



Company: Whiting Oil & Gas
Field: Weld Co., CO
Location: Sec.26-T10N-R58W
Well: Razor Federal 26J-3511A
Borehole: Original Hole
Rig: Xtreme 18
Plan: Original Hole

PATHFINDER
A Schlumberger Company

WELL DETAILS: Razor Federal 26J-3511A

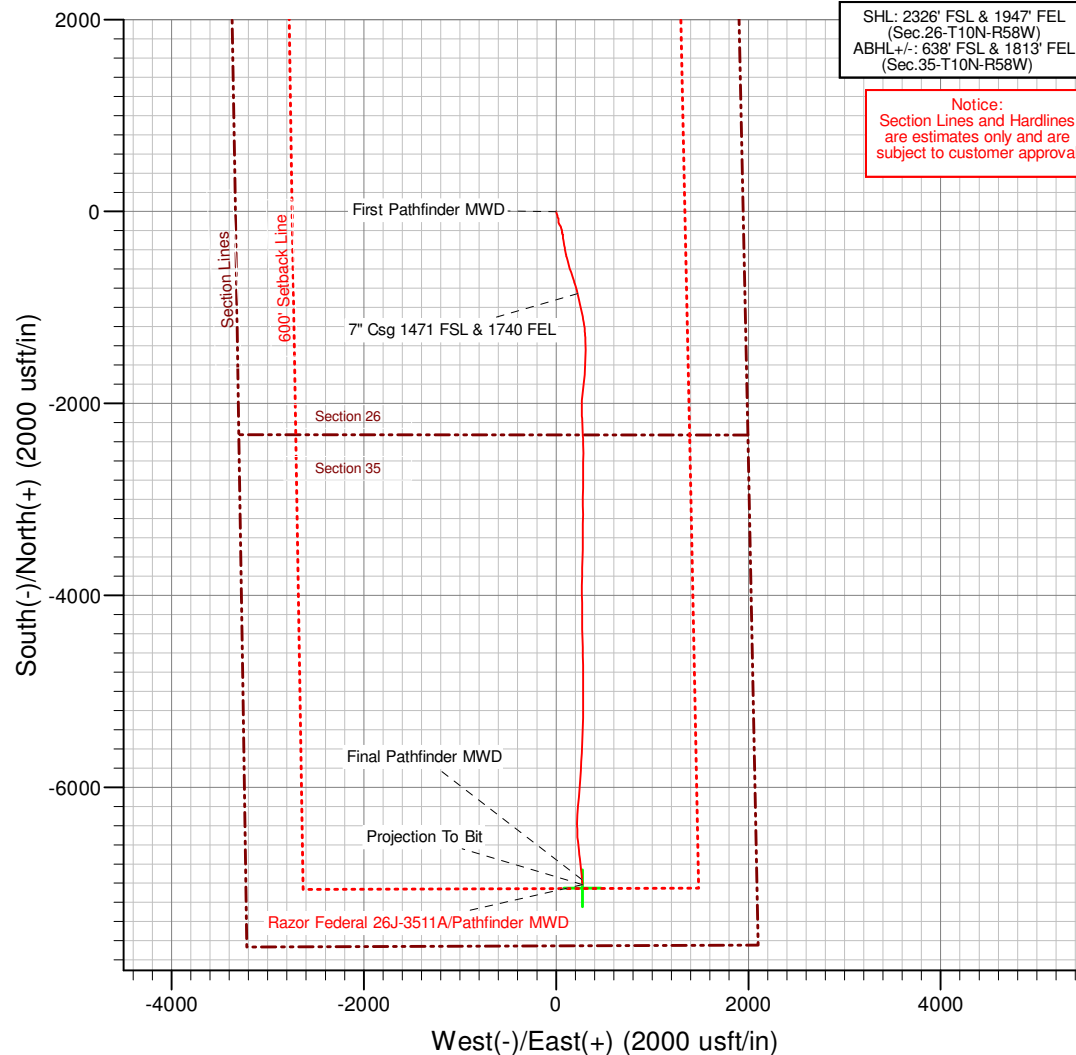
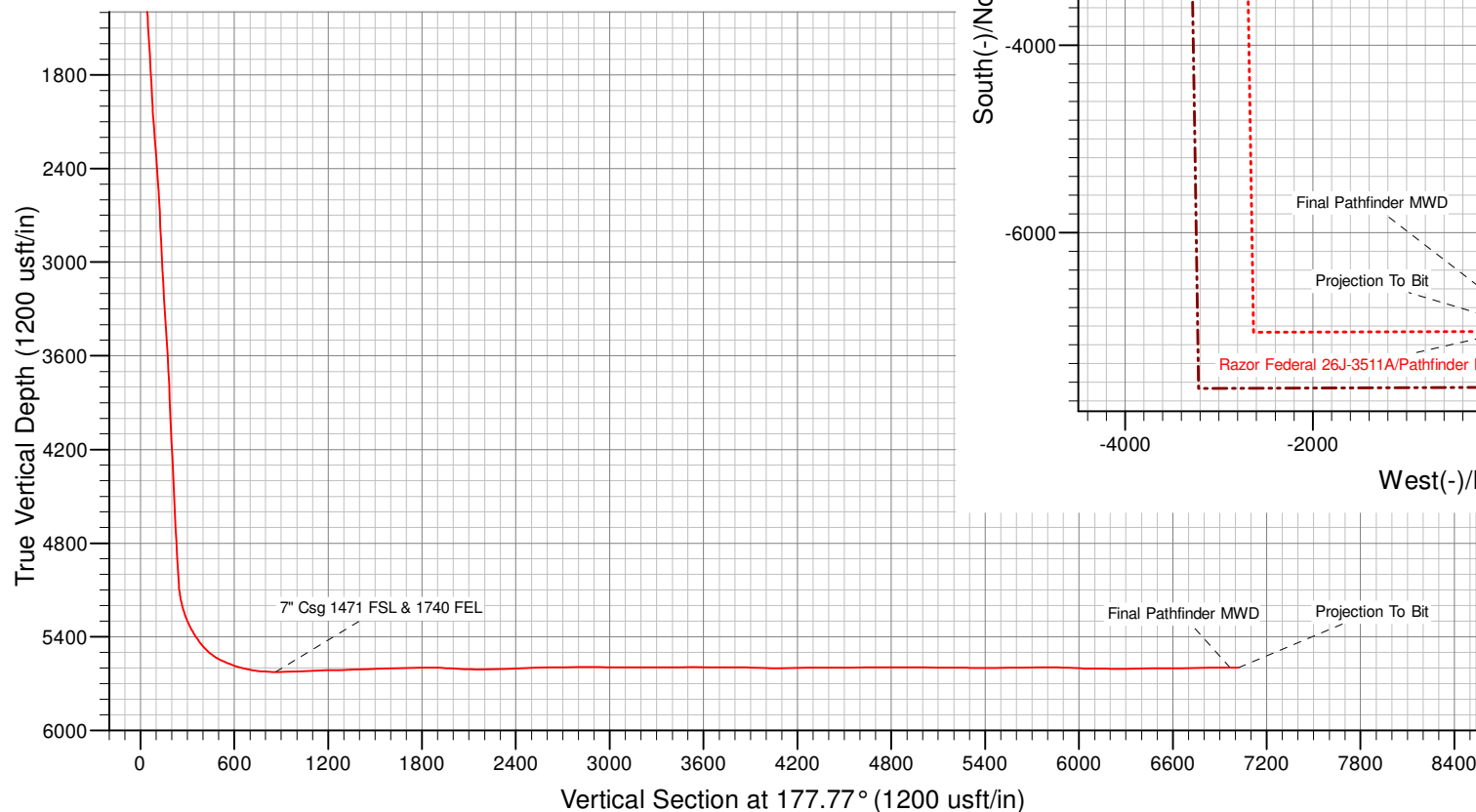
+N/-S	+E/-W	GL 4726.00	KB @ 4743.00usft (Xtreme 18 KB 17')	Latitude	Longitude
0.00	0.00	1541831.96	3462385.07	40° 48' 31.521 N	103° 49' 46.639 W

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
PBHL Razor Federal 26J-3511A	5620.00	-7051.00	274.42	Point

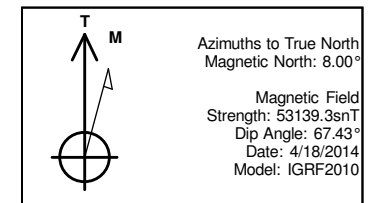
ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	Vsect	Departure	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Tie Into Surface
167.00	167.00	0.18	155.03	-0.24	0.11	0.24	0.26	First Pathfinder MWD
5624.85	6024.30	89.68	166.02	-854.68	224.36	862.76	891.11	7" Csg 1471 FSL & 1740 FEL
5598.09	12146.00	90.31	174.00	-6960.10	269.68	6965.32	7011.34	Final Pathfinder MWD
5597.80	12200.00	90.31	174.00	-7013.80	275.33	7019.20	7065.34	Projection To Bit



SHL: 2326' FSL & 1947' FEL
(Sec.26-T10N-R58W)
ABHL +/-: 638' FSL & 1813' FEL
(Sec.35-T10N-R58W)

Notice:
Section Lines and Hardlines
are estimates only and are
subject to customer approval





Whiting Oil & Gas

Weld Co., CO

Sec.26-T10N-R58W

Razor Federal 26J-3511A

Original Hole

Survey: Pathfinder MWD

Standard Survey Report

12 June, 2014



Company:	Whiting Oil & Gas	Local Co-ordinate Reference:	Well Razor Federal 26J-3511A
Project:	Weld Co., CO	TVD Reference:	KB @ 4743.00usft (Xtreme 18 KB 17')
Site:	Sec.26-T10N-R58W	MD Reference:	KB @ 4743.00usft (Xtreme 18 KB 17')
Well:	Razor Federal 26J-3511A	North Reference:	True
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	EDM 5000.1 Single User Db

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

Site		Sec.26-T10N-R58W					
Site Position:		Northing:	1,541,755.70	usft	Latitude:	40° 48' 30.780 N	
From:	Lat/Long	Easting:	3,462,320.33	usft	Longitude:	103° 49' 47.500 W	
Position Uncertainty:	0.00	usft	Slot Radius:	13-3/16	"	Grid Convergence:	1.08 °

Well	Razor Federal 26J-3511A					
Well Position	+N/-S	0.00 usft	Northing:	1,541,831.97 usft	Latitude:	40° 48' 31.521 N
	+E/-W	0.00 usft	Easting:	3,462,385.07 usft	Longitude:	103° 49' 46.639 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	4,743.00 usft	Ground Level:	4,726.00 usft

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	4/18/2014	8.00	67.43	53,139

Design	Original Hole				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	177.77	

Survey Program	Date	6/12/2014			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
167.00	12,200.00	Pathfinder MWD (Original Hole)	Pathfinder	Pathfinder MWD	

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
Tie Into Surface									
167.00	0.18	155.03	167.00	-0.24	0.11	0.24	0.11	0.11	0.00
First Pathfinder MWD									
228.00	0.09	127.58	228.00	-0.35	0.19	0.36	0.18	-0.15	-45.00
320.00	0.18	86.03	320.00	-0.39	0.39	0.40	0.14	0.10	-45.16
412.00	0.35	131.89	412.00	-0.57	0.74	0.59	0.28	0.18	49.85
504.00	0.26	110.36	504.00	-0.83	1.15	0.87	0.16	-0.10	-23.40
595.00	0.97	179.00	594.99	-1.67	1.36	1.72	1.00	0.78	75.43
687.00	2.37	172.95	686.95	-4.33	1.60	4.39	1.53	1.52	-6.58



Company:	Whiting Oil & Gas	Local Co-ordinate Reference:	Well Razor Federal 26J-3511A
Project:	Weld Co., CO	TVD Reference:	KB @ 4743.00usft (Xtreme 18 KB 17')
Site:	Sec.26-T10N-R58W	MD Reference:	KB @ 4743.00usft (Xtreme 18 KB 17')
Well:	Razor Federal 26J-3511A	North Reference:	True
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	EDM 5000.1 Single User Db

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)
779.00	3.69	161.70	778.82	-9.03	2.77	9.13	1.57	1.43	-12.23
872.00	3.43	161.04	871.64	-14.51	4.61	14.67	0.28	-0.28	-0.71
964.00	3.52	160.38	963.47	-19.77	6.45	20.00	0.11	0.10	-0.72
1,056.00	3.25	163.39	1,055.31	-24.93	8.15	25.23	0.35	-0.29	3.27
1,148.00	3.08	157.35	1,147.17	-29.71	9.84	30.07	0.41	-0.18	-6.57
1,240.00	3.34	164.01	1,239.03	-34.57	11.53	34.99	0.49	0.28	7.24
1,332.00	3.43	160.15	1,330.87	-39.73	13.21	40.21	0.27	0.10	-4.20
1,423.00	3.34	168.29	1,421.71	-44.89	14.67	45.42	0.54	-0.10	8.95
1,496.00	3.17	170.17	1,494.59	-48.96	15.44	49.52	0.27	-0.23	2.58
1,581.00	3.34	175.87	1,579.45	-53.74	16.02	54.33	0.43	0.20	6.71
1,672.00	3.43	160.82	1,670.30	-58.96	17.11	59.58	0.98	0.10	-16.54
1,765.00	3.69	150.74	1,763.12	-64.20	19.49	64.91	0.73	0.28	-10.84
1,856.00	3.87	141.74	1,853.92	-69.16	22.82	70.00	0.68	0.20	-9.89
1,948.00	2.73	137.28	1,945.77	-73.21	26.23	74.17	1.27	-1.24	-4.85
2,039.00	4.48	176.05	2,036.60	-78.35	27.94	79.38	3.19	1.92	42.60
2,131.00	4.04	183.75	2,128.34	-85.17	27.98	86.19	0.78	-0.48	8.37
2,223.00	4.13	183.05	2,220.11	-91.71	27.59	92.71	0.11	0.10	-0.76
2,315.00	4.40	176.89	2,311.85	-98.54	27.61	99.54	0.58	0.29	-6.70
2,408.00	4.22	183.59	2,404.59	-105.52	27.59	106.51	0.57	-0.19	7.20
2,500.00	4.13	183.37	2,496.35	-112.20	27.18	113.18	0.10	-0.10	-0.24
2,591.00	2.90	159.21	2,587.18	-117.63	27.80	118.62	2.09	-1.35	-26.55
2,682.00	2.99	158.06	2,678.06	-121.98	29.51	123.04	0.12	0.10	-1.26
2,774.00	2.90	154.79	2,769.94	-126.31	31.39	127.44	0.21	-0.10	-3.55
2,867.00	2.64	159.27	2,862.83	-130.45	33.16	131.64	0.36	-0.28	4.82
2,958.00	2.73	157.70	2,953.73	-134.41	34.72	135.66	0.13	0.10	-1.73
3,049.00	3.78	151.81	3,044.58	-139.06	36.96	140.39	1.21	1.15	-6.47
3,141.00	3.87	141.87	3,136.38	-144.17	40.31	145.63	0.73	0.10	-10.80
3,233.00	3.96	142.34	3,228.16	-149.13	44.17	150.74	0.10	0.10	0.51
3,326.00	4.40	155.37	3,320.92	-154.92	47.61	156.65	1.12	0.47	14.01
3,418.00	3.43	159.77	3,412.70	-160.71	50.04	162.53	1.10	-1.05	4.78
3,511.00	3.61	166.17	3,505.53	-166.16	51.70	168.05	0.46	0.19	6.88
3,603.00	3.52	163.59	3,597.35	-171.68	53.19	173.62	0.20	-0.10	-2.80
3,696.00	3.34	150.32	3,690.18	-176.77	55.34	178.79	0.87	-0.19	-14.27
3,788.00	2.64	166.82	3,782.06	-181.17	57.15	183.25	1.20	-0.76	17.93
3,879.00	2.37	170.02	3,872.97	-185.06	57.95	187.17	0.33	-0.30	3.52
3,971.00	2.55	165.17	3,964.89	-188.91	58.81	191.06	0.30	0.20	-5.27
4,063.00	2.20	157.08	4,056.81	-192.52	60.02	194.70	0.53	-0.38	-8.79
4,155.00	3.25	177.46	4,148.71	-196.75	60.82	198.96	1.54	1.14	22.15
4,247.00	3.17	176.37	4,240.56	-201.89	61.10	204.12	0.11	-0.09	-1.18
4,340.00	2.64	172.31	4,333.44	-206.58	61.55	208.82	0.61	-0.57	-4.37
4,432.00	2.20	175.47	4,425.36	-210.44	61.97	212.69	0.50	-0.48	3.43
4,523.00	2.02	178.62	4,516.30	-213.79	62.15	216.04	0.24	-0.20	3.46
4,615.00	2.90	147.87	4,608.22	-217.38	63.42	219.68	1.69	0.96	-33.42



Company:	Whiting Oil & Gas	Local Co-ordinate Reference:	Well Razor Federal 26J-3511A
Project:	Weld Co., CO	TVD Reference:	KB @ 4743.00usft (Xtreme 18 KB 17')
Site:	Sec.26-T10N-R58W	MD Reference:	KB @ 4743.00usft (Xtreme 18 KB 17')
Well:	Razor Federal 26J-3511A	North Reference:	True
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	EDM 5000.1 Single User Db

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)
4,707.00	3.61	174.14	4,700.07	-222.23	64.96	224.59	1.77	0.77	28.55
4,799.00	3.25	165.40	4,791.91	-227.64	65.91	230.03	0.69	-0.39	-9.50
4,891.00	2.81	160.16	4,883.78	-232.28	67.33	234.72	0.56	-0.48	-5.70
4,982.00	3.61	169.03	4,974.64	-237.19	68.63	239.68	1.03	0.88	9.75
5,074.00	3.96	168.16	5,066.44	-243.14	69.84	245.68	0.39	0.38	-0.95
5,119.00	7.30	173.96	5,111.21	-247.51	70.46	250.06	7.52	7.42	12.89
5,164.00	10.46	175.19	5,155.67	-254.42	71.10	257.00	7.03	7.02	2.73
5,209.00	14.25	174.04	5,199.62	-264.01	72.02	266.61	8.44	8.42	-2.56
5,254.00	17.85	171.52	5,242.86	-276.34	73.61	278.99	8.15	8.00	-5.60
5,298.00	21.98	171.30	5,284.22	-291.16	75.85	293.89	9.39	9.39	-0.50
5,343.00	25.85	171.11	5,325.35	-309.18	78.64	312.00	8.60	8.60	-0.42
5,388.00	30.34	170.67	5,365.03	-330.10	82.00	333.04	9.99	9.98	-0.98
5,433.00	33.77	170.51	5,403.17	-353.66	85.91	356.73	7.62	7.62	-0.36
5,478.00	38.16	170.63	5,439.58	-379.72	90.24	382.94	9.76	9.76	0.27
5,523.00	43.00	167.72	5,473.75	-408.45	95.77	411.87	11.55	10.76	-6.47
5,568.00	50.56	168.54	5,504.54	-440.52	102.49	444.17	16.85	16.80	1.82
5,613.00	57.86	165.30	5,530.85	-476.03	110.79	479.98	17.24	16.22	-7.20
5,658.00	66.13	164.64	5,551.96	-514.37	121.10	518.69	18.42	18.38	-1.47
5,702.00	67.71	163.88	5,569.21	-553.33	132.08	558.05	3.93	3.59	-1.73
5,747.00	70.52	163.29	5,585.25	-593.65	143.96	598.80	6.36	6.24	-1.31
5,792.00	76.15	162.47	5,598.15	-634.84	156.65	640.45	12.63	12.51	-1.82
5,837.00	78.88	161.74	5,607.88	-676.64	170.15	682.75	6.27	6.07	-1.62
5,882.00	81.07	161.00	5,615.71	-718.63	184.31	725.25	5.13	4.87	-1.64
5,926.00	85.47	162.20	5,620.86	-760.08	198.09	767.21	10.36	10.00	2.73
5,971.00	87.67	164.35	5,623.56	-803.10	211.02	810.69	6.83	4.89	4.78
5,984.00	88.02	165.39	5,624.04	-815.64	214.41	823.36	8.44	2.69	8.00
6,024.30	89.68	166.02	5,624.85	-854.68	224.36	862.76	4.40	4.11	1.56
7" Csg 1471 FSL & 1740 FEL									
6,046.00	90.57	166.36	5,624.81	-875.75	229.54	884.01	4.40	4.11	1.56
6,091.00	92.07	167.22	5,623.77	-919.55	239.82	928.18	3.84	3.33	1.91
6,181.00	91.28	168.61	5,621.14	-1,007.51	258.65	1,016.81	1.78	-0.88	1.54
6,270.00	92.86	168.65	5,617.93	-1,094.71	276.18	1,104.62	1.78	1.78	0.04
6,358.00	91.98	171.21	5,614.21	-1,181.26	291.55	1,191.71	3.07	-1.00	2.91
6,445.00	90.40	175.77	5,612.40	-1,267.66	301.41	1,278.42	5.55	-1.82	5.24
6,530.00	93.03	178.40	5,609.86	-1,352.50	305.73	1,363.36	4.37	3.09	3.09
6,618.00	91.36	179.31	5,606.49	-1,440.41	307.49	1,451.28	2.16	-1.90	1.03
6,704.00	91.63	182.89	5,604.24	-1,526.35	305.84	1,537.09	4.17	0.31	4.16
6,794.00	91.28	181.36	5,601.96	-1,616.26	302.50	1,626.80	1.74	-0.39	-1.70
6,881.00	91.89	186.46	5,599.55	-1,702.99	296.58	1,713.24	5.90	0.70	5.86
6,967.00	90.84	186.34	5,597.50	-1,788.43	286.99	1,798.24	1.23	-1.22	-0.14
7,058.00	88.29	186.43	5,598.19	-1,878.86	276.87	1,888.20	2.80	-2.80	0.10
7,149.00	86.61	183.38	5,602.24	-1,969.42	269.10	1,978.39	3.82	-1.85	-3.35
7,242.00	87.49	179.20	5,607.03	-2,062.25	267.01	2,071.08	4.59	0.95	-4.49
7,333.00	89.69	176.69	5,609.27	-2,153.15	270.27	2,162.03	3.67	2.42	-2.76



Company:	Whiting Oil & Gas	Local Co-ordinate Reference:	Well Razor Federal 26J-3511A
Project:	Weld Co., CO	TVD Reference:	KB @ 4743.00usft (Xtreme 18 KB 17')
Site:	Sec.26-T10N-R58W	MD Reference:	KB @ 4743.00usft (Xtreme 18 KB 17')
Well:	Razor Federal 26J-3511A	North Reference:	True
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	EDM 5000.1 Single User Db

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)
7,423.00	90.92	177.38	5,608.79	-2,243.03	274.93	2,252.02	1.57	1.37	0.77
7,515.00	92.33	177.02	5,606.18	-2,334.88	279.42	2,343.98	1.58	1.53	-0.39
7,606.00	93.12	178.94	5,601.85	-2,425.71	282.63	2,434.87	2.28	0.87	2.11
7,698.00	91.54	179.27	5,598.11	-2,517.62	284.06	2,526.77	1.75	-1.72	0.36
7,789.00	91.10	180.94	5,596.02	-2,608.60	283.89	2,617.66	1.90	-0.48	1.84
7,880.00	90.75	181.10	5,594.55	-2,699.57	282.27	2,708.51	0.42	-0.38	0.18
7,972.00	89.78	180.21	5,594.12	-2,791.56	281.22	2,800.39	1.43	-1.05	-0.97
8,064.00	90.13	180.59	5,594.20	-2,883.56	280.58	2,892.29	0.56	0.38	0.41
8,156.00	88.90	180.40	5,594.97	-2,975.55	279.79	2,984.18	1.35	-1.34	-0.21
8,247.00	89.69	179.54	5,596.09	-3,066.54	279.83	3,075.10	1.28	0.87	-0.95
8,339.00	90.31	179.65	5,596.09	-3,158.54	280.48	3,167.06	0.68	0.67	0.12
8,431.00	89.69	181.30	5,596.09	-3,250.53	279.72	3,258.95	1.92	-0.67	1.79
8,523.00	91.10	178.94	5,595.46	-3,342.52	279.53	3,350.86	2.99	1.53	-2.57
8,615.00	89.78	181.37	5,594.75	-3,434.51	279.28	3,442.77	3.01	-1.43	2.64
8,708.00	90.75	181.51	5,594.32	-3,527.48	276.94	3,535.58	1.05	1.04	0.15
8,801.00	89.08	180.81	5,594.46	-3,620.45	275.06	3,628.41	1.95	-1.80	-0.75
8,892.00	88.64	180.99	5,596.27	-3,711.42	273.63	3,719.26	0.52	-0.48	0.20
8,983.00	91.10	181.96	5,596.48	-3,802.39	271.29	3,810.06	2.91	2.70	1.07
9,076.00	88.46	181.04	5,596.83	-3,895.34	268.85	3,902.85	3.01	-2.84	-0.99
9,167.00	88.29	178.86	5,599.42	-3,986.30	268.93	3,993.75	2.40	-0.19	-2.40
9,258.00	89.78	178.93	5,600.95	-4,077.27	270.69	4,084.71	1.64	1.64	0.08
9,350.00	91.98	178.71	5,599.53	-4,169.23	272.58	4,176.68	2.40	2.39	-0.24
9,442.00	90.22	180.38	5,597.77	-4,261.21	273.31	4,268.61	2.64	-1.91	1.82
9,535.00	90.04	179.63	5,597.56	-4,354.21	273.30	4,361.54	0.83	-0.19	-0.81
9,627.00	90.04	178.85	5,597.49	-4,446.20	274.52	4,453.51	0.85	0.00	-0.85
9,720.00	90.57	178.15	5,597.00	-4,539.16	276.96	4,546.50	0.94	0.57	-0.75
9,813.00	90.92	179.39	5,595.79	-4,632.13	278.96	4,639.48	1.39	0.38	1.33
9,905.00	90.31	178.47	5,594.80	-4,724.11	280.67	4,731.45	1.20	-0.66	-1.00
9,997.00	90.04	180.16	5,594.52	-4,816.10	281.77	4,823.41	1.86	-0.29	1.84
10,089.00	89.34	181.05	5,595.02	-4,908.09	280.80	4,915.30	1.23	-0.76	0.97
10,181.00	89.25	178.61	5,596.15	-5,000.08	281.07	5,007.22	2.65	-0.10	-2.65
10,273.00	89.52	180.03	5,597.14	-5,092.06	282.17	5,099.18	1.57	0.29	1.54
10,365.00	89.87	179.90	5,597.63	-5,184.06	282.22	5,191.11	0.41	0.38	-0.14
10,458.00	88.64	180.05	5,598.84	-5,277.05	282.26	5,284.04	1.33	-1.32	0.16
10,550.00	89.87	183.90	5,600.03	-5,368.97	279.09	5,375.76	4.39	1.34	4.18
10,641.00	90.13	182.32	5,600.03	-5,459.83	274.16	5,466.36	1.76	0.29	-1.74
10,733.00	91.10	181.86	5,599.05	-5,551.76	270.80	5,558.10	1.17	1.05	-0.50
10,825.00	90.75	182.46	5,597.56	-5,643.69	267.33	5,649.81	0.75	-0.38	0.65
10,917.00	91.01	182.85	5,596.15	-5,735.58	263.07	5,741.47	0.51	0.28	0.42
11,009.00	89.60	183.35	5,595.66	-5,827.44	258.10	5,833.07	1.63	-1.53	0.54
11,100.00	87.23	184.78	5,598.18	-5,918.17	251.65	5,923.48	3.04	-2.60	1.57
11,192.00	87.67	182.60	5,602.27	-6,009.88	245.74	6,014.89	2.42	0.48	-2.37
11,284.00	89.87	187.97	5,604.25	-6,101.43	237.27	6,106.04	6.31	2.39	5.84



Company:	Whiting Oil & Gas	Local Co-ordinate Reference:	Well Razor Federal 26J-3511A
Project:	Weld Co., CO	TVD Reference:	KB @ 4743.00usft (Xtreme 18 KB 17')
Site:	Sec.26-T10N-R58W	MD Reference:	KB @ 4743.00usft (Xtreme 18 KB 17')
Well:	Razor Federal 26J-3511A	North Reference:	True
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	EDM 5000.1 Single User Db

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)	
11,376.00	88.72	183.51	5,605.38	-6,192.93	228.07	6,197.12	5.01	-1.25	-4.85	
11,467.00	90.48	183.32	5,606.01	-6,283.77	222.65	6,287.67	1.95	1.93	-0.21	
11,559.00	91.98	180.12	5,604.04	-6,375.69	219.89	6,379.42	3.84	1.63	-3.48	
11,649.00	90.66	178.58	5,601.96	-6,465.66	220.91	6,469.35	2.25	-1.47	-1.71	
11,743.00	89.43	174.11	5,601.89	-6,559.44	226.90	6,563.30	4.93	-1.31	-4.76	
11,837.00	90.92	173.86	5,601.60	-6,652.92	236.75	6,657.09	1.61	1.59	-0.27	
11,930.00	91.63	172.61	5,599.53	-6,745.24	247.70	6,749.78	1.55	0.76	-1.34	
12,024.00	89.87	174.95	5,598.30	-6,838.67	257.88	6,843.53	3.11	-1.87	2.49	
12,116.00	90.22	174.18	5,598.23	-6,930.26	266.60	6,935.38	0.92	0.38	-0.84	
12,146.00	90.31	174.00	5,598.09	-6,960.10	269.68	6,965.32	0.67	0.30	-0.60	
Final Pathfinder MWD										
12,200.00	90.31	174.00	5,597.80	-7,013.80	275.33	7,019.20	0.00	0.00	0.00	
Projection To Bit - PBHL Razor Federal 26J-3511A										

Survey Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
0.00	0.00	0.00	0.00	Tie Into Surface	
167.00	167.00	-0.24	0.11	First Pathfinder MWD	
6,024.30	5,624.85	-854.68	224.36	7" Csg 1471 FSL & 1740 FEL	
12,146.00	5,598.09	-6,960.10	269.68	Final Pathfinder MWD	
12,200.00	5,597.80	-7,013.80	275.33	Projection To Bit	

Checked By: _____ Approved By: _____ Date: _____