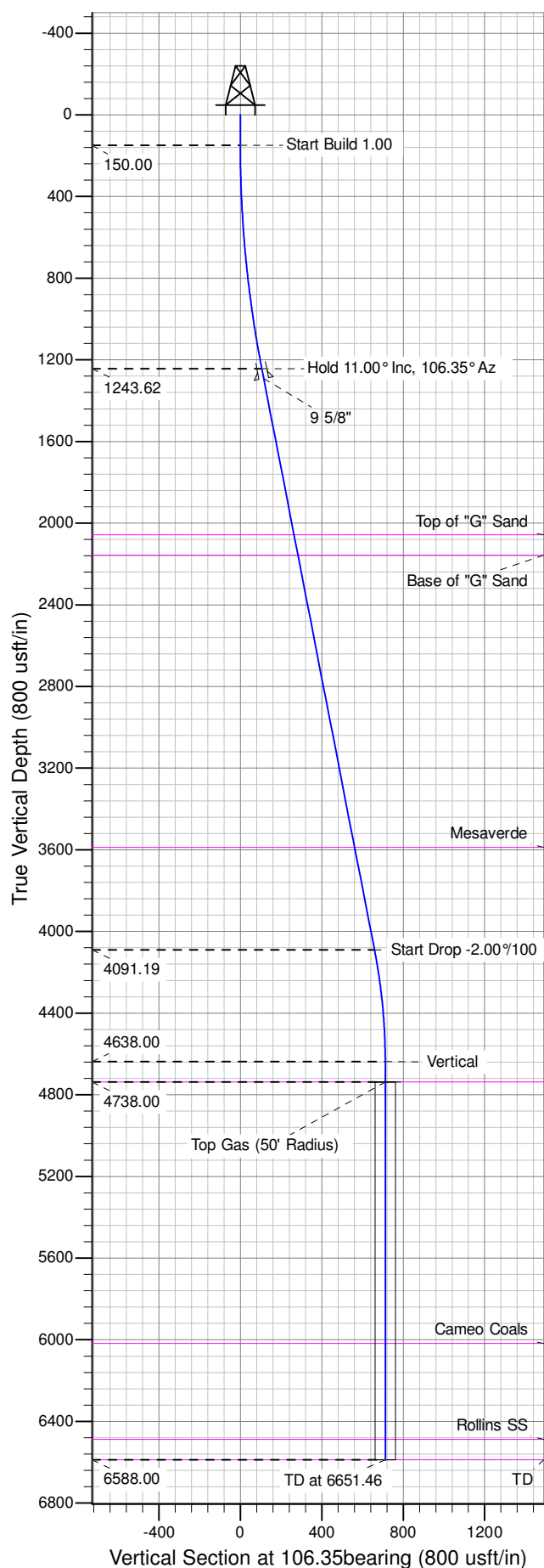




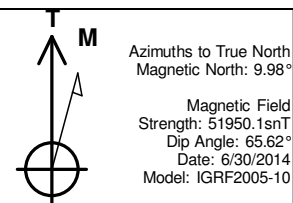
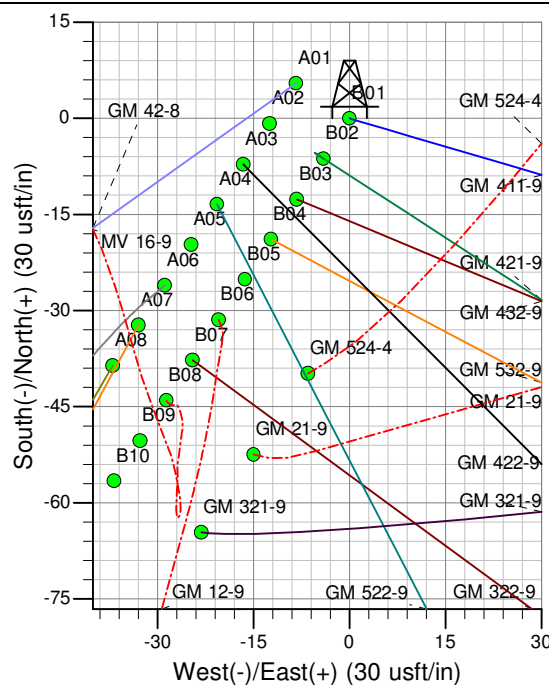
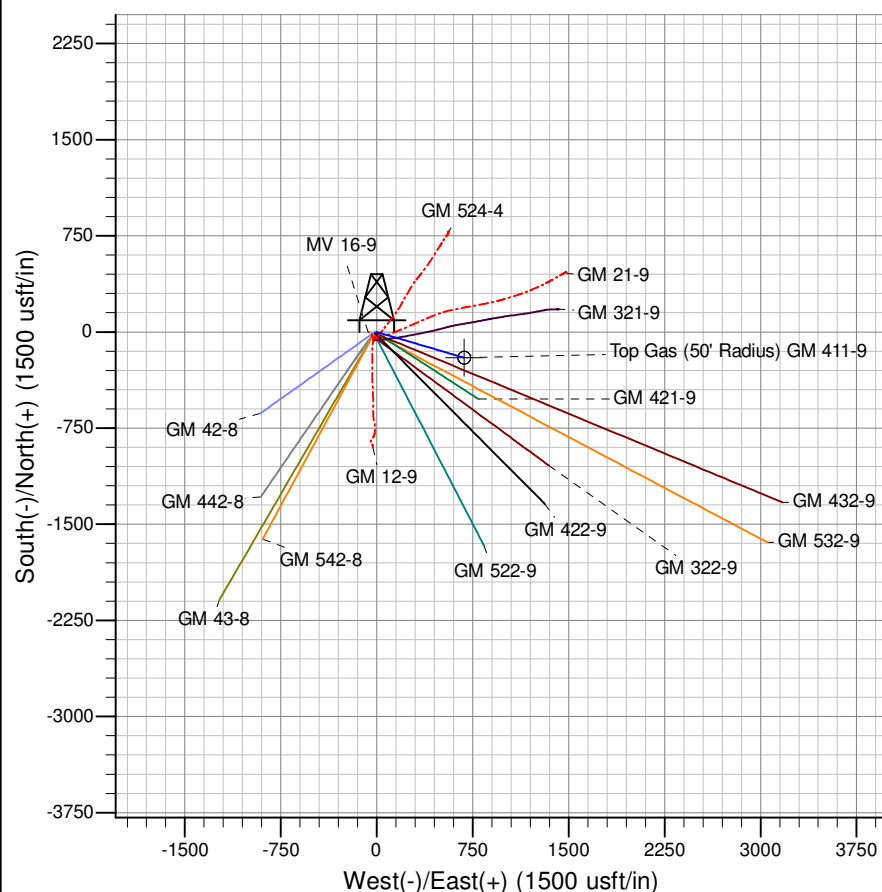
Well Name: GM 411-9
Surface Location: MV 16-9 Pad
North American Datum 1983 , US State Plane 1983 , Colorado Central Zone
Ground Elevation: 6087.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1601981.60000	2260360.50000	39.45693	-108.11988	B01

KELLY BUSHING @ 6108.00usft (Cyclone 17 (21' RKB) mab)



ANNOTATIONS									
TVD	MD	Inc	Azi	+N/-S	+E/-W	Vsect	Departure	Annotation	
150.00	150.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build 1.00	
1243.62	1250.37	11.00	106.35	-29.65	101.08	105.34	105.34	Hold 11.00° Inc, 106.35° Az	
4091.19	4151.27	11.00	106.35	-185.53	632.39	659.04	659.04	Start Drop -2.00°/100	
4638.00	4701.46	0.00	0.00	-200.35	682.93	711.71	711.71	Vertical	
4738.00	4801.46	0.00	0.00	-200.35	682.93	711.71	711.71	Top Gas	
6588.00	6651.46	0.00	0.00	-200.35	682.93	711.71	711.71	TD at 6651.46	



Project: GV 09-07S-096W
Site: MV 16-9 Pad
Well: GM 411-9
Design #1 30Jun14 mab

PICEANCE VLY NAD 83

GV 09-07S-096W

MV 16-9 Pad

GM 411-9 - Slot B01

Wellbore #1

Plan: Design #1 30Jun14 mab

Standard Planning Report - Geographic

04 August, 2014

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well GM 411-9 - Slot B01
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 6108.00usft (Cyclone 17 (21' RKB) mab)
Project:	GV 09-07S-096W	MD Reference:	KELLY BUSHING @ 6108.00usft (Cyclone 17 (21' RKB) mab)
Site:	MV 16-9 Pad	North Reference:	True
Well:	GM 411-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 30Jun14 mab		

Project	GV 09-07S-096W, Garfield County, CO, 09-07S-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 16-9 Pad			
Site Position:		Northing:	1,601,987.30000 usft	Latitude: 39.45695
From: Map		Easting:	2,260,352.30000 usft	Longitude: -108.11991
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence: -1.65 °

Well	GM 411-9 - Slot B01			
Well Position	+N/-S	0.00 usft	Northing:	1,601,981.60000 usft
	+E/-W	0.00 usft	Easting:	2,260,360.50000 usft
Position Uncertainty	0.00 usft		Wellhead Elevation:	0.00 usft
			Ground Level:	6,087.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2005-10	6/30/2014	9.98	65.62	51,950

Design	Design #1 30Jun14 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	106.35

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	
150.00	0.00	0.00	150.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,250.37	11.00	106.35	1,243.62	-29.65	101.08	1.00	1.00	0.00	106.35	
4,151.28	11.00	106.35	4,091.19	-185.53	632.39	0.00	0.00	0.00	0.00	
4,701.46	0.00	0.00	4,638.00	-200.35	682.93	2.00	-2.00	0.00	180.00	
4,801.46	0.00	0.00	4,738.00	-200.35	682.93	0.00	0.00	0.00	0.00	Top Gas (50' Radius)
6,651.46	0.00	0.00	6,588.00	-200.35	682.93	0.00	0.00	0.00	0.00	

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well GM 411-9 - Slot B01
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 6108.00usft (Cyclone 17 (21' RKB) mab)
Project:	GV 09-07S-096W	MD Reference:	KELLY BUSHING @ 6108.00usft (Cyclone 17 (21' RKB) mab)
Site:	MV 16-9 Pad	North Reference:	True
Well:	GM 411-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 30Jun14 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	1,601,981.60000	2,260,360.50000	39.45693	-108.11988	
150.00	0.00	0.00	150.00	0.00	0.00	1,601,981.60000	2,260,360.50000	39.45693	-108.11988	
Start Build 1.00										
200.00	0.50	106.35	200.00	-0.06	0.21	1,601,981.53258	2,260,360.70748	39.45693	-108.11988	
400.00	2.50	106.35	399.92	-1.54	5.23	1,601,979.91468	2,260,365.68608	39.45693	-108.11987	
600.00	4.50	106.35	599.54	-4.97	16.95	1,601,976.14151	2,260,377.29692	39.45692	-108.11982	
800.00	6.50	106.35	798.61	-10.37	35.34	1,601,970.21767	2,260,395.52586	39.45690	-108.11976	
1,000.00	8.50	106.35	996.89	-17.72	60.39	1,601,962.15036	2,260,420.35068	39.45688	-108.11967	
1,200.00	10.50	106.35	1,194.13	-27.01	92.06	1,601,951.94942	2,260,451.74114	39.45686	-108.11956	
1,250.37	11.00	106.35	1,243.62	-29.65	101.08	1,601,949.04519	2,260,460.67808	39.45685	-108.11953	
Hold 11.00° Inc, 106.35° Az										
1,300.37	11.00	106.35	1,292.70	-32.34	110.24	1,601,946.09596	2,260,469.75349	39.45684	-108.11949	
9 5/8"										
1,400.00	11.00	106.35	1,390.50	-37.69	128.48	1,601,940.21894	2,260,487.83834	39.45683	-108.11943	
1,600.00	11.00	106.35	1,586.82	-48.44	165.12	1,601,928.42123	2,260,524.14237	39.45680	-108.11930	
1,800.00	11.00	106.35	1,783.14	-59.19	201.75	1,601,916.62353	2,260,560.44640	39.45677	-108.11917	
2,000.00	11.00	106.35	1,979.47	-69.93	238.38	1,601,904.82583	2,260,596.75044	39.45674	-108.11904	
2,080.00	11.00	106.35	2,058.00	-74.23	253.03	1,601,900.10647	2,260,611.27293	39.45673	-108.11899	
Top of "G" Sand										
2,181.88	11.00	106.35	2,158.00	-79.71	271.69	1,601,894.09714	2,260,629.76493	39.45671	-108.11892	
Base of "G" Sand										
2,200.00	11.00	106.35	2,175.79	-80.68	275.01	1,601,893.02813	2,260,633.05447	39.45671	-108.11891	
2,400.00	11.00	106.35	2,372.11	-91.43	311.64	1,601,881.23043	2,260,669.35851	39.45668	-108.11878	
2,600.00	11.00	106.35	2,568.43	-102.17	348.27	1,601,869.43273	2,260,705.66254	39.45665	-108.11865	
2,800.00	11.00	106.35	2,764.76	-112.92	384.90	1,601,857.63503	2,260,741.96658	39.45662	-108.11852	
3,000.00	11.00	106.35	2,961.08	-123.67	421.53	1,601,845.83733	2,260,778.27061	39.45659	-108.11839	
3,200.00	11.00	106.35	3,157.40	-134.41	458.16	1,601,834.03963	2,260,814.57465	39.45656	-108.11826	
3,400.00	11.00	106.35	3,353.73	-145.16	494.79	1,601,822.24193	2,260,850.87868	39.45653	-108.11813	
3,600.00	11.00	106.35	3,550.05	-155.90	531.42	1,601,810.44423	2,260,887.18272	39.45650	-108.11800	
3,638.66	11.00	106.35	3,588.00	-157.98	538.50	1,601,808.16367	2,260,894.20049	39.45650	-108.11798	
Mesaverde										
3,800.00	11.00	106.35	3,746.37	-166.65	568.05	1,601,798.64654	2,260,923.48674	39.45647	-108.11787	
4,000.00	11.00	106.35	3,942.70	-177.40	604.68	1,601,786.84884	2,260,959.79078	39.45644	-108.11774	
4,151.28	11.00	106.35	4,091.19	-185.53	632.39	1,601,777.92536	2,260,987.25023	39.45642	-108.11764	
Start Drop -2.00°/100										
4,200.00	10.03	106.35	4,139.10	-188.03	640.92	1,601,775.17698	2,260,995.70758	39.45641	-108.11761	
4,400.00	6.03	106.35	4,337.09	-195.89	667.72	1,601,766.54533	2,261,022.26900	39.45639	-108.11752	
4,600.00	2.03	106.35	4,536.56	-199.85	681.21	1,601,762.20316	2,261,035.63077	39.45638	-108.11747	
4,701.46	0.00	0.00	4,638.00	-200.35	682.93	1,601,761.64795	2,261,037.33927	39.45638	-108.11747	
Vertical										
4,800.00	0.00	0.00	4,736.54	-200.35	682.93	1,601,761.64795	2,261,037.33927	39.45638	-108.11747	
4,801.46	0.00	0.00	4,738.00	-200.35	682.93	1,601,761.64795	2,261,037.33927	39.45638	-108.11747	
Top Gas - Approx. Top Gas										
5,000.00	0.00	0.00	4,936.54	-200.35	682.93	1,601,761.64795	2,261,037.33927	39.45638	-108.11747	
5,200.00	0.00	0.00	5,136.54	-200.35	682.93	1,601,761.64795	2,261,037.33927	39.45638	-108.11747	
5,400.00	0.00	0.00	5,336.54	-200.35	682.93	1,601,761.64795	2,261,037.33927	39.45638	-108.11747	
5,600.00	0.00	0.00	5,536.54	-200.35	682.93	1,601,761.64795	2,261,037.33927	39.45638	-108.11747	
5,800.00	0.00	0.00	5,736.54	-200.35	682.93	1,601,761.64795	2,261,037.33927	39.45638	-108.11747	
6,000.00	0.00	0.00	5,936.54	-200.35	682.93	1,601,761.64795	2,261,037.33927	39.45638	-108.11747	
6,081.46	0.00	0.00	6,018.00	-200.35	682.93	1,601,761.64795	2,261,037.33927	39.45638	-108.11747	
Cameo Coals										

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well GM 411-9 - Slot B01
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 6108.00usft (Cyclone 17 (21' RKB) mab)
Project:	GV 09-07S-096W	MD Reference:	KELLY BUSHING @ 6108.00usft (Cyclone 17 (21' RKB) mab)
Site:	MV 16-9 Pad	North Reference:	True
Well:	GM 411-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 30Jun14 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
6,200.00	0.00	0.00	6,136.54	-200.35	682.93	1,601,761.64795	2,261,037.33927	39.45638	-108.11747
6,400.00	0.00	0.00	6,336.54	-200.35	682.93	1,601,761.64795	2,261,037.33927	39.45638	-108.11747
6,551.46	0.00	0.00	6,488.00	-200.35	682.93	1,601,761.64795	2,261,037.33927	39.45638	-108.11747
Rollins SS									
6,600.00	0.00	0.00	6,536.54	-200.35	682.93	1,601,761.64795	2,261,037.33927	39.45638	-108.11747
6,651.46	0.00	0.00	6,588.00	-200.35	682.93	1,601,761.64795	2,261,037.33927	39.45638	-108.11747
TD at 6651.46 - 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) G1	0.00	0.00	4,738.00	-200.35	682.93	1,601,761.64795	2,261,037.33927	39.45638	-108.11747
- plan hits target center									
- Circle (radius 50.00)									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,300.37	1,292.70	9 5/8"	9.625	13.500	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (bearing)	
2,080.00	2,058.00	Top of "G" Sand				
2,181.88	2,158.00	Base of "G" Sand				
3,638.66	3,588.00	Mesaverde				
4,801.46	4,738.00	Approx. Top Gas				
6,081.46	6,018.00	Cameo Coals				
6,551.46	6,488.00	Rollins SS				
6,651.46	6,588.00	TD				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
150.00	150.00	0.00	0.00	Start Build 1.00	
1,250.37	1,243.62	-29.65	101.08	Hold 11.00° Inc, 106.35° Az	
4,151.28	4,091.19	-185.53	632.39	Start Drop -2.00°/100	
4,701.46	4,638.00	-200.35	682.93	Vertical	
4,801.46	4,738.00	-200.35	682.93	Top Gas	
6,651.46	6,588.00	-200.35	682.93	TD at 6651.46	