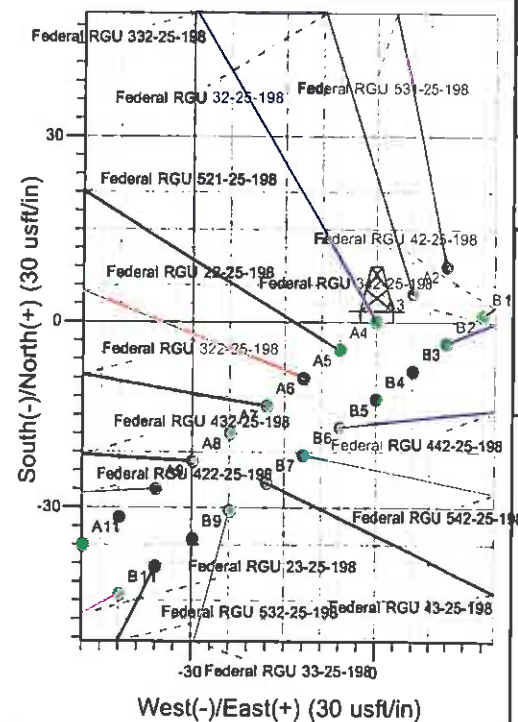
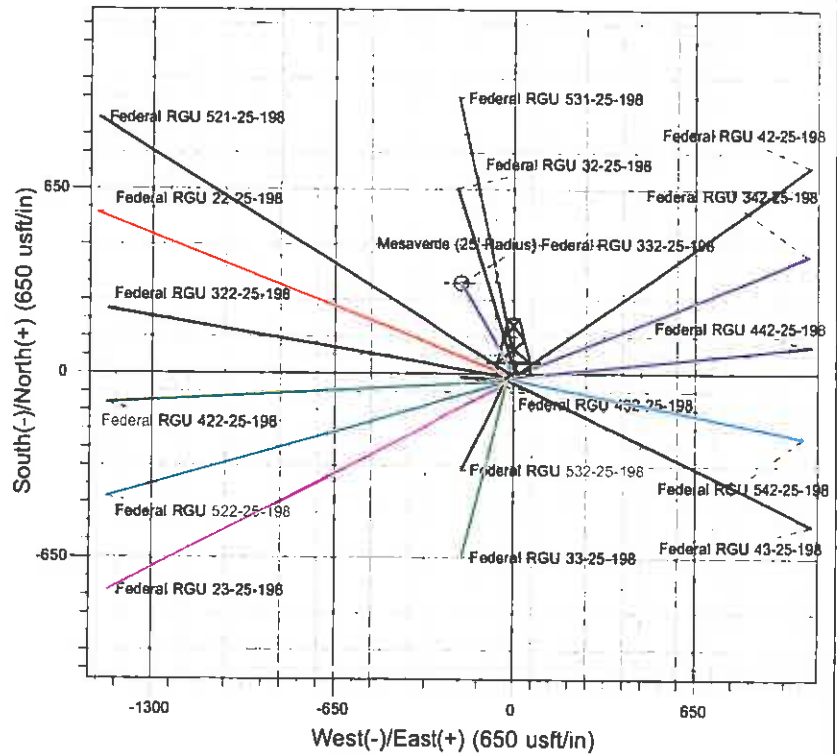
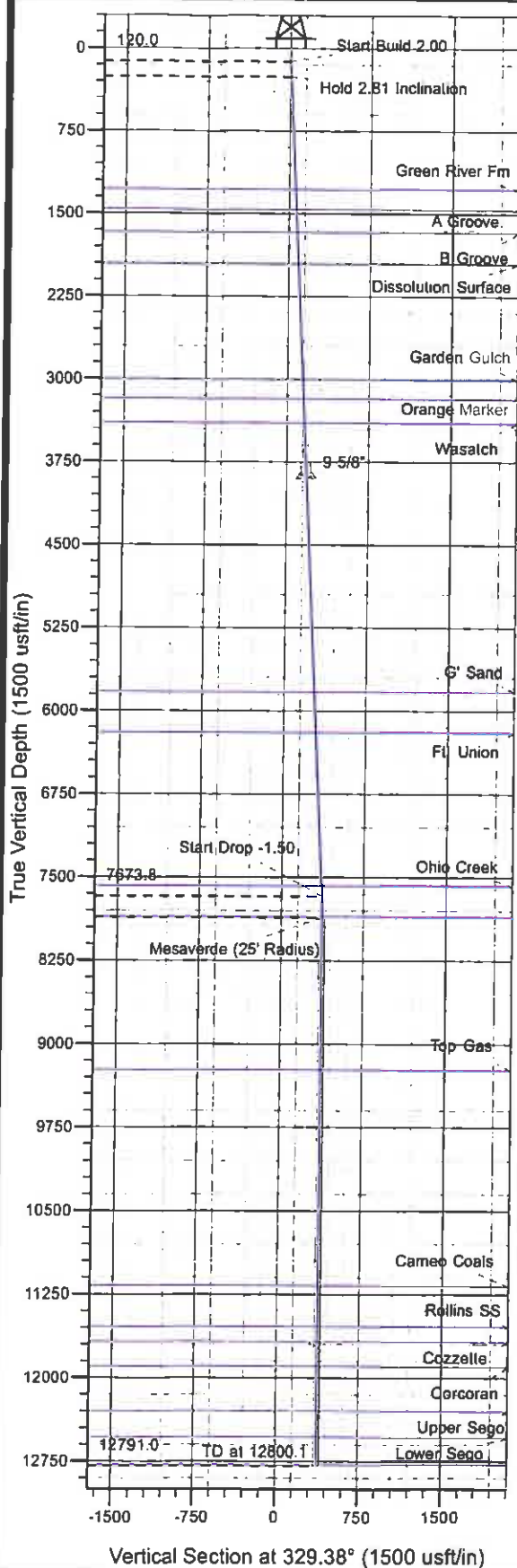




Well Name: Federal RGU 332-25-198
 Surface Location: RGU 32-25-198 Pad
 North American Datum 1983 , US State Plane 1983 , Colorado Central Zone
 Ground Elevation: 6670.0
 +N/-S +E/-W Northing Easting Latitude Longitude Slat
 0.0 0.0 1778149.40 2203869.10 39° 56' 8.442 N 108° 20' 21.664 W A3
 KELLY BUSHING @ 6691.0usft



Project RG 25-01S-098W
 Site RGU 32-25-198 Pad
 Well: Federal RGU 332-25-198
 Plan #2 14Jan11 kjs

Azimuths to True North
 Magnetic North: 10.61°
 Magnetic Field
 Strength: 52476.6snT
 Dip Angle: 66.05°
 Date: 1/26/2011
 Model: IGRF2010

ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	VSed	Departure	Annotation
120.0	120.0	0.00	0.00	0.0	0.0	0.0	0.0	Start Build 2.00
260.4	260.5	2.81	329.38	3.0	-1.8	3.4	3.4	Hold 2.81 Inclination
7673.8	7682.7	2.81	329.38	316.1	-187.0	367.3	367.3	Start Drop -1.50
7861.0	7870.1	0.00	0.00	320.0	-189.4	371.9	371.9	Mesaverde
12791.0	12800.1	0.00	0.00	320.0	-189.4	371.9	371.9	TD at 12800.1

PICEANCE HL NAD 83

RG 25-01S-098W

RGU 32-25-198 Pad

Federal RGU 332-25-198 - Slot A3

Wellbore #1

Plan: Plan #2 14Jan11 kjs

Standard Planning Report - Geographic

17 January, 2011

Williams
Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well Federal RGU 332-25-198 - Slot A3
Company:	PICEANCE HL NAD 83	TVD Reference:	KELLY BUSHING @ 6691.0usft
Project:	RG 25-01S-098W	MD Reference:	KELLY BUSHING @ 6691.0usft
Site:	RGU 32-25-198 Pad	North Reference:	True
Well:	Federal RGU 332-25-198	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 14Jan11 kjs		

Project	RG 25-01S-098W, Rio Blanco County, CO, RG 25-01S-098W		
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	RGU 32-25-198 Pad		
Site Position:		Northing:	1,778,153.70 usft
From:	Map	Easting:	2,203,875.30 usft
Position Uncertainty:	0.0 usft	Slot Radius:	0.000 in
		Latitude:	39° 56' 8.487 N
		Longitude:	108° 20' 21.587 W
		Grid Convergence:	-1.791 °

Well	Federal RGU 332-25-198 - Slot A3		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	
		Latitude:	39° 56' 8.442 N
		Longitude:	108° 20' 21.664 W
		Ground Level:	6,670.0 usft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF2010	1/26/2011	10.614
			Dip Angle
			(°)
			Field Strength
			(nT)
			52,477

Design	Plan #2 14Jan11 kjs		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth:
			0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction
			(°)
			329.38

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(°)	Depth	(usft)	(usft)	Rate	Rate	Rate	(°)	
(usft)			(usft)			(°/100usft)	(°/100usft)	(°/100usft)		
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	
260.5	2.81	329.38	260.4	3.0	-1.8	2.00	2.00	0.00	329.384	
7,682.7	2.81	329.38	7,673.8	316.1	-187.0	0.00	0.00	0.00	0.000	
7,870.1	0.00	0.00	7,861.0	320.0	-189.4	1.50	-1.50	0.00	180.000	Mesaverde (25' Radiu
12,800.1	0.00	0.00	12,791.0	320.0	-189.4	0.00	0.00	0.00	0.000	

Williams
Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well Federal RGU 332-25-198 - Slot A3
Company:	PICEANCE HL NAD 83	TVD Reference:	KELLY BUSHING @ 6691.0usft
Project:	RG 25-01S-098W	MD Reference:	KELLY BUSHING @ 6691.0usft
Site:	RGU 32-25-198 Pad	North Reference:	True
Well:	Federal RGU 332-25-198	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 14Jan11 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	1,778,149.40	2,203,869.10	39° 56' 8.442 N	108° 20' 21.664 W
120.0	0.00	0.00	120.0	0.0	0.0	1,778,149.40	2,203,869.10	39° 56' 8.442 N	108° 20' 21.664 W
Start Build 2.00									
260.5	2.81	329.38	260.4	3.0	-1.8	1,778,152.42	2,203,867.44	39° 56' 8.472 N	108° 20' 21.687 W
Hold 2.81 Inclination									
1,287.3	2.81	329.38	1,286.0	46.3	-27.4	1,778,196.51	2,203,843.17	39° 56' 8.900 N	108° 20' 22.016 W
Green River Fm									
1,467.5	2.81	329.38	1,466.0	53.9	-31.9	1,778,204.25	2,203,838.91	39° 56' 8.975 N	108° 20' 22.074 W
A Groove									
1,677.8	2.81	329.38	1,676.0	62.8	-37.1	1,778,213.28	2,203,833.94	39° 56' 9.062 N	108° 20' 22.141 W
B Groove									
1,963.1	2.81	329.38	1,961.0	74.8	-44.3	1,778,225.54	2,203,827.20	39° 56' 9.181 N	108° 20' 22.233 W
Dissolution Surface									
3,009.4	2.81	329.38	3,006.0	118.9	-70.4	1,778,270.47	2,203,802.47	39° 56' 9.618 N	108° 20' 22.568 W
Garden Gulch									
3,184.6	2.81	329.38	3,181.0	126.3	-74.8	1,778,278.00	2,203,798.33	39° 56' 9.691 N	108° 20' 22.624 W
Orange Marker									
3,404.8	2.81	329.38	3,401.0	135.6	-80.3	1,778,287.46	2,203,793.12	39° 56' 9.782 N	108° 20' 22.695 W
Wasatch									
3,905.0	2.81	329.38	3,900.6	156.7	-92.7	1,778,308.94	2,203,781.30	39° 56' 9.991 N	108° 20' 22.855 W
D 5/8"									
5,842.8	2.81	329.38	5,836.0	238.5	-141.1	1,778,392.16	2,203,735.50	39° 56' 10.799 N	108° 20' 23.476 W
G' Sand									
6,208.2	2.81	329.38	6,201.0	253.9	-150.2	1,778,407.85	2,203,726.86	39° 56' 10.951 N	108° 20' 23.593 W
Ft. Union									
7,594.9	2.81	329.38	7,586.0	312.4	-184.9	1,778,467.40	2,203,694.09	39° 56' 11.529 N	108° 20' 24.038 W
Ohio Creek									
7,682.7	2.81	329.38	7,673.8	316.1	-187.0	1,778,471.18	2,203,692.01	39° 56' 11.566 N	108° 20' 24.066 W
Start Drop -1.50									
7,870.1	0.00	0.00	7,861.0	320.0	-189.4	1,778,475.20	2,203,689.80	39° 56' 11.605 N	108° 20' 24.096 W
Mesaverde - Mesaverde									
9,250.1	0.00	0.00	9,241.0	320.0	-189.4	1,778,475.20	2,203,689.80	39° 56' 11.605 N	108° 20' 24.096 W
Top Gas									
11,190.1	0.00	0.00	11,181.0	320.0	-189.4	1,778,475.20	2,203,689.80	39° 56' 11.605 N	108° 20' 24.096 W
Cameo Coals									
11,560.1	0.00	0.00	11,551.0	320.0	-189.4	1,778,475.20	2,203,689.80	39° 56' 11.605 N	108° 20' 24.096 W
Rollins SS									
11,695.1	0.00	0.00	11,686.0	320.0	-189.4	1,778,475.20	2,203,689.80	39° 56' 11.605 N	108° 20' 24.096 W
Cozzette									
11,915.1	0.00	0.00	11,906.0	320.0	-189.4	1,778,475.20	2,203,689.80	39° 56' 11.605 N	108° 20' 24.096 W
Corcoran									
12,320.1	0.00	0.00	12,311.0	320.0	-189.4	1,778,475.20	2,203,689.80	39° 56' 11.605 N	108° 20' 24.096 W
Upper Sego									
12,550.1	0.00	0.00	12,541.0	320.0	-189.4	1,778,475.20	2,203,689.80	39° 56' 11.605 N	108° 20' 24.096 W
Lower Sego									
12,800.1	0.00	0.00	12,791.0	320.0	-189.4	1,778,475.20	2,203,689.80	39° 56' 11.605 N	108° 20' 24.096 W
TD at 12800.1 - TD									

Williams
Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well Federal RGU 332-25-198 - Slot A3
Company:	PICEANCE HL NAD 83	TVD Reference:	KELLY BUSHING @ 6691.0usft
Project:	RG 25-01S-098W	MD Reference:	KELLY BUSHING @ 6691.0usft
Site:	RGU 32-25-198 Pad	North Reference:	True
Well:	Federal RGU 332-25-198	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 14Jan11 kis		

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Mesaverde (25' Radius) - plan hits target center - Circle (radius 25.0)	0.00	0.00	7,861.0	320.0	-189.4	1,778,475.20	2,203,689.80	39° 56' 11.605 N	108° 20' 24.096 W

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)
3,905.0	3,900.6	9 5/8"	9.625	13.500

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,287.3	1,286.0	Green River Fm			
1,467.5	1,466.0	A Groove			
1,677.8	1,676.0	B Groove			
1,963.1	1,961.0	Dissolution Surface			
3,009.4	3,006.0	Garden Gulch			
3,184.6	3,181.0	Orange Marker			
3,404.8	3,401.0	Wasatch			
5,842.8	5,836.0	G' Sand			
6,208.2	6,201.0	Fl. Union			
7,594.9	7,586.0	Ohio Creek			
7,870.1	7,861.0	Mesaverde			
9,250.1	9,241.0	Top Gas			
11,190.1	11,181.0	Cameo Coals			
11,560.1	11,551.0	Rollins SS			
11,695.1	11,686.0	Cozzette			
11,915.1	11,906.0	Corcoran			
12,320.1	12,311.0	Upper Sego			
12,550.1	12,541.0	Lower Sego			
12,800.1	12,791.0	TD		0.000	

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
120.0	120.0	0.0	0.0	Start Build 2.00
260.5	260.4	3.0	-1.8	Hold 2.81 Inclination
7,682.7	7,673.8	316.1	-187.0	Start Drop -1.50
7,870.1	7,861.0	320.0	-189.4	Mesaverde
12,800.1	12,791.0	320.0	-189.4	TD at 12800.1