Special Study 102
Plate 6
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# CHEMICAL QUALITY OF WATER FROM SELECTED WELLS IN THE PRINCIPAL VALLEY-FILL AQUIFER SANPETE VALLEY, SANPETE COUNTY, UTAH

PENETRATING SHALLOW (<100 FEET DEEP), MEDIUM (100-200 FEET DEEP), AND DEEP (>200 FEET DEEP) DEPOSITS

Unit abbreviations: µmhos/cm, micromohs per centimeter; ºC, degrees Celsius; mg/L, milligrams per liter; µg/L, micrograms per liter.
Laboratory: Utah Department of Health Laboratory

| Well ID # | Location | Depth of well (feet) | Sampling Date | Nitrogen $NO_2$+$NO_3$ dissolved (mg/L as N) | Phosphorus, total (mg/L as P) | Solids, sum of constituents, dissolved (mg/L) | Field temperature (°C) | Specific Conductance (µmhos/cm) | TDS Converted (mg/L) | pH (standard units) | Calcium, dissolved (mg/L as Ca) | Magnesium, dissolved (mg/L as Mg) | Sodium, dissolved (mg/L as Na) | Potassium, dissolved (mg/L as K) | Bicarbonate (mg/L as $HCO_3$) | Carbonate (mg/L as $CO_3$) | Sulfate, dissolved (mg/L as $SO_4$) | Chloride, dissolved (mg/L as Cl) | Hydroxide (mg/L) | Carbon Dioxide (mg/L) | Ammonia (as N) (mg/L) | Aluminum, dissolved (µg/L) | Arsenic, dissolved (µg/L as As) | Barium, dissolved (µg/L as Ba) | Cadmium, dissolved (µg/L as Cd) | Chromium, dissolved (µg/L as Cr) | Copper, dissolved (µg/L as Cu) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | (D-13-4) 1aaa-1 | 105 | 07/16/96 | 0.04 | - | - | 14.6 | 495 | 287 | 8.2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 13 | (D-13-4) 1dbb-1 | 90 | 07/16/96 | 0.2 | 0.01 | 384 | 11.9 | 781 | - | 7.3 | 67.4 | 51.6 | 12.2 | <1 | 426 | 0 | 24.1 | 35.0 | 0 | 27 | <0.05 | <30.0 | <5.0 | 260 | <1.0 | <5.0 | <12.0 |
| 20 | (D-13-4) 11adc-1 | 147 | 07/16/96 | 1.81 | - | - | 9.5 | 753 | 437 | 7.5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 21 | (D-13-4) 11dcb-1 | 105 | 07/17/96 | 1.55 | - | - | 10.6 | 740 | 426 | 7.5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 25 | (D-13-4) 12bdd-1 | 165 | 07/16/96 | 0.59 | - | - | 11.3 | 656 | 381 | 7.6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 26 | (D-13-4) 12cbb-1 | 100 | 07/16/96 | 1.95 | - | - | 9.8 | 758 | 440 | 7.4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 27 | (D-13-4) 12cbb-2 | 100 | 07/16/96 | 2.02 | - | - | 11.1 | 790 | 458 | 7.4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 28 | (D-13-4) 12ccc-1 | 74 | 07/16/96 | 5.55 | - | - | 10.8 | 761 | 441 | 7.4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 32 | (D-13-4) 12dbb-1 | 148 | 07/16/96 | 0.55 | - | - | 13.4 | 641 | 372 | 7.7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 33 | (D-13-4) 13cbd-1 | 82 | 09/17/96 | 0.77 | 0.04 | 306 | 9.4 | 533 | - | 7.6 | 61.3 | 26.6 | 12.1 | 1.1 | 336 | 0 | 25.0 | 8.0 | 0 | 2 | <0.05 | <30.0 | <5.0 | 190 | <1.0 | <5.0 | <12.0 |
| 36 | (D-13-4) 23daa-1 | 85 | 09/17/96 | 2.32 | <0.01 | 326 | 12.7 | 575 | - | 7.4 | 73.4 | 30.0 | 11.7 | <1 | 338 | 0 | 18.9 | 11.0 | 0 | 4 | <0.05 | <30.0 | <5.0 | 190 | <1.0 | <5.0 | <12.0 |
| 37 | (D-13-4) 24cba-1 | 101 | 09/17/96 | 0.28 | - | - | 17.7 | 547 | 317 | 7.8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 39 | (D-13-4) 24cbb-1 | 103 | 09/17/96 | 2.6 | - | - | 11.6 | 510 | 296 | 7.5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 40 | (D-13-4) 24cbc-1 | 130 | 09/17/96 | 1.4 | - | - | 8.9 | 528 | 306 | 7.5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 38 | (D-13-4) 24dba-1 | 100 | 07/30/96 | 0.29 | 0.01 | 324 | 11.2 | 644 | - | 7.5 | 56.4 | - | 15.5 | <1 | 334 | 0 | 30.4 | 11.0 | 0 | 9 | <0.05 | <30.0 | <5.0 | 99 | <1.0 | <5.0 | <12.0 |
| 43 | (D-13-4) 24dba-2 | 100 | 07/30/96 | 0.43 | - | - | 11.5 | 623 | 361 | 7.5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 49 | (D-13-4) 26aaa-1 | 75 | 07/16/96 | 2.23 | - | - | 11.5 | 586 | 340 | 7.5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 55 | (D-13-4) 35add-1 | 140 | 09/17/96 | 2.5 | <0.01 | 368 | 14 | 603 | - | 7.3 | 79 | - | 20.4 | <1 | 380 | 0 | 20.8 | 14.5 | 0 | 6 | <0.05 | <30.0 | <5.0 | 240 | <1.0 | 5.3 | <12.0 |
| 59 | (D-13-4) 36cbc-1 | 135 | 07/16/96 | 2.26 | - | - | 14.4 | 682 | 396 | 7.5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 65 | (D-14-2) 13cad-1 | 80 | 08/07/96 | 6.97 | - | - | 15.9 | 1017 | 590 | 7.2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 66 | (D-14-2) 13daa-1 | 95 | 10/18/96 | 3.39 | <0.01 | 522 | - | - | - | - | 42.9 | - | 33.8 | 1.1 | 564 | 0 | 39.3 | 29.0 | 0 | 6 | <0.05 | 31.0 | <5.0 | 67 | <1.0 | <5.0 | <12.0 |
| 68 | (D-14-2) 24dac-1 | 130 | 08/12/96 | 0.02 | 0.01 | 888 | 13.2 | 1868 | - | 9.3 | 2.6 | 24.5 | 323.0 | 1.8 | 179 | 0 | <10.0 | 460.0 | 0 | 0 | 0.49 | <30.0 | <5.0 | 49 | <1.0 | <5.0 | <12.0 |
| 76 | (D-14-3) 7bdd-1 | 82 | 08/06/96 | 3.79 | - | - | 14.3 | 662 | 384 | 7.4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 78 | (D-14-3) 7ddb-1 | 92 | 07/24/96 | 4.13 | 0.01 | 386 | 11.1 | 740 | - | 7.6 | 70.5 | 26.9 | 12.8 | 2.0 | 350 | 0 | 22.1 | 22.5 | 0 | 8 | <0.05 | 84.0 | <5.0 | 110 | <1.0 | <5.0 | 1750.0 |
| 80 | (D-14-3) 17cbc-1 | 80 | 07/31/96 | 4.03 | - | - | 11.3 | 791 | 459 | 7.5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 81 | D-14-3 17cbc-2 | 133 | 07/31/96 | 3.9 | - | - | 10.9 | 782 | 454 | 7.5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 82 | (D-14-3) 17cca-1 | 100 | 05/13/97 | 0.43 | - | - | 12.7 | 444 | 258 | 7.9 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 83 | (D-14-3) 17ccb-1 | 100 | 09/18/96 | 2.46 | 0.01 | 400 | 11.3 | 662 | - | 7.4 | 85.7 | 34.9 | 19.3 | 2.2 | 380 | 0 | 18.1 | 30.5 | 0 | 3 | <0.05 | <30.0 | <5.0 | 108 | <1.0 | 5.2 | <12.0 |
| 84 | (D-14-3) 17dcd-1 | 140 | 08/06/96 | 20.71 | 0.03 | 572 | 11.7 | 886 | - | 7.2 | 108 | 33.0 | 21.2 | 4.4 | 328 | 0 | 30.1 | 50.0 | 0 | 9 | <0.05 | <30.0 | <5.0 | 260 | <1.0 | 5.5 | <12.0 |
| " | " " | " | 09/14/99 | 19 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 92 | (D-14-3) 20aba-1 | 105 | 11/06/96 | 18.34 | 0.015 | 552 | 10.8 | 962 | - | 7.6 | 116 | 35.9 | 27.5 | 3.6 | 400 | 0 | 37.9 | 44.0 | 0 | 5 | <0.05 | <30.0 | <5.0 | 160 | <1.0 | 5.1 | <12.0 |
| " | " " | 105 | 08/28/97 | 18.76 | - | 508 | 13.7 | 852 | - | 7.4 | 100 | 30.4 | | | | | | | | | | | | | | | |
| " | " " | 105 | 09/14/99 | 18.2 | - | - | - | - | - | - | - | - | | | | | | | | | | | | | | | |
| 92b | (D-14-3) 20bbb pond | - | 08/28/97 | 3.22 | - | 420 | 11.8 | 716 | - | 7.2 | 43.8 | 33.2 | | | | | | | | | | | | | | | |
| 93 | (D-14-3) 20ada-1 | 125 | 09/18/96 | 16.95 | - | | 15.4 | 667 | - | 7.5 | - | - | | | | | | | | | | | | | | | |