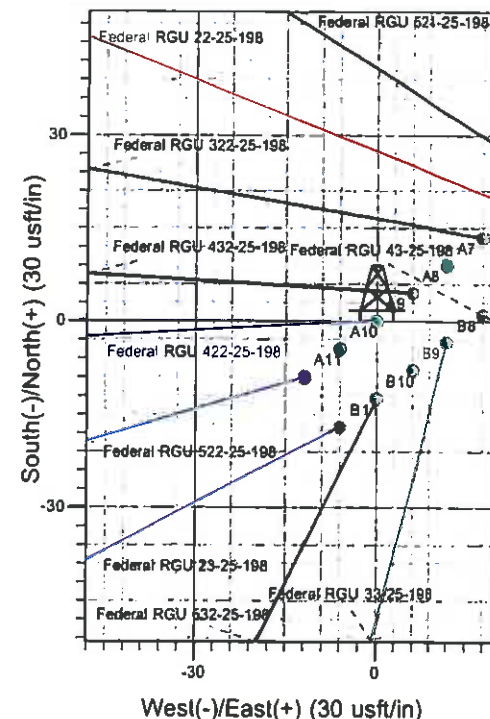
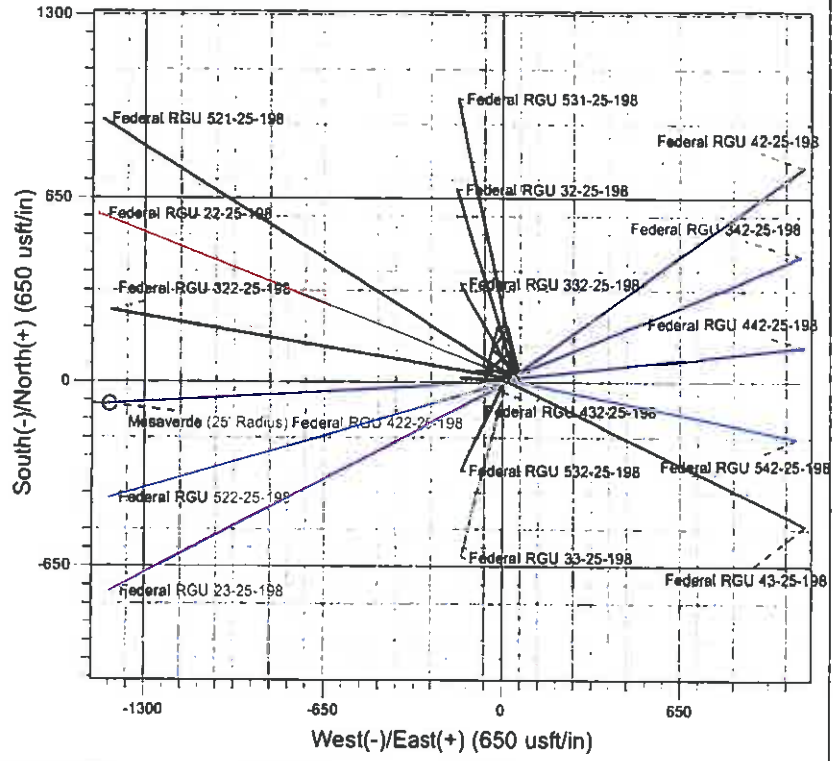
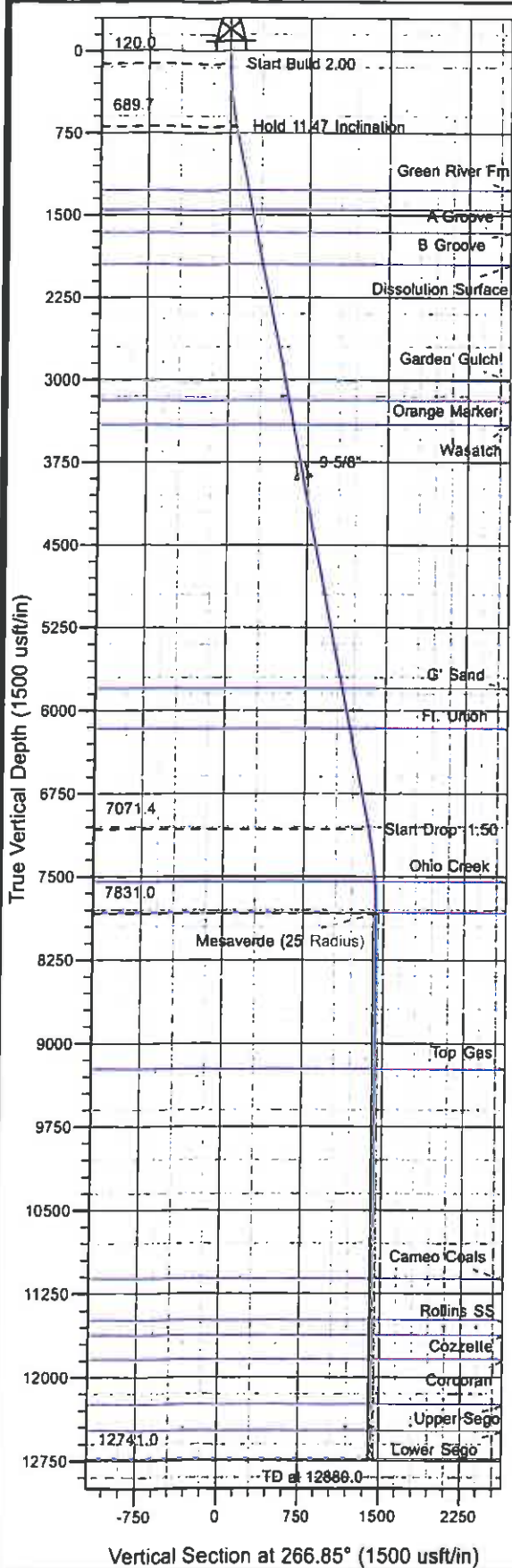




Well Name: Federal RGU 422-25-198
 Surface Location: RGU 32-25-198 Pad
 North American Datum 1983 , US State Plane 1983 , Colorado Central Zone
 Ground Elevation: 6670.0
 +N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1778123.50 2203832.30 39° 56' 8.175 N 108° 20' 22.126 W A9
 KELLY BUSHING @ 6691.0usft (Cyclone 29 (21') kjs)



Project: RG 25-01S-098W
 Site: RGU 32-25-198 Pad
 Well: Federal RGU 422-25-198
 Plan #2 14Jan11 kjs

Azimuths to True North
 Magnetic North: 10.60°

Magnetic Field
 Strength: 52468.0snT
 Dip Angle: 66.04°
 Date: 2/26/2011
 Model: IGRF2010

ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	V	Sed	Departure	Annotation
120.0	120.0	0.00	0.00	0.0	0.0	0.0	0.0	0.0	Start Build 2.00
689.7	693.5	11.47	266.85	-3.1	-57.1	57.2	57.2	57.2	Hold 11.47 Inclination
7071.4	7205.3	11.47	266.85	-74.3	-1350.1	1352.2	1352.2	1352.2	Start Drop -1.50
7831.0	7970.0	0.00	0.00	-78.5	-1426.3	1428.4	1428.4	1428.4	Mesaverde
12741.0	12880.0	0.00	0.00	-78.5	-1426.3	1428.4	1428.4	1428.4	TD at 12880.0

PICEANCE HL NAD 83

RG 25-01S-098W

RGU 32-25-198 Pad

Federal RGU 422-25-198 - Slot A9

Wellbore #1

Plan: Plan #2 14Jan11 kjs

Standard Planning Report - Geographic

17 January, 2011

Williams
Planning Report - Geographic

Database Company:	Compass R5000 WIN AUTH PICEANCE HL NAD 83	Local Co-ordinate Reference:	Well Federal RGU 422-25-198 - Slot A9
Project:	RG 25-01S-098W	TVD Reference:	KELLY BUSHING @ 6691.0usft (Cyclone 29 (21') kjs)
Site:	RGU 32-25-198 Pad	MD Reference:	KELLY BUSHING @ 6691.0usft (Cyclone 29 (21') kjs)
Well:	Federal RGU 422-25-198	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
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
		Grid Convergence:	-1.791 °

Well:	Federal RGU 422-25-198 - Slot A9		
Well Position	+N-S	0.0 usft	Northing: 1,778,123.50 usft
	+E-W	0.0 usft	Easting: 2,203,832.30 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	Ground Level: 6,670.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2/26/2011	10.603	66.045	52,468

Design:	Plan #2 14Jan11 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	266.85

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	
120.0	0.00	0.00	120.0	0.0	0.0	0.00	0.00	0.00	0.000	
693.5	11.47	266.85	689.7	-3.1	-57.1	2.00	2.00	0.00	266.849	
7,205.3	11.47	266.85	7,071.4	-74.3	-1,350.1	0.00	0.00	0.00	0.000	
7,970.0	0.00	0.00	7,831.0	-78.5	-1,426.3	1.50	-1.50	0.00	180.000	Mesaverde (25' Radi
12,880.0	0.00	0.00	12,741.0	-78.5	-1,426.3	0.00	0.00	0.00	0.000	

Williams
Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well Federal RGU 422-25-198 - Slot A9
Company:	PICEANCE HL NAD 83	TVD Reference:	KELLY BUSHING @ 6691.0usft (Cyclone 29 (21') kjs)
Project:	RG 25-01S-098W	MD Reference:	KELLY BUSHING @ 6691.0usft (Cyclone 29 (21') kjs)
Site:	RGU 32-25-198 Pad	North Reference:	True
Well:	Federal RGU 422-25-198	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	1,778,123.50	2,203,832.30	39° 56' 8.175 N	108° 20' 22.126 W
120.0	0.00	0.00	120.0	0.0	0.0	1,778,123.50	2,203,832.30	39° 56' 8.175 N	108° 20' 22.126 W
Start Build 2.00									
693.5	11.47	266.85	689.7	-3.1	-57.1	1,778,122.14	2,203,775.10	39° 56' 8.144 N	108° 20' 22.860 W
Hold 11.47 Inclination									
1,291.8	11.47	266.85	1,276.0	-9.7	-175.9	1,778,119.32	2,203,656.16	39° 56' 8.079 N	108° 20' 24.385 W
Green River Fm									
1,475.4	11.47	266.85	1,456.0	-11.7	-212.4	1,778,118.45	2,203,619.64	39° 56' 8.060 N	108° 20' 24.853 W
A Groove									
1,689.7	11.47	266.85	1,666.0	-14.0	-254.9	1,778,117.44	2,203,577.04	39° 56' 8.036 N	108° 20' 25.399 W
B Groove									
1,980.5	11.47	266.85	1,951.0	-17.2	-312.7	1,778,116.07	2,203,518.22	39° 56' 8.005 N	108° 20' 26.140 W
Dissolution Surface									
3,067.2	11.47	266.85	3,016.0	-29.1	-528.5	1,778,110.94	2,203,303.17	39° 56' 7.888 N	108° 20' 28.910 W
Garden Gulch									
3,245.8	11.47	266.85	3,191.0	-31.0	-563.9	1,778,110.10	2,203,267.67	39° 56' 7.868 N	108° 20' 29.365 W
Orange Marker									
3,470.3	11.47	266.85	3,411.0	-33.5	-608.5	1,778,109.04	2,203,223.04	39° 56' 7.844 N	108° 20' 29.938 W
Wasatch									
3,970.0	11.47	266.85	3,900.7	-39.0	-707.7	1,778,106.68	2,203,123.69	39° 56' 7.790 N	108° 20' 31.211 W
9 5/8"									
5,914.1	11.47	266.85	5,806.0	-60.2	-1,093.7	1,778,097.50	2,202,737.18	39° 56' 7.580 N	108° 20' 36.167 W
G' Sand									
6,286.5	11.47	266.85	6,171.0	-64.3	-1,167.7	1,778,095.75	2,202,663.13	39° 56' 7.540 N	108° 20' 37.116 W
Fl. Union									
7,205.3	11.47	266.85	7,071.4	-74.3	-1,350.1	1,778,091.41	2,202,480.47	39° 56' 7.440 N	108° 20' 39.458 W
Start Drop -1.50									
7,694.7	4.13	266.85	7,556.0	-78.0	-1,416.4	1,778,089.83	2,202,414.11	39° 56' 7.404 N	108° 20' 40.309 W
Ohio Creek									
7,970.0	0.00	0.00	7,831.0	-78.5	-1,426.3	1,778,089.60	2,202,404.20	39° 56' 7.399 N	108° 20' 40.436 W
Messaverde - Messaverde									
9,380.0	0.00	0.00	9,241.0	-78.5	-1,426.3	1,778,089.60	2,202,404.20	39° 56' 7.399 N	108° 20' 40.436 W
Top Gas									
11,270.0	0.00	0.00	11,131.0	-78.5	-1,426.3	1,778,089.60	2,202,404.20	39° 56' 7.399 N	108° 20' 40.436 W
Cameo Coals									
11,640.0	0.00	0.00	11,501.0	-78.5	-1,426.3	1,778,089.60	2,202,404.20	39° 56' 7.399 N	108° 20' 40.436 W
Rollins SS									
11,775.0	0.00	0.00	11,636.0	-78.5	-1,426.3	1,778,089.60	2,202,404.20	39° 56' 7.399 N	108° 20' 40.436 W
Cozzette									
11,995.0	0.00	0.00	11,856.0	-78.5	-1,426.3	1,778,089.60	2,202,404.20	39° 56' 7.399 N	108° 20' 40.436 W
Corcoran									
12,400.0	0.00	0.00	12,261.0	-78.5	-1,426.3	1,778,089.60	2,202,404.20	39° 56' 7.399 N	108° 20' 40.436 W
Upper Sego									
12,630.0	0.00	0.00	12,491.0	-78.5	-1,426.3	1,778,089.60	2,202,404.20	39° 56' 7.399 N	108° 20' 40.436 W
Lower Sego									
12,880.0	0.00	0.00	12,741.0	-78.5	-1,426.3	1,778,089.60	2,202,404.20	39° 56' 7.399 N	108° 20' 40.436 W
TD at 12880.0 - TD									

Williams
Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well Federal RGU 422-25-198 - Slot A9
Company:	PICEANCE HL NAD 83	TVD Reference:	KELLY BUSHING @ 6691.0usft (Cyclone 29 (21') kjs)
Project:	RG 25-01S-098W	MD Reference:	KELLY BUSHING @ 6691.0usft (Cyclone 29 (21') kjs)
Site:	RGU 32-25-198 Pad	North Reference:	True
Well:	Federal RGU 422-25-198	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 14Jan11 kjs		

Design Targets									
Target Name	Dip Angle	Dip Dir	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
Mesaverde (25' Radius)	0.00	0.00	7,831.0	-78.5	-1,426.3	1,778,089.60	2,202,404.20	39° 56' 7.399 N	108° 20' 40.436 W
- plan hit target center									
- Circle (radius 25.0)									

Casing Points				
Measured Depth	Vertical Depth	Name	Casing Diameter	Hole Diameter
(usft)	(usft)		(in)	(in)
3,970.0	3,900.7	9 5/8"	9.625	13.500

Formations					
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction
(usft)	(usft)			(°)	(°)
1,291.8	1,276.0	Green River Fm			
1,475.4	1,456.0	A Groove			
1,689.7	1,666.0	B Groove			
1,980.5	1,951.0	Dissolution Surface			
3,067.2	3,016.0	Garden Gulch			
3,245.8	3,191.0	Orange Marker			
3,470.3	3,411.0	Wasatch			
5,914.1	5,806.0	G' Sand			
6,286.5	6,171.0	Fl. Union			
7,694.7	7,556.0	Ohio Creek			
7,970.0	7,831.0	Mesaverde			
9,380.0	9,241.0	Top Gas		0.000	
11,270.0	11,131.0	Cameo Coals			
11,640.0	11,501.0	Rollins SS			
11,775.0	11,636.0	Cozzette			
11,995.0	11,856.0	Corcoran			
12,400.0	12,261.0	Upper Sego			
12,630.0	12,491.0	Lower Sego			
12,880.0	12,741.0	TD		0.000	

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(usft)	(usft)	+N/-S	+E/-W	
(usft)	(usft)	(usft)	(usft)	
120.0	120.0	0.0	0.0	Start Build 2.00
693.5	689.7	-3.1	-57.1	Hold 11.47 Inclination
7,205.3	7,071.4	-74.3	-1,350.1	Start Drop -1.50
7,970.0	7,831.0	-78.5	-1,426.3	Mesaverde
12,880.0	12,741.0	-78.5	-1,426.3	TD at 12880.0