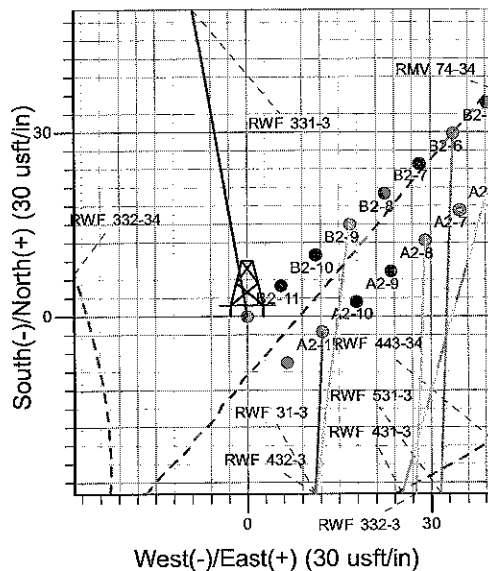
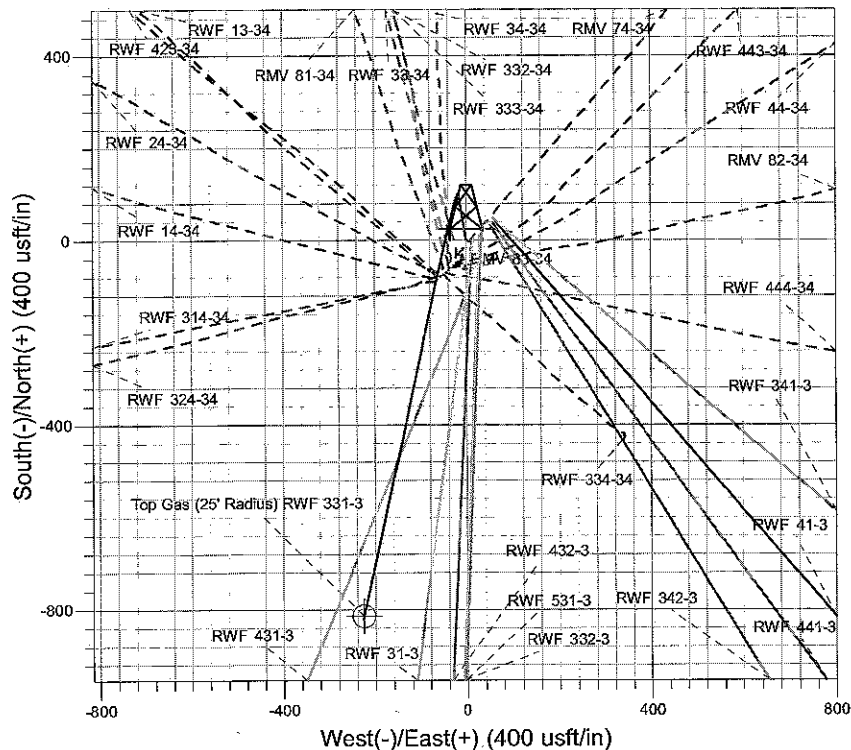
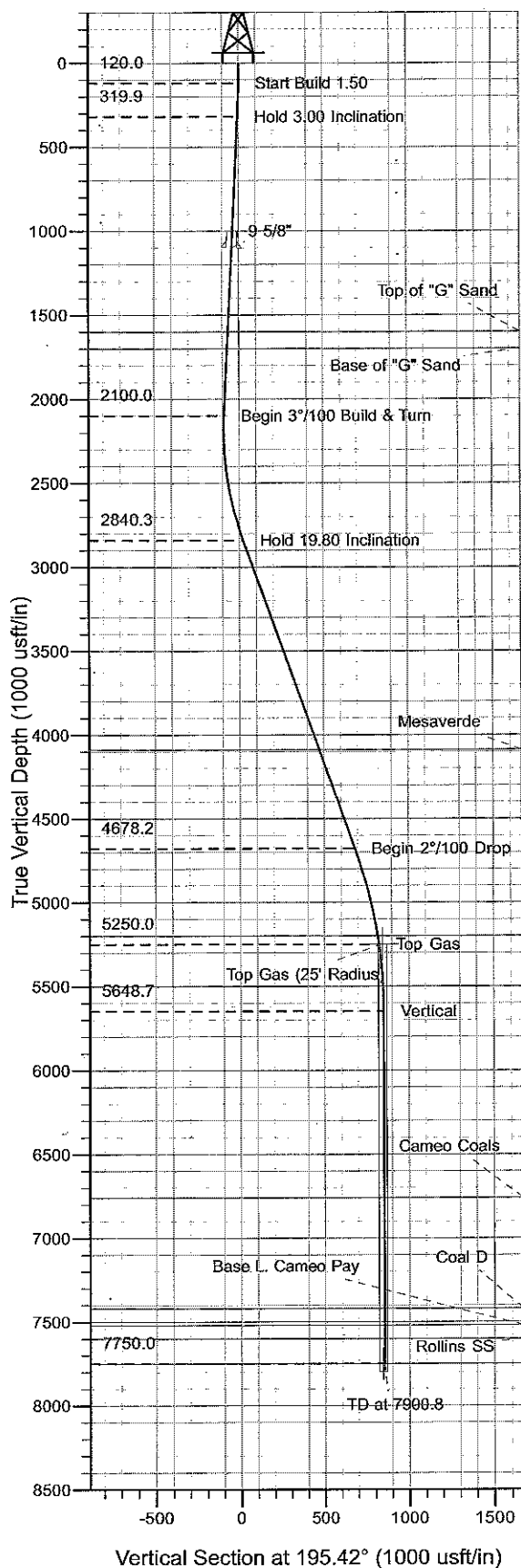




Well Name: RWF 331-3
 Surface Location: RMV 83-34 Pad
 North American Datum 1983 , US State Plane 1983, Colorado Central Zone
 Ground Elevation: 5626.0
 +N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1607082.50 2330661.30 39° 28' 34.427 N 107° 52' 17.251 W B2-11
 KELLY BUSHING @ 5650.0usft (H&P 24' KB JMS)



Project: RU 34-06S-094W
 Site: RMV 83-34 Pad
 Well: RWF 331-3
 Design #1 14Apr10 JMS



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

ANNOTATIONS

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 1.50
319.9	320.0	3.00	350.00	5.2	-0.9	-4.7	5.2	Hold 3.00 Inclination
2100.0	2102.5	3.00	350.00	97.0	-17.1	-89.0	96.5	Begin 3°/100 Build & Turn
2840.3	2856.0	19.80	192.38	-9.6	-48.3	22.1	246.9	Hold 19.80 Inclination
4678.2	4809.4	19.80	192.38	-656.0	-190.2	652.9	908.7	Begin 2°/100 Drop
5250.0	5399.5	8.00	192.38	-794.2	-220.6	824.3	1050.2	Top Gas
5648.7	5799.5	0.00	104.29	-821.4	-226.6	852.1	1078.1	Vertical
7750.0	7900.8	0.00	104.29	-821.4	-226.6	852.1	1078.1	TD at 7900.8

PICEANCE VLY NAD 83

RU 34-06S-094W

RMV 83-34 Pad

RWF 331-3 - Slot B2-11

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 331-3 - Slot B2-11
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 331-3	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
From:	Map	Easting:	2,330,648.70 usft
Position Uncertainty:	0.0 usft	Slot Radius:	0.000 in
		Latitude:	39° 28' 34.035 N
		Longitude:	107° 52' 17.399 W
		Grid Convergence:	-1.496 °

Well	RWF 331-3 - Slot B2-11		
Well Position	+N/-S	0.0 usft	Northing: 1,607,082.50 usft
	+E/-W	0.0 usft	Easting: 2,330,661.30 usft
Position Uncertainty	0.0 usft		Wellhead Elevation:
			Ground Level: 5,626.0 usft

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

Design	Design #1 14Apr10 JMS		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth: 0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction
			(°)
			195.42

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	
320.0	3.00	350.00	319.9	5.2	-0.9	1.50	1.50	0.00	350.000	
2,102.5	3.00	350.00	2,100.0	97.0	-17.1	0.00	0.00	0.00	0.000	
2,856.0	19.80	192.38	2,840.3	-9.6	-48.3	3.00	2.23	-20.92	-160.388	
4,809.4	19.80	192.38	4,678.2	-656.0	-190.2	0.00	0.00	0.00	0.000	
5,399.5	8.00	192.38	5,250.0	-794.2	-220.6	2.00	-2.00	0.00	-179.998	Top Gas (25' Radius)
5,799.5	0.00	104.29	5,648.7	-821.4	-226.6	2.00	-2.00	-22.02	-179.998	
7,900.8	0.00	104.29	7,750.0	-821.4	-226.5	0.00	0.00	0.00	0.000	

Williams
Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well RWF 331-3 - Slot B2-11
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 331-3	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	1,607,082.50	2,330,661.30	39° 28' 34.427 N	107° 52' 17.251 W	
120.0	0.00	0.00	120.0	0.0	0.0	1,607,082.50	2,330,661.30	39° 28' 34.427 N	107° 52' 17.251 W	
Start Build 1.50										
320.0	3.00	350.00	319.9	5.2	-0.9	1,607,087.67	2,330,660.53	39° 28' 34.478 N	107° 52' 17.263 W	
Hold 3.00 Inclination										
1,101.2	3.00	350.00	1,100.0	45.4	-8.0	1,607,128.10	2,330,654.48	39° 28' 34.876 N	107° 52' 17.353 W	
9 5/8"										
1,601.8	3.00	350.00	1,600.0	71.2	-12.6	1,607,154.02	2,330,650.61	39° 28' 35.131 N	107° 52' 17.411 W	
Top of "G" Sand										
1,702.0	3.00	350.00	1,700.0	76.4	-13.5	1,607,159.20	2,330,649.83	39° 28' 35.182 N	107° 52' 17.423 W	
Base of "G" Sand										
2,102.5	3.00	350.00	2,100.0	97.0	-17.1	1,607,179.93	2,330,646.73	39° 28' 35.386 N	107° 52' 17.469 W	
Begin 3°/100 Build & Turn										
2,856.0	19.80	192.38	2,840.3	-9.6	-48.3	1,607,074.16	2,330,612.76	39° 28' 34.332 N	107° 52' 17.867 W	
Hold 19.80 Inclination										
4,184.2	19.80	192.38	4,090.0	-449.1	-144.8	1,606,637.33	2,330,504.82	39° 28' 29.988 N	107° 52' 19.098 W	
Mesaverde										
4,809.4	19.80	192.38	4,678.2	-656.0	-190.2	1,606,431.74	2,330,454.02	39° 28' 27.944 N	107° 52' 19.677 W	
Begin 2°/100 Drop										
5,349.0	9.01	192.38	5,200.0	-786.9	-219.0	1,606,301.60	2,330,421.87	39° 28' 26.650 N	107° 52' 20.044 W	
Approx. Top Gas										
5,399.5	8.00	192.38	5,250.0	-794.2	-220.6	1,606,294.35	2,330,420.08	39° 28' 26.578 N	107° 52' 20.064 W	
Top Gas										
5,799.5	0.00	104.29	5,648.7	-821.4	-226.6	1,606,267.28	2,330,413.39	39° 28' 26.309 N	107° 52' 20.140 W	
Vertical										
6,910.8	0.00	104.29	6,760.0	-821.4	-226.6	1,606,267.28	2,330,413.40	39° 28' 26.309 N	107° 52' 20.140 W	
Cameo Coals										
7,570.8	0.00	104.29	7,420.0	-821.4	-226.5	1,606,267.28	2,330,413.40	39° 28' 26.309 N	107° 52' 20.140 W	
Coal D										
7,670.8	0.00	104.29	7,520.0	-821.4	-226.5	1,606,267.28	2,330,413.40	39° 28' 26.309 N	107° 52' 20.140 W	
Base L. Cameo Pay										
7,750.8	0.00	104.29	7,600.0	-821.4	-226.5	1,606,267.28	2,330,413.40	39° 28' 26.309 N	107° 52' 20.140 W	
Rollins SS										
7,900.8	0.00	104.29	7,750.0	-821.4	-226.5	1,606,267.28	2,330,413.40	39° 28' 26.309 N	107° 52' 20.140 W	
TD at 7900.8 = 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) R1	0.00	0.00	5,248.0	-813.8	-225.3	1,606,274.90	2,330,414.80	39° 28' 26.384 N	107° 52' 20.125 W	
- plan misses target center by 20.3usft at 5399.5usft MD (5250.0 TVD, -794.2 N, -220.6 E)										
- Circle (radius 25.0)										
TD / PBHL RWF 331-3	0.00	0.00	7,750.0	-813.8	-225.3	1,606,274.90	2,330,414.80	39° 28' 26.384 N	107° 52' 20.125 W	
- plan misses target center by 7.7usft at 7900.8usft MD (7750.0 TVD, -821.4 N, -226.5 E)										
- Point										

Williams
Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well RWF 331-3 - Slot B2-11
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 331-3	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 14Apr10 JMS		

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)
1,101.2	1,100.0	9 5/8"	9.625	12.250

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,601.8	1,600.0	Top of "G" Sand			
1,702.0	1,700.0	Base of "G" Sand			
4,184.2	4,090.0	Mesaverde			
5,349.0	5,200.0	Approx. Top Gas			
6,910.8	6,760.0	Cameo Coals			
7,570.8	7,420.0	Coal D			
7,670.8	7,520.0	Base L. Cameo Pay			
7,750.8	7,600.0	Rollins SS			
7,900.8	7,750.0	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 1.50
320.0	319.9	5.2	-0.9	Hold 3.00 Inclination
2,102.5	2,100.0	97.0	-17.1	Begin 3°/100 Build & Turn
2,856.0	2,840.3	-9.6	-48.3	Hold 19.80 Inclination
4,809.4	4,678.2	-656.0	-190.2	Begin 2°/100 Drop
5,399.5	5,250.0	-794.2	-220.6	Top Gas
5,799.5	5,648.7	-821.4	-226.6	Vertical
7,900.8	7,750.0	-821.4	-226.5	TD at 7900.8