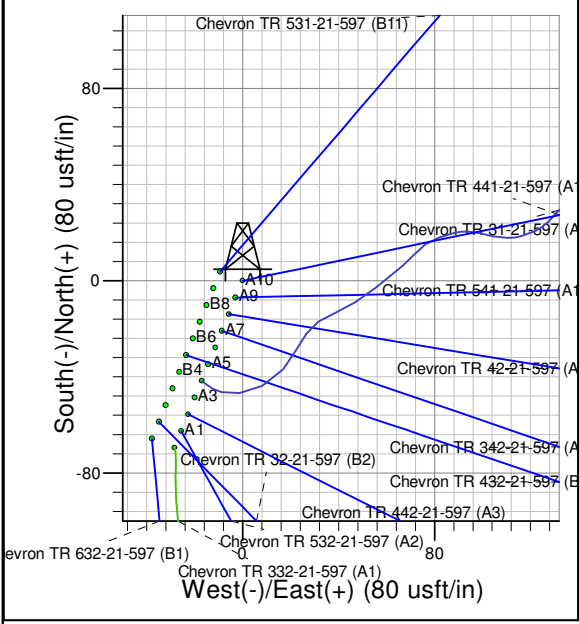
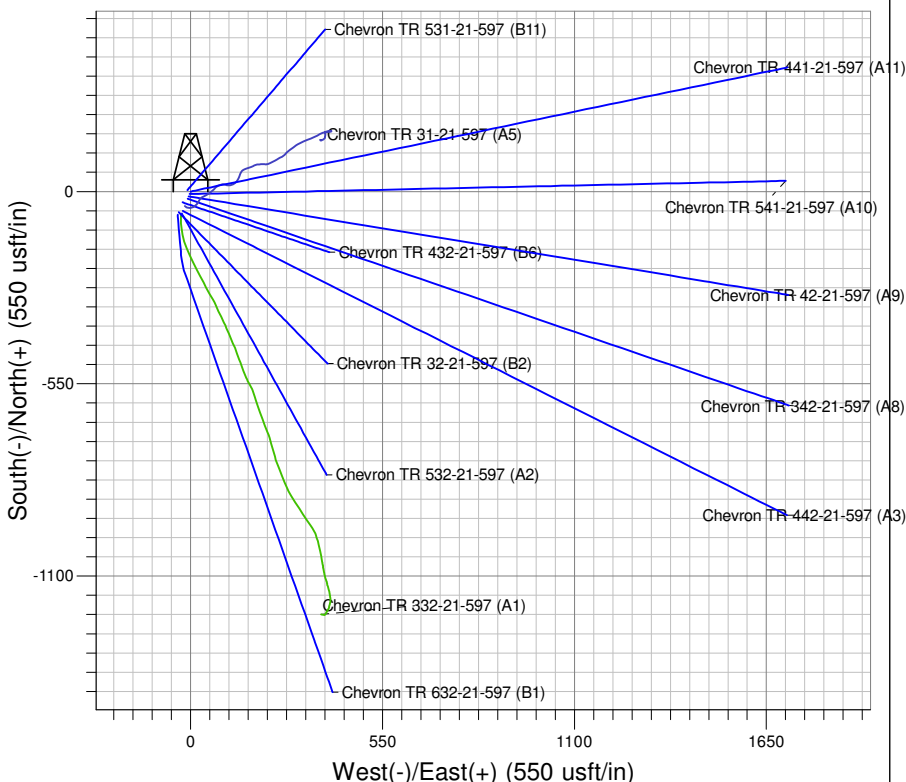


Well Name: Chevron TR 441-21-597  
Surface Location: TR 32-21-597 Pad  
North American Datum 1983 , US State Plane 1983 , Colorado Central Zone  
Ground Elevation: 8576.0  
+N/-S 0.0 +E/-W 0.0 Northing 1656448.10 Easting 2216183.20 39° 36' 10.047 N 108° 16' 55.824 W Slot A11  
KELLY BUSHING @ 8604.0usft (Frontier 10 (28' RKB) jib)



Project: TR 21-05S-097W  
Site: TR 32-21-597 Pad  
Well: Chevron TR 441-21-597  
Plan #1 26Oct09 kjs

**M** Azimuths to True North  
Magnetic North: 10.68°  
Magnetic Field  
Strength: 52442.0snT  
Dip Angle: 65.83°  
Date: 10/26/2009  
Model: IGRF2005-10

ANNOTATIONS									
TVD	MD	Inc	Azi	+N/-S	+E/-W	Vsect	Departure	Annotation	
120.0	120.0	0.00	0.00	0.0	0.0	0.0	0.0	Start Build 2.00	
1099.8	1120.0	20.00	78.27	35.1	169.2	172.8	172.8	Hold 20 Inc	
4791.6	5048.7	20.00	78.27	308.3	1484.8	1516.5	1516.5	Start Drop -1.50	
6098.0	6382.0	0.00	0.00	355.1	1710.3	1746.8	1746.8	Vertical	
9213.0	9497.0	0.00	0.00	355.1	1710.3	1746.8	1746.8	TD at 9497.0	

# **PICEANCE HL NAD 83**

**TR 21-05S-097W**

**TR 32-21-597 Pad**

**Chevron TR 441-21-597 - Slot A11**

**Wellbore #1**

**Plan: Plan #1 26Oct09 kjs**

## **Standard Planning Report - Geographic**

**03 May, 2010**

**Williams**  
Planning Report - Geographic

<b>Database:</b>	Compass R5000 WIN AUTH	<b>Local Co-ordinate Reference:</b>	Well Chevron TR 441-21-597 (A11) - Slot A11
<b>Company:</b>	PICEANCE HL NAD 83	<b>TVD Reference:</b>	KELLY BUSHING @ 8604.0usft (Frontier 10 (28' RKB) jib)
<b>Project:</b>	TR 21-05S-097W	<b>MD Reference:</b>	KELLY BUSHING @ 8604.0usft (Frontier 10 (28' RKB) jib)
<b>Site:</b>	TR 32-21-597 Pad	<b>North Reference:</b>	True
<b>Well:</b>	Chevron TR 441-21-597	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 26Oct09 kjs		

<b>Project</b>	TR 21-05S-097W, Garfield County, CO, TR 21-05S-097W		
<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		

<b>Site</b>	TR 32-21-597 Pad		
<b>Site Position:</b>		<b>Northing:</b>	1,656,390.50 usft
<b>From:</b>	Map	<b>Easting:</b>	2,216,146.60 usft
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	13.200 in
		<b>Latitude:</b>	39° 36' 9.467 N
		<b>Longitude:</b>	108° 16' 56.268 W
		<b>Grid Convergence:</b>	-1.755 °

<b>Well</b>	Chevron TR 441-21-597 - Slot A11		
<b>Well Position</b>	<b>+N/-S</b>	0.0 usft	<b>Northing:</b>
	<b>+E/-W</b>	0.0 usft	<b>Easting:</b>
<b>Position Uncertainty</b>	0.0 usft		<b>Wellhead Elevation:</b>
			<b>Latitude:</b>
			<b>Longitude:</b>
			<b>Ground Level:</b>

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2005-10	10/26/2009	10.682	65.828	52,442

<b>Design</b>	Plan #1 26Oct09 kjs			
<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	78.27

<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	0.000	
120.0	0.00	0.00	120.0	0.0	0.0	0.00	0.00	0.00	0.000	
1,120.0	20.00	78.27	1,099.8	35.1	169.2	2.00	2.00	0.00	78.270	
5,048.7	20.00	78.27	4,791.6	308.3	1,484.8	0.00	0.00	0.00	0.000	
6,382.0	0.00	0.00	6,098.0	355.1	1,710.3	1.50	-1.50	0.00	180.000	Mesaverde (25' Radiu
9,497.0	0.00	0.00	9,213.0	355.1	1,710.3	0.00	0.00	0.00	0.000	

**Williams**  
Planning Report - Geographic

<b>Database:</b>	Compass R5000 WIN AUTH	<b>Local Co-ordinate Reference:</b>	Well Chevron TR 441-21-597 (A11) - Slot A11
<b>Company:</b>	PICEANCE HL NAD 83	<b>TVD Reference:</b>	KELLY BUSHING @ 8604.0usft (Frontier 10 (28' RKB) jjb)
<b>Project:</b>	TR 21-05S-097W	<b>MD Reference:</b>	KELLY BUSHING @ 8604.0usft (Frontier 10 (28' RKB) jjb)
<b>Site:</b>	TR 32-21-597 Pad	<b>North Reference:</b>	True
<b>Well:</b>	Chevron TR 441-21-597	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 26Oct09 kjs		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.0	0.00	0.00	0.0	0.0	0.0	1,656,448.10	2,216,183.20	39° 36' 10.047 N	108° 16' 55.824 W
120.0	0.00	0.00	120.0	0.0	0.0	1,656,448.10	2,216,183.20	39° 36' 10.047 N	108° 16' 55.824 W
1,120.0	20.00	78.27	1,099.8	35.1	169.2	1,656,478.03	2,216,353.35	39° 36' 10.394 N	108° 16' 53.662 W
5,048.7	20.00	78.27	4,791.6	308.3	1,484.8	1,656,710.79	2,217,676.73	39° 36' 13.094 N	108° 16' 36.853 W
6,382.0	0.00	0.00	6,098.0	355.1	1,710.3	1,656,750.70	2,217,903.60	39° 36' 13.556 N	108° 16' 33.972 W
9,497.0	0.00	0.00	9,213.0	355.1	1,710.3	1,656,750.70	2,217,903.60	39° 36' 13.556 N	108° 16' 33.972 W

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
Mesaverde (25' Radius)	0.00	0.00	6,098.0	355.1	1,710.3	1,656,750.70	2,217,903.60	39° 36' 13.556 N	108° 16' 33.972 W
- plan hits target center									
- Circle (radius 25.0)									
Mesaverde (50' Radius)	0.00	0.00	6,098.0	355.1	1,710.3	1,656,750.70	2,217,903.60	39° 36' 13.556 N	108° 16' 33.972 W
- plan hits target center									
- Circle (radius 50.0)									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
3,083.0	2,944.4	9 5/8"	9.625	14.750	

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
2,832.5	2,709.0	Wasatch			
4,735.2	4,497.0	G' Sand			
4,937.4	4,687.0	Ft. Union			
6,382.0	6,098.0	Mesaverde			
7,329.0	7,045.0	Approx. Top Gas			
8,827.0	8,543.0	Cameo Coals			
9,247.0	8,963.0	Rollins SS			

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment
120.0	120.0	0.0	0.0	Start Build 2.00
1,120.0	1,099.8	35.1	169.2	Hold 20 Inc
5,048.7	4,791.6	308.3	1,484.8	Start Drop -1.50
6,382.0	6,098.0	355.1	1,710.3	Vertical
9,497.0	9,213.0	355.1	1,710.3	TD at 9497.0