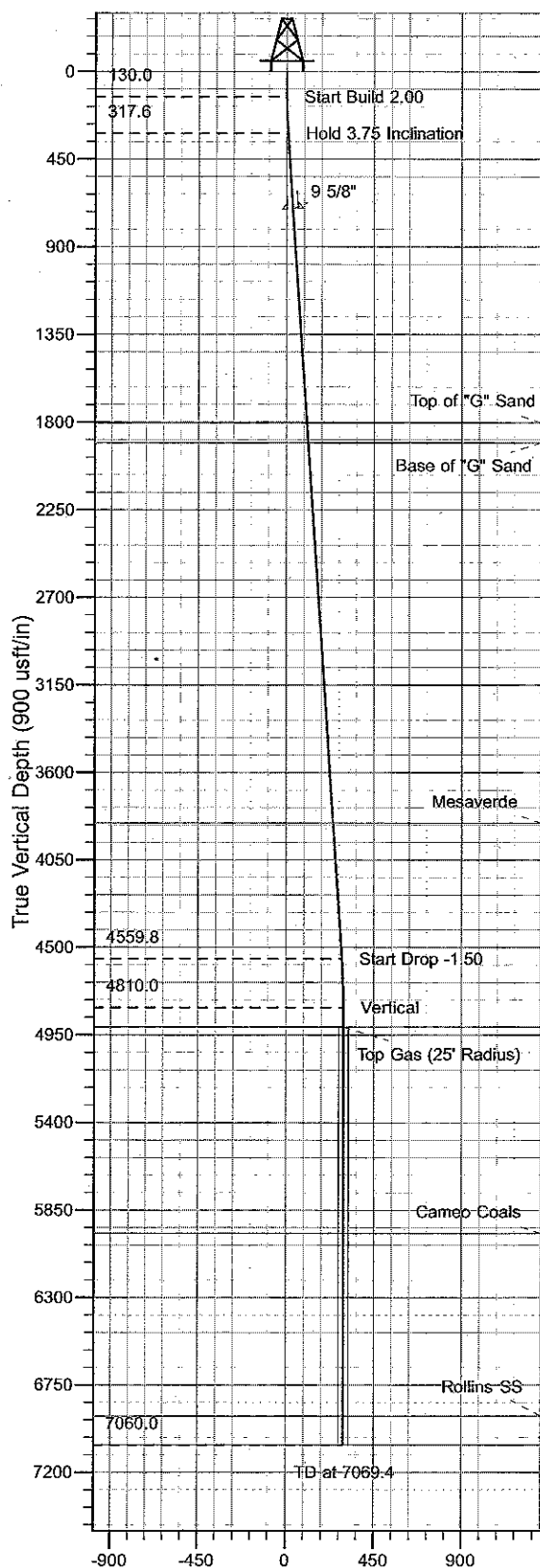
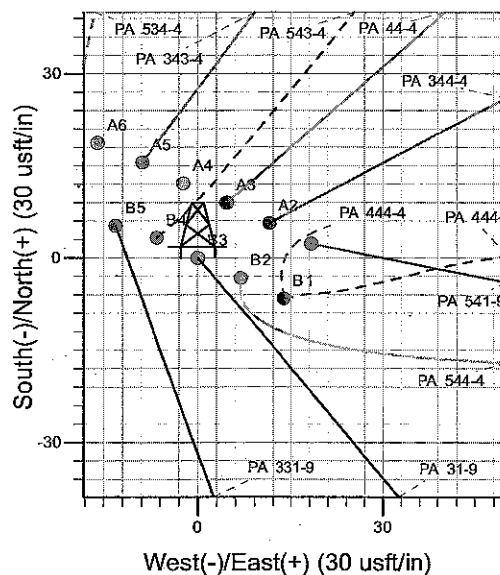
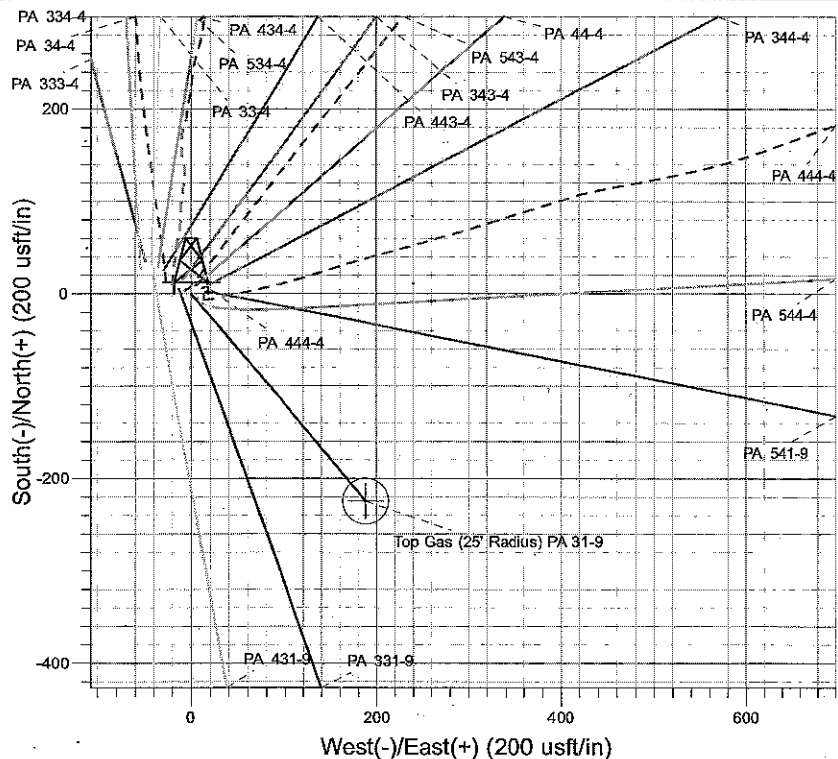




Well Name: PA 31-9
 Surface Location: PA 34-4 Pad
 North American Datum 1983 , US State Plane 1983 , Colorado Central Zone
 Ground Elevation: 5757.0
 Northing Easting Latitude Longitude Slot
 0.0 0.0 1602008.97 2294061.23 39° 27' 34.601 N 108° 0' 2.066 W B3
 KELLY BUSHING @ 5779.0usft (Cyclone 17 (22' KB) kjs)



Vertical Section at 140.07° (900 usft/in)



Project: PA 04-07S-095W
 Site: PA 34-4 Pad
 Well: PA 31-9
 PA 31-9 plan #1 11Mar10 sam

M Azimuths to True North
 Magnetic North: 10.49°
 Magnetic Field
 Strength: 52387.6snT
 Dip Angle: 65.75°
 Date: 3/11/2010
 Model: IGRF2005-10

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 2.00
317.6	317.7	3.75	140.07	-4.7	3.9	6.2	6.2	Hold 3.75 Inclination
4559.8	4569.1	3.75	140.07	-218.2	182.7	284.6	284.6	Start Drop -1.50
4810.0	4819.4	0.00	0.00	-224.5	187.9	292.8	292.8	Vertical
4910.0	4919.4	0.00	0.00	-224.5	187.9	292.8	292.8	Top Gas
7060.0	7069.4	0.00	0.00	-224.5	187.9	292.8	292.8	TD at 7069.4

PICEANCE VLY NAD 83

PA 04-07S-095W

PA 34-4 Pad

PA 31-9 - Slot B3

Wellbore #1

Plan: PA 31-9 plan #1 11Mar10 sam

Standard Planning Report - Geographic

25 May, 2010

Williams
Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well PA 31-9 - Slot B3
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 5779.0usft (Cyclone 17 (22' KB) kjs)
Project:	PA 04-07S-095W	MD Reference:	KELLY BUSHING @ 5779.0usft (Cyclone 17 (22' KB) kjs)
Site:	PA 34-4 Pad	North Reference:	True
Well:	PA 31-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PA 31-9 plan #1 11Mar10 sam		

Project	PA 04-07S-095W, Garfield County, CO, 04-07S-095W		
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	PA 34-4 Pad			
Site Position:		Northing:	1,602,022.90 usft	Latitude: 39° 27' 34.732 N
From:	Map	Easting:	2,294,034.80 usft	Longitude: 108° 0' 2.407 W
Position Uncertainty:	0.0 usft	Slot Radius:	13.200 in	Grid Convergence: -1.577 °

Well	PA 31-9 - Slot B3			
Well Position	+N/-S	0.0 usft	Northing:	1,602,008.96 usft
	+E/-W	0.0 usft	Easting:	2,294,061.23 usft
Position Uncertainty	0.0 usft		Wellhead Elevation:	Ground Level: 5,757.0 usft

Wellbore	Wellbore #1			
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)
	IGRF2005-10	3/11/2010	10.490	65.754
				Field Strength (nT) 52,388

Design	PA 31-9 plan #1 11Mar10 sam			
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	140.07

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	
317.7	3.75	140.07	317.6	-4.7	3.9	2.00	2.00	0.00	140.066	
4,569.1	3.75	140.07	4,559.8	-218.2	182.7	0.00	0.00	0.00	0.000	
4,819.4	0.00	0.00	4,810.0	-224.5	187.9	1.50	-1.50	0.00	180.000	
4,919.4	0.00	0.00	4,910.0	-224.5	187.9	0.00	0.00	0.00	0.000	Top Gas (25' Radius)
7,069.4	0.00	0.00	7,060.0	-224.5	187.9	0.00	0.00	0.00	0.000	

Williams

Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well PA 31-9 - Slot B3
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 5779.0usft (Cyclone 17 (22' KB) kjs)
Project:	PA 04-07S-095W	MD Reference:	KELLY BUSHING @ 5779.0usft (Cyclone 17 (22' KB) kjs)
Site:	PA 34-4 Pad	North Reference:	True
Well:	PA 31-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PA 31-9 plan #1 11Mar10 sam		

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	1,602,008.96	2,294,061.23	39° 27' 34.601 N	108° 0' 2.066 W	
130.0	0.00	0.00	130.0	0.0	0.0	1,602,008.96	2,294,061.23	39° 27' 34.601 N	108° 0' 2.066 W	
Start Build 2.00										
317.7	3.75	140.07	317.6	-4.7	3.9	1,602,004.14	2,294,065.04	39° 27' 34.555 N	108° 0' 2.015 W	
Hold 3.75 Inclination										
707.0	3.75	140.07	706.0	-24.3	20.3	1,601,984.15	2,294,080.86	39° 27' 34.361 N	108° 0' 1.807 W	
9 5/8"										
1,808.3	3.75	140.07	1,805.0	-79.6	66.6	1,601,927.60	2,294,125.62	39° 27' 33.815 N	108° 0' 1.216 W	
Top of "G" Sand										
1,908.5	3.75	140.07	1,905.0	-84.6	70.8	1,601,922.45	2,294,129.69	39° 27' 33.765 N	108° 0' 1.163 W	
Base of "G" Sand										
3,867.8	3.75	140.07	3,860.0	-183.0	153.2	1,601,821.84	2,294,209.31	39° 27' 32.793 N	108° 0' 0.113 W	
Mesaverde										
4,569.1	3.75	140.07	4,559.8	-218.2	182.7	1,601,785.83	2,294,237.81	39° 27' 32.445 N	107° 59' 59.737 W	
Start Drop -1.50										
4,819.4	0.00	0.00	4,810.0	-224.5	187.9	1,601,779.40	2,294,242.90	39° 27' 32.382 N	107° 59' 59.670 W	
Vertical										
4,919.4	0.00	0.00	4,910.0	-224.5	187.9	1,601,779.40	2,294,242.90	39° 27' 32.382 N	107° 59' 59.670 W	
Top Gas - Approx. Top Gas										
5,979.4	0.00	0.00	5,970.0	-224.5	187.9	1,601,779.40	2,294,242.90	39° 27' 32.382 N	107° 59' 59.670 W	
Cameo Coals										
6,919.4	0.00	0.00	6,910.0	-224.5	187.9	1,601,779.40	2,294,242.90	39° 27' 32.382 N	107° 59' 59.670 W	
Rollins SS										
7,069.4	0.00	0.00	7,060.0	-224.5	187.9	1,601,779.40	2,294,242.90	39° 27' 32.382 N	107° 59' 59.670 W	
TD at 7069.4 - TD										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
- hit/miss target										
- Shape										
Top Gas (25' Radius) P/	0.00	0.00	4,910.0	-224.5	187.9	1,601,779.40	2,294,242.90	39° 27' 32.382 N	107° 59' 59.670 W	
- plan hits target center										
- Circle (radius 25.0)										

Casing Points							
Measured Depth (usft)	Vertical Depth (usft)	Name		Casing Diameter (in)	Hole Diameter (in)		
707.0	706.0	9 5/8"		9.625	12.250		

Williams
Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well PA 31-9 - Slot B3
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Project:	PA 04-07S-095W	MD Reference:	KELLY BUSHING @ 5779.0usft (Cyclone 17 (22' KB) kjs)
Site:	PA 34-4 Pad	North Reference:	True
Well:	PA 31-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PA 31-9 plan #1 11Mar10 sam		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,808.3	1,805.0	Top of "G" Sand				
1,908.5	1,905.0	Base of "G" Sand				
3,867.8	3,860.0	Mesaverde				
4,919.4	4,910.0	Approx. Top Gas				
5,979.4	5,970.0	Cameo Coals				
6,919.4	6,910.0	Rollins SS				
7,069.4	7,060.0	TD				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
130.0	130.0	0.0	0.0	Start Build 2.00	
317.7	317.6	-4.7	3.9	Hold 3.75 Inclination	
4,569.1	4,559.8	-218.2	182.7	Start Drop -1.50	
4,819.4	4,810.0	-224.5	187.9	Vertical	
4,919.4	4,910.0	-224.5	187.9	Top Gas	
7,069.4	7,060.0	-224.5	187.9	TD at 7069.4	