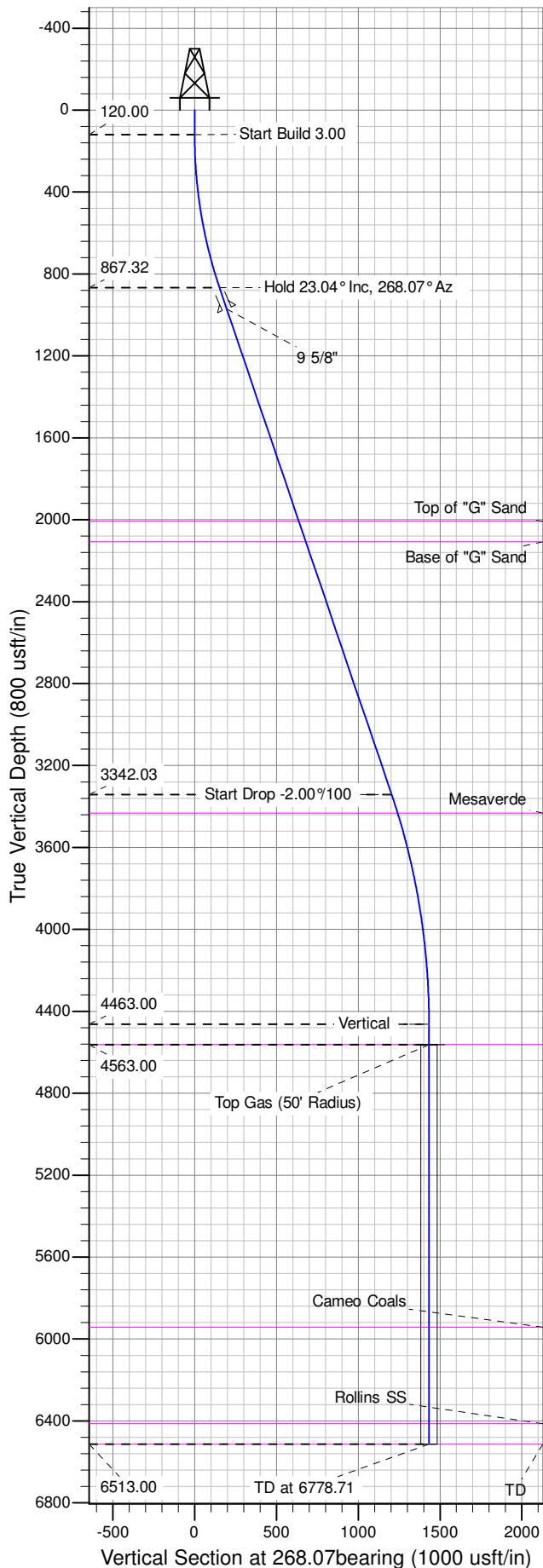




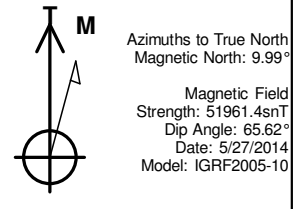
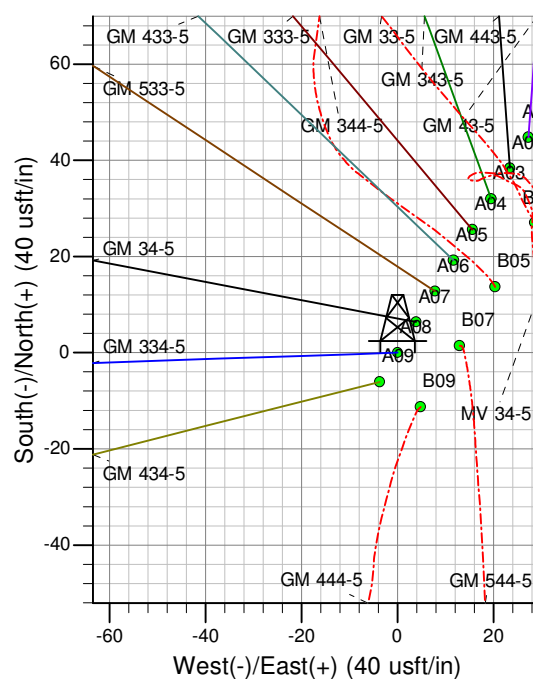
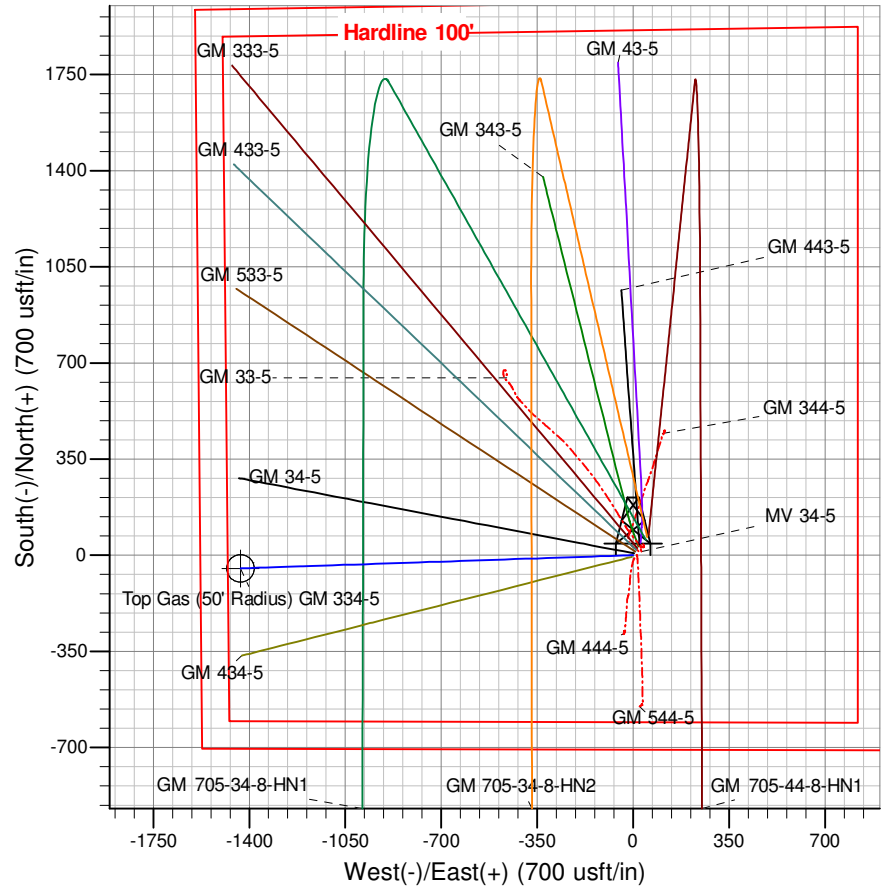
Well Name: GM 334-5
Surface Location: MV 34-5 Pad
North American Datum 1983 , US State Plane 1983 , Colorado Central Zone
Ground Elevation: 5977.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1603501.57000	2258788.27000	39.46098	-108.12560	A08

KELLY BUSHING @ 6003.00usft (Nabors 577 (26' 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	
867.32	887.83	23.04	268.07	-5.12	-152.19	152.28	152.28	Hold 23.04° Inc, 268.07° Az	
3342.03	3576.96	23.04	268.07	-40.52	-1203.84	1204.52	1204.52	Start Drop -2.00%/100	
4463.00	4728.71	0.00	0.00	-48.21	-1432.13	1432.94	1432.94	Vertical	
4563.00	4828.71	0.00	0.00	-48.21	-1432.13	1432.94	1432.94	Top Gas	
6513.00	6778.71	0.00	0.00	-48.21	-1432.13	1432.94	1432.94	TD at 6778.71	



Azimuths to True North
Magnetic North: 9.99°
Magnetic Field
Strength: 51961.4snT
Dip Angle: 65.62°
Date: 5/27/2014
Model: IGRF2005-10

Project: GV 05-07S-096W
Site: MV 34-5 Pad
Well: GM 334-5
Design #2 24Jul14 mab

PICEANCE VLY NAD 83

GV 05-07S-096W

MV 34-5 Pad

GM 334-5 - Slot A08

Wellbore #1

Plan: Design #2 24Jul14 mab

Standard Planning Report - Geographic

30 September, 2014

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well GM 334-5 - Slot A08
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 6003.00usft (Nabors 577 (26' RKB) mab)
Project:	GV 05-07S-096W	MD Reference:	KELLY BUSHING @ 6003.00usft (Nabors 577 (26' RKB) mab)
Site:	MV 34-5 Pad	North Reference:	True
Well:	GM 334-5	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2 24Jul14 mab		

Project	GV 05-07S-096W, Garfield County, CO, 05-07S-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 34-5 Pad			
Site Position:		Northing:	1,603,540.12600 usft	Latitude: 39.461085
From: Map		Easting:	2,258,825.25200 usft	Longitude: -108.125476
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence: -1.66 °

Well	GM 334-5 - Slot A08			
Well Position	+N/-S	0.00 usft	Northing:	1,603,501.57000 usft
	+E/-W	0.00 usft	Easting:	2,258,788.27000 usft
Position Uncertainty	0.00 usft		Wellhead Elevation:	0.00 usft
			Ground Level:	5,977.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2005-10	5/27/2014	9.99	65.62	51,961

Design	Design #2 24Jul14 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	268.07

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	
887.83	23.04	268.07	867.32	-5.12	-152.19	3.00	3.00	0.00	268.07	
3,576.96	23.04	268.07	3,342.03	-40.52	-1,203.84	0.00	0.00	0.00	0.00	
4,728.71	0.00	0.00	4,463.00	-48.21	-1,432.13	2.00	-2.00	0.00	180.00	
4,828.71	0.00	0.00	4,563.00	-48.21	-1,432.13	0.00	0.00	0.00	0.00	Top Gas (50' Radius)
6,778.71	0.00	0.00	6,513.00	-48.21	-1,432.13	0.00	0.00	0.00	0.00	

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well GM 334-5 - Slot A08
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 6003.00usft (Nabors 577 (26' RKB) mab)
Project:	GV 05-07S-096W	MD Reference:	KELLY BUSHING @ 6003.00usft (Nabors 577 (26' RKB) mab)
Site:	MV 34-5 Pad	North Reference:	True
Well:	GM 334-5	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2 24Jul14 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	1,603,501.57000	2,258,788.27000	39.460976	-108.125603	
120.00	0.00	0.00	120.00	0.00	0.00	1,603,501.57000	2,258,788.27000	39.460976	-108.125603	
Start Build 3.00										
200.00	2.40	268.07	199.98	-0.06	-1.67	1,603,501.56205	2,258,786.59482	39.460976	-108.125609	
400.00	8.40	268.07	399.00	-0.69	-20.48	1,603,501.47277	2,258,767.78281	39.460974	-108.125675	
600.00	14.40	268.07	594.96	-2.02	-59.97	1,603,501.28526	2,258,728.27160	39.460970	-108.125815	
800.00	20.40	268.07	785.72	-4.03	-119.71	1,603,501.00157	2,258,668.49409	39.460965	-108.126027	
887.83	23.04	268.07	867.32	-5.12	-152.19	1,603,500.84735	2,258,635.99761	39.460962	-108.126142	
Hold 23.04° Inc, 268.07° Az										
1,000.00	23.04	268.07	970.54	-6.60	-196.06	1,603,500.63907	2,258,592.11010	39.460958	-108.126297	
9 5/8"										
1,200.00	23.04	268.07	1,154.59	-9.23	-274.27	1,603,500.26770	2,258,513.85575	39.460951	-108.126574	
1,400.00	23.04	268.07	1,338.64	-11.86	-352.49	1,603,499.89632	2,258,435.60140	39.460943	-108.126851	
1,600.00	23.04	268.07	1,522.70	-14.50	-430.70	1,603,499.52494	2,258,357.34705	39.460936	-108.127128	
1,800.00	23.04	268.07	1,706.75	-17.13	-508.92	1,603,499.15357	2,258,279.09270	39.460929	-108.127405	
2,000.00	23.04	268.07	1,890.80	-19.76	-587.13	1,603,498.78219	2,258,200.83835	39.460922	-108.127682	
2,127.35	23.04	268.07	2,008.00	-21.44	-636.93	1,603,498.54572	2,258,151.00998	39.460917	-108.127858	
Top of "G" Sand										
2,200.00	23.04	268.07	2,074.86	-22.40	-665.35	1,603,498.41082	2,258,122.58400	39.460914	-108.127959	
2,236.01	23.04	268.07	2,108.00	-22.87	-679.43	1,603,498.34394	2,258,108.49274	39.460913	-108.128009	
Base of "G" Sand										
2,400.00	23.04	268.07	2,258.91	-25.03	-743.56	1,603,498.03944	2,258,044.32965	39.460907	-108.128236	
2,600.00	23.04	268.07	2,442.96	-27.66	-821.78	1,603,497.66806	2,257,966.07530	39.460900	-108.128513	
2,800.00	23.04	268.07	2,627.02	-30.29	-899.99	1,603,497.29669	2,257,887.82095	39.460893	-108.128790	
3,000.00	23.04	268.07	2,811.07	-32.93	-978.20	1,603,496.92531	2,257,809.56660	39.460886	-108.129067	
3,200.00	23.04	268.07	2,995.12	-35.56	-1,056.42	1,603,496.55394	2,257,731.31224	39.460878	-108.129344	
3,400.00	23.04	268.07	3,179.18	-38.19	-1,134.63	1,603,496.18256	2,257,653.05790	39.460871	-108.129621	
3,576.96	23.04	268.07	3,342.03	-40.52	-1,203.84	1,603,495.85397	2,257,583.81859	39.460865	-108.129866	
Start Drop -2.00°/100										
3,600.00	22.57	268.07	3,363.27	-40.82	-1,212.76	1,603,495.81159	2,257,574.88891	39.460864	-108.129898	
3,675.12	21.07	268.07	3,433.00	-41.76	-1,240.67	1,603,495.67908	2,257,546.96631	39.460861	-108.129997	
Mesaverde										
3,800.00	18.57	268.07	3,550.47	-43.19	-1,282.99	1,603,495.47813	2,257,504.62305	39.460857	-108.130147	
4,000.00	14.57	268.07	3,742.12	-45.10	-1,340.00	1,603,495.20744	2,257,447.58644	39.460852	-108.130348	
4,200.00	10.57	268.07	3,937.29	-46.57	-1,383.51	1,603,495.00086	2,257,404.05694	39.460848	-108.130503	
4,400.00	6.57	268.07	4,135.01	-47.57	-1,413.30	1,603,494.85939	2,257,374.24662	39.460845	-108.130608	
4,600.00	2.57	268.07	4,334.33	-48.11	-1,429.24	1,603,494.78372	2,257,358.30072	39.460844	-108.130665	
4,728.71	0.00	0.00	4,463.00	-48.21	-1,432.13	1,603,494.77000	2,257,355.41000	39.460843	-108.130675	
Vertical										
4,800.00	0.00	0.00	4,534.29	-48.21	-1,432.13	1,603,494.77000	2,257,355.41000	39.460843	-108.130675	
4,828.71	0.00	0.00	4,563.00	-48.21	-1,432.13	1,603,494.77000	2,257,355.41000	39.460843	-108.130675	
Top Gas - Approx. Top Gas										
5,000.00	0.00	0.00	4,734.29	-48.21	-1,432.13	1,603,494.77000	2,257,355.41000	39.460843	-108.130675	
5,200.00	0.00	0.00	4,934.29	-48.21	-1,432.13	1,603,494.77000	2,257,355.41000	39.460843	-108.130675	
5,400.00	0.00	0.00	5,134.29	-48.21	-1,432.13	1,603,494.77000	2,257,355.41000	39.460843	-108.130675	
5,600.00	0.00	0.00	5,334.29	-48.21	-1,432.13	1,603,494.77000	2,257,355.41000	39.460843	-108.130675	
5,800.00	0.00	0.00	5,534.29	-48.21	-1,432.13	1,603,494.77000	2,257,355.41000	39.460843	-108.130675	
6,000.00	0.00	0.00	5,734.29	-48.21	-1,432.13	1,603,494.77000	2,257,355.41000	39.460843	-108.130675	
6,200.00	0.00	0.00	5,934.29	-48.21	-1,432.13	1,603,494.77000	2,257,355.41000	39.460843	-108.130675	
6,208.71	0.00	0.00	5,943.00	-48.21	-1,432.13	1,603,494.77000	2,257,355.41000	39.460843	-108.130675	
Cameo Coals										

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well GM 334-5 - Slot A08
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 6003.00usft (Nabors 577 (26' RKB) mab)
Project:	GV 05-07S-096W	MD Reference:	KELLY BUSHING @ 6003.00usft (Nabors 577 (26' RKB) mab)
Site:	MV 34-5 Pad	North Reference:	True
Well:	GM 334-5	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2 24Jul14 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	6,134.29	-48.21	-1,432.13	1,603,494.77000	2,257,355.41000	39.460843	-108.130675
6,600.00	0.00	0.00	6,334.29	-48.21	-1,432.13	1,603,494.77000	2,257,355.41000	39.460843	-108.130675
6,678.71	0.00	0.00	6,413.00	-48.21	-1,432.13	1,603,494.77000	2,257,355.41000	39.460843	-108.130675
Rollins SS									
6,778.71	0.00	0.00	6,513.00	-48.21	-1,432.13	1,603,494.77000	2,257,355.41000	39.460843	-108.130675
TD at 6778.71 - 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	4,563.00	-48.21	-1,432.13	1,603,494.77000	2,257,355.41000	39.460843	-108.130675

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,000.00	970.54	9 5/8"	9.625	13.500	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (bearing)	
2,127.35	2,008.00	Top of "G" Sand				
2,236.01	2,108.00	Base of "G" Sand				
3,675.12	3,433.00	Mesaverde				
4,828.71	4,563.00	Approx. Top Gas				
6,208.71	5,943.00	Cameo Coals				
6,678.71	6,413.00	Rollins SS				
6,778.71	6,513.00	TD				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
120.00	120.00	0.00	0.00	Start Build 3.00	
887.83	867.32	-5.12	-152.19	Hold 23.04° Inc, 268.07° Az	
3,576.96	3,342.03	-40.52	-1,203.84	Start Drop -2.00°/100	
4,728.71	4,463.00	-48.21	-1,432.13	Vertical	
4,828.71	4,563.00	-48.21	-1,432.13	Top Gas	
6,778.71	6,513.00	-48.21	-1,432.13	TD at 6778.71	