

# **EXTRACTION OIL & GAS**

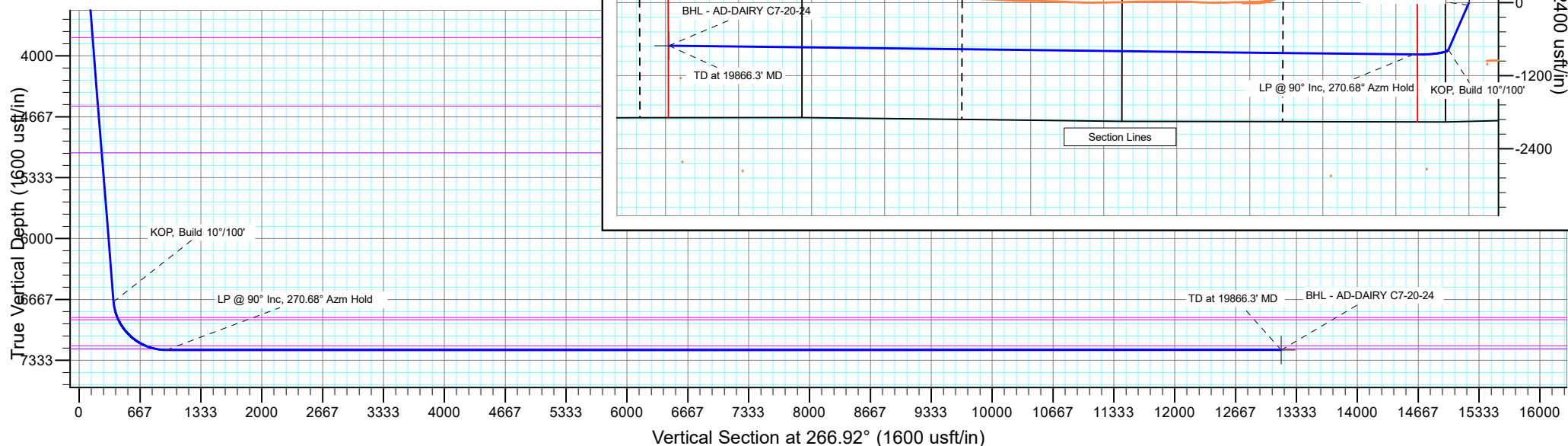
**Weld County  
Sec 21-T5N-R65W  
AD-DAIRY C7-20-24**

**ORIGINAL WELLBORE**

**Plan: PROPOSAL #1**

## **Standard Planning Report**

**13 February, 2017**



## Planning Report

<b>Database:</b>	EDT_32Bit_ODBC	<b>Local Co-ordinate Reference:</b>	Well AD-DAIRY C7-20-24
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4655.0usft (Original Well Elev)
<b>Project:</b>	Weld County	<b>MD Reference:</b>	KB-EST @ 4655.0usft (Original Well Elev)
<b>Site:</b>	Sec 21-T5N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	AD-DAIRY C7-20-24	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

Project	Weld County		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site		Sec 21-T5N-R65W			
Site Position:		Northing:	1,383,619.20 usft	Latitude:	40° 23' 0.636 N
From:	Lat/Long	Easting:	3,229,494.91 usft	Longitude:	104° 40' 34.248 W
Position Uncertainty:	0.0 usft	Slot Radius:	13.200 in	Grid Convergence:	0.53 °

Well	AD-DAIRY C7-20-24					
Well Position	+N/-S	-287.8 usft	Northing:	1,383,330.64 usft	Latitude:	40° 22' 57.792 N
	+E/-W	-83.6 usft	Easting:	3,229,414.02 usft	Longitude:	104° 40' 35.328 W
Position Uncertainty		0.0 usft	Wellhead Elevation:		Ground Level:	4,639.0 usft

Wellbore	ORIGINAL WELLBORE				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	5/22/2016	8.28	66.88	52,516.20438289

Design	PROPOSAL #1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	0.00

Plan Survey Tool Program			Date	2/13/2017	
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.0	19,866.3	PROPOSAL #1 (ORIGINAL WEL	MWD OWSG Rev 2	
				OWSG MWD - Standard	

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,203.9	10.08	203.47	2,201.4	-40.6	-17.6	2.00	2.00	0.00	203.47	
6,765.9	10.08	203.47	6,692.9	-772.9	-335.6	0.00	0.00	0.00	0.00	
7,627.0	90.00	270.68	7,220.0	-852.5	-908.2	10.00	9.28	7.80	67.52	
19,866.3	90.00	270.69	7,220.0	-706.9	-13,146.6	0.00	0.00	0.00	90.00	BHL - AD-DAIRY C7-;

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<b>Project:</b>	Weld County	<b>MD Reference:</b>	KB-EST @ 4655.0usft (Original Well Elev)
<b>Site:</b>	Sec 21-T5N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	AD-DAIRY C7-20-24	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>Build 2°/100'</b>									
1,800.0	2.00	203.47	1,800.0	-1.6	-0.7	-1.6	2.00	2.00	0.00
1,900.0	4.00	203.47	1,899.8	-6.4	-2.8	-6.4	2.00	2.00	0.00
2,000.0	6.00	203.47	1,999.5	-14.4	-6.3	-14.4	2.00	2.00	0.00
2,100.0	8.00	203.47	2,098.7	-25.6	-11.1	-25.6	2.00	2.00	0.00
2,203.9	10.08	203.47	2,201.4	-40.6	-17.6	-40.6	2.00	2.00	0.00
<b>Hold 10.08° Inc</b>									
2,300.0	10.08	203.47	2,295.9	-56.0	-24.3	-56.0	0.00	0.00	0.00
2,400.0	10.08	203.47	2,394.4	-72.0	-31.3	-72.0	0.00	0.00	0.00
2,500.0	10.08	203.47	2,492.8	-88.1	-38.2	-88.1	0.00	0.00	0.00
2,600.0	10.08	203.47	2,591.3	-104.1	-45.2	-104.1	0.00	0.00	0.00
2,700.0	10.08	203.47	2,689.7	-120.2	-52.2	-120.2	0.00	0.00	0.00
2,800.0	10.08	203.47	2,788.2	-136.2	-59.2	-136.2	0.00	0.00	0.00
2,900.0	10.08	203.47	2,886.7	-152.3	-66.1	-152.3	0.00	0.00	0.00
3,000.0	10.08	203.47	2,985.1	-168.3	-73.1	-168.3	0.00	0.00	0.00
3,100.0	10.08	203.47	3,083.6	-184.4	-80.1	-184.4	0.00	0.00	0.00
3,200.0	10.08	203.47	3,182.0	-200.4	-87.0	-200.4	0.00	0.00	0.00
3,300.0	10.08	203.47	3,280.5	-216.5	-94.0	-216.5	0.00	0.00	0.00
3,400.0	10.08	203.47	3,378.9	-232.5	-101.0	-232.5	0.00	0.00	0.00
3,500.0	10.08	203.47	3,477.4	-248.6	-108.0	-248.6	0.00	0.00	0.00
3,600.0	10.08	203.47	3,575.9	-264.7	-114.9	-264.7	0.00	0.00	0.00
3,700.0	10.08	203.47	3,674.3	-280.7	-121.9	-280.7	0.00	0.00	0.00
3,800.0	10.08	203.47	3,772.8	-296.8	-128.9	-296.8	0.00	0.00	0.00
3,827.7	10.08	203.47	3,800.0	-301.2	-130.8	-301.2	0.00	0.00	0.00
<b>PARKMAN</b>									
3,900.0	10.08	203.47	3,871.2	-312.8	-135.8	-312.8	0.00	0.00	0.00
4,000.0	10.08	203.47	3,969.7	-328.9	-142.8	-328.9	0.00	0.00	0.00
4,100.0	10.08	203.47	4,068.1	-344.9	-149.8	-344.9	0.00	0.00	0.00
4,200.0	10.08	203.47	4,166.6	-361.0	-156.8	-361.0	0.00	0.00	0.00
4,300.0	10.08	203.47	4,265.1	-377.0	-163.7	-377.0	0.00	0.00	0.00
4,400.0	10.08	203.47	4,363.5	-393.1	-170.7	-393.1	0.00	0.00	0.00
4,500.0	10.08	203.47	4,462.0	-409.1	-177.7	-409.1	0.00	0.00	0.00
4,589.4	10.08	203.47	4,550.0	-423.5	-183.9	-423.5	0.00	0.00	0.00
<b>SUSSEX</b>									
4,600.0	10.08	203.47	4,560.4	-425.2	-184.6	-425.2	0.00	0.00	0.00

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<b>Site:</b>	Sec 21-T5N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	AD-DAIRY C7-20-24	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,700.0	10.08	203.47	4,658.9	-441.2	-191.6	-441.2	0.00	0.00	0.00
4,800.0	10.08	203.47	4,757.3	-457.3	-198.6	-457.3	0.00	0.00	0.00
4,900.0	10.08	203.47	4,855.8	-473.3	-205.6	-473.3	0.00	0.00	0.00
5,000.0	10.08	203.47	4,954.3	-489.4	-212.5	-489.4	0.00	0.00	0.00
5,100.0	10.08	203.47	5,052.7	-505.4	-219.5	-505.4	0.00	0.00	0.00
5,107.4	10.08	203.47	5,060.0	-506.6	-220.0	-506.6	0.00	0.00	0.00
SHANNON									
5,200.0	10.08	203.47	5,151.2	-521.5	-226.5	-521.5	0.00	0.00	0.00
5,300.0	10.08	203.47	5,249.6	-537.5	-233.4	-537.5	0.00	0.00	0.00
5,400.0	10.08	203.47	5,348.1	-553.6	-240.4	-553.6	0.00	0.00	0.00
5,500.0	10.08	203.47	5,446.5	-569.6	-247.4	-569.6	0.00	0.00	0.00
5,600.0	10.08	203.47	5,545.0	-585.7	-254.3	-585.7	0.00	0.00	0.00
5,700.0	10.08	203.47	5,643.5	-601.7	-261.3	-601.7	0.00	0.00	0.00
5,800.0	10.08	203.47	5,741.9	-617.8	-268.3	-617.8	0.00	0.00	0.00
5,900.0	10.08	203.47	5,840.4	-633.9	-275.3	-633.9	0.00	0.00	0.00
6,000.0	10.08	203.47	5,938.8	-649.9	-282.2	-649.9	0.00	0.00	0.00
6,100.0	10.08	203.47	6,037.3	-666.0	-289.2	-666.0	0.00	0.00	0.00
6,200.0	10.08	203.47	6,135.7	-682.0	-296.2	-682.0	0.00	0.00	0.00
6,300.0	10.08	203.47	6,234.2	-698.1	-303.1	-698.1	0.00	0.00	0.00
6,400.0	10.08	203.47	6,332.6	-714.1	-310.1	-714.1	0.00	0.00	0.00
6,500.0	10.08	203.47	6,431.1	-730.2	-317.1	-730.2	0.00	0.00	0.00
6,600.0	10.08	203.47	6,529.6	-746.2	-324.1	-746.2	0.00	0.00	0.00
6,700.0	10.08	203.47	6,628.0	-762.3	-331.0	-762.3	0.00	0.00	0.00
6,765.9	10.08	203.47	6,692.9	-772.9	-335.6	-772.9	0.00	0.00	0.00
KOP, Build 10°/100'									
6,800.0	11.81	219.05	6,726.4	-778.3	-339.0	-778.3	10.00	5.07	45.70
6,850.0	15.38	234.11	6,775.0	-786.2	-347.6	-786.2	10.00	7.14	30.12
6,900.0	19.57	243.23	6,822.7	-793.8	-360.5	-793.8	10.00	8.39	18.26
6,945.5	23.66	248.71	6,865.0	-800.6	-375.8	-800.6	10.00	8.97	12.03
SHARON SPRINGS									
6,950.0	24.07	249.15	6,869.1	-801.2	-377.5	-801.2	10.00	9.17	9.88
6,973.1	26.20	251.23	6,890.0	-804.5	-386.7	-804.5	10.00	9.25	8.98
NIOBRARA									
7,000.0	28.72	253.28	6,913.9	-808.3	-398.5	-808.3	10.00	9.36	7.62
7,050.0	33.47	256.33	6,956.7	-815.0	-423.4	-815.0	10.00	9.49	6.10
7,100.0	38.28	258.69	6,997.2	-821.3	-452.0	-821.3	10.00	9.61	4.73
7,150.0	43.12	260.60	7,035.1	-827.2	-484.1	-827.2	10.00	9.69	3.82
7,200.0	47.99	262.19	7,070.1	-832.5	-519.4	-832.5	10.00	9.74	3.18
7,250.0	52.88	263.55	7,101.9	-837.3	-557.6	-837.3	10.00	9.78	2.73
7,300.0	57.78	264.75	7,130.4	-841.4	-598.5	-841.4	10.00	9.80	2.39
7,350.0	62.69	265.82	7,155.2	-845.0	-641.8	-845.0	10.00	9.82	2.15
7,396.9	67.31	266.75	7,175.0	-847.7	-684.2	-847.7	10.00	9.84	1.97
FORT HAYS									
7,400.0	67.61	266.81	7,176.2	-847.9	-687.0	-847.9	10.00	9.85	1.90
7,450.0	72.54	267.72	7,193.2	-850.1	-734.0	-850.1	10.00	9.85	1.83
7,500.0	77.47	268.59	7,206.2	-851.7	-782.2	-851.7	10.00	9.86	1.73
7,519.1	79.35	268.91	7,210.0	-852.1	-801.0	-852.1	10.00	9.86	1.69
CODELL									
7,550.0	82.40	269.42	7,214.9	-852.5	-831.4	-852.5	10.00	9.86	1.66
7,600.0	87.33	270.24	7,219.4	-852.7	-881.2	-852.7	10.00	9.87	1.63
7,627.0	90.00	270.68	7,220.0	-852.5	-908.2	-852.5	10.00	9.87	1.62
LP @ 90° Inc, 270.68° Azm Hold									
7,700.0	90.00	270.68	7,220.0	-851.6	-981.2	-851.6	0.00	0.00	0.00

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<b>Well:</b>	AD-DAIRY C7-20-24	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
7,800.0	90.00	270.68	7,220.0	-850.4	-1,081.2	-850.4	0.00	0.00	0.00	
7,900.0	90.00	270.68	7,220.0	-849.2	-1,181.2	-849.2	0.00	0.00	0.00	
8,000.0	90.00	270.68	7,220.0	-848.1	-1,281.2	-848.1	0.00	0.00	0.00	
8,100.0	90.00	270.68	7,220.0	-846.9	-1,381.2	-846.9	0.00	0.00	0.00	
8,200.0	90.00	270.68	7,220.0	-845.7	-1,481.2	-845.7	0.00	0.00	0.00	
8,300.0	90.00	270.68	7,220.0	-844.5	-1,581.2	-844.5	0.00	0.00	0.00	
8,400.0	90.00	270.68	7,220.0	-843.3	-1,681.1	-843.3	0.00	0.00	0.00	
8,500.0	90.00	270.68	7,220.0	-842.1	-1,781.1	-842.1	0.00	0.00	0.00	
8,600.0	90.00	270.68	7,220.0	-841.0	-1,881.1	-841.0	0.00	0.00	0.00	
8,700.0	90.00	270.68	7,220.0	-839.8	-1,981.1	-839.8	0.00	0.00	0.00	
8,800.0	90.00	270.68	7,220.0	-838.6	-2,081.1	-838.6	0.00	0.00	0.00	
8,900.0	90.00	270.68	7,220.0	-837.4	-2,181.1	-837.4	0.00	0.00	0.00	
9,000.0	90.00	270.68	7,220.0	-836.2	-2,281.1	-836.2	0.00	0.00	0.00	
9,100.0	90.00	270.68	7,220.0	-835.0	-2,381.1	-835.0	0.00	0.00	0.00	
9,200.0	90.00	270.68	7,220.0	-833.9	-2,481.1	-833.9	0.00	0.00	0.00	
9,300.0	90.00	270.68	7,220.0	-832.7	-2,581.1	-832.7	0.00	0.00	0.00	
9,400.0	90.00	270.68	7,220.0	-831.5	-2,681.1	-831.5	0.00	0.00	0.00	
9,500.0	90.00	270.68	7,220.0	-830.3	-2,781.1	-830.3	0.00	0.00	0.00	
9,600.0	90.00	270.68	7,220.0	-829.1	-2,881.1	-829.1	0.00	0.00	0.00	
9,700.0	90.00	270.68	7,220.0	-827.9	-2,981.1	-827.9	0.00	0.00	0.00	
9,800.0	90.00	270.68	7,220.0	-826.8	-3,081.1	-826.8	0.00	0.00	0.00	
9,900.0	90.00	270.68	7,220.0	-825.6	-3,181.0	-825.6	0.00	0.00	0.00	
10,000.0	90.00	270.68	7,220.0	-824.4	-3,281.0	-824.4	0.00	0.00	0.00	
10,100.0	90.00	270.68	7,220.0	-823.2	-3,381.0	-823.2	0.00	0.00	0.00	
10,200.0	90.00	270.68	7,220.0	-822.0	-3,481.0	-822.0	0.00	0.00	0.00	
10,300.0	90.00	270.68	7,220.0	-820.8	-3,581.0	-820.8	0.00	0.00	0.00	
10,400.0	90.00	270.68	7,220.0	-819.6	-3,681.0	-819.6	0.00	0.00	0.00	
10,500.0	90.00	270.68	7,220.0	-818.5	-3,781.0	-818.5	0.00	0.00	0.00	
10,600.0	90.00	270.68	7,220.0	-817.3	-3,881.0	-817.3	0.00	0.00	0.00	
10,700.0	90.00	270.68	7,220.0	-816.1	-3,981.0	-816.1	0.00	0.00	0.00	
10,800.0	90.00	270.68	7,220.0	-814.9	-4,081.0	-814.9	0.00	0.00	0.00	
10,900.0	90.00	270.68	7,220.0	-813.7	-4,181.0	-813.7	0.00	0.00	0.00	
11,000.0	90.00	270.68	7,220.0	-812.5	-4,281.0	-812.5	0.00	0.00	0.00	
11,100.0	90.00	270.68	7,220.0	-811.3	-4,381.0	-811.3	0.00	0.00	0.00	
11,200.0	90.00	270.68	7,220.0	-810.2	-4,481.0	-810.2	0.00	0.00	0.00	
11,300.0	90.00	270.68	7,220.0	-809.0	-4,580.9	-809.0	0.00	0.00	0.00	
11,400.0	90.00	270.68	7,220.0	-807.8	-4,680.9	-807.8	0.00	0.00	0.00	
11,500.0	90.00	270.68	7,220.0	-806.6	-4,780.9	-806.6	0.00	0.00	0.00	
11,600.0	90.00	270.68	7,220.0	-805.4	-4,880.9	-805.4	0.00	0.00	0.00	
11,700.0	90.00	270.68	7,220.0	-804.2	-4,980.9	-804.2	0.00	0.00	0.00	
11,800.0	90.00	270.68	7,220.0	-803.0	-5,080.9	-803.0	0.00	0.00	0.00	
11,900.0	90.00	270.68	7,220.0	-801.8	-5,180.9	-801.8	0.00	0.00	0.00	
12,000.0	90.00	270.68	7,220.0	-800.7	-5,280.9	-800.7	0.00	0.00	0.00	
12,100.0	90.00	270.68	7,220.0	-799.5	-5,380.9	-799.5	0.00	0.00	0.00	
12,200.0	90.00	270.68	7,220.0	-798.3	-5,480.9	-798.3	0.00	0.00	0.00	
12,300.0	90.00	270.68	7,220.0	-797.1	-5,580.9	-797.1	0.00	0.00	0.00	
12,400.0	90.00	270.68	7,220.0	-795.9	-5,680.9	-795.9	0.00	0.00	0.00	
12,500.0	90.00	270.68	7,220.0	-794.7	-5,780.9	-794.7	0.00	0.00	0.00	
12,600.0	90.00	270.68	7,220.0	-793.5	-5,880.9	-793.5	0.00	0.00	0.00	
12,700.0	90.00	270.68	7,220.0	-792.3	-5,980.8	-792.3	0.00	0.00	0.00	
19,866.3	90.00	270.69	7,220.0	-706.9	-13,146.6	-706.9	0.00	0.00	0.00	
TD at 19866.3' MD										

## Planning Report

<b>Database:</b>	EDT_32Bit_ODBC	<b>Local Co-ordinate Reference:</b>	Well AD-DAIRY C7-20-24
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4655.0usft (Original Well Elev)
<b>Project:</b>	Weld County	<b>MD Reference:</b>	KB-EST @ 4655.0usft (Original Well Elev)
<b>Site:</b>	Sec 21-T5N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	AD-DAIRY C7-20-24	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,827.7	3,800.0	PARKMAN				
4,589.4	4,550.0	SUSSEX				
5,107.4	5,060.0	SHANNON				
6,945.5	6,865.0	SHARON SPRINGS				
6,973.1	6,890.0	NIOBRARA				
7,396.9	7,175.0	FORT HAYS				
7,519.1	7,210.0	CODELL				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
1,700.0	1,700.0	0.0	0.0	Build 2°/100'	
2,203.9	2,201.4	-40.6	-17.6	Hold 10.08° Inc	
6,765.9	6,692.9	-772.9	-335.6	KOP, Build 10°/100'	
7,627.0	7,220.0	-852.5	-908.2	LP @ 90° Inc, 270.68° Azm Hold	
19,866.3	7,220.0	-706.9	-13,146.6	TD at 19866.3' MD	