



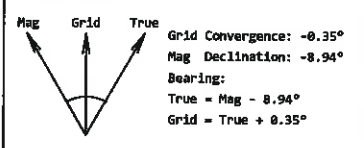
CONSOL ENERGY  
 PHL-3C-HS PLAN 2  
 BARBOUR COUNTY, WV  
 FINAL PVA



**Plan Data for 3C-HS**

**Plan Point Information:**

DogLeg Severity Unit: °/100.00ft		Position offsets from Slot centre								
MD (USft)	Inc (°)	Az (°)	TVD (USft)	+N/-S (USft)	+E/-W (USft)	VSec (USft)	DLS (DLSU)	Build (DLSU)	Turn (DLSU)	
2295.00	0.74	91.84	2294.90	-11.22	14.85	17.89	0.46	0.46	-1.77	
2686.67	5.00	280.00	2686.25	-9.15	5.74	10.77	2.00	1.49	-59.94	
3086.67	5.00	280.00	3084.73	-3.10	-28.59	-14.67	0.00	0.00	0.00	
3586.67	0.00	0.00	3584.09	0.69	-50.06	-30.58	1.00	-1.00	0.00	
4983.00	0.00	0.00	4980.42	0.69	-50.06	-30.58	0.00	0.00	0.00	
5473.73	29.44	225.09	5449.84	-86.40	-137.41	-13.30	6.00	6.00	0.00	
7417.17	29.44	225.09	7142.25	-760.89	-813.97	120.52	0.00	0.00	0.00	
8341.51	92.00	133.68	7641.99	-1381.00	-590.00	751.02	10.00	6.77	-9.89	
16262.04	92.00	133.68	7365.49	-6847.76	5134.76	8559.07	0.00	0.00	0.00	



**Plan Data for 3C-HS**

Field: CONSOL ENERGY BARBOUR COUNTY, WV\_MAD 27 (WV NORTH)  
 Map Unit: USft Vertical Reference Datum (VRD):  
 Projected Coordinate System: NAD27 / West Virginia North

Site: PHL PAD

Unit: USfeet TVD Reference:  
 Company Name:  
 Position: Northing: 253820.23USft Latitude: 39°11'44.0"  
 Easting: 1842549.33USft Longitude: -80°3'19.9"  
 North Reference: Grid Grid Convergence: -0.35°  
 Elevation Above VRD: 1443.13USft

Slot: 3C-HS

Position:  
 Offset is from Site centre  
 +N/-S: -23.84USft Northing: 253796.40USft Latitude: 39°11'43.7"  
 +E/-W: -31.80USft Easting: 1842517.53USft Longitude: -80°3'20.3"  
 Elevation Above VRD: 1442.97USft

Well: 3C-HS

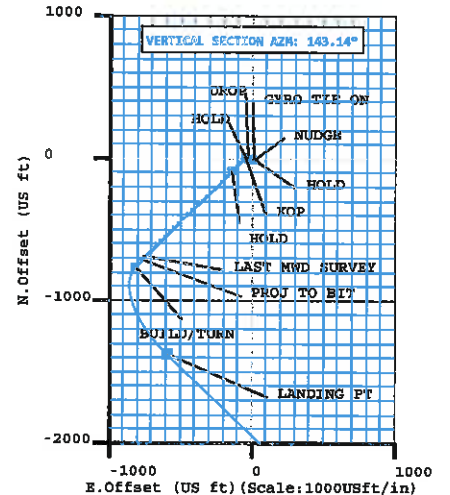
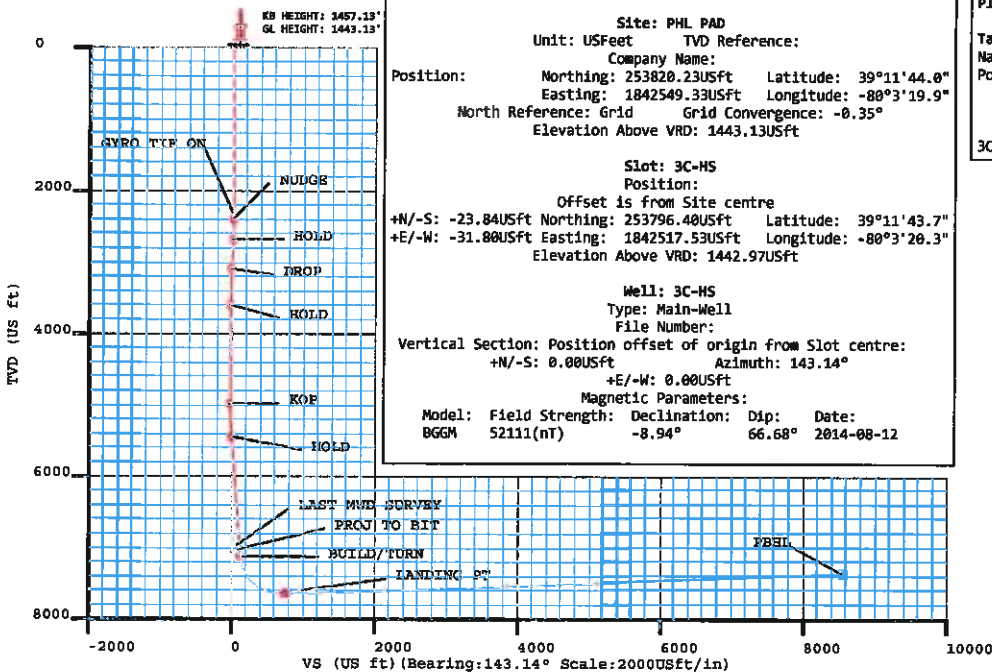
Type: Main-Well  
 File Number:  
 Vertical Section: Position offset of origin from Slot centre:  
 +N/-S: 0.00USft Azimuth: 143.14°  
 +E/-W: 0.00USft  
 Magnetic Parameters:  
 Model: Field Strength: Declination: Dip: Date:  
 BGGM 52111(nT) -8.94° 66.68° 2014-08-12

**Plan Data for 3C-HS**

**Target Set Information:**

Name: PHL3C-HS TARGETS

Position offsets from Slot centre					
Name	TVD (USft)	+N/-S (USft)	+E/-W (USft)	Northing (USft)	Easting (USft)
3C-HS LP P1	7642.00	-1381.00	-590.00	252415.40	1841927.53
3C-HS PBHL P1	7365.50	-6847.76	5134.76	246948.64	1847652.29



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wwellboredirsurveydata md Measured Depth	PHL3CHS												
	inclination	azimuth	surveymet	tydcalc	vscal	departcalc	nscal	ewcalc	discal	buildrate	turnrate	displaceun	wrapcalc
	Inclination	Azimuth	Survey Me	TVD	VS	Departure	NS	EW	DLS	Build Rate	Turn Rate	Unwrapped	Displace
28.5	0	116.09	MWD	28.5	0	0	0	0	0	0	407.33	0	0
114.5	0.38	116.09	MWD	114.5	0.25	0.29	-0.13	0.26	0.44	0.44	0	0.29	0.88
214.5	0.3	126.62	MWD	214.5	0.8	0.88	-0.43	0.76	0.1	-0.08	10.53	1.7	1.7
314.5	0.68	91.63	MWD	314.49	1.42	1.68	-0.6	1.57	0.47	0.38	-34.99	2.89	2.89
414.5	0.77	130.54	MWD	414.49	2.45	2.87	-1.05	2.67	0.49	0.09	38.91	4.16	4.16
514.5	0.77	169.8	MWD	514.48	3.7	3.94	-2.15	3.3	0.52	0	39.26	5.1	5.1
614.5	0.47	108.06	MWD	614.47	4.64	4.81	-2.94	3.81	0.69	-0.3	-61.74	6.06	6.06
714.5	0.65	125.55	MWD	714.47	5.52	5.77	-3.4	4.66	0.25	0.18	17.49	7.34	7.34
814.5	0.82	128.16	MWD	814.46	6.75	7.05	-4.17	5.69	0.17	0.17	2.61	8.71	8.71
914.5	0.76	143.02	MWD	914.45	8.1	8.4	-5.14	6.65	0.21	-0.06	14.86	9.64	9.64
1,014.50	0.31	135.46	MWD	1,014.45	9.03	9.31	-5.86	7.24	0.45	-0.45	-7.56	10.46	10.46
1,114.50	0.63	124.19	MWD	1,114.44	9.82	10.13	-6.37	7.88	0.33	0.32	-11.27	11.48	11.48
1,214.50	0.54	115.7	MWD	1,214.44	10.76	11.14	-6.88	8.76	0.12	-0.09	-8.49	12.13	12.13
1,314.50	0.21	112.48	MWD	1,314.44	11.34	11.78	-7.15	9.35	0.33	-0.33	-3.22	12.84	12.84
1,414.50	0.64	151.1	MWD	1,414.43	12.05	12.47	-7.71	9.79	0.49	0.43	38.62	13.64	13.64
1,514.50	0.27	152.28	MWD	1,514.43	12.83	13.2	-8.41	10.17	0.37	-0.37	1.18	14.17	14.17
1,614.50	0.34	154.86	MWD	1,614.43	13.36	13.69	-8.89	10.41	0.07	0.07	2.58	15	15
1,714.50	0.61	149.95	MWD	1,714.42	14.18	14.46	-9.62	10.8	0.27	0.27	-4.91	15.82	15.82
1,814.50	0.33	156.04	MWD	1,814.42	14.98	15.23	-10.34	11.18	0.28	-0.28	6.09	16.42	16.42
1,914.50	0.37	143.28	MWD	1,914.42	15.59	15.81	-10.86	11.49	0.09	0.09	-12.76	17.37	17.37
2,014.50	0.81	92.31	MWD	2,014.41	16.36	16.67	-11.15	12.39	0.64	0.44	-50.97	18.39	18.39
2,114.50	0.36	89.3	MWD	2,114.41	16.99	17.46	-11.17	13.41	0.45	-0.45	-3.01	18.96	18.96
2,214.50	0.3	93.52	MWD	2,214.41	17.35	17.91	-11.19	13.99	0.06	-0.06	4.22	19.83	19.83
2,309.50	0.74	91.84	MWD	2,309.40	17.89	18.61	-11.22	14.85	0.46	0.46	-1.77	20.41	20.41
2,364.50	0.53	123.77	MWD	2,364.40	18.35	19.16	-11.37	15.42	0.73	-0.38	58.05	20.77	20.77
2,427.50	0.89	256.7	MWD	2,427.40	18.43	19.14	-11.65	15.18	2.08	0.57	211	21.54	21.54
2,458.50	1.93	262.11	MWD	2,458.39	18.08	18.63	-11.78	14.43	3.38	3.35	17.45	26.02	26.02
2,554.50	3.45	274.94	MWD	2,554.28	15.37	15.4	-11.75	9.95	1.69	1.58	13.36	32.69	32.69
2,648.50	4.7	280.37	MWD	2,648.04	10.65	11.32	-10.81	3.35	1.39	1.33	5.78	40.48	40.48
2,742.50	4.81	282.52	MWD	2,741.72	4.83	10.21	-9.26	-4.29	0.22	0.12	2.29	48.48	48.48
2,836.50	4.95	281.99	MWD	2,835.38	-1.22	14.28	-7.57	-12.1	0.16	0.15	-0.56	56.84	56.84
2,931.50	5.15	283.6	MWD	2,930.01	-7.6	21.05	-5.71	-20.26	0.26	0.21	1.69	65.17	65.17
3,024.50	5.13	283.33	MWD	3,022.63	-14.02	28.61	-3.77	-28.36	0.03	-0.02	-0.29	72.25	72.25
3,119.50	3.44	275.75	MWD	3,117.36	-19.21	35.42	-2.51	-35.33	1.87	-1.78	-7.98	77.19	77.19
3,214.50	2.52	280.39	MWD	3,212.24	-22.68	40.26	-1.85	-40.22	1	-0.97	4.88	80.5	80.5
3,309.50	1.48	273.03	MWD	3,307.18	-25	43.52	-1.41	-43.5	1.13	-1.09	-7.75	84.07	84.07
3,404.50	1.48	270.23	MWD	3,402.14	-26.53	45.97	-1.34	-45.95	0.08	0	-2.95	84.32	84.32
3,497.50	0.14	133.83	MWD	3,495.14	-27.14	47.09	-1.41	-47.07	1.7	-1.44	-146.67	84.68	84.68
3,592.50	0.16	135.06	MWD	3,590.13	-26.9	46.92	-1.58	-46.89	0.02	0.02	1.29	85.09	85.09
3,688.50	0.28	118.8	MWD	3,686.13	-26.55	46.63	-1.79	-46.59	0.14	0.13	-16.94	85.53	85.53
3,782.50	0.21	113.91	MWD	3,780.13	-26.19	46.28	-1.97	-46.23	0.08	-0.07	-5.2	86.18	86.18
3,877.50	0.34	90.67	MWD	3,875.13	-25.87	45.84	-2.05	-45.79	0.18	0.14	-24.46	86.96	86.96
3,972.50	0.44	91.48	MWD	3,970.13	-25.47	45.19	-2.06	-45.15	0.11	0.11	0.85	87.6	87.6
4,066.50	0.51	97.92	MWD	4,064.13	-24.95	44.42	-2.13	-44.37	0.09	0.07	6.85	87.93	87.93
4,161.50	0.26	101.24	MWD	4,159.12	-24.49	43.8	-2.23	-43.74	0.26	-0.26	3.49	89.12	89.12
4,257.50	0.64	298.91	MWD	4,255.12	-24.82	44.04	-2.01	-44	0.93	0.4	205.91	90.6	90.6
4,352.50	0.8	305.13	MWD	4,350.12	-25.93	45.02	-1.37	-45	0.19	0.17	6.55	91.86	91.86
4,446.50	1	306.36	MWD	4,444.10	-27.34	46.2	-0.51	-46.2	0.21	0.21	1.31	92.92	92.92
4,541.50	0.56	331.53	MWD	4,539.09	-28.6	47.09	0.39	-47.09	0.58	-0.46	26.49	94.34	94.34
4,635.50	0.73	328.69	MWD	4,633.09	-29.65	47.64	1.31	-47.62	0.18	0.18	-3.02	95.33	95.33
4,729.50	1	328.36	MWD	4,727.08	-31.06	48.43	2.52	-48.36	0.29	0.29	-0.35	95.77	95.77
4,823.50	0.21	343.8	MWD	4,821.07	-32.04	48.96	3.38	-48.84	0.85	-0.84	16.43	96.17	96.17
4,917.50	0.39	288.19	MWD	4,915.07	-32.46	49.33	3.65	-49.19	0.34	0.19	-59.16	97.24	97.24
4,949.50	1.16	238.9	MWD	4,947.07	-32.58	49.7	3.51	-49.57	2.98	2.41	-154.03	99.1	99.1
4,981.50	2.69	227.82	MWD	4,979.05	-32.55	50.49	2.84	-50.41	4.9	4.78	-34.63	101.73	101.73
5,012.50	4.17	223.97	MWD	5,009.99	-32.3	51.75	1.54	-51.73	4.83	4.77	-12.42	105.56	105.56
5,042.50	5.9	223.62	MWD	5,039.88	-31.87	53.55	-0.36	-53.55	5.77	5.77	-1.17	110.47	110.47
5,074.50	7.86	224.46	MWD	5,071.64	-31.28	56.3	-3.11	-56.22	6.13	6.13	2.63	116.25	116.25
5,106.50	9.78	224.41	MWD	5,103.26	-30.54	60.02	-6.62	-59.65	6	6	-0.16	122.99	122.99
5,138.50	11.4	224.07	MWD	5,134.72	-29.63	64.67	-10.83	-63.75	5.07	5.06	-1.06	139.8	139.8
5,169.50	13.34	222.98	MWD	5,165.00	-28.52	70.09	-15.65	-68.32	6.3	6.26	-0.12	149.5	149.5
5,201.50	15.29	222.94	MWD	5,196.00	-27.13	76.77	-21.44	-73.71	6.09	6.09	-0.12	159.95	159.95
5,233.50	16.99	223.48	MWD	5,226.74	-25.61	84.55	-27.92	-79.81	5.33	5.33	-0.12	171.24	171.24
5,265.50	18.59	224.58	MWD	5,257.21	-24.07	93.39	-34.95	-86.6	5.11	5	3.44	183.86	183.86
5,296.50	20.43	224.56	MWD	5,286.43	-22.54	102.97	-42.32	-93.87	5.94	5.94	-0.87	197.24	197.24
5,327.50	22.39	224.29	MWD	5,315.29	-20.84	113.58	-50.4	-101.79	6.33	6.32	-0.87	211.31	211.31
5,359.50	24.07	223.61	MWD	5,344.69	-18.83	125.54	-59.49	-110.55	5.32	5.25	-2.12	226.05	226.05
5,391.50	25.37	222.74	MWD	5,373.76	-16.52	138.29	-69.25	-119.7	4.22	4.06	-2.72	241.21	241.21
5,423.50	26.78	223.34	MWD	5,402.50	-14.07	151.8	-79.53	-129.3	4.48	4.41	1.87		
5,455.50	28.09	223.94	MWD	5,430.90	-11.65	166.1	-90.2	-139.48	4.18	4.09	1.87		
5,487.50	28.45	224.02	MWD	5,459.08	-9.26	180.89	-101.1	-150	1.13	1.13	0.25		

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5,519.50	28.53	223.66 MWD	5,487.21	-6.8	195.84	-112.11	-160.57	0.59	0.25	-1.13	256.47
5,551.50	28.7	223.38 MWD	5,515.30	-4.26	210.88	-123.23	-171.13	0.68	0.53	-0.88	271.8
5,582.50	28.97	224.25 MWD	5,542.46	-1.85	225.6	-134.01	-181.48	1.61	0.87	2.81	286.75
5,677.50	29.37	226.46 MWD	5,625.41	4.38	271.5	-166.54	-214.42	1.21	0.42	2.33	333.04
5,771.50	29.87	225.28 MWD	5,707.13	10.22	317.72	-198.89	-247.76	0.82	0.53	-1.26	379.5
5,867.50	29.89	225.75 MWD	5,790.37	16.52	365.34	-232.41	-281.88	0.24	0.02	0.49	427.33
5,962.50	30.56	224.54 MWD	5,872.45	23.13	412.97	-266.14	-315.78	0.95	0.71	-1.27	475.15
6,058.50	30.16	225.21 MWD	5,955.29	30.06	461.33	-300.52	-350.01	0.55	-0.42	0.7	523.67
6,153.50	29.12	226.86 MWD	6,037.86	35.84	508.23	-333.14	-383.82	1.39	-1.09	1.74	570.64
6,247.50	28.61	227.02 MWD	6,120.18	40.7	553.58	-364.13	-416.97	0.55	-0.54	0.17	616.02
6,341.50	28.11	226.62 MWD	6,202.90	45.57	598.21	-394.68	-449.53	0.57	-0.53	-0.43	660.67
6,435.50	28.5	225.19 MWD	6,285.66	51.15	642.72	-425.69	-481.54	0.83	0.41	-1.52	705.24
6,530.50	28.73	226.58 MWD	6,369.06	56.85	688.17	-457.36	-514.2	0.74	0.24	1.46	750.74
6,625.50	27.44	225.41 MWD	6,452.87	62.36	732.86	-488.42	-546.38	1.48	-1.36	-1.23	795.46
6,721.50	27.5	225.79 MWD	6,538.04	68.13	777.1	-519.41	-578.02	0.19	0.06	0.4	839.74
6,816.50	28.13	225.41 MWD	6,622.07	73.91	821.39	-550.42	-609.69	0.69	0.66	-0.4	884.07
6,912.50	28.81	225.54 MWD	6,706.46	79.97	867.11	-582.51	-642.31	0.71	0.71	0.14	929.83
7,073.00	30.17	226.23 MWD	6,846.16	89.86	946.08	-637.5	-699.04	0.87	0.85	0.43	1,008.84
7,166.00	30.02	226.14 MWD	6,926.62	95.47	992.7	-669.79	-732.69	0.17	-0.16	-0.1	1,055.47
7,260.00	29.93	226.74 MWD	7,008.05	100.9	1,039.65	-702.15	-766.72	0.33	-0.1	0.64	1,102.44
7,354.00	29.84	227.08 MWD	7,089.55	105.94	1,086.49	-734.15	-800.93	0.2	-0.1	0.36	1,149.27
7,448.00	29.58	220.1 MWD	7,171.22	113.6	1,132.90	-767.83	-833.01	3.69	-0.28	-7.43	1,195.79
7,542.00	29.83	215.89 MWD	7,252.88	125.73	1,178.86	-804.52	-861.66	2.23	0.27	-4.48	1,242.34
7,573.00	30.81	212.18 MWD	7,279.64	130.84	1,194.11	-817.49	-870.41	6.82	3.16	-11.97	1,257.98
7,605.00	33.32	207.58 MWD	7,306.76	137.56	1,210.35	-832.22	-878.85	10.94	7.84	-14.38	1,274.96
7,636.00	36.02	204.79 MWD	7,332.25	145.54	1,226.89	-848.05	-886.61	10.1	8.71	-9	1,292.59
7,667.00	38.33	202.44 MWD	7,356.95	154.77	1,244.19	-865.21	-894.1	8.75	7.45	-7.58	1,311.32
7,698.00	38.25	199.8 MWD	7,381.29	164.93	1,261.65	-883.12	-901.02	5.28	-0.26	-8.52	1,330.52
7,730.00	38.16	196.09 MWD	7,406.44	176.32	1,279.21	-901.94	-907.12	7.18	-0.28	-11.59	1,350.30
7,777.00	38.17	189.58 MWD	7,443.40	195.07	1,303.81	-930.23	-913.56	8.56	0.02	-13.85	1,379.31
7,824.00	38.2	184.31 MWD	7,480.36	216	1,326.95	-959.05	-917.07	6.93	0.06	-11.21	1,408.34
7,871.00	39.39	178.5 MWD	7,517.00	239.09	1,348.84	-988.46	-917.78	8.15	2.53	-12.36	1,437.76
7,918.00	41.26	171.9 MWD	7,552.85	264.84	1,369.45	-1,018.73	-915.2	9.92	3.98	-14.04	1,468.14
7,965.00	43.67	164.82 MWD	7,587.54	293.51	1,388.46	-1,049.75	-908.76	11.38	5.13	-15.06	1,499.83
8,012.00	47.39	160.24 MWD	7,620.46	325.13	1,406.30	-1,081.71	-898.66	10.53	7.91	-9.74	1,533.34
8,059.00	53.5	156.64 MWD	7,650.39	360.06	1,424.01	-1,115.37	-885.31	14.27	13	-7.66	1,569.55
8,106.00	59.9	153.69 MWD	7,676.18	398.46	1,442.06	-1,150.98	-868.79	14.59	13.62	-6.28	1,608.81
8,153.00	67.23	151.06 MWD	7,697.09	439.96	1,460.52	-1,188.22	-849.26	16.38	15.6	-5.6	1,650.86
8,200.00	72.72	149.79 MWD	7,713.18	483.74	1,479.62	-1,226.61	-827.47	11.95	11.68	-2.7	1,695.00
8,247.00	74.36	148.54 MWD	7,726.50	528.56	1,499.33	-1,265.30	-804.36	4.32	3.49	-2.66	1,740.07
8,293.00	77.37	146.4 MWD	7,737.73	573.03	1,518.73	-1,302.90	-780.38	7.95	6.54	-4.65	1,784.67
8,340.00	80.07	143.4 MWD	7,746.93	619.09	1,538.03	-1,340.60	-753.87	8.5	5.74	-6.38	1,830.75
8,387.00	82.66	141.11 MWD	7,753.98	665.54	1,556.70	-1,377.34	-725.43	7.32	5.51	-4.87	1,877.21
8,434.00	85.97	137.38 MWD	7,758.64	712.19	1,574.41	-1,412.75	-694.91	10.58	7.04	-7.94	1,923.97
8,481.00	88.68	135.69 MWD	7,760.83	758.83	1,591.34	-1,446.82	-662.61	6.79	5.77	-3.6	1,970.91
8,528.00	91.66	133.41 MWD	7,760.69	805.3	1,607.97	-1,479.79	-629.12	7.98	6.34	-4.85	2,017.90
8,575.00	91.42	132.25 MWD	7,759.43	851.53	1,624.49	-1,511.73	-594.67	2.52	-0.51	-2.47	2,064.88
8,669.00	91.45	133.27 MWD	7,757.08	943.98	1,660.91	-1,575.53	-525.68	1.09	0.03	1.09	2,158.85
8,763.00	91.48	133.59 MWD	7,754.67	1,036.62	1,702.72	-1,640.13	-457.44	0.34	0.03	0.34	2,252.82
8,857.00	91.63	134.46 MWD	7,752.12	1,129.41	1,749.43	-1,705.43	-389.87	0.94	0.16	0.93	2,346.79
8,951.00	91.54	133.8 MWD	7,749.52	1,222.23	1,799.97	-1,770.86	-322.43	0.71	-0.1	-0.7	2,440.75
9,045.00	92	134.58 MWD	7,746.62	1,315.05	1,853.97	-1,836.35	-255.06	0.96	0.49	0.83	2,534.70
9,139.00	92.09	133.49 MWD	7,743.27	1,407.82	1,910.87	-1,901.64	-187.53	1.16	0.1	-1.16	2,628.64
9,233.00	92.49	131.95 MWD	7,739.51	1,500.21	1,968.93	-1,965.36	-118.52	1.69	0.43	-1.64	2,722.57
9,327.00	92.55	130.36 MWD	7,735.38	1,592.08	2,027.72	-2,027.16	-47.82	1.69	0.06	-1.69	2,816.47
9,421.00	92.46	129.28 MWD	7,731.27	1,683.49	2,087.44	-2,087.30	24.31	1.15	-0.1	-1.15	2,910.38
9,515.00	92.46	129.42 MWD	7,727.23	1,774.71	2,149.03	-2,146.84	96.93	0.15	0	0.15	3,004.29
9,609.00	92.31	131.41 MWD	7,723.32	1,866.34	2,214.15	-2,207.73	168.43	2.12	-0.16	2.12	3,098.21
9,703.00	92.4	133.24 MWD	7,719.46	1,958.61	2,283.39	-2,270.97	237.87	1.95	0.1	1.95	3,192.12
9,797.00	92.4	135.77 MWD	7,715.52	2,051.46	2,356.60	-2,336.79	304.85	2.69	0	2.69	3,286.03
9,891.00	92.12	136.24 MWD	7,711.81	2,144.67	2,432.68	-2,404.37	370.09	0.58	-0.3	0.5	3,379.96
9,985.00	92.09	137.68 MWD	7,708.36	2,238.07	2,510.85	-2,473.02	434.2	1.53	-0.03	1.53	3,473.89
10,079.00	92.19	137.48 MWD	7,704.85	2,331.57	2,590.60	-2,542.36	497.56	0.24	0.11	-0.21	3,567.83
10,173.00	91.72	134.94 MWD	7,701.64	2,424.83	2,670.11	-2,610.18	562.57	2.75	-0.5	-2.7	3,661.77
10,267.00	91.72	132.84 MWD	7,698.82	2,517.58	2,748.55	-2,675.31	630.28	2.23	0	-2.23	3,755.72
10,361.00	91.66	132.68 MWD	7,696.05	2,610.02	2,826.95	-2,739.10	699.26	0.18	0.03	0.18	3,849.68
10,455.00	91.63	131.89 MWD	7,693.35	2,702.31	2,905.86	-2,802.32	768.77	0.84	0.03	0.84	3,943.64
10,549.00	92.12	132.82 MWD	7,690.28	2,794.62	2,985.69	-2,865.62	838.2	0.43	0.03	0.43	4,037.59
10,643.00	92.52	133.26 MWD	7,686.47	2,887.10	3,066.86	-2,929.72	906.85	0.63	0.04	0.63	4,131.51
10,737.00	92.56	132.67 MWD	7,682.30	2,979.54	3,148.67	-2,993.72	975.57	0.83	0.04	0.83	4,225.42
10,831.00	93.11	132.11 MWD	7,677.65	3,071.80	3,230.66	-3,057.02	1,044.91	1.67	-0.03	-1.67	4,319.30
10,925.00	93.08	130.54 MWD	7,672.58	3,163.69	3,312.43	-3,118.99	1,115.39	1.19	0.03	-1.19	4,413.16
11,018.00	93.11	129.43 MWD	7,667.56	3,254.13	3,392.91	-3,178.67	1,186.55	1.19	0.03	-1.19	4,506.02
11,112.00	92.37	128 MWD	7,663.06	3,345.08	3,473.87	-3,237.39	1,259.80	1.71	-0.79	-1.52	4,599.91

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11,206.00	92.19	128.74 MWD	7,659.32	3,435.93	3,555.23	-3,295.69	1,333.44	0.81	-0.19	0.79	4,693.84
11,300.00	92	130.52 MWD	7,655.89	3,527.28	3,638.18	-3,355.60	1,405.79	1.9	-0.2	1.89	4,787.77
11,394.00	91.72	132.29 MWD	7,652.84	3,619.28	3,722.94	-3,417.74	1,476.25	1.91	-0.3	1.88	4,881.72
11,487.00	91.66	133.16 MWD	7,650.09	3,710.73	3,808.10	-3,480.81	1,544.54	0.94	-0.06	0.94	4,974.68
11,581.00	91.66	134 MWD	7,647.37	3,803.39	3,895.08	-3,545.58	1,612.61	0.89	0	0.89	5,068.64
11,675.00	91.26	133.52 MWD	7,644.98	3,896.12	3,982.49	-3,610.58	1,680.48	0.66	-0.43	-0.51	5,162.61
11,769.00	91.29	132.36 MWD	7,642.88	3,988.63	4,069.72	-3,674.59	1,749.27	1.23	0.03	-1.23	5,256.58
11,863.00	91.91	132.94 MWD	7,640.26	4,081.03	4,157.05	-3,738.26	1,818.38	0.9	0.66	0.62	5,350.54
11,957.00	91.91	134.47 MWD	7,637.13	4,173.72	4,245.25	-3,803.17	1,886.30	1.63	0	1.63	5,444.49
12,051.00	91.97	135.73 MWD	7,633.94	4,266.76	4,334.44	-3,869.71	1,952.61	1.34	0.06	1.34	5,538.43
12,145.00	91.85	136.97 MWD	7,630.81	4,360.05	4,424.42	-3,937.69	2,017.46	1.32	-0.13	1.32	5,632.38
12,239.00	91.94	135.31 MWD	7,627.70	4,453.31	4,514.47	-4,005.42	2,082.55	1.77	0.1	-1.77	5,726.32
12,333.00	91.94	133.81 MWD	7,624.52	4,546.21	4,603.92	-4,071.34	2,149.49	1.59	0	-1.6	5,820.27
12,427.00	91.88	133.1 MWD	7,621.39	4,638.84	4,693.00	-4,135.96	2,217.68	0.76	-0.06	-0.76	5,914.21
12,521.00	92.99	132.52 MWD	7,617.39	4,731.24	4,781.90	-4,199.78	2,286.58	1.33	1.18	-0.62	6,008.13
12,615.00	93.6	132.52 MWD	7,611.99	4,823.50	4,870.77	-4,263.20	2,355.75	0.65	0.65	0	6,101.97
12,709.00	93.57	135.52 MWD	7,606.11	4,916.13	4,960.53	-4,328.39	2,423.20	3.19	-0.03	3.19	6,195.78
12,803.00	93.51	135.16 MWD	7,600.31	5,009.09	5,051.03	-4,395.12	2,489.15	0.39	-0.06	-0.38	6,289.60
12,897.00	93.6	132.88 MWD	7,594.48	5,101.73	5,141.07	-4,460.31	2,556.61	2.42	0.1	-2.43	6,383.41
12,991.00	94.03	132.34 MWD	7,588.22	5,193.96	5,230.57	-4,523.81	2,625.64	0.73	0.46	-0.57	6,477.20
13,085.00	94.28	132.15 MWD	7,581.41	5,286.04	5,319.99	-4,586.84	2,695.04	0.33	0.27	-0.2	6,570.95
13,180.00	94	132.33 MWD	7,574.55	5,379.10	5,410.52	-4,650.54	2,765.19	0.35	-0.29	0.19	6,665.71
13,273.00	93.42	131.86 MWD	7,568.54	5,470.20	5,499.26	-4,712.75	2,834.05	0.8	-0.62	-0.51	6,758.51
13,367.00	92.99	131.7 MWD	7,563.28	5,562.23	5,588.98	-4,775.28	2,904.04	0.49	-0.46	-0.17	6,852.36
13,461.00	92.06	132.84 MWD	7,559.14	5,654.47	5,679.12	-4,838.44	2,973.53	1.56	-0.99	1.21	6,946.27
13,555.00	91.63	134.26 MWD	7,556.11	5,747.12	5,769.97	-4,903.17	3,041.62	1.58	-0.46	1.51	7,040.22
13,649.00	91.57	133.79 MWD	7,553.49	5,839.91	5,861.12	-4,968.47	3,109.18	0.5	-0.06	-0.5	7,134.18
13,743.00	91.79	134.31 MWD	7,550.73	5,932.71	5,952.37	-5,033.80	3,176.71	0.6	0.23	0.55	7,228.14
13,837.00	91.78	134.1 MWD	7,547.81	6,025.53	6,043.75	-5,099.31	3,244.06	0.22	-0.01	-0.22	7,322.09
13,931.00	91.72	134.16 MWD	7,544.93	6,118.34	6,135.19	-5,164.73	3,311.50	0.09	-0.06	0.06	7,416.05
14,025.00	91.94	134.06 MWD	7,541.93	6,211.15	6,226.68	-5,230.13	3,378.96	0.26	0.23	-0.11	7,510.00
14,119.00	91.75	135.61 MWD	7,538.91	6,304.12	6,318.51	-5,296.37	3,445.58	1.66	-0.2	1.65	7,603.95
14,213.00	91.94	133.67 MWD	7,535.88	6,397.05	6,410.32	-5,362.38	3,512.43	2.07	0.2	-2.06	7,697.90
14,307.00	92.43	133.17 MWD	7,532.30	6,489.65	6,501.75	-5,426.94	3,580.65	0.74	0.52	-0.53	7,791.83
14,401.00	92.4	130.65 MWD	7,528.33	6,581.77	6,592.64	-5,489.67	3,650.54	2.68	-0.03	-2.68	7,885.74
14,495.00	91.78	130.02 MWD	7,524.91	6,673.39	6,682.97	-5,550.47	3,722.15	0.94	-0.66	-0.67	7,979.67
14,589.00	91.88	131.37 MWD	7,521.90	6,765.15	6,773.57	-5,611.73	3,793.38	1.44	0.11	1.44	8,073.62
14,683.00	91.91	133.59 MWD	7,518.80	6,857.49	6,864.96	-5,675.17	3,862.66	2.36	0.03	2.36	8,167.57
14,777.00	91.45	133.27 MWD	7,516.04	6,950.12	6,956.78	-5,739.76	3,930.90	0.6	-0.49	-0.34	8,261.53
14,871.00	91.42	132.16 MWD	7,513.69	7,042.55	7,048.42	-5,803.51	3,999.94	1.18	-0.03	-1.18	8,355.49
14,964.00	91.42	131.42 MWD	7,511.38	7,133.72	7,138.80	-5,865.46	4,069.26	0.8	0	-0.8	8,448.47
15,058.00	91.35	130.86 MWD	7,509.11	7,225.66	7,229.98	-5,927.29	4,140.03	0.6	-0.07	-0.6	8,542.44
15,152.00	91.94	130.36 MWD	7,506.41	7,317.40	7,321.00	-5,988.45	4,211.36	0.82	0.63	-0.53	8,636.40
15,246.00	91.91	130.75 MWD	7,503.25	7,409.11	7,412.06	-6,049.53	4,282.74	0.42	-0.03	0.41	8,730.35
15,340.00	91.82	130.31 MWD	7,500.19	7,500.81	7,503.19	-6,110.58	4,354.15	0.48	-0.1	-0.47	8,824.30
15,433.00	91.48	130.58 MWD	7,497.52	7,591.52	7,593.39	-6,170.89	4,424.89	0.47	-0.37	0.29	8,917.26
15,527.00	91.54	132.59 MWD	7,495.04	7,683.60	7,685.05	-6,233.25	4,495.17	2.14	0.06	2.14	9,011.22
15,621.00	91.51	133.78 MWD	7,492.54	7,776.16	7,777.31	-6,297.56	4,563.69	1.27	-0.03	1.27	9,105.18
15,715.00	91.48	135.73 MWD	7,490.08	7,869.13	7,870.05	-6,363.72	4,630.41	2.07	-0.03	2.07	9,199.15
15,809.00	91.26	136.53 MWD	7,487.84	7,962.41	7,963.15	-6,431.46	4,695.54	0.88	-0.23	0.85	9,293.12
15,903.00	91.2	136.17 MWD	7,485.82	8,055.74	8,056.33	-6,499.46	4,760.41	0.39	-0.06	-0.38	9,387.10
15,997.00	91.29	133.39 MWD	7,483.78	8,148.73	8,149.16	-6,565.65	4,827.11	2.96	0.1	-2.96	9,481.07
16,091.00	91.23	131.22 MWD	7,481.71	8,241.04	8,241.31	-6,628.90	4,896.61	2.31	-0.06	-2.31	9,575.04
16,185.00	91.26	131.56 MWD	7,479.67	8,333.07	8,333.20	-6,691.04	4,967.11	0.36	0.03	0.36	9,669.02
16,279.00	90.46	130.95 MWD	7,478.26	8,425.06	8,425.10	-6,753.02	5,037.77	1.07	-0.85	-0.65	9,763.00
16,373.00	90.62	131.21 MWD	7,477.37	8,517.00	8,517.00	-6,814.78	5,108.62	0.32	0.17	0.28	9,857.00
16,389.00	90.71	131.22 MWD	7,477.18	8,532.65	8,532.65	-6,825.32	5,120.66	0.57	0.56	0.06	9,873.00
16,414.00	90.71	131.22 MWD	7,476.87	8,557.12	8,557.12	-6,841.80	5,139.46	0	0	0	9,898.00

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