Naturally Occurring Perchlorate in Ground Water, Northern Rio Grande Basin, New Mexico

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Abstract

The drinking-water aquifer near Los Alamos, New Mexico at several locations is contaminated with perchlorate at levels up to about 7 micrograms/liter (μg/L). The source of the contamination is from historical releases of perchlorate-tainted industrial effluent from the Los Alamos National Laboratory. Background concentrations of perchlorate needed to be determined to differentiate between anthropogenic and non-anthropogenic sources of this oxyanion.

This investigation determined that naturally occurring perchlorate is present in the Los Alamos area regional drinking-water aquifer as well as the ground-water system as a whole. Background levels were also determined for select ground-water sources in the Taos area. The ground-water system in the Los Alamos area contains background concentrations of perchlorate ranging from 0.09 to 0.45 μg/L with a mean of 0.28±0.07 μg/L. Perchlorate is present at similar concentrations in both modern and submodern-age ground water. Concentrations are consistent along flow paths from the mountain-block recharge area to deep saturation within the Rio Grande basin. A correlation between perchlorate and other parameters is not apparent for the Los Alamos area ground-water system. However, if the regional aquifer data set is analyzed separately, then some degree of correlation between perchlorate and chloride, sulfate, and age is evident. The correlation with age may be attributed to changes in evapotranspiration or climate through the Holocene. Natural perchlorate concentrations in ground water within the Taos area ranged from 0.07 to 0.18 μg/L. Two of thirteen precipitation samples collected contained detectable perchlorate at 0.0210 and 0.0099 μg/L. The data set suggest that naturally occurring perchlorate may be accumulated through evapotranspiration processes.

Introduction

Perchlorate (ClO_4^-) is an oxyanion that is both naturally occurring and manmade and mobile in ground water. If ingested, the contaminant competitively inhibits iodide uptake by the thyroid gland. Additional health concerns include carcinogenic, developmental, immunotoxic, and reproductive effects (Nerenberg

et al., 2002). Perchlorate in ground water from anthropogenic and natural sources has been discussed by previous authors (Rajagopalan et al., 2006; Jackson et al., 2005; Dasgupta et al., 2005). Naturally occurring ClO_4^- in ground water is ubiquitous in north-central New Mexico as shown in a recent study by Plummer et al. (2006). Their results show that Pleistocene and Holocene age ground waters in the Middle Rio Grande Basin (MRGB) contain ClO_4^- from a natural source at levels ranging from 0.12 to 1.8 micrograms/liter (μg/L). Plummer et al. (2006) show relationships between ClO_4^- concentration and other anions with respect to evapotranspiration (ET) and ground-water age. Plummer et al. (2006) conclude that (1) the source of ClO_4^- in MRGB ground water may be from an atmospheric (bulk deposition) origin, (2) that concentration may be dependent on ET and not ground water age, and (3) that processes in the soil may deplete ClO_4^- prior to recharge. With respect to ET, Plummer et al. (2006) suggest that higher levels of ClO_4^- in ground water may be associated with recharge areas with ET factors approaching 40 and/or where long-term accumulations of atmospheric salts in dry soil are suddenly remobilized or leached. Using chloride (Cl^-), Plummer et al. (2006) applied ET adjusted ClO_4^- values found in ground water to back calculate an average ClO_4^- in bulk atmospheric deposition at 0.025±0.011 μg/L. Dasgupta et al. (2005) reported measured perchlorate in precipitation in the Lubbock, Texas, area at levels ranging from <0.01 to 1.6 μg/L.

The U.S. Environmental Protection Agency (USEPA) has yet to set a Federal drinking-water standard for perchlorate; however, they have established a human reference dose (estimated) that is equivalent to a drinking-water maximum contaminant level of 24.5 parts per billion (ppb or μg/L). Several states have set their own standards or public health goals. California's public health goal is 6 μg/L, meaning that ingestion of levels exceeding 6 ppb would pose a significant risk to human health.

Near Los Alamos, New Mexico, ClO_4^- contamination from anthropogenic sources is present in the underlying aquifers, including the drinking-water source or regional aquifer. The primary source of ClO_4^- is from releases of untreated and treated industrial liquid waste containing dissociated perchloric acid ($HClO_4$) discharged at the Los Alamos National Laboratory (or the Laboratory) beginning in the early to mid 1940s. Monitoring for ClO_4^- in ground water at the Laboratory began in 2000. Concentrations of ClO_4^- range from non-detect at <0.03 μg/L to 256 μg/L within perched intermediate-depth ground water occurring above the regional water table (http://wqdbworld.lanl.gov/). To date, the highest level in the drinking-water or regional aquifer is 7 μg/L. Discerning the level at which the presence of natural versus anthropogenic ClO_4^- is critical for detection monitoring, well-head protection, site investigations, remedial actions, assessing human health and ecological risks, and setting regulatory standards.

The New Mexico Environment Department (NMED), Department of Energy (DOE) Oversight Bureau, and Los Alamos National Laboratory, undertook a four-

year (2003 – 2006) project to determine background levels of ClO_4^- in the ground water present in the Los Alamos and Taos areas of the Northern Rio Grande Basin, New Mexico. Additional objectives for this work include determining: (a) the spatial distribution of background ClO_4^- within the Los Alamos regional aquifer, (b) variability of ClO_4^- concentration within the Los Alamos ground-water system as a whole; (c) correlations between ClO_4^- concentration and concentrations of other ions such as Cl^- and sulfate (SO_4^{2-}), stable-isotope ($\delta^{18}O$ and δ^2H) composition, and ground-water age; and (d) the presence or absence of ClO_4^- in local precipitation.

The project involved collection and analysis of samples taken from 44 ground-water stations and four precipitation stations. Ground-water samples were collected by personnel from the NMED DOE Oversight Bureau and the Laboratory. Thirty six of the ground-water stations are located in the Los Alamos area and eight are from the Taos area. Precipitation stations are located in the Los Alamos area and the Sangre de Cristo Mountains near Santa Fe, New Mexico. Samples were analyzed for low-detection level ClO_4^- using liquid chromatography-mass spectrometry/mass spectrometry (LC-MS/MS) and ion chromatography-mass spectrometry/mass spectrometry (IC-MS/MS) with method detection limits ranging from 0.0088 to 0.05 μg/L. Complementary analyses included major ions, trace elements, radiocarbon (^{14}C) measured on the dissolved inorganic component (DIC) for average-age determination, tritium (^3H) and the noble gases helium-3 (^3He), helium-4 (^4He), and neon-22 (^{22}Ne) for apparent-age determination, the stable isotopes of carbon ($\delta^{13}C$ in DIC), hydrogen (δ^2H), and oxygen ($\delta^{18}O$), and the field parameters pH, temperature, specific conductance, and dissolved oxygen. A large portion of these data and their interpretation were presented and discussed by Longmire et al. (2007). Longmire et al. (2007) focused on dating modern and submodern fractions of ground water using $^3H/^3He$ and ^{14}C dating methods, respectively, in the vicinity of Los Alamos and within the Laboratory boundary.

Study Area

From 2003 through 2006, 140 ground-water samples were collected from 15 wells and 29 springs (Table 1). Thirty six of the sampling stations are located in the Los Alamos area and eight stations were sampled at springs located north and south of Taos along the west and east sides of the Rio Grande. Thirteen precipitation samples were collected at three stations in the Los Alamos area and one station in the Sangre de Cristo Mountains (Figure 1).

In the Los Alamos area, ground-water samples were collected at the mountain block/front area, along the Pajarito Plateau and in the canyons that dissect it, and in White Rock Canyon (Figure 2). Springs sampled north and south of Taos along the Rio Grande may represent the terminus of basin-fill aquifers located east and west of the Rio Grande (Figure 3). Sampling stations were selected

based on several criteria including age and the presence or absence and concentration of conservative constituents such as ^{3}H and Cl^{-}. Background or non-impacted ground water, near Los Alamos, New Mexico, was sampled as part of this investigation, meeting the following two criteria:

- The average Cl^{-}, SO_4^{2-}, and nitrate (NO_3^{-}) as nitrogen concentrations on a per-station basis were less than 6, 20, and 1 milligrams per liter (mg/L), respectively. These concentrations are based on a non-statistical evaluation of the available hydrochemical data set for the Los Alamos area ground-water system.

- For the submodern age (>65 yrs or pre-1943) regional ground water at Los Alamos, the sample had to contain ^{3}H at an activity of less than 0.5 tritium units (TU).

Due to the lack of an adequate historical water-quality data set, no criteria were made for samples collected in the Taos area.

Hydrogeology and Hydrochemistry

Los Alamos Area – The ground-water system at Los Alamos is subdivided into four distinct zones of saturation, all of which are assumed to be interconnected (Figure 4). The first ground water zone (zone 1) is perched within the Sierra de Los Valles and the mountain front area near the Pajarito fault zone; the second zone (zone 2) is found within saturated canyon-bottom alluvium, forming alluvial aquifers; the third zone (zone 3) represents perched lenses of saturation at intermediate depths beneath canyon bottom alluvial aquifers; and the fourth zone (zone 4) is the regional drinking-water aquifer. These ground waters are oxidizing with concentrations of dissolved oxygen generally exceeding 3 mg/L. Oxidized forms of nitrogen, iron, sulfur, and carbon dominate over reduced forms of these solutes (Longmire et al., 2007). All springs sampled as part of this project were assumed to be perennial with respect to flow. For this study, the first, third, and fourth zones were evaluated for background ClO_4^{-}. Zone 2 was not considered as part of this investigation based on the fact that ground-water monitoring has shown that most of the anthropogenic perchlorate has migrated from alluvial ground water, has infiltrated through the vadose zone, and reached the regional water table.

Zone 1 **-** This zone is perched in the Sierra de Los Valles (mountain block) and near the Pajarito fault zone (mountain front). The Sierra de Los Valles is located west of the Pajarito fault zone (Figure 4). The Pajarito fault zone roughly bounds the eastern or down slope portion of the mountain front. This zone is believed to be recharged within the mountain block through subsurface inflow of snowmelt. The zone represents many saturated lenses or ribbons that discharge at springs and at one well. Rates of ground-water

flow from these springs range from about one to 300 liters per minute (Dale et al., 2005). In some cases, the springs discharge sufficient water to support perennial surface flow in many of the canyons and supply recharge to alluvial aquifers. Ground water within zone 1 discharges from the Tschicoma Formation (dacite) and upper Bandelier Tuff (ignimbrite). Eleven springs and one well within zone 1 were sampled as part of this investigation. Apparent ages, as determined by the $^{3}H/^{3}He$ dating method, for most stations are modern (<62 years or post-1943), ranging from <1 to 15 years (Longmire et al., 2007). Three springs and the well have unadjusted ^{14}C fractions greater than 1.0 (or >100 percent modern carbon), suggesting that they are recharged by 100% modern water. Two springs contain a mixture of modern and submodern water as determined by the $^{3}H/^{3}He$ and ^{14}C dating methods, respectively.

Zone 1 consists of a mixed Ca-Na-Mg-HCO_3-SO_4 composition with Cl^- concentrations ranging from 0.65 to 6.43 mg/L. Major-ion concentrations vary seasonally at stations containing all modern water. The variability is probably due to localized snowmelt recharge. Solute concentrations at two of the springs exhibiting a mixed age show much less variability, suggesting much longer flow paths and less local recharge from snowmelt (Longmire et al., 2007). Tritium activities for all stations varied from 0.13 to 32 TU. $\delta^{18}O$,$\delta^{13}C$ in DIC, and $\delta^{2}H$ compositions ranged from -13.07 to -10.91, -15.70 to -8.20, and -89.2 to -76.53 permil, respectively (Longmire et al., 2007). The variability in stable isotope composition is greater for the modern-aged springs and well than the two mixed-age springs, suggesting seasonal (snowmelt) and/or event (e.g., rain) specific inputs from local recharge sources. In general, the isotopic composition for this zone is lighter than zones 3 and 4, suggesting that ground water was derived from precipitation deposited at higher elevations and/or seasonal changes in isotope composition of precipitation may have occurred.

Zone 2 - Canyon-bottom alluvial ground water represents zone 2. This aquifer type is found in several watersheds within the study area. The aquifers are recharged through surface-water infiltration and artificial discharges from industrial and sewage-treatment outfalls. Some intermittent recharge occurs seasonally as snowmelt and storm-water runoff, however, the majority of recharge is supplied by perennial surface water that is supported by discharge from zone 1. Zone 2 was not sampled as part of this project because the lack of reliable background sampling locations.

Zone 3 – Perched intermediate-depth ground water characteristic of zone 3 occurs within thin lenses beneath wet canyons that dissect the Pajarito Plateau at depths ranging from about 40 to 250 meters below land surface (Figure 4). For this zone, only one well, LAOI(a)-1.1, and Sacred and Sandia springs were sampled. Our current conceptual model suggests that recharge to this zone is focused along and beneath drainages that dissect the

mountain block and front areas and along wet canyons east of the Pajarito fault zone. The zone discharges naturally as springs found in the lower reaches of several canyons near the Rio Grande. The lateral extent of saturation usually mirrors that of the above overlying alluvial aquifers, they are spatially thin in the north-south direction and elongated in the west-east direction. Thickness of saturation varies from one to about 30 meters. Ground water characteristic of zone 3 is found sporadically in the Bandelier Tuff, Puye fanglomerate, Cerros del Rio basalt, and Santa Fe Group sediments. Ground-water flow is generally to the east-southeast. Legacy wastes discharged at the Laboratory starting from 1943 through the present can be found within zone 3 ground water. The ground-water ages are both submodern and mixed with ^{3}H activities ranging from <0.09 to 0.25 TU at Sandia Spring, and mean ^{3}H activities of 2.02 TU at LAOI(a)-1.1 and 1.54 TU at Sacred Spring. The water type consists of a Na-Ca-Mg-HCO_3 composition with background Cl^- ranging from 1.11 to 3.60 mg/L. Temporal variability of the major-ion chemistry is less for this zone in comparison to zone 1 ground water, reflecting longer flow paths and greater solute residence times. $\delta^{18}O$, $\delta^{13}C$ in DIC, and $\delta^{2}H$ compositions ranged from -11.46 to -11.01 permil, -14.2 to -12.3 permil, and -81.69 to -77.83 permil, respectively, which are generally heavier than zone 1.

Zone 4 – The regional or drinking-water aquifer comprises the fourth zone (Figure 4). The regional aquifer is laterally extensive beneath the Pajarito Plateau. Ground water generally flows from the west to east-southeast. A portion of the regional aquifer discharges at the Rio Grande as spring flow within White Rock Canyon. Typically, the top of saturation beneath the Pajarito Plateau is encountered at depths ranging from about 200 to 400 meters. For this zone, 13 wells and eight springs were sampled. The hydrostratigraphy varies, and includes the Puye Formation (Pliocene age sands and gravels), Tschicoma Formation (Pliocene age dacites), Cerros del Rio basalt (Pliocene age), older basalt flows (Miocene age), and the Santa Fe Group (Miocene sands and gravels). The portion of the regional aquifer that was sampled is under phreatic conditions. The ground water is mined for drinking-water (Laboratory and Los Alamos County) and industrial (Laboratory) purposes. Recharge source(s) for the regional aquifer is not known; however, our current conceptual model suggests that there are probably multiple components including the mountain block of the Sierra de Los Valles, the mountain front area near the Pajarito fault zone, and canyon-bottom alluvial aquifers. Some recharge to the regional aquifer is from contaminated alluvial aquifers because at several locations Laboratory-derived contamination is present, including ClO_4^-, ^{3}H, chromate (CrO_4^{2-}), uranium (U), and/or NO_3^-. Along the west to east ground-water flow path, the volumes and rates of recharge from these discharge sources probably vary. At some locations, regional aquifer ground water contains both modern and submodern water as noted by Longmire et al. (2007). For this study, the average background ^{3}H activities on a per-station basis ranged from <0.09 to

0.38 TU, suggesting that the sampled ground water is mostly submodern with little or no modern water. Unadjusted mean radiocarbon ages for stations collected as part of this project ranged from 565 to 7,462 years. Figure 5 shows all ^{14}C-age results for ground-water samples collected in the area, including data collected at locations not sampled for this study. The anomalous young ^{14}C ages for the White Rock Canyon springs located in the southeastern portion of the Laboratory may reflect significant focused recharge from Frijoles Canyon, a major watershed within the southern boundary of the Pajarito Plateau sampled as part of this investigation. In terms of ground-water production and flow, Frijoles Canyon is the most prolific of all watersheds in the study area. The figure also shows younger aged isochrons pointing eastward beneath perennially wet drainages such as Los Alamos, Pajarito, and Water canyons. The water type varies from a Na-Ca-HCO_3 to a Ca-Na-HCO_3 type, reflecting water-rock interaction along the flow paths, including mineral dissolution, cation exchange, and ground-water mixing. Chloride, SO_4^{2-}, and bicarbonate (HCO_3^-) concentrations varied from 1.20 to 3.40 mg/L, 0.97 to 4.79 mg/L, and 62.5 to 180.6 mg/L, respectively. Delta ^{18}O, $\delta^{13}C$ in DIC, and δ^2H compositions ranged from -12.12 to -9.31 permil, -15.2 to -11.7 permil, and -85.13 to -66.84 permil, respectively. Ground-water temperatures at the regional water table typically increase from west to east, and probably reflect the geothermal gradient and increasing ground-water residence times at those depths. Within the study area, ground-water temperatures range from about 16°C along the western portion of the Pajarito Plateau to about 20°C within the discharge zone occurring along White Rock Canyon.

Evapotranspiration - Concentrations of Cl^- are higher in the Los Alamos area ground-water system compared to Cl- in local precipitation. This condition suggests that some ET processes occur during recharge. For example, the mean Cl^- concentration from our data set for the regional-aquifer zone 4 is 1.97 mg/L. This value is 25 times greater than the 0.08 mg/L non-weighted wet-only mean Cl^- concentration found in local snowfall in the mountain block/front area. Using the 0.24 mg/L of Cl^- in mean bulk atmospheric deposition provided by Plummer et al. (2007), the Cl^- enrichment for zone 4 is about 8 times that of precipitation. Enrichment of other oxyanions, such as ClO_4^-, may also occur through evaporation processes.

Taos Area – Spring samples collected in the Taos area discharge from Tertiary age basin fill basalts and interbasalt gravels belonging to the Servilleta Formation. The four springs located north of Taos, New Mexico, along the east side of the Rio Grande, are considered to be recharged from the Sangre de Cristo Mountains (Figure 3). AH-0.2 and DBN springs contain ^3H activities ranging from 5.93 to 6.51 TU, suggesting a large component of modern water. Big Arsenic and RG1 Springs contain ^3H at 0.50 and 0.79 TU, respectively, suggesting a mixed age with a large component of submodern water. The four springs sampled on the west side of the Rio Grande are likely recharged from the

Tusas Mountains area, located roughly 25 km to the west (Figure 3). Big Spring and DBS 2 Spring contained no measurable ^{3}H above 0.1 TU; DBS 1 Spring and Felsenmeere Spring contained ^{3}H at 0.16 and 0.12 TU, respectively, suggesting a very small fraction of modern water that may be attributable to cross contamination from local precipitation at or near the spring orifice. Based on the lack of detectable ^{3}H, these springs are assumed to be of submodern age.

Ground water collected from these springs varies from a Ca-Na-HCO_3 to Na-Ca-HCO_3-SO_4^{2-}-CO_3 ionic composition. Chloride, SO_4^{2-}, and HCO_3^- concentrations varied from 1.37 to 23 mg/L, 8.21 to 59 mg/L, and 85.1 to 159 mg/L, respectively. $\delta^{18}O$ and $\delta^{2}H$ compositions ranged from -14.55 to -13.09 permil and from -106.78 to -94.76 permil, respectively.

See Tables 3 through 5 for all associated data collected at Los Alamos and Taos area stations.

Field Sampling Methods and Procedures

Single completion wells were sampled from screens located at or near the regional water table. Ground-water samples were retrieved via dedicated pumps. Springs were sampled at their source using peristaltic pumps. Samples collected for major ions, trace elements, tritium, and field parameters were collected as described by Los Alamos National Laboratory's Standard Operating Procedures (http://www.lanl.gov/environment/all/qa.shtml?4). Noble gases, tritium (ingrowth method), ^{14}C, and stable-isotope samples were collected by methods described byLongmire et al. (2007).

Ground-water samples collected for ClO_4^- analysis were placed in 1000 or 125 ml high density polyethylene (HDPE) bottles or 40 ml glass vials with Teflon septa. Sampling bottles used by NMED were triple rinsed prior to sampling, whereas samples collected by the Laboratory were not field rinsed. Precipitation, as rain, was collected in five-gallon buckets lined with two plastic bags. Plastic bags were thoroughly rinsed with deionized blank water and air dried upside down prior to field installation. The bags were necked-down in a funnel shape to a diameter of about one centimeter. Rain samples were collected within about two hours after the precipitation event ended. The captured water was then poured into two 125 ml HDPE bottles that were triple rinsed with the sampled water. Using dedicated sterile plastic scoops, event-specific snow samples were placed in clean one-liter HDPE bottles and placed in the refrigerator at an approximate temperature of 4^{o}C. Seasonal snowpack samples were collected during March and April 2006 and 2007, during maximum snow depth and prior to any significant melting. A cross-sectional exposure of the snow pack was made followed by depth-integrated grab sampling using dedicated sterile plastic scoops. The snow was stored in clean one-liter HDPE bottles and placed in the refrigerator at approximately 4^{o}C. All bottles used were supplied by Environmental Sampling

Supply, Inc. and were precleaned certified following USEPA cleaning procedures. In most cases, samples analyzed for ClO_4^- were not filtered; however, in some cases, two samples were collected simultaneously during the sampling event, one filtered through a 0.45 micrometer filter and the other was not filtered. Eleven paired data sets from six stations have analytical results for both filtered and non-filtered samples, and a percent difference was calculated for the data set. The average relative percent difference between the filtered and non-filtered samples is 5.4%, suggesting that filtering had little impact on ClO_4^- concentration. Therefore, analytical results for both filtered and non-filtered samples were included in statistical analyses.

For external quality-control purposes, a total of 12 filtered and 10 non-filtered blind intralaboratory field duplicate samples were collected. The average relative percent difference between the filtered blind intralaboratory duplicate data was 3.1%. The average relative percent difference between the non-filtered blind intralaboratory duplicate data was 5.0%. Six non-filtered samples collected in duplicate were analyzed by the two laboratories used for the project. The average relative percent difference for these data was 7.5%.

Analytical Methods

Perchlorate was quantified using LC-MS/MS [SW-846 8321A(M) and SW-846 6850 (M)] and IC-MS/MS [SW-846 8321A(IC) and 6860 (M)]. Analytical detection limits for both methods ranged from 0.0088 to 0.05 μg/L. Most results were obtained from analyses that occurred within 28 days of sampling. Perchlorate analyses were performed by Severn Trent Laboratories, Inc. and GEL Laboratories, LLC. Longmire et al. (2007) provide information on analytical methods specific to analyses of major ions, trace elements, ^3H, noble gases, ^{14}C, and stable isotopes.

Analytical results for seven ground water and two precipitation samples were disqualified due to presence of ClO_4^- in the instrument blank. These data were not used in the statistical analyses. Results qualified as “J”, meaning the analyte was detected above the method detection limit but below the reporting limit, were used in the statistical analyses. Four results were from samples analyzed past the 28-day hold time; these results were used in the statistical analyses. Sixteen samples arrived at the analytical laboratory at a temperature slightly greater than 6^oC – these data were also used in the statistical analyses.

Statistical Methods

Data collected for this project were statistically analyzed using the Microsoft Office Excel mean and one standard deviation formula-derived methods. Mean and standard deviation values for each zone were calculated from the single

results and the means from multiple results for each station within the zone. An upper tolerance limit (UTL) for each zone was calculated using the means plus two standard deviations. Where duplicate or split data were available for a given sampling event per station, a mean value was calculated and applied as noted above. Means and one-standard deviations were also determined for the entire Los Alamos data set. Due to the small population of results for the precipitation and the Taos area sampling, statistical analyses were not performed, and only ranges are described. Coefficients of determination (R^2) were calculated for ClO_4^- and conservative chemicals such as Cl^-, stable isotopes, and ground-water age. The statistical parameter, R-squared is the measure of degree to which two sets of numbers correlate with one another.

Results

Los Alamos Area. For zone 1, 12 stations were sampled yielding 23 ClO_4^- results (Table 2). The mean, median, one standard deviation, and UTL were 0.28, 0.28, 0.05, and 0.39 μg/L, respectively, for zone 1. The low uncertainty indicates that the variability in ClO_4^- concentration from station to station was small. All samples contained concentrations of ClO_4^- greater than the method detection limit. Short-term temporal variability does occur as noted by the six sampling results at PC Spring where ClO_4^- concentrations ranged from 0.23 to 0.36 μg/L.

The three stations representing zone 3 provided 10 analytical results for ClO_4^- (Table 2). The mean, median, one standard deviation, and UTL for the data set were 0.23, 0.18, 0.13 and 0.50 μg/L, respectively. The limited amount of data for this zone 3 makes it difficult to assess the temporal and spatial behavior. Sandia Spring, with a mean concentration of ClO_4^- of 0.38 μg/L, contains roughly two times the ClO_4^- concentration found at LAOI(a)-1.1 or Sacred Spring. The reason(s) for this is unclear.

Zone 4 holds the largest population of data with 88 analytical results for ClO_4^- obtained from sampling 13 wells and 8 springs (Table 2). The mean, median, one standard deviation, and UTL for the zone 4 data set were 0.27, 0.25, 0.06 and 0.39 μg/L, respectively. The short-term temporal variability is small for stations where analytical results span more than two years of sampling, as illustrated by ClO_4^- results from well R-21. This well was sampled seven times during the period March 2004 through November 2006 with concentrations ranging from 0.25 to 0.30 μg/L, a mean of 0.27 μg/L, and a one standard deviation of 0.02 μg/L. Other zone 4 stations had similar variability during the study period. The spatial variability across zone 4 is small as noted on Figure 6.

Figure 7 illustrates the ClO_4^- data set with respect to ground-water occurrence. Note the similarities in ClO_4^- concentration from the higher elevation aquifers versus the deep regional aquifer.

Taos Area. Twenty-one analytical results (Table 2) were obtained from sampling eight springs located north and south of Taos along the east and west sides of the Rio Grande (Figure 8). All samples contained ClO_4^- greater than their associated method detection limit. The mean, median, one standard deviation, and UTL for the Taos area data set were 0.12, 0.12, 0.03 and 0.18 μg/L, respectively. As noted by the low uncertainty, the variability in ClO_4^- concentration was small. Perchlorate concentrations for these waters are roughly half that found in the Los Alamos area.

Figure 9 shows results and general statistical data for ClO_4^- concentrations in ground water at Los Alamos and Taos, New Mexico. The larger uncertainty noted for zone 3 is probably related to the small population of results.

Los Alamos Area Precipitation. Of the 13 snowpack and precipitation samples analyzed for ClO_4^-, only two exceed the method detection limit. The two samples were collected during separate summer thunderstorm events and analytical results were 0.010 and 0.021 μg/L with a method detection limit of 0.001 μg/L. Note that these data were qualified due to the presence of ClO_4^- in the intralaboratory blank at 0.0039 μg/L. With respect to these samples, it is inconclusive as to whether the detected ClO_4^- was indeed in the precipitation or whether it was introduced by some other means such as cross contamination via dust particles during the rain events. However, it is reasonable to hypothesize that ClO_4^- is present in precipitation based on its presence early in the hydrologic cycle such as near-surface modern ground water.

Discussion

Perchlorate is found in nearly equal concentrations within the Los Alamos ground-water system including perched-intermediate depth ground water and the regional aquifer. This trace anion is present at similar concentrations in young (modern or post 1943) ground waters as well as in the regional aquifer having ages in excess of 7,000 years. The uniformity in ClO_4^- concentrations suggests that perchlorate is introduced early in the hydrologic process, e.g. during recharge with the initial source of ClO_4^- being precipitation. It is possible that perchlorate is concentrated during periods of less recharge and higher ET at or near the point of surface to subsurface inflow, followed by seasonal flushing during times of greater recharge. Additional detailed studies are needed to verify this hypothesis.

Statistical calculations using the coefficient of determination (R^2) were performed on the ClO_4^- data set with respect to concentrations of SO_4^{2-}, Cl^-, and other anions and ground-water age to quantify the relationship between these parameters. The coefficient of determination is the statistical measure of how closely the regression line approximates the actual data points. Figure 10

illustrates the relationship between ClO_4^- and Cl^- on a molar basis for the Los Alamos ground-water system. The scatter, as represented by an R^2 at 0.04, indicates that no correlation is evident between these two analytes. Weak statistical correlations between other parameters and perchlorate for all stations show similar R^2 values. However, if the Los Alamos regional aquifer (zone 4) is analyzed separately from zones 1 and 3, then the R^2 value for ClO_4^- and Cl^- increases to 0.67, suggesting that a much stronger statistical correlation exists between these two anions as shown in Figure 11. For comparison purposes, the R^2 for Cl^- versus SO_4^{2-} for the regional aquifer is 0.62. R-squared values for perchlorate versus SO_4^{2-} and NO_3^- were 0.51 and 0.07, respectively. The low R^2 for the NO_3^- may be the result of nitrate degradation or denitrification taking place during recharge and/or along ground-water flow paths. The relationship between ground-water age and perchlorate concentration in zone 4 has a lower degree of correlation at 0.46 as shown in Figure 12. Comparison of Cl^- versus ground-water age yielded a similar R^2 value at 0.53. Probabilities, or p values, for the correlations between ClO_4^- versus Cl^-, SO_4^{2-}, and ground-water age are at 0.0003 or less. These low p values indicate that the correlation tests between these anions and ground-water age are statistically significant. The p value for background concentrations of ClO_4^- and NO_3^- is not significant at 0.26.

If concentrations of ClO_4^- do increase with ground-water age and evapotranspiration is the controlling factor, then it is conceivable that climate plays a role in long-term accumulation of ClO_4^- within the subsurface. Lower concentrations of ClO_4^- in the modern ground water in contrast to those measured in the submodern age regional aquifer samples suggest that ET has decreased through time in the Los Alamos area, assuming that the measured ClO_4^- is associated with ground-water recharge.

Isotope ratios of δ^2H versus ClO_4^- concentration for all stations are shown in Figure 13. It is apparent that two separate populations occur for ground-water samples collected within both the Los Alamos and Taos areas. Within zone 4 there is some degree of correlation between δ^2H and ClO_4^- with an R^2 of 0.41 and a p value of 0.003. Lower ClO_4^- concentrations in the Taos area may be due to different recharge conditions such as land-surface temperatures, soil thickness, soil type and hydraulic properties, lack of hydrothermal activity such as the Jemez Mountains, and vegetation cover. Water-rock reactions including reduction of ClO_4^- ultimately to Cl^- in the presence of appropriate microorganisms may also play a role in producing lower ClO_4^- concentrations in the Taos area. The measured differences in ClO_4^- concentrations suggest that each hydrogeologic system may contain its own naturally occurring level of ClO_4^-.

Plummer et al. (2006) suggest the concentration and distribution of natural ClO_4^- in the vicinity of Albuquerque, New Mexico may be related to changes in evapotranspiration, either spatially and/or temporally. Within a given aquifer, location of recharge and long-term recharge rates controlled by climate change may play a significant role. Within the regional aquifer at Los Alamos, wells R-2

and R-18 are located nearly equidistant from the mountain block/front area but have different concentrations of ClO_4^- and Cl^- at 0.38 μg/L and 2.31 mg/L and 0.24 μg/L and 1.55 mg/L, respectively. This may be due to the fact that R-2 pumps regional-aquifer ground water that is much older and the well is present beneath a relatively dry watershed characterized by lower recharge rates and higher evapotranspiration. Well R-18 pumps younger ground water from the regional aquifer and is located close to a very active and perennially wet watershed characterized by higher recharge rates and lower evapotranspiration.

Plummer et al. (2006) calculate concentrations of ClO_4^- in bulk atmospheric deposition by adjusting the amount of evapotranspiration (ET) using Cl^- and ClO_4^- concentrations measured in ground water sampled in north-central New Mexico. Their average ET-adjusted value for ClO_4^- concentration in atmospheric deposition is 0.025±0.011 μg/L calculated from 31 ground-water samples. This value is nearly equal to ClO_4^- concentrations of 0.010 and 0.021 μg/L that we measured in two of thirteen precipitation samples. Following the approach (ET adjusted method) presented by Plummer et al. (2007) and using our Cl^- data from 21 regional aquifer stations, we calculate an average concentration of ClO_4^- in bulk atmospheric deposition of 0.032±0.004 μg/L, which is slightly higher than that calculated by Plummer et al. (2006). Results of ET calculations performed by Plummer et al. (2006) and those presented in this paper are consistent and suggest that low concentrations of this trace anion are likely to be present in atmospheric deposition.

Conclusions

- Perchlorate was measured at 0.010 and 0.021 μg/L in two of thirteen precipitation samples.
- Background concentrations of ClO_4^- in ground water range from 0.03 to 0.45 μg/L within the Los Alamos and Taos areas.
- Perchlorate is present at similar concentrations in both submodern (pre-1943) and modern (post-1943) ground water.
- Some statistical correlation is apparent between concentrations of ClO_4^- and other anions (Cl^- and SO_4^{2-}) and ground-water age for the Los Alamos area regional aquifer (zone 4).
- Like chloride, ClO_4^- may be concentrated within the vadose zone as a result of evapotranspiration taking place during recharge. This suggests that climate may play an important role in the accumulation of ClO_4^- within recharge zones.

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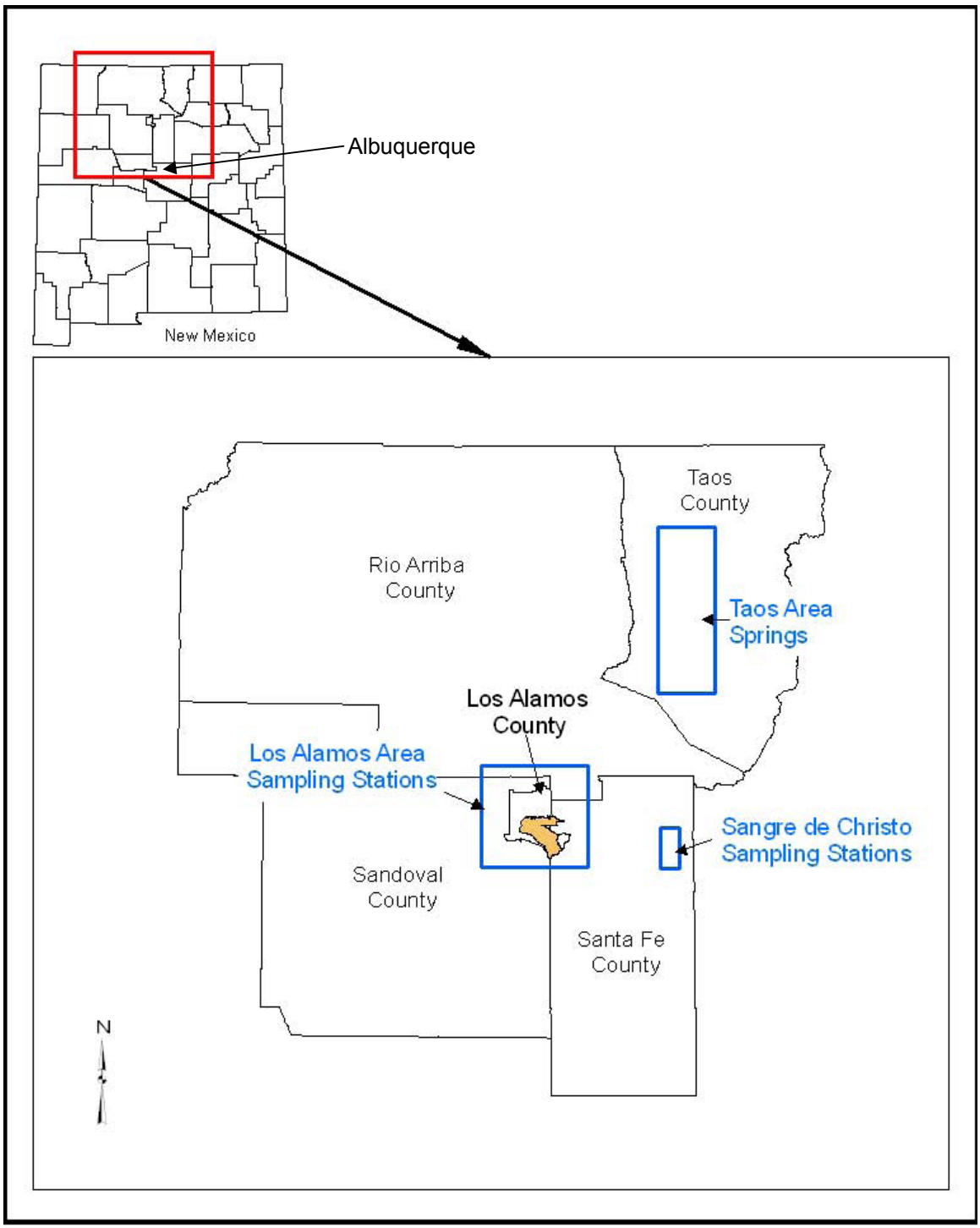

Figure 1 Generalized map showing sampling locations

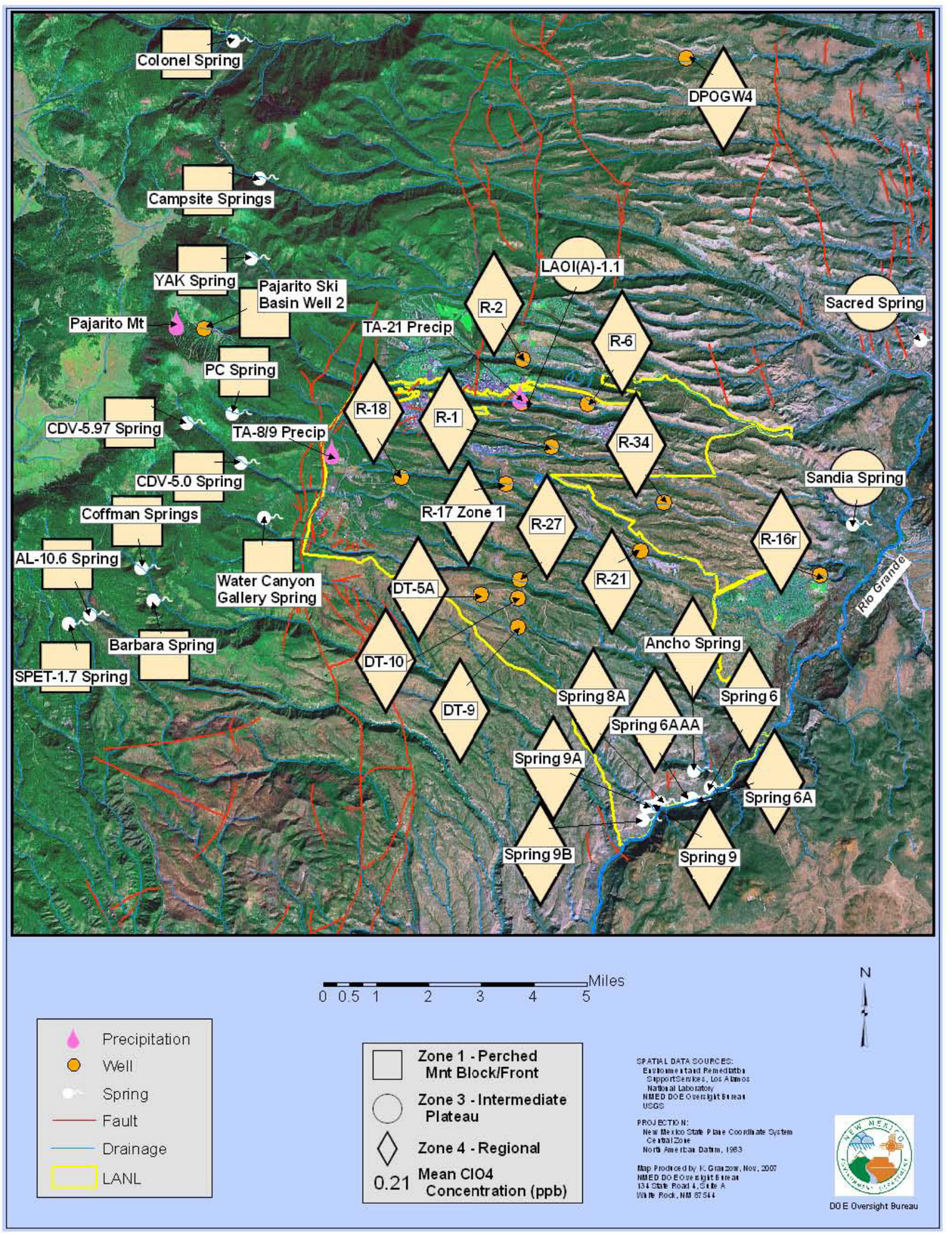

Figure 2 Los Alamos area sampling stations

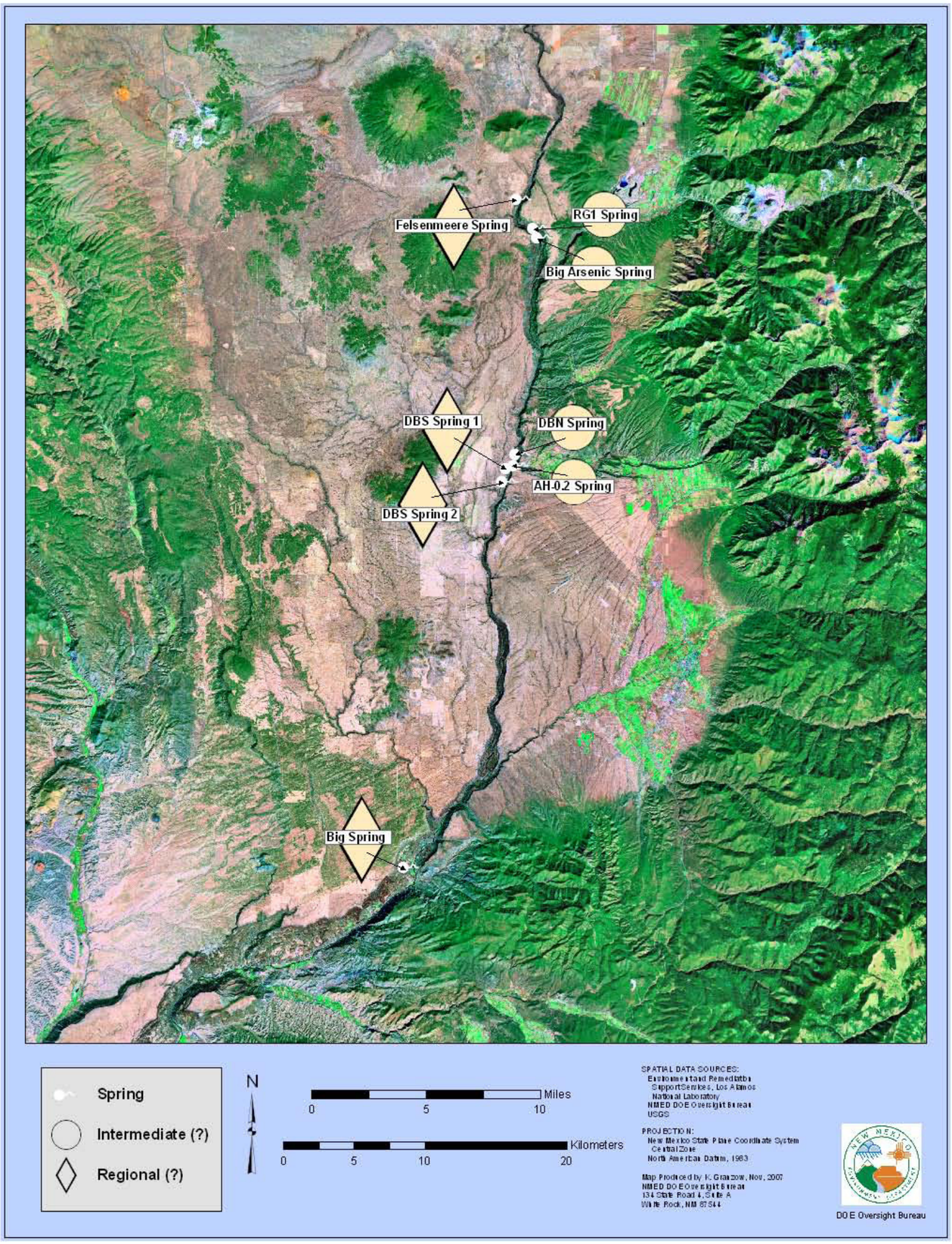

Figure 3 Taos area sampling stations

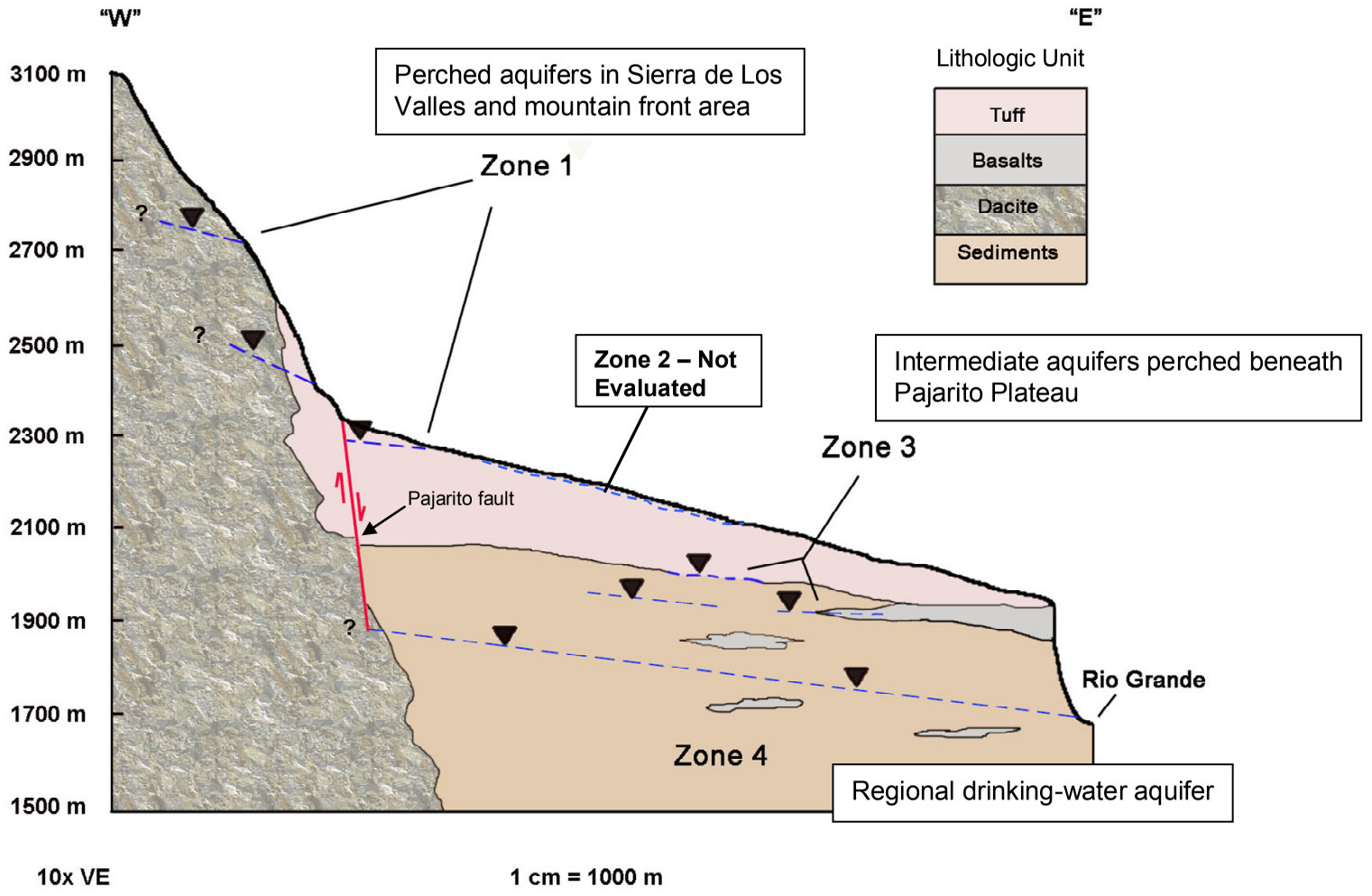

Figure 4 Generalized schematic illustrating the different occurrences of ground water at Los Alamos, New Mexico

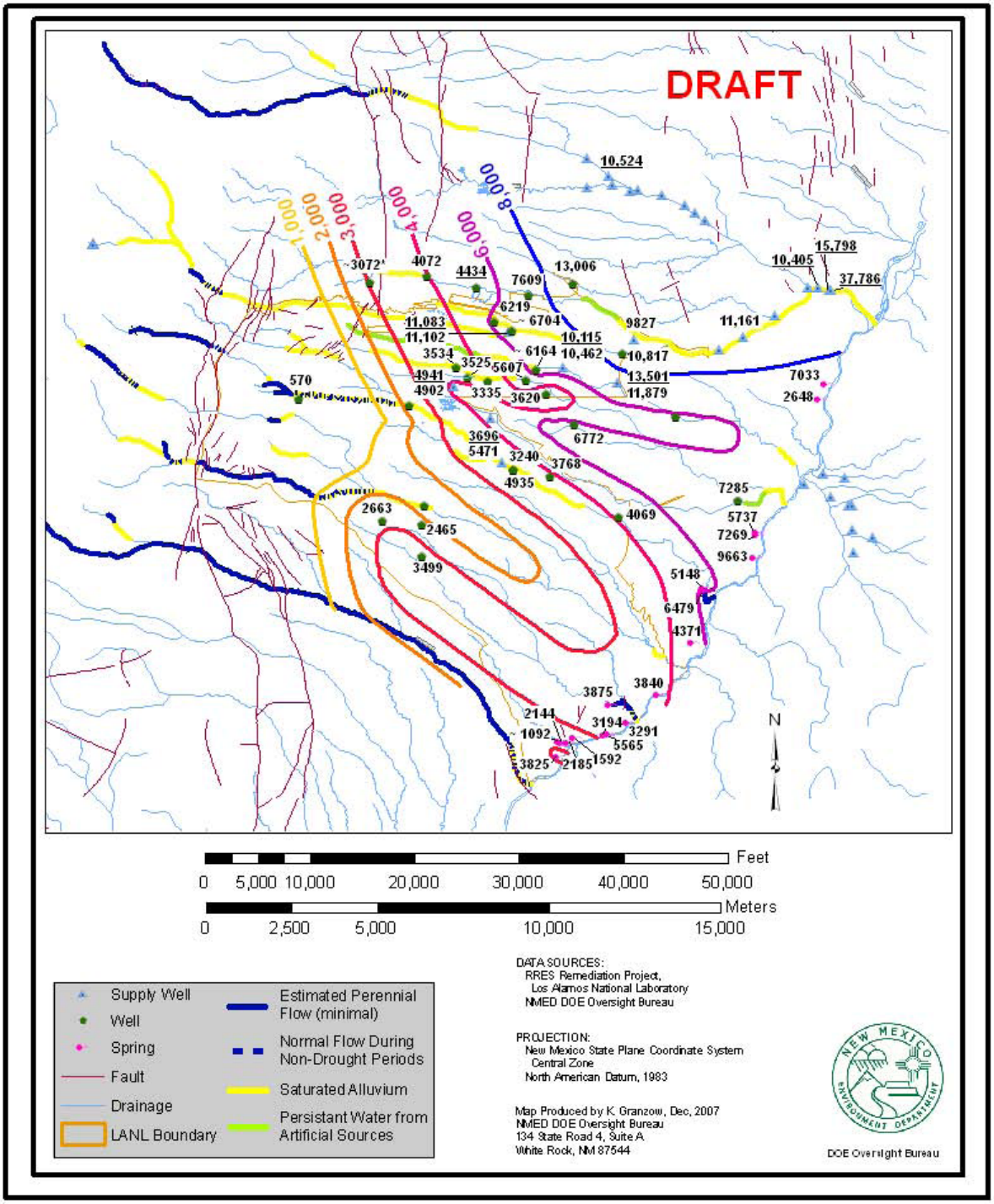

Figure 5 Unadjusted mean radiocarbon age of DIC in regional ground water for the Pajarito Plateau, New Mexico

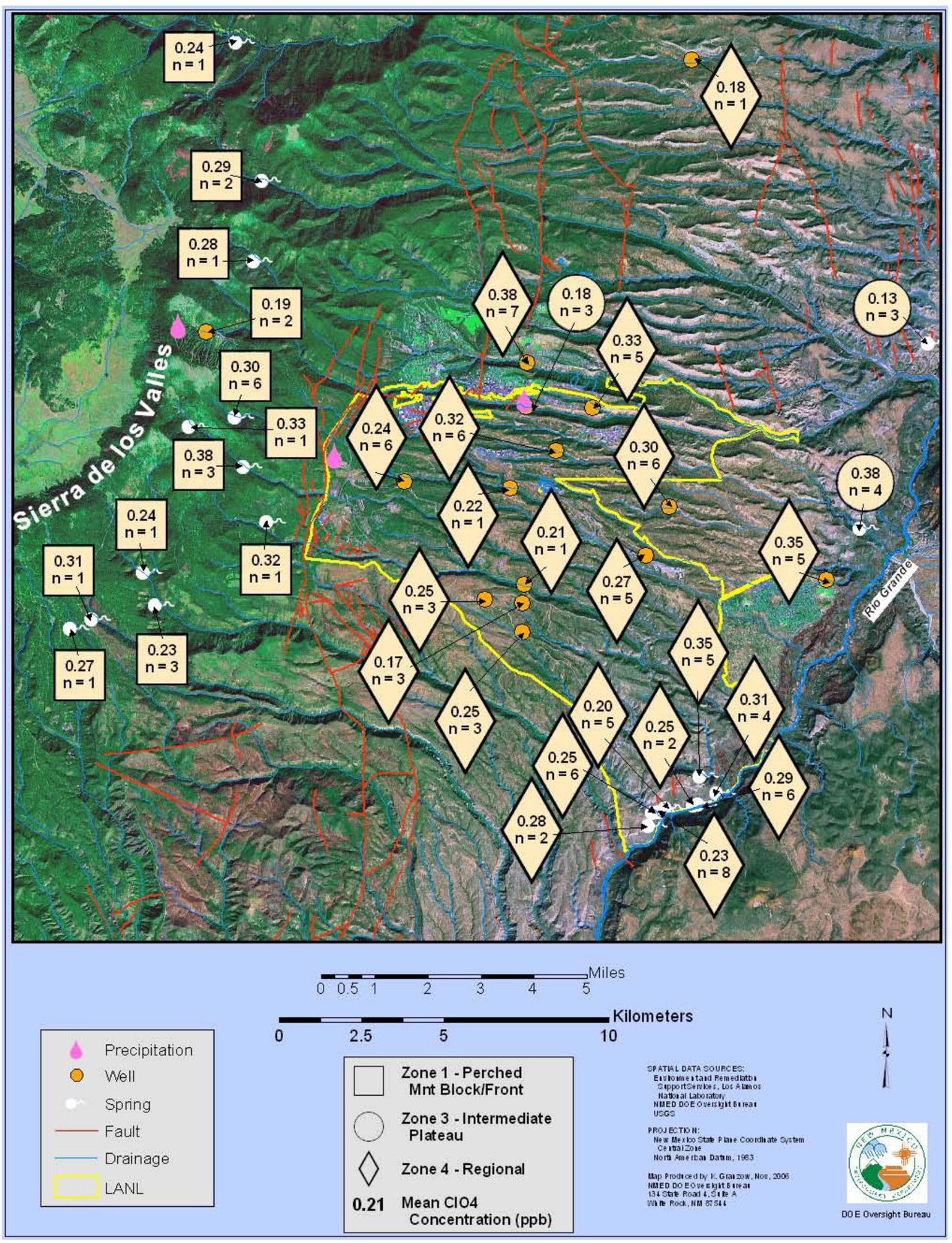

Figure 6 Los Alamos area mean background perchlorate values

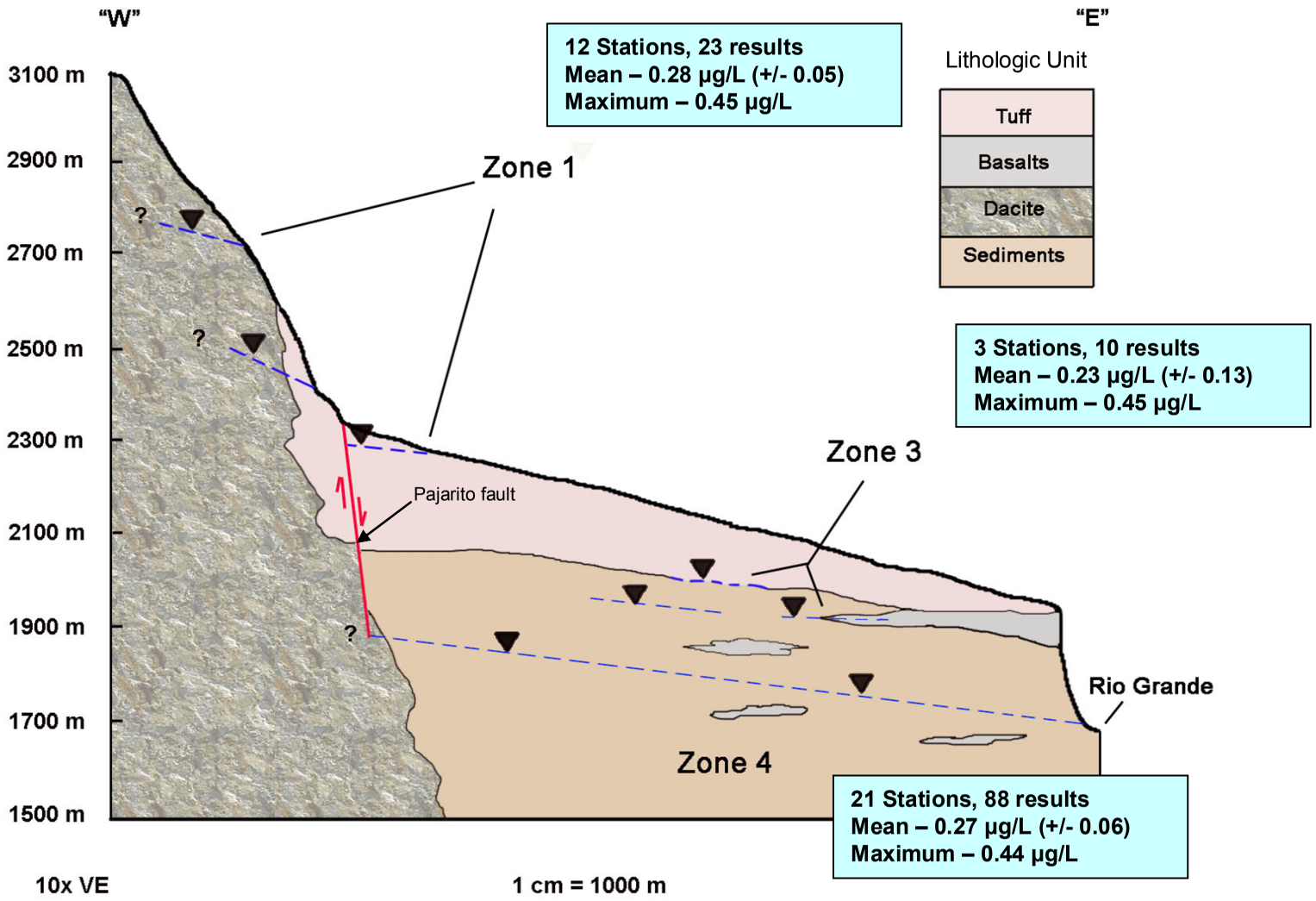

Figure 7 Cross-section showing the relationship between ground-water occurrence and naturally occurring perchlorate in the Los Alamos area ground-water system

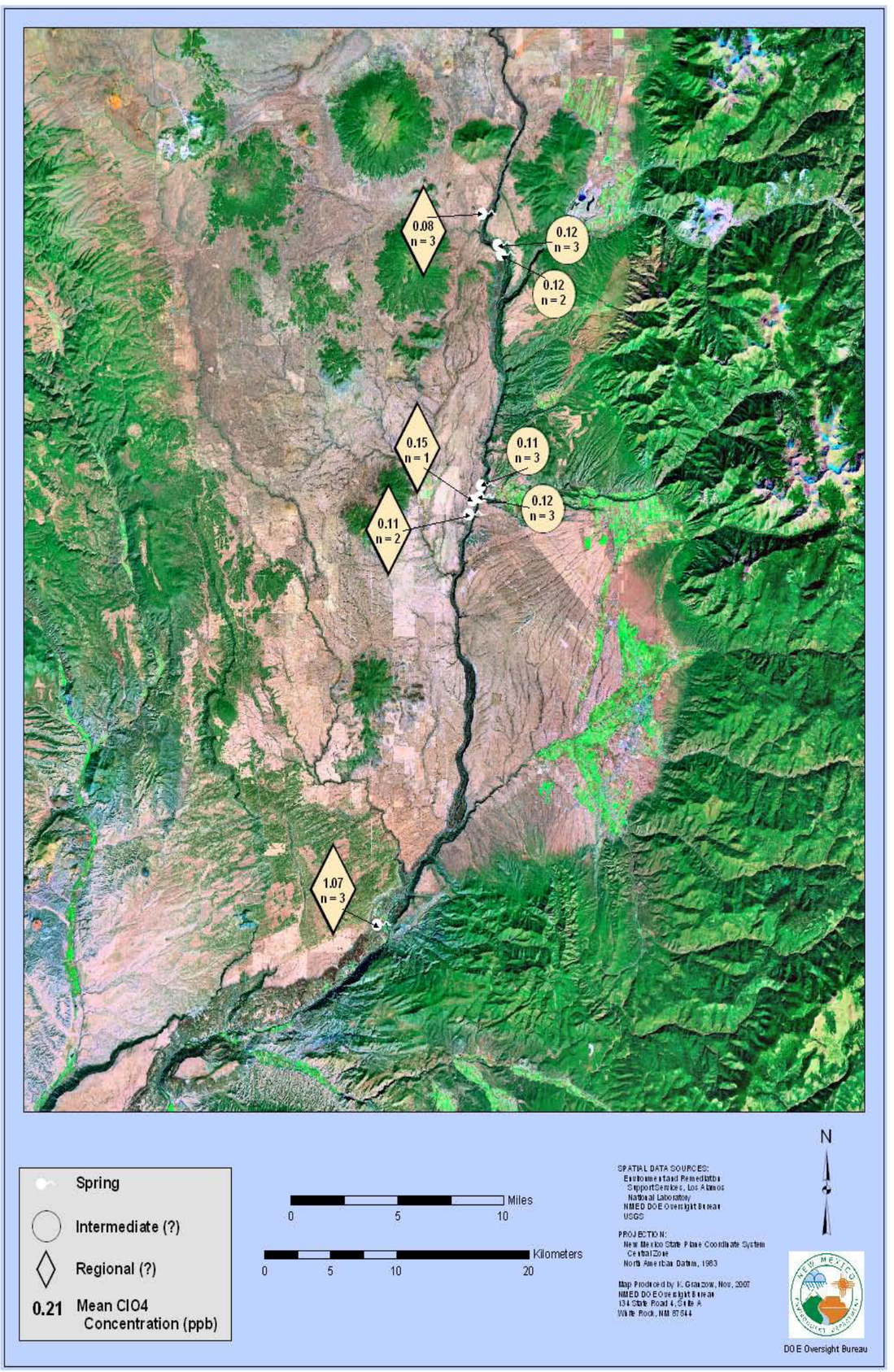

Figure 8 Taos area mean background perchlorate values

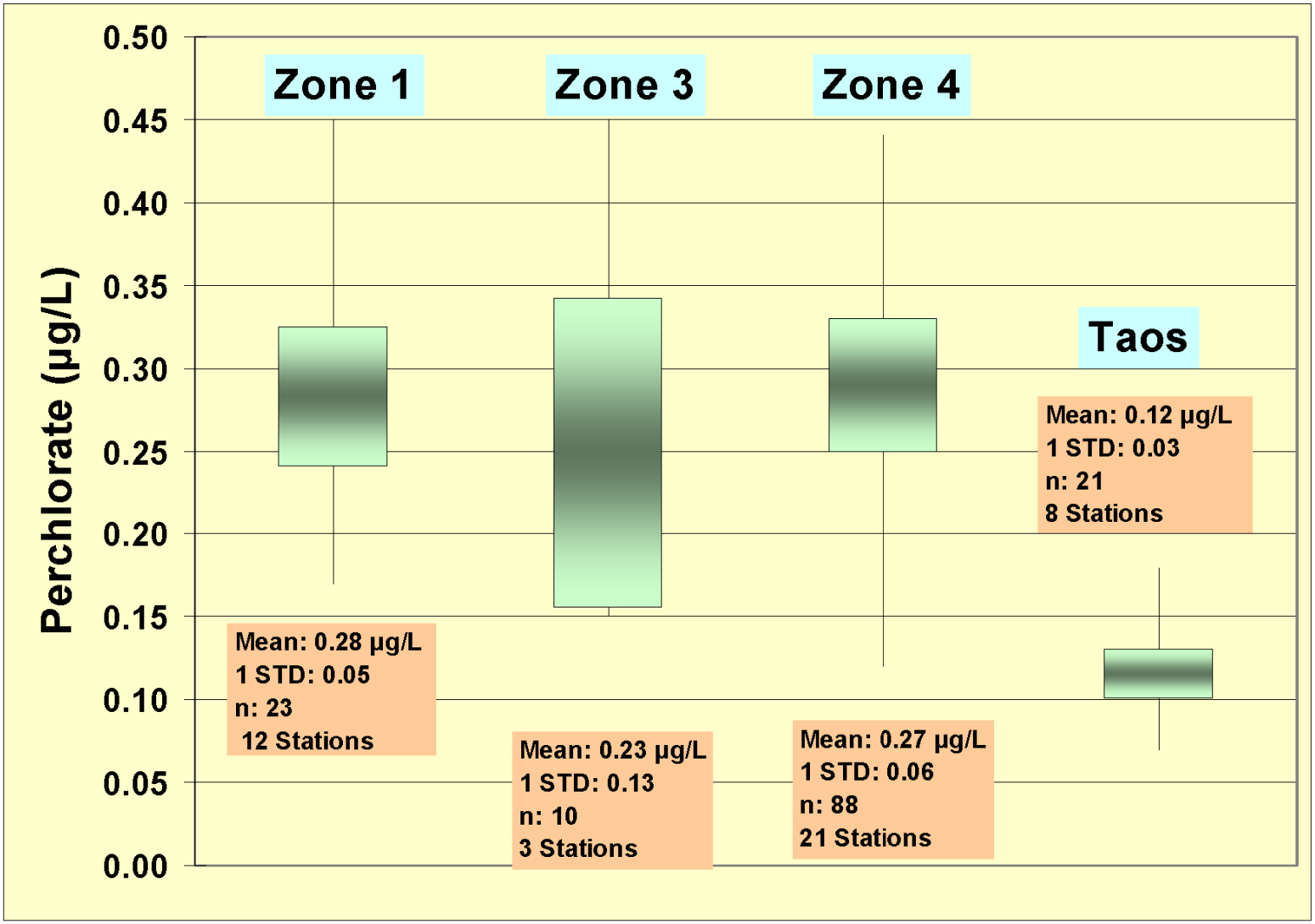

Figure 9 Box-and-whisker diagram illustrating the 25 and 75 percentiles for background data collected at Los Alamos and Taos, New Mexico

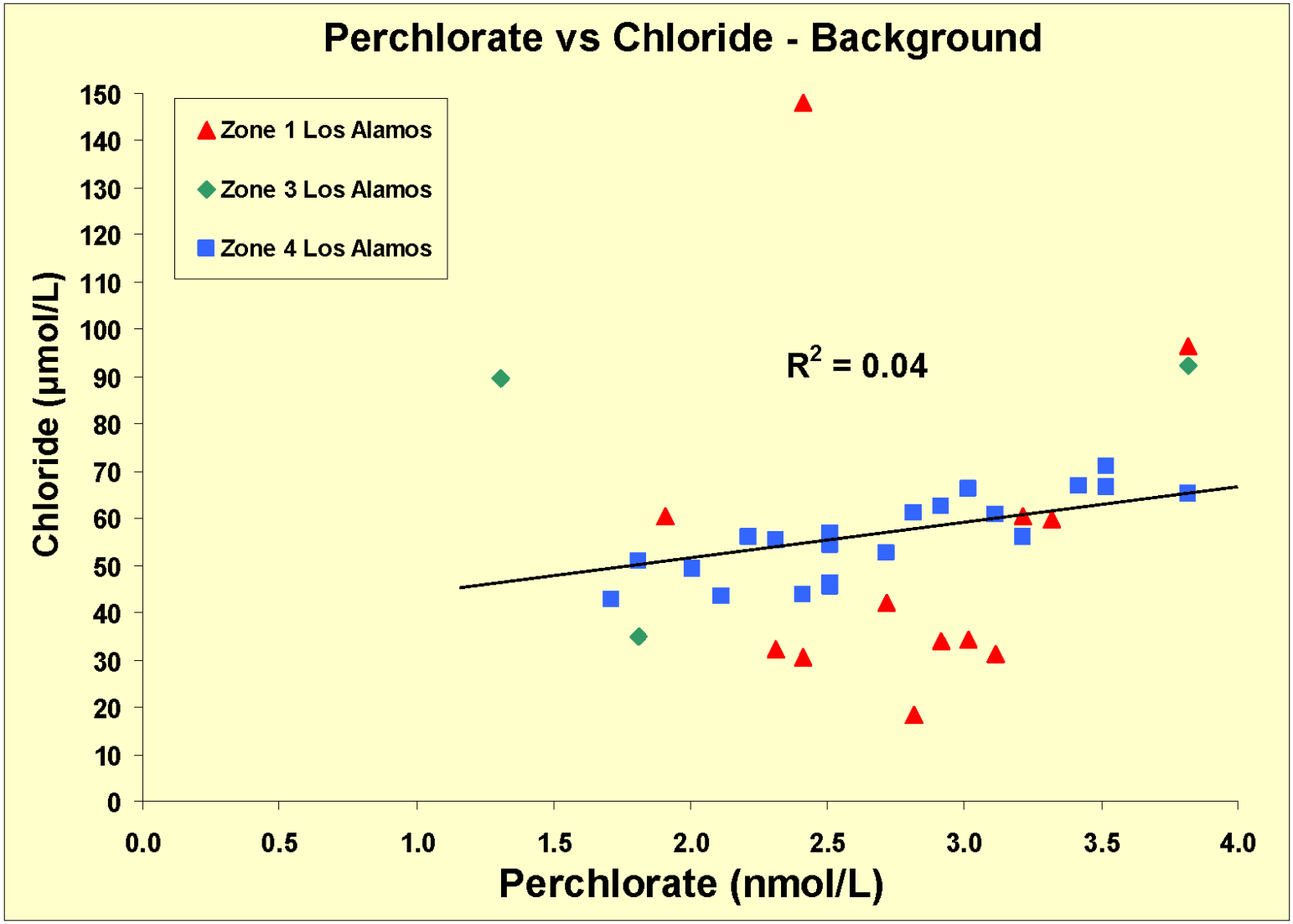

Figure 10 Plot illustrating the relationship between perchlorate and chloride concentrations for the Los Alamos area ground-water system

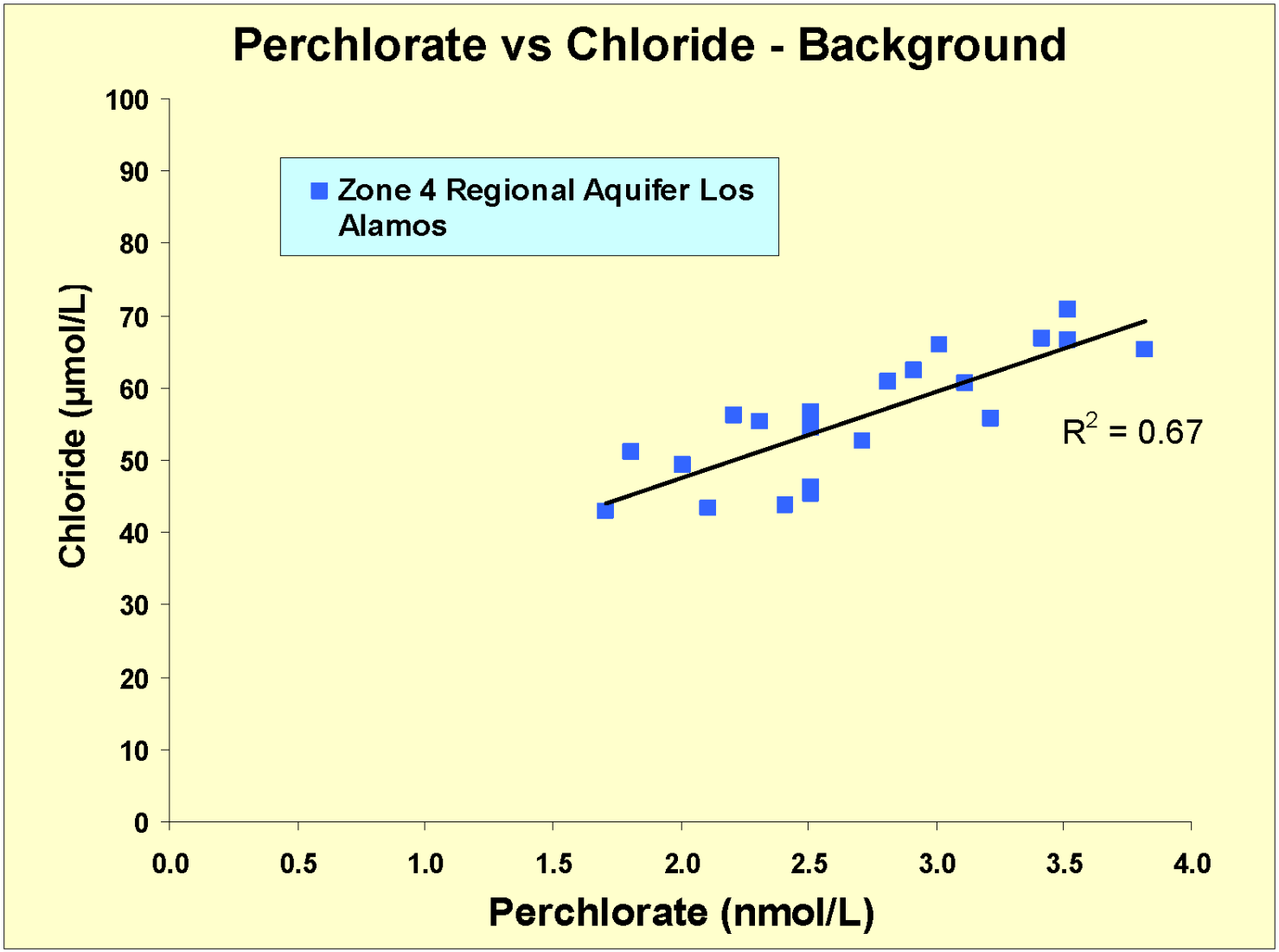

Figure 11 Plot illustrating the correlation between perchlorate and chloride concentrations for the regional drinking-water aquifer at Los Alamos, New Mexico

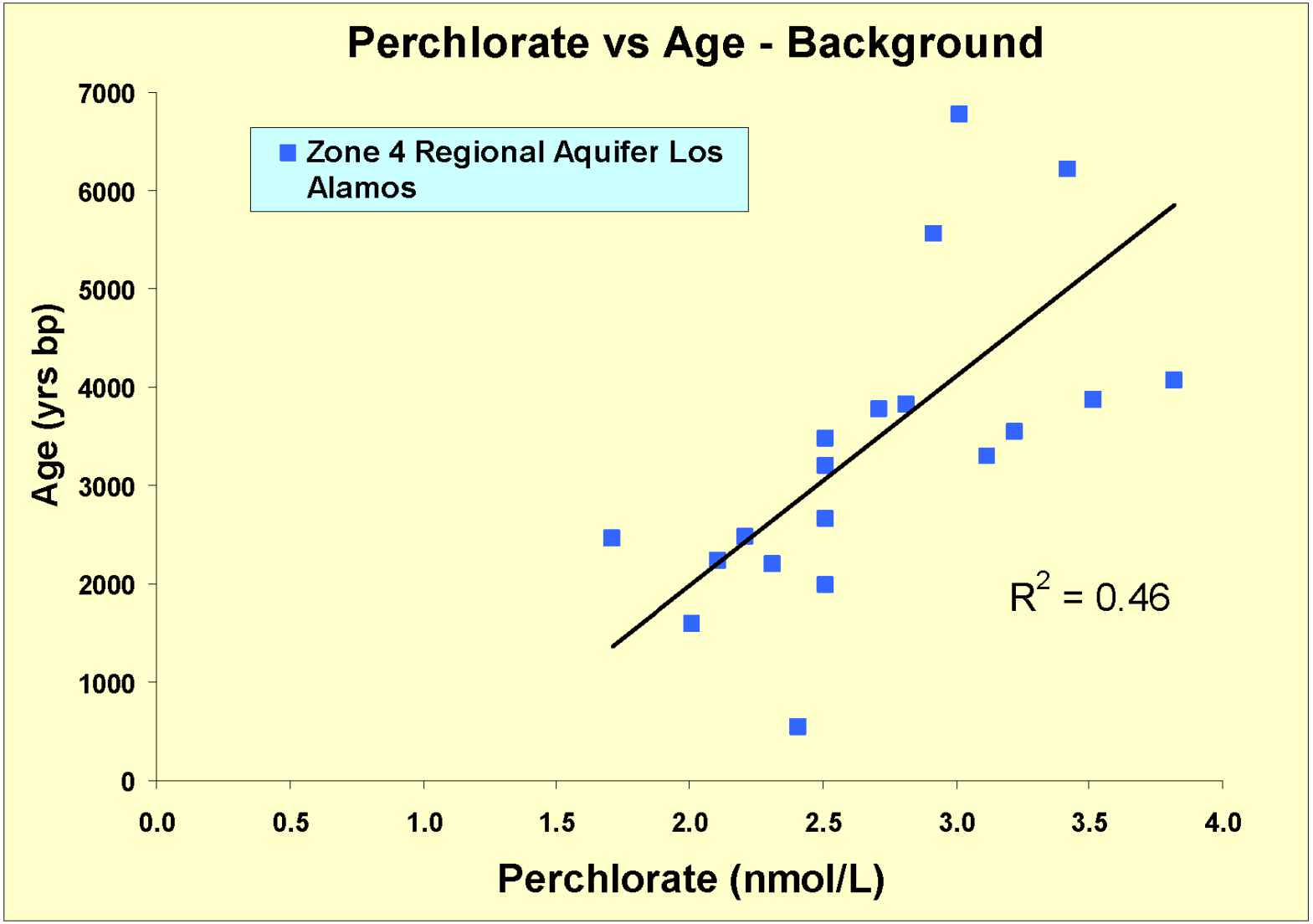

Figure 12 Plot illustrating the correlation between perchlorate and for the regional drinking-water aquifer at Los Alamos, New Mexico

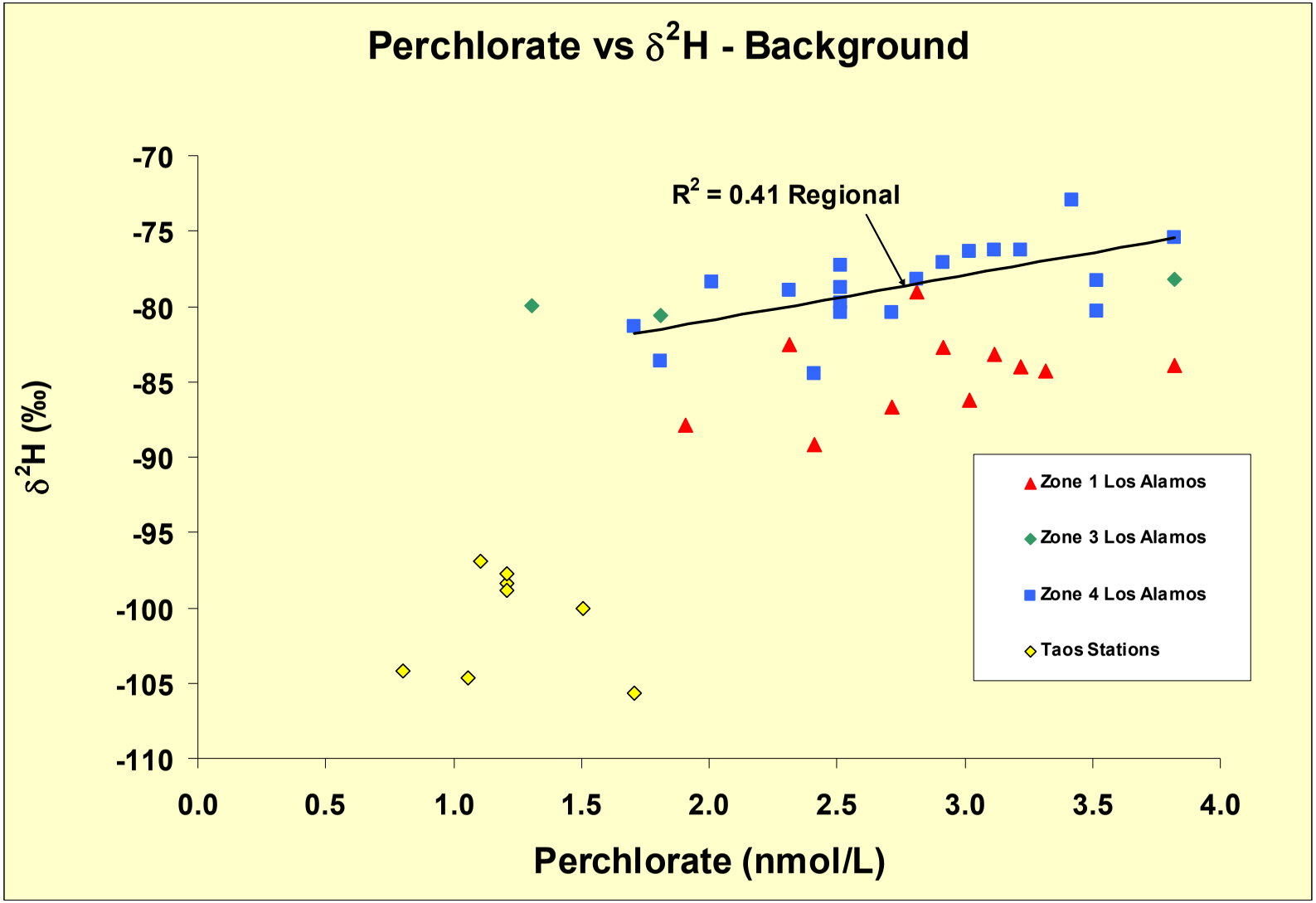

Figure 13 Plot illustrating the correlation between perchlorate and deuterium for all stations

Table 1- Location and Description of Sampling Sites.

Station ID	Hydrostratigraphic Unit (s)	Discharge or Water Elevation (m)	(ft)	X-Coord	Y-Coord
Los Alamos Area					
Zone 1 - Perched Sierra de Los Valles and Mountain Front Area					
Wells					
Pajarito Ski Well #2	Tt[c]	2710	8892	1597573.748	1781378.697
Springs					
AL-10.6 Spring	Qbt?	2558	8393	1586782.126	1752840.12
Barbara Spring	Qbt/Tt (near contact)[a]	2357	7734	1593101.22	1754219.24
Campsite Springs	Tt[a]	2622	8602	1603673.95	1796416.85
CDV-5.0 Spring	Tt[a]	2562	8407	1601806.342	1767986.45
CDV-5.97 Spring	Tt[a]	2719	8921	1596469.15	1771945.34
Colonel Spring	Tt	2683	8804	1601103.982	1810258.884
PC Spring	Qal[b]/Tt (near contact)[a]	2679	8790	1601022.14	1772943.43
Water Canyon Gallery Spring	Qbt[a]	2423	7948	1604172.61	1762507.18
SPET-1.7 Spring	Qbt	2637	8652	1584650.347	1751892.294
Yak Spring	Tt[a]	2644	8674	1602884.282	1788491.755
Coffman Springs	Tt[a]	2433	7983	1591864.15	1757508.3
Zone 3 - Perched Intermediate Pajarito Plateau					
Wells					
LAOI(A)-1.1	Qbog	1992	6535	1629427.38	1773924.51
Springs					
Sacred Spring	Qtp5	1717	5634	1669915.437	1780252.86
Sandia Spring	Qc over Tsfu near Tpt contact[d]	1732	5683	1663153.545	1761836.2
Zone 4 - Regional Aquifer					
Wells					
DPOGW4	Tp/Tsf?	~ 1710	~ 5610	1645885.98	1808431.26
R-1	Tp	1779	5837	1632355.1	1769598.8
R-2	Tf	1784	5852	1629519.57	1778281.56
R-6	Tf	1762	5780	1636011.02	1773884.07
R-16r	Tpt	1722	5648	1659289.39	1756730.68

Table 1- Location and Description of Sampling Sites.

Station ID	Hydrostratigraphic Unit (s)	Discharge or Water Elevation (m)	(ft)	X-Coord	Y-Coord
R-17 Screen 1	Tp	1784	5853	1627795.96	1765861.23
R-18	Tp	1839	6035	1617254.37	1766545.47
R-21	Tb/Tp	1755	5758	1641284.17	1759143.05
R-27	Tp	1783	5850	1629230.52	1756296.28
R-34	Tp	1748	5735	1643595.82	1764028.77
Test Well DT-5A	Tp	~ 1787	~ 5862	1625310	1754789
Test Well DT-9	Tp	~ 2041	~ 6696	1628994	1751493
Test Well DT-10	Tp	~ 1763	~ 5785	1628988	1754449
Springs					
Ancho Spring	Tpt^{d}	1724	5656	1647208.26	1737200.304
Spring 6	Qls over Tcb_1^{d}?	1640	5381	1648882	1735517
Spring 6A	Qc over Tsfu or Tcm^{d}?	1637	5371	1647047.11	1734368.47
Spring 6AAA	Qc over Tsfu or Tcm^{d}?	1638	5375	1646632.745	1734336.373
Spring 8A	Qls over Tcm^{d} ?	1668	5472	1643802.216	1734004.86
Spring 9	Qls over Tcm^{d} ?	1664	5460	1643134.734	1733631.205
Spring 9A	Qls over Tcm^{d} ?	1696	5563	1642542.55	1733606.12
Spring 9B	$Tcbm/Tcm^{d}$	1677	5500	1642129	1732280.99
Taos Area					
Regional and Intermediate Aquifers					
Springs - East Rio Grande					
AH-0.2 Spring	Servilleta Fm, basalt (Pliocene)[f]	1994	6543	1800286.454	2014059.595
Big Arsenic Spring	Servilleta Fm, basalt (Pliocene)[f]	2070	6791	1805691.99	2066769.42
DBN Spring	Servilleta Fm, basalt or interbasalt gravel (Pliocene)[f]	1995	6545	1800804.53	2016622.83
RG1 Spring	Servilleta Fm, basalt (Pliocene)[f]	2139	7018	1804832.52	2068877.95
Springs - West Rio Grande					
Big Spring	Servilleta Fm, basalt or interbasalt gravel (Pliocene)[f]	1878	6160	1774962.361	1920993.002
DBS Spring 1	Servilleta Fm, basalt or interbasalt gravel (Pliocene)[f]	1974	6478	1798547.297	2013405.333
DBS Spring 2	Servilleta Fm, basalt or interbasalt gravel (Pliocene)[f]	1971	6468	1797722.808	2010408.956
Felsenmeere Spring	Servilleta Fm, basalt or interbasalt gravel (Pliocene)[f]	2133	6997	1800936.293	2075796.274

Table 1- Location and Description of Sampling Sites.

Station ID	Hydrostratigraphic Unit (s)	Discharge or Water Elevation (m)	(ft)	X-Coord	Y-Coord
Snowpack/Precipitation					
Snowpack					
Aspen Peak Snowpack	-	3370	11055	1771377.472	1747583.242
Pajarito Mountain Snowpack	-	3000	9844	1594750.046	1782005.775
Snow					
TA-21 Snow	-	2195	7202	1629171.18	1774646.1
TA-8/9 Snow	-	2342	7685	1610321.89	1769115.28
Rain					
TA-21 Rain	-	2195	7202	1629171.18	1774646.1
TA-8/9 Rain	-	2342	7685	1610321.89	1769115.28

[a] - Smith et al., 1970
[b] - NMED DOE OB
[c] - Purtymun, 1995
[d] - Dethier, 1997
[e] - Blake, et al., 1995
[f] - Kelson and Bauer, 2006 (preliminary)
NA - Not available
Qaf - Alluvial fan deposits
Qal - Alluvium; stream deposits
Qc - Colluvial deposit
Qls - Landslide deposit
Qbt - Bandelier Tuff
Qbo - Bandelier Tuff, Otowi member
Qtb - Basalt lavas as used by Smith et al., 1970 and others
Tb - Cerros del Rio Basalts
Tt - Tschicoma Formation
Tcm - Phreatomagmatic deposit
Tcbm - Basalt and interlayered phreatomagmatic deposits
Tcb, - Basalt flows
Tp - Puye Formation fanglomerate
Tpt - Puye Formation, ancestral Rio Grande facies (Totavi Lentil of Griggs, 1964)
Tf - Unassigned Formation Fanglomerates
Tsfu - Santa Fe Group, undivided
Tsf - Santa Fe Formation as used by Smith et al., 1970 and others

Table 2 - Background Perchlorate in Ground Water and Precipitation, Northern Rio Grande Basin, New Mexico.

Station ID	Date Sampled	Source Code	F/NF	Concentration (ug/L)	MDL	PQL/RL	Q
Los Alamos Area							
Zone 1 - Perched Sierra de Los Valles and Mountain Front Area							
Wells							
Pajarito Ski Well #2	5/19/2004	I	NF	0.21	0.05	0.20	
	9/22/2004	I	NF	0.17	0.03	0.20	J
Springs							
AL-10.6 Spring	5/26/2004	I	NF	0.31	0.05	0.20	ST
Barbara Spring	8/18/2003	I	F	0.23	0.05	0.20	
	5/26/2004	I	NF	0.22	0.05	0.20	ST
	9/20/2004	I	NF	0.24	0.03	0.20	
Campsite Springs	8/25/2003	I	F	0.28	0.05	0.20	
	8/10/2004	I	NF	0.29	0.03	0.20	
CDV-5.0 Spring	8/20/2003	I	F	0.33	0.05	0.20	
	5/16/2004	I	NF	0.45	0.05	0.20	
	9/17/2004	I	NF	0.37	0.03	0.20	
CDV-5.97 Spring	11/9/2006*	I	NF	0.330	0.009	0.10	
Colonel Spring	9/16/2004	I	NF	0.24	0.03	0.20	
PC Spring	8/22/2003	I	F	0.23	0.05	0.2	
	5/15/2004	I	NF	0.35	0.05	0.2	
	9/16/2004	II	NF	0.26	0.05	NP	
	6/21/2005	II	F	0.31	0.05	NP	
	8/31/2006	II	F	0.36	0.05	NP	
	12/14/2006	II	F	0.28	0.05	NP	
Water Canyon Gallery Spring	5/19/2004	I	NF	0.32	0.05	0.20	
SPET-1.7 Spring	5/26/2004	I	NF	0.27	0.05	0.20	ST
Yak Spring	5/27/2004	I	NF	0.28	0.05	0.20	ST
Coffman Springs	12/4/2006*	I	NF	0.240	0.009	0.10	

Mean =	**0.28**
Median =	**0.28**
One Standard Deviation (1 sigma) =	**0.05**
Upper Tolerance Limit (mean + 2 sigma) =	**0.39**
Number of Stations =	**12**
Number of Results Used =	**23**

Table 2 - Background Perchlorate in Ground Water and Precipitation, Northern Rio Grande Basin, New Mexico.

Station ID	Date Sampled	Source Code	F/NF	Concentration (ug/L)	MDL	PQL/RL	Q
Zone 3 - Perched Intermediate Pajarito Plateau							
LAOI(A)-1.1	6/3/2004	II	NF	0.15	0.05	NP	J
	6/3/2004	I	NF	0.21	0.05	0.20	B
	5/7/2005	II	NF	0.17	0.05	NP	J
	8/4/2006	II	F	0.18	0.05	NP	J
Sacred Spring	8/24/2004	I	NF	0.23	0.03	0.20	
(Blind Interlaboratory Field Duplicate)	8/24/2004	II	NF	0.15	0.05	NP	
	7/13/2005	II	F	0.12	0.05	NP	
	9/14/2006	II	F	0.09	0.05	NP	
Sandia Spring	6/14/2004	I	NF	0.46	0.05	0.20	B
(re-analysis)	6/14/2004	I	NF	0.41	0.03	0.20	
	1/28/2005	II	NF	0.45	0.05	NP	
	9/8/2005	II	F	0.32	0.05	NP	H
	9/14/2006*	I	NF	0.35	0.02	0.10	

Mean =	**0.23**
Median =	**0.18**
One Standard Deviation (1 sigma) =	**0.13**
Upper Tolerance Limit (mean + 2 sigma) =	**0.50**
Number of Stations =	**3**
Number of Results Used =	**10**

Zone 4 - Regional Aquifer

Wells

DPOGW4	9/30/2004	I	NF	0.18	0.03	0.20	J
R-1	5/19/2005	I	NF	0.35	0.03	0.20	
(Blind Interlaboratory Field Duplicate)	5/19/2005	II	NF	0.31	0.05	NP	
	9/12/2005	II	F	0.33	0.05	NP	
(Blind Intralaboratory Field Duplicate)	9/12/2005	II	F	0.36	0.05	NP	
	9/12/2005	II	NF	0.34	0.05	NP	
(Blind Intralaboratory Field Duplicate)	9/12/2005	II	NF	0.35	0.05	NP	
	11/28/2005	II	NF	0.33	0.05	NP	
	1/25/2006	II	F	0.30	0.05	NP	
	1/25/2006	II	NF	0.31	0.05	NP	
	7/6/2006	II	F	0.32	0.05	NP	
(Blind Intralaboratory Field Duplicate)	7/6/2006	II	F	0.33	0.05	NP	
	10/26/2006	II	F	0.28	0.05	NP	
(Blind Intralaboratory Field Duplicate)	10/26/2006	II	F	0.28	0.05	NP	
R-2	12/11/2003	II	NF	0.39	0.05	0.20	
	1/13/2004	II	NF	0.40	0.05	0.20	
	4/26/2005	II	NF	0.33	0.05	NP	
	4/26/2005	II	NF	0.35	0.03	0.20	B
	8/9/2005	II	NF	0.37	0.05	NP	
	11/9/2005	II	NF	0.44	0.05	NP	
	2/27/2006	II	NF	0.38	0.05	NP	
	7/24/2006	II	F	0.38	0.05	NP	

Table 2 - Background Perchlorate in Ground Water and Precipitation, Northern Rio Grande Basin, New Mexico.

Station ID	Date Sampled	Source Code	F/NF	Concentration (ug/L)	MDL	PQL/RL	Q
R-6	8/23/2005	II	NF	0.358	0.05	NP	
(Blind Intralaboratory Field Duplicate)	8/23/2005	II	NF	0.379	0.05	NP	
	11/17/2005	II	NF	0.279	0.05	NP	
	3/1/2006	II	NF	0.306	0.05	NP	
	5/11/2006	II	NF	0.314	0.05	NP	
	7/26/2006	II	F	0.371	0.05	NP	
(Blind Intralaboratory Field Duplicate)	7/26/2006	II	F	0.371	0.05	NP	
R-16r	12/19/2005	II	F	0.37	0.05	NP	
	3/8/2006	II	NF	0.35	0.05	NP	
(Blind Intralaboratory Field Duplicate)	3/8/2006	II	NF	0.33	0.05	NP	
	5/24/2006	II	NF	0.36	0.05	NP	
	8/17/2006	II	NF	0.34	0.05	NP	
(Blind Intralaboratory Field Duplicate)	8/17/2006	II	NF	0.35	0.05	NP	
	11/1/2006	II	NF	0.36	0.05	NP	
R-17 Screen 1	10/19/2006	II	F	0.22	0.05	NP	
R-18	8/25/2005	II	NF	0.27	0.05	NP	H
	12/1/2005	II	NF	0.22	0.05	NP	
(Blind Intralaboratory Field Duplicate)	12/1/2005	II	NF	0.23	0.05	NP	
	3/7/2006	II	NF	0.24	0.05	NP	
	5/16/2006	II	NF	0.24	0.05	NP	
(Blind Intralaboratory Field Duplicate)	5/16/2006	II	NF	0.23	0.05	NP	X
	8/15/2006	II	F	0.24	0.05	NP	
(Blind Intralaboratory Field Duplicate)	8/15/2006	II	F	0.25	0.05	NP	
	12/18/2006	II	F	0.24	0.05	NP	
(Blind Intralaboratory Field Duplicate)	12/18/2006	II	F	0.22	0.05	NP	
R-21	3/31/2004	II	NF	0.30	NP	NP	
	6/30/2004	II	NF	0.25	0.05	NP	
	9/23/2004	II	NF	0.27	0.05	NP	
	12/14/2004	II	NF	0.26	0.05	NP	
	6/6/2005	II	F	0.29	0.05	NP	
(Blind Intralaboratory Field Duplicate)	6/6/2005	II	F	0.29	0.05	NP	
	7/7/2006	II	F	0.27	0.05	NP	
	11/6/2006	II	F	0.28	0.05	NP	
(Blind Intralaboratory Field Duplicate)	11/6/2006	II	F	0.27	0.05	NP	
R-27	7/1/2006	II	F	0.22	0.05	NP	
(Blind Intralaboratory Field Duplicate)	7/1/2006	II	F	0.21	0.05	NP	
R-34	6/7/2005	II	NF	0.295	0.05	NP	X
	9/7/2005	II	F	0.287	0.05	NP	
	9/7/2005	II	NF	0.293	0.05	NP	
	11/29/2005	II	NF	0.302	0.05	NP	
(Blind Intralaboratory Field Duplicate)	11/29/2005	II	NF	0.304	0.05	NP	
	1/31/2006	II	F	0.288	0.05	NP	
(Blind Intralaboratory Field Duplicate)	1/31/2006	II	F	0.285	0.05	NP	
	1/31/2006	II	NF	0.299	0.05	NP	
(Blind Intralaboratory Field Duplicate)	1/31/2006	II	NF	0.307	0.05	NP	
	7/17/2006	II	F	0.334	0.05	NP	
	10/30/2006	II	F	0.276	0.05	NP	

Table 2 - Background Perchlorate in Ground Water and Precipitation, Northern Rio Grande Basin, New Mexico.

Station ID	Date Sampled	Source Code	F/NF	Concentration (ug/L)	MDL	PQL/RL	Q
Test Well DT-5A	7/13/2004	II	NF	0.22	0.05	NP	
	8/24/2005	II	F	0.29	0.05	NP	
	12/6/2006	II	F	0.24	0.05	NP	
Test Well DT-9	7/7/2004	II	NF	0.25	0.05	NP	
	7/20/2005	II	F	0.25	0.05	NP	
	12/5/2006	II	F	0.26	0.05	NP	
Test Well DT-10	6/22/2004	II	NF	0.17	0.05	NP	J
	7/19/2005	II	F	0.16	0.05	NP	J
	12/4/2006	II	F	0.17	0.05	NP	J
(Blind Intralaboratory Field Duplicate)	12/4/2006	II	F	0.17	0.05	NP	J
Springs							
Ancho Spring	11/5/2003	I	NF	0.44 [2]	0.05	0.20	B
(re-analysis)	11/5/2003	I	NF	0.35	0.05	0.20	H
	3/12/2004	II	NF	0.31	0.05	0.20	ST
	2/2/2005	II	NF	0.44	0.05	NP	
	9/27/2005	I	NF	0.32	0.03	0.20	
(Blind Intralaboratory Field Duplicate)	9/27/2005	I	NF	0.30	0.03	0.20	
	9/19/2006	II	F	0.30	0.05	NP	
	9/19/2006*	I	NF	0.39	0.02	0.10	
Spring 6	3/12/2004	I	NF	0.31	0.05	0.20	ST
(Blind Interlaboratory Field Duplicate)	3/12/2004	II	NF	0.35	NP	NP	
	9/14/2004	II	NF	0.35	0.05	NP	
	9/27/2005	I	NF	0.26	0.03	0.20	
	9/27/2005	II	F	0.31	0.05	NP	
	9/19/2006	II	F	0.28	0.05	NP	
Spring 6A	10/7/2003	I	NF	0.19	0.05	0.20	J
	3/12/2004	I	NF	0.32	0.05	0.20	ST
(Blind Interlaboratory Field Duplicate)	3/12/2004	II	NF	0.29	NP	NP	
	9/14/2004	II	NF	0.32	0.05	NP	
	9/27/2005	I	NF	0.29	0.03	0.20	
	9/27/2005	II	F	0.31	0.05	NP	
	9/19/2006	II	F	0.28	0.05	NP	
	9/19/2006*	I	NF	0.32	0.02	0.10	
Spring 6AAA	3/12/2004	I	NF	0.26	0.05	0.20	ST
	9/19/2006	II	F	0.24	0.05	NP	
(Blind Intralaboratory Field Duplicate)	9/19/2006	II	F	0.25	0.05	NP	
Spring 8A	10/8/2003	I	NF	0.15	0.05	0.20	J
	3/18/2004	I	NF	0.26	0.05	0.20	
(Blind Interlaboratory Field Duplicate)	3/18/2004	II	NF	0.26	NP	NP	
	1/26/2005	II	NF	0.24	0.05	NP	
	9/28/2005	I	NF	0.25	0.03	0.20	
	9/19/2006	II	F	0.12	0.05	NP	J

Table 2 - Background Perchlorate in Ground Water and Precipitation, Northern Rio Grande Basin, New Mexico.

Station ID	Date Sampled	Source Code	F/NF	Concentration (ug/L)	MDL	PQL/RL	Q
Spring 9	10/8/2003	I	NF	0.20	0.05	0.20	
	3/12/2004	I	NF	0.26	0.05	0.20	ST
(Blind Interlaboratory Field Duplicate)	3/12/2004	II	NF	0.28	NP	NP	
	9/14/2004	II	NF	0.14	0.05	NP	J
	9/28/2005	I	NF	0.25	0.03	0.20	
	9/28/2005	II	F	0.26	0.05	NP	
	9/19/2006	II	F	0.24	0.05	NP	
	9/19/2006*	I	NF	0.23	0.009	0.10	
Spring 9A	10/8/2003	I	NF	0.17	0.05	0.20	J
	3/12/2004		NF	0.25	0.05	0.20	ST
(Blind Interlaboratory Field Duplicate)	3/12/2004	II	NF	0.29	0.05	NP	
	9/14/2004	II	NF	0.26	0.05	NP	
	9/28/2005	I	NF	0.25	0.03	0.20	
	9/28/2005	II	F	0.27	0.05	NP	
	9/20/2006*	I	NF	0.26	0.02	0.10	
Spring 9B	11/5/2003	I	NF	0.41 [2]	0.05	0.20	B
(re-analysis)	11/5/2003	I	NF	0.30	0.05	0.20	H
	3/12/2004	I	NF	0.26	0.05	0.20	ST

Mean =	**0.27**
Median =	**0.25**
One Standard Deviation (1 sigma) =	**0.06**
Upper Tolerance Limit (mean + 2 sigma) =	**0.39**
Number of Stations =	**21**
Number of Results Used =	**88**

Taos Area

Regional and Intermediate Aquifers

Springs - East Rio Grande

AH-0.2 Spring	3/15/2004	I	NF	0.10	0.05	0.20	J, ST
	9/27/2004	I	NF	0.13	0.033	0.20	J
	11/9/2005	I	NF	0.12	0.027	0.20	J
Big Arsenic Spring	3/25/2004	I	NF	0.13	0.05	0.20	J
	9/28/2004	I	NF	0.10	0.03	0.20	J
(Blind Intralaboratory Field Duplicate)	9/28/2004	I	NF	0.12	0.03	0.20	J
	11/9/2005	I	NF	0.13	0.03	0.20	J
DBN Spring	3/25/2004	I	NF	0.11	0.05	0.20	J
	9/27/2004	I	NF	0.10	0.03	0.20	J
	11/9/2005	I	NF	0.11	0.03	0.20	J
RG1 Spring	3/25/2004	I	NF	0.13	0.05	0.20	J
	9/28/2004	I	NF	0.12	0.03	0.20	J
	11/9/2005	I	NF	0.11	0.03	0.20	J

Table 2 - Background Perchlorate in Ground Water and Precipitation, Northern Rio Grande Basin, New Mexico.

Station ID	Date Sampled	Source Code	F/NF	Concentration (ug/L)	MDL	PQL/RL	Q
Springs - West Rio Grande							
Big Spring	5/29/2004	I	NF	0.26	0.05	0.20	B
(Blind Intralaboratory Field Duplicate)	5/29/2004	I	NF	0.25	0.05	0.20	B
(re-analysis)	5/29/2004	I	NF	0.18	0.03	0.20	J
	9/28/2004	I	NF	0.17	0.03	0.20	J
	11/18/2005	I	NF	0.17	0.03	0.20	J
DBS Spring 1	3/15/2004	I	NF	0.15	0.05	0.20	J, ST
DBS Spring 2	3/15/2004	I	NF	0.10	0.05	0.20	J, ST
	9/27/2004	I	NF	0.11	0.03	0.20	J
Felsenmeere Spring	5/5/2004	I	NF	0.07	0.05	0.20	J
	9/27/2004	I	NF	0.07	0.03	0.20	J
	11/10/2005	I	NF	0.09	0.03	0.20	J

Mean =	**0.12**
Median =	**0.12**
One Standard Deviation (1 sigma) =	**0.03**
Upper Tolerance Limit (mean + 2 sigma) =	**0.18**
Number of Stations =	**8**
Number of Results Used =	**21**

Snowpack/Precipitation

Snowpack

Aspen Peak Snowpack	4/18/2003	I	NF	<0.06	0.06	0.20	U
	3/30/2004	I	NF	<0.05	0.05	0.20	U
Pajarito Mountain Snowpack	4/13/2003	I	NF	<0.06	0.06	0.20	U
	3/21/2004	I	NF	<0.05	0.05	0.20	U

Snow

TA-21 Snow	11/30/2006*	I	NF	<0.009	0.009	0.10	U
	12/31/2006*	I	NF	<0.009	0.009	0.10	U
TA-8/9 Snow	11/30/2006*	I	NF	<0.009	0.009	0.10	U
	12/31/2006*	I	NF	<0.009	0.009	0.10	U

Rain

TA-21 Rain	8/11/2003	I	NF	<0.05	0.05	0.20	U
	8/17/2003	I	NF	<0.05	0.05	0.20	U
	8/10/2004*	I	NF	0.021	0.001	0.01	B
TA-8/9 Rain	8/23/2003	I	F	<0.05	0.05	0.20	U
	8/13/2004*	I	NF	0.010	0.001	0.01	J,B

Table 2 - Background Perchlorate in Ground Water and Precipitation, Northern Rio Grande Basin, New Mexico.

Station ID	Date Sampled	Source Code	F/NF	Concentration (ug/L)	MDL	PQL/RL	Q

Data Source Codes: I - NMED DOE OB; II - LANL Water Quality Database

NP - Not provided.

LC - LC/MS/MS SW-846 8321A(M); later updated to SW-846 6850 Modified

IC - IC/MS/MS SW-846 8321A(IC); later updated to SW-846 6860(M)

B - The assoicated method blank contained the target analyte at a reportable level

Q - Flags which indicate problems or issues that may affect the result.

J - Indicates an estimated value that is less than the reporting limit (quantitation limit) but greater than the method detection limit (MDL).

U - Indicates that the compound was analyzed for but not detected above the MDL.

H - Hold times exceeded.

X - Reported concentration is a false positive per LANL's WQDB

ST - Sample temperature at arrival time at contract laboratory exceeded 6 degrees C.

PQL/RL - Practical Quantitation Limit/Reporting Limit which is defined as the smallest amount that can be reliably measured with good confidence.

2 - Result may be biased high because re-analysis of two samples from the particular batch show a slight decrease in concentration of the target analyte.

^ - Sample analyzed using Ion Chromatography Mass Spectrometry Mass Spectrometry.

Table 3 - Summary Results of Major Element Chemistry and Field Parameters.

Station ID	Date Sampled	Source Code	F/NF	Total Alk (lab) (ppm)	HCO_3 (ppm)	Hardness (ppm)	CO_3 (ppm)	SO_4 (ppm)	Cl (ppm)	F (ppm)	Br (ppm)
Los Alamos Area											
Zone 1 - Perched Sierra de Los Valles and Mountain Front Area											
Wells											
Pajarito Ski Well #2	5/19/2004	III	F	36.2	44.2	29.7	0	3.55	1.28	0.02	<0.01
	9/22/2004	III	F	40.3	49.2	30.5	0	3.13	1.18	0.02	0.01
	3/2/2005	III	F	37.13	45.3	30.3	0	3.36	1.26	0.03	<0.01
	8/31/2005	III	F	37.38	45.6	28.9	0	4.08	5.53	0.03	<0.01
	1/12/2006	III	F	37.0	45.1	28.2	0	4.22	1.44	0.03	0.01
Springs											
AL-10.6 Spring	5/26/2004	III	F	34.0	41.5	22.1	0	1.71	1.07	0.07	0.01
	5/12/2005	III	F	31.23	38.1	20.8	0	4.45	1.22	0.07	0.02
	6/15/2005	III	F	34.26	41.8	20.8	0	2.45	1.07	0.07	0.02
	7/13/2005	III	F	34.59	42.2	21.3	0	1.76	1.09	0.06	0.01
Barbara Spring	8/18/2003	III	F	36.2	44.2	16.5	0	1.09	1.18	0.14	<0.01
	5/26/2004	III	F	35.2	43.0	17.3	0	1.07	1.07	0.13	0.01
	9/20/2004	III	F	36.7	44.8	15.9	0	1.03	1.11	0.10	0.02
	3/29/2005	III	F	35.74	43.6	15.2	0	1.22	1.21	0.12	0.01
	5/12/2005	III	F	34.84	42.5	14.7	0	1.14	1.15	0.12	0.02
	6/15/2005	III	F	35.16	42.9	15.3	0	1.15	1.15	0.12	0.02
	7/13/2005	III	F	34.59	42.2	15.7	0	1.07	1.11	0.12	0.01
Campsite Springs	8/25/2003	III	F	39.7	48.4	21.5	0	1.65	1.22	0.14	0.02
	8/10/2004	III	F	NA	NA	NA	NA	NA	NA	NA	NA
	5/17/2005	III	F	38.52	47.0	21.1	0	2.46	1.12	0.13	0.02
	6/8/2005	III	F	38.65	47.2	17.5	0	1.93	1.08	0.14	0.02
	7/14/2005	III	F	38.77	47.3	19.4	0	1.54	1.05	0.14	0.01
	3/31/2006	III	F	41.4	50.5	19.3	0	2.00	1.54	0.15	0.02
CDV-5.0 Spring	8/20/2003	III	F	42.0	51.3	37.2	0	6.58	1.83	0.07	0.02
	5/16/2004	III	F	24.3	29.6	35.3	0	16.5	2.60	0.06	<0.01
	9/17/2004	III	F	42.8	52.2	38.0	0	7.95	1.84	0.04	0.02
	3/3/2005	III	F	33.77	41.2	65.3	0	34.82	6.43	0.07	0.02
	4/18/2005	III	F	33.77	41.2	57.4	0	30.92	5.38	0.09	0.03
	5/27/2005	III	F	25.66	31.3	33.4	0	17.54	2.79	0.06	0.02
	7/11/2005	III	F	34.67	42.3	40.2	0	14.19	3.20	0.05	0.02
	12/23/2005	III	F	36.7	44.8	39.4	0	13.5	3.13	0.07	0.02
	3/5/2006	III	F	40.2	49.0	35.0	0	10.2	2.72	0.08	0.02
	8/24/2006	III	F	42.0	51.3	51.0	0	20.0	4.31	0.06	0.03
CDV-5.97 Spring	11/9/2006	III	F	37.2	45.4	32.8	0	14.3	2.12	0.10	<0.01
Colonel Spring	9/16/2004	III	F	36.6	44.6	17.8	0	1.80	1.08	0.55	0.03
PC Spring	8/22/2003	III	F	37.5	45.8	30.6	0	2.34	0.70	0.05	<0.01
	5/15/2004	III	F	25.7	31.3	23.9	0	6.46	1.23	0.05	<0.01
	9/16/2004		F	33.4	40.7	31.1	<1.45	2.8	0.917	0.092 (J)	NA
	3/30/2005	III	F	25.82	31.5	27.4	0	10.00	1.97	0.05	<0.01
	5/3/2005	III	F	20.00	24.4	23.3	0	10.71	1.97	0.06	0.02
	6/10/2005	III	F	25.25	30.8	21.7	0	6.14	1.06	0.05	0.01
	6/21/2005	II	F	28.6	34.9	25.7	<1.45	5.78	1.02	0.074 (J)	<0.041
(Blind Interlaboratory Field Duplicate)	6/21/2005	II	F	26.10	31.9	NA	0	NA	NA	NA	NA
	6/21/2005	II	NF	NA	NA	26.0	NA	NA	NA	NA	NA
	6/29/2005	III	F	26.70	32.6	24.8	0	4.73	0.87	0.03	0.01

Table 3 - Summary Results of Major Element Chemistry and Field Parameters.

Station ID	Date Sampled	Source Code	F/NF	Total Alk (lab) (ppm)	HCO_3 (ppm)	Hardness (ppm)	CO_3 (ppm)	SO_4 (ppm)	Cl (ppm)	F (ppm)	Br (ppm)
	7/12/2005	III	F	28.20	34.4	25.7	0	4.98	0.97	0.05	<0.01
	8/31/2006	II	F	30.9	37.7	32.2	<0.725	7.08	1.57	0.07 (J)	<0.066
	8/31/2006	II	NF	34	41.5	33.3	<0.725	7.06	1.57	0.071 (J)	<0.066
	12/14/2006	II	F	34.4	42.0	28	<0.725	3.93	1.11	0.075 (J)	<0.066
	12/14/2006	II	NF	33.3	40.6	29	<0.725	3.89	1.07	0.075 (J)	<0.066
Water Canyon Gallery Spring	8/26/2003	II	UF	42.8	42.7	33.1	<1.45	1.09	0.843	0.121	NA
(Blind Intralaboratory Field Duplicate)	8/26/2003	II	UF	NA	NA	NA	NA	1.08	0.865	0.136	NA
	5/19/2004	III	NF	NA	NA	NA	NA	NA	NA	NA	NA
	3/4/2005	III	F	34.92	42.6	45.1	0	18.35	3.60	0.05	<0.01
	4/18/2005	III	F	35.66	43.5	42.2	0	17.63	3.49	0.05	0.02
	5/27/2005	III	F	38.39	46.8	35.0	0	9.58	1.96	0.04	0.02
	7/11/2005	III	F	40.74	49.7	32.0	0	2.96	0.99	0.04	0.01
(Blind Intralaboratory Field Duplicate)	7/11/2005	III	F	40.66	49.6	32.5	0	2.98	0.96	0.04	0.01
	9/23/2005	III	F	41.9	51.1	32.5	0	2.52	0.88	0.04	0.01
	8/25/2006	III	F	41.6	50.8	38.4	0	9.11	1.95	0.05	0.02
SPET-1.7 Spring	5/26/2004	III	F	23.4	28.6	23.1	0	4.33	1.49	0.04	<0.01
Yak Spring	5/27/2004	III	F	26.7	32.6	21.5	0	3.44	0.65	0.08	<0.01
Coffman Springs	12/4/2006	III	F	57.8	70.5	35.7	0	3.14	5.25	0.15	0.02
Zone 3 - Perched Intermediate Pajarito Plateau											
Wells											
LAOI(A)-1.1	12/2/2003	I, III	F	52.5	64.0	NA	NA	2.81	1.11	0.12	0.01
(Field Parameter Duplicate)	6/3/2004	III	F	77.4	52.7	16.5	20.5	3.35	1.17	0.12	0.01
	6/3/2004	II	NF	89.7	109.4	20.3	9.43	3.72	1.37	0.24	NA
(Blind Intralaboratory Field Duplicate)	6/3/2004	II	NF	NA	NA	NA	NA	3.63	1.39	0.24	NA
	3/4/2005	III	F	51.23	62.5	20.9	0	4.58	1.29	0.10	0.01
	5/7/2005	II	NF & F	68	83.0	23.9	<1.45	3.39	1.22	0.145	<0.041
	8/4/2006	II	F	41.9	51.1	20.9	<0.725	3.28	1.28	0.171	<0.066
	8/4/2006	II	NF	39.7	48.4	22.9	<0.725	3.24	1.27	0.168	<0.066
Springs											
Sacred Spring	7/23/2003	II	F	118	144.0	83	<1.45	8.63	3.03	0.489	NA
(Blind Intralaboratory Field Duplicate)	7/23/2003	II	F	113	137.9	80.4	<1.45	8.72	3.09	0.487	NA
(Field Parameter Duplicate)	7/23/2003	III	NF	NA	NA	NA	NA	NA	NA	NA	NA
	12/22/2003	I	F	*147.0*	*180.0*	*119.0*	0	*14.30*	*<10*	*0.53*	NA
	8/24/2004	II	F	126	153.7	99.3	<1.45	8	3.08	0.468	NA
(Field Parameter Duplicate)	8/24/2004	III	NF	NA	NA	NA	NA	NA	NA	NA	NA
	7/13/2005	II	F	110	134.2	91.5	<1.45	7.77	3.00	0.321	<0.041
	7/13/2005	II	NF	NA	NA	90.9	NA	NA	NA	NA	NA
(Field Parameter Duplicate)	7/13/2005	III	NF	NA	NA	NA	NA	NA	NA	NA	NA
	9/14/2006	II	F	152	185.4	113	1.36	7.03	3.60	0.463	<0.066
	9/14/2006	II	NF	153	186.7	115	2.14	7.03	3.57	0.465	<0.066
Sandia Spring	12/29/2003	III	NF	NA	NA	NA	NA	NA	NA	NA	NA
	6/14/2004	III	NF	91.8	112.0	67.2	0	7.47	3.14	0.50	0.03
	9/13/2004	III	NF	NA	NA	NA	NA	NA	NA	NA	NA
	9/13/2004	II	F	125	152.5	108.0	<1.45	5.55	3.46	0.633	NA
	1/28/2005	II	F	99.7	121.6	76.1	<1.45	7.26	3.3	0.472	NA
	9/8/2005	II	F	83.1	101.4	71.1	<1.45	7.35	3.31	0.578	< 0.041
	9/8/2005	II	NF	NA	NA	70.6	NA	NA	NA	NA	NA
(Field Parameter Duplicate)	9/8/2005	III	NF	NA	NA	NA	NA	NA	NA	NA	NA
	9/14/2006	II	F	93	113.5	72.9	< 0.725	6.74	3.18	0.507	< 0.066

Table 3 - Summary Results of Major Element Chemistry and Field Parameters.

Station ID	Date Sampled	Source Code	F/NF	Total Alk (lab) (ppm)	HCO_3 (ppm)	Hardness (ppm)	CO_3 (ppm)	SO_4 (ppm)	Cl (ppm)	F (ppm)	Br (ppm)
(Blind Interlaboratory Field Duplicate)	9/14/2006	III	F	NA	NA	NA	NA	NA	NA	NA	NA
(Blind Intralaboratory Field Duplicate)	9/14/2006	III	F	NA	NA	NA	NA	NA	NA	NA	NA
	9/14/2006	II	NF	90.9	110.9	71.3	< 0.725	6.78	3.14	0.513	< 0.066
Zone 4 - Regional Aquifer											
Wells											
DPOGW4	9/30/2004	III	F	84.8	88.0	43.3	7.6	2.64	1.80	0.52	0.01
(Blind Intralaboratory Field Duplicate)	9/30/2004	III	F	84.9	88.2	43.4	7.6	2.67	1.81	0.52	0.02
R-1	5/19/2005	II	F	62.2	75.9	NA	<1.45	3.65	1.84	0.261	0.179 (J)
	9/12/2005	III	F	66.15	80.7	43.6	0	3.22	2.11	0.14	0.11
	9/12/2005	II	F	60.1	73.3	45	<1.45	3.27	1.96	0.203	0.149
(Blind Intralaboratory Field Duplicate)	9/12/2005	II	F	61.1	74.5	42.5	<1.45	3.23	1.98	0.191	0.175
	9/12/2005	II	NF	60.1	73.3	42.5	<1.45	3.36	1.98	0.188	0.132
(Blind Intralaboratory Field Duplicate)	9/12/2005	II	NF	60.1	73.3	43	<1.45	3.41	1.96	0.184	0.154
	11/28/2005	II	F	131	159.8	NA	NA	3.22	1.97	0.195	0.157
	11/28/2005	II	NF	54[F]	NA	NA	NA	NA	NA	NA	NA
	1/25/2006	II	F	61.3	74.8	46.1	<1.45	3.37	2.23	0.228	<0.041
	1/25/2006	II	NF	49.8[F]	NA	46.3	NA	NA	NA	NA	NA
	7/6/2006	II	F	64.8	79.1	45.7	<0.725	2.9	1.9	0.226	<0.066
(Blind Intralaboratory Field Duplicate)	7/6/2006	II	F	64.3	78.4	44.7	<0.725	2.81	1.91	0.219	<0.066
	7/6/2006	II	NF	63.2	77.1	45.2	<0.725	3.09	1.9	0.228	<0.066
(Blind Intralaboratory Field Duplicate)	7/6/2006	II	NF	64.3	78.4	44.8	<0.725	2.97	1.99	0.252	<0.066
	10/26/2006	II	F	65.8	80.3	45.6	<0.725	2.98	1.93	0.194	<0.066
(Blind Intralaboratory Field Duplicate)	10/26/2006	II	F	66.3	80.9	45.7	<0.725	2.98	1.93	0.201	<0.066
	10/26/2006	II	NF	65.8	80.3	45.0	<0.725	2.86	1.92	0.193	<0.066
(Blind Intralaboratory Field Duplicate)	10/26/2006	II	NF	66.3	80.9	44.8	<0.725	2.9	1.87	0.203	<0.066
R-2	12/11/2003	II	F	64.9	79.2	NA	NA	3.43	2.98	0.26	0.11
	4/26/2005	III	F	69.26	84.5	29.1	0	3.32	2.74	0.26	0.08
(Blind Interlaboratory Field Duplicate)	4/26/2005	II	F	68	83.0	NA	<1.45	3.36	2.35	0.333	<0.041
	4/26/2005	II	NF	NA	NA	NA	NA	NA	NA	NA	NA
	8/9/2005	III	F	72.30	88.2	30.5	0	2.88	2.32	0.21	0.04
(Blind Interlaboratory Field Duplicate)	8/9/2005	II	F	60.5	73.8	NA	NA	2.36	2.16	0.203	< 0.041
	8/9/2005	II	NF	61[F]	NA	NA	NA	NA	NA	NA	NA
	11/9/2005	II	F	61.6	75.2	NA	NA	2.51	2.09	0.293	0.067 (J)
	11/9/2005	II	NF	103[F]	NA	NA	NA	NA	NA	NA	NA
	2/27/2006	III	F	68.00	83.0	32.2	0	3.54	2.93	0.26	0.06
(Blind Interlaboratory Field Duplicate)	2/27/2006	II	F	63.7	77.7	37.5	<0.725	2.48	2.15	0.318	< 0.041
	2/27/2006	II	NF	NA	NA	38.0	NA	NA	NA	NA	NA
	7/24/2006	II	F	65.6	80.0	36.7	<0.725	2.59	2.15	0.291	<0.066
	7/24/2006	II	NF	65.6	80.0	38.6	<0.725	2.65	2.18	0.304	<0.066
R-6	8/23/2005	II	F	80	97.6	NA	NA	3.2	2.5	0.48	NA
(Blind Intralaboratory Field Duplicate)	8/23/2005	II	F	77.7	94.8	NA	NA	3.2	2.49	0.496	NA
	8/23/2005	II	UF	68.2[F]	NA	NA	NA	NA	NA	NA	NA
(Blind Intralaboratory Field Duplicate)	8/23/2005	II	UF	NA	NA	NA	NA	NA	NA	NA	NA
	11/17/2005	II	F	71.7	87.5	NA	NA	2.79	2.32	0.439	NA
	11/17/2005	II	UF	63[F]	NA	NA	NA	NA	NA	NA	NA
	3/1/2006	II	F	74	90.3	52.3	1.01	2.82	2.42	0.465	NA
	3/1/2006	II	UF	75[F]	NA	49.8	NA	NA	NA	NA	NA
	5/11/2006	II	F	72.6	88.6	47.2	1.49	2.76	2.25	0.476	NA
	5/11/2006	II	UF	74[F]	NA	89.7	NA	NA	NA	NA	NA
	7/26/2006	II	F	71.8	87.6	48.4	1.08	2.69	2.22	0.464	NA
(Blind Intralaboratory Field Duplicate)	7/26/2006	II	F	73.3	89.4	47.2	1.1	2.69	2.2	0.453	NA
	7/26/2006	II	UF	72.3	88.2	45.3	0.864	2.73	2.18	0.445	NA
(Blind Intralaboratory Field Duplicate)	7/26/2006	II	UF	72.3	88.2	45.4	<0.725	2.73	2.19	0.461	NA

Table 3 - Summary Results of Major Element Chemistry and Field Parameters.

Station ID	Date Sampled	Source Code	F/NF	Total Alk (lab) (ppm)	HCO_3 (ppm)	Hardness (ppm)	CO_3 (ppm)	SO_4 (ppm)	Cl (ppm)	F (ppm)	Br (ppm)
R-16r	12/19/2005	III	NF	NA	NA		NA	NA	NA	NA	NA
	12/19/2005	II	F	80.5	98.2	56.4	<1.45	4.39	2.38	0.401	< 0.041
	12/19/2005	II	NF	NA	NA	56.3	NA	NA	NA	NA	NA
	3/8/2006	II	F	79.2	96.6	52.5	1.16	4.33	2.30	0.452	0.041 (J)
(Blind Intralaboratory Field Duplicate)	3/8/2006	II	F	80.7	98.5	53.1	1.7	4.32	2.3	0.451	< 0.041
	3/8/2006	II	NF	77[F]	NA	53.50	NA	NA	NA	NA	NA
(Blind Intralaboratory Field Duplicate)	3/8/2006	II	NF	NA	NA	53.10	NA	NA	NA	NA	NA
	5/24/2006	II	F	80.8	98.6	53.4	1.27	4.35	2.38	0.445	< 0.066
	5/24/2006	II	NF	70[F]	NA	54.70	NA	NA	NA	NA	NA
	8/17/2006	II	F	79.3	96.7	44.7	0.809 (J)	4.39	2.35	0.439	< 0.066
(Blind Intralaboratory Field Duplicate)	8/17/2006	II	F	79.3	96.7	42.3	0.927 (J)	4.42	2.35	0.453	< 0.066
	8/17/2006	II	NF	NA	NA	46.60	NA	NA	NA	NA	NA
(Blind Intralaboratory Field Duplicate)	8/17/2006	II	NF	70[F]	NA	54.10	NA	NA	NA	NA	NA
	11/1/2006	II	F	80.1	97.7	54.6	1.23	4.79	2.4	0.449	< 0.066
	11/1/2006	II	NF	NA	NA	55.40	NA	NA	NA	NA	NA
R-17 Screen 1	10/19/2006	II	F	55.80	68.1	37.9	0.73 (J)	2.35	1.99	< 0.312	< 0.066
	10/19/2006	II	NF	68[F]	NA	40.6	NA	NA	NA	NA	NA
R-18	8/25/2005	III	F	51.6	62.9	34.0	0	1.73	1.35	0.06	0.03
	8/25/2005	II	F	47.0	57.3	NA	NA	1.73	1.21	0.167	0.068 (J)
	8/25/2005	II	NF	46.5[F]	NA	NA	NA	NA	NA	NA	NA
	12/1/2005	III	F	51.20	62.5	34.5	0	5.73[1]	6.45[1]	0.65	0.08
	12/1/2005	II	F	48.7	59.4	NA	NA	1.74	1.29	0.163	0.068 (J)
(Blind Intralaboratory Field Duplicate)	12/1/2005	II	F	48.7	59.4	NA	NA	1.76	1.29	0.167	0.065 (J)
	12/1/2005	II	NF	22[F]	NA	NA	NA	NA	NA	NA	NA
(Blind Intralaboratory Field Duplicate)	12/1/2005	II	NF	NA	NA	NA	NA	NA	NA	NA	NA
	3/7/2006	II	F	50.7	61.9	38	< 0.725	1.6	1.2	0.142	< 0.041
	3/7/2006	II	NF	45[F]	NA	38	NA	NA	NA	NA	NA
	5/16/2006	II	F	50.4	61.5	35.8	< 0.725	1.67	1.22	0.149	< 0.066
(Blind Intralaboratory Field Duplicate)	5/16/2006	II	F	50.4	61.5	35.3	< 0.725	1.67	1.23	0.146	< 0.066
	5/16/2006	II	NF	50[F]	NA	35.4	NA	NA	NA	NA	NA
(Blind Intralaboratory Field Duplicate)	5/16/2006	II	NF	NA	NA	36.5	NA	NA	NA	NA	NA
	8/15/2006	II	F	50.5	61.6	36.8	< 0.725	1.72	1.27	0.104	< 0.066
(Blind Intralaboratory Field Duplicate)	8/15/2006	II	F	51.0	62.2	35.7	< 0.725	1.70	1.24	0.109	< 0.066
	8/15/2006	II	NF	51.0	62.2	36.2	< 0.725	1.71	1.27	0.110	< 0.066
(Blind Intralaboratory Field Duplicate)	8/15/2006	II	NF	51.0	62.2	35.8	< 0.725	1.72	1.28	0.108	< 0.066
	12/18/2006	II	F	50.2	61.2	36.4	< 0.725	1.80	1.33	0.102	< 0.066
(Blind Intralaboratory Field Duplicate)	12/18/2006	II	F	50.7	61.9	37.1	< 0.725	1.81	1.35	0.090 (J)	< 0.066
	12/18/2006	II	NF	50.7	61.9	37.5	< 0.725	1.75	1.31	0.095 (J)	< 0.066
(Blind Intralaboratory Field Duplicate)	12/18/2006	II	NF	51.8	63.2	37.1	< 0.725	1.73	1.32	0.094 (J)	< 0.066
R-21	3/31/2004	II	F	57	69.5	NA	<1.45	2.32	1.98	0.348	< 0.0978
(Blind Intralaboratory Field Duplicate)	3/31/2004	II	F	58	70.8	NA	<1.45	2.4	1.94	0.335	< 0.0978
	3/31/2004	II	NF	NA	NA	NA	NA	NA	NA	NA	NA
(Blind Intralaboratory Field Duplicate)	3/31/2004	II	NF	NA	NA	NA	NA	NA	NA	NA	NA
	6/30/2004	II	F	85.8	104.7	NA	<1.45	2.26	1.92	0.347	< 0.0978
	6/30/2004	II	NF	NA	NA	NA	NA	NA	NA	NA	NA
(Blind Intralaboratory Field Duplicate)	6/30/2004	II	NF	NA	NA	NA	NA	NA	NA	NA	NA
	9/23/2004	II	F	53.6	65.4	NA	<1.45	2.04	1.75	0.338	< 0.0978
	9/23/2004	II	NF	NA	NA	NA	NA	NA	NA	NA	NA
	12/14/2004	II	F	58.3	71.1	NA	<1.45	2.29	1.88	0.279	< 0.0978
	12/14/2004	II	NF	NA	NA	NA	NA	NA	NA	NA	NA
(Blind Intralaboratory Field Duplicate)	12/14/2004	II	NF	NA	NA	NA	NA	NA	NA	NA	NA
	6/6/2005	II	F	57.9	70.6	40.6	NA	1.96	1.76	0.193	< 0.041
(Blind Intralaboratory Field Duplicate)	6/6/2005	II	F	54.7	66.7	39.7	NA	1.93	1.74	0.175	< 0.041
	6/6/2005	II	NF	NA	NA	38.5	NA	NA	NA	NA	NA

Table 3 - Summary Results of Major Element Chemistry and Field Parameters.

Station ID	Date Sampled	Source Code	F/NF	Total Alk (lab) (ppm)	HCO_3 (ppm)	Hardness (ppm)	CO_3 (ppm)	SO_4 (ppm)	Cl (ppm)	F (ppm)	Br (ppm)
	7/7/2006	II	F	58.5	71.4	39.6	< 0.725	2.1	1.86	0.284	< 0.066
	7/7/2006	II	F	NA	NA	NA	NA	NA	NA	NA	NA
	7/7/2006	II	NF	58.5	71.4	40.1	< 0.725	2.18	1.88	0.264	< 0.066
	11/6/2006	II	F	57.9	70.6	42.2	< 0.725	2.5	1.95	0.297	< 0.066
	11/6/2006	II	F	NA	NA	NA	NA	NA	NA	NA	NA
(Blind Intralaboratory Field Duplicate)	11/6/2006	II	F	58.4	71.2	41.3	< 0.725	2.56	1.96	0.299	< 0.066
	11/6/2006	II	NF	58.4	71.2	42.2	< 0.725	2.54	1.98	0.303	< 0.066
(Blind Intralaboratory Field Duplicate)	11/6/2006	II	NF	58.4	71.2	41.5	< 0.725	2.51	1.97	0.303	< 0.066
R-27	7/1/2006	II	F	56.8	69.3	37.3	< 0.725	1.52	1.54	0.274	< 0.066
(Blind Intralaboratory Field Duplicate)	7/1/2006	II	F	57.3	69.9	37.3	< 0.725	1.49	1.53	0.279	< 0.066
	7/1/2006	II	NF	45[F]	NA	37.6	NA	NA	NA	NA	NA
(Blind Intralaboratory Field Duplicate)	7/1/2006	II	NF	NA	NA	38.3	NA	NA	NA	NA	NA
R-34	6/7/2005	II	F	75.1	91.6		<1.45	2.49	2.22	0.245	< 0.041
	6/7/2005	II	UF	59[F]	NA	NA	NA	NA	NA	NA	0.04
	9/7/2005	II	F	68.1	83.1	57.8	<1.45	2.57	2.24	0.41	0.04
	9/7/2005	II	UF	70.1	85.5	58.8	<1.45	2.82	2.35	0.365	0.04
	11/29/2005	II	F	146	178.1	NA	7	2.69	2.42	0.372	< 0.041
(Blind Intralaboratory Field Duplicate)	11/29/2005	II	F	148	180.6	NA	7	2.72	2.42	0.367	< 0.041
	11/29/2005	II	UF	63.5[F]	NA	NA	NA	NA	NA	NA	NA
	11/29/2005	II	UF	76.3	NA	NA	NA	NA	NA	NA	0.06
(Blind Intralaboratory Field Duplicate)	11/29/2005	II	UF	76.4	NA	NA	NA	NA	NA	NA	0.06
	1/31/2006	II	F	73.5	89.7	56.9	1.48	2.74	2.28	0.408	< 0.066
(Blind Intralaboratory Field Duplicate)	1/31/2006	II	F	71.5	87.2	56.8	<1.45	2.74	2.28	0.41	< 0.066
	1/31/2006	II	UF	64[F]	NA	57.2	7.6	NA	NA	NA	0.06
(Blind Intralaboratory Field Duplicate)	1/31/2006	II	UF	NA	NA	56.5	9.0	NA	NA	NA	0.06
	7/17/2006	II	F	112	136.6	56	<0.725	3.03	2.32	0.343	< 0.066
	7/17/2006	II	UF	73.3	89.4	57.4	1.12	3.06	2.32	0.338	< 0.066
	10/30/2006	II	F	64.2	78.3	55.3	2.02	2.84	2.39	0.375	< 0.066
	10/30/2006	II	UF	73.8	90.0	57.8	2.03	2.86	2.39	0.385	< 0.066
Test Well DT-5A	8/28/2003	II	NF	53.0	64.7	32.7	<1.45	1.11	1.68	0.268	NA
(Blind Intralaboratory Field Duplicate)	8/28/2003	II	NF	NA	NA	NA	NA	1.08	1.68	0.266	NA
	7/13/2004	II	NF	49.4	60.3	31.7	<1.45	1.49	1.67	0.226	NA
(Blind Intralaboratory Field Duplicate)	7/13/2004	II	NF	49.4	60.3	NA	<1.45	1.60	1.65	0.227	NA
	8/24/2005	II	F	54.1	66.0	34.4	<1.45	1.53	1.54	0.229	< 0.041
	8/24/2005	II	NF	NA	NA	33.6	NA	NA	NA	NA	NA
	12/6/2006	II	F	52.3	63.8	32.3	0.753 (J)	1.44	1.7	0.224	< 0.066
	12/6/2006	II	NF	55	67.1	32.7	< 0.725	1.46	1.69	0.229	< 0.066
Test Well DT-9	8/6/2003	II	NF	51.6	63.0	35.7	<1.45	1.49	1.71	0.32	NA
(Blind Intralaboratory Field Duplicate)	8/6/2003	II	NF	50.6	61.7	NA	<1.45	1.5	1.72	0.322	NA
	7/7/2004	II	F	NA	NA	NA	NA	NA	NA	NA	NA
	7/7/2004	II	NF	65.6	80.0	36.2	<1.45	1.4	1.64	0.202	NA
(Blind Intralaboratory Field Duplicate)	7/7/2004	II	NF	NA	NA	NA	NA	NA	NA	NA	NA
	7/20/2005	II	F	52.9	64.5	36.5	<1.45	1.16	1.58	0.164	< 0.041
	7/20/2005	II	NF	NA	NA	36.7	NA	NA	NA	NA	NA
	12/5/2006	II	F	54.4	66.4	35.6	< 0.725	1.39	1.47	0.241	< 0.066
	12/5/2006	II	F	NA	NA	NA	NA	NA	NA	NA	NA
	12/5/2006	II	NF	54.4	66.4	37.8	< 0.725	1.44	1.54	0.235	< 0.066
Test Well DT-10	6/22/2004	II	NF	110	134.2	47.4	<1.45	1.22	1.57	0.166	NA
	7/19/2005	II	F	63.7	77.7	41.5	<1.45	0.974	1.45	< 0.03	< 0.041
	7/19/2005	II	NF	NA	NA	43.7	NA	NA	NA	NA	NA
	12/4/2006	II	F	63.9	78.0	44.2	0.856 (J)	1.33	1.53	0.211	< 0.066
(Blind Intralaboratory Field Duplicate)	12/4/2006	II	F	63.9	78.0	43.3	0.8 (J)	1.36	1.58	0.208	< 0.066
	12/4/2006	II	NF	64.5	78.7	45.7	0.924 (J)	1.34	1.51	0.208	< 0.066
(Blind Intralaboratory Field Duplicate)	12/4/2006	II	NF	63.4	77.3	43.9	0.849 (J)	1.37	1.53	0.208	< 0.066

Table 3 - Summary Results of Major Element Chemistry and Field Parameters.

Station ID	Date Sampled	Source Code	F/NF	Total Alk (lab) (ppm)	HCO_3 (ppm)	Hardness (ppm)	CO_3 (ppm)	SO_4 (ppm)	Cl (ppm)	F (ppm)	Br (ppm)
Springs											
Ancho Spring	11/5/2003	III	F	NA	NA	NA	NA	2.67	2.09	0.33	0.04
	3/12/2004	III	F	61.5	75.0	43.4	0	2.46	2.13	0.30	0.03
	2/2/2005	II	F	57.1	69.7	45.6	<1.45	2.61	2.16	0.307	NA
	9/27/2005	III	F	100.0	122.0	43.2	0	4.01	3.40	0.41	0.04
	2/24/2006	III	F	59.6	72.7	40.6	0	3.44	3.08	0.37	0.03
	9/19/2006	II	F	53.9	65.8	43.9	< 0.725	2.59	2.24	0.384	< 0.066
(Blind Interlaboratory Field Duplicate)	9/19/2006	III	F	NA	NA	NA	NA	NA	NA	NA	NA
	9/19/2006	II	NF	60.6	73.9	44	< 0.725	2.56	2.21	0.411	< 0.066
Spring 6	5/1/2003	III	F	62.7	76.5	46.8	0	2.43	2.12	0.31	0.03
	3/12/2004	III	F	61.1	74.5	42.2	0	2.29	1.98	0.31	0.03
	9/14/2004		F	65	79.3	42.9	<1.45	2.61	2.17	0.371	NA
	3/2/2005	III	F	60.20	73.4	39.3	0	2.47	2.20	0.33	0.02
	3/24/2005	III	F	60.49	73.8	41.2	0	2.53	2.23	0.32	0.02
	4/29/2005	III	F	60.98	74.4	41.8	0	2.47	2.29	0.31	0.03
	7/25/2005	III	F	62.21	75.9	42.7	0	2.49	2.14	0.30	0.03
(Blind Intralaboratory Field Duplicate)	7/25/2005	III	F	64.02	78.1	44.2	0	2.51	2.16	0.30	0.02
	9/27/2005	II	F	55.1	67.2	44.1	<1.45	2.56	2.14	0.343	< .041
	9/27/2005	II	NF	NA	NA	42.7	NA	NA	NA	NA	NA
	9/19/2006	II	F	61.1	74.5	43.2	< 0.725	2.39	2.12	< 0.376	< 0.066
	9/19/2006	II	NF	61.1	74.5	44.1	< 0.725	2.34	2.07	< 0.418	< 0.066
Spring 6A	10/7/2003	II	F	53.1	64.8	39.1	<1.45	2.47	2.1	0.259	NA
	3/12/2004	III	F	62.9	76.7	40.8	0	2.62	2.07	0.31	0.03
	9/14/2004	II	F	62.9	76.7	35.7	<1.45	2.54	2.1	0.364	NA
	9/27/2005	II	F	68.2	83.2	44.1	<1.45	4.02	2.62	0.416	< .041
	9/27/2005	II	NF	NA	NA	44.1	NA	NA	NA	NA	NA
	9/19/2006	II	F	64.2	78.3	39.6	< 0.725	2.83	2.2	0.436	< 0.066
(Blind Interlaboratory Field Duplicate)	9/19/2006	III	F	NA	NA	NA	NA	NA	NA	NA	NA
	9/19/2006	II	NF	63.2	77.1	39.3	< 0.725	2.75	2.16	0.457	< 0.066
Spring 6AAA	5/1/2003	III	F	53.6	65.4	37.8	0	1.91	1.77	0.26	0.03
	3/12/2004	III	F	53.6	65.4	36.1	0	1.84	1.69	0.26	0.02
	3/2/2005	III	F	54.3	66.2	33.9	0	2.15	1.97	0.28	0.02
	2/24/2006	III	F	52.9	64.5	32.7	0	2.29	2.45	0.30	0.03
	9/19/2006	II	F	51.8	63.2	34.1	< 0.725	1.80	1.74	< 0.337	< 0.066
(Blind Intralaboratory Field Duplicate)	9/19/2006	II	F	52.8	64.4	33.4	< 0.725	1.82	1.76	< 0.333	< 0.066
	9/19/2006	II	NF	52.8	64.4	34.2	< 0.725	1.81	1.74	< 0.334	< 0.066
(Blind Intralaboratory Field Duplicate)	9/19/2006	II	NF	52.3	63.8	34.2	< 0.725	1.82	1.74	< 0.333	< 0.066
Spring 8A	10/7/2003	II	F	60.1	73.3	38.0	<1.45	1.72	1.89	0.274	NA
	3/18/2004	III	F	53.5	65.3	32.9	0	1.86	1.77	0.34	0.03
	9/12/2004	III	NF	NA	NA	NA	NA	NA	NA	NA	NA
	9/14/2004	III	NF	NA	NA	NA	NA	NA	NA	NA	NA
	12/15/2004	III	NF	NA	NA	NA	NA	NA	NA	NA	NA
	12/27/2004	III	NF	NA	NA	NA	NA	NA	NA	NA	NA
	1/13/2005	III	NF	NA	NA	NA	NA	NA	NA	NA	NA
	1/26/2005	II	F	52.5	64.1	33.7	<1.45	1.65	1.61	0.327	NA
	9/28/2005	III	F	53.9	65.7	31.5	0	1.78	1.71	0.30	0.02
	9/19/2006	II	F	62.2	75.9	40.1	< 0.725	2.14	1.78	< 0.409	< 0.066
	9/19/2006	II	NF	61.6	75.2	39.9	< 0.725	2.15	1.78	< 0.413	< 0.066
Spring 9	10/8/2003	II	F	56.1	68.4	40.7	<1.45	1.90	1.93	0.295	NA
(Blind Intralaboratory Field Duplicate)	10/8/2003	II	F	NA	NA	NA	NA	1.92	1.93	0.294	NA
(Blind Interlaboratory Field Duplicate)	10/8/2003	III	F	58.4	71.2	42.7	0	< 10	< 10	0.429	NA
	3/12/2004	III	F	58.9	71.8	38.0	0	1.83	1.75	0.37	0.03
	6/7/2004	III	NF	NA	NA	NA	NA	NA	NA	NA	NA

Table 3 - Summary Results of Major Element Chemistry and Field Parameters.

Station ID	Date Sampled	Source Code	F/NF	Total Alk (lab) (ppm)	HCO_3 (ppm)	Hardness (ppm)	CO_3 (ppm)	SO_4 (ppm)	Cl (ppm)	F (ppm)	Br (ppm)
	9/14/2004	II	F	62.9	76.7	38.1	<1.45	1.87	1.91	0.477	NA
	1/13/2005	III	NF	NA	NA	NA	NA	NA	NA	NA	NA
	5/18/2005	III	NF	NA	NA	NA	NA	NA	NA	NA	NA
	9/28/2005	II	F	53.1	64.8	37.3	<1.45	2.07	1.91	0.425	<0.041
	9/28/2005	II	NF	NA	NA	37.9	NA	NA	NA	NA	NA
	2/3/2006	III	F	57.4	70.0	35.9	0	2.49	2.34	0.43	0.03
	9/19/2006	II	F	59.6	72.7	39.7	<0.725	2.03	1.94	<0.438	<0.066
	9/19/2006	II	NF	59.6	72.7	39.8	<0.725	2.01	1.93	<0.437	<0.066
Spring 9A	5/1/2003	III	F	59.4	72.5	40.5	0	1.84	1.78	0.44	0.03
	10/8/2003	II	F	56.1	68.4	39.7	<1.45	2.06	2.24	0.383	NA
(Laboratory Duplicate)	10/8/2003	II	F	55.1	67.2	NA	<1.45	NA	NA	NA	NA
	3/12/2004	III	F	57.3	69.9	38.6	0	1.81	1.78	0.42	0.02
	9/14/2004	II	F	56.6	69.1	37.6	<1.45	2.09	1.98	0.483	NA
	3/8/2005	III	F	56.97	69.5	37.7	0	2.13	2.05	0.44	0.01
	4/29/2005	III	F	56.58	69.0	37.1	0	2.04	2.08	0.48	0.02
	5/18/2005	III	F	57.70	70.4	35.9	0	2.08	1.95	0.46	0.03
	7/20/2005	III	F	56.98	69.4	36.8	0	2.09	2.00	0.46	0.02
	9/28/2005	II	F	51.10	62.3	37.5	<1.45	2.09	1.95	0.46	0.05
	9/28/2005	II	NF	NA	NA	37.4	NA	NA	NA	NA	NA
	2/3/2006	III	F	57.5	70.2	35.5	0	2.44	2.40	0.48	0.04
	9/20/2006*	II	F	57.5	70.2	37.9	<0.725	1.99	1.91	<0.477	<0.066
	9/20/2006*	II	NF	59.1	72.1	39.6	0.927	1.98	1.9	<0.478	<0.066
Spring 9B	11/5/2003	III	F	NA	NA	NA	NA	1.94	1.92	0.42	0.03
	3/12/2004**	III	F	56.1	68.5	35.6	0	1.94	1.98	0.43	0.02
	2/3/2006	III	F	54.8	66.9	35.1	0	2.62	2.59	0.47	0.04

Taos Area

Regional and Intermediate Aquifers

Springs - East Rio Grande

AH-0.2 Spring	3/15/2004	III	F	112.7	120.0	117.2	8.6	30.4	3.34	0.21	0.04
	9/27/2004	III	F	114.4	139.6	116.7	0	30.3	3.24	0.19	0.02
	2/15/2005	III	F	111.5	136.0	112.2	0	30.3	3.39	0.22	0.03
	4/8/2005	III	F	111.48	136.0	108.6	0	29.85	3.35	0.22	0.03
	5/13/2005	III	F	112.30	137.0	111.6	0	30.29	3.30	0.21	0.04
	6/24/2005	III	F	111.48	136.0	112.0	0	29.26	3.12	0.20	0.04
	7/22/2005	III	F	112.30	137.0	116.0	0	29.58	3.32	0.22	0.03
	11/9/2005	III	F	111.5	136.0	NA	0	31.2	3.49	0.21	0.05
Big Arsenic Spring	3/25/2004	III	F	83.5	89.3	75.7	6.2	25.5	7.35	1.18	0.07
	9/28/2004	III	F	83.4	85.1	73.9	8.2	25.3	7.26	1.18	0.04
	11/9/2005	III	F	86.9	106.0	NA	0	26.5	7.75	1.25	0.08
DBN Spring	3/25/2004	III	F	91.3	97.8	91.7	6.7	23.5	2.44	0.24	0.03
	9/27/2004	III	F	91.7	96.4	89.5	7.6	23.1	2.46	0.23	0.02
	11/9/2005	III	F	90.2	110.0	NA	0	23.7	2.47	0.24	0.04
RG1 Spring	3/25/2004	III	F	84.7	90.5	75.5	6.3	26.8	7.05	1.16	0.07
	9/28/2004	III	F	86.9	88.1	77.8	8.8	27.0	7.06	1.15	0.04
	11/9/2005	III	F	84.4	103.0	NA	0	27.9	7.50	1.23	0.09

Springs - West Rio Grande

Big Spring	5/29/2004	III	F	129.1	137.0	73.3	10.1	11.2	1.37	0.51	0.02
	9/28/2004	III	F	128.0	136.0	75.9	9.9	11.2	1.61	0.50	0.01
	11/18/2005	III	F	129.5	158.0	NA	0	12.0	1.52	0.53	0.03
DBS Spring 1	3/15/2004	III	F	142.3	159.0	41.3	7.2	23.2	9.72	1.24	0.05

Table 3 - Summary Results of Major Element Chemistry and Field Parameters.

Station ID	Date Sampled	Source Code	F/NF	Total Alk (lab) (ppm)	HCO_3 (ppm)	Hardness (ppm)	CO_3 (ppm)	SO_4 (ppm)	Cl (ppm)	F (ppm)	Br (ppm)
DBS Spring 2	3/15/2004	III	F	136.5	146.0	59.3	10.1	59.0	22.1	1.26	0.10
	9/27/2004	III	F	143.4	154.0	56.4	10.3	58.8	23.1	1.32	0.06
Felsenmeere Spring	12/7/2003	III	F	83.6	102.0	71.0	0	8.21	2.34	0.34	0.03
	5/5/2004	III	F	85.2	104.0	65.9	0	8.47	2.35	0.34	0.02
	9/27/2004	III	F	86.1	105.0	66.2	0	8.39	2.38	0.33	0.01
	11/10/2005	III	F	84.9	89.8	NA	6.8	9.08	2.60	0.36	0.03
Snowpack/Precipitation											
Snowpack											
Aspen Peak Snowpack	4/18/2003	III	F	3.0	3.7	1.40	0	0.44	0.56	<0.01	<0.01
	3/30/2004	III	F	<0.7	<0.8	2.6	0	0.67	0.05	<0.01	<0.01
Pajarito Mountain Snowpack	4/13/2003	III	F	2.0	2.5	1.08	0	0.31	0.14	<0.01	<0.01
	3/21/2004	III	F	<0.7	<0.8	1.7	0	0.48	0.04	<0.01	<0.01
Snow											
TA-21 Snow	11/30/2006	III	F	0.0	<0.8	0.31	0	0.36	0.13	<0.01	<0.01
	12/31/2006	III	F	NA	NA	NA	NA	0.13	0.04	<0.01	<0.01
TA-8/9 Snow	11/30/2006	III	F	NA	NA	NA	NA	0.22	0.08	<0.01	<0.01
	12/31/2006	III	F	NA	NA	NA	NA	0.14	0.13	<0.01	<0.01
Rain											
TA-21 Rain	8/11/2003	III	F	0.0	<0.8	2.86	0	0.97	0.26	<0.01	<0.01
	8/17/2003	III	F	0.0	<0.8	2.03	0	1.04	0.14	<0.01	<0.01
TA-8/9 Rain	8/23/2003	III	F	0.0	<0.8	2.22	0	0.96	0.14	<0.01	<0.01

Data Source Codes: I - NMED DOE OB; II - LANL Water Quality Database; and III - LANL EES-6
NA - Not Analyzed
F - Sample filtered through a 0.45 micron filter
NF - Non-filtered
NC - Not Calculated

J - Indicates an estimated value that is less than the reporting limit (quantitation limit) but greater than the method detection limit (MDL)
E- Percent difference between the parent sample and its serial dilution's concentration exceeds 10%
H - Hold times exceeded
[1] - Chloride and sulfate results for well R-18 may not be accurate as noted by the interlaboratory duplicate results. Data were not used in statistical or correlation analyses
*** - Spring 9A sample collected approximately 50 meters downstream of the spring source. Associated field data and low-level perchlorate sample collected at the source**
**** - Spring 9B field data collected approximately 20 meters downstream of spring source. Samples collected for analyses were collected at the spring source**
***** - Spring 9C field data and samples collected approximately 5 meters downstream of spring source**
All field data were collected on non-filtered flowing ground-water sample at the spring source or well head

Table 3 - Summary Results of Major Element Chemistry and Field Parameters.

Station ID	Date Sampled	Source Code	F/NF	NO_3 as N (ppm)	PO4-P (ppm)	Ca (ppm)	Mg (ppm)	Na (ppm)	K (ppm)	SiO_2 Cal (ppm)	Lab TDS (ppm)	Field Properties: Temp (^oC)	pH (S.U.)	Diss O_2 (ppm)	Specific Cond (uS/cm)
Los Alamos Area															
Zone 1 - Perched Sierra de Los Valles and Mountain Front Area															
Wells															
Pajarito Ski Well #2	5/19/2004	III	F	0.27	<0.01	7.47	2.68	4.80	2.20	43.0	111	6.8	7.37	NA	90
	9/22/2004	III	F	0.00	<0.01	7.50	2.87	4.65	2.21	45.1	116	10.9	7.28	NA	92
	3/2/2005	III	F	0.45	0.05	7.52	2.81	4.79	2.18	43.8	113	6.3	8.85	8.1	91
	8/31/2005	III	F	0.40	0.04	7.10	2.71	7.37	2.15	41.4	119	16.2	7.12	5.4	99
	1/12/2006	III	F	0.53	0.08	6.94	2.63	4.80	2.18	42.3	112	7.6	7.07	9.6	86
Springs															
AL-10.6 Spring	5/26/2004	III	F	0.20	0.08	6.20	1.60	7.01	1.93	59.3	122	8.6	NA	NA	78
	5/12/2005	III	F	0.26	0.07	5.96	1.44	6.19	1.66	54.1	115	7.8	7.28	7.1	80
	6/15/2005	III	F	0.24	0.16	5.69	1.60	6.85	1.95	58.5	122	8.4	6.76	6.1	78
	7/13/2005	III	F	0.22	0.09	5.94	1.58	6.92	1.83	57.6	120	8.7	6.94	6.0	74
Barbara Spring	8/18/2003	III	F	0.28	0.10	5.10	0.92	10.7	0.20	68.9	134	15.7	6.85	NA	78
	5/26/2004	III	F	0.01	0.04	5.38	0.95	10.1	0.25	74.2	136	15.3	NA	NA	76
	9/20/2004	III	F	<0.002	<0.01	4.77	0.96	9.83	0.27	75.3	138	15.7	7.11	NA	77
	3/29/2005	III	F	0.27	0.16	4.86	0.74	9.75	0.19	73.2	136	13.8	7.76	9.9	73
	5/12/2005	III	F	0.28	0.12	4.60	0.77	9.43	0.21	72.0	133	15.2	7.39	7.0	73
	6/15/2005	III	F	0.25	0.08	4.64	0.90	9.97	0.29	74.7	137	15.4	7.06	6.2	75
	7/13/2005	III	F	0.28	0.12	4.81	0.91	10.06	0.32	74.0	136	15.5	7.22	5.0	73
Campsite Springs	8/25/2003	III	F	0.38	0.11	5.59	1.83	9.23	1.46	57.4	129	14.9	7.73	NA	87
	8/10/2004	III	F	NA	NA	NA	NA	NA	NA	NA	NA	14.8	6.71	NA	88
	5/17/2005	III	F	0.33	0.08	5.35	1.63	8.95	1.21	56.1	126	14.4	7.86	6.7	75
	6/8/2005	III	F	0.35	0.08	4.39	1.60	8.97	1.27	53.8	122	14.9	7.73	6.5	NA
	7/14/2005	III	F	0.34	0.07	4.90	1.74	9.60	1.45	57.0	126	15.0	7.85	4.9	83
	3/31/2006	III	F	0.42	0.08	4.91	1.70	9.44	1.38	53.1	127	14.6	7.12	7.1	86
CDV-5.0 Spring	8/20/2003	III	F	0.58	0.18	9.34	3.38	5.31	2.59	43.2	127	8.8	7.40	NA	109
	5/16/2004	III	F	0.18	<0.01	8.86	3.19	4.77	2.49	42.2	112	8.6	6.76	NA	101
	9/17/2004	III	F	0.00	<0.01	9.37	3.55	5.03	2.55	43.4	126	10.4	7.15	NA	112
	3/3/2005	III	F	1.31	0.15	16.47	5.86	7.49	3.54	52.4	176	8.7	7.86	8.1	173
	4/18/2005	III	F	1.78	0.20	15.64	4.45	7.52	2.62	51.7	168	9.0	7.02	NA	177
	5/27/2005	III	F	0.90	0.15	8.20	3.14	5.20	2.41	40.7	116	8.6	7.35	NA	115
	7/11/2005	III	F	0.76	0.17	9.86	3.79	5.93	3.62	42.7	129	8.9	6.79	6.1	120
	12/23/2005	III	F	0.81	0.19	9.69	3.70	5.58	2.80	46.1	134	6.6	7.78	9.0	113
	3/5/2006	III	F	0.67	0.21	8.89	3.12	4.96	2.46	40.4	125	NA	NA	NA	105
	8/24/2006	III	F	0.94	0.14	12.6	4.75	6.59	3.22	53.6	163	8.9	7.45	8.5	139
CDV-5.97 Spring	11/9/2006	III	F	0.60	0.13	8.17	3.00	4.74	1.94	40.1	124	6.6	7.47	8.3	98
Colonel Spring	9/16/2004	III	F	0.001	<0.01	5.27	1.11	9.90	0.58	51.1	116	11.1	6.72	NA	80
PC Spring	8/22/2003	III	F	0.31	0.11	7.30	3.00	4.07	2.47	42.4	110	9.9	7.39	NA	84
	5/15/2004	III	F	0.01	<0.01	5.77	2.31	3.40	1.80	33.1	86	5.9	6.85	NA	76
	9/16/2004		F	0.11	0.155	7.32	3.11	4.15	2.23	40.9	87	18.8	7.68	NA	147
	3/30/2005	III	F	0.55	0.14	7.03	2.39	3.88	1.85	39.0	101	5.5	7.61	8.9	83
	5/3/2005	III	F	0.32	0.12	6.05	1.99	3.45	1.29	33.5	85	5.7	7.23	8.5	78
	6/10/2005	III	F	0.26	0.09	5.13	2.15	3.39	1.50	32.1	84	6.3	6.94	NA	72
	6/21/2005	II	F	NA	<0.086	6.18	2.5	3.84 (N)	1.87	36.2	77	6.9	7.20	9.1	69
(Blind Interlaboratory Field Duplicate)	6/21/2005	II	F	NA	NA	5.77	2.40	3.78	1.74	35.5	NA	6.9	7.20	9.1	69
	6/21/2005	II	NF	NA	NA	6.2	2.55	3.85 (N)	1.87	36.4	NA	6.9	7.20	9.1	69
	6/29/2005	III	F	0.21	0.06	5.84	2.47	3.72	1.73	36.5	90	6.4	6.58	9.3	64

Table 3 - Summary Results of Major Element Chemistry and Field Parameters.

Station ID	Date Sampled	Source Code	F/NF	NO_3 as N (ppm)	PO4-P (ppm)	Ca (ppm)	Mg (ppm)	Na (ppm)	K (ppm)	SiO_2 Cal (ppm)	Lab TDS (ppm)	Field Properties: Temp (°C)	pH (S.U.)	Diss O_2 (ppm)	Specific Cond (uS/cm)
	7/12/2005	III	F	0.21	0.06	6.09	2.55	3.91	1.73	34.6	90	6.6	6.91	7.6	70
	8/31/2006	II	F	0.258	0.012 (J)	7.74	3.12	4.17	2.25	36.4	96	7.4	6.30	11.3	79
	8/31/2006	II	NF	0.26	0.013 (J)	7.98	3.25	4.27	2.27	38.9	103	7.4	6.30	11.3	79
	12/14/2006	II	F	0.259	<0.067	6.73	2.72	4.09	2.07	38.8	78	5.3	7.10	8.4	74
	12/14/2006	II	NF	0.262	<0.063	6.96	2.81	4.2	2.13	40.1	81	5.3	7.10	8.4	74
Water Canyon Gallery Spring	8/26/2003	II	UF	0.15	<0.021	7.43	3.53	5.59	1.47	NA	97[F]	13.3	7.43	NA	80
(Blind Intralaboratory Field Duplicate)	8/26/2003	II	UF	0.16	0.028	NA	NA	NA	NA	NA	90[F]	13.3	7.43	NA	80
	5/19/2004	III	NF	NA	NA	NA	NA	NA	NA	NA	NA	12.6	NA	NA	103
	3/4/2005	III	F	0.35	0.06	11.07	4.25	5.70	2.89	39.5	131	9.9	7.95	4.4	122
	4/18/2005	III	F	0.45	0.06	11.24	3.43	5.44	1.96	38.2	127	10.7	6.75	NA	125
	5/27/2005	III	F	0.54	0.09	8.04	3.61	5.17	1.82	35.0	115	11.3	7.21	NA	128
	7/11/2005	III	F	0.26	0.06	7.08	3.47	5.82	1.65	41.0	114	12.1	7.15	8.1	90
(Blind Intralaboratory Field Duplicate)	7/11/2005	III	F	0.36	0.10	7.22	3.52	5.82	1.68	41.7	115	12.1	7.15	8.1	90
	9/23/2005	III	F	0.34	0.10	7.38	3.43	5.73	1.73	44.2	119	11.4	NA	7.3	NA
	8/25/2006	III	F	0.40	0.10	8.70	4.06	6.03	1.95	43.4	129	8.4	6.95	8.4	118
SPET-1.7 Spring	5/26/2004	III	F	<0.002	<0.01	6.10	1.90	3.63	3.08	54.2	109	6.5	NA	NA	68
Yak Spring	5/27/2004	III	F	0.003	0.06	5.58	1.85	3.55	3.09	48.6	101	5.1	6.65	NA	68
Coffman Springs	12/4/2006	III	F	<0.002	0.25	7.98	3.83	9.85	2.13	63.6	167	11.2	7.22	6.0	122
Zone 3 - Perched Intermediate Pajarito Plateau															
Wells															
LAOI(A)-1.1	12/2/2003	I, III	F	0.30	0.03	*5*	*1*	NA	NA	*34.2*	NA	9.7	7.62	NA	126
(Field Parameter Duplicate)	6/3/2004	III	F	0.39	0.02	5.16	0.88	17.9	22.6	67.0	193	14.7	9.50	NA	172
	6/3/2004	II	NF	0.43	<0.047 (J)	6.10	1.23	22.6	27.7	73.9	160	12.3	10.14	NA	227
(Blind Intralaboratory Field Duplicate)	6/3/2004	II	NF	NA	NA	NA	NA	NA	NA	NA	NA	12.3	10.14	NA	227
	3/4/2005	III	F	0.47	0.04	5.78	1.57	11.13	10.01	67.7	167	9.5	9.62	15.3	148
	5/7/2005	II	NF & F	0.291[F]	<0.031 (J)[F]	6.39	1.94	10.4	8.83	70.4	142	9.3	7.46	7.4	120
	8/4/2006	II	F	0.289	<0.020 (J)	5.64	1.66	8.27	4.73	65.7	127	11.1	9.06	9.8	92
	8/4/2006	II	NF	0.232	<0.12	6.07	1.87	8.31	4.83	69.3	138	11.1	9.06	9.8	92
Springs															
Sacred Spring	7/23/2003	II	F	0.140	0.027 (J)	31	1.38	21.5	2.48	NA	183	17.4	7.75	NA	250
(Blind Intralaboratory Field Duplicate)	7/23/2003	II	F	0.140	0.022 (J)	30	1.34	20.5	2.3	NA	190	17.4	7.75	NA	250
(Field Parameter Duplicate)	7/23/2003	III	NF	NA	NA	NA	NA	NA	NA	NA	NA	16.8	7.75	NA	250
	12/22/2003	I	F	*<0.1*	NA	*47*	*2*	NA	NA	NA	NA	9.5	7.18	NA	332
	8/24/2004	II	F	0.125 (H)	<0.032 (J)	35.7	2.45	19.6	3.11	42.7	190	17.7	8.07	NA	289
(Field Parameter Duplicate)	8/24/2004	III	NF	NA	NA	NA	NA	NA	NA	NA	NA	15.8	7.46	NA	290
	7/13/2005	II	F	0.0513	<0.030 (J)	35.9	1.76	22.2	2.66	44.8	204	18.4	8.20	NA	226
	7/13/2005	II	NF	NA	NA	36.0	1.78	21.0	2.56	43.9	NA	18.4	8.20	NA	226
(Field Parameter Duplicate)	7/13/2005	III	NF	NA	NA	NA	NA	NA	NA	NA	NA	15.9	6.90	NA	227
	9/14/2006	II	F	0.0964	<0.063	41.7	2.23	24.4	2.64	46.6	230	25.0	7.62	3.1	273
	9/14/2006	II	NF	0.0638	<0.047 (J)	42.5	2.28	24.5	2.69	47.9	NA	25.0	7.62	3.1	273
Sandia Spring	12/29/2003	III	NF	NA	NA	NA	NA	NA	NA	NA	NA	12.7	6.94	NA	210
	6/14/2004	III	NF	0.23	<0.01	24.1	1.69	14.4	2.26	44.8	212	15.7	6.65		212
	9/13/2004	III	NF	NA	NA	NA	NA	NA	NA	NA	NA	18.4	6.51	NA	206
	9/13/2004	II	F	0.0194 (J)	< 0.011	35.8	4.48	15	2.54	53.7	183	18.9	6.89	NA	261
	1/28/2005	II	F	0.351	< 0.011	27.4	1.86	15.1	2.54	45.1	151	12.0	7.17	NA	212
	9/8/2005	II	F	0.173	<0.051	25.6	1.75	15.2	2.50	44.6	145	20.1	7.46	NA	200
	9/8/2005	II	NF	NA	NA	25.4	1.74	15.2	2.44	45.5	NA	20.1	7.46	NA	200
(Field Parameter Duplicate)	9/8/2005	III	NF	NA	NA	NA	NA	NA	NA	NA	NA	17.0	6.87	NA	212
	9/14/2006	II	F	0.208	<0.051	26.2	1.82	15.6	2.49	48.0	163	16.8	7.00	3.9	177

Table 3 - Summary Results of Major Element Chemistry and Field Parameters.

Station ID	Date Sampled	Source Code	F/NF	NO_3 as N (ppm)	PO4-P (ppm)	Ca (ppm)	Mg (ppm)	Na (ppm)	K (ppm)	SiO_2 Cal (ppm)	Lab TDS (ppm)	Field Properties: Temp (^oC)	pH (S.U.)	Diss O_2 (ppm)	Specific Cond (uS/cm)
(Blind Interlaboratory Field Duplicate)	9/14/2006	III	F	NA	NA	26	1.7	13	2.4	NA	NA	16.8	7.00	3.9	177
(Blind Intralaboratory Field Duplicate)	9/14/2006	III	F	NA	NA	26.2	1.74	13.1	2.43	NA	NA	16.8	7.00	3.9	177
	9/14/2006	II	NF	0.209	<0.029 (J)	25.6	1.78	15.1	2.43	47.1	NA	16.8	7.00	3.9	177
Zone 4 - Regional Aquifer															
Wells															
DPOGW4	9/30/2004	III	F	0.17	<0.01	13.5	2.35	18.7	2.79	79.1	218	30.1	7.69	NA	178
(Blind Intralaboratory Field Duplicate)	9/30/2004	III	F	0.76	<0.01	13.5	2.35	19.0	2.84	79.0	219	30.1	7.69	NA	178
R-1	5/19/2005	II	F	0.251	< 0.062	12.2	4.22	12.9	1.79	75.9	NA	22.4	7.63	4.5	158
	9/12/2005	III	F	0.33	0.10	10.98	3.92	12.77	1.74	74.9	189	21.7	7.78	4.4	143
	9/12/2005	II	F	0.253	< 0.072	11.4	4.00	12.5	1.65	<74.0	140	21.7	7.78	4.4	143
(Blind Intralaboratory Field Duplicate)	9/12/2005	II	F	0.253	< 0.100	10.8	3.78	11.7	1.58	<69.9	123	21.7	7.78	4.4	143
	9/12/2005	II	NF	0.240	< 0.070	10.8	3.77	11.9	1.55	<70.0	143	21.7	7.78	4.4	143
(Blind Intralaboratory Field Duplicate)	9/12/2005	II	NF	0.260	< 0.049 (J)	10.9	3.82	12.0	1.57	<70.7	148	21.7	7.78	4.4	143
	11/28/2005	II	F	0.242	< 0.040 (J)	10.9	3.85	11.4	1.63	72.4	NA	NA	NA	NA	NA
	11/28/2005	II	NF	0.224	< 0.040 (J)	11.3	4.02	12.0	1.70	74.9	NA	21.3	7.71	4.3	143
	1/25/2006	II	F	0.266	0.096	11.7	4.11	12.3	1.75	78.2	149	NA	NA	NA	NA
	1/25/2006	II	NF	NA	NA	11.7	4.13	12.5	1.75	78.6	NA	21.3	7.82	4.1	133
	7/6/2006	II	F	0.259	0.010 (J)	11.6	4.04	12.6	1.72	77.9	149	NA	NA	NA	NA
(Blind Intralaboratory Field Duplicate)	7/6/2006	II	F	0.253	< 0.01	11.3	3.98	11.9	1.70	76.4	155	NA	NA	NA	NA
	7/6/2006	II	NF	0.251	0.016 (J)	11.5	4.01	12.4	1.73	76.5	154	21.3	NA	4.5	138
(Blind Intralaboratory Field Duplicate)	7/6/2006	II	NF	0.251	< 0.01	11.4	3.97	12.2	1.70	75.6	157	NA	NA	NA	NA
	10/26/2006	II	F	0.224	0.023 (J)	11.5	4.12	13.0	1.76	75.3	138	NA	NA	NA	NA
(Blind Intralaboratory Field Duplicate)	10/26/2006	II	F	0.210	0.025 (J)	11.5	4.13	13.0	1.77	75.1	137	NA	NA	NA	NA
	10/26/2006	II	NF	0.222	0.026 (J)	11.3	4.07	13.0	1.73	74.4	144	20.8	7.63	2.5	133
(Blind Intralaboratory Field Duplicate)	10/26/2006	II	NF	0.230	0.027 (J)	11.3	4.05	12.8	1.80	74.3	140	NA	NA	NA	NA
R-2	12/11/2003	II	F	0.36	0.01	10.8	2.78	13.6	0.89	71.9	188	19.5	6.19	NA	146
	4/26/2005	III	F	0.23	0.01	8.62	1.85	19.58	0.95	85.2	208	23.3	6.96	4.9	160
(Blind Interlaboratory Field Duplicate)	4/26/2005	II	F	0.304	< 0.070	8.17	2.26	21.5	1.17	84.6	NA	23.3	6.96	4.9	160
	4/26/2005	II	NF	0.301	< 0.078	8.86	2.62	21.7	1.25	91.9	NA	23.3	6.96	4.9	160
	8/9/2005	III	F	0.43	0.11	8.43	2.28	18.3	0.77	84.8	210	24.6	7.39	4.8	148
(Blind Interlaboratory Field Duplicate)	8/9/2005	II	F	0.324	0.054	9.15	2.43	19.4	1.11	87.4	NA	24.6	7.39	4.8	148
	8/9/2005	II	NF	0.262	0.077	9.5	2.65	20.4	1.21	87.8	NA	24.6	7.39	4.8	148
	11/9/2005	II	F	0.378	0.060	9.95	2.67	16.9	1.08	87.9	NA	NA	NA	NA	NA
	11/9/2005	II	NF	0.344	0.075	9.79	2.75	17.2	1.12	90.0	NA	23.9	7.43	4.7	144
	2/27/2006	III	F	0.49	0.14	8.73	2.52	16.57	1.06	84.4	206	24.0	7.05	5.4	145
(Blind Interlaboratory Field Duplicate)	2/27/2006	II	F	0.455	0.072	10.3	2.83	17.4	1.13	92.1	160	NA	NA	NA	NA
	2/27/2006	II	NF	NA	NA	10.5	2.89	18.7	1.22	NA	NA	25.1	7.46	3.1	143
	7/24/2006	II	F	0.395	0.020 (J)	10.2	2.74	16.1	1.05	83.9	165	NA	NA	NA	NA
	7/24/2006	II	NF	0.368	0.018 (J)	10.6	2.95	16.5	1.12	89.3	170	24.3	7.56	3.1	104
R-6	8/23/2005	II	F	0.305	<0.038	14	3.92	15.4	1.4	78.9	NA	22.9	8.15	3.45	157
(Blind Intralaboratory Field Duplicate)	8/23/2005	II	F	0.271	<0.01	14.1	3.97	15.4	1.41	79.1	NA	22.9	8.15	3.45	157
	8/23/2005	II	UF	0.265	<0.035	13.3	3.68	16.1	1.34	78.6	NA	22.9	8.15	3.45	157
(Blind Intralaboratory Field Duplicate)	8/23/2005	II	UF	0.248	<0.022	13.7	3.83	17.4	1.36	78.8	NA	22.9	8.15	3.45	157
	11/17/2005	II	F	0.28	<0.038	14.5	4	15.9	1.48	79.6	NA	22.3	8.17	3.47	162
	11/17/2005	II	UF	0.233	<0.056	13.8	3.75	17.2	1.44	78.2	NA	22.3	8.17	3.47	162
	3/1/2006	II	F	0.292	<0.028	14.3	4.01	14.7	1.48	77.5	163	20.8	8.2	2.93	156
	3/1/2006	II	UF	NA	NA	13.7	3.79	15.5	1.45	NA	NA	20.8	8.2	2.93	156
	5/11/2006	II	F	0.262	0.012	13.3	3.42	15.5	1.32	74.8	165	22.1	8.43	2.33	156
	5/11/2006	II	UF	NA	NA	27.8	4.91	19.2	0.659	NA	NA	22.1	8.43	2.33	156
	7/26/2006	II	F	0.252	<0.01	13.5	3.47	15.6	1.25	74.1	154	22.7	8.35	3.8	153
(Blind Intralaboratory Field Duplicate)	7/26/2006	II	F	0.28	0.015	13.2	3.57	15.4	1.27	74.6	161	22.7	8.35	3.8	153
	7/26/2006	II	UF	0.24	<0.01	12.6	3.35	14.7	1.21	71.1	NA	22.7	8.35	3.8	153
(Blind Intralaboratory Field Duplicate)	7/26/2006	II	UF	0.246	<0.01	12.6	3.36	14.5	1.25	70.9	NA	22.7	8.35	3.8	153

Table 3 - Summary Results of Major Element Chemistry and Field Parameters.

Station ID	Date Sampled	Source Code	F/NF	NO_3 as N (ppm)	PO4-P (ppm)	Ca (ppm)	Mg (ppm)	Na (ppm)	K (ppm)	SiO_2 Cal (ppm)	Lab TDS (ppm)	Field Properties: Temp (°C)	pH (S.U.)	Diss O_2 (ppm)	Specific Cond (uS/cm)
R-16r	12/19/2005	III	NF	NA		NA	NA	NA	NA	NA	NA	20.0	7.66	5.7	186
	12/19/2005	II	F	0.292	NA	21.1	0.887	16.6	2.47	40.4	137	NA	NA	NA	NA
	12/19/2005	II	NF	NA	NA	21.1	0.891	16.4	2.48	40.6	NA	20.7	8.13	4.3	180
	3/8/2006	II	F	0.352	< 0.033 (J)	19.7	0.794	16.6	2.33	42.4	136	NA	NA	NA	NA
(Blind Intralaboratory Field Duplicate)	3/8/2006	II	F	0.367	< 0.010	19.9	0.807	16.7	2.36	42.8	139	NA	NA	NA	NA
	3/8/2006	II	NF	NA	NA	20.1	0.818	16.7	2.37	NA	NA	17.6	7.96	3.2	179
(Blind Intralaboratory Field Duplicate)	3/8/2006	II	NF	NA	NA	19.9	0.811	16.4	2.34	NA	NA	NA	NA	NA	NA
	5/24/2006	II	F	0.36	< 0.021 (J)	20.1	0.796	16.5	2.30	41.4	143	NA	NA	NA	NA
	5/24/2006	II	NF	NA	NA	20.6	0.812	16.7	2.34	NA	NA	21.5	8.15	4.4	177
	8/17/2006	II	F	0.354	< 0.013 (J)	16.8	0.677	14.1	1.92	35.6	132	NA	NA	NA	NA
(Blind Intralaboratory Field Duplicate)	8/17/2006	II	F	0.369	< 0.014 (J)	15.9	0.638	13.1	1.85	33.8	134	NA	NA	NA	NA
	8/17/2006	II	NF	NA	NA	17.5	0.705	14.8	2.02	NA	NA	23.1	8.34	4.5	150
(Blind Intralaboratory Field Duplicate)	8/17/2006	II	NF	NA	NA	20.3	0.818	16.9	2.31	NA	NA	NA	NA	NA	NA
	11/1/2006	II	F	0.369	< 0.022 (J)	20.5	0.816	17.4	2.28	43.4	117	NA	NA	NA	NA
	11/1/2006	II	NF	NA	NA	20.8	0.824	17.4	2.33	NA	NA	20.0	8.20	3.2	145
R-17 Screen 1	10/19/2006	II	F	0.145	< 0.028 (J)	10.4	2.88	12.0	1.64	72.1	135	NA	NA	NA	NA
	10/19/2006	II	NF	NA	NA	11.2	3.06	12.7	1.76	NA	NA	19.2	8.21	3.2	125
R-18	8/25/2005	III	F	0.54	0.08	8.74	2.97	8.36	1.10	58.8	149	16.9	7.10	NA	109
	8/25/2005	II	F	0.391	< 0.047 (J)	9.56	3.19	8.58	1.14	58.6	NA	NA	NA	NA	NA
	8/25/2005	II	NF	0.382	0.168	9.44	3.16	8.39	1.13	57.6	NA	17.1	7.63	4.6	110
	12/1/2005	III	F	0.54	<0.01	8.66	3.13	9.03	1.10	62.3	162	NA	NA	NA	NA
	12/1/2005	II	F	0.397	0.022 (J)	9.35	3.13	8.40	1.14	58.5	NA	NA	NA	NA	NA
(Blind Intralaboratory Field Duplicate)	12/1/2005	II	F	0.448	0.054	9.35	3.13	8.39	1.13	58.4	NA	NA	NA	NA	NA
	12/1/2005	II	NF	0.463	0.035 (J)	9.49	3.19	8.51	1.17	59.3	NA	16.0	7.67	4.6	105
(Blind Intralaboratory Field Duplicate)	12/1/2005	II	NF	0.444	0.042 (J)	9.30	3.12	8.38	1.13	58.2	NA	NA	NA	NA	NA
	3/7/2006	II	F	0.491	< 0.055	9.82	3.28	8.98	1.22	65.8	122	NA	NA	NA	NA
	3/7/2006	II	NF	NA	NA	9.81	3.28	8.96	1.21	NA	NA	16.0	7.62	4.7	107
	5/16/2006	II	F	0.542	0.019 (J)	9.34	3.03	8.43	1.11	55.2	125	NA	NA	NA	NA
(Blind Intralaboratory Field Duplicate)	5/16/2006	II	F	NA	0.028 (J)	9.21	2.99	8.32	1.10	54.1	142	NA	NA	NA	NA
	5/16/2006	II	NF	NA	NA	9.22	3.01	8.24	1.11	NA	NA	15.5	7.22	4.3	108
(Blind Intralaboratory Field Duplicate)	5/16/2006	II	NF	0.532	NA	9.5	3.11	8.49	1.14	NA	NA	NA	NA	NA	NA
	8/15/2006	II	F	0.568	< 0.034 (J)	9.61	3.12	8.88	1.13	60.1	123	NA	NA	NA	NA
(Blind Intralaboratory Field Duplicate)	8/15/2006	II	F	0.599	< 0.041 (J)	9.32	3.02	8.65	1.10	58.2	123	NA	NA	NA	NA
	8/15/2006	II	NF	0.579	< 0.040 (J)	9.45	3.07	8.75	1.12	59.2	121	16.3	7.72	4.4	**68**
(Blind Intralaboratory Field Duplicate)	8/15/2006	II	NF	0.567	< 0.040 (J)	9.34	3.04	8.69	1.10	58.4	124	NA	NA	NA	NA
	12/18/2006	II	F	0.633	< 0.071	9.43	3.12	8.38	1.11	58.8	102	NA	NA	NA	NA
(Blind Intralaboratory Field Duplicate)	12/18/2006	II	F	0.601	3.640	9.60	3.19	8.50	1.12	59.4	91	NA	NA	NA	NA
	12/18/2006	II	NF	0.618	< 0.061	9.71	3.22	8.64	1.14	60.2	110	13.7	7.44	5.4	111
(Blind Intralaboratory Field Duplicate)	12/18/2006	II	NF	0.590	< 0.070	9.61	3.19	8.51	1.13	59.4	110	NA	NA	NA	NA
R-21	3/31/2004	II	F	0.32	< .011	11.4	2.95	10.6	1.74	71.7	NA	NA	NA	NA	NA
(Blind Intralaboratory Field Duplicate)	3/31/2004	II	F	0.31	NA	11.6	3.00	10.8	1.78	73.2	NA	NA	NA	NA	NA
	3/31/2004	II	NF	0.32	< 0.037 (J)	10.9	2.81	10.1	1.69	68.3	NA	21.5	8.30	NA	127
(Blind Intralaboratory Field Duplicate)	3/31/2004	II	NF	0.32	NA	11.2	2.89	10.4	1.7	71.6	NA	NA	NA	NA	NA
	6/30/2004	II	F	0.31	< 0.032 (J)	11.7	3.12	10.6	1.7	32.2	NA	NA	NA	NA	NA
	6/30/2004	II	NF	0.31	< 0.021 (J)	11.5	3.06	10.4	1.67	31.4	NA	NA	NA	NA	NA
(Blind Intralaboratory Field Duplicate)	6/30/2004	II	NF	NA	NA	NA	NA	NA	NA	NA	NA	21.5	8.19	3.9	126
	9/23/2004	II	F	0.359	< .011	12.1	3.07	11.0	1.81	27.0 (E)	NA	NA	NA	NA	NA
	9/23/2004	II	NF	0.39	< .011	11.9	3.03	10.7	1.82	26.8 (E)	NA	21.7	8.12	NA	120
	12/14/2004	II	F	0.305	0.126	11.4	3.06	10.2	1.67	32.6	NA	NA	NA	NA	NA
	12/14/2004	II	NF	0.3	0.121	11.4	3.05	10.2	1.65	32.3	NA	NA	NA	NA	NA
(Blind Intralaboratory Field Duplicate)	12/14/2004	II	NF	NA	NA	NA	NA	NA		NA	NA	21.0	8.09	4.8	124
	6/6/2005	II	F	0.25	< 0.046 (J)	11.5	2.85	10.8	1.71	70.4	127	NA	NA	NA	NA
(Blind Intralaboratory Field Duplicate)	6/6/2005	II	F	0.241	< 0.041 (J)	11.3	2.79	10.7	1.71	69.2	129	NA	NA	NA	NA
	6/6/2005	II	NF	NA	NA	11.4	2.83	9.59	1.58	68.2	NA	21.5	8.06	4.3	126
(Blind Intralaboratory Field Duplicate)	6/6/2005	II	NF	NA	NA	11.5	2.89	9.75	1.63	70.6	NA	NA	NA	NA	NA

Table 3 - Summary Results of Major Element Chemistry and Field Parameters.

Station ID	Date Sampled	Source Code	F/NF	NO_3 as N (ppm)	PO4-P (ppm)	Ca (ppm)	Mg (ppm)	Na (ppm)	K (ppm)	SiO_2 Cal (ppm)	Lab TDS (ppm)	Field Properties: Temp (°C)	pH (S.U.)	Diss O_2 (ppm)	Specific Cond (uS/cm)
	7/7/2006	II	F	0.284	< 0.012 (J)	11.2	2.79	10.4	1.67	67.7	144	NA	NA	NA	NA
	7/7/2006	II	F	NA	NA	NA	NA	NA		NA	147	NA	NA	NA	NA
	7/7/2006	II	NF	0.277	< 0.010	11.4	2.81	10.5	1.69	68.0	NA	21.9	8.03	4.3	127
	11/6/2006	II	F	0.279	< 0.100	12	2.98	10.5	1.67	72.0	115	NA	NA	NA	NA
	11/6/2006	II	F	NA	NA	NA	NA	NA		NA	118	NA	NA	NA	NA
(Blind Intralaboratory Field Duplicate)	11/6/2006	II	F	0.282	< 0.010	12	2.91	10.3	1.66	70.7	123	NA	NA	NA	NA
	11/6/2006	II	NF	0.308	0.013 (J)	11.8	2.99	10.5	1.65	72.1	NA	21.5	7.80	4.0	**15**
(Blind Intralaboratory Field Duplicate)	11/6/2006	II	NF	0.301	< 0.010	11.8	2.93	10.2	1.64	70.4	NA	NA	NA	NA	NA
R-27	7/1/2006	II	F	0.263	< 0.010	10.2	2.89	10.1	1.31	65.4	130	NA	NA	NA	NA
(Blind Intralaboratory Field Duplicate)	7/1/2006	II	F	0.256	< 0.055	10.2	2.89	10.1	1.31	65.3	125	NA	NA	NA	NA
	7/1/2006	II	NF	NA	NA	10.2	2.92	10.2	1.32	NA	NA	21.9	7.63	5.6	100
(Blind Intralaboratory Field Duplicate)	7/1/2006	II	NF	NA	NA	10.4	2.97	10.4	1.35	NA	NA	NA	NA	NA	NA
R-34	6/7/2005	II	F	0.29	<0.038	17.3	3.83	10.9	2.07	67.6	NA	23.3	8.06	2.84	166
	6/7/2005	II	UF	0.304	<0.032	17.9	4.09	11.1	2.21	72.0	NA	23.3	8.06	2.84	166
	9/7/2005	II	F	0.313	<0.038	16.9	3.75	11	1.95	66.2	144	23.6	8.19	3.79	166
	9/7/2005	II	UF	0.306	0.105	17.1	3.93	10.9	2.01	69.4	NA	23.6	8.19	3.79	166
	11/29/2005	II	F	0.291	<0.041	16.4	3.69	11.1	1.91	66.8	NA	21.9	8.24	4.07	164
(Blind Intralaboratory Field Duplicate)	11/29/2005	II	F	0.314	<0.038	16.1	3.63	10.9	1.91	65.8	NA	21.9	8.24	4.07	164
	11/29/2005	II	UF	NA	NA	NA	NA	NA	NA	NA	NA	21.9	8.24	4.07	164
	11/29/2005	II	UF	0.35	<0.046	16.9	4.02	11.2	2.05	72.0	NA	21.9	8.24	4.07	164
(Blind Intralaboratory Field Duplicate)	11/29/2005	II	UF	0.365	<0.041	17.7	4.01	11.1	2.1	72.8	NA	21.9	8.24	4.07	164
	1/31/2006	II	F	0.271	<0.144	16.5	3.77	11.3	1.96	65.5	181	20.4	8.4	4.00	161
(Blind Intralaboratory Field Duplicate)	1/31/2006	II	F	0.279	<0.195	16.5	3.78	11.2	1.95	65.7	185	20.4	8.4	4.00	161
	1/31/2006	II	UF	NA	NA	16.4	3.77	11.3	1.94	64.9	NA	20.4	8.4	4.00	161
(Blind Intralaboratory Field Duplicate)	1/31/2006	II	UF	NA	NA	16.5	3.85	11	2.02	67.0	NA	20.4	8.4	4.00	161
	7/17/2006	II	F	0.343	<0.01	16.3	3.68	11.2	1.85	67.0	161	22.5	8.25	3.62	162
	7/17/2006	II	UF	0.344	<0.01	16.5	3.93	11.1	1.9	71.2	NA	22.5	8.22	3.62	152
	10/30/2006	II	F	0.347	0.015	16.1	3.66	11.2	1.8	66.2	131	22.1	8.24	2.99	155
	10/30/2006	II	UF	0.353	0.024	16.6	3.97	11.3	1.98	71.5	NA	22.1	8.24	2.99	155
Test Well DT-5A	8/28/2003	II	NF	< 0.020 (J)	< 0.043 (J)	9.02	2.47	11.4	1.85	47.7	106	17.1	8.41	NA	114
(Blind Intralaboratory Field Duplicate)	8/28/2003	II	NF	NA	NA	9.32	2.55	11.6	1.88	49.1	113	NA	NA	NA	NA
	7/13/2004	II	NF	0.3	< 0.011	8.54	2.51	10.3	1.59	66.3	117	25.1	7.73	NA	116
(Blind Intralaboratory Field Duplicate)	7/13/2004	II	NF	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/24/2005	II	F	0.249	0.051	9.33	2.71	11.3	1.79	73.4	131	NA	NA	NA	NA
	8/24/2005	II	NF	NA	NA	9.09	2.64	11.2	1.74	71.4	NA	21.3	7.97	1.0	113
	12/6/2006	II	F	0.301	< 0.061	8.74	2.54	11.1	1.82	71.4	94	NA	NA	NA	NA
	12/6/2006	II	NF	0.3	< 0.067	8.87	2.57	11.2	1.84	72.1	110	18.9	8.01	5.5	110
Test Well DT-9	8/6/2003	II	NF	0.31	< 0.026 (J)	9.82	2.71	10.4	0.952	62.6	137	15.2	8.03	NA	120
(Blind Intralaboratory Field Duplicate)	8/6/2003	II	NF	0.32	0.018 (J)	10.2	2.79	11	0.983	66.8	132	NA	NA	NA	NA
	7/7/2004	II	F	NA	NA	NA	NA	NA	NA	NA	111	NA	NA	NA	NA
	7/7/2004	II	NF	0.31	0.030 (J)	9.94	2.77	10.9	0.951	68.9	NA	21.7	7.82	NA	120
(Blind Intralaboratory Field Duplicate)	7/7/2004	II	NF	NA	0.026 (J)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/20/2005	II	F	0.273	< 0.041 (J)	10.1	2.75	10.9	0.971	< 66.8	67	NA	NA	NA	NA
	7/20/2005	II	NF	NA	NA	10.1	2.76	10.9	0.969	< 68.3	NA	21.6	8.11	0.2	122
	12/5/2006	II	F	0.301	< 0.063	9.81	2.7	10.8	0.948	68.0	134	NA	NA	NA	NA
	12/5/2006	II	F	NA	NA	NA	NA	NA	NA	NA	54	NA	NA	NA	NA
	12/5/2006	II	NF	0.315	< 0.064	10.4	2.86	11.2	0.996	71.8	NA	20.5	7.99	4.9	109
Test Well DT-10	6/22/2004	II	NF	0.17	< 0.044 (J)	12.7	3.82	11.2	1.37	64.8	NA	20.3	8.43	NA	138
	7/19/2005	II	F	0.189	< 0.023 (J)	11.1	3.34	10.4	1.24	58.4	164	NA	NA	NA	NA
	7/19/2005	II	NF	NA	NA	11.7	3.53	11.0	1.30	61.6	NA	18.6	8.23	0.5	132
	12/4/2006	II	F	0.208	< 0.048 (J)	11.8	3.59	11.1	1.33	63.9	102	NA	NA	NA	NA
(Blind Intralaboratory Field Duplicate)	12/4/2006	II	F	0.209	< 0.047 (J)	11.5	3.51	10.9	1.30	62.5	105	NA	NA	NA	NA
	12/4/2006	II	NF	0.206	< 0.051	12.2	3.71	11.2	1.35	64.6	NA	NA	NA	NA	NA
(Blind Intralaboratory Field Duplicate)	12/4/2006	II	NF	0.219	< 0.044 (J)	11.7	3.56	11.0	1.31	63.0	NA	NA	NA	NA	NA

Table 3 - Summary Results of Major Element Chemistry and Field Parameters.

Station ID	Date Sampled	Source Code	F/NF	NO_3 as N (ppm)	PO4-P (ppm)	Ca (ppm)	Mg (ppm)	Na (ppm)	K (ppm)	SiO_2 Cal (ppm)	Lab TDS (ppm)	Field Properties: Temp (^oC)	pH (S.U.)	Diss O_2 (ppm)	Specific Cond (uS/cm)
Springs															
Ancho Spring	11/5/2003	III	F	0.46	<0.01	NA	NA	NA	NA	NA	NA	20.6	7.50	NA	136
	3/12/2004	III	F	0.43	0.04	12.4	3.04	10.3	1.69	70.4	180	19.9	NA	NA	136
	2/2/2005	II	F	0.491	0.034 (J)	13.1	3.11	10.4	1.72	71.2	131	19.1	8.01	NA	135
	9/27/2005	III	F	0.60	0.04	12.4	2.98	11.2	1.63	78.6	240	21.3	7.86	6.2	136
	2/24/2006	III	F	0.39	<0.01	11.6	2.85	10.1	1.65	64.8	172	19.3	7.50	6.7	136
	9/19/2006	II	F	0.424	< 0.01	12.7	2.98	10.1	1.75	72.0	151	20.7	7.87	8.0	135
(Blind Interlaboratory Field Duplicate)	9/19/2006	III	F	NA	NA	13	3	8.6	1.6	NA	NA	20.7	7.87	8.0	135
	9/19/2006	II	NF	0.371	< 0.01	12.7	3.00	10.2	1.73	73.1	NA	20.7	7.87	8.0	135
Spring 6	5/1/2003	III	F	0.43	0.07	13.1	3.43	10.2	2.02	77.0	189	20.4	7.84	NA	NA
	3/12/2004	III	F	0.36	0.05	11.3	3.41	10.3	1.85	71.4	179	20.5	7.80	NA	123
	9/14/2004		F	0.385	0.014 (J)	11.3	3.58	9.98	1.86	69.9	133	21.0	7.68	NA	133
	3/2/2005	III	F	0.21	0.05	11.20	2.78	10.40	1.62	74.1	180	20.9	7.12	6.5	133
	3/24/2005	III	F	0.39	0.12	11.88	2.79	9.37	1.53	70.6	177	20.5	6.43	7.1	129
	4/29/2005	III	F	0.43	0.06	11.96	2.90	9.98	1.54	72.8	181	20.6	7.74	6.8	134
	7/25/2005	III	F	0.42	0.06	11.37	3.48	10.20	2.01	72.0	182	20.0	7.51	7.0	135
(Blind Intralaboratory Field Duplicate)	7/25/2005	III	F	0.42	0.07	12.02	3.44	10.16	1.94	72.0	185	20.0	7.51	7.0	135
	9/27/2005	II	F	0.34	< 0.183	11.8	3.55	10.7	1.88	73.8	141	21.0	7.41	7.5	131
	9/27/2005	II	NF	NA	NA	11.5	3.43	10.4	1.79	72.4	NA	21.0	7.41	7.5	131
	9/19/2006	II	F	0.367	< 0.010	11.7	3.43	10.1	1.96	71.9	152	21.0	7.68	7.2	131
	9/19/2006	II	NF	0.359	< 0.010	11.9	3.5	10.2	1.96	74.5	NA	21.0	7.68	7.2	131
Spring 6A	10/7/2003	II	F	0.37	< 0.011	11.6	2.68	11.8	1.93	76.9	123	20.3	7.35	NA	129
	3/12/2004	III	F	0.03	<0.01	11.8	2.76	12.0	1.90	73.3	184	21.1	6.82	NA	140
	9/14/2004	II	F	0.407	< 0.011	10	2.61	9.57	1.68	69.7	134	23.5	7.49	NA	118
	9/27/2005	II	F	0.307	< 0.126	13	2.8	17.8	1.98	71.0	173	21.2	6.58	6.1	155
	9/27/2005	II	NF	NA	NA	13.1	2.8	17.9	2.02	70.7	NA	21.2	6.58	6.1	155
	9/19/2006	II	F	< 0.151	< 0.010	11.9	2.41	13.2	1.93	73.5	157	20.9	7.10	3.5	134
(Blind Interlaboratory Field Duplicate)	9/19/2006	III	F	NA	NA	12	2.4	12	1.8	NA	NA	20.9	7.10	3.5	134
	9/19/2006	II	NF	< 0.144	< 0.010	11.8	2.37	13.3	1.85	73.3	NA	20.9	7.10	3.5	134
Spring 6AAA	5/1/2003	III	F	0.47	0.09	10.7	2.69	10.0	2.15	82.4	180	21.4	7.61	NA	117
	3/12/2004	III	F	0.41	0.06	9.94	2.73	10.4	2.00	77.0	174	21.4	7.69	NA	115
	3/2/2005	III	F	0.22	0.05	9.90	2.23	10.2	1.66	76.2	172	21.5	7.12	5.6	120
	2/24/2006	III	F	0.22	<0.01	8.92	2.53	9.84	1.95	69.5	163	21.5	7.87	6.7	118
	9/19/2006	II	F	0.356	< 0.010	9.17	2.54	10.3	2.09	76.5	140	21.6	7.81	10.1	93
(Blind Intralaboratory Field Duplicate)	9/19/2006	II	F	0.344	< 0.010	9.36	2.60	10.1	2.09	78.2	140	21.6	7.81	10.1	93
	9/19/2006	II	NF	0.288	< 0.010	9.38	2.61	10.1	2.05	78.3	131	21.6	7.81	10.1	93
(Blind Intralaboratory Field Duplicate)	9/19/2006	II	NF	0.278	< 0.010	9.39	2.61	10.1	2.06	78.3	142	21.6	7.81	10.1	93
Spring 8A	10/7/2003	II	F	< 0.010	< 0.011	10.3	3.23	13.3	2.2	82.1	128	12.8	8.00	NA	130
	3/18/2004	III	F	<0.002	<0.01	8.77	2.68	11.7	1.87	81.7	176	21.0	7.05	NA	117
	9/12/2004	III	NF	NA	NA	NA	NA	NA	NA	NA	NA	20.6	6.43	NA	117
	9/14/2004	III	NF	NA	NA	NA	NA	NA	NA	NA	NA	21.5	6.63	NA	120
	12/15/2004	III	NF	NA	NA	NA	NA	NA	NA	NA	NA	20.3	6.35	NA	130
	12/27/2004	III	NF	NA	NA	NA	NA	NA	NA	NA	NA	20.2	6.30	4.6	116
	1/13/2005	III	NF	NA	NA	NA	NA	NA	NA	NA	NA	20.4	6.34	5.2	116
	1/26/2005	II	F	0.19	0.036 (J)	8.95	2.76	11.6	1.94	84.9	128	19.3	7.44	NA	113
	9/28/2005	III	F	0.24	0.04	8.26	2.63	11.0	1.88	79.2	174	20.3	6.93	5.6	119
	9/19/2006	II	F	< 0.0782	< 0.010	10.8	3.19	11.1	1.91	79.4	153	19.1	7.25	7.3	133
	9/19/2006	II	NF	< 0.0737	< 0.010	10.7	3.17	11.6	1.96	79.2	152	19.1	7.25	7.3	133
Spring 9	10/8/2003	II	F	0.11	< 0.011	10.3	2.94	11.9	1.75	72.5	139	19.8	7.25	NA	133
(Blind Intralaboratory Field Duplicate)	10/8/2003	II	F	NA	NA	10.5	2.99	11.7	1.74	74.1	NA	19.8	7.25	NA	133
(Blind Interlaboratory Field Duplicate)	10/8/2003	III	F	0.11	NA	11.0	3.16	NA	NA	NA	NA	19.8	7.25	NA	133
	3/12/2004	III	F	<0.002	<0.01	10.5	2.83	10.9	1.60	74.0	176	18.6	7.62	NA	126
	6/7/2004	III	NF	NA	NA	NA	NA	NA	NA	NA	NA	21.4	7.00	NA	124

Table 3 - Summary Results of Major Element Chemistry and Field Parameters.

Station ID	Date Sampled	Source Code	F/NF	NO_3 as N (ppm)	PO4-P (ppm)	Ca (ppm)	Mg (ppm)	Na (ppm)	K (ppm)	SiO_2 Cal (ppm)	Lab TDS (ppm)	Field Properties: Temp (°C)	pH (S.U.)	Diss O_2 (ppm)	Specific Cond (uS/cm)
	9/14/2004	II	F	0.0148	<0.011	10.3	2.99	11	1.56	73.8	142	22.3	7.74	NA	123
	1/13/2005	III	NF	NA	NA	NA	NA	NA	NA	NA	NA	19.4	7.26	5.5	125
	5/18/2005	III	NF	NA	NA	NA	NA	NA	NA	NA	NA	22.8	7.76	NA	130
	9/28/2005	II	F	0.183	<0.096	10.2	2.87	11	1.43	72.8	149	20.4	7.17	6.3	126
	9/28/2005	II	NF	NA	NA	10.4	2.92	11.1	1.46	73.9	NA	20.4	7.17	6.3	126
	2/3/2006	III	F	0.41	0.07	9.76	2.80	10.9	1.63	70.8	173	19.5	7.72	6.9	126
	9/19/2006	II	F	<0.136	0.068	10.9	3.05	11.4	1.49	74.0	138	20.4	7.26	NA	121
	9/19/2006	II	NF	<0.128	<0.01	10.9	3.06	11.3	1.54	73.4	NA	20.4	7.26	NA	121
Spring 9A	5/1/2003	III	F	0.25	0.05	11.4	2.93	10.7	1.43	76.8	181	17.7	8.13	NA	NA
	10/8/2003	II	F	0.15	<0.011	10.1	2.96	11.7	1.65	69.9	141	16.8	7.34	NA	146
(Laboratory Duplicate)	10/8/2003	II	F	NA	NA	NA	NA	NA	NA	NA	NA	16.8	7.34	NA	146
	3/12/2004	III	F	0.15	<0.01	10.6	2.98	11.1	1.46	73.9	175	19.7	7.06	NA	123
	9/14/2004	II	F	0.183	0.024	10	3.03	10.7	1.37	70.0	124	20.0	8	NA	122
	3/8/2005	III	F	0.37	0.07	10.24	2.94	10.61	1.48	69.7	171	20.1	7.74	5.7	122
	4/29/2005	III	F	0.39	0.05	10.75	2.49	10.79	1.18	72.5	173	19.3	7.47	6.2	125
	5/18/2005	III	F	0.31	0.04	10.10	2.59	10.61	1.10	71.0	172	20.5	7.85	NA	124
	7/20/2005	III	F	0.22	0.03	9.89	2.93	11.71	1.38	76.2	177	20.6	7.79	7.1	123
	9/28/2005	II	F	0.30	<0.211	10.20	2.91	11.10	1.37	72.5	147	20.0	7.02	4.1	122
	9/28/2005	II	NF	NA	NA	10.2	2.9	11.1	1.38	72.5	NA	20.0	7.02	4.1	122
	2/3/2006	III	F	0.45	0.07	9.59	2.81	10.8	1.44	68.5	171	20.3	7.02	5.5	126
	9/20/2006*	II	F	0.0977	<0.014	10.3	2.93	11.2	1.31	70.6	142	20.5	6.81	NA	125
	9/20/2006*	II	NF	0.102	<0.016	10.8	3.05	11.6	1.42	72.8	NA	20.5	6.81	NA	125
Spring 9B	11/5/2003	III	F	0.27	0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/12/2004**	III	F	0.00	<0.01	9.50	2.87	11.1	1.67	73.9	172	13.4	7.67	NA	124
	2/3/2006	III	F	0.48	0.06	9.27	2.90	10.8	1.58	69.6	169	19.1	7.6	7.5	122.9
Taos Area															
Regional and Intermediate Aquifers															
Springs - East Rio Grande															
AH-0.2 Spring	3/15/2004	III	F	0.55	<0.01	33.0	8.43	12.8	3.29	28.2	252	14.2	NA	NA	291
	9/27/2004	III	F	0.35	<0.01	32.8	8.42	12.2	3.28	28.2	260	14.4	7.64	NA	294
	2/15/2005	III	F	0.64	0.06	33.9	6.68	11.9	2.46	27.3	255	14.0	7.44	7.3	290
	4/8/2005	III	F	0.67	0.11	32.78	6.49	10.96	2.49	26.6	252	14.0	8.03	5.4	290
	5/13/2005	III	F	0.70	0.02	32.99	7.09	12.05	2.64	26.6	256	13.8	8.02	7.7	291
	6/24/2005	III	F	0.65	<0.01	31.71	8.01	12.26	3.09	27.8	255	14.3	7.92	6.6	288
	7/22/2005	III	F	0.67	<0.01	32.03	8.63	11.75	3.12	28.0	257	13.8	8.00	3.5	286
	11/9/2005	III	F	0.71	0.01	NA	NA	NA	NA	NA	NA	14.2	8.13	7.3	288
Big Arsenic Spring	3/25/2004	III	F	0.86	0.02	20.8	5.78	22.0	2.53	34.3	220	17.5	7.85	NA	251
	9/28/2004	III	F	0.87	0.02	20.1	5.74	20.4	2.50	33.5	214	17.2	NA	NA	212
	11/9/2005	III	F	0.93	0.02	NA	NA	NA	NA	NA	NA	17.2	NA	NA	251
DBN Spring	3/25/2004	III	F	0.32	<0.01	25.8	6.63	10.4	3.11	28.9	208	15.5	7.82	NA	234
	9/27/2004	III	F	0.44	0.01	25.2	6.47	9.80	3.15	28.7	205	15.7	7.61	NA	237
	11/9/2005	III	F	0.44	0.02	NA	NA	NA	NA	NA	NA	15.3	8.29	7.5	232
RG1 Spring	3/25/2004	III	F	0.98	0.02	20.8	5.73	20.8	2.54	33.0	220	17.2	7.70	NA	256
	9/28/2004	III	F	0.92	<0.01	21.4	5.91	20.2	2.64	33.5	220	16.9	NA	NA	216
	11/9/2005	III	F	1.08	0.02	NA	NA	NA	NA	NA	NA	17.0	8.46	NA	258
Springs - West Rio Grande															
Big Spring	5/29/2004	III	F	0.77	<0.01	27.0	1.41	27.0	4.30	33.0	257	22.5	6.99	NA	284
	9/28/2004	III	F	0.80	<0.01	28.0	1.47	27.0	4.56	34.2	259	NA	NA	NA	NA
	11/18/2005	III	F	0.86	0.01	NA	NA	NA	NA	NA	NA	21.6	7.77	5.7	284
DBS Spring 1	3/15/2004	III	F	0.21	<0.01	11.1	3.27	58.9	8.36	54.6	339	15.9	7.77	NA	353

Table 3 - Summary Results of Major Element Chemistry and Field Parameters.

Station ID	Date Sampled	Source Code	F/NF	NO_3 as N (ppm)	PO4-P (ppm)	Ca (ppm)	Mg (ppm)	Na (ppm)	K (ppm)	SiO_2 Cal (ppm)	Lab TDS (ppm)	Field Properties: Temp (°C)	pH (S.U.)	Diss O_2 (ppm)	Specific Cond (uS/cm)
DBS Spring 2	3/15/2004	III	F	0.18	<0.01	17.0	4.10	71.2	11.1	56.1	400	14.3	7.71	NA	474
	9/27/2004	III	F	0.32	<0.01	15.6	4.25	72.9	11.0	55.4	409	19.2	NA	NA	427
Felsenmeere Spring	12/7/2003	III	F	0.45	<0.01	18.9	5.78	13.2	3.09	51.1	208	NA	NA	NA	NA
	5/5/2004	III	F	0.58	0.02	17.5	5.40	12.3	2.82	45.8	202	16.3	7.68	NA	196
	9/27/2004	III	F	0.52	<0.01	17.4	5.51	11.8	2.90	47.5	204	16.4	7.98	NA	197
	11/10/2005	III	F	0.68	0.03	NA	NA	NA	NA	NA	NA	15.7	7.60	8.4	190
Snowpack/Precipitation															
Snowpack															
Aspen Peak Snowpack	4/18/2003	III	F	0.20	0.02	0.51	0.03	0.17	0.09	0.1	7	NA	NA	NA	NA
	3/30/2004	III	F	0.28	<0.01	0.97	0.05	0.07	0.15	0.3	4	NA	NA	NA	NA
Pajarito Mountain Snowpack	4/13/2003	III	F	0.10	0.01	0.35	0.05	0.05	0.52	0.1	5	NA	NA	NA	NA
	3/21/2004	III	F	0.19	0.04	0.59	0.05	0.09	0.16	0.3	3	NA	NA	NA	NA
Snow															
TA-21 Snow	11/30/2006	III	F	0.20	<0.01	0.12	<0.01	<0.01	<0.01	0.1	2	NA	NA	NA	NA
	12/31/2006	III	F	0.17	<0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TA-8/9 Snow	11/30/2006	III	F	0.18	<0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/31/2006	III	F	0.14	<0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Rain															
TA-21 Rain	8/11/2003	III	F	0.56	<0.01	0.88	0.16	3.52	0.25	0.7	9	NA	NA	NA	NA
	8/17/2003	III	F	0.37	<0.01	0.63	0.11	1.78	0.14	0.4	6	NA	NA	NA	NA
TA-8/9 Rain	8/23/2003	III	F	0.35	<0.01	0.74	0.09	0.07	0.16	0.1	4	NA	NA	NA	NA

Data Source Codes: I - NMED DOE OB; II - LANL Water Quality Database; and III - LANL EES-6
NA - Not Analyzed
F - Sample filtered through a 0.45 micron filter
NF - Non-filtered
NC - Not Calculated
J - Indicates an estimated value that is less than the reporting limit (quantitation limit) but greater than the method detection limit (MDL)
E- Percent difference between the parent sample and its serial dilution's concentration exceeds 10%
H - Hold times exceeded
[1] - Chloride and sulfate results for well R-18 may not be accurate as noted by the interlaboratory duplicate results. Data were not used in statistical or correlation analyses
*** - Spring 9A sample collected approximately 50 meters downstream of the spring source. Associated field data and low-level perchlorate sample collected at the source**

**** - Spring 9B field data collected approximately 20 meters downstream of spring source. Samples collected for analyses were collected at the spring source**

***** - Spring 9C field data and samples collected approximately 5 meters downstream of spring source**
All field data were collected on non-filtered flowing ground-water sample at the spring source or well head

Table 4 - Summary Results of Dissolved Trace Elements.

Station ID	Date Sampled	Source Code	Ag (mg/L)	Al (mg/L)	As (mg/L)	B (mg/L)	Ba (mg/L)	Be (mg/L)	Cd (mg/L)	Co (mg/L)	Cr (mg/L)	Cs (mg/L)	Cu (mg/L)	Fe (mg/L)	Hg (mg/L)	Li (mg/L)	Mn (mg/L)
Los Alamos Area																	
Zone 1 - Perched Sierra de Los Valles and Mountain Front Area																	
Wells																	
Pajarito Ski Well #2	5/19/2004	III	<0.001	0.026	<0.0002	0.004	0.011	<0.001	<0.001	<0.001	<0.001	<0.001	0.004	0.03	<0.00005	0.007	<0.001
	9/22/2004	III	<0.001	0.003	<0.0002	0.002	0.012	<0.001	<0.001	<0.001	<0.001	<0.001	0.003	<0.01	<0.00005	0.008	<0.001
	3/2/2005	III	<0.001	0.009	<0.0002	0.004	0.013	<0.001	<0.001	<0.001	<0.001	<0.001	0.005	<0.01	<0.00005	0.007	<0.001
	8/31/2005	III	<0.001	0.004	0.0003	0.004	0.015	<0.001	<0.001	<0.001	<0.001	<0.001	0.012	0.80	<0.00005	0.007	0.003
	1/12/2006	III	<0.001	0.007	0.0003	0.027	0.011	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.00005	0.007	<0.001
Springs																	
AL-10.6 Spring	5/26/2004	III	<0.001	0.234	0.0003	0.007	0.004	<0.001	<0.001	<0.001	<0.001	<0.001	0.004	0.07	<0.00005	0.015	<0.001
	5/12/2005	III	<0.001	0.104	0.0003	0.007	0.004	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	0.06	<0.00005	0.013	<0.001
	6/15/2005	III	<0.001	0.008	0.0004	0.006	0.004	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.00005	0.015	<0.001
	7/13/2005	III	<0.001	0.005	0.0003	0.006	0.004	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.01	<0.00005	0.016	<0.001
Barbara Spring	8/18/2003	III	<0.001	0.013	0.0005	0.006	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.01	<0.00005	0.033	<0.001
	5/26/2004	III	<0.001	0.008	0.0005	0.007	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.003	0.02	<0.00005	0.034	<0.001
	9/20/2004	III	<0.001	0.002	0.0005	0.006	0.0015	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.01	<0.00005	0.039	<0.001
	3/29/2005	III	<0.001	0.015	0.0005	0.007	0.0014	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.02	<0.00005	0.040	<0.001
	5/12/2005	III	<0.001	0.011	0.0006	0.007	0.0014	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	<0.01	<0.00005	0.036	<0.001
	6/15/2005	III	<0.001	0.005	0.0007	0.006	0.0013	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.00005	0.037	<0.001
	7/13/2005	III	<0.001	0.006	0.0005	0.006	0.0016	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.01	<0.00005	0.039	<0.001
Campsite Springs	8/25/2003	III	<0.001	0.020	0.0006	0.007	0.002	<0.001	<0.001	<0.001	0.0024	<0.001	<0.001	<0.01	<0.00005	0.021	<0.001
	5/17/2005	III	<0.001	0.036	0.0005	0.009	0.0022	<0.001	<0.001	<0.001	0.0022	<0.001	0.003	0.02	<0.00005	0.026	<0.001
	6/8/2005	III	<0.001	0.011	0.0006	0.008	0.0019	<0.001	<0.001	<0.001	0.0024	<0.001	0.003	<0.01	<0.00005	0.023	<0.001
	7/14/2005	III	<0.001	0.002	0.0005	0.008	0.0021	<0.001	<0.001	<0.001	0.0024	<0.001	<0.001	<0.01	<0.00005	0.027	<0.001
	3/31/2006	III	<0.001	0.004	0.0004	0.003	0.0024	<0.001	<0.001	<0.001	0.0046	<0.001	0.003	<0.01	<0.00005	0.022	<0.001
CDV-5.0 Spring	8/20/2003	III	<0.001	0.059	0.0003	0.004	0.026	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.01	<0.00005	0.002	0.001
	5/16/2004	III	<0.001	0.958	0.0004	0.006	0.028	<0.001	<0.001	<0.001	<0.001	<0.001	0.006	0.19	<0.00005	0.003	0.002
	9/17/2004	III	<0.001	0.091	0.0003	0.009	0.031	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	0.03	<0.00005	0.004	<0.001
	3/3/2005	III	<0.001	0.821	0.0005	0.008	0.058	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	0.48	<0.00005	0.004	0.002
	4/18/2005	III	<0.001	0.075	0.0005	0.009	0.054	<0.001	<0.001	<0.001	<0.001	<0.001	0.003	0.04	<0.00005	0.003	<0.001
	5/27/2005	III	<0.001	0.085	0.0004	0.006	0.030	<0.001	<0.001	<0.001	<0.001	<0.001	0.004	0.03	<0.00005	0.002	<0.001
	7/11/2005	III	<0.001	0.021	0.0003	0.008	0.035	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.01	<0.00005	0.003	<0.001
	12/23/2005	III	<0.001	0.279	0.0004	0.012	0.030	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	0.14	<0.00005	0.003	0.001
	3/5/2006	III	<0.001	0.186	0.0004	<0.002	0.031	<0.001	<0.001	<0.001	<0.001	<0.001	0.005	0.09	<0.00005	0.002	0.001
	8/24/2006	III	<0.001	1.519	0.0004	<0.002	0.050	<0.001	<0.001	<0.001	<0.001	<0.001	0.003	0.73	<0.00005	0.003	0.003
CDV-5.97 Spring	11/9/2006	III	<0.001	0.962	0.0005	<0.002	0.045	<0.001	<0.001	0.003	0.003	<0.001	0.002	0.23	<0.00005	0.003	0.006

Table 4 - Summary Results of Dissolved Trace Elements.

Station ID	Date Sampled	Source Code	Ag (mg/L)	Al (mg/L)	As (mg/L)	B (mg/L)	Ba (mg/L)	Be (mg/L)	Cd (mg/L)	Co (mg/L)	Cr (mg/L)	Cs (mg/L)	Cu (mg/L)	Fe (mg/L)	Hg (mg/L)	Li (mg/L)	Mn (mg/L)
Colonel Spring	9/16/2004	III	<0.001	0.009	0.0007	0.015	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	<0.01	<0.00005	0.047	<0.001
PC Spring	8/22/2003	III	<0.001	0.031	0.0002	0.002	0.023	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	<0.01	<0.00005	0.002	<0.001
	5/15/2004	III	<0.001	0.614	0.0002	0.004	0.017	<0.001	0.0012	<0.001	<0.001	<0.001	0.005	0.10	<0.00005	0.002	0.0014
	9/16/2004	II	<0.0008	0.041(J)	<0.0022	<0.005	0.0235	<0.0002	<0.00004	<0.0005	0.0007(J)	NA	<0.001	0.0140(J)	NA	NA	0.0013(J)
	3/30/2005	III	<0.001	0.573	0.0003	0.0034	0.025	<0.001	<0.001	<0.001	<0.001	<0.001	0.003	0.24	<0.00005	0.002	0.001
	5/3/2005	III	<0.001	0.048	<0.0002	0.0066	0.004	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.03	<0.00005	0.001	<0.001
	6/10/2005	III	<0.001	0.043	0.0002	0.0031	0.014	<0.001	<0.001	<0.001	<0.001	<0.001	0.003	0.01	<0.00005	0.001	<0.001
	6/21/2005	II	<0.0002	0.029	<0.006	0.0033	0.017	<0.001	<0.0001	<0.001	<0.001	NA	<0.0030	0.0100	<0.00005	0.001	<0.001
	6/21/2005	II	<0.0002	0.603	<0.006	<0.0100	0.0194	<0.001	<0.0001	<0.001	<0.001	NA	<0.0030	0.1550	<0.00005	NA	<0.0020
	6/29/2005	III	<0.001	0.228	0.0002	0.005	0.019	<0.001	<0.0001	<0.001	<0.001	<0.001	0.006	0.09	<0.00005	0.002	<0.001
	7/12/2005	III	<0.001	0.013	<0.0002	0.0023	0.018	<0.001	<0.0001	<0.001	<0.001	<0.001	0.001	<0.01	<0.00005	0.001	<0.001
	8/31/2006	II	<0.0002	0.631	<0.006	<0.0100	0.0289	<0.001	<0.00010	<0.0010	0.0014(J)	NA	<0.0030	0.2510	<0.00006	NA	<0.0020
	12/14/2006	II	<0.0002	0.261	<0.0015	<0.0100	0.0212	<0.001	<0.00010	<0.0010	0.00100	NA	<0.0030	0.0629(J)	<0.00006	NA	<0.0020
Water Canyon Gallery Spring	3/4/2005	III	<0.001	0.325	0.0003	0.008	0.032	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	0.42	<0.00005	0.007	0.001
	4/18/2005	III	<0.001	0.113	0.0003	0.008	0.028	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	0.05	<0.00005	0.007	<0.001
	5/27/2005	III	<0.001	0.025	0.0003	0.009	0.018	<0.001	<0.001	<0.001	<0.001	<0.001	0.004	<0.01	<0.00005	0.007	<0.001
	7/11/2005	III	<0.001	0.003	0.0003	0.006	0.016	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.01	<0.00005	0.008	<0.001
(Blind Intralaboratory Field Duplicate)	7/11/2005	III	<0.001	0.007	0.0003	0.005	0.017	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.01	<0.00005	0.008	<0.001
	9/23/2005	III	<0.001	0.040	0.0003	0.011	0.015	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.02	<0.00005	0.007	<0.001
	8/25/2006	III	<0.001	0.685	0.0004	<0.002	0.020	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	0.35	<0.00005	0.007	0.002
SPET-1.7 Spring	5/26/2004	III	<0.001	4.336	0.0004	0.006	0.039	<0.001	<0.001	<0.001	0.001	<0.001	0.086	0.83	<0.00005	0.004	0.010
Yak Spring	5/27/2004	III	<0.001	0.988	0.0003	0.005	0.009	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	0.20	<0.00005	0.004	0.002
Coffman Springs	12/4/2006	III	<0.001	0.023	0.0005	<0.002	0.012	<0.001	<0.001	<0.001	0.002	<0.001	0.004	0.03	<0.00005	0.012	<0.001
Zone 3 - Perched Intermediate Pajarito Plateau																	
Wells																	
LAOI(A)-1.1	6/3/2004	III	<0.001	0.021	0.0004	0.009	0.011	<0.001	<0.001	<0.001	<0.001	0.0049	0.003	0.02	<0.00005	0.027	<0.001
	3/4/2005	III	<0.001	0.070	0.0004	0.009	0.009	<0.001	<0.001	<0.001	<0.001	0.0016	0.001	0.11	<0.00005	0.012	<0.001
	8/4/2006	II	<0.0002	0.086(J)	<0.006	0.0108(J)	0.0071	<0.001	<0.00010	0.001(J)	0.0021(J)	NA	<0.0030	0.0806(J)	<0.00006	NA	0.003(J)
Springs																	
Sacred Spring	8/24/2004	II	<0.0008	<0.015	0.0032(B)	0.0313(B)	0.0946	<0.0002	<0.00004	<0.0005	0.0015(B)	NA	<0.001	0.0363(B)	<0.00005	NA	0.033
	7/13/2005	II	<0.0002	<0.068	<0.006	0.0306(J)	0.0992	<0.001	<0.00010	<0.0001	0.002(J)	NA	<0.0030	0.0378(J)	<0.00005	NA	0.065
	9/14/2006	II	<0.0002	<0.068	<0.006	0.0314(J)	0.1150	<0.001	<0.00010	<0.0001	<0.001	NA	<0.0030	0.0713(J)	0.00014(J)	NA	0.124
Sandia Spring	6/14/2004	III	<0.001	<0.002	0.0019	0.016	0.075	<0.001	<0.001	<0.001	0.003	<0.001	0.004	0.09	<0.00005	0.028	<0.001
	9/13/2004	II	<0.0008	<0.015	<0.0022	0.020(J)	0.0615	<0.0002	<0.00004	0.0007(J)	0.0011(J)	NA	<0.0014	0.0215(J)	NA	NA	0.0565
	1/28/2005	II	<0.0008	<0.015	<0.0022	0.016(J)	0.0730	<0.0002	<0.00004	<0.0005	0.0027(J)	NA	<0.0014	0.0144(J)	NA	NA	0.0015(J)
	9/8/2005	II	<0.0002	<0.068	<0.006	0.0191(J)	0.0758	<0.001	<0.0001	<0.0001	0.003(J)	NA	<0.0030	<0.0180	<0.00005	NA	0.0147
	9/14/2006	II	<0.0002	<0.068	<0.006	0.0195(J)	0.0755	<0.001	<0.00010	<0.0001	0.001(J)	NA	<0.0030	0.0361(J)	0.00009(J)	NA	0.0183

Table 4 - Summary Results of Dissolved Trace Elements.

Station ID	Date Sampled	Source Code	Ag (mg/L)	Al (mg/L)	As (mg/L)	B (mg/L)	Ba (mg/L)	Be (mg/L)	Cd (mg/L)	Co (mg/L)	Cr (mg/L)	Cs (mg/L)	Cu (mg/L)	Fe (mg/L)	Hg (mg/L)	Li (mg/L)	Mn (mg/L)
Zone 4 - Regional Aquifer																	
DPOGW4	9/30/2004	III	<0.001	0.003	0.0022	0.019	0.029	<0.001	<0.001	<0.001	0.0018	<0.001	0.002	<0.01	<0.00005	0.040	<0.001
R-1	5/19/2005	III	<0.001	0.023	0.0009	0.012	0.017	<0.001	<0.001	<0.001	0.0042	<0.001	0.0048	0.06	<0.00005	0.025	<0.001
(Blind Interlaboratory Field Duplicate)	5/19/2005	II	<0.001	<0.068	<0.006	0.0139(J)	0.0179	<0.0001	0.00011(J)	<0.0010	0.0045(J)	NA	<0.0030	0.0788(J)	<0.00005	NA	<0.001
	9/12/2005	III	<0.001	0.007	0.0010	0.0118	0.016	<0.001	<0.001	<0.001	0.0050	<0.001	0.002	0.02	<0.00005	0.023	<0.001
	9/12/2005	II	<0.0002	<0.068	<0.006	0.0124(J)	0.0158	<0.001	<0.00010	<0.0010	0.0056	NA	<0.0030	<0.0180	<0.00005	NA	<0.0020
(Blind Intralaboratory Field Duplicate)	9/12/2005	II	<0.0002	<0.068	<0.006	0.0101(J)	0.0149	<0.001	<0.00010	<0.0010	0.0046(J)	NA	<0.0030	<0.0180	<0.00005	NA	<0.0020
	11/28/2005	II	<0.001	<0.068	<0.006	0.0117(J)	0.0154	<0.0001	<0.00010	0.0016(J)	0.0049(J)	NA	<0.0030	0.0231(J)	<0.00005	NA	0.0042(J)
	1/25/2006	II	<0.0002	<0.068	<0.006	<0.0100	0.0167	<0.001	<0.00010	<0.0010	0.0045(J)	NA	<0.0030	<0.0180	<0.00005	NA	<0.0020
	7/6/2006	II	<0.0002	<0.068	<0.006	0.0144(J)	0.0160	<0.001	<0.00010	<0.0010	0.0045	NA	<0.0030	0.019(J)	<0.00005	NA	<0.0020
(Blind Intralaboratory Field Duplicate)	7/6/2006	II	<0.0002	<0.068	<0.006	0.0118(J)	0.0154	<0.001	<0.00010	<0.0010	0.0072(J)	NA	<0.0030	<0.0180	<0.00005	NA	<0.0020
	10/26/2006	II	<0.0002	<0.068	<0.006	0.0152(J)	0.0165	<0.001	<0.00010	0.0033(J)	0.0069	NA	<0.0030	<0.0180	<0.00005	NA	<0.0020
(Blind Intralaboratory Field Duplicate)	10/26/2006	II	<0.0002	<0.068	<0.006	0.0140(J)	0.0162	<0.001	<0.00010	0.0030(J)	0.0042	NA	<0.0030	<0.0180	<0.00005	NA	<0.0020
R-2	4/26/2005	III	<0.001	0.008	0.0012	0.018	0.012	<0.001	<0.001	<0.001	0.0016	<0.001	0.003	0.02	<0.00005	0.024	0.026
(Blind Interlaboratory Field Duplicate)	4/26/2005	II	<0.001	<0.068(N)	<0.006	0.0237(J)	0.0125	<0.0001	<0.00010	<0.001	0.0016(J)	NA	<0.0030	0.0598(J)	<0.00005	NA	0.0352
	8/9/2005	III	<0.001	0.003	0.0012	0.0155	0.011	<0.001	<0.001	<0.001	0.0031	<0.001	0.001	<0.01	<0.00005	0.025	<0.001
(Blind Interlaboratory Field Duplicate)	8/9/2005	II	<0.001	<0.068	<0.006	0.0170(J)	0.0137	<0.0001	<0.00010	<0.001	0.0037(J)	NA	<0.0030	0.0180	<0.00005	NA	0.0229
	11/9/2005	II	<0.001	<0.068	<0.006	0.0168(J)	0.0153	<0.0001	<0.00010	<0.001	0.0047(J)	NA	<0.0030	<0.0180	<0.00005	NA	0.0199
	2/27/2006	III	<0.001	0.116	0.0012	<0.002	0.0141	<0.001	<0.001	<0.001	0.0052	<0.001	0.004	0.28	<0.00005	0.023	0.013
(Blind Interlaboratory Field Duplicate)	2/27/2006	II	<0.0002	<0.068	<0.006	0.0177(J)	0.0155	<0.001	<0.00010	<0.0010	0.0043(J)	NA	<0.0030	0.0205(J)	0.00007(J)	NA	0.0149
	7/24/2006	II	<0.0002	0.115(J)	<0.006	0.0170(J)	0.0141	<0.001	<0.00010	0.0026(J)	0.0069	NA	<0.0030	0.0466(J)	<0.00006	NA	0.0091(J)
R-6	8/23/2005	II	<0.001	<0.068	<0.006	0.0228(J)	0.0268	<0.0001	<0.00010	<0.001	0.004(J)	NA	<0.0030	<0.0180	<0.00005	NA	0.0607
(Blind Intralaboratory Field Duplicate)	8/23/2005	II	<0.001	<0.068	<0.006	0.0235(J)	0.0271	<0.0001	<0.00010	<0.001	0.004(J)	NA	<0.0030	<0.0180	<0.00005	NA	0.0598
	11/17/2005	II	<0.001	<0.068	<0.006	0.0204(J)	0.0273	<0.0001	<0.00010	<0.001	0.0034(J)	NA	<0.0030	<0.0180	<0.00005	NA	0.0369
	3/1/2006	II	<0.0002	<0.068	<0.006	0.0272(J)	0.0278	<0.001	<0.00010	<0.0010	0.0045(J)	NA	<0.0030	<0.0180	<0.00005	NA	0.0404
	5/11/2006	II	<0.0002	<0.068	<0.006	0.0287(J)	0.0245	<0.001	<0.00010	0.0051	0.0035(J)	NA	0.0050(J)	0.0494(J)	<0.00006	NA	0.0282
	7/26/2006	II	<0.0002	<0.068	<0.006	0.0243(J)	0.0216	<0.001	0.00011(J)	<0.0010	0.0064	NA	<0.0030	0.0897(J)	<0.00006	NA	0.0160
(Blind Intralaboratory Field Duplicate)	7/26/2006	II	<0.0002	<0.068	<0.006	0.0238(J)	0.0218	<0.001	<0.00010	<0.0010	0.0063	NA	<0.0030	0.1140	<0.00006	NA	0.0160
R-16r	12/19/2005	II	<0.0002	<0.068	<0.006	<0.0100	0.0766	<0.001	<0.00010	<0.001	0.0047(J)	NA	0.0035(J)	<0.0180	<0.00005	NA	0.0034(J)
	3/8/2006	II	<0.0002	<0.068	<0.006	0.0200(J)	0.0695	<0.001	<0.00010	<0.001	0.0045(J)	NA	0.0058(J)	<0.0180	<0.00005	NA	<0.0020
(Blind Intralaboratory Field Duplicate)	3/8/2006	II	<0.0002	<0.068	<0.006	0.0191(J)	0.0707	<0.001	<0.00010	<0.001	0.0045(J)	NA	<0.0030	<0.0180	<0.00005	NA	<0.0020
	5/24/2006	II	<0.0002	<0.068	<0.006	0.0194(J)	0.0711	<0.001	<0.00010	<0.001	0.0052	NA	<0.0030	<0.0180	<0.00006	NA	<0.0020
	8/17/2006	II	<0.0002	<0.068	<0.006	0.0177(J)	0.0583	<0.001	<0.00010	<0.001	0.0069	NA	0.0032(J)	0.3740	<0.00006	NA	0.0028(J)
(Blind Intralaboratory Field Duplicate)	8/17/2006	II	<0.0002	<0.068	<0.006	0.0149(J)	0.0551	<0.001	<0.00010	<0.001	0.0068	NA	<0.0030	<0.0180	<0.00006	NA	<0.0020
	11/1/2006	II	<0.0002	<0.068	<0.006	0.0210(J)	0.0701	<0.001	<0.00010	<0.001	0.0041	NA	<0.0030	<0.0180	<0.00006	NA	<0.0020
R-17 Screen 1	10/19/2006	II	<0.0002	<0.068	<0.006	0.0148(J)	0.0208	<0.001	<0.00010	<0.001	0.0017(J)	NA	<0.0030	1.51(N)	<0.00006	NA	0.0225

Table 4 - Summary Results of Dissolved Trace Elements.

Station ID	Date Sampled	Source Code	Ag (mg/L)	Al (mg/L)	As (mg/L)	B (mg/L)	Ba (mg/L)	Be (mg/L)	Cd (mg/L)	Co (mg/L)	Cr (mg/L)	Cs (mg/L)	Cu (mg/L)	Fe (mg/L)	Hg (mg/L)	Li (mg/L)	Mn (mg/L)
R-18	8/25/2005	III	<0.001	0.0044	<0.001	0.006	0.0199	<0.001	<0.001	<0.001	0.0014	<0.001	0.001	<0.01	<0.00005	0.014	<0.001
(Blind Interlaboratory Field Duplicate)	8/25/2005	II	<0.001	<0.0680	<0.0060	<0.0100	0.0196	<0.0001	<0.00010	<0.001	0.0015(J)	NA	<0.0030	<0.0180	<0.00005	NA	<0.001
	12/1/2005	III	<0.001	0.0091	0.0005	0.025	0.1146	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.00005	0.015	<0.001
(Blind Interlaboratory Field Duplicate)	12/1/2005	II	<0.001	<0.068	<0.0060	<0.0100	0.0195	<0.0001	<0.00010	<0.001	<0.0010	NA	<0.0030	<0.0180	<0.00005	NA	<0.001
(Blind Intralaboratory Field Duplicate)	12/1/2005	II	<0.001	<0.068	<0.0060	<0.0100	0.0194	<0.001	<0.00010	<0.001	<0.0010	NA	<0.0030	<0.0180	<0.00005	NA	<0.001
	3/7/2006	II	<0.0002	<0.068	<0.0060	<0.0100	0.0206	<0.001	<0.00010	<0.001	<0.0010	NA	<0.0030	<0.0180	<0.00005	NA	<0.0020
	5/16/2006	II	<0.0002	<0.068	<0.0060	0.0126(J)	0.0206	<0.001	<0.00010	<0.001	0.0011(J)	NA	0.0041(J)	0.0189(J)	<0.00006	NA	<0.0020
(Blind Intralaboratory Field Duplicate)	5/16/2006	II	<0.0002	<0.068	<0.0060	0.0117(J)	0.0200	<0.001	<0.00010	<0.001	0.0014(J)	NA	0.0040(J)	0.0204(J)	<0.00006	NA	<0.0020
	8/15/2006	II	<0.0002	<0.068	<0.0060	<0.0100	0.0207	<0.001	<0.00010	<0.001	0.0025(J)	NA	<0.0030	0.0337(J)	<0.00006	NA	<0.0020
(Blind Intralaboratory Field Duplicate)	8/15/2006	II	<0.0002	<0.068	<0.0060	<0.0100	0.0198	<0.001	<0.00010	<0.001	0.0025(J)	NA	<0.0030	0.0600(J)	<0.00006	NA	<0.0020
	12/18/2006	II	<0.0002	<0.068	<0.0015	<0.0100	0.0192	<0.001	<0.00010	<0.001	<0.0050	NA	<0.0030	<0.0180	<0.00006	NA	<0.0020
(Blind Intralaboratory Field Duplicate)	12/18/2006	II	<0.0002	<0.068	<0.0015	<0.0100	0.0197	NA	<0.00010	<0.001	<0.0050	NA	<0.0030	<0.0180	<0.00006	NA	<0.0020
R-21	3/31/2004	II	<0.0008	<0.0147	0.0023(J)	0.0101(J)	0.0156	<0.00008	<0.00004	0.00079(J)	0.00178(J)	NA	<0.00139	0.0231(J)	<0.000047	NA	0.00873
(Blind Intralaboratory Field Duplicate)	3/31/2004	II	<0.0008	<0.0147	0.0035(J)	0.0080(J)	0.0161	<0.00008	<0.00004	<0.00054	0.00192(J)	NA	<0.00139	0.0221(J)	<0.000047	NA	0.00898
	6/30/2004	II	<0.0008	<0.0147	<0.0022	0.018(B)	0.0150	<0.00008	<0.00004	<0.00054	0.00236(B)	NA	<0.00139	0.0149(B)	<0.000047	NA	0.00729
	9/23/2004	II	<0.0008	0.0246(J)	0.0035(J)	0.0124(J)	0.0149	<0.00008	<0.00004	0.00140(J)	<0.00390	NA	<0.00139	0.0217(J)	<0.000047	NA	0.00830(E)
	12/14/2004	II	<0.0008	<0.0147	<0.0022	0.0208(J)	0.0141(E)	<0.00008	<0.00004	<0.00054	0.00300(J)	NA	<0.00139	<0.0126	<0.000047	NA	0.00800
	6/6/2005	II	<0.0002	<0.068	<0.0060	0.0159(J)	0.0147	<0.001	<0.00010	<0.001	0.0024(J)	NA	<0.0030	0.0248(J)	<0.00005	NA	0.0106
(Blind Intralaboratory Field Duplicate)	6/6/2005	II	<0.0002	<0.068	<0.0060	0.0123(J)	0.0140	<0.001	<0.00010	<0.001	0.0016(J)	NA	<0.0030	0.0279(J)	<0.00005	NA	0.0104
	7/7/2006	II	<0.0002	<0.068	<0.0060	0.0153(J)	0.0141	<0.001	<0.00010	<0.001	0.0031	NA	<0.0030	0.0296(J)	<0.00006	NA	0.0112
	11/6/2006	II	<0.0002	<0.068	<0.0060	0.0159(J)	0.0141	<0.001	<0.00010	<0.001	0.0036	NA	<0.0030	0.0250(J,N)	<0.00006	NA	0.0105
(Blind Intralaboratory Field Duplicate)	11/6/2006	II	<0.0002	<0.068	<0.0060	0.013(J)	0.0135	<0.001	<0.00010	<0.001	0.0027(J)	NA	<0.0030	0.0228(J,N)	<0.00006	NA	0.0101
R-27	7/1/2006	II	<0.0002	<0.068	<0.0060	<0.0100	0.0261	<0.001	<0.00010	<0.001	0.0038	NA	<0.0030	0.036(J)	<0.00006	NA	<0.0020
(Blind Intralaboratory Field Duplicate)	7/1/2006	II	<0.0002	<0.068	<0.0060	<0.0100	0.0262	<0.001	<0.00010	<0.001	0.0033	NA	<0.0030	0.0348(J)	<0.00006	NA	<0.0020
R-34	6/27/2005	II	<0.001	<0.068	<0.0060	0.0192(J)	0.0418	<0.0001	<0.00010	<0.001	0.0038(J)	NA	<0.0030	<0.0180	<0.00005	NA	0.0426
	9/7/2005	II	<0.0002	<0.068	<0.0060	0.0198(J)	0.0414	<0.001	<0.00010	<0.001	0.0038(J)	NA	<0.0030	<0.0180	<0.00005	NA	0.0185
	11/29/2005	II	<0.001	<0.068	<0.0060	0.0184(J)	0.0395	<0.0001	<0.00010	<0.001	0.004(J)	NA	<0.0030	<0.0180	<0.00005	NA	0.0098
(Blind Intralaboratory Field Duplicate)	11/29/2005	II	<0.001	<0.068	<0.0060	0.019(J)	0.0394	<0.0001	<0.00010	<0.001	0.004(J)	NA	<0.0030	<0.0180	<0.00005	NA	0.0107
	1/31/2006	II	<0.0002	<0.068	<0.0060	0.0205(J)	0.0387	<0.001	<0.00010	0.0014(J)	0.0046(J)	NA	0.0035(J)	<0.0180	<0.00005	NA	0.0067(J)
(Blind Intralaboratory Field Duplicate)	1/31/2006	II	<0.0002	<0.068	<0.0060	0.0209(J)	0.0381	<0.001	<0.00010	0.0012(J)	0.0046(J)	NA	<0.0030	<0.0180	<0.00005	NA	0.0068(J)
	7/17/2006	II	<0.0002	<0.068	<0.0060	0.0191(J)	0.0384	<0.001	<0.00010	<0.001	0.0052	NA	<0.0030	<0.0180	<0.00006	NA	0.0067(J)
	10/30/2006	II	<0.0002	<0.068	<0.0060	0.0199(J)	0.0378	<0.001	<0.00010	<0.001	0.0064	NA	<0.0030	<0.0180	<0.00006	NA	0.0068(J)
Test Well DT-5A	8/24/2005	II	<0.0002	<0.068	<0.0060	<0.0100	0.0244	<0.001	<0.00010	<0.001	0.0023(J)	NA	<0.0030	0.0239(J)	<0.00005	NA	0.0054(J)
	12/6/2006	II	<0.0002	<0.068	<0.0015	<0.0100	0.0235	<0.001	<0.00010	<0.001	0.0027(J,N)	NA	<0.0030	0.0264(J)	<0.00006	NA	0.0084(J)
Test Well DT-9	7/20/2005	II	<0.0002	<0.068	<0.0060	0.0105(J)	0.0159	<0.001	<0.00010	<0.001	0.0022(J)	NA	<0.0030	<0.0180	<0.00005	NA	<0.0020
	12/5/2006	II	<0.0002	<0.068	<0.0015	0.0102(J)	0.0161	<0.001	<0.00010	0.0041(J)	0.0020(J)	NA	<0.0030	<0.0180	<0.00006	NA	0.0077(J)
Test Well DT-10	7/19/2005	II	<0.0002	<0.068	<0.0060	0.0113(J)	0.0063	<0.001	<0.00010	<0.001	0.0024(J)	NA	<0.0030	0.0185(J)	<0.00005	NA	<0.0020
	12/4/2006	II	<0.0002	<0.068	<0.0015	0.0117(J)	0.0070	<0.001	<0.00010	<0.001	<0.0053	NA	<0.0030	<0.0180	<0.00006	NA	<0.0020
(Blind Intralaboratory Field Duplicate)	12/4/2006	II	<0.0002	<0.068	<0.0015	0.0117(J)	0.0067	<0.001	<0.00010	<0.001	<0.0051	NA	<0.0030	<0.0180	<0.00006	NA	<0.0020

Table 4 - Summary Results of Dissolved Trace Elements.

Station ID	Date Sampled	Source Code	Ag (mg/L)	Al (mg/L)	As (mg/L)	B (mg/L)	Ba (mg/L)	Be (mg/L)	Cd (mg/L)	Co (mg/L)	Cr (mg/L)	Cs (mg/L)	Cu (mg/L)	Fe (mg/L)	Hg (mg/L)	Li (mg/L)	Mn (mg/L)
Springs																	
Ancho Spring	3/12/2004	III	<0.0002	0.010	0.0009	0.015	0.025	<0.001	<0.001	<0.001	0.0043	<0.001	0.003	0.01	<0.00005	0.026	<0.001
	2/2/2005	II	<0.0008	<0.0147	0.0026(J)	0.0141(J)	0.0247	<0.0002	<0.00004(N)	<0.00054	0.0038(J)	NA	<0.0014	<0.0126	NA	NA	<0.0003
	9/19/2006	II	<0.0002	<0.068	<0.0060	0.0139(J)	0.0256	<0.001	<0.0001	<0.001	0.0028(J)	NA	<0.003	<0.0180	<0.00006	NA	<0.0020
	2/24/2006	III	<0.001	<0.002	0.0009	0.024	0.023	<0.001	<0.001	<0.001	0.0035	<0.001	<0.001	<0.01	<0.00005	0.022	<0.001
Spring 6	3/12/2004	III	<0.0002	<0.002	0.0010	0.015	0.024	<0.001	<0.001	<0.001	0.0040	<0.001	<0.001	<0.01	<0.00005	0.025	<0.001
	9/14/2004	II	<0.0008	<0.0147	<0.0022	0.0181(J)	0.0239	<0.0002	<0.00004	<0.00054	0.0044(J)	NA	<0.0014	<0.0126	NA	NA	<0.0003
	3/2/2005	III	<0.001	0.0086	0.0008	0.014	0.023	<0.001	<0.001	<0.001	0.0042	<0.001	<0.001	<0.01	<0.00005	0.024	<0.001
	3/24/2005	III	<0.001	<0.002	0.0008	0.015	0.024	<0.001	<0.001	<0.001	0.0047	<0.001	0.001	<0.01	<0.00005	0.024	<0.001
	4/29/2005	III	<0.001	0.007	0.0008	0.034	0.018	<0.001	<0.001	<0.001	0.0040	<0.001	0.002	<0.01	<0.00005	0.023	<0.001
	7/25/2005	III	<0.001	<0.002	0.0009	0.013	0.023	<0.001	<0.001	<0.001	0.0035	<0.001	<0.001	<0.01	<0.00005	0.023	<0.001
(Blind Intralaboratory Field Duplicate)	7/25/2005	III	<0.001	<0.002	0.0010	0.013	0.024	<0.001	<0.001	<0.001	0.0036	<0.001	<0.001	<0.01	<0.00005	0.023	<0.001
	9/27/2005	III	<0.0002	<0.068	<0.006	0.0142(J)	0.0246	<0.001	<0.0001	<0.001	0.0041(J)	NA	<0.003	<0.0180	<0.00005	NA	<0.0020
	9/19/2006	II	<0.0002	<0.068	<0.006	0.0152(J)	0.0249	<0.001	<0.0001	<0.001	0.0031	NA	<0.003	<0.0180	<0.00006	NA	<0.0020
Spring 6A																	
	5/1/2003	III	<0.0001	0.016	0.0008	0.007	0.024	<0.001	<0.001	<0.001	0.0041	<0.001	0.001	<0.01	<0.00005	0.021	<0.001
	10/7/2003	II	<0.0008	<0.0147	<0.0022	0.0144(B)	0.0174	<0.0002	<0.00004	0.00103(B)	0.00268(B)	NA	0.00279(B)	<0.0126	NA	NA	0.0027(B)
	3/12/2004	III	<0.0002	0.003	0.0012	0.017	0.018	<0.001	<0.001	<0.001	0.0042	<0.001	0.002	<0.01	<0.00005	0.025	<0.001
	9/14/2004	II	<0.0008	<0.0147	<0.0022	0.0161(J)	0.0156	<0.0002	0.00004	<0.00054	0.0038(J)	NA	<0.0014	<0.0126	NA	NA	0.0008(J)
	9/27/2005	II	<0.0002	<0.068	<0.006	0.0198(J)	0.0219	<0.001	<0.0001	<0.001	0.0036(J)	NA	<0.003	<0.0180	<0.00005	NA	<0.0020
	9/19/2006	II	<0.0002	<0.068	<0.006	0.0189(J)	0.0195	<0.001	<0.0001	<0.001	0.002(J)	NA	<0.003	<0.0180	<0.00006	NA	<0.0020
Spring 6AAA	5/1/2003	III	<0.0001	<0.002	0.0008	0.006	0.020	<0.001	<0.001	<0.001	0.0029	<0.001	0.001	<0.01	<0.00005	0.019	<0.001
	3/12/2004	III	<0.0002	0.006	0.0008	0.014	0.021	<0.001	<0.001	<0.001	0.0033	<0.001	0.002	0.02	<0.00005	0.024	<0.001
	3/2/2005	III	<0.001	0.031	0.0008	0.013	0.020	<0.001	<0.001	<0.001	0.0035	<0.001	0.001	<0.01	<0.00005	0.023	<0.001
	2/24/2006	III	<0.001	<0.002	0.0009	0.017	0.019	<0.001	<0.001	<0.001	0.0024	<0.001	<0.001	<0.01	<0.00005	0.020	0.001
	9/19/2006	II	<0.0002	<0.068	<0.006	0.0134(J)	0.0196	<0.001	<0.0001	<0.001	0.0019(J)	NA	<0.003	<0.0180	<0.00006	NA	<0.0020
(Blind Intralaboratory Field Duplicate)	9/19/2006	II	<0.0002	<0.068	<0.006	0.0127(J)	0.0199	<0.001	<0.0001	<0.001	0.002(J)	NA	<0.003	<0.0180	<0.00006	NA	<0.0020
Spring 8A	10/7/2003	II	<0.0008	<0.0147	0.0023(B)	0.0101(B)	0.0218	<0.0002	<0.00004	0.00102(B)	0.00176(B)	NA	0.00328(B)	<0.0126	NA	NA	<0.0006(B)
	3/18/2004	III	<0.0002	0.002	0.0010	0.013	0.017	<0.001	<0.001	<0.001	0.0025	<0.001	0.001	<0.01	<0.00005	0.027	<0.001
	1/26/2005	II	<0.0008	<0.0147	<0.005	0.0176(J)	0.0174	<0.0002	0.00005(J)	<0.00054	0.0018(J)	NA	<0.0014	<0.0126	NA	NA	<0.0003
	9/28/2005	III	<0.001	<0.002	0.0009	0.015	0.018	<0.001	<0.001	<0.001	0.0017	<0.001	<0.001	<0.01	<0.00005	0.023	<0.001
	9/19/2006	II	<0.0002	<0.068	<0.006	0.0131(J)	0.0255	<0.001	<0.0001	<0.001	<0.001	NA	<0.003	0.0432(J)	<0.00006	NA	0.0191
Spring 9	10/8/2003	II	<0.0008	<0.0147	<0.0022	0.0076(B)	0.0171	<0.0002	<0.00004	<0.00054	0.001(B)	NA	<0.0014	<0.0126	NA	NA	<0.0003
(Blind Intralaboratory Field Duplicate)	10/8/2003	II	<0.0008	<0.0147	0.0030(B)	0.0094(B)	0.0176	<0.0002	NA	<0.00054	0.00109(B)	NA	0.00259(B)	<0.0126	NA	NA	<0.0003
	3/12/2004	III	<0.0002	<0.002	0.0011	0.013	0.018	<0.001	<0.001	<0.001	0.0027	<0.001	<0.001	<0.01	<0.00005	0.027	<0.001
	9/14/2004	II	<0.0008	0.0164(J)	<0.0022	0.0165(J)	0.0158	<0.0002	<0.00004	<0.00054	0.0013(J)	NA	<0.0014	0.0325(J)	NA	NA	0.0008(J)
	9/28/2005	II	<0.0002	<0.068	<0.006	0.0102(J)	0.0175	<0.001	<0.0001	<0.001	0.0022(J)	NA	<0.003	<0.0180	<0.00005	NA	<0.0020
	2/3/2006	III	<0.001	0.0024	0.0009	0.027	0.017	<0.001	<0.001	0.0022	0.0023	<0.001	<0.001	0.01	<0.00005	0.024	0.004
	9/19/2006	II	<0.0002	<0.068	<0.006	0.0145(J)	0.0193	<0.001	<0.0001	<0.001	<0.001	NA	<0.003	<0.0180	<0.00006	NA	<0.0020

Table 4 - Summary Results of Dissolved Trace Elements.

Station ID	Date Sampled	Source Code	Ag (mg/L)	Al (mg/L)	As (mg/L)	B (mg/L)	Ba (mg/L)	Be (mg/L)	Cd (mg/L)	Co (mg/L)	Cr (mg/L)	Cs (mg/L)	Cu (mg/L)	Fe (mg/L)	Hg (mg/L)	Li (mg/L)	Mn (mg/L)
Spring 9A	10/8/2003	II	<0.0008	<0.0147	<0.0022	0.0061(B)	0.0102	<0.0002	<0.00004	<0.00054	0.00077(B)	NA	<0.0014	<0.0126	NA	NA	<0.0003
	3/12/2004	III	<0.0002	<0.002	0.0010	0.015	0.010	<0.001	<0.001	<0.001	0.0029	<0.001	0.001	<0.01	<0.00005	0.028	<0.001
	9/14/2004	II	<0.0008	<0.0147	<0.0022	0.0152(J)	0.0099	<0.0002	<0.00004	<0.00054	0.0026(J)	NA	<0.0014	0.016(J)	NA	NA	0.0009(J)
	3/8/2005	III	<0.001	<0.002	0.0010	0.013	0.014	<0.001	<0.001	<0.001	0.0029	<0.001	<0.001	<0.01	<0.00005	0.023	<0.001
	4/29/2005	III	<0.001	0.022	0.0009	0.025	0.017	<0.001	<0.001	<0.001	0.0029	<0.001	<0.001	0.02	<0.00005	0.025	<0.001
	5/18/2005	III	<0.001	<0.002	0.0009	0.012	0.0090	<0.001	<0.001	<0.001	0.0025	<0.001	0.005	<0.01	<0.00005	0.025	<0.001
	7/20/2005	III	<0.001	0.0037	0.0010	0.012	0.011	<0.001	<0.001	<0.001	0.0024	<0.001	0.001	<0.01	<0.00005	0.025	<0.001
	9/28/2005	II	<0.0002	<0.068	<0.006	0.0114(J)	0.01	<0.001	<0.0001	<0.001	0.0025(J)	NA	<0.003	<0.0180	<0.00005	NA	<0.0020
	2/3/2006	III	<0.001	0.0023	0.0010	0.016	0.0099	<0.001	<0.001	<0.001	0.0030	<0.001	<0.001	<0.01	<0.00005	0.024	<0.001
	9/20/2006	II	<0.0002	<0.068	<0.006	0.0133(J)	0.0101	<0.001	<0.0001	<0.001	<0.001	NA	<0.003	<0.0180	<0.00006	NA	<0.0020
Spring 9B	3/12/2004	III	<0.0002	0.002	0.0014	0.014	0.005	<0.001	<0.001	<0.001	0.0034	<0.001	0.002	<0.01	<0.00005	0.028	<0.001
	2/3/2006	III	<0.001	0.0051	0.0013	0.022	0.0043	<0.001	<0.001	<0.001	0.0036	<0.001	0.001	<0.01	<0.00005	0.025	<0.001
Taos Area																	
Regional and Intermediate Aquifers																	
Springs - East Rio Grande																	
AH-0.2 Spring	3/15/2004	III	<0.0002	<0.002	0.0004	0.014	0.020	<0.001	<0.001	<0.001	0.0012	<0.001	<0.001	0.01	<0.00005	0.004	<0.001
	9/27/2004	III	<0.001	0.007	0.0003	0.011	0.019	<0.001	<0.001	<0.001	0.0013	<0.001	0.002	<0.01	<0.00005	0.004	<0.001
	2/15/2005	III	<0.001	0.017	0.0002	0.011	0.020	<0.001	<0.001	<0.001	0.0015	<0.001	0.002	<0.01	<0.00005	0.003	0.001
	4/8/2005	III	<0.001	0.062	0.0004	0.012	0.026	<0.001	<0.001	<0.001	0.0014	<0.001	<0.001	<0.01	<0.00005	0.003	0.001
	5/13/2005	III	<0.001	<0.002	0.0003	0.013	0.018	<0.001	<0.001	<0.001	0.0013	<0.001	0.003	<0.01	<0.00005	0.004	<0.001
	6/24/2005	III	<0.001	0.007	0.0005	0.011	0.020	<0.001	<0.001	<0.001	0.0014	<0.001	<0.001	<0.01	<0.00005	0.003	<0.001
	7/22/2005	III	<0.001	<0.002	0.0003	0.012	0.021	<0.001	<0.001	<0.001	0.0016	<0.001	<0.001	<0.01	<0.00005	0.003	<0.001
Big Arsenic Spring	3/25/2004	III	<0.0002	0.006	0.0014	0.030	0.022	<0.001	<0.001	<0.001	0.0017	<0.001	0.002	0.01	<0.00005	0.025	<0.001
	9/28/2004	III	<0.001	0.004	0.0015	0.028	0.021	<0.001	<0.001	<0.001	0.0017	<0.001	0.002	<0.01	<0.00005	0.024	<0.001
DBN Spring	3/25/2004	III	<0.0002	0.007	0.0004	0.010	0.018	<0.001	<0.001	<0.001	0.0010	<0.001	0.002	0.02	<0.00005	0.003	<0.001
	9/27/2004	III	<0.001	0.006	0.0004	0.008	0.017	<0.001	<0.001	<0.001	0.0012	<0.001	0.002	<0.01	<0.00005	0.004	<0.001
RG1 Spring	3/25/2004	III	<0.0002	0.007	0.0014	0.025	0.023	<0.001	<0.001	<0.001	0.0018	<0.001	0.001	0.02	<0.00005	0.022	<0.001
	9/28/2004	III	<0.001	0.005	0.0013	0.025	0.023	<0.001	<0.001	<0.001	0.0017	<0.001	0.002	<0.01	<0.00005	0.023	<0.001
Springs - West Rio Grande																	
Big Spring	5/29/2004	III	<0.001	<0.002	0.0031	0.040	0.128	<0.001	<0.001	<0.001	0.0044	<0.001	0.001	0.09	0.00008	0.053	<0.001
	9/28/2004	III	<0.001	<0.002	0.0032	0.046	0.122	<0.001	<0.001	<0.001	0.0043	<0.001	0.002	<0.01	<0.00005	0.067	<0.001
DBS Spring 1	3/15/2004	III	<0.0002	0.044	0.0080	0.103	0.021	<0.001	<0.001	<0.001	0.0022	<0.001	0.003	0.08	0.00029	0.122	0.002
DBS Spring 2	3/15/2004	III	<0.0002	0.042	0.0034	0.153	0.010	<0.001	<0.001	<0.001	0.0025	<0.001	0.003	0.06	0.00007	0.101	<0.001
	9/27/2004	III	<0.001	0.018	0.0033	0.161	0.011	<0.001	<0.001	<0.001	0.0024	<0.001	0.003	0.03	0.00008	0.103	<0.001

Table 4 - Summary Results of Dissolved Trace Elements.

Station ID	Date Sampled	Source Code	Ag (mg/L)	Al (mg/L)	As (mg/L)	B (mg/L)	Ba (mg/L)	Be (mg/L)	Cd (mg/L)	Co (mg/L)	Cr (mg/L)	Cs (mg/L)	Cu (mg/L)	Fe (mg/L)	Hg (mg/L)	Li (mg/L)	Mn (mg/L)
Felsenmeere Spring	12/7/2003	III	<0.0002	0.017	0.0028	0.027	0.021	<0.001	0.001	<0.001	0.0016	<0.001	0.002	0.02	<0.00005	0.010	<0.001
	5/5/2004	III	<0.001	<0.002	0.0032	0.026	0.018	<0.001	<0.001	<0.001	0.0017	<0.001	0.002	0.06	<0.00005	0.010	<0.001
	9/27/2004	III	<0.001	0.005	0.0032	0.027	0.019	<0.001	<0.001	<0.001	0.0020	<0.001	0.002	<0.01	<0.00005	0.011	<0.001
Snowpack/Precipitation																	
Snowpack																	
Aspen Peak Snowpack	4/18/2003	III	<0.001	0.009	<0.0002	<0.002	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.01	0.00005	<0.001	0.003
	3/30/2004	III	<0.0002	0.007	<0.0002	0.001	0.003	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	0.02	<0.00005	<0.001	0.006
Pajarito Mountain Snowpack	4/13/2003	III	<0.001	0.008	<0.0002	<0.002	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	0.003	<0.01	0.00012	<0.001	0.010
	3/25/2004	III	<0.0002	0.009	<0.0002	0.002	0.003	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	0.02	<0.00005	<0.001	0.005
Snow																	
TA-21 Snow	11/30/2006	III	<0.001	0.005	<0.0002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.00005	<0.001	0.002
Rain																	
TA-8/9 Rain	8/23/2003	III	<0.001	0.033	<0.0002	0.001	0.006	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	<0.01	<0.00005	<0.001	0.046
TA-21 Rain	8/11/2003	III	<0.001	0.130	0.0002	0.005	0.004	<0.001	<0.001	<0.001	<0.001	<0.001	0.005	0.04	<0.00005	<0.001	0.019
	8/17/2003	III	<0.001	0.078	<0.0002	0.003	0.003	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	0.02	<0.00005	<0.001	0.017

Data Source Codes: II - LANL Water Quality Database; and III - LANL EES-6

J -The associated numerical value is an estimated quantity.

B - Reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL) but greater than or equal to the Instrument Detection Limit (IDL).

E - Reported value is estimated because of the presence of interference or percent difference between the parent sample and its serial dilution's concentration exceeds 10%

N - Spiked sample recovery not within control limits.

Table 4 - Summary Results of Dissolved Trace Elements.

Station ID	Date Sampled	Source Code	Mo (mg/L)	Ni (mg/L)	Pb (mg/L)	Rb (mg/L)	Sb (mg/L)	Se (mg/L)	Sn (mg/L)	Sr (mg/L)	Th (mg/L)	Ti (mg/L)	Tl (mg/L)	U (mg/L)	V (mg/L)	Zn (mg/L)
Los Alamos Area																
Zone 1 - Perched Sierra de Los Valles and Mountain Front Area																
Wells																
Pajarito Ski Well #2	5/19/2004	III	<0.001	<0.0010	0.0027	0.004	<0.001	<0.001	<0.001	0.055	<0.001	<0.001	<0.001	<0.0002	<0.001	<0.001
	9/22/2004	III	<0.001	<0.0010	0.0010	0.005	<0.001	<0.001	<0.001	0.066	<0.001	<0.001	<0.001	<0.0002	<0.001	0.007
	3/2/2005	III	<0.001	<0.0010	0.0008	0.005	<0.001	<0.001	<0.001	0.061	<0.001	<0.001	<0.001	<0.0002	<0.001	0.072
	8/31/2005	III	<0.001	<0.0010	0.0196	0.005	<0.001	<0.001	<0.001	0.058	<0.001	<0.001	<0.001	<0.0002	<0.001	0.467
	1/12/2006	III	<0.001	<0.0010	0.0013	0.005	<0.001	<0.001	<0.001	0.055	<0.001	<0.002	<0.001	<0.0002	<0.001	0.002
Springs																
AL-10.6 Spring	5/26/2004	III	<0.001	<0.001	0.0016	0.006	<0.001	<0.001	<0.001	0.026	<0.001	0.004	<0.001	<0.0002	<0.001	0.007
	5/12/2005	III	<0.001	<0.001	<0.0002	0.006	<0.001	<0.001	<0.001	0.031	<0.001	0.004	<0.001	<0.0002	<0.001	<0.001
	6/15/2005	III	<0.001	<0.001	<0.0002	0.007	<0.001	<0.001	<0.001	0.029	<0.001	<0.001	<0.001	<0.0002	<0.001	0.004
	7/13/2005	III	<0.001	<0.001	<0.0002	0.006	<0.001	<0.001	<0.001	0.029	<0.001	<0.001	<0.001	<0.0002	<0.001	0.003
Barbara Spring	8/18/2003	III	0.001	<0.001	0.0001	0.001	<0.001	<0.001	<0.001	0.023	<0.001	<0.001	<0.001	0.0003	0.001	0.001
	5/26/2004	III	0.001	<0.001	0.0022	0.001	<0.001	<0.001	<0.001	0.020	<0.001	<0.001	<0.001	0.0003	0.001	0.019
	9/20/2004	III	0.001	<0.001	0.0013	<0.001	<0.001	<0.001	<0.001	0.023	<0.001	<0.001	<0.001	0.0002	0.001	0.002
	3/29/2005	III	0.002	<0.001	<0.0002	<0.001	<0.001	<0.001	<0.001	0.022	<0.001	<0.001	<0.001	0.0003	0.002	<0.001
	5/12/2005	III	0.001	<0.001	<0.0002	<0.001	<0.001	<0.001	<0.001	0.020	<0.001	<0.001	<0.001	0.0003	0.002	<0.001
	6/15/2005	III	0.002	<0.001	<0.0002	<0.001	<0.001	<0.001	<0.001	0.021	<0.001	<0.001	<0.001	0.0003	0.002	0.002
	7/13/2005	III	0.001	<0.001	<0.0002	<0.001	<0.001	<0.001	<0.001	0.021	<0.001	<0.001	<0.001	<0.0002	0.001	<0.001
Campsite Springs	8/25/2003	III	0.001	<0.001	0.0018	0.005	<0.001	<0.001	<0.001	0.020	<0.001	<0.001	<0.001	0.0006	0.003	0.001
	5/17/2005	III	0.001	<0.001	<0.0002	0.005	<0.001	<0.001	<0.001	0.020	<0.001	<0.001	<0.001	0.0005	0.003	<0.001
	6/8/2005	III	0.001	<0.001	<0.0002	0.004	<0.001	<0.001	<0.001	0.019	<0.001	<0.001	<0.001	0.0004	0.003	0.005
	7/14/2005	III	0.001	<0.001	<0.0002	0.004	<0.001	<0.001	<0.001	0.019	<0.001	<0.001	<0.001	0.0004	0.003	<0.001
	3/31/2006	III	0.001	<0.001	<0.0002	0.005	<0.001	<0.001	<0.001	0.019	<0.001	<0.002	<0.001	0.0005	0.005	<0.001
CDV-5.0 Spring	8/20/2003	III	<0.001	<0.001	0.0002	0.006	<0.001	<0.001	<0.001	0.082	<0.001	<0.001	<0.001	<0.001	0.003	0.008
	5/16/2004	III	<0.001	<0.001	0.0033	0.005	<0.001	<0.001	<0.001	0.070	<0.001	0.020	<0.001	<0.0002	0.004	<0.001
	9/17/2004	III	0.000	<0.001	0.0018	0.005	<0.001	<0.001	<0.001	0.087	<0.001	0.002	<0.001	<0.0002	0.003	0.003
	3/3/2005	III	<0.001	<0.001	0.0003	0.008	<0.001	<0.001	<0.001	0.143	<0.001	0.009	<0.001	<0.0002	0.004	<0.001
	4/18/2005	III	<0.001	0.029	<0.0002	0.006	<0.001	<0.001	<0.001	0.122	<0.001	0.002	<0.001	<0.0002	0.004	0.019
	5/27/2005	III	<0.001	<0.001	<0.0002	0.005	<0.001	<0.001	<0.001	0.087	<0.001	0.003	<0.001	<0.0002	0.003	0.002
	7/11/2005	III	<0.001	<0.001	<0.0002	0.007	<0.001	<0.001	<0.001	0.089	<0.001	<0.001	<0.001	<0.0002	0.003	<0.001
	12/23/2005	III	<0.001	<0.001	0.0014	0.006	<0.001	<0.001	<0.001	0.081	<0.001	0.009	<0.001	<0.0002	0.003	0.002
	3/5/2006	III	<0.001	<0.001	0.0024	0.006	<0.001	<0.001	<0.001	0.074	<0.001	0.005	<0.001	<0.0002	0.003	0.005
	8/24/2006	III	<0.001	<0.001	0.0004	0.008	<0.001	<0.001	<0.001	0.111	<0.001	0.050	<0.001	<0.0002	0.004	0.003
CDV-5.97 Spring	11/9/2006	III	0.001	0.001	0.0003	0.008	<0.001	0.001	<0.001	0.148	<0.001	0.011	<0.001	<0.0002	0.004	0.003

Table 4 - Summary Results of Dissolved Trace Elements.

Station ID	Date Sampled	Source Code	Mo (mg/L)	Ni (mg/L)	Pb (mg/L)	Rb (mg/L)	Sb (mg/L)	Se (mg/L)	Sn (mg/L)	Sr (mg/L)	Th (mg/L)	Ti (mg/L)	Tl (mg/L)	U (mg/L)	V (mg/L)	Zn (mg/L)
Colonel Spring	9/16/2004	III	0.002	<0.001	0.0013	0.001	<0.001	<0.001	<0.001	0.014	<0.001	<0.001	<0.001	0.0005	<0.001	<0.001
PC Spring	8/22/2003	III	<0.001	<0.001	0.0003	0.005	<0.001	<0.001	<0.001	0.068	<0.001	<0.001	<0.001	<0.0001	0.002	0.002
	5/15/2004	III	<0.001	<0.001	0.0039	0.003	<0.001	<0.001	<0.001	0.048	<0.001	0.011	<0.001	<0.0002	0.002	<0.001
	9/16/2004	II	<0.0014	0.0011(J)	0.00007(J)	NA	<0.0003	NA	<0.0033	0.0691	NA	NA	<0.00002	0.0014	0.0024(J)	0.0013(J)
	3/30/2005	III	<0.001	<0.001	0.0003	0.005	<0.001	<0.001	<0.001	0.064	<0.001	0.017	<0.001	<0.0002	0.003	<0.001
	5/3/2005	III	<0.001	<0.001	<0.0002	0.003	<0.001	<0.001	<0.001	0.052	<0.001	0.002	<0.001	<0.0002	0.002	0.002
	6/10/2005	III	<0.001	<0.001	<0.0002	0.003	<0.001	<0.001	<0.001	0.054	<0.001	0.001	<0.001	<0.0002	0.002	<0.001
	6/21/2005	II	<0.0020	<0.0005	<0.0002	0.004	<0.0005	<0.0025	<0.001	0.0540	<0.001	NA	<0.001	<0.0002	0.0022	<0.002
	6/21/2005	II	<0.0020	<0.0005	<0.0005	NA	<0.0005	<0.0025	<0.0025	0.0566	NA	NA	<0.00040	0.00005(J)	0.0022(J)	<0.002
	6/29/2005	III	<0.001	<0.001	<0.0002	0.004	<0.001	<0.001	<0.001	0.056	<0.001	0.006	<0.001	<0.0002	0.002	<0.001
	7/12/2005	III	<0.001	<0.001	<0.0002	0.004	<0.001	<0.001	<0.001	0.058	<0.001	<0.001	<0.001	<0.0002	0.002	0.003
	8/31/2006	II	<0.0020	<0.0005	<0.0005	NA	<0.0005	<0.0025	<0.0025	0.0743	NA	NA	<0.00040	<0.00005	0.0024(J)	0.0055(J)
	12/14/2006	II	<0.0020	<0.0005	<0.0005	NA	<0.0005	<0.0025	<0.0025	0.0633	NA	NA	<0.00040	<0.00005	0.0026(J)	0.0024(J)
Water Canyon Gallery Spring	3/4/2005	III	<0.001	<0.001	0.0002	0.004	<0.001	<0.001	<0.001	0.084	<0.001	0.008	<0.001	<0.0002	0.003	<0.001
	4/18/2005	III	<0.001	0.028	<0.0002	0.003	<0.001	<0.001	<0.001	0.078	<0.001	0.002	<0.001	<0.0002	0.002	0.019
	5/27/2005	III	<0.001	<0.001	<0.0002	0.003	<0.001	<0.001	<0.001	0.071	<0.001	0.001	<0.001	<0.0002	0.003	0.001
	7/11/2005	III	<0.001	<0.001	<0.0002	0.003	<0.001	<0.001	<0.001	0.055	<0.001	<0.001	<0.001	<0.0002	0.003	0.004
(Blind Intralaboratory Field Duplicate)	7/11/2005	III	<0.001	<0.001	<0.0002	0.003	<0.001	<0.001	<0.001	0.055	<0.001	<0.001	<0.001	<0.0002	0.003	<0.001
	9/23/2005	III	<0.001	<0.001	<0.0002	0.003	<0.001	<0.001	<0.001	0.052	<0.001	<0.001	<0.001	<0.0002	0.004	<0.001
	8/25/2006	III	<0.001	<0.001	0.0002	0.005	<0.001	<0.001	<0.001	0.065	<0.001	0.019	<0.001	0.0002	0.004	0.002
SPET-1.7 Spring	5/26/2004	III	<0.001	<0.001	0.0034	0.006	<0.001	<0.001	<0.001	0.043	<0.001	0.069	<0.001	0.0003	0.004	0.038
Yak Spring	5/27/2004	III	<0.001	<0.001	0.0019	0.020	<0.001	<0.001	<0.001	0.040	<0.001	0.011	<0.001	0.0003	<0.001	0.011
Coffman Springs	12/4/2006	III	<0.001	<0.001	<0.0002	0.004	<0.001	<0.001	<0.001	0.052	<0.001	<0.002	<0.001	0.0002	0.007	<0.001
Zone 3 - Perched Intermediate Pajarito Plateau																
Wells																
LAOI(A)-1.1	6/3/2004	III	0.003	0.002	0.0029	0.113	<0.001	<0.001	0.001	0.088	<0.001	<0.001	<0.001	0.0005	<0.001	0.008
	3/4/2005	III	0.002	<0.001	0.0002	0.048	<0.001	<0.001	<0.001	0.057	<0.001	0.002	<0.001	0.0005	<0.001	0.003
	8/4/2006	II	0.0043(J)	0.0006(J)	<0.0005	NA	<0.0005	<0.0025	<0.0025	0.0337	NA	NA	<0.00040	0.00025	0.0015(J)	0.0079(J)
Springs																
Sacred Spring	8/24/2004	II	0.002(B)	0.0008(B)	<0.00005	NA	<0.0003	NA	<0.0033	0.4030	NA	NA	0.00005(B)	0.0023	0.0071	0.0018(B)
	7/13/2005	II	<0.0020	0.0010(J)	<0.0005	NA	<0.0005	<0.0025	<0.0025	0.4770	NA	NA	<0.00040	0.0017	0.0064	0.008(J)
	9/14/2006	II	<0.0020	0.0008(J)	<0.0005	NA	<0.0005	<0.0025	<0.0025	0.4760	NA	NA	<0.00040	0.0016	0.0055	0.004(J)
Sandia Spring	6/14/2004	III	0.0011	<0.001	0.0011	0.002	<0.001	<0.001	<0.001	0.314	<0.001	<0.001	<0.001	0.0012	0.010	<0.001
	9/13/2004	II	0.0021(J)	0.0022(J)	<0.00005	NA	<0.0003	NA	<0.0033	0.2780	NA	NA	0.00009(J)	0.00062	0.0053	0.0014(J)
	1/28/2005	II	0.0025(J)	<0.0007	<0.00005	NA	<0.0003	NA	<0.0033	0.3190	NA	NA	0.00029(J)	NA	0.0111	0.0011(J)
	9/8/2005	II	0.0023(J)	0.0007(J)	<0.0005	NA	<0.0005	<0.0025	<0.0025	0.3180	NA	NA	0.00060(J)	0.00110	0.0102	<0.002
	9/14/2006	II	<0.0020	0.0006	<0.00005	NA	<0.00050	<0.0025	<0.0025	0.3190	NA	NA	<0.00040	0.00100	0.0099	0.0026(J)

Table 4 - Summary Results of Dissolved Trace Elements.

Station ID		Date Sampled	Source Code	Mo (mg/L)	Ni (mg/L)	Pb (mg/L)	Rb (mg/L)	Sb (mg/L)	Se (mg/L)	Sn (mg/L)	Sr (mg/L)	Th (mg/L)	Ti (mg/L)	Tl (mg/L)	U (mg/L)	V (mg/L)	Zn (mg/L)
Zone 4 - Regional Aquifer																	
DPOGW4		9/30/2004	III	0.0014	<0.001	0.0019	0.0041	<0.001	<0.001	<0.001	0.076	<0.001	<0.001	<0.001	0.0010	0.013	0.033
R-1		5/19/2005	III	0.0024	<0.001	0.0003	0.0042	<0.001	<0.001	<0.001	0.049	<0.001	<0.001	<0.001	0.0007	0.007	0.008
	(Blind Interlaboratory Field Duplicate)	5/19/2005	II	0.0024	0.0020(J)	<0.0005	NA	<0.00050	<0.0060	NA	0.0554	NA	NA	<0.00040	0.00078	0.0084	0.0076(J)
		9/12/2005	III	0.0019	<0.001	<0.0002	0.0043	<0.001	<0.001	<0.001	0.051	<0.001	<0.001	<0.001	0.0007	0.007	0.001
		9/12/2005	II	0.0021(J)	0.0007(J)	<0.0005	NA	<0.00050	<0.0025	<0.0025	0.0525	NA	NA	<0.00040	0.00084	0.0066	0.0027(J)
	(Blind Intralaboratory Field Duplicate)	9/12/2005	II	<0.0020	0.0006(J)	<0.0005	NA	<0.00050	<0.0025	<0.0025	0.0496	NA	NA	<0.00040	0.00084	0.0060	<0.0020
		11/28/2005	II	0.0020	0.0011(J)	<0.0005	NA	<0.00050	<0.0060	NA	0.0503	NA	NA	0.00064(J)	0.00080	0.0059	<0.0020
		1/25/2006	II	0.0026(J)	0.0007(J)	<0.0005	NA	<0.00050	<0.0025	<0.0025	0.0545	NA	NA	<0.00040	0.00093	0.0067	<0.0020
		7/6/2006	II	0.0022(J)	<0.0025	<0.0005	NA	<0.00050	<0.0025	<0.0025	0.0537	NA	NA	<0.00040	0.00095	0.0073	0.0051(J)
	(Blind Intralaboratory Field Duplicate)	7/6/2006	II	0.0024(J)	0.0007(J)	<0.0005	NA	<0.00050	<0.0025	<0.0025	0.0524	NA	NA	<0.00040	0.00089	0.0080	0.0039(J)
		10/26/2006	II	0.0035(J)	0.0011(J)	<0.0005	NA	0.00051(J)	<0.0025	0.0036(J)	0.0526	NA	NA	<0.00040	0.00065	0.0100	0.0023(J)
	(Blind Intralaboratory Field Duplicate)	10/26/2006	II	0.004(J)	0.0012(J)	<0.0005	NA	<0.00050	<0.0025	<0.0025	0.0525	NA	NA	<0.00040	0.00064	0.0087	<0.0020
R-2		4/26/2005	III	0.0048	0.031	0.0004	0.0014	<0.001	<0.001	<0.001	0.041	<0.001	<0.001	<0.001	0.0006	0.007	0.022
	(Blind Interlaboratory Field Duplicate)	4/26/2005	II	0.0055	0.0043(J)	<0.0005	NA	0.00056(J)	0.0069(J)	NA	0.0416	NA	NA	<0.00040	0.00071	0.0071	0.0101
		8/9/2005	III	0.0029	0.001	<0.0002	0.0015	<0.001	<0.001	<0.001	0.042	<0.001	<0.001	<0.001	0.0004	0.008	0.004
	(Blind Interlaboratory Field Duplicate)	8/9/2005	II	0.0027	0.0027(J)	<0.0005	NA	<0.00050	<0.0060	NA	0.0460	NA	NA	<0.00040	0.00045	0.0082	0.0074(J)
		11/9/2005	II	0.0026	0.0019(J)	<0.0005	NA	0.00092(J)	<0.0060	NA	0.0502	NA	NA	0.00099(J)	0.00057	0.0088	0.0056(J)
		2/27/2006	III	0.0022	0.002	0.0005	0.0015	<0.001	<0.001	<0.001	0.046	<0.001	<0.002	<0.001	0.00053	0.0084	0.0054
	(Blind Interlaboratory Field Duplicate)	2/27/2006	II	0.0025(J)	0.0014(J)	<0.0005	NA	0.00051(J)	<0.0025	<0.0025	0.0515	NA	NA	0.00056(J)	0.00043	0.0091	0.0073(J)
		7/24/2006	II	0.0034(J)	0.0016(J)	<0.0005	NA	<0.00050	<0.0025	<0.0025	0.0483	NA	NA	0.00055(J)	0.00044	0.0085	0.0080(J)
R-6		8/23/2005	II	0.0023	<0.001	<0.0005	NA	<0.00050	<0.0060	NA	0.0582	NA	NA	<0.00040	0.00064	0.0076	0.0069(J)
	(Blind Intralaboratory Field Duplicate)	8/23/2005	II	0.0023	0.0013(J)	<0.0005	NA	<0.00050	<0.0060	NA	0.0587	NA	NA	<0.00040	0.00065	0.0079	0.0087(J)
		11/17/2005	II	0.0023	0.0012(J)	<0.0005	NA	<0.00050	<0.0060	NA	0.0599	NA	NA	<0.00040	0.00057	0.0085	<0.002
		3/1/2006	II	0.0029(J)	0.00069(J)	<0.0005	NA	<0.00050	<0.0025	0.0026(J)	0.0608	NA	NA	0.00055(J)	0.00052	0.0093	0.0037(J)
		5/11/2006	II	0.0030(J)	0.0016(J)	<0.0005	NA	0.00053	<0.0025	<0.0025	0.0535	NA	NA	<0.00040	0.00047	0.0084	<0.0102
		7/26/2006	II	0.0030(J)	0.0009(J)	<0.0005	NA	<0.00050	<0.0025	<0.0025	0.0545	NA	NA	0.00050(J)	0.00054	0.0088	0.0064(J)
	(Blind Intralaboratory Field Duplicate)	7/26/2006	II	0.0024(J)	0.0009(J)	<0.0005	NA	<0.00050	<0.0025	<0.0025	0.0549	NA	NA	<0.00040	0.00050	0.0092	<0.0178
R-16r		12/19/2005	II	0.0056(J)	0.0025	<0.0005	NA	<0.00050	<0.0025	0.0029(J)	0.1920	NA	NA	<0.00040	0.0015	0.0096	0.0055(J)
		3/8/2006	II	0.0035(J)	0.0015(J)	<0.0005	NA	<0.00050	<0.0025	<0.0025	0.1890	NA	NA	0.00062(J)	0.0012	0.0103	0.0071(J)
	(Blind Intralaboratory Field Duplicate)	3/8/2006	II	0.0031(J)	0.0016(J)	<0.0005	NA	<0.00050	<0.0025	<0.0025	0.1910	NA	NA	<0.00040	0.0012	0.0108	0.0076(J)
		5/24/2006	II	0.0027(J)	0.0016(J)	<0.0005	NA	<0.00050	<0.0025(N)	<0.0025	0.1920	NA	NA	0.00046(J)	0.0012	0.0119	0.0093(J)
		8/17/2006	II	0.0021(J)	0.0095	<0.0005	NA	<0.00050	<0.0025	<0.0025	0.1600	NA	NA	<0.00040	0.0014	0.0099	0.0076(J)
	(Blind Intralaboratory Field Duplicate)	8/17/2006	II	<0.0020	0.0019(J)	<0.0005	NA	<0.00050	<0.0025	0.0026(J)	0.1520	NA	NA	<0.00040	0.0014	0.0092	0.0072(J)
		11/1/2006	II	<0.0020	0.0021	<0.0005	NA	<0.00050	<0.0025	0.0026(J)	0.1960	NA	NA	<0.00040	0.0012	0.0134	0.0127
R-17 Screen 1		10/19/2006	II	<0.0020	0.0014(J)	<0.0005	NA	<0.00050	<0.0025	0.0033(J)	0.0498	NA	NA	0.00045(J)	0.00046	0.0038(J)	0.0947

Table 4 - Summary Results of Dissolved Trace Elements.

Station ID	Date Sampled	Source Code	Mo (mg/L)	Ni (mg/L)	Pb (mg/L)	Rb (mg/L)	Sb (mg/L)	Se (mg/L)	Sn (mg/L)	Sr (mg/L)	Th (mg/L)	Ti (mg/L)	Tl (mg/L)	U (mg/L)	V (mg/L)	Zn (mg/L)
R-18	8/25/2005	III	<0.001	<0.001	<0.0002	0.0019	<0.001	<0.001	<0.001	0.043	<0.001	<0.001	<0.001	0.0003	0.003	0.001
(Blind Interlaboratory Field Duplicate)	8/25/2005	II	0.0005	<0.0010	<0.0005	NA	<0.00050	<0.0060	NA	0.0471	NA	NA	0.00041(J)	0.00042	0.0030(J)	0.0054(J)
	12/1/2005	III	<0.001	<0.001	<0.0002	0.0013	<0.001	<0.001	<0.001	0.044	<0.001	<0.002	<0.001	0.0003	0.003	0.030
(Blind Interlaboratory Field Duplicate)	12/1/2005	II	0.0005(J)	<0.0010	<0.0005	NA	<0.00050	<0.0060	NA	0.0467	NA	NA	0.00054(J)	0.00038	0.0027(J)	<0.0020
(Blind Intralaboratory Field Duplicate)	12/1/2005	II	0.0005(J)	<0.0010	<0.0005	NA	<0.00050	<0.0060	NA	0.0466	NA	NA	<0.00040	0.00036	0.0028(J)	<0.0020
	3/7/2006	II	<0.0020	<0.0005	<0.0005	NA	0.00055(J)	<0.0025	<0.0025	0.0503	NA	NA	0.00077(J)	0.00041	0.0021(J)	0.0123
	5/16/2006	II	<0.0020	<0.0005	<0.0005	NA	<0.00050	<0.0025	<0.0025	0.0468	NA	NA	0.00056(J)	0.00047	0.0027(J)	0.0025(J)
(Blind Intralaboratory Field Duplicate)	5/16/2006	II	<0.0020	<0.0005	<0.0005	NA	<0.00050	<0.0025	<0.0025	0.0461	NA	NA	<0.00040	0.00041	0.0027(J)	0.0031(J)
	8/15/2006	II	<0.0020	0.0008(J)	<0.0005	NA	<0.00050	<0.0025	<0.0025	0.0480	NA	NA	0.00059(J)	0.00051	0.0032(J)	0.004(J)
(Blind Intralaboratory Field Duplicate)	8/15/2006	II	<0.0020	0.0006(J)	<0.0005	NA	<0.00050	<0.0025	<0.0025	0.0467	NA	NA	<0.00040	0.00047	0.0028(J)	0.004(J)
	12/18/2006	II	<0.0020	<0.0025	<0.0005	NA	<0.00050	<0.0025	<0.0025	0.0468	NA	NA	<0.00040	0.00041	0.0027(J)	0.0021(J)
(Blind Intralaboratory Field Duplicate)	12/18/2006	II	<0.0020	<0.0025	<0.0005	NA	<0.00050	<0.0025	<0.0025	0.0474	NA	NA	<0.00040	0.00039	0.0026(J)	0.0035(J)
R-21	3/31/2004	II	0.00385	<0.00069	0.00012(J)	NA	<0.00028	<0.00281	NA	0.0451	NA	NA	0.000297(J)	0.000401	0.00528	0.00442(J)
(Blind Intralaboratory Field Duplicate)	3/31/2004	II	0.00383	0.00086(J)	0.00012(J)	NA	<0.00028	<0.00786	NA	0.0455	NA	NA	0.000065(J)	0.000417	0.00516	0.00758
	6/30/2004	II	0.00270	<0.00069	0.00009(B)	NA	<0.00028	<0.00281	NA	0.0458	NA	NA	0.000084(B)	0.000398	0.00503	0.00781
	9/23/2004	II	0.00220	0.00180(J)	<0.00005	NA	<0.00028	<0.00281	NA	0.0458	NA	NA	0.00011(J)	0.000360	0.00450(J)	0.00280(J)
	12/14/2004	II	0.00210	<0.00069	<0.00005	NA	<0.00028	<0.00281	NA	0.0456	NA	NA	0.000830	0.000360	0.00500(J)	0.00740
	6/6/2005	II	0.0031(J)	0.0006(J)	<0.0005	NA	<0.00050	<0.0025	<0.0025	0.0454	NA	NA	<0.00040	0.000340	0.0053	0.0029(J)
(Blind Intralaboratory Field Duplicate)	6/6/2005	II	<0.0020	0.0006(J)	<0.0005	NA	<0.00050	<0.0025	<0.0025	0.0443	NA	NA	<0.00040	0.000330	<0.0051	<0.0020
	7/7/2006	II	0.0035(J)	0.0006(J)	<0.0005	NA	<0.00050	<0.0025	<0.0025	0.0440	NA	NA	0.00077(J)	0.000400	0.0053	0.0030(J)
	11/6/2006	II	0.0030(J)	0.0006(J)	<0.0005	NA	<0.00050	<0.0025	<0.0025	0.0456	NA	NA	<0.00040	0.000360	0.0064	0.0027(J)
(Blind Intralaboratory Field Duplicate)	11/6/2006	II	0.0037(J)	0.0006(J)	<0.0005	NA	<0.00050	<0.0025	<0.0025	0.0447	NA	NA	<0.00040	0.000360	0.0053	0.0056(J)
R-27	7/1/2006	II	<0.0020	<0.0005	<0.0005	NA	<0.00050	<0.0025	<0.0025	0.0479	NA	NA	<0.00040	0.00047	0.0049(J)	0.0655
(Blind Intralaboratory Field Duplicate)	7/1/2006	II	<0.0020	<0.0005	<0.0005	NA	<0.00050	<0.0025	<0.0025	0.0481	NA	NA	<0.00040	0.00047	0.0047(J)	0.0656
R-34	6/27/2005	II	0.0015	0.0015(J)	<0.0005	NA	<0.00050	<0.0060		0.0650	NA	NA	0.00045(J)	0.00048	0.0095	0.004(J)
	9/7/2005	II	0.0027(J)	0.0008(J)	<0.0005	NA	<0.00050	<0.0025	<0.0025	0.0654	NA	NA	0.00042(J)	0.00046	0.0094	0.0022(J)
	11/29/2005	II	<0.0013	<0.001	<0.0005	NA	<0.00050	<0.0060	NA	0.0648	NA	NA	<0.00040	0.00041	0.0085	<0.0020
(Blind Intralaboratory Field Duplicate)	11/29/2005	II	0.0012	<0.001	<0.0005	NA	<0.00050	<0.0060	NA	0.0655	NA	NA	<0.00040	0.00048	0.0081	<0.0020
	1/31/2006	II	0.0028(J)	0.0007(J)	<0.0005	NA	<0.00050	<0.0025	<0.0025	0.0657	NA	NA	<0.00040	0.00042	0.0089	0.0028(J)
(Blind Intralaboratory Field Duplicate)	1/31/2006	II	0.0022(J)	0.0006(J)	<0.0005	NA	<0.00050	<0.0025	<0.0025	0.0650	NA	NA	<0.00040	0.00041	0.0093	0.0025(J)
	7/17/2006	II	<0.0020	0.0008(J)	<0.0005	NA	<0.00050	<0.0025	<0.0025	0.0677	NA	NA	0.00058(J)	0.00054	0.0083	0.0036(J)
	10/30/2006	II	0.0025(J)	0.0007(J)	<0.0005	NA	<0.00050	<0.0025	<0.0025	0.0656	NA	NA	<0.00040	<0.00049	0.0078	0.0045(J)
Test Well DT-5A	8/24/2005	II	0.0023(J)	0.0007(J)	<0.0005	NA	<0.00050	<0.0025	<0.0025	0.0481	NA	NA	<0.00040	<0.00043	0.0083	0.228
	12/6/2006	II	<0.0020	0.0005(N)	<0.0005	NA	<0.00050	<0.0025	<0.0025	0.0449	NA	NA	<0.00040	<0.0003	0.0081	0.212
Test Well DT-9	7/20/2005	II	<0.0020	0.0008(J)	<0.0005	NA	<0.00050	<0.0025	<0.0025	0.0486	NA	NA	<0.00040	0.00043	0.0053	0.103
	12/5/2006	II	<0.0020	0.0009(J)	0.0008(J)	NA	<0.00050	<0.0025	<0.0025	0.0467	NA	NA	<0.00040	0.00042	0.0061	0.113
Test Well DT-10	7/19/2005	II	<0.0020	0.0009(J)	0.0026	NA	<0.00050	<0.0025	<0.0025	0.0455	NA	NA	<0.00040	0.00059	0.0036(J)	0.0944
	12/4/2006	II	<0.0020	0.0006(J)	<0.0005	NA	<0.00050	<0.0025	<0.0025	0.0481	NA	NA	<0.00040	0.00062	0.0044(J)	0.1120
(Blind Intralaboratory Field Duplicate)	12/4/2006	II	<0.0020	0.0006(J)	<0.0005	NA	<0.00050	<0.0025	<0.0025	0.0469	NA	NA	<0.00040	0.00063	0.0042(J)	0.1080

Table 4 - Summary Results of Dissolved Trace Elements.

Station ID		Date Sampled	Source Code	Mo (mg/L)	Ni (mg/L)	Pb (mg/L)	Rb (mg/L)	Sb (mg/L)	Se (mg/L)	Sn (mg/L)	Sr (mg/L)	Th (mg/L)	Ti (mg/L)	Tl (mg/L)	U (mg/L)	V (mg/L)	Zn (mg/L)
Springs																	
Ancho Spring		3/12/2004	III	<0.001	<0.001	<0.0002	0.003	<0.001	<0.001	<0.001	0.058	<0.001	<0.001	<0.001	0.0004	0.008	<0.001
		2/2/2005	II	0.0035(J)	<0.00069	<0.00005	NA	<0.00028	NA	<0.0033	0.0613	NA	NA	0.00041(J)	NA	0.0076(J)	0.0012(J)
		9/19/2006	II	<0.0020	<0.0005	<0.0005	NA	0.0005	<0.0025	<0.0025	0.0605	NA	NA	<0.00040	0.00024	0.0062	0.0032(J*)
		2/24/2006	III	0.0010	<0.001	0.0014	0.0026	<0.001	<0.001	<0.001	0.055	<0.001	<0.002	<0.001	0.0003	0.007	<0.001
Spring 6		3/12/2004	III	<0.001	<0.001	<0.0002	0.003	<0.001	<0.001	<0.001	0.058	<0.001	<0.001	<0.001	0.0004	0.008	<0.001
		9/14/2004	II	0.0019(J)	<0.00069	<0.00005	NA	<0.00028	NA	<0.0033	0.0570	NA	NA	0.000026(J)	0.00036	0.0073	0.0055
		3/2/2005	III	0.0010	<0.001	<0.0002	0.0030	<0.001	<0.001	<0.001	0.057	<0.001	<0.001	<0.001	0.0003	0.008	0.001
		3/24/2005	III	<0.001	<0.001	<0.0002	0.0030	<0.001	<0.001	<0.001	0.056	<0.001	<0.001	<0.001	0.0004	0.009	<0.001
		4/29/2005	III	0.0012	0.050	<0.0002	0.0031	<0.001	<0.001	<0.001	0.056	<0.001	<0.001	<0.001	0.0004	0.008	0.032
		7/25/2005	III	<0.001	<0.001	<0.0002	0.0029	<0.001	<0.001	<0.001	0.058	<0.001	<0.001	<0.001	0.0004	0.007	0.001
	(Blind Intralaboratory Field Duplicate)	7/25/2005	III	<0.001	<0.001	<0.0002	0.0028	<0.001	<0.001	<0.001	0.059	<0.001	<0.001	<0.001	0.0004	0.007	0.001
		9/27/2005	III	<0.0020	<0.0005	<0.00005	NA	<0.00050	<0.0025	<0.0025	0.0592	NA	NA	<0.00040	0.0003	0.0073	<0.002
		9/19/2006	II	<0.0020	<0.0005	<0.0005	NA	<0.00050	<0.0025	<0.0025	0.0591	NA	NA	<0.00040	0.00027	0.0067	0.0037(J*)
Spring 6A																	
		5/1/2003	III	<0.001	<0.001	0.0001	0.003	<0.001	<0.001	<0.001	0.062	<0.001	<0.001	<0.001	0.0004	0.007	0.003
		10/7/2003	II	<0.0014	0.00104(B)	<0.00005	NA	<0.00028	NA	<0.0033	0.0635	NA	NA	<0.00002	0.000855	0.0111	<0.000883
		3/12/2004	III	0.0010	<0.001	<0.0002	0.003	<0.001	<0.001	<0.001	0.064	<0.001	<0.001	<0.001	0.0008	0.010	<0.001
		9/14/2004	II	0.0016(J)	<0.00069	<0.00005	NA	<0.00028	NA	<0.0033	0.0527	NA	NA	<0.00002	0.00071	0.0082	0.0043(J)
		9/27/2005	II	0.0021(J)	<0.0005	<0.0005	NA	<0.00050	<0.0025	<0.0025	0.0751	NA	NA	<0.00040	0.00093	0.0103	<0.002
		9/19/2006	II	<0.0020	<0.0005	<0.0005	NA	<0.00050	<0.0025	<0.0025	0.0694	NA	NA	0.00055(J)	0.00058	0.0109	0.0073(J*)
Spring 6AAA		5/1/2003	III	<0.001	<0.001	<0.0001	0.003	<0.001	<0.001	<0.001	0.045	<0.001	<0.001	<0.001	0.0003	0.006	0.004
		3/12/2004	III	0.0010	<0.001	0.0020	0.003	<0.001	<0.001	<0.001	0.049	<0.001	<0.001	<0.001	0.0002	0.006	<0.001
		3/2/2005	III	0.0011	0.001	<0.0002	0.0030	<0.001	<0.001	<0.001	0.048	<0.001	<0.001	<0.001	0.0002	0.007	0.002
		2/24/2006	III	0.0010	<0.001	0.0022	0.0029	<0.001	<0.001	<0.001	0.043	<0.001	<0.002	<0.001	0.0002	0.007	0.003
		9/19/2006	II	<0.0020	<0.0005	<0.0005	NA	<0.00050	<0.0025	<0.0025	0.0456	NA	NA	<0.00040	0.00019(J)	0.0056	0.0034(J*)
	(Blind Intralaboratory Field Duplicate)	9/19/2006	II	<0.0020	0.0006(J)	<0.0005	NA	<0.00050	<0.0025	<0.0025	0.0466	NA	NA	<0.00040	0.00019(J)	0.0061	0.0033(J*)
Spring 8A		10/7/2003	II	0.0023(B)	<0.00174(B)	<0.00005	NA	<0.00028	NA	<0.0033	0.0490	NA	NA	<0.00002	0.000058(B)	0.00738	<0.000883
		3/18/2004	III	<0.001	<0.001	<0.0002	0.0026	<0.001	<0.001	<0.001	0.043	<0.001	<0.001	<0.001	0.0003	0.009	<0.001
		1/26/2005	II	<0.0014	<0.0021(J)	<0.00005	NA	<0.00028	NA	<0.0033	0.0439	NA	NA	0.00028(J)	NA	0.0081	0.0013(J)
		9/28/2005	III	0.0011	<0.001	<0.0002	0.0026	<0.001	<0.001	<0.001	0.040	<0.001	<0.001	<0.001	0.0002	0.0084	<0.001
		9/19/2006	II	<0.0020	0.0006(J)	<0.0005	NA	<0.00050	<0.0025	<0.0025	0.0510	NA	NA	<0.00040	0.000085(J)	0.0059	0.0034(J)
Spring 9		10/8/2003	II	<0.0014	<0.00128(B)	<0.00005	NA	<0.00028	<0.00281	<0.0033	0.0492	NA	NA	<0.00002	0.000303	0.00588	<0.000883
	(Blind Intralaboratory Field Duplicate)	10/8/2003	II	<0.0014	0.00102(B)	NA	NA	NA	<0.00281	<0.0033	0.0502	NA	NA	NA	NA	0.00683	<0.000883
		3/12/2004	III	<0.001	<0.001	<0.0002	0.0025	<0.001	<0.001	<0.001	0.052	<0.001	<0.001	<0.001	0.0002	0.009	<0.001
		9/14/2004	II	0.0015(J)	<0.00069	<0.00005	NA	<0.00028	NA	<0.0033	0.0499	NA	NA	<0.00002	0.00025	0.0068	0.0045(J)
		9/28/2005	II	<0.0020	<0.0005	<0.0005	NA	<0.00050	<0.0025	<0.0033(J)	0.0485	NA	NA	<0.00040	0.0002	0.0073	<0.002
		2/3/2006	III	0.0011	<0.001	<0.0002	0.0025	<0.001	<0.001	<0.001	0.047	<0.001	<0.002	<0.001	0.0003	0.0084	0.001
		9/19/2006	II	0.0028(J)	<0.0005	<0.0005	NA	<0.00050	0.0025	<0.0025	0.0511	NA	NA	0.00054(J)	0.00014	0.0075	0.0053(J)

Table 4 - Summary Results of Dissolved Trace Elements.

Station ID	Date Sampled	Source Code	Mo (mg/L)	Ni (mg/L)	Pb (mg/L)	Rb (mg/L)	Sb (mg/L)	Se (mg/L)	Sn (mg/L)	Sr (mg/L)	Th (mg/L)	Ti (mg/L)	Tl (mg/L)	U (mg/L)	V (mg/L)	Zn (mg/L)
Spring 9A	10/8/2003	II	<0.0014	<0.00153(B)	0.000058(B)	NA	<0.00028	<0.00281	<0.0033	0.0490	NA	NA	<0.00002	0.000223	0.007	<0.000883
	3/12/2004	III	<0.001	<0.001	<0.0002	0.002	<0.001	<0.001	<0.001	0.052	<0.001	<0.001	<0.001	0.0003	0.008	<0.001
	9/14/2004	II	0.0015(J)	<0.00069	<0.00007(J)	NA	<0.00028	NA	<0.0033	0.0490	NA	NA	<0.00002	0.00073	0.0075	0.0057
	3/8/2005	III	0.0013	<0.001	<0.0002	0.0026	<0.001	<0.001	<0.001	0.049	<0.001	<0.001	<0.001	0.0003	0.009	<0.001
	4/29/2005	III	0.0012	0.049	<0.0002	0.0024	<0.001	<0.001	<0.001	0.047	<0.001	<0.001	<0.001	0.0003	0.008	0.031
	5/18/2005	III	0.0012	0.001	<0.0002	0.0021	<0.001	<0.001	<0.001	0.047	<0.001	<0.001	<0.001	0.0003	0.008	0.004
	7/20/2005	III	0.0012	<0.001	<0.0002	0.0023	<0.001	<0.001	<0.001	0.046	<0.001	<0.001	<0.001	<0.0002	0.008	0.001
	9/28/2005	II	0.0023(J)	<0.0005	0.00082(J)	NA	<0.00050	<0.0025	<0.0025	0.0491	NA	NA	<0.00040	0.00027	0.0078	0.002(J)
	2/3/2006	III	0.0011	<0.001	0.0011	0.0024	<0.001	<0.001	<0.001	0.047	<0.001	<0.002	<0.001	0.0003	0.0088	<0.001
	9/20/2006	II	<0.0020	<0.0005	<0.0005	NA	<0.00050	<0.0025	<0.0025	0.0490	NA	NA	<0.00040	0.00017(J)	0.0067	0.0022(J)
Spring 9B	3/12/2004	III	0.0012	<0.001	<0.0002	0.002	<0.001	<0.001	<0.001	0.052	<0.001	<0.001	<0.001	<0.0002	0.014	<0.001
	2/3/2006	III	0.0011	<0.001	0.0011	0.0023	<0.001	<0.001	<0.001	0.049	<0.001	<0.002	<0.001	0.0003	0.012	<0.001
Taos Area																
Regional and Intermediate Aquifers																
Springs - East Rio Grande																
AH-0.2 Spring	3/15/2004	III	0.0038	<0.001	0.0011	0.006	<0.001	<0.001	<0.001	0.271	<0.001	<0.001	<0.001	0.0059	0.004	<0.001
	9/27/2004	III	0.0042	0.001	0.0020	0.005	<0.001	<0.001	<0.001	0.251	<0.001	<0.001	<0.001	0.0046	0.004	0.003
	2/15/2005	III	0.0042	<0.001	<0.0002	0.005	<0.001	<0.001	<0.001	0.238	<0.001	0.001	<0.001	0.0058	0.004	0.001
	4/8/2005	III	0.0043	0.001	<0.0002	0.005	<0.001	<0.001	<0.001	0.234	<0.001	<0.001	<0.001	0.0053	0.004	0.002
	5/13/2005	III	0.0044	<0.001	<0.0002	0.006	<0.001	<0.001	<0.001	0.245	<0.001	<0.001	<0.001	0.0059	0.005	<0.001
	6/24/2005	III	0.0044	<0.001	<0.0002	0.005	<0.001	<0.001	<0.001	0.250	<0.001	<0.001	<0.001	0.0054	0.005	0.004
	7/22/2005	III	0.0045	<0.001	<0.0002	0.005	<0.001	<0.001	<0.001	0.246	<0.001	<0.001	<0.001	0.0061	0.005	0.002
Big Arsenic Spring	3/25/2004	III	0.0031	<0.001	0.0017	0.005	<0.001	<0.001	<0.001	0.188	<0.001	<0.001	<0.001	0.0027	0.005	0.002
	9/28/2004	III	0.0034	<0.001	0.0012	0.005	<0.001	<0.001	<0.001	0.171	<0.001	<0.001	<0.001	0.0022	0.006	0.002
DBN Spring	3/25/2004	III	0.0043	<0.001	0.0023	0.006	<0.001	<0.001	<0.001	0.232	<0.001	<0.001	<0.001	0.0027	0.005	<0.001
	9/27/2004	III	0.0047	0.001	0.0011	0.005	<0.001	<0.001	<0.001	0.209	<0.001	<0.001	<0.001	0.0025	0.005	0.002
RG1 Spring	3/25/2004	III	0.0031	<0.001	0.0022	0.005	<0.001	<0.001	<0.001	0.186	<0.001	<0.001	<0.001	0.0026	0.005	<0.001
	9/28/2004	III	0.0033	<0.001	0.0020	0.005	<0.001	<0.001	<0.001	0.177	<0.001	<0.001	<0.001	0.0022	0.005	0.001
Springs - West Rio Grande																
Big Spring	5/29/2004	III	0.0026	0.002	0.0033	<0.001	<0.001	<0.001	<0.001	0.694	<0.001	<0.001	<0.001	0.0018	0.014	0.009
	9/28/2004	III	0.0024	0.001	0.0014	0.001	<0.001	<0.001	<0.001	0.692	<0.001	<0.001	<0.001	0.0016	0.015	0.002
DBS Spring 1	3/15/2004	III	0.0042	<0.001	0.0013	0.009	<0.001	<0.001	<0.001	0.140	<0.001	0.002	<0.001	0.0024	0.035	<0.001
DBS Spring 2	3/15/2004	III	0.0088	<0.001	0.0014	0.011	<0.001	<0.001	<0.001	0.142	<0.001	0.002	<0.001	0.0018	0.024	<0.001
	9/27/2004	III	0.0096	<0.001	0.0016	0.012	<0.001	<0.001	<0.001	0.132	<0.001	0.002	<0.001	0.0013	0.025	0.004

Table 4 - Summary Results of Dissolved Trace Elements.

Station ID	Date Sampled	Source Code	Mo (mg/L)	Ni (mg/L)	Pb (mg/L)	Rb (mg/L)	Sb (mg/L)	Se (mg/L)	Sn (mg/L)	Sr (mg/L)	Th (mg/L)	Ti (mg/L)	Tl (mg/L)	U (mg/L)	V (mg/L)	Zn (mg/L)
Felsenmeere Spring	12/7/2003	III	0.0011	<0.001	0.0046	0.005	<0.001	<0.001	<0.001	0.166	<0.001	<0.001	<0.001	0.0023	0.010	<0.001
	5/5/2004	III	0.0014	<0.001	0.0014	0.005	<0.001	<0.001	<0.001	0.147	<0.001	<0.001	<0.001	0.0016	0.012	<0.001
	9/27/2004	III	0.0012	<0.001	0.0012	0.005	<0.001	<0.001	<0.001	0.149	<0.001	<0.001	<0.001	0.0015	0.012	0.003
Snowpack/Precipitation																
Snowpack																
Aspen Peak Snowpack	4/18/2003	III	<0.001	<0.001	0.0003	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	<0.0001	<0.001	0.049
	3/30/2004	III	<0.001	<0.001	0.0012	<0.001	<0.001	<0.001	<0.001	0.003	<0.001	<0.001	<0.001	<0.0002	<0.001	<0.001
Pajarito Mountain Snowpack	4/13/2003	III	<0.001	<0.001	0.0003	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	0.0002	<0.001	0.099
	3/25/2004	III	<0.001	<0.001	0.0019	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	<0.0002	<0.001	<0.001
Snow																
TA-21 Snow	11/30/2006	III	<0.001	<0.001	<0.0002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.0002	<0.001	0.005
Rain																
TA-8/9 Rain	8/23/2003	III	<0.001	<0.001	0.0002	<0.001	0.001	<0.001	<0.001	0.003	<0.001	<0.001	<0.001	<0.0001	<0.001	0.002
TA-21 Rain	8/11/2003	III	<0.001	<0.001	0.0004	<0.001	<0.001	<0.001	<0.001	0.007	<0.001	0.004	<0.001	<0.0001	<0.001	0.008
	8/17/2003	III	<0.001	<0.001	0.0002	<0.001	<0.001	<0.001	<0.001	0.005	<0.001	<0.001	<0.001	<0.0002	<0.001	0.002

Data Source Codes: II - LANL Water Quality Database; and III - LANL EES-6

J -The associated numerical value is an estimated quantity.

B - Reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL) but greater than or equal to the Instrument Detection Limit (IDL).

E - Reported value is estimated because of the presence of interference or percent difference between the parent sample and its serial dilution's concentration exceeds 10%

N - Spiked sample recovery not within control limits.

Table 5 - Summary Results of Stable Isotopes, Tritium, and Radiocarbon and Tritium-Helium Ages.

Station ID	Date Sampled	Source Code	delta ^{18}O ‰	delta ^{2}H ‰	Source Code	Tritium T.U.	Unc +/-TU	Apparent $^{3}H/^{3}He$ Age (year)	Unc (year)	delta ^{13}C - HCO_3 ‰	Fraction Modern Carbon (non-normalized)	Unadjusted 14C Ages 1 Sigma +/-	(years)	2 Sigma +/-
Los Alamos Area														
Zone 1 - Perched Sierra de Los Valles and Mountain Front Area														
Wells														
Pajarito Ski Well #2	5/19/2004	I	-12.39	-87.25	I	13.9	0.5	-	-	-	-	-	-	-
(Intralaboratory Duplicate)	5/19/2004	I	-12.28	-87.82	-	-	-	-	-	-	-	-	-	-
	9/22/2004	I	-12.11	-88.70	-	-	-	-	-	-	-	-	-	-
	10/6/2004	-	-	-	-	-	-	-	-	-	-	-	-	-
	3/2/2005	III	-12.18	-87.49	II	***10.44***	*0.17*	<62	-	-	-	-	-	-
	8/31/2005	III	-13.07	-87.73	II	***12.04***	*0.07*	1.07	0.37	-	-	-	-	-
	1/12/2006	III	-12.48	-87.81	-	-	-	-	-	-12.4	1.080	0.008	-668	62
Springs														
AL-10.6 Spring	5/26/2004	I	-11.88	-80.08	I	1	3	-	-	-	-	-	-	-
	5/12/2005	III	-12.00	-85.18	II	***3.12***	*0.13*	10.68	1.16	-	-	-	-	-
	6/15/2005	III	-11.93	-83.80	-	-	-	-	-	-	-	-	-	-
	7/13/2005	III	-11.83	-83.61	II	***2.10***	*0.03*	19.99	0.87	-	-	-	-	-
Barbara Spring	5/26/2004	I	-12.11	-80.41	I	-2	3	-	-	-	-	-	-	-
	9/20/2004	-	-	-	I	0.28	0.10			-	-	-	-	-
	3/29/2005	III	-11.77	-81.76	II	***0.39***	*0.12*	31.05	6.59	-	-	-	-	-
	5/12/2005	III	-11.94	-83.69	-	-	-	-	-	-	-	-	-	-
	6/15/2005	III	-11.90	-83.58	-	-	-	-	-	-	-	-	-	-
	7/13/2005	III	-11.70	-83.02	II	***0.58***	*0.01*	2.41	6.85	-15.0	0.729	0.003	2486	63
Campsite Springs	5/27/2004	I	-12.84	-80.94	-	-	-	-	-	-	-	-	-	-
	8/10/2004	I	-11.71	-81.46	I	0.13	0.10	-	-	-	-	-	-	-
	5/17/2005	III	-11.84	-84.40	II	***1.03***	*0.15*	33.01	2.90	-	-	-	-	-
	6/8/2005	III	-11.94	-82.69	-	-	-	-	-	-	-	-	-	-
	7/14/2005	III	-11.88	-83.23	II	***0.56***	*0.01*	50.47	0.81	-14.2	0.713	0.004	2662	94
	3/31/2006	III	-11.99	-82.88	-	-	-	-	-	-	-	-	-	-
(Intralaboratory Duplicate)	3/31/2006	III	-11.91	-83.97	-	-	-	-	-	-	-	-	-	-
(Intralaboratory Duplicate)	3/31/2006	III	-12.01	-	-	-	-	-	-	-	-	-	-	-
CDV-5.0 Spring	5/16/2004	-	-	-	I	22	3	-	-	-	-	-	-	-
	3/3/2005	III	-11.79	-83.76	II	***18.64***	*0.28*	11.65	0.26	-	-	-	-	-
	4/18/2005	III	-12.29	-85.78	-	-	-	-	-	-	-	-	-	-
	5/27/2005	III	-12.23	-85.14	-	-	-	-	-	-	-	-	-	-
	7/11/2005	III	-12.05	-83.73	II	***27.37***	*0.16*	<62	-	-	-	-	-	-
	12/23/2005	III	-12.30	-84.43	-	-	-	-	-	-9.2	1.139	0.005	-1102	59
(Blind Interlaboratory Field Duplicate)	12/23/2005	III	-12.26	-83.54	-	-	-	-	-	-8.2	1.129	0.008	-1026	119
	3/5/2006	III	-12.20	-84.08	-	-	-	-	-	-	-	-	-	-
(Intralaboratory Duplicate)	3/5/2006	III	-	-84.22	-	-	-	-	-	-	-	-	-	-
	8/24/2006	III	-11.54	-81.04	-	-	-	-	-	-	-	-	-	-
CDV-5.97 Spring	11/9/2006	III	-12.00	-84.30	-	-	-	-	-	-	-	-	-	-
Colonel Spring	9/16/2004	I	-12.16	-89.15	I	1	4	-	-	-	-	-	-	-

Table 5 - Summary Results of Stable Isotopes, Tritium, and Radiocarbon and Tritium-Helium Ages.

Station ID	Date Sampled	Source Code	delta ^{18}O ‰	delta ^{2}H ‰	Source Code	Tritium T.U.	Unc +/-TU	Apparent $^{3}H/^{3}He$ Age (year)	Unc (year)	delta ^{13}C - HCO_3 ‰	Fraction Modern Carbon (non-normalized)	Unadjusted 14C Ages 1 Sigma +/-	(years)	2 Sigma +/-
PC Spring	5/15/2004	I	-12.30	-84.45	I	15	3	-	-	-	-	-	-	-
	3/30/2005	III	-12.24	-86.29	II	***12.45***	*0.19*	1.25	0.37	-	-	-	-	-
	5/3/2005	III	-11.78	-84.53	-	-	-	-	-	-	-	-	-	-
	6/10/2005	III	-12.68	-88.42	-	-	-	-	-	-	-	-	-	-
	7/12/2005	III	-12.42	-88.56	II	***21.58***	*0.13*	0.38	0.22	-	-	-	-	-
	8/31/2006	III	-12.32	-85.26	II	12.49	0.09	-	-	-	-	-	-	-
(Blind Interlaboratory Field Duplicate)	8/31/2006	III	-12.25	-	-	-	-	-	-	-	-	-	-	-
Water Canyon Gallery Spring	3/4/2005	III	-12.17	-87.31	II	***2.154***	*0.003*	2.28	0.003	-	-	-	-	-
	4/18/2005	III	-11.99	-86.21	II	***8.03***	*0.21*	4.20	0.55	-	-	-	-	-
	5/27/2005	III	-12.11	-85.34	-	-	-	-	-	-	-	-	-	-
	7/11/2005	III	-12.00	-84.49	II	***6.56***	*0.06*	<62	-	-	-	-	-	-
(Blind Interlaboratory Field Duplicate)	7/11/2005	III	-12.17	-84.40	-	-	-	-	-	-	-	-	-	-
	9/23/2005	III	-12.47	-83.72	I	***3.508***	*0.035*	-	-	-15.7	1.006	0.004	-99	58
(Blind Interlaboratory Field Duplicate)	9/23/2005	III	-12.47	-83.72	-	-	-	-	-	-	-	-	-	-
	8/25/2006	III	-11.03	-77.59	-	-	-	-	-	-	-	-	-	-
(Blind Interlaboratory Field Duplicate)	8/25/2006	III	-10.91	-76.53	-	-	-	-	-	-	-	-	-	-
SPET-1.7 Spring	5/26/2004	I	-12.41	-86.70	I	11	3	-	-	-	-	-	-	-
Yak Spring	5/27/2004	I	-11.73	-79.00	I	32	3	-	-	-	-	-	-	-
Coffman Springs	12/4/2006	III	-11.47	-	-	-	-	-	-	-	-	-	-	-
Zone 3 - Perched Intermediate Pajarito Plateau														
LAOI(a)-1.1	12/2/2003	III	-11.37	-79.89	-	-	-	-	-	-	-	-	-	-
	6/3/2004	I	-11.03	-80.05	II	2.34	0.09	-	-	-	-	-	-	-
	3/4/2005	III	-11.14	-80.63	II	***1.77***	*0.09*	18.52	1.52	-	-	-	-	-
	3/7/2005	-	-	-	II	***1.77***	*0.09*	13.98	1.69	-	-	-	-	-
	5/7/2005	-	-	-	II	1.78	0.09	-	-	-	-	-	-	-
	8/4/2006	III	-11.39	-81.06	II	0.04	0.09	-	-	-12.3	1.829	0.016	-4903	143
(Blind Interlaboratory Field Duplicate)	8/25/2006	III	-11.12	-82.32	-	-	-	-	-	-	-	-	-	-
Sacred Spring	7/13/2005	III	-11.26	-80.25	I	***0.496***	*0.010*	-	-	-13.6	0.600	0.003	4045	68
	9/14/2006	III	-11.46	-79.59	II	3.55	0.09	-	-	-	-	-	-	-
Sandia Spring	1/28/2005	-	-	-	II	0.08	0.09	-	-	-	-	-	-	-
	9/8/2005	III	-11.34	-77.83	I	***0.247***	*0.005*	-	-	-14.2	0.641	0.003	3520	71
	9/14/2006	III	-10.90	-78.65	-	-	-	-	-	-	-	-	-	-
(Blind Interlaboratory Field Duplicate)	9/14/2006	III	-11.11	-	II	0.08	0.09	-	-	-13.2	0.620	0.003	3786	82
Zone 4 - Regional Aquifer														
Wells														
DPOGW4	9/30/2004	I	-11.11	-83.63	-	-	-	-	-	-	-	-	-	-

Table 5 - Summary Results of Stable Isotopes, Tritium, and Radiocarbon and Tritium-Helium Ages.

Station ID	Date Sampled	Source Code	delta ^{18}O ‰	delta ^{2}H ‰	Source Code	Tritium T.U.	Unc +/-TU	Apparent $^{3}H/^{3}He$ Age (year)	Unc (year)	delta ^{13}C - HCO_3 ‰	Fraction Modern Carbon (non-normalized)	Unadjusted 14C Ages 1 Sigma + / -	(years)	2 Sigma + / -
R-1	5/19/2005	III	-10.71	-76.37	II	***0.02***	*0.01*	>62	-	-	-	-	-	-
(Blind Interlaboratory Duplicate)	5/19/2005	-	-	-	II	0.07	0.09	-	-	-	-	-	-	-
	9/12/2005	III	-10.51	-75.31	II	***0.46***	*0.01*	>62	-	-14.9	0.640	0.004	3534	89
(Blind Intralaboratory Duplicate)	9/12/2005	III	-10.66	-75.91	-	-	-	-	-	-	-	-	-	-
(Blind Intralaboratory Duplicate)	9/12/2005	III	-10.50	-75.86	II	-0.05	0.09	-	-	-	-	-	-	-
(Blind Intralaboratory Duplicate)	9/12/2005	-	-	-	II	0.02	0.09	-	-	-	-	-	-	-
	11/28/2005	III	-10.91	-76.19	II	0.02	0.09	-	-	-	-	-	-	-
	1/25/2006	III	-10.83	-76.32	II	0.14	0.09	-	-	-	-	-	-	-
	7/6/2006	III	-10.87	-76.43	II	-0.10	0.09	-	-	-	-	-	-	-
(Blind Intralaboratory Duplicate)	7/6/2006	III	-10.98	-77.25	II	0.17	0.09	-	-	-	-	-	-	-
	10/26/2006	-	-	-	II	0.07	0.09	-	-	-	-	-	-	-
(Blind Intralaboratory Duplicate)	10/26/2006	-	-	-	II	0.01	0.09	-	-	-	-	-	-	-
R-2	12/11/2003	-	-	-	II	-0.07	0.09	-	-	-	-	-	-	-
	1/13/2004	-	-	-	II	0.07	0.09	-	-	-	-	-	-	-
	4/26/2005	III	-10.91	-75.06	II	-0.06	0.09	-	-	-	-	-	-	-
	8/9/2005	III	-10.71	-74.87	-	-	-	-	-	-	-	-	-	-
(Blind Intralaboratory Duplicate)	8/9/2005	III	-10.84	-74.76	II	8.53^	0.09	-	-	-14.9	0.589	0.003	4193	80
(Blind Intralaboratory Duplicate)	8/9/2005	III	-10.65	-75.05	-	-	-	-	-	-14.3	0.591	0.003	4177	86
(Blind Intralaboratory Duplicate)	8/9/2005	III	-	-75.37	-	-	-	-	-	-	-	-	-	-
(Blind Intralaboratory Duplicate)	8/9/2005	III	-	-76.32	-	-	-	-	-	-	-	-	-	-
	11/9/2005	III	-10.59	-74.96	II	0.09	0.09	-	-	-	-	-	-	-
	2/27/2006	III	-10.66	-75.89	II	0.10	0.09	-	-	-14.9	0.607	0.003	3951	91
	7/24/2006	III	-10.69	-75.92	II	-0.02	0.09	-	-	-	-	-	-	-
R-6	08/23/05	III	-10.42	-72.03	II	-0.04	0.09	-	-	-12.30	0.454	0.002	6283	79
(Blind Intralaboratory Duplicate/Re-analysis ^{3}H)	08/23/05	III	-10.42	-72.46	II	-0.06	0.09	-	-					
(Re-analysis ^{3}H)	08/23/05	-	-	-	II	0.05	0.09	-	-					
	11/17/05	III	-10.22	-72.59	II	-0.03	0.09	-	-					
(Re-analysis ^{3}H)	11/17/05	-	-	-	II	0.09	0.09	-	-					
	03/01/06	III	-10.54	-72.62	II	-0.13	0.09	-	-					
	05/11/06	III	-10.26	-74.10	II	0.05	0.09	-	-					
	07/26/06	III	-10.38	-73.19	II	-0.02	0.09	-	-	-12.40	0.462	0.002	6154	85
(Blind Intralaboratory Duplicate)	07/26/06	III	-10.30	-73.61	II	0.07	0.09	-	-					
R-16r	12/19/2005	-	-	-	II	0.15	0.09	-	-	-13.0	0.392	0.003	7462	113
	3/8/2006	III	-11.23	-78.95	II	-0.07	0.09	-	-	-	-	-	-	-
(Blind Intralaboratory Duplicate)	3/8/2006	III	-11.25	-79.39	II	-0.06	0.09	-	-	-	-	-	-	-
	5/24/2006	III	-11.07	-80.20	II	-0.02	0.09	-	-	-	-	-	-	-
	8/17/2006	III	-10.90	-82.05	II	-0.04	0.09	-	-	-12.40	0.410	0.002	7108	92
(Blind Intralaboratory Duplicate)	8/17/2006	III	-11.07	-81.13	II	-0.06	0.09	-	-	-	-	-	-	-
	11/1/2006	III	-11.11	?	II	0.01	0.09	-	-	-	-	-	-	-
R-17 Screen 1	10/19/2006	-	-	-		0.19	0.09	-	-	-	-	-	-	-

Table 5 - Summary Results of Stable Isotopes, Tritium, and Radiocarbon and Tritium-Helium Ages.

Station ID	Date Sampled	Source Code	delta ^{18}O ‰	delta ^{2}H ‰	Source Code	Tritium T.U.	Unc +/-TU	Apparent $^{3}H/^{3}He$ Age (year)	Unc (year)	delta ^{13}C - HCO_3 ‰	Fraction Modern Carbon (non-normalized)	1 Sigma +/-	Unadjusted 14C Ages (years)	2 Sigma +/-
R-18	8/25/2005	III	-11.95	-84.39	II	0.13	0.09	-	-	-14.9	0.921	0.004	604	71
(Blind Intralaboratory Duplicate)	8/25/2005	III	-12.10	-84.40	-	-	-	-	-	-	-	-	-	-
	12/1/2005	III	-11.93	-85.10	I	***0.477***	*0.010*	-	-	-	-	-	-	-
(Blind Intralaboratory Duplicate)	12/1/2005	III	-11.96	-85.13	II	-0.01	0.09	-	-	-14.8	0.929	0.004	536	72
(Blind Intralaboratory Duplicate)	12/1/2005	-	-	-	II	-0.03	0.09	-	-	-	-	-	-	-
	3/7/2006	III	-12.12	-84.68	II	2.28	0.09	-	-	-	-	-	-	-
	5/16/2006	III	-11.84	-84.70	II	0.70	0.09	-	-	-	-	-	-	-
(Blind Intralaboratory Duplicate)	5/16/2006	III	-11.97	-84.40	II	0.10	0.09	-	-	-	-	-	-	-
	8/16/2006	III	-11.85	-83.20	II	0.08	0.09	-	-	-	-	-	-	-
(Blind Intralaboratory Duplicate)	8/16/2006	III	-11.74	-83.87	II	0.01	0.09	-	-	-	-	-	-	-
R-21	3/31/2004	-	-	-	II	0.02	0.09	-	-	-	-	-	-	-
(Blind Intralaboratory Duplicate)	3/31/2004	-	-	-	II	-0.10	0.09	-	-	-	-	-	-	-
	6/30/2004	-	-	-	II	0.13	0.09	-	-	-	-	-	-	-
(Blind Intralaboratory Duplicate)	6/30/2004	-	-	-	II	-0.20	0.09	-	-	-	-	-	-	-
	9/23/2004	-	-	-	II	0.05	0.09	-	-	-	-	-	-	-
	12/14/2004	-	-	-	II	0.06	0.09	-	-	-	-	-	-	-
	6/6/2005	-	-	-	-	-	-	-	-	-13.6	0.621	0.003	3768	66
	7/7/2006	III	-9.13	-80.41	II	0.05	0.09	-	-	-	-	-	-	-
	11/6/2006	-	-	-	II	0.05	0.09	-	-	-	-	-	-	-
(Blind Intralaboratory Duplicate)	11/6/2006	-	-	-	II	-0.04	0.09	-	-	-	-	-	-	-
R-27	7/1/2006	-	-	-	II	-0.05	0.09	-	-	-	-	-	-	-
(Blind Intralaboratory Duplicate)	7/1/2006	-	-	-	II	0.04	0.09	-	-	-	-	-	-	-
R-34	6/7/2005	III	-10.92	-76.79	II	0.02	0.09	-	-	-	-	-	-	-
	9/7/2005	III	-10.89	-76.03	II	0.26	0.09	-	-	-13.7	0.424	0.002	6835	89
	9/7/2005	III	-10.69	-75.90	II	0.07	0.09	-	-	-	-	-	-	-
	9/7/2005	-	-	-	II	-0.05	0.09	-	-	-	-	-	-	-
	11/29/2005	III	-10.80	-76.63	II	-0.06	0.09	-	-	-	-	-	-	-
	11/29/2005	III	-10.80	-76.26	II	-0.03	0.09	-	-	-	-	-	-	-
	1/31/2006	III	-11.04	-76.20	II	0.08	0.09	-	-	-13.6	0.431	0.003	6709	114
	1/31/2006	III	-11.07	-76.31	II	0.06	0.09	-	-	-	-	-	-	-
	7/17/2006	III	-10.83	-76.35	II	0.11	0.09	-	-	-	-	-	-	-
	10/30/2006	-	-	-	II	-0.04	0.09	-	-	-	-	-	-	-
Test Well DT-5A	8/24/2005	III	-11.76	-79.76		-	-	-	-	-14.0	0.713	0.003	2663	76
	12/6/2006	III	-11.72	-81.06	II	0.09	0.09	-	-	-	-	-	-	-
Test Well DT-9	7/20/2005	III	-11.54	-79.73		-	-	-	-	-13.1	0.643	0.003	3499	76
(Blind Intralaboratory Duplicate)	7/20/2005	-	-	-		-	-			-13.2	0.646	0.003	3457	73
	12/5/2006	III	-11.60	-81.36	II	-0.02	0.09	-	-	-	-	-	-	-
Test Well DT-10	7/19/2005	III	-11.46	-79.44		-	-	-	-	-12.5	0.731	0.003	2465	72
(Intralaboratory Duplicate)	7/19/2005	III	-	-80.52		-	-	-	-	-	-	-	-	-
(Blind Intralaboratory Duplicate)	7/19/2005	III	-	-80.21		-	-	-	-	-	-	-	-	-
	12/4/2006	III	-11.36	-80.88	II	0.07	0.09	-	-	-	-	-	-	-
(Blind Intralaboratory Duplicate)	12/4/2006	III	-11.65	-80.47	II	0.00	0.09	-	-	-	-	-	-	-

Table 5 - Summary Results of Stable Isotopes, Tritium, and Radiocarbon and Tritium-Helium Ages.

Station ID Springs	Date Sampled	Source Code	delta ^{18}O ‰	delta ^{2}H ‰	Source Code	Tritium T.U.	Unc +/-TU	Apparent $^{3}H/^{3}He$ Age (year)	Unc (year)	delta ^{13}C - HCO_3 ‰	Fraction Modern Carbon (non-normalized)	Unadjusted 14C Ages 1 Sigma +/-	(years)	2 Sigma +/-
Ancho Spring	9/27/2005	III	-11.30	-	I	***0.316***	*0.006*	-	-	-14.0	0.624	0.003	3742	68
(Intralaboratory Duplicate)	9/27/2005	III	-11.36	-	I	***0.292***	*0.018*	-	-	-13.9	0.628	0.004	3679	94
	2/24/2006	III	-11.22	-77.22	II	-0.05	0.09	-	-	-13.7	0.603	0.004	4014	95
(Intralaboratory Duplicate)	2/24/2006	III	-10.98	-	-	-	-	-	-	-	-	-	-	-
	9/19/2006	III	-11.11	-79.42	II	0.05	0.09	-	-	-13.5	0.611	0.003	3901	83
(Blind Intralaboratory Duplicate)	9/19/2006	III	-11.08	-	-	-	-	-	-	-	-	-	-	-
Spring 6	9/14/2004	-	-	-	II	0.27	0.09	-	-	-	-	-	-	-
(Blind Intralaboratory Duplicate)	9/14/2004	-	-	-	II	0.16	0.09	-	-	-	-	-	-	-
	3/2/2005	III	-10.84	-76.89	I	***0.01***	*0.01*	>62	-	-	-	-	-	-
	3/24/2005	III	-11.01	-75.57	II	***0.01***	*0.01*	>62	-	-	-	-	-	-
	4/29/2005	III	-11.07	-75.93	-	-	-	-	-	-	-	-	-	-
	7/25/2005	III	-11.20	-74.45	II	***0.22***	*0.01*	38.66	3.33	-14.2	0.659	0.004	3296	84
(Blind Intralaboratory Duplicate)	7/25/2005	III	-11.54	-75.89	II	***0.23***	*0.01*	29.35	4.63	-	-	-	-	
	9/27/2005	III	-10.91	-76.36	I	***0.203***	*0.012*	-	-	-14.3	0.660	0.003	3286	64
	9/19/2006	III	-10.93	-77.50	II	0.18	0.09	-	-					
(Blind Intralaboratory Duplicate)	9/19/2006	III	-11.05	-	-	-	-	-	-					
Spring 6A	10/7/2003	-	-	-	II	-0.04	0.09	-	-	-	-	-	-	-
	9/14/2004	-	-	-	II	-0.03	0.09	-	-	-	-	-	-	-
	9/27/2005	III	-11.36	-77.21	I	***0.307***	*0.018*	-	-	-11.7	0.497	0.002	5565	79
	9/19/2006	III	-11.00	-	II	0.18	0.09	-	-	-	-	-	-	-
(Blind Intralaboratory Duplicate)	9/19/2006	III	-11.21	-76.93	-	-	-	-	-	-	-	-	-	-
Spring 6AAA	3/2/2005	III	-11.01	-79.04	-	-	-	-	-	-	-	-	-	-
	2/24/2006	III	-11.33	-78.70	-	-	-	-	-	-12.9	0.667	0.004	3194	96
(Intralaboratory Duplicate)	2/24/2006	III	-11.46	-	-	-	-	-	-	-	-	-	-	-
	9/19/2006	III	-11.23	-	II	0.03	0.09	-	-	-	-	-	-	-
(Blind Intralaboratory Duplicate)	9/19/2006	III	-11.37	-79.40	II	-0.06	0.09	-	-	-	-	-	-	-
(Blind Intralaboratory Duplicate)	9/19/2006	III	-11.45	-77.71		-	-	-	-	-	-	-	-	-
Spring 8A	10/7/2003	-	-	-	II	0.36	0.10	-	-	-	-	-	-	-
(Blind Intralaboratory Duplicate)	10/7/2003	-	-	-	II	0.28	0.09	-	-	-	-	-	-	-
	1/26/2005	-	-	-	II	0.04	0.09	-	-	-	-	-	-	-
	9/28/2005	III	-11.18	-78.53	I	***0.340***	*0.007*	-	-	-15.2	0.815	0.004	1592	74
	9/19/2006	III	-10.72	-	II	0.13	0.09	-	-	-	-	-	-	-
(Blind Intralaboratory Duplicate)	9/19/2006	III	-11.24	-78.22	-	-	-	-	-	-	-	-	-	-
Spring 9	10/8/2003	-	-	-	II	0.11	0.09	-	-	-	-	-	-	-
	9/14/2004	-	-	-	II	0.11	0.09	-	-	-	-	-	-	-
	9/28/2005	III	-11.60	-78.36	I	***0.299***	*0.018*	-	-	-	-	-	-	-
(Blind Intralaboratory Duplicate)	9/28/2005	III	-11.30	-78.92	I	***0.303***	*0.018*	-	-	-14.5	0.704	0.003	2770	67
(Intralaboratory Duplicate)	9/28/2005	III	-	-79.09	-	-	-	-	-	-14.9	0.698	0.003	2839	79
(Blind Intralaboratory Duplicate)	9/28/2005	III	-11.64	-79.16	-	-	-	-	-	-	-	-	-	-
(Intralaboratory Duplicate)	9/28/2005	III	-	-79.14	-	-	-	-	-	-	-	-	-	-
	9/19/2006	III	-11.36	-78.94	II	0.00	0.09	-	-	-14.1	0.818	0.004	1564	74
(Blind Intralaboratory Duplicate)	9/19/2006	III	-11.07	-										

Table 5 - Summary Results of Stable Isotopes, Tritium, and Radiocarbon and Tritium-Helium Ages.

Station ID	Date Sampled	Source Code	delta ^{18}O ‰	delta ^{2}H ‰	Source Code	Tritium T.U.	Unc +/-TU	Apparent $^{3}H/^{3}He$ Age (year)	Unc (year)	delta ^{13}C - HCO_3 ‰	Fraction Modern Carbon (non-normalized)	Unadjusted 14C Ages 1 Sigma + /	(years)	2 Sigma + /
Spring 9A	10/8/2003		-	-	II	0.28	0.09	-	-	-	-	-	-	-
	9/14/2004		-	-	II	0.03	0.09	-	-	-	-	-	-	-
	3/8/2005	III	-10.92	-79.76	II	***0.001***	*0.010*	>62	-	-	-	-	-	-
	4/29/2005	III	-11.11	-79.66	-	-	-	-	-	-	-	-	-	-
	5/18/2005	III	-11.39	-78.61	-	-	-	-	-	-	-	-	-	-
	7/20/2005	III	-11.24	-78.04	II	***0.022***	*0.004*	>62		-11.7	0.762	0.003	2133	71
	9/28/2005	III	-11.24	-79.07	I	***0.090***	*0.009*	-	-	-13.8	0.822	0.004	1525	76
	9/28/2005	-	-	-	-	-	-	-	-	-13.3	0.829	0.004	1449	75
	2/3/2006	III	-11.46	-78.76	-	-	-	-	-					
(Intralaboratory Duplicate)	2/3/2006	III	-	-79.31	-	-	-	-	-	-14.8	0.700	0.004	2813	81
(Intralaboratory Duplicate)	2/3/2006	III	-	-78.85	-	-	-	-	-	-	-	-	-	-
	9/20/2006	III	-11.27	-66.84	II	0.12	0.09	-	-	-	-	-	-	-
(Intralaboratory Duplicate)	9/20/2006	III	-11.27	-	-	-	-	-	-	-	-	-	-	-
Spring 9B	2/3/2006	III	-11.20	-78.09	-	-	-	-	-	-12.0	0.617	0.003	3825	85
(Intralaboratory Duplicate)	2/3/2006	III	-	-78.16	-	-	-	-	-	-	-	-	-	-
(Intralaboratory Duplicate)	2/3/2006	III	-	-78.33	-	-	-	-	-	-	-	-	-	-

Taos Area

Regional and Intermediate Aquifers

Springs - East Rio Grande

AH-0.2 Spring	3/15/2004	III	-13.73	-95.84	I	5.93	0.21	-	-	-	-	-	-	-
	2/15/2005	III	-13.52	-99.20	I	***6.46***	*0.10*	21.26	0.41	-	-	-	-	-
	4/8/2005	III	-13.48	-99.67	II	***6.11***	*0.15*	25.26	0.51	-	-	-	-	-
	5/13/2005	III	-13.45	-99.31		-	-	-	-	-	-	-	-	-
	6/24/2005	III	-13.53	-97.86		-	-	-	-	-	-	-	-	-
	7/22/2005	III	-13.73	-97.64	II	***6.49***	*0.06*	22.23	0.32	-11.9	0.887	0.004	912	76
(Blind Intralaboratory Duplicate)	7/22/2005	-	-	-	II	***6.51***	*0.06*	23.27	0.31	-	-	-	-	-
	11/9/2005	III	-13.53	-99.20	-	-	-	-	-					
Big Arsenic Spring	3/25/2004	I	-13.55	-96.36	I	0.50	0.09	-	-	-	-	-	-	-
	11/9/2005	III	-13.09	-101.35	-	-	-	-	-	-	-	-	-	-
DBN Spring	3/25/2004	I	-13.99	-94.76	I	4.45	0.16	-	-	-	-	-	-	-
	11/9/2005	III	-13.69	-99.01	-	-	-	-	-	-	-	-	-	-
(Intralaboratory Duplicate)	11/9/2005	III	-	-99.15	-	-	-	-	-	-	-	-	-	-
RG1 Spring	3/25/2004	I	-14.07	-95.00	I	0.79	0.09	-	-	-	-	-	-	-
	11/9/2005	III	-13.27	-100.50	-	-	-	-	-	-	-	-	-	-

Table 5 - Summary Results of Stable Isotopes, Tritium, and Radiocarbon and Tritium-Helium Ages.

Station ID Springs - West Rio Grande	Date Sampled	Source Code	delta ^{18}O ‰	delta ^{2}H ‰	Source Code	Tritium T.U.	Unc +/-TU	Apparent $^{3}H/^{3}He$ Age (year)	Unc (year)	delta ^{13}C - HCO_3 ‰	Fraction Modern Carbon (non-normalized)	Unadjusted 14C Ages 1 Sigma +/-	(years)	2 Sigma +/-
Big Spring	5/29/2004	I	-14.55	-103.87	I	-0.02	0.09	-	-	-	-	-	-	-
(Blind Interlaboratory Field Duplicate)	5/29/2004	III	-14.51	-105.29	I	-0.01	0.09	-	-	-	-	-	-	-
	5/29/2004	III	-14.27	-	-	-	-	-	-	-	-	-	-	-
	11/18/2005	III	-13.97	-106.78	-	-	-	-	-	-	-	-	-	-
DBS Spring 1	3/15/2004	I	-14.30	-100.02	I	0.11	0.10	-	-	-	-	-	-	-
DBS Spring 2	3/15/2004	I	-14.24	-104.66	I	-0.11	0.10	-	-	-	-	-	-	-
Felsenmeere Spring	5/5/2004	I	-14.55	-99.76	I	0.12	0.09	-	-	-	-	-	-	-
(Blind Interlaboratory Field Duplicate)	5/5/2004	III	-14.37	-104.41	-	-	-	-	-	-	-	-	-	-
(Intralaboratory Duplicate)	5/5/2004	III	-14.29	-	-	-	-	-	-	-	-	-	-	-
	11/10/2005	III	-13.81	-106.25	-	-	-	-	-	-	-	-	-	-
										-	-	-	-	-

Data Source Codes for Stable Isotopes: I - NMED DOE OB through University of Miami 's Rosenstiel School of Marine and Atmospheric Science Laboratory ; III - LANL EES-6 IRMS Laboratory
Data Source Codes for Tritium: I - NMED DOE OB through University of Miami's Tritium Laboratory ; II - LANL Water Quality Data Base an Longmire et al., 2007.
Italicized tritium results derived from the ingrowth method at the University of Miami Noble Gas Isotope Lab
Tritium results, unless noted otherwise, were provided by the University of Miami Tritium Laboratory using the low-level electrolytic enrichment method
All radiocarbon and delta 13C results provided by NMED DOE OB through NSF - Arizona Accelerator Mass Spectrometry Laboratory at the University of Arizona
^ - Elevated tritium activity for R-2 may be attributed to cross contaminantion; result was not used for averaging purposes nor in the criteria for Zone 4.