

## **APPENDIX A**

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### **WELL SAMPLING LOG FORMS FOR SHALLOW WELLS AND GROUNDWATER SAMPLING FIELD DATA SHEETS FOR DEEP MULTI- PORT WELLS**

# GROUNDWATER COLLECTION AND SAMPLE LOG

## WELL ID # 5



Project Name: Quarterly Monitoring at JPL, Pasadena, CA.  
 Project No: 4-12812  
 Navy Contract No.: N68711-01-D-6008, D.O. No. 0012  
 Sampled By: Tony M. & J. Robinson  
 Date: 2/24/04  
 Weather: Cool & clear

22632 Golden Springs Dr., Suite 270  
 Diamond Bar, CA 91765  
 Telephone: (909) 396-7662  
 Fax: (909) 396-1455

### PURGE VOLUME CALCULATION (casing volume):

$$\left( \frac{140}{\text{TD (feet)}} - \frac{68.97}{\text{WL (feet)}} \right) \times \frac{4^2}{\text{D (inches)}} \times \frac{3}{\text{\# Vols}} \times 0.0408 = \frac{139.11}{\text{Calculated Purge Volume}} \text{ Gallons}$$

### PURGE METHOD

### PUMP INTAKE SETTING

Bailer – Type: \_\_\_\_\_  Pump – Type: 2" Grundfos Depth in feet (BTOC): \_\_\_\_\_

### FIELD PARAMETER MEASUREMENT

Time	Depth to Water (Feet)	Total Discharge (Gallons)	pH	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (° C)	Salinity (%)	Comments
0641	68.97	0	7.89	36.8	4.45	8.45	13.25	0.0	
0701		40	4.99	40.4	0.71	7.99	15.23	0.0	
0721		80	5.06	38.9	1.01	8.13	14.11	0.0	
0741		120	5.53	34.5	0.14	7.71	15.07	0.0	
0751	68.97	140	6.07	34.5	1.51	8.75	15.42	0.0	

Total Purge Volume: 140 (Gallons)

Total Discharge: 3.02 (Casing Volumes)

Approx. Purge Rate: 2 (GPM)

### OBSERVATIONS DURING PUMPING

NOTES: (well condition, color, clarity, odor): Purge start at 0641 control box: 228

Clear and odorless

RECHARGE BEHAVIOR:  Fast recharging  
 Slow recharging (80% recharge did not occur after two hours)

### WATER DISPOSAL

Purge water storage: polytank

Purge water disposal: \_\_\_\_\_

### WELL SAMPLING

Sample Depth in feet (BTOC): \_\_\_\_\_

<u>Original</u>	<u>MS/MSD</u>	<u>Blank</u>	<u>Other ( Trip / Source / )</u>
Sample ID: <u>MW- 5</u>	Sample ID: <u>MW-5</u>	Type: _____	Type: _____
Sample Time: <u>0756</u>	Sample Time: <u>0756</u>	Sample ID: _____	Sample ID: _____
No. of Containers: <u>5</u>	No. of Containers: <u>5</u>	Sample Time: _____	Sample Time: _____
		No. of Containers: _____	No. of Containers: _____

ORIGINAL FIELD RECORD

# GROUNDWATER COLLECTION AND SAMPLE LOG

## WELL ID # 6



Project Name: Quarterly Monitoring at JPL, Pasadena, CA.  
 Project No: 4-12812  
 Navy Contract No.: N68711-01-D-6008, D.O. No. 0012  
 Sampled By: Tony M. & J. Robinson  
 Date: 2/24/04  
 Weather: Clear & cool

22632 Golden Springs Dr., Suite 270  
 Diamond Bar, CA 91765  
 Telephone: (909) 396-7662  
 Fax: (909) 396-1455

### PURGE VOLUME CALCULATION (casing volume):

$$\left( \frac{245}{\text{TD (feet)}} - \frac{175.70}{\text{WL (feet)}} \right) \times \frac{4^2}{\text{D (inches)}} \times \frac{3}{\text{\# Vols}} \times 0.0408 = \frac{135.72}{\text{Calculated Purge Volume}} \text{ Gallons}$$

### PURGE METHOD

### PUMP INTAKE SETTING

Bailer – Type: \_\_\_\_\_  Pump – Type: 2" Grundfos Depth in feet (BTOC): \_\_\_\_\_

### FIELD PARAMETER MEASUREMENT

Time	Depth to Water (Feet)	Total Discharge (Gallons)	pH	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (° C)	Salinity (%)	Comments
1135	175.70	0	7.08	78.6	11.00	7.31	18.07	0.0	
1145		25	7.16	76.2	4.00	6.91	18.70	0.0	
1155		50	7.32	73.9	1.20	6.88	18.30	0.0	
1205		75	7.27	72.1	1.50	8.39	18.06	0.0	
1215		100	7.20	71.5	0.40	8.12	18.46	0.0	
1225		125	7.24	71.7	0.40	8.38	17.80	0.0	
1230	175.70	137.5	7.17	70.6	2.80	7.19	18.11	0.0	

Total Purge Volume: 137.5 (Gallons)

Total Discharge: 3.04 (Casing Volumes)

Approx. Purge Rate: 2.5 (GPM)

### OBSERVATIONS DURING PUMPING

NOTES: (well condition, color, clarity, odor): Purge start at 1133 control box: 378

RECHARGE BEHAVIOR:  Fast recharging  
 Slow recharging (80% recharge did not occur after two hours)

### WATER DISPOSAL

Purge water storage: polytank

Purge water disposal: \_\_\_\_\_

### WELL SAMPLING

Sample Depth in feet (BTOC): \_\_\_\_\_

<u>Original</u>	<u>MS/MSD</u>	<u>Blank</u>	<u>Other ( Trip / Source / )</u>
Sample ID: <u>MW- 6</u>	Sample ID: _____	Type: _____	Type: _____
Sample Time: <u>1232</u>	Sample Time: _____	Sample ID: _____	Sample ID: _____
No. of Containers: <u>5</u>	No. of Containers: _____	Sample Time: _____	Sample Time: _____
		No. of Containers: _____	No. of Containers: _____

ORIGINAL FIELD RECORD

# GROUNDWATER COLLECTION AND SAMPLE LOG

## WELL ID # 7



Project Name: Quarterly Monitoring at JPL, Pasadena, CA.  
 Project No: 4-12812  
 Navy Contract No.: N68711-01-D-6008, D.O. No. 0012  
 Sampled By: Tony M. & J. Robinson  
 Date: 2/25/04  
 Weather: Cool & clear

22632 Golden Springs Dr., Suite 270  
 Diamond Bar, CA 91765  
 Telephone: (909) 396-7662  
 Fax: (909) 396-1455

### PURGE VOLUME CALCULATION (casing volume):

$$\left( \frac{285}{\text{TD (feet)}} - \frac{208.65}{\text{WL (feet)}} \right) \times \frac{4^2}{\text{D (inches)}} \times \frac{3}{\text{\# Vols}} \times 0.0408 = \frac{149.52}{\text{Calculated Purge Volume}} \text{ Gallons}$$

### PURGE METHOD

### PUMP INTAKE SETTING

Bailer – Type: \_\_\_\_\_  Pump – Type: 2" Grundfos Depth in feet (BTOC): \_\_\_\_\_

### FIELD PARAMETER MEASUREMENT

Time	Depth to Water (Feet)	Total Discharge (Gallons)	pH	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (° C)	Salinity (%)	Comments
1118	208.65	0	7.41	39.7	60.0	7.16	18.84	0.0	Brownish yellow & odorless
1138		30	7.38	38.1	20.0	3.74	19.66	0.0	Clear & odorless
1158		60	7.43	37.7	6.6	4.62	19.32	0.0	Same
1218		90	7.49	37.7	3.9	4.87	19.66	0.0	Cloudy & odorless
1238		120	7.52	37.7	1.5	7.44	20.11	0.0	Same
1258	208.65	150	7.52	37.5	8.1	7.63	20.19	0.0	Clear & odorless

Total Purge Volume: 150 (Gallons)

Total Discharge: 3.01 (Casing Volumes)

Approx. Purge Rate: 1.5 (GPM)

### OBSERVATIONS DURING PUMPING

NOTES: (well condition, color, clarity, odor): Purge start at 1117 control box: 368

Clear & odorless

RECHARGE BEHAVIOR:  Fast recharging  
 Slow recharging (80% recharge did not occur after two hours)

### WATER DISPOSAL

Purge water storage: polytank

Purge water disposal: \_\_\_\_\_

### WELL SAMPLING

Sample Depth in feet (BTOC): \_\_\_\_\_

<u>Original</u>	<u>MS/MSD</u>	<u>Blank</u>	<u>Other ( Trip / Source / )</u>
Sample ID: <u>MW- 16</u>	Sample ID: _____	Type: _____	Type: _____
Sample Time: <u>1259</u>	Sample Time: _____	Sample ID: _____	Sample ID: _____
No. of Containers: <u>5</u>	No. of Containers: _____	Sample Time: _____	Sample Time: _____
		No. of Containers: _____	No. of Containers: _____

ORIGINAL FIELD RECORD

# GROUNDWATER COLLECTION AND SAMPLE LOG

WELL ID # 8



Project Name: Quarterly Monitoring at JPL, Pasadena, CA.  
 Project No: 4-12812  
 Navy Contract No.: N68711-01-D-6008, D.O. No. 0012  
 Sampled By: Tony M. & J. Robinson  
 Date: 2/25/04  
 Weather: Cool & clear

22632 Golden Springs Dr., Suite 270  
 Diamond Bar, CA 91765  
 Telephone: (909) 396-7662  
 Fax: (909) 396-1455

### PURGE VOLUME CALCULATION (casing volume):

$$\left( \frac{205}{\text{TD (feet)}} - \frac{134.35}{\text{WL (feet)}} \right) \times \frac{4^2}{\text{D (inches)}} \times \frac{3}{\text{\# Vols}} \times 0.0408 = \frac{138.36}{\text{Calculated Purge Volume}} \text{ Gallons}$$

### PURGE METHOD

### PUMP INTAKE SETTING

Bailer – Type: \_\_\_\_\_  Pump – Type: 2" Grundfos Depth in feet (BTOC): \_\_\_\_\_

### FIELD PARAMETER MEASUREMENT

Time	Depth to Water (Feet)	Total Discharge (Gallons)	pH	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (° C)	Salinity (%)	Comments
0751	134.35	0	6.93	29.2	3.50	9.59	16.11	0.0	
0800		27	6.85	27.3	1.10	9.55	16.78	0.0	
0809		54	6.93	27.1	0.65	7.71	16.46	0.0	
0818		81	6.96	26.5	0.85	7.52	16.19	0.0	
0827		108	7.00	27.5	0.30	9.37	16.35	0.0	
0836		135	7.01	27.9	0.15	9.56	16.49	0.0	
0837	134.35	138	7.01	26.6	0.10	7.87	16.17	0.0	

Total Purge Volume: 138 (Gallons)

Total Discharge: 2.99 (Casing Volumes)

Approx. Purge Rate: 3 (GPM)

### OBSERVATIONS DURING PUMPING

NOTES: (well condition, color, clarity, odor): Purge start at 0750 control box: 364

RECHARGE BEHAVIOR:  Fast recharging  
 Slow recharging (80% recharge did not occur after two hours)

### WATER DISPOSAL

Purge water storage: polytank

Purge water disposal: \_\_\_\_\_

### WELL SAMPLING

Sample Depth in feet (BTOC): \_\_\_\_\_

<b>Original</b>	<b>MS/MSD</b>	<b>Blank</b>	<b>Other ( Trip / Source / _____ )</b>
Sample ID: <u>MW- 8</u>	Sample ID: _____	Type: _____	Type: _____
Sample Time: <u>0840</u>	Sample Time: _____	Sample ID: _____	Sample ID: _____
No. of Containers: <u>5</u>	No. of Containers: _____	Sample Time: _____	Sample Time: _____
		No. of Containers: _____	No. of Containers: _____

ORIGINAL FIELD RECORD

# GROUNDWATER COLLECTION AND SAMPLE LOG

## WELL ID # 10



Project Name: Quarterly Monitoring at JPL, Pasadena, CA.  
 Project No: 4-12812  
 Navy Contract No.: N68711-01-D-6008, D.O. No. 0012  
 Sampled By: Tony M. & J. Robinson  
 Date: 2/25/04  
 Weather: Cool & clear

22632 Golden Springs Dr., Suite 270  
 Diamond Bar, CA 91765  
 Telephone: (909) 396-7662  
 Fax: (909) 396-1455

### PURGE VOLUME CALCULATION (casing volume):

$$\left( \frac{155}{\text{TD (feet)}} - \frac{83.72}{\text{WL (feet)}} \right) \times \frac{4^2}{\text{D (inches)}} \times \frac{3}{\text{\# Vols}} \times 0.0408 = \frac{139.59}{\text{Calculated Purge Volume}} \text{ Gallons}$$

### PURGE METHOD

### PUMP INTAKE SETTING

Bailer – Type: \_\_\_\_\_  Pump – Type: 2" Grundfos Depth in feet (BTOC): \_\_\_\_\_

### FIELD PARAMETER MEASUREMENT

Time	Depth to Water (Feet)	Total Discharge (Gallons)	pH	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (° C)	Salinity (%)	Comments
0640	83.72	0	7.46	77.3	8.30	7.73	18.30	0.0	
0648		32	7.31	76.2	2.70	8.14	18.71	0.0	
0656		64	4.92	81.5	1.50	7.97	18.36	0.0	
0704		96	6.01	78.5	0.95	7.60	17.62	0.0	
0712		128	6.24	75.2	0.65	6.80	17.52	0.0	
0715	83.72	140	6.44	75.7	0.15	7.58	16.49	0.0	

Total Purge Volume: 140 (Gallons)

Total Discharge: 3.01 (Casing Volumes)

Approx. Purge Rate: 4 (GPM)

### OBSERVATIONS DURING PUMPING

NOTES: (well condition, color, clarity, odor): Purge start at 0640 control box: 367

Cloudy & odorless

RECHARGE BEHAVIOR:  Fast recharging  
 Slow recharging (80% recharge did not occur after two hours)

### WATER DISPOSAL

Purge water storage: polytank

Purge water disposal: \_\_\_\_\_

### WELL SAMPLING

Sample Depth in feet (BTOC): \_\_\_\_\_

<u>Original</u>	<u>MS/MSD</u>	<u>Blank</u>	<u>Other ( Trip / Source / )</u>
Sample ID: <u>MW- 10</u>	Sample ID: <u>MW-10</u>	Type: _____	Type: _____
Sample Time: <u>0720</u>	Sample Time: <u>0720</u>	Sample ID: _____	Sample ID: _____
No. of Containers: <u>5</u>	No. of Containers: <u>5</u>	Sample Time: _____	Sample Time: _____
		No. of Containers: _____	No. of Containers: _____

ORIGINAL FIELD RECORD

# GROUNDWATER COLLECTION AND SAMPLE LOG

## WELL ID # 13



Project Name: Quarterly Monitoring at JPL, Pasadena, CA.  
 Project No: 4-12812  
 Navy Contract No.: N68711-01-D-6008, D.O. No. 0012  
 Sampled By: Tony M. & J. Robinson  
 Date: 2/24/04  
 Weather: Cool & clear

22632 Golden Springs Dr., Suite 270  
 Diamond Bar, CA 91765  
 Telephone: (909) 396-7662  
 Fax: (909) 396-1455

### PURGE VOLUME CALCULATION (casing volume):

$$\left( \frac{235}{\text{TD (feet)}} - \frac{178.02}{\text{WL (feet)}} \right) \times \frac{4^2}{\text{D (inches)}} \times \frac{3}{\text{\# Vols}} \times 0.0408 = \frac{111.59}{\text{Calculated Purge Volume}} \text{ Gallons}$$

### PURGE METHOD

### PUMP INTAKE SETTING

Bailer – Type: \_\_\_\_\_  Pump – Type: 2" Grundfos Depth in feet (BTOC): \_\_\_\_\_

### FIELD PARAMETER MEASUREMENT

Time	Depth to Water (Feet)	Total Discharge (Gallons)	pH	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (° C)	Salinity (%)	Comments
0957	178.02	0	7.15	44.8	5.08	8.53	19.52	0.0	
1009		24	6.97	44.3	1.03	7.96	20.19	0.0	
1021		48	7.08	44.6	0.98	8.79	19.83	0.0	
1033		62	7.13	44.5	0.02	7.08	20.09	0.0	
1045		86	7.19	44.2	0.12	7.29	20.00	0.0	
1057		110	7.20	44.1	20.30	7.04	20.13	0.0	
1058	178.02	112	7.16	44.2	3.87	8.31	20.18	0.0	

Total Purge Volume: 112 (Gallons)

Total Discharge: 3.01 (Casing Volumes)

Approx. Purge Rate: 2 (GPM)

### OBSERVATIONS DURING PUMPING

NOTES: (well condition, color, clarity, odor): Purge start at 0956 control box: 367

RECHARGE BEHAVIOR:  Fast recharging  
 Slow recharging (80% recharge did not occur after two hours)

### WATER DISPOSAL

Purge water storage: polytank

Purge water disposal: \_\_\_\_\_

### WELL SAMPLING

Sample Depth in feet (BTOC): \_\_\_\_\_

<u>Original</u>	<u>MS/MSD</u>	<u>Blank</u>	<u>Other ( Trip / Source / )</u>
Sample ID: <u>MW- 13</u>	Sample ID: _____	Type: _____	Type: _____
Sample Time: <u>1059</u>	Sample Time: _____	Sample ID: _____	Sample ID: _____
No. of Containers: <u>5</u>	No. of Containers: _____	Sample Time: _____	Sample Time: _____
		No. of Containers: _____	No. of Containers: _____

ORIGINAL FIELD RECORD

# GROUNDWATER COLLECTION AND SAMPLE LOG

## WELL ID # 15



Project Name: Quarterly Monitoring at JPL, Pasadena, CA.  
 Project No: 4-12812  
 Navy Contract No.: N68711-01-D-6008, D.O. No. 0012  
 Sampled By: Tony M. & J. Robinson  
 Date: 2/24/04  
 Weather: Cool & clear

22632 Golden Springs Dr., Suite 270  
 Diamond Bar, CA 91765  
 Telephone: (909) 396-7662  
 Fax: (909) 396-1455

### PURGE VOLUME CALCULATION (casing volume):

$$\left( \frac{74}{\text{TD (feet)}} - \frac{29.15}{\text{WL (feet)}} \right) \times \frac{4^2}{\text{D (inches)}} \times \frac{3}{\text{\# Vols}} \times 0.0408 = \frac{87.83}{\text{Calculated Purge Volume}} \text{ Gallons}$$

### PURGE METHOD

### PUMP INTAKE SETTING

Bailer – Type: \_\_\_\_\_  Pump – Type: 2" Grundfos Depth in feet (BTOC): \_\_\_\_\_

### FIELD PARAMETER MEASUREMENT

Time	Depth to Water (Feet)	Total Discharge (Gallons)	pH	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (° C)	Salinity (%)	Comments
0836	29.15	0	6.38	34.9	0.65	7.17	15.18	0.0	
0844		18	6.51	36.6	0.01	7.25	15.46	0.0	
0852		36	6.74	35.8	0.57	8.01	15.56	0.0	
0900		54	6.71	37.3	1.30	7.22	15.73	0.0	
0908		72	6.93	36.4	1.99	7.34	15.77	0.0	
0916	29.15	90	6.88	36.0	0.32	8.10	15.80	0.0	

Total Purge Volume: 90 (Gallons)

Total Discharge: 3.07 (Casing Volumes)

Approx. Purge Rate: 2.25 (GPM)

### OBSERVATIONS DURING PUMPING

NOTES: (well condition, color, clarity, odor): Purge start at 0834 control box: 200

Clear & odorless

RECHARGE BEHAVIOR:  Fast recharging  
 Slow recharging (80% recharge did not occur after two hours)

### WATER DISPOSAL

Purge water storage: polytank

Purge water disposal: \_\_\_\_\_

### WELL SAMPLING

Sample Depth in feet (BTOC): \_\_\_\_\_

<u>Original</u>	<u>MS/MSD</u>	<u>Blank</u>	<u>Other ( Trip / Source / )</u>
Sample ID: <u>MW- 15</u>	Sample ID: _____	Type: _____	Type: _____
Sample Time: <u>0917</u>	Sample Time: _____	Sample ID: _____	Sample ID: _____
No. of Containers: <u>2</u>	No. of Containers: _____	Sample Time: _____	Sample Time: _____
		No. of Containers: _____	No. of Containers: _____

ORIGINAL FIELD RECORD



# GROUNDWATER COLLECTION AND SAMPLE LOG

## WELL ID # 16



Project Name: Quarterly Monitoring at JPL, Pasadena, CA.  
 Project No: 4-12812  
 Navy Contract No.: N68711-01-D-6008, D.O. No. 0012  
 Sampled By: Tony M. & J. Robinson  
 Date: 2/25/04  
 Weather: Clear & cool

22632 Golden Springs Dr., Suite 270  
 Diamond Bar, CA 91765  
 Telephone: (909) 396-7662  
 Fax: (909) 396-1455

### PURGE VOLUME CALCULATION (casing volume):

$$\left( \frac{275}{\text{TD (feet)}} - \frac{231.12}{\text{WL (feet)}} \right) \times \frac{4^2}{\text{D (inches)}} \times \frac{3}{\text{\# Vols}} \times 0.0408 = \frac{85.93}{\text{Calculated Purge Volume}} \text{ Gallons}$$

### PURGE METHOD

### PUMP INTAKE SETTING

Bailer – Type: \_\_\_\_\_  Pump – Type: 2" Grundfos Depth in feet (BTOC): \_\_\_\_\_

### FIELD PARAMETER MEASUREMENT

Time	Depth to Water (Feet)	Total Discharge (Gallons)	pH	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (° C)	Salinity (%)	Comments
0916	231.12	0	7.11	32.5	29.00	6.91	20.21	0.0	Yellow in color & odorless
0924		20	7.09	32.6	9.40	7.04	20.34	0.0	Same
0932		40	7.13	32.3	3.10	9.05	20.40	0.0	Cloudy & odorless
0940		60	7.21	32.5	1.20	8.47	20.20	0.0	Same
0948		80	7.21	32.6	0.40	8.65	19.96	0.0	Clear & odorless
0954	231.12	86	7.24	32.5	0.15	8.45	20.09	0.0	same

Total Purge Volume: 86 (Gallons)

Total Discharge: 3.00 (Casing Volumes)

Approx. Purge Rate: 2.5 (GPM)

### OBSERVATIONS DURING PUMPING

NOTES: (well condition, color, clarity, odor): Purge start at 0908 control box: 400

Clear & odorless

RECHARGE BEHAVIOR:  Fast recharging  
 Slow recharging (80% recharge did not occur after two hours)

### WATER DISPOSAL

Purge water storage: polytank

Purge water disposal: \_\_\_\_\_

### WELL SAMPLING

Sample Depth in feet (BTOC): \_\_\_\_\_

<u>Original</u>	<u>MS/MSD</u>	<u>Blank</u>	<u>Other ( Trip / Source / )</u>
Sample ID: <u>MW- 7</u>	Sample ID: _____	Type: _____	Type: _____
Sample Time: <u>0957</u>	Sample Time: _____	Sample ID: _____	Sample ID: _____
No. of Containers: <u>5</u>	No. of Containers: _____	Sample Time: _____	Sample Time: _____
		No. of Containers: _____	No. of Containers: _____

ORIGINAL FIELD RECORD



## Groundwater Sampling

Multi-Port Well Field Data Sheet

**JPL Pasadena**

Contract #: N68711-01-D-6008

Delivery Order #: 0001

Well ID: MW-3

Sampling Zone No.: 4 to 2

Depth (ft): 558,346 & 252

Beginning of Session: 14.18

End of Session: 14.18

Start Time: 1116

Finish Time: 1301

Date: 2/10/04

Page: 1 of 1

Water Pressure Inside Casing: -----

Port #	Run #	Surface Function Checks							Position Sampler	Arm out	Sample Collection Checks								Water Quality Parameters				
		Shoe Out	Vacuum Check Valve Closed	Valve Open	Evacuate Container	Valve Closed	Shoe in	Arm In			Deactivate Set Arm Locate Port	Pressure in MP	Shoe Out	Zone Pressure	Open Valve	Zone Pressure	Close Valve	Shoe In	Pressure in MP	Time	PH	Turb. (NTU)	Temp. (oC)
4	1	X	X	X	X	X	X	X	X	X	139.32	X	210.22	X	210.21	X	X	140.01	1133	7.93	2.6	19.06	25.1
3	1	X	X	X	X	X	X	X	X	X	47.45	X	119.87	X	119.89	X	X	47.29	1200	8.01	1.4	18.64	27.4
2	1	X	X	X	X	X	X	X	X	X	14.29	X	78.93	X	78.90	X	X	14.31	1227	8.29	4.4	18.50	26.2
2	2	X	X	X	X	X	X	X	X	X	14.26	X	78.92	X	78.91	X	X	14.32	1251	8.07	3.6	18.77	24.8

**Notes:**  
 port 4: clear & odorless      port 3: clear & odorless      port 2: clear & odorless

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Total Volume: \_\_\_\_\_



**Groundwater Sampling**  
Multi-Port Well Field Data Sheet

**JPL Pasadena**

Contract #: N68711-01-D-6008

Delivery Order #: 0001

Well ID: MW-4

Sampling Zone No.: 3 to 1

Depth (ft): 322, 240, & 150

Beginning of Session: 14.16

End of Session: 14.20

Start Time: 648

Finish Time: 831

Date: 2/19/04

Page: 1 of 1

Water Pressure Inside Casing: -----

Port #	Run #	Surface Function Checks							Position Sampler		Sample Collection Checks								Water Quality Parameters				
		Shoe Out	Vacuum Check Valve Closed	Valve Open	Evacuate Container	Valve Closed	Shoe in	Arm In	Deactivate Set Arm Locate Port	Arm out	Pressure in MP	Shoe Out	Zone Pressure	Open Valve	Zone Pressure	Close Valve	Shoe In	Pressure in MP	Time	PH	Turb. (NTU)	Temp. (oC)	Cond (mmhos)
3	1	X	X	X	X	X	X	X	X	X	56.15	X	118.41	X	118.38	X	X	56.11	703	4.91	20.0	14.01	35.7
3	2	X	X	X	X	X	X	X	X	X	56.15	X	118.37	X	118.36	X	X	56.13	729	6.47	21.0	15.59	25.7
2	1	X	X	X	X	X	X	X	X	X	20.34	X	82.67	X	82.67	X	X	20.39	749	6.42	10.0	16.20	51.9
1	1	X	X	X	X	X	X	X	X	X	14.23	X	44.41	X	44.43	X	X	14.33	820	7.10	7.1	15.64	28.2

**Notes:**

port 3: yellowish, brown & H2S odor    port 2: clear & odorless    port 1: clear & odorless

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Total Volume: \_\_\_\_\_



**Groundwater Sampling**  
Multi-Port Well Field Data Sheet

**JPL Pasadena**

Contract #: N68711-01-D-6008  
Delivery Order #: 0001

Well ID: MW-11

Sampling Zone No.: 4 to 1

Depth (ft): 524, 429, 259, & 149

Beginning of Session: 14.15

End of Session: 14.14

Start Time: 939

Finish Time: 1130

Date: 2/19/04

Page: 1 of 1

Water Pressure Inside Casing: -----

Port #	Run #	Surface Function Checks							Position Sampler	Arm out	Sample Collection Checks								Water Quality Parameters				
		Shoe Out	Vacuum Check Valve Closed	Valve Open	Evacuate Container	Valve Closed	Shoe in	Arm In			Deactivate Set Arm Locate Port	Pressure in MP	Shoe Out	Zone Pressure	Open Valve	Zone Pressure	Close Valve	Shoe In	Pressure in MP	Time	PH	Turb. (NTU)	Temp. (oC)
4	1	X	X	X	X	X	X	X	X	X	152.45	X	185.11	X	185.02	X	X	150.43	953	7.45	0.25	20.42	16.0
3	1	X	X	X	X	X	X	X	X	X	109.20	X	141.91	X	141.80	X	X	109.38	1023	7.86	17.00	19.62	25.2
2	1	X	X	X	X	X	X	X	X	X	35.85	X	69.15	X	69.15	X	X	35.69	1051	7.85	2.40	19.81	27.6
1	1	X	X	X	X	X	X	X	X	X	14.20	X	28.65	X	28.64	X	X	14.27	1119	7.78	0.45	20.73	33.7

**Notes:**  
 port 4: clear & odorless  
 port 3: clear & odorless  
 port 2: clear & odorless  
 port 1: clear & odorless

Total Volume: \_\_\_\_\_



**Groundwater Sampling**  
Multi-Port Well Field Data Sheet

**JPL Pasadena**

Contract #: N68711-01-D-6008

Delivery Order #: 0001

Well ID: MW-12

Sampling Zone No.: 5 to 1

Depth (ft): 548, 436, 323, 243, & 140

Beginning of Session: 14.05

End of Session: 14.02

Start Time: 1101

Finish Time: 1319

Date: 2/23/04

Page: 1 of 1

Water Pressure Inside Casing: -----

Port #	Run #	Surface Function Checks							Position Sampler	Arm out	Sample Collection Checks								Water Quality Parameters				
		Shoe Out	Vacuum Check Valve Closed	Valve Open	Evacuate Container	Valve Closed	Shoe in	Arm In			Deactivate Set Arm Locate Port	Pressure in MP	Shoe Out	Zone Pressure	Open Valve	Zone Pressure	Close Valve	Shoe In	Pressure in MP	Time	PH	Turb. (NTU)	Temp. (oC)
5	1	X	X	X	X	X	X	X	X	X	206.91	X	206.36	X	206.32	X	X	202.95	1115	7.73	1.87	17.06	24.8
4	1	X	X	X	X	X	X	X	X	X	153.14	X	159.74	X	159.69	X	X	153.15	1142	7.81	0.51	17.27	29.4
3	1	X	X	X	X	X	X	X	X	X	105.57	X	110.69	X	110.69	X	X	104.85	1208	7.76	1.30	16.28	26.1
2	1	X	X	X	X	X	X	X	X	X	69.74	X	76.12	X	76.11	X	X	69.97	1234	7.80	1.04	16.35	30.5
1	1	X	X	X	X	X	X	X	X	X	25.47	X	33.68	X	33.70	X	X	25.46	1308	7.88	6.80	15.86	29.9

**Notes:**

port 5: clear & odorless                      port 4: clear & H<sub>2</sub>S odor                      port 3: clear & H<sub>2</sub>S odor  
 port 2: clear & odorless                      port 1: clear & odorless

Total Volume: \_\_\_\_\_



**Groundwater Sampling**  
Multi-Port Well Field Data Sheet

**JPL Pasadena**

Contract #: N68711-01-D-6008

Delivery Order #: 0001

Well ID: MW-14

Sampling Zone No.: 5 to 1

Depth (ft): 540, 456, 382, 277, & 207

Beginning of Session: 14.17

End of Session: 14.20

Start Time: 725

Finish Time: 1021

Date: 2/16/04

Page: 1 of 1

Water Pressure Inside Casing: -----

Port #	Run #	Surface Function Checks							Position Sampler	Arm out	Sample Collection Checks								Water Quality Parameters				
		Shoe Out	Vacuum Check Valve Closed	Valve Open	Evacuate Container	Valve Closed	Shoe in	Arm In			Deactivate Set Arm Locate Port	Pressure in MP	Shoe Out	Zone Pressure	Open Valve	Zone Pressure	Close Valve	Shoe In	Pressure in MP	Time	PH	Turb. (NTU)	Temp. (oC)
5	1	X	X	X	X	X	X	X	X	X	176.25	X	179.56	X	179.55	X	X	176.25	746	6.81	2.10	24.29	21.5
4	1	X	X	X	X	X	X	X	X	X	139.09	X	143.07	X	143.07	X	X	139.01	817	6.54	0.50	24.07	37.0
3	1	X	X	X	X	X	X	X	X	X	107.43	X	110.97	X	110.98	X	X	102.81	840	6.19	1.40	23.74	66.9
2	1	X	X	X	X	X	X	X	X	X	61.66	X	65.27	X	65.97	X	X	62.02	906	6.56	0.55	23.52	69.8
1	1	X	X	X	X	X	X	X	X	X	32.36	X	34.96	X	34.95	X	X	31.97	939	5.96	3.00	23.21	77.9
1	1	X	X	X	X	X	X	X	X	X	31.94	X	34.95	X	34.98	X	X	31.95	1011	6.74	4.10	22.32	78.2

**Notes:**

port 5: slight H<sub>2</sub>S odor & clear      port 4: slight H<sub>2</sub>S odor & clear      port 3: clear & odorless  
 port 2: clear & odorless      port 1: clear & odorless

Total Volume: \_\_\_\_\_



**Groundwater Sampling**  
Multi-Port Well Field Data Sheet

**JPL Pasadena**

Contract #: N68711-01-D-6008  
Delivery Order #: 0001

Well ID: MW-17

Sampling Zone No.: 4 to 2

Depth (ft): 582, 468, & 370

Beginning of Session: 14.11

End of Session: 14.15

Start Time: 717

Finish Time: 849

Date: 2/11/04

Page: 1 of 1

Water Pressure Inside Casing: -----

Port #	Run #	Surface Function Checks							Position Sampler		Sample Collection Checks								Water Quality Parameters				
		Shoe Out	Vacuum Check Valve Closed	Valve Open	Evacuate Container	Valve Closed	Shoe in	Arm In	Deactivate Set Arm Locate Port	Arm out	Pressure in MP	Shoe Out	Zone Pressure	Open Valve	Zone Pressure	Close Valve	Shoe In	Pressure in MP	Time	PH	Turb. (NTU)	Temp. (oC)	Cond (mmhos)
4	1	X	X	X	X	X	X	X	X	X	105.14	X	179.99	X	179.98	X	X	104.67	738	5.12	1.1	13.11	31.8
3	1	X	X	X	X	X	X	X	X	X	55.09	X	129.54	X	129.49	X	X	54.93	809	6.19	16.0	14.13	27.6
2	1	X	X	X	X	X	X	X	X	X	14.30	X	88.19	X	88.18	X	X	14.37	836	6.67	2.2	15.19	34.4

**Notes:**

port 4: clear & odorless                      port 3: clear & odorless                      port 2: clear & odorless

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Total Volume: \_\_\_\_\_



## Groundwater Sampling

Multi-Port Well Field Data Sheet

**JPL Pasadena**

Contract #: N68711-01-D-6008  
 Delivery Order #: 0001

Well ID: MW-18

Sampling Zone No.: 5 to 2  
 Depth (ft): 684, 564, 424, & 330

Start Time: 1120  
 Finish Time: 1325

Date: 2/16/04  
 Page: 1 of 1

Water Pressure Inside Casing: -----

Beginning of Session: 14.18  
 End of Session: 14.18

Port #	Run #	Surface Function Checks							Position Sampler		Sample Collection Checks								Water Quality Parameters				
		Shoe Out	Vacuum Check Valve Closed	Valve Open	Evacuate Container	Valve Closed	Shoe in	Arm In	Deactivate Set Arm Locate Port	Arm out	Pressure in MP	Shoe Out	Zone Pressure	Open Valve	Zone Pressure	Close Valve	Shoe In	Pressure in MP	Time	PH	Turb. (NTU)	Temp. (oC)	Cond (mmhos)
5	1	X	X	X	X	X	X	X	X	X	159.62	X	208.17	X	208.12	X	X	159.75	1139	5.46	0.0	22.04	28.3
4	1	X	X	X	X	X	X	X	X	X	107.42	X	156.67	X	156.67	X	X	107.43	1212	5.82	2.8	22.67	25.5
3	1	X	X	X	X	X	X	X	X	X	46.58	X	96.96	X	96.98	X	X	46.44	1244	5.90	0.0	22.45	34.1
2	1	X	X	X	X	X	X	X	X	X	14.30	X	54.67	X	54.68	X	X	14.38	1312	5.52	1.0	22.07	29.7

**Notes:**

port 5: clear & odorless                      port 4: clear & odorless                      port 3: clear & odorless  
 port 2: clear & odorless

Total Volume: \_\_\_\_\_





**Groundwater Sampling**  
Multi-Port Well Field Data Sheet

**JPL Pasadena**

Contract #: N68711-01-D-6008

Delivery Order #: 0001

Well ID: MW-19

Sampling Zone No.: 5 to 1

Depth (ft): 498, 444, 392, 314 & 242

Beginning of Session: 14.21

End of Session: 14.15

Start Time: 932

Finish Time: 1144

Date: 2/11/04

Page: 1 of 1

Water Pressure Inside Casing: -----

Port #	Run #	Surface Function Checks							Position Sampler	Arm out	Sample Collection Checks								Water Quality Parameters				
		Shoe Out	Vacuum Check Valve Closed	Valve Open	Evacuate Container	Valve Closed	Shoe in	Arm In			Deactivate Set Arm Locate Port	Pressure in MP	Shoe Out	Zone Pressure	Open Valve	Zone Pressure	Close Valve	Shoe In	Pressure in MP	Time	PH	Turb. (NTU)	Temp. (oC)
5	1	X	X	X	X	X	X	X	X	X	81.88	X	164.54	X	164.56	X	X	81.67	946	7.20	12.0	15.74	40.8
4	1	X	X	X	X	X	X	X	X	X	57.02	X	141.20	X	141.19	X	X	57.09	1013	7.44	0.5	16.35	37.6
3	1	X	X	X	X	X	X	X	X	X	36.82	X	118.58	X	118.59	X	X	36.59	1042	7.72	3.3	16.46	55.6
2	1	X	X	X	X	X	X	X	X	X	14.31	X	84.27	X	84.27	X	X	14.36	1109	7.73	18.0	18.01	67.1
1	1	X	X	X	X	X	X	X	X	X	14.25	X	52.32	X	52.33	X	X	14.30	1133	7.94	30.0	19.63	24.1

**Notes:**

port 5: clear & odorless                      port 4: clear & odorless                      port 3: clear & odorless  
 port 2: a little cloudy & odorless            port 1: a little & odorless

Total Volume: \_\_\_\_\_



## Groundwater Sampling

Multi-Port Well Field Data Sheet

### JPL Pasadena

Contract #: N68711-01-D-6008

Delivery Order #: 0001

Well ID: MW-20

Sampling Zone No.: 5 to 1

Depth (ft): 900, 700, 562, 392, & 230

Beginning of Session: 14.14

End of Session: 14.19

Start Time: 713

Finish Time: 1008

Date: 2/12/04

Page: 1 of 1

Water Pressure Inside Casing: -----

Port #	Run #	Surface Function Checks							Position Sampler	Arm out	Sample Collection Checks								Water Quality Parameters					
		Shoe Out	Vacuum Check Valve Closed	Valve Open	Evacuate Container	Valve Closed	Shoe in	Arm In			Deactivate Set Arm Locate Port	Pressure in MP	Shoe Out	Zone Pressure	Open Valve	Zone Pressure	Close Valve	Shoe In	Pressure in MP	Time	PH	Turb. (NTU)	Temp. (oC)	Cond (mmhos)
5	1	X	X	X	X	X	X	X	X	X	304.02	X	324.46	X	324.46	X	X	304.09	750	5.70	0.70	15.34	30.8	
4	1	X	X	X	X	X	X	X	X	X	217.00	X	239.20	X	239.13	X	X	216.95	827	1.41	13.00	17.01	20.6	
3	1	X	X	X	X	X	X	X	X	X	156.90	X	178.01	X	178.01	X	X	156.86	859	7.42	0.85	17.75	33.2	
2	1	X	X	X	X	X	X	X	X	X	83.03	X	103.43	X	103.45	X	X	82.78	927	7.75	0.50	18.57	23.4	
1	1	X	X	X	X	X	X	X	X	X	14.30	X	32.46	X	32.41	X	X	14.32	954	7.84	0.00	18.96	34.2	

**Notes:**

port 5: clear w/ H<sub>2</sub>S odor                      port 4: lightly cloudy w/ H<sub>2</sub>S odor      port 3: clear & slight H<sub>2</sub>S odor

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port 2: clear & odorless                      port 1: clear & slight H<sub>2</sub>S odor

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Total Volume: \_\_\_\_\_



## Groundwater Sampling

Multi-Port Well Field Data Sheet

**JPL Pasadena**

Contract #: N68711-01-D-6008  
 Delivery Order #: 0001

Well ID: MW-21

Sampling Zone No.: 5 to 1  
 Depth (ft): 372, 310, 240, 161, & 90

Start Time: 738  
 Finish Time: 1007

Date: 2/10/04  
 Page: 1 of 1

Water Pressure Inside Casing: -----

Beginning of Session: 14.24  
 End of Session: 14.22

Port #	Run #	Surface Function Checks							Position Sampler	Sample Collection Checks									Water Quality Parameters				
		Shoe Out	Vacuum Check Valve Closed	Valve Open	Evacuate Container	Valve Closed	Shoe in	Arm In	Deactivate Set Arm Locate Port	Arm out	Pressure in MP	Shoe Out	Zone Pressure	Open Valve	Zone Pressure	Close Valve	Shoe In	Pressure in MP	Time	PH	Turb. (NTU)	Temp. (oC)	Cond (mmhos)
5	1	X	X	X	X	X	X	X	X	X	129.80	X	152.75	X	152.75	X	X	129.83	755	4.71	1.40	14.60	0.000
4	1	X	X	X	X	X	X	X	X	X	102.77	X	125.88	X	125.87	X	X	102.78	821	6.21	0.45	14.76	47.000
3	1	X	X	X	X	X	X	X	X	X	72.56	X	95.91	X	95.92	X	X	72.67	845	6.56	1.50	13.83	0.998
3	1	X	X	X	X	X	X	X	X	X	72.62	X	95.92	X	95.90	X	X	72.64	909	6.99	1.50	14.91	73.800
2	1	X	X	X	X	X	X	X	X	X	38.03	X	61.55	X	61.53	X	X	38.17	933	7.43	1.60	15.31	83.100
1	1	X	X	X	X	X	X	X	X	X	14.23	X	29.90	X	29.95	X	X	14.33	956	7.49	4.20	15.01	70.200

**Notes:**

port 5: clear & no odor                      port 4: clear & no odor                      port 3: clear & no odor  
 port 2: clear & no odor                      port 1: clear & no odor

Total Volume: \_\_\_\_\_



### Groundwater Sampling Multi-Port Well Field Data Sheet

**JPL Pasadena**

Contract #: N68711-01-D-6008  
 Delivery Order #: 0001

Well ID: MW-22

Sampling Zone No.: 3 to 1

Depth (ft): 389, 329, & 245

Beginning of Session: 13.96

End of Session: 14.00

Start Time: 711

Finish Time: 833

Date: 2/23/04

Page: 1 of 1

Water Pressure Inside Casing: -----

Port #	Run #	Surface Function Checks							Position Sampler		Sample Collection Checks								Water Quality Parameters					
		Shoe Out	Vacuum Check Valve Closed	Valve Open	Evacuate Container	Valve Closed	Shoe in	Arm In	Deactivate Set Arm Locate Port	Arm out	Pressure in MP	Shoe Out	Zone Pressure	Open Valve	Zone Pressure	Close Valve	Shoe In	Pressure in MP	Time	PH	Turb. (NTU)	Temp. (oC)	Cond (mmhos)	
3	1	X	X	X	X	X	X	X	X	X	115.79	X	110.51	X	110.46	X	X	115.72	725	5.03	0.87	15.67	40.1	
2	1	X	X	X	X	X	X	X	X	X	89.66	X	84.33	X	84.33	X	X	89.65	753	6.59	1.32	15.64	33.2	
1	1	X	X	X	X	X	X	X	X	X	52.93	X	46.79	X	46.79	X	X	52.92	822	6.67	11.00	15.37	68.5	

**Notes:**

port 3: clear & odorless                      port 2: clear & slight H<sub>2</sub>S odor                      port 1: clear & odorless

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Total Volume: \_\_\_\_\_



**Groundwater Sampling**  
Multi-Port Well Field Data Sheet

**JPL Pasadena**

Contract #: N68711-01-D-6008

Delivery Order #: 0001

Well ID: MW-23

Sampling Zone No.: 4 to 1

Depth (ft): 445, 319, 254, & 174

Beginning of Session: 14.17

End of Session: 14.21

Start Time: 654

Finish Time: 922

Date: 2/18/04

Page: 1 of 1

Water Pressure Inside Casing: -----

Port #	Run #	Surface Function Checks							Position Sampler		Sample Collection Checks								Water Quality Parameters				
		Shoe Out	Vacuum Check Valve Closed	Valve Open	Evacuate Container	Valve Closed	Shoe in	Arm In	Deactivate Set Arm Locate Port	Arm out	Pressure in MP	Shoe Out	Zone Pressure	Open Valve	Zone Pressure	Close Valve	Shoe In	Pressure in MP	Time	PH	Turb. (NTU)	Temp. (oC)	Cond (mmhos)
3	1	X	X	X	X	X	X	X	X	X	111.93	X	108.01	X	107.98	X	X	111.91	706	4.92	9.90	15.07	33.8
3	2	X	X	X	X	X	X	X	X	X	111.96	X	108.02	X	107.98	X	X	111.90	735	6.31	14.00	15.91	26.1
2	1	X	X	X	X	X	X	X	X	X	83.64	X	79.67	X	79.67	X	X	83.67	812	6.65	0.55	15.93	51.1
4	1	X	X	X	X	X	X	X	X	X	166.04	X	161.64	X	161.63	X	X	166.22	837	7.23	0.30	17.49	25.0
1	1	X	X	X	X	X	X	X	X	X	49.22	X	44.75	X	44.74	X	X	49.09	908	7.09	25.00	17.45	71.7

**Notes:**

port 3: clear & strong H<sub>2</sub>S odor      port 2: clear & strong H<sub>2</sub>S odor      port 1: light brown in color & strong H<sub>2</sub>S odor  
 port 4: clear & strong H<sub>2</sub>S odor

Total Volume: \_\_\_\_\_



## Groundwater Sampling

Multi-Port Well Field Data Sheet

**JPL Pasadena**

Contract #: N68711-01-D-6008

Delivery Order #: 0001

Well ID: MW-24

Sampling Zone No.: 4, 1 & 3

Depth (ft): 554, 279, & 435

Beginning of Session: 14.04

End of Session: 14.05

Start Time: 648

Finish Time: 811

Date: 2/20/04

Page: 1 of 2

Water Pressure Inside Casing: -----

Port #	Run #	Surface Function Checks							Position Sampler		Sample Collection Checks								Water Quality Parameters				
		Shoe Out	Vacuum Check Valve Closed	Valve Open	Evacuate Container	Valve Closed	Shoe in	Arm In	Deactivate Set Arm Locate Port	Arm out	Pressure in MP	Shoe Out	Zone Pressure	Open Valve	Zone Pressure	Close Valve	Shoe In	Pressure in MP	Time	PH	Turb. (NTU)	Temp. (oC)	Cond (mmhos)
4	1	X	X	X	X	X	X	X	X	X	114.07	X	168.49	X	168.47	X	X	113.56	705	5.22	0.66	17.65	29.0
1	1	X	X	X	X	X	X	X	X	X	14.18	X	49.96	X	49.99	X	X	14.25	728	5.82	8.41	15.61	33.8
3	1	X	X	X	X	X	X	X	X	X	62.33	X	117.74	X	117.71	X	X	62.28	757	6.76	2.84	15.64	22.0

**Notes:**

port 4: clear & strong H<sub>2</sub>S odor      port 3: clear & H<sub>2</sub>S odor      port 1: clear & strong H<sub>2</sub>S odor

Total Volume: \_\_\_\_\_

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**Groundwater Sampling**  
Multi-Port Well Field Data Sheet

**JPL Pasadena**

Contract #: N68711-01-D-6008

Delivery Order #: 0001

Well ID: MW-24

Sampling Zone No.: 2

Depth (ft): 373

Beginning of Session: 13.98

End of Session: 13.98

Start Time: 911

Finish Time: 1004

Date: 2/23/04

Page: 2 of 2

Water Pressure Inside Casing: -----

Port #	Run #	Surface Function Checks							Position Sampler	Sample Collection Checks								Water Quality Parameters					
		Shoe Out	Vacuum Check Valve Closed	Valve Open	Evacuate Container	Valve Closed	Shoe in	Arm In	Deactivate Set Arm Locate Port	Arm out	Pressure in MP	Shoe Out	Zone Pressure	Open Valve	Zone Pressure	Close Valve	Shoe In	Pressure in MP	Time	PH	Turb. (NTU)	Temp. (oC)	Cond (mmhos)
2	1	X	X	X	X	X	X	X	X	X	35.51	X	90.77	X	90.77	X	X	35.31	925	7.29	3.98	16.50	27.3
2	2	X	X	X	X	X	X	X	X	X	35.23	X	90.76	X	90.74	X	X	35.24	953	7.57	3.11	17.36	28.8

**Notes:**

port 2: clear & odorless  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Total Volume: \_\_\_\_\_