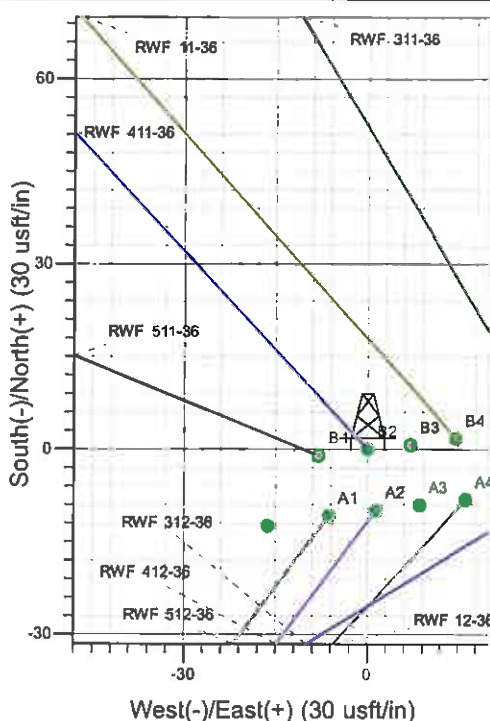
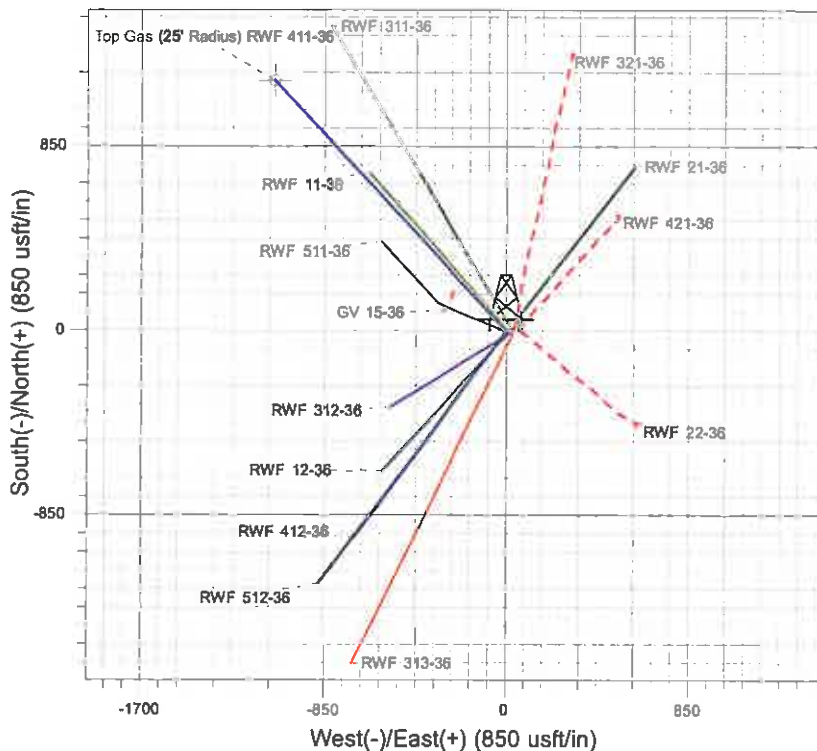
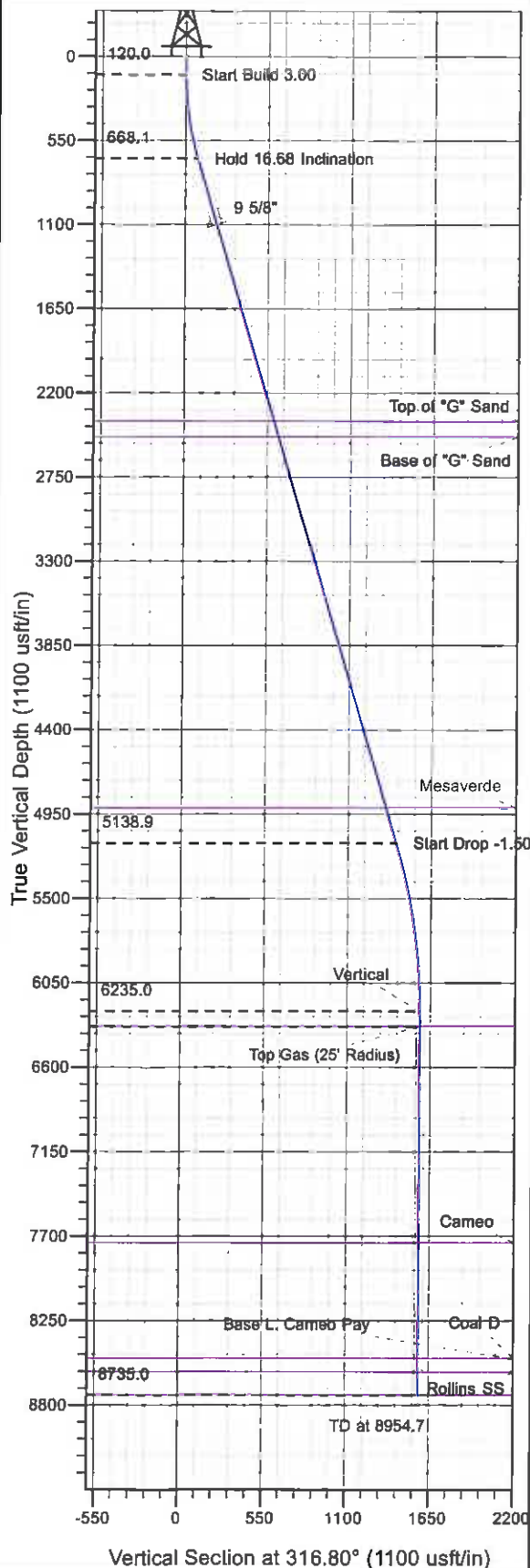




Well Name: RWF 411-36
 Surface Location: GV 15-36 Pad
 North American Datum 1983 , US State Plane 1983 , Colorado Central Zone
 Ground Elevation: 6387.0
 +N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1610117.53 2339637.68 39° 29' 6.715 N 107° 50' 23.807 W B2
 KELLY BUSHING @ 6411.0usft (H&P 271 (24' RKB) kjs)



Project: RU 36-06S-094W
 Site: GV 15-36 Pad
 Well: RWF 411-36
 Plan #4 28Feb11 kjs

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

ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	VSec	Departure	Annotation
120.0	120.0	0.00	0.00	0.0	0.0	0.0	0.0	Start Build 3.00
668.1	675.9	16.68	316.80	58.6	-55.0	80.3	80.3	Hold 16.68 Inclination
5138.9	5343.0	16.68	316.80	1034.9	-971.8	1419.6	1419.6	Start Drop -1.50
6235.0	6454.7	0.00	0.00	1152.0	-1081.7	1580.3	1580.3	Vertical
6335.0	6554.7	0.00	0.00	1152.0	-1081.7	1580.3	1580.3	Top Gas
8735.0	8954.7	0.00	0.00	1152.0	-1081.7	1580.3	1580.3	TD at 8954.7

PICEANCE VLY NAD 83

RU 36-06S-094W

GV 15-36 Pad

RWF 411-36 - Slot B2

Wellbore #1

Plan: Plan #4 28Feb11 kjs

Standard Planning Report - Geographic

26 April, 2011

Williams
Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well RWF 411-36 - Slot B2
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 411-36	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #4 28Feb11 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	Latitude:	39° 29' 6.592 N
From:	Map	Easting:	2,339,621.10 usft	Longitude:	107° 50' 24.015 W
Position Uncertainty:	0.0 usft	Slot Radius:	13.200 in	Grid Convergence:	-1.476 °

Well	RWF 411-36 - Slot B2					
Well Position	+N/-S	0.0 usft	Northing:	1,610,117.53 usft	Latitude:	39° 29' 6.715 N
	+E/-W	0.0 usft	Easting:	2,339,637.68 usft	Longitude:	107° 50' 23.807 W
Position Uncertainty		0.0 usft	Wellhead Elevation:		Ground Level:	6,387.0 usft

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

Design	Plan #4 28Feb11 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	316.80

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	
675.9	16.68	316.80	668.1	58.6	-55.0	3.00	3.00	0.00	316.802	
5,343.0	16.68	316.80	5,138.9	1,034.9	-971.8	0.00	0.00	0.00	0.000	
6,454.7	0.00	0.00	6,235.0	1,152.0	-1,081.7	1.50	-1.50	0.00	180.000	
6,554.7	0.00	0.00	6,335.0	1,152.0	-1,081.7	0.00	0.00	0.00	0.000	Top Gas (25' Radius)
8,954.7	0.00	0.00	8,735.0	1,152.0	-1,081.7	0.00	0.00	0.00	0.000	

Williams
Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well RWF 411-36 - Slot B2
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 411-36	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #4 28Feb11 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	1,610,117.53	2,339,637.68	39° 29' 6.715 N	107° 50' 23.807 W
120.0	0.00	0.00	120.0	0.0	0.0	1,610,117.53	2,339,637.68	39° 29' 6.715 N	107° 50' 23.807 W
Start Build 3.00									
675.9	16.68	316.80	668.1	58.6	-55.0	1,610,177.48	2,339,584.22	39° 29' 7.293 N	107° 50' 24.509 W
Hold 16.68 Inclination									
1,126.8	16.68	316.80	1,100.0	152.9	-143.6	1,610,274.06	2,339,498.11	39° 29' 8.226 N	107° 50' 25.638 W
9 5/8"									
2,468.2	16.68	316.80	2,385.0	433.5	-407.1	1,610,561.36	2,339,241.93	39° 29' 10.999 N	107° 50' 28.999 W
Top of "G" Sand									
2,572.6	16.68	316.80	2,485.0	455.4	-427.6	1,610,583.72	2,339,221.99	39° 29' 11.215 N	107° 50' 29.261 W
Base of "G" Sand									
5,104.1	16.68	316.80	4,910.0	984.9	-924.8	1,611,125.92	2,338,738.54	39° 29' 16.449 N	107° 50' 35.604 W
Mesaverde									
5,343.0	16.68	316.80	5,138.9	1,034.9	-971.8	1,611,177.09	2,338,692.92	39° 29' 16.943 N	107° 50' 36.202 W
Start Drop -1.50									
6,454.7	0.00	0.00	6,235.0	1,152.0	-1,081.7	1,611,297.00	2,338,586.00	39° 29' 18.100 N	107° 50' 37.605 W
Vertical									
6,554.7	0.00	0.00	6,335.0	1,152.0	-1,081.7	1,611,297.00	2,338,586.00	39° 29' 18.100 N	107° 50' 37.605 W
Top Gas - Approx. Top Gas									
7,964.7	0.00	0.00	7,745.0	1,152.0	-1,081.7	1,611,297.00	2,338,586.00	39° 29' 18.100 N	107° 50' 37.605 W
Cameo									
8,714.7	0.00	0.00	8,495.0	1,152.0	-1,081.7	1,611,297.00	2,338,586.00	39° 29' 18.100 N	107° 50' 37.605 W
Coal D									
8,719.7	0.00	0.00	8,500.0	1,152.0	-1,081.7	1,611,297.00	2,338,586.00	39° 29' 18.100 N	107° 50' 37.605 W
Base L. Cameo Pay									
8,804.7	0.00	0.00	8,585.0	1,152.0	-1,081.7	1,611,297.00	2,338,586.00	39° 29' 18.100 N	107° 50' 37.605 W
Rollins SS									
8,954.7	0.00	0.00	8,735.0	1,152.0	-1,081.7	1,611,297.00	2,338,586.00	39° 29' 18.100 N	107° 50' 37.605 W
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	6,335.0	1,152.0	-1,081.7	1,611,297.00	2,338,586.00	39° 29' 18.100 N	107° 50' 37.605 W
- plan hits target center									
- Circle (radius 25.0)									
TD / PBHL RWF 411-36	0.00	0.00	8,735.0	1,152.0	-1,081.7	1,611,297.00	2,338,586.00	39° 29' 18.100 N	107° 50' 37.605 W
- plan hits target center									
- Point									

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)
1,126.8	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 411-36 - Slot B2
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 411-36	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #4 28Feb11 kjs		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (")	Dip Direction (")	
2,468.2	2,385.0	Top of "G" Sand				
2,572.6	2,485.0	Base of "G" Sand				
5,104.1	4,910.0	Mesaverde				
6,554.7	6,335.0	Approx. Top Gas				
7,964.7	7,745.0	Cameo				
8,714.7	8,495.0	Coal D				
8,719.7	8,500.0	Base L. Cameo Pay				
8,804.7	8,585.0	Rollins SS				
8,954.7	8,735.0	TD		0.000		

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 3.00	
675.9	668.1	58.6	-55.0	Hold 16.68 Inclination	
5,343.0	5,138.9	1,034.9	-971.8	Start Drop -1.50	
6,454.7	6,235.0	1,152.0	-1,081.7	Vertical	
6,554.7	6,335.0	1,152.0	-1,081.7	Top Gas	
8,954.7	8,735.0	1,152.0	-1,081.7	TD at 8954.7	