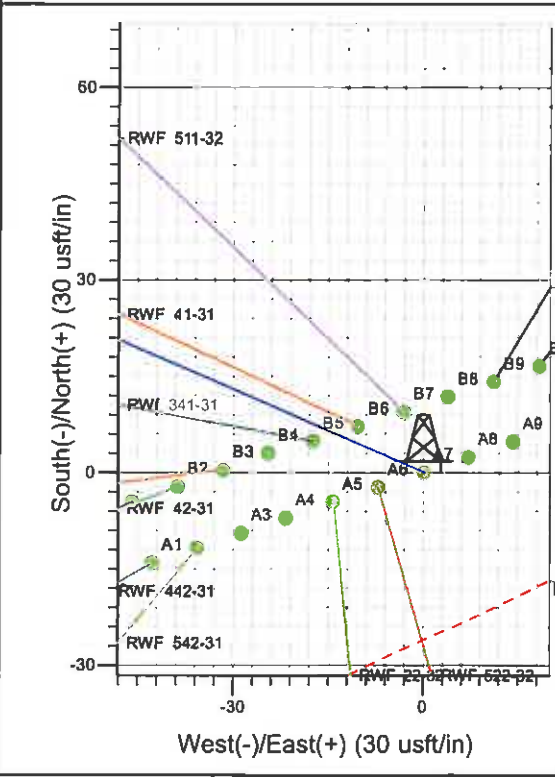
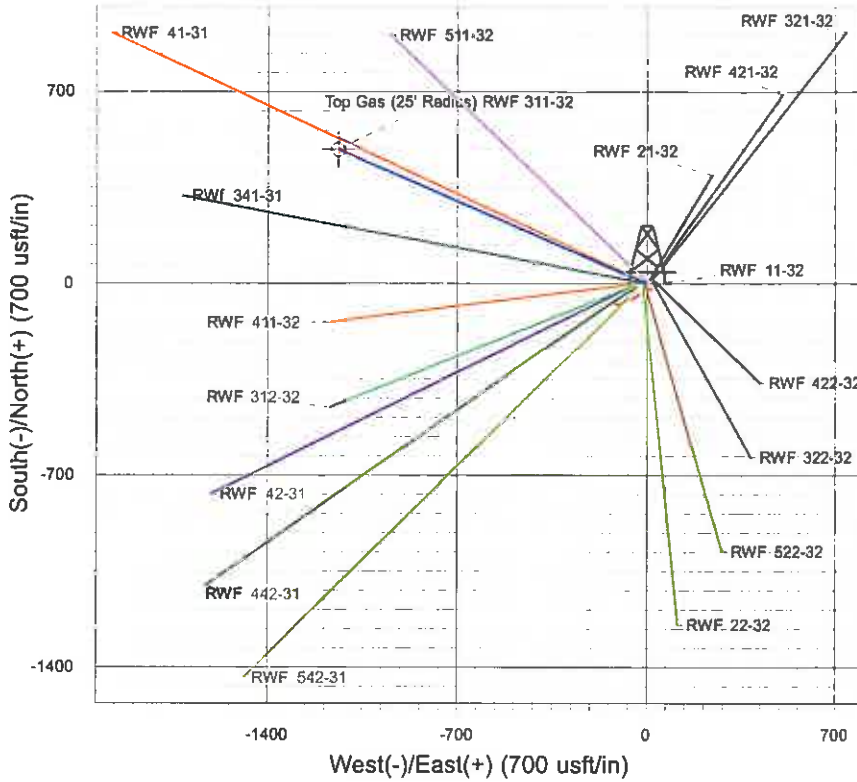
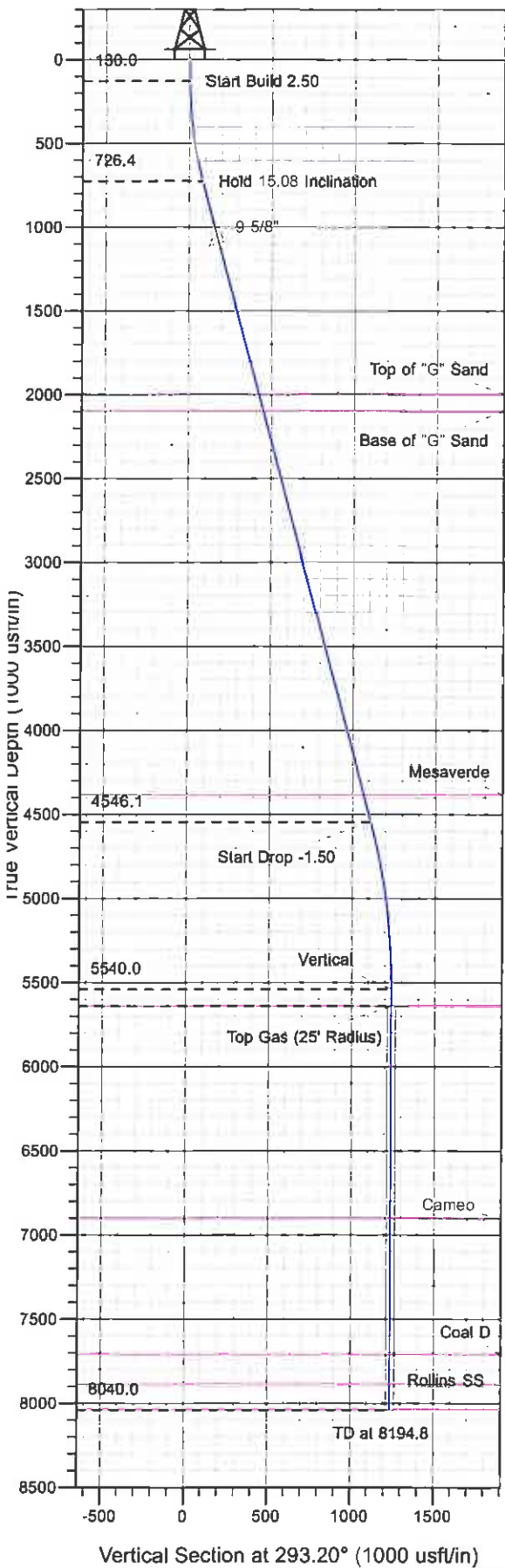




Surface Location: RWF 11-32 Pad
 North American Datum 1983 , US State Plane 1983 , Colorado Central Zone
 Ground Elevation: 5539.0

+N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1610861.00 2318243.60 39° 29' 8.526 N 107° 54' 56.843 W A7
 KELLY BUSHING @ 5565.0usft (SSD 573 (26' RKB) kjs)



Project: RU 32-06S-094W
 Site: RWF 11-32 Pad
 Well: RWF 311-32
 Design #1 06Jun11 kjs

Azimuths to True North
 Magnetic North: 10.32°
 Magnetic Field
 Strength: 52261.0snT
 Dip Angle: 65.75°
 Date: 6/6/2011
 Model: IGRF2010

ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	VSec	Departure	Annotation
130.0	130.0	0.00	0.00	0.0	0.0	0.0	0.0	Start Build 2.50
726.4	733.3	15.08	293.20	31.1	-72.6	78.9	78.9	Hold 15.08 Inclusion
4546.1	4689.3	15.08	293.20	436.7	-1018.7	1108.3	1108.3	Start Drop -1.50
5540.0	5694.6	0.00	0.00	488.5	-1139.6	1239.9	1239.9	Vertical
5640.0	5794.6	0.00	0.00	488.5	-1139.6	1239.9	1239.9	Top Gas
8040.0	8194.8	0.00	0.00	488.5	-1139.6	1239.9	1239.9	TD at 8194.8

PICEANCE VLY NAD 83

RU 32-06S-094W

RWF 11-32 Pad

RWF 311-32 - Slot A7

Wellbore #1

Plan: Design #1 06Jun11 kjs

Standard Planning Report - Geographic

26 July, 2011

Williams

Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well RWF 311-32 - Slot A7
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 311-32	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 06Jun11 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

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 311-32 - Slot A7

Well Position	+N/-S	0.0 usft	Northing:	1,610,861.00 usft	Latitude:	39° 29' 8.526 N
	+E/-W	0.0 usft	Easting:	2,318,243.60 usft	Longitude:	107° 54' 56.843 W
Position Uncertainty		0.0 usft	Wellhead Elevation:		Ground Level:	5,539.0 usft

Wellbore Wellbore #1

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

Design Design #1 06Jun11 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	293.20

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	
130.0	0.00	0.00	130.0	0.0	0.0	0.00	0.00	0.00	0.000	
733.3	15.08	293.20	726.4	31.1	-72.6	2.50	2.50	0.00	293.202	
4,689.3	15.08	293.20	4,546.1	436.7	-1,018.7	0.00	0.00	0.00	0.000	
5,694.8	0.00	0.00	5,540.0	488.5	-1,139.6	1.50	-1.50	0.00	180.000	
5,794.8	0.00	0.00	5,640.0	488.5	-1,139.6	0.00	0.00	0.00	0.000	Top Gas (25' Radius)
8,194.8	0.00	0.00	8,040.0	488.5	-1,139.6	0.00	0.00	0.00	0.000	

Williams
Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well RWF 311-32 - Slot A7
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 311-32	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 06Jun11 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	1,610,861.00	2,318,243.60	39° 29' 8.526 N	107° 54' 56.843 W	
130.0	0.00	0.00	130.0	0.0	0.0	1,610,861.00	2,318,243.60	39° 29' 8.526 N	107° 54' 56.843 W	
Start Build 2.50										
733.3	15.08	293.20	726.4	31.1	-72.6	1,610,894.02	2,318,171.89	39° 29' 8.834 N	107° 54' 57.769 W	
Hold 15.08 Inclination										
1,120.3	15.08	293.20	1,100.0	70.8	-165.1	1,610,936.13	2,318,080.43	39° 29' 9.226 N	107° 54' 58.949 W	
9 5/8"										
2,047.2	15.08	293.20	1,995.0	165.8	-386.8	1,611,037.01	2,317,861.36	39° 29' 10.165 N	107° 55' 1.777 W	
Top of "G" Sand										
2,150.8	15.08	293.20	2,095.0	176.4	-411.6	1,611,048.29	2,317,836.88	39° 29' 10.270 N	107° 55' 2.093 W	
Base of "G" Sand										
4,522.5	15.08	293.20	4,385.0	419.6	-978.8	1,611,306.41	2,317,276.34	39° 29' 12.673 N	107° 55' 9.327 W	
Mesaverde										
4,689.3	15.08	293.20	4,546.1	436.7	-1,018.7	1,611,324.56	2,317,236.92	39° 29' 12.842 N	107° 55' 9.836 W	
Start Drop -1.50										
5,694.8	0.00	0.00	5,540.0	488.5	-1,139.6	1,611,379.60	2,317,117.40	39° 29' 13.354 N	107° 55' 11.379 W	
Vertical										
5,794.8	0.00	0.00	5,640.0	488.5	-1,139.6	1,611,379.60	2,317,117.40	39° 29' 13.354 N	107° 55' 11.379 W	
Top Gas - Approx. Top Gas - Top Gas (25' Radius) RWF 311-32										
7,059.8	0.00	0.00	6,905.0	488.5	-1,139.6	1,611,379.60	2,317,117.40	39° 29' 13.354 N	107° 55' 11.379 W	
Cameo										
7,869.8	0.00	0.00	7,715.0	488.5	-1,139.6	1,611,379.60	2,317,117.40	39° 29' 13.354 N	107° 55' 11.379 W	
Coal D										
8,044.8	0.00	0.00	7,890.0	488.5	-1,139.6	1,611,379.60	2,317,117.40	39° 29' 13.354 N	107° 55' 11.379 W	
Rollins SS										
8,194.8	0.00	0.00	8,040.0	488.5	-1,139.6	1,611,379.60	2,317,117.40	39° 29' 13.354 N	107° 55' 11.379 W	
TD at 8194.8 - TD										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
Top Gas (25' Radius) R1 - hit/miss target - Shape - plan hits target center - Circle (radius 25.0)	0.00	0.00	5,640.0	488.5	-1,139.6	1,611,379.60	2,317,117.40	39° 29' 13.354 N	107° 55' 11.379 W	

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,120.3	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 311-32 - Slot A7
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 311-32	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 06Jun11 kjs		

Formations:						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
2,047.2	1,995.0	Top of "G" Sand				
2,150.8	2,095.0	Base of "G" Sand				
4,522.5	4,385.0	Mesaverde				
5,794.8	5,640.0	Approx. Top Gas				
7,059.8	6,905.0	Cameo				
7,869.8	7,715.0	Coal D				
8,044.8	7,890.0	Rollins SS				
8,194.8	8,040.0	TD				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
130.0	130.0	0.0	0.0	Start Build 2.50	
733.3	726.4	31.1	-72.6	Hold 15.08 Inclination	
4,689.3	4,546.1	436.7	-1,018.7	Start Drop -1.50	
5,694.8	5,540.0	488.5	-1,139.6	Vertical	
5,794.8	5,640.0	488.5	-1,139.6	Top Gas	
8,194.8	8,040.0	488.5	-1,139.6	TD at 8194.8	