

US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_DECHANT 23-1 PAD

DECHANT 40-1

DECHANT 40-1

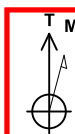
Plan: DECHANT 40-1 (wp01)

Standard Planning Report

18 November, 2010



Project: COLORADO NORTHERN ZONE - 83
Site: WELD_DECHANT 23-1 PAD
Well: DECHANT 40-1
Wellbore: DECHANT 40-1
Section:
SHL:
Design: DECHANT 40-1 (wp01)
Latitude: 40.166063
Longitude: -104.612482
GL: 0.00
KB: WELL @ 4838.00ft (Original Well Elev)



Azimuths to True North
Magnetic North: 8.84°

Magnetic Field
Strength: 53085.7nT
Dip Angle: 66.91°
Date: 11/17/2010
Model: IGRF2010



Weatherford®

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
4137.00	4521.22	PK Depth
4377.00	4789.78	SX Depth
6800.00	7383.49	NIO Depth
7087.00	7670.49	CD Depth
7170.00	7753.49	GH Depth
7548.00	8131.49	J Depth

WELL DETAILS: DECHANT 40-1

+N/-S	+E/-W	Northing	Ground Level: Easting	0.00 Latitude	Longitude	Slot
0.00	0.00	1304581.05	3248031.76	40.166063	-104.612482	

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)

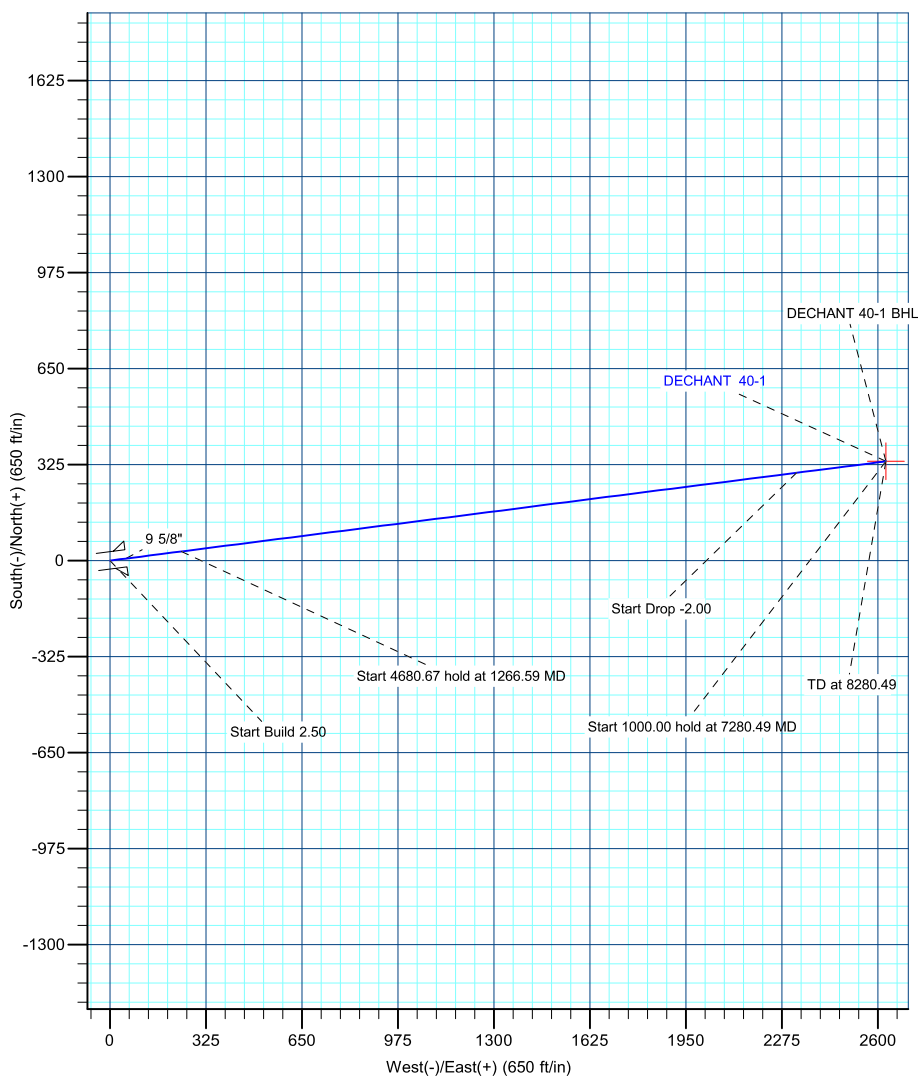
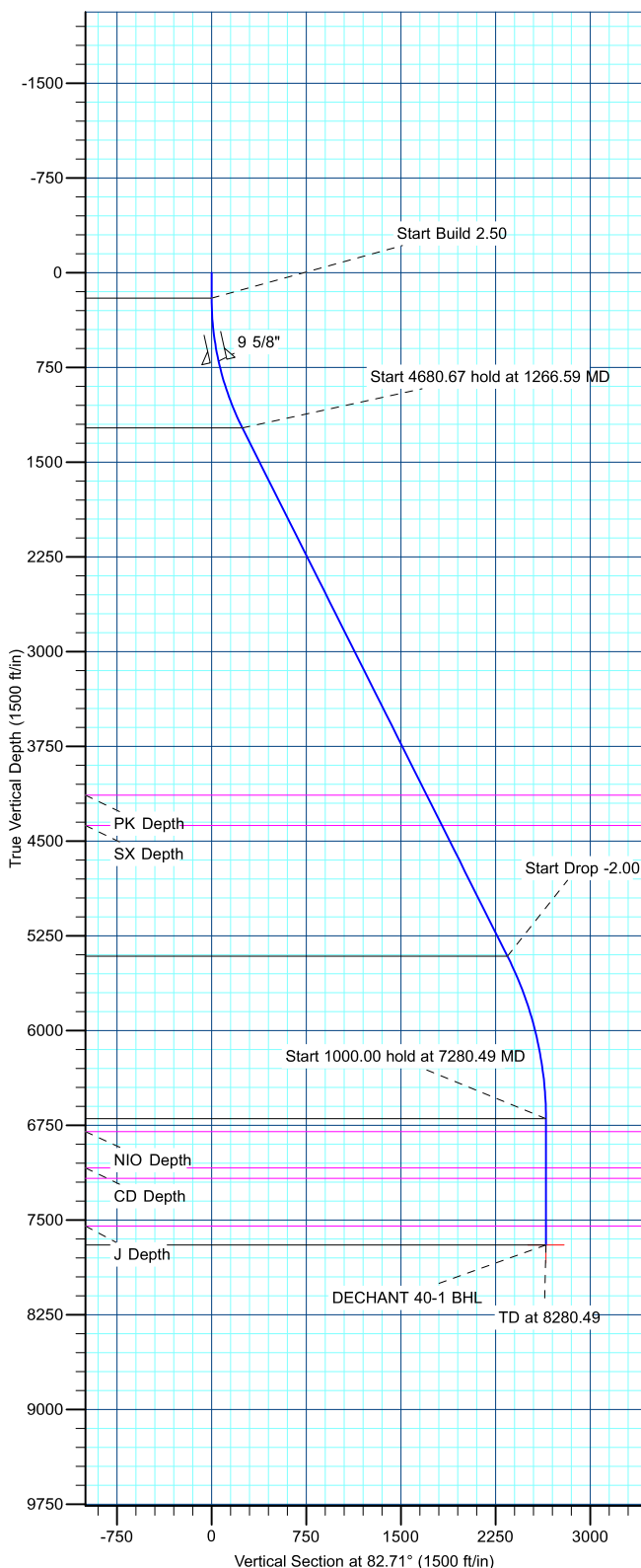
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
DECHANT 40-1 BHL	7697.00	336.01	2627.55	40.166985	-104.603080	Point

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	
3	1266.59	26.66	82.71	1228.50	30.92	241.77	2.50	82.71	243.74	
4	5947.26	26.66	82.71	5411.37	297.37	2325.34	0.00	0.00	2344.28	
5	7280.49	0.00	0.00	6697.00	336.01	2627.55	2.00	180.00	2648.95	
6	8280.49	0.00	0.00	7697.00	336.01	2627.55	0.00	0.00	2648.95	DECHANT 40-1 BHL

CASING DETAILS

TVD	MD	Name	Size
700.00	704.05	9 5/8"	9-5/8



Database:	edm5000p	Local Co-ordinate Reference:	Well DECHANT 40-1
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4838.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4838.00ft (Original Well Elev)
Site:	WELD_DECHANT 23-1 PAD	North Reference:	True
Well:	DECHANT 40-1	Survey Calculation Method:	Minimum Curvature
Wellbore:	DECHANT 40-1		
Design:	DECHANT 40-1 (wp01)		

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_DECHANT 23-1 PAD				
Site Position:		Northing:	1,304,551.19 ft	Latitude:	40.165981	
From:	Lat/Long	Easting:	3,248,032.06 ft	Longitude:	-104.612482	
Position Uncertainty:		0.00 ft	Slot Radius:	0 "	Grid Convergence:	0.57 °

Well	DECHANT 40-1					
Well Position	+N/-S	29.86 ft	Northing:	1,304,581.05 ft	Latitude:	40.166063
	+E/-W	0.00 ft	Easting:	3,248,031.76 ft	Longitude:	-104.612482
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	0.00 ft

Wellbore	DECHANT 40-1				
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	11/17/2010	8.84	66.91	53,086

Design	DECHANT 40-1 (wp01)				
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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	82.71	

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	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	
1,266.59	26.66	82.71	1,228.50	30.92	241.77	2.50	2.50	0.00	82.71	
5,947.26	26.66	82.71	5,411.37	297.37	2,325.34	0.00	0.00	0.00	0.00	
7,280.49	0.00	0.00	6,697.00	336.01	2,627.55	2.00	-2.00	0.00	180.00	
8,280.49	0.00	0.00	7,697.00	336.01	2,627.55	0.00	0.00	0.00	0.00	DECHANT 40-1 BH

Database:	edm5000p	Local Co-ordinate Reference:	Well DECHANT 40-1
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4838.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4838.00ft (Original Well Elev)
Site:	WELD_DECHANT 23-1 PAD	North Reference:	True
Well:	DECHANT 40-1	Survey Calculation Method:	Minimum Curvature
Wellbore:	DECHANT 40-1		
Design:	DECHANT 40-1 (wp01)		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
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
Start Build 2.50									
300.00	2.50	82.71	299.97	0.28	2.16	2.18	2.50	2.50	0.00
400.00	5.00	82.71	399.75	1.11	8.65	8.72	2.50	2.50	0.00
500.00	7.50	82.71	499.14	2.49	19.45	19.61	2.50	2.50	0.00
600.00	10.00	82.71	597.97	4.42	34.54	34.82	2.50	2.50	0.00
700.00	12.50	82.71	696.04	6.89	53.89	54.33	2.50	2.50	0.00
704.05	12.60	82.71	700.00	7.00	54.76	55.21	2.50	2.50	0.00
9 5/8"									
800.00	15.00	82.71	793.17	9.91	77.46	78.09	2.50	2.50	0.00
900.00	17.50	82.71	889.17	13.46	105.22	106.07	2.50	2.50	0.00
1,000.00	20.00	82.71	983.85	17.53	137.10	138.21	2.50	2.50	0.00
1,100.00	22.50	82.71	1,077.05	22.13	173.05	174.46	2.50	2.50	0.00
1,200.00	25.00	82.71	1,168.57	27.24	212.99	214.73	2.50	2.50	0.00
1,266.59	26.66	82.71	1,228.50	30.92	241.77	243.74	2.50	2.50	0.00
Start 4680.67 hold at 1266.59 MD									
1,300.00	26.66	82.71	1,258.36	32.82	256.64	258.73	0.00	0.00	0.00
1,400.00	26.66	82.71	1,347.73	38.51	301.16	303.61	0.00	0.00	0.00
1,500.00	26.66	82.71	1,437.09	44.21	345.67	348.49	0.00	0.00	0.00
1,600.00	26.66	82.71	1,526.45	49.90	390.19	393.37	0.00	0.00	0.00
1,700.00	26.66	82.71	1,615.82	55.59	434.70	438.24	0.00	0.00	0.00
1,800.00	26.66	82.71	1,705.18	61.28	479.22	483.12	0.00	0.00	0.00
1,900.00	26.66	82.71	1,794.55	66.98	523.73	528.00	0.00	0.00	0.00
2,000.00	26.66	82.71	1,883.91	72.67	568.25	572.87	0.00	0.00	0.00
2,100.00	26.66	82.71	1,973.28	78.36	612.76	617.75	0.00	0.00	0.00
2,200.00	26.66	82.71	2,062.64	84.05	657.27	662.63	0.00	0.00	0.00
2,300.00	26.66	82.71	2,152.01	89.75	701.79	707.50	0.00	0.00	0.00
2,400.00	26.66	82.71	2,241.37	95.44	746.30	752.38	0.00	0.00	0.00
2,500.00	26.66	82.71	2,330.74	101.13	790.82	797.26	0.00	0.00	0.00
2,600.00	26.66	82.71	2,420.10	106.82	835.33	842.13	0.00	0.00	0.00
2,700.00	26.66	82.71	2,509.47	112.52	879.85	887.01	0.00	0.00	0.00
2,800.00	26.66	82.71	2,598.83	118.21	924.36	931.89	0.00	0.00	0.00
2,900.00	26.66	82.71	2,688.20	123.90	968.87	976.76	0.00	0.00	0.00
3,000.00	26.66	82.71	2,777.56	129.59	1,013.39	1,021.64	0.00	0.00	0.00
3,100.00	26.66	82.71	2,866.93	135.29	1,057.90	1,066.52	0.00	0.00	0.00
3,200.00	26.66	82.71	2,956.29	140.98	1,102.42	1,111.39	0.00	0.00	0.00
3,300.00	26.66	82.71	3,045.66	146.67	1,146.93	1,156.27	0.00	0.00	0.00
3,400.00	26.66	82.71	3,135.02	152.36	1,191.45	1,201.15	0.00	0.00	0.00
3,500.00	26.66	82.71	3,224.39	158.06	1,235.96	1,246.03	0.00	0.00	0.00
3,600.00	26.66	82.71	3,313.75	163.75	1,280.47	1,290.90	0.00	0.00	0.00
3,700.00	26.66	82.71	3,403.12	169.44	1,324.99	1,335.78	0.00	0.00	0.00
3,800.00	26.66	82.71	3,492.48	175.13	1,369.50	1,380.66	0.00	0.00	0.00
3,900.00	26.66	82.71	3,581.85	180.83	1,414.02	1,425.53	0.00	0.00	0.00
4,000.00	26.66	82.71	3,671.21	186.52	1,458.53	1,470.41	0.00	0.00	0.00
4,100.00	26.66	82.71	3,760.58	192.21	1,503.05	1,515.29	0.00	0.00	0.00
4,200.00	26.66	82.71	3,849.94	197.90	1,547.56	1,560.16	0.00	0.00	0.00
4,300.00	26.66	82.71	3,939.30	203.60	1,592.07	1,605.04	0.00	0.00	0.00
4,400.00	26.66	82.71	4,028.67	209.29	1,636.59	1,649.92	0.00	0.00	0.00
4,500.00	26.66	82.71	4,118.03	214.98	1,681.10	1,694.79	0.00	0.00	0.00
4,521.22	26.66	82.71	4,137.00	216.19	1,690.55	1,704.32	0.00	0.00	0.00
PK Depth									
4,600.00	26.66	82.71	4,207.40	220.67	1,725.62	1,739.67	0.00	0.00	0.00

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Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4838.00ft (Original Well Elev)
Site:	WELD_DECHANT 23-1 PAD	North Reference:	True
Well:	DECHANT 40-1	Survey Calculation Method:	Minimum Curvature
Wellbore:	DECHANT 40-1		
Design:	DECHANT 40-1 (wp01)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,700.00	26.66	82.71	4,296.76	226.37	1,770.13	1,784.55	0.00	0.00	0.00
4,789.78	26.66	82.71	4,377.00	231.48	1,810.10	1,824.84	0.00	0.00	0.00
SX Depth									
4,800.00	26.66	82.71	4,386.13	232.06	1,814.65	1,829.42	0.00	0.00	0.00
4,900.00	26.66	82.71	4,475.49	237.75	1,859.16	1,874.30	0.00	0.00	0.00
5,000.00	26.66	82.71	4,564.86	243.44	1,903.67	1,919.18	0.00	0.00	0.00
5,100.00	26.66	82.71	4,654.22	249.14	1,948.19	1,964.05	0.00	0.00	0.00
5,200.00	26.66	82.71	4,743.59	254.83	1,992.70	2,008.93	0.00	0.00	0.00
5,300.00	26.66	82.71	4,832.95	260.52	2,037.22	2,053.81	0.00	0.00	0.00
5,400.00	26.66	82.71	4,922.32	266.21	2,081.73	2,098.68	0.00	0.00	0.00
5,500.00	26.66	82.71	5,011.68	271.91	2,126.25	2,143.56	0.00	0.00	0.00
5,600.00	26.66	82.71	5,101.05	277.60	2,170.76	2,188.44	0.00	0.00	0.00
5,700.00	26.66	82.71	5,190.41	283.29	2,215.27	2,233.32	0.00	0.00	0.00
5,800.00	26.66	82.71	5,279.78	288.98	2,259.79	2,278.19	0.00	0.00	0.00
5,900.00	26.66	82.71	5,369.14	294.68	2,304.30	2,323.07	0.00	0.00	0.00
5,947.26	26.66	82.71	5,411.37	297.37	2,325.34	2,344.28	0.00	0.00	0.00
Start Drop -2.00									
6,000.00	25.61	82.71	5,458.72	300.31	2,348.39	2,367.51	2.00	-2.00	0.00
6,100.00	23.61	82.71	5,549.63	305.60	2,389.69	2,409.15	2.00	-2.00	0.00
6,200.00	21.61	82.71	5,641.94	310.47	2,427.82	2,447.60	2.00	-2.00	0.00
6,300.00	19.61	82.71	5,735.54	314.94	2,462.74	2,482.79	2.00	-2.00	0.00
6,400.00	17.61	82.71	5,830.31	318.99	2,494.39	2,514.70	2.00	-2.00	0.00
6,500.00	15.61	82.71	5,926.13	322.61	2,522.74	2,543.29	2.00	-2.00	0.00
6,600.00	13.61	82.71	6,022.89	325.81	2,547.76	2,568.51	2.00	-2.00	0.00
6,700.00	11.61	82.71	6,120.47	328.58	2,569.42	2,590.34	2.00	-2.00	0.00
6,800.00	9.61	82.71	6,218.76	330.92	2,587.68	2,608.75	2.00	-2.00	0.00
6,900.00	7.61	82.71	6,317.63	332.81	2,602.53	2,623.72	2.00	-2.00	0.00
7,000.00	5.61	82.71	6,416.96	334.27	2,613.94	2,635.23	2.00	-2.00	0.00
7,100.00	3.61	82.71	6,516.63	335.29	2,621.92	2,643.27	2.00	-2.00	0.00
7,200.00	1.61	82.71	6,616.52	335.87	2,626.43	2,647.82	2.00	-2.00	0.00
7,280.49	0.00	0.00	6,697.00	336.01	2,627.55	2,648.95	2.00	-2.00	0.00
Start 1000.00 hold at 7280.49 MD									
7,300.00	0.00	0.00	6,716.51	336.01	2,627.55	2,648.95	0.00	0.00	0.00
7,383.49	0.00	0.00	6,800.00	336.01	2,627.55	2,648.95	0.00	0.00	0.00
NIO Depth									
7,400.00	0.00	0.00	6,816.51	336.01	2,627.55	2,648.95	0.00	0.00	0.00
7,500.00	0.00	0.00	6,916.51	336.01	2,627.55	2,648.95	0.00	0.00	0.00
7,600.00	0.00	0.00	7,016.51	336.01	2,627.55	2,648.95	0.00	0.00	0.00
7,670.49	0.00	0.00	7,087.00	336.01	2,627.55	2,648.95	0.00	0.00	0.00
CD Depth									
7,700.00	0.00	0.00	7,116.51	336.01	2,627.55	2,648.95	0.00	0.00	0.00
7,753.49	0.00	0.00	7,170.00	336.01	2,627.55	2,648.95	0.00	0.00	0.00
GH Depth									
7,800.00	0.00	0.00	7,216.51	336.01	2,627.55	2,648.95	0.00	0.00	0.00
7,900.00	0.00	0.00	7,316.51	336.01	2,627.55	2,648.95	0.00	0.00	0.00
8,000.00	0.00	0.00	7,416.51	336.01	2,627.55	2,648.95	0.00	0.00	0.00
8,100.00	0.00	0.00	7,516.51	336.01	2,627.55	2,648.95	0.00	0.00	0.00
8,131.49	0.00	0.00	7,548.00	336.01	2,627.55	2,648.95	0.00	0.00	0.00
J Depth									
8,200.00	0.00	0.00	7,616.51	336.01	2,627.55	2,648.95	0.00	0.00	0.00
8,280.49	0.00	0.00	7,697.00	336.01	2,627.55	2,648.95	0.00	0.00	0.00
TD at 8280.49 - DECHANT 40-1 BHL									

Database:	edm5000p	Local Co-ordinate Reference:	Well DECHANT 40-1
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4838.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4838.00ft (Original Well Elev)
Site:	WELD_DECHANT 23-1 PAD	North Reference:	True
Well:	DECHANT 40-1	Survey Calculation Method:	Minimum Curvature
Wellbore:	DECHANT 40-1		
Design:	DECHANT 40-1 (wp01)		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
DECHANT 40-1 BHL	0.00	0.00	7,697.00	336.01	2,627.55	1,304,943.35	3,250,655.82	40.166985	-104.603080
- plan hits target center									
- Point									

Casing Points					
Measured Depth	Vertical Depth		Name	Casing Diameter	Hole Diameter
(ft)	(ft)			(")	(")
704.05	700.00	9 5/8"		9-5/8	12-1/4

Formations					
Measured Depth	Vertical Depth		Name	Lithology	Dip
(ft)	(ft)				(°)
4,521.22	4,137.00	PK Depth			
4,789.78	4,377.00	SX Depth			
7,383.49	6,800.00	NIO Depth			
7,670.49	7,087.00	CD Depth			
7,753.49	7,170.00	GH Depth			
8,131.49	7,548.00	J Depth			

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(ft)	(ft)	+N/-S	+E/-W	Comment	
(ft)	(ft)	(ft)	(ft)		
200.00	200.00	0.00	0.00	Start Build 2.50	
1,266.59	1,228.50	30.92	241.77	Start 4680.67 hold at 1266.59 MD	
5,947.26	5,411.37	297.37	2,325.34	Start Drop -2.00	
7,280.49	6,697.00	336.01	2,627.55	Start 1000.00 hold at 7280.49 MD	
8,280.49	7,697.00	336.01	2,627.55	TD at 8280.49	