

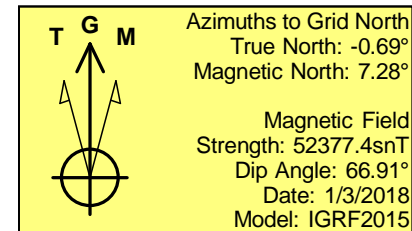
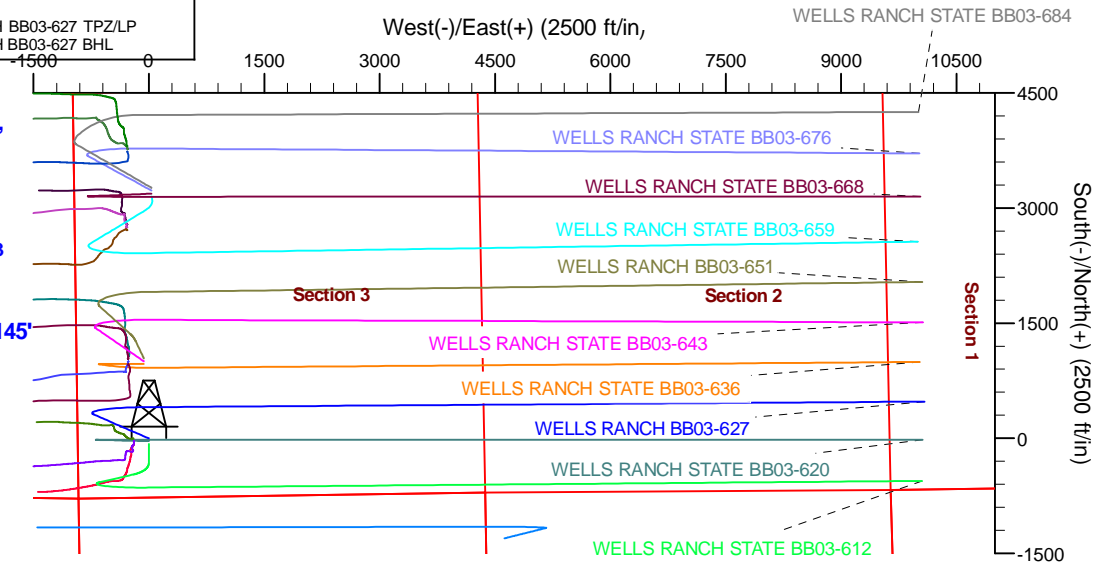
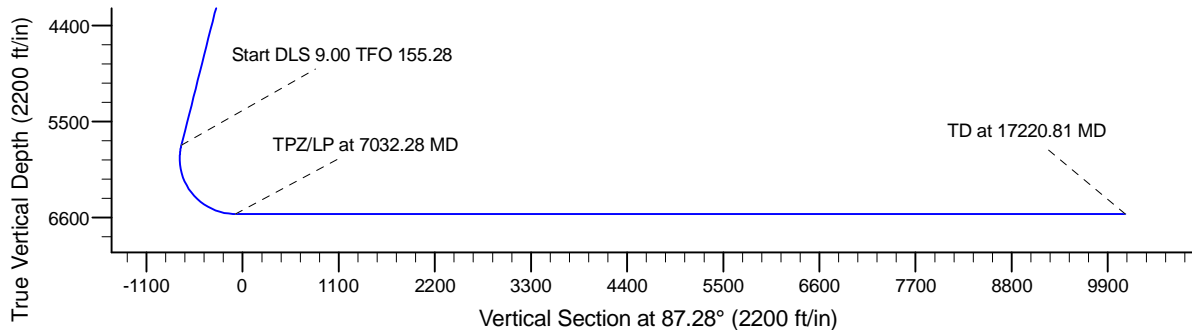
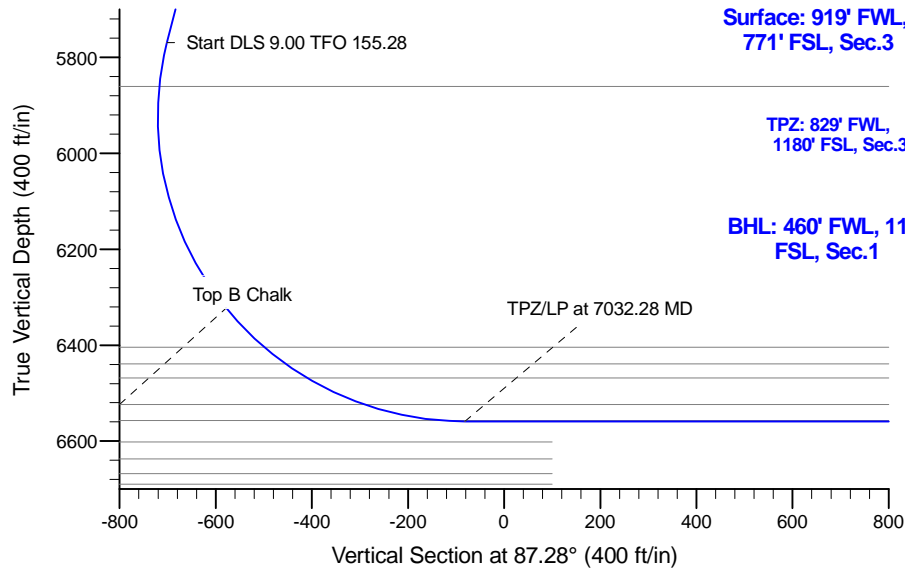
Project: Wells Ranch
Site: BB Section 03
Well: WELLS RANCH BB03-627
Wellbore: Wellbore #1
Design: Plan 1

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	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	2600.00	0.00	0.00	2600.00	0.00	0.00	0.00	0.00	0.00	
3	3387.13	15.74	293.49	3377.26	42.83	-98.55	2.00	293.49	-96.41	
4	5872.69	15.74	293.49	5769.59	311.60	-717.05	0.00	0.00	-701.47	
5	7032.28	90.00	89.59	6559.00	406.14	-100.99	9.00	155.28	-81.62	WELLS RANCH BB03-627 TPZ/LP
6	17220.81	90.00	89.59	6559.00	478.88	10087.28	0.00	0.00	10098.64	WELLS RANCH BB03-627 BHL



WELL DETAILS: WELLS RANCH BB03-627

	Northing	Easting	4714.00 Latitude	Longitude
0.00	0.00	1398833.85	3298110.97	40.4232600 -104.4292300

Plan: Plan 1 (WELLS RANCH BB03-627/Wellbore #1)

Created By: Colby Baxter	Date: 12:35, March 07 2018
Checked: _____	Date: _____
Reviewed: _____	Date: _____
Approved: _____	Date: _____

Northern Region - DJ Basin

Wells Ranch

BB Section 03

WELLS RANCH BB03-627

Wellbore #1

Plan: Plan 1

Standard Survey Report

07 March, 2018

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well WELLS RANCH BB03-627
Project:	Wells Ranch	TVD Reference:	Well @ 4744.00ft
Site:	BB Section 03	MD Reference:	Well @ 4744.00ft
Well:	WELLS RANCH BB03-627	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan 1	Database:	EDMP

Project	Wells Ranch, 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	BB Section 03				
Site Position:		Northing:	11,793.94 usft	Latitude:	36.1509298
From:	Map	Easting:	1,597.09 usft	Longitude:	-115.6527898
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	-6.56 °

Well	WELLS RANCH BB03-627					
Well Position	+N/-S	0.00 ft	Northing:	1,398,833.85 usft	Latitude:	40.4232600
	+E/-W	0.00 ft	Easting:	3,298,110.97 usft	Longitude:	-104.4292300
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,714.00 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	1/3/2018	7.97	66.91	52,377.40963920

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	87.28	

Survey Tool Program	Date	3/7/2018			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.00	17,220.81	Plan 1 (Wellbore #1)	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 WELLS RANCH BB03-627
Project:	Wells Ranch	TVD Reference:	Well @ 4744.00ft
Site:	BB Section 03	MD Reference:	Well @ 4744.00ft
Well:	WELLS RANCH BB03-627	North Reference:	Grid
Wellbore:	Wellbore #1	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	2.00	293.49	2,699.98	0.70	-1.60	-1.57	2.00	2.00	0.00
2,800.00	4.00	293.49	2,799.84	2.78	-6.40	-6.26	2.00	2.00	0.00
2,900.00	6.00	293.49	2,899.45	6.25	-14.39	-14.08	2.00	2.00	0.00
3,000.00	8.00	293.49	2,998.70	11.11	-25.57	-25.01	2.00	2.00	0.00
3,100.00	10.00	293.49	3,097.47	17.35	-39.92	-39.05	2.00	2.00	0.00
3,200.00	12.00	293.49	3,195.62	24.95	-57.42	-56.17	2.00	2.00	0.00
3,300.00	14.00	293.49	3,293.06	33.92	-78.05	-76.35	2.00	2.00	0.00
3,387.13	15.74	293.49	3,377.26	42.83	-98.55	-96.41	2.00	2.00	0.00
3,400.00	15.74	293.49	3,389.65	44.22	-101.76	-99.55	0.00	0.00	0.00
3,500.00	15.74	293.49	3,485.90	55.03	-126.64	-123.89	0.00	0.00	0.00
3,600.00	15.74	293.49	3,582.15	65.85	-151.52	-148.23	0.00	0.00	0.00
3,700.00	15.74	293.49	3,678.40	76.66	-176.41	-172.57	0.00	0.00	0.00
3,800.00	15.74	293.49	3,774.65	87.47	-201.29	-196.92	0.00	0.00	0.00
3,900.00	15.74	293.49	3,870.90	98.29	-226.17	-221.26	0.00	0.00	0.00
4,000.00	15.74	293.49	3,967.14	109.10	-251.06	-245.60	0.00	0.00	0.00
4,100.00	15.74	293.49	4,063.39	119.91	-275.94	-269.95	0.00	0.00	0.00
4,200.00	15.74	293.49	4,159.64	130.73	-300.83	-294.29	0.00	0.00	0.00
4,300.00	15.74	293.49	4,255.89	141.54	-325.71	-318.63	0.00	0.00	0.00
4,400.00	15.74	293.49	4,352.14	152.35	-350.59	-342.97	0.00	0.00	0.00
4,500.00	15.74	293.49	4,448.39	163.17	-375.48	-367.32	0.00	0.00	0.00
4,600.00	15.74	293.49	4,544.64	173.98	-400.36	-391.66	0.00	0.00	0.00
4,700.00	15.74	293.49	4,640.89	184.79	-425.24	-416.00	0.00	0.00	0.00
4,800.00	15.74	293.49	4,737.14	195.61	-450.13	-440.35	0.00	0.00	0.00
4,900.00	15.74	293.49	4,833.39	206.42	-475.01	-464.69	0.00	0.00	0.00
5,000.00	15.74	293.49	4,929.64	217.23	-499.90	-489.03	0.00	0.00	0.00
5,100.00	15.74	293.49	5,025.88	228.05	-524.78	-513.37	0.00	0.00	0.00
5,200.00	15.74	293.49	5,122.13	238.86	-549.66	-537.72	0.00	0.00	0.00

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well WELLS RANCH BB03-627
Project:	Wells Ranch	TVD Reference:	Well @ 4744.00ft
Site:	BB Section 03	MD Reference:	Well @ 4744.00ft
Well:	WELLS RANCH BB03-627	North Reference:	Grid
Wellbore:	Wellbore #1	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)
5,300.00	15.74	293.49	5,218.38	249.67	-574.55	-562.06	0.00	0.00	0.00
5,400.00	15.74	293.49	5,314.63	260.49	-599.43	-586.40	0.00	0.00	0.00
5,500.00	15.74	293.49	5,410.88	271.30	-624.31	-610.75	0.00	0.00	0.00
5,600.00	15.74	293.49	5,507.13	282.11	-649.20	-635.09	0.00	0.00	0.00
5,700.00	15.74	293.49	5,603.38	292.93	-674.08	-659.43	0.00	0.00	0.00
5,800.00	15.74	293.49	5,699.63	303.74	-698.96	-683.77	0.00	0.00	0.00
5,872.69	15.74	293.49	5,769.59	311.60	-717.05	-701.47	0.00	0.00	0.00
5,900.00	13.55	297.88	5,796.01	314.57	-723.28	-707.55	9.00	-8.04	16.08
6,000.00	7.13	335.49	5,894.44	325.72	-736.23	-719.96	9.00	-6.42	37.62
6,100.00	8.91	42.86	5,993.65	337.07	-733.53	-716.72	9.00	1.78	67.36
6,200.00	16.41	66.78	6,091.21	348.34	-715.25	-697.92	9.00	7.50	23.92
6,300.00	24.91	75.36	6,184.72	359.26	-681.82	-664.02	9.00	8.50	8.58
6,400.00	33.66	79.72	6,271.86	369.55	-634.08	-615.84	9.00	8.75	4.36
6,500.00	42.50	82.43	6,350.50	378.96	-573.20	-554.58	9.00	8.84	2.72
6,600.00	51.39	84.36	6,418.70	387.27	-500.68	-481.75	9.00	8.89	1.93
6,700.00	60.31	85.86	6,474.78	394.26	-418.31	-399.14	9.00	8.91	1.50
6,800.00	69.24	87.11	6,517.36	399.77	-328.11	-308.78	9.00	8.93	1.25
6,900.00	78.17	88.22	6,545.40	403.65	-232.30	-212.90	9.00	8.94	1.11
7,000.00	87.11	89.26	6,558.19	405.82	-133.25	-113.86	9.00	8.94	1.04
7,032.28	90.00	89.59	6,559.00	406.14	-100.99	-81.62	9.00	8.94	1.02
7,100.00	90.00	89.59	6,559.00	406.63	-33.27	-13.95	0.00	0.00	0.00
7,200.00	90.00	89.59	6,559.00	407.34	66.73	85.97	0.00	0.00	0.00
7,300.00	90.00	89.59	6,559.00	408.05	166.73	185.89	0.00	0.00	0.00
7,400.00	90.00	89.59	6,559.00	408.77	266.73	285.81	0.00	0.00	0.00
7,500.00	90.00	89.59	6,559.00	409.48	366.72	385.73	0.00	0.00	0.00
7,600.00	90.00	89.59	6,559.00	410.20	466.72	485.65	0.00	0.00	0.00
7,700.00	90.00	89.59	6,559.00	410.91	566.72	585.57	0.00	0.00	0.00
7,800.00	90.00	89.59	6,559.00	411.62	666.72	685.48	0.00	0.00	0.00
7,900.00	90.00	89.59	6,559.00	412.34	766.71	785.40	0.00	0.00	0.00
8,000.00	90.00	89.59	6,559.00	413.05	866.71	885.32	0.00	0.00	0.00
8,100.00	90.00	89.59	6,559.00	413.77	966.71	985.24	0.00	0.00	0.00
8,200.00	90.00	89.59	6,559.00	414.48	1,066.71	1,085.16	0.00	0.00	0.00
8,300.00	90.00	89.59	6,559.00	415.19	1,166.70	1,185.08	0.00	0.00	0.00
8,400.00	90.00	89.59	6,559.00	415.91	1,266.70	1,285.00	0.00	0.00	0.00
8,500.00	90.00	89.59	6,559.00	416.62	1,366.70	1,384.92	0.00	0.00	0.00
8,600.00	90.00	89.59	6,559.00	417.34	1,466.69	1,484.84	0.00	0.00	0.00
8,700.00	90.00	89.59	6,559.00	418.05	1,566.69	1,584.75	0.00	0.00	0.00
8,800.00	90.00	89.59	6,559.00	418.76	1,666.69	1,684.67	0.00	0.00	0.00
8,900.00	90.00	89.59	6,559.00	419.48	1,766.69	1,784.59	0.00	0.00	0.00
9,000.00	90.00	89.59	6,559.00	420.19	1,866.68	1,884.51	0.00	0.00	0.00
9,100.00	90.00	89.59	6,559.00	420.91	1,966.68	1,984.43	0.00	0.00	0.00
9,200.00	90.00	89.59	6,559.00	421.62	2,066.68	2,084.35	0.00	0.00	0.00
9,300.00	90.00	89.59	6,559.00	422.33	2,166.68	2,184.27	0.00	0.00	0.00

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well WELLS RANCH BB03-627
Project:	Wells Ranch	TVD Reference:	Well @ 4744.00ft
Site:	BB Section 03	MD Reference:	Well @ 4744.00ft
Well:	WELLS RANCH BB03-627	North Reference:	Grid
Wellbore:	Wellbore #1	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)
9,400.00	90.00	89.59	6,559.00	423.05	2,266.67	2,284.19	0.00	0.00	0.00
9,500.00	90.00	89.59	6,559.00	423.76	2,366.67	2,384.10	0.00	0.00	0.00
9,600.00	90.00	89.59	6,559.00	424.48	2,466.67	2,484.02	0.00	0.00	0.00
9,700.00	90.00	89.59	6,559.00	425.19	2,566.67	2,583.94	0.00	0.00	0.00
9,800.00	90.00	89.59	6,559.00	425.90	2,666.66	2,683.86	0.00	0.00	0.00
9,900.00	90.00	89.59	6,559.00	426.62	2,766.66	2,783.78	0.00	0.00	0.00
10,000.00	90.00	89.59	6,559.00	427.33	2,866.66	2,883.70	0.00	0.00	0.00
10,100.00	90.00	89.59	6,559.00	428.04	2,966.66	2,983.62	0.00	0.00	0.00
10,200.00	90.00	89.59	6,559.00	428.76	3,066.65	3,083.54	0.00	0.00	0.00
10,300.00	90.00	89.59	6,559.00	429.47	3,166.65	3,183.45	0.00	0.00	0.00
10,400.00	90.00	89.59	6,559.00	430.19	3,266.65	3,283.37	0.00	0.00	0.00
10,500.00	90.00	89.59	6,559.00	430.90	3,366.65	3,383.29	0.00	0.00	0.00
10,600.00	90.00	89.59	6,559.00	431.61	3,466.64	3,483.21	0.00	0.00	0.00
10,700.00	90.00	89.59	6,559.00	432.33	3,566.64	3,583.13	0.00	0.00	0.00
10,800.00	90.00	89.59	6,559.00	433.04	3,666.64	3,683.05	0.00	0.00	0.00
10,900.00	90.00	89.59	6,559.00	433.76	3,766.64	3,782.97	0.00	0.00	0.00
11,000.00	90.00	89.59	6,559.00	434.47	3,866.63	3,882.89	0.00	0.00	0.00
11,100.00	90.00	89.59	6,559.00	435.18	3,966.63	3,982.81	0.00	0.00	0.00
11,200.00	90.00	89.59	6,559.00	435.90	4,066.63	4,082.72	0.00	0.00	0.00
11,300.00	90.00	89.59	6,559.00	436.61	4,166.63	4,182.64	0.00	0.00	0.00
11,400.00	90.00	89.59	6,559.00	437.33	4,266.62	4,282.56	0.00	0.00	0.00
11,500.00	90.00	89.59	6,559.00	438.04	4,366.62	4,382.48	0.00	0.00	0.00
11,600.00	90.00	89.59	6,559.00	438.75	4,466.62	4,482.40	0.00	0.00	0.00
11,700.00	90.00	89.59	6,559.00	439.47	4,566.62	4,582.32	0.00	0.00	0.00
11,800.00	90.00	89.59	6,559.00	440.18	4,666.61	4,682.24	0.00	0.00	0.00
11,900.00	90.00	89.59	6,559.00	440.90	4,766.61	4,782.16	0.00	0.00	0.00
12,000.00	90.00	89.59	6,559.00	441.61	4,866.61	4,882.07	0.00	0.00	0.00
12,100.00	90.00	89.59	6,559.00	442.32	4,966.61	4,981.99	0.00	0.00	0.00
12,200.00	90.00	89.59	6,559.00	443.04	5,066.60	5,081.91	0.00	0.00	0.00
12,300.00	90.00	89.59	6,559.00	443.75	5,166.60	5,181.83	0.00	0.00	0.00
12,400.00	90.00	89.59	6,559.00	444.47	5,266.60	5,281.75	0.00	0.00	0.00
12,500.00	90.00	89.59	6,559.00	445.18	5,366.60	5,381.67	0.00	0.00	0.00
12,600.00	90.00	89.59	6,559.00	445.89	5,466.59	5,481.59	0.00	0.00	0.00
12,700.00	90.00	89.59	6,559.00	446.61	5,566.59	5,581.51	0.00	0.00	0.00
12,800.00	90.00	89.59	6,559.00	447.32	5,666.59	5,681.43	0.00	0.00	0.00
12,900.00	90.00	89.59	6,559.00	448.04	5,766.59	5,781.34	0.00	0.00	0.00
13,000.00	90.00	89.59	6,559.00	448.75	5,866.58	5,881.26	0.00	0.00	0.00
13,100.00	90.00	89.59	6,559.00	449.46	5,966.58	5,981.18	0.00	0.00	0.00
13,200.00	90.00	89.59	6,559.00	450.18	6,066.58	6,081.10	0.00	0.00	0.00
13,300.00	90.00	89.59	6,559.00	450.89	6,166.58	6,181.02	0.00	0.00	0.00
13,400.00	90.00	89.59	6,559.00	451.60	6,266.57	6,280.94	0.00	0.00	0.00
13,500.00	90.00	89.59	6,559.00	452.32	6,366.57	6,380.86	0.00	0.00	0.00
13,600.00	90.00	89.59	6,559.00	453.03	6,466.57	6,480.78	0.00	0.00	0.00

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well WELLS RANCH BB03-627
Project:	Wells Ranch	TVD Reference:	Well @ 4744.00ft
Site:	BB Section 03	MD Reference:	Well @ 4744.00ft
Well:	WELLS RANCH BB03-627	North Reference:	Grid
Wellbore:	Wellbore #1	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)
13,700.00	90.00	89.59	6,559.00	453.75	6,566.56	6,580.69	0.00	0.00	0.00
13,800.00	90.00	89.59	6,559.00	454.46	6,666.56	6,680.61	0.00	0.00	0.00
13,900.00	90.00	89.59	6,559.00	455.17	6,766.56	6,780.53	0.00	0.00	0.00
14,000.00	90.00	89.59	6,559.00	455.89	6,866.56	6,880.45	0.00	0.00	0.00
14,100.00	90.00	89.59	6,559.00	456.60	6,966.55	6,980.37	0.00	0.00	0.00
14,200.00	90.00	89.59	6,559.00	457.32	7,066.55	7,080.29	0.00	0.00	0.00
14,300.00	90.00	89.59	6,559.00	458.03	7,166.55	7,180.21	0.00	0.00	0.00
14,400.00	90.00	89.59	6,559.00	458.74	7,266.55	7,280.13	0.00	0.00	0.00
14,500.00	90.00	89.59	6,559.00	459.46	7,366.54	7,380.05	0.00	0.00	0.00
14,600.00	90.00	89.59	6,559.00	460.17	7,466.54	7,479.96	0.00	0.00	0.00
14,700.00	90.00	89.59	6,559.00	460.89	7,566.54	7,579.88	0.00	0.00	0.00
14,800.00	90.00	89.59	6,559.00	461.60	7,666.54	7,679.80	0.00	0.00	0.00
14,900.00	90.00	89.59	6,559.00	462.31	7,766.53	7,779.72	0.00	0.00	0.00
15,000.00	90.00	89.59	6,559.00	463.03	7,866.53	7,879.64	0.00	0.00	0.00
15,100.00	90.00	89.59	6,559.00	463.74	7,966.53	7,979.56	0.00	0.00	0.00
15,200.00	90.00	89.59	6,559.00	464.46	8,066.53	8,079.48	0.00	0.00	0.00
15,300.00	90.00	89.59	6,559.00	465.17	8,166.52	8,179.40	0.00	0.00	0.00
15,400.00	90.00	89.59	6,559.00	465.88	8,266.52	8,279.31	0.00	0.00	0.00
15,500.00	90.00	89.59	6,559.00	466.60	8,366.52	8,379.23	0.00	0.00	0.00
15,600.00	90.00	89.59	6,559.00	467.31	8,466.52	8,479.15	0.00	0.00	0.00
15,700.00	90.00	89.59	6,559.00	468.03	8,566.51	8,579.07	0.00	0.00	0.00
15,800.00	90.00	89.59	6,559.00	468.74	8,666.51	8,678.99	0.00	0.00	0.00
15,900.00	90.00	89.59	6,559.00	469.45	8,766.51	8,778.91	0.00	0.00	0.00
16,000.00	90.00	89.59	6,559.00	470.17	8,866.51	8,878.83	0.00	0.00	0.00
16,100.00	90.00	89.59	6,559.00	470.88	8,966.50	8,978.75	0.00	0.00	0.00
16,200.00	90.00	89.59	6,559.00	471.59	9,066.50	9,078.66	0.00	0.00	0.00
16,300.00	90.00	89.59	6,559.00	472.31	9,166.50	9,178.58	0.00	0.00	0.00
16,400.00	90.00	89.59	6,559.00	473.02	9,266.50	9,278.50	0.00	0.00	0.00
16,500.00	90.00	89.59	6,559.00	473.74	9,366.49	9,378.42	0.00	0.00	0.00
16,600.00	90.00	89.59	6,559.00	474.45	9,466.49	9,478.34	0.00	0.00	0.00
16,700.00	90.00	89.59	6,559.00	475.16	9,566.49	9,578.26	0.00	0.00	0.00
16,800.00	90.00	89.59	6,559.00	475.88	9,666.49	9,678.18	0.00	0.00	0.00
16,900.00	90.00	89.59	6,559.00	476.59	9,766.48	9,778.10	0.00	0.00	0.00
17,000.00	90.00	89.59	6,559.00	477.31	9,866.48	9,878.02	0.00	0.00	0.00
17,100.00	90.00	89.59	6,559.00	478.02	9,966.48	9,977.93	0.00	0.00	0.00
17,200.00	90.00	89.59	6,559.00	478.73	10,066.48	10,077.85	0.00	0.00	0.00
17,220.81	90.00	89.59	6,559.00	478.88	10,087.28	10,098.64	0.00	0.00	0.00

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well WELLS RANCH BB03-627
Project:	Wells Ranch	TVD Reference:	Well @ 4744.00ft
Site:	BB Section 03	MD Reference:	Well @ 4744.00ft
Well:	WELLS RANCH BB03-627	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan 1	Database:	EDMP

Design Targets

Target Name

- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)		
WELLS RANCH BB03-627 BHL	0.00	0.00	6,559.00	478.88	10,087.28	1,399,312.74	3,308,198.23	40.4242344	-104.3929803
- plan hits target center									
- Point									
WELLS RANCH BB03-627 TPZ/LP	0.00	0.00	6,559.00	406.14	-100.99	1,399,240.00	3,298,009.98	40.4243781	-104.4295751
- plan hits target center									
- Point									

Formations

Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction
(ft)	(ft)			(°)	(°)
474.00	474.00	Pierre			
530.00	530.00	Upper Pierre Aquifer Top			
1,588.00	1,588.00	Upper Pierre Aquifer Base			
3,499.07	3,485.00	Parkman			
4,255.44	4,213.00	Sussex			
4,892.33	4,826.00	Shannon			
5,966.24	5,861.00	Teepee Buttes			
6,576.95	6,404.00	Sharon Springs			
6,633.65	6,439.00	Top A Chalk			
6,686.55	6,468.00	Top A Marl			
6,819.50	6,524.00	Top B Chalk			
6,981.64	6,557.00	Top B Marl			

Plan Annotations

Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
2600	2600	0	0	Start Build 2.00
5873	5770	43	-99	Start DLS 9.00 TFO 155.28
7032	6559	312	-717	TPZ/LP at 7032.28 MD
17,221	6559	406	-101	TD at 17220.81 MD

Checked By: _____ Approved By: _____ Date: _____

Northern Region - DJ Basin

Wells Ranch

BB Section 03

WELLS RANCH BB03-627

Wellbore #1

Plan 1

Anticollision Summary Report

07 March, 2018

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well WELLS RANCH BB03-627
Project:	Wells Ranch	TVD Reference:	Well @ 4744.00ft
Reference Site:	BB Section 03	MD Reference:	Well @ 4744.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	WELLS RANCH BB03-627	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	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	3/7/2018		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	17,220.81	Plan 1 (Wellbore #1)	2_MWD+IFR1+MS	A008Mb: IFR dec & multi-station analysis

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
AA Section 34						
Wells Ranch 34E-232 - Original Drilling - Original Drilling	106.41	166.41	8,627.37	8,626.86	10,000.000	CC
Wells Ranch 34E-232 - Original Drilling - Original Drilling	200.00	214.00	8,627.81	8,626.79	8,487.149	ES
Wells Ranch 34E-232 - Original Drilling - Original Drilling	13,600.00	11,175.00	9,562.60	9,351.19	45.232	SF
AA Section 35						
Wells Ranch 14-35 - Wellbore #1 - Wellbore #1 - As Drille	12,096.65	6,597.14	4,782.91	4,687.99	50.386	CC
Wells Ranch 14-35 - Wellbore #1 - Wellbore #1 - As Drille	12,200.00	6,597.78	4,784.03	4,687.91	49.769	ES
Wells Ranch 14-35 - Wellbore #1 - Wellbore #1 - As Drille	13,600.00	6,606.72	5,013.61	4,904.63	46.007	SF
Wells Ranch USX AA35-01 - Wellbore #1 - Wellbore #1-	15,947.42	6,655.83	8,745.59	8,604.91	62.164	CC
Wells Ranch USX AA35-01 - Wellbore #1 - Wellbore #1-	16,100.00	6,657.59	8,746.92	8,604.40	61.373	ES
Wells Ranch USX AA35-01 - Wellbore #1 - Wellbore #1-	17,220.81	6,669.83	8,837.81	8,682.96	57.074	SF
Wells Ranch USX AA35-02 - Wellbore #1 - Wellbore #1-	14,693.23	6,779.18	8,670.42	8,544.38	68.791	CC
Wells Ranch USX AA35-02 - Wellbore #1 - Wellbore #1-	14,800.00	6,778.40	8,671.08	8,543.77	68.108	ES
Wells Ranch USX AA35-02 - Wellbore #1 - Wellbore #1-	17,220.81	6,760.58	9,031.31	8,879.86	59.631	SF
Wells Ranch USX AA35-03 - Wellbore #1 - Wellbore #1-	13,596.66	6,623.59	8,838.05	8,725.46	78.498	CC
Wells Ranch USX AA35-03 - Wellbore #1 - Wellbore #1-	13,700.00	6,620.65	8,838.65	8,724.84	77.664	ES
Wells Ranch USX AA35-03 - Wellbore #1 - Wellbore #1-	17,220.81	6,548.02	9,551.89	9,405.31	65.167	SF
Wells Ranch USX AA35-04 - Wellbore #1 - Wellbore #1-	12,013.62	12,013.62	8,721.90	8,609.03	77.274	CC
Wells Ranch USX AA35-04 - Wellbore #1 - Wellbore #1-	12,100.00	12,100.00	8,722.33	8,608.15	76.396	ES
Wells Ranch USX AA35-04 - Wellbore #1 - Wellbore #1-	16,900.00	16,900.00	9,997.40	9,824.78	57.916	SF
Wells Ranch USX AA35-05 - Wellbore #1 - Wellbore #1-	12,072.43	6,598.46	7,474.50	7,379.81	78.942	CC
Wells Ranch USX AA35-05 - Wellbore #1 - Wellbore #1-	12,200.00	6,599.15	7,475.59	7,379.42	77.738	ES
Wells Ranch USX AA35-05 - Wellbore #1 - Wellbore #1-	15,400.00	6,635.28	8,181.70	8,056.35	65.271	SF
Wells Ranch USX AA35-06 - Wellbore #1 - Wellbore #1-	13,451.16	6,578.14	7,463.27	7,352.58	67.425	CC
Wells Ranch USX AA35-06 - Wellbore #1 - Wellbore #1-	13,500.00	6,577.99	7,463.43	7,352.16	67.075	ES
Wells Ranch USX AA35-06 - Wellbore #1 - Wellbore #1-	16,400.00	6,568.90	8,024.71	7,886.74	58.165	SF
Wells Ranch USX AA35-07 - Wellbore #1 - Wellbore #1-	14,782.53	6,614.67	7,455.51	7,328.90	58.885	CC
Wells Ranch USX AA35-07 - Wellbore #1 - Wellbore #1-	14,900.00	6,614.56	7,456.43	7,328.42	58.248	ES
Wells Ranch USX AA35-07 - Wellbore #1 - Wellbore #1-	17,220.81	6,612.26	7,844.09	7,694.26	52.354	SF
Wells Ranch USX AA35-08 - Wellbore #1 - Wellbore #1-	16,091.36	6,612.57	7,413.71	7,271.45	52.112	CC
Wells Ranch USX AA35-08 - Wellbore #1 - Wellbore #1-	16,200.00	6,612.76	7,414.51	7,270.94	51.643	ES
Wells Ranch USX AA35-08 - Wellbore #1 - Wellbore #1-	17,220.81	6,614.49	7,499.25	7,344.71	48.525	SF
Wells Ranch USX AA35-09 - Wellbore #1 - Wellbore #1-	16,228.66	6,667.99	6,183.06	6,038.96	42.908	CC
Wells Ranch USX AA35-09 - Wellbore #1 - Wellbore #1-	16,300.00	6,668.11	6,183.47	6,038.51	42.657	ES
Wells Ranch USX AA35-09 - Wellbore #1 - Wellbore #1-	17,220.81	6,669.65	6,262.16	6,107.59	40.514	SF
Wells Ranch USX AA35-10 - Wellbore #1 - Wellbore #1-	14,741.31	6,542.84	6,138.20	6,012.32	48.763	CC
Wells Ranch USX AA35-10 - Wellbore #1 - Wellbore #1-	14,800.00	6,542.95	6,138.48	6,011.90	48.494	ES

CC - Min centre to center distance or convergent 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 WELLS RANCH BB03-627
Project:	Wells Ranch	TVD Reference:	Well @ 4744.00ft
Reference Site:	BB Section 03	MD Reference:	Well @ 4744.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	WELLS RANCH BB03-627	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
AA Section 35						
Wells Ranch USX AA35-10 - Wellbore #1 - Wellbore #1-	16,600.00	6,546.42	6,413.44	6,270.15	44.759	SF
Wells Ranch USX AA35-11 - Wellbore #1 - Wellbore #1-	13,441.80	6,615.73	6,035.35	5,924.65	54.519	CC
Wells Ranch USX AA35-11 - Wellbore #1 - Wellbore #1-	13,500.00	6,620.49	6,035.62	5,924.22	54.177	ES
Wells Ranch USX AA35-11 - Wellbore #1 - Wellbore #1-	15,500.00	6,610.09	6,376.64	6,246.88	49.142	SF
Wells Ranch USX AA35-12 - Wellbore #1 - Wellbore #1-	12,038.41	6,638.95	6,365.88	6,271.35	67.342	CC
Wells Ranch USX AA35-12 - Wellbore #1 - Wellbore #1-	12,100.00	6,639.50	6,366.18	6,270.93	66.839	ES
Wells Ranch USX AA35-12 - Wellbore #1 - Wellbore #1-	14,600.00	6,660.90	6,861.91	6,743.77	58.085	SF
Wells Ranch USX AA35-15 - Wellbore #1 - Wellbore #1-	14,846.85	6,527.15	4,861.57	4,734.47	38.250	CC
Wells Ranch USX AA35-15 - Wellbore #1 - Wellbore #1-	14,900.00	6,527.25	4,861.86	4,734.12	38.061	ES
Wells Ranch USX AA35-15 - Wellbore #1 - Wellbore #1-	16,000.00	6,529.23	4,996.46	4,858.38	36.185	SF
Wells Ranch USX AA35-16 - Wellbore #1 - Wellbore #1-	16,185.26	6,549.43	4,788.38	4,645.20	33.444	CC
Wells Ranch USX AA35-16 - Wellbore #1 - Wellbore #1-	16,200.00	6,549.40	4,788.40	4,645.04	33.402	ES
Wells Ranch USX AA35-16 - Wellbore #1 - Wellbore #1-	17,220.81	6,547.34	4,899.07	4,746.12	32.031	SF
Wells Ranch USX AA35-19 - Wellbore #1 - Wellbore #1-	12,883.49	6,664.74	8,219.93	8,115.61	78.794	CC
Wells Ranch USX AA35-19 - Wellbore #1 - Wellbore #1-	13,000.00	6,664.16	8,220.75	8,115.07	77.784	ES
Wells Ranch USX AA35-19 - Wellbore #1 - Wellbore #1-	16,500.00	6,645.95	8,980.31	8,842.69	65.253	SF
Wells Ranch USX AA35-23 - Wellbore #1 - Wellbore #1-	15,523.17	6,570.00	5,503.55	5,368.20	40.663	CC
Wells Ranch USX AA35-23 - Wellbore #1 - Wellbore #1-	15,600.00	6,570.54	5,504.08	5,367.82	40.392	ES
Wells Ranch USX AA35-23 - Wellbore #1 - Wellbore #1-	16,900.00	6,580.15	5,673.15	5,524.72	38.222	SF
Wells Ranch USX AA35-65HN - Plan A - Original Drilling	13,800.00	13,800.00	6,838.39	6,566.26	25.129	ES, SF
Wells Ranch USX AA35-65HN - Plan A - Original Drilling	15,158.94	9,982.02	6,812.06	6,615.37	34.633	CC
BB Section 01						
Wells Ranch 14-01 - Original Drilling - Original Drilling - A	17,220.81	6,487.41	481.24	349.56	3.655	CC, ES, SF
Wells Ranch 23-01 - Original Drilling - Original Drilling - A	17,220.81	6,534.14	1,739.27	1,649.57	19.390	CC, ES, SF
Wells Ranch 24-01 - Original Drilling - Original Drilling - A	17,220.81	6,486.88	1,582.98	1,511.66	22.196	CC, ES, SF
Wells Ranch USX BB01-01 - Original Drilling - Original D	17,220.81	6,468.97	5,455.77	5,346.94	50.131	CC, ES, SF
Wells Ranch USX BB01-02 - Original Drilling - Original D	17,220.81	6,543.89	4,497.21	4,369.72	35.277	CC, ES, SF
Wells Ranch USX BB01-03 - Original Drilling - Original D	17,220.81	6,694.19	3,716.84	3,572.13	25.684	CC, ES, SF
Wells Ranch USX BB01-04 - Original Drilling - Original D	17,220.81	6,730.33	3,365.35	3,210.14	21.682	CC, ES, SF
Wells Ranch USX BB01-05 - Original Drilling - Original D	17,220.81	6,573.14	2,265.59	2,110.17	14.577	CC, ES, SF
Wells Ranch USX BB01-06 - Original Drilling - Original D	17,220.81	6,529.35	2,561.02	2,431.62	19.792	CC, ES, SF
Wells Ranch USX BB01-07 - Original Drilling - Original D	17,220.81	6,537.55	3,654.85	3,544.15	33.014	CC, ES, SF
Wells Ranch USX BB01-08 - Original Drilling - Original D	17,220.81	6,536.14	4,823.79	4,735.91	54.887	CC, ES, SF
Wells Ranch USX BB01-09 - Original Drilling - Original D	17,220.81	6,555.76	4,350.41	4,290.36	72.451	CC, ES, SF
Wells Ranch USX BB01-10 - Original Drilling - Original D	17,220.81	6,503.90	2,983.17	2,909.63	40.567	CC, ES, SF
Wells Ranch USX BB01-12 - Original Drilling - Original D	17,220.81	6,525.81	859.21	708.34	5.695	CC, ES, SF
Wells Ranch USX BB01-15 - Original Drilling - Original D	17,220.81	6,475.76	2,900.17	2,844.62	52.205	CC, ES, SF
Wells Ranch USX BB01-16 - Original Drilling - Original D	17,220.81	6,518.69	4,084.82	4,030.44	75.114	CC, ES, SF
Wells Ranch USX BB01-17 - Original Drilling - Original D	17,220.81	6,574.65	4,591.22	4,487.01	44.057	CC, ES, SF
Wells Ranch USX BB01-19 - Original Drilling - Original D	17,220.81	6,633.11	3,075.85	2,927.24	20.697	CC, ES, SF
Wells Ranch USX BB01-23 - Original Drilling - Original D	17,220.81	6,513.57	3,781.71	3,730.24	73.465	CC, ES, SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well WELLS RANCH BB03-627
Project:	Wells Ranch	TVD Reference:	Well @ 4744.00ft
Reference Site:	BB Section 03	MD Reference:	Well @ 4744.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	WELLS RANCH BB03-627	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
BB Section 02						
Wells Ranch 11-2 - Wellbore #1 - Gyro Surveys	12,312.28	6,539.49	3,280.52	3,183.28	33.738	CC, ES
Wells Ranch 11-2 - Wellbore #1 - Gyro Surveys	13,100.00	6,536.82	3,373.76	3,269.27	32.286	SF
Wells Ranch 12-2 SI - Wellbore #1 - No Surveys	12,131.47	6,515.00	2,164.83	2,035.50	16.739	CC, ES
Wells Ranch 12-2 SI - Wellbore #1 - No Surveys	12,400.00	6,515.00	2,181.42	2,049.39	16.523	SF
Wells Ranch 13-2 - No Surveys - No Surveys	12,113.03	6,525.00	878.74	749.53	6.801	CC, ES
Wells Ranch 13-2 - No Surveys - No Surveys	12,200.00	6,525.00	883.03	753.06	6.794	SF
Wells Ranch 14-2 - Wellbore #1 - Gyro Surveys	12,112.89	6,482.47	481.94	387.43	5.100	CC, ES, SF
Wells Ranch 21-2 SI - Wellbore #1 - Gyro Surveys	13,539.99	6,526.79	3,329.55	3,217.97	29.838	CC
Wells Ranch 21-2 SI - Wellbore #1 - Gyro Surveys	13,600.00	6,526.95	3,330.09	3,217.80	29.654	ES
Wells Ranch 21-2 SI - Wellbore #1 - Gyro Surveys	14,200.00	6,528.48	3,394.34	3,276.48	28.802	SF
Wells Ranch 22-2 SI - Wellbore #1 - No Surveys	13,636.58	6,515.00	2,354.76	2,207.82	16.025	CC, ES
Wells Ranch 22-2 SI - Wellbore #1 - No Surveys	13,900.00	6,515.00	2,369.45	2,219.83	15.837	SF
Wells Ranch 23-2 - Wellbore #1 - No Surveys	13,452.42	6,505.00	827.37	682.68	5.719	CC, ES
Wells Ranch 23-2 - Wellbore #1 - No Surveys	13,500.00	6,505.00	828.73	683.58	5.709	SF
Wells Ranch 24-2 - Wellbore #1 - No Surveys	13,280.08	6,495.00	299.23	201.70	3.068	CC, ES, SF
Wells Ranch 31-2 - Wellbore #1 - Gyro Surveys	14,956.60	6,515.69	3,311.67	3,183.31	25.800	CC
Wells Ranch 31-2 - Wellbore #1 - Gyro Surveys	15,000.00	6,515.33	3,311.95	3,183.07	25.698	ES
Wells Ranch 31-2 - Wellbore #1 - Gyro Surveys	15,500.00	6,511.09	3,355.95	3,222.36	25.122	SF
Wells Ranch 32-2 - Wellbore #1 - No Surveys	14,759.26	6,529.00	2,207.62	2,047.22	13.764	CC
Wells Ranch 32-2 - Wellbore #1 - No Surveys	14,800.00	6,529.00	2,207.99	2,047.11	13.725	ES
Wells Ranch 32-2 - Wellbore #1 - No Surveys	15,000.00	6,529.00	2,220.70	2,057.93	13.643	SF
Wells Ranch 33-2 - Wellbore #1 - Gyro Surveys	14,962.35	6,100.00	751.31	635.44	6.484	CC, ES
Wells Ranch 33-2 - Wellbore #1 - Gyro Surveys	15,000.00	6,100.00	752.25	635.94	6.467	SF
Wells Ranch 34-2 SI - Wellbore #1 - No Surveys	14,981.27	6,505.00	308.57	145.73	1.895	CC, ES, SF
Wells Ranch 41-2 - Wellbore #1 - Gyro Surveys	15,886.92	6,571.74	3,269.30	3,129.68	23.415	CC
Wells Ranch 41-2 - Wellbore #1 - Gyro Surveys	15,900.00	6,571.66	3,269.33	3,129.54	23.388	ES
Wells Ranch 41-2 - Wellbore #1 - Gyro Surveys	16,400.00	6,569.02	3,309.32	3,164.83	22.903	SF
Wells Ranch 42-2 SI - Wellbore #1 - No Surveys	15,880.44	6,515.00	2,344.67	2,170.98	13.499	CC
Wells Ranch 42-2 SI - Wellbore #1 - No Surveys	15,900.00	6,515.00	2,344.75	2,170.83	13.481	ES
Wells Ranch 42-2 SI - Wellbore #1 - No Surveys	16,100.00	6,515.00	2,354.93	2,179.02	13.387	SF
Wells Ranch 43-2 TA - Wellbore #1 - Gyro Surveys	15,875.23	6,541.39	608.93	469.71	4.374	CC, ES
Wells Ranch 43-2 TA - Wellbore #1 - Gyro Surveys	15,900.00	6,540.99	609.43	469.97	4.370	SF
Wells Ranch 44-2 - Wellbore #1 - No Surveys	15,911.12	6,505.00	296.38	122.41	1.704	CC, ES, SF

CC - Min centre to center distance or convergent 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 WELLS RANCH BB03-627
Project:	Wells Ranch	TVD Reference:	Well @ 4744.00ft
Reference Site:	BB Section 03	MD Reference:	Well @ 4744.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	WELLS RANCH BB03-627	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
BB Section 03						
U P R R PAN AM 1 PA - Wellbore #1 - No Surveys	6,938.27	6,567.12	3,482.51	3,400.55	42.490	CC
U P R R PAN AM 1 PA - Wellbore #1 - No Surveys	6,950.00	6,568.73	3,482.54	3,400.53	42.467	ES
U P R R PAN AM 1 PA - Wellbore #1 - No Surveys	7,700.00	6,574.00	3,576.53	3,491.40	42.011	SF
Wells 43-3 PA - Wellbore #1 - No Surveys	10,934.24	6,515.00	936.83	821.13	8.097	CC, ES
Wells 43-3 PA - Wellbore #1 - No Surveys	11,000.00	6,515.00	939.13	822.77	8.071	SF
Wells 34-3 - Wellbore #1 - Gyro Surveys	9,413.07	6,545.00	482.99	417.68	7.395	CC, ES, SF
Wells Rach USX BB 3-14 - Wellbore #1 - Gyro Surveys	8,119.27	6,512.46	605.53	552.16	11.346	CC, ES, SF
Wells Ranch 12-03 - Original Drilling - Original Drilling - A	6,955.56	6,553.11	2,090.00	2,042.57	44.067	CC, ES
Wells Ranch 12-03 - Original Drilling - Original Drilling - A	7,300.00	6,563.17	2,122.13	2,073.58	43.710	SF
Wells Ranch 21-3 TA - Wellbore #1 - No Surveys	8,149.67	6,565.00	3,448.89	3,360.51	39.023	CC
Wells Ranch 21-3 TA - Wellbore #1 - No Surveys	8,200.00	6,565.00	3,449.26	3,360.49	38.856	ES
Wells Ranch 21-3 TA - Wellbore #1 - No Surveys	9,100.00	6,565.00	3,577.43	3,481.48	37.285	SF
Wells Ranch 32-3 SI - Wellbore #1 - No Surveys	9,609.32	6,525.00	2,151.99	2,050.51	21.206	CC, ES
Wells Ranch 32-3 SI - Wellbore #1 - No Surveys	10,000.00	6,525.00	2,187.17	2,082.08	20.813	SF
Wells Ranch 41-3 - Wellbore #1 - No Surveys	10,785.82	6,875.00	3,909.06	3,800.31	35.945	CC
Wells Ranch 41-3 - Wellbore #1 - No Surveys	10,800.00	6,875.00	3,909.09	3,800.18	35.894	ES
Wells Ranch 41-3 - Wellbore #1 - No Surveys	11,900.00	6,875.00	4,064.75	3,945.21	34.005	SF
WELLS RANCH BB03-651 - Wellbore #1 - Plan 3	3,106.30	3,035.77	1,035.53	1,014.06	48.233	CC
WELLS RANCH BB03-651 - Wellbore #1 - Plan 3	3,200.00	3,105.50	1,035.99	1,013.97	47.051	ES
WELLS RANCH BB03-651 - Wellbore #1 - Plan 3	17,220.81	17,255.51	1,561.45	1,297.38	5.913	SF
WELLS RANCH STATE BB03-612 - Wellbore #1 - Plan #	2,000.00	2,001.00	72.86	58.98	5.251	CC, ES
WELLS RANCH STATE BB03-612 - Wellbore #1 - Plan #	17,200.00	17,156.41	1,032.95	768.23	3.902	SF
WELLS RANCH STATE BB03-620 - Wellbore #1 - Plan 1	2,288.18	2,288.20	36.40	20.47	2.285	CC
WELLS RANCH STATE BB03-620 - Wellbore #1 - Plan 1	2,400.00	2,399.77	36.84	20.12	2.204	ES
WELLS RANCH STATE BB03-620 - Wellbore #1 - Plan 1	17,200.00	17,129.19	498.18	233.54	1.883	SF
WELLS RANCH STATE BB03-636 - Wellbore #1 - Plan 1	7,056.60	6,938.30	516.54	467.76	10.590	CC
WELLS RANCH STATE BB03-636 - Wellbore #1 - Plan 1	17,100.38	16,982.67	521.52	261.84	2.008	ES
WELLS RANCH STATE BB03-636 - Wellbore #1 - Plan 1	17,200.00	17,044.87	522.91	261.96	2.004	SF
WELLS RANCH STATE BB03-643 - Wellbore #1 - Plan 1	2,500.00	2,510.00	1,006.85	989.36	57.556	CC
WELLS RANCH STATE BB03-643 - Wellbore #1 - Plan 1	17,220.81	17,154.33	1,032.81	767.38	3.891	ES, SF
WELLS RANCH STATE BB03-659 - Wellbore #1 - Plan 1	7,002.41	7,113.11	2,006.13	1,956.40	40.339	CC
WELLS RANCH STATE BB03-659 - Wellbore #1 - Plan 1	17,200.00	17,268.09	2,084.80	1,820.03	7.874	ES
WELLS RANCH STATE BB03-659 - Wellbore #1 - Plan 1	17,220.81	17,268.09	2,085.44	1,820.49	7.871	SF
WELLS RANCH STATE BB03-668 - Wellbore #1 - Plan 1	17,184.69	17,304.30	2,674.66	2,409.40	10.083	CC
WELLS RANCH STATE BB03-668 - Wellbore #1 - Plan 1	17,220.81	17,304.30	2,674.90	2,409.24	10.069	ES, SF
WELLS RANCH STATE BB03-676 - Wellbore #1 - Plan 1	2,107.92	2,143.92	3,228.57	3,213.79	218.507	CC
WELLS RANCH STATE BB03-676 - Wellbore #1 - Plan 1	17,220.81	17,284.21	3,234.04	2,967.94	12.154	ES, SF
WELLS RANCH STATE BB03-684 - Wellbore #1 - Plan 1	1,906.24	1,944.24	3,264.98	3,251.65	244.809	CC
WELLS RANCH STATE BB03-684 - Wellbore #1 - Plan 1	2,000.00	2,024.37	3,265.06	3,251.10	233.901	ES
WELLS RANCH STATE BB03-684 - Wellbore #1 - Plan 1	17,220.81	17,665.22	3,776.93	3,509.82	14.140	SF
Wells Ranch State BB05-613 - Original Drilling - Original	1,981.48	1,981.51	208.20	194.70	15.424	CC, ES
Wells Ranch State BB05-613 - Original Drilling - Original	3,300.00	3,271.65	285.09	265.44	14.508	SF
Wells Ranch State BB05-617 - Original Drilling - Original	3,408.33	3,387.54	172.54	152.30	8.524	CC, ES
Wells Ranch State BB05-617 - Original Drilling - Original	3,500.00	3,474.83	174.35	153.59	8.397	SF
Wells Ranch State BB05-625 - Original Drilling - Original	4,465.25	4,425.25	86.20	59.16	3.188	CC, ES
Wells Ranch State BB05-625 - Original Drilling - Original	4,500.00	4,459.23	86.46	59.17	3.168	SF
Wells Ranch State BB05-630 - Original Drilling - Original	6,660.54	6,549.62	100.87	59.26	2.424	CC, ES, SF
Wells Ranch State BB05-635 - Original Drilling - Original	6,704.74	6,508.38	472.76	431.62	11.492	CC, ES, SF
Wells Ranch State BB05-644 - Original Drilling - Original	6,659.36	6,425.00	1,055.67	1,014.22	25.470	CC, ES
Wells Ranch State BB05-644 - Original Drilling - Original	6,700.00	6,416.79	1,056.45	1,014.93	25.446	SF
Wells Ranch State BB05-650 - Original Drilling - Original	1,230.16	1,239.21	1,104.50	1,096.18	132.746	CC
Wells Ranch State BB05-650 - Original Drilling - Original	1,900.00	1,902.34	1,106.48	1,093.45	84.899	ES
Wells Ranch State BB05-650 - Original Drilling - Original	6,800.00	6,327.47	1,364.64	1,322.91	32.700	SF

CC - Min centre to center distance or convergent 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 WELLS RANCH BB03-627
Project:	Wells Ranch	TVD Reference:	Well @ 4744.00ft
Reference Site:	BB Section 03	MD Reference:	Well @ 4744.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	WELLS RANCH BB03-627	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
BB Section 03						
Wells Ranch State BB05-656 - Original Drilling - Original	6,497.84	6,485.14	1,907.12	1,865.54	45.865	CC
Wells Ranch State BB05-656 - Original Drilling - Original	6,500.00	6,485.25	1,907.12	1,865.53	45.857	ES
Wells Ranch State BB05-656 - Original Drilling - Original	6,650.00	6,486.65	1,916.48	1,874.47	45.620	SF
Wells Ranch State BB05-665 - Original Drilling - Original	6,763.50	6,264.54	2,541.82	2,501.04	62.325	CC, ES
Wells Ranch State BB05-665 - Original Drilling - Original	7,500.00	6,235.00	2,643.05	2,599.84	61.165	SF
Wells Ranch State BB05-669 - Original Drilling - Original	1,004.25	1,039.27	2,798.17	2,791.36	411.108	CC
Wells Ranch State BB05-669 - Original Drilling - Original	6,774.32	6,400.75	2,824.71	2,783.07	67.834	ES
Wells Ranch State BB05-669 - Original Drilling - Original	7,800.00	6,185.79	3,008.15	2,963.21	66.932	SF
Wells Ranch State BB05-678 - Original Drilling - Original	6,815.35	6,614.00	3,185.89	3,144.09	76.221	CC, ES
Wells Ranch State BB05-678 - Original Drilling - Original	8,000.00	6,437.93	3,414.17	3,367.77	73.588	SF
Wells Ranch State BB05-685 - Original Drilling - Original	2,169.34	2,236.37	3,776.30	3,762.24	268.562	CC
Wells Ranch State BB05-685 - Original Drilling - Original	6,606.25	6,518.00	3,792.50	3,750.83	91.010	ES
Wells Ranch State BB05-685 - Original Drilling - Original	8,600.00	6,235.00	4,362.79	4,313.02	87.672	SF
Wells Ranch State BB05-690 - Original Drilling - Original	0.00	56.44	3,817.83			
Wells Ranch State BB05-690 - Original Drilling - Original	1,947.21	2,013.03	3,818.85	3,805.48	285.618	ES
Wells Ranch State BB05-690 - Original Drilling - Original	9,100.00	5,966.23	4,665.95	4,613.18	88.412	SF
Wells Ranch USX BB 3-10 - Wellbore #1 - Gyro Surveys	9,364.57	6,515.97	827.93	763.25	12.800	CC, ES
Wells Ranch USX BB 3-10 - Wellbore #1 - Gyro Surveys	9,400.00	6,516.64	828.69	763.65	12.742	SF
Wells Ranch USX BB 3-11 SI - Wellbore #1 - Gyro Surveys	8,266.22	6,525.89	752.52	697.87	13.771	CC, ES
Wells Ranch USX BB 3-11 SI - Wellbore #1 - Gyro Surveys	8,300.00	6,525.22	753.27	698.36	13.717	SF
Wells Ranch USX BB 3-16 SI - Wellbore #1 - Gyro Surveys	10,748.44	6,498.34	585.39	506.16	7.388	CC, ES
Wells Ranch USX BB 3-16 SI - Wellbore #1 - Gyro Surveys	10,800.00	6,498.68	587.65	508.09	7.386	SF
Wells Ranch USX BB 3-2 SI - Wellbore #1 - No Surveys	9,372.47	6,534.00	3,580.69	3,481.54	36.113	CC
Wells Ranch USX BB 3-2 SI - Wellbore #1 - No Surveys	9,400.00	6,534.00	3,580.80	3,481.37	36.012	ES
Wells Ranch USX BB 3-2 SI - Wellbore #1 - No Surveys	10,400.00	6,534.00	3,725.21	3,616.71	34.334	SF
Wells Ranch USX BB 3-4 - Wellbore #1 - No Surveys	6,889.95	6,579.26	3,588.00	3,506.08	43.796	CC
Wells Ranch USX BB 3-4 - Wellbore #1 - No Surveys	6,900.00	6,581.40	3,588.02	3,506.05	43.771	ES
Wells Ranch USX BB 3-4 - Wellbore #1 - No Surveys	7,600.00	6,595.00	3,673.49	3,588.73	43.339	SF
Wells Ranch USX BB 3-6 SI - Wellbore #1 - Gyro Surveys	1,216.66	3,324.93	2,763.34	2,747.76	177.420	CC
Wells Ranch USX BB 3-6 SI - Wellbore #1 - Gyro Surveys	1,800.00	3,901.68	2,767.05	2,747.36	140.565	ES
Wells Ranch USX BB 3-6 SI - Wellbore #1 - Gyro Surveys	9,600.00	6,600.00	3,288.26	3,231.28	57.714	SF
Wells Ranch USX BB 3-8 - Wellbore #1 - Gyro Surveys	10,675.78	6,542.79	2,106.93	2,028.30	26.796	CC
Wells Ranch USX BB 3-8 - Wellbore #1 - Gyro Surveys	10,700.00	6,542.61	2,107.07	2,028.17	26.706	ES
Wells Ranch USX BB 3-8 - Wellbore #1 - Gyro Surveys	11,100.00	6,539.52	2,149.21	2,066.74	26.060	SF
Wells Ranch USX BB03-04 - Original Drilling - Original D	6,904.34	6,607.90	3,616.86	3,569.43	76.250	CC, ES
Wells Ranch USX BB03-04 - Original Drilling - Original D	8,500.00	6,627.76	3,986.96	3,931.61	72.027	SF
Wells Ranch USX BB03-12 - Original Drilling - Original D	6,778.95	6,501.90	862.64	815.95	18.476	CC, ES
Wells Ranch USX BB03-12 - Original Drilling - Original D	6,850.00	6,527.16	865.75	818.81	18.446	SF
Wells Ranch USX BB03-13 - Original Drilling - Original D	3,885.72	3,824.77	30.91	3.99	1.148	Level 2, CC, ES, SF
Wells Ranch USX BB03-25 PA - Original Drilling - Gyro S	7,665.00	6,536.43	111.25	60.94	2.211	CC, ES, SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well WELLS RANCH BB03-627
Project:	Wells Ranch	TVD Reference:	Well @ 4744.00ft
Reference Site:	BB Section 03	MD Reference:	Well @ 4744.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	WELLS RANCH BB03-627	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
BB Section 04						
State 11-04 - Original Drilling - Original Drilling - As Drille	6,074.80	5,883.99	5,843.45	5,801.34	138.757	CC, ES
State 11-04 - Original Drilling - Original Drilling - As Drille	6,500.00	6,272.39	5,951.68	5,907.16	133.683	SF
State 12-04 - Original Drilling - Original Drilling - As Drille	6,094.51	6,200.00	5,177.80	5,134.70	120.122	CC, ES
State 12-04 - Original Drilling - Original Drilling - As Drille	6,400.00	6,377.72	5,245.40	5,200.83	117.703	SF
State 13-04 - Original Drilling - Original Drilling - As Drille	6,037.42	5,850.82	4,956.43	4,914.71	118.797	CC, ES
State 13-04 - Original Drilling - Original Drilling - As Drille	6,350.00	6,101.03	5,031.34	4,987.89	115.781	SF
State 21-04 - Original Drilling - Original Drilling - As Drille	6,116.96	6,052.60	5,032.36	4,989.48	117.349	CC, ES
State 21-04 - Original Drilling - Original Drilling - As Drille	6,600.00	6,519.05	5,156.15	5,110.53	113.016	SF
State 22-04 - Original Drilling - Original Drilling - As Drille	6,077.76	5,977.65	4,138.18	3,996.97	29.305	CC
State 22-04 - Original Drilling - Original Drilling - As Drille	6,100.00	5,999.65	4,138.51	3,996.79	29.202	ES
State 22-04 - Original Drilling - Original Drilling - As Drille	6,450.00	6,318.37	4,229.10	4,080.14	28.392	SF
State 23-04 - Original Drilling - Original Drilling - As Drille	6,042.42	5,916.04	3,536.36	3,494.39	84.262	CC
State 23-04 - Original Drilling - Original Drilling - As Drille	6,050.00	5,923.73	3,536.40	3,494.38	84.157	ES
State 23-04 - Original Drilling - Original Drilling - As Drille	6,350.00	6,260.96	3,606.69	3,562.72	82.035	SF
State 24-04 - Original Drilling - Original Drilling - As Drille	6,024.09	5,910.15	3,411.35	3,369.44	81.390	CC, ES
State 24-04 - Original Drilling - Original Drilling - As Drille	6,250.00	6,212.02	3,447.37	3,403.78	79.088	SF
State 31-04 (SI) - Original Drilling - Original Drilling - As D	6,158.89	6,084.07	4,162.40	4,119.10	96.116	CC, ES
State 31-04 (SI) - Original Drilling - Original Drilling - As D	6,600.00	6,437.87	4,244.16	4,198.52	92.989	SF
State 32-04 - Original Drilling - Original Drilling - As Drille	6,108.25	6,007.79	3,014.39	2,872.34	21.221	CC, ES
State 32-04 - Original Drilling - Original Drilling - As Drille	6,450.00	6,318.37	3,078.61	2,929.48	20.643	SF
State 33-04 - Original Drilling - Original Drilling - As Drille	6,062.35	5,947.36	2,333.09	2,192.60	16.606	CC, ES
State 33-04 - Original Drilling - Original Drilling - As Drille	6,300.00	6,175.72	2,374.04	2,228.31	16.291	SF
State 41-04 (SI) - Original Drilling - Original Drilling - As D	6,298.32	6,241.02	3,645.18	3,600.80	82.131	CC
State 41-04 (SI) - Original Drilling - Original Drilling - As D	6,300.00	6,242.59	3,645.18	3,600.79	82.112	ES
State 41-04 (SI) - Original Drilling - Original Drilling - As D	6,800.00	6,596.73	3,714.74	3,667.89	79.287	SF
State 42-04 (SI) - Original Drilling - Original Drilling - As D	6,203.27	6,090.34	2,461.41	2,317.19	17.066	CC
State 42-04 (SI) - Original Drilling - Original Drilling - As D	6,250.00	6,134.62	2,462.13	2,316.89	16.951	ES
State 42-04 (SI) - Original Drilling - Original Drilling - As D	6,550.00	6,382.02	2,503.99	2,353.06	16.590	SF
State Lease 34-04 (PA) - Original Drilling - Original Drillin	6,019.70	5,901.00	2,114.48	1,975.00	15.160	CC, ES
State Lease 34-04 (PA) - Original Drilling - Original Drillin	6,250.00	6,125.62	2,155.16	2,010.50	14.898	SF
State Wells 14-04 - Original Drilling - Original Drilling - As	6,026.61	5,913.87	4,652.88	4,513.16	33.301	CC
State Wells 14-04 - Original Drilling - Original Drilling - As	6,050.00	5,937.10	4,653.31	4,513.04	33.175	ES
State Wells 14-04 - Original Drilling - Original Drilling - As	6,400.00	6,264.86	4,759.06	4,611.35	32.218	SF
State Wells 44-04 - Original Drilling - Original Drilling - As	5,978.52	5,830.60	981.41	939.71	23.534	CC, ES
State Wells 44-04 - Original Drilling - Original Drilling - As	6,100.00	5,950.27	991.70	949.16	23.311	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well WELLS RANCH BB03-627
Project:	Wells Ranch	TVD Reference:	Well @ 4744.00ft
Reference Site:	BB Section 03	MD Reference:	Well @ 4744.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	WELLS RANCH BB03-627	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
BB Section 05						
UPV 05-03H3 - Original Drilling - Original Drilling - As Dri	6,054.37	5,782.12	9,417.40	9,375.84	226.606	CC, ES
UPV 05-03H3 - Original Drilling - Original Drilling - As Dri	6,500.00	6,081.77	9,558.83	9,515.14	218.794	SF
UPV 05-04H3 - Original Drilling - Original Drilling - As Dri						Out of range
UPV 05-05H3 - Original Drilling - Original Drilling - As Dri						Out of range
UPV 05-06H3 - Original Drilling - Original Drilling - As Dri	6,062.08	6,067.97	8,921.47	8,878.99	210.015	CC, ES
UPV 05-06H3 - Original Drilling - Original Drilling - As Dri	6,500.00	6,400.00	9,061.64	9,016.97	202.829	SF
Wells Ranch 31-05 - Original Drilling - Original Drilling - A	6,093.37	6,249.08	8,066.61	8,023.36	186.506	CC, ES
Wells Ranch 31-05 - Original Drilling - Original Drilling - A	6,450.00	6,400.01	8,158.57	8,113.85	182.434	SF
Wells Ranch 32-05 - Original Drilling - Original Drilling - A	6,063.49	6,029.68	7,676.42	7,634.03	181.097	CC, ES
Wells Ranch 32-05 - Original Drilling - Original Drilling - A	6,500.00	6,403.27	7,815.02	7,770.30	174.755	SF
Wells Ranch 41-05 - Original Drilling - Original Drilling - A	6,077.34	6,000.01	6,976.29	6,933.89	164.524	CC, ES
Wells Ranch 41-05 - Original Drilling - Original Drilling - A	6,900.00	6,900.00	7,383.36	7,336.40	157.249	SF
Wells Ranch 42-05 - Original Drilling - Original Drilling - A	6,063.90	5,978.31	6,476.42	6,434.17	153.287	CC, ES
Wells Ranch 42-05 - Original Drilling - Original Drilling - A	6,550.00	6,462.99	6,642.48	6,597.47	147.595	SF
Wells Ranch BB01-611 - Original Drilling - Original Drillin	17,220.81	16,278.00	1,140.27	882.92	4.431	CC, ES, SF
Wells Ranch BB01-615 - Original Drilling - Original Drillin	17,220.81	16,386.00	549.60	320.30	2.397	CC, ES, SF
Wells Ranch BB01-624 - Original Drilling - Original Drillin	17,220.81	6,931.00	9,519.75	9,474.48	210.293	CC, ES, SF
Wells Ranch BB01-624 - Original Drilling - ST01 - ST01 -	17,220.81	16,377.00	88.60	10.09	1.128	Level 2, CC, ES, SF
Wells Ranch BB01-638 - Original Drilling - Original Drillin	17,220.81	16,495.00	656.44	397.64	2.536	CC, ES, SF
Wells Ranch BB01-649 - Original Drilling - Original Drillin	17,220.81	16,393.27	1,325.28	1,066.37	5.119	CC, ES, SF
Wells Ranch BB01-655 - Original Drilling - Original Drillin	17,220.81	16,311.00	1,901.32	1,659.92	7.876	CC, ES, SF
Wells Ranch BB01-669 - Original Drilling - Original Drillin	17,220.81	16,285.29	2,553.82	2,306.08	10.308	CC, ES, SF
Wells Ranch BB01-675 - Original Drilling - Original Drillin	17,220.81	17,220.81	3,214.23	2,964.47	12.869	CC, ES, SF
Wells Ranch State AA32-717 - Wellbore #1 - Plan 1	6,095.84	6,250.00	7,065.92	7,021.65	159.639	CC
Wells Ranch State AA32-717 - Wellbore #1 - Plan 1	6,100.00	6,250.00	7,065.93	7,021.65	159.586	ES
Wells Ranch State AA32-717 - Wellbore #1 - Plan 1	6,450.00	6,271.72	7,155.20	7,109.92	157.997	SF
Wells Ranch State AA32-724 - Wellbore #1 - Plan 1	6,077.82	6,043.75	7,467.13	7,423.91	172.764	CC, ES
Wells Ranch State AA32-724 - Wellbore #1 - Plan 1	6,450.00	6,222.62	7,560.48	7,515.61	168.501	SF
Wells Ranch State AA32-731 - Wellbore #1 - Plan 1	5,986.88	5,002.02	7,869.73	7,830.44	200.283	CC, ES
Wells Ranch State AA32-731 - Wellbore #1 - Plan 1	6,600.00	5,538.08	8,106.58	8,063.81	189.537	SF
Wells Ranch State AA32-737 - Wellbore #1 - Plan 1	5,948.77	4,517.78	8,066.71	8,029.38	216.106	CC
Wells Ranch State AA32-737 - Wellbore #1 - Plan 1	5,950.00	4,519.01	8,066.71	8,029.37	216.052	ES
Wells Ranch State AA32-737 - Wellbore #1 - Plan 1	6,550.00	5,041.42	8,299.12	8,258.32	203.411	SF
Wells Ranch State AA32-745 - Wellbore #1 - Plan 1	6,079.86	6,150.00	8,651.25	8,607.88	199.453	CC, ES
Wells Ranch State AA32-745 - Wellbore #1 - Plan 1	6,350.00	6,200.00	8,704.91	8,660.62	196.524	SF
Wells Ranch State AA32-751 - Wellbore #1 - Plan 1	6,079.60	6,128.18	9,002.27	8,959.20	208.992	CC, ES
Wells Ranch State AA32-751 - Wellbore #1 - Plan 1	6,550.00	6,200.00	9,161.98	9,117.53	206.122	SF
Wells Ranch State AA32-759 - Wellbore #1 - Plan 1	6,060.52	5,907.85	9,332.83	9,290.64	221.191	CC, ES
Wells Ranch State AA32-759 - Wellbore #1 - Plan 1	6,450.00	6,020.23	9,443.74	9,400.13	216.520	SF
Wells Ranch State AA32-763 - Wellbore #1 - Plan 1	6,006.83	5,107.44	9,637.03	9,597.56	244.164	CC, ES
Wells Ranch State AA32-763 - Wellbore #1 - Plan 1	6,600.00	5,584.47	9,873.65	9,831.10	232.070	SF
Wells Ranch State AA32-770 - Wellbore #1 - Plan 1						Out of range
Wells Ranch State AA32-775 - Wellbore #1 - Plan 1						Out of range
Wells Ranch State AA32-783 - Wellbore #1 - Plan 1						Out of range
Wells Ranch State AA32-789 - Wellbore #1 - Plan1						Out of range
Wells Ranch State BB01-690 - Original Drilling - Original	17,220.81	16,119.00	4,158.16	3,900.84	16.160	CC, ES, SF
Wells Ranch USX BB05-09 - Original Drilling - Original D	6,052.47	5,993.24	5,971.62	5,929.41	141.447	CC, ES
Wells Ranch USX BB05-09 - Original Drilling - Original D	6,450.00	6,328.07	6,091.99	6,047.62	137.297	SF
Wells Ranch USX BB05-10 - Original Drilling - Original D	6,050.39	6,040.04	7,286.74	7,244.39	172.058	CC, ES
Wells Ranch USX BB05-10 - Original Drilling - Original D	6,550.00	6,512.16	7,471.07	7,425.99	165.705	SF
Wells Ranch USX BB05-11 - Original Drilling - Original D	6,040.63	5,888.81	8,658.05	8,616.22	206.948	CC, ES
Wells Ranch USX BB05-11 - Original Drilling - Original D	6,500.00	6,236.54	8,817.73	8,773.59	199.779	SF
Wells Ranch USX BB05-12 - Original Drilling - Original D	6,036.56	5,862.87	9,959.70	9,917.95	238.546	CC, ES

CC - Min centre to center distance or convergent 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 WELLS RANCH BB03-627
Project:	Wells Ranch	TVD Reference:	Well @ 4744.00ft
Reference Site:	BB Section 03	MD Reference:	Well @ 4744.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	WELLS RANCH BB03-627	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
BB Section 05						
Wells Ranch USX BB05-12 - Original Drilling - Original D	6,250.00	6,066.68	9,995.09	9,952.00	231.949	SF
Wells Ranch USX BB05-13 - Original Drilling - Original D						Out of range
Wells Ranch USX BB05-14 - Original Drilling - Original D	6,031.53	5,983.49	8,644.91	8,602.76	205.081	CC, ES
Wells Ranch USX BB05-14 - Original Drilling - Original D	6,400.00	6,141.26	8,750.88	8,707.18	200.242	SF
Wells Ranch USX BB05-15 - Original Drilling - Original D	6,069.78	6,429.05	7,378.75	7,335.12	169.122	CC, ES
Wells Ranch USX BB05-15 - Original Drilling - Original D	6,450.00	6,600.01	7,493.56	7,448.32	165.645	SF
Wells Ranch USX BB05-16 - Original Drilling - Original D	6,041.77	6,061.30	6,073.61	6,031.17	143.086	CC
Wells Ranch USX BB05-16 - Original Drilling - Original D	6,050.00	6,070.71	6,073.67	6,031.16	142.883	ES
Wells Ranch USX BB05-16 - Original Drilling - Original D	6,500.00	6,517.72	6,232.65	6,187.55	138.209	SF
Wells Ranch USX BB05-23 - Original Drilling - Original D	6,043.75	6,012.80	6,490.20	6,447.89	153.393	CC
Wells Ranch USX BB05-23 - Original Drilling - Original D	6,050.00	6,018.83	6,490.23	6,447.88	153.238	ES
Wells Ranch USX BB05-23 - Original Drilling - Original D	6,450.00	6,389.51	6,615.82	6,571.19	148.259	SF
Wells Ranch USX BB05-25 - Original Drilling - Original D	6,027.54	5,774.83	9,470.66	9,429.23	228.568	CC, ES
Wells Ranch USX BB05-25 - Original Drilling - Original D	6,500.00	6,146.02	9,639.42	9,595.57	219.816	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well WELLS RANCH BB03-627
Project:	Wells Ranch	TVD Reference:	Well @ 4744.00ft
Reference Site:	BB Section 03	MD Reference:	Well @ 4744.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	WELLS RANCH BB03-627	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
BB Section 10						
Wells Ranch 10A - Original Drilling - Original Drilling - As	2,645.89	2,611.34	2,121.02	2,102.82	116.578	CC
Wells Ranch 10A - Original Drilling - Original Drilling - As	2,700.00	2,664.17	2,121.32	2,102.75	114.235	ES
Wells Ranch 10A - Original Drilling - Original Drilling - As	8,200.00	6,571.36	2,580.99	2,527.63	48.372	SF
Wells Ranch 10B - Original Drilling - Original Drilling - As	2,350.37	2,286.50	4,873.46	4,857.44	304.261	CC
Wells Ranch 10B - Original Drilling - Original Drilling - As	2,500.00	2,400.00	4,874.13	4,857.18	287.601	ES
Wells Ranch 10B - Original Drilling - Original Drilling - As	10,800.00	6,516.97	6,121.14	6,048.00	83.692	SF
Wells Ranch 10C - Original Drilling - Original Drilling - As	10,309.93	6,500.55	2,338.09	2,263.53	31.360	CC, ES
Wells Ranch 10C - Original Drilling - Original Drilling - As	10,800.00	6,500.72	2,388.90	2,310.12	30.324	SF
Wells Ranch 10F - Original Drilling - Original Drilling - As	2,861.04	2,843.43	2,297.73	2,277.96	116.238	CC
Wells Ranch 10F - Original Drilling - Original Drilling - As	2,900.00	2,877.94	2,297.79	2,277.76	114.746	ES
Wells Ranch 10F - Original Drilling - Original Drilling - As	6,850.00	6,642.75	2,601.72	2,554.29	54.859	SF
Wells Ranch 10H - Original Drilling - Original Drilling - As	2,688.96	2,674.54	4,819.32	4,800.73	259.232	CC
Wells Ranch 10H - Original Drilling - Original Drilling - As	2,800.00	2,784.28	4,819.92	4,800.55	248.914	ES
Wells Ranch 10H - Original Drilling - Original Drilling - As	9,900.00	6,494.14	6,235.51	6,171.80	97.869	SF
Wells Ranch 10J - Original Drilling - Original Drilling - As	2,705.98	2,685.62	844.46	826.63	47.354	CC, ES
Wells Ranch 10J - Original Drilling - Original Drilling - As	7,600.00	6,519.90	1,193.76	1,144.72	24.345	SF
Wells Ranch 10K - Original Drilling - Original Drilling - As	208.09	154.09	3,576.22	3,575.35	4,077.793	CC
Wells Ranch 10K - Original Drilling - Original Drilling - As	600.00	528.09	3,577.32	3,573.73	996.920	ES
Wells Ranch 10K - Original Drilling - Original Drilling - As	9,700.00	6,493.73	4,415.13	4,350.72	68.553	SF
Wells Ranch 11-10 - Original Drilling - Original Drilling - A	100.00	53.03	1,463.66	1,463.45	6,689.339	CC
Wells Ranch 11-10 - Original Drilling - Original Drilling - A	2,800.00	2,771.49	1,467.65	1,448.35	76.046	ES
Wells Ranch 11-10 - Original Drilling - Original Drilling - A	7,100.00	6,516.21	1,867.71	1,820.03	39.174	SF
Wells Ranch 12-10 - Original Drilling - Original Drilling - A	100.00	55.60	2,932.98	2,932.76	10,000.000	CC
Wells Ranch 12-10 - Original Drilling - Original Drilling - A	2,800.00	2,803.62	2,937.65	2,918.25	151.410	ES
Wells Ranch 12-10 - Original Drilling - Original Drilling - A	8,400.00	6,251.62	3,669.23	3,616.15	69.128	SF
Wells Ranch 13-10 - Original Drilling - Original Drilling - A	100.00	36.11	4,177.20	4,177.01	10,000.000	CC
Wells Ranch 13-10 - Original Drilling - Original Drilling - A	400.00	333.24	4,178.66	4,176.47	1,905.109	ES
Wells Ranch 13-10 - Original Drilling - Original Drilling - A	9,600.00	6,431.15	5,424.82	5,362.86	87.556	SF
Wells Ranch 14-10 - Original Drilling - Original Drilling - A	2,665.50	2,634.91	5,360.44	5,342.06	291.673	CC
Wells Ranch 14-10 - Original Drilling - Original Drilling - A	2,700.00	2,668.34	5,360.52	5,341.90	287.931	ES
Wells Ranch 14-10 - Original Drilling - Original Drilling - A	10,800.00	6,456.65	6,987.78	6,916.81	98.461	SF
Wells Ranch 21-10 - Original Drilling - Original Drilling - A	8,225.06	6,569.62	1,709.45	1,654.95	31.368	CC, ES
Wells Ranch 21-10 - Original Drilling - Original Drilling - A	8,500.00	6,563.91	1,731.41	1,674.99	30.687	SF
Wells Ranch 22-10 - Original Drilling - Original Drilling - A	100.00	41.67	2,864.85	2,864.66	10,000.000	CC
Wells Ranch 22-10 - Original Drilling - Original Drilling - A	400.00	328.29	2,865.90	2,863.73	1,317.246	ES
Wells Ranch 22-10 - Original Drilling - Original Drilling - A	9,400.00	6,509.64	3,299.94	3,236.98	52.408	SF
Wells Ranch 23-10 - Original Drilling - Original Drilling - A	1,009.88	945.94	4,347.59	4,341.07	666.276	CC
Wells Ranch 23-10 - Original Drilling - Original Drilling - A	2,624.21	2,582.66	4,349.56	4,331.54	241.325	ES
Wells Ranch 23-10 - Original Drilling - Original Drilling - A	10,400.00	6,533.64	5,122.38	5,051.38	72.149	SF
Wells Ranch 24-10 - Original Drilling - Original Drilling - A	2,348.30	2,284.42	5,516.06	5,500.07	344.933	CC
Wells Ranch 24-10 - Original Drilling - Original Drilling - A	2,600.00	2,502.94	5,517.07	5,499.41	312.477	ES
Wells Ranch 24-10 - Original Drilling - Original Drilling - A	11,700.00	6,373.70	6,733.21	6,651.69	82.603	SF
Wells Ranch 31-10 - Original Drilling - Original Drilling - A	9,579.06	6,497.48	1,799.30	1,732.52	26.944	CC
Wells Ranch 31-10 - Original Drilling - Original Drilling - A	9,600.00	6,497.57	1,799.42	1,732.44	26.864	ES
Wells Ranch 31-10 - Original Drilling - Original Drilling - A	9,900.00	6,498.91	1,827.70	1,758.25	26.318	SF
Wells Ranch 32-10 - Original Drilling - Original Drilling - A	9,808.14	6,495.26	3,152.10	3,080.84	44.240	CC, ES
Wells Ranch 32-10 - Original Drilling - Original Drilling - A	10,700.00	6,504.14	3,275.83	3,196.79	41.447	SF
Wells Ranch 33-10 - Original Drilling - Original Drilling - A	9,562.28	6,520.83	4,518.03	4,451.35	67.758	CC
Wells Ranch 33-10 - Original Drilling - Original Drilling - A	9,600.00	6,521.88	4,518.19	4,451.13	67.373	ES
Wells Ranch 33-10 - Original Drilling - Original Drilling - A	11,400.00	6,568.92	4,877.23	4,794.70	59.094	SF
Wells Ranch 34-10 - Original Drilling - Original Drilling - A	9,825.52	6,493.22	5,612.32	5,542.02	79.834	CC
Wells Ranch 34-10 - Original Drilling - Original Drilling - A	9,900.00	6,494.15	5,612.81	5,541.73	78.967	ES
Wells Ranch 34-10 - Original Drilling - Original Drilling - A	12,400.00	6,525.51	6,174.55	6,081.70	66.503	SF

CC - Min centre to center distance or convergent 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 WELLS RANCH BB03-627
Project:	Wells Ranch	TVD Reference:	Well @ 4744.00ft
Reference Site:	BB Section 03	MD Reference:	Well @ 4744.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	WELLS RANCH BB03-627	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
BB Section 10						
Wells Ranch 41-10 - Original Drilling - Original Drilling - A	10,883.86	6,485.54	1,849.28	1,768.48	22.887	CC
Wells Ranch 41-10 - Original Drilling - Original Drilling - A	10,900.00	6,485.53	1,849.35	1,768.38	22.839	ES
Wells Ranch 41-10 - Original Drilling - Original Drilling - A	11,200.00	6,485.26	1,876.11	1,792.65	22.479	SF
Wells Ranch 42-10 - Original Drilling - Original Drilling - A	10,768.99	6,471.07	3,101.05	3,021.64	39.051	CC
Wells Ranch 42-10 - Original Drilling - Original Drilling - A	10,800.00	6,471.06	3,101.20	3,021.46	38.889	ES
Wells Ranch 42-10 - Original Drilling - Original Drilling - A	11,500.00	6,470.97	3,186.04	3,100.09	37.065	SF
Wells Ranch 43-10 - Original Drilling - Original Drilling - A	10,872.48	6,426.27	4,481.81	4,401.41	55.745	CC
Wells Ranch 43-10 - Original Drilling - Original Drilling - A	10,900.00	6,426.28	4,481.89	4,401.19	55.538	ES
Wells Ranch 43-10 - Original Drilling - Original Drilling - A	12,400.00	6,427.11	4,734.97	4,641.00	50.387	SF
Wells Ranch 44-10 - Original Drilling - Original Drilling - A	10,846.83	6,443.93	5,700.22	5,620.04	71.092	CC
Wells Ranch 44-10 - Original Drilling - Original Drilling - A	10,900.00	6,443.53	5,700.47	5,619.71	70.583	ES
Wells Ranch 44-10 - Original Drilling - Original Drilling - A	13,200.00	6,424.82	6,166.81	6,065.81	61.056	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well WELLS RANCH BB03-627
Project:	Wells Ranch	TVD Reference:	Well @ 4744.00ft
Reference Site:	BB Section 03	MD Reference:	Well @ 4744.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	WELLS RANCH BB03-627	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
BB Section 11						
Wells 12-11 - Original Drilling - Original Drilling - As Drille	12,327.85	6,485.00	3,049.55	2,845.10	14.916	CC, ES
Wells 12-11 - Original Drilling - Original Drilling - As Drille	12,700.00	6,485.00	3,072.18	2,864.02	14.759	SF
Wells Ranch 13-11 - Original Drilling - Original Drilling - A	12,166.23	6,437.71	4,451.87	4,356.71	46.782	CC
Wells Ranch 13-11 - Original Drilling - Original Drilling - A	12,200.00	6,437.86	4,452.00	4,356.45	46.596	ES
Wells Ranch 13-11 - Original Drilling - Original Drilling - A	13,500.00	6,443.68	4,647.37	4,540.25	43.382	SF
Wells Ranch 14-11 - Original Drilling - Original Drilling - A	11,554.39	6,509.70	6,421.83	6,301.17	53.224	CC
Wells Ranch 14-11 - Original Drilling - Original Drilling - A	11,600.00	6,509.12	6,421.99	6,300.83	53.004	ES
Wells Ranch 14-11 - Original Drilling - Original Drilling - A	13,800.00	6,481.11	6,803.08	6,661.77	48.145	SF
Wells Ranch 23-11 - Original Drilling - Original Drilling - A	13,463.90	6,499.49	4,200.14	4,089.52	37.969	CC
Wells Ranch 23-11 - Original Drilling - Original Drilling - A	13,500.00	6,499.10	4,200.29	4,089.26	37.829	ES
Wells Ranch 23-11 - Original Drilling - Original Drilling - A	14,500.00	6,488.29	4,326.03	4,206.11	36.075	SF
Wells Ranch 24-11 - Original Drilling - Original Drilling - A	13,519.69	6,502.00	5,712.79	5,601.55	51.354	CC
Wells Ranch 24-11 - Original Drilling - Original Drilling - A	13,600.00	6,501.95	5,713.36	5,601.19	50.934	ES
Wells Ranch 24-11 - Original Drilling - Original Drilling - A	15,300.00	6,501.03	5,983.77	5,856.31	46.945	SF
Wells Ranch BB11-618 - Original Drilling - Original Drillin	11,975.83	6,991.00	5,795.66	5,705.89	64.567	CC
Wells Ranch BB11-618 - Original Drilling - Original Drillin	16,600.00	16,600.00	5,849.85	5,598.04	23.231	ES, SF
Wells Ranch BB11-627 - Original Drilling - Original Drillin	16,854.60	11,864.35	5,294.47	5,096.36	26.724	CC
Wells Ranch BB11-627 - Original Drilling - Original Drillin	17,100.00	12,005.00	5,297.00	5,094.32	26.134	ES
Wells Ranch BB11-627 - Original Drilling - Original Drillin	17,220.81	12,099.00	5,299.65	5,094.41	25.822	SF
Wells Ranch BB11-635 - Original Drilling - Original Drillin	14,987.20	10,154.19	4,788.53	4,634.08	31.004	CC
Wells Ranch BB11-635 - Original Drilling - Original Drillin	17,220.81	12,613.97	4,795.49	4,585.32	22.817	ES, SF
Wells Ranch BB11-643 - Original Drilling - Original Drillin	16,066.79	11,148.76	4,284.81	4,104.86	23.811	CC
Wells Ranch BB11-643 - Original Drilling - Original Drillin	17,220.81	12,666.96	4,307.66	4,096.50	20.400	ES, SF
Wells Ranch BB11-650 - Original Drilling - Original Drillin	17,220.81	12,447.20	3,759.25	3,551.29	18.076	CC, ES, SF
Wells Ranch BB11-658 - Original Drilling - Original Drillin	17,220.81	12,706.78	3,257.98	3,046.92	15.436	CC, ES, SF
Wells Ranch BB11-667 - Original Drilling - Original Drillin	16,600.00	16,600.00	2,782.79	2,556.94	12.322	ES, SF
Wells Ranch BB11-667 - Original Drilling - Original Drillin	17,120.15	12,356.28	2,753.41	2,562.75	14.441	CC
Wells Ranch BB11-674 - Original Drilling - Original Drillin	17,220.81	12,437.20	2,233.44	2,024.72	10.701	CC, ES, SF
Wells Ranch BB11-682 - Original Drilling - Original Drillin	15,500.00	15,500.00	1,646.08	1,423.61	7.399	SF
Wells Ranch BB11-682 - Original Drilling - Original Drillin	16,248.24	11,435.00	1,610.63	1,426.39	8.742	CC
Wells Ranch BB11-682 - Original Drilling - Original Drillin	17,200.00	12,343.04	1,626.98	1,420.59	7.883	ES
Wells Ranch State BB09-683 - Original Drilling - APD - R	6,550.00	12,087.76	1,560.98	1,465.15	16.290	SF
Wells Ranch State BB09-683 - Original Drilling - APD - R	6,600.00	12,050.15	1,560.25	1,464.60	16.311	ES
Wells Ranch State BB09-683 - Original Drilling - APD - R	6,626.47	12,029.22	1,560.16	1,464.63	16.331	CC
Wells Ranch USX BB11-01 - Original Drilling - Original D	16,016.70	6,515.61	1,755.79	1,614.72	12.446	CC, ES
Wells Ranch USX BB11-01 - Original Drilling - Original D	16,200.00	6,516.56	1,765.33	1,622.77	12.383	SF
Wells Ranch USX BB11-02 - Original Drilling - Original D	14,674.80	6,517.83	1,772.65	1,647.57	14.171	CC
Wells Ranch USX BB11-02 - Original Drilling - Original D	14,700.00	6,517.71	1,772.83	1,647.47	14.142	ES
Wells Ranch USX BB11-02 - Original Drilling - Original D	14,800.00	6,517.21	1,777.07	1,650.80	14.074	SF
Wells Ranch USX BB11-03 - Original Drilling - Original D	13,447.64	6,502.00	1,703.10	1,592.66	15.421	CC, ES
Wells Ranch USX BB11-03 - Original Drilling - Original D	13,600.00	6,500.15	1,709.90	1,598.07	15.291	SF
Wells Ranch USX BB11-04 - Original Drilling - Original D	12,173.10	6,502.61	1,815.24	1,719.73	19.007	CC
Wells Ranch USX BB11-04 - Original Drilling - Original D	12,200.00	6,502.76	1,815.44	1,719.64	18.951	ES
Wells Ranch USX BB11-04 - Original Drilling - Original D	12,400.00	6,503.93	1,829.36	1,731.84	18.759	SF
Wells Ranch USX BB11-06 - Original Drilling - Original D	13,393.99	6,510.60	2,982.17	2,872.38	27.161	CC
Wells Ranch USX BB11-06 - Original Drilling - Original D	13,400.00	6,510.45	2,982.18	2,872.31	27.144	ES
Wells Ranch USX BB11-06 - Original Drilling - Original D	13,900.00	6,501.30	3,024.77	2,910.38	26.442	SF
Wells Ranch USX BB11-07 - Original Drilling - Original D	14,822.72	6,519.06	3,098.32	2,971.43	24.417	CC, ES
Wells Ranch USX BB11-07 - Original Drilling - Original D	15,300.00	6,516.36	3,134.86	3,003.70	23.900	SF
Wells Ranch USX BB11-08 - Original Drilling - Original D	16,099.71	6,533.18	3,137.21	2,995.05	22.068	CC
Wells Ranch USX BB11-08 - Original Drilling - Original D	16,100.00	6,533.18	3,137.21	2,995.05	22.068	ES
Wells Ranch USX BB11-08 - Original Drilling - Original D	16,500.00	6,532.97	3,162.65	3,016.74	21.676	SF
Wells Ranch USX BB11-09 - Original Drilling - Original D	16,179.52	6,462.58	4,590.90	4,448.10	32.148	CC

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

Noble Energy, Inc.
Anticollision Summary Report

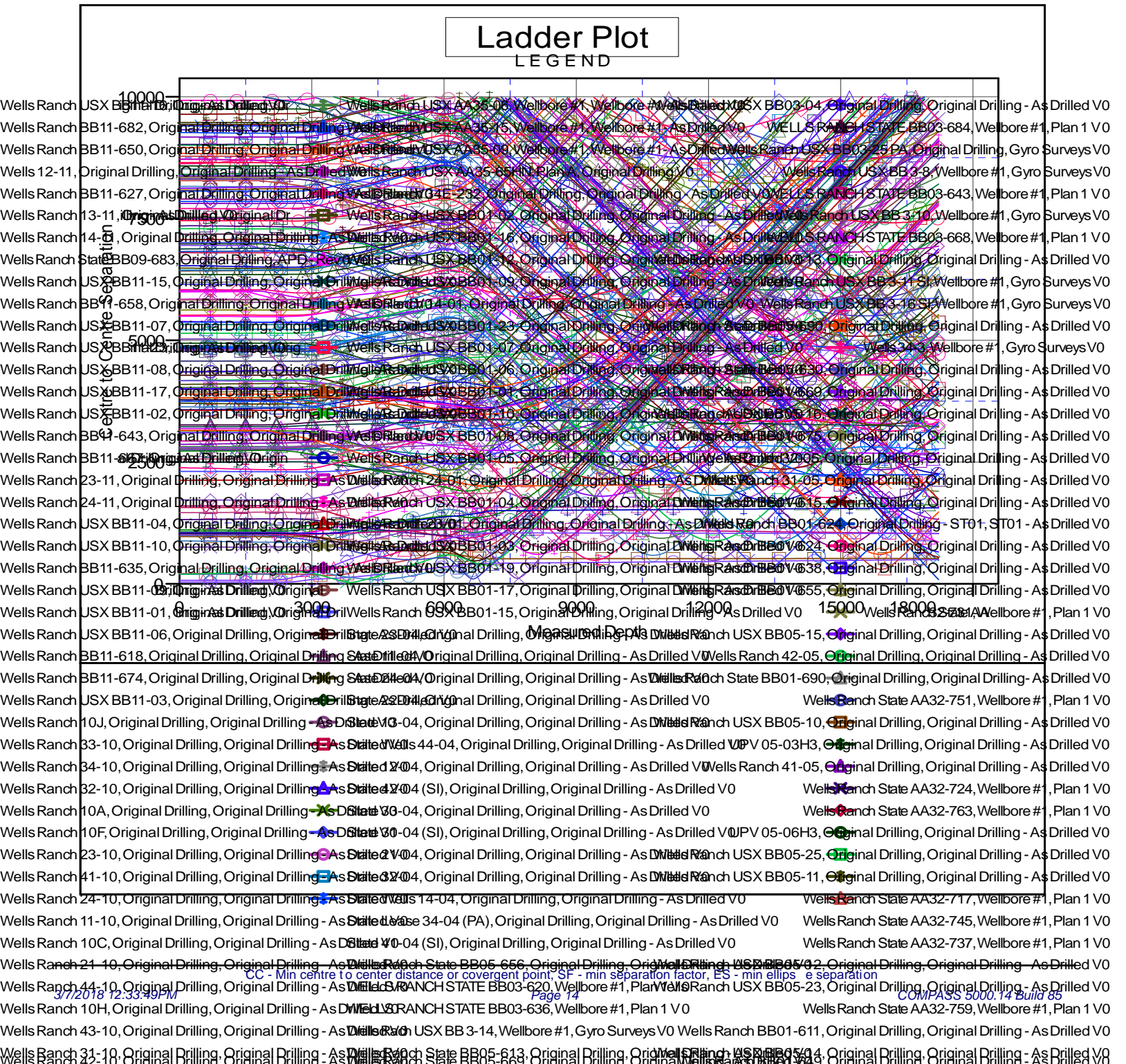
Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well WELLS RANCH BB03-627
Project:	Wells Ranch	TVD Reference:	Well @ 4744.00ft
Reference Site:	BB Section 03	MD Reference:	Well @ 4744.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	WELLS RANCH BB03-627	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
BB Section 11						
Wells Ranch USX BB11-09 - Original Drilling - Original D	16,200.00	6,462.71	4,590.95	4,447.90	32.094	ES
Wells Ranch USX BB11-09 - Original Drilling - Original D	17,100.00	6,468.68	4,682.27	4,530.98	30.950	SF
Wells Ranch USX BB11-10 - Original Drilling - Original D	14,774.24	6,429.34	4,523.02	4,397.19	35.945	CC
Wells Ranch USX BB11-10 - Original Drilling - Original D	14,800.00	6,429.14	4,523.10	4,396.96	35.860	ES
Wells Ranch USX BB11-10 - Original Drilling - Original D	15,800.00	6,421.11	4,637.87	4,502.71	34.313	SF
Wells Ranch USX BB11-15 - Original Drilling - Original D	14,837.42	6,529.99	5,743.13	5,616.09	45.208	CC
Wells Ranch USX BB11-15 - Original Drilling - Original D	14,900.00	6,529.71	5,743.47	5,615.70	44.952	ES
Wells Ranch USX BB11-15 - Original Drilling - Original D	16,400.00	6,522.93	5,951.90	5,810.52	42.097	SF
Wells Ranch USX BB11-16 - Original Drilling - Original D	16,202.54	6,620.18	5,714.26	5,570.54	39.758	CC
Wells Ranch USX BB11-16 - Original Drilling - Original D	16,300.00	6,616.18	5,715.09	5,570.24	39.456	ES
Wells Ranch USX BB11-16 - Original Drilling - Original D	17,220.81	6,578.41	5,804.13	5,650.43	37.762	SF
Wells Ranch USX BB11-17 - Original Drilling - Original D	15,463.12	6,495.00	2,455.43	2,213.70	10.158	CC
Wells Ranch USX BB11-17 - Original Drilling - Original D	15,500.00	6,495.00	2,455.71	2,213.56	10.141	ES
Wells Ranch USX BB11-17 - Original Drilling - Original D	15,700.00	6,495.00	2,466.83	2,222.85	10.111	SF
Wells Ranch USX BB11-23 - Original Drilling - Original D	15,476.18	6,564.98	5,082.62	4,947.84	37.710	CC
Wells Ranch USX BB11-23 - Original Drilling - Original D	15,500.00	6,565.11	5,082.68	4,947.61	37.632	ES
Wells Ranch USX BB11-23 - Original Drilling - Original D	16,700.00	6,530.67	5,227.89	5,082.08	35.856	SF

Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well WELLS RANCH BB03-627
Project:	Wells Ranch	TVD Reference:	Well @ 4744.00ft
Reference Site:	BB Section 03	MD Reference:	Well @ 4744.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	WELLS RANCH BB03-627	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Grid Convergence at Surface is: 0.69°



Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well WELLS RANCH BB03-627
Project:	Wells Ranch	TVD Reference:	Well @ 4744.00ft
Reference Site:	BB Section 03	MD Reference:	Well @ 4744.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	WELLS RANCH BB03-627	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Grid Convergence at Surface is: 0.69°

