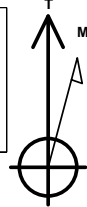




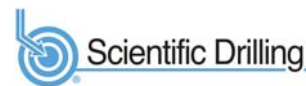
PROJECT DETAILS: Weld County, CO NAD 83

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Northern Zone
System Datum: Mean Sea Level
Local North: True

Project: Weld County, CO NAD 83
Site: Critter Creek 15 SW Pad
Well: Critter Creek 15-1604BE
Wellbore: OH
Design: Plan 1



Azimuths to True North
Magnetic North: 8.28°



Magnetic Field
Strength: 52792.3nT
Dip Angle: 67.20°
Date: 4/20/2018
Model: HDGM

Plan: Plan 1 (Critter Creek 15-1604BE/OH)

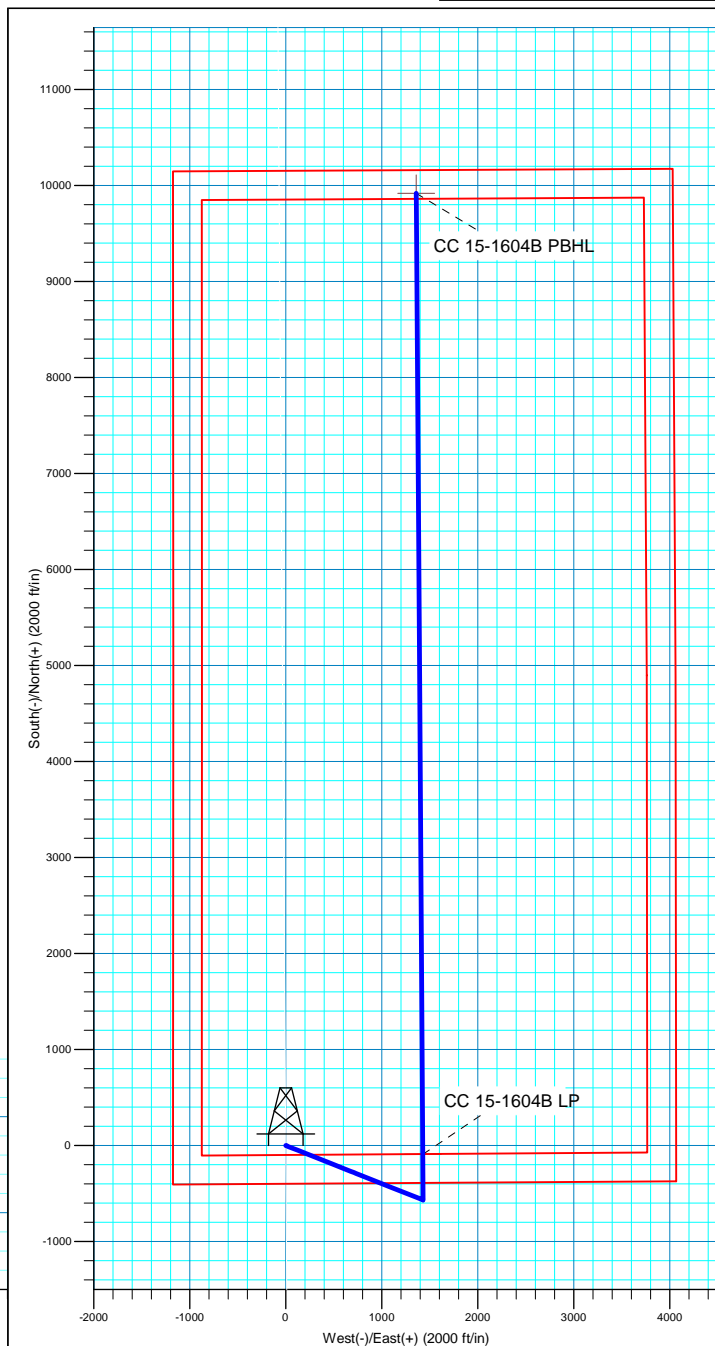
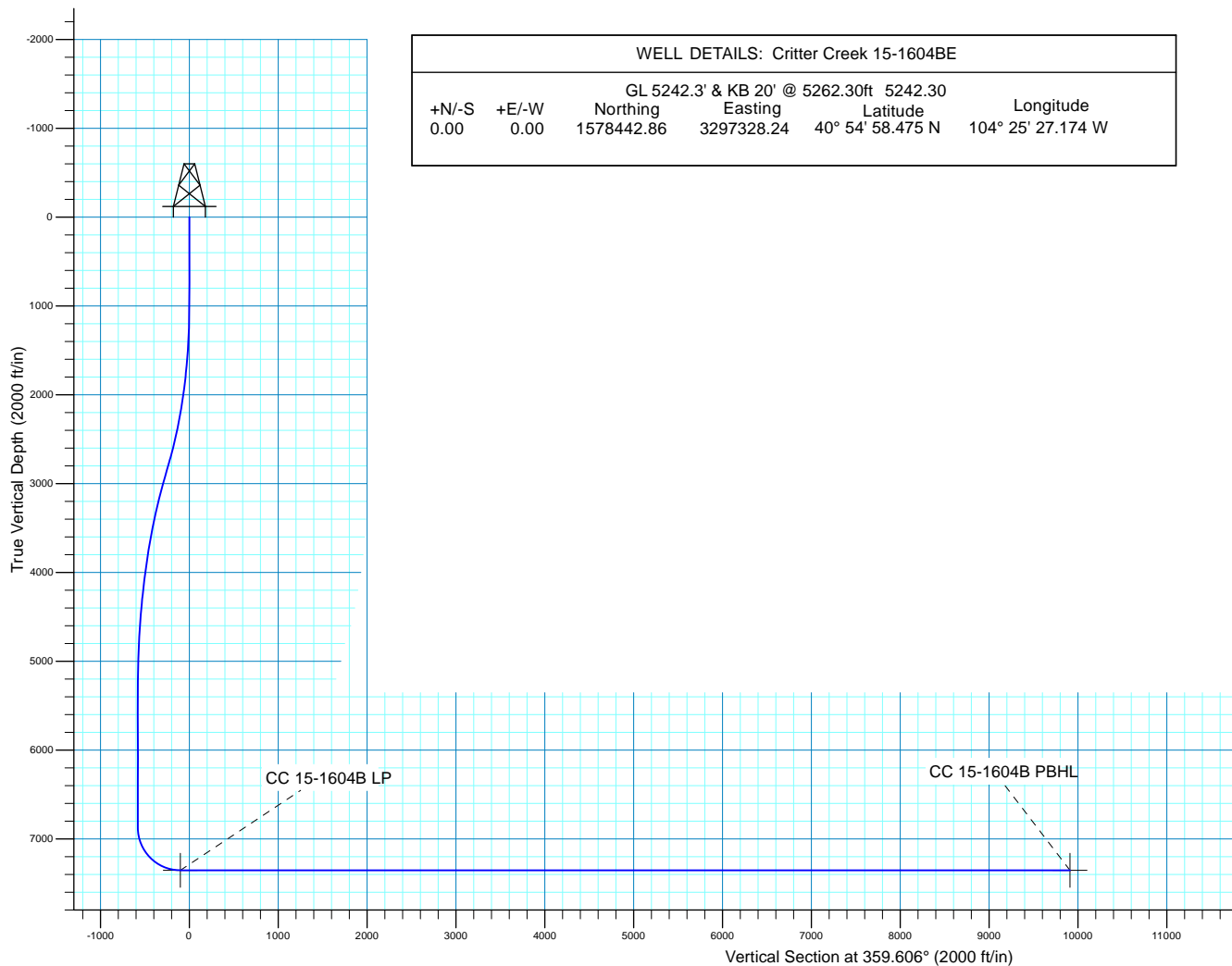
Created By: Seth Burstad

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00
1000.00	0.00	0.000	1000.00	0.00	0.00	0.00	0.00	0.00
2859.42	37.19	111.653	2731.59	-214.96	541.44	2.00	111.65	-218.67
3159.50	37.19	111.653	2970.65	-281.88	710.02	0.00	0.00	-286.76
5638.73	0.00	0.000	5279.43	-568.49	1431.94	1.50	180.00	-578.32
7235.84	0.00	0.000	6876.54	-568.49	1431.94	0.00	0.00	-578.32
7985.84	90.00	359.606	7354.00	-91.04	1428.66	12.00	359.61	-100.86
17996.74	90.00	359.606	7354.00	9919.63	1359.84	0.00	0.00	9910.05

WELL DETAILS: Critter Creek 15-1604BE

GL 5242.3' & KB 20' @ 5262.30ft 5242.30						Longitude	
+N/-S	+E/-W	Northing	Easting	Latitude			
0.00	0.00	1578442.86	3297328.24	40° 54' 58.475 N		104° 25' 27.174 W	





HighPoint Resources

Weld County, CO NAD 83
Crittter Creek 15 SW Pad
Crittter Creek 15-1604BE

OH

Plan: Plan 1

Standard Planning Report

20 April, 2018



Database:	Casper District	Local Co-ordinate Reference:	Well Critter Creek 15-1604BE
Company:	HighPoint Resources	TVD Reference:	GL 5242.3' & KB 20' @ 5262.30ft
Project:	Weld County, CO NAD 83	MD Reference:	GL 5242.3' & KB 20' @ 5262.30ft
Site:	Critter Creek 15 SW Pad	North Reference:	True
Well:	Critter Creek 15-1604BE	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1		

Project	Weld County, CO NAD 83		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site						Critter Creek 15 SW Pad, Site Center : Critter Creek 15-6104BE					
Site Position:				Northing:		1,578,441.59 usft		Latitude:		40° 54' 58.471 N	
From:		Lat/Long		Easting:		3,297,253.35 usft		Longitude:		104° 25' 28.150 W	
Position Uncertainty:		0.00 ft		Slot Radius:		13.200 in		Grid Convergence:		0.69	

Well	Critter Creek 15-1604BE, 400' FSL 1175' FWL Sec 15 T11N R63W					
Well Position	+N/-S	0.35 ft	Northing:	1,578,442.85 usft	Latitude:	40° 54' 58.475 N
	+E/-W	74.90 ft	Easting:	3,297,328.24 usft	Longitude:	104° 25' 27.174 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	5,242.30 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	4/20/2018	8.28	67.20	52,792

Design	Plan 1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	359.606

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,000.00	0.00	0.000	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,859.42	37.19	111.653	2,731.59	-214.96	541.44	2.00	2.00	0.00	111.65	
3,159.50	37.19	111.653	2,970.65	-281.88	710.02	0.00	0.00	0.00	0.00	
5,638.73	0.00	0.000	5,279.43	-568.49	1,431.94	1.50	-1.50	0.00	180.00	
7,235.84	0.00	0.000	6,876.54	-568.49	1,431.94	0.00	0.00	0.00	0.00	
7,985.84	90.00	359.606	7,354.00	-91.04	1,428.66	12.00	12.00	-0.05	359.61	
17,996.74	90.00	359.606	7,354.00	9,919.63	1,359.84	0.00	0.00	0.00	0.00	CC 15-1604B PBHL

Database:	Casper District	Local Co-ordinate Reference:	Well Critter Creek 15-1604BE
Company:	HighPoint Resources	TVD Reference:	GL 5242.3' & KB 20' @ 5262.30ft
Project:	Weld County, CO NAD 83	MD Reference:	GL 5242.3' & KB 20' @ 5262.30ft
Site:	Critter Creek 15 SW Pad	North Reference:	True
Well:	Critter Creek 15-1604BE	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.000	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.000	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.000	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.000	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.000	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.000	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.000	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.000	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.000	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.000	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
1,100.00	2.00	111.653	1,099.98	-0.64	1.62	-0.66	2.00	2.00	0.00
1,200.00	4.00	111.653	1,199.84	-2.57	6.49	-2.62	2.00	2.00	0.00
1,300.00	6.00	111.653	1,299.45	-5.79	14.59	-5.89	2.00	2.00	0.00
1,400.00	8.00	111.653	1,398.70	-10.29	25.91	-10.47	2.00	2.00	0.00
1,500.00	10.00	111.653	1,497.47	-16.06	40.45	-16.34	2.00	2.00	0.00
1,522.90	10.46	111.653	1,520.00	-17.56	44.23	-17.86	2.00	2.00	0.00
Fox Hills-Pierre contact									
1,600.00	12.00	111.653	1,595.62	-23.10	58.18	-23.50	2.00	2.00	0.00
1,700.00	14.00	111.653	1,693.06	-31.40	79.09	-31.94	2.00	2.00	0.00
1,800.00	16.00	111.653	1,789.64	-40.95	103.15	-41.66	2.00	2.00	0.00
1,900.00	18.00	111.653	1,885.27	-51.74	130.32	-52.63	2.00	2.00	0.00
2,000.00	20.00	111.653	1,979.82	-63.75	160.58	-64.85	2.00	2.00	0.00
2,100.00	22.00	111.653	2,073.17	-76.97	193.88	-78.30	2.00	2.00	0.00
2,200.00	24.00	111.653	2,165.21	-91.39	230.20	-92.97	2.00	2.00	0.00
2,300.00	26.00	111.653	2,255.84	-106.98	269.47	-108.83	2.00	2.00	0.00
2,400.00	28.00	111.653	2,344.94	-123.73	311.67	-125.87	2.00	2.00	0.00
2,500.00	30.00	111.653	2,432.39	-141.62	356.72	-144.07	2.00	2.00	0.00
2,600.00	32.00	111.653	2,518.11	-160.63	404.59	-163.40	2.00	2.00	0.00
2,700.00	34.00	111.653	2,601.97	-180.72	455.21	-183.85	2.00	2.00	0.00
2,800.00	36.00	111.653	2,683.88	-201.88	508.52	-205.38	2.00	2.00	0.00
2,859.42	37.19	111.653	2,731.59	-214.96	541.44	-218.67	2.00	2.00	0.00
Start 300.08 hold at 2859.42 MD									
2,900.00	37.19	111.653	2,763.92	-224.01	564.24	-227.88	0.00	0.00	0.00
3,000.00	37.19	111.653	2,843.58	-246.31	620.42	-250.57	0.00	0.00	0.00
3,100.00	37.19	111.653	2,923.25	-268.61	676.59	-273.26	0.00	0.00	0.00
3,159.50	37.19	111.653	2,970.65	-281.88	710.02	-286.76	0.00	0.00	0.00
Start Drop -1.50									
3,200.00	36.58	111.653	3,003.04	-290.85	732.61	-295.88	1.50	-1.50	0.00
3,300.00	35.08	111.653	3,084.11	-312.45	787.02	-317.86	1.50	-1.50	0.00
3,400.00	33.58	111.653	3,166.69	-333.26	839.44	-339.03	1.50	-1.50	0.00
3,467.20	32.57	111.653	3,223.00	-346.79	873.52	-352.79	1.50	-1.50	0.00
Pierre A									
3,500.00	32.08	111.653	3,250.71	-353.27	889.82	-359.38	1.50	-1.50	0.00
3,600.00	30.58	111.653	3,336.13	-372.45	938.15	-378.90	1.50	-1.50	0.00
3,700.00	29.08	111.653	3,422.88	-390.81	984.38	-397.57	1.50	-1.50	0.00
3,800.00	27.58	111.653	3,510.90	-408.32	1,028.49	-415.38	1.50	-1.50	0.00
3,900.00	26.08	111.653	3,600.13	-424.97	1,070.44	-432.32	1.50	-1.50	0.00
4,000.00	24.58	111.653	3,690.51	-440.76	1,110.20	-448.38	1.50	-1.50	0.00
4,100.00	23.08	111.653	3,781.98	-455.67	1,147.76	-463.55	1.50	-1.50	0.00
4,200.00	21.58	111.653	3,874.48	-469.69	1,183.07	-477.81	1.50	-1.50	0.00
4,300.00	20.08	111.653	3,967.94	-482.81	1,216.12	-491.16	1.50	-1.50	0.00
4,400.00	18.58	111.653	4,062.30	-495.02	1,246.89	-503.58	1.50	-1.50	0.00

Database:	Casper District	Local Co-ordinate Reference:	Well Critter Creek 15-1604BE
Company:	HighPoint Resources	TVD Reference:	GL 5242.3' & KB 20' @ 5262.30ft
Project:	Weld County, CO NAD 83	MD Reference:	GL 5242.3' & KB 20' @ 5262.30ft
Site:	Critter Creek 15 SW Pad	North Reference:	True
Well:	Critter Creek 15-1604BE	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,500.00	17.08	111.653	4,157.49	-506.32	1,275.34	-515.08	1.50	-1.50	0.00
4,517.26	16.82	111.653	4,174.00	-508.18	1,280.02	-516.97	1.50	-1.50	0.00
Parkman									
4,600.00	15.58	111.653	4,253.46	-516.70	1,301.48	-525.63	1.50	-1.50	0.00
4,700.00	14.08	111.653	4,350.12	-526.14	1,325.27	-535.24	1.50	-1.50	0.00
4,800.00	12.58	111.653	4,447.43	-534.65	1,346.70	-543.90	1.50	-1.50	0.00
4,900.00	11.08	111.653	4,545.30	-542.21	1,365.75	-551.59	1.50	-1.50	0.00
5,000.00	9.58	111.653	4,643.67	-548.83	1,382.42	-558.32	1.50	-1.50	0.00
5,100.00	8.08	111.653	4,742.49	-554.49	1,396.69	-564.09	1.50	-1.50	0.00
5,200.00	6.58	111.653	4,841.67	-559.20	1,408.55	-568.88	1.50	-1.50	0.00
5,300.00	5.08	111.653	4,941.15	-562.95	1,417.99	-572.69	1.50	-1.50	0.00
5,400.00	3.58	111.653	5,040.86	-565.74	1,425.01	-575.52	1.50	-1.50	0.00
5,500.00	2.08	111.653	5,140.73	-567.56	1,429.60	-577.38	1.50	-1.50	0.00
5,600.00	0.58	111.653	5,240.70	-568.42	1,431.76	-578.25	1.50	-1.50	0.00
5,638.73	0.00	0.000	5,279.43	-568.49	1,431.94	-578.32	1.50	-1.50	0.00
Start 1597.11 hold at 5638.73 MD									
5,700.00	0.00	0.000	5,340.70	-568.49	1,431.94	-578.32	0.00	0.00	0.00
5,800.00	0.00	0.000	5,440.70	-568.49	1,431.94	-578.32	0.00	0.00	0.00
5,900.00	0.00	0.000	5,540.70	-568.49	1,431.94	-578.32	0.00	0.00	0.00
6,000.00	0.00	0.000	5,640.70	-568.49	1,431.94	-578.32	0.00	0.00	0.00
6,100.00	0.00	0.000	5,740.70	-568.49	1,431.94	-578.32	0.00	0.00	0.00
6,200.00	0.00	0.000	5,840.70	-568.49	1,431.94	-578.32	0.00	0.00	0.00
6,300.00	0.00	0.000	5,940.70	-568.49	1,431.94	-578.32	0.00	0.00	0.00
6,400.00	0.00	0.000	6,040.70	-568.49	1,431.94	-578.32	0.00	0.00	0.00
6,500.00	0.00	0.000	6,140.70	-568.49	1,431.94	-578.32	0.00	0.00	0.00
6,600.00	0.00	0.000	6,240.70	-568.49	1,431.94	-578.32	0.00	0.00	0.00
6,700.00	0.00	0.000	6,340.70	-568.49	1,431.94	-578.32	0.00	0.00	0.00
6,800.00	0.00	0.000	6,440.70	-568.49	1,431.94	-578.32	0.00	0.00	0.00
6,900.00	0.00	0.000	6,540.70	-568.49	1,431.94	-578.32	0.00	0.00	0.00
7,000.00	0.00	0.000	6,640.70	-568.49	1,431.94	-578.32	0.00	0.00	0.00
7,100.00	0.00	0.000	6,740.70	-568.49	1,431.94	-578.32	0.00	0.00	0.00
7,200.00	0.00	0.000	6,840.70	-568.49	1,431.94	-578.32	0.00	0.00	0.00
7,235.84	0.00	0.000	6,876.54	-568.49	1,431.94	-578.32	0.00	0.00	0.00
Start DLS 12.00 TFO 359.61									
7,300.00	7.70	359.606	6,940.51	-564.19	1,431.91	-574.02	12.00	12.00	0.00
7,400.00	19.70	359.606	7,037.49	-540.55	1,431.75	-550.38	12.00	12.00	0.00
7,500.00	31.70	359.606	7,127.43	-497.26	1,431.45	-507.09	12.00	12.00	0.00
7,600.00	43.70	359.606	7,206.41	-436.22	1,431.03	-446.05	12.00	12.00	0.00
7,603.60	44.13	359.606	7,209.00	-433.73	1,431.01	-443.56	12.00	12.00	0.00
Sharon Springs									
7,642.82	48.84	359.606	7,236.00	-405.29	1,430.82	-415.12	12.00	12.00	0.00
Niobrara A Chalk									
7,681.08	53.43	359.606	7,260.00	-375.51	1,430.61	-385.34	12.00	12.00	0.00
Niobrara A Marl									
7,686.15	54.04	359.606	7,263.00	-371.42	1,430.59	-381.25	12.00	12.00	0.00
Nio B1 Chalk									
7,700.00	55.70	359.606	7,270.97	-360.10	1,430.51	-369.93	12.00	12.00	0.00
7,743.88	60.97	359.606	7,294.00	-322.76	1,430.25	-332.59	12.00	12.00	0.00
Nio B1 Marl									
7,784.06	65.79	359.606	7,312.00	-286.86	1,430.00	-296.68	12.00	12.00	0.00
Niobrara B Chalk									
7,800.00	67.70	359.606	7,318.29	-272.21	1,429.90	-282.04	12.00	12.00	0.00
7,887.92	78.25	359.606	7,344.00	-188.26	1,429.33	-198.09	12.00	12.00	0.00

Database:	Casper District	Local Co-ordinate Reference:	Well Critter Creek 15-1604BE
Company:	HighPoint Resources	TVD Reference:	GL 5242.3' & KB 20' @ 5262.30ft
Project:	Weld County, CO NAD 83	MD Reference:	GL 5242.3' & KB 20' @ 5262.30ft
Site:	Critter Creek 15 SW Pad	North Reference:	True
Well:	Critter Creek 15-1604BE	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
Niobrara B Marl									
7,900.00	79.70	359.606	7,346.31	-176.41	1,429.24	-186.24	12.00	12.00	0.00
7,983.69	89.74	359.606	7,354.00	-93.18	1,428.67	-103.01	12.00	12.00	0.00
Niobrara B Landing Target - TD									
7,985.84	90.00	359.606	7,354.00	-91.04	1,428.66	-100.86	12.00	12.00	0.00
Start 10010.90 hold at 7985.84 MD									
8,000.00	90.00	359.606	7,354.00	-76.88	1,428.56	-86.70	0.00	0.00	0.00
8,100.00	90.00	359.606	7,354.00	23.12	1,427.87	13.30	0.00	0.00	0.00
8,200.00	90.00	359.606	7,354.00	123.12	1,427.19	113.30	0.00	0.00	0.00
8,300.00	90.00	359.606	7,354.00	223.12	1,426.50	213.30	0.00	0.00	0.00
8,400.00	90.00	359.606	7,354.00	323.12	1,425.81	313.30	0.00	0.00	0.00
8,500.00	90.00	359.606	7,354.00	423.11	1,425.12	413.30	0.00	0.00	0.00
8,600.00	90.00	359.606	7,354.00	523.11	1,424.44	513.30	0.00	0.00	0.00
8,700.00	90.00	359.606	7,354.00	623.11	1,423.75	613.30	0.00	0.00	0.00
8,800.00	90.00	359.606	7,354.00	723.11	1,423.06	713.30	0.00	0.00	0.00
8,900.00	90.00	359.606	7,354.00	823.10	1,422.37	813.30	0.00	0.00	0.00
9,000.00	90.00	359.606	7,354.00	923.10	1,421.69	913.30	0.00	0.00	0.00
9,100.00	90.00	359.606	7,354.00	1,023.10	1,421.00	1,013.30	0.00	0.00	0.00
9,200.00	90.00	359.606	7,354.00	1,123.10	1,420.31	1,113.30	0.00	0.00	0.00
9,300.00	90.00	359.606	7,354.00	1,223.09	1,419.62	1,213.30	0.00	0.00	0.00
9,400.00	90.00	359.606	7,354.00	1,323.09	1,418.94	1,313.30	0.00	0.00	0.00
9,500.00	90.00	359.606	7,354.00	1,423.09	1,418.25	1,413.30	0.00	0.00	0.00
9,600.00	90.00	359.606	7,354.00	1,523.09	1,417.56	1,513.30	0.00	0.00	0.00
9,700.00	90.00	359.606	7,354.00	1,623.08	1,416.87	1,613.30	0.00	0.00	0.00
9,800.00	90.00	359.606	7,354.00	1,723.08	1,416.19	1,713.30	0.00	0.00	0.00
9,900.00	90.00	359.606	7,354.00	1,823.08	1,415.50	1,813.30	0.00	0.00	0.00
10,000.00	90.00	359.606	7,354.00	1,923.08	1,414.81	1,913.30	0.00	0.00	0.00
10,100.00	90.00	359.606	7,354.00	2,023.08	1,414.12	2,013.30	0.00	0.00	0.00
10,200.00	90.00	359.606	7,354.00	2,123.07	1,413.44	2,113.30	0.00	0.00	0.00
10,300.00	90.00	359.606	7,354.00	2,223.07	1,412.75	2,213.30	0.00	0.00	0.00
10,400.00	90.00	359.606	7,354.00	2,323.07	1,412.06	2,313.30	0.00	0.00	0.00
10,500.00	90.00	359.606	7,354.00	2,423.07	1,411.37	2,413.30	0.00	0.00	0.00
10,600.00	90.00	359.606	7,354.00	2,523.06	1,410.69	2,513.30	0.00	0.00	0.00
10,700.00	90.00	359.606	7,354.00	2,623.06	1,410.00	2,613.30	0.00	0.00	0.00
10,800.00	90.00	359.606	7,354.00	2,723.06	1,409.31	2,713.30	0.00	0.00	0.00
10,900.00	90.00	359.606	7,354.00	2,823.06	1,408.63	2,813.30	0.00	0.00	0.00
11,000.00	90.00	359.606	7,354.00	2,923.05	1,407.94	2,913.30	0.00	0.00	0.00
11,100.00	90.00	359.606	7,354.00	3,023.05	1,407.25	3,013.30	0.00	0.00	0.00
11,200.00	90.00	359.606	7,354.00	3,123.05	1,406.56	3,113.30	0.00	0.00	0.00
11,300.00	90.00	359.606	7,354.00	3,223.05	1,405.88	3,213.30	0.00	0.00	0.00
11,400.00	90.00	359.606	7,354.00	3,323.04	1,405.19	3,313.30	0.00	0.00	0.00
11,500.00	90.00	359.606	7,354.00	3,423.04	1,404.50	3,413.30	0.00	0.00	0.00
11,600.00	90.00	359.606	7,354.00	3,523.04	1,403.81	3,513.30	0.00	0.00	0.00
11,700.00	90.00	359.606	7,354.00	3,623.04	1,403.13	3,613.30	0.00	0.00	0.00
11,800.00	90.00	359.606	7,354.00	3,723.04	1,402.44	3,713.30	0.00	0.00	0.00
11,900.00	90.00	359.606	7,354.00	3,823.03	1,401.75	3,813.30	0.00	0.00	0.00
12,000.00	90.00	359.606	7,354.00	3,923.03	1,401.06	3,913.30	0.00	0.00	0.00
12,100.00	90.00	359.606	7,354.00	4,023.03	1,400.38	4,013.30	0.00	0.00	0.00
12,200.00	90.00	359.606	7,354.00	4,123.03	1,399.69	4,113.30	0.00	0.00	0.00
12,300.00	90.00	359.606	7,354.00	4,223.02	1,399.00	4,213.30	0.00	0.00	0.00
12,400.00	90.00	359.606	7,354.00	4,323.02	1,398.31	4,313.30	0.00	0.00	0.00
12,500.00	90.00	359.606	7,354.00	4,423.02	1,397.63	4,413.30	0.00	0.00	0.00
12,600.00	90.00	359.606	7,354.00	4,523.02	1,396.94	4,513.30	0.00	0.00	0.00

Database:	Casper District	Local Co-ordinate Reference:	Well Critter Creek 15-1604BE
Company:	HighPoint Resources	TVD Reference:	GL 5242.3' & KB 20' @ 5262.30ft
Project:	Weld County, CO NAD 83	MD Reference:	GL 5242.3' & KB 20' @ 5262.30ft
Site:	Critter Creek 15 SW Pad	North Reference:	True
Well:	Critter Creek 15-1604BE	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
12,700.00	90.00	359.606	7,354.00	4,623.01	1,396.25	4,613.30	0.00	0.00	0.00
12,800.00	90.00	359.606	7,354.00	4,723.01	1,395.56	4,713.30	0.00	0.00	0.00
12,900.00	90.00	359.606	7,354.00	4,823.01	1,394.88	4,813.30	0.00	0.00	0.00
13,000.00	90.00	359.606	7,354.00	4,923.01	1,394.19	4,913.30	0.00	0.00	0.00
13,100.00	90.00	359.606	7,354.00	5,023.00	1,393.50	5,013.30	0.00	0.00	0.00
13,200.00	90.00	359.606	7,354.00	5,123.00	1,392.81	5,113.30	0.00	0.00	0.00
13,300.00	90.00	359.606	7,354.00	5,223.00	1,392.13	5,213.30	0.00	0.00	0.00
13,400.00	90.00	359.606	7,354.00	5,323.00	1,391.44	5,313.30	0.00	0.00	0.00
13,500.00	90.00	359.606	7,354.00	5,423.00	1,390.75	5,413.30	0.00	0.00	0.00
13,600.00	90.00	359.606	7,354.00	5,522.99	1,390.06	5,513.30	0.00	0.00	0.00
13,700.00	90.00	359.606	7,354.00	5,622.99	1,389.38	5,613.30	0.00	0.00	0.00
13,800.00	90.00	359.606	7,354.00	5,722.99	1,388.69	5,713.30	0.00	0.00	0.00
13,900.00	90.00	359.606	7,354.00	5,822.99	1,388.00	5,813.30	0.00	0.00	0.00
14,000.00	90.00	359.606	7,354.00	5,922.98	1,387.32	5,913.30	0.00	0.00	0.00
14,100.00	90.00	359.606	7,354.00	6,022.98	1,386.63	6,013.30	0.00	0.00	0.00
14,200.00	90.00	359.606	7,354.00	6,122.98	1,385.94	6,113.30	0.00	0.00	0.00
14,300.00	90.00	359.606	7,354.00	6,222.98	1,385.25	6,213.30	0.00	0.00	0.00
14,400.00	90.00	359.606	7,354.00	6,322.97	1,384.57	6,313.30	0.00	0.00	0.00
14,500.00	90.00	359.606	7,354.00	6,422.97	1,383.88	6,413.30	0.00	0.00	0.00
14,600.00	90.00	359.606	7,354.00	6,522.97	1,383.19	6,513.30	0.00	0.00	0.00
14,700.00	90.00	359.606	7,354.00	6,622.97	1,382.50	6,613.30	0.00	0.00	0.00
14,800.00	90.00	359.606	7,354.00	6,722.96	1,381.82	6,713.30	0.00	0.00	0.00
14,900.00	90.00	359.606	7,354.00	6,822.96	1,381.13	6,813.30	0.00	0.00	0.00
15,000.00	90.00	359.606	7,354.00	6,922.96	1,380.44	6,913.30	0.00	0.00	0.00
15,100.00	90.00	359.606	7,354.00	7,022.96	1,379.75	7,013.30	0.00	0.00	0.00
15,200.00	90.00	359.606	7,354.00	7,122.95	1,379.07	7,113.30	0.00	0.00	0.00
15,300.00	90.00	359.606	7,354.00	7,222.95	1,378.38	7,213.30	0.00	0.00	0.00
15,400.00	90.00	359.606	7,354.00	7,322.95	1,377.69	7,313.30	0.00	0.00	0.00
15,500.00	90.00	359.606	7,354.00	7,422.95	1,377.00	7,413.30	0.00	0.00	0.00
15,600.00	90.00	359.606	7,354.00	7,522.95	1,376.32	7,513.30	0.00	0.00	0.00
15,700.00	90.00	359.606	7,354.00	7,622.94	1,375.63	7,613.30	0.00	0.00	0.00
15,800.00	90.00	359.606	7,354.00	7,722.94	1,374.94	7,713.30	0.00	0.00	0.00
15,900.00	90.00	359.606	7,354.00	7,822.94	1,374.25	7,813.30	0.00	0.00	0.00
16,000.00	90.00	359.606	7,354.00	7,922.94	1,373.57	7,913.30	0.00	0.00	0.00
16,100.00	90.00	359.606	7,354.00	8,022.93	1,372.88	8,013.30	0.00	0.00	0.00
16,200.00	90.00	359.606	7,354.00	8,122.93	1,372.19	8,113.30	0.00	0.00	0.00
16,300.00	90.00	359.606	7,354.00	8,222.93	1,371.50	8,213.30	0.00	0.00	0.00
16,400.00	90.00	359.606	7,354.00	8,322.93	1,370.82	8,313.30	0.00	0.00	0.00
16,500.00	90.00	359.606	7,354.00	8,422.92	1,370.13	8,413.30	0.00	0.00	0.00
16,600.00	90.00	359.606	7,354.00	8,522.92	1,369.44	8,513.30	0.00	0.00	0.00
16,700.00	90.00	359.606	7,354.00	8,622.92	1,368.75	8,613.30	0.00	0.00	0.00
16,800.00	90.00	359.606	7,354.00	8,722.92	1,368.07	8,713.30	0.00	0.00	0.00
16,900.00	90.00	359.606	7,354.00	8,822.91	1,367.38	8,813.30	0.00	0.00	0.00
17,000.00	90.00	359.606	7,354.00	8,922.91	1,366.69	8,913.30	0.00	0.00	0.00
17,100.00	90.00	359.606	7,354.00	9,022.91	1,366.00	9,013.30	0.00	0.00	0.00
17,200.00	90.00	359.606	7,354.00	9,122.91	1,365.32	9,113.30	0.00	0.00	0.00
17,300.00	90.00	359.606	7,354.00	9,222.91	1,364.63	9,213.30	0.00	0.00	0.00
17,400.00	90.00	359.606	7,354.00	9,322.90	1,363.94	9,313.30	0.00	0.00	0.00
17,500.00	90.00	359.606	7,354.00	9,422.90	1,363.26	9,413.30	0.00	0.00	0.00
17,600.00	90.00	359.606	7,354.00	9,522.90	1,362.57	9,513.30	0.00	0.00	0.00
17,700.00	90.00	359.606	7,354.00	9,622.90	1,361.88	9,613.30	0.00	0.00	0.00
17,800.00	90.00	359.606	7,354.00	9,722.89	1,361.19	9,713.30	0.00	0.00	0.00
17,900.00	90.00	359.606	7,354.00	9,822.89	1,360.51	9,813.30	0.00	0.00	0.00
17,996.74	90.00	359.606	7,354.00	9,919.62	1,359.84	9,910.04	0.00	0.00	0.00

Database:	Casper District	Local Co-ordinate Reference:	Well Critter Creek 15-1604BE
Company:	HighPoint Resources	TVD Reference:	GL 5242.3' & KB 20' @ 5262.30ft
Project:	Weld County, CO NAD 83	MD Reference:	GL 5242.3' & KB 20' @ 5262.30ft
Site:	Critter Creek 15 SW Pad	North Reference:	True
Well:	Critter Creek 15-1604BE	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
TD at 17996.74									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
CC 15-1604B PBHL	0.00	0.000	7,354.00	9,919.63	1,359.84	1,588,378.23	3,298,567.64	40° 56' 36.485 N	104° 25' 9.455 W
- plan hits target center									
- Point									
CC 15-1604B LP	0.00	0.000	7,354.00	-91.04	1,428.66	1,578,369.16	3,298,757.90	40° 54' 57.575 N	104° 25' 8.566 W
- plan misses target center by 0.01ft at 7985.84ft MD (7354.00 TVD, -91.04 N, 1428.66 E)									
- Point									

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,522.90	-3,742.30	Fox Hills-Pierre contact				
3,467.20	-2,039.30	Pierre A				
4,517.26	-1,088.30	Parkman				
7,603.60	1,946.70	Sharon Springs				
7,642.82	1,973.70	Niobrara A Chalk				
7,681.08	1,997.70	Niobrara A Marl				
7,686.15	2,000.70	Nio B1 Chalk				
7,743.88	2,031.70	Nio B1 Marl				
7,784.06	2,049.70	Niobrara B Chalk				
7,887.92	2,081.70	Niobrara B Marl				
7,983.69	2,091.70	Niobrara B Landing Target				
7,983.69	2,091.70	TD				

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,000.00	1,000.00	0.00	0.00	Start Build 2.00
2,859.42	2,731.59	-214.96	541.44	Start 300.08 hold at 2859.42 MD
3,159.50	2,970.65	-281.88	710.02	Start Drop -1.50
5,638.73	5,279.43	-568.49	1,431.94	Start 1597.11 hold at 5638.73 MD
7,235.84	6,876.54	-568.49	1,431.94	Start DLS 12.00 TFO 359.61
7,985.84	7,354.00	-91.04	1,428.66	Start 10010.90 hold at 7985.84 MD
17,996.74	7,354.00	9,919.62	1,359.84	TD at 17996.74