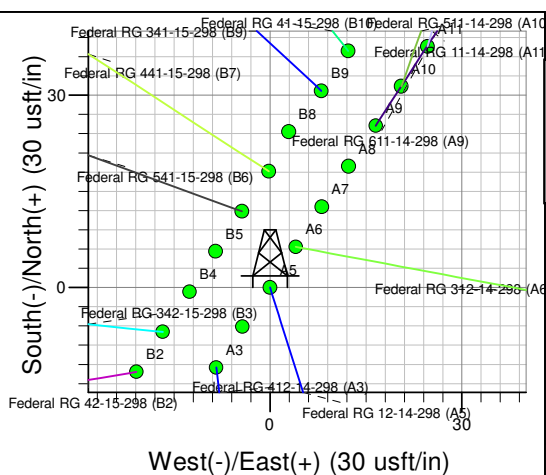
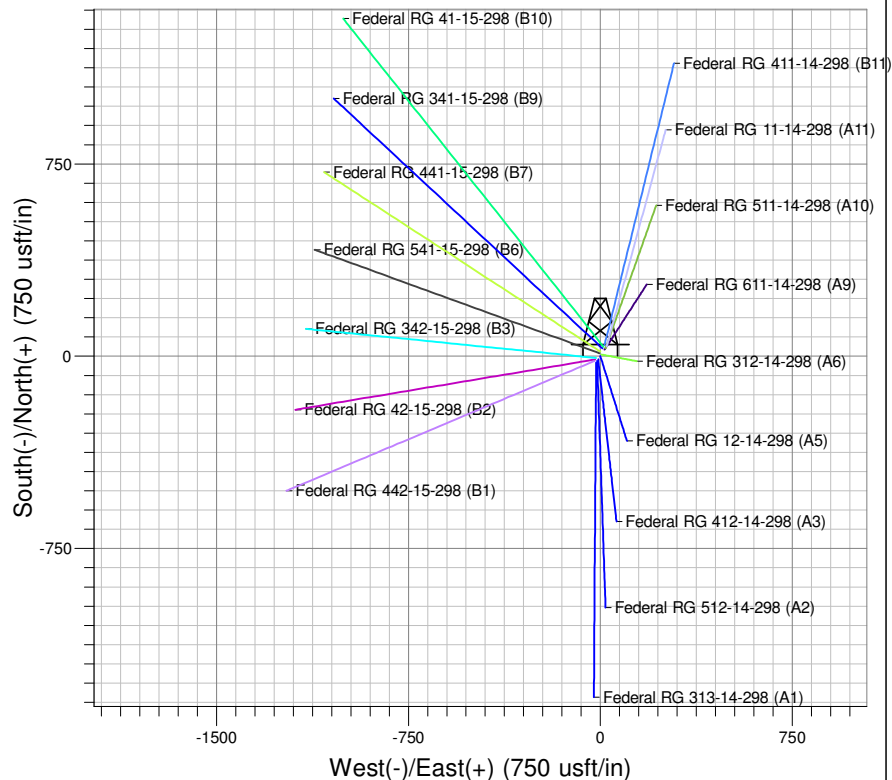


Well Name: Federal RG 12-14-298
 Surface Location: RG 12-14-298 Pad
 Federal RG 12-14-298
 North American Datum 1983 , US State Plane 1983 Colorado Central Zone
 Ground Elevation: 6560.0
 +N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1758319.30 2195522.90 39° 52' 49.985 N 108° 22' 0.720 W A5
 KELLY BUSHING @ 6581.0usft



Project: RG 14-02S-098W
 Site: RG 12-14-298 Pad
 Well: Federal RG 12-14-298
 Plan: Plan #2 21Mar10 kjs

Azimuths to True North
 Magnetic North: 11.04°
 Magnetic Field
 Strength: 52808.4snT
 Dip Angle: 66.10°
 Date: 8/27/2007
 Model: IGRF2005-10

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	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	
280.5	3.21	162.54	280.4	-4.3	1.3	2.00	162.542	4.5	
6276.6	3.21	162.54	6267.1	-324.6	102.1	0.00	0.000	340.2	
6490.6	0.00	0.00	6481.0	-330.3	103.9	1.50	180.000	346.2	Mesaverde (25' Radius) Federal RG 12-14-298
10940.6	0.00	0.00	10931.0	-330.3	103.9	0.00	0.000	346.2	

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
280.4	280.5	3.21	162.54	-4.3	1.3	4.5	4.5	Hold 3.21 Inc
6267.1	6276.6	3.21	162.54	-324.6	102.1	340.2	340.2	Start Drop -1.50
6481.0	6490.6	0.00	0.00	-330.3	103.9	346.2	346.2	Vertical
10931.0	10940.6	0.00	0.00	-330.3	103.9	346.2	346.2	TD at 10941

PICEANCE HL NAD 83

RG 14-02S-098W

RG 12-14-298 Pad

Federal RG 12-14-298 - Slot A5

Federal RG 12-14-298

Plan: Plan #2 21Mar10 kjs

Standard Planning Report - Geographic

30 March, 2010

Williams
Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well Federal RG 12-14-298 (A5) - Slot A5
Company:	PICEANCE HL NAD 83	TVD Reference:	KELLY BUSHING @ 6581.0usft
Project:	RG 14-02S-098W	MD Reference:	KELLY BUSHING @ 6581.0usft
Site:	RG 12-14-298 Pad	North Reference:	True
Well:	Federal RG 12-14-298	Survey Calculation Method:	Minimum Curvature
Wellbore:	Federal RG 12-14-298		
Design:	Plan #2 21Mar10 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
From:	Map	Easting:	2,195,514.10 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13.200 in
		Latitude:	39° 52' 49.862 N
		Longitude:	108° 22' 0.828 W
		Grid Convergence:	-1.808 °

Well	Federal RG 12-14-298 - Slot A5		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	
		Latitude:	39° 52' 49.985 N
		Longitude:	108° 22' 0.720 W
		Ground Level:	6,560.0 usft

Wellbore	Federal RG 12-14-298				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2005-10	8/27/2007	11.044	66.096	52,808

Design	Plan #2 21Mar10 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	162.54

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	
280.5	3.21	162.54	280.4	-4.3	1.3	2.00	2.00	0.00	162.542	
6,276.6	3.21	162.54	6,267.1	-324.6	102.1	0.00	0.00	0.00	0.000	
6,490.6	0.00	0.00	6,481.0	-330.3	103.9	1.50	-1.50	0.00	180.000	Mesaverde (25' Radiu
10,940.6	0.00	0.00	10,931.0	-330.3	103.9	0.00	0.00	0.00	0.000	

Williams
Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well Federal RG 12-14-298 (A5) - Slot A5
Company:	PICEANCE HL NAD 83	TVD Reference:	KELLY BUSHING @ 6581.0usft
Project:	RG 14-02S-098W	MD Reference:	KELLY BUSHING @ 6581.0usft
Site:	RG 12-14-298 Pad	North Reference:	True
Well:	Federal RG 12-14-298	Survey Calculation Method:	Minimum Curvature
Wellbore:	Federal RG 12-14-298		
Design:	Plan #2 21Mar10 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	1,758,319.30	2,195,522.90	39° 52' 49.985 N	108° 22' 0.720 W	
120.0	0.00	0.00	120.0	0.0	0.0	1,758,319.30	2,195,522.90	39° 52' 49.985 N	108° 22' 0.720 W	
280.5	3.21	162.54	280.4	-4.3	1.3	1,758,314.97	2,195,524.11	39° 52' 49.943 N	108° 22' 0.703 W	
6,276.6	3.21	162.54	6,267.1	-324.6	102.1	1,757,991.67	2,195,614.68	39° 52' 46.778 N	108° 21' 59.411 W	
6,490.6	0.00	0.00	6,481.0	-330.3	103.9	1,757,985.90	2,195,616.30	39° 52' 46.721 N	108° 21' 59.388 W	
10,940.6	0.00	0.00	10,931.0	-330.3	103.9	1,757,985.90	2,195,616.30	39° 52' 46.721 N	108° 21' 59.388 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	6,481.0	-330.3	103.9	1,757,985.90	2,195,616.30	39° 52' 46.721 N	108° 21' 59.388 W	
Mesaverde (50' Radius) - plan hits target center - Circle (radius 50.0)	0.00	0.00	6,481.0	-330.3	103.9	1,757,985.90	2,195,616.30	39° 52' 46.721 N	108° 21' 59.388 W	

Casing Points							Casing Diameter (in)	Hole Diameter (in)
Measured Depth (usft)	Vertical Depth (usft)	Name						
3,010.0	3,005.6	9 5/8"					9.625	13.500

Williams
Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well Federal RG 12-14-298 (A5) - Slot A5
Company:	PICEANCE HL NAD 83	TVD Reference:	KELLY BUSHING @ 6581.0usft
Project:	RG 14-02S-098W	MD Reference:	KELLY BUSHING @ 6581.0usft
Site:	RG 12-14-298 Pad	North Reference:	True
Well:	Federal RG 12-14-298	Survey Calculation Method:	Minimum Curvature
Wellbore:	Federal RG 12-14-298		
Design:	Plan #2 21Mar10 kjs		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
746.8	746.0	Green River Fm				
897.1	896.0	A Groove				
1,082.3	1,081.0	B Groove				
1,392.8	1,391.0	Dissolution Surface				
2,124.0	2,121.0	Garden Gulch				
2,304.3	2,301.0	Orange Marker				
2,509.6	2,506.0	Wasatch				
4,407.6	4,401.0	G' Sand				
4,678.0	4,671.0	Ft. Union				
5,970.0	5,961.0	Ohio Creek				
6,490.6	6,481.0	Mesaverde				
7,370.6	7,361.0	Top Gas				
9,350.6	9,341.0	Cameo Coals				
9,750.6	9,741.0	Rollins SS				
9,875.6	9,866.0	Cozzette				
10,100.6	10,091.0	Corcoran				
10,445.6	10,436.0	Upper Sego				
10,690.6	10,681.0	Lower Sego				
10,940.6	10,931.0	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	
280.5	280.4	-4.3	1.3	Hold 3.21 Inc	
6,276.6	6,267.1	-324.6	102.1	Start Drop -1.50	
6,490.6	6,481.0	-330.3	103.9	Vertical	
10,940.6	10,931.0	-330.3	103.9	TD at 10941	