

US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_DECHANT 23-1 PAD

DECHANT 22-1

DECHANT 22-1

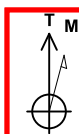
Plan: DECHANT 22-1 (wp01)

Standard Planning Report

18 November, 2010



Project: COLORADO NORTHERN ZONE - 83
Site: WELD_DECHANT 23-1 PAD
Well: DECHANT 22-1
Wellbore: DECHANT 22-1
Section:
SHL:
Design: DECHANT 22-1 (wp01)
Latitude: 40.166119
Longitude: -104.612481
GL: 0.00
KB: WELL @ 4838.00ft (Original Well Elev)



Azimuths to True North
Magnetic North: 8.84°
Magnetic Field
Strength: 53086.0snT
Dip Angle: 66.91°
Date: 11/16/2010
Model: IGRF2010



Weatherford®

FORMATION TOP DETAILS

TVDPPath	MDPath	Formation
4137.00	4352.67	PK Depth
4377.00	4595.63	SX Depth
6800.00	7019.30	NIO Depth
7087.00	7306.30	CD Depth
7170.00	7389.30	GH Depth
7548.00	7767.30	J Depth

WELL DETAILS: DECHANT 22-1

+N/-S	+E/-W	Northing	Ground Level: Easting	0.00 Latitude	Longitude	Slot
0.00	0.00	1304601.45	3248031.83	40.166119	-104.612481	

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

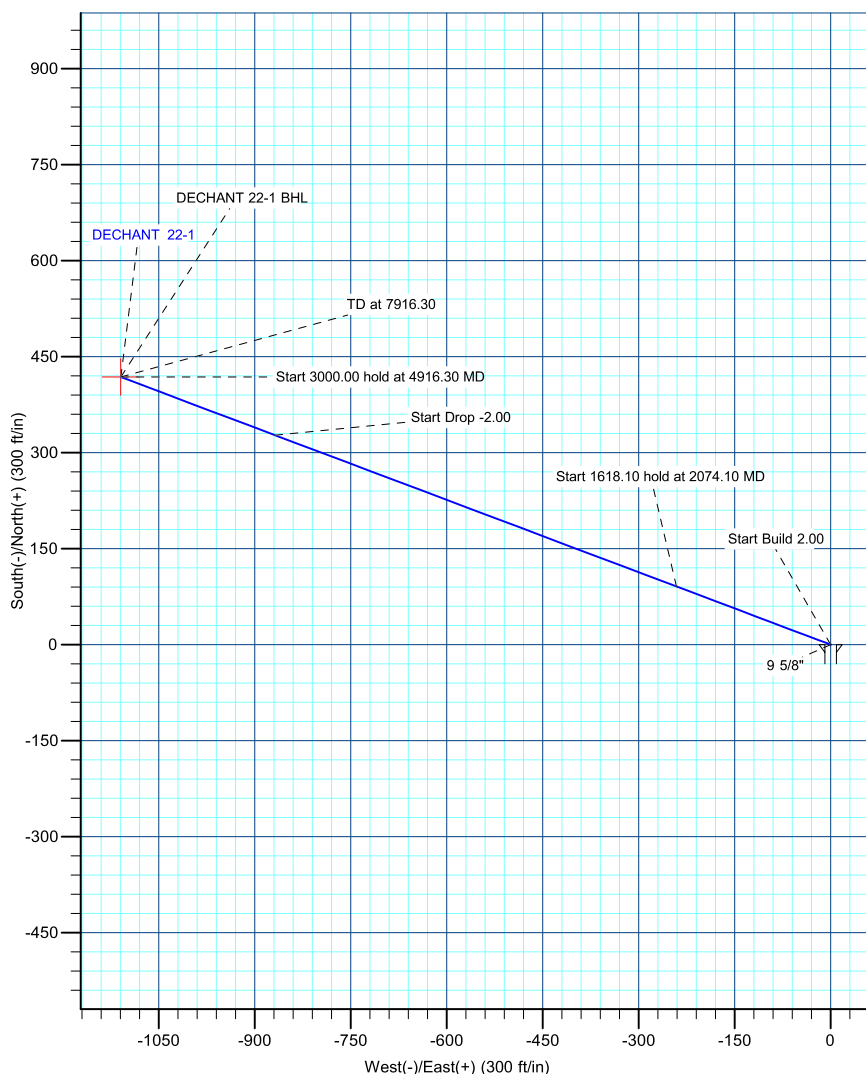
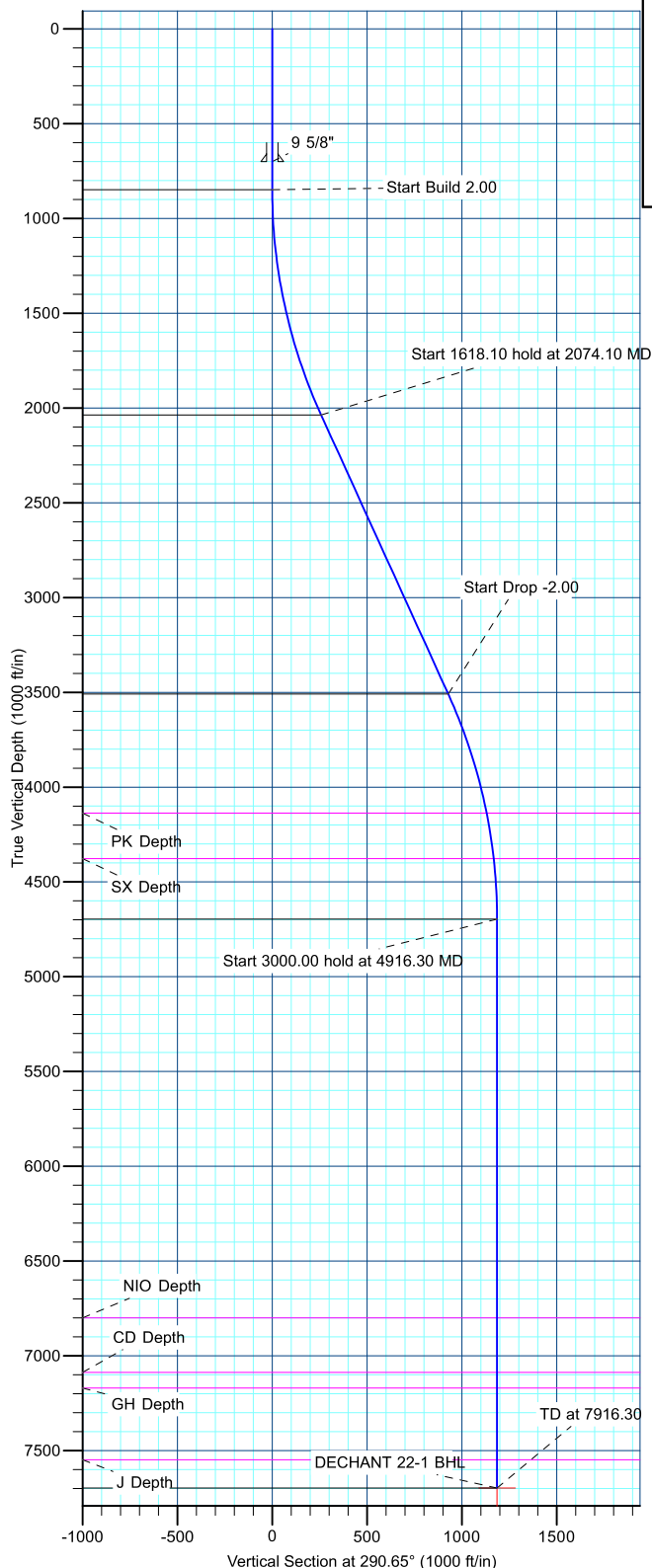
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Point	Shape
DECHANT 22-1 BHL	7697.00	418.23	-1109.48	40.167267	-104.616451		

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	850.00	0.00	0.00	850.00	0.00	0.00	0.00	0.00	0.00	
3	2074.10	24.48	290.65	2037.19	90.85	-241.01	2.00	290.65	257.57	
4	3692.20	24.48	290.65	3509.81	327.38	-868.47	0.00	0.00	928.12	
5	4916.30	0.00	0.00	4697.00	418.23	-1109.48	2.00	180.00	1185.69	
6	7916.30	0.00	0.00	7697.00	418.23	-1109.48	0.00	0.00	1185.69	DECHANT 22-1 BHL

CASING DETAILS

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



Database:	edm5000p	Local Co-ordinate Reference:	Well DECHANT 22-1
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 22-1	Survey Calculation Method:	Minimum Curvature
Wellbore:	DECHANT 22-1		
Design:	DECHANT 22-1 (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 22-1					
Well Position	+N/-S	50.26 ft	Northing:	1,304,601.45 ft	Latitude:	40.166119
	+E/-W	0.28 ft	Easting:	3,248,031.84 ft	Longitude:	-104.612481
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	0.00 ft

Wellbore	DECHANT 22-1				
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	11/16/2010	8.84	66.91	53,086

Design	DECHANT 22-1 (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	290.65	

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	
850.00	0.00	0.00	850.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,074.10	24.48	290.65	2,037.19	90.85	-241.01	2.00	2.00	0.00	290.65	
3,692.20	24.48	290.65	3,509.81	327.38	-868.47	0.00	0.00	0.00	0.00	
4,916.30	0.00	0.00	4,697.00	418.23	-1,109.48	2.00	-2.00	0.00	180.00	
7,916.30	0.00	0.00	7,697.00	418.23	-1,109.48	0.00	0.00	0.00	0.00	DECHANT 22-1 BH

Database:	edm5000p	Local Co-ordinate Reference:	Well DECHANT 22-1
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 22-1	Survey Calculation Method:	Minimum Curvature
Wellbore:	DECHANT 22-1		
Design:	DECHANT 22-1 (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
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
9 5/8"									
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
850.00	0.00	0.00	850.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
900.00	1.00	290.65	900.00	0.15	-0.41	0.44	2.00	2.00	0.00
1,000.00	3.00	290.65	999.93	1.38	-3.67	3.93	2.00	2.00	0.00
1,100.00	5.00	290.65	1,099.68	3.85	-10.20	10.90	2.00	2.00	0.00
1,200.00	7.00	290.65	1,199.13	7.53	-19.98	21.35	2.00	2.00	0.00
1,300.00	9.00	290.65	1,298.15	12.44	-33.00	35.27	2.00	2.00	0.00
1,400.00	11.00	290.65	1,396.63	18.57	-49.25	52.63	2.00	2.00	0.00
1,500.00	13.00	290.65	1,494.44	25.90	-68.70	73.42	2.00	2.00	0.00
1,600.00	15.00	290.65	1,591.46	34.43	-91.34	97.62	2.00	2.00	0.00
1,700.00	17.00	290.65	1,687.58	44.15	-117.13	125.18	2.00	2.00	0.00
1,800.00	19.00	290.65	1,782.68	55.05	-146.05	156.08	2.00	2.00	0.00
1,900.00	21.00	290.65	1,876.65	67.12	-178.05	190.28	2.00	2.00	0.00
2,000.00	23.00	290.65	1,969.36	80.33	-213.10	227.74	2.00	2.00	0.00
2,074.10	24.48	290.65	2,037.19	90.85	-241.01	257.57	2.00	2.00	0.00
Start 1618.10 hold at 2074.10 MD									
2,100.00	24.48	290.65	2,060.76	94.64	-251.06	268.30	0.00	0.00	0.00
2,200.00	24.48	290.65	2,151.77	109.26	-289.83	309.74	0.00	0.00	0.00
2,300.00	24.48	290.65	2,242.78	123.87	-328.61	351.18	0.00	0.00	0.00
2,400.00	24.48	290.65	2,333.79	138.49	-367.39	392.62	0.00	0.00	0.00
2,500.00	24.48	290.65	2,424.80	153.11	-406.17	434.07	0.00	0.00	0.00
2,600.00	24.48	290.65	2,515.81	167.73	-444.94	475.51	0.00	0.00	0.00
2,700.00	24.48	290.65	2,606.82	182.34	-483.72	516.95	0.00	0.00	0.00
2,800.00	24.48	290.65	2,697.82	196.96	-522.50	558.39	0.00	0.00	0.00
2,900.00	24.48	290.65	2,788.83	211.58	-561.27	599.83	0.00	0.00	0.00
3,000.00	24.48	290.65	2,879.84	226.20	-600.05	641.27	0.00	0.00	0.00
3,100.00	24.48	290.65	2,970.85	240.81	-638.83	682.71	0.00	0.00	0.00
3,200.00	24.48	290.65	3,061.86	255.43	-677.61	724.15	0.00	0.00	0.00
3,300.00	24.48	290.65	3,152.87	270.05	-716.38	765.59	0.00	0.00	0.00
3,400.00	24.48	290.65	3,243.88	284.67	-755.16	807.03	0.00	0.00	0.00
3,500.00	24.48	290.65	3,334.89	299.28	-793.94	848.47	0.00	0.00	0.00
3,600.00	24.48	290.65	3,425.90	313.90	-832.71	889.91	0.00	0.00	0.00
3,692.20	24.48	290.65	3,509.81	327.38	-868.47	928.12	0.00	0.00	0.00
Start Drop -2.00									
3,700.00	24.33	290.65	3,516.91	328.52	-871.48	931.35	2.00	-2.00	0.00
3,800.00	22.33	290.65	3,608.73	342.48	-908.53	970.94	2.00	-2.00	0.00
3,900.00	20.33	290.65	3,701.88	355.31	-942.56	1,007.31	2.00	-2.00	0.00
4,000.00	18.33	290.65	3,796.24	366.98	-973.53	1,040.40	2.00	-2.00	0.00
4,100.00	16.33	290.65	3,891.70	377.49	-1,001.39	1,070.18	2.00	-2.00	0.00
4,200.00	14.33	290.65	3,988.14	386.81	-1,026.12	1,096.61	2.00	-2.00	0.00
4,300.00	12.33	290.65	4,085.44	394.94	-1,047.69	1,119.66	2.00	-2.00	0.00
4,352.67	11.27	290.65	4,137.00	398.74	-1,057.77	1,130.43	2.00	-2.00	0.00
PK Depth									
4,400.00	10.33	290.65	4,183.49	401.87	-1,066.06	1,139.29	2.00	-2.00	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 22-1	Survey Calculation Method:	Minimum Curvature
Wellbore:	DECHANT 22-1		
Design:	DECHANT 22-1 (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)
4,500.00	8.33	290.65	4,282.16	407.58	-1,081.23	1,155.50	2.00	-2.00	0.00
4,595.63	6.41	290.65	4,377.00	411.91	-1,092.71	1,167.76	2.00	-2.00	0.00
SX Depth									
4,600.00	6.33	290.65	4,381.34	412.08	-1,093.16	1,168.25	2.00	-2.00	0.00
4,700.00	4.33	290.65	4,480.90	415.35	-1,101.84	1,177.53	2.00	-2.00	0.00
4,800.00	2.33	290.65	4,580.73	417.40	-1,107.27	1,183.33	2.00	-2.00	0.00
4,900.00	0.33	290.65	4,680.70	418.22	-1,109.44	1,185.65	2.00	-2.00	0.00
4,916.30	0.00	0.00	4,697.00	418.23	-1,109.48	1,185.69	2.00	-2.00	0.00
Start 3000.00 hold at 4916.30 MD									
5,000.00	0.00	0.00	4,780.70	418.23	-1,109.48	1,185.69	0.00	0.00	0.00
5,100.00	0.00	0.00	4,880.70	418.23	-1,109.48	1,185.69	0.00	0.00	0.00
5,200.00	0.00	0.00	4,980.70	418.23	-1,109.48	1,185.69	0.00	0.00	0.00
5,300.00	0.00	0.00	5,080.70	418.23	-1,109.48	1,185.69	0.00	0.00	0.00
5,400.00	0.00	0.00	5,180.70	418.23	-1,109.48	1,185.69	0.00	0.00	0.00
5,500.00	0.00	0.00	5,280.70	418.23	-1,109.48	1,185.69	0.00	0.00	0.00
5,600.00	0.00	0.00	5,380.70	418.23	-1,109.48	1,185.69	0.00	0.00	0.00
5,700.00	0.00	0.00	5,480.70	418.23	-1,109.48	1,185.69	0.00	0.00	0.00
5,800.00	0.00	0.00	5,580.70	418.23	-1,109.48	1,185.69	0.00	0.00	0.00
5,900.00	0.00	0.00	5,680.70	418.23	-1,109.48	1,185.69	0.00	0.00	0.00
6,000.00	0.00	0.00	5,780.70	418.23	-1,109.48	1,185.69	0.00	0.00	0.00
6,100.00	0.00	0.00	5,880.70	418.23	-1,109.48	1,185.69	0.00	0.00	0.00
6,200.00	0.00	0.00	5,980.70	418.23	-1,109.48	1,185.69	0.00	0.00	0.00
6,300.00	0.00	0.00	6,080.70	418.23	-1,109.48	1,185.69	0.00	0.00	0.00
6,400.00	0.00	0.00	6,180.70	418.23	-1,109.48	1,185.69	0.00	0.00	0.00
6,500.00	0.00	0.00	6,280.70	418.23	-1,109.48	1,185.69	0.00	0.00	0.00
6,600.00	0.00	0.00	6,380.70	418.23	-1,109.48	1,185.69	0.00	0.00	0.00
6,700.00	0.00	0.00	6,480.70	418.23	-1,109.48	1,185.69	0.00	0.00	0.00
6,800.00	0.00	0.00	6,580.70	418.23	-1,109.48	1,185.69	0.00	0.00	0.00
6,900.00	0.00	0.00	6,680.70	418.23	-1,109.48	1,185.69	0.00	0.00	0.00
7,000.00	0.00	0.00	6,780.70	418.23	-1,109.48	1,185.69	0.00	0.00	0.00
7,019.30	0.00	0.00	6,800.00	418.23	-1,109.48	1,185.69	0.00	0.00	0.00
NIO Depth									
7,100.00	0.00	0.00	6,880.70	418.23	-1,109.48	1,185.69	0.00	0.00	0.00
7,200.00	0.00	0.00	6,980.70	418.23	-1,109.48	1,185.69	0.00	0.00	0.00
7,300.00	0.00	0.00	7,080.70	418.23	-1,109.48	1,185.69	0.00	0.00	0.00
7,306.30	0.00	0.00	7,087.00	418.23	-1,109.48	1,185.69	0.00	0.00	0.00
CD Depth									
7,389.30	0.00	0.00	7,170.00	418.23	-1,109.48	1,185.69	0.00	0.00	0.00
GH Depth									
7,400.00	0.00	0.00	7,180.70	418.23	-1,109.48	1,185.69	0.00	0.00	0.00
7,500.00	0.00	0.00	7,280.70	418.23	-1,109.48	1,185.69	0.00	0.00	0.00
7,600.00	0.00	0.00	7,380.70	418.23	-1,109.48	1,185.69	0.00	0.00	0.00
7,700.00	0.00	0.00	7,480.70	418.23	-1,109.48	1,185.69	0.00	0.00	0.00
7,767.30	0.00	0.00	7,548.00	418.23	-1,109.48	1,185.69	0.00	0.00	0.00
J Depth									
7,800.00	0.00	0.00	7,580.70	418.23	-1,109.48	1,185.69	0.00	0.00	0.00
7,900.00	0.00	0.00	7,680.70	418.23	-1,109.48	1,185.69	0.00	0.00	0.00
7,916.30	0.00	0.00	7,697.00	418.23	-1,109.48	1,185.69	0.00	0.00	0.00
TD at 7916.30 - DECHANT 22-1 BHL									

Database:	edm5000p	Local Co-ordinate Reference:	Well DECHANT 22-1
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 22-1	Survey Calculation Method:	Minimum Curvature
Wellbore:	DECHANT 22-1		
Design:	DECHANT 22-1 (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 22-1 BHL	0.00	0.00	7,697.00	418.23	-1,109.48	1,305,008.56	3,246,918.22	40.167267	-104.616451
- plan hits target center									
- Point									

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

Formations					
Measured Depth	Vertical Depth		Name	Lithology	Dip
(ft)	(ft)				(°)
4,352.67	4,137.00	PK Depth			
4,595.63	4,377.00	SX Depth			
7,019.30	6,800.00	NIO Depth			
7,306.30	7,087.00	CD Depth			
7,389.30	7,170.00	GH Depth			
7,767.30	7,548.00	J Depth			

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(ft)	(ft)	+N/-S	+E/-W	Comment	
(ft)	(ft)	(ft)	(ft)		
850.00	850.00	0.00	0.00	Start Build 2.00	
2,074.10	2,037.19	90.85	-241.01	Start 1618.10 hold at 2074.10 MD	
3,692.20	3,509.81	327.38	-868.47	Start Drop -2.00	
4,916.30	4,697.00	418.23	-1,109.48	Start 3000.00 hold at 4916.30 MD	
7,916.30	7,697.00	418.23	-1,109.48	TD at 7916.30	