



Mesa West Directional  
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## **Austin Exploration**

**Fremont County (Nad 83)**

**Sec 18, T20S,R69W**

**C-18 #4**

**DD**

**UWI:**

**API:**

**Plan: #1**

## **Mesa West Planning Report**

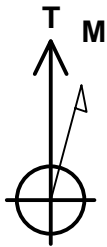
**14 July, 2014**





Project: Fremont County (Nad 83)  
Site: Sec 18, T20S,R69W  
Well: C-18 #4  
Wellbore: DD  
Plan: #1

Reference Details - WELL CENTRE  
Geodetic System: US State Plane 1983  
Ellipsoid: GRS 1980  
Zone: Colorado Central Zone  
Northing: 1174590.17  
Easting: 3101224.09  
Latitude: 38° 18' 43.819 N  
Longitude: 105° 8' 50.050 W  
Grid Convergence: 0.22° West  
Ground Elevation: 5970.0  
KB Elevation: Est RKB @ 5984.0usft

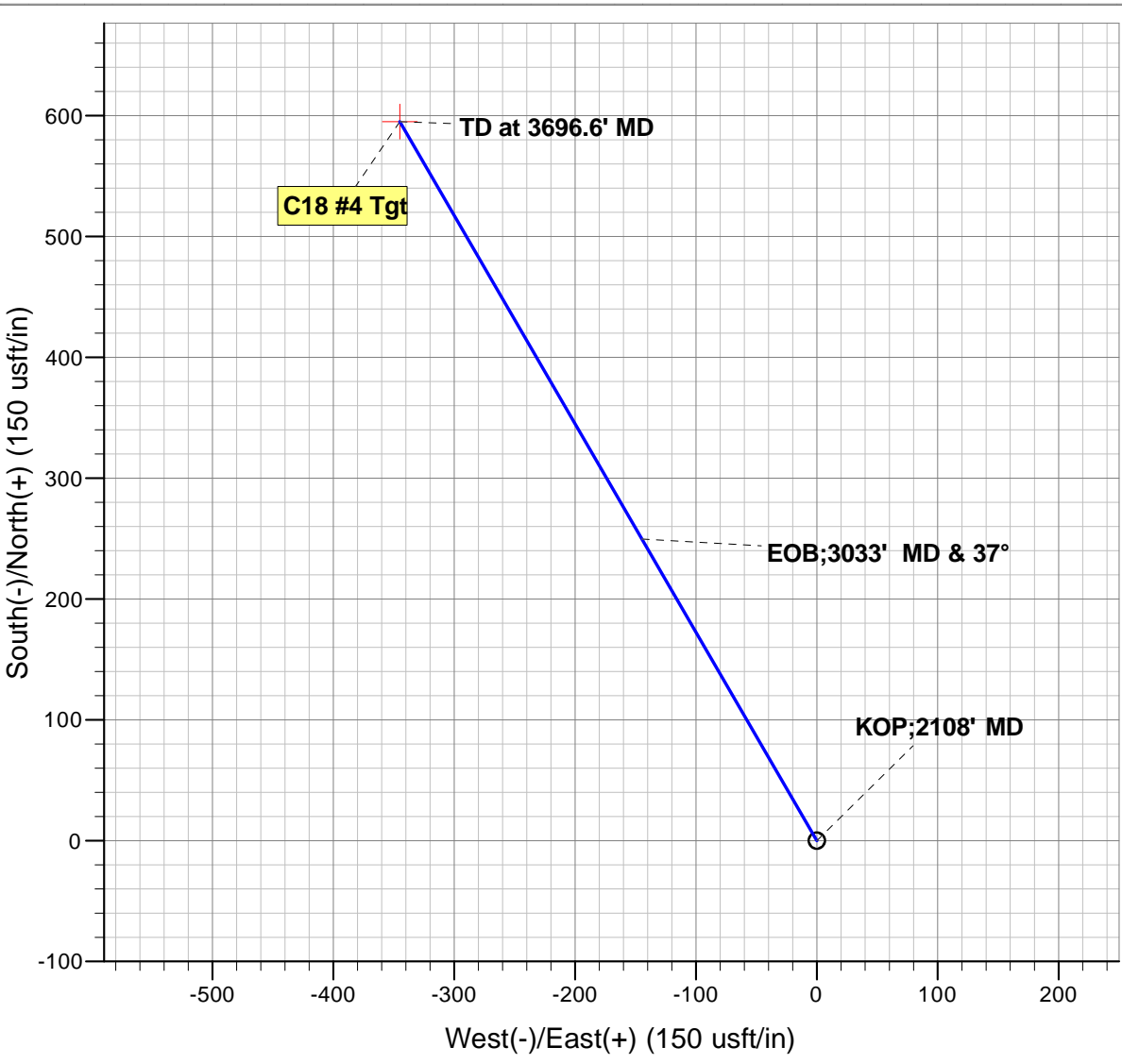
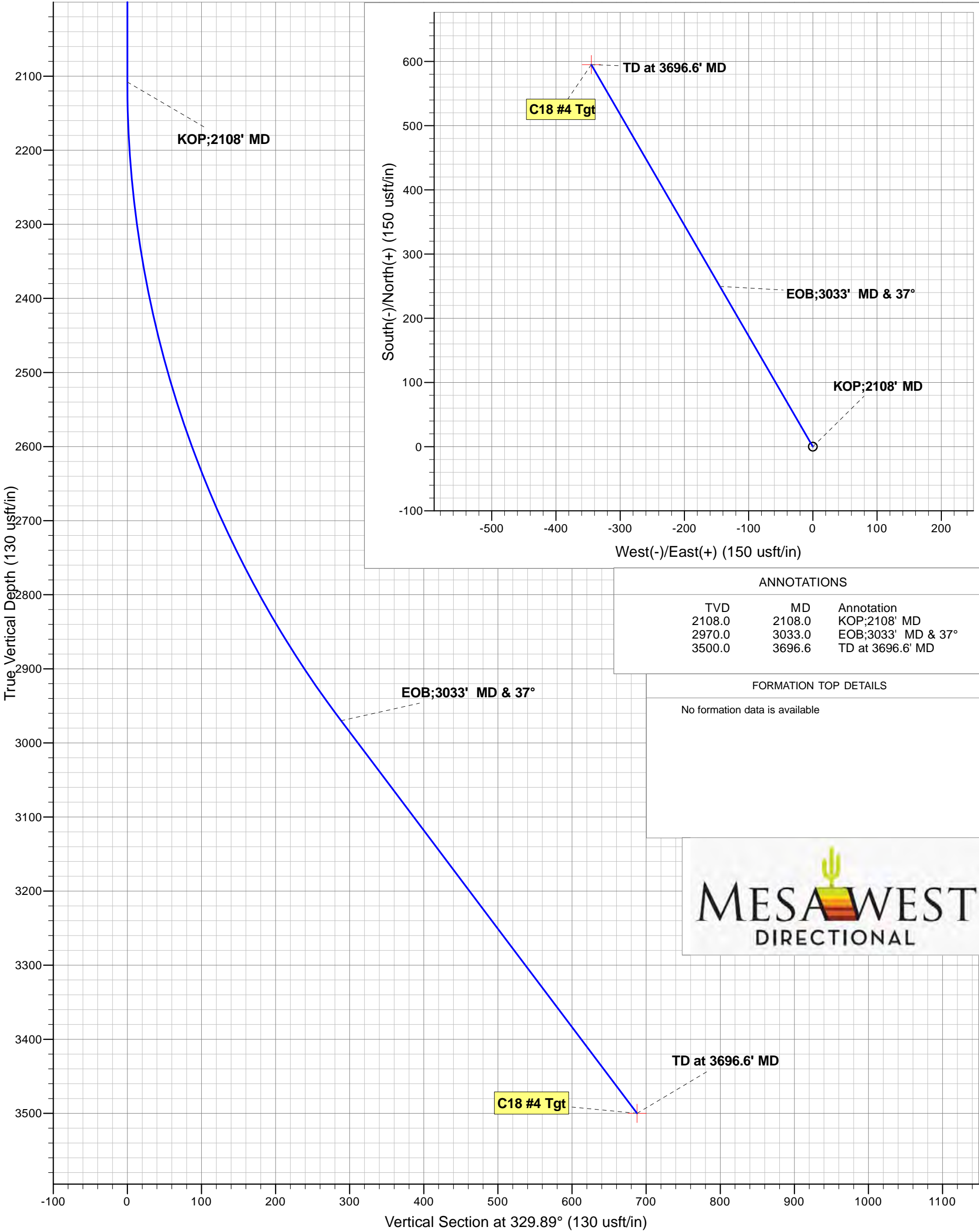


Azimuths to True North  
Magnetic North: 8.47°

Magnetic Field  
Strength: 51684.1snT  
Dip Angle: 65.18°  
Date: 7/9/2014  
Model: IGRF2010

PLAN DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	2108.0	0.00	0.00	2108.0	0.0	0.0	0.00	0.00	0.0	
3	3033.0	37.00	329.89	2970.0	249.5	-144.7	4.00	329.89	288.4	
4	3696.6	37.00	329.89	3500.0	595.0	-345.0	0.00	0.00	687.8	C18 #4 Tgt



ANNOTATIONS

TVD	MD	Annotation
2108.0	2108.0	KOP;2108' MD
2970.0	3033.0	EOB;3033' MD & 37°
3500.0	3696.6	TD at 3696.6' MD

FORMATION TOP DETAILS

No formation data is available



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well C-18 #4
<b>Company:</b>	Austin Exploration	<b>TVD Reference:</b>	Est RKB @ 5984.0usft
<b>Project:</b>	Fremont County (Nad 83)	<b>MD Reference:</b>	Est RKB @ 5984.0usft
<b>Site:</b>	Sec 18, T20S,R69W	<b>North Reference:</b>	True
<b>Well:</b>	C-18 #4	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<b>Plan:</b>	#1		

<b>Project</b>	Fremont County (Nad 83)		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Central Zone		

Site		Sec 18, T20S,R69W			
Site Position:		Northing:	1,173,713.71 usft	Latitude:	38° 18' 35.172 N
From:	Lat/Long	Easting:	3,100,788.76 usft	Longitude:	105° 8' 55.554 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.22 °

Well		C-18 #4				
Well Position	+N/-S	874.8 usft	Northing:	1,174,590.17 usft	Latitude:	38° 18' 43.819 N
	+E/-W	438.7 usft	Easting:	3,101,224.09 usft	Longitude:	105° 8' 50.050 W
Position Uncertainty		0.0 usft	Wellhead Elevation:		Ground Level:	5,970.0 usft

<b>Wellbore</b>	DD				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	7/9/2014	8.47	65.18	51,684

<b>Plan</b>	#1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	329.89

<b>Plan Sections</b>										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,108.0	0.00	0.00	2,108.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,033.0	37.00	329.89	2,970.0	249.5	-144.7	4.00	4.00	0.00	329.89	
3,696.6	37.00	329.89	3,500.0	595.0	-345.0	0.00	0.00	0.00	0.00	C18 #4 Tgt

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well C-18 #4
<b>Company:</b>	Austin Exploration	<b>TVD Reference:</b>	Est RKB @ 5984.0usft
<b>Project:</b>	Fremont County (Nad 83)	<b>MD Reference:</b>	Est RKB @ 5984.0usft
<b>Site:</b>	Sec 18, T20S,R69W	<b>North Reference:</b>	True
<b>Well:</b>	C-18 #4	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<b>Plan:</b>	#1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea (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	5,984.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>KOP;2108' MD</b>										
2,108.0	0.00	0.00	2,108.0	3,876.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	3.68	329.89	2,199.9	3,784.1	2.6	-1.5	3.0	4.00	4.00	0.00
2,300.0	7.68	329.89	2,299.4	3,684.6	11.1	-6.4	12.8	4.00	4.00	0.00
2,400.0	11.68	329.89	2,398.0	3,586.0	25.7	-14.9	29.7	4.00	4.00	0.00
2,500.0	15.68	329.89	2,495.1	3,488.9	46.1	-26.7	53.3	4.00	4.00	0.00
2,600.0	19.68	329.89	2,590.4	3,393.6	72.4	-42.0	83.7	4.00	4.00	0.00
2,700.0	23.68	329.89	2,683.3	3,300.7	104.3	-60.5	120.6	4.00	4.00	0.00
2,800.0	27.68	329.89	2,773.4	3,210.6	141.8	-82.2	163.9	4.00	4.00	0.00
2,900.0	31.68	329.89	2,860.3	3,123.7	184.6	-107.1	213.4	4.00	4.00	0.00
3,000.0	35.68	329.89	2,943.5	3,040.5	232.6	-134.9	268.9	4.00	4.00	0.00
<b>EOB;3033' MD &amp; 37°</b>										
3,033.0	37.00	329.89	2,970.0	3,014.0	249.5	-144.7	288.4	4.00	4.00	0.00
3,100.0	37.00	329.89	3,023.5	2,960.5	284.4	-164.9	328.8	0.00	0.00	0.00
3,200.0	37.00	329.89	3,103.4	2,880.6	336.5	-195.1	388.9	0.00	0.00	0.00
3,300.0	37.00	329.89	3,183.3	2,800.7	388.5	-225.3	449.1	0.00	0.00	0.00
3,400.0	37.00	329.89	3,263.1	2,720.9	440.6	-255.5	509.3	0.00	0.00	0.00
3,500.0	37.00	329.89	3,343.0	2,641.0	492.7	-285.7	569.5	0.00	0.00	0.00
3,600.0	37.00	329.89	3,422.9	2,561.1	544.7	-315.8	629.7	0.00	0.00	0.00
<b>TD at 3696.6' MD</b>										
3,696.6	37.00	329.89	3,500.0	2,484.0	595.0	-345.0	687.8	0.00	0.00	0.00

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude		Longitude
C18 #4 Tgt	0.00	0.00	3,500.0	595.0	-345.0	1,175,183.83	3,100,876.78	38° 18' 49.701 N		105° 8' 54.378 W
- hit/miss target										
- Shape										
- plan hits target center										
- Point										

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
2,108.0	2,108.0	0.0	0.0	KOP;2108' MD	
3,033.0	2,970.0	249.5	-144.7	EOB;3033' MD & 37°	
3,696.6	3,500.0	595.0	-345.0	TD at 3696.6' MD	