

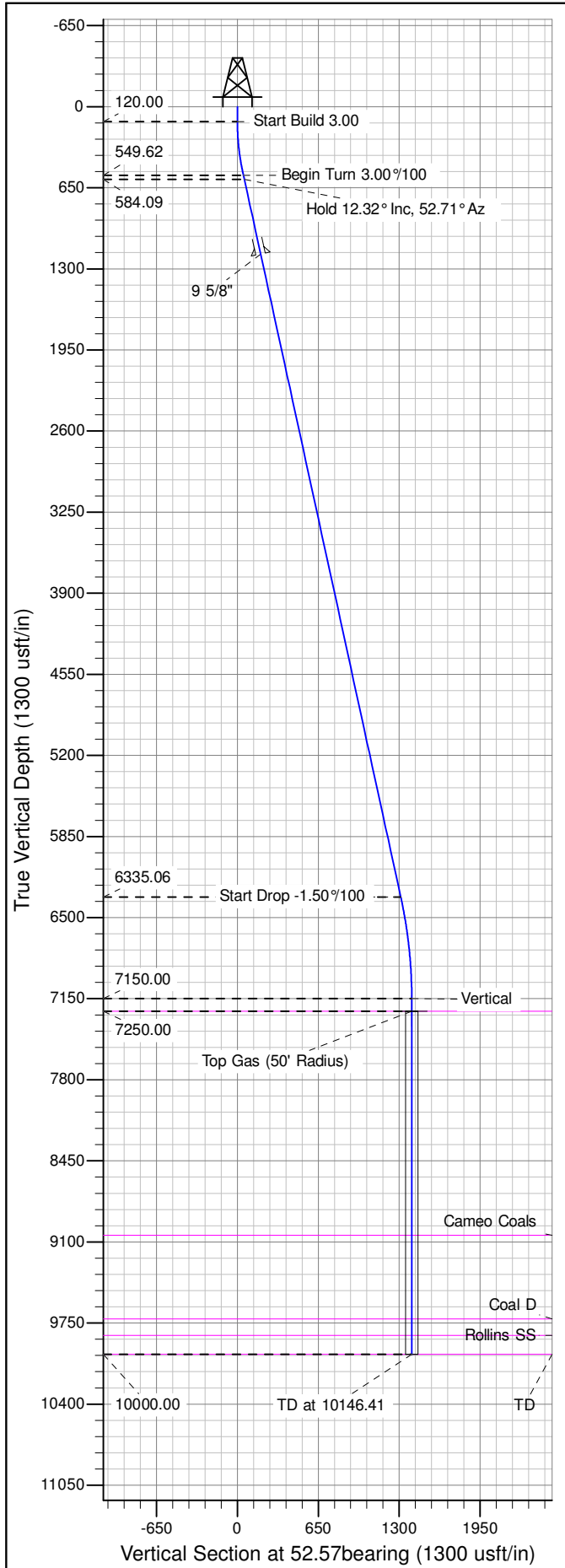


Well Name: RU 34-5
 Surface Location: RU 21-8 Pad

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

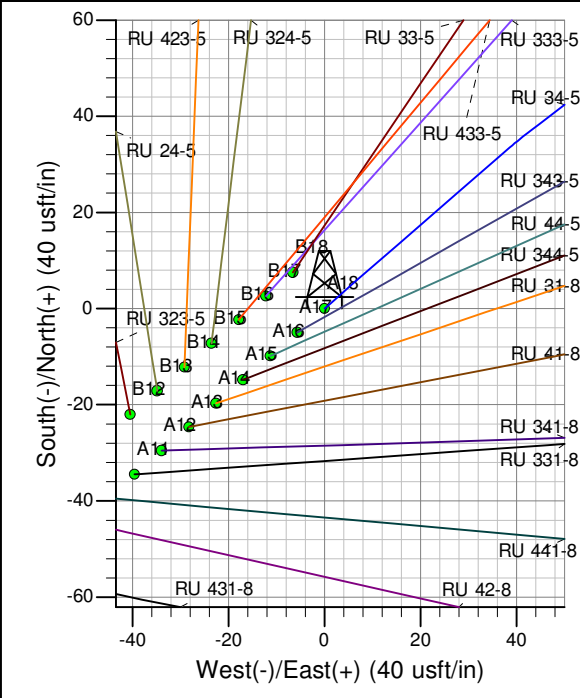
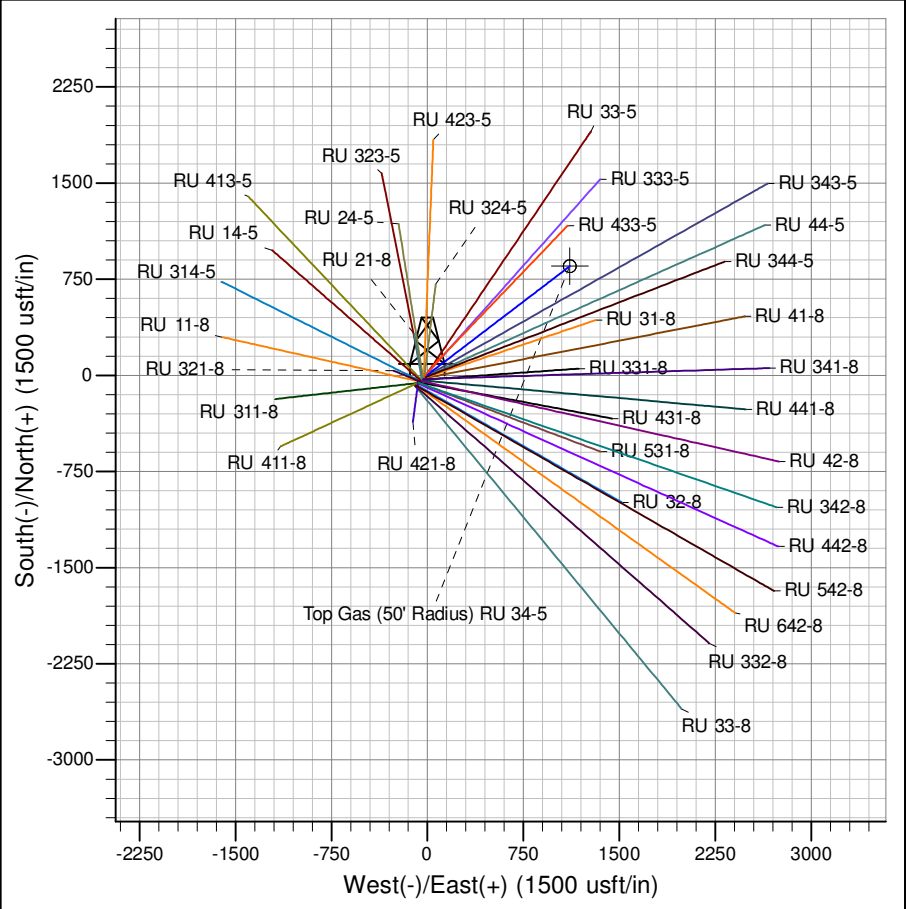
+N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.00 0.00 1602707.70 2350555.60 39.46563 -107.80061 A18

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
549.62	553.33	13.00	49.00	32.11	36.94	48.85	48.95	Begin Turn 3.00%/100
584.09	588.66	12.32	52.71	37.00	42.94	56.59	56.69	Hold 12.32° Inc, 52.71° Az
6335.06	6475.16	12.32	52.71	797.94	1042.05	1312.47	1312.57	Start Drop -1.50%/100
7150.00	7296.41	0.00	0.00	851.23	1112.01	1400.41	1400.52	Vertical
7250.00	7396.41	0.00	0.00	851.23	1112.01	1400.41	1400.52	Top Gas
10000.00	10146.41	0.00	0.00	851.23	1112.01	1400.41	1400.52	TD at 10146.41



Azimuths to True North
 Magnetic North: 9.84°
 Magnetic Field
 Strength: 51918.0snT
 Dip Angle: 65.66°
 Date: 9/9/2014
 Model: IGRF2010

Project: RU 08-07S-093W
 Site: RU 21-8 Pad
 Well: RU 34-5
 Design #1 09Sep14 mab

PICEANCE VLY NAD 83

RU 08-07S-093W

RU 21-8 Pad

RU 34-5 - Slot A18

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 34-5 - Slot A18
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 34-5	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 34-5 - Slot A18					
Well Position	+N/-S	0.00 usft	Northing:	1,602,707.70000 usft	Latitude:	39.46563
	+E/-W	0.00 usft	Easting:	2,350,555.60000 usft	Longitude:	-107.80061
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	52.57

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	
553.33	13.00	49.00	549.62	32.11	36.94	3.00	3.00	0.00	49.00	
588.66	12.32	52.71	584.09	37.00	42.94	3.00	-1.93	10.49	131.78	
6,475.16	12.32	52.71	6,335.06	797.94	1,042.05	0.00	0.00	0.00	0.00	
7,296.41	0.00	0.00	7,150.00	851.23	1,112.01	1.50	-1.50	0.00	180.00	
10,146.41	0.00	0.00	10,000.00	851.23	1,112.01	0.00	0.00	0.00	0.00	TD / PBHL RU 34-5

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well RU 34-5 - Slot A18
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 34-5	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	1,602,707.70000	2,350,555.60000	39.46563	-107.80061	
120.00	0.00	0.00	120.00	0.00	0.00	1,602,707.70000	2,350,555.60000	39.46563	-107.80061	
Start Build 3.00										
200.00	2.40	49.00	199.98	1.10	1.26	1,602,708.76671	2,350,556.89177	39.46563	-107.80061	
400.00	8.40	49.00	399.00	13.44	15.46	1,602,720.74571	2,350,571.39815	39.46567	-107.80056	
553.33	13.00	49.00	549.62	32.11	36.94	1,602,738.86806	2,350,593.34404	39.46572	-107.80048	
Begin Turn 3.00°/100										
588.66	12.32	52.71	584.09	37.00	42.94	1,602,743.60510	2,350,599.46315	39.46573	-107.80046	
Hold 12.32° Inc, 52.71° Az										
600.00	12.32	52.71	595.17	38.47	44.86	1,602,745.02157	2,350,601.42406	39.46573	-107.80046	
800.00	12.32	52.71	790.57	64.32	78.81	1,602,770.00733	2,350,636.01357	39.46580	-107.80034	
1,000.00	12.32	52.71	985.96	90.18	112.76	1,602,794.99309	2,350,670.60307	39.46588	-107.80021	
1,200.00	12.32	52.71	1,181.36	116.03	146.70	1,602,819.97885	2,350,705.19258	39.46595	-107.80009	
9 5/8"										
1,400.00	12.32	52.71	1,376.75	141.88	180.65	1,602,844.96461	2,350,739.78208	39.46602	-107.79997	
1,600.00	12.32	52.71	1,572.15	167.74	214.59	1,602,869.95037	2,350,774.37158	39.46609	-107.79985	
1,800.00	12.32	52.71	1,767.54	193.59	248.54	1,602,894.93613	2,350,808.96108	39.46616	-107.79973	
2,000.00	12.32	52.71	1,962.94	219.45	282.48	1,602,919.92188	2,350,843.55058	39.46623	-107.79961	
2,200.00	12.32	52.71	2,158.33	245.30	316.43	1,602,944.90764	2,350,878.14009	39.46630	-107.79949	
2,400.00	12.32	52.71	2,353.73	271.15	350.38	1,602,969.89340	2,350,912.72959	39.46637	-107.79937	
2,600.00	12.32	52.71	2,549.12	297.01	384.32	1,602,994.87915	2,350,947.31910	39.46644	-107.79925	
2,800.00	12.32	52.71	2,744.52	322.86	418.27	1,603,019.86491	2,350,981.90860	39.46651	-107.79913	
3,000.00	12.32	52.71	2,939.91	348.71	452.21	1,603,044.85067	2,351,016.49810	39.46659	-107.79901	
3,200.00	12.32	52.71	3,135.31	374.57	486.16	1,603,069.83643	2,351,051.08761	39.46666	-107.79889	
3,400.00	12.32	52.71	3,330.70	400.42	520.10	1,603,094.82219	2,351,085.67711	39.46673	-107.79877	
3,600.00	12.32	52.71	3,526.10	426.27	554.05	1,603,119.80794	2,351,120.26662	39.46680	-107.79865	
3,800.00	12.32	52.71	3,721.50	452.13	588.00	1,603,144.79370	2,351,154.85611	39.46687	-107.79853	
4,000.00	12.32	52.71	3,916.89	477.98	621.94	1,603,169.77946	2,351,189.44562	39.46694	-107.79841	
4,200.00	12.32	52.71	4,112.29	503.83	655.89	1,603,194.76522	2,351,224.03512	39.46701	-107.79829	
4,400.00	12.32	52.71	4,307.68	529.69	689.83	1,603,219.75098	2,351,258.62462	39.46708	-107.79817	
4,600.00	12.32	52.71	4,503.08	555.54	723.78	1,603,244.73674	2,351,293.21413	39.46715	-107.79805	
4,800.00	12.32	52.71	4,698.47	581.40	757.72	1,603,269.72250	2,351,327.80363	39.46722	-107.79793	
5,000.00	12.32	52.71	4,893.87	607.25	791.67	1,603,294.70825	2,351,362.39314	39.46730	-107.79781	
5,200.00	12.32	52.71	5,089.26	633.10	825.62	1,603,319.69401	2,351,396.98264	39.46737	-107.79769	
5,400.00	12.32	52.71	5,284.66	658.96	859.56	1,603,344.67977	2,351,431.57214	39.46744	-107.79757	
5,600.00	12.32	52.71	5,480.05	684.81	893.51	1,603,369.66553	2,351,466.16165	39.46751	-107.79745	
5,800.00	12.32	52.71	5,675.45	710.66	927.45	1,603,394.65128	2,351,500.75115	39.46758	-107.79733	
6,000.00	12.32	52.71	5,870.84	736.52	961.40	1,603,419.63704	2,351,535.34066	39.46765	-107.79721	
6,200.00	12.32	52.71	6,066.24	762.37	995.34	1,603,444.62280	2,351,569.93015	39.46772	-107.79709	
6,400.00	12.32	52.71	6,261.63	788.22	1,029.29	1,603,469.60856	2,351,604.51966	39.46779	-107.79697	
6,475.16	12.32	52.71	6,335.06	797.94	1,042.05	1,603,478.99855	2,351,617.51888	39.46782	-107.79692	
Start Drop -1.50°/100										
6,600.00	10.45	52.71	6,457.44	812.87	1,061.65	1,603,493.42461	2,351,637.48986	39.46786	-107.79685	
6,800.00	7.45	52.71	6,654.99	831.71	1,086.39	1,603,511.63416	2,351,662.69859	39.46791	-107.79677	
7,000.00	4.45	52.71	6,853.89	844.26	1,102.87	1,603,523.76484	2,351,679.49193	39.46795	-107.79671	
7,200.00	1.45	52.71	7,053.60	850.49	1,111.04	1,603,529.78342	2,351,687.82385	39.46796	-107.79668	
7,296.41	0.00	0.00	7,150.00	851.23	1,112.01	1,603,530.49584	2,351,688.81011	39.46797	-107.79668	
Vertical										
7,396.41	0.00	0.00	7,250.00	851.23	1,112.01	1,603,530.49584	2,351,688.81011	39.46797	-107.79668	
Top Gas - Approx. Top Gas										
7,400.00	0.00	0.00	7,253.59	851.23	1,112.01	1,603,530.49584	2,351,688.81011	39.46797	-107.79668	
7,600.00	0.00	0.00	7,453.59	851.23	1,112.01	1,603,530.49584	2,351,688.81011	39.46797	-107.79668	

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well RU 34-5 - Slot A18
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 34-5	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	
7,800.00	0.00	0.00	7,653.59	851.23	1,112.01	1,603,530.49584	2,351,688.81011	39.46797	-107.79668	
8,000.00	0.00	0.00	7,853.59	851.23	1,112.01	1,603,530.49584	2,351,688.81011	39.46797	-107.79668	
8,200.00	0.00	0.00	8,053.59	851.23	1,112.01	1,603,530.49584	2,351,688.81011	39.46797	-107.79668	
8,400.00	0.00	0.00	8,253.59	851.23	1,112.01	1,603,530.49584	2,351,688.81011	39.46797	-107.79668	
8,600.00	0.00	0.00	8,453.59	851.23	1,112.01	1,603,530.49584	2,351,688.81011	39.46797	-107.79668	
8,800.00	0.00	0.00	8,653.59	851.23	1,112.01	1,603,530.49584	2,351,688.81011	39.46797	-107.79668	
9,000.00	0.00	0.00	8,853.59	851.23	1,112.01	1,603,530.49584	2,351,688.81011	39.46797	-107.79668	
9,193.41	0.00	0.00	9,047.00	851.23	1,112.01	1,603,530.49584	2,351,688.81011	39.46797	-107.79668	
Cameo Coals										
9,200.00	0.00	0.00	9,053.59	851.23	1,112.01	1,603,530.49584	2,351,688.81011	39.46797	-107.79668	
9,400.00	0.00	0.00	9,253.59	851.23	1,112.01	1,603,530.49584	2,351,688.81011	39.46797	-107.79668	
9,600.00	0.00	0.00	9,453.59	851.23	1,112.01	1,603,530.49584	2,351,688.81011	39.46797	-107.79668	
9,800.00	0.00	0.00	9,653.59	851.23	1,112.01	1,603,530.49584	2,351,688.81011	39.46797	-107.79668	
9,864.41	0.00	0.00	9,718.00	851.23	1,112.01	1,603,530.49584	2,351,688.81011	39.46797	-107.79668	
Coal D										
9,996.41	0.00	0.00	9,850.00	851.23	1,112.01	1,603,530.49584	2,351,688.81011	39.46797	-107.79668	
Rollins SS										
10,000.00	0.00	0.00	9,853.59	851.23	1,112.01	1,603,530.49584	2,351,688.81011	39.46797	-107.79668	
10,146.41	0.00	0.00	10,000.00	851.23	1,112.01	1,603,530.49584	2,351,688.81011	39.46797	-107.79668	
TD at 10146.41										

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 - plan hits target center - Circle (radius 50.00)	0.00	358.55	7,250.00	851.23	1,112.01	1,603,530.49584	2,351,688.81011	39.46797	-107.79668	
TD / PBHL RU 34-5 - plan hits target center - Point	0.00	0.00	10,000.00	851.23	1,112.01	1,603,530.49584	2,351,688.81011	39.46797	-107.79668	

Casing Points						
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)		
1,200.00	1,181.36	9 5/8"	9.625	13.500		

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well RU 34-5 - Slot A18
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 34-5	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)	
7,396.41	7,250.00	Approx. Top Gas				
9,193.41	9,047.00	Cameo Coals				
9,864.41	9,718.00	Coal D				
9,996.41	9,850.00	Rollins SS				
10,146.41	10,000.00	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 3.00	
553.33	549.62	32.11	36.94	Begin Turn 3.00°/100	
588.66	584.09	37.00	42.94	Hold 12.32° Inc, 52.71° Az	
6,475.16	6,335.06	797.94	1,042.05	Start Drop -1.50°/100	
7,296.41	7,150.00	851.23	1,112.01	Vertical	
7,396.41	7,250.00	851.23	1,112.01	Top Gas	
10,146.41	10,000.00	851.23	1,112.01	TD at 10146.41	