

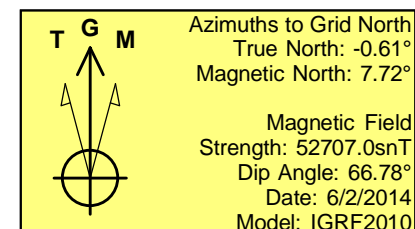
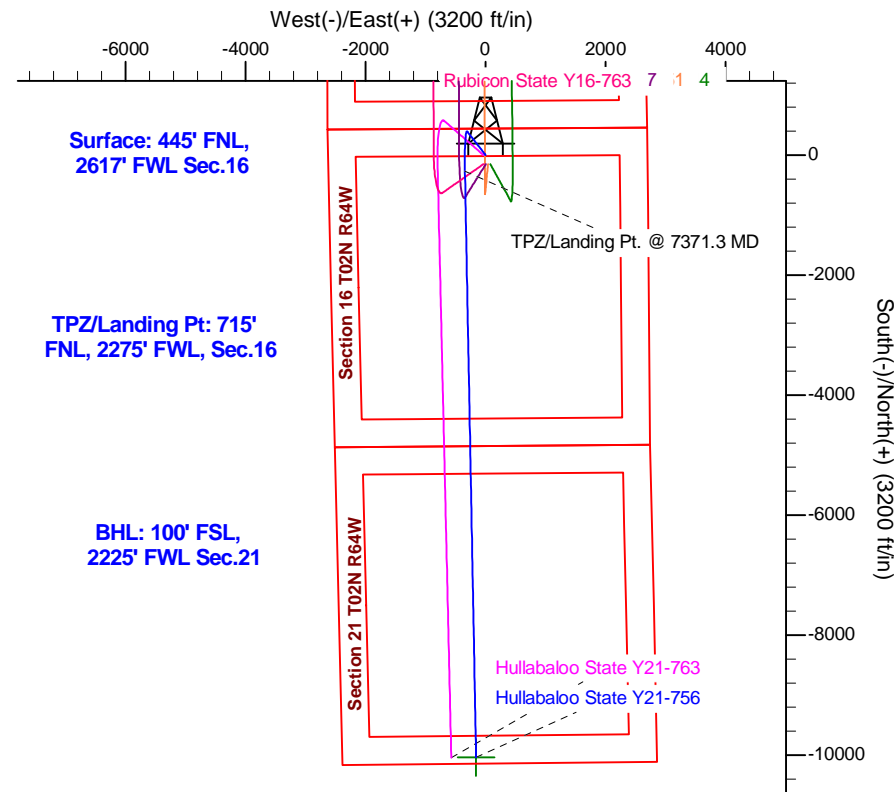
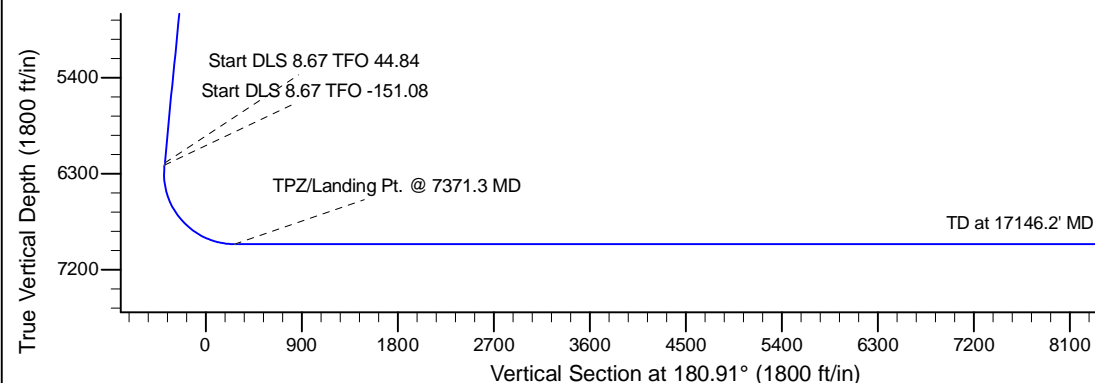
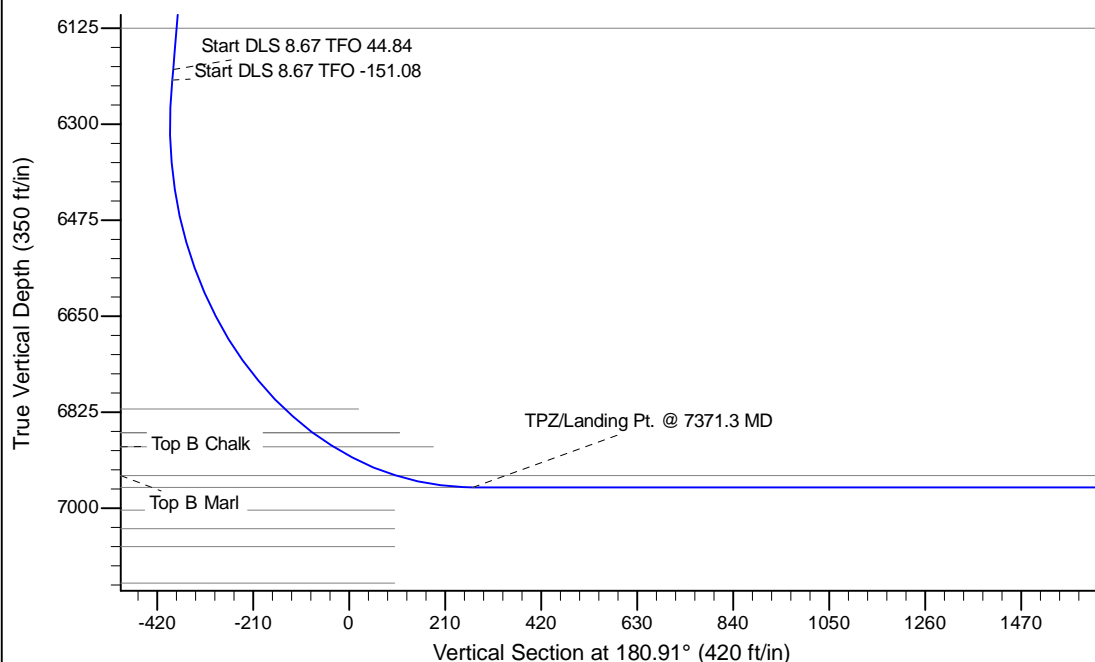
Project: Mustang
 Site: Y Section 16-T2N-R64W Weld County, CO
 Well: Hullabaloo State Y21-756
 Wellbore: Original Drilling
 Design: APD - Rev 0

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	2350.0	7.00	322.00	2349.1	16.8	-13.1	2.00	322.00	-16.6	
4	6229.8	7.00	322.00	6200.0	389.4	-304.2	0.00	0.00	-384.6	
5	6249.1	8.27	330.24	6219.2	391.6	-305.7	8.67	44.84	-386.7	
6	7371.3	90.00	178.91	6962.0	-265.0	-345.0	8.67	-151.08	270.4	
7	17146.2	90.00	178.91	6962.0	-10038.2	-158.9	0.00	0.00	10039.4	Hullabaloo State Y21-756 BHL 100'FSL, 2225'FWL



WELL DETAILS: Hullabaloo State Y21-756

	Ground Level: 4912.0	Latitude	Longitude
0.0	1296902.1576423	3263717.7818420	40.1445400

Plan: APD - Rev 0 (Hullabaloo State Y21-756/Original Drilling)

Created By: Shailey Jewell Date: 16:56, April 12 2017

OK to submit with 2A as per Noble Drilling
4/12/2017 5:02

Northern Region - DJ Basin

Mustang

Y Section 16

Hullabaloo State Y21-756

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 Y21-756
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 Y21-756	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	EDM Produccction
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	17,146.2	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 09						
Perkins 34-09 - Wellbore #1 - Wellbore #1 - As Drilled	591.8	587.8	1,257.5	1,253.8	333.275	CC
Perkins 34-09 - Wellbore #1 - Wellbore #1 - As Drilled	6,100.0	6,071.4	1,273.3	1,230.6	29.801	ES
Perkins 34-09 - Wellbore #1 - Wellbore #1 - As Drilled	6,500.0	6,463.2	1,296.9	1,251.4	28.525	SF
Perkins USX Y09-23 - Original Drilling - Original Drilling -						Out of range
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	17,146.6	17,110.8	1,287.0	1,113.5	7.417	CC, ES, SF
Hullabaloo State Y21-746 - Wellbore #1 - Design #1	17,146.6	17,361.2	627.2	452.1	3.583	CC, ES, SF
Hullabaloo State Y21-763 - Wellbore #1 - Design #1	2,000.0	2,000.0	36.3	22.5	2.620	CC
Hullabaloo State Y21-763 - Wellbore #1 - Design #1	2,100.0	2,099.1	36.6	22.0	2.509	ES
Hullabaloo State Y21-763 - Wellbore #1 - Design #1	2,300.0	2,297.2	38.5	22.5	2.414	SF
Hullabaloo State Y21-769 - Wellbore #1 - Design #1	17,140.6	17,349.1	828.2	653.1	4.731	CC, ES, SF
Hullabaloo State Y21-775 - Wellbore #1 - Design #1	17,136.2	17,216.1	1,245.0	1,070.4	7.131	CC, ES
Hullabaloo State Y21-775 - Wellbore #1 - Design #1	17,146.6	17,216.1	1,245.2	1,070.5	7.128	SF
Hullabaloo State Y21-781 - Wellbore #1 - Design #1	17,107.4	17,310.0	1,658.5	1,484.1	9.514	CC
Hullabaloo State Y21-781 - Wellbore #1 - Design #1	17,146.6	17,328.6	1,658.7	1,483.9	9.489	ES, SF
Hullabaloo State Y21-787 - Original Drilling - Prelim - Re	7,830.0	7,331.5	805.7	780.2	31.627	CC, ES
Hullabaloo State Y21-787 - Original Drilling - Prelim - Re	14,400.0	13,850.3	876.2	810.2	13.278	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	7,068.4	7,461.4	1,650.4	1,601.0	33.395	CC, ES
Rubicon State Y16-731 - Original Drilling - APD - Rev 0	7,100.0	7,432.8	1,650.5	1,601.0	33.389	SF
Rubicon State Y16-738 - Original Drilling - APD - Rev 0	6,900.0	7,821.0	1,220.8	1,170.6	24.318	SF
Rubicon State Y16-738 - Original Drilling - APD - Rev 0	6,995.2	7,744.8	1,219.6	1,169.5	24.319	CC, ES
Rubicon State Y16-744 - Original Drilling - APD - Rev 0	2,000.0	2,002.0	167.3	153.5	12.057	CC, ES
Rubicon State Y16-744 - Original Drilling - APD - Rev 0	2,200.0	2,201.8	174.2	158.9	11.380	SF
Rubicon State Y16-751 - Original Drilling - APD - Rev 0	2,000.0	2,001.0	154.4	140.5	11.126	CC, ES
Rubicon State Y16-751 - Original Drilling - APD - Rev 0	7,200.0	7,275.9	334.7	285.8	6.833	SF
Rubicon State Y16-757 - Original Drilling - APD - Rev 0	7,541.5	7,103.3	81.0	31.4	1.631	CC, ES, SF
Rubicon State Y16-763 - Original Drilling - APD - Rev 0	1,900.0	1,900.0	153.7	140.6	11.684	CC, ES
Rubicon State Y16-763 - Original Drilling - APD - Rev 0	7,500.0	7,039.4	500.7	450.9	10.051	SF
Rubicon State Y16-770 - Wellbore #1 - Design #1	7,168.5	7,264.3	942.3	893.2	19.214	CC, ES, SF
Rubicon State Y16-776 - Wellbore #1 - Design #1	7,305.1	7,196.3	1,366.8	1,317.8	27.885	CC, ES, SF
Rubicon State Y16-783 - Wellbore #1 - Design #1	2,492.9	2,368.9	1,733.3	1,716.4	102.926	CC
Rubicon State Y16-783 - Wellbore #1 - Design #1	2,500.0	2,373.9	1,733.3	1,716.4	102.679	ES

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

Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Hullabaloo State Y21-756
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 Y21-756	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	EDM Produccion
Reference Design:	APD - Rev 0	Offset TVD Reference:	Offset Datum

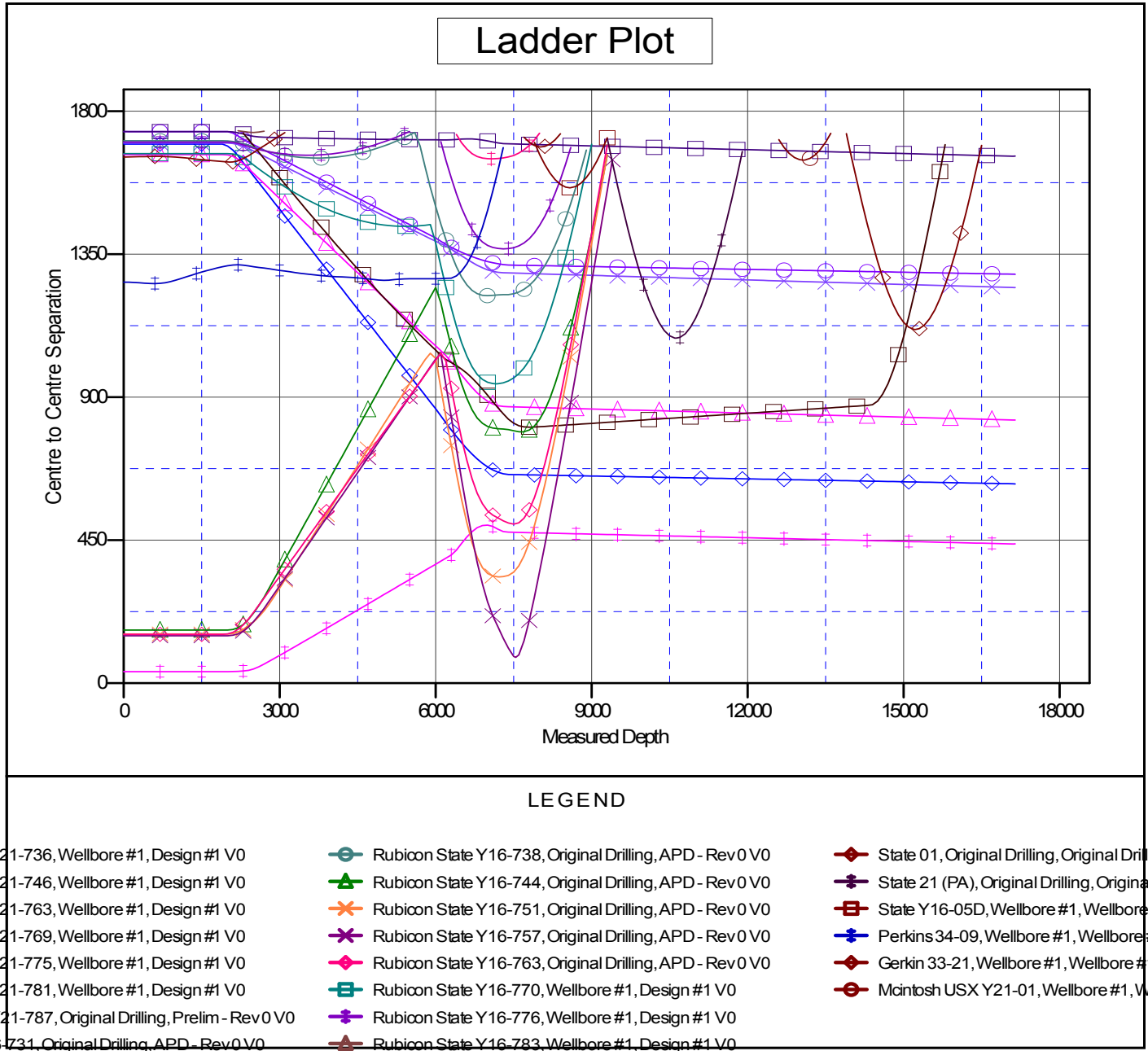
Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Y Section 16						
Rubicon State Y16-783 - Wellbore #1 - Design #1	2,700.0	2,512.6	1,737.2	1,719.2	96.480	SF
Rubicon State Y16-789 - Wellbore #1 - Design #1						Out of range
State 01 - Original Drilling - Original Drilling - As Drilled	2,042.2	2,051.2	1,640.1	1,626.0	116.481	CC, ES
State 01 - Original Drilling - Original Drilling - As Drilled	8,100.0	6,928.3	1,689.3	1,633.5	30.267	SF
State 21 (PA) - Original Drilling - Original Drilling - As Dril	10,627.2	6,947.0	1,085.9	908.4	6.116	CC, ES
State 21 (PA) - Original Drilling - Original Drilling - As Dril	10,700.0	6,947.0	1,088.4	910.3	6.112	SF
State Y16-05D - Wellbore #1 - Wellbore #1 - As Drilled	8,582.4	6,931.3	1,559.2	1,507.5	30.119	CC, ES
State Y16-05D - Wellbore #1 - Wellbore #1 - As Drilled	8,800.0	6,927.0	1,574.4	1,521.7	29.872	SF
Y Section 21						
Gerkin 33-21 - Wellbore #1 - Wellbore #1 - As Drilled	15,224.2	6,872.0	1,113.3	1,017.8	11.661	CC, ES
Gerkin 33-21 - Wellbore #1 - Wellbore #1 - As Drilled	15,300.0	6,874.1	1,115.8	1,020.0	11.645	SF
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	13,066.1	6,960.4	1,646.2	1,566.4	20.641	CC, ES
Mcintosh USX Y21-01 - Wellbore #1 - Wellbore #1 - As D	13,200.0	6,957.7	1,651.6	1,571.2	20.533	SF

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Reference Well:	Hullabaloo State Y21-756	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 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 Y21-756
 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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