

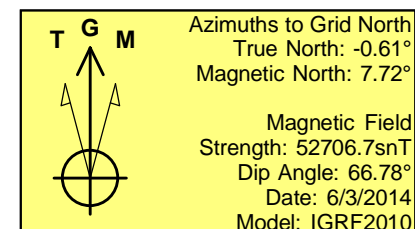
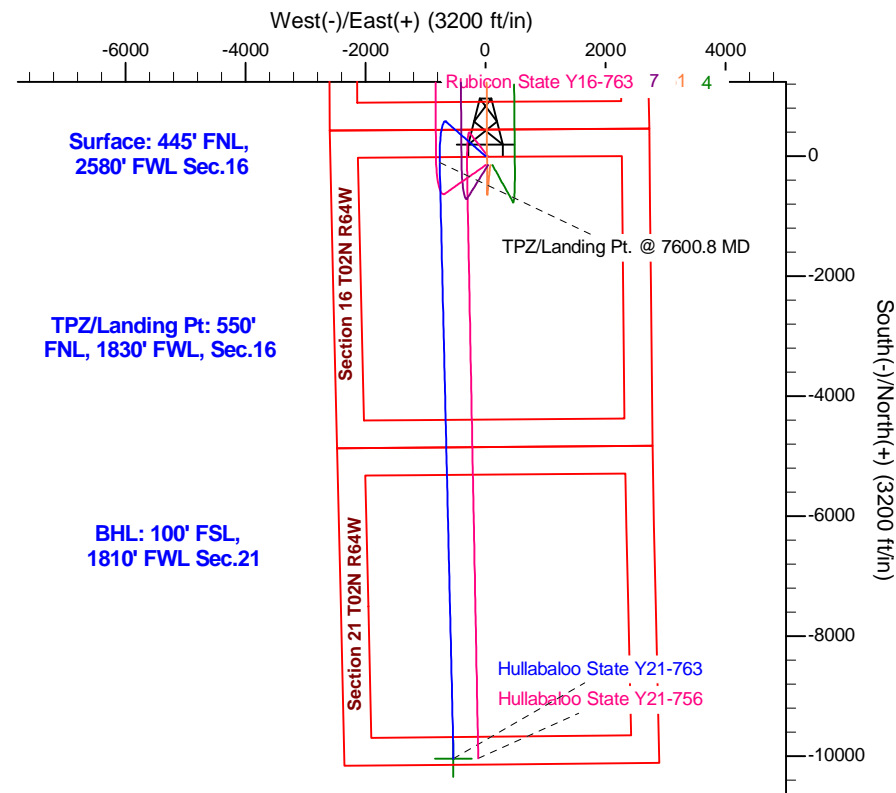
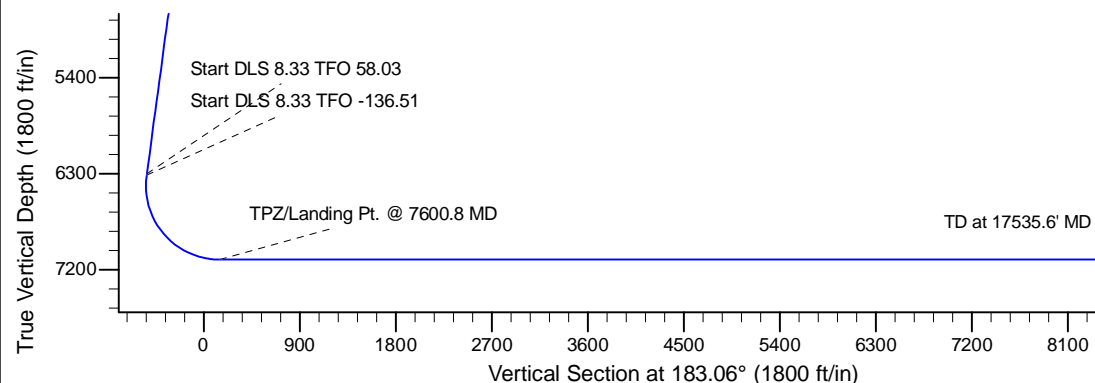
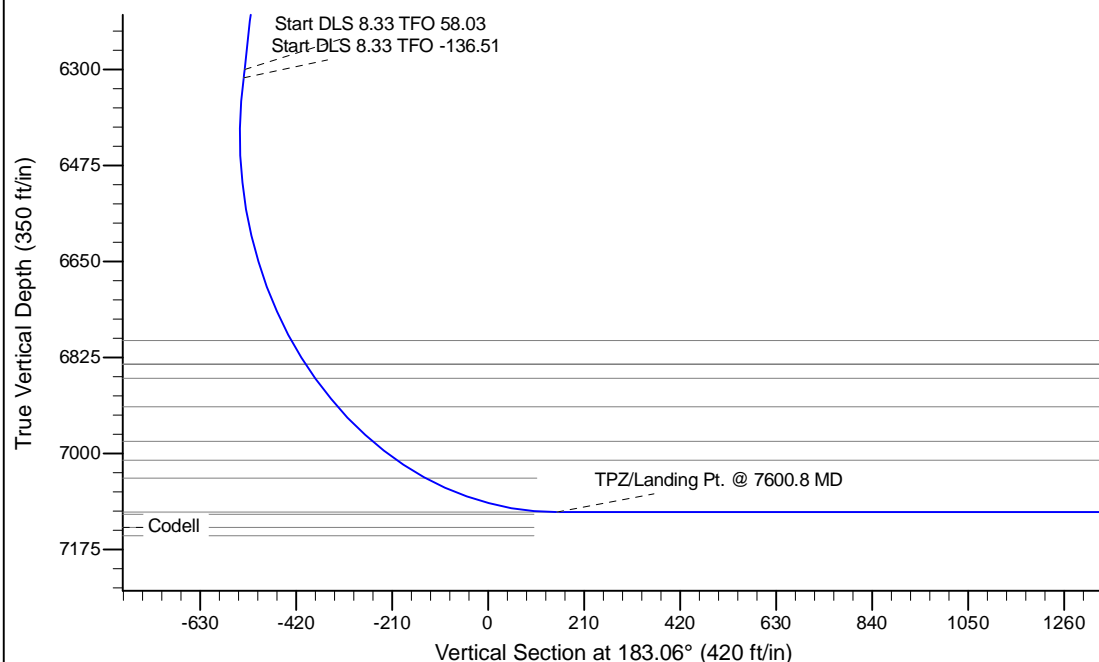
Project: Mustang
 Site: Y Section 16-T2N-R64W Weld County, CO
 Well: Hullabaloo State Y21-763
 Wellbore: Original Drilling
 Design: APD - Rev 0

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	2000.0	0.00	0.00	2000.0	0.0	0.0	0.00	0.00	0.0	
3	2612.5	12.25	311.00	2607.8	42.8	-49.2	2.00	311.00	-40.1	
4	6390.7	12.25	311.00	6300.0	568.7	-654.2	0.00	0.00	-533.0	
5	6406.3	12.99	315.93	6315.3	571.1	-656.7	8.33	58.03	-535.2	
6	7600.8	90.00	178.68	7107.0	-110.0	-765.0	8.33	-136.51	150.6	
7	17535.6	90.00	178.68	7107.0	-10042.2	-536.5	0.00	0.00	10056.5	Hullabal State Y21-763 BHL 100'FSL, 1810'FWL



WELL DETAILS: Hullabaloo State Y21-763

Ground Level: 4912.0			
Northing	Easting	Latitude	Longitude
0.0	1296901.7710507	3263681.4411217	40.1445400 -104.5567800

Plan: APD - Rev 0 (Hullabaloo State Y21-763/Original Drilling)

Created By: Shailey Jewell Date: 17:11, April 12 2017

OK to submit with 2A as per Noble Drilling
4/12/2017 5:14

Northern Region - DJ Basin

Mustang

Y Section 16

Hullabaloo State Y21-763

Original Drilling

APD - Rev 0

Anticollision Summary Report

12 April, 2017

Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Hullabaloo State Y21-763
Project:	Mustang	TVD Reference:	WELL @ 4942.0ft (Original Well Elev)
Reference Site:	Y Section 16	MD Reference:	WELL @ 4942.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Hullabaloo State Y21-763	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	EDM Production
Reference Design:	APD - Rev 0	Offset TVD Reference:	Offset Datum

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

Survey Tool Program	Date	4/12/2017		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	17,535.6	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	17,524.0	17,104.7	1,710.0	1,536.6	9.861	CC, ES
Hullabaloo State Y21-736 - Wellbore #1 - Design #1	17,536.6	17,106.5	1,710.3	1,536.8	9.859	SF
Hullabaloo State Y21-746 - Wellbore #1 - Design #1	17,524.2	17,347.2	1,046.4	873.0	6.033	CC, ES
Hullabaloo State Y21-746 - Wellbore #1 - Design #1	17,536.6	17,359.6	1,046.7	873.0	6.027	SF
Hullabaloo State Y21-756 - Original Drilling - APD - Rev	2,000.0	2,000.0	36.3	22.5	2.620	CC
Hullabaloo State Y21-756 - Original Drilling - APD - Rev	2,100.0	2,100.8	36.6	22.0	2.508	ES
Hullabaloo State Y21-756 - Original Drilling - APD - Rev	2,300.0	2,302.3	38.5	22.6	2.412	SF
Hullabaloo State Y21-769 - Wellbore #1 - Design #1	17,536.6	17,344.7	429.6	253.5	2.440	CC, ES, SF
Hullabaloo State Y21-775 - Wellbore #1 - Design #1	17,536.6	17,216.1	851.0	674.6	4.825	CC, ES, SF
Hullabaloo State Y21-781 - Wellbore #1 - Design #1	17,536.6	17,328.6	1,249.9	1,073.2	7.076	CC, ES, SF
Hullabaloo State Y21-787 - Original Drilling - Prelim - Re	8,285.9	7,396.0	439.8	414.3	17.284	CC
Hullabaloo State Y21-787 - Original Drilling - Prelim - Re	8,300.0	7,407.9	439.8	414.3	17.238	ES
Hullabaloo State Y21-787 - Original Drilling - Prelim - Re	14,800.0	13,850.3	528.3	459.7	7.694	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	6,784.4	8,186.7	1,636.4	1,584.9	31.759	CC, ES
Rubicon State Y16-738 - Original Drilling - APD - Rev 0	6,800.0	8,180.7	1,636.5	1,585.0	31.749	SF
Rubicon State Y16-744 - Original Drilling - APD - Rev 0	2,000.0	2,002.0	186.6	172.7	13.442	CC, ES
Rubicon State Y16-744 - Original Drilling - APD - Rev 0	2,200.0	2,201.8	193.4	178.1	12.637	SF
Rubicon State Y16-751 - Original Drilling - APD - Rev 0	2,000.0	2,001.0	167.3	153.5	12.059	CC, ES
Rubicon State Y16-751 - Original Drilling - APD - Rev 0	2,200.0	2,200.8	173.8	158.5	11.361	SF
Rubicon State Y16-757 - Original Drilling - APD - Rev 0	2,000.0	2,000.0	154.4	140.5	11.129	CC, ES
Rubicon State Y16-757 - Original Drilling - APD - Rev 0	7,335.8	7,721.5	360.3	309.0	7.028	SF
Rubicon State Y16-763 - Original Drilling - APD - Rev 0	7,250.4	7,701.7	70.9	19.4	1.377	Level 3, CC, ES, SF
Rubicon State Y16-770 - Wellbore #1 - Design #1	7,194.1	7,599.6	502.6	452.6	10.052	CC, ES, SF
Rubicon State Y16-776 - Wellbore #1 - Design #1	7,400.0	7,504.1	915.1	864.7	18.165	SF
Rubicon State Y16-776 - Wellbore #1 - Design #1	7,435.4	7,461.7	915.0	864.6	18.169	CC, ES
Rubicon State Y16-783 - Wellbore #1 - Design #1	7,363.0	7,444.0	1,356.9	1,306.4	26.893	CC, ES, SF
Rubicon State Y16-789 - Wellbore #1 - Design #1	2,723.3	2,461.4	1,731.4	1,713.5	97.088	CC, ES
Rubicon State Y16-789 - Wellbore #1 - Design #1	3,000.0	2,668.5	1,739.0	1,719.6	89.471	SF
State 01 - Original Drilling - Original Drilling - As Drilled	2,040.4	2,049.8	1,670.5	1,656.4	118.742	CC, ES
State 01 - Original Drilling - Original Drilling - As Drilled	2,600.0	2,595.9	1,724.1	1,706.1	96.030	SF
State 21 (PA) - Original Drilling - Original Drilling - As Drilled	11,017.4	7,092.0	646.3	464.7	3.558	CC, ES, SF
State Y16-05D - Wellbore #1 - As Drilled	8,967.7	7,077.2	1,111.4	1,057.6	20.676	CC, ES

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

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Reference Well:	Hullabaloo State Y21-763	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	EDM Production
Reference Design:	APD - Rev 0	Offset TVD Reference:	Offset Datum

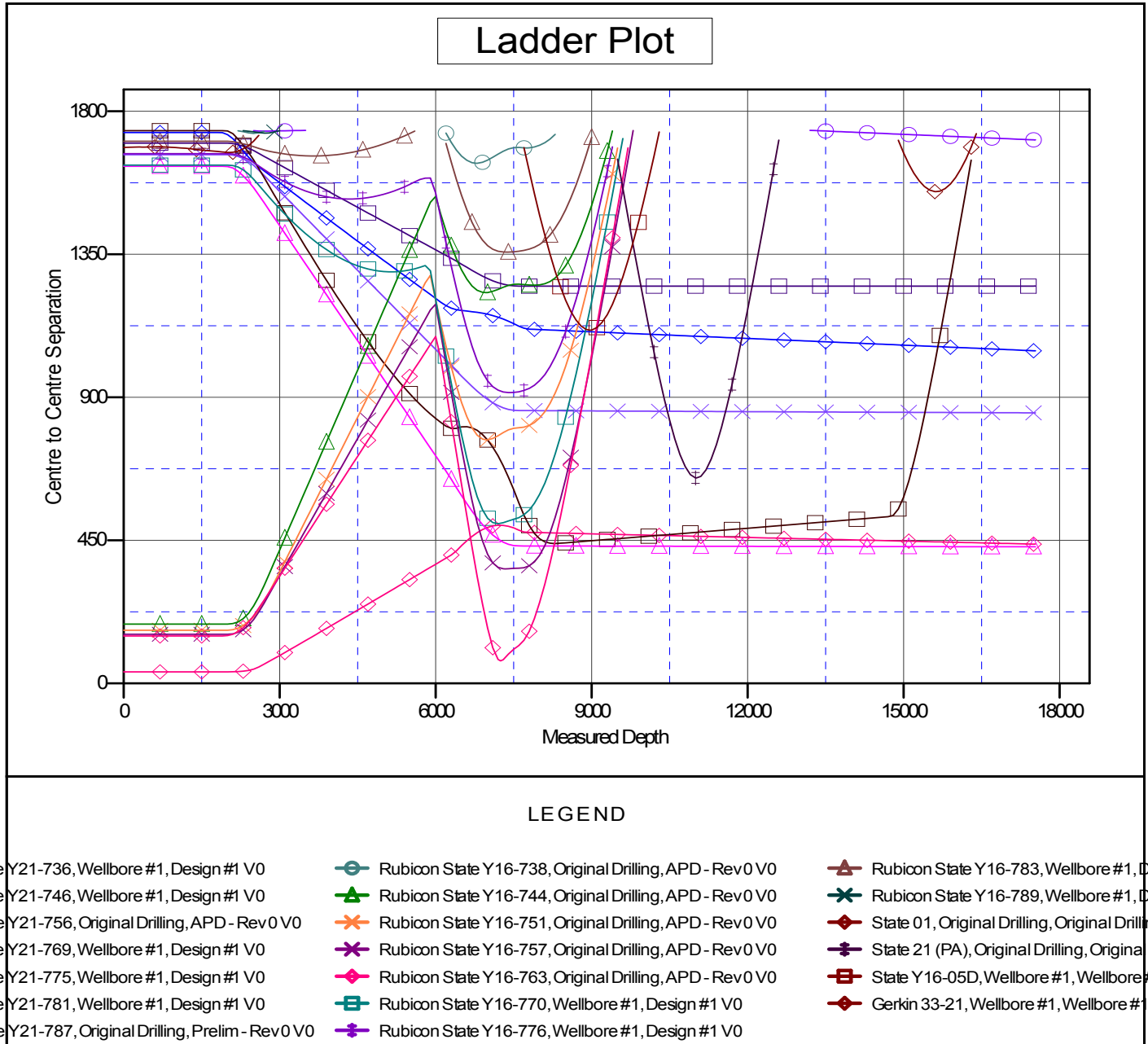
Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Y Section 16						
State Y16-05D - Wellbore #1 - Wellbore #1 - As Drilled	9,100.0	7,074.4	1,119.2	1,064.8	20.558	SF
Y Section 21						
Gerkin 33-21 - Wellbore #1 - Wellbore #1 - As Drilled	15,626.5	6,968.6	1,547.1	1,450.5	16.010	CC, ES
Gerkin 33-21 - Wellbore #1 - Wellbore #1 - As Drilled	15,700.0	6,970.9	1,548.8	1,451.8	15.967	SF
Mcintosh 42-21 (SI) - Wellbore #1 - Wellbore #1 - As Drilled						Out of range
Mcintosh 44-21 - Wellbore #1 - Wellbore #1 - As Drilled						Out of range
Mcintosh USX Y21-01 - Wellbore #1 - Wellbore #1 - As Drilled						Out of range

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Reference Wellbore	Original Drilling	Database:	EDM Production
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Reference Depths are relative to WELL @ 4942.0ft (Original Well Elev)
Offset Depths are relative to Offset Datum
Central Meridian is -105.5000000

Coordinates are relative to: Hullabaloo State Y21-763
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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