

US ROCKIES WATTENBERG PLANNING

WELD-NAD83-UTMFT13N

2N-66W-32 Land Fed 13S-32HZ Pad

LAND FED 30C-29HZ

Plan A

Plan: Permit Rev-1

Sperry Drilling Services Proposal Report

27 May, 2015

Well Coordinates: 14,562,853.50 N, 1,694,712.19 E (40° 05' 56.50" N, 104° 48' 21.03" W)

Ground Level: 4,897.00 usft

Local Coordinate Origin:

Centered on Well LAND FED 30C-29HZ

Viewing Datum:

RKB = 17' @ 4914.00usft (D Rig)

TVDs to System:

N

North Reference:

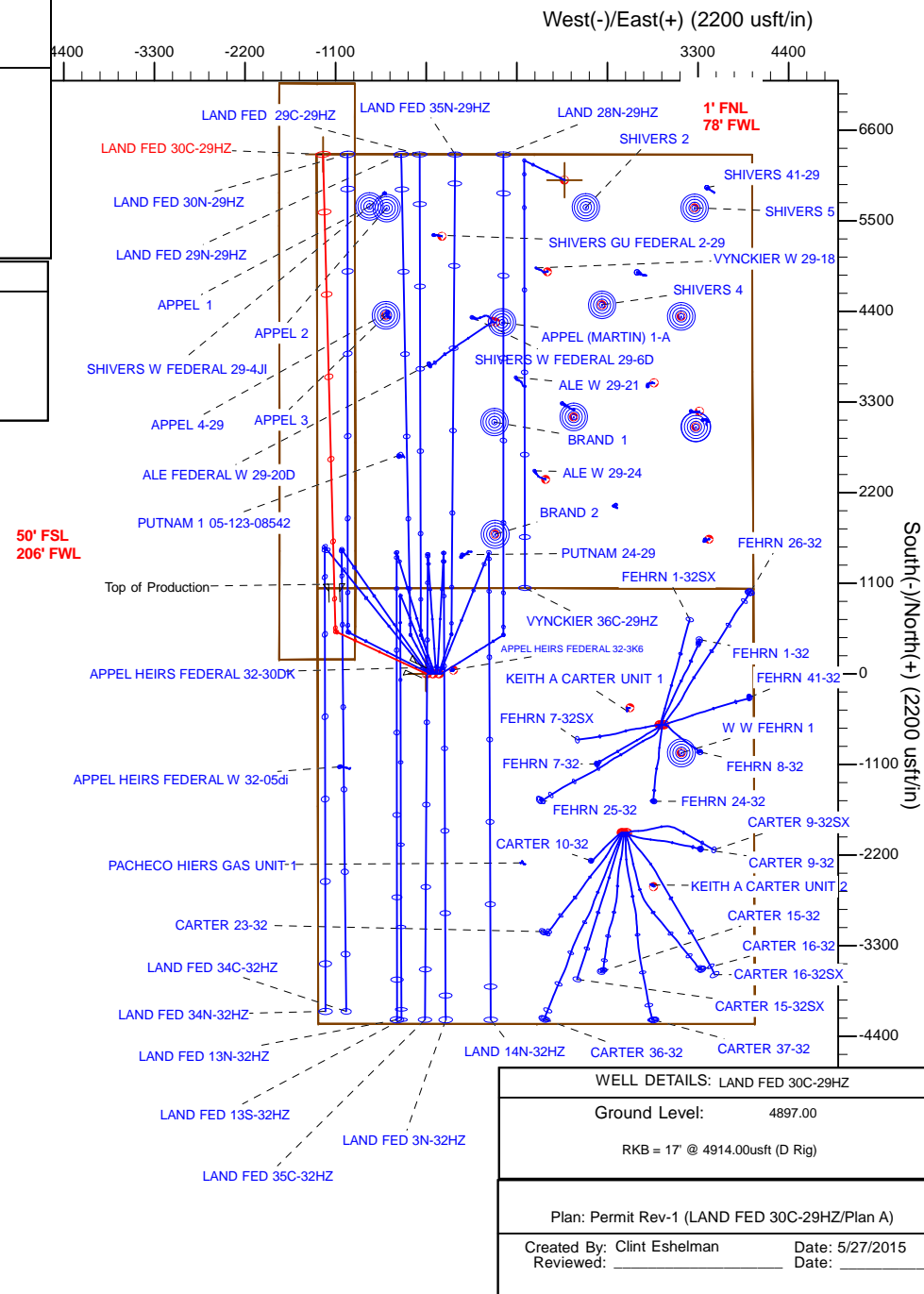
True

Unit System:

Dec-Deg - API - US Survey Feet - Custom

Version: 5000.1 Build: 70

HALLIBURTON



Plan Report for LAND FED 30C-29HZ - Permit Rev-1

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)	Toolface Azimuth (°)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2N-R66W-Sec. 32_Section Lines - LAND FED 30C-29HZ_SHL - LAND FED 30C-29HZ_Landing Diagram										
10.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2N-R66W-Sec. 29_Section Lines										
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 250.00ft										
300.00	0.75	295.00	300.00	0.14	-0.30	0.15	1.50	1.50	0.00	295.00
400.00	2.25	295.00	399.96	1.24	-2.67	1.31	1.50	1.50	0.00	0.00
500.00	3.75	295.00	499.82	3.46	-7.41	3.65	1.50	1.50	0.00	0.00
600.00	5.25	295.00	599.51	6.77	-14.52	7.14	1.50	1.50	0.00	0.00
700.00	6.75	295.00	698.96	11.19	-24.00	11.81	1.50	1.50	0.00	0.00
800.00	8.25	295.00	798.10	16.71	-35.83	17.63	1.50	1.50	0.00	0.00
900.00	9.75	295.00	896.87	23.32	-50.00	24.60	1.50	1.50	0.00	0.00
1,000.00	11.25	295.00	995.19	31.02	-66.52	32.73	1.50	1.50	0.00	0.00
1,100.00	12.75	295.00	1,093.00	39.80	-85.36	42.00	1.50	1.50	0.00	0.00
1,200.00	14.25	295.00	1,190.24	49.67	-106.52	52.40	1.50	1.50	0.00	0.00
1,300.00	15.75	295.00	1,286.83	60.61	-129.97	63.94	1.50	1.50	0.00	0.00
1,322.02	16.08	295.00	1,308.00	63.16	-135.45	66.64	1.50	1.50	0.00	0.00
Fox Hills										
1,400.00	17.25	295.00	1,382.71	72.61	-155.71	76.61	1.50	1.50	0.00	0.00
1,500.00	18.75	295.00	1,477.81	85.67	-183.72	90.39	1.50	1.50	0.00	0.00
1,516.67	19.00	295.00	1,493.58	87.95	-188.61	92.79	1.50	1.50	0.00	0.00
End Nudge @ 1516.67ft										
1,600.00	19.00	295.00	1,572.37	99.41	-213.19	104.89	0.00	0.00	0.00	0.00
1,629.22	19.00	295.00	1,600.00	103.43	-221.82	109.13	0.00	0.00	0.00	0.00
9 5/8"										
1,700.00	19.00	295.00	1,666.92	113.17	-242.70	119.40	0.00	0.00	0.00	0.00
1,800.00	19.00	295.00	1,761.48	126.93	-272.21	133.92	0.00	0.00	0.00	0.00
1,900.00	19.00	295.00	1,856.03	140.69	-301.71	148.44	0.00	0.00	0.00	0.00
2,000.00	19.00	295.00	1,950.58	154.45	-331.22	162.95	0.00	0.00	0.00	0.00
2,100.00	19.00	295.00	2,045.13	168.21	-360.73	177.47	0.00	0.00	0.00	0.00
2,200.00	19.00	295.00	2,139.68	181.97	-390.23	191.99	0.00	0.00	0.00	0.00
2,300.00	19.00	295.00	2,234.23	195.73	-419.74	206.50	0.00	0.00	0.00	0.00
2,400.00	19.00	295.00	2,328.79	209.49	-449.25	221.02	0.00	0.00	0.00	0.00
2,500.00	19.00	295.00	2,423.34	223.25	-478.75	235.54	0.00	0.00	0.00	0.00
2,600.00	19.00	295.00	2,517.89	237.01	-508.26	250.05	0.00	0.00	0.00	0.00
2,700.00	19.00	295.00	2,612.44	250.76	-537.77	264.57	0.00	0.00	0.00	0.00
2,800.00	19.00	295.00	2,706.99	264.52	-567.27	279.09	0.00	0.00	0.00	0.00
2,900.00	19.00	295.00	2,801.55	278.28	-596.78	293.60	0.00	0.00	0.00	0.00
3,000.00	19.00	295.00	2,896.10	292.04	-626.29	308.12	0.00	0.00	0.00	0.00
3,100.00	19.00	295.00	2,990.65	305.80	-655.79	322.64	0.00	0.00	0.00	0.00
3,200.00	19.00	295.00	3,085.20	319.56	-685.30	337.15	0.00	0.00	0.00	0.00
3,300.00	19.00	295.00	3,179.75	333.32	-714.81	351.67	0.00	0.00	0.00	0.00
3,400.00	19.00	295.00	3,274.31	347.08	-744.31	366.19	0.00	0.00	0.00	0.00
3,500.00	19.00	295.00	3,368.86	360.84	-773.82	380.70	0.00	0.00	0.00	0.00
3,600.00	19.00	295.00	3,463.41	374.60	-803.32	395.22	0.00	0.00	0.00	0.00
3,700.00	19.00	295.00	3,557.96	388.36	-832.83	409.74	0.00	0.00	0.00	0.00
3,800.00	19.00	295.00	3,652.51	402.11	-862.34	424.25	0.00	0.00	0.00	0.00
3,900.00	19.00	295.00	3,747.06	415.87	-891.84	438.77	0.00	0.00	0.00	0.00
4,000.00	19.00	295.00	3,841.62	429.63	-921.35	453.29	0.00	0.00	0.00	0.00
4,100.00	19.00	295.00	3,936.17	443.39	-950.86	467.80	0.00	0.00	0.00	0.00
4,136.67	19.00	295.00	3,970.84	448.44	-961.68	473.13	0.00	0.00	0.00	0.00
Begin Drop @ 4136.67ft										
4,200.00	17.73	295.00	4,030.94	456.87	-979.76	482.02	2.00	-2.00	0.00	180.00
4,300.00	15.73	295.00	4,126.70	469.04	-1,005.86	494.86	2.00	-2.00	0.00	180.00

Plan Report for LAND FED 30C-29HZ - Permit Rev-1

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)	Toolface Azimuth (°)
4,400.00	13.73	295.00	4,223.41	479.79	-1,028.90	506.20	2.00	-2.00	0.00	180.00
4,500.00	11.73	295.00	4,320.95	489.10	-1,048.88	516.03	2.00	-2.00	0.00	180.00
4,600.00	9.73	295.00	4,419.19	496.97	-1,065.76	524.33	2.00	-2.00	0.00	180.00
4,700.00	7.73	295.00	4,518.03	503.39	-1,079.52	531.10	2.00	-2.00	0.00	180.00
4,800.00	5.73	295.00	4,617.33	508.34	-1,090.14	536.33	2.00	-2.00	0.00	180.00
4,900.00	3.73	295.00	4,716.99	511.83	-1,097.62	540.01	2.00	-2.00	0.00	180.00
5,000.00	1.73	295.00	4,816.87	513.84	-1,101.94	542.13	2.00	-2.00	0.00	180.00
5,086.67	0.00	0.00	4,903.52	514.40	-1,103.13	542.72	2.00	-2.00	75.00	180.00
End Drop @ 5086.67ft										
5,095.15	0.00	0.00	4,912.00	514.40	-1,103.13	542.72	0.00	0.00	0.00	0.00
Sussex										
5,100.00	0.00	0.00	4,916.85	514.40	-1,103.13	542.72	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,016.85	514.40	-1,103.13	542.72	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,116.85	514.40	-1,103.13	542.72	0.00	0.00	0.00	0.00
5,400.00	0.00	0.00	5,216.85	514.40	-1,103.13	542.72	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,316.85	514.40	-1,103.13	542.72	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,416.85	514.40	-1,103.13	542.72	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,516.85	514.40	-1,103.13	542.72	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,616.85	514.40	-1,103.13	542.72	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,716.85	514.40	-1,103.13	542.72	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	5,816.85	514.40	-1,103.13	542.72	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	5,916.85	514.40	-1,103.13	542.72	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,016.85	514.40	-1,103.13	542.72	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,116.85	514.40	-1,103.13	542.72	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,216.85	514.40	-1,103.13	542.72	0.00	0.00	0.00	0.00
6,500.00	0.00	0.00	6,316.85	514.40	-1,103.13	542.72	0.00	0.00	0.00	0.00
6,600.00	0.00	0.00	6,416.85	514.40	-1,103.13	542.72	0.00	0.00	0.00	0.00
6,700.00	0.00	0.00	6,516.85	514.40	-1,103.13	542.72	0.00	0.00	0.00	0.00
6,800.00	0.00	0.00	6,616.85	514.40	-1,103.13	542.72	0.00	0.00	0.00	0.00
6,900.00	0.00	0.00	6,716.85	514.40	-1,103.13	542.72	0.00	0.00	0.00	0.00
7,000.00	0.00	0.00	6,816.85	514.40	-1,103.13	542.72	0.00	0.00	0.00	0.00
7,081.19	0.00	0.00	6,898.04	514.40	-1,103.13	542.72	0.00	0.00	0.00	0.00
KOP @ 7081.19ft										
7,100.00	1.88	358.52	6,916.85	514.71	-1,103.14	543.03	10.00	10.00	-7.88	-1.48
7,200.00	11.88	358.52	7,016.01	526.67	-1,103.45	554.99	10.00	10.00	0.00	0.00
7,291.77	21.06	358.52	7,103.91	552.65	-1,104.12	580.98	10.00	10.00	0.00	0.00
Sharon Springs										
7,300.00	21.88	358.52	7,111.57	555.66	-1,104.20	584.00	10.00	10.00	0.00	0.00
7,349.79	26.86	358.52	7,156.91	576.19	-1,104.73	604.54	10.00	10.00	0.00	0.00
Niobrara Top										
7,400.00	31.88	358.52	7,200.66	600.80	-1,105.37	629.15	10.00	10.00	0.00	0.00
7,451.50	37.03	358.52	7,243.10	629.92	-1,106.12	658.28	10.00	10.00	0.00	0.00
Niobrara B Bench										
7,500.00	41.88	358.52	7,280.54	660.72	-1,106.92	689.09	10.00	10.00	0.00	0.00
DLS 10°/100'										
7,526.72	44.55	358.52	7,300.02	679.01	-1,107.39	707.39	10.00	10.00	0.00	0.00
Niobrara C Bench										
7,600.00	51.88	358.52	7,348.81	733.60	-1,108.81	761.99	10.00	10.00	0.00	0.00
7,700.00	61.88	358.52	7,403.37	817.22	-1,110.97	845.64	10.00	10.00	0.00	0.00
7,785.83	70.46	358.52	7,438.02	895.63	-1,113.00	924.08	10.00	10.00	0.00	0.00
Fort Hays										
7,800.00	71.88	358.52	7,442.59	909.04	-1,113.35	937.49	10.00	10.00	0.00	0.00
7,881.82	80.06	358.52	7,462.40	988.33	-1,115.40	1,016.81	10.00	10.00	0.00	0.00
Codell										
7,900.00	81.88	358.52	7,465.26	1,006.28	-1,115.87	1,034.76	10.00	10.00	0.00	0.00
7,983.38	90.22	358.52	7,471.00	1,089.36	-1,118.02	1,117.87	10.00	10.00	0.00	0.00
End Build @ 7983.38ft - Heel: - Top of Production										
8,000.00	90.22	358.52	7,470.93	1,105.97	-1,118.45	1,134.49	0.00	0.00	0.00	0.00

Plan Report for LAND FED 30C-29HZ - Permit Rev-1

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)	Toolface Azimuth (°)
8,100.00	90.22	358.52	7,470.55	1,205.94	-1,121.04	1,234.49	0.00	0.00	0.00	0.00
8,200.00	90.22	358.52	7,470.16	1,305.90	-1,123.62	1,334.49	0.00	0.00	0.00	0.00
8,300.00	90.22	358.52	7,469.78	1,405.87	-1,126.21	1,434.49	0.00	0.00	0.00	0.00
8,400.00	90.22	358.52	7,469.40	1,505.83	-1,128.80	1,534.49	0.00	0.00	0.00	0.00
8,500.00	90.22	358.52	7,469.02	1,605.80	-1,131.39	1,634.49	0.00	0.00	0.00	0.00
8,600.00	90.22	358.52	7,468.63	1,705.77	-1,133.98	1,734.49	0.00	0.00	0.00	0.00
8,700.00	90.22	358.52	7,468.25	1,805.73	-1,136.56	1,834.48	0.00	0.00	0.00	0.00
8,800.00	90.22	358.52	7,467.87	1,905.70	-1,139.15	1,934.48	0.00	0.00	0.00	0.00
8,900.00	90.22	358.52	7,467.48	2,005.66	-1,141.74	2,034.48	0.00	0.00	0.00	0.00
9,000.00	90.22	358.52	7,467.10	2,105.63	-1,144.33	2,134.48	0.00	0.00	0.00	0.00
9,100.00	90.22	358.52	7,466.72	2,205.59	-1,146.92	2,234.48	0.00	0.00	0.00	0.00
9,200.00	90.22	358.52	7,466.33	2,305.56	-1,149.51	2,334.48	0.00	0.00	0.00	0.00
9,300.00	90.22	358.52	7,465.95	2,405.53	-1,152.09	2,434.48	0.00	0.00	0.00	0.00
9,400.00	90.22	358.52	7,465.57	2,505.49	-1,154.68	2,534.48	0.00	0.00	0.00	0.00
9,500.00	90.22	358.52	7,465.18	2,605.46	-1,157.27	2,634.48	0.00	0.00	0.00	0.00
9,600.00	90.22	358.52	7,464.80	2,705.42	-1,159.86	2,734.48	0.00	0.00	0.00	0.00
9,700.00	90.22	358.52	7,464.42	2,805.39	-1,162.45	2,834.48	0.00	0.00	0.00	0.00
9,800.00	90.22	358.52	7,464.03	2,905.35	-1,165.03	2,934.48	0.00	0.00	0.00	0.00
9,900.00	90.22	358.52	7,463.65	3,005.32	-1,167.62	3,034.48	0.00	0.00	0.00	0.00
10,000.00	90.22	358.52	7,463.27	3,105.29	-1,170.21	3,134.47	0.00	0.00	0.00	0.00
10,100.00	90.22	358.52	7,462.88	3,205.25	-1,172.80	3,234.47	0.00	0.00	0.00	0.00
10,200.00	90.22	358.52	7,462.50	3,305.22	-1,175.39	3,334.47	0.00	0.00	0.00	0.00
10,300.00	90.22	358.52	7,462.12	3,405.18	-1,177.98	3,434.47	0.00	0.00	0.00	0.00
10,400.00	90.22	358.52	7,461.73	3,505.15	-1,180.56	3,534.47	0.00	0.00	0.00	0.00
10,500.00	90.22	358.52	7,461.35	3,605.12	-1,183.15	3,634.47	0.00	0.00	0.00	0.00
10,600.00	90.22	358.52	7,460.97	3,705.08	-1,185.74	3,734.47	0.00	0.00	0.00	0.00
10,700.00	90.22	358.52	7,460.58	3,805.05	-1,188.33	3,834.47	0.00	0.00	0.00	0.00
10,800.00	90.22	358.52	7,460.20	3,905.01	-1,190.92	3,934.47	0.00	0.00	0.00	0.00
10,900.00	90.22	358.52	7,459.82	4,004.98	-1,193.50	4,034.47	0.00	0.00	0.00	0.00
11,000.00	90.22	358.52	7,459.43	4,104.94	-1,196.09	4,134.47	0.00	0.00	0.00	0.00
11,100.00	90.22	358.52	7,459.05	4,204.91	-1,198.68	4,234.47	0.00	0.00	0.00	0.00
11,200.00	90.22	358.52	7,458.67	4,304.88	-1,201.27	4,334.47	0.00	0.00	0.00	0.00
11,300.00	90.22	358.52	7,458.29	4,404.84	-1,203.86	4,434.47	0.00	0.00	0.00	0.00
11,400.00	90.22	358.52	7,457.90	4,504.81	-1,206.45	4,534.46	0.00	0.00	0.00	0.00
11,500.00	90.22	358.52	7,457.52	4,604.77	-1,209.03	4,634.46	0.00	0.00	0.00	0.00
11,600.00	90.22	358.52	7,457.14	4,704.74	-1,211.62	4,734.46	0.00	0.00	0.00	0.00
11,700.00	90.22	358.52	7,456.75	4,804.70	-1,214.21	4,834.46	0.00	0.00	0.00	0.00
11,800.00	90.22	358.52	7,456.37	4,904.67	-1,216.80	4,934.46	0.00	0.00	0.00	0.00
11,900.00	90.22	358.52	7,455.99	5,004.64	-1,219.39	5,034.46	0.00	0.00	0.00	0.00
12,000.00	90.22	358.52	7,455.60	5,104.60	-1,221.98	5,134.46	0.00	0.00	0.00	0.00
12,100.00	90.22	358.52	7,455.22	5,204.57	-1,224.56	5,234.46	0.00	0.00	0.00	0.00
12,200.00	90.22	358.52	7,454.84	5,304.53	-1,227.15	5,334.46	0.00	0.00	0.00	0.00
12,300.00	90.22	358.52	7,454.45	5,404.50	-1,229.74	5,434.46	0.00	0.00	0.00	0.00
12,400.00	90.22	358.52	7,454.07	5,504.46	-1,232.33	5,534.46	0.00	0.00	0.00	0.00
12,500.00	90.22	358.52	7,453.69	5,604.43	-1,234.92	5,634.46	0.00	0.00	0.00	0.00
12,600.00	90.22	358.52	7,453.30	5,704.40	-1,237.50	5,734.46	0.00	0.00	0.00	0.00
12,700.00	90.22	358.52	7,452.92	5,804.36	-1,240.09	5,834.45	0.00	0.00	0.00	0.00
12,800.00	90.22	358.52	7,452.54	5,904.33	-1,242.68	5,934.45	0.00	0.00	0.00	0.00
12,900.00	90.22	358.52	7,452.15	6,004.29	-1,245.27	6,034.45	0.00	0.00	0.00	0.00
13,000.00	90.22	358.52	7,451.77	6,104.26	-1,247.86	6,134.45	0.00	0.00	0.00	0.00
13,100.00	90.22	358.52	7,451.39	6,204.23	-1,250.45	6,234.45	0.00	0.00	0.00	0.00
13,200.00	90.22	358.52	7,451.00	6,304.19	-1,253.03	6,334.45	0.00	0.00	0.00	0.00
13,201.07	90.22	358.52	7,451.00	6,305.26	-1,253.06	6,335.52	0.00	0.00	0.00	0.00

TD Well @ 13201.07ft - Toe: - LAND FED 30C-29HZ_BHL

Plan Report for LAND FED 30C-29HZ - Permit Rev-1

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
250.00	250.00	0.00	0.00	Begin Nudge @ 250.00ft
1,516.67	1,493.58	87.95	-188.61	End Nudge @ 1516.67ft
4,136.67	3,970.84	448.44	-961.68	Begin Drop @ 4136.67ft
5,086.67	4,903.52	514.40	-1,103.13	End Drop @ 5086.67ft
7,081.19	6,898.04	514.40	-1,103.13	KOP @ 7081.19ft
7,500.00	7,280.54	660.72	-1,106.92	DLS 10°/100'
7,983.38	7,471.00	1,089.36	-1,118.02	End Build @ 7983.38ft
13,201.07	7,451.00	6,305.26	-1,253.06	TD Well @ 13201.07ft

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin +N/-S (usft)	Origin +E/-W (usft)	Start TVD (usft)
User	No Target (Freehand)	358.52	Slot	0.00	0.00	0.00

Survey tool program

From (usft)	To (usft)	Survey/Plan	Survey Tool
0.00	7,983.38	Permit Rev-1	APC_ISCWSA REV 2 MWD+IFR1
7,983.38	13,201.07	Permit Rev-1	APC_ISCWSA REV 2 MWD+IFR1

Casing Details

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,629.22	1,600.00	9 5/8"	9-5/8	13-1/2
7,983.38	7,471.00	Top of Production	5-1/2	7-7/8

Formation Details

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,322.02	1,308.00	Fox Hills		0.00	
5,095.15	4,912.00	Sussex		0.00	
7,291.77	7,103.91	Sharon Springs		0.00	
7,349.79	7,156.91	Niobrara Top		0.00	
7,451.50	7,243.10	Niobrara B Bench		0.00	
7,526.72	7,300.02	Niobrara C Bench		0.00	
7,785.83	7,438.02	Fort Hays		0.00	
7,881.82	7,462.40	Codell		0.00	
7,983.38	7,471.00	Heel:		0.00	
13,201.07	7,451.00	Toe:		0.00	

Plan Report for LAND FED 30C-29HZ - Permit Rev-1

Targets associated with this wellbore

Target Name	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Shape
LAND FED 30C-29HZ_BHL	7,451.00	6,305.26	-1,253.06	Point
2N-R66W-Sec. 29_Section Lines	10.00	5,992.85	1,678.31	Polygon
2N-R66W-Sec. 32_Section Lines	0.00	0.00	0.00	Polygon
LAND FED 30C-29HZ_SHL	0.00	0.00	0.00	Point
LAND FED 30C-29HZ_Landing Diagram	0.00	0.00	0.00	Polygon

North Reference Sheet for 2N-66W-32 Land Fed 13S-32HZ Pad - LAND FED 30C-29HZ - Plan A

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

Vertical Depths are relative to RKB = 17' @ 4914.00usft (D Rig). Northing and Easting are relative to LAND FED 30C-29HZ

Coordinate System is Universal Transverse Mercator (US Survey Feet), Zone 13N (108 W to 102 W) using datum North American Datum 1983, ellipsoid

Projection method is Transverse Mercator (Gauss-Kruger)

Central Meridian is -105.00°, Longitude Origin:0.000000°, Latitude Origin:0.000000°

False Easting: 1,640,416.67usft, False Northing: 0.00usft, Scale Reduction: 0.99960337

Grid Coordinates of Well: 14,562,853.50 usft N, 1,694,712.19 usft E

Geographical Coordinates of Well: 40° 05' 56.50" N, 104° 48' 21.03" W

Grid Convergence at Surface is: 0.13°

Based upon Minimum Curvature type calculations, at a Measured Depth of 13,201.07usft
the Bottom Hole Displacement is 6,428.57usft in the Direction of 348.76° (True).

Magnetic Convergence at surface is: -8.21° (19 May 2015, , IGRF2010)

