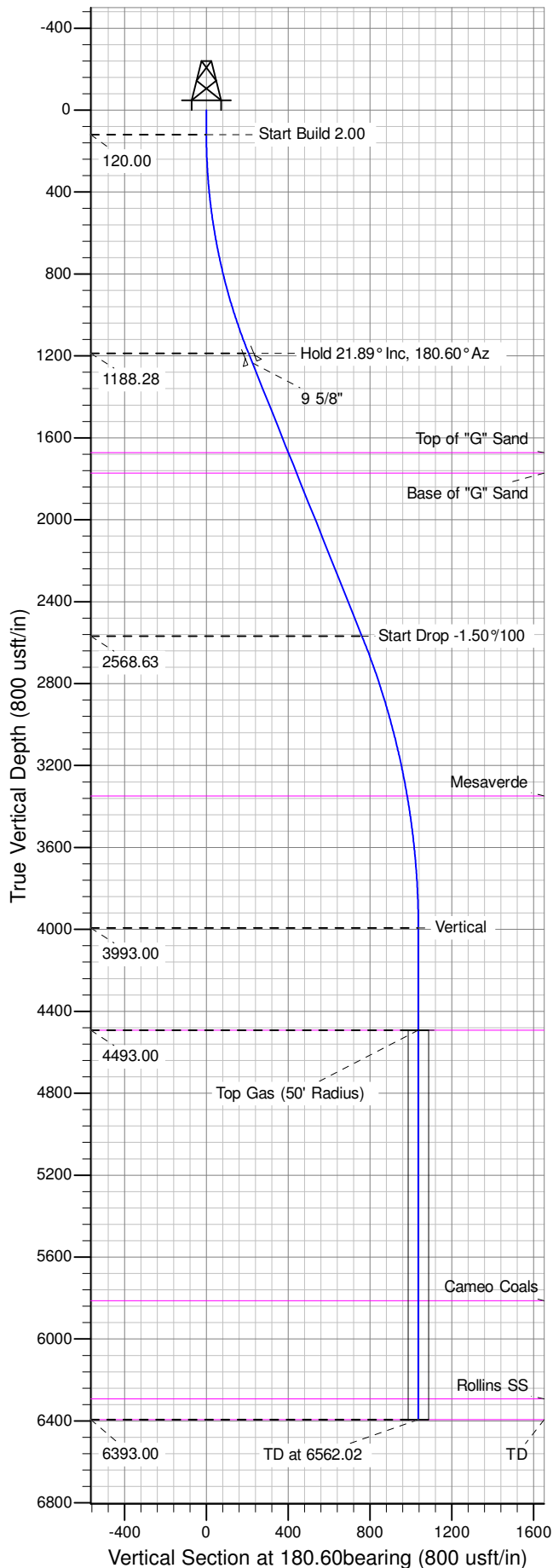
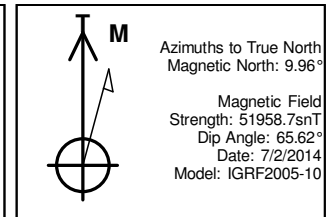
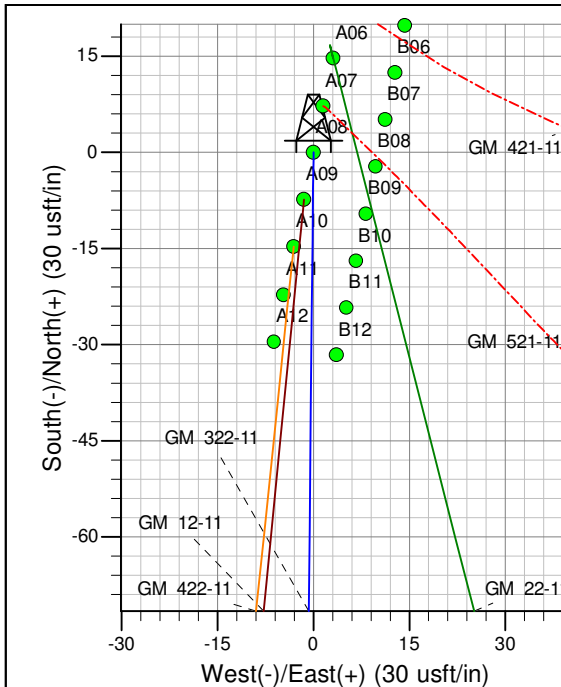
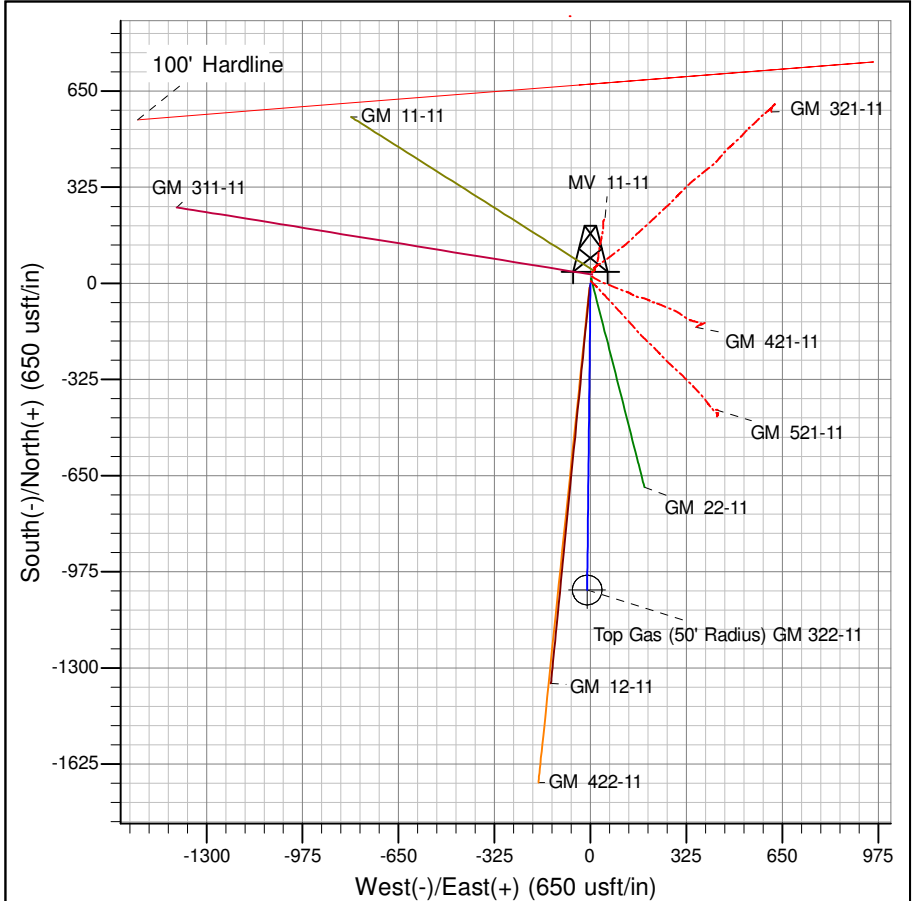




Well Name: GM 322-11
Surface Location: MV 11-11 Pad
North American Datum 1983 , US State Plane 1983 , Colorado Central Zone
Ground Elevation: 5559.00
+N/-S +E/-W Northing Easting Latitude Longitude Slot
0.00 0.00 1601773.80000 2271279.50000 39.45722 -108.08120 A08
KELLY BUSHING @ 5583.00usft (H&P 318 (24' RKB) mab)



ANNOTATIONS									
TVD	MD	Inc	Azi	+N/-S	+E/-W	VSect	Departure	Annotation	
120.00	120.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build 2.00	
1188.28	1214.73	21.89	180.60	-206.62	-2.17	206.63	206.63	Hold 21.89° Inc, 180.60° Az	
2568.63	2702.38	21.89	180.60	-761.33	-8.01	761.38	761.38	Start Drop -1.50%/100	
3993.00	4162.02	0.00	0.00	-1036.83	-10.91	1036.89	1036.89	Vertical	
4493.00	4662.02	0.00	0.00	-1036.83	-10.91	1036.89	1036.89	Top Gas	
6393.00	6562.02	0.00	0.00	-1036.83	-10.91	1036.89	1036.89	TD at 6562.02	



Project: GV 11-07S-096W
Site: MV 11-11 Pad
Well: GM 322-11
Design #2 08Jul14 sam

PICEANCE VLY NAD 83

GV 11-07S-096W

MV 11-11 Pad

GM 322-11 - Slot A08

Wellbore #1

Plan: Design #2 08Jul14 sam

Standard Planning Report - Geographic

19 August, 2014

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well GM 322-11 - Slot A08
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 5583.00usft (H&P 318 (24' RKB) mab)
Project:	GV 11-07S-096W	MD Reference:	KELLY BUSHING @ 5583.00usft (H&P 318 (24' RKB) mab)
Site:	MV 11-11 Pad	North Reference:	True
Well:	GM 322-11	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2 08Jul14 sam		

Project	GV 11-07S-096W, Garfield County, CO, 11-07S-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 11-11 Pad			
Site Position:		Northing:	1,601,781.00000 usft	Latitude: 39.45724
From: Map		Easting:	2,271,281.20000 usft	Longitude: -108.08120
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence: -1.63 °

Well	GM 322-11 - Slot A08			
Well Position	+N/-S	0.00 usft	Northing:	1,601,773.80000 usft
	+E/-W	0.00 usft	Easting:	2,271,279.50000 usft
Position Uncertainty	0.00 usft		Wellhead Elevation:	0.00 usft
			Ground Level:	5,559.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2005-10	7/2/2014	9.96	65.62	51,959

Design	Design #2 08Jul14 sam			
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	180.60

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	
1,214.73	21.89	180.60	1,188.28	-206.62	-2.17	2.00	2.00	0.00	180.60	
2,702.38	21.89	180.60	2,568.63	-761.33	-8.01	0.00	0.00	0.00	0.00	
4,162.02	0.00	0.00	3,993.00	-1,036.83	-10.91	1.50	-1.50	0.00	180.00	
4,662.02	0.00	0.00	4,493.00	-1,036.83	-10.91	0.00	0.00	0.00	0.00	Top Gas (50' Radius)
6,562.02	0.00	0.00	6,393.00	-1,036.83	-10.91	0.00	0.00	0.00	0.00	

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well GM 322-11 - Slot A08
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 5583.00usft (H&P 318 (24' RKB) mab)
Project:	GV 11-07S-096W	MD Reference:	KELLY BUSHING @ 5583.00usft (H&P 318 (24' RKB) mab)
Site:	MV 11-11 Pad	North Reference:	True
Well:	GM 322-11	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2 08Jul14 sam		

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	1,601,773.80000	2,271,279.50000	39.45722	-108.08121	
120.00	0.00	0.00	120.00	0.00	0.00	1,601,773.80000	2,271,279.50000	39.45722	-108.08121	
Start Build 2.00										
200.00	1.60	180.60	199.99	-1.12	-0.01	1,601,772.68396	2,271,279.45652	39.45721	-108.08121	
400.00	5.60	180.60	399.55	-13.67	-0.14	1,601,760.13849	2,271,278.96779	39.45718	-108.08121	
600.00	9.60	180.60	597.76	-40.12	-0.42	1,601,733.71381	2,271,277.93836	39.45711	-108.08121	
800.00	13.60	180.60	793.63	-80.32	-0.85	1,601,693.53867	2,271,276.37327	39.45700	-108.08121	
1,000.00	17.60	180.60	986.23	-134.09	-1.41	1,601,639.80879	2,271,274.28012	39.45685	-108.08121	
1,200.00	21.60	180.60	1,174.60	-201.16	-2.12	1,601,572.78595	2,271,271.66912	39.45667	-108.08121	
1,214.73	21.89	180.60	1,188.28	-206.62	-2.17	1,601,567.33442	2,271,271.45674	39.45665	-108.08122	
Hold 21.89° Inc, 180.60° Az										
1,264.73	21.89	180.60	1,234.67	-225.27	-2.37	1,601,548.70269	2,271,270.73091	39.45660	-108.08122	
9 5/8"										
1,400.00	21.89	180.60	1,360.19	-275.70	-2.90	1,601,498.30116	2,271,268.76742	39.45646	-108.08122	
1,600.00	21.89	180.60	1,545.76	-350.28	-3.69	1,601,423.78127	2,271,265.86436	39.45626	-108.08122	
1,737.13	21.89	180.60	1,673.00	-401.41	-4.22	1,601,372.68716	2,271,263.87389	39.45612	-108.08122	
Top of "G" Sand										
1,800.00	21.89	180.60	1,731.34	-424.86	-4.47	1,601,349.26138	2,271,262.96130	39.45605	-108.08122	
1,844.90	21.89	180.60	1,773.00	-441.60	-4.65	1,601,332.53082	2,271,262.30953	39.45601	-108.08122	
Base of "G" Sand										
2,000.00	21.89	180.60	1,916.91	-499.43	-5.26	1,601,274.74149	2,271,260.05823	39.45585	-108.08123	
2,200.00	21.89	180.60	2,102.49	-574.01	-6.04	1,601,200.22160	2,271,257.15517	39.45564	-108.08123	
2,400.00	21.89	180.60	2,288.06	-648.58	-6.83	1,601,125.70170	2,271,254.25211	39.45544	-108.08123	
2,600.00	21.89	180.60	2,473.63	-723.16	-7.61	1,601,051.18181	2,271,251.34904	39.45523	-108.08123	
2,702.38	21.89	180.60	2,568.63	-761.33	-8.01	1,601,013.03430	2,271,249.86294	39.45513	-108.08124	
Start Drop -1.50°/100										
2,800.00	20.43	180.60	2,659.66	-796.57	-8.38	1,600,977.82230	2,271,248.49119	39.45503	-108.08124	
3,000.00	17.43	180.60	2,848.83	-861.45	-9.07	1,600,912.99845	2,271,245.96585	39.45485	-108.08124	
3,200.00	14.43	180.60	3,041.12	-916.33	-9.64	1,600,858.15544	2,271,243.82934	39.45470	-108.08124	
3,400.00	11.43	180.60	3,236.03	-961.07	-10.12	1,600,813.44357	2,271,242.08750	39.45458	-108.08124	
3,513.91	9.72	180.60	3,348.00	-981.98	-10.34	1,600,792.55422	2,271,241.27372	39.45452	-108.08124	
Mesaverde										
3,600.00	8.43	180.60	3,433.01	-995.56	-10.48	1,600,778.98540	2,271,240.74512	39.45448	-108.08124	
3,800.00	5.43	180.60	3,631.53	-1,019.69	-10.73	1,600,754.87538	2,271,239.80587	39.45442	-108.08125	
4,000.00	2.43	180.60	3,831.03	-1,033.39	-10.88	1,600,741.17960	2,271,239.27232	39.45438	-108.08125	
4,162.02	0.00	0.00	3,993.00	-1,036.83	-10.91	1,600,737.74687	2,271,239.13860	39.45437	-108.08125	
Vertical										
4,200.00	0.00	0.00	4,030.98	-1,036.83	-10.91	1,600,737.74687	2,271,239.13860	39.45437	-108.08125	
4,400.00	0.00	0.00	4,230.98	-1,036.83	-10.91	1,600,737.74687	2,271,239.13860	39.45437	-108.08125	
4,600.00	0.00	0.00	4,430.98	-1,036.83	-10.91	1,600,737.74687	2,271,239.13860	39.45437	-108.08125	
4,662.02	0.00	0.00	4,493.00	-1,036.83	-10.91	1,600,737.74687	2,271,239.13860	39.45437	-108.08125	
Top Gas - Approx. Top Gas										
4,800.00	0.00	0.00	4,630.98	-1,036.83	-10.91	1,600,737.74687	2,271,239.13860	39.45437	-108.08125	
5,000.00	0.00	0.00	4,830.98	-1,036.83	-10.91	1,600,737.74687	2,271,239.13860	39.45437	-108.08125	
5,200.00	0.00	0.00	5,030.98	-1,036.83	-10.91	1,600,737.74687	2,271,239.13860	39.45437	-108.08125	
5,400.00	0.00	0.00	5,230.98	-1,036.83	-10.91	1,600,737.74687	2,271,239.13860	39.45437	-108.08125	
5,600.00	0.00	0.00	5,430.98	-1,036.83	-10.91	1,600,737.74687	2,271,239.13860	39.45437	-108.08125	
5,800.00	0.00	0.00	5,630.98	-1,036.83	-10.91	1,600,737.74687	2,271,239.13860	39.45437	-108.08125	
5,982.02	0.00	0.00	5,813.00	-1,036.83	-10.91	1,600,737.74687	2,271,239.13860	39.45437	-108.08125	
Cameo Coals										
6,000.00	0.00	0.00	5,830.98	-1,036.83	-10.91	1,600,737.74687	2,271,239.13860	39.45437	-108.08125	

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well GM 322-11 - Slot A08
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 5583.00usft (H&P 318 (24' RKB) mab)
Project:	GV 11-07S-096W	MD Reference:	KELLY BUSHING @ 5583.00usft (H&P 318 (24' RKB) mab)
Site:	MV 11-11 Pad	North Reference:	True
Well:	GM 322-11	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2 08Jul14 sam		

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
6,200.00	0.00	0.00	6,030.98	-1,036.83	-10.91	1,600,737.74687	2,271,239.13860	39.45437	-108.08125
6,400.00	0.00	0.00	6,230.98	-1,036.83	-10.91	1,600,737.74687	2,271,239.13860	39.45437	-108.08125
6,462.02	0.00	0.00	6,293.00	-1,036.83	-10.91	1,600,737.74687	2,271,239.13860	39.45437	-108.08125
Rollins SS									
6,562.02	0.00	0.00	6,393.00	-1,036.83	-10.91	1,600,737.74687	2,271,239.13860	39.45437	-108.08125
TD at 6562.02 - 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) GM - plan hits target center - Circle (radius 50.00)	0.00	0.00	4,493.00	-1,036.83	-10.91	1,600,737.74687	2,271,239.13860	39.45437	-108.08125

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,264.73	1,234.67	9 5/8"	9.625	13.500	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (bearing)	
1,737.13	1,673.00	Top of "G" Sand				
1,844.90	1,773.00	Base of "G" Sand				
3,513.91	3,348.00	Mesaverde				
4,662.02	4,493.00	Approx. Top Gas				
5,982.02	5,813.00	Cameo Coals				
6,462.02	6,293.00	Rollins SS				
6,562.02	6,393.00	TD				

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	
1,214.73	1,188.28	-206.62	-2.17	Hold 21.89° Inc, 180.60° Az	
2,702.38	2,568.63	-761.33	-8.01	Start Drop -1.50°/100	
4,162.02	3,993.00	-1,036.83	-10.91	Vertical	
4,662.02	4,493.00	-1,036.83	-10.91	Top Gas	
6,562.02	6,393.00	-1,036.83	-10.91	TD at 6562.02	