

**FLORENCE COPPER INC.  
FLORENCE COPPER PROJECT  
SECOND QUARTER 2007 MONITORING REPORT  
U.I.C. PERMIT AZ396000001  
AND  
A.P.P. PERMIT 101704**

**July 27, 2007**

MERRILL MINING, LLC  
3340 Peachtree Road NE, Suite 2200  
Atlanta, Georgia 30326  
404-495-9577 Fax: 404-495-9578

**HUGH NOWELL  
CORPORATE COUNSEL**

**July 27, 2007**

Ms. Nancy Rumrill  
U.S. Environmental Protection Agency  
Region 9, Ground Water Office, WTR-9  
75 Hawthorne Street  
San Francisco, California 94105-3901

**RE: MONITORING REPORT FOR UIC PERMIT NUMBER AZ396000001  
SECOND QUARTER 2007 REPORT**

Dear Ms. Rumrill,

This report is submitted in accordance with the reporting requirements of Parts II.G.2.(a) through (j) of the referenced permit. It pertains to monitoring activities conducted at the Florence In-Situ Mine Site from April 1 through June 30, 2007. Copies of records required by Part II.G.1 are maintained at the Mine Site along with other information that is summarized below.

Florence Copper is subject to the requirements of UIC Permit No. AZ396000001 issued by the United States Environmental Protection Agency (USEPA) on May 1, 1997, and APP No. 101704 issued by the Arizona Department of Environmental Quality (ADEQ) on June 9, 1997 and last amended on July 16, 2004.

As you are aware, Florence Copper discontinued hydraulic control on September 1, 2004, in order to conduct groundwater quality tests in accordance with Part II.H.2 of the APP and Part II.I.2 of the UIC Permit. A report of the results has been provided to the ADEQ and USEPA for review. The pumping wells remain off during the evaluation process. As a result, no extraction flows are reported under Section (b) below and the water level measurements that are reported in Section (b) reflect natural conditions, not hydraulic control.

**(a) A map showing the current status of the mine.**

Figure 1 shows the current monitoring area including the Point of Compliance (POC) wells and the wellfield. Figure 2 shows the approximate layout of the wellfield and denotes the four well pairs. There are four injection/recovery wells and nine pumping wells. Five observation wells were installed to demonstrate net inward hydraulic gradient for the 90 days required by the permit. Solution injection began on October 31, 1997, and ceased on February 8, 1998.

- (b) A table and graph showing daily cumulative injection flows and extraction flows in each active mine block over the reporting period.**

Hydraulic control was discontinued on September 1, 2004 for purposes of collecting groundwater samples following a 90-day period of no hydraulic control, and remains discontinued for evaluation of results. Accordingly there are no injection or extraction flows to report.

- (c) A table and graph comparing average daily head in the four observation wells.**

Although hydraulic control was not maintained during this reporting period, water level measurements were continued by manual measurements in the four observation wells and their nearest inward neighbors. Figure 1 of Attachment 1 and the supporting data show the groundwater elevations in the four well pairs.

- (d) A table showing POC monitoring wells analytical results and alert levels.**

The attached report *Florence Project Quarterly Compliance Monitoring Report - Second Quarter 2007* by Brown and Caldwell and sealed by Ms. Barbara Sylvester, Professional Engineer (Attachment 2), contains the POC monitoring records and results. Brown and Caldwell, along with Project personnel, conducted compliance sampling on April 22 through 25, and May 8, 2007.

Quarterly parameters were conducted for 29 of the 31 POC monitoring wells. POC monitoring wells M32-UBF and M33-UBF were dry and could not be sampled. All results were below the Alert Levels (ALs) or Aquifer Quality Limits (AQLs). The results are discussed in the report.

- (e) Results of the monthly analyses of organic in the injectate**

Organic analyses are not required because no solution was injected during the reporting period.

- (f) Results of monitoring required by 40 CFR 146.33 (b)(1)**

No solution was injected.

- (g) Results of the mechanical integrity tests**

No mechanical integrity test was required.

Ms. Nancy Rumrill

July 10, 2007

Page 3

**(h) Results of the annular conductivity monitoring**

Although injection ceased in early 1998, annular conductivity measurements have continued to the present time. A graph showing measurement results for this reporting period is presented in Attachment 1, Figure 2. No unusual conditions were noted.

**(i) Well and core hole plugging and abandonment.**

None of the existing wells and core holes were abandoned during the report period.

**(j) A summary of closure operations during the reporting period.**

There were no closure operations during the reporting period.

Florence Copper, Inc., believes that you will find this report complete and in compliance with all permit conditions. Please contact me at (404) 495-9577 should you have any questions regarding this report.

Sincerely,

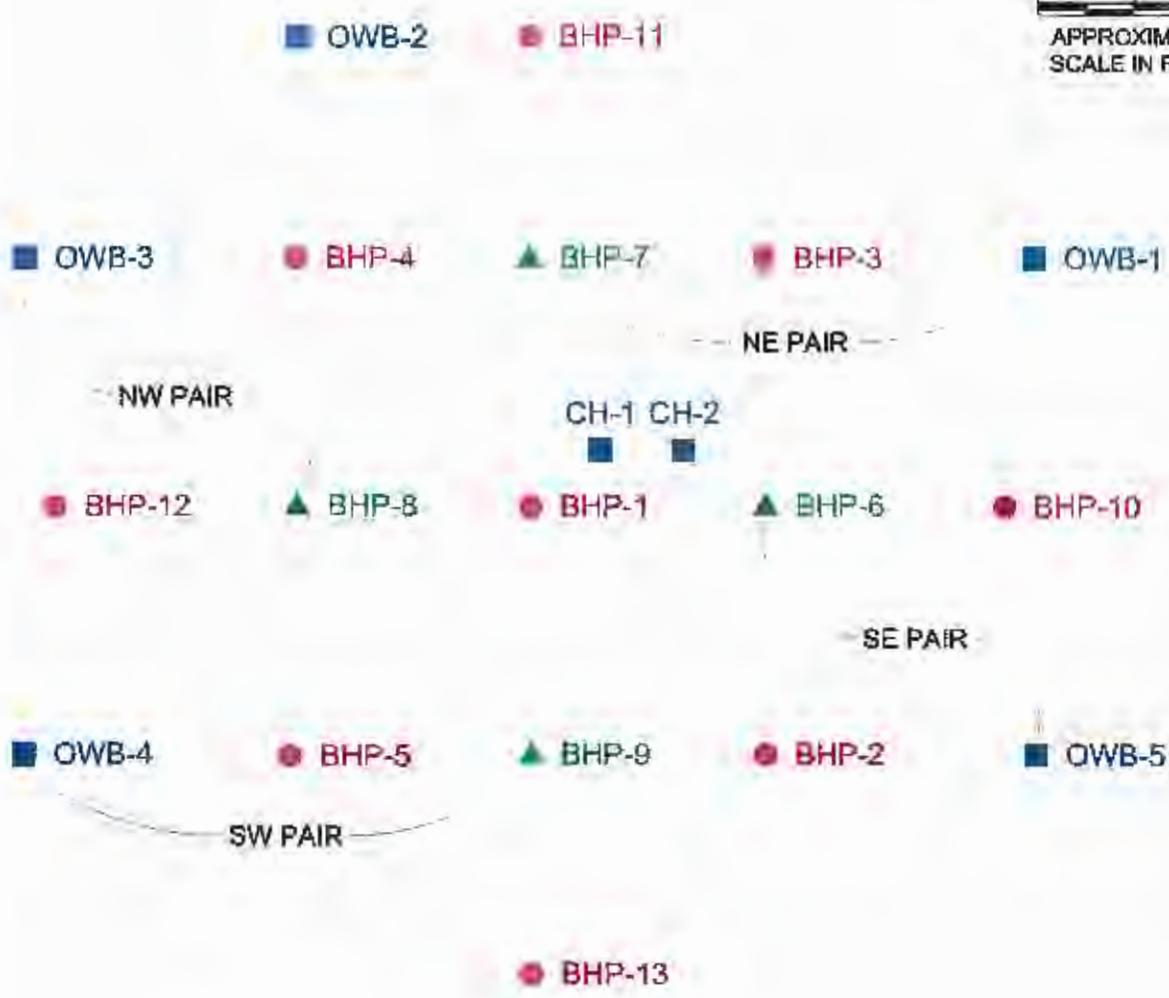
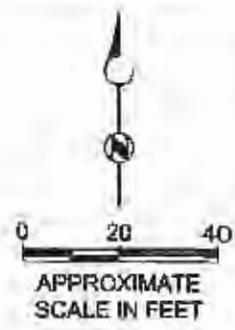


Hugh Nowell  
Corporate Counsel

BAS:tc  
Attachments

cc: Florence Copper File





**EXPLANATION**

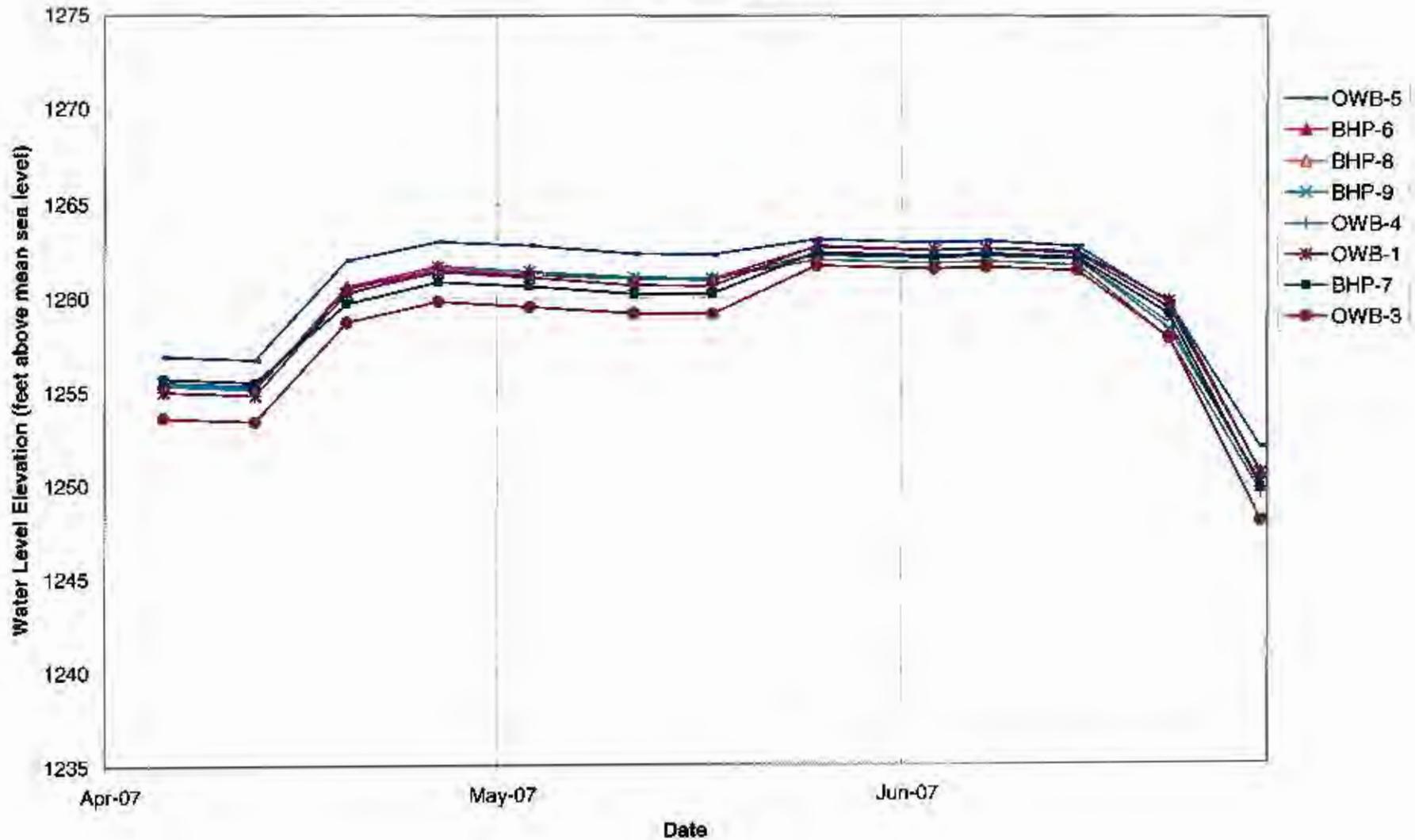
- BHP-10 PUMPING WELL (CURRENTLY INACTIVE)
- OWB-2 OBSERVATION WELL
- ▲ BHP-8 INJECTION / RECOVERY WELL (RECOVERY MODE SINCE 1998)



Figure 2  
**WELLFIELD LAYOUT**  
 MERRILL MINING, L.L.C.  
 FLORENCE, ARIZONA

**ATTACHMENT 1**  
**MINE OPERATIONS MONITORING**

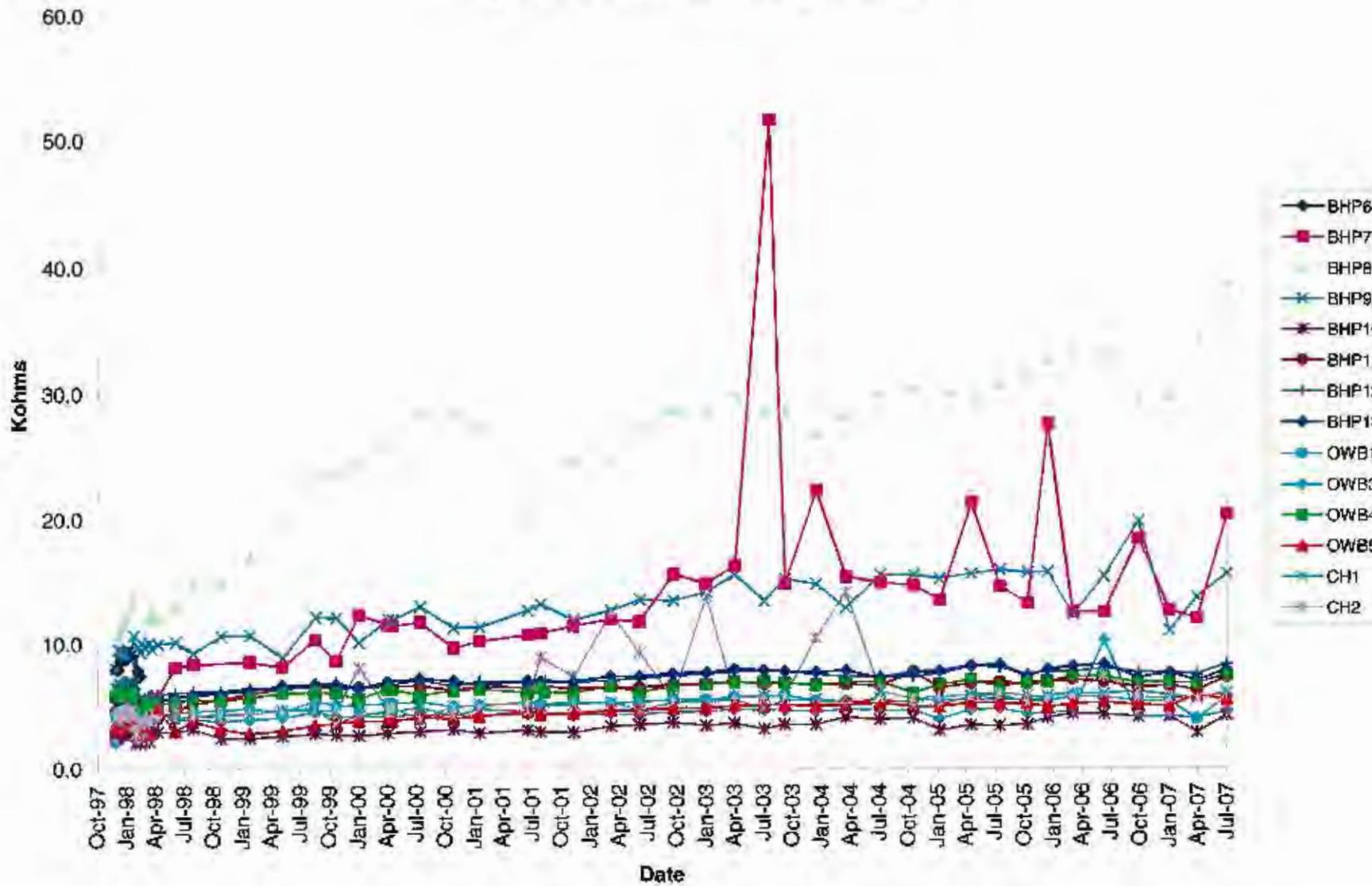
**Figure 1 - Well Field Water Elevations  
Second Quarter 2007**



**Well Field Water Elevations  
Second Quarter 2007**

Date	BHP-6	BHP-7	BHP-8	BHP-9	OWB-1	OWB-3	OWB-4	OWB-5
4/5/2007	1255.3	1255.7	1255.3	1255.5	1255.0	1253.6	1255.4	1256.9
4/12/2007	1255.1	1255.5	1255.1	1255.3	1254.8	1253.4	1255.2	1256.7
4/19/2007	1260.6	1259.7	1260.5	1260.2	1260.3	1258.7	1260.5	1262.0
4/26/2007	1261.7	1260.9	1261.6	1261.7	1261.4	1259.8	1261.5	1263.0
5/3/2007	1261.4	1260.6	1261.3	1261.4	1261.1	1259.5	1261.2	1262.8
5/11/2007	1261.0	1260.2	1261.0	1261.1	1260.7	1259.2	1261.0	1262.4
5/17/2007	1261.0	1260.2	1260.9	1261.0	1260.6	1259.1	1261.0	1262.3
5/25/2007	1262.7	1262.4	1262.4	1262.3	1262.8	1261.7	1262.0	1263.1
6/3/2007	1262.5	1262.2	1262.1	1262.1	1262.5	1261.5	1261.8	1262.9
6/7/2007	1262.6	1262.3	1262.2	1262.2	1262.6	1261.6	1261.9	1263.0
6/14/2007	1262.3	1262.1	1262.0	1262.0	1262.4	1261.4	1261.7	1262.7
6/21/2007	1259.4	1259.1	1258.6	1258.5	1259.8	1257.8	1257.8	1259.7
6/28/2007	1250.6	1249.8	1249.8	1250.0	1250.5	1248.0	1249.5	1251.9
Water Level Elevations (feet AMSL)								

Figure 2 - Annular Resistivity in Kohms



**ATTACHMENT 2**

**POC QUARTERLY COMPLIANCE MONITORING REPORT**

**FLORENCE COPPER PROJECT  
QUARTERLY COMPLIANCE MONITORING REPORT  
SECOND QUARTER 2007**

***Primary Sampling Activities***

Quarterly compliance monitoring was conducted for the Florence Copper project on April 22 through 25, and May 8, 2007 (Second Quarter 2007). Groundwater sampling and analysis was conducted in accordance with the requirements of Aquifer Protection Permit (APP) Permit Number 101704, Part IIE.3.d (Compliance Monitoring). Quarterly parameters, as listed in Part IV Table III.B of the APP were analyzed from the designated Point of Compliance (POC) wells. The quarterly parameters are magnesium, sulfate, fluoride, and total dissolved solids (TDS).

During the Second Quarter 2007 sampling event, 29 POC wells were sampled and a total of 116 constituents were analyzed. Two POC wells, M32-UBF and M33-UBF, were dry and could not be sampled. Of the 116 constituents analyzed, none had reported concentrations exceeding the approved alert levels (ALs).

Analyses of the samples were conducted by Aerotech Environmental Laboratories (Aerotech). Analytical results for the POC wells for the quarterly parameters are provided in Table 1 and field parameters measured during sampling are indicated in Table 2.

***AL Exceedances and Verification Sampling***

Part II.F.4 of the APP (AL, Aquifer Quality Limit [AQL], and Discharge Limit [DL] Contingencies) requires verification sampling for an AL exceedance. There were no AL exceedances during this quarterly sampling. No verification sampling was required.

***Contingency Sampling Plan to be Implemented During Third Quarter 2007***

There were no AL exceedances verified during this quarterly sampling. No contingency sampling plan is required during the Third Quarter of 2007.

***Results of Contingency Sampling Plan Implemented from First Quarter 2007***

There were no AL exceedances during the First Quarter 2007. Therefore, no contingency sampling plan was implemented.

***Issues***

There were no other issues to report during the Second Quarter 2007.





**TABLE 2. SUMMARY OF QUARTERLY FIELD PARAMETERS**

Well ID	Sample Date	Temperature (°C)	Temperature (°F)	pH	Conductivity (µmhos/cm)
M1-GL	Apr 25 2007	22.0	71.6	7.51	1065
M2-GU	Apr 25 2007	19.6	67.3	7.34	1323
M3-GL	Apr 25 2007	21.7	71.1	7.52	1015
M4-O	Apr 25 2007	24.0	75.2	7.41	656
M6-GU	Apr 23 2007	24.6	76.3	8.74	675
M7-GL	Apr 24 2007	24.1	75.4	9.54	486
M8-O	Apr 24 2007	29.0	84.2	8.98	663
M14-GL	Apr 24 2007	27.5	81.5	8.69	798
M15-GU	Apr 24 2007	24.8	76.6	7.58	1291
M16-GU	Apr 25 2007	23.7	74.7	7.51	1541
M17-GL	Apr 24 2007	28.1	82.6	8.38	830
M18-GU	Apr 25 2007	20.3	68.5	7.38	1271
M19-LBF	Apr 23 2007	22.8	73.0	7.79	765
M20-O	Apr 23 2007	23.5	74.3	7.67	747
M21-UBF	Apr 23 2007	22.1	71.8	7.48	1061
M22-O	Apr 23 2007	28.6	83.5	8.15	777
M23-UBF	Apr 24 2007	22.1	71.8	7.23	2028
M24-O	Apr 25 2007	30.3	86.5	7.81	1940
M25-UBF	Apr 25 2007	20.9	69.6	7.11	1773
M26-O	Apr 23 2007	28.7	83.7	8.74	536
M27-LBF	Apr 23 2007	22.9	73.2	7.62	1575
M28-LBF	Apr 23 2007	25.6	78.1	8.49	664
M29-UBF	Apr 23 2007	21.9	71.4	7.24	1708
M30-O	Apr 23 2007	23.9	75.0	7.53	777
M31-LBF	May 08 2007	22.3	72.1	7.80	987
O19-GL	Apr 24 2007	23.6	74.5	7.84	753
O49-GL	Apr 15 2007	25.9	78.6	7.37	891
P19-1-O	Apr 24 2007	24.3	75.7	7.66	733
P49-O	Apr 22 2007	27.9	82.2	7.84	796