

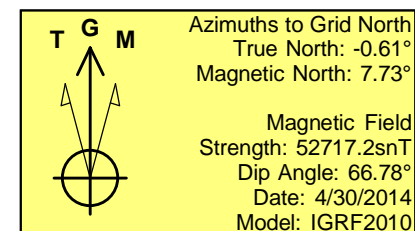
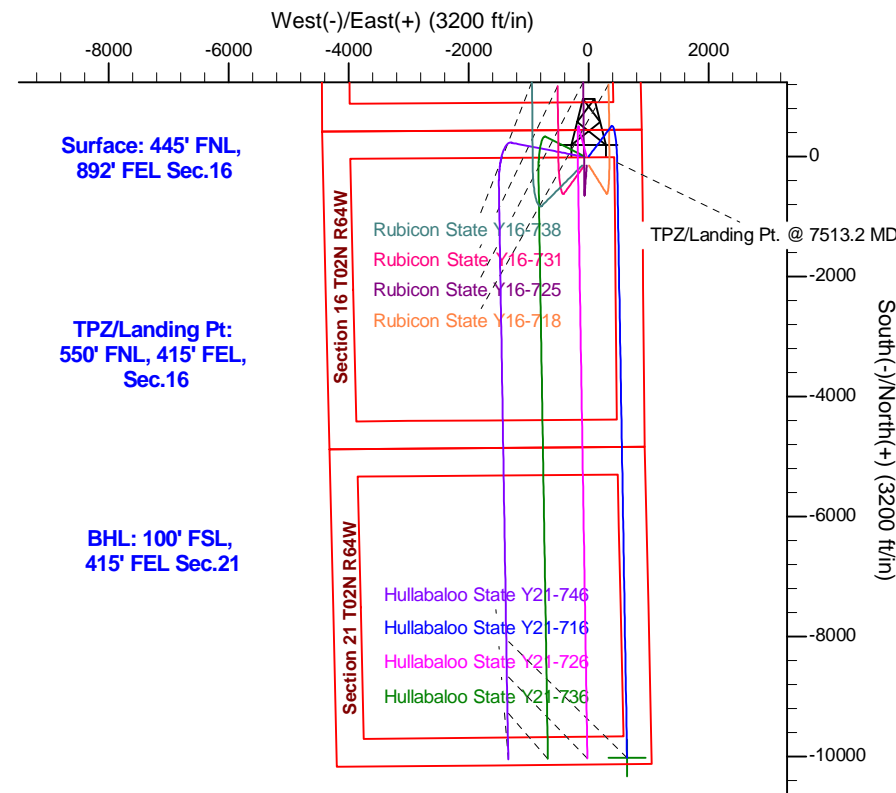
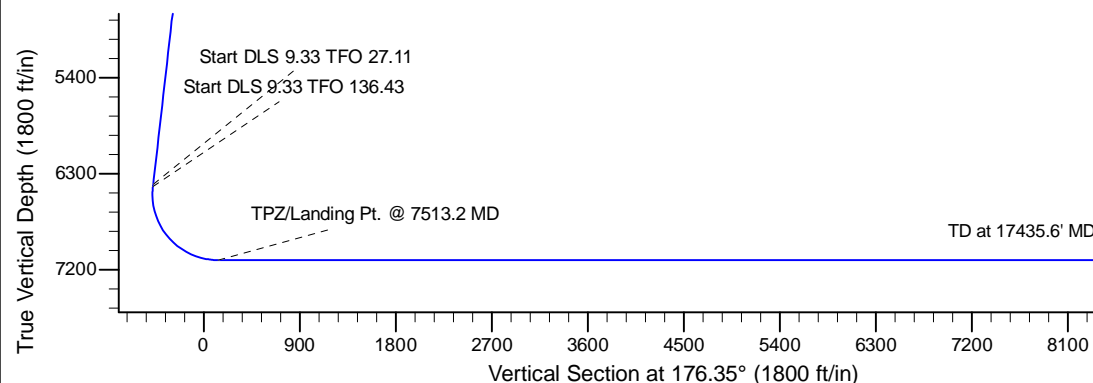
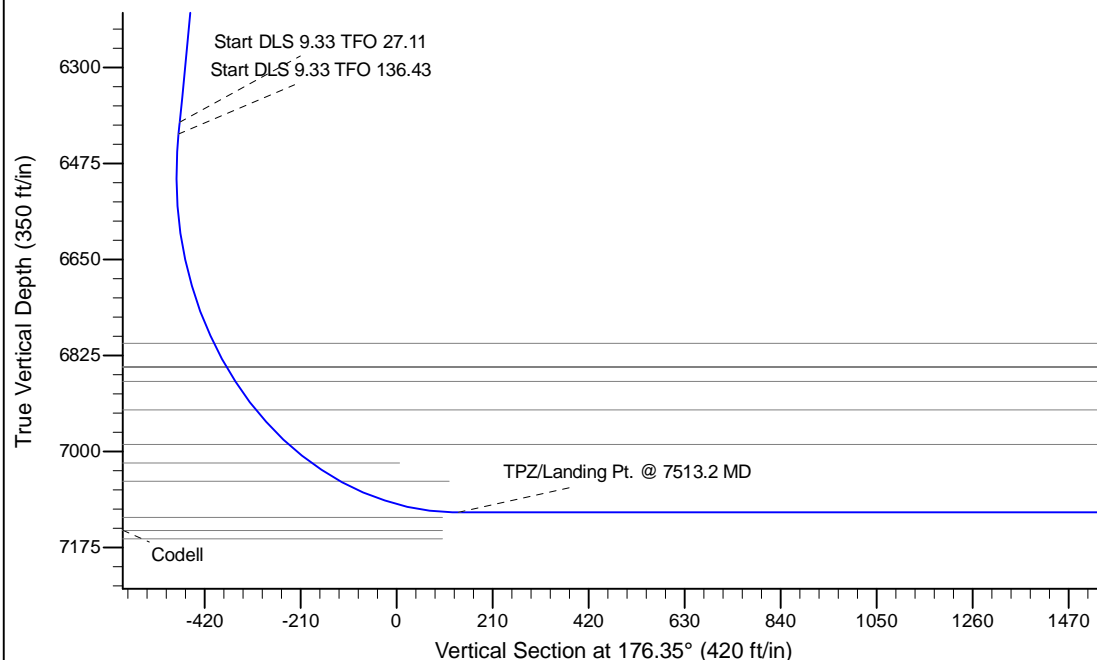
Project: Mustang  
 Site: Y Section 16-T2N-R64W Weld County, CO  
 Well: Hullabaloo State Y21-716  
 Wellbore: Original Drilling  
 Design: APD - Rev 0

# 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	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	2000.0	0.00	0.00	2000.0	0.0	0.0	0.00	0.00	0.0	
3	2425.0	8.50	37.00	2423.4	25.1	18.9	2.00	37.00	-23.9	
4	6445.7	8.50	37.00	6400.0	499.8	376.6	0.00	0.00	-474.8	
5	6467.5	10.35	42.16	6421.5	502.5	378.9	9.33	27.11	-477.4	
6	7513.2	90.00	179.05	7111.0	-105.0	475.0	9.33	136.43	135.0	
7	17435.6	90.00	179.06	7111.0	-10026.0	638.8	0.00	90.00	10046.3	Hullabaloo State Y21-716 BHL 100'FSL, 415'FEL



## WELL DETAILS: Hullabaloo State Y21-716

Ground Level: 4946.0			
Northing	Easting	Latitude	Longitude
0.0 1296914.1801332	3265526.5088556	40.1445200	-104.5501800

Plan: APD - Rev 0 (Hullabaloo State Y21-716/Original Drilling)

Created By: Shailey Jewell

Date: 9:57, April 11 2017

**OK to submit with 2A as per Noble Drilling**  
**4/11/2017 10:05**

# **Northern Region - DJ Basin**

**Mustang**

**Y Section 16**

**Hullabaloo State Y21-716**

**Original Drilling**

**APD - Rev 0**

## **Anticollision Summary Report**

**10 April, 2017**

# Anticollision Summary Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Hullabaloo State Y21-716
<b>Project:</b>	Mustang	<b>TVD Reference:</b>	WELL @ 4976.0ft (Original Well Elev)
<b>Reference Site:</b>	Y Section 16	<b>MD Reference:</b>	WELL @ 4976.0ft (Original Well Elev)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Hullabaloo State Y21-716	<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>	4/10/2017		
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	17,435.6	APD - Rev 0 (Original Drilling)		

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Y Section 04						
HSR-Guttersen 01-04 - Original Drilling - Original Drilling						Out of range
HSR-Guttersen 02-04 - Original Drilling - Original Drilling						Out of range
HSR-Guttersen 03-04 - Original Drilling - Original Drilling						Out of range
HSR-Guttersen 05-04 - Original Drilling - Original Drilling						Out of range
HSR-Guttersen 07-04 - Original Drilling - Original Drilling						Out of range
Melvin Y04-04 - Original Drilling - Original Drilling - As Dr						Out of range
Y Section 09						
Perkins 34-09 - Wellbore #1 - Wellbore #1 - As Drilled	4,056.4	4,007.4	1,472.6	1,458.8	106.140	CC
Perkins 34-09 - Wellbore #1 - Wellbore #1 - As Drilled	4,200.0	4,149.0	1,472.8	1,458.5	102.512	ES
Perkins 34-09 - Wellbore #1 - Wellbore #1 - As Drilled	7,000.0	7,045.7	1,616.7	1,592.1	65.584	SF
Perkins USX Y09-23 - Original Drilling - Original Drilling -	6,512.5	6,472.0	1,388.9	1,366.5	61.920	CC, ES
Perkins USX Y09-23 - Original Drilling - Original Drilling -	6,700.0	6,652.9	1,412.3	1,389.3	61.233	SF
Y Section 16						
Hullabaloo State Y21-726 - Wellbore #1 - Design #1	2,000.0	1,999.0	36.3	29.4	5.242	CC, ES
Hullabaloo State Y21-726 - Wellbore #1 - Design #1	2,100.0	2,098.7	37.8	30.5	5.190	SF
Hullabaloo State Y21-736 - Wellbore #1 - Design #1	2,000.0	1,999.0	72.7	65.8	10.484	CC, ES
Hullabaloo State Y21-736 - Wellbore #1 - Design #1	2,100.0	2,096.8	75.2	68.0	10.340	SF
Hullabaloo State Y21-746 - Wellbore #1 - Design #1	1,900.0	1,898.0	111.8	107.7	27.141	CC, ES
Hullabaloo State Y21-746 - Wellbore #1 - Design #1	2,000.0	1,994.4	113.4	109.1	26.227	SF
Hullabaloo State Y21-756 - Wellbore #1 - Design #1						Out of range
Hullabaloo State Y21-763 - Wellbore #1 - Design #1						Out of range
Hullabaloo State Y21-769 - Wellbore #1 - Design #1						Out of range
Hullabaloo State Y21-775 - Wellbore #1 - Design #1						Out of range
Hullabaloo State Y21-781 - Wellbore #1 - Design #1						Out of range
Hullabaloo State Y21-787 - Original Drilling - Prelim - Re						Out of range
Rubicon State Y16-718 - Wellbore #1 - Design #1	7,342.0	7,568.1	127.0	110.8	7.869	CC, ES, SF
Rubicon State Y16-725 - Wellbore #1 - Design #1	2,000.0	2,000.0	156.6	149.7	22.581	CC, ES
Rubicon State Y16-725 - Wellbore #1 - Design #1	7,000.0	7,707.7	525.9	500.9	21.019	SF
Rubicon State Y16-731 - Wellbore #1 - Design #1	2,000.0	2,001.0	166.1	159.2	23.933	CC, ES
Rubicon State Y16-731 - Wellbore #1 - Design #1	2,200.0	2,201.2	172.9	165.3	22.584	SF
Rubicon State Y16-738 - Wellbore #1 - Design #1	2,000.0	1,998.0	184.9	178.0	26.686	CC, ES
Rubicon State Y16-738 - Wellbore #1 - Design #1	2,100.0	2,092.0	188.2	181.0	25.963	SF
Rubicon State Y16-744 - Wellbore #1 - Design #1	2,000.0	1,968.0	1,739.1	1,732.3	254.927	CC, ES, SF
Rubicon State Y16-751 - Wellbore #1 - Design #1						Out of range
Rubicon State Y16-757 - Wellbore #1 - Design #1						Out of range

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

## Anticollision Summary Report

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<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

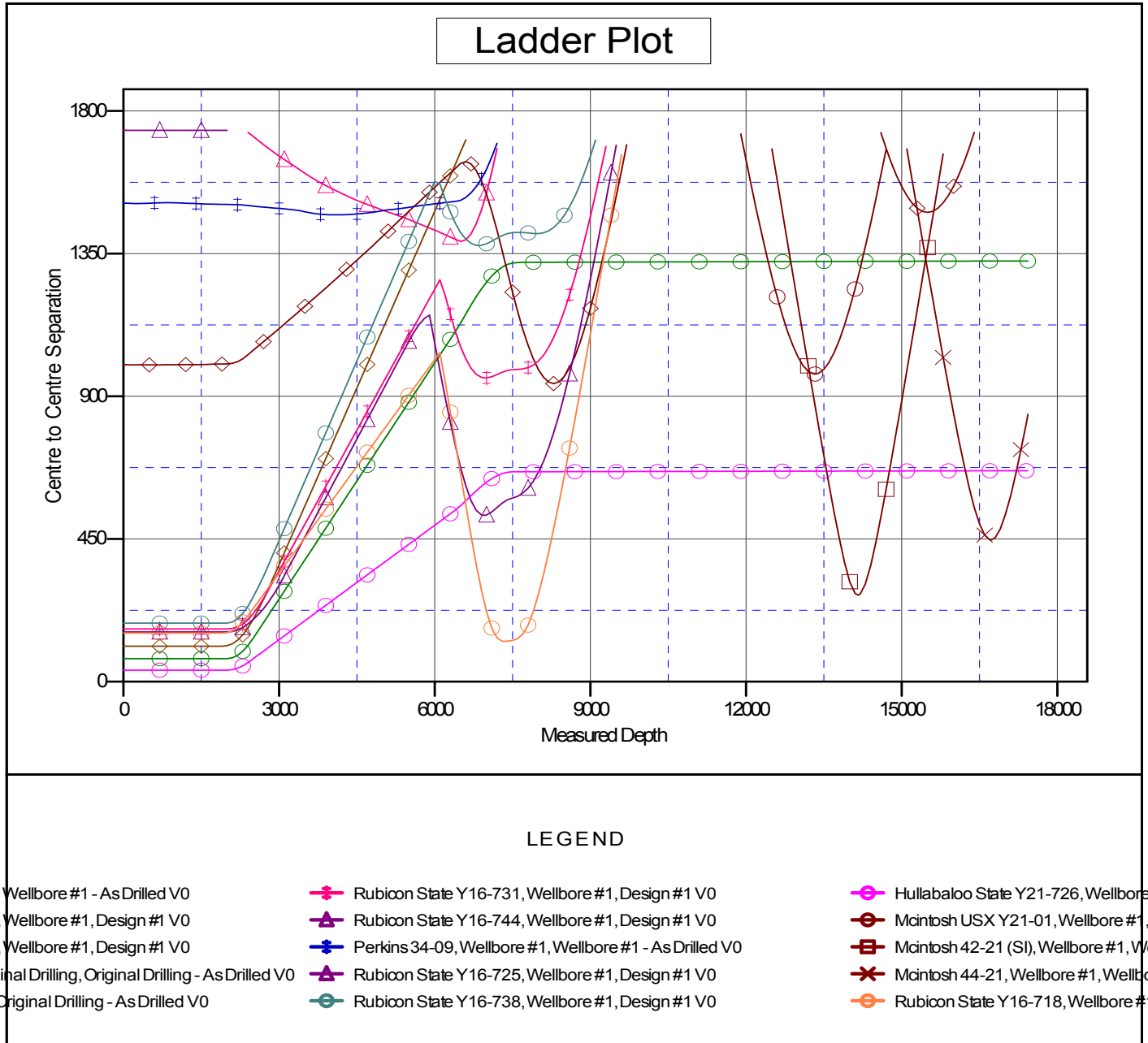
Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Y Section 16						
Rubicon State Y16-763 - Wellbore #1 - Design #1						Out of range
Rubicon State Y16-770 - Wellbore #1 - Design #1						Out of range
Rubicon State Y16-776 - Wellbore #1 - Design #1						Out of range
Rubicon State Y16-783 - Wellbore #1 - Design #1						Out of range
Rubicon State Y16-789 - Wellbore #1 - Design #1						Out of range
State 01 - Original Drilling - Original Drilling - As Drilled	8,291.2	7,075.2	940.4	908.9	29.927	CC, ES, SF
State 21 (PA) - Original Drilling - Original Drilling - As Drilled						Out of range
State Y16-05D - Wellbore #1 - Wellbore #1 - As Drilled						Out of range
Y Section 21						
Gerkin 33-21 - Wellbore #1 - Wellbore #1 - As Drilled	15,499.1	7,166.7	1,480.2	1,455.3	59.566	CC, ES
Gerkin 33-21 - Wellbore #1 - Wellbore #1 - As Drilled	15,500.0	7,166.8	1,480.2	1,455.3	59.566	SF
Mcintosh 42-21 (SI) - Wellbore #1 - Wellbore #1 - As Drilled	14,158.1	7,106.3	272.8	248.1	11.081	CC, ES, SF
Mcintosh 44-21 - Wellbore #1 - Wellbore #1 - As Drilled	16,720.1	7,106.8	446.5	421.9	18.112	CC, ES, SF
Mcintosh USX Y21-01 - Wellbore #1 - Wellbore #1 - As Drilled	13,329.8	7,085.4	970.3	945.7	39.480	CC, ES, SF

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<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 @ 4976.0ft (Original Well Elev)  
Offset Depths are relative to Offset Datum  
Central Meridian is -105.5000000

Coordinates are relative to: Hullabaloo State Y21-716  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: 0.61°



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

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