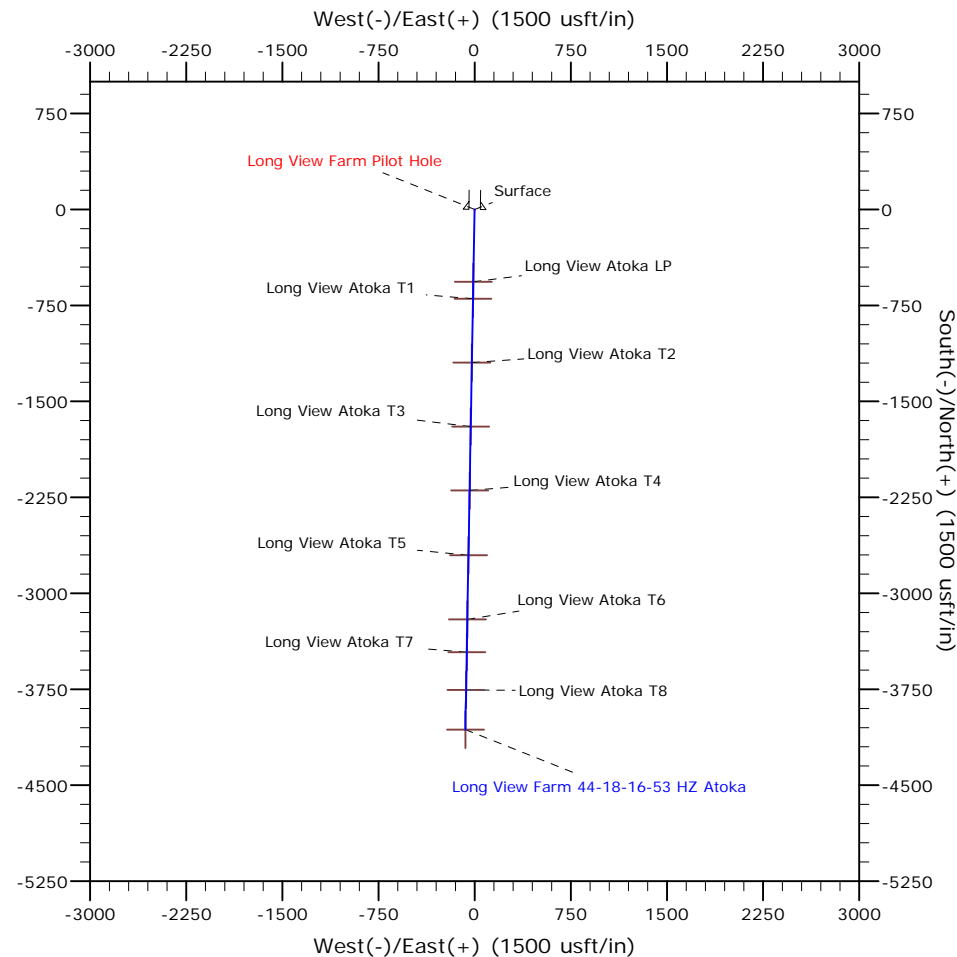
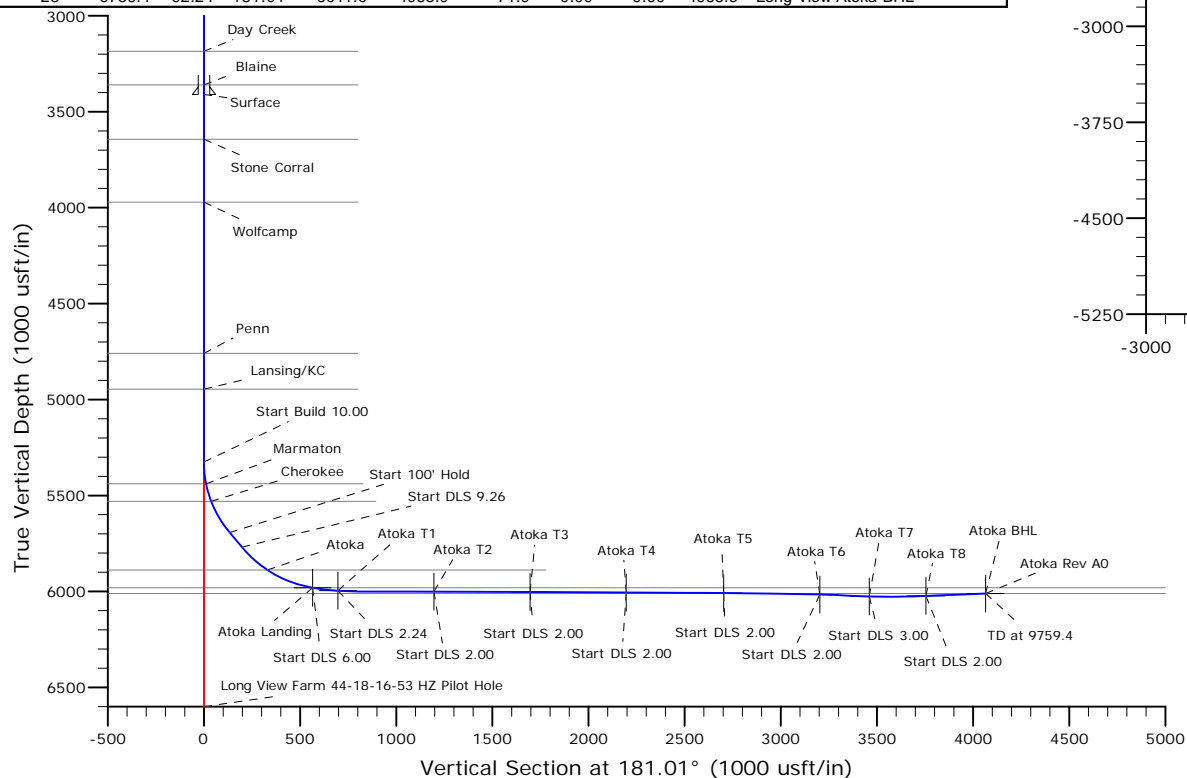


Pioneer Natural Resources



<u>Ground Level:</u>	<u>Northing:</u>	<u>Easting:</u>	<u>Latitude:</u>	<u>Longitude:</u>
4848.0	14040690.00	2103630.00	38° 39' 20.480 N	103° 22' 38.734 W

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	5325.0	0.00	0.00	5325.0	0.0	0.0	0.00	0.00	0.0	
3	5725.0	40.00	181.01	5693.3	-134.0	-2.4	10.00	181.01	134.0	
4	5825.0	40.00	181.01	5769.9	-198.3	-3.5	0.00	0.00	198.3	
5	6257.2	80.01	181.01	5981.6	-565.0	-10.0	9.26	0.00	565.1	Long View Atoka LP
6	6358.7	86.10	181.01	5993.9	-665.7	-11.8	6.00	0.03	665.8	
7	6390.1	86.10	181.01	5996.0	-697.0	-12.3	0.00	0.00	697.1	Long View Atoka T1
8	6571.1	90.16	181.01	6001.9	-877.9	-15.5	2.24	-0.02	878.0	
9	6889.3	90.16	181.01	6001.0	-1196.0	-21.2	0.00	0.00	1196.2	Long View Atoka T2
10	6909.3	89.76	181.01	6001.0	-1215.9	-21.5	2.00	179.96	1216.1	
11	7389.4	89.76	181.01	6003.0	-1696.0	-30.0	0.00	0.00	1696.3	Long View Atoka T3
12	7394.7	89.66	181.01	6003.0	-1701.4	-30.1	2.00	-180.00	1701.6	
13	7889.5	89.66	181.01	6006.0	-2196.0	-38.9	0.00	0.00	2196.3	Long View Atoka T4
14	7895.4	89.77	181.01	6006.0	-2201.9	-39.0	2.00	0.00	2202.3	
15	8396.6	89.77	181.01	6008.0	-2703.0	-47.8	0.00	0.00	2703.4	Long View Atoka T5
16	8432.4	89.06	181.01	6008.4	-2738.8	-48.5	2.00	-180.00	2739.3	
17	8896.7	89.06	181.01	6016.0	-3203.0	-56.7	0.00	0.00	3203.5	Long View Atoka T6
18	8980.0	87.39	181.01	6018.6	-3286.3	-58.2	2.00	180.00	3286.8	
19	9154.0	87.39	181.01	6026.5	-3460.0	-61.2	0.00	0.00	3460.5	Long View Atoka T7
20	9299.4	91.76	181.01	6027.6	-3605.4	-63.8	3.00	0.00	3606.0	
21	9449.1	91.76	181.01	6023.0	-3755.0	-66.4	0.00	0.00	3755.6	Long View Atoka T8
22	9473.1	92.24	181.01	6022.2	-3779.0	-66.9	2.00	0.00	3779.6	
23	9759.4	92.24	181.01	6011.0	-4065.0	-71.9	0.00	0.00	4065.6	Long View Atoka BHL



PIONEER
NATURAL RESOURCES

Plan: Atoka Rev A0 (Long View Farm 44-18-16-53 HZ/Atoka Plan)

13:57, April 24 2014

Created By: Troy Stoute Date: _____

Checked: _____ Date: _____

Reviewed: _____ Date: _____

Approved: _____ Date: _____

Pioneer Natural Resources

Lincoln County, CO (NAD 27)

Sec. 18-T16S-R53W

Long View Farm 44-18-16-53 HZ

Atoka Plan

Plan: Atoka Rev A0

Sperry Drilling Services

Proposal Report

24 April, 2014

Well Coordinates: 14,040,690.00 N, 2,103,630.00 E (38° 39' 20.48" N, 103° 22' 38.73" W)

Ground Level: 4,848.00 usft

Local Coordinate Origin:

Viewing Datum:

TVDs to System:

North Reference:

Unit System:

Geodetic Scale Factor Applied

Version: 5000.1 Build: 70

Centered on Well Long View Farm 44-18-16-53 HZ

KB 23' @ 4871.0usft (Original Well Elev)

N

True

API - US Survey Feet

HALLIBURTON

Plan Report for Long View Farm 44-18-16-53 HZ - Atoka Rev A0

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	Toolface Azimuth (°)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
1,093.0	0.00	0.00	1,093.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
Niobrara										
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
1,669.0	0.00	0.00	1,669.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
Ft Hayes										
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
2,167.0	0.00	0.00	2,167.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
Dakota										
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
2,521.0	0.00	0.00	2,521.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
Morrison										
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
2,671.0	0.00	0.00	2,671.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
Dockum										
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
3,185.0	0.00	0.00	3,185.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
Day Creek										
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
3,360.0	0.00	0.00	3,360.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
Blaine										
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
3,410.0	0.00	0.00	3,410.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
Surface										
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
3,644.0	0.00	0.00	3,644.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
Stone Corral										
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00

Plan Report for Long View Farm 44-18-16-53 HZ - Atoka Rev A0

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	Toolface Azimuth (°)
3,971.0	0.00	0.00	3,971.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
Wolfcamp										
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
4,759.0	0.00	0.00	4,759.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
Penn										
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
4,946.0	0.00	0.00	4,946.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
Lansing/KC										
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
5,300.0	0.00	0.00	5,300.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
5,325.0	0.00	0.00	5,325.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
Start Build 10.00										
5,400.0	7.50	181.01	5,399.8	-4.9	-0.1	4.9	10.00	10.00	0.00	181.01
5,439.8	11.48	181.01	5,439.0	-11.5	-0.2	11.5	10.00	10.00	0.00	0.00
Marmaton										
5,500.0	17.50	181.01	5,497.3	-26.5	-0.5	26.5	10.00	10.00	0.00	0.00
5,534.6	20.96	181.01	5,530.0	-37.9	-0.7	37.9	10.00	10.00	0.00	0.00
Cherokee										
5,600.0	27.50	181.01	5,589.6	-64.7	-1.1	64.7	10.00	10.00	0.00	0.00
5,700.0	37.50	181.01	5,673.8	-118.4	-2.1	118.4	10.00	10.00	0.00	0.00
5,725.0	40.00	181.01	5,693.3	-134.0	-2.4	134.0	10.00	10.00	0.00	0.00
Start 100.0 hold at 5725.0 MD										
5,800.0	40.00	181.01	5,750.7	-182.2	-3.2	182.3	0.00	0.00	0.00	0.00
5,825.0	40.00	181.01	5,769.9	-198.3	-3.5	198.3	0.00	0.00	0.00	0.00
Start DLS 9.26 TFO 0.00										
5,900.0	46.94	181.01	5,824.3	-249.9	-4.4	249.9	9.26	9.26	0.00	0.00
6,000.0	56.20	181.01	5,886.4	-328.1	-5.8	328.1	9.26	9.26	0.00	0.00
6,002.9	56.47	181.01	5,888.0	-330.5	-5.9	330.6	9.26	9.26	0.00	0.00
Atoka										
6,100.0	65.46	181.01	5,935.1	-415.3	-7.4	415.4	9.26	9.26	0.00	0.00
6,200.0	74.71	181.01	5,969.1	-509.2	-9.0	509.3	9.26	9.26	0.00	0.00
6,257.2	80.01	181.01	5,981.6	-565.0	-10.0	565.1	9.26	9.26	0.00	0.00
Start DLS 6.00 TFO 0.03 - Atoka Landing - Long View Atoka LP										
6,300.0	82.58	181.01	5,988.1	-607.3	-10.7	607.4	6.00	6.00	0.00	0.03
6,358.7	86.10	181.01	5,993.9	-665.7	-11.8	665.8	6.00	6.00	0.00	0.03
6,390.1	86.10	181.01	5,996.0	-697.0	-12.3	697.1	0.00	0.00	0.00	0.00
Start DLS 2.24 TFO -0.02 - Long View Atoka T1										
6,400.0	86.32	181.01	5,996.7	-706.9	-12.5	707.0	2.24	2.24	0.00	-0.02
6,500.0	88.57	181.01	6,001.1	-806.8	-14.3	806.9	2.24	2.24	0.00	-0.02
6,571.1	90.16	181.01	6,001.9	-877.9	-15.5	878.0	2.24	2.24	0.00	-0.02
6,600.0	90.16	181.01	6,001.8	-906.7	-16.0	906.9	0.00	0.00	0.00	0.00
6,700.0	90.16	181.01	6,001.5	-1,006.7	-17.8	1,006.9	0.00	0.00	0.00	0.00
6,800.0	90.16	181.01	6,001.3	-1,106.7	-19.6	1,106.9	0.00	0.00	0.00	0.00
6,889.3	90.16	181.01	6,001.0	-1,196.0	-21.2	1,196.2	0.00	0.00	0.00	0.00
Start DLS 2.00 TFO 179.96 - Long View Atoka T2										
6,900.0	89.95	181.01	6,001.0	-1,206.7	-21.4	1,206.9	2.00	-2.00	0.00	179.96
6,909.3	89.76	181.01	6,001.0	-1,215.9	-21.5	1,216.1	2.00	-2.00	0.00	179.96
7,000.0	89.76	181.01	6,001.4	-1,306.7	-23.1	1,306.9	0.00	0.00	0.00	0.00

Plan Report for Long View Farm 44-18-16-53 HZ - Atoka Rev A0

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	Toolface Azimuth (°)
7,100.0	89.76	181.01	6,001.8	-1,406.7	-24.9	1,406.9	0.00	0.00	0.00	0.00
7,200.0	89.76	181.01	6,002.2	-1,506.6	-26.7	1,506.9	0.00	0.00	0.00	0.00
7,300.0	89.76	181.01	6,002.6	-1,606.6	-28.4	1,606.9	0.00	0.00	0.00	0.00
7,389.4	89.76	181.01	6,003.0	-1,696.0	-30.0	1,696.3	0.00	0.00	0.00	0.00
Start DLS 2.00 TFO -180.00 - Long View Atoka T3										
7,394.7	89.66	181.01	6,003.0	-1,701.4	-30.1	1,701.6	2.00	-2.00	0.00	-180.00
7,400.0	89.66	181.01	6,003.1	-1,706.6	-30.2	1,706.9	0.00	0.00	0.00	0.00
7,500.0	89.66	181.01	6,003.7	-1,806.6	-32.0	1,806.9	0.00	0.00	0.00	0.00
7,600.0	89.66	181.01	6,004.3	-1,906.6	-33.7	1,906.9	0.00	0.00	0.00	0.00
7,700.0	89.66	181.01	6,004.9	-2,006.6	-35.5	2,006.9	0.00	0.00	0.00	0.00
7,800.0	89.66	181.01	6,005.5	-2,106.5	-37.3	2,106.9	0.00	0.00	0.00	0.00
7,889.5	89.66	181.01	6,006.0	-2,196.0	-38.9	2,196.3	0.00	0.00	0.00	0.00
Start DLS 2.00 TFO 0.00 - Long View Atoka T4										
7,895.4	89.77	181.01	6,006.0	-2,201.9	-39.0	2,202.3	2.00	2.00	0.00	0.00
7,900.0	89.77	181.01	6,006.0	-2,206.5	-39.0	2,206.9	0.00	0.00	0.00	0.00
8,000.0	89.77	181.01	6,006.4	-2,306.5	-40.8	2,306.9	0.00	0.00	0.00	0.00
8,100.0	89.77	181.01	6,006.8	-2,406.5	-42.6	2,406.9	0.00	0.00	0.00	0.00
8,200.0	89.77	181.01	6,007.2	-2,506.5	-44.4	2,506.9	0.00	0.00	0.00	0.00
8,300.0	89.77	181.01	6,007.6	-2,606.5	-46.1	2,606.9	0.00	0.00	0.00	0.00
8,396.6	89.77	181.01	6,008.0	-2,703.0	-47.8	2,703.4	0.00	0.00	0.00	0.00
Start DLS 2.00 TFO -180.00 - Long View Atoka T5										
8,400.0	89.71	181.01	6,008.0	-2,706.4	-47.9	2,706.9	2.00	-2.00	0.00	-180.00
8,432.4	89.06	181.01	6,008.4	-2,738.8	-48.5	2,739.3	2.00	-2.00	0.00	-180.00
8,500.0	89.06	181.01	6,009.5	-2,806.4	-49.7	2,806.9	0.00	0.00	0.00	0.00
8,592.6	89.06	181.01	6,011.0	-2,899.0	-51.3	2,899.5	0.00	0.00	0.00	0.00
Atoka BHL										
8,600.0	89.06	181.01	6,011.1	-2,906.4	-51.4	2,906.8	0.00	0.00	0.00	0.00
8,700.0	89.06	181.01	6,012.8	-3,006.4	-53.2	3,006.8	0.00	0.00	0.00	0.00
8,800.0	89.06	181.01	6,014.4	-3,106.3	-55.0	3,106.8	0.00	0.00	0.00	0.00
8,896.7	89.06	181.01	6,016.0	-3,203.0	-56.7	3,203.5	0.00	0.00	0.00	0.00
Start DLS 2.00 TFO 180.00 - Long View Atoka T6										
8,900.0	88.99	181.01	6,016.1	-3,206.3	-56.7	3,206.8	2.00	-2.00	0.00	180.00
8,980.0	87.39	181.01	6,018.6	-3,286.3	-58.2	3,286.8	2.00	-2.00	0.00	180.00
9,000.0	87.39	181.01	6,019.5	-3,306.2	-58.5	3,306.7	0.00	0.00	0.00	0.00
9,100.0	87.39	181.01	6,024.0	-3,406.1	-60.3	3,406.6	0.00	0.00	0.00	0.00
9,154.0	87.39	181.01	6,026.5	-3,460.0	-61.2	3,460.5	0.00	0.00	0.00	0.00
Start DLS 3.00 TFO 0.00 - Long View Atoka T7										
9,200.0	88.77	181.01	6,028.0	-3,506.0	-62.0	3,506.5	3.00	3.00	0.00	0.00
9,299.4	91.76	181.01	6,027.6	-3,605.4	-63.8	3,606.0	3.00	3.00	0.00	0.00
9,300.0	91.76	181.01	6,027.6	-3,606.0	-63.8	3,606.5	0.00	0.00	0.00	0.00
9,400.0	91.76	181.01	6,024.5	-3,705.9	-65.6	3,706.5	0.00	0.00	0.00	0.00
9,449.1	91.76	181.01	6,023.0	-3,755.0	-66.4	3,755.6	0.00	0.00	0.00	0.00
Start DLS 2.00 TFO 0.00 - Long View Atoka T8										
9,473.1	92.24	181.01	6,022.2	-3,779.0	-66.9	3,779.6	2.00	2.00	0.00	0.00
9,500.0	92.24	181.01	6,021.1	-3,805.8	-67.3	3,806.4	0.00	0.00	0.00	0.00
9,600.0	92.24	181.01	6,017.2	-3,905.7	-69.1	3,906.4	0.00	0.00	0.00	0.00
9,700.0	92.24	181.01	6,013.3	-4,005.7	-70.9	4,006.3	0.00	0.00	0.00	0.00
9,759.4	92.24	181.01	6,011.0	-4,065.0	-71.9	4,065.6	0.00	0.00	0.00	0.00
TD at 9759.4 - Long View Atoka BHL										

Plan Report for Long View Farm 44-18-16-53 HZ - Atoka Rev A0

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
5,325.0	5,325.0	0.0	0.0	Start Build 10.00
5,725.0	5,693.3	-134.0	-2.4	Start 100.0 hold at 5725.0 MD
5,825.0	5,769.9	-198.3	-3.5	Start DLS 9.26 TFO 0.00
6,257.2	5,981.6	-565.0	-10.0	Start DLS 6.00 TFO 0.03
6,390.1	5,996.0	-697.0	-12.3	Start DLS 2.24 TFO -0.02
6,889.3	6,001.0	-1,196.0	-21.2	Start DLS 2.00 TFO 179.96
7,389.4	6,003.0	-1,696.0	-30.0	Start DLS 2.00 TFO -180.00
7,889.5	6,006.0	-2,196.0	-38.9	Start DLS 2.00 TFO 0.00
8,396.6	6,008.0	-2,703.0	-47.8	Start DLS 2.00 TFO -180.00
8,896.7	6,016.0	-3,203.0	-56.7	Start DLS 2.00 TFO 180.00
9,154.0	6,026.5	-3,460.0	-61.2	Start DLS 3.00 TFO 0.00
9,449.1	6,023.0	-3,755.0	-66.4	Start DLS 2.00 TFO 0.00
9,759.4	6,011.0	-4,065.0	-71.9	TD at 9759.4

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin		Start TVD (usft)
				+N/-S (usft)	+E/-W (usft)	
Target	Long View Atoka BHL	181.01	Slot	0.0	0.0	0.0

Survey tool program

From (usft)	To (usft)	Survey/Plan	Survey Tool
0.0	9,759.4	Atoka Rev A0	MWD

Casing Details

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
3,410.0	3,410.0	Surface	8-5/8	12-1/4

Formation Details

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,093.0	1,093.0	Niobrara		0.00	
1,669.0	1,669.0	Ft Hayes		0.00	
2,167.0	2,167.0	Dakota		0.00	
2,521.0	2,521.0	Morrison		0.00	
2,671.0	2,671.0	Dockum		0.00	
3,185.0	3,185.0	Day Creek		0.00	
3,360.0	3,360.0	Blaine		0.00	
3,644.0	3,644.0	Stone Corral		0.00	
3,971.0	3,971.0	Wolfcamp		0.00	
4,759.0	4,759.0	Penn		0.00	
4,946.0	4,946.0	Lansing/KC		0.00	
5,439.8	5,439.0	Marmaton		0.00	
5,534.6	5,530.0	Cherokee		0.00	
6,002.9	5,888.0	Atoka		0.00	
6,257.2	5,981.6	Atoka Landing		0.00	
8,592.6	6,011.0	Atoka BHL		0.00	

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Targets associated with this wellbore

Target Name	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Shape
Long View Atoka LP	5,981.6	-565.0	-10.0	Point
Long View Atoka T1	5,996.0	-697.0	-12.3	Point
Long View Atoka T2	6,001.0	-1,196.0	-21.2	Point
Long View Atoka T3	6,003.0	-1,696.0	-30.0	Point
Long View Atoka T4	6,006.0	-2,196.0	-38.9	Point
Long View Atoka T5	6,008.0	-2,703.0	-47.8	Point
Long View Atoka BHL	6,011.0	-4,065.0	-71.9	Point
Long View Atoka T6	6,016.0	-3,203.0	-56.7	Point
Long View Atoka T8	6,023.0	-3,755.0	-66.4	Point
Long View Atoka T7	6,026.5	-3,460.0	-61.2	Point

Directional Difficulty Index

Average Dogleg over Survey:	1.00 °/100usft	Maximum Dogleg over Survey:	10.00 °/100usft at 5,725.0 usft
Net Tortousity applicable to Plans:	1.00 °/100usft	Directional Difficulty Index:	5.963

Audit Info

North Reference Sheet for Sec. 18-T16S-R53W - Long View Farm 44-18-16-53 HZ - Atoka Plan

All data is in US Feet unless otherwise stated. Directions and Coordinates are relative to True North Reference.

Vertical Depths are relative to KB 23' @ 4871.0usft (Original Well Elev). Northing and Easting are relative to Long View Farm 44-18-16-53 HZ

Coordinate System is Universal Transverse Mercator (US Survey Feet), Zone 13N (108 W to 102 W) using datum NAD 1927 - Western US, ellipsoid Clarke 1866

Projection method is Transverse Mercator (Gauss-Kruger)

Central Meridian is -105.00°, Longitude Origin:0° 0' 0.000 E°, Latitude Origin:0° 0' 0.000 N°

False Easting: 1,640,416.67usft, False Northing: 0.00usft, Scale Reduction: 0.99984548

Grid Coordinates of Well: 14,040,690.00 usft N, 2,103,630.00 usft E

Geographical Coordinates of Well: 38° 39' 20.48" N, 103° 22' 38.73" W

Grid Convergence at Surface is: 1.01°

Based upon Minimum Curvature type calculations, at a Measured Depth of 9,759.39usft the Bottom Hole Displacement is 4,065.63usft in the Direction of 181.01° (True).

Magnetic Convergence at surface is: -6.67° (7 May 2014, , BGGM2013)

