

PICEANCE VLY NAD 83

GV 10-07S-096W

MV 5-10 Pad

GM 533-10 - Slot A05

Wellbore #1

Plan: Design #1 07Aug14 mab

Standard Planning Report - Geographic

14 October, 2014

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well GM 533-10 - Slot A05
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 6174.00usft (Nabors _ (26' RKB) mab)
Project:	GV 10-07S-096W	MD Reference:	KELLY BUSHING @ 6174.00usft (Nabors _ (26' RKB) mab)
Site:	MV 5-10 Pad	North Reference:	True
Well:	GM 533-10	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 07Aug14 mab		

Project	GV 10-07S-096W		
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	MV 5-10 Pad			
Site Position:		Northing:	1,600,354.00000 usft	Latitude: 39.45298
From: Map		Easting:	2,266,910.20000 usft	Longitude: -108.09653
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence: -1.64 °

Well	GM 533-10 - Slot A05			
Well Position	+N/-S	0.00 usft	Northing:	1,600,349.40000 usft
	+E/-W	0.00 usft	Easting:	2,266,895.90000 usft
Position Uncertainty	0.00 usft		Wellhead Elevation:	0.00 usft
			Ground Level:	6,148.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	8/7/2014	9.99	65.60	51,895

Design	Design #1 07Aug14 mab			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (bearing)
	0.00	0.00	0.00	144.67

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	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	0.00	
120.00	0.00	0.00	120.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,030.71	29.60	144.67	990.74	-187.69	133.02	3.25	3.25	0.00	144.67	
3,240.74	29.60	144.67	2,912.39	-1,078.26	764.20	0.00	0.00	0.00	0.00	
5,213.95	0.00	0.00	4,799.00	-1,484.92	1,052.41	1.50	-1.50	0.00	180.00	
5,313.95	0.00	0.00	4,899.00	-1,484.92	1,052.41	0.00	0.00	0.00	0.00	Top Gas (50' Radius)
7,163.95	0.00	0.00	6,749.00	-1,484.92	1,052.41	0.00	0.00	0.00	0.00	

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well GM 533-10 - Slot A05
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 6174.00usft (Nabors _ (26' RKB) mab)
Project:	GV 10-07S-096W	MD Reference:	KELLY BUSHING @ 6174.00usft (Nabors _ (26' RKB) mab)
Site:	MV 5-10 Pad	North Reference:	True
Well:	GM 533-10	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 07Aug14 mab		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	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	1,600,349.40000	2,266,895.90000	39.45297	-108.09658
120.00	0.00	0.00	120.00	0.00	0.00	1,600,349.40000	2,266,895.90000	39.45297	-108.09658
Start Build 3.25									
200.00	2.60	144.67	199.97	-1.48	1.05	1,600,347.89001	2,266,896.90661	39.45296	-108.09658
400.00	9.10	144.67	398.82	-18.10	12.83	1,600,330.93838	2,266,908.20718	39.45292	-108.09654
600.00	15.60	144.67	594.09	-52.98	37.55	1,600,295.36631	2,266,931.92083	39.45282	-108.09645
800.00	22.10	144.67	783.26	-105.68	74.90	1,600,241.63111	2,266,967.74267	39.45268	-108.09632
1,000.00	28.60	144.67	963.91	-175.50	124.38	1,600,170.42364	2,267,015.21217	39.45248	-108.09614
1,030.71	29.60	144.67	990.74	-187.69	133.02	1,600,157.99691	2,267,023.49629	39.45245	-108.09611
Hold 29.60° Inc, 144.67° Az									
1,070.71	29.60	144.67	1,025.52	-203.81	144.44	1,600,141.55967	2,267,034.45395	39.45241	-108.09607
9 5/8"									
1,200.00	29.60	144.67	1,137.94	-255.90	181.37	1,600,088.42821	2,267,069.87332	39.45226	-108.09594
1,400.00	29.60	144.67	1,311.84	-336.50	238.49	1,600,006.23861	2,267,124.66391	39.45204	-108.09574
1,600.00	29.60	144.67	1,485.75	-417.09	295.61	1,599,924.04902	2,267,179.45449	39.45182	-108.09554
1,800.00	29.60	144.67	1,659.65	-497.69	352.73	1,599,841.85942	2,267,234.24506	39.45160	-108.09533
2,000.00	29.60	144.67	1,833.55	-578.28	409.85	1,599,759.66983	2,267,289.03565	39.45138	-108.09513
2,200.00	29.60	144.67	2,007.45	-658.87	466.97	1,599,677.48024	2,267,343.82623	39.45116	-108.09493
2,380.04	29.60	144.67	2,164.00	-731.43	518.39	1,599,603.49279	2,267,393.14896	39.45096	-108.09475
Top of "G" Sand									
2,400.00	29.60	144.67	2,181.35	-739.47	524.09	1,599,595.29064	2,267,398.61682	39.45094	-108.09473
2,495.05	29.60	144.67	2,264.00	-777.77	551.23	1,599,556.23083	2,267,424.65551	39.45083	-108.09463
Base of "G" Sand									
2,600.00	29.60	144.67	2,355.26	-820.06	581.21	1,599,513.10104	2,267,453.40740	39.45071	-108.09452
2,800.00	29.60	144.67	2,529.16	-900.66	638.33	1,599,430.91145	2,267,508.19799	39.45049	-108.09432
3,000.00	29.60	144.67	2,703.06	-981.25	695.45	1,599,348.72186	2,267,562.98857	39.45027	-108.09412
3,200.00	29.60	144.67	2,876.96	-1,061.84	752.56	1,599,266.53227	2,267,617.77915	39.45005	-108.09392
3,240.74	29.60	144.67	2,912.39	-1,078.26	764.20	1,599,249.78924	2,267,628.94066	39.45001	-108.09388
Start Drop -1.50°/100									
3,400.00	27.21	144.67	3,052.47	-1,140.06	808.00	1,599,186.76315	2,267,670.95615	39.44984	-108.09372
3,600.00	24.21	144.67	3,232.65	-1,210.84	858.16	1,599,114.58418	2,267,719.07328	39.44964	-108.09354
3,800.00	21.21	144.67	3,417.12	-1,273.83	902.81	1,599,050.35005	2,267,761.89410	39.44947	-108.09339
4,000.00	18.21	144.67	3,605.38	-1,328.85	941.80	1,598,994.23685	2,267,799.30121	39.44932	-108.09325
4,160.65	15.80	144.67	3,759.00	-1,367.18	968.97	1,598,955.14949	2,267,825.35827	39.44921	-108.09315
Mesaverde									
4,200.00	15.21	144.67	3,796.92	-1,375.76	975.05	1,598,946.39836	2,267,831.19209	39.44919	-108.09313
4,400.00	12.21	144.67	3,991.20	-1,414.43	1,002.45	1,598,906.96570	2,267,857.47934	39.44908	-108.09303
4,600.00	9.21	144.67	4,187.69	-1,444.75	1,023.94	1,598,876.04697	2,267,878.09090	39.44900	-108.09296
4,800.00	6.21	144.67	4,385.86	-1,466.63	1,039.45	1,598,853.72690	2,267,892.97027	39.44894	-108.09290
5,000.00	3.21	144.67	4,585.16	-1,480.03	1,048.95	1,598,840.06668	2,267,902.07668	39.44890	-108.09287
5,200.00	0.21	144.67	4,785.05	-1,484.90	1,052.40	1,598,835.10374	2,267,905.38515	39.44889	-108.09286
5,213.95	0.00	0.00	4,799.00	-1,484.92	1,052.41	1,598,835.08254	2,267,905.39928	39.44889	-108.09286
Vertical									
5,313.95	0.00	0.00	4,899.00	-1,484.92	1,052.41	1,598,835.08254	2,267,905.39928	39.44889	-108.09286
Top Gas - Approx. Top Gas									
5,400.00	0.00	0.00	4,985.05	-1,484.92	1,052.41	1,598,835.08254	2,267,905.39928	39.44889	-108.09286
5,600.00	0.00	0.00	5,185.05	-1,484.92	1,052.41	1,598,835.08254	2,267,905.39928	39.44889	-108.09286
5,800.00	0.00	0.00	5,385.05	-1,484.92	1,052.41	1,598,835.08254	2,267,905.39928	39.44889	-108.09286
6,000.00	0.00	0.00	5,585.05	-1,484.92	1,052.41	1,598,835.08254	2,267,905.39928	39.44889	-108.09286
6,200.00	0.00	0.00	5,785.05	-1,484.92	1,052.41	1,598,835.08254	2,267,905.39928	39.44889	-108.09286
6,400.00	0.00	0.00	5,985.05	-1,484.92	1,052.41	1,598,835.08254	2,267,905.39928	39.44889	-108.09286

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well GM 533-10 - Slot A05
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 6174.00usft (Nabors _ (26' RKB) mab)
Project:	GV 10-07S-096W	MD Reference:	KELLY BUSHING @ 6174.00usft (Nabors _ (26' RKB) mab)
Site:	MV 5-10 Pad	North Reference:	True
Well:	GM 533-10	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 07Aug14 mab		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
6,583.95	0.00	0.00	6,169.00	-1,484.92	1,052.41	1,598,835.08254	2,267,905.39928	39.44889	-108.09286
Cameo Coals									
6,600.00	0.00	0.00	6,185.05	-1,484.92	1,052.41	1,598,835.08254	2,267,905.39928	39.44889	-108.09286
6,800.00	0.00	0.00	6,385.05	-1,484.92	1,052.41	1,598,835.08254	2,267,905.39928	39.44889	-108.09286
7,000.00	0.00	0.00	6,585.05	-1,484.92	1,052.41	1,598,835.08254	2,267,905.39928	39.44889	-108.09286
7,063.95	0.00	0.00	6,649.00	-1,484.92	1,052.41	1,598,835.08254	2,267,905.39928	39.44889	-108.09286
Rollins SS									
7,163.95	0.00	0.00	6,749.00	-1,484.92	1,052.41	1,598,835.08254	2,267,905.39928	39.44889	-108.09286
TD at 7163.95 - TD									

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (bearing)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Top Gas (50' Radius) G1 - plan hits target center - Circle (radius 50.00)	0.00	0.00	4,899.00	-1,484.92	1,052.41	1,598,835.08254	2,267,905.39928	39.44889	-108.09286

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,070.71	1,025.52	9 5/8"	9.625	13.500	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (bearing)	
2,380.04	2,164.00	Top of "G" Sand				
2,495.05	2,264.00	Base of "G" Sand				
4,160.65	3,759.00	Mesaverde				
5,313.95	4,899.00	Approx. Top Gas				
6,583.95	6,169.00	Cameo Coals				
7,063.95	6,649.00	Rollins SS				
7,163.95	6,749.00	TD				

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well GM 533-10 - Slot A05
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 6174.00usft (Nabors _ (26' RKB) mab)
Project:	GV 10-07S-096W	MD Reference:	KELLY BUSHING @ 6174.00usft (Nabors _ (26' RKB) mab)
Site:	MV 5-10 Pad	North Reference:	True
Well:	GM 533-10	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 07Aug14 mab		

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 3.25
1,030.71	990.74	-187.69	133.02	Hold 29.60° Inc, 144.67° Az
3,240.74	2,912.39	-1,078.26	764.20	Start Drop -1.50°/100
5,213.95	4,799.00	-1,484.92	1,052.41	Vertical
5,313.95	4,899.00	-1,484.92	1,052.41	Top Gas
7,163.95	6,749.00	-1,484.92	1,052.41	TD at 7163.95