

US ROCKIES WATTENBERG PLANNING

WELD-NAD83-UTMFT13N

Milk 4-21HZ Pad

Milk State 29C-21HZ

Plan A

Plan: Rev A0 Permit

Sperry Drilling Services Proposal Report

13 October, 2014

Well Coordinates: 14,601,552.02 N, 1,732,182.19 E (40° 12' 17.99" N, 104° 40' 16.83" W)

Ground Level: 4,838.00 usft

Local Coordinate Origin:

Centered on Well Milk State 29C-21HZ

Viewing Datum:

RKB = 17' @ 4855.00usft (D Rig)

TVDs to System:

N

North Reference:

True

Unit System:

Dec-Deg - API - US Survey Feet - Custom

Version: 5000.1 Build: 70

HALLIBURTON

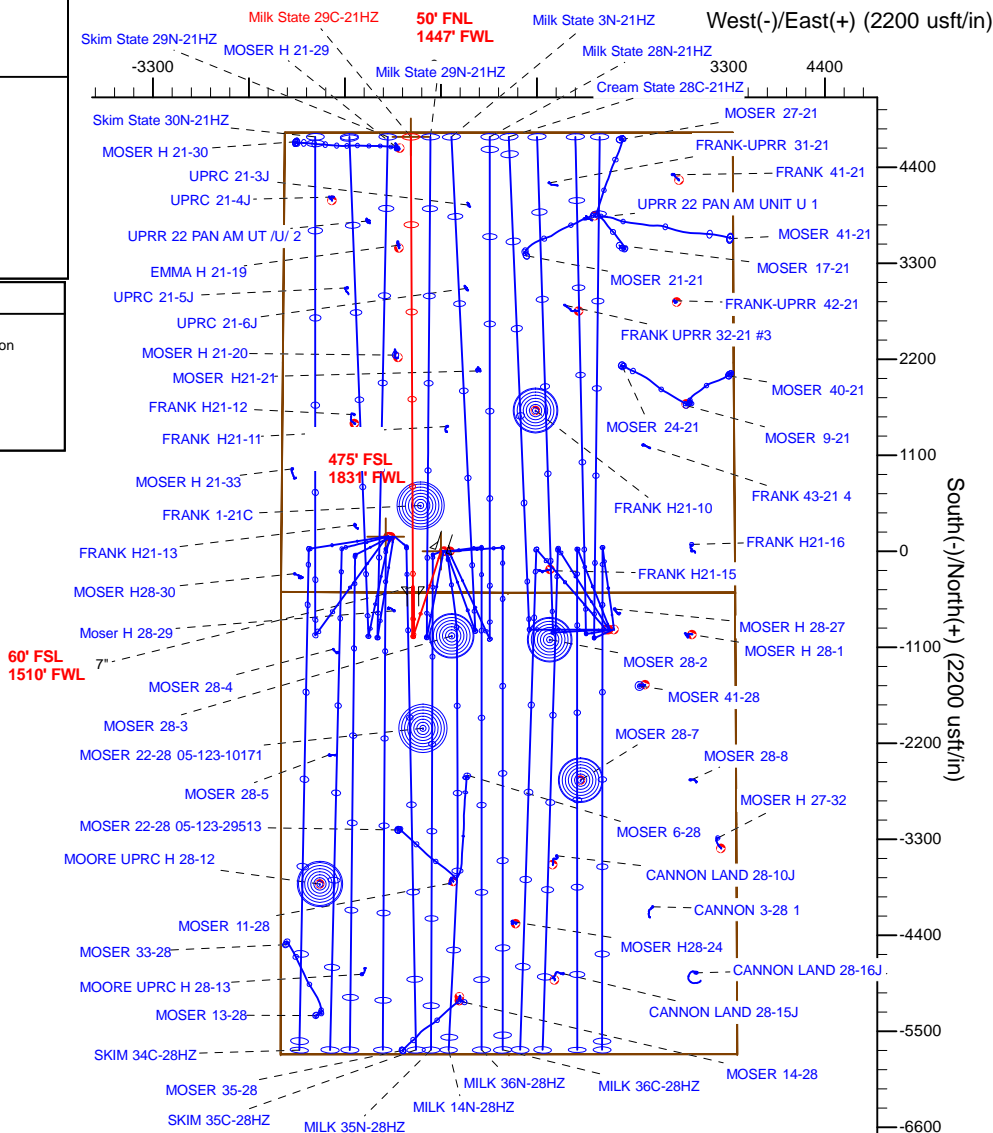
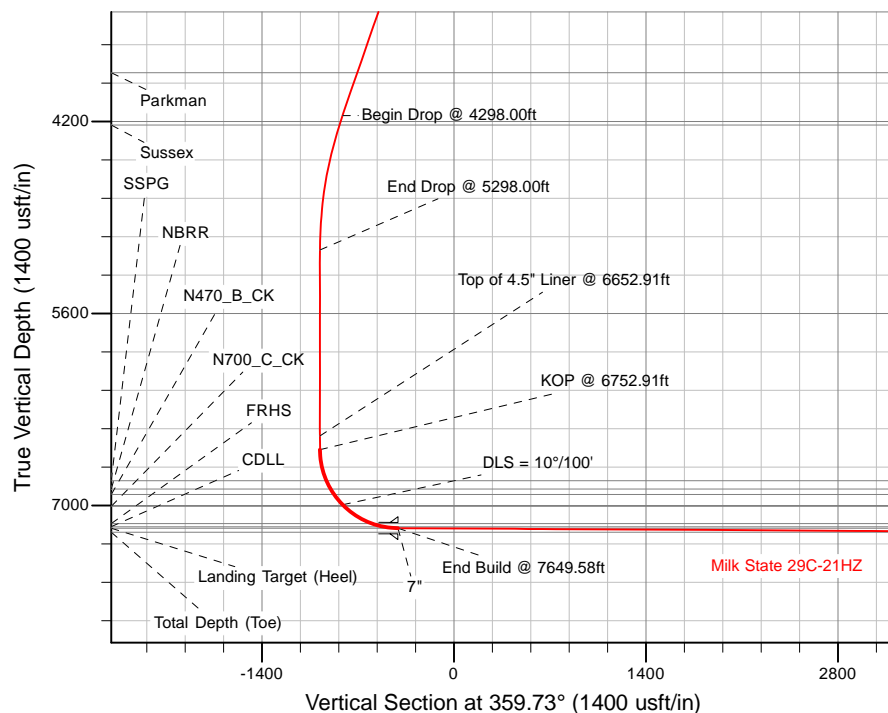
Design: Rev A0 Permit

US ROCKIES WATTENBERG PLANNING

Sperry Drilling

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	1300.00	0.00	0.00	1300.00	0.00	0.00	0.00	0.00	0.00	
3	2300.00	20.00	198.00	2279.82	-164.31	-53.39	2.00	198.00	-164.06	
4	4298.00	20.00	198.00	4157.32	-184.22	-264.56	0.00	0.00	-812.97	
5	5298.00	0.00	0.00	5137.14	-978.53	-317.95	2.00	180.00	-977.03	
6	6759.91	0.00	0.00	6329.55	-978.53	-317.95	0.00	0.00	-977.03	
7	7649.58	89.67	359.73	7165.00	-408.92	-320.62	10.00	359.73	-407.40	
8	12806.16	89.67	359.73	7195.00	4747.52	-344.88	0.00	0.00	4749.09	Milk State 29C-21HZ Bhl

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	
Sec. 28 and 21-T3N-R65W	-9.00	- 166.06	-633.25	40 205452	-104.673609	Polygon
Milk State 29C-21HZ_SHL	0.00	0.00	0.00	40 204996	-104.671341	
Milk State 29C-21HZ_BHL	7195.00	4747.52	-344.88	40 218033	-104.672576	



		WELL DETAILS: Milk State 29C-21HZ	
		Ground Level: 4838.00	
		RKB = 17' @ 4855.00usft (D Rig)	
		Plan: Rev A0 Permit (Milk State 29C-21HZ/Plan A)	
<p>6492.05 6652.91 Top of 4.5" Liner @ 6652.91ft</p> <p>6592.05 6752.91 KOP @ 6752.91ft</p>		<p>Created By: Clint Eshelman Date: 10/13/2014</p> <p>Reviewed: _____ Date: _____</p>	

Plan Report for Milk State 29C-21HZ - Rev A0 Permit

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
Sec. 28 and 21-T3N-R65W - Milk State 29C-21HZ_SHL										
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
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
614.00	0.00	0.00	614.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Base Fox Hills										
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,127.00	0.00	0.00	1,127.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Surface Csg Setting Depth - 9 5/8"										
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 1300.00ft										
1,400.00	2.00	198.00	1,399.98	-1.66	-0.54	-1.66	2.00	2.00	0.00	198.00
1,500.00	4.00	198.00	1,499.84	-6.64	-2.16	-6.63	2.00	2.00	0.00	0.00
1,600.00	6.00	198.00	1,599.45	-14.93	-4.85	-14.90	2.00	2.00	0.00	0.00
1,700.00	8.00	198.00	1,698.70	-26.52	-8.62	-26.47	2.00	2.00	0.00	0.00
1,800.00	10.00	198.00	1,797.47	-41.39	-13.45	-41.33	2.00	2.00	0.00	0.00
1,900.00	12.00	198.00	1,895.62	-59.54	-19.35	-59.45	2.00	2.00	0.00	0.00
2,000.00	14.00	198.00	1,993.06	-80.93	-26.30	-80.81	2.00	2.00	0.00	0.00
2,100.00	16.00	198.00	2,089.64	-105.55	-34.29	-105.38	2.00	2.00	0.00	0.00
2,200.00	18.00	198.00	2,185.27	-133.35	-43.33	-133.14	2.00	2.00	0.00	0.00
2,300.00	20.00	198.00	2,279.82	-164.31	-53.39	-164.06	2.00	2.00	0.00	0.00
End Nudge @ 2300.00ft										
2,400.00	20.00	198.00	2,373.78	-196.84	-63.96	-196.54	0.00	0.00	0.00	0.00
2,500.00	20.00	198.00	2,467.75	-229.37	-74.53	-229.01	0.00	0.00	0.00	0.00
2,600.00	20.00	198.00	2,561.72	-261.90	-85.10	-261.49	0.00	0.00	0.00	0.00
2,700.00	20.00	198.00	2,655.69	-294.42	-95.66	-293.97	0.00	0.00	0.00	0.00
2,800.00	20.00	198.00	2,749.66	-326.95	-106.23	-326.45	0.00	0.00	0.00	0.00
2,900.00	20.00	198.00	2,843.63	-359.48	-116.80	-358.93	0.00	0.00	0.00	0.00
3,000.00	20.00	198.00	2,937.60	-392.01	-127.37	-391.40	0.00	0.00	0.00	0.00
3,100.00	20.00	198.00	3,031.57	-424.54	-137.94	-423.88	0.00	0.00	0.00	0.00
3,200.00	20.00	198.00	3,125.54	-457.06	-148.51	-456.36	0.00	0.00	0.00	0.00
3,300.00	20.00	198.00	3,219.51	-489.59	-159.08	-488.84	0.00	0.00	0.00	0.00
3,400.00	20.00	198.00	3,313.48	-522.12	-169.65	-521.32	0.00	0.00	0.00	0.00
3,500.00	20.00	198.00	3,407.45	-554.65	-180.22	-553.79	0.00	0.00	0.00	0.00
3,600.00	20.00	198.00	3,501.42	-587.18	-190.79	-586.27	0.00	0.00	0.00	0.00
3,700.00	20.00	198.00	3,595.39	-619.70	-201.35	-618.75	0.00	0.00	0.00	0.00
3,800.00	20.00	198.00	3,689.35	-652.23	-211.92	-651.23	0.00	0.00	0.00	0.00
3,900.00	20.00	198.00	3,783.32	-684.76	-222.49	-683.70	0.00	0.00	0.00	0.00
3,965.63	20.00	198.00	3,845.00	-706.11	-229.43	-705.02	0.00	0.00	0.00	0.00
Parkman										
4,000.00	20.00	198.00	3,877.29	-717.29	-233.06	-716.18	0.00	0.00	0.00	0.00
4,100.00	20.00	198.00	3,971.26	-749.82	-243.63	-748.66	0.00	0.00	0.00	0.00
4,200.00	20.00	198.00	4,065.23	-782.34	-254.20	-781.14	0.00	0.00	0.00	0.00
4,298.00	20.00	198.00	4,157.32	-814.22	-264.56	-812.97	0.00	0.00	0.00	0.00
Begin Drop @ 4298.00ft										
4,300.00	19.96	198.00	4,159.20	-814.87	-264.77	-813.62	2.00	-2.00	0.00	180.00
4,369.70	18.57	198.00	4,225.00	-836.74	-271.87	-835.45	2.00	-2.00	0.00	180.00
Sussex										
4,400.00	17.96	198.00	4,253.77	-845.77	-274.81	-844.47	2.00	-2.00	0.00	-180.00

Plan Report for Milk State 29C-21HZ - Rev A0 Permit

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 (°)
4,500.00	15.96	198.00	4,349.42	-873.51	-283.82	-872.17	2.00	-2.00	0.00	180.00
4,600.00	13.96	198.00	4,446.02	-898.06	-291.80	-896.68	2.00	-2.00	0.00	-180.00
4,700.00	11.96	198.00	4,543.47	-919.39	-298.73	-917.97	2.00	-2.00	0.00	180.00
4,800.00	9.96	198.00	4,641.64	-937.47	-304.60	-936.03	2.00	-2.00	0.00	180.00
4,900.00	7.96	198.00	4,740.42	-952.28	-309.42	-950.81	2.00	-2.00	0.00	180.00
5,000.00	5.96	198.00	4,839.67	-963.81	-313.16	-962.32	2.00	-2.00	0.00	180.00
5,100.00	3.96	198.00	4,939.29	-972.03	-315.83	-970.53	2.00	-2.00	0.00	180.00
5,200.00	1.96	198.00	5,039.16	-976.94	-317.43	-975.43	2.00	-2.00	0.00	180.00
5,298.00	0.00	0.00	5,137.14	-978.53	-317.95	-977.03	2.00	-2.00	165.31	180.00
End Drop @ 5298.00ft										
5,300.00	0.00	0.00	5,139.14	-978.53	-317.95	-977.03	0.00	0.00	0.00	180.00
5,400.00	0.00	0.00	5,239.14	-978.53	-317.95	-977.03	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,339.14	-978.53	-317.95	-977.03	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,439.14	-978.53	-317.95	-977.03	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,539.14	-978.53	-317.95	-977.03	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,639.14	-978.53	-317.95	-977.03	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,739.14	-978.53	-317.95	-977.03	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	5,839.14	-978.53	-317.95	-977.03	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	5,939.14	-978.53	-317.95	-977.03	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,039.14	-978.53	-317.95	-977.03	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,139.14	-978.53	-317.95	-977.03	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,239.14	-978.53	-317.95	-977.03	0.00	0.00	0.00	0.00
6,500.00	0.00	0.00	6,339.14	-978.53	-317.95	-977.03	0.00	0.00	0.00	0.00
6,600.00	0.00	0.00	6,439.14	-978.53	-317.95	-977.03	0.00	0.00	0.00	0.00
6,652.91	0.00	0.00	6,492.05	-978.53	-317.95	-977.03	0.00	0.00	0.00	0.00
Top of 4.5" Liner @ 6652.91ft										
6,700.00	0.00	0.00	6,539.14	-978.53	-317.95	-977.03	0.00	0.00	0.00	0.00
6,752.91	0.00	0.00	6,592.05	-978.53	-317.95	-977.03	0.00	0.00	0.00	0.00
KOP @ 6752.91ft										
6,800.00	4.71	359.73	6,639.08	-976.60	-317.95	-975.09	10.00	10.00	0.00	359.73
6,900.00	14.71	359.73	6,737.53	-959.76	-318.03	-958.25	10.00	10.00	0.00	0.00
6,986.26	23.34	359.73	6,819.00	-931.67	-318.17	-930.16	10.00	10.00	0.00	0.00
SSPG										
7,000.00	24.71	359.73	6,831.55	-926.08	-318.19	-924.57	10.00	10.00	0.00	0.00
7,053.46	30.05	359.73	6,879.00	-901.50	-318.31	-899.99	10.00	10.00	0.00	0.00
NBRR										
7,100.00	34.71	359.73	6,918.29	-876.58	-318.42	-875.07	10.00	10.00	0.00	0.00
7,100.86	34.79	359.73	6,919.00	-876.09	-318.43	-874.58	10.00	10.00	0.00	0.00
N470_B_CK										
7,200.00	44.71	359.73	6,995.13	-812.77	-318.72	-811.26	10.00	10.00	0.00	0.00
DLS = 10°/100'										
7,214.07	46.12	359.73	7,005.00	-802.76	-318.77	-801.25	10.00	10.00	0.00	0.00
N700_C_CK										
7,300.00	54.71	359.73	7,059.71	-736.59	-319.08	-735.08	10.00	10.00	0.00	0.00
7,400.00	64.71	359.73	7,110.09	-650.36	-319.49	-648.84	10.00	10.00	0.00	0.00
7,457.49	70.46	359.73	7,132.00	-597.24	-319.74	-595.72	10.00	10.00	0.00	0.00
FRHS										
7,500.00	74.71	359.73	7,144.72	-556.68	-319.93	-555.17	10.00	10.00	0.00	0.00
7,545.68	79.28	359.73	7,155.00	-512.19	-320.14	-510.67	10.00	10.00	0.00	0.00
CDLL										
7,600.00	84.71	359.73	7,162.56	-458.42	-320.39	-456.90	10.00	10.00	0.00	0.00
7,649.58	89.67	359.73	7,165.00	-408.91	-320.62	-407.40	10.00	10.00	0.00	0.00
End Build @ 7649.58ft - Landing Target (Heel) - 7"										
7,700.00	89.67	359.73	7,165.29	-358.49	-320.86	-356.98	0.00	0.00	0.00	0.00
7,800.00	89.67	359.73	7,165.87	-258.50	-321.33	-256.98	0.00	0.00	0.00	0.00
7,900.00	89.67	359.73	7,166.45	-158.50	-321.80	-156.98	0.00	0.00	0.00	0.00
8,000.00	89.67	359.73	7,167.03	-58.50	-322.27	-56.98	0.00	0.00	0.00	0.00
8,100.00	89.67	359.73	7,167.62	41.49	-322.74	43.01	0.00	0.00	0.00	0.00

Plan Report for Milk State 29C-21HZ - Rev A0 Permit

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 (°)
8,200.00	89.67	359.73	7,168.20	141.49	-323.21	143.01	0.00	0.00	0.00	0.00
8,300.00	89.67	359.73	7,168.78	241.49	-323.68	243.01	0.00	0.00	0.00	0.00
8,400.00	89.67	359.73	7,169.36	341.49	-324.15	343.01	0.00	0.00	0.00	0.00
8,500.00	89.67	359.73	7,169.94	441.48	-324.62	443.01	0.00	0.00	0.00	0.00
8,600.00	89.67	359.73	7,170.53	541.48	-325.10	543.01	0.00	0.00	0.00	0.00
8,700.00	89.67	359.73	7,171.11	641.48	-325.57	643.00	0.00	0.00	0.00	0.00
8,800.00	89.67	359.73	7,171.69	741.47	-326.04	743.00	0.00	0.00	0.00	0.00
8,900.00	89.67	359.73	7,172.27	841.47	-326.51	843.00	0.00	0.00	0.00	0.00
9,000.00	89.67	359.73	7,172.85	941.47	-326.98	943.00	0.00	0.00	0.00	0.00
9,100.00	89.67	359.73	7,173.43	1,041.47	-327.45	1,043.00	0.00	0.00	0.00	0.00
9,200.00	89.67	359.73	7,174.02	1,141.46	-327.92	1,143.00	0.00	0.00	0.00	0.00
9,300.00	89.67	359.73	7,174.60	1,241.46	-328.39	1,242.99	0.00	0.00	0.00	0.00
9,400.00	89.67	359.73	7,175.18	1,341.46	-328.86	1,342.99	0.00	0.00	0.00	0.00
9,500.00	89.67	359.73	7,175.76	1,441.46	-329.33	1,442.99	0.00	0.00	0.00	0.00
9,600.00	89.67	359.73	7,176.34	1,541.45	-329.80	1,542.99	0.00	0.00	0.00	0.00
9,700.00	89.67	359.73	7,176.93	1,641.45	-330.27	1,642.99	0.00	0.00	0.00	0.00
9,800.00	89.67	359.73	7,177.51	1,741.45	-330.74	1,742.99	0.00	0.00	0.00	0.00
9,900.00	89.67	359.73	7,178.09	1,841.44	-331.21	1,842.98	0.00	0.00	0.00	0.00
10,000.00	89.67	359.73	7,178.67	1,941.44	-331.68	1,942.98	0.00	0.00	0.00	0.00
10,100.00	89.67	359.73	7,179.25	2,041.44	-332.15	2,042.98	0.00	0.00	0.00	0.00
10,200.00	89.67	359.73	7,179.84	2,141.44	-332.62	2,142.98	0.00	0.00	0.00	0.00
10,300.00	89.67	359.73	7,180.42	2,241.43	-333.09	2,242.98	0.00	0.00	0.00	0.00
10,400.00	89.67	359.73	7,181.00	2,341.43	-333.56	2,342.98	0.00	0.00	0.00	0.00
10,500.00	89.67	359.73	7,181.58	2,441.43	-334.03	2,442.97	0.00	0.00	0.00	0.00
10,600.00	89.67	359.73	7,182.16	2,541.42	-334.50	2,542.97	0.00	0.00	0.00	0.00
10,700.00	89.67	359.73	7,182.74	2,641.42	-334.97	2,642.97	0.00	0.00	0.00	0.00
10,800.00	89.67	359.73	7,183.33	2,741.42	-335.44	2,742.97	0.00	0.00	0.00	0.00
10,900.00	89.67	359.73	7,183.91	2,841.42	-335.91	2,842.97	0.00	0.00	0.00	0.00
11,000.00	89.67	359.73	7,184.49	2,941.41	-336.38	2,942.97	0.00	0.00	0.00	0.00
11,100.00	89.67	359.73	7,185.07	3,041.41	-336.85	3,042.96	0.00	0.00	0.00	0.00
11,200.00	89.67	359.73	7,185.65	3,141.41	-337.32	3,142.96	0.00	0.00	0.00	0.00
11,300.00	89.67	359.73	7,186.24	3,241.40	-337.80	3,242.96	0.00	0.00	0.00	0.00
11,400.00	89.67	359.73	7,186.82	3,341.40	-338.27	3,342.96	0.00	0.00	0.00	0.00
11,500.00	89.67	359.73	7,187.40	3,441.40	-338.74	3,442.96	0.00	0.00	0.00	0.00
11,600.00	89.67	359.73	7,187.98	3,541.40	-339.21	3,542.96	0.00	0.00	0.00	0.00
11,700.00	89.67	359.73	7,188.56	3,641.39	-339.68	3,642.95	0.00	0.00	0.00	0.00
11,800.00	89.67	359.73	7,189.15	3,741.39	-340.15	3,742.95	0.00	0.00	0.00	0.00
11,900.00	89.67	359.73	7,189.73	3,841.39	-340.62	3,842.95	0.00	0.00	0.00	0.00
12,000.00	89.67	359.73	7,190.31	3,941.39	-341.09	3,942.95	0.00	0.00	0.00	0.00
12,100.00	89.67	359.73	7,190.89	4,041.38	-341.56	4,042.95	0.00	0.00	0.00	0.00
12,200.00	89.67	359.73	7,191.47	4,141.38	-342.03	4,142.95	0.00	0.00	0.00	0.00
12,300.00	89.67	359.73	7,192.05	4,241.38	-342.50	4,242.94	0.00	0.00	0.00	0.00
12,400.00	89.67	359.73	7,192.64	4,341.37	-342.97	4,342.94	0.00	0.00	0.00	0.00
12,500.00	89.67	359.73	7,193.22	4,441.37	-343.44	4,442.94	0.00	0.00	0.00	0.00
12,600.00	89.67	359.73	7,193.80	4,541.37	-343.91	4,542.94	0.00	0.00	0.00	0.00
12,700.00	89.67	359.73	7,194.38	4,641.37	-344.38	4,642.94	0.00	0.00	0.00	0.00
12,800.00	89.67	359.73	7,194.96	4,741.36	-344.85	4,742.94	0.00	0.00	0.00	0.00
12,806.16	89.67	359.73	7,195.00	4,747.52	-344.88	4,749.09	0.00	0.00	0.00	0.00

TD Well @ 12806.16ft - Total Depth (Toe) - Milk State 29C-21HZ_Bhl

Plan Report for Milk State 29C-21HZ - Rev A0 Permit

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,300.00	1,300.00	0.00	0.00	Begin Nudge @ 1300.00ft
2,300.00	2,279.82	-164.31	-53.39	End Nudge @ 2300.00ft
4,298.00	4,157.32	-814.22	-264.56	Begin Drop @ 4298.00ft
5,298.00	5,137.14	-978.53	-317.95	End Drop @ 5298.00ft
6,652.91	6,492.05	-978.53	-317.95	Top of 4.5" Liner @ 6652.91ft
6,752.91	6,592.05	-978.53	-317.95	KOP @ 6752.91ft
7,200.00	6,995.13	-812.77	-318.72	DLS = 10°/100'
7,649.58	7,165.00	-408.91	-320.62	End Build @ 7649.58ft
12,806.16	7,195.00	4,747.52	-344.88	TD Well @ 12806.16ft

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin		Start TVD (usft)
				+N/_S (usft)	+E/-W (usft)	
User	No Target (Freehand)	359.73	Slot	0.00	0.00	0.00

Survey tool program

From (usft)	To (usft)	Survey/Plan	Survey Tool
0.00	7,649.58	Rev A0 Permit	MWD+IFR1
7,649.58	12,806.16	Rev A0 Permit	MWD+IFR1

Casing Details

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,127.00	1,127.00	9 5/8"	9-5/8	13-1/2
7,649.58	7,165.00	7"	7	8-3/4

Formation Details

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
614.00	614.00	Base Fox Hills		0.00	
1,127.00	1,127.00	Surface Csg Setting Depth		0.00	
3,965.63	3,845.00	Parkman		0.00	
4,369.70	4,225.00	Sussex		0.00	
6,986.26	6,819.00	SSPG		0.00	
7,053.46	6,879.00	NBRR		0.00	
7,100.86	6,919.00	N470_B_CK		0.00	
7,214.07	7,005.00	N700_C_CK		0.00	
7,457.49	7,132.00	FRHS		0.00	
7,545.68	7,155.00	CDLL		0.00	
7,649.58	7,165.00	Landing Target (Heel)		0.00	
12,806.16	7,195.00	Total Depth (Toe)		0.00	

Plan Report for Milk State 29C-21HZ - Rev A0 Permit

Targets associated with this wellbore

Target Name	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Shape
Milk State 29C-21HZ_Bhl	7,195.00	4,747.52	-344.88	Point
Sec. 28 and 21-T3N-R65W	-9.00	166.06	-633.25	Polygon
Milk State 29C-21HZ_SHL	0.00	0.00	0.00	Point

North Reference Sheet for Milk 4-21HZ Pad - Milk State 29C-21HZ - 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' @ 4855.00usft (D Rig). Northing and Easting are relative to Milk State 29C-21HZ

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: 0.99960963

Grid Coordinates of Well: 14,601,552.02 usft N, 1,732,182.19 usft E

Geographical Coordinates of Well: 40° 12' 17.99" N, 104° 40' 16.83" W

Grid Convergence at Surface is: 0.21°

Based upon Minimum Curvature type calculations, at a Measured Depth of 12,806.16usft
the Bottom Hole Displacement is 4,760.03usft in the Direction of 355.85° (True).

Magnetic Convergence at surface is: -8.14° (11 October 2014, , IGRF2010)

