

Whiting Oil & Gas

Well Name: **Wildhorse #04-0424H**

Surface Location: Wildhorse #04-0424H Pad Sec.4-T9N-R59W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

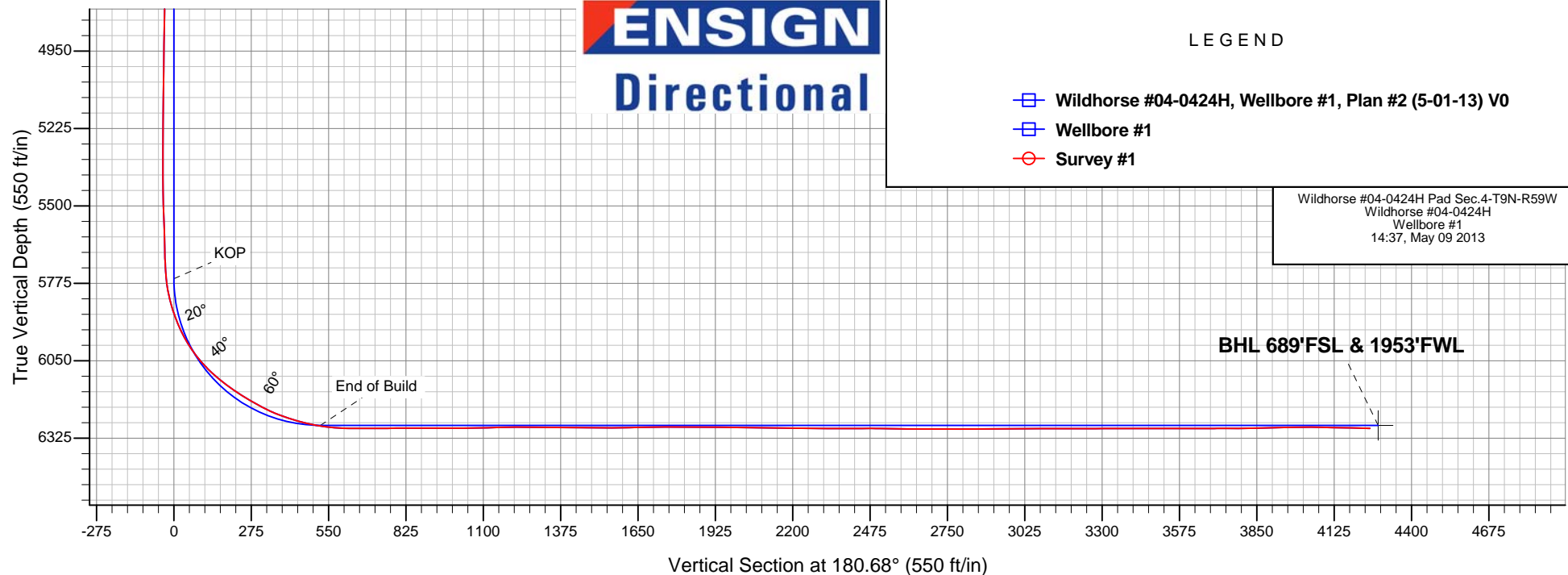
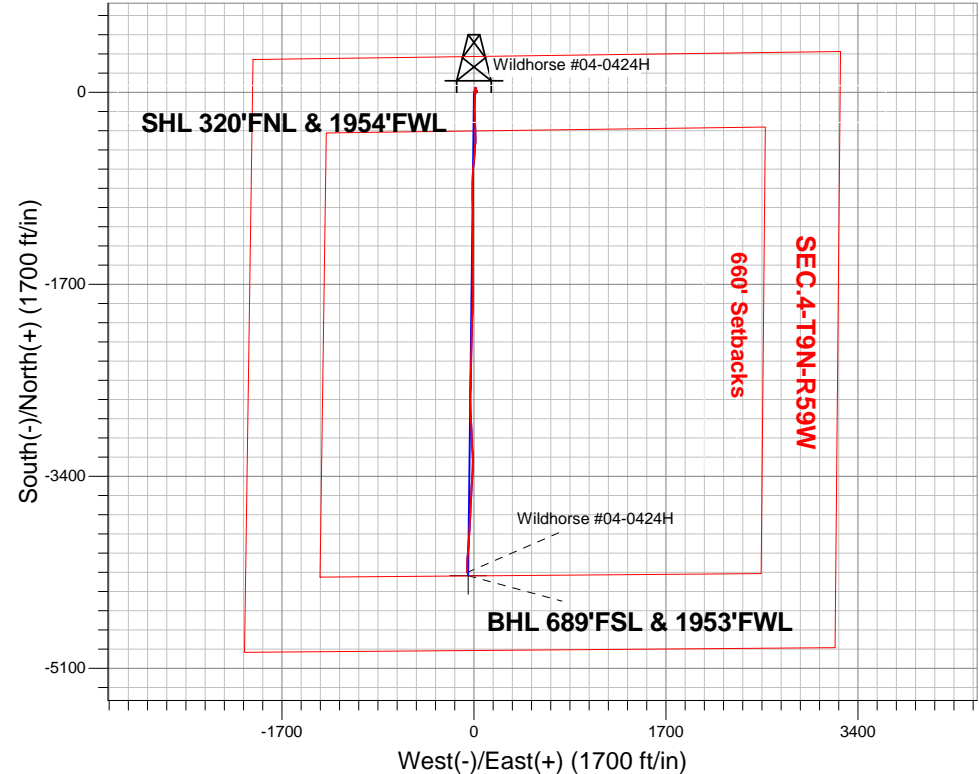
Ground Elevation: 5094.5

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1532772.39	3419373.09	40.786014	-103.985531	

RKB - CADE 21 - 17.3' WELL @ 5111.8ft (RKB - CADE 21 - 17.3')

FINAL SURVEY

Projected Bottom Hole Location
10310' MD 6290' TVD 4252' S & 60'
W of SHL 89.0 degree Incl @ 181.3
degree AZM





Directional

Whiting Oil & Gas

SEC.4-T9N-R59W

Wildhorse #04-0424H Pad Sec.4-T9N-R59W

Wildhorse #04-0424H

Wellbore #1

Survey: Survey #1

Standard Survey Report

09 May, 2013

Survey	Wellbore Data									
	Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
Survey	0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
	196.0	0.40	28.40	196.0	0.6	0.3	-0.6	0.20	0.20	0.00
	291.0	0.70	59.00	291.0	1.2	1.0	-1.2	0.43	0.32	32.21
	382.0	0.70	70.30	382.0	1.7	2.0	-1.7	0.15	0.00	12.42
	472.0	0.60	34.90	472.0	2.2	2.8	-2.3	0.45	-0.11	-39.33
	565.0	0.90	50.90	565.0	3.1	3.6	-3.1	0.39	0.32	17.20
	659.0	0.50	68.00	659.0	3.7	4.6	-3.8	0.48	-0.43	18.19
	753.0	0.80	79.00	753.0	4.0	5.6	-4.1	0.34	0.32	11.70
	848.0	0.60	62.40	848.0	4.4	6.7	-4.4	0.30	-0.21	-17.47
	943.0	0.40	44.40	943.0	4.8	7.4	-4.9	0.27	-0.21	-18.95
	1,037.0	0.60	93.30	1,036.9	5.0	8.1	-5.1	0.48	0.21	52.02
	1,133.0	0.70	92.80	1,132.9	5.0	9.2	-5.1	0.10	0.10	-0.52
	1,227.0	1.00	69.60	1,226.9	5.2	10.5	-5.4	0.48	0.32	-24.68

Company:	Whiting Oil & Gas	Local Co-ordinate Reference:	Well Wildhorse #04-0424H
Project:	SEC.4-T9N-R59W	TVD Reference:	WELL @ 5111.8ft (RKB - CADE 21 - 17.3')
Site:	Wildhorse #04-0424H Pad Sec.4-T9N-R59W	MD Reference:	WELL @ 5111.8ft (RKB - CADE 21 - 17.3')
Well:	Wildhorse #04-0424H	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
1,321.0	0.70	97.30	1,320.9	5.4	11.8	-5.6	0.53	-0.32	29.47	
1,416.0	0.70	122.60	1,415.9	5.1	12.9	-5.2	0.32	0.00	26.63	
1,505.0	0.90	125.10	1,504.9	4.4	13.9	-4.5	0.23	0.22	2.81	
1,617.0	1.20	112.60	1,616.9	3.4	15.7	-3.6	0.34	0.27	-11.16	
1,708.0	1.90	128.80	1,707.9	2.1	17.8	-2.3	0.90	0.77	17.80	
1,800.0	2.00	133.50	1,799.8	0.0	20.1	-0.3	0.20	0.11	5.11	
1,892.0	1.60	66.20	1,891.8	-0.6	22.5	0.3	2.20	-0.43	-73.15	
1,984.0	0.40	57.60	1,983.7	0.1	23.9	-0.4	1.31	-1.30	-9.35	
2,076.0	1.50	0.50	2,075.7	1.5	24.2	-1.8	1.44	1.20	-62.07	
2,173.0	0.70	349.20	2,172.7	3.4	24.1	-3.6	0.85	-0.82	-11.65	
2,268.0	1.00	37.00	2,267.7	4.6	24.5	-4.9	0.78	0.32	50.32	
2,363.0	0.40	351.00	2,362.7	5.6	25.0	-5.9	0.82	-0.63	-48.42	
2,458.0	0.30	312.10	2,457.7	6.1	24.7	-6.4	0.26	-0.11	-40.95	
2,553.0	0.50	51.50	2,552.7	6.5	24.9	-6.8	0.66	0.21	104.63	
2,648.0	1.40	51.50	2,647.7	7.5	26.1	-7.8	0.95	0.95	0.00	
2,743.0	1.50	42.00	2,742.7	9.1	27.8	-9.5	0.27	0.11	-10.00	
2,837.0	2.20	309.70	2,836.6	11.2	27.3	-11.5	2.88	0.74	-98.19	
2,933.0	2.20	309.10	2,932.5	13.5	24.4	-13.8	0.02	0.00	-0.63	
3,028.0	2.70	282.30	3,027.5	15.2	20.8	-15.4	1.30	0.53	-28.21	
3,122.0	0.40	348.70	3,121.4	16.0	18.6	-16.2	2.73	-2.45	70.64	
3,217.0	0.80	299.10	3,216.4	16.6	17.9	-16.8	0.65	0.42	-52.21	
3,312.0	1.10	311.60	3,311.4	17.5	16.7	-17.7	0.38	0.32	13.16	
3,407.0	1.10	300.20	3,406.4	18.6	15.2	-18.8	0.23	0.00	-12.00	
3,502.0	0.50	318.30	3,501.4	19.4	14.1	-19.5	0.68	-0.63	19.05	
3,597.0	0.80	339.70	3,596.4	20.3	13.6	-20.5	0.40	0.32	22.53	
3,692.0	0.90	344.80	3,691.4	21.6	13.2	-21.8	0.13	0.11	5.37	
3,787.0	0.70	338.00	3,786.4	22.9	12.8	-23.0	0.23	-0.21	-7.16	
3,882.0	0.70	313.50	3,881.3	23.8	12.2	-24.0	0.31	0.00	-25.79	
3,977.0	0.20	66.40	3,976.3	24.3	11.9	-24.4	0.84	-0.53	118.84	
4,071.0	0.50	20.30	4,070.3	24.7	12.2	-24.9	0.41	0.32	-49.04	
4,166.0	0.60	11.90	4,165.3	25.6	12.4	-25.8	0.13	0.11	-8.84	
4,261.0	1.10	20.70	4,260.3	27.0	12.9	-27.1	0.54	0.53	9.26	
4,357.0	1.10	30.20	4,356.3	28.6	13.7	-28.8	0.19	0.00	9.90	
4,452.0	1.20	17.70	4,451.3	30.4	14.4	-30.5	0.28	0.11	-13.16	
4,546.0	0.80	37.20	4,545.3	31.8	15.1	-32.0	0.55	-0.43	20.74	
4,641.0	0.50	55.80	4,640.3	32.6	15.9	-32.8	0.38	-0.32	19.58	
4,736.0	0.30	36.90	4,735.3	33.0	16.3	-33.2	0.25	-0.21	-19.89	
4,831.0	0.50	32.60	4,830.3	33.6	16.7	-33.8	0.21	0.21	-4.53	
4,926.0	1.00	12.10	4,925.3	34.7	17.1	-34.9	0.59	0.53	-21.58	
5,021.0	0.90	338.50	5,020.2	36.2	17.0	-36.4	0.59	-0.11	-35.37	
5,116.0	0.90	315.80	5,115.2	37.5	16.2	-37.6	0.37	0.00	-23.89	
5,211.0	0.50	317.10	5,210.2	38.3	15.4	-38.5	0.42	-0.42	1.37	
5,306.0	0.10	323.00	5,305.2	38.7	15.1	-38.8	0.42	-0.42	6.21	
5,401.0	0.30	88.40	5,400.2	38.7	15.3	-38.9	0.39	0.21	132.00	
5,496.0	2.00	173.30	5,495.2	37.1	15.7	-37.3	2.10	1.79	89.37	
5,591.0	1.70	167.30	5,590.2	34.1	16.2	-34.3	0.38	-0.32	-6.32	
5,654.0	1.60	164.10	5,653.1	32.3	16.7	-32.5	0.22	-0.16	-5.08	
5,686.0	1.80	159.40	5,685.1	31.4	17.0	-31.6	0.76	0.63	-14.69	
5,718.0	3.10	179.40	5,717.1	30.1	17.2	-30.3	4.80	4.06	62.50	
5,749.0	4.80	186.30	5,748.0	28.0	17.0	-28.2	5.68	5.48	22.26	
5,781.0	8.00	185.40	5,779.8	24.4	16.7	-24.6	10.00	10.00	-2.81	
5,813.0	11.70	186.60	5,811.3	19.0	16.1	-19.2	11.58	11.56	3.75	
5,844.0	14.90	187.50	5,841.5	11.9	15.2	-12.1	10.34	10.32	2.90	
5,876.0	18.20	187.00	5,872.2	2.8	14.1	-3.0	10.32	10.31	-1.56	

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Survey										
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5,908.0	20.80	185.40	5,902.3	-7.8	12.9	7.6	8.29	8.13	-5.00	
5,939.0	24.50	184.50	5,930.9	-19.7	11.9	19.5	11.99	11.94	-2.90	
5,971.0	27.80	184.30	5,959.7	-33.7	10.8	33.6	10.32	10.31	-0.63	
6,003.0	31.00	185.20	5,987.5	-49.4	9.5	49.3	10.09	10.00	2.81	
6,034.0	35.00	184.00	6,013.5	-66.2	8.2	66.1	13.07	12.90	-3.87	
6,066.0	38.80	183.50	6,039.1	-85.4	6.9	85.3	11.91	11.88	-1.56	
6,097.0	42.40	182.80	6,062.6	-105.5	5.8	105.4	11.71	11.61	-2.26	
6,129.0	46.30	181.40	6,085.5	-127.9	5.0	127.8	12.56	12.19	-4.38	
6,161.0	49.20	180.30	6,107.0	-151.5	4.7	151.5	9.41	9.06	-3.44	
6,192.0	52.10	179.40	6,126.7	-175.5	4.7	175.4	9.62	9.35	-2.90	
6,224.0	54.50	178.40	6,145.8	-201.2	5.2	201.1	7.91	7.50	-3.13	
6,256.0	57.80	178.20	6,163.6	-227.7	6.0	227.6	10.33	10.31	-0.63	
6,288.0	58.80	176.80	6,180.4	-254.9	7.2	254.8	4.86	3.13	-4.38	
6,319.0	59.30	174.50	6,196.4	-281.4	9.2	281.3	6.56	1.61	-7.42	
6,351.0	62.30	175.40	6,212.0	-309.2	11.7	309.1	9.69	9.38	2.81	
6,382.0	64.90	177.30	6,225.8	-337.0	13.4	336.8	10.02	8.39	6.13	
6,414.0	68.10	179.20	6,238.5	-366.3	14.3	366.1	11.39	10.00	5.94	
6,446.0	71.00	180.80	6,249.7	-396.3	14.3	396.1	10.20	9.06	5.00	
6,477.0	72.90	182.10	6,259.3	-425.7	13.6	425.5	7.31	6.13	4.19	
6,509.0	75.20	183.50	6,268.1	-456.5	12.1	456.3	8.33	7.19	4.38	
6,541.0	78.10	184.70	6,275.5	-487.5	9.8	487.4	9.77	9.06	3.75	
6,572.0	81.00	184.20	6,281.1	-517.9	7.5	517.8	9.49	9.35	-1.61	
6,604.0	83.90	185.00	6,285.3	-549.5	4.9	549.4	9.40	9.06	2.50	
6,620.0	85.30	185.20	6,286.8	-565.4	3.5	565.3	8.84	8.75	1.25	
6,692.0	89.80	185.60	6,289.9	-637.0	-3.3	637.0	6.27	6.25	0.56	
6,722.0	90.20	184.50	6,289.9	-666.9	-5.9	666.9	3.90	1.33	-3.67	
6,753.0	90.10	183.60	6,289.8	-697.8	-8.1	697.8	2.92	-0.32	-2.90	
6,783.0	90.40	182.80	6,289.7	-727.7	-9.8	727.8	2.85	1.00	-2.67	
6,814.0	90.70	181.90	6,289.4	-758.7	-11.0	758.8	3.06	0.97	-2.90	
6,845.0	90.20	180.80	6,289.2	-789.7	-11.8	789.8	3.90	-1.61	-3.55	
6,875.0	89.90	180.50	6,289.1	-819.7	-12.1	819.8	1.41	-1.00	-1.00	
6,906.0	89.80	180.30	6,289.2	-850.7	-12.3	850.8	0.72	-0.32	-0.65	
6,937.0	90.10	179.90	6,289.3	-881.7	-12.4	881.8	1.61	0.97	-1.29	
6,968.0	90.30	179.10	6,289.1	-912.7	-12.1	912.8	2.66	0.65	-2.58	
6,999.0	90.00	178.20	6,289.1	-943.7	-11.4	943.7	3.06	-0.97	-2.90	
7,029.0	89.30	178.50	6,289.2	-973.7	-10.5	973.7	2.54	-2.33	1.00	
7,059.0	90.10	179.10	6,289.4	-1,003.7	-9.9	1,003.7	3.33	2.67	2.00	
7,090.0	90.70	178.50	6,289.2	-1,034.6	-9.2	1,034.7	2.74	1.94	-1.94	
7,121.0	91.10	178.70	6,288.7	-1,065.6	-8.5	1,065.7	1.44	1.29	0.65	
7,152.0	91.50	179.20	6,288.0	-1,096.6	-7.9	1,096.6	2.07	1.29	1.61	
7,183.0	91.60	179.20	6,287.2	-1,127.6	-7.5	1,127.6	0.32	0.32	0.00	
7,213.0	91.40	179.40	6,286.4	-1,157.6	-7.1	1,157.6	0.94	-0.67	0.67	
7,244.0	91.10	180.30	6,285.7	-1,188.6	-7.0	1,188.6	3.06	-0.97	2.90	
7,274.0	90.20	180.70	6,285.4	-1,218.6	-7.3	1,218.6	3.28	-3.00	1.33	
7,305.0	89.40	181.50	6,285.5	-1,249.6	-7.9	1,249.6	3.65	-2.58	2.58	
7,336.0	89.00	181.50	6,285.9	-1,280.6	-8.7	1,280.6	1.29	-1.29	0.00	
7,366.0	89.30	180.70	6,286.3	-1,310.6	-9.3	1,310.6	2.85	1.00	-2.67	
7,397.0	89.60	181.00	6,286.6	-1,341.6	-9.7	1,341.6	1.37	0.97	0.97	
7,428.0	90.70	181.50	6,286.6	-1,372.5	-10.4	1,372.6	3.90	3.55	1.61	
7,459.0	89.80	180.30	6,286.4	-1,403.5	-10.9	1,403.6	4.84	-2.90	-3.87	
7,489.0	89.00	180.70	6,286.7	-1,433.5	-11.2	1,433.6	2.98	-2.67	1.33	
7,520.0	88.70	180.70	6,287.4	-1,464.5	-11.5	1,464.6	0.97	-0.97	0.00	
7,551.0	89.30	180.30	6,287.9	-1,495.5	-11.8	1,495.6	2.33	1.94	-1.29	
7,582.0	90.00	179.80	6,288.1	-1,526.5	-11.8	1,526.6	2.77	2.26	-1.61	

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Well:	Wildhorse #04-0424H	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
7,613.0	90.70	179.40	6,287.9	-1,557.5	-11.6	1,557.5	2.60	2.26	-1.29
7,644.0	91.30	179.40	6,287.4	-1,588.5	-11.3	1,588.5	1.94	1.94	0.00
7,675.0	90.90	179.20	6,286.8	-1,619.5	-10.9	1,619.5	1.44	-1.29	-0.65
7,705.0	91.20	179.80	6,286.2	-1,649.5	-10.7	1,649.5	2.24	1.00	2.00
7,736.0	90.90	179.60	6,285.6	-1,680.5	-10.5	1,680.5	1.16	-0.97	-0.65
7,767.0	91.00	179.60	6,285.1	-1,711.5	-10.3	1,711.5	0.32	0.32	0.00
7,797.0	90.10	179.80	6,284.8	-1,741.5	-10.1	1,741.5	3.07	-3.00	0.67
7,828.0	89.30	180.10	6,285.0	-1,772.5	-10.1	1,772.5	2.76	-2.58	0.97
7,859.0	89.50	180.10	6,285.3	-1,803.5	-10.1	1,803.5	0.65	0.65	0.00
7,889.0	90.70	181.00	6,285.3	-1,833.5	-10.4	1,833.5	5.00	4.00	3.00
7,920.0	90.60	180.70	6,284.9	-1,864.5	-10.9	1,864.5	1.02	-0.32	-0.97
7,950.0	89.30	181.20	6,285.0	-1,894.5	-11.4	1,894.5	4.64	-4.33	1.67
7,981.0	88.70	182.10	6,285.5	-1,925.5	-12.3	1,925.5	3.49	-1.94	2.90
8,011.0	88.60	182.20	6,286.2	-1,955.4	-13.4	1,955.4	0.47	-0.33	0.33
8,042.0	89.30	181.70	6,286.8	-1,986.4	-14.5	1,986.4	2.77	2.26	-1.61
8,073.0	90.10	182.10	6,286.9	-2,017.4	-15.5	2,017.4	2.89	2.58	1.29
8,104.0	89.90	181.90	6,286.9	-2,048.4	-16.6	2,048.4	0.91	-0.65	-0.65
8,135.0	89.50	181.50	6,287.1	-2,079.3	-17.5	2,079.4	1.82	-1.29	-1.29
8,166.0	88.70	181.40	6,287.6	-2,110.3	-18.3	2,110.4	2.60	-2.58	-0.32
8,197.0	88.60	181.20	6,288.3	-2,141.3	-19.0	2,141.4	0.72	-0.32	-0.65
8,228.0	89.20	181.20	6,288.9	-2,172.3	-19.6	2,172.4	1.94	1.94	0.00
8,259.0	89.70	181.00	6,289.2	-2,203.3	-20.2	2,203.4	1.74	1.61	-0.65
8,289.0	89.90	181.50	6,289.3	-2,233.3	-20.9	2,233.4	1.80	0.67	1.67
8,320.0	88.90	181.40	6,289.6	-2,264.3	-21.7	2,264.4	3.24	-3.23	-0.32
8,351.0	89.20	181.70	6,290.1	-2,295.3	-22.5	2,295.4	1.37	0.97	0.97
8,381.0	89.40	181.40	6,290.5	-2,325.2	-23.3	2,325.4	1.20	0.67	-1.00
8,412.0	89.60	181.00	6,290.8	-2,356.2	-24.0	2,356.4	1.44	0.65	-1.29
8,442.0	90.30	181.40	6,290.8	-2,386.2	-24.6	2,386.4	2.69	2.33	1.33
8,473.0	91.00	181.00	6,290.5	-2,417.2	-25.2	2,417.4	2.60	2.26	-1.29
8,504.0	90.70	181.20	6,290.0	-2,448.2	-25.8	2,448.3	1.16	-0.97	0.65
8,535.0	89.90	181.40	6,289.8	-2,479.2	-26.5	2,479.3	2.66	-2.58	0.65
8,566.0	88.60	181.40	6,290.2	-2,510.2	-27.3	2,510.3	4.19	-4.19	0.00
8,596.0	88.70	181.50	6,290.9	-2,540.2	-28.1	2,540.3	0.47	0.33	0.33
8,627.0	89.20	181.40	6,291.5	-2,571.2	-28.8	2,571.3	1.64	1.61	-0.32
8,658.0	88.70	180.80	6,292.1	-2,602.1	-29.4	2,602.3	2.52	-1.61	-1.94
8,689.0	90.10	182.80	6,292.4	-2,633.1	-30.4	2,633.3	7.87	4.52	6.45
8,720.0	90.20	181.40	6,292.3	-2,664.1	-31.5	2,664.3	4.53	0.32	-4.52
8,751.0	89.90	180.30	6,292.3	-2,695.1	-32.0	2,695.3	3.68	-0.97	-3.55
8,781.0	90.50	181.40	6,292.2	-2,725.1	-32.4	2,725.3	4.18	2.00	3.67
8,812.0	90.20	179.90	6,292.0	-2,756.1	-32.8	2,756.3	4.93	-0.97	-4.84
8,842.0	89.80	177.10	6,292.0	-2,786.1	-32.0	2,786.3	9.43	-1.33	-9.33
8,873.0	90.20	176.80	6,292.0	-2,817.0	-30.4	2,817.2	1.61	1.29	-0.97
8,903.0	90.20	176.30	6,291.9	-2,847.0	-28.6	2,847.1	1.67	0.00	-1.67
8,934.0	90.00	175.60	6,291.8	-2,877.9	-26.4	2,878.0	2.35	-0.65	-2.26
8,965.0	90.00	176.80	6,291.8	-2,908.8	-24.3	2,908.9	3.87	0.00	3.87
8,995.0	90.40	178.70	6,291.7	-2,938.8	-23.1	2,938.9	6.47	1.33	6.33
9,026.0	90.30	179.80	6,291.6	-2,969.8	-22.7	2,969.9	3.56	-0.32	3.55
9,056.0	90.10	178.70	6,291.4	-2,999.8	-22.3	2,999.9	3.73	-0.67	-3.67
9,087.0	90.30	177.10	6,291.3	-3,030.8	-21.2	3,030.8	5.20	0.65	-5.16
9,117.0	90.10	176.60	6,291.2	-3,060.7	-19.6	3,060.8	1.80	-0.67	-1.67
9,148.0	90.30	177.10	6,291.1	-3,091.7	-17.9	3,091.7	1.74	0.65	1.61
9,179.0	90.60	176.60	6,290.9	-3,122.6	-16.1	3,122.6	1.88	0.97	-1.61
9,209.0	90.00	176.80	6,290.7	-3,152.6	-14.4	3,152.5	2.11	-2.00	0.67
9,240.0	89.80	177.70	6,290.8	-3,183.6	-12.9	3,183.5	2.97	-0.65	2.90

Company:	Whiting Oil & Gas	Local Co-ordinate Reference:	Well Wildhorse #04-0424H
Project:	SEC.4-T9N-R59W	TVD Reference:	WELL @ 5111.8ft (RKB - CADE 21 - 17.3')
Site:	Wildhorse #04-0424H Pad Sec.4-T9N-R59W	MD Reference:	WELL @ 5111.8ft (RKB - CADE 21 - 17.3')
Well:	Wildhorse #04-0424H	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
9,271.0	90.50	178.70	6,290.7	-3,214.5	-12.0	3,214.5	3.94	2.26	3.23	
9,302.0	90.10	178.90	6,290.5	-3,245.5	-11.3	3,245.4	1.44	-1.29	0.65	
9,333.0	89.80	179.20	6,290.6	-3,276.5	-10.8	3,276.4	1.37	-0.97	0.97	
9,364.0	90.50	180.30	6,290.5	-3,307.5	-10.7	3,307.4	4.21	2.26	3.55	
9,394.0	90.40	181.50	6,290.2	-3,337.5	-11.1	3,337.4	4.01	-0.33	4.00	
9,425.0	89.50	180.80	6,290.3	-3,368.5	-11.8	3,368.4	3.68	-2.90	-2.26	
9,455.0	89.90	183.60	6,290.4	-3,398.5	-12.9	3,398.4	9.43	1.33	9.33	
9,486.0	90.40	186.50	6,290.4	-3,429.4	-15.6	3,429.3	9.49	1.61	9.35	
9,516.0	90.40	185.20	6,290.1	-3,459.2	-18.7	3,459.2	4.33	0.00	-4.33	
9,547.0	89.80	182.20	6,290.1	-3,490.1	-20.7	3,490.1	9.87	-1.94	-9.68	
9,578.0	90.00	181.40	6,290.1	-3,521.1	-21.7	3,521.1	2.66	0.65	-2.58	
9,608.0	90.20	182.10	6,290.1	-3,551.1	-22.6	3,551.1	2.43	0.67	2.33	
9,640.0	89.80	183.60	6,290.1	-3,583.1	-24.2	3,583.1	4.85	-1.25	4.69	
9,671.0	90.60	184.70	6,290.0	-3,614.0	-26.4	3,614.0	4.39	2.58	3.55	
9,703.0	90.20	182.80	6,289.8	-3,645.9	-28.5	3,646.0	6.07	-1.25	-5.94	
9,735.0	89.40	182.10	6,289.9	-3,677.9	-29.9	3,678.0	3.32	-2.50	-2.19	
9,766.0	90.50	184.00	6,289.9	-3,708.8	-31.5	3,709.0	7.08	3.55	6.13	
9,798.0	90.20	182.10	6,289.7	-3,740.8	-33.2	3,740.9	6.01	-0.94	-5.94	
9,829.0	89.80	180.30	6,289.7	-3,771.8	-33.9	3,771.9	5.95	-1.29	-5.81	
9,861.0	90.50	181.70	6,289.6	-3,803.8	-34.4	3,803.9	4.89	2.19	4.38	
9,892.0	90.60	182.60	6,289.3	-3,834.8	-35.6	3,834.9	2.92	0.32	2.90	
9,924.0	91.20	183.80	6,288.8	-3,866.7	-37.4	3,866.9	4.19	1.88	3.75	
9,955.0	92.20	185.20	6,287.9	-3,897.6	-39.8	3,897.8	5.55	3.23	4.52	
9,987.0	91.40	184.20	6,286.9	-3,929.5	-42.4	3,929.7	4.00	-2.50	-3.13	
10,018.0	91.20	183.80	6,286.2	-3,960.4	-44.6	3,960.6	1.44	-0.65	-1.29	
10,050.0	90.70	184.50	6,285.7	-3,992.3	-46.9	3,992.6	2.69	-1.56	2.19	
10,082.0	90.20	185.00	6,285.4	-4,024.2	-49.6	4,024.5	2.21	-1.56	1.56	
10,113.0	89.30	184.30	6,285.5	-4,055.1	-52.1	4,055.4	3.68	-2.90	-2.26	
10,145.0	88.50	184.00	6,286.2	-4,087.0	-54.4	4,087.3	2.67	-2.50	-0.94	
10,177.0	88.60	183.10	6,287.0	-4,118.9	-56.4	4,119.3	2.83	0.31	-2.81	
10,208.0	88.80	181.90	6,287.7	-4,149.9	-57.7	4,150.3	3.92	0.65	-3.87	
10,240.0	89.00	181.50	6,288.3	-4,181.9	-58.7	4,182.3	1.40	0.63	-1.25	
10,260.0	89.00	181.50	6,288.6	-4,201.9	-59.2	4,202.3	0.00	0.00	0.00	
10,310.0	89.00	181.30	6,289.5	-4,251.8	-60.4	4,252.2	0.40	0.00	-0.40	
BHL 660'FSL & 1963'FWL										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N-S (ft)	+E-W (ft)	Northing (ft)	Easting (ft)	Latitude		
- hit/miss target										
- Shape										
BHL 660'FSL & 1963'I	0.00	0.00	6,279.0	-4,280.9	-50.7	1,528,491.22	3,419,395.53	40.774264		
- survey misses target center by 32.4ft at 10310.0ft MD (6289.5 TVD, -4251.8 N, -60.4 E)										
- Point										

Checked By: _____	Approved By: _____	Date: _____
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