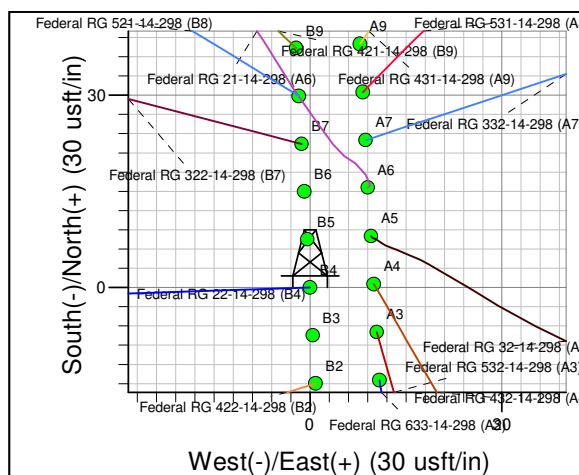
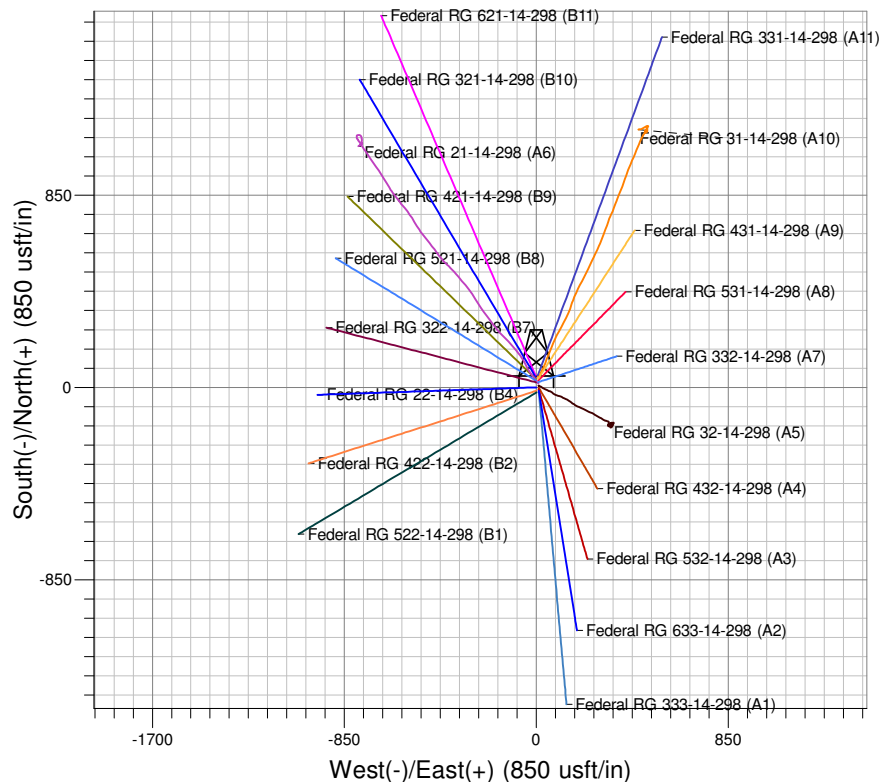


Well Name: Federal RG 22-14-298
Surface Location: RG 32-14-298 Pad
North American Datum 1983 US State Plane 1983 Colorado Central Zone
Ground Elevation: 6545.0
+N/-S +E/-W Northing Easting Latitude Longitude Slot
0.0 0.0 1758122.00 2197913.50 39° 52' 48.781 N 108° 21' 29.991 W B4
Cyclone 29 (21' RKB) jib



Project: RG 14-02S-098W
Site: RG 32-14-298 Pad
Well: Federal RG 22-14-298
Plan: Design #1 17Mar10 kjs

Azimuths to True North
Magnetic North: 10.73°
Magnetic Field
Strength: 52532.1snT
Dip Angle: 66.02°
Date: 3/17/2010
Model: IGRF2010

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	
585.8	9.32	268.05	583.7	-1.3	-37.8	2.00	268.050	37.8	
6031.6	9.32	268.05	5957.7	-31.3	-918.8	0.00	0.000	919.3	
6652.6	0.00	0.00	6576.0	-33.0	-969.1	1.50	180.000	969.7	Mesaverde (25' Radius) Federal RG 22-14-298
11112.6	0.00	0.00	11036.0	-33.0	-969.1	0.00	0.000	969.7	

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
583.7	585.8	9.32	268.05	-1.3	-37.8	37.8	37.8	Hold 9.32 Inc
5957.7	6031.6	9.32	268.05	-31.3	-918.8	919.3	919.3	Start Drop -1.50
6576.0	6652.6	0.00	0.00	-33.0	-969.1	969.7	969.7	Vertical
11036.0	11112.6	0.00	0.00	-33.0	-969.1	969.7	969.7	TD at 11113

PICEANCE HL NAD 83

RG 14-02S-098W

RG 32-14-298 Pad

Federal RG 22-14-298 - Slot B4

Wellbore #1

Plan: Design #1 17Mar10 kjs

Standard Planning Report - Geographic

25 March, 2010

Williams
Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well Federal RG 22-14-298 (B4) - Slot B4
Company:	PICEANCE HL NAD 83	TVD Reference:	KELLY BUSHING @ 6566.0usft (Cyclone 29 (21' RKB) jib)
Project:	RG 14-02S-098W	MD Reference:	KELLY BUSHING @ 6566.0usft (Cyclone 29 (21' RKB) jib)
Site:	RG 32-14-298 Pad	North Reference:	True
Well:	Federal RG 22-14-298	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 17Mar10 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 32-14-298 Pad		
Site Position:		Northing:	1,758,130.50 usft
From:	Map	Easting:	2,197,923.90 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13.200 in
		Latitude:	39° 52' 48.868 N
		Longitude:	108° 21' 29.862 W
		Grid Convergence:	-1.803 °

Well	Federal RG 22-14-298 - Slot B4		
Well Position	+N/-S	0.0 usft	Northing: 1,758,122.00 usft
	+E/-W	0.0 usft	Easting: 2,197,913.50 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	Latitude: 39° 52' 48.781 N
			Longitude: 108° 21' 29.991 W
			Ground Level: 6,545.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/17/2010	10.726	66.021	52,532

Design	Design #1 17Mar10 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	268.05

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	
585.8	9.32	268.05	583.7	-1.3	-37.8	2.00	2.00	0.00	268.050	
6,031.6	9.32	268.05	5,957.7	-31.3	-918.8	0.00	0.00	0.00	0.000	
6,652.6	0.00	0.00	6,576.0	-33.0	-969.1	1.50	-1.50	0.00	180.000	Mesaverde (25' Radiu
11,112.6	0.00	0.00	11,036.0	-33.0	-969.1	0.00	0.00	0.00	0.000	

Williams
Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well Federal RG 22-14-298 (B4) - Slot B4
Company:	PICEANCE HL NAD 83	TVD Reference:	KELLY BUSHING @ 6566.0usft (Cyclone 29 (21' RKB) jjb)
Project:	RG 14-02S-098W	MD Reference:	KELLY BUSHING @ 6566.0usft (Cyclone 29 (21' RKB) jjb)
Site:	RG 32-14-298 Pad	North Reference:	True
Well:	Federal RG 22-14-298	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 17Mar10 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	1,758,122.00	2,197,913.50	39° 52' 48.781 N	108° 21' 29.991 W
120.0	0.00	0.00	120.0	0.0	0.0	1,758,122.00	2,197,913.50	39° 52' 48.781 N	108° 21' 29.991 W
585.8	9.32	268.05	583.7	-1.3	-37.8	1,758,121.90	2,197,875.72	39° 52' 48.768 N	108° 21' 30.476 W
6,031.6	9.32	268.05	5,957.7	-31.3	-918.8	1,758,119.63	2,196,994.18	39° 52' 48.471 N	108° 21' 41.777 W
6,652.6	0.00	0.00	6,576.0	-33.0	-969.1	1,758,119.50	2,196,943.80	39° 52' 48.454 N	108° 21' 42.422 W
11,112.6	0.00	0.00	11,036.0	-33.0	-969.1	1,758,119.50	2,196,943.80	39° 52' 48.454 N	108° 21' 42.422 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	6,576.0	-33.0	-969.1	1,758,119.50	2,196,943.80	39° 52' 48.454 N	108° 21' 42.422 W
- plan hits target center									
- Circle (radius 25.0)									
Mesaverde (50' Radius)	0.00	0.00	6,576.0	-33.0	-969.1	1,758,119.50	2,196,943.80	39° 52' 48.454 N	108° 21' 42.422 W
- plan hits target center									
- Circle (radius 50.0)									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
3,024.0	2,989.8	9 5/8"	9.625	13.500	

Williams
Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well Federal RG 22-14-298 (B4) - Slot B4
Company:	PICEANCE HL NAD 83	TVD Reference:	KELLY BUSHING @ 6566.0usft (Cyclone 29 (21' RKB) jjb)
Project:	RG 14-02S-098W	MD Reference:	KELLY BUSHING @ 6566.0usft (Cyclone 29 (21' RKB) jjb)
Site:	RG 32-14-298 Pad	North Reference:	True
Well:	Federal RG 22-14-298	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 17Mar10 kjs		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
745.2	741.0	Green River Fm				
897.2	891.0	A Groove				
1,079.6	1,071.0	B Groove				
1,398.8	1,386.0	Dissolution Surface				
2,138.5	2,116.0	Garden Gulch				
2,320.9	2,296.0	Orange Marker				
2,523.6	2,496.0	Wasatch				
4,499.7	4,446.0	G' Sand				
4,783.4	4,726.0	Ft. Union				
6,110.8	6,036.0	Ohio Creek				
6,652.6	6,576.0	Mesaverde				
7,512.6	7,436.0	Top Gas				
9,522.6	9,446.0	Cameo Coals				
9,912.6	9,836.0	Rollins SS				
10,042.6	9,966.0	Cozzette				
10,262.6	10,186.0	Corcoran				
10,617.6	10,541.0	Upper Sego				
10,862.6	10,786.0	Lower Sego				
11,112.6	11,036.0	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	
585.8	583.7	-1.3	-37.8	Hold 9.32 Inc	
6,031.6	5,957.7	-31.3	-918.8	Start Drop -1.50	
6,652.6	6,576.0	-33.0	-969.1	Vertical	
11,112.6	11,036.0	-33.0	-969.1	TD at 11113	