

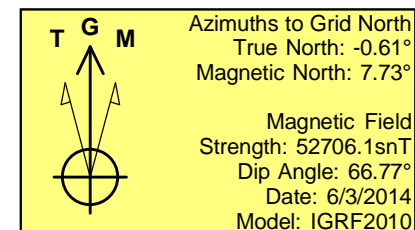
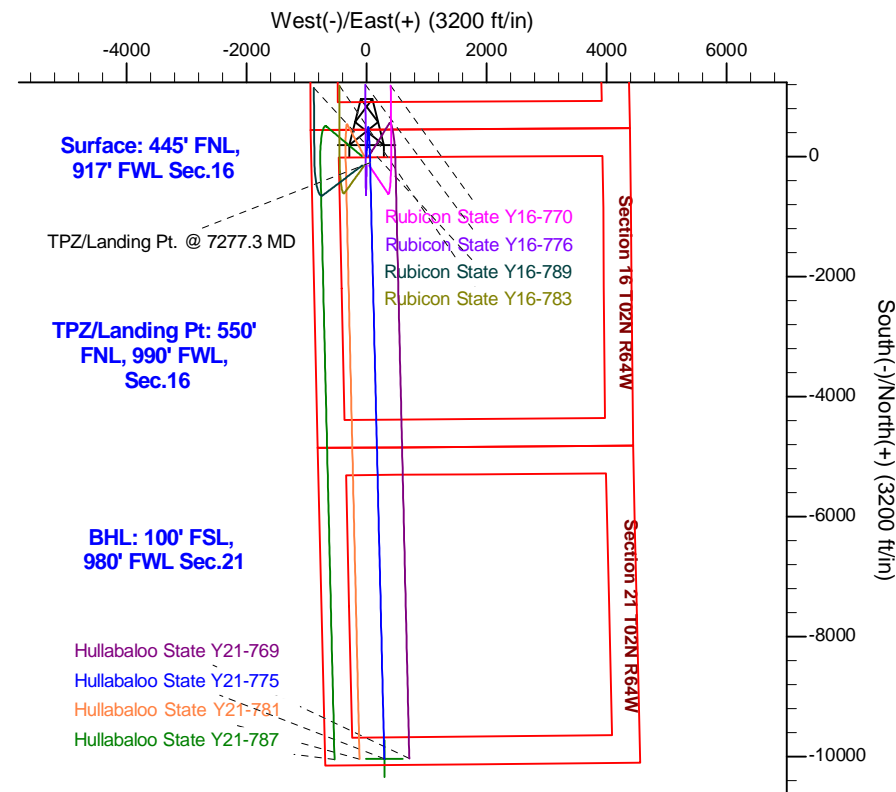
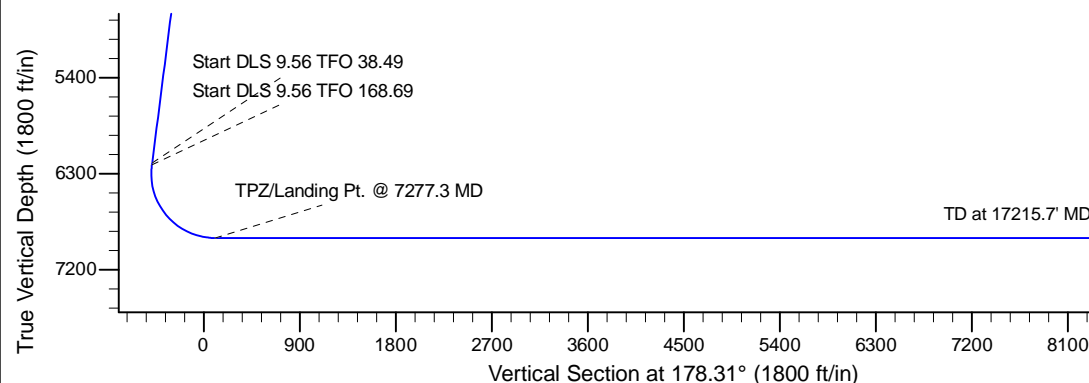
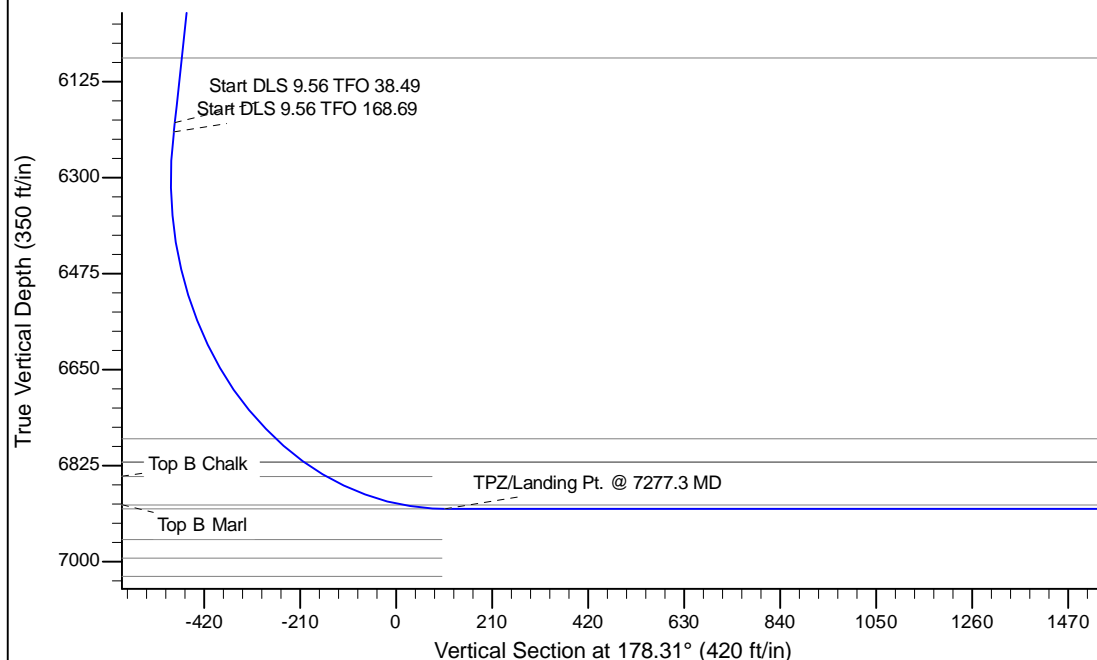
Project: Mustang  
 Site: Y Section 16-T2N-R64W Weld County, CO  
 Well: Hullabaloo State Y21-775  
 Wellbore: Original Drilling  
 Design: APD - Rev 0

# Northern Region - DJ Basin

Geodetic System: US State Plane 1983  
 Datum: North American Datum 1983  
 Ellipsoid: GRS 1980  
 Zone: Colorado Northern Zone  
 System Datum: Mean Sea Level

## 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	2200.0	0.00	0.00	2200.0	0.0	0.0	0.00	0.00	0.0	
3	2562.5	7.25	3.00	2561.5	22.9	1.2	2.00	3.00	-22.8	
4	6230.3	7.25	3.00	6200.0	485.1	25.4	0.00	0.00	-484.1	
5	6247.4	8.59	9.82	6216.9	487.4	25.7	9.56	38.49	-486.5	
6	7277.3	90.00	178.63	6904.0	-105.0	60.0	9.56	168.69	106.7	
7	17215.7	90.00	178.64	6904.0	-10040.6	296.3	0.00	90.00	10045.0	Hullabaloo State Y21-775 BHL 100'FSL, 980'FWL



## WELL DETAILS: Hullabaloo State Y21-775

	Ground Level: 4894.0		
Northing	Easting	Latitude	Longitude
0.0	1296891.4192672	3262018.0766973	40.1445600 -104.5627300

Plan: APD - Rev 0 (Hullabaloo State Y21-775/Original Drilling)

Created By: Shailey Jewell Date: 11:42, April 13 2017

**OK to submit with 2A as per Noble Drilling**  
**4/13/2017 11:45**

# **Northern Region - DJ Basin**

**Mustang**

**Y Section 16**

**Hullabaloo State Y21-775**

**Original Drilling**

**APD - Rev 0**

## **Anticollision Summary Report**

**13 April, 2017**

## Anticollision Summary Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Hullabaloo State Y21-775
<b>Project:</b>	Mustang	<b>TVD Reference:</b>	WELL @ 4924.0ft (Original Well Elev)
<b>Reference Site:</b>	Y Section 16	<b>MD Reference:</b>	WELL @ 4924.0ft (Original Well Elev)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Hullabaloo State Y21-775	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDM Produccction
<b>Reference Design:</b>	APD - Rev 0	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	APD - Rev 0		
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method:</b>	MD Interval 100.0ft	<b>Error Model:</b>	ISCWSA
<b>Depth Range:</b>	Unlimited	<b>Scan Method:</b>	Closest Approach 3D
<b>Results Limited by:</b>	Maximum center-center distance of 1,740.1 ft	<b>Error Surface:</b>	Pedal Curve
<b>Warning Levels Evaluated at:</b>	2.00 Sigma	<b>Casing Method:</b>	Not applied

<b>Survey Tool Program</b>	<b>Date</b>	4/13/2017		
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	17,215.7	APD - Rev 0 (Original Drilling)	2_MWD+IFR1+MS	A008Mb: IFR dec & multi-station analysis

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Y Section 16						
Hullabaloo State Y21-716 - Original Drilling - APD - Rev						Out of range
Hullabaloo State Y21-726 - Wellbore #1 - Design #1						Out of range
Hullabaloo State Y21-736 - Wellbore #1 - Design #1						Out of range
Hullabaloo State Y21-746 - Wellbore #1 - Design #1						Out of range
Hullabaloo State Y21-756 - Original Drilling - APD - Rev	17,216.1	17,132.4	1,245.1	1,070.6	7.133	CC, ES, SF
Hullabaloo State Y21-763 - Original Drilling - APD - Rev 0	17,216.1	17,533.3	851.0	674.6	4.826	CC, ES, SF
Hullabaloo State Y21-769 - Wellbore #1 - Design #1	1,900.0	1,899.0	36.3	23.2	2.763	CC, ES
Hullabaloo State Y21-769 - Wellbore #1 - Design #1	17,216.1	17,339.4	422.5	248.0	2.421	SF
Hullabaloo State Y21-781 - Original Drilling - APD - Rev	2,100.0	2,100.0	36.3	21.8	2.491	CC, ES
Hullabaloo State Y21-781 - Original Drilling - APD - Rev	17,216.1	17,328.6	419.8	244.9	2.401	SF
Hullabaloo State Y21-787 - Original Drilling - APD - Rev	1,907.7	1,961.7	75.6	62.2	5.638	CC
Hullabaloo State Y21-787 - Original Drilling - APD - Rev	2,000.0	2,052.9	76.0	61.9	5.403	ES
Hullabaloo State Y21-787 - Original Drilling - APD - Rev	17,216.1	17,336.1	830.6	559.6	3.065	SF
Rubicon State Y16-718 - Original Drilling - APD - Rev 0						Out of range
Rubicon State Y16-725 - Original Drilling - APD - Rev 0						Out of range
Rubicon State Y16-731 - Original Drilling - APD - Rev 0						Out of range
Rubicon State Y16-738 - Original Drilling - APD - Rev 0						Out of range
Rubicon State Y16-744 - Original Drilling - APD - Rev 0						Out of range
Rubicon State Y16-751 - Original Drilling - APD - Rev 0	7,400.0	7,138.4	1,625.4	1,576.6	33.363	SF
Rubicon State Y16-751 - Original Drilling - APD - Rev 0	7,534.0	7,022.6	1,624.0	1,575.3	33.372	CC, ES
Rubicon State Y16-757 - Original Drilling - APD - Rev 0	7,532.2	7,216.0	1,207.8	1,158.3	24.401	CC, ES, SF
Rubicon State Y16-763 - Original Drilling - APD - Rev 0	7,300.0	7,354.7	781.2	731.4	15.683	SF
Rubicon State Y16-763 - Original Drilling - APD - Rev 0	7,311.0	7,345.0	781.2	731.4	15.683	CC, ES
Rubicon State Y16-770 - Wellbore #1 - Design #1	2,100.0	2,106.0	154.4	139.8	10.567	CC, ES
Rubicon State Y16-770 - Wellbore #1 - Design #1	7,400.0	7,089.8	347.5	298.7	7.122	SF
Rubicon State Y16-776 - Wellbore #1 - Design #1	7,495.4	7,061.7	77.5	28.8	1.590	CC, ES, SF
Rubicon State Y16-783 - Wellbore #1 - Design #1	2,100.0	2,106.0	153.7	139.1	10.520	CC, ES
Rubicon State Y16-783 - Wellbore #1 - Design #1	2,300.0	2,295.9	161.9	146.0	10.161	SF
Rubicon State Y16-789 - Wellbore #1 - Design #1	2,000.0	2,005.0	166.1	152.2	11.958	CC, ES
Rubicon State Y16-789 - Wellbore #1 - Design #1	2,200.0	2,194.7	172.3	157.1	11.317	SF
State 01 - Original Drilling - Original Drilling - As Drilled						Out of range
State 21 (PA) - Original Drilling - Original Drilling - As Drilled	10,708.0	6,907.0	189.1	12.0	1.068	Level 2, CC, ES, SF
State Y16-05D - Wellbore #1 - Wellbore #1 - As Drilled	8,661.7	6,891.4	274.3	222.6	5.307	CC, ES, SF

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

## Anticollision Summary Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Hullabaloo State Y21-775
<b>Project:</b>	Mustang	<b>TVD Reference:</b>	WELL @ 4924.0ft (Original Well Elev)
<b>Reference Site:</b>	Y Section 16	<b>MD Reference:</b>	WELL @ 4924.0ft (Original Well Elev)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Hullabaloo State Y21-775	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDM Producction
<b>Reference Design:</b>	APD - Rev 0	<b>Offset TVD Reference:</b>	Offset Datum

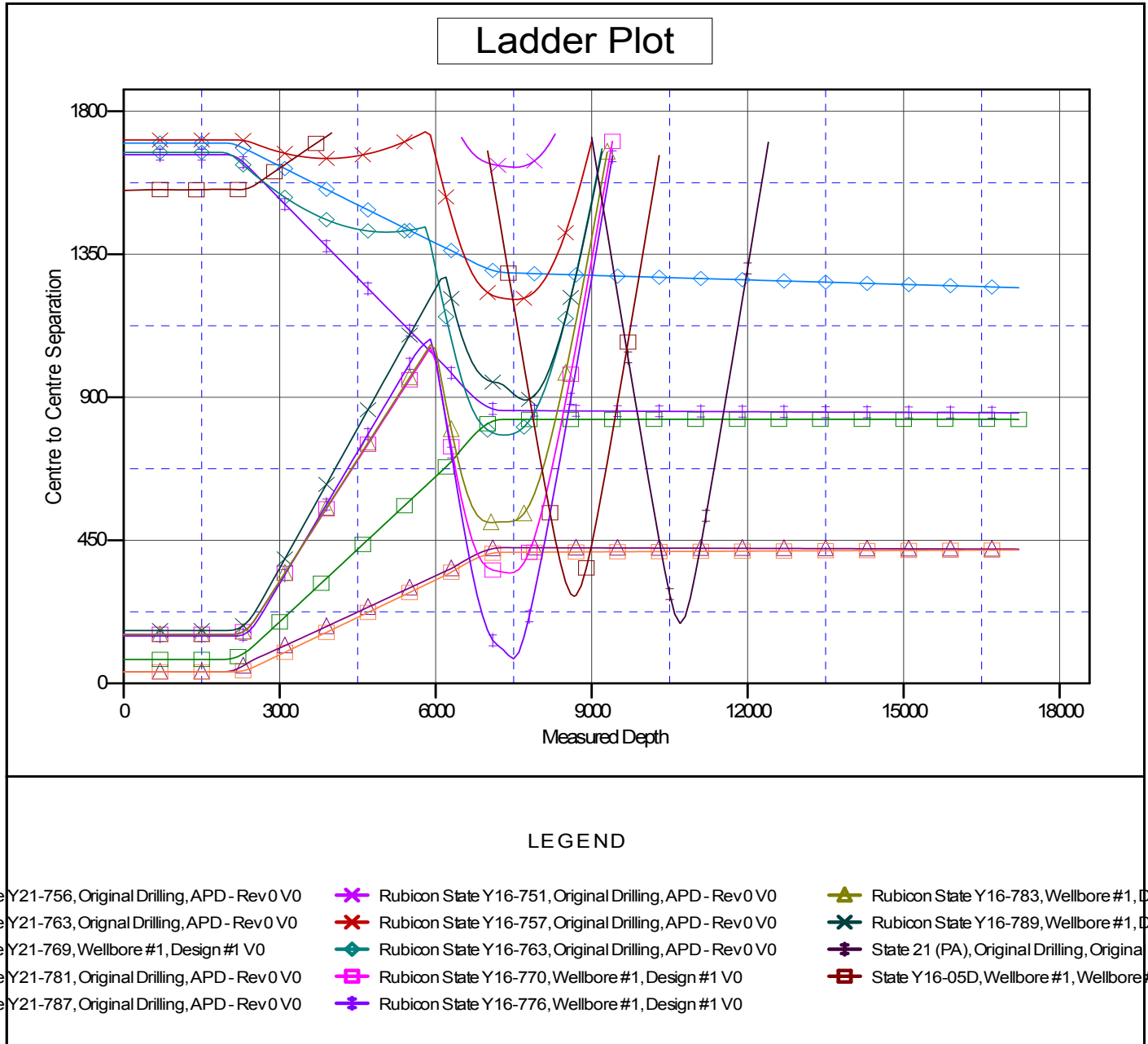
Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Y Section 21						
Gerkin 33-21 - Wellbore #1 - Wellbore #1 - As Drilled						Out of range
Mcintosh 42-21 (SI) - Wellbore #1 - Wellbore #1 - As Dril						Out of range
Mcintosh 44-21 - Wellbore #1 - Wellbore #1 - As Drilled						Out of range
Mcintosh USX Y21-01 - Wellbore #1 - Wellbore #1 - As D						Out of range

## Anticollision Summary Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Hullabaloo State Y21-775
<b>Project:</b>	Mustang	<b>TVD Reference:</b>	WELL @ 4924.0ft (Original Well Elev)
<b>Reference Site:</b>	Y Section 16	<b>MD Reference:</b>	WELL @ 4924.0ft (Original Well Elev)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Hullabaloo State Y21-775	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDM Production
<b>Reference Design:</b>	APD - Rev 0	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4924.0ft (Original Well Elev)  
Offset Depths are relative to Offset Datum  
Central Meridian is -105.5000000

Coordinates are relative to: Hullabaloo State Y21-775  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: 0.61°



## Anticollision Summary Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Hullabaloo State Y21-775
<b>Project:</b>	Mustang	<b>TVD Reference:</b>	WELL @ 4924.0ft (Original Well Elev)
<b>Reference Site:</b>	Y Section 16	<b>MD Reference:</b>	WELL @ 4924.0ft (Original Well Elev)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Hullabaloo State Y21-775	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDM Production
<b>Reference Design:</b>	APD - Rev 0	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4924.0ft (Original Well Elev)  
 Offset Depths are relative to Offset Datum  
 Central Meridian is -105.5000000

Coordinates are relative to: Hullabaloo State Y21-775  
 Coordinate System is US State Plane 1983, Colorado Northern Zone  
 Grid Convergence at Surface is: 0.61°

