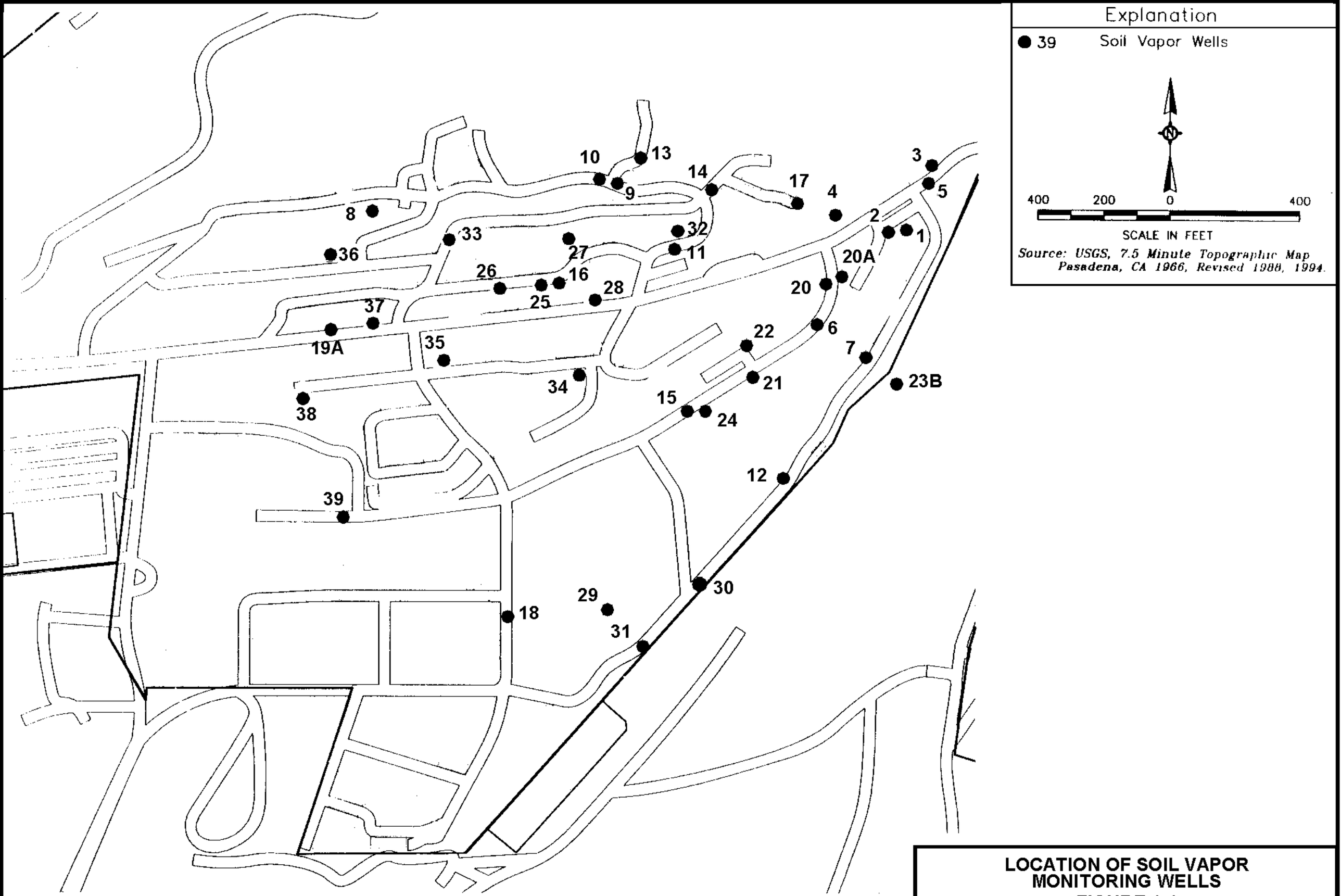
FIGURES

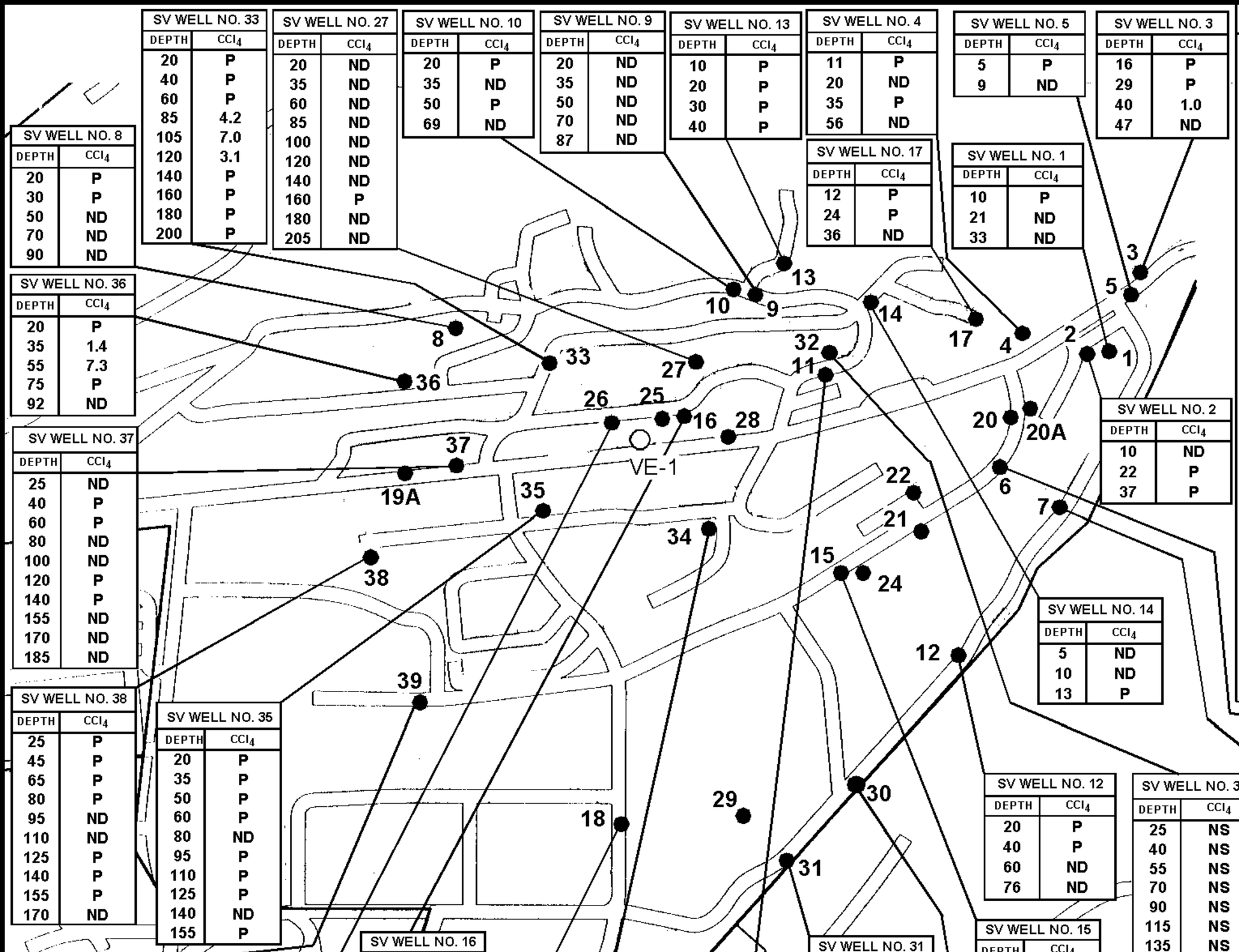


LOCATION OF SOIL VAPOR MONITORING WELLS
FIGURE 1-1

Jet Propulsion Laboratory
Pasadena, California

GEOFON INCORPORATION

Date: April 2002
Contract No.: N68711-97-D-8702
DO No.: 0048



Explanation

● 39	Soil Vapor Wells Sampled
○ VE-1	Vapor Extraction Well
CCl_4	Carbon Tetrachloride
ND	Non-Detect @ Laboratory Detection Limit of 1.0 $\mu g/L$-Vapor
P	Sample Port Plugged: No Sample Collected
NS	Not Sampled at that Depth

NOTE:

Concentrations in $\mu g/L$-Vapor

400 200 0 400

SCALE IN FEET

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

SV WELL NO. 33

DEPTH	CCl_4
20	P
40	P
60	P
85	4.2
105	7.0
120	3.1
140	P
160	P
180	P
200	P

SV WELL NO. 27

DEPTH	CCl_4
20	ND
35	ND
60	ND
85	ND
100	ND
120	ND
140	ND
160	P
180	ND
205	ND

SV WELL NO. 10

DEPTH	CCl_4
20	P
35	ND
50	P
69	ND

SV WELL NO. 9

DEPTH	CCl_4
20	ND
35	ND
50	ND
70	ND
87	ND

SV WELL NO. 13

DEPTH	CCl_4
10	P
20	P
30	P
40	P

SV WELL NO. 4

DEPTH	CCl_4
11	P
20	ND
35	P
56	ND

SV WELL NO. 5

DEPTH	CCl_4
5	P
9	ND

SV WELL NO. 3

DEPTH	CCl_4
16	P
29	P
40	1.0
47	ND

SV WELL NO. 8

DEPTH	CCl_4
20	P
30	P
50	ND
70	ND
90	ND

SV WELL NO. 17

DEPTH	CCl_4
12	P
24	P
36	ND

SV WELL NO. 1

DEPTH	CCl_4
10	P
21	ND
33	ND

SV WELL NO. 36

DEPTH	CCl_4
20	P
35	1.4
55	7.3
75	P
92	ND

SV WELL NO. 2

DEPTH	CCl_4
10	ND
22	P
37	P

SV WELL NO. 37

DEPTH	CCl_4
25	ND
40	P
60	P
80	ND
100	ND
120	P
140	P
155	ND
170	ND
185	ND

SV WELL NO. 14

DEPTH	CCl_4
5	ND
10	ND
13	P

SV WELL NO. 38

DEPTH	CCl_4
25	P
45	P
65	P
80	P
95	ND
110	ND
125	P
140	P
155	P
170	ND

SV WELL NO. 35

DEPTH	CCl_4
20	P
35	P
50	P
60	P
80	ND
95	P
110	P
125	P
140	ND
155	P

SV WELL NO. 6

DEPTH	CCl_4
20	P
40	ND
60	P
77	ND
96	ND

SV WELL NO. 12

DEPTH	CCl_4
20	P
40	P
60	ND
76	ND

SV WELL NO. 32

DEPTH	CCl_4
25	NS
40	NS
55	NS
70	NS
90	NS
115	NS
135	NS
155	3.9
180	NS
195	NS

SV WELL NO. 7

DEPTH	CCl_4
20	ND
35	ND

SV WELL NO. 39

DEPTH	CCl_4
20	ND
35	P
50	ND
70	ND
85	ND
100	ND
110	P
120	P
130	ND

SV WELL NO. 26

DEPTH	CCl_4
20	P
35	P
55	P
80	P
100	P
115	2.5
140	ND
160	ND
180	P
195	P

SV WELL NO. 16

DEPTH	CCl_4
20	P
40	P
60	P
80	P
95	P

SV WELL NO. 18

DEPTH	CCl_4
20	P
40	P
55	P
70	P
85	P

SV WELL NO. 34

DEPTH	CCl_4
20	NS
35	NS
50	NS
65	NS
80	NS
95	NS
108	NS
118	P

SV WELL NO. 11

DEPTH	CCl_4
20	ND
40	P
60	P
80	P
96	ND

SV WELL NO. 31

DEPTH	CCl_4
20	ND
35	ND
45	P
55	ND
65	ND

SV WELL NO. 15

DEPTH	CCl_4
20	P
40	ND
60	ND
75	ND
90	ND

SV WELL NO. 30

DEPTH	CCl_4
17	ND
30	ND
40	ND
50	ND
65	ND

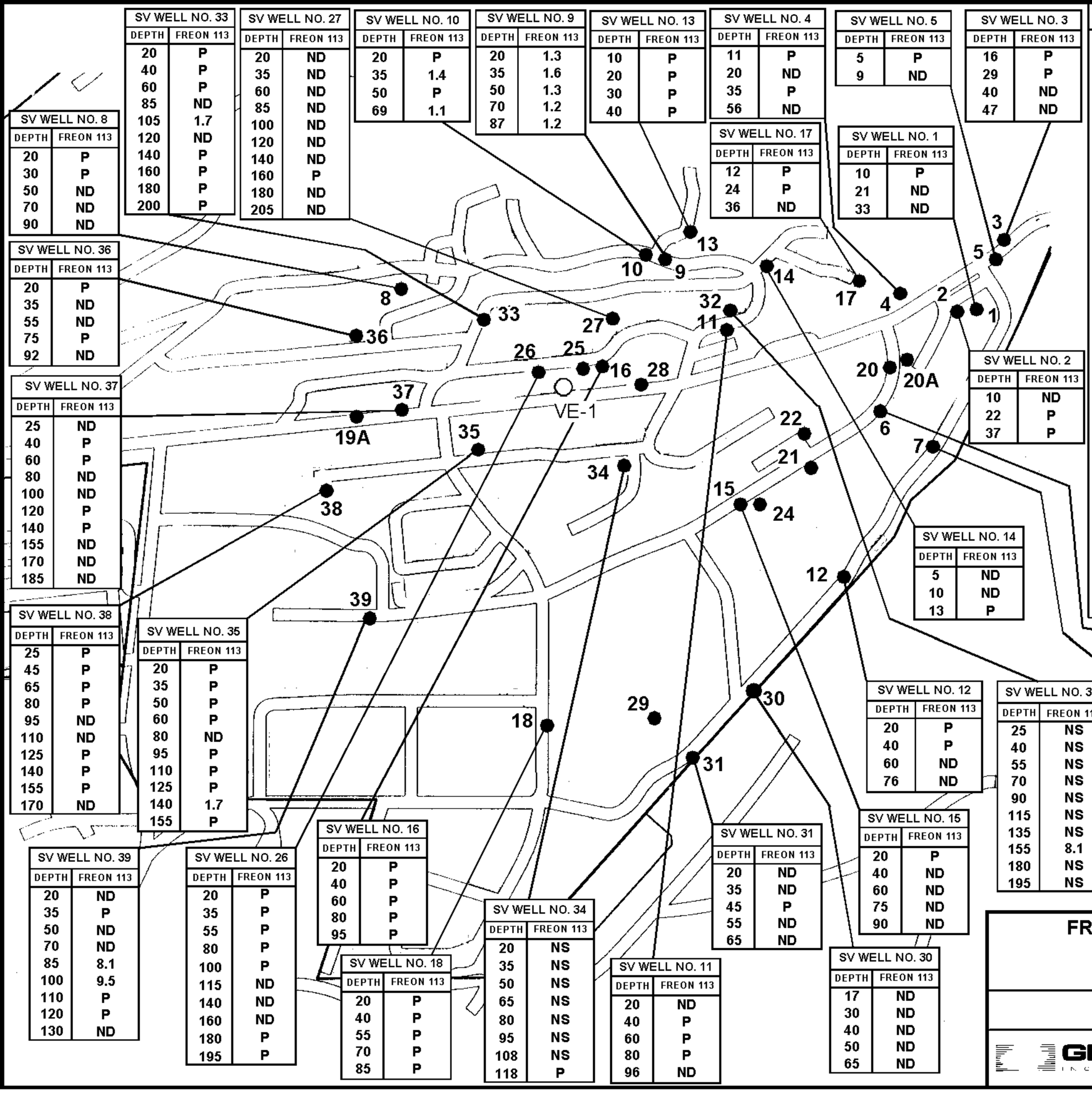
CARBON TETRACHLORIDE CONCENTRATIONS AT DEPTH

FIGURE 3-1

Jet Propulsion Laboratory
Pasadena, California

GEOFON INCORPORATED

Date: April 2002
Contract No.: N68711-97-D-8702
DO No.: 0048



Explanation

● 39	Soil Vapor Wells Sampled
○ VE-1	Vapor Extraction Well
F-113:	FREON 113
ND	Non-Detect @ Laboratory Detection Limit of 1.0 μg/L-Vapor
P	Sample Port Plugged: No Sample Collected
NS	Not Sampled at that Depth

NOTE:

Concentrations in μg/L-Vapor

400 200 0 400

SCALE IN FEET

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

SV WELL NO. 33

DEPTH	FREON 113
20	P
40	P
60	P
85	ND
105	1.7
120	ND
140	P
160	P
180	P
200	P

SV WELL NO. 27

DEPTH	FREON 113
20	ND
35	ND
60	ND
85	ND
100	ND
120	ND
140	ND
160	P
180	ND
205	ND

SV WELL NO. 10

DEPTH	FREON 113
20	P
35	1.4
50	P
69	1.1

SV WELL NO. 9

DEPTH	FREON 113
20	1.3
35	1.6
50	1.3
70	1.2
87	1.2

SV WELL NO. 13

DEPTH	FREON 113
10	P
20	P
30	P
40	P

SV WELL NO. 4

DEPTH	FREON 113
11	P
20	ND
35	P
56	ND

SV WELL NO. 5

DEPTH	FREON 113
5	P
9	ND

SV WELL NO. 3

DEPTH	FREON 113
16	P
29	P
40	ND
47	ND

SV WELL NO. 8

DEPTH	FREON 113
20	P
30	P
50	ND
70	ND
90	ND

SV WELL NO. 17

DEPTH	FREON 113
12	P
24	P
36	ND

SV WELL NO. 1

DEPTH	FREON 113
10	P
21	ND
33	ND

SV WELL NO. 36

DEPTH	FREON 113
20	P
35	ND
55	ND
75	P
92	ND

SV WELL NO. 2

DEPTH	FREON 113
10	ND
22	P
37	P

SV WELL NO. 37

DEPTH	FREON 113
25	ND
40	P
60	P
80	ND
100	ND
120	P
140	P
155	ND
170	ND
185	ND

SV WELL NO. 14

DEPTH	FREON 113
5	ND
10	ND
13	P

SV WELL NO. 38

DEPTH	FREON 113
25	P
45	P
65	P
80	P
95	ND
110	ND
125	P
140	P
155	P
170	ND

SV WELL NO. 35

DEPTH	FREON 113
20	P
35	P
50	P
60	P
80	ND
95	P
110	P
125	P
140	1.7
155	P

SV WELL NO. 6

DEPTH	FREON 113
20	P
40	ND
60	P
77	ND
96	ND

SV WELL NO. 7

DEPTH	FREON 113
20	ND
35	ND

SV WELL NO. 32

DEPTH	FREON 113
25	NS
40	NS
55	NS
70	NS
90	NS
115	NS
135	NS
155	8.1
180	NS
195	NS

SV WELL NO. 12

DEPTH	FREON 113
20	P
40	P
60	ND
76	ND

SV WELL NO. 15

DEPTH	FREON 113
20	P
40	ND
60	ND
75	ND
90	ND

SV WELL NO. 31

DEPTH	FREON 113
20	ND
35	ND
45	P
55	ND
65	ND

SV WELL NO. 16

DEPTH	FREON 113
20	P
40	P
60	P
80	P
95	P

SV WELL NO. 39

DEPTH	FREON 113
20	ND
35	P
50	ND
70	ND
85	8.1
100	9.5
110	P
120	P
130	ND

SV WELL NO. 26

DEPTH	FREON 113
20	P
35	P
55	P
80	P
100	P
115	ND
140	ND
160	ND
180	P
195	P

SV WELL NO. 34

DEPTH	FREON 113
20	NS
35	NS
50	NS
65	NS
80	NS
95	NS
108	NS
118	P

SV WELL NO. 18

DEPTH	FREON 113
20	P
40	P
55	P
70	P
85	P

SV WELL NO. 11

DEPTH	FREON 113
20	ND
40	P
60	P
80	P
96	ND

SV WELL NO. 30

DEPTH	FREON 113
17	ND
30	ND
40	ND
50	ND
65	ND

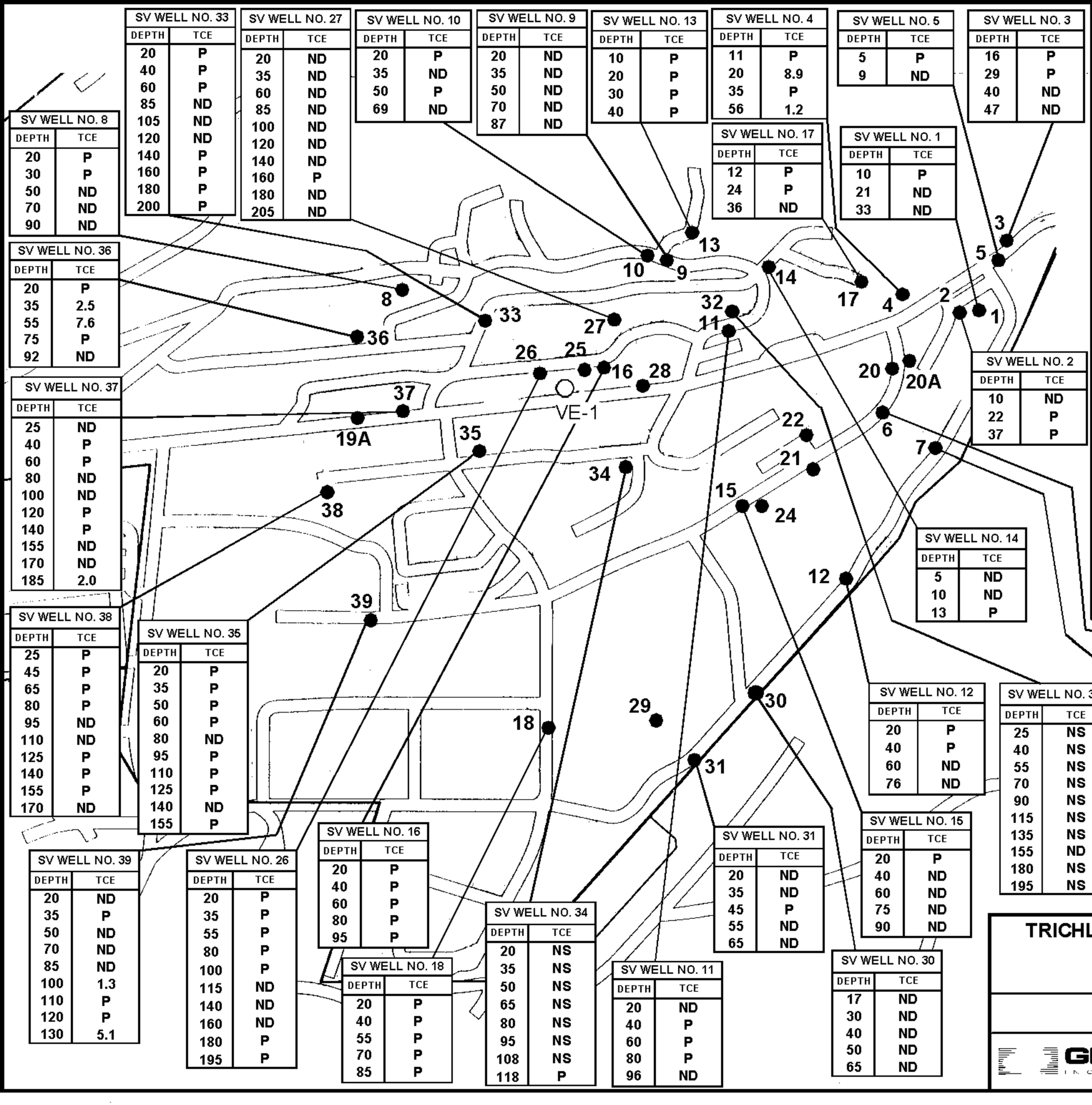
FREON 113 CONCENTRATIONS AT DEPTH

FIGURE 3-2

Jet Propulsion Laboratory
Pasadena, California

GEOFON INCORPORATED

Date: April 2002
Contract No.: N68711-97-D-8702
DO No.: 0048



Explanation

● 39	Soil Vapor Wells Sampled
○ VE-1	Vapor Extraction Well
TCE:	TRICHLOROETHENE
ND	Non-Detect @ Laboratory Detection Limit of 1.0 μg/L-Vapor
P	Sample Port Plugged: No Sample Collected
NS	Not Sampled at that Depth

NOTE:

Concentrations in μg/L-Vapor

400 200 0 400

SCALE IN FEET

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

SV WELL NO. 33

DEPTH	TCE
20	P
40	P
60	P
85	ND
105	ND
120	ND
140	P
160	P
180	P
200	P

SV WELL NO. 27

DEPTH	TCE
20	ND
35	ND
60	ND
85	ND
100	ND
120	ND
140	ND
160	P
180	ND
205	ND

SV WELL NO. 10

DEPTH	TCE
20	P
35	ND
50	P
69	ND

SV WELL NO. 9

DEPTH	TCE
20	ND
35	ND
50	ND
70	ND
87	ND

SV WELL NO. 13

DEPTH	TCE
10	P
20	P
30	P
40	P

SV WELL NO. 4

DEPTH	TCE
11	P
20	8.9
35	P
56	1.2

SV WELL NO. 5

DEPTH	TCE
5	P
9	ND

SV WELL NO. 3

DEPTH	TCE
16	P
29	P
40	ND
47	ND

SV WELL NO. 8

DEPTH	TCE
20	P
30	P
50	ND
70	ND
90	ND

SV WELL NO. 17

DEPTH	TCE
12	P
24	P
36	ND

SV WELL NO. 1

DEPTH	TCE
10	P
21	ND
33	ND

SV WELL NO. 36

DEPTH	TCE
20	P
35	2.5
55	7.6
75	P
92	ND

SV WELL NO. 2

DEPTH	TCE
10	ND
22	P
37	P

SV WELL NO. 37

DEPTH	TCE
25	ND
40	P
60	P
80	ND
100	ND
120	P
140	P
155	ND
170	ND
185	2.0

SV WELL NO. 14

DEPTH	TCE
5	ND
10	ND
13	P

SV WELL NO. 38

DEPTH	TCE
25	P
45	P
65	P
80	P
95	ND
110	ND
125	P
140	P
155	P
170	ND

SV WELL NO. 35

DEPTH	TCE
20	P
35	P
50	P
60	P
80	ND
95	P
110	P
125	P
140	ND
155	P

SV WELL NO. 6

DEPTH	TCE
20	P
40	ND
60	P
77	ND
96	ND

SV WELL NO. 12

DEPTH	TCE
20	P
40	P
60	ND
76	ND

SV WELL NO. 32

DEPTH	TCE
25	NS
40	NS
55	NS
70	NS
90	NS
115	NS
135	NS
155	ND
180	NS
195	NS

SV WELL NO. 7

DEPTH	TCE
20	ND
35	ND

SV WELL NO. 16

DEPTH	TCE
20	P
40	P
60	P
80	P
95	P

SV WELL NO. 31

DEPTH	TCE
20	ND
35	ND
45	P
55	ND
65	ND

SV WELL NO. 15

DEPTH	TCE
20	P
40	ND
60	ND
75	ND
90	ND

SV WELL NO. 39

DEPTH	TCE
20	ND
35	P
50	ND
70	ND
85	ND
100	1.3
110	P
120	P
130	5.1

SV WELL NO. 26

DEPTH	TCE
20	P
35	P
55	P
80	P
100	P
115	ND
140	ND
160	ND
180	P
195	P

SV WELL NO. 18

DEPTH	TCE
20	P
40	P
55	P
70	P
85	P

SV WELL NO. 34

DEPTH	TCE
20	NS
35	NS
50	NS
65	NS
80	NS
95	NS
108	NS
118	P

SV WELL NO. 11

DEPTH	TCE
20	ND
40	P
60	P
80	P
96	ND

SV WELL NO. 30

DEPTH	TCE
17	ND
30	ND
40	ND
50	ND
65	ND

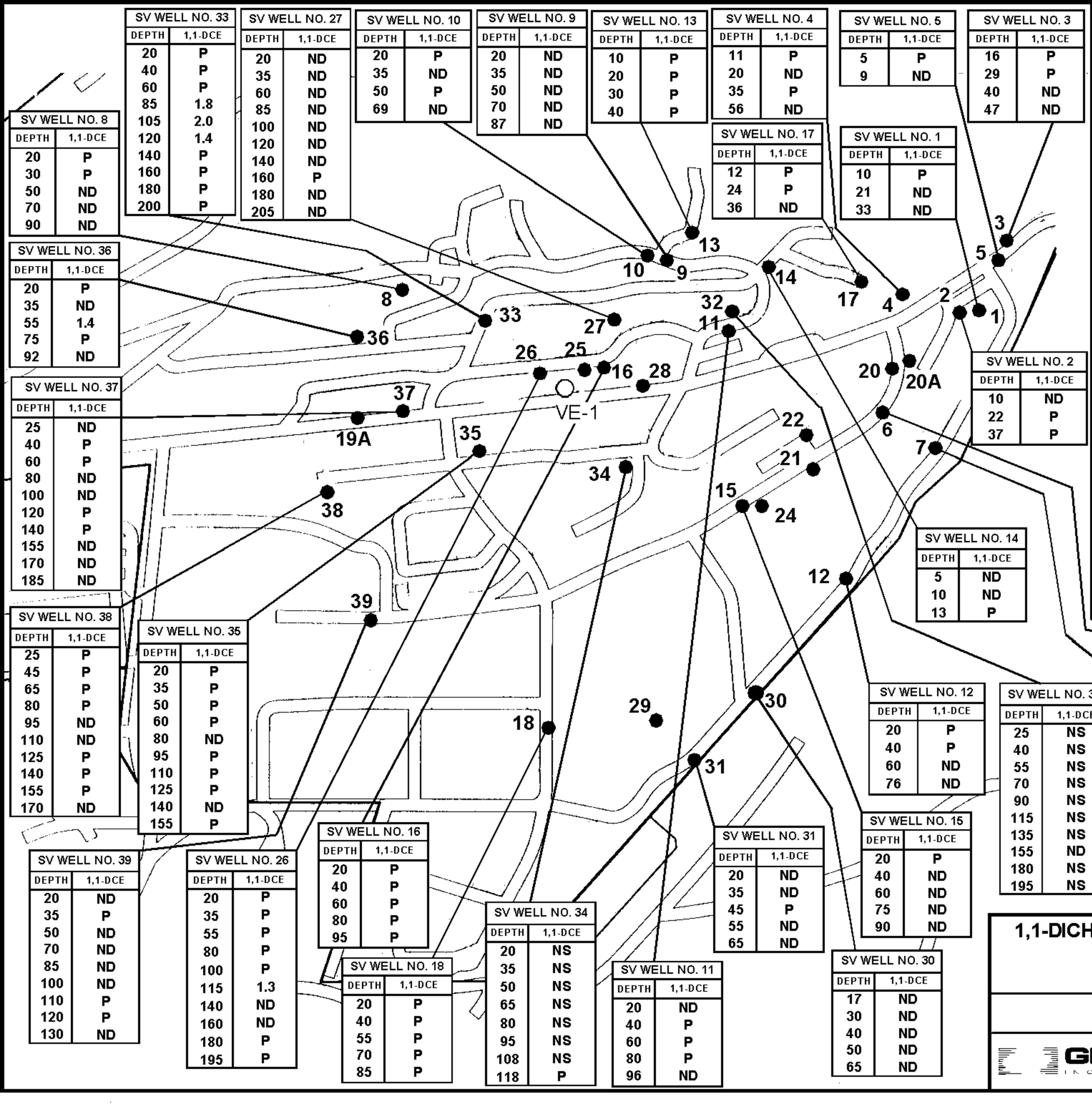
TRICHLOROETHENE CONCENTRATIONS AT DEPTH

FIGURE 3-3

Jet Propulsion Laboratory
Pasadena, California

GEOFON INCORPORATED

Date: April 2002
Contract No.: N68711-97-D-8702
DO No.: 0048



SV WELL NO. 33	
DEPTH	1,1-DCE
20	P
40	P
60	P
85	1.8
105	2.0
120	1.4
140	P
160	P
180	P
200	P

SV WELL NO. 27	
DEPTH	1,1-DCE
20	ND
35	ND
60	ND
85	ND
100	ND
120	ND
140	ND
160	P
180	ND
205	ND

SV WELL NO. 10	
DEPTH	1,1-DCE
20	P
35	ND
50	P
69	ND

SV WELL NO. 9	
DEPTH	1,1-DCE
20	ND
35	ND
50	ND
70	ND
87	ND

SV WELL NO. 13	
DEPTH	1,1-DCE
10	P
20	P
30	P
40	P

SV WELL NO. 4	
DEPTH	1,1-DCE
11	P
20	ND
35	P
56	ND

SV WELL NO. 5	
DEPTH	1,1-DCE
5	P
9	ND

SV WELL NO. 3	
DEPTH	1,1-DCE
16	P
29	P
40	ND
47	ND

SV WELL NO. 8	
DEPTH	1,1-DCE
20	P
30	P
50	ND
70	ND
90	ND

SV WELL NO. 17	
DEPTH	1,1-DCE
12	P
24	P
36	ND

SV WELL NO. 1	
DEPTH	1,1-DCE
10	P
21	ND
33	ND

SV WELL NO. 36	
DEPTH	1,1-DCE
20	P
35	ND
55	1.4
75	P
92	ND

SV WELL NO. 2	
DEPTH	1,1-DCE
10	ND
22	P
37	P

SV WELL NO. 37	
DEPTH	1,1-DCE
25	ND
40	P
60	P
80	ND
100	ND
120	P
140	P
155	ND
170	ND
185	ND

SV WELL NO. 14	
DEPTH	1,1-DCE
5	ND
10	ND
13	P

SV WELL NO. 38	
DEPTH	1,1-DCE
25	P
45	P
65	P
80	P
95	ND
110	ND
125	P
140	P
155	P
170	ND

SV WELL NO. 35	
DEPTH	1,1-DCE
20	P
35	P
50	P
60	P
80	ND
95	P
110	P
125	P
140	ND
155	P

SV WELL NO. 6	
DEPTH	1,1-DCE
20	P
40	ND
60	P
77	ND
96	P

SV WELL NO. 12	
DEPTH	1,1-DCE
20	P
40	P
60	ND
76	ND

SV WELL NO. 32	
DEPTH	1,1-DCE
25	NS
40	NS
55	NS
70	NS
90	NS
115	NS
135	NS
155	ND
180	NS
195	NS

SV WELL NO. 7	
DEPTH	1,1-DCE
20	ND
35	ND

SV WELL NO. 16	
DEPTH	1,1-DCE
20	P
40	P
60	P
80	P
95	P

SV WELL NO. 31	
DEPTH	1,1-DCE
20	ND
35	ND
45	P
55	ND
65	ND

SV WELL NO. 15	
DEPTH	1,1-DCE
20	P
40	ND
60	ND
75	ND
90	ND

SV WELL NO. 39	
DEPTH	1,1-DCE
20	ND
35	P
50	ND
70	ND
85	ND
100	ND
110	P
120	P
130	ND

SV WELL NO. 26	
DEPTH	1,1-DCE
20	P
35	P
55	P
80	P
100	P
115	1.3
140	ND
160	ND
180	P
195	P

SV WELL NO. 18	
DEPTH	1,1-DCE
20	P
40	P
55	P
70	P
85	P

SV WELL NO. 34	
DEPTH	1,1-DCE
20	NS
35	NS
50	NS
65	NS
80	NS
95	NS
108	NS
118	P

SV WELL NO. 11	
DEPTH	1,1-DCE
20	ND
40	P
60	P
80	P
96	ND

SV WELL NO. 30	
DEPTH	1,1-DCE
17	ND
30	ND
40	ND
50	ND
65	ND

Explanation

● 39	Soil Vapor Wells Sampled
○ VE-1	Vapor Extraction Well
1,1-DCE:	**1,1-DICHLOROETHENE**
ND	Non-Detect @ Laboratory Detection Limit of 1.0 μg/L-Vapor
P	Sample Port Plugged: No Sample Collected
NS	Not Sampled at that Depth

NOTE:

Concentrations in μg/L-Vapor

400 200 0 400

SCALE IN FEET

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

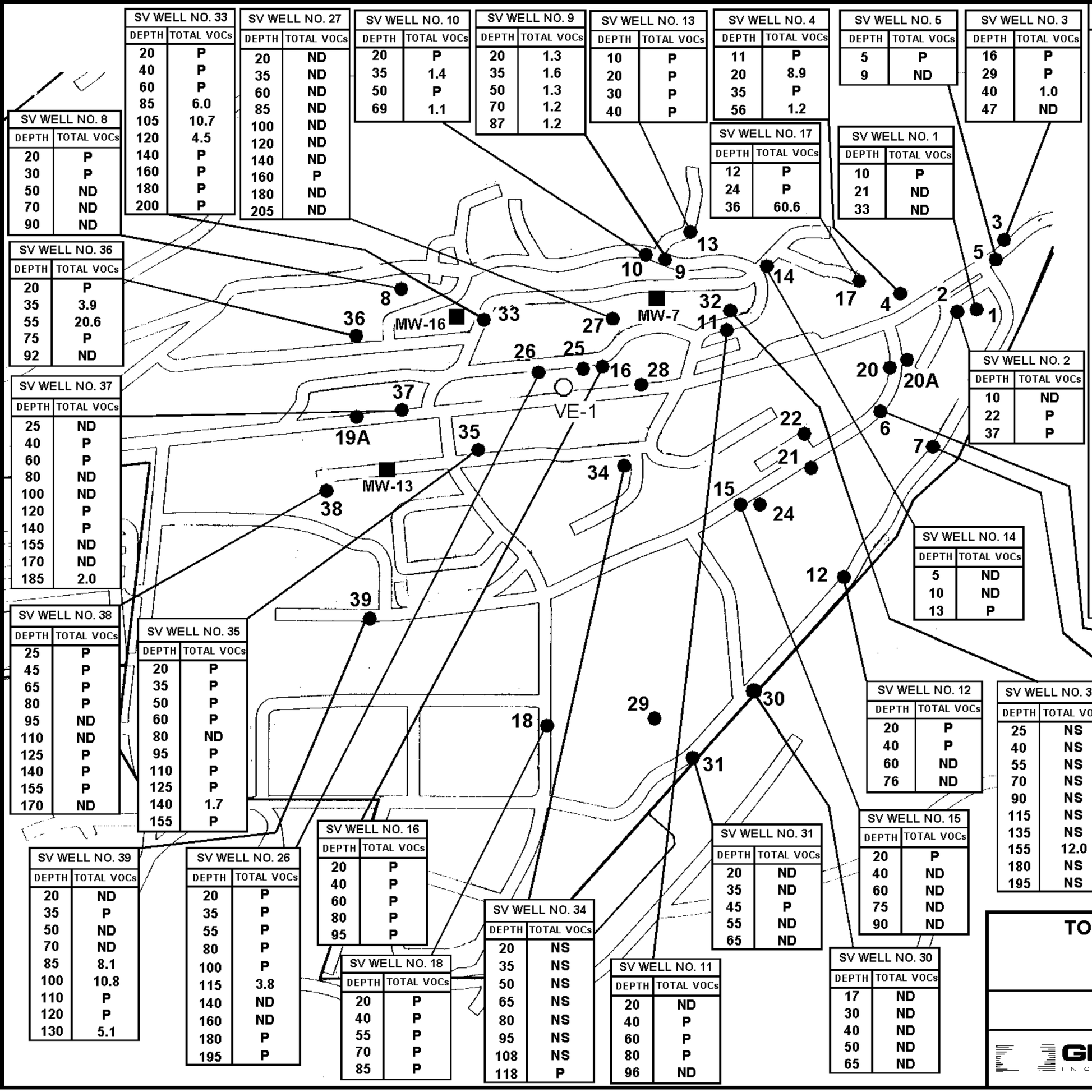
1,1-DICHLOROETHENE CONCENTRATIONS AT DEPTH

FIGURE 3-4

Jet Propulsion Laboratory
Pasadena, California

GEOFON INCORPORATED

Date: April 2002
Contract No.: N68711-97-D-8702
DO No.: 0048



SV WELL NO. 33	
DEPTH	TOTAL VOCs
20	P
40	P
60	P
85	6.0
105	10.7
120	4.5
140	P
160	P
180	P
200	P

SV WELL NO. 27	
DEPTH	TOTAL VOCs
20	ND
35	ND
60	ND
85	ND
100	ND
120	ND
140	ND
160	P
180	ND
205	ND

SV WELL NO. 10	
DEPTH	TOTAL VOCs
20	P
35	1.4
50	P
69	1.1

SV WELL NO. 9	
DEPTH	TOTAL VOCs
20	1.3
35	1.6
50	1.3
70	1.2
87	1.2

SV WELL NO. 13	
DEPTH	TOTAL VOCs
10	P
20	P
30	P
40	P

SV WELL NO. 4	
DEPTH	TOTAL VOCs
11	P
20	8.9
35	P
56	1.2

SV WELL NO. 5	
DEPTH	TOTAL VOCs
5	P
9	ND

SV WELL NO. 3	
DEPTH	TOTAL VOCs
16	P
29	P
40	1.0
47	ND

SV WELL NO. 8	
DEPTH	TOTAL VOCs
20	P
30	P
50	ND
70	ND
90	ND

SV WELL NO. 17	
DEPTH	TOTAL VOCs
12	P
24	P
36	60.6

SV WELL NO. 1	
DEPTH	TOTAL VOCs
10	P
21	ND
33	ND

SV WELL NO. 36	
DEPTH	TOTAL VOCs
20	P
35	3.9
55	20.6
75	P
92	ND

SV WELL NO. 2	
DEPTH	TOTAL VOCs
10	ND
22	P
37	P

SV WELL NO. 37	
DEPTH	TOTAL VOCs
25	ND
40	P
60	P
80	ND
100	ND
120	P
140	P
155	ND
170	ND
185	2.0

SV WELL NO. 14	
DEPTH	TOTAL VOCs
5	ND
10	ND
13	P

SV WELL NO. 38	
DEPTH	TOTAL VOCs
25	P
45	P
65	P
80	P
95	ND
110	ND
125	P
140	P
155	P
170	ND

SV WELL NO. 35	
DEPTH	TOTAL VOCs
20	P
35	P
50	P
60	P
80	ND
95	P
110	P
125	P
140	1.7
155	P

SV WELL NO. 12	
DEPTH	TOTAL VOCs
20	P
40	P
60	ND
76	ND

SV WELL NO. 32	
DEPTH	TOTAL VOCs
25	NS
40	NS
55	NS
70	NS
90	NS
115	NS
135	NS
155	12.0
180	NS
195	NS

SV WELL NO. 7	
DEPTH	TOTAL VOCs
20	ND
35	ND

SV WELL NO. 6	
DEPTH	TOTAL VOCs
20	P
40	ND
60	P
77	ND
96	ND

SV WELL NO. 16	
DEPTH	TOTAL VOCs
20	P
40	P
60	P
80	P
95	P

SV WELL NO. 31	
DEPTH	TOTAL VOCs
20	ND
35	ND
45	P
55	ND
65	ND

SV WELL NO. 15	
DEPTH	TOTAL VOCs
20	P
40	ND
60	ND
75	ND
90	ND

SV WELL NO. 39	
DEPTH	TOTAL VOCs
20	ND
35	P
50	ND
70	ND
85	8.1
100	10.8
110	P
120	P
130	5.1

SV WELL NO. 26	
DEPTH	TOTAL VOCs
20	P
35	P
55	P
80	P
100	P
115	3.8
140	ND
160	ND
180	P
195	P

SV WELL NO. 18	
DEPTH	TOTAL VOCs
20	P
40	P
55	P
70	P
85	P

SV WELL NO. 34	
DEPTH	TOTAL VOCs
20	NS
35	NS
50	NS
65	NS
80	NS
95	NS
108	NS
118	P

SV WELL NO. 11	
DEPTH	TOTAL VOCs
20	ND
40	P
60	P
80	P
96	ND

SV WELL NO. 30	
DEPTH	TOTAL VOCs
17	ND
30	ND
40	ND
50	ND
65	ND

Explanation

● 39	Soil Vapor Wells Sampled
○ VE-1	Vapor Extraction Well
VOCs:	**Volatile Organic Compounds**
ND	Non-Detect @ Laboratory Detection Limit of 1.0 μg/L-Vapor
P	Sample Port Plugged: No Sample Collected
NS	Not Sampled at that Depth
■ MW-7	**Groundwater Monitoring Well**

NOTE:

Concentrations in μg/L-Vapor

400 200 0 400

SCALE IN FEET

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

TOTAL VOC CONCENTRATIONS AT DEPTH

FIGURE 3-5

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Pasadena, California

GEOFON INCORPORATED

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