



Bayswater Exploration & Production, LLC

SEC.12-T6N-R65W

Holton 12-C Pad Sec.12-T6N-R65W

Holton J-12HC

Wellbore #1

Survey: Survey #1

Standard Survey Report

22 July, 2014



BAYSWATER
EXPLORATION & PRODUCTION, LLC

Company:	Bayswater Exploration & Production, LLC	Local Co-ordinate Reference:	Well Holton J-12HC
Project:	SEC.12-T6N-R65W	TVD Reference:	WELL @ 4740.5ft (RKB - 22.5')
Site:	Holton 12-C Pad Sec.12-T6N-R65W	MD Reference:	WELL @ 4740.5ft (RKB - 22.5')
Well:	Holton J-12HC	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	SEC.12-T6N-R65W, 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	Holton 12-C Pad Sec.12-T6N-R65W		
Site Position:		Northing:	1,428,505.94 ft
From:	Lat/Long	Easting:	3,247,902.63 ft
Position Uncertainty:	0.0 ft	Slot Radius:	"
		Latitude:	40.506229
		Longitude:	-104.608486
		Grid Convergence:	0.58 °

Well	Holton J-12HC		
Well Position	+N/-S	0.0 ft	Northing: 1,428,504.83 ft
	+E/-W	0.0 ft	Easting: 3,247,974.39 ft
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft
		Latitude:	40.506224
		Longitude:	-104.608228
		Ground Level:	4,718.0 ft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination (°)
	IGRF2010	7/16/2014	8.37
			Dip Angle (°) 67.05
			Field Strength (nT) 52,879

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)
	0.0	0.0	0.0
			Direction (°) 185.54

Survey Program	Date 7/22/2014		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name
166.0	11,903.0	Survey #1 (Wellbore #1)	MWD
			Description 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
1.0	0.00	345.20	1.0	0.0	0.0	0.0	0.30	0.30	0.00
SHL 555'FNL, 1833'FEL									
166.0	0.50	345.20	166.0	0.7	-0.2	-0.7	0.30	0.30	0.00
258.0	0.40	349.80	258.0	1.4	-0.3	-1.4	0.12	-0.11	5.00
350.0	0.40	355.00	350.0	2.0	-0.4	-2.0	0.04	0.00	5.65
442.0	0.40	335.90	442.0	2.7	-0.6	-2.6	0.14	0.00	-20.76
534.0	0.50	344.10	534.0	3.3	-0.8	-3.2	0.13	0.11	8.91
626.0	0.80	334.80	626.0	4.3	-1.2	-4.2	0.34	0.33	-10.11
708.0	1.00	354.00	708.0	5.5	-1.5	-5.4	0.44	0.24	23.41
829.0	1.60	9.30	828.9	8.2	-1.4	-8.1	0.57	0.50	12.64
925.0	1.60	17.70	924.9	10.8	-0.7	-10.7	0.24	0.00	8.75
1,020.0	2.70	338.70	1,019.8	14.2	-1.2	-14.0	1.86	1.16	-41.05

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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)
1,115.0	4.50	328.20	1,114.6	19.4	-3.9	-19.0	2.01	1.89	-11.05
1,210.0	5.30	330.80	1,209.3	26.4	-8.0	-25.5	0.87	0.84	2.74
1,305.0	5.00	327.80	1,303.9	33.8	-12.4	-32.4	0.42	-0.32	-3.16
1,398.0	5.20	351.70	1,396.6	41.4	-15.2	-39.7	2.28	0.22	25.70
1,490.0	7.70	348.90	1,488.0	51.6	-16.9	-49.7	2.74	2.72	-3.04
1,582.0	9.10	345.60	1,579.0	64.6	-19.9	-62.4	1.61	1.52	-3.59
1,674.0	10.50	344.00	1,669.6	79.8	-24.1	-77.1	1.55	1.52	-1.74
1,766.0	9.40	340.80	1,760.3	94.9	-28.8	-91.7	1.34	-1.20	-3.48
1,858.0	9.80	341.30	1,851.0	109.4	-33.8	-105.6	0.44	0.43	0.54
1,951.0	9.10	335.00	1,942.7	123.6	-39.5	-119.2	1.34	-0.75	-6.77
2,043.0	8.60	327.60	2,033.6	136.0	-46.2	-130.9	1.35	-0.54	-8.04
2,135.0	8.70	327.80	2,124.6	147.7	-53.6	-141.8	0.11	0.11	0.22
2,227.0	8.70	332.20	2,215.5	159.7	-60.6	-153.1	0.72	0.00	4.78
2,323.0	9.80	339.10	2,310.3	173.8	-66.9	-166.5	1.63	1.15	7.19
2,418.0	10.00	337.80	2,403.8	189.0	-72.9	-181.1	0.32	0.21	-1.37
2,513.0	10.60	350.10	2,497.3	205.2	-77.5	-196.8	2.39	0.63	12.95
2,608.0	10.00	345.20	2,590.8	221.8	-81.1	-212.9	1.12	-0.63	-5.16
2,703.0	9.20	344.70	2,684.5	237.1	-85.2	-227.8	0.85	-0.84	-0.53
2,798.0	8.80	344.30	2,778.3	251.4	-89.2	-241.6	0.43	-0.42	-0.42
2,893.0	10.70	348.20	2,871.9	267.0	-93.0	-256.8	2.12	2.00	4.11
2,989.0	10.30	344.30	2,966.3	284.0	-97.1	-273.3	0.85	-0.42	-4.06
3,084.0	8.70	341.20	3,060.0	299.0	-101.7	-287.8	1.77	-1.68	-3.26
3,179.0	10.00	338.40	3,153.7	313.5	-107.1	-301.7	1.45	1.37	-2.95
3,274.0	9.80	340.60	3,247.3	328.8	-112.8	-316.4	0.45	-0.21	2.32
3,369.0	8.60	342.20	3,341.1	343.2	-117.6	-330.2	1.29	-1.26	1.68
3,464.0	8.30	346.60	3,435.1	356.6	-121.4	-343.2	0.75	-0.32	4.63
3,561.0	9.60	339.90	3,530.9	371.0	-125.8	-357.1	1.72	1.34	-6.91
3,656.0	8.40	339.60	3,624.7	385.0	-130.9	-370.5	1.26	-1.26	-0.32
3,751.0	9.80	346.10	3,718.5	399.3	-135.3	-384.4	1.83	1.47	6.84
3,846.0	11.50	351.20	3,811.9	416.5	-138.7	-401.2	2.04	1.79	5.37
3,942.0	13.50	350.30	3,905.6	437.0	-142.1	-421.3	2.09	2.08	-0.94
4,037.0	13.90	343.60	3,997.9	458.9	-147.1	-442.6	1.72	0.42	-7.05
4,132.0	12.30	339.80	4,090.4	479.3	-153.9	-462.3	1.91	-1.68	-4.00
4,227.0	11.50	337.10	4,183.4	497.6	-161.0	-479.7	1.03	-0.84	-2.84
4,322.0	10.80	332.70	4,276.6	514.2	-168.8	-495.5	1.16	-0.74	-4.63
4,418.0	9.80	328.30	4,371.1	529.1	-177.2	-509.6	1.32	-1.04	-4.58
4,513.0	9.20	323.90	4,464.8	542.2	-185.9	-521.7	0.99	-0.63	-4.63
4,608.0	9.30	334.10	4,558.5	555.2	-193.8	-533.9	1.73	0.11	10.74
4,704.0	8.40	330.10	4,653.4	568.3	-200.7	-546.2	1.14	-0.94	-4.17
4,799.0	8.80	328.00	4,747.3	580.4	-208.0	-557.7	0.54	0.42	-2.21
4,894.0	10.00	332.70	4,841.0	593.9	-215.6	-570.3	1.50	1.26	4.95
4,989.0	9.50	338.00	4,934.7	608.5	-222.3	-584.2	1.08	-0.53	5.58
5,085.0	8.90	346.60	5,029.4	623.1	-227.0	-598.3	1.56	-0.63	8.96
5,180.0	11.30	345.60	5,123.0	639.3	-231.0	-614.0	2.53	2.53	-1.05
5,275.0	9.10	340.80	5,216.5	655.4	-235.8	-629.6	2.48	-2.32	-5.05
5,371.0	7.70	338.90	5,311.4	668.5	-240.6	-642.2	1.49	-1.46	-1.98
5,466.0	7.80	339.90	5,405.6	680.5	-245.1	-653.7	0.18	0.11	1.05
5,561.0	8.30	341.70	5,499.6	693.1	-249.5	-665.8	0.59	0.53	1.89
5,656.0	10.20	342.20	5,593.4	707.6	-254.2	-679.8	2.00	2.00	0.53
5,751.0	8.60	351.50	5,687.1	722.7	-257.9	-694.4	2.32	-1.68	9.79
5,846.0	9.80	340.80	5,780.9	737.3	-261.6	-708.6	2.19	1.26	-11.26
5,941.0	10.60	334.80	5,874.4	752.9	-267.9	-723.5	1.40	0.84	-6.32
6,037.0	9.20	331.30	5,969.0	767.6	-275.4	-737.4	1.59	-1.46	-3.65
6,132.0	9.40	332.20	6,062.7	781.1	-282.7	-750.2	0.26	0.21	0.95

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6,227.0	8.90	334.50	6,156.5	794.6	-289.4	-763.0	0.65	-0.53	2.42
6,274.0	7.70	332.20	6,203.0	800.7	-292.5	-768.7	2.65	-2.55	-4.89
6,322.0	7.30	329.60	6,250.6	806.1	-295.5	-773.9	1.09	-0.83	-5.42
6,369.0	5.20	324.30	6,297.3	810.4	-298.3	-777.9	4.63	-4.47	-11.28
6,418.0	4.00	259.80	6,346.2	811.9	-301.2	-779.1	10.22	-2.45	-131.63
6,465.0	8.40	234.00	6,392.9	809.6	-305.6	-776.4	10.86	9.36	-54.89
6,513.0	11.60	228.50	6,440.2	804.4	-312.1	-770.5	6.95	6.67	-11.46
6,560.0	12.50	204.20	6,486.2	796.6	-317.7	-762.2	10.88	1.91	-51.70
6,608.0	16.20	193.70	6,532.7	785.4	-321.4	-750.7	9.39	7.71	-21.88
6,655.0	18.40	191.70	6,577.5	771.7	-324.5	-736.8	4.85	4.68	-4.26
6,703.0	19.60	191.40	6,622.9	756.4	-327.6	-721.3	2.51	2.50	-0.63
6,750.0	22.90	189.50	6,666.7	739.7	-330.7	-704.3	7.17	7.02	-4.04
6,799.0	28.20	186.80	6,710.9	718.7	-333.6	-683.2	11.07	10.82	-5.51
6,846.0	33.80	183.70	6,751.2	694.6	-335.8	-659.0	12.39	11.91	-6.60
6,894.0	37.10	181.60	6,790.3	666.8	-337.1	-631.2	7.33	6.88	-4.38
6,941.0	38.60	180.70	6,827.4	638.0	-337.6	-602.4	3.40	3.19	-1.91
6,989.0	41.20	180.70	6,864.2	607.2	-338.0	-571.8	5.42	5.42	0.00
7,036.0	46.10	181.70	6,898.2	574.8	-338.7	-539.4	10.53	10.43	2.13
7,085.0	53.50	181.00	6,929.8	537.4	-339.6	-502.1	15.14	15.10	-1.43
7,132.0	59.00	181.60	6,955.9	498.4	-340.5	-463.2	11.75	11.70	1.28
7,180.0	63.30	182.60	6,979.1	456.4	-342.0	-421.2	9.14	8.96	2.08
7,227.0	66.40	183.30	6,999.1	413.9	-344.2	-378.7	6.73	6.60	1.49
7,275.0	69.80	183.10	7,017.0	369.4	-346.7	-334.2	7.09	7.08	-0.42
7,322.0	72.30	183.00	7,032.2	325.0	-349.1	-289.8	5.32	5.32	-0.21
7,370.0	74.30	182.80	7,046.0	279.1	-351.4	-243.9	4.19	4.17	-0.42
7,417.0	77.20	182.40	7,057.6	233.6	-353.4	-198.4	6.23	6.17	-0.85
7,465.0	80.50	181.60	7,066.9	186.6	-355.1	-151.4	7.07	6.88	-1.67
7,518.0	86.50	181.60	7,072.9	133.9	-356.6	-98.9	11.32	11.32	0.00
7,552.4	88.22	181.26	7,074.4	99.6	-357.4	-64.6	5.10	5.00	-0.99
LANDING PT. 465'FNL, 2193'FEL									
7,610.0	91.10	180.69	7,074.8	42.0	-358.4	-7.2	5.10	5.00	-0.99
7,704.0	90.66	180.38	7,073.3	-52.0	-359.3	86.4	0.57	-0.47	-0.33
7,798.0	90.84	180.14	7,072.1	-146.0	-359.7	180.0	0.32	0.19	-0.26
7,892.0	91.54	180.29	7,070.2	-239.9	-360.1	273.6	0.76	0.74	0.16
7,987.0	90.57	181.94	7,068.4	-334.9	-361.9	368.3	2.01	-1.02	1.74
8,081.0	89.60	181.72	7,068.3	-428.9	-364.9	462.1	1.06	-1.03	-0.23
8,175.0	89.87	181.41	7,068.7	-522.8	-367.5	555.8	0.44	0.29	-0.33
8,269.0	89.69	180.44	7,069.1	-616.8	-369.0	649.5	1.05	-0.19	-1.03
8,363.0	90.31	180.69	7,069.1	-710.8	-369.9	743.2	0.71	0.66	0.27
8,401.0	90.41	180.49	7,068.8	-748.8	-370.3	781.1	0.59	0.27	-0.53
WP 1									
8,458.0	90.57	180.19	7,068.3	-805.8	-370.6	837.8	0.59	0.27	-0.53
8,552.0	90.66	179.53	7,067.3	-899.8	-370.4	931.3	0.71	0.10	-0.70
8,647.0	90.04	180.36	7,066.7	-994.8	-370.3	1,025.9	1.09	-0.65	0.87
8,741.0	90.48	179.59	7,066.3	-1,088.8	-370.3	1,119.4	0.94	0.47	-0.82
8,835.0	88.02	180.82	7,067.5	-1,182.8	-370.6	1,213.0	2.93	-2.62	1.31
8,930.0	88.20	180.78	7,070.7	-1,277.7	-371.9	1,307.6	0.19	0.19	-0.04
9,024.0	88.55	179.57	7,073.3	-1,371.7	-372.2	1,401.2	1.34	0.37	-1.29
9,118.0	91.01	179.87	7,073.7	-1,465.7	-371.8	1,494.7	2.64	2.62	0.32
9,160.4	91.45	179.62	7,072.8	-1,508.1	-371.6	1,536.9	1.19	1.03	-0.58
WP 2									
9,212.0	91.98	179.32	7,071.3	-1,559.6	-371.1	1,588.2	1.19	1.03	-0.59
9,307.0	90.40	179.92	7,069.3	-1,654.6	-370.5	1,682.6	1.78	-1.66	0.63
9,401.0	89.69	179.28	7,069.2	-1,748.6	-369.8	1,776.1	1.02	-0.76	-0.68

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9,495.0	90.75	179.07	7,068.8	-1,842.6	-368.5	1,869.5	1.15	1.13	-0.22
9,590.0	92.42	179.51	7,066.2	-1,937.5	-367.3	1,963.9	1.82	1.76	0.46
9,684.0	94.53	180.30	7,060.5	-2,031.4	-367.1	2,057.3	2.40	2.24	0.84
9,778.0	93.39	181.01	7,054.0	-2,125.1	-368.2	2,150.7	1.43	-1.21	0.76
9,873.0	89.78	181.31	7,051.4	-2,220.1	-370.1	2,245.4	3.81	-3.80	0.32
9,967.0	90.84	180.82	7,050.9	-2,314.0	-371.9	2,339.1	1.24	1.13	-0.52
10,062.0	92.42	182.17	7,048.2	-2,409.0	-374.4	2,433.8	2.19	1.66	1.42
10,156.0	91.45	182.86	7,045.0	-2,502.8	-378.5	2,527.7	1.27	-1.03	0.73
10,251.0	90.13	183.03	7,043.7	-2,597.7	-383.4	2,622.5	1.40	-1.39	0.18
10,345.0	90.57	182.28	7,043.1	-2,691.6	-387.7	2,716.4	0.93	0.47	-0.80
10,440.0	89.52	182.12	7,043.1	-2,786.5	-391.4	2,811.3	1.12	-1.11	-0.17
10,534.0	89.96	181.93	7,043.5	-2,880.4	-394.7	2,905.1	0.51	0.47	-0.20
10,629.0	89.87	181.33	7,043.6	-2,975.4	-397.4	2,999.9	0.64	-0.09	-0.63
10,724.0	90.04	180.32	7,043.7	-3,070.4	-398.7	3,094.5	1.08	0.18	-1.06
10,818.0	90.48	178.74	7,043.3	-3,164.4	-398.0	3,188.0	1.74	0.47	-1.68
10,913.0	91.63	180.24	7,041.5	-3,259.4	-397.1	3,282.5	1.99	1.21	1.58
10,998.3	91.63	179.94	7,039.1	-3,344.6	-397.3	3,367.3	0.35	0.00	-0.35
WP 3									
11,007.0	91.63	179.91	7,038.9	-3,353.3	-397.3	3,376.0	0.35	0.00	-0.35
11,101.0	90.40	179.68	7,037.2	-3,447.3	-396.9	3,469.5	1.33	-1.31	-0.24
11,196.0	91.10	179.95	7,035.9	-3,542.3	-396.6	3,564.0	0.79	0.74	0.28
11,291.0	91.36	180.85	7,033.9	-3,637.3	-397.3	3,658.6	0.99	0.27	0.95
11,385.0	91.10	182.97	7,031.9	-3,731.2	-400.4	3,752.4	2.27	-0.28	2.26
11,479.0	89.34	184.28	7,031.5	-3,825.0	-406.3	3,846.4	2.33	-1.87	1.39
11,574.0	89.60	183.84	7,032.4	-3,919.8	-413.1	3,941.3	0.54	0.27	-0.46
11,597.5	89.60	183.68	7,032.6	-3,943.2	-414.6	3,964.8	0.69	0.00	-0.69
WP 4									
11,669.0	89.60	183.18	7,033.1	-4,014.6	-418.9	4,036.3	0.69	0.00	-0.69
11,763.0	90.04	183.06	7,033.4	-4,108.4	-424.0	4,130.2	0.49	0.47	-0.13
11,818.0	90.04	183.07	7,033.3	-4,163.4	-426.9	4,185.1	0.02	0.00	0.02
11,903.0	90.04	183.07	7,033.3	-4,248.2	-431.5	4,270.0	0.00	0.00	0.00
BHL 465'FSL, 2225'FEL									

Checked By: _____ Approved By: _____ Date: _____