



**Scientific Drilling**  
Rocky Mountain Operations

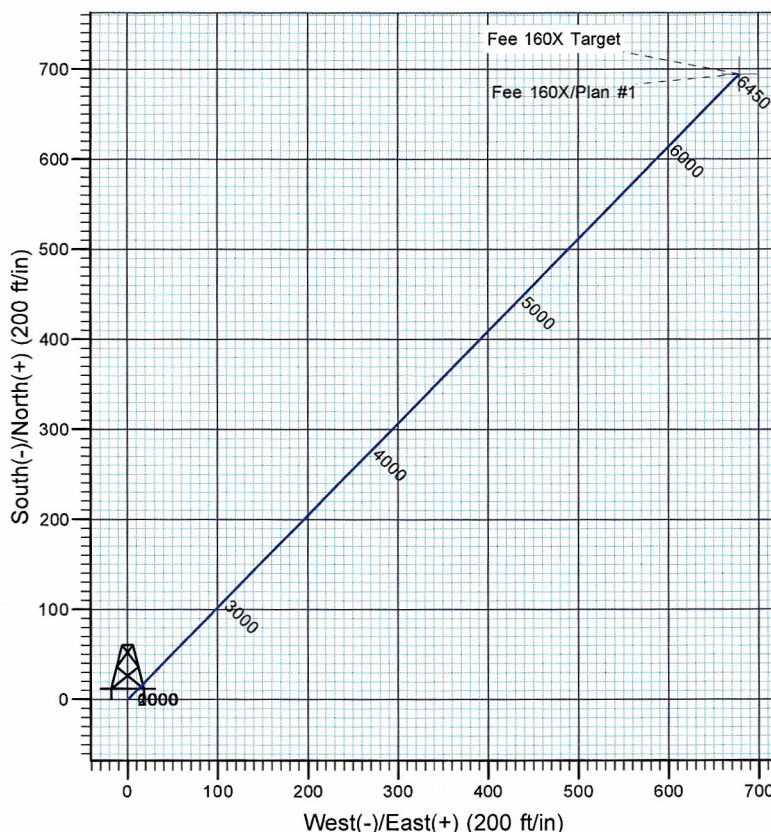
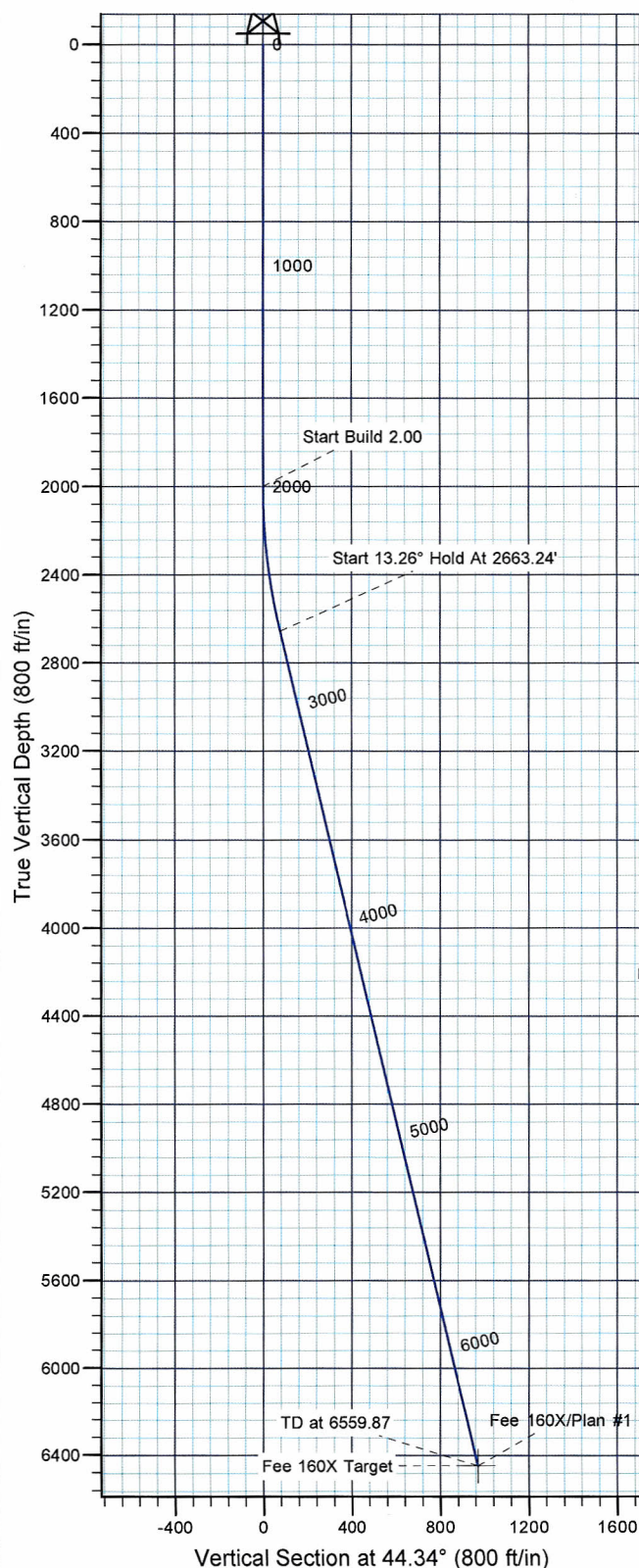
Company: Chevron  
Project: Rio Blanco County, CO (NAD 83)  
Site: Fee 160X/161X



Well Details: Fee 160X

TVD Reference: GL 5276' @ 5276.00ft (Ground Level) Ground Level: 5276.00  
+N/-S +E/-W Northing Easting Latitude Longitude Slot  
0.00 0.00 1300099.92 2065878.13 40° 6' 31.910 N 108° 50' 25.590 W

**T** Azimuths to True North  
**M** Magnetic North: 10.84°  
  
Magnetic Field  
Strength: 52550.2snT  
Dip Angle: 66.11°  
Date: 2011/01/17  
Model: IGRF200510



#### FORMATION TOP DETAILS

No formation data is available

Plan: Plan #1

11:52, January 17 2011

Created By: Rex Hall

PROJECT DETAILS: Rio Blanco County, CO (NAD 83)

Geodetic System: US State Plane 1983  
Datum: North American Datum 1983  
Ellipsoid: GRS 1980  
Zone: Colorado Northern Zone

System Datum: Mean Sea Level

#### SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00	0.00	
3	2663.24	13.26	44.34	2657.33	54.67	53.42	2.00	44.34	76.43	
4	6559.87	13.26	44.34	6450.00	694.17	678.27	0.00	0.00	970.53	Fee 160X Target

# **Chevron**

**Rio Blanco County, CO (NAD 83)**

**Fee 160X/161X**

**Fee 160X**

**OH**

**Plan: Plan #1**

## **Standard Planning Report**

**17 January, 2011**



# Scientific Drilling International

## Planning Report

<b>Database:</b>	Rockies-R5000.1	<b>Local Co-ordinate Reference:</b>	Well Fee 160X
<b>Company:</b>	Chevron	<b>TVD Reference:</b>	GL 5276' @ 5276.00ft (Ground Level)
<b>Project:</b>	Rio Blanco County, CO (NAD 83)	<b>MD Reference:</b>	GL 5276' @ 5276.00ft (Ground Level)
<b>Site:</b>	Fee 160X/161X	<b>North Reference:</b>	True
<b>Well:</b>	Fee 160X	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

<b>Project</b>	Rio Blanco County, CO (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 Northern Zone		

Site	Fee 160X/161X, Sec 28 T2N R102W				
Site Position:		Northing:	1,300,099.92 usft	Latitude:	40° 6' 31.910 N
From:	Lat/Long	Easting:	2,065,878.13 usft	Longitude:	108° 50' 25.590 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	-2.16

Well	Fee 160X, 765' FSL & 442' FEL					
Well Position	+N/-S	0.00 ft	Northing:	1,300,099.91 usft	Latitude:	40° 6' 31.910 N
	+E/-W	0.00 ft	Easting:	2,065,878.13 usft	Longitude:	108° 50' 25.590 W
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	5,276.00 ft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF200510	2011/01/17	10.84	66.11	52,550

<b>Design</b>	Plan #1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	44.34

<b>Plan Sections</b>										
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	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,663.24	13.26	44.34	2,657.33	54.67	53.42	2.00	2.00	0.00	44.34	
6,559.87	13.26	44.34	6,450.00	694.17	678.27	0.00	0.00	0.00	0.00	Fee 160X Target

# Scientific Drilling International

## Planning Report

**Database:** Rockies-R5000.1  
**Company:** Chevron  
**Project:** Rio Blanco County, CO (NAD 83)  
**Site:** Fee 160X/161X  
**Well:** Fee 160X  
**Wellbore:** OH  
**Design:** Plan #1

**Local Co-ordinate Reference:** Well Fee 160X  
**TVD Reference:** GL 5276' @ 5276.00ft (Ground Level)  
**MD Reference:** GL 5276' @ 5276.00ft (Ground Level)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature

### 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
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Start Build 2.00</b>									
2,100.00	2.00	44.34	2,099.98	1.25	1.22	1.75	2.00	2.00	0.00
2,200.00	4.00	44.34	2,199.84	4.99	4.88	6.98	2.00	2.00	0.00
2,300.00	6.00	44.34	2,299.45	11.22	10.97	15.69	2.00	2.00	0.00
2,400.00	8.00	44.34	2,398.70	19.94	19.48	27.88	2.00	2.00	0.00
2,500.00	10.00	44.34	2,497.47	31.13	30.42	43.52	2.00	2.00	0.00
2,600.00	12.00	44.34	2,595.62	44.78	43.75	62.60	2.00	2.00	0.00
2,663.24	13.26	44.34	2,657.33	54.67	53.42	76.43	2.00	2.00	0.00
<b>Start 13.26° Hold At 2663.24'</b>									
2,700.00	13.26	44.34	2,693.11	60.70	59.31	84.87	0.00	0.00	0.00
2,800.00	13.26	44.34	2,790.44	77.11	75.35	107.81	0.00	0.00	0.00
2,900.00	13.26	44.34	2,887.77	93.52	91.38	130.76	0.00	0.00	0.00
3,000.00	13.26	44.34	2,985.11	109.94	107.42	153.70	0.00	0.00	0.00
3,100.00	13.26	44.34	3,082.44	126.35	123.45	176.65	0.00	0.00	0.00
3,200.00	13.26	44.34	3,179.77	142.76	139.49	199.59	0.00	0.00	0.00
3,300.00	13.26	44.34	3,277.10	159.17	155.53	222.54	0.00	0.00	0.00
3,400.00	13.26	44.34	3,374.43	175.58	171.56	245.48	0.00	0.00	0.00
3,500.00	13.26	44.34	3,471.77	191.99	187.60	268.43	0.00	0.00	0.00
3,600.00	13.26	44.34	3,569.10	208.41	203.63	291.37	0.00	0.00	0.00
3,700.00	13.26	44.34	3,666.43	224.82	219.67	314.32	0.00	0.00	0.00
3,800.00	13.26	44.34	3,763.76	241.23	235.70	337.27	0.00	0.00	0.00
3,900.00	13.26	44.34	3,861.09	257.64	251.74	360.21	0.00	0.00	0.00
4,000.00	13.26	44.34	3,958.43	274.05	267.78	383.16	0.00	0.00	0.00
4,100.00	13.26	44.34	4,055.76	290.46	283.81	406.10	0.00	0.00	0.00
4,200.00	13.26	44.34	4,153.09	306.88	299.85	429.05	0.00	0.00	0.00
4,300.00	13.26	44.34	4,250.42	323.29	315.88	451.99	0.00	0.00	0.00
4,400.00	13.26	44.34	4,347.75	339.70	331.92	474.94	0.00	0.00	0.00
4,500.00	13.26	44.34	4,445.09	356.11	347.95	497.88	0.00	0.00	0.00
4,600.00	13.26	44.34	4,542.42	372.52	363.99	520.83	0.00	0.00	0.00
4,700.00	13.26	44.34	4,639.75	388.93	380.03	543.77	0.00	0.00	0.00
4,800.00	13.26	44.34	4,737.08	405.34	396.06	566.72	0.00	0.00	0.00
4,900.00	13.26	44.34	4,834.41	421.76	412.10	589.66	0.00	0.00	0.00
5,000.00	13.26	44.34	4,931.75	438.17	428.13	612.61	0.00	0.00	0.00



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## Planning Report

<b>Database:</b>	Rockies-R5000.1	<b>Local Co-ordinate Reference:</b>	Well Fee 160X
<b>Company:</b>	Chevron	<b>TVD Reference:</b>	GL 5276' @ 5276.00ft (Ground Level)
<b>Project:</b>	Rio Blanco County, CO (NAD 83)	<b>MD Reference:</b>	GL 5276' @ 5276.00ft (Ground Level)
<b>Site:</b>	Fee 160X/161X	<b>North Reference:</b>	True
<b>Well:</b>	Fee 160X	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

### 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)
5,100.00	13.26	44.34	5,029.08	454.58	444.17	635.55	0.00	0.00	0.00
5,200.00	13.26	44.34	5,126.41	470.99	460.20	658.50	0.00	0.00	0.00
5,300.00	13.26	44.34	5,223.74	487.40	476.24	681.44	0.00	0.00	0.00
5,400.00	13.26	44.34	5,321.07	503.81	492.28	704.39	0.00	0.00	0.00
5,500.00	13.26	44.34	5,418.41	520.23	508.31	727.33	0.00	0.00	0.00
5,600.00	13.26	44.34	5,515.74	536.64	524.35	750.28	0.00	0.00	0.00
5,700.00	13.26	44.34	5,613.07	553.05	540.38	773.23	0.00	0.00	0.00
5,800.00	13.26	44.34	5,710.40	569.46	556.42	796.17	0.00	0.00	0.00
5,900.00	13.26	44.34	5,807.73	585.87	572.45	819.12	0.00	0.00	0.00
6,000.00	13.26	44.34	5,905.07	602.28	588.49	842.06	0.00	0.00	0.00
6,100.00	13.26	44.34	6,002.40	618.70	604.53	865.01	0.00	0.00	0.00
6,200.00	13.26	44.34	6,099.73	635.11	620.56	887.95	0.00	0.00	0.00
6,300.00	13.26	44.34	6,197.06	651.52	636.60	910.90	0.00	0.00	0.00
6,400.00	13.26	44.34	6,294.39	667.93	652.63	933.84	0.00	0.00	0.00
6,500.00	13.26	44.34	6,391.73	684.34	668.67	956.79	0.00	0.00	0.00
6,559.87	13.26	44.34	6,450.00	694.17	678.27	970.53	0.00	0.00	0.00
TD at 6559.87									

### Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
Fee 160X Target	0.00	0.00	6,450.00	694.17	678.27	1,300,768.04	2,066,582.06	40° 6' 38.770 N	108° 50' 16.860 W
- plan hits target center									
- Point									

### Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
2,000.00	2,000.00	0.00	0.00	Start Build 2.00
2,663.24	2,657.33	54.67	53.42	Start 13.26° Hold At 2663.24'
6,559.87	6,450.00	694.17	678.27	TD at 6559.87