

HIGHPOINT RESOURCES

WELD COUNTY

SEC 25-T6N-R62W

PURCELL 31E-10-02

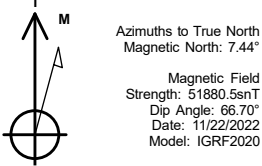
OWB

Plan: PROPOSAL 1

Standard Planning Report

22 November, 2022

Project: WELD COUNTY
Site: SEC 25-T6N-R62W
Well: PURCELL 31E-10-02
Wellbore: OWB
Design: PROPOSAL 1



WELL DETAILS: PURCELL 31E-10-02

4666.40						
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1409957.30	3341474.63	40.452249°N	104.272940°W	

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	
3	1806.84	34.14	115.30	1707.63	-210.92	446.27	2.00	115.30	477.43	
4	6835.04	34.14	115.30	5869.48	-1416.65	2997.36	0.00	0.00	3206.63	
5	7430.90	90.00	89.73	6141.00	-1493.80	3491.84	10.00	-30.02	3706.86	LP-PURCELL 31W-02
6	11821.76	90.00	89.73	6141.00	-1473.48	7882.65	0.00	0.00	8019.19	PBHL-PURCELL 31W-02

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Departure	Annotation
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	Start Build 2.00
1806.84	34.14	115.30	1707.63	-210.92	446.27	477.43	493.60	Start 5028.21 hold at 1806.84 MD
6835.04	34.14	115.30	5869.48	-1416.65	2997.36	3206.63	3315.28	Start DLS 10.00 TFO -30.02
7430.90	90.00	89.73	6141.00	-1493.80	3491.84	3706.86	3819.11	Start 4390.86 hold at 7430.90 MD
11821.76	90.00	89.73	6141.00	-1473.48	7882.65	8019.19	8209.97	TD at 11821.76

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
LP-PURCELL 31W-02	6141.00	-1493.80	3491.84	1408512.02	3344986.67	40.448148°N	104.260394°W	Point
- plan hits target center								
PBHL-PURCELL 31W-02	6141.00	-1473.48	7882.65	1408593.09	3349376.62	40.448201°N	104.244618°W	Point
- plan hits target center								

SHL:
269' FSL, 2247' FWL
Sec 25-T6N-R62W

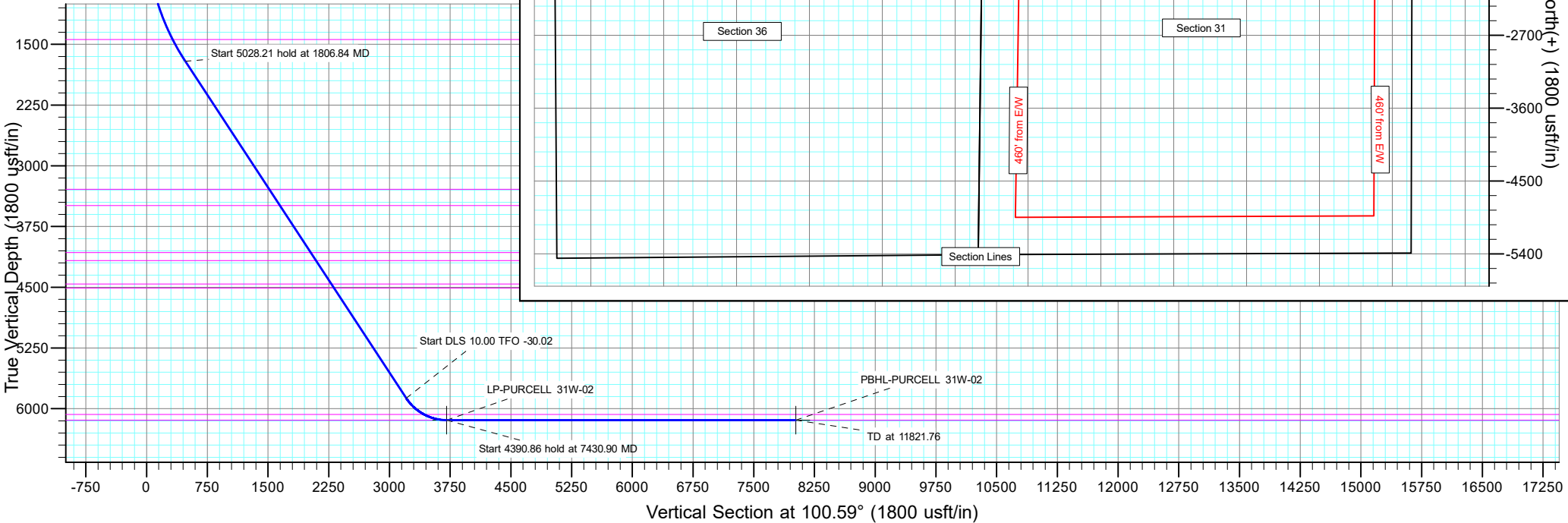
LP:
1341' FNL, 460' FWL
Sec 31-T6N-R61W

BHL:
1341' FNL, 460' FEL
Sec 31-T6N-R61W

PROJECT DETAILS: WELD COUNTY

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Northern Zone

System Datum: Mean Sea Level



Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well PURCELL 31E-10-02
Company:	HIGHPOINT RESOURCES	TVD Reference:	KB 25' @ 4691.40usft
Project:	WELD COUNTY	MD Reference:	KB 25' @ 4691.40usft
Site:	SEC 25-T6N-R62W	North Reference:	True
Well:	PURCELL 31E-10-02	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PROPOSAL 1		

Project	WELD COUNTY		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site		SEC 25-T6N-R62W			
Site Position:		Northing:	1,409,572.50 usft	Latitude:	40.451278°N
From:	Lat/Long	Easting:	3,339,223.85 usft	Longitude:	104.281046°W
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence:	0.79 °

Well	PURCELL 31E-10-02					
Well Position	+N/-S	353.84 usft	Northing:	1,409,957.30 usft	Latitude:	40.452249°N
	+E/-W	2,255.95 usft	Easting:	3,341,474.63 usft	Longitude:	104.272940°W
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	4,666.40 usft

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	11/22/2022	7.44	66.70	51,880.50351191

Design	PROPOSAL 1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	100.59

Plan Survey Tool Program	Date	11/22/2022		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	11,821.76	PROPOSAL 1 (OWB)	MWD
				OWSG MWD - Standard

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,806.84	34.14	115.30	1,707.63	-210.92	446.27	2.00	2.00	0.00	115.30	
6,835.04	34.14	115.30	5,869.48	-1,416.65	2,997.36	0.00	0.00	0.00	0.00	
7,430.90	90.00	89.73	6,141.00	-1,493.80	3,491.84	10.00	9.38	-4.29	-30.02	LP-PURCELL 31W-02
11,821.76	90.00	89.73	6,141.00	-1,473.48	7,882.65	0.00	0.00	0.00	0.00	PBHL-PURCELL 31W

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well PURCELL 31E-10-02
Company:	HIGHPOINT RESOURCES	TVD Reference:	KB 25' @ 4691.40usft
Project:	WELD COUNTY	MD Reference:	KB 25' @ 4691.40usft
Site:	SEC 25-T6N-R62W	North Reference:	True
Well:	PURCELL 31E-10-02	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PROPOSAL 1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24.00	0.00	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00
Laramie-Fox Hills Formation									
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
200.00	2.00	115.30	199.98	-0.75	1.58	1.69	2.00	2.00	0.00
241.06	2.82	115.30	241.00	-1.48	3.14	3.36	2.00	2.00	0.00
Pierre Formation									
300.00	4.00	115.30	299.84	-2.98	6.31	6.75	2.00	2.00	0.00
400.00	6.00	115.30	399.45	-6.71	14.19	15.18	2.00	2.00	0.00
451.88	7.04	115.30	451.00	-9.22	19.51	20.88	2.00	2.00	0.00
Upper Pierre aquifer									
500.00	8.00	115.30	498.70	-11.91	25.21	26.97	2.00	2.00	0.00
600.00	10.00	115.30	597.47	-18.60	39.35	42.10	2.00	2.00	0.00
700.00	12.00	115.30	695.62	-26.75	56.60	60.55	2.00	2.00	0.00
800.00	14.00	115.30	793.06	-36.36	76.94	82.31	2.00	2.00	0.00
900.00	16.00	115.30	889.64	-47.42	100.34	107.34	2.00	2.00	0.00
1,000.00	18.00	115.30	985.27	-59.91	126.77	135.62	2.00	2.00	0.00
1,100.00	20.00	115.30	1,079.82	-73.83	156.20	167.11	2.00	2.00	0.00
1,200.00	22.00	115.30	1,173.17	-89.14	188.60	201.77	2.00	2.00	0.00
1,300.00	24.00	115.30	1,265.21	-105.83	223.92	239.56	2.00	2.00	0.00
1,400.00	26.00	115.30	1,355.84	-123.89	262.13	280.43	2.00	2.00	0.00
1,495.54	27.91	115.30	1,441.00	-142.40	301.29	322.32	2.00	2.00	0.00
Base of Upper Pierre aquifer									
1,500.00	28.00	115.30	1,444.94	-143.29	303.17	324.34	2.00	2.00	0.00
1,600.00	30.00	115.30	1,532.39	-164.01	347.00	371.23	2.00	2.00	0.00
1,700.00	32.00	115.30	1,618.11	-186.01	393.57	421.04	2.00	2.00	0.00
1,806.84	34.14	115.30	1,707.63	-210.92	446.27	477.43	2.00	2.00	0.00
Start 5028.21 hold at 1806.84 MD									
1,900.00	34.14	115.30	1,784.74	-233.26	493.54	527.99	0.00	0.00	0.00
2,000.00	34.14	115.30	1,867.51	-257.24	544.27	582.27	0.00	0.00	0.00
2,100.00	34.14	115.30	1,950.28	-281.22	595.01	636.55	0.00	0.00	0.00
2,200.00	34.14	115.30	2,033.05	-305.20	645.74	690.83	0.00	0.00	0.00
2,300.00	34.14	115.30	2,115.82	-329.18	696.48	745.10	0.00	0.00	0.00
2,400.00	34.14	115.30	2,198.59	-353.16	747.21	799.38	0.00	0.00	0.00
2,500.00	34.14	115.30	2,281.36	-377.14	797.95	853.66	0.00	0.00	0.00
2,600.00	34.14	115.30	2,364.13	-401.12	848.69	907.94	0.00	0.00	0.00
2,700.00	34.14	115.30	2,446.90	-425.10	899.42	962.22	0.00	0.00	0.00
2,800.00	34.14	115.30	2,529.67	-449.08	950.16	1,016.49	0.00	0.00	0.00
2,900.00	34.14	115.30	2,612.44	-473.06	1,000.89	1,070.77	0.00	0.00	0.00
3,000.00	34.14	115.30	2,695.21	-497.03	1,051.63	1,125.05	0.00	0.00	0.00
3,100.00	34.14	115.30	2,777.98	-521.01	1,102.36	1,179.33	0.00	0.00	0.00
3,200.00	34.14	115.30	2,860.75	-544.99	1,153.10	1,233.61	0.00	0.00	0.00
3,300.00	34.14	115.30	2,943.52	-568.97	1,203.84	1,287.88	0.00	0.00	0.00
3,400.00	34.14	115.30	3,026.29	-592.95	1,254.57	1,342.16	0.00	0.00	0.00
3,500.00	34.14	115.30	3,109.06	-616.93	1,305.31	1,396.44	0.00	0.00	0.00
3,600.00	34.14	115.30	3,191.83	-640.91	1,356.04	1,450.72	0.00	0.00	0.00
3,700.00	34.14	115.30	3,274.60	-664.89	1,406.78	1,505.00	0.00	0.00	0.00
3,719.81	34.14	115.30	3,291.00	-669.64	1,416.83	1,515.75	0.00	0.00	0.00
Larimer ("Parkman") sandstone									
3,800.00	34.14	115.30	3,357.37	-688.87	1,457.51	1,559.27	0.00	0.00	0.00
3,900.00	34.14	115.30	3,440.14	-712.85	1,508.25	1,613.55	0.00	0.00	0.00
3,961.44	34.14	115.30	3,491.00	-727.58	1,539.42	1,646.90	0.00	0.00	0.00

Planning Report

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Company:	HIGHPOINT RESOURCES	TVD Reference:	KB 25' @ 4691.40usft
Project:	WELD COUNTY	MD Reference:	KB 25' @ 4691.40usft
Site:	SEC 25-T6N-R62W	North Reference:	True
Well:	PURCELL 31E-10-02	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PROPOSAL 1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
Pierre Formation										
4,000.00	34.14	115.30	3,522.91	-736.83	1,558.99	1,667.83	0.00	0.00	0.00	
4,100.00	34.14	115.30	3,605.68	-760.81	1,609.72	1,722.11	0.00	0.00	0.00	
4,200.00	34.14	115.30	3,688.45	-784.79	1,660.46	1,776.39	0.00	0.00	0.00	
4,300.00	34.14	115.30	3,771.22	-808.77	1,711.19	1,830.66	0.00	0.00	0.00	
4,400.00	34.14	115.30	3,853.99	-832.75	1,761.93	1,884.94	0.00	0.00	0.00	
4,500.00	34.14	115.30	3,936.76	-856.73	1,812.66	1,939.22	0.00	0.00	0.00	
4,600.00	34.14	115.30	4,019.53	-880.70	1,863.40	1,993.50	0.00	0.00	0.00	
4,662.18	34.14	115.30	4,071.00	-895.61	1,894.95	2,027.25	0.00	0.00	0.00	
Terry ("Sussex") sandstone										
4,700.00	34.14	115.30	4,102.30	-904.68	1,914.14	2,047.78	0.00	0.00	0.00	
4,783.00	34.14	115.30	4,171.00	-924.59	1,956.24	2,092.82	0.00	0.00	0.00	
Pierre Formation										
4,800.00	34.14	115.30	4,185.07	-928.66	1,964.87	2,102.05	0.00	0.00	0.00	
4,900.00	34.14	115.30	4,267.84	-952.64	2,015.61	2,156.33	0.00	0.00	0.00	
5,000.00	34.14	115.30	4,350.61	-976.62	2,066.34	2,210.61	0.00	0.00	0.00	
5,100.00	34.14	115.30	4,433.38	-1,000.60	2,117.08	2,264.89	0.00	0.00	0.00	
5,133.36	34.14	115.30	4,461.00	-1,008.60	2,134.01	2,283.00	0.00	0.00	0.00	
Hygiene ("Shannon") sandstone										
5,193.77	34.14	115.30	4,511.00	-1,023.09	2,164.65	2,315.79	0.00	0.00	0.00	
Pierre Formation										
5,200.00	34.14	115.30	4,516.15	-1,024.58	2,167.81	2,319.17	0.00	0.00	0.00	
5,300.00	34.14	115.30	4,598.92	-1,048.56	2,218.55	2,373.44	0.00	0.00	0.00	
5,400.00	34.14	115.30	4,681.69	-1,072.54	2,269.29	2,427.72	0.00	0.00	0.00	
5,500.00	34.14	115.30	4,764.46	-1,096.52	2,320.02	2,482.00	0.00	0.00	0.00	
5,600.00	34.14	115.30	4,847.23	-1,120.50	2,370.76	2,536.28	0.00	0.00	0.00	
5,700.00	34.14	115.30	4,930.00	-1,144.48	2,421.49	2,590.56	0.00	0.00	0.00	
5,800.00	34.14	115.30	5,012.77	-1,168.46	2,472.23	2,644.83	0.00	0.00	0.00	
5,900.00	34.14	115.30	5,095.54	-1,192.44	2,522.96	2,699.11	0.00	0.00	0.00	
6,000.00	34.14	115.30	5,178.31	-1,216.42	2,573.70	2,753.39	0.00	0.00	0.00	
6,100.00	34.14	115.30	5,261.08	-1,240.40	2,624.44	2,807.67	0.00	0.00	0.00	
6,200.00	34.14	115.30	5,343.85	-1,264.38	2,675.17	2,861.94	0.00	0.00	0.00	
6,300.00	34.14	115.30	5,426.62	-1,288.35	2,725.91	2,916.22	0.00	0.00	0.00	
6,400.00	34.14	115.30	5,509.39	-1,312.33	2,776.64	2,970.50	0.00	0.00	0.00	
6,500.00	34.14	115.30	5,592.17	-1,336.31	2,827.38	3,024.78	0.00	0.00	0.00	
6,600.00	34.14	115.30	5,674.94	-1,360.29	2,878.11	3,079.06	0.00	0.00	0.00	
6,700.00	34.14	115.30	5,757.71	-1,384.27	2,928.85	3,133.33	0.00	0.00	0.00	
6,800.00	34.14	115.30	5,840.48	-1,408.25	2,979.58	3,187.61	0.00	0.00	0.00	
6,835.04	34.14	115.30	5,869.48	-1,416.65	2,997.36	3,206.63	0.00	0.00	0.00	
Start DLS 10.00 TFO -30.02										
6,850.00	35.44	114.01	5,881.76	-1,420.21	3,005.12	3,214.91	10.00	8.70	-8.63	
6,900.00	39.88	110.23	5,921.34	-1,431.66	3,033.42	3,244.83	10.00	8.88	-7.55	
6,950.00	44.42	107.11	5,958.41	-1,442.36	3,065.20	3,278.04	10.00	9.08	-6.25	
7,000.00	49.03	104.45	5,992.68	-1,452.22	3,100.23	3,314.28	10.00	9.22	-5.31	
7,050.00	53.69	102.15	6,023.89	-1,461.18	3,138.23	3,353.28	10.00	9.33	-4.61	
7,100.00	58.40	100.10	6,051.81	-1,469.15	3,178.91	3,394.74	10.00	9.41	-4.09	
7,138.65	62.06	98.66	6,071.00	-1,474.62	3,212.00	3,428.27	10.00	9.46	-3.73	
Sharon Springs Member										
7,150.00	63.13	98.26	6,076.23	-1,476.10	3,221.97	3,438.34	10.00	9.49	-3.56	
7,200.00	67.89	96.56	6,096.95	-1,481.95	3,267.08	3,483.75	10.00	9.51	-3.39	
7,250.00	72.66	94.98	6,113.82	-1,486.67	3,313.89	3,530.64	10.00	9.54	-3.17	
7,300.00	77.45	93.47	6,126.71	-1,490.22	3,362.05	3,578.63	10.00	9.57	-3.01	
7,350.00	82.24	92.02	6,135.53	-1,492.57	3,411.20	3,627.37	10.00	9.58	-2.90	

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well PURCELL 31E-10-02
Company:	HIGHPOINT RESOURCES	TVD Reference:	KB 25' @ 4691.40usft
Project:	WELD COUNTY	MD Reference:	KB 25' @ 4691.40usft
Site:	SEC 25-T6N-R62W	North Reference:	True
Well:	PURCELL 31E-10-02	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PROPOSAL 1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
7,400.00	87.03	90.60	6,140.20	-1,493.71	3,460.95	3,676.49	10.00	9.59	-2.83	
7,430.90	90.00	89.73	6,141.00	-1,493.80	3,491.84	3,706.86	10.00	9.60	-2.81	
Start 4390.86 hold at 7430.90 MD - Niobrara Formation										
7,500.00	90.00	89.73	6,141.00	-1,493.48	3,560.94	3,774.73	0.00	0.00	0.00	
7,600.00	90.00	89.73	6,141.00	-1,493.02	3,660.94	3,872.94	0.00	0.00	0.00	
7,700.00	90.00	89.73	6,141.00	-1,492.55	3,760.93	3,971.15	0.00	0.00	0.00	
7,800.00	90.00	89.73	6,141.00	-1,492.09	3,860.93	4,069.36	0.00	0.00	0.00	
7,900.00	90.00	89.73	6,141.00	-1,491.63	3,960.93	4,167.57	0.00	0.00	0.00	
8,000.00	90.00	89.73	6,141.00	-1,491.16	4,060.93	4,265.78	0.00	0.00	0.00	
8,100.00	90.00	89.73	6,141.00	-1,490.70	4,160.93	4,363.99	0.00	0.00	0.00	
8,200.00	90.00	89.73	6,141.00	-1,490.24	4,260.93	4,462.21	0.00	0.00	0.00	
8,300.00	90.00	89.73	6,141.00	-1,489.78	4,360.93	4,560.42	0.00	0.00	0.00	
8,400.00	90.00	89.73	6,141.00	-1,489.31	4,460.93	4,658.63	0.00	0.00	0.00	
8,500.00	90.00	89.73	6,141.00	-1,488.85	4,560.93	4,756.84	0.00	0.00	0.00	
8,600.00	90.00	89.73	6,141.00	-1,488.39	4,660.92	4,855.05	0.00	0.00	0.00	
8,700.00	90.00	89.73	6,141.00	-1,487.93	4,760.92	4,953.26	0.00	0.00	0.00	
8,800.00	90.00	89.73	6,141.00	-1,487.46	4,860.92	5,051.47	0.00	0.00	0.00	
8,900.00	90.00	89.73	6,141.00	-1,487.00	4,960.92	5,149.68	0.00	0.00	0.00	
9,000.00	90.00	89.73	6,141.00	-1,486.54	5,060.92	5,247.90	0.00	0.00	0.00	
9,100.00	90.00	89.73	6,141.00	-1,486.07	5,160.92	5,346.11	0.00	0.00	0.00	
9,200.00	90.00	89.73	6,141.00	-1,485.61	5,260.92	5,444.32	0.00	0.00	0.00	
9,300.00	90.00	89.73	6,141.00	-1,485.15	5,360.92	5,542.53	0.00	0.00	0.00	
9,400.00	90.00	89.73	6,141.00	-1,484.69	5,460.92	5,640.74	0.00	0.00	0.00	
9,500.00	90.00	89.73	6,141.00	-1,484.22	5,560.91	5,738.95	0.00	0.00	0.00	
9,600.00	90.00	89.73	6,141.00	-1,483.76	5,660.91	5,837.16	0.00	0.00	0.00	
9,700.00	90.00	89.73	6,141.00	-1,483.30	5,760.91	5,935.38	0.00	0.00	0.00	
9,800.00	90.00	89.73	6,141.00	-1,482.83	5,860.91	6,033.59	0.00	0.00	0.00	
9,900.00	90.00	89.73	6,141.00	-1,482.37	5,960.91	6,131.80	0.00	0.00	0.00	
10,000.00	90.00	89.73	6,141.00	-1,481.91	6,060.91	6,230.01	0.00	0.00	0.00	
10,100.00	90.00	89.73	6,141.00	-1,481.45	6,160.91	6,328.22	0.00	0.00	0.00	
10,200.00	90.00	89.73	6,141.00	-1,480.98	6,260.91	6,426.43	0.00	0.00	0.00	
10,300.00	90.00	89.73	6,141.00	-1,480.52	6,360.91	6,524.64	0.00	0.00	0.00	
10,400.00	90.00	89.73	6,141.00	-1,480.06	6,460.91	6,622.85	0.00	0.00	0.00	
10,500.00	90.00	89.73	6,141.00	-1,479.60	6,560.90	6,721.07	0.00	0.00	0.00	
10,600.00	90.00	89.73	6,141.00	-1,479.13	6,660.90	6,819.28	0.00	0.00	0.00	
10,700.00	90.00	89.73	6,141.00	-1,478.67	6,760.90	6,917.49	0.00	0.00	0.00	
10,800.00	90.00	89.73	6,141.00	-1,478.21	6,860.90	7,015.70	0.00	0.00	0.00	
10,900.00	90.00	89.73	6,141.00	-1,477.74	6,960.90	7,113.91	0.00	0.00	0.00	
11,000.00	90.00	89.73	6,141.00	-1,477.28	7,060.90	7,212.12	0.00	0.00	0.00	
11,100.00	90.00	89.73	6,141.00	-1,476.82	7,160.90	7,310.33	0.00	0.00	0.00	
11,200.00	90.00	89.73	6,141.00	-1,476.36	7,260.90	7,408.55	0.00	0.00	0.00	
11,300.00	90.00	89.73	6,141.00	-1,475.89	7,360.90	7,506.76	0.00	0.00	0.00	
11,400.00	90.00	89.73	6,141.00	-1,475.43	7,460.89	7,604.97	0.00	0.00	0.00	
11,500.00	90.00	89.73	6,141.00	-1,474.97	7,560.89	7,703.18	0.00	0.00	0.00	
11,600.00	90.00	89.73	6,141.00	-1,474.50	7,660.89	7,801.39	0.00	0.00	0.00	
11,700.00	90.00	89.73	6,141.00	-1,474.04	7,760.89	7,899.60	0.00	0.00	0.00	
11,800.00	90.00	89.73	6,141.00	-1,473.58	7,860.89	7,997.81	0.00	0.00	0.00	
11,821.76	90.00	89.73	6,141.00	-1,473.48	7,882.65	8,019.19	0.00	0.00	0.00	
TD at 11821.76										

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well PURCELL 31E-10-02
Company:	HIGHPOINT RESOURCES	TVD Reference:	KB 25' @ 4691.40usft
Project:	WELD COUNTY	MD Reference:	KB 25' @ 4691.40usft
Site:	SEC 25-T6N-R62W	North Reference:	True
Well:	PURCELL 31E-10-02	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PROPOSAL 1		

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL-PURCELL 31W-0 - plan hits target center - Point	0.00	0.00	6,141.00	-1,473.48	7,882.65	1,408,593.09	3,349,376.63	40.448201°N	104.244618°W
LP-PURCELL 31W-02 - plan hits target center - Point	0.00	0.00	6,141.00	-1,493.80	3,491.84	1,408,512.02	3,344,986.68	40.448148°N	104.260394°W

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
24.00	24.00	Laramie-Fox Hills Formation				
241.06	241.00	Pierre Formation				
451.88	451.00	Upper Pierre aquifer				
1,495.54	1,441.00	Base of Upper Pierre aquifer				
3,719.81	3,291.00	Larimer ("Parkman") sandstone				
3,961.44	3,491.00	Pierre Formation				
4,662.18	4,071.00	Terry ("Sussex") sandstone				
4,783.00	4,171.00	Pierre Formation				
5,133.36	4,461.00	Hygiene ("Shannon") sandstone				
5,193.77	4,511.00	Pierre Formation				
7,138.65	6,071.00	Sharon Springs Member				
7,430.90	6,141.00	Niobrara Formation				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
100.00	100.00	0.00	0.00	Start Build 2.00	
1,806.84	1,707.63	-210.92	446.27	Start 5028.21 hold at 1806.84 MD	
6,835.04	5,869.48	-1,416.65	2,997.36	Start DLS 10.00 TFO -30.02	
7,430.90	6,141.00	-1,493.80	3,491.84	Start 4390.86 hold at 7430.90 MD	
11,821.76	6,141.00	-1,473.48	7,882.65	TD at 11821.76	