

March 9, 2001

California Regional Water Quality Control Board (CRWQCB)  
San Diego Region  
9771 Clairemont Mesa Boulevard, Suite B  
San Diego, California 92126

ATTN: MS. KELLY DORSEY

SITE: 76 STATION 6519  
28903 RANCHO CALIFORNIA ROAD  
TEMECULA, CALIFORNIA  
HMD CASE NO. 89382

RE: WORKPLAN FOR SITE ASSESSMENT

Dear Ms. Dorsey:

This workplan has been prepared by TRC Alton Geoscience, Inc. (TRC) on behalf of Tosco Marketing Corporation (Tosco) to conduct offsite subsurface assessment activities at 76 Products Station 6519, 28903 Rancho California Road, Temecula, California (the Site; Figure 1).

## **1.0 INTRODUCTION**

The Site has been classified as an unauthorized release case since 1989, when a release of gasoline was discovered during fuel tank removal activities. Since then, site assessment and remediation activities have been performed as described in Section 3.0 under the oversight of the Riverside County Hazardous Materials Division (HMD), including ongoing soil vapor extraction activities.

In September 2000, a municipal drinking water well owned and operated by the Rancho California Water District (RCWD) was taken out of service and subsequently was found to be impacted with methyl tertiary butyl ether (MTBE) at concentrations near or above State of California maximum contaminant levels (MCLs). The California Regional Water Quality Control Board, San Diego Region (CRWQCB) is beginning the process of identifying potential sources of MTBE in the vicinity of this well. In the interim, however, the CRWQCB has requested an "expedited schedule" for investigation and cleanup at several unauthorized release cases in the vicinity, including the Site (CRWQCB, 2001).

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In its letter dated January 2, 2001, the CRWQCB also made the following more specific requests:

- to copy the CRWQCB on all correspondence with the HMD;
- to collect and report monthly groundwater level measurements on all existing monitoring wells at the Site;
- to calculate the groundwater gradient based on the monthly measurements; and
- to take interim remedial actions as appropriate and after prior notification of the lead agency.

In phone conversations with Mr. Dan Fischman, Tosco, the CRWQCB has additionally indicated that it is concerned with vertical migration of MTBE and will likely require deeper wells for vertical assessment at sites with elevated dissolved-phase MTBE concentrations.

In its letter dated January 8, 2001, the HMD observed that groundwater monitoring wells MW-8 and MW-9 at the Site are not providing beneficial information due to insufficient water column and that Tosco wells at the Site do not adequately define the lateral extent of the dissolved-phase hydrocarbon plume. Therefore, the HMD requested the preparation of a workplan to install additional groundwater monitoring wells to define the dissolved-phase hydrocarbon plume downgradient of the source area and replace existing dry wells (HMD, 2001).

Since then, lead agency status for oversight of the unauthorized release case at this Site has been transferred from the HMD to the CRWQCB. According to Mr. Kelly Winters, HMD, the HMD's request for workplan and the stated deadline for submittal of a workplan are no longer valid (Winters, 2001).

## **2.0 SITE SETTING**

### **2.1 SITE DESCRIPTION**

The Site is an active service station with three dispenser islands, two 15,000-gallon gasoline underground storage tanks (USTs), one 12,000-gallon diesel UST, and a service station building (Figure 2). The Site is bordered on the north by Rancho California Road, on the west by Front Street, and on the south by Moreno Road. The Chevron service station is located to the north across Rancho California Road. The flood channel embankment for Murrieta Creek is located approximately 100 feet southwest of the Site across Front Street.

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### **2.2 GEOLOGIC SETTING**

The Site is located in Temecula Valley within the flood plain of Murrieta Creek, at an elevation of approximately 1,000 feet above mean sea level (United States Geological Survey [USGS], 1975 and 1979). Based on drilling previously conducted at the Site, the Site is underlain by clayey to silty sands overlying fine to coarse sand (Alton Geoscience, 1999). A geologic cross section of the Site is provided as Figure 3.

Regionally, the Site is underlain by approximately 1,500 feet of alluvium, colluvium, and slope wash sediments of late Pleistocene to Holocene age. The alluvium consists of moderately well sorted, poorly consolidated sand and silt, with tongues of pebble conglomerate. The colluvium and slope wash deposits are composed principally of poorly consolidated fine sand, silt, and clay. These deposits are underlain by the Pauba Formation, a succession of late Pleistocene siltstone, sandstone, and conglomerate (Kennedy, 1977).

Tectonically, the Site lies within the Elsinore Trough, the structural feature defined by the seismically active Elsinore fault zone (Figure 4). The west side of the trough, approximately 2,000 feet from the Site, is defined by the Willard fault zone, composed of a series of east-dipping, steeply inclined normal faults. The Wildomar fault zone, approximately 1,500 to 2,000 feet east of the Site, is characterized by right-stepping, strike-slip faults. The trough is bounded to the west by the Santa Ana Mountains and to the east by the Perris Block. These mountains and hills are composed of pre-Cretaceous metamorphic rocks and Cretaceous granitic rocks, with outcroppings of Miocene-aged basalts and Quaternary-aged sedimentary deposits along the sides at lower elevations (Kennedy, 1977).

### **2.3 HYDROGEOLOGIC SETTING**

Based on a review of the CRWQCB Water Quality Control Plan for the San Diego Region, the Site lies within the Murrieta Hydrologic Area of the Santa Margarita Hydrologic Unit. Groundwater within the Murrieta Hydrologic Area is designated as having existing beneficial uses for municipal, agricultural, and industrial supplies (CRWQCB, 1994).

The Site is located over an alluvial groundwater basin as defined by the CDWR and, therefore, is located over a basin considered by the CRWQCB to be a "sensitive aquifer" and an area designated as "most vulnerable to groundwater contamination" (CDWR, 1975; CRWQCB, 1996 and 2000; California State Water Resources Control Board [CSWRCB], 2000; and State of California Teale Data Center, undated).

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Based on the water well driller's report for RCWD well 118, there appear to be several aquifers in the Site area. The upper aquifers, extending from the surface to approximately 145 fbg, consist of alluvial sediments of sand, silt, and clay. Recharge of these aquifers is reportedly influenced by the flow of Murrieta Creek, southwest of the Site. The deeper Temecula Aquifer is described as consisting of older alluvial sediments, approximately 1,500 feet thick, and as the source of water to the RCWD wells (Harding Lawson Associates [HLA], 1984; HLA, 1986; CRWQCB, 2001a; Geo-Hydro-Data, 1986).

The regional hydrologic gradient is controlled, in part, by the faults of the Elsinore fault zone that surround the Site. A groundwater barrier exists to the east of the Site, along the Wildomar fault zone. In Temecula valley, groundwater flows to the southwest, to Temecula Canyon (Giessner et al, 1971; Kennedy, 1977).

### **2.4 SURFACE WATER**

The flood channel embankment of Murrieta Creek begins approximately 100 feet southwest of the Site, across Front Street. The flow of the creek is seasonal, varying with rainfall and aquifer recharge. Murrieta Creek drains a portion of the Santa Margarita Basin, an area of approximately 222 square miles. Approximately two miles southeast of the Site, Murrieta Creek converges with Temecula Creek, forming the Santa Margarita River, which flows southwest through Temecula Canyon (Figure 1).

TRC obtained USGS gaging data from gaging stations in the vicinity of the Site. TRC performed a preliminary review of the data gathered at USGS Gaging Station No. 11043000, which is located in Murrieta Creek southeast and downstream of the Site and RCWD well 118 (Figure 5). Data for this station was available from 1931 through September 30, 1999. This data indicates that peak discharge occurred in January 1993 at a rate of 25,000 cubic feet per second (cfs), over 17 feet above gage datum. The daily mean discharge on days of flow in the 1990s has ranged from 0.1 to 7790 cfs with the last recorded date of no discharge being December 26, 1992 (USGS, 2001).

In a 1984 interview, the Chevron station owner reported that flood waters from Murrieta Creek have reached the level of Front Street west of the station (HLA, 1984).

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### **2.5 AREA GROUNDWATER USAGE**

Historically, residents of Temecula Valley had to rely on many privately-owned production wells to supply water (Giessner ET al, 1971). However, according to Mr. Craig Elitharp of the RCWD, there are currently no active private, domestic wells in the area. As a condition of permit approval, all new development in the area is required to utilize the RCWD as the sole supplier of potable water (Canonie, 1993). Historical private wells were reportedly abandoned when the area was developed for industrial and commercial purposes (PIC Environmental [PIC], 1997). However, TRC identified one active well during a preliminary reconnaissance of the area at the Kids World School, located at 41956 Third Street, Temecula. This well is approximately ½ mile south-southeast and currently upgradient of the Site. Mr. Jim Gillis, Well Permits Section, Riverside HMD, confirmed that this is an active well. Mr. Gillis was not aware of any other active wells in the area (Gillis, 2001).

In addition to Mr. Gillis, TRC also contacted the CDWR, City of Temecula Planning Department and the Geotracker website to research the potential presence of groundwater wells in the vicinity of the Site (CDWR, 2001; Anders, 2001; Geotracker, 2001). Based on these sources, TRC has identified a number of historical and existing wells in the area (Figure 6). The RCWD operates a network of production wells north of the site to supply drinking water to the Temecula and surrounding communities. A number of historical, private drinking water wells were identified south of the site. The current status and exact location of most of these wells is not known. A drive-by field reconnaissance by TRC confirmed the locations of RCWD wells 118 and 137 as well as the Kids World School well. No other wells were observed during this driving survey of the area.

### **2.6 RCWD WELLS**

The closest active production well to the Site is RCWD Well No. 118, located approximately 1,000 feet to the northwest (Figure 2). The well, used to provide drinking water to the City of Temecula, is identified by the California Department of Water Resources (CDWR) as well number T08S/R03W-02J1, and is located at 28076 Diaz Road. The well was installed in 1986 to a depth of 1,110 fbg, and is screened from 320 to 400 feet, and from 460 to 1,100 feet, through the Temecula Aquifer. From July 1997 to August 2000, depth to water in the well has ranged from approximately 51 to 188 feet. The seal is set from grade to a depth of 68 feet, and the pump is positioned at 310 fbg. Production capacity is rated at approximately 2,119 gallons per minute. In the past two years, monthly production has ranged from 82 to 139 acre-feet. Water from this well is continually chlorinated and is then blended with other water well sources before distribution to approximately 23,000 domestic connections (Geotracker, 2001; CRWQCB, 2001a).

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Well 118 was taken out of service on September 10, 2000 (CRWQCB, 2001b). Based on conversations between Julie Chan, CRWQCB and Dan Fischman, Tosco, it is our understanding that well 118 was taken out of service for maintenance purposes. Prior to shut down, the well had been sampled for MTBE in February, March, and April of 2000. The identified MTBE concentrations were 3.7 micrograms per liter ( $\mu\text{g/l}$ ) on February 29 and below the laboratory detection limits in March and April. On September 10, 2000, the MTBE concentration was 7.8  $\mu\text{g/l}$ . Additional sampling of the well in October and November 2000 and February 2001 identified MTBE concentrations below the laboratory detection limit, at 4.7  $\mu\text{g/l}$ , and 24  $\mu\text{g/l}$ , respectively. The well remains out of service and is being sampled for MTBE on a monthly basis (CRWQCB, 2001b).

In addition to the recent exceedance of the MTBE maximum contaminant level (MCL) in well 118, this well has also seen at least two instances of exceedances of the secondary MCL for manganese, 50  $\mu\text{g/l}$ . As reported in the Geotracker website, RCWD well 118 has been sampled for manganese a total of four times. Dissolved phase manganese concentrations were reported as 0.02  $\mu\text{g/l}$ , 40  $\mu\text{g/l}$ , 60  $\mu\text{g/l}$  and 100  $\mu\text{g/l}$  in the years 1990, 1993, 1996 and 1999, respectively (Geotracker, 2001).

An additional well, RCWD Well No. 102, is located approximately  $\frac{1}{2}$  mile northwest of the Site (Figure 6). The well (CDWR No. T8S/R3W-02Q1) is 1,275 feet deep and is screened from 348 to 396 feet, 424 to 466 feet, 563 to 663 feet, 703 to 773 feet, and 835 to 1,245 feet (PIC, 1997). The pump is set at 300 fbg and has a production capacity of 1,301 gallons per minute (Canonie, 1993). According to Mr. Elitharp, RCWD, the well is pumped only during the summer due to hydrogen sulfide concentrations (PIC, 1997). A structure potentially housing this well was identified during the TRC field reconnaissance, but could not be confirmed due to a lack of access.

Other active RCWD wells are located further northwest, north, and northeast of the Site. Typically, they are greater than 1,000 feet in depth and are screened at depths of 300 fbg and greater (Canonie, 1993).

## 2.7 IDENTIFIED UNAUTHORIZED RELEASE CASES

TRC reviewed the Geotracker website and a commercial database report to identify unauthorized release cases in the vicinity of RCWD well 118 (Geotracker, 2001; EDR, 2001; Appendix A). Based on these sources, TRC has identified 16 unauthorized release cases within one mile of the RCWD well, including the Site. Several of these appear to be potential sources of MTBE in groundwater. The locations of these release case facilities are presented on Figure 7, and have

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been plotted based on a field reconnaissance by TRC. Brief summaries of the cases are presented in Table 1.

### **2.8 IDENTIFIED NON-RELEASE FACILITIES**

TRC utilized the same commercial database discussed in Section 4.6 and a field reconnaissance to identify facilities that had the potential to be a source of MTBE in groundwater (EDR, 2001). Although TRC identified a large number of auto repair and other businesses potentially handling gasoline, TRC has initially focused on facilities with gasoline USTs, which are presumed to be potential sources of MTBE in groundwater. The one exception is the Liberty Auto Center at 28093 Front Street. Although this facility does not appear to have any registered USTs, the facility appears to be the location of a historical oil well as discussed below in Section 2.9. Based on this investigation, seven facilities were identified within one mile of the RCWD well and their locations are presented on Figure 8. Summaries of the facilities are presented in Table 2.

### **2.9 HISTORIC OIL WELLS**

One exploratory oil well was drilled in the Site vicinity by the Positive Oil Company in 1957 (Figure 6). As mapped by a California Division of Mines and Geology publication, this oil well was located approximately 1,500 feet north of the Site, at the approximate current location of the Liberty Auto Center, 28903 Front Street, Temecula (facility E on Figure 8), and adjacent to the Narain Oil unauthorized release case (facility 1 on Figure 7). The well proved to be barren of oil and was abandoned. The method of abandonment is not described in records currently obtained by TRC, but may provide a hydrogeologic connection between the shallow and deeper aquifers. Total depth of the oil well, named "Berghofer", was approximately 4,050 feet, which was through Holocene and Pleistocene sediments. Basement rocks were reportedly not encountered (Kennedy, 1977; Munger, 1994). Other exploratory oil wells were attempted approximately 1.5 miles north of the Site.

## **3.0 BACKGROUND**

### **3.1 PREVIOUS SITE ASSESSMENT ACTIVITIES**

In March 1989, Harding Lawson Associates supervised the removal of one 6,000-gallon diesel and two 10,000-gallon gasoline USTs, and a 280-gallon waste oil tank from the property. New replacement USTs consisted of one 10,000-gallon diesel and two 12,000-gallon gasoline, double-walled USTs, which were placed within the enlarged, original tank cavity. Information supplied to Alton Geoscience by Unocal Refining and Marketing Division indicates that gasoline- and

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diesel-impacted soil was reportedly encountered following tank removal. The highest total petroleum hydrocarbon (TPH) concentrations were detected below the southern end of the center gasoline tank at 1,800 milligrams per kilogram (mg/kg). Soil samples beneath the diesel UST had total recoverable petroleum hydrocarbon concentrations of 961 mg/kg. The estimated lateral and vertical extent of gasoline- or diesel-range hydrocarbons were not assessed in the area of the gasoline storage tank cavity at that time. No impacted soil was reportedly encountered beneath the former waste oil UST (Alton Geoscience, 1992).

Alton Geoscience performed site characterization activities in March and October, 1992. These activities included excavation of six slanted hand auger borings, HA-1 through HA-6, installed to approximately 9 feet below existing dispenser islands, and drilling eight onsite and two offsite hollow-stem auger borings to a maximum depth of 30 feet below grade (fbg). These eight borings were converted to groundwater monitoring wells MW-2, MW-3, and MW-5 through MW-10 to approximately 24 fbg. One additional onsite groundwater monitoring well, MW-11, and four onsite vapor extraction wells, VEW-12 through VEW-15, were installed in September 1993 (Appendix B).

Hydrocarbon concentrations up to 14,000 mg/kg total petroleum hydrocarbons as gasoline (TPHg) and 5,100 mg/kg total petroleum hydrocarbons as diesel (TPHd) were detected in soil samples collected in the vicinity of the tank cavity (Boring B-5 at 5 fbg), and up to 850 mg/kg TPHg in the vicinity of the center pump island (Boring HA-3 at 3.5 fbg). Soil samples from surrounding boring locations had concentrations ranging from below the laboratory detection limits to 240 mg/kg TPHg (VEW-14 at 6.5 fbg). Based on the results of these investigations, Alton Geoscience concluded that the lateral and vertical extent of adsorbed-phase hydrocarbons appeared to be adequately assessed, and the lateral extent of dissolved-phase hydrocarbons appeared adequately assessed in all directions except to the north-northwest in the downgradient direction. In this direction, it appeared that the dissolved-phase plume from the Unocal Site commingled with the dissolved-phase plume from the Chevron station. Alton Geoscience concluded that additional monitoring wells in Rancho California Road were not expected to provide any additional delineation of the dissolved-phase plumes since Chevron already had placed wells in this area (Alton Geoscience, 1992, 1993, and 1994a; and Appendix B).

In March 1994, Alton Geoscience conducted a limited remedial excavation adjacent to and below the central dispenser island and the eastern dispenser island during station renovation activities. Soil samples collected at the limit of the excavation, representative of soil remaining at the site, had concentrations ranging from below the laboratory detection limits to 7,996 mg/kg TPHg in sample E5 at 10 fbg (Alton Geoscience, 1994b; and Appendix B).

In April 1996, additional soil sampling was performed as part of a complete station demolition and renovation. All existing structures were removed, a limited remedial excavation was conducted

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beneath the waste oil tank and one of the hydraulic lifts, and the current UST system and station structures were installed at the Site. The TPHg concentrations in the soil that was removed from beneath the underground fuel storage tanks ranged up to 9,500 mg/kg (sample T1N-12.5 at 12.5 fbg). Benzene concentrations ranged up to 9.4 mg/kg. The TPHg and benzene concentrations of soil samples collected from beneath the product lines were below the laboratory detection limits. Following remedial excavation, soil sample laboratory results for total recoverable petroleum hydrocarbons (TRPH) from beneath the waste oil tank and the hydraulic lifts were below laboratory detection limits (Alton Geoscience, 1996; and Appendix B).

A soil vapor extraction (SVE) system was installed at the Site and began operation in February 1995. On May 12, 1997, Alton Geoscience drilled five borings, B-18 through B-22, to 17 fbg to evaluate the progress of remedial activities at the Site. TPHg concentrations in soil samples ranged from below the laboratory detection limits to 3.6 mg/kg (Boring B-19-17.0 at 17 fbg). Based on the results of this investigation, Alton Geoscience concluded that remedial activities had been successful in reducing hydrocarbon concentrations in soil and recommended closure of the unauthorized release case for this Site (Alton Geoscience, 1997a, 1997b). Selected tables and figures from various previous reports are attached in Appendix B.

In 1998, HMD stated that closure could not be granted because of increasing dissolved-phase MTBE concentrations in monitor well MW-16 and requested that the source of these increasing concentrations be investigated. Additionally, the HMD requested a 24-hour SVE test.

Tosco has inspected the UST system at the Site and has not yet identified the source of the increasing MTBE concentrations. As of December 18, 2000, Tosco has started using ethanol to substitute for MTBE as a fuel additive at this station.

### 3.2 GROUNDWATER MONITORING AND SAMPLING

Groundwater monitoring has been performed quarterly in Site wells since 1992. The depth to groundwater at the Site has historically ranged from 11 to over 25 fbg. The groundwater flow direction was initially measured for several quarters in 1992 and 1993 as flowing to the southeast at approximately 0.03 to 0.045 foot per foot. In the second quarter of 1993, however, the flow direction shifted to the northwest at approximately 0.016 foot per foot. Since then, the flow direction has consistently been to the west or northwest at gradients ranging from 0.01 foot per foot to 0.09 foot per foot (ERI, 2001a).

Historical dissolved-phase concentrations in wells adjacent to the UST cavity (MW-2, MW-3, MW-5 and MW-16) have ranged from below laboratory detection limits in well MW-3 to 3,120,000 µg/l TPHg (MW-16), 26,000 µg/l benzene (MW-5), and 717,000 µg/l MTBE (MW-

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16). Concentrations in the other wells at the Site have ranged from below the laboratory detection limits to 130,000 µg/l TPHg (MW-10), 6,507 µg/l benzene (MW-6), and 2,100 µg/l MTBE (MW-11). Dissolved-phase TPHg and benzene concentrations have been stable or have generally dropped by one to two orders of magnitude in all the Site wells. The only exception is well MW-16, which has seen TPHg concentrations rise in conjunction with a rise in MTBE concentrations. During the fourth quarter 2000 sampling event, dissolved-phase concentrations ranged up to 4,300 µg/l TPHg and 480 µg/l benzene in all wells, excluding well MW-16 (ERI, 2001a).

Groundwater samples have only been analyzed for MTBE at the site since 1996. MTBE concentrations rose in well MW-16 to a peak of 717,000 µg/l in February 1999 and have since dropped to 59,000 µg/l in December 2000, likely as a result of ongoing SVE activities. Smaller rises in MTBE concentrations have been detected over a similar time period in wells MW-10, MW-11 and MW-17 (ERI, 2001a).

### 3.3 REMEDIAL TESTING ACTIVITIES

Two constant rate vapor injection tests were performed in October 1993. Monitoring Wells MW-2, MW-3, MW-5, and MW-15 and Vapor Extraction Wells VEW-12 through VEW-14 were used in the tests. The constant rate tests consisted of injecting air at 23.6 cubic feet per minute (cfm) and 15.5 cfm into VEW-14 (Test 1) and MW-2 (Test 2) and recording pressure responses in as many as three observation points. Based on this test, the radius of influence (ROI) at the Site was estimated to be approximately 40 to 80 feet. Based on laboratory analysis of vapor samples, VEW-14 and MW-2 had TPH concentrations of 2,790 and 670 parts per million per volume (ppmv) and benzene concentrations of 370 and 55 ppmv, respectively. Based on these successful results, SVE was selected as the remediation alternative and eventually implemented at the Site (Alton Geoscience, 1994c).

After the shutdown of the original SVE system and as a result of rising MTBE concentrations in soil, the HMD requested an additional SVE test. Alton Geoscience performed a 24-hour SVE test in September 1998. Based on the test results and data from previous SVE operations at the Site, Alton Geoscience concluded that SVE appeared to be a technically feasible approach for remediation of soil concentrations and free product at the Site. Trace levels of product were observed during the test in well MW-16 for the first time in any well at the Site. Alton Geoscience recommended resumption of SVE activities if measurable free product was observed at the Site (Alton Geoscience, 1999).

### 3.4 SOURCE REMOVAL AND REMEDIATION ACTIVITIES

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In March 1989, one 6,000-gallon diesel and two 10,000-gallon gasoline USTs, and a 280-gallon waste oil tank were removed from the property, and replaced with one 10,000-gallon diesel and two new 12,000-gallon, double-walled, gasoline USTs within the enlarged, original tank cavity. The volume of hydrocarbon impacted soil removed during these activities was not reported to Alton Geoscience (Alton Geoscience, 1992).

In March 1994 and April 1996, Alton Geoscience conducted limited remedial excavation around the dispenser islands, USTs, former clarifier, and former hydraulic lifts. The excavations removed approximately 130 cubic yards of hydrocarbon-affected soil in 1994 and 220 tons in 1996 (Alton Geoscience, 1994b; Alton Geoscience, 1996).

In addition to limited remedial excavation, an SVE remediation system has been operated at the Site. The first SVE system was started in February 1995 and shut down on June 30, 1995, under the direction of Unocal Corporation. The SVE system was disconnected on August 7, 1995 and removed from the Site on August 18, 1995. A second SVE system was installed onsite and started on February 15, 1996. The system was eventually shut off because of low benzene influent concentrations on November 21, 1996. The system was restarted on April 11, 1997, and shut off again on May 2, 1997, due to low influent concentrations. This system was subsequently removed from the Site. A total of 1,031 gallons of hydrocarbons were recovered through SVE from February 1, 1995 through 1997 (Alton Geoscience, 1999).

Based on the rising dissolved-phase MTBE concentrations detected in well MW-16, the HMD requested in 1999 that remediation using SVE be resumed at the Site. TRC installed two new vapor extraction wells for this purpose in June 1999. ERI permitted and installed a new SVE system at the Site and SVE operations resumed on July 31, 2000. Since startup of this SVE system on July 31, 2000, the system has operated for a total of 2,770 hours and recovered approximately 1,049 pounds of hydrocarbons (ERI, 2001b).

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### **3.5 CHEVRON ASSESSMENT AND REMEDIATION ACTIVITIES**

At the Chevron station, across Rancho California Road from the Site (Figure 2), groundwater levels in monitoring wells have reportedly fluctuated by as much as 60 feet. At the time of initial investigation in 1984, groundwater was approximately 15 fbg. Groundwater levels dropped until reaching its low in 1990 and then rebounding to near 1984 levels (Groundwater Technology, 1995). Since 1992, groundwater levels in offsite Chevron wells have shown up to 10 feet in variation while wells on the Chevron station have shown up to 30 feet in variation. Chevron well B-15 appears to have anomalously high MTBE concentrations given the surrounding wells with lower MTBE concentrations. It is not clear if the MTBE concentrations are affected by the well construction. The range of variation for groundwater levels in well B-15 was at least 10 feet, but could not be determined because of inadequate screen depth, which has caused the well to become dry as the water table dropped. Groundwater flow directions have been inconsistent, but recently appear to flow northwest to north. Although the groundwater monitoring and sampling was performed in different months at the two stations, TRC has combined the general groundwater gradient maps for the Site and the Chevron station for the third quarter of 2000 (Figure 9; BBC, 2000).

Prior to 1986, free product was observed in wells B-2, B-3, B-5, B-6, and R-1, which were located adjacent to, and south of, the tank pit and pump islands. From 1984 to 1990, the thicknesses of free product and dissolved-phase hydrocarbon concentrations decreased, which was interpreted to be the result of smearing of contaminants through the vadose zone and later partial mass removal by SVE. SVE was conducted intermittently from 1992 to 1993, 1994 to 1995, and 1996 to 1997. An estimated 9,400 pounds of hydrocarbons were recovered (Fluor Daniel GTI, 1998; Groundwater Technology, Inc., 1995). TRC has combined the MTBE results from the Site and the Chevron station wells for the third quarter of 2000 onto one figure (Figure 10). The Chevron station's third quarter groundwater monitoring and sampling figures and tables are included in Appendix C (BBC, 2000).

### **4.0 OBJECTIVE**

The primary objective of the scope of work presented herein is to assess the lateral and vertical extent of dissolved-phase hydrocarbons in groundwater downgradient of the Site and between the Site and RCWD well 118. This assessment is also intended to serve as a basis for conducting additional more detailed assessments, conducting risk assessment, performing remediation feasibility evaluations, or establishing interim remedial actions, as necessary.

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### **5.0 SCOPE OF WORK**

In order to address the regulatory agency requests and concerns described in Section 1.0, TRC proposes to perform additional site assessment activities.

Although the HMD has observed that existing Tosco wells do not provide adequate lateral assessment of the dissolved-phase plume at the Site, it should be noted that the wells associated with the adjacent Chevron station appear to have provided lateral assessment for the Site to below the laboratory detection limits through the third quarter of 2000, the most recent data available to TRC (Figures 9 and 10; Appendix C). To more clearly address this issue of lateral assessment, TRC proposes to conduct a joint elevation and location survey of all Chevron and Site wells following completion of proposed assessment activities, to coordinate monitoring and sampling events for the adjacent Chevron station and Site, and to share data so that a more comprehensive gradient and flow direction can be calculated.

Per the CRWQCB's request, monthly groundwater monitoring and calculation of flow direction was initiated in February 2001 and will be reported in the regular quarterly groundwater sampling reports.

Per the HMD's request, existing dry wells MW-8 and MW-9 will also be destroyed and replaced by new wells MW-8a and MW-9a (Figures 9 and 10). These new wells will be shallow wells, that is, screened through the water table.

TRC will also collect more groundwater and geologic information from publicly available sources, reinstallation of wells MW-8 and MW-9, and through the use of cone penetrometer test (CPT) borings. The information gathered during this investigation will be used to further characterize hydrogeologic conditions and contaminant migration pathways in the Site vicinity. TRC will submit preliminary tables and figures to the CRWQCB with the results of the above evaluation at a meeting to be scheduled. Based on the preliminary data, TRC will propose to install additional shallow and deeper wells downgradient of the Site source area, i.e. between the Site and Murrieta Creek, and to conduct an aquifer test at the site. The locations, construction, and depths of these wells will be determined at the proposed meeting with the CRWQCB. Additional recommendations, potentially including a pump and treat system designed for MTBE plume control, may also be discussed at the meeting, as appropriate.

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### **5.1 PREDRILLING ACTIVITIES**

Prior to drilling and CPT advancement, appropriate well abandonment and installation permits will be obtained from HMD and encroachment permits will be obtained for the offsite borings and wells. The boring locations will be marked out and cleared by Underground Service Alert. A geophysical survey of the proposed boring locations will then be conducted to delineate subsurface improvements. The boring locations will also be hand-augered to approximately 5 fbg prior to drilling.

### **5.2 CPT AND HYDROPUNCH BORINGS**

Assuming favorable soil conditions are encountered, TRC proposes to advance six CPT borings to approximately 180 fbg, which based on the drilling log for RCWD well 118 and assuming horizontal strata would place our boring in the same strata of higher permeability soils as that of the first screen interval for RCWD well 118 (Figure 3). However, based on available geologic information, cobbles and other unfavorable soil conditions appear likely to limit the CPT borings to significantly shallower depths.

The CPT borings will collect soil stratigraphy and groundwater pressure data. Based on this information, the approximate geologic soil type and water saturation will be estimated. In addition, groundwater samples will be collected from borings next to the CPT boring. The groundwater samples will be collected using a hydropunch sampler driven to depth by the CPT rig. Groundwater samples will be collected at discrete intervals based on the CPT generated stratigraphic and groundwater pressure data. Generally, samples will be collected more frequently at shallower depths, with sample intervals becoming less frequent with increasing depth. If shallow groundwater is found to be impacted by MTBE, only one groundwater sample per boring will be collected, which will require multiple borings per CPT location. This will be done to prevent cross-contamination from the shallow zone.

The groundwater samples will be analyzed in an onsite, state-certified mobile laboratory for MTBE using EPA Method 8260B. Bentonite grout will be used to backfill all the borings as the cone penetrometer and hydropunch are removed. General field procedures are in Appendix D.

### **5.3 WELL RECONSTRUCTION**

Following removal of the surface well vaults, groundwater monitor wells MW-8 and MW-9 will be overdrilled to remove the existing seal, filter pack and casing. Shallow soil borings MW-8a and MW-9a will then be installed in the former wells MW-8 and MW-9, respectively. The boring will be deepened using a 10-inch-diameter hollow-stem auger to approximately 15 feet

## **Workplan for Site Assessment**

76 Products Station 6519, 28903 Rancho California Road, Temecula, California

March 9, 2001

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below the first encounter of groundwater. The borings will be converted to standard 4-inch diameter PVC groundwater monitor wells with a screen interval of approximately 10 feet above groundwater to 15 feet below groundwater. Auger flights will be high-pressure water-washed prior to drilling the borings. General field procedures are in Appendix D.

### **5.4 SOIL SAMPLING**

Soil samples will be collected from the borings using a split-spoon sampler and will be driven approximately 18-inches at five-foot intervals, continuously through the water table, and at the bottom of each boring. Soil will be screened by a combustible gas indicator (CGI) and described using the Unified Soil Classification System. At least one soil sample will be collected from each sampler to be used for geologic description and CGI measurements.

### **5.5 WELL DEVELOPMENT, SURVEYING AND SAMPLING**

A drill rig-mounted surge block will be used to develop each monitor well after the filter pack is installed and prior to setting of the seal in order to settle the pack and disperse fine sediment from the borehole. Groundwater will be bailed from the well after it is surged in order to remove the suspended sediment.

A professional survey of well elevations and locations will be performed for all new and existing Site and Chevron station wells, as available. In addition, the elevation and location of CPT borings and the water level elevation of standing water in Murrieta Creek will be surveyed west and northwest of the Site. The survey may also incorporate locations of other improvements such as storm drain outlets into Murrieta Creek or RCWD well 118, as appropriate and available.

Following installation of the wells, TRC will attempt to arrange a coordinated groundwater monitoring and sampling event for all 76 station and Chevron monitoring wells with Chevron. Typical groundwater sampling procedures are described in Appendix D.

## **Workplan for Site Assessment**

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### 5.6 PRELIMINARY RESULTS AND CRWQCB MEETING

The results of these initial assessments will be presented to the CRWQCB in the form of preliminary tables and figures in advance of a planned, but yet to be scheduled, meeting with the CRWQCB. The purpose of the meeting is to review the preliminary results and obtain expedited CRWQCB approval for additional assessment activities. At this time, TRC anticipates recommending aquifer testing at this Site as well as the placement and construction of clustered groundwater monitor wells screened in the shallow and deeper aquifers. In addition, TRC may propose the design of a groundwater remediation system. TRC and Tosco will be seeking approval from the CRWQCB for both the overall approach and specific scope of work on an expedited basis. A written confirmation of the agreed scope of work will be submitted after the meeting and concurrently with the initiation of the work.

### 5.7 ADDITIONAL WELL INSTALLATION

Clustered groundwater monitor wells will be installed. The quantity of wells clustered, locations, depths, screen intervals, and construction will be decided based on the preliminary results from the CPT borings. Appropriate well permits will be obtained from the HMD and the same hole clearance procedures described in Section 5.1 will be performed prior to drilling. Soil borings will be drilled using a hollow stem auger and be sampled continuously for soil classification purposes. The wells will be installed in accordance with the construction specifications agreed to at the preliminary meeting with the CRWQCB. The wells will be developed, surveyed, and sampled in the same manner described in Section 5.5.

### 5.8 LABORATORY ANALYSIS

Selected soil samples from borings will be submitted for laboratory analysis by a state-certified laboratory. Soil samples will be analyzed for TPHg using EPA Method 8015B, and for benzene, toluene, ethylbenzene and xylenes (BTEX) and MTBE using EPA Method 8021B. The soil sample from each boring with the highest MTBE result will be reanalyzed for MTBE and other oxygenates using EPA Method 8260B. Specifically, the other oxygenates will include ethanol, di-isopropyl ether (DIPE), tertiary amyl methyl ether (TAME), ethyl tertiary butyl ether (ETBE), and tertiary butyl alcohol (TBA).

Selected soil samples from the borings may be analyzed for soil physical properties using the API RP-40 method and for grain size distribution via laser method. The soil samples will also be analyzed for total organic carbon. Physical properties to be measured include bulk density, grain density, porosity, horizontal and vertical hydraulic conductivity, and moisture content.

## **Workplan for Site Assessment**

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Groundwater samples from hydropunch borings, new wells, and aquifer testing will be analyzed for TPHg using EPA Method 8015B, and for BTEX, MTBE, and other oxygenates using EPA Method 8260B.

### **5.9 AQUIFER TESTING**

TRC will conduct an aquifer test using existing site wells as well as potential future site wells (see Section 5.7). Initially, TRC will conduct a step-drawdown test to evaluate water level drawdown in the pumping well planned for the aquifer test. The rate of water removal will be increased in discrete increments until a steady-state/pseudo-steady-state is reached. After completion of the step-drawdown test and the wells have recovered to at least 90% of the static groundwater level, a 24-hour to 72-hour constant discharge aquifer test will be conducted.

The rate of pumping of the constant discharge test will be determined based on the results of the step-drawdown test. The test will be conducted for at least 24 hours and may be extended to as long as 72 hours (3 days) depending on the results obtained. Observation wells, including existing Site wells, Chevron wells if access is granted, and potential future wells, will be monitored prior to the start, during, and following termination of groundwater extraction. Water level drawdowns in observation wells will be measured and recorded using downhole pressure transducers connected to data loggers and/or manually using electronic depth to water probes. Extracted groundwater will be periodically sampled throughout the test for laboratory analysis.

The test data will be used to estimate aquifer parameters, including hydraulic conductivity, transmissivity, and specific yield.

### **5.10 WASTE MANAGEMENT**

Soil cuttings, equipment rinse water, and purged groundwater will be placed onsite in 55-gallon drums. Well construction materials from the abandoned wells will also be placed onsite in 55-gallon drums. Groundwater collected during the potential aquifer testing will be stored onsite in drums or larger container as appropriate. All wastes will be transported to a licensed facility within 90 days of generation.

## **Workplan for Site Assessment**

76 Products Station 6519, 28903 Rancho California Road, Temecula, California

March 9, 2001

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### **5.11 INITIAL SITE CONCEPTUAL MODEL**

Based on State guidelines and available data, an initial Site Conceptual Model (SCM) will be prepared (CSWRCB, 2000). The initial SCM will include the following:

- The likely unauthorized release scenario, that is, what is the likely source of the impact to groundwater;
- Site characteristics, including local geology and hydrogeology. Estimates of aquifer characteristics, such as porosity and hydraulic conductivity, will be estimated from existing data and peer reviewed references;
- The current distribution of MTBE at the site;
- How the distribution of MTBE is changing with time, that is, is the MTBE plume in groundwater advancing, stable, or retreating; and
- The identification of potential current and future receptors of MTBE impacted groundwater, in particular groundwater production wells and surface water bodies. Figures will be prepared which illustrate the potential receptors relative to the site.

This initial SCM will be updated through out the subsequent corrective action process as new information is obtained.

### **5.12 REPORTING**

After the completion of field activities, a site assessment report will be prepared and submitted to CRWQCB. The report will summarize the field activities, findings, conclusions and recommendations for additional assessment, remediation feasibility testing, risk evaluation, and/or interim remedial actions, as appropriate.

## **6.0 SCHEDULE**

A proposed schedule for site activities is attached in Appendix E. TRC anticipates being able to present the results of the CPT borings in the form of preliminary tables and figures in May and being able to complete the additional scopes of work by the end of October 2001. This schedule is aggressive and any delays to the schedule will be reported to the CRWQCB as they are encountered.

## **Workplan for Site Assessment**

76 Products Station 6519, 28903 Rancho California Road, Temecula, California

March 9, 2001

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76 Products Station 6519, 28903 Rancho California Road, Temecula, California

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March 9, 2001

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March 9, 2001

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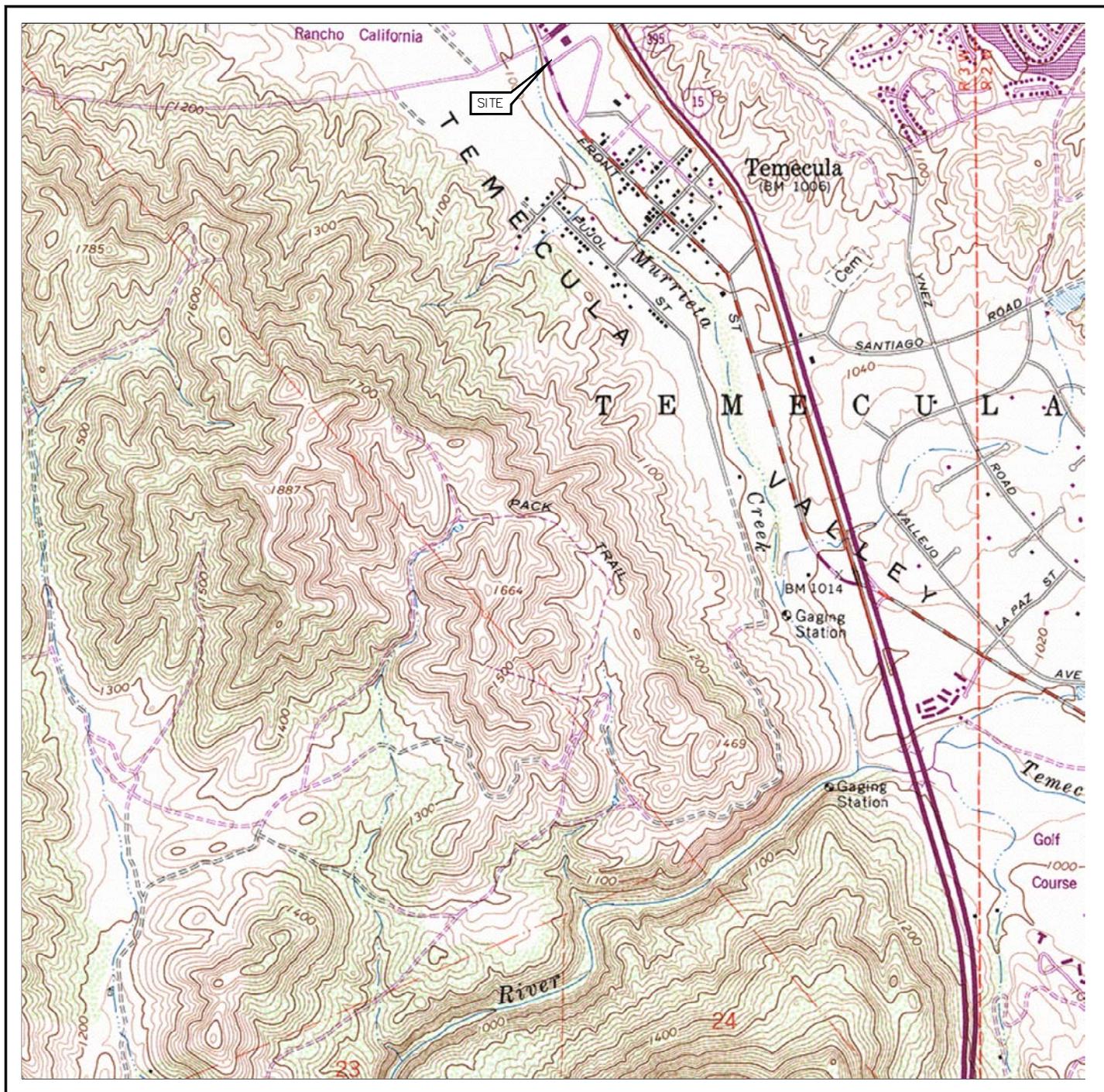
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SCALE 1: 24,000

SOURCE:

United States Geological Survey  
7.5 Minute Topographic Map:  
Temecula Quadrangles



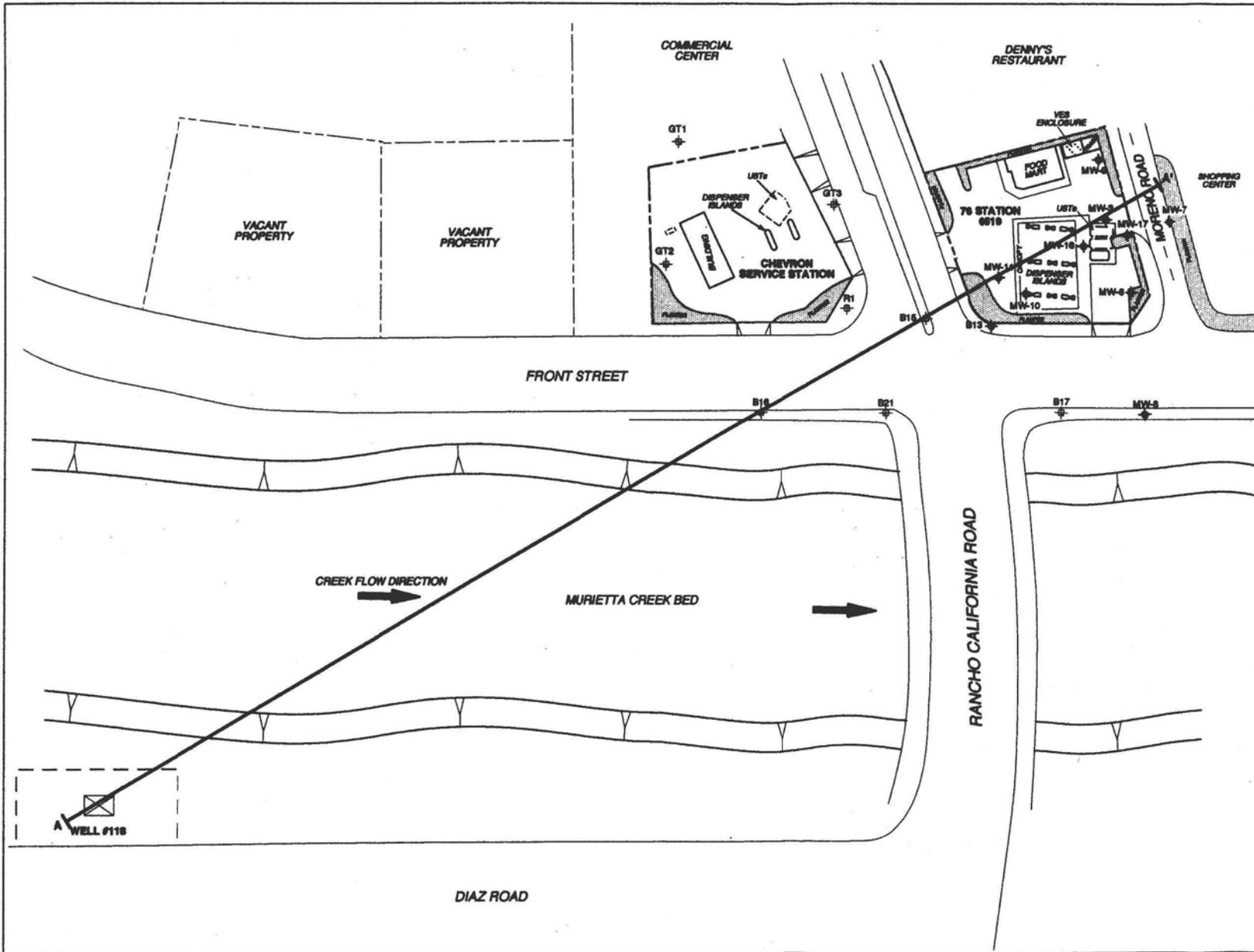
QUADRANGLE  
LOCATION

**INDEX MAP**

76 Station 6519  
28903 Rancho California Road  
Temecula, California

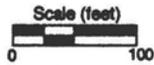
**TRC**

**FIGURE 1**



**LEGEND**

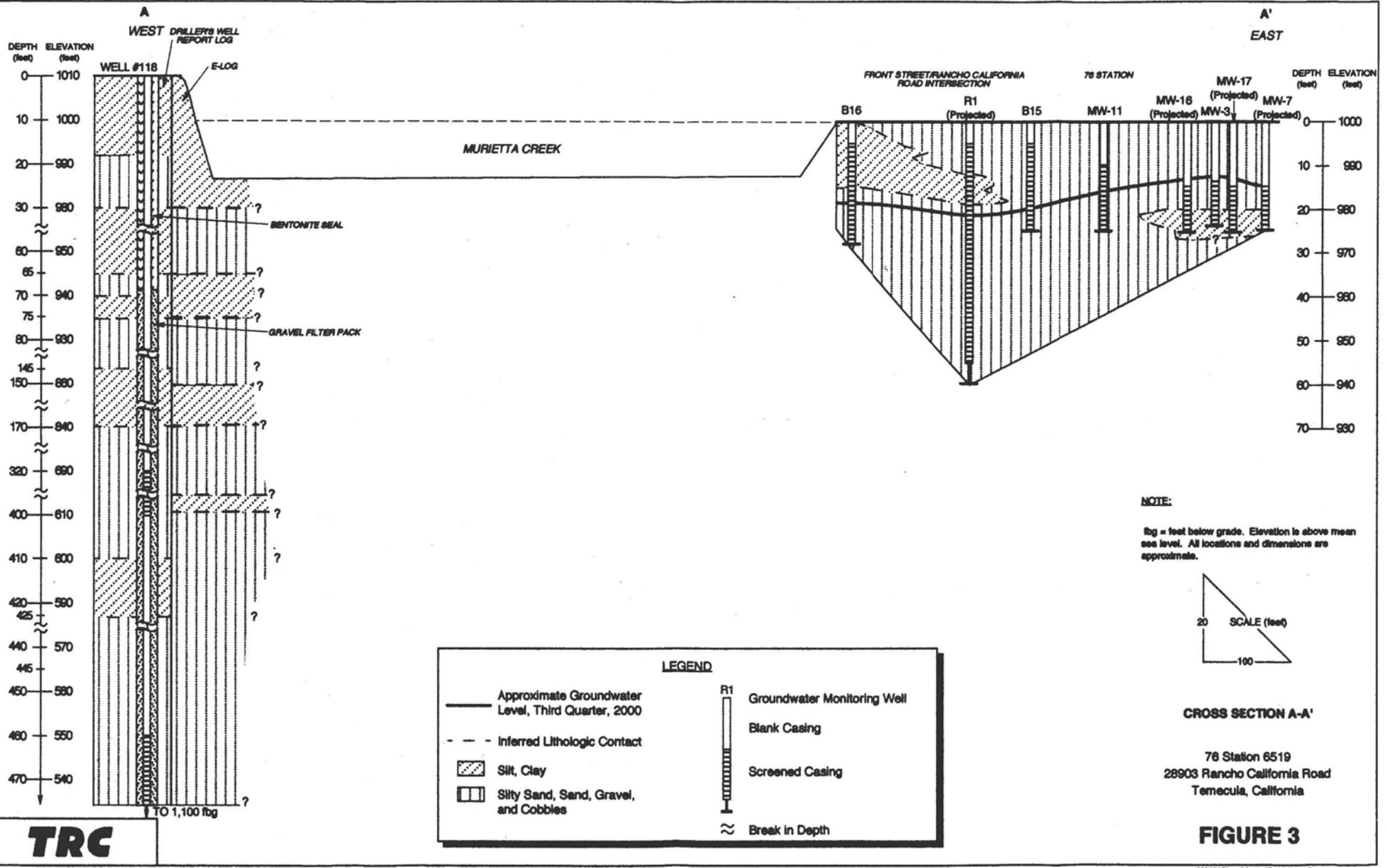
- MW-6 76 Monitoring Well
- B24 Chevron Monitoring Well
- Rancho California Water District Production Well
- A—A' Cross Section Line



**NOTES:**  
 Figure redrawn from blueprints by Harding Lawson and Associates, Chevron Ground and Grade Plan, and blueprints by Holmes and Narver. Chevron monitoring wells installed by Groundwater Technology, and Harding Lawson and Associates. 76 monitoring wells installed by Alton Geoscience. USTs = underground storage tanks. All dimensions and locations are estimated.

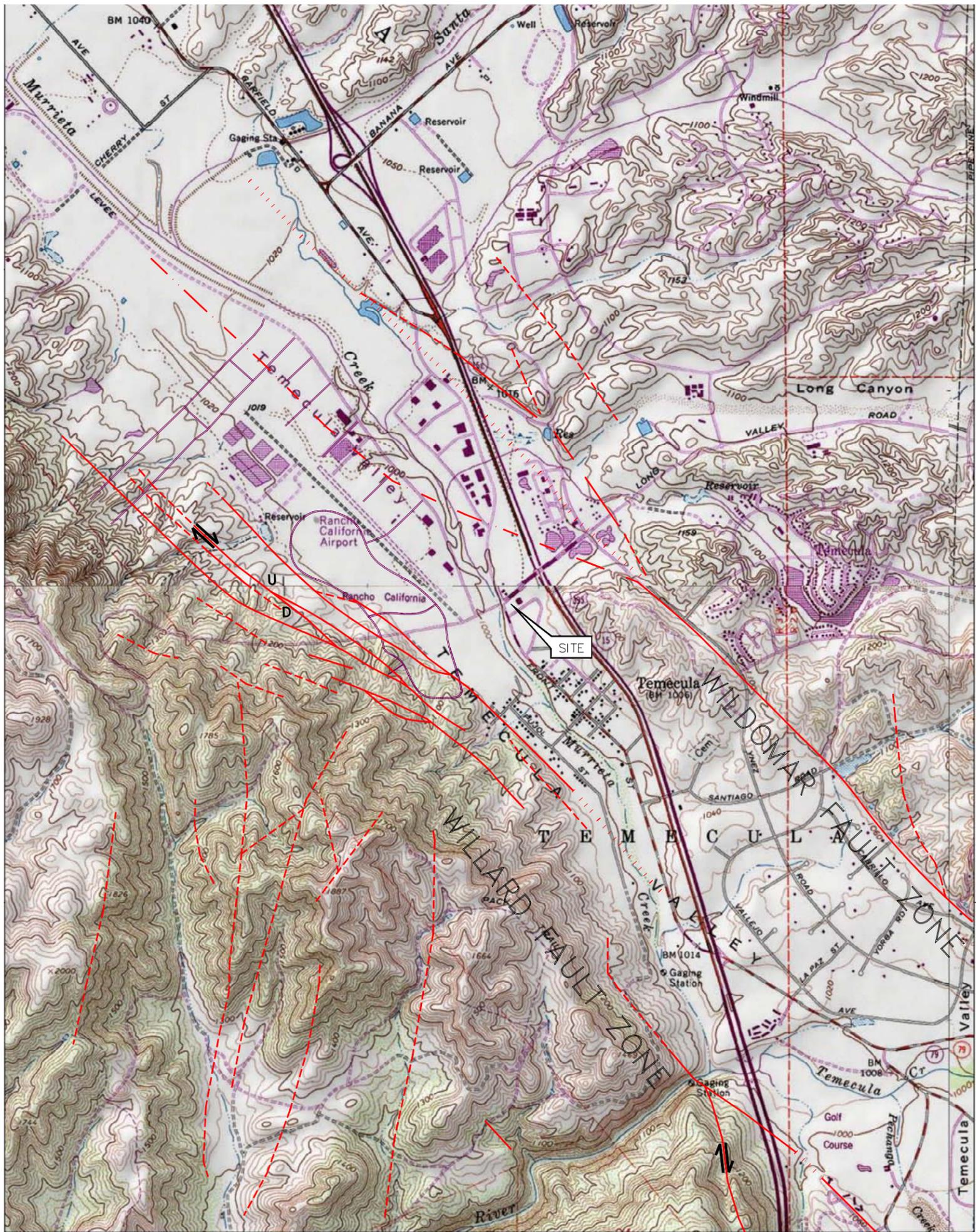
**VICINITY MAP SHOWING CROSS SECTION LINE**

76 Station 6519  
 28903 Rancho California Road  
 Temecula, California



**TRC**

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SCALE 1:2,400'

**LEGEND**

- Confirmed Fault
- - - Inferred Fault
- · · · · Concealed Fault
- · - · - Fault based on gravity data
- U** Uplthrown Side
- D** Downthrown Side
- ↔** Relative Direction of Horizontal Movement

**NOTES:**

All dimensions and locations are estimated.

**SOURCE:**

Faults from Kennedy, 1977.  
 United States Geological Survey  
 7.5 Minute Topographic Map:  
 Murrieta and Temecula Quadrangles



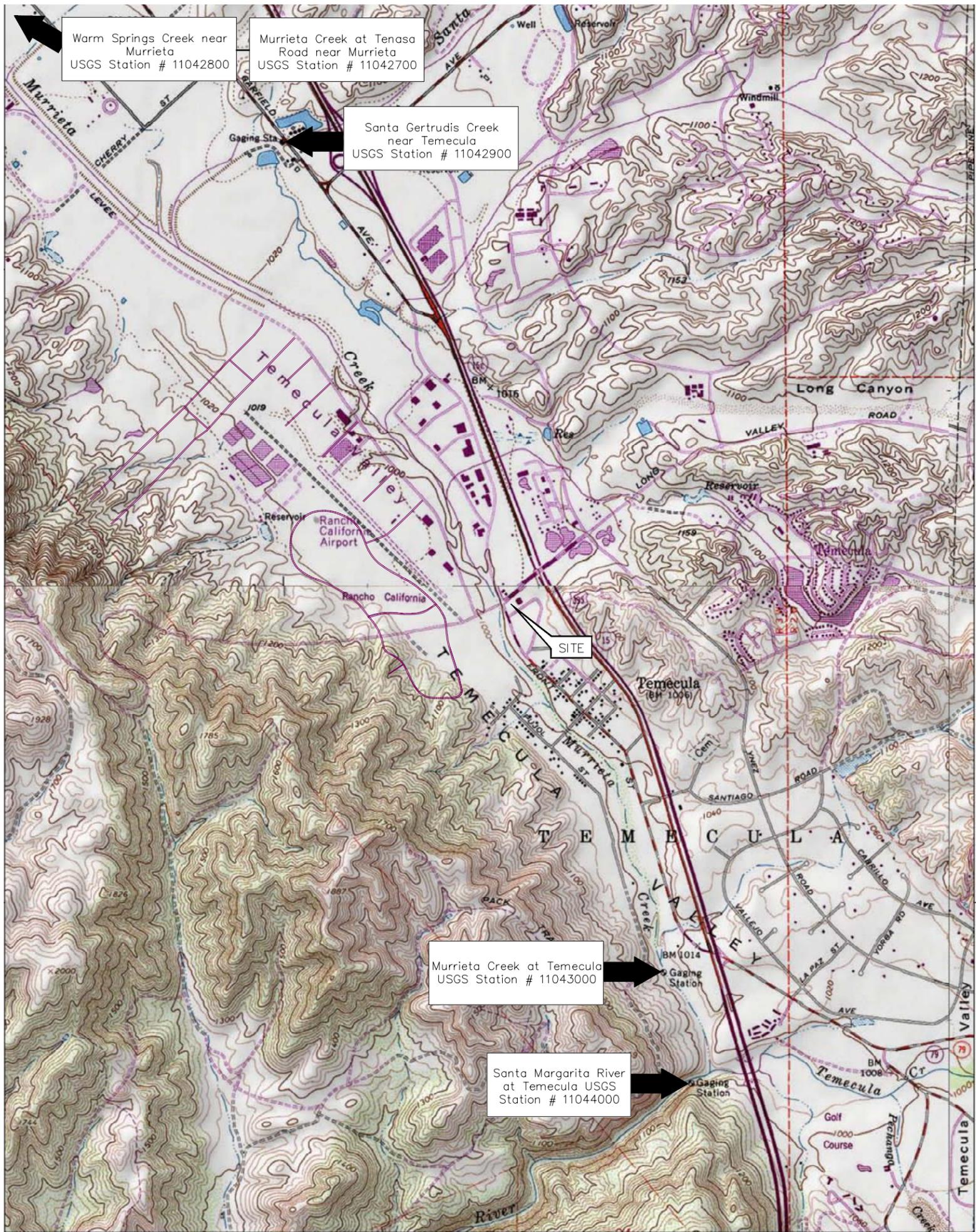
QUADRANGLE  
 LOCATION

**VICINITY MAP  
 SHOWING FAULTS**

76 Station 6519  
 28903 Rancho California Road  
 Temecula, California

**FIGURE 4**





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SCALE 1:2,400'

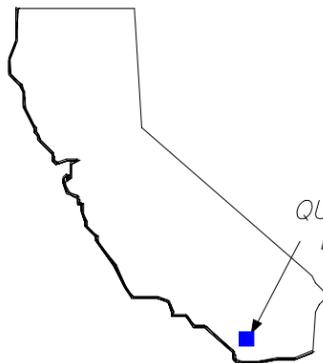


**NOTES:**

USGS = United States Geological Survey.  
 Base map updated with roads based on  
 locations and scale in the Thomas Guide  
 2001, Riverside County. All dimensions and  
 locations are estimated.

**SOURCE:**

United States Geological Survey  
 7.5 Minute Topographic Map:  
 Murrieta and Temecula Quadrangles



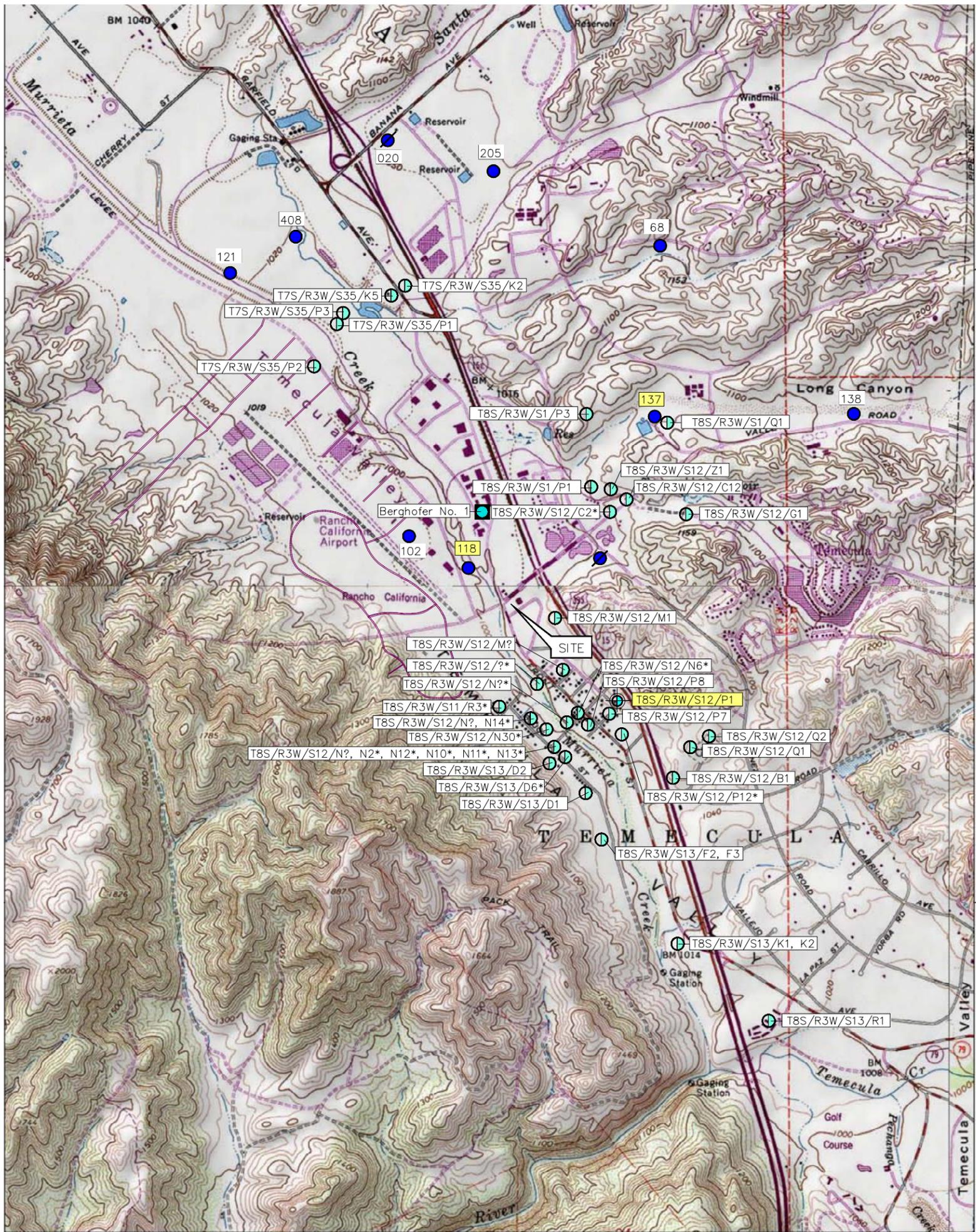
QUADRANGLE  
 LOCATION

**VICINITY MAP SHOWING  
 USGS GAGING STATION  
 IDENTIFICATION**

76 Station 6519  
 28903 Rancho California Road  
 Temecula, California



**FIGURE 5**



**LEGEND**

- 121 ● Rancho California Water District (RCWD) Water Well
- 020 ● Destroyed (RCWD) Water Well
- Exploratory Oil Well
- ⊕ Kid's World School Drinking Water Well
- Well mapped or listed by California Department of Water Resources (CDWR)

**NOTES:**

Locations of RCWD Wells based on review of Geotracker Website 1/16/01. Well ID's highlighted in yellow have been field verified to exist. Base map updated with roads based on locations and scale in the Thomas Guide 2001, Riverside County. \* = well locations not mapped by CDWR; TRC estimated location based on DWR listed information. All dimensions and locations are estimated.

**SOURCE:**

United States Geological Survey  
7.5 Minute Topographic Map:  
Murrieta and Temecula Quadrangles

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SCALE 1:2,400'

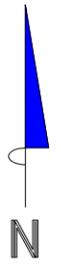
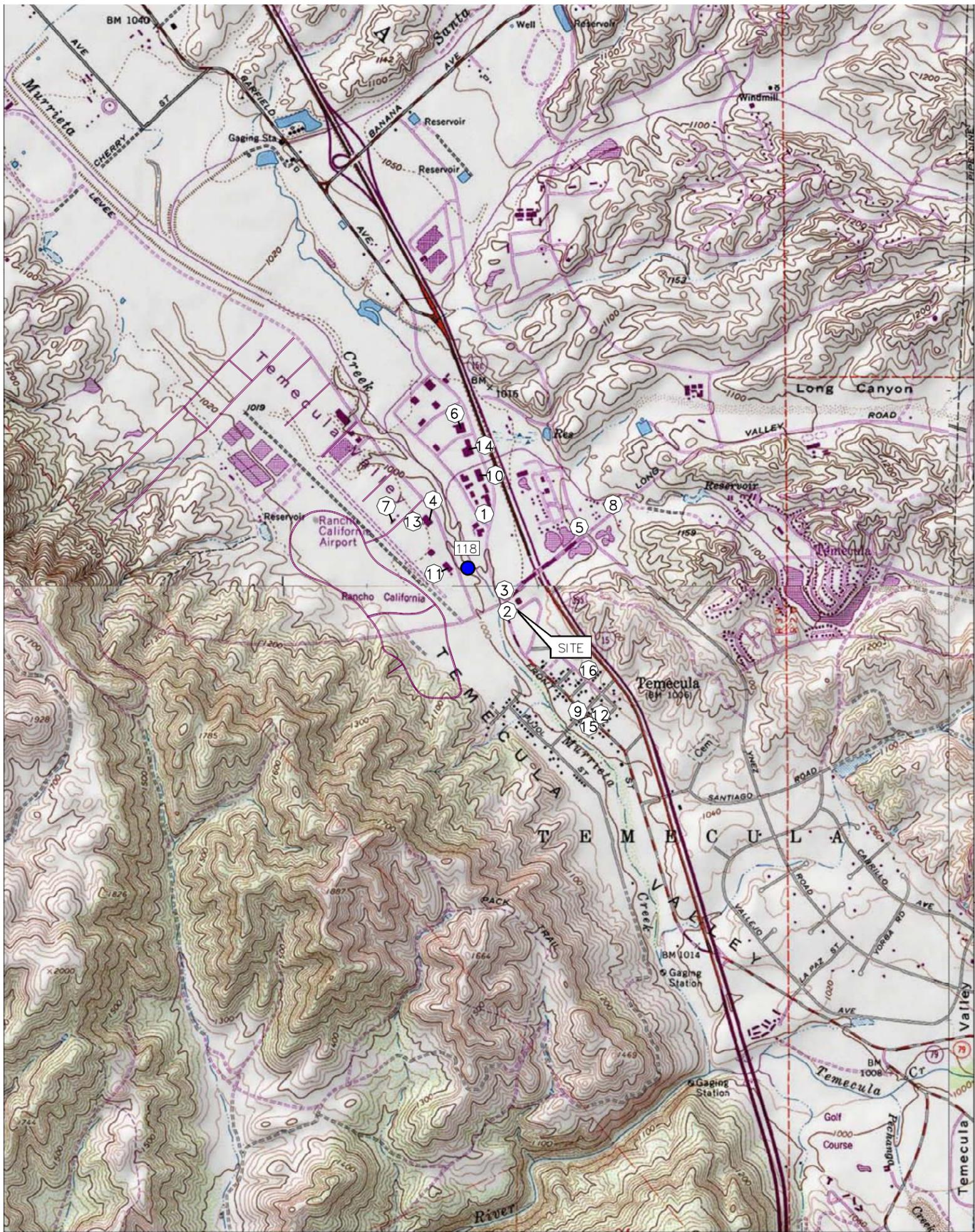


**VICINITY MAP SHOWING LOCATION OF IDENTIFIED WATER WELLS**

76 Station 6519  
28903 Rancho California Road  
Temecula, California

**FIGURE 6**





LEGEND	
118 ●	Rancho California Water District (RCWD) Water Well
RELEASE SITES:	
①	Narain Oil, 28111 Front St. (Summit Oil)
②	76 Station 6519, 28903 Rancho California Rd.
③	Chevron 9-1870, 28900 Rancho California Rd.
④	Rancho California Water District, 28061 Diaz Rd.
⑤	ARCO 3012, 27641 Ynez Rd.
⑥	Borg Warner Mechanical Seal, 27941 Front St.
⑦	Former Rancho California Airport, (Downs Commercial Fueling & Vacant Lot), 27985 Diaz Rd.
⑧	Mobil, 29500 Rancho California Rd.
⑨	Penfold Properties, 28545 Front St. (Vacant Lot)
⑩	Pichel Industries, 28007 Front St. (Discount Tire Center)
⑪	Plant Equipment, 28075 Diaz Rd. (Western Eagle Foundation & Thrift Store)
⑫	Sam's Super Shell, 28676 Front St. (Swing Inn Cafe)
⑬	US Border Patrol, 43136 Rancho Way
⑭	Bianchi International, 100 Calle Cortez
⑮	Former Mobil, 28677 Front St. (Nana's Collectibles)
⑯	CDF Station #12, 28330 Mercedes St.

NOTES:  
 Sites are listed in Legend by the site name given by the regulatory agency. Current site occupant is given in parentheses if different. Base map updated with roads in the Thomas Guide 2001, Riverside County. All dimensions and locations are estimated.

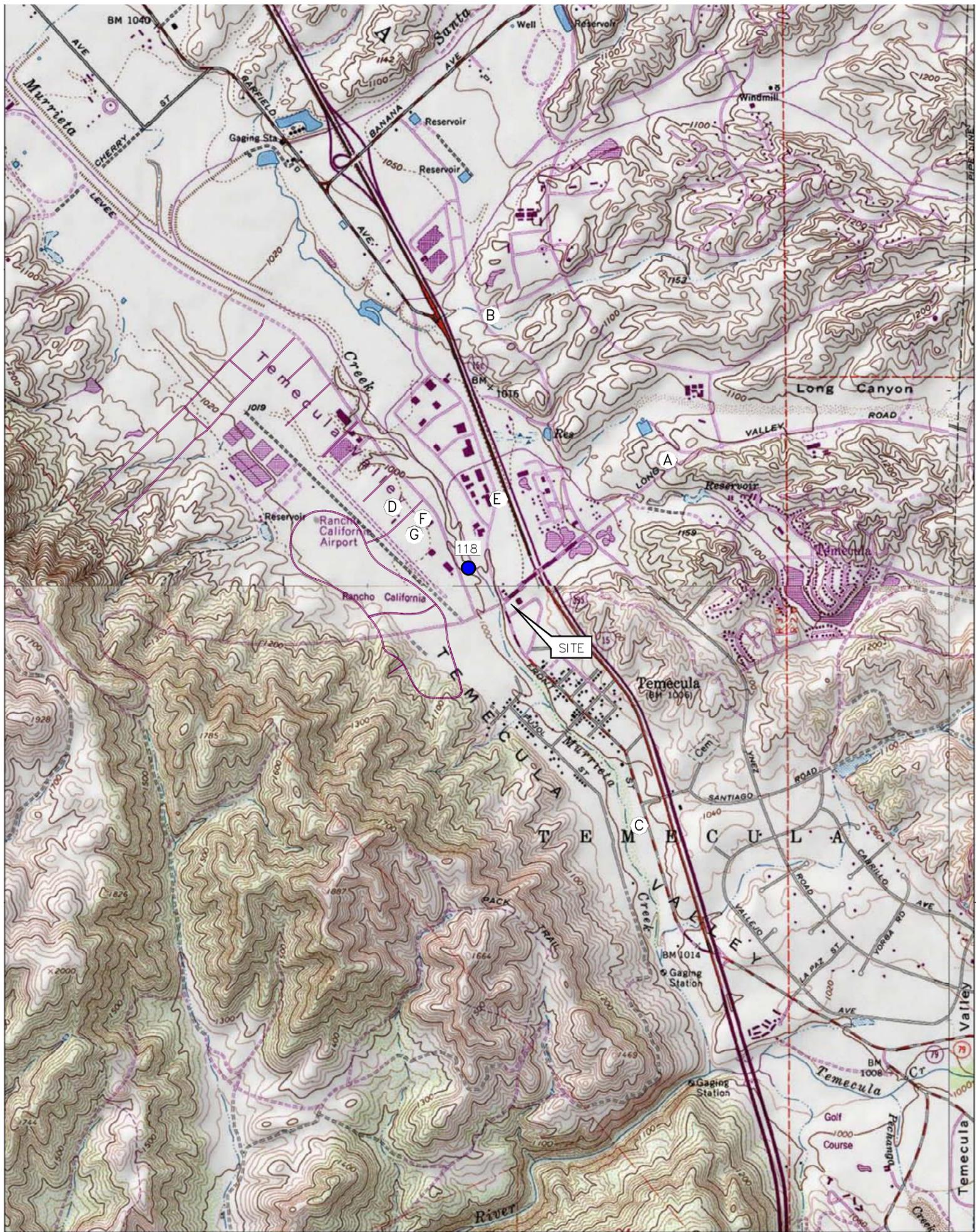
**VICINITY MAP SHOWING SITES WITH UNAUTHORIZED RELEASE CASES**

76 Station 6519  
 28903 Rancho California Road  
 Temecula, California



SCALE 1:2,400'

**FIGURE 7**



**LEGEND**

- 118 ● Rancho California Water District (RCWD) Water Well
- NON-RELEASE SITES:
- (A) Texaco Starmart, 29750 Rancho California Road (UST)
- (B) Ynez Shell, 26680, Ynez Road (UST)
- (C) Creekside Gas & Food Mart, 29115 Front Street (UST)
- (D) Down's Commercial Fueling, 27985 Diaz Road (UST)
- (E) Frenchy's/Liberty Auto Center, 28093 Front Street (Haz Mat)
- (F) Agrispect, 43124 Rancho Way (UST)
- (G) Merchants Delivery Systems, 43244 Rancho Way (UST)

0 1/4 1/2 3/4 1 MILE



SCALE 1:2,400'



QUADRANGLE LOCATION

**NOTES:**

Notes in parentheses indicate the potential source of MTBE at the site. UST = underground storage tank. HazMat = hazardous material use. Base map updated with roads based on locations and scale in the Thomas Guide 2001, Riverside County. All dimensions and locations are estimated.

**VICINITY MAP SHOWING NON-RELEASE HAZARDOUS MATERIAL AND UNDERGROUND STORAGE TANK SITES**

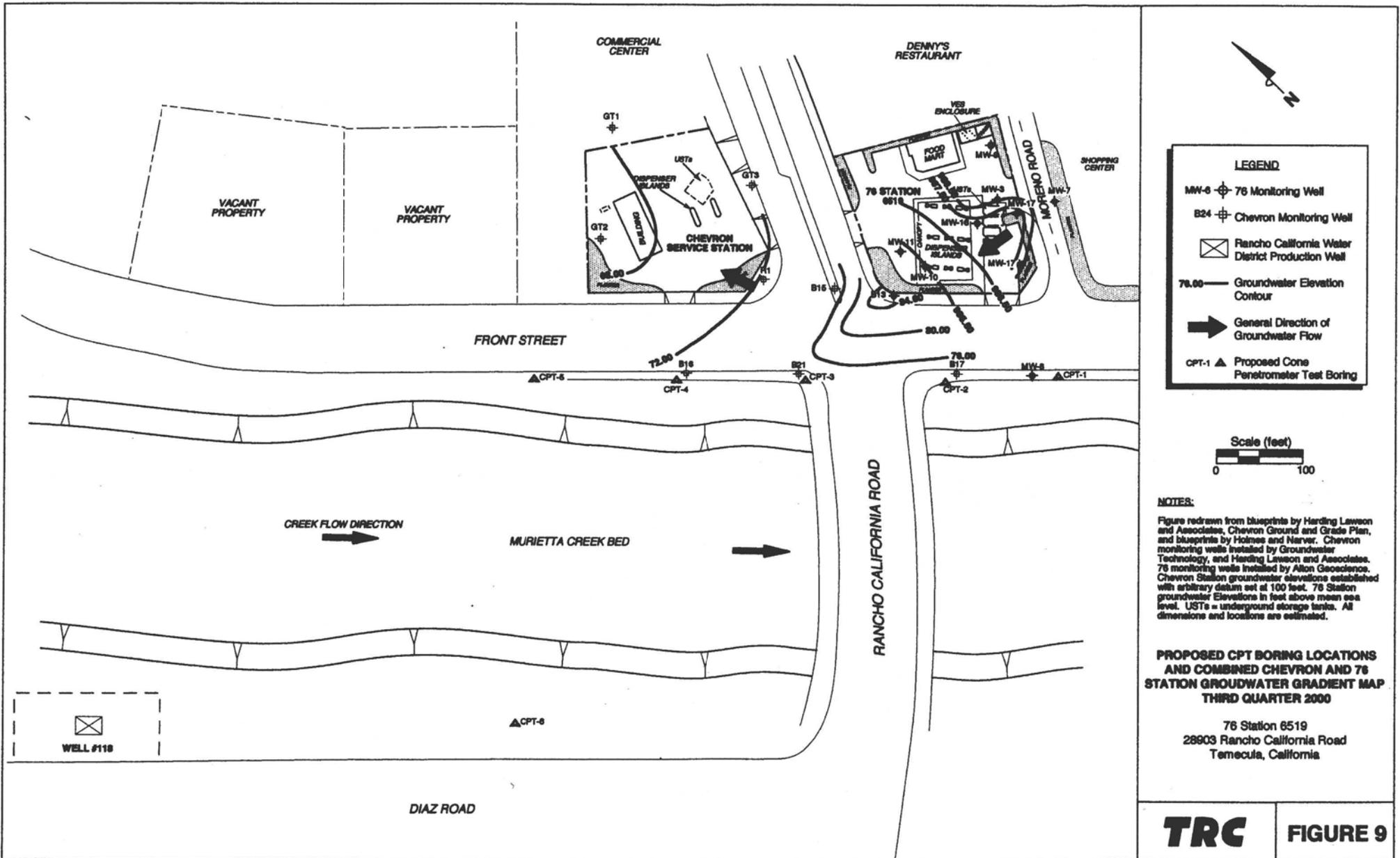
76 Station 6519  
28903 Rancho California Road  
Temecula, California



**SOURCE:**

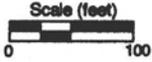
United States Geological Survey  
7.5 Minute Topographic Map:  
Murrieta and Temecula Quadrangles

**FIGURE 8**



**LEGEND**

- MW-6 76 Monitoring Well
- B24 Chevron Monitoring Well
- Rancho California Water District Production Well
- 78.00 Groundwater Elevation Contour
- General Direction of Groundwater Flow
- CPT-1 Proposed Cone Penetrometer Test Boring

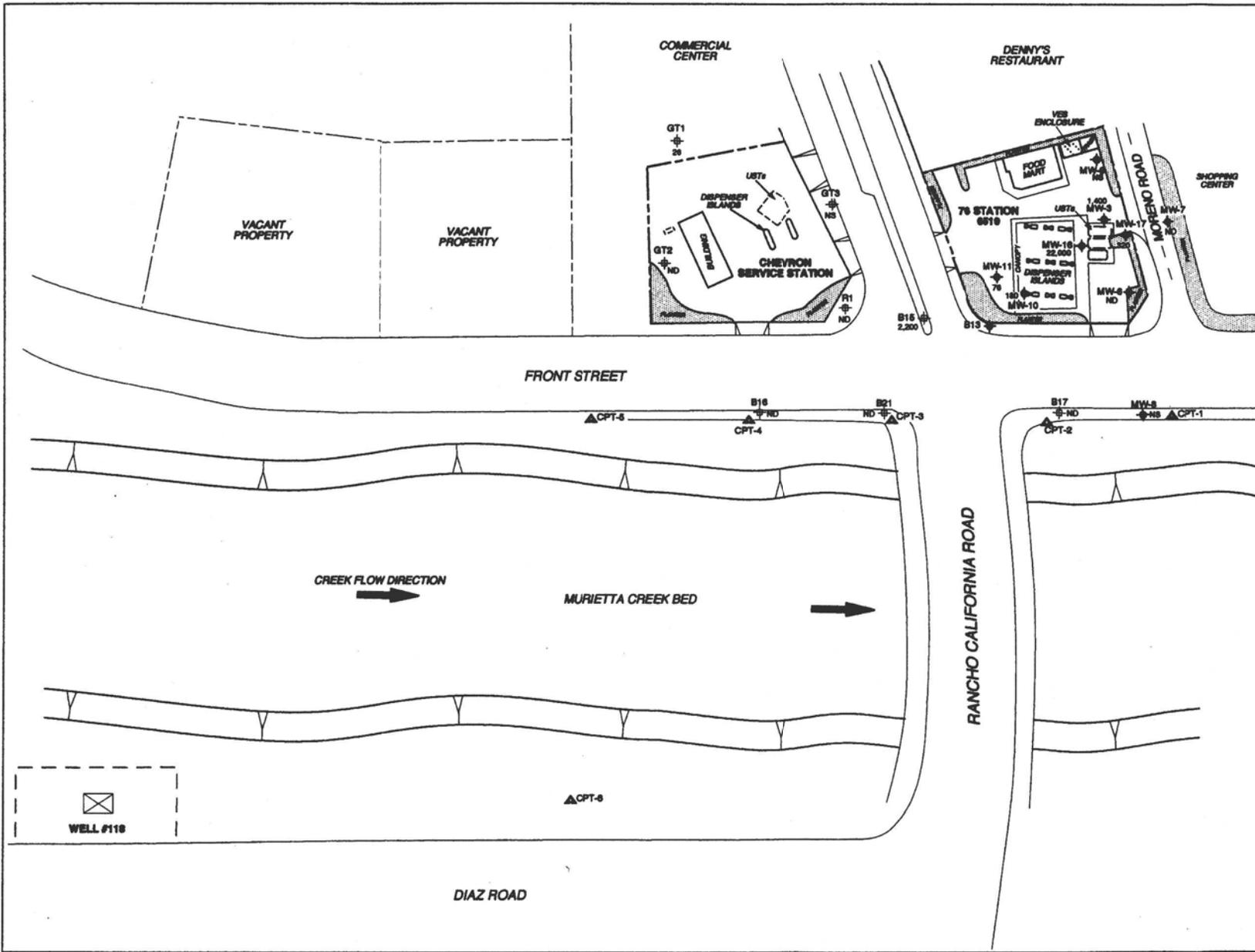


**NOTES:**  
 Figure redrawn from blueprints by Harding Lawson and Associates, Chevron Ground and Grade Plan, and blueprints by Holmes and Narver. Chevron monitoring wells installed by Groundwater Technology, and Harding Lawson and Associates. 76 monitoring wells installed by Alton Geoscience. Chevron Station groundwater elevations established with arbitrary datum set at 100 feet. 76 Station groundwater Elevations in feet above mean sea level. USTs = underground storage tanks. All dimensions and locations are estimated.

**PROPOSED CPT BORING LOCATIONS AND COMBINED CHEVRON AND 76 STATION GROUNDWATER GRADIENT MAP THIRD QUARTER 2000**

76 Station 6519  
 28903 Rancho California Road  
 Temecula, California

**TRC** **FIGURE 9**



**LEGEND**

- MW-6 ⊕ 76 Monitoring Well with Dissolved-Phase MTBE Concentration (ug/l)
- B24 ⊕ Chevron Monitoring Well with Dissolved-Phase MTBE Concentration (ug/l)
- ⊗ Rancho California Water District Production Well
- CPT-1 ▲ Proposed Cone Penetrometer Test Boring



**NOTES:**

Figure redrawn from blueprints by Harding Lawson and Associates, Chevron Ground and Grade Plan, and blueprints by Holmes and Narver. Chevron monitoring wells installed by Groundwater Technology, and Harding Lawson and Associates. 76 monitoring wells installed by Alton Geoscience. Chevron wells sampled on August 17, 2000. Tesco wells sampled on September 18, 2000. UST's = underground storage tanks. ND = not detected above laboratory reporting limits. NS = not sampled. All dimensions and locations are estimated.

**PROPOSED CPT BORING LOCATIONS AND COMBINED CHEVRON AND 76 STATION MTBE RESULTS THIRD QUARTER 2000**

76 Station 6519  
28903 Rancho California Road  
Temecula, California

Table 1

IDENTIFIED UNAUTHORIZED RELEASE SITES  
WITHIN 1 MILE OF WELL NO. 118  
Tosco Station 6519

Figure 8 ID #	Site Name	Address	Approx. Distance from Well 118	Contaminant	Release to Soil and/or Water
1	Former Narian Oil (Summit Oil)	28111 Front St. (Delta Discount Gas)	~1,000 ft. northeast (near historical oil well)	Fuel	Soil, water
2	76 Station 6519	28903 R. C. Rd.	~1,000 ft. southeast	Gasoline	Water
3	Chevron Station	28900 R. C. Rd.	~800 ft. southeast	Gasoline	Water
4	RCWD	28061 Diaz Rd.	¼ mile northwest	Not identified	Not identified
5	ARCO Station 3012	27641 Ynez Rd.	½ mile east	Gasoline, fuel	Water
6	Borg Warner Mechanical Seal	27941 Front St.	> ½ mile north	TCE	Water; case closed 1999
7	Former Rancho California Airport	27985 Diaz Rd.	> ¼ mile northwest	Gasoline or aviation fuel	Water; case closed, 1998
8	Mobil Station	29500 Rancho California Rd.	> ½ mile east	Not identified	Not identified
9	Penfold Properties	28545 Front St. (vacant lot)	> ½ mile southeast	Not identified	Not identified
10	Pichel Industries	28007 Front St. (Discount Tire Center)	> ¼ mile north	Nickel	Soil only; case closed 1991
11	Plant Equipment	28075 Diaz Rd.	~200 ft. west	Not identified	Soil only; case closed 1992
12	Sam's Super Shell	28676 Front St. (Swing Inn Café)	½ > ¾ mile southeast	Gasoline	Water: free product
13	US Border Patrol	43136 Rancho Way	¼ mile northwest	Gasoline	Soil only; case closed 1996
14	Bianchi International	100 Calle Cortez	½ mile north	Gasoline	Water
15	Former Mobil	28677 Front St. (Nana's Collect.)	¾ mile southeast	Fuel	Soil
16	CDF Fire Station #12	28330 Mercedes St.	½ > ¾ mile southeast	Diesel	Soil only

Table 2

IDENTIFIED NON-RELEASE SITES WITHIN 1 MILE OF WELL NO. 118  
Tosco Station 6519

<b>Figure 9 ID #</b>	<b>Site Name</b>	<b>Address</b>	<b>Site Type</b>	<b>Approximate Distance from Well 118</b>
A	Texaco Starmart	29750 Rancho California Rd.	Underground Storage Tank	> 3/4 mile east northeast
B	Ynez Shell	26680 Ynez Rd.	Underground Storage Tank	> 3/4 mile north
C	Creekside Gas & Food Mart	29115 Front St.	Underground Storage Tank	> 1 mile southeast
D	Downs Commercial Fueling	27985 Diaz Rd.	Underground Storage Tank	1/4 > 1/2 mile northwest
E	Frenchy's/Liberty Auto Center	28093 Front St.	Hazardous Materials (Approximate Location of Historical Oil Well)	1/4 mile northeast
F	Agrispect, Inc.	43124 Rancho Way	Underground Storage Tank	1/4 mile northwest
G	Merchant's Delivery Systems	43244 Rancho Way	Underground Storage Tank	1/4 mile northwest