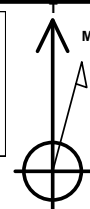




PROJECT DETAILS: Weld County, CO NAD 83

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 14 SW Pad
Well: Critter Creek 540-1411H
Wellbore: OH
Design: Plan 1



Azimuths to True North
Magnetic North: 8.28°
Magnetic Field
Strength: 52807.4nT
Dip Angle: 67.20°
Date: 4/3/2018
Model: HDGM



Plan: Plan 1 (Critter Creek 540-1411H/OH)

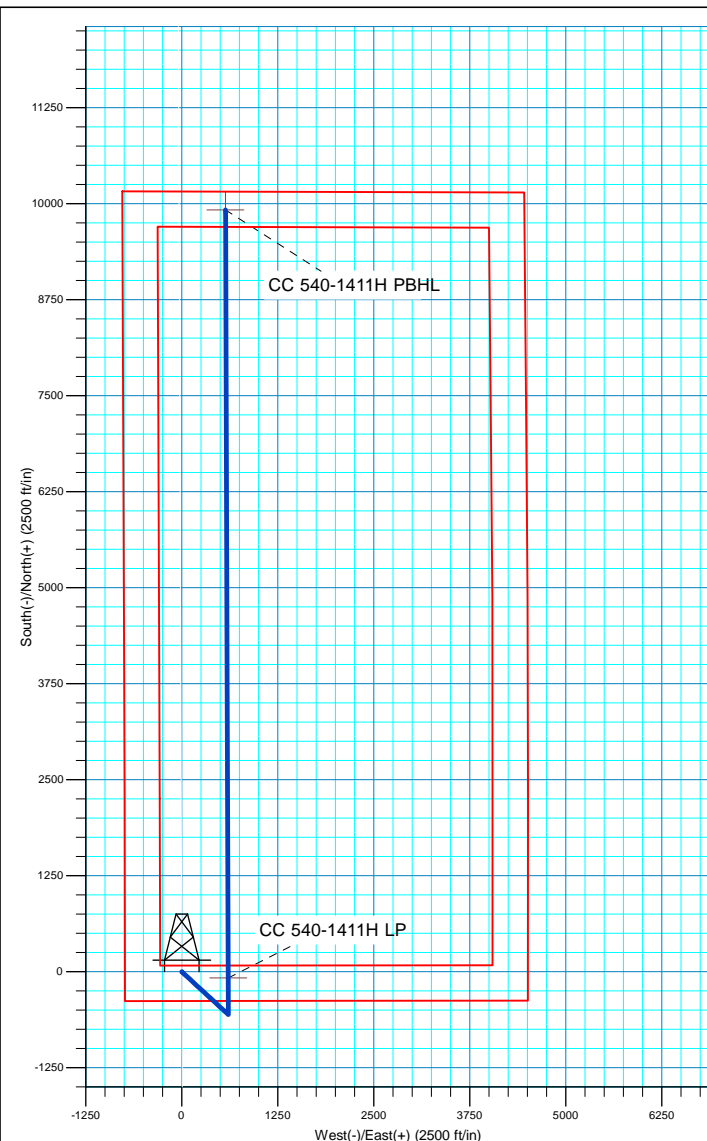
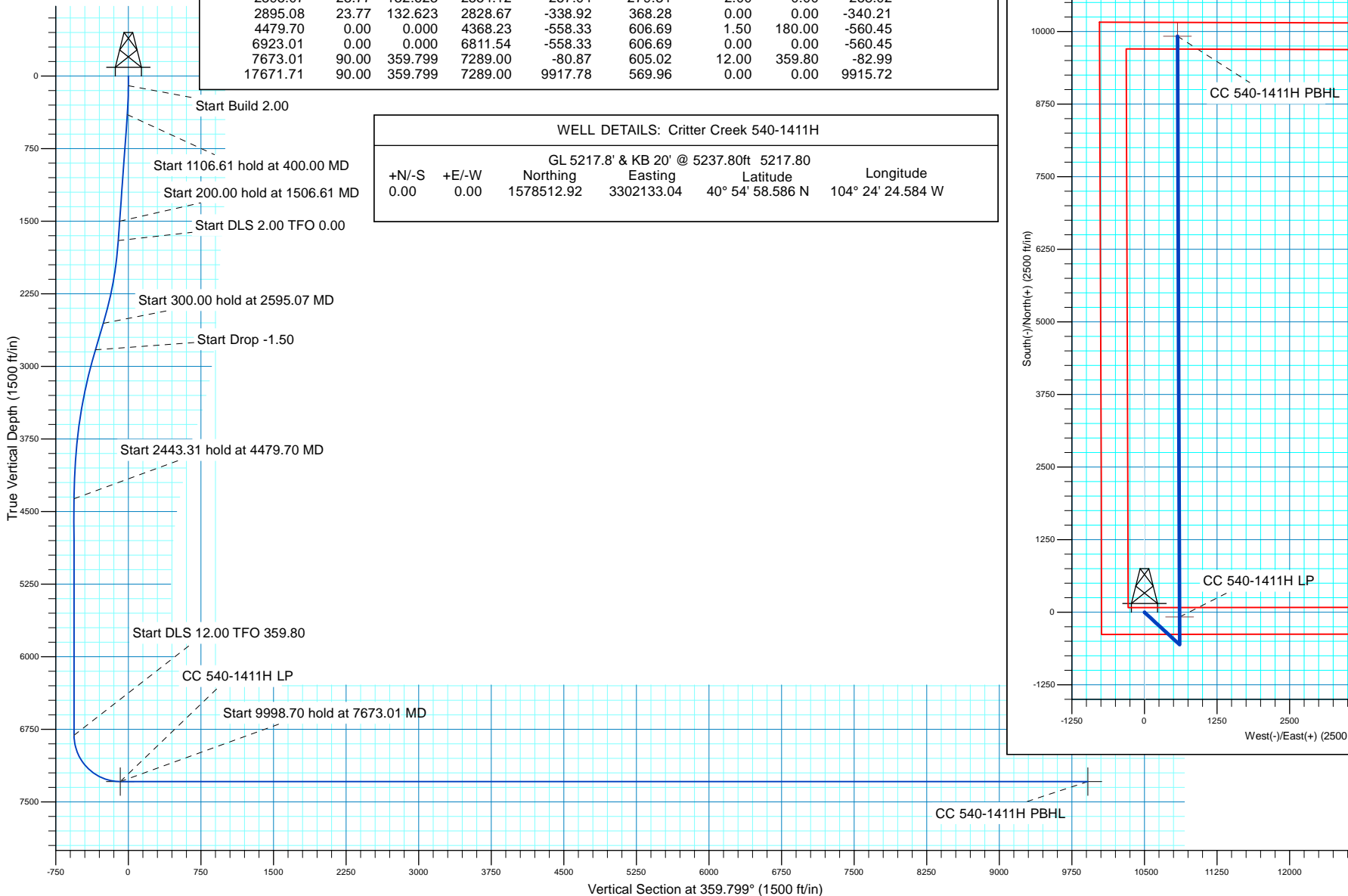
Created By: Seth Burstad

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
100.00	0.00	0.000	100.00	0.00	0.00	0.00	0.00	0.00
400.00	6.00	132.623	399.45	-10.63	11.55	2.00	132.62	-10.67
1506.61	6.00	132.623	1500.00	-88.96	96.66	0.00	0.00	-89.30
1706.61	6.00	132.623	1698.90	-103.11	112.05	0.00	0.00	-103.51
2595.07	23.77	132.623	2554.12	-257.04	279.31	2.00	0.00	-258.02
2895.08	23.77	132.623	2828.67	-338.92	368.28	0.00	0.00	-340.21
4479.70	0.00	0.000	4368.23	-558.33	606.69	1.50	180.00	-560.45
6923.01	0.00	0.000	6811.54	-558.33	606.69	0.00	0.00	-560.45
7673.01	90.00	359.799	7289.00	-80.87	605.02	12.00	359.80	-82.99
17671.71	90.00	359.799	7289.00	9917.78	569.96	0.00	0.00	9915.72

WELL DETAILS: Critter Creek 540-1411H

GL 5217.8' & KB 20' @ 5237.80ft 5217.80						Longitude	
+N/-S	+E/-W	Northing	Easting	Latitude			
0.00	0.00	1578512.92	3302133.04	40° 54' 58.586 N		104° 24' 24.584 W	





HighPoint Resources

Weld County, CO NAD 83
Crittter Creek 14 SW Pad
Crittter Creek 540-1411H

OH

Plan: Plan 1

Standard Planning Report

03 April, 2018



Database:	Casper District	Local Co-ordinate Reference:	Well Critter Creek 540-1411H
Company:	HighPoint Resources	TVD Reference:	GL 5217.8' & KB 20' @ 5237.80ft
Project:	Weld County, CO NAD 83	MD Reference:	GL 5217.8' & KB 20' @ 5237.80ft
Site:	Critter Creek 14 SW Pad	North Reference:	True
Well:	Critter Creek 540-1411H	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 14 SW Pad, Site Center : Critter Creek 240-1411H			
Site Position:		Northing:	1,578,513.30 usft	Latitude:	40° 54' 58.586 N
From:	Lat/Long	Easting:	3,302,162.89 usft	Longitude:	104° 24' 24.196 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.71 °

Well	Critter Creek 540-1411H, 382' FSL 740' FWL Sec 14 T11N R63W					
Well Position	+N/-S	-0.01 ft	Northing:	1,578,512.92 usft	Latitude:	40° 54' 58.586 N
	+E/-W	-29.85 ft	Easting:	3,302,133.05 usft	Longitude:	104° 24' 24.584 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	5,217.80 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	4/3/2018	8.28	67.20	52,807

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	359.799

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	
100.00	0.00	0.000	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
400.00	6.00	132.623	399.45	-10.63	11.55	2.00	2.00	0.00	132.62	
1,506.61	6.00	132.623	1,500.00	-88.96	96.66	0.00	0.00	0.00	0.00	
1,706.61	6.00	132.623	1,698.90	-103.11	112.05	0.00	0.00	0.00	0.00	
2,595.07	23.77	132.623	2,554.12	-257.04	279.31	2.00	2.00	0.00	0.00	
2,895.08	23.77	132.623	2,828.67	-338.92	368.28	0.00	0.00	0.00	0.00	
4,479.70	0.00	0.000	4,368.23	-558.33	606.69	1.50	-1.50	0.00	180.00	
6,923.01	0.00	0.000	6,811.54	-558.33	606.69	0.00	0.00	0.00	0.00	
7,673.01	90.00	359.799	7,289.00	-80.87	605.02	12.00	12.00	-0.03	359.80	
17,671.71	90.00	359.799	7,289.00	9,917.78	569.96	0.00	0.00	0.00	0.00	CC 540-1411H PBHL

Database:	Casper District	Local Co-ordinate Reference:	Well Critter Creek 540-1411H
Company:	HighPoint Resources	TVD Reference:	GL 5217.8' & KB 20' @ 5237.80ft
Project:	Weld County, CO NAD 83	MD Reference:	GL 5217.8' & KB 20' @ 5237.80ft
Site:	Critter Creek 14 SW Pad	North Reference:	True
Well:	Critter Creek 540-1411H	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
Start Build 2.00									
200.00	2.00	132.623	199.98	-1.18	1.28	-1.19	2.00	2.00	0.00
300.00	4.00	132.623	299.84	-4.73	5.13	-4.74	2.00	2.00	0.00
400.00	6.00	132.623	399.45	-10.63	11.55	-10.67	2.00	2.00	0.00
Start 1106.61 hold at 400.00 MD									
500.00	6.00	132.623	498.90	-17.71	19.24	-17.77	0.00	0.00	0.00
600.00	6.00	132.623	598.36	-24.78	26.93	-24.88	0.00	0.00	0.00
700.00	6.00	132.623	697.81	-31.86	34.62	-31.98	0.00	0.00	0.00
800.00	6.00	132.623	797.26	-38.94	42.31	-39.09	0.00	0.00	0.00
900.00	6.00	132.623	896.71	-46.02	50.01	-46.19	0.00	0.00	0.00
1,000.00	6.00	132.623	996.17	-53.10	57.70	-53.30	0.00	0.00	0.00
1,100.00	6.00	132.623	1,095.62	-60.18	65.39	-60.40	0.00	0.00	0.00
1,200.00	6.00	132.623	1,195.07	-67.25	73.08	-67.51	0.00	0.00	0.00
1,300.00	6.00	132.623	1,294.52	-74.33	80.77	-74.62	0.00	0.00	0.00
1,400.00	6.00	132.623	1,393.97	-81.41	88.46	-81.72	0.00	0.00	0.00
1,488.51	6.00	132.623	1,482.00	-87.68	95.27	-88.01	0.00	0.00	0.00
Fox Hills-Pierre contact									
1,500.00	6.00	132.623	1,493.43	-88.49	96.15	-88.83	0.00	0.00	0.00
1,506.61	6.00	132.623	1,500.00	-88.96	96.66	-89.30	0.00	0.00	0.00
Start 200.00 hold at 1506.61 MD									
1,600.00	6.00	132.623	1,592.88	-95.57	103.85	-95.93	0.00	0.00	0.00
1,700.00	6.00	132.623	1,692.33	-102.65	111.54	-103.04	0.00	0.00	0.00
1,706.61	6.00	132.623	1,698.90	-103.11	112.05	-103.51	0.00	0.00	0.00
Start DLS 2.00 TFO 0.00									
1,800.00	7.87	132.623	1,791.61	-110.75	120.34	-111.17	2.00	2.00	0.00
1,900.00	9.87	132.623	1,890.41	-121.19	131.68	-121.65	2.00	2.00	0.00
2,000.00	11.87	132.623	1,988.61	-133.95	145.56	-134.46	2.00	2.00	0.00
2,100.00	13.87	132.623	2,086.09	-149.03	161.94	-149.60	2.00	2.00	0.00
2,200.00	15.87	132.623	2,182.74	-166.41	180.82	-167.04	2.00	2.00	0.00
2,300.00	17.87	132.623	2,278.43	-186.06	202.17	-186.76	2.00	2.00	0.00
2,400.00	19.87	132.623	2,373.05	-207.95	225.97	-208.75	2.00	2.00	0.00
2,500.00	21.87	132.623	2,466.49	-232.07	252.18	-232.96	2.00	2.00	0.00
2,595.07	23.77	132.623	2,554.12	-257.04	279.31	-258.02	2.00	2.00	0.00
Start 300.00 hold at 2595.07 MD									
2,600.00	23.77	132.623	2,558.63	-258.39	280.77	-259.37	0.00	0.00	0.00
2,700.00	23.77	132.623	2,650.14	-285.68	310.42	-286.77	0.00	0.00	0.00
2,800.00	23.77	132.623	2,741.66	-312.97	340.08	-314.16	0.00	0.00	0.00
2,895.08	23.77	132.623	2,828.67	-338.92	368.28	-340.21	0.00	0.00	0.00
Start Drop -1.50									
2,900.00	23.70	132.623	2,833.18	-340.27	369.74	-341.56	1.50	-1.50	0.00
3,000.00	22.20	132.623	2,925.27	-366.66	398.42	-368.06	1.50	-1.50	0.00
3,100.00	20.70	132.623	3,018.34	-391.42	425.33	-392.91	1.50	-1.50	0.00
3,200.00	19.20	132.623	3,112.34	-414.52	450.43	-416.10	1.50	-1.50	0.00
3,276.68	18.05	132.623	3,185.00	-431.10	468.44	-432.74	1.50	-1.50	0.00
Pierre A									
3,300.00	17.70	132.623	3,207.20	-435.95	473.71	-437.61	1.50	-1.50	0.00
3,400.00	16.20	132.623	3,302.85	-455.68	495.15	-457.42	1.50	-1.50	0.00
3,500.00	14.70	132.623	3,399.24	-473.72	514.75	-475.52	1.50	-1.50	0.00
3,600.00	13.20	132.623	3,496.29	-490.04	532.48	-491.90	1.50	-1.50	0.00
3,700.00	11.70	132.623	3,593.94	-504.63	548.34	-506.55	1.50	-1.50	0.00
3,800.00	10.20	132.623	3,692.12	-517.49	562.31	-519.46	1.50	-1.50	0.00

Database:	Casper District	Local Co-ordinate Reference:	Well Critter Creek 540-1411H
Company:	HighPoint Resources	TVD Reference:	GL 5217.8' & KB 20' @ 5237.80ft
Project:	Weld County, CO NAD 83	MD Reference:	GL 5217.8' & KB 20' @ 5237.80ft
Site:	Critter Creek 14 SW Pad	North Reference:	True
Well:	Critter Creek 540-1411H	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)
3,900.00	8.70	132.623	3,790.76	-528.60	574.38	-530.61	1.50	-1.50	0.00
4,000.00	7.20	132.623	3,889.79	-537.96	584.56	-540.01	1.50	-1.50	0.00
4,100.00	5.70	132.623	3,989.16	-545.56	592.82	-547.64	1.50	-1.50	0.00
4,200.00	4.20	132.623	4,088.78	-551.40	599.16	-553.50	1.50	-1.50	0.00
4,247.32	3.49	132.623	4,136.00	-553.55	601.49	-555.65	1.50	-1.50	0.00
Parkman									
4,300.00	2.70	132.623	4,188.60	-555.47	603.58	-557.58	1.50	-1.50	0.00
4,400.00	1.20	132.623	4,288.54	-557.77	606.08	-559.89	1.50	-1.50	0.00
4,479.70	0.00	0.000	4,368.23	-558.33	606.69	-560.45	1.50	-1.50	0.00
Start 2443.31 hold at 4479.70 MD									
4,500.00	0.00	0.000	4,388.53	-558.33	606.69	-560.45	0.00	0.00	0.00
4,600.00	0.00	0.000	4,488.53	-558.33	606.69	-560.45	0.00	0.00	0.00
4,700.00	0.00	0.000	4,588.53	-558.33	606.69	-560.45	0.00	0.00	0.00
4,800.00	0.00	0.000	4,688.53	-558.33	606.69	-560.45	0.00	0.00	0.00
4,900.00	0.00	0.000	4,788.53	-558.33	606.69	-560.45	0.00	0.00	0.00
5,000.00	0.00	0.000	4,888.53	-558.33	606.69	-560.45	0.00	0.00	0.00
5,100.00	0.00	0.000	4,988.53	-558.33	606.69	-560.45	0.00	0.00	0.00
5,200.00	0.00	0.000	5,088.53	-558.33	606.69	-560.45	0.00	0.00	0.00
5,300.00	0.00	0.000	5,188.53	-558.33	606.69	-560.45	0.00	0.00	0.00
5,400.00	0.00	0.000	5,288.53	-558.33	606.69	-560.45	0.00	0.00	0.00
5,500.00	0.00	0.000	5,388.53	-558.33	606.69	-560.45	0.00	0.00	0.00
5,600.00	0.00	0.000	5,488.53	-558.33	606.69	-560.45	0.00	0.00	0.00
5,700.00	0.00	0.000	5,588.53	-558.33	606.69	-560.45	0.00	0.00	0.00
5,800.00	0.00	0.000	5,688.53	-558.33	606.69	-560.45	0.00	0.00	0.00
5,900.00	0.00	0.000	5,788.53	-558.33	606.69	-560.45	0.00	0.00	0.00
6,000.00	0.00	0.000	5,888.53	-558.33	606.69	-560.45	0.00	0.00	0.00
6,100.00	0.00	0.000	5,988.53	-558.33	606.69	-560.45	0.00	0.00	0.00
6,200.00	0.00	0.000	6,088.53	-558.33	606.69	-560.45	0.00	0.00	0.00
6,300.00	0.00	0.000	6,188.53	-558.33	606.69	-560.45	0.00	0.00	0.00
6,400.00	0.00	0.000	6,288.53	-558.33	606.69	-560.45	0.00	0.00	0.00
6,500.00	0.00	0.000	6,388.53	-558.33	606.69	-560.45	0.00	0.00	0.00
6,600.00	0.00	0.000	6,488.53	-558.33	606.69	-560.45	0.00	0.00	0.00
6,700.00	0.00	0.000	6,588.53	-558.33	606.69	-560.45	0.00	0.00	0.00
6,800.00	0.00	0.000	6,688.53	-558.33	606.69	-560.45	0.00	0.00	0.00
6,900.00	0.00	0.000	6,788.53	-558.33	606.69	-560.45	0.00	0.00	0.00
6,923.01	0.00	0.000	6,811.54	-558.33	606.69	-560.45	0.00	0.00	0.00
Start DLS 12.00 TFO 359.80									
7,000.00	9.24	359.799	6,888.20	-552.14	606.67	-554.26	12.00	12.00	0.00
7,100.00	21.24	359.799	6,984.51	-525.90	606.58	-528.02	12.00	12.00	0.00
7,200.00	33.24	359.799	7,073.26	-480.21	606.42	-482.34	12.00	12.00	0.00
7,278.38	42.64	359.799	7,135.00	-432.07	606.25	-434.20	12.00	12.00	0.00
Sharon Springs									
7,300.00	45.24	359.799	7,150.57	-417.07	606.19	-419.20	12.00	12.00	0.00
7,340.76	50.13	359.799	7,178.00	-386.94	606.09	-389.06	12.00	12.00	0.00
Niobrara A Chalk									
7,356.68	52.04	359.799	7,188.00	-374.55	606.05	-376.67	12.00	12.00	0.00
Niobrara A Marl									
7,373.32	54.04	359.799	7,198.00	-361.26	606.00	-363.39	12.00	12.00	0.00
Nio B1 Chalk									
7,400.00	57.24	359.799	7,213.06	-339.24	605.92	-341.36	12.00	12.00	0.00
7,420.94	59.75	359.799	7,224.00	-321.39	605.86	-323.51	12.00	12.00	0.00
Nio B1 Marl									
7,464.03	64.92	359.799	7,244.00	-283.23	605.73	-285.35	12.00	12.00	0.00

Database:	Casper District	Local Co-ordinate Reference:	Well Critter Creek 540-1411H
Company:	HighPoint Resources	TVD Reference:	GL 5217.8' & KB 20' @ 5237.80ft
Project:	Weld County, CO NAD 83	MD Reference:	GL 5217.8' & KB 20' @ 5237.80ft
Site:	Critter Creek 14 SW Pad	North Reference:	True
Well:	Critter Creek 540-1411H	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 Chalk									
7,500.00	69.24	359.799	7,258.00	-250.11	605.61	-252.24	12.00	12.00	0.00
7,575.09	78.24	359.799	7,279.00	-178.10	605.36	-180.22	11.99	11.99	0.00
Niobrara B Marl									
7,600.00	81.24	359.799	7,283.43	-153.59	605.27	-155.71	12.04	12.04	0.00
7,670.86	89.74	359.799	7,289.00	-83.02	605.02	-85.14	12.00	12.00	0.00
Niobrara B Chalk Landing Target - TD									
7,673.01	90.00	359.799	7,289.00	-80.87	605.02	-82.99	12.00	12.00	0.00
Start 9998.70 hold at 7673.01 MD									
7,700.00	90.00	359.799	7,289.00	-53.87	604.92	-56.00	0.00	0.00	0.00
7,800.00	90.00	359.799	7,289.00	46.13	604.57	44.00	0.00	0.00	0.00
7,900.00	90.00	359.799	7,289.00	146.12	604.22	144.00	0.00	0.00	0.00
8,000.00	90.00	359.799	7,289.00	246.12	603.87	244.00	0.00	0.00	0.00
8,100.00	90.00	359.799	7,289.00	346.12	603.52	344.00	0.00	0.00	0.00
8,200.00	90.00	359.799	7,289.00	446.12	603.17	444.00	0.00	0.00	0.00
8,300.00	90.00	359.799	7,289.00	546.12	602.82	544.00	0.00	0.00	0.00
8,400.00	90.00	359.799	7,289.00	646.12	602.47	644.00	0.00	0.00	0.00
8,500.00	90.00	359.799	7,289.00	746.12	602.12	744.00	0.00	0.00	0.00
8,600.00	90.00	359.799	7,289.00	846.12	601.77	844.00	0.00	0.00	0.00
8,700.00	90.00	359.799	7,289.00	946.12	601.42	944.00	0.00	0.00	0.00
8,800.00	90.00	359.799	7,289.00	1,046.12	601.06	1,044.00	0.00	0.00	0.00
8,900.00	90.00	359.799	7,289.00	1,146.12	600.71	1,144.00	0.00	0.00	0.00
9,000.00	90.00	359.799	7,289.00	1,246.12	600.36	1,244.00	0.00	0.00	0.00
9,100.00	90.00	359.799	7,289.00	1,346.12	600.01	1,344.00	0.00	0.00	0.00
9,200.00	90.00	359.799	7,289.00	1,446.12	599.66	1,444.00	0.00	0.00	0.00
9,300.00	90.00	359.799	7,289.00	1,546.12	599.31	1,544.00	0.00	0.00	0.00
9,400.00	90.00	359.799	7,289.00	1,646.12	598.96	1,644.00	0.00	0.00	0.00
9,500.00	90.00	359.799	7,289.00	1,746.11	598.61	1,744.00	0.00	0.00	0.00
9,600.00	90.00	359.799	7,289.00	1,846.11	598.26	1,844.00	0.00	0.00	0.00
9,700.00	90.00	359.799	7,289.00	1,946.11	597.91	1,944.00	0.00	0.00	0.00
9,800.00	90.00	359.799	7,289.00	2,046.11	597.56	2,044.00	0.00	0.00	0.00
9,900.00	90.00	359.799	7,289.00	2,146.11	597.21	2,144.00	0.00	0.00	0.00
10,000.00	90.00	359.799	7,289.00	2,246.11	596.86	2,244.00	0.00	0.00	0.00
10,100.00	90.00	359.799	7,289.00	2,346.11	596.51	2,344.00	0.00	0.00	0.00
10,200.00	90.00	359.799	7,289.00	2,446.11	596.16	2,444.00	0.00	0.00	0.00
10,300.00	90.00	359.799	7,289.00	2,546.11	595.81	2,544.00	0.00	0.00	0.00
10,400.00	90.00	359.799	7,289.00	2,646.11	595.46	2,644.00	0.00	0.00	0.00
10,500.00	90.00	359.799	7,289.00	2,746.11	595.10	2,744.00	0.00	0.00	0.00
10,600.00	90.00	359.799	7,289.00	2,846.11	594.75	2,844.00	0.00	0.00	0.00
10,700.00	90.00	359.799	7,289.00	2,946.11	594.40	2,944.00	0.00	0.00	0.00
10,800.00	90.00	359.799	7,289.00	3,046.11	594.05	3,044.00	0.00	0.00	0.00
10,900.00	90.00	359.799	7,289.00	3,146.11	593.70	3,144.00	0.00	0.00	0.00
11,000.00	90.00	359.799	7,289.00	3,246.11	593.35	3,244.00	0.00	0.00	0.00
11,100.00	90.00	359.799	7,289.00	3,346.10	593.00	3,344.00	0.00	0.00	0.00
11,200.00	90.00	359.799	7,289.00	3,446.10	592.65	3,444.00	0.00	0.00	0.00
11,300.00	90.00	359.799	7,289.00	3,546.10	592.30	3,544.00	0.00	0.00	0.00
11,400.00	90.00	359.799	7,289.00	3,646.10	591.95	3,644.00	0.00	0.00	0.00
11,500.00	90.00	359.799	7,289.00	3,746.10	591.60	3,744.00	0.00	0.00	0.00
11,600.00	90.00	359.799	7,289.00	3,846.10	591.25	3,844.00	0.00	0.00	0.00
11,700.00	90.00	359.799	7,289.00	3,946.10	590.90	3,944.00	0.00	0.00	0.00
11,800.00	90.00	359.799	7,289.00	4,046.10	590.55	4,044.00	0.00	0.00	0.00
11,900.00	90.00	359.799	7,289.00	4,146.10	590.20	4,144.00	0.00	0.00	0.00
12,000.00	90.00	359.799	7,289.00	4,246.10	589.85	4,244.00	0.00	0.00	0.00

Database:	Casper District	Local Co-ordinate Reference:	Well Critter Creek 540-1411H
Company:	HighPoint Resources	TVD Reference:	GL 5217.8' & KB 20' @ 5237.80ft
Project:	Weld County, CO NAD 83	MD Reference:	GL 5217.8' & KB 20' @ 5237.80ft
Site:	Critter Creek 14 SW Pad	North Reference:	True
Well:	Critter Creek 540-1411H	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)
12,100.00	90.00	359.799	7,289.00	4,346.10	589.50	4,344.00	0.00	0.00	0.00
12,200.00	90.00	359.799	7,289.00	4,446.10	589.14	4,444.00	0.00	0.00	0.00
12,300.00	90.00	359.799	7,289.00	4,546.10	588.79	4,544.00	0.00	0.00	0.00
12,400.00	90.00	359.799	7,289.00	4,646.10	588.44	4,644.00	0.00	0.00	0.00
12,500.00	90.00	359.799	7,289.00	4,746.10	588.09	4,744.00	0.00	0.00	0.00
12,600.00	90.00	359.799	7,289.00	4,846.10	587.74	4,844.00	0.00	0.00	0.00
12,700.00	90.00	359.799	7,289.00	4,946.10	587.39	4,944.00	0.00	0.00	0.00
12,800.00	90.00	359.799	7,289.00	5,046.09	587.04	5,044.00	0.00	0.00	0.00
12,900.00	90.00	359.799	7,289.00	5,146.09	586.69	5,144.00	0.00	0.00	0.00
13,000.00	90.00	359.799	7,289.00	5,246.09	586.34	5,244.00	0.00	0.00	0.00
13,100.00	90.00	359.799	7,289.00	5,346.09	585.99	5,344.00	0.00	0.00	0.00
13,200.00	90.00	359.799	7,289.00	5,446.09	585.64	5,444.00	0.00	0.00	0.00
13,300.00	90.00	359.799	7,289.00	5,546.09	585.29	5,544.00	0.00	0.00	0.00
13,400.00	90.00	359.799	7,289.00	5,646.09	584.94	5,644.00	0.00	0.00	0.00
13,500.00	90.00	359.799	7,289.00	5,746.09	584.59	5,744.00	0.00	0.00	0.00
13,600.00	90.00	359.799	7,289.00	5,846.09	584.24	5,844.00	0.00	0.00	0.00
13,700.00	90.00	359.799	7,289.00	5,946.09	583.89	5,944.00	0.00	0.00	0.00
13,800.00	90.00	359.799	7,289.00	6,046.09	583.54	6,044.00	0.00	0.00	0.00
13,900.00	90.00	359.799	7,289.00	6,146.09	583.18	6,144.00	0.00	0.00	0.00
14,000.00	90.00	359.799	7,289.00	6,246.09	582.83	6,244.00	0.00	0.00	0.00
14,100.00	90.00	359.799	7,289.00	6,346.09	582.48	6,344.00	0.00	0.00	0.00
14,200.00	90.00	359.799	7,289.00	6,446.09	582.13	6,444.00	0.00	0.00	0.00
14,300.00	90.00	359.799	7,289.00	6,546.09	581.78	6,544.00	0.00	0.00	0.00
14,400.00	90.00	359.799	7,289.00	6,646.08	581.43	6,644.00	0.00	0.00	0.00
14,500.00	90.00	359.799	7,289.00	6,746.08	581.08	6,744.00	0.00	0.00	0.00
14,600.00	90.00	359.799	7,289.00	6,846.08	580.73	6,844.00	0.00	0.00	0.00
14,700.00	90.00	359.799	7,289.00	6,946.08	580.38	6,944.00	0.00	0.00	0.00
14,800.00	90.00	359.799	7,289.00	7,046.08	580.03	7,044.00	0.00	0.00	0.00
14,900.00	90.00	359.799	7,289.00	7,146.08	579.68	7,144.00	0.00	0.00	0.00
15,000.00	90.00	359.799	7,289.00	7,246.08	579.33	7,244.00	0.00	0.00	0.00
15,100.00	90.00	359.799	7,289.00	7,346.08	578.98	7,344.00	0.00	0.00	0.00
15,200.00	90.00	359.799	7,289.00	7,446.08	578.63	7,444.00	0.00	0.00	0.00
15,300.00	90.00	359.799	7,289.00	7,546.08	578.28	7,544.00	0.00	0.00	0.00
15,400.00	90.00	359.799	7,289.00	7,646.08	577.93	7,644.00	0.00	0.00	0.00
15,500.00	90.00	359.799	7,289.00	7,746.08	577.58	7,744.00	0.00	0.00	0.00
15,600.00	90.00	359.799	7,289.00	7,846.08	577.22	7,844.00	0.00	0.00	0.00
15,700.00	90.00	359.799	7,289.00	7,946.08	576.87	7,944.00	0.00	0.00	0.00
15,800.00	90.00	359.799	7,289.00	8,046.08	576.52	8,044.00	0.00	0.00	0.00
15,900.00	90.00	359.799	7,289.00	8,146.08	576.17	8,144.00	0.00	0.00	0.00
16,000.00	90.00	359.799	7,289.00	8,246.07	575.82	8,244.00	0.00	0.00	0.00
16,100.00	90.00	359.799	7,289.00	8,346.07	575.47	8,344.00	0.00	0.00	0.00
16,200.00	90.00	359.799	7,289.00	8,446.07	575.12	8,444.00	0.00	0.00	0.00
16,300.00	90.00	359.799	7,289.00	8,546.07	574.77	8,544.00	0.00	0.00	0.00
16,400.00	90.00	359.799	7,289.00	8,646.07	574.42	8,644.00	0.00	0.00	0.00
16,500.00	90.00	359.799	7,289.00	8,746.07	574.07	8,744.00	0.00	0.00	0.00
16,600.00	90.00	359.799	7,289.00	8,846.07	573.72	8,844.00	0.00	0.00	0.00
16,700.00	90.00	359.799	7,289.00	8,946.07	573.37	8,944.00	0.00	0.00	0.00
16,800.00	90.00	359.799	7,289.00	9,046.07	573.02	9,044.00	0.00	0.00	0.00
16,900.00	90.00	359.799	7,289.00	9,146.07	572.67	9,144.00	0.00	0.00	0.00
17,000.00	90.00	359.799	7,289.00	9,246.07	572.32	9,244.00	0.00	0.00	0.00
17,100.00	90.00	359.799	7,289.00	9,346.07	571.97	9,344.00	0.00	0.00	0.00
17,200.00	90.00	359.799	7,289.00	9,446.07	571.62	9,444.00	0.00	0.00	0.00
17,300.00	90.00	359.799	7,289.00	9,546.07	571.26	9,544.00	0.00	0.00	0.00
17,400.00	90.00	359.799	7,289.00	9,646.07	570.91	9,644.00	0.00	0.00	0.00

Database:	Casper District	Local Co-ordinate Reference:	Well Critter Creek 540-1411H
Company:	HighPoint Resources	TVD Reference:	GL 5217.8' & KB 20' @ 5237.80ft
Project:	Weld County, CO NAD 83	MD Reference:	GL 5217.8' & KB 20' @ 5237.80ft
Site:	Critter Creek 14 SW Pad	North Reference:	True
Well:	Critter Creek 540-1411H	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)
17,500.00	90.00	359.799	7,289.00	9,746.07	570.56	9,744.00	0.00	0.00	0.00
17,600.00	90.00	359.799	7,289.00	9,846.07	570.21	9,844.00	0.00	0.00	0.00
17,671.71	90.00	359.799	7,289.00	9,917.77	569.96	9,915.71	0.00	0.00	0.00
TD at 17671.71									

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 540-1411H PBHL	0.00	0.000	7,289.00	9,917.78	569.96	1,588,436.94	3,302,580.70	40° 56' 36.578 N	104° 24' 17.158 W
- plan hits target center									
- Point									
CC 540-1411H LP	0.00	0.000	7,289.00	-80.87	605.02	1,578,439.51	3,302,739.02	40° 54' 57.787 N	104° 24' 16.704 W
- plan misses target center by 0.01ft at 7673.01ft MD (7289.00 TVD, -80.87 N, 605.02 E)									
- Point									

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,488.51	1,482.00	Fox Hills-Pierre contact				
3,276.68	3,185.00	Pierre A				
4,247.32	4,136.00	Parkman				
7,278.38	7,135.00	Sharon Springs				
7,340.76	7,178.00	Niobrara A Chalk				
7,356.68	7,188.00	Niobrara A Marl				
7,373.32	7,198.00	Nio B1 Chalk				
7,420.94	7,224.00	Nio B1 Marl				
7,464.03	7,244.00	Niobrara B Chalk				
7,575.09	7,279.00	Niobrara B Marl				
7,670.86	7,289.00	Niobrara B Chalk Landing Target				
7,670.86	7,289.00	TD				

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
100.00	100.00	0.00	0.00	Start Build 2.00
400.00	399.45	-10.63	11.55	Start 1106.61 hold at 400.00 MD
1,506.61	1,500.00	-88.96	96.66	Start 200.00 hold at 1506.61 MD
1,706.61	1,698.90	-103.11	112.05	Start DLS 2.00 TFO 0.00
2,595.07	2,554.12	-257.04	279.31	Start 300.00 hold at 2595.07 MD
2,895.08	2,828.67	-338.92	368.28	Start Drop -1.50
4,479.70	4,368.23	-558.33	606.69	Start 2443.31 hold at 4479.70 MD
6,923.01	6,811.54	-558.33	606.69	Start DLS 12.00 TFO 359.80
7,673.01	7,289.00	-80.87	605.02	Start 9998.70 hold at 7673.01 MD
17,671.71	7,289.00	9,917.77	569.96	TD at 17671.71