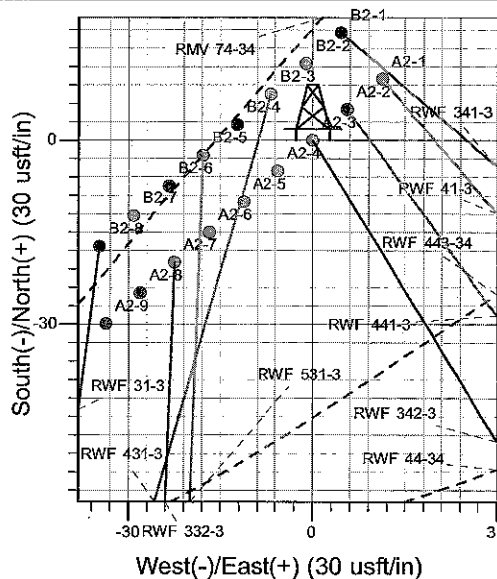
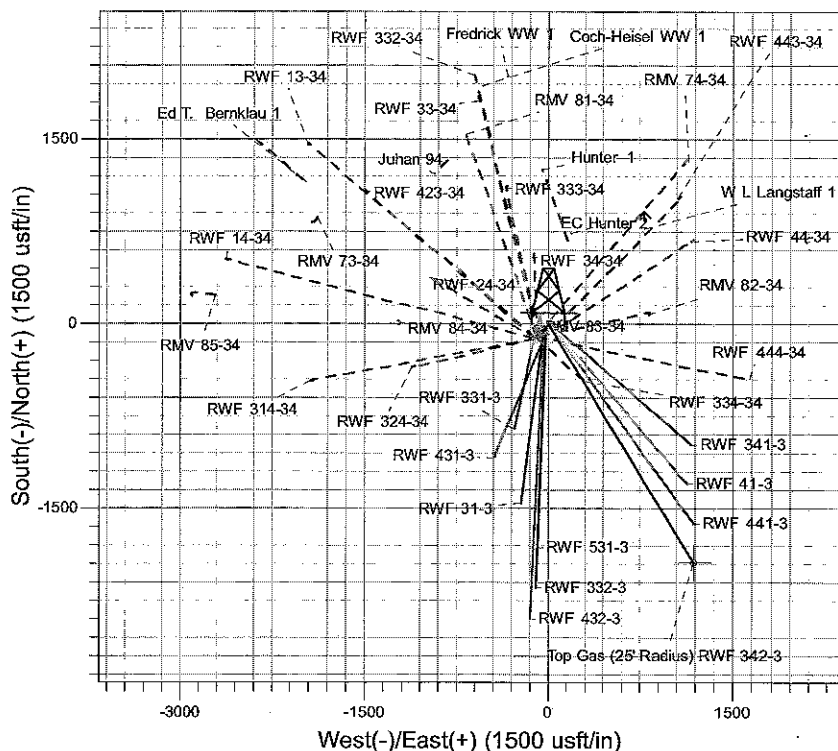
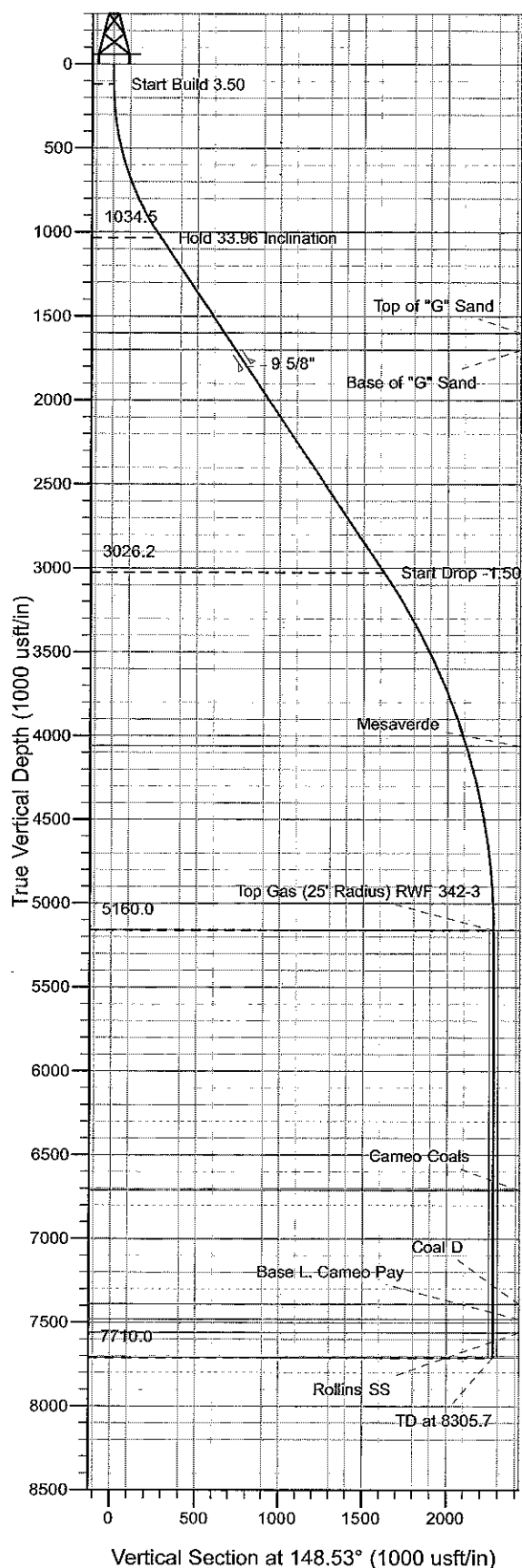
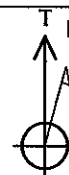




Well Name: RWF 342-3
 Surface Location: RMV 83-34 Pad
 North American Datum 1983 , US State Plane 1983, Colorado Central Zone
 Ground Elevation: 5626.0
 +N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1607113.40 2330713.70 89° 28' 34.746" 107° 52' 16.593" W A2-3
 KELLY BUSHING @ 5650.0usft (H&P 24' KB JMS)



Project: RU 34-06S-094W
 Site: RMV 83-34 Pad
 Well: RWF 342-3
 Design #1 14Apr10 JMS



Azimuths to True North
 Magnetic North: 10.44°
 Magnetic Field
 Strength: 52375.4snT
 Dip Angle: 65.78°
 Date: 4/19/2010
 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 3.50
1034.5	1090.3	33.96	148.53	-239.2	145.8	279.2	279.2	Hold 33.96 Inclination
3026.2	3491.7	33.96	148.53	-1382.4	846.0	1620.7	1620.7	Start Drop -1.50
5160.0	5755.7	0.00	0.00	-1938.1	1186.1	2272.2	2272.2	Top Gas
7710.0	8305.7	0.00	0.00	-1938.1	1186.1	2272.2	2272.2	TD at 8305.7

PICEANCE VLY NAD 83

RU 34-06S-094W

RMV 83-34 Pad

RWF 342-3 - Slot A2-3

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 342-3 - Slot A2-3
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 342-3	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 342-3 - Slot A2-3					
Well Position	+N/-S	0.0 usft	Northing:	1,607,113.40 usft	Latitude:	39° 28' 34.746 N
	+E/-W	0.0 usft	Easting:	2,330,713.70 usft	Longitude:	107° 52' 16.593 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	4/19/2010	10.443	65.778	52,375

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	148.53

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	
1,090.3	33.96	148.53	1,034.5	-238.2	145.8	3.50	3.50	0.00	148.533	
3,491.7	33.96	148.53	3,026.2	-1,382.4	846.0	0.00	0.00	0.00	0.000	
5,755.7	0.00	0.00	5,160.0	-1,938.1	1,186.1	1.50	-1.50	0.00	180.000	Top Gas (25' Radius)
8,305.7	0.00	0.00	7,710.0	-1,938.1	1,186.1	0.00	0.00	0.00	0.000	

Williams
Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well RWF 342-3 - Slot A2-3
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 342-3	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	1,607,113.40	2,330,713.70	39° 28' 34.746 N	107° 52' 16.593 W
120.0	0.00	0.00	120.0	0.0	0.0	1,607,113.40	2,330,713.70	39° 28' 34.746 N	107° 52' 16.593 W
Start Build 3.50									
1,090.3	33.96	148.53	1,034.5	-238.2	145.8	1,606,871.51	2,330,853.19	39° 28' 32.392 N	107° 52' 14.734 W
Hold 33.96 Inclination									
1,772.1	33.96	148.53	1,600.0	-563.0	344.6	1,606,541.58	2,331,043.47	39° 28' 29.181 N	107° 52' 12.199 W
Top of "G" Sand									
1,892.7	33.96	148.53	1,700.0	-620.5	379.7	1,606,483.23	2,331,077.11	39° 28' 28.614 N	107° 52' 11.751 W
Base of "G" Sand									
2,013.3	33.96	148.53	1,800.0	-677.9	414.9	1,606,424.89	2,331,110.76	39° 28' 28.046 N	107° 52' 11.302 W
9 5/8"									
3,491.7	33.96	148.53	3,026.2	-1,382.4	846.0	1,605,709.49	2,331,523.32	39° 28' 21.084 N	107° 52' 5.805 W
Start Drop -1.50									
4,639.9	16.74	148.53	4,060.0	-1,800.1	1,101.7	1,605,285.27	2,331,767.97	39° 28' 16.955 N	107° 52' 2.545 W
Mesaverde									
5,755.7	0.00	0.00	5,160.0	-1,938.1	1,186.1	1,605,145.10	2,331,848.80	39° 28' 15.591 N	107° 52' 1.468 W
Top Gas - Approx. Top Gas									
7,305.7	0.00	0.00	6,710.0	-1,938.1	1,186.1	1,605,145.10	2,331,848.80	39° 28' 15.591 N	107° 52' 1.468 W
Cameo Coals									
7,985.7	0.00	0.00	7,390.0	-1,938.1	1,186.1	1,605,145.10	2,331,848.80	39° 28' 15.591 N	107° 52' 1.468 W
Coat D									
8,075.7	0.00	0.00	7,480.0	-1,938.1	1,186.1	1,605,145.10	2,331,848.80	39° 28' 15.591 N	107° 52' 1.468 W
Base L. Cameo Pay									
8,155.7	0.00	0.00	7,560.0	-1,938.1	1,186.1	1,605,145.10	2,331,848.80	39° 28' 15.591 N	107° 52' 1.468 W
Rollins SS									
8,305.7	0.00	0.00	7,710.0	-1,938.1	1,186.1	1,605,145.10	2,331,848.80	39° 28' 15.591 N	107° 52' 1.468 W
TD at 8305.7 - 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	5,160.0	-1,938.1	1,186.1	1,605,145.10	2,331,848.80	39° 28' 15.591 N	107° 52' 1.468 W
- plan hits target center									
- Circle (radius 25.0)									

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)
2,013.3	1,800.0	9 5/8"	9.625	12.250

Williams

Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well RWF 342-3 - Slot A2-3
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 342-3	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 (°)	
1,772.1	1,600.0	Top of "G" Sand				
1,892.7	1,700.0	Base of "G" Sand				
4,639.9	4,060.0	Mesaverde				
5,755.7	5,160.0	Approx. Top Gas				
7,305.7	6,710.0	Cameo Coals				
7,985.7	7,390.0	Coal D				
8,075.7	7,480.0	Base L. Cameo Pay				
8,155.7	7,560.0	Rollins SS				
8,305.7	7,710.0	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 3.50	
1,090.3	1,034.5	-238.2	145.8	Hold 33.96 Inclination	
3,491.7	3,026.2	-1,382.4	846.0	Start Drop -1.50	
5,755.7	5,160.0	-1,938.1	1,186.1	Top Gas	
8,305.7	7,710.0	-1,938.1	1,186.1	TD at 8305.7	