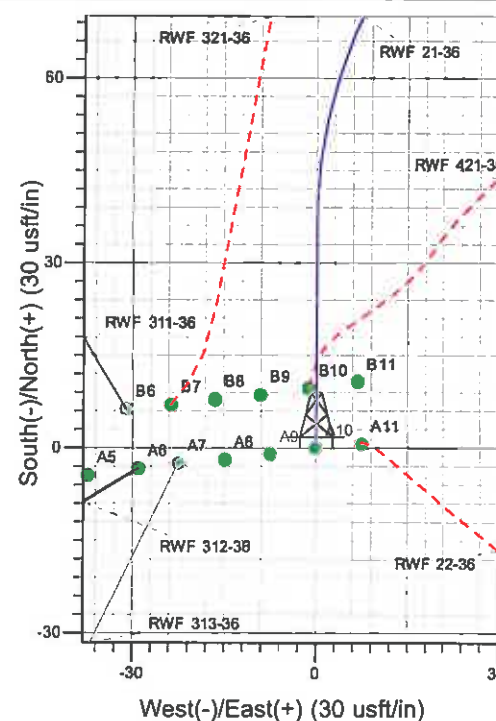
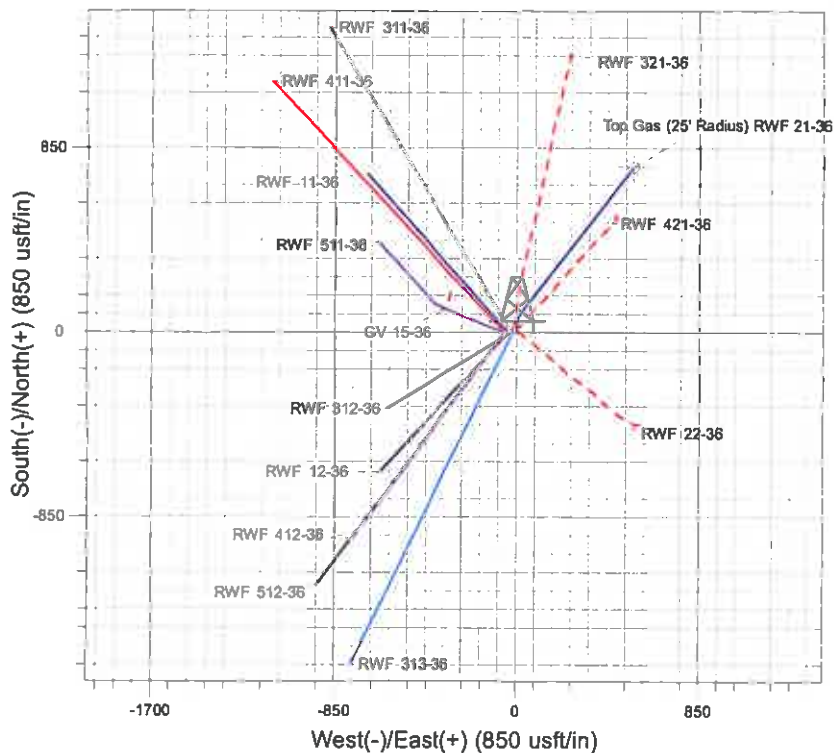
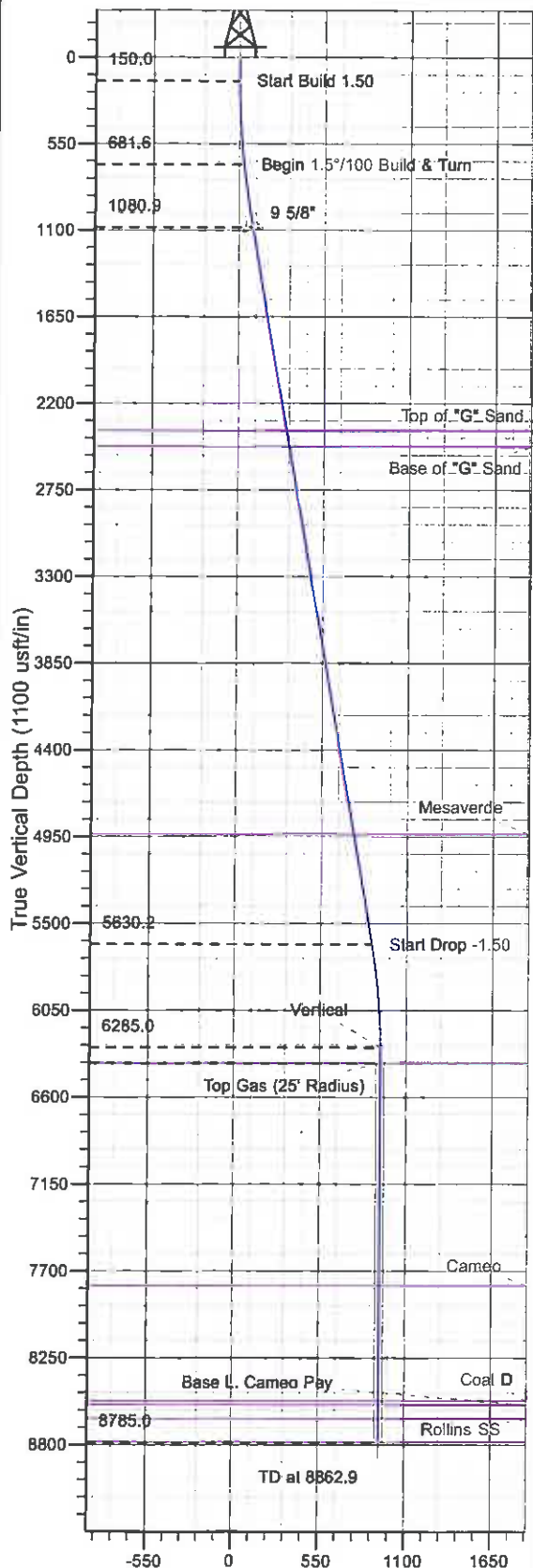




Well Name: RWF 21-36
 Surface Location: GV 15-36 Pad
 North American Datum 1983 , US State Plane 1983 , Colorado Central Zone
 Ground Elevation: 6387.0
 +N/-S 0.0 +E/-W 0.0 Northing 1610112.90 Easting 2339698.40 Latitude 39° 29' 6.684 N Longitude 107° 50' 23.032 W Slot A10
 KELLY BUSHING @ 6411.0usft (H&P 271 (24' RKB) kjs)



Project: RU 36-06S-094W
 Site: GV 15-36 Pad
 Well: RWF 21-36
 Plan #4 01Mar11 kjs

M Azimuths to True North
 Magnetic North: 10.62°
 Magnetic Field
 Strength: 52567.0snT
 Dip Angle: 65.84°
 Date: 8/29/2008
 Model: IGRF2005-10

ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	VSec	Departure	Annotation
150.0	150.0	0.00	0.00	0.0	0.0	0.0	0.0	Start Build 1.50
681.6	683.3	8.00	0.00	37.2	0.0	30.3	37.2	Begin 1.5°/100 Build & Turn
1080.9	1087.2	9.87	37.98	92.6	21.3	87.8	97.8	Hold 9.87 Inclination
5630.2	5704.9	9.87	37.98	716.6	508.4	878.6	889.4	Start Drop -1.50
6285.0	6382.9	0.00	0.00	761.2	543.2	935.1	946.0	Vertical
6385.0	6462.9	0.00	0.00	761.2	543.2	935.1	946.0	Top Gas
8785.0	8862.9	0.00	0.00	761.2	543.2	935.1	946.0	TD at 8862.9

PICEANCE VLY NAD 83

RU 36-06S-094W

GV 15-36 Pad

RWF 21-36 - Slot A10

Wellbore #1

Plan: Plan #4 01Mar11 kjs

Standard Planning Report - Geographic

26 April, 2011

Williams
Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well RWF 21-36 - Slot A10
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 6411.0usft (H&P 271 (24' RKB) kjs)
Project:	RU 36-06S-094W	MD Reference:	KELLY BUSHING @ 6411.0usft (H&P 271 (24' RKB) kjs)
Site:	GV 15-36 Pad	North Reference:	True
Well:	RWF 21-36	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #4 01Mar11 kjs		

Project	RU 36-06S-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	GV 15-36 Pad		
Site Position:		Northing:	1,610,105.50 usft
From:	Map	Easting:	2,339,621.10 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13.200 in
		Latitude:	39° 29' 6.592 N
		Longitude:	107° 50' 24.015 W
		Grid Convergence:	-1.476 °

Well	RWF 21-36 - Slot A10		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	
		Latitude:	39° 29' 6.684 N
		Longitude:	107° 50' 23.032 W
		Ground Level:	6,387.0 usft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination
	IGRF2005-10	8/29/2008	(°)
			10.621
			Dip Angle
			(°)
			65.845
			Field Strength
			(nT)
			52,567

Design	Plan #4 01Mar11 kjs		
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
			(°)
			35.51

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	
150.0	0.00	0.00	150.0	0.0	0.0	0.00	0.00	0.00	0.000	
683.3	8.00	0.00	681.6	37.2	0.0	1.50	1.50	0.00	0.000	
1,087.2	9.87	37.98	1,080.9	92.6	21.3	1.50	0.46	9.40	91.791	
5,704.9	9.87	37.98	5,630.2	716.6	508.4	0.00	0.00	0.00	0.000	
6,362.9	0.00	0.00	6,285.0	761.2	543.2	1.50	-1.50	0.00	180.000	
8,862.9	0.00	0.00	8,785.0	761.2	543.2	0.00	0.00	0.00	0.000	TD / PBHL RWF 21-3

Williams
Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Coordinate Reference:	Well RWF 21-36 - Slot A10
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 6411.0usft (H&P 271 (24' RKB) kjs)
Project:	RU 36-06S-094W	MD Reference:	KELLY BUSHING @ 6411.0usft (H&P 271 (24' RKB) kjs)
Site:	GV 15-36 Pad	North Reference:	True
Well:	RWF 21-36	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #4 01Mar11 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	1,610,112.90	2,339,698.40	39° 29' 6.684 N	107° 50' 23.032 W
150.0	0.00	0.00	150.0	0.0	0.0	1,610,112.90	2,339,698.40	39° 29' 6.684 N	107° 50' 23.032 W
Start Build 1.50									
683.3	8.00	0.00	681.6	37.2	0.0	1,610,150.06	2,339,699.36	39° 29' 7.052 N	107° 50' 23.032 W
Begin 1.5"/100 Build & Turn									
1,087.2	9.87	37.98	1,080.9	92.6	21.3	1,610,204.93	2,339,722.10	39° 29' 7.600 N	107° 50' 22.760 W
Hold 9.87 Inclination									
1,106.6	9.87	37.98	1,100.0	95.2	23.4	1,610,207.50	2,339,724.21	39° 29' 7.626 N	107° 50' 22.734 W
9 5/8"									
2,400.8	9.87	37.98	2,375.0	270.1	159.9	1,610,378.79	2,339,865.18	39° 29' 9.354 N	107° 50' 20.992 W
Top of "G" Sand									
2,502.3	9.87	37.98	2,475.0	283.8	170.6	1,610,392.23	2,339,876.23	39° 29' 9.489 N	107° 50' 20.856 W
Base of "G" Sand									
4,999.2	9.87	37.98	4,935.0	621.2	434.0	1,610,722.74	2,340,148.21	39° 29' 12.824 N	107° 50' 17.496 W
Mesaverde									
5,704.9	9.87	37.98	5,630.2	716.6	508.4	1,610,816.14	2,340,225.07	39° 29' 13.767 N	107° 50' 16.547 W
Start Drop -1.50									
6,362.9	0.00	0.00	6,285.0	761.2	543.2	1,610,859.80	2,340,261.00	39° 29' 14.207 N	107° 50' 16.103 W
Vertical									
6,462.9	0.00	0.00	6,385.0	761.2	543.2	1,610,859.80	2,340,261.00	39° 29' 14.207 N	107° 50' 16.103 W
Top Gas - Approx. Top Gas									
7,872.9	0.00	0.00	7,795.0	761.2	543.2	1,610,859.80	2,340,261.00	39° 29' 14.207 N	107° 50' 16.103 W
Cameo									
8,602.9	0.00	0.00	8,525.0	761.2	543.2	1,610,859.80	2,340,261.00	39° 29' 14.207 N	107° 50' 16.103 W
Coal D									
8,627.9	0.00	0.00	8,550.0	761.2	543.2	1,610,859.80	2,340,261.00	39° 29' 14.207 N	107° 50' 16.103 W
Base L. Cameo Pay									
8,712.9	0.00	0.00	8,635.0	761.2	543.2	1,610,859.80	2,340,261.00	39° 29' 14.207 N	107° 50' 16.103 W
Rollins SS									
8,862.9	0.00	0.00	8,785.0	761.2	543.2	1,610,859.80	2,340,261.00	39° 29' 14.207 N	107° 50' 16.103 W
TD at 8862.9 - TD									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (")	Dip Dir. (")	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Top Gas (25' Radius) R1 - plan hits target center - Circle (radius 25.0)	0.00	0.00	6,385.0	761.2	543.2	1,610,859.80	2,340,261.00	39° 29' 14.207 N	107° 50' 16.103 W
TD / PBHL RWF 21-36 - plan hits target center - Point	0.00	0.00	8,785.0	761.2	543.2	1,610,859.80	2,340,261.00	39° 29' 14.207 N	107° 50' 16.103 W

Williams
Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well RWF 21-36 - Skel A10
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 6411.0usft (H&P 271 (24' RKB) kjs)
Project:	RU 36-06S-094W	MD Reference:	KELLY BUSHING @ 6411.0usft (H&P 271 (24' RKB) kjs)
Site:	GV 15-36 Pad	North Reference:	True
Well:	RWF 21-36	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #4 01Mar11 kjs		

Casing Points				
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)
1,106.6	1,100.0	8 5/8"	9.625	12.250

Formations				
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip Direction (°)
2,400.8	2,375.0	Top of "G" Sand		
2,502.3	2,475.0	Base of "G" Sand		
4,999.2	4,935.0	Mesaverde		
6,462.9	6,385.0	Approx. Top Gas		
7,872.9	7,795.0	Cameo		
8,602.9	8,525.0	Coal D		
8,627.9	8,550.0	Base L. Cameo Pay		
8,712.9	8,635.0	Rollins SS		
8,862.9	8,785.0	TD		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
150.0	150.0	0.0	0.0	Start Build 1.50
683.3	681.6	37.2	0.0	Begin 1.5°/100 Build & Turn
1,087.2	1,080.9	92.6	21.3	Hold 9.87 Inclination
5,704.9	5,630.2	716.6	508.4	Start Drop -1.50
6,362.9	6,285.0	761.2	543.2	Vertical
6,462.9	6,385.0	761.2	543.2	Top Gas
8,862.9	8,785.0	761.2	543.2	TD at 8862.9