

# **EXTRACTION OIL & GAS**

**Weld County**

**Sec 29-T12N-R61W**

**DARLENE EAST 29N-20-11C**

**ORIGINAL WELLBORE**

**Plan: PROPOSAL 1**

## **Standard Planning Report**

**28 August, 2017**



Project: Weld County  
Site: Sec 29-T12N-R61W  
Well: DARLENE EAST 29N-20-11C  
Wellbore: ORIGINAL WELLBORE  
Design: PROPOSAL 1

PROJECT DETAILS: Weld County

Geodetic System: US State Plane 1983  
Datum: North American Datum 1983  
Ellipsoid: GRS 1980  
Zone: Colorado Northern Zone

System Datum: Mean Sea Level



Azimuths to True North  
Magnetic North: 7.95°

Magnetic Field  
Strength: 52716.5nT  
Dip Angle: 67.39°  
Date: 8/28/2017  
Model: IGRF2015

WELL DETAILS: DARLENE EAST 29N-20-11C

+N/-S	+E/-W	Northing	Easting	5247.00	Latitude	Longitude	Slot
0.00	0.00	1600226.79	3351479.75		40° 58' 26.605 N	104° 13' 37.844 W	

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	200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	
3	958.26	15.17	115.73	949.44	-43.31	89.87	2.00	115.73	-30.28	
4	5888.06	15.17	115.73	5707.56	-803.25	1251.63	0.00	0.00	-421.71	
5	6646.32	0.00	0.00	6457.00	-646.56	1341.50	2.00	180.00	-451.99	
6	6746.32	0.00	0.00	6557.00	-646.56	1341.50	0.00	0.00	-451.99	
7	7646.40	90.00	0.23	7130.00	-73.56	1343.76	10.00	0.23	115.67	DARLENE EAST 29N 11C LP
8	17483.55	90.00	0.23	7130.00	9763.52	1383.24	0.00	101.20	9861.02	DARLENE EAST 29N 11C PBHL

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3100.00	3186.42	PARKMAN
3670.00	3776.98	SUSSEX
4075.00	4196.60	SHANNON
6865.00	7071.50	NIOBRARA
6948.00	7176.65	NIO B TARGET
7103.00	7469.79	FORT HAYS
7130.00	7646.40	CODELL

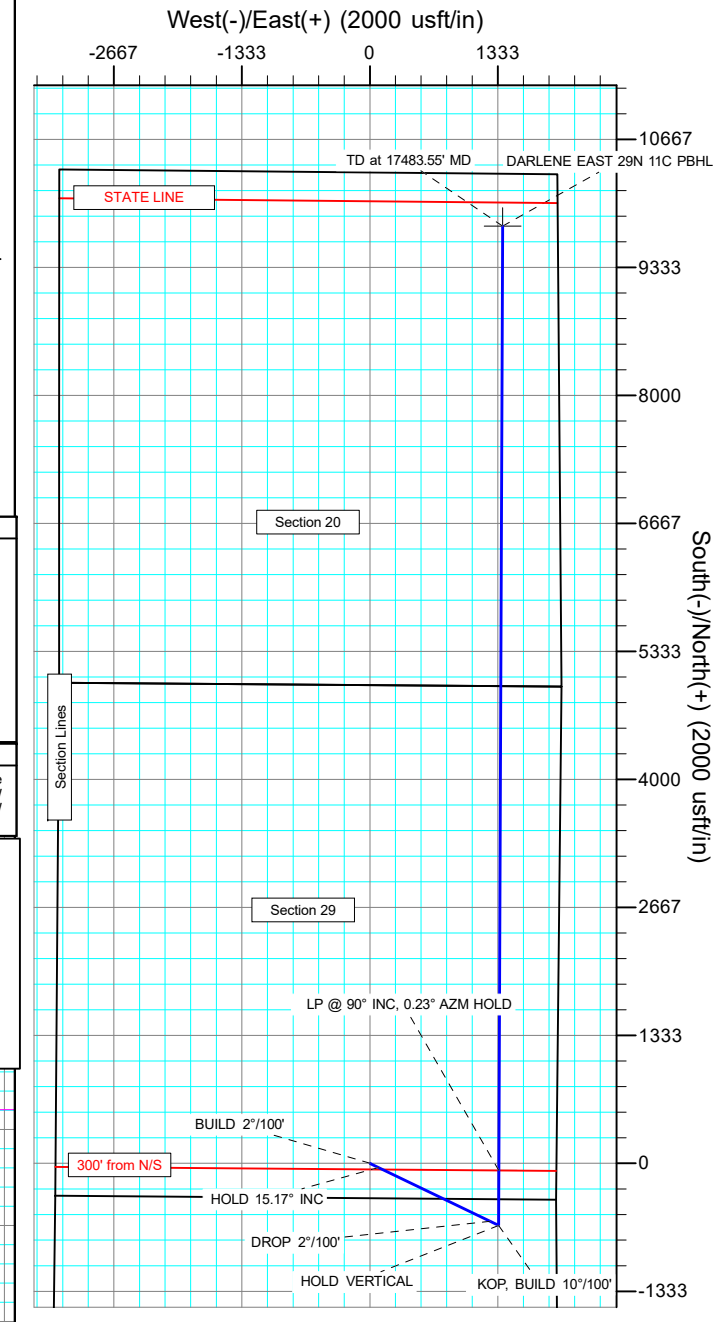
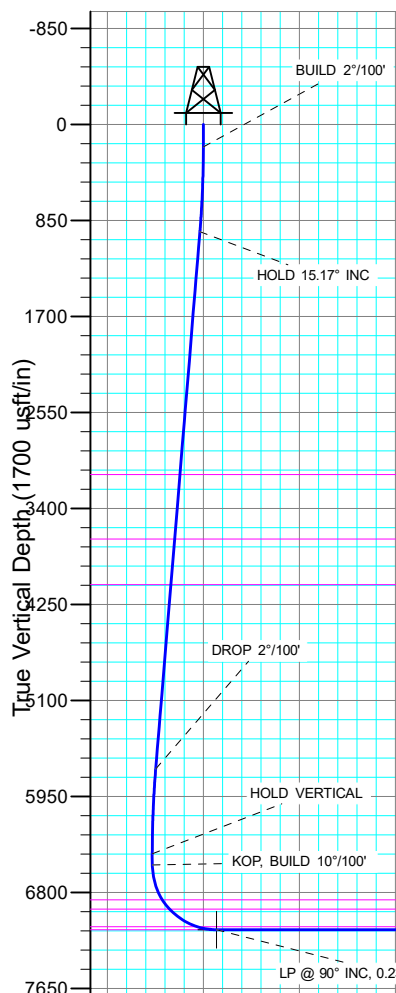
ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSec	Departure	Annotation
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	BUILD 2"/100'
958.26	15.17	115.73	949.44	-43.31	89.87	-30.28	99.76	HOLD 15.17° INC
5888.06	15.17	115.73	5707.56	-803.25	1251.63	-421.71	1389.42	DROP 2"/100'
6646.32	0.00	0.00	6457.00	-646.56	1341.50	-451.99	1489.18	HOLD VERTICAL
6746.32	0.00	0.00	6557.00	-646.56	1341.50	-451.99	1489.18	KOP, BUILD 10"/100'
7646.40	90.00	0.23	7130.00	-73.56	1343.76	115.67	2062.19	LP @ 90° INC, 0.23° AZM HOLD
17483.55	90.00	0.23	7130.00	9763.52	1383.24	9861.02	11899.34	TD at 17483.55' MD

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
DARLENE EAST 29N11C LP	7130.00	-73.56	1343.76	1600172.53	3352824.43	40° 58' 25.878 N	104° 13' 20.327 W
DARLENE EAST 29N11C PBHL	9763.52	9763.52	1383.24	1610009.15	3352722.72	41° 0' 3.071 N	104° 13' 19.805 W

SHL:  
363' FSL, 1942' FEL  
Sec 29-T12N-R61W  
  
LP:  
300' FSL, 598' FEL  
Sec 29-T12N-R61W  
  
BHL:  
300' FNL(STATE LINE),  
574' FEL  
Sec 20-T12N-R61W



## Planning Report

<b>Database:</b>	EDT_32Bit_ODBC	<b>Local Co-ordinate Reference:</b>	Well DARLENE EAST 29N-20-11C
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB 25' @ 5272.00usft
<b>Project:</b>	Weld County	<b>MD Reference:</b>	KB 25' @ 5272.00usft
<b>Site:</b>	Sec 29-T12N-R61W	<b>North Reference:</b>	True
<b>Well:</b>	DARLENE EAST 29N-20-11C	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL 1		

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

Site		Sec 29-T12N-R61W			
Site Position:		Northing:	1,599,841.88 usft	Latitude:	40° 58' 23.264 N
From:	Lat/Long	Easting:	3,348,207.53 usft	Longitude:	104° 14' 20.569 W
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence:	0.81 °

Well	DARLENE EAST 29N-20-11C					
Well Position	+N/-S	338.34 usft	Northing:	1,600,226.78 usft	Latitude:	40° 58' 26.605 N
	+E/-W	3,277.37 usft	Easting:	3,351,479.76 usft	Longitude:	104° 13' 37.844 W
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	5,247.00 usft

<b>Wellbore</b>	ORIGINAL WELLBORE				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2015	8/28/2017	7.94	67.39	52,716.54221687

<b>Design</b>	PROPOSAL 1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	8.06

<b>Plan Survey Tool Program</b>	<b>Date</b>	8/28/2017		
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>
1	0.00	17,483.55	PROPOSAL 1 (ORIGINAL WELL	MWD OWSG
			OWSG MWD - Standard	

<b>Plan Sections</b>										
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Dogleg Rate (°/100ft)</b>	<b>Build Rate (°/100ft)</b>	<b>Turn Rate (°/100ft)</b>	<b>TFO (°)</b>	<b>Target</b>
0.00	0.00	0.00	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	
958.26	15.17	115.73	949.44	-43.31	89.87	2.00	2.00	0.00	115.73	
5,888.06	15.17	115.73	5,707.56	-603.25	1,251.63	0.00	0.00	0.00	0.00	
6,646.32	0.00	0.00	6,457.00	-646.56	1,341.50	2.00	-2.00	0.00	180.00	
6,746.32	0.00	0.00	6,557.00	-646.56	1,341.50	0.00	0.00	0.00	0.00	
7,646.40	90.00	0.23	7,130.00	-73.56	1,343.76	10.00	10.00	0.03	0.23	DARLENE EAST 29N
17,483.55	90.00	0.23	7,130.00	9,763.52	1,383.25	0.00	0.00	0.00	101.20	DARLENE EAST 29N

# Planning Report

<b>Database:</b>	EDT_32Bit_ODBC	<b>Local Co-ordinate Reference:</b>	Well DARLENE EAST 29N-20-11C
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB 25' @ 5272.00usft
<b>Project:</b>	Weld County	<b>MD Reference:</b>	KB 25' @ 5272.00usft
<b>Site:</b>	Sec 29-T12N-R61W	<b>North Reference:</b>	True
<b>Well:</b>	DARLENE EAST 29N-20-11C	<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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	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
<b>BUILD 2°/100'</b>									
300.00	2.00	115.73	299.98	-0.76	1.57	-0.53	2.00	2.00	0.00
400.00	4.00	115.73	399.84	-3.03	6.29	-2.12	2.00	2.00	0.00
500.00	6.00	115.73	499.45	-6.81	14.14	-4.76	2.00	2.00	0.00
600.00	8.00	115.73	598.70	-12.10	25.12	-8.46	2.00	2.00	0.00
700.00	10.00	115.73	697.47	-18.90	39.21	-13.21	2.00	2.00	0.00
800.00	12.00	115.73	795.62	-27.18	56.39	-19.00	2.00	2.00	0.00
900.00	14.00	115.73	893.06	-36.95	76.66	-25.83	2.00	2.00	0.00
958.26	15.17	115.73	949.44	-43.31	89.87	-30.28	2.00	2.00	0.00
<b>HOLD 15.17° INC</b>									
1,000.00	15.17	115.73	989.72	-48.06	99.71	-33.59	0.00	0.00	0.00
1,100.00	15.17	115.73	1,086.24	-59.41	123.27	-41.53	0.00	0.00	0.00
1,200.00	15.17	115.73	1,182.76	-70.77	146.84	-49.47	0.00	0.00	0.00
1,300.00	15.17	115.73	1,279.28	-82.13	170.41	-57.41	0.00	0.00	0.00
1,400.00	15.17	115.73	1,375.79	-93.49	193.97	-65.35	0.00	0.00	0.00
1,500.00	15.17	115.73	1,472.31	-104.85	217.54	-73.29	0.00	0.00	0.00
1,600.00	15.17	115.73	1,568.83	-116.20	241.10	-81.23	0.00	0.00	0.00
1,700.00	15.17	115.73	1,665.35	-127.56	264.67	-89.17	0.00	0.00	0.00
1,800.00	15.17	115.73	1,761.86	-138.92	288.24	-97.11	0.00	0.00	0.00
1,900.00	15.17	115.73	1,858.38	-150.28	311.80	-105.05	0.00	0.00	0.00
2,000.00	15.17	115.73	1,954.90	-161.64	335.37	-112.99	0.00	0.00	0.00
2,100.00	15.17	115.73	2,051.42	-172.99	358.93	-120.93	0.00	0.00	0.00
2,200.00	15.17	115.73	2,147.93	-184.35	382.50	-128.88	0.00	0.00	0.00
2,300.00	15.17	115.73	2,244.45	-195.71	406.07	-136.82	0.00	0.00	0.00
2,400.00	15.17	115.73	2,340.97	-207.07	429.63	-144.76	0.00	0.00	0.00
2,500.00	15.17	115.73	2,437.49	-218.43	453.20	-152.70	0.00	0.00	0.00
2,600.00	15.17	115.73	2,534.00	-229.78	476.76	-160.64	0.00	0.00	0.00
2,700.00	15.17	115.73	2,630.52	-241.14	500.33	-168.58	0.00	0.00	0.00
2,800.00	15.17	115.73	2,727.04	-252.50	523.90	-176.52	0.00	0.00	0.00
2,900.00	15.17	115.73	2,823.56	-263.86	547.46	-184.46	0.00	0.00	0.00
3,000.00	15.17	115.73	2,920.07	-275.22	571.03	-192.40	0.00	0.00	0.00
3,100.00	15.17	115.73	3,016.59	-286.58	594.59	-200.34	0.00	0.00	0.00
3,186.42	15.17	115.73	3,100.00	-296.39	614.96	-207.20	0.00	0.00	0.00
<b>PARKMAN</b>									
3,200.00	15.17	115.73	3,113.11	-297.93	618.16	-208.28	0.00	0.00	0.00
3,300.00	15.17	115.73	3,209.63	-309.29	641.73	-216.22	0.00	0.00	0.00
3,400.00	15.17	115.73	3,306.15	-320.65	665.29	-224.16	0.00	0.00	0.00
3,500.00	15.17	115.73	3,402.66	-332.01	688.86	-232.10	0.00	0.00	0.00
3,600.00	15.17	115.73	3,499.18	-343.37	712.42	-240.04	0.00	0.00	0.00
3,700.00	15.17	115.73	3,595.70	-354.72	735.99	-247.98	0.00	0.00	0.00
3,776.98	15.17	115.73	3,670.00	-363.47	754.13	-254.09	0.00	0.00	0.00
<b>SUSSEX</b>									
3,800.00	15.17	115.73	3,692.22	-366.08	759.56	-255.92	0.00	0.00	0.00
3,900.00	15.17	115.73	3,788.73	-377.44	783.12	-263.86	0.00	0.00	0.00
4,000.00	15.17	115.73	3,885.25	-388.80	806.69	-271.80	0.00	0.00	0.00
4,100.00	15.17	115.73	3,981.77	-400.16	830.25	-279.74	0.00	0.00	0.00
4,196.60	15.17	115.73	4,075.00	-411.13	853.02	-287.41	0.00	0.00	0.00
<b>SHANNON</b>									
4,200.00	15.17	115.73	4,078.29	-411.51	853.82	-287.68	0.00	0.00	0.00
4,300.00	15.17	115.73	4,174.80	-422.87	877.39	-295.62	0.00	0.00	0.00

# Planning Report

<b>Database:</b>	EDT_32Bit_ODBC	<b>Local Co-ordinate Reference:</b>	Well DARLENE EAST 29N-20-11C
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB 25' @ 5272.00usft
<b>Project:</b>	Weld County	<b>MD Reference:</b>	KB 25' @ 5272.00usft
<b>Site:</b>	Sec 29-T12N-R61W	<b>North Reference:</b>	True
<b>Well:</b>	DARLENE EAST 29N-20-11C	<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)
4,400.00	15.17	115.73	4,271.32	-434.23	900.95	-303.56	0.00	0.00	0.00
4,500.00	15.17	115.73	4,367.84	-445.59	924.52	-311.50	0.00	0.00	0.00
4,600.00	15.17	115.73	4,464.36	-456.95	948.08	-319.44	0.00	0.00	0.00
4,700.00	15.17	115.73	4,560.87	-468.30	971.65	-327.38	0.00	0.00	0.00
4,800.00	15.17	115.73	4,657.39	-479.66	995.22	-335.32	0.00	0.00	0.00
4,900.00	15.17	115.73	4,753.91	-491.02	1,018.78	-343.26	0.00	0.00	0.00
5,000.00	15.17	115.73	4,850.43	-502.38	1,042.35	-351.20	0.00	0.00	0.00
5,100.00	15.17	115.73	4,946.94	-513.74	1,065.91	-359.14	0.00	0.00	0.00
5,200.00	15.17	115.73	5,043.46	-525.09	1,089.48	-367.08	0.00	0.00	0.00
5,300.00	15.17	115.73	5,139.98	-536.45	1,113.05	-375.02	0.00	0.00	0.00
5,400.00	15.17	115.73	5,236.50	-547.81	1,136.61	-382.96	0.00	0.00	0.00
5,500.00	15.17	115.73	5,333.01	-559.17	1,160.18	-390.90	0.00	0.00	0.00
5,600.00	15.17	115.73	5,429.53	-570.53	1,183.74	-398.84	0.00	0.00	0.00
5,700.00	15.17	115.73	5,526.05	-581.88	1,207.31	-406.78	0.00	0.00	0.00
5,800.00	15.17	115.73	5,622.57	-593.24	1,230.88	-414.72	0.00	0.00	0.00
5,888.06	15.17	115.73	5,707.56	-603.25	1,251.63	-421.71	0.00	0.00	0.00
<b>DROP 2°/100'</b>									
5,900.00	14.93	115.73	5,719.09	-604.59	1,254.42	-422.65	2.00	-2.00	0.00
6,000.00	12.93	115.73	5,816.15	-615.04	1,276.10	-429.95	2.00	-2.00	0.00
6,100.00	10.93	115.73	5,913.98	-624.01	1,294.72	-436.23	2.00	-2.00	0.00
6,200.00	8.93	115.73	6,012.48	-631.50	1,310.24	-441.46	2.00	-2.00	0.00
6,300.00	6.93	115.73	6,111.52	-637.48	1,322.67	-445.64	2.00	-2.00	0.00
6,400.00	4.93	115.73	6,210.98	-641.97	1,331.97	-448.78	2.00	-2.00	0.00
6,500.00	2.93	115.73	6,310.74	-644.94	1,338.13	-450.86	2.00	-2.00	0.00
6,600.00	0.93	115.73	6,410.68	-646.40	1,341.16	-451.88	2.00	-2.00	0.00
6,646.32	0.00	0.00	6,457.00	-646.56	1,341.50	-451.99	2.00	-2.00	0.00
<b>HOLD VERTICAL</b>									
6,700.00	0.00	0.00	6,510.68	-646.56	1,341.50	-451.99	0.00	0.00	0.00
6,746.32	0.00	0.00	6,557.00	-646.56	1,341.50	-451.99	0.00	0.00	0.00
<b>KOP, BUILD 10°/100'</b>									
6,750.00	0.37	0.23	6,560.68	-646.55	1,341.50	-451.98	10.00	10.00	0.00
6,800.00	5.37	0.23	6,610.60	-644.05	1,341.51	-449.50	10.00	10.00	0.00
6,850.00	10.37	0.23	6,660.11	-637.21	1,341.54	-442.72	10.00	10.00	0.00
6,900.00	15.37	0.23	6,708.84	-626.08	1,341.58	-431.70	10.00	10.00	0.00
6,950.00	20.37	0.23	6,756.42	-610.74	1,341.64	-416.50	10.00	10.00	0.00
7,000.00	25.37	0.23	6,802.47	-591.32	1,341.72	-397.26	10.00	10.00	0.00
7,050.00	30.37	0.23	6,846.66	-567.96	1,341.81	-374.12	10.00	10.00	0.00
7,071.50	32.52	0.23	6,865.00	-556.74	1,341.85	-363.01	10.00	10.00	0.00
<b>NIORARA</b>									
7,100.00	35.37	0.23	6,888.64	-540.83	1,341.92	-347.25	10.00	10.00	0.00
7,150.00	40.36	0.23	6,928.10	-510.15	1,342.04	-316.85	10.00	10.00	0.00
7,176.65	43.03	0.23	6,948.00	-492.43	1,342.11	-299.29	10.00	10.00	0.00
<b>NIO B TARGET</b>									
7,200.00	45.36	0.23	6,964.74	-476.15	1,342.17	-283.17	10.00	10.00	0.00
7,250.00	50.36	0.23	6,998.27	-439.08	1,342.32	-246.45	10.00	10.00	0.00
7,300.00	55.36	0.23	7,028.45	-399.24	1,342.47	-206.97	10.00	10.00	0.00
7,350.00	60.36	0.23	7,055.04	-356.91	1,342.64	-165.04	10.00	10.00	0.00
7,400.00	65.36	0.23	7,077.84	-312.43	1,342.82	-120.98	10.00	10.00	0.00
7,450.00	70.36	0.23	7,096.67	-266.13	1,343.00	-75.11	10.00	10.00	0.00
7,469.79	72.34	0.23	7,103.00	-247.38	1,343.07	-56.54	10.00	10.00	0.00
<b>FORT HAYS</b>									
7,500.00	75.36	0.23	7,111.40	-218.37	1,343.19	-27.79	10.00	10.00	0.00
7,550.00	80.36	0.23	7,121.91	-169.50	1,343.38	20.62	10.00	10.00	0.00

# Planning Report

<b>Database:</b>	EDT_32Bit_ODBC	<b>Local Co-ordinate Reference:</b>	Well DARLENE EAST 29N-20-11C
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB 25' @ 5272.00usft
<b>Project:</b>	Weld County	<b>MD Reference:</b>	KB 25' @ 5272.00usft
<b>Site:</b>	Sec 29-T12N-R61W	<b>North Reference:</b>	True
<b>Well:</b>	DARLENE EAST 29N-20-11C	<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)	
7,600.00	85.36	0.23	7,128.12	-119.90	1,343.58	69.75	10.00	10.00	0.00	
7,646.40	90.00	0.23	7,130.00	-73.56	1,343.76	115.67	10.00	10.00	0.00	
LP @ 90° INC, 0.23° AZM HOLD - CODELL										
7,700.00	90.00	0.23	7,130.00	-19.95	1,343.97	168.77	0.00	0.00	0.00	
7,800.00	90.00	0.23	7,130.00	80.04	1,344.36	267.83	0.00	0.00	0.00	
7,900.00	90.00	0.23	7,130.00	180.04	1,344.76	366.90	0.00	0.00	0.00	
8,000.00	90.00	0.23	7,130.00	280.04	1,345.15	465.96	0.00	0.00	0.00	
8,100.00	90.00	0.23	7,129.99	380.04	1,345.55	565.03	0.00	0.00	0.00	
8,200.00	90.00	0.23	7,129.99	480.04	1,345.94	664.10	0.00	0.00	0.00	
8,300.00	90.00	0.23	7,129.99	580.04	1,346.34	763.16	0.00	0.00	0.00	
8,400.00	90.00	0.23	7,129.99	680.04	1,346.73	862.23	0.00	0.00	0.00	
8,500.00	90.00	0.23	7,129.99	780.04	1,347.13	961.29	0.00	0.00	0.00	
8,600.00	90.00	0.23	7,129.99	880.04	1,347.52	1,060.36	0.00	0.00	0.00	
8,700.00	90.00	0.23	7,129.99	980.04	1,347.92	1,159.43	0.00	0.00	0.00	
8,800.00	90.00	0.23	7,129.99	1,080.04	1,348.32	1,258.49	0.00	0.00	0.00	
8,900.00	90.00	0.23	7,129.98	1,180.04	1,348.71	1,357.56	0.00	0.00	0.00	
9,000.00	90.00	0.23	7,129.98	1,280.04	1,349.11	1,456.62	0.00	0.00	0.00	
9,100.00	90.00	0.23	7,129.98	1,380.03	1,349.50	1,555.69	0.00	0.00	0.00	
9,200.00	90.00	0.23	7,129.98	1,480.03	1,349.90	1,654.76	0.00	0.00	0.00	
9,300.00	90.00	0.23	7,129.98	1,580.03	1,350.30	1,753.82	0.00	0.00	0.00	
9,400.00	90.00	0.23	7,129.98	1,680.03	1,350.69	1,852.89	0.00	0.00	0.00	
9,500.00	90.00	0.23	7,129.98	1,780.03	1,351.09	1,951.96	0.00	0.00	0.00	
9,600.00	90.00	0.23	7,129.98	1,880.03	1,351.49	2,051.02	0.00	0.00	0.00	
9,700.00	90.00	0.23	7,129.98	1,980.03	1,351.88	2,150.09	0.00	0.00	0.00	
9,800.00	90.00	0.23	7,129.98	2,080.03	1,352.28	2,249.15	0.00	0.00	0.00	
9,900.00	90.00	0.23	7,129.98	2,180.03	1,352.68	2,348.22	0.00	0.00	0.00	
10,000.00	90.00	0.23	7,129.97	2,280.03	1,353.08	2,447.29	0.00	0.00	0.00	
10,100.00	90.00	0.23	7,129.97	2,380.03	1,353.47	2,546.35	0.00	0.00	0.00	
10,200.00	90.00	0.23	7,129.97	2,480.03	1,353.87	2,645.42	0.00	0.00	0.00	
10,300.00	90.00	0.23	7,129.97	2,580.03	1,354.27	2,744.49	0.00	0.00	0.00	
10,400.00	90.00	0.23	7,129.97	2,680.02	1,354.67	2,843.55	0.00	0.00	0.00	
10,500.00	90.00	0.23	7,129.97	2,780.02	1,355.07	2,942.62	0.00	0.00	0.00	
10,600.00	90.00	0.23	7,129.97	2,880.02	1,355.47	3,041.68	0.00	0.00	0.00	
10,700.00	90.00	0.23	7,129.97	2,980.02	1,355.86	3,140.75	0.00	0.00	0.00	
10,800.00	90.00	0.23	7,129.97	3,080.02	1,356.26	3,239.82	0.00	0.00	0.00	
10,900.00	90.00	0.23	7,129.97	3,180.02	1,356.66	3,338.88	0.00	0.00	0.00	
11,000.00	90.00	0.23	7,129.97	3,280.02	1,357.06	3,437.95	0.00	0.00	0.00	
11,100.00	90.00	0.23	7,129.97	3,380.02	1,357.46	3,537.02	0.00	0.00	0.00	
11,200.00	90.00	0.23	7,129.97	3,480.02	1,357.86	3,636.08	0.00	0.00	0.00	
11,300.00	90.00	0.23	7,129.97	3,580.02	1,358.26	3,735.15	0.00	0.00	0.00	
11,400.00	90.00	0.23	7,129.97	3,680.02	1,358.66	3,834.22	0.00	0.00	0.00	
11,500.00	90.00	0.23	7,129.97	3,780.02	1,359.06	3,933.28	0.00	0.00	0.00	
11,600.00	90.00	0.23	7,129.97	3,880.02	1,359.46	4,032.35	0.00	0.00	0.00	
11,700.00	90.00	0.23	7,129.97	3,980.01	1,359.86	4,131.42	0.00	0.00	0.00	
11,800.00	90.00	0.23	7,129.97	4,080.01	1,360.26	4,230.48	0.00	0.00	0.00	
11,900.00	90.00	0.23	7,129.97	4,180.01	1,360.66	4,329.55	0.00	0.00	0.00	
12,000.00	90.00	0.23	7,129.97	4,280.01	1,361.06	4,428.62	0.00	0.00	0.00	
12,100.00	90.00	0.23	7,129.97	4,380.01	1,361.46	4,527.68	0.00	0.00	0.00	
12,200.00	90.00	0.23	7,129.97	4,480.01	1,361.86	4,626.75	0.00	0.00	0.00	
12,300.00	90.00	0.23	7,129.97	4,580.01	1,362.26	4,725.82	0.00	0.00	0.00	
12,400.00	90.00	0.23	7,129.97	4,680.01	1,362.66	4,824.88	0.00	0.00	0.00	
12,500.00	90.00	0.23	7,129.97	4,780.01	1,363.06	4,923.95	0.00	0.00	0.00	
12,600.00	90.00	0.23	7,129.97	4,880.01	1,363.47	5,023.02	0.00	0.00	0.00	
12,700.00	90.00	0.23	7,129.97	4,980.01	1,363.87	5,122.08	0.00	0.00	0.00	

# Planning Report

<b>Database:</b>	EDT_32Bit_ODBC	<b>Local Co-ordinate Reference:</b>	Well DARLENE EAST 29N-20-11C
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB 25' @ 5272.00usft
<b>Project:</b>	Weld County	<b>MD Reference:</b>	KB 25' @ 5272.00usft
<b>Site:</b>	Sec 29-T12N-R61W	<b>North Reference:</b>	True
<b>Well:</b>	DARLENE EAST 29N-20-11C	<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)
12,800.00	90.00	0.23	7,129.97	5,080.01	1,364.27	5,221.15	0.00	0.00	0.00
12,900.00	90.00	0.23	7,129.97	5,180.00	1,364.67	5,320.22	0.00	0.00	0.00
13,000.00	90.00	0.23	7,129.97	5,280.00	1,365.07	5,419.28	0.00	0.00	0.00
13,100.00	90.00	0.23	7,129.97	5,380.00	1,365.47	5,518.35	0.00	0.00	0.00
13,200.00	90.00	0.23	7,129.97	5,480.00	1,365.88	5,617.42	0.00	0.00	0.00
13,300.00	90.00	0.23	7,129.97	5,580.00	1,366.28	5,716.48	0.00	0.00	0.00
13,400.00	90.00	0.23	7,129.97	5,680.00	1,366.68	5,815.55	0.00	0.00	0.00
13,500.00	90.00	0.23	7,129.97	5,780.00	1,367.08	5,914.62	0.00	0.00	0.00
13,600.00	90.00	0.23	7,129.97	5,880.00	1,367.49	6,013.68	0.00	0.00	0.00
13,700.00	90.00	0.23	7,129.97	5,980.00	1,367.89	6,112.75	0.00	0.00	0.00
13,800.00	90.00	0.23	7,129.97	6,080.00	1,368.29	6,211.82	0.00	0.00	0.00
13,900.00	90.00	0.23	7,129.97	6,180.00	1,368.70	6,310.89	0.00	0.00	0.00
14,000.00	90.00	0.23	7,129.97	6,280.00	1,369.10	6,409.95	0.00	0.00	0.00
14,100.00	90.00	0.23	7,129.97	6,379.99	1,369.50	6,509.02	0.00	0.00	0.00
14,200.00	90.00	0.23	7,129.97	6,479.99	1,369.91	6,608.09	0.00	0.00	0.00
14,300.00	90.00	0.23	7,129.97	6,579.99	1,370.31	6,707.15	0.00	0.00	0.00
14,400.00	90.00	0.23	7,129.97	6,679.99	1,370.72	6,806.22	0.00	0.00	0.00
14,500.00	90.00	0.23	7,129.97	6,779.99	1,371.12	6,905.29	0.00	0.00	0.00
14,600.00	90.00	0.23	7,129.97	6,879.99	1,371.52	7,004.36	0.00	0.00	0.00
14,700.00	90.00	0.23	7,129.97	6,979.99	1,371.93	7,103.42	0.00	0.00	0.00
14,800.00	90.00	0.23	7,129.97	7,079.99	1,372.33	7,202.49	0.00	0.00	0.00
14,900.00	90.00	0.23	7,129.97	7,179.99	1,372.74	7,301.56	0.00	0.00	0.00
15,000.00	90.00	0.23	7,129.97	7,279.99	1,373.14	7,400.62	0.00	0.00	0.00
15,100.00	90.00	0.23	7,129.97	7,379.99	1,373.55	7,499.69	0.00	0.00	0.00
15,200.00	90.00	0.23	7,129.98	7,479.99	1,373.95	7,598.76	0.00	0.00	0.00
15,300.00	90.00	0.23	7,129.98	7,579.99	1,374.36	7,697.83	0.00	0.00	0.00
15,400.00	90.00	0.23	7,129.98	7,679.98	1,374.76	7,796.89	0.00	0.00	0.00
15,500.00	90.00	0.23	7,129.98	7,779.98	1,375.17	7,895.96	0.00	0.00	0.00
15,600.00	90.00	0.23	7,129.98	7,879.98	1,375.57	7,995.03	0.00	0.00	0.00
15,700.00	90.00	0.23	7,129.98	7,979.98	1,375.98	8,094.10	0.00	0.00	0.00
15,800.00	90.00	0.23	7,129.98	8,079.98	1,376.39	8,193.16	0.00	0.00	0.00
15,900.00	90.00	0.23	7,129.98	8,179.98	1,376.79	8,292.23	0.00	0.00	0.00
16,000.00	90.00	0.23	7,129.98	8,279.98	1,377.20	8,391.30	0.00	0.00	0.00
16,100.00	90.00	0.23	7,129.98	8,379.98	1,377.61	8,490.37	0.00	0.00	0.00
16,200.00	90.00	0.23	7,129.98	8,479.98	1,378.01	8,589.43	0.00	0.00	0.00
16,300.00	90.00	0.23	7,129.99	8,579.98	1,378.42	8,688.50	0.00	0.00	0.00
16,400.00	90.00	0.23	7,129.99	8,679.98	1,378.83	8,787.57	0.00	0.00	0.00
16,500.00	90.00	0.23	7,129.99	8,779.98	1,379.23	8,886.64	0.00	0.00	0.00
16,600.00	90.00	0.23	7,129.99	8,879.97	1,379.64	8,985.70	0.00	0.00	0.00
16,700.00	90.00	0.23	7,129.99	8,979.97	1,380.05	9,084.77	0.00	0.00	0.00
16,800.00	90.00	0.23	7,129.99	9,079.97	1,380.46	9,183.84	0.00	0.00	0.00
16,900.00	90.00	0.23	7,129.99	9,179.97	1,380.86	9,282.91	0.00	0.00	0.00
17,000.00	90.00	0.23	7,129.99	9,279.97	1,381.27	9,381.97	0.00	0.00	0.00
17,100.00	90.00	0.23	7,129.99	9,379.97	1,381.68	9,481.04	0.00	0.00	0.00
17,200.00	90.00	0.23	7,130.00	9,479.97	1,382.09	9,580.11	0.00	0.00	0.00
17,300.00	90.00	0.23	7,130.00	9,579.97	1,382.50	9,679.18	0.00	0.00	0.00
17,400.00	90.00	0.23	7,130.00	9,679.97	1,382.90	9,778.24	0.00	0.00	0.00
17,483.55	90.00	0.23	7,130.00	9,763.52	1,383.25	9,861.02	0.00	0.00	0.00
TD at 17483.55' MD									

## Planning Report

<b>Database:</b>	EDT_32Bit_ODBC	<b>Local Co-ordinate Reference:</b>	Well DARLENE EAST 29N-20-11C
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB 25' @ 5272.00usft
<b>Project:</b>	Weld County	<b>MD Reference:</b>	KB 25' @ 5272.00usft
<b>Site:</b>	Sec 29-T12N-R61W	<b>North Reference:</b>	True
<b>Well:</b>	DARLENE EAST 29N-20-11C	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL 1		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
DARLENE EAST 29N 11	0.00	0.00	7,130.00	9,763.52	1,383.25	1,610,009.15	3,352,722.72	41° 0' 3.071 N	104° 13' 19.805 W
- plan hits target center									
- Point									
DARLENE EAST 29N 11	0.00	0.00	7,130.00	-73.56	1,343.76	1,600,172.52	3,352,824.43	40° 58' 25.878 N	104° 13' 20.327 W
- plan hits target center									
- Point									

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(usft)	(usft)			(°)	(°)	
3,186.42	3,100.00	PARKMAN				
3,776.98	3,670.00	SUSSEX				
4,196.60	4,075.00	SHANNON				
7,071.50	6,865.00	NIOBRARA				
7,176.65	6,948.00	NIO B TARGET				
7,469.79	7,103.00	FORT HAYS				
7,646.40	7,130.00	CODELL				

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	Comment
200.00	200.00	0.00	0.00	BUILD 2°/100'
958.26	949.44	-43.31	89.87	HOLD 15.17° INC
5,888.06	5,707.56	-603.25	1,251.63	DROP 2°/100'
6,646.32	6,457.00	-646.56	1,341.50	HOLD VERTICAL
6,746.32	6,557.00	-646.56	1,341.50	KOP, BUILD 10°/100'
7,646.40	7,130.00	-73.56	1,343.76	LP @ 90° INC, 0.23° AZM HOLD
17,483.55	7,130.00	9,763.52	1,383.25	TD at 17483.55' MD