

EXTRACTION OIL & GAS

**Weld County
Sec 18-T4N-R68W
KENNEDY 2**

Original Wellbore

Plan: Proposal 1

Standard Planning Report

07 February, 2017



Project: Weld County
Site: Sec 18-T4N-R68W
Well: KENNEDY 2
Wellbore: Original Wellbore
Design: Proposal 1



Azimuths to True North
Magnetic North: 8.39°
Magnetic Field
Strength: 52362.8nT
Dip Angle: 66.76°
Date: 1/30/2017
Model: IGRF2015

WELL DETAILS: KENNEDY 2

+N/-S	+E/-W	Northing	Easting	4967.0	Latitude	Longitude	Slot
0.0	0.0	1359133.04	3128799.50	40° 19' 5.880 N	105° 2' 17.146 W		

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1450.0	0.00	0.00	1450.0	0.0	0.0	0.00	0.00	0.0	
3	2605.3	23.11	7.11	2574.2	228.0	28.5	2.00	7.11	97.1	
4	5448.2	23.11	7.11	5189.0	1335.1	166.6	0.00	0.00	568.7	
5	6411.7	90.00	88.73	5742.0	1582.5	796.9	9.00	82.28	1244.5	Kennedy 2 LP
6	10819.7	90.00	88.73	5742.0	1679.9	5203.7	0.00	0.00	5468.2	Kennedy 2 PBHL

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Departure	Annotation
1450.0	0.00	0.00	1450.0	0.0	0.0	0.0	0.0	Start Build 2.00
2605.3	23.11	7.11	2574.2	228.0	28.5	97.1	229.8	Start 2842.8 hold at 2605.3 MD
5448.2	23.11	7.11	5189.0	1335.1	166.6	568.7	1345.5	Start DLS 9.00 TFO 82.28
6411.7	90.00	88.73	5742.0	1582.5	796.9	1244.5	2059.9	Start 4407.9 hold at 6411.7 MD
10819.7	90.00	88.73	5742.0	1679.9	5203.7	5468.2	6467.9	TD at 10819.7

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Kennedy 2 LP	5742.0	1582.5	796.9	1360719.67	3129588.14	40° 19' 21.518 N	105° 2' 6.857 W	Point
- plan hits target center								
Kennedy 2 PBHL	5742.0	1679.9	5203.7	1360840.06	3133994.43	40° 19' 22.476 N	105° 1' 9.959 W	Point
- plan hits target center								

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
2210.0	2219.2	PARKMAN
2810.0	2861.6	SUSSEX
3250.0	3340.0	SHANNON
5742.0	6411.7	NIORARA

PROJECT DETAILS: Weld County

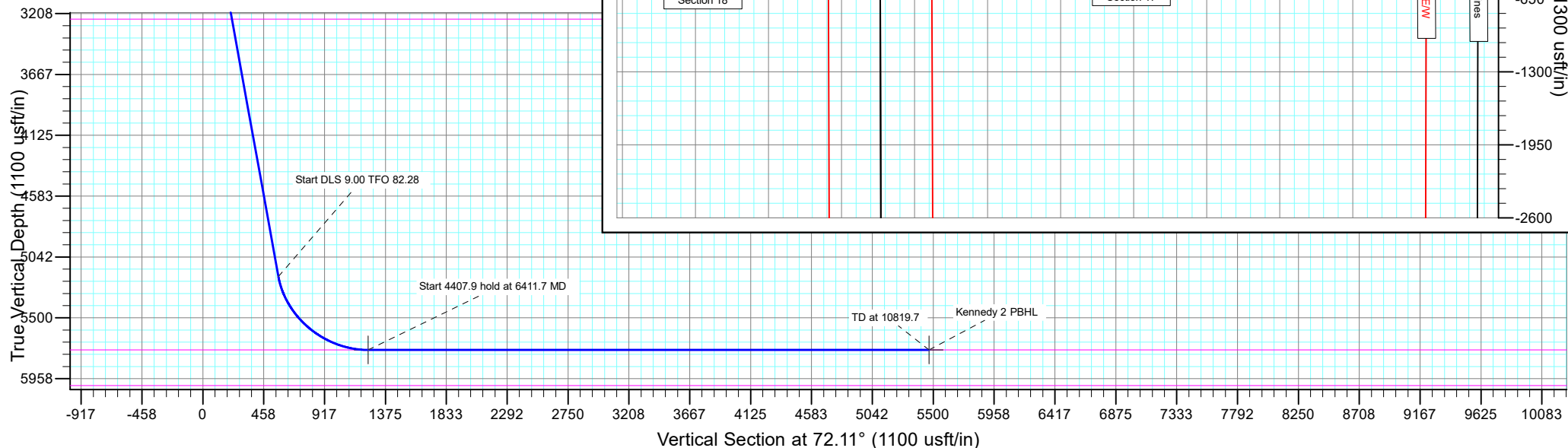
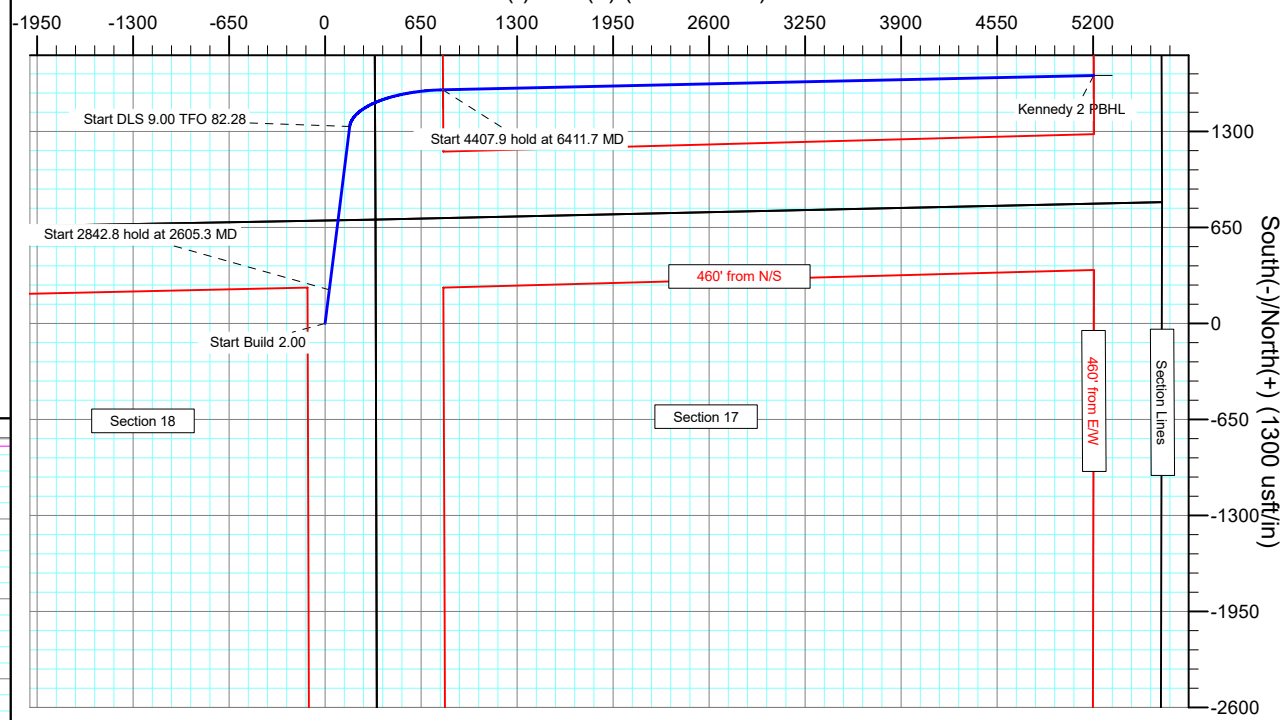
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Northern Zone
System Datum: Mean Sea Level

SHL:
698' FNL, 342' FEL
Sec 18-T4N-R68W

BHL:
868' FSL, 460' FEL
Sec 8-T4N-R68W

LP:
868' FSL, 460' FWL
Sec 8-T4N-R68W

West(-)/East(+) (1300 usft/in)



Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well KENNEDY 2
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 11' @ 4978.0usft
Project:	Weld County	MD Reference:	KB 11' @ 4978.0usft
Site:	Sec 18-T4N-R68W	North Reference:	True
Well:	KENNEDY 2	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Wellbore		
Design:	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 18-T4N-R68W			
Site Position:		Northing:	1,359,838.99 usft	Latitude:	40° 19' 12.839 N
From:	Lat/Long	Easting:	3,129,136.57 usft	Longitude:	105° 2' 12.746 W
Position Uncertainty:	0.0 usft	Slot Radius:	13.200 in	Grid Convergence:	0.30 °

Well	KENNEDY 2					
Well Position	+N/-S	-704.2 usft	Northing:	1,359,133.04 usft	Latitude:	40° 19' 5.880 N
	+E/-W	-340.7 usft	Easting:	3,128,799.50 usft	Longitude:	105° 2' 17.146 W
Position Uncertainty		0.0 usft	Wellhead Elevation:		Ground Level:	4,967.0 usft

Wellbore	Original Wellbore				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	1/30/2017	8.39	66.76	52,362.79273777

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	72.11

Plan Survey Tool Program			Date	2/7/2017	
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.0	10,819.7	Proposal 1 (Original Wellbore)	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	
1,450.0	0.00	0.00	1,450.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,605.3	23.11	7.11	2,574.2	228.0	28.5	2.00	2.00	0.00	7.11	
5,448.2	23.11	7.11	5,189.0	1,335.1	166.6	0.00	0.00	0.00	0.00	
6,411.7	90.00	88.73	5,742.0	1,582.5	796.9	9.00	6.94	8.47	82.28	Kennedy 2 LP
10,819.7	90.00	88.73	5,742.0	1,679.9	5,203.7	0.00	0.00	0.00	0.00	Kennedy 2 PBHL

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well KENNEDY 2
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 11' @ 4978.0usft
Project:	Weld County	MD Reference:	KB 11' @ 4978.0usft
Site:	Sec 18-T4N-R68W	North Reference:	True
Well:	KENNEDY 2	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Wellbore		
Design:	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
1,450.0	0.00	0.00	1,450.0	0.0	0.0	0.0	0.00	0.00	0.00
Start Build 2.00									
1,500.0	1.00	7.11	1,500.0	0.4	0.1	0.2	2.00	2.00	0.00
1,600.0	3.00	7.11	1,599.9	3.9	0.5	1.7	2.00	2.00	0.00
1,700.0	5.00	7.11	1,699.7	10.8	1.4	4.6	2.00	2.00	0.00
1,800.0	7.00	7.11	1,799.1	21.2	2.6	9.0	2.00	2.00	0.00
1,900.0	9.00	7.11	1,898.2	35.0	4.4	14.9	2.00	2.00	0.00
2,000.0	11.00	7.11	1,996.6	52.2	6.5	22.2	2.00	2.00	0.00
2,100.0	13.00	7.11	2,094.4	72.9	9.1	31.0	2.00	2.00	0.00
2,200.0	15.00	7.11	2,191.5	96.9	12.1	41.3	2.00	2.00	0.00
2,219.2	15.38	7.11	2,210.0	101.9	12.7	43.4	2.00	2.00	0.00
PARKMAN									
2,300.0	17.00	7.11	2,287.6	124.2	15.5	52.9	2.00	2.00	0.00
2,400.0	19.00	7.11	2,382.7	154.9	19.3	66.0	2.00	2.00	0.00
2,500.0	21.00	7.11	2,476.6	188.8	23.6	80.4	2.00	2.00	0.00
2,605.3	23.11	7.11	2,574.2	228.0	28.5	97.1	2.00	2.00	0.00
Start 2842.8 hold at 2605.3 MD									
2,700.0	23.11	7.11	2,661.3	264.9	33.1	112.9	0.00	0.00	0.00
2,800.0	23.11	7.11	2,753.3	303.9	37.9	129.4	0.00	0.00	0.00
2,861.6	23.11	7.11	2,810.0	327.9	40.9	139.7	0.00	0.00	0.00
SUSSEX									
2,900.0	23.11	7.11	2,845.3	342.8	42.8	146.0	0.00	0.00	0.00
3,000.0	23.11	7.11	2,937.3	381.7	47.6	162.6	0.00	0.00	0.00
3,100.0	23.11	7.11	3,029.3	420.7	52.5	179.2	0.00	0.00	0.00
3,200.0	23.11	7.11	3,121.2	459.6	57.4	195.8	0.00	0.00	0.00
3,300.0	23.11	7.11	3,213.2	498.6	62.2	212.4	0.00	0.00	0.00
3,340.0	23.11	7.11	3,250.0	514.1	64.2	219.0	0.00	0.00	0.00
SHANNON									
3,400.0	23.11	7.11	3,305.2	537.5	67.1	229.0	0.00	0.00	0.00
3,500.0	23.11	7.11	3,397.2	576.5	71.9	245.6	0.00	0.00	0.00
3,600.0	23.11	7.11	3,489.1	615.4	76.8	262.2	0.00	0.00	0.00
3,700.0	23.11	7.11	3,581.1	654.3	81.7	278.7	0.00	0.00	0.00
3,800.0	23.11	7.11	3,673.1	693.3	86.5	295.3	0.00	0.00	0.00
3,900.0	23.11	7.11	3,765.1	732.2	91.4	311.9	0.00	0.00	0.00
4,000.0	23.11	7.11	3,857.1	771.2	96.2	328.5	0.00	0.00	0.00
4,100.0	23.11	7.11	3,949.0	810.1	101.1	345.1	0.00	0.00	0.00
4,200.0	23.11	7.11	4,041.0	849.0	106.0	361.7	0.00	0.00	0.00
4,300.0	23.11	7.11	4,133.0	888.0	110.8	378.3	0.00	0.00	0.00

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well KENNEDY 2
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Project:	Weld County	MD Reference:	KB 11' @ 4978.0usft
Site:	Sec 18-T4N-R68W	North Reference:	True
Well:	KENNEDY 2	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Wellbore		
Design:	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)
4,400.0	23.11	7.11	4,225.0	926.9	115.7	394.9	0.00	0.00	0.00
4,500.0	23.11	7.11	4,316.9	965.9	120.5	411.5	0.00	0.00	0.00
4,600.0	23.11	7.11	4,408.9	1,004.8	125.4	428.0	0.00	0.00	0.00
4,700.0	23.11	7.11	4,500.9	1,043.8	130.3	444.6	0.00	0.00	0.00
4,800.0	23.11	7.11	4,592.9	1,082.7	135.1	461.2	0.00	0.00	0.00
4,900.0	23.11	7.11	4,684.9	1,121.6	140.0	477.8	0.00	0.00	0.00
5,000.0	23.11	7.11	4,776.8	1,160.6	144.8	494.4	0.00	0.00	0.00
5,100.0	23.11	7.11	4,868.8	1,199.5	149.7	511.0	0.00	0.00	0.00
5,200.0	23.11	7.11	4,960.8	1,238.5	154.6	527.6	0.00	0.00	0.00
5,300.0	23.11	7.11	5,052.8	1,277.4	159.4	544.2	0.00	0.00	0.00
5,400.0	23.11	7.11	5,144.7	1,316.3	164.3	560.8	0.00	0.00	0.00
5,448.2	23.11	7.11	5,189.0	1,335.1	166.6	568.7	0.00	0.00	0.00
Start DLS 9.00 TFO 82.28									
5,450.0	23.13	7.53	5,190.7	1,335.8	166.7	569.0	9.00	1.24	22.70
5,500.0	24.15	18.47	5,236.6	1,355.3	171.3	579.3	9.00	2.05	21.88
5,550.0	25.89	28.31	5,281.9	1,374.6	179.7	593.3	9.00	3.47	19.67
5,600.0	28.20	36.81	5,326.4	1,393.7	191.9	610.8	9.00	4.62	17.01
5,650.0	30.96	44.02	5,369.9	1,412.4	208.0	631.8	9.00	5.52	14.42
5,700.0	34.06	50.10	5,412.1	1,430.6	227.7	656.2	9.00	6.20	12.16
5,750.0	37.41	55.24	5,452.7	1,448.3	250.9	683.7	9.00	6.71	10.29
5,800.0	40.96	59.64	5,491.4	1,465.2	277.5	714.2	9.00	7.09	8.79
5,850.0	44.65	63.43	5,528.1	1,481.4	307.4	747.6	9.00	7.38	7.60
5,900.0	48.45	66.76	5,562.5	1,496.6	340.3	783.6	9.00	7.60	6.65
5,950.0	52.33	69.71	5,594.4	1,510.9	376.1	822.1	9.00	7.77	5.91
6,000.0	56.28	72.37	5,623.6	1,524.0	414.5	862.6	9.00	7.90	5.31
6,050.0	60.28	74.79	5,649.8	1,536.0	455.3	905.1	9.00	8.00	4.84
6,100.0	64.32	77.02	5,673.1	1,546.8	498.2	949.3	9.00	8.08	4.47
6,150.0	68.40	79.11	5,693.1	1,556.3	543.0	994.8	9.00	8.15	4.17
6,200.0	72.50	81.08	5,709.9	1,564.3	589.4	1,041.5	9.00	8.20	3.94
6,250.0	76.61	82.97	5,723.2	1,571.0	637.1	1,089.0	9.00	8.23	3.77
6,300.0	80.74	84.79	5,733.0	1,576.2	685.9	1,136.9	9.00	8.26	3.64
6,350.0	84.88	86.57	5,739.2	1,580.0	735.3	1,185.1	9.00	8.28	3.56
6,400.0	89.03	88.32	5,741.9	1,582.2	785.2	1,233.3	9.00	8.29	3.51
6,411.7	89.99	88.73	5,742.0	1,582.5	796.8	1,244.5	9.00	8.29	3.50
NIOBRARA									
6,411.7	90.00	88.73	5,742.0	1,582.5	796.9	1,244.5	9.00	8.29	3.50
Start 4407.9 hold at 6411.7 MD									
6,500.0	90.00	88.73	5,742.0	1,584.5	885.1	1,329.1	0.00	0.00	0.00
6,600.0	90.00	88.73	5,742.0	1,586.7	985.1	1,424.9	0.00	0.00	0.00
6,700.0	90.00	88.73	5,742.0	1,588.9	1,085.1	1,520.8	0.00	0.00	0.00
6,800.0	90.00	88.73	5,742.0	1,591.1	1,185.1	1,616.6	0.00	0.00	0.00
6,900.0	90.00	88.73	5,742.0	1,593.3	1,285.0	1,712.4	0.00	0.00	0.00
7,000.0	90.00	88.73	5,742.0	1,595.5	1,385.0	1,808.2	0.00	0.00	0.00
7,100.0	90.00	88.73	5,742.0	1,597.7	1,485.0	1,904.0	0.00	0.00	0.00
7,200.0	90.00	88.73	5,742.0	1,599.9	1,585.0	1,999.9	0.00	0.00	0.00
7,300.0	90.00	88.73	5,742.0	1,602.1	1,685.0	2,095.7	0.00	0.00	0.00
7,400.0	90.00	88.73	5,742.0	1,604.3	1,784.9	2,191.5	0.00	0.00	0.00
7,500.0	90.00	88.73	5,742.0	1,606.6	1,884.9	2,287.3	0.00	0.00	0.00
7,600.0	90.00	88.73	5,742.0	1,608.8	1,984.9	2,383.1	0.00	0.00	0.00
7,700.0	90.00	88.73	5,742.0	1,611.0	2,084.9	2,479.0	0.00	0.00	0.00
7,800.0	90.00	88.73	5,742.0	1,613.2	2,184.8	2,574.8	0.00	0.00	0.00
7,900.0	90.00	88.73	5,742.0	1,615.4	2,284.8	2,670.6	0.00	0.00	0.00
8,000.0	90.00	88.73	5,742.0	1,617.6	2,384.8	2,766.4	0.00	0.00	0.00

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well KENNEDY 2
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 11' @ 4978.0usft
Project:	Weld County	MD Reference:	KB 11' @ 4978.0usft
Site:	Sec 18-T4N-R68W	North Reference:	True
Well:	KENNEDY 2	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Wellbore		
Design:	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)	
8,100.0	90.00	88.73	5,742.0	1,619.8	2,484.8	2,862.2	0.00	0.00	0.00	
8,200.0	90.00	88.73	5,742.0	1,622.0	2,584.7	2,958.0	0.00	0.00	0.00	
8,300.0	90.00	88.73	5,742.0	1,624.2	2,684.7	3,053.9	0.00	0.00	0.00	
8,400.0	90.00	88.73	5,742.0	1,626.5	2,784.7	3,149.7	0.00	0.00	0.00	
8,500.0	90.00	88.73	5,742.0	1,628.7	2,884.7	3,245.5	0.00	0.00	0.00	
8,600.0	90.00	88.73	5,742.0	1,630.9	2,984.6	3,341.3	0.00	0.00	0.00	
8,700.0	90.00	88.73	5,742.0	1,633.1	3,084.6	3,437.1	0.00	0.00	0.00	
8,800.0	90.00	88.73	5,742.0	1,635.3	3,184.6	3,533.0	0.00	0.00	0.00	
8,900.0	90.00	88.73	5,742.0	1,637.5	3,284.6	3,628.8	0.00	0.00	0.00	
9,000.0	90.00	88.73	5,742.0	1,639.7	3,384.5	3,724.6	0.00	0.00	0.00	
9,100.0	90.00	88.73	5,742.0	1,641.9	3,484.5	3,820.4	0.00	0.00	0.00	
9,200.0	90.00	88.73	5,742.0	1,644.1	3,584.5	3,916.2	0.00	0.00	0.00	
9,300.0	90.00	88.73	5,742.0	1,646.3	3,684.5	4,012.1	0.00	0.00	0.00	
9,400.0	90.00	88.73	5,742.0	1,648.6	3,784.4	4,107.9	0.00	0.00	0.00	
9,500.0	90.00	88.73	5,742.0	1,650.8	3,884.4	4,203.7	0.00	0.00	0.00	
9,600.0	90.00	88.73	5,742.0	1,653.0	3,984.4	4,299.5	0.00	0.00	0.00	
9,700.0	90.00	88.73	5,742.0	1,655.2	4,084.4	4,395.3	0.00	0.00	0.00	
9,800.0	90.00	88.73	5,742.0	1,657.4	4,184.3	4,491.2	0.00	0.00	0.00	
9,900.0	90.00	88.73	5,742.0	1,659.6	4,284.3	4,587.0	0.00	0.00	0.00	
10,000.0	90.00	88.73	5,742.0	1,661.8	4,384.3	4,682.8	0.00	0.00	0.00	
10,100.0	90.00	88.73	5,742.0	1,664.0	4,484.3	4,778.6	0.00	0.00	0.00	
10,200.0	90.00	88.73	5,742.0	1,666.2	4,584.2	4,874.4	0.00	0.00	0.00	
10,300.0	90.00	88.73	5,742.0	1,668.4	4,684.2	4,970.3	0.00	0.00	0.00	
10,400.0	90.00	88.73	5,742.0	1,670.7	4,784.2	5,066.1	0.00	0.00	0.00	
10,500.0	90.00	88.73	5,742.0	1,672.9	4,884.2	5,161.9	0.00	0.00	0.00	
10,600.0	90.00	88.73	5,742.0	1,675.1	4,984.1	5,257.7	0.00	0.00	0.00	
10,700.0	90.00	88.73	5,742.0	1,677.3	5,084.1	5,353.5	0.00	0.00	0.00	
10,800.0	90.00	88.73	5,742.0	1,679.5	5,184.1	5,449.4	0.00	0.00	0.00	
10,819.7	90.00	88.73	5,742.0	1,679.9	5,203.7	5,468.2	0.00	0.00	0.00	
TD at 10819.7										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude		Longitude
Kennedy 2 PBHL - hit/miss target - Shape - Point	0.00	0.00	5,742.0	1,679.9	5,203.7	1,360,840.06	3,133,994.43	40° 19' 22.476 N		105° 1' 9.959 W
Kennedy 2 LP - plan hits target center - Point	0.00	0.00	5,742.0	1,582.5	796.9	1,360,719.67	3,129,588.14	40° 19' 21.518 N		105° 2' 6.857 W

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well KENNEDY 2
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 11' @ 4978.0usft
Project:	Weld County	MD Reference:	KB 11' @ 4978.0usft
Site:	Sec 18-T4N-R68W	North Reference:	True
Well:	KENNEDY 2	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Wellbore		
Design:	Proposal 1		

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
2,219.2	2,210.0	PARKMAN			
2,861.6	2,810.0	SUSSEX			
3,340.0	3,250.0	SHANNON			
6,411.7	5,742.0	NIOBRARA			

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,450.0	1,450.0	0.0	0.0	Start Build 2.00
2,605.3	2,574.2	228.0	28.5	Start 2842.8 hold at 2605.3 MD
5,448.2	5,189.0	1,335.1	166.6	Start DLS 9.00 TFO 82.28
6,411.7	5,742.0	1,582.5	796.9	Start 4407.9 hold at 6411.7 MD
10,819.7	5,742.0	1,679.9	5,203.7	TD at 10819.7