



Well Name: Chevron TR 32-21-597

Surface Location: TR 32-21-597 Pad

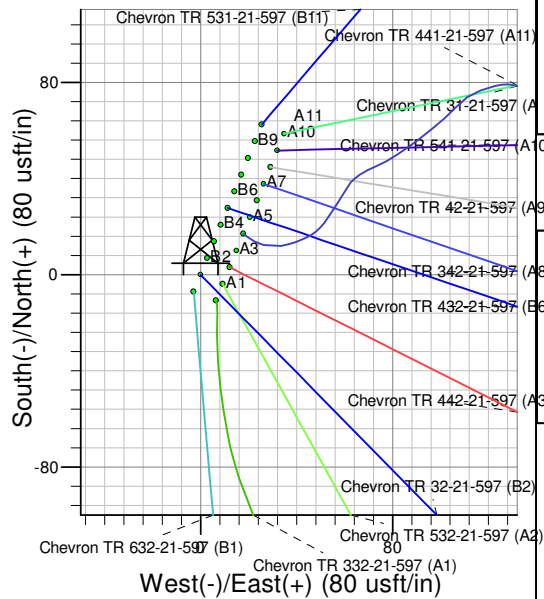
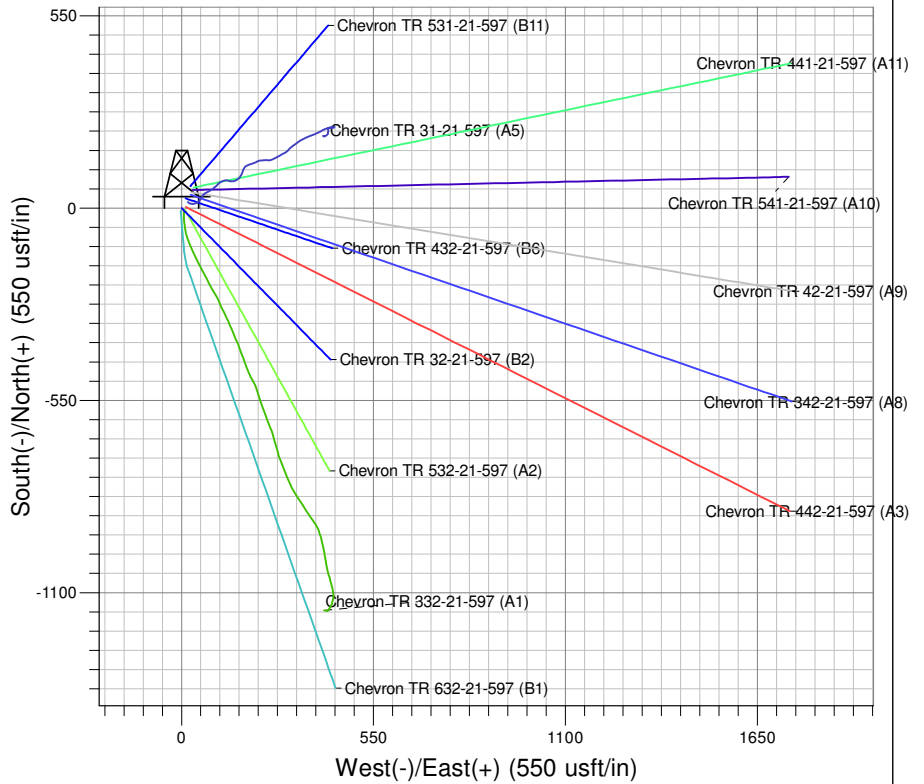
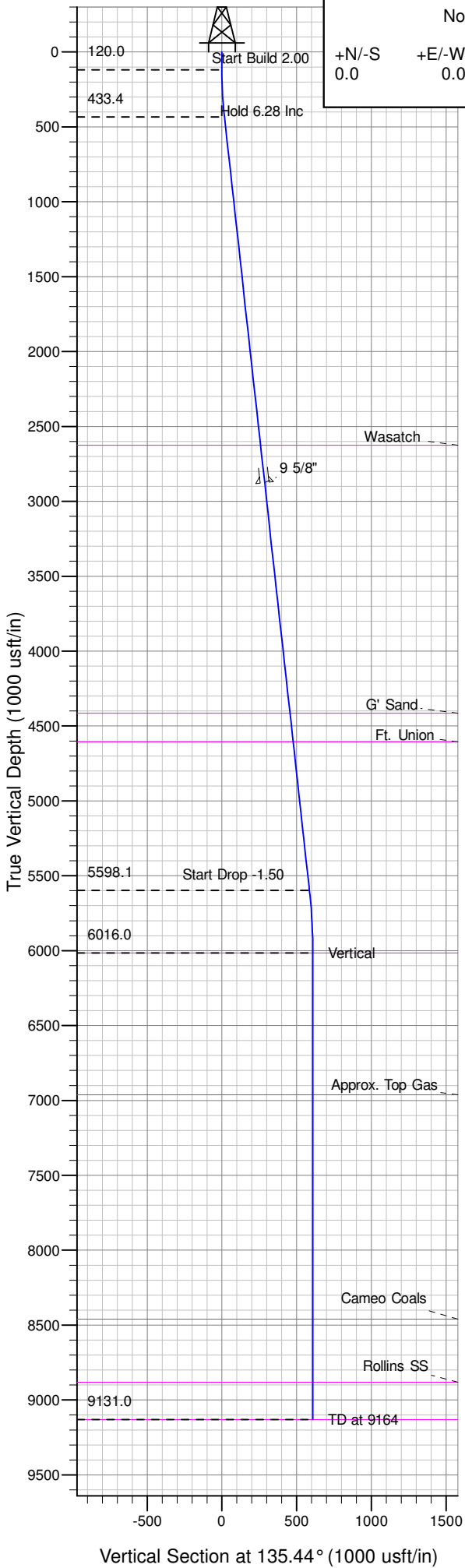
North American Datum 1983 , US State Plane 1983 , Colorado Central Zone

Ground Elevation: 8576.0

Northing 1656390.50 Easting 2216146.60 Latitude 39° 36' 9.467 N Longitude 108° 16' 56.268 W

KELLY BUSHING @ 8604.0usft (Frontier 10 (28' RKB) jib)

Slot  
B2



Project: TR 21-05S-097W  
Site: TR 32-21-597 Pad  
Well: Chevron TR 32-21-597  
Plan #2 26Oct09 kjs



Azimuths to True North  
Magnetic North: 11.16°  
Magnetic Field  
Strength: 52794.5nT  
Dip Angle: 65.92°  
Date: 3/10/2006  
Model: IGRF2005-10

#### ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	V Sect	Departure	Annotation
120.0	120.0	0.00	0.00	0.0	0.0	0.0	0.0	Start Build 2.00
433.4	434.1	6.28	135.44	-12.3	12.1	17.2	17.2	Hold 6.28 Inc
5598.1	5629.9	6.28	135.44	-417.3	411.0	585.7	585.7	Start Drop -1.50
6016.0	6048.7	0.00	0.00	-433.6	427.1	608.6	608.6	Vertical
9131.0	9163.7	0.00	0.00	-433.6	427.1	608.6	608.6	TD at 9164

# **PICEANCE HL NAD 83**

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

**TR 32-21-597 Pad**

**Chevron TR 32-21-597 - Slot B2**

**Chevron TR 32-21-597**

**Plan: Plan #2 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 32-21-597 (B2) - Slot B2
<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 32-21-597	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Chevron TR 32-21-597		
<b>Design:</b>	Plan #2 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 32-21-597 - Slot B2					
Well Position	+N/-S	0.0 usft	Northing:	1,656,390.50 usft	Latitude:	39° 36' 9.467 N
	+E/-W	0.0 usft	Easting:	2,216,146.60 usft	Longitude:	108° 16' 56.268 W
Position Uncertainty		0.0 usft	Wellhead Elevation:		Ground Level:	8,576.0 usft

<b>Wellbore</b>	Chevron TR 32-21-597				
<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	3/10/2006	11.156	65.919	52,794

<b>Design</b>	Plan #2 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	135.44

<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	
434.1	6.28	135.44	433.4	-12.3	12.1	2.00	2.00	0.00	135.436	
5,629.9	6.28	135.44	5,598.1	-417.3	411.0	0.00	0.00	0.00	0.000	
6,048.7	0.00	0.00	6,016.0	-433.6	427.1	1.50	-1.50	0.00	180.000	Mesaverde (25' Radiu
9,163.7	0.00	0.00	9,131.0	-433.6	427.1	0.00	0.00	0.00	0.000	

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Planning Report - Geographic

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<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 32-21-597	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Chevron TR 32-21-597		
<b>Design:</b>	Plan #2 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	1,656,390.50	2,216,146.60	39° 36' 9.467 N	108° 16' 56.268 W
120.0	0.00	0.00	120.0	0.0	0.0	1,656,390.50	2,216,146.60	39° 36' 9.467 N	108° 16' 56.268 W
434.1	6.28	135.44	433.4	-12.3	12.1	1,656,377.88	2,216,158.29	39° 36' 9.346 N	108° 16' 56.114 W
5,629.9	6.28	135.44	5,598.1	-417.3	411.0	1,655,960.82	2,216,544.62	39° 36' 5.343 N	108° 16' 51.018 W
6,048.7	0.00	0.00	6,016.0	-433.6	427.1	1,655,944.00	2,216,560.20	39° 36' 5.181 N	108° 16' 50.812 W
9,163.7	0.00	0.00	9,131.0	-433.6	427.1	1,655,944.00	2,216,560.20	39° 36' 5.181 N	108° 16' 50.812 W

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Mesaverde (25' Radius) - plan hits target center - Circle (radius 25.0)	0.00	0.00	6,016.0	-433.6	427.1	1,655,944.00	2,216,560.20	39° 36' 5.181 N	108° 16' 50.812 W
Mesaverde (50' Radius) - plan hits target center - Circle (radius 50.0)	0.00	0.00	6,016.0	-433.6	427.1	1,655,944.00	2,216,560.20	39° 36' 5.181 N	108° 16' 50.812 W

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
2,891.0	2,875.6	9 5/8"	9.625	14.750	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
2,640.9	2,627.0	Wasatch				
4,439.7	4,415.0	G' Sand				
4,630.8	4,605.0	Ft. Union				
6,048.7	6,016.0	Mesaverde				
6,995.7	6,963.0	Approx. Top Gas				
8,493.7	8,461.0	Cameo Coals				
8,913.7	8,881.0	Rollins SS				
9,163.7	9,131.0	TD				

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<b>Site:</b>	TR 32-21-597 Pad	<b>North Reference:</b>	True
<b>Well:</b>	Chevron TR 32-21-597	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Chevron TR 32-21-597		
<b>Design:</b>	Plan #2 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
434.1	433.4	-12.3	12.1	Hold 6.28 Inc
5,629.9	5,598.1	-417.3	411.0	Start Drop -1.50
6,048.7	6,016.0	-433.6	427.1	Vertical
9,163.7	9,131.0	-433.6	427.1	TD at 9164