

## REFERENCE INFORMATION

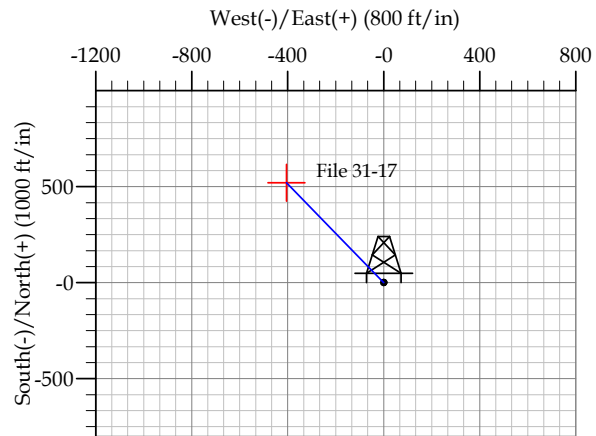
Co-ordinate (N/E) Reference: Well File 31-17, True North  
Vertical (TVD) Reference: WELL @ 4896.0ft (Original Well Elev)  
Section (VS) Reference: Slot - (0.0N, 0.0E)  
Measured Depth Reference: WELL @ 4896.0ft (Original Well Elev)  
Calculation Method:

## WELL DETAILS: File 31-17

+N/-S	+E/-W	Northing	Ground Level:	4883.0	Longitude	Slot
0.0	0.0	1295299.49	Easting	3133125.94	40° 8' 34.836 N105° 1' 25.716 W	

## SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	600.0	0.00	0.00	600.0	0.0	0.0	0.00	0.00	0.0	
3	911.7	6.23	322.11	911.1	13.4	-10.4	2.00	322.11	16.9	
4	6677.6	6.23	322.11	6642.9	507.6	-395.0	0.00	0.00	643.1	
5	6989.3	0.00	0.00	6954.0	520.9	-405.4	2.00	180.00	660.1	
6	8039.3	0.00	0.00	8004.0	520.9	-405.4	0.00	0.00	660.1	File 31-17



## FORMATION TOP DETAILS

TVDPath	MDPath	Formation
4136.0	4155.8	Sussex
5106.0	5131.6	Shannon
7146.0	7181.3	Niobrara
7436.0	7471.3	Codell
7854.0	7889.3	J Sand
7914.0	7949.3	A Marker

## CASING DETAILS

TVD	MD	Name	Size
550.0	550.0	Surface	8.625
8004.0	8039.3	Production	4.500

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## Planning Report - Geographic

<b>Database:</b>	EDM	<b>Local Co-ordinate Reference:</b>	Well File 31-17
<b>Company:</b>	DJ/Paradox/WTX	<b>TVD Reference:</b>	WELL @ 4896.0ft (Original Well Elev)
<b>Project:</b>	Wattenberg	<b>MD Reference:</b>	WELL @ 4896.0ft (Original Well Elev)
<b>Site:</b>	New Drills	<b>North Reference:</b>	True
<b>Well:</b>	File 31-17	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	File 31-17		

<b>Project</b>	Wattenberg,		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		

Site	New Drills				
Site Position:		Northing:	1,278,589.08ft	Latitude:	40° 5' 49.848 N
From:	Lat/Long	Easting:	3,130,247.44ft	Longitude:	105° 2' 3.912 W
Position Uncertainty:	ft	Slot Radius:	in	Grid Convergence:	0.30 °

Well	File 31-17					
Well Position	+N-S	16,694.8 ft	Northing:	1,295,299.49 ft	Latitude:	40° 8' 34.836 N
	+E-W	2,968.2 ft	Easting:	3,133,125.94 ft	Longitude:	105° 1' 25.716 W
Position Uncertainty		ft	Wellhead Elevation:	ft	Ground Level:	4,883.0ft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF200510	12/31/2009	9.14	66.86	53,140

<b>Design</b>	File 31-17				
<b>Audit Notes:</b>					
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE		<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.0	0.0	0.0	322.11	

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
600.0	0.00	0.00	600.0	0.0	0.0	0.00	0.00	0.00	0.00	
911.7	6.23	322.11	911.1	13.4	-10.4	2.00	2.00	0.00	322.11	
6,677.6	6.23	322.11	6,642.9	507.6	-395.0	0.00	0.00	0.00	0.00	
6,989.3	0.00	0.00	6,954.0	520.9	-405.4	2.00	-2.00	0.00	180.00	
8,039.3	0.00	0.00	8,004.0	520.9	-405.4	0.00	0.00	0.00	0.00	File 31-17

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Planning Report - Geographic

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<b>Site:</b>	New Drills	<b>North Reference:</b>	True
<b>Well:</b>	File 31-17	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	File 31-17		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude	
0.0	0.00	0.00	0.0	0.0	0.0	1,295,299.49	3,133,125.94	40° 8' 34.836 N	105° 1' 25.716 W	
550.0	0.00	0.00	550.0	0.0	0.0	1,295,299.49	3,133,125.94	40° 8' 34.836 N	105° 1' 25.716 W	
Surface										
600.0	0.00	0.00	600.0	0.0	0.0	1,295,299.49	3,133,125.94	40° 8' 34.836 N	105° 1' 25.716 W	
911.7	6.23	322.11	911.1	13.4	-10.4	1,295,312.81	3,133,115.47	40° 8' 34.968 N	105° 1' 25.850 W	
4,155.8	6.23	322.11	4,136.0	291.4	-226.8	1,295,589.69	3,132,897.62	40° 8' 37.716 N	105° 1' 28.636 W	
Sussex										
5,131.6	6.23	322.11	5,106.0	375.1	-291.8	1,295,672.97	3,132,832.09	40° 8' 38.542 N	105° 1' 29.474 W	
Shannon										
6,677.6	6.23	322.11	6,642.9	507.6	-395.0	1,295,804.92	3,132,728.27	40° 8' 39.852 N	105° 1' 30.802 W	
6,989.3	0.00	0.00	6,954.0	520.9	-405.4	1,295,818.24	3,132,717.79	40° 8' 39.984 N	105° 1' 30.936 W	
7,181.3	0.00	0.00	7,146.0	520.9	-405.4	1,295,818.24	3,132,717.79	40° 8' 39.984 N	105° 1' 30.936 W	
Niobrara										
7,471.3	0.00	0.00	7,436.0	520.9	-405.4	1,295,818.24	3,132,717.79	40° 8' 39.984 N	105° 1' 30.936 W	
Codell										
7,889.3	0.00	0.00	7,854.0	520.9	-405.4	1,295,818.24	3,132,717.79	40° 8' 39.984 N	105° 1' 30.936 W	
J Sand										
7,949.3	0.00	0.00	7,914.0	520.9	-405.4	1,295,818.24	3,132,717.79	40° 8' 39.984 N	105° 1' 30.936 W	
A Marker										
8,039.3	0.00	0.00	8,004.0	520.9	-405.4	1,295,818.24	3,132,717.79	40° 8' 39.984 N	105° 1' 30.936 W	
Production - File 31-17										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude	
- hit/miss target										
- Shape										
File 31-17	0.00	0.00	8,004.0	520.9	-405.4	1,295,818.24	3,132,717.79	40° 8' 39.984 N	105° 1' 30.936 W	
- plan hits target										
- Point										

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
550.0	550.0	Surface	8.625	12.250	
8,039.3	8,004.0	Production	4.500	7.785	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,155.8	4,136.0	Sussex		0.00		
5,131.6	5,106.0	Shannon		0.00		
7,181.3	7,146.0	Niobrara		0.00		
7,471.3	7,436.0	Codell		0.00		
7,889.3	7,854.0	J Sand		0.00		
7,949.3	7,914.0	A Marker		0.00		

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<b>Design:</b>	File 31-17		