

EXTRACTION OIL & GAS

WELD COUNTY, COLORADO (NAD 83)

NE SE SEC. 8 T5N R66W 6th P.M.

TC-AIMS 4-9-11

ORIGINAL WELLBORE

23 July, 2015

Plan: PROPOSAL #1

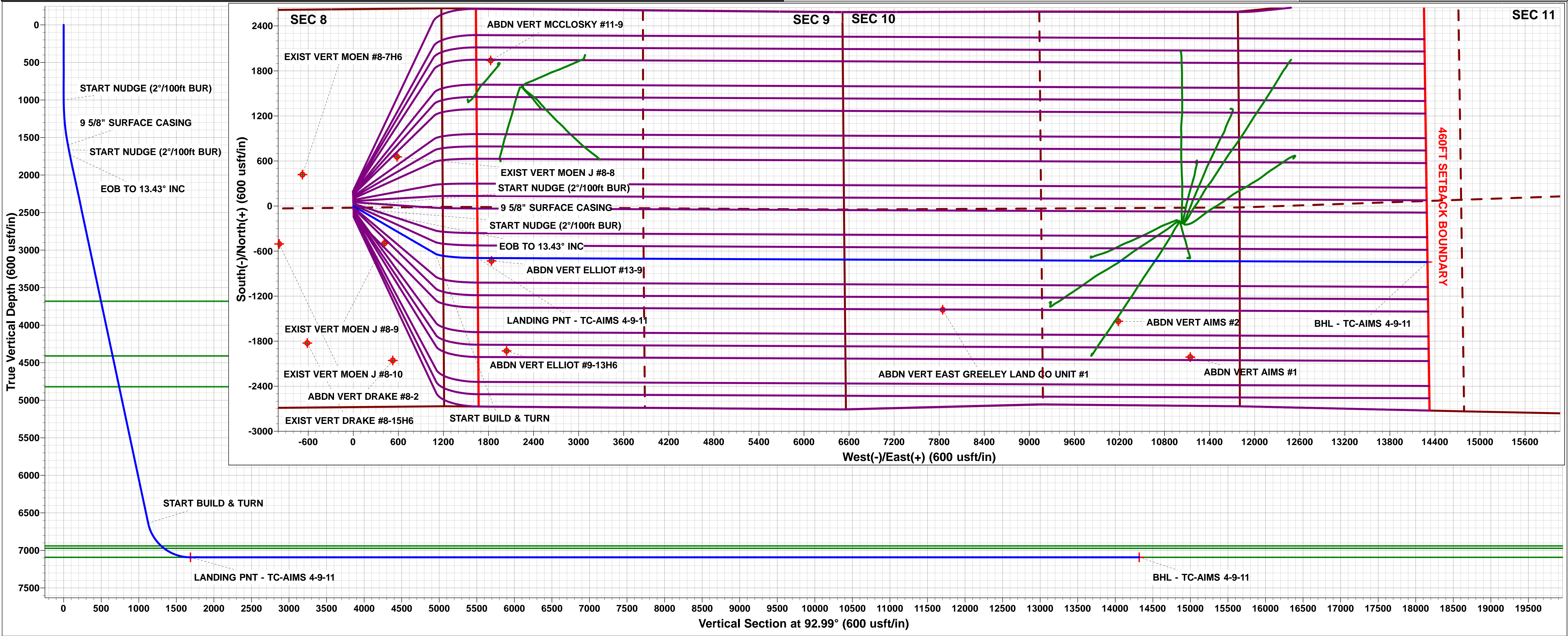
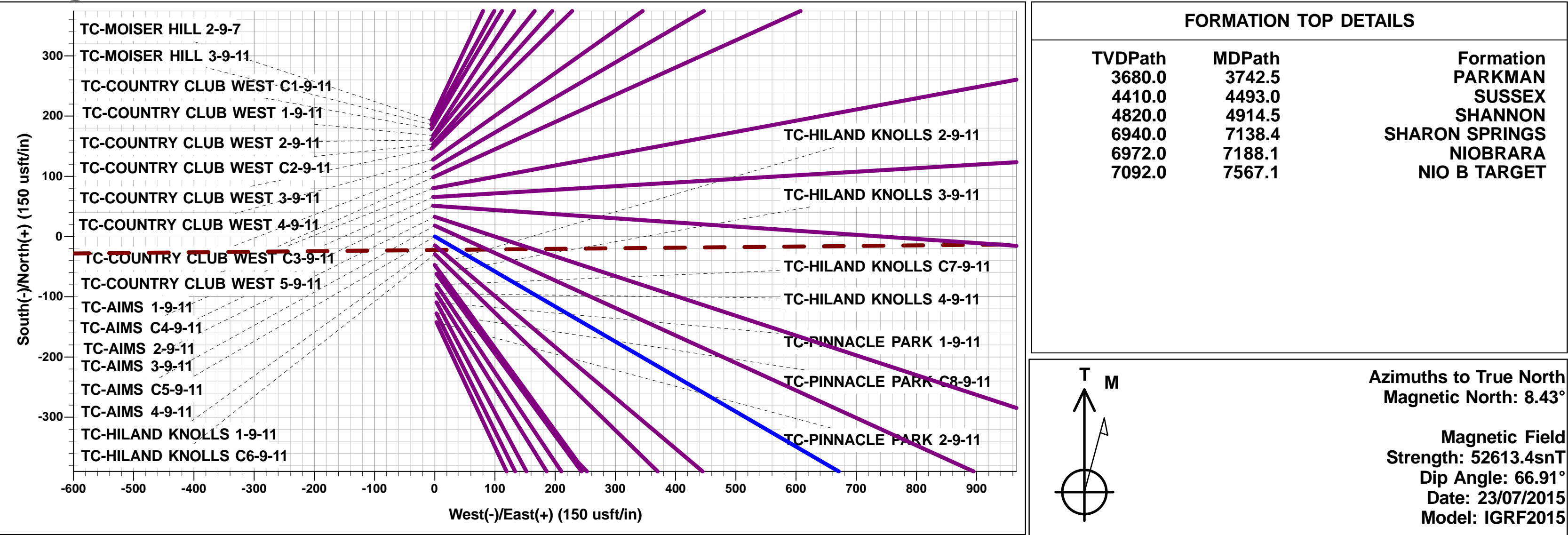




Project: WELD COUNTY, COLORADO (NAD 83)
Site: NE SE SEC. 8 T5N R66W 6th P.M.
Well: TC-AIMS 4-9-11
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL #1

ANNOTATIONS										
TVD	MD	Inc	Azi	+N/-S	+E/-W	VSect	Dep	Annotation		
1000.0	1000.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE (2°/100ft BUR)		
1600.0	1604.5	12.09	120.18	-31.9	54.9	56.5	63.5	9 5/8" SURFACE CASING		
1663.6	1669.5	12.09	120.18	-38.8	66.7	68.6	77.2	START NUDGE (2°/100ft BUR)		
1728.9	1736.5	13.43	120.18	-46.2	79.5	81.8	92.0	EOB TO 13.43° INC		
6637.6	6783.3	13.43	120.17	-635.6	1093.1	1124.8	1264.5	START BUILD & TURN		
7092.0	7567.1	90.00	90.25	-692.1	1654.1	1687.9	1830.8	LANDING PNT - TC-AIMS 4-9-11		
7092.0	20212.6	90.00	90.25	-746.3	14299.5	14318.9	14476.3	BHL - TC-AIMS 4-9-11		

WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
LANDING PNT - TC-AIMS 4-9-11	7092.0	-692.1	1654.1	40.412300	-104.792730
BHL - TC-AIMS 4-9-11	7092.0	-746.3	14299.5	40.412140	-104.747320



Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well TC-AIMS 4-9-11
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4806.0usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4806.0usft (Original Well Elev)
Site:	NE SE SEC. 8 T5N R66W 6th P.M.	North Reference:	True
Well:	TC-AIMS 4-9-11	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #1		

Project	WELD COUNTY, COLORADO (NAD 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site	NE SE SEC. 8 T5N R66W 6th P.M.		
Site Position:		Northing:	1,394,363.62 usft
From:	Lat/Long	Easting:	3,195,288.63 usft
Position Uncertainty:	0.0 usft	Slot Radius:	1.10000ft
		Latitude:	40.413810
		Longitude:	-104.798660
		Grid Convergence:	0.45 °

Well	TC-AIMS 4-9-11		
Well Position	+N/-S	142.1 usft	Northing:
	+E/-W	-2.8 usft	Easting:
Position Uncertainty		0.0 usft	Wellhead Elevation:
			Latitude:
			Longitude:
			Ground Level:

Wellbore	ORIGINAL WELLBORE				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	23/07/2015	8.43	66.91	52,613

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 (°)
	7,092.0	0.0	0.0	92.99

Plan Sections											
MD (usft)	Inc (°)	Azi (°)	Vertical Depth	SS (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usf)	Build Rate (°/100usf)	Turn Rate (°/100usf)	TFO (°)	Target
0.0	0.00	0.00	0.0	-4,806.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,000.0	0.00	0.00	1,000.0	-3,806.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,604.5	12.09	120.18	1,600.0	-3,206.0	-31.9	54.9	2.00	2.00	0.00	120.18	
1,669.5	12.09	120.18	1,663.6	-3,142.4	-38.8	66.7	0.00	0.00	0.00	0.00	
1,736.5	13.43	120.18	1,728.9	-3,077.1	-46.2	79.5	2.00	2.00	0.00	0.00	
1,736.5	13.43	120.17	1,729.0	-3,077.0	-46.2	79.5	10.00	9.56	-12.57	-16.98	
6,783.3	13.43	120.17	6,637.6	1,831.6	-635.6	1,093.1	0.00	0.00	0.00	0.00	
7,567.1	90.00	90.25	7,092.0	2,286.0	-692.1	1,654.1	10.00	9.77	-3.82	-30.62	LANDING PNT - TC
20,212.6	90.00	90.25	7,092.0	2,286.0	-746.3	14,299.5	0.00	0.00	0.00	0.00	BHL - TC-AIMS 4-9

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well TC-AIMS 4-9-11
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4806.0usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4806.0usft (Original Well Elev)
Site:	NE SE SEC. 8 T5N R66W 6th P.M.	North Reference:	True
Well:	TC-AIMS 4-9-11	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #1		

Planned Survey

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	4,806.00	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	4,706.00	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	4,606.00	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	4,506.00	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	4,406.00	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	4,306.00	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	4,206.00	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	4,106.00	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	4,006.00	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	3,906.00	0.0	0.0	0.0	0.00	0.00	0.00
START NUDGE (2°/100ft BUR)										
1,000.0	0.00	0.00	1,000.0	3,806.00	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	2.00	120.18	1,100.0	3,706.02	-0.9	1.5	1.6	2.00	2.00	0.00
1,200.0	4.00	120.18	1,199.8	3,606.16	-3.5	6.0	6.2	2.00	2.00	0.00
1,300.0	6.00	120.18	1,299.5	3,506.55	-7.9	13.6	14.0	2.00	2.00	0.00
1,400.0	8.00	120.18	1,398.7	3,407.30	-14.0	24.1	24.8	2.00	2.00	0.00
1,500.0	10.00	120.18	1,497.5	3,308.53	-21.9	37.6	38.7	2.00	2.00	0.00
1,600.0	12.00	120.18	1,595.6	3,210.38	-31.5	54.1	55.7	2.00	2.00	0.00
9 5/8" SURFACE CASING										
1,604.5	12.09	120.18	1,600.0	3,205.98	-31.9	54.9	56.5	1.99	1.99	0.00
START NUDGE (2°/100ft BUR)										
1,669.5	12.09	120.18	1,663.6	3,142.42	-38.8	66.7	68.6	0.00	0.00	0.00
1,700.0	12.70	120.18	1,693.4	3,112.63	-42.1	72.4	74.5	2.00	2.00	0.00
EOB TO 13.43° INC										
1,736.5	13.43	120.18	1,728.9	3,077.07	-46.2	79.5	81.8	2.00	2.00	0.00
1,800.0	13.43	120.17	1,790.7	3,015.31	-53.6	92.2	94.9	0.01	0.01	-0.01
1,900.0	13.43	120.17	1,888.0	2,918.05	-65.3	112.3	115.6	0.00	0.00	0.00
2,000.0	13.43	120.17	1,985.2	2,820.78	-77.0	132.4	136.2	0.00	0.00	0.00
2,100.0	13.43	120.17	2,082.5	2,723.52	-88.7	152.5	156.9	0.00	0.00	0.00
2,200.0	13.43	120.17	2,179.7	2,626.26	-100.4	172.6	177.6	0.00	0.00	0.00
2,300.0	13.43	120.17	2,277.0	2,528.99	-112.0	192.7	198.2	0.00	0.00	0.00
2,400.0	13.43	120.17	2,374.3	2,431.73	-123.7	212.8	218.9	0.00	0.00	0.00
2,500.0	13.43	120.17	2,471.5	2,334.47	-135.4	232.8	239.6	0.00	0.00	0.00
2,600.0	13.43	120.17	2,568.8	2,237.20	-147.1	252.9	260.2	0.00	0.00	0.00
2,700.0	13.43	120.17	2,666.1	2,139.94	-158.7	273.0	280.9	0.00	0.00	0.00
2,800.0	13.43	120.17	2,763.3	2,042.67	-170.4	293.1	301.6	0.00	0.00	0.00
2,900.0	13.43	120.17	2,860.6	1,945.41	-182.1	313.2	322.2	0.00	0.00	0.00
3,000.0	13.43	120.17	2,957.9	1,848.15	-193.8	333.3	342.9	0.00	0.00	0.00
3,100.0	13.43	120.17	3,055.1	1,750.88	-205.5	353.3	363.6	0.00	0.00	0.00
3,200.0	13.43	120.17	3,152.4	1,653.62	-217.1	373.4	384.2	0.00	0.00	0.00
3,300.0	13.43	120.17	3,249.6	1,556.36	-228.8	393.5	404.9	0.00	0.00	0.00
3,400.0	13.43	120.17	3,346.9	1,459.09	-240.5	413.6	425.6	0.00	0.00	0.00
3,500.0	13.43	120.17	3,444.2	1,361.83	-252.2	433.7	446.2	0.00	0.00	0.00
3,600.0	13.43	120.17	3,541.4	1,264.56	-263.8	453.8	466.9	0.00	0.00	0.00
3,700.0	13.43	120.17	3,638.7	1,167.30	-275.5	473.9	487.6	0.00	0.00	0.00
PARKMAN										
3,742.5	13.43	120.17	3,680.0	1,126.00	-280.5	482.4	496.3	0.00	0.00	0.00
3,800.0	13.43	120.17	3,736.0	1,070.04	-287.2	493.9	508.2	0.00	0.00	0.00
3,900.0	13.43	120.17	3,833.2	972.77	-298.9	514.0	528.9	0.00	0.00	0.00
4,000.0	13.43	120.17	3,930.5	875.51	-310.6	534.1	549.6	0.00	0.00	0.00
4,100.0	13.43	120.17	4,027.8	778.25	-322.2	554.2	570.2	0.00	0.00	0.00
4,200.0	13.43	120.17	4,125.0	680.98	-333.9	574.3	590.9	0.00	0.00	0.00
4,300.0	13.43	120.17	4,222.3	583.72	-345.6	594.4	611.6	0.00	0.00	0.00
4,400.0	13.43	120.17	4,319.5	486.45	-357.3	614.4	632.2	0.00	0.00	0.00

Planning Report



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Well:	TC-AIMS 4-9-11	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #1		

Planned Survey

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
SUSSEX										
4,493.0	13.43	120.17	4,410.0	396.00	-368.1	633.1	651.5	0.00	0.00	0.00
4,500.0	13.43	120.17	4,416.8	389.19	-368.9	634.5	652.9	0.00	0.00	0.00
4,600.0	13.43	120.17	4,514.1	291.93	-380.6	654.6	673.6	0.00	0.00	0.00
4,700.0	13.43	120.17	4,611.3	194.66	-392.3	674.7	694.2	0.00	0.00	0.00
4,800.0	13.43	120.17	4,708.6	97.40	-404.0	694.8	714.9	0.00	0.00	0.00
4,900.0	13.43	120.17	4,805.9	0.14	-415.6	714.9	735.6	0.00	0.00	0.00
SHANNON										
4,914.5	13.43	120.17	4,820.0	-14.00	-417.3	717.8	738.6	0.00	0.00	0.00
5,000.0	13.43	120.17	4,903.1	-97.13	-427.3	735.0	756.2	0.00	0.00	0.00
5,100.0	13.43	120.17	5,000.4	-194.39	-439.0	755.0	776.9	0.00	0.00	0.00
5,200.0	13.43	120.17	5,097.7	-291.66	-450.7	775.1	797.6	0.00	0.00	0.00
5,300.0	13.43	120.17	5,194.9	-388.92	-462.4	795.2	818.2	0.00	0.00	0.00
5,400.0	13.43	120.17	5,292.2	-486.18	-474.0	815.3	838.9	0.00	0.00	0.00
5,500.0	13.43	120.17	5,389.4	-583.45	-485.7	835.4	859.6	0.00	0.00	0.00
5,600.0	13.43	120.17	5,486.7	-680.71	-497.4	855.5	880.2	0.00	0.00	0.00
5,700.0	13.43	120.17	5,584.0	-777.97	-509.1	875.6	900.9	0.00	0.00	0.00
5,800.0	13.43	120.17	5,681.2	-875.24	-520.7	895.6	921.6	0.00	0.00	0.00
5,900.0	13.43	120.17	5,778.5	-972.50	-532.4	915.7	942.2	0.00	0.00	0.00
6,000.0	13.43	120.17	5,875.8	-1,069.76	-544.1	935.8	962.9	0.00	0.00	0.00
6,100.0	13.43	120.17	5,973.0	-1,167.03	-555.8	955.9	983.6	0.00	0.00	0.00
6,200.0	13.43	120.17	6,070.3	-1,264.29	-567.5	976.0	1,004.2	0.00	0.00	0.00
6,300.0	13.43	120.17	6,167.6	-1,361.56	-579.1	996.1	1,024.9	0.00	0.00	0.00
6,400.0	13.43	120.17	6,264.8	-1,458.82	-590.8	1,016.1	1,045.6	0.00	0.00	0.00
6,500.0	13.43	120.17	6,362.1	-1,556.08	-602.5	1,036.2	1,066.2	0.00	0.00	0.00
6,600.0	13.43	120.17	6,459.3	-1,653.35	-614.2	1,056.3	1,086.9	0.00	0.00	0.00
6,700.0	13.43	120.17	6,556.6	-1,750.61	-625.8	1,076.4	1,107.6	0.00	0.00	0.00
START BUILD & TURN										
6,783.3	13.43	120.17	6,637.6	-1,831.63	-635.6	1,093.1	1,124.8	0.00	0.00	0.00
6,800.0	14.90	116.86	6,653.8	-1,847.82	-637.5	1,096.7	1,128.5	10.01	8.75	-19.83
6,900.0	24.21	105.62	6,748.0	-1,941.99	-648.9	1,128.0	1,160.3	10.00	9.31	-11.24
7,000.0	33.90	100.46	6,835.3	-2,029.32	-659.5	1,175.3	1,208.1	10.00	9.69	-5.16
7,100.0	43.71	97.41	6,913.2	-2,107.16	-669.0	1,237.1	1,270.3	10.00	9.82	-3.06
SHARON SPRINGS										
7,138.4	47.50	96.52	6,940.0	-2,134.00	-672.3	1,264.4	1,297.7	10.00	9.86	-2.32
NIOBRARA										
7,188.1	52.41	95.51	6,972.0	-2,166.00	-676.3	1,302.2	1,335.7	10.00	9.88	-2.02
7,200.0	53.59	95.29	6,979.1	-2,173.15	-677.2	1,311.7	1,345.2	10.00	9.89	-1.86
7,300.0	63.49	93.65	7,031.3	-2,225.28	-683.8	1,396.6	1,430.3	10.00	9.90	-1.64
7,400.0	73.41	92.28	7,068.0	-2,261.97	-688.6	1,489.4	1,523.2	10.00	9.92	-1.37
7,500.0	83.33	91.04	7,088.1	-2,282.10	-691.4	1,587.1	1,621.0	10.00	9.93	-1.24
LANDING PNT - TC-AIMS 4-9-11 - NIO B TARGET										
7,567.1	90.00	90.25	7,092.0	-2,286.00	-692.1	1,654.1	1,687.9	10.00	9.93	-1.19
7,600.0	90.00	90.25	7,092.0	-2,286.00	-692.3	1,687.0	1,720.8	0.00	0.00	0.00
7,700.0	90.00	90.25	7,092.0	-2,286.00	-692.7	1,787.0	1,820.7	0.00	0.00	0.00
7,800.0	90.00	90.25	7,092.0	-2,286.00	-693.1	1,887.0	1,920.5	0.00	0.00	0.00
7,900.0	90.00	90.25	7,092.0	-2,286.00	-693.6	1,987.0	2,020.4	0.00	0.00	0.00
8,000.0	90.00	90.25	7,092.0	-2,286.00	-694.0	2,087.0	2,120.3	0.00	0.00	0.00
8,100.0	90.00	90.25	7,092.0	-2,286.00	-694.4	2,187.0	2,220.2	0.00	0.00	0.00
8,200.0	90.00	90.25	7,092.0	-2,286.00	-694.8	2,287.0	2,320.1	0.00	0.00	0.00
8,300.0	90.00	90.25	7,092.0	-2,286.00	-695.3	2,387.0	2,420.0	0.00	0.00	0.00
8,400.0	90.00	90.25	7,092.0	-2,286.00	-695.7	2,487.0	2,519.9	0.00	0.00	0.00
8,500.0	90.00	90.25	7,092.0	-2,286.00	-696.1	2,587.0	2,619.7	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well TC-AIMS 4-9-11
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4806.0usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4806.0usft (Original Well Elev)
Site:	NE SE SEC. 8 T5N R66W 6th P.M.	North Reference:	True
Well:	TC-AIMS 4-9-11	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #1		

Planned Survey										
MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,600.0	90.00	90.25	7,092.0	-2,286.00	-696.6	2,687.0	2,719.6	0.00	0.00	0.00
8,700.0	90.00	90.25	7,092.0	-2,286.00	-697.0	2,787.0	2,819.5	0.00	0.00	0.00
8,800.0	90.00	90.25	7,092.0	-2,286.00	-697.4	2,887.0	2,919.4	0.00	0.00	0.00
8,900.0	90.00	90.25	7,092.0	-2,286.00	-697.8	2,987.0	3,019.3	0.00	0.00	0.00
9,000.0	90.00	90.25	7,092.0	-2,286.00	-698.3	3,087.0	3,119.2	0.00	0.00	0.00
9,100.0	90.00	90.25	7,092.0	-2,286.00	-698.7	3,187.0	3,219.1	0.00	0.00	0.00
9,200.0	90.00	90.25	7,092.0	-2,286.00	-699.1	3,287.0	3,318.9	0.00	0.00	0.00
9,300.0	90.00	90.25	7,092.0	-2,286.00	-699.6	3,387.0	3,418.8	0.00	0.00	0.00
9,400.0	90.00	90.25	7,092.0	-2,286.00	-700.0	3,487.0	3,518.7	0.00	0.00	0.00
9,500.0	90.00	90.25	7,092.0	-2,286.00	-700.4	3,587.0	3,618.6	0.00	0.00	0.00
9,600.0	90.00	90.25	7,092.0	-2,286.00	-700.8	3,687.0	3,718.5	0.00	0.00	0.00
9,700.0	90.00	90.25	7,092.0	-2,286.00	-701.3	3,787.0	3,818.4	0.00	0.00	0.00
9,800.0	90.00	90.25	7,092.0	-2,286.00	-701.7	3,887.0	3,918.3	0.00	0.00	0.00
9,900.0	90.00	90.25	7,092.0	-2,286.00	-702.1	3,987.0	4,018.1	0.00	0.00	0.00
10,000.0	90.00	90.25	7,092.0	-2,286.00	-702.6	4,087.0	4,118.0	0.00	0.00	0.00
10,100.0	90.00	90.25	7,092.0	-2,286.00	-703.0	4,187.0	4,217.9	0.00	0.00	0.00
10,200.0	90.00	90.25	7,092.0	-2,286.00	-703.4	4,287.0	4,317.8	0.00	0.00	0.00
10,300.0	90.00	90.25	7,092.0	-2,286.00	-703.8	4,387.0	4,417.7	0.00	0.00	0.00
10,400.0	90.00	90.25	7,092.0	-2,286.00	-704.3	4,487.0	4,517.6	0.00	0.00	0.00
10,500.0	90.00	90.25	7,092.0	-2,286.00	-704.7	4,587.0	4,617.5	0.00	0.00	0.00
10,600.0	90.00	90.25	7,092.0	-2,286.00	-705.1	4,687.0	4,717.3	0.00	0.00	0.00
10,700.0	90.00	90.25	7,092.0	-2,286.00	-705.6	4,787.0	4,817.2	0.00	0.00	0.00
10,800.0	90.00	90.25	7,092.0	-2,286.00	-706.0	4,887.0	4,917.1	0.00	0.00	0.00
10,900.0	90.00	90.25	7,092.0	-2,286.00	-706.4	4,987.0	5,017.0	0.00	0.00	0.00
11,000.0	90.00	90.25	7,092.0	-2,286.00	-706.8	5,087.0	5,116.9	0.00	0.00	0.00
11,100.0	90.00	90.25	7,092.0	-2,286.00	-707.3	5,187.0	5,216.8	0.00	0.00	0.00
11,200.0	90.00	90.25	7,092.0	-2,286.00	-707.7	5,287.0	5,316.7	0.00	0.00	0.00
11,300.0	90.00	90.25	7,092.0	-2,286.00	-708.1	5,387.0	5,416.5	0.00	0.00	0.00
11,400.0	90.00	90.25	7,092.0	-2,286.00	-708.6	5,486.9	5,516.4	0.00	0.00	0.00
11,500.0	90.00	90.25	7,092.0	-2,286.00	-709.0	5,586.9	5,616.3	0.00	0.00	0.00
11,600.0	90.00	90.25	7,092.0	-2,286.00	-709.4	5,686.9	5,716.2	0.00	0.00	0.00
11,700.0	90.00	90.25	7,092.0	-2,286.00	-709.8	5,786.9	5,816.1	0.00	0.00	0.00
11,800.0	90.00	90.25	7,092.0	-2,286.00	-710.3	5,886.9	5,916.0	0.00	0.00	0.00
11,900.0	90.00	90.25	7,092.0	-2,286.00	-710.7	5,986.9	6,015.8	0.00	0.00	0.00
12,000.0	90.00	90.25	7,092.0	-2,286.00	-711.1	6,086.9	6,115.7	0.00	0.00	0.00
12,100.0	90.00	90.25	7,092.0	-2,286.00	-711.6	6,186.9	6,215.6	0.00	0.00	0.00
12,200.0	90.00	90.25	7,092.0	-2,286.00	-712.0	6,286.9	6,315.5	0.00	0.00	0.00
12,300.0	90.00	90.25	7,092.0	-2,286.00	-712.4	6,386.9	6,415.4	0.00	0.00	0.00
12,400.0	90.00	90.25	7,092.0	-2,286.00	-712.8	6,486.9	6,515.3	0.00	0.00	0.00
12,500.0	90.00	90.25	7,092.0	-2,286.00	-713.3	6,586.9	6,615.2	0.00	0.00	0.00
12,600.0	90.00	90.25	7,092.0	-2,286.00	-713.7	6,686.9	6,715.0	0.00	0.00	0.00
12,700.0	90.00	90.25	7,092.0	-2,286.00	-714.1	6,786.9	6,814.9	0.00	0.00	0.00
12,800.0	90.00	90.25	7,092.0	-2,286.00	-714.6	6,886.9	6,914.8	0.00	0.00	0.00
12,900.0	90.00	90.25	7,092.0	-2,286.00	-715.0	6,986.9	7,014.7	0.00	0.00	0.00
13,000.0	90.00	90.25	7,092.0	-2,286.00	-715.4	7,086.9	7,114.6	0.00	0.00	0.00
13,100.0	90.00	90.25	7,092.0	-2,286.00	-715.8	7,186.9	7,214.5	0.00	0.00	0.00
13,200.0	90.00	90.25	7,092.0	-2,286.00	-716.3	7,286.9	7,314.4	0.00	0.00	0.00
13,300.0	90.00	90.25	7,092.0	-2,286.00	-716.7	7,386.9	7,414.2	0.00	0.00	0.00
13,400.0	90.00	90.25	7,092.0	-2,286.00	-717.1	7,486.9	7,514.1	0.00	0.00	0.00
13,500.0	90.00	90.25	7,092.0	-2,286.00	-717.6	7,586.9	7,614.0	0.00	0.00	0.00
13,600.0	90.00	90.25	7,092.0	-2,286.00	-718.0	7,686.9	7,713.9	0.00	0.00	0.00
13,700.0	90.00	90.25	7,092.0	-2,286.00	-718.4	7,786.9	7,813.8	0.00	0.00	0.00
13,800.0	90.00	90.25	7,092.0	-2,286.00	-718.8	7,886.9	7,913.7	0.00	0.00	0.00
13,900.0	90.00	90.25	7,092.0	-2,286.00	-719.3	7,986.9	8,013.6	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well TC-AIMS 4-9-11
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4806.0usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4806.0usft (Original Well Elev)
Site:	NE SE SEC. 8 T5N R66W 6th P.M.	North Reference:	True
Well:	TC-AIMS 4-9-11	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #1		

Planned Survey										
MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
14,000.0	90.00	90.25	7,092.0	-2,286.00	-719.7	8,086.9	8,113.4	0.00	0.00	0.00
14,100.0	90.00	90.25	7,092.0	-2,286.00	-720.1	8,186.9	8,213.3	0.00	0.00	0.00
14,200.0	90.00	90.25	7,092.0	-2,286.00	-720.6	8,286.9	8,313.2	0.00	0.00	0.00
14,300.0	90.00	90.25	7,092.0	-2,286.00	-721.0	8,386.9	8,413.1	0.00	0.00	0.00
14,400.0	90.00	90.25	7,092.0	-2,286.00	-721.4	8,486.9	8,513.0	0.00	0.00	0.00
14,500.0	90.00	90.25	7,092.0	-2,286.00	-721.8	8,586.9	8,612.9	0.00	0.00	0.00
14,600.0	90.00	90.25	7,092.0	-2,286.00	-722.3	8,686.9	8,712.8	0.00	0.00	0.00
14,700.0	90.00	90.25	7,092.0	-2,286.00	-722.7	8,786.9	8,812.6	0.00	0.00	0.00
14,800.0	90.00	90.25	7,092.0	-2,286.00	-723.1	8,886.9	8,912.5	0.00	0.00	0.00
14,900.0	90.00	90.25	7,092.0	-2,286.00	-723.6	8,986.9	9,012.4	0.00	0.00	0.00
15,000.0	90.00	90.25	7,092.0	-2,286.00	-724.0	9,086.9	9,112.3	0.00	0.00	0.00
15,100.0	90.00	90.25	7,092.0	-2,286.00	-724.4	9,186.9	9,212.2	0.00	0.00	0.00
15,200.0	90.00	90.25	7,092.0	-2,286.00	-724.8	9,286.9	9,312.1	0.00	0.00	0.00
15,300.0	90.00	90.25	7,092.0	-2,286.00	-725.3	9,386.9	9,412.0	0.00	0.00	0.00
15,400.0	90.00	90.25	7,092.0	-2,286.00	-725.7	9,486.9	9,511.8	0.00	0.00	0.00
15,500.0	90.00	90.25	7,092.0	-2,286.00	-726.1	9,586.9	9,611.7	0.00	0.00	0.00
15,600.0	90.00	90.25	7,092.0	-2,286.00	-726.6	9,686.9	9,711.6	0.00	0.00	0.00
15,700.0	90.00	90.25	7,092.0	-2,286.00	-727.0	9,786.9	9,811.5	0.00	0.00	0.00
15,800.0	90.00	90.25	7,092.0	-2,286.00	-727.4	9,886.9	9,911.4	0.00	0.00	0.00
15,900.0	90.00	90.25	7,092.0	-2,286.00	-727.8	9,986.9	10,011.3	0.00	0.00	0.00
16,000.0	90.00	90.25	7,092.0	-2,286.00	-728.3	10,086.9	10,111.2	0.00	0.00	0.00
16,100.0	90.00	90.25	7,092.0	-2,286.00	-728.7	10,186.9	10,211.0	0.00	0.00	0.00
16,200.0	90.00	90.25	7,092.0	-2,286.00	-729.1	10,286.9	10,310.9	0.00	0.00	0.00
16,300.0	90.00	90.25	7,092.0	-2,286.00	-729.6	10,386.9	10,410.8	0.00	0.00	0.00
16,400.0	90.00	90.25	7,092.0	-2,286.00	-730.0	10,486.9	10,510.7	0.00	0.00	0.00
16,500.0	90.00	90.25	7,092.0	-2,286.00	-730.4	10,586.9	10,610.6	0.00	0.00	0.00
16,600.0	90.00	90.25	7,092.0	-2,286.00	-730.8	10,686.9	10,710.5	0.00	0.00	0.00
16,700.0	90.00	90.25	7,092.0	-2,286.00	-731.3	10,786.9	10,810.4	0.00	0.00	0.00
16,800.0	90.00	90.25	7,092.0	-2,286.00	-731.7	10,886.9	10,910.2	0.00	0.00	0.00
16,900.0	90.00	90.25	7,092.0	-2,286.00	-732.1	10,986.9	11,010.1	0.00	0.00	0.00
17,000.0	90.00	90.25	7,092.0	-2,286.00	-732.6	11,086.9	11,110.0	0.00	0.00	0.00
17,100.0	90.00	90.25	7,092.0	-2,286.00	-733.0	11,186.9	11,209.9	0.00	0.00	0.00
17,200.0	90.00	90.25	7,092.0	-2,286.00	-733.4	11,286.9	11,309.8	0.00	0.00	0.00
17,300.0	90.00	90.25	7,092.0	-2,286.00	-733.8	11,386.9	11,409.7	0.00	0.00	0.00
17,400.0	90.00	90.25	7,092.0	-2,286.00	-734.3	11,486.9	11,509.6	0.00	0.00	0.00
17,500.0	90.00	90.25	7,092.0	-2,286.00	-734.7	11,586.9	11,609.4	0.00	0.00	0.00
17,600.0	90.00	90.25	7,092.0	-2,286.00	-735.1	11,686.9	11,709.3	0.00	0.00	0.00
17,700.0	90.00	90.25	7,092.0	-2,286.00	-735.6	11,786.9	11,809.2	0.00	0.00	0.00
17,800.0	90.00	90.25	7,092.0	-2,286.00	-736.0	11,886.9	11,909.1	0.00	0.00	0.00
17,900.0	90.00	90.25	7,092.0	-2,286.00	-736.4	11,986.9	12,009.0	0.00	0.00	0.00
18,000.0	90.00	90.25	7,092.0	-2,286.00	-736.9	12,086.9	12,108.9	0.00	0.00	0.00
18,100.0	90.00	90.25	7,092.0	-2,286.00	-737.3	12,186.9	12,208.8	0.00	0.00	0.00
18,200.0	90.00	90.25	7,092.0	-2,286.00	-737.7	12,286.9	12,308.6	0.00	0.00	0.00
18,300.0	90.00	90.25	7,092.0	-2,286.00	-738.1	12,386.9	12,408.5	0.00	0.00	0.00
18,400.0	90.00	90.25	7,092.0	-2,286.00	-738.6	12,486.9	12,508.4	0.00	0.00	0.00
18,500.0	90.00	90.25	7,092.0	-2,286.00	-739.0	12,586.9	12,608.3	0.00	0.00	0.00
18,600.0	90.00	90.25	7,092.0	-2,286.00	-739.4	12,686.9	12,708.2	0.00	0.00	0.00
18,700.0	90.00	90.25	7,092.0	-2,286.00	-739.9	12,786.9	12,808.1	0.00	0.00	0.00
18,800.0	90.00	90.25	7,092.0	-2,286.00	-740.3	12,886.9	12,907.9	0.00	0.00	0.00
18,900.0	90.00	90.25	7,092.0	-2,286.00	-740.7	12,986.9	13,007.8	0.00	0.00	0.00
19,000.0	90.00	90.25	7,092.0	-2,286.00	-741.1	13,086.9	13,107.7	0.00	0.00	0.00
19,100.0	90.00	90.25	7,092.0	-2,286.00	-741.6	13,186.9	13,207.6	0.00	0.00	0.00
19,200.0	90.00	90.25	7,092.0	-2,286.00	-742.0	13,286.9	13,307.5	0.00	0.00	0.00
19,300.0	90.00	90.25	7,092.0	-2,286.00	-742.4	13,386.9	13,407.4	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well TC-AIMS 4-9-11
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4806.0usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4806.0usft (Original Well Elev)
Site:	NE SE SEC. 8 T5N R66W 6th P.M.	North Reference:	True
Well:	TC-AIMS 4-9-11	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #1		

Planned Survey										
MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
19,400.0	90.00	90.25	7,092.0	-2,286.00	-742.9	13,486.9	13,507.3	0.00	0.00	0.00
19,500.0	90.00	90.25	7,092.0	-2,286.00	-743.3	13,586.9	13,607.1	0.00	0.00	0.00
19,600.0	90.00	90.25	7,092.0	-2,286.00	-743.7	13,686.9	13,707.0	0.00	0.00	0.00
19,700.0	90.00	90.25	7,092.0	-2,286.00	-744.1	13,786.9	13,806.9	0.00	0.00	0.00
19,800.0	90.00	90.25	7,092.0	-2,286.00	-744.6	13,886.9	13,906.8	0.00	0.00	0.00
19,900.0	90.00	90.25	7,092.0	-2,286.00	-745.0	13,986.9	14,006.7	0.00	0.00	0.00
20,000.0	90.00	90.25	7,092.0	-2,286.00	-745.4	14,086.9	14,106.6	0.00	0.00	0.00
20,100.0	90.00	90.25	7,092.0	-2,286.00	-745.9	14,186.9	14,206.5	0.00	0.00	0.00
20,200.0	90.00	90.25	7,092.0	-2,286.00	-746.3	14,286.9	14,306.3	0.00	0.00	0.00
BHL - TC-AIMS 4-9-11										
20,212.6	90.00	90.25	7,092.0	-2,286.00	-746.3	14,299.5	14,318.9	0.00	0.00	0.00

Formations						
MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,742.5	3,680.0	PARKMAN				
4,493.0	4,410.0	SUSSEX				
4,914.5	4,820.0	SHANNON				
7,138.4	6,940.0	SHARON SPRINGS				
7,188.1	6,972.0	NIOBRARA				
7,567.1	7,092.0	NIO B TARGET				

Plan Annotations				
MD (usft)	TVD (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,000.0	1,000.0	0.0	0.0	START NUDGE (2°/100ft BUR)
1,604.5	1,600.0	-31.9	54.9	9 5/8" SURFACE CASING
1,669.5	1,663.6	-38.8	66.7	START NUDGE (2°/100ft BUR)
1,736.5	1,728.9	-46.2	79.5	EOB TO 13.43° INC
6,783.3	6,637.6	-635.6	1,093.1	START BUILD & TURN
7,567.1	7,092.0	-692.1	1,654.1	LANDING PNT - TC-AIMS 4-9-11
20,212.6	7,092.0	-746.3	14,299.5	BHL - TC-AIMS 4-9-11