

US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_LAMBRECHT 1-2 PAD

LAMBRECHT 8-2

Lambrecht 8-2

Plan: Lambrecht 8-2 (wp02)

Standard Planning Report

10 April, 2012

Project: COLORADO NORTHERN ZONE - 83
Site: WELD_LAMBRECHT 1-2 PAD
Well: LAMBRECHT 8-2
Wellbore: Lambrecht 8-2
Section:
SHL:
Design: Lambrecht 8-2 (wp02)
Latitude: 40.085724
Longitude: -104.850294
GL: 4939.00
KB: GL + RKB @ 4954.00ft

FORMATION TOP DETAILS			
TVDPath	MDPath	Formation	
4038.00	4230.00	PK Depth	
4498.00	4706.44	SX Depth	
7218.00	7430.02	NIO Depth	
7528.00	7740.02	CD Depth	
7616.00	7828.02	GH Depth	
7968.00	8180.02	J Depth	

WELL DETAILS: LAMBRECHT 8-2						
+N/-S	+E/-W	Northing	Ground Level: Easting	4939.00 Latitude	Longitude	Slot
0.00	0.00	1274739.94	3181787.05	40.085724	-104.850294	

CASING DETAILS			
TVD	MD	Name	Size
915.00	919.82	8-5/8"	8-5/8

T

M

Azimuths to True North

Magnetic North: 8.77°

Magnetic Field

Strength: 52869.2nT

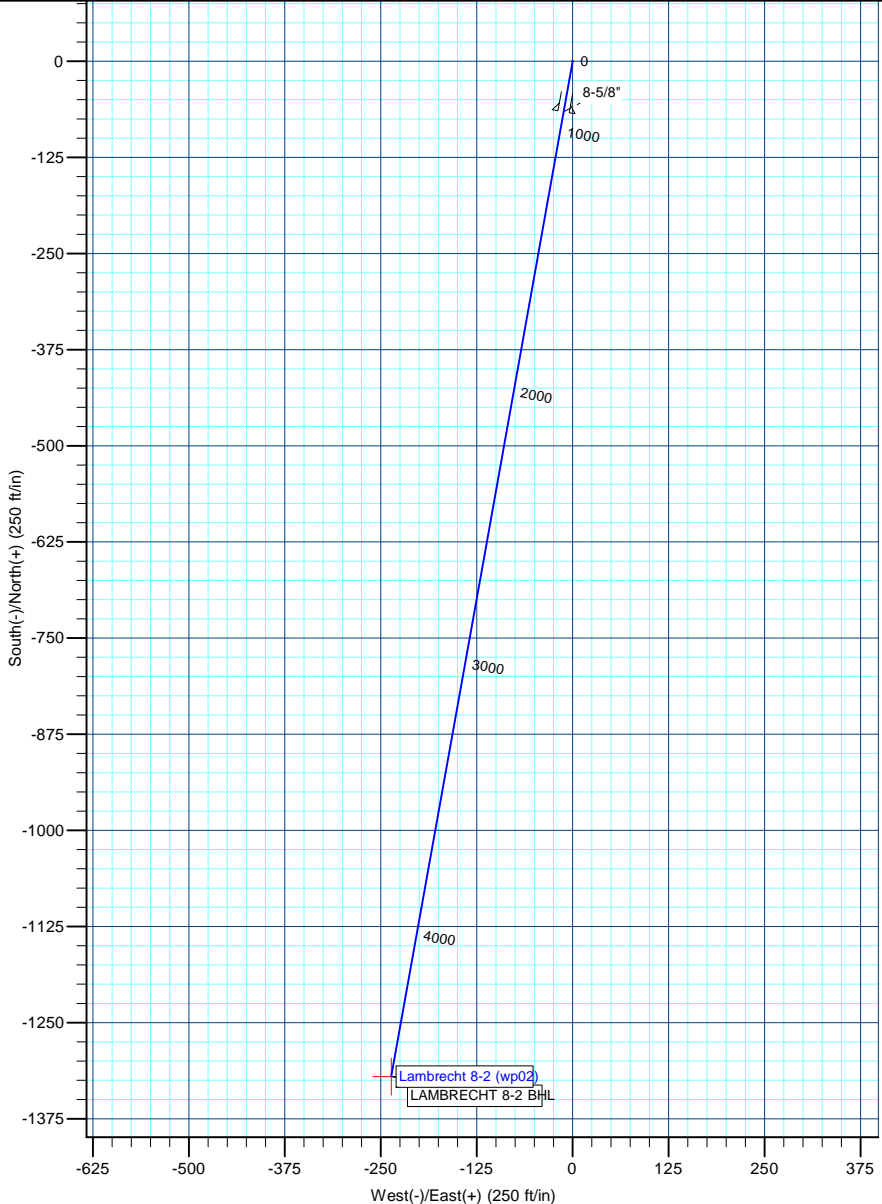
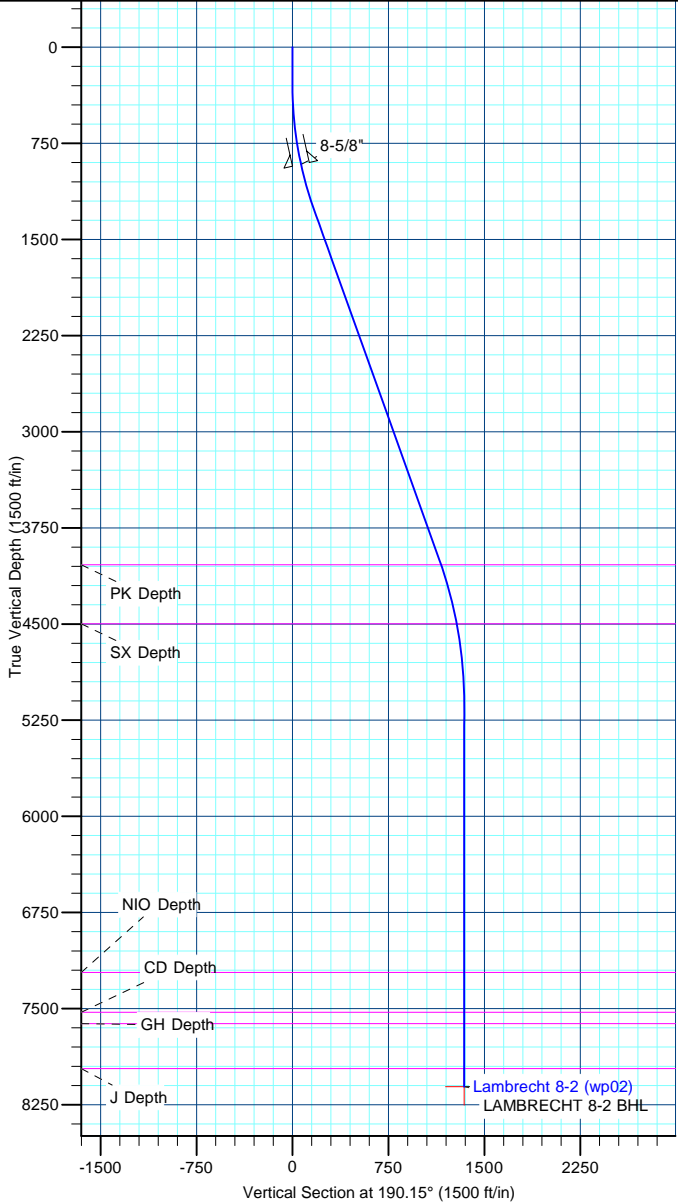
Dip Angle: 66.75°

Date: 4/10/2012

Model: IGRF2010

DESIGN TARGET DETAILS									
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape	
LAMBRECHT 8-2 BHL	8108.00	-1320.13	-236.45	1273418.11	3181560.28	40.082100	-104.851139	Point	

SECTION DETAILS								
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
0.00	0.00	0.00	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
1286.17	19.72	190.15	1266.81	-165.44	-29.63	2.00	190.15	168.07
4192.97	19.72	190.15	4003.07	-1131.06	-202.58	0.00	0.00	1149.06
5320.02	0.00	0.00	5108.00	-1320.13	-236.45	1.75	180.00	1341.14
8320.02	0.00	0.00	8108.00	-1320.13	-236.45	0.00	0.00	1341.14



Anadarko Petroleum Corp

Planning Report

Database:	edmp	Local Co-ordinate Reference:	Well LAMBRECHT 8-2
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL + RKB @ 4954.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL + RKB @ 4954.00ft
Site:	WELD_LAMBRECHT 1-2 PAD	North Reference:	True
Well:	LAMBRECHT 8-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lambrecht 8-2		
Design:	Lambrecht 8-2 (wp02)		

Project	COLORADO NORTHERN ZONE - 83		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site	WELD_LAMBRECHT 1-2 PAD			
Site Position:		Northing:	1,274,749.10 usft	Latitude: 40.085753
From:	Lat/Long	Easting:	3,181,594.19 usft	Longitude: -104.850983
Position Uncertainty:	0.00 ft	Slot Radius:	0 "	Grid Convergence: 0.42 °

Well	LAMBRECHT 8-2			
Well Position	+N/-S	-10.58 ft	Northing:	1,274,739.94 usft
	+E/-W	192.78 ft	Easting:	3,181,787.05 usft
Position Uncertainty		0.00 ft	Wellhead Elevation:	Latitude: 40.085724
				Longitude: -104.850294
				Ground Level: 4,939.00 ft

Wellbore	Lambrecht 8-2				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	4/10/2012	8.77	66.75	52,869

Design	Lambrecht 8-2 (wp02)			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	190.15

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	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	
1,286.17	19.72	190.15	1,266.81	-165.44	-29.63	2.00	2.00	0.00	190.15	
4,192.97	19.72	190.15	4,003.07	-1,131.06	-202.58	0.00	0.00	0.00	0.00	
5,320.02	0.00	0.00	5,108.00	-1,320.13	-236.45	1.75	-1.75	0.00	180.00	
8,320.02	0.00	0.00	8,108.00	-1,320.13	-236.45	0.00	0.00	0.00	0.00	LAMBRECHT 8-2 BH

Anadarko Petroleum Corp

Planning Report

Database:	edmp	Local Co-ordinate Reference:	Well LAMBRECHT 8-2
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL + RKB @ 4954.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL + RKB @ 4954.00ft
Site:	WELD_LAMBRECHT 1-2 PAD	North Reference:	True
Well:	LAMBRECHT 8-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lambrecht 8-2		
Design:	Lambrecht 8-2 (wp02)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
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	2.00	190.15	399.98	-1.72	-0.31	1.75	2.00	2.00	0.00
500.00	4.00	190.15	499.84	-6.87	-1.23	6.98	2.00	2.00	0.00
600.00	6.00	190.15	599.45	-15.45	-2.77	15.69	2.00	2.00	0.00
700.00	8.00	190.15	698.70	-27.44	-4.92	27.88	2.00	2.00	0.00
800.00	10.00	190.15	797.47	-42.84	-7.67	43.52	2.00	2.00	0.00
900.00	12.00	190.15	895.62	-61.62	-11.04	62.60	2.00	2.00	0.00
919.82	12.40	190.15	915.00	-65.74	-11.78	66.79	2.00	2.00	0.00
8-5/8"									
1,000.00	14.00	190.15	993.06	-83.76	-15.00	85.10	2.00	2.00	0.00
1,100.00	16.00	190.15	1,089.64	-109.24	-19.57	110.98	2.00	2.00	0.00
1,200.00	18.00	190.15	1,185.27	-138.02	-24.72	140.21	2.00	2.00	0.00
1,286.17	19.72	190.15	1,266.81	-165.44	-29.63	168.07	2.00	2.00	0.00
1,300.00	19.72	190.15	1,279.83	-170.03	-30.45	172.74	0.00	0.00	0.00
1,400.00	19.72	190.15	1,373.96	-203.25	-36.40	206.48	0.00	0.00	0.00
1,500.00	19.72	190.15	1,468.09	-236.47	-42.35	240.23	0.00	0.00	0.00
1,600.00	19.72	190.15	1,562.23	-269.69	-48.30	273.98	0.00	0.00	0.00
1,700.00	19.72	190.15	1,656.36	-302.91	-54.25	307.73	0.00	0.00	0.00
1,800.00	19.72	190.15	1,750.49	-336.13	-60.20	341.48	0.00	0.00	0.00
1,900.00	19.72	190.15	1,844.63	-369.35	-66.15	375.22	0.00	0.00	0.00
2,000.00	19.72	190.15	1,938.76	-402.57	-72.10	408.97	0.00	0.00	0.00
2,100.00	19.72	190.15	2,032.89	-435.79	-78.05	442.72	0.00	0.00	0.00
2,200.00	19.72	190.15	2,127.03	-469.01	-84.00	476.47	0.00	0.00	0.00
2,300.00	19.72	190.15	2,221.16	-502.22	-89.95	510.22	0.00	0.00	0.00
2,400.00	19.72	190.15	2,315.29	-535.44	-95.90	543.96	0.00	0.00	0.00
2,500.00	19.72	190.15	2,409.43	-568.66	-101.85	577.71	0.00	0.00	0.00
2,600.00	19.72	190.15	2,503.56	-601.88	-107.80	611.46	0.00	0.00	0.00
2,700.00	19.72	190.15	2,597.69	-635.10	-113.75	645.21	0.00	0.00	0.00
2,800.00	19.72	190.15	2,691.83	-668.32	-119.70	678.96	0.00	0.00	0.00
2,900.00	19.72	190.15	2,785.96	-701.54	-125.65	712.71	0.00	0.00	0.00
3,000.00	19.72	190.15	2,880.09	-734.76	-131.60	746.45	0.00	0.00	0.00
3,100.00	19.72	190.15	2,974.23	-767.98	-137.55	780.20	0.00	0.00	0.00
3,200.00	19.72	190.15	3,068.36	-801.20	-143.50	813.95	0.00	0.00	0.00
3,300.00	19.72	190.15	3,162.49	-834.42	-149.45	847.70	0.00	0.00	0.00
3,400.00	19.72	190.15	3,256.63	-867.64	-155.40	881.45	0.00	0.00	0.00
3,500.00	19.72	190.15	3,350.76	-900.86	-161.35	915.19	0.00	0.00	0.00
3,600.00	19.72	190.15	3,444.89	-934.08	-167.30	948.94	0.00	0.00	0.00
3,700.00	19.72	190.15	3,539.02	-967.30	-173.25	982.69	0.00	0.00	0.00
3,800.00	19.72	190.15	3,633.16	-1,000.52	-179.20	1,016.44	0.00	0.00	0.00
3,900.00	19.72	190.15	3,727.29	-1,033.74	-185.15	1,050.19	0.00	0.00	0.00
4,000.00	19.72	190.15	3,821.42	-1,066.96	-191.10	1,083.93	0.00	0.00	0.00
4,100.00	19.72	190.15	3,915.56	-1,100.17	-197.05	1,117.68	0.00	0.00	0.00
4,192.97	19.72	190.15	4,003.07	-1,131.06	-202.58	1,149.06	0.00	0.00	0.00
4,200.00	19.60	190.15	4,009.69	-1,133.39	-203.00	1,151.42	1.75	-1.75	0.00
4,230.00	19.08	190.15	4,038.00	-1,143.17	-204.75	1,161.36	1.75	-1.75	0.00
PK Depth									
4,300.00	17.85	190.15	4,104.40	-1,164.99	-208.66	1,183.52	1.75	-1.75	0.00
4,400.00	16.10	190.15	4,200.04	-1,193.72	-213.81	1,212.72	1.75	-1.75	0.00
4,500.00	14.35	190.15	4,296.52	-1,219.57	-218.43	1,238.98	1.75	-1.75	0.00
4,600.00	12.60	190.15	4,393.77	-1,242.51	-222.54	1,262.28	1.75	-1.75	0.00
4,700.00	10.85	190.15	4,491.68	-1,262.51	-226.13	1,282.60	1.75	-1.75	0.00

Anadarko Petroleum Corp

Planning Report

Database:	edmp	Local Co-ordinate Reference:	Well LAMBRECHT 8-2
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL + RKB @ 4954.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL + RKB @ 4954.00ft
Site:	WELD_LAMBRECHT 1-2 PAD	North Reference:	True
Well:	LAMBRECHT 8-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lambrecht 8-2		
Design:	Lambrecht 8-2 (wp02)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,706.44	10.74	190.15	4,498.00	-1,263.70	-226.34	1,283.81	1.75	-1.75	0.00
SX Depth									
4,800.00	9.10	190.15	4,590.16	-1,279.56	-229.18	1,299.93	1.75	-1.75	0.00
4,900.00	7.35	190.15	4,689.13	-1,293.65	-231.70	1,314.23	1.75	-1.75	0.00
5,000.00	5.60	190.15	4,788.49	-1,304.75	-233.69	1,325.51	1.75	-1.75	0.00
5,100.00	3.85	190.15	4,888.14	-1,312.86	-235.14	1,333.75	1.75	-1.75	0.00
5,200.00	2.10	190.15	4,988.00	-1,317.96	-236.06	1,338.94	1.75	-1.75	0.00
5,300.00	0.35	190.15	5,087.98	-1,320.07	-236.43	1,341.08	1.75	-1.75	0.00
5,320.02	0.00	0.00	5,108.00	-1,320.13	-236.45	1,341.14	1.75	-1.75	0.00
5,400.00	0.00	0.00	5,187.98	-1,320.13	-236.45	1,341.14	0.00	0.00	0.00
5,500.00	0.00	0.00	5,287.98	-1,320.13	-236.45	1,341.14	0.00	0.00	0.00
5,600.00	0.00	0.00	5,387.98	-1,320.13	-236.45	1,341.14	0.00	0.00	0.00
5,700.00	0.00	0.00	5,487.98	-1,320.13	-236.45	1,341.14	0.00	0.00	0.00
5,800.00	0.00	0.00	5,587.98	-1,320.13	-236.45	1,341.14	0.00	0.00	0.00
5,900.00	0.00	0.00	5,687.98	-1,320.13	-236.45	1,341.14	0.00	0.00	0.00
6,000.00	0.00	0.00	5,787.98	-1,320.13	-236.45	1,341.14	0.00	0.00	0.00
6,100.00	0.00	0.00	5,887.98	-1,320.13	-236.45	1,341.14	0.00	0.00	0.00
6,200.00	0.00	0.00	5,987.98	-1,320.13	-236.45	1,341.14	0.00	0.00	0.00
6,300.00	0.00	0.00	6,087.98	-1,320.13	-236.45	1,341.14	0.00	0.00	0.00
6,400.00	0.00	0.00	6,187.98	-1,320.13	-236.45	1,341.14	0.00	0.00	0.00
6,500.00	0.00	0.00	6,287.98	-1,320.13	-236.45	1,341.14	0.00	0.00	0.00
6,600.00	0.00	0.00	6,387.98	-1,320.13	-236.45	1,341.14	0.00	0.00	0.00
6,700.00	0.00	0.00	6,487.98	-1,320.13	-236.45	1,341.14	0.00	0.00	0.00
6,800.00	0.00	0.00	6,587.98	-1,320.13	-236.45	1,341.14	0.00	0.00	0.00
6,900.00	0.00	0.00	6,687.98	-1,320.13	-236.45	1,341.14	0.00	0.00	0.00
7,000.00	0.00	0.00	6,787.98	-1,320.13	-236.45	1,341.14	0.00	0.00	0.00
7,100.00	0.00	0.00	6,887.98	-1,320.13	-236.45	1,341.14	0.00	0.00	0.00
7,200.00	0.00	0.00	6,987.98	-1,320.13	-236.45	1,341.14	0.00	0.00	0.00
7,300.00	0.00	0.00	7,087.98	-1,320.13	-236.45	1,341.14	0.00	0.00	0.00
7,400.00	0.00	0.00	7,187.98	-1,320.13	-236.45	1,341.14	0.00	0.00	0.00
7,430.02	0.00	0.00	7,218.00	-1,320.13	-236.45	1,341.14	0.00	0.00	0.00
NIO Depth									
7,500.00	0.00	0.00	7,287.98	-1,320.13	-236.45	1,341.14	0.00	0.00	0.00
7,600.00	0.00	0.00	7,387.98	-1,320.13	-236.45	1,341.14	0.00	0.00	0.00
7,700.00	0.00	0.00	7,487.98	-1,320.13	-236.45	1,341.14	0.00	0.00	0.00
7,740.02	0.00	0.00	7,528.00	-1,320.13	-236.45	1,341.14	0.00	0.00	0.00
CD Depth									
7,800.00	0.00	0.00	7,587.98	-1,320.13	-236.45	1,341.14	0.00	0.00	0.00
7,828.02	0.00	0.00	7,616.00	-1,320.13	-236.45	1,341.14	0.00	0.00	0.00
GH Depth									
7,900.00	0.00	0.00	7,687.98	-1,320.13	-236.45	1,341.14	0.00	0.00	0.00
8,000.00	0.00	0.00	7,787.98	-1,320.13	-236.45	1,341.14	0.00	0.00	0.00
8,100.00	0.00	0.00	7,887.98	-1,320.13	-236.45	1,341.14	0.00	0.00	0.00
8,180.02	0.00	0.00	7,968.00	-1,320.13	-236.45	1,341.14	0.00	0.00	0.00
J Depth									
8,200.00	0.00	0.00	7,987.98	-1,320.13	-236.45	1,341.14	0.00	0.00	0.00
8,300.00	0.00	0.00	8,087.98	-1,320.13	-236.45	1,341.14	0.00	0.00	0.00
8,320.02	0.00	0.00	8,108.00	-1,320.13	-236.45	1,341.14	0.00	0.00	0.00
LAMBRECHT 8-2 BHL									

Anadarko Petroleum Corp

Planning Report

Database:	edmp	Local Co-ordinate Reference:	Well LAMBRECHT 8-2
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL + RKB @ 4954.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL + RKB @ 4954.00ft
Site:	WELD_LAMBRECHT 1-2 PAD	North Reference:	True
Well:	LAMBRECHT 8-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lambrecht 8-2		
Design:	Lambrecht 8-2 (wp02)		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)		
- Shape									
LAMBRECHT 8-2 BHL	0.00	0.00	8,108.00	-1,320.13	-236.45	1,273,418.11	3,181,560.28	40.082100	-104.851139
- plan hits target center									
- Point									

Casing Points					
Measured Depth	Vertical Depth	Name		Casing Diameter	Hole Diameter
(ft)	(ft)			(")	(")
919.82	915.00	8-5/8"		8-5/8	11

Formations						
Measured Depth	Vertical Depth	Name		Lithology	Dip	Dip Direction
(ft)	(ft)				(°)	(°)
4,230.00	4,038.00	PK Depth				
4,706.44	4,498.00	SX Depth				
7,430.02	7,218.00	NIO Depth				
7,740.02	7,528.00	CD Depth				
7,828.02	7,616.00	GH Depth				
8,180.02	7,968.00	J Depth				