



David D. Bohannon Organization T 650.345.8222  
Sixty 31<sup>st</sup> Avenue F 650.573.5457  
San Mateo, CA 94403-3404 W ddbo.com

June 11, 2012

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Alameda County  
Environmental Health

**SUBMITTED ELECTRONICALLY**

Alameda County Health Care Services Agency  
Environmental Health Department  
Environmental Protection  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502-6577

**Re: Submission to Geo Tracker; Fuel Leak Case No. RO0000167 and  
Geo Tracker Global ID T0600102098; David D. Bohannon Organization  
Property, 575 Paseo Grande, San Lorenzo, California 94580**

To Whom This May Concern:

The David D. Bohannon Organization is the owner of commercial property located at 575 Paseo Grande, San Lorenzo, California 94580 (the "Property"). In accordance with applicable California law, I am submitting the enclosed document or report with respect to the Property for uploading to Geo Tracker.

I declare, under penalty of perjury under the laws of the State of California, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge.

A handwritten signature in blue ink that reads 'Scott E. Bohannon'.

Scott E. Bohannon, Senior Vice President

**MAY 2002  
GROUNDWATER MONITORING  
REPORT**

**575 PASEO GRANDE  
SAN LORENZO, CALIFORNIA**

**Job No. 05OT.50026.00**

**Prepared For:**

Bohannon Development Company  
Sixty 31<sup>st</sup> Avenue  
San Mateo, California 94403

**Prepared by:**

SECOR International Incorporated  
57 Lafayette Circle  
Lafayette, California 94549

October 25, 2002

**May 2002 Groundwater Monitoring Report**

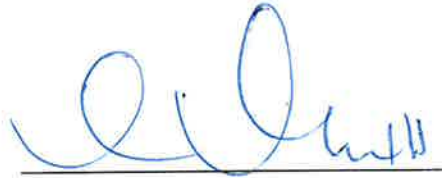
**Bohannon Development Company  
575 Paseo Grande  
San Lorenzo, CA  
SECOR Project No. 05OT.50026.00**

The material and data in this report were prepared under the supervision and direction of the undersigned. This report was prepared consistent with current and generally accepted geologic and environmental consulting principles and practices that are within the limitations provided herein.

**SECOR International Incorporated**



Neil Doran  
Project Geologist



Chris R. Maxwell, R.G. No. 7269  
Principal Project Geologist

## LIMITATIONS

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The conclusions and recommendations contained in this report/assessment are based upon professional opinions with regard to the subject matter. These opinions have been arrived at in accordance with currently accepted hydrogeologic and engineering standards and practices applicable to this location and are subject to the following inherent limitations:

1. The data and findings presented in this report are valid as of the dates when the investigations were performed. The passage of time, manifestation of latent conditions or occurrence of future events may require further exploration at the Site, analysis of the data, and reevaluation of the findings, observations, and conclusions expressed in the report.
2. The data reported and the findings, observations, and conclusions expressed in the report are limited by the Scope of Work. The Scope of Work was defined by the request of the client, the time and budgetary constraints imposed by the client, and availability of access to the Site.
3. Because of the limitations stated above, the findings, observations, and conclusions expressed by SECOR in this report are not, and should not be, considered an opinion concerning the compliance of any past or present owner or operator of the Site with any federal, state or local law or regulation.
4. No warranty or guarantee, whether expressed or implied, is made with respect to the data or the reported findings, observations, and conclusions, which are based solely upon Site conditions in existence at the time of investigation.
5. SECOR reports present professional opinions and findings of a scientific and technical nature. While attempts were made to relate the data and findings to applicable environmental laws and regulations, the report shall not be construed to offer legal opinion or representations as to the requirements of, nor compliance with, environmental laws, rules, regulations or policies of federal, state or local governmental agencies. Any use of the report constitutes acceptance of the limits of SECOR's liability. SECOR's liability extends only to its client and not to any other parties who may obtain the report. Issues raised by the report should be reviewed by appropriate legal counsel.

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## 1.0 INTRODUCTION

This report presents the results of groundwater monitoring, sampling, and analysis conducted on May 22, 2002 for the property located at 575 Paseo Grande, San Lorenzo, California (Site). This sampling event was conducted to continue the assessment of groundwater conditions beneath the Site. The previous groundwater monitoring and sampling event was conducted in August 2001.

The scope of work included measuring the depth to water in groundwater monitoring wells MW-1 through MW-7, and collecting groundwater samples for analysis of total petroleum hydrocarbons as gasoline (TPHg) and benzene, toluene, ethylbenzene, and total xylenes (BTEX).

### 1.1 BACKGROUND

Over the last 25 years, the Site has been used as an asphalt-paved parking area located in a C1 commercial zone. The Site was a gasoline station prior to 1969. Little information is known about the Site history related to its use as a gasoline service station. In anticipation of property redevelopment, initial investigation activities were conducted in March 1995 to determine if out-of-service gasoline service station underground equipment remained on-Site. The work was conducted by Twining Laboratories, Inc. (TLI), as documented in their letter report dated April 15, 1995. The work conducted included a magnetometer survey followed by an exploratory excavation. In summary, the work conducted identified underground gasoline service station equipment which included what appeared to be the former tank pit, approximately 110 feet of fuel delivery system piping, and a grease sump and/or hydraulic lift pit in an area which may have been the former service garage (Figure 2). Field evidence and one soil sample indicated the potential for soil contamination along the piping runs, around the grease sump, and around the inferred location of the former tank pit. Characterization of the magnitude and extent of potential soil contamination were not conducted during initial investigation activities.

In June 1995, SECOR conducted additional activities at the Site which included removal of the former underground storage tank (UST) system piping and the former grease sump, and characterization soil sampling along pipelines and around the former grease sump and former tank pit areas. This work was summarized in SECOR's letter report dated June 29, 1995. The characterization data from this investigation indicated that there were two areas of concern at the Site. These areas were the former grease sump area and the former gasoline distribution system area. SECOR subsequently conducted excavation activities in the vicinity of the two areas. The soil excavated from the former sump area was transported off-Site for disposal. The soil generated from the UST excavation was treated by means of aeration and transported off-Site for disposal. Three groundwater monitoring wells (MW-1, MW-2, and MW-3) were installed during the investigation activities to evaluate the degree to which the groundwater had been affected. The results of the soil characterization and groundwater monitoring activities are reported in SECOR's "Report of Interim Remedial Actions" dated June 4, 1996, and "Fourth Quarter 1996 Monitoring and Sampling Report" dated November 26, 1996.

In June 1999, a utility trench survey was conducted around the Site, and a passive soil vapor survey was conducted in the down-gradient direction from the Site. The results of the utility trench and passive soil vapor surveys are documented in SECOR's "Third Quarter 1999 Groundwater Monitoring Results and Plume Definition Report", dated October 21, 1999.

On December 5, 2000, four additional groundwater monitoring wells (MW-4 through MW-7) were installed at the Site by SECOR. Soil and groundwater sampling was conducted to evaluate possible off-Site migration of petroleum-related constituents originating from the Site, and to collect data to direct further subsurface investigations, and/or remediation at the Site, if necessary. The work was conducted in general accordance with the "Work Plan for Additional Groundwater Monitoring Well Installation" dated October 22, 1999 (Work Plan) and the "Addendum to the Work Plan for Additional Groundwater Monitoring Well Installation" dated December 2, 1999 (Addendum). The Work Plan was approved with comments in correspondence from the Alameda County Health Care Services Agency (ACHCSA) in a letter dated November 4, 1999.

Historically, two of the onsite wells (MW-2 and MW-3) and one well immediately down-gradient to the west (MW-4) contain elevated concentrations of petroleum hydrocarbons. Wells further off-Site to the west (MW-6 and MW-7) and south (MW-5) typically do not contain detectable levels of petroleum hydrocarbons, with the exception of well MW-7, which reported low concentrations of total xylenes (up to 6.7 mg/kg) in the first two sampling events (December 2000 and February 2001). The well has since been nondetect for all constituents..



## 2.0 GROUNDWATER MONITORING

Groundwater monitoring wells MW-1 through MW-7 were gauged for depth-to-water and sampled on May 22, 2002.

### 2.1 Water Level Gauging

Prior to purging and sampling, the depth to groundwater was measured from the top of each well casing using a water-level indicator graduated to 0.01 foot. Depth-to-groundwater measurements and surveyed wellhead top-of-casing elevations were used to calculate groundwater surface elevations for each well. Table 1 presents historical groundwater elevation data for the Site.

### 2.2 Purging and Sampling

Each of the seven wells were purged using a low-flow purging method consisting of dedicated tubing attached to a variable speed peristaltic pump set to extract groundwater at a rate of 0.1 gallons per minute. Temperature, conductivity, pH, and oxidation-reduction potential were monitored during purging to confirm static water conditions prior to sampling. Copies of the field data sheets are attached as Appendix A.

Samples were collected from each well using the dedicated tubing to eliminate the possibility of cross-contamination. Samples were placed in laboratory supplied sample containers, capped, labeled, and stored on ice pending delivery to STL San Francisco, a California state-certified laboratory. The groundwater samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg) by U.S. Environmental Protection Agency (EPA) Method 8015 (modified); and for benzene, toluene, ethylbenzene and xylenes (BTEX) by EPA Method 8020.

## 3.0 RESULTS

### 3.1 May 2002 Groundwater Elevation Results

The average depth-to-water at the Site on May 22, 2002 was 5.76 feet below the top of each well casing with an average water table elevation of 20.27 feet above mean sea level. Groundwater elevations increased an average of 1.18 feet since the previous monitoring event in August 2001.

A potentiometric surface map illustrating the interpreted groundwater surface elevation and flow direction on May 22, 2002 is presented as Figure 3. The hydraulic gradient across the Site was approximately 0.0035 feet per foot toward the west-southwest. These results are generally consistent with flow direction results obtained during the prior monitoring events. As mentioned in previous reports, the flow direction beneath the Site is potentially tidally influenced by San Francisco Bay to the west.

### 3.2 May 2002 Groundwater Analytical Results

Table 2 presents historical groundwater laboratory analytical results for the Site, including the May 2002 sampling event. The groundwater chemical data for the May 2002 event are illustrated on Figure 4.

TPHg and BTEX concentrations continue to be below laboratory method reporting limits in on-Site well MW-1 and off-Site wells MW-5, MW-6, and MW-7. Samples from wells MW-2, MW-3, and MW-4 continue to report detectable concentrations of petroleum hydrocarbons.

Copies of the laboratory analytical reports for groundwater samples are attached as Appendix B. The following provides a brief discussion regarding the analytical results:

#### 3.2.1 BTEX

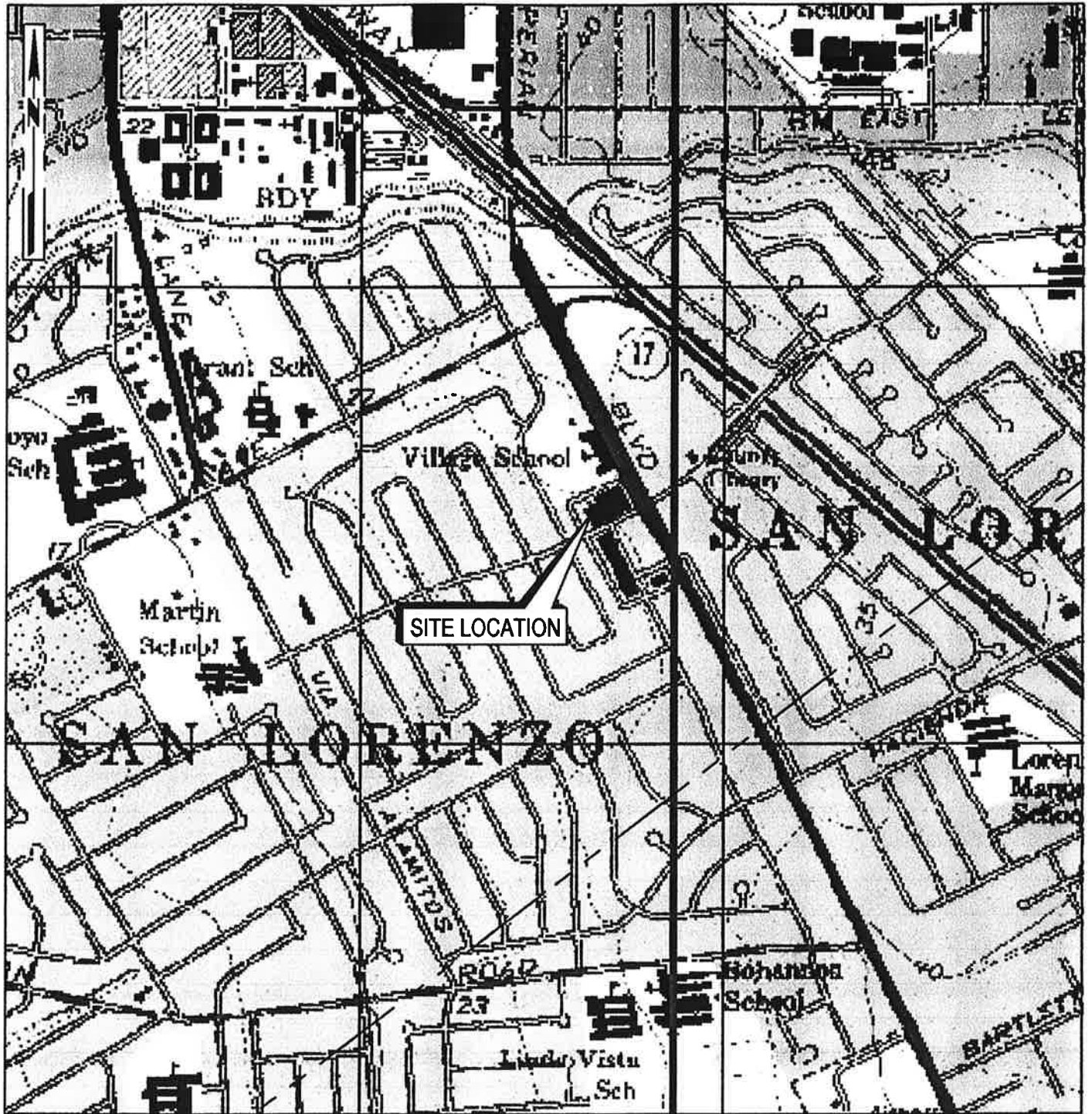
BTEX constituents were reported in samples collected from wells MW-2, MW-3 and MW-4. Historic concentrations of benzene in these three wells are shown on Figure 5 (MW-2 and MW-4) and Figure 6 (MW-3). During the May 2002 event, benzene concentrations ranged from 230 micrograms per liter ( $\mu\text{g/L}$ ) in MW-2 to 1,000  $\mu\text{g/L}$  in MW-3. Reported BTEX concentrations for the May 2002 event are generally consistent with historic results.

#### 3.2.2 TPH as Gasoline

TPHg was reported in samples collected from wells MW-2, MW-3 and MW-4. Historic concentrations of TPHg in these three wells are shown on Figure 7 (MW-2 and MW-4) and Figure 8 (MW-3). During the May 2002 event, TPHg concentrations ranged from 1,700  $\mu\text{g/L}$  at MW-2 to 5,400  $\mu\text{g/L}$  at MW-3. Reported TPHg concentrations are generally consistent with historic results.

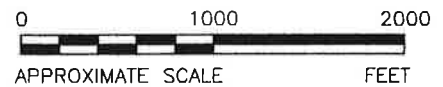
## FIGURES

20021011.15050312 E:\BOH\2002 work plan\BOH-SITE LOCATION MAP-FIGURE 1-2002 work plan.dwg



REFERENCE:

DeLORME 3-D TOPOQUADS

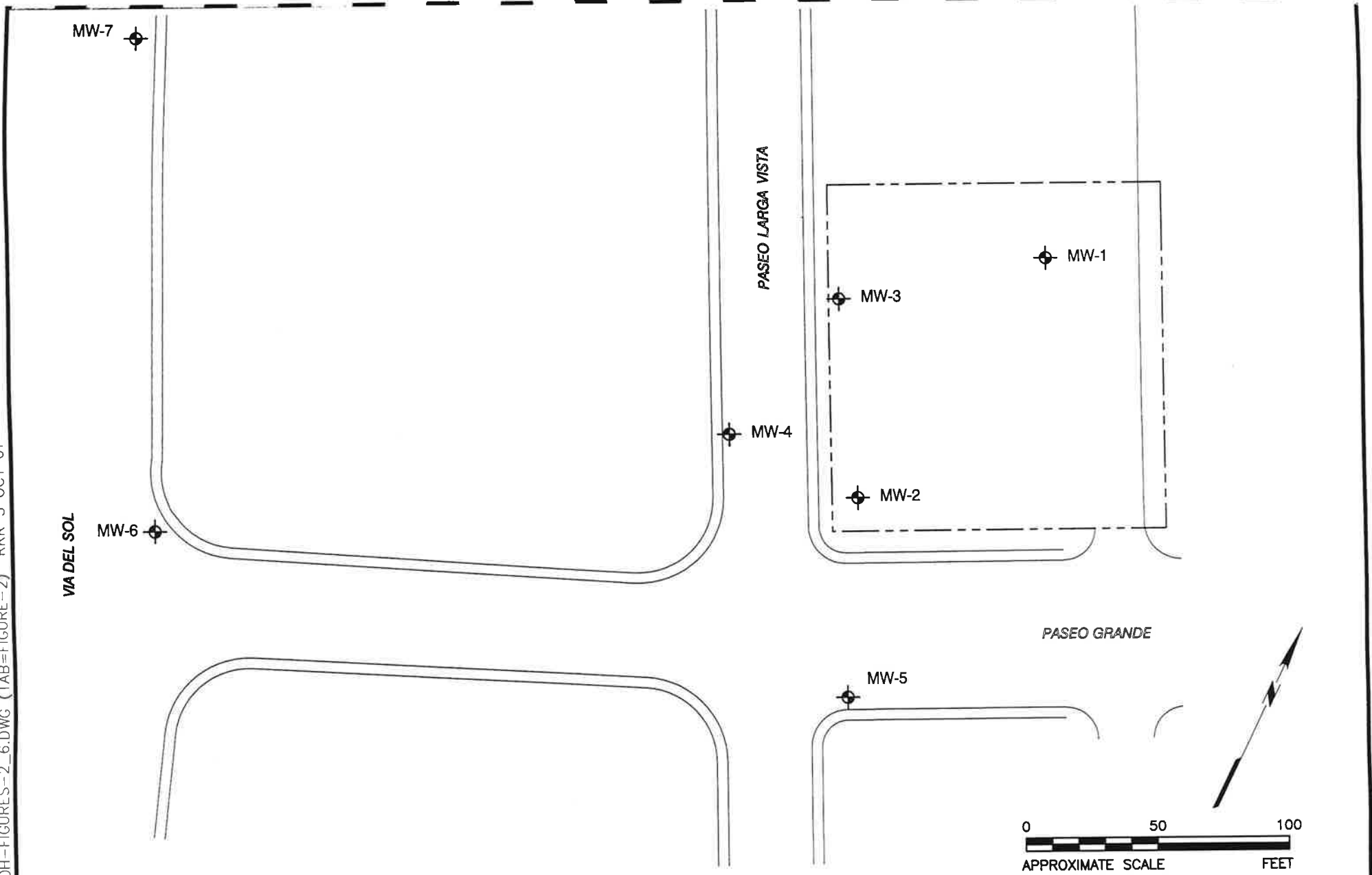


**SECOR**  
*International Incorporated*



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APPR	ND
DATE	11 MAY 2002
JOB NO.	05OT.50026.00.0005

**FIGURE 1**  
**BOHANNON DEVELOPMENT COMPANY**  
575 PASEO GRANDE  
SAN LORENZO, CALIFORNIA

**SITE LOCATION MAP**



LEGEND

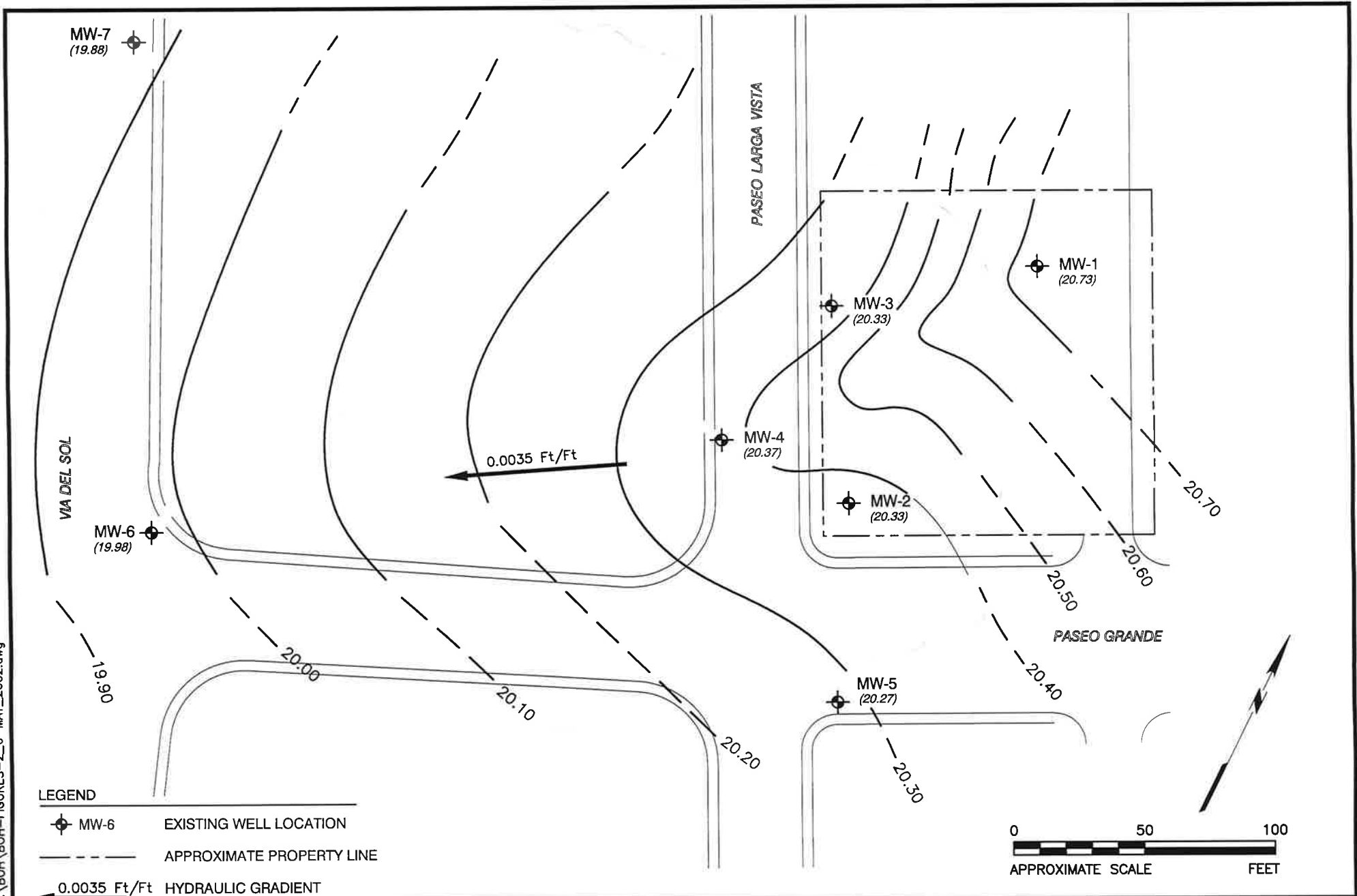
-  MW-6 EXISTING WELL LOCATION
-  APPROXIMATE PROPERTY LINE

**SECOR**  
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Incorporated

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JOB NO.	007.03814.006

**FIGURE 2**  
BOHANNON DEVELOPMENT COMPANY  
575 PASEO GRANDE  
SAN LORENZO, CALIFORNIA  
SITE PLAN

20021014.13513905 E:\BOH\BOH-FIGURES-2\_6-MAY\_2002.dwg



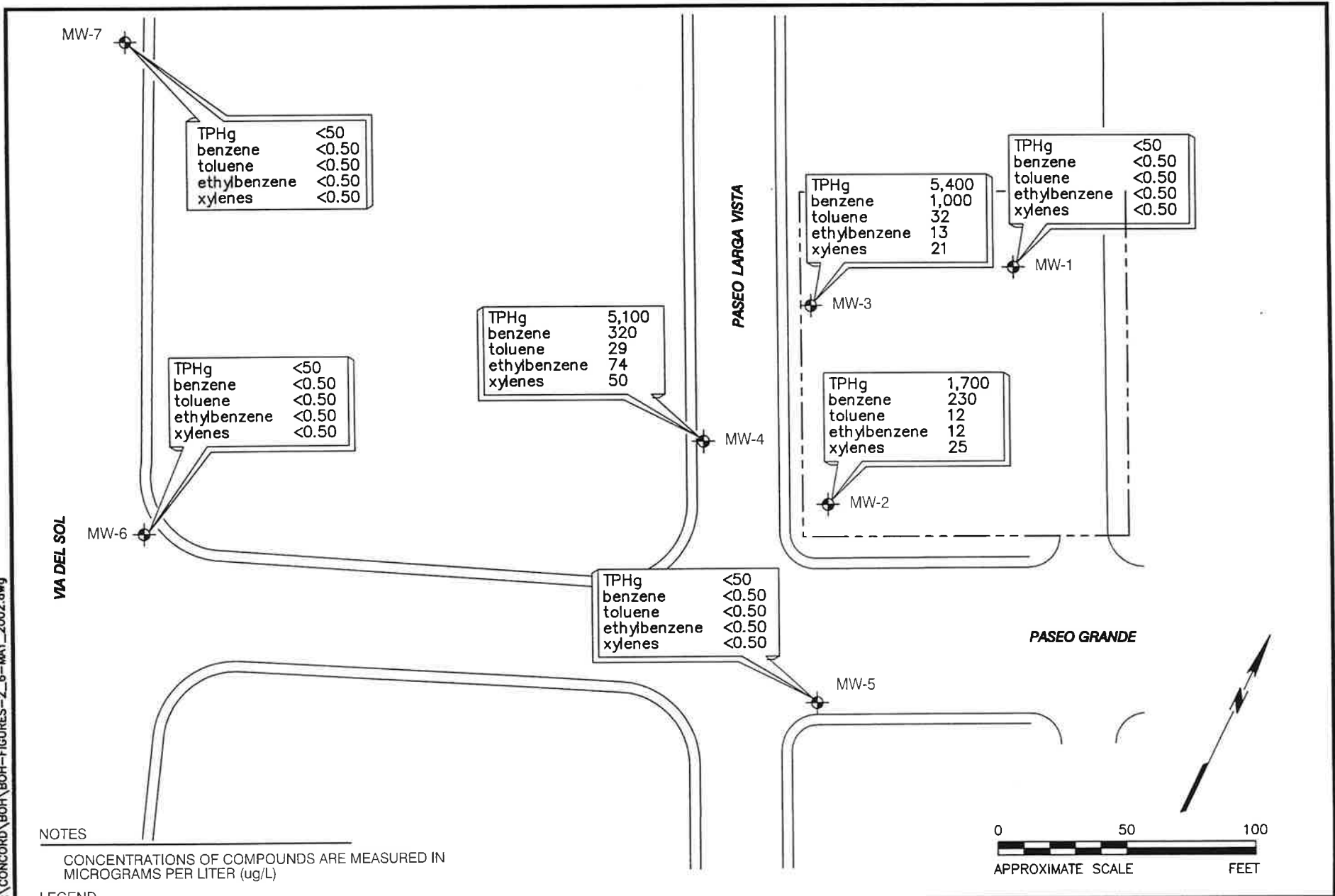
**LEGEND**

- MW-6 EXISTING WELL LOCATION
- APPROXIMATE PROPERTY LINE
- 0.0035 Ft/Ft HYDRAULIC GRADIENT
- 20.60 GROUNDWATER SURFACE ELEVATION CONTOUR (DASHED WHERE INFERRED)
- (20.54) GROUNDWATER ELEVATION (FEET ABOVE MSL)

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DATE	11 MAY 2002
JOB NO.	050T.50026.00.0005

**FIGURE 3**  
BOHANNON DEVELOPMENT COMPANY  
575 PASEO GRANDE  
SAN LORENZO, CALIFORNIA  
**POTENTIOMETRIC SURFACE MAP**  
MAY 22, 2002



**NOTES**

CONCENTRATIONS OF COMPOUNDS ARE MEASURED IN MICROGRAMS PER LITER (ug/L)

**LEGEND**

- MW-6 EXISTING WELL LOCATION
- APPROXIMATE PROPERTY LINE
- TPHg** TOTAL PETROLEUM HYDROCARBONS AS GASOLINE

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	APPR	ND
	DATE	11 MAY 2002
	JOB NO.	050T.50026.00.0005

**FIGURE 4**  
 BOHANNON DEVELOPMENT COMPANY  
 575 PASEO GRANDE  
 SAN LORENZO, CALIFORNIA  
**CHEMICAL CONCENTRATIONS IN GROUNDWATER**  
 MAY 22, 2002

Figure 5 - Historical Concentrations of Benzene at MW-2 and MW-4

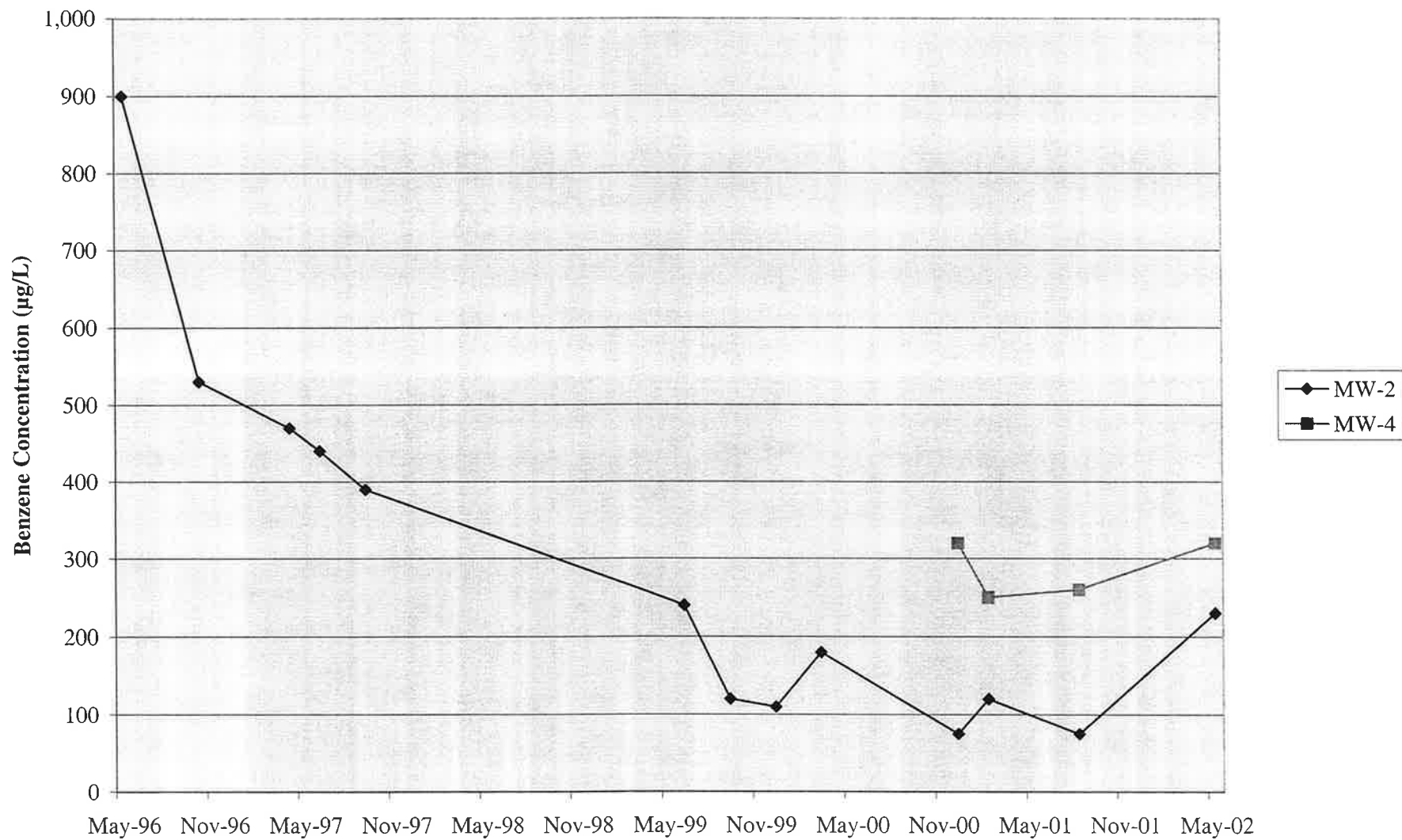




Figure 6 - Historical Concentrations of Benzene at MW-3

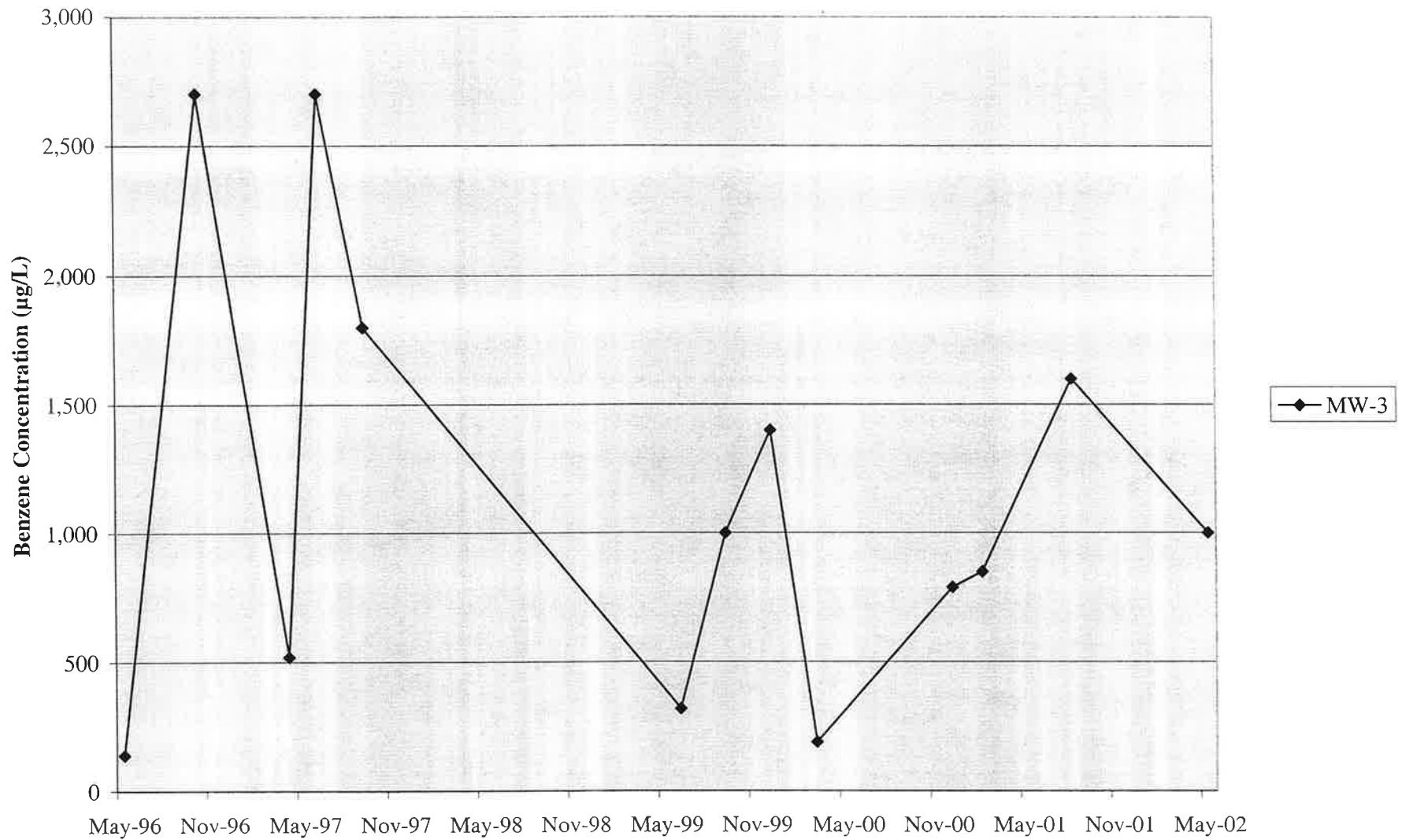


Figure 7 - Historical Concentrations of TPHg at MW-2 and MW-4

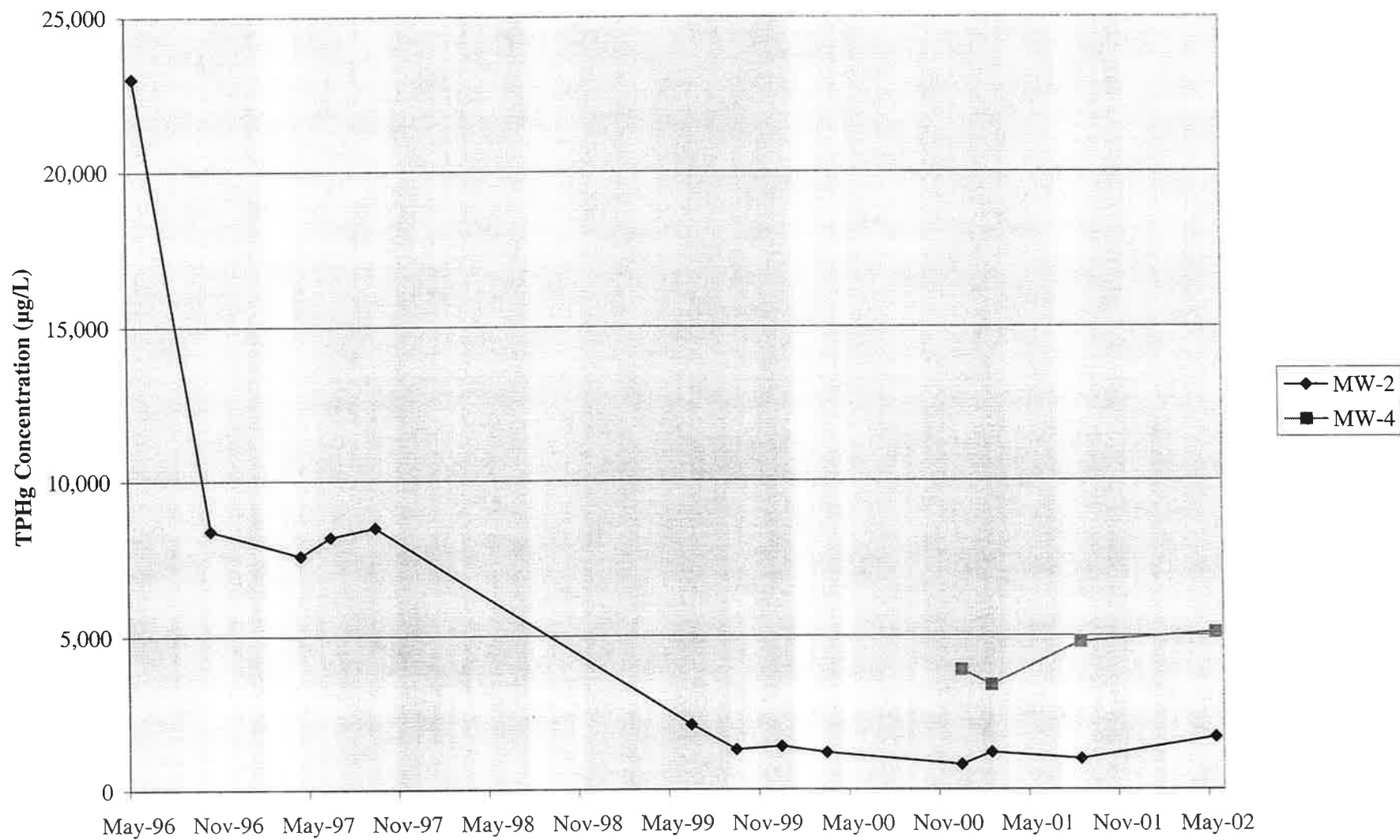
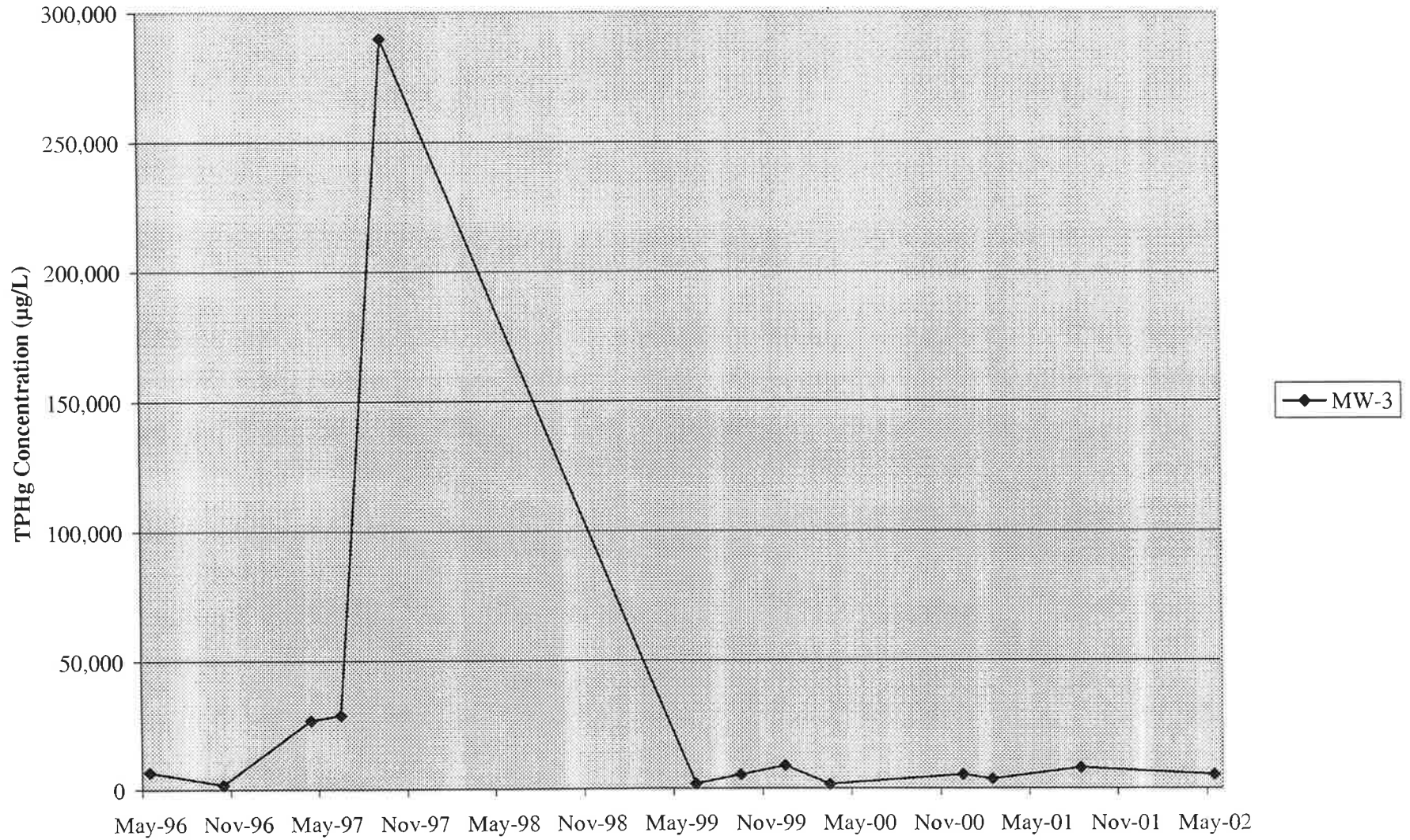


Figure 8 - Historical Concentrations of TPHg at MW-3



## TABLES

**Table 1**  
**Historical Groundwater Elevation Data**  
**575 Paseo Grande**  
**San Lorenzo, California**

<b>Date</b>	<b>TOC (ft msl)</b>	<b>DTW (ft bTOC)</b>	<b>ELEV (ft msl)</b>	
<b>MW-1</b>				
17-May-96	27.11	5.65	21.46	
8-Oct-96		7.47	19.64	
1-Apr-97		6.27	20.84	
12-Jun-97		6.90	20.21	
10-Sep-97		7.48	19.63	
8-Jun-99		6.44	20.67	
13-Sep-99		7.56	19.55	
21-Dec-99		7.41	19.70	
17-Mar-00		26.98	5.35	21.76
5-Dec-00			6.99	19.99
28-Feb-01	5.71		21.27	
22-Aug-01	7.39		19.59	
22-May-02	6.25		20.73	
<b>MW-2</b>				
17-May-96	26.73	5.56	21.17	
8-Oct-96		7.15	19.58	
1-Apr-97		6.61	20.12	
12-Jun-97		6.76	19.97	
10-Sep-97		7.19	19.54	
8-Jun-99		6.45	20.28	
13-Sep-99		7.46	19.27	
21-Dec-99		7.26	19.47	
17-Mar-00		26.73	5.56	21.17
5-Dec-00			7.01	19.72
28-Feb-01	5.81		20.92	
22-Aug-01	7.42		19.31	
22-May-02	6.40		20.33	
<b>MW-3</b>				
17-May-96	26.15	4.39	21.76	
8-Oct-96		6.82	19.33	
1-Apr-97		5.53	20.62	
12-Jun-97		6.18	19.97	
10-Sep-97		6.81	19.34	
8-Jun-99		5.74	20.41	
13-Sep-99		6.88	19.27	
21-Dec-99		6.66	19.49	
17-Mar-00		4.51	21.64	

**Table 1**  
**Historical Groundwater Elevation Data**  
**575 Paseo Grande**  
**San Lorenzo, California**

<b>Date</b>	<b>TOC</b> (ft msl)	<b>DTW</b> (ft bTOC)	<b>ELEV</b> (ft msl)
5-Dec-00	26.55	6.84	19.71
28-Feb-01		5.44	21.11
22-Aug-01		7.29	19.26
22-May-02		6.22	20.33
<b>MW-4</b>			
5-Dec-00	25.87	6.28	19.59
28-Feb-01		4.99	20.88
22-Aug-01		6.73	19.14
22-May-02		5.50	20.37
<b>MW-5</b>			
5-Dec-00	25.77	6.25	19.52
28-Feb-01		4.95	20.82
22-Aug-01		6.69	19.08
22-May-02		5.50	20.27
<b>MW-6</b>			
5-Dec-00	24.89	5.68	19.21
28-Feb-01		4.35	20.54
22-Aug-01		6.15	18.74
22-May-02		4.91	19.98
<b>MW-7</b>			
5-Dec-00	25.43	6.43	19.00
28-Feb-01		4.76	20.67
22-Aug-01		6.95	18.48
22-May-02		5.55	19.88

Notes:

TOC = Top of well casing  
DTW = Depth to Water  
ELEV = Water table elevation above MSL  
ft msl = Feet above mean sea level  
ft bTOC = Feet below top of casing

**Table 2**  
**Historical Groundwater Analytical Results**  
**575 Paseo Grande**  
**San Lorenzo, California**

	<b>TPHg</b> (ug/L)	<b>Benzene</b> (ug/L)	<b>Toluene</b> (ug/L)	<b>Ethylbenzene</b> (ug/L)	<b>Total Xylenes</b> (ug/L)	<b>MTBE</b> (ug/L)	<b>Chromium</b> (ug/L)	<b>Dissolved Inorganic Lead</b> (ug/L)
<b>MW-1</b>								
17-May-96	<b>1,100</b>	ND (<0.5)	<b>8.7</b>	<b>7.4</b>	<b>17</b>	NA	ND (<10)	ND (<50)
8-Oct-96	<b>120</b>	ND (<0.5)	ND (<0.5)	<b>2.7</b>	ND (<0.5)	NA	NA	NA
1-Apr-97	<b>550</b>	ND (<0.5)	ND (<0.5)	<b>7.6</b>	<b>6.6</b>	NA	NA	NA
12-Jun-97	<b>160</b>	ND (<0.5)	ND (<0.5)	<b>2.9</b>	<b>1.7</b>	NA	NA	NA
10-Sep-97	<b>640</b>	<b>2.2<sup>P</sup></b>	<b>3.8<sup>P</sup></b>	<b>7.4<sup>P</sup></b>	<b>16<sup>P</sup></b>	NA	NA	NA
8-Jun-99	ND (<50)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<10)	ND (<10)	ND (<20)
21-Dec-99	ND (<50)	ND (<0.5)	ND (<0.5)	ND (<0.5)	<b>1.1</b>	NA	NA	ND (<5.0)
13-Sep-99	ND (<50)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	NA	NA	NA
17-Mar-00	ND (<50)	ND (<0.5)	ND (<0.5)	ND (<0.5)	<b>0.79</b>	ND (<5)	NA	ND (<5.0)
5-Dec-00	ND (<50)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	NA	NA	NA
28-Feb-01	ND (<50)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	NA	NA	NA
22-Aug-01	ND (<50)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<5.0)	NA	ND (<5.0)
22-May-02	ND (<50)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	NA	NA	NA
<b>MW-2</b>								
17-May-96	<b>23,000</b>	<b>900</b>	<b>330</b>	<b>650</b>	<b>1,500</b>	NA	ND (<10)	ND (<50)
8-Oct-96	<b>8,400</b>	<b>530</b>	ND (<50)	<b>400</b>	<b>360</b>	NA	NA	NA
1-Apr-97	<b>7,600</b>	<b>470</b>	<b>64</b>	<b>210</b>	<b>250</b>	NA	NA	NA
12-Jun-97	<b>8,200</b>	<b>440</b>	<b>52</b>	<b>190</b>	<b>190</b>	NA	NA	NA
10-Sep-97	<b>8,500</b>	<b>390</b>	<b>51<sup>P</sup></b>	<b>220</b>	<b>240</b>	NA	NA	NA
8-Jun-99	<b>2,100</b>	<b>240</b>	<b>8</b>	<b>33</b>	<b>40</b>	ND (<10)	ND (<10)	<b>33</b>
13-Sep-99	<b>1,300</b>	<b>120</b>	ND (<5.0)	ND (<5.0)	<b>15</b>	NA	NA	NA
21-Dec-99	<b>1,400</b>	<b>110</b>	<b>5.6</b>	<b>11</b>	<b>17</b>	NA	NA	ND (<5.0)
17-Mar-00	<b>1,200</b>	<b>180</b>	<b>19</b>	<b>28</b>	<b>31</b>	ND (<50)	NA	ND (<5.0)
5-Dec-00	<b>800</b>	<b>75</b>	<b>1.8</b>	<b>11</b>	<b>14</b>	NA	NA	NA
28-Feb-01	<b>1,200</b>	<b>120</b>	<b>7.1</b>	<b>19</b>	<b>27</b>	NA	NA	NA
22-Aug-01	<b>990</b>	<b>75</b>	<b>3.5</b>	<b>8.9</b>	<b>8.1</b>	ND (<5.0)	NA	ND (<5.0)
22-May-02	<b>1,700</b>	<b>230</b>	<b>12</b>	<b>12</b>	<b>25</b>	NA	NA	NA
<b>MW-3</b>								
17-May-96	<b>6,700</b>	<b>140</b>	<b>45</b>	<b>210</b>	<b>180</b>	NA	ND (<10)	ND (<50)
8-Oct-96	<b>1,800</b>	<b>2,700</b>	<b>240</b>	<b>910</b>	<b>970</b>	NA	NA	NA
1-Apr-97	<b>27,000</b>	<b>520</b>	<b>50</b>	<b>520</b>	<b>450</b>	NA	NA	NA
12-Jun-97	<b>29,000</b>	<b>2,700</b>	<b>160</b>	<b>940</b>	<b>500</b>	NA	NA	NA
10-Sep-97	<b>290,000</b>	<b>1,800</b>	<b>3,200</b>	<b>2800<sup>P</sup></b>	<b>6900<sup>P</sup></b>	NA	NA	NA
8-Jun-99	<b>1,700</b>	<b>320</b>	<b>6.4</b>	<b>15</b>	ND (<0.5)	ND (<10)	ND (<10)	<b>24</b>
13-Sep-99	<b>5,400</b>	<b>1,000</b>	ND (<20)	ND (<20)	ND (<20)	NA	NA	NA
21-Dec-99	<b>8,800</b>	<b>1,400</b>	<b>63</b>	<b>17</b>	<b>23</b>	NA	NA	ND (<5.0)
17-Mar-00	<b>1,500</b>	<b>190</b>	ND (<5)	<b>7.6</b>	ND (<5)	ND (<50)	NA	ND (<5.0)

**Table 2  
Historical Groundwater Analytical Results  
575 Paseo Grande  
San Lorenzo, California**

	<b>TPHg</b> (ug/L)	<b>Benzene</b> (ug/L)	<b>Toluene</b> (ug/L)	<b>Ethylbenzene</b> (ug/L)	<b>Total Xylenes</b> (ug/L)	<b>MTBE</b> (ug/L)	<b>Chromium</b> (ug/L)	<b>Dissolved Inorganic Lead</b> (ug/L)
5-Dec-00	<b>5,400</b>	<b>790</b>	<b>20</b>	<b>7.4</b>	<b>10</b>	NA	NA	NA
28-Feb-01	<b>3,600</b>	<b>850</b>	<b>15</b>	<b>25</b>	<b>10</b>	NA	NA	NA
22-Aug-01	<b>8,100</b>	<b>1,600</b>	<b>28</b>	<b>44</b>	<b>17</b>	ND (<50)	NA	ND (<5.0)
22-May-02	<b>5,400</b>	<b>1,000</b>	<b>32</b>	<b>13</b>	<b>21</b>	NA	NA	NA
<b>MW-4</b>								
5-Dec-00	<b>3,900</b>	<b>320</b>	<b>13</b>	<b>41</b>	<b>31</b>	NA	NA	ND (<5.0)
28-Feb-01	<b>3,400</b>	<b>250</b>	<b>14</b>	<b>44</b>	<b>22</b>	NA	NA	ND (<5.0)
22-Aug-01	<b>4,800</b>	<b>260</b>	<b>12</b>	<b>27</b>	<b>9</b>	ND (<50)	NA	ND (<5.0)
22-May-02	<b>5,100</b>	<b>320</b>	<b>29</b>	<b>74</b>	<b>50</b>	NA	NA	NA
<b>MW-5</b>								
5-Dec-00	ND (<50)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	NA	NA	ND (<5.0)
28-Feb-01	ND (<50)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	NA	NA	ND (<5.0)
22-Aug-01	ND (<50)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<5.0)	NA	ND (<5.0)
22-May-02	ND (<50)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	NA	NA	NA
<b>MW-6</b>								
5-Dec-00	ND (<50)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	NA	NA	ND (<5.0)
28-Feb-01	ND (<50)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	NA	NA	ND (<5.0)
22-Aug-01	ND (<50)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<5.0)	NA	ND (<5.0)
22-May-02	ND (<50)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	NA	NA	NA
<b>MW-7</b>								
5-Dec-00	ND (<50)	ND (<0.5)	ND (<0.5)	ND (<0.5)	<b>1.5</b>	NA	NA	ND (<5.0)
28-Feb-01	ND (<50)	ND (<0.5)	ND (<0.5)	ND (<0.5)	<b>6.7</b>	NA	NA	ND (<5.0)
22-Aug-01	ND (<50)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<5.0)	NA	ND (<5.0)
22-May-02	ND (<50)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	NA	NA	NA

**Notes:**

TPHg = Total petroleum hydrocarbons quantified as gasoline

ug/L = Micrograms per liter

ND = Below laboratory detection limits (detection limit indicated in parentheses)

† The laboratory noted that there was a greater than 25% difference in results between the two GC columns.

NA = Not analyzed



**APPENDIX A**  
**Field Data Sheets**

## SECOR International Incorporated

### HYDROLOGIC DATA SHEET

Gauge Date: 5-22-02

Project Name: 575 Paseo Grande

Field Technician: ND

Project Number: 0507.50026.00

TOC = Top of Well Casing Elevation  
 DTP = Depth to Free Product (FP or NAP) Below TOC  
 DTW = Depth to Groundwater Below TOC  
 DTB = Depth to Bottom of Well Casing Below TOC

DIA = Well Casing Diameter  
 ELEV = Groundwater Elevation  
 DUP = Duplicate

WELL OR LOCATION	TIME	MEASUREMENT						PURGE & SAMPLE	SHEEN CONFIRMATION (w/bailer)	COMMENTS
		TOC	DTP	DTW	DTB	DIA	ELEV			
MW-1	1120			6.25				✓		
MW-2	1030			6.40				✓		
MW-3	1050			6.22				✓		
MW-4	1000			5.50				✓		
MW-5	840			5.50				✓		
MW-6	935			4.91				✓		
MW-7	910			5.55				✓		
<del>HA</del>										

**SECOR International Inc.**

**WATER SAMPLE FIELD DATA SHEET**

PROJECT #: \_\_\_\_\_ PURGED BY: ND WELL I.D.: MW-2  
 CLIENT NAME: Bohannon SAMPLED BY: ND SAMPLE I.D.: MW-2  
 LOCATION: 575 Paseo Grande, San Lorenzo QA SAMPLES: -

DATE PURGED 5-22-02 START (2400hr) 1038 END (2400hr) 1037  
 DATE SAMPLED 5-22-02 SAMPLE TIME (2400hr) 1045  
 SAMPLE TYPE: Groundwater  Surface Water \_\_\_\_\_ Treatment Effluent \_\_\_\_\_ Other \_\_\_\_\_

CASING DIAMETER: 2"  3" \_\_\_\_\_ 4" \_\_\_\_\_ 5" \_\_\_\_\_ 6" \_\_\_\_\_ 8" \_\_\_\_\_ Other \_\_\_\_\_  
 Casing Volume: (gallons per foot) (0.17) (0.38) (0.67) (1.02) (1.50) (2.60) ( )

DEPTH TO BOTTOM (feet) = 14.70 CASING VOLUME (gal) = 1.4  
 DEPTH TO WATER (feet) = 6.40 CALCULATED PURGE (gal) = flow rate = 0.19 gal/min  
 WATER COLUMN HEIGHT (feet) = 8.30 ACTUAL PURGE (gal) = 0.7

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU) (uv)
<u>5-22-02</u>	<u>1031</u>	<u>0.1</u>	<u>20.85</u>	<u>1.548</u>	<u>6.77</u>	<u>cloudy</u>	<u>-188.1</u>
	<u>1032</u>	<u>0.2</u>	<u>20.90</u>	<u>1.558</u>	<u>6.73</u>	<u>"</u>	<u>-196.6</u>
	<u>1033</u>	<u>0.3</u>	<u>20.97</u>	<u>1.552</u>	<u>6.72</u>	<u>"</u>	<u>-200.1</u>
	<u>1034</u>	<u>0.4</u>	<u>20.98</u>	<u>1.548</u>	<u>6.72</u>	<u>"</u>	<u>-202.2</u>
	<u>1035</u>	<u>0.5</u>	<u>21.03</u>	<u>1.548</u>	<u>6.72</u>	<u>"</u>	<u>-200.0</u>
	<u>1036</u>	<u>0.6</u>	<u>21.05</u>	<u>1.550</u>	<u>6.72</u>	<u>"</u>	<u>-205.3</u>
	<u>1037</u>	<u>0.7</u>	<u>21.07</u>	<u>1.546</u>	<u>6.72</u>	<u>"</u>	<u>-206.7</u>

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 6.45 SAMPLE TURBIDITY: low

80% RECHARGE:  YES  NO ANALYSES: TPH, BTEX  
 ODOR: TPH, Strong SAMPLE VESSEL / PRESERVATIVE: (3) 40 mL VOAs w/ HCl

PURGING EQUIPMENT

Bladder Pump  Bailer (Teflon)  
 Centrifugal Pump  Bailer (PVC)  
 Submersible Pump  Bailer (Stainless Steel)  
 Peristaltic Pump  Dedicated tubing  
 Other: \_\_\_\_\_  
 Pump Depth: 12'

SAMPLING EQUIPMENT

Bladder Pump  Bailer (Teflon)  
 Centrifugal Pump  Bailer ( \_\_\_\_\_ PVC or \_\_\_\_\_ disposable)  
 Submersible Pump  Bailer (Stainless Steel)  
 Peristaltic Pump  Dedicated tubing  
 Other: \_\_\_\_\_

WELL INTEGRITY: good LOCK#: \_\_\_\_\_

REMARKS: \_\_\_\_\_  
 \_\_\_\_\_

SIGNATURE: [Signature] Page \_\_\_\_\_ of \_\_\_\_\_

**SECOR International Inc.**

**WATER SAMPLE FIELD DATA SHEET**

PROJECT #: \_\_\_\_\_ PURGED BY: ND WELL I.D.: MW-4  
 CLIENT NAME: Bohannon SAMPLED BY: ND SAMPLE I.D.: MW-4  
 LOCATION: 575 Paseo Grande, San Lorenzo QA SAMPLES: -

DATE PURGED 5-22-02 START (2400hr) 1000 END (2400hr) 1015  
 DATE SAMPLED 5-22-02 SAMPLE TIME (2400hr) 1020  
 SAMPLE TYPE: Groundwater  Surface Water \_\_\_\_\_ Treatment Effluent \_\_\_\_\_ Other \_\_\_\_\_

CASING DIAMETER: 2"  3" \_\_\_\_\_ 4" \_\_\_\_\_ 5" \_\_\_\_\_ 6" \_\_\_\_\_ 8" \_\_\_\_\_ Other \_\_\_\_\_  
 Casing Volume: (gallons per foot) (0.17) (0.38) (0.67) (1.02) (1.50) (2.60) ( )

DEPTH TO BOTTOM (feet) = 15.15 CASING VOLUME (gal) = 1.6  
 DEPTH TO WATER (feet) = 5.50 CALCULATED PURGE (gal) = flow rate = 0.1 g./min.  
 WATER COLUMN HEIGHT (feet) = 9.65 ACTUAL PURGE (gal) = 0.8

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees <sup>o</sup> C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	ORP TURBIDITY (NTU) (mV)
<u>5-22-02</u>	<u>1008</u>	<u>0.1</u>	<u>18.26</u>	<u>1.051</u>	<u>6.75</u>	<u>none</u>	<u>-239.5</u>
	<u>1009</u>	<u>0.2</u>	<u>18.42</u>	<u>1.061</u>	<u>6.71</u>	<u>"</u>	<u>-245.5</u>
	<u>1010</u>	<u>0.3</u>	<u>18.49</u>	<u>1.064</u>	<u>6.70</u>	<u>"</u>	<u>-251.4</u>
	<u>1011</u>	<u>0.4</u>	<u>18.57</u>	<u>1.066</u>	<u>6.70</u>	<u>"</u>	<u>-253.1</u>
	<u>1012</u>	<u>0.5</u>	<u>18.62</u>	<u>1.070</u>	<u>6.69</u>	<u>"</u>	<u>-244.9</u>
	<u>1013</u>	<u>0.6</u>	<u>18.64</u>	<u>1.073</u>	<u>6.69</u>	<u>"</u>	<u>-247.0</u>
	<u>1014</u>	<u>0.7</u>	<u>18.66</u>	<u>1.077</u>	<u>6.68</u>	<u>"</u>	<u>-240.0</u>
	<u>1015</u>	<u>0.8</u>	<u>18.68</u>	<u>1.078</u>	<u>6.68</u>	<u>"</u>	<u>-250.0</u>

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 5.00 SAMPLE TURBIDITY: v. low

80% RECHARGE:  YES  NO ANALYSES: TPH<sub>g</sub> / BTEX  
 ODOR: TPH, strong SAMPLE VESSEL / PRESERVATIVE: (3) 40 mL VOAs w/ HCl

PURGING EQUIPMENT

Bladder Pump  Bailer (Teflon)  
 Centrifugal Pump  Bailer (PVC)  
 Submersible Pump  Bailer (Stainless Steel)  
 Peristaltic Pump  Dedicated tubing  
 Other: \_\_\_\_\_  
 Pump Depth: 12'

SAMPLING EQUIPMENT

Bladder Pump  Bailer (Teflon)  
 Centrifugal Pump  Bailer ( \_\_\_\_\_ PVC or \_\_\_\_\_ disposable)  
 Submersible Pump  Bailer (Stainless Steel)  
 Peristaltic Pump  Dedicated tubing  
 Other: \_\_\_\_\_

WELL INTEGRITY: good LOCK#: \_\_\_\_\_

REMARKS: \_\_\_\_\_  
 \_\_\_\_\_

SIGNATURE: Neil Don Page \_\_\_\_\_ of \_\_\_\_\_

**SECOR International Inc.**

**WATER SAMPLE FIELD DATA SHEET**

PROJECT #: \_\_\_\_\_ PURGED BY: ND WELL I.D.: MW-6  
 CLIENT NAME: Bannon SAMPLED BY: ND SAMPLE I.D.: MW-6  
 LOCATION: 575 Pasco Grande, San Lorenzo QA SAMPLES: -

DATE PURGED 5-22-02 START (2400hr) 935 END (2400hr) 943  
 DATE SAMPLED 5-22-02 SAMPLE TIME (2400hr) 945  
 SAMPLE TYPE: Groundwater  Surface Water \_\_\_\_\_ Treatment Effluent \_\_\_\_\_ Other \_\_\_\_\_

CASING DIAMETER: 2"  3" \_\_\_\_\_ 4" \_\_\_\_\_ 5" \_\_\_\_\_ 6" \_\_\_\_\_ 8" \_\_\_\_\_ Other \_\_\_\_\_  
 Casing Volume: (gallons per foot) (0.17) (0.38) (0.67) (1.02) (1.50) (2.60) ( )

DEPTH TO BOTTOM (feet) = 14.55 CASING VOLUME (gal) = 1.6  
 DEPTH TO WATER (feet) = 4.91 CALCULATED PURGE (gal) = flow rate = 0.1 gal/min  
 WATER COLUMN HEIGHT (feet) = 9.64 ACTUAL PURGE (gal) = 0.7

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	ORP TURBIDITY (NTU)(mV)
<u>5-22-02</u>	<u>937</u>	<u>0.1</u>	<u>18.49</u>	<u>0.855</u>	<u>7.21</u>	<u>cloudy</u>	<u>92.4</u>
	<u>938</u>	<u>0.2</u>	<u>18.52</u>	<u>0.859</u>	<u>7.08</u>	<u>"</u>	<u>93.8</u>
	<u>939</u>	<u>0.3</u>	<u>18.53</u>	<u>0.861</u>	<u>7.04</u>	<u>"</u>	<u>93.3</u>
	<u>940</u>	<u>0.4</u>	<u>18.56</u>	<u>0.865</u>	<u>7.01</u>	<u>"</u>	<u>92.5</u>
	<u>941</u>	<u>0.5</u>	<u>18.55</u>	<u>0.866</u>	<u>7.00</u>	<u>"</u>	<u>91.8</u>
	<u>942</u>	<u>0.6</u>	<u>18.54</u>	<u>0.863</u>	<u>6.91</u>	<u>"</u>	<u>91.2</u>
	<u>943</u>	<u>0.7</u>	<u>18.53</u>	<u>0.863</u>	<u>6.99</u>	<u>"</u>	<u>90.4</u>

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 4.95 SAMPLE TURBIDITY: low

80% RECHARGE:  YES  NO ANALYSES: TPHg / BTEX  
 ODOR: none SAMPLE VESSEL / PRESERVATIVE: (3) 40 ml VOAs w/ HCl

PURGING EQUIPMENT

\_\_\_\_ Bladder Pump \_\_\_\_\_ Bailer (Teflon)  
 \_\_\_\_ Centrifugal Pump \_\_\_\_\_ Bailer (PVC)  
 \_\_\_\_ Submersible Pump \_\_\_\_\_ Bailer (Stainless Steel)  
 Peristaltic Pump  Dedicated tubing  
 Other: \_\_\_\_\_  
 Pump Depth: 12

SAMPLING EQUIPMENT

\_\_\_\_ Bladder Pump \_\_\_\_\_ Bailer (Teflon)  
 \_\_\_\_ Centrifugal Pump \_\_\_\_\_ Bailer (\_\_\_\_ PVC or \_\_\_\_\_ disposable)  
 \_\_\_\_ Submersible Pump \_\_\_\_\_ Bailer (Stainless Steel)  
 Peristaltic Pump  Dedicated tubing  
 Other: \_\_\_\_\_

WELL INTEGRITY: good LOCK#: \_\_\_\_\_

REMARKS: \_\_\_\_\_  
 \_\_\_\_\_

SIGNATURE: Neil Doan Page \_\_\_\_ of \_\_\_\_