

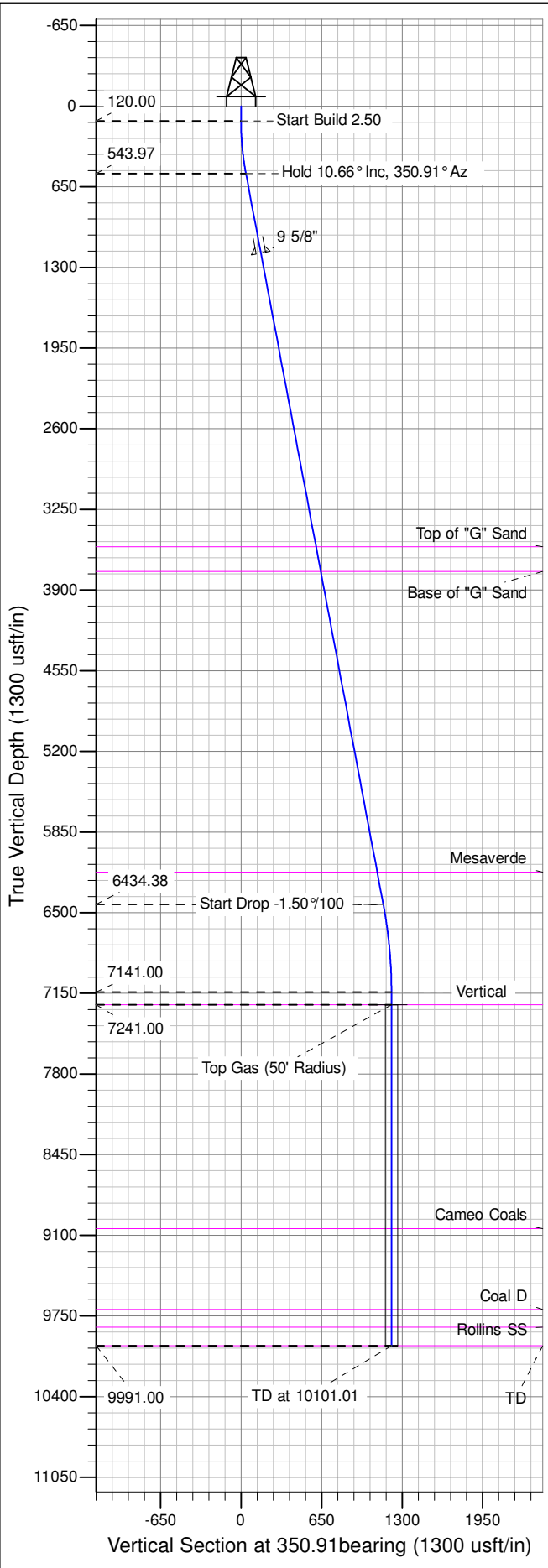


Well Name: RU 24-5
 Surface Location: RU 21-8 Pad

North American Datum 1983 , US State Plane 1983 , Colorado Central Zone
 Ground Elevation: 7736.00

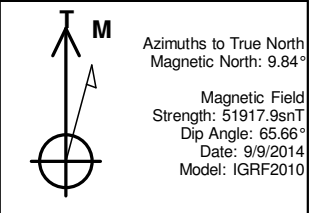
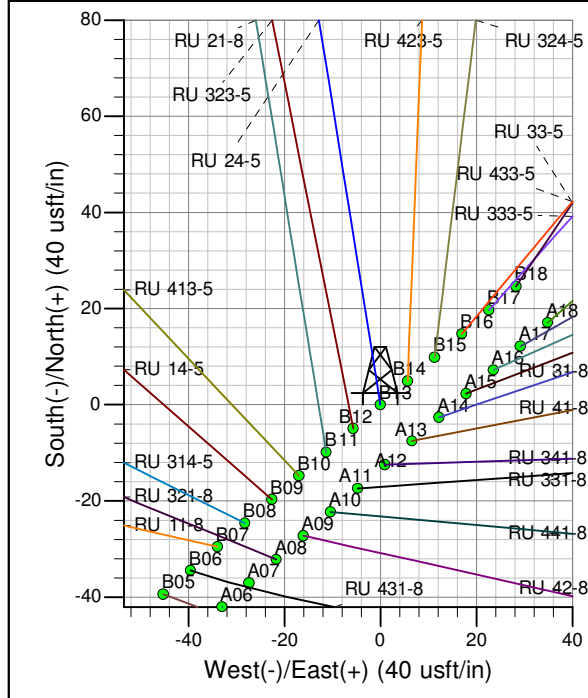
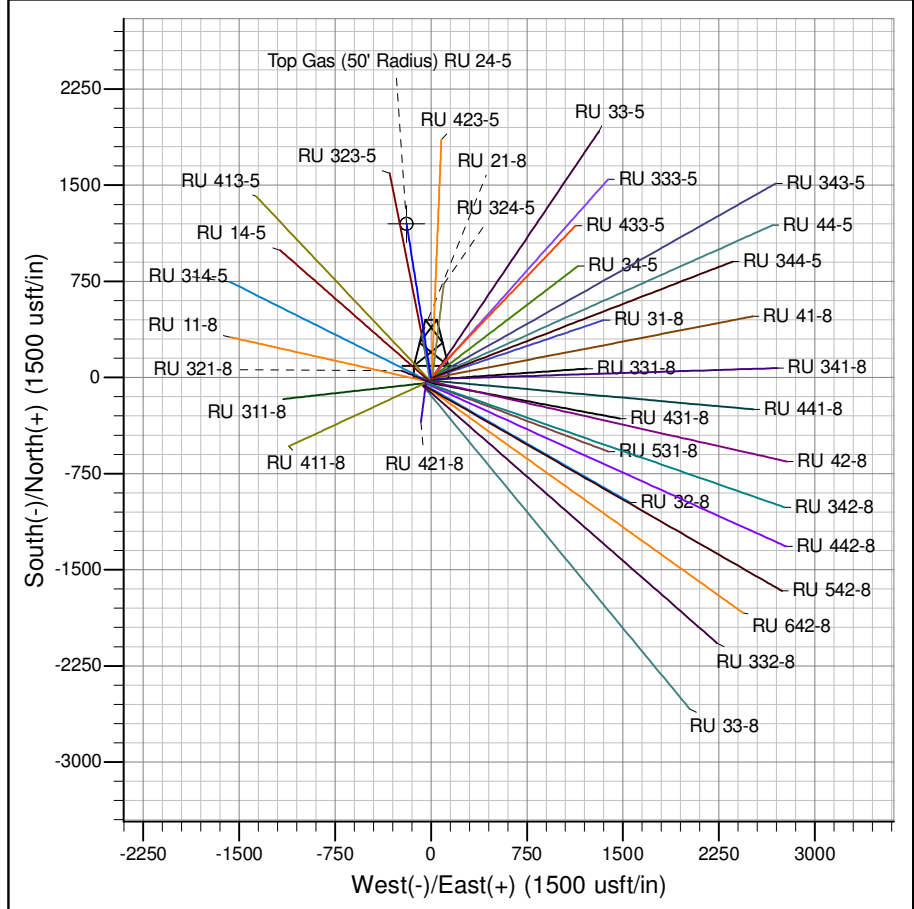
+N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.00 0.00 1602691.50 2350520.33 39.46558 -107.80073 B13

KELLY BUSHING @ 7762.00usft (Nabors 576 (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 2.50
543.97	546.43	10.66	350.91	39.06	-6.25	39.56	39.56	Hold 10.66° Inc, 350.91° Az
6434.38	6540.29	10.66	350.91	1133.97	-181.36	1148.38	1148.38	Start Drop -1.50%/100
7141.00	7251.01	0.00	0.00	1199.07	-191.77	1214.31	1214.31	Vertical
7241.00	7351.01	0.00	0.00	1199.07	-191.77	1214.31	1214.31	Top Gas
9991.00	10101.01	0.00	0.00	1199.07	-191.77	1214.31	1214.31	TD at 10101.01



Project: RU 08-07S-093W
 Site: RU 21-8 Pad
 Well: RU 24-5
 Design #1 09Sep14 mab

PICEANCE VLY NAD 83

RU 08-07S-093W

RU 21-8 Pad

RU 24-5 - Slot B13

Wellbore #1

Plan: Design #1 09Sep14 mab

Standard Planning Report - Geographic

28 November, 2014

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well RU 24-5 - Slot B13
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 7762.00usft (Nabors 576 (26' RKB) mab)
Project:	RU 08-07S-093W	MD Reference:	KELLY BUSHING @ 7762.00usft (Nabors 576 (26' RKB) mab)
Site:	RU 21-8 Pad	North Reference:	True
Well:	RU 24-5	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 09Sep14 mab		

Project	RU 08-07S-093W		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		

Site	RU 21-8 Pad				
Site Position:		Northing:	1,602,707.70 usft	Latitude:	39.46563
From:	Map	Easting:	2,350,555.60 usft	Longitude:	-107.80061
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence:	-1.45 °

Well	RU 24-5 - Slot B13					
Well Position	+N/-S	0.00 usft	Northing:	1,602,691.50 usft	Latitude:	39.46558
	+E/-W	0.00 usft	Easting:	2,350,520.33 usft	Longitude:	-107.80074
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	7,736.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	9/9/2014	9.84	65.66	51,918

Design	Design #1 09Sep14 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	350.91

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	
546.43	10.66	350.91	543.97	39.06	-6.25	2.50	2.50	0.00	350.91	
6,540.29	10.66	350.91	6,434.38	1,133.97	-181.36	0.00	0.00	0.00	0.00	
7,251.01	0.00	0.00	7,141.00	1,199.07	-191.77	1.50	-1.50	0.00	180.00	
7,351.01	0.00	0.00	7,241.00	1,199.07	-191.77	0.00	0.00	0.00	0.00	Top Gas (50' Radius)
10,101.01	0.00	0.00	9,991.00	1,199.07	-191.77	0.00	0.00	0.00	0.00	

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well RU 24-5 - Slot B13
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 7762.00usft (Nabors 576 (26' RKB) mab)
Project:	RU 08-07S-093W	MD Reference:	KELLY BUSHING @ 7762.00usft (Nabors 576 (26' RKB) mab)
Site:	RU 21-8 Pad	North Reference:	True
Well:	RU 24-5	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 09Sep14 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	1,602,691.50	2,350,520.33	39.46558	-107.80074	
120.00	0.00	0.00	120.00	0.00	0.00	1,602,691.50	2,350,520.33	39.46558	-107.80074	
Start Build 2.50										
200.00	2.00	350.91	199.98	1.38	-0.22	1,602,692.88	2,350,520.15	39.46559	-107.80074	
400.00	7.00	350.91	399.30	16.87	-2.70	1,602,708.43	2,350,518.06	39.46563	-107.80075	
546.43	10.66	350.91	543.97	39.06	-6.25	1,602,730.70	2,350,515.08	39.46569	-107.80076	
Hold 10.66° Inc, 350.91° Az										
600.00	10.66	350.91	596.62	48.85	-7.81	1,602,740.53	2,350,513.76	39.46572	-107.80077	
800.00	10.66	350.91	793.17	85.38	-13.66	1,602,777.20	2,350,508.85	39.46582	-107.80079	
1,000.00	10.66	350.91	989.72	121.92	-19.50	1,602,813.87	2,350,503.93	39.46592	-107.80081	
1,200.00	10.66	350.91	1,186.26	158.45	-25.34	1,602,850.54	2,350,499.01	39.46602	-107.80083	
9 5/8"										
1,400.00	10.66	350.91	1,382.81	194.98	-31.18	1,602,887.21	2,350,494.10	39.46612	-107.80085	
1,600.00	10.66	350.91	1,579.36	231.52	-37.03	1,602,923.88	2,350,489.18	39.46622	-107.80087	
1,800.00	10.66	350.91	1,775.91	268.05	-42.87	1,602,960.55	2,350,484.27	39.46632	-107.80089	
2,000.00	10.66	350.91	1,972.45	304.59	-48.71	1,602,997.22	2,350,479.35	39.46642	-107.80091	
2,200.00	10.66	350.91	2,169.00	341.12	-54.56	1,603,033.89	2,350,474.43	39.46652	-107.80093	
2,400.00	10.66	350.91	2,365.55	377.66	-60.40	1,603,070.56	2,350,469.52	39.46662	-107.80095	
2,600.00	10.66	350.91	2,562.10	414.19	-66.24	1,603,107.23	2,350,464.60	39.46672	-107.80097	
2,800.00	10.66	350.91	2,758.65	450.73	-72.08	1,603,143.90	2,350,459.69	39.46682	-107.80099	
3,000.00	10.66	350.91	2,955.19	487.26	-77.93	1,603,180.57	2,350,454.77	39.46692	-107.80101	
3,200.00	10.66	350.91	3,151.74	523.79	-83.77	1,603,217.25	2,350,449.85	39.46702	-107.80103	
3,400.00	10.66	350.91	3,348.29	560.33	-89.61	1,603,253.92	2,350,444.94	39.46712	-107.80106	
3,600.00	10.66	350.91	3,544.84	596.86	-95.46	1,603,290.59	2,350,440.02	39.46722	-107.80108	
3,606.27	10.66	350.91	3,551.00	598.01	-95.64	1,603,291.74	2,350,439.87	39.46722	-107.80108	
Top of "G" Sand										
3,800.00	10.66	350.91	3,741.39	633.40	-101.30	1,603,327.26	2,350,435.11	39.46732	-107.80110	
3,809.78	10.66	350.91	3,751.00	635.18	-101.59	1,603,329.05	2,350,434.87	39.46733	-107.80110	
Base of "G" Sand										
4,000.00	10.66	350.91	3,937.93	669.93	-107.14	1,603,363.93	2,350,430.19	39.46742	-107.80112	
4,200.00	10.66	350.91	4,134.48	706.47	-112.99	1,603,400.60	2,350,425.27	39.46752	-107.80114	
4,400.00	10.66	350.91	4,331.03	743.00	-118.83	1,603,437.27	2,350,420.36	39.46762	-107.80116	
4,600.00	10.66	350.91	4,527.58	779.54	-124.67	1,603,473.94	2,350,415.44	39.46772	-107.80118	
4,800.00	10.66	350.91	4,724.13	816.07	-130.51	1,603,510.61	2,350,410.53	39.46782	-107.80120	
5,000.00	10.66	350.91	4,920.67	852.60	-136.36	1,603,547.28	2,350,405.61	39.46792	-107.80122	
5,200.00	10.66	350.91	5,117.22	889.14	-142.20	1,603,583.95	2,350,400.69	39.46802	-107.80124	
5,400.00	10.66	350.91	5,313.77	925.67	-148.04	1,603,620.62	2,350,395.78	39.46812	-107.80126	
5,600.00	10.66	350.91	5,510.32	962.21	-153.89	1,603,657.29	2,350,390.86	39.46822	-107.80128	
5,800.00	10.66	350.91	5,706.87	998.74	-159.73	1,603,693.96	2,350,385.95	39.46832	-107.80130	
6,000.00	10.66	350.91	5,903.41	1,035.28	-165.57	1,603,730.64	2,350,381.03	39.46842	-107.80132	
6,200.00	10.66	350.91	6,099.96	1,071.81	-171.42	1,603,767.31	2,350,376.12	39.46852	-107.80134	
6,275.34	10.66	350.91	6,174.00	1,085.57	-173.62	1,603,781.12	2,350,374.26	39.46856	-107.80135	
Mesaverde										
6,400.00	10.66	350.91	6,296.51	1,108.35	-177.26	1,603,803.98	2,350,371.20	39.46862	-107.80137	
6,540.29	10.66	350.91	6,434.38	1,133.97	-181.36	1,603,829.70	2,350,367.75	39.46869	-107.80138	
Start Drop -1.50°/100										
6,600.00	9.77	350.91	6,493.14	1,144.43	-183.03	1,603,840.19	2,350,366.34	39.46872	-107.80139	
6,800.00	6.77	350.91	6,691.04	1,172.81	-187.57	1,603,868.68	2,350,362.52	39.46880	-107.80140	
7,000.00	3.77	350.91	6,890.18	1,190.93	-190.47	1,603,886.87	2,350,360.09	39.46885	-107.80141	
7,200.00	0.77	350.91	7,090.00	1,198.74	-191.71	1,603,894.71	2,350,359.04	39.46887	-107.80142	
7,251.01	0.00	0.00	7,141.00	1,199.07	-191.77	1,603,895.04	2,350,358.99	39.46887	-107.80142	
Vertical										

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well RU 24-5 - Slot B13
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 7762.00usft (Nabors 576 (26' RKB) mab)
Project:	RU 08-07S-093W	MD Reference:	KELLY BUSHING @ 7762.00usft (Nabors 576 (26' RKB) mab)
Site:	RU 21-8 Pad	North Reference:	True
Well:	RU 24-5	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 09Sep14 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
7,351.01	0.00	0.00	7,241.00	1,199.07	-191.77	1,603,895.04	2,350,358.99	39.46887	-107.80142
Top Gas - Approx. Top Gas									
7,400.00	0.00	0.00	7,289.99	1,199.07	-191.77	1,603,895.04	2,350,358.99	39.46887	-107.80142
7,600.00	0.00	0.00	7,489.99	1,199.07	-191.77	1,603,895.04	2,350,358.99	39.46887	-107.80142
7,800.00	0.00	0.00	7,689.99	1,199.07	-191.77	1,603,895.04	2,350,358.99	39.46887	-107.80142
8,000.00	0.00	0.00	7,889.99	1,199.07	-191.77	1,603,895.04	2,350,358.99	39.46887	-107.80142
8,200.00	0.00	0.00	8,089.99	1,199.07	-191.77	1,603,895.04	2,350,358.99	39.46887	-107.80142
8,400.00	0.00	0.00	8,289.99	1,199.07	-191.77	1,603,895.04	2,350,358.99	39.46887	-107.80142
8,600.00	0.00	0.00	8,489.99	1,199.07	-191.77	1,603,895.04	2,350,358.99	39.46887	-107.80142
8,800.00	0.00	0.00	8,689.99	1,199.07	-191.77	1,603,895.04	2,350,358.99	39.46887	-107.80142
9,000.00	0.00	0.00	8,889.99	1,199.07	-191.77	1,603,895.04	2,350,358.99	39.46887	-107.80142
9,155.01	0.00	0.00	9,045.00	1,199.07	-191.77	1,603,895.04	2,350,358.99	39.46887	-107.80142
Cameo Coals									
9,200.00	0.00	0.00	9,089.99	1,199.07	-191.77	1,603,895.04	2,350,358.99	39.46887	-107.80142
9,400.00	0.00	0.00	9,289.99	1,199.07	-191.77	1,603,895.04	2,350,358.99	39.46887	-107.80142
9,600.00	0.00	0.00	9,489.99	1,199.07	-191.77	1,603,895.04	2,350,358.99	39.46887	-107.80142
9,800.00	0.00	0.00	9,689.99	1,199.07	-191.77	1,603,895.04	2,350,358.99	39.46887	-107.80142
9,807.01	0.00	0.00	9,697.00	1,199.07	-191.77	1,603,895.04	2,350,358.99	39.46887	-107.80142
Coal D									
9,951.01	0.00	0.00	9,841.00	1,199.07	-191.77	1,603,895.04	2,350,358.99	39.46887	-107.80142
Rollins SS									
10,000.00	0.00	0.00	9,889.99	1,199.07	-191.77	1,603,895.04	2,350,358.99	39.46887	-107.80142
10,101.01	0.00	0.00	9,991.00	1,199.07	-191.77	1,603,895.04	2,350,358.99	39.46887	-107.80142
TD at 10101.01									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (bearing)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Top Gas (50' Radius) RL - hit/miss target - Shape - plan hits target center - Circle (radius 50.00)	0.00	358.55	7,241.00	1,199.07	-191.77	1,603,895.04	2,350,358.99	39.46887	-107.80142

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,200.00	1,186.26	9 5/8"	9.625	13.500	

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well RU 24-5 - Slot B13
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 7762.00usft (Nabors 576 (26' RKB) mab)
Project:	RU 08-07S-093W	MD Reference:	KELLY BUSHING @ 7762.00usft (Nabors 576 (26' RKB) mab)
Site:	RU 21-8 Pad	North Reference:	True
Well:	RU 24-5	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 09Sep14 mab		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (bearing)	
3,606.27	3,551.00	Top of "G" Sand				
3,809.78	3,751.00	Base of "G" Sand				
6,275.34	6,174.00	Mesaverde				
7,351.01	7,241.00	Approx. Top Gas				
9,155.01	9,045.00	Cameo Coals				
9,807.01	9,697.00	Coal D				
9,951.01	9,841.00	Rollins SS				
10,101.01	9,991.00	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 2.50	
546.43	543.97	39.06	-6.25	Hold 10.66° Inc, 350.91° Az	
6,540.29	6,434.38	1,133.97	-181.36	Start Drop -1.50°/100	
7,251.01	7,141.00	1,199.07	-191.77	Vertical	
7,351.01	7,241.00	1,199.07	-191.77	Top Gas	
10,101.01	9,991.00	1,199.07	-191.77	TD at 10101.01	