

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

API 47 - 051 - 01707 County Marshall District Clay  
Quad Glen Easton Pad Name Berger Field/Pool Name \_\_\_\_\_  
Farm name Berger Well Number 8H  
Operator (as registered with the OOG) Chevron Appalachia, LLC  
Address 800 Mountain View Drive City Smithfield State PA Zip 15478

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey  
Top hole Northing 4413862.22 Easting 520983.62  
Landing Point of Curve Northing 4413843.19 Easting 520541.14  
Bottom Hole Northing 4415165.27 Easting 519567.20

Elevation (ft) 1292' 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)  
Surface sections was drilled on air. The Intermediate and Production sections was drilled on SBM  
Fluid loss control, emulsifier, and shale stabilizer additives

Date permit issued 2/26/2014 Date drilling commenced 6/20/2014 Date drilling ceased 1/3/2015  
Date completion activities began 8/4/2015 Date completion activities ceased 12/26/2015  
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 169' Open mine(s) (Y/N) depths \_\_\_\_\_  
Salt water depth(s) ft \_\_\_\_\_ Void(s) encountered (Y/N) depths \_\_\_\_\_  
Coal depth(s) ft 768'-769', 784'-785', 830'-837', 1411'-1413', 1415'-1418' Cavern(s) encountered (Y/N) depths \_\_\_\_\_  
Is coal being mined in area (Y/N) No but not sealed

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AK 04/08/16  
02/24/16

API 47-051 - 01707 Farm name Berger Well number 8H

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	New	X-42; 118.76	NA	Y
Surface	17 1/2	13 3/8	297	New	J-55; 54.50	NA	Y
Coal							
Intermediate 1							
Intermediate 2	12 1/4	9 5/8	2673	New	N-80; 40	NA	Y
Intermediate 3							
Production	8 1/2	5 1/2	12513	New	P-110; 20	NA	Y
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	Bulk	60					
Surface	Bulk	382	15.60	1.21	462	SURFACE	8
Coal							
Intermediate 1							
Intermediate 2	A	914	15.60	1.24	1133	SURFACE	8
Intermediate 3							
Production	A	2382	15.20	1.31	3120	SURFACE	8
Tubing							

Drillers TD (ft) 12532 Loggers TD (ft) 12532  
 Deepest formation penetrated NA Plug back to (ft) NA  
 Plug back procedure NA

Kick off depth (ft) 4868

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 String: 1 Bow spring centralizer halfway through the shoe track around a stop collar, 1 Bow spring centralizer per joint over connection to base of conductor. One ridged centralizer within top 40" inside conductor.  
 Intermediate String: 1 Bow spring centralizer halfway through the shoe track around a stop collar, and 1 bow spring centralizer over every other connection. Production casing 1 Solid Torque Glider Centralizer per joint to KOP, and 1 bow spring centralizer every other joint to surface after that.

WAS WELL COMPLETED AS SHOT HOLE  Yes  No DETAILS Please see attached Perforation and Stimulation reports

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

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

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PERFORATION RECORD

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

Please insert additional pages as applicable.

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API: 47-5101707	Well Name: Berger	Well Number: 8H
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PERFORATION RECORD					
Stage No.	Perforation Date	Perforated From TMD Ft.	Perforated To TMD Ft.	Number of Perforations	Formation(s)
1	11/20/15	12472	12270	50	Marcellus
2	11/20/15	12222	12020	50	Marcellus
3	11/21/15	11975	11770	50	Marcellus
4	11/21/15	11723	11520	50	Marcellus
5	11/22/15	11475	11270	50	Marcellus
6	11/22/15	11215	11021	50	Marcellus
7	11/22/15	10968	10773	50	Marcellus
8	11/23/15	11146	10943	50	Marcellus
9	11/23/15	10472	10268	50	Marcellus
10	11/24/15	10220	10020	50	Marcellus
11	11/24/15	9972	9770	50	Marcellus
12	11/25/15	9722	9520	50	Marcellus
13	11/25/15	9470	9270	50	Marcellus
14	11/26/15	9222	9020	50	Marcellus
15	11/26/15	8972	8770	50	Marcellus
16	11/27/15	8722	8520	50	Marcellus
17	11/27/15	8470	8270	50	Marcellus
18	11/28/15	8222	8020	50	Marcellus
19	11/29/15	7972	7770	50	Marcellus
20	11/29/15	7720	7520	50	Marcellus
21	11/30/15	7473	7270	50	Marcellus
22	11/30/15	7225	7020	50	Marcellus
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Please insert additional copies of this page if additional rows/stages are needed.

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<b>STIMULATION INFORMATION / STAGE</b>								
Complete a separate record for each stimulation stage. (Please insert additional lines for additional stages or additional pages as applicable).								
Stg No.	Stimulation 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)
1	11/20/15	98	8456	--	5017	402796	10611	n/a
2	11/20/15	96	8397	6293	4571	500880	13174	n/a
3	11/21/15	98	8260	6458	4884	498980	12432	n/a
4	11/21/15	90	7586	6359	4952	500556	12461	n/a
5	11/22/15	98	7725	6597	5006	501040	12503	n/a
6	11/22/15	98	7592	6102	5036	500878	12454	n/a
7	11/22/15	97	7459	6351	4728	500260	12404	n/a
8	11/23/15	93	7443	6160	5186	499796	12391	n/a
9	11/23/15	97	7426	5353	4751	499680	12867	n/a
10	11/24/15	98	7839	6146	4941	499489	12405	n/a
11	11/24/15	98	7617	6109	5060	500888	12418	n/a
12	11/25/15	98	7778	6171	4549	500340	12271	n/a
13	11/25/15	99	7507	5861	5522	501151	12255	n/a
14	11/26/15	83	8392	5846	5142	170145	10090	n/a
15	11/26/15	99	7249	n/a	4555	500785	12438	n/a
16	11/27/15	99	7454	6079	5186	499402	12257	n/a
17	11/27/15	99	7113	5971	5286	501310	12379	n/a
18	11/28/15	98	7825	6292	4646	401000	11319	n/a
19	11/29/15	99	7328	5995	5286	502097	12418	n/a
20	11/29/15	99	7160	7131	4800	500799	12310	n/a
21	11/30/15	88	8078	5889	4817	168615	8614	n/a
22	11/30/15	99	6485	5211	5386	500787	12185	n/a
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PRODUCING FORMATION(S)	DEPTHS	
	TVD	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

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	
	0		0		
Dunkard Group Sand	160	169	169	169	Fresh Water 169' MD 1" stream
Pittsburgh Coal	830	837	830	837	Coal
Salt Sand	1538	1568	1540	1570	Gas Show @ 1550' 6101 units
Big Lime	1848	1928	1850	1930	Limestone: crm-wh, hd, crpxln
Burgoon (Big Injun)	1927	2117	1930	2120	SS: offwh, wh, cons, clr, trans, lcemt, fg-mg
Weir Sand	2277	2297	2280	2300	SLTST: ltgy-mgy, occ mgy, hrd, vf-fg, tcmt, bio, arg, sl calc
Berea Sand	2507	2530	2510	2533	SS: wh, clr, trans, ltgy-gy, cns, lcemt, mg-fg, sbang-ang, arg, msph, non calc, tr floor, exl fast cut, frt odr, lse pyr
Burket Shale	6281	6294	6611	6635	SH: drkgy, v. drkgy, frm, slty, grty, sbblky-sbfiss, modcalc, embd calc, lse calct
Tully Limestone	6294	6330	6635	6706	LS: ltgy, gy, mgy, frm-hrd, dns, cln, mic-fxln, v. arg
Hamilton Shale	6330	6369	6706	6816	SH: drkgy, v. drkgy, frm, slty, grty, sbblky-sbfiss, carb, modv. calc, lse calct, w/LS
Marcellus Shale	6369		6816		SH: drkgy, v. drkgy, frm, slty, grty, sbblky-sbfiss, non calc, lse calct, lse pyr, w/LS: gy, ltgy, hrd, mott, mic, fxln, v. arg

Please insert additional pages as applicable.

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

Logging Company ALS Group USA Corp  
 Address 3352 128th Avenue City Holland State MI Zip 49424

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

Stimulating Company Schlumberger Technology Corp  
 Address 4600 J Barry Court, Suite 200 City Canonsburg State PA Zip 15307

Please insert additional pages as applicable.

Completed by Jackie M. Schlar Telephone 724-564-3721  
 Signature [Signature] Title Regulatory Compliance Team Lead Date 1/12/2016

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

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DRILLING CONTRACTORS		
Driller	Driller	Driller
Name Rocky Mountain Drilling	Name Highlands Drilling LLC	Name Nabors Drilling USA
Address 185 North Vernal Avenue, Suite 2	Address 900 Virginia Street East	Address 10100 NW 10th Street
City - State - Zip Vernal, UT 84078	City - State - Zip Charlestown, WV 25301	City - State - Zip Oklahoma City, OK 73127

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CEMENTING CONTRACTORS		
Name Schlumberger Technology Corp	Name Baker Hughes	Name
Address Two Robinson Plaza, Suite 200	Address 5373 West Alabama, Suite 300	Address
City - State - Zip Pittsburgh, PA 15205	City - State - Zip Houston, TX 77056	City - State - Zip

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# Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	11/20/2015
Job End Date:	11/30/2015
State:	West Virginia
County:	Marshall
API Number:	47-051-01707-00-00
Operator Name:	Chevron USA Inc.
Well Name and Number:	Berger 8H
Longitude:	-80.75462300
Latitude:	39.87454800
Datum:	NAD83
Federal/Tribal Well:	NO
True Vertical Depth:	6,303
Total Base Water Volume (gal):	10,979,676
Total Base Non Water Volume:	



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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
Base Fluid	Chevron	Carrier/Base Fluid					
			Water (Including Mix Water Supplied by Client)	7732-18-5	100.00000	89.90708	
Proppant	Schlumberger	Proppant					
			Crystalline Silica	14808-60-7	100.00000	9.96726	
7.5% Acid	Schlumberger	Perf Cleanup					
			Hydrochloric Acid	7647-01-0	8.00000	0.00784	
J580	Schlumberger	Gelling Agent					
			Carbohydrate Polymer	Proprietary	100.00000	0.00476	
M300	BASF Corporation	Biocide					
			Water	7732-18-5	75.00000	0.00165	
			Glutaral	111-30-8	25.00000	0.00055	
U042	Schlumberger	Iron Chelating Agent					
			Tetrasodium ethylenediaminetetraacetate	64-02-8	60.00000	0.00161	
			Trisodium nitrilotriacetate (impurity)	5064-31-3	10.00000	0.00027	
			Sodium hydroxide	1310-73-2	5.00000	0.00013	
L058	Schlumberger	Iron Stabilizer					
			Sodium erythorbate	6381-77-7	100.00000	0.00037	
B317	Schlumberger	Scale Inhibitor					

			Ethane-1,2-diol	107-21-1	5.00000	0.00010
			Trisodium ortho phosphate	7601-54-9	5.00000	0.00010
A264	Schlumberger	Corrosion Inhibitor				
			Methanol	67-56-1	40.00000	0.00004
			Aliphatic acids	Proprietary	30.00000	0.00003
			Aliphatic alcohols, ethoxylated #1	Proprietary	30.00000	0.00003
			Prop-2-yn-1-ol	107-19-7	10.00000	0.00001
J134	Schlumberger	Gel Breaker				
			Hemicellulase enzyme	9012-54-8	100.00000	0.00012

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)

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# Chevron Appalachia, LLC Berger 8H Gyro+MWD

<b>Report Date:</b> 11/16/2015	<b>Survey / DLS Computation Method:</b> Minimum Curvature / Lubinski
<b>Client:</b> Chevron Appalachia, LLC	<b>Vertical Section Azimuth:</b> 312.802° (TrueNorth)
<b>Field:</b> WV Marshall County	<b>Vertical Section Origin:</b> 0 ft, 0 ft
<b>Structure / Slot:</b> Chevron Appalachia, LLC Berger 8H / Chevron Appalachia, LLC Berger 8H	<b>TVD Reference Datum:</b> KB
<b>Well:</b> Berger 8H	<b>TVD Reference Elevation:</b> 1319.55 ft above MSL
<b>Borehole:</b> Original Borehole	<b>Sea Bed / Ground Level Elevation:</b> 1287.55 ft above MSL
<b>UWI/API#:</b> Unknown / 47-051-01707-00	<b>Magnetic Declination:</b> -7.6864 °
<b>Survey Name / Date:</b> Chevron Appalachia, LLC Berger 8H Gyro+MWD 03-Jan-2015	<b>Total Field Strength:</b> 52764.72 nT
<b>Grid Coordinate System:</b> NAD83 West Virginia State	<b>Magnetic Dip:</b> 67.3141 °
<b>Location Lat/Long:</b> 39° 52' 28.373" N, 80° 45' 16.635" W	<b>Declination Date:</b> 12/11/2014
<b>Location Grid N/E Y/X:</b> E 1616388.270 ftUSN 503114.100 ftUS	<b>Magnetic Declination Model:</b> HDGM 2013
<b>Grid Convergence Angle:</b> 0 °	<b>North Reference:</b> TrueNorth
<b>Grid Scale Factor:</b> 0.99991045	<b>Total Corr Mag North -&gt; Grid North:</b> -7.75 °
	<b>Local Coordinates Referenced To:</b> GridNorth

MD	INCL	AZIM	TVD	VSEC	ND	ED	DLS
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.17	242.30	100.00	0.05	-0.07	-0.13	0.17
130.00	0.16	234.02	130.00	0.07	-0.11	-0.20	0.09
160.00	0.21	259.70	160.00	0.11	-0.15	-0.29	0.32
190.00	0.19	252.96	190.00	0.17	-0.17	-0.39	0.10
220.00	0.15	249.99	220.00	0.21	-0.20	-0.48	0.14
250.00	0.17	263.54	250.00	0.26	-0.22	-0.56	0.14
280.00	0.22	248.97	280.00	0.32	-0.25	-0.66	0.23
310.00	0.20	253.52	310.00	0.37	-0.28	-0.76	0.09
340.00	0.25	253.52	340.00	0.43	-0.31	-0.87	0.17
370.00	0.28	258.73	370.00	0.50	-0.35	-1.01	0.13
400.00	0.42	264.46	400.00	0.62	-0.37	-1.19	0.48
430.00	0.45	267.44	430.00	0.78	-0.39	-1.42	0.13
460.00	0.67	267.39	460.00	0.98	-0.40	-1.71	0.73
490.00	0.87	271.68	489.99	1.28	-0.40	-2.11	0.69
520.00	0.97	269.41	519.99	1.63	-0.40	-2.60	0.35
550.00	1.07	274.55	549.98	2.04	-0.38	-3.13	0.45
580.00	0.97	273.64	579.98	2.45	-0.34	-3.66	0.34
610.00	0.96	272.37	609.97	2.84	-0.31	-4.17	0.08
640.00	0.88	268.56	639.97	3.20	-0.31	-4.65	0.34
670.00	0.76	271.43	669.97	3.51	-0.31	-5.08	0.42
694.00	0.46	265.11	693.97	3.70	-0.31	-5.33	1.28
717.00	0.32	128.32	716.97	3.70	-0.36	-5.37	3.17
748.00	0.66	114.93	747.97	3.44	-0.49	-5.14	1.15
808.00	0.98	106.56	807.96	2.65	-0.78	-4.34	0.57
900.00	0.93	121.26	899.95	1.21	-1.40	-2.94	0.27
995.00	0.31	210.95	994.94	0.39	-2.02	-2.41	1.03
1089.00	1.92	264.40	1088.92	1.39	-2.39	-4.11	1.86
1184.00	5.40	270.69	1183.71	5.76	-2.50	-10.16	3.68
1278.00	5.89	266.07	1277.26	12.34	-2.77	-19.39	0.71
1373.00	6.44	258.59	1371.71	18.79	-4.16	-29.47	1.02
1468.00	6.57	253.86	1466.10	24.71	-6.73	-39.91	0.58
1562.00	5.17	247.69	1559.61	29.27	-9.83	-48.99	1.63
1658.00	5.05	241.16	1655.23	32.42	-13.51	-56.69	0.62
1753.00	3.65	237.87	1749.95	34.52	-17.13	-62.92	1.50
1848.00	2.03	216.03	1844.83	35.11	-20.10	-66.47	2.02
1943.00	2.07	210.84	1939.77	34.55	-22.94	-68.34	0.20
2038.00	2.42	202.09	2034.70	33.49	-26.27	-69.97	0.51
2133.00	2.93	201.88	2129.60	31.91	-30.38	-71.63	0.54
2228.00	3.07	195.98	2224.47	29.89	-35.09	-73.24	0.36
2320.00	3.18	194.74	2316.33	27.58	-39.92	-74.56	0.14
2412.00	2.63	198.17	2408.21	25.50	-44.40	-75.87	0.63
2512.00	2.45	206.46	2508.11	23.94	-48.49	-77.54	0.41
2607.00	2.71	216.43	2603.02	23.13	-52.11	-79.77	0.55
2652.00	2.79	217.39	2647.96	22.90	-53.84	-81.07	0.20
2750.00	2.27	215.66	2745.87	22.44	-57.31	-83.65	0.54
2795.00	2.22	220.50	2790.83	22.29	-58.69	-84.74	0.43
2890.00	3.43	262.95	2885.73	24.05	-60.44	-88.76	2.46
2984.00	2.95	266.02	2979.58	27.52	-60.96	-93.96	0.54
3079.00	2.11	267.12	3074.49	30.42	-61.22	-98.15	0.89

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3174.00	1.73	269.73	3169.43	32.69	-61.31	-101.33	0.40
3268.00	1.18	260.38	3263.40	34.31	-61.48	-103.70	0.64
3363.00	0.93	282.15	3358.39	35.57	-61.48	-105.41	0.49
3458.00	0.65	308.93	3453.38	36.77	-60.98	-106.58	0.48
3552.00	0.74	300.16	3547.37	37.89	-60.34	-107.52	0.15
3647.00	1.06	294.48	3642.36	39.32	-59.67	-108.85	0.35
3742.00	0.71	299.27	3737.35	40.72	-59.02	-110.16	0.38
3837.00	0.97	303.98	3832.34	42.08	-58.29	-111.33	0.29
3932.00	0.71	303.23	3927.33	43.46	-57.51	-112.49	0.27
4027.00	0.91	306.81	4022.32	44.79	-56.74	-113.59	0.22
4122.00	0.71	304.83	4117.31	46.12	-55.95	-114.67	0.21
4217.00	0.79	295.80	4212.30	47.33	-55.33	-115.75	0.15
4312.00	0.62	307.85	4307.29	48.47	-54.73	-116.74	0.24
4407.00	0.39	294.19	4402.29	49.29	-54.28	-117.45	0.27
4501.00	0.61	289.35	4496.29	50.06	-53.98	-118.21	0.24
4596.00	0.76	285.62	4591.28	51.09	-53.64	-119.30	0.16
4692.00	1.00	299.65	4687.27	52.47	-53.05	-120.65	0.34
4785.00	1.14	302.06	4780.25	54.18	-52.16	-122.14	0.16
4890.00	0.17	250.25	4885.24	55.28	-51.66	-123.18	0.99
4985.00	5.42	252.20	4980.10	57.55	-53.08	-127.59	5.52
5080.00	11.58	244.47	5074.01	63.28	-58.56	-140.48	6.59
5175.00	16.63	246.66	5166.12	72.30	-68.07	-161.58	5.34
5269.00	22.70	238.64	5254.61	82.71	-82.85	-189.46	7.05
5315.00	25.23	241.21	5296.64	88.23	-92.20	-205.63	5.95
5364.00	27.69	244.56	5340.51	95.74	-102.12	-225.06	5.88
5459.00	33.58	244.82	5422.21	113.79	-122.80	-268.82	6.20
5554.00	37.76	246.51	5499.37	135.35	-145.58	-319.30	4.52
5649.00	40.07	245.05	5573.28	158.63	-170.08	-373.71	2.62
5744.00	39.96	244.85	5646.03	181.66	-195.94	-429.05	0.18
5838.00	39.86	247.34	5718.14	205.51	-220.37	-484.17	1.70
5933.00	40.21	247.53	5790.88	230.98	-243.82	-540.61	0.40
6028.00	40.75	246.66	5863.14	256.35	-267.83	-597.42	0.82
6123.00	41.08	248.34	5934.93	282.35	-291.63	-654.90	1.21
6218.00	41.63	251.95	6006.25	311.18	-312.93	-713.92	2.58
6312.00	43.89	265.93	6075.42	348.75	-324.94	-776.25	10.36
6407.00	43.36	277.45	6144.31	397.94	-323.05	-841.54	8.38
6502.00	46.77	282.53	6211.42	454.46	-311.31	-907.70	5.21
6597.00	52.65	284.23	6272.83	517.57	-294.50	-978.15	6.34
6692.00	62.37	283.84	6323.79	587.72	-275.11	-1055.80	10.23
6786.00	71.80	285.50	6360.35	664.00	-253.17	-1139.45	10.16
6881.00	79.84	291.61	6383.62	747.91	-223.82	-1226.63	10.51
6976.00	84.97	300.12	6396.20	837.89	-182.75	-1311.23	10.39
7071.00	87.49	310.81	6402.46	931.76	-127.82	-1388.31	11.53
7166.00	90.62	323.15	6404.03	1026.30	-58.52	-1452.98	13.40
7261.00	90.79	331.87	6402.86	1118.09	21.53	-1503.96	9.18
7356.00	91.65	335.19	6400.84	1206.91	106.54	-1546.29	3.60
7451.00	90.65	336.73	6398.93	1294.23	193.28	-1584.98	1.94
7545.00	90.86	331.21	6397.69	1381.85	277.70	-1626.21	5.88
7640.00	91.38	327.02	6395.83	1472.99	359.20	-1674.96	4.44
7735.00	90.55	327.19	6394.24	1565.03	438.95	-1726.54	0.89
7830.00	89.90	324.16	6393.86	1657.63	517.40	-1780.11	3.27
7924.00	90.62	323.20	6393.44	1749.94	593.13	-1835.78	1.27
8019.00	90.86	321.29	6392.22	1843.64	668.23	-1893.94	2.03
8114.00	89.83	321.47	6391.65	1937.57	742.45	-1953.24	1.10
8209.00	89.24	322.31	6392.42	2031.38	817.20	-2011.87	1.08
8304.00	88.07	322.33	6394.64	2125.04	892.36	-2069.91	1.23
8399.00	89.04	324.21	6397.04	2218.42	968.48	-2126.70	2.22
8494.00	89.38	323.24	6398.35	2311.69	1045.05	-2182.91	1.08
8588.00	89.17	323.58	6399.53	2404.08	1120.52	-2238.94	0.42
8683.00	91.10	323.60	6399.30	2497.40	1196.97	-2295.32	2.03
8778.00	91.00	327.06	6397.56	2590.11	1275.08	-2349.35	3.65
8873.00	91.38	324.82	6395.60	2682.59	1353.76	-2402.54	2.39
8968.00	91.48	324.68	6393.23	2775.50	1431.32	-2457.35	0.18
9062.00	91.24	322.90	6391.00	2867.75	1507.14	-2512.86	1.92
9157.00	91.24	323.59	6388.95	2961.15	1583.24	-2569.69	0.73
9252.00	91.34	323.34	6386.81	3054.49	1659.55	-2626.23	0.29
9347.00	91.24	322.49	6384.67	3147.99	1735.32	-2683.50	0.90
9441.00	91.48	322.60	6382.45	3240.61	1809.92	-2740.65	0.28
9536.00	90.83	321.01	6380.54	3334.41	1884.56	-2799.38	1.80

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9631.00	90.72	321.58	6379.25	3428.36	1958.69	-2858.77	0.61
9726.00	90.93	320.80	6377.88	3522.34	2032.70	-2918.31	0.85
9821.00	90.93	321.08	6376.35	3616.37	2106.46	-2978.16	0.30
9916.00	90.72	320.40	6374.98	3710.45	2180.01	-3038.28	0.75
10011.00	90.76	320.88	6373.75	3804.55	2253.45	-3098.53	0.51
10105.00	91.07	322.33	6372.26	3897.43	2327.11	-3156.90	1.58
10200.00	90.76	322.70	6370.75	3991.06	2402.48	-3214.71	0.51
10295.00	91.03	322.63	6369.27	4084.64	2478.01	-3272.31	0.30
10390.00	91.07	322.88	6367.53	4178.20	2553.62	-3329.80	0.26
10485.00	90.83	323.64	6365.96	4271.61	2629.74	-3386.63	0.84
10580.00	90.89	323.02	6364.53	4365.00	2705.92	-3443.35	0.65
10675.00	90.82	323.57	6363.11	4458.40	2782.08	-3500.13	0.59
10769.00	90.79	323.18	6361.78	4550.79	2857.52	-3556.19	0.42
10864.00	90.79	324.03	6360.47	4644.10	2933.98	-3612.55	0.89
10959.00	91.03	323.39	6358.96	4737.37	3010.54	-3668.77	0.72
11053.00	90.82	323.08	6357.44	4829.80	3085.84	-3725.03	0.40
11148.00	91.03	322.34	6355.90	4923.37	3161.40	-3782.58	0.81
11243.00	90.48	323.81	6354.65	5016.84	3237.34	-3839.65	1.65
11338.00	90.69	324.02	6353.68	5110.05	3314.11	-3895.60	0.31
11433.00	90.82	324.02	6352.43	5203.23	3390.98	-3951.40	0.14
11528.00	90.65	323.59	6351.20	5296.47	3467.64	-4007.49	0.49
11623.00	91.13	322.95	6349.72	5389.88	3543.77	-4064.30	0.85
11718.00	91.07	322.59	6347.89	5483.43	3619.40	-4121.77	0.38
11813.00	90.76	322.92	6346.38	5576.99	3695.02	-4179.25	0.47
11907.00	90.69	323.28	6345.20	5669.46	3770.18	-4235.69	0.39
12002.00	90.55	323.46	6344.17	5762.84	3846.42	-4292.36	0.24
12097.00	91.51	323.30	6342.46	5856.21	3922.66	-4349.01	1.03
12192.00	91.62	322.47	6339.87	5949.71	3998.39	-4406.31	0.88
12286.00	90.93	321.37	6337.78	6042.49	4072.37	-4464.26	1.38
12381.00	90.83	318.92	6336.33	6136.70	4145.28	-4525.13	2.58
12476.00	90.03	322.78	6335.62	6230.74	4218.94	-4585.09	4.15
12521.00	90.21	323.51	6335.52	6275.01	4254.94	-4612.09	1.65
12564.00	90.21	323.51	6335.37	6317.26	4289.51	-4637.66	0.01

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# Chevron Appalachia, LLC Berger 8H Gyro+MWD

<b>Report Date:</b> 11/16/2015	<b>Survey / DLS Computation Method:</b> Minimum Curvature / Lubinski
<b>Client:</b> Chevron Appalachia, LLC	<b>Vertical Section Azimuth:</b> 312.802° (TrueNorth)
<b>Field:</b> WV Marshall County	<b>Vertical Section Origin:</b> 0 ft, 0 ft
<b>Structure / Slot:</b> Chevron Appalachia, LLC Berger 8H / Chevron Appalachia, LLC Berger 8H	<b>TVD Reference Datum:</b> KB
<b>Well:</b> Berger 8H	<b>TVD Reference Elevation:</b> 1319.55 ft above MSL
<b>Borehole:</b> Original Borehole	<b>Sea Bed / Ground Level Elevation:</b> 1287.55 ft above MSL
<b>UWI/API#:</b> Unknown / 47-051-01707-00	<b>Magnetic Declination:</b> -7.6864 °
<b>Survey Name / Date:</b> Chevron Appalachia, LLC Berger 8H Gyro+MWD 03-Jan-2015	<b>Total Field Strength:</b> 52764.72 nT
<b>Grid Coordinate System:</b> NAD83 West Virginia State	<b>Magnetic Dip:</b> 67.3141 °
<b>Location Lat/Long:</b> 39° 52' 28.373" N, 80° 45' 16.635" W	<b>Declination Date:</b> 12/11/2014
<b>Location Grid N/E Y/X:</b> E 1616388.270 ftUSN 503114.100 ftUS	<b>Magnetic Declination Model:</b> HDGM 2013
<b>Grid Convergence Angle:</b> 0 °	<b>North Reference:</b> TrueNorth
<b>Grid Scale Factor:</b> 0.99991045	<b>Total Corr Mag North -&gt; Grid North:</b> -7.75 °
	<b>Local Coordinates Referenced To:</b> GridNorth

MD	INCL	AZIM	TVD	VSEC	ND	ED	DLS
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.17	242.30	100.00	0.05	-0.07	-0.13	0.17
130.00	0.16	234.02	130.00	0.07	-0.11	-0.20	0.09
160.00	0.21	259.70	160.00	0.11	-0.15	-0.29	0.32
190.00	0.19	252.96	190.00	0.17	-0.17	-0.39	0.10
220.00	0.15	249.99	220.00	0.21	-0.20	-0.48	0.14
250.00	0.17	263.54	250.00	0.26	-0.22	-0.56	0.14
280.00	0.22	248.97	280.00	0.32	-0.25	-0.66	0.23
310.00	0.20	253.52	310.00	0.37	-0.28	-0.76	0.09
340.00	0.25	253.52	340.00	0.43	-0.31	-0.87	0.17
370.00	0.28	258.73	370.00	0.50	-0.35	-1.01	0.13
400.00	0.42	264.46	400.00	0.62	-0.37	-1.19	0.48
430.00	0.45	267.44	430.00	0.78	-0.39	-1.42	0.13
460.00	0.67	267.39	460.00	0.98	-0.40	-1.71	0.73
490.00	0.87	271.68	489.99	1.28	-0.40	-2.11	0.69
520.00	0.97	269.41	519.99	1.63	-0.40	-2.60	0.35
550.00	1.07	274.55	549.98	2.04	-0.38	-3.13	0.45
580.00	0.97	273.64	579.98	2.45	-0.34	-3.66	0.34
610.00	0.96	272.37	609.97	2.84	-0.31	-4.17	0.08
640.00	0.88	268.56	639.97	3.20	-0.31	-4.65	0.34
670.00	0.76	271.43	669.97	3.51	-0.31	-5.08	0.42
694.00	0.46	265.11	693.97	3.70	-0.31	-5.33	1.28
717.00	0.32	128.32	716.97	3.70	-0.36	-5.37	3.17
748.00	0.66	114.93	747.97	3.44	-0.49	-5.14	1.15
808.00	0.98	106.56	807.96	2.65	-0.78	-4.34	0.57
900.00	0.93	121.26	899.95	1.21	-1.40	-2.94	0.27
995.00	0.31	210.95	994.94	0.39	-2.02	-2.41	1.03
1089.00	1.92	264.40	1088.92	1.39	-2.39	-4.11	1.86
1184.00	5.40	270.69	1183.71	5.76	-2.50	-10.16	3.68
1278.00	5.89	266.07	1277.26	12.34	-2.77	-19.39	0.71
1373.00	6.44	258.59	1371.71	18.79	-4.16	-29.47	1.02
1468.00	6.57	253.86	1466.10	24.71	-6.73	-39.91	0.58
1562.00	5.17	247.69	1559.61	29.27	-9.83	-48.99	1.63
1658.00	5.05	241.16	1655.23	32.42	-13.51	-56.69	0.62
1753.00	3.65	237.87	1749.95	34.52	-17.13	-62.92	1.50
1848.00	2.03	216.03	1844.83	35.11	-20.10	-66.47	2.02
1943.00	2.07	210.84	1939.77	34.55	-22.94	-68.34	0.20
2038.00	2.42	202.09	2034.70	33.49	-26.27	-69.97	0.51
2133.00	2.93	201.88	2129.60	31.91	-30.38	-71.63	0.54
2228.00	3.07	195.98	2224.47	29.89	-35.09	-73.24	0.36
2320.00	3.18	194.74	2316.33	27.58	-39.92	-74.56	0.14
2412.00	2.63	198.17	2408.21	25.50	-44.40	-75.87	0.63
2512.00	2.45	206.46	2508.11	23.94	-48.49	-77.54	0.41
2607.00	2.71	216.43	2603.02	23.13	-52.11	-79.77	0.55
2652.00	2.79	217.39	2647.96	22.90	-53.84	-81.07	0.20
2750.00	2.27	215.66	2745.87	22.44	-57.31	-83.65	0.54
2795.00	2.22	220.50	2790.83	22.29	-58.69	-84.74	0.43
2890.00	3.43	262.95	2885.73	24.05	-60.44	-88.76	2.46
2984.00	2.95	266.02	2979.58	27.52	-60.96	-93.96	0.54
3079.00	2.11	267.12	3074.49	30.42	-61.22	-98.15	0.89

3174.00	1.73	269.73	3169.43	32.69	-61.31	-101.33	0.40
3268.00	1.18	260.38	3263.40	34.31	-61.48	-103.70	0.64
3363.00	0.93	282.15	3358.39	35.57	-61.48	-105.41	0.49
3458.00	0.65	308.93	3453.38	36.77	-60.98	-106.58	0.48
3552.00	0.74	300.16	3547.37	37.89	-60.34	-107.52	0.15
3647.00	1.06	294.48	3642.36	39.32	-59.67	-108.85	0.35
3742.00	0.71	299.27	3737.35	40.72	-59.02	-110.16	0.38
3837.00	0.97	303.98	3832.34	42.08	-58.29	-111.33	0.29
3932.00	0.71	303.23	3927.33	43.46	-57.51	-112.49	0.27
4027.00	0.91	306.81	4022.32	44.79	-56.74	-113.59	0.22
4122.00	0.71	304.83	4117.31	46.12	-55.95	-114.67	0.21
4217.00	0.79	295.80	4212.30	47.33	-55.33	-115.75	0.15
4312.00	0.62	307.85	4307.29	48.47	-54.73	-116.74	0.24
4407.00	0.39	294.19	4402.29	49.29	-54.28	-117.45	0.27
4501.00	0.61	289.35	4496.29	50.06	-53.98	-118.21	0.24
4596.00	0.76	285.62	4591.28	51.09	-53.64	-119.30	0.16
4692.00	1.00	299.65	4687.27	52.47	-53.05	-120.65	0.34
4785.00	1.14	302.06	4780.25	54.18	-52.16	-122.14	0.16
4890.00	0.17	250.25	4885.24	55.28	-51.66	-123.18	0.99
4985.00	5.42	252.20	4980.10	57.55	-53.08	-127.59	5.52
5080.00	11.58	244.47	5074.01	63.28	-58.56	-140.48	6.59
5175.00	16.63	246.66	5166.12	72.30	-68.07	-161.58	5.34
5269.00	22.70	238.64	5254.61	82.71	-82.85	-189.46	7.05
5315.00	25.23	241.21	5296.64	88.23	-92.20	-205.63	5.95
5364.00	27.69	244.56	5340.51	95.74	-102.12	-225.06	5.88
5459.00	33.58	244.82	5422.21	113.79	-122.80	-268.82	6.20
5554.00	37.76	246.51	5499.37	135.35	-145.58	-319.30	4.52
5649.00	40.07	245.05	5573.28	158.63	-170.08	-373.71	2.62
5744.00	39.96	244.85	5646.03	181.66	-195.94	-429.05	0.18
5838.00	39.86	247.34	5718.14	205.51	-220.37	-484.17	1.70
5933.00	40.21	247.53	5790.88	230.98	-243.82	-540.61	0.40
6028.00	40.75	246.66	5863.14	256.35	-267.83	-597.42	0.82
6123.00	41.08	248.34	5934.93	282.35	-291.63	-654.90	1.21
6218.00	41.63	251.95	6006.25	311.18	-312.93	-713.92	2.58
6312.00	43.89	265.93	6075.42	348.75	-324.94	-776.25	10.36
6407.00	43.36	277.45	6144.31	397.94	-323.05	-841.54	8.38
6502.00	46.77	282.53	6211.42	454.46	-311.31	-907.70	5.21
6597.00	52.65	284.23	6272.83	517.57	-294.50	-978.15	6.34
6692.00	62.37	283.84	6323.79	587.72	-275.11	-1055.80	10.23
6786.00	71.80	285.50	6360.35	664.00	-253.17	-1139.45	10.16
6881.00	79.84	291.61	6383.62	747.91	-223.82	-1226.63	10.51
6976.00	84.97	300.12	6396.20	837.89	-182.75	-1311.23	10.39
7071.00	87.49	310.81	6402.46	931.76	-127.82	-1388.31	11.53
7166.00	90.62	323.15	6404.03	1026.30	-58.52	-1452.98	13.40
7261.00	90.79	331.87	6402.86	1118.09	21.53	-1503.96	9.18
7356.00	91.65	335.19	6400.84	1206.91	106.54	-1546.29	3.60
7451.00	90.65	336.73	6398.93	1294.23	193.28	-1584.98	1.94
7545.00	90.86	331.21	6397.69	1381.85	277.70	-1626.21	5.88
7640.00	91.38	327.02	6395.83	1472.99	359.20	-1674.96	4.44
7735.00	90.55	327.19	6394.24	1565.03	438.95	-1726.54	0.89
7830.00	89.90	324.16	6393.86	1657.63	517.40	-1780.11	3.27
7924.00	90.62	323.20	6393.44	1749.94	593.13	-1835.78	1.27
8019.00	90.86	321.29	6392.22	1843.64	668.23	-1893.94	2.03
8114.00	89.83	321.47	6391.65	1937.57	742.45	-1953.24	1.10
8209.00	89.24	322.31	6392.42	2031.38	817.20	-2011.87	1.08
8304.00	88.07	322.33	6394.64	2125.04	892.36	-2069.91	1.23
8399.00	89.04	324.21	6397.04	2218.42	968.48	-2126.70	2.22
8494.00	89.38	323.24	6398.35	2311.69	1045.05	-2182.91	1.08
8588.00	89.17	323.58	6399.53	2404.08	1120.52	-2238.94	0.42
8683.00	91.10	323.60	6399.30	2497.40	1196.97	-2295.32	2.03
8778.00	91.00	327.06	6397.56	2590.11	1275.08	-2349.35	3.65
8873.00	91.38	324.82	6395.60	2682.59	1353.76	-2402.54	2.39
8968.00	91.48	324.68	6393.23	2775.50	1431.32	-2457.35	0.18
9062.00	91.24	322.90	6391.00	2867.75	1507.14	-2512.86	1.92
9157.00	91.24	323.59	6388.95	2961.15	1583.24	-2569.69	0.73
9252.00	91.34	323.34	6386.81	3054.49	1659.55	-2626.23	0.29
9347.00	91.24	322.49	6384.67	3147.99	1735.32	-2683.50	0.90
9441.00	91.48	322.60	6382.45	3240.61	1809.92	-2740.65	0.28
9536.00	90.83	321.01	6380.54	3334.41	1884.56	-2799.38	1.80

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9631.00	90.72	321.58	6379.25	3428.36	1958.69	-2858.77	0.61
9726.00	90.93	320.80	6377.88	3522.34	2032.70	-2918.31	0.85
9821.00	90.93	321.08	6376.35	3616.37	2106.46	-2978.16	0.30
9916.00	90.72	320.40	6374.98	3710.45	2180.01	-3038.28	0.75
10011.00	90.76	320.88	6373.75	3804.55	2253.45	-3098.53	0.51
10105.00	91.07	322.33	6372.26	3897.43	2327.11	-3156.90	1.58
10200.00	90.76	322.70	6370.75	3991.06	2402.48	-3214.71	0.51
10295.00	91.03	322.63	6369.27	4084.64	2478.01	-3272.31	0.30
10390.00	91.07	322.88	6367.53	4178.20	2553.62	-3329.80	0.26
10485.00	90.83	323.64	6365.96	4271.61	2629.74	-3386.63	0.84
10580.00	90.89	323.02	6364.53	4365.00	2705.92	-3443.35	0.65
10675.00	90.82	323.57	6363.11	4458.40	2782.08	-3500.13	0.59
10769.00	90.79	323.18	6361.78	4550.79	2857.52	-3556.19	0.42
10864.00	90.79	324.03	6360.47	4644.10	2933.98	-3612.55	0.89
10959.00	91.03	323.39	6358.96	4737.37	3010.54	-3668.77	0.72
11053.00	90.82	323.08	6357.44	4829.80	3085.84	-3725.03	0.40
11148.00	91.03	322.34	6355.90	4923.37	3161.40	-3782.58	0.81
11243.00	90.48	323.81	6354.65	5016.84	3237.34	-3839.65	1.65
11338.00	90.69	324.02	6353.68	5110.05	3314.11	-3895.60	0.31
11433.00	90.82	324.02	6352.43	5203.23	3390.98	-3951.40	0.14
11528.00	90.65	323.59	6351.20	5296.47	3467.64	-4007.49	0.49
11623.00	91.13	322.95	6349.72	5389.88	3543.77	-4064.30	0.85
11718.00	91.07	322.59	6347.89	5483.43	3619.40	-4121.77	0.38
11813.00	90.76	322.92	6346.38	5576.99	3695.02	-4179.25	0.47
11907.00	90.69	323.28	6345.20	5669.46	3770.18	-4235.69	0.39
12002.00	90.55	323.46	6344.17	5762.84	3846.42	-4292.36	0.24
12097.00	91.51	323.30	6342.46	5856.21	3922.66	-4349.01	1.03
12192.00	91.62	322.47	6339.87	5949.71	3998.39	-4406.31	0.88
12286.00	90.93	321.37	6337.78	6042.49	4072.37	-4464.26	1.38
12381.00	90.83	318.92	6336.33	6136.70	4145.28	-4525.13	2.58
12476.00	90.03	322.78	6335.62	6230.74	4218.94	-4585.09	4.15
12521.00	90.21	323.51	6335.52	6275.01	4254.94	-4612.09	1.65
12564.00	90.21	323.51	6335.37	6317.26	4289.51	-4637.66	0.01

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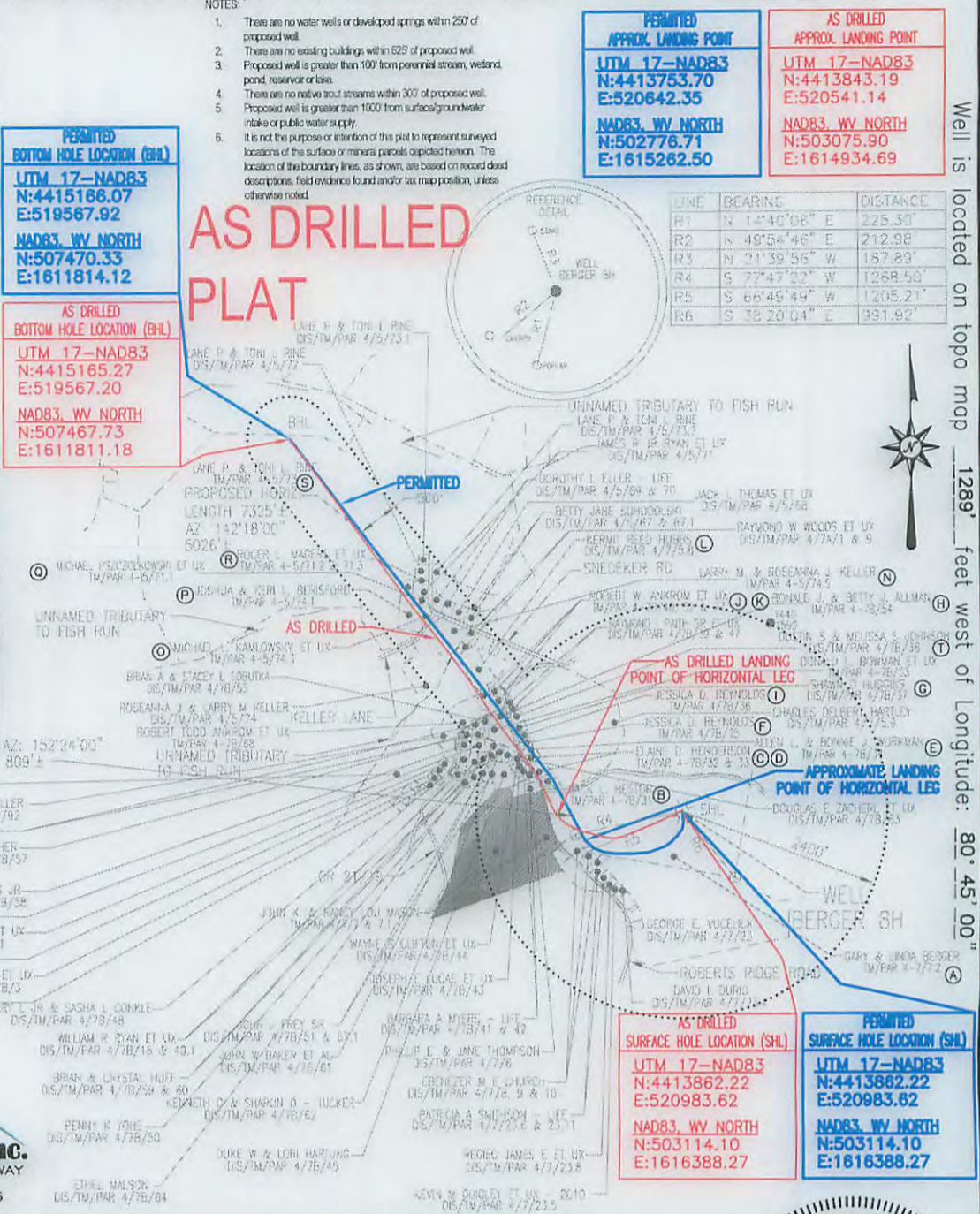
Well is located on topo map 157 feet south of Latitude: 39° 52' 30"

Well is located on topo map 1289 feet west of Longitude: 80° 45' 00"

### LEGEND

- TOPO MAP POINT
- WELL
- ALL ARE POINTS UNLESS OTHERWISE NOTED
- LEASE LETTER
- MINERAL TRACT BOUNDARY
- PARCEL LINES
- WELL REFERENCE
- PROPOSED HORIZONTAL WELL
- ROAD
- STREAM CENTER LINE
- AS DRILLED
- EXISTING WELLS
- EXISTING WELLS
- PLUGGED WELLS

PARCEL	LESSOR
A	GARY & LINDA BERGER
B	JACK L. & MARGARET G. NESTOR
C	ELAINE D. HENDERSON
D	ELAINE D. HENDERSON
E	ALLEN L. & BONNIE J. WORKMAN
F	THOMAS & JESSICA D. WALLACE
G	SHAWN D. HUGGINS
H	RONALD J. & BETTY J. ALLMAN
I	THOMAS & JESSICA D. WALLACE
J	ROBERT W. & SHIRLEY J. ANKROM
K	ROBERT W. & SHIRLEY J. ANKROM
L	KERMIT R. & CAROL S. HUBBS
M	ROBERT TODD & BARBARA ANN ANKROM
N	ROSEANNA & LARRY M. KELLER
O	MICHAEL L. & VICKIE L. KAMLOWSKY
P	JOSHUA D. & KERI L. BERISFORD
Q	DONALD A. SNEDEKER
R	DONALD A. SNEDEKER
S	LANE P. & TONI L. RINE
T	DUSTIN & MELISSA S. JOHNSON



**Blue Mountain Inc.**  
 10125 MASON DIXON HIGHWAY  
 BURTON, WV 26562  
 PHONE: (304) 662-6486

FILE #: BERGER 8H-AS DRILLED  
 DRAWING #: BERGER 8H-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: *George D. Six*  
 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: SEPTEMBER 28, 2015  
 OPERATOR'S WELL #: BERGER 8H-AS DRILLED  
 API WELL #: 47 51 01707  
 STATE COUNTY PERMIT

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

WATERSHED: MIDDLE GRAVE CREEK - GRAVE CREEK ELEVATION: 1287.55'

COUNTY/DISTRICT: MARSHALL / CLAY QUADRANGLE: POWHATAN, OH-WV 7.5'

SURFACE OWNER: GARY & LINDA BERGER ACREAGE: 51.753±

OIL & GAS ROYALTY OWNER: GARY & LINDA BERGER ACREAGE: 390.928±

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: 6,538± TMD: 13,330±

WELL OPERATOR: CHEVRON APPALACHIA, LLC DESIGNATED AGENT: KENNETH E. TAWNEY  
 Address: 800 MOUNTAIN VIEW DRIVE Address: 500 LEE STREET, EAST SUITE 1600  
 City: SMITHFIELD State: PA Zip Code: 15478 City: CHARLESTON State: WV Zip Code: 25301-3202

04/08/2016