

Noble Energy Inc.- Weld County, CO (Grid North)

Well Name: **Sandau State K25-62-1HNL**

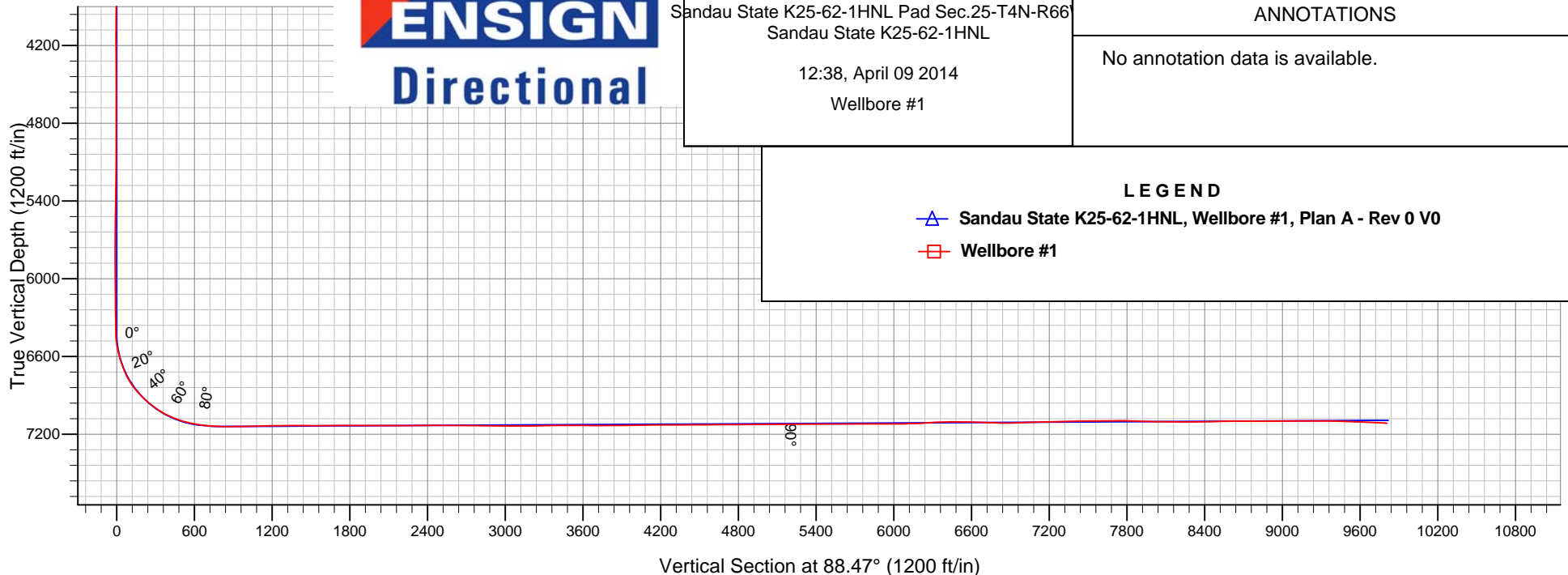
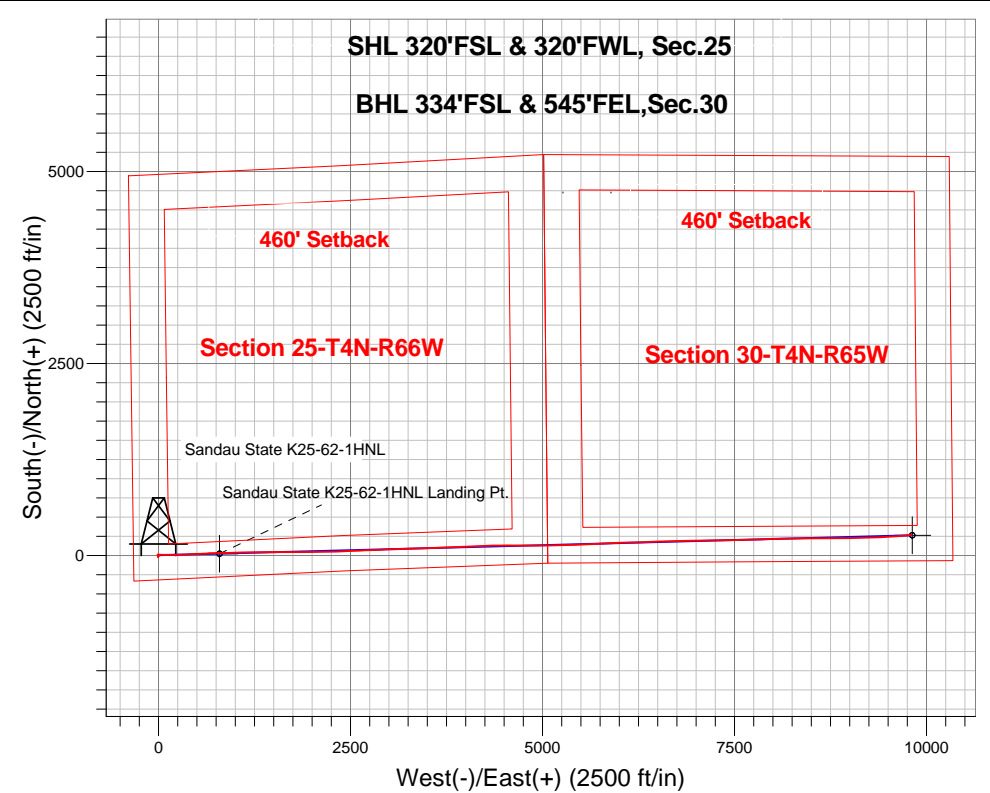
Surface Location: Sandau State K25-62-1HNL Pad Sec.25-T4N-R66W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

Ground Elevation: 4798.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1344534.20	3213808.27	40.276610	-104.733700	
Precision 829 RKB - 16' WELL @ 4814.0ft (Precision 829 RKB - 16')						

FINAL SURVEY

Projected Bottom Hole Location
16640'MD 7115'TVD 265'N & 9804'E of SHL
87.3 degree Incl @ 84.5 degree AZM





Noble Energy Inc.- Weld County, CO (Grid North)

Sec.25-T4N-R66W

Sandau State K25-62-1HNL Pad Sec.25-T4N-R66W

Sandau State K25-62-1HNL

Wellbore #1

Design: Wellbore #1

Standard Survey Report

09 April, 2014

Company:	Noble Energy Inc.- Weld County, CO (Grid North)	Local Co-ordinate Reference:	Well Sandau State K25-62-1HNL
Project:	Sec.25-T4N-R66W	TVD Reference:	WELL @ 4814.0ft (Precision 829 RKB - 16')
Site:	Sandau State K25-62-1HNL Pad Sec.25-T4N-R66W	MD Reference:	WELL @ 4814.0ft (Precision 829 RKB - 16')
Well:	Sandau State K25-62-1HNL	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	Sec.25-T4N-R66W, Weld County, CO		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site	Sandau State K25-62-1HNL Pad Sec.25-T4N-R66W				
Site Position:		Northing:	1,344,534.21 ft	Latitude:	40.276610
From:	Lat/Long	Easting:	3,213,808.27 ft	Longitude:	-104.733700
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.50 °

Well	Sandau State K25-62-1HNL					
Well Position	+N-S	0.0 ft	Northing:	1,344,534.20 ft	Latitude:	40.276610
	+E-W	0.0 ft	Easting:	3,213,808.27 ft	Longitude:	-104.733700
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,798.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/4/2014	8.47	66.86	52,784

Design	Wellbore #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.0	0.0	0.0	88.47	

Survey Program	Date	4/9/2014			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
256.0	653.0	Surface (Wellbore #1)	Flexi-Shot	VES Flexi-Shot Tool	
701.0	7,442.0	Intermediate/Curve (Wellbore #1)	MWD	MWD - Standard	
7,510.0	16,640.0	Lateral (Wellbore #1)	MWD+IFR1+MS_WY	Fixed:v2:Rockies, crustal dec + 3-axis correction	

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)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
256.0	0.20	13.12	256.0	0.4	0.1	0.1	0.08	0.08	0.00	
498.0	0.30	188.62	498.0	0.2	0.1	0.1	0.21	0.04	72.52	
653.0	0.70	307.72	653.0	0.4	-0.7	-0.7	0.57	0.26	76.84	
701.0	0.40	0.10	701.0	0.7	-0.9	-0.9	1.16	-0.63	109.13	
791.0	0.40	4.30	791.0	1.4	-0.9	-0.9	0.03	0.00	4.67	
880.0	0.40	9.00	880.0	2.0	-0.8	-0.8	0.04	0.00	5.28	
970.0	0.60	3.20	970.0	2.8	-0.8	-0.7	0.23	0.22	-6.44	
1,060.0	0.60	5.90	1,060.0	3.7	-0.7	-0.6	0.03	0.00	3.00	

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Site:	Sandau State K25-62-1HNL Pad	MD Reference:	WELL @ 4814.0ft (Precision 829 RKB - 16')
Well:	Sec.25-T4N-R66W	North Reference:	Grid
Wellbore:	Sandau State K25-62-1HNL	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark
Design:	Wellbore #1		

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)
1,136.0	0.70	3.20	1,136.0	4.6	-0.6	-0.5	0.14	0.13	-3.55
1,231.0	0.70	3.40	1,231.0	5.7	-0.6	-0.4	0.00	0.00	0.21
1,328.0	0.80	355.30	1,328.0	7.0	-0.6	-0.4	0.15	0.10	-8.35
1,422.0	0.70	358.00	1,422.0	8.2	-0.7	-0.4	0.11	-0.11	2.87
1,516.0	0.40	197.30	1,515.9	8.5	-0.8	-0.5	1.15	-0.32	-170.96
1,609.0	0.50	272.90	1,608.9	8.2	-1.3	-1.1	0.60	0.11	81.29
1,703.0	0.50	287.10	1,702.9	8.3	-2.1	-1.9	0.13	0.00	15.11
1,798.0	0.90	301.40	1,797.9	8.8	-3.1	-2.9	0.46	0.42	15.05
1,892.0	1.20	232.80	1,891.9	8.6	-4.5	-4.3	1.29	0.32	-72.98
1,986.0	1.70	180.40	1,985.9	6.6	-5.3	-5.1	1.44	0.53	-55.74
2,080.0	1.40	190.80	2,079.9	4.1	-5.5	-5.4	0.44	-0.32	11.06
2,174.0	1.10	211.90	2,173.8	2.2	-6.2	-6.2	0.58	-0.32	22.45
2,269.0	0.30	204.00	2,268.8	1.2	-6.8	-6.8	0.85	-0.84	-8.32
2,363.0	0.10	347.40	2,362.8	1.1	-6.9	-6.9	0.41	-0.21	152.55
2,456.0	0.90	330.90	2,455.8	1.8	-7.3	-7.3	0.87	0.86	-17.74
2,549.0	1.00	332.30	2,548.8	3.2	-8.0	-8.0	0.11	0.11	1.51
2,639.0	1.00	323.00	2,638.8	4.5	-8.9	-8.8	0.18	0.00	-10.33
2,728.0	1.10	324.70	2,727.8	5.8	-9.8	-9.7	0.12	0.11	1.91
2,818.0	0.60	51.70	2,817.8	6.8	-10.0	-9.8	1.36	-0.56	96.67
2,908.0	1.80	88.70	2,907.8	7.1	-8.2	-8.0	1.52	1.33	41.11
2,997.0	1.90	86.90	2,996.7	7.2	-5.3	-5.1	0.13	0.11	-2.02
3,087.0	2.00	79.90	3,086.7	7.6	-2.3	-2.1	0.29	0.11	-7.78
3,176.0	1.40	88.10	3,175.6	7.9	0.3	0.5	0.73	-0.67	9.21
3,266.0	0.80	168.50	3,265.6	7.3	1.6	1.8	1.66	-0.67	89.33
3,356.0	0.90	193.80	3,355.6	6.0	1.5	1.7	0.43	0.11	28.11
3,445.0	1.10	203.60	3,444.6	4.6	1.0	1.1	0.29	0.22	11.01
3,535.0	1.20	192.70	3,534.6	2.8	0.5	0.5	0.27	0.11	-12.11
3,625.0	1.10	207.30	3,624.6	1.2	-0.1	-0.1	0.34	-0.11	16.22
3,714.0	1.20	202.00	3,713.5	-0.5	-0.9	-0.9	0.16	0.11	-5.96
3,804.0	1.60	195.90	3,803.5	-2.6	-1.6	-1.7	0.47	0.44	-6.78
3,894.0	1.90	199.40	3,893.5	-5.2	-2.4	-2.6	0.35	0.33	3.89
3,983.0	2.40	195.50	3,982.4	-8.4	-3.4	-3.6	0.59	0.56	-4.38
4,073.0	2.60	192.90	4,072.3	-12.2	-4.4	-4.7	0.26	0.22	-2.89
4,163.0	1.50	173.20	4,162.3	-15.3	-4.7	-5.1	1.43	-1.22	-21.89
4,252.0	0.70	146.80	4,251.2	-16.9	-4.3	-4.7	1.04	-0.90	-29.66
4,342.0	0.10	187.60	4,341.2	-17.5	-4.0	-4.4	0.70	-0.67	45.33
4,432.0	0.50	57.90	4,431.2	-17.3	-3.6	-4.1	0.63	0.44	-144.11
4,521.0	1.20	27.30	4,520.2	-16.3	-2.9	-3.3	0.91	0.79	-34.38
4,611.0	1.10	19.40	4,610.2	-14.7	-2.2	-2.6	0.21	-0.11	-8.78
4,700.0	1.00	7.30	4,699.2	-13.1	-1.8	-2.1	0.27	-0.11	-13.60
4,790.0	0.80	327.20	4,789.2	-11.8	-2.0	-2.3	0.72	-0.22	-44.56
4,880.0	0.60	332.80	4,879.2	-10.8	-2.6	-2.9	0.23	-0.22	6.22
4,969.0	0.80	328.80	4,968.2	-9.9	-3.1	-3.4	0.23	0.22	-4.49
5,059.0	1.40	352.30	5,058.2	-8.2	-3.6	-3.8	0.82	0.67	26.11
5,149.0	1.10	342.00	5,148.1	-6.3	-4.0	-4.2	0.42	-0.33	-11.44
5,239.0	1.30	317.00	5,238.1	-4.8	-5.0	-5.1	0.62	0.22	-27.78
5,328.0	1.80	327.70	5,327.1	-2.9	-6.4	-6.5	0.65	0.56	12.02
5,418.0	2.00	328.10	5,417.0	-0.3	-8.0	-8.0	0.22	0.22	0.44
5,507.0	1.60	330.00	5,506.0	2.1	-9.4	-9.4	0.45	-0.45	2.13
5,597.0	1.80	325.30	5,595.9	4.3	-10.9	-10.7	0.27	0.22	-5.22
5,687.0	1.20	333.50	5,685.9	6.3	-12.1	-11.9	0.71	-0.67	9.11
5,776.0	0.70	2.00	5,774.9	7.7	-12.5	-12.3	0.76	-0.56	32.02

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Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

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)
5,866.0	0.60	57.60	5,864.9	8.5	-12.1	-11.8	0.68	-0.11	61.78
5,956.0	0.40	28.40	5,954.9	9.0	-11.5	-11.3	0.35	-0.22	-32.44
6,045.0	0.50	76.20	6,043.9	9.4	-11.0	-10.7	0.42	0.11	53.71
6,135.0	1.10	112.90	6,133.9	9.2	-9.8	-9.6	0.84	0.67	40.78
6,225.0	0.50	116.10	6,223.9	8.7	-8.7	-8.4	0.67	-0.67	3.56
6,315.0	0.20	156.90	6,313.9	8.3	-8.3	-8.0	0.41	-0.33	45.33
6,359.0	0.20	180.60	6,357.9	8.2	-8.2	-8.0	0.19	0.00	53.86
6,404.0	1.10	81.50	6,402.9	8.2	-7.8	-7.6	2.55	2.00	-220.22
6,449.0	4.30	81.10	6,447.8	8.5	-5.7	-5.5	7.11	7.11	-0.89
6,494.0	7.10	83.60	6,492.6	9.1	-1.3	-1.0	6.25	6.22	5.56
6,539.0	10.70	93.80	6,537.0	9.1	5.7	5.9	8.70	8.00	22.67
6,584.0	15.30	92.50	6,580.9	8.6	15.8	16.0	10.24	10.22	-2.89
6,628.0	18.00	93.40	6,623.0	7.9	28.4	28.6	6.16	6.14	2.05
6,673.0	18.50	90.60	6,665.8	7.4	42.4	42.6	2.24	1.11	-6.22
6,718.0	21.90	90.90	6,708.0	7.2	58.0	58.1	7.56	7.56	0.67
6,763.0	25.90	92.00	6,749.1	6.7	76.2	76.3	8.94	8.89	2.44
6,808.0	31.50	91.50	6,788.6	6.1	97.8	97.9	12.46	12.44	-1.11
6,852.0	36.10	91.70	6,825.1	5.4	122.2	122.3	10.46	10.45	0.45
6,897.0	39.90	89.70	6,860.6	5.1	149.9	150.0	8.88	8.44	-4.44
6,942.0	44.10	87.10	6,894.0	6.0	180.0	180.1	10.10	9.33	-5.78
6,987.0	46.70	86.70	6,925.6	7.7	212.0	212.1	5.81	5.78	-0.89
7,032.0	49.40	88.30	6,955.7	9.1	245.4	245.6	6.56	6.00	3.56
7,077.0	53.00	89.50	6,983.9	9.8	280.5	280.7	8.27	8.00	2.67
7,122.0	55.70	89.00	7,010.1	10.3	317.1	317.2	6.07	6.00	-1.11
7,166.0	60.10	88.00	7,033.5	11.3	354.3	354.5	10.18	10.00	-2.27
7,211.0	64.40	86.90	7,054.4	13.0	394.1	394.3	9.80	9.56	-2.44
7,256.0	67.30	86.60	7,072.9	15.4	435.1	435.3	6.47	6.44	-0.67
7,301.0	70.30	87.40	7,089.1	17.6	477.0	477.3	6.87	6.67	1.78
7,346.0	74.50	87.30	7,102.7	19.5	519.8	520.1	9.34	9.33	-0.22
7,391.0	78.00	87.10	7,113.4	21.7	563.5	563.8	7.79	7.78	-0.44
7,442.0	79.80	86.90	7,123.2	24.3	613.4	613.9	3.55	3.53	-0.39
7,510.0	83.80	88.19	7,132.9	27.2	680.7	681.2	6.17	5.88	1.90
7,554.0	86.50	89.48	7,136.7	28.1	724.5	725.0	6.80	6.14	2.93
7,599.0	86.60	89.32	7,139.4	28.5	769.4	769.9	0.42	0.22	-0.36
7,623.9	87.60	89.36	7,140.6	28.8	794.3	794.8	4.00	4.00	0.16
Sandau State K25-62-1HNL Landing Pt.									
7,644.0	88.40	89.39	7,141.3	29.0	814.4	814.8	4.00	4.00	0.16
7,689.0	90.30	89.17	7,141.8	29.6	859.4	859.8	4.25	4.22	-0.49
7,734.0	90.20	88.68	7,141.6	30.5	904.3	904.8	1.11	-0.22	-1.09
7,823.0	91.40	88.21	7,140.4	32.9	993.3	993.8	1.45	1.35	-0.53
7,913.0	91.80	88.38	7,137.9	35.6	1,083.2	1,083.8	0.48	0.44	0.19
8,002.0	91.10	88.44	7,135.6	38.0	1,172.2	1,172.8	0.79	-0.79	0.07
8,092.0	90.70	88.83	7,134.2	40.2	1,262.1	1,262.8	0.62	-0.44	0.43
8,182.0	90.70	89.69	7,133.1	41.3	1,352.1	1,352.7	0.96	0.00	0.96
8,272.0	88.80	90.49	7,133.5	41.2	1,442.1	1,442.7	2.29	-2.11	0.89
8,362.0	89.30	90.01	7,135.0	40.8	1,532.1	1,532.6	0.77	0.56	-0.53
8,451.0	91.20	89.51	7,134.6	41.2	1,621.1	1,621.6	2.21	2.13	-0.56
8,541.0	91.00	89.28	7,132.9	42.1	1,711.1	1,711.6	0.34	-0.22	-0.26
8,630.0	90.10	89.94	7,132.0	42.7	1,800.1	1,800.6	1.25	-1.01	0.74
8,720.0	90.00	89.49	7,132.0	43.2	1,890.1	1,890.5	0.51	-0.11	-0.50
8,810.0	88.90	89.54	7,132.8	43.9	1,980.0	1,980.5	1.22	-1.22	0.06
8,899.0	89.50	89.48	7,134.1	44.7	2,069.0	2,069.5	0.68	0.67	-0.07

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8,989.0	90.70	89.05	7,133.9	45.8	2,159.0	2,159.5	1.42	1.33	-0.48
9,079.0	90.50	88.92	7,133.0	47.4	2,249.0	2,249.5	0.27	-0.22	-0.14
9,168.0	90.40	87.23	7,132.3	50.4	2,338.0	2,338.5	1.90	-0.11	-1.90
9,258.0	90.30	87.87	7,131.7	54.3	2,427.9	2,428.5	0.72	-0.11	0.71
9,347.0	88.80	87.50	7,132.4	57.9	2,516.8	2,517.4	1.74	-1.69	-0.42
9,437.0	89.30	87.64	7,133.9	61.7	2,606.7	2,607.4	0.58	0.56	0.16
9,527.0	90.90	88.02	7,133.7	65.1	2,696.6	2,697.4	1.83	1.78	0.42
9,617.0	89.50	87.81	7,133.4	68.4	2,786.6	2,787.4	1.57	-1.56	-0.23
9,706.0	89.00	87.69	7,134.6	71.9	2,875.5	2,876.4	0.58	-0.56	-0.13
9,796.0	88.60	87.26	7,136.5	75.8	2,965.4	2,966.3	0.65	-0.44	-0.48
9,886.0	89.70	87.94	7,137.8	79.6	3,055.3	3,056.3	1.44	1.22	0.76
9,975.0	91.80	87.84	7,136.7	82.9	3,144.2	3,145.3	2.36	2.36	-0.11
10,065.0	91.00	88.12	7,134.5	86.0	3,234.1	3,235.3	0.94	-0.89	0.31
10,155.0	90.80	88.33	7,133.0	88.8	3,324.1	3,325.3	0.32	-0.22	0.23
10,244.0	89.80	88.28	7,132.6	91.5	3,413.0	3,414.3	1.13	-1.12	-0.06
10,339.0	90.60	88.21	7,132.2	94.4	3,508.0	3,509.3	0.85	0.84	-0.07
10,433.0	89.90	87.44	7,131.8	97.9	3,601.9	3,603.3	1.11	-0.74	-0.82
10,527.0	88.80	89.30	7,132.9	100.6	3,695.9	3,697.2	2.30	-1.17	1.98
10,622.0	89.80	88.30	7,134.1	102.6	3,790.8	3,792.2	1.49	1.05	-1.05
10,716.0	91.90	86.89	7,132.7	106.5	3,884.7	3,886.2	2.69	2.23	-1.50
10,810.0	89.80	86.77	7,131.3	111.7	3,978.6	3,980.1	2.24	-2.23	-0.13
10,905.0	90.70	87.30	7,130.9	116.7	4,073.5	4,075.1	1.10	0.95	0.56
10,999.0	90.80	87.83	7,129.6	120.6	4,167.4	4,169.1	0.57	0.11	0.56
11,093.0	90.40	88.43	7,128.6	123.7	4,261.3	4,263.1	0.77	-0.43	0.64
11,187.0	90.30	88.93	7,128.1	125.9	4,355.3	4,357.1	0.54	-0.11	0.53
11,281.0	90.30	89.40	7,127.6	127.3	4,449.3	4,451.1	0.50	0.00	0.50
11,374.0	90.30	89.89	7,127.1	127.8	4,542.3	4,544.1	0.53	0.00	0.53
11,467.0	90.40	90.35	7,126.5	127.6	4,635.3	4,637.0	0.51	0.11	0.49
11,560.0	90.50	91.08	7,125.8	126.5	4,728.2	4,729.9	0.79	0.11	0.78
11,653.0	89.80	90.33	7,125.5	125.3	4,821.2	4,822.9	1.10	-0.75	-0.81
11,745.0	90.60	88.91	7,125.2	125.9	4,913.2	4,914.8	1.77	0.87	-1.54
11,839.0	90.20	89.38	7,124.6	127.3	5,007.2	5,008.8	0.66	-0.43	0.50
11,933.0	90.10	88.13	7,124.3	129.4	5,101.2	5,102.8	1.33	-0.11	-1.33
12,027.0	90.50	88.95	7,123.8	131.8	5,195.2	5,196.8	0.97	0.43	0.87
12,119.0	90.10	89.11	7,123.3	133.3	5,287.1	5,288.8	0.47	-0.43	0.17
12,212.0	90.80	88.09	7,122.6	135.6	5,380.1	5,381.8	1.33	0.75	-1.10
12,304.0	90.30	88.17	7,121.7	138.6	5,472.1	5,473.8	0.55	-0.54	0.09
12,398.0	89.90	87.32	7,121.6	142.3	5,566.0	5,567.8	1.00	-0.43	-0.90
12,491.0	90.20	86.67	7,121.5	147.2	5,658.9	5,660.8	0.77	0.32	-0.70
12,583.0	90.20	86.59	7,121.2	152.6	5,750.7	5,752.7	0.09	0.00	-0.09
12,678.0	90.30	87.67	7,120.8	157.3	5,845.6	5,847.7	1.14	0.11	1.14
12,768.0	90.30	87.91	7,120.3	160.8	5,935.5	5,937.7	0.27	0.00	0.27
12,857.0	90.10	88.35	7,120.0	163.7	6,024.5	6,026.7	0.54	-0.22	0.49
12,947.0	91.10	88.56	7,119.0	166.1	6,114.4	6,116.7	1.14	1.11	0.23
13,037.0	92.40	88.32	7,116.3	168.6	6,204.3	6,206.6	1.47	1.44	-0.27
13,126.0	94.00	87.78	7,111.3	171.6	6,293.2	6,295.5	1.90	1.80	-0.61
13,216.0	92.50	87.55	7,106.2	175.3	6,382.9	6,385.3	1.69	-1.67	-0.26
13,305.0	90.20	88.11	7,104.1	178.7	6,471.8	6,474.3	2.66	-2.58	0.63
13,395.0	87.70	88.99	7,105.8	180.9	6,561.8	6,564.3	2.94	-2.78	0.98
13,485.0	87.80	88.61	7,109.3	182.8	6,651.7	6,654.2	0.44	0.11	-0.42
13,574.0	88.50	88.53	7,112.2	185.0	6,740.6	6,743.2	0.79	0.79	-0.09
13,663.0	89.40	88.06	7,113.8	187.7	6,829.6	6,832.1	1.14	1.01	-0.53
13,753.0	91.40	89.37	7,113.2	189.7	6,919.5	6,922.1	2.66	2.22	1.46

Company:	Noble Energy Inc.- Weld County, CO (Grid North)	Local Co-ordinate Reference:	Well Sandau State K25-62-1HNL
Project:	Sec.25-T4N-R66W	TVD Reference:	WELL @ 4814.0ft (Precision 829 RKB - 16')
Site:	Sandau State K25-62-1HNL Pad Sec.25-T4N-R66W	MD Reference:	WELL @ 4814.0ft (Precision 829 RKB - 16')
Well:	Sandau State K25-62-1HNL	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

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)
13,843.0	92.20	88.87	7,110.3	191.1	7,009.5	7,012.1	1.05	0.89	-0.56
13,932.0	91.50	89.11	7,107.5	192.6	7,098.4	7,101.0	0.83	-0.79	0.27
14,022.0	91.10	89.46	7,105.4	193.8	7,188.4	7,191.0	0.59	-0.44	0.39
14,111.0	92.60	89.28	7,102.6	194.7	7,277.3	7,279.9	1.70	1.69	-0.20
14,201.0	91.10	88.92	7,099.7	196.2	7,367.3	7,369.9	1.71	-1.67	-0.40
14,291.0	90.60	88.60	7,098.3	198.1	7,457.2	7,459.9	0.66	-0.56	-0.36
14,380.0	89.30	88.26	7,098.4	200.5	7,546.2	7,548.9	1.51	-1.46	-0.38
14,470.0	91.40	88.65	7,097.8	203.0	7,636.2	7,638.9	2.37	2.33	0.43
14,559.0	90.30	88.63	7,096.5	205.1	7,725.1	7,727.9	1.24	-1.24	-0.02
14,649.0	88.40	88.33	7,097.5	207.5	7,815.1	7,817.8	2.14	-2.11	-0.33
14,738.0	88.60	88.08	7,099.9	210.3	7,904.0	7,906.8	0.36	0.22	-0.28
14,828.0	88.60	87.66	7,102.1	213.6	7,993.9	7,996.8	0.47	0.00	-0.47
14,918.0	88.40	88.21	7,104.4	216.8	8,083.8	8,086.7	0.65	-0.22	0.61
15,008.0	89.80	88.38	7,105.8	219.5	8,173.8	8,176.7	1.57	1.56	0.19
15,097.0	91.00	89.94	7,105.2	220.8	8,262.8	8,265.7	2.21	1.35	1.75
15,187.0	89.70	89.91	7,104.7	220.9	8,352.8	8,355.7	1.44	-1.44	-0.03
15,276.0	92.30	90.30	7,103.1	220.8	8,441.7	8,444.6	2.95	2.92	0.44
15,366.0	90.70	90.13	7,100.8	220.4	8,531.7	8,534.5	1.79	-1.78	-0.19
15,445.0	90.00	90.04	7,100.3	220.3	8,610.7	8,613.5	0.89	-0.89	-0.11
15,535.0	90.00	90.03	7,100.3	220.3	8,700.7	8,703.5	0.01	0.00	-0.01
15,624.0	89.70	89.39	7,100.5	220.7	8,789.7	8,792.5	0.79	-0.34	-0.72
15,714.0	91.40	89.38	7,099.7	221.7	8,879.7	8,882.4	1.89	1.89	-0.01
15,803.0	90.50	88.56	7,098.2	223.3	8,968.7	8,971.4	1.37	-1.01	-0.92
15,893.0	89.10	88.28	7,098.5	225.8	9,058.6	9,061.4	1.59	-1.56	-0.31
15,983.0	90.20	88.29	7,099.0	228.5	9,148.6	9,151.4	1.22	1.22	0.01
16,072.0	91.20	87.76	7,098.0	231.5	9,237.5	9,240.4	1.27	1.12	-0.60
16,162.0	88.70	87.84	7,098.0	235.0	9,327.4	9,330.4	2.78	-2.78	0.09
16,252.0	88.60	87.44	7,100.2	238.7	9,417.3	9,420.4	0.46	-0.11	-0.44
16,341.0	88.20	86.83	7,102.6	243.1	9,506.2	9,509.3	0.82	-0.45	-0.69
16,431.0	87.80	86.40	7,105.8	248.4	9,596.0	9,599.2	0.65	-0.44	-0.48
16,521.0	87.50	85.90	7,109.5	254.5	9,685.7	9,689.0	0.65	-0.33	-0.56
16,578.0	87.30	84.50	7,112.1	259.2	9,742.4	9,745.9	2.48	-0.35	-2.46
16,640.0	87.30	84.50	7,115.0	265.2	9,804.1	9,807.7	0.00	0.00	0.00
Sandau State K25-62-1HNL BHL 330'FSL & 535'FEL									

Checked By: _____	Approved By: _____	Date: _____
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