



PICEANCE HL NAD 83

RG 26-01S-098W

RGU 42-26-198

RGU 442-26-198 - Slot A11

Wellbore #1

Plan: Design #1 24Jan13 kjs

Standard Planning Report - Geographic

09 April, 2013



WPX Energy
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well RGU 442-26-198 - Slot A11
Company:	PICEANCE HL NAD 83	TVD Reference:	KELLY BUSHING @ 6643.00usft (Cyclone 29 (21' RKB) kjs)
Project:	RG 26-01S-098W	MD Reference:	KELLY BUSHING @ 6643.00usft (Cyclone 29 (21' RKB) kjs)
Site:	RGU 42-26-198	North Reference:	True
Well:	RGU 442-26-198	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 24Jan13 kjs		

Project	RG 26-01S-098W, Rio Blanco County, CO		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		

Site	RGU 42-26-198			
Site Position:		Northing:	1,778,121.90 usft	Latitude: 39.93524
From: Map		Easting:	2,199,615.70 usft	Longitude: -108.35451
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence: -1.8003 °

Well	RGU 442-26-198 - Slot A11			
Well Position	+N/-S	0.00 usft	Northing:	1,778,116.30 usft
	+E/-W	0.00 usft	Easting:	2,199,623.90 usft
Position Uncertainty	0.00 usft		Wellhead Elevation:	
			Ground Level:	6,622.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	1/24/2013	10.3617	65.9894	52,274

Design	Design #1 24Jan13 kjs			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	48.67

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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	
120.00	0.00	0.00	120.00	0.00	0.00	0.00	0.00	0.00	0.0000	
247.08	2.54	48.67	247.04	1.86	2.12	2.00	2.00	0.00	48.6713	
7,450.74	2.54	48.67	7,443.61	212.82	242.01	0.00	0.00	0.00	0.0000	
7,620.18	0.00	0.00	7,613.00	215.30	244.83	1.50	-1.50	0.00	180.0000	
7,720.18	0.00	0.00	7,713.00	215.30	244.83	0.00	0.00	0.00	0.0000	Mesaverde (25' Radius
12,590.18	0.00	0.00	12,583.00	215.30	244.83	0.00	0.00	0.00	0.0000	



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Project:	RG 26-01S-098W	MD Reference:	KELLY BUSHING @ 6643.00usft (Cyclone 29 (21' RKB) kjs)
Site:	RGU 42-26-198	North Reference:	True
Well:	RGU 442-26-198	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 24Jan13 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	
0.00	0.00	0.00	0.00	0.00	0.00	1,778,116.30	2,199,623.90	39.93522	-108.35448	
120.00	0.00	0.00	120.00	0.00	0.00	1,778,116.30	2,199,623.90	39.93522	-108.35448	
Start Build 2.00										
247.08	2.54	48.67	247.04	1.86	2.12	1,778,118.09	2,199,626.07	39.93523	-108.35447	
Hold 2.54 Inclination										
500.00	2.54	48.67	499.71	9.27	10.54	1,778,125.23	2,199,634.72	39.93525	-108.35444	
1,000.00	2.54	48.67	999.22	23.91	27.19	1,778,139.34	2,199,651.83	39.93529	-108.35438	
1,229.01	2.54	48.67	1,228.00	30.62	34.82	1,778,145.81	2,199,659.66	39.93531	-108.35436	
Green River Fm										
1,409.18	2.54	48.67	1,408.00	35.89	40.82	1,778,150.89	2,199,665.82	39.93532	-108.35434	
A Groove										
1,500.00	2.54	48.67	1,498.73	38.55	43.84	1,778,153.46	2,199,668.93	39.93533	-108.35432	
1,614.39	2.54	48.67	1,613.00	41.90	47.65	1,778,156.68	2,199,672.84	39.93534	-108.35431	
B Groove										
1,899.67	2.54	48.67	1,898.00	50.26	57.15	1,778,164.74	2,199,682.60	39.93536	-108.35428	
Dissolution Surface										
2,000.00	2.54	48.67	1,998.23	53.20	60.49	1,778,167.57	2,199,686.03	39.93537	-108.35426	
2,500.00	2.54	48.67	2,497.74	67.84	77.14	1,778,181.68	2,199,703.13	39.93541	-108.35421	
2,985.74	2.54	48.67	2,983.00	82.06	93.32	1,778,195.39	2,199,719.75	39.93545	-108.35415	
Garden Gulch										
3,000.00	2.54	48.67	2,997.25	82.48	93.79	1,778,195.79	2,199,720.24	39.93545	-108.35415	
3,165.91	2.54	48.67	3,163.00	87.34	99.32	1,778,200.48	2,199,725.91	39.93546	-108.35413	
Orange Marker										
3,386.13	2.54	48.67	3,383.00	93.79	106.65	1,778,206.69	2,199,733.44	39.93548	-108.35410	
Wasatch										
3,500.00	2.54	48.67	3,496.76	97.12	110.44	1,778,209.91	2,199,737.34	39.93549	-108.35409	
3,886.62	2.54	48.67	3,883.00	108.45	123.32	1,778,220.82	2,199,750.56	39.93552	-108.35404	
9 5/8"										
4,000.00	2.54	48.67	3,996.27	111.77	127.09	1,778,224.02	2,199,754.44	39.93553	-108.35403	
4,500.00	2.54	48.67	4,495.77	126.41	143.74	1,778,238.13	2,199,771.54	39.93557	-108.35397	
5,000.00	2.54	48.67	4,995.28	141.05	160.39	1,778,252.24	2,199,788.64	39.93561	-108.35391	
5,500.00	2.54	48.67	5,494.79	155.69	177.04	1,778,266.35	2,199,805.75	39.93565	-108.35385	
5,688.39	2.54	48.67	5,683.00	161.21	183.32	1,778,271.67	2,199,812.19	39.93567	-108.35383	
Top of "G" Sand										
6,000.00	2.54	48.67	5,994.30	170.34	193.69	1,778,280.47	2,199,822.85	39.93569	-108.35379	
6,048.75	2.54	48.67	6,043.00	171.76	195.32	1,778,281.84	2,199,824.52	39.93569	-108.35378	
Fort Union										
6,500.00	2.54	48.67	6,493.81	184.98	210.34	1,778,294.58	2,199,839.95	39.93573	-108.35373	
7,000.00	2.54	48.67	6,993.32	199.62	227.00	1,778,308.69	2,199,857.05	39.93577	-108.35367	
7,445.12	2.54	48.67	7,438.00	212.66	241.82	1,778,321.25	2,199,872.28	39.93581	-108.35362	
Ohio Creek										
7,450.74	2.54	48.67	7,443.61	212.82	242.01	1,778,321.41	2,199,872.47	39.93581	-108.35362	
Start Drop -1.50										
7,500.00	1.80	48.67	7,492.84	214.05	243.41	1,778,322.60	2,199,873.91	39.93581	-108.35361	
7,620.18	0.00	0.00	7,613.00	215.30	244.83	1,778,323.81	2,199,875.37	39.93581	-108.35361	
Vertical										
7,720.18	0.00	0.00	7,713.00	215.30	244.83	1,778,323.81	2,199,875.37	39.93581	-108.35361	
Mesaverde - Mesaverde										
8,000.00	0.00	0.00	7,992.82	215.30	244.83	1,778,323.81	2,199,875.37	39.93581	-108.35361	
8,500.00	0.00	0.00	8,492.82	215.30	244.83	1,778,323.81	2,199,875.37	39.93581	-108.35361	
9,000.00	0.00	0.00	8,992.82	215.30	244.83	1,778,323.81	2,199,875.37	39.93581	-108.35361	



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Site:	RGU 42-26-198	North Reference:	True
Well:	RGU 442-26-198	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 24Jan13 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
9,020.18	0.00	0.00	9,013.00	215.30	244.83	1,778,323.81	2,199,875.37	39.93581	-108.35361
Approx. Top Gas									
9,500.00	0.00	0.00	9,492.82	215.30	244.83	1,778,323.81	2,199,875.37	39.93581	-108.35361
10,000.00	0.00	0.00	9,992.82	215.30	244.83	1,778,323.81	2,199,875.37	39.93581	-108.35361
10,500.00	0.00	0.00	10,492.82	215.30	244.83	1,778,323.81	2,199,875.37	39.93581	-108.35361
10,815.18	0.00	0.00	10,808.00	215.30	244.83	1,778,323.81	2,199,875.37	39.93581	-108.35361
Cameo Coals									
11,000.00	0.00	0.00	10,992.82	215.30	244.83	1,778,323.81	2,199,875.37	39.93581	-108.35361
11,370.18	0.00	0.00	11,363.00	215.30	244.83	1,778,323.81	2,199,875.37	39.93581	-108.35361
Rollins SS									
11,500.00	0.00	0.00	11,492.82	215.30	244.83	1,778,323.81	2,199,875.37	39.93581	-108.35361
11,505.18	0.00	0.00	11,498.00	215.30	244.83	1,778,323.81	2,199,875.37	39.93581	-108.35361
Cozzette									
11,720.18	0.00	0.00	11,713.00	215.30	244.83	1,778,323.81	2,199,875.37	39.93581	-108.35361
Corcoran									
12,000.00	0.00	0.00	11,992.82	215.30	244.83	1,778,323.81	2,199,875.37	39.93581	-108.35361
12,090.18	0.00	0.00	12,083.00	215.30	244.83	1,778,323.81	2,199,875.37	39.93581	-108.35361
Upper Sego									
12,340.18	0.00	0.00	12,333.00	215.30	244.83	1,778,323.81	2,199,875.37	39.93581	-108.35361
Lower Sego									
12,500.00	0.00	0.00	12,492.82	215.30	244.83	1,778,323.81	2,199,875.37	39.93581	-108.35361
12,590.17	0.00	0.00	12,582.99	215.30	244.83	1,778,323.81	2,199,875.37	39.93581	-108.35361
TD									
12,590.18	0.00	0.00	12,583.00	215.30	244.83	1,778,323.81	2,199,875.37	39.93581	-108.35361
TD at 12590.18									

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									
Mesaverde (25' Radius)	0.00	0.00	7,713.00	215.30	244.83	1,778,323.81	2,199,875.37	39.93581	-108.35361
- plan hits target center									
- Circle (radius 25.00)									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
3,886.62	3,883.00	9 5/8"	9.625	13.500	



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Project:	RG 26-01S-098W	MD Reference:	KELLY BUSHING @ 6643.00usft (Cyclone 29 (21' RKB) kjs)
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Well:	RGU 442-26-198	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 24Jan13 kjs		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,229.01	1,228.00	Green River Fm				
1,409.18	1,408.00	A Groove				
1,614.39	1,613.00	B Groove				
1,899.67	1,898.00	Dissolution Surface				
2,985.74	2,983.00	Garden Gulch				
3,165.91	3,163.00	Orange Marker				
3,386.13	3,383.00	Wasatch				
5,688.39	5,683.00	Top of "G" Sand				
6,048.75	6,043.00	Fort Union				
7,445.12	7,438.00	Ohio Creek				
7,720.18	7,713.00	Mesaverde				
9,020.18	9,013.00	Approx. Top Gas				
10,815.18	10,808.00	Cameo Coals				
11,370.18	11,363.00	Rollins SS				
11,505.18	11,498.00	Cozzette				
11,720.18	11,713.00	Corcoran				
12,090.18	12,083.00	Upper Sego				
12,340.18	12,333.00	Lower Sego				
12,590.17	12,582.99	TD		0.0000		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
120.00	120.00	0.00	0.00	Start Build 2.00
247.08	247.04	1.86	2.12	Hold 2.54 Inclination
7,450.74	7,443.61	212.82	242.01	Start Drop -1.50
7,620.18	7,613.00	215.30	244.83	Vertical
7,720.18	7,713.00	215.30	244.83	Mesaverde
12,590.18	12,583.00	215.30	244.83	TD at 12590.18