

US ROCKIES WATTENBERG PLANNING

WELD-NAD83-UTMFT13N

Milk 4-21HZ Pad

Milk State 29N-21HZ

Plan A

Plan: Rev A0 Permit

Sperry Drilling Services

Proposal Report

13 October, 2014

Well Coordinates: 14,601,551.77 N, 1,732,212.07 E (40° 12' 17.98" N, 104° 40' 16.44" W)

Ground Level: 4,838.00 usft

Local Coordinate Origin:

Centered on Well Milk State 29N-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

Project: WELD-NAD83-UTMFT13N
 Site: Milk 4-21HZ Pad
 Well: Milk State 29N-21HZ
 Wellbore: Plan A
 Design: Rev A0 Permit

US ROCKIES WATTENBERG PLANNING

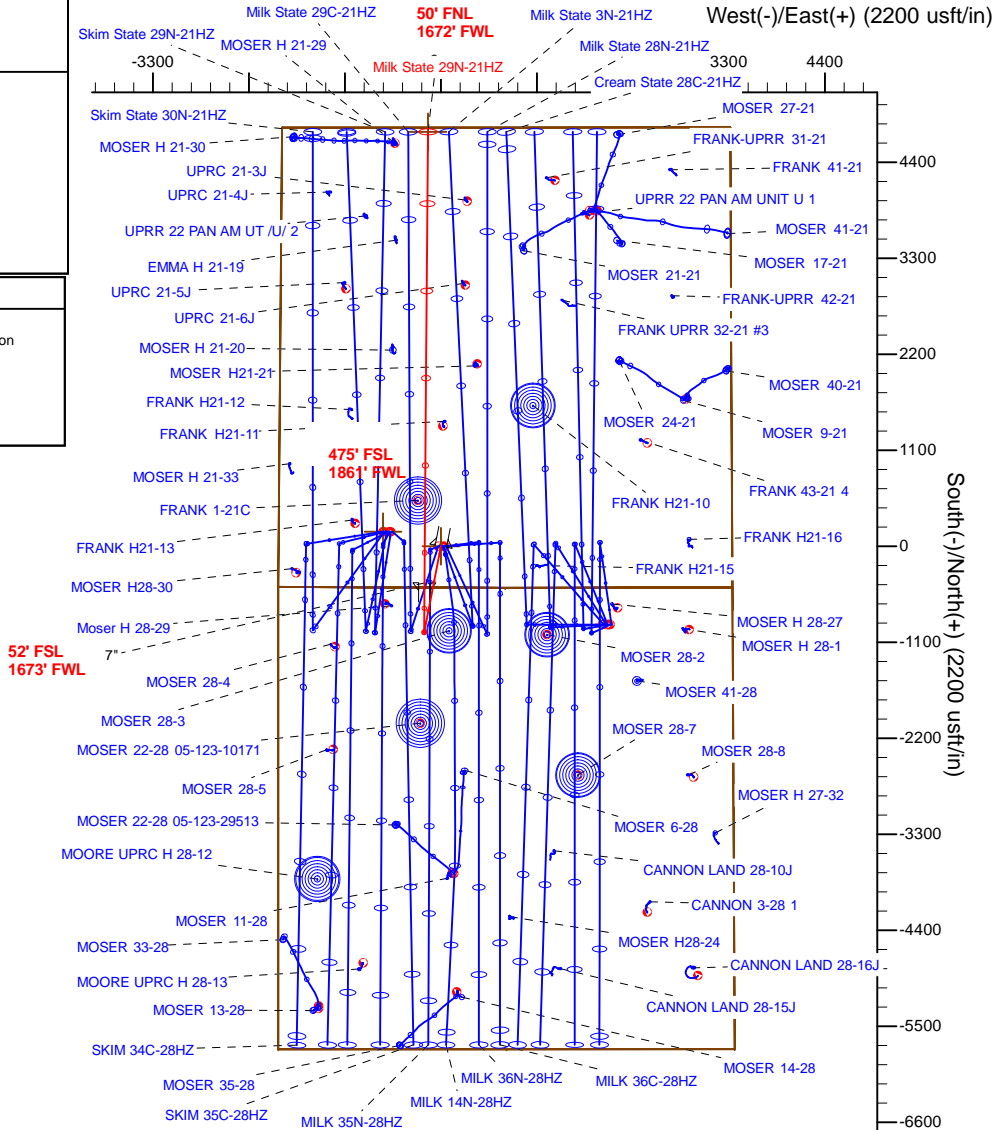
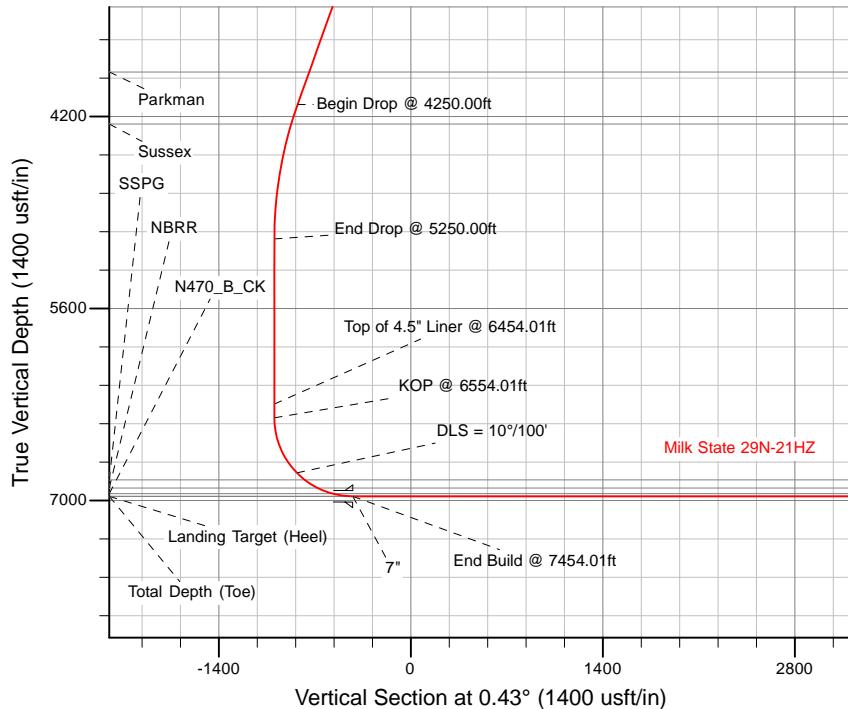


SECTION DETAILS

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	191.00	2279.82	-169.59	-32.97	2.00	191.00	-169.84	
4	4250.00	20.00	191.00	4112.22	-824.28	-160.22	0.00	0.00	-825.46	
5	5250.00	0.00	0.00	5092.03	-993.87	-193.19	2.00	180.00	-995.29	
6	6554.01	0.00	0.00	6396.04	-993.87	-193.19	0.00	0.00	-995.29	
7	7454.01	90.00	0.43	6969.00	-420.93	-188.84	10.00	0.43	-422.34	
8	12622.97	90.00	0.43	6969.00	4747.88	-149.63	0.00	0.00	4746.63	Milk State 29N-21HZ_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Polygon
Sec. 28 and 21-T3N-R65W	-9-00'	166.43	-663.13	40.205452	-104.673609	
Milk State 29N-21HZ_SHL	0.00	0.00	0.00	40.204995	-104.671234	
Milk State 29N-21HZ_BHL	6969.00	4747.88	-149.63	40.218033	-104.671770	



WELL DETAILS: Milk State 29N-21HZ	
Ground Level: 4838.00	
RKB = 17' @ 4855.00usft (D Rig)	
Plan: Rev A0 Permit (Milk State 29N-21HZ/Plan A)	
Created By: Clint Eshelman	Date: 10/13/2014
Reviewed: _____	Date: _____

TVD	MD	Description
6296.04	6454.01	Top of 4.5" Liner @ 6454.01ft
6396.04	6554.01	KOP @ 6554.01ft



Plan Report for Milk State 29N-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 29N-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	191.00	1,399.98	-1.71	-0.33	-1.72	2.00	2.00	0.00	191.00
1,500.00	4.00	191.00	1,499.84	-6.85	-1.33	-6.86	2.00	2.00	0.00	0.00
1,600.00	6.00	191.00	1,599.45	-15.41	-2.99	-15.43	2.00	2.00	0.00	0.00
1,700.00	8.00	191.00	1,698.70	-27.37	-5.32	-27.41	2.00	2.00	0.00	0.00
1,800.00	10.00	191.00	1,797.47	-42.72	-8.30	-42.78	2.00	2.00	0.00	0.00
1,900.00	12.00	191.00	1,895.62	-61.45	-11.95	-61.54	2.00	2.00	0.00	0.00
2,000.00	14.00	191.00	1,993.06	-83.53	-16.24	-83.65	2.00	2.00	0.00	0.00
2,100.00	16.00	191.00	2,089.64	-108.94	-21.18	-109.09	2.00	2.00	0.00	0.00
2,200.00	18.00	191.00	2,185.27	-137.64	-26.75	-137.83	2.00	2.00	0.00	0.00
2,300.00	20.00	191.00	2,279.82	-169.59	-32.97	-169.84	2.00	2.00	0.00	0.00
End Nudge @ 2300.00ft										
2,400.00	20.00	191.00	2,373.78	-203.17	-39.49	-203.46	0.00	0.00	0.00	0.00
2,500.00	20.00	191.00	2,467.75	-236.74	-46.02	-237.08	0.00	0.00	0.00	0.00
2,600.00	20.00	191.00	2,561.72	-270.31	-52.54	-270.70	0.00	0.00	0.00	0.00
2,700.00	20.00	191.00	2,655.69	-303.89	-59.07	-304.32	0.00	0.00	0.00	0.00
2,800.00	20.00	191.00	2,749.66	-337.46	-65.60	-337.94	0.00	0.00	0.00	0.00
2,900.00	20.00	191.00	2,843.63	-371.04	-72.12	-371.57	0.00	0.00	0.00	0.00
3,000.00	20.00	191.00	2,937.60	-404.61	-78.65	-405.19	0.00	0.00	0.00	0.00
3,100.00	20.00	191.00	3,031.57	-438.18	-85.17	-438.81	0.00	0.00	0.00	0.00
3,200.00	20.00	191.00	3,125.54	-471.76	-91.70	-472.43	0.00	0.00	0.00	0.00
3,300.00	20.00	191.00	3,219.51	-505.33	-98.23	-506.05	0.00	0.00	0.00	0.00
3,400.00	20.00	191.00	3,313.48	-538.90	-104.75	-539.67	0.00	0.00	0.00	0.00
3,500.00	20.00	191.00	3,407.45	-572.48	-111.28	-573.30	0.00	0.00	0.00	0.00
3,600.00	20.00	191.00	3,501.42	-606.05	-117.80	-606.92	0.00	0.00	0.00	0.00
3,700.00	20.00	191.00	3,595.39	-639.62	-124.33	-640.54	0.00	0.00	0.00	0.00
3,800.00	20.00	191.00	3,689.35	-673.20	-130.86	-674.16	0.00	0.00	0.00	0.00
3,900.00	20.00	191.00	3,783.32	-706.77	-137.38	-707.78	0.00	0.00	0.00	0.00
3,997.56	20.00	191.00	3,875.00	-739.53	-143.75	-740.58	0.00	0.00	0.00	0.00
Parkman										
4,000.00	20.00	191.00	3,877.29	-740.35	-143.91	-741.40	0.00	0.00	0.00	0.00
4,100.00	20.00	191.00	3,971.26	-773.92	-150.43	-775.03	0.00	0.00	0.00	0.00
4,200.00	20.00	191.00	4,065.23	-807.49	-156.96	-808.65	0.00	0.00	0.00	0.00
4,250.00	20.00	191.00	4,112.22	-824.28	-160.22	-825.46	0.00	0.00	0.00	0.00
Begin Drop @ 4250.00ft										
4,300.00	19.00	191.00	4,159.35	-840.66	-163.41	-841.87	2.00	-2.00	0.00	-180.00
4,400.00	17.00	191.00	4,254.45	-871.00	-169.30	-872.24	2.00	-2.00	0.00	180.00
4,400.58	16.99	191.00	4,255.00	-871.16	-169.34	-872.41	2.00	-2.00	0.00	180.00
Sussex										



Plan Report for Milk State 29N-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	15.00	191.00	4,350.57	-898.05	-174.56	-899.34	2.00	-2.00	0.00	-180.00
4,600.00	13.00	191.00	4,447.59	-921.80	-179.18	-923.12	2.00	-2.00	0.00	180.00
4,700.00	11.00	191.00	4,545.40	-942.21	-183.15	-943.55	2.00	-2.00	0.00	180.00
4,800.00	9.00	191.00	4,643.88	-959.25	-186.46	-960.62	2.00	-2.00	0.00	180.00
4,900.00	7.00	191.00	4,742.90	-972.91	-189.11	-974.30	2.00	-2.00	0.00	180.00
5,000.00	5.00	191.00	4,842.35	-983.17	-191.11	-984.58	2.00	-2.00	0.00	180.00
5,100.00	3.00	191.00	4,942.10	-990.02	-192.44	-991.44	2.00	-2.00	0.00	180.00
5,200.00	1.00	191.00	5,042.03	-993.44	-193.11	-994.87	2.00	-2.00	0.00	180.00
5,250.00	0.00	0.00	5,092.03	-993.87	-193.19	-995.29	2.00	-2.00	0.00	180.00
End Drop @ 5250.00ft										
5,300.00	0.00	0.00	5,142.03	-993.87	-193.19	-995.29	0.00	0.00	0.00	0.00
5,400.00	0.00	0.00	5,242.03	-993.87	-193.19	-995.29	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,342.03	-993.87	-193.19	-995.29	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,442.03	-993.87	-193.19	-995.29	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,542.03	-993.87	-193.19	-995.29	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,642.03	-993.87	-193.19	-995.29	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,742.03	-993.87	-193.19	-995.29	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	5,842.03	-993.87	-193.19	-995.29	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	5,942.03	-993.87	-193.19	-995.29	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,042.03	-993.87	-193.19	-995.29	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,142.03	-993.87	-193.19	-995.29	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,242.03	-993.87	-193.19	-995.29	0.00	0.00	0.00	0.00
6,454.01	0.00	0.00	6,296.04	-993.87	-193.19	-995.29	0.00	0.00	0.00	0.00
Top of 4.5" Liner @ 6454.01ft										
6,500.00	0.00	0.00	6,342.03	-993.87	-193.19	-995.29	0.00	0.00	0.00	0.00
6,554.01	0.00	0.00	6,396.04	-993.87	-193.19	-995.29	0.00	0.00	0.00	0.00
KOP @ 6554.01ft										
6,600.00	4.60	0.43	6,441.98	-992.03	-193.18	-993.45	10.00	10.00	0.00	0.43
6,700.00	14.60	0.43	6,540.46	-975.37	-193.05	-976.80	10.00	10.00	0.00	0.00
6,800.00	24.60	0.43	6,634.54	-941.87	-192.79	-943.30	10.00	10.00	0.00	0.00
6,900.00	34.60	0.43	6,721.38	-892.55	-192.42	-893.97	10.00	10.00	0.00	0.00
7,000.00	44.60	0.43	6,798.34	-828.89	-191.94	-830.31	10.00	10.00	0.00	0.00
DLS = 10°/100'										
7,076.39	52.24	0.43	6,849.00	-771.79	-191.50	-773.21	10.00	10.00	0.00	0.00
SSPG										
7,100.00	54.60	0.43	6,863.07	-752.83	-191.36	-754.25	10.00	10.00	0.00	0.00
7,189.46	63.54	0.43	6,909.00	-676.18	-190.78	-677.59	10.00	10.00	0.00	0.00
NBRR										
7,200.00	64.60	0.43	6,913.61	-666.70	-190.71	-668.11	10.00	10.00	0.00	0.00
7,300.00	74.60	0.43	6,948.43	-573.09	-190.00	-574.50	10.00	10.00	0.00	0.00
7,302.18	74.82	0.43	6,949.00	-570.99	-189.98	-572.40	10.00	10.00	0.00	0.00
N470_B_CK										
7,400.00	84.60	0.43	6,966.46	-474.86	-189.25	-476.27	10.00	10.00	0.00	0.00
7,454.01	90.00	0.43	6,969.00	-420.93	-188.84	-422.34	10.00	10.00	0.00	0.00
End Build @ 7454.01ft - Landing Target (Heel) - 7"										
7,500.00	90.00	0.43	6,969.00	-374.94	-188.49	-376.35	0.00	0.00	0.00	0.00
7,600.00	90.00	0.43	6,969.00	-274.95	-187.74	-276.35	0.00	0.00	0.00	0.00
7,700.00	90.00	0.43	6,969.00	-174.95	-186.98	-176.35	0.00	0.00	0.00	0.00
7,800.00	90.00	0.43	6,969.00	-74.95	-186.22	-76.35	0.00	0.00	0.00	0.00
7,900.00	90.00	0.43	6,969.00	25.05	-185.46	23.65	0.00	0.00	0.00	0.00
8,000.00	90.00	0.43	6,969.00	125.04	-184.70	123.65	0.00	0.00	0.00	0.00
8,100.00	90.00	0.43	6,969.00	225.04	-183.94	223.65	0.00	0.00	0.00	0.00
8,200.00	90.00	0.43	6,969.00	325.04	-183.18	323.65	0.00	0.00	0.00	0.00
8,300.00	90.00	0.43	6,969.00	425.03	-182.43	423.65	0.00	0.00	0.00	0.00
8,400.00	90.00	0.43	6,969.00	525.03	-181.67	523.65	0.00	0.00	0.00	0.00
8,500.00	90.00	0.43	6,969.00	625.03	-180.91	623.65	0.00	0.00	0.00	0.00
8,600.00	90.00	0.43	6,969.00	725.03	-180.15	723.65	0.00	0.00	0.00	0.00
8,700.00	90.00	0.43	6,969.00	825.02	-179.39	823.65	0.00	0.00	0.00	0.00



Plan Report for Milk State 29N-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)	Tooface Azimuth (°)
8,800.00	90.00	0.43	6,969.00	925.02	-178.63	923.65	0.00	0.00	0.00	0.00
8,900.00	90.00	0.43	6,969.00	1,025.02	-177.87	1,023.65	0.00	0.00	0.00	0.00
9,000.00	90.00	0.43	6,969.00	1,125.01	-177.12	1,123.65	0.00	0.00	0.00	0.00
9,100.00	90.00	0.43	6,969.00	1,225.01	-176.36	1,223.65	0.00	0.00	0.00	0.00
9,200.00	90.00	0.43	6,969.00	1,325.01	-175.60	1,323.65	0.00	0.00	0.00	0.00
9,300.00	90.00	0.43	6,969.00	1,425.01	-174.84	1,423.65	0.00	0.00	0.00	0.00
9,400.00	90.00	0.43	6,969.00	1,525.00	-174.08	1,523.65	0.00	0.00	0.00	0.00
9,500.00	90.00	0.43	6,969.00	1,625.00	-173.32	1,623.65	0.00	0.00	0.00	0.00
9,600.00	90.00	0.43	6,969.00	1,725.00	-172.56	1,723.65	0.00	0.00	0.00	0.00
9,700.00	90.00	0.43	6,969.00	1,824.99	-171.81	1,823.65	0.00	0.00	0.00	0.00
9,800.00	90.00	0.43	6,969.00	1,924.99	-171.05	1,923.65	0.00	0.00	0.00	0.00
9,900.00	90.00	0.43	6,969.00	2,024.99	-170.29	2,023.65	0.00	0.00	0.00	0.00
10,000.00	90.00	0.43	6,969.00	2,124.98	-169.53	2,123.65	0.00	0.00	0.00	0.00
10,100.00	90.00	0.43	6,969.00	2,224.98	-168.77	2,223.65	0.00	0.00	0.00	0.00
10,200.00	90.00	0.43	6,969.00	2,324.98	-168.01	2,323.65	0.00	0.00	0.00	0.00
10,300.00	90.00	0.43	6,969.00	2,424.98	-167.25	2,423.65	0.00	0.00	0.00	0.00
10,400.00	90.00	0.43	6,969.00	2,524.97	-166.49	2,523.65	0.00	0.00	0.00	0.00
10,500.00	90.00	0.43	6,969.00	2,624.97	-165.74	2,623.65	0.00	0.00	0.00	0.00
10,600.00	90.00	0.43	6,969.00	2,724.97	-164.98	2,723.65	0.00	0.00	0.00	0.00
10,700.00	90.00	0.43	6,969.00	2,824.96	-164.22	2,823.65	0.00	0.00	0.00	0.00
10,800.00	90.00	0.43	6,969.00	2,924.96	-163.46	2,923.65	0.00	0.00	0.00	0.00
10,900.00	90.00	0.43	6,969.00	3,024.96	-162.70	3,023.65	0.00	0.00	0.00	0.00
11,000.00	90.00	0.43	6,969.00	3,124.96	-161.94	3,123.65	0.00	0.00	0.00	0.00
11,100.00	90.00	0.43	6,969.00	3,224.95	-161.18	3,223.65	0.00	0.00	0.00	0.00
11,200.00	90.00	0.43	6,969.00	3,324.95	-160.43	3,323.65	0.00	0.00	0.00	0.00
11,300.00	90.00	0.43	6,969.00	3,424.95	-159.67	3,423.65	0.00	0.00	0.00	0.00
11,400.00	90.00	0.43	6,969.00	3,524.94	-158.91	3,523.65	0.00	0.00	0.00	0.00
11,500.00	90.00	0.43	6,969.00	3,624.94	-158.15	3,623.65	0.00	0.00	0.00	0.00
11,600.00	90.00	0.43	6,969.00	3,724.94	-157.39	3,723.65	0.00	0.00	0.00	0.00
11,700.00	90.00	0.43	6,969.00	3,824.94	-156.63	3,823.65	0.00	0.00	0.00	0.00
11,800.00	90.00	0.43	6,969.00	3,924.93	-155.87	3,923.65	0.00	0.00	0.00	0.00
11,900.00	90.00	0.43	6,969.00	4,024.93	-155.12	4,023.65	0.00	0.00	0.00	0.00
12,000.00	90.00	0.43	6,969.00	4,124.93	-154.36	4,123.65	0.00	0.00	0.00	0.00
12,100.00	90.00	0.43	6,969.00	4,224.92	-153.60	4,223.65	0.00	0.00	0.00	0.00
12,200.00	90.00	0.43	6,969.00	4,324.92	-152.84	4,323.65	0.00	0.00	0.00	0.00
12,300.00	90.00	0.43	6,969.00	4,424.92	-152.08	4,423.65	0.00	0.00	0.00	0.00
12,400.00	90.00	0.43	6,969.00	4,524.92	-151.32	4,523.65	0.00	0.00	0.00	0.00
12,500.00	90.00	0.43	6,969.00	4,624.91	-150.56	4,623.65	0.00	0.00	0.00	0.00
12,600.00	90.00	0.43	6,969.00	4,724.91	-149.81	4,723.65	0.00	0.00	0.00	0.00
12,622.97	90.00	0.43	6,969.00	4,747.88	-149.63	4,746.62	0.00	0.00	0.00	0.00

TD Well @ 12622.97ft - Total Depth (Toe) - Milk State 29N-21HZ_BHL

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	-169.59	-32.97	End Nudge @ 2300.00ft
4,250.00	4,112.22	-824.28	-160.22	Begin Drop @ 4250.00ft
5,250.00	5,092.03	-993.87	-193.19	End Drop @ 5250.00ft
6,454.01	6,296.04	-993.87	-193.19	Top of 4.5" Liner @ 6454.01ft
6,554.01	6,396.04	-993.87	-193.19	KOP @ 6554.01ft
7,000.00	6,798.34	-828.89	-191.94	DLS = 10°/100'
7,454.01	6,969.00	-420.93	-188.84	End Build @ 7454.01ft
12,622.97	6,969.00	4,747.88	-149.63	TD Well @ 12622.97ft

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

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin +N/_S (usft)	Origin +E/-W (usft)	Start TVD (usft)
User	No Target (Freehand)	0.43	Slot	0.00	0.00	0.00

Survey tool program

From (usft)	To (usft)	Survey/Plan	Survey Tool
0.00	7,454.01	Rev A0 Permit	MWD+IFR1
7,454.01	12,622.97	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
7,454.01	6,969.00	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	
3,997.56	3,875.00	Parkman		0.00	
4,400.58	4,255.00	Sussex		0.00	
7,076.39	6,849.00	SSPG		0.00	
7,189.46	6,909.00	NBRR		0.00	
7,302.18	6,949.00	N470_B_CK		0.00	
7,454.01	6,969.00	Landing Target (Heel)		0.00	
12,622.97	6,969.00	Total Depth (Toe)		0.00	

Targets associated with this wellbore

Target Name	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Shape
Sec. 28 and 21-T3N-R65W	-9.00	166.43	-663.13	Polygon
Milk State 29N-21HZ_BHL	6,969.00	4,747.88	-149.63	Point
Milk State 29N-21HZ_SHL	0.00	0.00	0.00	Point

North Reference Sheet for Milk 4-21HZ Pad - Milk State 29N-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 29N-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: 0.99960964

Grid Coordinates of Well: 14,601,551.77 usft N, 1,732,212.07 usft E
 Geographical Coordinates of Well: 40° 12' 17.98" N, 104° 40' 16.44" W
 Grid Convergence at Surface is: 0.21°

Based upon Minimum Curvature type calculations, at a Measured Depth of 12,622.97usft
 the Bottom Hole Displacement is 4,750.24usft in the Direction of 358.19° (True).

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

