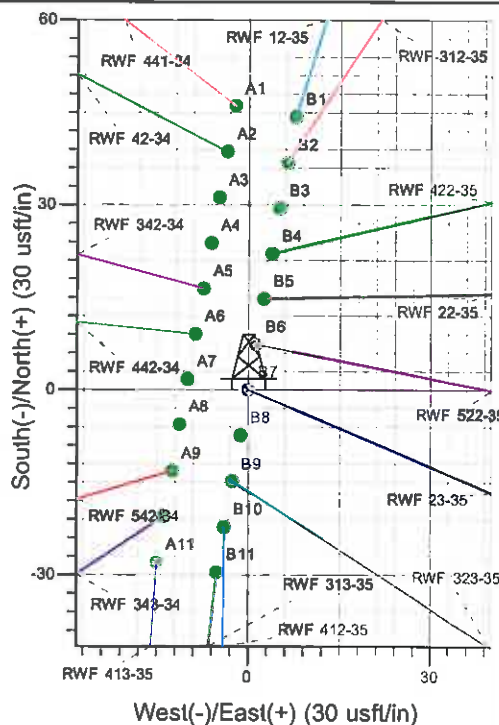
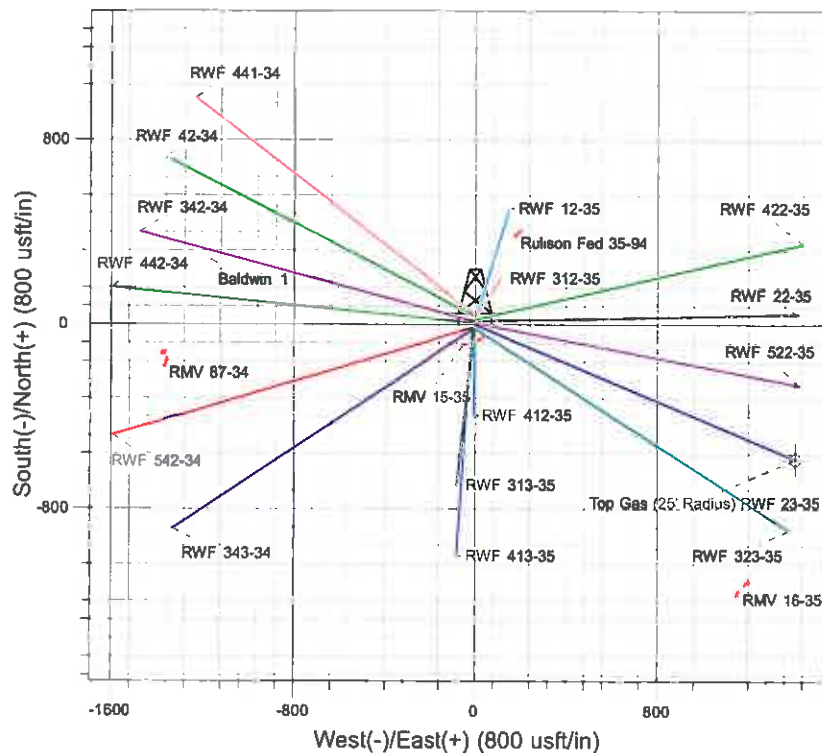
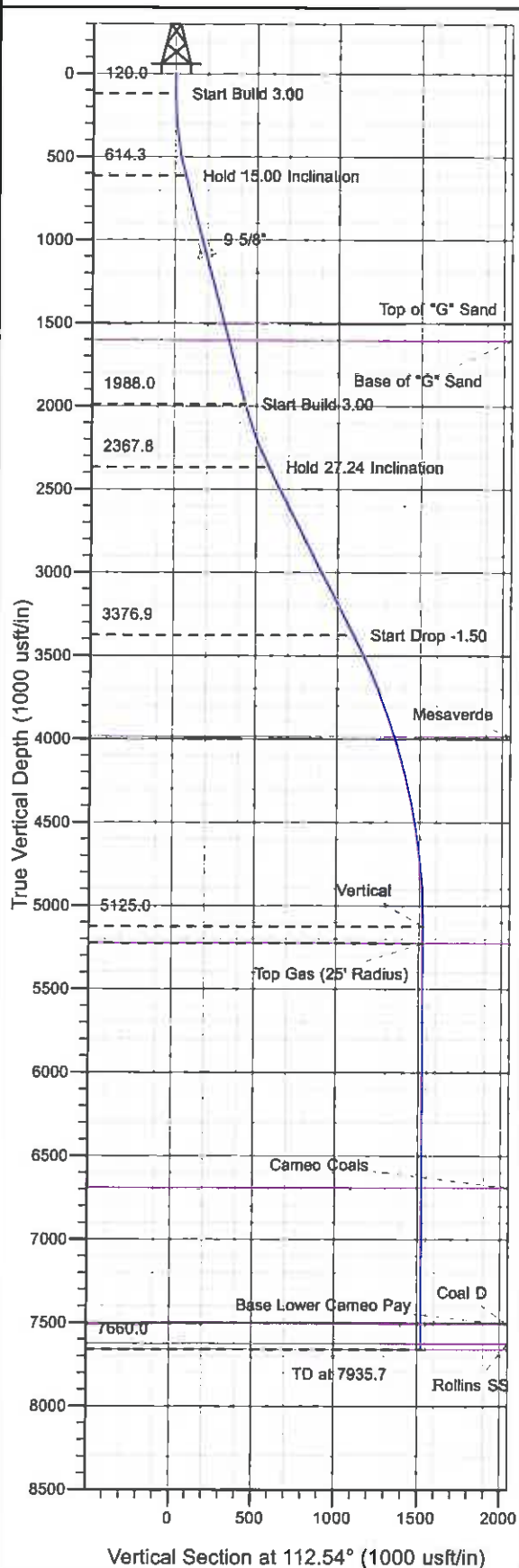




Well Name: RWF 23-35  
 Surface Location: RMV 15-35 Pad  
 North American Datum 1983 , US State Plane 1983 , Colorado Central Zone  
 Ground Elevation: 5550.0  
 +N/-S +E/-W Northing Easting Latitude Longitude Slat  
 0.0 0.0 1609622.30 2333147.70 39° 29' 0.161 N 107° 51' 46.394 W B7  
 KELLY BUSHING @ 5574.0usft (H&P 271 (24' RKB) kjs)



Project: RU 35-06S-094W  
 Site: RMV 15-35 Pad  
 Well: RWF 23-35  
 Plan #2 17Dec10 kjs



Azimuths to True North  
 Magnetic North: 10.69°  
 Magnetic Field  
 Strength: 52609.5nT  
 Dip Angle: 65.85°  
 Date: 4/2/2008  
 Model: IGRF2005-10

#### ANNOTATIONS

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 3.00
614.3	620.0	15.00	112.54	-24.9	60.1	65.1	65.1	Hold 15.00 Inclination
1988.0	2042.2	15.00	112.54	-166.0	400.1	433.2	433.2	Start Build 3.00
2367.8	2450.0	27.24	112.54	-222.3	535.5	579.8	579.8	Hold 27.24 Inclination
3376.9	3585.0	27.24	112.54	-421.4	1015.3	1099.3	1099.3	Start Drop -1.50
5125.0	5400.7	0.00	0.00	-583.7	1406.4	1522.7	1522.7	Vertical
5225.0	5500.7	0.00	0.00	-583.7	1406.4	1522.7	1522.7	Top Gas
7660.0	7935.7	0.00	0.00	-583.7	1406.4	1522.7	1522.7	TD at 7935.7

# **PICEANCE VLY NAD 83**

**RU 35-06S-094W**

**RMV 15-35 Pad**

**RWF 23-35 - Slot B7**

**Wellbore #1**

**Plan: Plan #2 17Dec10 kjs**

## **Standard Planning Report - Geographic**

**10 February, 2011**

**Williams**  
Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well RWF 23-35 - Slot B7
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 5574.0usft (H&P 271 (24' RKB) kjs)
Project:	RU 35-06S-094W	MD Reference:	KELLY BUSHING @ 5574.0usft (H&P 271 (24' RKB) kjs)
Site:	RMV 15-35 Pad	North Reference:	True
Well:	RWF 23-35	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 17Dec10 kjs		

Project	RU 35-06S-094W, Garfield County, CO		
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		RMV 15-35 Pad			
Site Position:		Northing:	1,609,578.20 usft	Latitude:	39° 28' 59.723 N
From:	Map	Easting:	2,333,138.00 usft	Longitude:	107° 51' 46.503 W
Position Uncertainty:	0.0 usft	Slot Radius:	13.200 in	Grid Convergence:	-1.490 °

Well	RWF 23-35 - Slot B7					
Well Position	+N/-S	0.0 usft	Northing:	1,609,622.30 usft	Latitude:	39° 29' 0.161 N
	+E/-W	0.0 usft	Easting:	2,333,147.70 usft	Longitude:	107° 51' 46.394 W
Position Uncertainty		0.0 usft	Wellhead Elevation:		Ground Level:	5,550.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (")	Dip Angle (°)	Field Strength (nT)
	IGRF2005-10	4/2/2008	10.685	65.849	52,610

Design	Plan #2 17Dec10 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	112.54

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	
620.0	15.00	112.54	614.3	-24.9	60.1	3.00	3.00	0.00	112.540	
2,042.2	15.00	112.54	1,988.0	-166.0	400.1	0.00	0.00	0.00	0.000	
2,450.0	27.24	112.54	2,367.8	-222.3	535.5	3.00	3.00	0.00	0.000	
3,585.0	27.24	112.54	3,376.9	-421.4	1,015.3	0.00	0.00	0.00	0.000	
5,400.7	0.00	0.00	5,125.0	-583.7	1,406.4	1.50	-1.50	0.00	180.000	
5,500.7	0.00	0.00	5,225.0	-583.7	1,406.4	0.00	0.00	0.00	0.000	Top Gas (25' Radius)
7,935.7	0.00	0.00	7,660.0	-583.7	1,406.4	0.00	0.00	0.00	0.000	

**Williams**  
Planning Report - Geographic

<b>Database:</b>	Compass R5000 WIN AUTH	<b>Local Co-ordinate Reference:</b>	Well RWF 23-35 - Slot B7
<b>Company:</b>	PICEANCE VLY NAD 83	<b>TVD Reference:</b>	KELLY BUSHING @ 5574.0usft (H&P 271 (24' RKB) kjs)
<b>Project:</b>	RU 35-06S-094W	<b>MD Reference:</b>	KELLY BUSHING @ 5574.0usft (H&P 271 (24' RKB) kjs)
<b>Site:</b>	RMV 15-35 Pad	<b>North Reference:</b>	True
<b>Well:</b>	RWF 23-35	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #2 17Dec10 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	1,609,622.30	2,333,147.70	39° 29' 0.161 N	107° 51' 46.394 W
120.0	0.00	0.00	120.0	0.0	0.0	1,609,622.30	2,333,147.70	39° 29' 0.161 N	107° 51' 46.394 W
<b>Start Build 3.00</b>									
620.0	15.00	112.54	614.3	-24.9	60.1	1,609,595.80	2,333,207.14	39° 28' 59.915 N	107° 51' 45.628 W
<b>Hold 15.00 Inclination</b>									
1,122.8	15.00	112.54	1,100.0	-74.8	180.3	1,609,542.80	2,333,325.99	39° 28' 59.422 N	107° 51' 44.095 W
<b>9 5/8"</b>									
1,542.1	15.00	112.54	1,505.0	-116.4	280.5	1,609,498.61	2,333,425.10	39° 28' 59.011 N	107° 51' 42.816 W
<b>Top of "G" Sand</b>									
1,645.6	15.00	112.54	1,605.0	-126.7	305.3	1,609,487.70	2,333,449.57	39° 28' 58.909 N	107° 51' 42.501 W
<b>Base of "G" Sand</b>									
2,042.2	15.00	112.54	1,988.0	-166.0	400.1	1,609,445.91	2,333,543.30	39° 28' 58.520 N	107° 51' 41.292 W
<b>Start Build 3.00</b>									
2,450.0	27.24	112.54	2,367.8	-222.3	535.5	1,609,386.18	2,333,677.25	39° 28' 57.965 N	107° 51' 39.564 W
<b>Hold 27.24 Inclination</b>									
3,585.0	27.24	112.54	3,376.9	-421.4	1,015.3	1,609,174.66	2,334,151.63	39° 28' 55.997 N	107° 51' 33.446 W
<b>Start Drop -1.50</b>									
4,243.1	17.36	112.54	3,985.0	-517.0	1,245.6	1,609,073.09	2,334,379.41	39° 28' 55.051 N	107° 51' 30.508 W
<b>Mesaverde</b>									
5,400.7	0.00	0.00	5,125.0	-583.7	1,406.4	1,609,002.20	2,334,538.40	39° 28' 54.392 N	107° 51' 28.457 W
<b>Vertical</b>									
5,500.7	0.00	0.00	5,225.0	-583.7	1,406.4	1,609,002.20	2,334,538.40	39° 28' 54.392 N	107° 51' 28.457 W
<b>Top Gas - Approx. Top Gas</b>									
6,965.7	0.00	0.00	6,690.0	-583.7	1,406.4	1,609,002.20	2,334,538.40	39° 28' 54.392 N	107° 51' 28.457 W
<b>Cameo Coals</b>									
7,783.7	0.00	0.00	7,508.0	-583.7	1,406.4	1,609,002.20	2,334,538.40	39° 28' 54.392 N	107° 51' 28.457 W
<b>Base Lower Cameo Pay</b>									
7,785.7	0.00	0.00	7,510.0	-583.7	1,406.4	1,609,002.20	2,334,538.40	39° 28' 54.392 N	107° 51' 28.457 W
<b>Coal D</b>									
7,900.7	0.00	0.00	7,625.0	-583.7	1,406.4	1,609,002.20	2,334,538.40	39° 28' 54.392 N	107° 51' 28.457 W
<b>Rollins SS</b>									
7,935.7	0.00	0.00	7,660.0	-583.7	1,406.4	1,609,002.20	2,334,538.40	39° 28' 54.392 N	107° 51' 28.457 W
<b>TD at 7935.7 - TD</b>									

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									
Top Gas (25' Radius) R1	0.00	0.00	5,225.0	-583.7	1,406.4	1,609,002.20	2,334,538.40	39° 28' 54.392 N	107° 51' 28.457 W
- plan hits target center									
- Circle (radius 25.0)									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,122.8	1,100.0	9 5/8"	9.625	12.250	

**Williams**  
Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well RWF 23-35 - Slot B7
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 5574.0usft (H&P 271 (24' RKB) kjs)
Project:	RU 35-06S-094W	MD Reference:	KELLY BUSHING @ 5574.0usft (H&P 271 (24' RKB) kjs)
Site:	RMV 15-35 Pad	North Reference:	True
Well:	RWF 23-35	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 17Dec10 kjs		

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,542.1	1,505.0	Top of "G" Sand			
1,645.6	1,605.0	Base of "G" Sand			
4,243.1	3,985.0	Mesaverde			
5,500.7	5,225.0	Approx. Top Gas			
6,865.7	6,690.0	Cameo Coals			
7,783.7	7,508.0	Base Lower Cameo Pay			
7,785.7	7,510.0	Coal D			
7,900.7	7,625.0	Rollins SS			
7,935.7	7,660.0	TD			

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 3.00
620.0	614.3	-24.9	60.1	Hold 15.00 Inclination
2,042.2	1,988.0	-166.0	400.1	Start Build 3.00
2,450.0	2,367.8	-222.3	535.5	Hold 27.24 Inclination
3,585.0	3,376.9	-421.4	1,015.3	Start Drop -1.50
5,400.7	5,125.0	-583.7	1,406.4	Vertical
5,500.7	5,225.0	-583.7	1,406.4	Top Gas
7,935.7	7,660.0	-583.7	1,406.4	TD at 7935.7