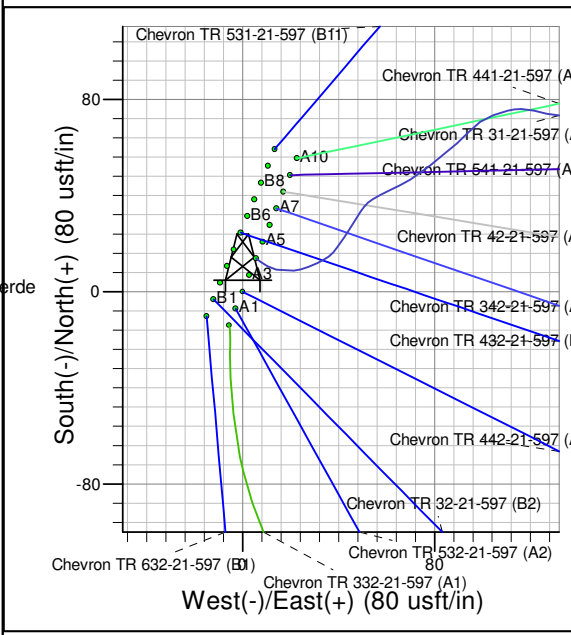
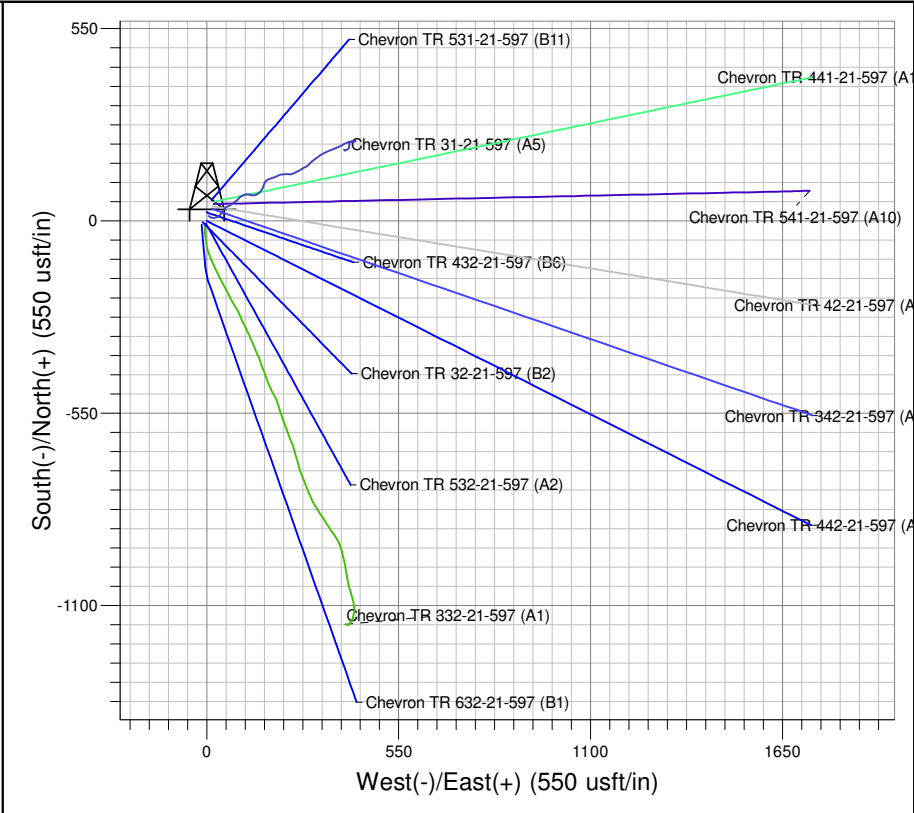


Well Name: Chevron TR 442-21-597  
Surface Location: TR 32-21-597 Pad  
North American Datum 1983 , US State Plane 1983 , Colorado Central Zone  
Ground Elevation: 8576.0  
+N/-S 0.0 +E/-W 0.0 Northing 1656393.30 Easting 2216158.80 Latitude 39° 36' 9.498 N Longitude 108° 16' 56.114 W Slot A3  
KELLY BUSHING @ 8604.0usft (Frontier 10 (28' RKB) jib)



Project: TR 21-05S-097W  
Site: TR 32-21-597 Pad  
Well: Chevron TR 442-21-597  
Plan #1 26Oct09 kjs

Azimuths to True North  
Magnetic North: 10.68°  
Magnetic Field  
Strength: 52441.9snT  
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		
1231.8	1261.8	22.84	116.69	-100.8	200.6	224.5	224.5	Hold 22.84 Inclination		
4590.6	4906.3	22.84	116.69	-736.1	1464.3	1638.9	1638.9	Start Drop -1.50		
6073.0	6428.6	0.00	0.00	-870.6	1731.8	1938.3	1938.3	Mesaverde		
9188.0	9543.6	0.00	0.00	-870.6	1731.8	1938.3	1938.3	TD at 9543.6		

# **PICEANCE HL NAD 83**

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

**TR 32-21-597 Pad**

**Chevron TR 442-21-597 - Slot A3**

**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 442-21-597 (A3) - Slot A3
<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 442-21-597	<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 °

Well	Chevron TR 442-21-597 - Slot A3					
Well Position	+N/-S	0.0 usft	Northing:	1,656,393.30 usft	Latitude:	39° 36' 9.498 N
	+E/-W	0.0 usft	Easting:	2,216,158.80 usft	Longitude:	108° 16' 56.114 W
Position Uncertainty		0.0 usft	Wellhead Elevation:		Ground Level:	8,576.0 usft

<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	116.69

<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	
1,261.8	22.84	116.69	1,231.8	-100.8	200.6	2.00	2.00	0.00	116.689	
4,906.3	22.84	116.69	4,590.6	-736.1	1,464.3	0.00	0.00	0.00	0.000	
6,428.6	0.00	0.00	6,073.0	-870.6	1,731.8	1.50	-1.50	0.00	180.000	Mesaverde (25' Radiu
9,543.6	0.00	0.00	9,188.0	-870.6	1,731.8	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 442-21-597 (A3) - Slot A3
<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 442-21-597	<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	1,656,393.30	2,216,158.80	39° 36' 9.498 N	108° 16' 56.114 W
120.0	0.00	0.00	120.0	0.0	0.0	1,656,393.30	2,216,158.80	39° 36' 9.498 N	108° 16' 56.114 W
1,261.8	22.84	116.69	1,231.8	-100.8	200.6	1,656,286.35	2,216,356.23	39° 36' 8.502 N	108° 16' 53.551 W
4,906.3	22.84	116.69	4,590.6	-736.1	1,464.3	1,655,612.69	2,217,599.86	39° 36' 2.223 N	108° 16' 37.406 W
6,428.6	0.00	0.00	6,073.0	-870.6	1,731.8	1,655,470.10	2,217,863.10	39° 36' 0.894 N	108° 16' 33.989 W
9,543.6	0.00	0.00	9,188.0	-870.6	1,731.8	1,655,470.10	2,217,863.10	39° 36' 0.894 N	108° 16' 33.989 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	6,073.0	-870.6	1,731.8	1,655,470.10	2,217,863.10	39° 36' 0.894 N	108° 16' 33.989 W
- plan hits target center									
- Circle (radius 25.0)									
Mesaverde (50' Radius)	0.00	0.00	6,073.0	-870.6	1,731.8	1,655,470.10	2,217,863.10	39° 36' 0.894 N	108° 16' 33.989 W
- plan hits target center									
- Circle (radius 50.0)									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
3,088.0	2,914.9	9 5/8"	9.625	14.750	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
2,837.5	2,684.0	Wasatch				
4,777.5	4,472.0	G' Sand				
4,983.4	4,662.0	Ft. Union				
6,428.6	6,073.0	Mesaverde				
7,375.6	7,020.0	Approx. Top Gas				
8,873.6	8,518.0	Cameo Coals				
9,293.6	8,938.0	Rollins SS				
9,543.6	9,188.0	TD				

**Williams**  
Planning Report - Geographic

<b>Database:</b>	Compass R5000 WIN AUTH	<b>Local Co-ordinate Reference:</b>	Well Chevron TR 442-21-597 (A3) - Slot A3
<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 442-21-597	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 26Oct09 kjs		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
120.0	120.0	0.0	0.0	Start Build 2.00
1,261.8	1,231.8	-100.8	200.6	Hold 22.84 Inclination
4,906.3	4,590.6	-736.1	1,464.3	Start Drop -1.50
6,428.6	6,073.0	-870.6	1,731.8	Mesaverde
9,543.6	9,188.0	-870.6	1,731.8	TD at 9543.6