



PICEANCE HL NAD 83

RG 26-01S-098W

RGU 42-26-198

RGU 531-26-198 - Slot B10

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 531-26-198 - Slot B10
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 531-26-198	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 531-26-198 - Slot B10			
Well Position	+N/-S	0.00 usft	Northing:	1,778,115.70 usft
	+E/-W	0.00 usft	Easting:	2,199,611.50 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	65.9893	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	318.00

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	
125.00	0.00	0.00	125.00	0.00	0.00	0.00	0.00	0.00	0.0000	
308.33	5.50	318.00	308.05	6.53	-5.88	3.00	3.00	0.00	318.0000	
3,515.04	5.50	318.00	3,500.00	234.94	-211.54	0.00	0.00	0.00	0.0000	
3,970.61	19.17	318.00	3,944.00	307.08	-276.50	3.00	3.00	0.00	0.0000	
6,848.58	19.17	318.00	6,662.43	1,009.27	-908.78	0.00	0.00	0.00	0.0000	
7,806.93	0.00	0.00	7,603.00	1,127.28	-1,015.04	2.00	-2.00	0.00	180.0000	
7,906.93	0.00	0.00	7,703.00	1,127.28	-1,015.04	0.00	0.00	0.00	0.0000	Mesaverde (25' Radiu
12,736.93	0.00	0.00	12,533.00	1,127.28	-1,015.04	0.00	0.00	0.00	0.0000	



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Site:	RGU 42-26-198	North Reference:	True
Well:	RGU 531-26-198	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	1,778,115.70	2,199,611.50	39.93522	-108.35452	
125.00	0.00	0.00	125.00	0.00	0.00	1,778,115.70	2,199,611.50	39.93522	-108.35452	
Start Build 3.00										
308.33	5.50	318.00	308.05	6.53	-5.88	1,778,122.42	2,199,605.82	39.93524	-108.35455	
Hold 5.50 Inc, 318.00° azi										
500.00	5.50	318.00	498.84	20.19	-18.18	1,778,136.45	2,199,593.97	39.93528	-108.35459	
1,000.00	5.50	318.00	996.53	55.80	-50.24	1,778,173.05	2,199,563.03	39.93537	-108.35470	
1,232.54	5.50	318.00	1,228.00	72.36	-65.16	1,778,190.07	2,199,548.65	39.93542	-108.35476	
Green River Fm										
1,413.37	5.50	318.00	1,408.00	85.24	-76.75	1,778,203.31	2,199,537.46	39.93545	-108.35480	
A Groove										
1,500.00	5.50	318.00	1,494.23	91.41	-82.31	1,778,209.65	2,199,532.10	39.93547	-108.35482	
1,619.32	5.50	318.00	1,613.00	99.91	-89.96	1,778,218.39	2,199,524.72	39.93550	-108.35485	
B Groove										
1,905.64	5.50	318.00	1,898.00	120.31	-108.32	1,778,239.35	2,199,507.01	39.93555	-108.35491	
Dissolution Surface										
2,000.00	5.50	318.00	1,991.93	127.03	-114.38	1,778,246.26	2,199,501.17	39.93557	-108.35493	
2,500.00	5.50	318.00	2,489.63	162.64	-146.44	1,778,282.86	2,199,470.24	39.93567	-108.35505	
2,995.65	5.50	318.00	2,983.00	197.94	-178.23	1,778,319.15	2,199,439.58	39.93576	-108.35516	
Garden Gulch										
3,000.00	5.50	318.00	2,987.33	198.25	-178.51	1,778,319.46	2,199,439.31	39.93576	-108.35516	
3,181.51	5.50	318.00	3,168.00	211.18	-190.15	1,778,332.75	2,199,428.08	39.93580	-108.35520	
Orange Marker										
3,402.53	5.50	318.00	3,388.00	226.93	-204.32	1,778,348.93	2,199,414.40	39.93584	-108.35525	
Wasatch										
3,500.00	5.50	318.00	3,485.02	233.87	-210.58	1,778,356.07	2,199,408.37	39.93586	-108.35528	
3,515.04	5.50	318.00	3,500.00	234.94	-211.54	1,778,357.17	2,199,407.44	39.93587	-108.35528	
Start Build 3.00										
3,911.63	17.40	317.99	3,888.00	293.33	-264.12	1,778,417.19	2,199,356.72	39.93603	-108.35547	
9 5/8"										
3,970.61	19.17	318.00	3,944.00	307.08	-276.50	1,778,431.32	2,199,344.78	39.93606	-108.35551	
Hold 19.17 Inclination										
4,000.00	19.17	318.00	3,971.76	314.25	-282.96	1,778,438.69	2,199,338.55	39.93608	-108.35553	
4,500.00	19.17	318.00	4,444.04	436.25	-392.80	1,778,564.07	2,199,232.59	39.93642	-108.35593	
5,000.00	19.17	318.00	4,916.32	558.24	-502.65	1,778,689.46	2,199,126.63	39.93675	-108.35632	
5,500.00	19.17	318.00	5,388.61	680.23	-612.50	1,778,814.84	2,199,020.67	39.93709	-108.35671	
5,801.08	19.17	318.00	5,673.00	753.69	-678.65	1,778,890.34	2,198,956.87	39.93729	-108.35694	
Top of "G" Sand										
6,000.00	19.17	318.00	5,860.89	802.23	-722.35	1,778,940.22	2,198,914.71	39.93742	-108.35710	
6,182.21	19.17	318.00	6,033.00	846.68	-762.38	1,778,985.92	2,198,876.10	39.93754	-108.35724	
Fort Union										
6,500.00	19.17	318.00	6,333.17	924.22	-832.20	1,779,065.61	2,198,808.75	39.93776	-108.35749	
6,848.58	19.17	318.00	6,662.43	1,009.27	-908.78	1,779,153.02	2,198,734.88	39.93799	-108.35777	
Start Drop -2.00										
7,000.00	16.14	318.00	6,806.70	1,043.39	-939.50	1,779,188.09	2,198,705.24	39.93808	-108.35787	
7,500.00	6.14	318.00	7,296.66	1,115.08	-1,004.05	1,779,261.77	2,198,642.98	39.93828	-108.35811	
7,631.82	3.50	318.00	7,428.00	1,123.31	-1,011.46	1,779,270.23	2,198,635.83	39.93830	-108.35813	
Ohio Creek										
7,806.93	0.00	0.00	7,603.00	1,127.28	-1,015.04	1,779,274.31	2,198,632.37	39.93832	-108.35814	
Vertical										

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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 531-26-198	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
7,906.93	0.00	0.00	7,703.00	1,127.28	-1,015.04	1,779,274.31	2,198,632.37	39.93832	-108.35814
Mesaverde - Mesaverde									
8,000.00	0.00	0.00	7,796.07	1,127.28	-1,015.04	1,779,274.31	2,198,632.37	39.93832	-108.35814
8,500.00	0.00	0.00	8,296.07	1,127.28	-1,015.04	1,779,274.31	2,198,632.37	39.93832	-108.35814
9,000.00	0.00	0.00	8,796.07	1,127.28	-1,015.04	1,779,274.31	2,198,632.37	39.93832	-108.35814
9,296.93	0.00	0.00	9,093.00	1,127.28	-1,015.04	1,779,274.31	2,198,632.37	39.93832	-108.35814
Approx. Top Gas									
9,500.00	0.00	0.00	9,296.07	1,127.28	-1,015.04	1,779,274.31	2,198,632.37	39.93832	-108.35814
10,000.00	0.00	0.00	9,796.07	1,127.28	-1,015.04	1,779,274.31	2,198,632.37	39.93832	-108.35814
10,500.00	0.00	0.00	10,296.07	1,127.28	-1,015.04	1,779,274.31	2,198,632.37	39.93832	-108.35814
10,956.93	0.00	0.00	10,753.00	1,127.28	-1,015.04	1,779,274.31	2,198,632.37	39.93832	-108.35814
Cameo Coals									
11,000.00	0.00	0.00	10,796.07	1,127.28	-1,015.04	1,779,274.31	2,198,632.37	39.93832	-108.35814
11,500.00	0.00	0.00	11,296.07	1,127.28	-1,015.04	1,779,274.31	2,198,632.37	39.93832	-108.35814
11,516.93	0.00	0.00	11,313.00	1,127.28	-1,015.04	1,779,274.31	2,198,632.37	39.93832	-108.35814
Rollins SS									
11,651.93	0.00	0.00	11,448.00	1,127.28	-1,015.04	1,779,274.31	2,198,632.37	39.93832	-108.35814
Cozzette									
11,866.93	0.00	0.00	11,663.00	1,127.28	-1,015.04	1,779,274.31	2,198,632.37	39.93832	-108.35814
Corcoran									
12,000.00	0.00	0.00	11,796.07	1,127.28	-1,015.04	1,779,274.31	2,198,632.37	39.93832	-108.35814
12,246.93	0.00	0.00	12,043.00	1,127.28	-1,015.04	1,779,274.31	2,198,632.37	39.93832	-108.35814
Upper Sego									
12,486.93	0.00	0.00	12,283.00	1,127.28	-1,015.04	1,779,274.31	2,198,632.37	39.93832	-108.35814
Lower Sego									
12,500.00	0.00	0.00	12,296.07	1,127.28	-1,015.04	1,779,274.31	2,198,632.37	39.93832	-108.35814
12,736.92	0.00	0.00	12,532.99	1,127.28	-1,015.04	1,779,274.31	2,198,632.37	39.93832	-108.35814
TD									
12,736.93	0.00	0.00	12,533.00	1,127.28	-1,015.04	1,779,274.31	2,198,632.37	39.93832	-108.35814
TD at 12736.93									

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	7,703.00	1,127.28	-1,015.04	1,779,274.31	2,198,632.37	39.93832	-108.35814
- plan hits target center									
- Circle (radius 25.00)									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
3,911.63	3,888.00	9 5/8"	9.625	13.500	



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Site:	RGU 42-26-198	North Reference:	True
Well:	RGU 531-26-198	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 (°)	
1,232.54	1,228.00	Green River Fm				
1,413.37	1,408.00	A Groove				
1,619.32	1,613.00	B Groove				
1,905.64	1,898.00	Dissolution Surface				
2,995.65	2,983.00	Garden Gulch				
3,181.51	3,168.00	Orange Marker				
3,402.53	3,388.00	Wasatch				
5,801.08	5,673.00	Top of "G" Sand				
6,182.21	6,033.00	Fort Union				
7,631.82	7,428.00	Ohio Creek				
7,906.93	7,703.00	Mesaverde				
9,296.93	9,093.00	Approx. Top Gas				
10,956.93	10,753.00	Cameo Coals				
11,516.93	11,313.00	Rollins SS				
11,651.93	11,448.00	Cozzette				
11,866.93	11,663.00	Corcoran				
12,246.93	12,043.00	Upper Sego				
12,486.93	12,283.00	Lower Sego				
12,736.92	12,532.99	TD		0.0000		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
125.00	125.00	0.00	0.00	Start Build 3.00
308.33	308.05	6.53	-5.88	Hold 5.50 Inc, 318.00° azi
3,515.04	3,500.00	234.94	-211.54	Start Build 3.00
3,970.61	3,944.00	307.08	-276.50	Hold 19.17 Inclination
6,848.58	6,662.43	1,009.27	-908.78	Start Drop -2.00
7,806.93	7,603.00	1,127.28	-1,015.04	Vertical
7,906.93	7,703.00	1,127.28	-1,015.04	Mesaverde
12,736.93	12,533.00	1,127.28	-1,015.04	TD at 12736.93