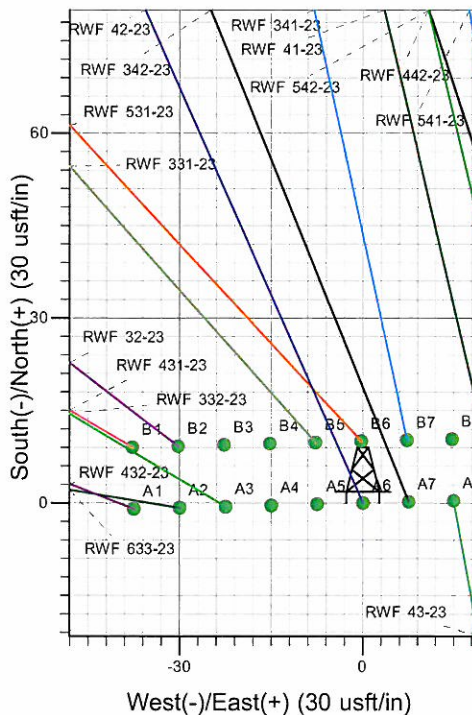
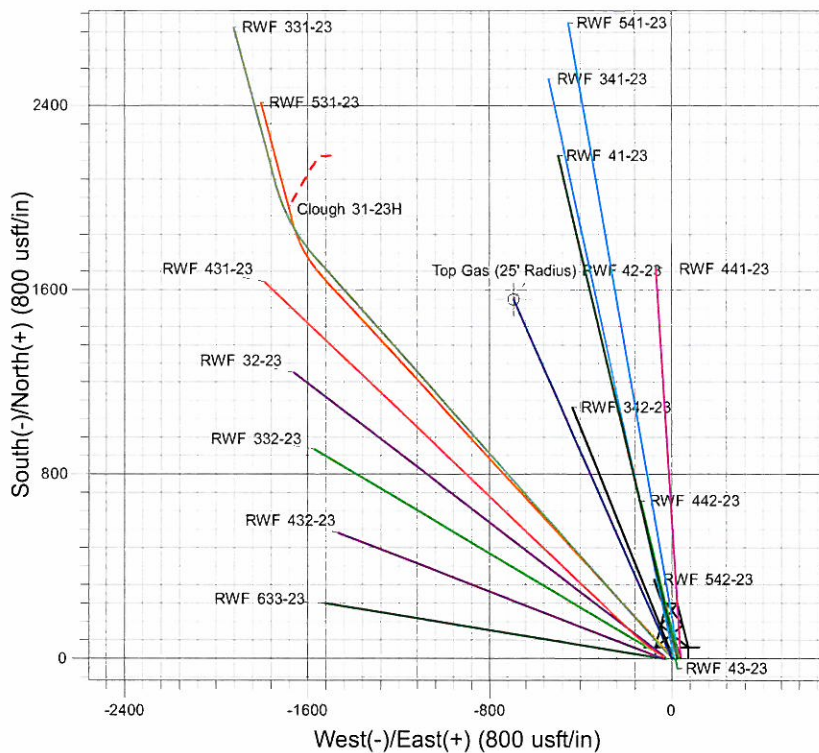
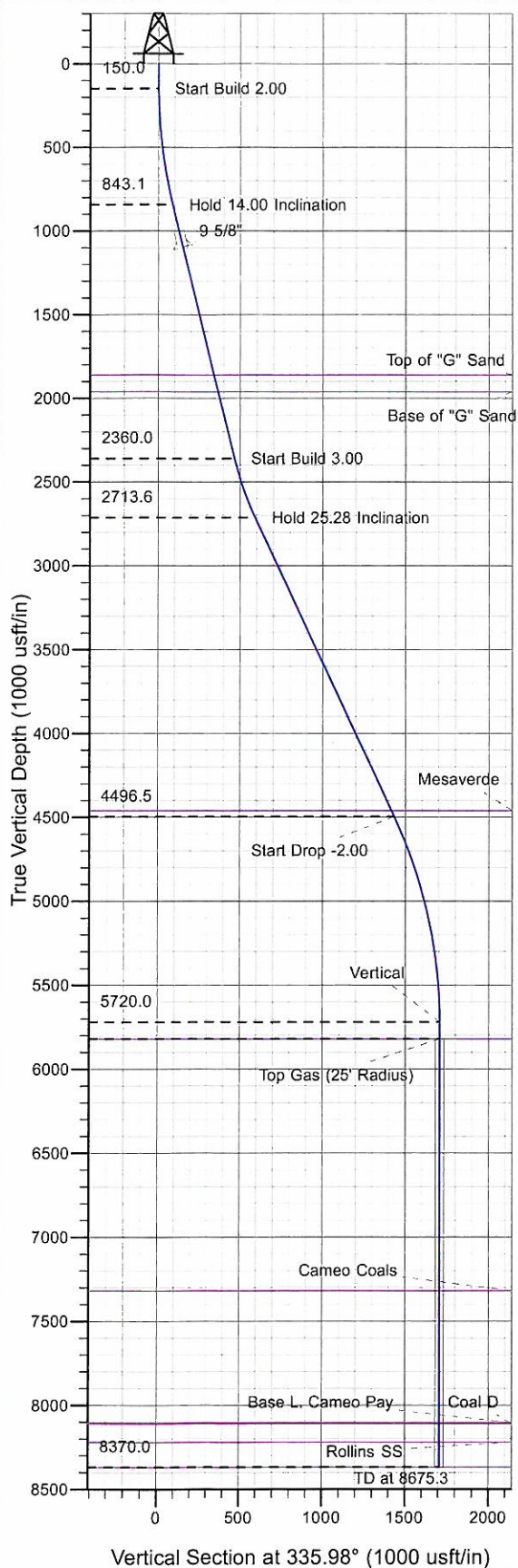




Well Name: RWF 42-23
 Surface Location: RWF 43-23 Pad
 North American Datum 1983 , US State Plane 1983 , Colorado Central Zone
 Ground Elevation: 5599.0
 +N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1619204.50 2337881.50 39° 30' 36.049 N 107° 50' 49.194 W A6
 KELLY BUSHING @ 5623.0usft (H&P (24' RKB) kjs)



Project: RU 23-06S-094W
 Site: RWF 43-23 Pad
 Well: RWF 42-23
 Plan #3 24Aug10 kjs

M Azimuths to True North
 Magnetic North: 10.43°
 Magnetic Field
 Strength: 52394.8nT
 Dip Angle: 65.81°
 Date: 4/28/2010
 Model: IGRF2010

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 2.00
843.1	850.0	14.00	335.98	77.7	-34.6	85.1	85.1	Hold 14.00 Inclination
2360.0	2413.4	14.00	335.98	423.2	-188.6	463.3	463.3	Start Build 3.00
2713.6	2789.5	25.28	335.99	538.5	-240.0	589.5	589.5	Hold 25.28 Inclination
4496.5	4761.2	25.28	335.99	1307.7	-582.6	1431.6	1431.6	Start Drop -2.00
5720.0	6025.3	0.00	0.00	1558.3	-694.3	1706.0	1706.0	Vertical
5820.0	6125.3	0.00	0.00	1558.3	-694.3	1706.0	1706.0	Top Gas
8370.0	8675.3	0.00	0.00	1558.3	-694.3	1706.0	1706.0	TD at 8675.3

PICEANCE VLY NAD 83

RU 23-06S-094W

RWF 43-23 Pad

RWF 42-23 - Slot A6

Wellbore #1

Plan: Plan #3 24Aug10 kjs

Standard Planning Report - Geographic

27 August, 2010

Williams
Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well RWF 42-23 - Slot A6
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 5623.0usft (H&P (24' RKB) kjs)
Project:	RU 23-06S-094W	MD Reference:	KELLY BUSHING @ 5623.0usft (H&P (24' RKB) kjs)
Site:	RWF 43-23 Pad	North Reference:	True
Well:	RWF 42-23	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #3 24Aug10 kjs		

Project	RU 23-06S-094W, Garfield County, CO, 23-06S-094W		
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		RWF 43-23 Pad			
Site Position:		Northing:	1,619,204.50 usft	Latitude:	39° 30' 36.053 N
From:	Map	Easting:	2,337,897.00 usft	Longitude:	107° 50' 48.996 W
Position Uncertainty:	0.0 usft	Slot Radius:	13.200 in	Grid Convergence:	-1.480 °

Well	RWF 42-23 - Slot A6					
Well Position	+N/-S	0.0 usft	Northing:	1,619,204.50 usft	Latitude:	39° 30' 36.049 N
	+E/-W	0.0 usft	Easting:	2,337,881.50 usft	Longitude:	107° 50' 49.194 W
Position Uncertainty		0.0 usft	Wellhead Elevation:		Ground Level:	5,599.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	4/28/2010	10.434	65.810	52,395

Design	Plan #3 24Aug10 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	335.98

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	
850.0	14.00	335.98	843.1	77.7	-34.6	2.00	2.00	0.00	335.980	
2,413.4	14.00	335.98	2,360.0	423.2	-188.6	0.00	0.00	0.00	0.000	
2,789.5	25.28	335.99	2,713.6	538.5	-240.0	3.00	3.00	0.00	0.000	
4,761.2	25.28	335.99	4,496.5	1,307.7	-582.6	0.00	0.00	0.00	0.000	
6,025.3	0.00	0.00	5,720.0	1,558.3	-694.3	2.00	-2.00	0.00	180.000	
6,125.3	0.00	0.00	5,820.0	1,558.3	-694.3	0.00	0.00	0.00	0.000	Top Gas (25' Radius)
8,675.3	0.00	0.00	8,370.0	1,558.3	-694.3	0.00	0.00	0.00	0.000	

Williams
Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well RWF 42-23 - Slot A6
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 5623.0usft (H&P (24' RKB) kjs)
Project:	RU 23-06S-094W	MD Reference:	KELLY BUSHING @ 5623.0usft (H&P (24' RKB) kjs)
Site:	RWF 43-23 Pad	North Reference:	True
Well:	RWF 42-23	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #3 24Aug10 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	1,619,204.50	2,337,881.50	39° 30' 36.049 N	107° 50' 49.194 W
150.0	0.00	0.00	150.0	0.0	0.0	1,619,204.50	2,337,881.50	39° 30' 36.049 N	107° 50' 49.194 W
Start Build 2.00									
850.0	14.00	335.98	843.1	77.7	-34.6	1,619,283.09	2,337,848.88	39° 30' 36.817 N	107° 50' 49.636 W
Hold 14.00 Inclination									
1,114.8	14.00	335.98	1,100.0	136.2	-60.7	1,619,342.26	2,337,824.33	39° 30' 37.395 N	107° 50' 49.969 W
9 5/8"									
1,898.1	14.00	335.98	1,860.0	309.3	-137.8	1,619,517.27	2,337,751.69	39° 30' 39.106 N	107° 50' 50.953 W
Top of "G" Sand									
2,001.1	14.00	335.98	1,960.0	332.1	-148.0	1,619,540.29	2,337,742.14	39° 30' 39.331 N	107° 50' 51.082 W
Base of "G" Sand									
2,413.4	14.00	335.98	2,360.0	423.2	-188.6	1,619,632.40	2,337,703.91	39° 30' 40.231 N	107° 50' 51.600 W
Start Build 3.00									
2,789.5	25.28	335.99	2,713.6	538.5	-240.0	1,619,748.97	2,337,655.55	39° 30' 41.371 N	107° 50' 52.256 W
Hold 25.28 Inclination									
4,720.8	25.28	335.99	4,460.0	1,291.9	-575.6	1,620,510.82	2,337,339.46	39° 30' 48.817 N	107° 50' 56.539 W
Mesaverde									
4,761.2	25.28	335.99	4,496.5	1,307.7	-582.6	1,620,526.75	2,337,332.86	39° 30' 48.973 N	107° 50' 56.628 W
Start Drop -2.00									
6,025.3	0.00	0.00	5,720.0	1,558.3	-694.3	1,620,780.20	2,337,227.70	39° 30' 51.450 N	107° 50' 58.053 W
Vertical									
6,125.3	0.00	0.00	5,820.0	1,558.3	-694.3	1,620,780.20	2,337,227.70	39° 30' 51.450 N	107° 50' 58.053 W
Top Gas - Approx. Top Gas									
7,625.3	0.00	0.00	7,320.0	1,558.3	-694.3	1,620,780.20	2,337,227.70	39° 30' 51.450 N	107° 50' 58.053 W
Cameo Coals									
8,410.3	0.00	0.00	8,105.0	1,558.3	-694.3	1,620,780.20	2,337,227.70	39° 30' 51.450 N	107° 50' 58.053 W
Base L. Cameo Pay									
8,415.3	0.00	0.00	8,110.0	1,558.3	-694.3	1,620,780.20	2,337,227.70	39° 30' 51.450 N	107° 50' 58.053 W
Coal D									
8,525.3	0.00	0.00	8,220.0	1,558.3	-694.3	1,620,780.20	2,337,227.70	39° 30' 51.450 N	107° 50' 58.053 W
Rollins SS									
8,675.3	0.00	0.00	8,370.0	1,558.3	-694.3	1,620,780.20	2,337,227.70	39° 30' 51.450 N	107° 50' 58.053 W
TD at 8675.3 - 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	5,820.0	1,558.3	-694.3	1,620,780.20	2,337,227.70	39° 30' 51.450 N	107° 50' 58.053 W
- plan hits target center									
- Circle (radius 25.0)									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,114.8	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 42-23 - Slot A6
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 5623.0usft (H&P (24' RKB) kjs)
Project:	RU 23-06S-094W	MD Reference:	KELLY BUSHING @ 5623.0usft (H&P (24' RKB) kjs)
Site:	RWF 43-23 Pad	North Reference:	True
Well:	RWF 42-23	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #3 24Aug10 kjs		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,898.1	1,860.0	Top of "G" Sand				
2,001.1	1,960.0	Base of "G" Sand				
4,720.8	4,460.0	Mesaverde				
6,125.3	5,820.0	Approx. Top Gas				
7,625.3	7,320.0	Cameo Coals				
8,410.3	8,105.0	Base L. Cameo Pay				
8,415.3	8,110.0	Coal D				
8,525.3	8,220.0	Rollins SS				
8,675.3	8,370.0	TD		0.000		

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
150.0	150.0	0.0	0.0	Start Build 2.00	
850.0	843.1	77.7	-34.6	Hold 14.00 Inclination	
2,413.4	2,360.0	423.2	-188.6	Start Build 3.00	
2,789.5	2,713.6	538.5	-240.0	Hold 25.28 Inclination	
4,761.2	4,496.5	1,307.7	-582.6	Start Drop -2.00	
6,025.3	5,720.0	1,558.3	-694.3	Vertical	
6,125.3	5,820.0	1,558.3	-694.3	Top Gas	
8,675.3	8,370.0	1,558.3	-694.3	TD at 8675.3	