

Fram Operating, LLC

Mesa County, CO

Sec. 26-T2S-R2E

Whiting 26-5

Plan #1

Design: Actual Field Surveys

Sperry Drilling Services

Standard Report

07 August, 2009

Well Coordinates: 1,420,203.48 N, 2,193,318.56 E (38° 57' 09.11" N, 108° 20' 13.56" W)

Ground Level: 5,410.70 ft

Local Coordinate Origin:

Centered on Well Whiting 26-5

Viewing Datum:

RKB 11' @ 5421.70ft (Original Well Elev)

TVDs to System:

N

North Reference:

True

Unit System:

API- Alt

Geodetic Scale Factor Applied

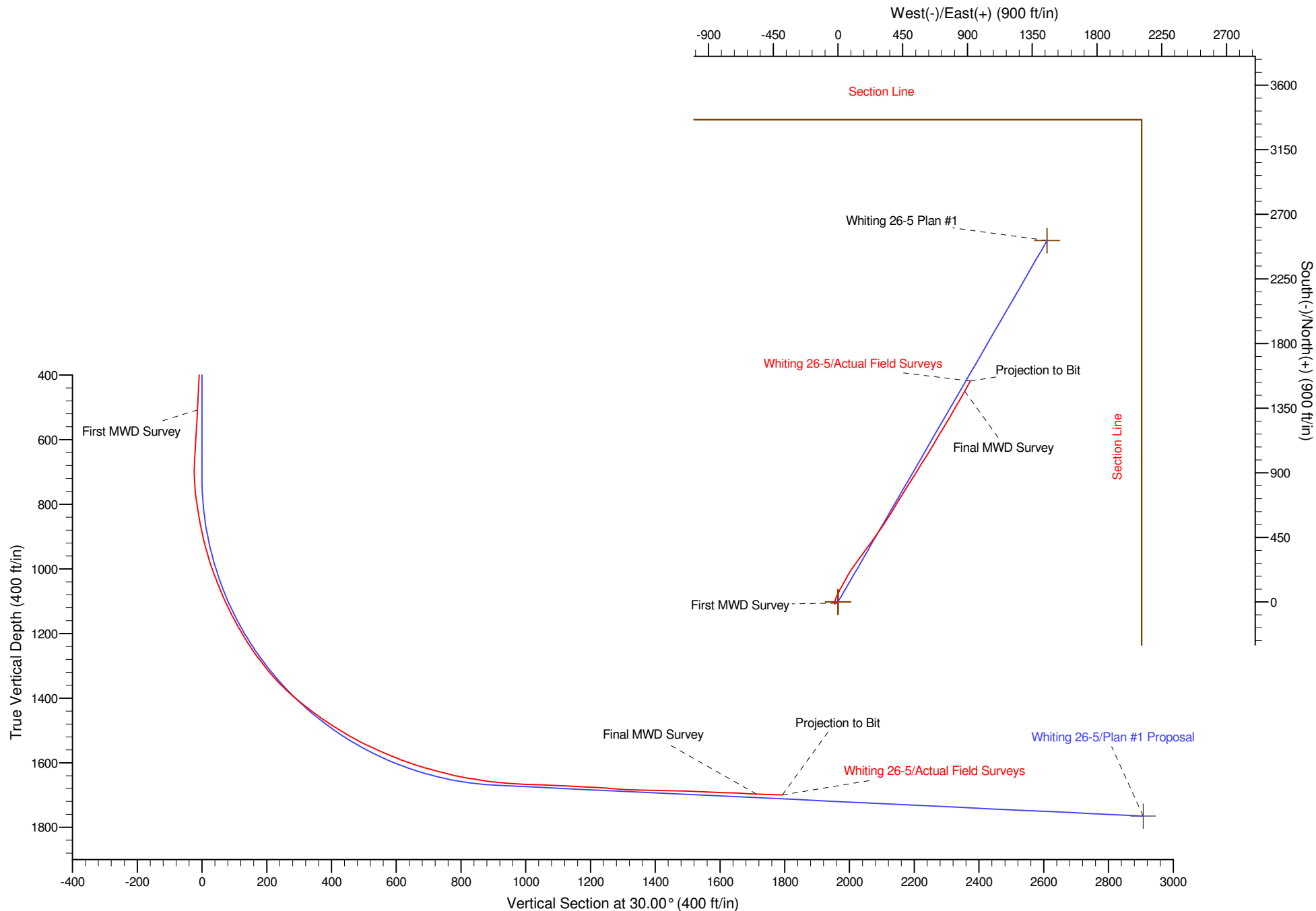
Version: 2003.16 Build: 431

HALLIBURTON

Project: Mesa County, CO
Site: Sec. 26-T2S-R2E
Well: Whiting 26-5
Wellbore: Plan #1
Design: Actual Field Surveys

Fram Operating, LLC

HALLIBURTON



Design Report for Whiting 26-5 - Actual Field Surveys

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00
Whiting 26-5 E. Section Line - Whiting 26-5 N. Section Line - Whiting 26-5 S. Section Line - Whiting 26-5 W. Section Line							
508.00	3.50	237.500	507.68	-8.33	-13.08	-13.76	0.69
First MWD Survey							
538.00	3.80	236.200	537.62	-9.38	-14.68	-15.46	1.04
569.00	3.60	238.200	568.56	-10.46	-16.36	-17.24	0.77
600.00	3.60	235.800	599.50	-11.52	-17.99	-18.98	0.49
630.00	3.80	236.500	629.43	-12.60	-19.60	-20.71	0.68
661.00	3.70	235.500	660.37	-13.74	-21.28	-22.54	0.39
691.00	2.10	271.000	690.33	-14.27	-22.63	-23.68	7.78
722.00	3.30	355.300	721.31	-13.37	-23.27	-23.22	12.03
754.00	5.50	7.600	753.21	-10.94	-23.14	-21.04	7.44
785.00	7.70	13.000	784.00	-7.44	-22.48	-17.68	7.37
816.00	9.50	9.800	814.65	-2.89	-21.58	-13.30	6.01
848.00	11.10	9.800	846.14	2.74	-20.60	-7.93	5.00
880.00	12.30	12.800	877.47	9.10	-19.32	-1.78	4.20
912.00	13.40	16.000	908.67	15.99	-17.55	5.08	4.09
944.00	15.40	19.800	939.66	23.55	-15.08	12.86	6.91
975.00	17.50	21.300	969.39	31.77	-12.00	21.52	6.91
1,007.00	19.30	23.600	999.76	41.10	-8.13	31.53	6.06
1,039.00	20.70	25.700	1,029.83	51.04	-3.56	42.42	4.92
1,070.00	22.30	26.700	1,058.67	61.23	1.46	53.76	5.29
1,102.00	24.00	27.700	1,088.09	72.42	7.21	66.32	5.45
1,133.00	25.70	28.400	1,116.22	83.92	13.34	79.34	5.57
1,165.00	27.20	29.200	1,144.87	96.41	20.21	93.59	4.82
1,196.00	28.70	28.600	1,172.25	109.13	27.23	108.12	4.92
1,229.00	30.70	28.100	1,200.92	123.52	34.99	124.46	6.11
1,260.00	32.50	27.700	1,227.32	137.87	42.59	140.69	5.85
1,292.00	34.60	28.100	1,253.99	153.50	50.86	158.37	6.60
1,323.00	36.70	29.100	1,279.18	169.36	59.52	176.43	7.03
1,355.00	38.50	29.900	1,304.53	186.35	69.13	195.95	5.83
1,387.00	41.00	31.200	1,329.13	203.97	79.54	216.41	8.23
1,418.00	43.70	33.100	1,352.04	221.64	90.66	237.27	9.64
1,449.00	46.80	35.300	1,373.86	239.84	103.04	259.22	11.20
1,481.00	49.60	36.400	1,395.19	259.17	117.01	282.95	9.12
1,512.00	51.20	35.900	1,414.95	278.45	131.10	306.70	5.31
1,544.00	52.50	35.900	1,434.72	298.84	145.85	331.73	4.06
1,576.00	54.00	35.800	1,453.86	319.62	160.87	357.24	4.69
1,607.00	55.90	36.200	1,471.66	340.15	175.79	382.47	6.22
1,638.00	58.00	35.800	1,488.57	361.17	191.06	408.31	6.86
1,670.00	58.90	36.400	1,505.31	383.20	207.13	435.43	3.23
1,699.00	60.80	36.300	1,519.88	403.40	221.99	460.35	6.56
1,731.00	62.70	35.900	1,535.02	426.18	238.60	488.38	6.04
1,762.00	64.90	35.100	1,548.71	448.82	254.75	516.06	7.46
1,794.00	66.10	34.600	1,561.98	472.72	271.38	545.08	4.01
1,826.00	67.40	34.400	1,574.61	496.95	288.04	574.39	4.10
1,857.00	68.00	34.300	1,586.37	520.63	304.22	602.99	1.96
1,888.00	70.20	33.300	1,597.43	544.69	320.33	631.88	7.71
1,918.00	72.20	33.000	1,607.10	568.47	335.86	660.23	6.73
1,950.00	73.80	32.600	1,616.46	594.19	352.43	690.80	5.14

Design Report for Whiting 26-5 - Actual Field Surveys

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
1,981.00	75.20	31.800	1,624.74	619.47	368.35	720.65	5.16
2,013.00	76.00	31.900	1,632.70	645.79	384.70	751.63	2.52
2,045.00	77.60	31.300	1,640.00	672.33	401.03	782.77	5.32
2,076.00	79.70	31.200	1,646.11	698.31	416.79	813.15	6.78
2,108.00	80.70	31.600	1,651.55	725.23	433.22	844.68	3.36
2,139.00	81.30	31.500	1,656.40	751.32	449.24	875.28	1.96
2,169.00	83.50	32.000	1,660.37	776.60	464.89	905.00	7.52
2,199.00	85.70	32.500	1,663.19	801.86	480.83	934.85	7.52
2,231.00	86.60	32.300	1,665.34	828.82	497.94	966.75	2.88
2,261.00	87.30	32.000	1,666.94	854.18	513.88	996.68	2.54
2,292.00	87.80	31.600	1,668.26	880.50	530.20	1,027.64	2.06
2,324.00	87.90	31.200	1,669.46	907.80	546.86	1,059.61	1.29
2,355.00	87.40	31.400	1,670.73	934.26	562.95	1,090.57	1.74
2,385.00	87.30	32.100	1,672.12	959.75	578.72	1,120.52	2.35
2,417.00	87.60	32.300	1,673.54	986.80	595.75	1,152.47	1.13
2,448.00	87.10	32.200	1,674.98	1,012.99	612.28	1,183.41	1.64
2,480.00	86.60	31.900	1,676.74	1,040.07	629.23	1,215.34	1.82
2,511.00	85.90	31.600	1,678.76	1,066.37	645.51	1,246.26	2.46
2,543.00	85.80	30.400	1,681.08	1,093.73	661.95	1,278.17	3.75
2,574.00	86.30	30.200	1,683.21	1,120.43	677.55	1,309.10	1.74
2,604.00	88.70	30.700	1,684.52	1,146.27	692.74	1,339.07	8.17
2,636.00	89.00	31.100	1,685.17	1,173.72	709.17	1,371.06	1.56
2,666.00	88.80	31.000	1,685.74	1,199.42	724.64	1,401.05	0.75
2,728.00	88.30	30.600	1,687.31	1,252.66	756.38	1,463.02	1.03
2,760.00	88.00	30.400	1,688.34	1,280.21	772.61	1,495.00	1.13
2,791.00	88.00	30.200	1,689.43	1,306.96	788.24	1,525.98	0.64
2,823.00	87.90	30.100	1,690.57	1,334.61	804.30	1,557.96	0.44
2,854.00	87.70	30.100	1,691.76	1,361.41	819.84	1,588.94	0.65
2,886.00	87.40	29.700	1,693.13	1,389.13	835.78	1,620.91	1.56
2,916.00	87.80	29.300	1,694.38	1,415.22	850.54	1,650.88	1.88
2,947.00	87.70	29.600	1,695.60	1,442.19	865.77	1,681.86	1.02
2,978.00	87.70	29.500	1,696.85	1,469.14	881.04	1,712.83	0.32
Final MWD Survey							
3,058.00	87.70	29.500	1,700.06	1,538.71	920.40	1,792.76	0.00
Projection to Bit - Whiting 26-5 Plan #1 BH Tgt							

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
508.00	507.68	-8.33	-13.08	First MWD Survey
2,978.00	1,696.85	1,469.14	881.04	Final MWD Survey
3,058.00	1,700.06	1,538.71	920.40	Projection to Bit

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin		Start TVD (ft)
				+N/-S (ft)	+E/-W (ft)	
Target	Whiting 26-5 Plan #1 BH Tgt	30.000	Slot	0.00	0.00	1,765.25

Design Report for Whiting 26-5 - Actual Field Surveys

Survey tool program

From (ft)	To (ft)	Survey/Plan	Survey Tool
508.00	3,058.00	MWD Survey	MWD

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Whiting 26-5 Plan #1 E		0.00	1,765.25	2,517.69	1,453.59	1,422,674.41	2,194,849.96	38° 57' 33.993 N	108° 19' 55.158 W
- actual wellpath misses target center by 1116.66ft at 3058.00ft MD (1700.06 TVD, 1538.71 N, 920.40 E)									
- Point									
Whiting 26-5 N. Section	0.00	0.00	0.00	0.00	0.00	1,420,203.48	2,193,318.56	38° 57' 9.108 N	108° 20' 13.560 W
- actual wellpath hits target center									
- Polygon									
Point 1				-3,173.00	3,359.00	1,423,659.71	2,190,252.18		
Point 2				2,111.00	3,359.00	1,423,494.73	2,195,533.28		
Whiting 26-5 S. Section	0.00	0.00	0.00	0.00	0.00	1,420,203.48	2,193,318.56	38° 57' 9.108 N	108° 20' 13.560 W
- actual wellpath hits target center									
- Polygon									
Point 1				-3,173.00	-1,950.00	1,418,353.62	2,190,086.42		
Point 2				2,111.00	-1,950.00	1,418,188.64	2,195,367.52		
Whiting 26-5 E. Section	0.00	0.00	0.00	0.00	0.00	1,420,203.48	2,193,318.56	38° 57' 9.108 N	108° 20' 13.560 W
- actual wellpath hits target center									
- Polygon									
Point 1				2,111.00	3,359.00	1,423,494.73	2,195,533.28		
Point 2				2,111.00	-1,950.00	1,418,188.64	2,195,367.52		
Whiting 26-5 W. Section	0.00	0.00	0.00	0.00	0.00	1,420,203.48	2,193,318.56	38° 57' 9.108 N	108° 20' 13.560 W
- actual wellpath hits target center									
- Polygon									
Point 1				-3,173.00	3,359.00	1,423,659.71	2,190,252.18		
Point 2				-3,173.00	-1,950.00	1,418,353.62	2,190,086.42		