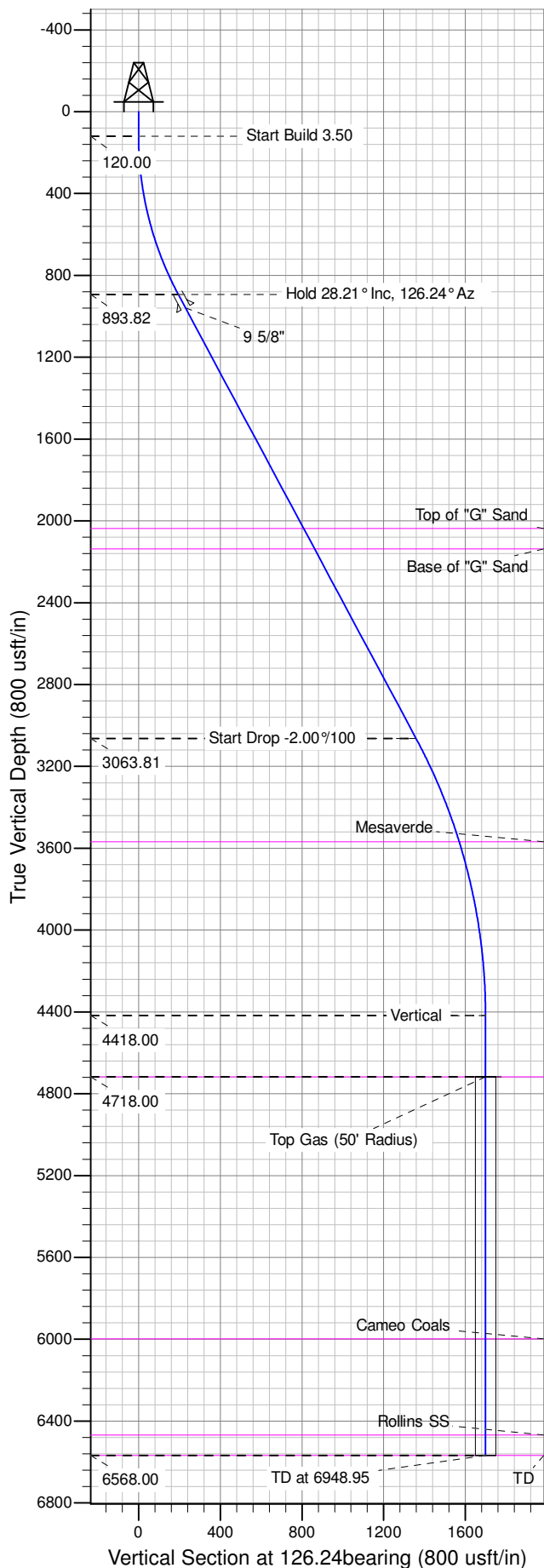
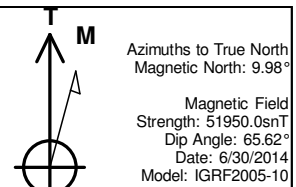
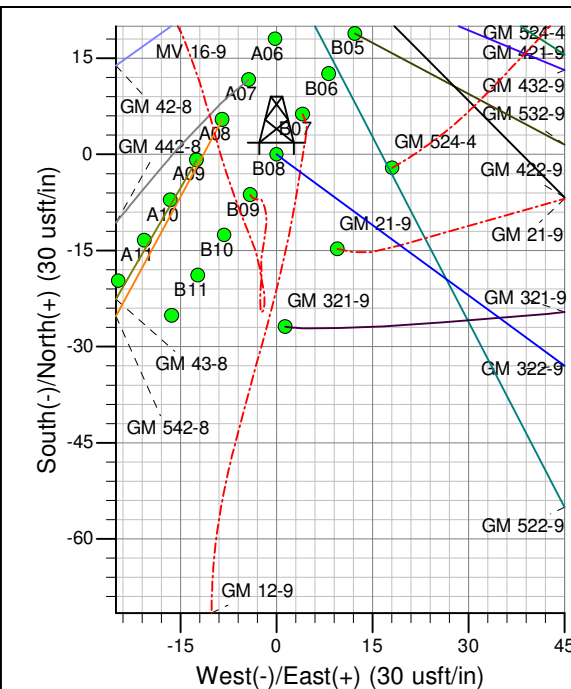
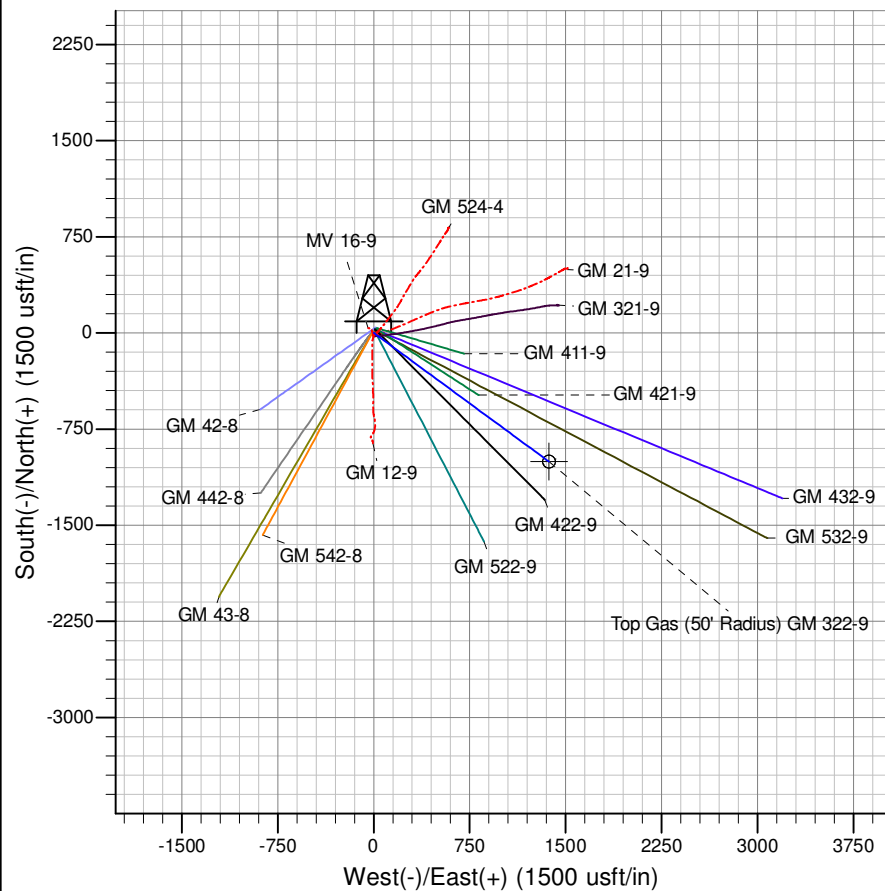




Well Name: GM 322-9
Surface Location: MV 16-9 Pad
North American Datum 1983 , US State Plane 1983 , Colorado Central Zone
Ground Elevation: 6087.00
+N/-S +E/-W Northing Easting Latitude Longitude Slot
0.00 0.00 1601944.61441 2260334.90030 39.45683 -108.11997 B07
KELLY BUSHING @ 6108.00usft (Cyclone 17 (21' 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 3.50	
893.82	925.99	28.21	126.24	-114.94	156.83	194.44	194.44	Hold 28.21° Inc, 126.24° Az	
3063.81	3388.47	28.21	126.24	-803.03	1095.69	1358.45	1358.45	Start Drop -2.00%/100	
4418.00	4798.95	0.00	0.00	-1004.18	1370.14	1698.72	1698.72	Vertical	
4718.00	5098.95	0.00	0.00	-1004.18	1370.14	1698.72	1698.72	Top Gas	
6568.00	6948.95	0.00	0.00	-1004.18	1370.14	1698.72	1698.72	TD at 6948.95	



Project: GV 09-07S-096W
Site: MV 16-9 Pad
Well: GM 322-9
Design #1 30Jun14 mab

PICEANCE VLY NAD 83

GV 09-07S-096W

MV 16-9 Pad

GM 322-9 - Slot B07

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 322-9 - Slot B07
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 322-9	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 322-9 - Slot B07			
Well Position	+N/-S	0.00 usft	Northing:	1,601,944.61441 usft
	+E/-W	0.00 usft	Easting:	2,260,334.90030 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	126.24

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	
925.99	28.21	126.24	893.82	-114.94	156.83	3.50	3.50	0.00	126.24	
3,388.47	28.21	126.24	3,063.81	-803.03	1,095.69	0.00	0.00	0.00	0.00	
4,798.96	0.00	0.00	4,418.00	-1,004.18	1,370.14	2.00	-2.00	0.00	180.00	
5,098.96	0.00	0.00	4,718.00	-1,004.18	1,370.14	0.00	0.00	0.00	0.00	Top Gas (50' Radius)
6,948.96	0.00	0.00	6,568.00	-1,004.18	1,370.14	0.00	0.00	0.00	0.00	

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well GM 322-9 - Slot B07
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 322-9	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	1,601,944.61441	2,260,334.90030	39.45683	-108.11997	
120.00	0.00	0.00	120.00	0.00	0.00	1,601,944.61441	2,260,334.90030	39.45683	-108.11997	
Start Build 3.50										
200.00	2.80	126.24	199.97	-1.16	1.58	1,601,943.41418	2,260,336.44261	39.45682	-108.11996	
400.00	9.80	126.24	398.64	-14.12	19.27	1,601,929.94455	2,260,353.75132	39.45679	-108.11990	
600.00	16.80	126.24	593.15	-41.30	56.35	1,601,901.70646	2,260,390.03775	39.45671	-108.11977	
800.00	23.80	126.24	780.61	-82.29	112.29	1,601,859.12090	2,260,444.76094	39.45660	-108.11957	
925.99	28.21	126.24	893.82	-114.94	156.83	1,601,825.20498	2,260,488.34349	39.45651	-108.11942	
Hold 28.21° Inc, 126.24° Az										
1,000.00	28.21	126.24	959.04	-135.62	185.05	1,601,803.72061	2,260,515.95128	39.45645	-108.11932	
9 5/8"										
1,200.00	28.21	126.24	1,135.28	-191.51	261.30	1,601,745.66169	2,260,590.55801	39.45630	-108.11905	
1,400.00	28.21	126.24	1,311.53	-247.39	337.55	1,601,687.60276	2,260,665.16474	39.45615	-108.11878	
1,600.00	28.21	126.24	1,487.77	-303.28	413.81	1,601,629.54383	2,260,739.77147	39.45599	-108.11851	
1,800.00	28.21	126.24	1,664.02	-359.16	490.06	1,601,571.48491	2,260,814.37820	39.45584	-108.11823	
2,000.00	28.21	126.24	1,840.26	-415.05	566.31	1,601,513.42598	2,260,888.98493	39.45569	-108.11796	
2,200.00	28.21	126.24	2,016.51	-470.94	642.57	1,601,455.36705	2,260,963.59165	39.45553	-108.11769	
2,224.39	28.21	126.24	2,038.00	-477.75	651.87	1,601,448.28667	2,260,972.69006	39.45552	-108.11766	
Top of "G" Sand										
2,337.87	28.21	126.24	2,138.00	-509.46	695.13	1,601,415.34445	2,261,015.02139	39.45543	-108.11751	
Base of "G" Sand										
2,400.00	28.21	126.24	2,192.75	-526.82	718.82	1,601,397.30814	2,261,038.19838	39.45538	-108.11742	
2,600.00	28.21	126.24	2,369.00	-582.71	795.07	1,601,339.24921	2,261,112.80511	39.45523	-108.11715	
2,800.00	28.21	126.24	2,545.24	-638.59	871.33	1,601,281.19028	2,261,187.41184	39.45507	-108.11688	
3,000.00	28.21	126.24	2,721.49	-694.48	947.58	1,601,223.13136	2,261,262.01857	39.45492	-108.11661	
3,200.00	28.21	126.24	2,897.73	-750.37	1,023.83	1,601,165.07243	2,261,336.62529	39.45477	-108.11634	
3,388.47	28.21	126.24	3,063.81	-803.03	1,095.69	1,601,110.36048	2,261,406.93110	39.45462	-108.11609	
Start Drop -2.00°/100										
3,400.00	27.98	126.24	3,073.99	-806.24	1,100.07	1,601,107.02607	2,261,411.21588	39.45461	-108.11607	
3,600.00	23.98	126.24	3,253.74	-858.02	1,170.72	1,601,053.23473	2,261,480.33868	39.45447	-108.11582	
3,800.00	19.98	126.24	3,439.17	-902.26	1,231.08	1,601,007.27490	2,261,539.39787	39.45435	-108.11561	
3,935.96	17.26	126.24	3,568.00	-927.92	1,266.09	1,600,980.61838	2,261,573.65197	39.45428	-108.11549	
Mesaverde										
4,000.00	15.98	126.24	3,629.36	-938.74	1,280.86	1,600,969.37048	2,261,588.10571	39.45425	-108.11543	
4,200.00	11.98	126.24	3,823.40	-967.30	1,319.82	1,600,939.70615	2,261,626.22490	39.45417	-108.11530	
4,400.00	7.98	126.24	4,020.33	-987.78	1,347.77	1,600,918.42642	2,261,653.56972	39.45411	-108.11520	
4,600.00	3.98	126.24	4,219.21	-1,000.09	1,364.57	1,600,905.63496	2,261,670.00696	39.45408	-108.11514	
4,798.96	0.00	0.00	4,418.00	-1,004.18	1,370.14	1,600,901.39398	2,261,675.45669	39.45407	-108.11512	
Vertical										
4,800.00	0.00	0.00	4,419.05	-1,004.18	1,370.14	1,600,901.39398	2,261,675.45669	39.45407	-108.11512	
5,000.00	0.00	0.00	4,619.05	-1,004.18	1,370.14	1,600,901.39398	2,261,675.45669	39.45407	-108.11512	
5,098.96	0.00	0.00	4,718.00	-1,004.18	1,370.14	1,600,901.39398	2,261,675.45669	39.45407	-108.11512	
Top Gas - Approx. Top Gas										
5,200.00	0.00	0.00	4,819.05	-1,004.18	1,370.14	1,600,901.39398	2,261,675.45669	39.45407	-108.11512	
5,400.00	0.00	0.00	5,019.05	-1,004.18	1,370.14	1,600,901.39398	2,261,675.45669	39.45407	-108.11512	
5,600.00	0.00	0.00	5,219.05	-1,004.18	1,370.14	1,600,901.39398	2,261,675.45669	39.45407	-108.11512	
5,800.00	0.00	0.00	5,419.05	-1,004.18	1,370.14	1,600,901.39398	2,261,675.45669	39.45407	-108.11512	
6,000.00	0.00	0.00	5,619.05	-1,004.18	1,370.14	1,600,901.39398	2,261,675.45669	39.45407	-108.11512	
6,200.00	0.00	0.00	5,819.05	-1,004.18	1,370.14	1,600,901.39398	2,261,675.45669	39.45407	-108.11512	
6,378.96	0.00	0.00	5,998.00	-1,004.18	1,370.14	1,600,901.39398	2,261,675.45669	39.45407	-108.11512	
Cameo Coals										

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well GM 322-9 - Slot B07
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 322-9	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
6,400.00	0.00	0.00	6,019.05	-1,004.18	1,370.14	1,600,901.39398	2,261,675.45669	39.45407	-108.11512
6,600.00	0.00	0.00	6,219.05	-1,004.18	1,370.14	1,600,901.39398	2,261,675.45669	39.45407	-108.11512
6,800.00	0.00	0.00	6,419.05	-1,004.18	1,370.14	1,600,901.39398	2,261,675.45669	39.45407	-108.11512
6,848.96	0.00	0.00	6,468.00	-1,004.18	1,370.14	1,600,901.39398	2,261,675.45669	39.45407	-108.11512
Rollins SS									
6,948.96	0.00	0.00	6,568.00	-1,004.18	1,370.14	1,600,901.39398	2,261,675.45669	39.45407	-108.11512
TD at 6948.95 - 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	4,718.00	-1,004.18	1,370.14	1,600,901.39398	2,261,675.45669	39.45407	-108.11512
- plan hits target center									
- Circle (radius 50.00)									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,000.00	959.04	9 5/8"	9.625	13.500	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (bearing)	
2,224.39	2,038.00	Top of "G" Sand				
2,337.87	2,138.00	Base of "G" Sand				
3,935.96	3,568.00	Mesaverde				
5,098.96	4,718.00	Approx. Top Gas				
6,378.96	5,998.00	Cameo Coals				
6,848.96	6,468.00	Rollins SS				
6,948.96	6,568.00	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 3.50	
925.99	893.82	-114.94	156.83	Hold 28.21° Inc, 126.24° Az	
3,388.47	3,063.81	-803.03	1,095.69	Start Drop -2.00°/100	
4,798.96	4,418.00	-1,004.18	1,370.14	Vertical	
5,098.96	4,718.00	-1,004.18	1,370.14	Top Gas	
6,948.96	6,568.00	-1,004.18	1,370.14	TD at 6948.95	