

Whiting Oil and Gas Corporation

Weld County, CO

Sec. 26-T10N-R58W

Razor Federal #26I-3513A

Plan C

Design: Actual Field Surveys_MWD+IFR1+MS+sag

Sperry Drilling Services

Standard Report

25 July, 2014

Well Coordinates: 1,541,769.76 N, 3,463,607.56 E (40° 48' 30.68" N, 103° 49' 30.76" W)

Ground Level: 4,712.00 usft

Local Coordinate Origin:

Centered on Well Razor Federal #26I-3513A

Viewing Datum:

KB 21' @ 4733.00usft (Frontier 26)

TVDs to System:

N

North Reference:

True

Unit System:

API - US Survey Feet - Custom

Geodetic Scale Factor Applied

Version: 5000.1 Build: 70

HALLIBURTON

Design Report for Razor Federal #26I-3513A - Actual Field Surveys_MWD+IFR1+MS+sag

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
178.00	0.21	146.56	178.00	-0.27	0.18	0.21	0.12
First Sperry MWD Survey @ 178.00 ft							
269.00	0.47	182.41	269.00	-0.78	0.26	0.68	0.36
362.00	0.49	157.22	361.99	-1.53	0.39	1.36	0.23
454.00	0.52	22.25	453.99	-1.51	0.70	1.25	1.01
546.00	1.22	18.11	545.98	-0.19	1.17	-0.14	0.76
638.00	2.11	2.27	637.94	2.43	1.54	-2.77	1.08
730.00	3.47	9.24	729.83	6.87	2.05	-7.17	1.52
823.00	4.46	15.03	822.61	13.14	3.44	-13.58	1.15
915.00	5.26	0.37	914.28	20.82	4.40	-21.21	1.60
1,007.00	6.11	359.35	1,005.83	29.93	4.37	-29.95	0.93
1,098.00	6.29	349.01	1,096.30	39.66	3.36	-39.01	1.24
1,189.00	6.74	344.46	1,186.71	49.70	0.98	-47.98	0.75
1,281.00	6.39	339.91	1,278.11	59.71	-2.22	-56.68	0.68
1,372.00	5.41	347.18	1,368.63	68.65	-4.91	-64.50	1.35
1,464.00	3.76	353.63	1,460.33	75.88	-6.21	-71.07	1.88
1,499.00	3.46	354.20	1,495.26	78.07	-6.45	-73.11	0.86
1,500.00	3.46	354.20	1,496.26	78.13	-6.45	-73.17	0.00
9 5/8"							
1,636.00	3.31	352.56	1,632.02	86.11	-7.37	-80.56	0.13
1,728.00	2.84	355.04	1,723.89	91.01	-7.92	-85.11	0.53
1,819.00	5.17	354.15	1,814.66	97.34	-8.53	-91.01	2.56
1,910.00	5.60	349.91	1,905.26	105.79	-9.72	-98.79	0.64
2,001.00	5.53	344.75	1,995.83	114.39	-11.66	-106.50	0.56
2,093.00	6.40	342.04	2,087.33	123.54	-14.40	-114.51	0.99
2,184.00	4.86	336.73	2,177.89	131.91	-17.49	-121.67	1.78
2,275.00	4.54	318.78	2,268.59	138.16	-21.39	-126.58	1.65
2,367.00	4.57	342.93	2,360.31	144.40	-24.86	-131.59	2.07
2,459.00	4.17	340.27	2,452.04	151.05	-27.07	-137.35	0.49
2,550.00	3.54	331.40	2,542.83	156.64	-29.53	-142.02	0.95
2,641.00	4.19	349.43	2,633.63	162.37	-31.48	-146.97	1.51
2,733.00	5.14	334.21	2,725.33	169.39	-33.89	-153.03	1.69
2,824.00	3.72	10.65	2,816.07	175.96	-35.12	-158.99	3.38
2,915.00	4.46	9.48	2,906.84	182.35	-33.99	-165.44	0.82
3,006.00	2.96	12.94	2,997.64	188.13	-32.88	-171.30	1.67
3,098.00	3.53	340.34	3,089.50	193.11	-33.31	-175.96	2.07
3,190.00	3.64	346.47	3,181.32	198.62	-34.94	-180.79	0.43
3,282.00	3.27	351.20	3,273.16	204.05	-36.03	-185.70	0.51
3,373.00	3.15	351.29	3,364.01	209.09	-36.80	-190.31	0.13
3,465.00	3.29	354.59	3,455.87	214.21	-37.43	-195.05	0.25
3,557.00	3.47	358.54	3,547.71	219.63	-37.75	-200.16	0.32
3,648.00	2.37	335.26	3,638.59	224.09	-38.61	-204.20	1.75
3,740.00	1.37	331.03	3,730.54	226.78	-39.94	-206.41	1.10
3,832.00	1.55	350.89	3,822.51	228.97	-40.67	-208.30	0.58
3,923.00	2.81	348.41	3,913.45	232.37	-41.31	-211.38	1.39
4,014.00	5.03	358.44	4,004.23	238.54	-41.87	-217.15	2.54
4,105.00	4.28	355.31	4,094.93	245.91	-42.26	-224.12	0.87
4,196.00	3.28	341.72	4,185.73	251.77	-43.35	-229.43	1.47
4,288.00	5.01	355.19	4,277.49	258.27	-44.51	-235.35	2.15

Design Report for Razor Federal #26I-3513A - Actual Field Surveys_MWD+IFR1+MS+sag

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)
4,379.00	4.13	355.52	4,368.20	265.50	-45.10	-242.12	0.97
4,470.00	2.95	0.30	4,459.02	271.11	-45.35	-247.43	1.34
4,560.00	4.35	2.89	4,548.84	276.83	-45.16	-252.98	1.57
4,652.00	5.13	354.07	4,640.52	284.41	-45.41	-260.18	1.16
4,744.00	3.80	350.79	4,732.24	291.51	-46.32	-266.73	1.47
4,836.00	3.21	356.47	4,824.07	297.09	-46.97	-271.91	0.74
4,929.00	1.58	348.07	4,916.99	300.95	-47.39	-275.49	1.79
4,959.00	1.02	268.02	4,946.98	301.34	-47.75	-275.77	5.75
4,990.00	4.30	208.02	4,977.95	300.30	-48.57	-274.54	12.55
5,021.00	8.91	196.93	5,008.73	296.98	-49.81	-271.00	15.36
5,051.00	15.87	194.74	5,038.02	290.78	-51.54	-264.57	23.25
5,081.00	21.07	194.26	5,066.46	281.58	-53.91	-255.07	17.34
5,112.00	24.73	194.15	5,095.01	269.89	-56.87	-243.02	11.81
5,143.00	26.00	193.86	5,123.02	257.01	-60.08	-229.75	4.12
5,174.00	26.74	192.62	5,150.80	243.60	-63.23	-216.00	2.98
5,205.00	28.09	193.08	5,178.32	229.69	-66.41	-201.76	4.41
5,236.00	33.74	194.05	5,204.90	214.22	-70.15	-185.86	18.30
5,266.00	36.34	194.82	5,229.46	197.54	-74.45	-168.64	8.79
5,297.00	37.53	195.01	5,254.24	179.54	-79.25	-150.02	3.86
5,328.00	38.82	194.80	5,278.61	161.02	-84.17	-130.87	4.18
5,359.00	40.28	194.05	5,302.51	141.91	-89.09	-111.14	4.96
5,390.00	42.10	194.70	5,325.84	122.13	-94.16	-90.74	6.03
5,420.00	44.24	194.61	5,347.72	102.27	-99.35	-70.22	7.14
5,451.00	46.31	196.27	5,369.53	81.05	-105.22	-48.20	7.68
5,482.00	48.80	197.92	5,390.45	59.19	-111.95	-25.33	8.94
5,512.00	51.39	199.42	5,409.70	37.39	-119.32	-2.34	9.45
5,543.00	53.71	199.87	5,428.55	14.22	-127.60	22.23	7.57
5,573.00	57.09	200.36	5,445.58	-8.97	-136.09	46.86	11.35
5,604.00	58.36	201.41	5,462.13	-33.46	-145.43	72.99	5.00
5,636.00	60.20	201.80	5,478.48	-59.03	-155.56	100.38	5.84
5,668.00	62.30	200.85	5,493.87	-85.16	-165.76	128.33	7.06
5,699.00	65.42	198.76	5,507.53	-111.34	-175.18	156.10	11.74
5,731.00	68.38	197.42	5,520.08	-139.32	-184.32	185.52	10.02
5,762.00	73.19	195.41	5,530.28	-167.39	-192.58	214.78	16.68
5,794.00	77.27	194.32	5,538.44	-197.29	-200.51	245.71	13.17
5,826.00	78.96	194.38	5,545.03	-227.63	-208.28	277.00	5.28
5,857.00	81.44	193.74	5,550.31	-257.26	-215.70	307.52	8.25
5,889.00	84.85	193.56	5,554.12	-288.13	-223.19	339.25	10.67
5,917.00	86.86	193.82	5,556.15	-315.26	-229.80	367.15	7.24
5,971.00	87.93	193.62	5,558.60	-367.67	-242.59	421.04	2.02
7"							
6,027.00	89.04	193.41	5,560.08	-422.09	-255.68	476.95	2.02
6,122.00	91.74	192.44	5,559.44	-514.68	-276.92	571.77	3.02
6,217.00	90.49	192.78	5,557.59	-607.37	-297.66	666.55	1.36
6,312.00	89.32	188.20	5,557.75	-700.75	-314.95	761.03	4.98
6,407.00	89.61	183.34	5,558.63	-795.24	-324.50	854.39	5.12
6,502.00	90.49	178.22	5,558.55	-890.20	-325.79	945.88	5.47
6,597.00	89.82	176.70	5,558.29	-985.10	-321.58	1,035.77	1.75
6,692.00	89.77	177.73	5,558.63	-1,079.98	-316.96	1,125.54	1.09
6,787.00	91.60	178.55	5,557.50	-1,174.92	-313.88	1,215.78	2.11
6,882.00	91.29	177.26	5,555.10	-1,269.83	-310.41	1,305.88	1.40

Design Report for Razor Federal #26I-3513A - Actual Field Surveys_MWD+IFR1+MS+sag

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)
6,977.00	90.52	177.48	5,553.60	-1,364.71	-306.05	1,395.72	0.84
7,072.00	87.72	178.15	5,555.06	-1,459.62	-302.43	1,485.78	3.03
7,167.00	87.63	178.58	5,558.91	-1,554.51	-299.72	1,576.08	0.46
7,262.00	88.37	178.57	5,562.23	-1,649.42	-297.36	1,666.50	0.78
7,357.00	89.23	178.90	5,564.22	-1,744.37	-295.26	1,757.03	0.97
7,451.00	88.13	178.75	5,566.38	-1,838.33	-293.34	1,846.66	1.18
7,546.00	88.88	180.05	5,568.86	-1,933.29	-292.34	1,937.51	1.58
7,641.00	88.70	179.66	5,570.87	-2,028.27	-292.10	2,028.59	0.45
7,733.00	89.17	180.80	5,572.58	-2,120.25	-292.47	2,116.96	1.34
7,824.00	89.42	180.33	5,573.70	-2,211.24	-293.37	2,204.54	0.58
7,917.00	89.38	178.79	5,574.67	-2,304.23	-292.65	2,293.57	1.66
8,009.00	91.02	177.79	5,574.35	-2,396.18	-289.91	2,381.05	2.09
8,101.00	91.97	178.56	5,571.95	-2,488.10	-286.98	2,468.44	1.33
8,193.00	90.76	176.73	5,569.76	-2,579.99	-283.20	2,555.56	2.38
8,285.00	90.73	177.56	5,568.56	-2,671.87	-278.62	2,642.45	0.90
8,378.00	90.73	177.72	5,567.38	-2,764.78	-274.79	2,730.54	0.17
8,470.00	90.36	179.01	5,566.50	-2,856.74	-272.16	2,818.05	1.46
8,562.00	89.51	178.75	5,566.61	-2,948.72	-270.37	2,905.81	0.97
8,653.00	90.39	183.97	5,566.69	-3,039.66	-272.52	2,993.69	5.82
8,744.00	90.68	187.21	5,565.84	-3,130.21	-281.39	3,083.09	3.57
8,836.00	90.19	189.04	5,565.14	-3,221.28	-294.39	3,174.14	2.06
8,927.00	89.78	188.38	5,565.16	-3,311.23	-308.17	3,264.33	0.85
9,019.00	89.89	186.24	5,565.43	-3,402.48	-319.87	3,355.19	2.33
9,110.00	90.00	182.96	5,565.51	-3,493.17	-327.17	3,444.28	3.61
9,202.00	90.71	180.21	5,564.94	-3,585.13	-329.72	3,533.24	3.09
9,293.00	90.40	175.78	5,564.06	-3,676.04	-326.53	3,619.60	4.88
9,384.00	90.46	172.14	5,563.38	-3,766.52	-316.96	3,703.73	4.00
9,476.00	89.43	171.25	5,563.47	-3,857.55	-303.67	3,787.36	1.48
9,567.00	89.12	172.18	5,564.62	-3,947.60	-290.56	3,870.09	1.08
9,659.00	90.28	174.55	5,565.10	-4,038.97	-279.93	3,954.79	2.87
9,750.00	89.50	175.50	5,565.28	-4,129.62	-272.04	4,039.57	1.35
9,842.00	89.85	176.79	5,565.80	-4,221.41	-265.85	4,125.92	1.45
9,933.00	89.88	181.61	5,566.01	-4,312.38	-264.58	4,212.86	5.30
10,024.00	89.40	181.04	5,566.58	-4,403.35	-266.69	4,300.75	0.82
10,115.00	91.72	182.99	5,565.69	-4,494.28	-269.89	4,388.91	3.33
10,206.00	91.63	183.16	5,563.03	-4,585.11	-274.77	4,477.45	0.21
10,297.00	91.73	183.09	5,560.37	-4,675.94	-279.73	4,566.01	0.13
10,389.00	90.44	181.21	5,558.62	-4,767.85	-283.18	4,655.19	2.48
10,480.00	90.17	181.39	5,558.14	-4,858.82	-285.24	4,743.07	0.36
10,571.00	89.08	179.68	5,558.74	-4,949.81	-286.09	4,830.63	2.23
10,662.00	87.91	176.82	5,561.13	-5,040.73	-283.31	4,917.10	3.39
10,754.00	87.78	176.64	5,564.59	-5,132.51	-278.07	5,003.71	0.24
10,845.00	86.49	175.41	5,569.13	-5,223.18	-271.77	5,088.95	1.96
10,937.00	88.15	178.83	5,573.44	-5,314.94	-267.15	5,175.72	4.13
11,028.00	89.43	181.54	5,575.36	-5,405.91	-267.45	5,263.10	3.29
11,120.00	88.86	181.01	5,576.73	-5,497.88	-269.50	5,351.93	0.85
11,211.00	89.38	181.50	5,578.13	-5,588.85	-271.49	5,439.79	0.79
11,303.00	89.97	180.75	5,578.65	-5,680.82	-273.29	5,528.57	1.04
11,394.00	90.95	185.76	5,577.92	-5,771.65	-278.46	5,617.18	5.61
11,485.00	88.35	183.03	5,578.48	-5,862.36	-285.43	5,706.19	4.14
11,576.00	90.59	185.51	5,579.32	-5,953.09	-292.21	5,795.17	3.67

Design Report for Razor Federal #26I-3513A - Actual Field Surveys_MWD+IFR1+MS+sag

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)
11,668.00	91.12	183.00	5,577.94	-6,044.82	-299.03	5,885.12	2.79
11,760.00	90.14	177.74	5,576.93	-6,136.78	-299.62	5,973.54	5.82
11,851.00	88.61	175.52	5,577.93	-6,227.61	-294.28	6,059.20	2.96
11,943.00	87.63	176.34	5,580.94	-6,319.32	-287.75	6,145.38	1.39
12,035.00	87.35	177.34	5,584.97	-6,411.09	-282.68	6,232.03	1.13
12,126.00	86.61	177.85	5,589.77	-6,501.89	-278.87	6,318.09	0.99
12,218.00	86.76	177.32	5,595.09	-6,593.65	-275.00	6,405.06	0.60
12,310.00	87.81	177.86	5,599.44	-6,685.46	-271.14	6,492.09	1.28
12,402.00	88.01	179.18	5,602.80	-6,777.37	-268.76	6,579.62	1.45
12,493.00	89.00	179.04	5,605.17	-6,868.33	-267.35	6,666.51	1.10
12,536.00	88.66	178.65	5,606.05	-6,911.31	-266.48	6,707.52	1.20
Final Sperry MWD Survey @ 12536.00 ft							
12,585.00	88.66	178.65	5,607.20	-6,960.28	-265.33	6,754.19	0.00
Straight Line Projection to TD @ 12585.00 ft - Straight Line rojection to TD							

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
178.00	178.00	-0.27	0.18	First Sperry MWD Survey @ 178.00 ft
12,536.00	5,606.05	-6,911.31	-266.48	Final Sperry MWD Survey @ 12536.00 ft
12,585.00	5,607.20	-6,960.28	-265.33	Straight Line Projection to TD @ 12585.00 ft
12,585.00	5,607.20	-6,960.28	-265.33	Straight Line rojection to TD

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin +N/-S (usft)	Origin +E/-W (usft)	Start TVD (usft)
User	No Target (Freehand)	196.33	Slot	0.00	0.00	0.00

Survey tool program

From (usft)	To (usft)	Survey/Plan	Survey Tool
178.00	1,499.00	Surface_Sperry MWD Survey	MWD+IFR1+MS+sag
1,636.00	5,917.00	Vertical & Build_Sperry MWD Surveys	MWD+IFR1+MS+sag
6,027.00	12,585.00	Lateral_Sperry MWD Surveys	MWD+IFR1+MS+sag

Casing Details

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,500.00		9 5/8"	9-5/8	12-1/4
5,971.00	5,558.60	7"	7	8-3/4

Design Report for Razor Federal #26I-3513A - Actual Field Surveys_MWD+IFR1+MS+sag**Wellbore 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
Razor 26K Section 26	0.00	0.00	0.00	207.83	-2,578.38	1,541,928.85	3,461,025.71	40° 48' 32.731 N	103° 50' 4.290 W
- actual wellpath misses target center by 2586.74usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Polygon									
Point 1				0.00	2,745.16	-1,929.43	1,544,637.10	3,459,044.77	
Point 2				0.00	2,774.18	3,138.31	1,544,761.82	3,464,111.08	
Point 3				0.00	-2,347.34	3,255.73	1,539,643.41	3,464,325.20	
Point 4				0.00	-2,349.07	-1,840.84	1,539,545.43	3,459,229.55	
Razor 26I 1/2 Section :	0.00	0.00	0.00	0.00	0.00	1,541,769.76	3,463,607.56	40° 48' 30.679 N	103° 49' 30.760 W
- actual wellpath hits target center									
- Polygon									
Point 1				0.00	408.49	-4,562.92	1,542,092.01	3,459,037.72	
Point 2				0.00	419.01	718.08	1,542,202.26	3,464,317.61	
Razor 26K Section 35	0.00	0.00	0.00	207.82	-2,578.38	1,541,928.85	3,461,025.71	40° 48' 32.731 N	103° 50' 4.290 W
- actual wellpath misses target center by 2586.74usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Polygon									
Point 1				0.00	-2,549.02	-1,844.60	1,539,345.43	3,459,229.57	
Point 2				0.00	-2,547.30	3,251.97	1,539,443.41	3,464,325.22	
Point 3				0.00	-7,165.62	3,370.53	1,534,828.13	3,464,530.98	
Point 4				0.00	-7,186.68	-1,746.30	1,534,710.44	3,459,415.44	
Razor 26K Section 26	0.00	0.00	0.00	207.83	-2,578.38	1,541,928.85	3,461,025.71	40° 48' 32.731 N	103° 50' 4.290 W
- actual wellpath misses target center by 2586.74usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Polygon									
Point 1				0.00	2,847.02	-2,027.54	1,544,737.09	3,458,944.75	
Point 2				0.00	2,872.29	3,240.17	1,544,861.84	3,464,211.07	
Point 3				0.00	-2,449.20	3,353.83	1,539,543.42	3,464,425.21	
Point 4				0.00	-2,447.17	-1,942.70	1,539,445.42	3,459,129.56	
Razor 26K Section 35	0.00	0.00	0.00	207.82	-2,578.38	1,541,928.85	3,461,025.71	40° 48' 32.731 N	103° 50' 4.290 W
- actual wellpath misses target center by 2586.74usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Polygon									
Point 1				0.00	-2,447.16	-1,942.70	1,539,445.42	3,459,129.56	
Point 2				0.00	-2,449.19	3,353.83	1,539,543.42	3,464,425.21	
Point 3				0.00	-7,767.39	3,459.24	1,534,228.14	3,464,631.04	
Point 4				0.00	-7,784.69	-1,857.55	1,534,110.43	3,459,315.50	
Razor 26K Section 23	0.00	0.00	0.00	207.83	-2,578.38	1,541,928.85	3,461,025.71	40° 48' 32.731 N	103° 50' 4.290 W
- actual wellpath misses target center by 2586.74usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Polygon									
Point 1				0.00	8,061.24	-2,034.98	1,549,950.26	3,458,838.84	
Point 2				0.00	8,083.33	3,093.62	1,550,069.20	3,463,966.13	
Point 3				0.00	2,974.15	3,142.07	1,544,961.83	3,464,111.06	
Point 4				0.00	2,945.12	-1,925.68	1,544,837.09	3,459,044.74	
Razor 26K Section 23	0.00	0.00	0.00	207.83	-2,578.38	1,541,928.85	3,461,025.71	40° 48' 32.731 N	103° 50' 4.290 W
- actual wellpath misses target center by 2586.74usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Polygon									
Point 1				0.00	8,163.10	-2,133.09	1,550,050.25	3,458,738.82	
Point 2				0.00	8,181.43	3,195.48	1,550,169.21	3,464,066.12	
Point 3				0.00	2,872.29	3,240.17	1,544,861.84	3,464,211.07	
Point 4				0.00	2,847.02	-2,027.54	1,544,737.09	3,458,944.75	
Razor 26I-3513A_Re	0.00	0.00	5,560.00	-6,963.88	-286.86	1,534,801.67	3,463,452.27	40° 47' 21.869 N	103° 49' 34.489 W
- actual wellpath misses target center by 52.00usft at 12585.00usft MD (5607.20 TVD, -6960.28 N, -265.33 E)									
- Point									

Directional Difficulty Index

Average Dogleg over Survey:	2.30 °/100usft	Maximum Dogleg over Survey:	23.25 °/100usft at 5,051.00 usft
Net Tortousity applicable to Plans:	1.39 °/100usft	Directional Difficulty Index:	6.694



Design Report for Razor Federal #26I-3513A - Actual Field Surveys_MWD+IFR1+MS+sag

Audit Info

North Reference Sheet for Sec. 26-T10N-R58W - Razor Federal #26I-3513A - Plan C

All data is in US Feet unless otherwise stated. Directions and Coordinates are relative to True North Reference .

Vertical Depths are relative to KB 21' @ 4733.00usft (Frontier 26). Northing and Easting are relative to Razor Federal #26I-3513A

Coordinate System is US State Plane 1983, Colorado Northern Zone using datum North American Datum 1983, ellipsoid GRS 1980

Projection method is Lambert Conformal Conic (2 parallel)

Central Meridian is 105° 30' 0.000 W°, Longitude Origin:0° 0' 0.000 E°, Latitude Origin:40° 47' 0.000 N°

False Easting: 3,000,000.00usft, False Northing: 1,000,000.00usft, Scale Reduction: 1.00000418

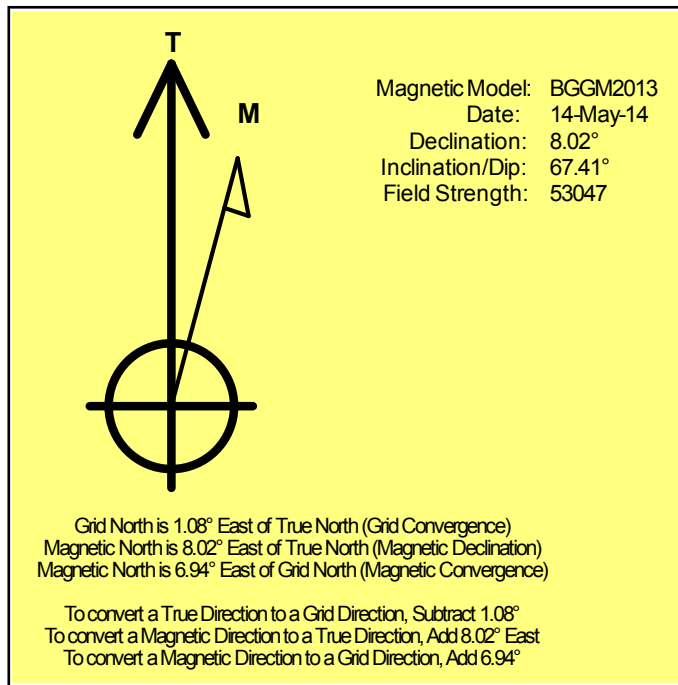
Grid Coordinates of Well: 1,541,769.76 usft N, 3,463,607.56 usft E

Geographical Coordinates of Well: 40° 48' 30.68" N, 103° 49' 30.76" W

Grid Convergence at Surface is: 1.08°

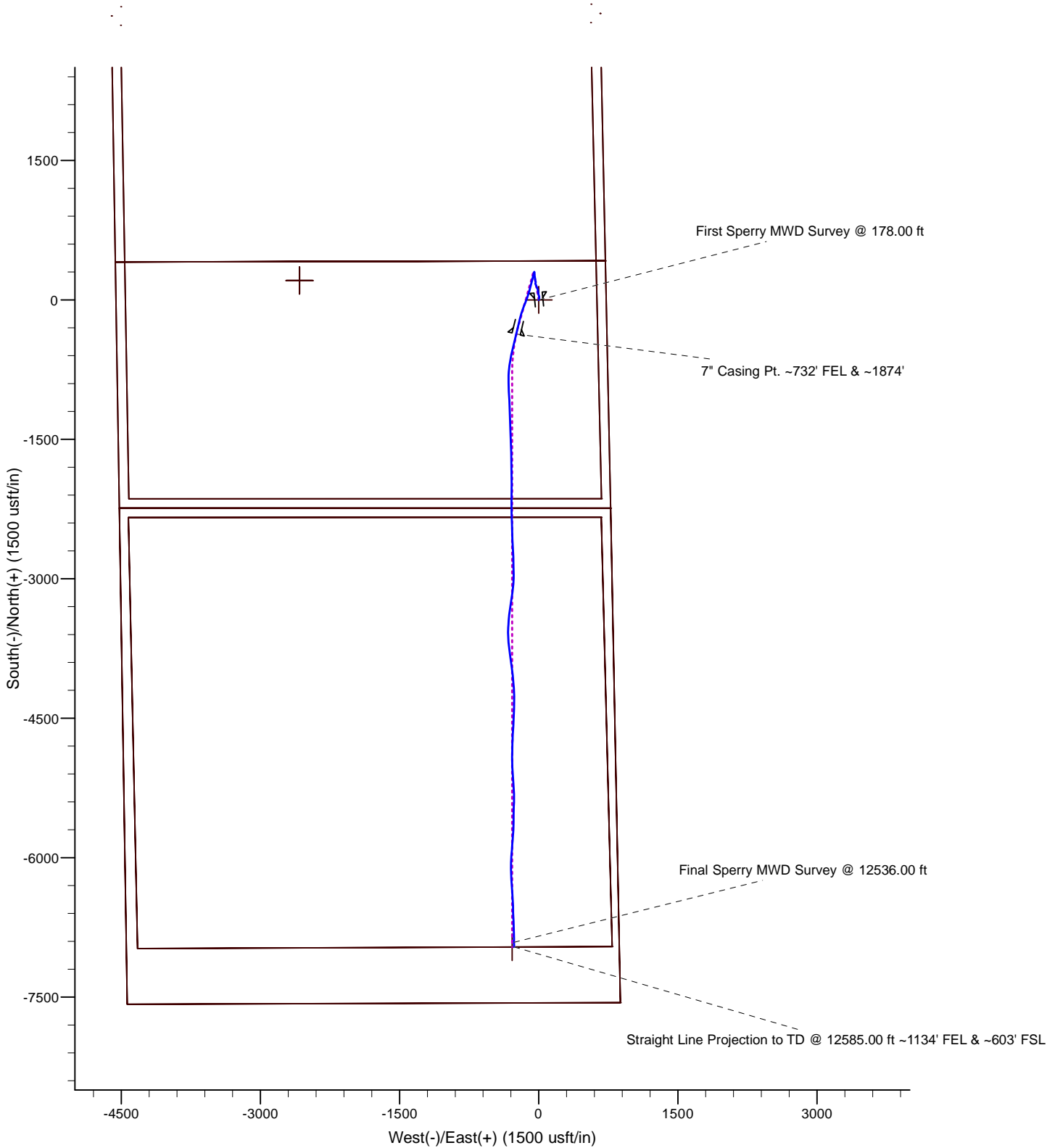
Based upon Minimum Curvature type calculations, at a Measured Depth of 12,585.00usft the Bottom Hole Displacement is 6,965.34usft in the Direction of 182.18° (True).

Magnetic Convergence at surface is: -6.94° (14 May 2014, , BGGM2013)



LEGEND

- Razor Federal #26I-3513A, Plan C, Rev C0 V0
- Actual Field Surveys_MWD+IFR1+MS+sag



LEGEND

- Razor Federal #26I-3513A, Plan C, Rev C0 V0
- Actual Field Surveys_MWD+IFR1+MS+sag

