Groundwater Investigation and Wellhead Protection Program for the Greater San Bruno Area

FINAL REPORT

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by

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Special thanks are owed to Dr. Steven Kreek and Dr. Howard Hall at Lawrence Livermore National Laboratories who generously offered to analyze all of the tritium samples. This data provided a great deal to our understanding of the degreee of confinement of the groundwater system in the San Bruno area.

Introduction and Purpose

In June of 1986, Amendments to the Safe Drinking Water Act (SDWA) were passed, establishing a nationwide program to protect groundwater resources used for public water supplies (Environmental Protection Agency, 1987). One of the ways that the SDWA seeks to accomplish the goal of managing groundwater quality is by the use of Wellhead Protection (WHP) Programs. One of the major components of a WHP Program is the delineation of zones around a wellhead within which contaminant source assessment and management will be addressed. The Environmental Health Services Division of the County of San Mateo has implemented a WHP Program, focusing on the City of San Bruno.

Currently, the City of San Bruno's water demands are being met by two basic sources: groundwater drawn from five active pumping wells within the City, and purchased wholesale water from San Francisco Water District and North Coast County Water District. Groundwater pumped from the local wells accounts for approximately 52.2% of the total demand of the San Bruno community, 47.8% is treated surface water purchased from the San Francisco Water Department, and less than 1% is delivered from the North Coast County Water District (George Kanakaris, written communication, 1994). San Bruno is also the home to several hazardous material storage sites, waste generator sites, and leaky underground fuel tanks, all of which have the potential to affect the deep drinking water source aquifer in the area. Since over half of San Bruno's water supply comes from groundwater, amounting to approximately 3.2 million gallons per day, it is extremely important that the quality of that drinking water is protected for current and future users.

The purpose of this study is to establish a program for long-term protection of the quality

of San Bruno's groundwater resource through a Wellhead Protection Program. This groundwater protection plan consists of three segments: (1) the development of wellhead protection areas surrounding the San Bruno municipal wells, (2) use of a computer mapping system to identify the location of known and potential sources of contamination in relation to these municipal wells, and (3) education and outreach to the public regarding groundwater protection and hazardous waste minimization. The development of wellhead protection areas and the identification and location of known and potential sources of contamination will be covered in this report.

PART ONE: DEVELOPMENT OF WELLHEAD PROTECTION AREAS

Delineation of wellhead protection areas requires a thorough examination of the geologic and hydrogeologic parameters that affect groundwater occurrence and flow in an area. Once these critical parameters have been determined, protection areas can be established around the wells in areas that represent likely sources of groundwater contamination.

1.1 Area of Investigation

The city of San Bruno occupies an area of 6.4 square miles and lies approximately 8 miles south of San Francisco (Figure 1). The city is bordered on the east by the San Francisco Bay and San Francisco International Airport, and to the west by the uplifted hills along the San Andreas Fault Zone. The most populated portions of the city lie in a northwest-southeast trending lowland area approximately one to two miles from the Bay. This valley lies between the Montara Mountain highlands on the west and San Bruno Mountain to the north. The uplifted hills to the west rise to a maximum of approximately 800 feet and San Bruno Mountain rises to 1300 feet above mean sea level. The coastal ocean currents of the Pacific moderate the effects of seasonal changes in temperature giving San Bruno a Mediterranean type climate of mild wet winters and warm dry summers.

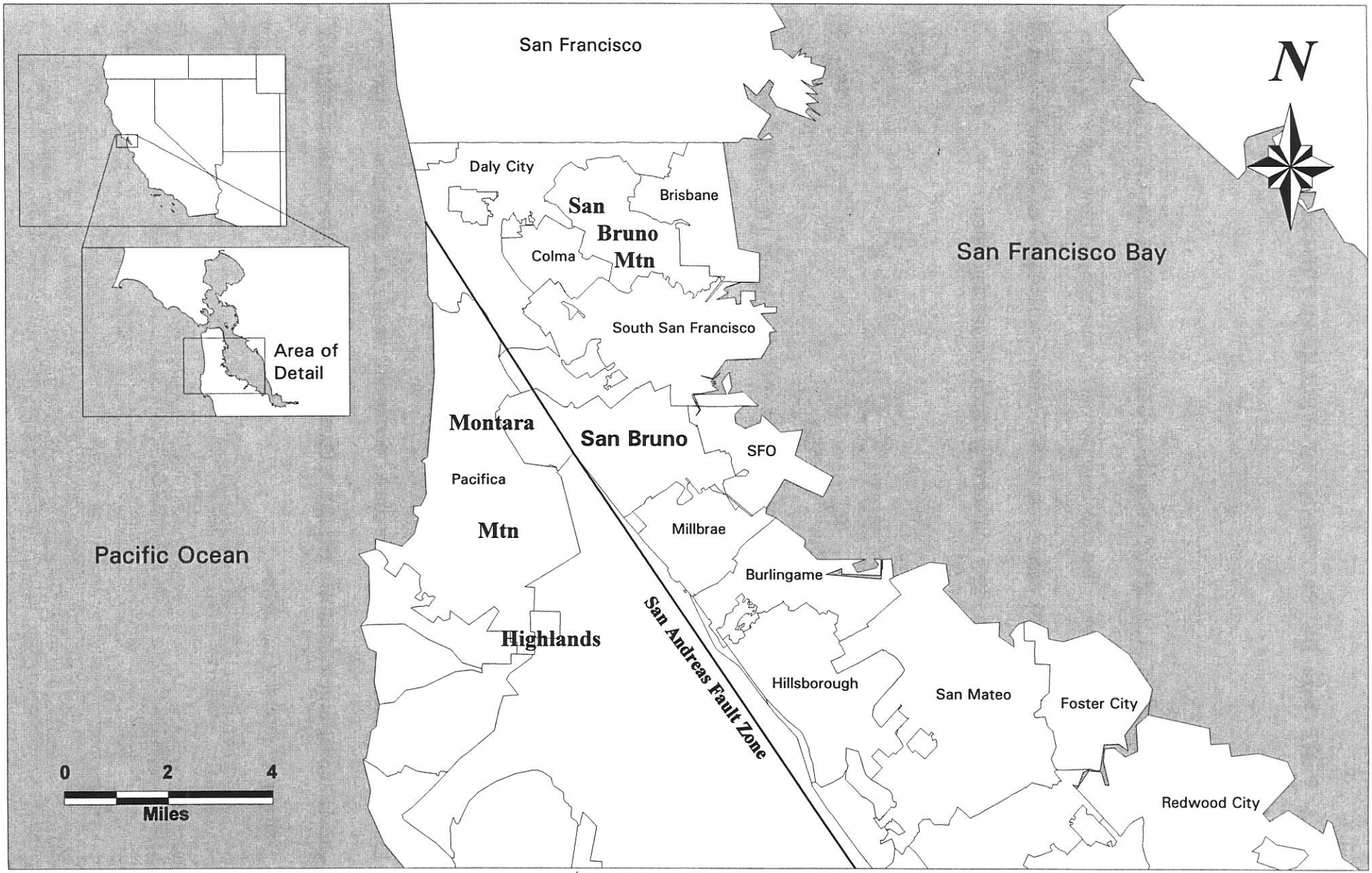


Figure 1: Location of San Bruno

1.2 Geologic Setting

1.2a Description of Geologic Units

Four geologic units dominate the geology of the San Bruno area: the Franciscan Assemblage bedrock, the Merced Formation, the Colma Formation and the Bay Muds (Figure 2). The following descriptions are based on the geologic mapping of E.H. Pampeyan (1981).

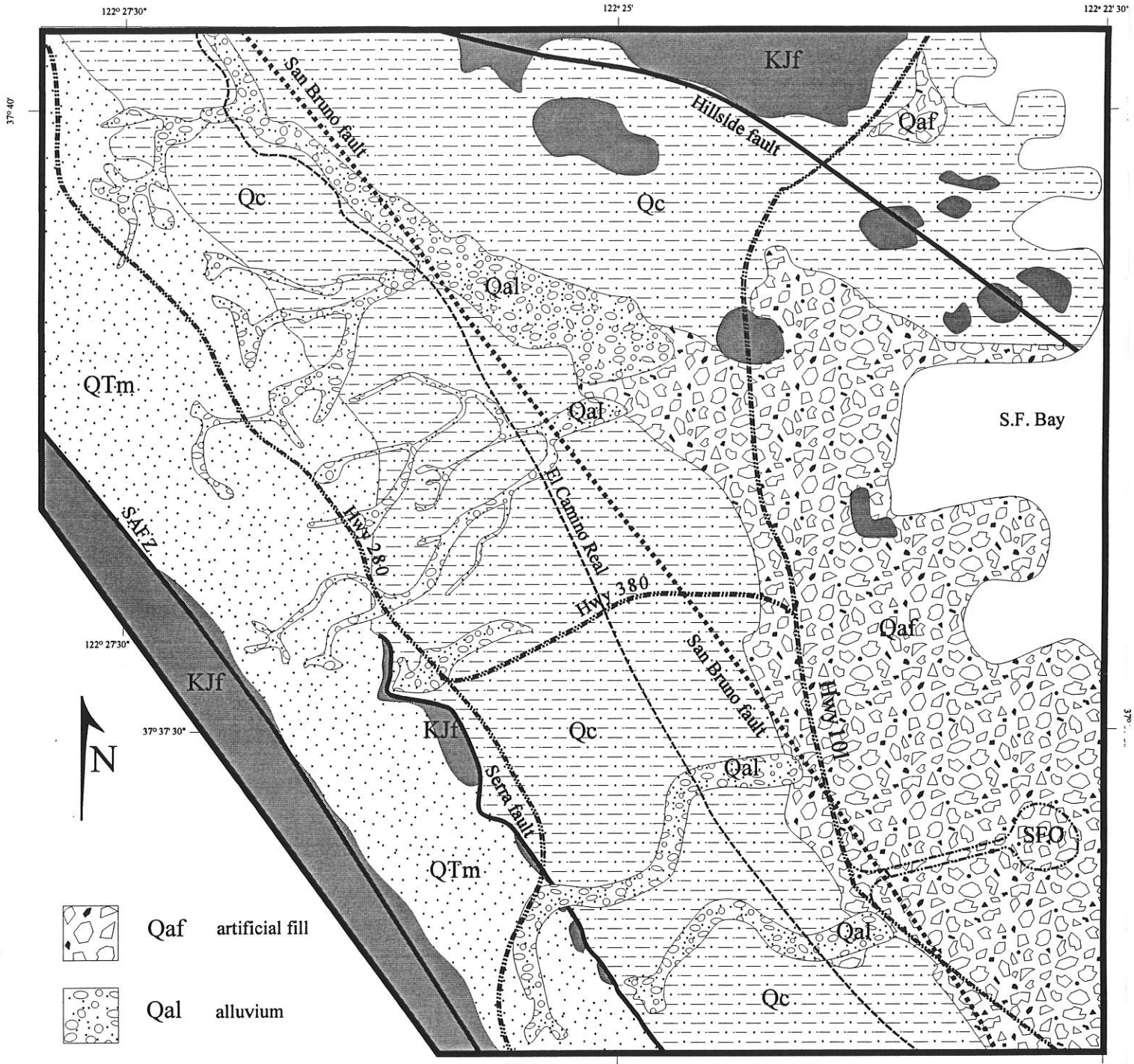
Franciscan Assemblage (Jurassic and Cretaceous)

The Franciscan Assemblage consists of graywacke with interbedded siltstone and shale, greenstone, chert, discontinuous lenses of limestone, pebble to cobble conglomerate, and metamorphic rocks of the blueschist facies. These rocks are generally highly cemented and relatively resistant to weathering, thus they act as a highly impermeable barrier to groundwater flow, especially in the San Bruno Mountain area and below the Merced and Colma Formations along the Bay. However, in the hills to the west of the city where the Franciscan rocks are exposed and highly sheared, fractures act as conduits for rainfall to enter the groundwater system.

Merced Formation (Pliocene and Pleistocene)

The Merced Formation was deposited on top of Franciscan Assemblage bedrock in the Pleistocene and Pliocene. It is composed of moderately consolidated thick-bedded to massive fine sandstone, siltstone and clayey sandstone. Locally, fossiliferous layers are moderately cemented and hard. The Merced Formation constitutes the main drinking water source aquifer

Figure 2
Generalized Geologic Map of the San Bruno and So. San Francisco Area



Qaf artificial fill

Qal alluvium

Qc Colma formation

QTm Merced formation

KJf Franciscan Assemblage

contact

fault

fault (uncertain location)

highway

major road

SAFZ = San Andreas Fault Zone

SFO = San Francisco International Airport

0 500 1000 1500 2000

FEET

1" = 3300'

Map based on: Bonilla, M.G., 1971, Preliminary geologic map of the San Francisco South quadrangle and part of the Hunters Point quadrangle, California, USGS Miscellaneous Field Studies Map, MF-311.
Pampeyan, E.H., 1981, Geologic map of the Montara Mountain quadrangle, San Mateo County, California, USGS Open-file report 81-451.

for the city of San Bruno and is exposed in the highlands to the west of the city.

Colma Formation (Pleistocene)

The Colma Formation lies above the Merced Formation and consists of poorly to well sorted sand and gravel, silty sand and sandy clay. The Colma Formation is exposed throughout San Bruno, except where more recent alluvial sediments have been deposited in stream channels and valleys.

Bay Muds (Holocene)

The Bay Muds are a very poorly to well consolidated blue-gray to black silty clay with interspersed layers of sand, gravel, peat, and shell fragments. The Bay Muds are generally not exposed due to emplacement of younger alluvial deposits and artificial fill.

1.2b Geologic History

The geography of this region has changed significantly over the last few million years. The combination of both the San Andreas fault system and dramatic sea level fluctuations have slowly transformed the San Francisco Bay region into the bay, hills, valleys and estuaries that we see today.

For the past several million years, the terrane west of the San Andreas fault has been moving northwestward relative to the terrane east of the fault at a rate of about one to two inches per year (Helley, 1979). Tectonic stresses associated with this faulting have locally uplifted,

folded, fractured and overturned some strata in the San Bruno area, especially within the uplifted hills to the west of the city.

During the time of deposition of the Merced and Colma Formations in the vicinity of San Bruno (late Pliocene to Pleistocene), the area was a shallow marine passageway connecting the ocean with an ancestral bay (Helley, 1979). Thick-bedded to massive fine sandstone of the Merced Formation, which would eventually become San Bruno's drinking water aquifer, was deposited on the Franciscan Assemblage bedrock during this time period, followed by the emplacement of the Colma Formation.

During the late Pleistocene glacial advance between about 30,000 and 10,000 years ago, sea level stood about 300 to 400 feet below its present elevation (Milliman and Emery, 1968). This low sea level stance allowed streams to grade lower than present day sea level, cutting channels into the previously deposited marine sands, silts and clays of the Colma and Merced Formations. Freshwater streams and marshes began to dominate where the marine passageway had once existed, and the coastline was near the present site of the Farallon Islands, about 30 miles west of San Francisco (Lajoie and others, 1974).

About 15,000 years ago sea level began to rise as glaciers in the northern latitudes began to melt. This rise in sea level inundated the bay basin about 7,000 years ago, depositing bay muds over the stream-cut Pliocene and Pleistocene marine sediments (Story and others, 1966). The ocean reached its present elevation about 5,000 years ago. With this rise in sea level, elevations of discharge points of streams in the bay basin, such as Colma Creek, were raised, causing alluvial sediments to be deposited on floodplains around the growing Bay.

These historical changes in the depostional environment of the San Bruno area, along

with uplift, folding and fracturing along the San Andreas fault zone, have resulted in a complex aquifer system of floodplain muds, stream-channel gravels, and marine sands, silts and clays.

1.3 Hydrogeology

The San Bruno Water Department operates five municipal water supply wells within the City (Figure 3). All of these wells draw their water from a deep aquifer that extends from about 250 to 300 feet below the surface to the Franciscan Assemblage bedrock approximately 550 to 600 feet below the surface. The source aquifer for San Bruno wells represents the southernmost portion of the aquifer system described by Phillips, Hamlin and Yates (1993) as the Westside Basin. This basin is the most extensive basin in San Francisco, comprising the Merced and Colma Formations which extend from the western part of San Francisco south to San Bruno. The porous Merced Formation sands form a reservoir for groundwater bounded by the relatively impermeable Franciscan Assemblage bedrock below it. This drinking water source aquifer in San Bruno is capped by a 100 to 150 ft. clay lens that acts as a barrier to vertical flow from the upper, unconfined aquifer. The upper aquifer is approximately 100 to 300 feet thick and is composed of the sands and clays of the Colma Formation. The clay lenses within the Colma Formation act as barriers to vertical groundwater flow within the upper aquifer thus creating discontinuous zones of perched water. Specific hydrogeologic parameters will be discussed in the Wellhead Protection Area (WHPA) groundwater modeling section.

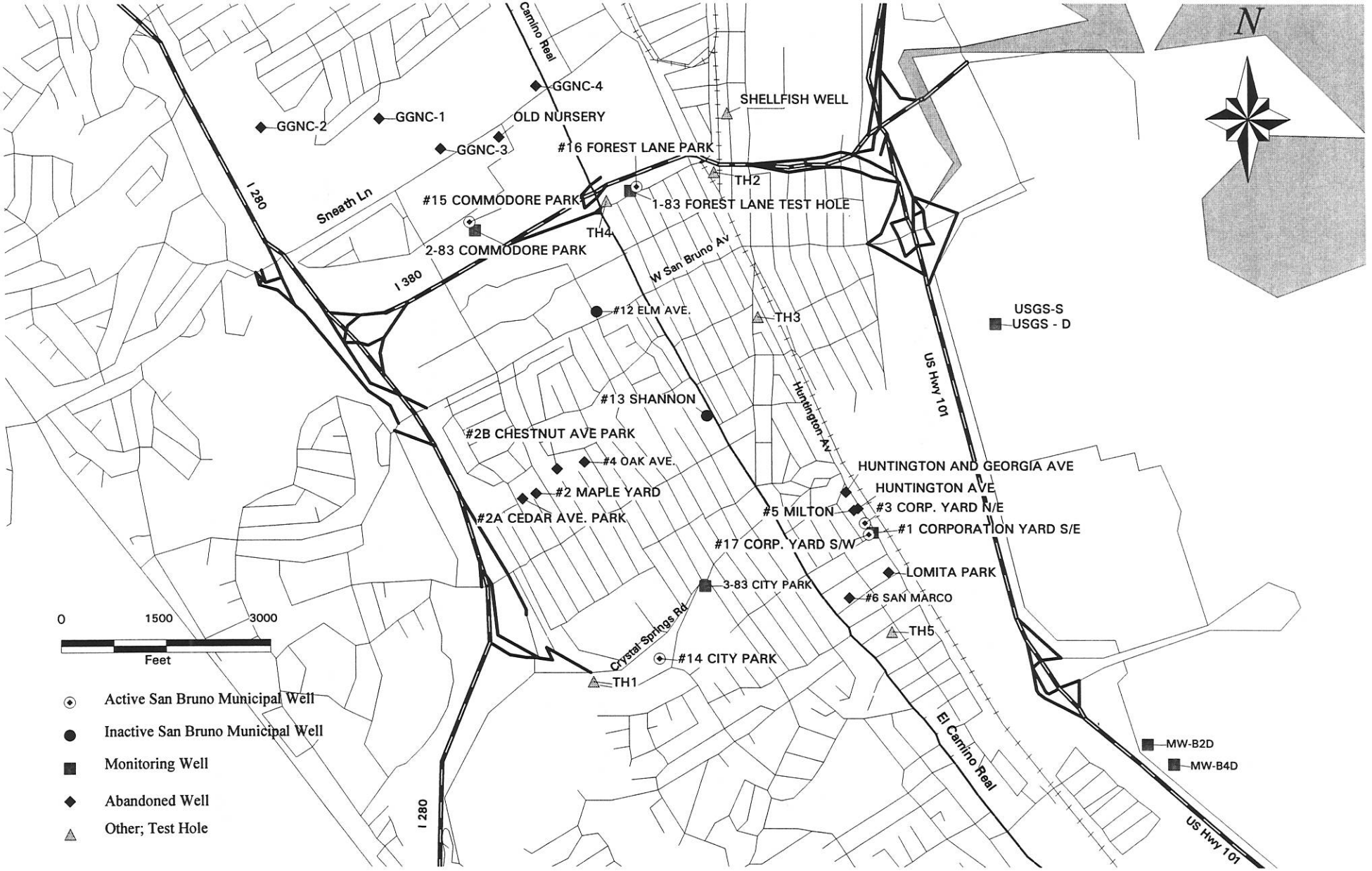


Figure 3: City of San Bruno Wellfield and Other Deep Wells
(See Appendix 6 and 7 for data on wells)

1.3a Degree of Confinement

WHPA delineation depends strongly on the degree of confinement of the source aquifer. Several approaches can be used to determine degree of confinement. In this study, the following methods were used: (1) geologic mapping and cross-section analysis of the subsurface geology of the area, (2) hydrologic information such as water-level elevation in wells, and (3) the hydrochemical technique of tritium analysis.

Geologic Cross-Sections and Water-Level Data

As can be seen in the geologic cross-sections (Figures 4 to 9), a significant clay to silty-clay lens separates the upper sand, gravel and clay unit from the lower water-bearing sands of the Merced Formation. This clay layer is approximately 100 to 150 ft thick and likely acts as a barrier to vertical migration of groundwater from the shallow unconfined aquifer and perched zones above it. Screened intervals of the San Bruno wells along with recent and averaged water-level data are also indicated on the cross-sections.

Unfortunately, San Bruno Water Department has never implemented a program to measure static water levels. The water level data provided is a measurement of active water levels, taken from nearby monitoring wells while the production wells were in use. The static water level for each well is thus not known, however, the active pumping water level data still provides valuable information as to the approximate thickness and occurrence of the deep aquifer. Water levels are generally about 200 feet below the surface and in most cases rise above the deep perforated intervals to a height within the clayey confining layer. These observations

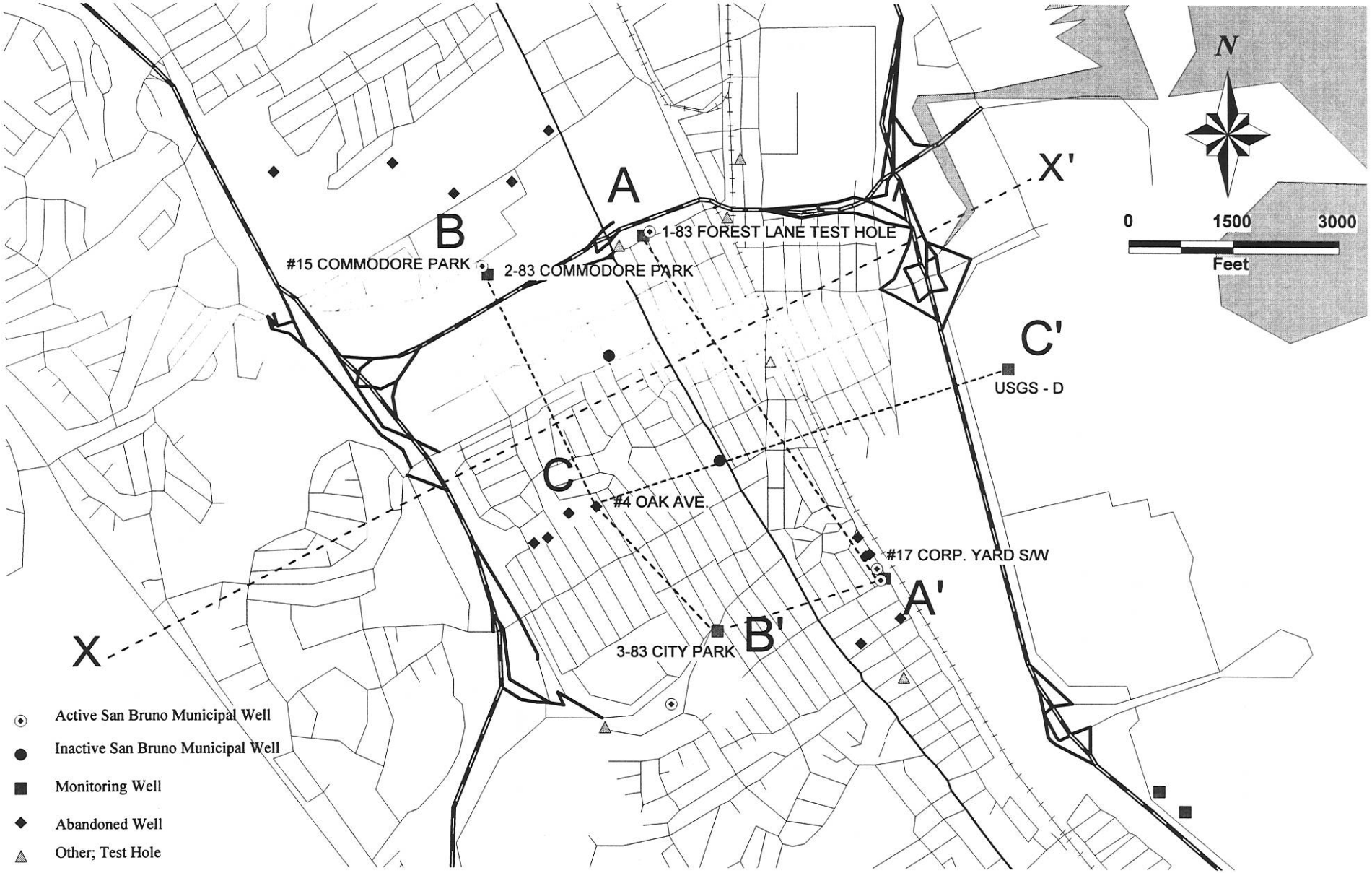


Figure 4: Location of Cross-Sections

Figure 5

LEGEND TO CROSS-SECTIONS

Top of Perforated Interval, Depth (ft) Below Surface

Average Water Table, Depth (ft) Below Surface

Screened Interval

LITHOLOGY

Clay

Coarse Sand

Silty Clay/Sandy Clay

Clayey Sand

Clayey Silt

Fine Gravel

Sand

Sand & Gravel

Fine Sand

Fill, Soil, Asphalt

Franciscan

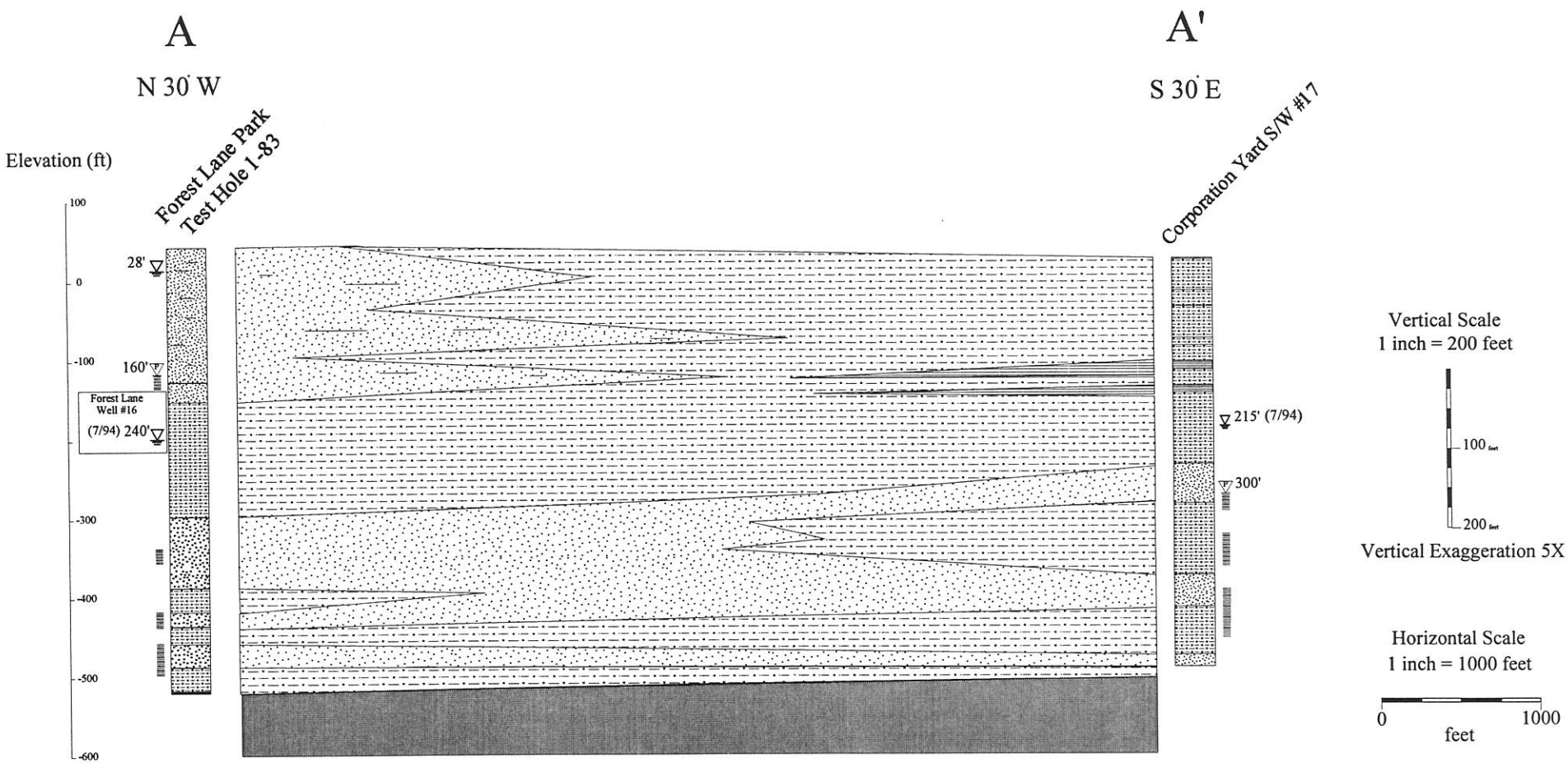


Figure 6: Cross-Section A-A'

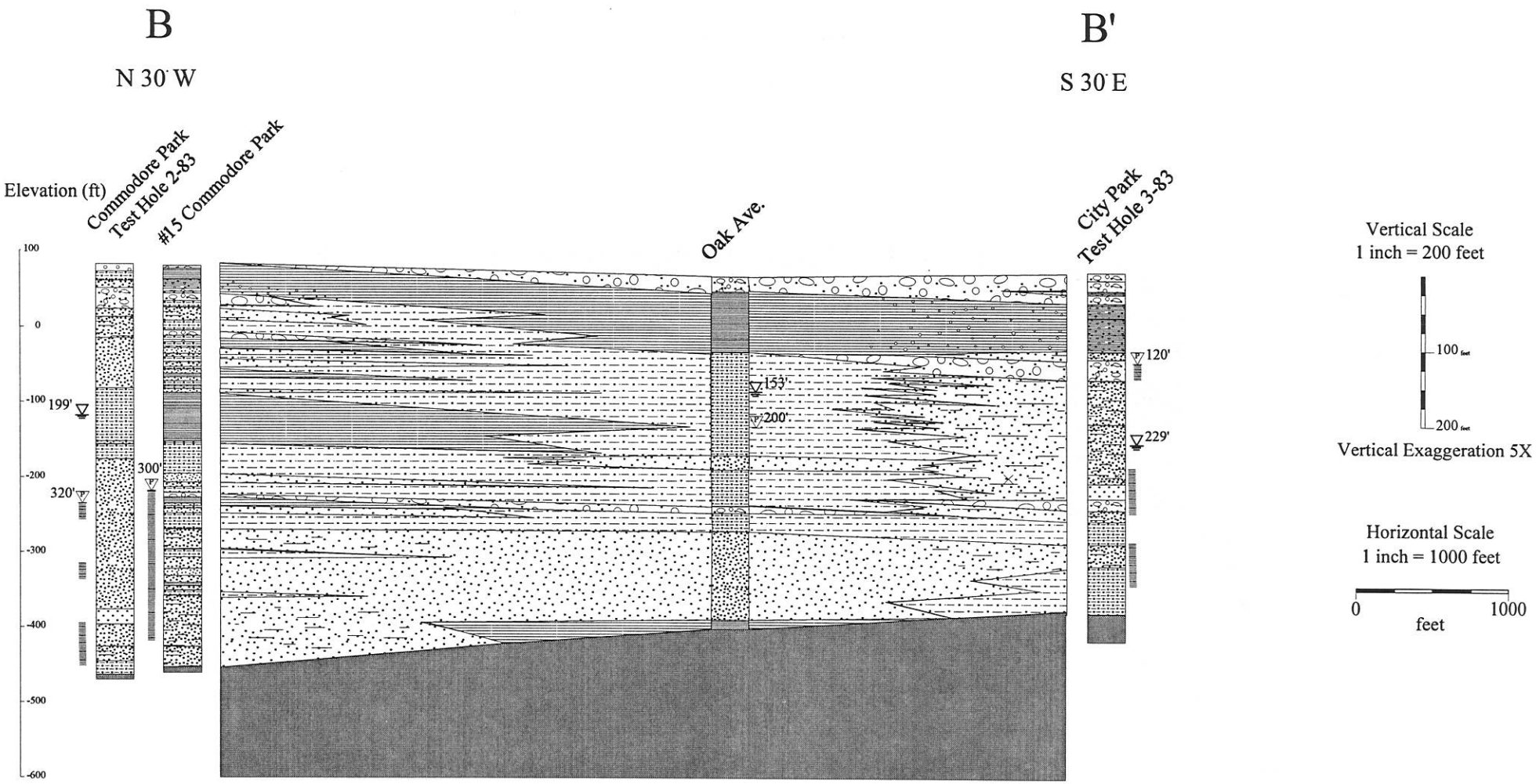


Figure 7: Cross-Section B-B'

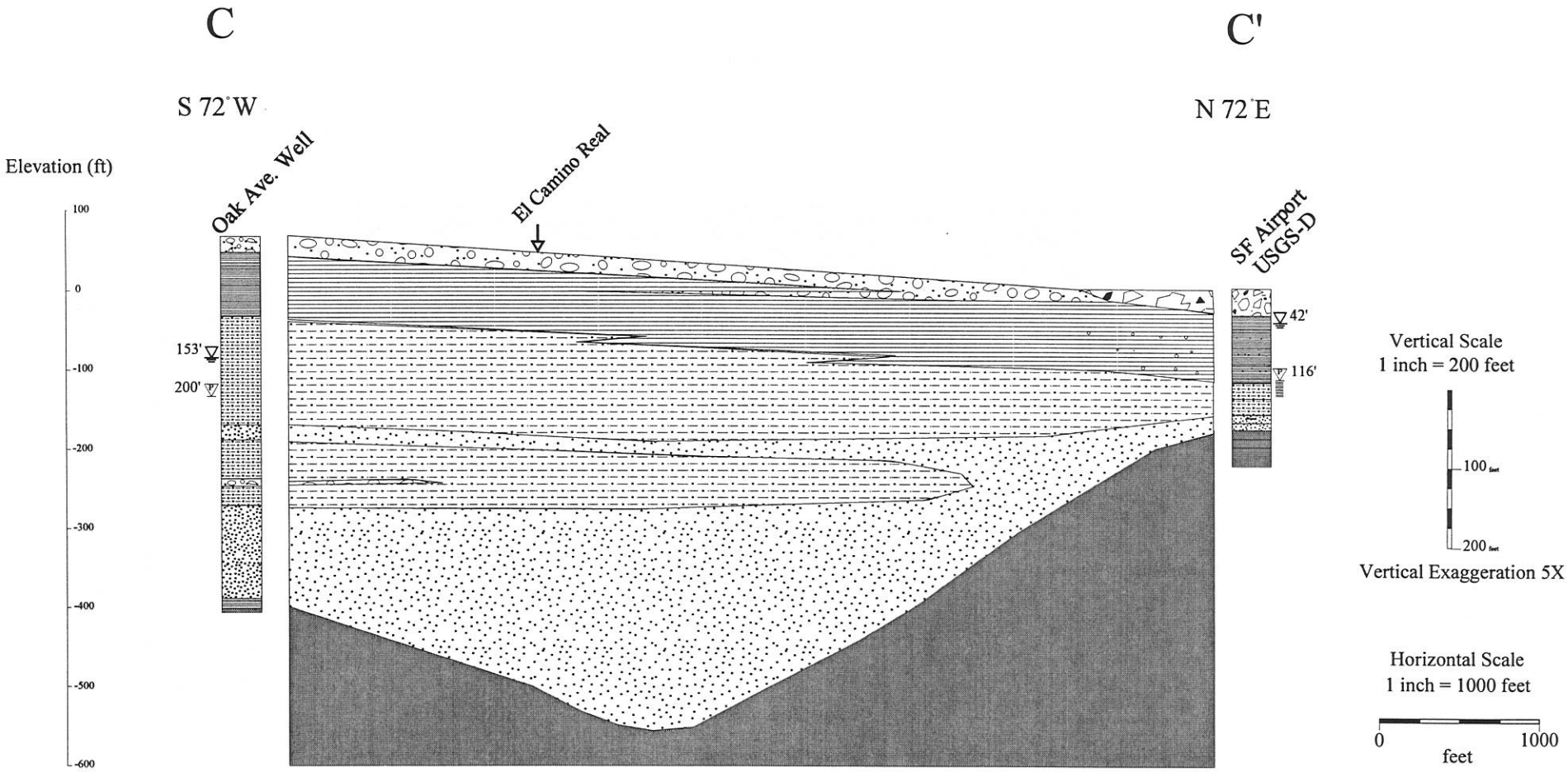


Figure 8: Cross-Section C-C'

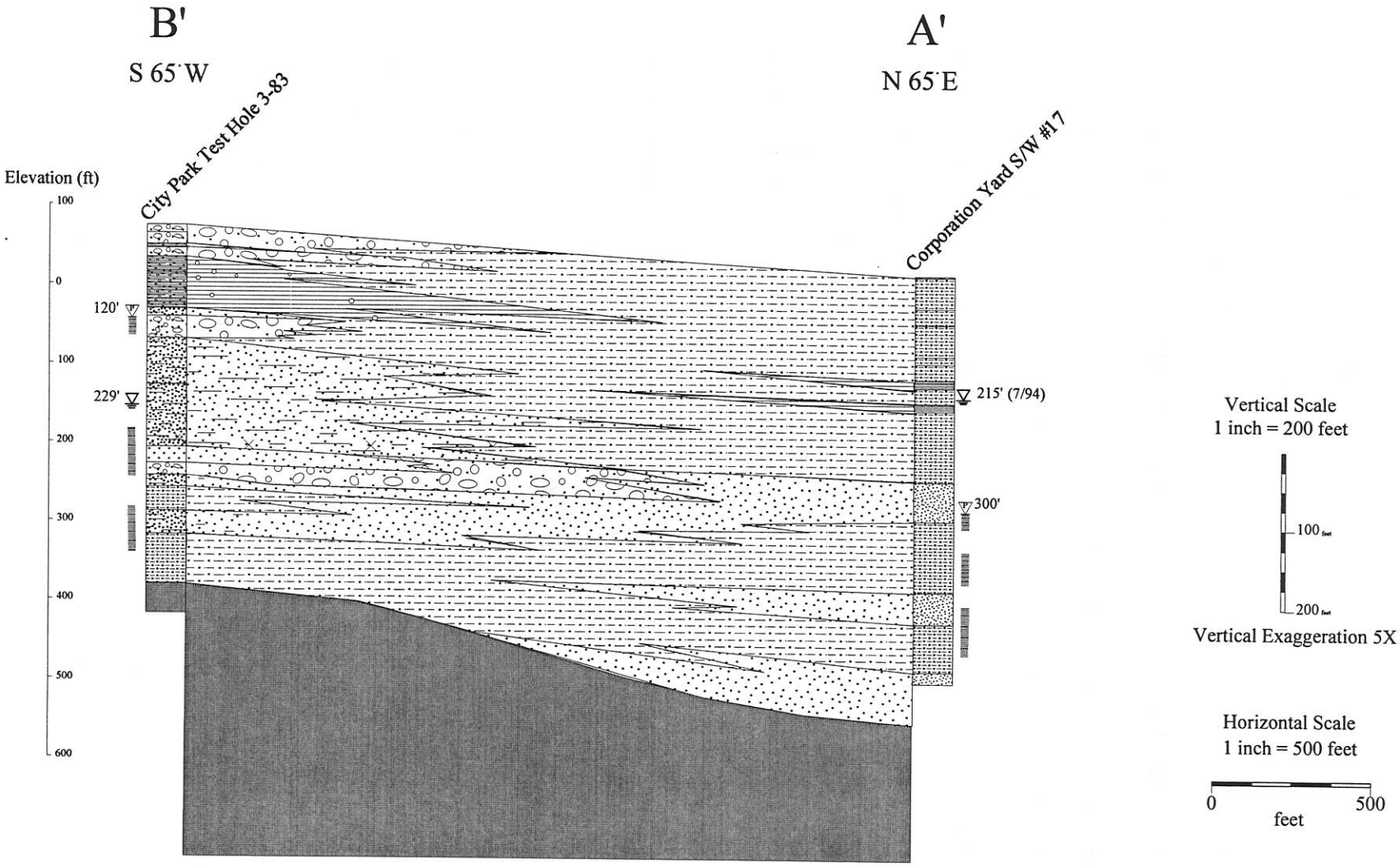


Figure 9: Cross-Section B'-A'

indicate that this aquifer is most likely under a significant amount of confinement and hydraulic head which causes the water to be forced up to a higher level in the wells than it would otherwise rise if the clay cap had not been penetrated by the well casing.

The water level data at the Forest Lane Park Test Hole (Figure 6) reveals a zone of perched water approximately 28 feet below the surface. The perforated interval for this well is much higher than the pumping well adjacent to it (Forest Lane Well #16, log not shown), and in fact the perforations in the test hole occur above the confining clay zone, indicating that this is a perched water table measurement. Although there is no record of the perforated interval of the pumping well at Forest Lane Park, water-level data from this well indicates that the depth to water while pumping averages around 240', revealing that unlike the neighboring test hole, perforated intervals for this well are probably beneath the clayey confining zone. The perched zone of the Forest Lane Park Test Hole is representative of most shallow wells in the San Bruno area. According to records at the San Mateo County Environmental Health Services Division, most shallow wells (< 50 feet) in San Bruno that are used for environmental monitoring have water levels ranging from approximately 10 to 30 feet below the surface.

These observations of varying water levels support the interpretation that two aquifers exist in the area: a deep aquifer that is the source of drinking water and a shallow unconfined aquifer with the probability of several perched zones.

Tritium Analysis

Large quantities of tritium, the radioactive isotope of hydrogen, have been added to the atmosphere in approximately the last 40 years. Tritium has been recharged through precipitation

to groundwater at concentrations above natural levels on a global basis as a result of atmospheric tests of nuclear weapons from 1952 to the early 1960's (Michel, 1990). The presence of tritium in concentrations above present-day freshwater concentrations of five to ten tritium units (T.U.'s) (Phillips, Hamlin and Yates, 1993), indicates that the aquifer has been recharged within the last approximately 40 years. An aquifer that has been recharged that recently may be susceptible to contamination by sources of pollutants in the recharge areas of the aquifer. Low levels of tritium (less than 5 T.U.'s) in an aquifer may indicate the presence of confining strata that protect the aquifer from inflow of surface pollutants, or a longer than 40 year travel time from the recharge zone to the point of discharge.

Only one tritium analysis had been done in the San Bruno area prior to this report. This analysis was reported by Phillips, Hamlin and Yates (1993) of the U.S. Geological Survey, as part of a larger groundwater study of the San Francisco area. The analysis of water from the deep well showed a tritium level of only 0.1 T.U., indicating that this water had not been in contact with the atmosphere for at least forty years, whereas the shallow well showed modern concentrations of 5.9 T.U.'s. The deep well (USGS-D) is located near the San Francisco airport and is screened at an interval below the clayey confining layer, as are most of the San Bruno pumping wells. Cross Section C-C' (Figure 8) shows the correlation of units from the USGS-D well to the Oak Avenue well in San Bruno. It appears that the water being drawn from USGS-D well comes from the same deep aquifer beneath the City of San Bruno. To confirm this interpretation, a tritium analysis was done on water being drawn from three active San Bruno pumping wells that are screened below the confining clay layer. The results are listed in Table 1. The tritium data indicates that the water in the San Bruno area deep aquifer; (1) has not been in

Table 1

Tritium Concentrations for Selected Wells in San Bruno and South San Francisco

Well Name	Date Sampled	*Tritium (T.U.)
San Bruno #17 Corp. Yard	10/11/94	**0.82**
San Bruno #14 City Park	10/11/94	**0.88**
San Bruno #15 Commodore Park	10/11/94	**1.03**
Cal. Water (SSF) #1-20	10/12/94	**0.61**
Cal. Water (SSF) #1-21	10/12/94	**0.60**
Cal. Water (SSF) #1-18	10/12/94	**2.34**
Cal. Water (SSF) #1-17	10/12/94	**0.85**
Cal. Water (SSF) #1-14	10/12/94	**0.93**
Cal. Water (SSF) #1-19	10/12/94	**0.92**
**San Francisco Airport USGS-D	4/2/90	**0.1**
**San Francisco Airport USGS-S	4/2/90	**5.9**
**Lake Merced at the boathouse	8/31/89	**7.3**

*Tritium units as reported here are average values based on triplicate or duplicate samples

**Phillips, Hamlin and Yates, 1993; Tritium analyses provided by Bob Michel, U.S. Geological Survey

Tritium analysis provided by Dr. Steven A. Kreek and Dr. Howard L. Hall, Lawrence Livermore National Laboratory, Nuclear Chemistry Division.

contact with the atmosphere in the last 40 years, (2) is likely being drawn from the same source as the deep aquifer beneath the airport, and (3) is protected from surface infiltration by a confining layer.

Saltwater Intrusion

The lack of saltwater intrusion into San Bruno's drinking water aquifer is further evidence supporting the confined aquifer interpretation. Chloride is the major anion of seawater and it moves through an aquifer at nearly the same rate as the intruding water (Hem, 1992, p.205). In an area where no other source of chloride contamination exists, chloride concentrations in groundwater can be used to indicate the existence or lack of seawater intrusion. Chloride concentrations for the two U.S.G.S. airport wells and for several San Bruno drinking water wells are listed in Table 2. Chloride concentrations in deep wells that are perforated beneath the clay zone (San Bruno drinking water wells and U.S.G.S.-D) have relatively low chloride concentrations compared to that of seawater or to that of shallow wells near the Bay, indicating that chloride-rich Bay water has not yet penetrated the protective clay lens. Phillips, Hamlin and Yates (1993) reported a downward trend in the water levels of the 141' deep U.S.G.S.-D well at the San Francisco Airport (Figure 10). They reported that the downward hydraulic gradient observed at the Airport probably results from pumping near San Bruno and that this large downward gradient increases the possibility of saltwater contamination in the deep aquifer from the overlying brackish water (Phillips and others, 1993, p. 9). Trends in chloride concentration over time in this U.S.G.S.-D well will be helpful in tracking brackish water intrusion into the San Bruno drinking water aquifer.

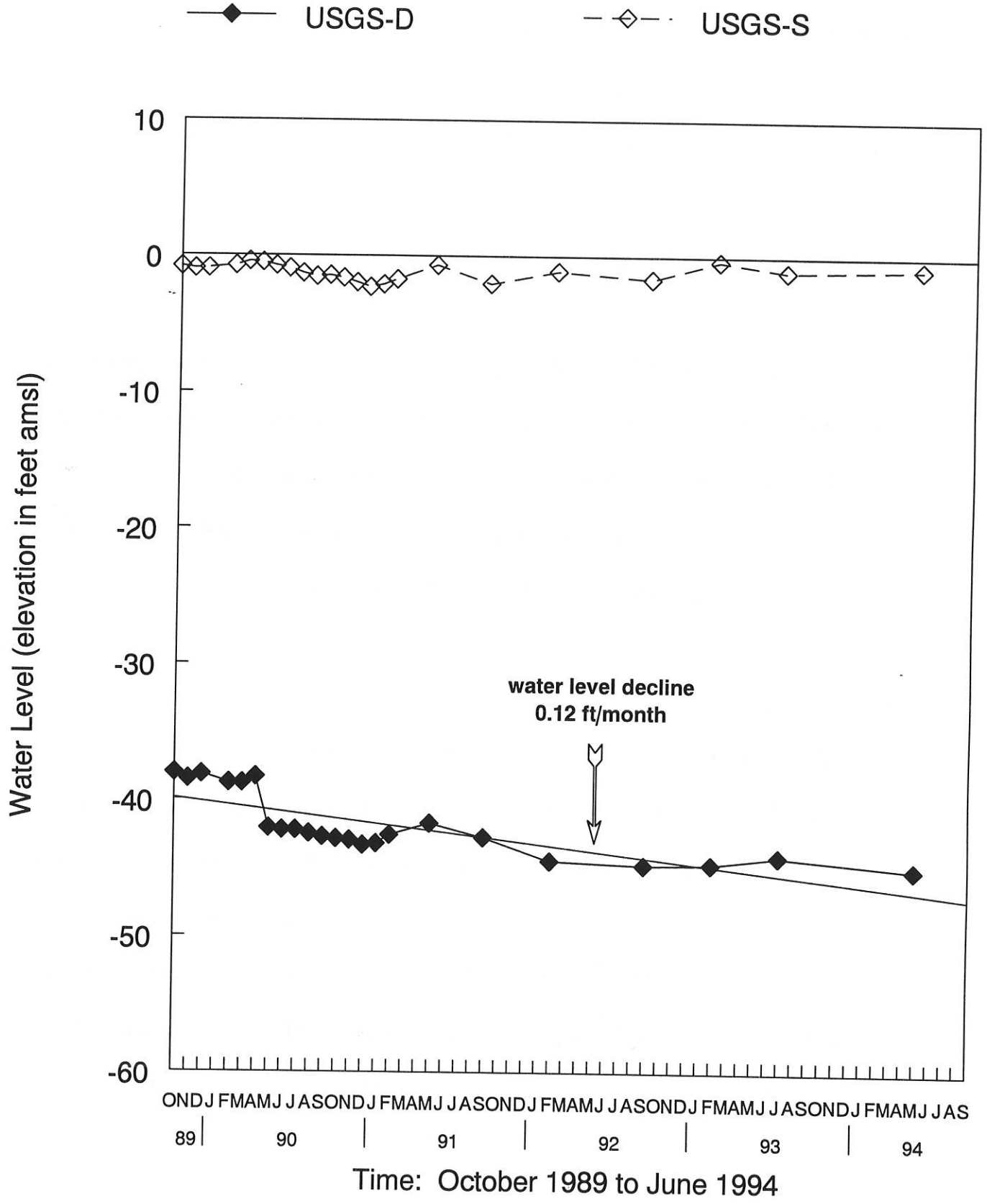
Table 2

Chloride Concentrations at Selected San Bruno Area Wells

Well Name	Depth (feet below surface)	Top of Perforated Interval (feet below surface)	Chloride (mg/L)	Date Measured
#1 Corporation Yard	200	unknown	67	10/15/90
#12 Elm Ave.	478	150	107	5/2/91
#13 Shannon	500	155	98	5/1/89
#14 City Park	442	103	89	7/7/92
#15 Commodore Park	534	300	87	7/1/91
#16 Forest Lane	515	unknown	111	7/7/92
S.F. Airport U.S.G.S. - D	141	112	130	12/7/89
S.F. Airport U.S.G.S. - S	35	16	3,100	12/7/89
Seawater (Hem, 1992, p. 7)	n/a	n/a	19,000	n/a

Figure 10

Water Levels for USGS S.F. Airport Wells



Source: Modified from Phillips, Hamlin, and Yates, 1993, p. 9.

Geologic mapping of subsurface lithology, water-level data, tritium concentrations and chloride concentrations, all indicate that the drinking water aquifer used to supply San Bruno is confined. The most likely sites for contamination are thus artificial penetrations of the protective clay lens, such as abandoned deep wells, that can act as potential conduits for contamination, and areas at the surface where rainfall and runoff recharge the deep aquifer.

1.4 Wellhead Protection Areas

It is important to establish wellhead protection areas that accurately reflect the potential sites of inflow to the source aquifer. In the case of San Bruno, the most likely pathways for contamination are (1) the recharge areas in the upland hills to the west and northeast, (2) the improperly abandoned deep wells that penetrate the protective clay lens and enter the source aquifer, and (3) zones of contribution around the pumping wells.

1.4a Recharge Areas

Recharge areas to the source aquifer are indicated in Figure 11, where the Merced Formation is exposed on the hills to the west of San Bruno. A generalized cross section of the San Bruno area (Figure 12) shows how the porous sands of the Merced Formation take in the rainwater that will eventually percolate into the source aquifer. The fractures within the Franciscan Assemblage along the Serra Fault likely act as conduits for the percolating water to reach the part of the Merced Formation that extends beneath San Bruno. The clay lens, thickest in the lowland areas around San Bruno, eventually thins towards the hills to the west, allowing

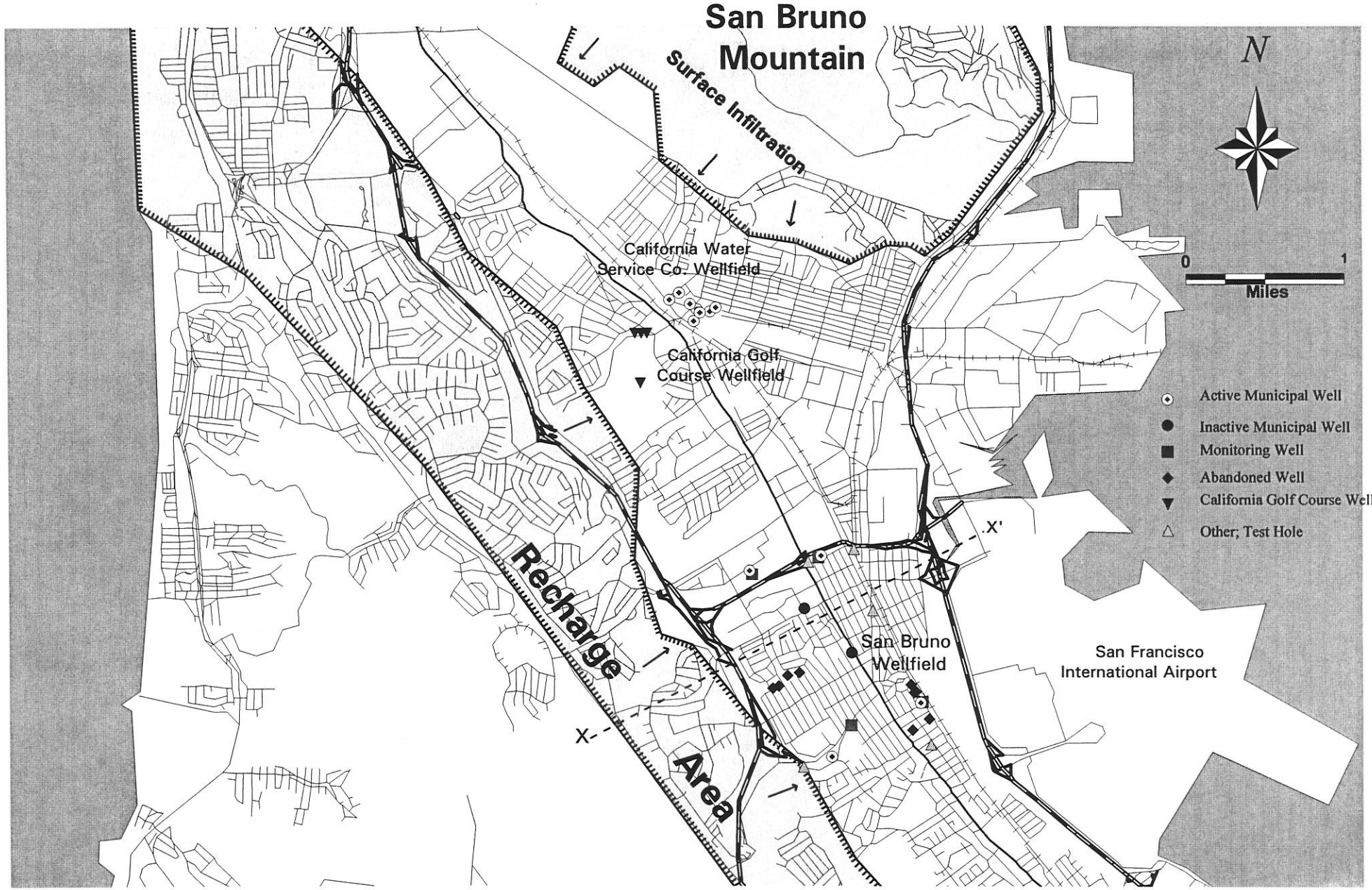


Figure 11: Recharge Area

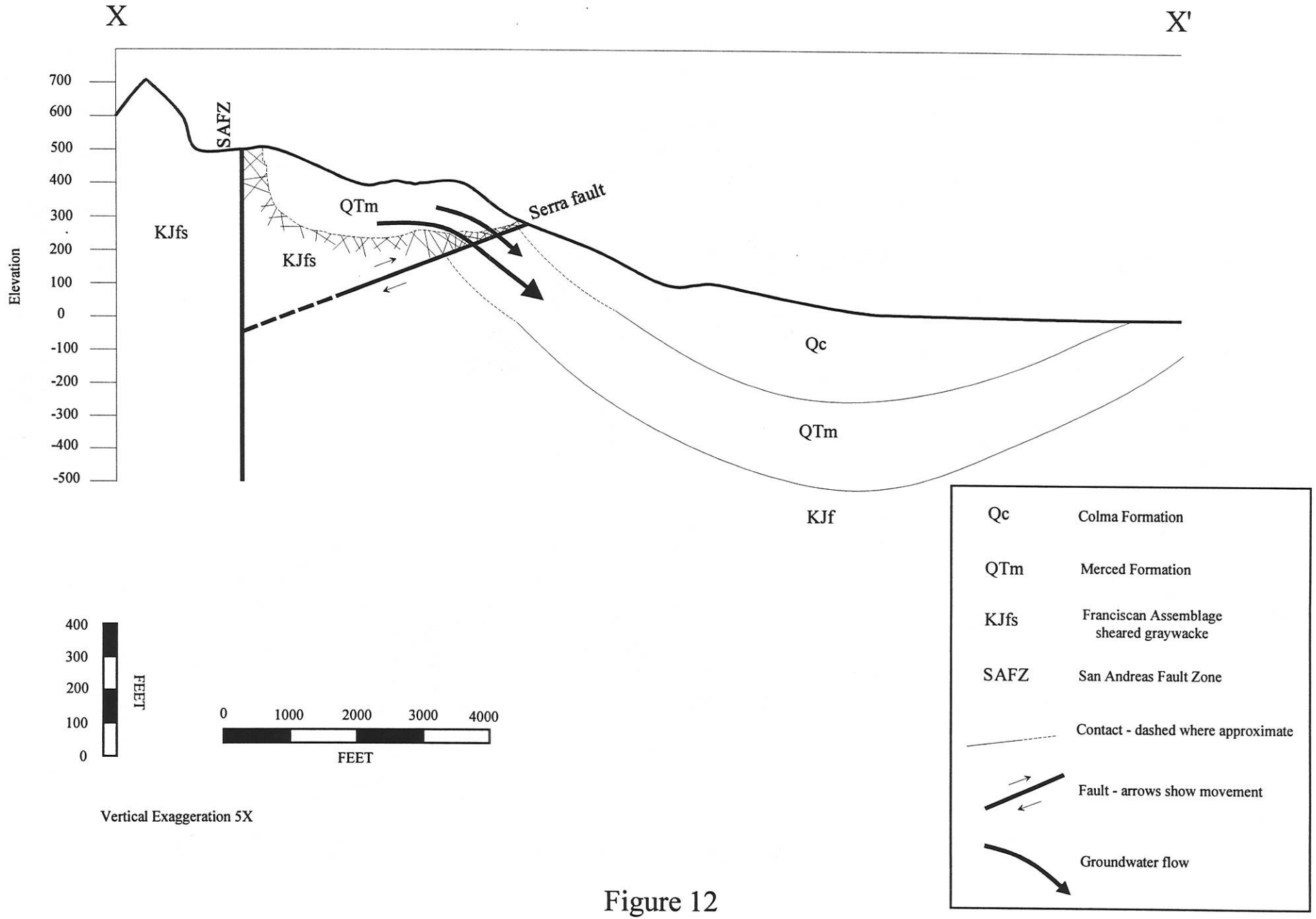


Figure 12
Cross Section Showing Recharge to Source Aquifer From the West

For location of Cross-Section X-X'
se re 4

aquifer recharge to occur. The geologic logs of City Park Test Hole 3-83 and Corporation Yard S/W #17 show this trend from clays and silty clays near the Corporation Yard to the more sandy layers near City Park (Figure 9).

Another possible source of recharge is the area around the base of San Bruno Mountain where the relatively impermeable rock of the Franciscan Group comes into contact with the more permeable sands and gravels of the Colma Formation. Most rainfall runoff cannot penetrate the Franciscan Group rocks and the water flows down the mountain until it encounters the permeable sands of the Colma Formation where it then percolates into the ground and recharges the larger groundwater system. It is unclear at this time whether or not the clay lens that protects the source aquifer in San Bruno is continuous with the deeper clay lens that appears beneath South San Francisco near the recharge zone at the base of San Bruno Mountain. This discontinuity may allow that percolating rainwater to recharge the San Bruno source aquifer. A likely possibility, however, is that the California Water Service Company wells in South San Francisco take up much of that recharge into their own active pumping wells, thus the water may never reach the down gradient San Bruno pumping wells.

1.4b Abandoned Wells

In the San Bruno area, the most likely pathways for contamination to enter the source aquifer are improperly abandoned deep wells that penetrate the protective clay layer and reach the source aquifer. Twelve abandoned deep wells have been located in the City of San Bruno (Figure 3). No record exists of the fate of those wells. It is likely that these old wells were not

sealed properly and thus they may pose a threat to San Bruno's drinking water source.

1.4c Capture Zone Delineation

Capture zones were delineated using "WHPA Version 2.0: A Modular Semi-Analytical Model for the Delineation of Wellhead Protection Areas" (Environmental Protection Agency, 1991). The WHPA model delineates capture zones around pumping wells using a particle tracking method. The "particle" is viewed as an individual water molecule that moves through the aquifer coincident with the bulk movement of groundwater flow towards the pumping well. Time-related capture zones are used here and are obtained by tracing the pathlines or "streamlines" formed by a series of particles placed around the pumping well. Individual pathlines for each particle are traced using reverse tracking. Pathlines are terminated when the assigned travel time value is reached or when a boundary is encountered such as a groundwater drainage divide. The capture zone consists of the entire region covered by the traced pathlines.

WHPA Version 2.0 offers different computational groundwater flow models. Selection of the appropriate model or models is based on the specific groundwater parameters associated with a site. The capabilities of each model are summarized in Table 3. There are two major assumptions common to all of the computational modules: 1) flow in the aquifer is at steady-state, and 2) flow in the aquifer is horizontal (two-dimensional in areal view). The first assumption implies that the aquifer is under equilibrium and that temporal variations in sources and sinks (such as recharge and pumping rate) are not considered. The WHPA model is therefore most applicable to continuously pumping water wells such as those operated by San

Table 3

Description of WHPA Model Computational Modules

Module Name	Description
RESSQC	Delineates time-related capture zones around pumping wells, or contaminant fronts around injection wells, for multiple pumping and injection wells in homogeneous aquifers of infinite areal extent with steady and uniform ambient groundwater flow. Well interference effects are accounted for.
MWCAP	Delineates steady-state, time-related or hybrid capture zones for pumping wells in homogeneous aquifers with steady and uniform ambient groundwater flow. The aquifer may be infinite in areal extent or the effects of nearby stream or barrier boundaries can be assessed. If multiple wells are examined, the effects of well interference are ignored.
GPTRAC	Semi-analytical Option: Delineates time-related capture zones for pumping wells in homogeneous aquifers with steady and uniform ambient groundwater flow. The aquifer may be of infinite areal extent, or it may be bounded by one or two (parallel) stream and/or barrier boundaries. The aquifer may be confined, leaky confined or unconfined with areal recharge. Effects of well interference are accounted for. Numerical Option: Delineates time-related capture zones about pumping wells for steady groundwater flow fields. Since this option performs particle tracking using a head field obtained from a numerical (finite difference or finite element) groundwater flow code, many types of boundary conditions as well as aquifer heterogeneities and anisotropies may be accounted for.
MONTEC	Performs uncertainty analysis for time-related capture zones for a single pumping well in homogeneous aquifers of infinite areal extent. The aquifer may be confined or leaky confined.

Source: Environmental Protection Agency, 1991, p. 2-5.

Bruno Water Department. The second assumption implies that the aquifer is confined, or unconfined if the drawdown-to-initial saturated thickness is approximately less than 0.1. None of the modules simulate vertical flow of water within the aquifer.

Model Selection

Since the aquifer in the San Bruno area is semi-confined to confined, the only module options are RESSQC and GPTRAC because these take into account confinement. Both the RESSQC and GPTRAC modules can simulate multiple well interference, which likely occurs in the City of San Bruno, especially at the Corporation Yard where Well #3 and Well #17 are in close proximity. This situation likely exists to a lesser extent between the Commodore Park Well #15 and Forest Lane Well #16. The major differences between GPTRAC and RESSQC relevant to conditions in San Bruno are that GPTRAC considers confining layer hydraulic conductivity and confining layer thickness, whereas RESSQC does not. GPTRAC thus represents the most relevant model to use for the San Bruno pumping wells.

Input Parameters

The input parameters specific to the five active San Bruno pumping wells are listed in Table 4.

The *X-Y coordinate* axis is arbitrarily placed on a San Bruno area map. Each well receives a unique set or coordinates designated to scale, in this case, feet. *Discharge rate* values were provided by San Bruno Water Department, reflecting 1994 rates of pumpage. *Well radius* values were obtained from well data sheets, where available.

Table 4

GPTRAC Input Parameters

Well Name:	#3 Corp. Yard N/E	#14 City Park	#15 Commodore Park	#16 Forest Lane	#17 Corp. Yard S/W	Average Values for non well-specific parameters
Coordinate (x,y) (ft)	9742.5, 4326.2	6812.92, 2214.2	3900.4, 8635.38	6523.4, 9027.1	9793.6, 4138.8	
[1]Discharge Rate (ft^3/day)	55426.8	23094.5	94879.9	90453.5	52732.5	
[2]Well Radius (ft)	0.58	0.58	0.58	0.58	0.58	
[3]Transmissivity (ft^2/day)	668 and 1762	668 and 1762	668 and 1762	668 and 1762	668 and 1762	
[4]Aquifer Thickness (ft)	180	161	255	230	180	201
[5]Aquifer Porosity	0.43	0.41	0.41	0.41	0.43	0.42
Hydraulic Gradient	0.0378 and none	0.0378 and none	0.0378 and none	0.0378 and none	0.0378 and none	
Angle of Ambient Flow	285 and none	285 and none	285 and none	285 and none	285 and none	
[6]Hydraulic Conductivity of Confining Layer (ft/day)	0.03	0.03	0.03	0.03	0.03	
[7]Confining Layer Thickness (ft)	260	169	107	145	260	
Travel Time (days)	3650	3650	3650	3650	3650	

[1]City of San Bruno, 1994, Well History Log Report.

[2]State of California, 1982, Department of Public Health Well Data Sheet for "Huntington #3", collected by Catherine Ling

Well radius values for wells #14 - #17 are not documented, however, the majority of state documented wells for the City of San Bruno indicate a well radius of 0.58 ft, therefore a value of 0.58 for the four wells indicated is assumed.

[3]Boone, Cooke & Associates, 1987, Report to the Veterans Administration on Irrigation Water at the Golden Gate National Cemetary, p. 16.

[4]Aquifer thickness values are based on interpretation of both electric logs and geologic logs provided by the State of California Department of Water Resources and William C. Ellis, Consulting Geologist.

[5]Kirker, Chapman & Associates in conjunction with David K. Todd, 1972, Daly City Groundwater Investigation, p. 30.

[6]Geo/Resource Consultants, Inc., 1993, Lake Merced Water Resource Planning Study for the San Francisco Water Department, p. 48.

[7]Confining bed thickness values are based on interpretation of both electric logs and geologic logs provided by the State of California Department of Water Resources and William C. Ellis, Consulting Geologist.

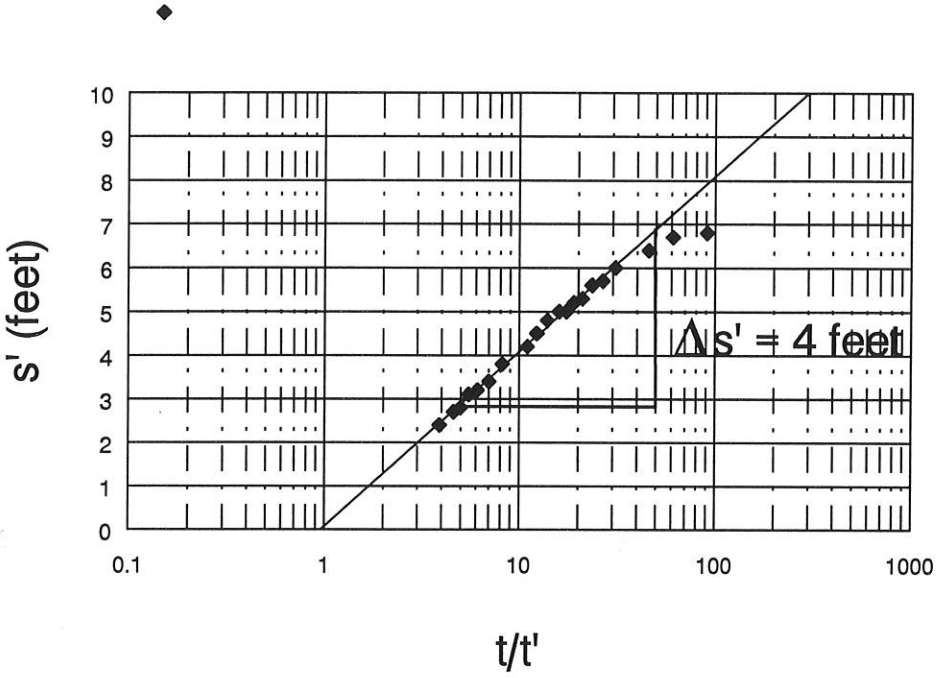
Two *transmissivity* values are available; 668 ft^2/day and 1762 ft^2/day. The first value of 668 ft^2/day was obtained from a pump test conducted by Boone, Cook and Associates for Golden Gate National Cemetery Well #1 on January 8, 1987. The second value of 1762 ft^2/day was calculated based on data from a recovery test completed on July 19, 1991 by Layne-Western Company, Inc., for San Bruno Water Department #14 City Park well (Figure 13). The lower transmissivity value obtained for the Golden Gate National Cemetery Well #1 is likely the result of the higher clay content of the sediments there versus the more sandy sediments beneath San Bruno City Park #14.

Aquifer thickness values for each well are based on interpretations of both electric logs and geologic logs provided by well drillers' reports. The thickness of the sandy water-bearing units constitute aquifer thickness, the top border being the clay lens and the bottom being the Franciscan Assemblage bedrock. For the GPTRAC analysis, the aquifer thickness value is not a well-specific parameter, therefore all values were averaged to give a basin aquifer thickness input parameter of 201 feet.

Aquifer porosity values were obtained by assigning a porosity value (Table 5) to each sediment type presented in the geologic log of each well, then weighting those values based on percent of that sediment type represented over the total aquifer thickness. As with aquifer thickness, aquifer porosity is not a well-specific parameter in the GPTRAC module. An average value of 0.42 was used to represent the average porosity of the aquifer.

Hydraulic gradient and *angle of ambient flow* information was not available for the San Bruno area. To obtain an accurate hydraulic gradient value, the top of each of at least three wells needs to be surveyed to an elevation relative to mean sea level. All pumps in the area should

Figure 13
Transmissivity Calculation by Recovery Test



$$T = 2.3Q/4\pi\Delta s'$$

$$T = (2.3)(3850\ ft^3/d)/4\pi(4\ ft)$$

$$\boxed{T = 1762\ ft^2/day}$$

T = Transmissivity (ft^2/day)

Q = pumping rate (ft^3/day)

s = drawdown (feet below static water level)

s' = residual drawdown (feet of drawdown below original static level)

t = time elapsed since beginning of pump test (minutes)

t' = time elapsed since beginning of recovery test (minutes)

Table 5

Representative Values of Porosity

(after Morris and Johnson, 1967, table modified after Todd, 1980. p. 28)

Material	Porosity (%)
Gravel, coarse	28*
Gravel, medium	32*
Gravel, fine	34*
Sand, coarse	39
Sand, medium	39
Sand, fine	43
Silt	46
Clay	42
Sandstone, fine-grained	33
Sandstone, medium-grained	37
Peat	92
Siltstone	35
Claystone	43
Shale	6
Dune Sand	45

*These values are for repacked samples; all others are undisturbed.

then be turned off. Static water level measurements taken simultaneously from the three wells with known elevations can then be used to determine groundwater flow direction and gradient. Model results based on interpreted groundwater gradient are discussed in the following section.

Model Results

Results for three different model runs, based on a ten year time of travel, are displayed in Figure 14.

Two scenarios of ambient groundwater flow and two different transmissivity values result in four different capture zone delineations. Only three model runs are displayed because varying the transmissivity value between 668 ft^2/day and 1762 ft^2/day has a negligible effect on the capture zone under the no gradient condition. The more circular of the three zones represents the model results with no groundwater gradient. The more elongated zones with tighter spacing of particle tracking lines represent an angle of ambient flow towards the southwest. Two scenarios were chosen because it is unclear at this time of the exact nature of the groundwater gradient and thus flow direction in the City of San Bruno. As stated previously, San Bruno Water Department has no record of static water level data for their wells. All data collected is pumping water-level data and thus cannot be used to make an accurate assessment of the direction of flow or the severity of the gradient.

The angle of groundwater flow value of 285 degrees (0 degrees being due east and 270 degrees being due south) is based on calculations made from static water level data provided by the California Water Service wells that operate just north of San Bruno in South San Francisco

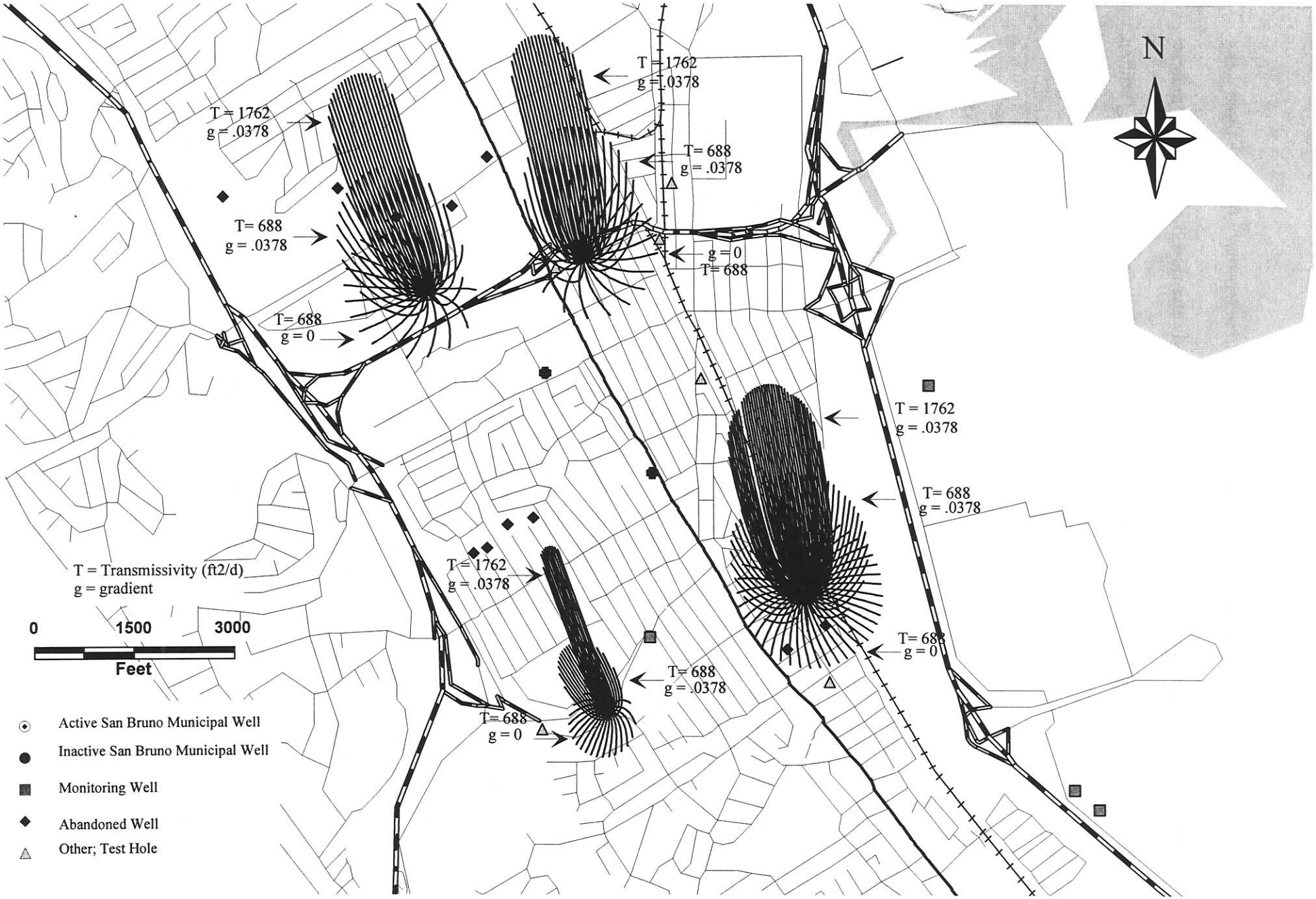


Figure 14 GPTRAC Results
10 year time of travel

(Figure 11). The general topography of the land surface and the topography of the basement rock (Figure 15) are quite similar in both the California Water Service well field in South San Francisco and the San Bruno well locations. It is therefore likely that the groundwater gradient and flow direction computed for South San Francisco corresponds to the gradient and flow direction occurring under San Bruno.

The no gradient or "bathtub" effect is supported by David Keith Todd in his 1971 report to the City of San Bruno (D.K. Todd, unpub. data, 1971). In that report Todd suggests that the natural groundwater gradient is negligible, and that gradient is controlled by the pumping at the Corporation Yard. The flow lines converge near the Corporation Yard coming from both the west-southwest and the east-northeast, reflecting the topography of the Franciscan Assemblage bedrock beneath the aquifer (Figure 16).

Because of the lack of static water level data in San Bruno, both groundwater gradients were used resulting in a more conservative larger protection area around each well that encompasses both likely scenarios.

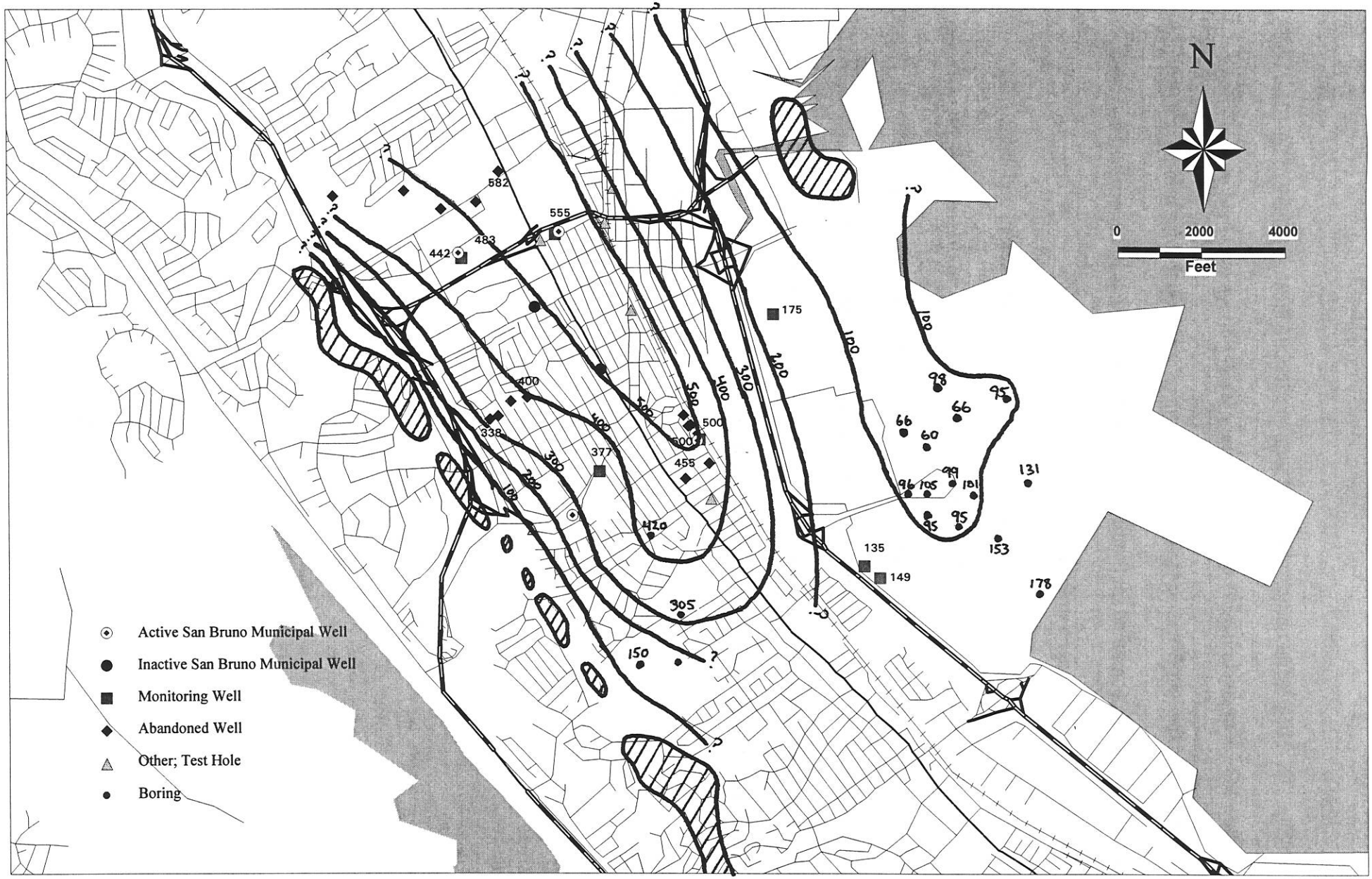
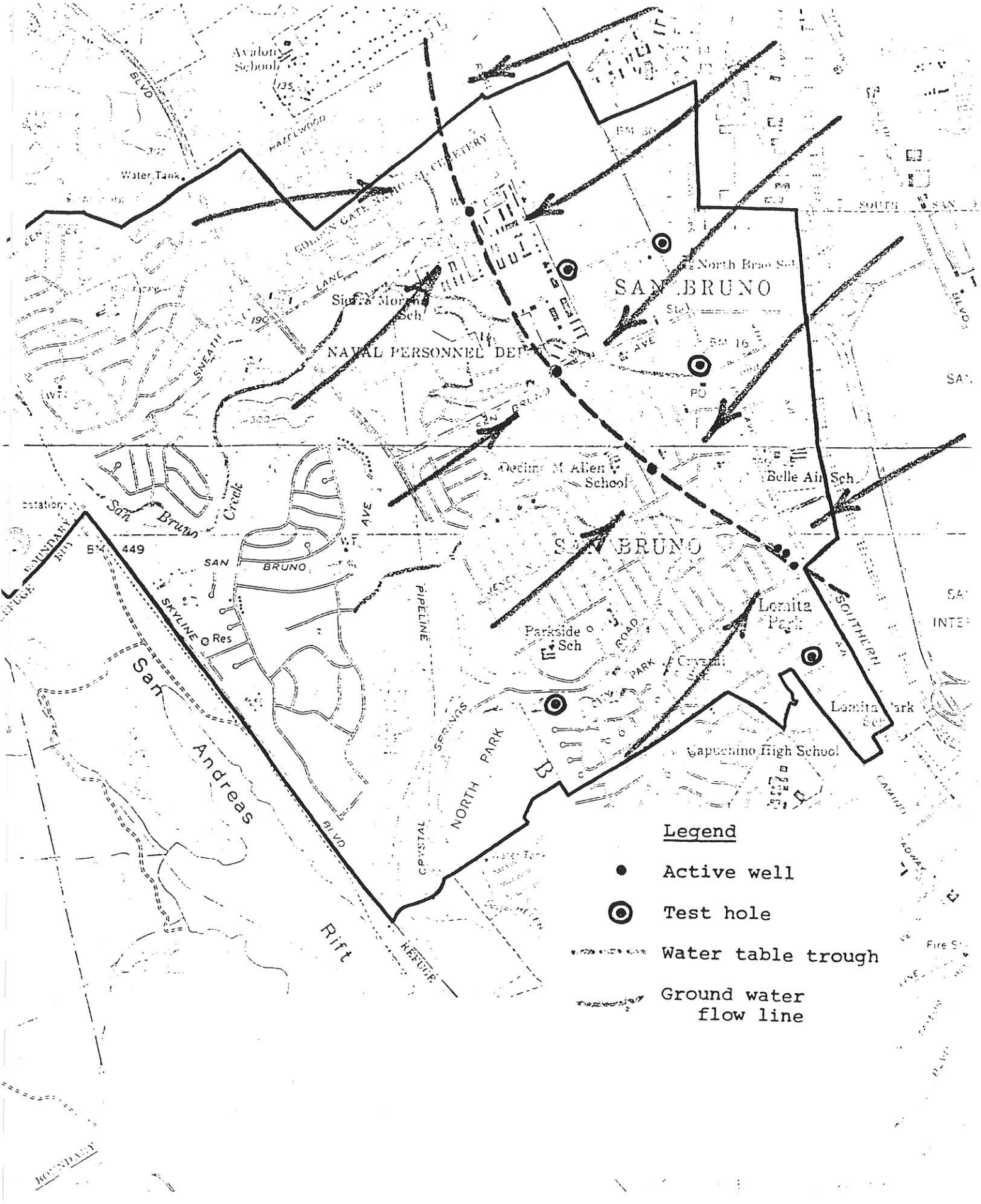


Figure 15: Depth to Franciscan Assemblage Contour Map

Figure 16
Water Table Interpretation From David Keith Todd, 1971



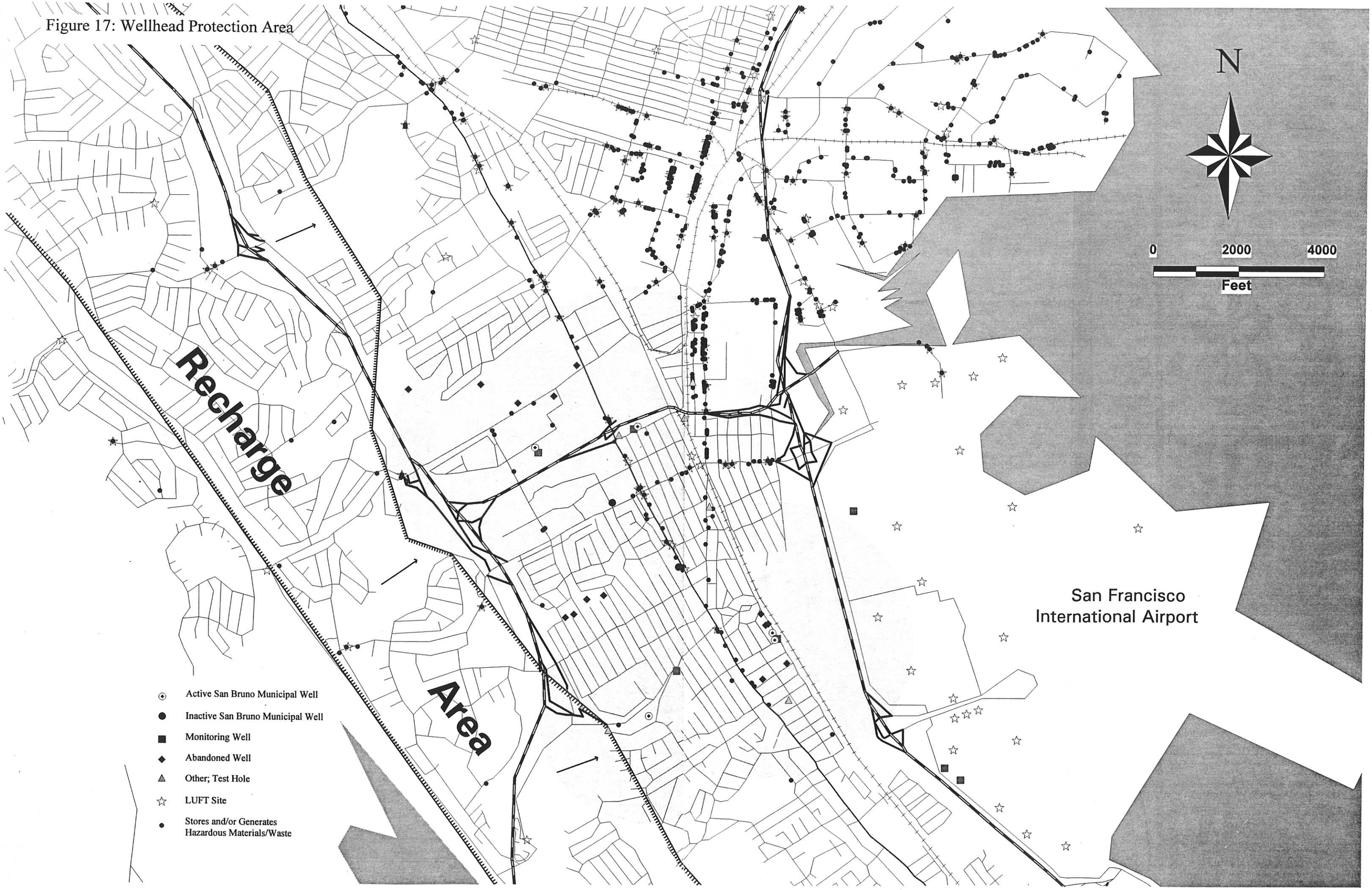
PART TWO: KNOWN AND POTENTIAL SOURCES OF CONTAMINATION

In order to understand the threat from contamination to the drinking water wells of San Bruno a search of county, state, and federally listed sites of known and potential contamination was performed. The current major threat comes from existing contamination in the surface aquifer where Leaking Underground Fuel Tanks (LUFT's) have contaminated soil and/or groundwater. Other potential threats to San Bruno's drinking water wells come from Underground Storage Tanks (UST's), hazardous material storage sites, and hazardous waste generator sites.

2.1 Wellhead Protection Area (WHPA)

The purpose of delineating a WHPA is to protect and manage the area for current and future water users. Because of the uncertain flow direction, gradient, and transmissivity values used in the capture zone delineation, a conservative WHPA is used by encompassing all three model runs and rotating the capture zones 360 degrees around the wellhead. Without a better understanding of groundwater movement in the area, this decision was made in order to protect areas around the wells which were not protected by the model. As a result, the capture zones predicted by the model coalesce into a single WHPA which covers a large part of the lowland San Bruno area. By overlaying the WHPA with the sites of potential and existing contamination, provides a way of understanding the current and potential threat to San Bruno's drinking water aquifer (Figure 17). The existing and potential contamination sites within the WHPA and

Figure 17: Wellhead Protection Area



recharge area were determined (Tables 6-9), as were wells which could act as conduits for infiltrating contamination (Table 10).

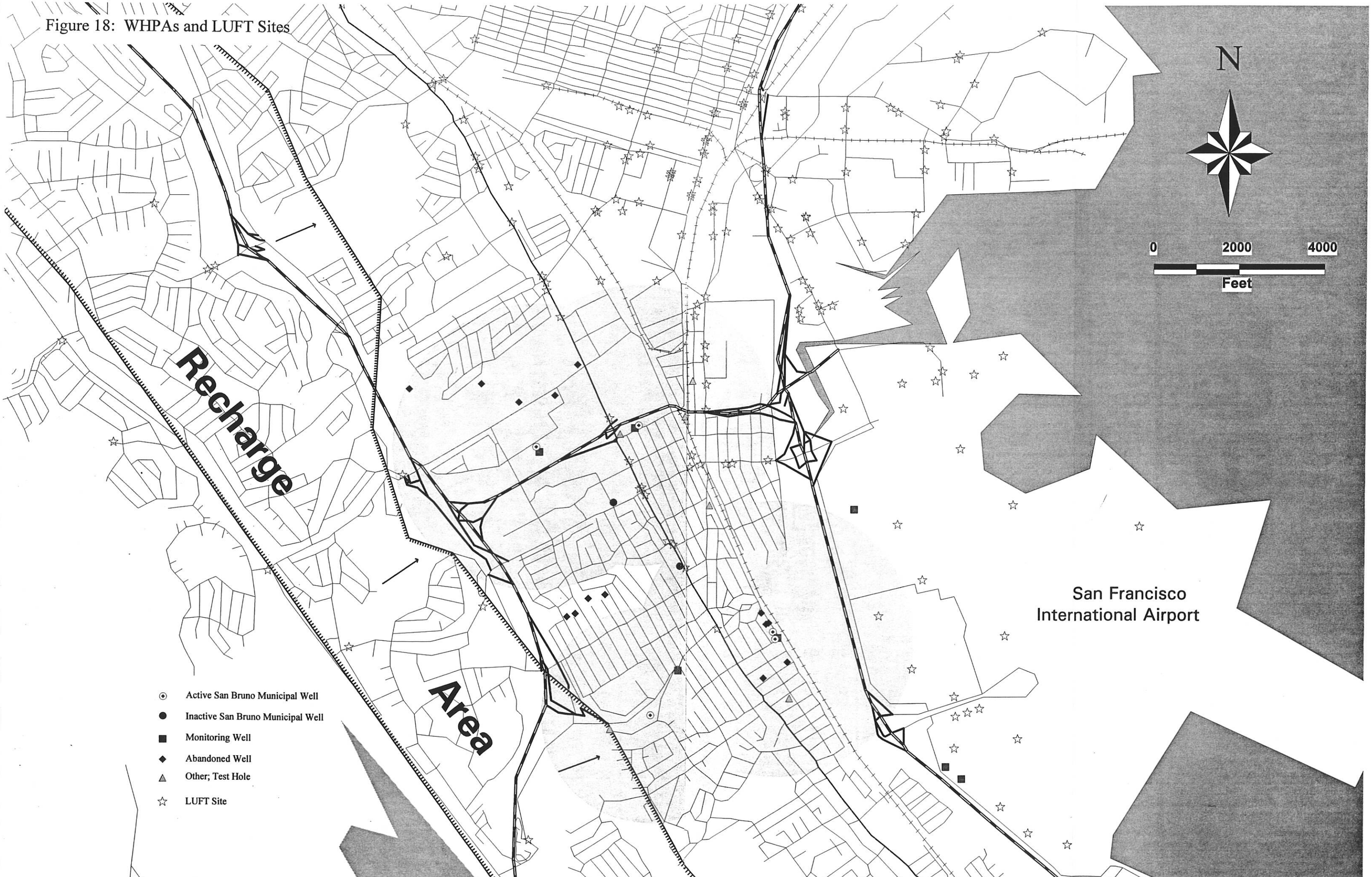
2.2 LUFT Sites

Leaking Underground Fuel Tanks (LUFT) pose the most serious threat to San Bruno's groundwater because of the confirmed existence of soil and/or groundwater contamination. San Mateo County Environmental Health Services Division (SMCEHSD) is the lead regulatory agency for LUFT sites and requires cleanup of contaminated sites before closure is given. Monitoring wells are installed to determine the extent of contamination in groundwater. Appendix 1 and Appendix 2 list LUFT sites and LUFT monitoring wells respectively. This information is useful to determine the extent of groundwater contamination especially in relation to the wellhead protection area, recharge areas, and abandoned wells. Based on San Bruno's sampling records and a review of LUFT sites, no contamination is known to exist within the drinking water aquifer of San Bruno. However, because of the confirmed existence of contamination in the surface aquifer, the risk of contamination is great. For clarity, Figure 18 shows LUFT sites in relation to the WHPA and wells in San Bruno.

2.3 UST's, SMCEHSD Hazardous Material Storage and Waste Generator Sites

SMCEHSD is also the lead regulatory agency for permitting businesses with Underground Storage Tanks (UST's) (Appendix 3) and businesses that generate and/or store hazardous materials and/or waste (Appendix 4). Most of these sites are inspected annually to insure the proper storage of hazardous materials and the proper disposal of hazardous wastes.

Figure 18: WHPAs and LUFT Sites



The potential for contamination comes from illegal and accidental releases of hazardous substances to the soil and groundwater.

2.4 Federal and State HAZMAT Sites (Appendix 5)

CALSITES Database

The CALSITES database was developed by the California EPA Toxic Substance Control Program which maintains a listing of potential and known hazardous waste sites. California EPA staff have interviewed officials from county health departments, local fire departments, county agricultural commissioners, and other local agencies that could reasonably be expected to have information regarding potential waste sites. The Regional Water Quality Control Boards, Department of Fish and Game and other state agencies also review historical land use data to generate lists of potentially contaminated sites.

CERCLIS Database

The CERCLIS database was developed in 1982 by the U.S. EPA and has maintained lists of contaminated properties under the federal Superfund program pursuant to the Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA). U.S. EPA discovers these sites from citizen reports, routine inspection of hazardous waste generators, treatment, storage and disposal facilities, and reporting requirements.

2.5 Contamination Pathways

Because the deeper drinking water aquifer is relatively protected by a thick confining clay

unit, the threat is less from vertical migration of contamination induced from pumping, but rather from the infiltration of contamination into abandoned well casings that have been broken or have compromised surface seals. Most abandoned wells that penetrate the confining clay unit may not have been abandoned in accordance with state well abandonment procedures which were designed to ensure the protection of deeper aquifers. Instead, the abandoned wells may have been left to deteriorate with time. Furthermore, not all of the abandoned wells in San Bruno have been located and may never be located. Due to the purging of well data files, well owners not accurately locating wells, and lack of proper abandonment records, the magnitude of the potential for contamination is uncertain.

Aside from abandoned wells, contamination in recharge areas can greatly affect the future of San Bruno's drinking water. The recharge areas for San Bruno lie in the hills to the west where the Merced formation outcrops, and further up the valley to the north in South San Francisco where the aquifer is believed to be leaky confined or unconfined. The recharge areas are important to consider even though the tritium results indicate a protected aquifer. Long range protection of the San Bruno drinking aquifer must be considered. South San Francisco already reports instances of PCE in one of their wells which requires them to dilute this well water with other water in order to get below health standards. By not protecting the recharge areas now we are inviting problems for the future.

Table 6
Hazardous Material Storage and Generator Sites Within the WHPA

BUSINESS	ADDRESS	CODE*
1 HOUR PHOTO	1310 EL CAMINO RL B	DA01
A & R AUTOMOTIVE	1141 SAN MATEO AVENUE	DA01; DD03
A TOUCH OF CLASS AUTOMOTIVE INC	1180 SAN MATEO AVENUE	DA01; DD02
A TO Z AUTOBODY & PAINT	108 SANTA MARIA	SQG
A-1 AUTO BODY SHOP	1720 EL CAMINO REAL	DD02; DA01; SQG
ACCUFLEET	1194 CHERRY AVE	SQG
ACCUTRONIX	1073 SAN MATEO AVE	RED
ACME AUTO SERVICE	1173 SAN MATEO AVENUE	DD01; DA01
ACURA CONSTRUCTION & SHEET METAL	325 S MAPLE AVE	DD02
AIRPORT CITY AUTOBODY	1065 SAN MATEO AVE	LQG
AIRPORT CITY AUTO BODY	1041 SAN MATEO AVENUE	DA01
ALL WEST CONTAINERS CORP	30 TANFORAN	DA01; DD04
ALONZO PRINTING CO INC	1094 SAN MATEO AVE	DD03
ALS OLYMPIC STATION	170 EL CAMINO REAL	DD01
ARTICHOKE JOE'S ENTERPRISE INC	659 HUNTINGTON ANE	DD03
ARTS AUTO SERVICE	265 E SAN BRUNO AVE	DA01; DD02
AUTO COSMETICS	1051 MONTEGOMERY	DD02; DA01
AUTO WORLD	860 SAN MATEO AVE	DD02; DA01; LQG
AUTOHAUS SAN BRUNO	675 E SAN BRUNO AVENUE	DD03; DA01
B & B TRANSMISSIONS	1299 SAN MATEO AVE	DA01; DD03
B & B TRANSMISSIONS	1079 SAN MATEO AVENUE	DD02; DA01
B & D AUTO WORLD	1177 SAN MATEO AVE	SQG
BARTEL RICHARD	189 LINDEN AVE	RED
BAY AREA LIFT TRUCK SERVICE	1059 SAN MATEO AVENUE	DD03; DA01
BERMICO AUTO INC	1144 MONTGOMERY AVENUE	DA01; DD02
BGB ENTERPRISES	325 S MAPLE #28	DD02
BP OIL COMPANY 11-206	2000 ROLLINGWOOD DRIVE	DD01; DA01
BRIGETTE CLEANERS	291 EL CAMINO REAL	RED
BUD'S AUTO CLINIC	1254 MONTGOMERY STREET	DD02; DA01

*see Key to Terms and Abbreviations at the end of Appendices

BUDGET FORKLIFT	1079 MONTGOMERY AVENUE	DD02; DA01
BUG AUTOBODY & SALES	1201 SAN MATEO AVE	LQG
CALIFORNIA ETCHING CORP	1212 MONTGOMERY AVE	DA05; DD06; LQG
CARGILL INC	1000 CHERRY AVE	RED
CARGILL INC	1000 CHERRY AVE	RED
CERFIFIED AUTO BODY	1201 SAN MATEO AVENUE	DD02; DA01
CITY CYCLE SALVAGE	1266 SAN MATEO AVE	DA01
CITY BODY SHOP	828 SAN MATEO AVE	DA01; DD01; SQG
COLOR TECH AUTO BODY	1123 SAN MATEO AVE	DA01; DD02
COLORADO FUEL AND IRON CO	30 TANFORAN AVE	RED
COMMERCIAL GRINDING	1193 SAN MATEO AVE	RED
CROCKER H S CO	1000 SAN MATEO AVE	LQG
CRUZ AUTO BODY & DETAILING	108 SANTA MARIA	DA01; DD02
CYCLE SHACK INC	1100 SAN MATEO AVENUE	DA02; DD04
D & S AUTO WORKS	1157 MONTGOMERY AVE	DD02; DA01
D & J AUTO REPAIR	900 SAN MATEO AVE	DD03; DA01
DAVE'S AUTO & TRUCK	1160 SAN MATEO AVENUE	DD02; DA01
DI TANO	1264 SAN MATEO AVE	DD02
DISMANTLERS EXCHANGE	1059 SAN MATEO AVE	RED
DISMANTLERS EXCHANGE	1069 SAN MATEO AVE	RED
DREXLER'S	1247 MONTGOMERY AVE	NFA
E & R TRANSMISSIONS	271 E SAN BRUNO AVE	DD03; DA01
EFL TRANSPORTATION	50 TANFORAN	DD01
ERNIES TOUR USA	1098 SAN MATEO AVE #7	DD02;DA01
EURO DESIGN	1168 SAN MATEO AVE	DD02; DA01
EURO DESIGN BODY & PAINT	1155 SAN MATEO AVE	SQG
EUROPEAN CAR SERVICE	928 EL CAMINO REAL	DA01; DD03; SQG
EXPRESSLY PORTRAITS	1150 EL CAMINO REAL UNIT 227	SQG
EXTRA CARE AUTO REPAIR	840 SAN MATEO AVE	DA01; DD02; SQG
EXXON SERVICE STATION	310 E SAN BRUNO AVENUE	DD01
FIRESTONE TIRE & RUBBER CO	1110 EL CAMINO REAL	DD03; DA01
FIRPO'S AUTO & TRUCK REPAIR	1029 SAN MATEO AVENUE	DA01; DD02
G M AUTO BODY	482 E SAN BRUNO AVE	DA01; DD02
G M AUTO BODY	511 E SAN BRUNO AVE	SQG

*see Key to Terms and Abbreviations at the end of Appendices

GAVA'S AUTO BODY	1121 SAN MATEO AVENUE	DA01; DD02; LQG
GENE'S AUTO & PAINT	887 SAN MATEO AVENUE	DD02; DA01; SQG
GOLDEN GATE NATIONAL CEMETERY	1300 SNEATH LANE	DD03; DA01
GOLDUST SALES	1224 MONTGOMERY AVE	RED
GOODYEAR CT & SC	240 DOLLAR AVENUE	DA01; DD04
GRACE HONDA	345 EL CAMINO REAL	DD03; DA01
GRAFEN MACHINE WORKS	1245 SAN MATEO AVE	DA01; DD02
HARMS GRAPHICS	1169 MONTGOMERY AVENUE	DA02; DD03; SQG
HARRIS FORKLIFT SERVICE INC	1184 SAN MATEO AVE	DA01; DD03
HERMANNS INDEPENDENT MERCEDES & BM	1014 MONTGOMERY AVE	DD01;DA01
HIDALGO'S AUTO BODY WORKS	916 SAN MATEO AVE	DD02; DA01
HIGH PERFORMANCE ENGINEERING	1137 SAN MATEO	DD02; DA01
HILLS ENTERPRISES	1210 SAN MATEO AVE	DD02
HOLIDAY CLEANERS	4 BAYHILL SHOPPING CTR	DA01; DD02
HOMEOWNER	988 EASTON	SPILL
IDETEK INC	1057 SNEATH LANE	DD03
J M CONSTRUCTION	1175 MONTGOMERY AVENUE	DD01
JACKS AUTOMOTIVE REPAIR	1077 SAN MATEO AVENUE	DA01; DD02
JIFFY LUBE	1580 EL CAMINO REAL	DD06; DA01
JOES SAN BRUNO UNOCAL 76	401 SAN MATEO AVE	SQG
JOHN ANTHONY CO	40 TANFORAN	DD02
KADOYAN AVA D	734 KAINS AVE	NFA
KARMA AUTOBODY	1201 MONTGOMERY AVE	DA01; LQG
KAUFMANNS CAMERAS	555 SAN MATEO AVE	SQG
KUSBER ENTERPRISES	1213 SAN MATEO AVE	DA01; DD03
LALOMA AUTO BODY SHOP	848 SAN MATEO AVE	DD03; DA01
LAMINATED FABRICATORS	1145 SAN MATEO AVE	NFA
LANGI AIRPORT EQUIPMENT REPAIR INC	1121 MONTGOMERY AVE	DD02; DA01
LEADER CLEANERS	1310 EL CAMINO RL H	DD02; DA01
LYNN'S PRINT SHOP	657 SAN MATEO AVE	RED
MACFARLAND RJ	100 EL CAMINO REAL	RED
MARELICH MFG	44 LAYNE PL	RED
MAX SINGER MAZDA SERVICE INC	511 E SAN BRUNO AVE	DA01;DD02
MCNEVIN CLEANING SPECIALISTS	1186 SAN MATEO AVE	DD02

*see Key to Terms and Abbreviations at the end of Appendices

MELODY TOYOTA INC	750 EL CAMINO REAL	DD03; DA01
MICRO GARNET ABRASIVE	600 SAN MATEO AVE	PEARL
MICRO MACHINE TOOL & DIE WORKS	1077 SAN MATEO AVE	RED
MILLS PARK CLEANERS	709 CAMINO PLAZA	DD02; DA01
MOBIL OIL CORP SERV STA	717 E SAN BRUNO	LQG
MODAL CITY AUTOBODY	1180 SAN MATEO AVE	SQG
MORROW SERVICE	80 TANFORAN AVE #2	DD02; DA01
MY CLEANERS	462 SAN MATEO AVE	RED
NAVAL FACILITY ENGINEERING	900 COMMODORE DR	DS1; PA1;N
NIKON PRECISION	1051 SNEATH LN	SQG
NORGE VILLAGE DRY CLEANERS	320 EL CAMINO REAL	RED
OLES CARB AND ELEC	120 EL CAMINO REAL	DA01; SQG
ONE HOUR DRY CLEANING	100 EL CAMINO REAL	DA01; DD02
OYSTER POINT AUTO	1049 SAN MATEO AVENUE	DA01; DD01
PACIFIC BELL	840 W SAN BRUNO AVE	DD03
PDQ 1 HOUR PHOTO	210 TANFORAN PARK MALL #C	DD02
PENINSULA TOW SERVICE INC	1071 MONTGOMERY AVE	DA01; DD02
PHASE II	1245 MONTGOMERY AVE	DA06; DD07
PHASE II	1229 MONTGOMERY AVE	DA95
POETSCH & PETERSON	325 S MAPLE AVE	LQG; REFRW
PRESTO PRINTS	5 BAYHILL SHOPPING CENTER	DA01; DD02
QUALITY TUNE-UP INC	501 EL CAMINO REAL	DD03; DA01
QUICK STOP 1 HR PHOTO	1310 EL CAMINO REAL #B	
R & P BODY SHOP	1089 MONTGOMERY	DA01; DD01
RHEE, JACK OSHICK	1799 EL CAMINO REAL	DD01
RICHARDS AUTO REPAIR	910 SAN MATEO AVE #A	DA01; DD02
ROBINSON'S CARPETS	701 SAN MATEO AVENUE	DD01
ROGERS TRUCKING CO	54 TANFORAN	DD03; DA01
ROLLINGWOOD AUTO SERVICE	2001 ROLLINGWOOD DRIVE	DA01; DD02
ROSS AUTO CLINIC	118 EL CAMINO REAL	DA01
ROYAL LIMOUSINE	325 S MAPLE #33	DA01
RUDYS AUTO CARE	1188 MONTGOMERY AVE	DD02; DA01
RYAN TRUCK	1188 SAN MATEO AVE	DA01; DD02
S T V OF SAN FRANCISCO	1176 CHERRY AVE	RED

*see Key to Terms and Abbreviations at the end of Appendices

SAN BRUNO AUTO KRAFT	1253 SAN MATEO AVE	DA01; DD02
SAN BRUNO EXXON	800 EL CAMINO REAL	DA01; DD01
SAN BRUNO FORD INC	601 EL CAMINO REAL	DA01; DD03
SAN BRUNO GARBAGE CO INC	101 TANFORAN AVE	DD03
SAN BRUNO GOODYEAR	205 W SAN BRUNO AVE	DA01; DD03
SAN BRUNO SHEET METAL TANK CLOSURE	828 SAN MATEO AVE	DB95
SAN BRUNO SHELL	798 EL CAMINO REAL	DA01; DD02
SAN BRUNO AUTO KRAFT	1253 SAN MATEO AVE	DDO2
SAN BRUNO AUTO DISMANTLERS INC	1069 SAN MATEO AVENUE	DA01; DD02
SAN BRUNO AUTO CENTER INC	965 SAN MATEO AVENUE	DD03; DA01
SAN BRUNO SHELL	798 EL CAMINO REAL	DD02; DA01
SAN BRUNO EXXON	800 EL CAMINO REAL	DD01; DA01
SAN BRUNO CORPORATION YARD	225 HUNTINGTON AVE	DA01; DD03
SAN BRUNO CAR WASH	512 EL CAMINO REAL	DD01
SEALIFE IMPORTS	1126 SAN MATEO AVE	DD02
SEARS ROEBUCK AND CO	1178 EL CAMINO REAL	DA01; DD04
SHAHIN'S PENINSULA TRANSMISSION	200 EL CAMINO REAL	DA01; DD01
SHELL OIL CO SERVICE STATION	1199 EL CAMINO REAL	DD01
SPEED-O-ELECTRIC	400 E SAN BRUNO AVE	RED
SPEEDIE OIL LUBE & TUNE UP	801 EL CAMINO	DA01; DD04
SPORTS APPAREL MARKETING	1133 SAN MATEO AVE	DD02; DA01
TECHNICS	1037 SAN MATEO AVE	DA01
TERMI-KILL	1045 MONTGOMERY AVE	RED
TOM'S AUTO SERVICE & REPAIR	798 SAN BRUNO AVENUE EAST	DA01; DD02
TONYS AUTO REPAIR	692 EL CAMINO REAL	DD02; DA01
TRANSPORTAION MAINT. CO	325 S MAPLE ST #28	DA01; DD02
TRIPLE R AUTO BODY	1013 MONTGOMERY	DD02; DA01
U S POSTAL SERVICE	850 CHERRY AVENUE	DD01
UNION OIL SERVICE STATION 3857	170 W SAN BRUNO AVE	DA01; DD03
UNION 76	401 SAN MATEO AVENUE	DD02; DA01
USTD ASSAY OFFICE	1070 SAN MATEO UNIT2	LQG
VALLEJO AUTO BODY & PAINT	1269 SAN MATEO AVE	DA01; DD02
VERNS AUTO SERVICE	701 SAN MATEO AVE	DD02; DA01
VINCE'S SHELL FISH COMPANY	1063 MONTGOMERY AVENUE	DD01

*see Key to Terms and Abbreviations at the end of Appendices

Table 8
UST's Within the WHPA

BUSINESS	ADDRESS	TANKS
BP OIL COMPANY 11-206	2000 ROLLINGWOOD DRIVE	4
GOLDEN GATE NATIONAL CEMETERY	1300 SNEATH LANE	1
MELODY TOYOTA INC	750 EL CAMINO REAL	2
PACIFIC BELL (R4-059)	840 W SAN BRUNO AVENUE	1
RHEE, JACK OSHICK	1799 EL CAMINO REAL	3
ROLLINGWOOD AUTO SERVICE	2001 ROLLINGWOOD DRIVE	5
SAN BRUNO EXXON	800 EL CAMINO REAL	5
SAN BRUNO INVESTMENT COMPANY	383 W SAN BRUNO AVENUE	1
SAN BRUNO SHELL	798 EL CAMINO REAL	3
SHELL OIL CO SERVICE STATION	1199 EL CAMINO REAL	3
U S POSTAL SERVICE	850 CHERRY AVENUE	1
WESTERN DIVISION NAVAL FACIL-CODE 09W	900 COMMODORE DRIVE	1
BP OIL COMPANY 11-200	717 E SAN BRUNO AVENUE	4
CYCLE SHACK INC	1104 SAN MATEO AVENUE	1
EFL TRANSPORTATION	50 TANFORAN	1
EXXON SERVICE STATION	310 E SAN BRUNO AVENUE	3
GOLDEN GATE NATIONAL CEMETERY	1300 SNEATH LANE	1
J M CONSTRUCTION	1175 MONTGOMERY AVE	1
MELODY TOYOTA INC	750 EL CAMINO REAL	2
PACIFIC BELL (P2-011)	1101 SAN MATEO AVENUE	1
PACIFIC BELL (R4-059)	840 W SAN BRUNO AVENUE	1
PHASE II	1245 MONTGOMERY AVE	1
RHEE, JACK OSHICK	1799 EL CAMINO REAL	3
ROBINSON'S CARPETS	701 SAN MATEO AVENUE	2
SAN BRUNO EXXON	800 EL CAMINO REAL	5
SAN BRUNO FIRE DEPT, CITY OF	555 EL CAMINO REAL	2
SAN BRUNO FORD INC	601 EL CAMINO REAL	1
SAN BRUNO GARBAGE CO INC	101 TANFORAN AVE	1
SAN BRUNO INVESTMENT COMPANY	383 W SAN BRUNO AVENUE	1

SAN BRUNO SHELL	798 EL CAMINO REAL	3
SHELL OIL CO SERVICE STATION	1199 EL CAMINO REAL	3
TONYS AUTO REPAIR	692 EL CAMINO REAL	1
U S POSTAL SERVICE	850 CHERRY AVENUE	1
UNDERGROUND TANK SITE	265 SAN BRUNO AVE	1
UNION OIL SERVICE STATION 3857	170 W SAN BRUNO AVE	3
VINCE'S SHELL FISH COMPANY	1063 MONTGOMERY AVE	3
WESTERN DIVISION NAVAL FACIL-CODE 09W	900 COMMODORE DRIVE	1
ALS OLYMPIC STATION	170 EL CAMINO REAL	4
SAN BRUNO CAR WASH	512 EL CAMINO REAL	3
SAN BRUNO CORPORATION YARD	225 HUNTINGTON AVE	1
SAN BRUNO FIRE DEPT, CITY OF	555 EL CAMINO REAL	2
SHAHIN'S PENINSULA TRANSMISSION	200 EL CAMINO REAL	1
UNION 76	401 SAN MATEO AVENUE	3
ALS OLYMPIC STATION	170 EL CAMINO REAL	4
SHAHIN'S PENINSULA TRANSMISSION	200 EL CAMINO REAL	1

Table 9
Potential and Existing Contamination Within the Recharge Area

BUSINESS	ADDRESS	CODE*	TANKS	MW#
CHEVRON STATION	2101 W SAN BRUNO AVE	DD03,DA01,LUFT,UST	4	2
CREST CLEANERS	118 SKYCREST CENTER	DD02,DA01		
EXXON SERVICE STATION #7-3673	2296 WESTBOROUGH BLVD	DD02,UST,LUFT	5	0
FAFOUTIS PROPERTY	2880 WEST SAN BRUNO AVE	LUFT		3
FIRE STATION #4	2350 GALWAY DR	LUFT,UST	1	0
IDEAL CARPET CLEAN	470 FERNWOOD DR	RED		
JONES WT JR	2131 ROLLINGWOOD DR	NFA		
JULIES ART	115 PIEDMONT	RED		
OLYMPIC STATION	2890 SAN BRUNO AVE	DA01,DD03,UST	4	
ORCHARD SUPPLY HARDWARE	2245 GELLERT BLVD	DD02		
PAL EXCAVATING	2501 VALLEYWOOD DR	NFA		
PERSONAL AWARD SERVICES	55 ESCANYO DR	NFA		
SAN ANDREAS FILTER PLANT	2901 CRYSTAL SPRINGS ROAD	LUFT		1
SAN BRUNO FIRE DEPT	1999 EARL AVE	UST	1	
UNION OIL SERVICE STATION #5841	3964 CALLAN BLVD	DD01,DA01,UST,LUFT	3	0
WESTBOROUGH ARCO #6073	2300 WESTBOROUGH BLVD	DD01,DA01,UST,LUFT	5	3
WESTBOROUGH 1-HOUR CLEANERS	2258 WESTBOROUGH BLVD	DD02,DA01		

*see Key to Terms and Abbreviations at the end of Appendices

Table 10
Deep Wells Within the WHPA

Well Name	Well Type*	Well Owner	Appendix	Closest Municipal Well
#14 City Park	D	City of San Bruno	6	City Park
3-83 City Park	M	City of San Bruno	6	City Park
2-83 Commodore Park TH	M	City of San Bruno	6	Commodore Park
GGNC-1	Y	GGNC	7	Commodore Park
GGNC-3	Y	GGNC	7	Commodore Park
#15 Commodore Park	D	City of San Bruno	6	Commodore Park
GGNC-2	Y	GGNC	7	Commodore Park
#3 Corp. Yard	D	City of San Bruno	6	Corp. Yard
#5 Milton	Y	City of San Bruno	6	Corp. Yard
#6 San Marco	Y	City of San Bruno	6	Corp. Yard
Huntington & Georgia Ave.	Y	City of San Bruno	6	Corp. Yard
Huntington Ave.	Y	City of San Bruno	6	Corp. Yard
Lomita Park	Y	City of San Bruno	6	Corp. Yard
#17 Corp. Yard	D	City of San Bruno	6	Corp. Yard
#1 Corp. Yard	M	City of San Bruno	6	Corp. Yard
#13 Shannon	I	City of San Bruno	6	Corp. Yard
TH5	O	City of San Bruno	6	Corp. Yard
TH4	O	City of San Bruno	6	Forest Lane
TH2	O	City of San Bruno	6	Forest Lane
1-83 Forest Lane TH	M	City of San Bruno	6	Forest Lane
Shellfish Well	O	Vinces Shellfish Co.	7	Forest Lane
#16 Forest Lane	D	City of San Bruno	6	Forest Lane
TH3	O	City of San Bruno	6	Forest Lane
Old Nursery	Y	Avansino Mortensen Co.	7	Forest Lane & Commodore Park
#12 Elm Ave	I	City of San Bruno	6	Forest Lane & Commodore Park

* see Key to Terms and Abbreviations at the end of Appendices.

GGNC-4	Y	GGNC	7	Forest Lane & Commodore Park
TH1	O	City of San Bruno	6	City Park & Recharge Area

* see Key to Terms and Abbreviations at the end of Appendices.

PART THREE: RECOMMENDATIONS FOR CONTINUED PROTECTION

After several months of collecting and analyzing data for this report, it has become apparent that several improvements can be made in long-term groundwater quality protection in the San Bruno area. The following is a list of ways that this wellhead protection plan can be improved:

(1) Capture zone refinement

(a) All wells in the area should be properly surveyed relative to mean sea level.

(b) A static water level monitoring plan should be implemented in order to determine groundwater gradient and direction.

(c) Transmissivity values can be refined by conducting pump tests at various well locations to account for spatial variability.

(2) Aquifer protection

(a) SMCEHSD Underground Storage Tank Program should restrict all future proposed underground storage tanks in the recharge areas and capture zones in favor of aboveground storage tanks, in order to detect and remediate releases easier and faster.

(b) The City of San Bruno should properly abandon all wells which are determined to be no longer serving a back-up or monitoring role.

(c) SMCEHSD should prioritize regulation of proper well abandonment, requiring that all abandoned wells be sealed to prevent surface and subsurface contamination from entering the

source aquifer.

(d) SMCEHSD should prioritize the remediation of LUFT sites that lie within the recharge areas and WHPA.

(e) SMCEHSD should prioritize the inspection and enforcement at HAZMAT sites that lie within the recharge areas and WHPA.

(f) The City of San Bruno should implement a contingency plan to provide for alternative water supplies in the event of unforeseen or accidental contamination of the drinking water aquifer.

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Appendix 1: LUFT Sites (summary)

Site_Name	Site_Address	MW#	City	Site#
##SUPER 7	2901 Sneath Lane	1	SAN BRUNO	880003
ARCO 743	1799 El Camino Real	13	SAN BRUNO	880004
AUTOHAUS SAN BRUNO	675 E San Bruno Ave	1	SAN BRUNO	880014
BP 11206	2000 Rollingwood Dr	1	SAN BRUNO	880029
BP OIL #11200	717 East San Bruno Ave	6	SAN BRUNO	880022
CHEVRON #90781	2101 West San Bruno Ave	2	SAN BRUNO	880005
CHEVRON 2759	801 El Camino Real	10	SAN BRUNO	880006
CONTINENTAL SAVINGS	500 El Camino Real	4	SAN BRUNO	880018
EUROPEAN CAR SERVICE	900 El Camino Real	1	SAN BRUNO	880021
EXXON 7-0107	310 East San Bruno Ave	8	SAN BRUNO	880010
FAFOUTIS PROPERTY	2880 W. San Bruno Ave	3	SAN BRUNO	880027
FLAT RATE RENT A CAR	830 Huntington Ave	3	SAN BRUNO	880019
GRACE HONDA	345 El Camino Real	1	SAN BRUNO	880020
H.S. CROCKER	1000 San Mateo Ave	3	SAN BRUNO	880002
HOFFMA PROPERTY	1276 Montgomery Ave	1	SAN BRUNO	880011
OLYMPIC OIL SB#2	620 El Camino Real	1	SAN BRUNO	880023
S.M. COMMUNITY COLLEGE C/O PAT KELLER	3300 College Drive	2	SAN BRUNO	880024
SAN ANDREAS FILTER PLANT	2901 Crystal Springs Road	1	SAN BRUNO	880031
SAN BRUNO FORD	601 El Camino Real	1	SAN BRUNO	880016
SAN BRUNO LUMBER	101 West San Bruno Ave	1	SAN BRUNO	880001
SEARS AUTOMOTIVE CENTER	1178 El Camino Real	3	SAN BRUNO	880008
SHELL OIL	3999 Skyline Blvd	3	SAN BRUNO	880012
SHELL OIL	798 El Camino Real	12	SAN BRUNO	880015
TEXACO/EXXON	800 El Camino Real	12	SAN BRUNO	880013
UNOCAL 3857	170 West San Bruno Ave	8	SAN BRUNO	880007

Appendix 2: LUFT Wells

Site_Name	Well_Address	Well_Name	City	Site#	Latitude	Longitude	Consultant
##SUPER 7	2901 Sneath Lane	MW-1	SAN BRUNO	880003	37.[illegible]4262	-122.445409	Hallenbeck & Assoc
ARCO 743	1799 El Camino Real	A-1	SAN BRUNO	880004	[illegible]5366	-122.405706	Emcon
ARCO 743	1799 El Camino Real	A-2	SAN BRUNO	880004	37.615462	-122.405626	Emcon
ARCO 743	1799 El Camino Real	A-3	SAN BRUNO	880004	37.615440	-122.405525	Emcon
ARCO 743	1799 El Camino Real	MW-4	SAN BRUNO	880004	37.615472	-122.405565	Applied Geosystems
ARCO 743	1799 El Camino Real	MW-5	SAN BRUNO	880004	37.615333	-122.405372	Applied Geosystems
ARCO 743	1799 El Camino Real	MW-6	SAN BRUNO	880004	37.615216	-122.405473	Applied Geosystems
ARCO 743	1799 El Camino Real	MW-7	SAN BRUNO	880004	37.615420	-122.405705	Applied Geosystems
ARCO 743	1799 El Camino Real	MW-8	SAN BRUNO	880004	37.615537	-122.405679	Resna
ARCO 743	1799 El Camino Real	MW-9	SAN BRUNO	880004	37.615943	-122.405412	Resna
ARCO 743	1799 El Camino Real	VW-1	SAN BRUNO	880004	37.615317	-122.405466	Applied Geosystems
ARCO 743	1799 El Camino Real	VW-2	SAN BRUNO	880004	37.615372	-122.405653	Applied Geosystems
ARCO 743	1799 El Camino Real	VW-3	SAN BRUNO	880004	37.615402	-122.405528	Resna
ARCO 743	1799 El Camino Real	VW-4	SAN BRUNO	880004	37.615393	-122.405434	Resna
AUTOHAUS SAN BRUNO	675 E San Bruno Ave	MW-1	SAN BRUNO	880014	37.631077	-122.406044	Christopher French
BP 11206	2000 Rollingwood Dr	MW-1	SAN BRUNO	880029	37.630258	-122.435354	Hydro Environmental Technologies
BP OIL #11200	717 East San Bruno Ave	MW-1	SAN BRUNO	880022	37.631217	-122.405261	Applied Geosciences
BP OIL #11200	717 East San Bruno Ave	MW-2	SAN BRUNO	880022	37.631169	-122.405661	Applied Geosciences
BP OIL #11200	717 East San Bruno Ave	MW-3	SAN BRUNO	880022	37.631089	-122.405517	Applied Geosciences
BP OIL #11200	717 East San Bruno Ave	MW-4	SAN BRUNO	880022	37.631213	-122.405585	Applied Geosciences
BP OIL #11200	717 East San Bruno Ave	MW-5	SAN BRUNO	880022	37.631061	-122.405641	Applied Geosciences
BP OIL #11200	717 East San Bruno Ave	MW-6	SAN BRUNO	880022	37.631086	-122.405225	Applied Geosciences
CHEVRON #90781	2101 West San Bruno Ave	MW-1	SAN BRUNO	880005	37.623236	-122.428193	Western Geologic Resources
CHEVRON #90781	2101 West San Bruno Ave	MW-2	SAN BRUNO	880005	37.623256	-122.427921	Western Geologic Resources
CHEVRON 2759	801 El Camino Real	C-1	SAN BRUNO	880006	37.629329	-122.416038	Pacific Environmental Group
CHEVRON 2759	801 El Camino Real	C-2	SAN BRUNO	880006	37.629212	-122.415974	Pacific Environmental Group
CHEVRON 2759	801 El Camino Real	C-3	SAN BRUNO	880006	37.629114	-122.415974	Pacific Environmental Group
CHEVRON 2759	801 El Camino Real	C-4	SAN BRUNO	880006	37.629085	-122.416130	Pacific Environmental Group
CHEVRON 2759	801 El Camino Real	C-5	SAN BRUNO	880006	37.629176	-122.416226	Pacific Environmental Group
CHEVRON 2759	801 El Camino Real	C-6	SAN BRUNO	880006	37.628974	-122.415866	Pacific Environmental Group
CHEVRON 2759	801 El Camino Real	C-7	SAN BRUNO	880006	37.629228	-122.415649	Pacific Environmental Group
CHEVRON 2759	801 El Camino Real	C-8	SAN BRUNO	880006	37.629348	-122.415725	Pacific Environmental Group
CHEVRON 2759	801 El Camino Real	C-9	SAN BRUNO	880006	37.629677	-122.415261	Pacific Environmental Group
CHEVRON 2759	801 El Camino Real	E-1	SAN BRUNO	880006	37.629092	-122.415944	Pacific Environmental Group
CONTINENTAL SAVINGS	500 El Camino Real	GW-1	SAN BRUNO	880018	37.623177	-122.411417	Uriah Inc.
CONTINENTAL SAVINGS	500 El Camino Real	GW-2	SAN BRUNO	880018	37.623266	-122.411508	Uriah Inc.
CONTINENTAL SAVINGS	500 El Camino Real	GW-3	SAN BRUNO	880018	37.623233	-122.411283	Uriah Inc
CONTINENTAL SAVINGS	500 El Camino Real	GW-4	SAN BRUNO	880018	37.623362	-122.411608	Uriah Inc
EUROPEAN CAR SERVICE	900 El Camino Real	MW-1	SAN BRUNO	880021	37.630983	-122.416568	Aquageosciences
EXXON 7-0107	310 East San Bruno Ave	MW-1	SAN BRUNO	880010	37.630925	-122.408851	Harding Lawson
EXXON 7-0107	310 East San Bruno Ave	MW-2	SAN BRUNO	880010	37.630710	-122.408836	Harding Lawson
EXXON 7-0107	310 East San Bruno Ave	MW-2A	SAN BRUNO	880010	37.630837	-122.409067	Harding Lawson
EXXON 7-0107	310 East San Bruno Ave	MW-3	SAN BRUNO	880010	37.630805	-122.408900	Harding Lawson
EXXON 7-0107	310 East San Bruno Ave	MW-4	SAN BRUNO	880010	37.630941	-122.409127	Harding Lawson
EXXON 7-0107	310 East San Bruno Ave	MW-5	SAN BRUNO	880010	37.630688	-122.409091	Harding Lawson
EXXON 7-0107	310 East San Bruno Ave	MW-6	SAN BRUNO	880010	37.630944	-122.408971	Harding Lawson
EXXON 7-0107	310 East San Bruno Ave	MW-7	SAN BRUNO	880010	37.630789	-122.408967	Harding Lawson
FAFOUTIS PROPERTY	2880 W. San Bruno Ave	MW-1	SAN BRUNO	880027	37.619139	-122.439499	Applied Remediation Company
FAFOUTIS PROPERTY	2880 W. San Bruno Ave	MW-2	SAN BRUNO	880027	37.619018	-122.439480	Applied Remediation Company
FAFOUTIS PROPERTY	2880 W. San Bruno Ave	MW-3	SAN BRUNO	880027	37.619065	-122.439611	Applied Remediation Company
FLAT RATE RENT A CAR	830 Huntington Ave	MW-1	SAN BRUNO	880019	37.631028	-122.411238	Tank Protect Engineering
FLAT RATE RENT A CAR	830 Huntington Ave	MW-2	SAN BRUNO	880019	37.631101	-122.411190	Tank Protect Engineering

Well_Type	Date_Drilled	Well_Depth	Surf_Elev	Casing_Mat	Diam	Gauge	Seal_Mat	Seal_Depth	Perf_Top	Slot_Size	Pump_Rate	Gradient
X	11/27/85	35	0	PVC	4	0		0	0	0	0	0
M	02/05/86	35.5	47.12	PVC	3	40	Concrete Over Bentonite	11	13	0.02	0	0.06
M	02/05/86	35.5	44.1	PVC	3	40	Concrete Over Bentonite	11	14	0.02	0	0.06
M	02/05/86	35.5	44.41	PVC	3	40	Concrete Over Bentonite	11	14	0.02	0	0.06
M	09/10/87	55.5	44.41	PVC	4	0	Cement Over Bentonite	12	15	0.02	0	0.06
M	09/10/87	56	45.23	PVC	4	0	Cement Over Bentonite	15	18	0.02	0	0.06
M	07/06/90	60	47.95	PVC	4	40	Coment Over Bentonite	40	42	0.02	0	0.06
M	07/05/90	60	45.68	PVC	4	40	Coment Over Bentonite	40	42	0.02	0	0.06
M	04/21/92	58.5	44.52	PVC	4	40	Coment Over Bentonite	41	43	0.01	0	0.06
M	04/22/92	60	39.69	PVC	4	40	Coment Over Bentonite	38	40	0.01	0	0.06
O	07/06/90	36	46.2	PVC	2	40	Coment Over Bentonite	27	28	0.02	0	0.06
O	07/05/90	36	46.55	PVC	2	40	Coment Over Bentonite	26	27	0.02	0	0.06
O	04/21/92	29	45	PVC	4	40	Coment Over Bentonite	18	19	0.01	0	0.06
O	04/21/92	30	45.16	PVC	4	40	Coment Over Bentonite	9	10	0.01	0	0.06
M	04/04/90	13.5	0	pvc	2	40	Cement Over Bentonite	3	3.4	0.01	0	0
M	10/15/92	40.5	0	pvc	2	40	Cement Over Bentonite	19	20	0.01	0	0
M	10/02/90	32	6.84	pvc	4	40	Cement Over Bentonite	15	16	0.01	0	0.02
M	10/02/90	32	6.78	pvc	4	40	Cement Over Bentonite	15	17	0.01	0	0.02
M	10/02/90	32	6.43	pvc	4	40	Cement Over Bentonite	14	15	0.01	0	0.02
M	11/03/92	9.5	6.69	pvc	2	40	Cement Over Bentonite	2.5	3.5	0.02	0	0.02
M	11/03/92	10	5.9	pvc	2	40	Cement Over Bentonite	2.5	3.5	0.02	0	0.02
M	11/03/92	10	5.36	pvc	2	40	Cement Over Bentonite	2.5	3.5	0.02	0	0.02
M	03/21/89	94.5	0	pvc	2	40	Grout Over Bentonite	61	64	0.02	0	0
M	01/09/90	80	0	pvc	2	40	Grout Over Bentonite	58	60	0.02	0	0
M	07/20/88	34	41.53	pvc	3	40	Concrete Over Bentonite	6	8.5	0.02	0	0
M	07/20/88	35	40.64	pvc	3	40	Concrete Over Bentonite	7	9	0.02	0	0
M	07/21/88	33	40.97	pvc	3	40	Concrete Over Bentonite	6	8	0.02	0	0
M	07/21/88	33	42.52	pvc	3	40	Concrete Over Bentonite	6	8	0.02	0	0
M	02/08/89	36	43.48	pvc	3	40	Concrete Over Bentonite	5	6	0.02	0	0
M	02/09/89	36	40.55	pvc	3	40	Concrete Over Bentonite	4	5	0.02	0	0
M	03/08/89	36	39.33	pvc	3	40	Cement Over Bentonite	5	6	0.02	0	0
M	03/08/89	36	40.13	pvc	3	40	Cement Over Bentonite	5	6	0.02	0	0
M	06/01/90	30	40.06	pvc	3	40	Cement Over Bentonite	9	10	0.02	0	0
O	05/07/90	28	0	pvc	3	40	Cement Over Bentonite	6	10.5	0.02	0	0
M	08/23/90	21.5	0	pvc	2	40	Heat Cement Over Bentonit	5.5	6.5	0.02	0	0
M	08/23/90	20.5	0	pvc	2	40	Heat Cement Over Bentonit	4.5	5.5	0.02	0	0
M	08/24/90	20.5	0	pvc	2	40	Heat Cement Over Bentonit	4.5	5.5	0.02	0	0
M	08/24/90	20.5	0	pvc	2	40	Cement Over Bentonite	5.5	5.5	0.02	0	0
M	03/12/92	40	0	PVC	4	0	Grout Over Bentonite	33	38	0.02	0	0
M	06/02/88	14	15.56	pvc	4	40	Cement Over Bentonite	3	3.5	0.02	0	0
X	06/02/88	14	15.79	pvc	4	40	Cement Over Bentonite	3	3.5	0.02	0	0
M	05/20/92	18	16.54	pvc	4	40	Cement Over Bentonite	2.75	3	0.02	0	0
M	06/02/88	14	16.05	pvc	4	40	Cement Over Bentonite	2.5	3.5	0.02	0	0
M	01/10/89	18	16.57	pvc	4	40	Cement Over Bentonite	2.75	3	0.02	0	0
X	01/10/89	18	15.31	pvc	4	40	Cement Over Bentonite	2.75	3	0.02	0	0
M	01/10/89	18	15.79	pvc	4	40	Cement Over Bentonite	2.75	3	0.02	0	0
X	01/11/89	20	15.72	pvc	4	40	Cement Over Bentonite	4.5	5	0.02	0	0
M	07/14/93	36.5	0	pvc	2	40	Cement Over Bentonite	18	20	0.01	0	0
M	09/07/93	31.08	0	pvc	2	40	Cement Over Bentonite	13	15	0.01	0	0
M	09/07/93	34	0	pvc	2	40	Cement Over Bentonite	13	15	0.01	0	0
M	05/25/90	26.5	21.16	pvc	2	40	Concrete Over Bentonite	4.5	6	0.02	0	0.0056
M	04/03/91	25	22	pvc	2	40	Concrete Over Bentonite	4	5	0.02	0	0.0056

Flow_Dir	Log	E_Log	DTW	Date_Meas	TPHgas	TPHdiesel	Comments1
	Y		0				PERMIT ISSUED FOR DESTRUCTION ON 12/21/93
260	Y	N	31.01	06/07/93			not sampled
260	Y	N	21.14	06/07/93			not sampled
260	Y	N	18.77	06/06/93			not sampled
290	Y	N	37.82	06/06/93			gradient and flow dir as of 9/30/93
260	Y	N	43.71	05/27/93			not sampled
260	Y	N	44.9	09/30/93	<50		sampled 9/30/93
260	Y	N	47.3	09/30/93	<50		sampled 9/30/93
260	Y	N	47.65	09/30/93	<50		sampled 9/30/93
260	Y	N	45.65	05/27/93			not sampled 9/30/93
260	Y	N	0				extraction well
260	Y	N	31.49	06/07/93			
260	Y	N	25.41	06/07/93			
260	Y	N	27.61	06/07/93			
	Y		0				considered for closure
	Y	N	0				well was dry when borings were done to 90'
165	Y	N	3.4	09/17/93			
165	Y	N	3	09/17/93			
165	Y	N	2.89	09/17/93			
165	Y	N	2.88	09/17/93	16000		B 2700
165	Y	N	3.08	09/17/93	1300		B 240
165	Y	N	3.13	09/17/93			
	Y	N	74.7	3/12/90			
	Y	N	64.16	3/12/90			
90	Y	N	26.61	06/12/90			
90	Y	N	24.94	11/30/94	6000		benzene 480
90	Y	N	13.96	06/12/90			
90	Y	N	16.56	11/29/93	6500		ppb
90	Y	N	17.31	11/29/93	<50		
90	Y	N	14.81	11/29/93	<50		
90	Y	N	15.69	11/30/93	8000		(ppb)
90	Y	N	16.6	11/30/93	3300		(ppb)
90	Y	N	18.57	11/29/93	<50		
90	Y	N	0		2600		benzene 54
	Y		9.38	09/11/90			
	Y		9.78	09/11/90			
	Y	N	9.44	09/11/90			
	Y	N	9.48	09/11/90			
	Y	N	20.1	3/92	3765		toluene 176ppb
	Y	N	6.98	12/22/93	430		sampled 11/18/93
	Y	N	0				DESTROYED 9/10/91
	Y	N	8.76	12/22/93	14000		SHEEN SEEN 12/22/93
	Y	N	8.02	12/22/93			
	Y	N	7.58	12/22/93	1900		SAMPLED 11/18/93
	Y	N	0				abandoned 9/10/91
	Y	N	8.1	12/22/93	540		sampled 11/18/93
	Y	N	0				abandoned 9/10/91
	Y	N	18.14	12/15/93			
	Y	N	11.7	12/15/93	16298.3		benzene 475
	Y	N	12.54	12/15/93			(ppb)
135	N	N	10.63	12/29/93	<50		carbon tetrachloride 630ppb
135	Y	N	11.03	12/29/93			carbon tetrachloride 160ppb

Comments2	Comments3	Comments4
SITE CLOSED 10/19/93		
h20 quality -ND since 3/25/86		
B,T,E,X all were <0.5		
B,T,E,X all <0.5		
B,T,E,X all <0.5		
2 monitoring wells are to be drilled soon	This well 1st encountered water at 25' on10/28/92	no water has been seen since. ????
T 1800	X 2100	Sampled 9/17/93
T 3.3	E 180	X 28
toluene 370	ethylbenzene 120	xylene 660
benzene 280	toluene 460	ethylbenzene 200
benzene 560	toluene 83	ethylbenzene 420
benzene 21	toluene 23	ethylbenzene 17
toluene 17	ethylbenzene 3	xylene 16
xylene 168ppb	sampled 3/92	
(ppb)	B 2.0	T <0.5
sampled 11/18/93	(ppb)	B 4300
B 170	T <2.5	E 22
B 97	T 5.2	E 13
toluene 345.5	ethylbenzene 565.1	xylenes 1693.6
benzene 2.1	toluene 0.7	ethylbenzene 1.20
benzene 4.4ppb	sampled 12/29/93	
	sampled 12/29/93	

Comments5	Comments6	Comments7
sampled 11/30/93		
xylene 530	sampled 11/29/93	
xylenes 290	sampled 11/30/90	
xylenes 10	sampled 11/30/93	
sampled 11/30/93		
E 0.9	X <0.5	
T 210	E 490	X 550
X 8.6	(ppb)	
X 11	(ppb)	
sampled 12/18/93		
xylenes 3.4		

Site_Name	Well_Address	Well_Name	City	Site#	Latitude	Longitude	Consultant
FLAT RATE RENT A CAR	830 Huntington Ave	MW-3	SAN BRUNO	880019	37.631009	-122.411150	Tank Protect Engineering
H.S. CROCKER	1000 San Mateo Ave	MW-1	SAN BRUNO	880002	37.634613	-122.408165	Weiss Associates
H.S. CROCKER	1000 San Mateo Ave	MW-2	SAN BRUNO	880002	37.634638	-122.407542	Weiss Associates
H.S. CROCKER	1000 San Mateo Ave	MW-3	SAN BRUNO	880002	37.635094	-122.406791	Weiss Associates
HOFFMA PROPERTY	1276 Montgomery Ave	MW-1	SAN BRUNO	880011	37.640441	-122.411370	Blaine Tech Services
OLYMPIC OIL SB#2	620 El Camino Real	MW-1	SAN BRUNO	880023	37.625740	-122.413066	Accutite
S.M. COMMUNITY COLLEGE C/O PAT	3300 College Drive	MW-1	SAN BRUNO	880024	37.628684	-122.466819	Lowney Assoc
S.M. COMMUNITY COLLEGE C/O PAT	3300 College Drive	MW-2	SAN BRUNO	880024	37.628609	-122.465620	Lowney Assoc
SAN ANDREAS FILTER PLANT	2901 Crystal Springs Road	MW-SA1	SAN BRUNO	880031	37.598376	-122.423006	Baseline Consulting
SAN BRUNO FORD	601 El Camino Real	MW-1	SAN BRUNO	880016	37.625751	-122.413571	Applied Consultants
SAN BRUNO LUMBER	101 West San Bruno Ave	MW-1	SAN BRUNO	880001	37.631713	-122.410422	Subsurface Consultants
SEARS AUTOMOTIVE CENTER	1178 El Camino Real	MW-1	SAN BRUNO	880008	37.638168	-122.417062	Harding Lawson Assoc
SEARS AUTOMOTIVE CENTER	1178 El Camino Real	MW-2	SAN BRUNO	880008	37.638116	-122.416566	Harding Lawson Assoc
SEARS AUTOMOTIVE CENTER	1178 El Camino Real	MW-3	SAN BRUNO	880008	37.637863	-122.416806	Harding Lawson Assoc
SHELL OIL	798 El Camino Real	MW-1	SAN BRUNO	880015	37.628962	-122.415065	Ags/weiss Assoc
SHELL OIL	3999 Skyline Blvd	MW-1	SAN BRUNO	880012	37.638697	-122.463013	Emcon Assoc
SHELL OIL	798 El Camino Real	MW-10	SAN BRUNO	880015	37.629440	-122.414642	Ags/weiss Assoc
SHELL OIL	798 El Camino Real	MW-11	SAN BRUNO	880015	37.629614	-122.414137	Ags/weiss Assoc
SHELL OIL	798 El Camino Real	MW-12	SAN BRUNO	880015	37.629236	-122.415224	Ags/weiss Assoc
SHELL OIL	798 El Camino Real	MW-2	SAN BRUNO	880015	37.628878	-122.415321	Ags/weiss Assoc
SHELL OIL	3999 Skyline Blvd	MW-2	SAN BRUNO	880012	37.638794	-122.462869	Emcon Assoc
SHELL OIL	798 El Camino Real	MW-3	SAN BRUNO	880015	37.629068	-122.415408	Ags/weiss Assoc
SHELL OIL	3999 Skyline Blvd	MW-3	SAN BRUNO	880012	37.638540	-122.462703	Emcon Assoc
SHELL OIL	798 El Camino Real	MW-4	SAN BRUNO	880015	37.629141	-122.415280	Ags/weiss Assoc
SHELL OIL	798 El Camino Real	MW-5	SAN BRUNO	880015	37.629168	-122.415149	Ags/weiss Assoc
SHELL OIL	798 El Camino Real	MW-6	SAN BRUNO	880015	37.629112	-122.414963	Ags/weiss Assoc
SHELL OIL	798 El Camino Real	MW-7	SAN BRUNO	880015	37.628978	-122.414922	Ags/weiss Assoc
SHELL OIL	798 El Camino Real	MW-8	SAN BRUNO	880015	37.629342	-122.414707	Ags/weiss Assoc
SHELL OIL	798 El Camino Real	MW-9	SAN BRUNO	880015	37.629328	-122.414892	Ags/weiss Assoc
TEXACO/EXXON	800 El Camino Real	MW-16D	SAN BRUNO	880013	37.629426	-122.415711	Harding Lawson
TEXACO/EXXON	800 El Camino Real	MW-16E	SAN BRUNO	880013	37.629198	-122.415913	Harding Lawson
TEXACO/EXXON	800 El Camino Real	MW-16F	SAN BRUNO	880013	37.629385	-122.415166	Harding Lawson
TEXACO/EXXON	800 El Camino Real	MW-16G	SAN BRUNO	880013	37.629188	-122.415035	Harding Lawson
TEXACO/EXXON	800 El Camino Real	MW-16H	SAN BRUNO	880013	37.629499	-122.414755	Harding Lawson
TEXACO/EXXON	800 El Camino Real	MW-16I	SAN BRUNO	880013	37.629579	-122.415205	Harding Lawson
TEXACO/EXXON	800 El Camino Real	RW-1	SAN BRUNO	880013	37.629426	-122.415628	Harding Lawson
TEXACO/EXXON	800 El Camino Real	RW-2	SAN BRUNO	880013	37.629299	-122.415556	Harding Lawson
TEXACO/EXXON	800 El Camino Real	RW-3	SAN BRUNO	880013	37.629286	-122.415488	Harding Lawson
TEXACO\EXXON	800 El Camino Real	MW-16A	SAN BRUNO	880013	37.629284	-122.415446	Harding Lawson
TEXACO\EXXON	800 El Camino Real	MW-16B	SAN BRUNO	880013	37.629233	-122.415584	Harding Lawson
TEXACO\EXXON	800 El Camino Real	MW-16C	SAN BRUNO	880013	37.629323	-122.415554	Harding Lawson
UNOCAL 3857	170 West San Bruno Ave	MW-1	SAN BRUNO	880007	37.630806	-122.411679	Petroleum Engineering
UNOCAL 3857	170 West San Bruno Ave	MW-2	SAN BRUNO	880007	37.630768	-122.411760	Petroleum Engineering
UNOCAL 3857	170 West San Bruno Ave	MW-3	SAN BRUNO	880007	37.630688	-122.411683	Petroleum Engineering
UNOCAL 3857	170 West San Bruno Ave	MW-4	SAN BRUNO	880007	37.630723	-122.411620	Petroleum Engineering
UNOCAL 3857	170 West San Bruno Ave	MW-5	SAN BRUNO	880007	37.630745	-122.411563	Applied Geosciences
UNOCAL 3857	170 West San Bruno Ave	MW-6	SAN BRUNO	880007	37.630849	-122.411572	Applied Geosciences
UNOCAL 3857	170 West San Bruno Ave	MW-7	SAN BRUNO	880007	37.630695	-122.411872	Applied Geosciences
UNOCAL 3857	170 West San Bruno Ave	MW-8	SAN BRUNO	880007	37.630688	-122.411600	Applied Geosciences
GRACE HONDA	345 El Camino Real	MW-1	SAN BRUNO	880020	37.620310	-122.410093	Tank Protect Engineers

Well_Type	Date_Drilled	Well_Depth	Surf_Elev	Casing_Mat	Diam	Gauge	Seal_Mat	Seal_Depth	Perf_Top	Slot_Size	Pump_Rate	Gradient
M	04/03/91	25	21	pvc	2	40	Concrete Over Bentonite	4	5	0.02	0	0.0056
M	05/19/88	30	14.9	pvc	4	0	Grout Over Bentonite	4	5	0.02	0	0
M	10/24/88	26	14.12	pvc	2	40	Cement Over Bentonite	4	5	0	0	0
M	10/24/88	26	10.49	pvc	2	40	Cement Over Bentonite	4	5	0	0	0
M	11/14/86	17.09	0	pvc	2	160	Concrete Over Bentonite	5	7.5	0.02	0	0
M	01/15/91	23.62	0	PVC	2	0	Cement Over Bentonite	6	7	0.02	0	0
M	11/03/92	30	110.89	pvc	2	40	Grout Over Bentonite	13	15	0.02	0	0.05
M	11/04/92	30	90.88	pvc	2	40	Grout Over Bentonite	13	15	0.02	0	0.05
		0	0		0	0		0	0	0	0	0
M	11/08/89	22.5	0	pvc	2	40	Grout Over Bentonite	4	5	0.01	0	0
M	07/27/87	28	20	PVC	2	0	Grout Over Bentonite	8	10	0.02	0	0
M	03/24/92	26.5	41.04	pvc	4	40	Cement Over Bentonite	15.6	16.5	0.02	0	0
M	03/24/92	26.5	39.5	pvc	4	40	Cement Over Bentonite	15.4	17.5	0.02	0	0
M	03/23/92	28	40.67	pvc	4	40	Cement Over Bentonite	16	18	0.02	0	0
M	07/12/89	31.5	38.06	PVC	4	40	Cement Over Grout	13	14.5	0.02	0	0
M	10/13/92	31.5	666.59	pvc	4	40	Grout Over Bentonite	17	18	0.02	0	0
M		0	35.9		0	0		0	0	0	0	0
M		0	33.27		0	0		0	0	0	0	0
M	05/07/93	28.5	38.78	pvc	2	0	Cement Over Bentonite	6.5	8	0.02	0	0
M	07/12/89	26.5	38.03	PVC	4	40	Cement Over Grout	8	9	0.02	0	0
M	10/15/92	33	665.62	pvc	4	40	Grout Over Bentonite	6.5	10	0.02	0	0
M	07/13/89	31.5	38.47	PVC	4	40	Cement Over Grout	8	10	0.02	0	0
M	10/15/92	25	673	pvc	4	40	Grout Over Bentonite	8	9	0.02	0	0
M	07/12/89	20.5	38.32	PVC	4	40	Cement Over Grout	8	10	0.02	0	0
M	07/14/89	26.5	37.97	PVC	4	40	Cement Over Grout	8	10	0.02	0	0
M	07/18/89	31.5	36.12	PVC	4	40	Cement Over Grout	8	10	0.02	0	0
M	07/18/89	26.5	35.26	PVC	4	40	Cement Over Grout	6	8	0.02	0	0
M		0	35.96		0	0		0	0	0	0	0
M		0	37.07		0	0		0	0	0	0	0
M	12/15/88	20	40.57	pvc	4	40	Cement Over Bentonite	8	10	0.02	0	0
M	02/24/89	21	40.2	pvc	4	40	Cement Over Bentonite	9	10	0.02	0	0
M	02/23/89	20.5	37.79	pvc	4	40	Cement Over Bentonite	9	10	0.02	0	0
M	02/23/89	21.5	36.99	pvc	4	40	Cement Over Bentonite	9	10	0.02	0	0
M	02/24/89	21.5	36.18	pvc	4	40	Cement Over Bentonite	9	10	0.02	0	0
M	02/24/89	25	39.26	pvc	4	40	Cement Over Bentonite	8	10	0.02	0	0
O	09/11/90	44	0	pvc	4	40	Cement Over Bentonite	8	10	0.03	0	0
O	09/11/90	44	0	pvc	4	40	Cement Over Bentonite	8	10	0.03	0	0
O	09/11/90	46	0	pvc	4	40	Cement Over Bentonite	7	9	0.03	0	0
M	6/88	19.5	38.95	pvc	2	40	Cement Over Bentonite	7.5	9.5	0.02	0	0
M	6/88	19.5	39.35	pvc	2	40	Cement Over Bentonite	7.5	9.5	0.02	0	0
M	6/88	19.5	39.91	pvc	2	40	Cement Over Bentonite	7.5	9.5	0.02	0	0
M		12.9	0		0	0		0	0	0	0	0
M		12.22	0		0	0		0	0	0	0	0
M		12.48	0		0	0		0	0	0	0	0
M		12.87	0		0	0		0	0	0	0	0
M	07/20/89	25	23.51	pvc	2	40	Cement Over Bentonite	5	6	0.02	0	0
M	07/21/89	25	24.04	pvc	2	40	Cement Over Bentonite	5	6	0.02	0	0
M	07/20/89	22.5	24.3	pvc	2	40	Cement Over Bentonite	6	7.5	0.02	0	0
M	03/16/90	21.5	23.44	pvc	4	40	Cement Over Bentonite	5	6	0.02	0	0
M	04/18/91	35	38	pvc(?)	2	0	Grout Over Bentonite	13	15	0.02	0	0

Flow_Dir	Log	E_Log	DTW	Date_Meas	TPHgas	TPHdiesel	Comments1
135	Y	N	10.8	12/29/93			carbon tetrachloride 230ppb
125	Y	N	8.5	11/08/93		360	toulene 860 ppb
125	Y	N	8.87	11/08/93			
125	Y	N	5.03	11/15/91			
	Y	N	5.7	02/09/94	22000		benzene 1700
	Y		12.62	11/10/92	85		B 7.7
050	Y	N	19	11/03/92			
050	Y	N	20.5	11/04/92			
	N	N	0				well under construction
	Y	N	10.03	08/13/92	3800		benzene 26ppb
	Y	N	7.19	04/12/93	1400		Benzene 2200ppb
070	Y	N	23.81	08/18/93	1300	<10	hydraulic gradient can be calculated from h20 contours
070	Y	N	23.28	08/18/93	1000	<10	hydraulic gradient can be calculated from h20 contours
070	Y	N	23.54	08/18/93	1300	<10	hydraulic gradient can be calculated from h20 contours
90	Y	N	16.51	11/29/93	<50		
345	Y	N	655.61	11/02/93	<50		
90	N	N	17.22	11/29/93	140	<50	benzene 1.9ppb
90	N	N	16.4	11/29/93	<50		
90	Y	N	16.7	11/29/93	34000	11000	benzene 1700
90	Y	N	14.69	11/29/93	<50		
345	Y	N	654.91	11/02/93	<50		
90	Y	N	14.61	11/29/93	<50		
345	Y	N	660.74	11/02/93	<50		
90	Y	N	16.12	11/29/93			
90	Y	N	16.15	11/29/93	520	540	(ppb)
90	Y	N	15.59	11/29/93	4100	120	(ppb)
90	Y	N	14.47	11/29/93	<50		
90	N	N	16.28	08/26/93	17000	8800	(ppb)
90	N	N	17.78	08/26/93	5000	3000	(ppb)
100	Y	N	0	11/29/93			well dry as of 8/27/93
100	N	N	0	11/29/93			well inaccessible as of 11/29/93
100	Y	N	0	11/29/93			well inaccessible as of 11/23/93
100	Y	N	16.73	11/29/93	57000		(ppb)
100	Y	N	0	11/29/93	<50		
100	Y	N	18.54	11/29/93	<50		
100	Y	N	0				extraction well for remediation of LUFT
100	Y	N	0				extraction well for remediation of LUFT
100	Y	N	0				extraction well for remediation of LUFT
100	N	N	16.55	11/29/93	12000		benzene 580ppb
100	Y	N	15.9	11/29/93	190000		benzene 2100
100	Y	N	16.94	11/29/93	170000		benzene 5400
	N	N	9.61	12/10/93			Can't find anymore info on MW1-MW4
	N	N	9.24	12/10/93			Can't find anymore info on MW1-MW4
	N	N	8.91	12/10/93			Can't find anymore info on MW1-MW4
	N	N	8.83	12/10/93			Can't find anymore info on MW1-MW4
80	Y	N	8.97	12/10/93	85		B 0.95ppb
80	Y	N	9.38	12/10/93			
80	Y	N	9.5	12/10/93	760		sampled 12/10/93
80	Y	N	8.83	12/10/93	61		
	Y	N	25.81	01/14/94			1,1-dichloroethene 3.2ppb

Comments2	Comments3	Comments4
	12/29/93	
ethylbenzene 230 ppb	xylenes 100 ppb	sampled 11/18/93
toluene 280	xylene isomers 1200	ethyl benzene 3000
T 0.7	X 1.5	sampled 11/10/92
toluene 240ppb	ethylbenzene 280ppb	xylenes 700ppb
Ethylbenzene 270ppb	Toluene 1600ppb	xylene 1700ppb
	benzene 400ppb	toluene 30ppb
	benzene 440ppb	toluene 3.0ppb
benzene 850ppb	toluene .7ppb	ethylbenzene 90 ppb
sampled 11/29/93		
ethlybenzene 3100	toluene 510	xylenes 2500
benzene 8.5	ethylbenzene 9.2	toluene 2.2
benzene 480	ethylbenzene 36	toluene 140
benzene 1200	ethlybenzene 960	toluene 480
benzene 190	ethlybenzene 180	toluene 21
therefore no h20 or quality data		
therefore no h20 or quality data currently avail.		
benzene 10000	toluene 1600	ethylbenzene 1900
pumping is not continuous		
pumping is not continuous		
pumping is not continuous		
toluene 110	ethylbenzene 440	xylenes 560
toluene 65	ethylbenzene 610	xylenes 6600
toluene 10000	ethylbenzene 4700	xylenes 40000
sampled 12/10/93		
(ppb)	B 0.87	T 0.66
cis-1,2-dichloroethene 5.1ppb	sampled 1/14/94	

Comments5	Comments6	Comments7
sampled 2/09/94		
sampled on 08/13/92		
sampled 4/12/93		2 more mon. wells to be installed in spring 94
ethylbenzene 75ppb	xylenes 300 ppb	sampled 8/18/93
ethylbenzene 94ppb	xylenes 74ppb	sampled 8/18/93
xylenes 14ppb	sampled 8/18/93	
(ppb)	sampled 11/29/93	
xylenes 10	sampled 11/29/93	
xylenes 120	sampled 11/29/93	
xylenes 2400	sampled 6/8/93	
xylenes 140	sampled 11/29/93	
xylenes 3900		
sampled 11/30/93		
sampled 11/30/93		
sampled 11/30/93		
E 1.0	X 1.4	

Appendix 3: UST's

Business_Name	Address	Tanks	Owner_Name	City	Acct#
ALS OLYMPIC STATION	170 EL CAMINO REAL	4	GARG, PAWAN K	SAN BRUNO	000880012
BP OIL COMPANY 11-200	717 E SAN BRUNO AVENUE	4	BP OIL COMPANY	SAN BRUNO	000880017
BP OIL COMPANY 11-206	2000 ROLLINGWOOD DRIVE	4	BP OIL COMPANY	SAN BRUNO	000880018
CHEVRON STATION	2101 W SAN BRUNO AVENUE	4	CHEVRON USA INC	SAN BRUNO	000880014
EXXON SERVICE STATION	310 E SAN BRUNO AVENUE	3	EXXON COMPANY USA	SAN BRUNO	000880036
GOLDEN GATE NATIONAL CEMETERY	1300 SNEATH LANE	1	VETERAN ADMINISTRATION	SAN BRUNO	000008697
J M CONSTRUCTION	1175 MONTGOMERY AVENUE	1	J M CONSTRUCTION	SAN BRUNO	000880047
MELODY TOYOTA INC	750 EL CAMINO REAL	2	MELODY TOYOTA INC	SAN BRUNO	000880004
MONTIS CHEVROLET	222 E SAN BRUNO AVENUE	2	MONTIS CHEVROLET	SAN BRUNO	000880015
OLYMPIC STATION	2890 SAN BRUNO AVENUE	4	BOUDAGHION, ROUBIK	SAN BRUNO	000880042
PACIFIC BELL (P2-011)	1101 SAN MATEO AVENUE	1	PACIFIC BELL	SAN BRUNO	000880019
PACIFIC BELL (R4-059)	840 W SAN BRUNO AVENUE	1	PACIFIC BELL	SAN BRUNO	000880023
PHASE II	1245 MONTGOMERY AVE	1	WELCH, JOSEPH	SAN BRUNO	000006504
RHEE, JACK OSHICK	1799 EL CAMINO REAL	3	ARCO PRODUCTS CO	SAN BRUNO	000880030
ROBINSON'S CARPETS	701 SAN MATEO AVENUE	2	ROBINSONS CARPET SERVICE	SAN BRUNO	000880025
ROLLINGWOOD AUTO SERVICE	2001 ROLLINGWOOD DRIVE	5	ROLLINGWOOD AUTO SERVICE	SAN BRUNO	000880031
SAN BRUNO CAR WASH	512 EL CAMINO REAL	3	SAN BRUNO CAR WASH	SAN BRUNO	000880033
SAN BRUNO CORPORATION YARD	225 HUNTINGTON AVE	1	CITY OF SAN BRUNO	SAN BRUNO	000009273
SAN BRUNO EXXON	800 EL CAMINO REAL	5	EXXON COMPANY, USA	SAN BRUNO	000880022
SAN BRUNO FIRE DEPT, CITY OF	555 EL CAMINO REAL	2	SAN BRUNO, CITY OF	SAN BRUNO	000007942
SAN BRUNO FORD INC	601 EL CAMINO REAL	1	SAN BRUNO FORD INC	SAN BRUNO	000880039
SAN BRUNO GARBAGE CO INC	101 TANFORAN AVE	1	SAN BRUNO GARBAGE CO INC	SAN BRUNO	000880009
SAN BRUNO INVESTMENT COMPANY	383 W SAN BRUNO AVENUE	1	SAN BRUNO INVESTMENT COMPANY	SAN BRUNO	000880044
SAN BRUNO SHELL	798 EL CAMINO REAL	3	CHANG, JAVIER	SAN BRUNO	000880037
SHAHIN'S PENINSULA TRANSMISSION	200 EL CAMINO REAL	1	NAZARI, SHAHIN	SAN BRUNO	000002343
SHELL OIL CO SERVICE STATION	1199 EL CAMINO REAL	3	AMSIA MGT CORP	SAN BRUNO	000880024
TONYS AUTO REPAIR	692 EL CAMINO REAL	1	KRAUS, ANTON	SAN BRUNO	000885058
U S POSTAL SERVICE	850 CHERRY AVENUE	1	U S POSTAL SERVICE JOHN BELL	SAN BRUNO	000880041
UNDERGROUND TANK SITE	265 SAN BRUNO AVE	1	BINSFELD, PAUL & BK OF NY	SAN BRUNO	000010041
UNION 76	401 SAN MATEO AVENUE	3	UNION OIL SERVICE STATION#0109	SAN BRUNO	000880003
UNION OIL SERVICE STATION 3857	170 W SAN BRUNO AVE	3	UNION OIL SERVICE STATION 3857	SAN BRUNO	000880035
VINCE'S SHELL FISH COMPANY	1063 MONTGOMERY AVENUE	3	VINCES SHELL FISH CO	SAN BRUNO	000880006
WESTERN DIVISION NAVAL FACIL-CODE 09W	900 COMMODORE DRIVE	1	WESTERN DIVISION NAVAL FACIL	SAN BRUNO	000880048

Business_Name	Address	Category_Code	Category_Description	Owner_Name
1 HOUR PHOTO	1310 EL CAMINO RL B	DA01	GENERATES AND RECYCLES WASTE O	PETERS GILL
A & R AUTOMOTIVE	1141 SAN MATEO AVENUE	DA01	GENERATES & RECYCLES WASTE OIL	A & R AUTOMOTIVE
A & R AUTOMOTIVE	1141 SAN MATEO AVENUE	DD03	STORES HAZ MATERIALS CATEGORY	A & R AUTOMOTIVE
A-1 AUTO BODY SHOP	1720 EL CAMINO REAL	DA01	GENERATES AND RECYCLES WASTE O	A-1 AUTO BODY SHOP
A-1 AUTO BODY SHOP	1720 EL CAMINO REAL	DD02	STORES HAZ MATERIALS CATEGORY	A-1 AUTO BODY SHOP
ACME AUTO SERVICE	1173 SAN MATEO AVENUE	DA01	GENERATES & RECYCLES WASTE OIL	ACME AUTO SERVICE
ACME AUTO SERVICE	1173 SAN MATEO AVENUE	DD01	STORES HAZ MATERIALS CATEGORY	ACME AUTO SERVICE
AIRPORT CITY AUTO BODY	1041 SAN MATEO AVENUE	DA01	GENERATES & RECYCLES WASTE OIL	AIRPORT CITY AUTO BODY
ALS OLYMPIC STATION	170 EL CAMINO REAL	DB96	TRANSFER OF OWNERSHIP	GARG, PAWAN K
ALS OLYMPIC STATION	170 EL CAMINO REAL	DD01	STORES HAZ MATERIALS CATEGORY	GARG, PAWAN K
ARTICHOKE JOE'S ENTERPRISE INC	659 HUNTINGTON ANE	DD03	STORES HAZ MATERIALS CATEGORY	SAMMUT DENNIS
ARTS AUTO SERVICE	265 E SAN BRUNO AVE	DA01	GENERATES & RECYCLES WASTE OIL	REEVES, ART
ARTS AUTO SERVICE	265 E SAN BRUNO AVE	DD02	STORES HAZ MATERIALS CATEGORY	REEVES, ART
AUTO COSMETICS	1051 MONTEGOMERY	DA01	GENERATES AND RECYCLES WASTE O	PEREZ LUIS
AUTO COSMETICS	1051 MONTEGOMERY	DD02	STORES HAZ MATERIALS CATEGORY	PEREZ LUIS
AUTO WORLD	860 SAN MATEO AVE	DD02	STORES HAZ MATERIALS CATEGORY	AUTO WORLD INC
AUTO WORLD	860 SAN MATEO AVE	DA01	GENERATES & RECYCLES WASTE OIL	AUTO WORLD INC
AUTOHAUS SAN BRUNO	675 E SAN BRUNO AVENUE	DA01	GENERATES & RECYCLES WASTE OIL	AUTOHAUS SAN BRUNO
AUTOHAUS SAN BRUNO	675 E SAN BRUNO AVENUE	DD03	STORES HAZ MATERIALS CATEGORY	AUTOHAUS SAN BRUNO
B & B TRANSMISSIONS	1079 SAN MATEO AVENUE	DA01	GENERATES & RECYCLES WASTE OIL	B & B TRANSMISSIONS
B & B TRANSMISSIONS	1299 SAN MATEO AVE	DA01	GENERATES AND RECYCLES WASTE O	BRADLEY, A
B & B TRANSMISSIONS	1299 SAN MATEO AVE	DD03	STORES HAZ MATERIALS CATEGORY	BRADLEY, A
B & B TRANSMISSIONS	1299 SAN MATEO AVE	DA01	GENERATES & RECYCLES WASTE OIL	BRADLEY, ART
B & B TRANSMISSIONS	1079 SAN MATEO AVENUE	DD02	STORES HAZ MATERIALS CATEGORY	B & B TRANSMISSIONS
BAY AREA LIFT TRUCK SERVICE	1059 SAN MATEO AVENUE	DA01	GENERATES & RECYCLES WASTE OIL	BAY AREA LIFT TRUCK SERVICE
BAY AREA LIFT TRUCK SERVICE	1059 SAN MATEO AVENUE	DD03	STORES HAZ MATERIALS CATEGORY	BAY AREA LIFT TRUCK SERVICE
BERMICO AUTO INC	1144 MONTGOMERY AVENUE	DA01	GENERATES & RECYCLES WASTE OIL	BERMICO AUTO INC
BERMICO AUTO INC	1144 MONTGOMERY AVENUE	DD02	STORES HAZ MATERIALS CATEGORY	BERMICO AUTO INC
BP OIL COMPANY 11-200	717 E SAN BRUNO AVENUE	DD01	STORES HAZ MATERIALS CATEGORY	BP OIL COMPANY
BP OIL COMPANY 11-200	717 E SAN BRUNO AVENUE	DA01	GENERATES AND RECYCLES WASTE O	BP OIL COMPANY
BP OIL COMPANY 11-200	717 E SAN BRUNO AVENUE	DB96	TRANSFER OF OWNERSHIP	BP OIL COMPANY
BP OIL COMPANY 11-206	2000 ROLLINGWOOD DRIVE	DB96	TRANSFER OF OWNERSHIP	BP OIL COMPANY
BP OIL COMPANY 11-206	2000 ROLLINGWOOD DRIVE	DD01	STORES HAZ MATERIALS CATEGORY	BP OIL COMPANY
BUD'S AUTO CLINIC	1254 MONTGOMERY STREET	DA01	GENERATES & RECYCLES WASTE OIL	SALVATO, MIKE
BUD'S AUTO CLINIC	1254 MONTGOMERY STREET	DD02	STORES HAZ MATERIALS CATEGORY	SALVATO, MIKE
BUDGET FORKLIFT	1079 MONTGOMERY AVENUE	DA01	GENERATES & RECYCLES WASTE OIL	BUDGET FORKLIFT
BUDGET FORKLIFT	1079 MONTGOMERY AVENUE	DD02	STORES HAZ MATERIALS CATEGORY	BUDGET FORKLIFT
CALIFORNIA ETCHING CORP	1212 MONTGOMERY AVE	DA05	GENERATES 26-50 TONS HAZ WASTE	CALIFORNIA ETCHING CORP
CALIFORNIA ETCHING CORP	1212 MONTGOMERY AVE	DD06	STORES HAZ MATERIALS CATEGORY	CALIFORNIA ETCHING CORP
CAPUCHINO HIGH SCHOOL	1501 MAGNOLIA	DA01	GENERATES AND RECYCLES WASTE O	SAN MATEO UNIFIED HIGH SCHOOL DIST
CAPUCHINO HIGH SCHOOL	1501 MAGNOLIA	DD02	STORES HAZ MATERIALS CATEGORY	SAN MATEO UNIFIED HIGH SCHOOL DIST
CERFIFIED AUTO BODY	1201 SAN MATEO AVENUE	DA01	GENERATES & RECYCLES WASTE OIL	CERTIFIED AUTO BODY
CERFIFIED AUTO BODY	1201 SAN MATEO AVENUE	DD02	STORES HAZ MATERIALS CATEGORY	CERTIFIED AUTO BODY
CHEVRON STATION	2101 W SAN BRUNO AVENUE	DA01	GENERATES AND RECYCLES WASTE O	CHEVRON USA INC
CHEVRON STATION	2101 W SAN BRUNO AVENUE	DD03	STORES HAZ MATERIALS CATEGORY	CHEVRON USA INC
CITY AUTO BODY	828 SAN MATEO AVE	DD01	STORES HAZ MATERIALS CATEGORY	OLIVA VICTOR
CITY AUTO BODY	828 SAN MATEO AVE	DA01	GENERATES AND RECYCLES WASTE O	OLIVA VICTOR
COLOR TECH AUTO BODY	1123 SAN MATEO AVE	DA01	GENERATES AND RECYCLES WASTE O	PEGUEROS, JAMES W
COLOR TECH AUTO BODY	1123 SAN MATEO AVE	DD02	STORES HAZ MATERIALS CATEGORY	PEGUEROS, JAMES W
CREST CLEANERS	118 SKYCREST CENTER	DA01	GENERATES AND RECYCLES WASTE O	TONG, IRENE
CREST CLEANERS	118 SKYCREST CENTER	DD02	STORES HAZ MATERIALS CATEGORY	TONG, IRENE
CRESTMOOR AUTO CENTER	2901 W SAN BRUNO AVE	DD01	STORES HAZ MAT	

Business_Name	Address	Category_Code	Category_Description	Owner_Name
CRUZ AUTO BODY & DETAILING	108 SANTA MARIA	DA01	GENERATES AND RECYCLES WASTE O	CRUZ AUTO BODY & DETAILING
CRUZ AUTO BODY & DETAILING	108 SANTA MARIA	DD02	STORES HAZ MATERIALS CATEGORY	CRUZ AUTO BODY & DETAILING
D & J AUTO REPAIR	900 SAN MATEO AVE	DA01	GENERATES AND RECYCLES WASTE O	MAK, DANIEL
D & J AUTO REPAIR	900 SAN MATEO AVE	DD03	STORES HAZ MATERIALS CATEGORY	MAK, DANIEL
D & S AUTO WORKS	1157 MONTGOMERY AVE	DA01	GENERATES & RECYCLES WASTE OIL	D & S AUTO WORKS
D & S AUTO WORKS	1157 MONTGOMERY AVE	DD02	STORES HAZ MATERIALS CATEGORY	D & S AUTO WORKS
E & R TRANSMISSIONS	271 E SAN BRUNO AVE	DA01	GENERATES & RECYCLES WASTE OIL	E & R TRANSMISSIONS
E & R TRANSMISSIONS	271 E SAN BRUNO AVE	DD03	STORES HAZ MATERIALS CATEGORY	E & R TRANSMISSIONS
EUROPEAN CAR SERVICE	928 EL CAMINO REAL	DA01	GENERATES AND RECYCLES WASTE O	EUROPEAN CAR SERVICE
EUROPEAN CAR SERVICE	928 EL CAMINO REAL	DD03	STORES HAZ MATERIALS CATEGORY	EUROPEAN CAR SERVICE
EXTRA CARE	840 SAN MATEO AVE	DA01	GENERATES AND RECYCLES WASTE O	ROSEN MIKE
EXTRA CARE	840 SAN MATEO AVE	DD02	STORES HAZ MATERIALS CATEGORY	ROSEN MIKE
EXXON SERVICE STATION	310 E SAN BRUNO AVENUE	DB96	TRANSFER OF OWNERSHIP	EXXON COMPANY USA
EXXON SERVICE STATION	310 E SAN BRUNO AVENUE	DD01	STORES HAZ MATERIALS CATEGORY	EXXON COMPANY USA
FIRESTONE TIRE & RUBBER CO	1110 EL CAMINO REAL	DA01	GENERATES AND RECYCLES WASTE O	FIRESTONE TIRE & RUBBER CO
FIRESTONE TIRE & RUBBER CO	1110 EL CAMINO REAL	DD03	STORES HAZ MATERIALS CATEGORY	FIRESTONE TIRE & RUBBER CO
FIRPO'S AUTO & TRUCK REPAIR	1029 SAN MATEO AVENUE	DA01	GENERATES & RECYCLES WASTE OIL	FIRPOS AUTO & TRUCK REPAIRR
FIRPO'S AUTO & TRUCK REPAIR	1029 SAN MATEO AVENUE	DD02	STORES HAZ MATERIALS CATEGORY	FIRPOS AUTO & TRUCK REPAIRR
G M AUTO BODY	482 E SAN BRUNO AVE	DA01	GENERATES & RECYCLES WASTE OIL	RAMIREZ, GILBERT A
G M AUTO BODY	482 E SAN BRUNO AVE	DD02	STORES HAZ MATERIALS CATEGORY	RAMIREZ, GILBERT A
GAVA'S AUTO BODY	1121 SAN MATEO AVENUE	DA01	GENERATES & RECYCLES WASTE OIL	GAVAS AUTO BODY
GAVA'S AUTO BODY	1121 SAN MATEO AVENUE	DD02	STORES HAZ MATERIALS CATEGORY	GAVAS AUTO BODY
GENE'S AUTO & PAINT	887 SAN MATEO AVENUE	DA01	GENERATES AND RECYCLES WASTE O	GENES AUTO & PAINT
GENE'S AUTO & PAINT	887 SAN MATEO AVENUE	DD02	STORES HAZ MATERIALS CATEGORY	GENES AUTO & PAINT
GOLDEN GATE NATIONAL CEMETERY	1300 SNEATH LANE	DD03	STORES HAZ MATERIALS CATEGORY	VETERAN ADMINISTRATION
GOLDEN GATE NATIONAL CEMETERY	1300 SNEATH LANE	DA01	GENERATES AND RECYCLES WASTE O	VETERAN ADMINISTRATION
GOLDEN GATE NATIONAL CEMETERY	1300 SNEATH LANE	DD01	STORES HAZ MATERIALS CATEGORY	VETERAN ADMINISTRATION
GOLDEN UNION SERVICE	170 SAN BRUNO AVE	DD03	STORES HAZ MATERIALS CATEGORY	CHEW, TONY
GRACE HONDA	345 EL CAMINO REAL	DA01	GENERATES AND RECYCLES WASTE O	GRACE HONDA
GRACE HONDA	345 EL CAMINO REAL	DD03	STORES HAZ MATERIALS CATEGORY	GRACE HONDA
GRAFEN MACHINE WORKS	1245 SAN MATEO AVE	DA01	GENERATES & RECYCLES WASTE OIL	VIDMAR, R A
GRAFEN MACHINE WORKS	1245 SAN MATEO AVE	DD02	STORES HAZ MATERIALS CATEGORY	VIDMAR, R A
HARMS GRAPHICS	1169 MONTGOMERY AVENUE	DA02	GENERATES LESS THAN 1 TON HAZ	HARMS GRAPHICS
HARMS GRAPHICS	1169 MONTGOMERY AVENUE	DD03	STORES HAZ MATERIALS CATEGORY	HARMS GRAPHICS
HERMANNS INDEPENDENT MERCEDES & B	1014 MONTGOMERY AVE	DD01	STORES HAZ MATERIALS CATEGORY	GARCIA, ALFREDO
HERMANNS INDEPENDENT MERCEDES & B	1014 MONTGOMERY AVE	DA01	GENERATES & RECYCLES WASTE OIL	GARCIA, ALFREDO
HIDALGO'S	1172 MONTGOMERY AVE		GENERATES HAZ WASTE	
HIDALGO'S AUTO BODY WORKS	916 SAN MATEO AVE	DA01	GENERATES & RECYCLES WASTE OIL	
HIDALGO'S AUTO BODY WORKS	916 SAN MATEO AVE	DD02	STORES HAZ MAT CAT III	
HIGH PERFORMANCE ENGINEERING	1137 SAN MATEO	DA01	GENERATES AND RECYCLES WASTE O	HIGH PERFORMANCE ENGINEERING
HIGH PERFORMANCE ENGINEERING	1137 SAN MATEO	DD02	STORES HAZ MATERIALS CATEGORY	HIGH PERFORMANCE ENGINEERING
HOLIDAY CLEANERS	4 BAYHILL SHOPPING CTR	DA01	GENERATES AND RECYCLES WASTE O	HOLIDAY CLEANERS
HOLIDAY CLEANERS	4 BAYHILL SHOPPING CTR	DD02	STORES HAZ MATERIALS CATEGORY	HOLIDAY CLEANERS
HOMEOWNER	988 EASTON		SOIL CONTAMINATION W/ OIL ETC.	
IDETEK INC	1057 SNEATH LANE	DD03	STORES HAZ WASTE	
J M CONSTRUCTION	1175 MONTGOMERY AVENUE	DD01	STORES HAZ MATERIALS CATEGORY	J M CONSTRUCTION
JACK DAVIS CABINETS	632 PEPPER DR	DD02	STOES HAZ MAT CAT III	
JACKS AUTOMOTIVE REPAIR	1077 SAN MATEO AVENUE	DA01	GENERATES & RECYCLES WASTE OIL	PARKIN, ROY
JACKS AUTOMOTIVE REPAIR	1077 SAN MATEO AVENUE	DD02	STORES HAZ MATERIALS CATEGORY	PARKIN, ROY
JIFFY LUBE	1580 EL CAMINO REAL	DA01	GENERATES & RECYCLES WASTE OIL	JIFFY LUBE
JIFFY LUBE	1580 EL CAMINO REAL	DD06	STORES HAZ MATERIALS CATEGORY	JIFFY LUBE
JUNIPERO SERRA COUNTY PARK	0 JUNIPERO SERRA	DA95	SITE INVESTIGATION WASTE GENER	JEFFREY R REED, PR

Business_Name	Address	Category_Code	Category_Description	Owner_Name
JUNIPERO SERRA PARK	1801 CRYSTAL SPRINGS RD		UST	SAN MATEO COUNTY
KARMA AUTOBODY	1201 MONTGOMERY AVENUE	DA01	GENERATES & RECYCLES WASTE OIL	KARMA AUTO BODY
KUSBER ENTERPRISES	1213 SAN MATEO AVE	DA01	GENERATES & RECYCLES WASTE OIL	KUSBER ENTERPRISES
KUSBER ENTERPRISES	1213 SAN MATEO AVE	DD03	STORES HAZ MATERIALS CATEGORY	KUSBER ENTERPRISES
LALOMA AUTO BODY SHOP	848 SAN MATEO AVE	DA01	GENERATES AND RECYCLES WASTE O	LALOMA AUTO BODY SHOP
LALOMA AUTO BODY SHOP	848 SAN MATEO AVE	DD03	STORES HAZ MATERIALS CATEGORY	LALOMA AUTO BODY SHOP
LANGI AIRPORT EQUIPMENT REPAIR INC	1121 MONTGOMERY AVE	DA01	GENERATES AND RECYCLES WASTE O	LANGI, LOU
LANGI AIRPORT EQUIPMENT REPAIR INC	1121 MONTGOMERY AVE	DD02	STORES HAZ MATERIALS CATEGORY	LANGI, LOU
LEADER CLEANERS	1310 EL CAMINO RL H	DA01	GENERATES AND RECYCLES WASTE O	BERNARDO THERESA
LEADER CLEANERS	1310 EL CAMINO RL H	DD02	STORES HAZ MATERIALS CATEGORY	BERNARDO THERESA
MAX SINGER MAZDA SERVICE INC	511 E SAN BRUNO AVE	DA01	GENERATES AND RECYCLES WASTE O	SINGER, MAX
MAX SINGER MAZDA SERVICE INC	511 E SAN BRUNO AVE	DD02	STORES HAZ MATERIALS CATEGORY	SINGER, MAX
MELODY TOYOTA INC	750 EL CAMINO REAL	DA01	GENERATES AND RECYCLES WASTE O	MELODY TOYOTA INC
MELODY TOYOTA INC	750 EL CAMINO REAL	DD03	STORES HAZ MATERIALS CATEGORY	MELODY TOYOTA INC
MILLS PARK CLEANERS	709 CAMINO PLAZA	DA01	GENERATES AND RECYCLES WASTE O	MILLS PARK CLEANERS
MILLS PARK CLEANERS	709 CAMINO PLAZA	DD02	STORES HAZ MATERIALS CATEGORY	MILLS PARK CLEANERS
MONTIS CHEVROLET	222 E SAN BRUNO AVENUE	DD03	STORES HAZ MATERIALS CATEGORY	MONTIS CHEVROLET
MONTIS CHEVROLET	222 E SAN BRUNO AVENUE	DA01	GENERATES AND RECYCLES WASTE O	MONTIS CHEVROLET
MONTIS CHEVROLET	222 E SAN BRUNO AVENUE	DB96	TRANSFER OF OWNERSHIP	MONTIS CHEVROLET
OLES CARBURATOR & ELECTRIC	120 EL CAMINO REAL	DA01	GENERATES & RECYCLES WASTE OIL	OLSEN, HENRY
OLYMPIC STATION	2890 SAN BRUNO AVENUE	DD03	STORES HAZ MATERIALS CATEGORY	BOUDAGHION, ROUBIK
OLYMPIC STATION	2890 SAN BRUNO AVENUE	DA01	GENERATES AND RECYCLES WASTE O	BOUDAGHION, ROUBIK
OLYMPIC STATION	2890 SAN BRUNO AVENUE	DD01	STORES HAZ MATERIALS CATEGORY	BOUDAGHION, ROUBIK
ONE HOUR DRY CLEANING	100 EL CAMINO REAL	DA01	GENERATES AND RECYCLES WASTE O	KIM, MAENG SO
ONE HOUR DRY CLEANING	100 EL CAMINO REAL	DD02	STORES HAZ MATERIALS CATEGORY	KIM, MAENG SO
OYSTER POINT AUTO	1049 SAN MATEO AVENUE	DA01	GENERATES & RECYCLES WASTE OIL	OYSTER POINT AUTO
OYSTER POINT AUTO	1049 SAN MATEO AVENUE	DD01	STORES HAZ MATERIALS CATEGORY	OYSTER POINT AUTO
PACIFIC BELL	840 W SAN BRUNO AVE	DD03	STORES HAZ MATERIALS CATEGORY	PACIFIC BELL
PACIFIC BELL	50	DD04	STORES HAZ MATERIALS CATEGORY	PACIIFIC BELL
PDQ 1 HOUR PHOTO	210 TANFORAN PARK MALL #C	DD02	STORES HAZ MATERIALS CATEGORY	PDQ 1 HOUR PHOTO CALIFORNIA
PENINSULA TOW SERVICE INC	1071 MONTGOMERY AVENUE	DA01	GENERATES & RECYCLES WASTE OIL	PENINSULA TOW SERVICE INC
PENINSULA TOW SERVICE INC	1071 MONTGOMERY AVENUE	DD02	STORES HAZ MATERIALS CATEGORY	PENINSULA TOW SERVICE INC
PHASE II	1245 MONTGOMERY AVENUE	DD07	STORES HAZ MATERIAL CATEGORY V	PHASE II
PHASE II	1245 MONTGOMERY AVENUE	DA06	GENERATES 51-250 TONS HAZ WAST	PHASE II
PHASE II	1229 MONTGOMERY AVE	DA95	SITE INVESTIGATION WASTE GENER	PHASE II
PRESTO PRINTS	5 BAYHILL SHOPPING CENTER	DA01	GENERATES AND RECYCLES WASTE O	PRESTO PRINTS
PRESTO PRINTS	5 BAYHILL SHOPPING CTR	DD02	STORES HAZ MATERIALS CATEGORY	DEANS PHOTO SERVICE INC
PRESTO PRINTS	5 BAYHILL SHOPPING CENTER	DD02	STORES HAZ MATERIALS CATEGORY	PRESTO PRINTS
QUALITY TUNE-UP INC	501 EL CAMINO REAL	DA01	GENERATES & RECYCLES WASTE OIL	QUALITY TUNE-UP INC
QUALITY TUNE-UP INC	501 EL CAMINO REAL	DD03	STORES HAZ MATERIALS CATEGORY	QUALITY TUNE-UP INC
R & P BODY SHOP	1089 MONTGOMERY	DA01	GENERATES AND RECYCLES WASTE O	R & P BODY SHOP
R & P BODY SHOP	1089 MONTGOMERY	DD01	STORES HAZ MATERIALS CATEGORY	R & P BODY SHOP
RHEE, JACK OSHICK	1799 EL CAMINO REAL	DD01	STORES HAZ MATERIALS CATEOGRY	ARCO PRODUCTS CO
RICHARDS AUTO REPAIR	910 SAN MATEO AVE #A	DA01	GENERATES & RECYCLES WASTE OIL	
RICHARDS AUTO REPAIR	910 SAN MATEO AVE #A	DD02	STORES HAZ MAT CAT III	
ROBINSON'S CARPETS	701 SAN MATEO AVENUE	DD01	STORES HAZ MATERIALS CATEGORY	ROBINSONS CARPET SERVICE
ROLLINGWOOD AUTO SERVICE	2001 ROLLINGWOOD DRIVE	DD02	STORES HAZ MATERIALS CATEGORY	ROLLINGWOOD AUTO SERVICE
ROLLINGWOOD AUTO SERVICE	2001 ROLLINGWOOD DRIVE	DA01	GENERATES AND RECYCLES WASTE O	ROLLINGWOOD AUTO SERVICE
ROLLINGWOOD AUTO SERVICE	2001 ROLLINGWOOD DRIVE	DD01	STORES HAZ MATERIALS CATEGORY	ROLLINGWOOD AUTO SERVICE
ROSS AUTO CLINIC	118 EL CAMINO REAL	DA01	GENERATES AND RECYCLES WASTE O	ROSS, JERRY
RUDYS AUTO CARE	1188 MONTGOMERY AVE	DA01	GENERATES AND RECYCLES WASTE O	PASION, RUDY
RUDYS AUTO CARE	1188 MONTGOMERY AVE	DD02	STORES HAZ MATERIALS CATEGORY	PASION, RUDY

Business_Name	Address	Category_Code	Category_Description	Owner_Name
SAN BRUNO AUTO CENTER INC	965 SAN MATEO AVENUE	DA01	GENERATES & RECYCLES WASTE OIL	SAN BRUNO AUTO CENTER INC
SAN BRUNO AUTO CENTER INC	965 SAN MATEO AVENUE	DD03	STORES HAZ MATERIALS CATEGORY	SAN BRUNO AUTO CENTER INC
SAN BRUNO AUTO DISMANTLERS INC	1069 SAN MATEO AVENUE	DA01	GENERATES & RECYCLES WASTE OIL	SAN BRUNO AUTO DISMANTLERS INC
SAN BRUNO AUTO DISMANTLERS INC	1069 SAN MATEO AVENUE	DD02	STORES HAZ MATERIALS CATEGORY	SAN BRUNO AUTO DISMANTLERS INC
SAN BRUNO AUTO KRAFT	1253 SAN MATEO AVE	DDO2	STORES HAZ MAT CAT III	
SAN BRUNO AUTO KRAFT	1253 SAN MATEO AVE	DA01	GENERATES & RECYCLES WASTE OIL	
SAN BRUNO AUTO KRAFT	1253 SAN MATEO AVE	DA01	GENERATES AND RECYCLES WASTE O	BRIEN, ROGER
SAN BRUNO AUTO KRAFT	1253 SAN MATEO AVE	DD02	STORES HAZ MATERIALS CATEGORY	BRIEN, ROGER
SAN BRUNO CAR WASH	512 EL CAMINO REAL	DD01	STORES HAZ MATERIALS CATEGORY	SAN BRUNO CAR WASH
SAN BRUNO CORPORATION YARD	225 HUNTINGTON AVE	DA01	GENERATES AND RECYCLES WASTE O	CITY OF SAN BRUNO
SAN BRUNO CORPORATION YARD	225 HUNTINGTON AVE	DD03	STORES HAZ MATERIALS CATEGORY	CITY OF SAN BRUNO
SAN BRUNO EXXON	800 EL CAMINO REAL	DA01	GENERATES AND RECYCLES WASTE O	BARBARIA, ANTHONY K
SAN BRUNO EXXON	800 EL CAMINO REAL	DD01	STORES HAZ MATERIALS CATEGORY	EXXON COMPANY, USA
SAN BRUNO FIRE DEPT.	1999 EARL AVE		DIESEL #2 TANK	SAN BRUNO FIRE DEPT
SAN BRUNO FORD INC	601 EL CAMINO REAL	DA01	GENERATES AND RECYCLES WASTE O	SAN BRUNO FORD INC
SAN BRUNO FORD INC	601 EL CAMINO REAL	DD03	STORES HAZ MATERIALS CATEGORY	SAN BRUNO FORD INC
SAN BRUNO GARBAGE CO INC	101 TANFORAN AVE	DD03	STORES HAZ MATERIALS CATEGORY	SAN BRUNO GARBAGE CO INC
SAN BRUNO GOODYEAR	205 W SAN BRUNO AVE	DA01	GENERATES & RECYCLES WASTE OIL	SAN BRUNO GOODYEAR
SAN BRUNO GOODYEAR	205 W SAN BRUNO AVE	DD03	STORES HAZ MATERIALS CATEGORY	SAN BRUNO GOODYEAR
SAN BRUNO SHEET METAL TANK CLOSURE	828 SAN MATEO AVE	DB95	SITE CONSULTATION (CLEAN-UP)	SEMCO OIL HEAT ENGINEERING DIV
SAN BRUNO SHELL	798 EL CAMINO REAL	DA01	GENERATES & RECYCLES WASTE OIL	CHANG, JAVIER
SAN BRUNO SHELL	798 EL CAMINO REAL	DD02	STORES HAZ MATERIALS CATEGORY	CHANG, JAVIER
SEARS ROEBUCK AND CO	50	DD04	STORES HAZ MATERIALS CATEGORY	SEARS ROEBUCK AND CO
SEARS ROEBUCK AND CO	1178 EL CAMINO REAL	DA01	GENERATES & RECYCLES WASTE OIL	SEARS ROEBUCK AND CO
SHAHIN'S PENINSULA TRANSMISSION	200 EL CAMINO REAL	DD01	STORES HAZ MATERIALS CATEGORY	NAZARI, SHAHIN
SHAHIN'S PENINSULA TRANSMISSION	200 EL CAMINO REAL	DA01	GENERATES & RECYCLES WASTE OIL	NAZARI, SHAHIN
SHELL OIL CO SERVICE STATION	1199 EL CAMINO REAL	DB96	TRANSFER OF OWNERSHIP	AMSIA MGT CORP
SHELL OIL CO SERVICE STATION	1199 EL CAMINO REAL	DD01	STORES HAZ MATERIALS CATEGORY	AMSIA MGT CORP
SKYLINE COLLEGE SITE INSPECTION	3300 COLLEGE DR	DB95	SITE CONSULTATION (CLEAN-UP)	TANK PROTECT ENGINEERING
SKYLINE COLLEGE-PHOTO LAB,BLDG 3/	3300 COLLEGE DR	DA02	GENERATES LESS THAN 1 TON HAZ	SAN MATEO COUNTY COLLEGE DIST
SKYLINE COLLEGE-PHOTO LAB,BLDG 3/	3300 COLLEGE DR	DA02	GENERATES LESS THAN 1 TON HAZ	SAN MATEO COUNTY COLLEGE DIST
SKYLINE COLLEGE-PHOTO LAB,BLDG 3/	3300 COLLEGE DR	DD01	STORES HAZ MATERIALS CATEGORY	SAN MATEO COUNTY COLLEGE DIST
SKYLINE COLLEGE-PHOTO LAB,BLDG 3/	3300 COLLEGE DR	DD01	STORES HAZ MATERIALS CATEGORY	SAN MATEO COUNTY COLLEGE DIST
SKYLINE COLLEGE-PHOTO LAB,BLDG 3/	3300 COLLEGE DR	DA01	GENERATES AND RECYCLES WASTE O	SAN MATEO COUNTY COLLEGE DIST
SKYLINE COLLEGE-PHOTO LAB,BLDG 3/	3300 COLLEGE DR	DA01	GENERATES AND RECYCLES WASTE O	SAN MATEO COUNTY COLLEGE DIST
SPEEDIE OIL LUBE & TUNE UP	801 EL CAMINO	DA01	GENERATES AND RECYCLES WASTE O	SPEEDIE OIL LUBE & TUNE UP
SPEEDIE OIL LUBE & TUNE UP	50	DD04	STORES HAZ MATERIALS CATEGORY	SPEEDIE OIL LUBE & TUNE UP
SPORTS APPAREL MARKETING	1133 SAN MATEO AVE	DA01	GENERATES AND RECYCLES WASTE O	SPORTS APPAREL MARKETING
SPORTS APPAREL MARKETING	1133 SAN MATEO AVE	DD02	STORES HAZ MATERIALS CATEGORY	SPORTS APPAREL MARKETING
TECHNICS	1037 SAN MATEO AVE	DA01	GENERATES AND RECYCLES WASTE O	CHAN, ALAN
TOM'S AUTO SERVICE & REPAIR	798 SAN BRUNO AVENUE EAST	DA01	GENERATES & RECYCLES WASTE OIL	TOMS AUTO SERVICE & REPAIR
TOM'S AUTO SERVICE & REPAIR	798 SAN BRUNO AVENUE EAST	DD02	STORES HAZ MATERIALS CATEGORY	TOMS AUTO SERVICE & REPAIR
TONYS AUTO REPAIR	692 EL CAMINO REAL	DA01	GENERATES & RECYCLES WASTE OIL	KRAUS, ANTON
TONYS AUTO REPAIR	692 EL CAMINO REAL	DD02	STORES HAZ MATERIALS CATEGORY	KRAUS, ANTON
TRIPLE R AUTO BODY	1013 MONTGOMERY	DA01	GENERATES & RECYCLES WASTE OIL	TRIPLE R AUTO BODY
TRIPLE R AUTO BODY	1013 MONTGOMERY	DD02	STORES HAZ MATERIALS CATEGORY	TRIPLE R AUTO BODY
U S POSTAL SERVICE	850 CHERRY AVENUE	DD01	STORES HAZ MATERIALS CATEGORY	U S POSTAL SERVICE JOHN BELL
UNION 76	401 SAN MATEO AVENUE	DA01	GENERATES & RECYCLES WASTE OIL	UNION OIL SERVICE STATION#0109
UNION 76	401 SAN MATEO AVENUE	DD02	STORES HAZ MATERIALS CATEGORY	UNION OIL SERVICE STATION#0109
UNION OIL SERVICE STATION 3857	170 W SAN BRUNO AVE	DA01	GENERATES & RECYCLES WASTE OIL	UNION OIL SERVICE STATION 3857
UNION OIL SERVICE STATION 3857	170 W SAN BRUNO AVE	DD03	STORES HAZ MATERIALS CATEGORY	UNION OIL SERVICE STATION 3857
UNITED AIRLINES MOC	SFO AIRPORT	DA10	GENERATES 2001 + TONS HAZ WASTE	UNITED AIRLINES

Business_Name	Address	Category_Code	Category_Description	Owner_Name
VALLEJO AUTO BODY & PAINT	1269 SAN MATEO AVE	DA01	GENERATES AND RECYCLES WASTE O	VALLEJO, JAIME
VALLEJO AUTO BODY & PAINT	1269 SAN MATEO AVE	DD02	STORES HAZ MATERIALS CATEGORY	VALLEJO, JAIME
VERNS AUTO SERVICE	701 SAN MATEO AVE	DA01	GENERATES & RECYCLES WASTE OIL	IZHAQ, JEREIS
VERNS AUTO SERVICE	701 SAN MATEO AVE	DD02	STORES HAZ MATERIALS CATEGORY	IZHAQ, JEREIS
VINCE'S SHELL FISH COMPANY	1063 MONTGOMERY AVENUE	DD01	STORES HAZ MATERIALS CATEGORY	VINCES SHELL FISH CO
VINCES ANTIQUE & MODERN CYCLE SUPPL	908 SAN MATEO AVENUE	DA01	GENERATES & RECYCLES WASTE OIL	VINCES ANTIQUE & MODERN CYCLE SUP
VINCES ANTIQUE & MODERN CYCLE SUPPL	908 SAN MATEO AVENUE	DD02	STORES HAZ MATERIALS CATEGORY	VINCES ANTIQUE & MODERN CYCLE SUP
WESTERN AUTO TOP	1136 MONTGOMERY AVE	DD02	STORES HAZ MATERIALS CATEGORY	ANDERSON, BRIAN
WESTERN DIVISION NAVAL FACIL-CODE 09	900 COMMODORE DRIVE	DA01	GENERATES AND RECYCLES WASTE O	WESTERN DIVISION NAVAL FACIL
WESTERN DIVISION NAVAL FACIL-CODE 09	900 COMMODORE DRIVE	DD02	STORES HAZ MATERIALS CATEGORY	WESTERN DIVISION NAVAL FACIL
WINSTON TIRE COMPANY	504 W SAN BRUNO AVE	DA01	GENERATES & RECYCLES WASTE OIL	WINSTON TIRE
WINSTON TIRE COMPANY	504 W SAN BRUNO AVE	DD03	STORES HAZ MATERIALS CATEGORY	WINSTON TIRE
ZAGAR AUTO BODY	1129 SAN MATEO AVENUE	DD02	STORES HAZ MATERIALS CATEGORY	ZAGAR AUTO BODY

Appendix 5: Federal & State HAZMAT Sites

business	address	city	zip	event1	event2	qual2	event3	qual3	source
A TO Z AUTOBODY & PAINT	108 SANTA MARIA	SAN BRUNO	94066	SQG					US EPA RCRA SITES
A1 AUTOBODY SHOP	1720 EL CAMINO REAL	SAN BRUNO	94066	SQG					US EPA RCRA SITES
ACCUFLEET	1194 CHERRY AVE	SAN BRUNO	94066	SQG					US EPA RCRA SITES
ACCUTRONIX	1073 SAN MATEO AVE	SAN BRUNO	94066	RED					CAL EPA CALSITES DATABASE
AIRPORT CITY AUTOBODY	1065 SAN MATEO AVE	SAN BRUNO	94066	LQG					US EPA RCRA SITES
AUTO WORLD	860 SAN MATEO AVE	SAN BRUNO	94066	LQG					US EPA RCRA SITES
B & D AUTO WORLD	1177 SAN MATEO AVE	SAN BRUNO	94066	SQG					US EPA RCRA SITES
BARTEL RICHARD	189 LINDEN AVE	SAN BRUNO	94066	RED					CAL EPA CALSITES DATABASE
BRIGETTE CLEANERS	291 EL CAMINO REAL	SAN BRUNO	94066	RED					CAL EPA CALSITES DATABASE
BUG AUTOBODY & SALES	1201 SAN MATEO AVE	SAN BRUNO	94066	LQG					US EPA RCRA SITES
CALIFORNIA ETCHING CO	1217 MONTGOMERY AVE	SAN BRUNO	94066	LQG					US EPA RCRA SITES
CANNONBALL QUICK COPY &PRINTING	1474 EL CAMINO REAL	SAN BRUNO	94066	RED					CAL EPA CALSITES DATABASE
CARGILL INC	1000 CHERRY AVE	SAN BRUNO	94066	RED					CAL EPA CALSITES DATABASE
CITY BODY SHOP	828 SAN MATEO AVE	SAN BRUNO	94066	SQG					US EPA RCRA SITES
COMMERCIAL GRINDING	1193 SAN MATEO AVE	SAN BRUNO	94066	RED					CAL EPA CALSITES DATABASE
CROCKER H S CO	1000 SAN MATEO AVE	SAN BRUNO	94066	LQG					US EPA RCRA SITES
DARDANI TECHNICAL SERV	131 GOODWIN SR	SAN BRUNO	94066						CAL EPA CALSITES DATABASE
DARDANI TECHNICAL SERVICES	131 GOODWIN DR	SAN BRUNO	94066	NFA					CAL EPA CALSITES DATABASE
DISMANTLERS EXCHANGE	1069 SAN MATEO AVE	SAN BRUNO	94066	RED					CAL EPA CALSITES DATABASE
DISMANTLERS EXCHANGE	1059 SAN MATEO AVE	SAN BRUNO	94066	RED					CAL EPA CALSITES DATABASE
DREXLER'S	1247 MONTGOMERY AVE	SAN BRUNO	94066	NFA					CAL EPA CALSITES DATABASE
ELSEY BILL CADILLAC	407 TANFORAN PARK	SAN BRUNO	94066	NFA					CAL EPA CALSITES DATABASE
EURO DESIGN BODY & PAINT	1155 SAN MATEO AVE	SAN BRUNO	94066	SQG					US EPA RCRA SITES
EUROPEAN CAR SERVICE & PARTS	928 EL CAMINO REAL	SAN BRUNO	94066	SQG					US EPA RCRA SITES
EXPRESSLY PORTRAITS	1150 EL CAMINO REAL UNIT 227	SAN BRUNO	94066	SQG					US EPA RCRA SITES
EXTRA CARE AUTO REPAIR	840 SAN MATEO AVE	SAN BRUNO	94066	SQG					US EPA RCRA SITES
G M AUTO BODY	511 E SAN BRUNO AVE	SAN BRUNO	94066	SQG					US EPA RCRA SITES
GAVAS AUTO BODY	1121 SAN AMTEO AVE	SAN BRUNO	94066	LQG					US EPA RCRA SITES
GENE'S BODY SHOP	887 SAN MATEO AVE	SAN BRUNO	94066	SQG					US EPA RCRA SITES
GOLDUST SALES	1224 MONTGOMERY AVE	SAN BRUNO	94066	RED					CAL EPA CALSITES DATABASE
HARMS GRAPHICS	1169 MONTGOMERY AVE	SAN BRUNO	94066	SQG					US EPA RCRA SITES
HORN PEST CONTROL	1149 MONTGOMERY	SAN BRUNO	94066	RED					CAL EPA CALSITES DATABASE
IDEAL CARPET CLEAN	470 FERNWOOD DR	SAN BRUNO	94066	RED					CAL EPA CALSITES DATABASE
JOES SAN BRUNO UNOCAL 76	401 SAN MATEO AVE	SAN BRUNO	94066	SQG					US EPA RCRA SITES
JONES WT JR	2131 ROLLINGWOOD DR	SAN BRUNO	94066	NFA					CAL EPA CALSITES DATABASE
JULES ART	115 PIEDMONT	SAN BRUNO	94066	RED					CAL EPA CALSITES DATABASE
KADOYAN AVA D	734 KAINS AVE	SAN BRUNO	94066	NFA					CAL EPA CALSITES DATABASE
KAISER BAYHILL MEDICAL OFFICES	801 TRAEGER	SAN BRUNO	94066	SQG					US EPA RCRA SITES
KARMA AUTOBODY	1201 MONTGOMERY AVE	SAN BRUNO	94066	LQG					US EPA RCRA SITES
KAUFMANNS CAMERAS	555 SAN MATEO AVE	SAN BRUNO	94066	SQG					US EPA RCRA SITES
KITS CAMERA	TANFORAN SHOP CNTR	SAN BRUNO	94066	SQG					US EPA RCRA SITES
LAMINATED FABRICATORS	1145 SAN MATEO AVE	SAN BRUNO	94066	NFA					CAL EPA CALSITES DATABASE
LES VOGEL CHEVY	222 E SAN BRUNO AVE	SAN BRUNO	94066	SQG					US EPA RCRA SITES
LYNN'S PRINT SHOP	657 SAN MATEO AVE	SAN BRUNO	94066	RED					CAL EPA CALSITES DATABASE
MACFARLAND RJ	100 EL CAMINO REAL	SAN BRUNO	94066	RED					CAL EPA CALSITES DATABASE
MARELICH MFG	44 LAYNE PL	SAN BRUNO	94066	RED					CAL EPA CALSITES DATABASE
MCCULLOCH MACHINE SHOP	1013 MONTGOMERY ST	SAN BRUNO	94066	SQG					US EPA RCRA SITES
MICRO GARNET ABRASIVE	600 SAN MATEO AVE	SAN BRUNO	94066	PEARL					CAL EPA CALSITES DATABASE
MICRO MACHINE TOOL & DIE WORKS	1077 SAN MATEO AVE	SAN BRUNO	94066	RED					CAL EPA CALSITES DATABASE
MOBIL OIL CORP SERV STA	717 E SAN BRUNO	SAN BRUNO	94066	LQG					US EPA RCRA SITES
MY CLEANERS	462 SAN MATEO AVE	SAN BRUNO	94066	RED					CAL EPA CALSITES DATABASE
NAVAL FACILITY ENGINEERING	900 COMMODORE DR	SAN BRUNO	94066	DS1	PA1	N			US EPA CERCLA SITES

business	address	city	zip	event1	event2	qual2	event3	qual3	source
NIKON PRECISION	1051 SNEATH LN	SAN BRUNO	94066	SQG					US EPA RCRA SITES
NORGE VILLAGE DRY CLEANERS	320 EL CAMINO REAL	SAN BRUNO	94066	RED					CAL EPA CALSITES DATABASE
OLES CARB AND ELEC	120 EL CAMINO REAL	SAN BRUNO	94066	SQG					US EPA RCRA SITES
P A L EXCAVATING	2501 VALLEYWOOD DR	SAN BRUNO	94066	NFA					CAL EPA CALSITES DATABASE
QUICK STOP 1 HR PHOTO	1310 EL CAMINO REAL #B	SAN BRUNO	94066	SQG					US EPA RCRA SITES
S T V OF SAN FRANCISCO	1176 CHERRY AVE	SAN BRUNO	94066	RED					CAL EPA CALSITES DATABASE
SPEED-O-ELECTRIC	400 E SAN BRUNO AVE	SAN BRUNO	94066	RED					CAL EPA CALSITES DATABASE
TERMI-KILL	1045 MONTGOMERY AVE	SAN BRUNO	94066	RED					CAL EPA CALSITES DATABASE
TEXACO INC	SFIA	SAN BRUNO	94066	DS1	PA1	L	PA2	N	US EPA CERCLA SITES
WALGREEN #2939	333 EL CAMINO REAL	SAN BRUNO	94066	SQG					US EPA RCRA SITES

Appendix 6: San Bruno Well Information

well_name	Latitude	Longitude	well_address	site_name	well_type	date_drilled	well_depth
#1 CORPORATION YARD S/E	37.619640	-122.404408		CITY OF SAN BRUNO	M	1920	200
#12 ELM AVE.	37.628415	-122.418040	Elm Ave.	CITY OF SAN BRUNO	M	1960	478
#13 SHANNON	37.624272	-122.412586	El Camino Real	CITY OF SAN BRUNO	M	1966	500
#14 CITY PARK	37.614648	-122.414985		CITY OF SAN BRUNO	D	1972	442
#15 COMMODORE PARK	37.631963	-122.424320		CITY OF SAN BRUNO	D	1984	534
#16 FOREST LANE PARK	37.633335	-122.416019		CITY OF SAN BRUNO	D	1993	515
#17 CORP. YARD S/W	37.619572	-122.404605		CITY OF SAN BRUNO	D	1993	515
#2 MAPLE YARD	37.621211	-122.421087		CITY OF SAN BRUNO	Y	1942	426
#2A CEDAR AVE. PARK	37.621498	-122.421264		CITY OF SAN BRUNO	Y	1948	320
#2B CHESTNUT AVE PARK	37.622182	-122.420046	600 Chestnut Ave	CITY OF SAN BRUNO	Y	1948	426
#3 CORP. YARD N/E	37.620027	-122.404793	Huntington Ave. & San Felipe	CITY OF SAN BRUNO	D	1946	548
#4 OAK AVE.	37.622445	-122.418684	590 Oak Ave	CITY OF SAN BRUNO	Y	1948	475
#5 MILTON	37.620533	-122.405346		CITY OF SAN BRUNO	Y	1932	548
#6 SAN MARCO	37.617062	-122.405583		CITY OF SAN BRUNO	Y	1942	479
#7 CORP. YARD	0.000000	0.000000	Huntington Ave. & San Felipe	CITY OF SAN BRUNO	Y	1924	0
#8 CORP. YARD	0.000000	0.000000	Huntington Ave. & San Felipe	CITY OF SAN BRUNO	Y	1924	0
1-83 FOREST LANE TEST HOLE	37.633171	-122.416339		CITY OF SAN BRUNO	M	1983	603
2-83 COMMODORE PARK	37.631628	-122.424055		CITY OF SAN BRUNO	M	1983	575
3-83 CITY PARK	37.617528	-122.412711		CITY OF SAN BRUNO	M	1983	490
CORPORATION YARD TEST HOLE	0.000000	0.000000		CITY OF SAN BRUNO	M	1988	514
HUNTINGTON AND GEORGIA AVE	37.621257	-122.405740	Huntington And Georgia Ave	CITY OF SAN BRUNO	Y	1936	554
HUNTINGTON AVE. PUMP STATION WELL	0.000000	0.000000		CITY OF SAN BRUNO	Y	1936	565
LOMITA PARK	37.618073	-122.403622	SAN ANTONIO & SAN MARCO	CITY OF SAN BRUNO	Y	1940	447
TH1	37.613741	-122.418267		CITY OF SAN BRUNO	O		0
TH2	37.633912	-122.412188		CITY OF SAN BRUNO	O		0
TH3	37.628204	-122.410053		CITY OF SAN BRUNO	O		0
TH4	37.632784	-122.417527		CITY OF SAN BRUNO	O		0
TH5	37.615730	-122.403468		CITY OF SAN BRUNO	O		0
HUNTINGTON AVE	37.620604	-122.405145		CITY OF SAN BRUNO	Y	1927	560

surf_elev	DTW	date_meas	casing_mat	diam	seal_depth	perf_top	pump_rate	pumping_depth	log	e_log
12.46	125	3/52		0	0	0	0	0	N	N
78.71	0	0		14	0	150	0	0	N	N
32.39	194	3/66	steel	14	0	155	0	0	Y	N
0	240	5/92	steel	12	0	103	120	0	Y	N
0	0	0	steel	14	0	300	493	0	Y	N
0	240.6	7/1/94		0	0	0	470	0	N	N
0	215	7/8/94	steel	16	280	300	274	0	Y	N
0	147	1942	CAStovepipe	14	0	234	0	0	Y	N
0	0	0		14	0	0	670	0	N	N
90.9	171	1948	CAStovepipe	14	0	226	0	0	Y	N
11.48	117	4/52		14	110	220	288	0	Y	N
77.2	153	1948	CAstovepipe	14	0	200	0	0	Y	N
13.62	115	1954	steel	12	0	0	0	0	N	N
0	0	0		14	0	0	0	0	N	N
0	0	0		0	0	0	0	0	N	N
0	0	0		0	0	0	0	0	N	N
0	16	4/22/83	pvc	2	50	160	0	0	Y	Y
0	182	4/22/83	pvc	2	50	320	0	0	Y	Y
0	234	4/22/83	pvc	2	50	120	0	0	Y	Y
0	0	0		0	0	0	0	0	Y	Y
0	0	0		12	0	0	0	0	Y	N
0	0	0		12	0	0	0	0	Y	N
0	0			12	0	0	0	0	N	N
0	0			0	0	0	0	0		
0	0			0	0	0	0	0		
0	0			0	0	0	0	0		
0	0			0	0	0	0	0		
0	0			0	0	0	0	0		
0	0		steel	12	0	260	0	0	N	N

well_name_2	Source	comments1
#1 CORPORATION YARD S/E	9,10,14	The information on this well as stated above was provided by the
#12 ELM AVE.	4,9,10	
#13 SHANNON	4,9,10	
#14 CITY PARK	9	
#15 COMMODORE PARK	5,9,4	
#16 FOREST LANE PARK	9,4	
#17 CORP. YARD S/W	5,9	
#2 MAPLE YARD	4,9,10,1	
#2A CEDAR AVE. PARK	9,14	The only record that exists of this well is from the
#2B CHESTNUT AVE PARK	4,9,10	
#3 CORP. YARD N/E	4,9,10,1	
#4 OAK AVE.	4,9,10	
#5 MILTON	4,9,10,1	Probably two old wells at this site,
#6 SAN MARCO	9	Artesian Well, very soft water.
#7 CORP. YARD	9	
#8 CORP. YARD	9	
1-83 FOREST LANE TEST HOLE	1,8	
2-83 COMMODORE PARK	1,8	
3-83 CITY PARK	1,8	
CORPORATION YARD TEST HOLE	3,5,8	
HUNTINGTON AND GEORGIA AVE	4,14	
HUNTINGTON AVE. PUMP STATION WELL	4	
LOMITA PARK	4,14	
TH1	15	These test holes were drilled from 69-71 in consultation with
TH2	15	
TH3	15	
TH4	15	
TH5	15	
HUNTINGTON AVE	4,14	

comments2	comments3
City of San Bruno in their 'Well History Log Report 1994.'	
City of San Bruno's 'Well History Log Report 1994.'	
according to George Kanakaris,	City of San Bruno Water Dept.
'In the old days' women used to collect water	from that well to wash their hair because
David Keith Todd. Were used to determine best placement of	City Park #14 well. G-log, E-log are

comments4
Another 'Well #1' exists in the Huntington Avenue Corporation
the well water was so 'soft' - George Kanakaris,
reported. San Bruno has no info on them.

Well_Name	Latitude	Longitude	City	Site_Name	Consultant	Well_Type	Date_Drilled	Well_Depth
GGNC-1	37.636015	122.428779	SAN BRUNO	GOLDEN GATE NATIONAL CEMENTARY	Boone Cook & Assoc	Y	1941	600
GGNC-2	37.635683	122.434675	SAN BRUNO	GOLDEN GATE NATIONAL CEMENTARY	Boone Cook & Assoc	Y	1952	630
GGNC-3	37.634828	122.425728	SAN BRUNO	GOLDEN GATE NATIONAL CEMENTARY	Boone Cook & Assoc	Y		0
GGNC-4	37.637276	122.420991	SAN BRUNO	GOLDEN GATE NATIONAL CEMENTARY	Boone Cook & Assoc	Y	1960	645
SHELLFISH WELL	37.636210	122.411525	SAN BRUNO	VINCES SHELLFISH CO	Wilkinson Enterprises	O	05/30/91	450
OLD NURSERY	37.635290	122.422839	SAN BRUNO	AVANSINO MORTENSEN CO		Y	1942	500
MW-B2D	37.611293	-122.390798	SAN BRUNO	SFO-UNITED-PLOT1	Bruns & McDonnell	X	07/24/93	194
MW-B4D	37.610514	-122.389501	SAN BRUNO	SFO-UNITED-PLOT1	Burns & McDonnell	X	07/23/93	160
USGS - D	37.628100	-122.397800	SAN BRUNO	USGS - SFIA DEEP WELL	USGS	M	9/21/89	141

Surf_Elev	DTW	Date_Meas	Casing_Mat	Diam	Gauge	Seal_Mat	Seal_Depth	Perf_Top	Slot_Size	Geol_Log	Elec_Log	Source
110.37	0			0	0		0	0	0	Y	N	2
0	0			0	0		0	0	0	Y	N	2
0	0			0	0		0	0	0	N	N	2
63.15	0			0	0		0	0	0	Y	N	2
0	0		pvc	5	0	Cement	20	0	0	N	N	10
85	241			12	0		0	0	0	N	N	10
4.91	0			0	0		0	0	0	Y	N	6
7.49	0			0	0		0	0	0	Y	N	6
4.25	49.25	06/08/94	PVC	0	40	BENTONITE	50	116	0.02	Y	N	5,7

Comments1	Comments2	Comments3
no information at all - just LOCATION on map in report		
old nursery well used for irrigation is now paved over by a	parking lot.	
Borings - Now cemented up		
Borings - Now cemented up		
Much more water quality info avialable on log	Tritium dead according to Scott Hamlin report	Good water depth info since 1989

Key to Terms and Abbreviations in Appendices

note: disregard negative sign for any longitude value. Latitude & Longitude locations are for the most part approximate. They are based on paper maps which have been subsequently geocoded at a 1:100,000 scale.

Appendix of San Bruno Wells

4 wells (no lat. & long.) with different well names have been reported in various reports, but their locations or alias' are unknown. We present this information as is and we are unable to confirm or deny the existence of these 4 wells.

well_type Y = abandoned; does not meet well abandonement standards
M = monitoring well
D = active drinking water well
O = Other; test holes which are unknown except for paper map.

surf_elev Surface elevation of top of casing. Datum is feet above mean sea level.

DTW Depth To Water. Depth in feet below top of casing.

date_meas Date water level was measured.

seal_depth Depth to the bottom of the seal - usually to the bottom of the bentonite plug.

perf_top Depth to the top of casing perforations.

pump_rate Units are in gallons per minute (gpm)

pumping_depth Depth to water when well is pumping.

log Geologic well log availability.

e_log Geophysical log availablility.

Appendix of Other Deep Wells

well_type Y = abandoned; does not meet state well abandonement standards
M = monitoring well
A = agricultural well
X = abandoned; meets state well standards
O = other well; intermittently pumped - water used for washing.

surf_elev Surface elevation of top of casing. Datum is feet above mean sea level.

DTW Depth To Water. Depth in feet below top of casing.

date_meas Date water level was measured.

seal_depth Depth to the bottom of the seal - usually to the bottom of the bentonite plug.

perf_top Depth to the top of casing perforations.

pump_rate Units are in gallons per minute (gpm)

Appendix of LUFT Wells

Site# County Remedial Oversight Program (CROP) site number.

well_type Y = abandoned; does not meet state well abandonement standards
M = monitoring well
X = abandoned; meets state well standards
O = other well

surf_elev Surface elevation of top of casing. Datum is feet above mean sea level.

DTW Depth To Water. Depth in feet below top of casing.

date_meas Date water level was measured.

seal_depth Depth to the bottom of the seal - usually to the bottom of the bentonite plug.

perf_top Depth to the top of casing perforations.

pump_rate Units are in gallons per minute (gpm)

flow_dir 0 = north; 90 = west; 180 = south; 270 = east

log Geologic well log availability.

e_log Geophysical log availablility.

TPHgas units in ppb

TPHdiesel units in ppb

*note: all BTEX and other sampling results are in ppb

Appendix of HAZMAT Sites

Category_Code

DA01 = Generates and recycles waste oil/solvent
DA02 = Generates less than 1 ton haz waste/yr
DA03 = Generates 1-5 tons haz waste/yr
DA04 = Generates 6-25 tons haz waste/yr
DA05 = Generates 26-50 tons haz waste/yr
DA06 = Generates 51-250 tons haz waste/yr
DA07 = Generates 251-500 tons haz waste/yr
DA08 = Generates 501-1000 tons haz waste/yr
DA09 = Generates 1001-2000 tons haz waste/yr
DA10 = Generates 2000+ tons haz waste/yr
DA11 = TSD permitted facilities
DD01 = Stores MV fuels, waste only <55gal
DD02 = Stores haz mat <219 gal, 1999 lbs
DD03 = Stores haz mat <1119, 9999 lbs
DD04 = Stores haz mat <3499 gal, 27999 lbs
DD05 = Stores radioactive mat category I
DD06 = Stores haz mat <5999 gal, 47999 lbs
DD07 = Stores haz mat <9999 gal, 79999 lbs
DD08 = Stores haz mat <14000 gal, 119000 lbs
DD09 = Stores haz mat 14001+ gal, 119001+ lbs

Appendix of Federal & State HAZMAT sites

event1	SQG =	Small Quantity Generator
event2	LQG =	Large Quantity Generator
qual2	RED =	Remediation
event3	NFA =	No Further Action
qual3	PEARL =	Preliminary Endangerment Assessment Required, Low Priority
	DS1 =	Discovery
	PA1&2 =	Preliminary Assessment
	N =	No further remedial action planned
	L =	Lower priority

Sources of Data in Appendices

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13 Fio, John and Leighton, Dave, 1994, Unpublished groundwater data, USGS Sacramento.

14 Report of sanitary engineering survey of public water system, 1958 Oct., State Department of Public Health, Bureau of Sanitary Engineers.

15 Todd, David K., On the location of well no. 14, 1971 Sept. 22, Consulting Hydrologist.