

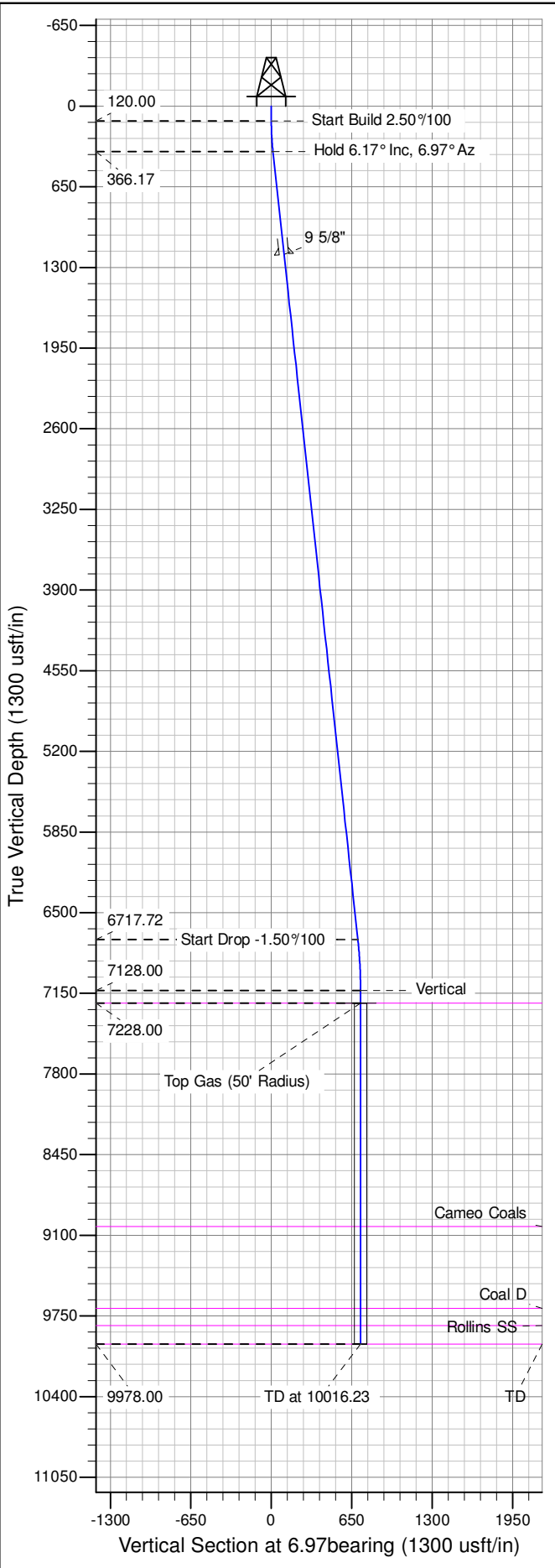


Well Name: RU 324-5
 Surface Location: RU 21-8 Pad

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

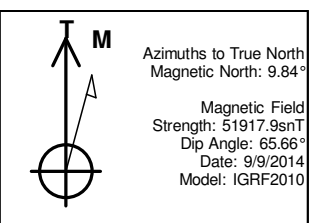
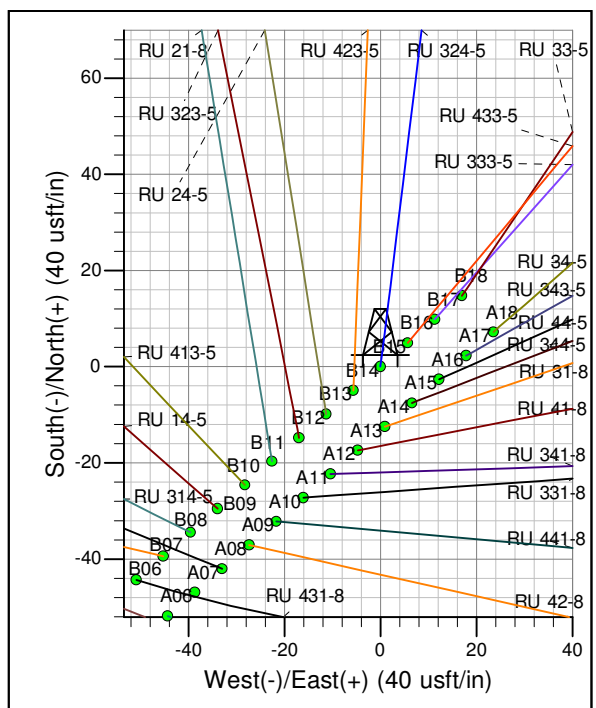
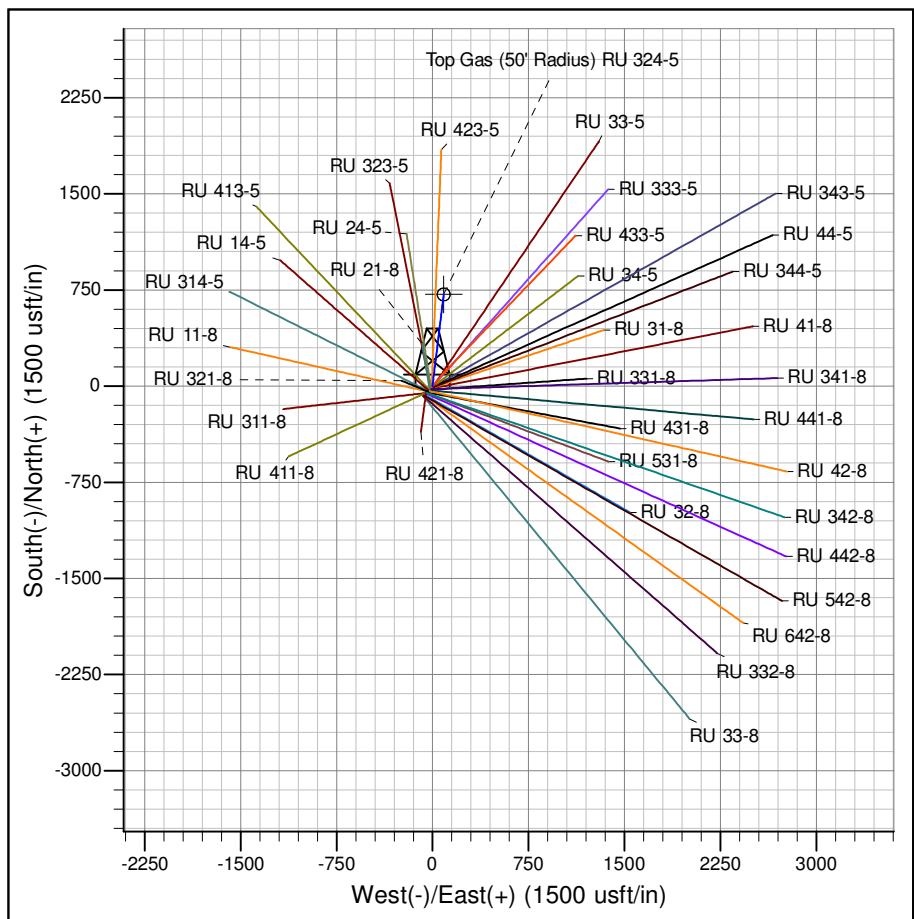
+N/-S 0.00 +E/-W 0.00 Northing 1602701.06 Easting 2350531.89 Latitude 39.46561 Longitude -107.80069 Slot B15

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%100
366.17	366.64	6.17	6.97	13.16	1.61	13.26	13.26	Hold 6.17° Inc, 6.97° Az
6717.72	6755.15	6.17	6.97	694.29	84.86	699.46	699.46	Start Drop -1.50%100
7128.00	7166.23	0.00	0.00	716.23	87.54	721.56	721.56	Vertical
7228.00	7266.23	0.00	0.00	716.23	87.54	721.56	721.56	Top Gas
9978.00	10016.23	0.00	0.00	716.23	87.54	721.56	721.56	TD at 10016.23



Project: RU 08-07S-093W
 Site: RU 21-8 Pad
 Well: RU 324-5
 Design #1 09Sep14 mab

PICEANCE VLY NAD 83

RU 08-07S-093W

RU 21-8 Pad

RU 324-5 - Slot B15

Wellbore #1

Plan: Design #1 09Sep14 mab

Standard Planning Report - Geographic

04 November, 2014

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well RU 324-5 - Slot B15
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 324-5	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:	1,602,707.70000 usft	Latitude:	39.46563
From:	Map	Easting:	2,350,555.60000 usft	Longitude:	-107.80061
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence:	-1.45 °

Well	RU 324-5 - Slot B15					
Well Position	+N/-S	0.00 usft	Northing:	1,602,701.06311 usft	Latitude:	39.46561
	+E/-W	0.00 usft	Easting:	2,350,531.88921 usft	Longitude:	-107.80070
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	6.97

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	
366.64	6.17	6.97	366.17	13.16	1.61	2.50	2.50	0.00	6.97	
6,755.15	6.17	6.97	6,717.72	694.29	84.86	0.00	0.00	0.00	0.00	
7,166.23	0.00	0.00	7,128.00	716.23	87.54	1.50	-1.50	0.00	180.00	
7,266.23	0.00	0.00	7,228.00	716.23	87.54	0.00	0.00	0.00	0.00	Top Gas (50' Radius)
10,016.23	0.00	0.00	9,978.00	716.23	87.54	0.00	0.00	0.00	0.00	

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well RU 324-5 - Slot B15
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 324-5	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	1,602,701.06311	2,350,531.88921	39.46561	-107.80070	
120.00	0.00	0.00	120.00	0.00	0.00	1,602,701.06311	2,350,531.88921	39.46561	-107.80070	
Start Build 2.50°/100										
200.00	2.00	6.97	199.98	1.39	0.17	1,602,702.44419	2,350,532.09362	39.46561	-107.80070	
366.64	6.17	6.97	366.17	13.16	1.61	1,602,714.17923	2,350,533.83058	39.46564	-107.80069	
Hold 6.17° Inc, 6.97° Az										
400.00	6.17	6.97	399.33	16.72	2.04	1,602,717.72337	2,350,534.35517	39.46565	-107.80069	
600.00	6.17	6.97	598.17	38.04	4.65	1,602,738.97413	2,350,537.50059	39.46571	-107.80068	
800.00	6.17	6.97	797.02	59.36	7.26	1,602,760.22488	2,350,540.64602	39.46577	-107.80067	
1,000.00	6.17	6.97	995.86	80.69	9.86	1,602,781.47564	2,350,543.79145	39.46583	-107.80066	
1,200.00	6.17	6.97	1,194.70	102.01	12.47	1,602,802.72639	2,350,546.93687	39.46589	-107.80065	
9 5/8"										
1,400.00	6.17	6.97	1,393.55	123.34	15.07	1,602,823.97715	2,350,550.08230	39.46595	-107.80064	
1,600.00	6.17	6.97	1,592.39	144.66	17.68	1,602,845.22790	2,350,553.22772	39.46601	-107.80064	
1,800.00	6.17	6.97	1,791.23	165.98	20.29	1,602,866.47866	2,350,556.37315	39.46606	-107.80063	
2,000.00	6.17	6.97	1,990.07	187.31	22.89	1,602,887.72942	2,350,559.51857	39.46612	-107.80062	
2,200.00	6.17	6.97	2,188.92	208.63	25.50	1,602,908.98017	2,350,562.66400	39.46618	-107.80061	
2,400.00	6.17	6.97	2,387.76	229.95	28.11	1,602,930.23093	2,350,565.80942	39.46624	-107.80060	
2,600.00	6.17	6.97	2,586.60	251.28	30.71	1,602,951.48168	2,350,568.95485	39.46630	-107.80059	
2,800.00	6.17	6.97	2,785.45	272.60	33.32	1,602,972.73244	2,350,572.10027	39.46636	-107.80058	
3,000.00	6.17	6.97	2,984.29	293.92	35.93	1,602,993.98318	2,350,575.24570	39.46642	-107.80057	
3,200.00	6.17	6.97	3,183.13	315.25	38.53	1,603,015.23394	2,350,578.39112	39.46647	-107.80056	
3,400.00	6.17	6.97	3,381.98	336.57	41.14	1,603,036.48469	2,350,581.53655	39.46653	-107.80055	
3,600.00	6.17	6.97	3,580.82	357.89	43.74	1,603,057.73545	2,350,584.68197	39.46659	-107.80054	
3,800.00	6.17	6.97	3,779.66	379.22	46.35	1,603,078.98621	2,350,587.82740	39.46665	-107.80053	
4,000.00	6.17	6.97	3,978.50	400.54	48.96	1,603,100.23696	2,350,590.97282	39.46671	-107.80052	
4,200.00	6.17	6.97	4,177.35	421.87	51.56	1,603,121.48772	2,350,594.11825	39.46677	-107.80051	
4,400.00	6.17	6.97	4,376.19	443.19	54.17	1,603,142.73847	2,350,597.26367	39.46683	-107.80051	
4,600.00	6.17	6.97	4,575.03	464.51	56.78	1,603,163.98923	2,350,600.40910	39.46688	-107.80050	
4,800.00	6.17	6.97	4,773.88	485.84	59.38	1,603,185.23998	2,350,603.55452	39.46694	-107.80049	
5,000.00	6.17	6.97	4,972.72	507.16	61.99	1,603,206.49074	2,350,606.69995	39.46700	-107.80048	
5,200.00	6.17	6.97	5,171.56	528.48	64.59	1,603,227.74149	2,350,609.84538	39.46706	-107.80047	
5,400.00	6.17	6.97	5,370.40	549.81	67.20	1,603,248.99225	2,350,612.99080	39.46712	-107.80046	
5,600.00	6.17	6.97	5,569.25	571.13	69.81	1,603,270.24301	2,350,616.13623	39.46718	-107.80045	
5,800.00	6.17	6.97	5,768.09	592.45	72.41	1,603,291.49376	2,350,619.28165	39.46723	-107.80044	
6,000.00	6.17	6.97	5,966.93	613.78	75.02	1,603,312.74452	2,350,622.42708	39.46729	-107.80043	
6,200.00	6.17	6.97	6,165.78	635.10	77.63	1,603,333.99527	2,350,625.57250	39.46735	-107.80042	
6,400.00	6.17	6.97	6,364.62	656.43	80.23	1,603,355.24603	2,350,628.71793	39.46741	-107.80041	
6,600.00	6.17	6.97	6,563.46	677.75	82.84	1,603,376.49678	2,350,631.86335	39.46747	-107.80040	
6,755.15	6.17	6.97	6,717.72	694.29	84.86	1,603,392.98250	2,350,634.30348	39.46751	-107.80040	
Start Drop -1.50°/100										
6,800.00	5.49	6.97	6,762.33	698.81	85.41	1,603,397.48851	2,350,634.97044	39.46753	-107.80040	
7,000.00	2.49	6.97	6,961.82	712.64	87.10	1,603,411.26523	2,350,637.00960	39.46756	-107.80039	
7,166.23	0.00	0.00	7,128.00	716.23	87.54	1,603,414.84270	2,350,637.53911	39.46757	-107.80039	
Vertical										
7,200.00	0.00	0.00	7,161.77	716.23	87.54	1,603,414.84270	2,350,637.53911	39.46757	-107.80039	
7,266.23	0.00	0.00	7,228.00	716.23	87.54	1,603,414.84270	2,350,637.53911	39.46757	-107.80039	
Top Gas - Approx. Top Gas										
7,400.00	0.00	0.00	7,361.77	716.23	87.54	1,603,414.84270	2,350,637.53911	39.46757	-107.80039	
7,600.00	0.00	0.00	7,561.77	716.23	87.54	1,603,414.84270	2,350,637.53911	39.46757	-107.80039	
7,800.00	0.00	0.00	7,761.77	716.23	87.54	1,603,414.84270	2,350,637.53911	39.46757	-107.80039	
8,000.00	0.00	0.00	7,961.77	716.23	87.54	1,603,414.84270	2,350,637.53911	39.46757	-107.80039	

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well RU 324-5 - Slot B15
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 324-5	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	
8,200.00	0.00	0.00	8,161.77	716.23	87.54	1,603,414.84270	2,350,637.53911	39.46757	-107.80039	
8,400.00	0.00	0.00	8,361.77	716.23	87.54	1,603,414.84270	2,350,637.53911	39.46757	-107.80039	
8,600.00	0.00	0.00	8,561.77	716.23	87.54	1,603,414.84270	2,350,637.53911	39.46757	-107.80039	
8,800.00	0.00	0.00	8,761.77	716.23	87.54	1,603,414.84270	2,350,637.53911	39.46757	-107.80039	
9,000.00	0.00	0.00	8,961.77	716.23	87.54	1,603,414.84270	2,350,637.53911	39.46757	-107.80039	
9,068.23	0.00	0.00	9,030.00	716.23	87.54	1,603,414.84270	2,350,637.53911	39.46757	-107.80039	
Cameo Coals										
9,200.00	0.00	0.00	9,161.77	716.23	87.54	1,603,414.84270	2,350,637.53911	39.46757	-107.80039	
9,400.00	0.00	0.00	9,361.77	716.23	87.54	1,603,414.84270	2,350,637.53911	39.46757	-107.80039	
9,600.00	0.00	0.00	9,561.77	716.23	87.54	1,603,414.84270	2,350,637.53911	39.46757	-107.80039	
9,727.23	0.00	0.00	9,689.00	716.23	87.54	1,603,414.84270	2,350,637.53911	39.46757	-107.80039	
Coal D										
9,800.00	0.00	0.00	9,761.77	716.23	87.54	1,603,414.84270	2,350,637.53911	39.46757	-107.80039	
9,866.23	0.00	0.00	9,828.00	716.23	87.54	1,603,414.84270	2,350,637.53911	39.46757	-107.80039	
Rollins SS										
10,000.00	0.00	0.00	9,961.77	716.23	87.54	1,603,414.84270	2,350,637.53911	39.46757	-107.80039	
10,016.23	0.00	0.00	9,978.00	716.23	87.54	1,603,414.84270	2,350,637.53911	39.46757	-107.80039	
TD at 10016.23 - TD										

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	7,228.00	716.23	87.54	1,603,414.84265	2,350,637.53958	39.46757	-107.80039	

Casing Points						
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)		
1,200.00	1,194.70	9 5/8"	9.625	13.500		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (bearing)	
7,266.23	7,228.00	Approx. Top Gas				
9,068.23	9,030.00	Cameo Coals				
9,727.23	9,689.00	Coal D				
9,866.23	9,828.00	Rollins SS				
10,016.23	9,978.00	TD				

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well RU 324-5 - Slot B15
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 324-5	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 09Sep14 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 2.50°/100
366.64	366.17	13.16	1.61	Hold 6.17° Inc, 6.97° Az
6,755.15	6,717.72	694.29	84.86	Start Drop -1.50°/100
7,166.23	7,128.00	716.23	87.54	Vertical
7,266.23	7,228.00	716.23	87.54	Top Gas
10,016.23	9,978.00	716.23	87.54	TD at 10016.23