

Well Name: Chevron TR 541-21-597

Surface Location: TR 32-21-597 Pad

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

Ground Elevation: 8576.0

+N/-S

+E/-W

North

1656441.20

East

2216180.10

Latitude

39° 36' 9.978 N

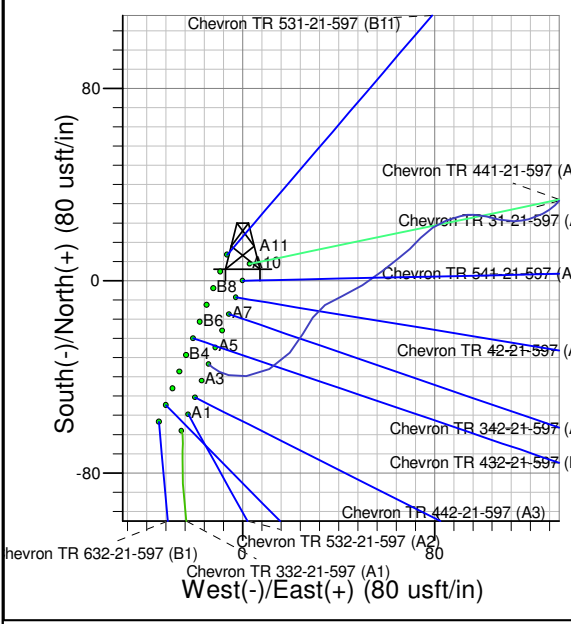
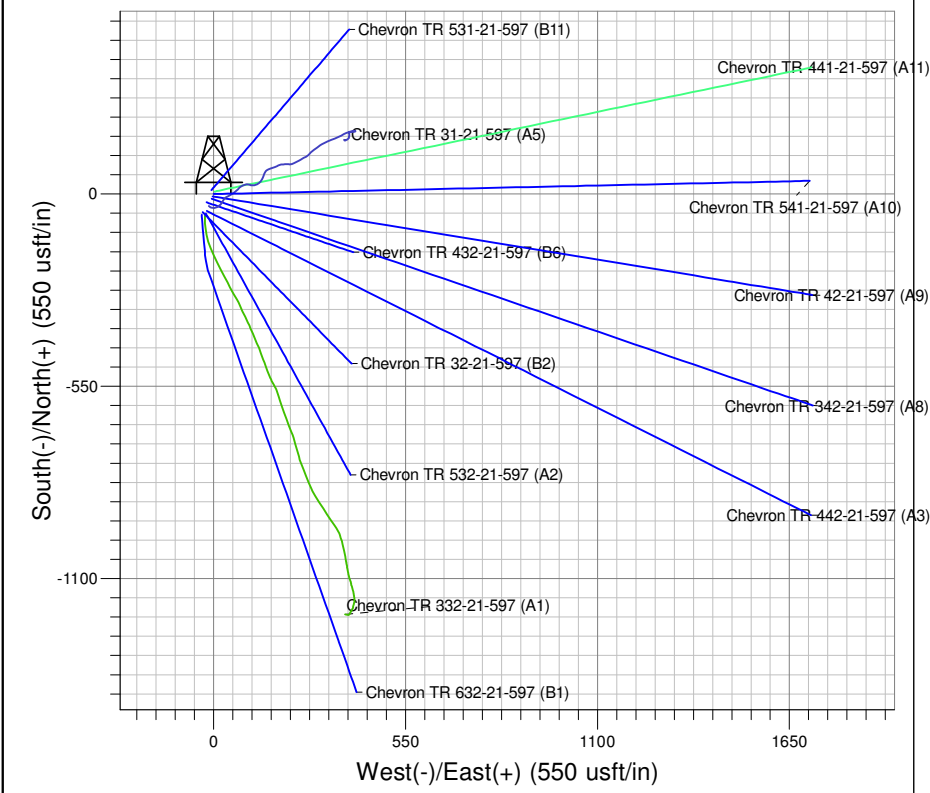
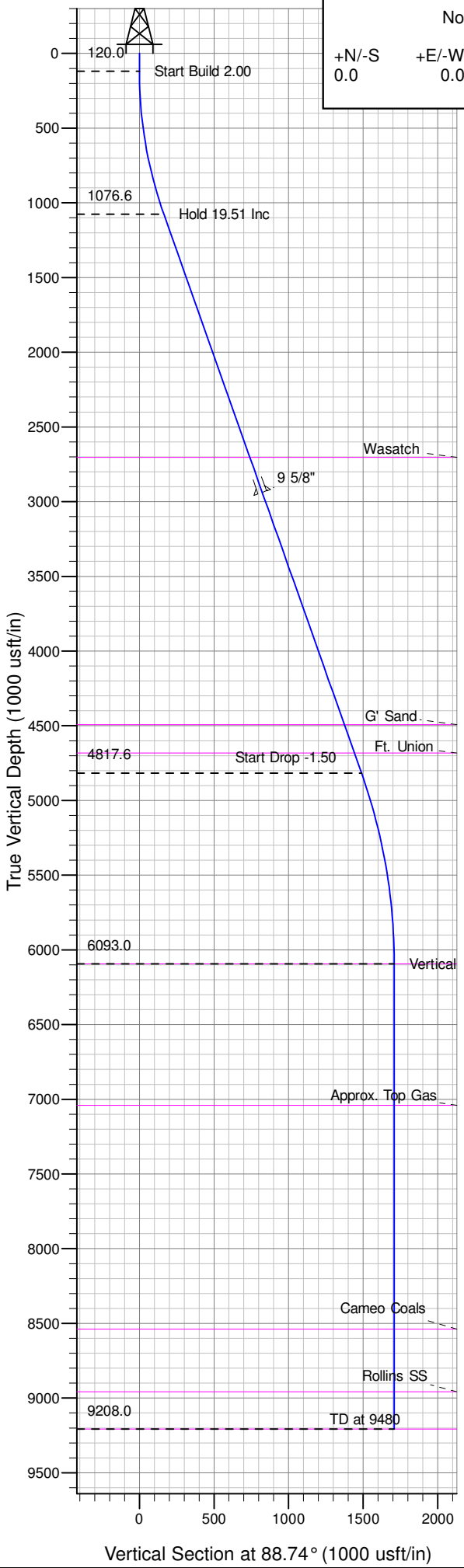
Longitude

108° 16' 55.860 W

Slot

A10

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



Project: TR 21-05S-097W

Site: TR 32-21-597 Pad

Well: Chevron TR 541-21-597

Plan #1 26Oct09 kjs

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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	V	Sect	Departure	Annotation
120.0	120.0	0.00	0.00	0.0	0.0	0.0	0.0	0.0	Start Build 2.00
1076.6	1095.3	19.51	88.74	3.6	164.4	164.4	164.4	164.4	Hold 19.51 Inc
4817.6	5064.1	19.51	88.74	32.7	1489.3	1489.6	1489.6	1489.6	Hold Drop -1.50
6093.0	6364.5	0.00	0.00	37.5	1708.5	1708.9	1708.9	1708.9	Vertical
9208.0	9479.5	0.00	0.00	37.5	1708.5	1708.9	1708.9	1708.9	TD at 9480

PICEANCE HL NAD 83

TR 21-05S-097W

TR 32-21-597 Pad

Chevron TR 541-21-597 - Slot A10

Wellbore #1

Plan: Plan #1 26Oct09 kjs

Standard Planning Report - Geographic

03 May, 2010

Williams
Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well Chevron TR 541-21-597 (A10) - Slot A10
Company:	PICEANCE HL NAD 83	TVD Reference:	KELLY BUSHING @ 8604.0usft (Frontier 10 (28' RKB) jib)
Project:	TR 21-05S-097W	MD Reference:	KELLY BUSHING @ 8604.0usft (Frontier 10 (28' RKB) jib)
Site:	TR 32-21-597 Pad	North Reference:	True
Well:	Chevron TR 541-21-597	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 26Oct09 kjs		

Project	TR 21-05S-097W, Garfield County, CO, TR 21-05S-097W		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		

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

Well	Chevron TR 541-21-597 - Slot A10					
Well Position	+N/-S	0.0 usft	Northing:	1,656,441.20 usft	Latitude:	39° 36' 9.978 N
	+E/-W	0.0 usft	Easting:	2,216,180.10 usft	Longitude:	108° 16' 55.860 W
Position Uncertainty		0.0 usft	Wellhead Elevation:		Ground Level:	8,576.0 usft

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

Design	Plan #1 26Oct09 kjs			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	88.74

Plan Sections										
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	
1,095.3	19.51	88.74	1,076.6	3.6	164.4	2.00	2.00	0.00	88.742	
5,064.1	19.51	88.74	4,817.6	32.7	1,489.3	0.00	0.00	0.00	0.000	
6,364.5	0.00	0.00	6,093.0	37.5	1,708.5	1.50	-1.50	0.00	180.000	Mesaverde (25' Radiu
9,479.5	0.00	0.00	9,208.0	37.5	1,708.5	0.00	0.00	0.00	0.000	

Williams
Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well Chevron TR 541-21-597 (A10) - Slot A10
Company:	PICEANCE HL NAD 83	TVD Reference:	KELLY BUSHING @ 8604.0usft (Frontier 10 (28' RKB) jib)
Project:	TR 21-05S-097W	MD Reference:	KELLY BUSHING @ 8604.0usft (Frontier 10 (28' RKB) jib)
Site:	TR 32-21-597 Pad	North Reference:	True
Well:	Chevron TR 541-21-597	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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	1,656,441.20	2,216,180.10	39° 36' 9.978 N	108° 16' 55.860 W
120.0	0.00	0.00	120.0	0.0	0.0	1,656,441.20	2,216,180.10	39° 36' 9.978 N	108° 16' 55.860 W
1,095.3	19.51	88.74	1,076.6	3.6	164.4	1,656,439.77	2,216,344.52	39° 36' 10.014 N	108° 16' 53.760 W
5,064.1	19.51	88.74	4,817.6	32.7	1,489.3	1,656,428.30	2,217,669.68	39° 36' 10.301 N	108° 16' 36.833 W
6,364.5	0.00	0.00	6,093.0	37.5	1,708.5	1,656,426.40	2,217,888.90	39° 36' 10.348 N	108° 16' 34.033 W
9,479.5	0.00	0.00	9,208.0	37.5	1,708.5	1,656,426.40	2,217,888.90	39° 36' 10.348 N	108° 16' 34.033 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 (50' Radius)	0.00	0.00	6,093.0	37.5	1,708.5	1,656,426.40	2,217,888.90	39° 36' 10.348 N	108° 16' 34.033 W
- plan hits target center									
- Circle (radius 50.0)									
Mesaverde (25' Radius)	0.00	0.00	6,093.0	37.5	1,708.5	1,656,426.40	2,217,888.90	39° 36' 10.348 N	108° 16' 34.033 W
- plan hits target center									
- Circle (radius 25.0)									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
3,072.0	2,939.8	9 5/8"	9.625	14.750	

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
2,821.8	2,704.0	Wasatch			
4,718.7	4,492.0	G' Sand			
4,920.3	4,682.0	Ft. Union			
6,364.5	6,093.0	Mesaverde			
7,311.5	7,040.0	Approx. Top Gas			
8,809.5	8,538.0	Cameo Coals			
9,229.5	8,958.0	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
1,095.3	1,076.6	3.6	164.4	Hold 19.51 Inc
5,064.1	4,817.6	32.7	1,489.3	Start Drop -1.50
6,364.5	6,093.0	37.5	1,708.5	Vertical
9,479.5	9,208.0	37.5	1,708.5	TD at 9480