

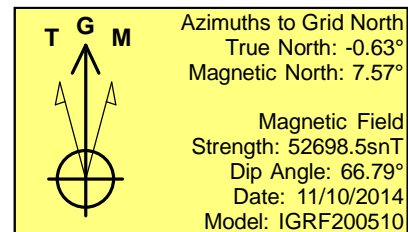
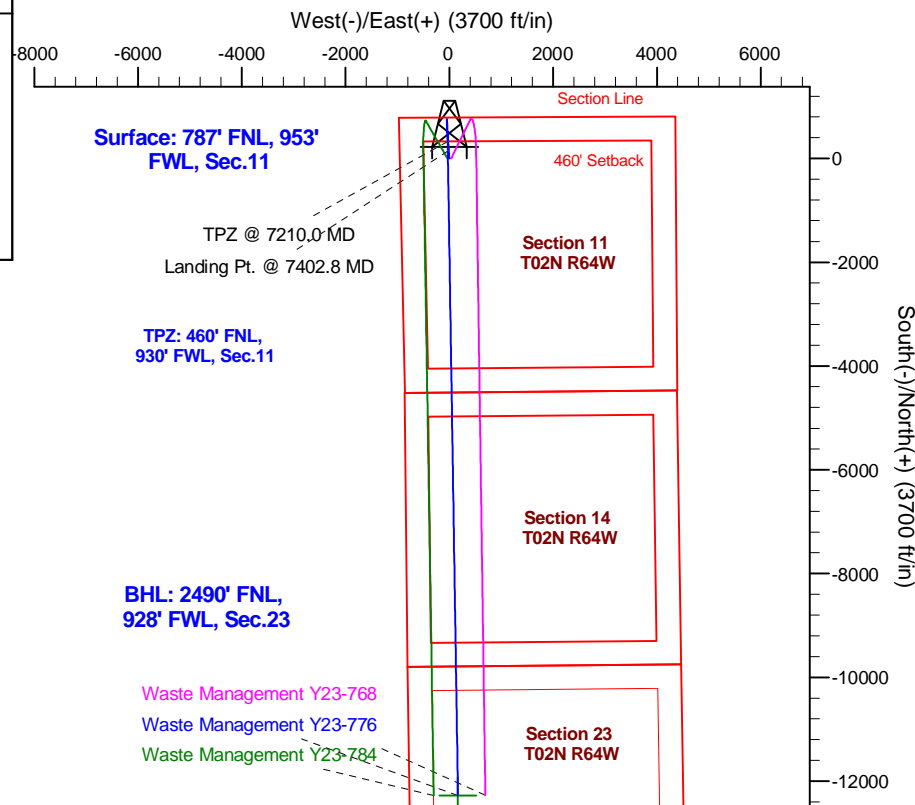
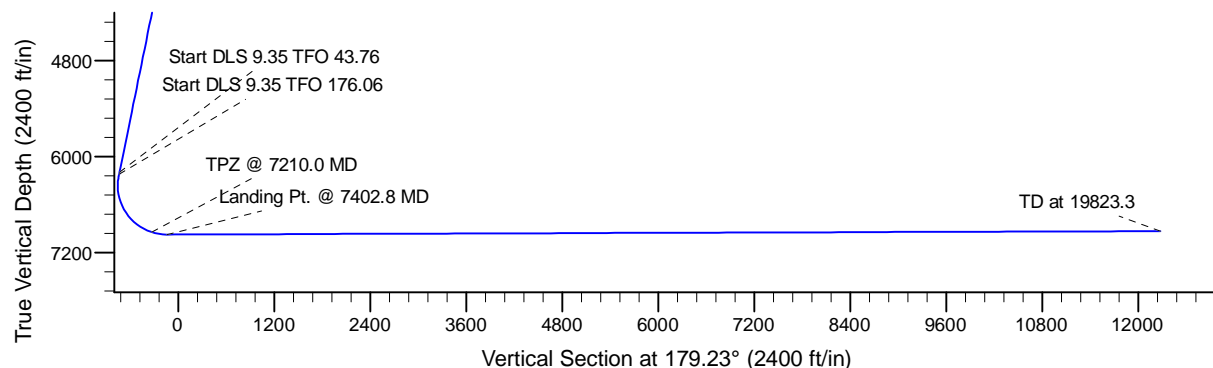
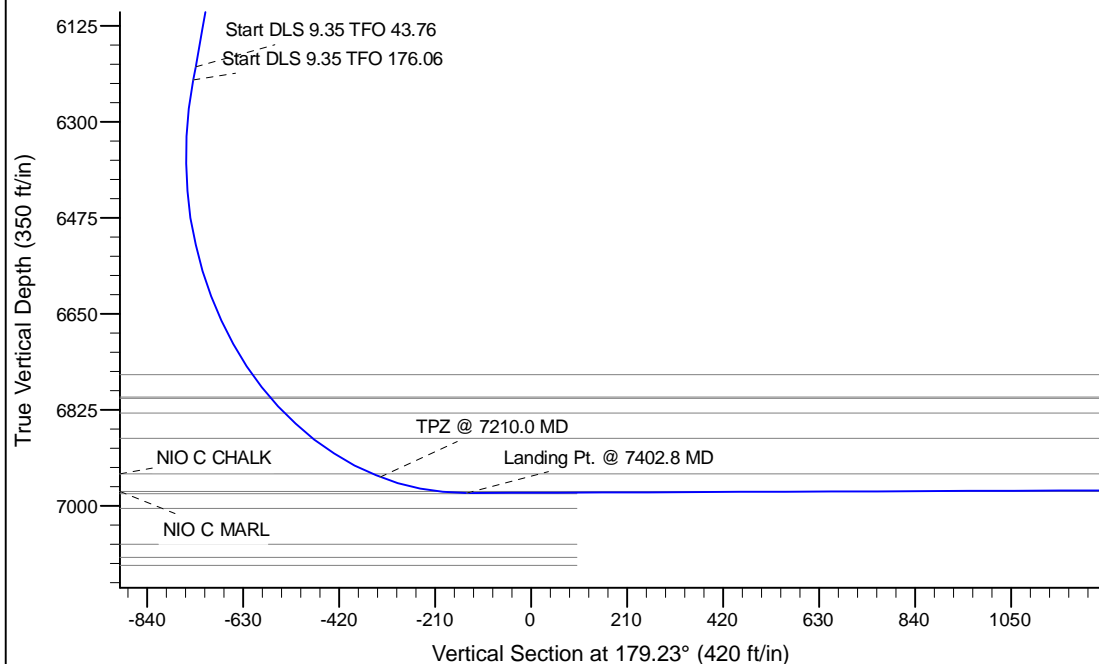
Project: Mustang
 Site: Y Section 11-T2N-R64W Weld County, CO
 Well: Waste Management Y23-776
 Wellbore: Original Drilling
 Design: APD - Rev 2

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	2300.0	0.00	0.00	2300.0	0.0	0.0	0.00	0.00	0.0	
3	2875.0	11.50	356.00	2871.1	57.4	-4.0	2.00	356.00	-57.4	
4	6272.0	11.50	356.00	6200.0	733.0	-51.3	0.00	0.00	-733.6	
5	6296.7	13.27	2.88	6224.1	738.3	-51.3	9.35	43.17	-738.9	
6	7402.8	90.20	179.09	6977.0	140.0	-30.0	9.35	176.10	-140.4	
7	19823.3	90.20	179.10	6934.0	-12278.8	165.8	0.00	103.71	12279.9	Waste Management Y23-776 BHL 2490'FNL, 928'FWL



WELL DETAILS: Waste Management Y23-776

		Ground Level:4951.0		
	Northing	Easting	Latitude	Longitude
0.00.0	1301919.5484736	3272561.5290498	40.1580500	-104.5248200

Plan: APD - Rev 2 (Waste Management Y23-776/Original Drilling)

Created By: Shailey Jewell Date: 16:19, June 21 2017

OK to submit with 2A as per Noble Drilling
6/21/2017 4:23

Northern Region - DJ Basin

Mustang

Y Section 11

Waste Management Y23-776

Original Drilling

APD - Rev 2

Anticollision Summary Report

21 June, 2017

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Waste Management Y23-776
Project:	Mustang	TVD Reference:	WELL @ 4981.0ft (Original Well Elev)
Reference Site:	Y Section 11	MD Reference:	WELL @ 4981.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Waste Management Y23-776	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	EDMP
Reference Design:	APD - Rev 2	Offset TVD Reference:	Offset Datum

Reference	APD - Rev 2		
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 1,933.0 ft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date	6/21/2017		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	19,823.3	APD - Rev 2 (Original Drilling)	2_MWD+IFR1+MS	A008Mb: IFR dec & multi-station analysis

Summary						
Site Name	Reference Measured Depth	Offset Measured Depth	Distance Between Centres	Distance Between Ellipses	Separation Factor	Warning
Offset Well - Wellbore - Design	()	()	()	()		
- -						Out of range

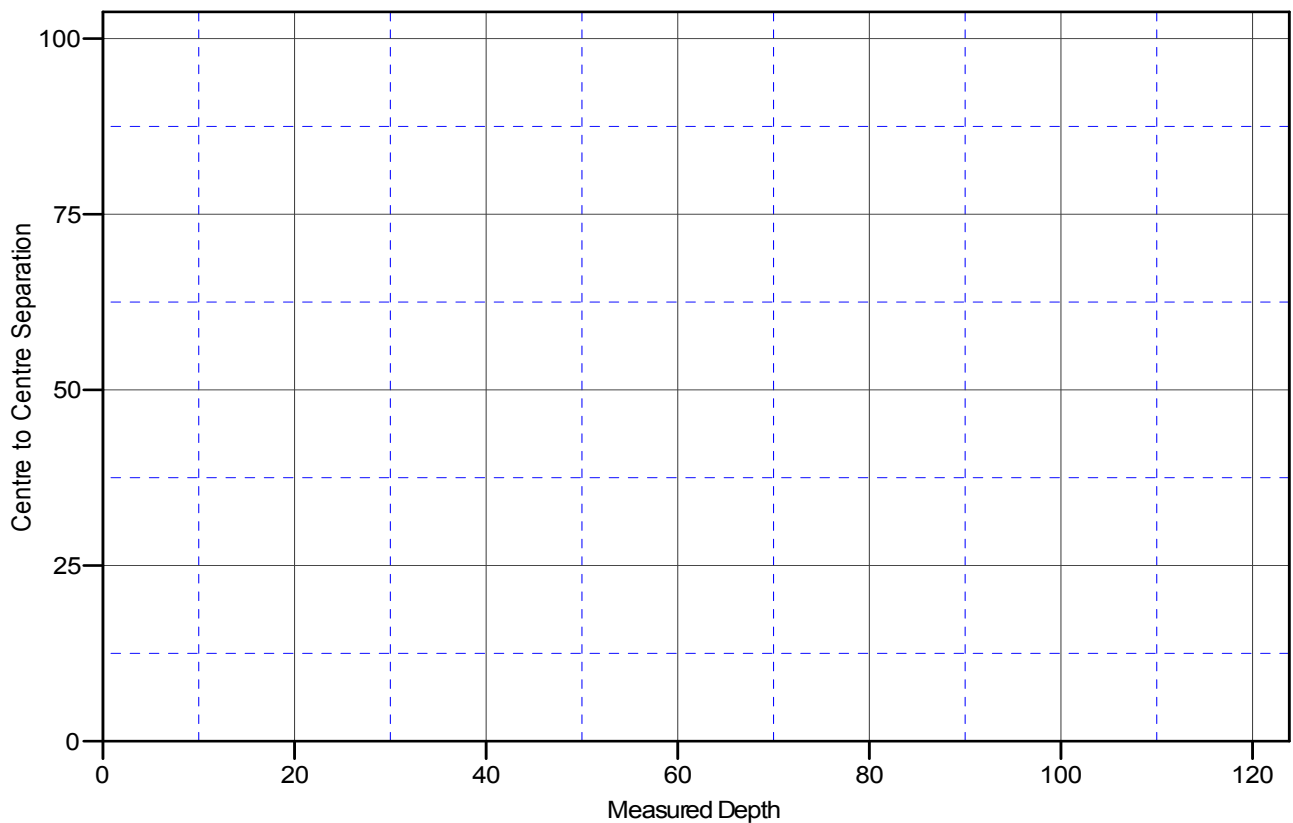
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Reference Design:	APD - Rev 2	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4981.0ft (Original Well Elev)
Offset Depths are relative to Offset Datum
Central Meridian is -105.5000000

Coordinates are relative to: Waste Management Y23-776
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.63°

Ladder Plot



LEGEND

Noble Energy, Inc.
Anticollision Summary Report

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