

# **EXTRACTION OIL & GAS**

**Weld County**

**Sec 28-T1N-R68W**

**COYOTE TRAILS 33S-20-1N**

**ORIGINAL WELLBORE**

**Plan: PROPOSAL 1**

## **Standard Planning Report**

**10 August, 2017**



Project: Weld County  
Site: Sec 28-T1N-R68W  
Well: COYOTE TRAILS 33S-20-1N  
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: 8.30°

Magnetic Field  
Strength: 52159.9snT  
Dip Angle: 66.51°  
Date: 6/29/2017  
Model: IGRF2015

WELL DETAILS: COYOTE TRAILS 33S-20-1N

+N/-S	+E/-W	Northing	Easting	5244.00	Latitude	Longitude	Slot
+N/-S	+E/-W	1249743.73	3137891.93	5244.00	40° 1' 4.377 N	105° 0' 27.602 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	1600.00	0.00	0.00	1600.00	0.00	0.00	0.00	0.00	0.00	
3	2187.00	11.74	192.21	2182.90	-58.57	-12.67	2.00	192.21	58.74	
4	6648.53	11.74	192.21	6551.10	-945.83	-204.68	0.00	0.00	948.60	
5	7235.53	0.00	0.00	7134.00	-1004.40	-217.35	2.00	180.00	1007.34	
6	7335.53	0.00	0.00	7234.00	-1004.40	-217.35	0.00	0.00	1007.34	
7	8235.61	90.00	179.66	7807.00	-1577.40	-213.97	10.00	179.66	1580.24	CT 33S-20-1N LP
8	17871.77	90.00	179.66	7807.00	-11213.40	-156.83	0.00	0.00	11214.50	CT 33S-20-1N PBHL

FORMATION TOP DETAILS

TVDPth	MDPath	Formation
4440.00	4492.32	PARKMAN
4910.00	4972.37	SUSSEX
7610.00	7745.66	SHARON SPRINGS
7650.00	7801.09	NIOBRARA
7797.00	8128.39	NIO B

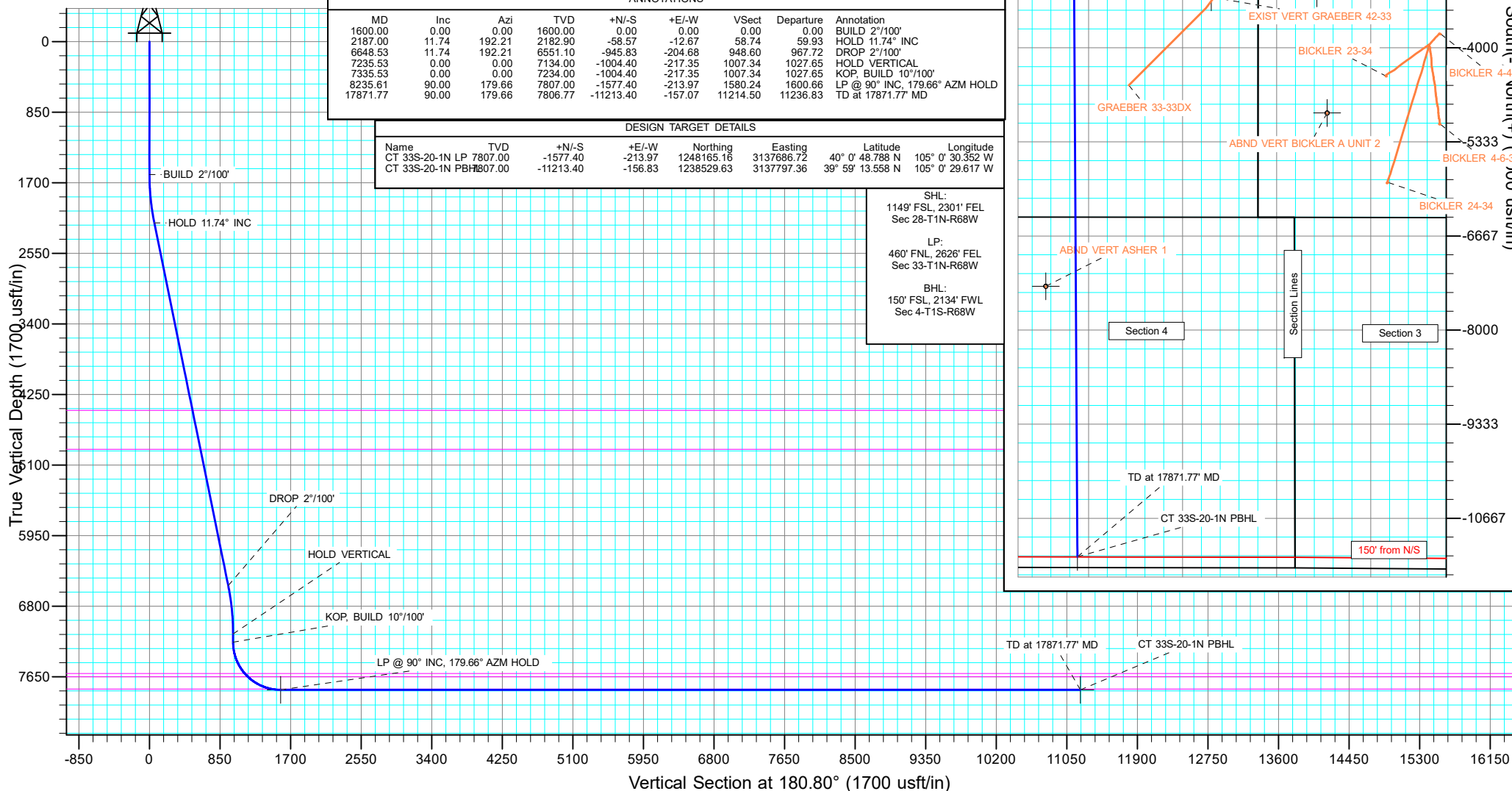
ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSec	Departure	Annotation
1600.00	0.00	0.00	1600.00	0.00	0.00	0.00	0.00	BUILD 2°/100'
2187.00	11.74	192.21	2182.90	-58.57	-12.67	58.74	59.93	HOLD 11.74° INC
6648.53	11.74	192.21	6551.10	-945.83	-204.68	948.60	967.72	DROP 2°/100'
7235.53	0.00	0.00	7134.00	-1004.40	-217.35	1007.34	1027.65	HOLD VERTICAL
7335.53	0.00	0.00	7234.00	-1004.40	-217.35	1007.34	1027.65	KOP, BUILD 10°/100'
8235.61	90.00	179.66	7807.00	-1577.40	-213.97	1580.24	1600.66	LP @ 90° INC, 179.66° AZM HOLD
17871.77	90.00	179.66	7806.77	-11213.40	-157.07	11214.50	11236.83	TD at 17871.77' MD

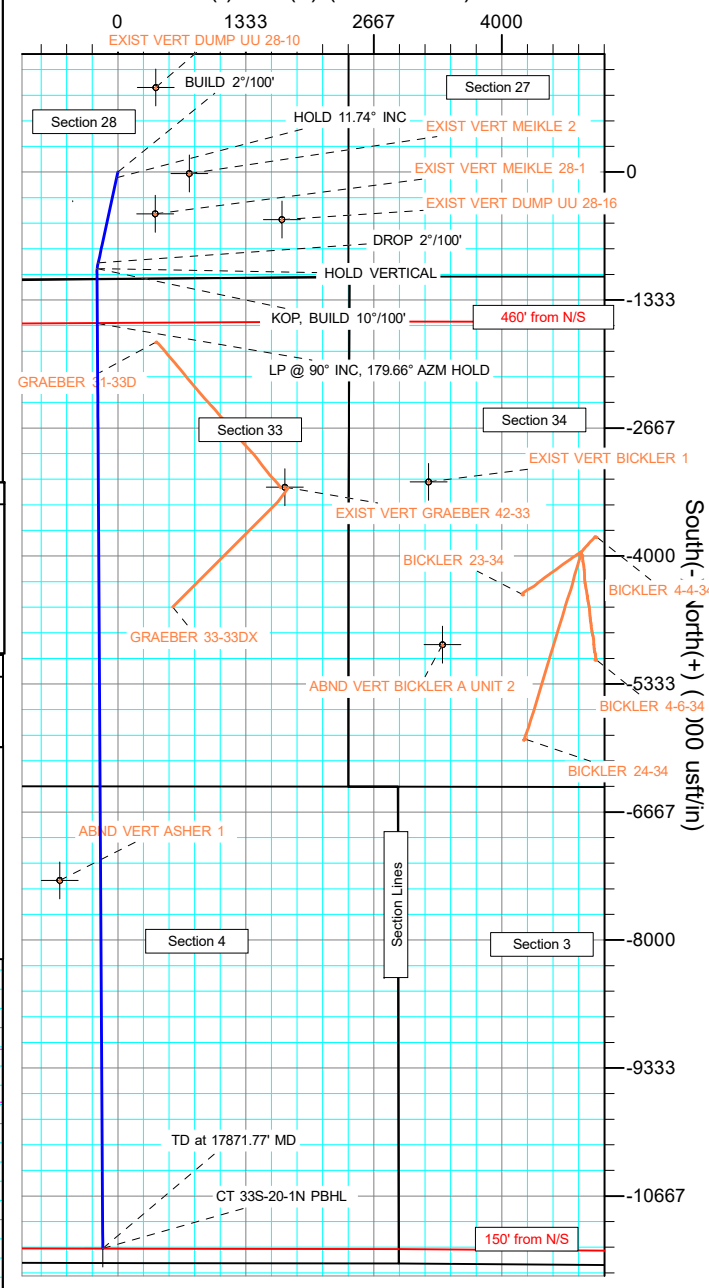
DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
CT 33S-20-1N LP	7807.00	-1577.40	-213.97	1248165.16	3137686.72	40° 0' 48.788 N	105° 0' 30.352 W
CT 33S-20-1N PBHL	7807.00	-11213.40	-156.83	1238529.63	3137797.36	39° 59' 13.558 N	105° 0' 29.617 W

SHL:  
1149' FSL, 2301' FEL  
Sec 28-T1N-R68W  
  
LP:  
460' FNL, 2626' FEL  
Sec 33-T1N-R68W  
  
BHL:  
150' FSL, 2134' FWL  
Sec 4-T1S-R68W



West(-)/East(+) (2000 usft/in)



## Planning Report

<b>Database:</b>	EDT_32Bit_ODBC	<b>Local Co-ordinate Reference:</b>	Well COYOTE TRAILS 33S-20-1N
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB 25' @ 5269.00usft
<b>Project:</b>	Weld County	<b>MD Reference:</b>	KB 25' @ 5269.00usft
<b>Site:</b>	Sec 28-T1N-R68W	<b>North Reference:</b>	True
<b>Well:</b>	COYOTE TRAILS 33S-20-1N	<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 28-T1N-R68W			
Site Position:		Northing:		1,248,660.21 usft	
From:		Easting:		3,140,299.83 usft	
Position Uncertainty:		Slot Radius:		Grid Convergence:	
Lat/Long		0.00 usft		13.200 in	
				40° 0' 53.536 N	
				104° 59' 56.731 W	
				0.32 °	

Well	COYOTE TRAILS 33S-20-1N					
Well Position	+N/-S	1,097.09 usft	Northing:	1,249,743.72 usft	Latitude:	40° 1' 4.377 N
	+E/-W	-2,401.74 usft	Easting:	3,137,891.93 usft	Longitude:	105° 0' 27.602 W
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	5,244.00 usft

Wellbore	ORIGINAL WELLBORE				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	6/29/2017	8.30	66.51	52,159.88229575

Design	PROPOSAL 1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	180.80

Plan Survey Tool Program			Date	8/10/2017	
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	17,871.68	PROPOSAL 1 (ORIGINAL WELL	MWD OWSG	
			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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,187.00	11.74	192.21	2,182.90	-58.57	-12.67	2.00	2.00	0.00	192.21	
6,648.53	11.74	192.21	6,551.10	-945.83	-204.68	0.00	0.00	0.00	0.00	
7,235.53	0.00	0.00	7,134.00	-1,004.40	-217.35	2.00	-2.00	0.00	180.00	
7,335.53	0.00	0.00	7,234.00	-1,004.40	-217.35	0.00	0.00	0.00	0.00	
8,235.61	90.00	179.66	7,807.00	-1,577.40	-213.97	10.00	10.00	19.96	179.66	CT 33S-20-1N LP
17,871.77	90.00	179.66	7,807.00	-11,213.40	-156.83	0.00	0.00	0.00	0.00	CT 33S-20-1N PBHL

# Planning Report

<b>Database:</b>	EDT_32Bit_ODBC	<b>Local Co-ordinate Reference:</b>	Well COYOTE TRAILS 33S-20-1N
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB 25' @ 5269.00usft
<b>Project:</b>	Weld County	<b>MD Reference:</b>	KB 25' @ 5269.00usft
<b>Site:</b>	Sec 28-T1N-R68W	<b>North Reference:</b>	True
<b>Well:</b>	COYOTE TRAILS 33S-20-1N	<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
300.00	0.00	0.00	300.00	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
500.00	0.00	0.00	500.00	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
700.00	0.00	0.00	700.00	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
900.00	0.00	0.00	900.00	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
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	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
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>BUILD 2°/100'</b>									
1,700.00	2.00	192.21	1,699.98	-1.71	-0.37	1.71	2.00	2.00	0.00
1,800.00	4.00	192.21	1,799.84	-6.82	-1.48	6.84	2.00	2.00	0.00
1,900.00	6.00	192.21	1,899.45	-15.34	-3.32	15.38	2.00	2.00	0.00
2,000.00	8.00	192.21	1,998.70	-27.25	-5.90	27.33	2.00	2.00	0.00
2,100.00	10.00	192.21	2,097.47	-42.54	-9.21	42.66	2.00	2.00	0.00
2,187.00	11.74	192.21	2,182.90	-58.57	-12.67	58.74	2.00	2.00	0.00
<b>HOLD 11.74° INC</b>									
2,200.00	11.74	192.21	2,195.63	-61.16	-13.23	61.34	0.00	0.00	0.00
2,300.00	11.74	192.21	2,293.54	-81.04	-17.54	81.28	0.00	0.00	0.00
2,400.00	11.74	192.21	2,391.45	-100.93	-21.84	101.23	0.00	0.00	0.00
2,500.00	11.74	192.21	2,489.35	-120.82	-26.14	121.17	0.00	0.00	0.00
2,600.00	11.74	192.21	2,587.26	-140.71	-30.45	141.12	0.00	0.00	0.00
2,700.00	11.74	192.21	2,685.17	-160.59	-34.75	161.06	0.00	0.00	0.00
2,800.00	11.74	192.21	2,783.08	-180.48	-39.06	181.01	0.00	0.00	0.00
2,900.00	11.74	192.21	2,880.99	-200.37	-43.36	200.95	0.00	0.00	0.00
3,000.00	11.74	192.21	2,978.89	-220.25	-47.66	220.90	0.00	0.00	0.00
3,100.00	11.74	192.21	3,076.80	-240.14	-51.97	240.84	0.00	0.00	0.00
3,200.00	11.74	192.21	3,174.71	-260.03	-56.27	260.79	0.00	0.00	0.00
3,300.00	11.74	192.21	3,272.62	-279.91	-60.57	280.73	0.00	0.00	0.00
3,400.00	11.74	192.21	3,370.53	-299.80	-64.88	300.68	0.00	0.00	0.00
3,500.00	11.74	192.21	3,468.43	-319.69	-69.18	320.62	0.00	0.00	0.00
3,600.00	11.74	192.21	3,566.34	-339.57	-73.48	340.57	0.00	0.00	0.00
3,700.00	11.74	192.21	3,664.25	-359.46	-77.79	360.51	0.00	0.00	0.00
3,800.00	11.74	192.21	3,762.16	-379.35	-82.09	380.46	0.00	0.00	0.00
3,900.00	11.74	192.21	3,860.07	-399.23	-86.39	400.40	0.00	0.00	0.00
4,000.00	11.74	192.21	3,957.98	-419.12	-90.70	420.35	0.00	0.00	0.00
4,100.00	11.74	192.21	4,055.88	-439.01	-95.00	440.29	0.00	0.00	0.00
4,200.00	11.74	192.21	4,153.79	-458.89	-99.30	460.24	0.00	0.00	0.00
4,300.00	11.74	192.21	4,251.70	-478.78	-103.61	480.18	0.00	0.00	0.00
4,400.00	11.74	192.21	4,349.61	-498.67	-107.91	500.13	0.00	0.00	0.00
4,492.32	11.74	192.21	4,440.00	-517.03	-111.88	518.54	0.00	0.00	0.00
<b>PARKMAN</b>									
4,500.00	11.74	192.21	4,447.52	-518.55	-112.21	520.07	0.00	0.00	0.00
4,600.00	11.74	192.21	4,545.42	-538.44	-116.52	540.02	0.00	0.00	0.00
4,700.00	11.74	192.21	4,643.33	-558.33	-120.82	559.96	0.00	0.00	0.00

# Planning Report

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<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB 25' @ 5269.00usft
<b>Project:</b>	Weld County	<b>MD Reference:</b>	KB 25' @ 5269.00usft
<b>Site:</b>	Sec 28-T1N-R68W	<b>North Reference:</b>	True
<b>Well:</b>	COYOTE TRAILS 33S-20-1N	<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)
4,800.00	11.74	192.21	4,741.24	-578.21	-125.12	579.91	0.00	0.00	0.00
4,900.00	11.74	192.21	4,839.15	-598.10	-129.43	599.85	0.00	0.00	0.00
4,972.37	11.74	192.21	4,910.00	-612.49	-132.54	614.29	0.00	0.00	0.00
<b>SUSSEX</b>									
5,000.00	11.74	192.21	4,937.06	-617.99	-133.73	619.80	0.00	0.00	0.00
5,100.00	11.74	192.21	5,034.96	-637.87	-138.03	639.74	0.00	0.00	0.00
5,200.00	11.74	192.21	5,132.87	-657.76	-142.34	659.69	0.00	0.00	0.00
5,300.00	11.74	192.21	5,230.78	-677.65	-146.64	679.63	0.00	0.00	0.00
5,400.00	11.74	192.21	5,328.69	-697.54	-150.95	699.58	0.00	0.00	0.00
5,500.00	11.74	192.21	5,426.60	-717.42	-155.25	719.52	0.00	0.00	0.00
5,600.00	11.74	192.21	5,524.50	-737.31	-159.55	739.47	0.00	0.00	0.00
5,700.00	11.74	192.21	5,622.41	-757.20	-163.86	759.41	0.00	0.00	0.00
5,800.00	11.74	192.21	5,720.32	-777.08	-168.16	779.36	0.00	0.00	0.00
5,900.00	11.74	192.21	5,818.23	-796.97	-172.46	799.30	0.00	0.00	0.00
6,000.00	11.74	192.21	5,916.14	-816.86	-176.77	819.25	0.00	0.00	0.00
6,100.00	11.74	192.21	6,014.05	-836.74	-181.07	839.19	0.00	0.00	0.00
6,200.00	11.74	192.21	6,111.95	-856.63	-185.37	859.14	0.00	0.00	0.00
6,300.00	11.74	192.21	6,209.86	-876.52	-189.68	879.08	0.00	0.00	0.00
6,400.00	11.74	192.21	6,307.77	-896.40	-193.98	899.03	0.00	0.00	0.00
6,500.00	11.74	192.21	6,405.68	-916.29	-198.28	918.97	0.00	0.00	0.00
6,600.00	11.74	192.21	6,503.59	-936.18	-202.59	938.92	0.00	0.00	0.00
6,648.53	11.74	192.21	6,551.10	-945.83	-204.68	948.60	0.00	0.00	0.00
<b>DROP 2°/100'</b>									
6,700.00	10.71	192.21	6,601.59	-955.62	-206.79	958.42	2.00	-2.00	0.00
6,800.00	8.71	192.21	6,700.15	-972.10	-210.36	974.95	2.00	-2.00	0.00
6,900.00	6.71	192.21	6,799.24	-985.22	-213.20	988.10	2.00	-2.00	0.00
7,000.00	4.71	192.21	6,898.74	-994.94	-215.30	997.86	2.00	-2.00	0.00
7,100.00	2.71	192.21	6,998.52	-1,001.27	-216.67	1,004.20	2.00	-2.00	0.00
7,200.00	0.71	192.21	7,098.47	-1,004.18	-217.30	1,007.13	2.00	-2.00	0.00
7,235.53	0.00	0.00	7,134.00	-1,004.40	-217.35	1,007.34	2.00	-2.00	0.00
<b>HOLD VERTICAL</b>									
7,300.00	0.00	0.00	7,198.47	-1,004.40	-217.35	1,007.34	0.00	0.00	0.00
7,335.53	0.00	0.00	7,234.00	-1,004.40	-217.35	1,007.34	0.00	0.00	0.00
<b>KOP, BUILD 10°/100'</b>									
7,350.00	1.45	179.66	7,248.47	-1,004.58	-217.35	1,007.52	10.00	10.00	0.00
7,400.00	6.45	179.66	7,298.34	-1,008.02	-217.33	1,010.96	10.00	10.00	0.00
7,450.00	11.45	179.66	7,347.71	-1,015.80	-217.28	1,018.74	10.00	10.00	0.00
7,500.00	16.45	179.66	7,396.22	-1,027.84	-217.21	1,030.78	10.00	10.00	0.00
7,550.00	21.45	179.66	7,443.50	-1,044.07	-217.12	1,047.01	10.00	10.00	0.00
7,600.00	26.45	179.66	7,489.18	-1,064.36	-217.00	1,067.29	10.00	10.00	0.00
7,650.00	31.44	179.66	7,532.92	-1,088.55	-216.85	1,091.47	10.00	10.00	0.00
7,700.00	36.44	179.66	7,574.39	-1,116.46	-216.69	1,119.38	10.00	10.00	0.00
7,745.66	41.01	179.66	7,610.00	-1,145.02	-216.52	1,147.93	10.00	10.00	0.00
<b>SHARON SPRINGS</b>									
7,750.00	41.44	179.66	7,613.26	-1,147.88	-216.50	1,150.79	10.00	10.00	0.00
7,800.00	46.44	179.66	7,649.25	-1,182.56	-216.30	1,185.47	10.00	10.00	0.00
7,801.09	46.55	179.66	7,650.00	-1,183.35	-216.29	1,186.26	10.00	10.00	0.00
<b>NIOBRARA</b>									
7,850.00	51.44	179.66	7,682.08	-1,220.25	-216.08	1,223.15	10.00	10.00	0.00
7,900.00	56.44	179.66	7,711.50	-1,260.66	-215.84	1,263.56	10.00	10.00	0.00
7,950.00	61.44	179.66	7,737.29	-1,303.48	-215.58	1,306.37	10.00	10.00	0.00
8,000.00	66.44	179.66	7,759.25	-1,348.38	-215.32	1,351.26	10.00	10.00	0.00
8,050.00	71.44	179.66	7,777.20	-1,395.03	-215.04	1,397.90	10.00	10.00	0.00

# Planning Report

<b>Database:</b>	EDT_32Bit_ODBC	<b>Local Co-ordinate Reference:</b>	Well COYOTE TRAILS 33S-20-1N
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB 25' @ 5269.00usft
<b>Project:</b>	Weld County	<b>MD Reference:</b>	KB 25' @ 5269.00usft
<b>Site:</b>	Sec 28-T1N-R68W	<b>North Reference:</b>	True
<b>Well:</b>	COYOTE TRAILS 33S-20-1N	<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)	
8,100.00	76.44	179.66	7,791.03	-1,443.06	-214.76	1,445.92	10.00	10.00	0.00	
8,128.39	79.28	179.66	7,797.00	-1,470.81	-214.60	1,473.67	10.00	10.00	0.00	
NIO B										
8,150.00	81.44	179.66	7,800.62	-1,492.11	-214.47	1,494.97	10.00	10.00	0.00	
8,200.00	86.44	179.66	7,805.89	-1,541.82	-214.18	1,544.66	10.00	10.00	0.00	
8,235.61	90.00	179.66	7,807.00	-1,577.40	-213.97	1,580.24	10.00	10.00	0.00	
LP @ 90° INC, 179.66° AZM HOLD										
8,300.00	90.00	179.66	7,807.00	-1,641.79	-213.59	1,644.62	0.00	0.00	0.00	
8,400.00	90.00	179.66	7,807.00	-1,741.79	-213.00	1,744.60	0.00	0.00	0.00	
8,500.00	90.00	179.66	7,806.99	-1,841.79	-212.41	1,844.58	0.00	0.00	0.00	
8,600.00	90.00	179.66	7,806.99	-1,941.79	-211.82	1,944.56	0.00	0.00	0.00	
8,700.00	90.00	179.66	7,806.99	-2,041.79	-211.22	2,044.54	0.00	0.00	0.00	
8,800.00	90.00	179.66	7,806.99	-2,141.79	-210.63	2,144.52	0.00	0.00	0.00	
8,900.00	90.00	179.66	7,806.98	-2,241.78	-210.04	2,244.50	0.00	0.00	0.00	
9,000.00	90.00	179.66	7,806.98	-2,341.78	-209.45	2,344.48	0.00	0.00	0.00	
9,100.00	90.00	179.66	7,806.98	-2,441.78	-208.86	2,444.46	0.00	0.00	0.00	
9,200.00	90.00	179.66	7,806.98	-2,541.78	-208.27	2,544.44	0.00	0.00	0.00	
9,300.00	90.00	179.66	7,806.98	-2,641.78	-207.68	2,644.42	0.00	0.00	0.00	
9,400.00	90.00	179.66	7,806.97	-2,741.78	-207.09	2,744.40	0.00	0.00	0.00	
9,500.00	90.00	179.66	7,806.97	-2,841.77	-206.50	2,844.38	0.00	0.00	0.00	
9,600.00	90.00	179.66	7,806.97	-2,941.77	-205.91	2,944.36	0.00	0.00	0.00	
9,700.00	90.00	179.66	7,806.97	-3,041.77	-205.32	3,044.34	0.00	0.00	0.00	
9,800.00	90.00	179.66	7,806.96	-3,141.77	-204.73	3,144.32	0.00	0.00	0.00	
9,900.00	90.00	179.66	7,806.96	-3,241.77	-204.14	3,244.30	0.00	0.00	0.00	
10,000.00	90.00	179.66	7,806.96	-3,341.76	-203.55	3,344.28	0.00	0.00	0.00	
10,100.00	90.00	179.66	7,806.96	-3,441.76	-202.96	3,444.26	0.00	0.00	0.00	
10,200.00	90.00	179.66	7,806.95	-3,541.76	-202.37	3,544.24	0.00	0.00	0.00	
10,300.00	90.00	179.66	7,806.95	-3,641.76	-201.78	3,644.23	0.00	0.00	0.00	
10,400.00	90.00	179.66	7,806.95	-3,741.76	-201.19	3,744.21	0.00	0.00	0.00	
10,500.00	90.00	179.66	7,806.95	-3,841.76	-200.60	3,844.19	0.00	0.00	0.00	
10,600.00	90.00	179.66	7,806.94	-3,941.75	-200.01	3,944.17	0.00	0.00	0.00	
10,700.00	90.00	179.66	7,806.94	-4,041.75	-199.42	4,044.15	0.00	0.00	0.00	
10,800.00	90.00	179.66	7,806.94	-4,141.75	-198.83	4,144.13	0.00	0.00	0.00	
10,900.00	90.00	179.66	7,806.94	-4,241.75	-198.24	4,244.11	0.00	0.00	0.00	
11,000.00	90.00	179.66	7,806.94	-4,341.75	-197.65	4,344.09	0.00	0.00	0.00	
11,100.00	90.00	179.66	7,806.93	-4,441.75	-197.05	4,444.07	0.00	0.00	0.00	
11,200.00	90.00	179.66	7,806.93	-4,541.74	-196.46	4,544.05	0.00	0.00	0.00	
11,300.00	90.00	179.66	7,806.93	-4,641.74	-195.87	4,644.03	0.00	0.00	0.00	
11,400.00	90.00	179.66	7,806.93	-4,741.74	-195.28	4,744.01	0.00	0.00	0.00	
11,500.00	90.00	179.66	7,806.92	-4,841.74	-194.69	4,843.99	0.00	0.00	0.00	
11,600.00	90.00	179.66	7,806.92	-4,941.74	-194.10	4,943.97	0.00	0.00	0.00	
11,700.00	90.00	179.66	7,806.92	-5,041.73	-193.51	5,043.95	0.00	0.00	0.00	
11,800.00	90.00	179.66	7,806.92	-5,141.73	-192.92	5,143.93	0.00	0.00	0.00	
11,900.00	90.00	179.66	7,806.91	-5,241.73	-192.33	5,243.91	0.00	0.00	0.00	
12,000.00	90.00	179.66	7,806.91	-5,341.73	-191.74	5,343.89	0.00	0.00	0.00	
12,100.00	90.00	179.66	7,806.91	-5,441.73	-191.15	5,443.87	0.00	0.00	0.00	
12,200.00	90.00	179.66	7,806.91	-5,541.73	-190.56	5,543.85	0.00	0.00	0.00	
12,300.00	90.00	179.66	7,806.90	-5,641.72	-189.97	5,643.83	0.00	0.00	0.00	
12,400.00	90.00	179.66	7,806.90	-5,741.72	-189.38	5,743.81	0.00	0.00	0.00	
12,500.00	90.00	179.66	7,806.90	-5,841.72	-188.79	5,843.79	0.00	0.00	0.00	
12,600.00	90.00	179.66	7,806.90	-5,941.72	-188.20	5,943.77	0.00	0.00	0.00	
12,700.00	90.00	179.66	7,806.90	-6,041.72	-187.61	6,043.75	0.00	0.00	0.00	
12,800.00	90.00	179.66	7,806.89	-6,141.72	-187.02	6,143.73	0.00	0.00	0.00	
12,900.00	90.00	179.66	7,806.89	-6,241.71	-186.43	6,243.71	0.00	0.00	0.00	

# Planning Report

<b>Database:</b>	EDT_32Bit_ODBC	<b>Local Co-ordinate Reference:</b>	Well COYOTE TRAILS 33S-20-1N
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB 25' @ 5269.00usft
<b>Project:</b>	Weld County	<b>MD Reference:</b>	KB 25' @ 5269.00usft
<b>Site:</b>	Sec 28-T1N-R68W	<b>North Reference:</b>	True
<b>Well:</b>	COYOTE TRAILS 33S-20-1N	<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)	
13,000.00	90.00	179.66	7,806.89	-6,341.71	-185.84	6,343.69	0.00	0.00	0.00	
13,100.00	90.00	179.66	7,806.89	-6,441.71	-185.25	6,443.67	0.00	0.00	0.00	
13,200.00	90.00	179.66	7,806.88	-6,541.71	-184.66	6,543.65	0.00	0.00	0.00	
13,300.00	90.00	179.66	7,806.88	-6,641.71	-184.07	6,643.63	0.00	0.00	0.00	
13,400.00	90.00	179.66	7,806.88	-6,741.71	-183.48	6,743.61	0.00	0.00	0.00	
13,500.00	90.00	179.66	7,806.88	-6,841.70	-182.88	6,843.59	0.00	0.00	0.00	
13,600.00	90.00	179.66	7,806.87	-6,941.70	-182.29	6,943.57	0.00	0.00	0.00	
13,700.00	90.00	179.66	7,806.87	-7,041.70	-181.70	7,043.55	0.00	0.00	0.00	
13,800.00	90.00	179.66	7,806.87	-7,141.70	-181.11	7,143.53	0.00	0.00	0.00	
13,900.00	90.00	179.66	7,806.87	-7,241.70	-180.52	7,243.51	0.00	0.00	0.00	
14,000.00	90.00	179.66	7,806.86	-7,341.69	-179.93	7,343.49	0.00	0.00	0.00	
14,100.00	90.00	179.66	7,806.86	-7,441.69	-179.34	7,443.47	0.00	0.00	0.00	
14,200.00	90.00	179.66	7,806.86	-7,541.69	-178.75	7,543.45	0.00	0.00	0.00	
14,300.00	90.00	179.66	7,806.86	-7,641.69	-178.16	7,643.43	0.00	0.00	0.00	
14,400.00	90.00	179.66	7,806.86	-7,741.69	-177.57	7,743.41	0.00	0.00	0.00	
14,500.00	90.00	179.66	7,806.85	-7,841.69	-176.98	7,843.39	0.00	0.00	0.00	
14,600.00	90.00	179.66	7,806.85	-7,941.68	-176.39	7,943.37	0.00	0.00	0.00	
14,700.00	90.00	179.66	7,806.85	-8,041.68	-175.80	8,043.35	0.00	0.00	0.00	
14,800.00	90.00	179.66	7,806.85	-8,141.68	-175.21	8,143.34	0.00	0.00	0.00	
14,900.00	90.00	179.66	7,806.84	-8,241.68	-174.62	8,243.32	0.00	0.00	0.00	
15,000.00	90.00	179.66	7,806.84	-8,341.68	-174.03	8,343.30	0.00	0.00	0.00	
15,100.00	90.00	179.66	7,806.84	-8,441.68	-173.44	8,443.28	0.00	0.00	0.00	
15,200.00	90.00	179.66	7,806.84	-8,541.67	-172.85	8,543.26	0.00	0.00	0.00	
15,300.00	90.00	179.66	7,806.83	-8,641.67	-172.26	8,643.24	0.00	0.00	0.00	
15,400.00	90.00	179.66	7,806.83	-8,741.67	-171.67	8,743.22	0.00	0.00	0.00	
15,500.00	90.00	179.66	7,806.83	-8,841.67	-171.08	8,843.20	0.00	0.00	0.00	
15,600.00	90.00	179.66	7,806.83	-8,941.67	-170.49	8,943.18	0.00	0.00	0.00	
15,700.00	90.00	179.66	7,806.82	-9,041.67	-169.90	9,043.16	0.00	0.00	0.00	
15,800.00	90.00	179.66	7,806.82	-9,141.66	-169.30	9,143.14	0.00	0.00	0.00	
15,900.00	90.00	179.66	7,806.82	-9,241.66	-168.71	9,243.12	0.00	0.00	0.00	
16,000.00	90.00	179.66	7,806.82	-9,341.66	-168.12	9,343.10	0.00	0.00	0.00	
16,100.00	90.00	179.66	7,806.82	-9,441.66	-167.53	9,443.08	0.00	0.00	0.00	
16,200.00	90.00	179.66	7,806.81	-9,541.66	-166.94	9,543.06	0.00	0.00	0.00	
16,300.00	90.00	179.66	7,806.81	-9,641.65	-166.35	9,643.04	0.00	0.00	0.00	
16,400.00	90.00	179.66	7,806.81	-9,741.65	-165.76	9,743.02	0.00	0.00	0.00	
16,500.00	90.00	179.66	7,806.81	-9,841.65	-165.17	9,843.00	0.00	0.00	0.00	
16,600.00	90.00	179.66	7,806.80	-9,941.65	-164.58	9,942.98	0.00	0.00	0.00	
16,700.00	90.00	179.66	7,806.80	-10,041.65	-163.99	10,042.96	0.00	0.00	0.00	
16,800.00	90.00	179.66	7,806.80	-10,141.65	-163.40	10,142.94	0.00	0.00	0.00	
16,900.00	90.00	179.66	7,806.80	-10,241.64	-162.81	10,242.92	0.00	0.00	0.00	
17,000.00	90.00	179.66	7,806.79	-10,341.64	-162.22	10,342.90	0.00	0.00	0.00	
17,100.00	90.00	179.66	7,806.79	-10,441.64	-161.63	10,442.88	0.00	0.00	0.00	
17,200.00	90.00	179.66	7,806.79	-10,541.64	-161.04	10,542.86	0.00	0.00	0.00	
17,300.00	90.00	179.66	7,806.79	-10,641.64	-160.45	10,642.84	0.00	0.00	0.00	
17,400.00	90.00	179.66	7,806.78	-10,741.64	-159.86	10,742.82	0.00	0.00	0.00	
17,500.00	90.00	179.66	7,806.78	-10,841.63	-159.27	10,842.80	0.00	0.00	0.00	
17,600.00	90.00	179.66	7,806.78	-10,941.63	-158.68	10,942.78	0.00	0.00	0.00	
17,700.00	90.00	179.66	7,806.78	-11,041.63	-158.09	11,042.76	0.00	0.00	0.00	
17,800.00	90.00	179.66	7,806.78	-11,141.63	-157.50	11,142.74	0.00	0.00	0.00	
17,871.77	90.00	179.66	7,807.00	-11,213.40	-156.83	11,214.50	0.00	0.00	0.00	
TD at 17871.77' MD										

## Planning Report

<b>Database:</b>	EDT_32Bit_ODBC	<b>Local Co-ordinate Reference:</b>	Well COYOTE TRAILS 33S-20-1N
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB 25' @ 5269.00usft
<b>Project:</b>	Weld County	<b>MD Reference:</b>	KB 25' @ 5269.00usft
<b>Site:</b>	Sec 28-T1N-R68W	<b>North Reference:</b>	True
<b>Well:</b>	COYOTE TRAILS 33S-20-1N	<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)		
CT 33S-20-1N PBHL	0.00	0.00	7,807.00	-11,213.40	-156.83	1,238,529.63	3,137,797.36	39° 59' 13.558 N	105° 0' 29.617 W
- plan hits target center									
- Point									
CT 33S-20-1N LP	0.00	0.00	7,807.00	-1,577.40	-213.97	1,248,165.16	3,137,686.72	40° 0' 48.788 N	105° 0' 30.352 W
- plan hits target center									
- Point									

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(usft)	(usft)			(°)	(°)	
4,492.32	4,440.00	PARKMAN				
4,972.37	4,910.00	SUSSEX				
7,745.66	7,610.00	SHARON SPRINGS				
7,801.09	7,650.00	NIOBRARA				
8,128.39	7,797.00	NIO B				

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(usft)	(usft)	+N/-S	+E/-W	Comment	
(usft)	(usft)	(usft)	(usft)		
1,600.00	1,600.00	0.00	0.00	BUILD 2°/100'	
2,187.00	2,182.90	-58.57	-12.67	HOLD 11.74° INC	
6,648.53	6,551.10	-945.83	-204.68	DROP 2°/100'	
7,235.53	7,134.00	-1,004.40	-217.35	HOLD VERTICAL	
7,335.53	7,234.00	-1,004.40	-217.35	KOP, BUILD 10°/100'	
8,235.61	7,807.00	-1,577.40	-213.97	LP @ 90° INC, 179.66° AZM HOLD	
17,871.77	7,807.00	-11,213.40	-156.83	TD at 17871.77' MD	