206.63	
14	7/21/2014	87.6	7692	6348		224,849		6360.49	
15	7/21/2014	67.8	7834	7498	5455	227,710		7285.08	
16	7/21/2014	67.7	7891	7880		213,020		6746.32	
17	7/21/2014	51.5	8251	8422	7365	224,648		6645.55	
18	7/22/2014	77.7	7764	4546		227,838		6276.22	
19	7/22/2014	27.4	8568	7596	6636	12,768		3067.81	
19B	7/23/2014	56.7	8672	5244	6702	44,448		4411.78	

API 47- 051 - 01472 W Farm name Dague, Charles W. & Elvira H. Well number SHL 6JHS

PRODUCING FORMATION(S)	DEPTHS		
<u>Marcellus</u>	<u>6229.47</u>	<u>TVD</u>	<u>9474</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 986 mcfpd Oil 0 bpd NGL 49 bpd Water 430 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 <sub>2</sub> S, ETC)
	DEPTH IN FT NAME TVD	DEPTH IN FT TVD	DEPTH IN FT MD	DEPTH IN FT MD	
	<u>0</u>		<u>0</u>		

Please insert additional pages as applicable.

Drilling Contractor \_\_\_\_\_  
Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Logging Company \_\_\_\_\_  
Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Cementing Company \_\_\_\_\_  
Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

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 Regina A. Logue Telephone 724-820-3559  
Signature Regina A. Logue Title Regulatory Analyst Date 9/15/14

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

# Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	7/17/2014
Job End Date:	7/23/2014
State:	West Virginia
County:	Marshall
API Number:	47-051-01472-00-00
Operator Name:	Noble Energy, Inc.
Well Name and Number:	SHL6J-HS
Longitude:	-80.57551700
Latitude:	39.95605300
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	6,230
Total Base Water Volume (gal):	5,637,339
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	90.81300	Density = 8.340
SAND - PREMIUM WHITE	Halliburton	Proppant					
			Crystalline silica, quartz	14808-60-7	100.00000	5.92796	
SSA-2	Halliburton	Proppant					
			Crystalline silica, quartz	14808-60-7	100.00000	2.04512	
HYDROCHLORIC ACID 5-10%	Halliburton	Solvent					
			Hydrochloric acid	7647-01-0	10.00000	0.07353	
HYDROCHLORIC ACID 5-10%	Halliburton	Solvent					
			Hydrochloric acid	7647-01-0	10.00000	0.03004	
FR-66	Halliburton	Friction Reducer					
			Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.02351	
Biovert NWB	Halliburton	Viscosifier					
			Poly lactide resin	Confidential	100.00000	0.01182	Denise Tuck, Halliburton 3000 N. Sam Houston Pkwy E., Houston, TX 77032 281-871-6226

FE-1A ACIDIZING COMPOSITION	Halliburton	Additive					
			Acetic anhydride	108-24-7	100.00000	0.00364	
			Acetic acid	64-19-7	60.00000	0.00219	
BE-9	Halliburton	Biocide					
			Tributyl tetradecyl phosphonium chloride	81741-28-8	10.00000	0.00418	
HYDROCHLORIC ACID 10-30%	Halliburton	Solvent					
			Hydrochloric acid	7647-01-0	30.00000	0.00415	
LP-65	Halliburton	Scale Inhibitor					
			Ammonium chloride	12125-02-9	10.00000	0.00253	
LGC-36 UC	Halliburton	Liquid Gel Concentrate					
			Guar gum	9000-30-0	60.00000	0.00094	
			Naphtha, hydrotreated heavy	64742-48-9	60.00000	0.00094	
LoSurf-300D	Halliburton	Non-ionic Surfactant					
			Ethanol	64-17-5	60.00000	0.00073	
			Heavy aromatic petroleum naphtha	64742-94-5	30.00000	0.00037	
			Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy-, branched	127087-87-0	5.00000	0.00006	
			Naphthalene	91-20-3	5.00000	0.00006	
			1,2,4 Trimethylbenzene	95-63-6	1.00000	0.00001	
HAI-OS ACID INHIBITOR	Halliburton	Corrosion Inhibitor					
			Methanol	67-56-1	60.00000	0.00036	
			Propargyl alcohol	107-19-7	10.00000	0.00006	
SP BREAKER	Halliburton	Breaker					
			Sodium persulfate	7775-27-1	100.00000	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.							
		Other Ingredient(s)					
			Water	7732-18-5		1.15356	
		Other Ingredient(s)					
			Polyacrylamide copolymer	Confidential		0.02351	
		Other Ingredient(s)					
			Organic phosphonate	Confidential		0.01515	
		Other Ingredient(s)					
			Sodium chloride	7647-14-5		0.00392	
		Other Ingredient(s)					
			Alcohols, C12-16, ethoxylated	68551-12-2		0.00392	
		Other Ingredient(s)					
			Ammonium chloride	12125-02-9		0.00392	
		Other Ingredient(s)					
			Fatty acid tall oil amide	Confidential		0.00392	
		Other Ingredient(s)					
			Sorbitan monooleate polyoxyethylene derivative	9005-65-6		0.00078	

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	Other Ingredient(s)					
		Sorbitan, mono-9-octadecenoate, (Z)	1338-43-8		0.00078	
	Other Ingredient(s)					
		Oxyalkylated phenolic resin	Confidential		0.00037	
	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		0.00018	
	Other Ingredient(s)					
		Alcohols, C14-C15, ethoxylated	68951-67-7		0.00018	
	Other Ingredient(s)					
		Fatty acids, tall oil	Confidential		0.00018	
	Other Ingredient(s)					
		Oxyalkylated phenolic resin	Confidential		0.00012	
	Other Ingredient(s)					
		Quaternary ammonium compounds, bis(hydrogenated tallow alkyl) dimethyl, salts with bentonite	68953-58-2		0.00008	
	Other Ingredient(s)					
		Olefins	Confidential		0.00003	
	Other Ingredient(s)					
		Olefins	Confidential		0.00003	
	Other Ingredient(s)					
		Fatty alcohol polyglycol ether surfactant	9043-30-5		0.00002	
	Other Ingredient(s)					
		Olefins	Confidential		0.00001	
	Other Ingredient(s)					
		Olefins	Confidential		0.00001	
	Other Ingredient(s)					
		Crystalline silica, quartz	14808-60-7		0.00000	
	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(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)



## Noble Energy SHL-6J-HS ST01 Gyro+MWD 0' MD to 9474' MD Survey Report (Def Survey)



**Report Date:** June 29, 2012 - 10:56 AM  
**Client:** Noble Energy  
**Field:** WV Marshall County (NAD 27)  
**Structure / Slot:** CNX/Noble Energy SHL-6 Pad / SHL-5J-HS  
**Well:** SHL-6J-HS  
**Borehole:** ST01  
**UWI / API#:** Unknown / Unknown  
**Survey Name:** Noble Energy SHL-6J-HS ST01 Gyro+MWD 0' MD to 9474' MD  
**Survey Date:** February 15, 2012  
**Tort / AHD / DDI / ERD Ratio:** 192.350' / 3840.317 ft / 6.050 / 0.616  
**Coordinate Reference System:** NAD27 West Virginia State Plane, Northern Zone, US Feet  
**Location Lat / Long:** N 39° 57' 21.78849", W 80° 34' 31.86035"  
**Location Grid N/E Y/X:** N 532139.053 ftUS, E 1698499.068 ftUS  
**CRS Grid Convergence Angle:** -0.6859 °  
**Grid Scale Factor:** 0.9999573

**Survey / DLS Computation:** Minimum Curvature / Lubinski  
**Vertical Section Azimuth:** 135.733 ° (Grid North)  
**Vertical Section Origin:** 0.000 ft, 0.000 ft  
**TVD Reference Datum:** KB  
**TVD Reference Elevation:** 854.020 ft above MSL  
**Seabed / Ground Elevation:** 831.020 ft above MSL  
**Magnetic Declination:** -8.738 °  
**Total Gravity Field Strength:** 1000.0880 mgn (9.8 based)  
**Total Magnetic Field Strength:** 52862.158 nT  
**Magnetic Dip Angle:** 67.533 °  
**Declination Date:** February 15, 2012  
**Magnetic Declination Model:** BGGM 2011  
**North Reference:** Grid North  
**Grid Convergence Used:** -0.6859 °  
**Total Corr Mag North→Grid North:** -8.0519 °  
**Local Coord Referenced To:** Well Head

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Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	BR (°/100ft)	TR (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
Projected-Up	0.00	0.00	0.00	0.00	-854.02	0.00	0.00	0.00	N/A	N/A	0.00	532139.05	1698499.07	N 39 57 21.79 W	80 34 31.86
SHL	15.00	0.00	0.00	15.00	-839.02	0.00	0.00	0.00	0.00	0.00	0.00	532139.05	1698499.07	N 39 57 21.79 W	80 34 31.86
	115.00	1.47	27.92	114.99	-739.03	-0.39	1.13	0.60	1.47	1.47	0.00	532140.19	1698499.67	N 39 57 21.80 W	80 34 31.85
	215.00	1.82	49.44	214.95	-639.07	-0.68	3.30	2.41	0.70	0.35	21.52	532142.35	1698501.48	N 39 57 21.82 W	80 34 31.83
	315.00	1.25	69.16	314.91	-539.11	-0.15	4.72	4.63	0.77	-0.57	19.72	532143.77	1698503.70	N 39 57 21.84 W	80 34 31.80
	415.00	0.44	89.01	414.90	-439.12	0.55	5.11	6.04	0.85	-0.81	19.85	532144.17	1698505.10	N 39 57 21.84 W	80 34 31.78
	515.00	0.30	40.58	514.90	-339.12	0.79	5.32	6.59	0.33	-0.14	-48.43	532144.37	1698505.66	N 39 57 21.84 W	80 34 31.78
	615.00	0.65	47.34	614.90	-239.12	0.78	5.90	7.18	0.35	0.35	6.76	532144.96	1698506.25	N 39 57 21.85 W	80 34 31.77
	715.00	1.81	48.97	714.87	-139.15	0.89	7.32	8.79	1.16	1.16	1.63	532146.38	1698507.85	N 39 57 21.86 W	80 34 31.75
	815.00	1.85	58.56	814.82	-39.20	1.34	9.20	11.36	0.31	0.04	9.59	532148.26	1698510.42	N 39 57 21.88 W	80 34 31.72
	915.00	2.00	40.58	914.76	60.74	1.54	11.37	13.87	0.62	0.15	-17.98	532150.42	1698512.94	N 39 57 21.90 W	80 34 31.68
	1015.00	1.49	28.14	1014.72	160.70	0.99	13.84	15.62	0.63	-0.51	-12.44	532152.89	1698514.68	N 39 57 21.93 W	80 34 31.66
	1115.00	1.37	16.94	1114.69	260.67	0.02	16.13	16.58	0.30	-0.12	-11.20	532155.18	1698515.64	N 39 57 21.95 W	80 34 31.65
	1215.00	1.75	21.40	1214.65	360.63	-1.19	18.70	17.48	0.40	0.38	4.46	532157.75	1698516.55	N 39 57 21.98 W	80 34 31.64
	1315.00	1.12	22.63	1314.62	460.60	-2.20	21.02	18.42	0.63	-0.63	1.23	532160.07	1698517.48	N 39 57 22.00 W	80 34 31.63
	1415.00	1.09	27.52	1414.60	560.58	-2.88	22.77	19.23	0.10	-0.03	-4.89	532161.82	1698518.30	N 39 57 22.02 W	80 34 31.62
	1515.00	1.37	22.94	1514.58	660.56	-3.64	24.71	20.14	0.30	0.28	-4.58	532163.76	1698519.20	N 39 57 22.04 W	80 34 31.61
	1615.00	1.17	16.66	1614.55	760.53	-4.60	26.79	20.90	0.24	-0.20	-6.28	532165.84	1698519.95	N 39 57 22.06 W	80 34 31.60
	1715.00	1.20	19.25	1714.53	860.51	-5.56	28.76	21.53	0.06	0.03	2.59	532167.81	1698520.60	N 39 57 22.08 W	80 34 31.59
	1815.00	1.43	8.66	1814.50	960.48	-6.78	30.98	22.07	0.33	0.23	-10.59	532170.03	1698521.13	N 39 57 22.10 W	80 34 31.58
	1915.00	1.32	351.76	1914.48	1060.46	-8.46	33.35	22.09	0.42	-0.11	-16.90	532172.40	1698521.16	N 39 57 22.12 W	80 34 31.58
	2015.00	1.29	330.24	2014.45	1160.43	-10.49	35.47	21.37	0.49	-0.03	-21.52	532174.52	1698520.43	N 39 57 22.14 W	80 34 31.59
	2115.00	1.78	332.86	2114.41	1260.39	-13.06	37.83	20.10	0.49	0.49	2.62	532176.88	1698519.17	N 39 57 22.16 W	80 34 31.61
	2215.00	1.25	317.34	2214.38	1360.36	-15.63	40.01	18.65	0.67	-0.53	-15.52	532179.06	1698517.72	N 39 57 22.19 W	80 34 31.63
	2315.00	1.59	306.33	2314.35	1460.33	-18.09	41.64	16.79	0.43	0.34	-11.01	532180.69	1698515.66	N 39 57 22.20 W	80 34 31.65
	2415.00	1.94	299.38	2414.30	1560.28	-21.09	43.29	14.20	0.41	0.35	-6.95	532182.34	1698513.27	N 39 57 22.22 W	80 34 31.68
	2515.00	1.82	311.67	2514.25	1660.23	-24.29	45.18	11.54	0.42	-0.12	12.29	532184.23	1698510.61	N 39 57 22.24 W	80 34 31.72
	2615.00	2.19	305.48	2614.19	1760.17	-27.76	47.34	8.80	0.43	0.37	-6.19	532186.39	1698507.87	N 39 57 22.26 W	80 34 31.75
	2715.00	2.32	315.85	2714.11	1860.09	-31.66	49.90	5.83	0.43	0.13	10.37	532188.95	1698504.90	N 39 57 22.28 W	80 34 31.79
	2815.00	2.02	325.12	2814.04	1960.02	-35.43	52.80	3.41	0.46	-0.30	9.27	532191.85	1698502.48	N 39 57 22.31 W	80 34 31.82
	2915.00	2.33	336.31	2913.97	2059.95	-39.07	56.11	1.59	0.52	0.31	11.19	532195.16	1698500.66	N 39 57 22.34 W	80 34 31.85
	3015.00	2.47	326.87	3013.88	2159.86	-43.09	59.77	-0.40	0.42	0.14	-9.44	532198.82	1698498.66	N 39 57 22.38 W	80 34 31.87
	3115.00	2.06	334.61	3113.80	2259.78	-46.90	63.20	-2.35	0.51	-0.41	7.74	532202.25	1698496.72	N 39 57 22.41 W	80 34 31.90
	3215.00	1.43	323.07	3213.75	2359.73	-49.84	65.82	-3.87	0.72	-0.63	-11.54	532204.87	1698495.20	N 39 57 22.44 W	80 34 31.92
	3315.00	1.66	330.09	3313.72	2459.70	-52.48	68.08	-5.34	0.30	0.23	7.02	532207.13	1698493.72	N 39 57 22.46 W	80 34 31.94
	3415.00	0.91	324.43	3413.69	2559.67	-54.67	69.98	-6.53	0.76	-0.75	-5.66	532209.03	1698492.54	N 39 57 22.48 W	80 34 31.95

51.01472 W

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	TVSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	BR (ft/100ft)	TR (ft/100ft)	Northing (ftUS)	Eastings (ftUS)	Latitude (N/S °'")	Longitude (E/W °'")
	3515.00	0.92	329.20	3513.66	2659.66	-56.23	71.31	-7.40	0.08	0.01	4.77	532210.36	1698491.67	N 39 57 22.48 W	80 34 31.97
	3815.00	1.40	321.56	2759.64	2759.64	-56.23	72.96	-8.50	0.50	0.48	-7.64	532212.01	1698490.50	N 39 57 22.51 W	80 34 31.98
	3715.00	0.82	346.20	3713.64	2659.62	-60.06	74.61	-9.50	0.74	0.58	-2.64	532213.68	1698489.57	N 39 57 22.52 W	80 34 31.99
	3815.00	0.81	350.69	3813.63	2959.61	-61.26	76.00	-8.78	0.06	-0.01	4.49	532215.05	1698488.28	N 39 57 22.54 W	80 34 32.00
	3915.00	1.26	6.68	3913.61	3059.59	-62.53	77.79	-9.77	0.53	0.45	15.99	532216.94	1698488.29	N 39 57 22.56 W	80 34 32.00
	4015.00	1.09	13.47	4013.58	3159.57	-63.73	79.61	-9.42	0.22	-0.17	6.79	532218.96	1698486.84	N 39 57 22.58 W	80 34 31.96
	4115.00	1.02	12.01	4113.56	3259.56	-64.73	81.61	-9.02	0.07	-0.07	-1.46	532220.65	1698490.05	N 39 57 22.59 W	80 34 31.99
	4215.00	1.14	11.20	4213.56	3359.54	-65.79	83.45	-8.94	0.12	0.12	-0.81	532222.50	1698490.43	N 39 57 22.61 W	80 34 31.98
	4315.00	0.66	35.89	4313.55	3459.53	-66.45	85.89	-8.11	0.61	-0.48	24.89	532223.94	1698490.96	N 39 57 22.63 W	80 34 31.98
	4415.00	0.80	81.52	4413.54	3559.52	-66.14	85.46	-7.08	0.56	0.14	45.63	532224.51	1698491.99	N 39 57 22.63 W	80 34 31.96
	4515.00	0.99	66.48	4513.53	3659.51	-65.43	85.91	-5.60	0.30	0.19	-15.04	532224.96	1698493.47	N 39 57 22.64 W	80 34 31.99
	4615.00	0.94	57.24	4613.51	3759.49	-64.96	86.70	-4.12	0.16	-0.05	-9.24	532225.75	1698494.95	N 39 57 22.64 W	80 34 31.93
	4715.00	0.72	68.74	4713.50	3859.48	-64.55	87.37	-2.84	0.27	0.22	11.50	532226.42	1698496.23	N 39 57 22.65 W	80 34 31.91
Tie In	4761.00	0.85	61.82	4759.50	3909.48	-64.34	87.64	-2.27	0.35	0.28	-15.04	532226.69	1698496.80	N 39 57 22.65 W	80 34 31.90
	4812.00	3.80	41.40	4810.45	3956.43	-84.36	89.08	-0.82	5.92	5.78	-40.04	532228.13	1698498.25	N 39 57 22.67 W	80 34 31.88
	4854.00	7.41	43.20	4852.24	3998.22	-64.59	92.10	1.96	6.30	8.60	4.29	532231.15	1698501.02	N 39 57 22.70 W	80 34 31.85
	4902.00	8.51	43.67	4899.78	4045.76	-64.85	96.93	6.53	8.00	2.29	0.88	532235.98	1698505.60	N 39 57 22.75 W	80 34 31.79
	4946.00	11.45	45.35	4945.06	4091.06	-65.01	102.60	12.13	6.42	6.38	3.65	532241.65	1698511.19	N 39 57 22.80 W	80 34 31.72
	4995.00	13.96	47.14	4990.92	4136.90	-64.90	109.14	16.61	5.45	5.36	3.81	532248.79	1698516.68	N 39 57 22.86 W	80 34 31.63
	5036.00	16.00	49.20	5030.53	4176.51	-64.44	116.80	27.52	5.09	4.93	5.02	532255.85	1698526.58	N 39 57 22.95 W	80 34 31.52
	5083.00	17.83	48.57	5075.49	4221.47	-63.69	125.80	37.82	3.91	3.89	-1.34	532264.85	1698536.68	N 39 57 23.04 W	80 34 31.39
	5128.00	17.44	48.23	5118.38	4264.36	-63.05	134.85	48.01	0.90	0.87	-10.63	532273.90	1698547.08	N 39 57 23.13 W	80 34 31.26
	5220.00	17.89	38.45	5206.06	4352.04	-64.24	155.10	67.08	3.28	0.49	-10.63	532284.15	1698566.15	N 39 57 23.33 W	80 34 31.02
	5313.00	17.15	39.33	5294.74	4440.72	-67.58	176.90	84.66	0.85	-0.80	0.95	532315.94	1698583.72	N 39 57 23.55 W	80 34 30.80
	5405.00	16.32	43.00	5382.85	4528.83	-69.71	196.84	120.37	1.46	-0.90	3.98	532335.89	1698601.13	N 39 57 23.75 W	80 34 30.58
	5498.00	17.24	42.92	5471.89	4617.87	-71.01	216.49	102.07	0.99	0.98	-0.09	532355.59	1698619.43	N 39 57 23.94 W	80 34 30.35
	5591.00	18.51	45.21	5560.40	4706.38	-71.82	236.99	140.23	1.56	1.37	2.48	532376.01	1698639.29	N 39 57 24.15 W	80 34 30.10
	5683.00	18.32	44.61	5647.69	4793.67	-72.24	257.57	160.75	0.29	-0.21	-0.65	532396.83	1698656.81	N 39 57 24.35 W	80 34 29.84
	5731.00	17.06	53.21	5693.42	4839.40	-71.47	287.16	171.89	6.02	-2.58	17.92	532406.20	1698670.75	N 39 57 24.45 W	80 34 29.70
	5777.00	16.09	71.65	5737.54	4883.52	-87.80	273.22	183.16	11.99	-2.15	40.09	532412.26	1698682.22	N 39 57 24.51 W	80 34 29.55
	5823.00	18.07	89.14	5781.54	4927.52	-60.11	275.33	196.36	11.91	4.30	35.02	532414.98	1698695.42	N 39 57 24.53 W	80 34 29.38
	5870.00	20.46	100.97	5825.92	4971.90	-48.35	273.88	211.72	9.71	5.09	26.17	532417.32	1698710.78	N 39 57 24.52 W	80 34 29.18
	5918.00	23.30	114.87	5870.48	5016.46	-32.58	268.32	228.59	12.13	5.92	28.54	532407.36	1698727.65	N 39 57 24.47 W	80 34 28.97
	5966.00	27.25	119.94	5913.89	5059.87	-13.14	256.86	246.75	9.46	8.23	10.98	532397.91	1698745.81	N 39 57 24.38 W	80 34 28.73
	6013.00	32.21	126.00	5954.70	5100.68	9.58	246.12	266.23	12.33	10.55	12.89	532385.16	1698765.28	N 39 57 24.25 W	80 34 28.48
	6061.00	36.75	129.76	5994.26	5140.24	36.48	229.41	287.63	10.44	9.46	7.83	532368.45	1698786.68	N 39 57 24.09 W	80 34 28.20
	6109.00	41.78	132.22	6031.41	5177.39	66.75	209.46	310.53	10.97	10.48	5.13	532348.51	1698809.58	N 39 57 23.90 W	80 34 27.91
	6157.00	47.49	132.65	6065.55	5211.53	100.41	186.71	335.40	11.91	11.90	0.90	532325.76	1698834.45	N 39 57 23.67 W	80 34 27.58
	6204.00	53.53	132.95	6095.43	5241.41	136.61	162.08	362.00	12.86	12.85	0.64	532301.12	1698861.05	N 39 57 23.43 W	80 34 27.24
	6251.00	59.46	134.62	6121.71	5267.69	175.54	135.11	390.11	10.89	10.49	3.55	532274.16	1698889.16	N 39 57 23.17 W	80 34 26.87
	6298.00	63.90	137.38	6144.36	5290.34	216.70	105.49	418.68	12.86	11.57	5.87	532244.54	1698917.73	N 39 57 22.88 W	80 34 26.50
	6345.00	68.28	139.47	6163.03	5309.01	259.76	73.23	447.28	12.15	11.45	4.45	532212.28	1698946.32	N 39 57 22.56 W	80 34 26.13
	6392.00	74.21	139.87	6177.75	5323.73	304.28	39.21	476.15	10.52	10.49	0.85	532178.26	1698975.20	N 39 57 22.23 W	80 34 25.75
	6439.00	78.62	140.45	6186.78	5334.76	349.81	4.14	505.41	9.46	9.38	1.23	532143.19	1699004.46	N 39 57 21.89 W	80 34 25.37
	6486.00	83.35	141.39	6196.15	5342.13	396.03	-31.89	534.66	10.26	10.06	2.00	532107.17	1699033.71	N 39 57 21.54 W	80 34 24.99
	6533.00	89.31	142.81	6199.15	5345.13	442.62	-68.88	563.46	13.03	12.68	3.02	532070.18	1699062.50	N 39 57 21.17 W	80 34 24.61
	6580.00	92.96	142.17	6197.25	5343.23	533.92	-145.00	621.89	3.66	3.80	-6.87	531994.06	1699120.83	N 39 57 20.83 W	80 34 23.85
	6724.00	92.20	142.74	6192.98	5339.96	632.17	-220.25	678.72	1.00	-0.80	0.60	531918.81	1699178.76	N 39 57 19.68 W	80 34 23.10
	6820.00	88.59	144.23	6182.31	5338.29	727.27	-297.39	736.83	4.07	-3.76	1.55	531641.68	1699235.87	N 39 57 18.94 W	80 34 22.35
	6915.00	89.14	143.78	6184.20	5340.18	821.28	-374.23	792.66	0.75	0.58	-0.47	531764.84	1699291.69	N 39 57 18.18 W	80 34 21.63
	7009.00	87.80	143.95	6186.71	5342.69	914.28	-450.12	846.07	1.44	-1.43	-0.78	531688.95	1699347.10	N 39 57 17.44 W	80 34 20.90
	7103.00	88.42	143.71	6199.81	5345.79	1007.29	-525.96	903.51	0.71	0.86	-0.28	531613.11	1699402.54	N 39 57 16.70 W	80 34 20.18
	7198.00	86.57	144.04	6203.96	5349.94	1101.12	-603.11	958.78	1.40	-1.90	-0.35	531535.97	1699458.82	N 39 57 15.94 W	80 34 19.46
	7293.00	85.43	144.71	6210.58	5356.56	1194.68	-680.61	1013.32	1.25	-1.20	-0.35	531458.47	1699512.34	N 39 57 15.18 W	80 34 18.74
	7387.00	89.52	144.61	6214.72	5360.70	1287.44	-757.20	1067.63	4.35	4.35	-0.11	531381.88	1699566.65	N 39 57 14.43 W	80 34 18.04
	7482.00	88.01	142.10	6216.97	5362.75	1381.56	-833.40	1124.31	3.08	-1.59	-2.64	531305.69	1699623.32	N 39 57 13.69 W	80 34 17.30
	7577.00	86.35	141.97	6218.96	5364.94	1475.96	-908.28	1182.73	1.42	-1.41	-0.14	531230.82	1699681.75	N 39 57 12.95 W	80 34 16.53
	7672.00	90.24	141.94	6219.30	5365.28	1570.40	-983.09	1241.28	0.94	0.94	-0.03	531156.01	1699740.29	N 39 57 12.22 W	80 34 15.77
	7766.00	88.67	140.84	6220.03	5366.01	1663.93	-1056.59	1299.87	1.80	-1.46	-1.08	531082.51	1699798.68	N 39 57 11.50 W	80 34 15.01
	7861.00	86.17	140.20	6220.83	5366.81	1758.58	-1129.96	1360.20	1.57	1.37	-0.78	531009.14	1699856.21	N 39 57 10.78 W	80 34 14.22
	7956.00	86.83	140.76	6220.83	5366.81	1853.26	-1203.24	1420.65	0.69	-0.36	0.59	530935.86	1699919.66	N 39 57 10.07 W	80 34 13.43

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (*100ft)	BR (*100ft)	TR (*100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S °'")	Longitude (E/W °'")
	8051.00	91.82	141.62	6219.46	5365.44	1947.81	-1277.26	1480.18	2.28	2.09	0.91	530861.85	1699979.19	N 39 57 9.34 W	80 34 12.66
	8145.00	88.97	141.11	6218.81	5364.79	2041.35	-1350.68	1538.87	3.08	-3.03	-0.54	530788.44	1700037.87	N 39 57 8.62 W	80 34 11.89
	8240.00	89.72	140.61	6219.90	5365.88	2135.96	-1424.35	1598.83	0.95	0.79	-0.53	530714.76	1700097.82	N 39 57 7.90 W	80 34 11.11
	8334.00	87.94	141.20	6221.82	5367.80	2229.55	-1497.29	1658.09	1.99	-1.89	0.63	530641.83	1700157.08	N 39 57 7.19 W	80 34 10.34
	8430.00	87.97	142.45	6225.24	5371.22	2324.95	-1572.71	1717.39	1.30	0.03	1.30	530566.42	1700216.38	N 39 57 6.45 W	80 34 9.57
	8525.00	89.42	142.47	6227.41	5373.39	2419.27	-1648.01	1775.25	1.53	1.53	0.02	530491.11	1700274.24	N 39 57 5.71 W	80 34 8.81
	8619.00	86.70	141.93	6228.95	5374.93	2512.66	-1722.28	1832.86	0.96	-0.77	-0.57	530416.85	1700331.84	N 39 57 4.99 W	80 34 8.06
	8714.00	89.07	141.60	6230.80	5376.78	2607.11	-1796.88	1891.64	0.52	0.39	-0.35	530342.25	1700390.63	N 39 57 4.25 W	80 34 7.30
	8809.00	89.69	140.48	6231.82	5377.80	2701.70	-1870.75	1951.37	1.35	0.65	-1.18	530268.39	1700450.35	N 39 57 3.53 W	80 34 6.52
	8903.00	90.00	142.17	6232.08	5378.06	2795.25	-1944.13	2010.11	1.83	0.33	1.80	530195.01	1700509.09	N 39 57 2.81 W	80 34 5.75
	8997.00	89.93	144.27	6232.14	5378.12	2888.44	-2019.42	2066.39	2.24	-0.07	2.23	530119.73	1700565.36	N 39 57 2.08 W	80 34 5.02
	9092.00	90.48	143.97	6231.80	5377.78	2982.42	-2096.39	2122.07	0.66	0.58	-0.32	530042.76	1700621.04	N 39 57 1.32 W	80 34 4.29
	9186.00	89.73	142.87	6231.62	5377.60	3075.57	-2171.87	2178.08	1.42	-0.80	-1.17	529967.28	1700677.05	N 39 57 0.58 W	80 34 3.56
	9282.00	91.86	142.80	6230.29	5376.27	3170.82	-2248.36	2236.07	2.22	2.22	-0.07	529890.79	1700735.04	N 39 56 59.83 W	80 34 2.81
	9377.00	89.62	143.10	6229.06	5375.04	3265.06	-2324.17	2293.30	2.36	-2.36	0.32	529814.99	1700792.27	N 39 56 59.09 W	80 34 2.06
Final Survey 28Jun12	9410.00	89.79	142.83	6229.23	5375.21	3297.79	-2350.51	2313.18	0.97	0.52	-0.82	529788.64	1700812.14	N 39 56 58.83 W	80 34 1.80
Projection to Bit	9474.00	89.79	142.83	6229.47	5375.45	3361.30	-2401.51	2351.84	0.00	0.00	0.00	529737.65	1700850.81	N 39 56 58.33 W	80 34 1.30

51-01472W

Survey Type: Def Survey

Survey Error Model: ISCWSA Rev 0 \*\*\* 3-D 95.000% Confidence 2.7955 sigma  
 Survey Program:

Description	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	0.000	15.000		30.000	30.000	SLB_NSG+MSHOT-Depth Only	Original Borehole / Noble Energy SHL-6J-HS Gyro 0' to 5950' MD (Projected-Up)
	15.000	23.000		30.000	30.000	SLB_NSG+MSHOT-Depth Only	Original Borehole / Noble Energy SHL-6J-HS Gyro 0' to 5950' MD
	23.000	4715.000		30.000	30.000	SLB_NSG+MSHOT	Original Borehole / Noble Energy SHL-6J-HS Gyro 0' to ST01 / Noble Energy SHL-6J-HS ST01 Gyro+MWD 0' MD to ST01 / Noble Energy SHL-6J-HS ST01 Gyro+MWD 0' MD to
	4715.000	9410.000		30.000	30.000	SLB_MWD-STD	
	9410.000	9474.000		30.000	30.000	SLB_BLIND+TREND	

51-01472W



Noble Energy



WELL	SHL-6J-HS ST01	FIELD	WV Marshall County (NAD 27)	STRUCTURE	Nabors M59					
Magnetic Parameters	Dip	4° 53' N	Date	November 14, 2013	Surface Location	NAD 2011 WGS 84 Virginia State Plane, Northern Zone, US Feet	Miscellaneous			
Miscellaneous	Mag Dec	10.73°	Time	12:29:30.7	Lat	N 34 17 21.78	Mag	516.42 NS	TVD Ref	63934 (2' above MSL)
	Mag Inc	0.00°			Lon	W 88 34 18.88	Grading	132219.65 PD3	Trp Date	November 14, 2013
							Leaving	100000.00 PD3		
								Scale Factor	0.9999730	

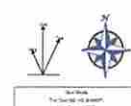
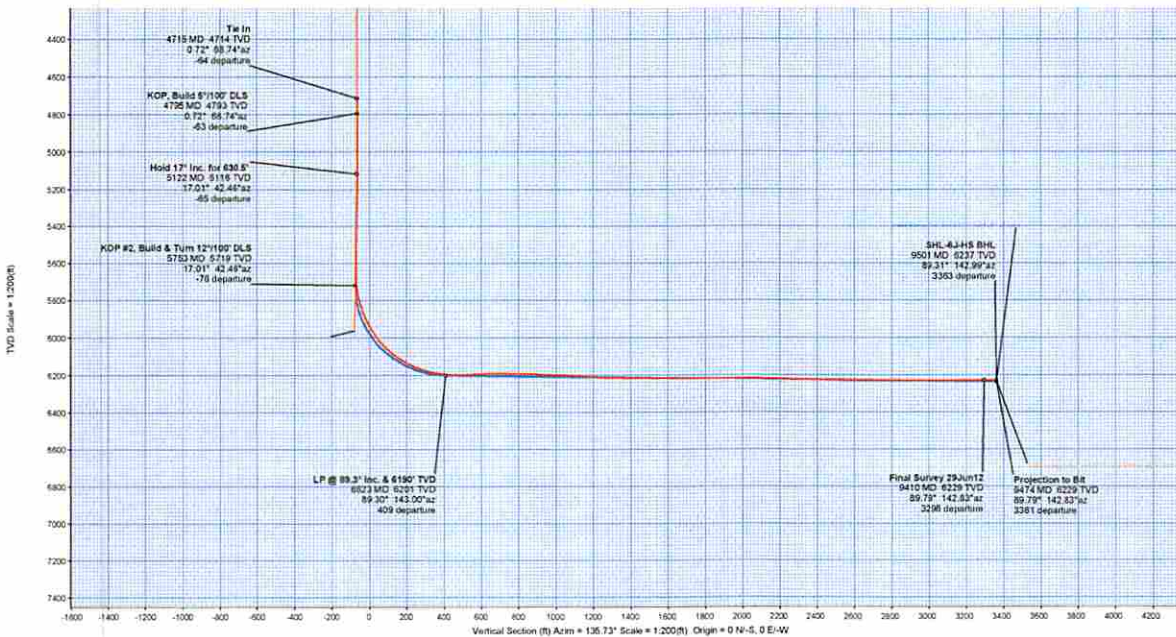
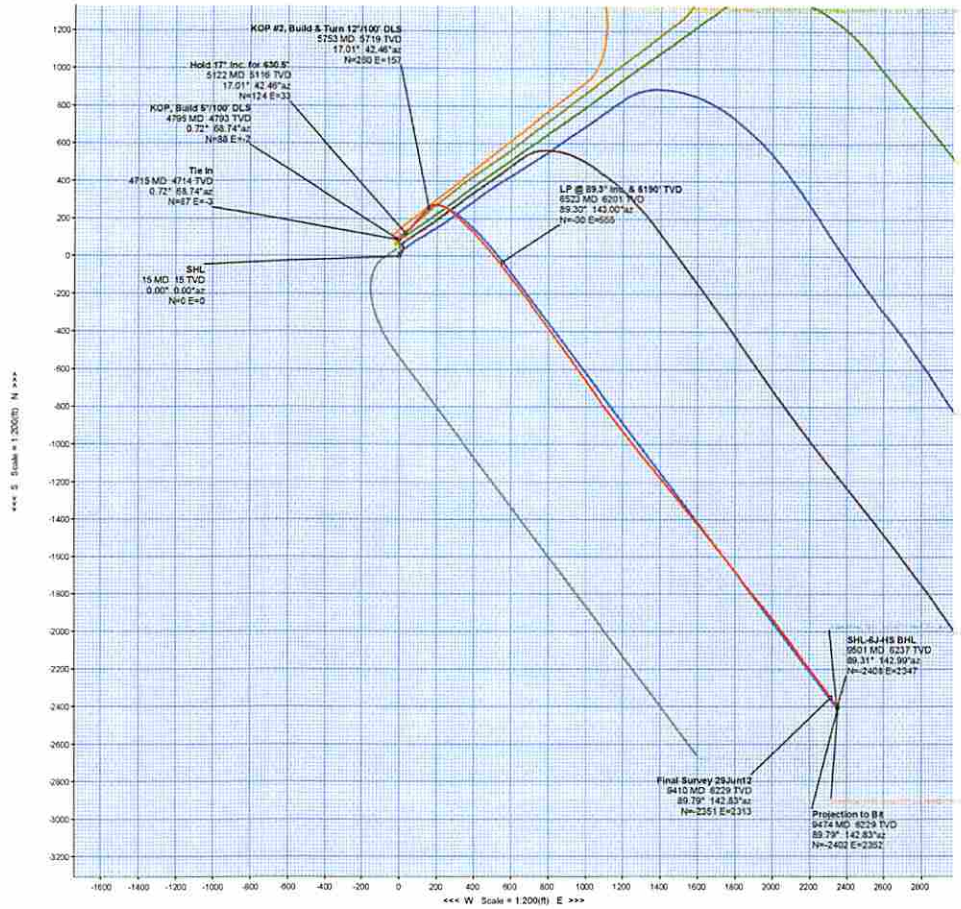
Legend

- SHL-6J-HS ST01 (Blue)
- SHL-6J-HS ST01 (Green)
- SHL-6J-HS ST01 (Red)
- SHL-6J-HS ST01 (Black)
- SHL-6J-HS ST01 (Grey)
- SHL-6J-HS ST01 (Light Blue)
- SHL-6J-HS ST01 (Light Green)
- SHL-6J-HS ST01 (Light Red)
- SHL-6J-HS ST01 (Light Black)
- SHL-6J-HS ST01 (Light Grey)

Station	Date	Time	Depth	Depth	Depth	Depth	Depth	Depth
4715 MD	4715	4715	4715	4715	4715	4715	4715	4715
4799 MD	4799	4799	4799	4799	4799	4799	4799	4799
5122 MD	5122	5122	5122	5122	5122	5122	5122	5122
5753 MD	5753	5753	5753	5753	5753	5753	5753	5753
6201 MD	6201	6201	6201	6201	6201	6201	6201	6201
6229 MD	6229	6229	6229	6229	6229	6229	6229	6229

Depth	Time	Time	Time	Time	Time	Time	Time
4715	4715	4715	4715	4715	4715	4715	4715
4799	4799	4799	4799	4799	4799	4799	4799
5122	5122	5122	5122	5122	5122	5122	5122
5753	5753	5753	5753	5753	5753	5753	5753
6201	6201	6201	6201	6201	6201	6201	6201
6229	6229	6229	6229	6229	6229	6229	6229

Station	Time	Time	Time	Time	Time	Time	Time
4715	4715	4715	4715	4715	4715	4715	4715
4799	4799	4799	4799	4799	4799	4799	4799
5122	5122	5122	5122	5122	5122	5122	5122
5753	5753	5753	5753	5753	5753	5753	5753
6201	6201	6201	6201	6201	6201	6201	6201
6229	6229	6229	6229	6229	6229	6229	6229



Drawn By: J. Venter  
 Date Created: June 24, 2012 08:06:29 AM  
 Checked By:  
 Checked Date:  
 Approved By:  
 Approved Date:

10/03/2014

Latitude: 39°57'30"

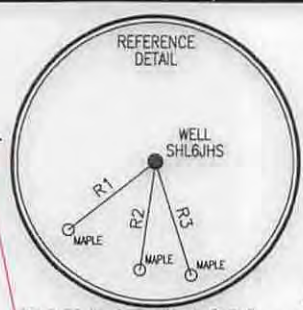
Longitude: 80°32'30"

**LEGEND**

- TOPO MAP POINT
- WELL
- ALL AS POINTS UNLESS OTHERWISE NOTED
- MINERAL TRACT BOUNDARY
- HANDED LINES
- WELL REFERENCE
- PROPOSED HORIZONTAL WELL
- ROAD
- STREAM CENTER LINE
- AS DRILLED
- WELLS WITHIN 3,000'
- CASING WELL



COORDINATES  
8476' WEST  
845' SOUTH



LINE	BEARING	DISTANCE
R1	S 61°33'48" W	234.34'
R2	S 14°33'31" W	204.92'
R3	S 16°11'20" E	218.37'

TRACT	LESSOR
1	CHARLES W. DAGUE, ET AL
2	AMERICAN PREMIER UNDERWRITERS, INC.
3	CARRIE M. & DONALD R. TOLAND
4	DAVID E. & CLAIRE M. HAGAN

**SURFACE HOLE LOCATION (SHL)**  
UTM 17-NAD83  
N:4422974.14  
E:536274.26  
NAD27 WV NORTH  
N:532138.824  
E:1698498.822  
LAT/LOG DATUM-WGS84  
LAT:39°57'22.06"  
LON:80°34'31.13"

**SURFACE HOLE LOCATION (SHL)**  
UTM 17-NAD83  
N:4422974.185  
E:536274.327  
NAD27 WV NORTH  
N:532138.825  
E:1698498.822  
LAT/LOG DATUM-WGS84  
LAT:39°57'22.06"  
LON:80°34'31.13"

**BOTTOM HOLE LOCATION (BHL)**  
UTM 17-NAD83  
N:4422252.50  
E:537001.62  
NAD27 WV NORTH  
N:529730.776  
E:1700846.007  
LAT/LOG DATUM-WGS84  
LAT:39°56'58.55"  
LON:80°34'00.63"

**BOTTOM HOLE LOCATION (BHL)**  
UTM 17-NAD83  
N:4422252.532  
E:537001.737  
NAD27 WV NORTH  
N:529731.112  
E:1700846.148  
LAT/LOG DATUM-WGS84  
LAT:39°56'58.54"  
LON:80°34'00.62"

**NOTES:**

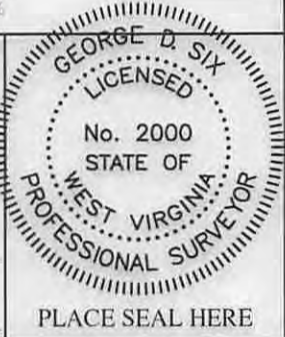
1. There are no dwellings within 200' of proposed well.
2. Proposed well is greater than 100' from the mineral line.
3. It is not the purpose or intention of this plat to represent surveyed locations of the surface or mineral parcels depicted hereon. The location of the boundary lines, as shown, are based on record deed descriptions, field evidence found and/or tax map position, unless otherwise noted.

**Blue Mountain Inc.**  
11023 MASON DIXON HIGHWAY  
BURTON, WV 26562  
PHONE: (304) 662-6486

FILE #: SHL6JHS-AS DRILLED  
DRAWING #: SHL6JHS-AS DRILLED  
SCALE: 1" = 1000'  
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



(+) 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 #: SHL6JHS-AS DRILLED SERIAL No.: WV0510588HS  
API WELL #: 47 051 01472H6A  
STATE COUNTY PERMIT

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

WATERSHED: WHEELING CREEK ELEVATION: 834.05'  
COUNTY/DISTRICT: MARSHALL / SAND HILL QUADRANGLE: MAJORSVILLE, WV-PA 7.5'  
SURFACE OWNER: CHARLES W. & ELVIRA H. DAGUE ACREAGE: 47.739±  
OIL & GAS ROYALTY OWNER: SEE ABOVE GAS LESSORS CHART ACREAGE: 353.141±

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: 6,212± TMD: 10,194±  
WELL OPERATOR CNX Gas Company LLC DESIGNATED AGENT KENT WRIGHT  
Address 200 EVERGREENE Dr. Address ONE ENERGY DRIVE  
City WAYNESBURG State PA Zip Code 15370 City JANE LEW State WV Zip Code 26378

10/03/2014