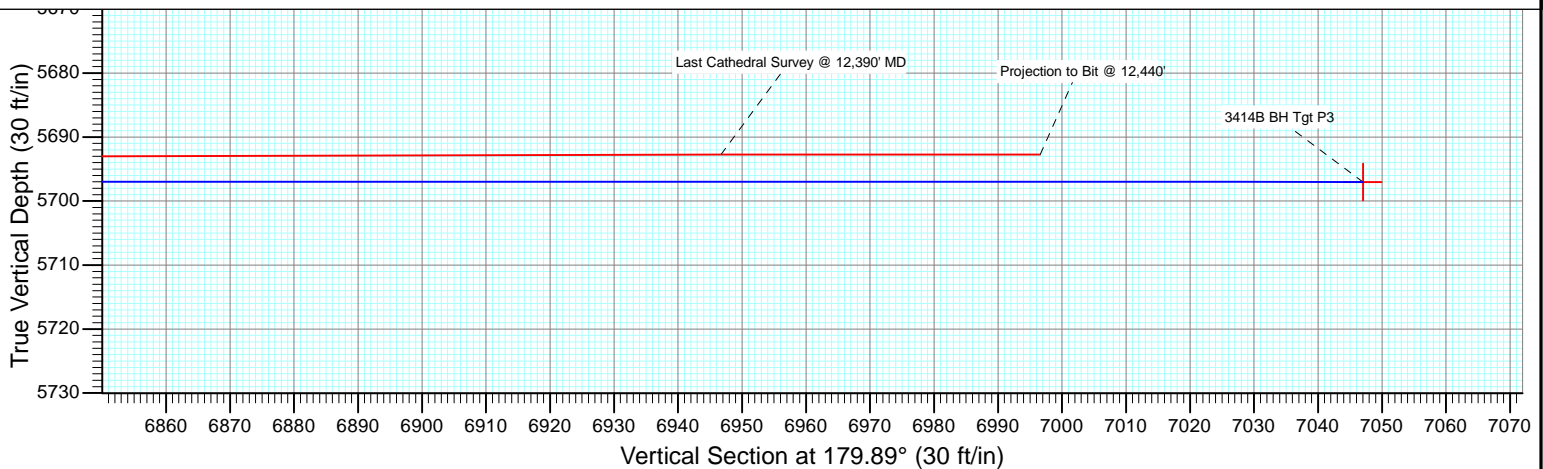
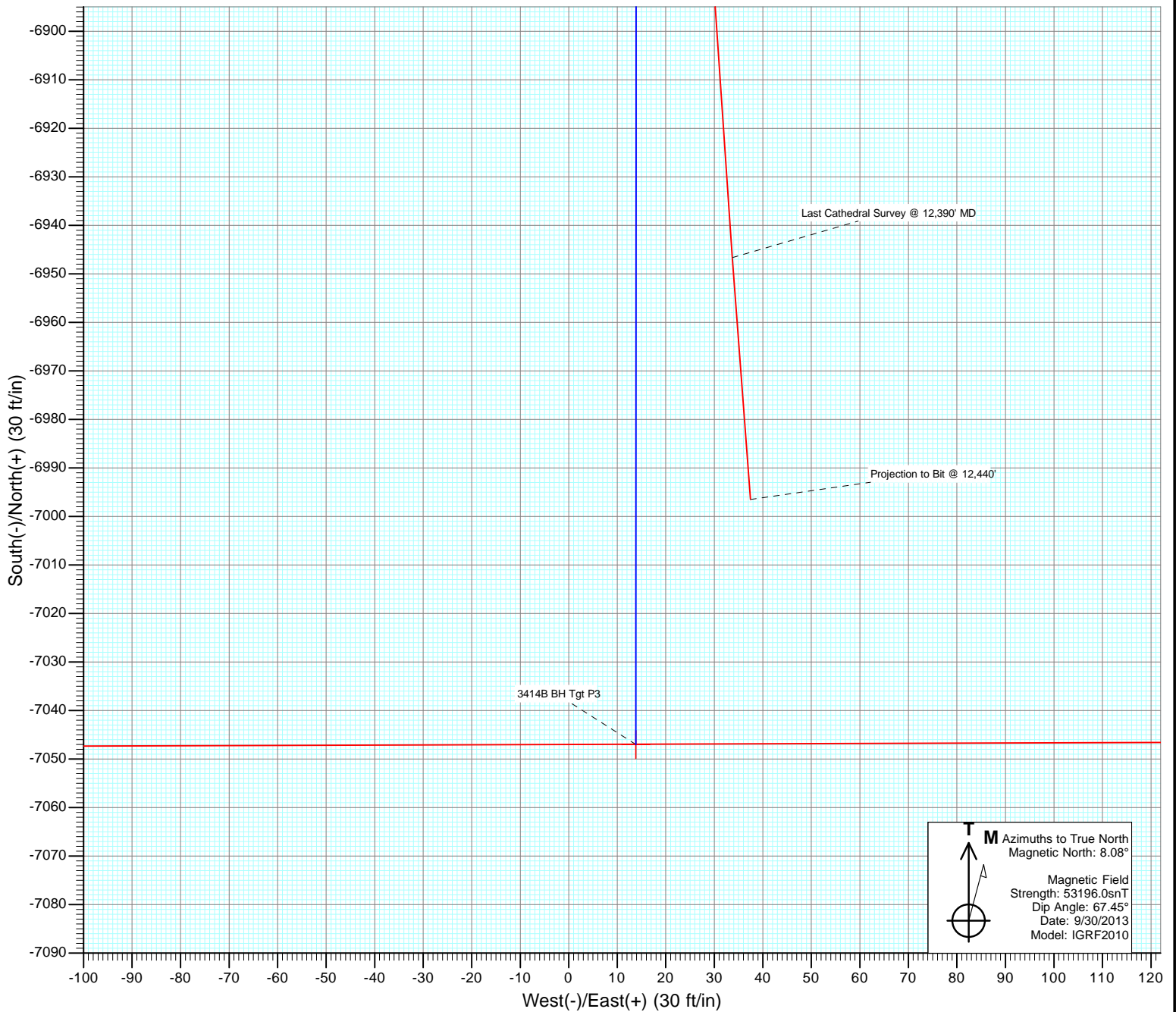




Project: Weld County, CO  
Site: S27-T10N-R58W  
Well: Razor #27I-3414B  
Wellbore: HZ  
Design: FINAL



# Cathedral Energy Services

## Survey Report

<b>Company:</b>	Whiting Petroleum Corporation	<b>Local Co-ordinate Reference:</b>	Well Razor #27I-3414B
<b>Project:</b>	Weld County, CO	<b>TVD Reference:</b>	KB @ 4773.3ft (Cade 23)
<b>Site:</b>	S27-T10N-R58W	<b>MD Reference:</b>	KB @ 4773.3ft (Cade 23)
<b>Well:</b>	Razor #27I-3414B	<b>North Reference:</b>	True
<b>Wellbore:</b>	HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL	<b>Database:</b>	USA EDM 5000 Multi Users DB

<b>Project</b>	Weld County, CO		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		

Site		S27-T10N-R58W			
Site Position:		Northing:	1,541,650.73 ft	Latitude:	40° 48' 30.94 N
From:	Lat/Long	Easting:	3,455,691.89 ft	Longitude:	103° 51' 13.80 W
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	1.06 °

Well	Razor #27I-3414B					
Well Position	+N/-S	0.0 ft	Northing:	1,541,740.65 ft	Latitude:	40° 48' 31.34 N
	+E/-W	0.0 ft	Easting:	3,458,330.55 ft	Longitude:	103° 50' 39.47 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,756.5 ft

<b>Wellbore</b>	HZ				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	9/30/2013	8.08	67.45	53,196

<b>Design</b>	FINAL				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.0	0.0	0.0	179.89	

<b>Survey Program</b>	<b>Date</b>	11/18/2013			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
257.0	12,440.0	Survey #1 (HZ)	ISCWSA MWD	MWD - ISCWSA	

<b>Survey</b>										
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Vertical Section (ft)</b>	<b>Dogleg Rate (°/100ft)</b>	<b>Build Rate (°/100ft)</b>	<b>Formations / Comments</b>	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00		
257.0	0.30	153.80	257.0	-0.6	0.3	0.6	0.12	0.12		
351.0	0.60	186.00	351.0	-1.3	0.4	1.3	0.41	0.32		
443.0	0.30	178.90	443.0	-2.0	0.3	2.0	0.33	-0.33		
535.0	0.40	223.90	535.0	-2.5	0.1	2.5	0.31	0.11		
626.0	0.40	219.50	626.0	-3.0	-0.3	3.0	0.03	0.00		
718.0	0.40	214.40	718.0	-3.5	-0.7	3.5	0.04	0.00		
810.0	0.70	203.70	810.0	-4.3	-1.1	4.3	0.34	0.33		
901.0	0.40	212.20	901.0	-5.1	-1.5	5.0	0.34	-0.33		
992.0	0.70	203.90	992.0	-5.8	-1.9	5.8	0.34	0.33		
1,083.0	0.70	213.10	1,083.0	-6.8	-2.4	6.8	0.12	0.00		
1,175.0	1.00	228.40	1,175.0	-7.8	-3.3	7.8	0.41	0.33		
1,267.0	1.10	243.50	1,266.9	-8.7	-4.7	8.7	0.32	0.11		

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	Whiting Petroleum Corporation	<b>Local Co-ordinate Reference:</b>	Well Razor #27I-3414B
<b>Project:</b>	Weld County, CO	<b>TVD Reference:</b>	KB @ 4773.3ft (Cade 23)
<b>Site:</b>	S27-T10N-R58W	<b>MD Reference:</b>	KB @ 4773.3ft (Cade 23)
<b>Well:</b>	Razor #27I-3414B	<b>North Reference:</b>	True
<b>Wellbore:</b>	HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL	<b>Database:</b>	USA EDM 5000 Multi Users DB

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
1,358.0	1.10	288.70	1,357.9	-8.8	-6.3	8.8	0.93	0.00	
1,450.0	1.70	297.00	1,449.9	-7.9	-8.4	7.9	0.69	0.65	
1,575.0	1.50	349.50	1,574.9	-5.5	-10.4	5.5	1.14	-0.16	
1,672.0	1.40	346.40	1,671.8	-3.1	-10.9	3.1	0.13	-0.10	
1,763.0	1.80	48.60	1,762.8	-1.1	-10.0	1.0	1.85	0.44	
1,854.0	2.10	44.40	1,853.7	1.1	-7.8	-1.1	0.36	0.33	
1,946.0	1.80	38.60	1,945.7	3.4	-5.7	-3.4	0.39	-0.33	
2,037.0	1.60	35.80	2,036.7	5.6	-4.1	-5.6	0.24	-0.22	
2,129.0	1.50	34.90	2,128.6	7.6	-2.7	-7.6	0.11	-0.11	
2,221.0	1.30	40.50	2,220.6	9.4	-1.3	-9.4	0.26	-0.22	
2,312.0	0.90	180.10	2,311.6	9.4	-0.6	-9.4	2.27	-0.44	
2,403.0	0.90	171.10	2,402.6	8.0	-0.5	-8.0	0.16	0.00	
2,494.0	0.60	187.10	2,493.6	6.8	-0.5	-6.8	0.40	-0.33	
2,586.0	0.80	161.20	2,585.6	5.7	-0.3	-5.8	0.40	0.22	
2,678.0	0.60	152.70	2,677.6	4.7	0.1	-4.7	0.24	-0.22	
2,769.0	0.50	158.90	2,768.6	3.9	0.5	-3.9	0.13	-0.11	
2,860.0	0.70	136.30	2,859.5	3.1	1.0	-3.1	0.34	0.22	
2,951.0	0.40	147.70	2,950.5	2.5	1.6	-2.5	0.35	-0.33	
3,042.0	0.40	66.50	3,041.5	2.3	2.0	-2.3	0.57	0.00	
3,134.0	1.50	51.50	3,133.5	3.2	3.3	-3.2	1.22	1.20	
3,225.0	1.30	47.10	3,224.5	4.7	4.9	-4.6	0.25	-0.22	
3,317.0	1.20	342.20	3,316.5	6.3	5.4	-6.3	1.46	-0.11	
3,409.0	1.40	348.80	3,408.5	8.3	4.9	-8.3	0.27	0.22	
3,500.0	1.30	195.00	3,499.4	8.4	4.4	-8.4	2.89	-0.11	
3,592.0	1.10	184.20	3,591.4	6.5	4.1	-6.5	0.33	-0.22	
3,683.0	1.20	195.90	3,682.4	4.7	3.8	-4.7	0.28	0.11	
3,775.0	1.70	192.20	3,774.4	2.5	3.2	-2.5	0.55	0.54	
3,867.0	1.50	194.20	3,866.3	0.0	2.6	0.0	0.23	-0.22	
3,959.0	1.40	196.70	3,958.3	-2.3	2.0	2.3	0.13	-0.11	
4,050.0	1.20	186.80	4,049.3	-4.3	1.6	4.3	0.33	-0.22	
4,141.0	1.40	177.40	4,140.3	-6.4	1.5	6.4	0.32	0.22	
4,232.0	1.60	174.00	4,231.2	-8.7	1.7	8.7	0.24	0.22	
4,323.0	0.20	183.80	4,322.2	-10.1	1.8	10.2	1.54	-1.54	
4,415.0	0.30	245.70	4,414.2	-10.4	1.6	10.4	0.29	0.11	
4,506.0	0.50	242.30	4,505.2	-10.7	1.0	10.7	0.22	0.22	
4,597.0	0.80	242.60	4,596.2	-11.2	0.1	11.2	0.33	0.33	
4,688.0	1.20	245.20	4,687.2	-11.9	-1.3	11.9	0.44	0.44	
4,780.0	1.20	231.60	4,779.2	-12.9	-3.0	12.9	0.31	0.00	
4,871.0	1.00	226.30	4,870.2	-14.0	-4.3	14.0	0.25	-0.22	
4,962.0	1.10	226.80	4,961.2	-15.1	-5.5	15.1	0.11	0.11	
5,054.0	0.90	234.90	5,053.1	-16.2	-6.7	16.2	0.27	-0.22	
5,145.0	8.30	178.50	5,143.8	-23.2	-7.1	23.1	8.61	8.13	
5,176.0	12.50	175.90	5,174.3	-28.7	-6.8	28.7	13.63	13.55	
5,206.0	12.70	172.40	5,203.6	-35.2	-6.2	35.2	2.63	0.67	
5,237.0	13.30	172.30	5,233.8	-42.2	-5.2	42.1	1.94	1.94	
5,267.0	16.70	170.60	5,262.7	-49.8	-4.1	49.8	11.43	11.33	
5,297.0	21.00	171.70	5,291.1	-59.4	-2.6	59.4	14.38	14.33	
5,328.0	23.20	173.80	5,319.8	-71.0	-1.1	71.0	7.54	7.10	
5,358.0	22.70	174.00	5,347.5	-82.6	0.1	82.6	1.69	-1.67	
5,389.0	22.20	173.80	5,376.1	-94.4	1.4	94.4	1.63	-1.61	
5,419.0	23.70	174.40	5,403.7	-106.0	2.6	106.0	5.06	5.00	
5,450.0	25.90	177.10	5,431.9	-119.0	3.5	119.0	7.98	7.10	
5,480.0	27.80	179.80	5,458.7	-132.5	3.9	132.5	7.52	6.33	

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	Whiting Petroleum Corporation	<b>Local Co-ordinate Reference:</b>	Well Razor #27I-3414B
<b>Project:</b>	Weld County, CO	<b>TVD Reference:</b>	KB @ 4773.3ft (Cade 23)
<b>Site:</b>	S27-T10N-R58W	<b>MD Reference:</b>	KB @ 4773.3ft (Cade 23)
<b>Well:</b>	Razor #27I-3414B	<b>North Reference:</b>	True
<b>Wellbore:</b>	HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL	<b>Database:</b>	USA EDM 5000 Multi Users DB

### Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
5,511.0	29.90	182.40	5,485.8	-147.5	3.6	147.5	7.89	6.77	
5,541.0	33.90	184.80	5,511.3	-163.3	2.6	163.3	13.99	13.33	
5,571.0	39.00	185.40	5,535.4	-181.0	1.0	181.0	17.04	17.00	
5,601.0	43.90	184.20	5,557.9	-200.8	-0.7	200.8	16.55	16.33	
5,632.0	47.30	183.90	5,579.6	-222.9	-2.2	222.9	10.99	10.97	
5,662.0	50.00	182.60	5,599.4	-245.4	-3.5	245.4	9.57	9.00	
5,693.0	53.80	181.00	5,618.5	-269.8	-4.3	269.8	12.91	12.26	
5,724.0	59.70	178.60	5,635.5	-295.7	-4.2	295.7	20.10	19.03	
5,754.0	65.80	177.70	5,649.2	-322.3	-3.3	322.3	20.51	20.33	
5,785.0	72.00	178.30	5,660.4	-351.2	-2.3	351.2	20.08	20.00	
5,815.0	75.30	178.60	5,668.8	-380.0	-1.5	380.0	11.04	11.00	
5,845.0	76.80	177.90	5,676.1	-409.1	-0.6	409.1	5.49	5.00	
5,876.0	78.10	178.10	5,682.8	-439.3	0.4	439.3	4.24	4.19	
5,906.0	79.90	178.10	5,688.5	-468.8	1.4	468.8	6.00	6.00	
5,937.0	82.20	178.00	5,693.3	-499.4	2.5	499.4	7.43	7.42	
5,967.0	84.70	177.60	5,696.8	-529.1	3.6	529.1	8.44	8.33	
5,998.0	87.30	177.10	5,698.9	-560.0	5.0	560.0	8.54	8.39	
6,040.0	89.10	176.80	5,700.2	-601.9	7.3	602.0	4.34	4.29	
6,115.0	90.20	177.30	5,700.7	-676.8	11.1	676.9	1.61	1.47	
6,210.0	91.70	178.20	5,699.1	-771.7	14.9	771.8	1.84	1.58	
6,305.0	90.20	179.60	5,697.5	-866.7	16.7	866.7	2.16	-1.58	
6,400.0	89.80	179.30	5,697.5	-961.7	17.6	961.7	0.53	-0.42	
6,495.0	90.90	181.70	5,697.0	-1,056.7	16.8	1,056.7	2.78	1.16	
6,590.0	92.20	181.40	5,694.4	-1,151.6	14.2	1,151.6	1.40	1.37	
6,684.0	91.70	181.70	5,691.2	-1,245.5	11.6	1,245.5	0.62	-0.53	
6,779.0	90.70	181.90	5,689.2	-1,340.5	8.7	1,340.5	1.07	-1.05	
6,874.0	89.80	180.50	5,688.8	-1,435.4	6.7	1,435.4	1.75	-0.95	
6,969.0	89.80	179.40	5,689.1	-1,530.4	6.8	1,530.4	1.16	0.00	
7,063.0	89.60	178.30	5,689.6	-1,624.4	8.6	1,624.4	1.19	-0.21	
7,158.0	90.20	178.10	5,689.8	-1,719.4	11.6	1,719.4	0.67	0.63	
7,253.0	89.50	176.90	5,690.0	-1,814.3	15.8	1,814.3	1.46	-0.74	
7,348.0	90.30	178.60	5,690.2	-1,909.2	19.5	1,909.2	1.98	0.84	
7,443.0	90.30	180.30	5,689.7	-2,004.2	20.4	2,004.2	1.79	0.00	
7,538.0	91.60	180.00	5,688.1	-2,099.2	20.2	2,099.2	1.40	1.37	
7,629.0	91.60	180.80	5,685.6	-2,190.1	19.5	2,190.2	0.88	0.00	
7,721.0	92.10	181.80	5,682.6	-2,282.1	17.4	2,282.1	1.21	0.54	
7,813.0	90.40	181.80	5,680.6	-2,374.0	14.6	2,374.0	1.85	-1.85	
7,904.0	88.20	181.30	5,681.7	-2,464.9	12.1	2,465.0	2.48	-2.42	
7,996.0	88.70	181.00	5,684.2	-2,556.9	10.2	2,556.9	0.63	0.54	
8,088.0	90.20	181.70	5,685.1	-2,648.9	8.1	2,648.9	1.80	1.63	
8,179.0	90.90	181.20	5,684.2	-2,739.8	5.8	2,739.8	0.95	0.77	
8,270.0	89.80	180.60	5,683.7	-2,830.8	4.3	2,830.8	1.38	-1.21	
8,361.0	89.00	179.40	5,684.6	-2,921.8	4.3	2,921.8	1.58	-0.88	
8,453.0	89.80	179.50	5,685.6	-3,013.8	5.2	3,013.8	0.88	0.87	
8,545.0	86.50	177.30	5,688.5	-3,105.7	7.8	3,105.7	4.31	-3.59	
8,636.0	86.90	177.20	5,693.8	-3,196.4	12.2	3,196.4	0.45	0.44	
8,728.0	87.70	176.90	5,698.1	-3,288.2	16.9	3,288.2	0.93	0.87	
8,819.0	88.40	176.20	5,701.2	-3,379.0	22.4	3,379.0	1.09	0.77	
8,910.0	86.70	178.20	5,705.1	-3,469.8	26.8	3,469.8	2.88	-1.87	
9,002.0	86.10	178.90	5,710.9	-3,561.6	29.1	3,561.6	1.00	-0.65	
9,093.0	87.80	181.00	5,715.7	-3,652.4	29.2	3,652.5	2.97	1.87	
9,185.0	89.80	181.80	5,717.7	-3,744.4	27.0	3,744.4	2.34	2.17	
9,276.0	91.70	182.00	5,716.5	-3,835.3	23.9	3,835.4	2.10	2.09	

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	Whiting Petroleum Corporation	<b>Local Co-ordinate Reference:</b>	Well Razor #27I-3414B
<b>Project:</b>	Weld County, CO	<b>TVD Reference:</b>	KB @ 4773.3ft (Cade 23)
<b>Site:</b>	S27-T10N-R58W	<b>MD Reference:</b>	KB @ 4773.3ft (Cade 23)
<b>Well:</b>	Razor #27I-3414B	<b>North Reference:</b>	True
<b>Wellbore:</b>	HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL	<b>Database:</b>	USA EDM 5000 Multi Users DB

### Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
9,367.0	93.10	181.50	5,712.7	-3,926.2	21.2	3,926.2	1.63	1.54	
9,458.0	93.00	182.30	5,707.8	-4,017.0	18.1	4,017.0	0.88	-0.11	
9,550.0	90.90	182.80	5,704.7	-4,108.9	14.1	4,108.9	2.35	-2.28	
9,641.0	92.00	182.80	5,702.4	-4,199.7	9.6	4,199.7	1.21	1.21	
9,733.0	91.10	180.60	5,699.9	-4,291.6	6.9	4,291.7	2.58	-0.98	
9,824.0	91.00	181.60	5,698.2	-4,382.6	5.1	4,382.6	1.10	-0.11	
9,916.0	90.30	181.50	5,697.2	-4,474.6	2.6	4,474.6	0.77	-0.76	
10,008.0	89.80	179.90	5,697.1	-4,566.6	1.5	4,566.6	1.82	-0.54	
10,099.0	90.10	178.50	5,697.2	-4,657.6	2.8	4,657.5	1.57	0.33	
10,191.0	90.90	177.80	5,696.4	-4,749.5	5.8	4,749.5	1.16	0.87	
10,283.0	89.80	178.10	5,695.8	-4,841.4	9.1	4,841.4	1.24	-1.20	
10,375.0	88.00	179.70	5,697.6	-4,933.4	10.8	4,933.4	2.62	-1.96	
10,466.0	88.20	179.60	5,700.6	-5,024.3	11.4	5,024.4	0.25	0.22	
10,557.0	89.00	179.20	5,702.8	-5,115.3	12.3	5,115.3	0.98	0.88	
10,649.0	88.90	178.60	5,704.5	-5,207.3	14.1	5,207.3	0.66	-0.11	
10,739.0	90.50	181.00	5,705.0	-5,297.3	14.4	5,297.3	3.20	1.78	
10,830.0	90.40	179.70	5,704.3	-5,388.3	13.9	5,388.3	1.43	-0.11	
10,921.0	90.30	177.50	5,703.7	-5,479.2	16.1	5,479.2	2.42	-0.11	
11,012.0	91.40	179.10	5,702.4	-5,570.2	18.8	5,570.2	2.13	1.21	
11,104.0	92.20	180.40	5,699.5	-5,662.1	19.2	5,662.1	1.66	0.87	
11,196.0	91.30	180.50	5,696.7	-5,754.1	18.5	5,754.1	0.98	-0.98	
11,287.0	92.80	181.40	5,693.4	-5,845.0	16.9	5,845.0	1.92	1.65	
11,378.0	93.10	181.10	5,688.7	-5,935.9	15.0	5,935.9	0.47	0.33	
11,470.0	91.60	181.90	5,684.9	-6,027.7	12.6	6,027.8	1.85	-1.63	
11,561.0	90.20	182.70	5,683.5	-6,118.7	8.9	6,118.7	1.77	-1.54	
11,652.0	88.60	181.30	5,684.5	-6,209.6	5.7	6,209.6	2.34	-1.76	
11,744.0	89.20	181.00	5,686.2	-6,301.6	3.9	6,301.6	0.73	0.65	
11,835.0	88.90	178.90	5,687.7	-6,392.5	4.0	6,392.5	2.33	-0.33	
11,927.0	88.20	176.80	5,690.1	-6,484.4	7.4	6,484.4	2.41	-0.76	
12,017.0	89.30	177.20	5,692.0	-6,574.3	12.1	6,574.3	1.30	1.22	
12,109.0	89.40	176.70	5,693.1	-6,666.2	17.0	6,666.2	0.55	0.11	
12,200.0	90.20	176.30	5,693.4	-6,757.0	22.6	6,757.0	0.98	0.88	
12,292.0	90.30	177.30	5,693.0	-6,848.8	27.7	6,848.9	1.09	0.11	
12,390.0	90.00	175.70	5,692.7	-6,946.7	33.7	6,946.7	1.66	-0.31	Last Cathedral Survey @ 12,390' MD
12,440.0	90.00	175.70	5,692.7	-6,996.5	37.4	6,996.6	0.00	0.00	Projection to Bit @ 12,440'

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	Whiting Petroleum Corporation	<b>Local Co-ordinate Reference:</b>	Well Razor #27I-3414B
<b>Project:</b>	Weld County, CO	<b>TVD Reference:</b>	KB @ 4773.3ft (Cade 23)
<b>Site:</b>	S27-T10N-R58W	<b>MD Reference:</b>	KB @ 4773.3ft (Cade 23)
<b>Well:</b>	Razor #27I-3414B	<b>North Reference:</b>	True
<b>Wellbore:</b>	HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL	<b>Database:</b>	USA EDM 5000 Multi Users DB

Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
- Shape									
3414B BHL	0.00	0.00	5,736.3	-7,546.9	21.6	1,534,195.49	3,458,493.05	40° 47' 16.77 N	103° 50' 39.19 W
- actual wellpath misses target center by 552.3ft at 12440.0ft MD (5692.7 TVD, -6996.5 N, 37.4 E)									
- Point									
3414B BH Tgt P3	0.00	0.00	5,697.0	-7,047.0	13.8	1,534,695.13	3,458,475.96	40° 47' 21.71 N	103° 50' 39.29 W
- actual wellpath misses target center by 55.9ft at 12440.0ft MD (5692.7 TVD, -6996.5 N, 37.4 E)									
- Point									

Design Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
12,390.0	5,692.7	-6,946.7	33.7	Last Cathedral Survey @ 12,390' MD
12,440.0	5,692.7	-6,996.5	37.4	Projection to Bit @ 12,440'

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_