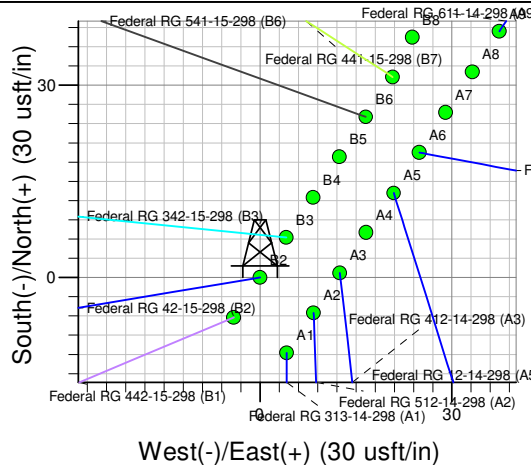
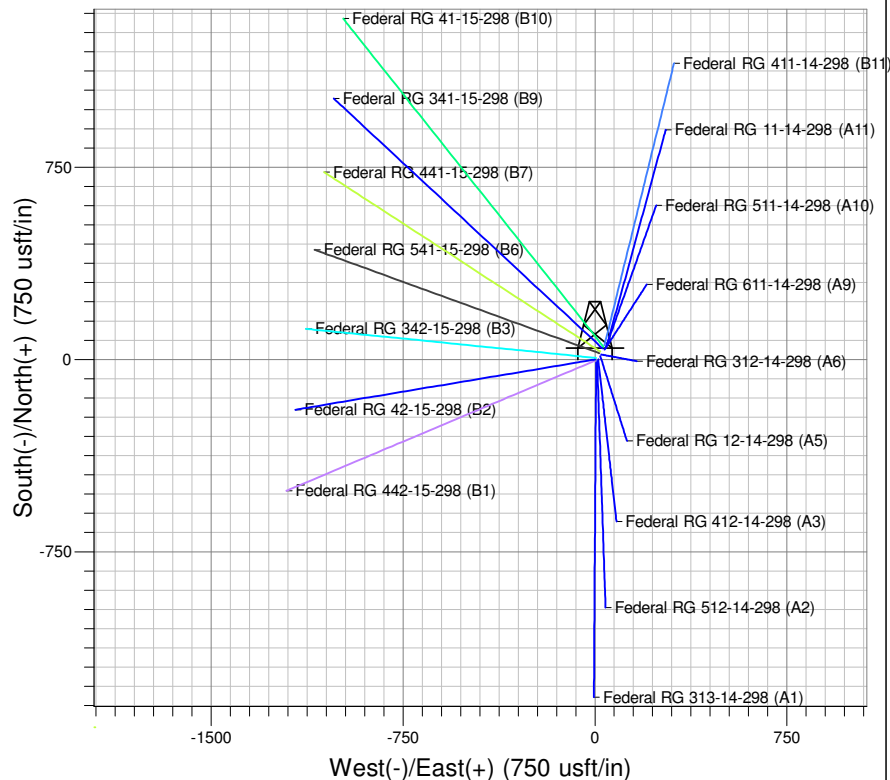


Well Name: Federal RG 42-15-298
 Surface Location: RG 12-14-298 Pad
 North American Datum 1983 US State Plane 1983 Colorado Central Zone
 Ground Elevation: 6560.0
 Kelly Busing @ 6581.0usft

+N/-S	+E/-W	North	East	Latitude	Longitude	Slot
0.0	0.0	1758306.80	2195501.60	39° 52' 49.855 N	108° 22' 0.988 W	B2



Project: RG 14-02S-098W
 Site: RG 12-14-298 Pad
 Well: Federal RG 42-15-298
 Plan: Plan #1 22Mar10 kjs

Azimuths to True North
 Magnetic North: 10.73°
 Magnetic Field
 Strength: 52529.6snT
 Dip Angle: 66.02°
 Date: 3/22/2010
 Model: IGRF2010

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.000	0.0	
120.0	0.00	0.00	120.0	0.0	0.0	0.00	0.000	0.0	
723.0	12.06	260.52	718.6	-10.4	-62.4	2.00	260.518	63.2	
5697.1	12.06	260.52	5582.9	-181.6	-1087.5	0.00	0.000	1102.6	
6501.2	0.00	0.00	6381.0	-195.5	-1170.7	1.50	180.000	1186.9	Mesaverde (25' Radius) Federal RG 42-15-298
10971.2	0.00	0.00	10851.0	-195.5	-1170.7	0.00	0.000	1186.9	

TVD	MD	Inc	Azi	+N/-S	+E/-W	VSec	Departure	Annotation
120.0	120.0	0.00	0.00	0.0	0.0	0.0	0.0	Start Build 2.00
718.6	723.0	12.06	260.52	-10.4	-62.4	63.2	63.2	Hold 12.06 Inc
5582.9	5697.1	12.06	260.52	-181.6	-1087.5	1102.6	1102.6	Start Drop -1.50
6381.0	6501.2	0.00	0.00	-195.5	-1170.7	1186.9	1186.9	Vertical
10851.0	10971.2	0.00	0.00	-195.5	-1170.7	1186.9	1186.9	TD at 10971

PICEANCE HL NAD 83

RG 14-02S-098W

RG 12-14-298 Pad

Federal RG 42-15-298 - Slot B2

Wellbore #1

Plan: Plan #1 22Mar10 kjs

Standard Planning Report - Geographic

30 March, 2010

Williams
Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well Federal RG 42-15-298 (B2) - Slot B2
Company:	PICEANCE HL NAD 83	TVD Reference:	KELLY BUSING @ 6581.0usft
Project:	RG 14-02S-098W	MD Reference:	KELLY BUSING @ 6581.0usft
Site:	RG 12-14-298 Pad	North Reference:	True
Well:	Federal RG 42-15-298	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 22Mar10 kjs		

Project	RG 14-02S-098W, Rio Blanco County, CO, RG 14-02S-098W		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		Using geodetic scale factor

Site		RG 12-14-298 Pad			
Site Position:		Northing:	1,758,307.10 usft	Latitude:	39° 52' 49.862 N
From:	Map	Easting:	2,195,514.10 usft	Longitude:	108° 22' 0.828 W
Position Uncertainty:	0.0 usft	Slot Radius:	13.200 in	Grid Convergence:	-1.808 °

Well		Federal RG 42-15-298 - Slot B2				
Well Position	+N/-S	0.0 usft	Northing:	1,758,306.80 usft	Latitude:	39° 52' 49.855 N
	+E/-W	0.0 usft	Easting:	2,195,501.60 usft	Longitude:	108° 22' 0.988 W
Position Uncertainty		0.0 usft	Wellhead Elevation:		Ground Level:	6,560.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/22/2010	10.728	66.020	52,530

Design	Plan #1 22Mar10 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	260.52

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	
723.0	12.06	260.52	718.6	-10.4	-62.4	2.00	2.00	0.00	260.518	
5,697.1	12.06	260.52	5,582.9	-181.6	-1,087.5	0.00	0.00	0.00	0.000	
6,501.2	0.00	0.00	6,381.0	-195.5	-1,170.7	1.50	-1.50	0.00	180.000	Mesaverde (25' Radiu
10,971.2	0.00	0.00	10,851.0	-195.5	-1,170.7	0.00	0.00	0.00	0.000	

Williams
Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well Federal RG 42-15-298 (B2) - Slot B2
Company:	PICEANCE HL NAD 83	TVD Reference:	KELLY BUSING @ 6581.0usft
Project:	RG 14-02S-098W	MD Reference:	KELLY BUSING @ 6581.0usft
Site:	RG 12-14-298 Pad	North Reference:	True
Well:	Federal RG 42-15-298	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 22Mar10 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	1,758,306.80	2,195,501.60	39° 52' 49.855 N	108° 22' 0.988 W
120.0	0.00	0.00	120.0	0.0	0.0	1,758,306.80	2,195,501.60	39° 52' 49.855 N	108° 22' 0.988 W
723.0	12.06	260.52	718.6	-10.4	-62.4	1,758,298.35	2,195,438.93	39° 52' 49.752 N	108° 22' 1.788 W
5,697.1	12.06	260.52	5,582.9	-181.6	-1,087.5	1,758,159.56	2,194,408.86	39° 52' 48.060 N	108° 22' 14.938 W
6,501.2	0.00	0.00	6,381.0	-195.5	-1,170.7	1,758,148.30	2,194,325.30	39° 52' 47.922 N	108° 22' 16.005 W
10,971.2	0.00	0.00	10,851.0	-195.5	-1,170.7	1,758,148.30	2,194,325.30	39° 52' 47.922 N	108° 22' 16.005 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
East Hardline Federal R	0.00	0.00	10.0	-195.5	-1,170.7	1,758,148.30	2,194,325.30	39° 52' 47.922 N	108° 22' 16.005 W
- plan misses target center by 1186.9usft at 10.0usft MD (10.0 TVD, 0.0 N, 0.0 E)									
- Polygon									
Point 1			10.0	-200.0	57.0	1,757,946.59	2,194,375.96		True
Point 2			10.0	200.0	57.0	1,758,346.41	2,194,388.58		True
Mesaverde (25' Radius)	0.00	0.00	6,381.0	-195.5	-1,170.7	1,758,148.30	2,194,325.30	39° 52' 47.922 N	108° 22' 16.005 W
- plan hits target center									
- Circle (radius 25.0)									
Mesaverde (50' Radius)	0.00	0.00	6,381.0	-195.5	-1,170.7	1,758,148.30	2,194,325.30	39° 52' 47.922 N	108° 22' 16.005 W
- plan hits target center									
- Circle (radius 50.0)									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
3,051.0	2,995.2	9 5/8"	9.625	13.500	

Williams
Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well Federal RG 42-15-298 (B2) - Slot B2
Company:	PICEANCE HL NAD 83	TVD Reference:	KELLY BUSING @ 6581.0usft
Project:	RG 14-02S-098W	MD Reference:	KELLY BUSING @ 6581.0usft
Site:	RG 12-14-298 Pad	North Reference:	True
Well:	Federal RG 42-15-298	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 22Mar10 kjs		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
751.1	746.0	Green River Fm				
909.6	901.0	A Groove				
1,093.6	1,081.0	B Groove				
1,410.6	1,391.0	Dissolution Surface				
2,162.2	2,126.0	Garden Gulch				
2,341.2	2,301.0	Orange Marker				
2,550.8	2,506.0	Wasatch				
4,457.9	4,371.0	G' Sand				
4,723.8	4,631.0	Ft. Union				
5,989.6	5,871.0	Ohio Creek				
6,501.2	6,381.0	Mesaverde				
7,471.2	7,351.0	Top Gas				
9,381.2	9,261.0	Cameo Coals				
9,781.2	9,661.0	Rollins SS				
9,906.2	9,786.0	Cozzette				
10,131.2	10,011.0	Corcoran				
10,476.2	10,356.0	Upper Sego				
10,721.2	10,601.0	Lower Sego				
10,971.2	10,851.0	TD		0.000		

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
120.0	120.0	0.0	0.0	Start Build 2.00	
723.0	718.6	-10.4	-62.4	Hold 12.06 Inc	
5,697.1	5,582.9	-181.6	-1,087.5	Start Drop -1.50	
6,501.2	6,381.0	-195.5	-1,170.7	Vertical	
10,971.2	10,851.0	-195.5	-1,170.7	TD at 10971	