

US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_Saddleback 18-29 pad

Saddleback 6-29

Saddleback 6-29

Plan: Saddleback 6-29 (wp01)

Standard Planning Report

27 July, 2011



Project: COLORADO NORTHERN ZONE - 83
 Site: WELD_Saddleback 18-29 pad
 Well: Saddleback 6-29
 Wellbore: Saddleback 6-29
 Section:
 SHL:
 Design: Saddleback 6-29 (wp01)
 Latitude: 40.113027
 Longitude: -104.919449
 GL: 5015.00
 KB: 15' RKB + 5015' gl @ 5030.00ft

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
4166.00	4321.85	PK Depth
4571.00	4726.86	SX Depth
7329.00	7484.86	NIO Depth
7616.00	7771.86	CD Depth
7693.00	7848.86	GH Depth
8042.00	8197.86	J Depth
8216.00	8371.86	DK Depth



Azimuths to True North
 Magnetic North: 8.91°

Magnetic Field
 Strength: 52950.0snT
 Dip Angle: 66.79°
 Date: 7/26/2011
 Model: IGRF2010

WELL DETAILS: Saddleback 6-29

+N/-S	+E/-W	Northing	Ground Level: Easting	5015.00 Latitude	Longitude	Slot
0.00	0.00	1284551.38	3162372.73	40.113027	-104.919449	

CASING DETAILS

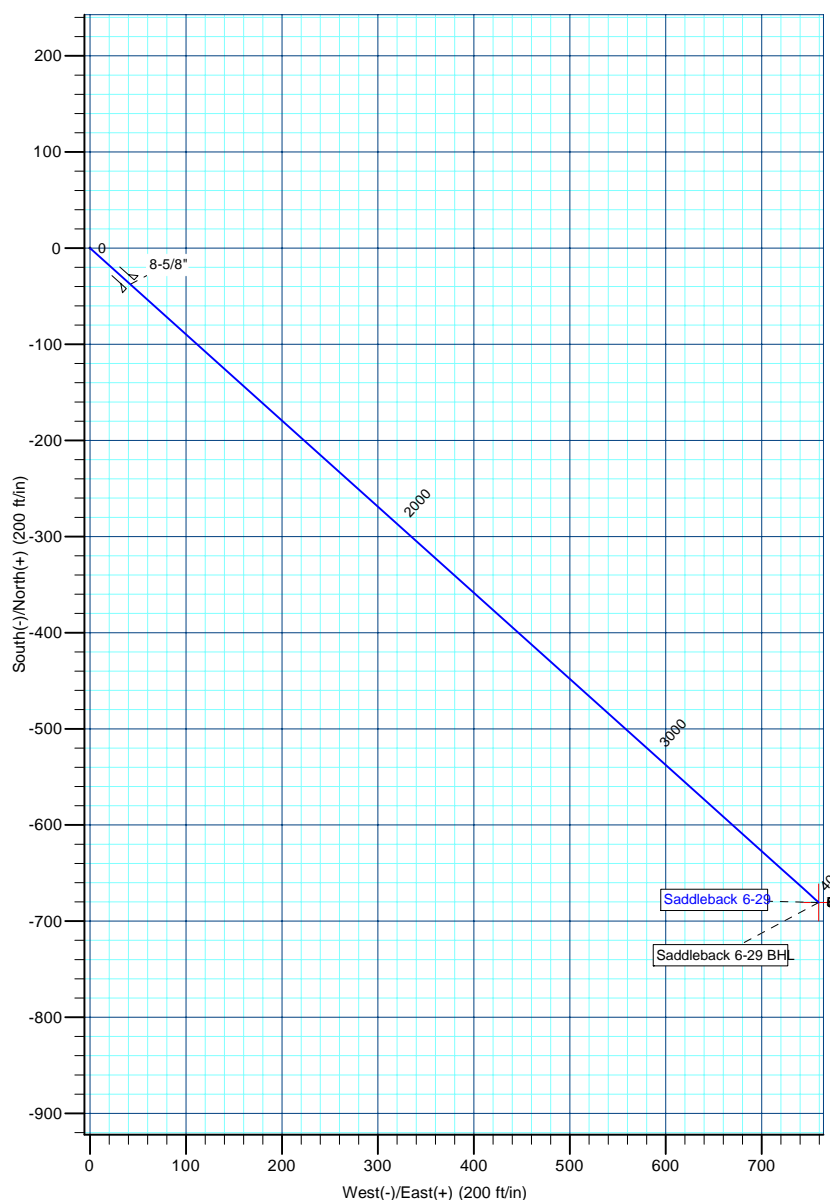
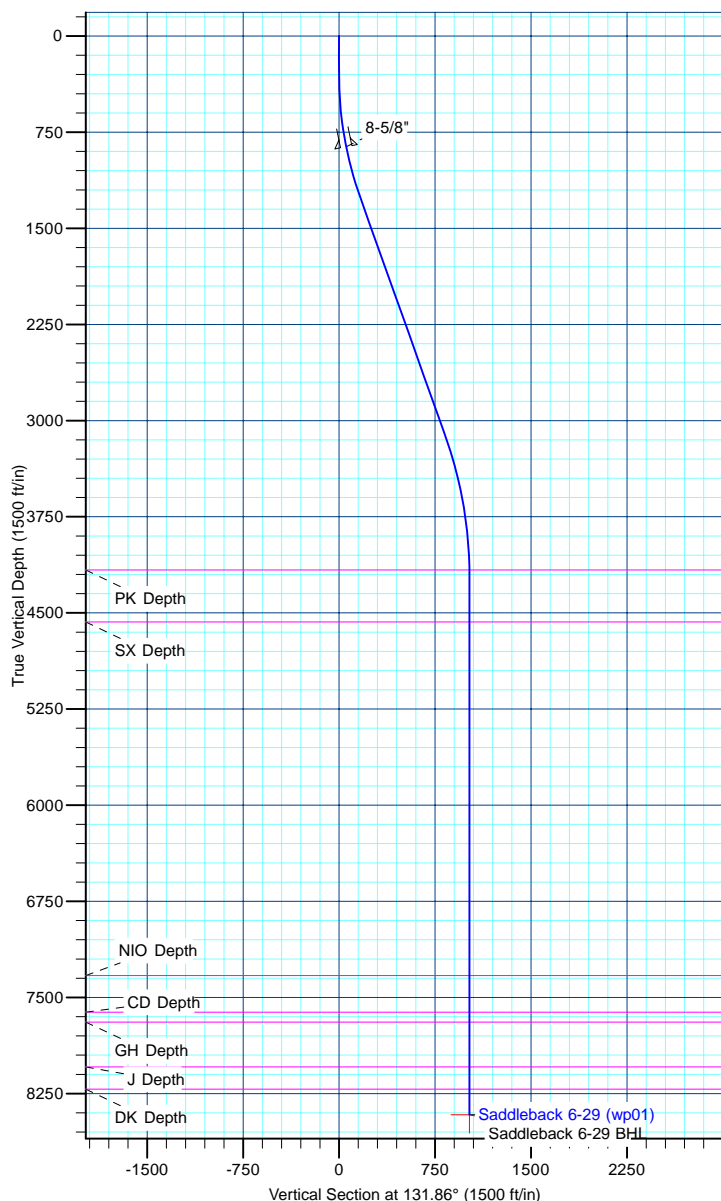
TVD	MD	Name	Size
865.00	868.73	8-5/8"	8-5/8

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape Point
Saddleback 6-29 BHL	8416.00	-680.44	759.38	1283875.92	3163136.55	40.111159	-104.916734	

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
1283.82	19.68	131.86	1264.60	-111.63	124.58	2.00	131.86	167.28
3247.48	19.68	131.86	3113.60	-552.86	617.00	0.00	0.00	828.46
4371.86	0.00	0.00	4216.00	-680.44	759.38	1.75	180.00	1019.64
8571.86	0.00	0.00	8416.00	-680.44	759.38	0.00	0.00	1019.64



Database:	edm5000p	Local Co-ordinate Reference:	Well Saddleback 6-29
Company:	US ROCKIES REGION PLANNING	TVD Reference:	15' RKB + 5015' gl @ 5030.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	15' RKB + 5015' gl @ 5030.00ft
Site:	WELD_Saddleback 18-29 pad	North Reference:	True
Well:	Saddleback 6-29	Survey Calculation Method:	Minimum Curvature
Wellbore:	Saddleback 6-29		
Design:	Saddleback 6-29 (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_Saddleback 18-29 pad			
Site Position:		Northing:	1,284,591.46 ft	Latitude:	40.113137
From:	Lat/Long	Easting:	3,162,372.75 ft	Longitude:	-104.919448
Position Uncertainty:	0.00 ft	Slot Radius:	0 "	Grid Convergence:	0.38

Well	Saddleback 6-29					
Well Position	+N-S	-40.09 ft	Northing:	1,284,551.37 ft	Latitude:	40.113027
	+E-W	-0.28 ft	Easting:	3,162,372.73 ft	Longitude:	-104.919449
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	5,015.00 ft

Wellbore	Saddleback 6-29				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	7/26/2011	8.91	66.79	52,950

Design	Saddleback 6-29 (wp01)			
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	131.86

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	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,283.82	19.68	131.86	1,264.60	-111.63	124.58	2.00	2.00	0.00	131.86	
3,247.49	19.68	131.86	3,113.60	-552.86	617.00	0.00	0.00	0.00	0.00	
4,371.86	0.00	0.00	4,216.00	-680.44	759.38	1.75	-1.75	0.00	180.00	
8,571.86	0.00	0.00	8,416.00	-680.44	759.38	0.00	0.00	0.00	0.00	Saddleback 6-29 BI

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Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	15' RKB + 5015' gl @ 5030.00ft
Site:	WELD_Saddleback 18-29 pad	North Reference:	True
Well:	Saddleback 6-29	Survey Calculation Method:	Minimum Curvature
Wellbore:	Saddleback 6-29		
Design:	Saddleback 6-29 (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	2.00	131.86	399.98	-1.16	1.30	1.75	2.00	2.00	0.00
500.00	4.00	131.86	499.84	-4.66	5.20	6.98	2.00	2.00	0.00
600.00	6.00	131.86	599.45	-10.47	11.69	15.69	2.00	2.00	0.00
700.00	8.00	131.86	698.70	-18.61	20.76	27.88	2.00	2.00	0.00
800.00	10.00	131.86	797.47	-29.04	32.41	43.52	2.00	2.00	0.00
868.73	11.37	131.86	865.00	-37.55	41.91	56.27	2.00	2.00	0.00
8-5/8"									
900.00	12.00	131.86	895.62	-41.78	46.62	62.60	2.00	2.00	0.00
1,000.00	14.00	131.86	993.06	-56.79	63.38	85.10	2.00	2.00	0.00
1,100.00	16.00	131.86	1,089.64	-74.06	82.65	110.98	2.00	2.00	0.00
1,200.00	18.00	131.86	1,185.27	-93.57	104.42	140.21	2.00	2.00	0.00
1,283.82	19.68	131.86	1,264.60	-111.63	124.58	167.28	2.00	2.00	0.00
1,300.00	19.68	131.86	1,279.83	-115.27	128.64	172.72	0.00	0.00	0.00
1,400.00	19.68	131.86	1,373.99	-137.74	153.71	206.40	0.00	0.00	0.00
1,500.00	19.68	131.86	1,468.15	-160.21	178.79	240.07	0.00	0.00	0.00
1,600.00	19.68	131.86	1,562.31	-182.68	203.87	273.74	0.00	0.00	0.00
1,700.00	19.68	131.86	1,656.47	-205.15	228.94	307.41	0.00	0.00	0.00
1,800.00	19.68	131.86	1,750.64	-227.62	254.02	341.08	0.00	0.00	0.00
1,900.00	19.68	131.86	1,844.80	-250.09	279.10	374.75	0.00	0.00	0.00
2,000.00	19.68	131.86	1,938.96	-272.56	304.17	408.42	0.00	0.00	0.00
2,100.00	19.68	131.86	2,033.12	-295.03	329.25	442.09	0.00	0.00	0.00
2,200.00	19.68	131.86	2,127.28	-317.50	354.33	475.76	0.00	0.00	0.00
2,300.00	19.68	131.86	2,221.44	-339.97	379.40	509.43	0.00	0.00	0.00
2,400.00	19.68	131.86	2,315.60	-362.44	404.48	543.10	0.00	0.00	0.00
2,500.00	19.68	131.86	2,409.76	-384.91	429.56	576.78	0.00	0.00	0.00
2,600.00	19.68	131.86	2,503.92	-407.38	454.63	610.45	0.00	0.00	0.00
2,700.00	19.68	131.86	2,598.08	-429.85	479.71	644.12	0.00	0.00	0.00
2,800.00	19.68	131.86	2,692.24	-452.32	504.79	677.79	0.00	0.00	0.00
2,900.00	19.68	131.86	2,786.41	-474.79	529.86	711.46	0.00	0.00	0.00
3,000.00	19.68	131.86	2,880.57	-497.26	554.94	745.13	0.00	0.00	0.00
3,100.00	19.68	131.86	2,974.73	-519.73	580.01	778.80	0.00	0.00	0.00
3,200.00	19.68	131.86	3,068.89	-542.20	605.09	812.47	0.00	0.00	0.00
3,247.49	19.68	131.86	3,113.60	-552.86	617.00	828.46	0.00	0.00	0.00
3,300.00	18.76	131.86	3,163.19	-564.40	629.87	845.75	1.75	-1.75	0.00
3,400.00	17.01	131.86	3,258.35	-584.89	652.74	876.45	1.75	-1.75	0.00
3,500.00	15.26	131.86	3,354.41	-603.43	673.43	904.24	1.75	-1.75	0.00
3,600.00	13.51	131.86	3,451.27	-620.01	691.93	929.07	1.75	-1.75	0.00
3,700.00	11.76	131.86	3,548.85	-634.60	708.22	950.94	1.75	-1.75	0.00
3,800.00	10.01	131.86	3,647.05	-647.20	722.28	969.82	1.75	-1.75	0.00
3,900.00	8.26	131.86	3,745.78	-657.79	734.10	985.69	1.75	-1.75	0.00
4,000.00	6.51	131.86	3,844.94	-666.37	743.67	998.54	1.75	-1.75	0.00
4,100.00	4.76	131.86	3,944.46	-672.92	750.98	1,008.36	1.75	-1.75	0.00
4,200.00	3.01	131.86	4,044.22	-677.43	756.02	1,015.13	1.75	-1.75	0.00
4,300.00	1.26	131.86	4,144.15	-679.92	758.79	1,018.85	1.75	-1.75	0.00
4,321.85	0.88	131.86	4,166.00	-680.19	759.09	1,019.25	1.75	-1.75	0.00
PK Depth									
4,371.86	0.00	0.00	4,216.00	-680.44	759.38	1,019.64	1.75	-1.75	0.00
4,400.00	0.00	0.00	4,244.14	-680.44	759.38	1,019.64	0.00	0.00	0.00
4,500.00	0.00	0.00	4,344.14	-680.44	759.38	1,019.64	0.00	0.00	0.00
4,600.00	0.00	0.00	4,444.14	-680.44	759.38	1,019.64	0.00	0.00	0.00

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Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	15' RKB + 5015' gl @ 5030.00ft
Site:	WELD_Saddleback 18-29 pad	North Reference:	True
Well:	Saddleback 6-29	Survey Calculation Method:	Minimum Curvature
Wellbore:	Saddleback 6-29		
Design:	Saddleback 6-29 (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	0.00	0.00	4,544.14	-680.44	759.38	1,019.64	0.00	0.00	0.00
4,726.86	0.00	0.00	4,571.00	-680.44	759.38	1,019.64	0.00	0.00	0.00
SX Depth									
4,800.00	0.00	0.00	4,644.14	-680.44	759.38	1,019.64	0.00	0.00	0.00
4,900.00	0.00	0.00	4,744.14	-680.44	759.38	1,019.64	0.00	0.00	0.00
5,000.00	0.00	0.00	4,844.14	-680.44	759.38	1,019.64	0.00	0.00	0.00
5,100.00	0.00	0.00	4,944.14	-680.44	759.38	1,019.64	0.00	0.00	0.00
5,200.00	0.00	0.00	5,044.14	-680.44	759.38	1,019.64	0.00	0.00	0.00
5,300.00	0.00	0.00	5,144.14	-680.44	759.38	1,019.64	0.00	0.00	0.00
5,400.00	0.00	0.00	5,244.14	-680.44	759.38	1,019.64	0.00	0.00	0.00
5,500.00	0.00	0.00	5,344.14	-680.44	759.38	1,019.64	0.00	0.00	0.00
5,600.00	0.00	0.00	5,444.14	-680.44	759.38	1,019.64	0.00	0.00	0.00
5,700.00	0.00	0.00	5,544.14	-680.44	759.38	1,019.64	0.00	0.00	0.00
5,800.00	0.00	0.00	5,644.14	-680.44	759.38	1,019.64	0.00	0.00	0.00
5,900.00	0.00	0.00	5,744.14	-680.44	759.38	1,019.64	0.00	0.00	0.00
6,000.00	0.00	0.00	5,844.14	-680.44	759.38	1,019.64	0.00	0.00	0.00
6,100.00	0.00	0.00	5,944.14	-680.44	759.38	1,019.64	0.00	0.00	0.00
6,200.00	0.00	0.00	6,044.14	-680.44	759.38	1,019.64	0.00	0.00	0.00
6,300.00	0.00	0.00	6,144.14	-680.44	759.38	1,019.64	0.00	0.00	0.00
6,400.00	0.00	0.00	6,244.14	-680.44	759.38	1,019.64	0.00	0.00	0.00
6,500.00	0.00	0.00	6,344.14	-680.44	759.38	1,019.64	0.00	0.00	0.00
6,600.00	0.00	0.00	6,444.14	-680.44	759.38	1,019.64	0.00	0.00	0.00
6,700.00	0.00	0.00	6,544.14	-680.44	759.38	1,019.64	0.00	0.00	0.00
6,800.00	0.00	0.00	6,644.14	-680.44	759.38	1,019.64	0.00	0.00	0.00
6,900.00	0.00	0.00	6,744.14	-680.44	759.38	1,019.64	0.00	0.00	0.00
7,000.00	0.00	0.00	6,844.14	-680.44	759.38	1,019.64	0.00	0.00	0.00
7,100.00	0.00	0.00	6,944.14	-680.44	759.38	1,019.64	0.00	0.00	0.00
7,200.00	0.00	0.00	7,044.14	-680.44	759.38	1,019.64	0.00	0.00	0.00
7,300.00	0.00	0.00	7,144.14	-680.44	759.38	1,019.64	0.00	0.00	0.00
7,400.00	0.00	0.00	7,244.14	-680.44	759.38	1,019.64	0.00	0.00	0.00
7,484.86	0.00	0.00	7,329.00	-680.44	759.38	1,019.64	0.00	0.00	0.00
NIO Depth									
7,500.00	0.00	0.00	7,344.14	-680.44	759.38	1,019.64	0.00	0.00	0.00
7,600.00	0.00	0.00	7,444.14	-680.44	759.38	1,019.64	0.00	0.00	0.00
7,700.00	0.00	0.00	7,544.14	-680.44	759.38	1,019.64	0.00	0.00	0.00
7,771.86	0.00	0.00	7,616.00	-680.44	759.38	1,019.64	0.00	0.00	0.00
CD Depth									
7,800.00	0.00	0.00	7,644.14	-680.44	759.38	1,019.64	0.00	0.00	0.00
7,848.86	0.00	0.00	7,693.00	-680.44	759.38	1,019.64	0.00	0.00	0.00
GH Depth									
7,900.00	0.00	0.00	7,744.14	-680.44	759.38	1,019.64	0.00	0.00	0.00
8,000.00	0.00	0.00	7,844.14	-680.44	759.38	1,019.64	0.00	0.00	0.00
8,100.00	0.00	0.00	7,944.14	-680.44	759.38	1,019.64	0.00	0.00	0.00
8,197.86	0.00	0.00	8,042.00	-680.44	759.38	1,019.64	0.00	0.00	0.00
J Depth									
8,200.00	0.00	0.00	8,044.14	-680.44	759.38	1,019.64	0.00	0.00	0.00
8,300.00	0.00	0.00	8,144.14	-680.44	759.38	1,019.64	0.00	0.00	0.00
8,371.86	0.00	0.00	8,216.00	-680.44	759.38	1,019.64	0.00	0.00	0.00
DK Depth									
8,400.00	0.00	0.00	8,244.14	-680.44	759.38	1,019.64	0.00	0.00	0.00
8,500.00	0.00	0.00	8,344.14	-680.44	759.38	1,019.64	0.00	0.00	0.00
8,571.86	0.00	0.00	8,416.00	-680.44	759.38	1,019.64	0.00	0.00	0.00
Saddleback 6-29 BHL									

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Company:	US ROCKIES REGION PLANNING	TVD Reference:	15' RKB + 5015' gl @ 5030.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	15' RKB + 5015' gl @ 5030.00ft
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Well:	Saddleback 6-29	Survey Calculation Method:	Minimum Curvature
Wellbore:	Saddleback 6-29		
Design:	Saddleback 6-29 (wp01)		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
- Shape									
Saddleback 6-29 BHL	0.00	0.00	8,416.00	-680.44	759.38	1,283,875.92	3,163,136.55	40.111159	-104.916734
- plan hits target center									
- Point									

Casing Points					
Measured Depth	Vertical Depth	Name		Casing Diameter	Hole Diameter
(ft)	(ft)			(")	(")
868.73	865.00	8-5/8"		8-5/8	11

Formations						
Measured Depth	Vertical Depth	Name		Lithology	Dip	Dip Direction
(ft)	(ft)				(°)	(°)
4,321.85	4,166.00	PK Depth				
4,726.86	4,571.00	SX Depth				
7,484.86	7,329.00	NIO Depth				
7,771.86	7,616.00	CD Depth				
7,848.86	7,693.00	GH Depth				
8,197.86	8,042.00	J Depth				
8,371.86	8,216.00	DK Depth				