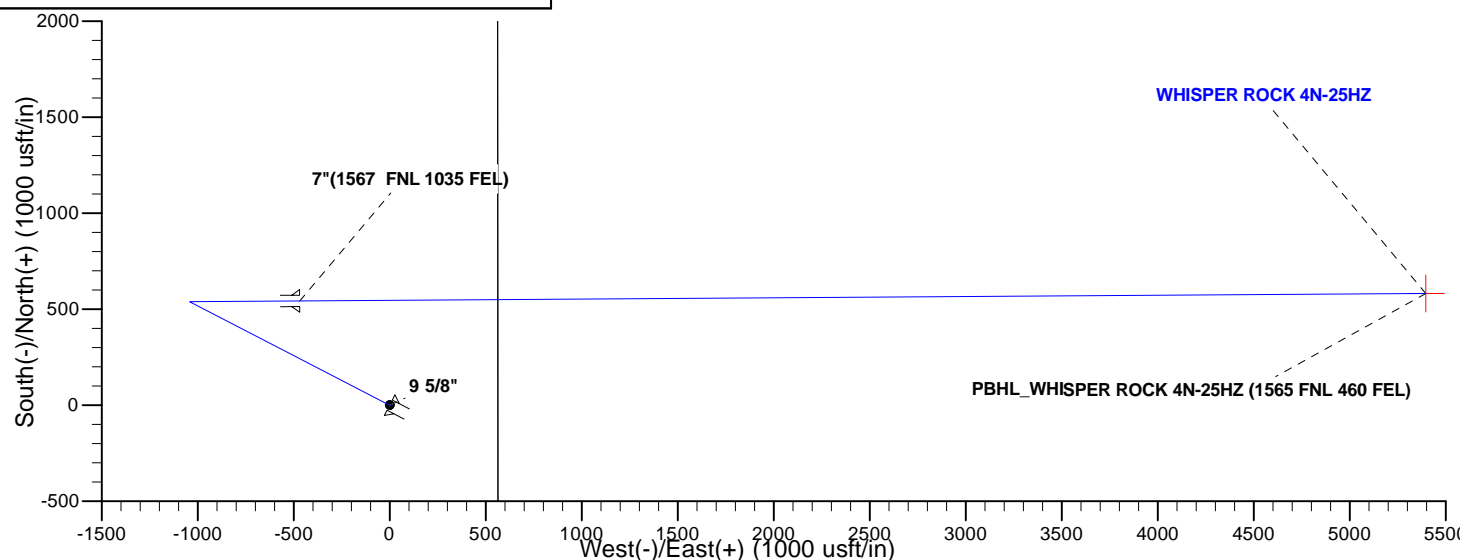
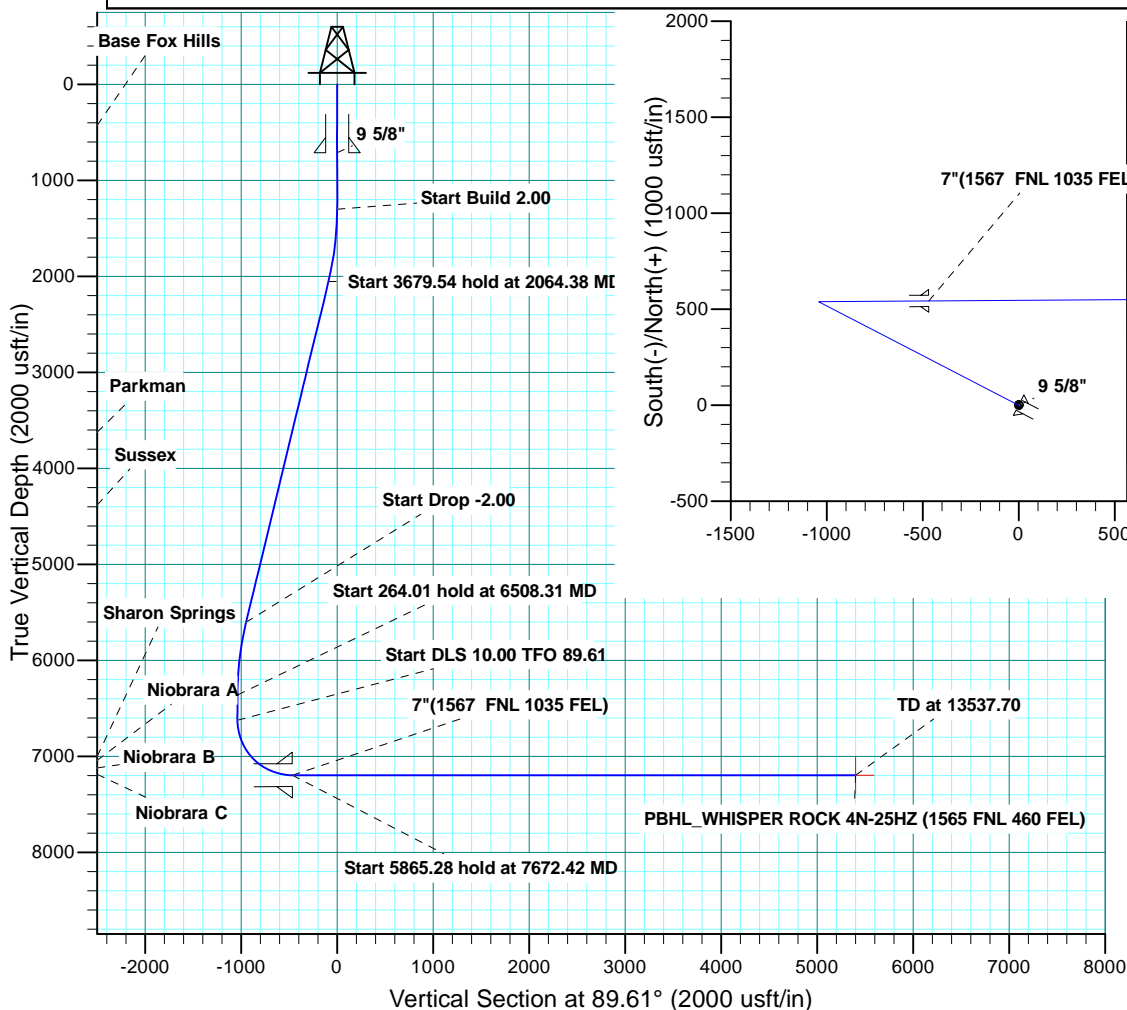


SHL: WHISPER ROCK 4N-25HZ								
GL 4998 KB 17 @ 5015.00usft								
		+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
		0.00	0.00	14630925.00	1650807.96	40.286117	-104.962739	
DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	7196.00	582.88	5396.73	14631510.15	1656204.45	40.287716	-104.943387	Point
- plan hits target center								
SECTION DETAILS								
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1300.00	0.00	0.00	1300.00	0.00	0.00	0.00	0.00	0.00
2064.38	15.29	297.39	2055.34	46.63	-90.01	2.00	297.39	-89.69
5743.92	15.29	297.39	5604.68	492.89	-951.45	0.00	0.00	-948.07
6508.31	0.00	0.00	6360.03	539.52	-1041.46	2.00	180.00	-1037.76
6772.32	0.00	0.00	6624.04	539.52	-1041.46	0.00	0.00	-1037.76
7672.42	90.01	89.61	7197.00	543.38	-468.42	10.00	89.61	-464.71
13537.70	90.01	89.61	7196.00	582.88	5396.73	0.00	0.00	5400.57

PBHL_WHISPER ROCK 4N-25HZ (1565 FNL 460 FEL)



CASING DETAILS			
TVD	MD	Name	Size
712.00	712.00	9 5/8"	9.625
7197.00	7672.42	7"	7.000

FORMATION TOP DETAILS			
TVDPath	MDPath	Formation	Inc
427.00	427.00	Base Fox Hills	0.00
3624.00	3690.58	Parkman	15.29
4382.00	4476.39	Sussex	15.29
7001.00	7183.73	Sharon Springs	41.14
7043.00	7242.21	Niobrara A	46.99
7120.00	7371.85	Niobrara B	59.95
7186.00	7559.88	Niobrara C	78.76



Scientific Drilling

US ROCKIES WATTENBERG PLANNING

WELD-NAD83-UTMFT13N

WILSON RANCH 8 -26HZ

WHISPER ROCK 4N-25HZ

PLAN A

Plan: Permit Rev-1

Standard Planning Report

30 December, 2014

Database:	Denver Sales	Local Co-ordinate Reference:	Well WHISPER ROCK 4N-25HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	GL 4998 KB 17 @ 5015.00usft
Project:	WELD-NAD83-UTMFT13N	MD Reference:	GL 4998 KB 17 @ 5015.00usft
Site:	WILSON RANCH 8 -26HZ	North Reference:	True
Well:	WHISPER ROCK 4N-25HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	PLAN A		
Design:	Permit Rev-1		

Project	WELD-NAD83-UTMFT13N		
Map System:	Universal Transverse Mercator (US Survey Feet)	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Zone 13N (108 W to 102 W)		

Site	WILSON RANCH 8 -26HZ				
Site Position:		Northing:	14,630,963.58 usft	Latitude:	40.286223
From:	Lat/Long	Easting:	1,650,762.21 usft	Longitude:	-104.962903
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence:	0.02

Well	WHISPER ROCK 4N-25HZ, 2109'FNL 563'FEL					
Well Position	+N/-S	-38.60 usft	Northing:	14,630,925.00 usft	Latitude:	40.286117
	+E/-W	45.74 usft	Easting:	1,650,807.96 usft	Longitude:	-104.962739
Position Uncertainty		3.28 usft	Wellhead Elevation:	0.00 usft	Ground Level:	4,998.00 usft

Wellbore	PLAN A				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	11/7/2014	8.45	66.82	52,722

Design	Permit Rev-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	89.61

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,064.38	15.29	297.39	2,055.34	46.63	-90.01	2.00	2.00	0.00	297.39	
5,743.92	15.29	297.39	5,604.68	492.89	-951.45	0.00	0.00	0.00	0.00	
6,508.31	0.00	0.00	6,360.03	539.52	-1,041.46	2.00	-2.00	0.00	180.00	
6,772.32	0.00	0.00	6,624.04	539.52	-1,041.46	0.00	0.00	0.00	0.00	
7,672.42	90.01	89.61	7,197.00	543.38	-468.42	10.00	10.00	9.96	89.61	
13,537.70	90.01	89.61	7,196.00	582.88	5,396.73	0.00	0.00	0.00	0.00	PBHL_WHISPER RO

Database:	Denver Sales	Local Co-ordinate Reference:	Well WHISPER ROCK 4N-25HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	GL 4998 KB 17 @ 5015.00usft
Project:	WELD-NAD83-UTMFT13N	MD Reference:	GL 4998 KB 17 @ 5015.00usft
Site:	WILSON RANCH 8 -26HZ	North Reference:	True
Well:	WHISPER ROCK 4N-25HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	PLAN A		
Design:	Permit Rev-1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
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
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
427.00	0.00	0.00	427.00	0.00	0.00	0.00	0.00	0.00	0.00
Base Fox Hills									
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
712.00	0.00	0.00	712.00	0.00	0.00	0.00	0.00	0.00	0.00
9 5/8"									
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
1,400.00	2.00	297.39	1,399.98	0.80	-1.55	-1.54	2.00	2.00	0.00
1,500.00	4.00	297.39	1,499.84	3.21	-6.20	-6.17	2.00	2.00	0.00
1,600.00	6.00	297.39	1,599.45	7.22	-13.93	-13.89	2.00	2.00	0.00
1,700.00	8.00	297.39	1,698.70	12.82	-24.76	-24.67	2.00	2.00	0.00
1,800.00	10.00	297.39	1,797.47	20.02	-38.64	-38.51	2.00	2.00	0.00
1,900.00	12.00	297.39	1,895.62	28.80	-55.59	-55.39	2.00	2.00	0.00
2,000.00	14.00	297.39	1,993.06	39.14	-75.56	-75.29	2.00	2.00	0.00
2,064.38	15.29	297.39	2,055.34	46.63	-90.01	-89.69	2.00	2.00	0.00
Start 3679.54 hold at 2064.38 MD									
2,100.00	15.29	297.39	2,089.70	50.95	-98.35	-98.00	0.00	0.00	0.00
2,200.00	15.29	297.39	2,186.16	63.08	-121.76	-121.33	0.00	0.00	0.00
2,300.00	15.29	297.39	2,282.63	75.21	-145.17	-144.66	0.00	0.00	0.00
2,400.00	15.29	297.39	2,379.09	87.33	-168.58	-167.99	0.00	0.00	0.00
2,500.00	15.29	297.39	2,475.55	99.46	-192.00	-191.31	0.00	0.00	0.00
2,600.00	15.29	297.39	2,572.01	111.59	-215.41	-214.64	0.00	0.00	0.00
2,700.00	15.29	297.39	2,668.47	123.72	-238.82	-237.97	0.00	0.00	0.00
2,800.00	15.29	297.39	2,764.93	135.85	-262.23	-261.30	0.00	0.00	0.00
2,900.00	15.29	297.39	2,861.39	147.97	-285.64	-284.63	0.00	0.00	0.00
3,000.00	15.29	297.39	2,957.86	160.10	-309.05	-307.96	0.00	0.00	0.00
3,100.00	15.29	297.39	3,054.32	172.23	-332.47	-331.29	0.00	0.00	0.00
3,200.00	15.29	297.39	3,150.78	184.36	-355.88	-354.61	0.00	0.00	0.00
3,300.00	15.29	297.39	3,247.24	196.49	-379.29	-377.94	0.00	0.00	0.00
3,400.00	15.29	297.39	3,343.70	208.62	-402.70	-401.27	0.00	0.00	0.00
3,500.00	15.29	297.39	3,440.16	220.74	-426.11	-424.60	0.00	0.00	0.00
3,600.00	15.29	297.39	3,536.62	232.87	-449.52	-447.93	0.00	0.00	0.00
3,690.58	15.29	297.39	3,624.00	243.86	-470.73	-469.06	0.00	0.00	0.00
Parkman									
3,700.00	15.29	297.39	3,633.09	245.00	-472.93	-471.26	0.00	0.00	0.00
3,800.00	15.29	297.39	3,729.55	257.13	-496.35	-494.58	0.00	0.00	0.00
3,900.00	15.29	297.39	3,826.01	269.26	-519.76	-517.91	0.00	0.00	0.00
4,000.00	15.29	297.39	3,922.47	281.38	-543.17	-541.24	0.00	0.00	0.00
4,100.00	15.29	297.39	4,018.93	293.51	-566.58	-564.57	0.00	0.00	0.00
4,200.00	15.29	297.39	4,115.39	305.64	-589.99	-587.90	0.00	0.00	0.00
4,300.00	15.29	297.39	4,211.85	317.77	-613.40	-611.23	0.00	0.00	0.00
4,400.00	15.29	297.39	4,308.32	329.90	-636.82	-634.56	0.00	0.00	0.00

Database:	Denver Sales	Local Co-ordinate Reference:	Well WHISPER ROCK 4N-25HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	GL 4998 KB 17 @ 5015.00usft
Project:	WELD-NAD83-UTMFT13N	MD Reference:	GL 4998 KB 17 @ 5015.00usft
Site:	WILSON RANCH 8 -26HZ	North Reference:	True
Well:	WHISPER ROCK 4N-25HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	PLAN A		
Design:	Permit Rev-1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,476.39	15.29	297.39	4,382.00	339.16	-654.70	-652.38	0.00	0.00	0.00
Sussex									
4,500.00	15.29	297.39	4,404.78	342.03	-660.23	-657.88	0.00	0.00	0.00
4,600.00	15.29	297.39	4,501.24	354.15	-683.64	-681.21	0.00	0.00	0.00
4,700.00	15.29	297.39	4,597.70	366.28	-707.05	-704.54	0.00	0.00	0.00
4,800.00	15.29	297.39	4,694.16	378.41	-730.46	-727.87	0.00	0.00	0.00
4,900.00	15.29	297.39	4,790.62	390.54	-753.87	-751.20	0.00	0.00	0.00
5,000.00	15.29	297.39	4,887.08	402.67	-777.28	-774.53	0.00	0.00	0.00
5,100.00	15.29	297.39	4,983.55	414.79	-800.70	-797.85	0.00	0.00	0.00
5,200.00	15.29	297.39	5,080.01	426.92	-824.11	-821.18	0.00	0.00	0.00
5,300.00	15.29	297.39	5,176.47	439.05	-847.52	-844.51	0.00	0.00	0.00
5,400.00	15.29	297.39	5,272.93	451.18	-870.93	-867.84	0.00	0.00	0.00
5,500.00	15.29	297.39	5,369.39	463.31	-894.34	-891.17	0.00	0.00	0.00
5,600.00	15.29	297.39	5,465.85	475.44	-917.75	-914.50	0.00	0.00	0.00
5,700.00	15.29	297.39	5,562.31	487.56	-941.17	-937.82	0.00	0.00	0.00
5,743.92	15.29	297.39	5,604.68	492.89	-951.45	-948.07	0.00	0.00	0.00
Start Drop -2.00									
5,800.00	14.17	297.39	5,658.92	499.45	-964.11	-960.68	2.00	-2.00	0.00
5,900.00	12.17	297.39	5,756.28	509.92	-984.33	-980.84	2.00	-2.00	0.00
6,000.00	10.17	297.39	5,854.38	518.83	-1,001.52	-997.97	2.00	-2.00	0.00
6,100.00	8.17	297.39	5,953.10	526.16	-1,015.67	-1,012.06	2.00	-2.00	0.00
6,200.00	6.17	297.39	6,052.32	531.90	-1,026.74	-1,023.10	2.00	-2.00	0.00
6,300.00	4.17	297.39	6,151.91	536.04	-1,034.74	-1,031.07	2.00	-2.00	0.00
6,400.00	2.17	297.39	6,251.75	538.58	-1,039.64	-1,035.95	2.00	-2.00	0.00
6,500.00	0.17	297.39	6,351.72	539.51	-1,041.45	-1,037.75	2.00	-2.00	0.00
6,508.31	0.00	0.00	6,360.03	539.52	-1,041.46	-1,037.76	2.00	-2.00	0.00
Start 264.01 hold at 6508.31 MD									
6,600.00	0.00	0.00	6,451.72	539.52	-1,041.46	-1,037.76	0.00	0.00	0.00
6,700.00	0.00	0.00	6,551.72	539.52	-1,041.46	-1,037.76	0.00	0.00	0.00
6,772.32	0.00	0.00	6,624.04	539.52	-1,041.46	-1,037.76	0.00	0.00	0.00
Start DLS 10.00 TFO 89.61									
6,800.00	2.77	89.61	6,651.71	539.52	-1,040.79	-1,037.09	10.00	10.00	0.00
6,900.00	12.77	89.61	6,750.67	539.62	-1,027.29	-1,023.60	10.00	10.00	0.00
7,000.00	22.77	89.61	6,845.78	539.82	-996.82	-993.12	10.00	10.00	0.00
7,100.00	32.77	89.61	6,934.15	540.13	-950.29	-946.59	10.00	10.00	0.00
7,183.73	41.14	89.61	7,001.00	540.47	-899.99	-896.29	10.00	10.00	0.00
Sharon Springs									
7,200.00	42.77	89.61	7,013.10	540.55	-889.12	-885.42	10.00	10.00	0.00
7,242.21	46.99	89.61	7,043.00	540.75	-859.34	-855.64	10.00	10.00	0.00
Niobrara A									
7,300.00	52.77	89.61	7,080.23	541.04	-815.17	-811.47	10.00	10.00	0.00
7,371.85	59.95	89.61	7,120.00	541.45	-755.40	-751.69	10.00	10.00	0.00
Niobrara B									
7,400.00	62.77	89.61	7,133.49	541.61	-730.69	-726.99	10.00	10.00	0.00
7,500.00	72.77	89.61	7,171.28	542.24	-638.24	-634.54	10.00	10.00	0.00
7,559.88	78.76	89.61	7,186.00	542.63	-580.23	-576.53	10.00	10.00	0.00
Niobrara C									
7,600.00	82.77	89.61	7,192.44	542.89	-540.64	-536.93	10.00	10.00	0.00
7,672.42	90.01	89.61	7,197.00	543.38	-468.41	-464.70	10.00	10.00	0.00
Start 5865.28 hold at 7672.42 MD - 7"(1567 FNL 1035 FEL)									
7,700.00	90.01	89.61	7,196.99	543.57	-440.83	-437.12	0.00	0.00	0.00
7,800.00	90.01	89.61	7,196.98	544.24	-340.84	-337.12	0.00	0.00	0.00
7,900.00	90.01	89.61	7,196.96	544.91	-240.84	-237.12	0.00	0.00	0.00

Database:	Denver Sales	Local Co-ordinate Reference:	Well WHISPER ROCK 4N-25HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	GL 4998 KB 17 @ 5015.00usft
Project:	WELD-NAD83-UTMFT13N	MD Reference:	GL 4998 KB 17 @ 5015.00usft
Site:	WILSON RANCH 8 -26HZ	North Reference:	True
Well:	WHISPER ROCK 4N-25HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	PLAN A		
Design:	Permit Rev-1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
8,000.00	90.01	89.61	7,196.94	545.59	-140.84	-137.12	0.00	0.00	0.00	
8,100.00	90.01	89.61	7,196.93	546.26	-40.84	-37.12	0.00	0.00	0.00	
8,200.00	90.01	89.61	7,196.91	546.93	59.15	62.88	0.00	0.00	0.00	
8,300.00	90.01	89.61	7,196.89	547.61	159.15	162.88	0.00	0.00	0.00	
8,400.00	90.01	89.61	7,196.87	548.28	259.15	262.88	0.00	0.00	0.00	
8,500.00	90.01	89.61	7,196.86	548.95	359.15	362.88	0.00	0.00	0.00	
8,600.00	90.01	89.61	7,196.84	549.63	459.15	462.88	0.00	0.00	0.00	
8,700.00	90.01	89.61	7,196.82	550.30	559.14	562.88	0.00	0.00	0.00	
8,800.00	90.01	89.61	7,196.81	550.97	659.14	662.88	0.00	0.00	0.00	
8,900.00	90.01	89.61	7,196.79	551.65	759.14	762.88	0.00	0.00	0.00	
9,000.00	90.01	89.61	7,196.77	552.32	859.14	862.88	0.00	0.00	0.00	
9,100.00	90.01	89.61	7,196.76	552.99	959.13	962.88	0.00	0.00	0.00	
9,200.00	90.01	89.61	7,196.74	553.67	1,059.13	1,062.88	0.00	0.00	0.00	
9,300.00	90.01	89.61	7,196.72	554.34	1,159.13	1,162.88	0.00	0.00	0.00	
9,400.00	90.01	89.61	7,196.70	555.01	1,259.13	1,262.88	0.00	0.00	0.00	
9,500.00	90.01	89.61	7,196.69	555.69	1,359.13	1,362.88	0.00	0.00	0.00	
9,600.00	90.01	89.61	7,196.67	556.36	1,459.12	1,462.88	0.00	0.00	0.00	
9,700.00	90.01	89.61	7,196.65	557.03	1,559.12	1,562.88	0.00	0.00	0.00	
9,800.00	90.01	89.61	7,196.64	557.71	1,659.12	1,662.88	0.00	0.00	0.00	
9,900.00	90.01	89.61	7,196.62	558.38	1,759.12	1,762.88	0.00	0.00	0.00	
10,000.00	90.01	89.61	7,196.60	559.05	1,859.11	1,862.88	0.00	0.00	0.00	
10,100.00	90.01	89.61	7,196.58	559.73	1,959.11	1,962.88	0.00	0.00	0.00	
10,200.00	90.01	89.61	7,196.57	560.40	2,059.11	2,062.88	0.00	0.00	0.00	
10,300.00	90.01	89.61	7,196.55	561.07	2,159.11	2,162.88	0.00	0.00	0.00	
10,400.00	90.01	89.61	7,196.53	561.75	2,259.10	2,262.88	0.00	0.00	0.00	
10,500.00	90.01	89.61	7,196.52	562.42	2,359.10	2,362.88	0.00	0.00	0.00	
10,600.00	90.01	89.61	7,196.50	563.09	2,459.10	2,462.88	0.00	0.00	0.00	
10,700.00	90.01	89.61	7,196.48	563.77	2,559.10	2,562.88	0.00	0.00	0.00	
10,800.00	90.01	89.61	7,196.47	564.44	2,659.10	2,662.88	0.00	0.00	0.00	
10,900.00	90.01	89.61	7,196.45	565.12	2,759.09	2,762.88	0.00	0.00	0.00	
11,000.00	90.01	89.61	7,196.43	565.79	2,859.09	2,862.88	0.00	0.00	0.00	
11,100.00	90.01	89.61	7,196.41	566.46	2,959.09	2,962.88	0.00	0.00	0.00	
11,200.00	90.01	89.61	7,196.40	567.14	3,059.09	3,062.88	0.00	0.00	0.00	
11,300.00	90.01	89.61	7,196.38	567.81	3,159.08	3,162.88	0.00	0.00	0.00	
11,400.00	90.01	89.61	7,196.36	568.48	3,259.08	3,262.88	0.00	0.00	0.00	
11,500.00	90.01	89.61	7,196.35	569.16	3,359.08	3,362.88	0.00	0.00	0.00	
11,600.00	90.01	89.61	7,196.33	569.83	3,459.08	3,462.88	0.00	0.00	0.00	
11,700.00	90.01	89.61	7,196.31	570.50	3,559.08	3,562.88	0.00	0.00	0.00	
11,800.00	90.01	89.61	7,196.30	571.18	3,659.07	3,662.88	0.00	0.00	0.00	
11,900.00	90.01	89.61	7,196.28	571.85	3,759.07	3,762.88	0.00	0.00	0.00	
12,000.00	90.01	89.61	7,196.26	572.52	3,859.07	3,862.88	0.00	0.00	0.00	
12,100.00	90.01	89.61	7,196.24	573.20	3,959.07	3,962.88	0.00	0.00	0.00	
12,200.00	90.01	89.61	7,196.23	573.87	4,059.06	4,062.88	0.00	0.00	0.00	
12,300.00	90.01	89.61	7,196.21	574.54	4,159.06	4,162.88	0.00	0.00	0.00	
12,400.00	90.01	89.61	7,196.19	575.22	4,259.06	4,262.88	0.00	0.00	0.00	
12,500.00	90.01	89.61	7,196.18	575.89	4,359.06	4,362.88	0.00	0.00	0.00	
12,600.00	90.01	89.61	7,196.16	576.56	4,459.05	4,462.88	0.00	0.00	0.00	
12,700.00	90.01	89.61	7,196.14	577.24	4,559.05	4,562.88	0.00	0.00	0.00	
12,800.00	90.01	89.61	7,196.13	577.91	4,659.05	4,662.88	0.00	0.00	0.00	
12,900.00	90.01	89.61	7,196.11	578.58	4,759.05	4,762.88	0.00	0.00	0.00	
13,000.00	90.01	89.61	7,196.09	579.26	4,859.05	4,862.88	0.00	0.00	0.00	
13,100.00	90.01	89.61	7,196.07	579.93	4,959.04	4,962.88	0.00	0.00	0.00	
13,200.00	90.01	89.61	7,196.06	580.60	5,059.04	5,062.88	0.00	0.00	0.00	
13,300.00	90.01	89.61	7,196.04	581.28	5,159.04	5,162.88	0.00	0.00	0.00	

Database:	Denver Sales	Local Co-ordinate Reference:	Well WHISPER ROCK 4N-25HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	GL 4998 KB 17 @ 5015.00usft
Project:	WELD-NAD83-UTMFT13N	MD Reference:	GL 4998 KB 17 @ 5015.00usft
Site:	WILSON RANCH 8 -26HZ	North Reference:	True
Well:	WHISPER ROCK 4N-25HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	PLAN A		
Design:	Permit Rev-1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,400.00	90.01	89.61	7,196.02	581.95	5,259.04	5,262.88	0.00	0.00	0.00
13,500.00	90.01	89.61	7,196.01	582.62	5,359.03	5,362.88	0.00	0.00	0.00
13,537.70	90.01	89.61	7,196.00	582.88	5,396.73	5,400.58	0.00	0.00	0.00
TD at 13537.70 - PBHL_WHISPER ROCK 4N-25HZ (1565 FNL 460 FEL)									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
PBHL_WHISPER ROCK	0.00	0.00	7,196.00	582.88	5,396.73	14,631,510.15	1,656,204.45	40.287716	-104.943387
- plan hits target center									
- Point									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
712.00	712.00	9 5/8"	9.625	13.500	
7,672.42	7,197.00	7"(1567 FNL 1035 FEL)	7.000	8.750	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
427.00	426.00	Base Fox Hills				
3,690.58	3,623.00	Parkman				
4,476.39	4,381.00	Sussex				
7,183.73	7,000.00	Sharon Springs				
7,242.21	7,042.00	Niobrara A				
7,371.85	7,119.00	Niobrara B				
7,559.88	7,185.00	Niobrara C		0.00		

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
1,300.00	1,300.00	0.00	0.00	Start Build 2.00	
2,064.38	2,055.34	46.63	-90.01	Start 3679.54 hold at 2064.38 MD	
5,743.92	5,604.68	492.89	-951.45	Start Drop -2.00	
6,508.31	6,360.03	539.52	-1,041.46	Start 264.01 hold at 6508.31 MD	
6,772.32	6,624.04	539.52	-1,041.46	Start DLS 10.00 TFO 89.61	
7,672.42	7,197.00	543.38	-468.42	Start 5865.28 hold at 7672.42 MD	
13,537.70	7,196.00	582.88	5,396.73	TD at 13537.70	