

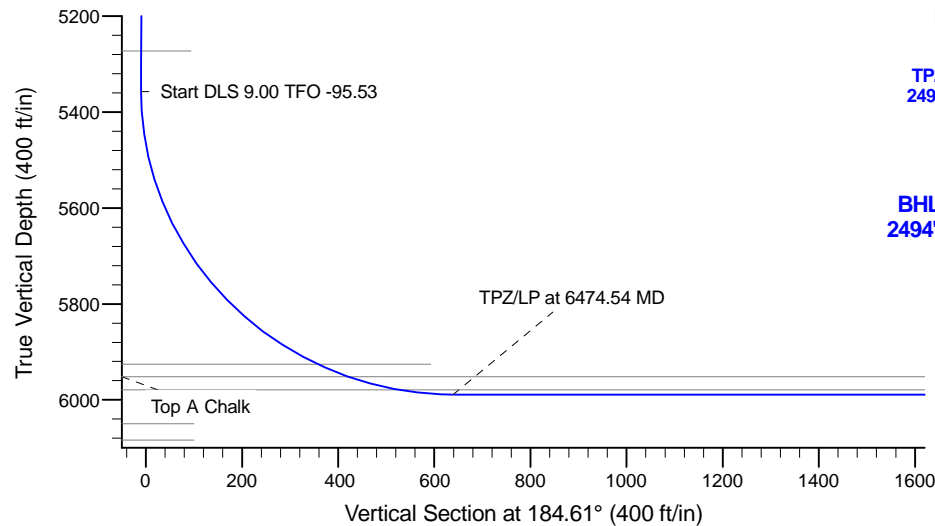
Project: East Pony  
 Site: LG Section 04  
 Well: Dorothy State LG16-748  
 Wellbore: Original Drilling  
 Design: Rev 0

# 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

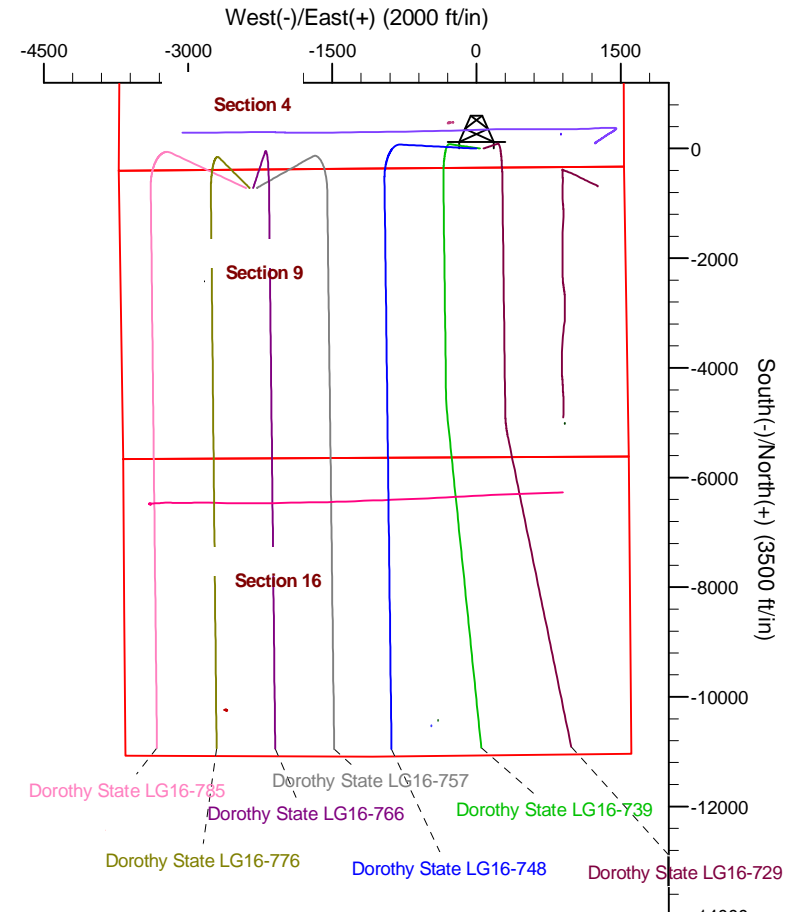
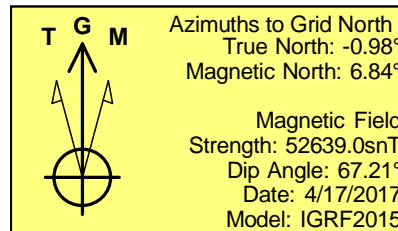
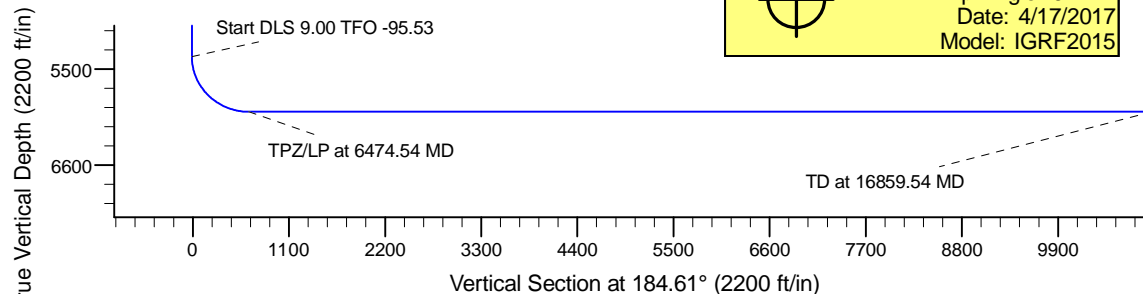
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00	0.00	
3	2747.68	14.95	275.31	2739.22	8.98	-96.60	2.00	275.31	-1.19	
4	5458.16	14.95	275.31	5357.91	73.75	-793.00	0.00	0.00	-9.80	
5	6474.54	90.00	179.59	5989.00	-563.83	-956.19	9.00	-95.53	638.83	TPZ Dorothy State LG16-748
6	16859.54	90.00	179.59	5989.00	-10948.58	-882.49	0.00	0.00	10984.09	BHL Dorothy State LG16-748



Surface: 350' FSL, 1535' FEL, Sec.4

TPZ: 200' FNL, 2494' FEL, Sec.9

BHL: 140' FSL, 2494' FEL, Sec.16



## WELL DETAILS: Dorothy State LG16-748

0.00	0.00	1496036.81	3422262.67	4840.00	40.6850624	Latitude	Longitude
							-103.9773757

## Plan: Rev 0 (Dorothy State LG16-748/Original Drilling)

Created By: Colby Baxter

Date: 15:05, March 05 2018

**OK to submit with 2A as per Noble Drilling  
 3/5/2018**

# **Northern Region - DJ Basin**

**East Pony**

**LG Section 04**

**Dorothy State LG16-748**

**Original Drilling**

**Rev 0**

## **Anticollision Summary Report**

**05 March, 2018**

**Noble Energy, Inc.**  
Anticollision Summary Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Dorothy State LG16-748
<b>Project:</b>	East Pony	<b>TVD Reference:</b>	KB @ 4870.00ft
<b>Reference Site:</b>	LG Section 04	<b>MD Reference:</b>	KB @ 4870.00ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Dorothy State LG16-748	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Rev 0	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	Rev 0		
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method:</b>	Stations	<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 10,000.00 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>	3/5/2018		
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.00	16,859.55	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
Offset Well - Wellbore - Design						
LG Section 04						
Bulleit Federal PC LG04-62HN - Original Drilling - Origina	5,911.85	8,165.67	494.29	433.46	8.126	CC
Bulleit Federal PC LG04-62HN - Original Drilling - Origina	5,950.00	8,172.94	496.83	432.65	7.741	ES
Bulleit Federal PC LG04-62HN - Original Drilling - Origina	6,050.00	8,190.68	526.64	455.45	7.398	SF
Dorothy State LG16-729 - Original Drilling - Rev 0	2,000.00	2,010.00	75.01	61.10	5.393	CC, ES
Dorothy State LG16-729 - Original Drilling - Rev 0	2,100.00	2,109.98	76.74	62.12	5.250	SF
Dorothy State LG16-739 - Original Drilling - Rev 1	2,000.00	2,010.00	38.00	24.10	2.732	CC, ES
Dorothy State LG16-739 - Original Drilling - Rev 1	2,100.00	2,109.98	39.74	25.12	2.719	SF
Grey #1 - Wellbore #1 - Actual	2,000.00	1,949.00	923.80	883.81	23.104	CC
Grey #1 - Wellbore #1 - Actual	2,100.00	2,151.02	925.41	881.55	21.099	ES
Grey #1 - Wellbore #1 - Actual	5,700.00	5,536.11	1,752.23	1,636.25	15.109	SF
McClellan PC LG04-15 - Wellbore #1 - Wellbore #1- As D	3,474.65	3,401.12	443.88	419.88	18.501	CC
McClellan PC LG04-15 - Wellbore #1 - Wellbore #1- As D	3,500.00	3,425.44	443.93	419.76	18.365	ES
McClellan PC LG04-15 - Wellbore #1 - Wellbore #1- As D	4,300.00	4,211.17	488.26	458.34	16.319	SF
LG Section 09						
Dorothy State LG16-757 - Original Drilling - Rev 0	16,859.55	16,746.71	601.69	419.91	3.310	CC, ES, SF
Dorothy State LG16-766 - Original Drilling - Rev 0	6,568.46	6,446.26	1,202.08	1,158.34	27.482	CC
Dorothy State LG16-766 - Original Drilling - Rev 0	16,859.55	16,724.49	1,209.93	1,027.66	6.638	ES, SF
Dorothy State LG16-776 - Original Drilling - Rev 0	6,291.79	5,958.23	1,793.56	1,750.48	41.632	CC
Dorothy State LG16-776 - Original Drilling - Rev 0	16,859.55	16,669.82	1,821.43	1,640.00	10.040	ES, SF
Dorothy State LG16-785 - Original Drilling - Rev 0	5,885.69	5,289.44	2,331.82	2,291.52	57.864	CC
Dorothy State LG16-785 - Original Drilling - Rev 0	16,859.55	16,815.98	2,439.89	2,257.57	13.382	ES, SF
Kirchner 1 - Original Drilling - Original Drilling - As Drilled	10,928.29	5,901.00	1,844.74	1,746.54	18.785	CC, ES
Kirchner 1 - Original Drilling - Original Drilling - As Drilled	11,000.00	5,901.00	1,846.14	1,747.63	18.741	SF
McClellan LG09-72HN - Original Drilling - As Drilled	2,662.52	2,958.23	1,353.56	1,334.62	71.477	CC, ES
McClellan LG09-72HN - Original Drilling - As Drilled	10,827.24	10,307.02	1,831.92	1,708.71	14.868	SF
LG Section 16						
Montana State PC LG16-68HN - Production Hole - Wellb	12,300.00	8,276.75	95.35	20.34	1.271	Level 3, ES, SF
Montana State PC LG16-68HN - Production Hole - Wellb	12,320.07	8,275.53	93.23	21.34	1.297	Level 3, CC
State 1 (Juniper) - Original Drilling - Original Drilling - As	16,334.23	5,979.00	487.06	346.17	3.457	CC, ES, SF
State L1 - Original Drilling - Original Drilling - As Drilled	16,433.31	5,978.00	415.91	274.24	2.936	CC, ES, SF
State-Tincup 13-16 - Original Drilling - Original Drilling - As	16,129.35	5,996.06	1,725.12	1,617.28	15.996	CC, ES
State-Tincup 13-16 - Original Drilling - Original Drilling - As	16,300.00	5,996.13	1,733.54	1,624.19	15.852	SF

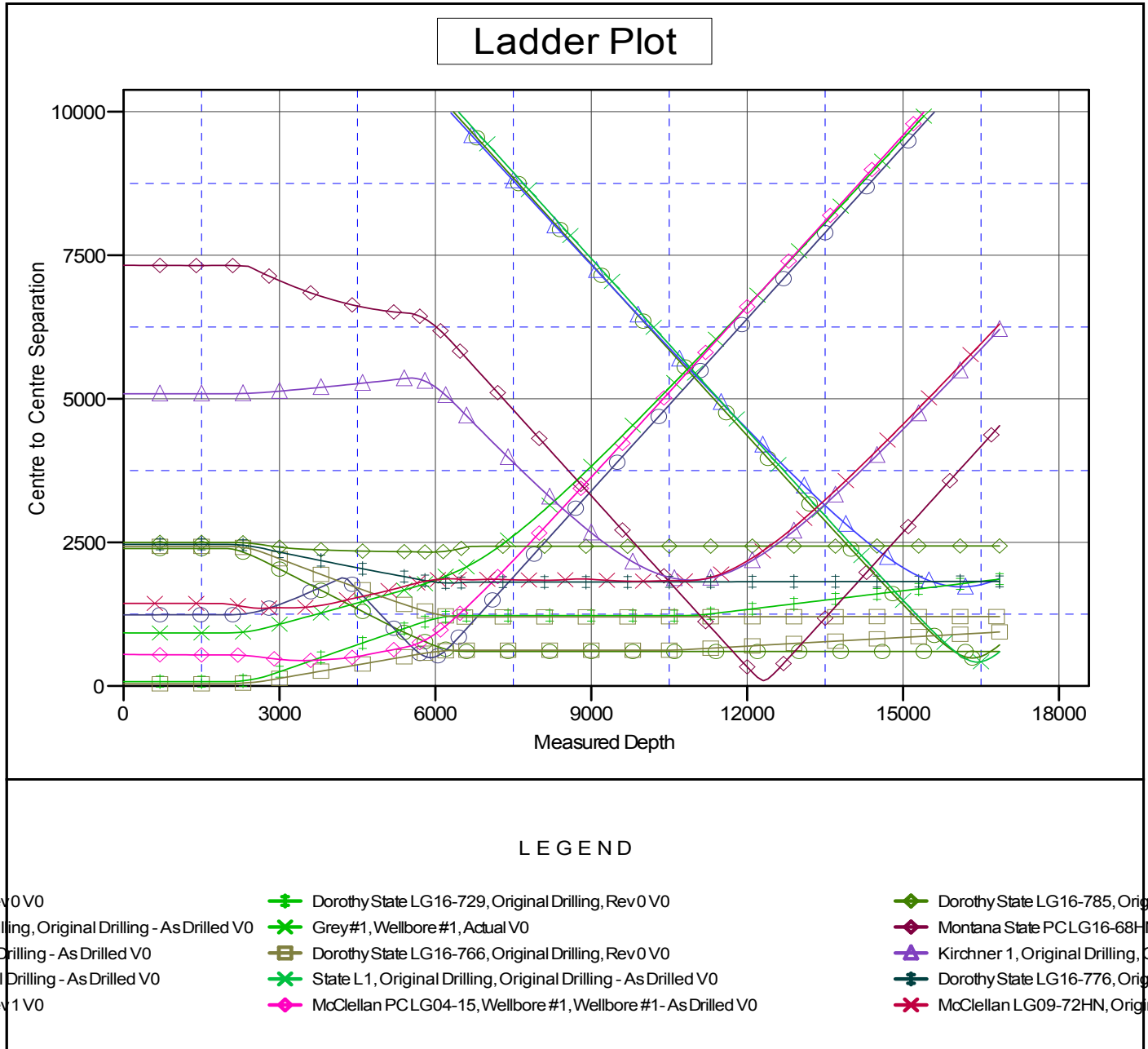
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

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Anticollision Summary Report

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<b>Reference Design:</b>	Rev 0	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to KB @ 4870.00ft  
Offset Depths are relative to Offset Datum  
Central Meridian is -105.5000000

Coordinates are relative to: Dorothy State LG16-748  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: 0.98°



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

**Noble Energy, Inc.**  
Anticollision Summary Report

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