

EXTRACTION OIL & GAS

WELD COUNTY, COLORADO (NAD 83)

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

TC-AIMS 3-9-11

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 3-9-11
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL #1

ANNOTATIONS										FORMATION TOP DETAILS		
TVD	MD	Inc	Azi	+N/-S	+E/-W	VSect	Dep	Annotation		TVDPath	MDPath	Formation
1200.0	1200.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDDGE (2"/100ft BUR)		3680.0	3730.8	PARKMAN
1600.0	1601.3	8.03	108.19	-8.8	26.7	26.9	28.1	9 5/8" SURFACE CASING		4410.0	4479.2	SUSSEX
1664.4	1666.3	8.03	108.19	-11.6	35.3	35.6	37.1	START NUDDGE (2"/100ft BUR)		4820.0	4899.6	SHANNON
1895.6	1901.5	12.73	108.19	-24.8	75.5	76.3	79.5	EOB TO 12.73° INC		6940.0	7117.0	SHARON SPRINGS
6640.2	6765.7	12.73	108.19	-359.5	1094.0	1104.7	1151.6	START BUILD & TURN		6972.0	7166.6	NIOBRARA
7092.0	7544.7	90.00	90.25	-393.4	1654.1	1665.6	1713.5	LANDING PNT - TC-AIMS 3-9-11		7092.0	7544.7	NIO B TARGET
7092.0	20187.3	90.00	90.25	-447.6	14296.5	14303.5	14356.1	BHL - TC-AIMS 3-9-11				

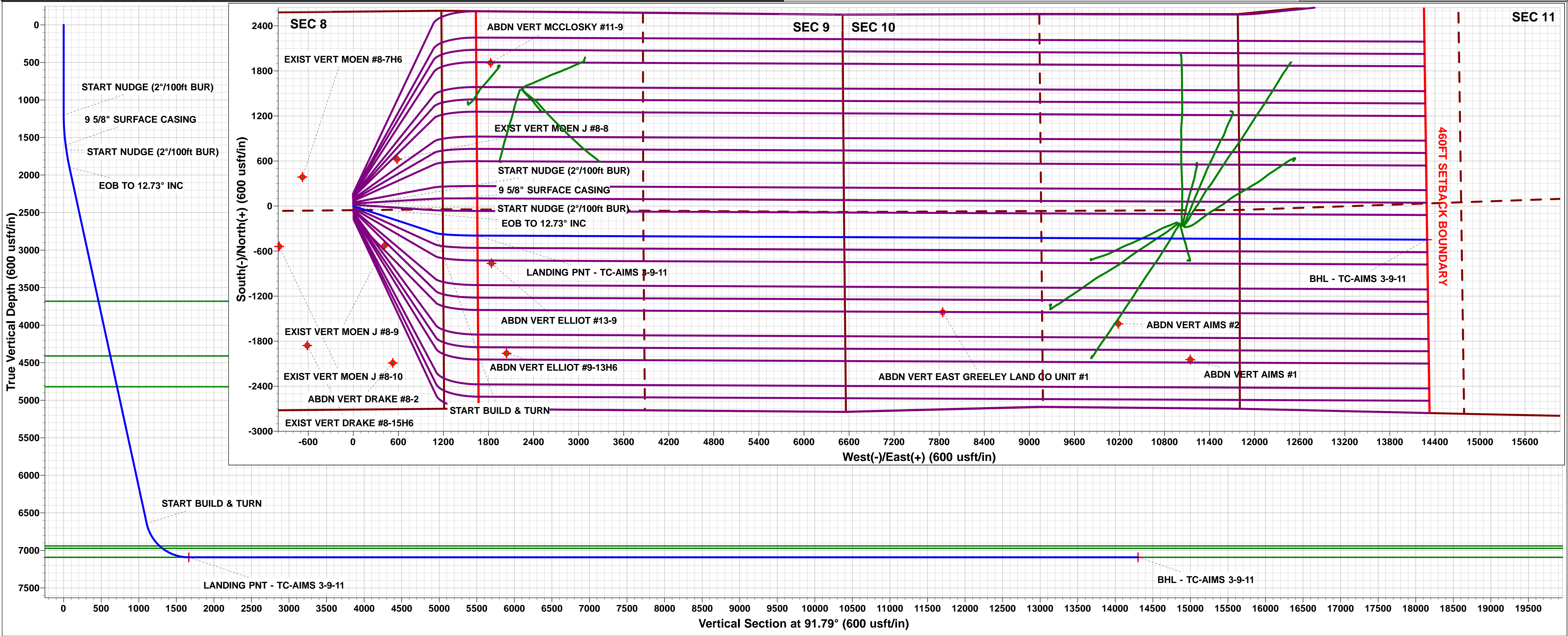
WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
LANDING PNT - TC-AIMS 3-9-11	7092.0	-393.4	1654.1	40.413210	-104.792730
BHL - TC-AIMS 3-9-11	7092.0	-447.6	14296.5	40.413050	-104.747330

South(-)/North(+) (150 usft/in)

West(-)/East(+) (150 usft/in)

Azimuths to True North
Magnetic North: 8.43°

Magnetic Field
Strength: 52613.5snT
Dip Angle: 66.91°
Date: 23/07/2015
Model: IGRF2015



Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well TC-AIMS 3-9-11
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 3-9-11	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	Latitude:	40.413810
From:	Lat/Long	Easting:	3,195,288.63 usft	Longitude:	-104.798660
Position Uncertainty:	0.0 usft	Slot Radius:	1.10000 ft	Grid Convergence:	0.45 °

Well	TC-AIMS 3-9-11					
Well Position	+N/-S	174.9 usft	Northing:	1,394,538.45 usfi	Latitude:	40.414290
	+E/-W	-2.8 usft	Easting:	3,195,284.46 usfi	Longitude:	-104.798670
Position Uncertainty		0.0 usft	Wellhead Elevation:	usfi	Ground Level:	4,790.0 usft

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	91.79

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	
1,200.0	0.00	0.00	1,200.0	-3,606.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,601.3	8.03	108.19	1,600.0	-3,206.0	-8.8	26.7	2.00	2.00	0.00	108.19	
1,666.3	8.03	108.19	1,664.4	-3,141.6	-11.6	35.3	0.00	0.00	0.00	0.00	
1,901.5	12.73	108.19	1,895.6	-2,910.4	-24.8	75.5	2.00	2.00	0.00	0.00	
1,901.5	12.73	108.19	1,895.7	-2,910.3	-24.8	75.5	10.00	9.69	11.10	14.17	
6,765.7	12.73	108.19	6,640.3	1,834.3	-359.5	1,094.0	0.00	0.00	0.00	0.00	
7,544.7	90.00	90.25	7,092.0	2,286.0	-393.4	1,654.1	10.00	9.92	-2.30	-18.37	LANDING PNT - TC
20,187.3	90.00	90.25	7,092.0	2,286.0	-447.6	14,296.5	0.00	0.00	0.00	0.00	BHL - TC-AIMS 3-9

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well TC-AIMS 3-9-11
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 3-9-11	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
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	0.00	0.00	1,100.0	3,706.00	0.0	0.0	0.0	0.00	0.00	0.00
START NUDGE (2°/100ft BUR)										
1,200.0	0.00	0.00	1,200.0	3,606.00	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	2.00	108.19	1,300.0	3,506.02	-0.5	1.7	1.7	2.00	2.00	0.00
1,400.0	4.00	108.19	1,399.8	3,406.16	-2.2	6.6	6.7	2.00	2.00	0.00
1,500.0	6.00	108.19	1,499.5	3,306.55	-4.9	14.9	15.1	2.00	2.00	0.00
1,600.0	8.00	108.19	1,598.7	3,207.30	-8.7	26.5	26.7	2.00	2.00	0.00
9 5/8" SURFACE CASING										
1,601.3	8.03	108.19	1,600.0	3,206.01	-8.8	26.7	26.9	2.00	2.00	0.00
START NUDGE (2°/100ft BUR)										
1,666.3	8.03	108.19	1,664.4	3,141.65	-11.6	35.3	35.6	0.00	0.00	0.00
1,700.0	8.70	108.19	1,697.7	3,108.31	-13.1	39.9	40.3	2.00	2.00	0.00
1,800.0	10.70	108.19	1,796.3	3,009.74	-18.4	55.9	56.5	2.00	2.00	0.00
1,900.0	12.70	108.19	1,894.2	2,911.82	-24.7	75.2	75.9	2.00	2.00	0.00
EOB TO 12.73° INC										
1,901.5	12.73	108.19	1,895.6	2,910.36	-24.8	75.5	76.3	1.87	1.87	-0.19
2,000.0	12.73	108.19	1,991.7	2,814.28	-31.6	96.1	97.1	0.00	0.00	0.00
2,100.0	12.73	108.19	2,089.3	2,716.74	-38.5	117.1	118.2	0.00	0.00	0.00
2,200.0	12.73	108.19	2,186.8	2,619.20	-45.4	138.0	139.4	0.00	0.00	0.00
2,300.0	12.73	108.19	2,284.3	2,521.66	-52.2	159.0	160.5	0.00	0.00	0.00
2,400.0	12.73	108.19	2,381.9	2,424.12	-59.1	179.9	181.7	0.00	0.00	0.00
2,500.0	12.73	108.19	2,479.4	2,326.58	-66.0	200.8	202.8	0.00	0.00	0.00
2,600.0	12.73	108.19	2,577.0	2,229.04	-72.9	221.8	223.9	0.00	0.00	0.00
2,700.0	12.73	108.19	2,674.5	2,131.50	-79.8	242.7	245.1	0.00	0.00	0.00
2,800.0	12.73	108.19	2,772.0	2,033.96	-86.6	263.7	266.2	0.00	0.00	0.00
2,900.0	12.73	108.19	2,869.6	1,936.41	-93.5	284.6	287.4	0.00	0.00	0.00
3,000.0	12.73	108.19	2,967.1	1,838.87	-100.4	305.5	308.5	0.00	0.00	0.00
3,100.0	12.73	108.19	3,064.7	1,741.33	-107.3	326.5	329.7	0.00	0.00	0.00
3,200.0	12.73	108.19	3,162.2	1,643.79	-114.2	347.4	350.8	0.00	0.00	0.00
3,300.0	12.73	108.19	3,259.7	1,546.25	-121.1	368.3	372.0	0.00	0.00	0.00
3,400.0	12.73	108.19	3,357.3	1,448.71	-127.9	389.3	393.1	0.00	0.00	0.00
3,500.0	12.73	108.19	3,454.8	1,351.17	-134.8	410.2	414.2	0.00	0.00	0.00
3,600.0	12.73	108.19	3,552.4	1,253.63	-141.7	431.2	435.4	0.00	0.00	0.00
3,700.0	12.73	108.19	3,649.9	1,156.09	-148.6	452.1	456.5	0.00	0.00	0.00
PARKMAN										
3,730.8	12.73	108.19	3,680.0	1,126.00	-150.7	458.6	463.0	0.00	0.00	0.00
3,800.0	12.73	108.19	3,747.5	1,058.55	-155.5	473.0	477.7	0.00	0.00	0.00
3,900.0	12.73	108.19	3,845.0	961.00	-162.3	494.0	498.8	0.00	0.00	0.00
4,000.0	12.73	108.19	3,942.5	863.46	-169.2	514.9	520.0	0.00	0.00	0.00
4,100.0	12.73	108.19	4,040.1	765.92	-176.1	535.9	541.1	0.00	0.00	0.00
4,200.0	12.73	108.19	4,137.6	668.38	-183.0	556.8	562.2	0.00	0.00	0.00
4,300.0	12.73	108.19	4,235.2	570.84	-189.9	577.7	583.4	0.00	0.00	0.00
4,400.0	12.73	108.19	4,332.7	473.30	-196.7	598.7	604.5	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well TC-AIMS 3-9-11
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 3-9-11	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										
4,479.2	12.73	108.19	4,410.0	396.00	-202.2	615.3	621.3	0.00	0.00	0.00
4,500.0	12.73	108.19	4,430.2	375.76	-203.6	619.6	625.7	0.00	0.00	0.00
4,600.0	12.73	108.19	4,527.8	278.22	-210.5	640.5	646.8	0.00	0.00	0.00
4,700.0	12.73	108.19	4,625.3	180.68	-217.4	661.5	668.0	0.00	0.00	0.00
4,800.0	12.73	108.19	4,722.9	83.14	-224.3	682.4	689.1	0.00	0.00	0.00
SHANNON										
4,899.6	12.73	108.19	4,820.0	-14.00	-231.1	703.3	710.2	0.00	0.00	0.00
4,900.0	12.73	108.19	4,820.4	-14.40	-231.2	703.4	710.2	0.00	0.00	0.00
5,000.0	12.73	108.19	4,917.9	-111.95	-238.0	724.3	731.4	0.00	0.00	0.00
5,100.0	12.73	108.19	5,015.5	-209.49	-244.9	745.2	752.5	0.00	0.00	0.00
5,200.0	12.73	108.19	5,113.0	-307.03	-251.8	766.2	773.7	0.00	0.00	0.00
5,300.0	12.73	108.19	5,210.6	-404.57	-258.7	787.1	794.8	0.00	0.00	0.00
5,400.0	12.73	108.19	5,308.1	-502.11	-265.6	808.0	816.0	0.00	0.00	0.00
5,500.0	12.73	108.19	5,405.7	-599.65	-272.4	829.0	837.1	0.00	0.00	0.00
5,600.0	12.73	108.19	5,503.2	-697.19	-279.3	849.9	858.2	0.00	0.00	0.00
5,700.0	12.73	108.19	5,600.7	-794.73	-286.2	870.9	879.4	0.00	0.00	0.00
5,800.0	12.73	108.19	5,698.3	-892.27	-293.1	891.8	900.5	0.00	0.00	0.00
5,900.0	12.73	108.19	5,795.8	-989.81	-300.0	912.7	921.7	0.00	0.00	0.00
6,000.0	12.73	108.19	5,893.4	-1,087.35	-306.8	933.7	942.8	0.00	0.00	0.00
6,100.0	12.73	108.19	5,990.9	-1,184.90	-313.7	954.6	964.0	0.00	0.00	0.00
6,200.0	12.73	108.19	6,088.4	-1,282.44	-320.6	975.6	985.1	0.00	0.00	0.00
6,300.0	12.73	108.19	6,186.0	-1,379.98	-327.5	996.5	1,006.3	0.00	0.00	0.00
6,400.0	12.73	108.19	6,283.5	-1,477.52	-334.4	1,017.4	1,027.4	0.00	0.00	0.00
6,500.0	12.73	108.19	6,381.1	-1,575.06	-341.3	1,038.4	1,048.5	0.00	0.00	0.00
6,600.0	12.73	108.19	6,478.6	-1,672.60	-348.1	1,059.3	1,069.7	0.00	0.00	0.00
6,700.0	12.73	108.19	6,576.1	-1,770.14	-355.0	1,080.2	1,090.8	0.00	0.00	0.00
START BUILD & TURN										
6,765.7	12.73	108.19	6,640.2	-1,834.23	-359.5	1,094.0	1,104.7	0.00	0.00	0.00
6,800.0	16.02	104.28	6,673.4	-1,867.45	-361.9	1,102.2	1,113.0	9.99	9.58	-11.41
6,900.0	25.82	98.52	6,766.8	-1,960.75	-368.5	1,137.2	1,148.2	10.00	9.80	-5.76
7,000.0	35.72	95.80	6,852.6	-2,046.57	-374.7	1,187.9	1,199.0	10.00	9.91	-2.72
7,100.0	45.66	94.15	6,928.3	-2,122.30	-380.3	1,252.8	1,264.0	10.00	9.94	-1.66
SHARON SPRINGS										
7,117.0	47.36	93.92	6,940.0	-2,134.00	-381.1	1,265.1	1,276.4	10.00	9.95	-1.32
NIOBRARA										
7,166.6	52.30	93.33	6,972.0	-2,166.00	-383.5	1,302.9	1,314.3	10.00	9.96	-1.19
7,200.0	55.62	92.98	6,991.6	-2,185.64	-385.0	1,329.8	1,341.2	10.00	9.96	-1.06
7,300.0	65.59	92.06	7,040.7	-2,234.65	-388.8	1,416.8	1,428.2	10.00	9.97	-0.92
7,400.0	75.56	91.27	7,073.9	-2,267.87	-391.5	1,510.9	1,522.4	10.00	9.97	-0.78
7,500.0	85.54	90.56	7,090.3	-2,284.26	-393.1	1,609.4	1,620.9	10.00	9.98	-0.72
LANDING PNT - TC-AIMS 3-9-11 - NIO B TARGET										
7,544.7	90.00	90.25	7,092.0	-2,286.00	-393.4	1,654.1	1,665.6	10.00	9.98	-0.70
7,600.0	90.00	90.25	7,092.0	-2,286.00	-393.6	1,709.4	1,720.9	0.00	0.00	0.00
7,700.0	90.00	90.25	7,092.0	-2,286.00	-394.1	1,809.4	1,820.8	0.00	0.00	0.00
7,800.0	90.00	90.25	7,092.0	-2,286.00	-394.5	1,909.4	1,920.8	0.00	0.00	0.00
7,900.0	90.00	90.25	7,092.0	-2,286.00	-394.9	2,009.4	2,020.8	0.00	0.00	0.00
8,000.0	90.00	90.25	7,092.0	-2,286.00	-395.3	2,109.4	2,120.7	0.00	0.00	0.00
8,100.0	90.00	90.25	7,092.0	-2,286.00	-395.8	2,209.4	2,220.7	0.00	0.00	0.00
8,200.0	90.00	90.25	7,092.0	-2,286.00	-396.2	2,309.4	2,320.6	0.00	0.00	0.00
8,300.0	90.00	90.25	7,092.0	-2,286.00	-396.6	2,409.4	2,420.6	0.00	0.00	0.00
8,400.0	90.00	90.25	7,092.0	-2,286.00	-397.1	2,509.4	2,520.6	0.00	0.00	0.00
8,500.0	90.00	90.25	7,092.0	-2,286.00	-397.5	2,609.4	2,620.5	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well TC-AIMS 3-9-11
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 3-9-11	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	-397.9	2,709.4	2,720.5	0.00	0.00	0.00
8,700.0	90.00	90.25	7,092.0	-2,286.00	-398.3	2,809.4	2,820.5	0.00	0.00	0.00
8,800.0	90.00	90.25	7,092.0	-2,286.00	-398.8	2,909.4	2,920.4	0.00	0.00	0.00
8,900.0	90.00	90.25	7,092.0	-2,286.00	-399.2	3,009.4	3,020.4	0.00	0.00	0.00
9,000.0	90.00	90.25	7,092.0	-2,286.00	-399.6	3,109.4	3,120.4	0.00	0.00	0.00
9,100.0	90.00	90.25	7,092.0	-2,286.00	-400.1	3,209.4	3,220.3	0.00	0.00	0.00
9,200.0	90.00	90.25	7,092.0	-2,286.00	-400.5	3,309.4	3,320.3	0.00	0.00	0.00
9,300.0	90.00	90.25	7,092.0	-2,286.00	-400.9	3,409.4	3,420.2	0.00	0.00	0.00
9,400.0	90.00	90.25	7,092.0	-2,286.00	-401.3	3,509.4	3,520.2	0.00	0.00	0.00
9,500.0	90.00	90.25	7,092.0	-2,286.00	-401.8	3,609.4	3,620.2	0.00	0.00	0.00
9,600.0	90.00	90.25	7,092.0	-2,286.00	-402.2	3,709.4	3,720.1	0.00	0.00	0.00
9,700.0	90.00	90.25	7,092.0	-2,286.00	-402.6	3,809.4	3,820.1	0.00	0.00	0.00
9,800.0	90.00	90.25	7,092.0	-2,286.00	-403.1	3,909.4	3,920.1	0.00	0.00	0.00
9,900.0	90.00	90.25	7,092.0	-2,286.00	-403.5	4,009.4	4,020.0	0.00	0.00	0.00
10,000.0	90.00	90.25	7,092.0	-2,286.00	-403.9	4,109.4	4,120.0	0.00	0.00	0.00
10,100.0	90.00	90.25	7,092.0	-2,286.00	-404.3	4,209.4	4,219.9	0.00	0.00	0.00
10,200.0	90.00	90.25	7,092.0	-2,286.00	-404.8	4,309.4	4,319.9	0.00	0.00	0.00
10,300.0	90.00	90.25	7,092.0	-2,286.00	-405.2	4,409.4	4,419.9	0.00	0.00	0.00
10,400.0	90.00	90.25	7,092.0	-2,286.00	-405.6	4,509.4	4,519.8	0.00	0.00	0.00
10,500.0	90.00	90.25	7,092.0	-2,286.00	-406.1	4,609.4	4,619.8	0.00	0.00	0.00
10,600.0	90.00	90.25	7,092.0	-2,286.00	-406.5	4,709.4	4,719.8	0.00	0.00	0.00
10,700.0	90.00	90.25	7,092.0	-2,286.00	-406.9	4,809.4	4,819.7	0.00	0.00	0.00
10,800.0	90.00	90.25	7,092.0	-2,286.00	-407.4	4,909.4	4,919.7	0.00	0.00	0.00
10,900.0	90.00	90.25	7,092.0	-2,286.00	-407.8	5,009.4	5,019.7	0.00	0.00	0.00
11,000.0	90.00	90.25	7,092.0	-2,286.00	-408.2	5,109.3	5,119.6	0.00	0.00	0.00
11,100.0	90.00	90.25	7,092.0	-2,286.00	-408.6	5,209.3	5,219.6	0.00	0.00	0.00
11,200.0	90.00	90.25	7,092.0	-2,286.00	-409.1	5,309.3	5,319.5	0.00	0.00	0.00
11,300.0	90.00	90.25	7,092.0	-2,286.00	-409.5	5,409.3	5,419.5	0.00	0.00	0.00
11,400.0	90.00	90.25	7,092.0	-2,286.00	-409.9	5,509.3	5,519.5	0.00	0.00	0.00
11,500.0	90.00	90.25	7,092.0	-2,286.00	-410.4	5,609.3	5,619.4	0.00	0.00	0.00
11,600.0	90.00	90.25	7,092.0	-2,286.00	-410.8	5,709.3	5,719.4	0.00	0.00	0.00
11,700.0	90.00	90.25	7,092.0	-2,286.00	-411.2	5,809.3	5,819.4	0.00	0.00	0.00
11,800.0	90.00	90.25	7,092.0	-2,286.00	-411.6	5,909.3	5,919.3	0.00	0.00	0.00
11,900.0	90.00	90.25	7,092.0	-2,286.00	-412.1	6,009.3	6,019.3	0.00	0.00	0.00
12,000.0	90.00	90.25	7,092.0	-2,286.00	-412.5	6,109.3	6,119.3	0.00	0.00	0.00
12,100.0	90.00	90.25	7,092.0	-2,286.00	-412.9	6,209.3	6,219.2	0.00	0.00	0.00
12,200.0	90.00	90.25	7,092.0	-2,286.00	-413.4	6,309.3	6,319.2	0.00	0.00	0.00
12,300.0	90.00	90.25	7,092.0	-2,286.00	-413.8	6,409.3	6,419.1	0.00	0.00	0.00
12,400.0	90.00	90.25	7,092.0	-2,286.00	-414.2	6,509.3	6,519.1	0.00	0.00	0.00
12,500.0	90.00	90.25	7,092.0	-2,286.00	-414.6	6,609.3	6,619.1	0.00	0.00	0.00
12,600.0	90.00	90.25	7,092.0	-2,286.00	-415.1	6,709.3	6,719.0	0.00	0.00	0.00
12,700.0	90.00	90.25	7,092.0	-2,286.00	-415.5	6,809.3	6,819.0	0.00	0.00	0.00
12,800.0	90.00	90.25	7,092.0	-2,286.00	-415.9	6,909.3	6,919.0	0.00	0.00	0.00
12,900.0	90.00	90.25	7,092.0	-2,286.00	-416.4	7,009.3	7,018.9	0.00	0.00	0.00
13,000.0	90.00	90.25	7,092.0	-2,286.00	-416.8	7,109.3	7,118.9	0.00	0.00	0.00
13,100.0	90.00	90.25	7,092.0	-2,286.00	-417.2	7,209.3	7,218.9	0.00	0.00	0.00
13,200.0	90.00	90.25	7,092.0	-2,286.00	-417.6	7,309.3	7,318.8	0.00	0.00	0.00
13,300.0	90.00	90.25	7,092.0	-2,286.00	-418.1	7,409.3	7,418.8	0.00	0.00	0.00
13,400.0	90.00	90.25	7,092.0	-2,286.00	-418.5	7,509.3	7,518.7	0.00	0.00	0.00
13,500.0	90.00	90.25	7,092.0	-2,286.00	-418.9	7,609.3	7,618.7	0.00	0.00	0.00
13,600.0	90.00	90.25	7,092.0	-2,286.00	-419.4	7,709.3	7,718.7	0.00	0.00	0.00
13,700.0	90.00	90.25	7,092.0	-2,286.00	-419.8	7,809.3	7,818.6	0.00	0.00	0.00
13,800.0	90.00	90.25	7,092.0	-2,286.00	-420.2	7,909.3	7,918.6	0.00	0.00	0.00
13,900.0	90.00	90.25	7,092.0	-2,286.00	-420.6	8,009.3	8,018.6	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well TC-AIMS 3-9-11
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 3-9-11	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	-421.1	8,109.3	8,118.5	0.00	0.00	0.00
14,100.0	90.00	90.25	7,092.0	-2,286.00	-421.5	8,209.3	8,218.5	0.00	0.00	0.00
14,200.0	90.00	90.25	7,092.0	-2,286.00	-421.9	8,309.3	8,318.5	0.00	0.00	0.00
14,300.0	90.00	90.25	7,092.0	-2,286.00	-422.4	8,409.3	8,418.4	0.00	0.00	0.00
14,400.0	90.00	90.25	7,092.0	-2,286.00	-422.8	8,509.3	8,518.4	0.00	0.00	0.00
14,500.0	90.00	90.25	7,092.0	-2,286.00	-423.2	8,609.3	8,618.3	0.00	0.00	0.00
14,600.0	90.00	90.25	7,092.0	-2,286.00	-423.6	8,709.3	8,718.3	0.00	0.00	0.00
14,700.0	90.00	90.25	7,092.0	-2,286.00	-424.1	8,809.3	8,818.3	0.00	0.00	0.00
14,800.0	90.00	90.25	7,092.0	-2,286.00	-424.5	8,909.3	8,918.2	0.00	0.00	0.00
14,900.0	90.00	90.25	7,092.0	-2,286.00	-424.9	9,009.3	9,018.2	0.00	0.00	0.00
15,000.0	90.00	90.25	7,092.0	-2,286.00	-425.4	9,109.3	9,118.2	0.00	0.00	0.00
15,100.0	90.00	90.25	7,092.0	-2,286.00	-425.8	9,209.3	9,218.1	0.00	0.00	0.00
15,200.0	90.00	90.25	7,092.0	-2,286.00	-426.2	9,309.3	9,318.1	0.00	0.00	0.00
15,300.0	90.00	90.25	7,092.0	-2,286.00	-426.6	9,409.3	9,418.1	0.00	0.00	0.00
15,400.0	90.00	90.25	7,092.0	-2,286.00	-427.1	9,509.3	9,518.0	0.00	0.00	0.00
15,500.0	90.00	90.25	7,092.0	-2,286.00	-427.5	9,609.3	9,618.0	0.00	0.00	0.00
15,600.0	90.00	90.25	7,092.0	-2,286.00	-427.9	9,709.3	9,717.9	0.00	0.00	0.00
15,700.0	90.00	90.25	7,092.0	-2,286.00	-428.4	9,809.3	9,817.9	0.00	0.00	0.00
15,800.0	90.00	90.25	7,092.0	-2,286.00	-428.8	9,909.3	9,917.9	0.00	0.00	0.00
15,900.0	90.00	90.25	7,092.0	-2,286.00	-429.2	10,009.3	10,017.8	0.00	0.00	0.00
16,000.0	90.00	90.25	7,092.0	-2,286.00	-429.6	10,109.3	10,117.8	0.00	0.00	0.00
16,100.0	90.00	90.25	7,092.0	-2,286.00	-430.1	10,209.3	10,217.8	0.00	0.00	0.00
16,200.0	90.00	90.25	7,092.0	-2,286.00	-430.5	10,309.3	10,317.7	0.00	0.00	0.00
16,300.0	90.00	90.25	7,092.0	-2,286.00	-430.9	10,409.3	10,417.7	0.00	0.00	0.00
16,400.0	90.00	90.25	7,092.0	-2,286.00	-431.4	10,509.3	10,517.7	0.00	0.00	0.00
16,500.0	90.00	90.25	7,092.0	-2,286.00	-431.8	10,609.3	10,617.6	0.00	0.00	0.00
16,600.0	90.00	90.25	7,092.0	-2,286.00	-432.2	10,709.3	10,717.6	0.00	0.00	0.00
16,700.0	90.00	90.25	7,092.0	-2,286.00	-432.6	10,809.3	10,817.5	0.00	0.00	0.00
16,800.0	90.00	90.25	7,092.0	-2,286.00	-433.1	10,909.3	10,917.5	0.00	0.00	0.00
16,900.0	90.00	90.25	7,092.0	-2,286.00	-433.5	11,009.3	11,017.5	0.00	0.00	0.00
17,000.0	90.00	90.25	7,092.0	-2,286.00	-433.9	11,109.3	11,117.4	0.00	0.00	0.00
17,100.0	90.00	90.25	7,092.0	-2,286.00	-434.4	11,209.3	11,217.4	0.00	0.00	0.00
17,200.0	90.00	90.25	7,092.0	-2,286.00	-434.8	11,309.3	11,317.4	0.00	0.00	0.00
17,300.0	90.00	90.25	7,092.0	-2,286.00	-435.2	11,409.3	11,417.3	0.00	0.00	0.00
17,400.0	90.00	90.25	7,092.0	-2,286.00	-435.6	11,509.3	11,517.3	0.00	0.00	0.00
17,500.0	90.00	90.25	7,092.0	-2,286.00	-436.1	11,609.3	11,617.3	0.00	0.00	0.00
17,600.0	90.00	90.25	7,092.0	-2,286.00	-436.5	11,709.3	11,717.2	0.00	0.00	0.00
17,700.0	90.00	90.25	7,092.0	-2,286.00	-436.9	11,809.3	11,817.2	0.00	0.00	0.00
17,800.0	90.00	90.25	7,092.0	-2,286.00	-437.4	11,909.3	11,917.1	0.00	0.00	0.00
17,900.0	90.00	90.25	7,092.0	-2,286.00	-437.8	12,009.3	12,017.1	0.00	0.00	0.00
18,000.0	90.00	90.25	7,092.0	-2,286.00	-438.2	12,109.3	12,117.1	0.00	0.00	0.00
18,100.0	90.00	90.25	7,092.0	-2,286.00	-438.7	12,209.3	12,217.0	0.00	0.00	0.00
18,200.0	90.00	90.25	7,092.0	-2,286.00	-439.1	12,309.3	12,317.0	0.00	0.00	0.00
18,300.0	90.00	90.25	7,092.0	-2,286.00	-439.5	12,409.3	12,417.0	0.00	0.00	0.00
18,400.0	90.00	90.25	7,092.0	-2,286.00	-439.9	12,509.3	12,516.9	0.00	0.00	0.00
18,500.0	90.00	90.25	7,092.0	-2,286.00	-440.4	12,609.3	12,616.9	0.00	0.00	0.00
18,600.0	90.00	90.25	7,092.0	-2,286.00	-440.8	12,709.3	12,716.8	0.00	0.00	0.00
18,700.0	90.00	90.25	7,092.0	-2,286.00	-441.2	12,809.3	12,816.8	0.00	0.00	0.00
18,800.0	90.00	90.25	7,092.0	-2,286.00	-441.7	12,909.3	12,916.8	0.00	0.00	0.00
18,900.0	90.00	90.25	7,092.0	-2,286.00	-442.1	13,009.3	13,016.7	0.00	0.00	0.00
19,000.0	90.00	90.25	7,092.0	-2,286.00	-442.5	13,109.3	13,116.7	0.00	0.00	0.00
19,100.0	90.00	90.25	7,092.0	-2,286.00	-442.9	13,209.3	13,216.7	0.00	0.00	0.00
19,200.0	90.00	90.25	7,092.0	-2,286.00	-443.4	13,309.3	13,316.6	0.00	0.00	0.00
19,300.0	90.00	90.25	7,092.0	-2,286.00	-443.8	13,409.3	13,416.6	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well TC-AIMS 3-9-11
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 3-9-11	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	-444.2	13,509.3	13,516.6	0.00	0.00	0.00
19,500.0	90.00	90.25	7,092.0	-2,286.00	-444.7	13,609.3	13,616.5	0.00	0.00	0.00
19,600.0	90.00	90.25	7,092.0	-2,286.00	-445.1	13,709.3	13,716.5	0.00	0.00	0.00
19,700.0	90.00	90.25	7,092.0	-2,286.00	-445.5	13,809.3	13,816.4	0.00	0.00	0.00
19,800.0	90.00	90.25	7,092.0	-2,286.00	-445.9	13,909.3	13,916.4	0.00	0.00	0.00
19,900.0	90.00	90.25	7,092.0	-2,286.00	-446.4	14,009.3	14,016.4	0.00	0.00	0.00
20,000.0	90.00	90.25	7,092.0	-2,286.00	-446.8	14,109.3	14,116.3	0.00	0.00	0.00
20,100.0	90.00	90.25	7,092.0	-2,286.00	-447.2	14,209.3	14,216.3	0.00	0.00	0.00
BHL - TC-AIMS 3-9-11										
20,187.3	90.00	90.25	7,092.0	-2,286.00	-447.6	14,296.5	14,303.5	0.00	0.00	0.00

Formations						
MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,730.8	3,680.0	PARKMAN				
4,479.2	4,410.0	SUSSEX				
4,899.6	4,820.0	SHANNON				
7,117.0	6,940.0	SHARON SPRINGS				
7,166.6	6,972.0	NIOBRARA				
7,544.7	7,092.0	NIO B TARGET				

Plan Annotations				
MD (usft)	TVD (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,200.0	1,200.0	0.0	0.0	START NUDGE (2°/100ft BUR)
1,601.3	1,600.0	-8.8	26.7	9 5/8" SURFACE CASING
1,666.3	1,664.4	-11.6	35.3	START NUDGE (2°/100ft BUR)
1,901.5	1,895.6	-24.8	75.5	EOB TO 12.73° INC
6,765.7	6,640.2	-359.5	1,094.0	START BUILD & TURN
7,544.7	7,092.0	-393.4	1,654.1	LANDING PNT - TC-AIMS 3-9-11
20,187.3	7,092.0	-447.6	14,296.5	BHL - TC-AIMS 3-9-11