# Geologic and Hydrologic Maps of the Ancha Formation, Santa Fe County, New Mexico

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Open File Report 550

New Mexico Bureau
of Geology and
Mineral Resources

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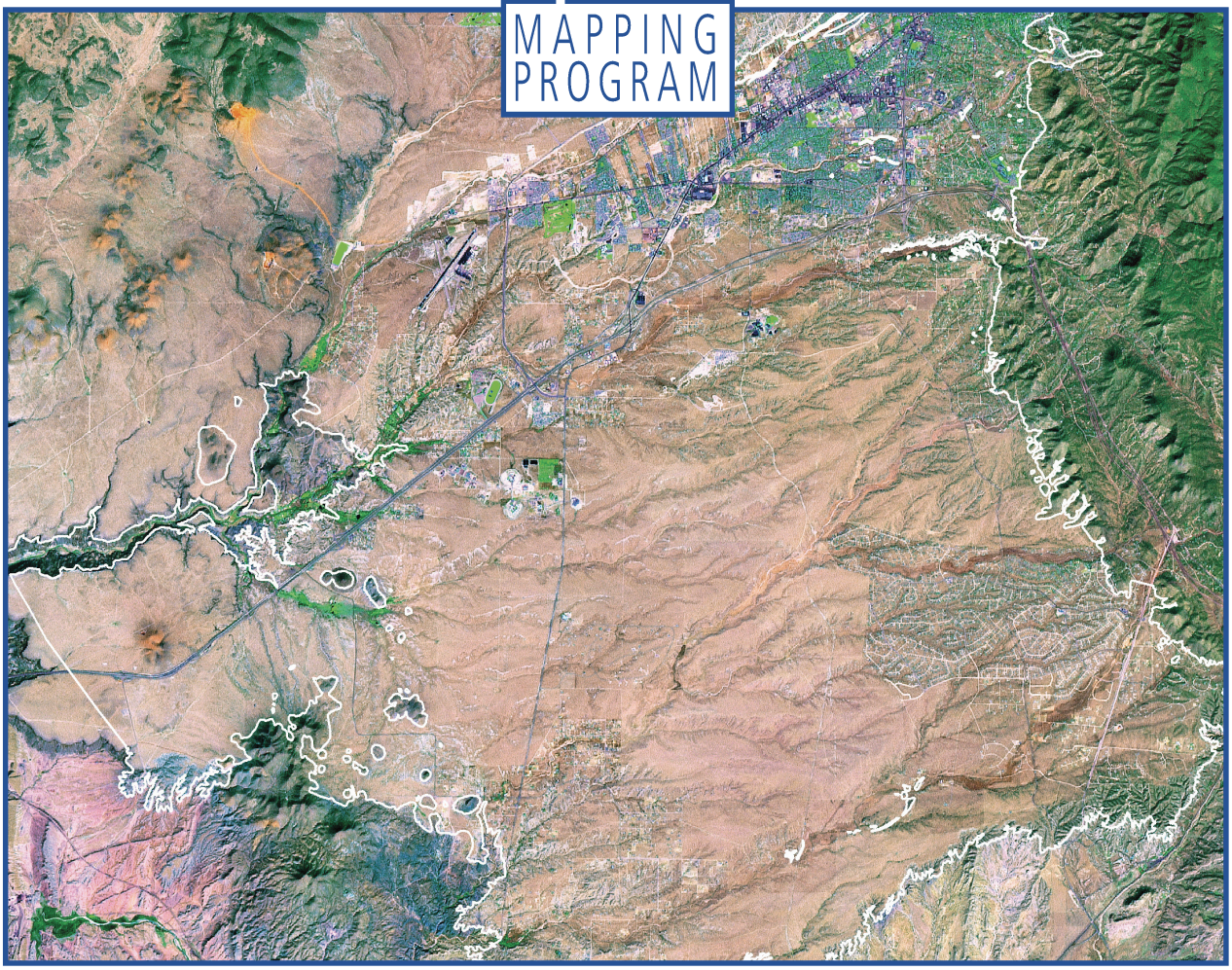
AQUIFER MAPPING PROGRAM



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# ABSTRACT

The Pliocene to lower Pleistocene Ancha Formation, upper Santa Fe Group, is a relatively coarse deposit found south and west of Santa Fe, northern New Mexico. It extends southward from the down-dropped southern Española Basin of the Rio Grande rift onto a weakly faulted structural platform that extends to the Rio Galisteo, a distance of approximately 30 km (19 mi). The Ancha Formation is found as far west as the La Bajada escarpment (also ~30 km distance). The Ancha Formation is texturally variable but predominately a sand to gravelly sand, with clayey-silty, fine-grained sand increasing towards the southwest. Examination of well logs indicates that the lower part of the Ancha Formation is commonly gravelly. Due in part to its relative coarseness, the Ancha Formation forms a locally important shallow aquifer for the Santa Fe area. The characteristics of the formation's base and its thickness are important to regional groundwater studies and are also useful for other studies involving basin stratigraphy, structure, geophysical interpretations, and basin evolution. The base of the Ancha Formation coincides with a Pliocene erosional surface overlying tilted and faulted beds of the Tesuque Formation (upper Oligocene-upper Miocene), the Espinaso Formation (upper Eocene to lower Oligocene), the Galisteo Formation (Eocene), and, locally, older Mesozoic and Paleozoic units. In order to characterize the thickness and the basal contact of the Ancha Formation, three data sets were evaluated: (1) cuttings and geophysical logs of key exploration drill holes and water wells, including monitoring wells; (2) lower resolution, generalized lithologic logs from water wells; and (3) outcrop exposures of the basal contact. This report presents the latest lithologic, thickness, and hydrologic observations for the Ancha Formation in the Santa Fe embayment in the form of four map plates: (1) Plate 1, elevation contour map of the base of the Ancha Formation; (2) Plate 2, isopach map showing thickness of the Ancha Formation; (3) Plate 3, saturated thickness of the Ancha Formation (2000 to 2005 conditions); and (4) Plate 4, subcrop geologic map showing distribution of strata underlying the Ancha Formation. Supporting data are presented in five tables.

# INTRODUCTION AND PURPOSE

The Pliocene to lower Pleistocene Ancha Formation constitutes the upper basin fill unit of the Santa Fe Group in the Santa Fe area, New Mexico (Figs. 1, 2 and 3). This formation occurs throughout the Santa Fe embayment, a geographic area bounded by the Sangre de Cristo Mountains to the east, Galisteo Creek to the south, the Cerrillos Hills to the southwest, basalt-capped mesas of the Cerros del Rio volcanic field to the northwest, and the Santa Fe uplands north of the Santa Fe River. The Ancha Formation extends ~30 km (19 mi) southward from the City of Santa Fe to bluffs overlooking the Rio Galisteo and ~30 km westward to the La Bajada escarpment and White Rock Canyon, where it underlies the Cerros del Rio basalts (Koning and Read, 2010; its westernmost outcrops are too small to show on Fig. 2). Thin Ancha deposits also extend ~26 km northwest to Buckman. The Ancha Formation consists of granite-dominated gravel, arkosic sand, and silt-clay derived from the southwestern flank of the Sangre de Cristo Mountains. It is mostly non-cemented and weakly consolidated, and over most of its extent it unconformably overlies the Tesuque Formation (upper Oligocene to upper Miocene), although near its southern and southwestern margins it overlies a variety of older formations. The Ancha Formation is generally coarser grained, less consolidated, and more permeable than the underlying formations. The Ancha and Tesuque Formations are part of the Santa Fe Group and form the region's primary aquifer, known as the Santa Fe Group aquifer or the Tesuque aquifer system (Spiegel and Baldwin, 1963).

The main purpose for our studying the extent, geologic characteristics, structure, and geometry of the Ancha Formation is to gain insight into its hydrogeologic properties and better understand its hydrologic significance. This report presents the latest lithologic, thickness, and hydrologic observations for the Ancha Formation in the Santa Fe embayment in the form of four map plates: (1) Plate 1, elevation contour map of the base of the Ancha Formation; (2) Plate 2, isopach map showing thickness of the Ancha Formation; (3) Plate 3, saturated thickness of the Ancha Formation (2000 to 2005 conditions); and (4) Plate 4, subcrop geologic map showing distribution of strata underlying the Ancha Formation. Site data controlling depth to base of formation, formation thickness, saturated thickness, and subcrop formation are presented in Tables 1 through 5.

## Previous Work

The Ancha Formation was originally described by Spiegel and Baldwin (1963, pp. 45-50) as the arkosic gravel, sand, and silt deposit of

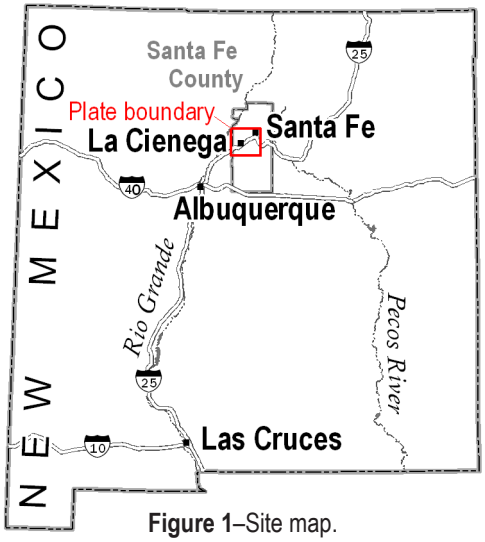



**Figure 1**–Site map.

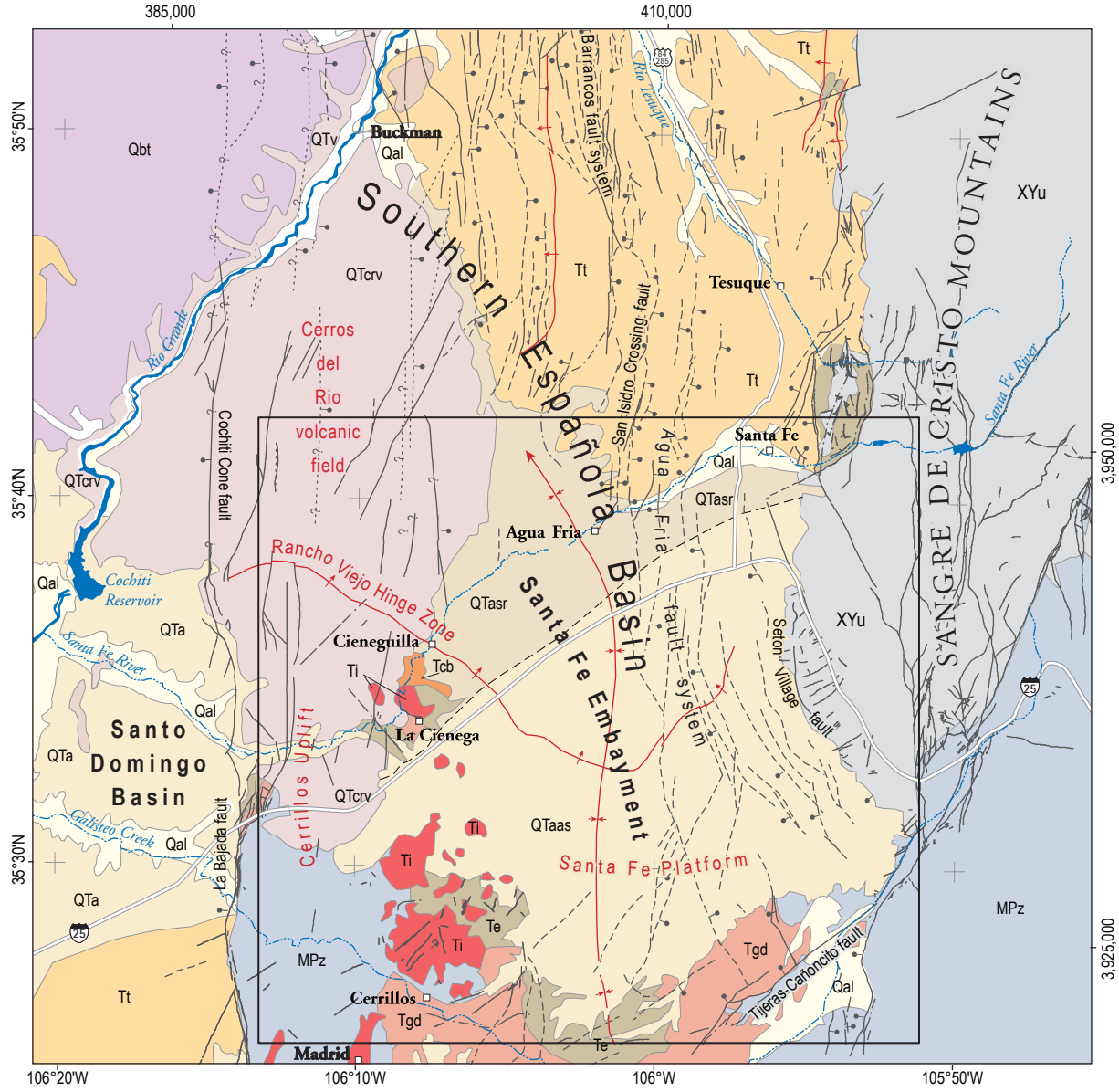



**Figure 2**–Generalized geologic map of the southern Española Basin.

Pliocene-Pleistocene age that lies with angular unconformity upon moderately tilted Tesuque Formation in the vicinity of Santa Fe. Spiegel and Baldwin (1963) also included the Ancha Formation as the uppermost unit of the Santa Fe Group in the Santa Fe area.

Recent mapping and sedimentologic studies in and near the Santa Fe embayment (Koning and Hallett, 2002; Koning and Maldonado, 2002; Koning et al., 2002; Koning and Johnson, 2004, 2005) elucidated the thickness, extent, and textural variability of the Ancha Formation. Based on outcrop and subsurface data, Koning et al. (2002) demonstrated that the Ancha Formation is generally 10-90 m (33-295 ft) thick and pinches out against older and topographically higher Tesuque Formation deposits north of the Santa Fe River. Koning and Johnson (2004) conducted a detailed geologic examination of the Ancha Formation, including its basal contact, differentiated ancestral Santa Fe River deposits from alluvial slope sediment deposited by smaller drainages, and approximately delineated coarse versus fine textural zones. The geologic map of Koning and Read (2010) depicts the extent of the Ancha Formation near the Bajada escarpment and Rio Galisteo; they also include a previous version of a subcrop geologic map of the Santa Fe embayment.

Interpretations of aeromagnetic and gravity data by Grauch et al. (2009) showed that: (1) the west-tilted southern Española Basin shallows progressively southward until it reaches the Rancho Viejo hinge zone (Fig. 2), south of which lies the Santa Fe platform; and (2) Santa Fe Group sediments on this platform (i.e., Ancha and Tesuque Formations) thicken over local irregularities and paleovalleys incised into upper Eocene and Oligocene volcaniclastic rocks of the Espinaso Formation.

Zane Spiegel was the first to discuss the hydrogeologic significance of the Ancha Formation (Spiegel and Baldwin, 1963, pp. 135-138) and proposed that differences in permeability between the Ancha and pre-Ancha formations largely controlled accumulation of groundwater in the formation. Spiegel further suggested that the topography of the "bedrock floor" (pre-Tesuque formations) is the major factor controlling the thickness and the zone of saturation in the Ancha Formation. However, at that time, there were insufficient reliable geologic, hydrologic, and geophysical data available to determine the details of the sub-Ancha topography. More recent efforts to map the locations of paleovalleys at the base of the Ancha Formation by HydroScience Associates, Inc. (2004) were also unsuccessful due to insufficient geologic information. Spiegel discussed groundwater recharge and discharge for the Ancha Formation in detail (Spiegel and Baldwin, 1963, pp. 136-137), suggesting that groundwater recharge into the Ancha Formation is largely by infiltration from the perennial flow and flood runoff of arroyos that drain the lower foothills of the Sangre de Cristo Mountains and, to a lesser extent, by direct infiltration of rainfall into the aquifer in wet years. Perhaps Spiegel's most significant hydrogeologic insight was to propose that groundwater discharge from the Ancha Formation was controlled by incision of arroyos into or through the Ancha Formation and the topography of the bedrock floor. Spiegel perceptively noted that "[s]prings emerge where pre-Ancha valleys, cut into the bedrock floor, have been exposed along the sides of post-Ancha valleys. Where these post-Ancha valleys are cut below the water table in the Ancha, springs and seeps emerge into the valley floors and lower side slopes."

**Methods**

The base of the Ancha Formation was mapped using lithologic interpretations of drill-hole cuttings (New Mexico Bureau of Geology and Mineral Resources, core and cutting archives, Socorro, NM), descriptive lithologies and geophysical logs from exploration and water well records, field outcrop exposures (Koning and Johnson, 2004), stratigraphic contacts from geologic maps (Koning and Read, 2010, and maps cited therein; Koning and Hallett, 2002).

Coordinates for data-site locations were derived from a combination of sources, including (from highest to lowest data quality): handheld GPS devices at the data site, coordinates reported by professional consultants and the New Mexico Office of the State Engineer, consultant map locations, Santa Fe County's ArcGIS plat map coverage and lot locator database, and township-range-section locations reported on well records on file with the New Mexico Office of the State Engineer (NMOSE). Surface elevations of data sites were generated using the 10-meter digital elevation model from the National Elevation Dataset (http://ned.usgs.gov/). Basal elevations of the Ancha Formation were calculated by subtracting the formation's basal depth from the surface elevation. Therefore, in some cases, small thicknesses of late-Pleistocene to Holocene surficial deposits were incorporated into thickness estimates for the Ancha Formation. Base elevation contours were interpolated from point data using a kriging function in ArcGIS and then smoothed by hand. Saturated thickness estimates for the Ancha Formation were calculated from a subset of wells used to map the formation base, combined with additional wells with NMOSE well records that met the following data requirements: full or nearly full penetration of the formation by the water well, a known location, an interpretable lithologic record, and a measured or otherwise reliable water level. Thickness and depth are reported in English units of feet, rather than metric, in order to be consistent with original data sources.

# THE ANCHA FORMATION IN THE SANTA FE EMBAYMENT

**Geologic Setting and History**

The Española Basin is one of a series of structural basins in the Rio Grande rift, which formed during crustal extension starting in the late Oligocene (Kelley, 1956; Spiegel and Baldwin, 1963; Chapin, 1971; Smith, 2004). The thick section of sediments that fills the basin was derived from erosion of surrounding highlands as the basins tectonically subsided over the past 28 million years (Koning et al., in press). These sediments include the Tesuque and Ancha Formations (belonging to the Santa Fe Group) and consist of sand, silt, clay, and gravel locally interbedded with minor volcanic flows and ashes (Spiegel and Baldwin, 1963; Galusha and Blick, 1971).

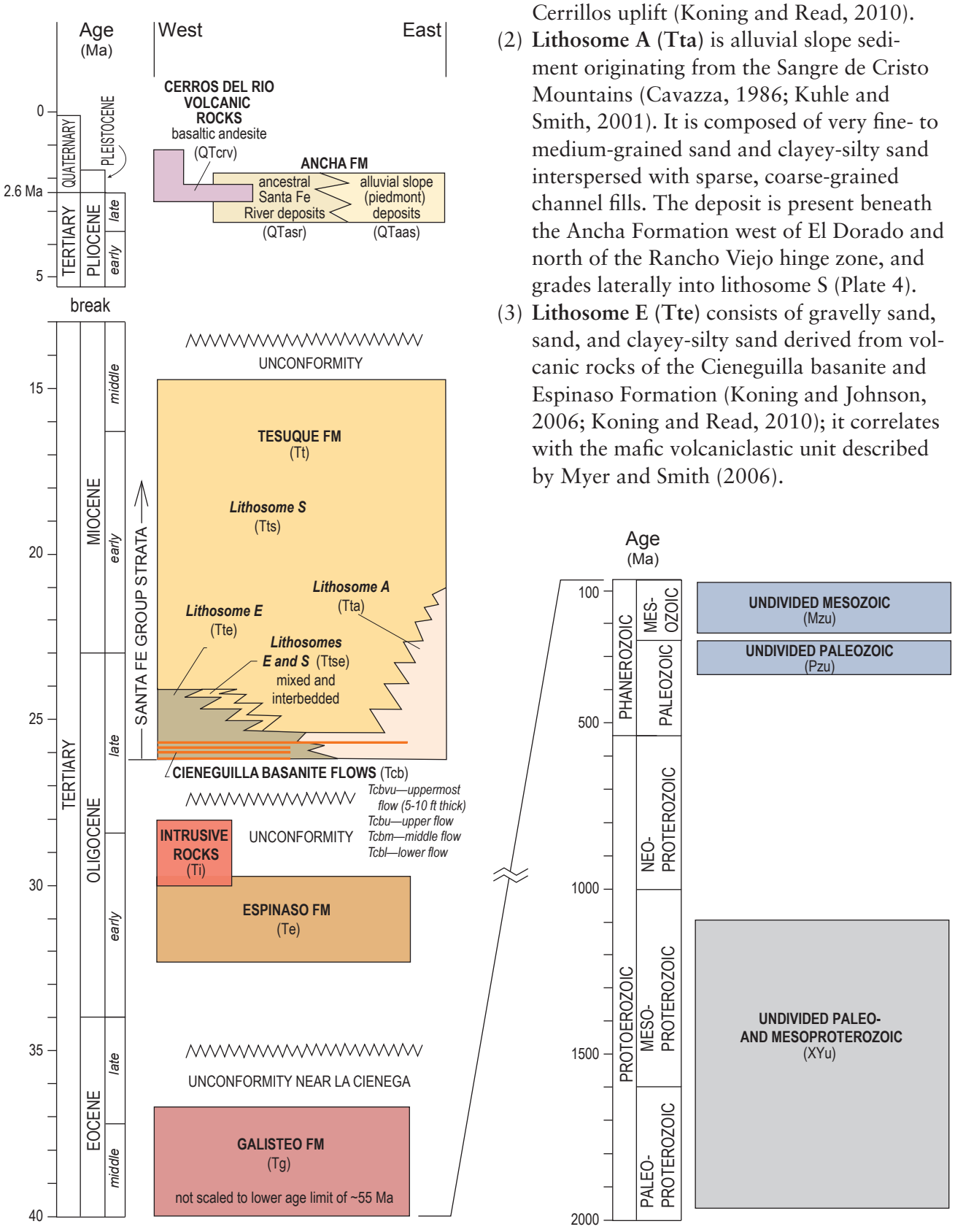
Geophysical data and geologic mapping indicate that the southern Española Basin is a west-tilted half-graben (Biehler et al., 1991; Koning et al., 2003; Grauch et al., 2009; Koning et al., in press). This graben is bounded on the south by a north-down, structural flexure called the Rancho Viejo hinge zone (Fig. 2; Grauch et al., 2009). The Santa Fe Group progressively thins southward towards this hinge zone. South of the hinge zone, on the Santa Fe platform, Santa Fe Group sediments average about 75 m (246 ft) thick (Grauch et al., 2009). Over much of the Santa Fe platform, the Ancha Formation unconformably overlies relatively thin Tesuque Formation. The Tesuque Formation, in turn, unconformably overlies eroded, upper Eocene-lower Oligocene volcanic and volcaniclastic rocks of the Espinaso Formation; locally, the Tesuque and Ancha Formations may overlie older rock units (Koning and Read, 2010). The Rancho Viejo hinge zone deforms the Tesuque Formation and lower Tertiary and older units and does not appear to notably affect the Ancha Formation (Grauch et al., 2009).

The Cerrillos uplift forms a structural boundary along the southwest side of the Santa Fe embayment (Fig. 2). This north-plunging, structural high is covered by relatively thin Santa Fe Group strata (including both the Ancha and Tesuque Formations) and lavas of the 1 to 3 million-year-old Cerros del Rio volcanic field (primarily 2.7-2.2 million-years-old; Thompson et al., 2006). Santa Fe Group sediments thicken to the northeast of this feature (Grauch et al., 2009).

In the Santa Fe area, the Tesuque Formation (upper Oligocene to upper Miocene) forms the bulk of the Santa Fe Group basin fill. The formation is subdivided into interfingering map units called lithosomes (Koning and Johnson, 2006; Koning and Read, 2010) that correspond to deposits from particular regional paleodrainage systems (Fig. 3). In the Santa Fe embayment, there are three significant lithosomes:

(1) **Lithosome S (Tts)**, deposited on a west-sloping fluvial fan by an ancestral Santa Fe River (Koning et al., 2004; Koning and Read, 2010), is a coarse, pebbly sand that becomes increasingly finer-grained away from the fan axis. In the western Santa Fe embayment, it is composed of reddish sand and pebbly sand channel-fills that are interbedded with floodplain deposits of clay, silt-clay, and very fine- to fine-grained sand. The floodplain deposits can often act as aquitards, locally creating confined aquifer conditions. Under the Santa Fe airport is a particularly large body of floodplain and paludal sediment that likely formed in a region of very low slopes between the toes of the west-sloping,

**Figure 3**–Stratigraphy of the southern Española Basin with age on the vertical axis.




ancestral Santa Fe River fluvial fan and east-sloping, volcaniclastic fans derived from the Cerrillos uplift (Koning and Read, 2010).

(2) **Lithosome A** (**Tta**) is alluvial slope sediment originating from the Sangre de Cristo Mountains (Cavazza, 1986; Kuhle and Smith, 2001). It is composed of very fine- to medium-grained sand and clayey-silty sand interspersed with sparse, coarse-grained channel fills. The deposit is present beneath the Ancha Formation west of El Dorado and north of the Rancho Viejo hinge zone, and grades laterally into lithosome S (Plate 4).

(3) **Lithosome E** (**Tte**) consists of gravelly sand, sand, and clayey-silty sand derived from volcanic rocks of the Cieneguilla basanite and Espinaso Formation (Koning and Johnson, 2006; Koning and Read, 2010); it correlates with the mafic volcaniclastic unit described by Myer and Smith (2006).

Lithosomes E, A, and S interfinger with one another (Fig. 3) and overlie the Espinaso Formation. A subunit of lithosome E, called Tteg on Plate 4, is probably stratigraphically higher than the main body of lithosome E and interfingers with lithosomes S and A. It is inferred to fill a paleovalley east of Turquoise Hill, and is recognized by the presence of: (1) green volcanic grains (probably olivine or pyroxene) and hornfels grains; and (2) fluvial channel-fill and floodplain deposits (contrasting to the alluvial fan facies of the main body of lithosome E, which generally lacks floodplain deposits). Within lithosome E are tongues of the Cieneguilla basanite. This volcanic rock is further described by Stearns (1953), Sun and Baldwin (1958), Koning and Hallett (2002), and Sawyer et al. (2002). Deposition of the Tesuque Formation continued until about 8 Ma in the study area (Koning et al., 2002), after which was a prolonged period of erosion.

**Ancha Formation**

Sedimentation and volcanism resumed in the southern Española Basin about 3 Ma, beginning with deposition of the Ancha Formation (Koning et al., 2002). These coarse sediments were derived from the Sangre de Cristo Mountains and deposited on top of the Tesuque Formation by west-flowing, alluvial slope streams (QTaas) and the ancestral Santa Fe River (QTasr) (Figs. 2 and 3). Because of tectonic tilting during the preceding 5 million years, an angular unconformity separates the Ancha Formation from the older Tesuque Formation (Spiegel and Baldwin, 1963; Koning et al., 2002; Koning and Johnson, 2004). Deposition of the Ancha Formation ceased between 1.5 and 1.2 Ma (Koning et al., 2002).

The Ancha Formation is a sand, gravelly sand, and silty-clayey sand deposit that forms a locally important, shallow aquifer for the Santa Fe area. The Ancha Formation consists of two alluvial deposits (Koning and Johnson, 2004, 2005): (1) sediment associated with the ancestral Santa Fe River (QTasr), and (2) alluvial slope sediment deposited by smaller streams originating from the southwestern Sangre de Cristo Mountains (QTaas) (Figs. 2 and 3). The ancestral Santa Fe River deposits contain abundant, laterally extensive, thick, sandy pebble-cobble channel-fills interspersed with fine-grained floodplain sediments of clayey-silty sand. In contrast, exposures of upper alluvial slope deposits contain narrow, ribbon-like channel-fills interbedded with very fine- to medium-grained sand and clayey-silty sand. In the subsurface, the lower alluvial slope deposits are generally coarse grained, often containing cobbles and boulders, and these coarse deposits locally are quite thick (up to 120 ft). In general, Ancha sediments are coarser, less consolidated, and more permeable than underlying strata. The base of the Ancha Formation coincides with a late Miocene to early Pliocene erosion surface that has truncated tilted and faulted beds of the underlying Tesuque, Espinaso, and Galisteo Formations. The characteristics of the formation's base, thickness, grain size, and permeability are significant to the understanding many geologic processes in the basin, from groundwater flow to paleogeography to tectonic evolution of this part of the Rio Grande rift.

**Geologic and Hydrologic Maps of the Ancha Formation**

Previous work has proposed that storage of groundwater and saturation of the Ancha Formation in the Santa Fe Group aquifer is controlled by three factors: (1) permeability contrasts between the Ancha and pre-Ancha formations; (2) the topography of the erosion surface at the base of the formation; and (3) sources of recharge or inflow to the formation (Spiegel and Baldwin, 1963; Johnson et al., 2008). Because of its importance as a shallow, productive zone in the upper Santa Fe Group aquifer, the Ancha Formation has recently been a focus of new studies in the Española Basin to address these hypotheses. A series of maps are presented here that depict the elevation of

the structural base (Plate 1), thickness (Plate 2), extent of groundwater saturation (Plate 3), and subcrop formations (Plate 4) for the Ancha Formation.

The elevation contour map of the base of the formation (Plate 1, Table 1) is essentially a "paleo-topographic" map of the pre-Ancha landscape at the time Ancha deposition began. Thus, the map illustrates general locations of valleys, ridges, and hills in the ancient, pre-Ancha land surface. A significant finding derived from mapping the base of the Ancha Formation is the delineation of paleovalleys on the pre-Ancha erosion surface. Two regional, pre-Ancha paleovalleys are depicted on Plate 1, which appear to merge near La Cienega. The El Dorado paleovalley originates in the southern Sangre de Cristo Mountains near El Dorado and trends towards La Cienega. Lithologic logs from wells completed in the El Dorado paleovalley indicate the presence of cobble- and boulder-sized materials, suggesting that paleovalley deposits may generally be coarser than the rest of the Ancha Formation.

A second pre-Ancha paleovalley associated with an ancestral Santa Fe River trends from the modern Santa Fe River canyon in the Sangre de Cristo Mountains towards La Cienega and generally aligns with the present-day course of Arroyo Hondo and Arroyo de los Chamisos. Using the location of outcrops of Ancha Santa Fe River sediment (QTasr) inset into the Cieneguilla basanite on the east side of Cienega Creek, north of Canorita de las Bacas, we interpret that the ancestral Santa Fe River drainage crossed present-day Cienega Creek and converged with the El Dorado paleovalley 1.5 km (0.9 mi) east of La Cienega. From there, the merged rivers may have either flowed west down present-day Guicu Creek before turning south, or flowed south towards modern Alamo Creek and then turned southwest (Plate 1). Either flow path would have gone south of the modern Santa Fe River (2 km southwest of La Cienega) before following the western reach of what is now the Santa Fe gorge. Additional Ancha-filled paleovalleys likely exist, but would probably be of limited extent and are beyond the resolution of the current subsurface dataset.

Plate 1 also defines a north-northeast trending paleo-topographic high on the surface of the Tesuque Formation east of Cieneguilla. At this location, the Tesuque Formation consists of interbedded clay-to-fine-sand floodplain deposits and sandy channel-fill deposits associated with the ancestral Santa Fe River. This high Tesuque surface was elevated about 150 ft above the ancestral Santa Fe River, which approached La Cienega from the northeast during the late Pliocene and early Pleistocene.

The isopach map (Plate 2, Table 1) shows that Ancha deposits vary in thickness from over 250 ft in the center of the Santa Fe embayment to less than 50 ft over the high Tesuque surface east of Cieneguilla. The thickest Ancha deposits are generally located north of the Rancho Viejo hinge zone. However, thicknesses greater than 250 ft occur locally where the El Dorado paleovalley is incised into the Espinaso Formation on the Santa Fe Platform. The thick, northwest-trending wedge of Ancha sediments located along the mountain front near El Dorado (Plate 2) corresponds spatially to a zone of thick Santa Fe Group fill, interpreted to be a paleovalley back-filled by the Tesuque Formation before Ancha Formation deposition (Grauch et al., 2009; the paleovalley is labeled on Plate 4). Ancha deposits are thin, less than 100 ft, around the margins of the formation and where buried beneath the Cerros del Rio volcanic field.

The extent and thickness of groundwater saturation zones within the Ancha Formation are shown on Plate 3. Saturated-thickness contours were constructed from point data of water levels and formation thicknesses measured in Ancha wells and also encompass groundwater-fed springs emerging from Ancha Formation sediments (Tables 2 and 3). The Ancha Formation is variably saturated south of the Santa Fe River and unsaturated everywhere north of the Santa Fe River except down gradient of the Santa Fe wastewater treatment plant outfall. Zones of saturation are thickest and most extensive in areas: (1) that coincide with pre-Ancha paleoval-

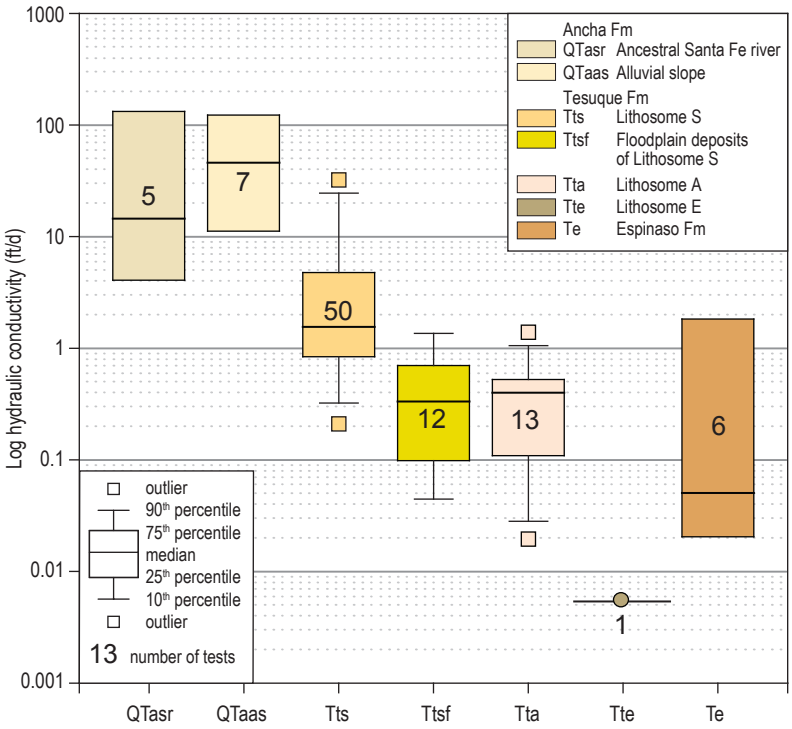



**Figure 4**–Percentile plot of hydraulic conductivity (ft/d) by geologic unit. Values of hydraulic conductivity are estimated from aquifer tests summarized in Table 5.

leys and major perennial and ephemeral streams and arroyos; (2) where Ancha deposits thin abruptly at the edge of modern incised valleys, particularly the east slopes of the Cienega Creek valley east of La Cienega and Arroyo Hondo northeast of El Rancho de las Golondrinas, and (3) that overlie older bedrock units with relatively low permeability and porosity (see Plate 4).

Thin discontinuous zones of saturation occur beneath modern streams and arroyos, including the Santa Fe River, Arroyo de los Chamisos, Arroyo Hondo, Cienega Creek, Bonanza Creek, Gallina Arroyo, Arroyo Coyote, and Alamo Creek. Saturated thicknesses representing years prior to 2000 (Table 4) are also shown on Plate 3 to provide a basis for comparison of modern and historic conditions. These data reveal that zones of saturation in the Ancha Formation were thicker and more extensive in past decades than during the period 2000 to 2005, particularly along the mountain front near El Dorado and beneath Gallina Arroyo in the southern Turquoise Hill quadrangle.

A plot showing the range of hydraulic conductivity values estimated from aquifer tests for the Ancha Formation and underlying geologic units (Fig. 4, Table 5) demonstrates that Ancha deposits have median hydraulic conductivities that are 1 to 4 orders of magnitude larger than for underlying strata in the Tesuque and Espinaso Formations. Hydraulic conductivity values compiled for the Ancha Formation range from 4 to 252 ft/d, with a median of 45 ft/d.

Plate 4 shows the distribution of pre-Ancha geologic formations, together with the 80- and 100-foot saturation contours from Plate 3. This map is updated from Koning and Read (2010), particularly in the La Cienega area and southwestern Santa Fe embayment. Where the Ancha Formation overlies the Tesuque Formation in the central, north, and northeast parts of the Santa Fe embayment, the two formations generally behave as one aquifer. One arm of the Tesuque Formation extends southeastward in the vicinity of El Dorado. As discussed previously, this arm probably represents a back-filled paleovalley (Grauch et al., 2009). In the southern embayment, the Ancha Formation mostly overlies the Espinaso Formation, with lesser subcrop of the Galisteo Formation and Mesozoic strata. The only Paleozoic subcrop occurs near the Sangre de Cristo Mountain front in the Eldorado area.

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# TABLES

**Table 1–Well and formation information for control wells used to construct elevation contour and isopach maps (Plates 1 and 2)**



| | Site identification | Location (UTM NAD27) Easting (m) | Location (UTM NAD27) Northing (m) | Surface elevation (ft asl) | Other location name or number | Data type | Well depth | Depth to base of Ancha Fm (ft) | Base elevation (ft asl) | Formation thickness (ft) | Subcrop formation | Lithologic notes | Source comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nuclear Dynamics uranium exploration drill holes | ND1 | 399600 | 3939334 | 6215 | 16N.08E.29.222 | LLe | 905 | 45 | 6170 | 45 | Tts | | |
| | ND2 | 410939 | 3942442 | 6709 | 16N.09E.16.222 | LLe | 1000 | 145 | 6564 | 145 | Tts | | |
| | ND3 | 409556 | 3941015 | 6560 | 16N.09E.16.333 | LLe | 1000 | 155 | 6405 | 155 | Tts | | |
| | ND4 | 411129 | 3939205 | 6663 | 16N.09E.27.111 | LLe, Cu | 1490 | 228 | 6435 | 228 | Tts | | Cuttings reviewed by D. Koning |
| | ND5 | 407873 | 3937626 | 6433 | 16N.09E.32.111 | LLe, Cu | 995 | 275 | 6158 | 275 | Tts | | Cuttings reviewed by D. Koning |
| | ND6 | 406018 | 3936207 | 6387 | 16N.08E.36.444 | LLe, Cu | 1600 | 295 | 6092 | 295 | Tts | Tts 295-900 ft with green sand in lower section (reported as Te by Spiegel); Tte 900-1600 ft | Cuttings reviewed by D. Koning |
| | ND7 | 401411 | 3936858 | 6172 | 16N.08E.34.311 | LLe, Cu | 680 | 157 | 6015 | 157 | Tts | Ttsl 157-187 ft, Tte 187-700 ft (no basalt) | Cuttings reviewed by D. Koning |
| | ND8 | 404028 | 3936442 | 6302 | 16N.08E.35.432 | LLe, Cu | 1000 | 257 | 6045 | 257 | Tta | Tts-Tta interbedded 260-750 ft, Tte 750 ft to bottom | Cuttings reviewed by D. Koning |
| | ND9 | 409491 | 3932823 | 6433 | 15N.09E.16.111 | LLe, Cu | 1717 | 142 | 6291 | 142 | Tte | Tta 187 to 475 ft (orange clay); Te 475 to bottom | Cuttings reviewed by D. Koning |
| | ND10 | 412409 | 3932369 | 6516 | 15N.09E.15.242 | LLe, Cu | 1117 | 108 | 6408 | 108 | Tte | QTa to 75 ft; QTt 75 to 108 ft | Cuttings reviewed by D. Koning |
| | ND12 | 405955 | 3947056 | 6519 | 17N.08E.36.223 | LLe | 980 | 25 | 6494 | 25 | Tts | | |
| | ND17 | 401742 | 3946125 | 6320 | 17N.08E.34.332 | LLe | 1985 | 50 | 6270 | 50 | Tts | | |
| | ND36 | 403661 | 3939279 | 6246 | 16N.08E.26.122 | LLe, Cu | 1400 | 140 | 6106 | 140 | Tts | Grainsize and color changes at QTa/Tts | Cuttings reviewed by D. Koning |
| | ND37C | 399125 | 3937900 | 6167 | 16N.08E.29.434 | LLe | 315 | 30 | 6137 | 30 | Tts | Ttc basalt 90-130; interbedded Tts/Ttc 130-TD | |
| | ND38 | 401379 | 3937859 | 6181 | 16N.08E.27.333 | LLe | 1145 | 160 | 6021 | 160 | Tts | Tts 160-478, basalt 480-485'; Tte-s 485-525; Tte 525-600; Te 600-TD | |
| | ND41 | 402439 | 3942100 | 6302 | 16N.08E.15.232 | LLe | 2000 | 175 | 6127 | 175 | Tts | | |
| | ND43 | 401461 | 3944117 | 6319 | 16N.08E.10.111 | LLe | 1000 | 200 | 6119 | 200 | Tts | | |
| | ND46 | 404520 | 3944262 | 6404 | 16N.08E.2.444 | LLe | 1940 | 145 | 6259 | 145 | Tts | | |
| | ND49 | 406741 | 3925436 | 6202 | 14N.09E.6.324 | LLe | 660 | 80 | 6122 | 80 | Te | | |
| | ND52 | 402455 | 3940876 | 6215 | 16N.08E.22.212 | LLe | 1000 | 115 | 6100 | 115 | Tts | Grainsize and color changes at QTa/Tts | |
| | ND59 | 401199 | 3940058 | 6267 | 16N.08E.21.422 | LLe | 1000 | 150 | 6117 | 150 | Tts | Grainsize and color changes at QTa/Tts | |
| | ND76 | 401636 | 3939705 | 6161 | 16N.08E.22.332 | LLe | 1140 | 105 | 6056 | 105 | Tts | Grainsize and color changes at QTa/Tts | |
| | ND77 | 401021 | 3939656 | 6245 | 16N.08E.21.441 | LLe | 1000 | 155 | 6090 | 155 | Tts | Grainsize and color changes at QTa/Tts | |
| | ND80 | 400799 | 3939253 | 6202 | 16N.08E.28.212 | LLe, GL | 800 | 138 | 6064 | 138 | Tts | | |
| | ND81 | 400412 | 3939492 | 6205 | 16N.08E.21.344 | LLe, GL | 800 | 107 | 6098 | 107 | Tts | | |
| | ND82 | 400595 | 3939474 | 6169 | 16N.08E.21.433 | LLe, GL | 800 | 110 | 6059 | 110 | Tts | | |
| | ND83 | 400834 | 3939664 | 6226 | 16N.08E.21.432 | LLe, GL | 1000 | 145 | 6081 | 145 | Tts | | |
| | ND84 | 400202 | 3939506 | 6243 | 16N.08E.21.343 | LLe, GL | 775 | 70 | 6173 | 70 | Tts | QTa contact at top of red-brwn gravel/sand/clay | |
| | ND85 | 401047 | 3938905 | 6122 | 16N.08E.28.241 | LLe, GL | 750 | 70 | 6052 | 70 | Tts | | |
| | ND86 | 400617 | 3939083 | 6146 | 16N.08E.28.213 | LLe, GL | 810 | 85 | 6061 | 85 | Tts | QTa contact at top of brown mudstone; Tts 85-185 ft; Ttsl 185-500 and 544-726 ft; Ttse 500-544 ft; Tte 726-810 ft | |
| | ND87 | 401225 | 3939290 | 6173 | 16N.08E.28.222 | LLe, GL, Cu | 840 | 80 | 6093 | 80 | Tts | Tts 85-230 (gamma kick @ 90'), Ttsl 230-480, Tts 480-TD (Hi gamma from 280 to 515) | Cuttings reviewed by D. Koning |
| | ND88 | 402023 | 3939079 | 6172 | 16N.08E.27.124 | LLe, GL | 980 | 75 | 6097 | 75 | Tts | Hi gamma and green reduction zones in Ttsl 240-486'; interbedded Tts and Tte 486-TD | |
| | ND89 | 399902 | 3940244 | 6263 | 16N.08E.21.134 | LLe, GL | 920 | 75 | 6188 | 75 | Tts | Hi gamma and green mudstone @ 280' Ttsl | |
| | ND90 | 400830 | 3940309 | 6262 | 16N.08E.21.234 | LLe, GL | 1000 | 155 | 6107 | 155 | Tts | Tts interbedded mudstone/sandstone 155-656 ft; Ttsl 656 ft on | |
| | ND91 | 401631 | 3939089 | 6146 | 16N.08E.27.114 | LLe, GL | 900 | 90 | 6056 | 90 | Tts | Hi gamma and gray-green reduction zone 256-470 ft is Ttsl (interbedded gravel) | |
| | ND92 | 401384 | 3938854 | 6141 | 16N.08E.27.131 | LLe, GL | 800 | 95 | 6046 | 95 | Tts | Hi gamma, green reduction zone 245-452 ft is Ttsl; Tts above and below; blue sandstone at 790 ft is Tte | |
| | ND93 | 401188 | 3938661 | 6141 | 16N.08E.28.244 | LLe, GL | 670 | 90 | 6051 | 90 | Tts | Hi gamma, green reduction zone starts at uppermost claystone, Ttsl 180-482 ft; gray claystone at 670 ft is Tte | |
| | ND95 | 400899 | 3939494 | 6224 | 16N.08E.21.434 | LLe, GL | 975 | 135 | 6089 | 135 | Tts | Hi gamma and green reduction zones in Ttsl 360-660 ft; interbedded Tts and Ttl 660-820 ft | |
| | ND96 | 400585 | 3938884 | 6133 | 16N.08E.28.231 | LLe, GL | 705 | 50 | 6083 | 50 | Tts | QTa contact at top of brown claystone; Tts 60-120 ft; Ttsl 120-390 ft; Ttse 390-601 ft; Ttsl 601-658 ft; Ttse 658-686 ft; Tte 686-705 ft | |
| | ND97 | 400814 | 3939543 | 6240 | 16N.08E.21.434 | LLe, GL | 795 | 145 | 6095 | 145 | Tts | QTa contact at top of brown claystone; Tts 145-206 ft; Ttsl 206-670 ft; Ttse 670-795 ft | |
| | YLM#3 | 406009 | 3932807 | 6335 | Yates La Mesa No. 3 | LLe, Cu | 4740 | 258 | 6077 | 258 | Tte | | Cuttings reviewed by D. Koning |
| | CKZ#1 | 402260 | 3930730 | 6208 | Gianardi well | LLe, Cu | 7773 | 175 | 6033 | 175 | Tg | QTa to 140 ft; QTt 140-175 ft, Tg 175-1660 ft | Cuttings reviewed by D. Koning |
| El Dorado water exploration drill holes and wells | R11 | 414271 | 3934563 | 6686 | 15N.9E.1.333 | LLe | 925 | 160 | 6526 | 160 | Tts | QTa/Tta contact indistinct; Tta 160-333, Tte 333-470, Tta 470-TD | Minton Engineering log in K.Summers files |
| | WX3DE | 413418 | 3931155 | 6555 | 15N.9E.23.211 | LLe | 345 | 95 | 6460 | 95 | Te | | K. Summers files and field notes |
| | X3CW | 414945 | 3929323 | 6617 | 15N.9E.25.12442 | LLe | 250 | 155 | 6462 | 155 | Te | QTa gravel over Te gray sandstone/clay | Scott Brothers drilling log; cuttings reviewed by K. Summers |
| | X3C1/2S | 415715 | 3928965 | 6633 | 15N.9E.25.2442 | LLe | 200 | 120 | 6513 | 120 | TRc | QTa gravel to 120 ft; Triassic red clay and sandstone below 120 ft | Scott Brothers drilling log; cuttings reviewed by K. Summers |
| | WX9S/X9N | 414451 | 3928591 | 6549 | 15N.9E.25.3124 | LLe | 325 | 62 | 6487 | 62 | Te | QTa/Te contact at 62 ft | Sandia Drilling log of RG-18561, at WX9S location |
| | X3C3/4S | 416055 | 3928777 | 6644 | 15N.9E.25.42432 | LLe | 260 | 50 | 6594 | 50 | Mzu | QTa contact at base of gravel; undifferen- tiated Mesozoic rocks to 240 or TD | Scott Brothers drilling log; cuttings reviewed by K. Summers |
| | R51 | 417390 | 3934580 | 6883 | 15N.10E.5.333 | LLe | 311 | 91 | 6792 | 91 | Ps | QTa to 91 ft; Ps 91 ft to bottom | Minton Log in K.Summers files |
| | R49 | 418178 | 3934458 | 6933 | 15N.10E.5.344 | LLe | 129 | 42 | 6891 | 42 | Ps | | Minton Log in K.Summers files |
| | R36 | 416780 | 3934540 | 6844 | 15N.10E.6.434 | LLe | 405 | 76 | 6768 | 76 | Tta | QTa 0-66 ft, Tta 66-146 ft, Ps 146 ft to bottom; fault possible at 400 ft | Minton Engineering log in K.Summers files |
| | R2B | 416345 | 3934450 | 6802 | 15N.10E.6.343 | LLe | 260 | 175 | 6627 | 175 | Tta | QTa 0-175 ft, Tta 175 ft to bottom | Minton Log in K.Summers files |
| | W2A | 416154 | 3934587 | 6795 | 15N.10E.6.332 | LLe | 330 | 140 | 6655 | 140 | Tta | QTa 0-140 ft, Tta 140-285 ft, Ps 285 ft to bottom | Minton Engineering log in K.Summers files |
| | R37 | 416904 | 3933297 | 6831 | 15N.10E.7.414 | LLe | 540 | 225 | 6606 | 225 | Ps | QTa is a red clay/gravel; cemented basal red sandstone at 180-225 ft | Minton Engineering log in K.Summers files |
| | R50 | 417744 | 3934277 | 6898 | 15N.10E.8.112 | LLe | 440 | 79 | 6819 | 79 | Ps | QTa 0-79 ft, Ps 79 ft | |

**Table 1–Well and formation information for control wells used to construct elevation contour and isopach maps (Plates 1 and 2)**



| | Site identification | Location (UTM NAD27) Easting (m) | Location (UTM NAD27) Northing (m) | Surface elevation (ft asl) | Other location name or number | Data type | Well depth | Depth to base of Ancha Fm (ft) | Base elevation (ft asl) | Formation thickness (ft) | Subcrop formation | Lithologic notes | Source comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| El Dorado water exploration drill holes and wells | R1A | 420247 | 3931136 | 6881 | 15N.10E.16.434 | LLe, GL | 232 | 42 | 6839 | 42 | Ps | QTa to 42 ft, Ps 42-225 ft, preC 225 ft to bottom | Drillers lithologic log and Century Geophysical log |
| | R3 | 418445 | 3931260 | 6858 | 15N.10E.17.434 | LLe | 258 | 164 | 6694 | 164 | Pm | QTa 0-164 ft, Pm 164 ft | Minton Log in K.Summers files |
| | X3CN | 415970 | 3930380 | 6701 | 15N.10E.19.312 | LLe | 240 | 210 | 6491 | 210 | TRc | QTa base at bottom of last coarse gravel/sand; TRc red sandy clay 210 ft to bottom; same as 'TH3C | Scott Brothers drilling log; cuttings reviewed by K. Summers |
| | X3CE | 416690 | 3930015 | 6739 | 15N.10E.19.431 | LLe | 260 | 153 | 6586 | 153 | TRc | QTa base at bottom of hard conglomerate; TRc at top of red clay | Scott Brothers drilling log; cuttings reviewed by K. Summers |
| | WR1W | 419744 | 3930648 | 6845 | 15N.10E.21.124 | LLe | 305 | 90 | 6755 | 90 | Ps | Base of QTa is cemented conglomerate; Ps 90 ft to bottom | Scott Brothers drilling log; cuttings reviewed by K. Summers |
| | R5 | 419145 | 3930326 | 6817 | 15N.10E.21.312 | LLe | 332 | 176 | 6641 | 176 | Pm | QTa red sand-gravel to 176 ft; Pm grey limestone to 332 ft | Minton Engineering log in K.Summers files |
| | X11A | 419744 | 3929610 | 6816 | 15N.10E.21.344 | LLe | 300 | 100 | 6716 | 100 | TRc | 90-100 ft grey clay is QTt or Tte?; red clay/green sandstone 100 ft to bottom is TRc | Scott Brothers drilling log; cuttings reviewed by Bliss |
| | WX11W | 419440 | 3929255 | 6762 | 15N.10E.28.123 | LLe | 260 | 80 | 6682 | 80 | TRc | Sandy clay, sand-gravel to 80 ft; red clay/green sandstone 80 ft to bottom | Scott Bros drilling log in K. Summers files |
| | TH3C | 415850 | 3929575 | 6678 | 15N.10E.30.1111 | LLe | 800 | 95 | 6583 | 95 | TRc | QTa red sand-gravel to 95 ft; Triassic red and blue clay 95 ft to bottom | Scott Brothers drilling log; cuttings reviewed by Bliss |
| | X3CS | 415872 | 3929550 | 6680 | 15N.10E.30.111 | LLe | 800 | 97 | 6583 | 97 | TRc | sand-gravel-clay to 97 ft, Triassic red clay 97 ft to bottom | K. Summers review of Scott drilling log; cuttings reviewed by Bliss |
| | X10N | 416990 | 3928739 | 6671 | 15N.10E.30.42114 | LLe | 220 | 80 | 6591 | 80 | TRc | Sand-gravel-clay to 80 ft, Triassic red clay 80 ft to bottom | K. Summers review of Scott drilling log |
| | 96-4 | 417801 | 3931928 | 6835 | 15N.10E.17 | LLe, Cu | 470 | 275 | 6560 | 275 | Ps | QTa to 270 ft; Tt 270-280 ft, Paleozoic 280-470 ft | Cuttings reviwed byD. Koning; hole bottoms in Paleozoic; no preCambrian |
| NMBGMR Española Basin water well database | EB-001 | 398579 | 3935004 | 6063 | 15N.08E.5.323 | LLw | 221 | 72 | 5991 | 72 | Tg | | NMOSE file no. RG-39419 |
| | EB-002 | 399120 | 3935618 | 6073 | 15N.08E.4.111 | LLw | 380 | 120 | 5953 | 120 | Te | Log may lump QTa and Tts, sand/gravel to 120 ft; Te 120-380 ft with thin veneer of Tte at top | NMOSE file no. RG-61825 |
| | EB-004 | 411115 | 3935891 | 6594 | 15N.09E.3.1114 | LLw | 560 | 239 | 6355 | 239 | Tta | Tte, hard blue shale at 510 ft | NMOSE file no. RG38073Ex2 |
| | EB-006 | 412295 | 3937996 | 6671 | 15N.10E.2.1123 | LLw | 400 | 220 | 6451 | 220 | Tta | | NMOSE file no. RG-82128 |
| | EB-007 | 403983 | 3929089 | 6189 | 15N.08E.26.234 | LLw | 146 | 96 | 6093 | 96 | Te | | NMOSE file no. RG-27779 |
| | EB-016 | 406520 | 3940184 | 6422 | 16N.09E.19.312 | LLw | 320 | 180 | 6242 | 180 | Tts | Brown clay and reddish sand-gravel (QTa); thick, coarse, tight sands (Tts) | NMOSE file no. RG-36485 |
| | EB-020 | 414999 | 3943065 | 7045 | 16N.09E.12.324 | LLw | 658 | 110 | 6935 | 110 | Tta | | NMOSE file no. RG-21469 |
| | EB-084 | 410085 | 3942677 | 6627 | 16N.09E9.3432 | LLw | 263 | 153 | 6474 | 153 | Tts | | NMOSE file no. RG-63499 |
| | EB-106 | 416860 | 3929416 | 6709 | 15N.10E.30.214 | LLw | 1490 | 110 | 6599 | 110 | TRc | | Glorieta Geoscience log for RSL no. 1 |
| | EB-113 | 405142 | 3938502 | 6335 | 16N.08E.25.321 | LLw | 300 | 170 | 6165 | 170 | Tts | granite wash gravel (QTa) over red sand (Tts) | NMOSE file no. RG-13786 |
| | EB-117 | 415600 | 3943321 | 7052 | 16N.09E.12.243 | LLw | 465 | 65 | 6987 | 65 | Tta | | NMOSE file no. RG-35297 |
| | EB-118 | 416160 | 3943637 | 7148 | 16N.10E.7.111 | LLw | 600 | 40 | 7108 | 40 | Tta | Te/Tg contact at 240 ft | NMOSE file no. RG-67398 |
| | EB-127 | 405305 | 3940672 | 6352 | 16N.08E.24.124 | LLw | 300 | 200 | 6152 | 200 | Tts | Tts is red clay 200-225 ft, red gravel 225-300 ft | NMOSE file no. RG-19274 |
| | EB-133 | 402830 | 3937581 | 6206 | 16N.08E.34.222 | LLw | 120 | 130 | 6076 | 130 | Tts | Red clay 130-160' in supplemental well (Tts) | NMOSE file no. RG-15752 |
| | EB-134 | 402030 | 3938076 | 6192 | 16N.08E.27.342 | LLw | 137 | 125 | 6067 | 125 | Tts | | NMOSE file no. RG-32553 |
| | EB-138 | 404266 | 3946278 | 6462 | 17N.08E.35.414 | LLw | 735 | 63 | 6399 | 63 | Tcrv | "Lava rock" 45-63 ft is phreatomagmatic deposit, constrains base of QTa | NMOSE file no. RG-77280 |
| | EB-139 | 417190 | 3928776 | 6683 | 15N.10E.30.421 | LLw, GL | 1558 | 74 | 6609 | 74 | TRc | | Glorieta Geoscience log for RSL no. 2; NMOSE file no. RG-72559 |
| | EB-147 | 410081 | 3945790 | 6705 | 17N.09E.33.3434 | LLw | 160 | 72 | 6633 | 72 | Tts | | NM Environment Department, Underground Storage Tank Bureau, monitor well log |
| | EB-149 | 404438 | 3947386 | 6463 | 17N.08E.35.2212 | LLw | 453 | 82 | 6381 | 82 | Tts | Landfill boring log; caliche at base of arkosic sand marks QTa contact | Consultant's well completion log to NM Environment Department Surface Water Bureau |
| | EB-155 | 401461 | 3949046 | 6430 | 17N.08E.21.4444 | LLw | 335 | 206 | 6224 | | Tts | Basalt 70-102 feet interbedded in QTa | Consultant's well completion log to NM Environment Department Surface Water Bureau |
| | EB-156 | 400777 | 3949450 | 6439 | 17N.08E.21.4133 | LLw | 350 | 195 | 6244 | | Tts | Basalt 57-138 feet interbedded in QTa | Consultant's well completion log to NM Environment Department Surface Water Bureau |
| | EB-164 | 405539 | 3949702 | 6609 | 17N.8E.24.3222 | LLw | 740 | 58 | 6551 | 58 | Tts | QTa contact at base of mixed silt-sand-gravel | NMOSE file no. RG-72349 |
| | EB-169 | 402566 | 3947907 | 6434 | 17N.08E.27.4141 | LLw | 370 | 80 | 6354 | 80 | Tts | Black sand 63-80 feet | NMOSE file no. RG-71098 |
| | EB-176 | 403746 | 3950506 | 6563 | 17N.8E.23.1221 | LLw | 700 | 70 | 6493 | 70 | Tts | Grey sand-grvl (QTa) over red-tan silt-clay (Tts) | NMOSE file no. RG-75456 |
| | EB-180 | 399632 | 3940517 | 6238 | 15N.8E.20.242 | LLw | 360 | 60 | 6178 | 60 | Tts | QTa/Tts contact at base of brown unit over red sands and clays | NMOSE file no. RG-39479 |
| | EB-202 | 410066 | 3926479 | 6317 | 15N.09E.33.34444 | LLw | 156 | 90 | 6227 | 90 | Tte | 58 ft of cemented basal QTa | NMOSE file no. RG-23040 |
| | EB-203 | 403444 | 3925336 | 6120 | 14N.08E.02.3243 | LLw | 114 | 113 | 6007 | 113 | Tg | "Brown rock" 113-114 ft is Tg | NMOSE file no. RG-19203 |
| | EB-204 | 404709 | 3929454 | 6182 | 15N.08E.25.1141 | LLw | 140 | 105 | 6075 | 105 | Te | "Volcanic rock" 105-140 is Te | NMOSE file no. RG-31627 |
| | EB-209 | 405075 | 3922945 | 6106 | 14N.08E.13.1241 | LLw | 276 | 23 | 6082 | 23 | Te | | NMOSE file no. RG-23364 |
| | EB-211 | 407315 | 3926117 | 6275 | 14N.09E.06.2233 | LLw | 200 | 90 | 6177 | 90 | Te | | NMOSE file no. RG-59112 |
| | EB-212 | 405898 | 3925840 | 6220 | 14N.08E.1.2421 | LLw | 410 | 190 | 6022 | 190 | Te | Brown sand/gravel (QTa) over gray rock (Te) | NMOSE file no. RG-34646 |
| | EB-214 | 401271 | 3932150 | 6192 | 15N.08E.15.3111 | LLw | 210 | 130 | 6062 | 130 | Tteg | QTa contact at base of caliche over 30 ft of red 'shale' | NMOSE file no. RG-44712 |
| | EB-217 | 412805 | 3932519 | 6529 | 15N.9E.14.11413 | LLw | 300 | 75 | 6454 | 75 | Tte | Cemented gravel at base of QTa; Tte 75-80 ft; Te 80-300 ft | NMOSE file no. RG-18572 |
| | EB-218 | 406168 | 3941012 | 6410 | 16N.08E.13.444 | LLw | 337 | 171 | 6239 | 171 | Tts | Red clay 297-312 ft and 334-337 ft is in Tts | NMOSE file no. RG-09982 |
| | EB-219 | 399317 | 3942545 | 6217 | 16N.08E.17.2122 | LLw | 244 | 72 | 6145 | 72 | Tts | QTa to base of yellow conglomerate; Tts granite sands and clays 72-244 ft | NMOSE file no. RG-00590 |
| | EB-220 | 403203 | 3938457 | 6258 | 16N.08E.26.32112 | LLw | 395 | 162 | 6096 | 162 | Tts | Red clay 162-272 ft | NMOSE file no. RG-03824T |
| | EB-221 | 404237 | 3937765 | 6241 | 16N.08E.26.44334 | LLw | 220 | 160 | 6081 | 160 | Tts | Red clay 160-170 ft | NMOSE file no. RG-22251x7 |
| | EB-222 | 404507 | 3937753 | 6265 | 16N.08E.26.4443 | LLw | 220 | 160 | 6105 | 160 | Tts | Red clay 160-170 ft | NMOSE file no. RG-22251x8 |
| | EB-223 | 399890 | 3938714 | 6166 | 16N.08E.28.134 | LLw | 100 | 93 | 6073 | 93 | Tts | QTa tan sands interbedded in brown clay | NMOSE file no. RG-25952 |
| | EB-226 | 411547 | 3945542 | 6744 | 16N.09E.03.1213A | LLw | 130 | 38 | 6706 | 38 | Tts | QTa-Tts contact at base of red gravel, top of tan sand | NMOSE file no. RG-28465 |

| | Site identification | Location (UTM NAD27) Easting (m) | Location (UTM NAD27) Northing (m) | Surface elevation (ft asl) | Other location name or number | Data type | Well depth | Depth to base of Ancha Fm (ft) | Base elevation (ft asl) | Formation thickness (ft) | Subcrop formation | Lithologic notes | Source comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NMBGMR Española Basin water well database | EB-227 | 407025 | 3944239 | 6522 | 16N.9E.6.4333 | LLw | 416 | 220 | 6302 | 220 | Tts | Gravel-boulders (QTa) over red sand-clay (Tts) | NMOSE file no. RG-11232 |
| | EB-231 | 411729 | 3941981 | 6717 | 16N.09E.15.143 | LLw | 163 | 159 | 6558 | 159 | Tta | QTa-Tts contact at base of brown sand, top of red clay | NMOSE file no. RG-29681 |
| | EB-232 | 412562 | 3941306 | 6820 | 16N.09E.15.4421 | LLw | 600 | 200 | 6620 | 200 | Tta | | NMOSE file no. RG-44863Ex |
| | EB-244 | 412888 | 3946766 | 6883 | 17N.09E.35.1314B | Lm, GL, C | 2020 | 45 | 6838 | 45 | Tts | QTa contact picked from gamma kick | SF-1 piezometer logs and cuttings reviewed by D. Koning |
| | EB-293 | 402500 | 3939316 | 6196 | 16N.08E.27.2122 | LLw | 340 | 104 | 6092 | 104 | Tts | Red clay 104-108 ft | NMOSE file no. RG-11826S |
| | EB-294 | 403710 | 3938648 | 6302 | 16N.08E.26.322 | LLw | 740 | 164 | 6138 | 164 | Tts | Coarse brown sand and gravel (QTa) over red sand and gravel (Tts) | NMOSE file no. RG-48358 |
| | EB-308 | 399408 | 3937812 | 6147 | 16N.08E.29.4434 | LLw | 103 | 70 | 6077 | 70 | Tcb | "Basalt" 78-103 ft | NMOSE file no. RG-23683x |
| | EB-309 | 399946 | 3939786 | 6231 | 16N.08E.21.3321 | LLw | 300 | 48 | 6183 | 48 | Tts | | NMOSE file no. RG-23683x2 |
| | EB-311 | 399834 | 3937807 | 6109 | 16N.08E.28.3343 | LLw | 180 | 100 | 6009 | 100 | Tts-Tte | Tte gray gravel 100-120 ft; Ttsl red clay 120-170 ft; Tc black volcanics 170-180 ft | NMOSE file no. RG-71045 |
| | EB-318 | 404225 | 3938053 | 6269 | 16N.08E.26.44132 | LLw | 250 | 140 | 6129 | 140 | Tts | QTa brown sand-gravel 0-140 ft; Tts red sand-clay 140-250 ft | NMOSE file no. RG-22251x5 |
| | EB-321 | 404036 | 3938048 | 6261 | 16N.8E.26.43232 | LLw | 180 | 160 | 6101 | 160 | Tts | QTa brown sand-gravel 0-160 ft; Tts brown sand 160-180 ft | NMOSE file no. RG-22251x2 |
| | EB-324 | 398640 | 3941239 | 6169 | 16N.08E.17.3414 | LLw | 300 | 60 | 6109 | 60 | Tts | QTa contact at base of sand/gravel unit | NMOSE file no. RG-65490 |
| | EB-325 | 398636 | 3940744 | 6149 | 16N.08E.20.1232 | LLw | 300 | 100 | 6049 | 100 | Tts | QTa contact at base of sand/gravel unit | NMOSE file no. RG-65564 |
| | EB-326 | 399122 | 3942157 | 6200 | 16N.08E.17.2312 | LLw | 300 | 80 | 6120 | 80 | Tts | | NMOSE file no. RG-65488 |
| | EB-327 | 398618 | 3941825 | 6187 | 16N.08E.17.3211 | LLw | 300 | 60 | 6127 | 60 | Tts | | NMOSE file no. RG-65489 |
| | EB-331 | 399038 | 3935884 | 6103 | 15N.08E.5.2132 | LLw | 400 | 90 | 6013 | 90 | Tcb-Tte | Basalt 90-240 ft, Tte 240-260 ft, basalt 260-400 ft | NMOSE file no. RG-61494 |
| | EB-332 | 399770 | 3935472 | 6089 | 15N.08E.4.13324 | LLw | 160 | 134 | 5955 | 134 | Tte | QTa brown clay-sand to 134 ft; brown and grey clay and cobbles Tte 134-160 ft | NMOSE file no. RG-74595 |
| | EB-333 | 399857 | 3935388 | 6119 | 15N.08E.4.13344 | LLw | 140 | 120 | 5999 | 120 | Tte | QTa sand-gravel over Tte red clay 120-140 ft | NMOSE file no. RG-55622 |
| | EB-336 | 403249 | 3944369 | 6365 | 16N.08E.2.343 | Lm, GL, C | 2000 | 163 | 6202 | 163 | Tts | | Santa Fe River piezometer logs and cuttings reviewed by D. Koning |
| | EB-339 | 403085 | 3938143 | 6258 | 16N.08E.26.313 | LLw | 200 | 200 | 6058 | 200 | Tts | Red clay at bottom of hole | NMOSE file no. RG-44219 |
| | EB-344 | 407223 | 3930261 | 6317 | 15N.09E.19.4142 | LLw | 400 | 70 | 6247 | 70 | Te | Te 70-210 ft "grayish black, grayish green, reddish gray basalt" | NMOSE file no. RG-71542 |
| | EB-346 | 407683 | 3932078 | 6335 | 15N.09E.18.4222 | LLw | 430 | 140 | 6195 | 140 | Tte | | NMOSE file no. RG-44753 |
| | EB-358 | 409417 | 3939620 | 6551 | 16N.09E.20.4422 | LLw | 1500 | 195 | 6356 | 195 | Tts | | J. Hawley hydrogeologic report, January 2002; review by D. Koning |
| | EB-363 | 401883 | 3943139 | 6299 | 16N.08E.10.3232 | LLm | 170 | 165 | 6134 | 165 | Tts | | Souder-Miller & Assoc., 1995, Wastewater treatment plant well boring; NMOSE file no. RG-45867 |
| | EB-364 | 402582 | 3943370 | 6333 | 16N.08E.10.1222 | LLm | 214 | 173 | 6160 | 173 | Tts | | Souder-Miller & Assoc., 1995, Wastewater treatment plant well boring; NMOSE file no. RG-45867 |
| | EB-369 | 405697 | 3940190 | 6387 | 16N.08E.24.2343 | LLw | 425 | 168 | 6219 | 168 | Tts | Brown clay and reddish sand-gravel (QTa); thick coarse tight sands (Tts) | NMOSE file no. RG-53523 |
| | EB-372 | 403888 | 3947036 | 6432 | 17N.8E.35.2133 | LLw | 700 | 40 | 6390 | 40 | Tts | QTa to base of black gravel | NMOSE file no. RG-71685 |
| | EB-374 | 403678 | 3928978 | 6180 | 15N.08E.26.233 | LLw | 200 | 110 | 6070 | 110 | Te | Saturated gravel over grey rock | NMOSE file no. RG-74896 |
| | EB-378 | 400527 | 3933618 | 6124 | 15N.08E.9.4113 | LLw | 110 | 75 | 6049 | 75 | Te | QTa 0-75; "hard white shale" caliche zone 75-98 ft; Te or Tc 98-110 ft "hard blue-green volcanics" | NMOSE file no. RG-51797 |
| | EB-379 | 401303 | 3934308 | 6203 | 15N.08E.10.1131 | LLw | 227 | 155 | 6048 | 155 | Tteg | Base of Ancha/top of Tesuque has white calcified zone | NMOSE file no. RG-45723 |
| | EB-380 | 403535 | 3932199 | 6254 | 15N.08E.14.1443 | LLw | 203 | 165 | 6089 | 165 | Tteg | | NMOSE file no. RG-51711 |
| | EB-382 | 404981 | 3939640 | 6331 | 16N.08E.24.3324 | LLw | 252 | 180 | 6151 | 180 | Tts | Brown sand-gravel (QTa) over red clay 249-252 ft (Tts) | NMOSE file no. RG-54184 |
| | EB-384 | 403767 | 3936036 | 6266 | 15N.08E.2.221 | LLw | 715 | 240 | 6026 | 240 | Tta | | NMOSE file no. RG-03824S |
| | EB-385 | 404356 | 3936059 | 6304 | 15N.08E.2.22213 | LLw | 802 | 250 | 6054 | 250 | Tta | | NMOSE file no. RG3824XS |
| | EB-390 | 404736 | 3932907 | 6302 | 15N.08E.13.1121 | LLw | 500 | 240 | 6062 | 240 | Tte | QTa brown silty-clay and red brwn granite wash (QTa); gray clay-shale (Tte) | NMOSE file no. RG-50386 |
| | EB-391 | 404689 | 3939282 | 6307 | 16N.08E.25.111 | LLw | 300 | 160 | 6147 | 160 | Tta | Red sand-gravel 50-160 ft over tan sand | NMOSE file no. RG-75255 |
| | EB-393 | 404280 | 3929825 | 6235 | 15N.08E.23.443 | LLw | 181 | 142 | 6093 | 142 | Te | Brown sand-gravel 108-142 ft over gray sand rock (Te) | NMOSE file no. RG-27783 |
| | EB-395 | 404190 | 3929345 | 6193 | 15N.08E.26.224 | LLw | 208 | 156 | 6037 | 156 | Te | | Geologic cross section of Jenkins (1977) |
| | EB-396 | 403680 | 3928860 | 6172 | 15N.08E.26.411 | LLw | 105 | 97 | 6075 | 97 | Te | Brown clay-sand-gravel (QTa) over gray rock (Te) | RG-27728; geologic cross section of Jenkins (1977) |
| | EB-398 | 404392 | 3928909 | 6181 | 15N.08E.26.244 | LLw | 152 | 92 | 6089 | 92 | Te | Brown sand-clay (QTa) over gray rock (Te) | NMOSE file no. RG-28595 |
| | EB-400 | 403554 | 3928731 | 6166 | 15N.08E.26.322 | LLw | 121 | 67 | 6099 | 67 | Te | Brown sand-gravel (QTa), gray clay and volcanic rock (Te) | NMOSE file no. RG-28307 |
| | EB-402 | 403732 | 3928346 | 6160 | 15N.8E.26.431 | LLw | 123 | 119 | 6041 | 119 | Te | Brown sand-gravel (QTa) over gray clay (Te) | NMOSE file no. RG-12036 |
| | EB-404 | 403062 | 3927680 | 6138 | 15N.08E.35.114 | LLw | 150 | 79 | 6059 | 79 | Tg | Brown sand-gravel (QTa) over brown sand rock (Tg) | NMOSE file no. RG-23418 |
| | EB-406 | 405095 | 3941702 | 6394 | 16N.08E.13.321 | LLw | 595 | 255 | 6139 | 255 | Tts | Gravel (QTa) over tan and red clay (Tts) | Driller's penetration rate and lithologic log; NMOSE file no. RG-32178 |
| | EB-409 | 405470 | 3944643 | 6459 | 16N.8E.1.413 | LLw | 457 | 140 | 6319 | 140 | Tts | Tan sandy clay (QTa) over red sand and clay (Tts) | NMOSE file no. RG-16869 |
| | EB-411 | 406580 | 3931585 | 6334 | 15N.09E.18.34132 | LLw | 430 | 270 | 6064 | 270 | Te | Pink siltstone, sand, clay with hard caliche 250-270 ft (QTa) over dark grey volcanic rock (Te) | NMOSE file no. RG-44554 |
| | EB-413 | 409840 | 3944302 | 6650 | 16N.09E.4.334 | Lm, GL, C | 1815 | 135 | 6515 | 135 | Tts | | Fairgrounds piezometer logs and cuttings reviewed by D. Koning |
| | EB-417 | 415275 | 3933898 | 6731 | 15N.10E.12.232 | LLw | 320 | 140 | 6591 | 140 | Tta | Brown sand-gravel (QTa) over "decomposed granite" (Tta) | NMOSE file no. RG-48785 |
| | EB-422 | 411759 | 3935029 | 6542 | 15N.09E.3.413 | LLw | 320 | 220 | 6322 | 220 | Tta | Brown sand-gravel (QTa) over coarse sand (Tta) | NMOSE file no. RG-42962 |
| | EB-424 | 418332 | 3934008 | 6966 | 15N.10E.8.213 | LLw | 350 | 90 | 6876 | 90 | XYu | Sand-clay (QTa) over hard granite | NMOSE file no. RG-61180 |
| | EB-426 | 413382 | 3934154 | 6628 | 15N.9E.11.124 | LLw | 340 | 160 | 6468 | 160 | Tta | Sand-gravel (QTa) over granite wash (Tta) | NMOSE file no. RG-52317 |
| | EB-427 | 415843 | 3934216 | 6773 | 15N.10E.7.11 | LLw | 315 | 180 | 6593 | 180 | Tta | Brown sand-gravel (QTa) over granite wash (Tta) | NMOSE file no. RG-43674 |
| | EB-431 | 412611 | 3933480 | 6580 | 15N.9E.11.311 | LLw | 380 | 80 | 6500 | 80 | Te | Brown dirt (QTa) over grey shale (Te) | NMOSE file no. RG-53571 |
| | EB-432 | 412833 | 3935028 | 6625 | 15N.09E.2.31 | LLw | 440 | 200 | 6425 | 200 | Tta-Tte | Clay and granite wash (QTa, may be lumped with some Tta) over grey clay, granite wash (Tta/Tte) | NMOSE file no. RG-57463 |

| | Site identification | Location (UTM NAD27) Easting (m) | Location (UTM NAD27) Northing (m) | Surface elevation (ft asl) | Other location name or number | Data type | Well depth | Depth to base of Ancha Fm (ft) | Base elevation (ft asl) | Formation thickness (ft) | Subcrop formation | Lithologic notes | Source comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NMBGMR Española Basin water well database | EB-437 | 414671 | 3934638 | 6714 | 15N.09E.1.341 | LLw | 420 | 160 | 6554 | 160 | Tta | Brown sandy clay (QTa) over red sand-gravel 160-320 ft (Tta) and grey rock below 320 ft (Te) | NMOSE file no. RG-78610 |
| | EB-438 | 414859 | 3931084 | 6631 | 15N.09E.24.1224 | LLw | 580 | 120 | 6511 | 120 | Te | Sand-gravel (QTa) over grey volcanic rock (Te) | NMOSE file no. RG-82526 |
| | EB-439 | 420979 | 3929486 | 6851 | 15N.10E.27.112 | LLw | 462 | 86 | 6765 | 86 | Jm | Brown sand-gravel (QTa) over brown, red, and grey sand rock (Jm) | NMOSE file no. RG-34171 |
| | EB-440 | 420594 | 3929428 | 6826 | 15N.10E.27.111 | LLw | 400 | 60 | 6766 | 60 | Jm | Brown sand-gravel (QTa) over brown, red, and grey sand rock (Jm) | NMOSE file no. RG-42702 |
| | EB-442 | 412051 | 3934088 | 6561 | 15N.09E.10.214 | LLw | 500 | 80 | 6481 | 80 | Te | Brown "dirt" (QTa) over grey shale (Te) | NMOSE file no. RG-53574 |
| | EB-445 | 404335 | 3923650 | 6124 | 14N.08E.11.42 | LLw | 1200 | 60 | 6064 | 60 | Te | Grey volcanic rock (Te) 60-1100 ft; sandstone (Tg) 1100 to 1200 ft | NMOSE file no. RG-31969 |
| | EB-446 | 414661 | 3930800 | 6619 | 15N.09E.24.1412 | LLw | 400 | 120 | 6499 | 120 | Te | Sand-gravel-boulders (QTa) over grey volcanic rock (Te) | NMOSE file no. RG-82528 |
| | EB-449 | 414545 | 3930574 | 6606 | 15N.09E.24.143 | LLw | 400 | 120 | 6486 | 120 | Te | Sand-gravel (QTa) over grey volcanic rock (Te) | NMOSE file no. RG-82525 |
| | EB-450 | 403543 | 3927816 | 6167 | 15N.08E.35.124 | LLw | 160 | 97 | 6070 | 97 | Te | Brown sand-gravel (QTa) over brown sand rock and dark grey clay-shale (Te) | NMOSE file no. RG-12913 |
| | EB-451 | 414292 | 3934481 | 6686 | 15N.09E.1.333 | LLw | 340 | 170 | 6516 | 170 | Tta-Tte | Tan sand-gravel-clay (QTa) over tan-red clay sand gravel (Tta) and black sand 170-200 ft (Tte) | NMOSE file no. RG-59129 |
| | EB-459 | 401892 | 3941637 | 6301 | 16N.08E.15.1433 | LLw | 500 | 118 | 6183 | 118 | Tts | Brown gravel-sand and clay (QTa) over red and brown clay and sand 118 ft (Tts) | NMOSE file no. RG-29860S |
| | EB-462 | 419527 | 3932746 | 6993 | 15N.10E.16.11 | LLw | 770 | 190 | 6803 | 190 | XYu | | Rodgers Drilling lithologic log; NMOSE file no. RG-75522 |
| | EB-464 | 413160 | 3942680 | 6882 | 16N.9E.11.333 | LLw | 600 | 40 | 6842 | 40 | Tts | Base of QTa below light tan to brown sand | Glorieta Geoscience lithologic log reviewed by D. Koning; NMOSE file no. RG-65116 |
| | EB-465 | 403328 | 3927909 | 6157 | 15N.8E.35.1214 | LLw | 250 | 90 | 6067 | 90 | Te | Base of QTa below purple gravel, at top of volcanic rock (Te) | NMOSE file no. RG-49052 |
| | EB-467 | 414152 | 3944023 | 6943 | 16N.9E.11.2222 | LLw | 320 | 12 | 6931 | 12 | Tts | Base of QTa below caliche zone; red sand-clay 12-320 ft (Tts) | NMOSE file no. RG-28397 |
| | EB-507 | 405857 | 3943425 | 6461 | 16N.8E.12.234 | LLw | 370 | 189 | 6272 | 189 | Tts | Brown sand-gravel-clay (QTa) over red clay and brown sand (Tts) | NMOSE file no. RG-18951 |
| | EB-517, EUI#3 | 417888 | 3934408 | 6907 | 15N.10E.5.3434 | LLe | 324 | 62 | 6845 | 62 | Ps | Sandia Fm (Ps) 62-311 ft, PreC below 311 ft | J. Hawley letter report, Feb. 20, 1997; Minton log of W-3 test in K.Summers file |
| | EB-518, EUI#2 | 414206 | 3934728 | 6663 | 15N.9E.1.331 | LLe | 350 | 161 | 6502 | 161 | Tta | Tta 161-264 ft, Tta/Tte below 264 ft | Minton Log of W-2 test in K.Summers file |
| | EB-519, EUI#6 | 415930 | 3932190 | 6749 | 15N.10E.18.133 | LLe | 280 | 215 | 6534 | 215 | Tta | Sand-clay-gravel with basal caliche (QTa) over fine-coarse sand-gravel, red clay (Tta) | Sandia log of EUI#6; Scott Bros log of WX3BN test; J. Hawley letter report, Feb. 20, 1997; NMOSE file no. RG-18571 |
| | EB-520, EUI#7 | 416709 | 3931146 | 6764 | 15N.10E.19.211 | LLe | 270 | 185 | 6579 | 185 | Tta | Sand-clay-gravel with basal caliche (QTa) over tight clay-sand-gravel (Tta) | Sandia log of EUI#7; Scott Bros log of WX3N test & KS cuttings review; NMOSE file no. RG-18595 |
| | EB-521, EUI#4 | 417975 | 3934709 | 6939 | 15N.10E.5.341 | LLe | 375 | 52 | 6887 | 52 | Ps | Sandia Fm (Ps) 52-369 ft, PreC below 369 ft | J. Hawley letter report, Feb. 20, 1997; Minton log of W-4 test in K.Summers file; NMOSE file no. RG-18550 |
| | EB-528 | 406761 | 3943324 | 6494 | 16N.9E.7.3212 | LLw | 414 | 186 | 6308 | 186 | Tts | Mixed brown sand-gravel-clay (QTa) over interbedded red clay and brown sand-gravel (Tts) | NMOSE file no. RG-07767FS |
| | EB-545 | 406135 | 3944070 | 6493 | 16N.8E.12.222 | LLw | 475 | 173 | 6320 | 173 | Tts | Brown sand-gravel (QTa) over red clay sand (Tts) | NMOSE file no. RG-00361A |
| | EB-574 | 403628 | 3928931 | 6177 | 15N.08E.26.422 | LLw | 500 | 107 | 6070 | 107 | Te | Sand-gravel (QTa) over grey rock (Te) | NMOSE file no. RG-27728S |
| | EB-580 | 414787 | 3927878 | 6602 | 15N.9E.36.122 | LLw | 600 | 50 | 6552 | 50 | Tg | Tan sand-gravel (QTa) over tan sand, red and gray clay and shale (Tg) | NMOSE file no. RG-83918 |
| | EB-581 | 415098 | 3928252 | 6588 | 15N.9E.25.431 | LLw | 600 | 80 | 6508 | 80 | Tg | Red sand-silt-gravel-clay (QTa) over red, fractured sandstone (Tg); no limestone per J. Corbin | J. Corbin, personal communication; NMOSE file no. RG-80808Ex2 |
| | EB-603 | 404034 | 3950186 | 6562 | 17N.8E.23.231 | LLw | 700 | 85 | 6477 | 85 | Tts | Grey-tan sand-gravel-clay (QTa) over tan-reddish tan sand-clay (Tts) | NMOSE file no. RG-74926 |
| | EB-607 | 405056 | 3935836 | 6339 | 15N.08E.1.123 | LLe, GL, Cu | 1365 | 248 | 6091 | 248 | Tta | | Jail piezometer logs and cuttings reviewed by D. Koning |
| | EB-617 | 403980 | 3940396 | 6310 | 16N.8E.23.23 | LLw | 302 | 200 | 6110 | 200 | Tts | Red sand-gravel (QTa) over brown clay, red sand rock (Tts) | J. Corbin, personal communication; NMOSE file no. RG-34093 |
| | EB-618 | 414160 | 3930187 | 6588 | 15N.9E.23.4242 | LLw | 640 | 160 | 6428 | 160 | Te | Pinkish tan sand-gravel (QTa) over grey volcanic rocks and granite wash (Te) | J. Corbin, personal communication; NMOSE file no. RG-85098 |
| | EB-640 | 394196 | 3934232 | 6107 | 15N.7E.11.231 | LLw | 460 | 240 | 5867 | 80 | Tg | Coarse red granite gravel (QTa) 160-240 ft | John Shomaker & Associates log reviewed by D. Koning; NMOSE file no. RG-61187 |
| | EB-642 | 393303 | 3947004 | 6728 | 17N.7E.34.24 | LLw | 1207 | 880 | 5848 | 40 | Tts | Basalt to 840 ft; QTa 840-880 ft soft clay-gravel | NMOSE file no. RG-14458 |
| | EB-655 | 411578 | 3941916 | 6703 | 16N.09E.15.141 | LLw, Cu | 600 | 155 | 6548 | 155 | Tts | Red sand-gravel (QTa) over darker gray and reddish sand (Tts) | Terrell well cuttings reviewed by P. Johnson; NMOSE file no. RG-86589 |
| | EB-656 | 415013 | 3927271 | 6605 | 15N.9E.36.233 | LLw, Cu | 480 | 50 | 6555 | 50 | Tgl | | John Shomaker & Associates log for New Moon Overlook no. 2, Lot 12; NMOSE file no. RG-84717 |
| | EB-657 | 414540 | 3926853 | 6583 | 15N.9E.36.3233 | LLw, Cu | 510 | 20 | 6563 | 20 | Tgu | | John Shomaker & Associates log for New Moon Overlook no. 3, Lot 14 |
| | EB-658 | 407813 | 3939313 | 6482 | 16N.9E.20.3333 | LLe, GL, Cu | 1320 | 215 | 6267 | 215 | Tts | | J. Hawley log and geologic report for CCD-1 well; review by D. Koning; NMOSE file no. RG-86222 |
| | EB-661 | 407815 | 3939343 | 6485 | 16N.9E.29.111 | LLe, GL, Cu | 1802 | 215 | 6270 | 215 | Tts | Base of Tts, and top of interbedded interval of Tta/Tts at 1180 ft; Te at 1710 ft | J. Hawley log and geologic report for CCD-OWA well; review by D. Koning; NMOSE file no. RG-86221 |
| | EB-664 | 407672 | 3939329 | 6483 | 16N.9E.30.2222 | LLe, GL, Cu | 1400 | 200 | 6283 | 200 | Tts | | J. Hawley log and geologic report for CCD-OWB well; review by D. Koning; NMOSE file no. RG-86218 |
| | EB-666 | 407185 | 3939290 | 6430 | 16N.9E.30.2121 | LLe, GL, Cu | 1400 | 180 | 6250 | 180 | Tts | | J. Hawley log and geologic report for CCD-OWC well; review by D. Koning; NMOSE file no. RG-86219 |
| | EB-670 | 421030 | 3929857 | 6898 | 15N.10E.21 | LLw | 420 | 100 | 6798 | 100 | Ps | Sand-gravel (QTa) over Sandia Fm (Ps) red sandstones, grey limestone | NMOSE file no. RG-83291 |
| | EB-671 | 403333 | 3944782 | 6392 | 16N.8E.2.3142 | LLw | 700 | 180 | 6212 | 180 | Tts | Red sand-gravel (QTa) over interbedded clay and red sand-gravel (Tts) | NMOSE file no. RG-89039 |
| | EB-673 | 407099 | 3942268 | 6456 | 16N.9E.18.213 | LLw | 800 | 145 | 6311 | 145 | Tts | Brown and red sands (QTa) over 20-ft red clay and red sand-gravel (Tts) | NMOSE file no. RG-86828 |
| | EB-675, EUI#1, W1 | 411867 | 3934700 | 6545 | 15N.9E.3.4313 | LLe | 719 | 155 | 6390 | 155 | Tta-Tte | Yellow sand/gravel (QTa) over interbedded Tta (155-649, 680-700 ft) red sand clay and Tte (649-680, 700-719 ft) grey-blue sandy clay-gravel | Minton log of W-1 test in K.Summers file; Sandia log of EUI#1; NMOSE file no. RG-18528 |

**Table 1–Well and formation information for control wells used to construct elevation contour and isopach maps (Plates 1 and 2)**



| | Site identification | Location (UTM NAD27) Easting (m) | Location (UTM NAD27) Northing (m) | Surface elevation (ft asl) | Other location name or number | Data type | Well depth | Depth to base of Ancha Fm (ft) | Base elevation (ft asl) | Formation thickness (ft) | Subcrop formation | Lithologic notes | Source comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NMBGMR Española Basin water well database | EB-676, EUI#8 | 419757 | 3930646 | 6848 | 15N.10E.21.142 | LLe | 325 | 95 | 6753 | 95 | Ps | QTa gravel over Sandia Fm (Ps) | Sandia log of EUI#8 7/27/83, Steinberger log of R1 test hole 3/13/70; NMOSE file no. RG-18531 |
| | EB-677, EUI#13, 95-1 | 417735 | 3932201 | 6874 | 15N.10E.17.141 | LLw, Cu | 1000 | 230 | 6644 | 230 | Ps | Base of QTa is cemented gravel and top of limestone at 230 ft; 230-270 ft Pennsylvanian Sandia Fm; 370 ft to bottom preCambrian | Cuttings reviewed by D. Koning; NMOSE file no. RG-62602Exp1 |
| | EB-679, EUI #12, 96-1 | 419028 | 3931921 | 6925 | 15N.10E.16 | LLe, Cu | 405 | 190 | 6735 | 190 | Tt | QTa to 190 ft; Tta 190-200 ft, Paleozoic 200-210 ft, preCambrian 210 ft to bottom | Cuttings reviewed by D. Koning; NMOSE file no. RG-65707Exp1 |
| | EB-680, EUI #14, 96-2b | 417620 | 3932675 | 6848 | 15N.10E.17 | LLe, Cu | 400 | 200 | 6648 | 200 | Ps | Pennsylvanian fusilinids in basal Madera Limestone 350-360 ft | Cuttings reviewed by B. Allen; NMOSE file no. RG-65707Exp1 |
| | EB-681, EUI #15, 96-3 | 417949 | 3931921 | 6848 | 15N.10E.17 | LLw, Cu | 400 | 200 | 6648 | 200 | Ps | QTa to 200 ft (190-200 ft cemented); Paleozoic rocks 240-400 ft | Cuttings reviewed by D. Koning; NMOSE file no. RB-65707Exp3 |
| | EB-691 | 400304 | 3937589 | 6119 | 16N.8E.28.344 | LLw | 180 | 90 | 6029 | 90 | Tcb-Tte | Sand-gravel (QTaas); basalt (Tcbvu) 90-100 ft; gray clay (Tte) 100-140 ft; basalt (Tcbu) 150-180 ft | Cuttings reviewed by D. Koning; NMOSE file no. RG-92758 |
| | EB-692 | 396224 | 3932667 | 6025 | 15N.7E.13.24 | LLw | 862 | 14 | 6011 | 6 | Tgu | Yellow-brown sand (QTt) and basalt over red cemented sand silt clay (Tgd) | NMOSE file no. RG-31524, NMOSE GPS and field check |
| NMOSE water well records | G-1 | 415951 | 3927077 | 6665 | 15N.10E.31.3121 | LLw | 510 | 70 | 6595 | 70 | Jm | | GPS and field check by P. Johnson |
| | G-2 | 409750 | 3925300 | 6341 | 14N.09E.4.323 | LLw | 2010 | 100 | 6241 | 100 | Te | T.Grauch personal communication, from A.Lisenbee data | |
| | G-3 | 404471 | 3932770 | 6284 | 15N.08E.13.1121 | LLw | 685 | 224 | 6060 | 224 | Tta | Brown clay-sand-gravel (QTa) over sand-gravel with gray clay (Te) | NMOSE file no. RG-50386x; GPS and field check by P. Johnson |
| | G-4 | 402589 | 3937463 | 6190 | 16N.08E.34.241 | LLw | 148 | 142 | 6048 | 142 | Tts | Red-brown clay-sand-gravel (QTa) over red clay (Tts) | NMOSE file no. RG-29929; consultant's map location |
| | G-5 | 409882 | 3944381 | 6649 | 16N.09E.4.3413 | LLw | 245 | 140 | 6509 | 140 | Tts | Sand-gravel (QTa) over light-brown clay (Tts) | NMOSE file no. RG-48102; GPS and field check by P. Johnson |
| | G-6 | 417200 | 3933170 | 6866 | ElDorado | LLw | 860 | 255 | 6611 | 255 | Ps | Sand-gravel some granite boulder conglomerate at base (QTa) | NMOSE file no. RG-73231; consultant's lithologic log |
| | G-7 | 415164 | 3938375 | 6924 | SH-X1 | LLw, GL | 250 | 98 | 6826 | 98 | Tta | Gamma-SP and lithologic logs, sand-gravel granite wash (QTa) over consolidated granite sand and shale | NMOSE file no. RG-21523X1; Sunlit Hills X-1, consultant's map location |
| | G-8 | 413542 | 3939736 | 6824 | ElDoradoLot18Blk14 | LLw | 340 | 160 | 6664 | 160 | Tta | Sand-gravel (QTa) over granitic sand (Tta) | NMOSE file no. RG-52317; Santa Fe County Lot Locator |
| | G-9 | 413145 | 3934970 | 6629 | 15N.09E.2.3232 | LLw | 450 | 180 | 6449 | 180 | Tta | Sand-gravel (QTa) over granitic sand (Tta) | NMOSE file no. RG-61733; NMOSE TRS |
| | G-10 | 415465 | 3938695 | 6910 | SH-X12 | LLw | 205 | 25 | 6885 | 25 | Tts | Sand-gravel (QTa) over red, brown shale and granite sand | NMOSE file no. RG-21523X12; Sunlit Hills X-12, consultant's map location |
| | G-11 | 412714 | 3933491 | 6584 | 15N.09E.11.331 | LLw | 460 | 60 | 6524 | 60 | Te | Brown top soil (QTa) over grey shale (Te) | NMOSE file no. RG-53116; Santa Fe County Lot Locator |
| | G-12 | 405230 | 3923870 | 6181 | 14N.08E.12.223 | LLw | 1000 | 135 | 6046 | 135 | Te | Red sand (QTa) over grey and brown "ash" (Te) | NMOSE file no. RG-32159; site visit; Santa Fe County lot locator |
| | G-13 | 412253 | 3934108 | 6582 | ElDorado | LLw | 315 | 180 | 6402 | 180 | Tta | Brown sand-gravel (QTa) over grey granitic sand (Tta) | NMOSE file no. RG-43674; Santa Fe County Lot Locator |
| | G-14 | 405171 | 3930616 | 6263 | 15N.08E.24.144 | LLw | 140 | 90 | 6173 | 90 | Te | Brown sand-clay (QTa) over gray shale (Te) | NMOSE file no. RG-32704; NMOSE TRS |
| | G-15 | 405716 | 3925981 | 6243 | 14N.08E.1.241 | LLw | 210 | 210 | 6033 | 210 | Te | Brown and grey sand and clay, QTa eroded from Te | NMOSE file no. RG-26341; NMOSE TRS |
| | G-16 | 405710 | 3924566 | 6158 | 14N.08E.12.223 | LLw | 170 | 100 | 6058 | 100 | Te | Red clay-sand-gravel (QTa) over hard grey volcanic | NMOSE file no. RG-51310; NMOSE TRS |
| | G-17 | 405625 | 3932200 | 6315 | 15N.08E.13.234 | LLw | 295 | 240 | 6075 | 240 | Te | Black-dark brown sandy clay (QTa); hard black volcanic (Te) | NMOSE file no. RG-59640; Santa Fe County Lot Locator |
| | G-18 | 398476 | 3933166 | 6024 | 15N.8E.8.434 | LLW | 65 | 65 | 5959 | 55 | Tg | Sand-gravel with thin tan-gray clays (QTa-QTt) over red shale (Tg) | NMOSE file no. RG-45724; ranch house well |
| | G-19 | 405427 | 3931917 | 6298 | 15N.08E.13.4113 | LLw | 455 | 240 | 6058 | 240 | Te | Brown clay-sand-gravel (QTa); black rock (Te) | NMOSE file no. RG-57545; Santa Fe County Lot Locator |
| | G-20 | 405141 | 3932052 | 6306 | 15N.08E.13.412 | LLw | 595 | 200 | 6106 | 200 | Te | Brown clay-sand-gravel (QTa); black and red rock, grey clay (Te) | NMOSE file no. RG-57752; Santa Fe County Lot Locator |
| | G-21 | 404927 | 3932219 | 6294 | 15N.08E.13.342 | LLw | 400 | 200 | 6094 | 200 | Te | Brown sand-gravel (QTa); grey purple volcanics, grey shale, fractures (Te) | NMOSE file no. RG-57209; Santa Fe County Lot Locator |
| | G-22 | 404581 | 3932039 | 6276 | 15N.08E.13.311 | LLw | 500 | 170 | 6106 | 170 | Te | Tan clay-sand-gravel (QTa) over basalt (Te) | NMOSE file no. RG-76701; NMOSE TRS |
| | G-23 | 405956 | 3932722 | 6327 | 15N.08E.13.222 | LLw | 460 | 230 | 6097 | 230 | Te | Brown and red sand and clay (QTa); brown/black rock (Te) | NMOSE file no. RG-77679; Santa Fe County Lot Locator |
| | G-24 | 405593 | 3931302 | 6286 | 15N.08E.13.132 | LLw | 600 | 200 | 6086 | 200 | Te | Red sands, brown clay (QTa) over black volcanic rock (Te) | NMOSE file no. RG-72833; Santa Fe County Lot Locator |
| | G-25 | 404386 | 3931835 | 6275 | 15N.08E.14.424 | LLw | 150 | 139 | 6136 | 139 | Te | Brown sand-gravel (QTa) over dark grey rock (Te) | NMOSE file no. RG-27729, drill and test well; NMOSE TRS |
| | G-26 | 403303 | 3924167 | 6073 | 14N.08E.11.143 | LLw | 1240 | 110 | 5963 | 110 | Te | Gray sand-gravel (QTa), gray ash over red-white sandstone-clay (Te) | NMOSE file no. RG-77769; NMOSE TRS |
| | G-27 | 405997 | 3931049 | 6305 | 15N.08E.18.144 | LLw | 340 | 200 | 6105 | 200 | Te | Brown-tan sand-clay-gravel (QTa); gray basalt (Te) | NMOSE file no. RG-73794; Santa Fe County Lot Locator |
| | G-28 | 404649 | 3930188 | 6253 | 15N.08E.24.3134 | LLw | 200 | 175 | 6078 | 175 | Te | Yellow sand-clay (QTa); gray basalt (Te) | NMOSE file no. RG-60749; Santa Fe County Lot Locator |
| | G-29 | 403147 | 3931219 | 6217 | 15N.08E.23.112 | LLw | 298 | 151 | 6066 | 151 | Tg | Sand-gravel with basal red clay (QTa); yellow/brown sand rock (Tg) | NMOSE file no. RG-37223; NMOSE TRS |
| | G-31 | 404227 | 3928702 | 6162 | 15N.08E.26.420 | LLw | 111 | 98 | 6064 | 98 | Te | Brown clay-sand-gravel (QTa) over brown volcanic rock (Te) | NMOSE file no. RG-29268; NMOSE TRS |
| | G-32 | 403305 | 3945495 | 6407 | 16N.08E.2.114 | LLw | 560 | 100 | 6307 | 100 | Tts | Brown, grey-green sand-gravel (QTa); reddish-pink sand-clay (Tts) | NMOSE file no. RG-70591; NMOSE TRS |
| | G-33 | 402797 | 3943781 | 6349 | 16N.08E.10.220 | LLw | 502 | 170 | 6179 | 170 | Tts | Brown sand-gravel (QTa); tan-brown-red gravel-sand-clay (Tts) | NMOSE file no. RG-7767C, NMOSE TRS |
| | G-34 | 414845 | 3938660 | 6880 | SH-X8 | LLw | 300 | 70 | 6810 | 70 | Tta | Sand-gravel, boulder conglomerate at base (QTa) over white and brown sand-gravel, sandstone and shale(Tta) | NMOSE file no. RG-21523X8, Sunlit Hills X-8, consultant's map location |
| | G-35 | 415096 | 3938126 | 6897 | SH-X7 | LLw | 250 | 75 | 6822 | 75 | Tta | Sand-gravel, granite wash at base (QTa), brown and red shale and gravel | NMOSE file no. RG-21523X7, Sunlit Hills X-9, consultant's map location |
| | G-36 | 404523 | 3944072 | 6413 | 16N.08E.11.222 | LLw | 388 | 154 | 6259 | 154 | Tts | Brown sand-gravel (QTa); red clay and brown fine sand (Tts) | NMOSE file no. RG-25230; NMOSE TRS |
| | G-37 | 405512 | 3943870 | 6473 | 16N.08E.12.213 | LLw | 510 | 168 | 6305 | 168 | Tts | Tan sand-gravel-boulders (QTa) over red and tan sand-clay (Tts) | NMOSE file no. RG-25228, NMOSE TRS |
| | G-38 | 413950 | 3941072 | 6927 | 16N.09E.14.442 | LLw | 440 | 135 | 6792 | 135 | Tta | Red coarse sand (QTa) over granite wash (Tta) | NMOSE file no. RG-75805, Santa Fe County Lot Locator |
| | G-39 | 405836 | 3941711 | 6380 | 16N.08E.13.421 | LLw | 368 | 145 | 6235 | 145 | Tts | Red sand-gravel-boulders (QTa); grey and red sands (Tts) | NMOSE file no. RG-4697, azmith and distance from section 1/4 |
| | G-40 | 405720 | 3942040 | 6423 | 16N.08E.13.230 | LLw | 410 | 185 | 6238 | 185 | Tts | Red brown sand (QTa); grey, brown and red sand and clay (Tts) | NMOSE file no. RG-4697, azmith and distance from section 1/4 |
| | G-41 | 404605 | 3940395 | 6309 | 16N.08E.24.131 | LLw | 280 | 140 | 6169 | 140 | Tts | Red sand-gravel-clay (QTa) over clay and pale sand (Tts) | NMOSE file no. RG-50402, Santa Fe County Lot Locator |
| | G-42 | 400412 | 3938483 | 6115 | 16N.08E.28.233 | LLw | 65 | 50 | 6065 | 50 | Tts | Tan-red clay-sand-gravel (QTa); grey clay (Tts) | NMOSE file no. RG-31960; NMOSE TRS |
| | G-44 | 408875 | 3941474 | 6542 | 16N.09E.17.414 | LLw | 500 | 130 | 6412 | 130 | Tts | Red-tan sand-gravel (QTa) over tan, red-tan sand-clay (Tts) | NMOSE file no. RG-76384; Santa Fe County Lot Locator |

**Table 1–Well and formation information for control wells used to construct elevation contour and isopach maps (Plates 1 and 2)**



| | Site identification | Location (UTM NAD27) Easting (m) | Location (UTM NAD27) Northing (m) | Surface elevation (ft asl) | Other location name or number | Data type | Well depth | Depth to base of Ancha Fm (ft) | Base elevation (ft asl) | Formation thickness (ft) | Subcrop formation | Lithologic notes | Source comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NMOSE water well records | G-45 | 408797 | 3944765 | 6611 | 16N.09E.5.341 | LLw | 745 | 118 | 6493 | 118 | Tts | Tan sand, red gravel (QTa) over tan sand, clay (Tts) | NMOSE file no. RG-2644X2; NMOSE TRS |
| | G-46 | 408706 | 3941242 | 6518 | 16N.09E.17.431 | LLw | 420 | 125 | 6393 | 125 | Tts | Reddish sand-clay-gravel (QTa) over reddish yellow sandy clay (Tts) | NMOSE file no. RG-69393, NMOSE TRS |
| | G-47 | 411818 | 3934236 | 6541 | 15N.09E.10.213 | LLw | 365 | 158 | 6383 | 158 | Tta | Brown and reddish sand-gravel (QTa) over red brown sandy clay (Tta) | NMOSE file no. RG-35843, Santa Fe County Lot Locator |
| | G-48 | 412577 | 3933455 | 6577 | 15N.09E.11.313 | LLw | 300 | 85 | 6492 | 85 | | Sand-clay-gravel (QTa) over rock, gravel, pumice (Te) | NMOSE file no. RG-48352, Santa Fe County Lot Locator |
| | G-49 | 415230 | 3937630 | 6900 | SH-X3 | LLw | 250 | 70 | 6830 | 70 | Tta | Sand-gravel (QTa) over consolidated red-brown-grey granite sand and shale (Tta) | NMOSE file no. RG-21523X3; Sunlit Hills X-3, consultant's location map |
| | G-50 | 408125 | 3943632 | 6522 | 16N.09E.8.132 | LLw | 200 | 160 | 6362 | 160 | Tts | Red gravel-boulders (QTa) over red clay and gravel (Tts) | NMOSE file no. RG-29610, NMOSE TRS |
| | G-52 | 404555 | 3941166 | 6299 | 16N.08E.13.323 | LLw | 410 | 155 | 6144 | 155 | Tts | Brown red sand-clay-gravel (QTa) over red sandstone and clay layers (Tts) | NMOSE file no. RG-88159, Santa Fe County Lot Locator |
| | G-53 | 411986 | 3943221 | 6761 | 16N.09E.10.411 | LLw | 400 | 120 | 6641 | 120 | Tts | Sand-gravel (QTa) over brown sand and clay (Tts) | NMOSE file no. RG-67541, NMOSE TRS |
| | G-54 | 405216 | 3941309 | 6335 | 16N.08E.13.423 | LLw | 365 | 160 | 6175 | 160 | Tts | Brown gravel-sand (QTa) over sand-clay (Tts) | NMOSE file no. RG-69497, Santa Fe County Lot Locator |
| | G-55 | 413428 | 3942801 | 6917 | 16N.09E.11.342 | LLw | 495 | 70 | 6847 | 70 | Tts | Sand-gravel (QTa) over dark gray clays and sands (Tts) | NMOSE file no. RG-77930, Santa Fe County Lot Locator |
| | G-56 | 412900 | 3934000 | 6604 | 15N.09E.11.132 | LLw | 460 | 200 | 6404 | 200 | Te | Sand-gravel with brown clay (QTa) over broken black-purple rock (Te) | NMOSE file no. RG-59391, NMOSE TRS |
| | G-57 | 406667 | 3942464 | 6473 | 16N.09E.18.124 | LLw | 300 | 140 | 6333 | 140 | Tts | Yellow sandy clay (QTa) over red-gray sand (Tts) | NMOSE file no. RG-42000X, Santa Fe County Lot Locator |
| | G-58 | 402365 | 3938919 | 6218 | 16N.08E.27.2321 | LLw | 248 | 100 | 6118 | 100 | Tts | Brown sand-gravel (QTa) over red clay and sand (Tts) | NMOSE file no. RG-11826, Z. Spiegel location map and report |
| | G-59 | 408032 | 3943121 | 6515 | 16N.09E.8.310 | LLw | 270 | 140 | 6375 | 140 | Tts | Brown gravel (QTa) over coarse brown sand (Tts) | NMOSE file no. RG-25300, NMOSE TRS |
| | G-60 | 410224 | 3942580 | 6644 | 16N.09E.10.324 | LLw | 250 | 140 | 6504 | 140 | Tta | Red sand-gravel and brown clay (QTa) over tan sand (Tta) | NMOSE file no. RG-76912, Santa Fe County Lot Locator |
| | G-61 | 409778 | 3942984 | 6621 | 16N.09E.9.321 | LLw | 250 | 140 | 6481 | 140 | Tta | Red sand-gravel and brown clay (QTa) over tan sand-gravel (Tta) | NMOSE file no. RG-78005, Santa Fe County Lot Locator |
| | G-62 | 414145 | 3933380 | 6631 | 15N.09E.12.221 | LLw | 360 | 155 | 6476 | 155 | Tte | Red-brown clay-sand-gravel (QTa) over gray clay, red-black rock (Tte) | NMOSE file no. RG-59501, Santa Fe County Lot Locator |
| | G-63 | 409157 | 3945673 | 6643 | 16N.09E.5.221 | LLw | 500 | 85 | 6558 | 85 | Tts | Red sand-gravel (QTa) over brown sand-clay (Tts) | NMOSE file no. RG-68368, Santa Fe County Lot Locator |
| | G-64 | 407906 | 3940843 | 6472 | 16N.09E.20.111 | LLw | 480 | 200 | 6272 | 200 | Tts | Pink-tan sand-gravel-clay (QTa) over pink-tan medium sand (Tts) | NMOSE file no. RG-83505, NMOSE TRS |
| | G-65 | 408957 | 3944045 | 6567 | 16N.09E.8.212 | LLw | 180 | 160 | 6407 | 160 | Tts | Brown gravel (QTa) over red sand (Tts) | NMOSE file no. RG-635X, NMOSE TRS |
| | G-66 | 408148 | 3940472 | 6504 | 16N.09E.20.132 | LLw | 500 | 205 | 6299 | 205 | Tts | Brown sand-gravel (QTa) over pinkish tan sand (Tts) | NMOSE file no. RG-75032, Santa Fe County Lot Locator |
| | G-67 | 404316 | 3941048 | 6309 | 16N.08E.14.344 | LLw | 320 | 125 | 6184 | 125 | Tts | Reddish tan sand-gravel (QTa) over reddish tan sand clay (Tts) | NMOSE file no. RG-72404, Santa Fe County Lot Locator |
| | G-68 | 409173 | 3943623 | 6615 | 16N.09E.8.241 | LLw | 240 | 140 | 6475 | 140 | Tts | Brown sand-gravel-clay (QTa) over tan sand-gravel, sand-clay (Tts) | NMOSE file no. RG-74765, Santa Fe County Lot Locator |
| | G-69 | 403669 | 3941675 | 6262 | 16N.08E.14.344 | LLw | 385 | 120 | 6142 | 120 | Tts | Red sand-clay-boulders (QTa) over sandstone, sand, clay (Tts) | NMOSE file no. RG-74546, NMOSE TRS |
| | G-70 | 395530 | 3929320 | 6204 | 15N.07E.25.141 | LLw | 420 | 65 | 6139 | 65 | Te | Pink-gray, gray sand-gravel (QTa) over gray shale-siltstone (Te) | NMOSE file no. RG-80420, NMOSE coordinates |
| | G-72 | 404671 | 3930343 | 6256 | 15N.08E.24.3123 | LLw | 163 | 155 | 6101 | 155 | Te | Brown clay, red sand-gravel (QTa) over white clay (Te) | NMOSE file no. RG-71895, Santa Fe County Lot Locator |
| | G-73 | 393822 | 3934091 | 6129 | 15N.07E.11.141 | LLw | 360 | 240 | 5889 | 75 | Tgd | Basalt (QTb) decomposed red granite (QTa) over red brown clay (Tgd) | NMOSE file no. RG-59808, GPS field check by P. Johnson |
| | G-74 | 390987 | 3933446 | 6112 | 15N.07E.9.431 | LLw | 690 | 110 | 6002 | 50 | K | Basalt (QTb), tan-pink granitic gravel (QTa) over dark grey clay, shale (K) | NMOSE file no. RG-59810, NMOSE TRS |
| | G-75 | 407693 | 3944741 | 6561 | 16N.09E.6.422 | LLw | 350 | 200 | 6361 | 200 | Tts | Yellow boulders (QTa) over red sand (Tts) | NMOSE file no. RG-5266, Santa Fe County Lot Locator |
| | G-76 | 394457 | 3933638 | 6142 | 15N.07E.11.414 | LLw | 465 | 260 | 5882 | 70 | Tgd | Basalt (QTb), tan, red brown clay and sand (QTa) over red brown clay and sandstone (Tgd) | NMOSE file no. RG-61188, GPS and field check by P. Johnson |
| | G-77 | 404550 | 3930345 | 6249 | 15N.08E.24.311 | LLw | 280 | 190 | 6059 | 190 | Te | Sand-clay-gravel (QTa) over black lava rock (Te) | NMOSE file no. RG-71448, Santa Fe County Lot Locator |
| | G-78 | 395211 | 3934037 | 6076 | 15N.07E.12.134 | LLw | 460 | 200 | 5876 | 60 | Tgd | Basalt (QTb), light brown clay, granitic sand (QTa) over red clay (Tgd) | NMOSE file no. RG-61192, GPS and field check by P. Johnson |
| | G-82 | 397964 | 3939616 | 6099 | 16N.08E.19.421 | LLw | 100 | 85 | 6014 | 85 | Tts | Red sand-gravel (QTa) over red clay (Tts) | NMOSE file no. RG-75752, Santa Fe County Lot Locator |
| | G-83 | 405352 | 3931409 | 6278 | 15N.08E.13.433 | LLw | 400 | 220 | 6058 | 220 | Te | Brown sand-gravel, red granite wash (QTa) over grey shale, broken grey rock (Te) | NMOSE file no. RG-56326x, NMOSE TRS |
| | G-84 | 391776 | 3933574 | 6118 | 15N.07E.10.314 | LLw | 630 | 180 | 5938 | 40 | Km | Basalt (QTb), coarse granitic and black sand (QTa) over black shale-sandstone (K) | NMOSE file no. RG-61194; GPS and field check by P. Johnson |
| | G-85 | 406545 | 3932737 | 6343 | 15N.09E.18.1213 | LLw | 580 | 221 | 6122 | 221 | Te | Sand-gravel-clay (QTa) over grey rock (Te); bottom foot of QTa saturated | NMOSE file no. RG-75557; Santa Fe Lot Locator and address |
| | G-86 | 405096 | 3932295 | 6302 | 15N.08E.13.14 | LLw | 480 | 210 | 6092 | 210 | Te | Sand with clay (QTa) over basalt, sand, clay (Te) | NMOSE file no. RG-58052; NMOSE TRS |
| | G-90 | 407511 | 3932387 | 6381 | 15N.09E.18.2434 | LLw | 600 | 160 | 6221 | 160 | Te | Brown sand-gravel (QTa) over black volcanics (Te) | NMOSE file no. RG-71772; Santa Fe County Lot Locator |
| | G-92 | 406565 | 3931426 | 6329 | 15N.09E.18.321 | LLw | 620 | 240 | 6089 | 240 | Te | Brown-tan clay and sand (QTa) over gray, green-gray, red sands and lava rock (Te) | NMOSE file no. RG-72408; Santa Fe County Lot Locator via address |
| | G-93 | 406682 | 3932398 | 6345 | 15N.09E.18.1414 | LLw | 500 | 200 | 6145 | 200 | Te | Reddish tan sand-gravel (QTa) over red-gray-green basalt (Te) | NMOSE file no. RG-76967, Santa Fe County Lot Locator |
| | G-94 | 406382 | 3931390 | 6322 | 15N.09E.18.334 | LLw | 380 | 180 | 6142 | 180 | Te | Tan sand-gravel-clay (QTa) over red-gray basalt (Te) | NMOSE file no. RG-72836, Santa Fe County Lot Locator |
| | G-95 | 406999 | 3931605 | 6344 | 15N.09E.18.431 | LLw | 360 | 270 | 6074 | 270 | Te | Grayish tan sand, gray clay, reddish gray sand (QTa) over reddish gray, green basalt (Te) | NMOSE file no. RG-71009, NMOSE TRS |
| | G-97 | 406730 | 3932071 | 6345 | 15N.09E.18.3221 | LLw | 500 | 189 | 6156 | 189 | Te | Tan-gray sand-clay-gravel (QTa) over gray basalt (Te) | NMOSE file no. RG-79539, Santa Fe County Lot Locator |
| | G-98 | 406889 | 3931075 | 6310 | 15N.09E.19.1224 | LLw | 430 | 190 | 6120 | 190 | Te | Reddish tan sand-gravel (QTa) over red-gray-tan basalt (Te) | NMOSE file no. RG-79027, Santa Fe County Lot Locator |
| | G-99 | 406444 | 3931058 | 6302 | 15N.09E.19.1142 | LLw | 440 | 158 | 6144 | 158 | Te | Yellow sand-clay-gravel (QTa) over basalt (Te) | NMOSE file no. RG-70292, Santa Fe County Lot Locator |
| | G-100 | 406589 | 3930601 | 6284 | 15N.09E.19.143 | LLw | 400 | 150 | 6134 | 150 | Te | Gray-tan sand-clay-gravel (QTa) over red-gray basalt (Te) | NMOSE file no. RG-72636, NMOSE TRS |
| | G-104 | 400389 | 3934855 | 6148 | 15N.08E.4.342 | LLw | 140 | 120 | 6028 | 120 | Te | Red granite wash (QTa) over grey volcanic rock (Te) | NMOSE file no. RG-50044, NMOSE TRS |
| | G-107 | 407195 | 3932746 | 6380 | 15N.09E.18.2123 | LLw | 740 | 223 | 6157 | 223 | Te | Brown sand-clay (QTa) over black-green-red conglomerate and volcanics (Te) | NMOSE file no. RG-80448, Santa Fe County Lot Locator |
| | G-109 | 407602 | 3931207 | 6311 | 15N.09E.19.222 | LLw | 440 | 205 | 6106 | 205 | Te | Tan, grayish tan sand-gravel-clay (QTa) over basalt (Te) | NMOSE file no. RG-75105, NMOSE TRS |
| | G-110 | 407209 | 3931100 | 6318 | 15N.09E.19.2123 | LLw | 500 | 140 | 6178 | 140 | Te | Yellow grayish, yellow sand-gravel-clay (QTa) over basalt (Te) | NMOSE file no. RG-80461, Santa Fe County Lot Locator |
| | G-111 | 400615 | 3935872 | 6131 | 15N.08E.4.213 | LLw | 140 | 130 | 6001 | 130 | Tts-Tte | Red gravel-boulders (QTa) over black shale (Tte) | NMOSE file no. RG-33532, NMOSE TRS |
| | G-112 | 399583 | 3934914 | 6119 | 15N.08E.5.4421 | LLw | 160 | 120 | 5999 | 120 | Te | Gravel and clay (QTa) over purple rock (Te); log lumps gravel and purple rock | NMOSE file no. RG-75766, Santa Fe County Lot Locator |
| | G-113 | 402842 | 3937246 | 6181 | 16N.08E.34.242 | LLw | 200 | 140 | 6041 | 140 | Tts | Red sand-gravel (QTa) over clay-sand (Tts) | NMOSE file no. RG-81008, NMOSE TRS |
| | G-126 | 407737 | 3940481 | 6488 | 16N.09E.19.2422 | LLw | 320 | 240 | 6248 | 240 | Tts | Red sand-gravel, brown clay (QTa) over tan sand (Tts) | NMOSE file no. RG-75800, Santa Fe County Lot Locator |
| | G-127 | 405130 | 3941306 | 6337 | 16N.08E.13.3412 | LLw | 320 | 160 | 6177 | 160 | Tts | Sand-gravel-cobbles (QTa) over interbeds of brown clay-red sand (Tts) | NMOSE file no. RG-74653, Santa Fe County Lot Locator |
| | G-132 | 401055 | 3939242 | 6187 | 16N.08E.28.2214 | LLw | 200 | 120 | 6067 | 120 | Tts | Red sand-gravel (QTa) over brown clay, tan sand (Tts) | NMOSE file no. RG-77162, Santa Fe County Lot Locator |
| | G-134 | 400340 | 3940133 | 6256 | 16N.08E.21.3221 | LLw | 200 | 30 | 6226 | 30 | Tts | Red sand-gravel (QTa) over brown sand-clay and red, tan sands (Tts); see ND89 | NMOSE file no. RG-76803, Santa Fe County Lot Locator |
| | G-135 | 401236 | 3939702 | 6220 | 16N.08E.21.442 | LLw | 220 | 160 | 6060 | 160 | Tts | Red sand-gravel (QTa) over brown clay and tan sand interbeds (Tts) | NMOSE file no. RG-75300, NMOSE TRS |

| | Site identification | Location (UTM NAD27) Easting (m) | Location (UTM NAD27) Northing (m) | Surface elevation (ft asl) | Other location name or number | Data type | Well depth | Depth to base of Ancha Fm (ft) | Base elevation (ft asl) | Formation thickness (ft) | Subcrop formation | Lithologic notes | Source comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NMOSE water well records | G-136 | 399060 | 3940886 | 6176 | 16N.08E.20.211 | LLw | 200 | 25 | 6151 | 25 | Tts | "Top soil" (QTa) over red sands, brown clay interbedded (Tts) | NMOSE file no. RG-80752, Santa Fe County Lot Locator |
| | G-138 | 398630 | 3939943 | 6136 | 16N.08E.20.3232 | LLw | 160 | 25 | 6111 | 25 | Tts | "Surface soil" (QTa) over red sands, brown clay interbedded (Tts) | NMOSE file no. RG-80079, Santa Fe County Lot Locator |
| | G-139 | 399091 | 3940710 | 6183 | 16N.08E.20.2132 | LLw | 160 | 25 | 6158 | 25 | Tts | "Top soil" (QTa) over red sands, brown clay interbedded (Tts) | NMOSE file no. RG-80098, Santa Fe County Lot Locator |
| | G-140 | 399069 | 3939496 | 6181 | 16N.08E.20.4332 | LLw | 160 | 50 | 6131 | 50 | Tts | Brown clay-sand (QTa) over red sands, brown clay interbedded (Tts) | NMOSE file no. RG-73691, Santa Fe County Lot Locator |
| | G-141 | 398951 | 3940645 | 6156 | 16N.08E.20.2133 | LLw | 160 | 8 | 6148 | 8 | Tts | "Surface soil" (QTa) over red sands, brown clay interbedded (Tts) | NMOSE file no. RG-75101, Santa Fe County Lot Locator |
| | G-143 | 398726 | 3939069 | 6183 | 16N.08E.29.1243 | LLw | 160 | 25 | 6158 | 25 | Tts | "Top soil" (QTa) over red sands, brown clay interbedded (Tts) | NMOSE file no. RG-80783, Santa Fe County Lot Locator |
| | G-144 | 398948 | 3940713 | 6154 | 16N.08E.20.21313 | LLw | 140 | 10 | 6144 | 10 | Tts | "Top soil" (QTa) over sand-gravel, brown clay interbedded (Tts) | NMOSE file no. RG-81186, Santa Fe County Lot Locator |
| | G-146 | 400926 | 3939770 | 6227 | 16N.08E.21.4411 | LLw | 200 | 170 | 6057 | 170 | Tts | Red sand-gravel-clay (QTa) over tan sandy clay(Tts) | NMOSE file no. RG-76174, Santa Fe County Lot Locator |
| | G-148 | 400250 | 3939951 | 6251 | 16N.08E.21.3232 | LLw | 253 | 35 | 6216 | 35 | Tts | Gravel-brown clay (QTa) over interbedded clay, sand (Tts) | NMOSE file no. RG-73997, Santa Fe County Lot Locator |
| | G-149 | 401102 | 3939883 | 6233 | 16N.08E.21.4232 | LLw | 220 | 145 | 6088 | 145 | Tts | Red sand-gravel (QTa) over brown sandy clay, red sand (Tts) | NMOSE file no. RG-73249, Santa Fe County Lot Locator |
| | G-150 | 400161 | 3939741 | 6244 | 16N.08E.21.423 | LLw | 220 | 35 | 6209 | 35 | Tts | Red sand-gravel (QTa) over brown clay, red sand interbedded (Tts) | NMOSE file no. RG-72234, Santa Fe County Lot Locator |
| | G-151 | 400378 | 3939762 | 6219 | 16N.08E.21.3421 | LLw | 200 | 40 | 6179 | 40 | Tts | Red sand-gravel-clay (QTa) over brown-red clay-sand interbedded (Tts) | NMOSE file no. RG-72922, Santa Fe County Lot Locator |
| | G-152 | 401269 | 3939729 | 6203 | 16N.08E.21.4422 | LLw | 223 | 150 | 6053 | 150 | Tts | Red sand-gravel (QTa) over red clay-sand (Tts) | NMOSE file no. RG-76460, Santa Fe County Lot Locator |
| | G-154 | 401787 | 3939507 | 6203 | 16N.08E.22.341 | LLw | 220 | 155 | 6048 | 155 | Tts | Red sand-gravel (QTa) over red clay-sand interbedded (Tts) | NMOSE file no. RG-73258, Santa Fe County Lot Locator |
| | G-155 | 401885 | 3939910 | 6191 | 16N.08E.22.3232 | LLw | 180 | 120 | 6071 | 120 | Tts | Red sand-gravel (QTa) over red clay and alluvial sand (Tts) | NMOSE file no. RG-70742, Santa Fe County Lot Locator |
| | G-156 | 404762 | 3940370 | 6302 | 16N.08E.24.131 | LLw | 300 | 130 | 6172 | 130 | Tts | Red-tan sand-gravel (QTa) over red-tan sand and clay (Tts) | NMOSE file no. RG-76852, Santa Fe County Lot Locator |
| | G-159 | 405084 | 3937992 | 6282 | 16N.08E.25.3414 | LLw | 300 | 180 | 6102 | 180 | Tts | Red sand-gravel (QTa) over clay-sand (Tts) | NMOSE file no. RG-72558, Santa Fe County Lot Locator |
| | G-160 | 401732 | 3937840 | 6165 | 16N.08E.27.3433 | LLw | 140 | 120 | 6045 | 120 | Tts | Red sand/gravel (QTa) over red clay/sand (Tts) | NMOSE file no. RG-75820, map location |
| | G-161 | 414373 | 3931620 | 6663 | 15N.09E.13.3321 | LLw | 330 | 200 | 6463 | 200 | Te | Brown-tan-red sand-clay-gravel (QTa) over grayish black basalt (Te) | NMOSE file no. RG-73470, consultant's map location |
| | G-162 | 401421 | 3938355 | 6203 | 16N.08E.27.3131 | LLw | 200 | 150 | 6053 | 150 | Tts | Red sand-gravel (QTa) over yellow and brown clay (Tts) | NMOSE file no. RG-71405, Santa Fe County Lot Locator |
| | G-163 | 402160 | 3938016 | 6182 | 16N.08E.27.4313 | LLw | 140 | 100 | 6082 | 100 | Tts | Sand-gravel (QTa) over brown-gray clays (Tts) | NMOSE file no. RG-71047, Santa Fe County Lot Locator |
| | G-164 | 401689 | 3938905 | 6164 | 16N.08E.27.1322 | LLw | 160 | 70 | 6094 | 70 | Tts | Red sand-gravel (QTa) over interbedded red sand and clay (Tts) | NMOSE file no. RG-70091, Santa Fe County Lot Locator |
| | G-165 | 400234 | 3939059 | 6197 | 16N.08E.28.1234 | LLw | 200 | 140 | 6057 | 140 | Tts | Red sand-gravel (QTa) over interbedded red clay and sand; see ND96 | NMOSE file no. RG-77392, Santa Fe County Lot Locator |
| | G-166 | 400873 | 3939124 | 6174 | 16N.08E.28.2142 | LLw | 150 | 90 | 6084 | 90 | Tts | Red sand-gravel (QTa) over interbedded sand and clay (Tts) | NMOSE file no. RG-73833, Santa Fe County Lot Locator |
| | G-167 | 401116 | 3939535 | 6201 | 16N.08E.21.4432 | LLw | 220 | 140 | 6061 | 140 | Tts | Red sand-gravel (QTa) over interbedded red clay and sand (Tts) | NMOSE file no. RG-73580, Santa Fe County Lot Locator |
| | G-168 | 401293 | 3938295 | 6208 | 16N.08E.28.42424 | LLw | 270 | 150 | 6058 | 150 | Tts | Red sand-gravel (QTa) over interbedded brown clay and sand (Tts) | NMOSE file no. RG-73550, Santa Fe County Lot Locator |
| | G-169 | 400429 | 3938965 | 6161 | 16N.08E.28.1422 | LLw | 100 | 90 | 6071 | 90 | Tts | Red sand-gravel (QTa) over red clay (Tts) | NMOSE file no. RG-72197, Santa Fe County Lot Locator |
| | G-170 | 401250 | 3939379 | 6170 | 16N.08E.28.2222 | LLw | 160 | 110 | 6060 | 110 | Tts | Red sand-gravel (QTa) over gray clay, interbedded sand (Tts) | NMOSE file no. RG-72038, Santa Fe County Lot Locator |
| | G-171 | 401031 | 3939379 | 6208 | 16N.08E.28.2212 | LLw | 200 | 130 | 6078 | 130 | Tts | Sand-gravel (QTa) over interbedded sand and clay (Tts) | NMOSE file no. RG-71557, Santa Fe County Lot Locator |
| | G-176 | 412172 | 3934258 | 6577 | 15N.09E.10.21422 | LLw | 410 | 160 | 6417 | 160 | Tta | Decomposed granitic gravels-sands (QTa) over granitic sandstone-clay (Tta) | NMOSE file no. RG-69621, NMOSE State Plane coordinates |
| | G-177 | 413944 | 3930082 | 6572 | 15N.09E.23.4234 | LLw | 400 | 120 | 6452 | 120 | Te | Sand-gravel-boulders (QTa) over grey volcanic rock (Te) | NMOSE file no. RG-82528, GPS and field check by P. Johnson |
| | G-178 | 414743 | 3930998 | 6620 | 15N.09E.24.1232 | LLw | 580 | 120 | 6500 | 120 | Te | Sand-gravel-boulders (QTa) over grey volcanic rock (Te) | NMOSE file no. RG-82526, NMOSE State Plane coordinates |
| | G-181 | 415664 | 3931321 | 6708 | 15N.09E.12.444 | LLw | 500 | 180 | 6528 | 180 | Te | Brown clay-sand (QTa) over grey clay, black lava rock (Te) | NMOSE file no. RG-71505, NMOSE TRS |
| | G-182 | 414060 | 3931538 | 6622 | 15N.09E.14.442 | LLw | 500 | 170 | 6452 | 170 | Te | Reddish-tan sand-gravel (QTa) over gray and reddish gray basalt (Te) | NMOSE file no. RG-75901, NMOSE TRS |
| | G-183 | 411160 | 3941135 | 6703 | 16N.09E.15.3313 | LLw | 470 | 240 | 6463 | 240 | Tts | Gravel (QTa) over tan sand (Tts) | NMOSE file no. RG-82439, Santa Fe County Lot Locator |
| | G-190 | 411798 | 3941355 | 6763 | 16N.09E.15.3244 | LLw | 303 | 200 | 6563 | 200 | Tts | Sand-gravel-clay (QTa) over sandrock (Tt) | NMOSE file no. RG-70451, Santa Fe County Lot Locator |
| | G-192 | 405311 | 3943291 | 6455 | 16N.08E.12.3212 | LLw | 500 | 180 | 6275 | 180 | Tts | Reddish tan sand-gravel (QTa) over tan sandy clay (Tts) | NMOSE file no. RG-76572, Santa Fe County Lot Locator |
| | G-193 | 404781 | 3943985 | 6424 | 16N.08E.12.110 | LLw | 415 | 140 | 6284 | 140 | Tts | Yellow clay-gravel (QTa) over red sand and clay (Tts) | NMOSE file no. RG-4121, NMOSE TRS |
| | G-194 | 412685 | 3931500 | 6542 | 15N.09E.14.3314 | LLw | 440 | 80 | 6462 | 80 | Te | Tan-red clay-sand-gravel (QTa) over gray, reddish-gray basalt (Te) | NMOSE file no. RG-78034, consultant's map location |
| | G-197 | 419794 | 3929621 | 6824 | 15N.10E.21.344 | LLw | 360 | 124 | 6700 | 124 | Mzu | Sand-gravel-boulders (QTa) over red clay, sandstone, fractured gray lime | NMOSE file no. RG-74337, consultant's coordinate location |
| | G-200 | 408085 | 3945217 | 6582 | 16N.09E.5.112 | LLw | 485 | 150 | 6432 | 150 | Tts | Red sand-gravel (QTa) over sandstone and sandy clay (Tts) | NMOSE file no. RG-70521, Santa Fe County Lot Locator |
| | G-204 | 406065 | 3927041 | 6242 | 15N.09E.31.3131 | LLw | 584 | 109 | 6133 | 109 | Te | Brown clay-sand-gravel (QTa) over gray-brown sandstone (Te) | NMOSE TRS |
| | G-205 | 406122 | 3926749 | 6223 | 15N.09E.31.331 | LLw | 600 | 190 | 6033 | 190 | Te | Reddish tan sand and gravel (QTa) over red-tan and gray basalt (Te) | NMOSE file no. RG-76734, NMOSE TRS |
| | G-206 | 406961 | 3927558 | 6269 | 15N.09E.31.231 | LLw | 600 | 105 | 6164 | 105 | Te | Red sandy clay (QTa) over gray shale and fractured hard rock (Te) | NMOSE file no. RG-72764, NMOSE TRS |
| | G-210 | 403922 | 3927478 | 6124 | 15N.08E.35.2324 | LLw | 208 | 80 | 6044 | 80 | Te | Sand-gravel- boulders (QTa) over grey volcanic rock (Te) | NMOSE file no. RG-82802, Santa Fe County Lot Locator |
| | G-212 | 404335 | 3926579 | 6120 | 15N.08E.35.4442 | LLw | 200 | 100 | 6020 | 100 | QTt-Te | Sand-clay (QTa) over gray clay-sand (QTt) over black lava rock (Te) | NMOSE file no. RG-70698, Santa Fe County Lot Locator |
| | G-213 | 403865 | 3927229 | 6115 | 15N.08E.35.4122 | LLw | 200 | 85 | 6030 | 85 | Te | Red sand, brown clay (QTa) over grey-brown shale, grey rock (Te) | NMOSE file no. RG-69396, Santa Fe County Lot Locator |
| | G-214 | 406909 | 3927125 | 6242 | 15N.09E.31.4113 | LLw | 500 | 110 | 6132 | 110 | Te | Gravel-clay (QTa) over gray rock (Te) | NMOSE file no. RG-78427, Santa Fe County Lot Locator |
| | G-216 | 406545 | 3926576 | 6259 | 15N.09E.31.343 | LLw | 400 | 160 | 6099 | 160 | Te | Sand-gravel-boulders (QTa) over gray rock (Te) | NMOSE file no. RG-75594, Santa Fe County Lot Locator |
| | G-218 | 406802 | 3926623 | 6261 | 15N.09E.31.3442 | LLw | 415 | 120 | 6141 | 120 | Te | Tan clay-gravel (QTa) over gray and red sand (Te) | NMOSE file no. RG-70550, Santa Fe County Lot Locator |
| | G-1 | 415951 | 3927077 | 6665 | 15N.10E.31.3121 | LLw | 510 | 70 | 6595 | 70 | Jm | | GPS and field check by P. Johnson |
| | SC-1 | 396256 | 3933815 | 5945 | House Well | LLw | | 56 | 5889 | | | | NMOSE file no. RG-41222, base of QTa from consultant geologic cross section |
| | SC-2 | 395898 | 3933869 | 6024 | Mesa Top Well | LLw | | 139 | 5885 | | | | NMOSE file no. RG-29242, base of QTa from consultant geologic cross section |
| | GGI-1 | 396642 | 3933779 | 5942 | outcrop | OCE | | | 5942 | | | | Glorieta Geoscience, Inc., written comm: GPS location of QTa/Te contact |
| | GGI-2 | 396712 | 3933760 | 5937 | outcrop | OCE | | | 5937 | | | | Glorieta Geoscience, Inc., written comm: GPS location of QTa/Te contact |

| | Site identification | Location (UTM NAD27) Easting (m) | Location (UTM NAD27) Northing (m) | Surface elevation (ft asl) | Other location name or number | Data type | Well depth | Depth to base of Ancha Fm (ft) | Base elevation (ft asl) | Formation thickness (ft) | Subcrop formation | Lithologic notes | Source comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Field data from outcrop exposures and maps | GGI-3 | 393608 | 3934802 | 5896 | outcrop | OCE | | | 5896 | | | | Glorieta Geoscience,Inc. (2006) |
| | GGI-4 | 394395 | 3935605 | 5974 | outcrop | OCE | | | 5974 | | | | Glorieta Geoscience,Inc. (2006) |
| | GGI-5 | 394473 | 3935005 | 5968 | outcrop | OCE | | | 5968 | | | | Glorieta Geoscience,Inc. (2006) |
| | GGI-6 | 395081 | 3935060 | 5938 | outcrop | OCE | | | 5938 | | | | Glorieta Geoscience,Inc. (2006) |
| | GGI-7 | 395415 | 3935187 | 5991 | outcrop | OCE | | | 5991 | | | | Glorieta Geoscience,Inc. (2006) |
| | GGI-8 | 396086 | 3934202 | 5935 | outcrop | OCE | | | 5935 | | | | Glorieta Geoscience,Inc. (2006) |
| | GGI-9 | 396241 | 3933963 | 5928 | outcrop | OCE | | | 5928 | | | | Glorieta Geoscience,Inc. (2006) |
| | GGI-10 | 396255 | 3933612 | 5942 | outcrop | OCE | | | 5942 | | | | Glorieta Geoscience,Inc. (2006) |
| | OC-0 | 400195 | 3937743 | 6063 | outcrop | OCM | | | 6063 | | | | Koning and Read (2010) |
| | OC-1 | 400589 | 3938139 | 6096 | outcrop | OCM | | | 6096 | | | | Koning and Read (2010) |
| | OC-3 | 412879 | 3942331 | 6827 | outcrop | OCM | | | 6827 | | | | Koning and Read (2010) |
| | OC-4 | 413569 | 3942575 | 6890 | outcrop | OCM | | | 6890 | | | | Koning and Read (2010) |
| | OC-5 | 414239 | 3942680 | 6929 | outcrop | OCM | | | 6929 | | | | Koning and Read (2010) |
| | OC-6 | 414869 | 3942694 | 6985 | outcrop | OCM | | | 6985 | | | | Koning and Read (2010) |
| | OC-7 | 415250 | 3942884 | 7057 | outcrop | OCM | | | 7057 | | | | Koning and Read (2010) |
| | OC-8 | 415205 | 3942450 | 6982 | outcrop | OCM | | | 6982 | | | | Koning and Read (2010) |
| | OC-9 | 415035 | 3942220 | 6991 | outcrop | OCM | | | 6991 | | | | Koning and Read (2010) |
| | OC-10 | 414787 | 3942090 | 6995 | outcrop | OCM | | | 6995 | | | | Koning and Read (2010) |
| | OC-11 | 414249 | 3942143 | 6916 | outcrop | OCM | | | 6916 | | | | Koning and Read (2010) |
| | OC-12 | 413569 | 3942162 | 6873 | outcrop | OCM | | | 6873 | | | | Koning and Read (2010) |
| | OC-13 | 413837 | 3942239 | 6883 | outcrop | OCM | | | 6883 | | | | Koning and Read (2010) |
| | OC-14 | 413313 | 3944644 | 6841 | outcrop | OCM | | | 6841 | | | | Koning and Read (2010) |
| | OC-15 | 412331 | 3944675 | 6778 | outcrop | OCM | | | 6778 | | | | Koning and Read (2010) |
| | OC-16 | 412330 | 3945176 | 6782 | outcrop | OCM | | | 6782 | | | | Koning and Read (2010) |
| | OC-17 | 413259 | 3945278 | 6841 | outcrop | OCM | | | 6841 | | | | Koning and Read (2010) |
| | OC-18 | 412840 | 3944714 | 6814 | outcrop | OCM | | | 6814 | | | | Koning and Read (2010) |
| | OC-19 | 415361 | 3945322 | 7021 | outcrop | OCM | | | 7021 | | | | Koning and Read (2010) |
| | OC-20 | 414967 | 3945789 | 7001 | outcrop | OCM | | | 7001 | | | | Koning and Read (2010) |
| | OC-21 | 415230 | 3946193 | 7037 | outcrop | OCM | | | 7037 | | | | Koning and Read (2010) |
| | OC-22 | 416052 | 3947030 | 7159 | outcrop | OCM | | | 7159 | | | | Koning and Read (2010) |
| | OC-26 | 411541 | 3944307 | 6722 | outcrop | OCM | | | 6722 | | | | Koning and Read (2010) |
| | OC-27 | 406821 | 3945830 | 6522 | outcrop | OCM | | | 6522 | | | | Koning and Read (2010) |
| | OC-30 | 407760 | 3946579 | 6601 | outcrop | OCM | | | 6601 | | | | Koning and Read (2010) |
| | OC-31 | 405219 | 3948531 | 6526 | outcrop | OCM | | | 6526 | | | | Koning and Read (2010) |
| | OC-32 | 407671 | 3948481 | 6706 | outcrop | OCM | | | 6706 | | | | Koning and Read (2010) |
| | OC-33 | 406782 | 3950684 | 6709 | outcrop | OCM | | | 6709 | | | | Koning and Read (2010) |
| | OC-34 | 404371 | 3949567 | 6499 | outcrop | OCM | | | 6499 | | | | Koning and Read (2010) |
| | OC-35 | 407286 | 3946252 | 6562 | outcrop | OCM | | | 6562 | | | | Koning and Read (2010) |
| | OC-36 | 408123 | 3947229 | 6683 | outcrop | OCM | | | 6683 | | | | Koning and Read (2010) |
| | OC-37 | 406716 | 3947444 | 6555 | outcrop | OCM | | | 6555 | | | | Koning and Read (2010) |
| | OC-38 | 406338 | 3948318 | 6581 | outcrop | OCM | | | 6581 | | | | Koning and Read (2010) |
| | OC-39 | 407182 | 3949407 | 6706 | outcrop | OCM | | | 6706 | | | | Koning and Read (2010) |
| | OC-40 | 402915 | 3951154 | 6460 | outcrop | OCM | | | 6460 | | | | Koning and Read (2010) |
| | OC-41 | 416489 | 3946133 | 7149 | outcrop | OCM | | | 7149 | | | | Koning and Read (2010) |
| | OC-42 | 389120 | 3937481 | 5980 | outcrop | OCE | | | 5980 | | | | Measured stratigraphic section by D. Koning |
| | OC-43 | 389579 | 3937952 | 5935 | outcrop | OCE | | | 5935 | | | | Measured stratigraphic section by D. Koning |
| | OC-44 | 389706 | 3934840 | 5940 | outcrop | OCE | | | 5940 | | | | Measured stratigraphic section by D. Koning |
| | OC-50 | 403303 | 3923386 | 6017 | outcrop | OCM | | | 6017 | | | | Koning and Read (2010) |
| | OC-51 | 403938 | 3922960 | 6027 | outcrop | OCM | | | 6027 | | | | Koning and Read (2010) |
| | OC-52 | 404822 | 3922687 | 6060 | outcrop | OCM | | | 6060 | | | | Koning and Read (2010) |
| | OC-53 | 406124 | 3922136 | 6102 | outcrop | OCM | | | 6102 | | | | Koning and Read (2010) |
| | OC-54 | 407155 | 3922625 | 6142 | outcrop | OCM | | | 6142 | | | | Koning and Read (2010) |
| | OC-55 | 407844 | 3923172 | 6181 | outcrop | OCM | | | 6181 | | | | Koning and Read (2010) |
| | OC-56 | 409140 | 3923565 | 6260 | outcrop | OCM | | | 6260 | | | | Koning and Read (2010) |
| | OC-57 | 409784 | 3923994 | 6325 | outcrop | OCM | | | 6325 | | | | Koning and Read (2010) |
| | OC-58 | 410625 | 3926683 | 6381 | outcrop | OCM | | | 6381 | | | | Koning and Read (2010) |
| | OC-59 | 412024 | 3927172 | 6421 | outcrop | OCM | | | 6421 | | | | Koning and Read (2010) |
| | OC-61 | 412646 | 3927187 | 6486 | outcrop | OCM | | | 6486 | | | | Koning and Read (2010) |
| | OC-62 | 413450 | 3927613 | 6545 | outcrop | OCM | | | 6545 | | | | Koning and Read (2010) |

**Table 1–Well and formation information for control wells used to construct elevation contour and isopach maps (Plates 1 and 2)**

| | Site identification | Location (UTM NAD27) Easting (m) | Location (UTM NAD27) Northing (m) | Surface elevation (ft asl) | Other location name or number | Data type | Well depth | Depth to base of Ancha Fm (ft) | Base elevation (ft asl) | Formation thickness (ft) | Subcrop formation | Lithologic notes | Source comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Field data from outcrop exposures and maps | OC-63 | 413606 | 3928361 | 6526 | outcrop | OCM | | | 6526 | | | | Koning and Read (2010) |
| | OC-64 | 413970 | 3928558 | 6542 | outcrop | OCM | | | 6542 | | | | Koning and Read (2010) |
| | OC-65 | 411608 | 3923980 | 6339 | outcrop | OCM | | | 6339 | | | | Koning and Read (2010) |
| | OC-66 | 412065 | 3924350 | 6385 | outcrop | OCM | | | 6385 | | | | Koning and Read (2010) |
| | OC-67 | 412277 | 3924575 | 6421 | outcrop | OCM | | | 6421 | | | | Koning and Read (2010) |
| | OC-68 | 413174 | 3925506 | 6473 | outcrop | OCM | | | 6473 | | | | Koning and Read (2010) |
| | OC-69 | 413639 | 3926179 | 6509 | outcrop | OCM | | | 6509 | | | | Koning and Read (2010) |
| | OC-70 | 416757 | 3927205 | 6634 | outcrop | OCM | | | 6634 | | | | Koning and Read (2010) |
| | OC-71 | 418213 | 3927568 | 6716 | outcrop | OCM | | | 6716 | | | | Koning and Read (2010) |
| | OC-72 | 419324 | 3927640 | 6732 | outcrop | OCM | | | 6732 | | | | Koning and Read (2010) |
| | OC-80 | 397057 | 3933617 | 5958 | outcrop | OCM | | | 5958 | | | | Koning and Read (2010) |
| | OC-86 | 397296 | 3934544 | 5974 | outcrop | OCM | | | 5974 | | | | Koning and Read (2010) |
| | OC-87 | 397474 | 3934973 | 5958 | outcrop | OCM | | | 5958 | | | | Koning and Read (2010) |
| | OC-88 | 397943 | 3935089 | 6001 | outcrop | OCM | | | 6001 | | | | Koning and Read (2010) |
| | OC-89 | 397400 | 3935232 | 5994 | outcrop | OCM | | | 5994 | | | | Koning and Read (2010) |
| | OC-81 | 396161 | 3935074 | 5945 | outcrop | OCM | | | 5945 | | | | Koning and Read (2010) |
| | OC-82 | 396666 | 3934743 | 5951 | outcrop | OCM | | | 5951 | | | | Koning and Read (2010) |
| | OC-83 | 396730 | 3935124 | 5942 | outcrop | OCM | | | 5942 | | | | Koning and Read (2010) |
| | OC-84 | 397076 | 3934419 | 5971 | outcrop | OCM | | | 5971 | | | | Koning and Read (2010) |
| | OC-85 | 397474 | 3934192 | 5997 | outcrop | OCM | | | 5997 | | | | Koning and Read (2010) |
| | OC-90 | 398013 | 3935559 | 6004 | outcrop | OCM | | | 6004 | | | | Koning and Read (2010) |
| | OC-91 | 396322 | 3934508 | 5942 | outcrop | OCM | | | 5942 | | | | Koning and Read (2010) |
| | OC-92 | 396598 | 3934157 | 5942 | outcrop | OCM | | | 5942 | | | | Koning and Read (2010) |

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Sauder - Miller & Assoc., 1995

asl—above sea level

***Data type***: LLe—lithologic log from exploration drill hole; Cu—cuttings; GL—geophysical log; LLw—lithologic log from water well; OCE—outcrop exposure in field; OCM—outcrop contact from geologic map.

***Subcrop formation and Lithologic notes, Quaternary***: QTa—Ancha Formation; QTt—Tuerto Gravels; QTcrv—Cerros del Rio volcanic field.

***Subcrop formation and Lithologic notes, Tertiary***: Tts—Tesuque Fm lithosome S; Ttsl—Tesuque Fm lithosome S lacustrine; Tta—Tesuque Fm lithosome A; Tte—Tesuque Fm lithosome E; Tteg—Tesuque Fm lithosome E with green volcanic grains derived from Cerrillos Hills; Tcb—Cieneguilla basanite; Tcrv—lower Cerros del Rio volcanics; Tab—Tesuque Abiquiu Fm; Ti—Tertiary intrusive rocks; Te—Espinaso Fm; Tg—Galisteo Fm (l, lower; u, upper); Tgd—Galisteo and Diamond Tail Fms.

***Subcrop formation and Lithologic notes, Other***: Mzu—Mesozoic units undifferentiated; TRc—Triassic Chinle Fm; Jm—Jurassic Morrison Fm; K—Cretaceous units undiffferentiated; Km—Mancos Fm; Pzu—Pennsylvanian units undifferentiated; Pm—Pennsylvanian Madera Fm; Ps—Pennsylvanian Sandia Fm; XYu—Precambrian units undifferentiated.

## Table 2–Well, water-level and saturation information used to construct the saturated thickness map (Plate 3)



| Site ID | Location number (township.range. section.1/4 1/4 1/4 sections) | UTM NAD27 | | Surface elevation (ft asl) | Well depth | Depth to base of Ancha Fm (ft) | Base elevation (ft asl) | Saturated thickness (ft) 2000-2005 conditions | Water-level source comments |
|---|---|---|---|---|---|---|---|---|---|
| | | Easting (m) | Northing (m) | | | | | | |
| R11 | 15N.9E.1.333 | 414271 | 3934563 | 6684 | 925 | 160 | 6524 | 0 | |
| X3C1/2S | 15N.9E.25.2442 | 415715 | 3928965 | 6635 | 200 | 120 | 6515 | 0 | |
| R-51 | 15N.10E.5.333 | 417390 | 3934580 | 6890 | 311 | 91 | 6799 | 0 | |
| R49 | 15N.10E.5.344 | 418178 | 3934458 | 6937 | 129 | 42 | 6895 | 0 | |
| R36 | 15N.10E.6.434 | 416780 | 3934540 | 6845 | 405 | 66 | 6779 | 0 | |
| R2B | 15N.10E.6.343 | 416345 | 3934450 | 6804 | 260 | 175 | 6629 | 0 | |
| R37 | 15N.10E.7.414 | 416904 | 3933297 | 6836 | 540 | 81 | 6755 | 0 | |
| R50 | 15N.10E.8.112 | 417744 | 3934277 | 6900 | 440 | 79 | 6821 | 0 | |
| R3 | 15N.10E.17.434 | 418445 | 3931260 | 6860 | 258 | 164 | 6696 | 0 | |
| R5 | 15N.10E.21.312 | 419145 | 3930326 | 6818 | 332 | 176 | 6642 | 0 | |
| X11A | 15N.10E.21.344 | 419744 | 3929610 | 6815 | 300 | 90 | 6725 | 0 | |
| WX11W | 15N.10E.28.123 | 419440 | 3929255 | 6765 | 260 | 80 | 6685 | 0 | |
| TH3C | 15N.10E.30.1111 | 415850 | 3929575 | 6680 | 800 | 95 | 6585 | 0 | |
| X3CS | 15N.10E.30.111 | 415872 | 3929550 | 6680 | 800 | 97 | 6583 | 0 | |
| X10N | 15N.10E.30.42114 | 416990 | 3928739 | 6665 | 220 | 80 | 6585 | 0 | |
| EB-001 | 15N.08E.5.323 | 398579 | 3935004 | 6063 | 221 | 72 | 5991 | 23 | Water level measured 2004 |
| EB-002 | 15N.8E.4.111 | 399120 | 3935619 | 6070 | 380 | 120 | 5950 | 93 | Water level measured 2004 |
| EB-004 | 15N.09E.3.1114 | 411115 | 3935891 | 6594 | 560 | 239 | 6355 | 5 | Water level measured 2004 |
| EB-006 | 15N.10E.2.1123 | 412295 | 3937996 | 6670 | 400 | 220 | 6450 | 10 | Water level measured 2004 |
| EB-013 | 16N.09E.8.2244 | 409380 | 3943797 | 6619 | 200 | 120 | 6499 | 0 | |
| EB-016 | 16N.09E.19.312 | 406520 | 3940184 | 6422 | 320 | 180 | 6242 | 0 | Water level measured in 2005 |
| EB-020 | 16N.09E.12.324 | 414999 | 3943065 | 7044 | 658 | 110 | 6934 | 0 | |
| EB-084 | 16N.09E9.3432 | 410085 | 3942677 | 6634 | 263 | 153 | 6481 | 0 | Water level measured 2004; 1 ft of saturation in 1995 |
| EB-106 | 15N.10E.30.214 | 416860 | 3929416 | 6708 | 1490 | 110 | 6598 | 0 | |
| EB-111 | 16N.09E.23.224 | 414112 | 3940815 | 6906 | 650 | 110 | 6796 | 0 | |
| EB-113 | 16N.08E.25.321 | 405142 | 3938502 | 6333 | 300 | 170 | 6163 | 0 | |
| EB-127 | 16N.08E.24.124 | 405305 | 3940672 | 6361 | 300 | 200 | 6161 | 0 | |
| EB-138 | 17N.08E.35.414 | 404266 | 3946278 | 6460 | 735 | 63 | 6397 | 0 | |
| EB-147 | 17N.09E.33.3434 | 410081 | 3945790 | 6703 | 160 | 72 | 6631 | 0 | |
| EB-149 | 17N.08E.35.2212 | 404438 | 3947386 | 6465 | 453 | 83 | 6382 | 0 | |
| EB-155 | 17N.08E.21.4444 | 401461 | 3949046 | 6435 | 335 | 70 | 6365 | 0 | |
| EB-156 | 17N.08E.21.4133 | 400777 | 3949450 | 6439 | 350 | 57 | 6382 | 0 | |
| EB-169 | 17N.08E.27.4141 | 402566 | 3947907 | 6429 | 370 | 80 | 6349 | 0 | |
| EB-180 | 15N.8E.20.242 | 399632 | 3940517 | 6236 | 360 | 60 | 6176 | 0 | |
| EB-202 | 15N.09E.33.34444 | 410066 | 3926479 | 6316 | 156 | 90 | 6226 | 36 | Water level measured 2004 |
| EB-203 | 14N.08E.02.3243 | 403444 | 3925336 | 6120 | 114 | 113 | 6007 | 24 | Water level measured 2003; 27 ft of saturation in 1973 |
| EB-204 | 15N.08E.25.1141 | 404709 | 3929454 | 6182 | 140 | 105 | 6077 | 32 | Water level measured 2003; 36 ft of saturation in 1975 |
| EB-209 | 14N.08E.13.1241 | 405075 | 3922945 | 6101 | 276 | 23 | 6078 | 0 | |
| EB-211 | 14N.09E.06.2233 | 407315 | 3926117 | 6273 | 200 | 90 | 6183 | 0 | |
| EB-214 | 15N.08E.15.3111 | 401271 | 3932150 | 6191 | 210 | 130 | 6061 | 0 | |
| EB-216 | 15N.9E.3.4342 | 411687 | 3934580 | 6532 | 300 | 192 | 6340 | 23 | Base of Ancha Formation projected using Plate 1; water level measured in 2003; 45 ft of saturation in 1988 |
| EB-217 | 15N.9E.14.11413 | 412805 | 3932519 | 6530 | 300 | 75 | 6455 | 13 | Water level measured 2004; 19 ft of saturation in 1974 |
| EB-218 | 16N.08E.13.444 | 406168 | 3941012 | 6409 | 337 | 171 | 6238 | 0 | Water level measured 2006 |
| EB-219 | 16N.08E.17.2122 | 399317 | 3942545 | 6214 | 244 | 72 | 6142 | 6 | Water level measured 2003; 6 ft of saturation in 1975 |
| EB-220 | 16N.08E.26.32112 | 403203 | 3938457 | 6256 | 161 | 162 | 6094 | 35 | Water level measured 2003; 39 ft of saturation in 1975 |
| EB-221 | 16N.08E.26.44334 | 404237 | 3937765 | 6238 | 220 | 160 | 6078 | 57 | Water level measured 2003; 59 ft of saturation in 1983 |
| EB-222 | 16N.08E.26.4443 | 404507 | 3937753 | 6258 | 220 | 160 | 6098 | 31 | Water level measured 2003; 37 ft of saturation in 1983 |

## Table 2–Well, water-level and saturation information used to construct the saturated thickness map (Plate 3)



| Site ID | Location number (township.range. section.1/4 1/4 1/4 sections) | UTM NAD27 | | Surface elevation (ft asl) | Well depth | Depth to base of Ancha Fm (ft) | Base elevation (ft asl) | Saturated thickness (ft) 2000-2005 conditions | Water-level source comments |
|---|---|---|---|---|---|---|---|---|---|
| | | Easting (m) | Northing (m) | | | | | | |
| EB-223 | 16N.08E.28.134 | 399890 | 3938714 | 6168 | 100 | 93 | 6075 | 47 | Water level measured 2004; 51 ft of saturation in 1975 |
| EB-226 | 16N.09E.03.1213A | 411547 | 3945542 | 6740 | 130 | 38 | 6702 | 0 | |
| EB-227 | 16N.9E.6.4333 | 407025 | 3944239 | 6521 | 416 | 220 | 6301 | 0 | |
| EB-228 | 16N.09E.08.21123 | 408810 | 3944072 | 6555 | 130 | 130 | 6425 | 100 | Well completed at base of QTa; water level measured in 2003; 101 ft of saturation in 1973 |
| EB-229 | 16N.9E.10.42114 | 412380 | 3943254 | 6832 | 241 | 82 | 6750 | 0 | Base of Ancha Formation projected using Plate 1 |
| EB-231 | 16N.09E.15.143 | 411729 | 3941981 | 6711 | 163 | 159 | 6552 | 34 | Water level measured 2004; 44 ft of saturation in 1983 |
| EB-232 | 16N.09E.15.4421 | 412562 | 3941306 | 6814 | 600 | 200 | 6614 | 0 | |
| EB-245 | 17N.09E.35.1314B | 412888 | 3946766 | 6881 | 1060 | 100 | 6781 | 0 | |
| EB-293 | 16N.08E.27.2122 | 402500 | 3939316 | 6196 | 340 | 104 | 6092 | 39 | Water level measured 2001; 39 ft of saturation in 1991 |
| EB-294 | 16N.08E.26.322 | 403710 | 3938648 | 6300 | 740 | 164 | 6136 | 0 | |
| EB-308 | 16N.08E.29.4434 | 399408 | 3937812 | 6144 | 103 | 70 | 6074 | 18 | Water level measured 2004; 21 ft of saturation in 1986 |
| EB-309 | 16N.08E.21.3321 | 399946 | 3939786 | 6226 | 300 | 48 | 6178 | 0 | Water level measured 2004 |
| EB-311 | 16N.08E.28.3343 | 399834 | 3937807 | 6107 | 180 | 100 | 6007 | 91 | Water level measured 2004 |
| EB-318 | 16N.08E.26.44132 | 404225 | 3938053 | 6264 | 250 | 140 | 6124 | 6 | Water level measured 2004 |
| EB-319 | 16N.8E.26.43242 | 404155 | 3938051 | 6269 | 200 | 120 | 6149 | 0 | Water level measured 2004 |
| EB-320 | 16N.8E.26.43241 | 404098 | 3938046 | 6267 | 200 | 140 | 6127 | 0 | Water level measured 2004 |
| EB-321 | 16N.8E.26.43232 | 404036 | 3938048 | 6261 | 180 | 160 | 6101 | 27 | Water level measured 2004 |
| EB-322 | 16N.8E.26.43111 | 403766 | 3938162 | 6265 | 200 | 130 | 6135 | 0 | Water level measured 2004 |
| EB-326 | 16N.08E.17.2312 | 399122 | 3942157 | 6197 | 300 | 80 | 6117 | 30 | Water level measured 2004 |
| EB-327 | 16N.08E.17.3211 | 398618 | 3941825 | 6185 | 300 | 60 | 6125 | 11 | Water level measured 2004 |
| EB-330 | 15N.8E.5.23412 | 399183 | 3935556 | 6064 | 100 | 112 | 5952 | 111 | Base of Ancha Formation projected using Plate 1; water level measured in 2004 |
| EB-332 | 15N.08E.4.13324 | 399770 | 3935472 | 6094 | 160 | 134 | 5960 | 126 | Water level measured 2004 |
| EB-333 | 15N.08E.4.13344 | 399857 | 3935388 | 6119 | 140 | 120 | 5999 | 88 | Water level measured 2004 |
| EB-334 | 16N.8E.34.142 | 401971 | 3937253 | 6140 | 140 | 97 | 6043 | 59 | Water level measured 2004 |
| EB-335 | 16N.8E.34.222 | 402813 | 3937634 | 6209 | 160 | 115 | 6094 | 30 | Water level measured 2004 |
| EB-336 | 16N.08E.2.343 | 403249 | 3944369 | 6363 | 2000 | 163 | 6200 | 0 | |
| EB-339 | 16N.08E.26.313 | 403085 | 3938143 | 6257 | 200 | 200 | 6057 | 63 | Water level measured 2004; 70 ft of saturation in 1985 |
| EB-340 | 15N.8E.4.1133 | 399736 | 3935854 | 6123 | 155 | 143 | 5980 | 91 | Base of Ancha Formation projected using Plate 1; water level measured in 2004 |
| EB-342 | 14N.08E.11.2131 | 403610 | 3924659 | 6054 | 60 | 60 | 5994 | 35 | Base of Ancha Formation projected using Plate 1; water level measured in 2004 |
| EB-343 | 15N.9E.9.2223 | 410798 | 3934311 | 6485 | | 145 | 6340 | 22 | Base of Ancha Formation projected using Plate 1; water level measured in 2004 |
| EB-344 | 15N.09E.19.4142 | 407223 | 3930261 | 6316 | 400 | 70 | 6246 | 0 | |
| EB-346 | 15N.09E.18.4222 | 407683 | 3932078 | 6335 | 430 | 140 | 6195 | 0 | Water level measured 2004; 17 ft of saturation in 1985 |
| EB-348 | 15N.9E.16.414 | 410412 | 3931772 | 6414 | | 94 | 6320 | 9 | Base of Ancha Formation projected using Plate 1; water level measured in 2004 |
| EB-349 | 15N.9E.2.422 | 414178 | 3935049 | 6674 | | 169 | 6505 | 17 | Base of Ancha Formation projected using Plate 1; water level measured in 2004 |
| EB-351 | 16N.9E.23.3113 | 412766 | 3939880 | 6789 | 230 | 129 | 6660 | 0 | Base of Ancha Formation projected using Plate 1; water level measured in 2004 |
| EB-352 | 15N.8E.12.224 | 406038 | 3934279 | 6299 | | 214 | 6085 | 76 | Base of Ancha Formation projected using Plate 1; water level measured in 2004 |
| EB-354 | 16N.9E.29.241 | 409106 | 3938833 | 6536 | | 224 | 6312 | 10 | Base of Ancha Formation projected using Plate 1; water level measured in 2002 |
| EB-357 | 16N.09E.20.4422 | 409417 | 3939620 | 6551 | 670 | 195 | 6356 | 0 | |
| EB-360 | 16N.09E.21.3113 | 409487 | 3939995 | 6584 | 460 | 200 | 6384 | 0 | |

## Table 2–Well, water-level and saturation information used to construct the saturated thickness map (Plate 3)



| Site ID | Location number (township.range. section.1/4 1/4 1/4 sections) | UTM NAD27 | | Surface elevation (ft asl) | Well depth | Depth to base of Ancha Fm (ft) | Base elevation (ft asl) | Saturated thickness (ft) 2000-2005 conditions | Water-level source comments |
|---|---|---|---|---|---|---|---|---|---|
| | | Easting (m) | Northing (m) | | | | | | |
| EB-363 | 16N.08E.10.3232 | 401883 | 3943139 | 6297 | 170 | 165 | 6132 | 19 | Water level measured 2004 |
| EB-364 | 16N.08E.10.1222 | 402582 | 3943370 | 6331 | 214 | 173 | 6158 | 0 | Water level measured 2004 |
| EB-366 | 16N.9E.20.4422 | 401879 | 3942820 | 6343 | 204 | 203 | 6140 | 15 | Base of Ancha Formation projected using Plate 1; water level measured in 2004 |
| EB-369 | 16N.08E.24.2343 | 405697 | 3940190 | 6388 | 425 | 168 | 6220 | 0 | Water level measured 2004 |
| EB-373 | 16N.8E.15.3433 | 401779 | 3941028 | 6273 | 300 | 123 | 6150 | 0 | Water level measured 2004 |
| EB-374 | 15N.08E.26.233 | 403678 | 3928978 | 6178 | 200 | 110 | 6068 | 43 | Water level measured 2004 |
| EB-378 | 15N.08E.9.4113 | 400527 | 3933618 | 6122 | 110 | 75 | 6047 | 50 | Water level measured 2004 |
| EB-379 | 15N.08E.10.1131 | 401303 | 3934308 | 6202 | 227 | 155 | 6047 | 53 | Water level measured 2004 |
| EB-380 | 15N.08E.14.1443 | 403535 | 3932199 | 6253 | 203 | 165 | 6088 | 48 | Water level measured 2004 |
| EB-382 | 16N.08E.24.3324 | 404981 | 3939640 | 6331 | 252 | 180 | 6151 | 0 | SWL at base of Ancha Formation |
| EB-388 | 16N.8E.35.3212 | 403492 | 3936933 | 6216 | 91 | 166 | 6050 | 77 | Water level measured 2003 |
| EB-390 | 15N.08E.13.1121 | 404736 | 3932907 | 6300 | 500 | 240 | 6060 | 82 | Water level measured 2004 |
| EB-391 | 16N.08E.25.111 | 404688 | 279485 | 6303 | 300 | 160 | 6143 | 2 | Water level measured 2004 |
| EB-392 | 16N.8E.25.3322 | 404903 | 3938128 | 6270 | 220 | 167 | 6103 | 42 | Water level measured 2004 |
| EB-396 | 15N.08E.26.411 | 403676 | 3928843 | 6171 | 105 | 97 | 6074 | 30 | Water level measured 2004; 36 ft of saturation in 1977 |
| EB-409 | 16N.8E.1.413 | 405470 | 3944643 | 6458 | 457 | 140 | 6318 | 0 | |
| EB-415 | 16N.09E.4.334 | 409840 | 3944302 | 6653 | 1815 | 135 | 6518 | 0 | |
| EB-417 | 15N.10E.12.232 | 415275 | 3933898 | 6729 | 320 | 140 | 6589 | 0 | |
| EB-418 | 15N.9E.11.13 | 412951 | 3933705 | 6617 | | 155 | 6462 | 16 | Base of Ancha Formation projected using Plate 1; water level measured in 2004 |
| EB-422 | 15N.09E.3.413 | 411759 | 3935029 | 6568 | 320 | 220 | 6348 | 32 | Water level measured 2004 |
| EB-426 | 15N.9E.11.124 | 413382 | 3934154 | 6625 | 340 | 160 | 6465 | 34 | Water level measured 2004 |
| EB-427 | 15N.10E.7.11 | 415843 | 3934216 | 6774 | 315 | 180 | 6594 | 0 | |
| EB-430 | 15N.9E.3.424 | 412392 | 3934701 | 6583 | 340 | 183 | 6400 | 0 | Base of Ancha Formation projected using Plate 1; water level measured in 2004 |
| EB-431 | 15N.9E.11.311 | 412611 | 3933480 | 6578 | 380 | 80 | 6498 | 0 | |
| EB-437 | 15N.09E.1.341 | 414671 | 3934638 | 6712 | 420 | 160 | 6552 | 0 | |
| EB-438 | 15N.09E.24.1224 | 414859 | 3931084 | 6630 | 580 | 120 | 6510 | 16 | Water level measured 2004 |
| EB-442 | 15N.09E.10.214 | 412051 | 3934088 | 6559 | 500 | 80 | 6479 | 0 | |
| EB-445 | 14N.08E.11.42 | 404335 | 3923650 | 6122 | 1200 | 60 | 6062 | 0 | |
| EB-449 | 15N.09E.24.143 | 414545 | 3930574 | 6603 | 400 | 120 | 6483 | 11 | Water level measured 2004 |
| EB-450 | 15N.08E.35.124 | 403543 | 3927816 | 6164 | 160 | 97 | 6067 | 12 | Water level measured 2004 |
| EB-451 | 15N.09E.1.333 | 414292 | 3934481 | 6684 | 340 | 170 | 6514 | 0 | |
| EB-459 | 16N.08E.15.1433 | 401892 | 3941637 | 6303 | 500 | 118 | 6185 | 0 | |
| EB-464 | 16N.9E.11.333 | 413264 | 3942764 | 6884 | 600 | 40 | 6844 | 0 | |
| EB-507 | 16N.8E.12.234 | 405857 | 3943425 | 6451 | 370 | 189 | 6262 | 0 | |
| EB-518, EUI#2 | 15N.9E.1.331 | 414206 | 3934728 | 6664 | 350 | 161 | 6503 | 5 | Water level measured 2000; 9 ft of saturation in 1977 |
| EB-519, EUI#6 | 15N.10E.18.133 | 415930 | 3932190 | 6749 | 280 | 215 | 6534 | 0 | |
| EB-520, EUI#7 | 15N.10E.19.211 | 416709 | 3931146 | 6760 | 270 | 185 | 6575 | 0 | Water level measured 2000; 16 ft of saturation in 1981 |
| EB-528 | 16N.9E.7.3212 | 406761 | 3943324 | 6493 | 414 | 186 | 6307 | 0 | |
| EB-574 | 15N.08E.26.422 | 403628 | 3928931 | 6178 | 500 | 107 | 6071 | 45 | Water level measured in 2005 |
| EB-579 | 16N.8E.17.132 | 398429 | 3941913 | 6191 | 240 | 45 | 6146 | 12 | Water level measured in 2005 |
| EB-580 | 15N.9E.36.122 | 414787 | 3927878 | 6600 | 600 | 50 | 6550 | 0 | Saturated to top of Tg |
| EB-581 | 15N.9E.25.431 | 415098 | 3928252 | 6587 | 600 | 80 | 6507 | 1 | |
| EB-582 | 16N.09E.30.131 | 406328 | 3938785 | 6388 | 316 | 203 | 6185 | 0 | Base of Ancha Formation projected using Plate 1; water level measured in 2005 |
| EB-607 | 15N.08E.1.123 | 405056 | 3935836 | 6341 | 1365 | 248 | 6093 | 49 | Water level measured in 2005 |
| EB-640 | 15N.7E.11.231 | 394196 | 3934232 | 6108 | 460 | 240 | 5868 | 75 | Water level measured 2006; 75 ft of saturation in 1994 |
| EB-642 | 17N.7E.34.24 | 393303 | 3947004 | 6730 | 1207 | 988 | 5742 | 0 | |
| EB-656 | 15N.9E.36.233 | 415013 | 3927271 | 6605 | 480 | 50 | 6555 | 0 | |
| EB-657 | 15N.9E.36.3233 | 414540 | 3926853 | 6583 | 510 | 20 | 6563 | 0 | |

## Table 2–Well, water-level and saturation information used to construct the saturated thickness map (Plate 3)



| Site ID | Location number (township.range. section.1/4 1/4 1/4 sections) | UTM NAD27 | | Surface elevation (ft asl) | Well depth | Depth to base of Ancha Fm (ft) | Base elevation (ft asl) | Saturated thickness (ft) 2000-2005 conditions | Water-level source comments |
|---|---|---|---|---|---|---|---|---|---|
| | | Easting (m) | Northing (m) | | | | | | |
| EB-661 | 16N.9E.29.111 | 407815 | 3939343 | 6483 | 1802 | 215 | 6268 | 0 | |
| EB-664 | 16N.9E.30.2222 | 407672 | 3939329 | 6473 | 1400 | 200 | 6273 | 0 | |
| EB-666 | 16N.9E.30.2121 | 407185 | 3939290 | 6418 | 1400 | 180 | 6238 | 0 | |
| EB-668 | 16N.9E.12.131 | 414532 | 3943541 | 6982 | 400 | 105 | 6877 | 0 | |
| EB-672 | 16N.8E.27.112 | 401549 | 3939237 | 6160 | 500 | 90 | 6070 | 55 | Base of Ancha Formation projected using Plate 1; water level measured in 2005 |
| EB-673 | 16N.9E.18.213 | 407099 | 3942268 | 6456 | 800 | 145 | 6311 | 0 | |
| EB-675, EUI#1 | 15N.9E.3.4313 | 411867 | 3934700 | 6551 | 719 | 155 | 6396 | 0 | Water level measured in 2000; 37 ft of saturation in 1980; 41 ft in 1970 |
| EB-691 | 16N.8E.28.344 | 400304 | 3937589 | 6119 | 180 | 90 | 6029 | 53 | Water level measured in 2011 |
| EB-692 | 15N.7E.13.24 | 396224 | 3932667 | 6025 | 862 | 14 | 6011 | 0 | |
| G-16 | 14N.08E.12.223 | 405710 | 3924566 | 6161 | 170 | 100 | 6061 | 0 | NMOSE SWL |
| G-22 | 15N.08E.13.311 | 404581 | 3932039 | 6279 | 500 | 170 | 6109 | 0 | NMOSE SWL |
| G-23 | 15N.08E.13.222 | 405956 | 3932722 | 6328 | 460 | 230 | 6098 | 35 | NMOSE SWL measured in 2002 |
| G-24 | 15N.08E.13.132 | 405593 | 3931302 | 6288 | 600 | 200 | 6088 | 5 | NMOSE SWL measured in 1999 |
| G-27 | 15N.08E.18.144 | 405997 | 3931049 | 6306 | 340 | 200 | 6106 | 25 | NMOSE SWL measured in 2000 |
| G-29 | 15N.08E.23.112 | 403147 | 3931219 | 6219 | 298 | 151 | 6068 | 0 | NMOSE SWL |
| G-34 | SH-X8 | 414845 | 3938660 | 6885 | 300 | 70 | 6815 | 0 | NMOSE SWL |
| G-35 | SH-X7 | 415096 | 3938126 | 6900 | 250 | 75 | 6825 | 0 | NMOSE SWL |
| G-39 | 16N.08E.13.421 | 405836 | 3941711 | 6380 | 368 | 145 | 6235 | 0 | NMOSE SWL |
| G-41 | 16N.08E.24.131 | 404605 | 3940395 | 6310 | 280 | 140 | 6170 | 0 | NMOSE SWL measured 1991 |
| G-44 | 16N.09E.17.414 | 408875 | 3941474 | 6543 | 500 | 130 | 6413 | 0 | NMOSE SWL |
| G-46 | 16N.09E.5.324 | 408560 | 3944660 | 6603 | 500 | 125 | 6478 | 0 | NMOSE SWL measured in 1998 |
| G-49 | SH-X3 | 415230 | 3937630 | 6903 | 250 | 70 | 6833 | 0 | NMOSE SWL |
| G-52 | 16N.08E.13.323 | 404555 | 3941166 | 6300 | 410 | 155 | 6145 | 0 | NMOSE SWL measured in 2006 |
| G-53 | 16N.09E.10.411 | 411986 | 3943221 | 6766 | 400 | 120 | 6646 | 0 | NMOSE SWL |
| G-54 | 16N.08E.13.423 | 405216 | 3941309 | 6336 | 365 | 160 | 6176 | 0 | NMOSE SWL |
| G-61 | 16N.09E.9.321 | 409778 | 3942984 | 6620 | 250 | 140 | 6480 | 1 | NMOSE SWL measured in 2002 |
| G-63 | 16N.09E.5.221 | 409147 | 3945673 | 6645 | 500 | 85 | 6560 | 0 | NMOSE SWL |
| G-64 | 16N.09E.20.111 | 407906 | 3940843 | 6474 | 480 | 200 | 6274 | 0 | NMOSE SWL |
| G-67 | 16N.08E.14.344 | 404316 | 3941048 | 6309 | 320 | 125 | 6184 | 0 | NMOSE SWL |
| G-68 | 16N.09E.8.241 | 409173 | 3943623 | 6617 | 240 | 140 | 6477 | 36 | NMOSE SWL measured in 2002 |
| G-69 | 16N.08E.14.344 | 403670 | 3941675 | 6263 | 385 | 120 | 6143 | 0 | NMOSE SWL |
| G-71 | 15N.07E.13.223 | 396263 | 3932764 | 6014 | 862 | 14 | 6000 | 0 | NMOSE SWL |
| G-73 | 15N.07E.11.141 | 393822 | 3934091 | 6130 | 360 | 240 | 5890 | 48 | Water level measured in 2006; 48 ft in 1994 |
| G-74 | 15N.07E.09.431 | 390987 | 3933446 | 6113 | 690 | 110 | 6003 | 0 | NMOSE SWL |
| G-75 | 16N.09E.6.422 | 407693 | 3944741 | 6563 | 350 | 200 | 6363 | 0 | NMOSE SWL |
| G-76 | 15N.07E.11.414 | 394457 | 3933638 | 6141 | 465 | 260 | 5881 | 50 | NMOSE SWL measured in 1994 |
| G-77 | 15N.08E.24.311 | 404550 | 3930345 | 6252 | 280 | 190 | 6062 | 5 | NMOSE SWL measured in 1999 |
| G-78 | 15N.07E.12.134 | 395211 | 3934037 | 6075 | 460 | 200 | 5875 | 57 | Water level measured in 2006; 59 ft in 1994 |
| G-80 | 16N.08E.14.444 | 404465 | 3941090 | 6304 | 360 | 180 | 6124 | 0 | NMOSE SWL |
| G-82 | 16N.08E.19.442 | 397964 | 3939616 | 6100 | 100 | 85 | 6015 | 69 | NMOSE SWL |
| G-84 | 15N.07E.10.314 | 391776 | 3933574 | 6119 | 630 | 180 | 5939 | 0 | NMOSE SWL |
| G-85 | 15N.09E.18.1213 | 406545 | 3932737 | 6344 | 580 | 221 | 6123 | 1 | NMOSE SWL |
| G-90 | 15N.09E.18.2434 | 407511 | 3932387 | 6372 | 600 | 160 | 6212 | 0 | NMOSE SWL |
| G-92 | 15N.09E.18.321 | 406565 | 3931426 | 6331 | 620 | 240 | 6091 | 76 | NMOSE SWL |
| G-93 | 15N.09E.18.1414 | 406682 | 3932398 | 6347 | 500 | 200 | 6147 | 0 | NMOSE SWL measured in 2002 |
| G-94 | 15N.09E.18.334 | 406382 | 3931390 | 6323 | 380 | 180 | 6143 | 0 | NMOSE SWL |
| G-95 | 15N.09E.18.431 | 406999 | 3931605 | 6345 | 360 | 270 | 6075 | 1 | Seepage in basal Ancha |
| G-97 | 15N.09E.18.3221 | 406730 | 3932071 | 6348 | 500 | 189 | 6159 | 0 | Saturated at base of Ancha Fm |
| G-98 | 15N.09E.19.1224 | 406889 | 3931075 | 6313 | 430 | 190 | 6123 | 56 | NMOSE SWL |
| G-99 | 15N.09E.19.1142 | 406444 | 3931058 | 6303 | 440 | 158 | 6145 | 3 | NMOSE SWL |
| G-100 | 15N.09E.19.143 | 406589 | 3930601 | 6286 | 400 | 150 | 6136 | 0 | NMOSE SWL |
| G-107 | 15N.09E.18.2123 | 407195 | 3932746 | 6381 | 740 | 223 | 6158 | 0 | NMOSE SWL |
| G-109 | 15N.09E.19.222 | 407602 | 3931207 | 6316 | 440 | 205 | 6111 | 35 | NMOSE SWL |

## Table 2–Well, water-level and saturation information used to construct the saturated thickness map (Plate 3)



| Site ID | Location number (township.range. section.1/4 1/4 1/4 sections) | UTM NAD27 | | Surface elevation (ft asl) | Well depth | Depth to base of Ancha Fm (ft) | Base elevation (ft asl) | Saturated thickness (ft) 2000-2005 conditions | Water-level source comments |
|---|---|---|---|---|---|---|---|---|---|
| | | Easting (m) | Northing (m) | | | | | | |
| G-110 | 15N.09E.19.2123 | 407209 | 3931100 | 6319 | 500 | 140 | 6179 | 7 | NMOSE SWL |
| G-112 | 15N.08E.5.4421 | 399583 | 3934914 | 6123 | 160 | 120 | 6003 | 90 | NMOSE SWL |
| G-113 | 16N.08E.34.242 | 402842 | 3937246 | 6182 | 200 | 140 | 6042 | 64 | NMOSE SWL |
| G-126 | 16N.09E.19.2422 | 407737 | 3940481 | 6490 | 320 | 240 | 6250 | 0 | NMOSE SWL |
| G-127 | 16N.08E.13.3412 | 405130 | 3941298 | 6335 | 320 | 160 | 6175 | 0 | NMOSE SWL |
| G-132 | 16N.08E.28.2214 | 401055 | 3939246 | 6189 | 200 | 120 | 6069 | 59 | NMOSE SWL |
| G-134 | 16N.08E.21.3221 | 400340 | 3940135 | 6253 | 200 | 30 | 6223 | 0 | NMOSE SWL |
| G-135 | 16N.08E.21.442 | 401236 | 3939702 | 6217 | 220 | 160 | 6057 | 48 | NMOSE SWL |
| G-138 | 16N.08E.20.3232 | 398630 | 3939943 | 6139 | 160 | 25 | 6114 | 0 | NMOSE SWL |
| G-139 | 16N.08E.20.2132 | 399091 | 3940710 | 6186 | 160 | 25 | 6161 | 0 | NMOSE SWL |
| G-140 | 16N.08E.20.4332 | 399069 | 3939496 | 6185 | 160 | 50 | 6135 | 0 | NMOSE SWL |
| G-141 | 16N.08E.20.2133 | 398951 | 3940645 | 6161 | 160 | 8 | 6153 | 0 | NMOSE SWL |
| G-143 | 16N.08E.29.1243 | 398726 | 3939069 | 6186 | 160 | 25 | 6161 | 0 | NMOSE SWL |
| G-144 | 16N.08E.20.21313 | 398948 | 3940713 | 6157 | 140 | 10 | 6147 | 0 | NMOSE SWL |
| G-146 | 16N.08E.21.4411 | 400926 | 3939770 | 6229 | 200 | 170 | 6059 | 46 | NMOSE SWL |
| G-148 | 16N.08E.21.3232 | 400250 | 3939951 | 6251 | 253 | 35 | 6216 | 0 | NMOSE SWL |
| G-149 | 16N.08E.21.4232 | 401102 | 3939883 | 6242 | 220 | 145 | 6097 | 23 | NMOSE SWL |
| G-150 | 16N.08E.21.423 | 400161 | 3939741 | 6247 | 220 | 35 | 6212 | 0 | NMOSE SWL |
| G-151 | 16N.08E.21.3421 | 400378 | 3939762 | 6218 | 200 | 40 | 6178 | 0 | NMOSE SWL |
| G-152 | 16N.08E.21.4422 | 401269 | 3939729 | 6199 | 223 | 150 | 6049 | 56 | NMOSE SWL |
| G-154 | 16N.08E.22.343 | 401787 | 3939507 | 6210 | 220 | 155 | 6055 | 49 | NMOSE SWL |
| G-155 | 16N.08E.22.3232 | 401885 | 3939910 | 6194 | 180 | 120 | 6074 | 25 | NMOSE SWL |
| G-156 | 16N.08E.24.131 | 404762 | 3940370 | 6303 | 300 | 130 | 6173 | 0 | NMOSE SWL |
| G-160 | 16N.08E.27.3433 | 401732 | 3937840 | 6167 | 140 | 120 | 6047 | 62 | NMOSE SWL test well |
| G-161 | 15N.09E.13.3321 | 414373 | 3931620 | 6665 | 330 | 200 | 6465 | 7 | NMOSE SWL |
| G-163 | 16N.08E.27.4313 | 402160 | 3938016 | 6184 | 140 | 100 | 6084 | 30 | NMOSE SWL |
| G-164 | 16N.08E.27.1322 | 401689 | 3938905 | 6167 | 160 | 70 | 6097 | 27 | NMOSE SWL |
| G-165 | 16N.08E.28.1234 | 400234 | 3939059 | 6199 | 200 | 140 | 6059 | 42 | NMOSE SWL |
| G-166 | 16N.08E.28.2142 | 400873 | 3939124 | 6173 | 150 | 90 | 6083 | 48 | NMOSE SWL |
| G-167 | 16N.08E.21.4432 | 401116 | 3939535 | 6205 | 220 | 140 | 6065 | 44 | NMOSE SWL |
| G-168 | 16N.08E.28.42424 | 401293 | 3938295 | 6208 | 270 | 150 | 6058 | 44 | NMOSE SWL |
| G-169 | 16N.08E.28.1422 | 400429 | 3938965 | 6160 | 100 | 90 | 6070 | 40 | NMOSE SWL |
| G-170 | 16N.08E.28.2222 | 401250 | 3939379 | 6182 | 160 | 110 | 6072 | 54 | NMOSE SWL |
| G-171 | 16N.08E.28.2212 | 401031 | 3939379 | 6219 | 200 | 130 | 6089 | 46 | NMOSE SWL |
| G-177 | 15N.09E.23.4234 | 413944 | 3930082 | 6572 | 400 | 120 | 6452 | 0 | NMOSE SWL |
| G-178 | 15N.09E.24.1232 | 414743 | 3930998 | 6624 | 580 | 120 | 6504 | 0 | NMOSE SWL |
| G-179 | 15N.09E.25.43124 | 415114 | 3928277 | 6587 | 600 | 80 | 6507 | 1 | NMOSE SWL |
| G-181 | 15N.09E.12.444 | 415664 | 3931321 | 6709 | 500 | 180 | 6529 | 32 | NMOSE SWL |
| G-182 | 15N.09E.14.442 | 414060 | 3931538 | 6625 | 500 | 170 | 6455 | 3 | NMOSE SWL |
| G-183 | 16N.09E.15.3313 | 411160 | 3941135 | 6710 | 470 | 240 | 6470 | 30 | NMOSE SWL |
| G-190 | 16N.09E.15.3244 | 411798 | 3941355 | 6765 | 303 | 200 | 6565 | 34 | NMOSE SWL |
| G-192 | 16N.08E.12.3212 | 405128 | 3943330 | 6453 | 500 | 180 | 6273 | 0 | NMOSE SWL |
| G-193 | 16N.08E.12.110 | 404781 | 3943985 | 6425 | 415 | 140 | 6285 | 0 | NMOSE SWL |
| G-194 | 15N.09E.14.3314 | 412685 | 3931500 | 6545 | 440 | 80 | 6465 | 4 | NMOSE SWL |
| G-200 | 16N.09E.5.112 | 408085 | 3945217 | 6584 | 485 | 150 | 6434 | 0 | NMOSE SWL |
| G-205 | 15N.09E.31.331 | 406122 | 3926749 | 6224 | 600 | 190 | 6034 | 38 | NMOSE SWL |
| G-210 | 15N.08E.35.2324 | 403922 | 3927478 | 6122 | 208 | 80 | 6042 | 4 | NMOSE SWL |
| G-212 | 15N.08E.35.4442 | 404335 | 3926579 | 6122 | 200 | 120 | 6002 | 40 | NMOSE SWL |
| G-213 | 15N.08E.35.4122 | 403865 | 3927229 | 6116 | 200 | 110 | 6006 | 40 | NMOSE SWL |
| G-214 | 15N.09E.31.4113 | 406909 | 3927125 | 6246 | 500 | 110 | 6136 | 0 | NMOSE SWL |
| G-215 | 15N.09E.31.1431 | 406752 | 3927361 | 6271 | 1000 | 200 | 6071 | 0 | NMOSE SWL |
| G-216 | 15N.09E.31.343 | 406545 | 3926576 | 6260 | 400 | 160 | 6100 | 0 | NMOSE SWL |
| G-218 | 15N.09E.31.3442 | 406802 | 3926623 | 6263 | 415 | 120 | 6143 | 0 | NMOSE SWL |

asl—above sea level; NMOSE—New Mexico Office of the State Engineer; SWL—static water level

## Table 3–Spring location data used to constrain saturation contours on Plate 3

| Site ID | Easting NAD83 | Northing NAD83 | Elevation (ft asl) | Site type | Water Bearing Formation |
|---|---|---|---|---|---|
| **EB-624** | 400057 | 3933375 | 6099 | Spring | Tti/QTa |
| **EB-654** | 401005 | 3937572 | 6120 | Spring | Qva/QTa |
| **EB-682** | 403021 | 3926339 | 6040 | Spring | QTa |
| **EB-690** | 402990 | 3924515 | 6000 | Spring | QTa |
| **LC-001** | 399265 | 3935671 | 6036 | Spring | Qva/QTa |
| **LC-002** | 398603 | 3935594 | 6004 | Spring | Qva/QTa |
| **LC-003** | 398346 | 3935963 | 6020 | Spring | QTa/Tg |
| **LC-004** | 398481 | 3935768 | 6027 | Spring | QTa/Tg |
| **LC-005** | 400922 | 3937561 | 6119 | Spring | Qva/QTa |
| **LC-007** | 399439 | 3937177 | 6039 | Spring | QTasr/Tcb |
| **LC-008** | 399472 | 3936672 | 6050 | Spring | QTaas/Te |
| **LC-012** | 399793 | 3936418 | 6076 | Spring | Qva/QTa/Tte |
| **LC-015** | 399009 | 3937651 | 6115 | Spring | QTasr/Tcb |
| **LC-016** | 399824 | 3937994 | 6095 | Spring | QTa |
| **LC-017** | 399197 | 3935742 | 6052 | Spring | QTa |
| **LC-018** | 399212 | 3935682 | 6036 | Spring | QTa |
| **LC-019** | 399212 | 3935699 | 6036 | Spring | QTa |
| **LC-020** | 398652 | 3935424 | 6034 | Spring | QTa |
| **LC-021** | 400462 | 3937369 | 6088 | Spring | QTaas/Tcb |
| **LC-022** | 397721 | 3939493 | 6088 | Spring | Qva/QTa/Tcb |
| **LC-023** | 400085 | 3938409 | 6105 | Spring | QTa |
| **LC-024** | 398982 | 3937584 | 6101 | Spring | QTasr/Tte |
| **LC-031** | 396201 | 3934130 | 5917 | Spring | QTa |
| **LC-032** | 396176 | 3933800 | 5922 | Spring | QTa |

## Table 4–Historic data for saturated thickness illustrated on Plate 3

| Site ID | Location number (township.range.section 1/4 1/4 1/4 sections) | UTM NAD27 | | Surface elevation (ft asl) | Well depth | Depth to base of Ancha Fm (ft) | Base elevation (ft asl) | Saturated thickness (ft) | Year measured |
|---|---|---|---|---|---|---|---|---|---|
| | | Easting (m) | Northing (m) | | | | | | |
| X3DW/ WX3DE | 15N.9E.23.211 | 413418 | 3931155 | 6560 | 345 | 95 | 6465 | 6 | 1970 |
| X3CW | 15N.9E.25.12442 | 414945 | 3929323 | 6619 | 250 | 155 | 6464 | 35 | 1970 |
| WX9S/X9N | 15N.9E.25.3124 | 414451 | 3928591 | 6556 | 325 | 62 | 6494 | 7 | 1970 |
| X3C3/4S | 15N.9E.25.42432 | 416055 | 3928777 | 6620 | 260 | 50 | 6570 | 11 | 1970 |
| W2A | 15N.10E.6.332 | 416154 | 3934587 | 6796 | 330 | 140 | 6656 | 50 | 1970 |
| R1A | 15N.10E.16.434 | 420247 | 3931136 | 6886 | 232 | 42 | 6844 | 2 | 1970 |
| X3CN | 15N.10E.19.312 | 415970 | 3930380 | 6700 | 240 | 210 | 6490 | 40 | 1970 |
| X3CE | 15N.10E.19.431 | 416690 | 3930015 | 6741 | 260 | 153 | 6588 | 19 | 1970 |
| WR1W | 15N.10E.21.124 | 419744 | 3930648 | 6850 | 305 | 90 | 6760 | 2 | 1970 |
| EB-007 | 15N.08E.26.234 | 403983 | 3929089 | 6187 | 146 | 96 | 6091 | 24 | 1977 |
| EB-113 | 16N.08E.25.321 | 405142 | 3938502 | 6333 | 300 | 170 | 6163 | 0<br>5 | 1985<br>1967 |
| EB-133 | 16N.08E.34.222 | 402830 | 3937581 | 6203 | 120 | 130 | 6073 | 53 | 1979 |
| EB-134 | 16N.08E.27.342 | 402030 | 3938076 | 6187 | 137 | 125 | 6062 | 64 | 1979 |
| EB-212 | 14N.08E.1.2421 | 405898 | 3925840 | 6220 | 410 | 190 | 6030 | 45<br>45 | 1983<br>1993 |
| EB-370 | 16N.8E.34.1142 | 401680 | 3937544 | 6156 | 90 | 116 | 6040 | 88 | 1988 |
| EB-393 | 15N.08E.23.443 | 404280 | 3929825 | 6236 | 181 | 142 | 6094 | 35 | 1977 |
| EB-395 | 15N.08E.26.224 | 404190 | 3929345 | 6192 | 208 | 156 | 6036 | 84 | 1977 |
| EB-398 | 15N.08E.26.244 | 404392 | 3928909 | 6182 | 152 | 92 | 6090 | 29 | 1977 |
| EB-400 | 15N.08E.26.322 | 403554 | 3928731 | 6168 | 121 | 67 | 6101 | 12 | 1977 |
| EB-402 | 15N.8E.26.431 | 403732 | 3928346 | 6160 | 123 | 119 | 6041 | 52 | 1977 |
| EB-404 | 15N.08E.35.114 | 403062 | 3927680 | 6140 | 150 | 79 | 6061 | 26 | 1977 |
| EB-406 | 16N.08E.13.321 | 405095 | 3941702 | 6395 | 595 | 255 | 6140 | 30 | 1982 |
| EB-411 | 15N.09E.18.34132 | 406580 | 3931585 | 6336 | 430 | 270 | 6066 | 81 | 1985 |
| EB-465 | 15N.8E.35.1214 | 403328 | 3927909 | 6156 | 250 | 90 | 6066 | 40 | 1988 |
| EB-525 | 16N.9E.7.2423 | 407669 | 3943561 | 6524 | 304 | 175 | 6349 | 1 | 1962 |
| EB-573 | 16N.8E.22.3423 | 402040 | 3939761 | 6240 | 373 | 120 | 6120 | 22 | 1984 |
| EB-617 | 16N.8E.23.23 | 403980 | 3940396 | 6312 | 302 | 200 | 6112 | 5 | 1993 |
| G-3 | 15N.08E.13.1121 | 404471 | 3932770 | 6283 | 685 | 224 | 6059 | 81 | 1990 |
| G-5 | 16N.09E.4.3413 | 409882 | 3944381 | 6649 | 245 | 140 | 6509 | 40 | 1987 |
| G-8 | ElDoradoLot18Blk14 | 413542 | 3939736 | 6826 | 340 | 160 | 6666 | 0.1 | 1990 |
| G-9 | 15N.09E.2.3232 | 413145 | 3934970 | 6630 | 450 | 180 | 6450 | 15 | 1995 |
| G-14 | 15N.08E.24.144 | 405171 | 3930616 | 6264 | 140 | 90 | 6174 | 30 | 1979 |
| G-17 | 15N.08E.13.234 | 405625 | 3932200 | 6316 | 295 | 240 | 6076 | 120 | 1994 |
| G-18 | 15N.8E.8.434 | 399200 | 3933116 | 6024 | 65 | 65 | 5959 | 42 | 1986 |
| G-19 | 15N.08E.13.4113 | 405427 | 3931917 | 6299 | 455 | 240 | 6059 | 40 | 1993 |
| G-21 | 15N.08E.13.342 | 404927 | 3932219 | 6296 | 400 | 200 | 6096 | 100 | 1993 |
| G-25 | 15N.08E.14.424 | 404386 | 3931835 | 6277 | 150 | 139 | 6138 | 65 | 1976 |
| G-28 | 15N.08E.24.3134 | 404649 | 3930188 | 6255 | 200 | 175 | 6080 | 45 | 1995 |
| G-31 | 15N.08E.26.420 | 404227 | 3928702 | 6165 | 111 | 98 | 6067 | 32 | 1977 |
| G-42 | 16N.08E.28.233 | 400412 | 3938483 | 6115 | 65 | 50 | 6065 | 16 | 1979 |
| G-45 | 16N.09E.5.341 | 408797 | 3944765 | 6612 | 745 | 118 | 6494 | 30 | 1980 |
| G-50 | 16N.09E.8.132 | 408125 | 3943632 | 6524 | 200 | 160 | 6364 | 80 | 1977 |
| G-56 | 15N.09E.11.132 | 412900 | 3934000 | 6604 | 460 | 200 | 6404 | 40 | 1994 |
| G-59 | 16N.09E.8.310 | 408032 | 3943121 | 6518 | 270 | 140 | 6378 | 0 | 1974 |
| G-62 | 15N.09E.12.221 | 414145 | 3933380 | 6632 | 360 | 155 | 6477 | 45 | 1995 |
| G-65 | 16N.09E.8.212 | 408957 | 3944045 | 6570 | 180 | 160 | 6410 | 85 | 1978 |
| G-83 | 15N.08E.13.433 | 405352 | 3931409 | 6280 | 400 | 220 | 6060 | 70 | 1993 |
| G-86 | 15N.08E.13.14 | 405096 | 3932295 | 6304 | 480 | 210 | 6094 | 33 | 1993 |
| G-104 | 15N.08E.4.342 | 400389 | 3934855 | 6149 | 140 | 120 | 6029 | 70 | 1988 |
| G-111 | 15N.08E.4.213 | 400615 | 3935872 | 6134 | 140 | 130 | 6004 | 70 | 1979 |

**Table 5–Hydraulic conductivity data estimated from aquifer tests in Ancha, Tesuque, and Espinaso Formations near Santa Fe and presented in Figure 4**



| Site ID | NAD83 | | Land surface elevation (ft) | Geologic unit | Well depth (ft bls) | Test top (ft bls) | Test bottom (ft bls) | Saturated thickness | Transmissivity (ft2/d) | K (ft/d) | Data Source | Comments on aquifer test data |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Easting (m) | Northing (m) | | | | | | | | | | |
| EB-001 | 398529 | 3935208 | 6063 | QTasr-Tg | 221 | 47 | 273 | 226 | 3238 | 15 | Cooper, D. R., 1995, Geohydrology Report for Cottonwood Ranch Subdivision, Santa Fe County, NM, April 1995 | Average of drawdown and recovery data. |
| EB-180 | 399582 | 3940723 | 6236 | QTasr-Tts | 360 | 107 | 393 | 286 | 1800 | 6 | Cooper, D. R., 1990, Geohydrologic report prepared for Kathleen Duran, Santa Fe County, NM July 1990 | Poor curve fit. Aquifer was not stressed. Delayed yield and/or fluctuating discharge compromised data. |
| EB-406 | 405045 | 3941905 | 6395 | QTasr-Tts | 595 | 227 | 595 | 368 | 6050 | 16 | Jenkins, D.N., 1982, Geohydrology of the Las Cuadras de Ocate subdivision area near Santa Fe, Santa Fe County, NM, August 1982 | Average of recovery data in pumping and observation wells. |
| EB-407 | 405069 | 3941697 | 6362 | QTasr | 247 | 235 | 255 | 20 | 5025 | 252 | Jenkins, D.N., 1982, Geohydrology of the Las Cuadras de Ocate subdivision area near Santa Fe, Santa Fe County, NM, August 1982 | Average of drawdown and recovery data, multiple methods (4 analyses). |
| EB-573 | 401990 | 3939964 | 6240 | QTasr-Tts | 370 | 128 | 370 | 242 | 480 | 2 | AGW Consultants, 1984, Hydrogeology of the Santa Fe Downs Resort area near Santa Fe, Santa Fe County, NM, May 1984 | Average of drawdown and recovery data. |
| EB-131 | 403262 | 3939063 | 6277 | QTaas | 222 | 134 | 245 | 111 | 5140 | 46 | C.A. Coonce & Assoc., 1977, Montoya Subdivision Water Availability Study for Cipriano Martinez, December 1977 | Average of drawdown and recovery data. |
| EB-134 | 401980 | 3938280 | 6195 | QTaas | 137 | 92 | 130 | 38 | 4700 | 124 | Analysis of raw data from Jenkins, 1979, Geohydrology of the Vista Subdivision, Santa Fe County, NM, December 1979 | Early-time drawdown data; barrier boundary at 500 minutes. |
| EB-135 | 401760 | 3938450 | 6217 | QTaas | 116 | 72 | 112 | 40 | 6250 | 156 | Analysis of raw data from Jenkins, 1979, Geohydrology of the Vista Subdivision, Santa Fe County, NM, December 1979 | Average of early-time drawdown and late-time recovery data. |
| EB-217 | 412755 | 3932722 | 6525 | QTaas- Tta | 300 | 59 | 372 | 313 | 1180 | 4 | Kelly Summers, written communication, personal field notes of 11/16/70 aquifer test | Average of drawdown and recovery data. |
| EB-370 | 401630 | 3937747 | 6160 | QTaas | 90 | 28 | 58 | 30 | 1766 | 59 | Geohydrology Assoc., Inc., 1988, Hydrogeologic investigation of Cottonwood Estates, February 1988 | Average of drawdown and recovery data. Poor curve fit. Aquifer was not stressed. Fluctuating discharge and/or aquifer boundaries compromised data. |
| EB-396 | 403626 | 3929047 | 6171 | QTaas | 105 | 66 | 97 | 31 | 216 | 13 | Corbin Consulting, Inc., 2005, Geohydrology Report (RG-27728-S) Longanecker Property, March 8, 2005 | Average of drawdown and recovery data; recharge boundary at 200 minutes. |
| EB-574 | 403578 | 3929135 | 6178 | QTaas | 100 | 64 | 107 | 43 | 490 | 11 | Corbin Consulting, Inc., 2005, Geohydrology Report (RG-27728-S) Longanecker Property, March 8, 2005 | Recovery data from 48-hr drawdown test; recharge boundary at 2000 minutes |
| EB-058 | 406139 | 3952312 | 6678 | Tts | 810 | 500 | 877 | 377 | 992 | 3 | Cooper, D.R., 1994, Geohydrology report for El Prado Subdivision, Santa Fe County, NM, September 1994 | Recovery data from 41-hr drawdown test. |
| EB-063 | 409884 | 3948082 | 6781 | Tts | 340 | 230 | 373 | 143 | 1710 | 12 | GGI, Geohydrology of the West Alameda Project, Santa Fe County, NM, January, 1989 | Average of drawdown and recovery data from 96-hr drawdown test. |
| EB-078 | 413940 | 3957720 | 6962 | Tts | 378 | 296 | 374 | 78 | 2045 | 26 | Jenkins, D.N., 1982, Geohydrologic Conditions at the San Juan Residences, Santa Fe County, NM, April 1982 | Drawdown data from observation well in 48-hr test; average of multiple methods |
| EB-082 | 414625 | 3957245 | 6928 | Tts | 916 | 700 | 978 | 278 | 47.5 | 0.2 | Cooper, D.R., 1993, Geohydrology Report for Neighbors, Inc., Santa Fe County, NM, December 1993 | Average of drawdown and recovery data from 96-hr drawdown test. |
| EB-089 | 413650 | 3957860 | 6904 | Tts | 535 | 247 | 515 | 268 | 620 | 2 | Jenkins, D.N., 1982, Geohydrologic Conditions at the San Juan Residences, Santa Fe County, NM, April 1982 | Average of drawdown (reanalysed) and recovery data from 48-hr drawdown test. |
| EB-094 | 410460 | 3956610 | 7015 | Tts | 749 | 655 | 770 | 115 | 166.5 | 1.5 | Cooper, D.R., 1985, Geohydrology Report for Rancho Oso Loco, Santa Fe County, NM, 1985 | Average of drawdown and recovery data from 36-hr drawdown test. |
| EB-096 | 409975 | 3957390 | 6922 | Tts | 777 | 611 | 827 | 216 | 133 | 1.0 | Cooper, D.R., 1985, Geohydrology Report for Rancho Oso Loco, Santa Fe County, NM, 1985 | Average of drawdown and recovery data from 42-hr drawdown test. |
| EB-097 | 410200 | 3955680 | 6957 | Tts | 1000 | 620 | 1110 | 490 | 345 | 0.7 | Glorieta Geoscience, Inc., 1992, Geohydrology of the Lane Property, Santa Fe County, NM, April 29, 1992 | Average of drawdown and recovery data from 48-hr drawdown test. |
| EB-100 | 416340 | 3958560 | 6921 | Tts | 250 | 204 | 256 | 52 | 32 | 0.6 | Cooper, D.R., 1994, Geohydrology Report for Marvin Pollock and Bettina Lancaster, Santa Fe County, NM, May 1994 | Recovery data from 36-hr drawdown test; recharge boundary at less than one hour of pumping. |
| EB-101 | 416630 | 3958000 | 6959 | Tts | 500 | 385 | 515 | 130 | 42 | 0.3 | Cooper, D.R., 1996, Geohydrology Report for Jeffrey Jacobs and Thad Bowman, Santa Fe County, NM, January 1996 | Recovery data from 48-hr drawdown test; high bedding dips limit vertical flow |
| EB-104 | 406047 | 3951057 | 6659 | Tts | 845 | 449 | 938 | 489 | 996 | 2 | Cooper, D.R., 1994, Geohydrology Report For Los Suenos, Santa Fe County, NM, April 1994 | Average of drawdown data and reanalysis of recovery data from 96-hr drawdown test. |
| EB-105 | 403911 | 3950729 | 6574 | Tts | 854 | 555 | 893 | 338 | 522.5 | 1.6 | Analysis of raw data from Cooper, D.R., 1999, Geohydrology for Rancho De Los Ninos, Santa Fe County, NM, April 1999 | Average of drawdown and recovery data from 44-hr drawdown test. |
| EB-107 | 412977 | 3954837 | 7162 | Tts | 640 | 452 | 696 | 244 | 260 | 1.1 | Analysis of raw data from Cooper, D.R., 1986, Geohydrologic Report for Rancho De Los Cuervos, Santa Fe County, NM, Sept 1986 | Recovery data from 36-hr drawdown test; recharge boundary at 45 minutes of pumping. |
| EB-108 | 410410 | 3954860 | 6978 | Tts | 940 | 609 | 1013 | 404 | 956 | 2 | Cooper, D.R., 1995, Geohydrology Report for Welsh Family Limited Partnership, Santa Fe County, NM, March 1995 | Average of drawdown (reanalysed) and recovery data from 40-hr drawdown test. |
| EB-110 | 407200 | 3952020 | 6718 | Tts | 730 | 490 | 750 | 260 | 1110 | 4 | Analysis of raw data from Glorieta Geoscience, Inc., 1990, Geohydrology of the Brenner Property, Santa Fe County, NM, August 1990 | Average of drawdown and recovery data from 48-hr drawdown test. Aquifer not stressed. |
| EB-112 | 405265 | 3938808 | 6349 | Tts | 420 | 340 | 444 | 104 | 140 | 1.3 | Glorieta Geoscience, Inc., 1985, Geohydrology of the La Canada Subdivision, Santa Fe County, NM, July 1985 | Average of drawdown and recovery data from 96-hr drawdown test. |
| EB-121 | 405692 | 3955377 | 6554 | Tts | 602 | 425 | 634 | 209 | 385 | 2 | Consulting Professionals, Inc., 1975, Hydrogeologic Report La Tierra Subdivision, Santa Fe County, NM, June 1975 | Average of drawdown and recovery data from 48-hr drawdown test. |
| EB-122 | 412030 | 3952650 | 7160 | Tts | 2000 | 983 | 1997 | 1014 | 1390 | 1.4 | Shomaker & Assoc., 1999, WellReport: Drilling, Construction and Testing, City of Santa Fe Northwest Area Test Well, April 1999 | Average of drawdown and recovery data from 1000-min drawdown test. |
| EB-123 | 414198 | 3949035 | 6963 | Tts | 860 | 334 | 906 | 572 | 149 | 0.3 | John Shomaker & Assoc, 1999, Well Report: Drilling, Construction and Testing Hickox Well No. 2, May 1999 | Average of drawdown and recovery data from 1000-min drawdown test. |
| EB-128 | 414020 | 3957360 | 6978 | Tts | 400 | 318 | 422 | 104 | 3598 | 35 | Jenkins, D.N., 1982, Geohydrologic Conditions at the San Juan Residences, Santa Fe County, NM, April 1982 | Average of drawdown and recovery data in observation well from 48-hr drawdown test. |
| EB-129 | 404145 | 3939566 | 6277 | Tts- QTaas | 220 | 151 | 229 | 78 | 468 | 6 | VeneKlasen & Associates, 1984, Remuda Ridge Warehouse, Santa Fe County, NM, October 1984 | Average of drawdown and recovery data. |
| EB-136 | 411150 | 3954500 | 7059 | Tts | 860 | 700 | 908 | 208 | 318 | 1.6 | Cooper, D.R., 2001, Geohydrology Report for Heartstone Development LLC, December 2001 | Average of drawdown and recovery (reanalysed) data from 48-hr drawdown test. |
| EB-137 | 409540 | 3954860 | 6917 | Tts | 950 | 800 | 995 | 195 | 44 | 0.2 | Glorieta Geoscience, Inc., 2002, Geohydrology of the Mountain Vista Subdivision, Santa Fe County, NM, July 2002 | Average of drawdown and recovery data from 48-hr drawdown test. |
| EB-138 | 404216 | 3946481 | 6455 | Tts | 735 | 508 | 784 | 276 | 1600 | 6 | Glorieta Geoscience, Inc., 2002, Geohydrology of the Santa Fe Animal Shelter Site, Santa Fe County, NM, May 2002 | Average of drawdown and recovery data from 48-hr drawdown test. |
| EB-166 | 409205 | 3953067 | 6880 | Tts | 730 | 557 | 769 | 212 | 218 | 1.0 | Cooper, D.R., 1991, Geohydrology report for Sheila Cooper, Santa Fe County, NM, August 1991 | Average of drawdown and recovery data from 50-hr drawdown test. |
| EB-276 | 412116 | 3949350 | 6861 | Tts | 725 | 250 | 861 | 611 | 766 | 1.3 | Faith Engineering, Inc., 1994, Pump Test Report for the Alto St Well, December 1994 | Average of drawdown and recovery data from 24-hr drawdown test. |
| EB-277 | 413025 | 3949523 | 6871 | Tts | 285 | 239 | 291 | 52 | 4288 | 83 | Faith Engineering, Inc., 1994, Pump Test Report for the Alto St Well, December 1994 | Average of drawdown and recovery data in observation well from 24-hr drawdown test. |
| EB-278 | 413025 | 3949523 | 6871 | Tts | 480 | 466 | 482 | 16 | 477 | 30 | Faith Engineering, Inc., 1994, Pump Test Report for the Alto St Well, December 1994 | Average of drawdown and recovery data in observation well from 24-hr drawdown test. |
| EB-279 | 413025 | 3949523 | 6871 | Tts | 415 | 392 | 418 | 26 | 637 | 25 | Faith Engineering, Inc., 1994, Pump Test Report for the Alto St Well, December 1994 | Average of drawdown and recovery data in observation well from 24-hr drawdown test. |
| EB-285 | 407026 | 3954795 | 6705 | Tts | 743 | 451 | 807 | 356 | 863 | 2 | Consulting Professionals, Inc., 1975, Hydrogeologic Report La Tierra Subdivision, Santa Fe County, NM, June 1975 | Average of drawdown and recovery data from 48-hr drawdown test. |
| EB-286 | 407931 | 3956170 | 6721 | Tts | 697 | 493 | 738 | 245 | 207 | 0.8 | Consulting Professionals, Inc., 1975, Hydrogeologic Report La Tierra Subdivision, Santa Fe County, NM, June 1975 | Recovery data from 58-hr drawdown test. |
| EB-287 | 407017 | 3956720 | 6664 | Tts | 841 | 465 | 940 | 475 | 1260 | 3 | Consulting Professionals, Inc., 1975, Hydrogeologic Report La Tierra Subdivision, Santa Fe County, NM, June 1975 | Average of drawdown and recovery data from 48-hr drawdown test. |
| EB-289 | 408320 | 3956006 | 6768 | Tts | 750 | 529 | 790 | 261 | 1080 | 4 | Consulting Professionals, Inc., 1977, Hydrogeologic Report La Tierra Subdivision - Phase 3, Santa Fe County, NM, May 1977 | Average of drawdown and recovery data from 48-hr drawdown test. Barrier boundary at 2000 minutes. |
| EB-292 | 408163 | 3956965 | 6748 | Tts | 790 | 595 | 821 | 226 | 185 | 0.8 | Consulting Professionals, Inc., 1977, Hydrogeologic Report La Tierra Subdivision - Phase 3, Santa Fe County, NM, May 1977 | Drawdown data from 48-hr test. |
| EB-293 | 402450 | 3939520 | 6199 | Tts- QTasr | 340 | 64 | 308 | 244 | 5270 | 22 | Calculated from raw data in Glorieta Geoscience, Inc., 1991, Chapter VI Geohydrology of the La Cienega de Santa Fe Project, October 1991 | Average of drawdown and recovery data from 96-hr drawdown test. Aquifer not adequately stressed. |
| EB-294 | 403660 | 3938852 | 6300 | Tts | 740 | 166 | 730 | 564 | 247 | 0.4 | Glorieta Geoscience, Inc., 1987, Addendum to Geohydrology Report for the Santa Fe Metro Center, November 1987 | Average of drawdown and recovery data from 96-hr drawdown test. |
| EB-355 | 409367 | 3939823 | 6555 | Tts | 1290 | 1060 | 1320 | 260 | 420 | 1.6 | Balleau Groundwater, 2001, CDEX1 Completion Report | Recovery data from 4-hr drawdown test. |
| EB-356 | 409367 | 3939823 | 6555 | Tts | 1020 | 660 | 920 | 260 | 800 | 3 | Balleau Groundwater, 2002, College District Production Well #1 (CDPROD1), February 2002 | Average of drawdown and recovery data in observation well from 100-hr drawdown test. |
| EB-359 | 409346 | 3939820 | 6550 | Tts | 1340 | 740 | 1396 | 656 | 800 | 1.2 | Balleau Groundwater, 2002, College District Production Well #1 (CDPROD1), February 2002 | Average of drawdown, recovery, and distance-drawdown data in pumping and observation wells from 100-hr drawdown test. |
| EB-408 | 405630 | 3944865 | 6472 | Tts | 502 | 349 | 479 | 130 | 1800 | 14 | John Shomaker and Associates reanalysis of original John Bliss data of 9/22/73 aquifer test reported in Veneklasen, G.O., 1977, Geohydrologic Report Lanphere -- Rio Villa Subdivision, AguaFria Road, Santa Fe County, NM, May 1977 | Recovery data from 24-hr drawdown test. |
| EB-409 | 405420 | 3944846 | 6462 | Tts | 457 | 420 | 450 | 30 | 660 | 22 | John Shomaker and Associates reanalysis of raw data of 12/19/76 aquifer test reported in Veneklasen, G.O., 1977, Geohydrologic Report Lanphere -- Rio Villa Subdivision, AguaFria Road, Santa Fe County, NM, May 1977 | Recovery data from 96-hr drawdown test. |

**Table 5–Hydraulic conductivity data estimated from aquifer tests in Ancha, Tesuque, and Espinaso Formations near Santa Fe and presented in Figure 4**



| Site ID | NAD83 | | Land surface elevation (ft) | Geologic unit | Well depth (ft bls) | Test top (ft bls) | Test bottom (ft bls) | Saturated thickness | Transmissivity (ft2/d) | K (ft/d) | Data Source | Comments on aquifer test data |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Easting (m) | Northing (m) | | | | | | | | | | |
| EB-410 | 411570 | 3942380 | 6730 | Tts | 360 | 260 | 390 | 130 | 720 | 6 | John Shomaker and Associates reanalysis of data reported in Veneklasen, G.O., 1980, Geohydrology of Santiago Subdivision, Santa Fe County, NM, October 1980 | Average of drawdown and recovery data from 48-hr drawdown test. |
| EB-464 | 413214 | 3942967 | 6885 | Tts | 600 | 204 | 693 | 489 | 405 | 0.8 | Glorieta Geoscience, Inc., 1995, Geohydrology of the Vereda Serena Property, Santa Fe, October, 1995 | Average of drawdown and recovery data from 48-hr drawdown test. |
| EB-466 | 412797 | 3954172 | 7146 | Tts | 800 | 469 | 900 | 431 | 275 | 0.8 | Glorieta Geoscience, Inc., 2004, Geohydrology of the Estancia Subdivision, Santa Fe County, December, 2004 | Average of drawdown and recovery data from 48-hr drawdown test. |
| EB-470 | 416356 | 3955378 | 7121 | Tts | 770 | 529 | 802 | 273 | 238 | 0.9 | Glorieta Geoscience, Inc., 2002, Addendum To: Reconnaissance Geohydrologic Characterization of the Tesuque Ridge Subdivision, Santa Fe County, August 2002 | Average of drawdown and recovery data from 48-hr drawdown test. |
| EB-477 | 412588 | 3946584 | 6863 | Tts | 780 | 225 | 795 | 570 | 820 | 1.4 | West, F.G., October 2, 1961, Technical Memo to P.D.Akin re Public Service Company's St. Michael's Well operational pump test | Results reported from 10-day drawdown and recovery test. |
| EB-604 | 412377 | 3949416 | 6825 | Tts | 1230 | 365 | 1230 | 865 | 1150 | 1.3 | John Shomaker and Associates, Inc., 1997, Well Report, Drilling, Construction, and Testing, City of Santa Fe, Torreon Well No. 2, May 1997 | Drawdown data from 1000-minute aquifer test. |
| EB-611 | 405227 | 3949987 | 6575 | Tts | 2000 | 1095 | 2013 | 918 | 210 | 0.2 | Tetra Tech EM, Inc., 2004, Geohydrologic Report for Proposed Suerte del Sur Subdivision, Santa Fe County, NM,August 2004 | Average of drawdown and recovery data from 96-hr drawdown test. |
| EB-615 | 406339 | 3950675 | 6689 | Tts | 900 | 696 | 904 | 208 | 1097 | 5 | Corbin Consulting Inc., 2004, Constant Property Geohydrology Report, June 2004 | Recovery data from 50-hr drawdown test. Aquifer not adequately stressed. |
| EB-617 | 403930 | 3940600 | 6312 | Tts | 302 | 279 | 305 | 26 | 20 | 0.8 | Dames & Moore, Inc., 1995, Geohydroloy Report Komis Estates for Southwest Surveying Co., Inc., December 1995 | Drawdown data from 48-hour aquifer test. |
| EB-065 | 405560 | 3954130 | 6676 | Ttsf | 785 | 560 | 852 | 292 | 340 | 1.2 | Consulting Professionals, Inc, 1978, Hydrogeologic Report, La Tierra Subdivision, Phase 4, Santa Fe County, NM, December 1978 | Average of drawdown and recovery (reanalysed) data from 48-hr drawdown test. |
| EB-066 | 416340 | 3954065 | 7343 | Ttsf | 725 | 266 | 863 | 597 | 66.5 | 0.1 | Glorieta Geoscience, Inc., 1991, Geohydrology of the Circle Drive Compound Property, Santa Fe County, NM, May 1991 | Average of drawdown and recovery data from 48-hr drawdown test. |
| EB-077 | 415810 | 3955990 | 7022 | Ttsf | 640 | 157 | 785 | 628 | 59 | 0.1 | Analysis of raw data from Glorieta Geoscience, Inc., 1990, Geohydrology of the San Ysidro de Tesuque Subdivision, Santa Fe County, NM, May 1990 | Average of drawdown and recovery data from 48-hr drawdown test. |
| EB-080 | 415431 | 3954452 | 7200 | Ttsf | 600 | 282 | 695 | 413 | 14 | 0.03 | Glorieta Geoscience, Inc., 1989, Geohydrology of the Sangre de Cristo Estates Subdivision, Santa Fe County, NM, January 1989 | Recovery data from 96-hour aquifer test. |
| EB-081 | 406473 | 3960061 | 6549 | Ttsf | 945 | 465 | 945 | 480 | 288 | 0.6 | Cooper, D.R., 1994, Geohydrology Report for Hacienda del Cerezo, Ltd, Santa Fe County, NM, January 1994 | Average of drawdown and recovery data from 48-hr drawdown test. |
| EB-083 | 406180 | 3961580 | 6621 | Ttsf | 720 | 483 | 786 | 303 | 167.5 | 0.6 | Cooper, D.R., 1994, Geohydrology Report for Barbara Howard and John Morris, Santa Fe County, NM, December, 1994 | Average of drawdown and recovery data from 42-hr drawdown test. |
| EB-085 | 407663 | 3958060 | 6612 | Ttsf | 773 | 379 | 885 | 506 | 350 | 1.4 | Analysis of raw data from Jenkins, 1982, Geohydrolgoy of the Las Dos, Phase II Area, Santa Fe County, NM, October 1982 | Average of drawdown data from 12.5-hr and 48-hr aquifer tests. |
| EB-086 | 408125 | 3958220 | 6674 | Ttsf | 770 | 434 | 844 | 410 | 300 | 0.7 | Analysis of raw data from Jenkins, 1982, Geohydrolgoy of the Las Dos, Phase II Area, Santa Fe County, NM, October 1982 | Drawdown data from 48-hour aquifer test. |
| EB-101 | 416630 | 3958000 | 6959 | Ttsf | 500 | 385 | 515 | 130 | 34 | 0.3 | Cooper, D.R., 1996, Geohydrology Report for Jeffrey Jacobs and Thad Bowman, Santa Fe County, NM, January 1996 | Average of drawdown and recovery data from 48-hr drawdown test. |
| EB-290 | 409264 | 3956135 | 6854 | Ttsf | 750 | 528 | 795 | 267 | 97.5 | 0.4 | Consulting Professionals, Inc., 1977, Hydrogeologic Report La Tierra Subdivision - Phase 3, Santa Fe County, NM, May 1977 | Average of drawdown and recovery data from 48-hr drawdown test. |
| EB-291 | 409347 | 3956949 | 6815 | Ttsf | 765 | 438 | 785 | 347 | 54 | 0.2 | Analysis of raw data from Consulting Professionals, Inc., 1977, Hydrogeologic Report La Tierra Subdivision - Phase 3, Santa Fe County, NM, May 1977 | Average of drawdown and recovery data from 48-hr drawdown test. Barrier boundary at ~1000 minutes. |
| EB-371 | 416257 | 3954800 | 7209 | Ttsf- XYu | 980 | 480 | 980 | 500 | 34.5 | 0.07 | Glorieta Geoscience, Inc., 2002, Reconnaissance Geohydrologic Characterization of the Tesuque Ridge Subdivision, Santa Fe County, NM, July 2002 | Average of drawdown and recovery data from 48-hr drawdown test. Barrier boundary at ~1100 minutes. |
| EB-004 | 411065 | 3936094 | 6594 | Tta | 560 | 234 | 595 | 361 | 149 | 0.4 | Geohydrology Associates, Inc. 1983, Geohydrology of Rancho Viejo Properties, Santa Fe County, NM, February 1983 | Well function analysis of drawdown data from 96-hr aquifer test. |
| EB-005 | 409975 | 3936434 | 6545 | Tta | 759 | 488 | 768 | 280 | 151 | 0.5 | Geohydrology Associates, Inc. 1983, Geohydrology of Rancho Viejo Properties, Santa Fe County, NM, February 1983 | Average of drawdown and recovery data from 96-hr drawdown test. |
| EB-099 | 416630 | 3962185 | 6884 | Tta | 725 | 351 | 773 | 422 | 47 | 0.1 | Glorieta Geoscience, Inc., 1990, Geohydrology of the Insight Investments Property, Santa Fe County, NM, February 1990 | Average of drawdown and recovery data from 24-hr drawdown test. |
| EB-111 | 414112 | 3940815 | 6909 | Tta_s | 650 | 142 | 672 | 530 | 212 | 0.5 | VeneKlasen & Associates, Inc., 1984, Hondo Trails Subdivision, Santa Fe County, NM, Geohydrology Report, December 1984 | Average of drawdown (reanalyzed due to discharge fluctuations) and recovery data from 36-hr drawdown test. |
| EB-183 | 414393 | 3943568 | 6983 | Tta | 540 | 379 | 561 | 182 | 25 | 0.1 | Glorieta Geoscience, Inc., 1992, Geohydrology of the McElvain/Patania Property, Santa Fe County, NM, June 1992 | Average of drawdown and recovery data from 96-hr drawdown test. Barrier boundary at ~500 minutes. |
| EB-232 | 412512 | 3941509 | 6814 | Tta_s | 600 | 231 | 710 | 479 | 193 | 0.4 | VeneKlasen, G.O., 1986, Geohydrology Report Arroyo Hondo West Subdivision, Santa Fe County, NM, February 1986 | Average of drawdown and recovery data from 36-hr drawdown test. |
| EB-386 | 404058 | 3938572 | 6311 | Tta_s | 900 | 371 | 969 | 598 | 140 | 0.2 | Heaton, C., Sinagua Consultants, 1999, Well Hydrology Report Elmer Garcia Property, Santa Fe County, NM, August 1999 | Average of drawdown and recovery data from 48-hr drawdown test. |
| EB-463 | 418467 | 3960683 | 7259 | Tta | 816 | 283 | 960 | 677 | 8.8 | 0.02 | Glorieta Geoscience, Inc., 2003, Reconnaissance Geohydrology report of the Clements Property, Santa Fe, April, 2003. | Average of drawdown and recovery data from 48-hr drawdown test. Barrier boundary at ~700 minutes. |
| EB-467 | 414102 | 3944226 | 6944 | Tta_s | 320 | 176 | 363 | 187 | 260 | 1.4 | Glorieta Geoscience, Inc., 2004, Reconnaissance Geohydrology Report for the Beaty Property, Santa Fe County, NM, December 2004 | Average of drawdown and recovery data from 48-hr drawdown test. |
| EB-486 | 396848 | 3965659 | 5726 | Tta | 1363 | 600 | 1363 | 763 | 388 | 0.5 | John Shomaker & Associates, Inc., 2003, Well Report: Drilling, Construction, and Testing of SF Buckman 9, April 2003 | Average of drawdown and recovery data from 1000-minute drawdown test. |
| EB-575 | 417400 | 3961020 | 7027 | Tta | 632 | 480 | 652 | 172 | 13.5 | 0.08 | Jenkins, D.L., 1978, Supplemental Geohydrologic Data for the Proposed Los Caminitos Subdivision, Phase 1, Santa Fe, NM, Septtember 1978 | Average of drawdown and recovery data from 48-hr drawdown test. |
| EB-576 | 416950 | 3961570 | 6939 | Tta | 500 | 328 | 516 | 188 | 9 | 0.05 | Jenkins, D.L., 1978, Supplemental Geohydrologic Data for the Proposed Los Caminitos Subdivision, Phase 1, Santa Fe, NM, September 1978 | Average of drawdown and recovery data from 85-minute drawdown test. |
| EB-614 | 407590 | 3973550 | 5847 | Tta | 90 | 65 | 98 | 33 | 30 | 0.9 | Spiegel, Z., 1972, Interpretation and application of an aquifer performance test on well RG-20228 at Pojoaque Terrace trailer court site HC McDonald Property, Santa Fe County, NM, September 1972 | Drawdown data from a 24-hr aquifer test. |
| EB-346 | 407590 | 3932255 | 6332 | Tte_a | 366 | 190 | 410 | 220 | 1.2 | 0.005 | Souder, K., March 12, 1986, written communication to E.Martinez on recalculation of AGW transmissivity data; AGW Consultants, 1985, Hydrogeology of Rancho San Marcos Property, Santa Fe County, NM, December 1985 | Average of drawdown and recovery data from 54-hr drawdown test. |
| EB-007 | 403933 | 3929293 | 6190 | Te | 146 | 73 | 125 | 52 | 310 | 6 | Jenkins, D., 1977, Geohydrologic Investigation of the Turquoise Trail Subdivision, Santa Fe County, NM, July 1977 | Average of drawdown and recovery data from 22-hr drawdown test. Barrier boundary at ~800 minutes. |
| EB-411 | 406530 | 3931790 | 6336 | Te | 430 | 270 | 478 | 208 | 1.85 | 0.01 | Souder, K., March 12, 1986, written communication to E.Martinez on recalculation of AGW transmissivity data; AGW Consultants, 1985, Hydrogeology of Rancho San Marcos Property, Santa Fe County, NM, December 1985 | Average of drawdown and recovery data from 50-hr drawdown test. |
| EB-412 | 404925 | 3931803 | 6274 | Te-QTaas | 510 | 125 | 356 | 231 | 15 | 0.06 | AGW Consultants, 1985, Geohydrology of Rancho San Marcos, December 1985. | Average of drawdown and recovery data from 50-hr drawdown test. |
| EB-465 | 403278 | 3928112 | 6159 | Te | 260 | 156 | 263 | 107 | 3.9 | 0.04 | Calculated from Glorieta Geoscience, Inc., 1988, Geohydrology of the Picture Rock Development Co. Property, Santa Fe County, NM, May 1988 | Average of drawdown and recovery data from 48-hr drawdown test. Discharge dropped through test. |
| EB-616 | 405500 | 3928790 | 6238 | Te | 410 | 192 | 439 | 247 | 6 | 0.02 | Glorieta Geoscience, Inc., 1998, Ground Water Conditions in the Vicinity of the Gonzales Tract San Marcos Arroyo, Santa Fe County, NM, December 1998 | Recovery data from 48-hr drawdown test. |
| EB-618 | 414110 | 3930390 | 6590 | Te | 640 | 94 | 778 | 684 | 294 | 0.4 | Corbin Consulting, Inc., 2005, Geo-Hydrology Report McMillan Subdivision, June 2005 | Average of drawdown and recovery data from 96-hr drawdown test. |

**Geologic unit:** QTasr - Santa Fe River facies of the Ancha Formation; QTaas - Alluvial slope facies of the Ancha Formation; Tts - lithosome S of the Tesuque Formation; Ttsf - floodplain facies of lithosome S of the Tesuque Formation; Tta - lithosome A of the Tesuque Formation; Tte - lithosome E of the Tesuque Formation; Te - Espinaso Formation; Tg - Galisteo Formation; XYu - Precambrian rocks undivided.

**Saturated thickness** is estimated using criteria described in text.


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