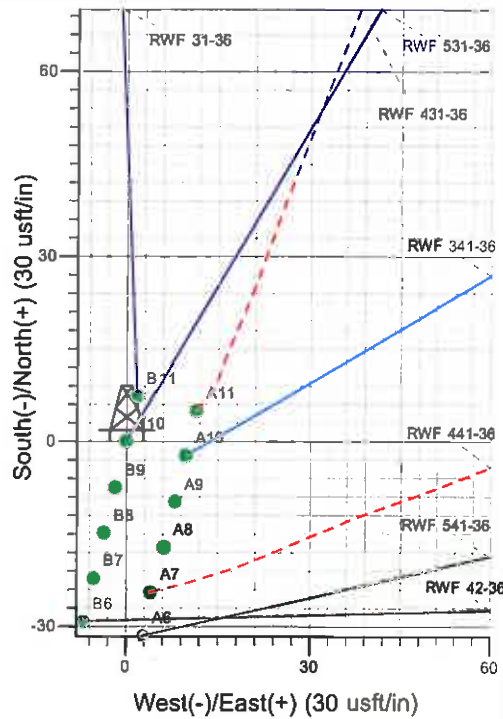
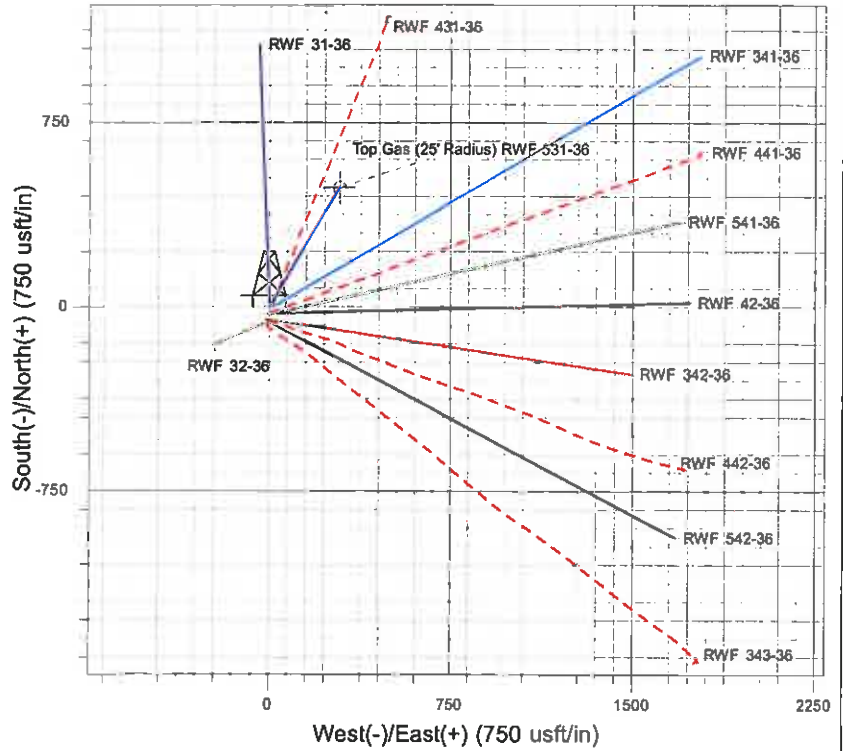
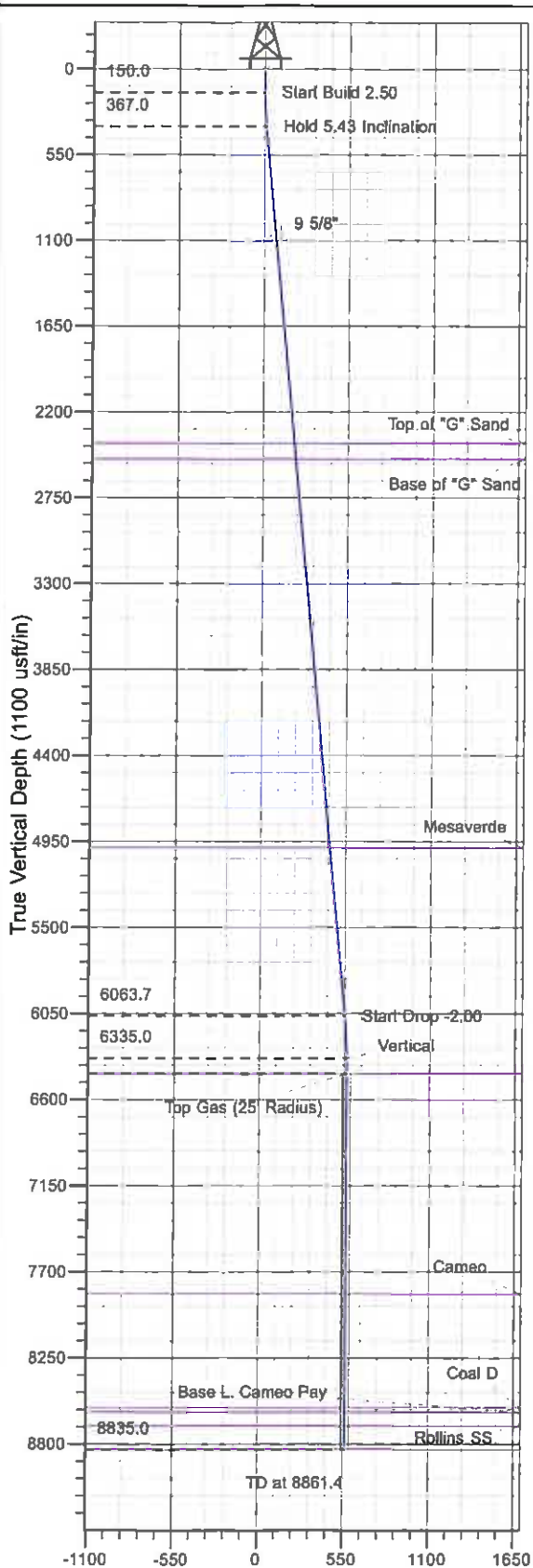




Well Name: RWF 531-36
 Surface Location: RWF 32-36 Pad
 North American Datum 1983 , US State Plane 1983 , Colorado Central Zone
 Ground Elevation: 6424.0
 +N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1610217.90 2340899.00 39° 29' 8.027 N 107° 50' 7.758 W B10
 KELLY BUSHING @ 6448.0usft (H&P 271 (24' RKB) kjs)



Project: RU 36-06S-094W
 Site: RWF 32-36 Pad
 Well: RWF 531-36
 Plan #4 02Mar11 kjs

Azimuths to True North
 Magnetic North: 10.62°
 Magnetic Field
 Strength: 52566.4nT
 Dip Angle: 65.85°
 Date: 9/2/2008
 Model: IGRF2005-10

ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	VSect	Departure	Annotation
150.0	150.0	0.00	0.00	0.0	0.0	0.0	0.0	Start Build 2.50
367.0	367.3	5.43	30.59	8.9	5.2	10.3	10.3	Hold 5.43 Inclination
6063.7	6089.8	5.43	30.59	475.3	281.0	552.1	552.1	Start Drop -2.00
6335.0	6361.4	0.00	0.00	488.4	287.5	565.0	565.0	Vertical
6435.0	6461.4	0.00	0.00	488.4	287.5	565.0	565.0	Top Gas
8835.0	8861.4	0.00	0.00	488.4	287.5	565.0	565.0	TD at 8861.4

PICEANCE VLY NAD 83

RU 36-06S-094W

RWF 32-36 Pad

RWF 531-36 - Slot B10

Wellbore #1

Plan: Plan #4 02Mar11 kjs

Standard Planning Report - Geographic

28 April, 2011

Williams
Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well RWF 531-36 - Slot B10
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 6448.0usft (H&P 271 (24' RKB) kjs)
Project:	RU 36-06S-094W	MD Reference:	KELLY BUSHING @ 6448.0usft (H&P 271 (24' RKB) kjs)
Site:	RWF 32-36 Pad	North Reference:	True
Well:	RWF 531-36	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #4 02Mar11 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	RWF 32-36 Pad			
Site Position:		Northing:	1,610,174.30 usft	Latitude: 39° 29' 7.596 N
From:	Map	Easting:	2,340,897.80 usft	Longitude: 107° 50' 7.759 W
Position Uncertainty:	0.0 usft	Slot Radius:	13.200 in	Grid Convergence: -1.473 °

Well	RWF 531-36 - Slot B10			
Well Position	+N/-S	0.0 usft	Northing: 1,610,217.89 usft	Latitude: 39° 29' 8.027 N
	+E/-W	0.0 usft	Easting: 2,340,899.00 usft	Longitude: 107° 50' 7.758 W
Position Uncertainty	0.0 usft	Wellhead Elevation:		Ground Level: 6,424.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (")	Dip Angle (")	Field Strength (nT)
	IGRF2005-10	9/2/2008	10.618	65.846	52,566

Design	Plan #4 02Mar11 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	30.59

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	
367.3	5.43	30.59	367.0	8.9	5.2	2.50	2.50	0.00	30.588	
6,089.8	5.43	30.59	6,063.7	475.3	281.0	0.00	0.00	0.00	0.000	
6,361.4	0.00	0.00	6,335.0	486.4	287.5	2.00	-2.00	0.00	180.000	
6,461.4	0.00	0.00	6,435.0	486.4	287.5	0.00	0.00	0.00	0.000	Top Gas (25' Radius)
8,861.4	0.00	0.00	8,835.0	486.4	287.5	0.00	0.00	0.00	0.000	

Williams
Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well RWF 531-36 - Slot B10
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 6448.0usft (H&P 271 (24' RKB) kjs)
Project:	RU 36-06S-094W	MD Reference:	KELLY BUSHING @ 6448.0usft (H&P 271 (24' RKB) kjs)
Site:	RWF 32-36 Pad	North Reference:	True
Well:	RWF 531-36	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #4 02Mar11 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	1,610,217.89	2,340,899.00	39° 29' 8.027 N	107° 50' 7.758 W
150.0	0.00	0.00	150.0	0.0	0.0	1,610,217.89	2,340,899.00	39° 29' 8.027 N	107° 50' 7.758 W
Start Build 2.50									
367.3	5.43	30.59	367.0	8.9	5.2	1,610,226.62	2,340,904.47	39° 29' 8.115 N	107° 50' 7.691 W
Hold 5.43 Inclination									
1,103.6	5.43	30.59	1,100.0	68.9	40.7	1,610,285.70	2,340,941.47	39° 29' 8.708 N	107° 50' 7.238 W
9 5/8"									
2,409.5	5.43	30.59	2,400.0	175.3	103.6	1,610,390.48	2,341,007.10	39° 29' 9.760 N	107° 50' 6.436 W
Top of "G" Sand									
2,510.0	5.43	30.59	2,500.0	183.5	108.5	1,610,398.54	2,341,012.15	39° 29' 9.841 N	107° 50' 6.374 W
Base of "G" Sand									
5,011.2	5.43	30.59	4,990.0	387.4	229.0	1,610,599.24	2,341,137.86	39° 29' 11.856 N	107° 50' 4.837 W
Mesaverde									
6,089.8	5.43	30.59	6,063.7	475.3	281.0	1,610,685.79	2,341,192.07	39° 29' 12.724 N	107° 50' 4.174 W
Start Drop -2.00									
6,361.4	0.00	0.00	6,335.0	486.4	287.5	1,610,696.70	2,341,198.90	39° 29' 12.834 N	107° 50' 4.091 W
Vertical									
6,461.4	0.00	0.00	6,435.0	486.4	287.5	1,610,696.70	2,341,198.90	39° 29' 12.834 N	107° 50' 4.091 W
Top Gas - Approx. Top Gas									
7,871.4	0.00	0.00	7,845.0	486.4	287.5	1,610,696.70	2,341,198.90	39° 29' 12.834 N	107° 50' 4.091 W
Cameo									
8,596.4	0.00	0.00	8,570.0	486.4	287.5	1,610,696.70	2,341,198.90	39° 29' 12.834 N	107° 50' 4.091 W
Coal D									
8,626.4	0.00	0.00	8,600.0	486.4	287.5	1,610,696.70	2,341,198.90	39° 29' 12.834 N	107° 50' 4.091 W
Base L. Cameo Pay									
8,711.4	0.00	0.00	8,685.0	486.4	287.5	1,610,696.70	2,341,198.90	39° 29' 12.834 N	107° 50' 4.091 W
Rollins SS									
8,861.4	0.00	0.00	8,835.0	486.4	287.5	1,610,696.70	2,341,198.90	39° 29' 12.834 N	107° 50' 4.091 W
TD at 8861.4 - TD									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/mis target									
- Shape									
Top Gas (25' Radius) R1	0.00	0.00	6,435.0	486.4	287.5	1,610,696.70	2,341,198.90	39° 29' 12.834 N	107° 50' 4.091 W
- plan hits target center									
- Circle (radius 25.0)									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,103.6	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 531-36 - Slot B10
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Project:	RJ 36-06S-094W	MD Reference:	KELLY BUSHING @ 6448.0usft (H&P 271 (24' RKB) kjs)
Site:	RWF 32-36 Pad	North Reference:	True
Well:	RWF 531-36	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #4 02Mar11 kjs		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (")	Dip Direction (")	
2,409.5	2,400.0	Top of "G" Sand				
2,510.0	2,500.0	Base of "G" Sand				
5,011.2	4,990.0	Mesaverde				
6,461.4	6,435.0	Approx. Top Gas				
7,871.4	7,845.0	Cameo				
8,596.4	8,570.0	Coal D				
8,626.4	8,600.0	Base L. Cameo Pay				
8,711.4	8,685.0	Rollins SS				
8,861.4	8,835.0	TD				

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 2.50	
367.3	367.0	8.9	5.2	Hold 5.43 Inclination	
6,089.8	6,063.7	475.3	281.0	Start Drop -2.00	
6,361.4	6,335.0	486.4	287.5	Vertical	
6,461.4	6,435.0	486.4	287.5	Top Gas	
8,861.4	8,835.0	486.4	287.5	TD at 8861.4	