



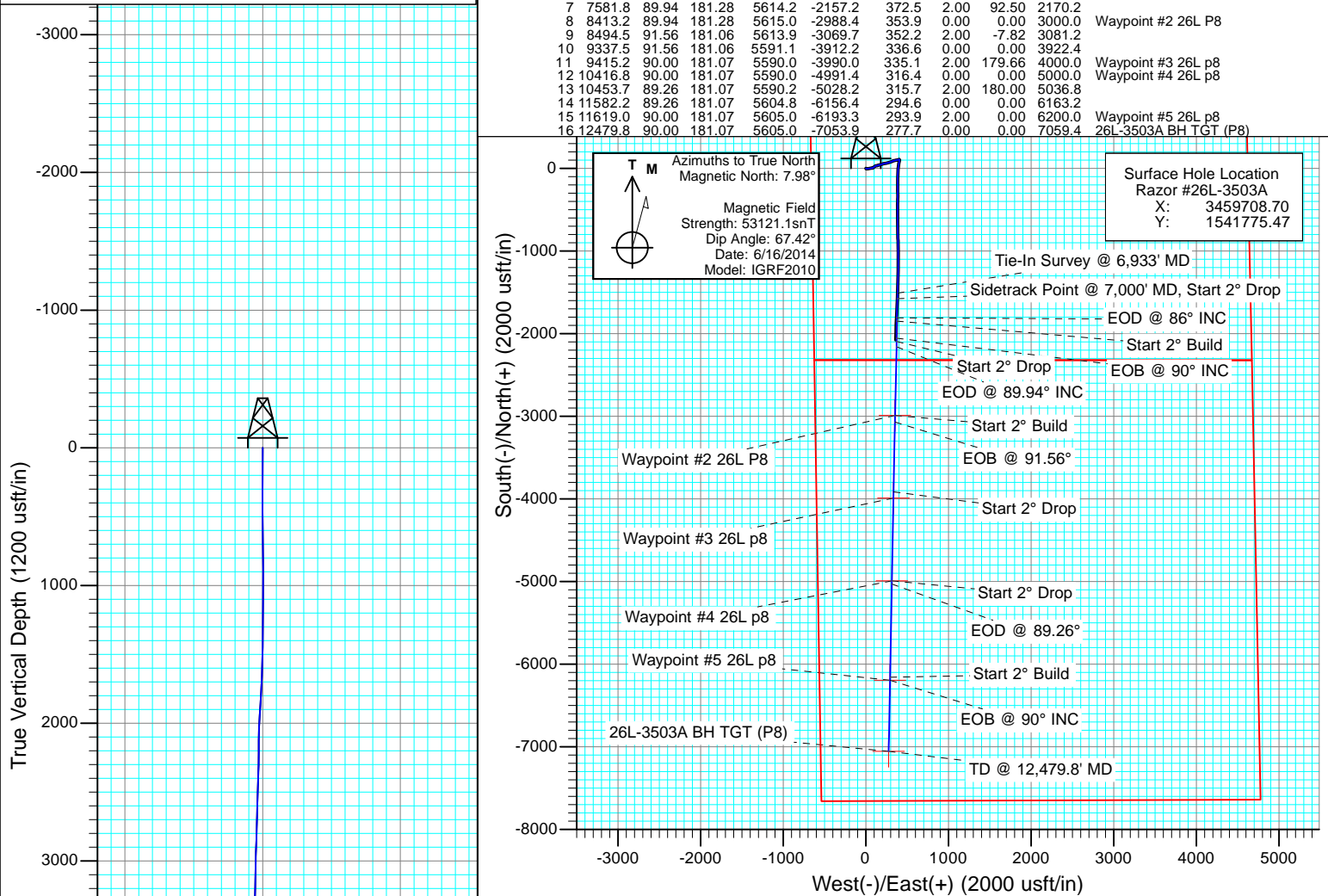
Project: Weld County, CO
Site: S26-T10N-R58W
Well: Razor #26L-3503A
Wellbore: ST
Design: ST Plan #1



ST Plan #1
Razor #26L-3503A
WELL @ 4751.0usft (Original Well Elev)
Ground Elevation @ 4734.5
North American Datum 1983
Well Razor #26L-3503A, True North

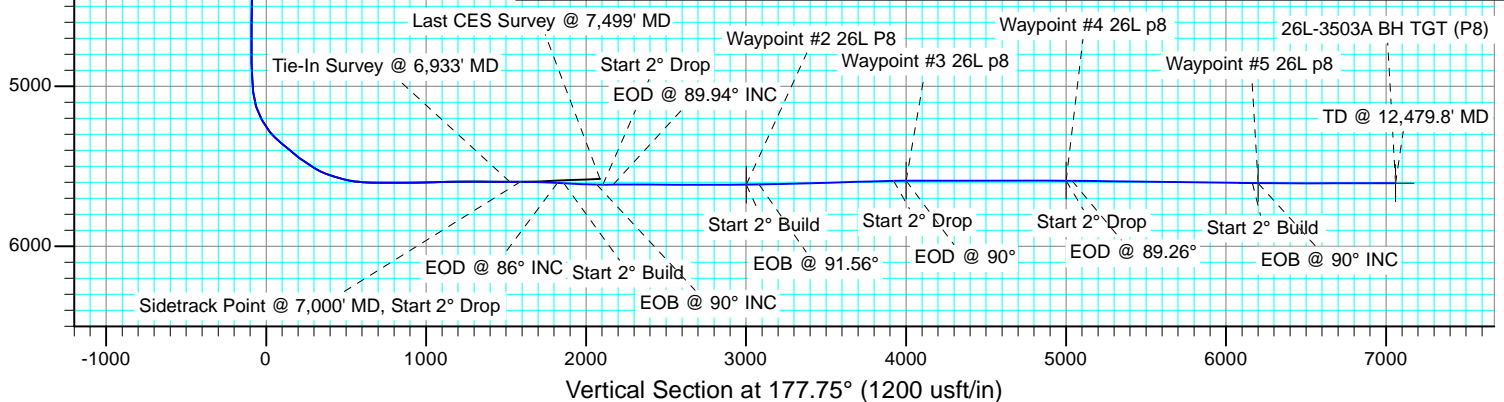
SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	6933.0	90.51	182.57	5597.4	-1509.1	385.7	0.00	0.00	1523.1	
2	7000.0	90.38	182.49	5596.9	-1576.0	382.8	0.23	-148.39	1589.8	
3	7231.3	86.00	181.00	5604.2	-1807.0	375.7	2.00	-161.24	1820.4	
4	7271.3	86.00	181.00	5607.0	-1846.9	375.0	0.00	0.00	1860.2	
5	7477.5	90.00	180.00	5614.2	-2052.9	373.3	2.00	-14.05	2066.0	
6	7517.5	90.00	180.00	5614.2	-2092.9	373.3	0.00	0.00	2105.9	
7	7581.8	89.94	181.28	5614.2	-2157.2	372.5	2.00	92.50	2170.2	
8	8413.2	89.94	181.28	5615.0	-2988.4	353.9	0.00	0.00	3000.0	Waypoint #2 26L P8
9	8494.5	91.56	181.06	5613.9	-3069.7	352.2	2.00	-7.82	3081.2	
10	9337.5	91.56	181.06	5591.1	-3912.2	336.6	0.00	0.00	3922.4	
11	9415.2	90.00	181.07	5590.0	-3990.0	335.1	2.00	179.66	4000.0	Waypoint #3 26L p8
12	10416.8	90.00	181.07	5590.0	-4991.4	316.4	0.00	0.00	5000.0	Waypoint #4 26L p8
13	10453.7	89.26	181.07	5590.2	-5028.2	315.7	2.00	180.00	5036.8	
14	11582.2	89.26	181.07	5604.8	-6156.4	294.6	0.00	0.00	6163.2	
15	11619.0	90.00	181.07	5605.0	-6193.3	293.9	2.00	0.00	6200.0	Waypoint #5 26L p8
16	12479.8	90.00	181.07	5605.0	-7053.9	277.7	0.00	0.00	7059.4	26L-3503A BH TGT (P8)



DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting
Waypoint #3 26L p8	5590.0	-3990.0	335.1	1537792.50	3460118.49
Waypoint #4 26L p8	5590.0	-4991.4	316.4	1536790.90	3460118.49
26L-3503A BH TGT (P8)	5605.0	-7053.9	277.7	1534728.02	3460118.49
Waypoint #5 26L p8	5605.0	-6193.3	293.9	1535588.80	3460118.49
Waypoint #2 26L P8	5615.0	-2988.4	353.9	1538794.20	3460118.49



Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Razor #26L-3503A
Company:	Whiting Petroleum Corporation	TVD Reference:	WELL @ 4751.0usft (Original Well Elev)
Project:	Weld County, CO	MD Reference:	WELL @ 4751.0usft (Original Well Elev)
Site:	S26-T10N-R58W	North Reference:	True
Well:	Razor #26L-3503A	Survey Calculation Method:	Minimum Curvature
Wellbore:	ST		
Design:	ST Plan #1		

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

Site		S26-T10N-R58W			
Site Position:		Northing:	1,541,774.28 usft	Latitude:	40.808739
From:	Lat/Long	Easting:	3,459,642.55 usft	Longitude:	-103.839531
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	1.07 °

Well	Razor #26L-3503A					
Well Position	+N/-S	0.0 usft	Northing:	1,541,775.47 usft	Latitude:	40.808739
	+E/-W	0.0 usft	Easting:	3,459,708.70 usft	Longitude:	-103.839292
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	4,734.5 usft

Wellbore	ST				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2010	6/16/2014	7.98	67.42	53,121

Design	ST Plan #1				
Audit Notes:					
Version:	Phase:	PLAN	Tie On Depth:	6,933.0	
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(usft)	(usft)	(usft)	(°)	
	0.0	0.0	0.0	177.75	

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
6,933.0	90.51	182.57	5,597.4	-1,509.1	385.7	0.00	0.00	0.00	0.00	
7,000.0	90.38	182.49	5,596.9	-1,576.0	382.8	0.23	-0.19	-0.12	-148.39	
7,231.3	86.00	181.00	5,604.2	-1,807.0	375.7	2.00	-1.89	-0.64	-161.24	
7,271.3	86.00	181.00	5,607.0	-1,846.9	375.0	0.00	0.00	0.00	0.00	
7,477.5	90.00	180.00	5,614.2	-2,052.9	373.3	2.00	1.94	-0.49	-14.05	
7,517.5	90.00	180.00	5,614.2	-2,092.9	373.3	0.00	0.00	0.00	0.00	
7,581.8	89.94	181.28	5,614.2	-2,157.2	372.5	2.00	-0.09	2.00	92.50	
8,413.2	89.94	181.28	5,615.0	-2,988.4	353.9	0.00	0.00	0.00	0.00	Waypoint #2 26L P8
8,494.5	91.56	181.06	5,613.9	-3,069.7	352.2	2.00	1.98	-0.27	-7.82	
9,337.5	91.56	181.06	5,591.1	-3,912.2	336.6	0.00	0.00	0.00	0.00	
9,415.2	90.00	181.07	5,590.0	-3,990.0	335.1	2.00	-2.00	0.01	179.66	Waypoint #3 26L p8
10,416.8	90.00	181.07	5,590.0	-4,991.4	316.4	0.00	0.00	0.00	0.00	Waypoint #4 26L p8
10,453.7	89.26	181.07	5,590.2	-5,028.2	315.7	2.00	-2.00	0.00	180.00	
11,582.2	89.26	181.07	5,604.8	-6,156.4	294.6	0.00	0.00	0.00	0.00	
11,619.0	90.00	181.07	5,605.0	-6,193.3	293.9	2.00	2.00	0.00	0.00	Waypoint #5 26L p8
12,479.8	90.00	181.07	5,605.0	-7,053.9	277.7	0.00	0.00	0.00	0.00	26L-3503A BH TGT (f

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Razor #26L-3503A
Company:	Whiting Petroleum Corporation	TVD Reference:	WELL @ 4751.0usft (Original Well Elev)
Project:	Weld County, CO	MD Reference:	WELL @ 4751.0usft (Original Well Elev)
Site:	S26-T10N-R58W	North Reference:	True
Well:	Razor #26L-3503A	Survey Calculation Method:	Minimum Curvature
Wellbore:	ST		
Design:	ST Plan #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 (°/100u)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
419.0	0.53	81.99	419.0	0.3	1.9	-0.2	0.13	0.13	
878.0	1.32	137.20	877.9	-3.3	7.6	3.6	0.24	0.17	
969.0	2.64	91.54	968.9	-4.1	10.4	4.5	2.15	1.45	
1,061.0	4.44	81.70	1,060.7	-3.7	16.1	4.3	2.06	1.96	
1,153.0	6.46	78.27	1,152.3	-2.1	24.7	3.1	2.22	2.20	
1,490.0	7.56	82.98	1,486.8	4.4	65.2	-1.9	0.37	0.33	
1,583.0	7.87	85.52	1,578.9	5.7	77.6	-2.6	0.50	0.33	
1,675.0	5.19	55.92	1,670.3	8.5	87.4	-5.1	4.59	-2.91	
1,767.0	5.45	51.12	1,761.9	13.6	94.2	-9.9	0.56	0.28	
1,858.0	5.01	47.78	1,852.6	19.0	100.5	-15.0	0.59	-0.48	
1,950.0	5.89	50.45	1,944.1	24.7	107.1	-20.4	1.00	0.96	
2,041.0	6.15	62.16	2,034.6	29.9	115.1	-25.4	1.38	0.29	
2,132.0	5.54	84.46	2,125.2	32.6	123.7	-27.7	2.57	-0.67	
2,224.0	5.27	80.19	2,216.8	33.8	132.3	-28.5	0.53	-0.29	
2,315.0	4.88	74.70	2,307.4	35.5	140.2	-30.0	0.68	-0.43	
2,407.0	6.51	73.05	2,399.0	38.1	148.9	-32.2	1.78	1.77	
2,498.0	6.46	72.80	2,489.4	41.1	158.8	-34.8	0.06	-0.05	
2,590.0	6.68	75.39	2,580.8	44.0	168.9	-37.3	0.40	0.24	
2,681.0	6.68	74.21	2,671.2	46.7	179.1	-39.7	0.15	0.00	
2,772.0	6.02	71.93	2,761.6	49.7	188.7	-42.2	0.78	-0.73	
2,864.0	7.52	70.99	2,853.0	53.1	199.0	-45.2	1.63	1.63	
2,955.0	6.51	70.62	2,943.3	56.8	209.5	-48.5	1.11	-1.11	
3,046.0	8.75	82.48	3,033.5	59.4	221.2	-50.6	3.00	2.46	
3,138.0	7.43	78.47	3,124.6	61.5	234.0	-52.2	1.56	-1.43	
3,230.0	7.25	78.13	3,215.8	63.9	245.5	-54.2	0.20	-0.20	
3,322.0	7.34	75.84	3,307.1	66.5	256.9	-56.3	0.33	0.10	
3,413.0	7.34	75.51	3,397.3	69.4	268.1	-58.8	0.05	0.00	
3,505.0	7.60	76.28	3,488.5	72.3	279.7	-61.2	0.30	0.28	
3,596.0	7.65	75.23	3,578.7	75.3	291.5	-63.7	0.16	0.05	
3,687.0	7.16	72.08	3,669.0	78.6	302.7	-66.6	0.70	-0.54	
3,779.0	5.49	64.70	3,760.4	82.2	312.1	-69.9	2.02	-1.82	
3,870.0	6.02	60.53	3,850.9	86.4	320.2	-73.7	0.74	0.58	
3,961.0	6.90	61.26	3,941.4	91.4	329.2	-78.4	0.97	0.97	
4,053.0	7.65	77.88	4,032.6	95.3	340.0	-81.9	2.42	0.82	
4,144.0	7.08	79.50	4,122.9	97.6	351.4	-83.7	0.67	-0.63	
4,236.0	6.37	75.48	4,214.2	99.9	362.0	-85.6	0.93	-0.77	
4,328.0	5.89	80.60	4,305.7	102.0	371.6	-87.3	0.79	-0.52	
4,420.0	5.01	79.98	4,397.3	103.5	380.2	-88.4	0.96	-0.96	
4,511.0	4.57	86.59	4,488.0	104.4	387.7	-89.0	0.77	-0.48	
4,602.0	3.96	77.09	4,578.7	105.3	394.4	-89.7	1.02	-0.67	
4,693.0	4.13	71.91	4,669.5	107.0	400.6	-91.2	0.44	0.19	
4,785.0	2.29	90.20	4,761.4	108.0	405.6	-92.0	2.26	-2.00	
4,877.0	1.85	168.47	4,853.3	106.6	407.7	-90.4	2.86	-0.48	
4,968.0	2.00	162.90	4,944.3	103.6	408.4	-87.5	0.26	0.16	
5,060.0	6.40	182.50	5,036.0	96.9	408.7	-80.8	4.96	4.78	
5,151.0	17.30	197.00	5,124.9	78.9	404.5	-62.9	12.32	11.98	
5,242.0	28.90	191.20	5,208.5	44.2	396.3	-28.6	12.98	12.75	
5,333.0	39.80	183.20	5,283.6	-6.6	390.3	21.9	12.94	11.98	
5,424.0	49.80	180.60	5,348.1	-70.6	388.3	85.8	11.17	10.99	
5,455.0	50.80	181.00	5,367.9	-94.4	388.0	109.6	3.38	3.23	
5,485.0	50.70	181.20	5,386.8	-117.7	387.6	132.8	0.61	-0.33	

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Razor #26L-3503A
Company:	Whiting Petroleum Corporation	TVD Reference:	WELL @ 4751.0usft (Original Well Elev)
Project:	Weld County, CO	MD Reference:	WELL @ 4751.0usft (Original Well Elev)
Site:	S26-T10N-R58W	North Reference:	True
Well:	Razor #26L-3503A	Survey Calculation Method:	Minimum Curvature
Wellbore:	ST		
Design:	ST Plan #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 (°/100u)	Comments / Formations
5,516.0	50.50	180.50	5,406.5	-141.6	387.2	156.7	1.86	-0.65	
5,546.0	50.20	180.60	5,425.7	-164.7	387.0	179.8	1.03	-1.00	
5,577.0	52.40	180.60	5,445.0	-188.9	386.7	204.0	7.10	7.10	
5,607.0	55.70	180.30	5,462.7	-213.2	386.5	228.2	11.03	11.00	
5,638.0	56.60	179.30	5,479.9	-238.9	386.6	253.9	3.95	2.90	
5,668.0	57.00	179.10	5,496.3	-264.0	387.0	279.0	1.45	1.33	
5,699.0	58.50	177.50	5,512.9	-290.2	387.8	305.3	6.52	4.84	
5,730.0	62.90	179.50	5,528.1	-317.2	388.5	332.3	15.27	14.19	
5,760.0	66.80	180.60	5,540.8	-344.4	388.4	359.4	13.42	13.00	
5,790.0	70.51	181.46	5,551.7	-372.3	387.9	387.3	12.65	12.36	
5,821.0	72.79	182.02	5,561.5	-401.7	387.0	416.7	7.55	7.35	
5,851.0	73.76	182.30	5,570.1	-430.5	385.9	445.3	3.35	3.23	
5,882.0	75.12	181.58	5,578.4	-460.3	384.9	475.1	4.92	4.39	
5,913.0	77.63	180.74	5,585.7	-490.4	384.3	505.2	8.51	8.10	
5,943.0	81.14	179.66	5,591.3	-519.9	384.2	534.6	12.22	11.70	
5,964.0	82.68	179.15	5,594.2	-540.7	384.4	555.4	7.72	7.33	
6,079.0	89.45	178.51	5,602.1	-655.3	386.8	670.0	5.91	5.89	
6,174.0	90.07	179.64	5,602.5	-750.3	388.3	765.0	1.36	0.65	
6,268.0	89.27	178.45	5,603.0	-844.3	389.9	859.0	1.53	-0.85	
6,363.0	91.52	179.85	5,602.4	-939.3	391.3	953.9	2.79	2.37	
6,458.0	91.69	179.64	5,599.7	-1,034.2	391.7	1,048.8	0.28	0.18	
6,553.0	91.96	179.21	5,596.7	-1,129.2	392.7	1,143.8	0.53	0.28	
6,648.0	89.54	181.16	5,595.5	-1,224.2	392.4	1,238.7	3.27	-2.55	
6,743.0	89.58	180.98	5,596.2	-1,319.1	390.6	1,333.5	0.19	0.04	
6,837.0	89.23	181.14	5,597.2	-1,413.1	388.9	1,427.3	0.41	-0.37	
6,933.0	90.51	182.57	5,597.4	-1,509.1	385.7	1,523.1	2.00	1.33	Tie-In Survey @ 6,933' MD
7,000.0	90.38	182.49	5,596.9	-1,576.0	382.8	1,589.8	0.23	-0.19	Sidetrack Point @ 7,000' MD, Start 2° Drop
7,100.0	88.49	181.85	5,597.9	-1,675.9	379.0	1,689.5	2.00	-1.89	
7,200.0	86.59	181.20	5,602.1	-1,775.8	376.3	1,789.2	2.00	-1.89	
7,231.3	86.00	181.00	5,604.2	-1,807.0	375.7	1,820.4	2.00	-1.89	EOD @ 86° INC
7,271.3	86.00	181.00	5,607.0	-1,846.9	375.0	1,860.2	0.00	0.00	Start 2° Build
7,300.0	86.56	180.86	5,608.8	-1,875.5	374.6	1,888.8	2.00	1.94	
7,400.0	88.50	180.38	5,613.1	-1,975.4	373.5	1,988.6	2.00	1.94	
7,477.5	90.00	180.00	5,614.2	-2,052.9	373.3	2,066.0	2.00	1.94	EOB @ 90° INC
7,500.0	90.00	180.00	5,614.2	-2,075.4	373.3	2,088.5	0.00	0.00	
7,517.5	90.00	180.00	5,614.2	-2,092.9	373.3	2,105.9	0.00	0.00	Start 2° Drop
7,581.8	89.94	181.28	5,614.2	-2,157.2	372.5	2,170.2	2.00	-0.09	EOD @ 89.94° INC
7,600.0	89.94	181.28	5,614.2	-2,175.4	372.1	2,188.4	0.00	0.00	
7,700.0	89.94	181.28	5,614.3	-2,275.4	369.9	2,288.2	0.00	0.00	
7,800.0	89.94	181.28	5,614.4	-2,375.4	367.6	2,388.0	0.00	0.00	
7,900.0	89.94	181.28	5,614.5	-2,475.3	365.4	2,487.8	0.00	0.00	
8,000.0	89.94	181.28	5,614.6	-2,575.3	363.2	2,587.6	0.00	0.00	
8,100.0	89.94	181.28	5,614.7	-2,675.3	360.9	2,687.4	0.00	0.00	
8,200.0	89.94	181.28	5,614.8	-2,775.3	358.7	2,787.2	0.00	0.00	
8,300.0	89.94	181.28	5,614.9	-2,875.2	356.4	2,887.0	0.00	0.00	
8,400.0	89.94	181.28	5,615.0	-2,975.2	354.2	2,986.9	0.00	0.00	
8,413.2	89.94	181.28	5,615.0	-2,988.4	353.9	3,000.0	0.00	0.00	Start 2° Build
8,494.5	91.56	181.06	5,613.9	-3,069.7	352.2	3,081.2	2.00	1.98	EOB @ 91.56°
8,500.0	91.56	181.06	5,613.8	-3,075.2	352.1	3,086.7	0.00	0.00	
8,600.0	91.56	181.06	5,611.1	-3,175.1	350.3	3,186.5	0.00	0.00	
8,700.0	91.56	181.06	5,608.4	-3,275.1	348.4	3,286.3	0.00	0.00	
8,800.0	91.56	181.06	5,605.6	-3,375.0	346.6	3,386.0	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Razor #26L-3503A
Company:	Whiting Petroleum Corporation	TVD Reference:	WELL @ 4751.0usft (Original Well Elev)
Project:	Weld County, CO	MD Reference:	WELL @ 4751.0usft (Original Well Elev)
Site:	S26-T10N-R58W	North Reference:	True
Well:	Razor #26L-3503A	Survey Calculation Method:	Minimum Curvature
Wellbore:	ST		
Design:	ST Plan #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 (°/100u)	Comments / Formations
8,900.0	91.56	181.06	5,602.9	-3,475.0	344.7	3,485.8	0.00	0.00	
9,000.0	91.56	181.06	5,600.2	-3,574.9	342.8	3,585.6	0.00	0.00	
9,100.0	91.56	181.06	5,597.5	-3,674.9	341.0	3,685.4	0.00	0.00	
9,200.0	91.56	181.06	5,594.8	-3,774.8	339.1	3,785.2	0.00	0.00	
9,300.0	91.56	181.06	5,592.1	-3,874.8	337.3	3,885.0	0.00	0.00	
9,337.5	91.56	181.06	5,591.1	-3,912.2	336.6	3,922.4	0.00	0.00	Start 2° Drop
9,400.0	90.30	181.07	5,590.0	-3,974.7	335.4	3,984.8	2.00	-2.00	
9,415.2	90.00	181.07	5,590.0	-3,990.0	335.1	4,000.0	2.00	-2.00	EOD @ 90°
9,500.0	90.00	181.07	5,590.0	-4,074.7	333.5	4,084.7	0.00	0.00	
9,600.0	90.00	181.07	5,590.0	-4,174.7	331.7	4,184.5	0.00	0.00	
9,700.0	90.00	181.07	5,590.0	-4,274.7	329.8	4,284.3	0.00	0.00	
9,800.0	90.00	181.07	5,590.0	-4,374.6	327.9	4,384.2	0.00	0.00	
9,900.0	90.00	181.07	5,590.0	-4,474.6	326.1	4,484.0	0.00	0.00	
10,000.0	90.00	181.07	5,590.0	-4,574.6	324.2	4,583.8	0.00	0.00	
10,100.0	90.00	181.07	5,590.0	-4,674.6	322.3	4,683.7	0.00	0.00	
10,200.0	90.00	181.07	5,590.0	-4,774.6	320.4	4,783.5	0.00	0.00	
10,300.0	90.00	181.07	5,590.0	-4,874.6	318.6	4,883.3	0.00	0.00	
10,400.0	90.00	181.07	5,590.0	-4,974.5	316.7	4,983.1	0.00	0.00	
10,416.8	90.00	181.07	5,590.0	-4,991.4	316.4	5,000.0	0.00	0.00	Start 2° Drop
10,453.7	89.26	181.07	5,590.2	-5,028.2	315.7	5,036.8	2.00	-2.00	EOD @ 89.26°
10,500.0	89.26	181.07	5,590.8	-5,074.5	314.8	5,083.0	0.00	0.00	
10,600.0	89.26	181.07	5,592.1	-5,174.5	312.9	5,182.8	0.00	0.00	
10,700.0	89.26	181.07	5,593.4	-5,274.5	311.1	5,282.6	0.00	0.00	
10,800.0	89.26	181.07	5,594.7	-5,374.4	309.2	5,382.4	0.00	0.00	
10,900.0	89.26	181.07	5,596.0	-5,474.4	307.3	5,482.3	0.00	0.00	
11,000.0	89.26	181.07	5,597.3	-5,574.4	305.5	5,582.1	0.00	0.00	
11,100.0	89.26	181.07	5,598.6	-5,674.4	303.6	5,681.9	0.00	0.00	
11,200.0	89.26	181.07	5,599.8	-5,774.3	301.7	5,781.7	0.00	0.00	
11,300.0	89.26	181.07	5,601.1	-5,874.3	299.8	5,881.6	0.00	0.00	
11,400.0	89.26	181.07	5,602.4	-5,974.3	298.0	5,981.4	0.00	0.00	
11,500.0	89.26	181.07	5,603.7	-6,074.3	296.1	6,081.2	0.00	0.00	
11,582.2	89.26	181.07	5,604.8	-6,156.4	294.6	6,163.2	0.00	0.00	Start 2° Build
11,600.0	89.62	181.07	5,604.9	-6,174.2	294.2	6,181.0	2.00	2.00	
11,619.0	90.00	181.07	5,605.0	-6,193.3	293.9	6,200.0	2.00	2.00	EOB @ 90° INC
11,700.0	90.00	181.07	5,605.0	-6,274.2	292.3	6,280.9	0.00	0.00	
11,800.0	90.00	181.07	5,605.0	-6,374.2	290.5	6,380.7	0.00	0.00	
11,900.0	90.00	181.07	5,605.0	-6,474.2	288.6	6,480.5	0.00	0.00	
12,000.0	90.00	181.07	5,605.0	-6,574.2	286.7	6,580.4	0.00	0.00	
12,100.0	90.00	181.07	5,605.0	-6,674.1	284.9	6,680.2	0.00	0.00	
12,200.0	90.00	181.07	5,605.0	-6,774.1	283.0	6,780.0	0.00	0.00	
12,300.0	90.00	181.07	5,605.0	-6,874.1	281.1	6,879.8	0.00	0.00	
12,400.0	90.00	181.07	5,605.0	-6,974.1	279.2	6,979.7	0.00	0.00	
12,479.8	90.00	181.07	5,605.0	-7,053.9	277.7	7,059.4	0.00	0.00	TD @ 12,479.8' MD

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Razor #26L-3503A
Company:	Whiting Petroleum Corporation	TVD Reference:	WELL @ 4751.0usft (Original Well Elev)
Project:	Weld County, CO	MD Reference:	WELL @ 4751.0usft (Original Well Elev)
Site:	S26-T10N-R58W	North Reference:	True
Well:	Razor #26L-3503A	Survey Calculation Method:	Minimum Curvature
Wellbore:	ST		
Design:	ST Plan #1		

Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
Waypoint #1 26L P8	0.00	0.00	5,600.0	-1,986.9	372.6	1,539,795.90	3,460,118.49	40.803285	-103.837946
- plan misses target center by 13.4usft at 7411.3usft MD (5613.4 TVD, -1986.7 N, 373.4 E)									
- Point									
Waypoint #3 26L p8	0.00	0.00	5,590.0	-3,990.0	335.1	1,537,792.50	3,460,118.49	40.797788	-103.838082
- plan hits target center									
- Point									
Waypoint #2 26L P8	0.00	0.00	5,615.0	-2,988.4	353.9	1,538,794.20	3,460,118.49	40.800537	-103.838014
- plan hits target center									
- Point									
Waypoint #4 26L p8	0.00	0.00	5,590.0	-4,991.4	316.4	1,536,790.90	3,460,118.49	40.795039	-103.838149
- plan hits target center									
- Point									
26L-3503A BH TGT (P8)	0.00	0.00	5,605.0	-7,053.9	277.7	1,534,728.02	3,460,118.49	40.789378	-103.838289
- plan hits target center									
- Point									
Waypoint #5 26L p8	0.00	0.00	5,605.0	-6,193.3	293.9	1,535,588.80	3,460,118.49	40.791740	-103.838231
- plan hits target center									
- Point									

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	
6,933.0	5,597.4	-1,509.1	385.7	Tie-In Survey @ 6,933' MD
7,000.0	5,596.9	-1,576.0	382.8	Sidetrack Point @ 7,000' MD, Start 2° Drop
7,231.3	5,604.2	-1,807.0	375.7	EOD @ 86° INC
7,271.3	5,607.0	-1,846.9	375.0	Start 2° Build
7,477.5	5,614.2	-2,052.9	373.3	EOB @ 90° INC
7,517.5	5,614.2	-2,092.9	373.3	Start 2° Drop
7,581.8	5,614.2	-2,157.2	372.5	EOD @ 89.94° INC
8,413.2	5,615.0	-2,988.4	353.9	Start 2° Build
8,494.5	5,613.9	-3,069.7	352.2	EOB @ 91.56°
9,337.5	5,591.1	-3,912.2	336.6	Start 2° Drop
9,415.2	5,590.0	-3,990.0	335.1	EOD @ 90°
10,416.8	5,590.0	-4,991.4	316.4	Start 2° Drop
10,453.7	5,590.2	-5,028.2	315.7	EOD @ 89.26°
11,582.2	5,604.8	-6,156.4	294.6	Start 2° Build
11,619.0	5,605.0	-6,193.3	293.9	EOB @ 90° INC
12,479.8	5,605.0	-7,053.9	277.7	TD @ 12,479.8' MD