

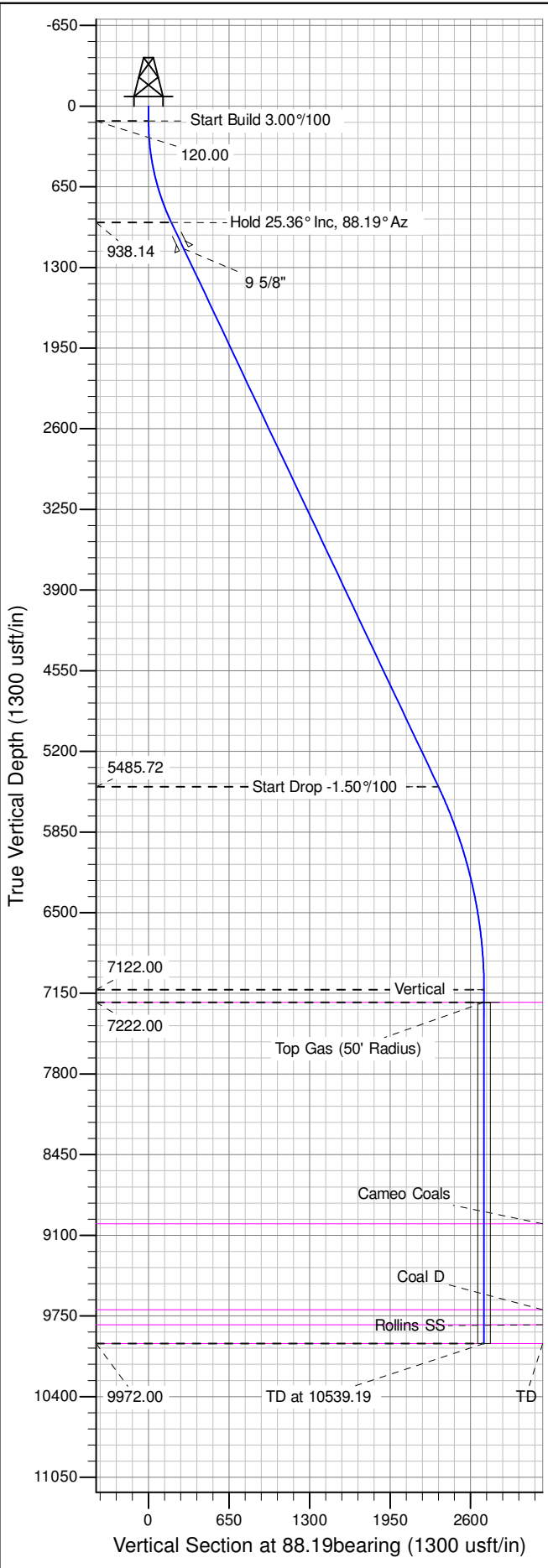


Well Name: RU 341-8
 Surface Location: RU 21-8 Pad

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

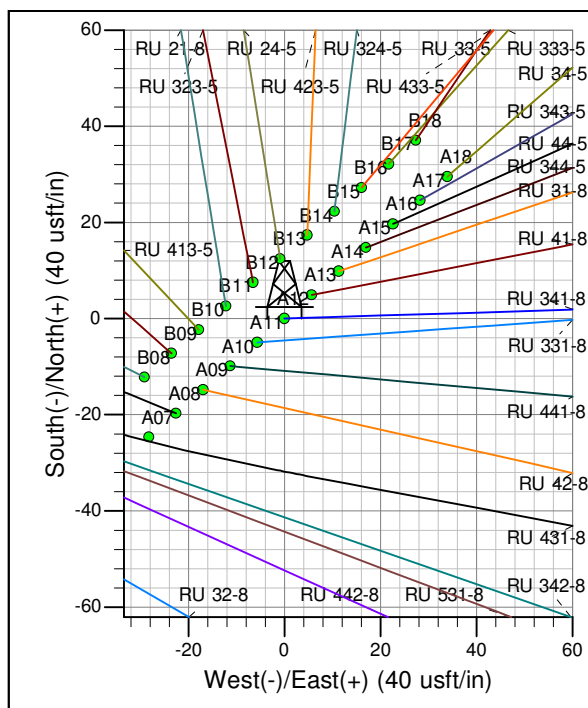
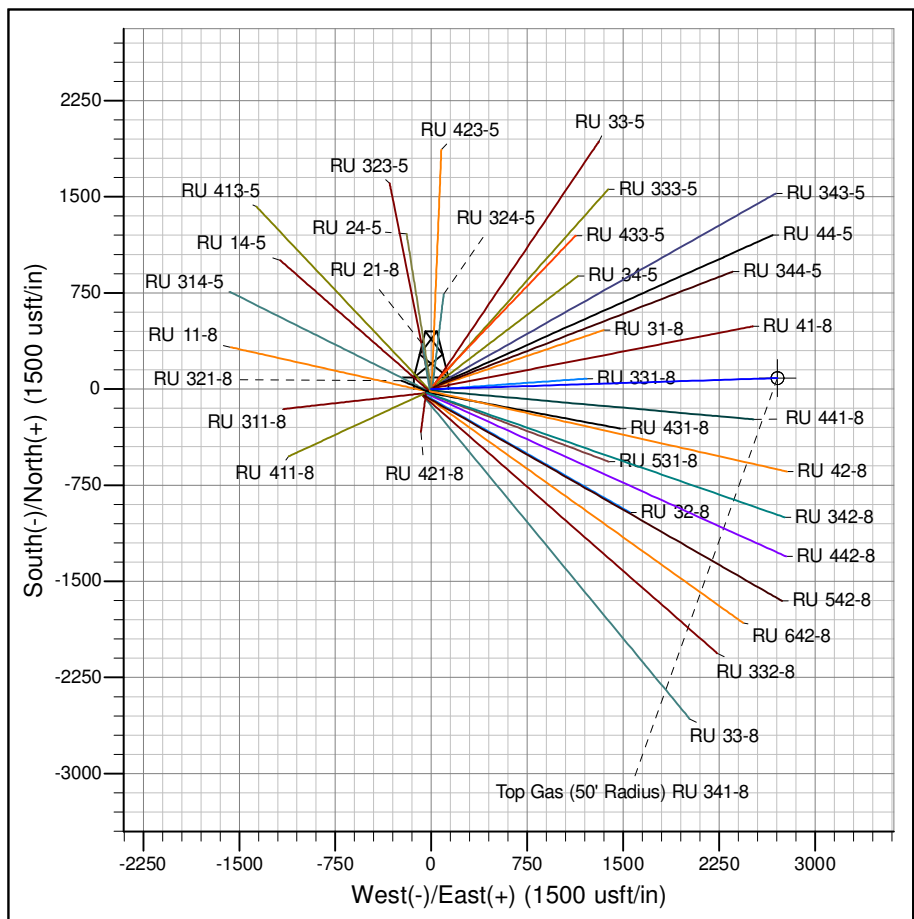
+N/-S 0.00 +E/-W 0.00 Northing 1602679.02 Easting 2350520.93 Latitude 39.46555 Longitude -107.80073 Slot A12

KELLY BUSHING @ 7762.00usft (Nabors 576 (26' RKB) mab)



ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	V Sect	Departure	Annotation
120.00	120.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build 3.00%/100
938.14	965.49	25.36	88.19	5.81	184.02	184.11	184.11	Hold 25.36° Inc, 88.19° Az
5485.72	5998.22	25.36	88.19	73.83	2338.85	2340.02	2340.02	Start Drop -1.50%/100
7122.00	7689.19	0.00	0.00	85.45	2706.89	2708.24	2708.24	Vertical
7222.00	7789.19	0.00	0.00	85.45	2706.89	2708.24	2708.24	Top Gas
9972.00	10539.19	0.00	0.00	85.45	2706.89	2708.24	2708.24	TD at 10539.19



Azimuths to True North
 Magnetic North: 9.84°
 Magnetic Field
 Strength: 51918.2snT
 Dip Angle: 65.66°
 Date: 9/8/2014
 Model: IGRF2010

Project: RU 08-07S-093W
 Site: RU 21-8 Pad
 Well: RU 341-8
 Design #1 08Sep14 mab

PICEANCE VLY NAD 83

RU 08-07S-093W

RU 21-8 Pad

RU 341-8 - Slot A12

Wellbore #1

Plan: Design #1 08Sep14 mab

Standard Planning Report - Geographic

04 November, 2014

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well RU 341-8 - Slot A12
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 341-8	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 08Sep14 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 341-8 - Slot A12					
Well Position	+N/-S	0.00 usft	Northing:	1,602,679.01596 usft	Latitude:	39.46555
	+E/-W	0.00 usft	Easting:	2,350,520.92687 usft	Longitude:	-107.80073
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	9/8/2014	9.84	65.66	51,918

Design	Design #1 08Sep14 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	88.19

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	
965.49	25.36	88.19	938.14	5.81	184.02	3.00	3.00	0.00	88.19	
5,998.22	25.36	88.19	5,485.72	73.83	2,338.85	0.00	0.00	0.00	0.00	
7,689.19	0.00	0.00	7,122.00	85.45	2,706.89	1.50	-1.50	0.00	180.00	
7,789.19	0.00	0.00	7,222.00	85.45	2,706.89	0.00	0.00	0.00	0.00	Top Gas (50' Radius)
10,539.19	0.00	0.00	9,972.00	85.45	2,706.89	0.00	0.00	0.00	0.00	

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well RU 341-8 - Slot A12
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 341-8	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 08Sep14 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	1,602,679.01596	2,350,520.92687	39.46555	-107.80073	
120.00	0.00	0.00	120.00	0.00	0.00	1,602,679.01596	2,350,520.92687	39.46555	-107.80073	
Start Build 3.00°/100										
200.00	2.40	88.19	199.98	0.05	1.67	1,602,679.02640	2,350,522.60210	39.46555	-107.80073	
400.00	8.40	88.19	399.00	0.65	20.48	1,602,679.14364	2,350,541.41480	39.46555	-107.80066	
600.00	14.40	88.19	594.96	1.89	59.97	1,602,679.38989	2,350,580.92744	39.46555	-107.80052	
800.00	20.40	88.19	785.72	3.78	119.72	1,602,679.76243	2,350,640.70712	39.46556	-107.80031	
965.49	25.36	88.19	938.14	5.81	184.02	1,602,680.16331	2,350,705.03300	39.46556	-107.80008	
Hold 25.36° Inc, 88.19° Az										
1,000.00	25.36	88.19	969.33	6.28	198.80	1,602,680.25545	2,350,719.81789	39.46556	-107.80003	
1,200.00	25.36	88.19	1,150.05	8.98	284.43	1,602,680.78937	2,350,805.49150	39.46557	-107.79973	
9 5/8"										
1,400.00	25.36	88.19	1,330.77	11.68	370.06	1,602,681.32329	2,350,891.16512	39.46558	-107.79942	
1,600.00	25.36	88.19	1,511.49	14.39	455.69	1,602,681.85720	2,350,976.83874	39.46559	-107.79912	
1,800.00	25.36	88.19	1,692.21	17.09	541.33	1,602,682.39112	2,351,062.51236	39.46559	-107.79882	
2,000.00	25.36	88.19	1,872.93	19.79	626.96	1,602,682.92504	2,351,148.18597	39.46560	-107.79851	
2,200.00	25.36	88.19	2,053.65	22.50	712.59	1,602,683.45895	2,351,233.85960	39.46561	-107.79821	
2,400.00	25.36	88.19	2,234.37	25.20	798.22	1,602,683.99287	2,351,319.53322	39.46562	-107.79791	
2,600.00	25.36	88.19	2,415.09	27.90	883.86	1,602,684.52679	2,351,405.20684	39.46562	-107.79760	
2,800.00	25.36	88.19	2,595.81	30.60	969.49	1,602,685.06071	2,351,490.88046	39.46563	-107.79730	
3,000.00	25.36	88.19	2,776.53	33.31	1,055.12	1,602,685.59462	2,351,576.55407	39.46564	-107.79700	
3,200.00	25.36	88.19	2,957.25	36.01	1,140.75	1,602,686.12854	2,351,662.22769	39.46565	-107.79669	
3,400.00	25.36	88.19	3,137.97	38.71	1,226.39	1,602,686.66246	2,351,747.90131	39.46565	-107.79639	
3,600.00	25.36	88.19	3,318.69	41.42	1,312.02	1,602,687.19638	2,351,833.57494	39.46566	-107.79609	
3,800.00	25.36	88.19	3,499.41	44.12	1,397.65	1,602,687.73029	2,351,919.24856	39.46567	-107.79578	
4,000.00	25.36	88.19	3,680.13	46.82	1,483.29	1,602,688.26421	2,352,004.92217	39.46568	-107.79548	
4,200.00	25.36	88.19	3,860.85	49.53	1,568.92	1,602,688.79813	2,352,090.59579	39.46568	-107.79518	
4,400.00	25.36	88.19	4,041.57	52.23	1,654.55	1,602,689.33205	2,352,176.26941	39.46569	-107.79487	
4,600.00	25.36	88.19	4,222.29	54.93	1,740.18	1,602,689.86596	2,352,261.94303	39.46570	-107.79457	
4,800.00	25.36	88.19	4,403.01	57.64	1,825.82	1,602,690.39988	2,352,347.61665	39.46571	-107.79427	
5,000.00	25.36	88.19	4,583.73	60.34	1,911.45	1,602,690.93380	2,352,433.29027	39.46571	-107.79396	
5,200.00	25.36	88.19	4,764.45	63.04	1,997.08	1,602,691.46771	2,352,518.96389	39.46572	-107.79366	
5,400.00	25.36	88.19	4,945.17	65.75	2,082.71	1,602,692.00163	2,352,604.63751	39.46573	-107.79336	
5,600.00	25.36	88.19	5,125.89	68.45	2,168.35	1,602,692.53555	2,352,690.31113	39.46573	-107.79305	
5,800.00	25.36	88.19	5,306.61	71.15	2,253.98	1,602,693.06947	2,352,775.98474	39.46574	-107.79275	
5,998.22	25.36	88.19	5,485.72	73.83	2,338.85	1,602,693.59864	2,352,860.89740	39.46575	-107.79245	
Start Drop -1.50°/100										
6,000.00	25.34	88.19	5,487.33	73.86	2,339.61	1,602,693.60338	2,352,861.65799	39.46575	-107.79245	
6,200.00	22.34	88.19	5,670.25	76.41	2,420.39	1,602,694.10705	2,352,942.47735	39.46576	-107.79216	
6,400.00	19.34	88.19	5,857.14	78.65	2,491.49	1,602,694.55036	2,353,013.61296	39.46576	-107.79191	
6,600.00	16.34	88.19	6,047.51	80.58	2,552.72	1,602,694.93212	2,353,074.86985	39.46577	-107.79169	
6,800.00	13.34	88.19	6,240.81	82.20	2,603.91	1,602,695.25126	2,353,126.08013	39.46577	-107.79151	
7,000.00	10.34	88.19	6,436.54	83.49	2,644.91	1,602,695.50691	2,353,167.10341	39.46578	-107.79137	
7,200.00	7.34	88.19	6,634.14	84.46	2,675.62	1,602,695.69839	2,353,197.82727	39.46578	-107.79126	
7,400.00	4.34	88.19	6,833.08	85.11	2,695.95	1,602,695.82515	2,353,218.16750	39.46578	-107.79119	
7,600.00	1.34	88.19	7,032.81	85.42	2,705.85	1,602,695.88685	2,353,228.06834	39.46578	-107.79115	
7,689.19	0.00	0.00	7,122.00	85.45	2,706.89	1,602,695.89334	2,353,229.10967	39.46578	-107.79115	
Vertical										
7,789.19	0.00	0.00	7,222.00	85.45	2,706.89	1,602,695.89334	2,353,229.10967	39.46578	-107.79115	
Top Gas - Approx. Top Gas										
7,800.00	0.00	0.00	7,232.81	85.45	2,706.89	1,602,695.89334	2,353,229.10967	39.46578	-107.79115	
8,000.00	0.00	0.00	7,432.81	85.45	2,706.89	1,602,695.89334	2,353,229.10967	39.46578	-107.79115	

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well RU 341-8 - Slot A12
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 341-8	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 08Sep14 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	7,632.81	85.45	2,706.89	1,602,695.89334	2,353,229.10967	39.46578	-107.79115	
8,400.00	0.00	0.00	7,832.81	85.45	2,706.89	1,602,695.89334	2,353,229.10967	39.46578	-107.79115	
8,600.00	0.00	0.00	8,032.81	85.45	2,706.89	1,602,695.89334	2,353,229.10967	39.46578	-107.79115	
8,800.00	0.00	0.00	8,232.81	85.45	2,706.89	1,602,695.89334	2,353,229.10967	39.46578	-107.79115	
9,000.00	0.00	0.00	8,432.81	85.45	2,706.89	1,602,695.89334	2,353,229.10967	39.46578	-107.79115	
9,200.00	0.00	0.00	8,632.81	85.45	2,706.89	1,602,695.89334	2,353,229.10967	39.46578	-107.79115	
9,400.00	0.00	0.00	8,832.81	85.45	2,706.89	1,602,695.89334	2,353,229.10967	39.46578	-107.79115	
9,573.19	0.00	0.00	9,006.00	85.45	2,706.89	1,602,695.89334	2,353,229.10967	39.46578	-107.79115	
Cameo Coals										
9,600.00	0.00	0.00	9,032.81	85.45	2,706.89	1,602,695.89334	2,353,229.10967	39.46578	-107.79115	
9,800.00	0.00	0.00	9,232.81	85.45	2,706.89	1,602,695.89334	2,353,229.10967	39.46578	-107.79115	
10,000.00	0.00	0.00	9,432.81	85.45	2,706.89	1,602,695.89334	2,353,229.10967	39.46578	-107.79115	
10,200.00	0.00	0.00	9,632.81	85.45	2,706.89	1,602,695.89334	2,353,229.10967	39.46578	-107.79115	
10,268.19	0.00	0.00	9,701.00	85.45	2,706.89	1,602,695.89334	2,353,229.10967	39.46578	-107.79115	
Coal D										
10,389.19	0.00	0.00	9,822.00	85.45	2,706.89	1,602,695.89334	2,353,229.10967	39.46578	-107.79115	
Rollins SS										
10,400.00	0.00	0.00	9,832.81	85.45	2,706.89	1,602,695.89334	2,353,229.10967	39.46578	-107.79115	
10,539.19	0.00	0.00	9,972.00	85.45	2,706.89	1,602,695.89334	2,353,229.10967	39.46578	-107.79115	
TD at 10539.19 - 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	358.56	7,222.00	85.45	2,706.89	1,602,695.89334	2,353,229.10967	39.46578	-107.79115	

Casing Points						
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)		
1,200.00	1,150.05	9 5/8"	9.625	13.500		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (bearing)	
7,789.19	7,222.00	Approx. Top Gas				
9,573.19	9,006.00	Cameo Coals				
10,268.19	9,701.00	Coal D				
10,389.19	9,822.00	Rollins SS				
10,539.19	9,972.00	TD				

WPX
 Planning Report - Geographic

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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 341-8	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 08Sep14 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 3.00°/100
965.49	938.14	5.81	184.02	Hold 25.36° Inc, 88.19° Az
5,998.22	5,485.72	73.83	2,338.85	Start Drop -1.50°/100
7,689.19	7,122.00	85.45	2,706.89	Vertical
7,789.19	7,222.00	85.45	2,706.89	Top Gas
10,539.19	9,972.00	85.45	2,706.89	TD at 10539.19