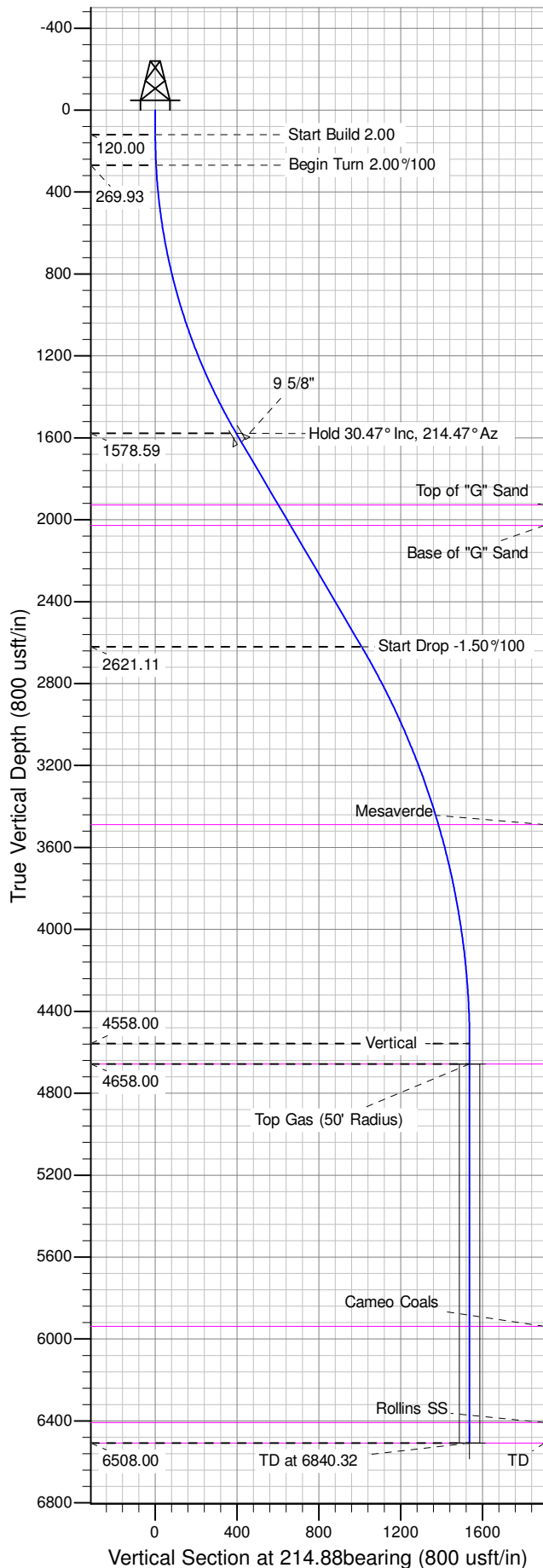
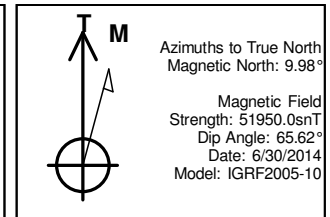
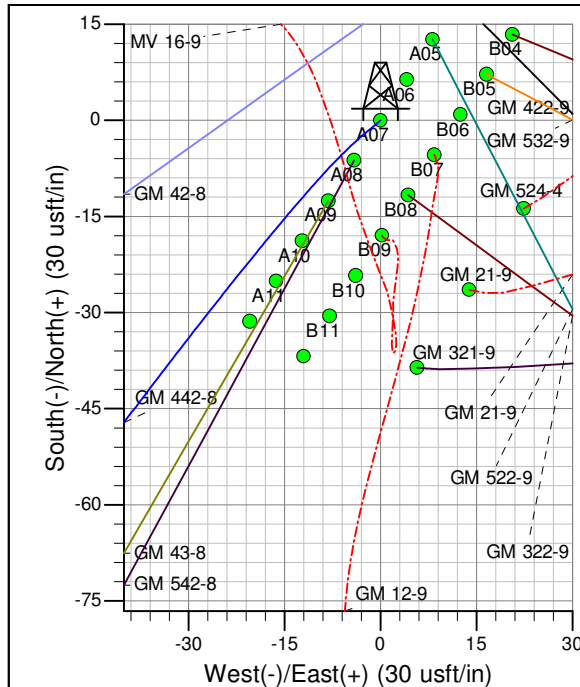
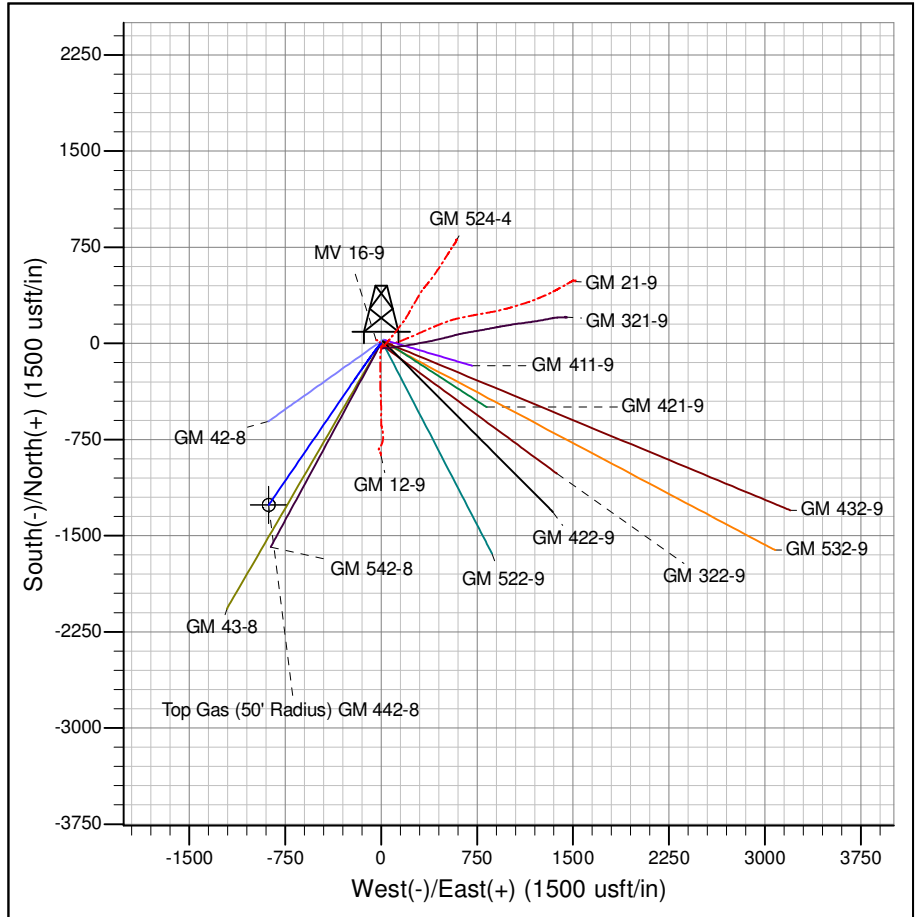




Well Name: GM 442-8
Surface Location: MV 16-9 Pad
North American Datum 1983 , US State Plane 1983 , Colorado Central Zone
Ground Elevation: 6087.00
+N/-S +E/-W Northing Easting Latitude Longitude Slot
0.00 0.00 1601956.40000 2260330.90000 39.45686 -108.11998 A06
KELLY BUSHING @ 6108.00usft (Cyclone 17 (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 2.00	
269.93	270.00	3.00	230.00	-2.52	-3.01	3.79	3.93	Begin Turn 2.00°/100	
1578.59	1649.47	30.47	214.47	-320.22	-233.08	395.98	396.43	Hold 30.47° Inc, 214.47° Az	
2621.11	2859.03	30.47	214.47	-825.86	-580.23	1009.31	1009.77	Start Drop -1.50°/100	
4558.00	4890.32	0.00	0.00	-1260.74	-878.80	1536.80	1537.27	Vertical	
4658.00	4990.32	0.00	0.00	-1260.74	-878.80	1536.80	1537.27	Top Gas	
6508.00	6840.32	0.00	0.00	-1260.74	-878.80	1536.80	1537.27	TD at 6840.32	



Project: GV 09-07S-096W
Site: MV 16-9 Pad
Well: GM 442-8
Design #1 30Jun14 mab

PICEANCE VLY NAD 83

GV 09-07S-096W

MV 16-9 Pad

GM 442-8 - Slot A06

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 442-8 - Slot A06
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 442-8	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 442-8 - Slot A06			
Well Position	+N/-S	0.00 usft	Northing:	1,601,956.40000 usft
	+E/-W	0.00 usft	Easting:	2,260,330.90000 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	214.88

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	
270.00	3.00	230.00	269.93	-2.52	-3.01	2.00	2.00	0.00	230.00	
1,649.47	30.47	214.47	1,578.59	-320.22	-233.08	2.00	1.99	-1.13	-17.04	
2,859.03	30.47	214.47	2,621.11	-825.86	-580.23	0.00	0.00	0.00	0.00	
4,890.32	0.00	0.00	4,558.00	-1,260.74	-878.80	1.50	-1.50	0.00	180.00	
6,840.32	0.00	0.00	6,508.00	-1,260.74	-878.80	0.00	0.00	0.00	0.00	TD / PBHL GM 442-8

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well GM 442-8 - Slot A06
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 442-8	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	1,601,956.40000	2,260,330.90000	39.45686	-108.11999	
120.00	0.00	0.00	120.00	0.00	0.00	1,601,956.40000	2,260,330.90000	39.45686	-108.11999	
Start Build 2.00										
200.00	1.60	230.00	199.99	-0.72	-0.86	1,601,955.70705	2,260,330.02407	39.45686	-108.11999	
270.00	3.00	230.00	269.93	-2.52	-3.01	1,601,953.96424	2,260,327.82106	39.45685	-108.12000	
Begin Turn 2.00°/100										
400.00	5.54	222.08	399.56	-9.37	-9.82	1,601,947.31989	2,260,320.81541	39.45683	-108.12002	
600.00	9.51	218.23	597.80	-29.52	-26.52	1,601,927.66289	2,260,303.54369	39.45678	-108.12008	
800.00	13.50	216.64	793.74	-61.23	-50.68	1,601,896.65851	2,260,278.47798	39.45669	-108.12017	
1,000.00	17.49	215.77	986.44	-104.36	-82.19	1,601,854.45779	2,260,245.74040	39.45657	-108.12028	
1,200.00	21.49	215.21	1,174.94	-158.69	-120.89	1,601,801.26635	2,260,205.49045	39.45642	-108.12041	
1,400.00	25.48	214.82	1,358.34	-223.96	-166.59	1,601,737.34330	2,260,157.92421	39.45624	-108.12058	
1,600.00	29.48	214.53	1,535.74	-299.86	-219.08	1,601,663.00009	2,260,103.27342	39.45604	-108.12076	
1,649.47	30.47	214.47	1,578.59	-320.22	-233.08	1,601,643.04506	2,260,088.69304	39.45598	-108.12081	
Hold 30.47° Inc, 214.47° Az										
1,699.47	30.47	214.47	1,621.68	-341.13	-247.43	1,601,622.56620	2,260,073.74631	39.45592	-108.12086	
9 5/8"										
1,800.00	30.47	214.47	1,708.33	-383.15	-276.28	1,601,581.39236	2,260,043.69512	39.45581	-108.12096	
2,000.00	30.47	214.47	1,880.71	-466.76	-333.69	1,601,499.47882	2,259,983.90959	39.45558	-108.12117	
2,054.87	30.47	214.47	1,928.00	-489.69	-349.43	1,601,477.00755	2,259,967.50868	39.45551	-108.12122	
Top of "G" Sand										
2,170.89	30.47	214.47	2,028.00	-538.20	-382.73	1,601,429.48844	2,259,932.82632	39.45538	-108.12134	
Base of "G" Sand										
2,200.00	30.47	214.47	2,053.09	-550.37	-391.09	1,601,417.56528	2,259,924.12407	39.45535	-108.12137	
2,400.00	30.47	214.47	2,225.47	-633.97	-448.49	1,601,335.65174	2,259,864.33854	39.45512	-108.12157	
2,600.00	30.47	214.47	2,397.85	-717.58	-505.89	1,601,253.73820	2,259,804.55302	39.45489	-108.12178	
2,800.00	30.47	214.47	2,570.23	-801.19	-563.29	1,601,171.82466	2,259,744.76749	39.45466	-108.12198	
2,859.03	30.47	214.47	2,621.11	-825.86	-580.23	1,601,147.64746	2,259,727.12149	39.45459	-108.12204	
Start Drop -1.50°/100										
3,000.00	28.35	214.47	2,743.90	-882.93	-619.41	1,601,091.73495	2,259,686.31312	39.45443	-108.12218	
3,200.00	25.35	214.47	2,922.31	-957.41	-670.54	1,601,018.77040	2,259,633.05912	39.45423	-108.12236	
3,400.00	22.35	214.47	3,105.21	-1,024.08	-716.32	1,600,953.44762	2,259,585.38254	39.45405	-108.12252	
3,600.00	19.35	214.47	3,292.08	-1,082.77	-756.61	1,600,895.94564	2,259,543.41407	39.45389	-108.12267	
3,800.00	16.35	214.47	3,482.43	-1,133.32	-791.32	1,600,846.42206	2,259,507.26873	39.45375	-108.12279	
3,805.80	16.27	214.47	3,488.00	-1,134.66	-792.24	1,600,845.10536	2,259,506.30772	39.45374	-108.12279	
Mesaverde										
4,000.00	13.35	214.47	3,675.72	-1,175.58	-820.34	1,600,805.01265	2,259,477.04560	39.45363	-108.12289	
4,200.00	10.35	214.47	3,871.43	-1,209.45	-843.59	1,600,771.83089	2,259,452.82751	39.45354	-108.12297	
4,400.00	7.35	214.47	4,069.03	-1,234.83	-861.01	1,600,746.96773	2,259,434.68086	39.45347	-108.12303	
4,600.00	4.35	214.47	4,267.96	-1,251.64	-872.56	1,600,730.49132	2,259,422.65536	39.45342	-108.12308	
4,800.00	1.35	214.47	4,467.69	-1,259.86	-878.19	1,600,722.44683	2,259,416.78400	39.45340	-108.12310	
4,890.32	0.00	0.00	4,558.00	-1,260.74	-878.80	1,600,721.58444	2,259,416.15458	39.45340	-108.12310	
Vertical										
4,990.32	0.00	0.00	4,658.00	-1,260.74	-878.80	1,600,721.58444	2,259,416.15458	39.45340	-108.12310	
Top Gas - Approx. Top Gas										
5,000.00	0.00	0.00	4,667.68	-1,260.74	-878.80	1,600,721.58444	2,259,416.15458	39.45340	-108.12310	
5,200.00	0.00	0.00	4,867.68	-1,260.74	-878.80	1,600,721.58444	2,259,416.15458	39.45340	-108.12310	
5,400.00	0.00	0.00	5,067.68	-1,260.74	-878.80	1,600,721.58444	2,259,416.15458	39.45340	-108.12310	
5,600.00	0.00	0.00	5,267.68	-1,260.74	-878.80	1,600,721.58444	2,259,416.15458	39.45340	-108.12310	
5,800.00	0.00	0.00	5,467.68	-1,260.74	-878.80	1,600,721.58444	2,259,416.15458	39.45340	-108.12310	
6,000.00	0.00	0.00	5,667.68	-1,260.74	-878.80	1,600,721.58444	2,259,416.15458	39.45340	-108.12310	

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well GM 442-8 - Slot A06
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 442-8	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	5,867.68	-1,260.74	-878.80	1,600,721.58444	2,259,416.15458	39.45340	-108.12310
6,270.32	0.00	0.00	5,938.00	-1,260.74	-878.80	1,600,721.58444	2,259,416.15458	39.45340	-108.12310
Cameo Coals									
6,400.00	0.00	0.00	6,067.68	-1,260.74	-878.80	1,600,721.58444	2,259,416.15458	39.45340	-108.12310
6,600.00	0.00	0.00	6,267.68	-1,260.74	-878.80	1,600,721.58444	2,259,416.15458	39.45340	-108.12310
6,740.32	0.00	0.00	6,408.00	-1,260.74	-878.80	1,600,721.58444	2,259,416.15458	39.45340	-108.12310
Rollins SS									
6,800.00	0.00	0.00	6,467.68	-1,260.74	-878.80	1,600,721.58444	2,259,416.15458	39.45340	-108.12310
6,840.32	0.00	0.00	6,508.00	-1,260.74	-878.80	1,600,721.58444	2,259,416.15458	39.45340	-108.12310
TD at 6840.32 - 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	4,658.00	-1,260.74	-878.80	1,600,721.58444	2,259,416.15458	39.45340	-108.12310
TD / PBHL GM 442-8 - plan hits target center - Point	0.00	0.00	6,508.00	-1,260.74	-878.80	1,600,721.58444	2,259,416.15458	39.45340	-108.12310

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,699.47	1,621.68	9 5/8"	9.625	13.500	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (bearing)	
2,054.87	1,928.00	Top of "G" Sand				
2,170.89	2,028.00	Base of "G" Sand				
3,805.80	3,488.00	Mesaverde				
4,990.32	4,658.00	Approx. Top Gas				
6,270.32	5,938.00	Cameo Coals				
6,740.32	6,408.00	Rollins SS				
6,840.32	6,508.00	TD				

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well GM 442-8 - Slot A06
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 442-8	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 30Jun14 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 2.00
270.00	269.93	-2.52	-3.01	Begin Turn 2.00°/100
1,649.47	1,578.59	-320.22	-233.08	Hold 30.47° Inc, 214.47° Az
2,859.03	2,621.11	-825.86	-580.23	Start Drop -1.50°/100
4,890.32	4,558.00	-1,260.74	-878.80	Vertical
4,990.32	4,658.00	-1,260.74	-878.80	Top Gas
6,840.32	6,508.00	-1,260.74	-878.80	TD at 6840.32