

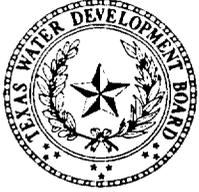
Report 331

**Ground-Water Quality
Monitoring of the Trinity
Aquifer in the Vicinity of
Erath County**

July 1991



Texas Water Development Board



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of the Trinity Aquifer in the Vicinity
of Erath County**

by
Barbara E. Beynon, Geologist

July 1991

Texas Water Development Board

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Texas Water Development Board

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ABSTRACT

The purpose of this study was to examine the ground-water quality from selected wells completed in the Trinity Group in all or parts of Bosque, Comanche, Eastland, Erath, Hamilton, Hood, and Somervell Counties. This segment of the Trinity was selected to coincide with a multi-agency study investigating dairy operations and their effect on ground water.

Sampling and laboratory analyses were performed during the second and third quarters of 1990. A total of 66 wells were sampled: 4 wells in the Antlers Formation; 6 wells in the Paluxy Formation; 1 well in the Glen Rose Formation; and 55 wells in the Twin Mountains Formation. All analyses in this report are presented in five sections; field measurements; dissolved inorganic constituents; nutrients; pesticides; and radioactivity.

No wells in the Antlers Formation exceeded the established Maximum Contaminant Levels (MCLs) for dissolved inorganic constituents. In Erath County the Paluxy Formation had 2 wells which had excessive dissolved inorganic constituents: chlorides (1 well); dissolved solids (2 wells); iron (2 wells); and manganese (1 well). The Twin Mountains Formation had thirteen wells, located in Comanche, Eastland, Erath, and Hood Counties, which had excessive dissolved inorganic constituents: chlorides (4 wells); dissolved solids (2 wells); iron (9 wells); and manganese (1 well).

No wells in the Antlers Formation exceeded the MCL for nitrate of 10 mg/l (as N). The Paluxy Formation had one well in Hamilton County which exceeded the MCL for nitrate. Four wells in the Twin Mountains Formation, located in Comanche and Erath Counties, exceeded the MCL for nitrate.

None of the 66 wells sampled in this study had any detectable amounts of insecticides or herbicides.

Both the Antlers Formation and the Paluxy Formation had no wells in excess of established MCLs for radioactivity. Five wells in the Twin Mountains Formation, located in Erath and Hood Counties, exceeded the established MCLs in gross alpha (5 wells) and combined Radium-226 and Radium-228 (4 wells).

A subjective attempt to compare previous water quality analyses of these same wells to these analyses was done using three parameters: chlorides, sulfates, and dissolved solids. Of the 4 wells sampled in the Antlers Formation, only two had previous sampling data; and no change in water quality was noted. Of the 55 wells sampled in the Twin Mountains, 36 wells had previous sampling data. Of these, no significant change in water quality was noted in 25 wells; some improvement in 5 wells; and some deterioration in 6 wells. Overall the water quality in the study area is good, and to date has shown little change in quality.

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INTRODUCTION

Purpose

The purpose of this report was to examine the quality of ground water from selected wells completed in the Trinity aquifer in all or parts of Bosque, Comanche, Eastland, Erath, Hamilton, Hood, and Somervell Counties (Figure 1). This was accomplished as part of the Board's water-quality monitoring program which was established to: (1) monitor changes, if any, in the quality of ground water over a period of time; and (2) establish, as accurately as possible, the base-line characteristics of the dissolved constituents in ground water occurring naturally in the State's aquifers.

A secondary purpose for selecting this particular segment of the Trinity aquifer at this time was to coincide with a multi-agency study in Erath County investigating the dairy operations in this area and their effect on ground water. The Texas Water Commission (TWC) has conducted a study in Erath County to determine the effects on ground water of confined animal operations and pesticide use. The Tarleton State University Institute for Applied Research is actively studying this area in conjunction with the TWC and the Texas State Soil and Water Conservation Board (TSSWCB).

One of the most important projects taking place in the Erath County area is the 5-year Upper North Bosque River Hydrologic Unit Project. Principal agencies involved in this study include the Soil Conservation Service, TSSWCB, Texas Agricultural Extension Service, and the Agricultural Stabilization and Conservation Service. The primary objective of the Project is to assist dairy owners and managers in installing animal waste management systems and applying Best Management Practices which will significantly reduce or prevent the potential for pollution in surface runoff and ground water within the watershed. Other contributors to this project are the Texas Agricultural Experiment Stations, the TWDB, the United States Geological Survey, the United States Department of Agriculture, and the Environmental Protection Agency.

Location and Extent

The study area encompasses approximately 3000 square miles through north central Texas (Figure 1). It extends from Comanche northeast to Granbury and from Hico northwest to Eastland. It includes the towns of Stephenville, Dublin, De Leon, Gorman, and Glen Rose. Stephenville, which is near the center of the study area, is about 90 miles west-southwest from Dallas.

Topography and Drainage

The topography of the area is characterized by rolling hills, sandy soils, and winding river valleys. Drainage is generally to the southeast into the Brazos and Colorado River basins. Native vegetation includes pecan, oak, mesquite, and juniper, although a significant amount of acreage has been cleared for farming and pasture land (Dallas Morning News, 1988).

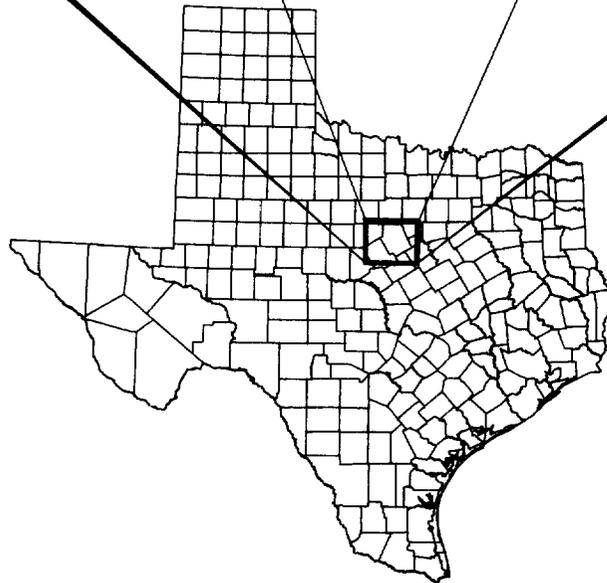
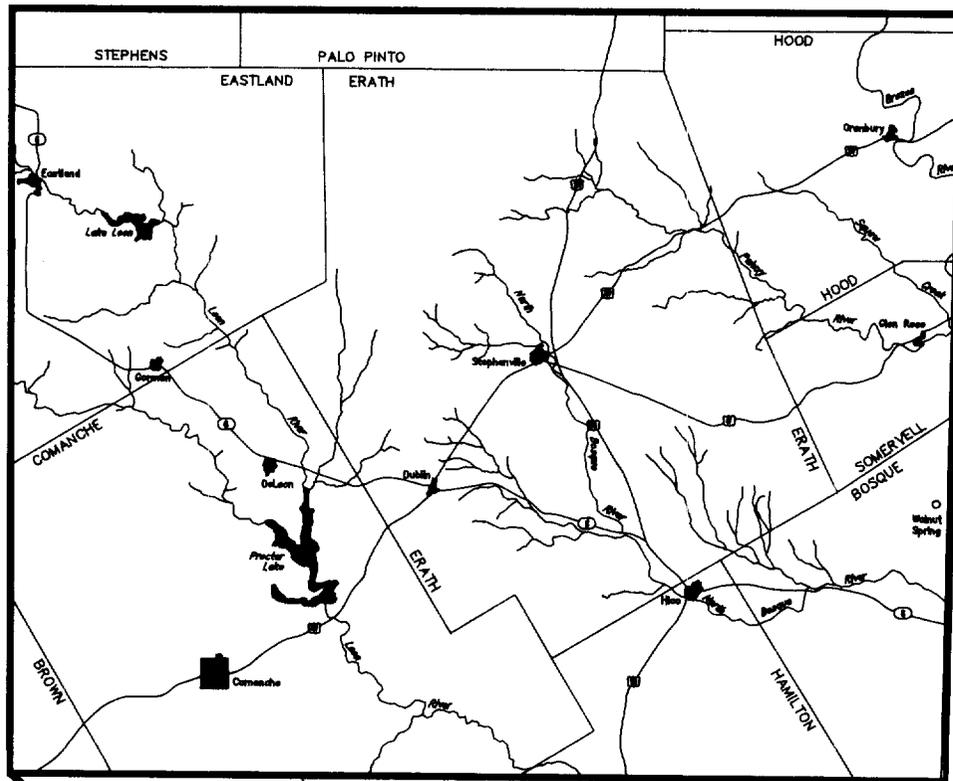


Figure 1

LOCATION OF STUDY AREA

Climate

The climate of the study area is characterized by long, hot summers and short, mild winters. The average daily minimum temperature is approximately 32°F in January, and the average daily maximum is 96°F in July. The average annual precipitation ranges from 28 to 30 inches across the study area (Dallas Morning News, 1988).

Economy

The overall economy of the area is based on agribusiness and mineral production. Principal crops include peanuts; grain sorghum, corn, wheat, and other grains; hay; cotton; and pecans. Livestock production includes dairy and beef cattle, sheep, goats, hogs, horses, and poultry. Dairy farming is a particularly important industry, and Erath County is the largest milk producer in Texas. Mineral production includes oil and gas; additionally sand, gravel, limestone, lime, and clay are mined in the area (Dallas Morning News, 1988).

Previous Investigations

Several governmental agencies and consulting firms have worked in this area over the years and discussed their findings related to the geology and ground-water resources in numerous publications. Initial work concerning the ground-water resources of the area began in the 1930s and continues through the present.

Previous investigations by the Texas Water Development Board includes Samuell (1937); Rose and George (1942); Kane (1967); Carr (1967); Klemm and others (1975); Nordstrom (1987); and Baker and others (1990). Publications pertinent to the geology and hydrology of the aquifers in the study area are listed in the Selected References of this report.

Acknowledgements

The Board appreciates the cooperation of the property owners within the study area for supplying information concerning their wells and allowing access to their property to sample for water quality. Appreciation is also extended to the various State and Federal agencies working in the study area and for the sharing of information that will result in a more cohesive report.

GEOHYDROLOGY

Geologic Framework

The geologic formations underlying the study area range in age from Paleozoic to Recent. The most important water-bearing units are of Cretaceous age: specifically the Antlers, Paluxy, and Twin Mountains Formations of the Trinity Group. The outcrop area of the Trinity Group units in the study area is shown in Figure 2.

The stratigraphic nomenclature and structural relationships of the various formations and members of the Trinity Group are shown in Figure 3. The Antlers Formation is the portion of the Trinity Group updip from the regional pinch-out of the Glen Rose Formation. The Glen Rose Formation is the division between the Paluxy Formation and the Twin Mountains Formation in north-central Texas. The correct geological name for the sands and clays which underlie the Glen Rose Formation in north-central Texas is the Twin Mountains Formation (Fisher and Rodda, 1967). Many geologists refer to this as the Travis Peak Formation, but that is the equivalent calcareous formation to the south of the study area.

The stratigraphic relationship, approximate thickness, lithologic description, and water-bearing characteristics of the geologic units within the study area are summarized in Table 1.

Detailed studies of the geology in the area have been previously published in other TWDB reports. Specifically the reports by Klemt and others (1978) and Nordstrom (1987) summarize the geologic history, structure, stratigraphic framework, and their effects on the ground water in this area.

Source and Occurrence

The primary source of ground water in the study area is the infiltration of precipitation either directly into the outcrop or indirectly as seepage from stream flow. A small amount of rainfall percolates downward under the force of gravity to the zone of saturation, which is that portion in the subsurface where all of the voids contain water.

For a formation to be an aquifer, it must be porous, permeable, water-bearing, and yield water in usable quantities. Two important characteristics of all aquifer rocks are porosity, or the amount of open space between the grains in the rock, and permeability, or the ability of a porous material to transmit water. Fine-grained sediments such as clay and silts generally have high porosity but little or no permeability and consequently do not readily transmit water. Sand and gravel are usually both porous and permeable, the degree depending upon the size, shape, sorting, and amount of cementation between the grains. In limestone, igneous rocks, and tightly cemented or compacted rocks, porosity and permeability are controlled to some degree by the occurrence and extent of joints, crevices, or solution cavities.

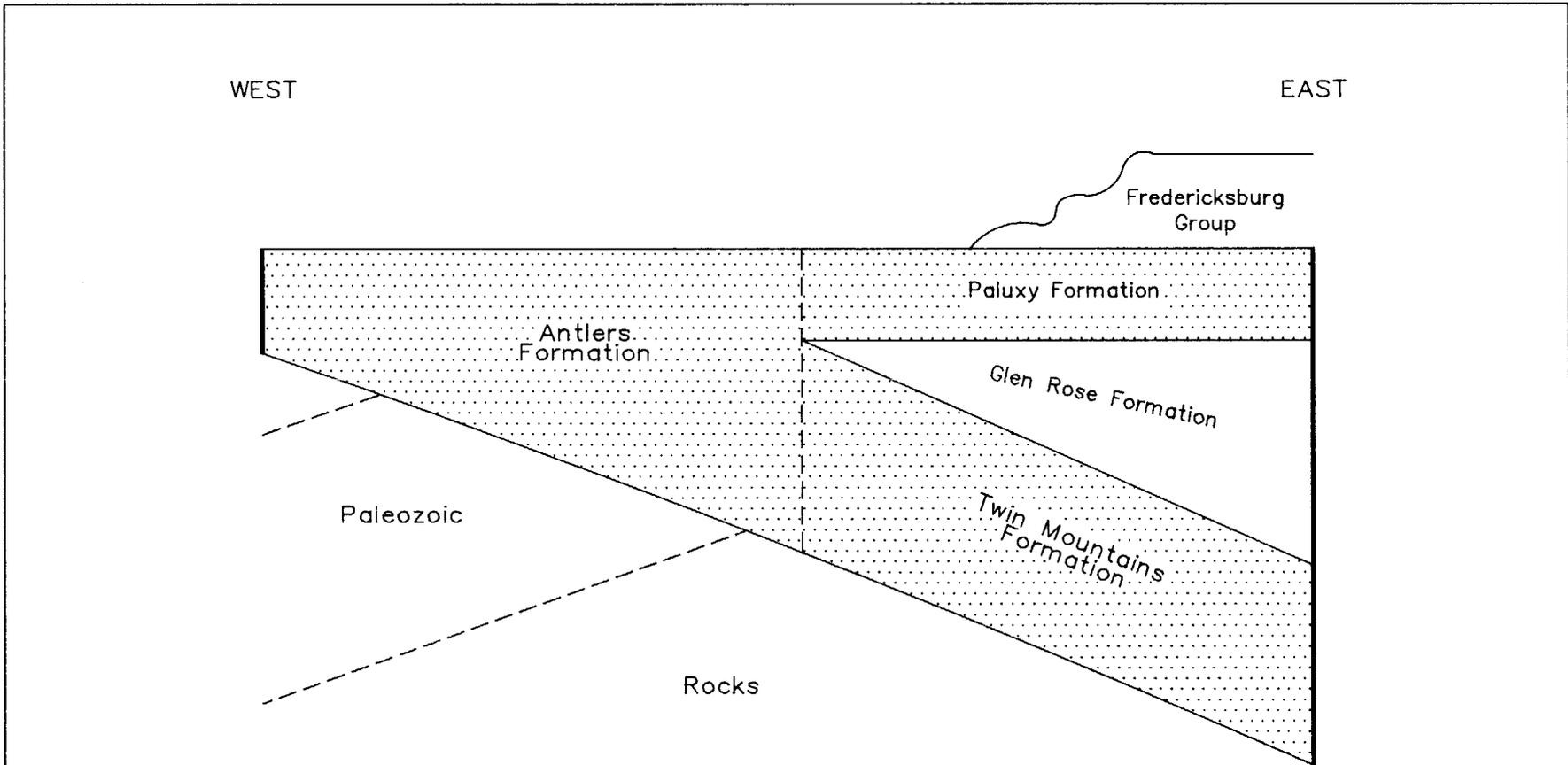


Figure 3

NOMENCLATURE OF THE TRINITY AQUIFER
IN THE STUDY AREA

(Modified from Atchley, 1983, p.12)

Table 1.- Geologic Units and Their Water-Bearing Characteristics

System	Series	Group	Geologic Unit	Maximum	Character of Rock	Water-Bearing Properties ¹			
Quaternary	Recent		Alluvium	—	Mostly gravel, sand, silt, and clay.	Yields small to moderate quantities of fresh to moderately saline water, mostly along the Brazos River.			
Cretaceous	Comanche	Fredericksburg		160	Hard fossiliferous limestone, shale, chert, dolomite, and some calcareous clay.	Yields little or no water in the study area.			
		Trinity	Antlers Formation	200	Alternating sandstones, claystones, and conglomerates. Sandstones are fine to very fine-grained, locally coarse-grained.	Paluxy Formation	100	Fine-grained quartz sand partly indurated by calcium carbonate cement. Locally contains thin beds of limestone and marl.	Yields small quantities of fresh to slightly saline water in the study area.
						Glen Rose Formation	250	Massive, fossiliferous limestone and dolomite in basal part, grading upward into the beds of limestone, shale, marl, and gypsum. <i>Corbula martinae</i> bed divides upper and lower members.	Yields small quantities of fresh to slightly saline water in the study area.
						Twin Mountains Formation	200	Alternating beds of sandstones, claystones, and conglomerates. Conglomerates confined mostly to lower unit. Sandstones are fine to medium-grained, well sorted, locally crossbedded and friable.	Yields small to moderate quantities of fresh to slightly saline water in the study area.

* Yields of Wells, in gallons per minute (gal/min): Small, less than 100 gal/min; moderate, 100 - 1,000 gal/min. Modified from TWDB Rpt. 319
 Quality of Water, in milligrams per liter (mg/l) dissolved solids: Fresh, less than 1,000 mg/l; slightly saline, 1,000 - 3,000 mg/l; moderately saline, 3,000 - 10,000 mg/l.

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Recharge, Movement, and Discharge

Recharge is the process by which water is added to an aquifer. Precipitation on the outcrop is the most significant natural source of recharge in the Trinity aquifer; however, water may enter from surface streams and lakes on the outcrop and possibly through interformational leakage. The amount of recharge must balance the discharge over a long period of time or the water in the aquifer will eventually be depleted. Factors which influence the amount of recharge received by an aquifer in its outcrop area are the amount and frequency of precipitation, rates of evaporation, types and condition of soil cover, topography, type and amount of vegetation, and the extent of the outcrop area. In addition, the ability of the aquifer to accept recharge and transmit it to areas of discharge influences the amount of recharge it will eventually receive. Recharge is generally greater during the winter months when plant growth, pumpage, and evaporation rates are all low.

Ground water moves in response to the hydraulic gradient from areas of recharge to areas of discharge. The movement of ground water within the Trinity aquifer under water-table conditions near the outcrop is generally parallel to the surface drainage. Under artesian conditions the movement is the same as that of the regional dip of the aquifer; in this case, it is down dip toward the southeast.

Discharge is the process by which water is removed from the aquifer. This may be through natural means such as springs, seepage to streams and lakes, transpiration through vegetation, evaporation through the soil, and interformational leakage. Artificial discharges include flowing and pumping wells and through excavations which intersect the water table.

WATER QUALITY

The chemical character of ground water mirrors the mineral composition of the rocks through which it has passed. As water moves through its environment, its solvent power dissolves some of the minerals from the surrounding rocks. Concentrations of the various dissolved mineral constituents depend upon the solubility of the minerals in the formation, the length of time the water is in contact with the rock, and the concentration of carbon dioxide present within the water. Additionally dissolved mineral concentrations generally increase with depth and temperature (Nordstrom, 1987). Neutralizing or removing the unwanted constituents is usually difficult and can be very costly.

Certain precautions are necessary in order to obtain water samples for chemical analysis that are representative of the true hydrochemical character of the aquifer. Prior to collecting a ground water sample from a well, the well must first be purged, which means removal of a sufficient volume of ground water stored in the well casing before a representative sample can be collected. The sample should be collected near the wellhead before the water has gone through pressure tanks, water softener, or other treatment. If a well is being actively pumped, the temperature, specific conductance, and pH are monitored until stabilization of the readings occurs. At that point, the well may be sampled. Standby, new, or little-used wells may require a day or more of pumping before the water is of constant quality (Wood, 1976).

The most representative water samples usually can be obtained from municipal, industrial, or irrigation wells. Because of their constant pumping and high yield, these wells draw water from a large area of the aquifer and usually insure a representative sample. Figure 4 shows the location of wells sampled for water quality analysis for this study.

Analytical Methods

Upon arrival at the wellsite, the purging procedure was started. During purging, the temperature, specific conductance (using a VWR conductivity meter), and pH (using Beckman pH meter) were monitored at five minute intervals until the readings stabilized.

Water samples were then collected according to the Texas Water Development Board Field Manual for Ground Water Sampling (Nordstrom and Adidas, 1990):

Dissolved anions: Ground water was filtered through a 0.45 μm nonmetallic filter into a 1-liter polyethylene bottle. The sample was then placed on ice and delivered to the Texas Department of Health (TDH) laboratory. Analyses were completed within 28 days. The sample was analyzed for sulfate, chloride, iodide, bromide, boron, fluoride, silica, and alkalinity contents. Table 2 shows the analytical method and detection limit for each species.

Dissolved cations/metals: Ground water was filtered through a 0.45 μm nonmetallic filter into a 1-liter polyethylene bottle and preserved with 5 ml HNO_3 . The sample was then placed on ice and delivered to the TDH laboratory. Analyses were completed within 28 days. The sample was

Table 2.-Detection Limits and Analytical Methods for Inorganic Species

	Symbol	Limit	Method
Boron	B	0.01 mg/l	Method 404A
Bromide	Br	0.1 mg/l	Method 405
Chloride	Cl	1 mg/l	EPA Method 325.2
Fluoride	F	0.1 mg/l	EPA Method 325.2
Iodide	I	0.01 mg/l	Method 415A
Silica	SiO ₂	1 mg/l	Method 425E
Sulfate	SO ₄	2 mg/l	EPA Method 375.2
Unless otherwise specified, "Method" refers to <i>Standard Methods for the Examination of Water and Wastewater</i> (ACPHA, 1985).			
Dissolved Cations/Metals			
Aluminum	Al	50 µg/l	ICP
Arsenic	As	10 µg/l	GFAA
Barium	Ba	10 µg/l	ICP
Cadmium	Cd	10 µg/l	FAAS
Calcium	Ca	1 mg/l	ICP
Chromium	Cr	20 µg/l	ICP
Copper	Cu	20 µg/l	ICP
Iron	Fe	20 µg/l	ICP
Lead	Pb	50 µg/l	FAAS
Magnesium	Mg	1 mg/l	ICP
Manganese	Mn	20 µg/l	ICP
Mercury	Hg	0.2 µg/l	CVAAS
Molybdenum	Mo	20 µg/l	ICP
Potassium	K	1 mg/l	ICP
Selenium	Se	2 µg/l	Fluorometric
Silver	Ag	10 µg/l	FAAS
Sodium	Na	1 mg/l	ICP
Strontium	Sr	200 µg/l	ICP
Vanadium	V	20 µg/l	ICP
Zinc	Zn	20 µg/l	ICP
ICP- Induction Coupled Plasma, EPA Method 200.7 GFAA - Graphite Furnace AA, EPA Method 206.2 FAAS- Flame AA, EPA Methods 213.1 (Cd), 239.1 (Pb), 272.1 (Ag) CVAAS- Cold Vapor AA, EPA Method 245.1 Fluorometric, DAN Method, AOAC Method 25.157			
Nutrients			
Ammonia	NH ₃ (N)	0.2 mg/l	EPA Method 350.1
Kjeldahl	N	0.2 mg/l	EPA Method 351.2
Nitrate	NO ₃ (N)	0.01 mg/l	EPA Method 353.2
Nitrite	NO ₂ (N)	0.01 mg/l	EPA Method 353.2
Orthophosphate	PO ₄ (P)	0.01mg/l	EPA Method 365.1
Radioactivity			
Gross Alpha	α	2.0 mg/l	EPA Method 900.0
Gross Beta	β	4.0 mg/l	EPA Method 900.0
Radium-226	Ra ²²⁶	0.2 mg/l	EPA Method 903.1
Radium-228	Ra ²²⁸	1.0 pCi/l	EPA Method 904.0

analyzed for aluminum, arsenic, barium, calcium, cadmium, chromium, copper, iron, lead, magnesium, manganese, mercury, molybdenum, potassium, selenium, silver, sodium, strontium, vanadium, and zinc. Table 2 shows the analytical method and detection limit for each species.

Nutrients: Ground water was filtered through a 0.45 µm nonmetallic filter into a 500-ml opaque polyethylene bottle, preserved with H₂SO₄, placed on ice, and delivered to the TDH laboratory. Analyses were completed within 7 days. The sample was analyzed for ammonia, Kjeldahl, nitrate, nitrite, and orthophosphate. Table 2 shows the analytical method and detection limit for each species.

Pesticides: Unfiltered ground water was filled to the brim in a 1-liter glass jar. No preservative was added, and the jar was sealed with a teflon-lined cap. The sample was placed on ice and delivered to the TDH laboratory. Analyses were completed within 7 days. The sample was analyzed for insecticides and herbicides according to the EPA Method 608 for Organic Pesticides and PCB's (Federal Register, 1984) and Method 509B for Chlorinated Phenoxy Acid Herbicides (American Public Health Association, 1985). Table 3 shows the detection limit for each species.

Table 3. Detection Limits for Organic Pesticides

Organic Compound	Detection Limit (µg/l)
Aldrin	0.20
α -BHC	0.03
β -BHC	0.03
δ -BHC	0.03
Banvel	5.0
Chlordane (cis)	0.02
Chlordane (trans)	0.02
Chloropyrifos	0.6
Dacthal	0.05
Dicamba	1.0
Dieldrin	0.10
Dursban	0.60
DDD	0.30
DDE	0.20
DDT	0.30
Endrin	0.20
Endosulfan I	0.20
Endosulfan II	0.20
Endosulfan Sulfate	0.20
Hexachlorobenzene	0.02
Heptachlor	0.02
Heptachlor Epoxide	0.06
Lindane	0.03
Malathion	0.40
Methoxychlor	0.50
Mirex	0.50
Methyl Parathion	0.25
Ethyl Parathion	0.25
PCBs (aroclor)	1.0
Pentachlorophenol	2.0
Picloram	3.0
Silvex	5.0
Toxaphene	5.0
Treflan	0.06
2, 4-D	20.0
2,4,5-T	5.0

Radioactivity: Ground water was filtered through a 0.45 μm nonmetallic filter into a 1-gallon polyethylene bottle. HNO_3 was added as a preservative. The sample was then placed on ice and delivered to the TDH laboratory. Analyses were completed within 6 months. Initially gross alpha and gross beta radiation were determined, followed by radium-226 and radium-228 for all samples. Table 2 shows the analytical method and detection limit for each species.

Field Measurements: In addition to the field measurements of temperature, specific conductance, and pH to establish that the well was stabilized, measurements of the alkalinity and Eh (using a pH meter with an Eh diode) were taken. Two types of alkalinity were tested in each well: phenolphthalein alkalinity from which carbonate is calculated and total alkalinity as CaCO_3 from which bicarbonate is calculated. Both were done according to the TWDB procedures for alkalinity determination (Nordstrom and Adidas, 1990).

Analytical Results

The results of the analyses for each well are presented in Appendices II through V. The wells are grouped according to county and well number.

In this report the results will be discussed by major chemical group: Field Measurements, Dissolved Inorganic Constituents, Nutrients, Pesticides, and Radioactivity:

Field Measurements - These measurements were taken in the field at the time of sampling. The range of each measurement is presented along with the average value.

Dissolved Inorganic Constituents - These are the results of the laboratory analyses for dissolved cations, anions, and selected metals. The range of concentrations for each species is presented along with the average concentration.

Nutrients - These are the results of the laboratory analyses for nutrients. The range of concentrations for each species is presented along with the average concentration.

Pesticides - These are the results of the laboratory analyses for insecticides and herbicides. Results from all wells sampled were below detection limits. This sampling was the first time that the TWDB analyzed the ground water of this area for insecticides and herbicides.

Radioactivity - These are the results of the laboratory analyses for radioactivity. The range of concentrations for each species is presented along with the average concentration. This sampling was the first time that the TWDB analyzed the ground water of this area for radioactivity.

Within each major chemical group, the results are further broken down according to the aquifer. All of the wells in the study area were completed in four aquifers: the Antlers Formation (4 wells); the Paluxy Formation (6 wells); the Glen Rose Formation (1 well); and the Twin Mountains Formation (55 wells). The four wells completed in the Antlers Formation are located in Eastland County and are used for irrigation and livestock purposes. Additionally, one well is used for domestic purposes. The six wells completed in the Paluxy Formation are located in Erath and Hamilton Counties and are used for domestic, stock, and commercial purposes. One well completed

in the Glen Rose Formation and located in Bosque County was sampled in this study. The 55 wells completed in the Twin Mountains Formation are located in Bosque, Comanche, Eastland, Erath, Hamilton, Hood, and Somervell Counties. Ground water from the Twin Mountains Formation is used for stock, irrigation, domestic, industrial, and public purposes.

The Texas Department of Health has set the primary and secondary maximum concentration level (MCL) for water which is used for human consumption. These standards can be found in Table 4.

Table 4.-Drinking Water Standards for Selected Inorganic Constituents as Set by the Texas Department of Health

Primary Constituent Levels			
Arsenic	As	0.05	mg/l
Barium	Ba	1.	mg/l
Cadmium	Cd	0.010	mg/l
Chromium	Cr	0.05	mg/l
Fluoride	F	4.0	mg/l
Lead	Pb	0.05	mg/l
Mercury	Hg	0.002	mg/l
Nitrate (as N)	NO ₃	10.	mg/l
Selenium	Se	0.01	mg/l
Silver	Ag	0.05	mg/l
Gross Alpha	α	15	pCi/l
Gross Beta	β	50	pCi/l
Radium	Ra-226 + Ra-228	5	pCi/l
Secondary Constituent Levels			
Chloride	Cl	300	mg/l
Copper	Cu	1.0	mg/l
Fluoride	F	2.0	mg/l
			(community)
Iron	Fe	0.3	mg/l
Manganese	Mn	0.05	mg/l
pH		>7.0	
Sulfate	SO ₄	300	mg/l
Total Dissolved Solids	TDS	1,000	mg/l
Zinc	Zn	5.0	mg/l

FIELD MEASUREMENTS

**Antlers
Formation**

The summary of the field analyses of the Antlers Formation ground water is found in Table 5. The average temperature of the Antlers Formation ground water was 19.0°C. The pH was essentially neutral, ranging from 6.7 to 7.0 with an average of 6.9. The specific conductance ranged from 678 to 1,440 µmhos with an average of 1,094 µmhos. The Eh ranged from 256 to 340 mV with an average of 292 mV, indicating that the ground water is oxidizing in nature. Because the pH was below 8.3, phenolphthalein alkalinity was zero. Total alkalinity averaged 352 mg/l.

Table 5.-Field Measurements of the Antlers Formation Ground Water.

	Range	Average
Temperature	18.2 - 20.3 °C	19.0 °C
Specific Conductance	678 - 1,440 µmho	1,094 µmho
pH	6.7 - 7.0	6.9
Eh	256 - 340 mV	292.3 mV
Alkalinity (Phenolphthalein)	0 mg/l	0 mg/l
Alkalinity (Total)	323 - 392 mg/l	352 mg/l

**Paluxy
Formation**

The summary of field analyses of the Paluxy Formation ground water is found in Table 6. The pH of the Paluxy ground water was essentially neutral, ranging from 6.8 to 7.2 with an average of 7.0. The specific conductance ranged from 452 to 2300 µmhos with an average of 850 µmhos. The Eh averaged 182.4 mV, indicating that the ground water is oxidizing in nature. Because the pH was below 8.3, and it had a phenolphthalein alkalinity was zero. Total alkalinity averaged 332 mg/l.

Table 6.-Field Measurements of the Paluxy Formation Ground Water

	Range	Average
Temperature	19 - 21°C	20°C
Specific Conductance	452 - 2,300 µmho	851 µmho
pH	6.8 - 7.2	7.0
Eh	156.2 - 208.6 mV	182.4 mV
Alkalinity (Phenolphthalein)	0 mg/l	0 mg/l
Alkalinity (Total)	259 - 401 mg/l	332 mg/l

Twin Mountains Formation

The summary of the field analyses of the Twin Mountains Formation ground water is found in Table 7. The average temperature of the Twin Mountains Formation ground water was 21.1°C. The pH was essentially neutral in most wells, ranging from 6.3 to 8.8 with an average of 7.2. Two "outlier" wells, one at each end of the pH spectrum, broadened the overall range of the pH measurements. The average specific conductance ranged from 44 to 2010 µmhos with an average of 888 µmhos. The Eh ranged from -198.6 to +280.8 mV with an average of +152.5 mV, indicating that the average Twin Mountains ground water is oxidizing in nature. Only one well had a pH greater than 8.3, and it had a phenolphthalein alkalinity of 16 mg/l. The total alkalinity averaged 371 mg/l.

Table 7.-Field Measurements of the Twin Mountains Formation Ground Water

	Range	Average
Temperature	19 - 22.9°C	21.1°C
Specific Conductance	444 - 2,010 µmho	888 µmho
pH	6.3 - 8.8	7.2
Eh	-198.6 - + 280.8 mV	152.5 mV
Alkalinity (Phenolphthalein)	0 - 16 mg/l	0 mg/l
Alkalinity (Total)	72 - 550 mg/l	371 mg/l

DISSOLVED INORGANIC CONSTITUENTS

Most of the wells in the study area were within drinking water standards for dissolved inorganic constituents. However, several wells in the Paluxy Formation and the Twin Mountains Formation had some constituents in excess of the MCLs. These constituents were:

Iron: Iron contamination is probably caused by poorly completed wells or from naturally occurring iron in the rock. On exposure to air, iron in ground water oxidizes to form a reddish-brown precipitate. Iron content in excess of the TDH drinking water standard of 0.3 mg/l can stain laundry and utensils. Larger quantities can cause an unpleasant taste and promote the growth of iron bacteria. Such ground water is not recommended for domestic use unless some kind of water treatment or filter system is used.

Chloride: Chloride is naturally dissolved from rocks and soils. It is present in sewage and is found in large amounts in oil-field brines, sea water, and industrial brines. Chloride content in excess of the TDH drinking water standard of 300 mg/l, in combination with sodium, gives a salty taste to drinking water. Extreme chloride concentration can also increase the corrosiveness of the water.

Manganese: Small amounts of manganese are found naturally in limestones and dolomites where it substitutes for calcium in the chemical structure. In aqueous solution, divalent manganese commonly precipitates to form coatings of manganese oxide (desert varnish). The TDH has set the drinking water standard for manganese at 0.05 mg/l.

Dissolved Solids: Dissolved solids are primarily mineral constituents dissolved from the rock. The TDH recommends that waters containing more than 1000 mg/l not be used if other less mineralized supplies are available. Ground water which contains dissolved solids in excess of drinking water standards is not recommended for domestic use unless some kind of water treatment or filter system is used.

Another term which is frequently used when discussing chemical analyses of water samples is hardness. Hardness is a calculation based on dissolved alkali earth metals. The property of hardness is associated primarily with reactions of water and soap; as the hardness increases, so does the soap-consuming ability of the water. Hard water forms scale in boilers, water heaters, and pipes. Hardness in excess of 180 mg/l is considered to be very hard. For general domestic use, the hardness of water is not particularly objectionable until it attains about 100 mg/l.

Only one well, #32-57-701, in the Glen Rose Formation was sampled for dissolved inorganic constituents. There were no constituents in excess of drinking water standards in this well. Because only one well was sampled, no statement concerning overall water quality of the Glen Rose Formation can be made.

Antlers Formation

A summary of the laboratory analyses of the dissolved inorganic constituents of the Antlers Formation ground water is found in Table 8. An insufficient number of wells in the Antlers Formation was sampled to give a statistically meaningful description of the "typical" formation water.

Table 8.-Dissolved Inorganic Constituents of the Antlers Formation Ground Water

Constituent	Concentration Range Conc.	Average
Aluminum	Below detection limit	—
Arsenic	Below detection limit	—
Barium	93 - 316 µg/l	221 µg/l
Boron	190 - 260 µg/l	238 µg/l
Bromide	0.1 - 0.3 mg/l	0.2 mg/l
Cadmium	Below detection limit	—
Calcium	80 - 184 mg/l	140 mg/l
Chloride	54 - 310 mg/l	173 mg/l
Chromium	Below detection limit	—
Copper	Below detection limit	—
Dissolved Solids	247 - 878 mg/l	657 mg/l
Fluoride	<0.2 - 0.7 mg/l	0.3 mg/l
Hardness	244 - 544 mg/l	416 mg/l
Iodide	Below detection limit	—
Iron	<20 - 57 µg/l	<20 µg/l
Lead	Below detection limit	—
Magnesium	11 - 22 mg/l	17 mg/l
Manganese	Below detection limit	—
Mercury	Below detection limit	—
Molybdenum	Below detection limit	—
Potassium	2 - 7 mg/l	4 mg/l
Selenium	Below detection limit	—
Silica	11 - 22 mg/l	18 mg/l
Silver	Below detection limit	—
Sodium	48 - 107 mg/l	81 mg/l
Strontium	360 - 710 µg/l	483 µg/l
Sulfate	33 - 47 mg/l	42 mg/l
Vanadium	Below detection limit	—
Zinc	<20 - 224 µg/l	61 µg/l

Average concentrations for calcium, magnesium, and strontium were 140 mg/l, 17 mg/l, and 0.483 mg/l, respectively. Hardness of the Antlers ground water, which is calculated using these values, ranged from 244 to 554 mg/l with an average of 416 mg/l. Water softeners are recommended for most purposes using this ground water.

Two other major cation species measured were sodium and potassium, which averaged 81 mg/l and 4 mg/l, respectively. There are no MCLs established for these elements.

Many elements tested were below detection limits: aluminum, arsenic, cadmium, chromium, copper, iodide, lead, manganese, mercury, molybdenum, selenium, silver, and vanadium.

Several constituents were present in Antlers ground water, but were within drinking water standards. These constituents and their average concentrations included: barium, 0.221 mg/l; chloride, 173 mg/l; dissolved solids, 657 mg/l; fluoride, 0.3 mg/l; sulfate, 42 mg/l; and zinc, 0.061 mg/l. Iron measured below the detection limit for three wells; and, only one well measured any iron: 0.057 mg/l, far below the secondary constituent level for iron of 0.300 mg/l.

Three other dissolved species were measured: boron, bromide, and silica. The average measurements of these were 0.2 mg/l, 0.238 mg/l, and 18 mg/l, respectively. There are no established MCLs for these species.

Paluxy Formation

A summary of the laboratory analyses of the dissolved cations, anions, and selected metals of the Paluxy Formation ground water is found in Table 9. An insufficient number of wells in the Paluxy Formation was sampled to give a statistically meaningful description of the "typical" formation water.

Table 9.-Dissolved Inorganic Constituents of the Paluxy Formation Ground Water

Constituent	Concentration Range	Average Conc.
Aluminum	Below detection limit	—
Arsenic	Below detection limit	—
Barium	52 - 166 µg/l	109 µg/l
Boron	200 µg/l (1 well only)	—
Bromide	0.0 - 0.1 mg/l	0.05 mg/l
Cadmium	Below detection limit	—
Calcium	81 - 203 mg/l	115 mg/l
Chloride	5 - 399 mg/l	79 mg/l
Chromium	Below detection limit	—
Copper	Below detection limit	—
Dissolved Solids	289 - 1388 mg/l	523 mg/l
Fluoride	0.2 - 0.3 mg/l	0.25 mg/l
Hardness	244 - 872 mg/l	390 mg/l
Iodide	Below detection limit	—
Iron	<20 - 2160 µg/l	623 µg/l
Lead	Below detection limit	—
Magnesium	3 - 89 mg/l	25 mg/l
Manganese	<20 - 77 µg/l	37 µg/l
Mercury	<0.2 - 0.2 µg/l	<0.2 µg/l
Molybdenum	Below detection limit	—
Potassium	1 - 5 mg/l	2 mg/l
Selenium	<2 - 5 µg/l	3 µg/l
Silica	12 - 19 mg/l	15 mg/l
Silver	Below detection limit	—
Sodium	6 - 172 mg/l	37 mg/l
Strontium	320 - 1430 µg/l	612 µg/l
Sulfate	18 - 265 mg/l	70 mg/l
Vanadium	Below detection limit	—
Zinc	<20 - 910 µg/l	337 µg/l

Average concentrations for calcium, magnesium, and strontium were 115 mg/l, 25 mg/l, and 0.612 mg/l, respectively. Hardness of the Paluxy ground water, which is calculated using these values, ranged from 244 to 872 mg/l with an average of 390 mg/l. Water softeners are recommended for most purposes using this ground water.

Sodium and potassium averaged 44 mg/l and 2 mg/l, respectively. Many elements tested were below detection limits: aluminum, arsenic, cadmium, chromium, copper, iodide, lead, mercury, molybdenum, silver, and vanadium. Three other dissolved species were measured: boron, bromide, and silica. The average measurements of these were 0.2 mg/l, 0.5 mg/l, and 15 mg/l, respectively.

Several constituents were present in Paluxy ground water but were within drinking water standards. These constituents and their average concentrations included: barium, 0.109 mg/l; chloride, 79 mg/l; dissolved solids, 523 mg/l; fluoride, 0.25 mg/l; selenium, 0.003 mg/l; sulfate, 70 mg/l; and zinc, 0.337 mg/l.

Two wells with measurements for several dissolved constituents in the Paluxy Formation were in excess of secondary drinking water standards:

Well # 31-46-801 (Erath County)
Chloride was 399 mg/l
Dissolved Solids were 1,388 mg/l
Iron was 2.160 mg/l

Well # 31-56-501 (Erath County)
Iron was 1.490 mg/l
Manganese was .077 mg/l

The four constituents for which these wells exceed the MCLs are iron (2 wells), manganese (1 well), chloride (1 well), and dissolved solids (1 well). The high iron and manganese concentrations are thought to be from naturally occurring iron in the Paluxy Formation. The level of chloride and dissolved solids found in well #31-46-801 suggests that they are also from a naturally occurring source within the Paluxy.

Twin Mountains Formation

A summary of the laboratory analyses of the dissolved cations, anions, and selected metals of the Twin Mountains ground water is found in Table 10.

Figure 5 is a trilinear diagram of the 55 wells completed in the Twin Mountains based on these analyses. It shows that the "typical" Twin Mountains water is a calcium-mixed cation bicarbonate water. This is ground water which would be expected from rocks rich in calcium carbonate.

Average concentrations for calcium, magnesium, and strontium were 88 mg/l, 29 mg/l, and 1.611 mg/l, respectively. Hardness of the Twin Mountains ground water, which is calculated using these values, ranged from 6 to 718 mg/l with an average of 349 mg/l. Water softeners are recommended for most purposes using this ground water.

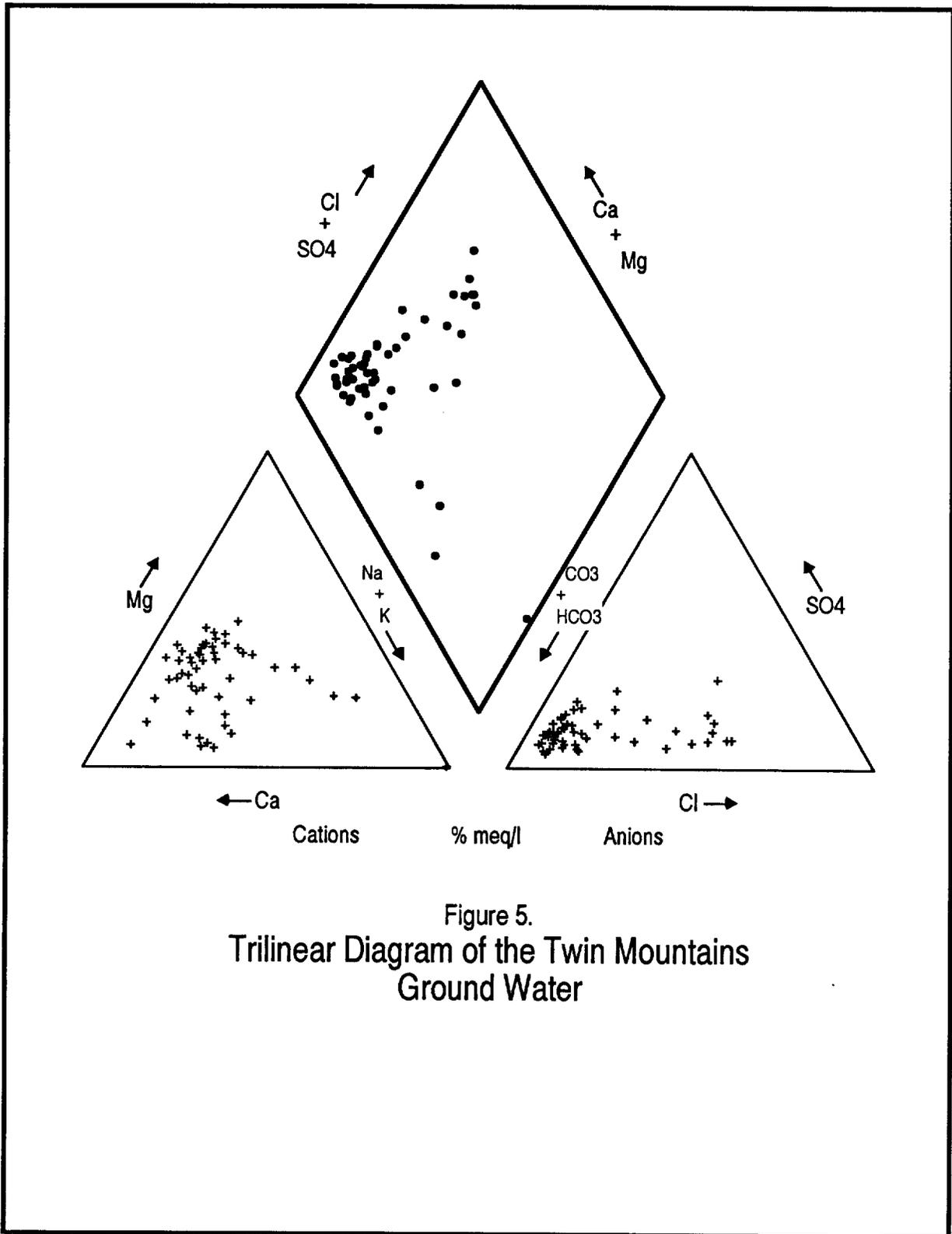


Figure 5.
Trilinear Diagram of the Twin Mountains
Ground Water

**Table 10.-Dissolved Inorganic Constituents of the Twin Mountains Formation
Ground Water**

Constituent	Concentration Range	Average Conc.
Aluminum	Below detection limit	-
Arsenic	Below detection limit	-
Barium	24 - 376 µg/l	148 µg/l
Boron	210 - 610 µg/l	337 µ/l
Bromide	<0.01 - 0.4 mg/l	0.02 mg/l
Cadmium	Below detection limit	-
Calcium	2 - 246 mg/l	88 mg/l
Chloride	9 - 399 mg/l	68 mg/l
Chromium	Below detection limit	-
Copper	Below detection limit	-
Dissolved Solids	295 - 1,265 mg/l	501 mg/l
Fluoride	<0.1 - 1.1 mg/l	0.2 mg/l
Hardness	6 - 718 mg/l	349 mg/l
Iodide	<0.1 - 0.3 mg/l	< 0.1 mg/l
Iron	<20 - 2,880 µg/l	254 µg/l
Lead	Below detection limit	-
Magnesium	0 - 71 mg/l	29 mg/l
Manganese	<20 - 177 µg/l	< 20 µg/l
Mercury	<0.2 - 0.2 µg/l	< 0.2 µg/l
Molybdenum	Below detection limit	-
Potassium	2 - 9 mg/l	5 mg/l
Selenium	<2 - 4 µg/l	< 2 µg/l
Silica	5 - 24 mg/l	17 mg/l
Silver	Below detection limit	-
Sodium	8 - 210 mg/l	47 mg/l
Strontium	<200 - 5,670 mg/l	1,611 µg/l
Sulfate	14 - 177 mg/l	52 mg/l
Vanadium	Below detection limit	-
Zinc	<20 - 514 µg/l	67 µg/l

Sodium and potassium averaged 47 mg/l and 5 mg/l, respectively. Many elements tested were below detection limits: aluminum, arsenic, cadmium, chromium, copper, lead, molybdenum, silver, and vanadium. Three other dissolved species were measured: boron, bromide, and silica. The average measurements of these were 0.0002 mg/l, 0.337 mg/l, and 17 mg/l, respectively.

Most elements present in the Twin Mountains ground water were below the allowed MCLs or secondary constituent levels. These constituents and their average concentrations included: barium, 0.148 mg/l; chloride, 68 mg/l; dissolved solids, 501 mg/l; fluoride, 0.2 mg/l; iron, 0.254 mg/l; sulfate, 52 mg/l; and zinc, 0.067 mg/l.

The following 13 wells had measurements for dissolved inorganic constituents which exceeded drinking water standards:

Well # 31-52-213 (Comanche County)

Iron was 2.610 mg/l

Manganese was 0.077 mg/l

Well # 41-04-304 (Comanche County)
Chloride was 354 mg/l
Dissolved Solids were 1265 mg/l
Well # 31-44-505 (Eastland County)
Chloride was 301 mg/l
Well # 31-51-277 (Eastland County)
Dissolved Solids were 1126 mg/l
Chloride was 385 mg/l
Well # 31-51-311 (Eastland County)
Chloride was 337 mg/l
Well # 31-48-102 (Erath County)
Iron was 0.569 mg/l
Well # 31-48-902 (Erath County)
Iron was 2.880 mg/l
Well # 31-62-803 (Erath County)
Iron was 0.305 mg/l
Well # 31-62-901 (Erath County)
Iron was 1.100 mg/l
Well # 31-63-701 (Erath County)
Iron was 1.778 mg/l
Well # 31-64-402 (Erath County)
Iron was 0.938 mg/l
Well # 32-42-403 (Hood County)
Iron was 0.417 mg/l
Well # 32-49-201 (Hood County)
Iron was 0.499 mg/l

The four standards for which these wells exceed the MCLs are iron (9 wells), manganese (1 well), chloride (4 wells), and dissolved solids (2 wells). The first three constituents are thought to be from naturally occurring elements from within the Twin Mountains Formation. Figure 6 shows the iron concentration in each of the Twin Mountains wells in the study area. Those wells which exceed the drinking water standard of 300 mg/l are located along the Leon River, the North Bosque River, the Paluxy River, and Squaw Creek.

NUTRIENTS

In this study, five nutrients were analyzed in each well: nitrate, Kjeldahl, ammonia, nitrite, and orthophosphate.

Because of the heavy agriculture usage of the land in the study area, nitrate may be among the potential pollutants found in the region. Nitrate (NO_3^-) is a derivative of nitric acid and is one of the most important nutrient species. It is an end product of the aerobic stabilization of nitrogen, particularly organic nitrogen. Nitrate is used extensively as a fertilizer, as a food preservative, and as an oxidizing agent in the chemical industry. Nitrates are particularly detectable in soil and, therefore, ground water (De Zuane, 1990). Higher concentrations of nitrate in ground water should be expected where fertilizers are used, near septic tanks, in decayed animal and vegetable matter, in leachates from sludge and refuse disposal, and in industrial discharges. Nitrate concentration of natural waters should always be higher than nitrite concentration.

Nitrite (NO_2^-) is a derivative of nitrous acid. It is formed by the action of bacteria upon ammonia and organic nitrogen. Nitrite is not found as abundantly as nitrate in the environment because it is oxidized to form nitrate. Nitrite is used in industry as a food preservative (sodium and potassium salts), particularly in meat and cheese. When nitrite is detected in potable water in considerable amounts, it is an indication of sewage or bacterial contamination and inadequate disinfection. (De Zuane, 1990). Large concentrations of nitrite in water may result in the potential formation of carcinogenic nitrosamines in the bloodstream.

No infant under the age of six months should drink ground water which contains more than 10 mg/l nitrate (as N) because it is known to cause methemoglobinemia, a sometimes fatal illness related to the impairment of the oxygen-carrying ability of the blood. Partial reduction of nitrates to nitrites takes place in human saliva and in the gastrointestinal tract of infants. Nitrite oxidizes the hemoglobin in the blood to methemoglobin, which is not an oxygen carrier. This may lead to anoxia and sometimes can result in death (De Zuane, 1990). There is no MCL for nitrite. The presence of nitrate, nitrite, and ammonia in water are indicators of pollution.

The Kjeldahl value includes the amount of total organic nitrogen plus ammonia (as N) in the water. To find the amount of organic nitrogen, the ammonia concentration is subtracted from the Kjeldahl value. There are no MCLs for ammonia or Kjeldahl.

Phosphate (PO_4^{3-}) in nature is found in phosphate rock, in the mineral apatite. It is an important source of the insoluble element phosphorous. Phosphate is also the inorganic component of bones and teeth. Water supplies may contain phosphate derived from natural contact with minerals or through pollution from the application of fertilizers, sewage, and industrial waste. Ground water is likely to have a high concentration of phosphate (De Zuane, 1990). The measurements reported in this study are

only for the phosphorous content of orthophosphate, the type of phosphate used in fertilizers. There is no MCL for phosphorous.

Only one well, #32-57-701, was sampled from the Glen Rose Formation. There were no nutrients in excess of drinking water standards. Because only one well was sampled, no statement concerning overall water quality of the Glen Rose Formation can be made.

Antlers Formation

A summary of the laboratory analyses for nutrients of the Antlers Formation ground water is found in Table 11.

Table 11.-Dissolved Nutrients of the Antlers Formation Ground Water

	Range	Average
Nitrate (N)	0.59 - 4.14 mg/l	2.33 mg/l
Ammonia (N)	<0.02 - 0.04 mg/l	0.02 mg/l
Kjeldahl (N)	0.2 - 0.3 mg/l	0.2 mg/l
Nitrite (N)	<0.01 - 0.01 mg/l	0.01 mg/l
Orthophosphate (P)	0.02 - 0.04 mg/l	0.03 mg/l

The average concentration of nitrates (as N) in the Antlers was 2.33 mg/l. None of the four wells sampled in the Antlers Formation exceeded the MCL for nitrates.

The Kjeldahl value includes the amount of total organic nitrogen plus ammonia (as N) in the water. The average Kjeldahl value for the Antlers wells was 0.2 mg/l. Ammonia averaged 0.02 mg/l in these wells, indicating that most of the Kjeldahl nitrogen is organic in nature.

Nitrite measurements averaged 0.01 mg/l. The average concentration of phosphorous (as orthophosphate) was 0.03 mg/l.

Paluxy Formation

A summary of the laboratory analyses for nutrients of the Paluxy Formation ground water is found in Table 12.

Table 12.-Dissolved Nutrients of the Paluxy Formation Ground Water

	Range	Average
Nitrate (N)	<0.01 - 11.38 mg/l	3.95 mg/l
Ammonia (N)	<0.02 - 0.08 mg/l	0.03 mg/l
Kjeldahl (N)	<0.1 - 0.2 mg/l	0.1 mg/l
Nitrite (N)	<0.01 - 0.02 mg/l	<0.01 mg/l
Orthophosphate (P)	<0.01 - 0.04 mg/l	0.01 mg/l

The average concentration of nitrates (as N) in the Paluxy was 3.95 mg/l. One well, #41-07-513 in Hamilton County, completed in the Paluxy Formation contained 11.38 mg/l nitrates (N), exceeding the MCL for nitrates.

The average Kjeldahl value for the Paluxy wells tested was 0.1 mg/l. Ammonia averaged 0.03 mg/l in these wells, indicating that most of the Kjeldahl nitrogen is organic in nature.

Nitrite measurements averaged <0.01 mg/l. The average concentration of phosphorous (as orthophosphate) was 0.01 mg/l.

Twin Mountains Formation

A summary of the laboratory analyses for nutrients of the Twin Mountains Formation is found in Table 13.

Table 13.-Dissolved Nutrients of the Twin Mountains Formation Ground Water

	Range	Average
Nitrate (N)	<0.01 - 15.05 mg/l	2.20 mg/l
Ammonia (N)	<0.02 - 10 mg/l	0.25 mg/l
Kjeldahl (N)	<0.1 - 0.5 mg/l	0.1 mg/l
Nitrite (N)	<0.01 - 0.04 mg/l	<0.01 mg/l
Orthophosphate (P)	<0.01 - 0.04 mg/l	<0.01 mg/l

The average concentration of nitrates (as N) in the Twin Mountains was 2.20 mg/l. Four wells in the Twin Mountains Formation exceeded the MCL for nitrates:

- Well # 31-52-213 (Comanche County) was 10.94 mg/l
- Well # 31-52-636 (Comanche County) was 15.05 mg/l
- Well # 41-05-508 (Comanche County) was 14.15 mg/l
- Well # 31-40-101 (Erath County) was 11.15 mg/l

Figure 7 shows a map of the area with the nitrate content of each of the sampled Twin Mountains wells. Three wells, #31-52-213, #31-52-636, and #41-05-508, are located in the Leon River Basin located among other wells showing elevated, although permissible, levels of nitrate. One well, #31-40-101, is in the northeastern section of Erath County. The ground water from these four wells is not recommended for domestic use.

The average Kjeldahl value for the Twin Mountains wells tested was 0.1 mg/l. Ammonia averaged 0.25 mg/l in these wells, indicating that most of the nitrogen is organic in nature.

Nitrite measurements averaged <0.01 mg/l. The average concentration of phosphorus (as orthophosphate) was below detection limits.

PESTICIDES

The insecticides and herbicides listed in Table 3 measured below detection limits in samples from all 66 wells.

RADIOACTIVITY

Gross alpha (α) radiation consists of the emissions of positively charged helium nuclei from the nucleus of atoms having high atomic weight. When the α particle is emitted from the atom, the atomic weight decreases by 4 atomic units. This radioactive decay is measured as gross α and in the unit of picocuries per liter (pCi/l). Alpha-emitting isotopes in natural waters are mainly isotopes of radium and radon which are members of the uranium and thorium disintegration series.

A major contributing factor to the gross α radiation is the that of the radium isotopes, Ra²²⁶ and Ra²²⁸. Ra²²⁶ is a disintegration product of uranium (U²³⁸), whereas Ra²²⁸ is a disintegration product of thorium (Th²³²). Ra²²⁶ decays to Rn²²² (radon gas), which is also an α -emitter.

Gross beta (β) radiation consists of the emission of high energy electrons and positrons from the nucleus of atoms having high atomic weight. During the production of a β particle, the neutron of the atom is converted to a proton and an electron is emitted as a β particle. When a β particle is emitted from an atom, the atomic number of the atom increases one unit. Natural β -emitting isotopes are those in the uranium and thorium disintegration series, but there are other natural sources as well.

Only one well, #32-57-701, was sampled in the Glen Rose Formation. All radioactive constituents were within drinking water standards for this well. Because only one well was sampled, no statement concerning overall water quality of the Glen Rose Formation can be made.

Antlers Formation

A summary of the analyses for radioactivity in Antlers Formation ground water is found in Table 14.

Table 14. Radioactivity of the Antlers Formation Ground Water

	Range	Average
Gross alpha α	4.8 - 8.7 pCi/l	6.7 pCi/l
Gross beta β	4.8 - 7.1 pCi/l	5.9 pCi/l
Ra ²²⁶	0.5 - 1.6 pCi/l	0.9 pCi/l
Ra ²²⁸	<1.0 pCi/l	<1.0 pCi/l

The average gross α radiation of the Antlers ground water was 6.7 pCi/l, below the MCL of 15 pCi/l. It is believed that the source of this α radiation in the Antlers Formation is due to naturally occurring radioactive materials found in volcanic ash.

The average Ra²²⁶ and Ra²²⁸ measurements were 0.9 pCi/l and <1.0 pCi/l, respectively, for a combined measurement of <2.0 pCi/l, also below the MCL of 5 pCi/l.

The average β radiation of the Antlers ground water was 5.9 pCi/l, far below the MCL of 50 pCi/l.

Paluxy Formation

A summary of the laboratory analyses for radioactivity in the Paluxy Formation ground water is found in Table 15.

The average gross α radiation of the Paluxy ground water was 6.1 pCi/l, below the MCL of 15 pCi/l. It is believed that the source of this α radiation in the Paluxy Formation is due to naturally occurring radioactive materials found in volcanic ash.

Table 15.- Radioactivity of the Paluxy Formation Ground Water.

	Range	Average
Gross alpha α	3.1 - 12 pCi/l	6.1 pCi/l
Gross beta β	<4.0 - 8.3 pCi/l	4.7 pCi/l
Ra ²²⁶	0.3 - 3.0 pCi/l	1.7 pCi/l
Ra ²²⁸	<1.0 - 1.8 pCi/l	<1.0 pCi/l

The average Ra²²⁶ and Ra²²⁸ measurements of the Paluxy ground water were 1.7 pCi/l and <1.0 pCi/l, respectively, for a combined measurement of <2.7 pCi/l, also below the established MCL.

The average β radiation of the Paluxy ground water was 4.7 pCi/l, far below the MCL of 50 pCi/l.

Twin Mountain Formation

A summary of the laboratory analyses for radioactivity of the Twin Mountains Formation is found in Table 16.

Table 16. Radioactivity of the Twin Mountains Formation Ground Water.

	Range	Average
Gross alpha α	<2.0 - 24 pCi/l	7.2 pCi/l
Gross beta β	<4.0 - 16 pCi/l	5.8 pCi/l
Ra ²²⁶	<0.2 - 22 pCi/l	2.0 pCi/l
Ra ²²⁸	<1.0 - 3.0 pCi/l	<1.0 pCi/l

The average levels for gross α radiation, gross β radiation, and combined Ra²²⁶ and Ra²²⁸ measurements for the Twin Mountains Formation ground water were under the established MCLs; however, five wells tested over the MCLs set for radiation:

- Well # 31-37-901 (Erath County)
 - Gross α radiation was 22 pCi/l
 - Combined Ra²²⁶ and Ra²²⁸ was 13.1 pCi/l
- Well # 31-45-702 (Erath County)
 - Gross α radiation was 16 pCi/l
 - Combined Ra²²⁶ and Ra²²⁸ was 5.1 pCi/l

Well # 31-48-902 (Erath County)
Gross α radiation was 24 pCi/l
Combined Ra²²⁶ and Ra²²⁸ was 6.1 pCi/l
Well # 31-63-601 (Erath County)
Gross α radiation was 17 pCi/l
Well # 32-49-201 (Hood County)
Gross α radiation was 23 pCi/l
Combined Ra²²⁶ and Ra²²⁸ was 23.4 pCi/l

It is believed that the source of the α radiation in the Twin Mountains Formation is due to naturally occurring radioactive elements, such as uranium and its daughter products, found in volcanic ash which is present in the formation. Figure 8 shows the α concentration of each of the Twin Mountains wells. Four wells in excess of the MCLs are located throughout Erath County, and one is in Hood County near the Erath County line.

The four wells which exceed the MCL for combined Ra²²⁶ and Ra²²⁸ radiation also exceed the MCL for gross α . Because so much of the gross α radiation is made up of Ra²²⁶, this lends further evidence to a natural source such as volcanic ash, which is high in U²³⁸.

COMPARISON TO PREVIOUS WORK

Water quality tests have been performed on ground water in the study area since the 1930s and, in a few wells, even earlier. However, it is difficult to compare previous results with those from this study because: (1) until a few years ago there were no quality assurance and quality control procedures in either the collection of water samples in the field or the laboratory analyses and (2) the laboratory instruments lacked the analytical precision of modern equipment. However, comparisons should at least be attempted, although some results may have a subjective bias.

The samples collected for this study were analyzed for field measurements; cations, anions, and selected metals; nutrients; pesticides; and radioactivity. This is the first project to analyze ground water in this area for pesticides and radioactivity; therefore, no comparison to previous work can be made for these constituents. Prior studies only analyzed for major cations and anions, nitrate, and field measurements including pH, specific conductance, and temperature. The only historical measurements that can be compared to this study are the major cations and anions. Of these, there are only three constituents which can be compared with any confidence: sulfate, chloride, and dissolved solids. The sulfate and chloride concentrations of ground water are relatively stable and not subject to decomposition if a water sample is lost or misplaced on the way to the laboratory. While the individual cations and anions may be difficult to analyze precisely, the dissolved solids is a good indication of the overall composition of the sample.

One constituent which is of great concern in the study area is nitrate. Because of the lack of quality control and quality assurance in the past, the nitrate values in the TWDB database are not reliable for use in a comparison study such as this. However, the wells which were sampled in the past show little change in dissolved nitrate content to this study.

Two wells in the Antlers Formation and 36 wells in the Twin Mountains Formation have previous water quality analyses. None of the wells in the Paluxy Formation have any previous sampling histories.

Antlers Formation

The two previously sampled Antlers wells are located in Eastland County. Table 17 shows the results for sulfate, chloride, and dissolved solids for these two wells. Well #31-43-752 has been sampled four times during the last eighteen years and well #31-43-942 twice in the last eight years. Both wells have levels below the secondary drinking water standards. Although the water from #13-43-752 meets drinking water standards, the quality in regard to chloride, sulfate, and dissolved solids appears to have deteriorated somewhat. The water from well #31-43-942 has shown some improvement in these same constituents.

Table 17.- Historical Water Quality Analysis of the Antlers Formation Wells.

Well	County	Date	SO ₄ ¹	Cl ¹	TDS ¹
31-43-752	Eastland	5/25/72	23	37	484
		6/22/78	21	37	400
		9/23/82	20	43	391
		3/22/90	33	60	475
31-43-942	Eastland	9/23/82	55	327	892
		3/21/90	45	266	804

¹ Units are mg/l.

Twin Mountains Formation

The 36 Twin Mountains wells which have been sampled previous to this study are located in Bosque (1 well), Comanche (9 wells), Eastland (2 wells), Erath (16 wells), Hamilton (1 well), Hood (6 wells), and Somervell (1 well) Counties. Table 18 shows the results for sulfate, chloride, and dissolved solids for these wells. Of these 36 wells, 17 have been sampled only twice; 11 have been sampled three times; 1 well has been sampled four times; 2 wells have been sampled six times; 2 wells have been sampled seven times; and 3 wells have been sampled eight times.

Of these 36 wells, only 3 have chlorides and/or dissolved solids higher than drinking water standards: #41-04-304 (354 mg/l Cl and 1265 mg/l dissolved solids), #31-44-505 (301 mg/l Cl), and #31-51-311 (337 mg/l Cl). In 1987, well #41-04-304 had a chloride measurement of 513 mg/l and a dissolved solids measurement of 2135 mg/l. Although the 1990 measurement exceeds drinking water standards, it shows improvement from 1987. Well #31-44-505 has historically had chloride measurements near the 300 mg/l secondary drinking water standard limit since 1971. The dissolved solids also has shown little change from its measurement of 949 mg/l, which is close to the drinking water standard of 1000 mg/l. Well #31-51-311 has shown a steady increase in chlorides, as well as sulfates and dissolved solids, since 1970. No well had sulfate measurements higher than the drinking water standard.

An overall determination of the water quality for each of the Twin Mountains wells is shown in Figure 9. No significant change in water quality was noted for 25 wells; 5 wells had improvement in water quality; and 6 wells had a deterioration of water quality. Of the 6 wells which showed a decrease in water quality, only #31-51-311 had levels which exceeded drinking water standards. The other 5, although showing a decline in water quality, all had water which was within drinking water standards for sulfate, chloride, and dissolved solids.

Overall, the water quality in the Twin Mountains remains largely unchanged. What minor changes have occurred have not resulted in widespread or significant deterioration of the aquifer.

Table 18.-Historical Water Quality Analysis of the Twin Mountains Formation Wells

Well	County	Date	SO ₄ ¹	Cl ¹	TDS ¹
40-02-101	Bosque	04/12/60	42	18	386
		02/02/76	42	17	540
		04/25/90	42	18	378
31-52-213	Comanche	08/11/66	38	86	339
		07/23/71	56	241	573
		03/27/90	59	68	331
31-60-251	Comanche	07/23/80	42	100	444
		07/21/87	53	129	553
		03/29/90	61	153	647
31-61-119	Comanche	09/18/70	75	329	892
		05/20/87	87	302	1002
		03/27/90	65	270	925
31-61-808	Comanche	05/08/70	22	29	396
		08/26/70	17	39	400
		07/16/70	35	23	394
		07/20/72	35	32	411
		08/21/73	34	27	398
		07/16/74	35	22	390
		03/28/90	27	41	431
41-04-304	Comanche	05/20/87	298	513	2135
		03/29/90	177	354	1265
41-05-508	Comanche	06/01/87	29	77	838
		03/28/90	21	43	481
41-06-501	Comanche	09/09/68	42	16	439
		03/29/90	38	14	393
41-07-803	Comanche	09/21/65	14	15	359
		04/24/90	26	13	347
41-13-301	Comanche	12/09/66	42	67	384
		04/05/67	22	23	317
		04/17/68	51	86	463
		04/18/70	47	104	640
		04/11/72	52	158	303
		03/28/90	77	112	587
31-44-505	Eastland	07/15/71	104	265	936
		10/18/71	96	268	946
		10/19/71	59	196	712
		10/21/71	44	155	591
		08/23/73	83	301	961
		07/18/74	54	214	720
		03/20/90	67	301	949

Table 18.-Historical Water Quality Analysis of the Twin Mountains Formation Wells (*continued*)

Well	County	Date	SO ₄ ¹	Cl ¹	TDS ¹
31-51-311	Eastland	07/27/70	55	228	794
		07/13/71	82	228	805
		07/13/72	61	227	784
		08/23/73	60	239	798
		07/17/74	62	234	773
		06/22/78	66	250	825
		09/23/82	60	253	802
		03/21/90	75	337	981
31-37-901	Erath	02/24/71	221	100	781
		03/20/90	136	71	630
31-39-502	Erath	03/17/80	15	41	376
		06/27/86	32	24	455
		03/20/90	32	25	452
31-40-101	Erath	03/17/80	61	27	587
		06/27/86	80	23	545
		04/16/90	55	24	570
31-46-102	Erath	06/21/88	47	55	505
		03/21/90	49	86	551
31-46-207	Erath	08/12/86	94	27	502
		03/21/90	94	28	505
31-47-402	Erath	09/17/68	121	51	586
		02/24/90	85	36	501
31-48-902	Erath	03/19/80	46	41	411
		06/27/86	42	40	403
		04/19/90	41	42	410
31-52-302	Earth	09/14/65	17	55	259
		07/18/66	20	24	224
		07/14/71	20	59	224
		07/26/72	26	72	306
		09/12/73	21	80	346
		03/22/90	47	154	522
31-54-801	Erath	04/18/61	13	22	330
		10/07/65	16	21	325
		04/18/90	14	19	341
31-55-805	Erath	07/12/69	10	23	337
		03/19/90	18	18	354
31-61-601	Erath	09/29/65	65	12	422
		03/29/90	29	14	381
31-62-803	Erath	03/18/80	42	16	383
		06/27/86	40	15	360
		03/28/90	40	15	382

Table 18.-Historical Water Quality Analysis of the Twin Mountains Formation Wells (continued)

Well	County	Date	SO ₄ ¹	Cl ¹	TDS ¹
31-63-601	Erath	08/11/86	39	31	399
		03/26/90	44	34	403
31-63-701	Erath	02/12/71	50	26	413
		03/29/90	55	27	419
31-64-301	Erath	09/16/68	59	23	349
		03/21/90	36	20	359
32-49-101	Erath	06/28/72	25	31	374
		03/22/90	28	31	385
41-08-308	Hamilton	07/13/88	49	30	413
		04/26/90	50	32	413
31-32-901	Hood	11/00/45	23	25	434
		05/15/60	33	55	595
		04/25/63	13	6	294
		05/09/66	26	23	412
		11/07/73	27	34	346
		07/13/76	24	26	405
		06/27/83	25	24	367
		04/17/90	27	19	357
32-33-805	Hood	06/10/64	46	28	590
		06/06/64	40	19	378
		11/11/67	40	21	381
		11/13/67	40	21	580
		08/19/74	34	17	339
		07/13/76	32	17	385
		06/27/83	38	16	394
		03/27/90	41	16	402
32-34-403	Hood	05/19/86	53	31	438
		04/24/90	49	28	457
32-34-611	Hood	09/16/68	83	33	528
		08/15/74	78	30	519
		03/28/90	82	29	535
32-49-201	Hood	10/10/74	33	49	390
		07/13/76	34	47	394
		03/21/90	35	45	395
32-42-403	Hood	06/24/71	40	14	358
		07/13/76	44	15	373
		07/31/87	43	13	364
		03/20/90	46	14	377
32-51-105	Sommervell	06/26/86	28	12	383
		04/23/90	26	13	397

¹ Units in mg/l

CONCLUSIONS

This study of the ground water of the Trinity aquifer from selected wells in Bosque, Comanche, Eastland, Erath, Hamilton, Hood, and Somervell Counties examined the water quality of the Antlers, Paluxy, and Twin Mountains Formations. The overall ground water quality of the entire study area was good.

The water quality of the Antlers Formation was good, based on the four wells sampled. There were no dissolved inorganic constituents, nutrients, or radioactive elements which exceeded the MCLs for drinking water. There were no detectable levels of any pesticides.

The Paluxy Formation was evaluated based on the sampling of six wells. Only two wells had any dissolved inorganic constituents which exceeded drinking water standards. These constituents were iron, chloride, manganese, and dissolved solids. Only one well, #41-07-513, exceeded the MCL for nitrate. There were no radioactive elements which exceeded drinking water standards. There were no detectable levels of pesticides in any of the wells.

The Twin Mountains Formation was evaluated based on 55 sampled wells. The overall quality of the ground water was good, although 19 wells had one or more constituents which exceeded drinking water standards. Various inorganic constituents were exceeded in 13 wells and included iron, manganese, chloride, and dissolved solids. Nitrate measurements exceeded the MCL in 4 wells. Five wells had alpha radiation and/or radium concentrations in excess of the established MCLs. There were no detectable levels of pesticides in any of the wells. It is believed that all constituents in excess of the MCLs, with the exception of nitrate, are naturally occurring.

Changes in water quality are based on measurements of sulfate, chloride, and dissolved solids. Only 3 wells, all in the Twin Mountains Formation, had measurements of these species which exceeded the secondary drinking water standards. Of the 2 wells in the Antlers Formation which had previous analyses, 1 had improved water quality and the other had deteriorated. Of the 36 wells in the Twin Mountains Formation, 5 showed improvement, 6 showed deterioration, and 25 were unchanged. Overall, the water quality is generally unchanged in the study area. Those changes which have occurred have not resulted in significant deterioration of the ground water.

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APPENDIX I

Record of Wells

Jul 15, 1991

TEXAS WATER DEVELOPMENT BOARD
GROUND WATER DATA SYSTEM

RECORDS OF WELLS, SPRINGS, AND TEST HOLES
COUNTY - Bosque

WELL	OWNER	DRILLER	DATE COM- PLETED	DEPTH OF WELL (FT.)	CASING AND SCREEN DATA				WATER BEARING UNIT	ALTITUDE OF LAND SURFACE (FT.)	WATER LEVEL		METHOD OF LIFT AND POWER	USE OF WATER	REMARKS
					CASING OR SCREEN (IN.)	DIAM- ETER (IN.)	TOP DEPTH (FT.)	BOT DEPTH (FT.)			MEASURE- MENT FROM LSD (FT.)	DATE			
32-57-701				286					218GLRS		- - - -				
40-02-101	City of Iredell	Rufus Hampton Smith	1945	325					218TWT	900	- - -85.00	03-08-1980	T E 5.00	P	

Jul 15, 1991

 TEXAS WATER DEVELOPMENT BOARD
 GROUND WATER DATA SYSTEM

 RECORDS OF WELLS, SPRINGS, AND TEST HOLES
 COUNTY - Comanche

WELL	OWNER	DRILLER	DATE COM- PLETED	DEPTH OF WELL (FT.)	CASING AND SCREEN DATA				WATER BEARING UNIT	ALTITUDE OF LAND SURFACE (FT.)	WATER LEVEL		METHOD OF LIFT AND POWER	USE OF WATER	REMARKS
					CASING OR SCREEN (IN.)	DIAM- ETER (IN.)	TOP DEPTH (FT.)	BOT DEPTH (FT.)			MEASURE- MENT FROM LSD (FT.)	DATE			
31-52-213	L. E. Singleton	B. G. Watson	1968	165					218TWM	1378	-32.80 -34.20	06-23-1971 03-07-1973	S E 7.50	I S	Slotted from 30 to 80 feet. Gravel packed. Temperature 86 degrees F.
31-52-636	Earl Taylor	F & F Drilling	1978	120	C S	6 6	0 90	90 120	218TWM	1320	- -	- -	S E 5	I	
31-60-251	Bill Dendy		1975	125					218TWM	1337	-66.28 -73.36	03-11-1976 03-05-1986		I S	
31-61-119	Bill Wood	Comeo Drilling Co.	1967	60					218TWM	1240	-36.00	0 - 0 - 1967 - -	J E 0.50	H S	Reported yield 20 gal/min.
31-61-808	H. L. Cox	Hester Drilling Co.	1968	171					218TWM	1270	-71.00	05-08-1970 - -	S E 15.00	I	Slotted from 85 to 155 feet. Pump set at 160 feet. Reported yield 230 gal/min. Pumping level 132.20 feet at 107.70 gal/min on June 15, 1970 and 124.50 on June 16, 1971. Gravel packed. Temperatuer 89 degrees F.
41-04-304	A. Montgomery			53					218TWM	1225	- -	- -	S E	S I	
41-05-508	R. Evans	Locket Bolden	1963	150					218TWM	1185	- -	- -	S E	H S	
41-06-501	J. W. Barbee	Texas Irrigation Sales, Inc.	1959	250	C S	6 6	0 230	230 250	218TWM	1270	-122.35 -128.72	10-26-1959 02-25-1991	S E 3.50	H S	Perforated from 230 to 250 feet. Temperature 72 degrees F. Observation well.
41-07-803	Ralph Shank	Dalton Drilling and Service Co.	1969	322					218TWM	1245	-242.00	06-11-1969 - -	S E 1.50	H	Perforated from 300 to 322 feet. Cemented from 0 to 13 feet. Pump set at 312 feet. Pumping level 252 feet at 18 gal/min when drilled. Gravel packed.
41-13-301	Gustine Water Supply Corp.	Andrews and Foster	1968	173					218TWM	1190	-48.14	01-04-1967 - -	S E 3.00	P	Completed from 58 to 70 feet, 140 to 148 feet and 160 to 168 feet.

RECORDS OF WELLS, SPRINGS, AND TEST HOLES
 COUNTY - Comanche

WELL	OWNER	DRILLER	DATE COM- PLETED	DEPTH OF WELL (FT.)	CASING AND SCREEN DATA				WATER BEARING UNIT	ALTITUDE OF LAND SURFACE (FT.)	WATER LEVEL		METHOD OF LIFT AND POWER	USE OF WATER	REMARKS
					CASING OR SCREEN	DIAM- ETER (IN.)	TOP DEPTH (FT.)	BOT DEPTH (FT.)			MEASURE- MENT FROM LSD (FT.)	DATE			
41-13-301 (Continued)															Pumping level 158 feet at 48 gal/min when drilled. Gravel packed. Cemented from 58 feet to surface. Well drilled to 255 feet and plugged back to 173 feet.
41-14-801	O. R. Colwell	Dalton Drilling Co.	1972	180	C S	4 4	0 150	150 180	218TMMT	1075	-80.00	03-27-1972	S E	H	

Jul 15, 1991

TEXAS WATER DEVELOPMENT BOARD
GROUND WATER DATA SYSTEM

RECORDS OF WELLS, SPRINGS, AND TEST HOLES
COUNTY - Eastland

WELL	OWNER	DRILLER	DATE COM- PLETED	DEPTH OF WELL (FT.)	CASING AND SCREEN DATA				WATER BEARING UNIT	ALTITUDE OF LAND SURFACE (FT.)	WATER LEVEL		METHOD OF LIFT AND POWER	USE OF WATER	REMARKS
					CASING DIAM- OR SCREEN (IN.)	TOP DEPTH (FT.)	BOT DEPTH (FT.)	MEASURE- MENT FROM LSD (FT.)			DATE				
31-38-718	Dwight Rogers			80					218ALRS	1457	- - - -		S E	H I S	
31-42-823	John Scitern	Bob Barnhill	1985	80					218ALRS	1509	-26.50 - -	03-22-1980	S E	I S	
31-43-752	Bill Brown	Lee-Barnhill	1971	44					218ALRS	1480	-22.00 - -	03-18-1971	S E	I S	Perforated. Estimated yield 25 gal/min. Gravel packed. Temperature 68 degrees F.
31-43-942	Mrs. Ray Rogers		1982	78					218ALRS		- - - -		S E	I S	
31-44-505	James Ryan	Watson Drilling Co.	1988	104					218TWM	1425	-38.70 -48.73	07-15-1971 03-20-1990	S E	I	Slotted 65 to 89 feet. Pump set at 97 feet. Temperature 67 degrees F.
31-44-821	L. E. Clark	Jerry Fronterhouse F & F Drilling	1989	80	C S	5 5	0 48	48 80	218TWM	1329	-31.58 - -	03-19-1990	S E	C H	Drilled as replacement for 3144802. Well used at cafe and house.
31-51-277	M. F. Dennis	F & F Drilling	1990	90					218TWM	1450	- - - -		S E	I H	
31-51-311	Jerry Warren	Curtis Alford	1968	70					218TWM	1408	- - - -		S E	I	Slotted. Pumping level 48 feet. Slotted. Pumping level 48 feet. Gravel packed. Temperature 67 degrees F.

JUL 15, 1991

TEXAS WATER DEVELOPMENT BOARD
GROUND WATER DATA SYSTEM

RECORDS OF WELLS, SPRINGS, AND TEST HOLES
COUNTY - Erath

WELL	OWNER	DRILLER	DATE COM- PLETED	DEPTH OF WELL (FT.)	CASING AND SCREEN DATA				WATER BEARING UNIT	ALTITUDE OF LAND SURFACE (FT.)	WATER LEVEL		METHOD OF LIFT AND POWER	USE OF WATER	REMARKS
					CASING DIAM- OR SCREEN (IN.)	TOP DEPTH (FT.)	BOT DEPTH (FT.)	MEASURE- MENT FROM LSD (FT.)			DATE				
31-37-901	Alex Fambro	Jones Drilling Co.	1983	80					218TMMT	1300	-25.00 -38.00	04-04-1983 05-05-1988	J E	S	Perforated from 55 to 80 feet. Pump set at 50 feet. Temperature 68 degrees F.
31-38-802	Roger Mize	Dowell Drilling	1971	115	C 4 S 4 C 4	0 75 110	75 110 115		218TMMT	1180	-25.70	01-06-1990	S E	S H	
31-38-902	Gary Metzger	Dowell Well Service	1981	180	C 4 S 4	0 120	120 180		218TMMT	1280	-99.04	01-03-1990	S E	S C	
31-39-502	Cee Bar Ranch R. W. Bowman	Terry Drilling	1955	308					218TMMT	1175	-82.21 -59.77	10-28-1985 03-27-1987	S E	H I S	Completed 137 to 158 feet. Pump set at 129 feet. Measured yield 17.7 gal/min on August 18, 1987. Power and yield test. Irrigated with 10 hp turbine until May 1987. Water level observation well.
31-39-503	O. B. Starns	Riley Drilling Co.	1972	89	C 5 S 5	0 50	50 89		218TMMT	1122	-37.37	01-05-1990	J E	H S	
31-40-101	Melvin Tipton	Jones Drilling Co.	1985	105	C 4 S 4	0 95	95 105		218TMMT	1115	-78.24 -73.06	03-27-1970 02-28-1991	S E	H S	Slotted from 95 to 105 feet. Pump set at 90 feet. Reported yield 10 gal/min. Water level observation well.
31-45-801	Charles Leatherwood	Riley Drilling Co.	1981	75	C 4 S 4	0 35	35 75		218PLXY	1569	-25.80	01-22-1990	S E	H	
31-45-702	Joe Staude	Riley Drilling Co.	1978	211	C 4 S 4	0 182	184 211		218TMMT	1480	-172.84	04-18-1990	S E	S H	
31-46-102	C. T. Fulfer	Dowell Well Service	1983	90	C 4 S 4	0 20	20 90		218TMMT	1242	-	-	J E	H S	
31-46-207	Huckabay School		1985	390					218TMMT		-	-	S E	P	

RECORDS OF WELLS, SPRINGS, AND TEST HOLES
COUNTY - Erath

WELL	OWNER	DRILLER	DATE COM- PLETED	DEPTH OF WELL (FT.)	CASING AND SCREEN DATA				WATER BEARING UNIT	ALTITUDE OF LAND SURFACE (FT.)	WATER LEVEL		METHOD OF LIFT AND POWER	USE OF WATER	REMARKS
					CASING OR SCREEN DIAM. (IN.)	TOP DEPTH (FT.)	BOT DEPTH (FT.)	MEASURE- MENT FROM LSD (FT.)			DATE				
31-48-801	Tony Lucas	Dowell Well Service	1980	108	C 4 0 S 4 50	50	108	218PLXY	1480	-65.60	01-24-1990	P W	S		
31-47-201	Roy Dingler	Riley Drilling Co.	1988	59	C 5 0 S 5 35	35	59	218TWM	1055	-30.50 -30.13	01-20-1990 04-18-1990	S E	H		
31-47-402	Kenneth Rucker	Jones Drilling Co.	1982	392				218TWM	1430	-290.00	08-25-1982	S E 7.50	I	Completed 382 to 392 feet. Pump set at 340 feet. Temperature 72 degrees F.	
31-48-102	George Luedtke	Riley Drilling Co.	1988	114	C 4 0 C 4 0 S 4 85 S 4 85	85	114	218TWM	985	-48.90	01-08-1990	S E .50	H S		
31-48-304	Bluffdale I.S.D.				C 4 0	0	0	218TWM	802		- -	S E	P		
31-48-403	Louis Randolph	Dowell Well Service Inc.	1981	110				218TWM	1080		- -	J E	H		
31-48-902	Mrs. F.S. Stocks	W.D. Dowell	1974	300	C 4 0	300	300	218TWM	1161	-231.84 -239.85	04-18-1975 02-28-1991	S E	H S		
31-52-302	Gayle Mahan	Stewart Drilling Co.	1984	100				218TWM	1345	-29.00	03-24-1988	S E	I S	Reported yield 150 gal/min. Pumping level 47.28 feet at 100 gal/min on July 10, 1987 and 45.93 on July 28, 1972. Gravel packed. Temperature 68 degrees F.	
31-53-304	Lingleville School	Dowell Well Service	1983	480	C 4 0 S 4 400	400	480	218TWM	1575	-380.00	04-28-1983	S E	P		
31-53-510	B. W. Mathis	J. C. Humphries	1953	178				218TWM	1310		- -	T E 5.00	I	Completed from 70 to 95 and 118 to 180 feet. Pump set at 185 feet. Reported yield 120 gal/min. Gravel packed.	
31-54-105	R. L. Roberson	Riley Drilling Co.	1971	115	C 4 0 S 4 70	70	115	218PLXY	1554		- -	S E	H		

RECORDS OF WELLS, SPRINGS, AND TEST HOLES
COUNTY - Erath

WELL	OWNER	DRILLER	DATE COM- PLETED	DEPTH OF WELL (FT.)	CASING AND SCREEN DATA				WATER BEARING UNIT	ALTITUDE OF LAND SURFACE (FT.)	WATER LEVEL		METHOD OF LIFT AND POWER	USE OF WATER	REMARKS
					CASING OR SCREEN (IN.)	DIAM- ETER (IN.)	TOP DEPTH (FT.)	BOT DEPTH (FT.)			MEASURE- MENT FROM LSD (FT.)	DATE			
31-54-801	Leander Kiker	Jones Drilling Co.	1955	387					218TWM	1380	-200.00 -213.93	0 - 0 - 1960 03-05-1974	T E 30.00	I	Pump set at 365 feet. Pumping level 320 feet at 200 gal/min on July 17, 1967. Temperature 72 degrees F.
31-55-113	City of Stephenville	C. Calloway	1949	390					218TWM	1325	-257.80 -246.80	02-07-1950 09-25-1963	T E	P	Pump set at 370 feet. Reported yield 370 gal/min.
31-55-805	City of Stephenville	Layne Texas Co.	1969	443					218TWM	1252	-215.00	07-10-1969 - -	T E	P	Screened 229 to 264, 279 to 354 feet. Cemented to 220 feet. Pump set at 350 feet. Pumping level 326 feet at 175 gal/min on July 12, 1969. Underreamed. Temperature 70 degrees F.
31-56-402	City of Stephenville	Layne-Western	1984	558	C	18	0	353	218TWM	1350	- -	- -	T E	P	Measuring point is 2 feet above land surface.
					C	11	0	358			- -	- -			
					S	11	358	372							
					C	11	372	378							
					S	11	378	410							
					C	11	410	414							
					S	11	414	424							
					C	11	424	446							
					S	11	446	530							
					C	11	530	558							
31-56-501	Bill Pruitt	Dowell Drilling Co.	1989						218PLXY	1343	-86.08	03-22-1990 - -	S E 1	H S	
31-56-901	Three-Way School	Parham Well Service	1975	121	C	4	0	101	218TWM	1258	- -	- -	S E	P	
					S	2	0	101			- -	- -			
31-61-601	Aurora Dairy Farms	J. C. Humphries	1953	400					218TWM	1525	- -	- -	S E 10.00	H S	Completed from 390 to 400 feet. Pump set at 356 feet. Reported yield 125 gal/min. Pumping level 340 feet at 65.8 gal/min on July 12, 1967. Temperature 70 degrees F.
31-62-107	W. L. Felts	Harris Drilling Co. Inc.	1987	125	C	5	0	65	218PLXY	1514	-50.00 -50.75	10-23-1967 01-20-1990	S E	H	Estimated yield 30 gpm. Cemented to 15 feet.
					S	5	65	125							
31-62-803	G. G. Hall	J. T. Brown Water Well Drilling	1985	285	C	8	0	87	218TWM	1342	-175.00 -177.16	10-08-1985 02-27-1991	S E 1.00	H S	Slotted from 242 to 262 feet. Pump set at 233 feet. Underreamed. Water
					C	8	0	242							

RECORDS OF WELLS, SPRINGS, AND TEST HOLES
COUNTY - Erath

WELL	OWNER	DRILLER	DATE COM- PLETED	DEPTH OF WELL (FT.)	CASING AND SCREEN DATA				WATER BEARING UNIT	ALTITUDE OF LAND SURFACE (FT.)	WATER LEVEL		METHOD OF LIFT AND POWER	USE OF WATER	REMARKS
					CASING OR SCREEN (IN.)	DIAM- ETER (IN.)	TOP DEPTH (FT.)	BOT DEPTH (FT.)			MEASURE- MENT FROM LSD (FT.)	DATE			
31-62-803 (Continued)					S	6	242	262							level observation well.
31-62-801	H. R. West	J. T. Brown Water Well Drilling	1972	333	C	6	0	293	218TMMT	1350	-235.00	08-29-1972	S E	H S	Estimated yield 10 gpm. Cemented to 85 feet.
					S	6	293	331			-245.80	01-19-1990			
					C	6	331	333							
31-63-801	Gilbert Robertson		1988	300					218TMMT					I	
31-63-701	L. F. Gibson	J. T. Brown Water Well Drilling	1968	294					218TMMT	1317	-220.00	08-18-1968	S E	H S	Perforated from 278 to 294 feet. Pump set at 270 feet. Reported yield 10 gal/min. Temperature 88 degrees F.
													1.50		
31-64-301	M. C. Lowry	Terry Drilling and Supply Co.		353					218TMMT	1152	-280.94	08-16-1968	S E	H S	Temperature 72 degrees F. Water level observation well.
											-286.51	03-15-1973	1.00		
31-64-402	L. E. Adams	Roberson Well Drilling	1963	281					218TMMT	1159	-215.68	03-30-1971	P W	S	Completed from 261 to 281 feet. Pump set at 170 feet. Reported yield 105 gal/min. Water level observation well.
											-232.54	03-07-1986			
32-48-101	Fred Parker	Dowell Well Service	1971	395					218TMMT	1085	-275.00	08-15-1971	S E	H S	Completed from 45 to 50, 304 to 404, and 451 to 512 feet. Pump set at 330 feet. Water level observation well.
													1.50		
41-07-203	Larry Harris	Riley Drilling Co.	1975	286	C	4	0	265	218TMMT	1260	-242.78	04-25-1980	S E	H S	
					S	4	265	286						1.5	

Jul 15, 1991

TEXAS WATER DEVELOPMENT BOARD
GROUND WATER DATA SYSTEM

RECORDS OF WELLS, SPRINGS, AND TEST HOLES
COUNTY - Hamilton

WELL	OWNER	DRILLER	DATE COM- PLETED	DEPTH OF WELL (FT.)	CASING AND SCREEN DATA				WATER BEARING UNIT	ALTITUDE OF LAND SURFACE (FT.)	WATER LEVEL		METHOD OF LIFT AND POWER	USE OF WATER	REMARKS
					CASING OR SCREEN	DIAM- ETER (IN.)	TOP DEPTH (FT.)	BOT DEPTH (FT.)			MEASURE- MENT FROM LSD (FT.)	DATE			
41-07-513	Novice Harbor	Dalton Drilling Co.	1971	100	C S	5 5	0 80	80 100	218PLXY	1328	- -	- -	S E	C H	
41-08-308									218TWMT		- -	- -			

Mar 11, 1991

TEXAS WATER DEVELOPMENT BOARD
GROUND WATER DATA SYSTEM

RECORDS OF WELLS, SPRINGS, AND TEST HOLES
COUNTY - Hood

WELL	OWNER	DRILLER	DATE COM- PLETED	DEPTH OF WELL (FT.)	CASING AND SCREEN DATA				WATER BEARING UNIT	ALTITUDE OF LAND SURFACE (FT.)	WATER LEVEL		METHOD OF LIFT AND POWER	USE OF WATER	REMARKS
					CASING OR SCREEN	DIAM- ETER (IN.)	TOP DEPTH (FT.)	BOT DEPTH (FT.)			MEASURE- MENT FROM LSD (FT.)	DATE			
31-32-801	Herman D. Howard	H.D. Howard	1982	48	C 0	4	0 15	15 48	218TWT	962	-27.00 -30.08	0 - 0 01-22-1991	1987 1.00	J E S	Omer's Old Tip. Estimated yield 15 gpm.
32-33-806	City of Tolar	Jones Drilling Co	1984	535					218TWT	1048	-265.00 -258.20	05-05-1984 08-19-1974	8 E 7.50	P	
32-34-403				250					218TWT		- - - -	- - - -		P	
32-34-811	City of Granbury	J.L. Myers Sons	1988	300					218TWT	750	-180.00 -157.00	08-16-1988 08-15-1974	T E 10.00	P	
32-42-403	A.L. Hurley	Jones Drilling Co.	1988	355	C C 8	8 4 4	0 0 347	347 355	218TWT	1025	-294.34 -319.50	08-24-1971 01-28-1980	8 E 1.50	H	
32-49-201	H.L. Seale Ranch	C.M. Stoner Drilling	1987	480					218TWT	818	-45.00	08-23-1987 - -	8 E 1.00	H S	

Mar 11, 1991

TEXAS WATER DEVELOPMENT BOARD
GROUND WATER DATA SYSTEM

RECORDS OF WELLS, SPRINGS, AND TEST HOLES
COUNTY - Somervell

WELL	OWNER	DRILLER	CASING AND SCREEN DATA						WATER LEVEL			METHOD OF LIFT AND POWER	USE OF WATER	REMARKS
			DATE COM- PLETED	DEPTH OF WELL (FT.)	CASING OR SCREEN (IN.)	DIAM- ETER (IN.)	TOP DEPTH (FT.)	BOT DEPTH (FT.)	WATER BEARING UNIT	ALTITUDE OF LAND SURFACE (FT.)	MEASURE- MENT FROM L&D (FT.)			
32-81-106				484					218TMMT		- -		P	

APPENDIX II

Major Anions and Cations

Jul 15 1991

TEXAS WATER DEVELOPMENT BOARD
GROUND WATER DATA SYSTEM

GROUND WATER QUALITY SAMPLES
COUNTY - Bosque

Well	Aquifer	Well Depth (Feet)	Date of Collection	Agency Code	Lab Code	Reliability Code	Temp. Deg. C	pH	Silica (SiO2) MG/L	Calcium (Ca) MG/L	Magnesium (Mg) MG/L	Sodium (Na) MG/L	Potassium (K) MG/L	Carbonate (CO3) MG/L	Bicarb. (HCO3) MG/L	Sulfate (SO4) MG/L	Chloride (Cl) MG/L	Fluoride (F) MG/L	Nitrate (NO3) MG/L	Dissolved Solids MG/L	Spec. Cond. (micromhos)	Hardness as CaCO3 MG/L
32 57 701	218GLRS	266	04/25/1990	01	01	10	20	7.6	14	45	31	55	6	0	329	62	20	0.3	0.0	365	850	239
40 02 101	218TMMT	325	04/25/1990	01	01	10	23	7.4		44	32	55	6	0	368	42	16	0.4	0.9	378	800	241

[-] * Depth value here reflects the bottom of the SAMPLED INTERVAL which was different from the completed well depth
U after date of collection signifies unbalanced or partial chemical analysis

Jul 15 1991

TEXAS WATER DEVELOPMENT BOARD
GROUND WATER DATA SYSTEM

GROUND WATER QUALITY SAMPLES
COUNTY - Comanche

Well	Aquifer	Well Depth (Feet)	Date of Collection	Agency Code	Lab Code	Reliability Code	Temp. Deg. C	pH	Silica (SiO2) MG/L	Calcium (Ca) MG/L	Magnesium (Mg) MG/L	Sodium (Na) MG/L	Potassium (K) MG/L	Carbonate (CO3) MG/L	Bicarb. (HCO3) MG/L	Sulfate (SO4) MG/L	Chloride (Cl) MG/L	Fluoride (F) MG/L	Nitrate (NO3) MG/L	Dissolved Solids MG/L	Spec. Cond. (micromhos)	Hardness as CaCO3 MG/L
31 52 213	218TWMT	165	03/27/1990	01	01	10	21	6.6	18	54	14	26	8	0	77	59	68	<.1	48.4	331	547	192
31 52 636	218TWMT	120	03/26/1990	01	01	10	20	6.3	21	50	7	31	4	0	72	23	57	<.1	66.6	295	486	154
31 60 251	218TWMT	125	03/29/1990	01	01	10	21	6.8	19	140	10	74	6	0	315	61	153	<.1	29.5	647	1121	390
31 61 119	218TWMT	60	03/27/1990	01	01	10	19	6.9	21	162	21	131	6	0	454	65	270	0.2	6.2	925	1570	540
31 61 808	218TWMT	171	03/28/1990	01	01	10	20	7.3	17	78	36	22	3	0	365	27	41	0.3	27.3	431	759	342
41 04 304	218TWMT	53	03/29/1990	01	01	10	20	6.8	22	194	57	172	9	0	483	177	354	0.2	42.9	1265	2010	718
41 05 508	218TWMT	150	03/28/1990	01	01	10	21	7.3	18	78	29	48	4	0	361	21	43	0.5	62.6	481	817	313
41 06 501	218TWMT	250	03/29/1990	01	01	10	21	7.1	17	78	31	18	4	0	391	38	14	0.4	0.1	393	673	324
41 07 803	218TWMT	322	04/24/1990	01	01	10	23	7.1	18	59	33	22	4	0	350	28	13	0.4	<.0	347	575	282
41 13 301	218TWMT	173	03/28/1990	01	01	10	18	7.4	14	58	40	96	8	0	344	77	112	0.5	15.3	567	667	304
41 14 601	218TWMT	180	03/28/1990	01	01	10	21	7.3	19	55	32	34	6	0	371	35	16	0.3	0.0	379	620	268

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U after date of collection signifies unbalanced or partial chemical analysis

Jul 15 1991

TEXAS WATER DEVELOPMENT BOARD
GROUND WATER DATA SYSTEM

GROUND WATER QUALITY SAMPLES
COUNTY - Eastland

Well	Aquifer	Well Depth (Feet)	Date of Collection	Agency Code	Lab Code	Reliability Code	Temp. Deg. C	pH	Silica (SiO2) MG/L	Calcium (Ca) MG/L	Magnesium (Mg) MG/L	Sodium (Na) MG/L	Potassium (K) MG/L	Carbonate (CO3) MG/L	Bicarb. (HCO3) MG/L	Sulfate (SO4) MG/L	Chloride (Cl) MG/L	Fluoride (F) MG/L	Nitrate (NO3) MG/L	Dissolved Solids MG/L	Spec. Cond. (micromhos)	Hardness as CaCO3 MG/L
31 36 718	218ALRS	80	03/22/1990	01	01	10	18	7.0	22	80	11	79	2	0	323	44	54	0.7	18.3	470	678	244
31 42 923	218ALRS	80	03/22/1990	01	01	10	19	6.7	19	186	22	107	7	0	353	47	310	0.3	6.8	878	1440	554
31 43 752	218ALRS	44	03/22/1990	01	01	10	18	7.0	11	108	19	48	2	0	392	33	80	0.2	2.6	475	840	347
31 43 942	218ALRS	76	03/21/1990	01	01	10	20	6.8	19	184	15	91	5	0	338	45	286	<.1	13.4	804	1419	520
31 44 505	218TWT	104	03/20/1990	01	01	10	20	6.7	18	213	18	100	6	0	425	67	301	<.1	20.1	949	1635	605
31 44 821	218TWT	80	03/19/1990	01	01	10	21	6.9	18	145	13	55	5	0	333	31	147	0.2	25.2	602	1029	415
31 51 277	218TWT	90	03/20/1990	01	01	10	19	6.7	20	246	14	145	7	0	425	85	385	<.1	15.9	1128	1879	671
31 51 311	218TWT	70	03/21/1990	01	01	10	20	6.9	21	224	14	111	5	0	354	75	337	0.2	20.9	981	1579	616

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Jul 15 1991

TEXAS WATER DEVELOPMENT BOARD
GROUND WATER DATA SYSTEMGROUND WATER QUALITY SAMPLES
COUNTY - Erath

Well	Aquifer	Well Depth (Feet)	Date of Collection	Agency Code	Lab Code	Reliability Code	Temp. Deg. C	pH	Silica (SiO ₂) MG/L	Calcium (Ca) MG/L	Magnesium (Mg) MG/L	Sodium (Na) MG/L	Potassium (K) MG/L	Carbonate (CO ₃) MG/L	Bicarb. (HCO ₃) MG/L	Sulfate (SO ₄) MG/L	Chloride (Cl) MG/L	Fluoride (F) MG/L	Nitrate (NO ₃) MG/L	Dissolved Solids MG/L	Spec. Cond. (micromhos)	Hardness as CaCO ₃ MG/L
31 37 801	218TWT	80	03/20/1990	01	01	10	21	7.2	18	122	43	38	4	0	403	138	71	0.4	0.2	830	1045	481
31 38 802	218TWT	115	04/18/1990	01	01	10	20	7.2	23	89	71	53	4	0	550	88	82	0.9	1.0	882	1234	514
31 38 802	218TWT	180	04/18/1990	01	01	10	20	7.2	18	84	38	23	3	0	414	40	23	0.3	1.8	432	787	357
31 38 502	218TWT	308	03/20/1990	01	01	10	22	7.2	15	104	28	21	3	0	425	32	25	0.4	14.7	452	782	378
31 38 503	218TWT	89	04/18/1990	01	01	10	19	7.1	13	102	38	17	3	0	443	57	28	0.4	1.1	475	1300	402
31 40 101	218TWT	105	04/18/1990	01	01	10	21	6.9	17	115	48	14	3	0	485	55	24	0.4	49.4	570	1250	488
31 45 801	218PLXY	75	04/17/1990	01	01	10	19	7.0	12	120	3	7	1	0	350	18	13	0.2	6.2	352	548	312
31 45 702	218TWT	211	04/18/1990	01	01	10	21	7.1	14	86	22	31	3	0	385	21	46	0.3	3.3	405	694	305
31 46 102	218TWT	90	03/21/1990	01	01	10	21	6.9	20	112	31	44	4	0	397	49	86	0.4	10.2	551	883	408
31 46 207	218TWT	380	03/21/1990	01	01	10	22	7.2	16	106	33	28	4	0	398	94	28	0.3	0.8	505	838	400
31 46 801	218PLXY	106	04/23/1990	01	01	10	20	6.8	19	203	89	172	5	0	481	265	399	0.2	0.4	1388	2300	872
31 47 201	218TWT	59	04/18/1990	01	01	10	19	7.2	17	88	38	26	3	0	421	88	22	0.5	2.4	470	1300	375
31 47 402	218TWT	392	04/24/1990	01	01	10	22	7.1	18	82	48	28	4	0	403	85	36	0.3	<.0	501	585	408
31 48 102	218TWT	114	03/27/1990	01	01	10	21	7.1	19	81	41	30	5	0	422	70	21	0.4	0.3	474	791	370
31 48 304	218TWT		03/19/1990	01	01	10	20	7.0	15	134	25	17	3	0	459	53	27	0.3	13.9	513	844	437
31 48 403	218TWT	110	04/18/1990	01	01	10	18	7.3	14	89	31	8	2	0	384	37	12	0.4	1.8	384	1100	349
31 48 802	218TWT	300	04/19/1990	01	01	10	18	7.4	15	78	34	21	4	0	358	41	42	0.4	<.0	410	1200	334
31 52 302	218TWT	100	03/22/1990	01	01	10	19	6.9	17	95	18	59	6	0	203	47	154	<.1	26.8	522	880	311
31 53 304	218TWT	480	04/18/1990	01	01	10	22	7.0	14	78	21	24	3	0	338	21	28	0.3	3.2	357	640	281
31 53 510	218TWT	178	03/28/1990	01	01	10	21	6.9	24	138	23	49	5	0	405	44	118	0.3	9.8	608	1083	433

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GROUND WATER QUALITY SAMPLES
COUNTY - Erath

Well	Aquifer	Well Depth (Feet)	Date of Collection	Agency Code	Lab Code	Reliability Code	Temp. Deg. C	pH	Silica (SiO2) MG/L	Calcium (Ca) MG/L	Magnesium (Mg) MG/L	Sodium (Na) MG/L	Potassium (K) MG/L	Carbonate (CO3) MG/L	Bicarb. (HCO3) MG/L	Sulfate (SO4) MG/L	Chloride (Cl) MG/L	Fluoride (F) MG/L	Nitrate (NO3) MG/L	Dissolved Solids MG/L	Spec. Cond. (micromhos)	Hardness as CaCO3 MG/L
31 54 105	218PLXY	115	04/17/1990	01	01	10	20	7.2	15	90	11	8	2	0	301	30	10	0.3	4.1	318	453	269
31 54 801	218TMMT	387	04/18/1990	01	01	10	21	7.2	14	82	22	13	3	0	348	14	19	0.3	3.1	341	470	295
31 55 113	218TMMT	390	03/19/1990	01	01	10	21	7.4	15	70	28	23	4	0	381	20	21	0.3	3.1	381	636	259
31 55 805	218TMMT	443	03/19/1990	01	01	10	22	7.3	15	72	27	18	4	0	387	18	18	0.3	2.1	354	812	290
31 56 402	218TMMT	558	03/26/1990	01	01	10	22	7.3	18	84	30	25	4	0	333	27	27	0.4	3.5	360	511	283
31 56 501	218PLXY		03/22/1990	01	01	10	20	6.8	13	81	4	8	1	0	259	39	5	0.3	<.0	289	452	244
31 56 801	218TMMT	121	03/22/1990	01	01	10	21	7.1	12	81	5	11	2	0	273	19	9	0.2	15.8	298	492	245
31 61 601	218TMMT	400	03/29/1990	01	01	10	22	7.1	18	79	32	12	3	0	392	29	14	0.4	3.8	381	657	328
31 62 107	218PLXY	125	03/27/1990	01	01	10	19	7.2	11	108	4	8	1	0	262	23	14	0.2	43.8	339	583	280
31 62 803	218TMMT	265	03/28/1990	01	01	10	22	7.2	18	84	26	18	3	0	365	40	15	0.3	0.1	382	668	318
31 62 901	218TMMT	333	03/27/1990	01	01	10	21	7.2	17	80	39	23	4	0	388	68	23	0.4	0.0	448	770	380
31 63 801	218TMMT	300	03/26/1990	01	01	10	20	7.3	5	73	32	31	5	0	384	44	34	0.4	0.2	403	710	313
31 63 701	218TMMT	284	03/29/1990	01	01	10	21	7.3	18	73	37	22	5	0	378	55	27	0.5	0.0	419	722	334
31 64 301	218TMMT	353	03/21/1990	01	01	10	22	7.2	15	57	32	27	5	0	337	38	20	0.4	1.5	359	604	273
31 64 402	218TMMT	281	03/21/1990	01	01	10	22	7.2	15	71	42	89	6	0	415	99	79	1.1	0.0	605	1002	349
32 49 101	218TMMT	395	03/22/1990	01	01	10	23	7.4	18	67	40	17	4	0	370	28	31	0.4	0.2	385	444	331
41 07 203	218TMMT	288	04/25/1990	01	01	10	22	7.1	17	65	41	30	5	0	389	51	31	0.4	<.0	421	727	330

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Jul 15 1991

TEXAS WATER DEVELOPMENT BOARD
GROUND WATER DATA SYSTEM

GROUND WATER QUALITY SAMPLES
COUNTY - Hamilton

Well	Aquifer	Well Depth (Feet)	Date of Collection	Agency Code	Lab Code	Relia- bility Code	Temp. Deg. C	pH	Silica (SiO2) MG/L	Calcium (Ca) MG/L	Magnesium (Mg) MG/L	Sodium (Na) MG/L	Potassium (K) MG/L	Carbonate (CO3) MG/L	Bicarb. (HCO3) MG/L	Sulfate (SO4) MG/L	Chloride (Cl) MG/L	Fluoride (F) MG/L	Nitrate (NO3) MG/L	Dissolved Solids MG/L	Spec. Cond. (micromhos)	Hardness as CaCO3 MG/L
41 07 513	218PLXY	100	04/25/1990	01	01	10	20	7.0	18	81	39	21	2	0	340	44	32	0.3	50.4	455	770	362
41 08 308	218TMMT		04/26/1990	01	01	10	21	7.2	15	83	34	38	5	0	356	50	32	0.4	<.0	413	694	297

Ground Water Quality Monitoring of the
Trinity Aquifer in the Vicinity of Erath County
July 1991

* Depth value here reflects the bottom of the SAMPLED INTERVAL which was different from the completed well depth
U after date of collection signifies unbalanced or partial chemical analysis

Jul 15 1991

TEXAS WATER DEVELOPMENT BOARD
GROUND WATER DATA SYSTEM

GROUND WATER QUALITY SAMPLES
COUNTY - Hood

Well	Aquifer	Well Depth (Feet)	Date of Collection	Agency Code	Lab Code	Reliability Code	Temp. Deg. C	pH	Silica (SiO2) MG/L	Calcium (Ca) MG/L	Magnesium (Mg) MG/L	Sodium (Na) MG/L	Potassium (K) MG/L	Carbonate (CO3) MG/L	Bicarb. (HCO3) MG/L	Sulfate (SO4) MG/L	Chloride (Cl) MG/L	Fluoride (F) MG/L	Nitrate (NO3) MG/L	Dissolved Solids MG/L	Spec. Cond. (micromhos)	Hardness as CaCO3 MG/L
31 32 901	218TMMT	46	04/17/1990	01	01	10	18	7.3	17	96	11	13	4	0	310	27	18	0.3	18.5	357	1000	284
32 33 805	218TMMT	535	03/27/1990	01	01	10	21	7.3	18	54	32	45	6	0	367	41	16	0.2	0.0	402	676	268
32 34 403	218TMMT	250	04/24/1990	01	01	10	22	7.4	16	35	23	105	7	0	364	49	28	0.4	0.3	457	1000	181
32 34 611	218TMMT	300	03/28/1990	01	01	10	22	8.8	11	2	0	210	3	16	371	82	29	0.5	0.3	535	747	6
32 42 403	218TMMT	355	03/20/1990	01	01	10	22	7.5	15	34	23	72	7	0	339	46	14	0.3	<.0	377	618	179
32 49 201	218TMMT	460	03/21/1990	01	01	10	22	7.2	16	57	32	40	5	0	336	35	45	0.4	<.0	395	641	273

* Depth value here reflects the bottom of the SAMPLED INTERVAL which was different from the completed well depth
U after date of collection signifies unbalanced or partial chemical analysis

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 Jul 15 1991

TEXAS WATER DEVELOPMENT BOARD
 GROUND WATER DATA SYSTEM

GROUND WATER QUALITY SAMPLES
 COUNTY - Somervell

Well	Aquifer	Well Depth (Feet)	Date of Collection	Agency Code	Lab Code	Reliability Code	Temp. Deg. C	pH	Silica (SiO2) MG/L	Calcium (Ca) MG/L	Magnesium (Mg) MG/L	Sodium (Na) MG/L	Potassium (K) MG/L	Carbonate (CO3) MG/L	Bicarb. (HCO3) MG/L	Sulfate (SO4) MG/L	Chloride (Cl) MG/L	Fluoride (F) MG/L	Nitrate (NO3) MG/L	Dissolved Solids MG/L	Spec. Cond. (micromhos)	Hardness as CaCO3 MG/L
32 51 105	218TWT	484	04/23/1990	01	01	10	23	7.8	15	22	20	108	6	0	388	26	13	0.3	<.0	387	900	137

Ground Water Quality Monitoring of the Trinity Aquifer in the Vicinity of Erath County July 1991

* Depth value here reflects the bottom of the SAMPLED INTERVAL which was different from the completed well depth
 U after date of collection signifies unbalanced or partial chemical analysis

APPENDIX III

Nutrient Sample Report

Jul 16 1991

TEXAS WATER DEVELOPMENT BOARD
GROUND WATER DATA SYSTEM

NUTRIENT SAMPLE REPORT COUNTY - Bosque

STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE
3257701	04/25/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		0.03
	04/25/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)		0.01
	04/25/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		0.01
	04/25/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)	<	0.1
	04/25/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)	<	0.01
4002101	04/25/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		0.26
	04/25/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)		0.01
	04/25/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		0.20
	04/25/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)		0.3
	04/25/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)		0.01

Jul 16 1991

TEXAS WATER DEVELOPMENT BOARD
GROUND WATER DATA SYSTEM

NUTRIENT SAMPLE REPORT COUNTY - Comanche

STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE
3152213	03/27/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		0.13
	03/27/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)		0.04
	03/27/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		10.94
	03/27/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)		0.2
	03/27/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)		0.02
3152636	03/26/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		0.03
	03/26/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	03/26/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		15.05
	03/26/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)	<	0.1
	03/26/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)		0.02
3160251	03/29/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		0.02
	03/29/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)		0.01
	03/29/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		6.67
	03/29/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)		0.1
	03/29/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)		0.04
3161119	03/27/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		0.03
	03/27/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	03/27/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		1.41
	03/27/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)		0.1
	03/27/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)		0.01
3161808	03/28/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)	<	0.02
	03/28/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)		0.01
	03/28/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		6.16
	03/28/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)	<	0.1
	03/28/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)	<	0.01
4104304	03/29/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)	<	0.02
	03/29/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	03/29/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		9.70

NUTRIENT SAMPLE REPORT COUNTY - Comanche

STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE
4104304	03/29/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)		0.2
	03/29/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)	<	0.01
4105508	03/28/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)	<	0.02
	03/28/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	03/28/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		14.15
	03/28/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)	<	0.1
	03/28/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)	<	0.01
4106501	03/29/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)	<	0.02
	03/29/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	03/29/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		0.02
	03/29/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)	<	0.1
	03/29/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)	<	0.01
4107803	04/24/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		0.06
	04/24/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)		0.01
	04/24/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	04/24/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)		0.1
	04/24/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)		0.01
4113301	03/28/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		10
	03/28/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	03/28/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		3.46
	03/28/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)		0.1
	03/28/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)	<	0.01
4114601	03/28/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		.27
	03/28/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	03/28/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		0.01
	03/28/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)		0.3
	03/28/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)	<	0.01

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TEXAS WATER DEVELOPMENT BOARD
GROUND WATER DATA SYSTEM

NUTRIENT SAMPLE REPORT COUNTY - Eastland

STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE
3136716	03/22/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		0.02
	03/22/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	03/22/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		4.14
	03/22/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)		0.2
	03/22/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)		0.03
3142923	03/23/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)	<	0.02
	03/23/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)		0.01
	03/23/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		1.54
	03/23/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)		0.2
	03/23/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)		0.03
3143752	03/22/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		0.04
	03/22/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)		0.01
	03/22/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		0.59
	03/22/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)		0.2
	03/22/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)		0.02
3143942	03/21/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		0.02
	03/21/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)		0.01
	03/21/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		3.03
	03/21/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)		0.2
	03/21/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)		0.04
3144505	03/20/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		0.02
	03/20/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)		0.01
	03/20/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		4.55
	03/20/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)		0.2
	03/20/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)		0.02
3144821	03/19/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		0.02
	03/19/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)		0.01
	03/19/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		5.70

NUTRIENT SAMPLE REPORT COUNTY - Eastland

STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE
3144821	03/19/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)		0.2
	03/19/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)		0.02
3151277	03/20/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		0.03
	03/20/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)		0.01
	03/20/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		3.60
	03/20/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)		0.3
	03/20/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)		0.01
3151311	03/21/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		0.03
	03/21/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)		0.01
	03/21/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		4.71
	03/21/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)		0.2
	03/21/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)		0.03

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TEXAS WATER DEVELOPMENT BOARD
GROUND WATER DATA SYSTEM

NUTRIENT SAMPLE REPORT COUNTY - Erath

STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE
3137901	03/20/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		0.04
	03/20/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	03/20/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		0.05
	03/20/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)		0.2
	03/20/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)		0.01
3138602	04/19/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		0.02
	04/19/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	04/19/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		0.23
	04/19/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)		0.1
	04/19/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)		0.01
3138902	04/19/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		0.02
	04/19/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	04/19/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		0.41
	04/19/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)	<	0.1
	04/19/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)	<	0.01
3139502	03/20/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		0.05
	03/20/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	03/20/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		3.33
	03/20/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)		0.1
	03/20/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)		0.04
3139503	04/19/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		0.02
	04/19/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	04/19/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		0.25
	04/19/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)	<	0.1
	04/19/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)		0.01
3140101	04/16/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)	<	0.02
	04/16/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	04/16/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		11.15

NUTRIENT SAMPLE REPORT COUNTY - Erath

STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE
3140101	04/16/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)		0.1
	04/16/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)	<	0.01
3145601	04/17/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		0.02
	04/17/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	04/17/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		1.41
	04/17/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)	<	0.1
	04/17/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)	<	0.01
3145702	04/18/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		0.02
	04/18/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)		0.01
	04/18/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		0.75
	04/18/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)	<	0.1
	04/18/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)	<	0.01
3146102	03/21/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		0.04
	03/21/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	03/21/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		2.30
	03/21/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)		0.2
	03/21/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)	<	0.01
3146207	03/21/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		0.02
	03/21/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	03/21/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		0.18
	03/21/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)		0.1
	03/21/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)	<	0.01
3146801	04/23/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		0.03
	04/23/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)		0.02
	04/23/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		0.09
	04/23/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)		0.2
	04/23/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)	<	0.01
3147201	04/18/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		0.02
	04/18/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	04/18/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		0.55

NUTRIENT SAMPLE REPORT COUNTY - Erath

STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE
3147201	04/18/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)	<	0.1
	04/18/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)	<	0.01
3147402	04/24/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)	<	0.02
	04/24/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)		0.01
	04/24/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	04/24/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)	<	0.1
	04/24/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)	<	0.01
3148102	03/27/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		0.05
	03/27/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	03/27/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		0.06
	03/27/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)	<	0.1
	03/27/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)	<	0.01
3148304	03/19/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		0.02
	03/19/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	03/19/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		3.14
	03/19/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)		0.1
	03/19/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)		0.01
3148403	04/18/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		0.02
	04/18/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	04/18/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		0.41
	04/18/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)	<	0.1
	04/18/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)	<	0.01
3148902	04/19/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		0.05
	04/19/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	04/19/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	04/19/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)	<	0.1
	04/19/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)	<	0.01
3152302	03/22/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		0.03
	03/22/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	03/22/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		6.05

NUTRIENT SAMPLE REPORT COUNTY - Erath

STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE
3152302	03/22/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)		0.2
	03/22/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)		0.01
3153304	04/16/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)	<	0.02
	04/16/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	04/16/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		0.72
	04/16/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)	<	0.1
	04/16/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)	<	0.01
3153510	03/28/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)	<	0.02
	03/28/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	03/28/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		2.22
	03/28/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)		0.2
	03/28/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)	<	0.01
3154105	04/17/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		0.02
	04/17/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	04/17/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		0.92
	04/17/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)	<	0.1
	04/17/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)		0.01
3154801	04/18/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		0.02
	04/18/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	04/18/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		0.71
	04/18/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)	<	0.1
	04/18/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)		0.01
3155113	03/19/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		0.03
	03/19/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)		0.01
	03/19/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		0.69
	03/19/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)		0.1
	03/19/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)		0.01
3155805	03/19/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		0.02
	03/19/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	03/19/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		0.48

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STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE
3155805	03/19/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)	<	0.1
	03/19/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)		0.01
3156402	03/26/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		0.02
	03/26/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	03/26/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		0.79
	03/26/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)	<	0.1
	03/26/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)	<	0.01
3156501	03/22/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		0.08
	03/22/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	03/22/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	03/22/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)		0.1
	03/22/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)		0.04
3156901	03/22/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		0.02
	03/22/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	03/22/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		3.60
	03/22/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)	<	0.1
	03/22/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)	<	0.01
3161601	03/29/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)	<	0.02
	03/29/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	03/29/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		0.86
	03/29/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)	<	0.1
	03/29/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)	<	0.01
3162107	03/27/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		0.04
	03/27/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	03/27/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		9.91
	03/27/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)		0.1
	03/27/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)		0.01
3162803	03/28/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		0.03
	03/28/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	03/28/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		0.03

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STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE
3162803	03/28/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)	<	0.1
	03/28/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)	<	0.01
3162901	03/27/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		0.15
	03/27/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	03/27/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		0.01
	03/27/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)	<	0.1
	03/27/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)		0.01
3163601	03/26/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		0.04
	03/26/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	03/26/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		0.03
	03/26/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)	<	0.1
	03/26/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)		0.01
3163701	03/29/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)	<	0.02
	03/29/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	03/29/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		0.01
	03/29/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)	<	0.1
	03/29/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)	<	0.01
3164301	03/21/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		0.04
	03/21/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	03/21/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		0.33
	03/21/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)	<	0.1
	03/21/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)	<	0.01
3164402	03/21/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		0.04
	03/21/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	03/21/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		0.01
	03/21/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)		0.2
	03/21/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)	<	0.01
3249101	03/22/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		0.04
	03/22/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	03/22/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		0.04

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STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE
3249101	03/22/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)	<	0.1
	03/22/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)	<	0.01
4107203	04/25/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		0.09
	04/25/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)		0.01
	04/25/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	04/25/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)		0.2
	04/25/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)	<	0.01

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STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE
4107513	04/25/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)	<	0.02
	04/25/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)		0.01
	04/25/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		11.38
	04/25/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)		0.2
	04/25/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)	<	0.01
4108308	04/26/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		0.08
	04/26/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)		0.01
	04/26/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	04/26/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)		0.2
	04/26/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)	<	0.01

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TEXAS WATER DEVELOPMENT BOARD
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NUTRIENT SAMPLE REPORT COUNTY - Hood

STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE
3132901	04/17/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)	<	0.02
	04/17/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	04/17/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		4.18
	04/17/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)	<	0.1
	04/17/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)	<	0.01
3233805	03/27/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		0.36
	03/27/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	03/27/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		0.01
	03/27/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)		0.5
	03/27/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)	<	0.01
3234403	04/24/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		0.70
	04/24/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)		0.01
	04/24/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		0.06
	04/24/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)		1.0
	04/24/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)	<	0.01
3234611	03/28/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		0.23
	03/28/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)		0.01
	03/28/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		0.07
	03/28/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)		0.3
	03/28/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)		0.01
3242403	03/20/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		0.47
	03/20/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	03/20/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	03/20/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)		1.0
	03/20/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)		0.01
3249201	03/21/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		0.06
	03/21/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	03/21/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01

NUTRIENT SAMPLE REPORT COUNTY - Hood

STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE
3249201	03/21/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)		0.1
	03/21/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)	<	0.01

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NUTRIENT SAMPLE REPORT COUNTY - Somervell

STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE
3251105	04/23/1990	1	00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)		0.25
	04/23/1990	1	00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	04/23/1990	1	00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01
	04/23/1990	1	00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)		0.3
	04/23/1990	1	00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)	<	0.01

APPENDIX IV
Minor Inorganic Element Report

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TEXAS WATER DEVELOPMENT BOARD
GROUND WATER DATA SYSTEM

MINOR INORGANIC ELEMENT REPORT COUNTY - Bosque

STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE
3257701	04/25/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	04/25/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		50
	04/25/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	04/25/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	04/25/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	04/25/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	04/25/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)	<	20
	04/25/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	04/25/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)		30
	04/25/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	04/25/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	04/25/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		4980
	04/25/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	04/25/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)		575
	04/25/1990	1	01106	ALUMINIUM, DISSOLVED (UG/L AS AL)	<	50
	04/25/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	2
	04/25/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2
4002101	04/25/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	04/25/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		90
	04/25/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	04/25/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	04/25/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	04/25/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)		41
	04/25/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	04/25/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	04/25/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	04/25/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	04/25/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		5670
	04/25/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	04/25/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)	<	20
	04/25/1990	1	01106	ALUMINIUM, DISSOLVED (UG/L AS AL)	<	50
	04/25/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	2

MINOR INORGANIC ELEMENT REPORT COUNTY - Bosque

STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE
4002101	04/25/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2

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TEXAS WATER DEVELOPMENT BOARD
GROUND WATER DATA SYSTEM

MINOR INORGANIC ELEMENT REPORT COUNTY - Comanche

STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE
3152213	03/27/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	03/27/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		274
	03/27/1990	1	01020	BORON, DISSOLVED (UG/L AS B)		610
	03/27/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	03/27/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	03/27/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	03/27/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)		2610
	03/27/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	03/27/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)		103
	03/27/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	03/27/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	03/27/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		300
	03/27/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	03/27/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)	<	20
	03/27/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	03/27/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	2
	03/27/1990	1	71865	IODIDE (MG/L AS I)	<	0.1
	03/27/1990	1	71870	BROMIDE, DISSOLVED, (MG/L AS BR)		0.4
03/27/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2	
3152636	03/26/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	03/26/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		277
	03/26/1990	1	01020	BORON, DISSOLVED (UG/L AS B)		270
	03/26/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	03/26/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	03/26/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	03/26/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)	<	20
	03/26/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	03/26/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	03/26/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	03/26/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	03/26/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)	<	200
	03/26/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20

MINOR INORGANIC ELEMENT REPORT COUNTY - Comanche

STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE
3152636	03/26/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)	<	20
	03/26/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	03/26/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	2
	03/26/1990	1	71865	IODIDE (MG/L AS I)	<	0.1
	03/26/1990	1	71870	BROMIDE, DISSOLVED, (MG/L AS BR)		0.5
	03/26/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2
3160251	03/29/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	03/29/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		281
	03/29/1990	1	01020	BORON, DISSOLVED (UG/L AS B)		290
	03/29/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	03/29/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	03/29/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	03/29/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)		126
	03/29/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	03/29/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	03/29/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	03/29/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	03/29/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		280
	03/29/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	03/29/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)	<	20
	03/29/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	03/29/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)		4
	03/29/1990	1	71865	IODIDE (MG/L AS I)	<	0.1
	03/29/1990	1	71870	BROMIDE, DISSOLVED, (MG/L AS BR)		0.2
	03/29/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2
	3161119	03/27/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<
03/27/1990		1	01005	BARIUM, DISSOLVED (UG/L AS BA)		148
03/27/1990		1	01020	BORON, DISSOLVED (UG/L AS B)		390
03/27/1990		1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
03/27/1990		1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
03/27/1990		1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
03/27/1990		1	01046	IRON, DISSOLVED (UG/L AS FE)	<	20
03/27/1990		1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
03/27/1990		1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20

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STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE
3161119	03/27/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	03/27/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	03/27/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		660
	03/27/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	03/27/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)	<	20
	03/27/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	03/27/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	2
	03/27/1990	1	71865	IODIDE (MG/L AS I)	<	0.1
	03/27/1990	1	71870	BROMIDE, DISSOLVED, (MG/L AS BR)		0.2
	03/27/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2
3161808	03/28/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	03/28/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		299
	03/28/1990	1	01020	BORON, DISSOLVED (UG/L AS B)		360
	03/28/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	03/28/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	03/28/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	03/28/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)	<	20
	03/28/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	03/28/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	03/28/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	03/28/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	03/28/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		400
	03/28/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	03/28/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)	<	20
	03/28/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	03/28/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	2
	03/28/1990	1	71865	IODIDE (MG/L AS I)	>	0.1
	03/28/1990	1	71870	BROMIDE, DISSOLVED, (MG/L AS BR)		0.1
03/28/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	>	0.2	
4104304	03/29/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	03/29/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		63
	03/29/1990	1	01020	BORON, DISSOLVED (UG/L AS B)		440
	03/29/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	03/29/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20

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STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE
4104304	03/29/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	03/29/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)	<	20
	03/29/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	03/29/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	03/29/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	03/29/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	03/29/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		770
	03/29/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	03/29/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)	<	20
	03/29/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	03/29/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)		4
	03/29/1990	1	71865	IODIDE (MG/L AS I)	<	0.1
	03/29/1990	1	71870	BROMIDE, DISSOLVED, (MG/L AS BR)		0.1
	03/29/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2
	4105508	03/28/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<
03/28/1990		1	01005	BARIUM, DISSOLVED (UG/L AS BA)		237
03/28/1990		1	01020	BORON, DISSOLVED (UG/L AS B)		240
03/28/1990		1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
03/28/1990		1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
03/28/1990		1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
03/28/1990		1	01046	IRON, DISSOLVED (UG/L AS FE)	<	20
03/28/1990		1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
03/28/1990		1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
03/28/1990		1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
03/28/1990		1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
03/28/1990		1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		420
03/28/1990		1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
03/28/1990		1	01090	ZINC, DISSOLVED (UG/L AS ZN)	<	20
03/28/1990		1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
03/28/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	2	
03/28/1990	1	71865	IODIDE (MG/L AS I)	<	0.1	
03/28/1990	1	71870	BROMIDE, DISSOLVED, (MG/L AS BR)		0.1	
03/28/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2	
4106501	03/29/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10

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STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE
4106501	03/29/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		102
	03/29/1990	1	01020	BORON, DISSOLVED (UG/L AS B)		360
	03/29/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	03/29/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	03/29/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	03/29/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)		244
	03/29/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	03/29/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	03/29/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	03/29/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	03/29/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		790
	03/29/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	03/29/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)	<	20
	03/29/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	03/29/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	2
	03/29/1990	1	71865	IODIDE (MG/L AS I)	<	0.1
	03/29/1990	1	71870	BROMIDE, DISSOLVED, (MG/L AS BR)	<	0.01
	03/29/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2
	4107803	04/24/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<
04/24/1990		1	01005	BARIUM, DISSOLVED (UG/L AS BA)		121
04/24/1990		1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
04/24/1990		1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
04/24/1990		1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
04/24/1990		1	01046	IRON, DISSOLVED (UG/L AS FE)		193
04/24/1990		1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
04/24/1990		1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
04/24/1990		1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
04/24/1990		1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
04/24/1990		1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		2560
04/24/1990		1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
04/24/1990		1	01090	ZINC, DISSOLVED (UG/L AS ZN)		70
04/24/1990		1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
04/24/1990		1	01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	2
04/24/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2	

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STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE
4113301	03/28/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	03/28/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		91
	03/28/1990	1	01020	BORON, DISSOLVED (UG/L AS B)		420
	03/28/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	03/28/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	03/28/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	03/28/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)	<	20
	03/28/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	03/28/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	03/28/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	03/28/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	03/28/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		4750
	03/28/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	03/28/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)	<	20
	03/28/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	03/28/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	2
	03/28/1990	1	71865	IODIDE (MG/L AS I)	<	0.1
	03/28/1990	1	71870	BROMIDE, DISSOLVED, (MG/L AS BR)		0.1
	03/28/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2
	4114601	03/28/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<
03/28/1990		1	01005	BARIUM, DISSOLVED (UG/L AS BA)		94
03/28/1990		1	01020	BORON, DISSOLVED (UG/L AS B)		410
03/28/1990		1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	20
03/28/1990		1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
03/28/1990		1	01046	IRON, DISSOLVED (UG/L AS FE)		110
03/28/1990		1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
03/28/1990		1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
03/28/1990		1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
03/28/1990		1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
03/28/1990		1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		3500
03/28/1990		1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
03/28/1990		1	01090	ZINC, DISSOLVED (UG/L AS ZN)	<	20
03/28/1990		1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
03/28/1990		1	01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	2
03/28/1990		1	71865	IODIDE (MG/L AS I)	<	0.1

MINOR INORGANIC ELEMENT REPORT COUNTY - Comanche

STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE
4114601	03/28/1990	1	71870	BROMIDE, DISSOLVED, (MG/L AS BR)	<	0.01
	03/28/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2

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MINOR INORGANIC ELEMENT REPORT COUNTY - Eastland

STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE
3136716	03/22/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	03/22/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		93
	03/22/1990	1	01020	BORON, DISSOLVED (UG/L AS B)		190
	03/22/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	03/22/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	03/22/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	03/22/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)	<	20
	03/22/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	03/22/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	03/22/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	03/22/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	03/22/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		360
	03/22/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	03/22/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)	<	20
	03/22/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	03/22/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	2
	03/22/1990	1	71865	IODIDE (MG/L AS I)	<	0.1
	03/22/1990	1	71870	BROMIDE, DISSOLVED, (MG/L AS BR)		0.2
03/22/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2	
3142923	03/23/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	03/23/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		316
	03/22/1990	1	01020	BORON, DISSOLVED (UG/L AS B)		260
	03/23/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	03/23/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	03/23/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	03/23/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)		57
	03/23/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	03/23/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	03/23/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	03/23/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	03/23/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		710
	03/23/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20

MINOR INORGANIC ELEMENT REPORT COUNTY - Eastland

STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE
3142923	03/23/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)		224
	03/23/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	03/23/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	2
	03/22/1990	1	71865	IODIDE (MG/L AS I)	<	0.1
	03/22/1990	1	71870	BROMIDE, DISSOLVED, (MG/L AS BR)		0.3
	03/23/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2
3143752	03/22/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	03/22/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		186
	03/22/1990	1	01020	BORON, DISSOLVED (UG/L AS B)		240
	03/22/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	03/22/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	03/22/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	03/22/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)	<	20
	03/22/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	20
	03/22/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	03/22/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	03/22/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	03/22/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		410
	03/22/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	03/22/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)		21
	03/22/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	03/22/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	2
	03/22/1990	1	71865	IODIDE (MG/L AS I)	<	0.1
	03/22/1990	1	71870	BROMIDE, DISSOLVED, (MG/L AS BR)		0.1
03/22/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2	
3143942	03/21/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	03/21/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		288
	03/21/1990	1	01020	BORON, DISSOLVED (UG/L AS B)		260
	03/21/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	03/21/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	03/21/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	03/21/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)	<	20
	03/21/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	03/21/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20

MINOR INORGANIC ELEMENT REPORT COUNTY - Eastland

STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE
3143942	03/21/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	03/21/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	03/21/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		450
	03/21/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	03/21/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)	<	20
	03/21/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	03/21/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	2
	03/21/1990	1	71865	IODIDE (MG/L AS I)	<	0.1
	03/21/1990	1	71870	BROMIDE, DISSOLVED, (MG/L AS BR)		0.3
03/21/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2	
3144505	03/20/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	03/20/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		335
	03/20/1990	1	01020	BORON, DISSOLVED (UG/L AS B)		390
	03/20/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	03/20/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	03/20/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	03/20/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)		182
	03/20/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	03/20/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	03/20/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	03/20/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	03/20/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		620
	03/20/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	03/20/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)		92
	03/20/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	03/20/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)		2
	03/20/1990	1	71865	IODIDE (MG/L AS I)	<	0.1
	03/20/1990	1	71870	BROMIDE, DISSOLVED, (MG/L AS BR)		0.2
03/20/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2	
3144821	03/19/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	03/19/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		344
	03/19/1990	1	01020	BORON, DISSOLVED (UG/L AS B)		390
	03/19/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	03/19/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20

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STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE
3144821	03/19/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	03/19/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)	<	20
	03/19/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	03/19/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	03/19/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	03/19/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	03/19/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		410
	03/19/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	03/19/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)	<	20
	03/19/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	03/19/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	2
	03/19/1990	1	71865	IODIDE (MG/L AS I)	<	0.1
	03/19/1990	1	71870	BROMIDE, DISSOLVED, (MG/L AS BR)		0.2
	03/19/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2
3151277	03/20/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	03/20/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		363
	03/20/1990	1	01020	BORON, DISSOLVED (UG/L AS B)		440
	03/20/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	03/20/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	03/20/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	03/20/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)	<	20
	03/20/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	03/20/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	03/20/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	03/20/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	03/20/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		710
	03/20/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	03/20/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)	<	20
	03/20/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	03/20/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)		3
	03/20/1990	1	71865	IODIDE (MG/L AS I)	<	0.1
	03/20/1990	1	71870	BROMIDE, DISSOLVED, (MG/L AS BR)		0.2
	03/20/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2
	3151311	03/21/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<

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STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE
3151311	03/21/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		172
	03/21/1990	1	01020	BORON, DISSOLVED (UG/L AS B)		360
	03/21/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	03/21/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	03/21/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	03/21/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)	<	20
	03/21/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	03/21/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	03/21/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	03/21/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	03/21/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		620
	03/21/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	03/21/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)	<	20
	03/21/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	03/21/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)		2
	03/21/1990	1	71865	IODIDE (MG/L AS I)	<	0.1
	03/21/1990	1	71870	BROMIDE, DISSOLVED, (MG/L AS BR)		0.3
03/21/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2	

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MINOR INORGANIC ELEMENT REPORT COUNTY - Erath

STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE
3137901	03/20/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	03/20/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		33
	03/20/1990	1	01020	BORON, DISSOLVED (UG/L AS B)		360
	03/20/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	03/20/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	03/20/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	03/20/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)		93
	03/20/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	03/20/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	03/20/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	03/20/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	03/20/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		1220
	03/20/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	03/20/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)		71
	03/20/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	03/20/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)		2
	03/20/1990	1	71865	IODIDE (MG/L AS I)	<	0.1
	03/20/1990	1	71870	BROMIDE, DISSOLVED, (MG/L AS BR)		0.0
03/20/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2	
3138602	04/19/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	04/19/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		127
	04/19/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	04/19/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	04/19/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	04/19/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)		43
	04/19/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	04/19/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	04/19/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	04/19/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	04/19/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		2690
	04/19/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	04/19/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)		43

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STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE
3138602	04/19/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	04/19/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)		2
	04/19/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2
3138902	04/19/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	04/19/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		141
	04/19/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	04/19/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	04/19/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)	<	20
	04/19/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	04/19/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	04/19/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	04/19/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	04/19/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		1620
	04/19/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	04/19/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)		22
	04/19/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	04/19/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	2
	04/19/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2
3139502	03/20/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	03/20/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		178
	03/20/1990	1	01020	BORON, DISSOLVED (UG/L AS B)		400
	03/20/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	03/20/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	03/20/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	03/20/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)	<	20
	03/20/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	03/20/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	03/20/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	03/20/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	03/20/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		880
	03/20/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	03/20/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)		38
	03/20/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	03/20/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)		5

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STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE
3139502	03/20/1990	1	71865	IODIDE (MG/L AS I)	<	0.1
	03/20/1990	1	71870	BROMIDE, DISSOLVED, (MG/L AS BR)		0.0
	03/20/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2
3139503	04/19/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	04/19/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		144
	04/19/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	04/19/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	04/19/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	04/19/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)		30
	04/19/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	04/19/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	04/19/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	04/19/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	04/19/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		1310
	04/19/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	04/19/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)	<	20
	04/19/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	04/19/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	2
04/19/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2	
3140101	04/16/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	04/16/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		98
	04/16/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	04/16/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	04/16/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	04/16/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)	<	20
	04/16/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	04/16/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	04/16/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	04/16/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	04/16/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		2300
	04/16/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	>	20
	04/16/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)	>	102
	04/16/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	>	50
	04/16/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)	>	2

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3140101	04/16/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2
3145601	04/17/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	04/17/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)	<	165
	04/17/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	04/17/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	04/17/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	04/17/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)	<	20
	04/17/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	04/17/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	04/17/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	04/17/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	04/17/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)	<	490
	04/17/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	04/17/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)	<	351
	04/17/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
04/17/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	2	
04/17/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2	
3145702	04/18/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	04/18/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)	<	159
	04/18/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	04/18/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	04/18/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	04/18/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)	<	20
	04/18/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	04/18/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	04/18/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	04/18/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	04/18/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)	<	610
	04/18/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	04/18/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)	<	63
	04/18/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
04/18/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	2	
04/18/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2	

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STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE
3146102	03/21/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	03/21/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		135
	03/21/1990	1	01020	BORON, DISSOLVED (UG/L AS B)		340
	03/21/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	03/21/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	03/21/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	03/21/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)	<	20
	03/21/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	03/21/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	03/21/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	03/21/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	03/21/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		860
	03/21/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	03/21/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)	<	20
	03/21/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	03/21/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)		3
	03/21/1990	1	71865	IODIDE (MG/L AS I)	<	0.1
	03/21/1990	1	71870	BROMIDE, DISSOLVED, (MG/L AS BR)		0.1
03/21/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2	
3146207	03/21/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	03/21/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		46
	03/21/1990	1	01020	BORON, DISSOLVED (UG/L AS B)		400
	03/21/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	>	10
	03/21/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	>	20
	03/21/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	>	20
	03/21/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)	>	20
	03/21/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	>	50
	03/21/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	>	20
	03/21/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	>	20
	03/21/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	>	10
	03/21/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		960
	03/21/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	>	20
	03/21/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)		292
	03/21/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	03/21/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)		3

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3146207	03/21/1990	1	71865	IODIDE (MG/L AS I)	<	0.1
	03/21/1990	1	71870	BROMIDE, DISSOLVED, (MG/L AS BR)	<	0.01
	03/21/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2
3146801	04/23/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	04/23/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)	<	60
	04/23/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	04/23/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	04/23/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	04/23/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)	<	2160
	04/23/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	04/23/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	40
	04/23/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	04/23/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	04/23/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)	<	1430
	04/23/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	04/23/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)	<	910
	04/23/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	04/23/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	5
04/23/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2	
3147201	04/18/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	04/18/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)	<	86
	04/18/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	04/18/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	04/18/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	04/18/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)	<	56
	04/18/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	04/18/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	04/18/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	04/18/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	04/18/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)	<	1180
	04/18/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	04/18/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)	<	514
	04/18/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	04/18/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	2

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3147201	04/18/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2
3147402	04/24/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	04/24/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		94
	04/24/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	04/24/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	04/24/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	04/24/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)		134
	04/24/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	04/24/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	04/24/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	04/24/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	04/24/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		1780
	04/24/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	04/24/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)		497
	04/24/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	04/24/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	2
	04/24/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2
3148102	03/27/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	03/27/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		87
	03/27/1990	1	01020	BORON, DISSOLVED (UG/L AS B)		210
	03/27/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	03/27/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	03/27/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	03/27/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)		569
	03/27/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	03/27/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	03/27/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	03/27/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	03/27/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		2130
	03/27/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	03/27/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)		67
	03/27/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	03/27/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	2
	03/27/1990	1	71865	IODIDE (MG/L AS I)	<	0.1

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STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE
3148102	03/27/1990	1	71870	BROMIDE, DISSOLVED, (MG/L AS BR)		0.0
	03/27/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2
3148304	03/19/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	03/19/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		117
	03/19/1990	1	01020	BORON, DISSOLVED (UG/L AS B)		510
	03/19/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	20
	03/19/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	03/19/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	03/19/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	03/19/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	03/19/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	03/19/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	03/19/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		860
	03/19/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	03/19/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)	<	20
	03/19/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	03/19/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	2
	03/19/1990	1	71865	IODIDE (MG/L AS I)	<	0.1
	03/19/1990	1	71870	BROMIDE, DISSOLVED, (MG/L AS BR)		0.1
03/19/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2	
3148403	04/18/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	04/18/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		164
	04/18/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	04/18/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	04/18/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	04/18/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)	<	20
	04/18/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	04/18/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	04/18/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	04/18/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	04/18/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		960
	04/18/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	04/18/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)		204
	04/18/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50

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3148403	04/18/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)		4
	04/18/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2
3148902	04/19/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	04/19/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		98
	04/19/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	04/19/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	04/19/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	04/19/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)		2880
	04/19/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	04/19/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	04/19/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	04/19/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	04/19/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		2380
	04/19/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	04/19/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)		127
	04/19/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	04/19/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	2
	04/19/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2
3152302	03/22/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	03/22/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		261
	03/22/1990	1	01020	BORON, DISSOLVED (UG/L AS B)		260
	03/22/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	03/22/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	03/22/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	03/22/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)		33
	03/22/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	03/22/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	03/22/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	03/22/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	03/22/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		320
	03/22/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	03/22/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)	<	20
	03/22/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	03/22/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	2

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3152302	03/22/1990	1	71865	IODIDE (MG/L AS I)	<	0.1
	03/22/1990	1	71870	BROMIDE, DISSOLVED, (MG/L AS BR)		0.5
	03/22/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2
3153304	04/16/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	04/16/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		155
	04/16/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	04/16/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	04/16/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	04/16/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)	<	20
	04/16/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	04/16/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	04/16/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	04/16/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	04/16/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		650
	04/16/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	04/16/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)		48
	04/16/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	04/16/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	2
04/16/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2	
3153510	03/28/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	03/28/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		376
	03/28/1990	1	01020	BORON, DISSOLVED (UG/L AS B)		420
	03/28/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	03/28/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	03/28/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	03/28/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)		24
	03/28/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	03/28/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	03/28/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	03/28/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	03/28/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		410
	03/28/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	03/28/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)	<	20
	03/28/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50

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3153510	03/28/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)		3
	03/28/1990	1	71865	IODIDE (MG/L AS I)	<	0.1
	03/28/1990	1	71870	BROMIDE, DISSOLVED, (MG/L AS BR)		0.1
	03/28/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2
3154105	04/17/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		112
	04/17/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	04/17/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	04/17/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	04/17/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)	<	20
	04/17/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	20
	04/17/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	04/17/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	04/17/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	04/17/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		500
	04/17/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	04/17/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)		184
	04/17/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	04/17/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	10
	04/17/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)		4
04/17/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2	
3154801	04/18/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	04/18/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		216
	04/18/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	04/18/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	04/18/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	04/18/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)	<	20
	04/18/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	04/18/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	04/18/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	04/18/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	04/18/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		690
	04/18/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	04/18/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)	<	20
	04/18/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50

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3154801	04/18/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	2
	04/18/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2
3155113	03/19/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	03/19/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		146
	03/19/1990	1	01020	BORON, DISSOLVED (UG/L AS B)		270
	03/19/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	03/19/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	03/19/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	03/19/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)	<	20
	03/19/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	03/19/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	03/19/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	03/19/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	03/19/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		740
	03/19/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	03/19/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)	<	20
	03/19/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	03/19/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	2
	03/19/1990	1	71865	IODIDE (MG/L AS I)	<	0.1
03/19/1990	1	71870	BROMIDE, DISSOLVED, (MG/L AS BR)	<	0.01	
03/19/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2	
3155805	03/19/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	03/19/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)	<	204
	03/19/1990	1	01020	BORON, DISSOLVED (UG/L AS B)		290
	03/19/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	03/19/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	03/19/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	03/19/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)	<	20
	03/19/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	03/19/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	03/19/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	03/19/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	03/19/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		700
	03/19/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20

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STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE
3155805	03/19/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)	<	20
	03/19/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	03/19/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	2
	03/19/1990	1	71865	IODIDE (MG/L AS I)	<	0.1
	03/19/1990	1	71870	BROMIDE, DISSOLVED, (MG/L AS BR)	<	0.01
	03/19/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2
3156402	03/26/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	03/26/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		94
	03/26/1990	1	01020	BORON, DISSOLVED (UG/L AS B)		350
	03/26/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	03/26/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	03/26/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	03/26/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)	<	20
	03/26/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	03/26/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	03/26/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	03/26/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	03/26/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		850
	03/26/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	03/26/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)	<	20
	03/26/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	03/26/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)		2
	03/26/1990	1	71865	IODIDE (MG/L AS I)	<	0.1
	03/26/1990	1	71870	BROMIDE, DISSOLVED, (MG/L AS BR)		0.0
03/26/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2	
3156501	03/22/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	03/22/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		52
	03/22/1990	1	01020	BORON, DISSOLVED (UG/L AS B)		330
	03/22/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	03/22/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	03/22/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	03/22/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)		1490
	03/22/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	03/22/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)		77

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STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE
3156501	03/22/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	03/22/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	03/22/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		320
	03/22/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	03/22/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)		535
	03/22/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	03/22/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	2
	03/22/1990	1	71865	IODIDE (MG/L AS I)	<	0.1
	03/22/1990	1	71870	BROMIDE, DISSOLVED, (MG/L AS BR)		0.0
03/22/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2	
3156901	03/22/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	03/22/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		74
	03/22/1990	1	01020	BORON, DISSOLVED (UG/L AS B)		350
	03/22/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	03/22/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	03/22/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	03/22/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)	<	20
	03/22/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	03/22/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	03/22/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	03/22/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	03/22/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		270
	03/22/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	03/22/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)	<	20
	03/22/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	03/22/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	2
	03/22/1990	1	71865	IODIDE (MG/L AS I)	<	0.1
03/22/1990	1	71870	BROMIDE, DISSOLVED, (MG/L AS BR)		0.1	
03/22/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2	
3161601	03/29/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	03/29/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		146
	03/29/1990	1	01020	BORON, DISSOLVED (UG/L AS B)		370
	03/29/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	03/29/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20

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3161601	03/29/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	03/29/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)	<	20
	03/29/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	03/29/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	03/29/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	03/29/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	03/29/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		530
	03/29/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	03/29/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)		78
	03/29/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	03/29/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)		2
	03/29/1990	1	71865	IODIDE (MG/L AS I)	<	0.1
	03/29/1990	1	71870	BROMIDE, DISSOLVED, (MG/L AS BR)	<	0.01
	03/29/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2
3162107	03/27/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	03/27/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		97
	03/27/1990	1	01020	BORON, DISSOLVED (UG/L AS B)		200
	03/27/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	03/27/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	03/27/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	03/27/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)	<	20
	03/27/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	03/27/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	03/27/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	03/27/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	03/27/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		320
	03/27/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	03/27/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)	<	20
	03/27/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	03/27/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	2
	03/27/1990	1	71865	IODIDE (MG/L AS I)	<	0.1
03/27/1990	1	71870	BROMIDE, DISSOLVED, (MG/L AS BR)	<	0.1	
03/27/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2	
3162803	03/28/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10

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3162803	03/28/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		88
	03/28/1990	1	01020	BORON, DISSOLVED (UG/L AS B)		290
	03/28/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	03/28/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	03/28/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	03/28/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)		305
	03/28/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	03/28/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)		30
	03/28/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	03/28/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	03/28/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		680
	03/28/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	03/28/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)		231
	03/28/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	03/28/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	2
	03/28/1990	1	71865	IODIDE (MG/L AS I)	<	0.1
	03/28/1990	1	71870	BROMIDE, DISSOLVED, (MG/L AS BR)		0.1
	03/28/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2
3162901	03/27/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	03/27/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		71
	03/27/1990	1	01020	BORON, DISSOLVED (UG/L AS B)		220
	03/27/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	03/27/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	03/27/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	03/27/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)		1100
	03/27/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	03/27/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	03/27/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	03/27/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	03/27/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		1600
	03/27/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	03/27/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)		24
	03/27/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	03/27/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	2
	03/27/1990	1	71865	IODIDE (MG/L AS I)	<	0.1

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STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE
3162901	03/27/1990	1	71870	BROMIDE, DISSOLVED, (MG/L AS BR)		0.0
	03/27/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2
3163601	03/26/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	03/26/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		95
	03/26/1990	1	01020	BORON, DISSOLVED (UG/L AS B)		200
	03/26/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	03/26/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	03/26/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	03/26/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)	<	20
	03/26/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	03/26/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	03/26/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	03/26/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	03/26/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		1360
	03/26/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	03/26/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)		62
	03/26/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	03/26/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	2
	03/26/1990	1	71865	IODIDE (MG/L AS I)	<	0.1
	03/26/1990	1	71870	BROMIDE, DISSOLVED, (MG/L AS BR)		0.0
03/26/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2	
3163701	03/29/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	03/29/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		69
	03/29/1990	1	01020	BORON, DISSOLVED (UG/L AS B)		350
	03/29/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	03/29/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	03/29/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	03/29/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)		1778
	03/29/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	03/29/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	03/29/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	03/29/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	03/29/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		1680
	03/29/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20

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STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE
3163701	03/29/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)	<	20
	03/29/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	03/29/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	2
	03/29/1990	1	71865	IODIDE (MG/L AS I)	<	0.1
	03/29/1990	1	71870	BROMIDE, DISSOLVED, (MG/L AS BR)		0.0
	03/29/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2
3164301	03/21/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	03/21/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		107
	03/21/1990	1	01020	BORON, DISSOLVED (UG/L AS B)		480
	03/21/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	03/21/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	03/21/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	03/21/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)		28
	03/21/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	03/21/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	03/21/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	03/21/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	03/21/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		2680
	03/21/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	03/21/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)		153
	03/21/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	03/21/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	2
	03/21/1990	1	71865	IODIDE (MG/L AS I)	<	0.1
	03/21/1990	1	71870	BROMIDE, DISSOLVED, (MG/L AS BR)		0.1
03/21/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2	
3164402	03/21/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	03/21/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		52
	03/21/1990	1	01020	BORON, DISSOLVED (UG/L AS B)		440
	03/21/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	03/21/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	03/21/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	03/21/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)		938
	03/21/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
03/21/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)		37	

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STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE
3164402	03/21/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	03/21/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	03/21/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		3990
	03/21/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	03/21/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)		139
	03/21/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	03/21/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	2
	03/21/1990	1	71865	IODIDE (MG/L AS I)	<	0.1
	03/21/1990	1	71870	BROMIDE, DISSOLVED, (MG/L AS BR)		0.1
	03/21/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2
3249101	03/22/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	03/22/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		142
	03/22/1990	1	01020	BORON, DISSOLVED (UG/L AS B)		330
	03/22/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	03/22/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	03/22/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	03/22/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)		31
	03/22/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	03/22/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	03/22/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	03/22/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	03/22/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		1730
	03/22/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	03/22/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)		141
	03/22/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	03/22/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	2
	03/22/1990	1	71865	IODIDE (MG/L AS I)	<	0.1
	03/22/1990	1	71870	BROMIDE, DISSOLVED, (MG/L AS BR)		0.0
03/22/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2	
4107203	04/25/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		85
	04/25/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	04/25/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	04/25/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	04/25/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)		284

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STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE
4107203	04/25/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	04/25/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	04/25/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	04/25/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	04/25/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		4290
	04/25/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	04/25/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)		126
	04/25/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	04/25/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	10
	04/25/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	2
	04/25/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2

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TEXAS WATER DEVELOPMENT BOARD
GROUND WATER DATA SYSTEM

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STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE
4107513	04/25/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	04/25/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		166
	04/25/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	04/25/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	04/25/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	04/25/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)	<	20
	04/25/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	04/25/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	04/25/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	04/25/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	04/25/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)	<	600
	04/25/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	04/25/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)	<	20
	04/25/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	04/25/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	2
04/25/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2	
4108308	04/26/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	04/26/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		75
	04/26/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	04/26/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	04/26/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	04/26/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)		294
	04/26/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	04/26/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	04/26/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	04/26/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	04/26/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		3370
	04/26/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	04/26/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)	<	20
	04/26/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	04/26/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	2
04/26/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2	

MINOR INORGANIC ELEMENT REPORT COUNTY - Hamilton

STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE
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TEXAS WATER DEVELOPMENT BOARD
GROUND WATER DATA SYSTEM

MINOR INORGANIC ELEMENT REPORT COUNTY - Hood

STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE
3132901	04/17/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	04/17/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		123
	04/17/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	04/17/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	04/17/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	04/17/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)	<	20
	04/17/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	04/17/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	04/17/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	04/17/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	04/17/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		600
	04/17/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	04/17/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)	<	20
	04/17/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	04/17/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	2
04/17/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2	
3233805	03/27/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	03/27/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		104
	03/27/1990	1	01020	BORON, DISSOLVED (UG/L AS B)		220
	03/27/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	03/27/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	03/27/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	03/27/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)		165
	03/27/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	03/27/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	03/27/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	03/27/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	03/27/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		4300
	03/27/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	03/27/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)	<	77
	03/27/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
03/27/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	2	

MINOR INORGANIC ELEMENT REPORT COUNTY - Hood

STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE
3233805	03/27/1990	1	71865	IODIDE (MG/L AS I)	<	0.1
	03/27/1990	1	71870	BROMIDE, DISSOLVED, (MG/L AS BR)	<	0.01
	03/27/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2
3234403	04/24/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	04/24/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		86
	04/24/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	04/24/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	04/24/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	04/24/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)		100
	04/24/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	04/24/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	04/24/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	04/24/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	04/24/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		3710
	04/24/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	04/24/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)		53
	04/24/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	04/24/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	2
04/24/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2	
3234611	03/28/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	03/28/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		24
	03/28/1990	1	01020	BORON, DISSOLVED (UG/L AS B)		.36
	03/28/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	03/28/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	03/28/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	03/28/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)	<	20
	03/28/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	03/28/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	03/28/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	03/28/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)	<	20
	03/28/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	03/28/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	2
	03/28/1990	1	71865	IODIDE (MG/L AS I)		0.3
	03/28/1990	1	71870	BROMIDE, DISSOLVED, (MG/L AS BR)		0.0

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STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE
3234611	03/28/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2
3242403	03/20/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	03/20/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		86
	03/20/1990	1	01020	BORON, DISSOLVED (UG/L AS B)		350
	03/20/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	03/20/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	03/20/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	03/20/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)		417
	03/20/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	03/20/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	03/20/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	03/20/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	03/20/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		4240
	03/20/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	03/20/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)	<	20
	03/20/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	03/20/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	2
	03/20/1990	1	71865	IODIDE (MG/L AS I)	<	0.1
	03/20/1990	1	71870	BROMIDE, DISSOLVED, (MG/L AS BR)		0.1
	03/20/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2
3249201	03/21/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	03/21/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		114
	03/21/1990	1	01020	BORON, DISSOLVED (UG/L AS B)		220
	03/21/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	03/21/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	03/21/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	03/21/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)		499
	03/21/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	03/21/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	03/21/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	03/21/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	03/21/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		1700
	03/21/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	03/21/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)	<	20

MINOR INORGANIC ELEMENT REPORT COUNTY - Hood

STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE
3249201	03/21/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	03/21/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	2
	03/21/1990	1	71865	IODIDE (MG/L AS I)	<	0.1
	03/21/1990	1	71870	BROMIDE, DISSOLVED, (MG/L AS BR)	<	0.1
	03/21/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2

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TEXAS WATER DEVELOPMENT BOARD
GROUND WATER DATA SYSTEM

MINOR INORGANIC ELEMENT REPORT COUNTY - Somervell

STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE
3251105	04/23/1990	1	01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10
	04/23/1990	1	01005	BARIUM, DISSOLVED (UG/L AS BA)		126
	04/23/1990	1	01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10
	04/23/1990	1	01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20
	04/23/1990	1	01040	COPPER, DISSOLVED (UG/L AS CU)	<	20
	04/23/1990	1	01046	IRON, DISSOLVED (UG/L AS FE)		22
	04/23/1990	1	01049	LEAD, DISSOLVED (UG/L AS PB)	<	50
	04/23/1990	1	01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20
	04/23/1990	1	01062	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20
	04/23/1990	1	01075	SILVER, DISSOLVED (UG/L AS AG)	<	10
	04/23/1990	1	01080	STRONTIUM, DISSOLVED (UG/L AS SR)		3090
	04/23/1990	1	01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20
	04/23/1990	1	01090	ZINC, DISSOLVED (UG/L AS ZN)	<	20
	04/23/1990	1	01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50
	04/23/1990	1	01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	2
	04/23/1990	1	71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2

APPENDIX V
Radioactivity Sample Report

Jul 15 1991

TEXAS WATER DEVELOPMENT BOARD
GROUND WATER DATA SYSTEM

RADIOACTIVITY SAMPLE REPORT COUNTY - Bosque

STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE	CONFIDENCE +OR-
3257701	04/25/1990	1	01503	ALPHA, DISSOLVED, PC/L		2.5	1.4
	04/25/1990	1	03503	BETA, DISSOLVED, PC/L		5.9	2.2
	04/25/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		0.5	0.2
	04/25/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)	<	1.0	
4002101	04/25/1990	1	01503	ALPHA, DISSOLVED, PC/L		13	4.0
	04/25/1990	1	03503	BETA, DISSOLVED, PC/L		10	5.0
	04/25/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		4.4	0.3
	04/25/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)	<	1.0	

Jul 15 1991

TEXAS WATER DEVELOPMENT BOARD
GROUND WATER DATA SYSTEM

RADIOACTIVITY SAMPLE REPORT COUNTY - Comanche

STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE	CONFIDENCE +OR-
3152213	03/27/1990	1	01503	ALPHA, DISSOLVED, PC/L		5.0	2.3
	03/27/1990	1	03503	BETA, DISSOLVED, PC/L		9.7	4.2
	03/27/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		1.5	0.2
	03/27/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)		1.7	0.8
3152636	03/26/1990	1	01503	ALPHA, DISSOLVED, PC/L		6.5	2.6
	03/26/1990	1	03503	BETA, DISSOLVED, PC/L		6.4	3.9
	03/26/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		1.6	0.3
	03/26/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)	<	1.0	
3160251	03/29/1990	1	01503	ALPHA, DISSOLVED, PC/L		5.4	2.6
	03/29/1990	1	03503	BETA, DISSOLVED, PC/L		9.6	4.0
	03/29/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		0.5	0.2
	03/29/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)	<	1.0	
3161119	03/27/1990	1	01503	ALPHA, DISSOLVED, PC/L		5.9	3.3
	03/27/1990	1	03503	BETA, DISSOLVED, PC/L		8.7	4.1
	03/27/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		0.5	0.2
	03/27/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)	<	1.0	
3161808	03/28/1990	1	01503	ALPHA, DISSOLVED, PC/L		3.8	2.1
	03/28/1990	1	03503	BETA, DISSOLVED, PC/L		6.2	3.8
	03/28/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		0.5	0.1
	03/28/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)	<	1.0	
4104304	03/29/1990	1	01503	ALPHA, DISSOLVED, PC/L		6.7	2.6
	03/29/1990	1	03503	BETA, DISSOLVED, PC/L		10	5.0
	03/29/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		0.9	0.2
	03/29/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)	<	1.0	
4105508	03/28/1990	1	01503	ALPHA, DISSOLVED, PC/L		3.6	2.0
	03/28/1990	1	03503	BETA, DISSOLVED, PC/L	<	4.0	
	03/28/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		2.6	0.3

RADIOACTIVITY SAMPLE REPORT COUNTY - Comanche

STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE	CONFIDENCE +OR-
4105508	03/28/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)	<	1.0	
4106501	03/29/1990	1	01503	ALPHA, DISSOLVED, PC/L		4.0	1.7
	03/29/1990	1	03503	BETA, DISSOLVED, PC/L		4.0	2.0
	03/29/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		1.3	0.8
	03/29/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)		1.5	0.8
4107803	04/24/1990	1	01503	ALPHA, DISSOLVED, PC/L		5.0	2.5
	04/24/1990	1	03503	BETA, DISSOLVED, PC/L	<	4.0	
	04/24/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		1.5	0.2
	04/24/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)		1.6	0.8
4113301	03/28/1990	1	01503	ALPHA, DISSOLVED, PC/L		5.3	1.6
	03/28/1990	1	03503	BETA, DISSOLVED, PC/L		12	3.0
	03/28/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		1.3	0.2
	03/28/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)		2.1	0.8
4114601	03/28/1990	1	01503	ALPHA, DISSOLVED, PC/L		8.9	2.3
	03/28/1990	1	03503	BETA, DISSOLVED, PC/L		8.6	2.4
	03/28/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		0.5	0.2
	03/28/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)		1.1	0.8

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TEXAS WATER DEVELOPMENT BOARD
GROUND WATER DATA SYSTEM

RADIOACTIVITY SAMPLE REPORT COUNTY - Eastland

STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE	CONFIDENCE +OR-
3136716	03/22/1990	1	01503	ALPHA, DISSOLVED, PC/L		8.4	2.4
	03/22/1990	1	03503	BETA, DISSOLVED, PC/L		5.5	2.3
	03/22/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		1.0	0.2
	03/22/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)	<	1.0	
3142923	03/23/1990	1	01503	ALPHA, DISSOLVED, PC/L		4.8	2.7
	03/23/1990	1	03503	BETA, DISSOLVED, PC/L		7.1	3.3
	03/23/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		0.6	0.2
	03/23/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)	<	1.0	
3143752	03/22/1990	1	01503	ALPHA, DISSOLVED, PC/L		5.0	2.1
	03/22/1990	1	03503	BETA, DISSOLVED, PC/L		4.8	2.2
	03/22/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		0.5	0.2
	03/22/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)	<	1.0	
3144505	03/20/1990	1	01503	ALPHA, DISSOLVED, PC/L		8.7	3.6
	03/20/1990	1	03503	BETA, DISSOLVED, PC/L	<	6.0	
	03/20/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		1.6	0.2
	03/20/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)		1.9	0.7
3144821	03/19/1990	1	01503	ALPHA, DISSOLVED, PC/L		3.7	2.2
	03/19/1990	1	03503	BETA, DISSOLVED, PC/L		7.6	4.2
	03/19/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		1.3	0.2
	03/19/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)		2.2	0.7
3151277	03/20/1990	1	01503	ALPHA, DISSOLVED, PC/L		5.4	3.2
	03/20/1990	1	03503	BETA, DISSOLVED, PC/L	<	6.0	
	03/20/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		1.0	0.2
	03/20/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)		1.3	0.7
3151311	03/21/1990	1	01503	ALPHA, DISSOLVED, PC/L		2.8	2.3
	03/21/1990	1	03503	BETA, DISSOLVED, PC/L	<	6.0	
	03/21/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		0.4	0.2

RADIOACTIVITY SAMPLE REPORT COUNTY - Eastland

STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE	CONFIDENCE +OR-
3151311	03/21/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)	<	1.0	

Jul 15 1991

TEXAS WATER DEVELOPMENT BOARD
GROUND WATER DATA SYSTEM

RADIOACTIVITY SAMPLE REPORT COUNTY - Erath

STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE	CONFIDENCE +OR-
3137901	03/20/1990	1	01503	ALPHA, DISSOLVED, PC/L		22	5.0
	03/20/1990	1	03503	BETA, DISSOLVED, PC/L		15	6.0
	03/20/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		12	1.0
	03/20/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)		1.1	0.9
3138602	04/19/1990	1	01503	ALPHA, DISSOLVED, PC/L		5.9	2.8
	04/19/1990	1	03503	BETA, DISSOLVED, PC/L	<	4.0	
	04/19/1990	1	09503	RADIUM 226, DISSOLVED, PC/L	<	0.2	
	04/19/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)	<	1.0	
3138902	04/19/1990	1	01503	ALPHA, DISSOLVED, PC/L		9.5	3.2
	04/19/1990	1	03503	BETA, DISSOLVED, PC/L	<	4.0	
	04/19/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		0.7	0.2
	04/19/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)	<	1.0	
3139502	03/20/1990	1	01503	ALPHA, DISSOLVED, PC/L		5.9	2.6
	03/20/1990	1	03503	BETA, DISSOLVED, PC/L	<	6.0	
	03/20/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		1.7	0.2
	03/20/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)		1.8	0.7
3139503	04/19/1990	1	01503	ALPHA, DISSOLVED, PC/L		3.0	2.0
	04/19/1990	1	03503	BETA, DISSOLVED, PC/L	<	4.0	
	04/19/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		0.3	0.2
	04/19/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)		1.4	0.9
3140101	04/16/1990	1	01503	ALPHA, DISSOLVED, PC/L		3.0	2.2
	04/16/1990	1	03503	BETA, DISSOLVED, PC/L		5.9	3.8
	04/16/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		0.6	0.2
	04/16/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)		1.2	0.9
3145601	04/17/1990	1	01503	ALPHA, DISSOLVED, PC/L		8.1	2.9
	04/17/1990	1	03503	BETA, DISSOLVED, PC/L		5.7	4.0
	04/17/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		3.0	0.3

RADIOACTIVITY SAMPLE REPORT COUNTY - Erath

STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE	CONFIDENCE +OR-
3145601	04/17/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)		1.5	1.3
3145702	04/18/1990	1	01503	ALPHA, DISSOLVED, PC/L		16	4.0
	04/18/1990	1	03503	BETA, DISSOLVED, PC/L		6.0	4.1
	04/18/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		3.5	0.3
	04/18/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)		1.6	1.1
3146102	03/21/1990	1	01503	ALPHA, DISSOLVED, PC/L		6.2	2.2
	03/21/1990	1	03503	BETA, DISSOLVED, PC/L		6.2	2.5
	03/21/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		2.4	0.3
	03/21/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)		1.1	0.7
3146207	03/21/1990	1	01503	ALPHA, DISSOLVED, PC/L		13	3.0
	03/21/1990	1	03503	BETA, DISSOLVED, PC/L		9.7	2.9
	03/21/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		3.7	0.3
	03/21/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)	<	1.0	
3146801	04/23/1990	1	01503	ALPHA, DISSOLVED, PC/L		4.2	3.3
	04/23/1990	1	03503	BETA, DISSOLVED, PC/L	<	4.0	
	04/23/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		0.3	0.1
	04/23/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)	<	1.0	
3147201	04/18/1990	1	01503	ALPHA, DISSOLVED, PC/L		5.1	2.5
	04/18/1990	1	03503	BETA, DISSOLVED, PC/L		5.1	4.0
	04/18/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		0.8	0.2
	04/18/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)	<	1.0	
3148102	03/27/1990	1	01503	ALPHA, DISSOLVED, PC/L		2.3	1.9
	03/27/1990	1	03503	BETA, DISSOLVED, PC/L		5.2	3.7
	03/27/1990	1	09503	RADIUM 226, DISSOLVED, PC/L	<	0.2	
	03/27/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)		1.8	0.8
3148304	03/19/1990	1	01503	ALPHA, DISSOLVED, PC/L		4.9	1.9
	03/19/1990	1	03503	BETA, DISSOLVED, PC/L		5.3	2.3
	03/19/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		1.4	0.2
	03/19/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)	<	1.0	

RADIOACTIVITY SAMPLE REPORT COUNTY - Erath

STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE	CONFIDENCE +OR-
3148403	04/18/1990	1	01503	ALPHA, DISSOLVED, PC/L		8.7	3.1
	04/18/1990	1	03503	BETA, DISSOLVED, PC/L		5.1	3.9
	04/18/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		1.1	0.2
	04/18/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)	<	1.0	
3148902	04/19/1990	1	01503	ALPHA, DISSOLVED, PC/L		24	5.0
	04/19/1990	1	03503	BETA, DISSOLVED, PC/L		13	5.0
	04/19/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		6.1	0.5
	04/19/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)	<	1.0	
3152303	03/22/1990	1	01503	ALPHA, DISSOLVED, PC/L		6.7	2.2
	03/22/1990	1	03503	BETA, DISSOLVED, PC/L		7.8	2.6
	03/22/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		2.0	0.3
	03/22/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)	<	1.0	
3153304	04/16/1990	1	01503	ALPHA, DISSOLVED, PC/L		6.0	2.6
	04/16/1990	1	03503	BETA, DISSOLVED, PC/L		7.7	4.0
	04/16/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		0.7	0.2
	04/16/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)	<	1.0	
3153510	03/28/1990	1	01503	ALPHA, DISSOLVED, PC/L		6.6	2.7
	03/28/1990	1	03503	BETA, DISSOLVED, PC/L		7.9	3.9
	03/28/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		1.2	0.2
	03/28/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)		1.3	0.6
3154105	04/17/1990	1	01503	ALPHA, DISSOLVED, PC/L		12	4.0
	04/17/1990	1	03503	BETA, DISSOLVED, PC/L		8.3	4.4
	04/17/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		2.8	0.3
	04/17/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)		1.8	1.1
3154801	04/18/1990	1	01503	ALPHA, DISSOLVED, PC/L		14	4.0
	04/18/1990	1	03503	BETA, DISSOLVED, PC/L	<	4	
	04/18/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		1.0	0.2
	04/18/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)		1.3	0.7

RADIOACTIVITY SAMPLE REPORT COUNTY - Erath

STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE	CONFIDENCE +OR-
3155113	03/19/1990	1	01503	ALPHA, DISSOLVED, PC/L		7.4	2.7
	03/19/1990	1	03503	BETA, DISSOLVED, PC/L		6.3	4.1
	03/19/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		1.1	0.2
	03/19/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)	<	1.0	
3155805	03/19/1990	1	01503	ALPHA, DISSOLVED, PC/L		8.0	2.9
	03/21/1990	1	01503	ALPHA, DISSOLVED, PC/L		3.4	2.6
	03/19/1990	1	03503	BETA, DISSOLVED, PC/L	<	6.0	
	03/21/1990	1	03503	BETA, DISSOLVED, PC/L	<	6.0	
	03/19/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		1.4	0.2
	03/21/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		1.0	0.2
	03/19/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)		1.7	0.8
	03/21/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)	<	1.0	
3156402	03/26/1990	1	01503	ALPHA, DISSOLVED, PC/L		7.1	2.7
	03/26/1990	1	03503	BETA, DISSOLVED, PC/L		4.8	3.7
	03/26/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		0.8	0.2
	03/26/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)		3.0	1.8
3156501	03/22/1990	1	01503	ALPHA, DISSOLVED, PC/L		3.4	1.4
	03/22/1990	1	03503	BETA, DISSOLVED, PC/L		5.5	2.2
	03/22/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		1.7	0.2
	03/22/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)	<	1.0	
3156901	03/22/1990	1	01503	ALPHA, DISSOLVED, PC/L		2.9	1.3
	03/22/1990	1	03503	BETA, DISSOLVED, PC/L	<	4.0	
	03/22/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		0.4	0.2
	03/22/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)	<	1.0	
3161601	03/29/1990	1	01503	ALPHA, DISSOLVED, PC/L		6.7	2.7
	03/29/1990	1	03503	BETA, DISSOLVED, PC/L	<	4.0	
	03/29/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		1.7	0.2
	03/29/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)		1.2	0.7
3162107	03/27/1990	1	01503	ALPHA, DISSOLVED, PC/L		3.1	1.8
	03/27/1990	1	03503	BETA, DISSOLVED, PC/L	<	4.0	

RADIOACTIVITY SAMPLE REPORT COUNTY - Erath

STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE	CONFIDENCE +OR-
3162107	03/27/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		0.7	0.2
	03/27/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)	<	1.0	
3162803	03/28/1990	1	01503	ALPHA, DISSOLVED, PC/L		2.4	1.8
	03/28/1990	1	03503	BETA, DISSOLVED, PC/L		4.4	3.5
	03/28/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		1.5	0.2
	03/28/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)		1.0	0.5
3162901	03/27/1990	1	01503	ALPHA, DISSOLVED, PC/L		2.3	1.8
	03/27/1990	1	01503	ALPHA, DISSOLVED, PC/L		7.6	3.0
	03/27/1990	1	03503	BETA, DISSOLVED, PC/L		7.9	4.0
	03/27/1990	1	03503	BETA, DISSOLVED, PC/L		5.4	4.0
	03/27/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		2.0	0.3
	03/27/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		0.8	0.2
	03/27/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)		1.6	1.2
	03/27/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)	<	1.0	
3163601	03/26/1990	1	01503	ALPHA, DISSOLVED, PC/L		17	5.0
	03/26/1990	1	03503	BETA, DISSOLVED, PC/L		16	6.0
	03/26/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		2.2	0.3
	03/26/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)	<	1.0	
3163701	03/29/1990	1	01503	ALPHA, DISSOLVED, PC/L		4.0	2.2
	03/29/1990	1	03503	BETA, DISSOLVED, PC/L		5.3	3.9
	03/29/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		2.7	0.3
	03/29/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)		1.8	0.8
3164301	03/21/1990	1	01503	ALPHA, DISSOLVED, PC/L		9.7	2.3
	03/21/1990	1	03503	BETA, DISSOLVED, PC/L		6.6	2.5
	03/21/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		1.0	0.2
	03/21/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)	<	1.0	
3164402	03/21/1990	1	01503	ALPHA, DISSOLVED, PC/L		7.7	2.5
	03/21/1990	1	03503	BETA, DISSOLVED, PC/L		7.5	2.6
	03/21/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		1.5	0.2
	03/21/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)		1.3	0.7

RADIOACTIVITY SAMPLE REPORT COUNTY - Erath

STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE	CONFIDENCE +OR-
3249101	03/22/1990	1	01503	ALPHA, DISSOLVED, PC/L		9.4	2.2
	03/22/1990	1	03503	BETA, DISSOLVED, PC/L		8.0	2.7
	03/22/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		1.8	0.3
	03/22/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)		1.4	0.7
4107203	04/25/1990	1	01503	ALPHA, DISSOLVED, PC/L		7.7	2.9
	04/25/1990	1	03503	BETA, DISSOLVED, PC/L	<	4.0	
	04/25/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		2.0	0.4
	04/25/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)		1.6	0.8

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TEXAS WATER DEVELOPMENT BOARD
GROUND WATER DATA SYSTEM

RADIOACTIVITY SAMPLE REPORT COUNTY - Hamilton

STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE	CONFIDENCE +OR-
4107501	04/25/1990	1	01503	ALPHA, DISSOLVED, PC/L		2.7	1.9
	04/25/1990	1	03503	BETA, DISSOLVED, PC/L		5.9	4.0
	04/25/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		0.5	0.2
	04/25/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)		1.3	0.9
4108308	04/26/1990	1	01503	ALPHA, DISSOLVED, PC/L	<	2.0	
	04/26/1990	1	03503	BETA, DISSOLVED, PC/L	<	4.0	
	04/26/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		0.9	0.2
	04/26/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)	<	1.0	

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TEXAS WATER DEVELOPMENT BOARD
GROUND WATER DATA SYSTEM

RADIOACTIVITY SAMPLE REPORT COUNTY - Hood

STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE	CONFIDENCE +OR-
3132901	04/17/1990	1	01503	ALPHA, DISSOLVED, PC/L	<	2.0	
	04/17/1990	1	03503	BETA, DISSOLVED, PC/L	<	4.0	
	04/17/1990	1	09503	RADIUM 226, DISSOLVED, PC/L	<	0.2	
	04/17/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)	<	1.0	
3233805	03/27/1990	1	01503	ALPHA, DISSOLVED, PC/L		3.7	2.1
	03/27/1990	1	03503	BETA, DISSOLVED, PC/L		6.7	3.8
	03/27/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		1.1	0.2
	03/27/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)		1.5	0.8
3234403	04/24/1990	1	01503	ALPHA, DISSOLVED, PC/L		5.4	2.6
	04/24/1990	1	03503	BETA, DISSOLVED, PC/L	<	4.0	
	04/24/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		0.8	0.2
	04/24/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)	<	1.0	
3234611	03/28/1990	1	01503	ALPHA, DISSOLVED, PC/L	<	2.0	
	03/28/1990	1	03503	BETA, DISSOLVED, PC/L	<	4.0	
	03/28/1990	1	09503	RADIUM 226, DISSOLVED, PC/L	<	0.2	
	03/28/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)	<	1.0	
3242403	03/20/1990	1	01503	ALPHA, DISSOLVED, PC/L		4.6	1.8
	03/20/1990	1	03503	BETA, DISSOLVED, PC/L		5.4	2.3
	03/20/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		1.3	0.2
	03/20/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)	<	1.0	
3249201	03/21/1990	1	01503	ALPHA, DISSOLVED, PC/L		23	4.0
	03/21/1990	1	03503	BETA, DISSOLVED, PC/L		13	4.0
	03/21/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		22	1.0
	03/21/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)		1.4	1.0

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TEXAS WATER DEVELOPMENT BOARD
GROUND WATER DATA SYSTEM

RADIOACTIVITY SAMPLE REPORT COUNTY - Somervell

STATE WELL NUMBER	DATE	SAMPLE #	STORET CODE	DESCRIPTION	FLAG	VALUE	CONFIDENCE +OR-
3251105	04/23/1990	1	01503	ALPHA, DISSOLVED, PC/L		2.0	1.9
	04/23/1990	1	03503	BETA, DISSOLVED, PC/L	<	4.0	
	04/23/1990	1	09503	RADIUM 226, DISSOLVED, PC/L		0.7	0.2
	04/23/1990	1	81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)	<	1.0	