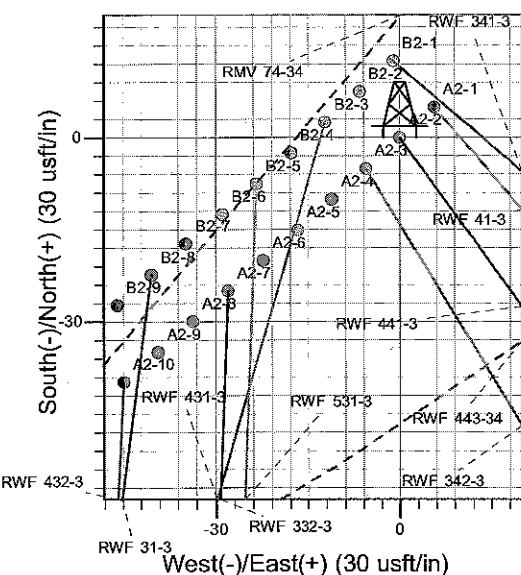
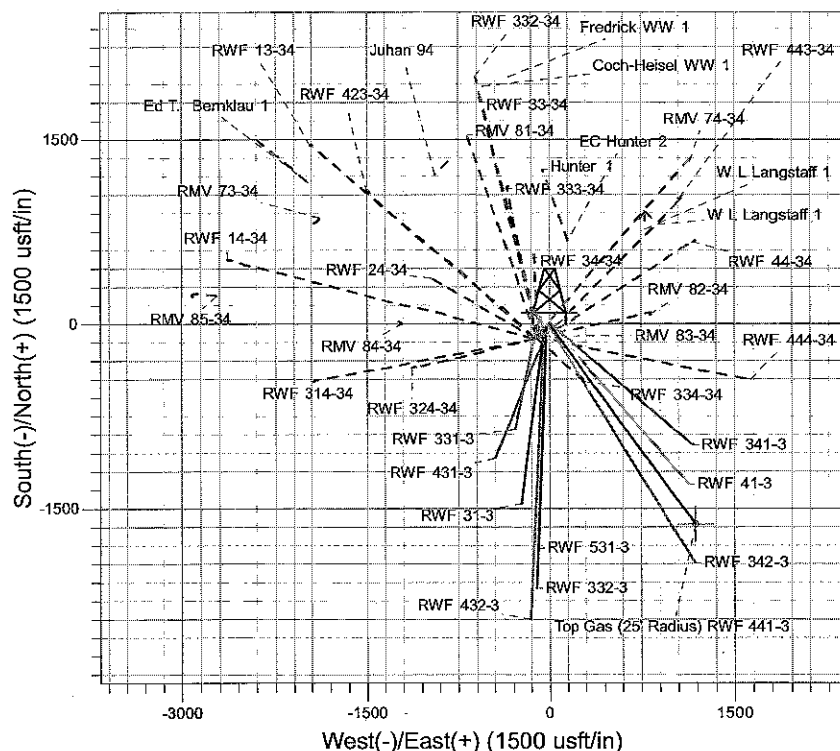
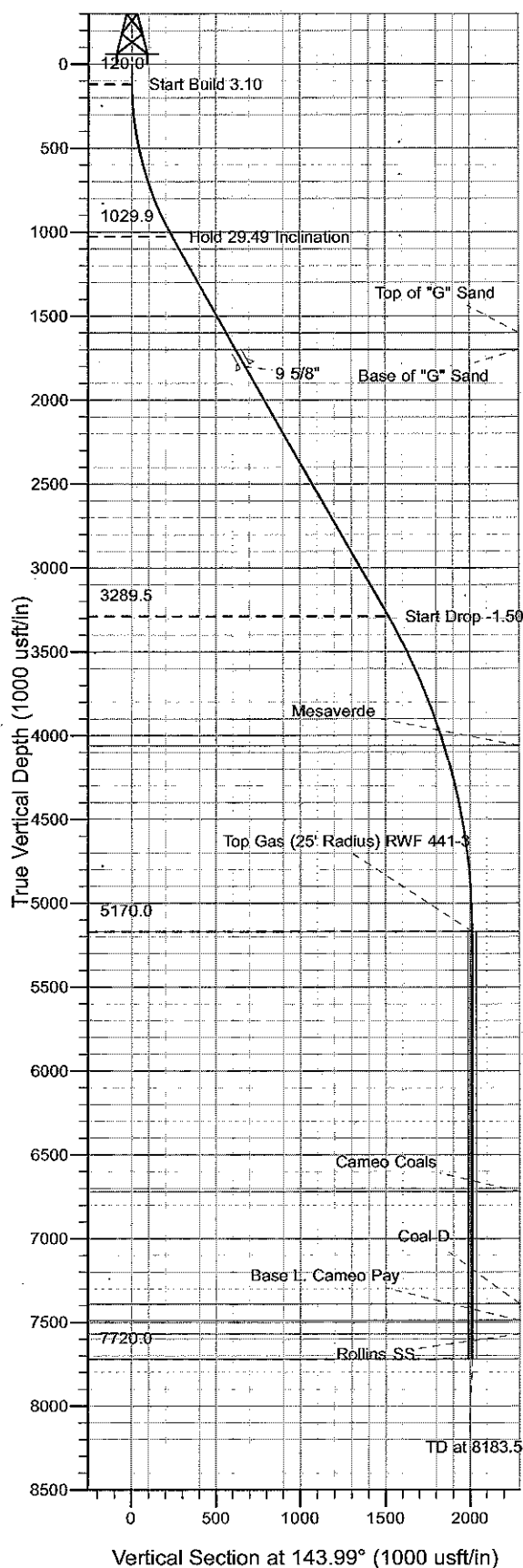




Well Name: RWF 441-3
 Surface Location: RMV 83-34 Pad
 North American Datum 1983 , US State Plane 1983, Colorado Central Zone
 Ground Elevation: 5626.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1607118.30	2330719.40	39° 28' 34.796 N	107° 52' 16.522 W	A2-2

KELLY BUSHING @ 5650.0usft (H&P 24' KB JMS)



Project: RU 34-06S-094W
 Site: RMV 83-34 Pad
 Well: RWF 441-3
 Design #1 14Apr10 JMS

Azimuths to True North
 Magnetic North: 10.45°
 Magnetic Field
 Strength: 52376.8nT
 Dip Angle: 65.78°
 Date: 4/14/2010
 Model: IGRF2010

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 3.10
1029.9	1071.4	29.49	143.99	-193.7	140.8	239.5	239.5	239.5	Hold 29.49 Inclination
3289.5	3667.3	29.49	143.99	-1227.5	892.2	1517.5	1517.5	1517.5	Start Drop -1.50
5170.0	5633.5	0.00	0.00	-1627.9	1183.2	2012.5	2012.5	2012.5	Top Gas
7720.0	8183.5	0.00	0.00	-1627.9	1183.2	2012.5	2012.5	2012.5	TD at 8183.5

PICEANCE VLY NAD 83

RU 34-06S-094W

RMV 83-34 Pad

RWF 441-3 - Slot A2-2

Wellbore #1

Plan: Design #1 14Apr10 JMS

Standard Planning Report - Geographic

29 April, 2010

Williams

Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well RWF 441-3 - Slot A2-2
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 5650.0usft (H&P 24' KB JMS)
Project:	RU 34-06S-094W	MD Reference:	KELLY BUSHING @ 5650.0usft (H&P 24' KB JMS)
Site:	RMV 83-34 Pad	North Reference:	True
Well:	RWF 441-3	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 14Apr10 JMS		

Project	RU 34-06S-094W, Garfield County, CO, 34-06S-094W		
Map System:	US State Plane 1983	System Datum:	Ground Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		Using geodetic scale factor

Site		RMV 83-34 Pad				
Site Position:		Northing:	1,607,043.10 usft	Latitude:	39° 28' 34.035 N	
From:	Map	Easting:	2,330,648.70 usft	Longitude:	107° 52' 17.399 W	
Position Uncertainty:		0.0 usft	Slot Radius:	0.000 in	Grid Convergence:	-1.496 °

Well	RWF 441-3 - Slot A2-2					
Well Position	+N-S	0.0 usft	Northing:	1,607,118.30 usft	Latitude:	39° 28' 34.796 N
	+E-W	0.0 usft	Easting:	2,330,719.40 usft	Longitude:	107° 52' 16.522 W
Position Uncertainty		0.0 usft	Wellhead Elevation:		Ground Level:	5,626.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	4/14/2010	10.445	65.778	52,377

Design	Design #1 14Apr10 JMS			
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	143.99

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	
1,071.4	29.49	143.99	1,029.9	-193.7	140.8	3.10	3.10	0.00	143.989	
3,667.3	29.49	143.99	3,289.5	-1,227.5	892.2	0.00	0.00	0.00	0.000	
5,633.5	0.00	0.00	5,170.0	-1,627.9	1,183.2	1.50	-1.50	0.00	180.000	Top Gas (25' Radius)
8,183.5	0.00	0.00	7,720.0	-1,627.9	1,183.2	0.00	0.00	0.00	0.000	

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Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well RWF 441-3 - Slot A2-2
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 5650.0usft (H&P 24' KB JMS)
Project:	RU 34-06S-094W	MD Reference:	KELLY BUSHING @ 5650.0usft (H&P 24' KB JMS)
Site:	RMV 83-34 Pad	North Reference:	True
Well:	RWF 441-3	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 14Apr10 JMS		

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	1,607,118.30	2,330,719.40	39° 28' 34.796 N	107° 52' 16.522 W
120.0	0.00	0.00	120.0	0.0	0.0	1,607,118.30	2,330,719.40	39° 28' 34.796 N	107° 52' 16.522 W
Start Build 3.10									
1,071.4	29.49	143.99	1,029.9	-193.7	140.8	1,606,920.96	2,330,855.11	39° 28' 32.881 N	107° 52' 14.727 W
Hold 29.49 Inclination									
1,726.3	29.49	143.99	1,600.0	-454.6	330.4	1,606,655.28	2,331,037.80	39° 28' 30.303 N	107° 52' 12.309 W
Top of "G" Sand									
1,841.2	29.49	143.99	1,700.0	-500.3	363.6	1,606,608.68	2,331,069.85	39° 28' 29.851 N	107° 52' 11.885 W
Base of "G" Sand									
1,956.1	29.49	143.99	1,800.0	-546.1	396.9	1,606,562.08	2,331,101.90	39° 28' 29.399 N	107° 52' 11.461 W
9 5/8"									
3,667.3	29.49	143.99	3,289.5	-1,227.5	892.2	1,605,867.93	2,331,579.24	39° 28' 22.664 N	107° 52' 5.145 W
Start Drop -1.50									
4,507.3	16.89	143.99	4,060.0	-1,494.6	1,086.3	1,605,595.91	2,331,766.30	39° 28' 20.024 N	107° 52' 2.669 W
Mesaverde									
5,633.5	0.00	0.00	5,170.0	-1,627.9	1,183.2	1,605,460.10	2,331,859.70	39° 28' 18.706 N	107° 52' 1.434 W
Top Gas - Approx. Top Gas									
7,183.5	0.00	0.00	6,720.0	-1,627.9	1,183.2	1,605,460.10	2,331,859.70	39° 28' 18.706 N	107° 52' 1.434 W
Cameo Coals									
7,853.5	0.00	0.00	7,390.0	-1,627.9	1,183.2	1,605,460.10	2,331,859.70	39° 28' 18.706 N	107° 52' 1.434 W
Coal D									
7,953.5	0.00	0.00	7,490.0	-1,627.9	1,183.2	1,605,460.10	2,331,859.70	39° 28' 18.706 N	107° 52' 1.434 W
Base L. Cameo Pay									
8,033.5	0.00	0.00	7,570.0	-1,627.9	1,183.2	1,605,460.10	2,331,859.70	39° 28' 18.706 N	107° 52' 1.434 W
Rollins SS									
8,183.5	0.00	0.00	7,720.0	-1,627.9	1,183.2	1,605,460.10	2,331,859.70	39° 28' 18.706 N	107° 52' 1.434 W
TD at 8183.5 - TD									

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) R\	0.00	0.00	5,170.0	-1,627.9	1,183.2	1,605,460.10	2,331,859.70	39° 28' 18.706 N	107° 52' 1.434 W
- plan hits target center									
- Circle (radius 25.0)									

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)
1,956.1	1,800.0	9 5/8"	9.625	12.250

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Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well RWF 441-3 - Slot A2-2
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 5650.0usft (H&P 24' KB JMS)
Project:	RU 34-06S-094W	MD Reference:	KELLY BUSHING @ 5650.0usft (H&P 24' KB JMS)
Site:	RMV 83-34 Pad	North Reference:	True
Well:	RWF 441-3	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 14Apr10 JMS		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,726.3	1,600.0	Top of "G" Sand				
1,841.2	1,700.0	Base of "G" Sand				
4,507.3	4,060.0	Mesaverde				
5,633.5	5,170.0	Approx. Top Gas				
7,183.5	6,720.0	Cameo Coals				
7,853.5	7,390.0	Coal D				
7,953.5	7,490.0	Base L. Cameo Pay				
8,033.5	7,570.0	Rollins SS				
8,183.5	7,720.0	TD				

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 3.10	
1,071.4	1,029.9	-193.7	140.8	Hold 29.49 Inclination	
3,667.3	3,289.5	-1,227.5	892.2	Start Drop -1.50	
5,633.5	5,170.0	-1,627.9	1,183.2	Top Gas	
8,183.5	7,720.0	-1,627.9	1,183.2	TD at 8183.5	