

Great Western

Well Name: **Tailholt FD 11-378HC**

Surface Location: Tailholt FD Horizontal Pad Sec.11-T6N-R67W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

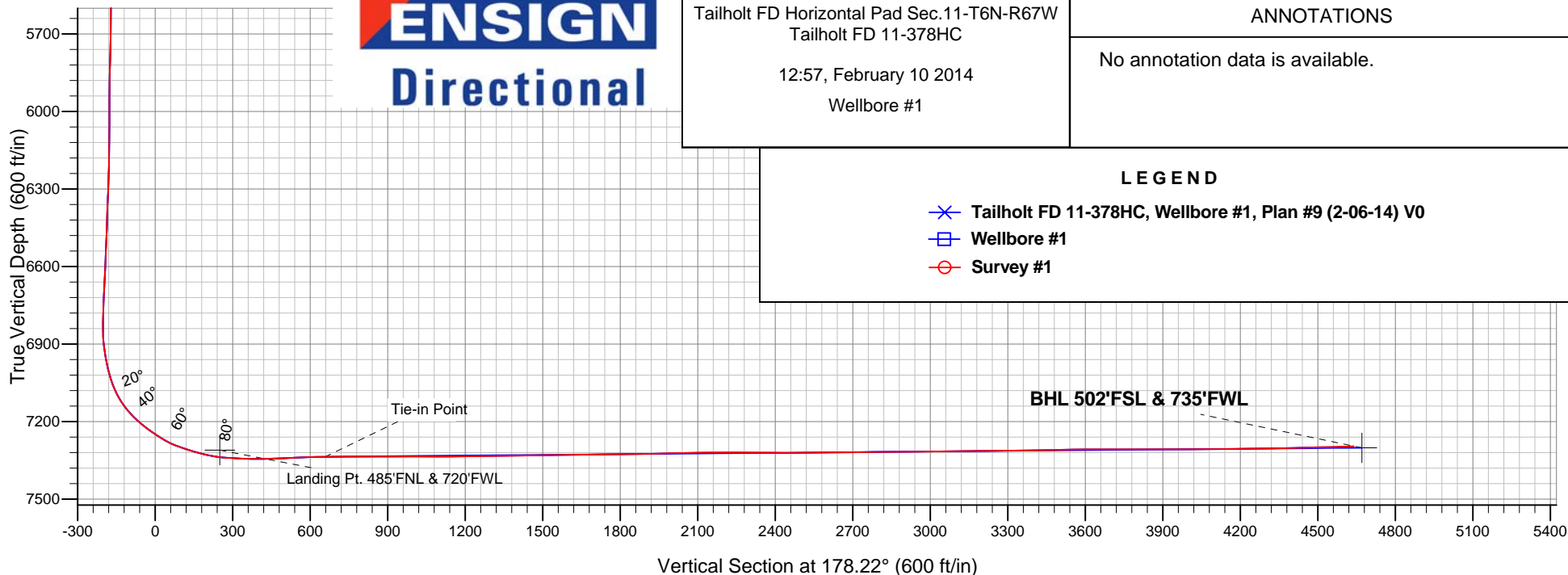
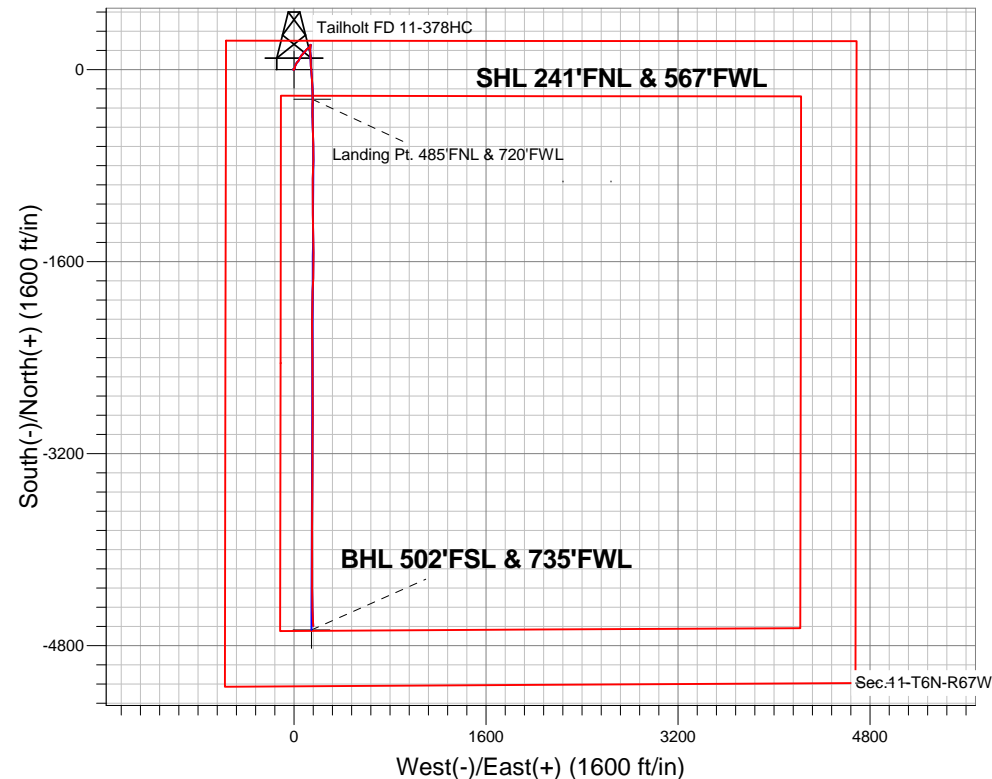
Ground Elevation: 4874.2

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1428645.38	3175718.03	40.508314	-104.868064	

RKB - 16.5' WELL @ 4890.7ft (RKB - 16.5')

FINAL SURVEY

Projected Bottom Hole Location
11985'MD 7296'TVD 4636'S & 160'E of SHL
91.5 degree Incl @ 177.0 degree AZM



Tailholt FD Horizontal Pad Sec.11-T6N-R67W
Tailholt FD 11-378HC

12:57, February 10 2014

Wellbore #1

ANNOTATIONS

No annotation data is available.

LEGEND

- ✕ Tailholt FD 11-378HC, Wellbore #1, Plan #9 (2-06-14) V0
- Wellbore #1
- Survey #1



Great Western

SEC.11-T6N-R67W

Tailholt FD Horizontal Pad Sec.11-T6N-R67W

Tailholt FD 11-378HC

Wellbore #1

Survey: Survey #1

Standard Survey Report

10 February, 2014

Company:	Great Western	Local Co-ordinate Reference:	Well Tailholt FD 11-378HC
Project:	SEC.11-T6N-R67W	TVD Reference:	WELL @ 4890.7ft (RKB - 16.5')
Site:	Tailholt FD Horizontal Pad Sec.11-T6N-R67W	MD Reference:	WELL @ 4890.7ft (RKB - 16.5')
Well:	Tailholt FD 11-378HC	North Reference:	True
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)
1,115.0	0.90	222.00	1,114.9	1.0	-5.5	-1.2	0.95	0.44	91.77
1,208.0	1.00	116.20	1,207.9	0.1	-5.2	-0.3	1.63	0.11	-113.76
1,301.0	2.80	66.80	1,300.9	0.7	-2.4	-0.8	2.45	1.94	-53.12
1,395.0	3.90	45.80	1,394.7	3.8	2.0	-3.8	1.73	1.17	-22.34
1,489.0	3.90	17.00	1,488.5	9.1	5.2	-8.9	2.06	0.00	-30.64
1,582.0	3.20	10.90	1,581.3	14.7	6.6	-14.5	0.85	-0.75	-6.56
1,675.0	2.60	6.10	1,674.2	19.3	7.3	-19.1	0.70	-0.65	-5.16
1,769.0	3.80	9.60	1,768.1	24.5	8.1	-24.2	1.29	1.28	3.72
1,854.0	3.30	16.80	1,852.9	29.6	9.3	-29.3	0.79	-0.59	8.47
1,939.0	2.90	32.30	1,937.8	33.8	11.1	-33.4	1.09	-0.47	18.24
2,025.0	3.00	28.60	2,023.7	37.6	13.4	-37.2	0.25	0.12	-4.30
2,110.0	2.60	21.40	2,108.6	41.4	15.1	-40.9	0.63	-0.47	-8.47
2,195.0	3.20	31.30	2,193.5	45.2	17.1	-44.6	0.92	0.71	11.65
2,280.0	3.20	27.90	2,278.3	49.3	19.4	-48.7	0.22	0.00	-4.00
2,366.0	2.80	23.50	2,364.2	53.3	21.4	-52.7	0.54	-0.47	-5.12
2,451.0	3.20	24.60	2,449.1	57.4	23.2	-56.7	0.48	0.47	1.29
2,536.0	2.90	47.30	2,534.0	61.0	25.8	-60.2	1.45	-0.35	26.71
2,621.0	3.10	49.70	2,618.9	64.0	29.1	-63.0	0.28	0.24	2.82
2,707.0	2.60	42.00	2,704.7	66.9	32.2	-65.9	0.73	-0.58	-8.95
2,792.0	2.20	39.30	2,789.7	69.6	34.5	-68.5	0.49	-0.47	-3.18
2,877.0	3.00	37.40	2,874.6	72.6	36.9	-71.5	0.95	0.94	-2.24
2,962.0	2.60	33.40	2,959.5	76.0	39.3	-74.8	0.52	-0.47	-4.71
3,048.0	2.10	20.00	3,045.4	79.1	40.9	-77.8	0.86	-0.58	-15.58
3,133.0	2.70	29.30	3,130.3	82.3	42.4	-81.0	0.84	0.71	10.94
3,218.0	2.30	19.70	3,215.3	85.7	44.0	-84.3	0.68	-0.47	-11.29
3,303.0	3.70	24.00	3,300.1	89.8	45.7	-88.3	1.67	1.65	5.06
3,389.0	3.30	22.10	3,386.0	94.6	47.7	-93.1	0.48	-0.47	-2.21
3,474.0	3.10	31.10	3,470.8	98.9	49.8	-97.3	0.64	-0.24	10.59
3,559.0	2.60	28.80	3,555.7	102.5	51.9	-100.9	0.60	-0.59	-2.71
3,645.0	3.10	34.40	3,641.6	106.2	54.2	-104.4	0.66	0.58	6.51
3,730.0	3.50	33.70	3,726.5	110.2	56.9	-108.4	0.47	0.47	-0.82
3,815.0	3.90	29.70	3,811.3	114.9	59.8	-113.0	0.56	0.47	-4.71
3,900.0	2.80	46.00	3,896.2	118.8	62.7	-116.8	1.70	-1.29	19.18
3,986.0	2.90	46.20	3,982.1	121.8	65.8	-119.7	0.12	0.12	0.23
4,071.0	2.30	44.10	4,067.0	124.5	68.6	-122.3	0.71	-0.71	-2.47
4,156.0	1.90	36.20	4,151.9	126.9	70.6	-124.6	0.58	-0.47	-9.29
4,242.0	1.50	36.90	4,237.9	128.9	72.1	-126.6	0.47	-0.47	0.81
4,327.0	1.80	38.50	4,322.8	130.9	73.6	-128.5	0.36	0.35	1.88
4,412.0	3.40	32.30	4,407.8	134.0	75.8	-131.6	1.91	1.88	-7.29
4,498.0	3.90	51.30	4,493.6	138.0	79.4	-135.5	1.51	0.58	22.09
4,583.0	3.90	46.70	4,578.4	141.8	83.8	-139.1	0.37	0.00	-5.41
4,668.0	3.60	38.50	4,663.2	145.9	87.5	-143.1	0.72	-0.35	-9.65
4,754.0	3.50	31.30	4,749.0	150.2	90.6	-147.3	0.53	-0.12	-8.37
4,839.0	3.80	43.70	4,833.9	154.5	93.9	-151.5	0.99	0.35	14.59
4,924.0	3.80	45.10	4,918.7	158.5	97.8	-155.4	0.11	0.00	1.65
5,009.0	3.50	42.50	5,003.5	162.4	101.6	-159.2	0.40	-0.35	-3.06
5,095.0	2.70	38.10	5,089.4	165.9	104.6	-162.6	0.97	-0.93	-5.12
5,180.0	2.20	48.50	5,174.3	168.6	107.0	-165.2	0.78	-0.59	12.24
5,265.0	1.60	45.80	5,259.3	170.5	109.1	-167.0	0.71	-0.71	-3.18
5,351.0	1.40	45.50	5,345.2	172.1	110.7	-168.6	0.23	-0.23	-0.35
5,436.0	0.70	45.30	5,430.2	173.2	111.8	-169.6	0.82	-0.82	-0.24
5,521.0	0.90	33.70	5,515.2	174.1	112.6	-170.5	0.30	0.24	-13.65
5,607.0	0.60	89.40	5,601.2	174.7	113.4	-171.1	0.87	-0.35	64.77
5,692.0	1.40	41.50	5,686.2	175.4	114.5	-171.8	1.29	0.94	-56.35

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Well:	Tailholt FD 11-378HC	North Reference:	True
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)	
5,777.0	1.80	49.00	5,771.2	177.1	116.2	-173.4	0.53	0.47	8.82	
5,863.0	2.50	51.80	5,857.1	179.1	118.7	-175.4	0.82	0.81	3.26	
5,948.0	2.50	86.60	5,942.0	180.4	122.0	-176.5	1.76	0.00	40.94	
6,033.0	1.50	70.80	6,027.0	180.9	124.9	-176.9	1.33	-1.18	-18.59	
6,119.0	1.40	78.00	6,112.9	181.5	127.0	-177.4	0.24	-0.12	8.37	
6,204.0	1.60	57.80	6,197.9	182.3	129.0	-178.2	0.66	0.24	-23.76	
6,289.0	2.60	9.30	6,282.9	184.8	130.4	-180.7	2.30	1.18	-57.06	
6,374.0	2.20	8.60	6,367.8	188.4	130.9	-184.2	0.47	-0.47	-0.82	
6,460.0	1.80	15.10	6,453.7	191.3	131.5	-187.1	0.53	-0.47	7.56	
6,545.0	2.60	10.00	6,538.7	194.5	132.2	-190.3	0.97	0.94	-6.00	
6,630.0	2.80	17.20	6,623.6	198.4	133.1	-194.1	0.46	0.24	8.47	
6,715.0	2.80	24.40	6,708.5	202.2	134.6	-198.0	0.41	0.00	8.47	
6,801.0	2.60	40.60	6,794.4	205.6	136.8	-201.3	0.91	-0.23	18.84	
6,844.0	1.10	95.90	6,837.4	206.3	137.8	-202.0	5.05	-3.49	128.60	
6,886.0	3.90	172.20	6,879.3	204.9	138.4	-200.5	9.03	6.67	181.67	
6,929.0	7.70	185.90	6,922.1	200.6	138.3	-196.2	9.34	8.84	31.86	
6,972.0	11.10	189.80	6,964.5	193.6	137.3	-189.3	8.04	7.91	9.07	
7,014.0	14.90	186.80	7,005.4	184.3	136.0	-180.0	9.19	9.05	-7.14	
7,057.0	19.20	183.70	7,046.5	171.7	134.9	-167.4	10.22	10.00	-7.21	
7,100.0	25.40	178.90	7,086.3	155.4	134.6	-151.2	15.02	14.42	-11.16	
7,142.0	32.40	175.40	7,123.0	135.2	135.7	-130.9	17.14	16.67	-8.33	
7,185.0	40.20	176.50	7,157.7	109.8	137.4	-105.5	18.20	18.14	2.56	
7,228.0	47.70	178.00	7,188.6	80.0	138.8	-75.7	17.61	17.44	3.49	
7,270.0	51.40	177.20	7,215.9	48.1	140.2	-43.7	8.93	8.81	-1.90	
7,313.0	53.60	175.40	7,242.0	14.0	142.4	-9.6	6.10	5.12	-4.19	
7,356.0	59.00	175.70	7,265.9	-21.6	145.2	26.1	12.57	12.56	0.70	
7,398.0	66.00	176.10	7,285.3	-58.7	147.8	63.3	16.69	16.67	0.95	
7,441.0	71.10	176.30	7,301.0	-98.7	150.5	103.3	11.87	11.86	0.47	
7,484.0	73.60	177.00	7,314.0	-139.6	152.9	144.3	6.02	5.81	1.63	
7,526.0	75.80	177.30	7,325.1	-180.0	154.9	184.8	5.28	5.24	0.71	
7,569.0	80.00	178.70	7,334.1	-222.0	156.3	226.8	10.27	9.77	3.26	
7,590.1	82.75	179.86	7,337.3	-242.9	156.6	247.7	14.11	13.02	5.52	
Landing Pt. 485'FNL & 720'FWL										
7,635.0	88.60	182.30	7,340.7	-287.6	155.7	292.3	14.11	13.04	5.43	
7,659.0	85.60	180.00	7,341.9	-311.6	155.3	316.3	15.74	-12.50	-9.58	
7,745.0	90.90	179.90	7,344.5	-397.5	155.3	402.2	6.16	6.16	-0.12	
7,830.0	92.20	178.60	7,342.2	-482.5	156.5	487.1	2.16	1.53	-1.53	
7,915.0	92.90	177.80	7,338.4	-567.4	159.1	572.0	1.25	0.82	-0.94	
8,001.0	90.50	179.80	7,335.9	-653.3	160.9	658.0	3.63	-2.79	2.33	
8,086.0	89.70	180.70	7,335.7	-738.3	160.5	742.9	1.42	-0.94	1.06	
8,171.0	90.20	181.30	7,335.8	-823.3	159.1	827.8	0.92	0.59	0.71	
8,256.0	90.40	180.90	7,335.3	-908.3	157.4	912.7	0.53	0.24	-0.47	
8,342.0	90.00	179.90	7,335.0	-994.2	156.8	998.6	1.25	-0.47	-1.16	
8,427.0	89.70	180.10	7,335.3	-1,079.2	156.8	1,083.6	0.42	-0.35	0.24	
8,512.0	90.80	179.30	7,334.9	-1,164.2	157.3	1,168.6	1.60	1.29	-0.94	
8,597.0	91.10	179.30	7,333.5	-1,249.2	158.3	1,253.5	0.35	0.35	0.00	
8,683.0	90.80	179.60	7,332.1	-1,335.2	159.1	1,339.5	0.49	-0.35	0.35	
8,768.0	90.50	178.80	7,331.1	-1,420.2	160.3	1,424.5	1.01	-0.35	-0.94	
8,853.0	90.80	178.50	7,330.1	-1,505.2	162.3	1,509.5	0.50	0.35	-0.35	
8,938.0	90.60	180.20	7,329.1	-1,590.2	163.3	1,594.5	2.01	-0.24	2.00	
9,024.0	90.90	182.80	7,328.0	-1,676.1	161.0	1,680.3	3.04	0.35	3.02	
9,109.0	90.80	181.50	7,326.7	-1,761.0	157.9	1,765.1	1.53	-0.12	-1.53	
9,194.0	90.80	181.10	7,325.5	-1,846.0	155.9	1,850.0	0.47	0.00	-0.47	
9,280.0	91.10	181.00	7,324.1	-1,932.0	154.3	1,935.8	0.37	0.35	-0.12	

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Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
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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)
9,365.0	91.50	181.30	7,322.2	-2,016.9	152.6	2,020.7	0.59	0.47	0.35
9,450.0	91.10	180.60	7,320.2	-2,101.9	151.2	2,105.6	0.95	-0.47	-0.82
9,535.0	90.00	178.90	7,319.4	-2,186.9	151.6	2,190.6	2.38	-1.29	-2.00
9,621.0	89.40	179.40	7,319.9	-2,272.9	152.9	2,276.5	0.91	-0.70	0.58
9,706.0	89.60	179.70	7,320.6	-2,357.9	153.5	2,361.5	0.42	0.24	0.35
9,791.0	90.10	179.90	7,320.8	-2,442.9	153.8	2,446.5	0.63	0.59	0.24
9,877.0	90.40	180.10	7,320.5	-2,528.9	153.8	2,532.4	0.42	0.35	0.23
9,962.0	90.80	179.70	7,319.6	-2,613.9	154.0	2,617.4	0.67	0.47	-0.47
10,047.0	90.70	179.30	7,318.5	-2,698.9	154.7	2,702.4	0.49	-0.12	-0.47
10,133.0	90.90	179.40	7,317.3	-2,784.8	155.7	2,788.3	0.26	0.23	0.12
10,218.0	90.30	180.00	7,316.4	-2,869.8	156.2	2,873.3	1.00	-0.71	0.71
10,303.0	90.20	180.50	7,316.0	-2,954.8	155.8	2,958.3	0.60	-0.12	0.59
10,389.0	90.70	180.50	7,315.3	-3,040.8	155.0	3,044.2	0.58	0.58	0.00
10,474.0	90.80	180.30	7,314.2	-3,125.8	154.4	3,129.1	0.26	0.12	-0.24
10,559.0	90.70	179.80	7,313.1	-3,210.8	154.4	3,214.1	0.60	-0.12	-0.59
10,644.0	90.50	180.70	7,312.2	-3,295.8	154.0	3,299.0	1.08	-0.24	1.06
10,730.0	90.80	180.90	7,311.2	-3,381.8	152.8	3,384.9	0.42	0.35	0.23
10,815.0	91.10	180.40	7,309.8	-3,466.8	151.8	3,469.8	0.69	0.35	-0.59
10,900.0	91.20	180.50	7,308.1	-3,551.8	151.2	3,554.7	0.17	0.12	0.12
10,986.0	90.10	179.80	7,307.1	-3,637.7	150.9	3,640.7	1.52	-1.28	-0.81
11,071.0	89.60	179.40	7,307.4	-3,722.7	151.5	3,725.7	0.75	-0.59	-0.47
11,156.0	90.20	179.40	7,307.5	-3,807.7	152.4	3,810.6	0.71	0.71	0.00
11,242.0	90.40	180.60	7,307.1	-3,893.7	152.4	3,896.6	1.41	0.23	1.40
11,327.0	90.00	181.50	7,306.8	-3,978.7	150.9	3,981.5	1.16	-0.47	1.06
11,412.0	90.10	180.60	7,306.7	-4,063.7	149.3	4,066.4	1.07	0.12	-1.06
11,498.0	90.60	179.60	7,306.2	-4,149.7	149.2	4,152.3	1.30	0.58	-1.16
11,583.0	90.90	179.20	7,305.1	-4,234.7	150.0	4,237.3	0.59	0.35	-0.47
11,668.0	91.10	179.30	7,303.6	-4,319.7	151.2	4,322.3	0.26	0.24	0.12
11,754.0	91.50	178.80	7,301.6	-4,405.6	152.6	4,408.3	0.74	0.47	-0.58
11,839.0	91.20	178.80	7,299.6	-4,490.6	154.4	4,493.2	0.35	-0.35	0.00
11,905.0	91.50	178.00	7,298.1	-4,556.6	156.2	4,559.2	1.29	0.45	-1.21
11,985.0	91.50	177.00	7,296.0	-4,636.4	159.7	4,639.2	1.25	0.00	-1.25
BHL 470'FSL & 720'FWL									

Checked By: _____	Approved By: _____	Date: _____
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