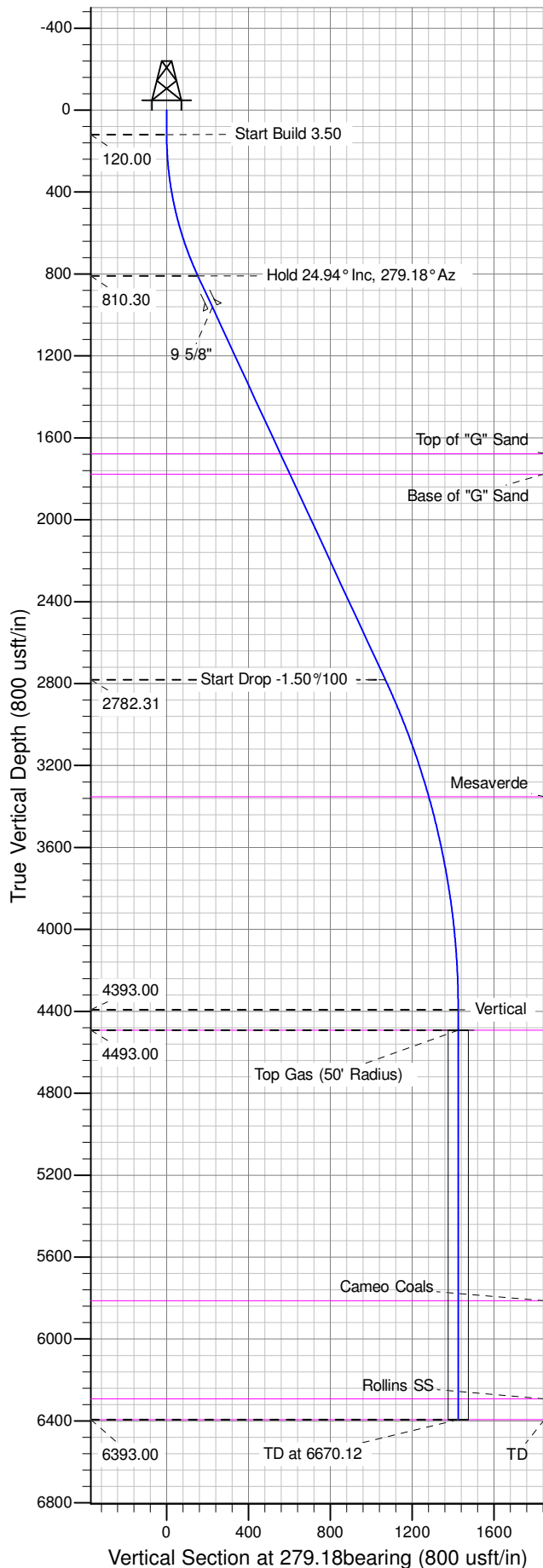
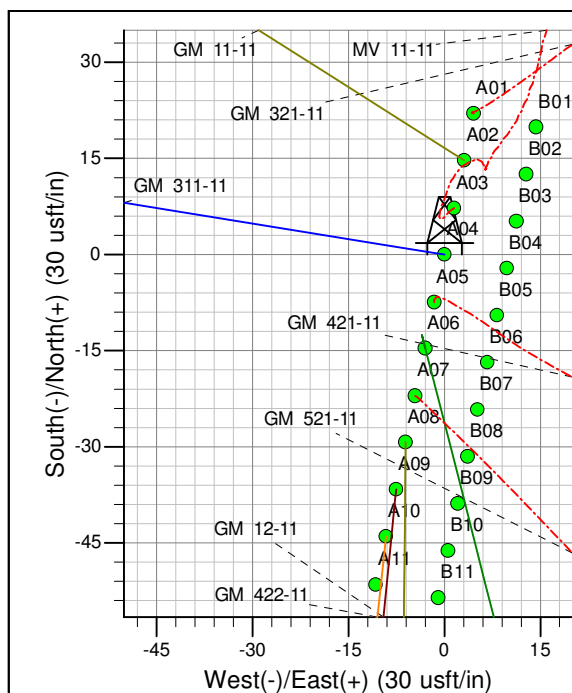
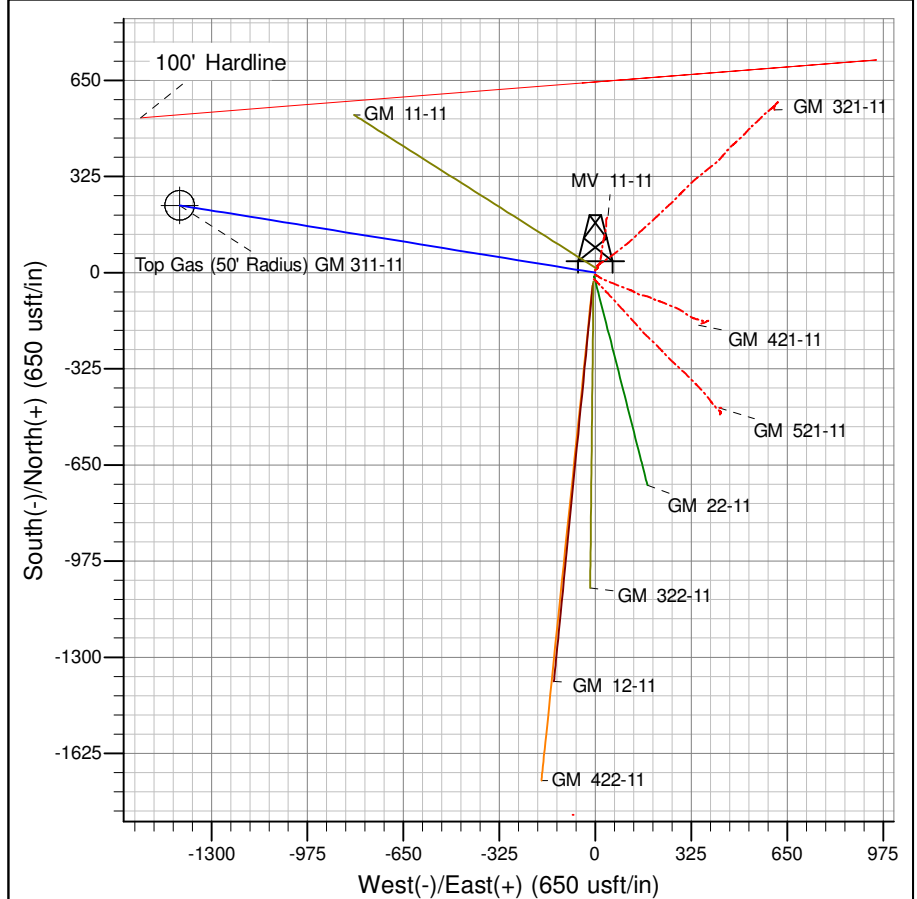




Well Name: GM 311-11
Surface Location: MV 11-11 Pad
North American Datum 1983 , US State Plane 1983 , Colorado Central Zone
Ground Elevation: 5559.00
+N/-S +E/-W Northing Easting Latitude Longitude Slot
0.00 0.00 1601802.90000 2271286.40000 39.45730 -108.08118 A04
KELLY BUSHING @ 5583.00usft (H&P 318 (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 3.50	
810.30	832.59	24.94	279.18	24.36	-150.70	152.66	152.66	Hold 24.94° Inc, 279.18° Az	
2782.31	3007.41	24.94	279.18	170.71	-1056.03	1069.73	1069.73	Start Drop -1.50%/100	
4393.00	4670.12	0.00	0.00	227.55	-1407.67	1425.94	1425.94	Vertical	
4493.00	4770.12	0.00	0.00	227.55	-1407.67	1425.94	1425.94	Top Gas	
6393.00	6670.12	0.00	0.00	227.55	-1407.67	1425.94	1425.94	TD at 6670.12	



Azimuths to True North
Magnetic North: 9.96°

Magnetic Field
Strength: 51958.7snT
Dip Angle: 65.62°
Date: 7/2/2014
Model: IGRF2005-10

Project: GV 11-07S-096W
Site: MV 11-11 Pad
Well: GM 311-11
Design #1 02Jul14 mab

PICEANCE VLY NAD 83

GV 11-07S-096W

MV 11-11 Pad

GM 311-11 - Slot A04

Wellbore #1

Plan: Design #1 02Jul14 mab

Standard Planning Report - Geographic

19 August, 2014

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well GM 311-11 - Slot A04
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 311-11	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 02Jul14 mab		

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 311-11 - Slot A04			
Well Position	+N/-S	0.00 usft	Northing:	1,601,802.90000 usft
	+E/-W	0.00 usft	Easting:	2,271,286.40000 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 #1 02Jul14 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	279.18

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	
832.59	24.94	279.18	810.30	24.36	-150.70	3.50	3.50	0.00	279.18	
3,007.41	24.94	279.18	2,782.31	170.71	-1,056.03	0.00	0.00	0.00	0.00	
4,670.12	0.00	0.00	4,393.00	227.55	-1,407.67	1.50	-1.50	0.00	180.00	
4,770.12	0.00	0.00	4,493.00	227.55	-1,407.67	0.00	0.00	0.00	0.00	Top Gas (50' Radius)
6,670.12	0.00	0.00	6,393.00	227.55	-1,407.67	0.00	0.00	0.00	0.00	

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well GM 311-11 - Slot A04
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 311-11	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 02Jul14 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	1,601,802.90000	2,271,286.40000	39.45730	-108.08119	
120.00	0.00	0.00	120.00	0.00	0.00	1,601,802.90000	2,271,286.40000	39.45730	-108.08119	
Start Build 3.50										
200.00	2.80	279.18	199.97	0.31	-1.93	1,601,803.26656	2,271,284.48039	39.45730	-108.08119	
400.00	9.80	279.18	398.64	3.81	-23.58	1,601,807.38021	2,271,262.93739	39.45731	-108.08127	
600.00	16.80	279.18	593.15	11.15	-68.97	1,601,816.00420	2,271,217.77412	39.45733	-108.08143	
800.00	23.80	279.18	780.61	22.22	-137.43	1,601,829.00994	2,271,149.66387	39.45736	-108.08167	
832.59	24.94	279.18	810.30	24.36	-150.70	1,601,831.53184	2,271,136.45685	39.45737	-108.08172	
Hold 24.94° Inc, 279.18° Az										
1,000.00	24.94	279.18	962.10	35.63	-220.39	1,601,844.77208	2,271,067.11853	39.45740	-108.08197	
9 5/8"										
1,200.00	24.94	279.18	1,143.45	49.09	-303.65	1,601,860.58955	2,270,984.28344	39.45743	-108.08226	
1,400.00	24.94	279.18	1,324.79	62.54	-386.90	1,601,876.40702	2,270,901.44836	39.45747	-108.08256	
1,600.00	24.94	279.18	1,506.14	76.00	-470.16	1,601,892.22449	2,270,818.61327	39.45751	-108.08285	
1,789.53	24.94	279.18	1,678.00	88.76	-549.05	1,601,907.21394	2,270,740.11445	39.45754	-108.08313	
Top of "G" Sand										
1,800.00	24.94	279.18	1,687.49	89.46	-553.41	1,601,908.04196	2,270,735.77819	39.45754	-108.08315	
1,899.81	24.94	279.18	1,778.00	96.18	-594.96	1,601,915.93605	2,270,694.43732	39.45756	-108.08329	
Base of "G" Sand										
2,000.00	24.94	279.18	1,868.84	102.92	-636.67	1,601,923.85942	2,270,652.94311	39.45758	-108.08344	
2,200.00	24.94	279.18	2,050.19	116.38	-719.92	1,601,939.67689	2,270,570.10802	39.45762	-108.08374	
2,400.00	24.94	279.18	2,231.54	129.84	-803.18	1,601,955.49436	2,270,487.27294	39.45765	-108.08403	
2,600.00	24.94	279.18	2,412.89	143.29	-886.43	1,601,971.31183	2,270,404.43785	39.45769	-108.08433	
2,800.00	24.94	279.18	2,594.24	156.75	-969.69	1,601,987.12930	2,270,321.60277	39.45773	-108.08462	
3,000.00	24.94	279.18	2,775.59	170.21	-1,052.94	1,602,002.94677	2,270,238.76769	39.45777	-108.08491	
3,007.41	24.94	279.18	2,782.31	170.71	-1,056.03	1,602,003.53306	2,270,235.69732	39.45777	-108.08493	
Start Drop -1.50°/100										
3,200.00	22.05	279.18	2,958.91	182.96	-1,131.82	1,602,017.93229	2,270,160.28943	39.45780	-108.08519	
3,400.00	19.05	279.18	3,146.16	194.17	-1,201.12	1,602,031.09908	2,270,091.33581	39.45783	-108.08544	
3,600.00	16.05	279.18	3,336.83	203.79	-1,260.65	1,602,042.40981	2,270,032.10223	39.45786	-108.08565	
3,616.82	15.80	279.18	3,353.00	204.53	-1,265.21	1,602,043.27532	2,270,027.56957	39.45786	-108.08567	
Mesaverde										
3,800.00	13.05	279.18	3,530.39	211.81	-1,310.25	1,602,051.83348	2,269,982.75105	39.45788	-108.08583	
4,000.00	10.05	279.18	3,726.32	218.20	-1,349.79	1,602,059.34427	2,269,943.41752	39.45790	-108.08597	
4,200.00	7.05	279.18	3,924.07	222.94	-1,379.14	1,602,064.92159	2,269,914.20946	39.45791	-108.08607	
4,400.00	4.05	279.18	4,123.11	226.03	-1,398.24	1,602,068.55014	2,269,895.20694	39.45792	-108.08614	
4,600.00	1.05	279.18	4,322.89	227.45	-1,407.03	1,602,070.22000	2,269,886.46203	39.45792	-108.08617	
4,670.12	0.00	0.00	4,393.00	227.55	-1,407.67	1,602,070.34069	2,269,885.82995	39.45792	-108.08617	
Vertical										
4,770.12	0.00	0.00	4,493.00	227.55	-1,407.67	1,602,070.34069	2,269,885.82995	39.45792	-108.08617	
Top Gas - Approx. Top Gas										
4,800.00	0.00	0.00	4,522.88	227.55	-1,407.67	1,602,070.34069	2,269,885.82995	39.45792	-108.08617	
5,000.00	0.00	0.00	4,722.88	227.55	-1,407.67	1,602,070.34069	2,269,885.82995	39.45792	-108.08617	
5,200.00	0.00	0.00	4,922.88	227.55	-1,407.67	1,602,070.34069	2,269,885.82995	39.45792	-108.08617	
5,400.00	0.00	0.00	5,122.88	227.55	-1,407.67	1,602,070.34069	2,269,885.82995	39.45792	-108.08617	
5,600.00	0.00	0.00	5,322.88	227.55	-1,407.67	1,602,070.34069	2,269,885.82995	39.45792	-108.08617	
5,800.00	0.00	0.00	5,522.88	227.55	-1,407.67	1,602,070.34069	2,269,885.82995	39.45792	-108.08617	
6,000.00	0.00	0.00	5,722.88	227.55	-1,407.67	1,602,070.34069	2,269,885.82995	39.45792	-108.08617	
6,090.12	0.00	0.00	5,813.00	227.55	-1,407.67	1,602,070.34069	2,269,885.82995	39.45792	-108.08617	
Cameo Coals										
6,200.00	0.00	0.00	5,922.88	227.55	-1,407.67	1,602,070.34069	2,269,885.82995	39.45792	-108.08617	

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well GM 311-11 - Slot A04
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 311-11	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 02Jul14 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	6,122.88	227.55	-1,407.67	1,602,070.34069	2,269,885.82995	39.45792	-108.08617
6,570.12	0.00	0.00	6,293.00	227.55	-1,407.67	1,602,070.34069	2,269,885.82995	39.45792	-108.08617
Rollins SS									
6,600.00	0.00	0.00	6,322.88	227.55	-1,407.67	1,602,070.34069	2,269,885.82995	39.45792	-108.08617
6,670.12	0.00	0.00	6,393.00	227.55	-1,407.67	1,602,070.34069	2,269,885.82995	39.45792	-108.08617
TD at 6670.12 - 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	4,493.00	227.55	-1,407.67	1,602,070.34069	2,269,885.82995	39.45792	-108.08617

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,000.00	962.10	9 5/8"	9.625	13.500	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (bearing)	
1,789.53	1,678.00	Top of "G" Sand				
1,899.81	1,778.00	Base of "G" Sand				
3,616.82	3,353.00	Mesaverde				
4,770.12	4,493.00	Approx. Top Gas				
6,090.12	5,813.00	Cameo Coals				
6,570.12	6,293.00	Rollins SS				
6,670.12	6,393.00	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 3.50	
832.59	810.30	24.36	-150.70	Hold 24.94° Inc, 279.18° Az	
3,007.41	2,782.31	170.71	-1,056.03	Start Drop -1.50°/100	
4,670.12	4,393.00	227.55	-1,407.67	Vertical	
4,770.12	4,493.00	227.55	-1,407.67	Top Gas	
6,670.12	6,393.00	227.55	-1,407.67	TD at 6670.12	