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Geodatabase Design and Characteristics of Geologic Information for a Geodatabase of Selected Wells Penetrating the Austin Group in Central Bexar County, Texas, 2010

Data Series 522

U.S. Department of the Interior
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Front cover:

Top, San Pedro Springs, Bexar County, Texas, 2007 (photograph by Allan Clark, U.S. Geological Survey).

Bottom, Blue Hole (San Antonio Springs), San Antonio, Texas, 2007 (photograph by Allan Clark, U.S. Geological Survey).

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Inch/Pound to SI

Multiply	By	To obtain
	Length	
foot (ft)	0.3048	meter (m)
mile (mi)	1.609	kilometer (km)
	Area	
square mile (mi^2)	2.590	square kilometer (km^2)

Datums

Vertical coordinate information is referenced to the North American Vertical Datum of 1988 (NAVD 88).

Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83).

Altitude, as used in this report, refers to distance above the vertical datum.

Geodatabase Design and Characteristics of Geologic Information for a Geodatabase of Selected Wells Penetrating the Austin Group in Central Bexar County, Texas, 2010

By Diana E. Pedraza and Sachin D. Shah

Abstract

The U.S. Geological Survey, in cooperation with the San Antonio Water System, developed a geodatabase of geologic and hydrogeologic information for selected wells penetrating the Austin Group in central Bexar County, Texas. The Austin Group functions as an upper confining unit to the Edwards aquifer and is the thickest and most permeable of the Edwards aquifer confining units. The geologic and hydrogeologic information pertains to a 377-square-mile study area that encompasses central Bexar County. Data were compiled primarily from drillers' and borehole geophysical logs from Federal, State, and local agencies and published reports. Austin Group characteristics compiled for 523 unique wells are documented (if known), including year drilled, well depth, altitude of top and base of the Austin Group, and thickness of the Austin Group.

Introduction

The Austin Group in central Bexar County, Tex. (fig. 1), overlies the Eagle Ford Group and consists of chalky, variably marly, generally fossiliferous limestone, commonly containing the fossil oyster *Gryphaea aucella* (Small, 1986; Hanson and Small, 1995). The Austin Group functions as an upper confining unit to the Edwards aquifer or as an aquifer where it is connected to the Edwards aquifer by faults, fractures, or caves; it is the thickest and most permeable of the Edwards aquifer confining units (Small, 1986; Clark, 2003). The available geologic and hydrogeologic information on the Austin Group in Bexar County is sparse. As demand for water increases in the San Antonio area, all available water resources will need to be investigated and characterized. There is a need by water-resource managers to gain a better understanding of the water-bearing and chemical characteristics of the Austin Group in Bexar County, Tex.

Much of the available information regarding the water-bearing and chemical characteristics of the Austin Group is in well logs produced when the wells were initially drilled; some of the information has been published by various entities but never compiled into one geodatabase. Some of the information is stored by various agencies and is available upon request. A first step toward achieving a better understanding of the hydrologic properties of the Austin Group was to compile existing geologic and hydrogeologic data and to organize that information in a geodatabase.

The U.S. Geological Survey (USGS), in cooperation with the San Antonio Water System (SAWS), developed a geodatabase (also referred to as a geospatial database) of geologic and hydrogeologic information from wells penetrating the Austin Group. Existing geologic and hydrogeologic information pertaining to 523 unique wells in a 377-square-mile study area (fig. 1) encompassing central Bexar County was compiled. The information, in geodatabase format (Zeiler, 1999), includes the following data measured or recorded at each well (if known): year drilled, well depth, altitude of top and base of the Austin Group, thickness of the Austin Group, and source of the data. The geodatabase is limited to selected digital and hard-copy data available from various Federal, State, or local agencies including the U.S. Environmental Protection Agency (USEPA), Texas Water Development Board (TWDB), Edwards Aquifer Authority (EAA), and SAWS; and from published reports.

Purpose and Scope

The purpose of this report is to document the design and integration of geologic and hydrogeologic information for selected wells penetrating the Austin Group in a 377-square-mile study area in central Bexar County, Tex., into a geodatabase. The design and integration of geologic and hydrogeologic information into a series of relational tables in the geodatabase are described. Austin Group characteristics compiled at 523 unique wells are documented (if known), including year drilled, well depth, altitude of top and base of the Austin Group, and thickness of the Austin Group. The different sources used to populate the geodatabase are documented and the methodology used to incorporate the

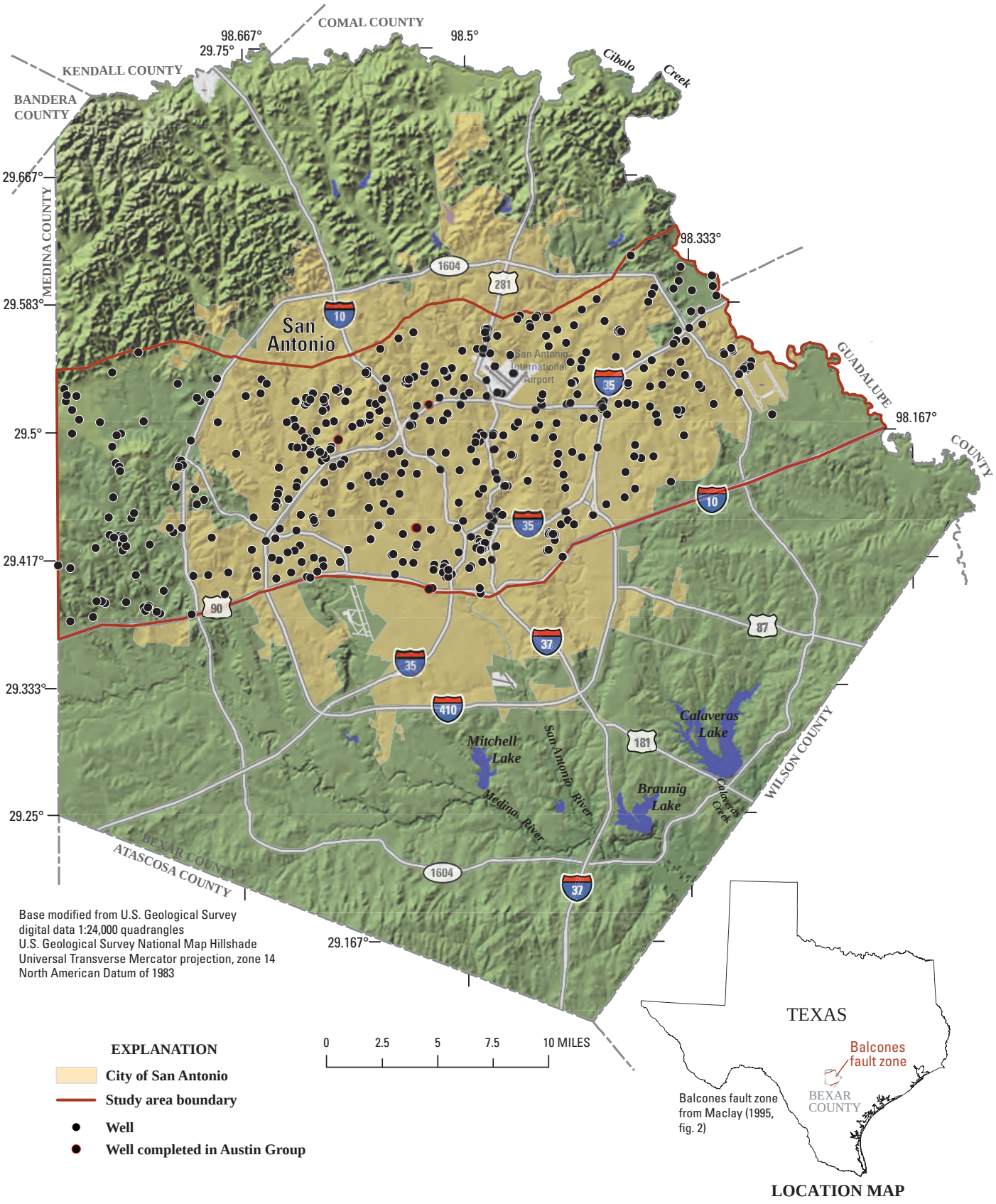

Figure 1. Location of study area and selected wells penetrating the Austin Group in central Bexar County, Texas, 2010.

geologic information in the geodatabase is described. Existing digital and hard-copy data were entered into the geodatabase; no new data were collected.

Geologic and Hydrogeologic Setting

The Austin Group is part of a series of geologic formations overlying the Edwards aquifer (Small, 1986); informally the Austin Group is referred to as the Austin Chalk. It is the thickest unit of the upper confining units of the Edwards aquifer (table 1). Arnow (1963) noted that the Austin Group is subject to structural controls associated with the Balcones fault zone. In addition to structural controls, the carbonate rock layers are subject to localized groundwater flow and associated limestone dissolution that might enhance the permeability of fault and fracture systems, including solution enlargement at a scale ranging from individual fractures to cave networks (Ferrill and others, 2004).

Recharge entering the Austin Group in Bexar County is derived from multiple sources, including direct infiltration of precipitation, infiltration along stream channels, and water moving up into the Austin Group from the underlying Edwards aquifer (Arnow, 1963). Because the connection between the land surface and the Austin Group is enhanced by karst features, infiltration is rapid and little opportunity exists for any attenuation of contaminants by geochemical or biological processes (Stephenson and others, 1999).

Geodatabase Design

A geodatabase is a spatially enabled database that contains both spatial and tabular data and allows users to associate tabular data with physical and spatial components (Shah and Houston, 2007). Geographically referenced data from a geodatabase can be manipulated using a geographic information system (GIS) to produce maps, interactive queries, and various types of spatial analyses. A geodatabase provides a framework and an interactive tool to aid in understanding attributes of geologic formations such as subsurface structure. The geodatabase designed for this study was based on an ESRI ArcGIS personal geodatabase platform. ArcGIS personal geodatabases were stored as Microsoft Access files (Zeiler, 1999).

A geodatabase uses a thematic approach to create spatial layers of data, called feature classes, in a GIS. Feature classes represent the various types of point, line, and polygon data that are keyed to spatial location and are related to one another within the geodatabase. The various types of data are separated into relational tables in the geodatabase (table 2) on the basis of how these data interact and correspond with the spatial feature class. These relational tables represent a collection of features and the relations between them (Shah and Houston, 2007). The goal is to provide accurate representations of the spatial extent and properties of the Austin Group using the geologic and hydrogeologic data that have been compiled. Compiling data, entering data into the geodatabase, ensuring data quality, and documenting the associated metadata were the primary steps in creating the geodatabase.

Data Integration

Subsurface geologic data were organized and incorporated into the geodatabase. Data were compiled primarily from drillers' and borehole geophysical logs from Federal, State, and local government agencies and from maps in published reports. Drillers' and geophysical logs were used to obtain lithology and altitude of the top and base of the Austin Group. Data gaps exist in parts of the study area; for example, at some sites drillers did not describe the lithology and thickness of the Austin Group as separate and distinct from the underlying unit where the two units showed similar lithologic characteristics, thus precluding identification of the base of the Austin Group at those wells.

Data Input

Digital data were imported and hard-copy data were entered manually into the geodatabase. Because the scope of geodatabase development was limited to geologic and hydrogeologic data, only the Well_Locations point feature class and wells and lithology tables containing geologic and hydrogeologic attributes were populated. Selected readily available spatial data from drillers' and geophysical logs were input into the Well_Locations point feature class. Related well and lithologic data were populated in corresponding tables. Additional features classes were included in the geodatabase as supporting geospatial data. Examples of such feature classes are GAT_faults, GAT_surface_geology, Counties, Study_Area, and Parks. A complete listing and description of the feature classes and tables that compose the geodatabase are in table 2. Drillers' logs of wells were recorded at the time of drilling. Wells were subsequently assigned a State well number (fig. 2) using the TWDB GroundWater Data System (GWDS) (Nordstrom and Quincy, 1999). Wells not in the GWDS were assigned two arbitrary characters to distinguish well locations from one another. The key well number, the first five digits, retains the location aspect of a State well number—that is, wells sited in increasingly smaller quadrangles.

Data Quality

Quality-assurance techniques were applied to ensure the quality of the data entered into the geodatabase. Queries were done on 755 well entries in the geodatabase to find missing records, duplicate records, incomplete well records, and values that were internally inconsistent for a given well (for example, altitude of the top or bottom of the Austin Group exceeding the reported well depth or erroneous recorded thickness for the Austin Group). When duplicate well records

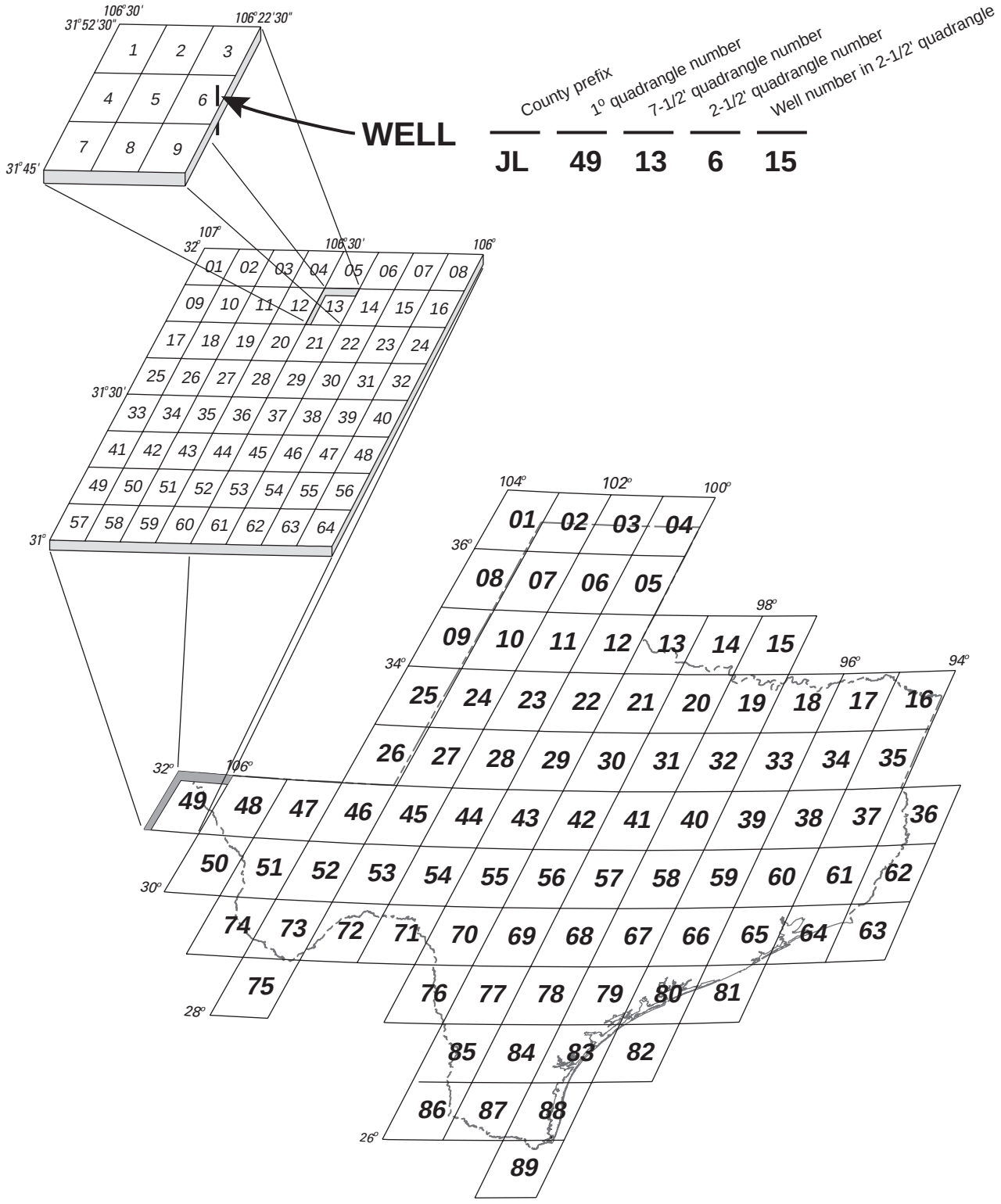

Figure 2. Well-numbering system for the Texas Water Development Board GroundWater Data System (modified from Nordstrom and Quincy, 1999).

Table 1. Summary of lithologic and hydrologic properties of stratigraphic units in central Bexar County, Texas, 2010.

[Hydrogeologic units modified from Maclay (1995); groups and formations modified from Sellards and others (1923) and Rose (1972); lithology modified from Dunham (1962); thickness modified from Livingston (1947), Stein and Ozuna (1995), and Blome and others (2005); water-yielding characteristics modified from Livingston (1947). AQ, aquifer; --, not available; CU, confining unit]

System	Hydrogeologic unit	Group or formation		Hydrologic function	Thickness (feet)	Lithology	Water-yielding characteristics
Quaternary		Alluvium		AQ	--	Silt, sand, gravel.	Yields small quantities of freshwater.
		Fluviatile terrace deposits		Not saturated	--	Coarse gravel, sand, and silt.	Yields small quantities of freshwater.
		Leona Formation		AQ	[1]0–90	Sand, gravel, silt, and clay.	Yields small quantities of freshwater mostly to wells for rural-domestic and livestock use.
Quaternary or Tertiary		Uvalde Gravel		AQ	[1]0–20	Gravel and sand with some silt and clay.	Yields no water to wells.
Upper Cretaceous	Upper confining unit	Navarro Group (undivided)		CU	[1]300	Marl, clay, and sand in upper part; chalky limestone and marl in lower part.	Yields no water to wells.
		Taylor Group[2]	Pecan Gap Chalk	CU	[1]200		Not known to yield water to wells.
		Austin Group (undivided)		CU; AQ where connected to faults/fractures and caves	[3]130–350	Chalk, marl, and hard limestone; chalk largely a carbonate mudstone.	Locally yields small to large quantities of freshwater to wells.
		Eagle Ford Group (undivided)		CU	[4]30–50	Brown, flaggy shale and argillaceous limestone.	Yields no water to wells.
		Buda Limestone		CU	[4]40–50	Buff, light-gray, dense mudstone.	Yields no water to wells.
		Del Rio Clay		CU	[4]40–50	Blue-green to yellow-brown clay.	Yields no water to wells.
Lower Cretaceous	Edwards aquifer	Georgetown Formation[2]		CU	[4]2–20	Reddish-brown, gray to light-tan marly limestone.	Is not commonly water-bearing but yields water to some wells.
		Edwards Group	Person Formation[2]	AQ	[4]80–90	Mudstone to packstone; miliolid grainstone; chert.	Chief water-bearing formation in area; source of large springs; yields water to many pumped and flowing wells.

[1] Livingston, 1947.

[2] Not shown in study area.

[3] Stein and Ozuna, 1995.

[4] Blome and others, 2005.

Table 2. Description and definition of data compiled and entered into geodatabase of geologic information for selected wells penetrating the Austin Group in central Bexar County, Texas, 2010.

[GAT, Geologic Atlas of Texas; --, not applicable]

Dataset	Data type	Feature class or table name	Definition
Geology	Line feature class	GAT_faults	Spatial locations of lines depicting faults within designated extent of study area ("Datasearch/Download Notes—GAT" [Texas Natural Resources Information System, 2009]).
	Polygon feature class	GAT_surface_geology	Spatial locations of polygons depicting surficial geologic units within designated extent of study area ("Datasearch/Download Notes—GAT" [Texas Natural Resources Information System, 2009]).
	Table	GAT_lithology	Non-spatial lithologic information including surficial unit code and unit name ("Datasearch/Download Notes—GAT" [Texas Natural Resources Information System, 2009]).
	Table	lithology	Additional non-spatial lithologic information collected from geophysical logs used to obtain top and base altitudes of Austin Group; data includes State well number, alternate number(s), top and base altitudes of Austin Group.
Locations	Point feature class	Well_Locations	Spatial locations of selected wells penetrating Austin Group within study area.
	Table	wells	Non-spatial location information collected from drillers' and geophysical logs, published reports, and online Texas Water Development Board database.
Miscellaneous	Polygon feature class	Counties	Spatial locations of Texas counties in and adjacent to the study area.
	Polygon feature class	Study_Area	Spatial location of study area.
	Polygon feature class	Military_Bases	Spatial locations of military bases in Bexar County.
	Polygon feature class	Parks	Spatial locations of City of San Antonio parks.
	Line feature class	Contours	Spatial locations of hypsography of surrounding study area.
Elevations	Raster	--	Land-surface altitude derived from Gesch (2007).

were identified, database queries and GIS proximity analyses were used to combine duplicate records into a single well record. Three duplicate well records with different altitudes for the top and bottom of the Austin Group, obtained from different published sources, were kept in the database because it was not possible to determine which of the two records for each of these wells contained the correct information. Duplicate records were kept for wells AY–68–30–616a and AY–68–30–616b, AY–68–36–610a and AY–68–36–610b, and AY–68–37–203a and AY–68–37–203b. After verification that well records were correct, 112 other duplicate well records and 117 incomplete well records were removed, and 526 records representing 523 unique wells with geologic data were included in the final geodatabase. All wells penetrating the Austin Group that were compiled in the geodatabase and their respective locations are listed in appendix 1.

Metadata

Metadata that comply with Federal Geographic Data Committee (2009) standards were created for each spatial component. The metadata record documents the basic characteristics of the data or information resource in the study area. Metadata components include source document information such as title, abstract, and publication date; geographic elements such as geographic extent and projection information; and database elements such as attribute label definitions and attribute domain values.

Characteristics of Geologic Information for Selected Wells Penetrating the Austin Group

Summaries of the geologic and descriptive well information input to the geodatabase are shown in figures 3–5. Each figure shows the distribution of wells penetrating the Austin Group relative to various geologic or spatial attributes, including surface geology (fig. 3; table 3), range in thickness of the Austin Group in each well (fig. 4), and range in depth of wells, whether completed in the Austin Group or in a deeper formation (fig. 5). Appendix 1 lists all wells penetrating the Austin Group included in the geodatabase and geologic information regarding the Austin Group obtained during the installation of a given well or summarized in reports discussing selected wells.

Figure 3 shows the surficial geology of wells throughout the study area. The highest percentage of wells plot where the surface geology is the Pecan Gap Chalk (table 3). The next highest percentage of wells plot where the surface geology is the fluviatile terrace deposits. No wells plot where the surface geology is the Eagle Ford Group or the Del Rio Clay (formations that underlie the Austin Group).

Distribution of wells categorized by the thickness of the Austin Group where the well was drilled is shown in figure 4. For wells with known depths in the geodatabase, thickness of the Austin Group ranges from 8 to 388 feet, and the average thickness is about 150 feet. The thickness of the Austin Group ranges from 80 to 160 feet for 357 wells and exceeds 300 feet for 10 wells.

Five wells in the study area are known to have been completed only in the Austin Group (indicated in figs. 3–5 by a red circle around the well symbol). All other wells are completed in the Edwards Limestone.

The distribution of wells by well depth, in feet below land-surface datum (LSD), for the study area is shown on figure 5. Depths for the selected wells range from 120 to 1,652 feet below LSD. The depths of more than one-half the wells range from 301 to 900 feet below LSD. The average well depth is about 715 feet below LSD. Less than 3 percent of all wells have depths greater than 1,300 feet below LSD.

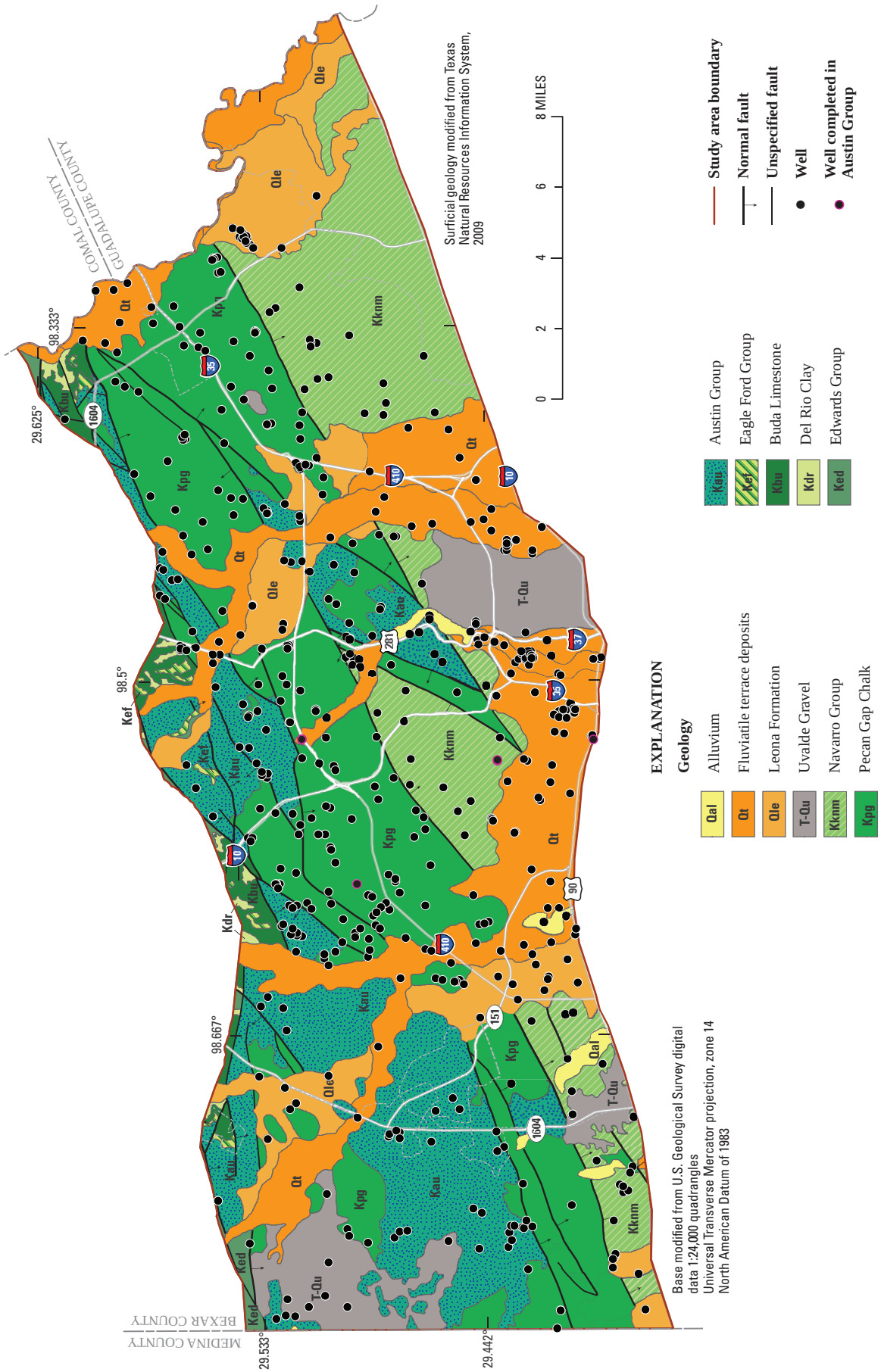

Figure 3. Surficial geologic units and locations of selected wells penetrating the Austin Group in central Bexar County, Texas, 2010.

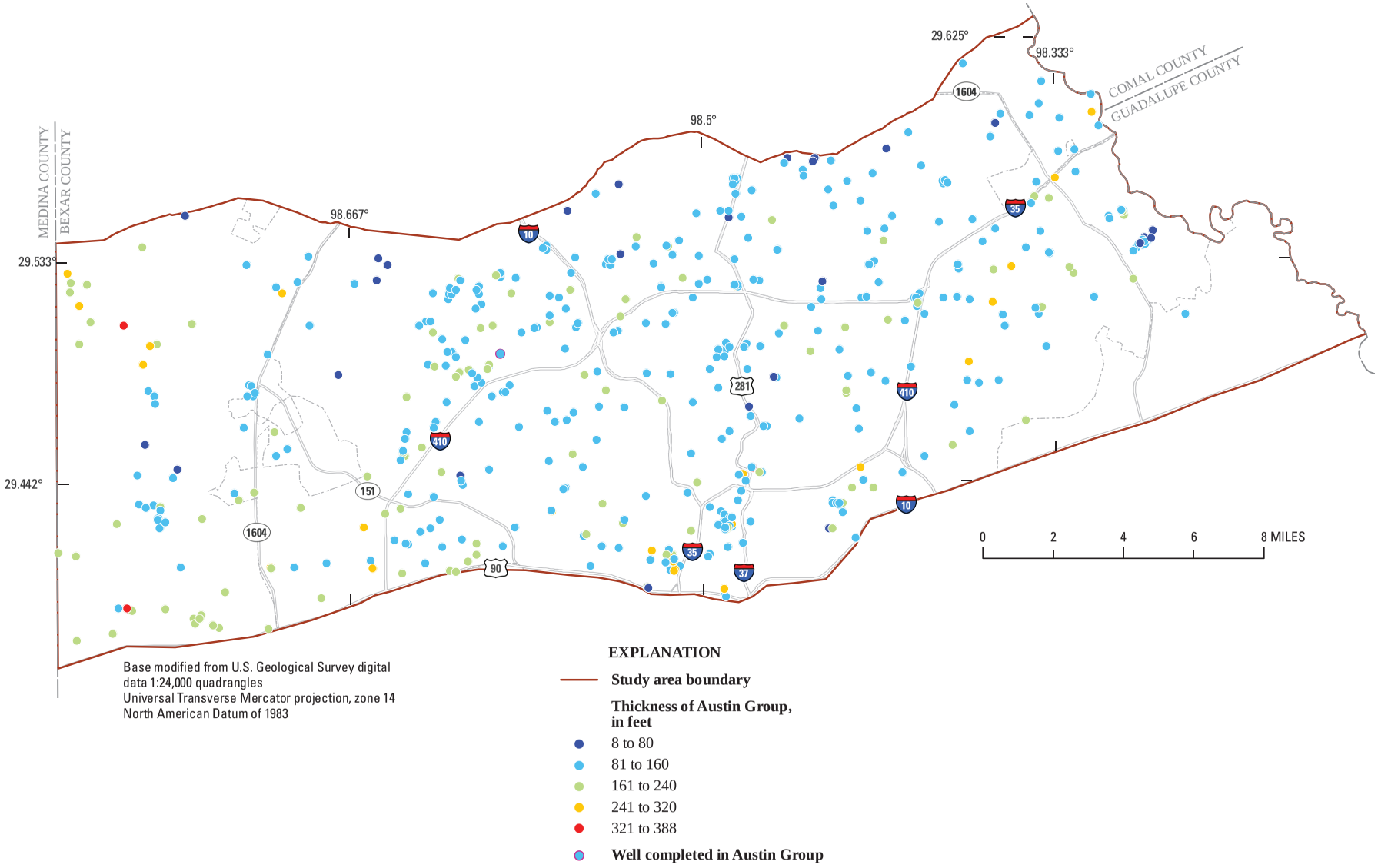

Figure 4. Thickness of the Austin Group for selected wells in central Bexar County, Texas, 2010.

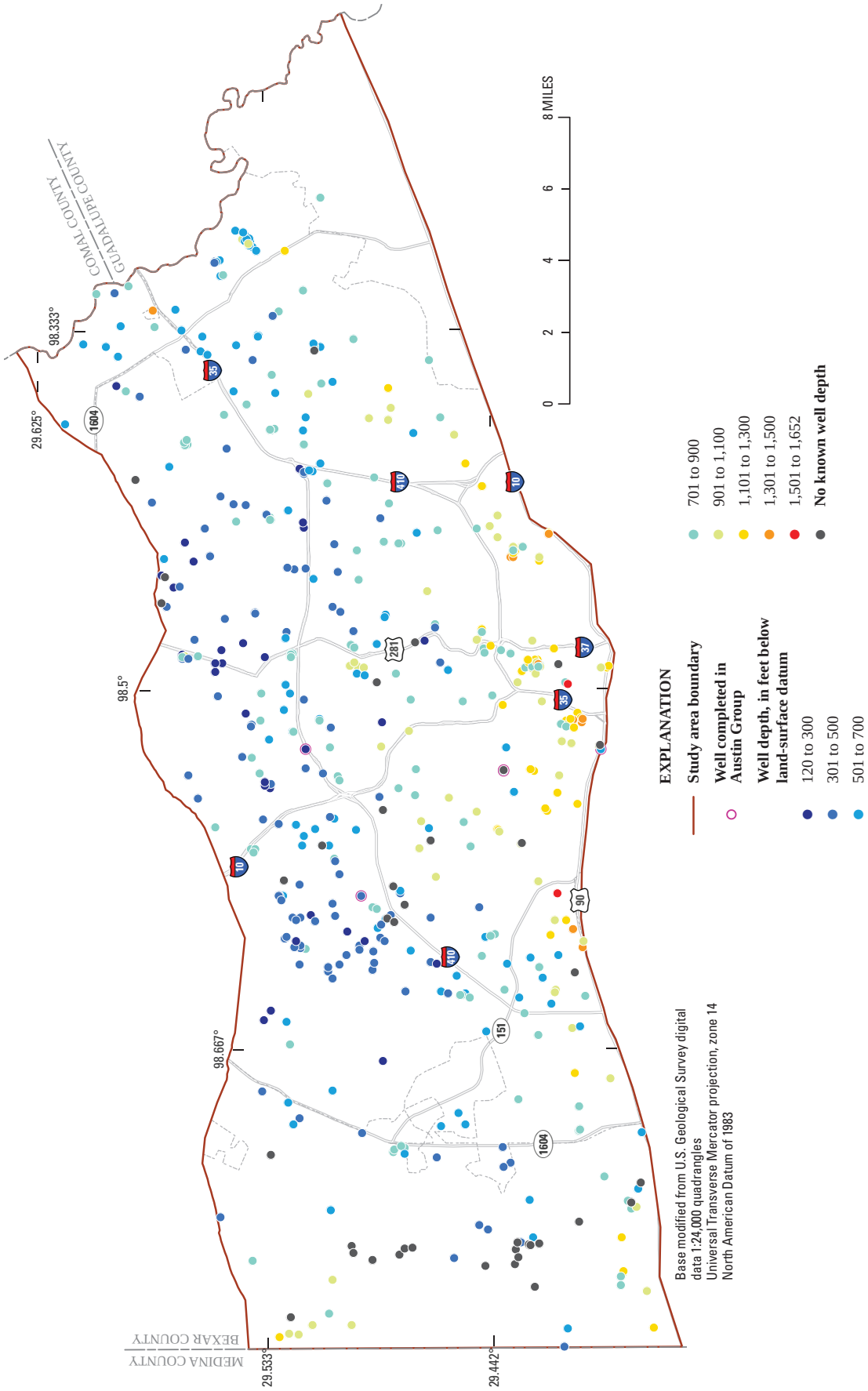

Figure 5. Depths of selected wells penetrating the Austin Group in central Bexar County, Texas, 2010.

Table 3. Number and percentage of selected wells penetrating the Austin Group, categorized by surficial geology, in central Bexar County, Texas, 2010.

Geologic abbreviation (fig. 3)	Surficial geologic unit	Number of wells	Percentage of wells
Qal	Alluvium	5	0.96
Qt	Fluviatile terrace deposits	133	25.43
Qle	Leona Formation	41	7.84
T-Qu	Uvalde Gravel	14	2.68
Kknm	Navarro Group	54	10.33
Kpg	Pecan Gap Chalk	187	35.76
Kau	Austin Group	84	16.06
Kbu	Buda Limestone	4	.76
Ked	Edwards Group	1	.19
	Totals	523	100

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Appendix 1—Wells Selected for Inclusion in Geodatabase of Selected Wells Penetrating the Austin Group, Central Bexar County, Texas, 2010

Appendix 1. Wells selected for inclusion in geodatabase of selected wells penetrating the Austin Group, central Bexar County, Texas,

[dd, decimal degrees; NAVD 88, North American Vertical Datum of 1988; --, not available; BMWD, Bexar Metropolitan Water District; USGS, U.S. Geological

State well number	First alternate well identifier	Second alternate well identifier	Third alternate well identifier	Latitude (dd)	Longitude (dd)	Land-surface altitude (feet above NAVD 88)	Year drilled
AY–68–26–803	Lackland Terrace	--	--	29.528562808	98.8000253742	1,045	1971
AY–68–26–804	Sanders	D–1	--	29.5246743941	98.7983588518	1,044	1933
AY–68–26–805	Gordon	--	--	29.5208333333	98.7986111111	1,045	1972
AY–68–26–806	Haner	--	--	29.5152302958	98.7944697782	1,041	1987
AY–68–26–904	Country Oaks no. 1	--	--	29.5071745804	98.7736354237	995	1984
AY–68–26–905	BMWD no. 1	097 WP no. 1	--	29.539722	98.764444	1,028	1998
AY–68–26–9aa	38525	--	--	29.524167	98.790833	1,035	--
AY–68–26–9bb	Bayer	--	--	29.5085638732	98.7891917931	1,023	--
AY–68–27–401	--	--	--	29.5527287846	98.7444689072	1,035	1920
AY–68–27–703	El Sueno	--	--	29.5077305226	98.7411344969	931	--
AY–68–27–7aa	--	--	--	29.5321735342	98.71530103	943	--
AY–68–27–801	Tausch no. 2	--	--	29.5249517682	98.6914113876	920	1968
AY–68–27–802	Tausch	--	--	29.5230078591	98.701133616	927	1969
AY–68–27–803	Munoz	--	--	29.5202299595	98.6983565288	918	1970
AY–68–27–804	Kindrick	--	--	29.5068974383	98.6855781272	895	1954
AY–68–27–8jj	Zion	--	--	29.5355071383	98.6858558729	935	--
AY–68–27–903	--	--	--	29.5068973298	98.633909859	840	1959
AY–68–27–906	Concorde no. 1	--	--	29.5241187512	98.6641887069	992	1973
AY–68–27–907	Concorde no. 2	--	--	29.5255076809	98.6536324532	922	1973
AY–68–27–910	Van Deldon	--	--	29.5202298278	98.6272427689	890	1982
AY–68–27–9ll	Hallmark	--	--	29.534673784	98.6527994867	910	--
AY–68–27–9nn	Grady’s	--	--	29.5085635945	98.6302987797	850	--
AY–68–27–9oo	Art’s	--	--	29.5086111111	98.6286111111	860	--
AY–68–27–9pp	0198–LG	--	--	29.5285628024	98.5955758049	886	--
AY–68–27–9qq	Twiefel	--	--	29.5318961024	98.6486326997	840	--
AY–68–27–9rr	Anderson	--	--	29.5038415388	98.627243123	874	--
AY–68–28–500	Redland-Worth	--	--	29.5541173985	98.5636306821	885	1988
AY–68–28–503	E–207	--	--	29.5613392389	98.5500190362	935	1956
AY–68–28–604	Lutteringer	--	--	29.5649501009	98.5391857764	890	1956
AY–68–28–6bb	E–66	--	--	29.5430034359	98.5307804654	894	1945
AY–68–28–6cc	Harvath	--	--	29.5530062511	98.5027958079	833	--
AY–68–28–700a	Whitby no. 2	--	--	29.5057858644	98.6047425818	895	--
AY–68–28–700b	Whitby H.P.R. no. 1	--	--	29.5230074644	98.6052982402	915	--
AY–68–28–702	Leon Valley	--	--	29.5068972564	98.5989089999	840	1963
AY–68–28–706	Balcones Water	--	--	29.5177299056	98.6200205767	902	1972
AY–68–28–708	Methodist Mission Home	--	--	29.526062593	98.6150204975	900	1966
AY–68–28–7hh	E–48	--	--	29.5273894142	98.5972794734	870	1945
AY–68–28–7ii	Sanville	--	--	29.5224519541	98.6191874704	906	--
AY–68–28–7kk	S.A. Alternative Housing	--	--	29.5138411334	98.6072426851	847	--
AY–68–28–7ll	Pacific Scene	--	--	29.5010638535	98.6230763391	862	--
AY–68–28–7nn	0798–LG	--	--	29.5283333333	98.5952777778	890	--
AY–68–28–7oo	0594–CLG	--	--	29.5255555556	98.6144444444	890	--
AY–68–28–7pp	USAA	--	--	29.5266666667	98.5955555556	887	--
AY–68–28–7qq	Studer	--	--	29.5199520437	98.618354103	915	--

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Survey; LSD, land-surface datum; TWDB, Texas Water Development Board; EAA, Edwards Aquifer Authority; SAWS, San Antonio Water System]

State well number	Well depth (feet below LSD)	Altitude of top of Austin Group (feet above NAVD 88)	Altitude of base of Austin Group (feet above NAVD 88)	Thickness of Austin Group (feet)	Data source	Source agency	Data source date	Report author, year[1]
AY–68–26–803	1,140	620	349	271	drillers' log	TWDB	3/2/1971	TWDB, 2009
AY–68–26–804	1,000	462	282	180	geophysical log	TWDB	3/13/1978	Petitt and George, 1956
AY–68–26–805	1,010	525	345	180	geophysical log	TWDB	3/28/1972	TWDB, 2009
AY–68–26–806	997	607	366	241	drillers' log	TWDB	8/14/1981	TWDB, 2009
AY–68–26–904	920	665	307	358	drillers' log	BMWD	6/14/1984	unpublished data, 1984
AY–68–26–905	870	1,028	795	233	drillers' log	BMWD	11/23/1998	unpublished data, 1998
AY–68–26–9aa	--	465	265	200	drillers' log	TWDB	6/2/2004	unpublished data, 2004
AY–68–26–9bb	883	617	425	192	geophysical log	TWDB	11/20/1991	unpublished data, 1991
AY–68–27–401	424	1,035	1,013	22	drillers' log	USGS	5/19/1972	unpublished data, 1972
AY–68–27–703	631	727	529	198	report/publication	USGS	5/31/1973	Small, 1984
AY–68–27–7aa	--	943	861	82	report/publication	USGS	--	Small, 1984
AY–68–27–801	518	792	668	124	drillers' log	TWDB	1/13/1968	TWDB, 2009
AY–68–27–802	660	723	618	105	drillers' log	TWDB	1/22/1969	TWDB, 2009
AY–68–27–803	420	918	663	255	drillers' log	TWDB	3/16/1970	TWDB, 2009
AY–68–27–804	525	877	764	113	drillers' log	TWDB	12/1/1954	TWDB, 2009
AY–68–27–8jj	317	923	785	138	geophysical log	TWDB	8/31/1978	unpublished data, 1978
AY–68–27–903	470	809	665	144	drillers' log	TWDB	--	TWDB, 2009
AY–68–27–906	764	984	826	158	geophysical log	USGS	5/3/1973	Small, 1984
AY–68–27–907	680	922	847	75	geophysical log	USGS	8/13/1973	Small, 1984
AY–68–27–910	382	880	740	140	drillers' log	TWDB	11/30/1982	TWDB, 2009
AY–68–27–9ll	196	910	848	62	geophysical log	TWDB	3/12/1992	unpublished data, 1992
AY–68–27–9nn	379	769	639	130	geophysical log	TWDB	7/14/1991	unpublished data, 1991
AY–68–27–9oo	416	818	659	159	geophysical log	TWDB	4/9/1999	unpublished data, 1999
AY–68–27–9pp	450	766	614	152	geophysical log	TWDB	1/28/1998	unpublished data, 1998
AY–68–27–9qq	295	840	776	64	geophysical log	TWDB	6/7/1991	unpublished data, 1991
AY–68–27–9rr	391	852	676	176	geophysical log	TWDB	3/15/1989	unpublished data, 1989
AY–68–28–500	705	885	833	52	geophysical log	USGS	8/3/1988	unpublished data, 1988
AY–68–28–503	375	935	847	88	geophysical log	USGS	3/5/1974	Small, 1984
AY–68–28–604	344	890	882	8	drillers' log	TWDB	9/21/1956	TWDB, 2009
AY–68–28–6bb	441	824	649	175	report/publication	TWDB	--	Livingston, 1947
AY–68–28–6cc	325	833	731	102	geophysical log	TWDB	5/15/1989	unpublished data, 1989
AY–68–28–700a	368	895	717	178	geophysical log	EAA	10/18/1989	unpublished data, 1989
AY–68–28–700b	349	873	722	151	geophysical log	TWDB	10/18/1989	TWDB, 2009
AY–68–28–702	450	752	575	177	geophysical log	EAA	6/13/1996	TWDB, 2009
AY–68–28–706	742	875	722	153	report/publication	USGS	--	Small, 1984
AY–68–28–708	403	900	735	165	drillers' log	TWDB	10/8/1966	TWDB, 2009
AY–68–28–7hh	405	789	617	172	report/publication	TWDB	--	Livingston, 1947
AY–68–28–7ii	368	884	728	156	geophysical log	TWDB	1/16/1990	unpublished data, 1990
AY–68–28–7kk	355	823	669	154	geophysical log	TWDB	10/6/1999	unpublished data, 1999
AY–68–28–7ll	431	730	598	132	geophysical log	TWDB	5/1/1989	unpublished data, 1989
AY–68–28–7nn	371	758	632	126	geophysical log	TWDB	7/27/1998	unpublished data, 1998
AY–68–28–7oo	370	890	736	154	geophysical log	TWDB	5/11/1994	unpublished data, 1994
AY–68–28–7pp	511	711	553	158	geophysical log	TWDB	3/13/1995	unpublished data, 1995
AY–68–28–7qq	337	915	755	160	geophysical log	TWDB	3/9/1994	unpublished data, 1994

Appendix 1. Wells selected for inclusion in geodatabase of selected wells penetrating the Austin Group, central Bexar County, Texas,

State well number	First alternate well identifier	Second alternate well identifier	Third alternate well identifier	Latitude (dd)	Longitude (dd)	Land-surface altitude (feet above NAVD 88)	Year drilled
AY–68–28–7rr	Mothers Day	--	--	29.5196742786	98.6197430248	885	--
AY–68–28–7ss	Flagship	--	--	29.5199519911	98.5900200686	930	--
AY–68–28–7tt	First Federal	--	--	29.5196742523	98.6055760076	880	--
AY–68–28–7uu	Leon Valley Community	--	--	29.5008333333	98.6119444444	828	--
AY–68–28–7vv	Burt	--	--	29.5216186461	98.6164096194	905	--
AY–68–28–7ww	Security Savings	--	--	29.5216186283	98.6066871563	905	--
AY–68–28–7xx	Gaskin	--	--	29.5038414484	98.5852976509	940	--
AY–68–28–7yy	Crain	--	--	29.5155077343	98.6044648475	905	--
AY–68–28–802	E–201	--	--	29.513840938	98.5644641861	1,015	1955
AY–68–28–807	Turtle Creek	--	--	29.5182853418	98.5675195042	941	--
AY–68–28–809	USAA no. 1	--	--	29.5380070955	98.5736305257	1,042	1972
AY–68–28–810	Methodist Hospital	--	--	29.5080081609	98.5722413506	1,025	1973
AY–68–28–811	Spanish Oaks Trailer Park	--	--	29.5188407749	98.5719643944	1,035	1953
AY–68–28–816	USAA	--	--	29.5399510263	98.5736305348	1,010	1986
AY–68–28–819	University Health	--	--	29.505833	98.578056	985	1999
AY–68–28–8gg	--	--	--	29.5110630522	98.5722413649	1,023	--
AY–68–28–8hh	E–59	--	--	29.5284261063	98.56188173	922	1946
AY–68–28–8ii	E–61	--	--	29.5315717416	98.543327448	861	1940
AY–68–28–8jj	E–62	--	--	29.5340811376	98.544303324	887	1945
AY–68–28–8kk	E–63	--	--	29.5342006333	98.5427777704	868	1940
AY–68–28–8ll	E–73	--	--	29.5075930633	98.5589414706	955	1939
AY–68–28–8mm	San Antonio Medical	--	--	29.5263406472	98.5880756075	926	--
AY–68–28–8nn	Friedrich-Ward	--	--	29.506063537	98.5597414793	984	--
AY–68–28–8oo	Audie Murphy Hospital	--	--	29.5057858108	98.579464184	975	--
AY–68–28–8pp	Medical Center	--	--	29.5110633855	98.5722418093	1,020	--
AY–68–28–8qq	Turtle Creek no. 2	--	--	29.5213407798	98.5625193944	1,000	1971
AY–68–28–8rr	Denton Homes	--	--	29.5318959335	98.5452967907	882	--
AY–68–28–8ss	Ironside	--	--	29.5349514046	98.5597416089	945	--
AY–68–28–8tt	USAA no. 2	--	--	29.5388401791	98.5750197866	1,020	--
AY–68–28–901	Wedgewood no. 1	E–208	--	29.5393959829	98.531407475	877	1960
AY–68–28–902	E–212	--	--	29.5352290808	98.5014068199	900	1959
AY–68–28–903	Castle Hills no. 1	E–211	--	29.5357850813	98.5139070231	895	1956
AY–68–28–904	E–213	--	--	29.5260624085	98.5091848689	845	1955
AY–68–28–905	Lemonwood no. 1	023 WP no. 1	--	29.5224515514	98.5194631102	832	1963
AY–68–28–906	E–215	--	--	29.5227295418	98.5194631113	830	1955
AY–68–28–907	E–216	--	--	29.511618914	98.5133519178	816	1955
AY–68–28–908	E–75	--	--	29.5173644574	98.536417719	829	1946
AY–68–28–909	E–172	--	--	29.5077300759	98.5266852305	873	1954
AY–68–28–910	Castle Hills core test	USGS test hole	--	29.5360621103	98.5386296419	815	1974
AY–68–28–911	E–150	--	--	29.5038412439	98.5419635893	823	1953
AY–68–28–912	Archdiocese	--	--	29.5235624806	98.5014066667	858	1962
AY–68–28–913	BMWD no. 3 well 1	--	--	29.5118969061	98.5141849394	816	1967
AY–68–28–917	--	--	--	29.5396729513	98.5166851074	925	1959
AY–68–28–918	Sale	--	--	29.5393959596	98.5158520855	930	1967

2010—Continued.

State well number	Well depth (feet below LSD)	Altitude of top of Austin Group (feet above NAVD 88)	Altitude of base of Austin Group (feet above NAVD 88)	Thickness of Austin Group (feet)	Data source	Source agency	Data source date	Report author, year[1]
AY–68–28–7rr	369	885	731	154	geophysical log	TWDB	9/9/1998	unpublished data, 1998
AY–68–28–7ss	442	800	636	164	geophysical log	TWDB	8/15/1994	unpublished data, 1994
AY–68–28–7tt	390	870	710	160	geophysical log	TWDB	10/25/1989	unpublished data, 1989
AY–68–28–7uu	258	798	646	152	geophysical log	TWDB	6/2/2002	unpublished data, 2002
AY–68–28–7vv	246	905	747	158	geophysical log	TWDB	6/7/1991	unpublished data, 1991
AY–68–28–7ww	425	881	721	160	geophysical log	TWDB	1/8/1990	unpublished data, 1990
AY–68–28–7xx	447	806	660	146	geophysical log	TWDB	8/21/1989	unpublished data, 1989
AY–68–28–7yy	279	855	697	158	geophysical log	TWDB	5/29/1990	unpublished data, 1990
AY–68–28–802	590	803	648	155	drillers' log	TWDB	9/1/1955	TWDB, 2009
AY–68–28–807	548	815	666	149	drillers' log	TWDB	3/26/1971	TWDB, 2009
AY–68–28–809	750	831	674	157	geophysical log	USGS	12/5/1972	unpublished data, 1972
AY–68–28–810	654	827	653	174	geophysical log	USGS	10/23/1973	unpublished data, 1973
AY–68–28–811	612	819	663	156	drillers' log	SAWS	5/6/1905	unpublished data, 1905
AY–68–28–816	742	805	645	160	drillers' log	TWDB	5/1/1986	TWDB, 2009
AY–68–28–819	780	738	655	83	drillers' log	TWDB	12/29/1999	TWDB, 2009
AY–68–28–8gg	--	803	649	154	gamma	USGS	--	Small, 1984
AY–68–28–8hh	325	919	769	150	report/publication	TWDB	--	Livingston, 1947
AY–68–28–8ii	323	861	710	151	report/publication	TWDB	--	Livingston, 1947
AY–68–28–8jj	300	887	762	125	report/publication	TWDB	--	Livingston, 1947
AY–68–28–8kk	270	868	752	116	report/publication	TWDB	--	Livingston, 1947
AY–68–28–8ll	467	799	653	146	report/publication	TWDB	--	Livingston, 1947
AY–68–28–8mm	--	870	716	154	geophysical log	TWDB	2/5/2001	unpublished data, 2001
AY–68–28–8nn	514	846	692	154	geophysical log	TWDB	7/2/1986	unpublished data, 1986
AY–68–28–8oo	466	813	653	160	geophysical log	TWDB	3/1/1984	unpublished data, 1984
AY–68–28–8pp	508	800	646	154	geophysical log	USGS	3/2/1978	Small, 1984
AY–68–28–8qq	685	1,000	830	170	geophysical log	TWDB	9/16/1982	unpublished data, 1982
AY–68–28–8rr	258	882	742	140	geophysical log	TWDB	4/2/1986	unpublished data, 1986
AY–68–28–8ss	383	870	731	139	geophysical log	TWDB	9/23/1982	unpublished data, 1982
AY–68–28–8tt	736	820	665	155	geophysical log	TWDB	5/5/1986	unpublished data, 1986
AY–68–28–901	791	877	723	154	geophysical log	SAWS	3/25/1960	unpublished data, 1960
AY–68–28–902	881	819	663	156	drillers' log	TWDB	7/1/1959	TWDB, 2009
AY–68–28–903	762	835	675	160	drillers' log	EAA	5/19/1956	unpublished data, 1956
AY–68–28–904	640	630	455	175	drillers' log	BMWD	5/1/1955	unpublished data, 1955
AY–68–28–905	856	545	431	114	drillers' log	BMWD	1/3/1983	unpublished data, 1983
AY–68–28–906	528	685	550	135	drillers' log	BMWD	1/1/1955	unpublished data, 1955
AY–68–28–907	533	657	530	127	drillers' log	BMWD	1/1/1955	unpublished data, 1955
AY–68–28–908	325	829	620	209	report/publication	TWDB	--	Livingston, 1947
AY–68–28–909	867	773	668	105	drillers' log	SAWS	7/21/1954	Petitt and George, 1956
AY–68–28–910	804	815	745	70	geophysical log	USGS	4/24/1974	unpublished data, 1974
AY–68–28–911	850	743	587	156	geophysical log	SAWS	5/12/1953	Petitt and George, 1956
AY–68–28–912	537	671	525	146	drillers' log	TWDB	9/1/1962	TWDB, 2009
AY–68–28–913	787	655	514	141	drillers' log	BMWD	5/30/1957	unpublished data, 1957
AY–68–28–917	392	870	740	130	drillers' log	TWDB	--	TWDB, 2009
AY–68–28–918	400	930	745	185	drillers' log	TWDB	11/1/1967	TWDB, 2009

Appendix 1. Wells selected for inclusion in geodatabase of selected wells penetrating the Austin Group, central Bexar County, Texas,

State well number	First alternate well identifier	Second alternate well identifier	Third alternate well identifier	Latitude (dd)	Longitude (dd)	Land-surface altitude (feet above NAVD 88)	Year drilled
AY–68–28–919	BMWD no. 6 well 1	--	--	29.5321732204	98.522796231	870	1981
AY–68–28–921	Barbet no. 2	--	--	29.504444	98.54	823	1984
AY–68–28–9cc	E–74	--	--	29.5104294683	98.538818113	820	1943
[2]AY–68–28–9dd	E–76	--	--	29.5175824631	98.5273560098	782	1936
AY–68–28–9ee	E–80	--	--	29.517890429	98.504243258	826	1939
AY–68–28–9ff	E–81	--	--	29.5073142413	98.5173970183	759	1940
AY–68–28–9gg	West Ave. Landfill	--	--	29.5416177641	98.5105737394	930	--
AY–68–29–3aa	Denton-Longs Creek	--	--	29.586111	98.402222	885	--
AY–68–29–3dd	Portland Cement no. 2	--	--	29.614393468	98.3761259512	1,040	--
AY–68–29–403	Henderson Pass	--	--	29.573611	98.461111	792	1964
AY–68–29–405	F–254	--	--	29.549950688	98.4666838472	770	1962
AY–68–29–407	Brewer	--	--	29.5624502277	98.4764061458	855	1964
AY–68–29–411	San Pedro Theater	F–40	--	29.5646721216	98.4852953889	831	1933
AY–68–29–413	Henderson Pass	TW–30	--	29.5755058391	98.459461739	780	--
AY–68–29–414	HCWW no. 7	--	--	29.5671720389	98.4844623755	840	1983
AY–68–29–415	HCWW no. 8	--	--	29.5663390683	98.4841843652	835	1985
AY–68–29–417	Hill Country Water Co.	--	--	29.5674500265	98.4852953985	863	1994
AY–68–29–4ff	F–42	--	--	29.5540507596	98.4913122919	786	1941
AY–68–29–4gg	F–45	--	--	29.5514717693	98.4814448508	793	1936
AY–68–29–4hh	F–44	--	--	29.5538264998	98.4871634811	778	1945
AY–68–29–4ii	Hill Country Village	--	--	29.566894716	98.484184256	840	--
AY–68–29–4jj	Weber	--	--	29.5510619141	98.4872398377	794	--
AY–68–29–4kk	USGS-McCullough	--	--	29.5610615822	98.4841842359	805	--
AY–68–29–4ll	Jones Maltsburger	--	--	29.5427288967	98.478072901	770	--
AY–68–29–4mm	Hill Country Landscape	--	--	29.567172488	98.4830731164	842	--
AY–68–29–4nn	Hill Country Landscape no. 2	--	--	29.567172488	98.4830731164	842	--
AY–68–29–4oo	M & E no. 31	--	--	29.5610615822	98.4841842359	800	--
AY–68–29–502	F–35	--	--	29.5706334924	98.4522754117	771	1946
AY–68–29–503	Cane	--	--	29.5682841123	98.4516835093	765	1963
AY–68–29–504	Robinson	--	--	29.558056	98.425	805	1964
AY–68–29–506	Feathercrest	USGS test hole	--	29.5746719378	98.4389051896	788	1972
AY–68–29–509	Capitol Cement	--	--	29.5452290005	98.4216826467	772	1954
AY–68–29–5bb	Denton Dev. no. 2	--	--	29.574167	98.4475	795	--
AY–68–29–5gg	F–31	--	--	29.5661579888	98.4311909271	782	1941
AY–68–29–5hh	Rumpell no. 1	--	--	29.5624505734	98.4400164041	781	1946
AY–68–29–5ii	Bulverde Rd. J.V. no. 1	--	--	29.5691170834	98.419182538	849	--
AY–68–29–5jj	Denton Dev. no. 1	--	--	29.5755056605	98.4466832879	797	--
AY–68–29–5kk	N.E. Preserve no. 2	--	--	29.5557841417	98.4377941029	833	--
AY–68–29–603	Day	--	--	29.579394866	98.4127935083	400	1965
AY–68–29–604	F–74	--	--	29.551617822	98.4100153572	815	1941
AY–68–29–605	F–75	--	--	29.5487862719	98.3876901064	803	1938
AY–68–29–608	Naco no. 1	--	--	29.5649504573	98.3836256946	823	1982
AY–68–29–609	Naco no. 2	--	--	29.5174522881	98.3858481876	829	--
AY–68–29–610	Naco no. 3	--	--	29.565783976	98.3861260963	827	1984

2010—Continued.

State well number	Well depth (feet below LSD)	Altitude of top of Austin Group (feet above NAVD 88)	Altitude of base of Austin Group (feet above NAVD 88)	Thickness of Austin Group (feet)	Data source	Source agency	Data source date	Report author, year[1]
AY–68–28–919	550	870	755	115	drillers' log	BMWD	4/23/1981	unpublished data, 1981
AY–68–28–921	855	741	603	138	geophysical log	SAWS	2/1/1984	unpublished data, 1984
AY–68–28–9cc	436	740	571	169	report/publication	TWDB	--	Livingston, 1947
[2]AY–68–28–9dd	282	--	--	--	report/publication	TWDB	--	Livingston, 1947
AY–68–28–9ee	498	580	423	157	report/publication	TWDB	--	Livingston, 1947
AY–68–28–9ff	390	682	536	146	report/publication	TWDB	--	Livingston, 1947
AY–68–28–9gg	120	930	800	130	geophysical log	TWDB	10/6/1983	unpublished data, 1983
AY–68–29–3aa	--	671	539	132	geophysical log	EAA	6/26/1989	unpublished data, 1989
AY–68–29–3dd	650	1,040	918	122	geophysical log	TWDB	6/26/1980	unpublished data, 1980
AY–68–29–403	340	792	682	110	drillers' log	USGS	8/23/1968	Small, 1984
AY–68–29–405	395	770	600	170	drillers' log	TWDB	6/1/1962	TWDB, 2009
AY–68–29–407	349	855	750	105	drillers' log	TWDB	6/1/1964	TWDB, 2009
AY–68–29–411	415	731	611	120	drillers' log	TWDB	4/16/1905	Petitt and George, 1956
AY–68–29–413	--	780	712	68	geophysical log	EAA	11/28/1988	unpublished data, 1988
AY–68–29–414	710	723	583	140	drillers' log	TWDB	2/25/1983	TWDB, 2009
AY–68–29–415	1,078	673	537	136	geophysical log	EAA	7/18/1986	unpublished data, 1986
AY–68–29–417	415	752	603	149	drillers' log	TWDB	3/1/1994	TWDB, 2009
AY–68–29–4ff	240	786	671	115	report/publication	TWDB	--	Livingston, 1947
AY–68–29–4gg	190	793	673	120	report/publication	TWDB	--	Livingston, 1947
AY–68–29–4hh	245	778	673	105	report/publication	TWDB	--	Livingston, 1947
AY–68–29–4ii	661	724	586	138	geophysical log	TWDB	3/2/1983	unpublished data, 1983
AY–68–29–4jj	228	794	770	24	geophysical log	TWDB	10/23/1992	unpublished data, 1992
AY–68–29–4kk	315	805	677	128	geophysical log	TWDB	8/23/1978	unpublished data, 1978
AY–68–29–4ll	260	770	634	136	geophysical log	TWDB	1/21/1981	unpublished data, 1981
AY–68–29–4mm	299	722	595	127	geophysical log	TWDB	1/20/1986	unpublished data, 1986
AY–68–29–4nn	299	730	595	135	geophysical log	TWDB	1/20/1986	unpublished data, 1986
AY–68–29–4oo	737	800	672	128	geophysical log	TWDB	8/23/1981	unpublished data, 1981
AY–68–29–502	264	771	681	90	report/publication	TWDB	--	Livingston, 1947
AY–68–29–503	349	753	658	95	drillers' log	TWDB	5/1/1963	TWDB, 2009
AY–68–29–504	305	770	634	136	drillers' log	TWDB	3/1/1964	TWDB, 2009
AY–68–29–506	694	788	696	92	geophysical log	USGS	10/26/1972	unpublished data, 1972
AY–68–29–509	725	637	498	139	drillers' log	TWDB	10/2/1954	TWDB, 2009
AY–68–29–5bb	--	795	752	43	geophysical log	EAA	8/18/1992	unpublished data, 1992
AY–68–29–5gg	300	782	677	105	report/publication	TWDB	--	Livingston, 1947
AY–68–29–5hh	264	781	655	126	geophysical log	TWDB	5/31/1979	unpublished data, 1979
AY–68–29–5ii	401	789	653	136	drillers' log	EAA	6/26/1989	unpublished data, 1989
AY–68–29–5jj	265	797	771	26	geophysical log	TWDB	9/18/1992	unpublished data, 1992
AY–68–29–5kk	337	763	629	134	geophysical log	TWDB	6/22/1979	unpublished data, 1979
AY–68–29–603	480	232	158	74	drillers' log	TWDB	4/14/1965	TWDB, 2009
AY–68–29–604	457	613	499	114	drillers' log	TWDB	12/3/1941	TWDB, 2009
AY–68–29–605	438	755	603	152	report/publication	TWDB	--	Livingston, 1947
AY–68–29–608	819	673	535	138	geophysical log	SAWS	8/2/1982	unpublished data, 1982
AY–68–29–609	833	749	604	145	geophysical log	TWDB	11/5/1981	TWDB, 2009
AY–68–29–610	811	744	607	137	drillers' log	TWDB	6/6/1905	TWDB, 2009

Appendix 1. Wells selected for inclusion in geodatabase of selected wells penetrating the Austin Group, central Bexar County, Texas,

State well number	First alternate well identifier	Second alternate well identifier	Third alternate well identifier	Latitude (dd)	Longitude (dd)	Land-surface altitude (feet above NAVD 88)	Year drilled
AY–68–29–611	Naco no. 4	--	--	29.5663394053	98.385014735	830	1985
AY–68–29–612	Naco no. 5	--	--	29.5647222222	98.3855555556	818	--
AY–68–29–6aa	F–72	--	--	29.5460979636	98.4135977616	772	1946
AY–68–29–6bb	F–27	--	--	29.572215821	98.3963381739	891	1945
AY–68–29–701	Fairchild	F–172	--	29.5377291132	98.4644617488	778	1942
AY–68–29–702	CY–319	--	--	29.5232855397	98.4847392316	787	1965
AY–68–29–703	Q–69	--	--	29.5227295615	98.483906319	770	1967
AY–68–29–707	Maltsberger no. 1	--	--	29.5232851008	98.4830729658	766	--
AY–68–29–709	F–63	--	--	29.5032558658	98.463728309	829	--
AY–68–29–711	F–128	--	--	29.5255074931	98.4758510068	795	1945
AY–68–29–712	Maltsberger no. 4	--	--	29.5232855434	98.4836282026	775	1985
AY–68–29–714	Maltsberger no. 5	--	--	29.5227295642	98.4830731862	758	1997
AY–68–29–7cc	F–49	--	--	29.5377919086	98.4638404398	748	1942
AY–68–29–7dd	F–51	--	--	29.5253623455	98.4976028172	856	1941
AY–68–29–7ee	F–52	--	--	29.5337552283	98.4844723607	823	1941
AY–68–29–7ff	F–57	--	--	29.5250287668	98.472928593	787	1941
AY–68–29–7gg	F–64	--	--	29.5062833761	98.4613735794	829	1945
AY–68–29–7hh	Maltsberger no. 6	--	--	29.522451795	98.483350748	758	--
AY–68–29–803	F–229	--	--	29.5316183599	98.419738001	777	1961
AY–68–29–804	Perrin no. 3	F–230	--	29.5313404759	98.4211265922	763	1954
AY–68–29–805	F–231	--	--	29.5310624863	98.4208495841	768	1961
AY–68–29–806	Rooke	--	--	29.5041193248	98.4452941414	780	1962
AY–68–29–811	F–190	--	--	29.5138410939	98.4483498066	736	1954
AY–68–29–812	Turner	--	--	29.5243966398	98.443072146	780	1972
AY–68–29–813	F–142	--	--	29.5327294378	98.4183495233	780	1950
AY–68–29–816	F–89	--	--	29.5053863356	98.4323319068	700	1944
AY–68–29–8aa	F–66	--	--	29.5216451875	98.4438812974	776	1941
AY–68–29–8bb	F–69	--	--	29.5176085073	98.4247070667	729	1942
AY–68–29–8cc	F–70	--	--	29.5181691571	98.4222402059	733	1941
AY–68–29–8dd	F–65	--	--	29.5172721169	98.4435449081	748	1946
AY–68–29–912	W.C.I.D. no. 10	--	--	29.5110632541	98.3947368471	748	1967
AY–68–29–913	Randolph no. 1	--	--	29.5310629574	98.3794591661	822	1968
AY–68–29–914	N. Alamo Height no. 1	Walzem	--	29.508008327	98.4041820846	737	1955
AY–68–29–915	Randolph no. 2	--	--	29.5313406165	98.3789034856	815	1971
AY–68–29–918	F–248	--	--	29.518007845	98.3797369185	790	1960
AY–68–29–920	Windcrest no. 3	--	--	29.5168967918	98.3736256452	790	1963
AY–68–29–925	Interchange Plaza	--	--	29.515556	98.398056	753	1987
AY–68–29–926	Randolph no. 4	--	--	29.531111	98.378889	812	1992
AY–68–29–929	Randolph no. 3	--	--	29.529444	98.378611	813	1992
AY–68–29–9ff	F–71	--	--	29.5412735618	98.4139257174	792	1946
AY–68–29–9gg	F–85	--	--	29.5175132454	98.3990236716	744	1940
AY–68–29–9hh	F–88	--	--	29.5086381061	98.412372765	708	1940
AY–68–29–9ii	Artesia	--	--	29.514119027	98.3983485048	742	--
AY–68–29–9jj	Gill Savings	--	--	29.5163411745	98.3980707257	752	--

2010—Continued.

State well number	Well depth (feet below LSD)	Altitude of top of Austin Group (feet above NAVD 88)	Altitude of base of Austin Group (feet above NAVD 88)	Thickness of Austin Group (feet)	Data source	Source agency	Data source date	Report author, year[1]
AY–68–29–611	785	746	610	136	geophysical log	SAWS	5/28/1985	unpublished data, 1985
AY–68–29–612	840	748	608	140	geophysical log	TWDB	8/8/1965	TWDB, 2009
AY–68–29–6aa	455	624	468	156	report/publication	TWDB	--	Livingston, 1947
AY–68–29–6bb	682	756	617	139	report/publication	TWDB	--	Livingston, 1947
AY–68–29–701	500	616	480	136	geophysical log	EAA	5/15/1992	Petitt and George, 1956
AY–68–29–702	866	622	479	143	drillers' log	SAWS	3/1/1965	unpublished data, 1965
AY–68–29–703	824	770	458	312	drillers' log	TWDB	11/3/1967	TWDB, 2009
AY–68–29–707	857	606	458	148	geophysical log	TWDB	1/24/1965	TWDB, 2009
AY–68–29–709	339	799	642	157	report/publication	TWDB	--	Livingston, 1947
AY–68–29–711	600	600	453	147	geophysical log	TWDB	8/20/1947	Petitt and George, 1956
AY–68–29–712	851	637	485	152	drillers' log	SAWS	1/19/1985	unpublished data, 1985
AY–68–29–714	848	612	480	132	geophysical log	EAA	5/23/1986	unpublished data, 1986
AY–68–29–7cc	402	693	555	138	report/publication	TWDB	--	Livingston, 1947
AY–68–29–7dd	502	632	494	138	report/publication	TWDB	--	Livingston, 1947
AY–68–29–7ee	266	691	564	127	report/publication	TWDB	--	Livingston, 1947
AY–68–29–7ff	461	695	538	157	report/publication	TWDB	--	Livingston, 1947
AY–68–29–7gg	348	829	664	165	report/publication	TWDB	--	Livingston, 1947
AY–68–29–7hh	844	603	478	125	geophysical log	TWDB	4/18/1997	unpublished data, 1997
AY–68–29–803	795	777	668	109	drillers' log	TWDB	10/2/1961	TWDB, 2009
AY–68–29–804	761	763	656	107	geophysical log	TWDB	11/8/1954	TWDB, 2009
AY–68–29–805	800	768	659	109	drillers' log	TWDB	1/1/1961	TWDB, 2009
AY–68–29–806	398	780	639	141	drillers' log	TWDB	8/1/1962	TWDB, 2009
AY–68–29–811	612	736	636	100	drillers' log	TWDB	1/1/1954	Petitt and George, 1956
AY–68–29–812	350	780	717	63	drillers' log	SAWS	6/15/1972	unpublished data, 1972
AY–68–29–813	369	780	657	123	geophysical log	TWDB	4/20/1950	Petitt and George, 1956
AY–68–29–816	347	700	532	168	report/publication	TWDB	--	Livingston, 1947
AY–68–29–8aa	318	776	659	117	report/publication	TWDB	--	Livingston, 1947
AY–68–29–8bb	284	729	606	123	report/publication	TWDB	--	Livingston, 1947
AY–68–29–8cc	286	733	608	125	report/publication	TWDB	--	Livingston, 1947
AY–68–29–8dd	359	748	633	115	report/publication	TWDB	--	Livingston, 1947
AY–68–29–912	630	563	458	105	drillers' log	TWDB	11/6/1967	TWDB, 2009
AY–68–29–913	784	822	586	236	geophysical log	TWDB	7/25/1968	TWDB, 2009
AY–68–29–914	845	597	467	130	geophysical log	TWDB	2/22/1955	TWDB, 2009
AY–68–29–915	824	676	560	116	geophysical log	SAWS	11/30/1971	unpublished data, 1971
AY–68–29–918	690	680	530	150	drillers' log	TWDB	5/1/1960	TWDB, 2009
AY–68–29–920	655	590	445	145	drillers' log	TWDB	1/1/1963	TWDB, 2009
AY–68–29–925	525	714	536	178	drillers' log	EAA	4/10/1987	unpublished data, 1987
AY–68–29–926	870	688	552	136	drillers' log	TWDB	4/4/1992	TWDB, 2009
AY–68–29–929	870	689	553	136	drillers' log	TWDB	2/22/1992	TWDB, 2009
AY–68–29–9ff	315	792	624	168	report/publication	TWDB	--	Livingston, 1947
AY–68–29–9gg	442	642	488	154	report/publication	TWDB	--	Livingston, 1947
AY–68–29–9hh	376	665	498	167	report/publication	TWDB	--	Livingston, 1947
AY–68–29–9ii	512	618	496	122	geophysical log	TWDB	6/9/1986	unpublished data, 1986
AY–68–29–9jj	438	690	534	156	geophysical log	TWDB	5/23/1986	unpublished data, 1986

Appendix 1. Wells selected for inclusion in geodatabase of selected wells penetrating the Austin Group, central Bexar County, Texas,

State well number	First alternate well identifier	Second alternate well identifier	Third alternate well identifier	Latitude (dd)	Longitude (dd)	Land-surface altitude (feet above NAVD 88)	Year drilled
AY–68–29–9kk	Gill Savings no. 2	--	--	29.5174522423	98.3997374388	748	--
AY–68–29–9ll	Swans no. 2	--	--	29.5241186257	98.4166823441	753	--
AY–68–29–9mm	Standard	--	--	29.5193966288	98.3972373787	750	--
AY–68–30–105	F–250	--	--	29.5927276465	98.3447357244	820	1962
AY–68–30–106	Hastey	--	--	29.6068941859	98.3389025985	800	1968
AY–68–30–107	Pope	--	--	29.5977274921	98.3402916162	788	1970
AY–68–30–109	Foxrun	--	--	29.5896716937	98.3611251558	947	1973
AY–68–30–1aa	F–25	--	--	29.5935120882	98.3586231318	903	1941
AY–68–30–1bb	Khakish	--	--	29.5841167637	98.3633477577	920	--
AY–68–30–212	Fey	--	--	29.594116701	98.3152909391	771	1968
AY–68–30–213	Boysville	--	--	29.591616733	98.330569343	780	1963
AY–68–30–214	G–71	--	--	29.5882839091	98.3122348462	761	1962
AY–68–30–220	Gose	--	--	29.6013384543	98.3158469679	770	1975
AY–68–30–401	W.C.I.D. no. 13	F–256	--	29.5585618363	98.3358474145	899	1965
AY–68–30–402	Live Oak Village	--	--	29.5566178731	98.344458638	885	1969
AY–68–30–403	Village Public Utility	--	--	29.544951285	98.3397354882	874	1972
AY–68–30–404	F–81	--	--	29.5460621755	98.361125054	946	1939
AY–68–30–405	Valley Forge	--	--	29.5499510059	98.3722363561	848	1973
AY–68–30–406	Green Meadows	--	--	29.5652285903	98.3416805832	869	1967
AY–68–30–4bb	Jordan Ford no. 2	--	--	29.5591176838	98.3425138143	880	--
AY–68–30–506	Universal City	--	--	29.5510625186	98.3077906584	838	1967
AY–68–30–510	G–66	--	--	29.5535621221	98.3014014943	835	1952
AY–68–30–511	G–70	--	--	29.5513403122	98.300290461	825	1963
AY–68–30–512	Live Oak well no. 6	--	--	29.5693955113	98.3233471055	840	1971
AY–68–30–514	G–5	--	--	29.5786723125	98.3235744074	769	1925
AY–68–30–516	U.C. no. 8	--	--	29.5499512247	98.3072346417	840	1980
AY–68–30–517	Golden	--	--	29.566944	98.332778	922	1977
AY–68–30–518	U.C. no. 3	--	--	29.5527291513	98.3011234855	838	1982
AY–68–30–519	G–43	--	--	29.5530071428	98.3008464787	831	1950
AY–68–30–520	Selma	--	--	29.578056	98.331389	873	1988
AY–68–30–612	G–10	--	--	29.5449057848	98.2868718677	762	1904
AY–68–30–616a	G–19	--	--	29.5421735431	98.2908461962	757	1929
[3]AY–68–30–616b	G–19	--	--	29.5397822294	98.2928044052	761	1929
AY–68–30–701	F–246	--	--	29.510508228	98.3408469988	769	1950
AY–68–30–702	Central Catholic High School	--	--	29.5057865576	98.3569588517	740	1966
AY–68–30–705	Stonegate no. 1	--	--	29.5407853343	98.3672362023	920	1964
AY–68–30–708	Don Sietma	--	--	29.5157861996	98.3625140195	815	1970
AY–68–30–711	TW–7	--	--	29.5132863504	98.3425134927	823	1979
AY–68–30–712	BMWD no. 15	--	--	29.510556	98.357778	765	1977
AY–68–30–713	Chapel Hill Memorial	--	--	29.513333	98.339444	760	1976

2010—Continued.

State well number	Well depth (feet below LSD)	Altitude of top of Austin Group (feet above NAVD 88)	Altitude of base of Austin Group (feet above NAVD 88)	Thickness of Austin Group (feet)	Data source	Source agency	Data source date	Report author, year[1]
AY–68–29–9kk	312	678	556	122	geophysical log	TWDB	5/23/1986	unpublished data, 1986
AY–68–29–9ll	700	753	659	94	geophysical log	TWDB	10/23/1992	unpublished data, 1986
AY–68–29–9mm	252	694	572	122	geophysical log	TWDB	--	unpublished data, --
AY–68–30–105	504	676	531	145	drillers' log	TWDB	8/23/1962	TWDB, 2009
AY–68–30–106	688	680	558	122	drillers' log	TWDB	3/6/1968	TWDB, 2009
AY–68–30–107	591	595	450	145	drillers' log	TWDB	12/1/1970	TWDB, 2009
AY–68–30–109	710	771	703	68	geophysical log	USGS	5/8/1973	unpublished data, 1973
AY–68–30–1aa	270	805	648	157	report/publication	TWDB	--	Livingston, 1947
AY–68–30–1bb	493	674	540	134	geophysical log	TWDB	10/18/1989	unpublished data, 1989
AY–68–30–212	481	771	511	260	drillers' log	TWDB	3/1/1968	TWDB, 2009
AY–68–30–213	655	482	348	134	drillers' log	TWDB	9/20/1963	TWDB, 2009
AY–68–30–214	732	721	635	86	drillers' log	TWDB	1/31/1963	TWDB, 2009
AY–68–30–220	770	510	380	130	drillers' log	TWDB	6/20/1975	TWDB, 2009
AY–68–30–401	600	899	724	175	drillers' log	City of Live Oak	8/16/1965	unpublished data, 1965
AY–68–30–402	592	795	697	98	drillers' log	TWDB	6/17/1969	Petitt and George, 1956
AY–68–30–403	650	758	634	124	geophysical log	City of Live Oak	5/30/1972	unpublished data, 1972
AY–68–30–404	509	842	716	126	drillers' log	TWDB	12/1/1939	TWDB, 2009
AY–68–30–405	802	681	590	91	geophysical log	USGS	1/15/1973	unpublished data, 1973
AY–68–30–406	390	748	646	102	drillers' log	TWDB	5/18/1967	TWDB, 2009
AY–68–30–4bb	547	880	715	165	geophysical log	TWDB	11/5/1992	unpublished data, 1992
AY–68–30–506	585	713	583	130	drillers' log	TWDB	8/1/1967	TWDB, 2009
AY–68–30–510	425	689	556	133	drillers' log	City of Schertz	5/5/1905	unpublished data, 1905
AY–68–30–511	630	595	422	173	drillers' log	TWDB	4/25/1963	TWDB, 2009
AY–68–30–512	636	810	680	130	geophysical log	City of Universal City	1/13/1972	unpublished data, 1972
AY–68–30–514	1,497	769	627	142	report/publication	TWDB	--	Livingston, 1947
AY–68–30–516	720	715	616	99	drillers' log	City of Universal City	12/31/1980	unpublished data, 1980
AY–68–30–517	520	922	652	270	drillers' log	TWDB	9/9/1977	TWDB, 2009
AY–68–30–518	520	764	581	183	drillers' log	TWDB	7/26/1982	TWDB, 2009
AY–68–30–519	426	701	572	129	drillers' log	TWDB	3/15/1950	TWDB, 2009
AY–68–30–520	777	725	583	142	drillers' log	EAA	11/7/1988	unpublished data, 1988
AY–68–30–612	554	474	394	80	report/publication	TWDB	--	Livingston, 1947
AY–68–30–616a	1,003	627	422	205	geophysical log	USGS	5/29/1973	Petitt and George, 1956
[3]AY–68–30–616b	1,003	596	411	185	geophysical log	TWDB	--	Livingston, 1947
AY–68–30–701	645	487	348	139	drillers' log	TWDB	9/10/1958	TWDB, 2009
AY–68–30–702	589	493	360	133	drillers' log	TWDB	5/1/1966	TWDB, 2009
AY–68–30–705	745	824	710	114	geophysical log	USGS	10/14/1964	unpublished data, 1964
AY–68–30–708	938	725	471	254	geophysical log	USGS	10/29/1971	unpublished data, 1971
AY–68–30–711	--	593	459	134	geophysical log	USGS	10/10/1979	unpublished data, 1979
AY–68–30–712	837	550	429	121	drillers' log	TWDB	5/26/1977	TWDB, 2009
AY–68–30–713	675	525	360	165	drillers' log	TWDB	9/1/1976	TWDB, 2009

Appendix 1. Wells selected for inclusion in geodatabase of selected wells penetrating the Austin Group, central Bexar County, Texas,

State well number	First alternate well identifier	Second alternate well identifier	Third alternate well identifier	Latitude (dd)	Longitude (dd)	Land-surface altitude (feet above NAVD 88)	Year drilled
AY–68–30–714	Converse no. 2	--	--	29.536111	98.336111	820	1987
AY–68–30–715	Converse no. 9	--	--	29.53578561	98.3355693592	815	1985
AY–68–30–716	Converse no. 3	--	--	29.535556	98.335556	814	1990
AY–68–30–717	Chapel Hill Cemetery	--	--	29.5130083663	98.3405694414	762	1993
AY–68–30–718	Lackland no. 18	038 WP no. 1	--	29.530278	98.353611	890	1984
AY–68–30–7bb	F–82	--	--	29.5382432401	98.3469841019	834	1939
AY–68–30–7cc	N. Cimmaron no. 2	--	--	29.5361111111	98.3352777778	815	--
AY–68–30–7dd	Mel Murray	--	--	29.5291186364	98.362236488	905	1978
AY–68–30–802	G–68	--	--	29.517452523	98.3147352216	710	1954
AY–68–30–807	Randolph test hole	USGS test hole	--	29.5249521084	98.2961233048	750	1972
AY–68–30–810	Converse no. 1	--	--	29.5274519305	98.3241800435	815	1983
AY–68–30–8aa	G–16	--	--	29.5378946036	98.2944223701	762	1929
AY–68–30–8bb	G–17	--	--	29.539242907	98.2937482181	762	1929
AY–68–30–8dd	G–20	--	--	29.5365462991	98.2959055047	762	1942
AY–68–30–8ee	U.C. no. 8	--	--	29.5299520615	98.3261244328	765	--
AY–68–30–9aa	G–11	--	--	29.5407260417	98.2891639842	755	1928
AY–68–30–9bb	G–12	--	--	29.5388384163	98.2917257625	763	1929
AY–68–30–9cc	G–13	--	--	29.5409957023	98.2917257617	761	1929
AY–68–30–9dd	G–14	--	--	29.5392429076	98.2902426279	761	1929
AY–68–30–9ee	G–15	--	--	29.5403215511	98.2906471188	760	1929
AY–68–30–9ff	G–18	--	--	29.5418046854	98.2875460193	755	1929
AY–68–30–9gg	A. Hofferichter no. 1	--	--	29.5102306871	98.2716785319	725	--
AY–68–34–203	040 WP no. 1	--	--	29.4993978776	98.7944700027	982	1969
AY–68–34–3dd	10652	--	--	29.498611	98.760833	976	--
AY–68–34–3ee	24938	--	--	29.499444	98.757778	974	--
AY–68–34–3ff	32523	--	--	29.48	98.761667	954	--
AY–68–34–3gg	32577	--	--	29.491111	98.764167	1,010	--
AY–68–34–3hh	32579	--	--	29.474722	98.758611	922	--
AY–68–34–3jj	78280	--	--	29.478056	98.759167	949	--
AY–68–34–601	BMWD-Elm Valley	--	--	29.45773206	98.763634976	892	1964
AY–68–34–604	Tejas Valley RV Park	--	--	29.4257889888	98.7539126049	893	1989
AY–68–34–6aa	31287	--	--	29.432778	98.759444	912	--
AY–68–34–6bb	40281	--	--	29.433333	98.766389	887	--
AY–68–34–6cc	88101	--	--	29.432222	98.756389	912	--
AY–68–34–6dd	84684	--	--	29.431667	98.763333	866	--
AY–68–34–6ee	33235	--	--	29.4275	98.757222	894	--
AY–68–34–6ff	37990	--	--	29.426944	98.7575	870	--
AY–68–34–6gg	85728	--	--	29.425	98.776944	962	--
AY–68–34–6hh	28776	--	--	29.423333	98.756944	857	--
AY–68–34–6ll	49312	--	--	29.445	98.767222	912	--
AY–68–34–6mm	Palayo	--	--	29.4307883974	98.7561350183	890	--
AY–68–34–802	Texas Research Park no. 1	039 WP no. 1	--	29.4119003277	98.7961358808	900	1989
AY–68–34–803	Texas Research Park no. 2	--	--	29.4118999944	98.7961362142	904	--
AY–68–34–8cc	Pioneer Estates	--	--	29.3769009747	98.7958583588	795	--

2010—Continued.

State well number	Well depth (feet below LSD)	Altitude of top of Austin Group (feet above NAVD 88)	Altitude of base of Austin Group (feet above NAVD 88)	Thickness of Austin Group (feet)	Data source	Source agency	Data source date	Report author, year[1]
AY–68–30–714	650	590	464	126	drillers' log	TWDB	5/27/1987	TWDB, 2009
AY–68–30–715	690	585	450	135	drillers' log	TWDB	7/22/1985	TWDB, 2009
AY–68–30–716	764	599	484	115	drillers' log	TWDB	4/20/1990	TWDB, 2009
AY–68–30–717	861	577	352	225	drillers' log	TWDB	2/18/1993	TWDB, 2009
AY–68–30–718	874	742	482	260	drillers' log	BMWD	12/27/1984	unpublished data, 1984
AY–68–30–7bb	417	716	584	132	report/publication	TWDB	--	Livingston, 1947
AY–68–30–7cc	653	585	461	124	geophysical log	TWDB	6/15/1987	unpublished data, 1987
AY–68–30–7dd	630	685	519	166	geophysical log	TWDB	6/24/1979	unpublished data, 1979
AY–68–30–802	750	340	230	110	drillers' log	TWDB	8/1/1954	unpublished data, 1954
AY–68–30–807	1,202	498	288	210	geophysical log	USGS	11/21/1972	unpublished data, 1972
AY–68–30–810	760	565	345	220	geophysical log	TWDB	11/3/1952	TWDB, 2009
AY–68–30–8aa	609	537	412	125	report/publication	TWDB	--	Livingston, 1947
AY–68–30–8bb	583	530	412	118	report/publication	TWDB	--	Livingston, 1947
AY–68–30–8dd	518	562	412	150	report/publication	TWDB	--	Livingston, 1947
AY–68–30–8ee	420	725	540	185	geophysical log	TWDB	7/2/1980	unpublished data, 1980
AY–68–30–9aa	700	569	412	157	report/publication	TWDB	--	Livingston, 1947
AY–68–30–9bb	563	552	418	134	report/publication	TWDB	--	Livingston, 1947
AY–68–30–9cc	584	539	417	122	report/publication	TWDB	--	Livingston, 1947
AY–68–30–9dd	584	537	417	120	report/publication	TWDB	--	Livingston, 1947
AY–68–30–9ee	584	540	418	122	report/publication	TWDB	--	Livingston, 1947
AY–68–30–9ff	577	583	411	172	geophysical log	TWDB	--	Livingston, 1947
AY–68–30–9gg	750	265	155	110	geophysical log	TWDB	2/4/1982	unpublished data, 1982
AY–68–34–203	1,000	537	319	218	drillers' log	BMWD	9/23/1969	unpublished data, 1969
AY–68–34–3dd	--	881	633	248	drillers' log	TWDB	8/1/2002	unpublished data, 2002
AY–68–34–3ee	--	814	614	200	drillers' log	TWDB	7/8/2003	unpublished data, 2003
AY–68–34–3ff	--	954	814	140	drillers' log	TWDB	6/11/2003	unpublished data, 2003
AY–68–34–3gg	--	878	627	251	drillers' log	TWDB	1/16/2003	unpublished data, 2003
AY–68–34–3hh	--	922	837	85	drillers' log	TWDB	12/26/2002	unpublished data, 2002
AY–68–34–3jj	--	949	829	120	drillers' log	TWDB	3/6/2006	unpublished data, 2006
AY–68–34–601	395	892	841	51	drillers' log	BMWD	5/1/1964	unpublished data, 1964
AY–68–34–604	664	658	533	125	drillers' log	TWDB	4/12/1989	TWDB, 2009
AY–68–34–6aa	--	912	752	160	drillers' log	TWDB	12/2/2003	unpublished data, 2003
AY–68–34–6bb	--	887	747	140	drillers' log	TWDB	6/30/2004	unpublished data, 2004
AY–68–34–6cc	--	912	742	170	drillers' log	TWDB	7/18/2006	unpublished data, 2006
AY–68–34–6dd	--	866	741	125	drillers' log	TWDB	4/7/2004	unpublished data, 2004
AY–68–34–6ee	--	894	734	160	drillers' log	TWDB	2/23/2004	unpublished data, 2004
AY–68–34–6ff	--	870	720	150	drillers' log	TWDB	5/7/2004	unpublished data, 2004
AY–68–34–6gg	--	912	727	185	drillers' log	TWDB	6/8/2006	unpublished data, 2006
AY–68–34–6hh	--	857	747	110	drillers' log	TWDB	10/23/2003	unpublished data, 2003
AY–68–34–6ll	--	912	762	150	drillers' log	TWDB	11/10/2004	unpublished data, 2004
AY–68–34–6mm	459	890	758	132	geophysical log	TWDB	9/30/1991	unpublished data, 1991
AY–68–34–802	677	868	678	190	geophysical log	EAA	5/22/1989	unpublished data, 1989
AY–68–34–803	667	874	684	190	geophysical log	TWDB	6/7/1989	TWDB, 2009
AY–68–34–8cc	1,140	337	145	192	geophysical log	TWDB	2/10/1992	unpublished data, 2009

Appendix 1. Wells selected for inclusion in geodatabase of selected wells penetrating the Austin Group, central Bexar County, Texas,

State well number	First alternate well identifier	Second alternate well identifier	Third alternate well identifier	Latitude (dd)	Longitude (dd)	Land-surface altitude (feet above NAVD 88)	Year drilled
AY–68–34–8dd	Texas Research Park no. 3	--	--	29.4132888318	98.8047475947	975	--
AY–68–34–901	Briggs Ranch no. 2	--	--	29.3902339737	98.7761352153	793	1957
AY–68–34–903	Briggs no. 3	--	--	29.3902339814	98.7722460942	790	1964
AY–68–34–904	Briggs no. 5	--	--	29.389123018	98.7697460139	749	1964
AY–68–34–905	Briggs no. 8	--	--	29.3796782677	98.7789132796	752	1967
AY–68–34–906	Briggs no. 1	H–73	--	29.389678	98.7708580497	785	1942
AY–68–34–907	Briggs no. 6	--	--	29.3896780331	98.7541905306	759	1966
AY–68–35–101	Anderson no. 3	083 WP no. 1	--	29.4777314285	98.7150227382	1,002	1973
AY–68–35–102	Anderson no. 1	--	--	29.4791203813	98.7116896596	982	1976
AY–68–35–103	Anderson no. 2	--	--	29.4777314239	98.7122446692	993	1979
AY–68–35–105	Anderson no. 4	--	--	29.4818983004	98.7130787023	962	1986
AY–68–35–106	Anderson no. 5	--	--	29.4824532862	98.7144677383	955	1986
AY–68–35–1cc	F.D.I.C.	--	--	29.4646762659	98.7166896305	910	--
AY–68–35–1dd	Emilio Garza	--	--	29.4932861032	98.4933508856	1,090	--
AY–68–35–203	Sea World no. 1	--	--	29.4630098532	98.7022443743	1,000	1985
AY–68–35–2cc	Langford	--	--	29.4949531155	98.7055783349	850	--
AY–68–35–2dd	Laredo Warehouse	--	--	29.4863888889	98.6719444444	824	--
AY–68–35–307	1185–LG	--	--	29.46467615	98.6269651597	770	--
AY–68–35–308	Royal Crest	--	--	29.4627317845	98.6400210342	818	1972
AY–68–35–309	Allied Concrete	--	--	29.4671756239	98.6261314833	800	1972
AY–68–35–310	Timber Creek no. 2	--	--	29.4905088782	98.6297426768	850	1971
AY–68–35–3aa	Sawyer	--	--	29.49	98.6263888889	867	--
AY–68–35–3bb	Well no. 2	--	--	29.46	98.6405555556	820	--
AY–68–35–3cc	0599–LG	--	--	29.4772222222	98.64	805	--
AY–68–35–3dd	Lost Lane	--	--	29.4902308708	98.6214095815	855	--
AY–68–35–3ee	0593–LG	Well no. 1	--	29.4772222222	98.64	805	--
AY–68–35–401	Sid Curless	--	--	29.4477323546	98.7480794882	862	1971
AY–68–35–402	Coolcrest W.C. no. 2	--	--	29.4271769486	98.7366901467	922	1972
AY–68–35–404	Zedler	--	--	29.4441214612	98.7503015361	860	1967
AY–68–35–405	Quest Development no. 1	--	--	29.437778	98.721389	850	1987
AY–68–35–4dd	Quest Development no. 2	--	--	29.4349549334	98.7191896079	833	--
AY–68–35–4ee	Denton Development	--	--	29.4380103937	98.712244995	830	--
AY–68–35–505	Ray Ellison at Heritage	--	--	29.4316217982	98.6900219618	890	1983
AY–68–35–506	Sea World no. 2	--	--	29.4532881467	98.7014113225	990	1986
AY–68–35–507	Sea World no. 3	--	--	29.456065057	98.6961331983	970	1987
AY–68–35–601	SWRI no. 2	--	--	29.4371765992	98.6391876823	760	1966
AY–68–35–603	Buch	--	--	29.4310657957	98.6427987489	735	1956
AY–68–35–604	Saunders	--	--	29.4310657957	98.6427987489	750	1958
AY–68–35–607	Southwest Utility Co.	--	--	29.4230110492	98.6286313498	724	1967
AY–68–35–608	0195–LG	--	--	29.4182892026	98.6455767672	752	1956
AY–68–35–610	I–6	--	--	29.4510651592	98.6427988327	789	1940
AY–68–35–613	Tom Slick	I–4	--	29.4446763747	98.6586322082	782	1940
AY–68–35–614	Westlakes no. 1	--	--	29.4235660381	98.6600211613	774	1985
AY–68–35–615	Westlakes no. 2	--	--	29.4291218602	98.6500209262	761	1985

2010—Continued.

State well number	Well depth (feet below LSD)	Altitude of top of Austin Group (feet above NAVD 88)	Altitude of base of Austin Group (feet above NAVD 88)	Thickness of Austin Group (feet)	Data source	Source agency	Data source date	Report author, year[1]
AY–68–34–8dd	463	898	712	186	geophysical log	TWDB	12/1/1987	unpublished data, 1987
AY–68–34–901	827	463	319	144	geophysical log	EAA	12/20/1989	unpublished data, 1989
AY–68–34–903	851	541	153	388	drillers' log	TWDB	9/1/1964	TWDB, 2009
AY–68–34–904	1,142	437	211	226	drillers' log	TWDB	8/29/1964	TWDB, 2009
AY–68–34–905	1,015	429	235	194	drillers' log	TWDB	9/29/1967	TWDB, 2009
AY–68–34–906	905	485	145	340	drillers' log	TWDB	7/24/1951	Petitt and George, 1956
AY–68–34–907	1,143	437	254	183	drillers' log	TWDB	12/1/1966	TWDB, 2009
AY–68–35–101	572	1,002	902	100	geophysical log	SAWS	5/6/1985	unpublished data, 1985
AY–68–35–102	796	982	872	110	geophysical log	TWDB	11/21/1975	TWDB, 2009
AY–68–35–103	810	993	873	120	drillers' log	SAWS	6/8/1979	unpublished data, 1979
AY–68–35–105	750	962	842	120	drillers' log	SAWS	2/25/1986	unpublished data, 1986
AY–68–35–106	760	955	835	120	drillers' log	SAWS	4/1/1986	unpublished data, 1986
AY–68–35–1cc	315	910	820	90	geophysical log	TWDB	10/27/1992	unpublished data, 1992
AY–68–35–1dd	546	888	731	157	geophysical log	TWDB	3/3/1988	unpublished data, 1988
AY–68–35–203	540	937	776	161	drillers' log	TWDB	12/17/1985	TWDB, 2009
AY–68–35–2cc	353	850	722	128	geophysical log	TWDB	2/21/1978	unpublished data, 1978
AY–68–35–2dd	235	824	765	59	geophysical log	TWDB	3/5/2005	unpublished data, 2005
AY–68–35–307	225	770	674	96	geophysical log	TWDB	11/5/1985	TWDB, 2009
AY–68–35–308	607	818	683	135	geophysical log	TWDB	3/29/1972	TWDB, 2009
AY–68–35–309	441	800	665	135	drillers' log	TWDB	7/1/1975	TWDB, 2009
AY–68–35–310	427	850	704	146	drillers' log	USGS	2/10/1971	unpublished data, 1971
AY–68–35–3aa	397	763	591	172	geophysical log	TWDB	3/6/2005	unpublished data, 2005
AY–68–35–3bb	385	820	663	157	geophysical log	TWDB	12/2/1999	unpublished data, 1999
AY–68–35–3cc	399	735	569	166	geophysical log	TWDB	5/5/1999	unpublished data, 1999
AY–68–35–3dd	407	855	711	144	geophysical log	TWDB	4/3/1992	unpublished data, 1992
AY–68–35–3ee	399	735	570	165	geophysical log	TWDB	5/5/1999	unpublished data, 1999
AY–68–35–401	301	862	796	66	geophysical log	USGS	6/12/1972	unpublished data, 1972
AY–68–35–402	606	767	562	205	drillers' log	TWDB	1/26/1972	TWDB, 2009
AY–68–35–404	314	860	775	85	drillers' log	TWDB	4/19/1967	TWDB, 2009
AY–68–35–405	405	850	715	135	drillers' log	TWDB	4/13/1987	TWDB, 2009
AY–68–35–4dd	407	707	526	181	geophysical log	TWDB	2/18/1986	unpublished data, 1986
AY–68–35–4ee	368	744	576	168	geophysical log	TWDB	5/22/1995	unpublished data, 1995
AY–68–35–505	900	771	605	166	geophysical log	TWDB	6/1/1983	TWDB, 2009
AY–68–35–506	700	990	843	147	drillers' log	TWDB	11/22/1986	TWDB, 2009
AY–68–35–507	700	935	785	150	drillers' log	TWDB	1/13/1987	TWDB, 2009
AY–68–35–601	900	556	402	154	geophysical log	TWDB	5/18/1966	TWDB, 2009
AY–68–35–603	618	540	370	170	drillers' log	TWDB	6/1/1956	TWDB, 2009
AY–68–35–604	906	542	386	156	drillers' log	TWDB	4/19/1958	TWDB, 2009
AY–68–35–607	701	491	334	157	drillers' log	TWDB	7/1/1967	TWDB, 2009
AY–68–35–608	638	489	332	157	geophysical log	USGS	1/26/1994	unpublished data, 1994
AY–68–35–610	763	651	493	158	drillers' log	TWDB	1/1/1940	Petitt and George, 1956
AY–68–35–613	545	706	538	168	geophysical log	EAA	5/18/1993	Petitt and George, 1956
AY–68–35–614	760	579	324	255	drillers' log	TWDB	6/25/1985	TWDB, 2009
AY–68–35–615	760	543	346	197	drillers' log	TWDB	7/9/1985	TWDB, 2009

Appendix 1. Wells selected for inclusion in geodatabase of selected wells penetrating the Austin Group, central Bexar County, Texas,

State well number	First alternate well identifier	Second alternate well identifier	Third alternate well identifier	Latitude (dd)	Longitude (dd)	Land-surface altitude (feet above NAVD 88)	Year drilled
AY–68–35–616	Micron no. 1	--	--	29.4549540343	98.641687821	817	2002
AY–68–35–617	Micron no. 2	--	--	29.4543990517	98.6414098117	816	2002
AY–68–35–6dd	I–48	--	--	29.4361449687	98.6271386687	729	1942
AY–68–35–6ee	I–49	--	--	29.421646233	98.6338051331	745	1931
AY–68–35–6ff	R.T.C.	--	--	29.4563430913	98.632520818	750	--
AY–68–35–6gg	Leeper	--	--	29.4530098732	98.6408543473	810	--
AY–68–35–705	Briggs no. 7	--	--	29.3838452185	98.7400231239	765	1966
AY–68–35–710	Air Force Village no. 1	--	--	29.3860671528	98.7408571515	761	1985
AY–68–35–711	Air Force Village no. 4	--	--	29.3855121693	98.7405791427	763	1985
AY–68–35–712	Benke	--	--	29.396900843	98.7258567849	780	--
AY–68–35–713	Air Force Village no. 2	--	--	29.387178123	98.7372450589	772	1991
AY–68–35–7bb	Air Force Village no. 3	--	--	29.385833	98.738056	768	--
AY–68–35–7ee	55447	--	--	29.381944	98.728611	715	--
AY–68–35–7ff	77106	--	--	29.406944	98.746667	865	--
AY–68–35–7gg	Harlach	--	--	29.3816232031	98.705300198	695	--
AY–68–35–7hh	Jungman	--	--	29.3830120277	98.73168979	704	--
AY–68–35–801	H–102	--	--	29.4069005537	98.693077958	768	1957
AY–68–35–808	Adams Hill	--	--	29.4085665056	98.678077573	730	1972
AY–68–35–810	Uptmore Development	17A	--	29.4066225597	98.7041892468	835	1981
AY–68–35–811	Uptmore Development	17B	--	29.4069005512	98.7044672549	835	1981
AY–68–35–8bb	West side Airpark	--	--	29.3941228394	98.6805773648	732	--
AY–68–35–903	I–264	--	--	29.4085668472	98.6311316841	740	1961
AY–68–35–904	W.C.I.D. no. 16	Well no. 2	--	29.4063445794	98.6561319929	789	1958
AY–68–35–905	I–231	--	--	29.4044003112	98.642243067	760	1957
AY–68–35–910	W.C.I.D. no. 16	--	--	29.4096774744	98.6569660278	781	1967
AY–68–35–912	CWB Marbach no. 1	--	--	29.4166222553	98.6402986236	757	1973
AY–68–35–913	CWB Marbach no. 2	--	--	29.4163442642	98.6394656008	757	1974
AY–68–36–100	Green Tree	--	--	29.4775	98.599444	821	--
AY–68–36–102	CWB Wurzbach no. 1	--	--	29.4896748488	98.6008539616	901	1963
AY–68–36–103	Wurzbach no. 2	--	--	29.4888419889	98.601686867	910	1967
AY–68–36–104	Wurzbach no. 3	--	--	29.4905085991	98.6008535213	888	1968
AY–68–36–107	Grass Hill	--	--	29.4885639035	98.6102981889	882	1970
AY–68–36–108	Craig	--	--	29.479398176	98.5941867457	870	1963
AY–68–36–111	Timber Creek	--	--	29.4752313557	98.6208543881	802	1972
AY–68–36–121	I–174	--	--	29.4960636801	98.6205764766	825	1950
AY–68–36–124	Dean	--	--	29.496063676	98.6186314289	825	1969
AY–68–36–129	Lewis	--	--	29.4874529481	98.6147422933	840	1972
[2]AY–68–36–134	--	--	--	29.495277	98.595555	841	2007
AY–68–36–1aa	Mursch	--	--	29.484722	98.606111	900	--
AY–68–36–1bb	Worth	--	--	29.481667	98.607778	888	--
AY–68–36–1cc	Evers and Assoc.	--	--	29.482222	98.591111	864	--
AY–68–36–1dd	I–39	--	--	29.4649685544	98.5867430266	903	--
AY–68–36–1ee	4M properties	--	--	29.4669444444	98.6058333333	880	--
AY–68–36–1ff	Theo	--	--	29.4830088524	98.6044646848	885	--

2010—Continued.

State well number	Well depth (feet below LSD)	Altitude of top of Austin Group (feet above NAVD 88)	Altitude of base of Austin Group (feet above NAVD 88)	Thickness of Austin Group (feet)	Data source	Source agency	Data source date	Report author, year[1]
AY–68–35–616	855	661	537	124	drillers' log	SAWS	6/24/2002	unpublished data, 2002
AY–68–35–617	850	661	490	171	drillers' log	SAWS	11/12/2001	unpublished data, 2001
AY–68–35–6dd	532	534	374	160	report/publication	TWDB	--	Livingston, 1947
AY–68–35–6ee	685	493	334	159	report/publication	TWDB	--	Livingston, 1947
AY–68–35–6ff	565	652	486	166	geophysical log	TWDB	11/5/1992	unpublished data, 1992
AY–68–35–6gg	519	662	495	167	geophysical log	TWDB	5/13/1986	unpublished data, 1986
AY–68–35–705	1,060	528	357	171	drillers' log	TWDB	12/15/1966	TWDB, 2009
AY–68–35–710	735	520	345	175	drillers' log	TWDB	5/10/1985	TWDB, 2009
AY–68–35–711	710	528	343	185	drillers' log	TWDB	5/13/1985	TWDB, 2009
AY–68–35–712	735	545	360	185	drillers' log	TWDB	5/13/1985	TWDB, 2009
AY–68–35–713	800	502	322	180	drillers' log	TWDB	11/26/1991	TWDB, 2009
AY–68–35–7bb	--	498	324	174	geophysical log	EAA	1/21/1992	unpublished data, 1992
AY–68–35–7ee	--	540	370	170	drillers' log	TWDB	1/23/2005	unpublished data, 2005
AY–68–35–7ff	--	755	630	125	drillers' log	TWDB	2/18/2004	unpublished data, 2004
AY–68–35–7gg	650	395	199	196	geophysical log	TWDB	3/16/1989	unpublished data, 1989
AY–68–35–7hh	537	532	360	172	geophysical log	TWDB	4/26/1978	unpublished data, 1978
AY–68–35–801	837	426	274	152	geophysical log	EAA	1/9/1987	unpublished data, 1987
AY–68–35–808	1,150	450	304	146	geophysical log	TWDB	5/21/1973	TWDB, 2009
AY–68–35–810	735	609	447	162	geophysical log	USGS	5/8/1981	unpublished data, 1981
AY–68–35–811	735	702	432	270	drillers' log	BMWD	5/9/1981	unpublished data, 1981
AY–68–35–8bb	1,001	399	238	161	geophysical log	TWDB	1/9/1987	unpublished data, 1987
AY–68–35–903	1,020	263	105	158	drillers' log	TWDB	6/6/1961	TWDB, 2009
AY–68–35–904	675	477	213	264	drillers' log	SAWS	9/8/1967	unpublished data, 1967
AY–68–35–905	881	270	103	167	drillers' log	TWDB	1/1/1957	TWDB, 2009
AY–68–35–910	1,050	430	286	144	drillers' log	TWDB	9/8/1967	Petitt and George, 1956
AY–68–35–912	1,040	420	293	127	drillers' log	SAWS	11/28/1973	unpublished data, 1973
AY–68–35–913	1,040	417	294	123	drillers' log	SAWS	3/5/1974	unpublished data, 1974
AY–68–36–100	--	671	517	154	geophysical log	EAA	12/2/1987	unpublished data, 1987
AY–68–36–102	786	854	704	150	geophysical log	SAWS	2/5/1963	unpublished data, 1963
AY–68–36–103	824	910	706	204	geophysical log	TWDB	9/13/1967	TWDB, 2009
AY–68–36–104	814	888	698	190	geophysical log	TWDB	5/17/1968	TWDB, 2009
AY–68–36–107	550	787	625	162	drillers' log	TWDB	12/28/1970	Petitt and George, 1956
AY–68–36–108	484	738	585	153	drillers' log	TWDB	9/1/1963	TWDB, 2009
AY–68–36–111	677	772	622	150	geophysical log	TWDB	11/17/1972	TWDB, 2009
AY–68–36–121	356	795	654	141	drillers' log	TWDB	5/3/1905	TWDB, 2009
AY–68–36–124	412	795	653	142	drillers' log	TWDB	3/11/1969	TWDB, 2009
AY–68–36–129	450	790	625	165	drillers' log	TWDB	5/4/1972	TWDB, 2009
[2]AY–68–36–134	418	818	666	152	drillers' log	SAWS	7/1/1905	USGS, 2007
AY–68–36–1aa	--	861	702	159	geophysical log	EAA	10/23/1986	unpublished data, 1986
AY–68–36–1bb	--	866	708	158	geophysical log	EAA	12/13/1991	unpublished data, 1991
AY–68–36–1cc	--	670	520	150	geophysical log	EAA	9/9/1989	unpublished data, 1989
AY–68–36–1dd	1,100	688	533	155	report/publication	TWDB	--	Livingston, 1947
AY–68–36–1ee	498	708	554	154	geophysical log	TWDB	1/24/2000	TWDB, 2009
AY–68–36–1ff	446	823	663	160	geophysical log	TWDB	4/26/1994	TWDB, 2009

Appendix 1. Wells selected for inclusion in geodatabase of selected wells penetrating the Austin Group, central Bexar County, Texas,

State well number	First alternate well identifier	Second alternate well identifier	Third alternate well identifier	Latitude (dd)	Longitude (dd)	Land-surface altitude (feet above NAVD 88)	Year drilled
AY–68–36–1gg	EG&G Automotive	--	--	29.4791200727	98.5933532792	829	--
AY–68–36–1hh	Mursch Sports	--	--	29.4852310053	98.6064091881	902	--
AY–68–36–1ii	Gunn Honda	--	--	29.4872222222	98.6088888889	900	--
AY–68–36–1jj	Elizondo	--	--	29.4855555556	98.6166666667	827	--
AY–68–36–1kk	0100–L	--	--	29.4938888889	98.6163888889	815	--
AY–68–36–205	I–189	Bandera	--	29.4716204027	98.5733531869	807	1953
AY–68–36–206	CY–258	Sunshine	--	29.4732873095	98.5489075869	756	1950
AY–68–36–207	CY–270	--	--	29.470787413	98.5611298774	755	1951
AY–68–36–208	CY–290	Loma Linda	--	29.4796750854	98.5458525484	813	1953
AY–68–36–2aa	Greenery	--	--	29.466944	98.569722	793	--
AY–68–36–2ee	37	--	--	29.4594139727	98.550167009	701	1946
AY–68–36–2ff	38	--	--	29.4676023	98.5642968979	782	1945
AY–68–36–2gg	Alix Weil	--	--	29.4971749695	98.5650193429	990	--
AY–68–36–2hh	Wick	--	--	29.4860642177	98.5558523884	850	--
AY–68–36–2ii	Balcones Height	--	--	29.4874530477	98.5497411344	821	--
AY–68–36–302	CY–289	289	--	29.4727313106	98.536963286	743	1946
AY–68–36–304	I–202	--	--	29.4868978008	98.526407111	785	1952
AY–68–36–306	CY–259	259	--	29.4755091865	98.5191848606	712	1940
AY–68–36–307	CY–260	260	--	29.4746751933	98.5047394958	717	1948
AY–68–36–3aa	I–35	--	--	29.4864683006	98.5151895893	737	1938
AY–68–36–402	SWRI no. 1	--	--	29.444676341	98.6147420931	840	1952
AY–68–36–403	SWRI no. 4	--	--	29.4427324039	98.6141869587	840	1954
AY–68–36–405	SWRI no. 2	--	--	29.4410654576	98.6133540408	832	1964
AY–68–36–407	I–223	--	--	29.4263439407	98.6241872503	731	1956
AY–68–36–409	Zachary Gravel	--	--	29.4182892001	98.613908948	700	1953
AY–68–36–411	SWRI no. 3	--	--	29.4463432939	98.6236313265	768	1971
AY–68–36–4aa	46	--	--	29.4231995805	98.5889003829	723	1946
AY–68–36–4bb	I–45	--	--	29.4473013035	98.6009613653	762	1946
AY–68–36–502	34 Street no. 2	--	--	29.4393994817	98.5652968075	685	1957
AY–68–36–503	CY–273	--	--	29.4396764719	98.5647407949	682	1957
AY–68–36–504	I–201	--	--	29.4507881031	98.5727970604	766	1950
AY–68–36–506	CY–44	44	--	29.4302327945	98.5716858096	710	1910
AY–68–36–508	CY–273 no. 1	273	--	29.4391213803	98.5658523757	687	1951
AY–68–36–511	CY–272	272	San Felipe at Culebra Ave.	29.4480101828	98.5566856369	708	1948
AY–68–36–5bb	St. John Bosco	--	--	29.43	98.571389	706	--
AY–68–36–5cc	I–40	--	--	29.4534377623	98.561645109	762	1894
AY–68–36–5ee	49	--	--	29.4195944	98.5562079511	686	1904
AY–68–36–5ff	51	--	--	29.4331240687	98.5473816318	657	1912
AY–68–36–5gg	Las Palmas	--	--	29.4202331292	98.5550186581	685	--
AY–68–36–602	CY–257	257	--	29.4416213634	98.5027952285	652	1942
AY–68–36–607	CY–240	240	--	29.4374545139	98.5072393143	656	1949
AY–68–36–608	CY–245	245	--	29.4360655737	98.5269628093	682	1946
AY–68–36–610a	CY–62	62	--	29.4263440266	98.536962673	652	1946
[3]AY–68–36–610b	62	--	--	29.4247806403	98.538027281	658	1946

2010—Continued.

State well number	Well depth (feet below LSD)	Altitude of top of Austin Group (feet above NAVD 88)	Altitude of base of Austin Group (feet above NAVD 88)	Thickness of Austin Group (feet)	Data source	Source agency	Data source date	Report author, year[1]
AY–68–36–1gg	512	710	555	155	geophysical log	TWDB	3/1/1988	TWDB, 2009
AY–68–36–1hh	636	852	704	148	geophysical log	TWDB	10/23/1986	TWDB, 2009
AY–68–36–1ii	492	810	683	127	geophysical log	TWDB	7/8/1994	TWDB, 2009
AY–68–36–1jj	394	770	607	163	geophysical log	TWDB	1/7/2004	TWDB, 2009
AY–68–36–1kk	288	815	667	148	geophysical log	TWDB	1/11/2000	TWDB, 2009
AY–68–36–205	956	641	543	98	geophysical log	TWDB	10/19/1953	Petitt and George, 1956
AY–68–36–206	748	524	376	148	geophysical log	TWDB	11/3/1950	Petitt and George, 1956
AY–68–36–207	1,030	557	411	146	geophysical log	TWDB	9/22/1951	Petitt and George, 1956
AY–68–36–208	840	503	339	164	drillers' log	TWDB	9/16/1953	Petitt and George, 1956
AY–68–36–2aa	--	691	539	152	geophysical log	EAA	8/23/1991	unpublished data, 1991
AY–68–36–2ee	994	465	315	150	report/publication	TWDB	--	Livingston, 1947
AY–68–36–2ff	524	572	434	138	report/publication	TWDB	--	Livingston, 1947
AY–68–36–2gg	524	805	665	140	geophysical log	TWDB	11/21/1991	unpublished data, 1991
AY–68–36–2hh	--	790	595	195	strip log	TWDB	2/1/1946	unpublished data, 1946
AY–68–36–2ii	480	666	566	100	strip log	TWDB	4/1/1946	unpublished data, 1946
AY–68–36–302	744	409	271	138	geophysical log	TWDB	11/14/1946	Petitt and George, 1956
AY–68–36–304	1,094	503	358	145	geophysical log	SAWS	3/16/1952	Petitt and George, 1956
AY–68–36–306	1,100	485	305	180	drillers' log	SAWS	9/1/1940	Petitt and George, 1956
AY–68–36–307	772	428	279	149	geophysical log	SAWS	11/25/1948	Petitt and George, 1956
AY–68–36–3aa	260	605	453	152	report/publication	TWDB	--	Livingston, 1947
AY–68–36–402	679	486	425	61	drillers' log	TWDB	5/12/1952	TWDB, 2009
AY–68–36–403	889	604	448	156	geophysical log	TWDB	2/25/1986	TWDB, 2009
AY–68–36–405	780	581	423	158	drillers' log	TWDB	4/6/1964	TWDB, 2009
AY–68–36–407	620	508	356	152	geophysical log	USGS	11/29/1971	unpublished data, 1971
AY–68–36–409	1,215	289	140	149	drillers' log	TWDB	10/9/1953	TWDB, 2009
AY–68–36–411	800	574	392	182	drillers' log	TWDB	12/20/1974	TWDB, 2009
AY–68–36–4aa	965	23	-137	160	report/publication	TWDB	--	Livingston, 1947
AY–68–36–4bb	490	602	452	150	report/publication	TWDB	--	Livingston, 1947
AY–68–36–502	1,217	261	116	145	drillers' log	SAWS	10/7/1957	unpublished data, 1957
AY–68–36–503	1,240	251	119	132	geophysical log	SAWS	10/28/1951	unpublished data, 1951
AY–68–36–504	772	454	306	148	geophysical log	TWDB	7/10/1950	Petitt and George, 1956
AY–68–36–506	1,000	320	182	138	report/publication	TWDB	--	Livingston, 1947
AY–68–36–508	950	257	127	130	drillers' log	TWDB	11/26/1951	Petitt and George, 1956
AY–68–36–511	1,051	156	38	118	drillers' log	SAWS	8/1/1948	Petitt and George, 1956
AY–68–36–5bb	--	464	174	290	geophysical log	EAA	5/2/1995	unpublished data, 1995
AY–68–36–5cc	702	474	307	167	report/publication	TWDB	--	Livingston, 1947
AY–68–36–5ee	1,286	-125	-265	140	report/publication	TWDB	--	Livingston, 1947
AY–68–36–5ff	609	470	308	162	report/publication	TWDB	--	Livingston, 1947
AY–68–36–5gg	1,253	-25	-225	200	geophysical log	TWDB	6/3/1992	unpublished data, 1992
AY–68–36–602	886	291	112	179	drillers' log	SAWS	2/1/1942	Petitt and George, 1956
AY–68–36–607	1,221	223	75	148	drillers' log	TWDB	2/1/1949	Petitt and George, 1956
AY–68–36–608	554	476	387	89	drillers' log	TWDB	10/1/1946	Petitt and George, 1956
AY–68–36–610a	1,212	-13	-168	155	geophysical log	TWDB	4/11/1946	Petitt and George, 1956
[3]AY–68–36–610b	1,212	189	1	188	report/publication	TWDB	--	Livingston, 1947

Appendix 1. Wells selected for inclusion in geodatabase of selected wells penetrating the Austin Group, central Bexar County, Texas,

State well number	First alternate well identifier	Second alternate well identifier	Third alternate well identifier	Latitude (dd)	Longitude (dd)	Land-surface altitude (feet above NAVD 88)	Year drilled
AY–68–36–6aa	33	--	--	29.45372835	98.5054309493	700	1942
[2]AY–68–36–6bb	54	--	--	29.4370569928	98.5378360972	711	1893
[2]AY–68–36–6cc	55	--	--	29.4370979608	98.5373239977	714	--
AY–68–36–6ee	64	--	--	29.4214531315	98.5058628807	649	--
AY–68–36–701	Farah	--	--	29.4121773999	98.606964739	704	1957
AY–68–36–704	I–232	--	--	29.405511615	98.619465033	740	1960
AY–68–36–712	I–151	--	--	29.4155110683	98.5947418827	713	1948
AY–68–36–715	I–52	--	--	29.4166222542	98.6072417676	712	1925
AY–68–36–7dd	I–56	--	--	29.4092690361	98.6112339648	690	--
AY–68–36–7ee	Cable Elementary	--	--	29.4152332997	98.623353734	712	--
AY–68–36–7ff	Casa Manana	--	--	29.405	98.6166666667	725	--
AY–68–36–801	San Fernando Cemetery	--	--	29.4152332999	98.5477962201	680	1950
AY–68–36–817	BMWD no. 9 well 1	--	--	29.407222	98.553333	679	1990
AY–68–36–901	Auge Packing	302	--	29.4138443488	98.5161283904	635	1952
AY–68–36–904	Hemco Packing	--	--	29.4094005049	98.516128362	641	1967
AY–68–36–905	San Fernado Water	--	--	29.3982898909	98.5261285531	651	1967
AY–68–36–914	San Antonio Packing	--	--	29.411622427	98.5147393401	637	1973
AY–68–36–916	CY–230	230	--	29.4071775841	98.5111282175	625	1949
AY–68–36–917	CY–286	286	--	29.4146773191	98.539740008	675	1948
AY–68–36–918	CY–231	231	--	29.4055116417	98.5155733227	640	1949
AY–68–36–925	CY–246	246	--	29.3982898909	98.5261285531	651	1950
AY–68–36–926	CY–229	229	--	29.4096779383	98.5250178173	650	1948
AY–68–36–932	Roegelein	--	--	29.409955708	98.5139064189	642	1979
AY–68–36–9aa	179	--	--	29.4050386357	98.5137562112	641	--
AY–68–36–9bb	180	--	--	29.405748747	98.5135650274	635	--
AY–68–36–9cc	181	--	--	29.4089715598	98.5142205148	635	--
AY–68–36–9dd	186	--	--	29.41077415	98.5158046092	635	1945
AY–68–36–9ee	187	--	--	29.411866629	98.5172521438	632	1945
AY–68–36–9ff	188	--	--	29.4084526323	98.5178803192	640	1946
AY–68–36–9gg	189	--	--	29.4134780354	98.5242440089	624	1942
[2]AY–68–36–9hh	208	--	--	29.3975278431	98.5278218774	675	--
AY–68–36–9ii	CY–209	La Gloria Camp water well no. 1	--	29.3980116785	98.5258510997	650	--
AY–68–37–101	Basin Station no. 7	--	--	29.4993973447	98.4889062549	725	1967
AY–68–37–102	CY–293	--	--	29.4974524195	98.4872391991	724	1957
AY–68–37–104	Basin Station no. 6	--	--	29.4938415399	98.4897392404	734	1963
AY–68–37–105	Basin Station no. 3	--	--	29.4966194446	98.4886282297	733	1958
AY–68–37–106	Basin Station no. 5	--	--	29.496341449	98.490295271	725	1963
AY–68–37–107	Olmos Park	--	--	29.4805090054	98.492517225	760	1968
AY–68–37–108	J–107	--	--	29.483287304	98.3747362232	740	1965
AY–68–37–109	J–106	--	--	29.4977304579	98.4725168198	811	1964
AY–68–37–112	Alamo Heights no. 7	--	--	29.4846749487	98.4652945536	802	1971
AY–68–37–113	Portland Cement no. 4	--	--	29.4988413964	98.4791839994	740	1969
AY–68–37–116	CY–293	--	--	29.4966194327	98.4922393231	728	1951
AY–68–37–117	Alamo Cement	J–3	--	29.4974526645	98.4802950194	752	--

2010—Continued.

State well number	Well depth (feet below LSD)	Altitude of top of Austin Group (feet above NAVD 88)	Altitude of base of Austin Group (feet above NAVD 88)	Thickness of Austin Group (feet)	Data source	Source agency	Data source date	Report author, year[1]
AY–68–36–6aa	851	562	416	146	report/publication	TWDB	--	Livingston, 1947
[2]AY–68–36–6bb	300	--	--	--	report/publication	TWDB	--	Livingston, 1947
[2]AY–68–36–6cc	--	--	--	--	report/publication	TWDB	--	Livingston, 1947
AY–68–36–6ee	911	264	83	181	report/publication	TWDB	--	Livingston, 1947
AY–68–36–701	1,199	94	-76	170	drillers' log	TWDB	2/26/1957	TWDB, 2009
AY–68–36–704	1,500	-60	-251	191	geophysical log	TWDB	2/4/1960	TWDB, 2009
AY–68–36–712	1,619	-144	-258	114	drillers' log	TWDB	7/1/1947	Petitt and George, 1956
AY–68–36–715	1,006	106	-95	201	report/publication	TWDB	4/8/1905	Livingston, 1947
AY–68–36–7dd	1,403	-410	-610	200	report/publication	TWDB	--	Livingston, 1947
AY–68–36–7ee	676	410	250	160	geophysical log	TWDB	12/16/1985	unpublished data, 1985
AY–68–36–7ff	974	165	-23	188	geophysical log	TWDB	11/7/1997	unpublished data, 1997
AY–68–36–801	1,270	70	-69	139	drillers' log	TWDB	11/8/1950	TWDB, 2009
AY–68–36–817	1,183	84	-49	133	drillers' log	BMWD	3/20/1990	unpublished data, 1990
AY–68–36–901	875	80	-35	115	drillers' log	TWDB	1/10/1952	TWDB, 2009
AY–68–36–904	1,356	185	-64	249	drillers' log	TWDB	3/13/1967	TWDB, 2009
AY–68–36–905	1,065	28	-141	169	drillers' log	TWDB	10/14/1967	Petitt and George, 1956
AY–68–36–914	1,214	130	-40	170	drillers' log	TWDB	5/1/1973	TWDB, 2009
AY–68–36–916	1,289	164	15	149	geophysical log	TWDB	3/19/1949	Petitt and George, 1956
AY–68–36–917	1,054	95	-61	156	geophysical log	SAWS	2/26/1948	Petitt and George, 1956
AY–68–36–918	1,351	133	-15	148	drillers' log	TWDB	4/1/1949	Petitt and George, 1956
AY–68–36–925	1,006	-107	-139	32	drillers' log	TWDB	3/6/1950	Petitt and George, 1956
AY–68–36–926	915	44	-100	144	drillers' log	TWDB	5/1/1905	Petitt and George, 1956
AY–68–36–932	1,265	82	-73	155	drillers' log	TWDB	9/16/1979	TWDB, 2009
AY–68–36–9aa	1,400	341	25	316	report/publication	TWDB	--	Livingston, 1947
AY–68–36–9bb	1,250	295	-21	316	report/publication	TWDB	--	Livingston, 1947
AY–68–36–9cc	1,400	295	-21	316	report/publication	TWDB	--	Livingston, 1947
AY–68–36–9dd	948	262	-9	271	report/publication	TWDB	--	Livingston, 1947
AY–68–36–9ee	851	172	-41	213	report/publication	TWDB	--	Livingston, 1947
AY–68–36–9ff	1,126	84	-65	149	report/publication	TWDB	--	Livingston, 1947
AY–68–36–9gg	1,011	283	23	260	report/publication	TWDB	--	Livingston, 1947
[2]AY–68–36–9hh	700	--	--	--	report/publication	TWDB	--	Livingston, 1947
AY–68–36–9ii	--	-115	-175	60	geophysical log	TWDB	9/6/1948	Petitt and George, 1956
AY–68–37–101	995	438	299	139	drillers' log	SAWS	3/21/1967	unpublished data, 1967
AY–68–37–102	1,002	482	345	137	geophysical log	SAWS	7/26/1951	unpublished data, 1951
AY–68–37–104	995	444	306	138	geophysical log	SAWS	1/31/1963	unpublished data, 1963
AY–68–37–105	1,044	447	311	136	drillers' log	SAWS	3/12/1958	unpublished data, 1958
AY–68–37–106	986	460	325	135	geophysical log	SAWS	12/4/1962	unpublished data, 1962
AY–68–37–107	816	392	292	100	geophysical log	USGS	9/16/1971	unpublished data, 1971
AY–68–37–108	986	398	260	138	drillers' log	TWDB	6/3/1965	TWDB, 2009
AY–68–37–109	450	811	670	141	drillers' log	TWDB	9/1/1964	TWDB, 2009
AY–68–37–112	592	654	540	114	geophysical log	TWDB	5/19/1971	Petitt and George, 1956
AY–68–37–113	805	396	258	138	drillers' log	TWDB	11/26/1969	TWDB, 2009
AY–68–37–116	700	483	358	125	drillers' log	TWDB	8/22/1951	Petitt and George, 1956
AY–68–37–117	705	416	292	124	geophysical log	TWDB	7/2/1986	Petitt and George, 1956

Appendix 1. Wells selected for inclusion in geodatabase of selected wells penetrating the Austin Group, central Bexar County, Texas,

State well number	First alternate well identifier	Second alternate well identifier	Third alternate well identifier	Latitude (dd)	Longitude (dd)	Land-surface altitude (feet above NAVD 88)	Year drilled
AY–68–37–118	Portland Cement	J–4	--	29.4974524432	98.4800170122	745	1926
AY–68–37–121	Alamo Heights no. 3	--	--	29.4852309251	98.4664055855	802	1939
AY–68–37–123	Alamo Heights no. 5	--	--	29.488286774	98.4789059257	781	1949
AY–68–37–127	Zoo	267	--	29.4646756428	98.471405587	673	1946
AY–68–37–128	Leonard	9	--	29.4691204638	98.4772387626	750	1939
AY–68–37–130	Brackenridge no. 3	266	--	29.4646756496	98.4694615377	677	1940
AY–68–37–131	CY–32	32	--	29.459675753	98.4908510468	755	1940
AY–68–37–132	CY–262	262	--	29.4730093221	98.4780728082	713	--
AY–68–37–1aa	Browning	--	--	29.488611	98.496389	730	--
AY–68–37–1ee	Landa Library	--	--	29.4627316568	98.4872394198	800	--
AY–68–37–202	J–21	--	--	29.463333	98.426111	623	1912
AY–68–37–203a	J–17	Ft. Sam Houston water well	San Antonio index well	29.4782980106	98.4321001178	723	1914
[3]AY–68–37–203b	J–17	Ft. Sam Houston water well	San Antonio index well	29.4793979175	98.4319603357	730	1914
AY–68–37–206	San Antonio Country Club	255	--	29.4677315925	98.4544611759	760	1948
AY–68–37–207	J–88	Military well no. 2	--	29.4963416301	98.4352938485	625	1952
AY–68–37–208	CY–263	263	Water well no. 53	29.4957866052	98.4489051973	821	1949
AY–68–37–210	J–20	Ft. Sam Houston water well 5	--	29.4718982026	98.427515737	670	--
AY–68–37–212	J–89	--	--	29.4855090337	98.4311266813	713	1951
AY–68–37–2aa	J–12	--	--	29.4865496974	98.4205987074	683	1944
AY–68–37–303	J–101	--	--	29.4730096564	98.3808483324	704	1952
AY–68–37–3aa	J–13	--	--	29.4830750556	98.4135440296	654	1946
AY–68–37–3bb	J–14	--	--	29.4891505767	98.4016061293	723	--
AY–68–37–401	CY–317	--	--	29.4421764166	98.4797386559	654	1962
AY–68–37–402	CY–297	--	--	29.4232890521	98.4900167896	653	1956
AY–68–37–403	Sunshine Laundry	--	--	29.4313437395	98.4969620138	651	1967
AY–68–37–404	CY–298	--	--	29.4227330782	98.4883503005	640	1954
AY–68–37–405	Foremost Foods	--	--	29.4449543125	98.4811277081	652	1968
AY–68–37–406	Ft. Sam Houston no. 7	--	--	29.4457883148	98.4722384912	676	1955
AY–68–37–411	CY–117	117	--	29.428288874	98.490016822	652	1941
AY–68–37–412	CY–238	238	--	29.4296768194	98.4914058654	645	1944
AY–68–37–413	CY–274	274	--	29.4480102184	98.4769616232	660	1953
AY–68–37–414	CY–79b	275	--	29.4474542393	98.4766836127	659	1953
AY–68–37–416	CY–236	236	--	29.424122036	98.486405706	653	1950
AY–68–37–427	CY–281	--	--	29.4230110683	98.4883507468	640	1951
AY–68–37–429	CY–98	98	--	29.4341216898	98.4836277014	654	1946
AY–68–37–430	CY–141	141	--	29.4221775414	98.4886280815	640	1930
AY–68–37–432	CY–226	226	--	29.4252330296	98.4775167163	675	1943
AY–68–37–436	CY–120	--	--	29.4271773715	98.4864058368	654	1935
AY–68–37–439	Market no. 5	--	--	29.4235660433	98.4897387845	643	1982
AY–68–37–443	City Parks, Commerce	--	--	29.4232890656	98.4864057007	652	1986

2010—Continued.

State well number	Well depth (feet below LSD)	Altitude of top of Austin Group (feet above NAVD 88)	Altitude of base of Austin Group (feet above NAVD 88)	Thickness of Austin Group (feet)	Data source	Source agency	Data source date	Report author, year[1]
AY–68–37–118	700	411	285	126	drillers' log	TWDB	4/9/1905	Petitt and George, 1956
AY–68–37–121	603	657	577	80	drillers' log	TWDB	8/2/1939	Petitt and George, 1956
AY–68–37–123	580	781	623	158	drillers' log	TWDB	9/16/1949	TWDB, 2009
AY–68–37–127	407	673	575	98	drillers' log	TWDB	9/20/1946	Petitt and George, 1956
AY–68–37–128	209	750	617	133	drillers' log	TWDB	4/22/1905	Petitt and George, 1956
AY–68–37–130	800	677	582	95	drillers' log	TWDB	4/23/1905	Petitt and George, 1956
AY–68–37–131	650	755	637	118	drillers' log	TWDB	10/1/1940	Petitt and George, 1956
AY–68–37–132	--	713	693	20	geophysical log	SAWS	11/6/1951	Petitt and George, 1956
AY–68–37–1aa	--	492	355	137	geophysical log	SAWS	11/5/1997	unpublished data, 1997
AY–68–37–1ee	370	800	680	120	geophysical log	TWDB	3/17/1966	unpublished data, 1966
AY–68–37–202	702	298	180	118	drillers' log	EAA	6/1/1984	Petitt and George, 1956
AY–68–37–203a	874	533	370	163	report/publication	TWDB	--	Livingston, 1947
[3]AY–68–37–203b	874	540	377	163	geophysical log	TWDB	3/5/1971	Petitt and George, 1956
AY–68–37–206	921	253	118	135	drillers' log	TWDB	12/29/1948	Petitt and George, 1956
AY–68–37–207	872	185	95	90	drillers' log	SAWS	2/13/1952	Petitt and George, 1956
AY–68–37–208	763	706	538	168	drillers' log	TWDB	8/26/1949	Petitt and George, 1956
AY–68–37–210	660	376	240	136	geophysical log	TWDB	10/14/1969	Petitt and George, 1956
AY–68–37–212	778	528	393	135	geophysical log	SAWS	4/15/1951	Petitt and George, 1956
AY–68–37–2aa	460	493	365	128	report/publication	TWDB	--	Livingston, 1947
AY–68–37–303	685	384	245	139	drillers' log	TWDB	3/8/1961	TWDB, 2009
AY–68–37–3aa	735	464	336	128	report/publication	TWDB	--	Livingston, 1947
AY–68–37–3bb	802	519	370	149	report/publication	TWDB	--	Livingston, 1947
AY–68–37–401	1,106	272	154	118	drillers' log	TWDB	11/13/1962	TWDB, 2009
AY–68–37–402	1,162	306	153	153	geophysical log	TWDB	10/11/1956	TWDB, 2009
AY–68–37–403	1,089	285	131	154	drillers' log	TWDB	9/14/1967	TWDB, 2009
AY–68–37–404	1,326	168	-18	186	geophysical log	TWDB	1/25/1954	TWDB, 2009
AY–68–37–405	775	468	166	302	geophysical log	EAA	3/21/1990	unpublished data, 1990
AY–68–37–406	1,103	290	142	148	geophysical log	TWDB	8/4/1955	TWDB, 2009
AY–68–37–411	805	251	97	154	report/publication	TWDB	6/14/1946	Livingston, 1947
AY–68–37–412	1,157	240	89	151	drillers' log	TWDB	3/14/1951	Petitt and George, 1956
AY–68–37–413	1,000	294	140	154	geophysical log	SAWS	1/29/1953	Petitt and George, 1956
AY–68–37–414	1,160	472	134	338	drillers' log	SAWS	4/26/1954	Petitt and George, 1956
AY–68–37–416	1,113	320	15	305	drillers' log	TWDB	3/1/1951	Petitt and George, 1956
AY–68–37–427	1,140	160	7	153	geophysical log	SAWS	6/16/1951	unpublished data, 1951
AY–68–37–429	749	291	143	148	geophysical log	TWDB	7/22/1946	Petitt and George, 1956
AY–68–37–430	900	330	155	175	drillers' log	TWDB	1/1/1931	Petitt and George, 1956
AY–68–37–432	966	285	130	155	drillers' log	TWDB	2/20/1951	Petitt and George, 1956
AY–68–37–436	1,159	262	105	157	drillers' log	TWDB	7/24/1946	TWDB, 2009
AY–68–37–439	1,280	157	27	130	drillers' log	SAWS	4/19/1982	TWDB, 2009
AY–68–37–443	1,252	172	25	147	drillers' log	TWDB	7/1/1986	TWDB, 2009

Appendix 1. Wells selected for inclusion in geodatabase of selected wells penetrating the Austin Group, central Bexar County, Texas,

State well number	First alternate well identifier	Second alternate well identifier	Third alternate well identifier	Latitude (dd)	Longitude (dd)	Land-surface altitude (feet above NAVD 88)	Year drilled
AY–68–37–4aa	80	--	--	29.4456151237	98.473440534	673	1903
AY–68–37–4bb	82	--	--	29.4448777005	98.4830543485	656	1931
AY–68–37–4dd	120	--	--	29.4268062783	98.4874001572	651	1935
AY–68–37–4ee	122	--	--	29.4253314317	98.4903498503	630	1931
AY–68–37–4ff	123	--	--	29.4253587437	98.4894212432	631	1905
AY–68–37–4gg	126	--	--	29.4236107774	98.487564029	647	1905
AY–68–37–4hh	144	--	--	29.4238292732	98.4929717997	647	1929
AY–68–37–4ii	140	--	--	29.4221632428	98.4894758671	642	1928
AY–68–37–4jj	CWB no. 5	--	--	29.4230108408	98.4897392254	650	--
AY–68–37–4kk	DeArte	--	--	29.438010335	98.4819613515	650	--
AY–68–37–507	CY–278	278	--	29.4327329125	98.4366824183	644	1953
AY–68–37–508	Artesia no. 4	CY–296	--	29.4330108944	98.438904586	641	1958
AY–68–37–509	Coca Cola no. 2	--	--	29.4224552737	98.4389045267	631	1966
AY–68–37–510	Coca Cola	--	--	29.4221772785	98.4402935593	630	1974
AY–68–37–511	J–24	--	--	29.439166	98.429443	642	1940
AY–68–37–517	SFD Enterprises	--	--	29.4421770618	98.424459944	635	--
AY–68–37–518	CY–277	277	--	29.4330106896	98.4341823579	639	--
AY–68–37–519	Artesia no. 6	--	--	29.4341218544	98.4389045923	649	1975
AY–68–37–520	CY–276	276	--	29.4330109046	98.4361265172	637	1949
AY–68–37–521	Defose no. 1	A–1	--	29.4182894644	98.4280712375	620	1985
AY–68–37–523	Defose no. 3a	A–3	--	29.4182894655	98.4277932307	620	1985
AY–68–37–524	Willow Springs no. 1C	C–1	--	29.4288440617	98.4341824459	626	1986
AY–68–37–525	Willow Springs no. 2C	C–2	--	29.4294000417	98.434182449	624	1986
AY–68–37–526	Willow Springs no. 1D	D–1	--	29.4321769346	98.4361265125	642	1986
AY–68–37–527	D–2	--	--	29.4327329146	98.4361265156	641	1986
AY–68–37–528	Water Park USA	--	--	29.4477324142	98.425293328	637	1985
AY–68–37–5bb	Artesia D2	--	--	29.4327329166	98.4355712796	641	--
AY–68–37–5cc	EUWD	--	--	29.4391216346	98.4194598031	610	--
AY–68–37–601	Suburban no. 2	J–87	--	29.4455103433	98.4055706008	686	1940
AY–68–37–605	Kirby	--	--	29.4521768056	98.3952925987	684	1971
AY–68–37–607	J–69	--	--	29.4449548068	98.4058483827	684	1947
AY–68–37–608	J–79	--	--	29.4566212475	98.3819592845	688	1944
AY–68–37–610	Seale Road no. 4	--	--	29.445278	98.405833	695	1996
AY–68–37–714	L & H Packing	241	--	29.3944010833	98.4894615887	612	1947
AY–68–37–716	153	--	--	29.4146773652	98.4883506929	630	1939
AY–68–37–719	CY–294	294	--	29.4163443332	98.4811275267	649	1952
AY–68–37–720	L & H Packing no. 2	--	--	29.3949560614	98.4900166057	610	1985
AY–68–37–721	L & H Packing no. 3	--	--	29.395	98.490278	621	1997
AY–68–37–7aa	150	--	--	29.4120851248	98.496740852	630	1912
AY–68–37–7bb	151	--	--	29.4109926458	98.4978606429	632	1929
AY–68–37–7cc	Blue Star	--	--	29.4146778096	98.4883502485	636	--
AY–68–37–7dd	163	--	--	29.3976917149	98.4901313545	598	--
AY–68–37–7ee	164	SAWS no. 4	--	29.3976917149	98.4901313545	597	1941
AY–68–38–104	BMWD-Northeast	036 WP no. 1	--	29.4910640241	98.373903237	744	1968

2010—Continued.

State well number	Well depth (feet below LSD)	Altitude of top of Austin Group (feet above NAVD 88)	Altitude of base of Austin Group (feet above NAVD 88)	Thickness of Austin Group (feet)	Data source	Source agency	Data source date	Report author, year[1]
AY–68–37–4aa	729	319	138	181	report/publication	TWDB	--	Livingston, 1947
AY–68–37–4bb	853	301	151	150	report/publication	TWDB	--	Livingston, 1947
AY–68–37–4dd	1,159	259	102	157	report/publication	TWDB	--	Livingston, 1947
AY–68–37–4ee	1,043	213	65	148	report/publication	TWDB	--	Livingston, 1947
AY–68–37–4ff	747	211	76	135	report/publication	TWDB	--	Livingston, 1947
AY–68–37–4gg	961	163	19	144	report/publication	TWDB	--	Livingston, 1947
AY–68–37–4hh	968	179	62	117	report/publication	TWDB	--	Livingston, 1947
AY–68–37–4ii	912	130	9	121	report/publication	TWDB	--	Livingston, 1947
AY–68–37–4jj	777	176	34	142	geophysical log	TWDB	10/1/1981	unpublished data, 1981
AY–68–37–4kk	713	296	154	142	geophysical log	TWDB	4/12/1988	unpublished data, 1988
AY–68–37–507	1,108	42	-73	115	drillers' log	TWDB	4/4/1954	Petitt and George, 1956
AY–68–37–508	1,318	-158	-249	91	drillers' log	SAWS	1/3/1958	unpublished data, 1958
AY–68–37–509	901	45	-120	165	drillers' log	TWDB	3/8/1974	TWDB, 2009
AY–68–37–510	1,150	-54	-74	20	drillers' log	TWDB	4/21/1966	TWDB, 2009
AY–68–37–511	904	92	-106	198	report/publication	TWDB	--	Livingston, 1947
AY–68–37–517	928	50	-75	125	drillers' log	TWDB	1/11/1952	TWDB, 2009
AY–68–37–518	945	134	-61	195	geophysical log	TWDB	11/26/1951	Petitt and George, 1956
AY–68–37–519	1,340	0	-116	116	drillers' log	SAWS	10/14/1975	unpublished data, 1975
AY–68–37–520	1,000	21	-97	118	drillers' log	TWDB	1/1/1949	Petitt and George, 1956
AY–68–37–521	1,489	-80	-192	112	geophysical log	TWDB	8/1/1985	TWDB, 2009
AY–68–37–523	1,175	-80	-193	113	geophysical log	TWDB	10/15/1985	TWDB, 2009
AY–68–37–524	891	74	-44	118	geophysical log	SAWS	11/25/1985	unpublished data, 1985
AY–68–37–525	1,150	76	-46	122	geophysical log	EAA	1/17/1985	unpublished data, 1985
AY–68–37–526	1,223	62	-68	130	geophysical log	EAA	2/21/1986	unpublished data, 1986
AY–68–37–527	926	47	-77	124	drillers' log	SAWS	5/6/1986	unpublished data, 1986
AY–68–37–528	885	249		250	drillers' log	TWDB	7/23/1985	TWDB, 2009
AY–68–37–5bb	867	47	-77	124	geophysical log	TWDB	5/7/1986	unpublished data, 1986
AY–68–37–5cc	994	99	-96	195	geophysical log	TWDB	10/4/1991	unpublished data, 1991
AY–68–37–601	1,150	-24	-164	140	geophysical log	TWDB	3/9/1953	Petitt and George, 1956
AY–68–37–605	1,139	-40	-186	146	drillers' log	TWDB	5/7/1971	TWDB, 2009
AY–68–37–607	1,054	-43	-163	120	drillers' log	TWDB	7/1/1947	Petitt and George, 1956
AY–68–37–608	1,047	18	-180	198	geophysical log	TWDB	10/1/1944	Petitt and George, 1956
AY–68–37–610	1,145	-35	-145	110	drillers' log	SAWS	5/17/1996	unpublished data, 1996
AY–68–37–714	1,260	-307	-423	116	drillers' log	TWDB	8/1/1947	Petitt and George, 1956
AY–68–37–716	844	247	22	225	report/publication	TWDB	--	Livingston, 1947
AY–68–37–719	1,241	148	5	143	geophysical log	SAWS	4/17/1952	Petitt and George, 1956
AY–68–37–720	1,286	-350	-440	90	drillers' log	TWDB	3/17/1988	TWDB, 2009
AY–68–37–721	1,475	0	-176	176	drillers' log	TWDB	1/3/1997	TWDB, 2009
AY–68–37–7aa	758	188	50	138	report/publication	TWDB	--	Livingston, 1947
AY–68–37–7bb	1,652	162	57	105	report/publication	TWDB	--	Livingston, 1947
AY–68–37–7cc	--	116	-22	138	geophysical log	EAA	9/28/1992	unpublished data, 1992
AY–68–37–7dd	998	-302	-599	297	report/publication	TWDB	--	Livingston, 1947
AY–68–37–7ee	1,052	69	-184	253	report/publication	TWDB	--	Livingston, 1947
AY–68–38–104	998	579	331	248	drillers' log	TWDB	7/2/1968	TWDB, 2009

Appendix 1. Wells selected for inclusion in geodatabase of selected wells penetrating the Austin Group, central Bexar County, Texas,

State well number	First alternate well identifier	Second alternate well identifier	Third alternate well identifier	Latitude (dd)	Longitude (dd)	Land-surface altitude (feet above NAVD 88)	Year drilled
AY–68–38–106	Doug Sanders	--	--	29.4832873536	98.3600138458	745	1970
AY–68–38–108	Ray Ellison	--	--	29.483287304	98.3747362232	730	1971
AY–68–38–109	J–41	--	--	29.4666210053	98.3472354505	687	1930
AY–68–38–110	Doug Sanders	--	--	29.4821753632	98.3691810759	715	1973
AY–68–38–111	Lackland	--	--	29.4971749217	98.3375133228	800	1985
AY–68–38–1aa	W.M. Collier	--	--	29.4622222222	98.3738888889	697	--

[1] Unpublished data on file at source agency.

[2] Completed only in Austin Group.

[3] Duplicate of proceeding well entry with different well information for some fields; determination of which well record contained the correct well information was not possible for this report.

2010—Continued.

State well number	Well depth (feet below LSD)	Altitude of top of Austin Group (feet above NAVD 88)	Altitude of base of Austin Group (feet above NAVD 88)	Thickness of Austin Group (feet)	Data source	Source agency	Data source date	Report author, year[1]
AY–68–38–106	1,196	298	184	114	drillers' log	TWDB	7/13/1973	TWDB, 2009
AY–68–38–108	1,023	405	245	160	geophysical log	USGS	11/15/1971	unpublished data, 1971
AY–68–38–109	860	287	58	229	drillers' log	TWDB	8/1/1930	Petitt and George, 1956
AY–68–38–110	1,042	391	279	112	geophysical log	USGS	8/16/1973	unpublished data, 1973
AY–68–38–111	727	470	314	156	drillers' log	TWDB	5/25/1985	TWDB, 2009
AY–68–38–1aa	752	233	83	150	geophysical log	TWDB	2/5/1986	unpublished data, 1986

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