


### Legend

- ▲ JPL Deep Multi-Port Monitoring Well
- JPL Shallow Monitoring Well
- City of Pasadena Monitoring Well
- ⊕ Municipal Production Well  
 LCID = La Canada Irrigation District  
 VWC = Valley Water Co.  
 LAWG = Lincoln Avenue Water Co.  
 RCL&W = Rubio Canon Land & Water Co.  
 LFWC = Las Flores Water Co.  
 All others are City of Pasadena

1: Screen Number for Wells in this Aquifer Layer (See Table 3-2 for Location of Well Screens in Aquifer Layers)  
 -- Not Detected  
 NA Sample Not Analyzed for this Constituent or Well Not Sampled

- JPL Thrust Fault
- JPL Property Line
- MCL Maximum Contaminant Level (5.0 µg/L)

Notes: 1. Where constituents were detected in multiple screens or duplicate samples, the higher concentration has been contoured.  
 2. All units reported in µg/L.




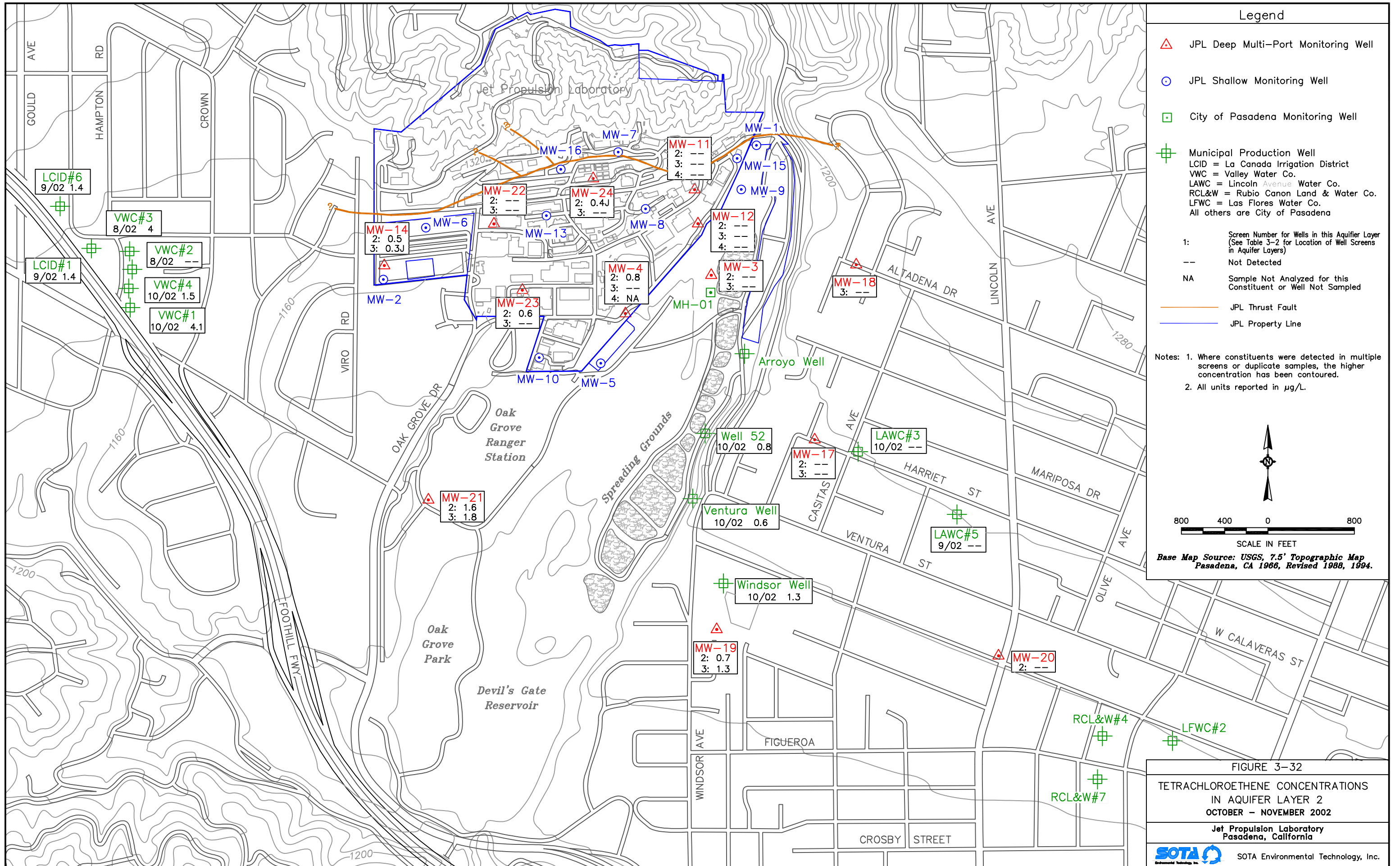
800 400 0 800  
SCALE IN FEET

Base Map Source: USGS, 7.5' Topographic Map Pasadena, CA 1966, Revised 1988, 1994.

FIGURE 3-31  
 CONTOURS OF TETRACHLOROETHENE  
 CONCENTRATIONS IN AQUIFER LAYER 2  
 JULY 2002

Jet Propulsion Laboratory  
 Pasadena, California

 SOTA Environmental Technology, Inc.



### Legend

- ▲ JPL Deep Multi-Port Monitoring Well
- JPL Shallow Monitoring Well
- City of Pasadena Monitoring Well
- ⊕ Municipal Production Well
  - LCID = La Canada Irrigation District
  - VWC = Valley Water Co.
  - LAWC = Lincoln Avenue Water Co.
  - RCL&W = Rubio Canon Land & Water Co.
  - LFWC = Las Flores Water Co.
  - All others are City of Pasadena

1: Screen Number for Wells in this Aquifer Layer (See Table 3-2 for Location of Well Screens in Aquifer Layers)

-- Not Detected

NA Sample Not Analyzed for this Constituent or Well Not Sampled

- JPL Thrust Fault
- JPL Property Line

Notes: 1. Where constituents were detected in multiple screens or duplicate samples, the higher concentration has been contoured.  
 2. All units reported in  $\mu\text{g/L}$ .

800 400 0 800

SCALE IN FEET

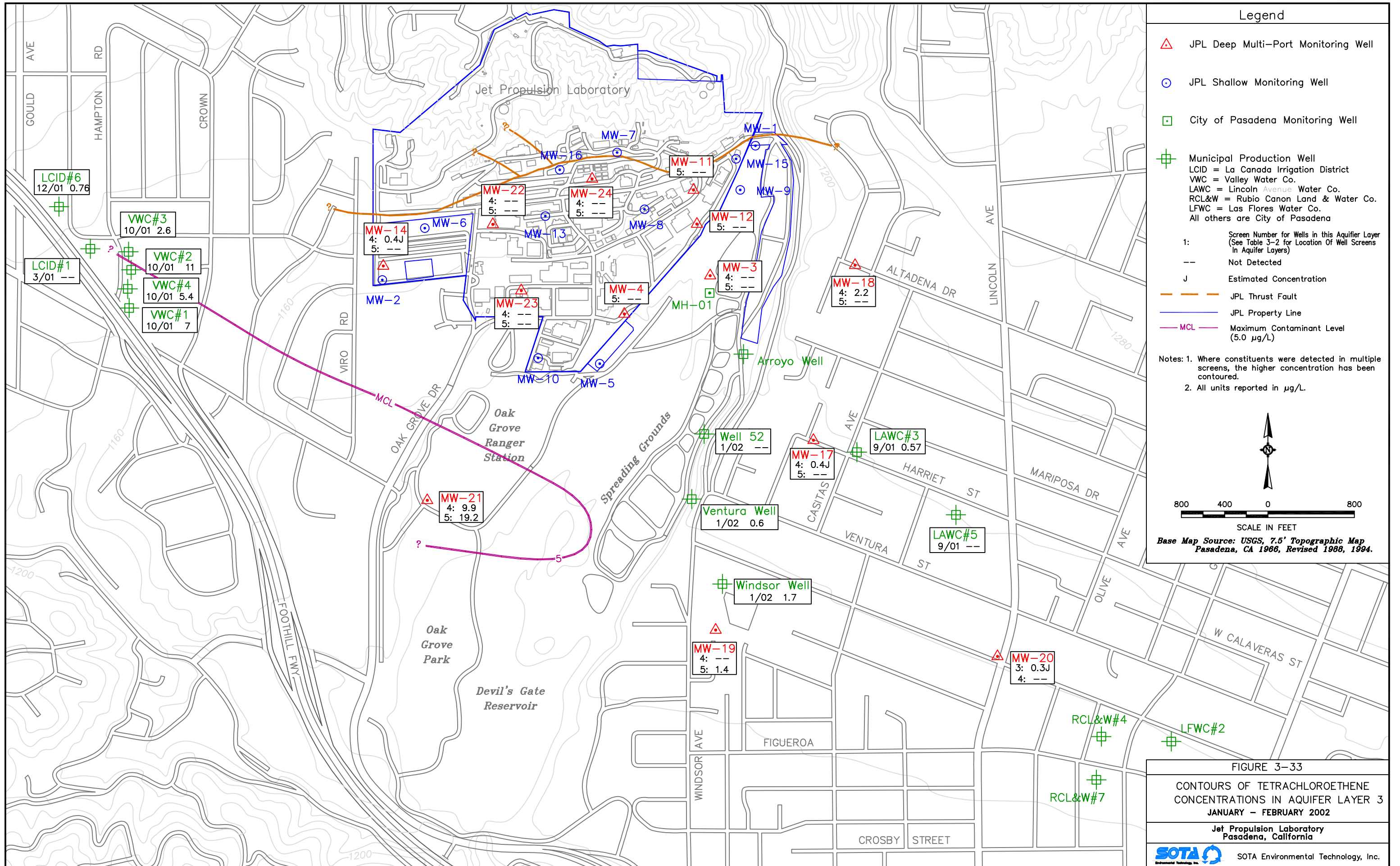
Base Map Source: USGS, 7.5' Topographic Map Pasadena, CA 1966, Revised 1988, 1994.

FIGURE 3-32

TETRACHLOROETHENE CONCENTRATIONS  
IN AQUIFER LAYER 2  
OCTOBER - NOVEMBER 2002

Jet Propulsion Laboratory  
Pasadena, California

SOTA Environmental Technology, Inc.



### Legend

- △ JPL Deep Multi-Port Monitoring Well
- JPL Shallow Monitoring Well
- City of Pasadena Monitoring Well
- ⊕ Municipal Production Well
  - LCID = La Canada Irrigation District
  - VWC = Valley Water Co.
  - LAWC = Lincoln Avenue Water Co.
  - RCL&W = Rubio Canon Land & Water Co.
  - LFWC = Las Flores Water Co.
  - All others are City of Pasadena

1: Screen Number for Wells in this Aquifer Layer (See Table 3-2 for Location Of Well Screens In Aquifer Layers)

-- Not Detected

J Estimated Concentration

--- JPL Thrust Fault

--- JPL Property Line

--- MCL Maximum Contaminant Level (5.0 µg/L)

Notes: 1. Where constituents were detected in multiple screens, the higher concentration has been contoured.

2. All units reported in µg/L.

SCALE IN FEET

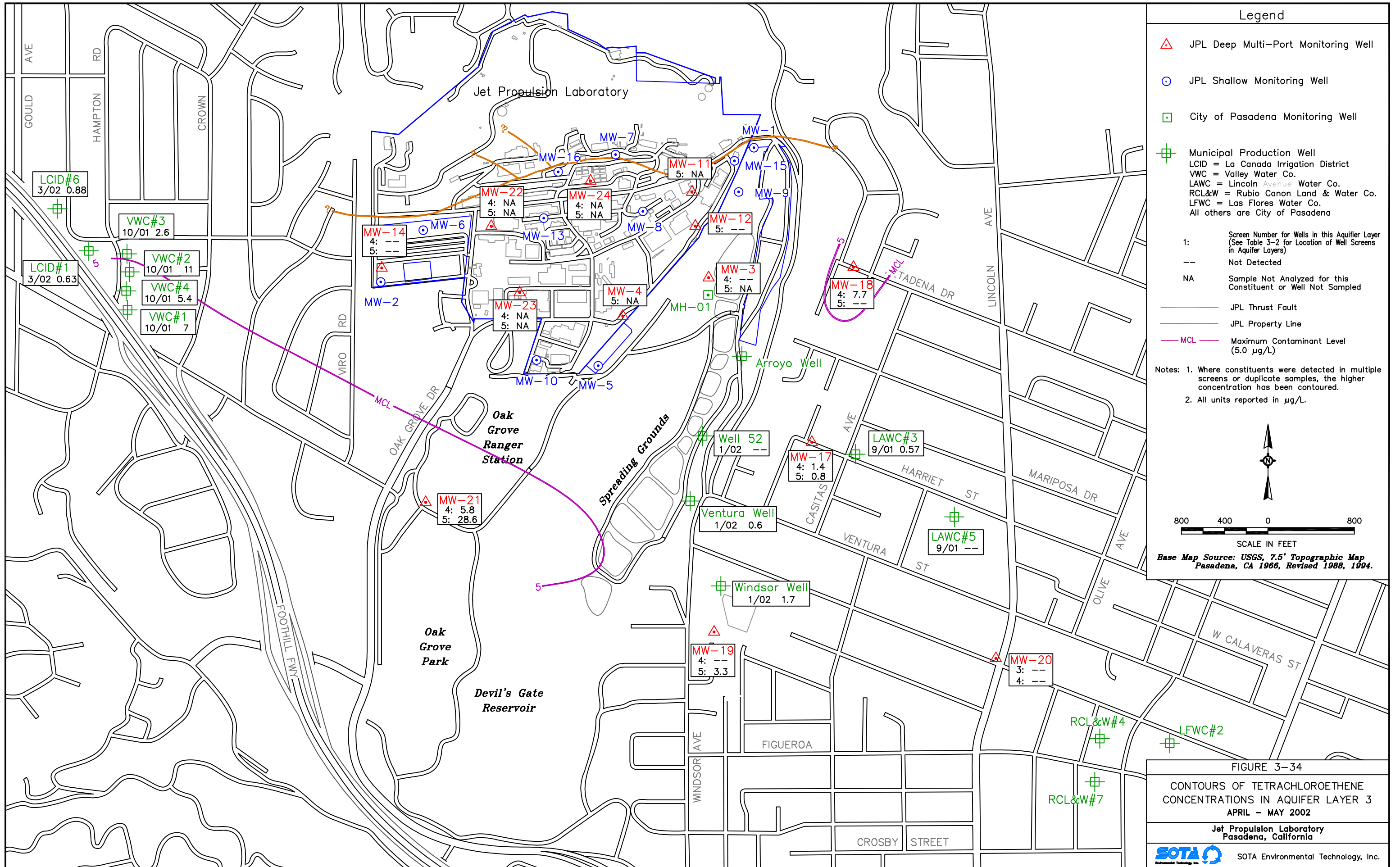
Base Map Source: USGS, 7.5' Topographic Map Pasadena, CA 1966, Revised 1988, 1994.

FIGURE 3-33

CONTOURS OF TETRACHLOROETHENE CONCENTRATIONS IN AQUIFER LAYER 3  
JANUARY - FEBRUARY 2002

Jet Propulsion Laboratory  
Pasadena, California

SOTA Environmental Technology, Inc.



Legend

- △ JPL Deep Multi-Port Monitoring Well
  - JPL Shallow Monitoring Well
  - City of Pasadena Monitoring Well
  - ⊕ Municipal Production Well  
 LCID = La Canada Irrigation District  
 VWC = Valley Water Co.  
 LAW = Lincoln Avenue Water Co.  
 RCL&W = Rubio Canon Land & Water Co.  
 LFWC = Las Flores Water Co.  
 All others are City of Pasadena
- 1: Screen Number for Wells in this Aquifer Layer (See Table 3-2 for Location of Well Screens in Aquifer Layers)  
 -- Not Detected  
 NA Sample Not Analyzed for this Constituent or Well Not Sampled
- JPL Thrust Fault
  - JPL Property Line
  - MCL Maximum Contaminant Level (5.0 µg/L)

Notes: 1. Where constituents were detected in multiple screens or duplicate samples, the higher concentration has been contoured.  
 2. All units reported in µg/L.

800 400 0 800  
 SCALE IN FEET  
 Base Map Source: USGS, 7.5' Topographic Map Pasadena, CA 1966, Revised 1988, 1994.

FIGURE 3-34  
 CONTOURS OF TETRACHLOROETHENE CONCENTRATIONS IN AQUIFER LAYER 3  
 APRIL - MAY 2002  
 Jet Propulsion Laboratory  
 Pasadena, California  
 SOTA Environmental Technology, Inc.

LCID#6  
3/02 0.88

LCID#1  
3/02 0.63

VWC#3  
10/01 2.6

VWC#2  
10/01 11

VWC#4  
10/01 5.4

VWC#1  
10/01 7

MW-14  
4: --  
5: --

MW-22  
4: NA  
5: NA

MW-24  
4: NA  
5: NA

MW-11  
5: NA

MW-12  
5: --

MW-3  
4: --  
5: NA

MW-18  
4: 7.7  
5: --

MW-23  
4: NA  
5: NA

MW-4  
5: NA

Well 52  
1/02 --

MW-17  
4: 1.4  
5: 0.8

LAWC#3  
9/01 0.57

LAWC#5  
9/01 --

MW-21  
4: 5.8  
5: 28.6

Ventura Well  
1/02 0.6

Windsor Well  
1/02 1.7

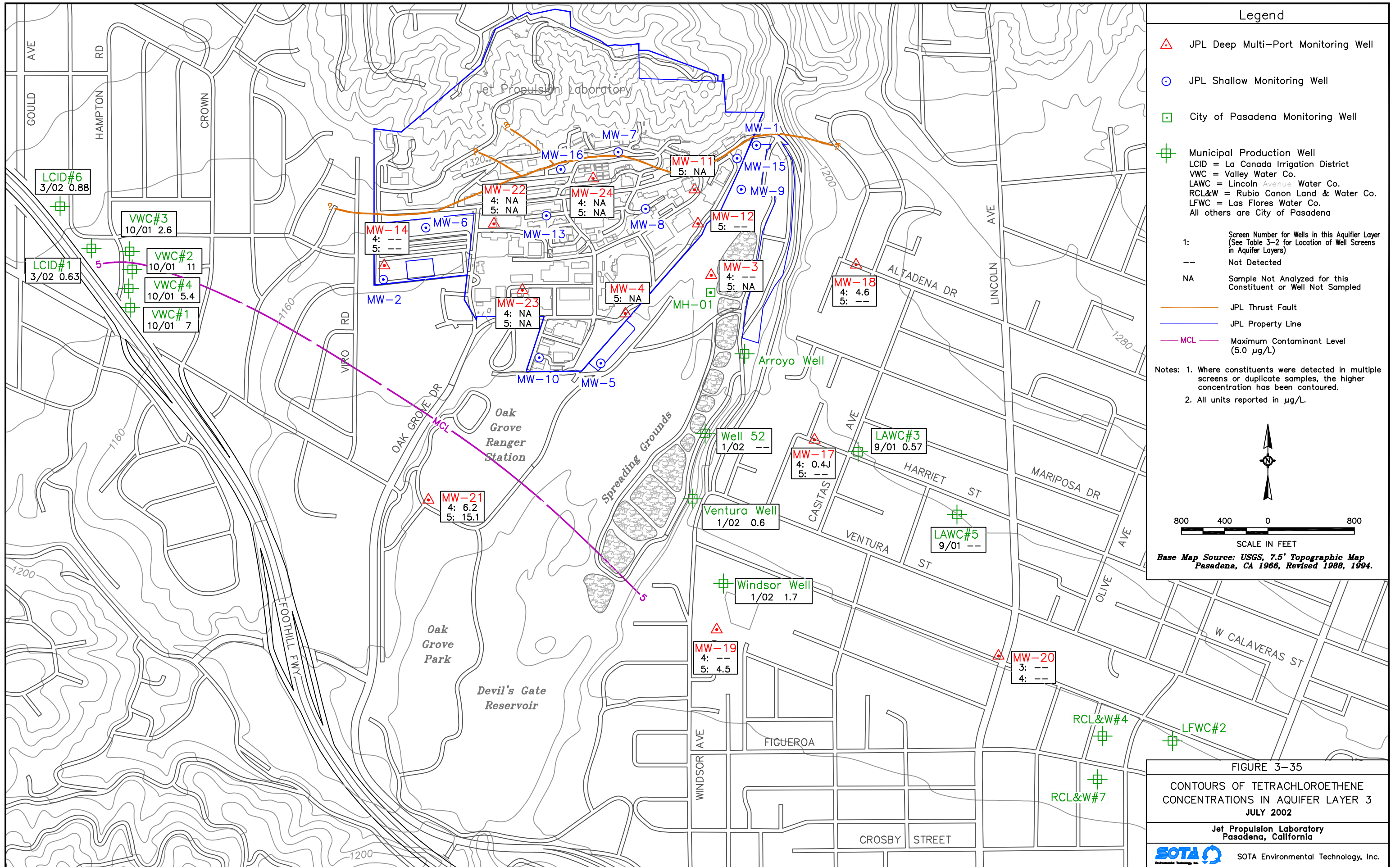
MW-19  
4: --  
5: 3.3

MW-20  
3: --  
4: --

RCL&W#4

LFWC#2

RCL&W#7




### Legend

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- JPL Shallow Monitoring Well
- City of Pasadena Monitoring Well
- ⊕ Municipal Production Well  
 LCID = La Canada Irrigation District  
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 LAWG = Lincoln Avenue Water Co.  
 RCL&W = Rubio Canon Land & Water Co.  
 LFWC = Las Flores Water Co.  
 All others are City of Pasadena

1: Screen Number for Wells in this Aquifer Layer (See Table 3-2 for Location of Well Screens in Aquifer Layers)  
 -- Not Detected  
 NA Sample Not Analyzed for this Constituent or Well Not Sampled


- JPL Thrust Fault
- JPL Property Line
- MCL Maximum Contaminant Level (5.0 µg/L)

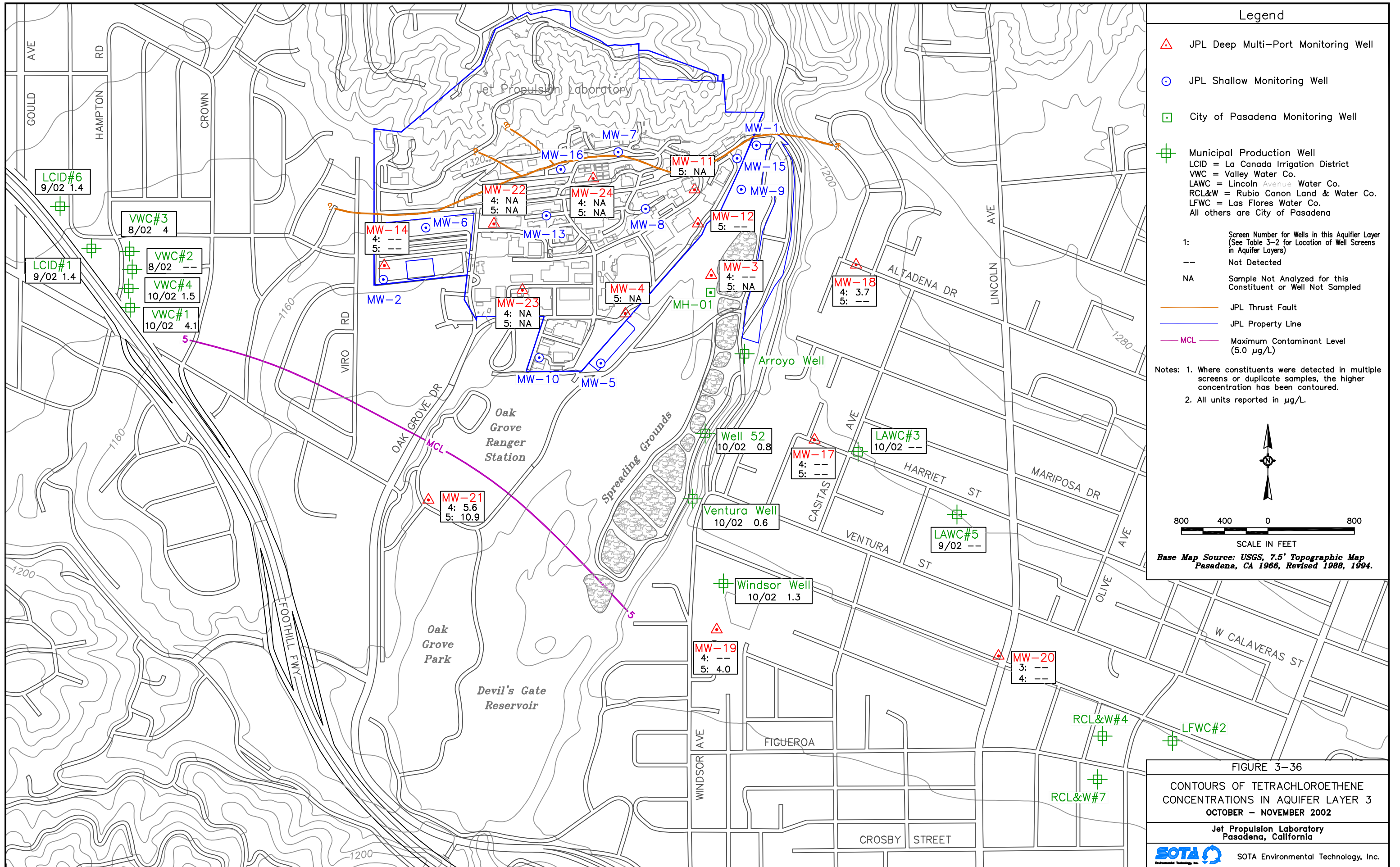
Notes: 1. Where constituents were detected in multiple screens or duplicate samples, the higher concentration has been contoured.  
 2. All units reported in µg/L.



800 400 0 800  
SCALE IN FEET

Base Map Source: USGS, 7.5' Topographic Map Pasadena, CA 1966, Revised 1988, 1994.

FIGURE 3-35  
 CONTOURS OF TETRACHLOROETHENE CONCENTRATIONS IN AQUIFER LAYER 3  
 JULY 2002  
 Jet Propulsion Laboratory  
 Pasadena, California  
 SOTA Environmental Technology, Inc.



Legend

- ▲ JPL Deep Multi-Port Monitoring Well
  - JPL Shallow Monitoring Well
  - City of Pasadena Monitoring Well
  - ⊕ Municipal Production Well  
 LCID = La Canada Irrigation District  
 VWC = Valley Water Co.  
 LAW = Lincoln Avenue Water Co.  
 RCL&W = Rubio Canon Land & Water Co.  
 LFWC = Las Flores Water Co.  
 All others are City of Pasadena
- Screen Number for Wells in this Aquifer Layer  
 (See Table 3-2 for Location of Well Screens in Aquifer Layers)
- 1: Not Detected
  - : Sample Not Analyzed for this Constituent or Well Not Sampled
  - NA: Sample Not Analyzed for this Constituent or Well Not Sampled
- JPL Thrust Fault
  - JPL Property Line
  - MCL Maximum Contaminant Level (5.0 µg/L)

Notes: 1. Where constituents were detected in multiple screens or duplicate samples, the higher concentration has been contoured.  
 2. All units reported in µg/L.

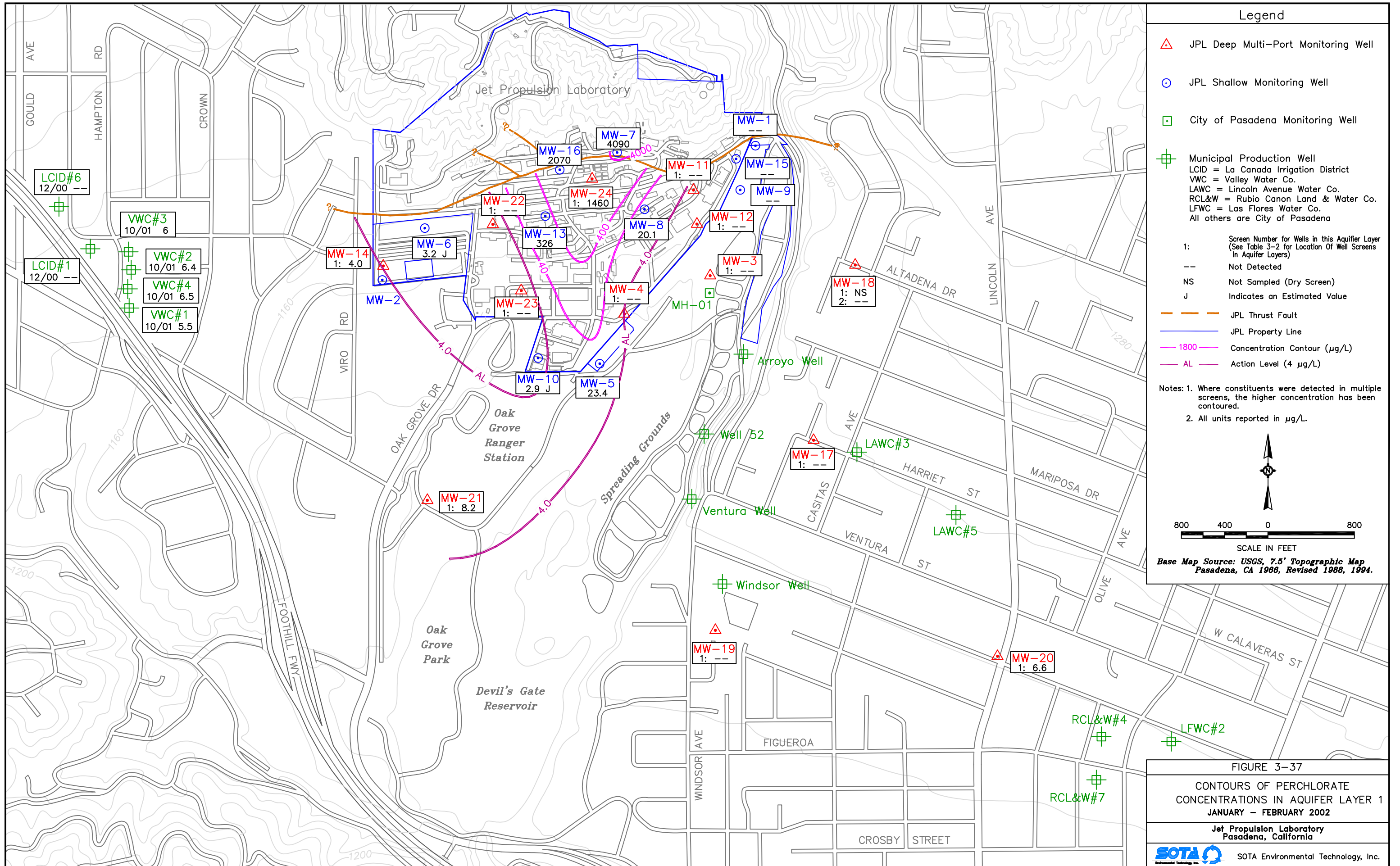
N

800 400 0 800

SCALE IN FEET

Base Map Source: USGS, 7.5' Topographic Map Pasadena, CA 1966, Revised 1988, 1994.

FIGURE 3-36  
 CONTOURS OF TETRACHLOROETHENE CONCENTRATIONS IN AQUIFER LAYER 3  
 OCTOBER - NOVEMBER 2002  
 Jet Propulsion Laboratory  
 Pasadena, California  
 SOTA Environmental Technology, Inc.



**Legend**


- △ JPL Deep Multi-Port Monitoring Well
- JPL Shallow Monitoring Well
- City of Pasadena Monitoring Well
- ⊕ Municipal Production Well


LCID = La Canada Irrigation District  
 VWC = Valley Water Co.  
 LAWC = Lincoln Avenue Water Co.  
 RCL&W = Rubio Canon Land & Water Co.  
 LFWC = Las Flores Water Co.  
 All others are City of Pasadena

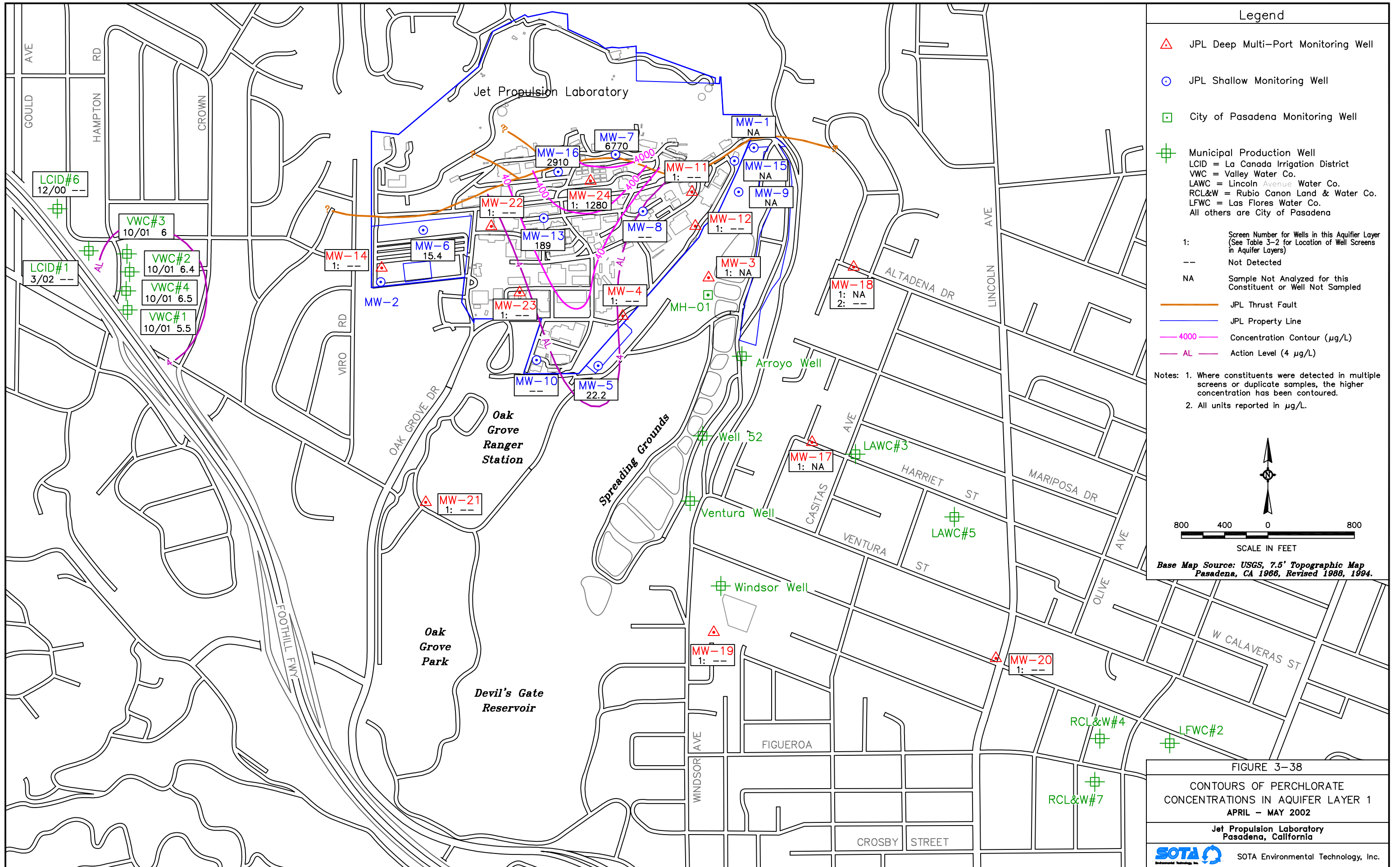
1: Screen Number for Wells in this Aquifer Layer (See Table 3-2 for Location of Well Screens in Aquifer Layers)  
 -- Not Detected  
 NS Not Sampled (Dry Screen)  
 J Indicates an Estimated Value

- JPL Thrust Fault
- JPL Property Line
- 1800 Concentration Contour (µg/L)
- AL Action Level (4 µg/L)

Notes: 1. Where constituents were detected in multiple screens, the higher concentration has been contoured.  
 2. All units reported in µg/L.

  
 800 400 0 800  
 SCALE IN FEET  
 Base Map Source: USGS, 7.5' Topographic Map Pasadena, CA 1966, Revised 1988, 1994.

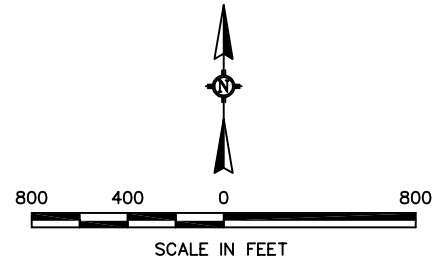
**FIGURE 3-37**  
**CONTOURS OF PERCHLORATE**  
**CONCENTRATIONS IN AQUIFER LAYER 1**  
**JANUARY - FEBRUARY 2002**  
 Jet Propulsion Laboratory  
 Pasadena, California  
 SOTA Environmental Technology, Inc.



Legend

- ▲ JPL Deep Multi-Port Monitoring Well
- JPL Shallow Monitoring Well
- City of Pasadena Monitoring Well
- ⊕ Municipal Production Well  
 LCID = La Canada Irrigation District  
 VWC = Valley Water Co.  
 LAWG = Lincoln Avenue Water Co.  
 RCL&W = Rubio Canon Land & Water Co.  
 LFWC = Las Flores Water Co.  
 All others are City of Pasadena
- 1: Screen Number for Wells in this Aquifer Layer (See Table 3-2 for Location of Well Screens in Aquifer Layers)
- Not Detected
- NA Sample Not Analyzed for this Constituent or Well Not Sampled
- JPL Thrust Fault
- JPL Property Line
- 4000 Concentration Contour (µg/L)
- AL Action Level (4 µg/L)

Notes: 1. Where constituents were detected in multiple screens or duplicate samples, the higher concentration has been contoured.  
 2. All units reported in µg/L.



Base Map Source: USGS, 7.5' Topographic Map Pasadena, CA 1966, Revised 1988, 1994.

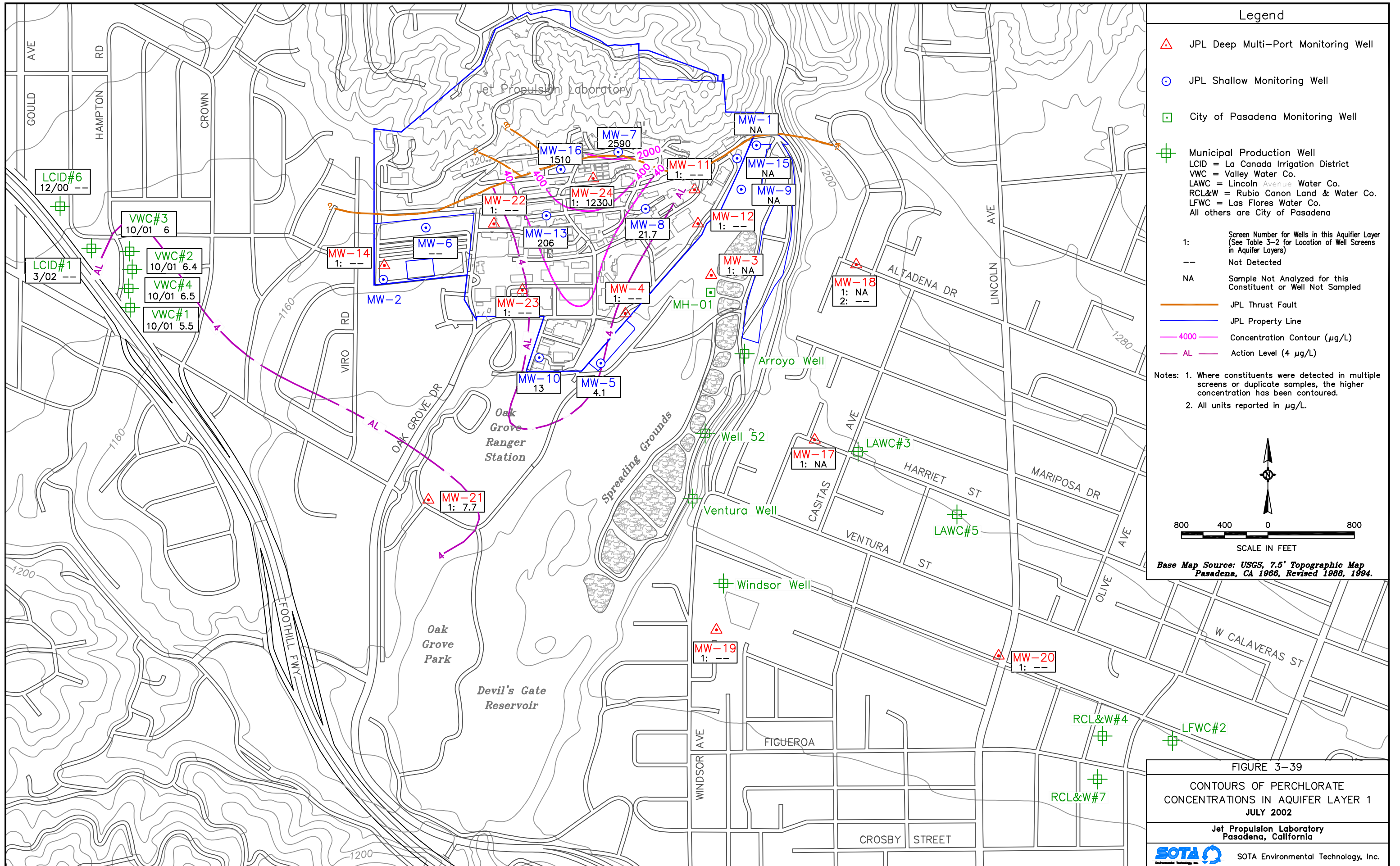
FIGURE 3-38

CONTOURS OF PERCHLORATE  
 CONCENTRATIONS IN AQUIFER LAYER 1  
 APRIL - MAY 2002

Jet Propulsion Laboratory  
 Pasadena, California

SOTA Environmental Technology, Inc.

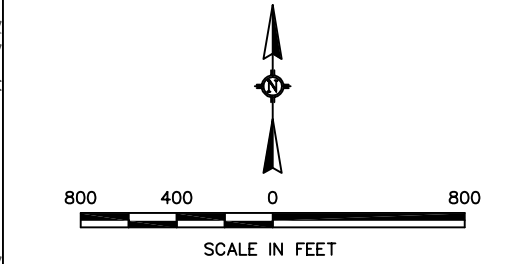




Legend

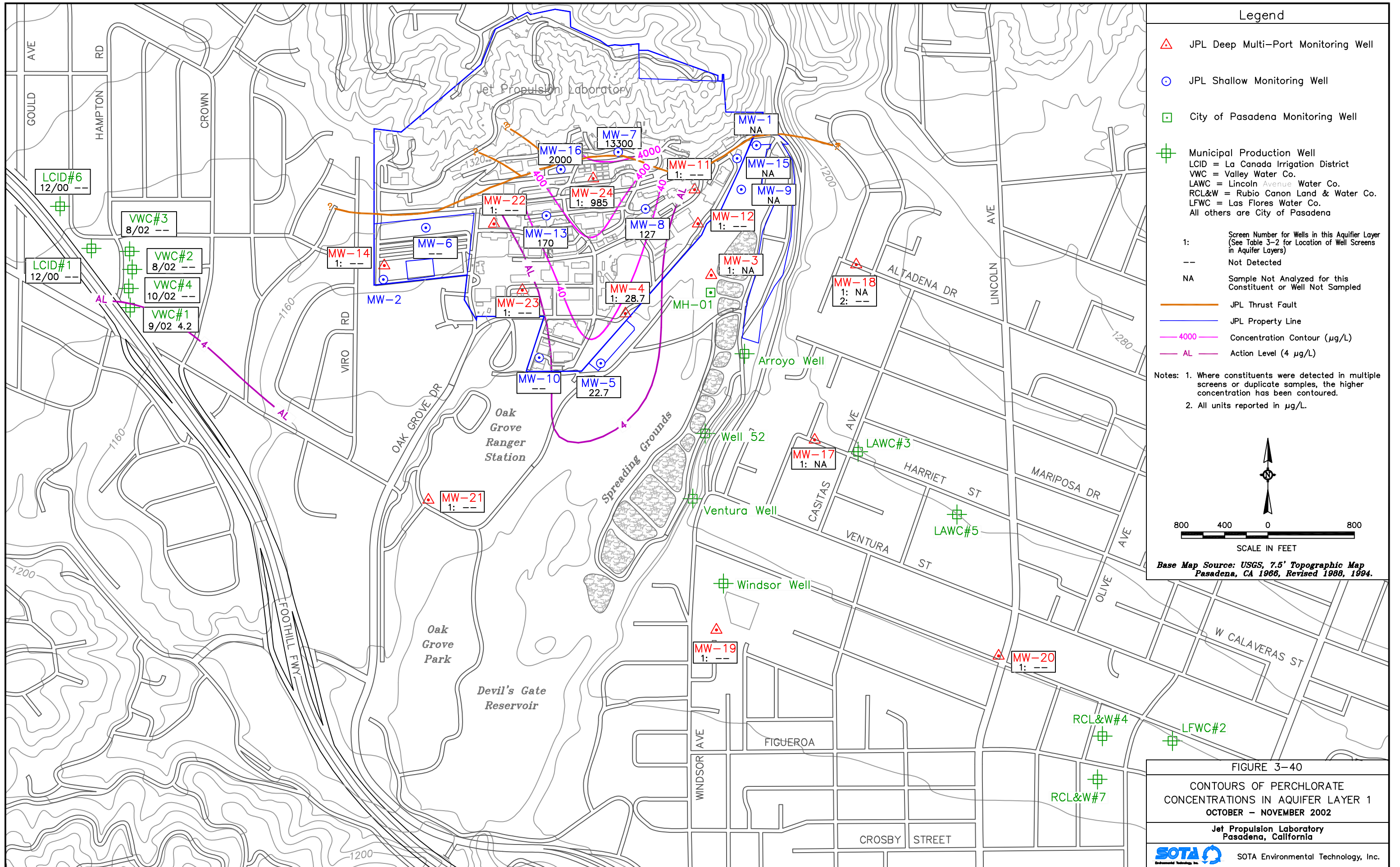
- ▲ JPL Deep Multi-Port Monitoring Well
  - JPL Shallow Monitoring Well
  - City of Pasadena Monitoring Well
  - ⊕ Municipal Production Well  
 LCID = La Canada Irrigation District  
 VWC = Valley Water Co.  
 LAWLC = Lincoln Avenue Water Co.  
 RCL&W = Rubio Canon Land & Water Co.  
 LFWC = Las Flores Water Co.  
 All others are City of Pasadena
- 1: Screen Number for Wells in this Aquifer Layer (See Table 3-2 for Location of Well Screens in Aquifer Layers)  
 -- Not Detected  
 NA Sample Not Analyzed for this Constituent or Well Not Sampled
- JPL Thrust Fault
  - JPL Property Line
  - 4000 Concentration Contour (µg/L)
  - AL Action Level (4 µg/L)

Notes: 1. Where constituents were detected in multiple screens or duplicate samples, the higher concentration has been contoured.  
 2. All units reported in µg/L.



Base Map Source: USGS, 7.5' Topographic Map Pasadena, CA 1966, Revised 1988, 1994.

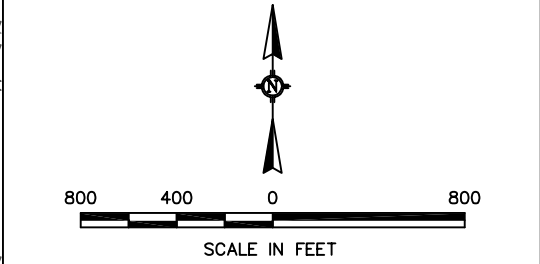
FIGURE 3-39  
 CONTOURS OF PERCHLORATE CONCENTRATIONS IN AQUIFER LAYER 1  
 JULY 2002



Legend

- ▲ JPL Deep Multi-Port Monitoring Well
  - JPL Shallow Monitoring Well
  - City of Pasadena Monitoring Well
  - ⊕ Municipal Production Well  
 LCID = La Canada Irrigation District  
 VWC = Valley Water Co.  
 LAWG = Lincoln Avenue Water Co.  
 RCL&W = Rubio Canon Land & Water Co.  
 LFWC = Las Flores Water Co.  
 All others are City of Pasadena
- 1: Screen Number for Wells in this Aquifer Layer  
 (See Table 3-2 for Location of Well Screens in Aquifer Layers)
- Not Detected
- NA Sample Not Analyzed for this Constituent or Well Not Sampled
- JPL Thrust Fault
  - JPL Property Line
  - 4000 Concentration Contour (µg/L)
  - AL Action Level (4 µg/L)

Notes: 1. Where constituents were detected in multiple screens or duplicate samples, the higher concentration has been contoured.  
 2. All units reported in µg/L.



Base Map Source: USGS, 7.5' Topographic Map Pasadena, CA 1966, Revised 1988, 1994.

FIGURE 3-40

CONTOURS OF PERCHLORATE CONCENTRATIONS IN AQUIFER LAYER 1  
 OCTOBER - NOVEMBER 2002

Jet Propulsion Laboratory  
 Pasadena, California

**SOTA** Environmental Technology, Inc.