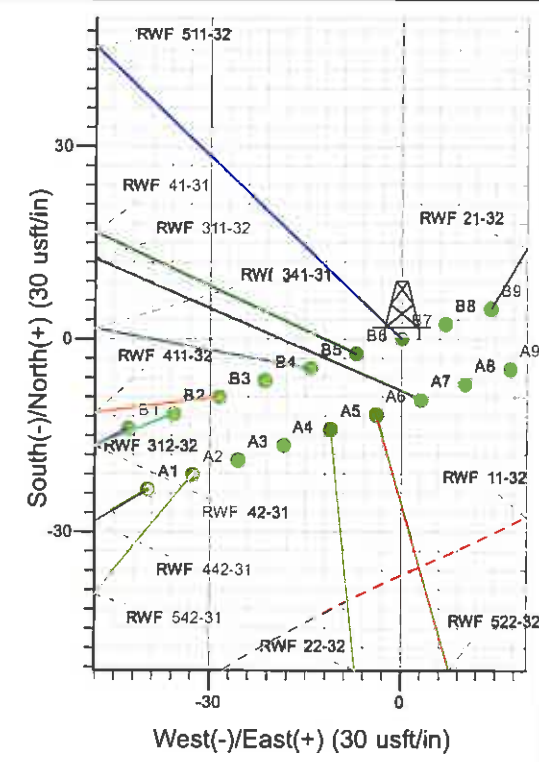
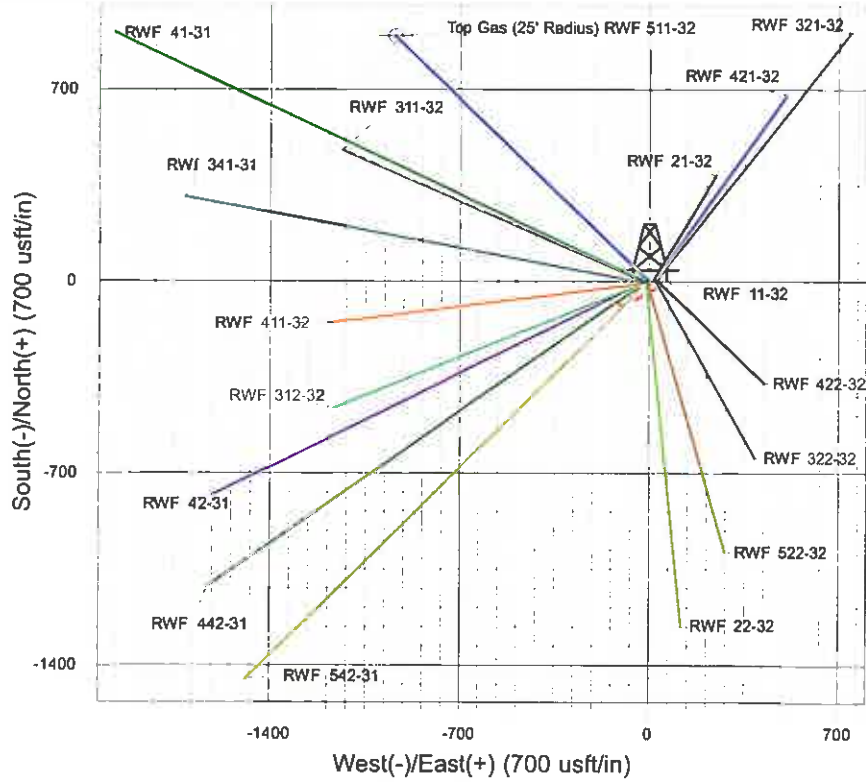
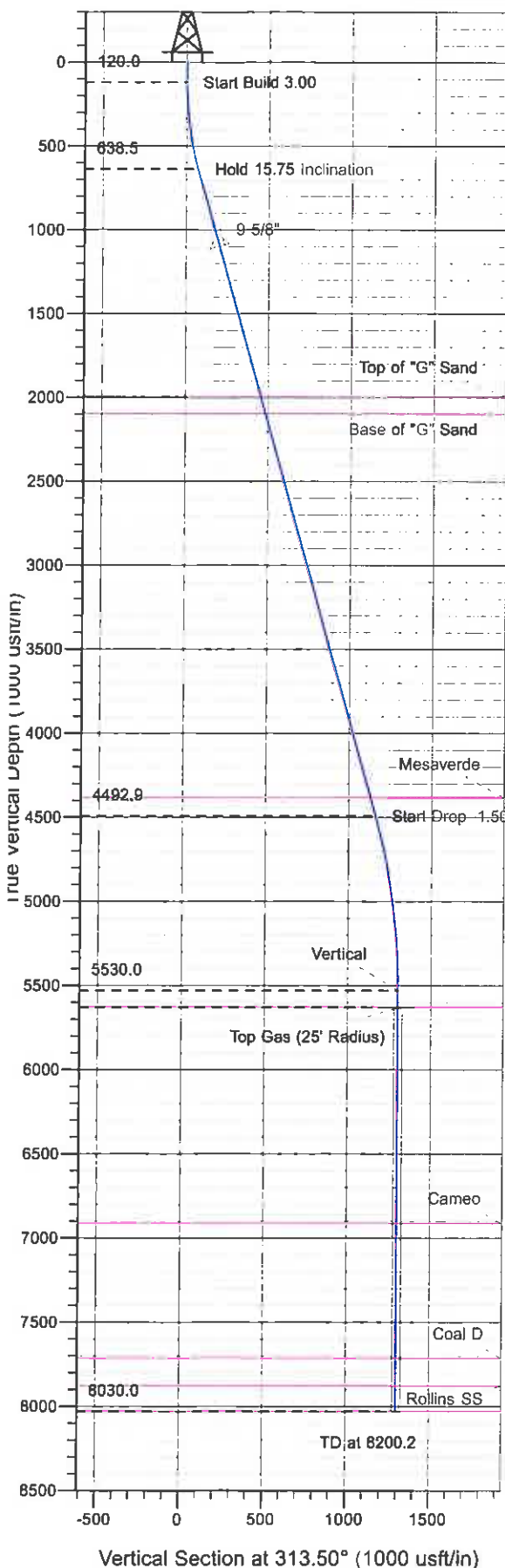




RWF 511-32

Surface Location: RWF 11-32 Pad
 North American Datum 1983 , US State Plane 1983 , Colorado Central Zone
 Ground Elevation: 5539.0
 Northing 1610870.50 Easting 2318240.70 Latitude 39° 29' 8.619 N Longitude 107° 54' 56.883 W Slot B7
 KELLY BUSHING @ 5565.0usft (SSD 573 (26' RKB) kjs)



Project: RU 32-06S-094W
 Site: RWF 11-32 Pad
 Well: RWF 511-32
 Design #1 08Jun11 kjs

Azimuths to True North
 Magnetic North: 10.32°

Magnetic Field
 Strength: 52261.0nT
 Dip Angle: 65.75°
 Date: 6/6/2011
 Model: IGRF2010

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
638.5	645.1	15.75	313.50	49.4	-52.0	71.7	71.7	Hold 15.75 Inclination
4492.9	4650.0	15.75	313.50	797.9	-840.7	1159.1	1159.1	Start Drop -1.50
5530.0	5700.2	0.00	0.00	896.6	-944.8	1302.5	1302.5	Vertical
5630.0	5800.2	0.00	0.00	896.6	-944.8	1302.5	1302.5	Top Gas
8030.0	8200.2	0.00	0.00	896.6	-944.8	1302.5	1302.5	TD at 8200.2

PICEANCE VLY NAD 83

RU 32-06S-094W

RWF 11-32 Pad

RWF 511-32 - Slot B7

Wellbore #1

Plan: Design #1 08Jun11 kjs

Standard Planning Report - Geographic

26 July, 2011

Williams
Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well RWF 511-32 - Slot B7
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 5565.0usft (SSD 573 (26' RKB) kjs)
Project:	RU 32-06S-094W	MD Reference:	KELLY BUSHING @ 5565.0usft (SSD 573 (26' RKB) kjs)
Site:	RWF 11-32 Pad	North Reference:	True
Well:	RWF 511-32	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 08Jun11 kjs		

Project	RU 32-06S-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 11-32 Pad		
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Site Position:		Northing:	1,610,858.10 usft	Latitude:	39° 29' 8.495 N
From:	Map	Easting:	2,318,234.00 usft	Longitude:	107° 54' 56.965 W
Position Uncertainty:	0.0 usft	Slot Radius:	13.200 in	Grid Convergence:	-1.524 °

Well	RWF 511-32 - Slot B7				
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Well Position	+N/-S	0.0 usft	Northing:	1,610,870.50 usft	Latitude:	39° 29' 8.619 N
	+E/-W	0.0 usft	Easting:	2,318,240.70 usft	Longitude:	107° 54' 56.883 W
Position Uncertainty		0.0 usft	Wellhead Elevation:		Ground Level:	5,539.0 usft

Wellbore	Wellbore #1				
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	6/6/2011	10.319	65.746	52,261

Design	Design #1 08Jun11 kjs				
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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	313.50

Plan Sections										
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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	
645.1	15.75	313.50	638.5	49.4	-52.0	3.00	3.00	0.00	313.501	
4,650.0	15.75	313.50	4,492.9	797.9	-840.7	0.00	0.00	0.00	0.000	
5,700.2	0.00	0.00	5,530.0	896.6	-944.8	1.50	-1.50	0.00	180.000	
5,800.2	0.00	0.00	5,630.0	896.6	-944.8	0.00	0.00	0.00	0.000	Top Gas (25' Radius)
8,200.2	0.00	0.00	8,030.0	896.6	-944.8	0.00	0.00	0.00	0.000	

Williams
Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well RWF 511-32 - Slot B7
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 5565.0usft (SSD 573 (26' RKB) kjs)
Project:	RU 32-06S-094W	MD Reference:	KELLY BUSHING @ 5565.0usft (SSD 573 (26' RKB) kjs)
Site:	RWF 11-32 Pad	North Reference:	True
Well:	RWF 511-32	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 08Jun11 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	1,610,870.50	2,318,240.70	39° 29' 8.619 N	107° 54' 56.883 W
120.0	0.00	0.00	120.0	0.0	0.0	1,610,870.50	2,318,240.70	39° 29' 8.619 N	107° 54' 56.883 W
Start Build 3.00									
645.1	15.75	313.50	638.5	49.4	-52.0	1,610,921.24	2,318,190.00	39° 29' 9.107 N	107° 54' 57.547 W
Hold 15.75 Inclination									
1,124.6	15.75	313.50	1,100.0	139.0	-146.5	1,611,013.33	2,318,097.99	39° 29' 9.993 N	107° 54' 58.751 W
9 5/8"									
2,054.5	15.75	313.50	1,995.0	312.8	-329.6	1,611,191.93	2,317,919.55	39° 29' 11.711 N	107° 55' 1.087 W
Top of "G" Sand									
2,158.4	15.75	313.50	2,095.0	332.2	-350.1	1,611,211.89	2,317,899.61	39° 29' 11.903 N	107° 55' 1.348 W
Base of "G" Sand									
4,537.8	15.75	313.50	4,385.0	776.9	-818.7	1,611,668.86	2,317,443.03	39° 29' 16.298 N	107° 55' 7.325 W
Mesaverde									
4,650.0	15.75	313.50	4,492.9	797.9	-840.7	1,611,690.40	2,317,421.51	39° 29' 16.505 N	107° 55' 7.607 W
Start Drop -1.50									
5,700.2	0.00	0.00	5,530.0	896.6	-944.8	1,611,791.90	2,317,320.10	39° 29' 17.481 N	107° 55' 8.934 W
Vertical									
5,800.2	0.00	0.00	5,630.0	896.6	-944.8	1,611,791.90	2,317,320.10	39° 29' 17.481 N	107° 55' 8.934 W
Top Gas - Approx. Top Gas - Top Gas (25' Radius) RWF 511-32									
7,085.2	0.00	0.00	6,915.0	896.6	-944.8	1,611,791.90	2,317,320.10	39° 29' 17.481 N	107° 55' 8.934 W
Cameo									
7,885.2	0.00	0.00	7,715.0	896.6	-944.8	1,611,791.90	2,317,320.10	39° 29' 17.481 N	107° 55' 8.934 W
Coal D									
8,050.2	0.00	0.00	7,880.0	896.6	-944.8	1,611,791.90	2,317,320.10	39° 29' 17.481 N	107° 55' 8.934 W
Rollins SS									
8,200.2	0.00	0.00	8,030.0	896.6	-944.8	1,611,791.90	2,317,320.10	39° 29' 17.481 N	107° 55' 8.934 W
TD at 8200.2 - 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	5,630.0	896.6	-944.8	1,611,791.90	2,317,320.10	39° 29' 17.481 N	107° 55' 8.934 W
- plan hits target center									
- Circle (radius 25.0)									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,124.6	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 511-32 - Slot B7
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 5565.0usft (SSD 573 (26' RKB) kjs)
Project:	RU 32-06S-094W	MD Reference:	KELLY BUSHING @ 5565.0usft (SSD 573 (26' RKB) kjs)
Site:	RWF 11-32 Pad	North Reference:	True
Well:	RWF 511-32	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 08Jun11 kjs		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (")	Dip Direction (")	
2,054.5	1,995.0	Top of "G" Sand				
2,158.4	2,095.0	Base of "G" Sand				
4,537.8	4,385.0	Mesaverde				
5,800.2	5,630.0	Approx. Top Gas				
7,085.2	6,915.0	Cameo				
7,885.2	7,715.0	Coal D				
8,050.2	7,880.0	Rollins SS				
8,200.2	8,030.0	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 3.00	
645.1	638.5	49.4	-52.0	Hold 15.75 Inclination	
4,650.0	4,492.9	797.9	-840.7	Start Drop -1.50	
5,700.2	5,530.0	896.6	-944.8	Vertical	
5,800.2	5,630.0	896.6	-944.8	Top Gas	
8,200.2	8,030.0	896.6	-944.8	TD at 8200.2	