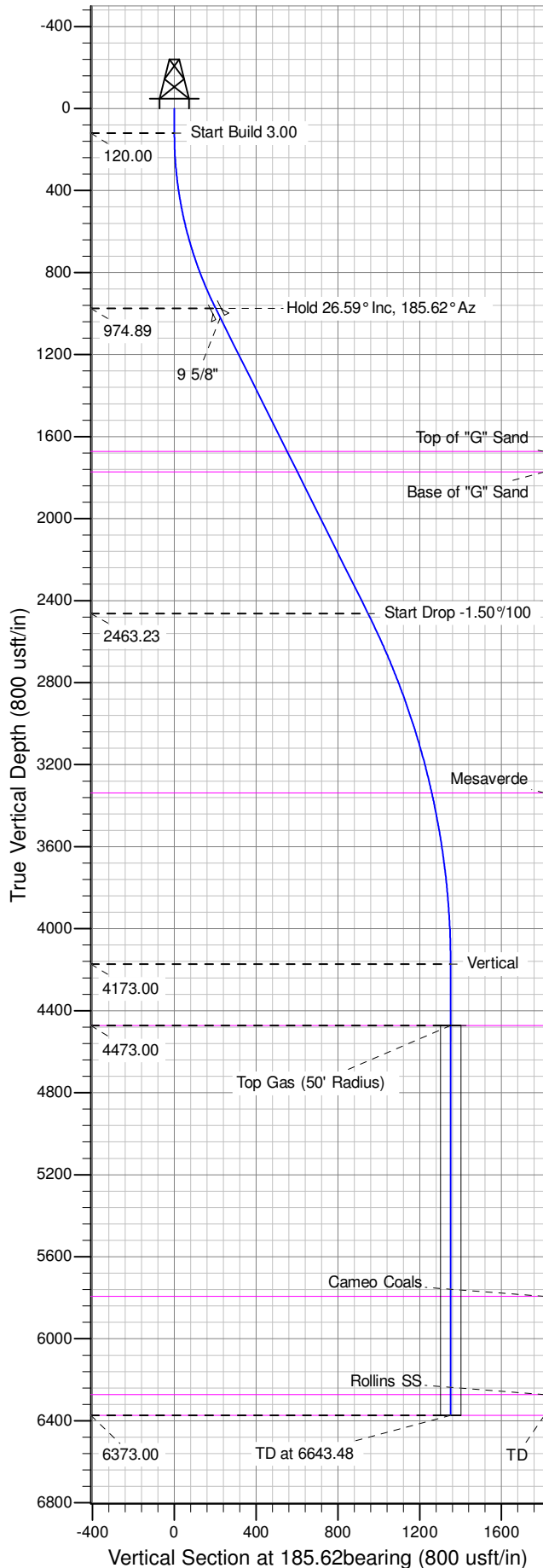
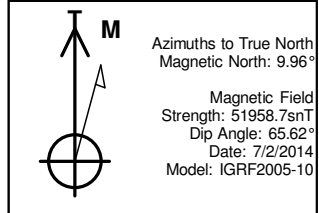
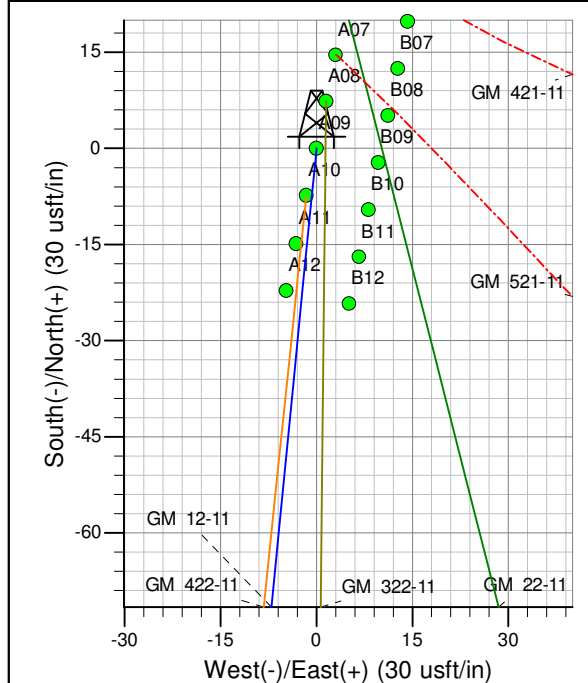
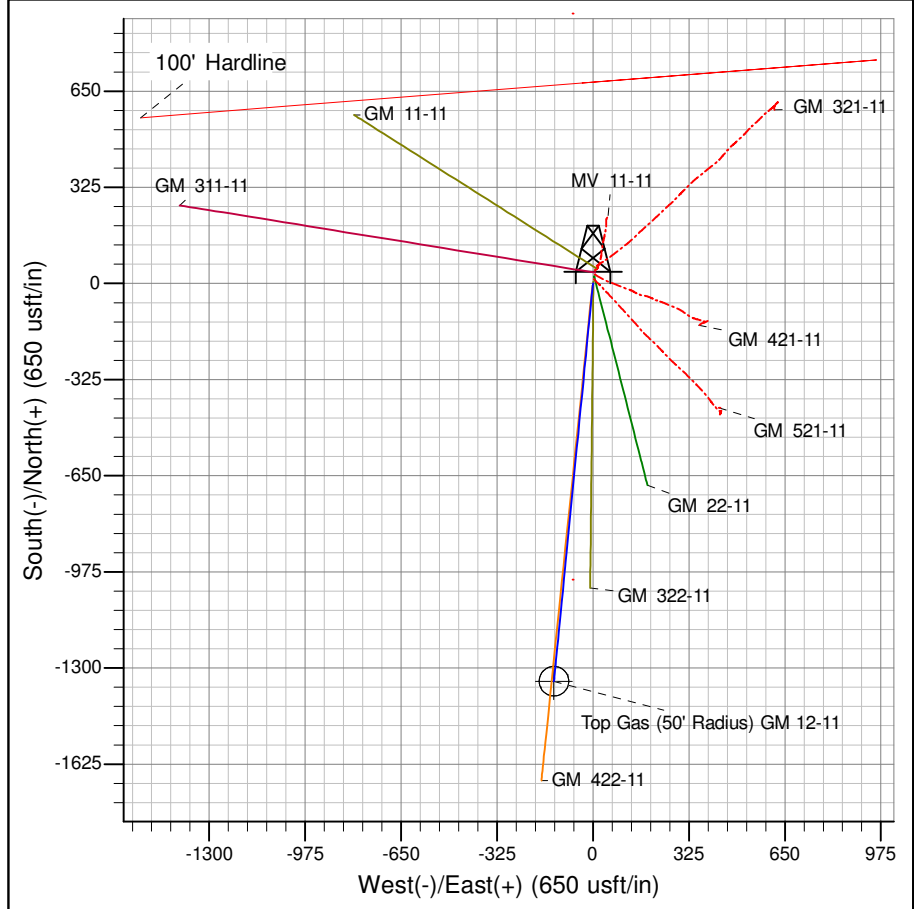




Well Name: GM 12-11
Surface Location: MV 11-11 Pad
North American Datum 1983 , US State Plane 1983 , Colorado Central Zone
Ground Elevation: 5559.00
+N/-S +E/-W Northing Easting Latitude Longitude Slot
0.00 0.00 1601766.50000 2271277.80000 39.45720 -108.08121 A09
KELLY BUSHING @ 5583.00usft (H&P 318 (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 3.00	
974.89	1006.36	26.59	185.62	-201.04	-19.78	202.01	202.01	Hold 26.59° Inc, 185.62° Az	
2463.23	2670.76	26.59	185.62	-942.47	-92.73	947.03	947.03	Start Drop -1.50%/100	
4173.00	4443.48	0.00	0.00	-1344.56	-132.29	1351.06	1351.06	Vertical	
4473.00	4743.48	0.00	0.00	-1344.56	-132.29	1351.06	1351.06	Top Gas	
6373.00	6643.48	0.00	0.00	-1344.56	-132.29	1351.06	1351.06	TD at 6643.48	



Project: GV 11-07S-096W
Site: MV 11-11 Pad
Well: GM 12-11
Design #2 08Jul14 sam

PICEANCE VLY NAD 83

GV 11-07S-096W

MV 11-11 Pad

GM 12-11 - Slot A09

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 12-11 - Slot A09
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 12-11	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 12-11 - Slot A09			
Well Position	+N/-S	0.00 usft	Northing:	1,601,766.50000 usft
	+E/-W	0.00 usft	Easting:	2,271,277.80000 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	185.62

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	
1,006.36	26.59	185.62	974.89	-201.04	-19.78	3.00	3.00	0.00	185.62	
2,670.76	26.59	185.62	2,463.23	-942.47	-92.73	0.00	0.00	0.00	0.00	
4,443.48	0.00	0.00	4,173.00	-1,344.56	-132.29	1.50	-1.50	0.00	180.00	
4,743.48	0.00	0.00	4,473.00	-1,344.56	-132.29	0.00	0.00	0.00	0.00	Top Gas (50' Radius)
6,643.48	0.00	0.00	6,373.00	-1,344.56	-132.29	0.00	0.00	0.00	0.00	

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well GM 12-11 - Slot A09
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 12-11	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	1,601,766.50000	2,271,277.80000	39.45720	-108.08121	
120.00	0.00	0.00	120.00	0.00	0.00	1,601,766.50000	2,271,277.80000	39.45720	-108.08121	
Start Build 3.00										
200.00	2.40	185.62	199.98	-1.67	-0.16	1,601,764.83819	2,271,277.58867	39.45719	-108.08121	
400.00	8.40	185.62	399.00	-20.39	-2.01	1,601,746.17626	2,271,275.21551	39.45714	-108.08122	
600.00	14.40	185.62	594.96	-59.71	-5.88	1,601,706.98027	2,271,270.23110	39.45703	-108.08123	
800.00	20.40	185.62	785.72	-119.21	-11.73	1,601,647.67967	2,271,262.69008	39.45687	-108.08125	
1,000.00	26.40	185.62	969.19	-198.22	-19.50	1,601,568.92417	2,271,252.67504	39.45665	-108.08128	
1,006.36	26.59	185.62	974.89	-201.04	-19.78	1,601,566.10794	2,271,252.31692	39.45665	-108.08128	
Hold 26.59° Inc, 185.62° Az										
1,056.36	26.59	185.62	1,019.59	-223.32	-21.97	1,601,543.90853	2,271,249.49390	39.45658	-108.08129	
9 5/8"										
1,200.00	26.59	185.62	1,148.04	-287.30	-28.27	1,601,480.12929	2,271,241.38334	39.45641	-108.08131	
1,400.00	26.59	185.62	1,326.89	-376.40	-37.03	1,601,391.32502	2,271,230.09045	39.45616	-108.08134	
1,600.00	26.59	185.62	1,505.73	-465.49	-45.80	1,601,302.52073	2,271,218.79755	39.45592	-108.08137	
1,787.06	26.59	185.62	1,673.00	-548.82	-54.00	1,601,219.46421	2,271,208.23557	39.45569	-108.08140	
Top of "G" Sand										
1,800.00	26.59	185.62	1,684.58	-554.58	-54.57	1,601,213.71644	2,271,207.50465	39.45568	-108.08141	
1,898.88	26.59	185.62	1,773.00	-598.63	-58.90	1,601,169.80989	2,271,201.92123	39.45555	-108.08142	
Base of "G" Sand										
2,000.00	26.59	185.62	1,863.42	-643.68	-63.33	1,601,124.91215	2,271,196.21176	39.45543	-108.08144	
2,200.00	26.59	185.62	2,042.27	-732.77	-72.10	1,601,036.10787	2,271,184.91887	39.45519	-108.08147	
2,400.00	26.59	185.62	2,221.11	-821.86	-80.86	1,600,947.30359	2,271,173.62597	39.45494	-108.08150	
2,600.00	26.59	185.62	2,399.96	-910.96	-89.63	1,600,858.49930	2,271,162.33308	39.45470	-108.08153	
2,670.76	26.59	185.62	2,463.23	-942.47	-92.73	1,600,827.08191	2,271,158.33785	39.45461	-108.08154	
Start Drop -1.50°/100										
2,800.00	24.65	185.62	2,579.76	-998.09	-98.20	1,600,771.64532	2,271,151.28819	39.45446	-108.08156	
3,000.00	21.65	185.62	2,763.63	-1,076.34	-105.90	1,600,693.65075	2,271,141.36992	39.45424	-108.08159	
3,200.00	18.65	185.62	2,951.36	-1,144.90	-112.65	1,600,625.30885	2,271,132.67915	39.45405	-108.08161	
3,400.00	15.65	185.62	3,142.45	-1,203.60	-118.42	1,600,566.80697	2,271,125.23969	39.45389	-108.08163	
3,600.00	12.65	185.62	3,336.35	-1,252.26	-123.21	1,600,518.30543	2,271,119.07194	39.45376	-108.08165	
3,601.69	12.63	185.62	3,338.00	-1,252.62	-123.25	1,600,517.93937	2,271,119.02539	39.45376	-108.08165	
Mesaverde										
3,800.00	9.65	185.62	3,532.56	-1,290.75	-127.00	1,600,479.93718	2,271,114.19280	39.45365	-108.08166	
4,000.00	6.65	185.62	3,730.51	-1,318.97	-129.77	1,600,451.80738	2,271,110.61564	39.45358	-108.08167	
4,200.00	3.65	185.62	3,929.68	-1,336.84	-131.53	1,600,433.99315	2,271,108.35027	39.45353	-108.08168	
4,400.00	0.65	185.62	4,129.52	-1,344.32	-132.27	1,600,426.54330	2,271,107.40291	39.45351	-108.08168	
4,443.48	0.00	0.00	4,173.00	-1,344.56	-132.29	1,600,426.29778	2,271,107.37168	39.45351	-108.08168	
Vertical										
4,600.00	0.00	0.00	4,329.52	-1,344.56	-132.29	1,600,426.29778	2,271,107.37168	39.45351	-108.08168	
4,743.48	0.00	0.00	4,473.00	-1,344.56	-132.29	1,600,426.29778	2,271,107.37168	39.45351	-108.08168	
Top Gas - Approx. Top Gas										
4,800.00	0.00	0.00	4,529.52	-1,344.56	-132.29	1,600,426.29778	2,271,107.37168	39.45351	-108.08168	
5,000.00	0.00	0.00	4,729.52	-1,344.56	-132.29	1,600,426.29778	2,271,107.37168	39.45351	-108.08168	
5,200.00	0.00	0.00	4,929.52	-1,344.56	-132.29	1,600,426.29778	2,271,107.37168	39.45351	-108.08168	
5,400.00	0.00	0.00	5,129.52	-1,344.56	-132.29	1,600,426.29778	2,271,107.37168	39.45351	-108.08168	
5,600.00	0.00	0.00	5,329.52	-1,344.56	-132.29	1,600,426.29778	2,271,107.37168	39.45351	-108.08168	
5,800.00	0.00	0.00	5,529.52	-1,344.56	-132.29	1,600,426.29778	2,271,107.37168	39.45351	-108.08168	
6,000.00	0.00	0.00	5,729.52	-1,344.56	-132.29	1,600,426.29778	2,271,107.37168	39.45351	-108.08168	
6,063.48	0.00	0.00	5,793.00	-1,344.56	-132.29	1,600,426.29778	2,271,107.37168	39.45351	-108.08168	
Cameo Coals										

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well GM 12-11 - Slot A09
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 12-11	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	5,929.52	-1,344.56	-132.29	1,600,426.29778	2,271,107.37168	39.45351	-108.08168
6,400.00	0.00	0.00	6,129.52	-1,344.56	-132.29	1,600,426.29778	2,271,107.37168	39.45351	-108.08168
6,543.48	0.00	0.00	6,273.00	-1,344.56	-132.29	1,600,426.29778	2,271,107.37168	39.45351	-108.08168
Rollins SS									
6,600.00	0.00	0.00	6,329.52	-1,344.56	-132.29	1,600,426.29778	2,271,107.37168	39.45351	-108.08168
6,643.48	0.00	0.00	6,373.00	-1,344.56	-132.29	1,600,426.29778	2,271,107.37168	39.45351	-108.08168
TD at 6643.48 - TD									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (bearing)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
Top Gas (50' Radius) Gm	0.00	0.00	4,473.00	-1,344.56	-132.29	1,600,426.29778	2,271,107.37168	39.45351	-108.08168
- plan hits target center									
- Circle (radius 50.00)									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,056.36	1,019.59	9 5/8"	9.625	13.500	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (bearing)	
1,787.06	1,673.00	Top of "G" Sand				
1,898.88	1,773.00	Base of "G" Sand				
3,601.69	3,338.00	Mesaverde				
4,743.48	4,473.00	Approx. Top Gas				
6,063.48	5,793.00	Cameo Coals				
6,543.48	6,273.00	Rollins SS				
6,643.48	6,373.00	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 3.00	
1,006.36	974.89	-201.04	-19.78	Hold 26.59° Inc, 185.62° Az	
2,670.76	2,463.23	-942.47	-92.73	Start Drop -1.50°/100	
4,443.48	4,173.00	-1,344.56	-132.29	Vertical	
4,743.48	4,473.00	-1,344.56	-132.29	Top Gas	
6,643.48	6,373.00	-1,344.56	-132.29	TD at 6643.48	