



NABORS

**Nabors Drilling Solutions
Directional Drilling Report**

Field: Lea NM

Site: Larry 18SA

Well: Unit 1-03H

Wellpath: Wellbore #1

NEMO

PERMIAN OPERATIONS

Nabors Drilling Solutions
515 W. Greens RD.
Houston, TX 77067
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NEMO

PERMIAN OPERATIONS

Nemo Fund I, LLC

Lea NM

Larry 18SA

Unit 1-03H

Wellbore #1

Design: Wellbore #1

Standard Survey Report

14 February, 2017



NABORS

NEMO

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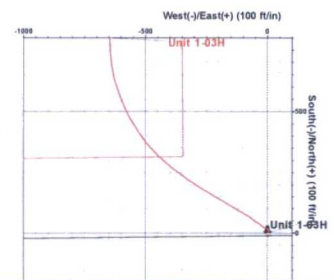
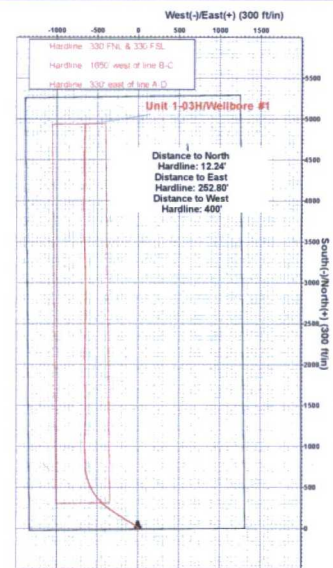
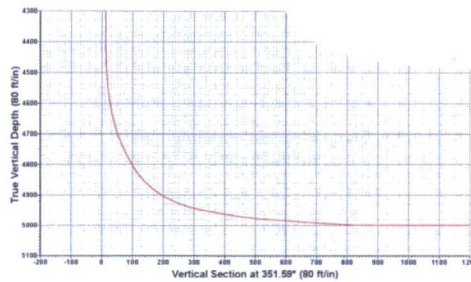
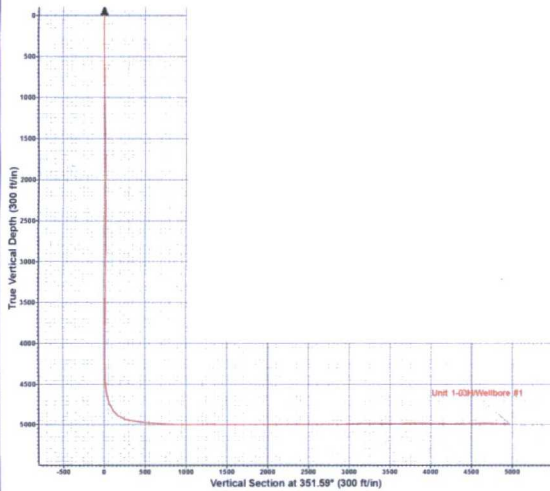
WELL DETAILS: Unit 1-03H

Ground Elevation: 3967.00
 RKB Elevation: RT @ 3980.00ft (Original Well Elev)
 Rig Name: Original Well Elev
 Wellbore: Wellbore #1
 Plan: Wellbore #1

Northing	Easting	Latitude	Longitude
889458.740	849514.310	33° 26' 23.36549 N	103° 11' 15.41326 W



Azimuths to Grid North
 True North: -6.83°
 Magnetic North: 6.17°
 Magnetic Field
 Strength: 48763.3snT
 Dip Angle: 61.15°
 Date: 1/18/2017
 Model: HDGM



Company:	Nemo Fund I, LLC	Local Co-ordinate Reference:	Well Unit 1-03H
Project:	Lea NM	TVD Reference:	RT @ 3980.00ft (Original Well Elev)
Site:	Larry 18SA	MD Reference:	RT @ 3980.00ft (Original Well Elev)
Well:	Unit 1-03H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	RyanUSA_Compass

Project	Lea NM		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	Larry 18SA		
Site Position:		Northing:	889,458.740 usft
From:	Map	Easting:	849,514.310 usft
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "
		Latitude:	33° 26' 23.36550 N
		Longitude:	103° 11' 15.41326 W
		Grid Convergence:	0.63 °

Well	Unit 1-03H		
Well Position	+N/-S	0.00 ft	Northing: 889,458.740 usft
	+E/-W	0.00 ft	Easting: 849,514.310 usft
Position Uncertainty	2.00 ft	Wellhead Elevation:	ft
		Latitude:	33° 26' 23.36550 N
		Longitude:	103° 11' 15.41326 W
		Ground Level:	3,967.00 ft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination (°)
	HDGM	1/18/2017	6.80
			Dip Angle (°)
			61.15
			Field Strength (nT)
			48,763.30000000

Design	Wellbore #1		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)
	0.00	0.00	0.00
			Direction (°)
			351.59

Survey Program	Date	2/14/2017		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
167.00	9,950.00	Survey #1 (Wellbore #1)	MWD+HRGM	OWSG MWD + HRGM

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
167.00	1.00	71.74	166.99	0.46	1.38	0.25	0.60	0.60	0.00
336.00	0.38	46.60	335.98	1.30	3.19	0.82	0.40	-0.37	-14.88
479.00	0.44	38.87	478.98	2.06	3.88	1.47	0.06	0.04	-5.41
649.00	0.56	26.74	648.97	3.31	4.66	2.59	0.09	0.07	-7.14
820.00	0.56	19.00	819.96	4.84	5.31	4.01	0.04	0.00	-4.53
990.00	0.69	14.96	989.95	6.62	5.85	5.69	0.08	0.08	-2.38
1,161.00	0.63	359.31	1,160.94	8.55	6.10	7.57	0.11	-0.04	-9.15
1,331.00	0.63	1.25	1,330.93	10.42	6.11	9.42	0.01	0.00	1.14
1,502.00	0.81	3.18	1,501.92	12.57	6.20	11.53	0.11	0.11	1.13

Company:	Nemo Fund I, LLC	Local Co-ordinate Reference:	Well Unit 1-03H
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Site:	Larry 18SA	MD Reference:	RT @ 3980.00ft (Original Well Elev)
Well:	Unit 1-03H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	RyanUSA_Compass

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)
1,672.00	0.75	329.96	1,671.90	14.73	5.71	13.74	0.26	-0.04	-19.54
1,842.00	0.63	312.38	1,841.89	16.32	4.46	15.50	0.14	-0.07	-10.34
2,013.00	0.25	311.33	2,012.88	17.20	3.49	16.51	0.22	-0.22	-0.61
2,183.00	0.44	359.49	2,182.88	18.10	3.20	17.44	0.19	0.11	28.33
2,240.00	0.44	356.33	2,239.88	18.54	3.19	17.87	0.04	0.00	-5.54
2,434.00	0.25	22.69	2,433.87	19.67	3.30	18.98	0.13	-0.10	13.59
2,605.00	0.06	137.13	2,604.87	19.95	3.51	19.22	0.16	-0.11	66.92
2,775.00	0.31	239.78	2,774.87	19.66	3.17	18.98	0.19	0.15	60.38
2,945.00	0.69	215.53	2,944.87	18.59	2.18	18.07	0.25	0.22	-14.26
3,116.00	0.75	210.08	3,115.85	16.78	1.02	16.46	0.05	0.04	-3.19
3,287.00	0.38	275.29	3,286.85	15.87	-0.11	15.71	0.40	-0.22	38.13
3,457.00	0.38	245.76	3,456.84	15.69	-1.18	15.69	0.11	0.00	-17.37
3,627.00	0.44	160.15	3,626.84	14.84	-1.48	14.90	0.33	0.04	-50.36
3,798.00	0.25	193.90	3,797.84	13.86	-1.34	13.91	0.16	-0.11	19.74
3,968.00	0.44	103.20	3,967.83	13.35	-0.80	13.33	0.30	0.11	-53.35
4,139.00	0.69	85.45	4,138.83	13.29	0.87	13.02	0.18	0.15	-10.38
4,309.00	0.50	95.47	4,308.82	13.30	2.63	12.77	0.13	-0.11	5.89
4,352.00	0.31	49.76	4,351.82	13.35	2.90	12.79	0.84	-0.44	-106.30
4,394.00	0.38	73.49	4,393.82	13.47	3.12	12.87	0.38	0.17	56.50
4,437.00	1.75	290.58	4,436.81	13.74	2.65	13.20	4.80	3.19	-332.35
4,480.00	4.56	296.74	4,479.74	14.74	0.50	14.51	6.57	6.53	14.33
4,522.00	7.50	301.83	4,521.50	16.94	-3.32	17.24	7.11	7.00	12.12
4,565.00	10.50	304.30	4,563.97	20.62	-8.94	21.71	7.03	6.98	5.74
4,604.00	13.50	304.65	4,602.11	25.22	-15.62	27.23	7.69	7.69	0.90
4,647.00	17.63	308.87	4,643.53	32.16	-24.82	35.44	9.95	9.60	9.81
4,689.00	23.88	306.05	4,682.78	41.16	-36.66	46.08	15.07	14.88	-6.71
4,732.00	29.81	306.76	4,721.13	52.69	-52.27	59.77	13.81	13.79	1.65
4,774.00	36.13	302.89	4,756.36	65.68	-71.06	75.36	15.85	15.05	-9.21
4,817.00	42.69	299.37	4,789.56	79.73	-94.43	92.68	16.11	15.26	-8.19
4,859.00	47.81	299.55	4,819.12	94.40	-120.40	110.99	12.19	12.19	0.43
4,902.00	53.69	300.60	4,846.32	111.09	-149.19	131.71	13.80	13.67	2.44
4,945.00	60.19	301.66	4,869.76	129.72	-180.02	154.65	15.26	15.12	2.47
4,987.00	65.38	302.54	4,888.96	149.56	-211.64	178.91	12.50	12.36	2.10
5,030.00	69.63	303.42	4,905.41	171.19	-244.96	205.17	10.06	9.88	2.05
5,072.00	72.69	303.24	4,918.97	193.03	-278.17	231.63	7.30	7.29	-0.43
5,115.00	76.88	303.24	4,930.26	215.77	-312.86	259.20	9.74	9.74	0.00
5,157.00	80.63	304.30	4,938.45	238.66	-347.10	286.86	9.27	8.93	2.52
5,200.00	81.81	307.11	4,945.01	263.46	-381.60	316.44	7.02	2.74	6.53
5,243.00	82.19	310.27	4,951.00	290.08	-414.83	347.63	7.33	0.88	7.35
5,285.00	81.75	314.31	4,956.87	318.05	-445.59	379.80	9.58	-1.05	9.62
5,328.00	81.94	318.01	4,962.97	348.75	-475.07	414.48	8.53	0.44	8.60
5,371.00	83.38	321.87	4,968.46	381.38	-502.51	450.78	9.51	3.35	8.98
5,413.00	84.25	325.74	4,972.99	415.08	-527.16	487.71	9.39	2.07	9.21
5,456.00	85.25	328.90	4,976.92	451.11	-550.28	526.74	7.68	2.33	7.35

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Well:	Unit 1-03H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	RyanUSA_Compass

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)
5,499.00	85.44	332.42	4,980.42	488.47	-571.27	566.77	8.17	0.44	8.19
5,541.00	85.56	336.64	4,983.71	526.26	-589.27	606.78	10.02	0.29	10.05
5,584.00	85.44	339.10	4,987.09	565.97	-605.42	648.43	5.71	-0.28	5.72
5,626.00	85.81	342.44	4,990.29	605.50	-619.21	689.55	7.98	0.88	7.95
5,669.00	86.75	347.01	4,993.08	646.88	-630.51	732.14	10.83	2.19	10.63
5,673.15	86.73	347.54	4,993.32	650.92	-631.43	736.27	12.66	-0.47	12.67
Unit 1-03H - LP									
5,712.00	86.56	352.46	4,995.59	689.11	-638.16	775.03	12.66	-0.44	12.67
5,742.00	86.50	354.74	4,997.41	718.86	-641.50	804.96	7.59	-0.20	7.60
5,772.00	88.38	357.21	4,998.75	748.76	-643.60	834.83	10.34	6.27	8.23
5,802.00	90.25	357.73	4,999.11	778.72	-644.92	864.67	6.47	6.23	1.73
5,830.00	90.25	357.73	4,998.99	806.70	-646.03	892.51	0.00	0.00	0.00
5,860.00	90.06	357.91	4,998.91	836.68	-647.17	922.33	0.87	-0.63	0.60
5,948.00	90.19	358.44	4,998.71	924.63	-649.98	1,009.75	0.62	0.15	0.60
6,032.00	89.94	359.67	4,998.62	1,008.62	-651.36	1,093.04	1.49	-0.30	1.46
6,120.00	90.19	0.72	4,998.52	1,096.62	-651.06	1,180.05	1.23	0.28	1.19
6,206.00	90.38	1.25	4,998.09	1,182.60	-649.58	1,264.89	0.65	0.22	0.62
6,293.00	89.50	3.36	4,998.18	1,269.53	-646.09	1,350.37	2.63	-1.01	2.43
6,379.00	89.19	0.72	4,999.16	1,355.46	-643.02	1,434.93	3.09	-0.36	-3.07
6,472.00	90.50	358.96	4,999.42	1,448.45	-643.28	1,526.96	2.36	1.41	-1.89
6,564.00	90.00	359.31	4,999.01	1,540.44	-644.67	1,618.16	0.66	-0.54	0.38
6,656.00	89.56	358.08	4,999.37	1,632.42	-646.77	1,709.46	1.42	-0.48	-1.34
6,750.00	90.56	358.08	4,999.27	1,726.36	-649.92	1,802.85	1.06	1.06	0.00
6,842.00	89.94	359.31	4,998.87	1,818.33	-652.01	1,894.14	1.50	-0.67	1.34
6,935.00	90.44	359.31	4,998.56	1,911.33	-653.13	1,986.30	0.54	0.54	0.00
7,027.00	91.25	0.37	4,997.20	2,003.31	-653.39	2,077.33	1.45	0.88	1.15
7,131.00	90.75	358.96	4,995.39	2,107.29	-654.00	2,180.28	1.44	-0.48	-1.36
7,217.00	89.13	1.07	4,995.48	2,193.29	-653.98	2,265.35	3.09	-1.88	2.45
7,302.00	89.50	1.78	4,996.49	2,278.25	-651.86	2,349.09	0.94	0.44	0.84
7,387.00	89.38	2.13	4,997.32	2,363.20	-648.96	2,432.70	0.44	-0.14	0.41
7,472.00	91.63	359.84	4,996.58	2,448.17	-647.50	2,516.55	3.78	2.65	-2.69
7,557.00	90.50	1.07	4,995.00	2,533.15	-646.83	2,600.51	1.96	-1.33	1.45
7,643.00	89.31	359.67	4,995.14	2,619.15	-646.27	2,685.50	2.14	-1.38	-1.63
7,728.00	90.06	359.84	4,995.61	2,704.14	-646.63	2,769.64	0.90	0.88	0.20
7,813.00	89.88	0.55	4,995.65	2,789.14	-646.34	2,853.68	0.86	-0.21	0.84
7,899.00	91.19	359.49	4,994.85	2,875.14	-646.31	2,938.75	1.96	1.52	-1.23
7,983.00	91.69	359.14	4,992.74	2,959.10	-647.32	3,021.96	0.73	0.60	-0.42
8,068.00	92.25	0.02	4,989.81	3,044.05	-647.94	3,106.08	1.23	0.66	1.04
8,154.00	91.06	359.31	4,987.33	3,130.01	-648.44	3,191.19	1.61	-1.38	-0.83
8,239.00	88.81	357.56	4,987.43	3,214.97	-650.77	3,275.58	3.35	-2.65	-2.06
8,324.00	88.81	358.08	4,989.19	3,299.89	-654.00	3,360.06	0.61	0.00	0.61
8,409.00	90.19	358.08	4,989.93	3,384.84	-656.85	3,444.51	1.62	1.62	0.00
8,494.00	90.69	358.08	4,989.28	3,469.79	-659.69	3,528.96	0.59	0.59	0.00

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 MD Reference: RT @ 3980.00ft (Original Well Elev)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: RyanUSA_Compass

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)
8,580.00	91.19	358.44	4,987.87	3,555.73	-662.30	3,614.36	0.72	0.58	0.42
8,665.00	90.81	359.67	4,986.39	3,640.71	-663.71	3,698.63	1.51	-0.45	1.45
8,750.00	90.44	1.07	4,985.46	3,725.70	-663.16	3,782.63	1.70	-0.44	1.65
8,836.00	89.75	358.08	4,985.32	3,811.69	-663.80	3,867.78	3.57	-0.80	-3.48
8,921.00	89.31	358.96	4,986.01	3,896.65	-665.99	3,952.16	1.16	-0.52	1.04
9,006.00	88.56	1.42	4,987.59	3,981.63	-665.71	4,036.18	3.03	-0.88	2.89
9,091.00	88.94	0.90	4,989.45	4,066.59	-663.99	4,119.98	0.76	0.45	-0.61
9,177.00	89.69	1.78	4,990.48	4,152.56	-661.98	4,204.73	1.34	0.87	1.02
9,261.00	90.31	0.02	4,990.48	4,236.55	-660.66	4,287.62	2.22	0.74	-2.10
9,347.00	91.06	359.49	4,989.45	4,322.54	-661.03	4,372.74	1.07	0.87	-0.62
9,432.00	90.63	359.84	4,988.20	4,407.53	-661.52	4,456.89	0.65	-0.51	0.41
9,517.00	90.69	359.84	4,987.22	4,492.52	-661.76	4,541.00	0.07	0.07	0.00
9,602.00	90.50	0.37	4,986.33	4,577.52	-661.60	4,625.06	0.66	-0.22	0.62
9,688.00	89.69	1.25	4,986.19	4,663.51	-660.39	4,709.95	1.39	-0.94	1.02
9,773.00	89.19	1.60	4,987.02	4,748.48	-658.27	4,793.69	0.72	-0.59	0.41
9,859.00	88.56	1.95	4,988.71	4,834.42	-655.61	4,878.32	0.84	-0.73	0.41
9,903.00	88.25	1.60	4,989.93	4,878.38	-654.25	4,921.61	1.06	-0.70	-0.80
9,950.00	88.25	1.60	4,991.37	4,925.34	-652.94	4,967.87	0.00	0.00	0.00

Unit 1-03H - BHL

Checked By: _____ Approved By: _____ Date: _____