

EXTRACTION OIL & GAS

WELD COUNTY, COLORADO (NAD 83)

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

TC-AIMS 2-9-11

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 2-9-11
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL #1

ANNOTATIONS											
TVD	MD	Inc	Azi	+N/-S	+E/-W	VSect	Dep	Annotation			
1300.0	1300.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDDGE (2"/100ft BUR)			
1600.0	1600.6	6.01	93.92	-1.1	15.7	15.7	15.8	9 5/8" SURFACE CASING			
1664.7	1665.6	6.01	93.92	-1.5	22.5	22.5	22.6	START NUDDGE (2"/100ft BUR)			
1978.8	1984.0	12.38	93.92	-5.0	73.2	73.3	73.4	EOB TO 12.38° INC			
6641.7	6757.9	12.38	93.92	-75.0	1094.4	1095.1	1097.0	START BUILD & TURN			
7092.0	7534.3	90.00	90.25	-83.7	1654.1	1654.8	1656.7	LANDING PNT - TC-AIMS 2-9-11			
7092.0	20173.9	90.00	90.25	-137.9	14293.5	14294.2	14296.3	BHL - TC-AIMS 2-9-11			

WELLBORE TARGET DETAILS (LAT/LONG)			
Name	TVD	+N/-S	+E/-W
LANDING PNT - TC-AIMS 2-9-11	7092.0	-83.7	1654.1
BHL - TC-AIMS 2-9-11	7092.0	-137.9	14293.6

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
3680.0	3725.7	PARKMAN
4410.0	4473.0	SUSSEX
4820.0	4892.8	SHANNON
6940.0	7107.1	SHARON SPRINGS
6972.0	7156.7	NIOBRARA
7092.0	7534.3	NIO B TARGET

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

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

TC-MOISER HILL 2-9-7

TC-MOISER HILL 3-9-11

TC-COUNTRY CLUB WEST C1-9-11

TC-COUNTRY CLUB WEST 1-9-11

TC-COUNTRY CLUB WEST 2-9-11

TC-COUNTRY CLUB WEST C2-9-11

TC-COUNTRY CLUB WEST 3-9-11

TC-COUNTRY CLUB WEST 4-9-11

TC-COUNTRY CLUB WEST C3-9-11

TC-COUNTRY CLUB WEST 5-9-11

TC-AIMS 1-9-11

TC-AIMS C4-9-11

TC-AIMS 2-9-11

TC-AIMS 3-9-11

TC-AIMS C5-9-11

TC-AIMS 4-9-11

TC-HILAND KNOLLS 1-9-11

TC-HILAND KNOLLS C6-9-11

TC-HILAND KNOLLS 2-9-11

TC-HILAND KNOLLS 3-9-11

TC-HILAND KNOLLS C7-9-11

TC-HILAND KNOLLS 4-9-11

TC-PINNACLE PARK 1-9-11

TC-PINNACLE PARK C8-9-11

TC-PINNACLE PARK 2-9-11

T

M

Azimuths to True North

Magnetic North: 8.43°

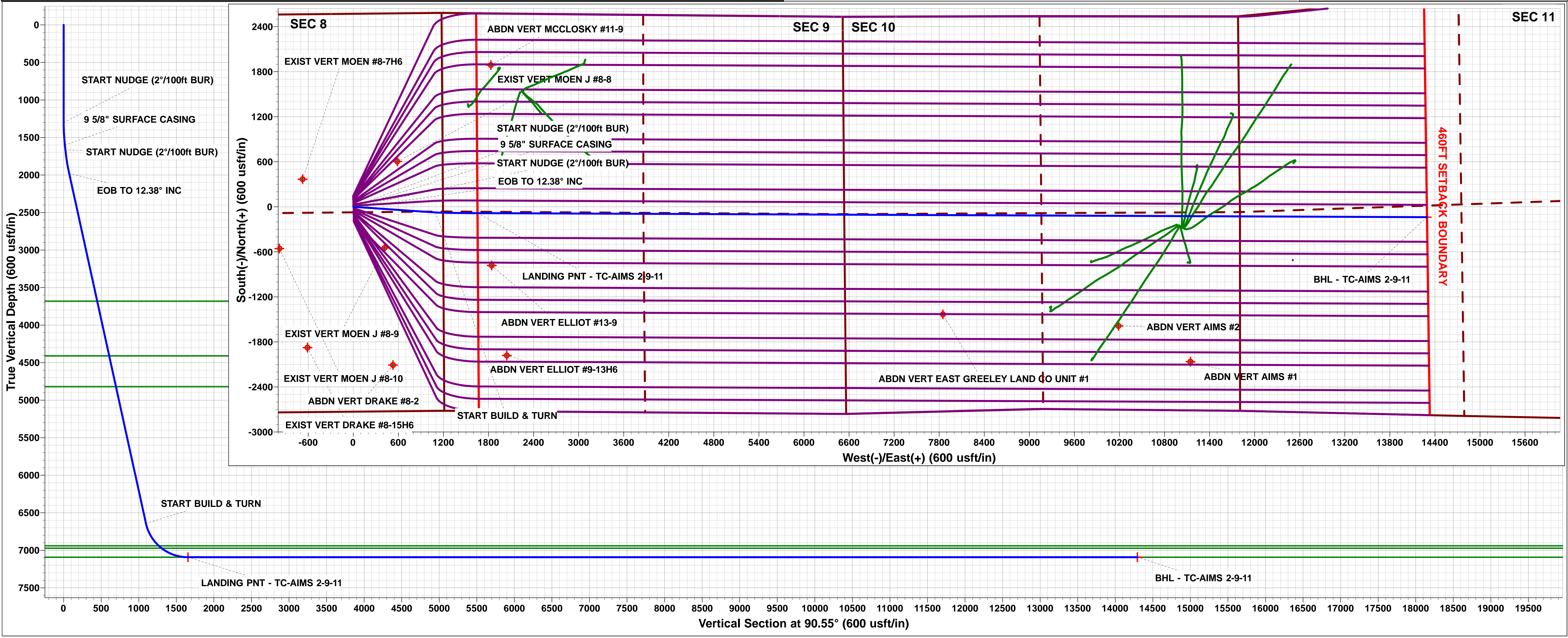
Magnetic Field

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 2-9-11
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4805.0usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4805.0usft (Original Well Elev)
Site:	NE SE SEC. 8 T5N R66W 6th P.M.	North Reference:	True
Well:	TC-AIMS 2-9-11	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 2-9-11		
Well Position	+N/-S	193.1 usft	Northing:
	+E/-W	-5.6 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	52,614

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	90.55

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	-4,805.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,300.0	0.00	0.00	1,300.0	-3,505.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,600.6	6.01	93.92	1,600.0	-3,205.0	-1.1	15.7	2.00	2.00	0.00	93.92	
1,665.6	6.01	93.92	1,664.6	-3,140.4	-1.5	22.5	0.00	0.00	0.00	0.00	
1,984.0	12.38	93.92	1,978.8	-2,826.2	-5.0	73.2	2.00	2.00	0.00	0.00	
1,984.0	12.38	93.92	1,978.8	-2,826.2	-5.0	73.3	10.00	9.98	-0.26	-0.32	
6,757.9	12.38	93.92	6,641.7	1,836.7	-75.0	1,094.4	0.00	0.00	0.00	0.00	
7,534.3	90.00	90.25	7,092.0	2,287.0	-83.7	1,654.1	10.00	10.00	-0.47	-3.76	LANDING PNT - TC
20,173.9	90.00	90.25	7,092.0	2,287.0	-137.9	14,293.6	0.00	0.00	0.00	0.00	BHL - TC-AIMS 2-9

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well TC-AIMS 2-9-11
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4805.0usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4805.0usft (Original Well Elev)
Site:	NE SE SEC. 8 T5N R66W 6th P.M.	North Reference:	True
Well:	TC-AIMS 2-9-11	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	4,805.00	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	4,705.00	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	4,605.00	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	4,505.00	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	4,405.00	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	4,305.00	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	4,205.00	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	4,105.00	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	4,005.00	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	3,905.00	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	3,805.00	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	3,705.00	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	3,605.00	0.0	0.0	0.0	0.00	0.00	0.00
START NUDGE (2°/100ft BUR)										
1,300.0	0.00	0.00	1,300.0	3,505.00	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	2.00	93.92	1,400.0	3,405.02	-0.1	1.7	1.7	2.00	2.00	0.00
1,500.0	4.00	93.92	1,499.8	3,305.16	-0.5	7.0	7.0	2.00	2.00	0.00
1,600.0	6.00	93.92	1,599.5	3,205.55	-1.1	15.7	15.7	2.00	2.00	0.00
9 5/8" SURFACE CASING										
1,600.6	6.01	93.92	1,600.0	3,204.95	-1.1	15.7	15.7	1.84	1.84	0.00
START NUDGE (2°/100ft BUR)										
1,665.6	6.01	93.92	1,664.7	3,140.31	-1.5	22.5	22.5	0.00	0.00	0.00
1,700.0	6.70	93.92	1,698.9	3,106.12	-1.8	26.3	26.3	2.00	2.00	0.00
1,800.0	8.70	93.92	1,798.0	3,007.03	-2.7	39.7	39.7	2.00	2.00	0.00
1,900.0	10.70	93.92	1,896.5	2,908.46	-3.9	56.5	56.5	2.00	2.00	0.00
EOB TO 12.38° INC										
1,984.0	12.38	93.92	1,978.8	2,826.16	-5.0	73.2	73.3	2.00	2.00	0.00
2,000.0	12.38	93.92	1,994.5	2,810.53	-5.3	76.7	76.7	0.01	0.01	0.00
2,100.0	12.38	93.92	2,092.1	2,712.86	-6.7	98.1	98.1	0.00	0.00	0.00
2,200.0	12.38	93.92	2,189.8	2,615.19	-8.2	119.5	119.5	0.00	0.00	0.00
2,300.0	12.38	93.92	2,287.5	2,517.51	-9.7	140.8	140.9	0.00	0.00	0.00
2,400.0	12.38	93.92	2,385.2	2,419.84	-11.1	162.2	162.3	0.00	0.00	0.00
2,500.0	12.38	93.92	2,482.8	2,322.16	-12.6	183.6	183.7	0.00	0.00	0.00
2,600.0	12.38	93.92	2,580.5	2,224.49	-14.0	205.0	205.1	0.00	0.00	0.00
2,700.0	12.38	93.92	2,678.2	2,126.81	-15.5	226.4	226.5	0.00	0.00	0.00
2,800.0	12.38	93.92	2,775.9	2,029.14	-17.0	247.8	248.0	0.00	0.00	0.00
2,900.0	12.38	93.92	2,873.5	1,931.47	-18.4	269.2	269.4	0.00	0.00	0.00
3,000.0	12.38	93.92	2,971.2	1,833.79	-19.9	290.6	290.8	0.00	0.00	0.00
3,100.0	12.38	93.92	3,068.9	1,736.12	-21.4	312.0	312.2	0.00	0.00	0.00
3,200.0	12.38	93.92	3,166.6	1,638.44	-22.8	333.4	333.6	0.00	0.00	0.00
3,300.0	12.38	93.92	3,264.2	1,540.77	-24.3	354.8	355.0	0.00	0.00	0.00
3,400.0	12.38	93.92	3,361.9	1,443.09	-25.8	376.1	376.4	0.00	0.00	0.00
3,500.0	12.38	93.92	3,459.6	1,345.42	-27.2	397.5	397.8	0.00	0.00	0.00
3,600.0	12.38	93.92	3,557.3	1,247.74	-28.7	418.9	419.2	0.00	0.00	0.00
3,700.0	12.38	93.92	3,654.9	1,150.07	-30.2	440.3	440.6	0.00	0.00	0.00
PARKMAN										
3,725.7	12.38	93.92	3,680.0	1,125.00	-30.5	445.8	446.1	0.00	0.00	0.00
3,800.0	12.38	93.92	3,752.6	1,052.40	-31.6	461.7	462.0	0.00	0.00	0.00
3,900.0	12.38	93.92	3,850.3	954.72	-33.1	483.1	483.4	0.00	0.00	0.00
4,000.0	12.38	93.92	3,948.0	857.05	-34.6	504.5	504.8	0.00	0.00	0.00
4,100.0	12.38	93.92	4,045.6	759.37	-36.0	525.9	526.2	0.00	0.00	0.00
4,200.0	12.38	93.92	4,143.3	661.70	-37.5	547.3	547.6	0.00	0.00	0.00
4,300.0	12.38	93.92	4,241.0	564.02	-39.0	568.7	569.0	0.00	0.00	0.00
4,400.0	12.38	93.92	4,338.7	466.35	-40.4	590.1	590.4	0.00	0.00	0.00

Planning Report



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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										
4,473.0	12.38	93.92	4,410.0	395.00	-41.5	605.7	606.0	0.00	0.00	0.00
4,500.0	12.38	93.92	4,436.3	368.68	-41.9	611.4	611.8	0.00	0.00	0.00
4,600.0	12.38	93.92	4,534.0	271.00	-43.4	632.8	633.2	0.00	0.00	0.00
4,700.0	12.38	93.92	4,631.7	173.33	-44.8	654.2	654.6	0.00	0.00	0.00
4,800.0	12.38	93.92	4,729.3	75.65	-46.3	675.6	676.0	0.00	0.00	0.00
SHANNON										
4,892.8	12.38	93.92	4,820.0	-15.00	-47.7	695.5	695.9	0.00	0.00	0.00
4,900.0	12.38	93.92	4,827.0	-22.02	-47.8	697.0	697.4	0.00	0.00	0.00
5,000.0	12.38	93.92	4,924.7	-119.70	-49.2	718.4	718.8	0.00	0.00	0.00
5,100.0	12.38	93.92	5,022.4	-217.37	-50.7	739.8	740.2	0.00	0.00	0.00
5,200.0	12.38	93.92	5,120.0	-315.05	-52.2	761.2	761.6	0.00	0.00	0.00
5,300.0	12.38	93.92	5,217.7	-412.72	-53.6	782.6	783.0	0.00	0.00	0.00
5,400.0	12.38	93.92	5,315.4	-510.39	-55.1	804.0	804.5	0.00	0.00	0.00
5,500.0	12.38	93.92	5,413.1	-608.07	-56.6	825.3	825.9	0.00	0.00	0.00
5,600.0	12.38	93.92	5,510.7	-705.74	-58.0	846.7	847.3	0.00	0.00	0.00
5,700.0	12.38	93.92	5,608.4	-803.42	-59.5	868.1	868.7	0.00	0.00	0.00
5,800.0	12.38	93.92	5,706.1	-901.09	-61.0	889.5	890.1	0.00	0.00	0.00
5,900.0	12.38	93.92	5,803.8	-998.77	-62.4	910.9	911.5	0.00	0.00	0.00
6,000.0	12.38	93.92	5,901.4	-1,096.44	-63.9	932.3	932.9	0.00	0.00	0.00
6,100.0	12.38	93.92	5,999.1	-1,194.12	-65.4	953.7	954.3	0.00	0.00	0.00
6,200.0	12.38	93.92	6,096.8	-1,291.79	-66.8	975.1	975.7	0.00	0.00	0.00
6,300.0	12.38	93.92	6,194.5	-1,389.46	-68.3	996.5	997.1	0.00	0.00	0.00
6,400.0	12.38	93.92	6,292.1	-1,487.14	-69.7	1,017.9	1,018.5	0.00	0.00	0.00
6,500.0	12.38	93.92	6,389.8	-1,584.81	-71.2	1,039.3	1,039.9	0.00	0.00	0.00
6,600.0	12.38	93.92	6,487.5	-1,682.49	-72.7	1,060.6	1,061.3	0.00	0.00	0.00
6,700.0	12.38	93.92	6,585.2	-1,780.16	-74.1	1,082.0	1,082.7	0.00	0.00	0.00
START BUILD & TURN										
6,757.9	12.38	93.92	6,641.7	-1,836.72	-75.0	1,094.4	1,095.1	0.00	0.00	0.00
6,800.0	16.59	92.95	6,682.5	-1,877.47	-75.6	1,104.9	1,105.6	10.01	9.99	-2.30
6,900.0	26.58	91.86	6,775.3	-1,970.34	-77.1	1,141.6	1,142.3	10.00	9.99	-1.10
7,000.0	36.58	91.33	6,860.4	-2,055.42	-78.5	1,193.9	1,194.6	10.00	10.00	-0.52
7,100.0	46.57	91.01	6,935.1	-2,130.14	-79.8	1,260.2	1,260.9	10.00	10.00	-0.32
SHARON SPRINGS										
7,107.1	47.29	90.99	6,940.0	-2,135.00	-79.9	1,265.4	1,266.1	10.00	10.00	-0.26
NIOBRARA										
7,156.7	52.24	90.87	6,972.0	-2,167.00	-80.5	1,303.2	1,303.9	10.00	10.00	-0.24
7,200.0	56.57	90.78	6,997.2	-2,192.21	-81.0	1,338.4	1,339.1	10.00	10.00	-0.21
7,300.0	66.57	90.60	7,044.8	-2,239.76	-82.1	1,426.2	1,427.0	10.00	10.00	-0.18
7,400.0	76.57	90.44	7,076.3	-2,271.33	-82.9	1,521.0	1,521.7	10.00	10.00	-0.16
7,500.0	86.57	90.29	7,091.0	-2,285.97	-83.6	1,619.8	1,620.5	10.00	10.00	-0.14
LANDING PNT - TC-AIMS 2-9-11 - NIO B TARGET										
7,534.3	90.00	90.25	7,092.0	-2,287.00	-83.7	1,654.1	1,654.8	10.00	10.00	-0.14
7,600.0	90.00	90.25	7,092.0	-2,287.00	-84.0	1,719.8	1,720.5	0.00	0.00	0.00
7,700.0	90.00	90.25	7,092.0	-2,287.00	-84.4	1,819.8	1,820.5	0.00	0.00	0.00
7,800.0	90.00	90.25	7,092.0	-2,287.00	-84.9	1,919.8	1,920.5	0.00	0.00	0.00
7,900.0	90.00	90.25	7,092.0	-2,287.00	-85.3	2,019.8	2,020.5	0.00	0.00	0.00
8,000.0	90.00	90.25	7,092.0	-2,287.00	-85.7	2,119.8	2,120.5	0.00	0.00	0.00
8,100.0	90.00	90.25	7,092.0	-2,287.00	-86.2	2,219.8	2,220.5	0.00	0.00	0.00
8,200.0	90.00	90.25	7,092.0	-2,287.00	-86.6	2,319.8	2,320.5	0.00	0.00	0.00
8,300.0	90.00	90.25	7,092.0	-2,287.00	-87.0	2,419.7	2,420.5	0.00	0.00	0.00
8,400.0	90.00	90.25	7,092.0	-2,287.00	-87.4	2,519.7	2,520.5	0.00	0.00	0.00
8,500.0	90.00	90.25	7,092.0	-2,287.00	-87.9	2,619.7	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 2-9-11
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4805.0usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4805.0usft (Original Well Elev)
Site:	NE SE SEC. 8 T5N R66W 6th P.M.	North Reference:	True
Well:	TC-AIMS 2-9-11	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	-2,287.00	-88.3	2,719.7	2,720.5	0.00	0.00	0.00
8,700.0	90.00	90.25	7,092.0	-2,287.00	-88.7	2,819.7	2,820.5	0.00	0.00	0.00
8,800.0	90.00	90.25	7,092.0	-2,287.00	-89.2	2,919.7	2,920.5	0.00	0.00	0.00
8,900.0	90.00	90.25	7,092.0	-2,287.00	-89.6	3,019.7	3,020.5	0.00	0.00	0.00
9,000.0	90.00	90.25	7,092.0	-2,287.00	-90.0	3,119.7	3,120.5	0.00	0.00	0.00
9,100.0	90.00	90.25	7,092.0	-2,287.00	-90.4	3,219.7	3,220.5	0.00	0.00	0.00
9,200.0	90.00	90.25	7,092.0	-2,287.00	-90.9	3,319.7	3,320.5	0.00	0.00	0.00
9,300.0	90.00	90.25	7,092.0	-2,287.00	-91.3	3,419.7	3,420.5	0.00	0.00	0.00
9,400.0	90.00	90.25	7,092.0	-2,287.00	-91.7	3,519.7	3,520.5	0.00	0.00	0.00
9,500.0	90.00	90.25	7,092.0	-2,287.00	-92.2	3,619.7	3,620.5	0.00	0.00	0.00
9,600.0	90.00	90.25	7,092.0	-2,287.00	-92.6	3,719.7	3,720.5	0.00	0.00	0.00
9,700.0	90.00	90.25	7,092.0	-2,287.00	-93.0	3,819.7	3,820.5	0.00	0.00	0.00
9,800.0	90.00	90.25	7,092.0	-2,287.00	-93.4	3,919.7	3,920.5	0.00	0.00	0.00
9,900.0	90.00	90.25	7,092.0	-2,287.00	-93.9	4,019.7	4,020.5	0.00	0.00	0.00
10,000.0	90.00	90.25	7,092.0	-2,287.00	-94.3	4,119.7	4,120.5	0.00	0.00	0.00
10,100.0	90.00	90.25	7,092.0	-2,287.00	-94.7	4,219.7	4,220.5	0.00	0.00	0.00
10,200.0	90.00	90.25	7,092.0	-2,287.00	-95.2	4,319.7	4,320.4	0.00	0.00	0.00
10,300.0	90.00	90.25	7,092.0	-2,287.00	-95.6	4,419.7	4,420.4	0.00	0.00	0.00
10,400.0	90.00	90.25	7,092.0	-2,287.00	-96.0	4,519.7	4,520.4	0.00	0.00	0.00
10,500.0	90.00	90.25	7,092.0	-2,287.00	-96.4	4,619.7	4,620.4	0.00	0.00	0.00
10,600.0	90.00	90.25	7,092.0	-2,287.00	-96.9	4,719.7	4,720.4	0.00	0.00	0.00
10,700.0	90.00	90.25	7,092.0	-2,287.00	-97.3	4,819.7	4,820.4	0.00	0.00	0.00
10,800.0	90.00	90.25	7,092.0	-2,287.00	-97.7	4,919.7	4,920.4	0.00	0.00	0.00
10,900.0	90.00	90.25	7,092.0	-2,287.00	-98.2	5,019.7	5,020.4	0.00	0.00	0.00
11,000.0	90.00	90.25	7,092.0	-2,287.00	-98.6	5,119.7	5,120.4	0.00	0.00	0.00
11,100.0	90.00	90.25	7,092.0	-2,287.00	-99.0	5,219.7	5,220.4	0.00	0.00	0.00
11,200.0	90.00	90.25	7,092.0	-2,287.00	-99.4	5,319.7	5,320.4	0.00	0.00	0.00
11,300.0	90.00	90.25	7,092.0	-2,287.00	-99.9	5,419.7	5,420.4	0.00	0.00	0.00
11,400.0	90.00	90.25	7,092.0	-2,287.00	-100.3	5,519.7	5,520.4	0.00	0.00	0.00
11,500.0	90.00	90.25	7,092.0	-2,287.00	-100.7	5,619.7	5,620.4	0.00	0.00	0.00
11,600.0	90.00	90.25	7,092.0	-2,287.00	-101.2	5,719.7	5,720.4	0.00	0.00	0.00
11,700.0	90.00	90.25	7,092.0	-2,287.00	-101.6	5,819.7	5,820.4	0.00	0.00	0.00
11,800.0	90.00	90.25	7,092.0	-2,287.00	-102.0	5,919.7	5,920.4	0.00	0.00	0.00
11,900.0	90.00	90.25	7,092.0	-2,287.00	-102.5	6,019.7	6,020.4	0.00	0.00	0.00
12,000.0	90.00	90.25	7,092.0	-2,287.00	-102.9	6,119.7	6,120.4	0.00	0.00	0.00
12,100.0	90.00	90.25	7,092.0	-2,287.00	-103.3	6,219.7	6,220.4	0.00	0.00	0.00
12,200.0	90.00	90.25	7,092.0	-2,287.00	-103.7	6,319.7	6,320.4	0.00	0.00	0.00
12,300.0	90.00	90.25	7,092.0	-2,287.00	-104.2	6,419.7	6,420.4	0.00	0.00	0.00
12,400.0	90.00	90.25	7,092.0	-2,287.00	-104.6	6,519.7	6,520.4	0.00	0.00	0.00
12,500.0	90.00	90.25	7,092.0	-2,287.00	-105.0	6,619.7	6,620.4	0.00	0.00	0.00
12,600.0	90.00	90.25	7,092.0	-2,287.00	-105.5	6,719.7	6,720.4	0.00	0.00	0.00
12,700.0	90.00	90.25	7,092.0	-2,287.00	-105.9	6,819.7	6,820.4	0.00	0.00	0.00
12,800.0	90.00	90.25	7,092.0	-2,287.00	-106.3	6,919.7	6,920.4	0.00	0.00	0.00
12,900.0	90.00	90.25	7,092.0	-2,287.00	-106.7	7,019.7	7,020.4	0.00	0.00	0.00
13,000.0	90.00	90.25	7,092.0	-2,287.00	-107.2	7,119.7	7,120.4	0.00	0.00	0.00
13,100.0	90.00	90.25	7,092.0	-2,287.00	-107.6	7,219.7	7,220.4	0.00	0.00	0.00
13,200.0	90.00	90.25	7,092.0	-2,287.00	-108.0	7,319.7	7,320.4	0.00	0.00	0.00
13,300.0	90.00	90.25	7,092.0	-2,287.00	-108.5	7,419.7	7,420.4	0.00	0.00	0.00
13,400.0	90.00	90.25	7,092.0	-2,287.00	-108.9	7,519.7	7,520.4	0.00	0.00	0.00
13,500.0	90.00	90.25	7,092.0	-2,287.00	-109.3	7,619.7	7,620.4	0.00	0.00	0.00
13,600.0	90.00	90.25	7,092.0	-2,287.00	-109.7	7,719.7	7,720.4	0.00	0.00	0.00
13,700.0	90.00	90.25	7,092.0	-2,287.00	-110.2	7,819.7	7,820.4	0.00	0.00	0.00
13,800.0	90.00	90.25	7,092.0	-2,287.00	-110.6	7,919.7	7,920.4	0.00	0.00	0.00
13,900.0	90.00	90.25	7,092.0	-2,287.00	-111.0	8,019.7	8,020.4	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well TC-AIMS 2-9-11
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4805.0usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4805.0usft (Original Well Elev)
Site:	NE SE SEC. 8 T5N R66W 6th P.M.	North Reference:	True
Well:	TC-AIMS 2-9-11	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	-2,287.00	-111.5	8,119.7	8,120.4	0.00	0.00	0.00
14,100.0	90.00	90.25	7,092.0	-2,287.00	-111.9	8,219.7	8,220.4	0.00	0.00	0.00
14,200.0	90.00	90.25	7,092.0	-2,287.00	-112.3	8,319.7	8,320.4	0.00	0.00	0.00
14,300.0	90.00	90.25	7,092.0	-2,287.00	-112.7	8,419.7	8,420.4	0.00	0.00	0.00
14,400.0	90.00	90.25	7,092.0	-2,287.00	-113.2	8,519.7	8,520.4	0.00	0.00	0.00
14,500.0	90.00	90.25	7,092.0	-2,287.00	-113.6	8,619.7	8,620.4	0.00	0.00	0.00
14,600.0	90.00	90.25	7,092.0	-2,287.00	-114.0	8,719.7	8,720.4	0.00	0.00	0.00
14,700.0	90.00	90.25	7,092.0	-2,287.00	-114.5	8,819.7	8,820.4	0.00	0.00	0.00
14,800.0	90.00	90.25	7,092.0	-2,287.00	-114.9	8,919.7	8,920.4	0.00	0.00	0.00
14,900.0	90.00	90.25	7,092.0	-2,287.00	-115.3	9,019.7	9,020.4	0.00	0.00	0.00
15,000.0	90.00	90.25	7,092.0	-2,287.00	-115.7	9,119.7	9,120.4	0.00	0.00	0.00
15,100.0	90.00	90.25	7,092.0	-2,287.00	-116.2	9,219.7	9,220.4	0.00	0.00	0.00
15,200.0	90.00	90.25	7,092.0	-2,287.00	-116.6	9,319.7	9,320.4	0.00	0.00	0.00
15,300.0	90.00	90.25	7,092.0	-2,287.00	-117.0	9,419.7	9,420.4	0.00	0.00	0.00
15,400.0	90.00	90.25	7,092.0	-2,287.00	-117.5	9,519.7	9,520.4	0.00	0.00	0.00
15,500.0	90.00	90.25	7,092.0	-2,287.00	-117.9	9,619.7	9,620.4	0.00	0.00	0.00
15,600.0	90.00	90.25	7,092.0	-2,287.00	-118.3	9,719.7	9,720.4	0.00	0.00	0.00
15,700.0	90.00	90.25	7,092.0	-2,287.00	-118.7	9,819.7	9,820.4	0.00	0.00	0.00
15,800.0	90.00	90.25	7,092.0	-2,287.00	-119.2	9,919.7	9,920.4	0.00	0.00	0.00
15,900.0	90.00	90.25	7,092.0	-2,287.00	-119.6	10,019.7	10,020.4	0.00	0.00	0.00
16,000.0	90.00	90.25	7,092.0	-2,287.00	-120.0	10,119.7	10,120.4	0.00	0.00	0.00
16,100.0	90.00	90.25	7,092.0	-2,287.00	-120.5	10,219.7	10,220.4	0.00	0.00	0.00
16,200.0	90.00	90.25	7,092.0	-2,287.00	-120.9	10,319.7	10,320.4	0.00	0.00	0.00
16,300.0	90.00	90.25	7,092.0	-2,287.00	-121.3	10,419.7	10,420.4	0.00	0.00	0.00
16,400.0	90.00	90.25	7,092.0	-2,287.00	-121.8	10,519.7	10,520.4	0.00	0.00	0.00
16,500.0	90.00	90.25	7,092.0	-2,287.00	-122.2	10,619.7	10,620.4	0.00	0.00	0.00
16,600.0	90.00	90.25	7,092.0	-2,287.00	-122.6	10,719.7	10,720.4	0.00	0.00	0.00
16,700.0	90.00	90.25	7,092.0	-2,287.00	-123.0	10,819.7	10,820.4	0.00	0.00	0.00
16,800.0	90.00	90.25	7,092.0	-2,287.00	-123.5	10,919.7	10,920.4	0.00	0.00	0.00
16,900.0	90.00	90.25	7,092.0	-2,287.00	-123.9	11,019.7	11,020.4	0.00	0.00	0.00
17,000.0	90.00	90.25	7,092.0	-2,287.00	-124.3	11,119.7	11,120.4	0.00	0.00	0.00
17,100.0	90.00	90.25	7,092.0	-2,287.00	-124.8	11,219.7	11,220.3	0.00	0.00	0.00
17,200.0	90.00	90.25	7,092.0	-2,287.00	-125.2	11,319.7	11,320.3	0.00	0.00	0.00
17,300.0	90.00	90.25	7,092.0	-2,287.00	-125.6	11,419.7	11,420.3	0.00	0.00	0.00
17,400.0	90.00	90.25	7,092.0	-2,287.00	-126.0	11,519.7	11,520.3	0.00	0.00	0.00
17,500.0	90.00	90.25	7,092.0	-2,287.00	-126.5	11,619.7	11,620.3	0.00	0.00	0.00
17,600.0	90.00	90.25	7,092.0	-2,287.00	-126.9	11,719.7	11,720.3	0.00	0.00	0.00
17,700.0	90.00	90.25	7,092.0	-2,287.00	-127.3	11,819.7	11,820.3	0.00	0.00	0.00
17,800.0	90.00	90.25	7,092.0	-2,287.00	-127.8	11,919.7	11,920.3	0.00	0.00	0.00
17,900.0	90.00	90.25	7,092.0	-2,287.00	-128.2	12,019.7	12,020.3	0.00	0.00	0.00
18,000.0	90.00	90.25	7,092.0	-2,287.00	-128.6	12,119.7	12,120.3	0.00	0.00	0.00
18,100.0	90.00	90.25	7,092.0	-2,287.00	-129.0	12,219.7	12,220.3	0.00	0.00	0.00
18,200.0	90.00	90.25	7,092.0	-2,287.00	-129.5	12,319.7	12,320.3	0.00	0.00	0.00
18,300.0	90.00	90.25	7,092.0	-2,287.00	-129.9	12,419.7	12,420.3	0.00	0.00	0.00
18,400.0	90.00	90.25	7,092.0	-2,287.00	-130.3	12,519.7	12,520.3	0.00	0.00	0.00
18,500.0	90.00	90.25	7,092.0	-2,287.00	-130.8	12,619.7	12,620.3	0.00	0.00	0.00
18,600.0	90.00	90.25	7,092.0	-2,287.00	-131.2	12,719.7	12,720.3	0.00	0.00	0.00
18,700.0	90.00	90.25	7,092.0	-2,287.00	-131.6	12,819.7	12,820.3	0.00	0.00	0.00
18,800.0	90.00	90.25	7,092.0	-2,287.00	-132.0	12,919.7	12,920.3	0.00	0.00	0.00
18,900.0	90.00	90.25	7,092.0	-2,287.00	-132.5	13,019.7	13,020.3	0.00	0.00	0.00
19,000.0	90.00	90.25	7,092.0	-2,287.00	-132.9	13,119.7	13,120.3	0.00	0.00	0.00
19,100.0	90.00	90.25	7,092.0	-2,287.00	-133.3	13,219.6	13,220.3	0.00	0.00	0.00
19,200.0	90.00	90.25	7,092.0	-2,287.00	-133.8	13,319.6	13,320.3	0.00	0.00	0.00
19,300.0	90.00	90.25	7,092.0	-2,287.00	-134.2	13,419.6	13,420.3	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well TC-AIMS 2-9-11
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4805.0usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4805.0usft (Original Well Elev)
Site:	NE SE SEC. 8 T5N R66W 6th P.M.	North Reference:	True
Well:	TC-AIMS 2-9-11	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	-2,287.00	-134.6	13,519.6	13,520.3	0.00	0.00	0.00
19,500.0	90.00	90.25	7,092.0	-2,287.00	-135.0	13,619.6	13,620.3	0.00	0.00	0.00
19,600.0	90.00	90.25	7,092.0	-2,287.00	-135.5	13,719.6	13,720.3	0.00	0.00	0.00
19,700.0	90.00	90.25	7,092.0	-2,287.00	-135.9	13,819.6	13,820.3	0.00	0.00	0.00
19,800.0	90.00	90.25	7,092.0	-2,287.00	-136.3	13,919.6	13,920.3	0.00	0.00	0.00
19,900.0	90.00	90.25	7,092.0	-2,287.00	-136.8	14,019.6	14,020.3	0.00	0.00	0.00
20,000.0	90.00	90.25	7,092.0	-2,287.00	-137.2	14,119.6	14,120.3	0.00	0.00	0.00
20,100.0	90.00	90.25	7,092.0	-2,287.00	-137.6	14,219.6	14,220.3	0.00	0.00	0.00
BHL - TC-AIMS 2-9-11										
20,173.9	90.00	90.25	7,092.0	-2,287.00	-137.9	14,293.5	14,294.2	0.00	0.00	0.00

Formations						
MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,725.7	3,680.0	PARKMAN				
4,473.0	4,410.0	SUSSEX				
4,892.8	4,820.0	SHANNON				
7,107.1	6,940.0	SHARON SPRINGS				
7,156.7	6,972.0	NIOBRARA				
7,534.3	7,092.0	NIO B TARGET				

Plan Annotations				
MD (usft)	TVD (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,300.0	1,300.0	0.0	0.0	START NUDGE (2°/100ft BUR)
1,600.6	1,600.0	-1.1	15.7	9 5/8" SURFACE CASING
1,665.6	1,664.7	-1.5	22.5	START NUDGE (2°/100ft BUR)
1,984.0	1,978.8	-5.0	73.2	EOB TO 12.38° INC
6,757.9	6,641.7	-75.0	1,094.4	START BUILD & TURN
7,534.3	7,092.0	-83.7	1,654.1	LANDING PNT - TC-AIMS 2-9-11
20,173.9	7,092.0	-137.9	14,293.5	BHL - TC-AIMS 2-9-11