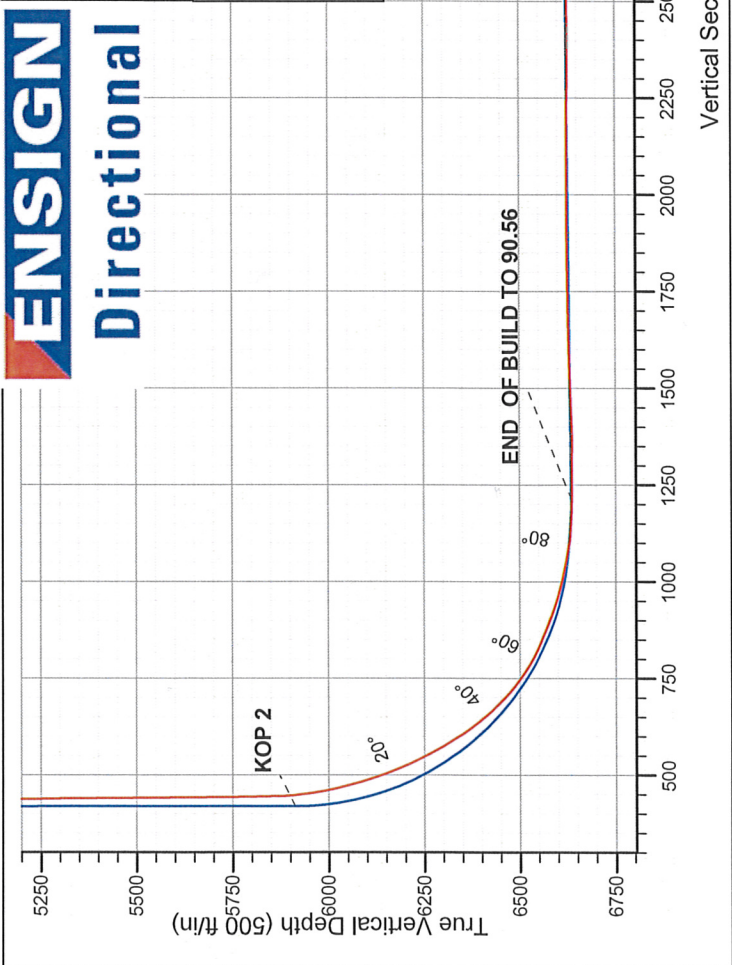
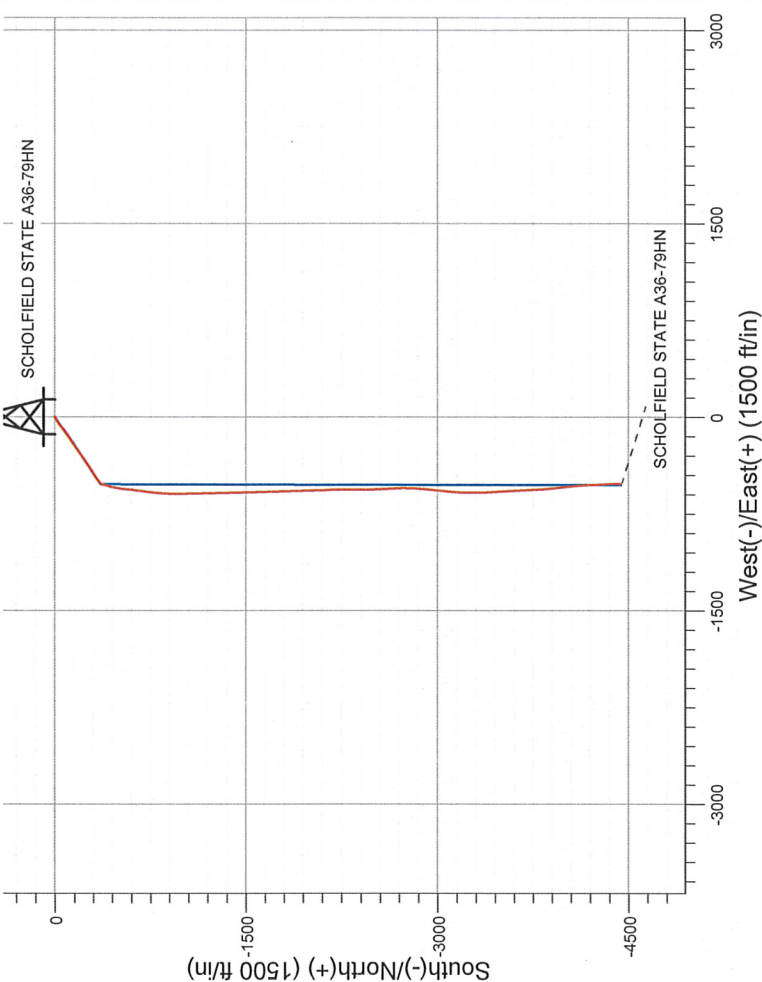


Well Name: SCHOLFIELD STATE A36-79HN					
Surface Location: SCHOLFIELD A36-79HN PAD 36-6N-64W					
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone					
Ground Elevation: 4630.0					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	1408077.48	3276579.22	40.449320	-104.506190
RKB ENSIGN 132 13' RKB @ 4643.0ft (RKB ENSIGN 132 13')					
Slot					

FINAL SURVEY

Projected Bottom Hole Location  
10444'MD 6611'TVD 4440'S & 517'W of SHL  
92.1 degree Incl @ 177.0 degree AZM



SCHOLFIELD A36-79HN PAD 36-6N-64W SCHOLFIELD STATE A36-79HN Wellbore #1 14:36, December 20 2011		ANNOTATIONS	
		No annotation data is available.	
		LEGEND	
		SCHOLFIELD STATE A36-79HN, Wellbore #1, PLAN 2 (JUNE 6,2011) V0	
		Survey #1	



# **NOBLE ENERGY INC WELD COUNTY CO**

**SEC.36-T6N-R64W**

**SCHOLFIELD A36-79HN PAD 36-6N-64W**

**SCHOLFIELD STATE A36-79HN**

**Wellbore #1**

**Survey: Survey #1**

## **Standard Survey Report**

**20 December, 2011**



**Company:** NOBLE ENERGY INC WELD COUNTY CO  
**Project:** SEC.36-T6N-R64W  
**Site:** SCHOLFIELD A36-79HN PAD 36-6N-64W  
**Well:** SCHOLFIELD STATE A36-79HN  
**Wellbore:** Wellbore #1  
**Design:** Wellbore #1

**Local Co-ordinate Reference:** Well SCHOLFIELD STATE A36-79HN  
**TVD Reference:** RKB @ 4643.0ft (RKB ENSIGN 132 13')  
**MD Reference:** RKB @ 4643.0ft (RKB ENSIGN 132 13')  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** Landmark

<b>Project</b>	SEC.36-T6N-R64W		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		Using Well Reference Point
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

**Site** SCHOLFIELD A36-79HN PAD 36-6N-64W

<b>Site Position:</b>		<b>Northing:</b>	1,408,077.93ft	<b>Latitude:</b>	40.449320
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,276,618.18ft	<b>Longitude:</b>	-104.506050
<b>Position Uncertainty:</b>	0.0 ft	<b>Slot Radius:</b>	"	<b>Grid Convergence:</b>	0.64 °

<b>Well</b>	SCHOLFIELD STATE A36-79HN				
<b>Well Position</b>	<b>+N/-S</b>	0.0 ft	<b>Northing:</b>	1,408,077.48 ft	<b>Latitude:</b> 40.449320
	<b>+E/-W</b>	0.0 ft	<b>Easting:</b>	3,276,579.22 ft	<b>Longitude:</b> -104.506190
<b>Position Uncertainty</b>	0.0 ft		<b>Wellhead Elevation:</b>	ft	<b>Ground Level:</b> 4,630.0 ft

**Wellbore** Wellbore #1

<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	5/17/2011	8.74	67.14	53,195

**Design** Wellbore #1

**Audit Notes:**

<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.0
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<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	6,604.0	0.0	0.0	186.79

**Survey Program** Date 12/20/2011

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
623.0	10,444.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard

**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
623.0	0.10	87.00	623.0	0.0	0.5	-0.1	0.02	0.02	0.00
716.0	0.10	194.70	716.0	0.0	0.6	0.0	0.17	0.00	115.81
806.0	0.20	205.60	806.0	-0.3	0.5	0.2	0.12	0.11	12.11
898.0	0.20	110.20	898.0	-0.5	0.6	0.4	0.32	0.00	-103.70
989.0	0.20	264.00	989.0	-0.5	0.6	0.5	0.43	0.00	169.01
1,085.0	0.10	193.50	1,085.0	-0.6	0.4	0.6	0.20	-0.10	-73.44
1,180.0	0.20	245.50	1,180.0	-0.8	0.2	0.8	0.17	0.11	54.74
1,275.0	0.20	221.60	1,275.0	-1.0	0.0	1.0	0.09	0.00	-25.16
1,370.0	0.40	246.90	1,370.0	-1.2	-0.4	1.3	0.25	0.21	26.63
1,465.0	1.30	250.80	1,465.0	-1.7	-1.8	1.9	0.95	0.95	4.11
1,560.0	2.80	235.30	1,559.9	-3.4	-4.7	3.9	1.67	1.58	-16.32
1,655.0	4.10	245.90	1,654.7	-6.1	-9.7	7.2	1.52	1.37	11.16



**Company:** NOBLE ENERGY INC WELD COUNTY CO  
**Project:** SEC.36-T6N-R64W  
**Site:** SCHOLFIELD A36-79HN PAD 36-6N-64W  
**Well:** SCHOLFIELD STATE A36-79HN  
**Wellbore:** Wellbore #1  
**Design:** Wellbore #1

**Local Co-ordinate Reference:** Well SCHOLFIELD STATE A36-79HN  
**TVD Reference:** RKB @ 4643.0ft (RKB ENSIGN 132 13')  
**MD Reference:** RKB @ 4643.0ft (RKB ENSIGN 132 13')  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**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)
1,750.0	6.20	241.10	1,749.4	-10.0	-17.3	11.9	2.25	2.21	-5.05
1,846.0	7.50	240.10	1,844.7	-15.6	-27.3	18.7	1.36	1.35	-1.04
1,941.0	9.10	233.00	1,938.7	-23.2	-38.6	27.6	2.00	1.68	-7.47
2,037.0	10.60	235.10	2,033.3	-32.8	-51.9	38.7	1.61	1.56	2.19
2,132.0	11.30	232.90	2,126.5	-43.4	-66.5	51.0	0.86	0.74	-2.32
2,227.0	10.70	230.80	2,219.8	-54.6	-80.8	63.8	0.76	-0.63	-2.21
2,322.0	10.70	237.60	2,313.1	-64.9	-95.1	75.7	1.33	0.00	7.16
2,417.0	11.70	237.60	2,406.3	-74.8	-110.7	87.4	1.05	1.05	0.00
2,512.0	11.30	230.20	2,499.4	-85.9	-125.9	100.2	1.61	-0.42	-7.79
2,607.0	12.00	235.10	2,592.5	-97.5	-141.2	113.6	1.28	0.74	5.16
2,702.0	12.40	237.80	2,685.3	-108.6	-157.9	126.5	0.73	0.42	2.84
2,797.0	12.90	237.60	2,778.0	-119.7	-175.5	139.7	0.53	0.53	-0.21
2,892.0	11.70	237.10	2,870.8	-130.7	-192.5	152.5	1.27	-1.26	-0.53
2,987.0	12.80	236.20	2,963.7	-141.7	-209.4	165.5	1.18	1.16	-0.95
3,084.0	11.80	234.60	3,058.4	-153.5	-226.4	179.2	1.09	-1.03	-1.65
3,179.0	11.80	234.80	3,151.4	-164.7	-242.2	192.2	0.04	0.00	0.21
3,275.0	11.40	231.10	3,245.5	-176.3	-257.7	205.5	0.88	-0.42	-3.85
3,370.0	11.80	230.90	3,338.5	-188.3	-272.5	219.2	0.42	0.42	-0.21
3,465.0	12.50	236.60	3,431.4	-200.1	-288.6	232.9	1.46	0.74	6.00
3,560.0	12.80	236.60	3,524.1	-211.6	-306.0	246.3	0.32	0.32	0.00
3,655.0	14.20	235.00	3,616.5	-224.1	-324.3	260.8	1.53	1.47	-1.68
3,750.0	15.10	234.40	3,708.4	-237.9	-343.9	276.9	0.96	0.95	-0.63
3,845.0	15.20	235.50	3,800.1	-252.2	-364.3	293.5	0.32	0.11	1.16
3,940.0	14.30	234.80	3,892.0	-266.0	-384.1	309.6	0.97	-0.95	-0.74
4,035.0	13.20	236.40	3,984.2	-278.8	-402.7	324.4	1.23	-1.16	1.68
4,130.0	12.60	236.40	4,076.8	-290.5	-420.4	338.2	0.63	-0.63	0.00
4,225.0	10.90	238.70	4,169.8	-300.9	-436.7	350.4	1.86	-1.79	2.42
4,320.0	10.10	238.00	4,263.2	-310.0	-451.4	361.2	0.85	-0.84	-0.74
4,415.0	10.10	238.80	4,356.8	-318.7	-465.6	371.6	0.15	0.00	0.84
4,510.0	9.90	236.90	4,450.3	-327.5	-479.6	381.9	0.41	-0.21	-2.00
4,605.0	8.40	229.20	4,544.1	-336.5	-491.7	392.3	2.03	-1.58	-8.11
4,700.0	7.20	228.10	4,638.2	-345.0	-501.4	401.9	1.27	-1.26	-1.16
4,795.0	6.20	226.20	4,732.6	-352.5	-509.5	410.3	1.08	-1.05	-2.00
4,890.0	5.50	221.30	4,827.1	-359.5	-516.2	418.0	0.90	-0.74	-5.16
4,985.0	4.70	212.50	4,921.7	-366.2	-521.3	425.3	1.18	-0.84	-9.26
5,080.0	3.70	210.70	5,016.5	-372.1	-525.0	431.6	1.06	-1.05	-1.89
5,175.0	1.80	202.50	5,111.4	-376.1	-527.1	435.8	2.04	-2.00	-8.63
5,269.0	1.10	187.50	5,205.3	-378.4	-527.8	438.2	0.84	-0.74	-15.96
5,365.0	0.40	196.30	5,301.3	-379.6	-528.0	439.4	0.74	-0.73	9.17
5,460.0	0.40	189.90	5,396.3	-380.3	-528.1	440.1	0.05	0.00	-6.74
5,550.0	0.70	175.90	5,586.3	-382.1	-528.2	441.9	0.17	0.16	-7.37
5,745.0	0.60	178.50	5,681.3	-383.2	-528.1	442.9	0.11	-0.11	2.74
5,840.0	0.60	166.40	5,776.3	-384.1	-528.0	443.9	0.13	0.00	-12.74
5,867.0	0.80	162.50	5,803.3	-384.5	-527.9	444.2	0.76	0.74	-14.44
5,898.0	0.60	177.70	5,834.3	-384.8	-527.8	444.6	0.88	-0.65	49.03
5,930.0	2.10	187.00	5,866.3	-385.6	-527.9	445.3	4.72	4.69	29.06
5,962.0	4.10	194.70	5,898.2	-387.3	-528.3	447.0	6.37	6.25	24.06
5,993.0	6.90	195.40	5,929.1	-390.1	-529.0	450.0	9.03	9.03	2.26
6,025.0	9.20	196.50	5,960.8	-394.4	-530.3	454.4	7.20	7.19	3.44
6,057.0	11.20	194.90	5,992.3	-399.9	-531.8	460.0	6.31	6.25	-5.00
6,088.0	13.10	194.20	6,022.6	-406.2	-533.4	466.5	6.15	6.13	-2.26
6,120.0	14.60	196.50	6,053.6	-413.6	-535.5	474.0	4.99	4.69	7.19
6,152.0	16.40	197.70	6,084.5	-421.8	-538.0	482.4	5.71	5.63	3.75
6,183.0	17.70	197.20	6,114.1	-430.4	-540.7	491.4	4.22	4.19	-1.61

**Company:** NOBLE ENERGY INC WELD COUNTY CO  
**Project:** SEC.36-T6N-R64W  
**Site:** SCHOLFIELD A36-79HN PAD 36-6N-64W  
**Well:** SCHOLFIELD STATE A36-79HN  
**Wellbore:** Wellbore #1  
**Design:** Wellbore #1

**Local Co-ordinate Reference:** Well SCHOLFIELD STATE A36-79HN  
**TVD Reference:** RKB @ 4643.0ft (RKB ENSIGN 132 13')  
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**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**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)
6,215.0	20.10	194.00	6,144.4	-440.4	-543.5	501.6	8.17	7.50	-10.00
6,247.0	22.40	192.80	6,174.2	-451.7	-546.2	513.1	7.31	7.19	-3.75
6,278.0	23.90	192.30	6,202.7	-463.6	-548.8	525.3	4.88	4.84	-1.61
6,310.0	25.60	190.70	6,231.8	-476.7	-551.5	538.6	5.71	5.31	-5.00
6,342.0	27.40	188.90	6,260.4	-490.8	-553.9	552.9	6.16	5.63	-5.63
6,373.0	29.20	187.50	6,287.7	-505.3	-556.0	567.6	6.19	5.81	-4.52
6,405.0	31.00	187.30	6,315.4	-521.3	-558.1	583.6	5.63	5.63	-0.63
6,437.0	33.20	187.50	6,342.5	-538.1	-560.2	600.6	6.88	6.88	0.63
6,468.0	35.50	185.40	6,368.1	-555.5	-562.2	618.1	8.35	7.42	-6.77
6,500.0	38.80	185.80	6,393.6	-574.7	-564.1	637.4	10.34	10.31	1.25
6,532.0	41.40	186.60	6,418.1	-595.2	-566.3	658.0	8.28	8.13	2.50
6,563.0	43.80	185.60	6,440.9	-616.1	-568.5	679.0	8.04	7.74	-3.23
6,595.0	47.00	187.00	6,463.3	-638.7	-571.1	701.8	10.47	10.00	4.38
6,627.0	50.40	187.70	6,484.5	-662.6	-574.1	725.8	10.75	10.63	2.19
6,658.0	54.30	187.90	6,503.4	-686.9	-577.5	750.3	12.59	12.58	0.65
6,690.0	58.50	187.00	6,521.1	-713.3	-580.9	777.0	13.33	13.13	-2.81
6,722.0	62.00	185.60	6,537.0	-740.9	-584.0	804.8	11.58	10.94	-4.38
6,753.0	65.10	185.00	6,550.8	-768.5	-586.5	832.5	10.15	10.00	-1.94
6,818.0	68.70	185.00	6,576.3	-828.1	-591.7	892.3	5.54	5.54	0.00
6,828.0	68.40	185.00	6,579.9	-837.4	-592.5	901.6	3.00	-3.00	0.00
6,859.0	71.00	184.30	6,590.7	-866.3	-594.9	930.6	8.65	8.39	-2.26
6,891.0	73.90	183.50	6,600.3	-896.8	-597.0	961.1	9.37	9.06	-2.50
6,923.0	75.50	180.70	6,608.8	-927.6	-598.1	991.8	9.81	5.00	-8.75
6,954.0	77.30	179.20	6,616.1	-957.7	-598.1	1,021.8	7.47	5.81	-4.84
6,986.0	79.00	179.40	6,622.6	-989.1	-597.7	1,052.8	5.35	5.31	0.63
7,018.0	80.70	180.00	6,628.3	-1,020.6	-597.5	1,084.1	5.62	5.31	1.88
7,050.0	84.00	178.70	6,632.5	-1,052.3	-597.2	1,115.5	11.07	10.31	-4.06
7,081.0	87.10	177.00	6,634.9	-1,083.1	-596.0	1,146.0	11.40	10.00	-5.48
7,113.0	87.80	178.40	6,636.4	-1,115.1	-594.7	1,177.6	4.89	2.19	4.38
7,145.0	88.70	179.40	6,637.3	-1,147.1	-594.1	1,209.3	4.20	2.81	3.13
7,176.0	90.00	179.20	6,637.7	-1,178.1	-593.7	1,240.0	4.24	4.19	-0.65
7,271.0	89.40	179.20	6,638.2	-1,273.1	-592.4	1,334.2	0.63	-0.63	0.00
7,366.0	92.50	178.70	6,636.6	-1,368.0	-590.7	1,428.3	3.31	3.26	-0.53
7,461.0	92.20	178.00	6,632.7	-1,462.9	-587.9	1,522.2	0.80	-0.32	-0.74
7,557.0	91.30	177.70	6,629.8	-1,558.8	-584.3	1,616.9	0.99	-0.94	-0.31
7,652.0	90.70	177.80	6,628.1	-1,653.7	-580.6	1,710.7	0.64	-0.63	0.11
7,747.0	90.50	177.70	6,627.1	-1,748.6	-576.9	1,804.6	0.24	-0.21	-0.11
7,842.0	90.50	179.60	6,626.3	-1,843.6	-574.6	1,898.6	2.00	0.00	2.00
7,937.0	89.90	178.50	6,626.0	-1,938.6	-573.1	1,992.7	1.32	-0.63	-1.16
8,032.0	90.60	179.40	6,625.6	-2,033.5	-571.3	2,086.8	1.20	0.74	0.95
8,127.0	89.70	177.50	6,625.3	-2,128.5	-568.7	2,180.8	2.21	-0.95	-2.00
8,222.0	88.10	178.90	6,627.1	-2,223.4	-565.8	2,274.7	2.24	-1.68	1.47
8,316.0	91.10	180.50	6,627.8	-2,317.4	-565.3	2,368.0	3.62	3.19	1.70
8,411.0	90.40	180.00	6,626.6	-2,412.4	-565.7	2,462.4	0.91	-0.74	-0.53
8,506.0	90.80	177.50	6,625.6	-2,507.4	-563.6	2,556.4	2.66	0.42	-2.63
8,601.0	90.90	176.80	6,624.1	-2,602.2	-558.9	2,650.1	0.74	0.11	-0.74
8,696.0	91.00	177.70	6,622.6	-2,697.1	-554.3	2,743.7	0.95	0.11	0.95
8,791.0	91.40	182.20	6,620.6	-2,792.1	-554.2	2,838.0	4.75	0.42	4.74
8,886.0	90.60	184.30	6,618.9	-2,886.9	-559.6	2,932.8	2.37	-0.84	2.21
8,981.0	90.50	186.30	6,618.0	-2,981.5	-568.4	3,027.8	2.11	-0.11	2.11
9,076.0	90.70	185.40	6,617.0	-3,076.0	-578.1	3,122.8	0.97	0.21	-0.95
9,172.0	90.70	184.50	6,615.8	-3,171.6	-586.4	3,218.7	0.94	0.00	-0.94
9,267.0	91.30	179.10	6,614.2	-3,266.5	-589.4	3,313.3	5.72	0.63	-5.68
9,361.0	92.90	177.10	6,610.7	-3,360.4	-586.2	3,406.1	2.72	1.70	-2.13

**Company:** NOBLE ENERGY INC WELD COUNTY CO  
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**Wellbore:** Wellbore #1  
**Design:** Wellbore #1

**Local Co-ordinate Reference:** Well SCHOLFIELD STATE A36-79HN  
**TVD Reference:** RKB @ 4643.0ft (RKB ENSIGN 132 13')  
**MD Reference:** RKB @ 4643.0ft (RKB ENSIGN 132 13')  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**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)
9,456.0	90.00	177.50	6,608.3	-3,455.3	-581.8	3,499.8	3.08	-3.05	0.42
9,551.0	90.10	176.40	6,608.3	-3,550.1	-576.7	3,593.4	1.16	0.11	-1.16
9,646.0	91.50	176.40	6,606.9	-3,644.9	-570.7	3,686.8	1.47	1.47	0.00
9,741.0	91.40	177.10	6,604.5	-3,739.7	-565.4	3,780.3	0.74	-0.11	0.74
9,836.0	90.80	176.30	6,602.7	-3,834.6	-559.9	3,873.9	1.05	-0.63	-0.84
9,931.0	91.10	173.60	6,601.1	-3,929.2	-551.5	3,966.8	2.86	0.32	-2.84
10,026.0	84.70	174.30	6,604.6	-4,023.5	-541.5	4,059.3	6.78	-6.74	0.74
10,121.0	85.60	175.20	6,612.6	-4,117.8	-532.9	4,151.9	1.34	0.95	0.95
10,216.0	89.40	178.20	6,616.8	-4,212.5	-527.4	4,245.3	5.09	4.00	3.16
10,311.0	91.80	177.70	6,615.8	-4,307.4	-524.0	4,339.2	2.58	2.53	-0.53
10,358.0	92.10	177.00	6,614.2	-4,354.4	-521.8	4,385.5	1.62	0.64	-1.49
10,444.0	92.10	177.00	6,611.0	-4,440.2	-517.3	4,470.2	0.00	0.00	0.00

BHL 535'FSL & 75'FEL

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_