

Bayswater Exploration & Production, LLC

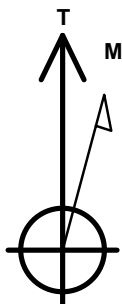
Well Name: **Ward M-20-19HN**

Surface Location: Ward 20-M Pad Sec. 20-T6N-R66W
North American Datum 1983 , US State Plane 1983 Colorado Northern Zone
Ground Elevation: 4729.0

+N/-S +E/-W Northing Easting Latitude Longitude Slot
0.0 0.0 1413957.02 3196665.10 40.467562 -104.793156
RKB - 23' WELL @ 4752.0ft (RKB - 23')

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 424'FSL, 213'FEL, SEC.20	1.0	0.0	0.0	Point
BHL 2424'FSL, 470'FWL, SEC.19	7000.0	1679.5	-10473.5	Point
Boreline Vertex 2448' FSL	7025.0	1841.4	-7869.0	Point
Boreline Vertex 2460' FSL	7035.0	1927.9	-5102.6	Point
LPL 2470'FSL, 470'FEL, SEC.20	7055.0	2043.1	-259.9	Point



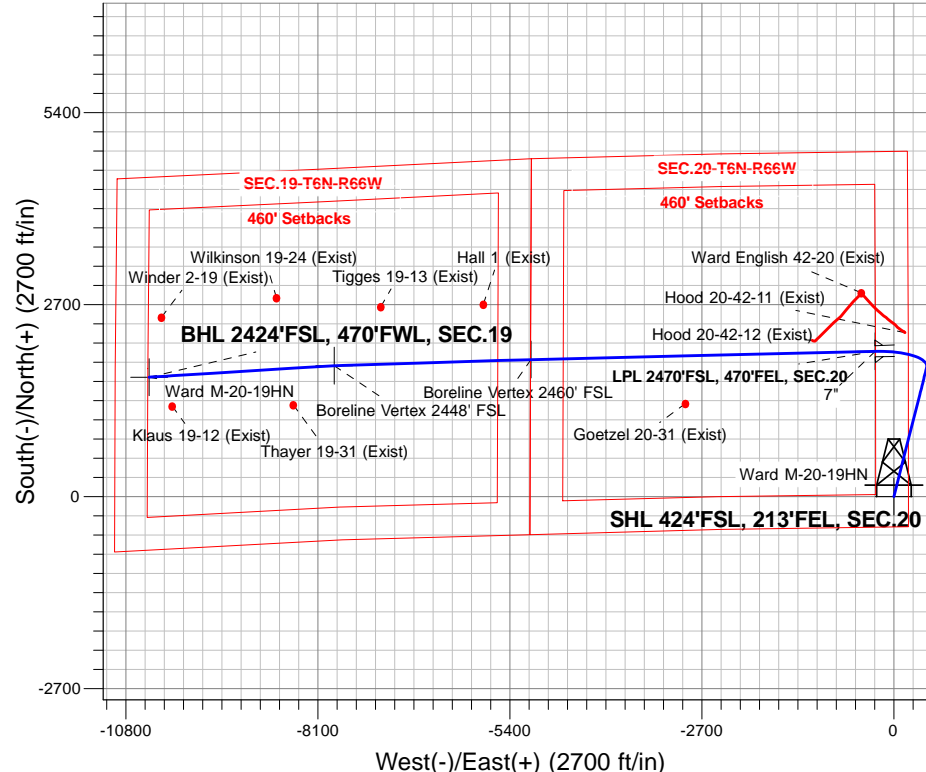
Azimuths to True North
Magnetic North: 8.21°

Magnetic Field
Strength: 52637.9snT
Dip Angle: 66.93°
Date: 6/14/2016
Model: IGRF2010

Ward 20-M Pad Sec. 20-T6N-R66W
Ward M-20-19HN
Plan #2 (6-14-16)
12:32, June 15 2016

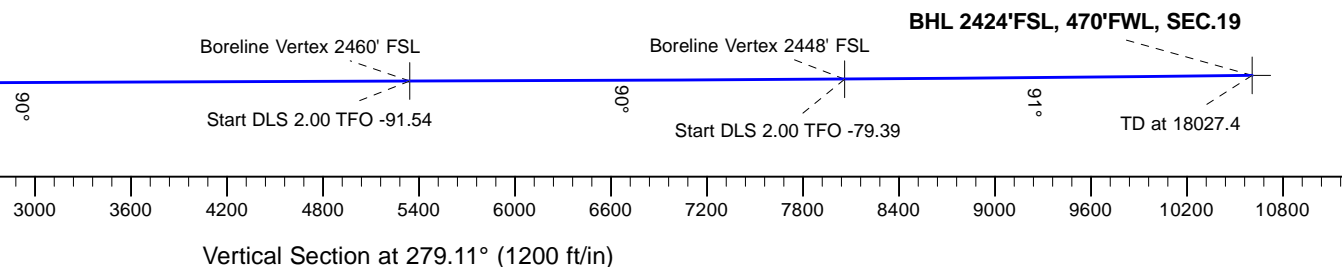
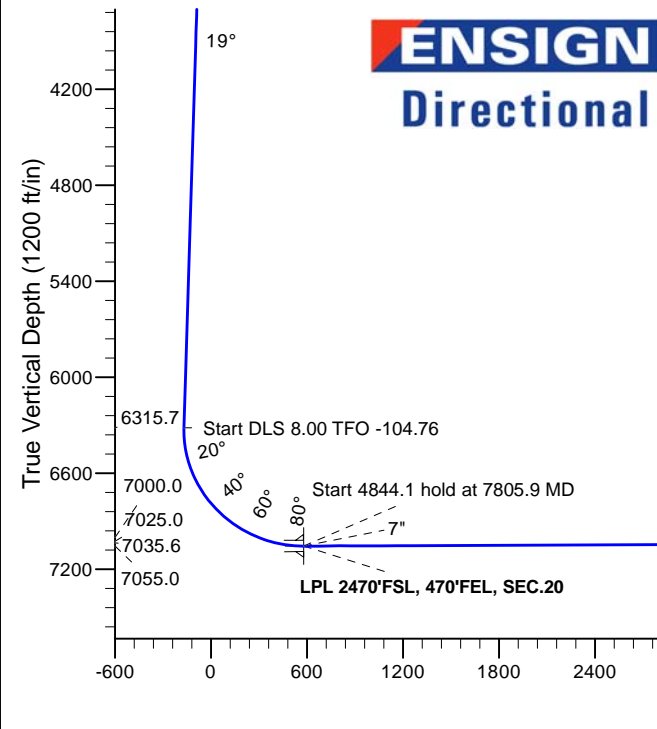
ANNOTATIONS

TVD	MD	Annotation
200.0	200.0	KOP - Start Build 1.50
6315.7	6615.6	Start DLS 8.00 TFO -104.76
7055.0	7805.9	Start 4844.1 hold at 7805.9 MD
7035.6	12650.0	Start DLS 2.00 TFO -91.54
7025.0	15417.8	Start DLS 2.00 TFO -79.39
7000.0	18027.4	TD at 18027.4



SECTION DETAILS

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	200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0	
3	1458.2	18.87	14.27	1435.6	199.0	50.6	1.50	14.27	-18.5	
4	6615.6	18.87	14.27	6315.7	1815.8	462.0	0.00	0.00	-168.6	
5	7805.9	90.23	268.64	7055.0	2043.1	-259.9	8.00	-104.76	580.1	LPL 2470'FSL, 470'FEL, SEC.20
6	12650.0	90.23	268.64	7035.6	1927.9	-5102.6	0.00	0.00	5343.5	Boreline Vertex 2460' FSL
7	12671.5	90.22	268.21	7035.5	1927.3	-5124.0	2.00	-91.54	5364.6	
8	15417.8	90.22	268.21	7025.0	1841.4	-7869.0	0.00	0.00	8061.3	Boreline Vertex 2448' FSL
9	15509.1	90.55	266.41	7024.4	1837.1	-7960.2	2.00	-79.39	8150.7	
10	18027.4	90.55	266.41	7000.0	1679.5	-10473.5	0.00	0.00	10607.3	BHL 2424'FSL, 470'FWL, SEC.19





Bayswater Exploration & Production, LLC

SEC.20-T6N-R66W

Ward 20-M Pad Sec. 20-T6N-R66W

Ward M-20-19HN

Wellbore #1

Plan: Plan #2 (6-14-16)

Standard Planning Report

15 June, 2016



BAYSWATER
EXPLORATION & PRODUCTION, LLC

Database:	US_EDM	Local Co-ordinate Reference:	Well Ward M-20-19HN
Company:	Bayswater Exploration & Production, LLC	TVD Reference:	WELL @ 4752.0ft (RKB - 23')
Project:	SEC.20-T6N-R66W	MD Reference:	WELL @ 4752.0ft (RKB - 23')
Site:	Ward 20-M Pad Sec. 20-T6N-R66W	North Reference:	True
Well:	Ward M-20-19HN	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (6-14-16)		

Project	SEC.20-T6N-R66W, Weld County, Colorado		
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		Ward 20-M Pad Sec. 20-T6N-R66W			
Site Position:		Northing:	1,413,957.04 usft	Latitude:	40.467562
From:	Lat/Long	Easting:	3,196,665.10 usft	Longitude:	-104.793156
Position Uncertainty:	0.0 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.46

Well	Ward M-20-19HN					
Well Position	+N/-S	0.0 ft	Northing:	1,413,957.03 usft	Latitude:	40.467562
	+E/-W	0.0 ft	Easting:	3,196,665.10 usft	Longitude:	-104.793156
Position Uncertainty		0.0 ft	Wellhead Elevation:	0.0 ft	Ground Level:	4,729.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	6/14/2016	8.21	66.93	52,638

Design	Plan #2 (6-14-16)			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	279.11

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	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	0.00	0.00	0.00	0.00	
1,458.2	18.87	14.27	1,435.6	199.0	50.6	1.50	1.50	0.00	14.27	
6,615.6	18.87	14.27	6,315.7	1,815.8	462.0	0.00	0.00	0.00	0.00	
7,805.9	90.23	268.64	7,055.0	2,043.1	-259.9	8.00	6.00	-8.88	-104.76	LPL 2470'FSL, 470'FE
12,650.0	90.23	268.64	7,035.6	1,927.9	-5,102.6	0.00	0.00	0.00	0.00	Boreline Vertex 2460'
12,671.5	90.22	268.21	7,035.5	1,927.3	-5,124.0	2.00	-0.05	-2.00	-91.54	
15,417.8	90.22	268.21	7,025.0	1,841.4	-7,869.0	0.00	0.00	0.00	0.00	Boreline Vertex 2448'
15,509.1	90.55	266.41	7,024.4	1,837.1	-7,960.2	2.00	0.37	-1.97	-79.39	
18,027.4	90.55	266.41	7,000.0	1,679.5	-10,473.5	0.00	0.00	0.00	0.00	BHL 2424'FSL, 470'F

Database:	US_EDM	Local Co-ordinate Reference:	Well Ward M-20-19HN
Company:	Bayswater Exploration & Production, LLC	TVD Reference:	WELL @ 4752.0ft (RKB - 23')
Project:	SEC.20-T6N-R66W	MD Reference:	WELL @ 4752.0ft (RKB - 23')
Site:	Ward 20-M Pad Sec. 20-T6N-R66W	North Reference:	True
Well:	Ward M-20-19HN	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (6-14-16)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	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
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP - Start Build 1.50									
300.0	1.50	14.27	300.0	1.3	0.3	-0.1	1.50	1.50	0.00
400.0	3.00	14.27	399.9	5.1	1.3	-0.5	1.50	1.50	0.00
500.0	4.50	14.27	499.7	11.4	2.9	-1.1	1.50	1.50	0.00
600.0	6.00	14.27	599.3	20.3	5.2	-1.9	1.50	1.50	0.00
700.0	7.50	14.27	698.6	31.7	8.1	-2.9	1.50	1.50	0.00
800.0	9.00	14.27	797.5	45.6	11.6	-4.2	1.50	1.50	0.00
900.0	10.50	14.27	896.1	62.0	15.8	-5.8	1.50	1.50	0.00
1,000.0	12.00	14.27	994.2	80.9	20.6	-7.5	1.50	1.50	0.00
1,100.0	13.50	14.27	1,091.7	102.3	26.0	-9.5	1.50	1.50	0.00
1,200.0	15.00	14.27	1,188.6	126.1	32.1	-11.7	1.50	1.50	0.00
1,300.0	16.50	14.27	1,284.9	152.4	38.8	-14.2	1.50	1.50	0.00
1,400.0	18.00	14.27	1,380.4	181.2	46.1	-16.8	1.50	1.50	0.00
1,458.2	18.87	14.27	1,435.6	199.0	50.6	-18.5	1.50	1.50	0.00
1,500.0	18.87	14.27	1,475.1	212.1	54.0	-19.7	0.00	0.00	0.00
1,600.0	18.87	14.27	1,569.7	243.5	61.9	-22.6	0.00	0.00	0.00
1,700.0	18.87	14.27	1,664.4	274.8	69.9	-25.5	0.00	0.00	0.00
1,800.0	18.87	14.27	1,759.0	306.2	77.9	-28.4	0.00	0.00	0.00
1,900.0	18.87	14.27	1,853.6	337.5	85.9	-31.3	0.00	0.00	0.00
2,000.0	18.87	14.27	1,948.2	368.9	93.8	-34.3	0.00	0.00	0.00
2,100.0	18.87	14.27	2,042.9	400.2	101.8	-37.2	0.00	0.00	0.00
2,200.0	18.87	14.27	2,137.5	431.6	109.8	-40.1	0.00	0.00	0.00
2,300.0	18.87	14.27	2,232.1	462.9	117.8	-43.0	0.00	0.00	0.00
2,400.0	18.87	14.27	2,326.7	494.3	125.7	-45.9	0.00	0.00	0.00
2,500.0	18.87	14.27	2,421.4	525.6	133.7	-48.8	0.00	0.00	0.00
2,600.0	18.87	14.27	2,516.0	557.0	141.7	-51.7	0.00	0.00	0.00
2,700.0	18.87	14.27	2,610.6	588.3	149.7	-54.6	0.00	0.00	0.00
2,800.0	18.87	14.27	2,705.2	619.6	157.6	-57.5	0.00	0.00	0.00
2,900.0	18.87	14.27	2,799.9	651.0	165.6	-60.5	0.00	0.00	0.00
3,000.0	18.87	14.27	2,894.5	682.3	173.6	-63.4	0.00	0.00	0.00
3,100.0	18.87	14.27	2,989.1	713.7	181.6	-66.3	0.00	0.00	0.00
3,200.0	18.87	14.27	3,083.7	745.0	189.5	-69.2	0.00	0.00	0.00
3,300.0	18.87	14.27	3,178.4	776.4	197.5	-72.1	0.00	0.00	0.00
3,400.0	18.87	14.27	3,273.0	807.7	205.5	-75.0	0.00	0.00	0.00
3,500.0	18.87	14.27	3,367.6	839.1	213.5	-77.9	0.00	0.00	0.00
3,600.0	18.87	14.27	3,462.2	870.4	221.4	-80.8	0.00	0.00	0.00
3,700.0	18.87	14.27	3,556.8	901.8	229.4	-83.7	0.00	0.00	0.00
3,800.0	18.87	14.27	3,651.5	933.1	237.4	-86.7	0.00	0.00	0.00
3,900.0	18.87	14.27	3,746.1	964.5	245.4	-89.6	0.00	0.00	0.00
4,000.0	18.87	14.27	3,840.7	995.8	253.3	-92.5	0.00	0.00	0.00
4,100.0	18.87	14.27	3,935.3	1,027.2	261.3	-95.4	0.00	0.00	0.00
4,200.0	18.87	14.27	4,030.0	1,058.5	269.3	-98.3	0.00	0.00	0.00
4,300.0	18.87	14.27	4,124.6	1,089.9	277.3	-101.2	0.00	0.00	0.00
4,400.0	18.87	14.27	4,219.2	1,121.2	285.3	-104.1	0.00	0.00	0.00
4,500.0	18.87	14.27	4,313.8	1,152.6	293.2	-107.0	0.00	0.00	0.00
4,600.0	18.87	14.27	4,408.5	1,183.9	301.2	-109.9	0.00	0.00	0.00
4,700.0	18.87	14.27	4,503.1	1,215.3	309.2	-112.9	0.00	0.00	0.00
4,800.0	18.87	14.27	4,597.7	1,246.6	317.2	-115.8	0.00	0.00	0.00
4,900.0	18.87	14.27	4,692.3	1,278.0	325.1	-118.7	0.00	0.00	0.00
5,000.0	18.87	14.27	4,787.0	1,309.3	333.1	-121.6	0.00	0.00	0.00
5,100.0	18.87	14.27	4,881.6	1,340.7	341.1	-124.5	0.00	0.00	0.00

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Site:	Ward 20-M Pad Sec. 20-T6N-R66W	North Reference:	True
Well:	Ward M-20-19HN	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (6-14-16)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,200.0	18.87	14.27	4,976.2	1,372.0	349.1	-127.4	0.00	0.00	0.00
5,300.0	18.87	14.27	5,070.8	1,403.4	357.0	-130.3	0.00	0.00	0.00
5,400.0	18.87	14.27	5,165.5	1,434.7	365.0	-133.2	0.00	0.00	0.00
5,500.0	18.87	14.27	5,260.1	1,466.1	373.0	-136.1	0.00	0.00	0.00
5,600.0	18.87	14.27	5,354.7	1,497.4	381.0	-139.1	0.00	0.00	0.00
5,700.0	18.87	14.27	5,449.3	1,528.8	388.9	-142.0	0.00	0.00	0.00
5,800.0	18.87	14.27	5,543.9	1,560.1	396.9	-144.9	0.00	0.00	0.00
5,900.0	18.87	14.27	5,638.6	1,591.5	404.9	-147.8	0.00	0.00	0.00
6,000.0	18.87	14.27	5,733.2	1,622.8	412.9	-150.7	0.00	0.00	0.00
6,100.0	18.87	14.27	5,827.8	1,654.1	420.8	-153.6	0.00	0.00	0.00
6,200.0	18.87	14.27	5,922.4	1,685.5	428.8	-156.5	0.00	0.00	0.00
6,300.0	18.87	14.27	6,017.1	1,716.8	436.8	-159.4	0.00	0.00	0.00
6,400.0	18.87	14.27	6,111.7	1,748.2	444.8	-162.3	0.00	0.00	0.00
6,500.0	18.87	14.27	6,206.3	1,779.5	452.7	-165.3	0.00	0.00	0.00
6,600.0	18.87	14.27	6,300.9	1,810.9	460.7	-168.2	0.00	0.00	0.00
6,615.6	18.87	14.27	6,315.7	1,815.8	462.0	-168.6	0.00	0.00	0.00
Start DLS 8.00 TFO -104.76									
6,700.0	18.31	353.06	6,395.8	1,842.2	463.7	-166.2	8.00	-0.67	-25.13
6,800.0	20.60	329.87	6,490.2	1,873.1	453.0	-150.7	8.00	2.29	-23.19
6,900.0	25.25	313.01	6,582.4	1,902.9	428.5	-121.8	8.00	4.64	-16.86
7,000.0	31.20	301.65	6,670.5	1,931.1	390.8	-80.1	8.00	5.96	-11.36
7,100.0	37.86	293.78	6,752.9	1,957.1	340.6	-26.4	8.00	6.65	-7.87
7,200.0	44.90	288.01	6,827.9	1,980.4	278.9	38.2	8.00	7.04	-5.77
7,300.0	52.16	283.53	6,894.1	2,000.6	206.8	112.6	8.00	7.27	-4.48
7,400.0	59.57	279.87	6,950.2	2,017.2	125.8	195.2	8.00	7.40	-3.67
7,500.0	67.06	276.73	6,995.1	2,030.0	37.4	284.5	8.00	7.49	-3.14
7,600.0	74.61	273.91	7,027.9	2,038.7	-56.5	378.6	8.00	7.55	-2.81
7,700.0	82.19	271.30	7,048.0	2,043.2	-154.3	475.9	8.00	7.58	-2.61
7,800.0	89.78	268.78	7,055.0	2,043.2	-254.0	574.3	8.00	7.60	-2.52
7,805.9	90.23	268.64	7,055.0	2,043.1	-259.9	580.1	7.96	7.56	-2.49
Start 4844.1 hold at 7805.9 MD									
7,900.0	90.23	268.64	7,054.6	2,040.9	-354.0	672.6	0.00	0.00	0.00
8,000.0	90.23	268.64	7,054.2	2,038.5	-453.9	771.0	0.00	0.00	0.00
8,100.0	90.23	268.64	7,053.8	2,036.1	-553.9	869.3	0.00	0.00	0.00
8,200.0	90.23	268.64	7,053.4	2,033.7	-653.9	967.6	0.00	0.00	0.00
8,300.0	90.23	268.64	7,053.0	2,031.3	-753.8	1,066.0	0.00	0.00	0.00
8,400.0	90.23	268.64	7,052.6	2,029.0	-853.8	1,164.3	0.00	0.00	0.00
8,500.0	90.23	268.64	7,052.2	2,026.6	-953.8	1,262.6	0.00	0.00	0.00
8,600.0	90.23	268.64	7,051.8	2,024.2	-1,053.8	1,361.0	0.00	0.00	0.00
8,700.0	90.23	268.64	7,051.4	2,021.8	-1,153.7	1,459.3	0.00	0.00	0.00
8,800.0	90.23	268.64	7,051.0	2,019.5	-1,253.7	1,557.6	0.00	0.00	0.00
8,900.0	90.23	268.64	7,050.6	2,017.1	-1,353.7	1,656.0	0.00	0.00	0.00
9,000.0	90.23	268.64	7,050.2	2,014.7	-1,453.6	1,754.3	0.00	0.00	0.00
9,100.0	90.23	268.64	7,049.8	2,012.3	-1,553.6	1,852.6	0.00	0.00	0.00
9,200.0	90.23	268.64	7,049.4	2,009.9	-1,653.6	1,951.0	0.00	0.00	0.00
9,300.0	90.23	268.64	7,049.0	2,007.6	-1,753.6	2,049.3	0.00	0.00	0.00
9,400.0	90.23	268.64	7,048.6	2,005.2	-1,853.5	2,147.6	0.00	0.00	0.00
9,500.0	90.23	268.64	7,048.2	2,002.8	-1,953.5	2,246.0	0.00	0.00	0.00
9,600.0	90.23	268.64	7,047.8	2,000.4	-2,053.5	2,344.3	0.00	0.00	0.00
9,700.0	90.23	268.64	7,047.4	1,998.0	-2,153.4	2,442.6	0.00	0.00	0.00
9,800.0	90.23	268.64	7,047.0	1,995.7	-2,253.4	2,541.0	0.00	0.00	0.00
9,900.0	90.23	268.64	7,046.6	1,993.3	-2,353.4	2,639.3	0.00	0.00	0.00
10,000.0	90.23	268.64	7,046.2	1,990.9	-2,453.3	2,737.6	0.00	0.00	0.00
10,100.0	90.23	268.64	7,045.8	1,988.5	-2,553.3	2,836.0	0.00	0.00	0.00

Database:	US_EDM	Local Co-ordinate Reference:	Well Ward M-20-19HN
Company:	Bayswater Exploration & Production, LLC	TVD Reference:	WELL @ 4752.0ft (RKB - 23')
Project:	SEC.20-T6N-R66W	MD Reference:	WELL @ 4752.0ft (RKB - 23')
Site:	Ward 20-M Pad Sec. 20-T6N-R66W	North Reference:	True
Well:	Ward M-20-19HN	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (6-14-16)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,200.0	90.23	268.64	7,045.4	1,986.2	-2,653.3	2,934.3	0.00	0.00	0.00
10,300.0	90.23	268.64	7,045.0	1,983.8	-2,753.3	3,032.6	0.00	0.00	0.00
10,400.0	90.23	268.64	7,044.6	1,981.4	-2,853.2	3,131.0	0.00	0.00	0.00
10,500.0	90.23	268.64	7,044.2	1,979.0	-2,953.2	3,229.3	0.00	0.00	0.00
10,600.0	90.23	268.64	7,043.8	1,976.6	-3,053.2	3,327.6	0.00	0.00	0.00
10,700.0	90.23	268.64	7,043.4	1,974.3	-3,153.1	3,426.0	0.00	0.00	0.00
10,800.0	90.23	268.64	7,043.0	1,971.9	-3,253.1	3,524.3	0.00	0.00	0.00
10,900.0	90.23	268.64	7,042.6	1,969.5	-3,353.1	3,622.6	0.00	0.00	0.00
11,000.0	90.23	268.64	7,042.2	1,967.1	-3,453.1	3,721.0	0.00	0.00	0.00
11,100.0	90.23	268.64	7,041.8	1,964.8	-3,553.0	3,819.3	0.00	0.00	0.00
11,200.0	90.23	268.64	7,041.4	1,962.4	-3,653.0	3,917.6	0.00	0.00	0.00
11,300.0	90.23	268.64	7,041.0	1,960.0	-3,753.0	4,016.0	0.00	0.00	0.00
11,400.0	90.23	268.64	7,040.6	1,957.6	-3,852.9	4,114.3	0.00	0.00	0.00
11,500.0	90.23	268.64	7,040.2	1,955.2	-3,952.9	4,212.6	0.00	0.00	0.00
11,600.0	90.23	268.64	7,039.8	1,952.9	-4,052.9	4,311.0	0.00	0.00	0.00
11,700.0	90.23	268.64	7,039.4	1,950.5	-4,152.9	4,409.3	0.00	0.00	0.00
11,800.0	90.23	268.64	7,039.0	1,948.1	-4,252.8	4,507.6	0.00	0.00	0.00
11,900.0	90.23	268.64	7,038.6	1,945.7	-4,352.8	4,606.0	0.00	0.00	0.00
12,000.0	90.23	268.64	7,038.2	1,943.4	-4,452.8	4,704.3	0.00	0.00	0.00
12,100.0	90.23	268.64	7,037.8	1,941.0	-4,552.7	4,802.6	0.00	0.00	0.00
12,200.0	90.23	268.64	7,037.4	1,938.6	-4,652.7	4,901.0	0.00	0.00	0.00
12,300.0	90.23	268.64	7,037.0	1,936.2	-4,752.7	4,999.3	0.00	0.00	0.00
12,400.0	90.23	268.64	7,036.6	1,933.8	-4,852.6	5,097.6	0.00	0.00	0.00
12,500.0	90.23	268.64	7,036.2	1,931.5	-4,952.6	5,196.0	0.00	0.00	0.00
12,600.0	90.23	268.64	7,035.8	1,929.1	-5,052.6	5,294.3	0.00	0.00	0.00
12,650.0	90.23	268.64	7,035.6	1,927.9	-5,102.6	5,343.5	0.00	0.00	0.00
Start DLS 2.00 TFO -91.54									
12,671.5	90.22	268.21	7,035.5	1,927.3	-5,124.0	5,364.6	2.00	-0.05	-2.00
12,700.0	90.22	268.21	7,035.4	1,926.4	-5,152.6	5,392.6	0.00	0.00	0.00
12,800.0	90.22	268.21	7,035.0	1,923.3	-5,252.5	5,490.8	0.00	0.00	0.00
12,900.0	90.22	268.21	7,034.6	1,920.2	-5,352.5	5,589.0	0.00	0.00	0.00
13,000.0	90.22	268.21	7,034.2	1,917.0	-5,452.4	5,687.2	0.00	0.00	0.00
13,100.0	90.22	268.21	7,033.8	1,913.9	-5,552.4	5,785.4	0.00	0.00	0.00
13,200.0	90.22	268.21	7,033.5	1,910.8	-5,652.3	5,883.6	0.00	0.00	0.00
13,300.0	90.22	268.21	7,033.1	1,907.6	-5,752.3	5,981.7	0.00	0.00	0.00
13,400.0	90.22	268.21	7,032.7	1,904.5	-5,852.2	6,079.9	0.00	0.00	0.00
13,500.0	90.22	268.21	7,032.3	1,901.4	-5,952.2	6,178.1	0.00	0.00	0.00
13,600.0	90.22	268.21	7,031.9	1,898.3	-6,052.1	6,276.3	0.00	0.00	0.00
13,700.0	90.22	268.21	7,031.5	1,895.1	-6,152.1	6,374.5	0.00	0.00	0.00
13,800.0	90.22	268.21	7,031.2	1,892.0	-6,252.0	6,472.7	0.00	0.00	0.00
13,900.0	90.22	268.21	7,030.8	1,888.9	-6,352.0	6,570.9	0.00	0.00	0.00
14,000.0	90.22	268.21	7,030.4	1,885.8	-6,451.9	6,669.1	0.00	0.00	0.00
14,100.0	90.22	268.21	7,030.0	1,882.6	-6,551.9	6,767.3	0.00	0.00	0.00
14,200.0	90.22	268.21	7,029.6	1,879.5	-6,651.8	6,865.5	0.00	0.00	0.00
14,300.0	90.22	268.21	7,029.3	1,876.4	-6,751.8	6,963.7	0.00	0.00	0.00
14,400.0	90.22	268.21	7,028.9	1,873.3	-6,851.7	7,061.9	0.00	0.00	0.00
14,500.0	90.22	268.21	7,028.5	1,870.1	-6,951.7	7,160.1	0.00	0.00	0.00
14,600.0	90.22	268.21	7,028.1	1,867.0	-7,051.6	7,258.3	0.00	0.00	0.00
14,700.0	90.22	268.21	7,027.7	1,863.9	-7,151.6	7,356.5	0.00	0.00	0.00
14,800.0	90.22	268.21	7,027.4	1,860.7	-7,251.5	7,454.7	0.00	0.00	0.00
14,900.0	90.22	268.21	7,027.0	1,857.6	-7,351.5	7,552.9	0.00	0.00	0.00
15,000.0	90.22	268.21	7,026.6	1,854.5	-7,451.4	7,651.0	0.00	0.00	0.00
15,100.0	90.22	268.21	7,026.2	1,851.4	-7,551.4	7,749.2	0.00	0.00	0.00

Database:	US_EDM	Local Co-ordinate Reference:	Well Ward M-20-19HN
Company:	Bayswater Exploration & Production, LLC	TVD Reference:	WELL @ 4752.0ft (RKB - 23')
Project:	SEC.20-T6N-R66W	MD Reference:	WELL @ 4752.0ft (RKB - 23')
Site:	Ward 20-M Pad Sec. 20-T6N-R66W	North Reference:	True
Well:	Ward M-20-19HN	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (6-14-16)		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
15,200.0	90.22	268.21	7,025.8	1,848.2	-7,651.3	7,847.4	0.00	0.00	0.00	
15,300.0	90.22	268.21	7,025.4	1,845.1	-7,751.3	7,945.6	0.00	0.00	0.00	
15,400.0	90.22	268.21	7,025.1	1,842.0	-7,851.2	8,043.8	0.00	0.00	0.00	
15,417.8	90.22	268.21	7,025.0	1,841.4	-7,869.0	8,061.3	0.00	0.00	0.00	
Start DLS 2.00 TFO -79.39										
15,500.0	90.52	266.59	7,024.5	1,837.7	-7,951.1	8,141.8	2.00	0.37	-1.97	
15,509.1	90.55	266.41	7,024.4	1,837.1	-7,960.2	8,150.7	2.00	0.37	-1.97	
15,600.0	90.55	266.41	7,023.5	1,831.5	-8,050.9	8,239.3	0.00	0.00	0.00	
15,700.0	90.55	266.41	7,022.5	1,825.2	-8,150.7	8,336.9	0.00	0.00	0.00	
15,800.0	90.55	266.41	7,021.6	1,818.9	-8,250.5	8,434.4	0.00	0.00	0.00	
15,900.0	90.55	266.41	7,020.6	1,812.7	-8,350.3	8,532.0	0.00	0.00	0.00	
16,000.0	90.55	266.41	7,019.6	1,806.4	-8,450.1	8,629.5	0.00	0.00	0.00	
16,100.0	90.55	266.41	7,018.7	1,800.2	-8,549.9	8,727.1	0.00	0.00	0.00	
16,200.0	90.55	266.41	7,017.7	1,793.9	-8,649.7	8,824.6	0.00	0.00	0.00	
16,300.0	90.55	266.41	7,016.7	1,787.7	-8,749.5	8,922.2	0.00	0.00	0.00	
16,400.0	90.55	266.41	7,015.8	1,781.4	-8,849.3	9,019.7	0.00	0.00	0.00	
16,500.0	90.55	266.41	7,014.8	1,775.1	-8,949.1	9,117.3	0.00	0.00	0.00	
16,600.0	90.55	266.41	7,013.8	1,768.9	-9,048.9	9,214.8	0.00	0.00	0.00	
16,700.0	90.55	266.41	7,012.9	1,762.6	-9,148.7	9,312.4	0.00	0.00	0.00	
16,800.0	90.55	266.41	7,011.9	1,756.4	-9,248.5	9,409.9	0.00	0.00	0.00	
16,900.0	90.55	266.41	7,010.9	1,750.1	-9,348.3	9,507.5	0.00	0.00	0.00	
17,000.0	90.55	266.41	7,009.9	1,743.8	-9,448.1	9,605.0	0.00	0.00	0.00	
17,100.0	90.55	266.41	7,009.0	1,737.6	-9,547.9	9,702.6	0.00	0.00	0.00	
17,200.0	90.55	266.41	7,008.0	1,731.3	-9,647.7	9,800.1	0.00	0.00	0.00	
17,300.0	90.55	266.41	7,007.0	1,725.1	-9,747.5	9,897.7	0.00	0.00	0.00	
17,400.0	90.55	266.41	7,006.1	1,718.8	-9,847.3	9,995.2	0.00	0.00	0.00	
17,500.0	90.55	266.41	7,005.1	1,712.6	-9,947.1	10,092.8	0.00	0.00	0.00	
17,600.0	90.55	266.41	7,004.1	1,706.3	-10,046.9	10,190.3	0.00	0.00	0.00	
17,700.0	90.55	266.41	7,003.2	1,700.0	-10,146.7	10,287.9	0.00	0.00	0.00	
17,800.0	90.55	266.41	7,002.2	1,693.8	-10,246.5	10,385.4	0.00	0.00	0.00	
17,900.0	90.55	266.41	7,001.2	1,687.5	-10,346.3	10,483.0	0.00	0.00	0.00	
18,000.0	90.55	266.41	7,000.3	1,681.3	-10,446.1	10,580.5	0.00	0.00	0.00	
18,027.4	90.55	266.41	7,000.0	1,679.6	-10,473.4	10,607.3	0.00	0.00	0.00	
TD at 18027.4										

Database:	US_EDM	Local Co-ordinate Reference:	Well Ward M-20-19HN
Company:	Bayswater Exploration & Production, LLC	TVD Reference:	WELL @ 4752.0ft (RKB - 23')
Project:	SEC.20-T6N-R66W	MD Reference:	WELL @ 4752.0ft (RKB - 23')
Site:	Ward 20-M Pad Sec. 20-T6N-R66W	North Reference:	True
Well:	Ward M-20-19HN	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (6-14-16)		

Design Targets										
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
SHL 424'FSL, 213'FEL, : - plan hits target center - Point	0.00	0.00	1.0	0.0	0.0	1,413,957.04	3,196,665.10	40.467562	-104.793156	
BHL 2424'FSL, 470'FWL - plan hits target center - Point	0.00	0.00	7,000.0	1,679.5	-10,473.5	1,415,552.98	3,186,178.96	40.472166	-104.830800	
Boreline Vertex 2448' F5 - plan hits target center - Point	0.00	0.00	7,025.0	1,841.4	-7,869.0	1,415,735.61	3,188,782.00	40.472613	-104.821439	
Boreline Vertex 2460' F5 - plan misses target center by 0.6ft at 12650.0ft MD (7035.6 TVD, 1927.9 N, -5102.6 E) - Point	0.00	0.00	7,035.0	1,927.9	-5,102.6	1,415,844.11	3,191,547.50	40.472852	-104.811496	
LPL 2470'FSL, 470'FEL, - plan hits target center - Point	0.00	0.00	7,055.0	2,043.1	-259.9	1,415,997.91	3,196,388.98	40.473170	-104.794090	

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
7,805.9	7,055.0	7"	7	8-3/4	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
200.0	200.0	0.0	0.0	KOP - Start Build 1.50	
6,615.6	6,315.7	199.0	50.6	Start DLS 8.00 TFO -104.76	
7,805.9	7,055.0	1,815.8	462.0	Start 4844.1 hold at 7805.9 MD	
12,650.0	7,035.6	2,043.1	-259.9	Start DLS 2.00 TFO -91.54	
15,417.8	7,025.0	1,927.9	-5,102.6	Start DLS 2.00 TFO -79.39	
18,027.4	7,000.0	1,927.3	-5,124.0	TD at 18027.4	