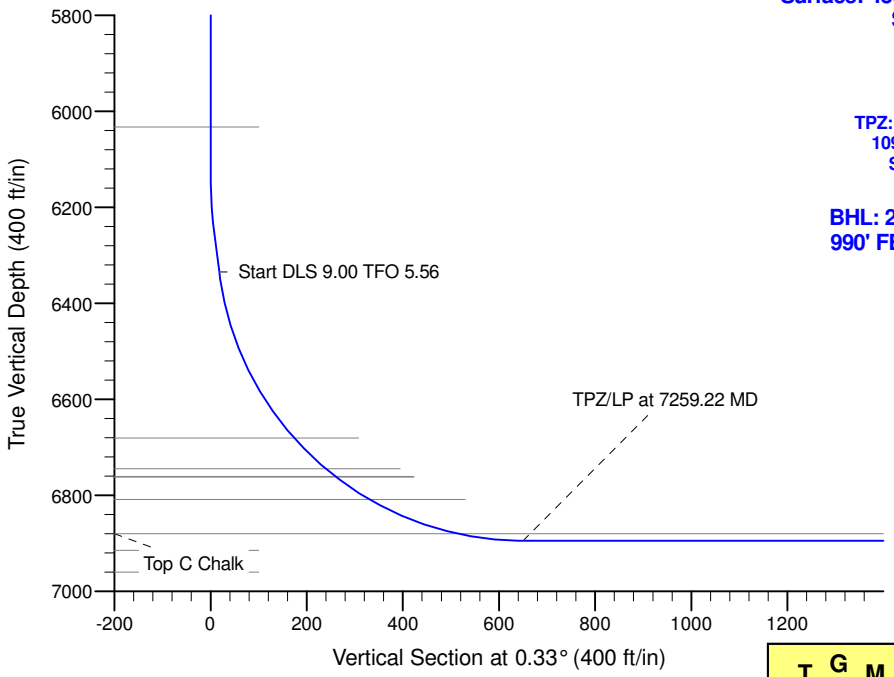
Project: Mustang
Site: D Section 19
Well: Independence D18-725
Wellbore: Independence D18-725
Design: Plan 1

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

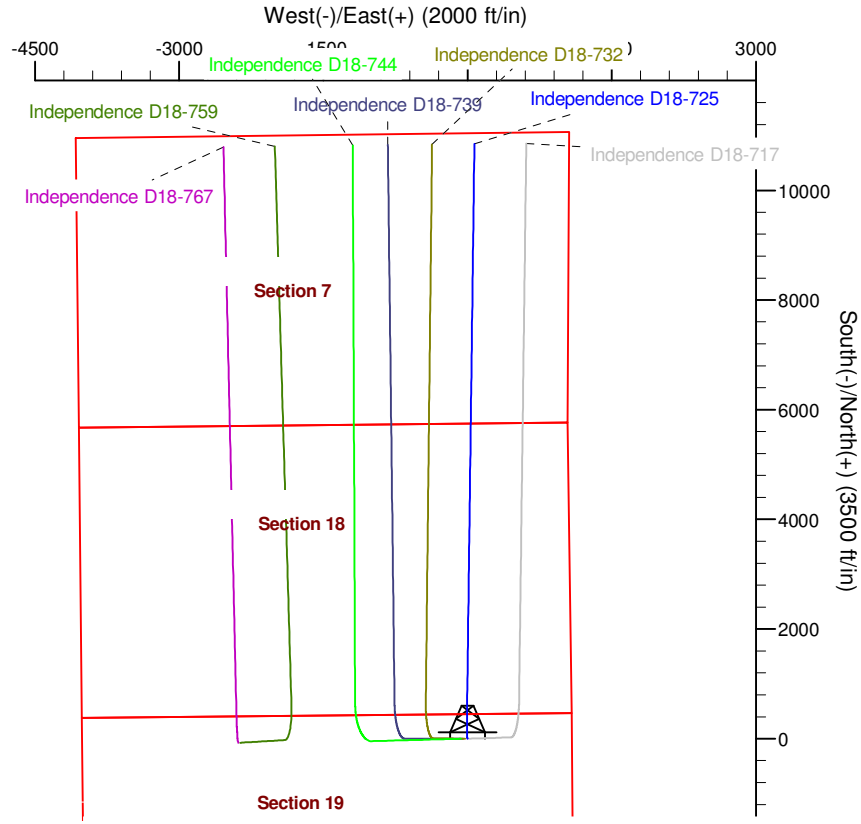
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	6140.00	0.00	0.00	6140.00	0.00	0.00	0.00	0.00	0.00	
3	6232.32	6.93	354.91	6232.09	5.56	-0.50	7.51	354.91	5.55	
4	6335.89	6.93	354.91	6334.91	18.01	-1.61	0.00	0.00	18.00	
5	7259.22	90.00	0.42	6895.00	650.05	-3.48	9.00	5.56	650.02	Independence D18-725 TPZ
6	17455.99	90.00	0.42	6895.00	10846.55	71.98	0.00	0.00	10846.78	Independence D18-725 BHL

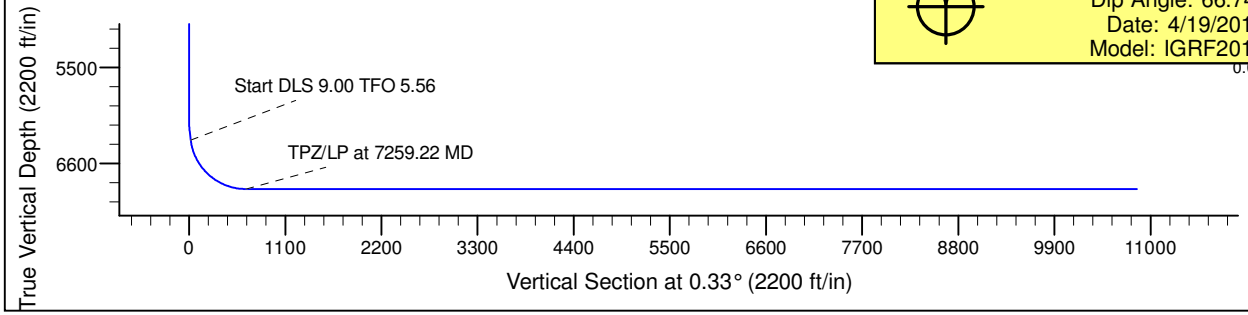


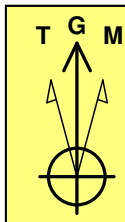
Surface: 450' FNL,1090' FEL, Sec.19

TPZ: 200' FSL, 1090' FEL, Sec.18

BHL: 200' FNL, 990' FEL, Sec.7







Azimuths to Grid North
True North: -0.59°
Magnetic North: 7.53°

Magnetic Field
Strength: 52334.3snT
Dip Angle: 66.74°
Date: 4/19/2017
Model: IGRF2015

WELL DETAILS: Independence D18-725

	Northing	Easting	Latitude	Longitude
0.00	1323130.42	3254586.76	40.2167981	-104.5883459

4770.00
0.00

Plan: Plan 1 (Independence D18-725/Independence D18-725)

Created By: Colby Baxter Date: 9:42, September 20 2018

Checked: _____ Date: _____

Reviewed: _____ Date: _____

Approved: _____ Date: _____

Northern Region - DJ Basin

Mustang
D Section 19
Independence D18-725

Independence D18-725

Plan: Plan 1

Standard Survey Report

20 September, 2018

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Independence D18-725
Project:	Mustang	**TVD Reference:**	Well @ 4800.00ft
Site:	D Section 19	**MD Reference:**	Well @ 4800.00ft
Well:	Independence D18-725	**North Reference:**	Grid
Wellbore:	Independence D18-725	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan 1	**Database:**	EDMP

Project	Mustang, Weld County Colorado		
Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site	D Section 19				
Site Position:		**Northing:**	1,318,926.35 usft	**Latitude:**	40.2052853
From:	Map	**Easting:**	3,253,617.62 usft	**Longitude:**	-104.5919702
Position Uncertainty:	0.00 ft	**Slot Radius:**	13.200 in	**Grid Convergence:**	0.59 °

Well	Independence D18-725					
Well Position	**+N/-S**	0.00 ft	**Northing:**	1,323,130.42 usft	**Latitude:**	40.2167981
	+E/-W	0.00 ft	**Easting:**	3,254,586.77 usft	**Longitude:**	-104.5883458
Position Uncertainty		0.00 ft	**Wellhead Elevation:**	ft	**Ground Level:**	4,770.00 ft

Wellbore	Independence D18-725				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2015	4/19/2017	8.12	66.74	52,334.27671558

Design	Plan 1				
Audit Notes:					
Version:		**Phase:**	PLAN	**Tie On Depth:**	0.00
Vertical Section:	**Depth From (TVD) (ft)**	**+N/-S (ft)**	**+E/-W (ft)**	**Direction (°)**	
	0.00	0.00	0.00	0.33	

Survey Tool Program **Date** 9/20/2018

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	17,455.24	Plan 1 (Independence D18-725)	2_MWD+IFR1+MS	A008Mb: IFR dec & multi-station analysis

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Independence D18-725
Project:	Mustang	**TVD Reference:**	Well @ 4800.00ft
Site:	D Section 19	**MD Reference:**	Well @ 4800.00ft
Well:	Independence D18-725	**North Reference:**	Grid
Wellbore:	Independence D18-725	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan 1	**Database:**	EDMP

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Independence D18-725
Project:	Mustang	**TVD Reference:**	Well @ 4800.00ft
Site:	D Section 19	**MD Reference:**	Well @ 4800.00ft
Well:	Independence D18-725	**North Reference:**	Grid
Wellbore:	Independence D18-725	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan 1	**Database:**	EDMP

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00
6,140.00	0.00	0.00	6,140.00	0.00	0.00	0.00	0.00	0.00	0.00
6,200.00	4.51	354.91	6,199.94	2.35	-0.21	2.35	7.51	7.51	0.00
6,232.32	6.93	354.91	6,232.09	5.56	-0.50	5.55	7.51	7.51	0.00
6,300.00	6.93	354.91	6,299.28	13.69	-1.22	13.69	0.00	0.00	0.00
6,335.89	6.93	354.91	6,334.91	18.01	-1.61	18.00	0.00	0.00	0.00
6,400.00	12.69	357.45	6,398.05	28.91	-2.26	28.89	9.00	8.98	3.96
6,500.00	21.68	358.74	6,493.49	58.41	-3.16	58.39	9.00	8.99	1.29
6,600.00	30.68	359.29	6,583.14	102.47	-3.88	102.45	9.00	9.00	0.56
6,700.00	39.68	359.62	6,664.80	160.02	-4.41	159.99	9.00	9.00	0.32
6,800.00	48.67	359.83	6,736.45	229.63	-4.74	229.60	9.00	9.00	0.22
6,900.00	57.67	360.00	6,796.32	309.59	-4.84	309.56	9.00	9.00	0.17
7,000.00	66.67	0.14	6,842.96	397.94	-4.74	397.91	9.00	9.00	0.14
7,100.00	75.67	0.25	6,875.20	492.49	-4.41	492.46	9.00	9.00	0.12
7,200.00	84.67	0.36	6,892.25	590.92	-3.88	590.89	9.00	9.00	0.11
7,259.22	90.00	0.42	6,895.00	650.05	-3.48	650.02	9.00	9.00	0.11
7,300.00	90.00	0.42	6,895.00	690.83	-3.18	690.80	0.00	0.00	0.00
7,400.00	90.00	0.42	6,895.00	790.83	-2.44	790.80	0.00	0.00	0.00
7,500.00	90.00	0.42	6,895.00	890.83	-1.70	890.80	0.00	0.00	0.00
7,600.00	90.00	0.42	6,895.00	990.82	-0.96	990.80	0.00	0.00	0.00
7,700.00	90.00	0.42	6,895.00	1,090.82	-0.22	1,090.80	0.00	0.00	0.00
7,800.00	90.00	0.42	6,895.00	1,190.82	0.52	1,190.80	0.00	0.00	0.00
7,900.00	90.00	0.42	6,895.00	1,290.82	1.26	1,290.80	0.00	0.00	0.00
8,000.00	90.00	0.42	6,895.00	1,390.81	2.00	1,390.80	0.00	0.00	0.00
8,100.00	90.00	0.42	6,895.00	1,490.81	2.74	1,490.80	0.00	0.00	0.00
8,200.00	90.00	0.42	6,895.00	1,590.81	3.48	1,590.80	0.00	0.00	0.00
8,300.00	90.00	0.42	6,895.00	1,690.81	4.22	1,690.80	0.00	0.00	0.00
8,400.00	90.00	0.42	6,895.00	1,790.80	4.96	1,790.80	0.00	0.00	0.00
8,500.00	90.00	0.42	6,895.00	1,890.80	5.70	1,890.80	0.00	0.00	0.00
8,600.00	90.00	0.42	6,895.00	1,990.80	6.44	1,990.80	0.00	0.00	0.00
8,700.00	90.00	0.42	6,895.00	2,090.79	7.18	2,090.80	0.00	0.00	0.00
8,800.00	90.00	0.42	6,895.00	2,190.79	7.92	2,190.80	0.00	0.00	0.00
8,900.00	90.00	0.42	6,895.00	2,290.79	8.66	2,290.80	0.00	0.00	0.00
9,000.00	90.00	0.42	6,895.00	2,390.79	9.40	2,390.80	0.00	0.00	0.00
9,100.00	90.00	0.42	6,895.00	2,490.78	10.14	2,490.80	0.00	0.00	0.00
9,200.00	90.00	0.42	6,895.00	2,590.78	10.88	2,590.80	0.00	0.00	0.00

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Independence D18-725
Project:	Mustang	**TVD Reference:**	Well @ 4800.00ft
Site:	D Section 19	**MD Reference:**	Well @ 4800.00ft
Well:	Independence D18-725	**North Reference:**	Grid
Wellbore:	Independence D18-725	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan 1	**Database:**	EDMP

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
9,300.00	90.00	0.42	6,895.00	2,690.78	11.62	2,690.80	0.00	0.00	0.00
9,400.00	90.00	0.42	6,895.00	2,790.78	12.36	2,790.80	0.00	0.00	0.00
9,500.00	90.00	0.42	6,895.00	2,890.77	13.10	2,890.80	0.00	0.00	0.00
9,600.00	90.00	0.42	6,895.00	2,990.77	13.84	2,990.80	0.00	0.00	0.00
9,700.00	90.00	0.42	6,895.00	3,090.77	14.58	3,090.80	0.00	0.00	0.00
9,800.00	90.00	0.42	6,895.00	3,190.76	15.32	3,190.80	0.00	0.00	0.00
9,900.00	90.00	0.42	6,895.00	3,290.76	16.06	3,290.80	0.00	0.00	0.00
10,000.00	90.00	0.42	6,895.00	3,390.76	16.80	3,390.80	0.00	0.00	0.00
10,100.00	90.00	0.42	6,895.00	3,490.76	17.54	3,490.80	0.00	0.00	0.00
10,200.00	90.00	0.42	6,895.00	3,590.75	18.28	3,590.80	0.00	0.00	0.00
10,300.00	90.00	0.42	6,895.00	3,690.75	19.02	3,690.80	0.00	0.00	0.00
10,400.00	90.00	0.42	6,895.00	3,790.75	19.76	3,790.80	0.00	0.00	0.00
10,500.00	90.00	0.42	6,895.00	3,890.74	20.50	3,890.80	0.00	0.00	0.00
10,600.00	90.00	0.42	6,895.00	3,990.74	21.24	3,990.80	0.00	0.00	0.00
10,700.00	90.00	0.42	6,895.00	4,090.74	21.98	4,090.80	0.00	0.00	0.00
10,800.00	90.00	0.42	6,895.00	4,190.74	22.72	4,190.80	0.00	0.00	0.00
10,900.00	90.00	0.42	6,895.00	4,290.73	23.46	4,290.80	0.00	0.00	0.00
11,000.00	90.00	0.42	6,895.00	4,390.73	24.20	4,390.80	0.00	0.00	0.00
11,100.00	90.00	0.42	6,895.00	4,490.73	24.94	4,490.80	0.00	0.00	0.00
11,200.00	90.00	0.42	6,895.00	4,590.73	25.68	4,590.80	0.00	0.00	0.00
11,300.00	90.00	0.42	6,895.00	4,690.72	26.42	4,690.80	0.00	0.00	0.00
11,400.00	90.00	0.42	6,895.00	4,790.72	27.16	4,790.80	0.00	0.00	0.00
11,500.00	90.00	0.42	6,895.00	4,890.72	27.90	4,890.80	0.00	0.00	0.00
11,600.00	90.00	0.42	6,895.00	4,990.71	28.64	4,990.80	0.00	0.00	0.00
11,700.00	90.00	0.42	6,895.00	5,090.71	29.38	5,090.80	0.00	0.00	0.00
11,800.00	90.00	0.42	6,895.00	5,190.71	30.12	5,190.80	0.00	0.00	0.00
11,900.00	90.00	0.42	6,895.00	5,290.71	30.86	5,290.80	0.00	0.00	0.00
12,000.00	90.00	0.42	6,895.00	5,390.70	31.60	5,390.80	0.00	0.00	0.00
12,100.00	90.00	0.42	6,895.00	5,490.70	32.34	5,490.80	0.00	0.00	0.00
12,200.00	90.00	0.42	6,895.00	5,590.70	33.08	5,590.80	0.00	0.00	0.00
12,300.00	90.00	0.42	6,895.00	5,690.70	33.82	5,690.80	0.00	0.00	0.00
12,400.00	90.00	0.42	6,895.00	5,790.69	34.56	5,790.80	0.00	0.00	0.00
12,500.00	90.00	0.42	6,895.00	5,890.69	35.30	5,890.80	0.00	0.00	0.00
12,600.00	90.00	0.42	6,895.00	5,990.69	36.04	5,990.80	0.00	0.00	0.00
12,700.00	90.00	0.42	6,895.00	6,090.68	36.78	6,090.80	0.00	0.00	0.00
12,800.00	90.00	0.42	6,895.00	6,190.68	37.52	6,190.80	0.00	0.00	0.00
12,900.00	90.00	0.42	6,895.00	6,290.68	38.26	6,290.80	0.00	0.00	0.00
13,000.00	90.00	0.42	6,895.00	6,390.68	39.00	6,390.80	0.00	0.00	0.00
13,100.00	90.00	0.42	6,895.00	6,490.67	39.74	6,490.80	0.00	0.00	0.00
13,200.00	90.00	0.42	6,895.00	6,590.67	40.48	6,590.79	0.00	0.00	0.00
13,300.00	90.00	0.42	6,895.00	6,690.67	41.22	6,690.79	0.00	0.00	0.00
13,400.00	90.00	0.42	6,895.00	6,790.67	41.96	6,790.79	0.00	0.00	0.00
13,500.00	90.00	0.42	6,895.00	6,890.66	42.70	6,890.79	0.00	0.00	0.00

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Independence D18-725
Project:	Mustang	**TVD Reference:**	Well @ 4800.00ft
Site:	D Section 19	**MD Reference:**	Well @ 4800.00ft
Well:	Independence D18-725	**North Reference:**	Grid
Wellbore:	Independence D18-725	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan 1	**Database:**	EDMP

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
13,600.00	90.00	0.42	6,895.00	6,990.66	43.44	6,990.79	0.00	0.00	0.00
13,700.00	90.00	0.42	6,895.00	7,090.66	44.18	7,090.79	0.00	0.00	0.00
13,800.00	90.00	0.42	6,895.00	7,190.65	44.92	7,190.79	0.00	0.00	0.00
13,900.00	90.00	0.42	6,895.00	7,290.65	45.66	7,290.79	0.00	0.00	0.00
14,000.00	90.00	0.42	6,895.00	7,390.65	46.40	7,390.79	0.00	0.00	0.00
14,100.00	90.00	0.42	6,895.00	7,490.65	47.14	7,490.79	0.00	0.00	0.00
14,200.00	90.00	0.42	6,895.00	7,590.64	47.88	7,590.79	0.00	0.00	0.00
14,300.00	90.00	0.42	6,895.00	7,690.64	48.62	7,690.79	0.00	0.00	0.00
14,400.00	90.00	0.42	6,895.00	7,790.64	49.36	7,790.79	0.00	0.00	0.00
14,500.00	90.00	0.42	6,895.00	7,890.64	50.10	7,890.79	0.00	0.00	0.00
14,600.00	90.00	0.42	6,895.00	7,990.63	50.84	7,990.79	0.00	0.00	0.00
14,700.00	90.00	0.42	6,895.00	8,090.63	51.58	8,090.79	0.00	0.00	0.00
14,800.00	90.00	0.42	6,895.00	8,190.63	52.32	8,190.79	0.00	0.00	0.00
14,900.00	90.00	0.42	6,895.00	8,290.62	53.06	8,290.79	0.00	0.00	0.00
15,000.00	90.00	0.42	6,895.00	8,390.62	53.80	8,390.79	0.00	0.00	0.00
15,100.00	90.00	0.42	6,895.00	8,490.62	54.54	8,490.79	0.00	0.00	0.00
15,200.00	90.00	0.42	6,895.00	8,590.62	55.28	8,590.79	0.00	0.00	0.00
15,300.00	90.00	0.42	6,895.00	8,690.61	56.02	8,690.79	0.00	0.00	0.00
15,400.00	90.00	0.42	6,895.00	8,790.61	56.76	8,790.79	0.00	0.00	0.00
15,500.00	90.00	0.42	6,895.00	8,890.61	57.50	8,890.79	0.00	0.00	0.00
15,600.00	90.00	0.42	6,895.00	8,990.61	58.24	8,990.79	0.00	0.00	0.00
15,700.00	90.00	0.42	6,895.00	9,090.60	58.98	9,090.79	0.00	0.00	0.00
15,800.00	90.00	0.42	6,895.00	9,190.60	59.72	9,190.79	0.00	0.00	0.00
15,900.00	90.00	0.42	6,895.00	9,290.60	60.46	9,290.79	0.00	0.00	0.00
16,000.00	90.00	0.42	6,895.00	9,390.59	61.20	9,390.79	0.00	0.00	0.00
16,100.00	90.00	0.42	6,895.00	9,490.59	61.94	9,490.79	0.00	0.00	0.00
16,200.00	90.00	0.42	6,895.00	9,590.59	62.68	9,590.79	0.00	0.00	0.00
16,300.00	90.00	0.42	6,895.00	9,690.59	63.42	9,690.79	0.00	0.00	0.00
16,400.00	90.00	0.42	6,895.00	9,790.58	64.16	9,790.79	0.00	0.00	0.00
16,500.00	90.00	0.42	6,895.00	9,890.58	64.90	9,890.79	0.00	0.00	0.00
16,600.00	90.00	0.42	6,895.00	9,990.58	65.64	9,990.79	0.00	0.00	0.00
16,700.00	90.00	0.42	6,895.00	10,090.58	66.38	10,090.79	0.00	0.00	0.00
16,800.00	90.00	0.42	6,895.00	10,190.57	67.12	10,190.79	0.00	0.00	0.00
16,900.00	90.00	0.42	6,895.00	10,290.57	67.86	10,290.79	0.00	0.00	0.00
17,000.00	90.00	0.42	6,895.00	10,390.57	68.60	10,390.79	0.00	0.00	0.00
17,100.00	90.00	0.42	6,895.00	10,490.56	69.34	10,490.79	0.00	0.00	0.00
17,200.00	90.00	0.42	6,895.00	10,590.56	70.08	10,590.79	0.00	0.00	0.00
17,300.00	90.00	0.42	6,895.00	10,690.56	70.82	10,690.79	0.00	0.00	0.00
17,400.00	90.00	0.42	6,895.00	10,790.56	71.56	10,790.79	0.00	0.00	0.00
17,455.99	90.00	0.42	6,895.00	10,846.55	71.98	10,846.78	0.00	0.00	0.00

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Independence D18-725
Project:	Mustang	**TVD Reference:**	Well @ 4800.00ft
Site:	D Section 19	**MD Reference:**	Well @ 4800.00ft
Well:	Independence D18-725	**North Reference:**	Grid
Wellbore:	Independence D18-725	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan 1	**Database:**	EDMP

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Independence D18-725 - plan hits target center - Point	0.00	0.00	6,895.00	650.05	-3.48	1,323,780.47	3,254,583.29	40.2185825	-104.5883344
Independence D18-725 - plan hits target center - Point	0.00	0.00	6,895.00	10,846.55	71.98	1,333,976.94	3,254,658.74	40.2465693	-104.5876885

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
482.00	482.00	Pierre			
646.00	646.00	Upper Pierre Aquifer Top			
1,544.00	1,544.00	Upper Pierre Aquifer Base			
3,679.00	3,679.00	Parkman			
4,081.00	4,081.00	Sussex			
4,865.00	4,865.00	Shannon			
6,033.00	6,033.00	Teepee Buttes			
6,721.35	6,681.00	Sharon Springs			
6,813.11	6,745.00	Top A Chalk			
6,838.53	6,761.00	Top A Marl			
6,840.17	6,762.00	Top B Chalk			
6,924.46	6,809.00	Top B Marl			
7,120.74	6,880.00	Top C Chalk			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
6140	6140	0	0	Start Build 7.51
6336	6335	6	0	Start DLS 9.00 TFO 5.56
7259	6895	18	-2	TPZ/LP at 7259.22 MD
17,456	6895	650	-3	TD at 17455.99 MD

Checked By: _____ Approved By: _____ Date: _____

Northern Region - DJ Basin

Mustang
D Section 19
Independence D18-725

Independence D18-725
Plan 1

Anticollision Summary Report

20 September, 2018

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Independence D18-725
Project:	Mustang	**TVD Reference:**	Well @ 4800.00ft
Reference Site:	D Section 19	**MD Reference:**	Well @ 4800.00ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Independence D18-725	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Independence D18-725	**Database:**	EDMP
Reference Design:	Plan 1	**Offset TVD Reference:**	Offset Datum

Reference Plan 1

Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	**Error Model:**	ISCWSA
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.00 ft	**Error Surface:**	Pedal Curve
Warning Levels Evaluated at:	2.00 **Sigma**	**Casing Method:**	Not applied

Survey Tool Program **Date** 9/20/2018

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	17,455.24	Plan 1 (Independence D18-725)	2_MWD+IFR1+MS	A008Mb: IFR dec & multi-station analysis

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
D Section 07						
Dechant 07-01-17 - Dechant 07-01-17 - Dechant 07-01-1	17,422.79	6,879.68	481.45	366.74	4.197	CC, ES, SF
Dechant 07-11 - Dechant 07-11 - Dechant 07-11 - As Dril	17,033.50	6,883.77	209.06	97.34	1.871	CC, ES, SF
Dechant 07-13 - Dechant 07-13 - Dechant 07-13 - As Dri	15,684.44	6,888.99	1,010.94	909.84	9.999	CC
Dechant 07-13 - Dechant 07-13 - Dechant 07-13 - As Dri	15,700.00	6,910.77	1,011.06	909.77	9.982	ES, SF
Dechant 07-14 - Dechant 07-14 - Dechant 07-14 - As Dri	15,574.21	6,877.00	318.51	182.16	2.336	CC, ES, SF
Dechant 07-15 - Dechant 07-15 - Dechant 07-15 - As Dri	16,321.89	6,889.00	482.90	340.60	3.394	CC, ES, SF
Dechant 18-07 - Dechant 18-07 - Dechant 18-07 - As Dri	16,363.32	6,932.07	2,850.77	2,744.13	26.734	CC
Dechant 18-07 - Dechant 18-07 - Dechant 18-07 - As Dri	16,400.00	6,931.89	2,851.00	2,744.08	26.665	ES
Dechant 18-07 - Dechant 18-07 - Dechant 18-07 - As Dri	16,700.00	6,930.42	2,870.58	2,761.81	26.390	SF
Dechant D07-09 - Dechant D07-09 - Dechant D07-09 - A	14,364.74	6,921.56	294.32	203.21	3.230	CC, ES, SF
Dechant D07-10 - Dechant D07-10 - Dechant D07-10 - A	14,217.41	6,849.88	819.52	729.73	9.127	CC, ES, SF
Dechant D07-11 - Dechant D07-11 - Dechant D07-11 - A	14,333.28	6,994.99	2,387.50	2,296.39	26.205	CC, ES
Dechant D07-11 - Dechant D07-11 - Dechant D07-11 - A	14,600.00	7,004.37	2,402.33	2,309.49	25.876	SF
Dechant D07-12 - Dechant D07-12 - Dechant D07-12 - A	14,196.78	6,780.01	3,606.62	3,517.18	40.327	CC
Dechant D07-12 - Dechant D07-12 - Dechant D07-12 - A	14,200.00	6,780.04	3,606.62	3,517.16	40.316	ES
Dechant D07-12 - Dechant D07-12 - Dechant D07-12 - A	14,900.00	6,786.76	3,674.52	3,580.72	39.174	SF
Dechant D07-13 - Dechant D07-13 - Dechant D07-13 - A	13,022.99	6,924.60	3,373.96	3,293.03	41.690	CC, ES
Dechant D07-13 - Dechant D07-13 - Dechant D07-13 - A	13,700.00	6,933.73	3,441.20	3,356.16	40.461	SF
Dechant D07-14 - Dechant D07-14 - Dechant D07-14 - A	13,032.30	7,035.40	2,250.81	2,169.38	27.642	CC, ES
Dechant D07-14 - Dechant D07-14 - Dechant D07-14 - A	13,300.00	7,045.14	2,266.66	2,183.54	27.272	SF
Dechant D07-15 - Dechant D07-15 - Dechant D07-15 - A	12,856.27	6,893.21	1,138.03	1,058.43	14.296	CC, ES
Dechant D07-15 - Dechant D07-15 - Dechant D07-15 - A	12,900.00	6,893.74	1,138.87	1,058.97	14.253	SF
Dechant D07-16 - Dechant D07-16 - Dechant D07-16 - A	13,032.56	6,879.31	446.41	365.48	5.517	CC, ES, SF
Dechant D07-20 - Dechant D07-20 - Dechant D07-20 - A	14,812.61	6,946.06	2,948.65	2,854.03	31.161	CC, ES
Dechant D07-20 - Dechant D07-20 - Dechant D07-20 - A	15,200.00	6,949.73	2,973.99	2,876.88	30.626	SF
Dechant D07-21 - Dechant D07-21 - Dechant D07-21 - A	14,753.79	6,878.41	1,591.09	1,497.16	16.939	CC, ES
Dechant D07-21 - Dechant D07-21 - Dechant D07-21 - A	14,900.00	6,878.29	1,597.80	1,502.98	16.852	SF
Dechant D07-22 - Dechant D07-22 - Dechant D07-22 - A	14,892.81	6,873.47	367.07	272.11	3.866	CC, ES
Dechant D07-22 - Dechant D07-22 - Dechant D07-22 - A	14,900.00	6,873.86	367.14	272.13	3.864	SF
Dechant D07-23 - Dechant D07-23 - Dechant D07-23 - A	13,422.48	6,892.62	344.89	261.00	4.111	CC, ES, SF
Dechant D07-24 - Dechant D07-24 - Dechant D07-24 - A	13,646.45	6,918.33	1,635.30	1,549.68	19.098	CC, ES
Dechant D07-24 - Dechant D07-24 - Dechant D07-24 - A	13,800.00	6,922.89	1,642.49	1,555.92	18.973	SF
Dechant D07-25 - Dechant D07-25 - Dechant D07-25 - A	13,677.81	6,910.12	2,844.15	2,758.36	33.151	CC
Dechant D07-25 - Dechant D07-25 - Dechant D07-25 - A	13,700.00	6,910.18	2,844.24	2,758.28	33.088	ES
Dechant D07-25 - Dechant D07-25 - Dechant D07-25 - A	14,100.00	6,911.28	2,875.31	2,786.91	32.524	SF
Dechant D07-32 - Dechant D07-32 - Dechant D07-32 - A	14,803.46	6,931.25	3,993.28	3,898.82	42.275	CC, ES
Dechant D07-32 - Dechant D07-32 - Dechant D07-32 - A	15,600.00	6,941.44	4,071.94	3,972.53	40.963	SF

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

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Independence D18-725
Project:	Mustang	**TVD Reference:**	Well @ 4800.00ft
Reference Site:	D Section 19	**MD Reference:**	Well @ 4800.00ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Independence D18-725	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Independence D18-725	**Database:**	EDMP
Reference Design:	Plan 1	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
D Section 07						
Dechant D07-33 - Dechant D07-33 - Dechant D07-33 - A	13,608.74	6,715.22	4,086.03	4,001.33	48.242	CC, ES
Dechant D07-33 - Dechant D07-33 - Dechant D07-33 - A	14,500.00	6,748.48	4,181.97	4,091.54	46.248	SF
Dechant D18-27D - Dechant D18-27D - Dechant D18-27	12,289.58	7,349.63	408.48	319.81	4.607	CC
Dechant D18-27D - Dechant D18-27D - Dechant D18-27	12,400.00	7,351.25	423.14	317.20	3.994	ES
Dechant D18-27D - Dechant D18-27D - Dechant D18-27	12,500.00	7,352.71	459.48	342.47	3.927	SF
Dechant D18-30D - Wellbore #1 - Wellbore #1- As Drilled	11,200.00	7,255.29	4,268.05	4,171.55	44.228	SF
Dechant D18-30D - Wellbore #1 - Wellbore #1- As Drilled	12,300.00	7,267.96	4,119.87	4,030.77	46.236	ES
Dechant D18-30D - Wellbore #1 - Wellbore #1- As Drilled	12,315.03	7,268.15	4,119.85	4,030.84	46.287	CC
HSR Barbour 04-07 - HSR Barbour 04-07 - HSR Barbour	17,138.48	6,951.98	3,547.05	3,435.08	31.678	CC, ES
HSR Barbour 04-07 - HSR Barbour 04-07 - HSR Barbour	17,455.99	6,951.66	3,561.23	3,447.06	31.193	SF
HSR Parkman 06-07 - HSR Parkman 06-07 - HSR Parkm	15,428.43	6,925.24	2,473.09	2,373.83	24.915	CC, ES
HSR Parkman 06-07 - HSR Parkman 06-07 - HSR Parkm	15,700.00	6,928.89	2,487.95	2,386.96	24.635	SF
HSR Petrie 03-07 - HSR Petrie 03-07 - HSR Petrie 03-07	17,077.98	6,862.99	2,499.20	2,387.28	22.330	CC
HSR Petrie 03-07 - HSR Petrie 03-07 - HSR Petrie 03-07	17,100.00	6,863.35	2,499.30	2,387.20	22.296	ES
HSR Petrie 03-07 - HSR Petrie 03-07 - HSR Petrie 03-07	17,300.00	6,866.61	2,509.04	2,395.65	22.128	SF
HSR Safran 05-07 - HSR Safran 05-07 - HSR Safran 05-	15,491.57	7,024.08	3,744.73	3,644.64	37.411	CC
HSR Safran 05-07 - HSR Safran 05-07 - HSR Safran 05-	15,500.00	7,024.10	3,744.74	3,644.58	37.387	ES
HSR Safran 05-07 - HSR Safran 05-07 - HSR Safran 05-	16,100.00	7,025.25	3,793.84	3,689.85	36.486	SF
Two E Ranch 07-01 - Two E Ranch 07-01 - Two E Ranch	16,918.36	6,888.34	1,025.37	914.61	9.258	CC, ES
Two E Ranch 07-01 - Two E Ranch 07-01 - Two E Ranch	17,000.00	6,890.38	1,028.62	917.44	9.252	SF
Two E Ranches 1 - Two E Ranches 1 - Two E Ranches 1	15,590.38	4,625.00	2,476.97	2,384.94	26.916	CC
Two E Ranches 1 - Two E Ranches 1 - Two E Ranches 1	15,600.00	4,625.00	2,476.99	2,384.89	26.895	ES
Two E Ranches 1 - Two E Ranches 1 - Two E Ranches 1	16,000.00	4,625.00	2,510.61	2,415.63	26.435	SF

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

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Independence D18-725
Project:	Mustang	**TVD Reference:**	Well @ 4800.00ft
Reference Site:	D Section 19	**MD Reference:**	Well @ 4800.00ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Independence D18-725	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Independence D18-725	**Database:**	EDMP
Reference Design:	Plan 1	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
D Section 17						
Butterball D19-27D - Wellbore #1 - Gyro Surveys	7,100.00	7,083.46	244.64	182.33	3.926	SF
Butterball D19-27D - Wellbore #1 - Gyro Surveys	7,200.00	7,098.93	222.23	170.83	4.324	ES
Butterball D19-27D - Wellbore #1 - Gyro Surveys	7,203.41	7,099.18	222.21	170.99	4.339	CC
Guttersen State D16-33 (SI) - Wellbore #1 - No Surveys	8,690.18	6,847.00	6,342.23	6,253.36	71.370	CC
Guttersen State D16-33 (SI) - Wellbore #1 - No Surveys	8,700.00	6,847.00	6,342.23	6,253.33	71.336	ES
Guttersen State D16-33 (SI) - Wellbore #1 - No Surveys	10,900.00	6,847.00	6,716.19	6,616.08	67.093	SF
HSR LDS 6-17 (SI) - Wellbore #1 - No Surveys	10,443.56	6,845.00	2,823.86	2,725.26	28.641	CC, ES
HSR LDS 6-17 (SI) - Wellbore #1 - No Surveys	10,900.00	6,845.00	2,860.51	2,759.28	28.259	SF
HSR LDS B5-17 (SI) - Wellbore #1 - No Surveys	10,578.71	6,846.00	1,715.85	1,616.37	17.249	CC
HSR LDS B5-17 (SI) - Wellbore #1 - No Surveys	10,600.00	6,846.00	1,715.98	1,616.37	17.227	ES
HSR LDS B5-17 (SI) - Wellbore #1 - No Surveys	10,700.00	6,846.00	1,720.13	1,619.93	17.168	SF
HSR Mike Gutteresen 16-17X (SI) - Wellbore #1 - No Su	7,761.31	6,852.00	5,662.88	5,577.31	66.179	CC, ES
HSR Mike Gutteresen 16-17X (SI) - Wellbore #1 - No Su	9,500.00	6,852.00	5,923.79	5,831.46	64.157	SF
HSR Weeks 10-17 - Wellbore #1 - Gyro Surveys	9,134.92	6,700.00	4,323.74	4,269.30	79.418	CC, ES
HSR Weeks 10-17 - Wellbore #1 - Gyro Surveys	10,600.00	6,700.00	4,565.21	4,503.44	73.900	SF
HSR Weeks 15-17 (SI) - Wellbore #1 - No Surveys	7,835.16	6,850.00	4,373.17	4,287.42	50.998	CC, ES
HSR Weeks 15-17 (SI) - Wellbore #1 - No Surveys	8,700.00	6,850.00	4,457.86	4,369.10	50.223	SF
HSR Weeks 9-17 - Wellbore #1 - Gyro Surveys	9,214.80	6,864.43	5,440.23	5,385.39	99.193	CC, ES
HSR Weeks 9-17 - Wellbore #1 - Gyro Surveys	11,500.00	6,862.99	5,900.70	5,834.07	88.554	SF
HSR-LDS 3-17 (SI) - Wellbore #1 - No Surveys	11,767.68	6,840.00	2,808.94	2,701.45	26.132	CC
HSR-LDS 3-17 (SI) - Wellbore #1 - No Surveys	11,800.00	6,840.00	2,809.13	2,701.41	26.079	ES
HSR-LDS 3-17 (SI) - Wellbore #1 - No Surveys	12,200.00	6,840.00	2,842.02	2,731.89	25.807	SF
HSR-LDS 4-17 (SI) - Wellbore #1 - No Surveys	11,572.80	6,842.00	1,684.24	1,578.09	15.868	CC, ES
HSR-LDS 4-17 (SI) - Wellbore #1 - No Surveys	11,700.00	6,842.00	1,689.03	1,582.10	15.795	SF
LDS 18-17 (SI) - Wellbore #1 - No Surveys	11,092.38	6,845.00	2,492.28	2,389.41	24.228	CC
LDS 18-17 (SI) - Wellbore #1 - No Surveys	11,100.00	6,845.00	2,492.29	2,389.37	24.217	ES
LDS 18-17 (SI) - Wellbore #1 - No Surveys	11,400.00	6,845.00	2,511.19	2,406.46	23.978	SF
LDS D17-13 - Wellbore #1 - Gyro Surveys	7,451.30	6,813.65	1,438.84	1,390.13	29.535	CC, ES
LDS D17-13 - Wellbore #1 - Gyro Surveys	7,500.00	6,814.88	1,439.66	1,390.85	29.495	SF
LDS D17-18 (SI) - Wellbore #1 - No Surveys	11,173.19	6,843.00	3,796.93	3,693.53	36.722	CC
LDS D17-18 (SI) - Wellbore #1 - No Surveys	11,200.00	6,843.00	3,797.02	3,693.44	36.659	ES
LDS D17-18 (SI) - Wellbore #1 - No Surveys	11,900.00	6,843.00	3,865.86	3,758.05	35.856	SF
LDS D17-20 - Wellbore #1 - No Surveys	9,610.29	6,851.00	2,372.58	2,278.98	25.347	CC, ES
LDS D17-20 - Wellbore #1 - No Surveys	9,900.00	6,851.00	2,390.20	2,295.05	25.121	SF
LDS D17-21 - Wellbore #1 - No Surveys	9,579.68	6,847.00	3,518.15	3,424.75	37.669	CC
LDS D17-21 - Wellbore #1 - No Surveys	9,600.00	6,847.00	3,518.21	3,424.70	37.624	ES
LDS D17-21 - Wellbore #1 - No Surveys	10,200.00	6,847.00	3,572.42	3,475.66	36.922	SF
LDS D17-22 (SI) - Wellbore #1 - No Surveys	9,983.65	6,842.00	4,921.27	4,825.55	51.417	CC
LDS D17-22 (SI) - Wellbore #1 - No Surveys	10,000.00	6,842.00	4,921.29	4,825.48	51.365	ES
LDS D17-22 (SI) - Wellbore #1 - No Surveys	11,300.00	6,842.00	5,094.28	4,991.05	49.352	SF
LDS D17-24D - Wellbore #1 - LDS D17-24D - As Drilled	8,544.94	6,966.98	3,624.65	3,566.46	62.283	CC, ES
LDS D17-24D - Wellbore #1 - LDS D17-24D - As Drilled	9,400.00	6,959.32	3,724.14	3,662.62	60.534	SF
LDS D17-25D - Wellbore #1 - LDS D17-25D - As Drilled	8,780.62	7,084.78	2,375.39	2,316.89	40.604	CC
LDS D17-25D - Wellbore #1 - LDS D17-25D - As Drilled	8,800.00	7,084.74	2,375.47	2,316.80	40.493	ES
LDS D17-25D - Wellbore #1 - LDS D17-25D - As Drilled	9,500.00	7,083.63	2,481.93	2,417.68	38.633	SF
LDS D17-31D - LDS D17-31D - LDS D17-31D - As Drille	11,053.98	7,061.00	971.26	894.77	12.698	CC, ES, SF
LDS D17-32D - LDS D17-32D - LDS D17-32D - As Drille	9,922.09	6,892.92	967.77	908.91	16.442	CC, ES
LDS D17-32D - LDS D17-32D - LDS D17-32D - As Drille	10,000.00	6,892.89	970.90	911.78	16.421	SF
LDS D17-33 - LDS D17-33 - LDS D17-33 - As Drilled	8,516.78	6,850.83	1,230.91	1,178.79	23.619	CC, ES
LDS D17-33 - LDS D17-33 - LDS D17-33 - As Drilled	8,600.00	6,850.15	1,233.72	1,181.27	23.523	SF
LDS D17-7 - Wellbore #1 - No Surveys	10,481.91	6,841.00	4,198.83	4,100.03	42.496	CC
LDS D17-7 - Wellbore #1 - No Surveys	10,500.00	6,841.00	4,198.87	4,099.95	42.447	ES
LDS D17-7 - Wellbore #1 - No Surveys	11,400.00	6,841.00	4,298.03	4,193.82	41.244	SF

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

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Independence D18-725
Project:	Mustang	**TVD Reference:**	Well @ 4800.00ft
Reference Site:	D Section 19	**MD Reference:**	Well @ 4800.00ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Independence D18-725	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Independence D18-725	**Database:**	EDMP
Reference Design:	Plan 1	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
D Section 17						
LDS D20-29D - Wellbore #1 - LDS D20-29D - As Drilled	752.31	730.39	1,544.72	1,540.97	411.712	CC
LDS D20-29D - Wellbore #1 - LDS D20-29D - As Drilled	800.00	764.77	1,545.06	1,540.93	373.862	ES
LDS D20-29D - Wellbore #1 - LDS D20-29D - As Drilled	7,050.00	6,993.13	2,392.51	2,343.31	48.621	SF
LDS D20-30D - Wellbore #1 - LDS D20-30D - As Drilled	6,949.17	6,865.63	953.58	905.28	19.745	CC
LDS D20-30D - Wellbore #1 - LDS D20-30D - As Drilled	6,950.00	6,866.01	953.58	905.28	19.743	ES
LDS D20-30D - Wellbore #1 - LDS D20-30D - As Drilled	7,050.00	6,904.63	958.02	909.21	19.629	SF
LDS RED D17-11 (SI) - Wellbore #1 - No Surveys	9,124.58	6,848.00	3,189.17	3,098.22	35.063	CC, ES
LDS RED D17-11 (SI) - Wellbore #1 - No Surveys	9,700.00	6,848.00	3,240.67	3,146.85	34.541	SF
LDS Red D17-12 - Wellbore #1 - No Surveys	9,287.46	6,851.00	1,530.43	1,438.60	16.666	CC
LDS Red D17-12 - Wellbore #1 - No Surveys	9,300.00	6,851.00	1,530.48	1,438.59	16.655	ES
LDS Red D17-12 - Wellbore #1 - No Surveys	9,400.00	6,851.00	1,534.56	1,442.17	16.609	SF
LDS Red D17-14X (SI) - Wellbore #1 - No Surveys	7,951.36	6,852.00	3,248.61	3,162.51	37.727	CC, ES
LDS Red D17-14X (SI) - Wellbore #1 - No Surveys	8,400.00	6,852.00	3,279.45	3,191.83	37.430	SF
LDS Red D17-3J - Wellbore #1 - Gyro Surveys	8,144.77	6,870.57	1,985.64	1,934.84	39.092	CC, ES
LDS Red D17-3J - Wellbore #1 - Gyro Surveys	8,400.00	6,870.82	2,001.97	1,950.29	38.736	SF
LDS White D17-1 - Wellbore #1 - Gyro Surveys	11,839.86	6,775.66	5,590.25	5,518.45	77.853	CC
LDS White D17-1 - Wellbore #1 - Gyro Surveys	11,900.00	6,775.63	5,590.58	5,518.35	77.401	ES
LDS White D17-1 - Wellbore #1 - Gyro Surveys	13,700.00	6,774.63	5,891.61	5,808.74	71.099	SF
LDS White D17-2 - Wellbore #1 - No Surveys	11,804.63	6,838.00	4,288.87	4,181.14	39.809	CC, ES
LDS White D17-2 - Wellbore #1 - No Surveys	12,700.00	6,838.00	4,381.34	4,268.04	38.672	SF
LDS White D17-8 - Wellbore #1 - No Surveys	10,485.59	6,836.00	5,545.11	5,446.32	56.133	CC
LDS White D17-8 - Wellbore #1 - No Surveys	10,500.00	6,836.00	5,545.12	5,446.25	56.081	ES
LDS White D17-8 - Wellbore #1 - No Surveys	12,100.00	6,836.00	5,775.34	5,667.00	53.308	SF
Thomson D20-31D - Wellbore #1 - Gyro Surveys	3,703.29	3,859.29	1,111.77	1,072.92	28.618	CC
Thomson D20-31D - Wellbore #1 - Gyro Surveys	3,800.00	3,946.79	1,112.58	1,072.70	27.899	ES
Thomson D20-31D - Wellbore #1 - Gyro Surveys	6,200.00	6,353.24	1,300.35	1,243.26	22.778	SF
Weeks 20-17 (SI) - Wellbore #1 - Gyro Surveys	8,412.18	6,854.82	4,870.75	4,819.00	94.114	CC, ES
Weeks 20-17 (SI) - Wellbore #1 - Gyro Surveys	10,400.00	6,848.95	5,260.76	5,200.04	86.643	SF

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Independence D18-725
Project:	Mustang	**TVD Reference:**	Well @ 4800.00ft
Reference Site:	D Section 19	**MD Reference:**	Well @ 4800.00ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Independence D18-725	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Independence D18-725	**Database:**	EDMP
Reference Design:	Plan 1	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
D Section 18						
Horton D18-20D - Horton D18-20D - Horton D18-20D - A	618.37	593.38	2,456.14	2,452.25	632.460	CC
Horton D18-20D - Horton D18-20D - Horton D18-20D - A	900.00	861.43	2,457.24	2,451.41	421.656	ES
Horton D18-20D - Horton D18-20D - Horton D18-20D - A	11,000.00	7,154.58	3,099.01	2,993.19	29.285	SF
Horton D18-22D - Horton D18-22D - Horton D18-22D - A	9,556.75	6,990.71	239.88	177.52	3.847	CC, ES, SF
LSWD 1 - LSWD 1 - LSWD 1 - As Drilled	11,793.37	6,900.00	1,913.61	1,805.41	17.686	CC
LSWD 1 - LSWD 1 - LSWD 1 - As Drilled	11,800.00	6,900.00	1,913.62	1,805.38	17.679	ES
LSWD 1 - LSWD 1 - LSWD 1 - As Drilled	12,000.00	6,900.00	1,924.74	1,815.27	17.584	SF
Mick D18-03 - Mick D18-03 - Mick D18-03 - As Drilled	11,833.03	6,843.97	2,075.11	2,003.12	28.827	CC, ES
Mick D18-03 - Mick D18-03 - Mick D18-03 - As Drilled	12,100.00	6,835.97	2,092.19	2,018.64	28.445	SF
Mick D18-04 - Wellbore #1 - Wellbore #1- As Drilled	11,760.95	6,854.80	3,597.93	3,526.37	50.280	CC
Mick D18-04 - Wellbore #1 - Wellbore #1- As Drilled	11,800.00	6,854.70	3,598.14	3,526.31	50.091	ES
Mick D18-04 - Wellbore #1 - Wellbore #1- As Drilled	12,600.00	6,852.73	3,694.47	3,617.94	48.278	SF
Mick D18-05 - Wellbore #1 - Wellbore #1- As Drilled	10,472.46	6,752.40	3,544.93	3,482.47	56.754	CC
Mick D18-05 - Wellbore #1 - Wellbore #1- As Drilled	10,500.00	6,752.43	3,545.04	3,482.40	56.597	ES
Mick D18-05 - Wellbore #1 - Wellbore #1- As Drilled	11,400.00	6,753.49	3,664.27	3,596.62	54.166	SF
Mick D18-06 - Mick D18-06 - Mick D18-06 - As Drilled	10,495.95	6,829.94	2,078.13	2,015.23	33.039	CC
Mick D18-06 - Mick D18-06 - Mick D18-06 - As Drilled	10,500.00	6,829.99	2,078.14	2,015.21	33.025	ES
Mick D18-06 - Mick D18-06 - Mick D18-06 - As Drilled	10,800.00	6,833.72	2,100.26	2,035.62	32.491	SF
Mick D18-11 - Mick D18-11 - Mick D18-11 - As Drilled	8,780.25	6,821.64	2,207.93	2,154.77	41.533	CC
Mick D18-11 - Mick D18-11 - Mick D18-11 - As Drilled	8,800.00	6,822.38	2,208.02	2,154.77	41.462	ES
Mick D18-11 - Mick D18-11 - Mick D18-11 - As Drilled	9,200.00	6,837.64	2,247.42	2,192.34	40.801	SF
Mick D18-12 - Wellbore #1 - Wellbore #1- As Drilled	8,940.67	6,765.26	3,324.45	3,270.73	61.889	CC, ES
Mick D18-12 - Wellbore #1 - Wellbore #1- As Drilled	9,800.00	6,767.40	3,433.72	3,375.90	59.391	SF
Mick D18-13 - Wellbore #1 - Wellbore #1- As Drilled	7,700.94	6,967.74	3,375.41	3,325.65	67.822	CC, ES
Mick D18-13 - Wellbore #1 - Wellbore #1- As Drilled	8,500.00	6,963.37	3,468.70	3,416.45	66.385	SF
Mick D18-14 - Mick D18-14 - Mick D18-14 - As Drilled	7,628.88	6,838.57	2,173.15	2,123.98	44.200	CC, ES
Mick D18-14 - Mick D18-14 - Mick D18-14 - As Drilled	7,900.00	6,834.07	2,189.99	2,140.17	43.953	SF
Mick D18-19 - Mick D18-19 - Mick D18-19 - As Drilled	11,156.42	6,825.29	2,728.50	2,661.26	40.583	CC, ES
Mick D18-19 - Mick D18-19 - Mick D18-19 - As Drilled	11,700.00	6,827.39	2,782.12	2,711.75	39.539	SF
Mick D18-25 - Mick D18-25 - Mick D18-25 - As Drilled	8,243.67	6,849.17	2,705.88	2,654.80	52.977	CC, ES
Mick D18-25 - Mick D18-25 - Mick D18-25 - As Drilled	8,800.00	6,843.07	2,762.47	2,709.29	51.943	SF
Scooter D18-02 - Scooter D18-02 - Scooter D18-02 - As	11,605.66	6,917.18	1,041.67	971.03	14.746	CC, ES
Scooter D18-02 - Scooter D18-02 - Scooter D18-02 - As	11,700.00	6,918.75	1,045.94	974.76	14.694	SF
Scooter D18-07 - Scooter D18-07 - Scooter D18-07 - As	10,292.22	6,904.11	1,002.77	940.87	16.199	CC
Scooter D18-07 - Scooter D18-07 - Scooter D18-07 - As	10,300.00	6,903.77	1,002.80	940.85	16.187	ES
Scooter D18-07 - Scooter D18-07 - Scooter D18-07 - As	10,400.00	6,899.38	1,008.54	946.08	16.149	SF
Scooter D18-10 - Scooter D18-10 - Scooter D18-10 - As	8,810.55	6,864.50	945.30	891.84	17.684	CC, ES
Scooter D18-10 - Scooter D18-10 - Scooter D18-10 - As	8,900.00	6,863.65	949.52	895.69	17.638	SF
Scooter D18-15 - Scooter D18-15 - Scooter D18-15 - As	7,665.56	6,893.46	811.70	762.28	16.425	CC, ES
Scooter D18-15 - Scooter D18-15 - Scooter D18-15 - As	7,700.00	6,892.57	812.43	762.94	16.413	SF
Scooter D18-16 - Scooter D18-16 - Scooter D18-16 - As	7,734.56	6,856.00	437.18	351.64	5.111	CC, ES, SF
Scooter D18-17 JI - Scooter D18-17 JI - Scooter D18-17	10,903.77	6,993.96	265.90	198.99	3.974	CC, ES, SF
Scooter D18-1JI - Scooter D18-1JI - Scooter D18-1JI - A	11,446.36	7,202.82	483.39	407.74	6.390	CC
Scooter D18-1JI - Scooter D18-1JI - Scooter D18-1JI - A	11,500.00	7,203.38	486.35	406.33	6.078	ES
Scooter D18-1JI - Scooter D18-1JI - Scooter D18-1JI - A	11,600.00	7,204.45	507.21	418.85	5.740	SF
Scooter D18-4J - Scooter D18-4J - Scooter D18-4J - As	8,577.99	6,936.45	55.80	3.19	1.061	Level 2, CC, ES, SF
Scooter D18-78-1HN - Original Drilling - Original Drilling -	12,133.36	6,889.81	3,109.15	3,038.63	44.087	CC, ES
Scooter D18-78-1HN - Original Drilling - Original Drilling -	12,700.00	6,893.80	3,160.36	3,086.47	42.772	SF
Scooter D18-78-1HN - Original Drilling - ST01 - Original D	7,520.25	11,297.00	3,012.08	2,907.44	28.786	CC, ES
Scooter D18-78-1HN - Original Drilling - ST01 - Original D	7,600.00	11,287.40	3,013.12	2,908.40	28.773	SF
Scooter D18-79-1HN - Original Drilling - Original Drilling -	7,502.84	11,265.00	3,670.06	3,564.57	34.788	CC, ES, SF
Scooter D18-79HN - Original Drilling - Original Drilling - A	7,494.28	11,410.00	4,089.83	3,984.16	38.705	CC, ES
Scooter D18-79HN - Original Drilling - Original Drilling - A	7,600.00	11,414.89	4,091.19	3,985.47	38.697	SF

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

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Independence D18-725
Project:	Mustang	**TVD Reference:**	Well @ 4800.00ft
Reference Site:	D Section 19	**MD Reference:**	Well @ 4800.00ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Independence D18-725	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Independence D18-725	**Database:**	EDMP
Reference Design:	Plan 1	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
D Section 18						
Scooter D18-8JI - Scooter D18-8JI - Scooter D18-8JI - A	10,365.57	7,100.66	388.32	312.51	5.122	CC, ES
Scooter D18-8JI - Scooter D18-8JI - Scooter D18-8JI - A	10,400.00	7,100.43	389.84	313.68	5.119	SF
Scooter D18-9JI - Scooter D18-9JI - Scooter D18-9JI - A	9,192.89	6,876.49	549.07	491.64	9.561	CC
Scooter D18-9JI - Scooter D18-9JI - Scooter D18-9JI - A	9,200.00	6,876.46	549.12	491.62	9.550	ES, SF
Shianne D18-29D - Shianne D18-29D - Shianne D18-29D	12,213.52	6,933.79	2,769.75	2,692.72	35.957	CC, ES
Shianne D18-29D - Shianne D18-29D - Shianne D18-29D	12,800.00	6,925.46	2,831.15	2,749.69	34.754	SF

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Independence D18-725
Project:	Mustang	**TVD Reference:**	Well @ 4800.00ft
Reference Site:	D Section 19	**MD Reference:**	Well @ 4800.00ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Independence D18-725	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Independence D18-725	**Database:**	EDMP
Reference Design:	Plan 1	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
D Section 19						
Butterball 13-19 - Butterball 13-19 - Butterball 13-19 - As	6,206.65	6,418.12	4,376.75	4,332.51	98.931	CC, ES
Butterball 13-19 - Butterball 13-19 - Butterball 13-19 - As	6,750.00	6,805.93	4,482.28	4,434.90	94.601	SF
Butterball 14-19 - Butterball 14-19 - Butterball 14-19 - As	6,165.05	6,278.08	5,293.66	5,249.97	121.177	CC, ES
Butterball 14-19 - Butterball 14-19 - Butterball 14-19 - As	6,750.00	6,836.69	5,430.09	5,382.55	114.224	SF
Butterball 23-19 - Butterball 23-19 - Butterball 23-19 - As	0.00	0.00	3,591.15			
Butterball 23-19 - Butterball 23-19 - Butterball 23-19 - As	6,158.90	6,204.28	3,609.60	3,566.28	83.305	ES
Butterball 23-19 - Butterball 23-19 - Butterball 23-19 - As	6,650.00	6,635.06	3,707.28	3,660.79	79.750	SF
Butterball B04-19 - Butterball B04-19 - Butterball B04-19	6,178.08	6,322.23	5,165.03	5,121.19	117.825	CC, ES
Butterball B04-19 - Butterball B04-19 - Butterball B04-19	6,750.00	6,700.00	5,286.30	5,239.28	112.430	SF
Butterball D18-75HN - Original Drilling - Original Drilling -	0.00	0.00	939.28			
Butterball D18-75HN - Original Drilling - Original Drilling -	2,100.00	2,092.93	941.58	928.14	70.043	ES
Butterball D18-75HN - Original Drilling - Original Drilling -	12,600.00	12,107.00	1,608.29	1,454.35	10.448	SF
Butterball D19-17D - Butterball D19-17D - Butterball D19	6,153.08	6,739.48	610.84	452.68	3.862	CC, ES, SF
Butterball D19-18D - Butterball D19-18D - Butterball D19	4,696.24	4,769.07	1,851.45	1,817.11	53.911	CC
Butterball D19-18D - Butterball D19-18D - Butterball D19	6,150.00	6,217.97	1,858.94	1,814.72	42.035	ES
Butterball D19-18D - Butterball D19-18D - Butterball D19	6,750.00	6,764.25	1,929.37	1,880.95	39.847	SF
Butterball D19-19D - Butterball D19-19D - Butterball D19	750.62	740.64	2,543.50	2,538.63	522.010	CC
Butterball D19-19D - Butterball D19-19D - Butterball D19	800.00	781.78	2,543.58	2,538.39	489.747	ES
Butterball D19-19D - Butterball D19-19D - Butterball D19	6,750.00	6,778.18	3,088.10	3,040.04	64.255	SF
Butterball D19-20D - Butterball D19-20D - Butterball D19	6,164.95	6,323.61	3,414.48	3,362.72	65.963	CC, ES
Butterball D19-20D - Butterball D19-20D - Butterball D19	6,650.00	6,777.68	3,487.13	3,432.31	63.617	SF
Butterball D19-22D - Wellbore #1 - Wellbore #1 - As Drill	100.00	65.05	1,730.86	1,730.62	7,171.437	CC
Butterball D19-22D - Wellbore #1 - Wellbore #1 - As Drill	1,000.00	957.18	1,735.64	1,729.11	265.632	ES
Butterball D19-22D - Wellbore #1 - Wellbore #1 - As Drill	6,450.00	6,506.22	2,183.05	2,133.71	44.240	SF
Butterball D19-75HN - Original Drilling - Original Drilling -	0.00	0.00	961.23			
Butterball D19-75HN - Original Drilling - Original Drilling -	400.00	391.72	962.32	960.44	511.931	ES
Butterball D19-75HN - Original Drilling - Original Drilling -	6,600.00	6,576.70	1,169.02	1,123.99	25.962	SF
Butterball D24-19 - Butterball D24-19 - Butterball D24-19	2,245.60	2,226.98	4,657.84	4,642.33	300.391	CC
Butterball D24-19 - Butterball D24-19 - Butterball D24-19	6,156.35	6,223.42	4,672.42	4,629.01	107.629	ES
Butterball D24-19 - Butterball D24-19 - Butterball D24-19	6,650.00	6,680.81	4,778.75	4,732.08	102.391	SF
Butterball H24-69HN - Original Drilling - Original Drilling -	6,600.00	6,405.24	909.24	864.97	20.538	SF
Butterball H24-69HN - Original Drilling - Original Drilling -	6,850.00	6,482.25	904.48	860.89	20.751	CC, ES
Champlin 366 Amoco F 1 - Wellbore #1 - Wellbore #1 - A	3,459.33	3,434.00	3,238.36	3,214.36	134.946	CC
Champlin 366 Amoco F 1 - Wellbore #1 - Wellbore #1 - A	6,150.00	6,133.74	3,245.09	3,202.03	75.365	ES
Champlin 366 Amoco F 1 - Wellbore #1 - Wellbore #1 - A	6,550.00	6,516.46	3,322.67	3,276.89	72.575	SF
Dechant D19-32D - Dechant D19-32D - Dechant D19-32	337.65	326.65	2,565.38	2,563.43	1,318.178	CC
Dechant D19-32D - Dechant D19-32D - Dechant D19-32	400.00	370.69	2,565.60	2,563.28	1,104.064	ES
Dechant D19-32D - Dechant D19-32D - Dechant D19-32	11,400.00	11,400.00	7,937.84	7,818.75	66.657	SF
Graznak 01-19 - Graznak 01-19 - Graznak 01-19 - As Dr	6,140.00	6,123.00	4,672.03	4,596.82	62.119	CC
Graznak 01-19 - Graznak 01-19 - Graznak 01-19 - As Dr	6,150.00	6,133.00	4,672.07	4,596.74	62.018	ES
Graznak 01-19 - Graznak 01-19 - Graznak 01-19 - As Dr	6,750.00	6,684.99	4,819.80	4,737.70	58.711	SF
Higgins D19-720 - Original Drilling - Original Drilling - As	6,946.71	6,846.78	386.59	342.87	8.843	CC, ES
Higgins D19-720 - Original Drilling - Original Drilling - As	6,950.00	6,848.34	386.60	342.87	8.842	SF
Higgins D19-720 - Sidetrack Curve/Horizontal - ST01 - A	6,879.78	6,800.96	399.36	355.89	9.187	CC, ES, SF
Independence D18-712(Killed) - Independence D18-712	2,200.00	2,199.00	46.33	31.02	3.027	CC, ES
Independence D18-712(Killed) - Independence D18-712	2,300.00	2,297.41	47.98	31.99	3.000	SF
Independence D18-717 - Independence D18-717 - Plan 1	2,600.00	2,600.00	22.00	3.83	1.211	Level 3, CC, ES, SF
Independence D18-732 - Independence D18-732 - Plan 1	3,400.00	3,400.00	23.00	-0.91	0.962	Level 1, CC, ES, SF
Independence D18-739 - Independence D18-739 - Plan 1	2,300.00	2,299.00	45.00	28.98	2.809	CC, ES
Independence D18-739 - Independence D18-739 - Plan 1	2,400.00	2,397.43	46.69	29.97	2.793	SF
Independence D18-744 - Independence D18-744 - Plan 1	2,200.00	2,198.00	67.01	51.71	4.380	CC, ES
Independence D18-744 - Independence D18-744 - Plan 1	2,300.00	2,295.73	68.64	52.65	4.292	SF
Independence D18-759 - Independence D18-759 - Plan 1	7,087.07	7,146.20	1,826.23	1,777.14	37.204	CC

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

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Independence D18-725
Project:	Mustang	**TVD Reference:**	Well @ 4800.00ft
Reference Site:	D Section 19	**MD Reference:**	Well @ 4800.00ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Independence D18-725	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Independence D18-725	**Database:**	EDMP
Reference Design:	Plan 1	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
D Section 19						
Independence D18-759 - Independence D18-759 - Plan 1	7,100.00	7,155.34	1,826.24	1,777.12	37.175	ES
Independence D18-759 - Independence D18-759 - Plan 1	17,455.99	17,454.04	2,075.94	1,892.85	11.338	SF
Independence D18-767 - Independence D18-767 - Plan 1	5,800.00	5,817.00	2,385.65	2,344.47	57.936	CC
Independence D18-767 - Independence D18-767 - Plan 1	6,450.00	6,443.31	2,389.53	2,343.85	52.317	ES
Independence D18-767 - Independence D18-767 - Plan 1	17,455.99	17,418.52	2,610.91	2,428.33	14.300	SF
Independence D30-711 - Independence D30-711 - Plan 1	2,200.00	2,198.00	157.04	141.75	10.265	CC, ES
Independence D30-711 - Independence D30-711 - Plan 1	2,400.00	2,388.41	162.94	146.27	9.775	SF
Independence D30-718 - Independence D30-718 - Plan 2	2,200.00	2,197.00	151.95	136.66	9.934	CC, ES
Independence D30-718 - Independence D30-718 - Plan 2	2,400.00	2,387.45	157.98	141.31	9.479	SF
Independence D30-724 - Independence D30-724 - Plan 1	2,200.00	2,196.00	150.07	134.77	9.813	CC, ES
Independence D30-724 - Independence D30-724 - Plan 1	7,010.04	7,294.69	187.31	138.54	3.841	SF
Independence D30-731 - Independence D30-731 - Plan 1	2,200.00	2,197.00	151.48	136.18	9.903	CC
Independence D30-731 - Independence D30-731 - Plan 1	7,010.25	7,285.13	167.48	118.72	3.435	ES, SF
Independence D30-737 - Independence D30-737 - Plan 1	2,200.00	2,199.00	156.11	140.81	10.201	CC, ES
Independence D30-737 - Independence D30-737 - Plan 1	2,400.00	2,388.75	162.47	145.80	9.747	SF
Independence D30-743 - Independence D30-743 - Plan 1	2,200.00	2,201.00	163.67	148.36	10.690	CC, ES
Independence D30-743 - Independence D30-743 - Plan 1	2,400.00	2,390.42	170.00	153.33	10.196	SF
Independence D30-758 - Independence D30-758 - Plan 1	6,942.18	7,405.54	1,880.84	1,831.87	38.412	CC
Independence D30-758 - Independence D30-758 - Plan 1	6,950.00	7,387.57	1,880.84	1,831.87	38.405	ES
Independence D30-758 - Independence D30-758 - Plan 1	7,100.00	7,282.76	1,883.45	1,834.29	38.312	SF
Independence D30-765 - Independence D30-765 - Plan 1	7,208.98	7,238.77	2,309.75	2,260.11	46.531	CC, ES
Independence D30-765 - Independence D30-765 - Plan 1	7,400.00	7,079.43	2,312.22	2,262.47	46.475	SF
Independence D30-770 - Independence D30-770 - Plan 1	2,109.84	2,126.84	2,410.44	2,395.72	163.738	CC
Independence D30-770 - Independence D30-770 - Plan 1	2,300.00	2,293.18	2,411.02	2,395.02	150.712	ES
Independence D30-770 - Independence D30-770 - Plan 1	7,250.00	7,011.97	2,708.06	2,659.00	55.191	SF
Independence D30-777 - Independence D30-777 - Plan 2	2,109.84	2,126.84	2,432.76	2,418.04	165.255	CC
Independence D30-777 - Independence D30-777 - Plan 2	2,200.00	2,211.52	2,432.78	2,417.43	158.510	ES
Independence D30-777 - Independence D30-777 - Plan 2	8,100.00	6,550.00	3,118.15	3,067.87	62.022	SF
Independence State D30-784 - Independence State D30	2,109.84	2,126.84	2,455.08	2,440.36	166.771	CC
Independence State D30-784 - Independence State D30	2,200.00	2,200.00	2,455.14	2,439.83	160.399	ES
Independence State D30-784 - Independence State D30	8,700.00	6,450.00	3,693.12	3,640.62	70.351	SF
LDS White D19-10 - LDS White D19-10 - LDS White D19	6,145.16	6,139.08	3,001.69	2,958.59	69.646	CC
LDS White D19-10 - LDS White D19-10 - LDS White D19	6,150.00	6,144.22	3,001.71	2,958.57	69.589	ES
LDS White D19-10 - LDS White D19-10 - LDS White D19	6,550.00	6,525.18	3,071.81	3,025.95	66.989	SF
LDS White D19-15 - LDS White D19-15 - LDS White D19	100.00	72.55	4,314.99	4,314.74	10,000.000	CC
LDS White D19-15 - LDS White D19-15 - LDS White D19	6,151.72	6,192.91	4,334.17	4,290.88	100.130	ES
LDS White D19-15 - LDS White D19-15 - LDS White D19	6,600.00	6,583.92	4,428.38	4,382.19	95.887	SF
LDS White D19-16 - Wellbore #1 - Wellbore #1 - As Drill	5,902.34	5,880.83	4,180.98	4,139.69	101.244	CC
LDS White D19-16 - Wellbore #1 - Wellbore #1 - As Drill	6,150.00	6,135.77	4,181.17	4,138.09	97.072	ES
LDS White D19-16 - Wellbore #1 - Wellbore #1 - As Drill	6,600.00	6,570.37	4,283.68	4,237.55	92.865	SF
Mile High 02-19 - Wellbore #1 - Wellbore #1 - As Drilled	3,362.71	3,336.18	1,299.88	1,276.58	55.788	CC
Mile High 02-19 - Wellbore #1 - Wellbore #1 - As Drilled	3,800.00	3,762.78	1,302.61	1,276.26	49.421	ES
Mile High 02-19 - Wellbore #1 - Wellbore #1 - As Drilled	6,400.00	6,377.41	1,363.74	1,318.95	30.443	SF
Sean D19-09 - Wellbore #1 - Wellbore #1 - As Drilled	6,140.00	6,113.00	2,766.77	2,622.73	19.209	CC
Sean D19-09 - Wellbore #1 - Wellbore #1 - As Drilled	6,150.00	6,123.00	2,766.84	2,622.56	19.178	ES
Sean D19-09 - Wellbore #1 - Wellbore #1 - As Drilled	6,550.00	6,512.18	2,844.35	2,690.91	18.537	SF
Turk Blue D19-02J - Turk Blue D19-02J - Turk Blue D19-	280.48	267.48	2,588.10	2,586.57	1,687.952	CC
Turk Blue D19-02J - Turk Blue D19-02J - Turk Blue D19-	2,400.00	2,363.58	2,594.49	2,578.04	157.705	ES
Turk Blue D19-02J - Turk Blue D19-02J - Turk Blue D19-	6,850.00	6,818.06	2,691.52	2,643.88	56.498	SF
Turk Blue D19-04 - Turk Blue D19-04 - Turk Blue D19-04	3,539.25	3,545.72	3,436.93	3,412.23	139.147	CC
Turk Blue D19-04 - Turk Blue D19-04 - Turk Blue D19-04	6,450.00	6,443.99	3,439.85	3,394.65	76.104	ES
Turk Blue D19-04 - Turk Blue D19-04 - Turk Blue D19-04	7,100.00	6,877.37	3,490.16	3,441.79	72.156	SF
Turk Blue D19-05 - Turk Blue D19-05 - Turk Blue D19-05	6,340.94	6,529.32	3,866.26	3,821.17	85.744	CC

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

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Independence D18-725
Project:	Mustang	**TVD Reference:**	Well @ 4800.00ft
Reference Site:	D Section 19	**MD Reference:**	Well @ 4800.00ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Independence D18-725	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Independence D18-725	**Database:**	EDMP
Reference Design:	Plan 1	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
D Section 19						
Turk Blue D19-05 - Turk Blue D19-05 - Turk Blue D19-05	6,350.00	6,539.74	3,866.29	3,821.13	85.616	ES
Turk Blue D19-05 - Turk Blue D19-05 - Turk Blue D19-05	6,800.00	6,884.10	3,948.01	3,900.26	82.680	SF
Turk Blue D19-06 - Turk Blue D19-06 - Turk Blue D19-06	2,335.03	2,310.05	2,718.98	2,702.96	169.649	CC
Turk Blue D19-06 - Turk Blue D19-06 - Turk Blue D19-06	6,169.54	6,203.05	2,732.18	2,688.83	63.017	ES
Turk Blue D19-06 - Turk Blue D19-06 - Turk Blue D19-06	6,600.00	6,597.61	2,786.63	2,740.43	60.315	SF
Turk White D19-01 - Wellbore #1 - Wellbore #1 - As Drill	6,149.33	6,124.57	590.86	547.83	13.731	CC
Turk White D19-01 - Wellbore #1 - Wellbore #1 - As Drill	6,150.00	6,125.27	590.86	547.82	13.729	ES
Turk White D19-01 - Wellbore #1 - Wellbore #1 - As Drill	6,400.00	6,372.02	600.65	555.87	13.414	SF
Turk White D19-02 - Wellbore #1 - Wellbore #1 - As Drill	100.00	59.72	903.10	902.87	3,917.057	CC
Turk White D19-02 - Wellbore #1 - Wellbore #1 - As Drill	6,450.00	6,438.74	910.75	865.60	20.172	ES
Turk White D19-02 - Wellbore #1 - Wellbore #1 - As Drill	6,600.00	6,559.39	917.99	871.92	19.929	SF
Turk White D19-08 - Wellbore #1 - Wellbore #1 - As Drill	672.19	643.22	1,724.44	1,720.19	405.285	CC
Turk White D19-08 - Wellbore #1 - Wellbore #1 - As Drill	6,150.00	6,129.16	1,728.53	1,685.49	40.164	ES
Turk White D19-08 - Wellbore #1 - Wellbore #1 - As Drill	6,450.00	6,422.36	1,767.97	1,722.85	39.184	SF

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Independence D18-725
Project:	Mustang	**TVD Reference:**	Well @ 4800.00ft
Reference Site:	D Section 19	**MD Reference:**	Well @ 4800.00ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Independence D18-725	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Independence D18-725	**Database:**	EDMP
Reference Design:	Plan 1	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
D Section 20						
Bohlender D20-2J - Wellbore #1 - No Surveys	6,140.00	6,108.00	2,383.33	2,308.25	31.744	CC
Bohlender D20-2J - Wellbore #1 - No Surveys	6,150.00	6,118.00	2,383.36	2,308.16	31.693	ES
Bohlender D20-2J - Wellbore #1 - No Surveys	6,650.00	6,593.10	2,452.67	2,371.65	30.273	SF
Bohlender D20-3 - Wellbore #1 - Gyro Surveys	6,152.98	6,134.84	3,000.30	2,957.19	69.607	CC
Bohlender D20-3 - Wellbore #1 - Gyro Surveys	6,200.00	6,172.67	3,000.56	2,957.16	69.134	ES
Bohlender D20-3 - Wellbore #1 - Gyro Surveys	7,100.00	6,842.00	3,068.12	3,019.87	63.590	SF
Bohlender D20-4 (P&A) - Wellbore #1 - No Surveys	6,140.00	6,110.00	1,640.63	1,496.66	11.395	CC
Bohlender D20-4 (P&A) - Wellbore #1 - No Surveys	6,450.00	6,416.35	1,644.55	1,493.37	10.878	ES
Bohlender D20-4 (P&A) - Wellbore #1 - No Surveys	6,850.00	6,737.95	1,671.34	1,512.58	10.527	SF
Bohlender D20-6 - Wellbore#1 - Gyro Surveys	5,221.17	5,187.24	3,373.98	3,337.54	92.576	CC
Bohlender D20-6 - Wellbore#1 - Gyro Surveys	6,140.00	6,081.92	3,376.49	3,333.64	78.793	ES
Bohlender D20-6 - Wellbore#1 - Gyro Surveys	6,850.00	6,703.32	3,513.26	3,466.03	74.395	SF
Butterball D19-27D - Butterball D19-27D - Butterball D19	7,100.00	7,083.46	244.65	182.34	3.926	SF
Butterball D19-27D - Butterball D19-27D - Butterball D19	7,200.00	7,098.93	222.23	170.83	4.323	ES
Butterball D19-27D - Butterball D19-27D - Butterball D19	7,203.42	7,099.18	222.21	170.99	4.339	CC
Duncan D20-1 (P&A) - Wellbore #1 - No Surveys	6,140.00	6,109.00	5,810.87	5,666.92	40.365	CC
Duncan D20-1 (P&A) - Wellbore #1 - No Surveys	6,650.00	6,594.10	5,816.92	5,661.55	37.440	ES
Duncan D20-1 (P&A) - Wellbore #1 - No Surveys	7,200.00	6,861.25	5,846.63	5,684.72	36.111	SF
Duncan D20-10 - Wellbore #1 - Gyro Surveys	5,689.12	5,669.38	5,654.06	5,614.25	142.013	CC
Duncan D20-10 - Wellbore #1 - Gyro Surveys	6,150.00	6,125.39	5,654.51	5,611.46	131.335	ES
Duncan D20-10 - Wellbore #1 - Gyro Surveys	6,850.00	6,748.83	5,812.84	5,765.45	122.656	SF
Duncan D20-11 (SI) - Wellbore #1 - No Surveys	6,140.00	6,115.00	4,178.25	4,103.10	55.606	CC
Duncan D20-11 (SI) - Wellbore #1 - No Surveys	6,150.00	6,125.00	4,178.29	4,103.03	55.515	ES
Duncan D20-11 (SI) - Wellbore #1 - No Surveys	6,750.00	6,676.99	4,311.86	4,229.84	52.575	SF
Duncan D20-12 (SI) - Wellbore #1 - No Surveys	6,140.00	6,113.00	3,326.25	3,251.13	44.277	CC
Duncan D20-12 (SI) - Wellbore #1 - No Surveys	6,150.00	6,123.00	3,326.31	3,251.06	44.206	ES
Duncan D20-12 (SI) - Wellbore #1 - No Surveys	6,600.00	6,556.14	3,415.64	3,335.09	42.400	SF
Duncan D20-13 (SI) - Wellbore #1 - No Surveys	6,140.00	6,118.00	4,694.95	4,619.78	62.460	CC
Duncan D20-13 (SI) - Wellbore #1 - No Surveys	6,150.00	6,128.00	4,695.01	4,619.72	62.359	ES
Duncan D20-13 (SI) - Wellbore #1 - No Surveys	6,650.00	6,603.10	4,817.07	4,735.96	59.388	SF
Duncan D20-14 (SI) - Wellbore #1 - Gyro Surveys	5,752.33	5,724.47	4,690.43	4,650.22	116.661	CC
Duncan D20-14 (SI) - Wellbore #1 - Gyro Surveys	6,140.00	6,087.44	4,691.12	4,648.25	109.448	ES
Duncan D20-14 (SI) - Wellbore #1 - Gyro Surveys	6,750.00	6,603.03	4,859.71	4,813.09	104.252	SF
Duncan D20-15 (P&A) - Wellbore #1 - Gyro Surveys	5,961.39	5,939.12	5,925.09	5,883.34	141.926	CC
Duncan D20-15 (P&A) - Wellbore #1 - Gyro Surveys	6,150.00	6,128.53	5,925.45	5,882.37	137.537	ES
Duncan D20-15 (P&A) - Wellbore #1 - Gyro Surveys	6,800.00	6,726.81	6,093.30	6,046.09	129.067	SF
Duncan D20-16 (SI) - Wellbore #1 - Gyro Surveys	6,153.36	6,222.21	7,193.48	7,150.10	165.811	CC, ES
Duncan D20-16 (SI) - Wellbore #1 - Gyro Surveys	7,050.00	6,805.20	7,463.12	7,415.20	155.730	SF
Duncan D20-2 - Wellbore #1 - Gyro Surveys	5,424.71	5,384.56	4,363.93	4,326.09	115.311	CC
Duncan D20-2 - Wellbore #1 - Gyro Surveys	5,500.00	5,434.28	4,364.13	4,325.85	113.980	ES
Duncan D20-2 - Wellbore #1 - Gyro Surveys	7,200.00	6,847.72	4,446.49	4,398.08	91.850	SF
Duncan D20-7 - Wellbore #1 - Gyro Surveys	6,159.30	6,159.78	4,818.63	4,775.45	111.606	CC, ES
Duncan D20-7 - Wellbore #1 - Gyro Surveys	7,050.00	6,833.28	4,944.89	4,896.80	102.833	SF
Duncan D20-8 - Wellbore #1 - Gyro Surveys	1,958.67	1,946.91	5,920.42	5,906.98	440.540	CC
Duncan D20-8 - Wellbore #1 - Gyro Surveys	2,200.00	2,152.54	5,921.01	5,905.98	393.881	ES
Duncan D20-8 - Wellbore #1 - Gyro Surveys	7,100.00	6,852.51	6,109.08	6,060.83	126.616	SF
Duncan D20-9 (P&A) - Wellbore #1 - Gyro Surveys	6,117.38	6,090.14	6,450.65	6,407.83	150.657	CC
Duncan D20-9 (P&A) - Wellbore #1 - Gyro Surveys	6,150.00	6,118.51	6,450.70	6,407.66	149.903	ES
Duncan D20-9 (P&A) - Wellbore #1 - Gyro Surveys	7,000.00	6,825.60	6,633.49	6,585.52	138.266	SF
E Ranches (P&A) - Wellbore #1 - No Surveys	6,140.00	6,110.00	4,713.11	4,569.13	32.735	CC
E Ranches (P&A) - Wellbore #1 - No Surveys	6,150.00	6,120.00	4,713.17	4,568.95	32.682	ES
E Ranches (P&A) - Wellbore #1 - No Surveys	6,700.00	6,634.80	4,856.46	4,700.15	31.068	SF
Guttersen 10-20 - Wellbore #1 - Gyro Surveys	6,093.67	6,058.77	4,941.26	4,898.64	115.939	CC

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

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Independence D18-725
Project:	Mustang	**TVD Reference:**	Well @ 4800.00ft
Reference Site:	D Section 19	**MD Reference:**	Well @ 4800.00ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Independence D18-725	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Independence D18-725	**Database:**	EDMP
Reference Design:	Plan 1	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
D Section 20						
Guttersen 10-20 - Wellbore #1 - Gyro Surveys	6,140.00	6,092.41	4,941.32	4,898.42	115.176	ES
Guttersen 10-20 - Wellbore #1 - Gyro Surveys	6,650.00	6,639.65	5,016.25	4,969.86	108.126	SF
LDS D20-30D - LDS D20-30D - LDS D20-30D - As Drille	6,953.20	6,853.32	950.93	901.19	19.118	CC, ES
LDS D20-30D - LDS D20-30D - LDS D20-30D - As Drille	7,050.00	6,891.06	955.03	904.70	18.974	SF

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Independence D18-725
Project:	Mustang	**TVD Reference:**	Well @ 4800.00ft
Reference Site:	D Section 19	**MD Reference:**	Well @ 4800.00ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Independence D18-725	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Independence D18-725	**Database:**	EDMP
Reference Design:	Plan 1	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
D Section 29						
Guttersen D29-30D - Wellbore #1 - Design #1	6,140.00	6,307.26	5,054.87	5,009.87	112.330	CC
Guttersen D29-30D - Wellbore #1 - Design #1	6,150.00	6,317.26	5,054.93	5,009.86	112.160	ES
Guttersen D29-30D - Wellbore #1 - Design #1	6,650.00	6,807.64	5,181.90	5,133.53	107.131	SF
Guttersen D29-31D - Wellbore #1 - Guttersen D29-31D	5,549.90	5,616.27	6,277.41	6,237.79	158.440	CC
Guttersen D29-31D - Wellbore #1 - Guttersen D29-31D	6,140.00	6,196.83	6,279.85	6,236.30	144.210	ES
Guttersen D29-31D - Wellbore #1 - Guttersen D29-31D	6,700.00	6,730.42	6,437.58	6,390.44	136.537	SF
Guttersen D29-33D - Wellbore #1 - Guttersen D29-33D -	855.00	863.00	7,694.01	7,689.51	1,710.262	CC
Guttersen D29-33D - Wellbore #1 - Guttersen D29-33D -	900.00	863.00	7,694.14	7,689.48	1,651.065	ES
Guttersen D29-33D - Wellbore #1 - Guttersen D29-33D -	6,800.00	6,921.61	9,121.53	9,073.74	190.876	SF
Guttersen D29-65HN - Original Drilling - Original Drilling	6,161.74	6,394.19	7,633.86	7,591.45	179.989	CC, ES
Guttersen D29-65HN - Original Drilling - Original Drilling	6,600.00	6,506.00	7,731.88	7,687.57	174.488	SF
Guttersen D29-67HN - Original Drilling - Original Drilling	3,497.30	3,496.72	6,313.18	6,290.12	273.781	CC
Guttersen D29-67HN - Original Drilling - Original Drilling	6,000.00	5,966.41	6,322.52	6,281.92	155.724	ES
Guttersen D29-67HN - Original Drilling - Original Drilling	6,650.00	6,349.13	6,461.79	6,417.69	146.506	SF
Guttersen D29-69HN - Original Drilling - Original Drilling	5,815.36	5,989.69	5,110.31	5,068.31	121.666	CC, ES
Guttersen D29-69HN - Original Drilling - Original Drilling	6,550.00	6,450.72	5,201.76	5,156.00	113.668	SF
Guttersen D29-722 - Guttersen D29-722 - Prelim - Rev 1	9,753.15	17,638.72	5,496.88	5,371.14	43.718	CC
Guttersen D29-722 - Guttersen D29-722 - Prelim - Rev 1	9,800.00	17,638.72	5,497.08	5,371.10	43.633	ES
Guttersen D29-722 - Guttersen D29-722 - Prelim - Rev 1	10,500.00	17,638.72	5,547.38	5,418.35	42.993	SF
Guttersen D29-730 - Guttersen D29-730 - Prelim - Rev 1	9,739.03	17,556.91	4,885.20	4,760.24	39.094	CC, ES
Guttersen D29-730 - Guttersen D29-730 - Prelim - Rev 1	10,300.00	17,556.91	4,917.30	4,790.10	38.658	SF
Guttersen D29-738 - Guttersen D29-738 - Prelim - Rev 1	9,724.45	17,779.88	4,251.16	4,125.72	33.891	CC, ES
Guttersen D29-738 - Guttersen D29-738 - Prelim - Rev 1	10,200.00	17,779.88	4,277.67	4,149.94	33.490	SF
Guttersen D29-746 - Guttersen D29-746 - Prelim - Rev 1	9,711.00	17,495.86	3,668.99	3,543.69	29.281	CC, ES
Guttersen D29-746 - Guttersen D29-746 - Prelim - Rev 1	10,100.00	17,495.86	3,689.55	3,562.62	29.066	SF
Guttersen D29-754 - Guttersen D29-754 - Prelim - Rev 1	9,697.48	17,718.83	3,080.82	2,955.26	24.537	CC
Guttersen D29-754 - Guttersen D29-754 - Prelim - Rev 1	9,700.00	17,718.83	3,080.82	2,955.25	24.535	ES
Guttersen D29-754 - Guttersen D29-754 - Prelim - Rev 1	9,900.00	17,718.83	3,087.46	2,961.11	24.435	SF
Guttersen D29-770 - Guttersen D29-770 - Prelim - Rev 1	9,683.04	17,536.90	2,448.58	2,323.43	19.565	CC
Guttersen D29-770 - Guttersen D29-770 - Prelim - Rev 1	9,700.00	17,536.90	2,448.64	2,323.39	19.551	ES
Guttersen D29-770 - Guttersen D29-770 - Prelim - Rev 1	9,800.00	17,536.90	2,451.37	2,325.68	19.503	SF
Guttersen D29-778 - Guttersen D29-778 - Prelim - Rev 1	9,669.02	17,670.79	1,834.06	1,708.51	14.608	CC, ES
Guttersen D29-778 - Guttersen D29-778 - Prelim - Rev 1	9,700.00	17,670.79	1,834.33	1,708.65	14.595	SF
Guttersen D29-786 - Guttersen D29-786 - Prelim - Rev 1	9,655.78	17,553.42	1,257.87	1,133.51	10.115	CC, ES, SF
Guttersen D29-99HZ - Wellbore #1 - MWD Surveys	6,125.49	6,228.65	9,007.61	8,964.94	211.089	CC
Guttersen D29-99HZ - Wellbore #1 - MWD Surveys	6,143.22	6,258.01	9,007.73	8,964.89	210.274	ES
Guttersen D29-99HZ - Wellbore #1 - MWD Surveys	6,700.00	6,353.01	9,176.56	9,131.71	204.592	SF
Guttersen D30-68-1HN - Original Drilling - Original Drillin	6,227.11	7,907.36	5,898.15	5,838.21	98.404	CC
Guttersen D30-68-1HN - Original Drilling - Original Drillin	6,232.32	7,907.40	5,898.17	5,838.21	98.365	ES
Guttersen D30-68-1HN - Original Drilling - Original Drillin	6,550.00	7,909.82	5,944.51	5,883.20	96.968	SF
Guttersen D30-69-1HN - Original Drilling - Original Drillin	6,277.32	7,694.70	5,172.16	5,114.86	90.276	CC
Guttersen D30-69-1HN - Original Drilling - Original Drillin	6,300.00	7,693.83	5,172.21	5,114.84	90.154	ES
Guttersen D30-69-1HN - Original Drilling - Original Drillin	11,400.00	11,400.00	9,910.85	9,799.34	88.879	SF
Guttersen State D29-714 - Guttersen D29-714 - Prelim -	9,765.88	17,532.66	6,050.60	5,925.06	48.195	CC
Guttersen State D29-714 - Guttersen D29-714 - Prelim -	9,800.00	17,532.66	6,050.70	5,924.96	48.123	ES
Guttersen State D29-714 - Guttersen D29-714 - Prelim -	10,800.00	17,532.66	6,138.34	6,008.05	47.113	SF
Guttersen State Y05-719 - Guttersen Y05-719 - Prelim -	6,149.28	6,300.00	8,766.49	8,722.18	197.850	CC
Guttersen State Y05-719 - Guttersen Y05-719 - Prelim -	6,150.00	6,300.00	8,766.49	8,722.18	197.839	ES
Guttersen State Y05-719 - Guttersen Y05-719 - Prelim -	6,650.00	6,350.00	8,871.72	8,825.65	192.552	SF
Guttersen Y05-726 - Guttersen Y05-726 - Prelim - Rev 1	6,144.40	6,377.69	8,425.03	8,380.43	188.925	CC, ES
Guttersen Y05-726 - Guttersen Y05-726 - Prelim - Rev 1	6,700.00	6,422.42	8,554.44	8,508.01	184.233	SF
Guttersen Y05-734 - Guttersen Y05-734 - Prelim - Rev 1	6,161.86	6,500.00	8,099.67	8,054.18	178.045	CC, ES
Guttersen Y05-734 - Guttersen Y05-734 - Prelim - Rev 1	6,600.00	6,550.00	8,182.53	8,135.52	174.040	SF

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

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Independence D18-725
Project:	Mustang	**TVD Reference:**	Well @ 4800.00ft
Reference Site:	D Section 19	**MD Reference:**	Well @ 4800.00ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Independence D18-725	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Independence D18-725	**Database:**	EDMP
Reference Design:	Plan 1	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
D Section 29						
Guttersen Y05-749 - Guttersen Y05-749 - Prelim - Rev 1	6,145.86	6,300.00	7,627.70	7,583.09	170.994	CC
Guttersen Y05-749 - Guttersen Y05-749 - Prelim - Rev 1	6,150.00	6,300.00	7,627.71	7,583.09	170.938	ES
Guttersen Y05-749 - Guttersen Y05-749 - Prelim - Rev 1	6,600.00	6,350.00	7,723.66	7,677.39	166.920	SF
Guttersen Y05-756 - Guttersen Y05-756 - Prelim - Rev 1	6,150.79	6,300.00	7,370.51	7,326.18	166.281	CC, ES
Guttersen Y05-756 - Guttersen Y05-756 - Prelim - Rev 1	6,550.00	6,350.00	7,444.53	7,398.74	162.566	SF
Guttersen Y05-771 - Guttersen Y05-771 - Prelim - Rev 1	6,150.54	6,350.00	7,035.08	6,990.18	156.711	CC, ES
Guttersen Y05-771 - Guttersen Y05-771 - Prelim - Rev 1	6,600.00	6,400.00	7,137.92	7,091.39	153.428	SF
Guttersen Y05-779 - Guttersen Y05- 779 - Prelim - Rev 1	6,160.88	6,400.00	6,878.46	6,833.68	153.609	CC, ES
Guttersen Y05-779 - Guttersen Y05- 779 - Prelim - Rev 1	6,550.00	6,450.00	6,953.43	6,907.20	150.405	SF
Guttersen Y05-786 - Guttersen Y05-786 - Prelim - Rev 1	6,155.64	6,350.00	6,738.45	6,693.88	151.185	CC, ES
Guttersen Y05-786 - Guttersen Y05-786 - Prelim - Rev 1	6,500.00	6,350.00	6,796.97	6,751.29	148.807	SF
Jessie D29-1J - Wellbore #1 - Gyro Surveys	5,790.13	5,774.51	7,432.46	7,391.94	183.421	CC
Jessie D29-1J - Wellbore #1 - Gyro Surveys	6,140.00	6,100.77	7,433.22	7,390.31	173.218	ES
Jessie D29-1J - Wellbore #1 - Gyro Surveys	6,800.00	6,676.22	7,616.83	7,569.84	162.082	SF
Jessie D29-4J - Wellbore #1 - Gyro Surveys	4,677.14	4,678.10	9,652.60	9,619.89	295.143	CC
Jessie D29-4J - Wellbore #1 - Gyro Surveys	4,800.00	4,732.86	9,653.01	9,619.67	289.574	ES
Jessie D29-4J - Wellbore #1 - Gyro Surveys	6,850.00	6,486.38	9,914.23	9,867.84	213.676	SF
Kate Red D29-03J - Kate Red D29-03J - Kate Red D29-0	6,146.29	6,212.48	8,699.11	8,655.77	200.713	CC
Kate Red D29-03J - Kate Red D29-03J - Kate Red D29-0	6,150.00	6,215.13	8,699.12	8,655.76	200.609	ES
Kate Red D29-03J - Kate Red D29-03J - Kate Red D29-0	6,800.00	6,756.40	8,920.40	8,873.10	188.616	SF
Kate Red D29-11 - Wellbore #1 - Gyro Surveys	6,018.13	6,008.88	8,626.33	8,584.15	204.483	CC
Kate Red D29-11 - Wellbore #1 - Gyro Surveys	6,140.00	6,101.78	8,626.54	8,583.59	200.864	ES
Kate Red D29-11 - Wellbore #1 - Gyro Surveys	6,850.00	6,870.67	8,875.94	8,828.20	185.902	SF
Kate Red D29-13 - Wellbore #1 - Gyro Surveys	3,087.91	3,091.94	9,645.61	9,624.13	449.153	CC
Kate Red D29-13 - Wellbore #1 - Gyro Surveys	3,300.00	3,252.65	9,646.01	9,623.21	423.184	ES
Kate Red D29-13 - Wellbore #1 - Gyro Surveys	6,800.00	6,720.69	9,907.56	9,860.43	210.228	SF
Kate Red D29-14 - Wellbore #1 - Gyro Surveys	6,143.50	6,200.00	9,892.95	9,849.68	228.629	CC, ES
Kate Red D29-14 - Wellbore #1 - Gyro Surveys	6,600.00	6,579.13	9,992.49	9,946.34	216.519	SF
Kate Red D29-2J - Wellbore #1 - Kate Red D29-2J	3,234.46	3,209.51	6,196.32	6,173.92	276.565	CC
Kate Red D29-2J - Wellbore #1 - Kate Red D29-2J	3,800.00	3,744.39	6,197.92	6,171.62	235.672	ES
Kate Red D29-2J - Wellbore #1 - Kate Red D29-2J	6,800.00	6,674.59	6,480.69	6,433.70	137.931	SF
Kate Red D29-3 - Wellbore #1 - Kate Red D29-3	2,305.87	2,281.00	6,246.65	6,230.81	394.250	CC
Kate Red D29-3 - Wellbore #1 - Kate Red D29-3	4,700.00	4,637.90	6,248.52	6,215.88	191.430	ES
Kate Red D29-3 - Wellbore #1 - Kate Red D29-3	6,800.00	6,682.06	6,475.87	6,428.87	137.768	SF
Kate Red D29-5 - Wellbore #1 - Gyro Surveys	4,788.48	4,770.53	6,984.78	6,951.33	208.824	CC
Kate Red D29-5 - Wellbore #1 - Gyro Surveys	6,140.00	6,098.04	6,992.10	6,949.18	162.935	ES
Kate Red D29-5 - Wellbore #1 - Gyro Surveys	6,800.00	6,720.63	7,215.73	7,168.58	153.015	SF
Kate Red D29-6 - Wellbore #1 - Gyro Surveys	4,693.16	4,669.45	7,431.70	7,398.98	227.146	CC
Kate Red D29-6 - Wellbore #1 - Gyro Surveys	4,800.00	4,727.48	7,432.07	7,398.77	223.170	ES
Kate Red D29-6 - Wellbore #1 - Gyro Surveys	6,800.00	6,700.00	7,687.80	7,640.73	163.340	SF
Kate White D29-1 - Wellbore #1 - Gyro Surveys	1,995.60	1,985.60	7,874.58	7,860.90	575.644	CC
Kate White D29-1 - Wellbore #1 - Gyro Surveys	5,800.00	5,747.69	7,890.72	7,850.26	195.045	ES
Kate White D29-1 - Wellbore #1 - Gyro Surveys	6,950.00	6,798.57	8,142.81	8,095.08	170.618	SF
Kate White D29-15 - Wellbore #1 - Gyro Surveys						Out of range
Kate White D29-16 - Wellbore #1 - Gyro Surveys						Out of range
Kate White D29-7 - Wellbore #1 - Gyro Surveys	6,156.39	6,300.00	8,202.59	8,158.87	187.639	CC, ES
Kate White D29-7 - Wellbore #1 - Gyro Surveys	6,800.00	6,680.54	8,391.08	8,344.02	178.301	SF
Kate White D29-8 - Wellbore #1 - Gyro Surveys	6,147.12	6,200.00	8,847.86	8,804.55	204.316	CC
Kate White D29-8 - Wellbore #1 - Gyro Surveys	6,150.00	6,200.00	8,847.86	8,804.55	204.267	ES
Kate White D29-8 - Wellbore #1 - Gyro Surveys	6,850.00	6,532.68	9,061.82	9,015.23	194.478	SF
Kate White D29-9 (SI) - Wellbore #1 - Gyro Surveys	3,090.07	3,091.21	9,907.76	9,886.29	461.558	CC
Kate White D29-9 (SI) - Wellbore #1 - Gyro Surveys	5,700.00	5,660.13	9,914.58	9,874.79	249.194	ES
Kate White D29-9 (SI) - Wellbore #1 - Gyro Surveys	6,550.00	6,212.96	9,997.74	9,953.05	223.734	SF

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

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Independence D18-725
Project:	Mustang	**TVD Reference:**	Well @ 4800.00ft
Reference Site:	D Section 19	**MD Reference:**	Well @ 4800.00ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Independence D18-725	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Independence D18-725	**Database:**	EDMP
Reference Design:	Plan 1	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Independence D18-725
Project:	Mustang	**TVD Reference:**	Well @ 4800.00ft
Reference Site:	D Section 19	**MD Reference:**	Well @ 4800.00ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Independence D18-725	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Independence D18-725	**Database:**	EDMP
Reference Design:	Plan 1	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
D Section 30						
Adams D30-27D - Adams D30-27D - Adams D30-27D - A	6,143.85	6,240.07	4,713.53	4,668.45	104.551	CC
Adams D30-27D - Adams D30-27D - Adams D30-27D - A	6,150.00	6,245.59	4,713.56	4,668.43	104.460	ES
Adams D30-27D - Adams D30-27D - Adams D30-27D - A	6,650.00	6,710.06	4,841.15	4,792.85	100.220	SF
Adams D30-29D - Wellbore #1 - Wellbore #1 - As Drilled	1,125.12	1,121.00	5,381.22	5,373.68	712.759	CC
Adams D30-29D - Wellbore #1 - Wellbore #1 - As Drilled	1,200.00	1,160.76	5,381.48	5,373.51	675.255	ES
Adams D30-29D - Wellbore #1 - Wellbore #1 - As Drilled	6,650.00	6,708.91	5,763.34	5,712.95	114.366	SF
Adams D30-30D - Adams D30-30D OH - As Drilled	1,592.47	1,613.00	5,271.03	5,257.16	380.117	CC
Adams D30-30D - Adams D30-30D OH - As Drilled	1,700.00	1,659.89	5,271.68	5,256.86	355.933	ES
Adams D30-30D - Adams D30-30D OH - As Drilled	6,650.00	6,650.00	6,361.10	6,247.50	55.992	SF
Adams D30-31D - Adams D30-31D Gyros - Gyros	0.00	0.00	5,367.81			
Adams D30-31D - Adams D30-31D Gyros - Gyros	100.00	59.27	5,367.96	5,367.73	10,000.000	ES
Adams D30-31D - Adams D30-31D Gyros - Gyros	8,300.00	8,300.00	8,553.55	8,439.71	75.139	SF
Corbin D30-23D - Corbin D30-23D - Corbin D30-23D - As	5,980.51	6,348.58	9,140.15	9,044.33	95.391	CC
Corbin D30-23D - Corbin D30-23D - Corbin D30-23D - As	6,140.00	6,502.78	9,140.27	9,043.73	94.677	ES
Corbin D30-23D - Corbin D30-23D - Corbin D30-23D - As	6,500.00	6,773.67	9,200.47	9,102.39	93.809	SF
Corbin Red D30-04J - Corbin Red D30-04J - Corbin Red	5,543.98	5,537.72	8,507.45	8,468.64	219.234	CC
Corbin Red D30-04J - Corbin Red D30-04J - Corbin Red	5,900.00	5,858.83	8,508.22	8,467.02	206.506	ES
Corbin Red D30-04J - Corbin Red D30-04J - Corbin Red	6,750.00	6,400.00	8,716.13	8,670.24	189.934	SF
Corbin Red D30-09 - Corbin Red D30-09 - Corbin Red D	5,154.36	5,151.85	8,153.31	8,117.22	225.878	CC
Corbin Red D30-09 - Corbin Red D30-09 - Corbin Red D	6,140.00	6,105.52	8,157.46	8,114.51	189.938	ES
Corbin Red D30-09 - Corbin Red D30-09 - Corbin Red D	6,750.00	6,595.22	8,356.19	8,309.58	179.275	SF
Corbin Red D30-15 - Corbin Red D30-15 - Corbin Red D	5,475.33	5,476.24	9,509.63	9,471.28	247.996	CC
Corbin Red D30-15 - Corbin Red D30-15 - Corbin Red D	5,600.00	5,541.82	9,510.01	9,470.99	243.720	ES
Corbin Red D30-15 - Corbin Red D30-15 - Corbin Red D	6,800.00	6,500.00	9,750.62	9,704.26	210.345	SF
Corbin Red D30-16 - Corbin Red D30-16 - Corbin Red D	0.00	0.87	9,509.11			
Corbin Red D30-16 - Corbin Red D30-16 - Corbin Red D	2,300.00	2,237.55	9,513.71	9,498.05	607.724	ES
Corbin Red D30-16 - Corbin Red D30-16 - Corbin Red D	6,850.00	6,847.08	9,862.86	9,815.14	206.669	SF
Dechant D30-17D - Dechant D30-17D - Dechant D30-17	141.92	123.92	5,360.80	5,360.27	10,000.000	CC
Dechant D30-17D - Dechant D30-17D - Dechant D30-17	200.00	163.11	5,360.91	5,360.02	6,079.739	ES
Dechant D30-17D - Dechant D30-17D - Dechant D30-17	6,500.00	6,969.00	6,559.59	6,471.88	74.784	SF
Dechant D30-20D - Dechant D30-20D - Dechant D30-20	6,155.58	6,389.74	7,954.57	7,908.33	172.022	CC, ES
Dechant D30-20D - Dechant D30-20D - Dechant D30-20	6,750.00	6,844.00	8,127.21	8,077.59	163.790	SF
Dechant D30-24D - Dechant D30-24D - Dechant D30-24	5,759.51	5,878.13	8,996.55	8,954.99	216.489	CC
Dechant D30-24D - Dechant D30-24D - Dechant D30-24	5,900.00	5,949.99	8,997.04	8,954.78	212.870	ES
Dechant D30-24D - Dechant D30-24D - Dechant D30-24	6,700.00	6,598.93	9,167.60	9,120.60	195.051	SF
Dechant D30-25D - Dechant D30-25D - Dechant D30-25	6,147.69	6,420.87	9,262.92	9,206.34	163.703	CC
Dechant D30-25D - Dechant D30-25D - Dechant D30-25	6,150.00	6,422.28	9,262.92	9,206.33	163.670	ES
Dechant D30-25D - Dechant D30-25D - Dechant D30-25	6,750.00	6,777.10	9,449.33	9,390.12	159.599	SF
Dechant D31-27D - Dechant D31-27D - Dechant D31-27						Out of range
Dechant D31-28D - Dechant D31-28D - Dechant D31-28						Out of range
Dechant D31-29D - Dechant D31-29D - Dechant D31-29						Out of range
Dechant D31-77HN - Original Drilling - Original Drilling - A						Out of range
Hanson D30-11 - Hanson D30-11 - Hanson D30-11 - As D	3,608.09	3,600.00	8,334.57	8,309.43	331.541	CC
Hanson D30-11 - Hanson D30-11 - Hanson D30-11 - As D	3,800.00	3,725.24	8,335.46	8,309.20	317.440	ES
Hanson D30-11 - Hanson D30-11 - Hanson D30-11 - As D	6,800.00	6,868.76	8,573.43	8,525.75	179.802	SF
Hanson D30-12 - Hanson D30-12 - Hanson D30-12 - As	6,151.93	6,263.66	8,646.21	8,602.65	198.502	CC, ES
Hanson D30-12 - Hanson D30-12 - Hanson D30-12 - As	6,800.00	6,834.62	8,850.45	8,802.84	185.927	SF
Hanson D30-13 - Hanson D30-13 - Hanson D30-13 - As						Out of range
Hanson D30-14 - Hanson D30-14 - Hanson D30-14 - As	6,094.12	6,100.00	9,654.10	9,611.25	225.287	CC
Hanson D30-14 - Hanson D30-14 - Hanson D30-14 - As	6,140.00	6,127.88	9,654.15	9,611.03	223.926	ES
Hanson D30-14 - Hanson D30-14 - Hanson D30-14 - As	6,750.00	6,543.64	9,847.03	9,800.52	211.699	SF
Hettinger C Unit 1 - Hettinger C Unit 1 - Hettinger C Unit	6,143.95	6,163.12	5,673.26	5,630.02	131.201	CC
Hettinger C Unit 1 - Hettinger C Unit 1 - Hettinger C Unit	6,150.00	6,167.82	5,673.29	5,630.01	131.086	ES

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

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Independence D18-725
Project:	Mustang	**TVD Reference:**	Well @ 4800.00ft
Reference Site:	D Section 19	**MD Reference:**	Well @ 4800.00ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Independence D18-725	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Independence D18-725	**Database:**	EDMP
Reference Design:	Plan 1	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
D Section 30						
Hettinger C Unit 1 - Hettinger C Unit 1 - Hettinger C Unit	6,650.00	6,717.03	5,798.18	5,751.30	123.680	SF
Hettinger D30-02 - Hettinger D30-02 - Hettinger D30-02 -	6,140.00	6,119.00	5,426.76	5,351.58	72.188	CC
Hettinger D30-02 - Hettinger D30-02 - Hettinger D30-02 -	6,150.00	6,129.00	5,426.82	5,351.52	72.071	ES
Hettinger D30-02 - Hettinger D30-02 - Hettinger D30-02 -	6,700.00	6,643.80	5,584.13	5,502.52	68.430	SF
Hettinger D30-03 - Hettinger D30-03 - Hettinger D30-03 -	3,131.38	3,111.75	5,782.79	5,761.10	266.517	CC
Hettinger D30-03 - Hettinger D30-03 - Hettinger D30-03 -	6,155.78	6,246.25	5,788.94	5,745.45	133.120	ES
Hettinger D30-03 - Hettinger D30-03 - Hettinger D30-03 -	6,700.00	6,735.70	5,924.39	5,877.40	126.055	SF
Hettinger D30-04 - Hettinger D30-04 - Hettinger D30-04 -	6,151.95	6,215.09	6,305.84	6,262.45	145.338	CC, ES
Hettinger D30-04 - Hettinger D30-04 - Hettinger D30-04 -	6,700.00	6,816.02	6,429.51	6,382.21	135.927	SF
Hettinger D30-05 - Hettinger D30-05 - Hettinger D30-05 -	6,143.33	6,162.98	7,840.30	7,797.16	181.764	CC
Hettinger D30-05 - Hettinger D30-05 - Hettinger D30-05 -	6,150.00	6,167.70	7,840.32	7,797.15	181.595	ES
Hettinger D30-05 - Hettinger D30-05 - Hettinger D30-05 -	6,850.00	6,741.96	8,081.19	8,033.86	170.751	SF
Hettinger D30-06 - Hettinger D30-06 - Hettinger D30-06 -	6,160.50	6,334.75	7,372.00	7,328.22	168.378	CC, ES
Hettinger D30-06 - Hettinger D30-06 - Hettinger D30-06 -	6,800.00	6,820.11	7,579.97	7,532.47	159.587	SF
Hettinger D30-08 - Hettinger D30-08 - Hettinger D30-08 -	5,111.11	5,100.00	6,926.21	6,890.48	193.819	CC
Hettinger D30-08 - Hettinger D30-08 - Hettinger D30-08 -	6,153.30	6,263.34	6,931.78	6,888.25	159.251	ES
Hettinger D30-08 - Hettinger D30-08 - Hettinger D30-08 -	6,750.00	6,690.17	7,120.66	7,073.72	151.702	SF
Leslie E Hanson Gas Unit 1 - Leslie E Hanson Gas Unit	6,140.00	6,137.00	9,410.31	9,334.98	124.917	CC
Leslie E Hanson Gas Unit 1 - Leslie E Hanson Gas Unit	6,150.00	6,147.00	9,410.37	9,334.92	124.714	ES
Leslie E Hanson Gas Unit 1 - Leslie E Hanson Gas Unit	6,850.00	6,764.95	9,663.90	9,580.91	116.444	SF
McWilliams D29-32 - McWilliams D29-32 - McWilliams D	4,540.84	4,533.26	7,448.42	7,416.72	234.955	CC
McWilliams D29-32 - McWilliams D29-32 - McWilliams D	4,600.00	4,564.15	7,448.53	7,416.51	232.615	ES
McWilliams D29-32 - McWilliams D29-32 - McWilliams D	6,750.00	6,623.76	7,660.66	7,613.97	164.087	SF
McWilliams D30-07 - McWilliams D30-07 - McWilliams D	6,140.00	6,127.00	6,743.34	6,668.09	89.618	CC
McWilliams D30-07 - McWilliams D30-07 - McWilliams D	6,150.00	6,137.00	6,743.40	6,668.03	89.472	ES
McWilliams D30-07 - McWilliams D30-07 - McWilliams D	6,750.00	6,688.99	6,934.69	6,852.57	84.448	SF
McWilliams D30-18 - McWilliams D30-18 - McWilliams D	3,214.63	3,200.00	6,394.22	6,371.92	286.662	CC
McWilliams D30-18 - McWilliams D30-18 - McWilliams D	6,156.03	6,269.15	6,401.26	6,357.72	147.003	ES
McWilliams D30-18 - McWilliams D30-18 - McWilliams D	6,750.00	6,797.87	6,578.26	6,530.94	139.025	SF
McWilliams D30-19 - McWilliams D30-19 - McWilliams D	153.83	139.83	6,731.54	6,730.91	10,000.000	CC
McWilliams D30-19 - McWilliams D30-19 - McWilliams D	6,150.00	6,205.15	6,744.50	6,700.19	152.215	ES
McWilliams D30-19 - McWilliams D30-19 - McWilliams D	6,800.00	6,792.64	6,947.60	6,898.49	141.471	SF
McWilliams D30-21 - McWilliams D30-21 - McWilliams D	6,164.00	6,400.00	7,889.72	7,845.70	179.229	CC, ES
McWilliams D30-21 - McWilliams D30-21 - McWilliams D	6,650.00	6,600.00	8,010.73	7,964.37	172.779	SF
McWilliams D30-22 - McWilliams D30-22 - McWilliams D	6,155.91	6,300.00	7,422.67	7,379.02	170.046	CC, ES
McWilliams D30-22 - McWilliams D30-22 - McWilliams D	6,700.00	6,557.31	7,580.99	7,534.65	163.596	SF

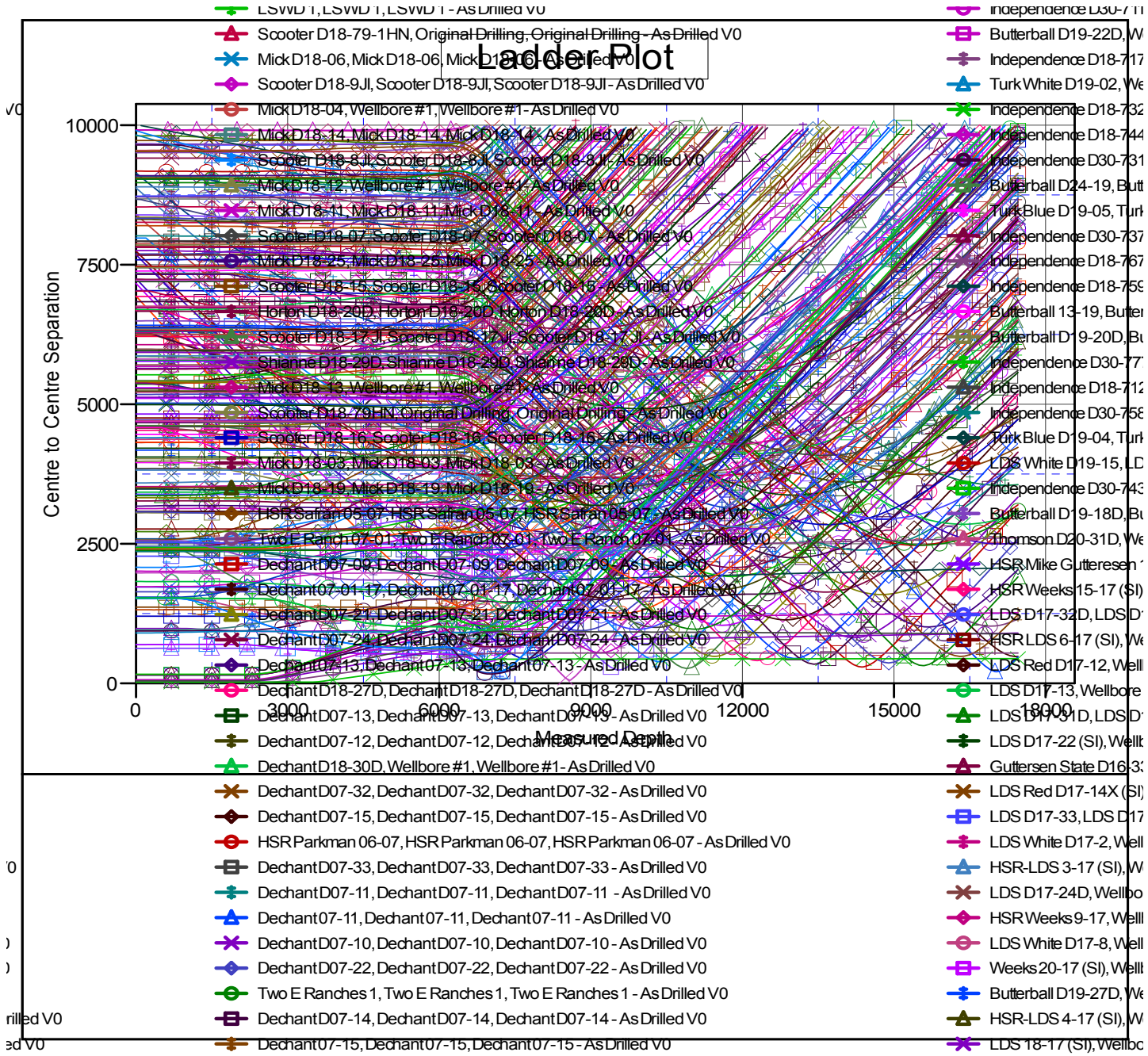
Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Independence D18-725
Project:	Mustang	**TVD Reference:**	Well @ 4800.00ft
Reference Site:	D Section 19	**MD Reference:**	Well @ 4800.00ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Independence D18-725	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Independence D18-725	**Database:**	EDMP
Reference Design:	Plan 1	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to Well @ 4800.00ft
Offset Depths are relative to Offset Datum
Central Meridian is -105.5000000

Coordinates are relative to: Independence D18-725
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.59°



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

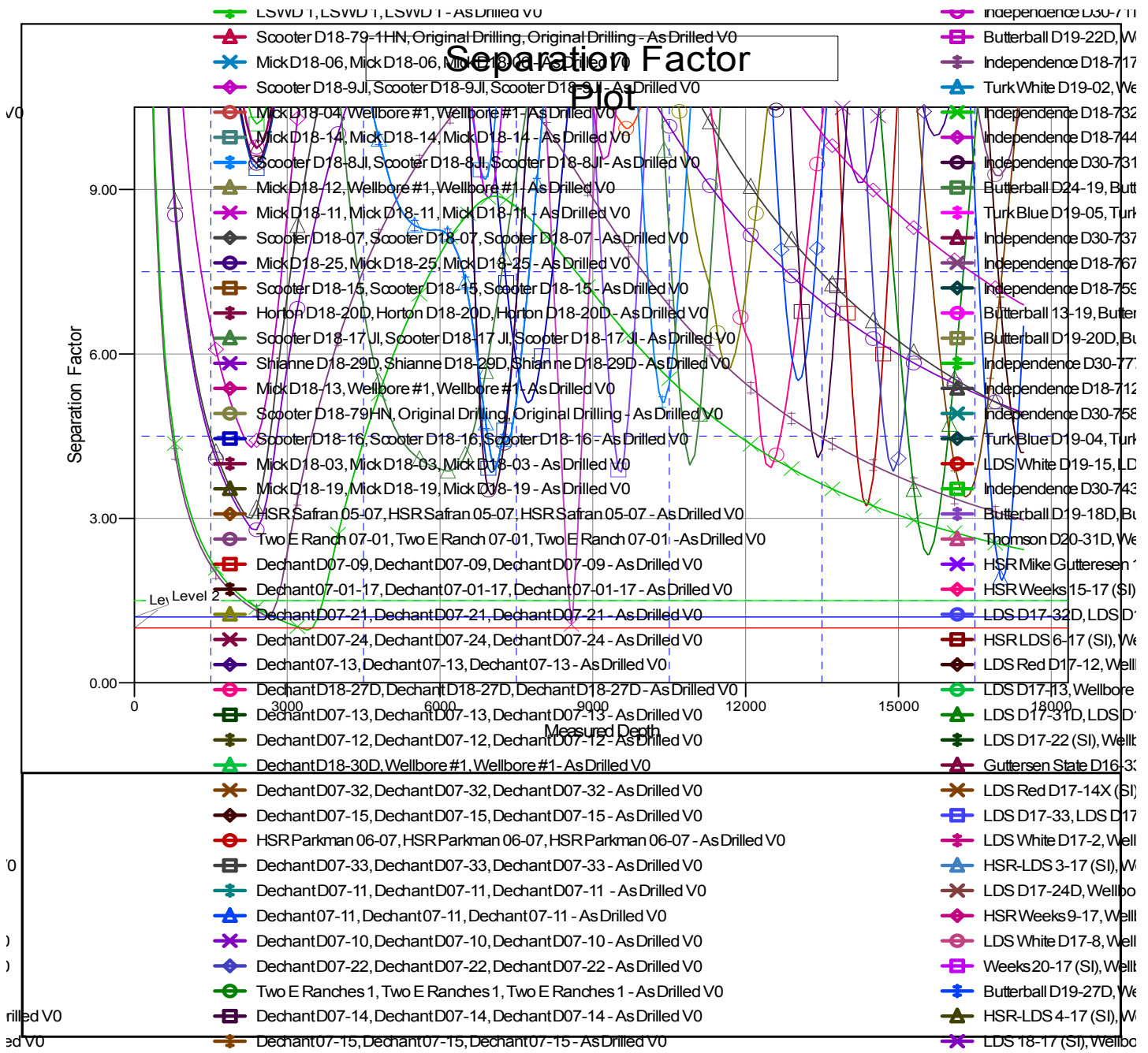
Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Independence D18-725
Project:	Mustang	**TVD Reference:**	Well @ 4800.00ft
Reference Site:	D Section 19	**MD Reference:**	Well @ 4800.00ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Independence D18-725	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Independence D18-725	**Database:**	EDMP
Reference Design:	Plan 1	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to Well @ 4800.00ft
Offset Depths are relative to Offset Datum
Central Meridian is -105.5000000

Coordinates are relative to: Independence D18-725
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.59°



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