

PM JK

WR-35
Rev. 8/23/13

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

API 47-051-01546 W County Marshall District Sandhill
Quad Majorsville, WV-PA 7.5' Pad Name SHL6 Field/Pool Name _____
Farm name Dague, Charles W. & Elvira H Well Number SHL6DHS-A
Operator (as registered with the OOG) CNX Gas Company, LLC
Address 200 Evergreen Dr. 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 4422985.04 Easting 536268.77
Landing Point of Curve Northing 4422794.49 Easting 536285.38
Bottom Hole Northing 442188.56 Easting 536764.78

Elevation (ft) 831.29' 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 11/18/2013 Date drilling commenced _____ Date drilling ceased _____
Date completion activities began 7/15/2014 Date completion activities ceased 7/24/2014
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

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'; Pittsburgh Seam Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) Y

SEP 18 2014

Reviewed by:

Corrected
9/23/14

WV Department of
Environmental Protection

10/03/2014

API 47-051 - 01546 W Farm name Dague, Charles W & Elvira H Well number SHL6DHS-A

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 ³ /sks)	Volume (ft ²)	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 _____

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 _____

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Perforation Record

API: 47-051-01546 W

Farm name: _____

Charles W. & Elvira H
Dague

Well Name: SHL-6D-HS-A

Stage No.	Stim Date	Top Perf	Bottom Perf	# of Perfs	Formation
1	7/9/2014	8426	8533	80	Marcellus
2	7/9/2014	8276	8383	80	Marcellus
3	7/9/2014	8129	8233	70	Marcellus
4	7/9/2014	7979	8083	70	Marcellus
5	7/10/2014	7831	7933	60	Marcellus
6	7/10/2014	7681	7783	50	Marcellus
7	7/10/2014	7531	7633	40	Marcellus
8	7/10/2014	7381	7483	30	Marcellus
9	7/10/2014	7231	7333	20	Marcellus
10	7/10/2014	7081	7183	20	Marcellus
11	7/10/2014	6932	7033	10	Marcellus
12	7/11/2014	6782	6883	10	Marcellus
13	7/11/2014	6632	6733	10	Marcellus
14	7/11/2014	6482	6583	10	Marcellus

STIMULATION INFORMATION PER STAGE

API: 47-051-01546

Farm name: _____

Charles W. & Elvira H Dague

Well Name: SHL-6D-HS-A

Stage No.	Stim Date	Avg Rate (bpm)	ATP (psi)	Max BD Pressure	ISIP (psi)	Proppant (lbs)	Water (BBLs)	Amount of N ² / other
1	7/15/2014	87.7	6649		4759	228153	5600.48	
2	7/15/2014	90.5	6965	6200		225185	4960.12	
3	7/15/2014	87.7	7154	6764		220320	5060.16	
4	7/15/2014	79.4	7205	6730	5288	225175	5413.67	
5	7/16/2014	92.9	7164	6411	0	221811	5284.30	
5 Inj Test	7/19/2014	11.5	4662	4668	5077	0	692.30	
6	7/19/2014	85.3	6884	5158		224926	7274.21	
7	7/19/2014	57.9	8019	7792		226414	10290.56	
8	7/19/2014	50.0	8409	8875	6831	224551	10175.20	
9	7/20/2014	71.1	8010	5322		229169	6315.58	
10	7/20/2014	34.9	8891	8614	6347	24461	3978.57	
10B	7/22/2014	67.5	7962	5909		197945	9501.95	
11	7/22/2014	49.4	7783	9071		225860	7663.98	
12	7/22/2014	32.0	8791	7669	5741	19510	3719.57	
12B	7/24/2014	76.9	7546	4701		203605	5405.23	
13	7/24/2014	64.0	8168	8518		226367	5460.03	
14	7/24/2014	59.9	8135	9219	5208	241637	5169.02	

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July 29, 2014
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10/03/2014

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	7/15/2014
Job End Date:	7/24/2014
State:	West Virginia
County:	Marshall
API Number:	47-051-01546-00-00
Operator Name:	Noble Energy, Inc.
Well Name and Number:	SHL6 D
Longitude:	-80.57560800
Latitude:	39.95613300
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	6,215
Total Base Water Volume (gal):	4,257,105
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	90.86526	Density = 8.330
SAND - PREMIUM WHITE - 40/70	Halliburton	Proppant	Crystalline silica, quartz	14808-60-7	100.00000	5.68000	
COMMON WHITE 100 MESH	Halliburton	Proppant	Crystalline silica, quartz	14808-60-7	100.00000	2.36750	
HYDROCHLORIC ACID 5-10%	Halliburton	Solvent	Hydrochloric acid	7647-01-0	10.00000	0.08523	
FR-66	Halliburton	Friction Reducer	Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.02342	
HYDROCHLORIC ACID 10-30%	Halliburton	Solvent	Hydrochloric acid	7647-01-0	30.00000	0.02059	
Biovert NWB	Halliburton	Viscosifier	Poly lactide resin	Confidential	100.00000	0.01045	
FE-1A ACIDIZING COMPOSITION	Halliburton	Additive	Acetic anhydride	108-24-7	100.00000	0.00390	

			Acetic acid	64-19-7	60.00000	0.00234
BE-9	Halliburton	Biocide				
			Tributyl tetradecyl phosphonium chloride	81741-28-8	10.00000	0.00432
LP-65 MC	Halliburton	Scale Inhibitor				
			Ammonium chloride	12125-02-9	10.00000	0.00261
LGC-36 UC	Halliburton	Liquid Gel Concentrate				
			Guar gum	9000-30-0	60.00000	0.00072
			Naphtha, hydrotreated heavy	64742-48-9	60.00000	0.00072
LCA-1	Halliburton	Solvent				
			Paraffinic solvent	Confidential	100.00000	0.00137
LoSurf-300D	Halliburton	Non-ionic Surfactant				
			Ethanol	64-17-5	60.00000	0.00074
			Heavy aromatic petroleum naphtha	64742-94-5	30.00000	0.00037
			Naphthalene	91-20-3	5.00000	0.00006
			Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy-, branched	127087-87-0	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	0.00039
			Propargyl alcohol	107-19-7	10.00000	0.00006
SP BREAKER	Halliburton	Breaker				
			Sodium persulfate	7775-27-1	100.00000	0.00005
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		1.02671
		Other Ingredient(s)				
			Polyacrylamide copolymer	Confidential		0.02342
		Other Ingredient(s)				
			Organic phosphonate	Confidential		0.01566
		Other Ingredient(s)				
			Ammonium chloride	12125-02-9		0.00390
		Other Ingredient(s)				
			Sodium chloride	7647-14-5		0.00390
		Other Ingredient(s)				
			Alcohols, C12-16, ethoxylated	68551-12-2		0.00390
		Other Ingredient(s)				
			Fatty acid tall oil amide	Confidential		0.00390
		Other Ingredient(s)				
			Sorbitan monooleate polyoxyethylene derivative	9005-65-6		0.00078
		Other Ingredient(s)				
			Sorbitan, mono-9-octadecenoate, (Z)	1338-43-8		0.00078
		Other Ingredient(s)				

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 Halliburton
 Confidential

		Oxyalkylated phenolic resin	Confidential		0.00037
	Other Ingredient(s)				
		Formaldehyde	50-00-0		0.00026
	Other Ingredient(s)				
		Fatty acids, tall oil	Confidential		0.00019
	Other Ingredient(s)				
		Reaction product of acetophenone, formaldehyde, thiourea and oleic acid in dimethyl formamide	68527-49-1		0.00019
	Other Ingredient(s)				
		Alcohols, C14-C15, ethoxylated	68951-67-7		0.00019
	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		0.00006
	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		0.00001
	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

51-01546M

* 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)

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Noble Energy SHL-6D-HS Gyro+MWD 0' to 9111' MD 30Jul12 Survey Report

(Def Survey)

Report Date: July 30, 2012 - 11:51 AM
 Client: Noble Energy
 Field: WV Marshall County (NAD 27)
 Structure / Slot: CNX/Noble Energy SHL-6 Pad / SHL-6D-HS
 Well: SHL-6D-HS
 Borehole: Original Borehole
 UWI / API#: Unknown / Unknown
 Survey Name: Noble Energy SHL-6D-HS Gyro+MWD 0' to 9111' MD 30Jul12
 Survey Date: July 11, 2012
 Tort / AHD / DDI / ERD Ratio: 213.852 * / 3334.162 ft / 6.019 / 0.537
 Coordinate Reference System: NAD27 West Virginia State Plane, Northern Zone, US Feet
 Location Lat / Long: N 39° 57' 22.07832", W 80° 34' 32.18577"
 Location Grid N/E Y/X: N 532168.680 NUS, E 1698474.080 NUS
 CRS Grid Convergence Angle: -0.6860 °
 Grid Scale Factor: 0.99995731

Survey / DLS Computation: Minimum Curvature / Lubinski
 Vertical Section Azimuth: 148.897 ° (Grid North)
 Vertical Section Origin: 0.000 ft, 0.000 ft
 TVD Reference Datum: KB
 TVD Reference Elevation: 854.290 ft above MSL
 Seabed / Ground Elevation: 831.020 ft above MSL
 Magnetic Declination: -8.682 °
 Total Gravity Field Strength: 1000.0880 mgm (9.8 based)
 Total Magnetic Field Strength: 52832.226 nT
 Magnetic Dip Angle: 67.490 °
 Declination Date: July 11, 2012
 Magnetic Declination Model: BGM2012
 North Reference: Grid North
 Grid Convergence Used: -0.6860 °
 Total Corr Mag North->Grid North: -7.9961 °
 Local Coord Referenced To: Well Head

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 ° '' ''')	Directional Difficulty Index
SHL	0.00	0.00	0.00	0.00	-854.29	0.00	0.00	0.00	N/A	N/A	N/A	532168.68	1698474.08	N 39 57 22.08 W	80 34 32.19	0.00
	100.00	0.31	315.32	100.00	-754.29	-0.26	0.19	-0.19	0.31	0.31	0.00	532168.87	1698473.89	N 39 57 22.08 W	80 34 32.19	0.00
	200.00	0.30	289.01	200.00	-854.29	-0.73	0.47	-0.63	0.14	0.01	-28.31	532169.15	1698473.45	N 39 57 22.08 W	80 34 32.19	0.00
	300.00	0.36	229.31	300.00	-554.29	-0.86	0.35	-1.11	0.33	0.06	-59.70	532169.03	1698472.97	N 39 57 22.08 W	80 34 32.20	0.01
	400.00	0.22	30.20	400.00	-454.29	-0.92	0.31	-1.26	0.57	-0.14	160.89	532168.99	1698472.82	N 39 57 22.08 W	80 34 32.20	0.34
	500.00	0.42	247.16	500.00	-354.29	-1.06	0.34	-1.50	0.61	0.20	-143.04	532169.02	1698472.58	N 39 57 22.08 W	80 34 32.21	0.58
	600.00	0.41	216.24	599.99	-254.30	-0.97	-0.10	-2.05	0.22	-0.01	-30.92	532168.58	1698472.03	N 39 57 22.08 W	80 34 32.21	0.77
	700.00	0.32	179.34	699.99	-154.30	-0.60	-0.66	-2.25	0.25	-0.09	-36.90	532168.02	1698471.83	N 39 57 22.07 W	80 34 32.21	0.90
	800.00	0.30	313.97	799.99	-54.30	-0.61	-0.76	-2.44	0.57	-0.02	134.63	532167.92	1698471.64	N 39 57 22.07 W	80 34 32.22	1.04
	900.00	0.48	19.64	899.99	45.70	-1.13	-0.18	-2.49	0.45	0.18	65.67	532168.50	1698471.59	N 39 57 22.08 W	80 34 32.22	1.16
	1000.00	0.22	290.46	999.99	145.70	-1.54	0.28	-2.53	0.53	-0.26	-89.18	532168.96	1698471.55	N 39 57 22.08 W	80 34 32.22	1.28
	1100.00	0.36	333.95	1099.99	245.70	-2.01	0.63	-2.84	0.25	0.14	43.49	532169.31	1698471.24	N 39 57 22.08 W	80 34 32.22	1.34
	1200.00	0.42	119.89	1199.99	345.69	-2.00	0.73	-2.66	0.09	0.06	145.94	532169.41	1698471.42	N 39 57 22.09 W	80 34 32.22	1.45
	1300.00	0.39	339.27	1299.99	445.69	-2.01	0.86	-2.47	0.76	-0.03	-140.62	532169.54	1698471.61	N 39 57 22.09 W	80 34 32.22	1.54
	1400.00	0.31	287.05	1399.99	545.69	-2.55	1.26	-2.85	0.32	-0.08	-52.22	532169.94	1698471.23	N 39 57 22.09 W	80 34 32.22	1.60
	1500.00	0.59	20.25	1499.99	645.69	-3.07	1.82	-2.93	0.68	0.28	93.20	532170.50	1698471.15	N 39 57 22.10 W	80 34 32.22	1.69
	1600.00	0.37	342.00	1599.99	745.69	-3.71	2.61	-2.85	0.38	-0.22	-38.25	532171.29	1698471.23	N 39 57 22.10 W	80 34 32.22	1.76
	1700.00	0.17	297.50	1699.99	845.69	-4.15	2.99	-3.08	0.28	0.20	-44.40	532171.67	1698471.00	N 39 57 22.11 W	80 34 32.23	1.80
	1800.00	0.60	40.36	1799.99	945.68	-4.44	3.46	-2.87	0.66	0.43	102.76	532172.14	1698471.21	N 39 57 22.11 W	80 34 32.22	1.86
	1900.00	0.34	278.79	1899.99	1045.68	-4.80	3.90	-2.83	0.83	-0.26	-121.57	532172.58	1698471.25	N 39 57 22.12 W	80 34 32.22	1.93
	2000.00	0.50	67.95	1999.99	1145.68	-4.92	4.11	-2.71	0.81	0.16	149.16	532172.79	1698471.37	N 39 57 22.12 W	80 34 32.22	1.99
	2100.00	0.21	235.02	2099.99	1245.68	-4.84	4.17	2.46	0.71	-0.29	167.07	532172.85	1698471.62	N 39 57 22.12 W	80 34 32.22	2.04
	2200.00	0.41	140.71	2199.99	1345.68	-4.47	3.79	-2.38	0.47	0.20	-94.31	532172.47	1698471.70	N 39 57 22.12 W	80 34 32.22	2.07
	2300.00	0.49	86.31	2299.99	1445.68	-3.92	3.54	-1.73	0.42	0.08	-54.40	532172.22	1698472.35	N 39 57 22.11 W	80 34 32.21	2.12
	2400.00	0.37	128.49	2399.99	1545.67	-3.42	3.36	-1.05	0.33	-0.12	42.18	532172.04	1698473.03	N 39 57 22.11 W	80 34 32.20	2.16
	2500.00	0.45	131.76	2499.99	1645.67	-2.74	2.90	-0.51	0.08	0.08	3.27	532171.58	1698473.57	N 39 57 22.11 W	80 34 32.19	2.18
	2600.00	0.54	99.69	2599.99	1745.67	-2.05	2.56	0.25	0.09	0.09	-32.07	532171.24	1698474.33	N 39 57 22.10 W	80 34 32.18	2.22
	2622.00	0.55	100.06	2621.96	1767.67	-1.92	2.52	0.46	0.05	0.11	1.68	532171.20	1698474.54	N 39 57 22.10 W	80 34 32.18	2.23
Final Gyro	2762.00	0.40	9.69	2761.95	1907.66	-1.85	2.69	1.20	0.49	-0.11	-64.41	532171.57	1698475.28	N 39 57 22.11 W	80 34 32.17	2.28
	2857.00	0.48	17.89	2856.95	2002.66	-2.36	3.89	1.38	0.11	0.08	6.42	532172.27	1698475.46	N 39 57 22.11 W	80 34 32.17	2.30
	2952.00	0.62	12.92	2951.95	2097.66	-2.99	4.47	1.62	0.15	0.15	-5.23	532173.15	1698475.70	N 39 57 22.12 W	80 34 32.17	2.33
	3048.00	0.62	12.00	3045.94	2191.65	-3.73	5.47	1.84	0.01	0.00	-0.98	532174.15	1698475.92	N 39 57 22.13 W	80 34 32.16	2.36
	3141.00	0.62	355.39	3140.93	2286.64	-4.56	6.48	1.91	0.19	0.00	-17.48	532175.16	1698475.99	N 39 57 22.14 W	80 34 32.16	2.39
	3236.00	0.79	2.20	3235.93	2381.64	-5.57	7.65	1.89	0.20	0.18	7.17	532176.33	1698475.97	N 39 57 22.15 W	80 34 32.16	2.42
	3331.00	0.88	31.91	3330.92	2476.63	-6.45	8.92	2.30	0.46	0.09	31.27	532177.60	1698476.38	N 39 57 22.17 W	80 34 32.16	2.47
	3426.00	1.19	37.00	3425.90	2571.61	-7.15	10.33	3.28	0.34	0.33	5.36	532179.01	1698477.36	N 39 57 22.18 W	80 34 32.15	2.51
	3521.00	0.88	39.60	3520.89	2666.60	-7.76	11.68	4.34	0.33	0.33	2.74	532180.36	1698478.42	N 39 57 22.19 W	80 34 32.13	2.55
	3616.00	1.10	38.50	3615.87	2761.58	-8.32	12.95	5.37	0.23	0.23	-1.16	532181.63	1698479.45	N 39 57 22.21 W	80 34 32.12	2.58
	3709.00	1.01	48.39	3708.86	2854.57	-8.78	14.20	6.54	0.22	-0.10	10.63	532182.88	1698480.62	N 39 57 22.22 W	80 34 32.10	2.62

51-01546W

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	BR (ft/100ft)	TR (ft/100ft)	Northing (NUS)	Easting (EUS)	Latitude (N/S ° ' '')	Longitude (E/W ° ' '')	Directional Difficulty Index
	3804.00	0.22	59.20	3803.85	2949.56	-8.93	14.85	7.32	0.84	-0.83	11.38	532183.53	1698481.40	N 39 57 22.23	W 80 34 32.09	2.66
	3899.00	0.40	33.00	3898.85	3044.56	-9.07	15.22	7.66	0.24	0.19	-27.58	532183.90	1698481.74	N 39 57 22.23	W 80 34 32.09	2.67
	3994.00	0.88	28.49	3993.84	3139.55	-9.58	16.13	8.20	0.51	0.51	-3.69	532184.81	1698482.28	N 39 57 22.24	W 80 34 32.70	2.70
	4087.00	1.19	40.30	4088.83	3232.54	-10.24	17.49	9.17	0.39	0.33	11.62	532186.17	1698483.25	N 39 57 22.25	W 80 34 32.07	2.73
	4182.00	0.40	50.10	4181.82	3327.53	-10.80	18.45	10.07	0.84	-0.83	10.32	532187.13	1698484.15	N 39 57 22.26	W 80 34 32.06	2.77
	4277.00	0.79	67.19	4276.81	3422.52	-10.56	18.92	10.93	0.45	0.41	17.99	532187.60	1698485.00	N 39 57 22.27	W 80 34 32.05	2.79
	4371.00	1.41	79.41	4370.80	3516.51	-10.06	19.38	12.66	0.70	0.66	13.00	532188.06	1698486.74	N 39 57 22.27	W 80 34 32.03	2.83
	4466.00	0.88	104.99	4465.76	3611.49	-9.12	19.41	14.51	0.76	-0.56	26.93	532188.09	1698488.59	N 39 57 22.27	W 80 34 32.00	2.87
	4561.00	1.41	105.21	4560.76	3706.47	-7.75	18.92	16.35	0.56	0.56	0.23	532187.59	1698490.42	N 39 57 22.27	W 80 34 31.98	2.90
	4656.00	0.62	109.21	4655.74	3801.45	-6.51	18.44	17.96	0.83	-0.83	4.21	532187.12	1698492.04	N 39 57 22.28	W 80 34 31.96	2.94
	4750.00	0.70	331.79	4749.74	3895.45	-6.69	16.78	18.17	1.31	0.09	-146.19	532187.48	1698492.25	N 39 57 22.27	W 80 34 31.96	2.97
	4844.00	1.32	345.10	4843.72	3989.43	-8.31	20.33	17.62	0.70	0.66	14.16	532189.01	1698491.70	N 39 57 22.28	W 80 34 31.96	3.00
	4939.00	0.48	356.71	4938.71	4084.42	-9.71	21.79	17.31	0.90	-0.88	12.22	532190.46	1698491.39	N 39 57 22.30	W 80 34 31.97	3.03
	5034.00	0.40	37.09	5033.71	4179.42	-10.18	22.45	17.49	0.33	-0.08	42.51	532191.13	1698491.57	N 39 57 22.30	W 80 34 31.96	3.04
	5129.00	0.62	31.42	5128.71	4274.42	-10.54	23.15	17.96	0.24	0.23	-5.97	532191.83	1698492.04	N 39 57 22.31	W 80 34 31.96	3.05
	5223.00	0.79	22.11	5222.70	4368.41	-11.17	24.16	18.47	0.22	0.18	-9.90	532192.66	1698492.55	N 39 57 22.32	W 80 34 31.95	3.07
	5289.00	0.88	18.99	5288.89	4414.40	-11.58	24.81	18.70	0.22	0.20	-6.78	532193.49	1698492.78	N 39 57 22.33	W 80 34 31.95	3.07
	5322.00	1.00	32.25	5321.89	4467.40	-12.05	25.59	19.08	0.47	0.23	25.02	532194.27	1698493.16	N 39 57 22.33	W 80 34 31.94	3.09
	5354.00	0.07	246.37	5353.68	4499.39	-12.16	25.82	19.21	3.30	-2.81	-446.50	532194.50	1698493.29	N 39 57 22.34	W 80 34 31.94	3.11
	5396.00	0.45	208.56	5395.68	4531.39	-12.12	25.70	19.13	1.25	1.19	-127.53	532194.38	1698493.21	N 39 57 22.33	W 80 34 31.94	3.11
	5417.00	3.80	220.51	5416.68	4562.37	-11.74	24.81	18.41	10.84	10.61	38.55	532193.49	1698492.49	N 39 57 22.33	W 80 34 31.95	3.18
	5449.00	7.50	220.34	5448.50	4594.21	-10.74	22.41	16.37	11.56	11.56	-0.53	532191.09	1698490.45	N 39 57 22.30	W 80 34 31.98	3.26
	5480.00	10.89	218.55	5479.10	4624.81	-9.09	18.62	13.26	10.33	10.29	-5.77	532187.30	1698487.34	N 39 57 22.26	W 80 34 32.02	3.33
	5512.00	13.98	213.08	5510.38	4656.09	-8.41	13.13	9.35	9.95	9.28	-17.09	532181.81	1698483.43	N 39 57 22.21	W 80 34 32.07	3.42
	5544.00	16.45	205.79	5541.28	4686.99	-2.29	5.89	5.32	10.52	8.72	-22.78	532174.57	1698479.40	N 39 57 22.14	W 80 34 32.12	3.50
	5575.00	19.85	204.70	5570.74	4716.45	3.06	-2.85	1.21	11.02	10.97	-3.52	532165.83	1698475.29	N 39 57 22.05	W 80 34 32.17	3.59
	5607.00	22.81	207.85	5600.54	4748.25	9.32	-13.27	-3.96	9.92	9.25	8.84	532155.41	1698470.12	N 39 57 21.95	W 80 34 32.23	3.67
	5638.00	25.62	214.24	5628.82	4774.53	15.22	-24.13	-10.54	12.38	9.08	20.81	532144.55	1698463.54	N 39 57 21.84	W 80 34 32.32	3.76
	5670.00	27.21	219.92	5657.48	4803.19	20.48	-35.46	-18.13	9.32	4.97	17.75	532133.22	1698454.95	N 39 57 21.73	W 80 34 32.43	3.84
	5701.00	25.96	214.15	5685.21	4830.92	25.83	-48.52	-27.49	9.25	-4.03	-18.61	532122.16	1698446.59	N 39 57 21.62	W 80 34 32.53	3.91
	5733.00	24.89	203.00	5714.12	4859.83	32.51	-58.52	-34.06	15.31	-3.34	-34.84	532110.18	1698440.02	N 39 57 21.50	W 80 34 32.61	3.98
	5765.00	25.23	195.03	5743.12	4888.83	41.19	-71.31	-38.46	10.60	1.06	-24.91	532097.37	1698435.62	N 39 57 21.37	W 80 34 32.67	4.04
	5796.00	27.03	189.17	5770.95	4916.66	51.15	-84.85	-41.30	10.14	5.81	-18.90	532084.04	1698432.79	N 39 57 21.24	W 80 34 32.70	4.10
	5828.00	29.83	185.15	5799.12	4944.83	63.08	-99.71	-43.17	10.07	8.13	-12.56	532068.98	1698430.92	N 39 57 21.09	W 80 34 32.72	4.15
	5859.00	32.96	184.04	5825.61	4971.32	76.15	-115.76	-44.45	10.60	10.74	-3.58	532052.93	1698429.63	N 39 57 20.93	W 80 34 32.74	4.21
	5891.00	35.32	184.62	5852.09	4997.80	90.78	-133.66	-45.81	7.44	7.38	1.81	532035.02	1698428.28	N 39 57 20.75	W 80 34 32.75	4.28
	5938.00	39.83	186.45	5889.38	5035.09	113.71	-162.11	-48.59	9.47	9.17	3.89	532006.57	1698425.50	N 39 57 20.47	W 80 34 32.78	4.33
	5985.00	43.94	188.33	5924.42	5070.13	138.20	-193.16	-52.63	9.55	9.17	4.00	531975.53	1698421.45	N 39 57 20.16	W 80 34 32.83	4.41
	6032.00	48.81	187.72	5956.84	5102.55	164.59	-226.84	-57.38	10.40	10.36	-1.30	531941.85	1698416.71	N 39 57 19.83	W 80 34 32.89	4.48
	6080.00	52.90	184.70	5987.14	5132.85	194.20	-263.83	-61.37	9.62	8.52	-6.29	531904.86	1698412.71	N 39 57 19.48	W 80 34 32.93	4.55
	6111.00	54.57	181.52	6005.48	5151.19	214.87	-288.79	-62.72	9.87	5.39	-10.26	531879.91	1698411.36	N 39 57 19.22	W 80 34 32.95	4.59
	6143.00	55.38	178.00	6023.85	5169.56	237.36	-314.98	-62.61	9.36	2.53	-11.00	531853.71	1698411.48	N 39 57 18.96	W 80 34 32.94	4.64
	6174.00	55.88	173.81	6041.36	5187.07	260.14	-340.49	-60.80	11.00	1.55	-13.19	531828.20	1698413.28	N 39 57 18.71	W 80 34 32.91	4.68
	6206.00	55.88	169.38	6059.32	5205.03	284.55	-368.69	-56.95	11.72	0.06	-14.16	531802.01	1698417.13	N 39 57 18.45	W 80 34 32.86	4.72
	6238.00	56.16	164.82	6077.21	5222.92	309.75	-392.55	-51.05	11.59	0.68	-13.84	531776.15	1698423.03	N 39 57 18.19	W 80 34 32.78	4.76
	6269.00	57.04	161.48	6094.28	5239.99	334.82	-417.32	-43.57	9.74	2.84	-11.16	531751.38	1698430.52	N 39 57 17.95	W 80 34 32.68	4.79
	6301.00	58.94	157.77	6111.24	5256.95	361.47	-442.74	-34.11	11.44	5.94	-11.53	531725.96	1698439.97	N 39 57 17.70	W 80 34 32.56	4.83
	6332.00	61.59	154.47	6126.62	5272.33	388.17	-467.34	-23.21	12.59	6.55	-10.65	531701.36	1698450.88	N 39 57 17.46	W 80 34 32.41	4.87
	6364.00	64.69	152.60	6141.08	5286.79	416.82	-492.89	-10.48	11.00	9.69	-5.84	531675.81	1698463.60	N 39 57 17.21	W 80 34 32.24	4.90
	6395.00	68.00	151.27	6153.52	5299.23	444.97	-517.94	-2.88	11.38	10.68	-4.29	531650.78	1698476.96	N 39 57 16.96	W 80 34 32.07	4.93
	6427.00	70.96	149.74	6164.73	5310.44	474.93	-544.02	17.64	10.28	9.25	-4.76	531624.68	1698491.72	N 39 57 16.70	W 80 34 31.88	4.97
	6459.00	73.51	148.99	6174.19	5319.80	504.44	-569.42	32.68	8.54	8.23	-2.42	531599.28	1698506.76	N 39 57 16.46	W 80 34 31.68	5.00
	6490.00	76.44	148.11	6182.49	5328.20	535.34	-595.78	48.61	9.53	9.16	-2.75	531572.92	1698522.86	N 39 57 16.20	W 80 34 31.47	5.03
	6522.00	79.03	146.85	6189.27	5334.88	566.60	-622.15	65.62	9.10	8.25	-3.94	531546.56	1698539.69	N 39 57 15.94	W 80 34 31.25	5.06
	6553.00	81.59	144.99	6194.53	5340.24	597.11	-647.45	82.74	9.49	7.42	-6.00	531521.26	1698556.81	N 39 57 15.69	W 80 34 31.02	5.08
	6585.00	83.75	142.98	6198.67	5344.36	628.72	-673.11	101.39	9.68	7.41	-6.28	531495.60	1698575.47	N 39 57 15.44	W 80 34 30.78	5.11
	6627.00	85.90	140.96	6201.73	5347.44	670.29	-706.10	127.18	10.95	9.88	-4.74	531462.61	1698601.28	N 39 57 15.12	W 80 34 30.44	5.15
	6648.00	88.87	141.23	6202.12	5347.83	691.09	-722.44	140.37	9.92	9.86	1.14	531446.27	1698614.44	N 39 57 14.96	W 80 34 30.27	5.17
	6743.00	90.43	140.07	6202.20	5347.91	785.11	-795.90	200.60	1.22	-0.04	-1.22	531372.81	1698674.67	N 39 57 14.24	W 80 34 29.49	5.22
	6837.00	90.45	143.17	6201.89	5347.80	878.34	-869.58	258.95	3.34	0.55	3.30	531299.14	1698733.02	N 39 57 13.52	W 80 34 28.73	5.28
	6932.00	90.98	142.36	6200.72	5346.43	972.79	-945.21	316.43	1.01	0.54	-0.85	531223.51	1698790.50	N 39 57 12.78	W 80 34 27.98	5.32
	7027.00	89.90	142.87	6200.01	5345.72	1087.21	-1020.69	374.11	1.24	-1.12	0.54	531146				

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 ° ' '')	Directional Difficulty Index
	7121.00	89.59	143.82	6200.43	5348.14	1160.77	-1096.10	430.23	1.06	-0.33	1.01	531072.63	1698904.29	N 39 57 11.30	W 80 34 26.49	5.40
	7216.00	88.73	140.85	6201.82	5347.53	1255.13	-1171.29	488.26	3.25	-0.91	-3.13	530997.45	1698962.32	N 39 57 10.56	W 80 34 25.74	5.45
	7310.00	89.24	141.29	6203.48	5349.19	1348.24	-1244.40	547.32	0.72	0.54	0.47	530824.34	1699021.38	N 39 57 9.85	W 80 34 24.97	5.48
	7405.00	89.31	143.71	6204.89	5350.40	1442.83	-1319.75	605.14	2.55	0.07	2.55	530848.98	1699079.20	N 39 57 9.11	W 80 34 24.21	5.52
	7500.00	88.70	145.65	6206.34	5352.05	1537.35	-1397.25	660.06	2.14	-0.64	2.04	530771.49	1699134.11	N 39 57 8.35	W 80 34 23.50	5.56
	7594.00	88.73	146.67	6208.44	5354.15	1631.22	-1475.31	712.39	1.09	0.03	1.09	530693.44	1699186.44	N 39 57 7.58	W 80 34 22.81	5.59
	7689.00	89.73	140.86	6209.72	5355.43	1725.79	-1551.89	768.51	6.21	1.05	-6.12	530616.86	1699242.58	N 39 57 6.83	W 80 34 22.08	5.63
	7784.00	90.48	138.41	6209.55	5355.26	1819.54	-1624.27	830.04	2.70	0.79	-2.58	530544.48	1699304.08	N 39 57 6.13	W 80 34 21.28	5.66
	7878.00	90.03	143.32	6209.13	5354.84	1912.59	-1687.16	889.34	5.25	-0.48	5.22	530471.80	1699363.39	N 39 57 5.41	W 80 34 20.51	5.70
	7973.00	90.34	142.07	6208.82	5354.53	2007.03	-1772.72	948.92	1.36	0.33	-1.32	530396.04	1699420.96	N 39 57 4.67	W 80 34 19.76	5.73
	8068.00	89.73	140.86	6208.76	5354.47	2101.23	-1847.03	1006.10	1.43	-0.64	-1.27	530321.73	1699480.14	N 39 57 3.95	W 80 34 18.98	5.75
	8163.00	90.52	142.19	6208.56	5354.27	2195.45	-1921.40	1065.21	1.83	0.83	1.40	530247.36	1699539.24	N 39 57 3.22	W 80 34 18.21	5.78
	8257.00	90.21	143.21	6207.86	5353.67	2288.89	-1996.18	1122.17	1.13	-0.33	1.09	530172.59	1699596.20	N 39 57 2.48	W 80 34 17.47	5.80
	8352.00	89.86	144.59	6207.90	5353.81	2383.53	-2072.93	1178.14	1.50	-0.37	1.45	530095.84	1699652.17	N 39 57 1.73	W 80 34 16.74	5.83
	8447.00	89.42	147.00	6208.50	5354.21	2478.38	-2151.49	1231.54	2.58	-0.46	2.54	530017.28	1699705.56	N 39 57 0.96	W 80 34 16.04	5.85
	8542.00	89.73	148.88	6209.20	5354.91	2573.36	-2232.04	1281.89	2.11	0.33	2.08	529936.74	1699755.91	N 39 57 0.17	W 80 34 15.38	5.88
	8637.00	89.35	145.88	6209.96	5355.67	2668.32	-2312.09	1333.02	3.29	-0.40	-3.26	529856.69	1699807.05	N 39 56 59.39	W 80 34 14.72	5.90
	8731.00	89.97	146.06	6210.52	5356.23	2762.19	-2389.99	1385.63	0.89	0.66	0.19	529778.80	1699859.65	N 39 56 58.62	W 80 34 14.03	5.92
	8826.00	90.34	141.38	6210.27	5355.98	2856.78	-2466.54	1441.84	4.86	0.39	-4.95	529702.25	1699915.88	N 39 56 57.87	W 80 34 13.29	5.95
	8921.00	89.04	139.65	6210.78	5356.49	2950.75	-2539.85	1502.26	2.26	-1.37	-1.80	529628.95	1699976.27	N 39 56 57.16	W 80 34 12.51	5.97
	9016.00	89.14	141.20	6212.29	5358.00	3044.70	-2613.06	1562.77	1.63	0.11	1.63	529555.74	1700036.78	N 39 56 56.44	W 80 34 11.72	6.00
Final Survey 28Jul12	9066.00	88.49	144.29	6213.32	5359.03	3094.39	-2652.84	1593.03	6.31	-1.30	6.18	529515.95	1700067.04	N 39 56 56.05	W 80 34 11.33	6.01
Protection to Bit	9111.00	88.49	144.29	6214.51	5360.22	3139.23	-2689.37	1619.29	0.00	0.00	0.00	529479.43	1700093.29	N 39 56 55.69	W 80 34 10.98	6.02

51-01546W

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	23.270		Act Stns	30.000	30.000	SLB_NSG+MSHOT-Depth Only
	23.270	2671.000		Act Stns	30.000	30.000	SLB_NSG+MSHOT
	2671.000	9066.000		Act Stns	30.000	30.000	SLB_MWD-STD
	9066.000	9111.000		Act Stns	30.000	30.000	SLB_BLIND+TREND

RECEIVED
 Office of Oil and Gas
 SEP 18 2014
 WV Department of
 Environmental Protection

Latitude: 39°57'30"

Longitude: 80°32'30"

LEGEND

- ⊕ - IRON NAIL POINT
- ⊙ - WELL
- - ALL ARE POINTS UNLESS OTHERWISE NOTED
- - - - - MINERAL TRACT BOUNDARY
- - - - - PARCEL LINES
- - - - - WELL REFERENCE
- - - - - PROPOSED HORIZONTAL WELL
- - - - - ROAD
- - - - - STREAM CENTER LINE
- - - - - AS DRILLED
- WELLS WITHIN 200' OF
- - EXISTING WELLS



SURFACE HOLE LOCATION (SHL)

UTM 17-NAD83
N:4422985.04
E:536268.77

NAD27, WV NORTH
N:532174.876
E:1698481.389

LAT/LOG DATUM-WGS84
LAT:39°57'22.41"
LON:80°34'31.36"

SURFACE HOLE LOCATION (SHL)

UTM 17-NAD83
N:4422982.750
E:536195.276

NAD27, WV NORTH
N:532168.179
E:1698473.961

LAT/LOG DATUM-WGS84
LAT:39°57'22.35"
LON:80°34'31.46"

BOTTOM HOLE LOCATION (BHL)

UTM 17-NAD83
N:4422170.335
E:536772.199

NAD27, WV NORTH
N:529473.798
E:1700088.472

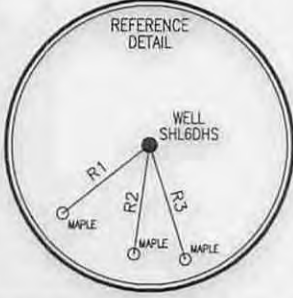
LAT/LOG DATUM-WGS84
LAT:39°56'55.91"
LON:80°34'10.31"

BOTTOM HOLE LOCATION (BHL)

UTM 17-NAD83
N:4422188.56
E:536764.78

NAD27, WV NORTH
N:529533.971
E:1700065.337

LAT/LOG DATUM-WGS84
LAT:39°56'56.50"
LON:80°34'10.62"



LINE	BEARING	DISTANCE
R1	S 52°24'32" W	266.45'
R2	S 06°40'33" W	229.25'
R3	S 19°26'11" E	296.47'

TRACT	LESSOR
1	CHARLES W. DAGUE, ET AL
2	LONNIE J. & KATHIE B. WINEMAN
3	CARRIE M. & DONALD R. TOLAND

WELL (AND LOG)

UTM 17-NAD83
N:4422982.750
E:536195.276

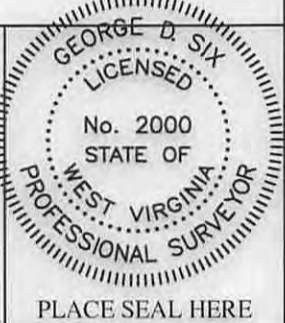
NAD27, WV NORTH
N:532168.179
E:1698473.961

LAT/LOG DATUM-WGS84
LAT:39°57'22.35"
LON:80°34'31.46"

- NOTES:**
- There are no dwellings within 200' of proposed well.
 - Proposed well is greater than 100' from the mineral line
 - 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

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

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 #: SHL6DHS-A AS DRILLED
SERIAL No.: WV0510580HS
API WELL #: 47 051 01546H6A
STATE COUNTY PERMIT

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

WATERSHED: WHEELING CREEK ELEVATION: 831.06'
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: 216.203±

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: 6,136'± TMD: 9,222'±
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