| Directional Survey Calculations | Measured Depth (ft) | Sub-Sea Incl. (deg) | Vertical Azim. (ft) | True Vert Depth (ft) | Northings (+) Southings (-) (ft) | Eastings (+) Westings (-) (ft) | Vert Section (ft) | DLS deg/100' (deg) | FNL | FSL | FWL | FEL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SHL | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5074 | 200 | 3318 | 1983 |
| BHL | 9140 | 92.07 | 0.58 | 4721.53 | 4692.12 | -164.84 | 4694.75 | 0.33 | 335 | 4894 | 3268 | 1933 |
| Miss Entry | 4940 | 61.53 | 357.22 | 4735.72 | 554.98 | -39.41 | 556.20 | 11.05 | 4519 | 756 | 3292 | 1997 |
| Top Perf | 4964 | 64.28 | 357.33 | 4746.67 | 576.30 | -40.42 | 577.55 | 11.41 | 4498 | 777 | 3291 | 1997 |
| Bottom Perf | 9022 | 92.50 | 0.91 | 4724.55 | 4618.20 | -165.86 | 4620.95 | 1.92 | 455 | 4820 | 3265 | 1937 |

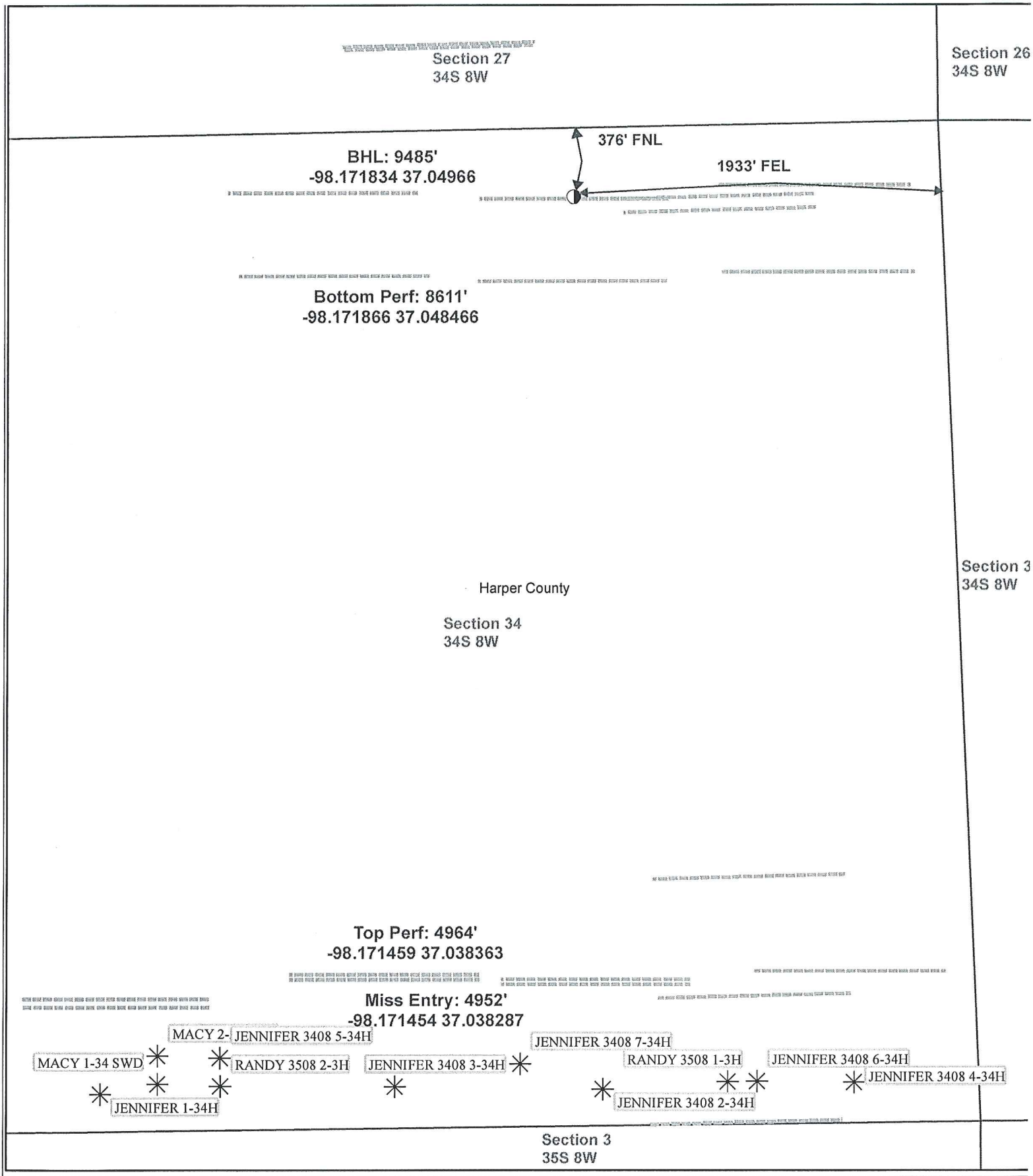
| Survey Points | | X | Y |
|---|---|---|---|
| | NW Corner XY Coord | 2092604 | 139968 |
| | SW Corner XY Coord | 2092733 | 134692 |
| | NE Corner XY Coord | 2097795 | 140014 |
| | SE Corner XY Coord | 2098036 | 134743 |

| | X | Y |
|---|---|---|
| Surface XY | 2096045 | 134924 |

| | m |
|---|---|
| North Line slope | 0.0088615 |
| East Line slope | -0.0457219 |
| South Line slope | 0.0096172 |
| West Line slope | -0.0244503 |

| | Measured Depth (ft) | Sub-Sea Incl. (deg) | Vertical Azim. (ft) | True Vert Depth (ft) | Northings (+) Southings (-) (ft) | Eastings (+) Westings (-) (ft) | Vert Section (ft) | DLS deg/100' (deg) | FNL | FSL | FWL | FEL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0 | 5074 | 200 | 3318 | 1983 |
| | 15 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 5074 | 200 | 3318 | 1983 |
| | 250 | 0.75 | 318.36 | 249.99329 | 1.1 | -1.0 | 1.2 | 0.32 | 5073 | 201 | 3317 | 1984 |
| | 500 | 1 | 318.36 | 499.96354 | 4.0 | -3.6 | 4.2 | 0.10 | 5070 | 204 | 3314 | 1986 |
| | 743 | 0.75 | 318.36 | 742.93463 | 6.8 | -6.0 | 7.0 | 0.10 | 5068 | 207 | 3312 | 1988 |
| | 820 | 0.29 | 318.36 | 819.93125 | 7.3 | -6.5 | 7.6 | 0.60 | 5067 | 208 | 3311 | 1989 |
| | 1004 | 0.15 | 211.17 | 1003.9304 | 7.4 | -6.9 | 7.7 | 0.20 | 5067 | 208 | 3311 | 1989 |
| | 1096 | 0.09 | 163.77 | 1095.9302 | 7.3 | -7.0 | 7.6 | 0.12 | 5067 | 207 | 3311 | 1989 |
| | 1187 | 0.09 | 231.6 | 1186.93 | 7.2 | -7.0 | 7.5 | 0.11 | 5067 | 207 | 3311 | 1989 |
| | 1279 | 0.28 | 180.27 | 1278.9294 | 6.9 | -7.1 | 7.2 | 0.25 | 5068 | 207 | 3311 | 1989 |
| | 1371 | 0.15 | 174.8 | 1370.9 | 6.5 | -7.0 | 6.9 | 0.14 | 5068 | 207 | 3311 | 1989 |
| | 1463 | 0.31 | 106.63 | 1462.9 | 6.3 | -6.8 | 6.7 | 0.32 | 5068 | 207 | 3311 | 1989 |
| | 1559 | 0.47 | 105.63 | 1558.9 | 6.2 | -6.2 | 6.4 | 0.17 | 5068 | 206 | 3312 | 1989 |
| | 1650 | 0.07 | 82.62 | 1649.9 | 6.1 | -5.8 | 6.3 | 0.45 | 5068 | 206 | 3312 | 1988 |
| | 1742 | 0.17 | 356.96 | 1741.9 | 6.2 | -5.7 | 6.5 | 0.19 | 5068 | 206 | 3312 | 1988 |
| | 1836 | 0.2 | 329.55 | 1835.9 | 6.5 | -5.8 | 6.8 | 0.10 | 5068 | 207 | 3312 | 1988 |
| | 1931 | 0.1 | 208.53 | 1930.9 | 6.6 | -5.9 | 6.8 | 0.28 | 5068 | 207 | 3312 | 1988 |
| | 2025 | 0.41 | 45.29 | 2024.9 | 6.7 | -5.7 | 7.0 | 0.54 | 5068 | 207 | 3312 | 1988 |
| | 2120 | 0.37 | 344.31 | 2119.9 | 7.3 | -5.6 | 7.5 | 0.42 | 5067 | 207 | 3312 | 1988 |
| | 2215 | 0.41 | 57.44 | 2214.9 | 7.7 | -5.4 | 8.0 | 0.49 | 5067 | 208 | 3313 | 1988 |
| | 2310 | 0.33 | 33.55 | 2309.9 | 8.2 | -4.9 | 8.4 | 0.18 | 5066 | 208 | 3313 | 1987 |
| | 2405 | 0.06 | 123.56 | 2404.9 | 8.4 | -4.7 | 8.6 | 0.35 | 5066 | 209 | 3313 | 1987 |
| | 2500 | 0.34 | 315.71 | 2499.9 | 8.5 | -4.9 | 8.7 | 0.42 | 5066 | 209 | 3313 | 1987 |
| | 2594 | 0.22 | 334.35 | 2593.9 | 8.9 | -5.2 | 9.1 | 0.16 | 5066 | 209 | 3313 | 1987 |
| | 2689 | 0.25 | 40.28 | 2688.9 | 9.2 | -5.1 | 9.4 | 0.27 | 5065 | 209 | 3313 | 1987 |
| | 2784 | 0.06 | 75.33 | 2783.9 | 9.4 | -4.9 | 9.6 | 0.21 | 5065 | 210 | 3313 | 1987 |
| | 2879 | 0.19 | 196.3 | 2878.9 | 9.2 | -4.9 | 9.5 | 0.24 | 5065 | 209 | 3313 | 1987 |
| | 2974 | 0.25 | 54.54 | 2973.9 | 9.2 | -4.8 | 9.4 | 0.44 | 5065 | 209 | 3313 | 1987 |
| | 3069 | 0.23 | 67.51 | 3068.9 | 9.4 | -4.4 | 9.6 | 0.06 | 5065 | 210 | 3313 | 1987 |
| | 3164 | 0.46 | 71.48 | 3163.9 | 9.6 | -3.9 | 9.8 | 0.24 | 5065 | 210 | 3314 | 1986 |
| | 3258 | 0.37 | 164.88 | 3257.9 | 9.4 | -3.5 | 9.6 | 0.65 | 5065 | 210 | 3314 | 1986 |
| | 3544 | 0.17 | 311.23 | 3543.9 | 8.8 | -3.6 | 9.0 | 0.18 | 5066 | 209 | 3314 | 1986 |
| | 3638 | 0.4 | 263.16 | 3637.9 | 8.9 | -4.0 | 9.0 | 0.33 | 5066 | 209 | 3314 | 1986 |
| Top of Tangent @ 4683' | 3733 | 0.42 | 243.22 | 3732.9 | 8.7 | -4.6 | 8.9 | 0.15 | 5066 | 209 | 3313 | 1987 |
| | 3828 | 0.69 | 249.14 | 3827.9 | 8.3 | -5.5 | 8.6 | 0.29 | 5066 | 209 | 3312 | 1988 |
| | 3923 | 4.13 | 349.42 | 3922.8 | 11.5 | -6.6 | 11.8 | 4.53 | 5063 | 212 | 3311 | 1989 |
| | 3955 | 6.24 | 354.03 | 3954.7 | 14.3 | -7.0 | 14.6 | 6.72 | 5060 | 215 | 3311 | 1989 |
| | 3986 | 8.65 | 357.58 | 3985.4 | 18.3 | -7.3 | 18.7 | 7.91 | 5056 | 219 | 3311 | 1989 |
| Btm of Tangent @ 4841' | 4018 | 10.89 | 359.35 | 4017.0 | 23.8 | -7.4 | 24.1 | 7.06 | 5051 | 224 | 3311 | 1989 |
| | 4050 | 12.07 | 358.46 | 4048.3 | 30.1 | -7.6 | 30.5 | 3.73 | 5044 | 230 | 3311 | 1989 |
| | 4081 | 13.34 | 358.22 | 4078.6 | 37.0 | -7.8 | 37.3 | 4.10 | 5037 | 237 | 3311 | 1989 |
| | 4113 | 14.2 | 358.72 | 4109.6 | 44.6 | -8.0 | 44.9 | 2.71 | 5030 | 245 | 3311 | 1989 |
| | 4144 | 16.6 | 356.98 | 4139.5 | 52.8 | -8.3 | 53.1 | 7.88 | 5022 | 253 | 3311 | 1989 |
| | 4176 | 20.01 | 354.69 | 4169.9 | 62.8 | -9.0 | 63.2 | 10.89 | 5012 | 263 | 3310 | 1989 |
| | 4208 | 23.69 | 352.7 | 4199.6 | 74.6 | -10.3 | 75.0 | 11.73 | 5000 | 275 | 3309 | 1990 |
| | 4240 | 26.32 | 352.19 | 4228.6 | 88.1 | -12.1 | 88.5 | 8.25 | 4986 | 288 | 3308 | 1991 |
| | 4271 | 28.19 | 352.6 | 4256.1 | 102.1 | -14.0 | 102.7 | 6.06 | 4972 | 302 | 3306 | 1992 |
| | 4303 | 29.07 | 352.92 | 4284.2 | 117.3 | -15.9 | 117.9 | 2.79 | 4957 | 318 | 3305 | 1993 |
| | 4334 | 29.41 | 353.43 | 4311.3 | 132.4 | -17.7 | 133.0 | 1.36 | 4942 | 333 | 3303 | 1994 |
| | 4366 | 30.2 | 354.94 | 4339.1 | 148.2 | -19.3 | 148.9 | 3.41 | 4926 | 349 | 3302 | 1995 |
| | 4398 | 31.75 | 357.05 | 4366.5 | 164.6 | -20.5 | 165.4 | 5.91 | 4910 | 365 | 3301 | 1996 |
| | 4430 | 33.96 | 359 | 4393.4 | 182.0 | -21.1 | 182.7 | 7.66 | 4892 | 382 | 3301 | 1995 |
| | 4461 | 36.02 | 359.6 | 4418.8 | 199.7 | -21.3 | 200.5 | 6.74 | 4875 | 400 | 3301 | 1995 |
| | 4493 | 38.88 | 359.8 | 4444.2 | 219.2 | -21.4 | 219.9 | 8.95 | 4855 | 420 | 3302 | 1994 |
| | 4525 | 40.42 | 359.08 | 4468.8 | 239.6 | -21.6 | 240.3 | 5.02 | 4835 | 440 | 3302 | 1993 |
| | 4556 | 42.08 | 358.53 | 4492.1 | 260.0 | -22.0 | 260.8 | 5.48 | 4814 | 460 | 3302 | 1993 |
| | 4588 | 44.79 | 358.01 | 4515.3 | 282.0 | -22.7 | 282.8 | 8.54 | 4792 | 482 | 3302 | 1993 |
| | 4619 | 47.03 | 357.42 | 4536.9 | 304.3 | -23.6 | 305.0 | 7.35 | 4770 | 505 | 3302 | 1992 |
| | 4683 | 49.65 | 356.55 | 4579.5 | 352.0 | -26.1 | 352.9 | 4.22 | 4722 | 552 | 3300 | 1993 |
| | 4730 | 49.47 | 356.06 | 4609.9 | 387.7 | -28.4 | 388.6 | 0.88 | 4687 | 588 | 3299 | 1993 |
| | 4778 | 50.07 | 355.94 | 4640.9 | 424.3 | -31.0 | 425.2 | 1.26 | 4650 | 625 | 3297 | 1994 |
| | 4841 | 51.31 | 355.62 | 4680.9 | 472.9 | -34.6 | 474.0 | 2.01 | 4601 | 673 | 3295 | 1996 |
| | 4872 | 54.19 | 356.35 | 4699.6 | 497.5 | -36.3 | 498.6 | 9.48 | 4577 | 698 | 3294 | 1996 |
| | 4904 | 57.56 | 356.92 | 4717.6 | 523.9 | -37.8 | 525.1 | 10.63 | 4550 | 724 | 3293 | 1997 |
| | 4936 | 61.07 | 357.2 | 4733.9 | 551.4 | -39.2 | 552.6 | 10.99 | 4523 | 752 | 3292 | 1997 |

| Measured Depth (ft) | Sub-Sea Incl. (deg) | Vertical Azim. (ft) | True Vert Depth (ft) | Northings (+) Southings (-) (ft) | Eastings (+) Westings (-) (ft) | Vert Section (ft) | DLS deg/100' (deg) | FNL | FSL | FWL | FEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4967 | 64.62 | 357.34 | 4748.0 | 579.0 | -40.6 | 580.2 | 11.46 | 4495 | 780 | 3291 | 1997 |
| 4999 | 68.28 | 356.64 | 4760.8 | 608.3 | -42.1 | 609.5 | 11.61 | 4466 | 809 | 3290 | 1997 |
| 5030 | 70.62 | 356.13 | 4771.7 | 637.2 | -43.9 | 638.6 | 7.70 | 4437 | 838 | 3289 | 1998 |
| 5062 | 72.36 | 356.15 | 4781.9 | 667.5 | -46.0 | 668.9 | 5.44 | 4407 | 868 | 3288 | 1998 |
| 5093 | 74.6 | 355.6 | 4790.7 | 697.1 | -48.1 | 698.6 | 7.42 | 4377 | 898 | 3287 | 1999 |
| 5125 | 77.47 | 355.32 | 4798.4 | 728.1 | -50.6 | 729.6 | 9.01 | 4346 | 929 | 3285 | 2000 |
| 5157 | 79.57 | 355.03 | 4804.8 | 759.3 | -53.2 | 761.0 | 6.62 | 4315 | 960 | 3283 | 2001 |
| 5188 | 82.1 | 355.04 | 4809.7 | 789.8 | -55.9 | 791.6 | 8.16 | 4284 | 991 | 3281 | 2002 |
| 5220 | 84.2 | 354.96 | 4813.5 | 821.5 | -58.6 | 823.3 | 6.57 | 4252 | 1022 | 3279 | 2004 |
| 5252 | 86.8 | 354.67 | 4816.0 | 853.2 | -61.5 | 855.2 | 8.18 | 4221 | 1054 | 3277 | 2005 |
| 5312 | 89.54 | 355.28 | 4817.9 | 913.0 | -66.8 | 915.1 | 4.68 | 4161 | 1114 | 3273 | 2008 |
| 5407 | 90.25 | 355.69 | 4818.1 | 1007.7 | -74.2 | 1010.0 | 0.86 | 4066 | 1209 | 3268 | 2011 |
| 5470 | 91.3 | 354.86 | 4817.3 | 1070.5 | -79.4 | 1073.0 | 2.12 | 4003 | 1271 | 3264 | 2013 |
| 5533 | 91.77 | 358.26 | 4815.6 | 1133.3 | -83.2 | 1135.9 | 5.45 | 3940 | 1334 | 3262 | 2014 |
| 5627 | 91.68 | 357.1 | 4812.7 | 1227.2 | -87.0 | 1229.9 | 1.24 | 3847 | 1428 | 3261 | 2014 |
| 5722 | 91.76 | 359.29 | 4809.9 | 1322.1 | -90.0 | 1324.8 | 2.31 | 3752 | 1523 | 3260 | 2012 |
| 5817 | 91.11 | 357.18 | 4807.5 | 1417.0 | -92.9 | 1419.8 | 2.32 | 3657 | 1618 | 3259 | 2011 |
| 5912 | 91.38 | 355.51 | 4805.5 | 1511.8 | -99.0 | 1514.7 | 1.78 | 3562 | 1713 | 3256 | 2013 |
| 6007 | 90.81 | 354.1 | 4803.6 | 1606.4 | -107.6 | 1609.6 | 1.60 | 3467 | 1808 | 3249 | 2017 |
| 6102 | 90.25 | 353.14 | 4802.8 | 1700.8 | -118.1 | 1704.4 | 1.17 | 3373 | 1902 | 3241 | 2023 |
| 6197 | 91.2 | 355.27 | 4801.6 | 1795.3 | -127.7 | 1799.3 | 2.45 | 3278 | 1997 | 3234 | 2028 |
| 6291 | 90.59 | 358.38 | 4800.1 | 1889.1 | -132.9 | 1893.2 | 3.37 | 3184 | 2091 | 3231 | 2029 |
| 6386 | 91.42 | 0.01 | 4798.4 | 1984.1 | -134.3 | 1988.2 | 1.93 | 3089 | 2186 | 3232 | 2026 |
| 6481 | 91.11 | 0.27 | 4796.3 | 2079.1 | -134.0 | 2083.0 | 0.43 | 2994 | 2281 | 3234 | 2022 |
| 6576 | 90.83 | 0.16 | 4794.7 | 2174.1 | -133.7 | 2177.9 | 0.32 | 2899 | 2375 | 3237 | 2017 |
| 6671 | 91.52 | 359.27 | 4792.8 | 2269.0 | -134.1 | 2272.8 | 1.19 | 2804 | 2470 | 3239 | 2013 |
| 6765 | 92.03 | 358.71 | 4789.9 | 2363.0 | -135.8 | 2366.7 | 0.81 | 2710 | 2564 | 3240 | 2010 |
| 6860 | 91.62 | 358.37 | 4786.8 | 2457.9 | -138.2 | 2461.6 | 0.56 | 2615 | 2659 | 3240 | 2009 |
| 6955 | 90.93 | 359 | 4784.7 | 2552.8 | -140.4 | 2556.6 | 0.98 | 2520 | 2754 | 3240 | 2006 |
| 7050 | 92.67 | 359.9 | 4781.7 | 2647.8 | -141.3 | 2651.5 | 2.06 | 2425 | 2849 | 3241 | 2003 |
| 7145 | 92.04 | 357.69 | 4777.8 | 2742.7 | -143.3 | 2746.4 | 2.42 | 2331 | 2944 | 3241 | 2001 |
| 7240 | 92.19 | 358.42 | 4774.3 | 2837.6 | -146.5 | 2841.3 | 0.78 | 2236 | 3039 | 3241 | 2000 |
| 7334 | 92.07 | 358.24 | 4770.8 | 2931.5 | -149.3 | 2935.2 | 0.23 | 2142 | 3133 | 3240 | 1998 |
| 7429 | 90.96 | 357.39 | 4768.3 | 3026.4 | -152.9 | 3030.2 | 1.47 | 2047 | 3228 | 3239 | 1997 |
| 7524 | 90.09 | 357.75 | 4767.4 | 3121.3 | -156.9 | 3125.2 | 0.99 | 1952 | 3323 | 3237 | 1997 |
| 7619 | 92.26 | 359.31 | 4765.5 | 3216.2 | -159.4 | 3220.1 | 2.81 | 1857 | 3418 | 3237 | 1995 |
| 7714 | 91.58 | 358.78 | 4762.3 | 3311.1 | -160.9 | 3315.0 | 0.91 | 1762 | 3513 | 3238 | 1992 |
| 7809 | 90.52 | 358.81 | 4760.6 | 3406.1 | -162.9 | 3410.0 | 1.12 | 1667 | 3608 | 3238 | 1990 |
| 7904 | 90.58 | 359.37 | 4759.7 | 3501.1 | -164.4 | 3504.9 | 0.59 | 1572 | 3703 | 3239 | 1987 |
| 7999 | 89.63 | 358.67 | 4759.5 | 3596.1 | -166.1 | 3599.9 | 1.24 | 1477 | 3798 | 3240 | 1984 |
| 8093 | 91.23 | 358.67 | 4758.8 | 3690.0 | -168.2 | 3693.9 | 1.70 | 1383 | 3892 | 3240 | 1982 |
| 8188 | 92.71 | 359.12 | 4755.5 | 3785.0 | -170.1 | 3788.8 | 1.63 | 1288 | 3987 | 3240 | 1980 |
| 8282 | 93.24 | 359.64 | 4750.6 | 3878.8 | -171.1 | 3882.6 | 0.79 | 1194 | 4081 | 3241 | 1976 |
| 8377 | 92.69 | 359.59 | 4745.7 | 3973.7 | -171.7 | 3977.4 | 0.58 | 1099 | 4175 | 3243 | 1973 |
| 8472 | 91.23 | 359.27 | 4742.5 | 4068.6 | -172.7 | 4072.3 | 1.57 | 1004 | 4270 | 3244 | 1969 |
| 8566 | 91.42 | 0.49 | 4740.3 | 4162.6 | -172.9 | 4166.2 | 1.31 | 910 | 4364 | 3247 | 1965 |
| 8661 | 90.37 | 359.91 | 4738.8 | 4257.6 | -172.5 | 4261.0 | 1.26 | 815 | 4459 | 3249 | 1961 |
| 8756 | 91.7 | 1.35 | 4737.1 | 4352.6 | -171.5 | 4355.9 | 2.06 | 720 | 4554 | 3253 | 1955 |
| 8850 | 92.45 | 0.86 | 4733.7 | 4446.5 | -169.7 | 4449.6 | 0.95 | 627 | 4648 | 3257 | 1949 |
| 8945 | 93.76 | 1.76 | 4728.6 | 4541.3 | -167.5 | 4544.2 | 1.67 | 532 | 4743 | 3261 | 1943 |
| 9040 | 92.2 | 0.71 | 4723.6 | 4636.2 | -165.5 | 4638.9 | 1.98 | 437 | 4838 | 3266 | 1936 |
| 9096.00 | 92.07 | 0.58 | 4721.5 | 4692.1 | -164.8 | 4694.8 | 0.33 | 381 | 4894 | 3268 | 1933 |
| 9140.00 | 92.07 | 0.58 | 4721.5 | 4692.1 | -164.8 | 4694.8 | 0.33 | 335 | 4894 | 3268 | 1933 |




SANDRIDGE
THE POWER OF US

Actual BH Location

SandRidge Wells

Perf

Sections

**Actual Bottom-Hole Location of Jennifer 3408 2-34H**
**T&R: 34S 8W**
**Section: 34, 1933' FEL & 376' FNL**
**-98.171834 37.04966**

1 in = 667 ft

0 500 1,000 2,000 Feet

N

| | |
|---|---|
| Draftsman: Dory Deines | Draft Date: 3/26/2015 |
| Drawing Name/Number: Addendum_Jennifer 3408 2-34H.mxd | |
| Coordinate System: NAD 1927 State Plane Kansas South FIPS: 1502 | |

EDGE SERVICES
580-254-3216
Woodward, OK

# INVOICE

| DATE | INVOICE # |
|---|---|
| 10/29/2012 | 3539 |

| BILL TO |
|---|
| SANDRIDGE ENERGY, INC.<br>ATTN: PURCHASING MANAGER<br>123 ROBERT S. KERR AVENUE<br>OKLAHOMA CITY, OK 73102 |

| REMIT TO |
|---|
| EDGE SERVICES, INC.<br>BILLING DEPARTMENT<br>PO BOX 4201<br>OKLAHOMA CITY, OK 73113 |

| COUNTY | STARTING D... | WORK ORDER | RIG NUMBER | LEASE NAME | Terms |
|---|---|---|---|---|---|
| HARPER, KS | 10/27/2012 | 2893 | UNIT 310 | JENNIFER 2-34H | Due on rec... |

| Description |
|---|
| DRILLED 90' OF 30" CONDUCTOR HOLE<br>DRILLED 6' OF 76" HOLE<br>FURNISHED AND SET 6' X 6' TINHORN CELLAR<br>FURNISHED 90' OF 20" CONDUCTOR PIPE<br>FURNISHED 1 LOAD(S) MUD<br>FURNISHED WELDER AND MATERIALS<br>FURNISHED 11 YARDS OF GRADE A CEMENT<br>FURNISHED GROUT PUMP<br>DRILL RAT AND MOUSE HOLES<br>FURNISHED 80' OF 14" CONDUCTOR PIPE<br><br>TOTAL BID $ 17,000.00 |

| | |
|---|---|
| Sales Tax (6.3%) | $295.48 |
| **TOTAL** | $17,295.48 |

HALLIBURTON

# Cementing Job Summary

*The Road to Excellence Starts with Safety*

| | | | |
|---|---|---|---|
| **Sold To #:** 305021 | **Ship To #:** 2961787 | **Quote #:** | **Sales Order #:** 9943714 |
| **Customer:** SANDRIDGE ENERGY INC EBUSINESS | | **Customer Rep:** Webster, John | |
| **Well Name:** Jennifer 3408 | **Well #:** 2-34H | | **API/UWI #:** 15-077-21881 |
| **Field:** | **City (SAP):** WALDRON | **County/Parish:** Harper | **State:** Kansas |
| **Legal Description:** Section 34 Township 34S Range 8W | | | |
| **Contractor:** UNIT | **Rig/Platform Name/Num:** 310 | | |
| **Job Purpose:** Cement Surface Casing | | | |
| **Well Type:** Development Well | **Job Type:** Cement Surface Casing | | |
| **Sales Person:** NGUYEN, VINH | **Srvc Supervisor:** OLSON, ERIC | **MBU ID Emp #:** 455339 | |

## Job Personnel

| HES Emp Name | Exp Hrs | Emp # | HES Emp Name | Exp Hrs | Emp # | HES Emp Name | Exp Hrs | Emp # |
|---|---|---|---|---|---|---|---|---|
| OLSON, ERIC Eugene | 9 | 455339 | TERRY, STACY Glen | 6 | 373291 | VAN DER HORST, DANIEL Scott | 9 | 515877 |

## Equipment

| HES Unit # | Distance-1 way | HES Unit # | Distance-1 way | HES Unit # | Distance-1 way | HES Unit # | Distance-1 way |
|---|---|---|---|---|---|---|---|
| 10025029 | 100 mile | 10714264C | 100 mile | 10804565 | 100 mile | 10951223 | 100 mile |
| 10994449 | 100 mile | | | | | | |

## Job Hours

| Date | On Location Hours | Operating Hours | Date | On Location Hours | Operating Hours | Date | On Location Hours | Operating Hours |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| TOTAL | | | *Total is the sum of each column separately* | | | | | |

## Job

| | | | | | |
|---|---|---|---|---|---|
| **Formation Name** | | | | | |
| **Formation Depth (MD)** | **Top** | | **Bottom** | | |
| **Form Type** | | **BHST** | | | |
| **Job depth MD** | 743. ft | **Job Depth TVD** | 743. ft | | |
| **Water Depth** | | **Wk Ht Above Floor** | | | |
| **Perforation Depth (MD)** | **From** | | **To** | | |

## Job Times

| | Date | Time | Time Zone |
|---|---|---|---|
| **Called Out** | 04 - Nov - 2012 | 05:00 | CST |
| **On Location** | 04 - Nov - 2012 | 08:00 | CST |
| **Job Started** | 04 - Nov - 2012 | 15:36 | CST |
| **Job Completed** | 04 - Nov - 2012 | 16:32 | GMT |
| **Departed Loc** | 04 - Nov - 2012 | 17:30 | CST |

## Well Data

| Description | New / Used | Max pressure psig | Size in | ID in | Weight lbm/ft | Thread | Grade | Top MD ft | Bottom MD ft | Top TVD ft | Bottom TVD ft |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 12.25" Open Hole | | | | 12.25 | | | | 80. | 755. | | |
| 12.25" Open Hole- Lower | | | | 12.25 | | | | 495. | 743. | | |
| 9.625" Surface Casing | Unknown | | 9.625 | 8.921 | 36. | LTC | J-55 | . | 743. | | |
| Preset Conductor | Unknown | | 20. | 19.124 | 94. | | | . | 80. | | |

## Tools and Accessories

| Type | Size | Qty | Make | Depth | Type | Size | Qty | Make | Depth | Type | Size | Qty | Make |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Guide Shoe | | | | | Packer | | | | | Top Plug | 9.625 | 1 | wiper |
| Float Shoe | | | | | Bridge Plug | | | | | Bottom Plug | | | |
| Float Collar | | | | | Retainer | | | | | SSR plug set | | | |
| Insert Float | | | | | | | | | | Plug Container | | | |
| Stage Tool | | | | | | | | | | Centralizers | | | |

## Miscellaneous Materials

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gelling Agt | | Conc | | Surfactant | | Conc | | Acid Type | | Qty | | Conc | % |
| Treatment Fld | | Conc | | Inhibitor | | Conc | | Sand Type | | Size | | Qty | |

## Fluid Data

**Stage/Plug #: 1**

HALLIBURTON

# *Cementing Job Summary*

| Fluid # | Stage Type | Fluid Name | Qty | Qty uom | Mixing Density lbm/gal | Yield ft3/sk | Mix Fluid Gal/sk | Rate bbl/min | Total Mix Fluid Gal/sk |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Fresh Water | | 10.00 | bbl | 8.33 | .0 | .0 | 4 | |
| 2 | HLC STANDARD | EXTENDACEM (TM) SYSTEM (452981) | 210.0 | sacks | 12.4 | 2.11 | 11.64 | 4 | 11.64 |
| | 3 % | CALCIUM CHLORIDE, PELLET, 50 LB (101509387) | | | | | | | |
| | 0.25 lbm | POLY-E-FLAKE (101216940) | | | | | | | |
| | 11.637 Gal | FRESH WATER | | | | | | | |
| 3 | STANDARD | SWIFTCEM (TM) SYSTEM (452990) | 190.0 | sacks | 15.6 | 1.2 | 5.32 | 5 | 5.32 |
| | 2 % | CALCIUM CHLORIDE, PELLET, 50 LB (101509387) | | | | | | | |
| | 0.125 lbm | POLY-E-FLAKE (101216940) | | | | | | | |
| | 5.319 Gal | FRESH WATER | | | | | | | |
| 4 | Displacement | | 54.00 | bbl | 8.33 | .0 | .0 | 5 | |

| Calculated Values | | Pressures | | Volumes | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Displacement | 54 | Shut In: Instant | | Lost Returns | no | Cement Slurry | 120 | Pad | |
| Top Of Cement | 0 ft | 5 Min | | Cement Returns | 54 | Actual Displacement | 54 | Treatment | |
| Frac Gradient | | 15 Min | | Spacers | 64 | Load and Breakdown | | Total Job | 184 |

| Rates | | | | | | | |
|---|---|---|---|---|---|---|---|
| Circulating | | Mixing | | Displacement | 54 | Avg. Job | |
| Cement Left In Pipe | Amount | 46 ft | Reason | Shoe Joint | | | |
| Frac Ring # 1 @ | ID | | Frac ring # 2 @ | ID | | Frac Ring # 3 @ | ID | | Frac Ring # 4 @ | ID | |

| The Information Stated Herein Is Correct | Customer Representative Signature |
|---|---|

# HALLIBURTON *Cementing Job Summary*

*The Road to Excellence Starts with Safety*

| | | | |
|---|---|---|---|
| **Sold To #:** 305021 | **Ship To #:** 2961787 | **Quote #:** | **Sales Order #:** 9956187 |
| **Customer:** SANDRIDGE ENERGY INC EBUSINESS | | **Customer Rep:** Webster, John | |
| **Well Name:** Jennifer 3408 | **Well #:** 2-34H | | **API/UWI #:** 15-077-21881 |
| **Field:** | **City (SAP):** WALDRON | **County/Parish:** Harper | **State:** Kansas |
| **Legal Description:** Section 34 Township 34S Range 8W | | | |
| **Contractor:** Unit Drilling * | **Rig/Platform Name/Num:** 310 | | |
| **Job Purpose:** Cement Intermediate Casing | | | |
| **Well Type:** Development Well | **Job Type:** Cement Intermediate Casing | | |
| **Sales Person:** NGUYEN, VINH | **Srvc Supervisor:** WALTON, SCOTTY | **MBU ID Emp #:** 478229 | |

**Job Personnel**

| HES Emp Name | Exp Hrs | Emp # | HES Emp Name | Exp Hrs | Emp # | HES Emp Name | Exp Hrs | Emp # |
|---|---|---|---|---|---|---|---|---|
| OSBORN, JAMES David | 10 | 518950 | RUSH, BENJAMIN Maxwell | 10 | 522278 | WALTON, SCOTTY Dwayne | 10 | 478229 |

**Equipment**

| HES Unit # | Distance-1 way | HES Unit # | Distance-1 way | HES Unit # | Distance-1 way | HES Unit # | Distance-1 way |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

**Job Hours**

| Date | On Location Hours | Operating Hours | Date | On Location Hours | Operating Hours | Date | On Location Hours | Operating Hours |
|---|---|---|---|---|---|---|---|---|
| 11-9-12 | 10 | 2 | | | | | | |
| TOTAL | | | *Total is the sum of each column separately* | | | | | |

**Job**

| | | | | | |
|---|---|---|---|---|---|
| **Formation Name** | | | | | |
| **Formation Depth (MD)** | **Top** | | **Bottom** | | |
| **Form Type** | | **BHST** | | | |
| **Job depth MD** | 5225. ft | **Job Depth TVD** | 5255. ft | | |
| **Water Depth** | | **Wk Ht Above Floor** | | | |
| **Perforation Depth (MD)** | **From** | | **To** | | |

**Job Times**

| | Date | Time | Time Zone |
|---|---|---|---|
| **Called Out** | 09 - Nov - 2012 | 09:00 | CST |
| **On Location** | 09 - Nov - 2012 | 14:00 | CST |
| **Job Started** | 09 - Nov - 2012 | 21:29 | CST |
| **Job Completed** | 09 - Nov - 2012 | 22:32 | CST |
| **Departed Loc** | 10 - Nov - 2012 | 00:00 | CST |

**Well Data**

| Description | New / Used | Max pressure psig | Size in | ID in | Weight lbm/ft | Thread | Grade | Top MD ft | Bottom MD ft | Top TVD ft | Bottom TVD ft |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 8.75" Open Hole | | | | 8.75 | | | | 765. | 5255. | | |
| 7" Intermediate Casing | Unknown | | 7. | 6.276 | 26. | LTC | P-110 | . | 5225. | | |
| 9.625" Surface Casing | Unknown | | 9.625 | 8.921 | 36. | LTC | J-55 | . | 765. | | |

**Tools and Accessories**

| Type | Size | Qty | Make | Depth | Type | Size | Qty | Make | Depth | Type | Size | Qty | Make |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Guide Shoe | | | | | Packer | | | | | Top Plug | | | |
| Float Shoe | | | | | Bridge Plug | | | | | Bottom Plug | | | |
| Float Collar | | | | | Retainer | | | | | SSR plug set | | | |
| Insert Float | | | | | | | | | | Plug Container | | | |
| Stage Tool | | | | | | | | | | Centralizers | | | |

**Miscellaneous Materials**

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gelling Agt | | Conc | | Surfactant | | Conc | | Acid Type | | Qty | | Conc | % |
| Treatment Fld | | Conc | | Inhibitor | | Conc | | Sand Type | | Size | | Qty | |

**Fluid Data**

**Stage/Plug #: 1**

| Fluid # | Stage Type | Fluid Name | Qty | Qty uom | Mixing Density lbm/gal | Yield ft3/sk | Mix Fluid Gal/sk | Rate bbl/min | Total Mix Fluid Gal/sk |
|---|---|---|---|---|---|---|---|---|---|

**Stage/Plug #: 1**

HALLIBURTON

# *Cementing Job Summary*

| Stage/Plug #: 1 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Fluid # | Stage Type | Fluid Name | Qty | Qty uom | Mixing Density lbm/gal | Yield ft3/sk | Mix Fluid Gal/sk | Rate bbl/min | Total Mix Fluid Gal/sk |
| 1 | Rig Supplied Gel Spacer | | | bbl | 8.33 | .0 | .0 | .0 | |
| 2 | 50/50 POZ STANDARD ( w/ 2% extra gel) | ECONOCEM (TM) SYSTEM (452992) | | sacks | 13.6 | 1.53 | 7.32 | | 7.32 |
| | 0.4 % | HALAD(R)-9, 50 LB (100001617) | | | | | | | |
| | 2 lbm | KOL-SEAL, BULK (100064233) | | | | | | | |
| | 2 % | BENTONITE, BULK (100003682) | | | | | | | |
| | 7.321 Gal | FRESH WATER | | | | | | | |
| 3 | Premium | HALCEM (TM) SYSTEM (452986) | | sacks | 15.6 | 1.19 | 5.08 | | 5.08 |
| | 0.4 % | HALAD(R)-9, 50 LB (100001617) | | | | | | | |
| | 2 lbm | KOL-SEAL, BULK (100064233) | | | | | | | |
| | 5.076 Gal | FRESH WATER | | | | | | | |
| 4 | Displacement | | | bbl | 8.33 | .0 | .0 | .0 | |

| Calculated Values | | Pressures | | Volumes | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Displacement | | Shut In: Instant | | Lost Returns | | Cement Slurry | | Pad | |
| Top Of Cement | | 5 Min | | Cement Returns | | Actual Displacement | | Treatment | |
| Frac Gradient | | 15 Min | | Spacers | | Load and Breakdown | | Total Job | |

| Rates | | | | | | | |
|---|---|---|---|---|---|---|---|
| Circulating | | Mixing | | Displacement | | Avg. Job | |

| Cement Left In Pipe | Amount | 84 ft | Reason | Shoe Joint |
|---|---|---|---|---|

| Frac Ring # 1 @ | | ID | | Frac ring # 2 @ | | ID | | Frac Ring # 3 @ | | ID | | Frac Ring # 4 @ | | ID | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

| The Information Stated Herein Is Correct | Customer Representative Signature |
|---|---|

# Cementing Job Summary

*The Road to Excellence Starts with Safety*

| | | | |
|---|---|---|---|
| **Sold To #:** 305021 | **Ship To #:** 2967958 | **Quote #:** | **Sales Order #:** 900079578 |
| **Customer:** SANDRIDGE ENERGY INC EBUSINESS | | **Customer Rep:** Webster, John | |
| **Well Name:** Jennifer 3408 | **Well #:** 3-34H | | **API/UWI #:** 15-077-21897 |
| **Field:** | **City (SAP):** WALDRON | **County/Parish:** Harper | **State:** Kansas |
| **Legal Description:** Section 34 Township 34S Range 8W | | | |
| **Contractor:** UNIT DRILLING | **Rig/Platform Name/Num:** 310 | | |
| **Job Purpose:** Cement Production Liner | | | |
| **Well Type:** Development Well | **Job Type:** Cement Production Liner | | |
| **Sales Person:** NGUYEN, VINH | **Srvc Supervisor:** WALTON, SCOTTY | **MBU ID Emp #:** 478229 | |

## Job Personnel

| HES Emp Name | Exp Hrs | Emp # | HES Emp Name | Exp Hrs | Emp # | HES Emp Name | Exp Hrs | Emp # |
|---|---|---|---|---|---|---|---|---|
| CRAWFORD, ANDREW B | 3 | 480612 | GILLIAM, KEVIN S | 11 | 493325 | OSBORN, JAMES David | 11 | 518950 |
| STILL, ERIC Dean | 3 | 523897 | UNDERWOOD, BILLY Dale | 3 | 159068 | WALLS, JAMES Richard | 11 | 396166 |
| WALTON, SCOTTY Dwayne | 11 | 478229 | | | | | | |

## Equipment

| HES Unit # | Distance-1 way | HES Unit # | Distance-1 way | HES Unit # | Distance-1 way | HES Unit # | Distance-1 way |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

## Job Hours

| Date | On Location Hours | Operating Hours | Date | On Location Hours | Operating Hours | Date | On Location Hours | Operating Hours |
|---|---|---|---|---|---|---|---|---|
| 12-17-12 | 11 | 2 | | | | | | |
| TOTAL | | | *Total is the sum of each column separately* | | | | | |

## Job

| | | | | | |
|---|---|---|---|---|---|
| **Formation Name** | | | | | |
| **Formation Depth (MD)** | **Top** | | **Bottom** | | |
| **Form Type** | | **BHST** | | 138 degF | |
| **Job depth MD** | 9116. ft | **Job Depth TVD** | | 5245. ft | |
| **Water Depth** | | **Wk Ht Above Floor** | | | |
| **Perforation Depth (MD)** | **From** | | **To** | | |

## Job Times

| | Date | Time | Time Zone |
|---|---|---|---|
| **Called Out** | 16 - Dec - 2012 | 22:00 | CST |
| **On Location** | 17 - Dec - 2012 | 01:30 | CST |
| **Job Started** | 17 - Dec - 2012 | 10:05 | CST |
| **Job Completed** | 17 - Dec - 2012 | 11:17 | CST |
| **Departed Loc** | 17 - Dec - 2012 | 12:30 | CST |

## Well Data

| Description | New / Used | Max pressure psig | Size in | ID in | Weight lbm/ft | Thread | Grade | Top MD ft | Bottom MD ft | Top TVD ft | Bottom TVD ft |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 6.125" Open Hole | | | | 6.125 | | | | 5245. | 9155. | | |
| 4.5" Production Liner | Unknown | | 4.5 | 4. | 11.6 | LTC | N-80 | 4801. | 9155. | | |
| 7" Intermediate Casing | Unknown | | 7. | 6.276 | 26. | LTC | P-110 | . | 5245. | | |
| 4" Drill Pipe | Unknown | | 4. | 3.34 | 14. | Unknown | | . | 4801. | | |

## Tools and Accessories

| Type | Size | Qty | Make | Depth | Type | Size | Qty | Make | Depth | Type | Size | Qty | Make |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Guide Shoe | | | | | Packer | | | | | Top Plug | | | |
| Float Shoe | | | | | Bridge Plug | | | | | Bottom Plug | | | |
| Float Collar | | | | | Retainer | | | | | SSR plug set | | | |
| Insert Float | | | | | | | | | | Plug Container | | | |
| Stage Tool | | | | | | | | | | Centralizers | | | |

## Miscellaneous Materials

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gelling Agt | | Conc | | Surfactant | | Conc | | Acid Type | | Qty | | Conc | % |
| Treatment Fld | | Conc | | Inhibitor | | Conc | | Sand Type | | Size | | Qty | |

## Fluid Data

HALLIBURTON

# *Cementing Job Summary*

| Stage/Plug #: 1 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Fluid # | Stage Type | Fluid Name | Qty | Qty uom | Mixing Density lbm/gal | Yield ft3/sk | Mix Fluid Gal/sk | Rate bbl/min | Total Mix Fluid Gal/sk |
| 1 | Rig Supplied Gel Water | | 30.00 | bbl | 8.5 | .0 | .0 | .0 | |
| 2 | 50/50 STANDARD W/ 2% EXTRA GEL | ECONOCEM (TM) SYSTEM (452992) | 500.0 | sacks | 13.6 | 1.58 | 6.92 | | 6.92 |
| | 0.4 % | HALAD(R)-9, 50 LB (100001617) | | | | | | | |
| | 10 lbm | KOL-SEAL, BULK (100064233) | | | | | | | |
| | 2 % | BENTONITE, BULK (100003682) | | | | | | | |
| | 0.2 % | CFR-3, W/O DEFOAMER, 50 LB SK (100003653) | | | | | | | |
| | 6.92 Gal | FRESH WATER | | | | | | | |
| 3 | Displacement | | 118.00 | bbl | 8.33 | .0 | .0 | .0 | |

| Calculated Values | | Pressures | | Volumes | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Displacement | | Shut In: Instant | | Lost Returns | | Cement Slurry | | Pad | |
| Top Of Cement | | 5 Min | | Cement Returns | | Actual Displacement | | Treatment | |
| Frac Gradient | | 15 Min | | Spacers | | Load and Breakdown | | Total Job | |

| Rates | | | | | | | |
|---|---|---|---|---|---|---|---|
| Circulating | | Mixing | | Displacement | | Avg. Job | |
| Cement Left In Pipe | Amount | 84 ft | Reason | Shoe Joint | | | |
| Frac Ring # 1 @ | ID | | Frac ring # 2 @ | ID | | Frac Ring # 3 @ | ID |
| Frac Ring # 4 @ | ID | | | | | | |

| The Information Stated Herein Is Correct | Customer Representative Signature |
|---|---|

Remarks

| | |
|---|---|
| Tiffany Golay<br>02/18/013 07:39 am | Frac Disclosure uploaded to FracFocus |
| Tiffany Golay<br>02/18/013 07:36 am | TVD= 4,719' |