

**FLORENCE COPPER INC.
FLORENCE COPPER PROJECT
FIRST QUARTER 2006 MONITORING REPORT
U.I.C. PERMIT AZ396000001
AND
A.P.P. PERMIT 101704**

April 28, 2006

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HUGH NOWELL
CORPORATE COUNSEL

April 28, 2006

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
FIRST QUARTER 2006 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 January 1 through March 31, 2006. 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 – First Quarter 2006* 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 January 9 through January 11, 2006.

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.

(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.

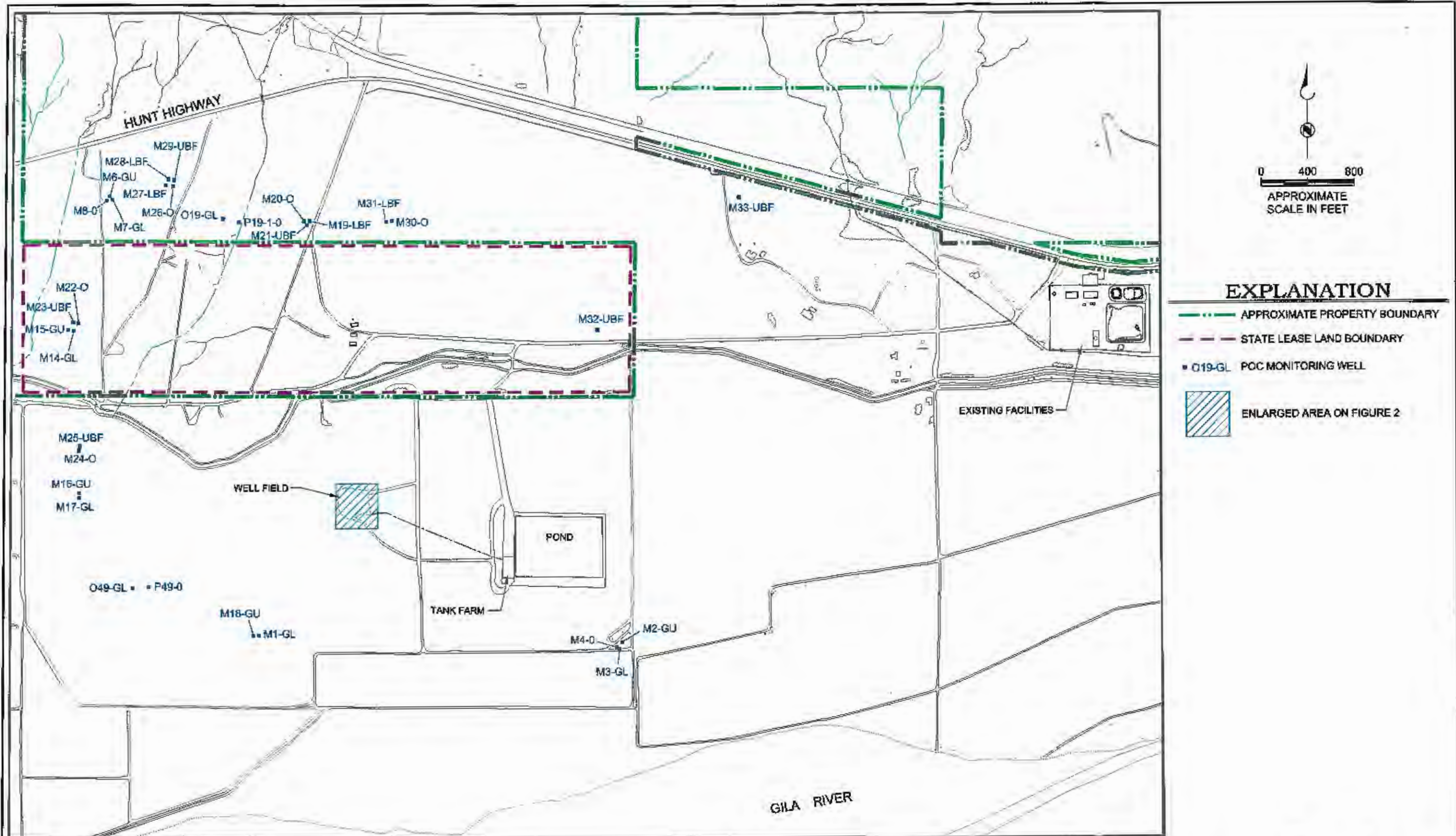
Sincerely,



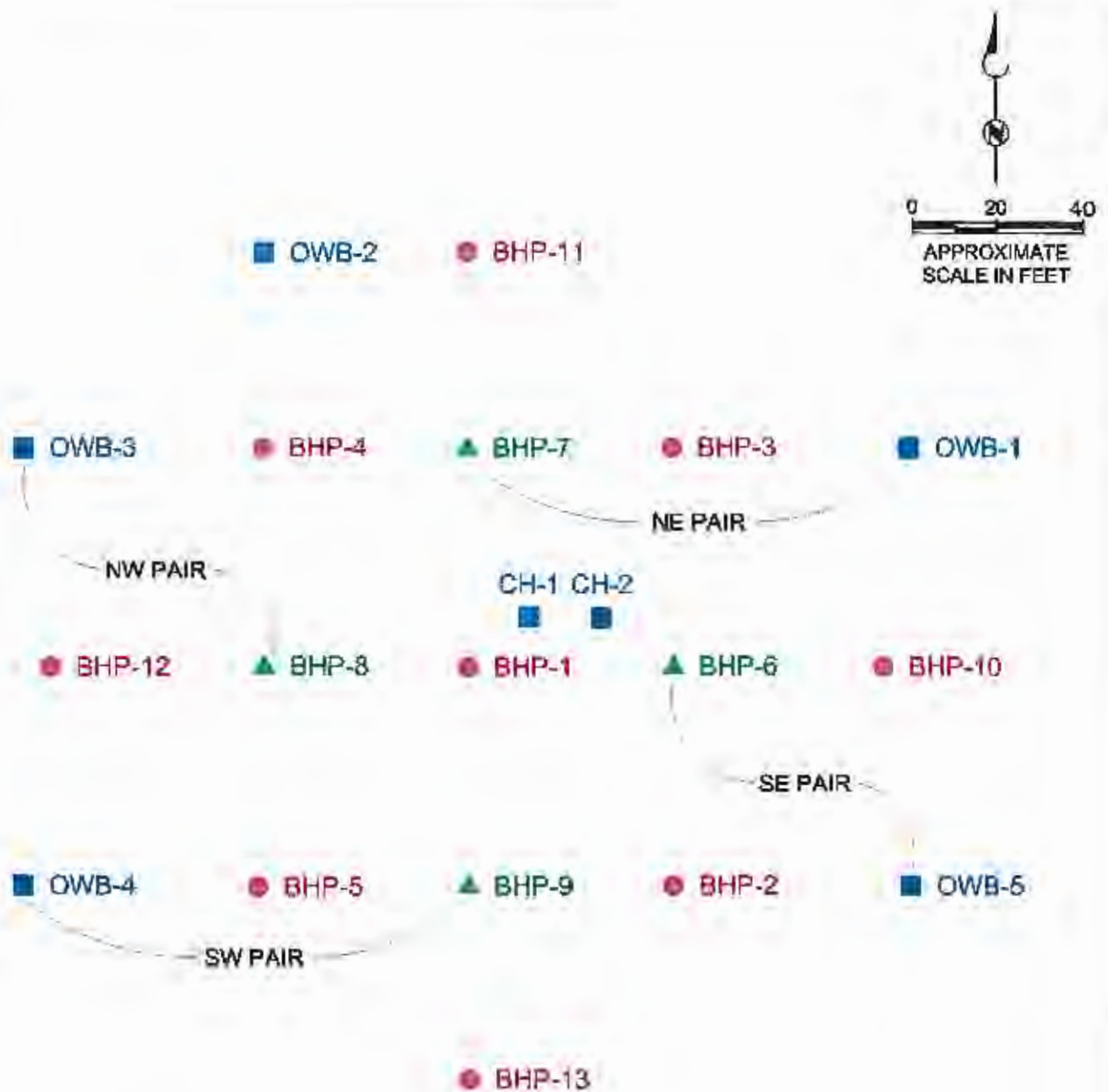
Hugh Nowell
Corporate Counsel

BAS:lld
Attachments

cc: Florence Copper File



**BROWN AND
CALDWELL**



EXPLANATION

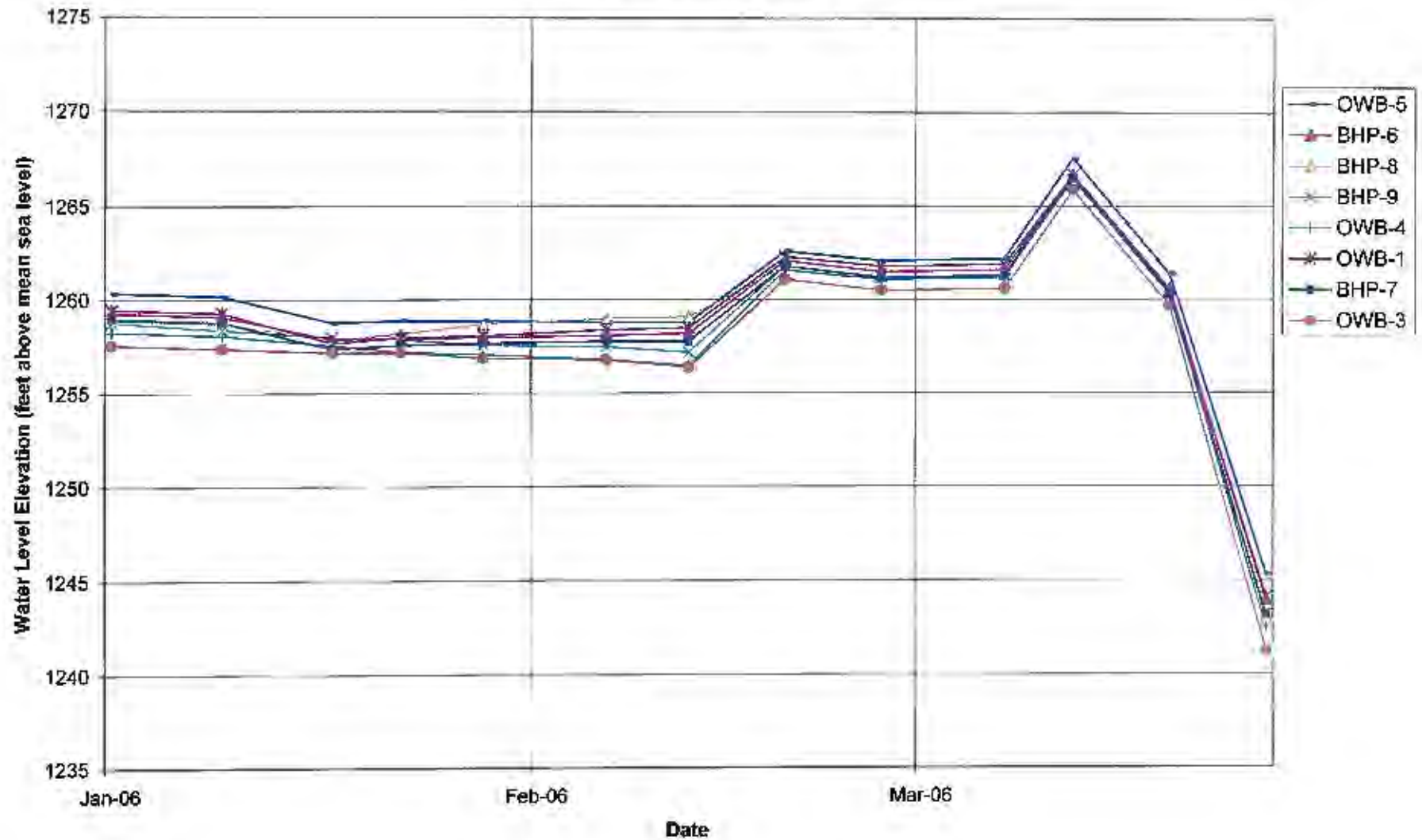
- BHP-10 PUMPING WELL (CURRENTLY INACTIVE)
- OWB-2 OBSERVATION WELL
- ▲ BHP-8 INJECTION / RECOVERY WELL (RECOVERY MODE SINCE 1998)

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

ATTACHMENT 1
MINE OPERATIONS MONITORING

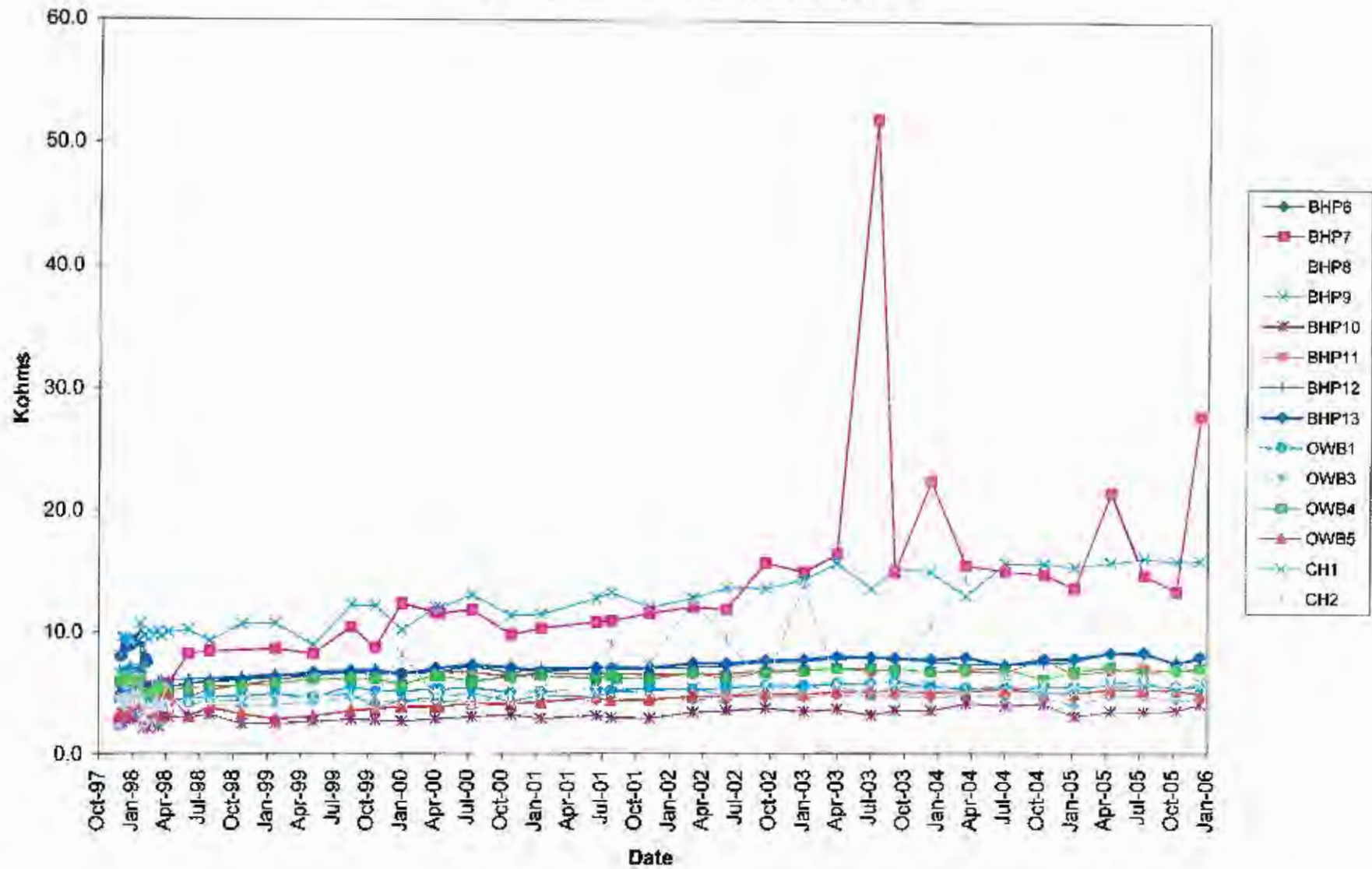
**Figure 1 - Well Field Water Elevations
First Quarter 2006**



**Well Field Water Elevations
First Quarter 2005**

Date	BHP-6	BHP-7	BHP-8	BHP-9	OWB-1	OWB-3	OWB-4	OWB-5
1/5/06	1259.3	1259.0	1258.9	1258.8	1259.5	1257.6	1258.3	1260.4
1/13/06	1259.1	1258.8	1258.7	1258.4	1259.3	1257.4	1258.1	1260.2
1/21/06	1257.9	1257.4	1257.9	1258.0	1257.7	1257.2	1257.6	1258.8
1/26/06	1258.0	1257.6	1258.2	1257.9	1258.0	1257.2	1257.3	1258.9
2/1/06	1258.0	1257.7	1258.7	1257.6	1258.1	1256.9	1257.1	1258.9
2/10/06	1258.1	1257.8	1259.0	1257.5	1258.4	1256.8	1256.8	1258.8
2/16/06	1258.2	1257.8	1259.1	1257.2	1258.5	1256.4	1256.5	1258.8
2/23/06	1262.1	1261.8	1261.8	1261.8	1262.3	1261.1	1261.6	1262.6
3/2/06	1261.5	1261.2	1261.2	1261.2	1261.8	1260.5	1261.1	1262.1
3/11/06	1261.6	1261.3	1261.3	1261.3	1261.9	1260.6	1261.2	1262.2
3/16/06	1266.7	1266.5	1266.7	1266.7	1266.7	1265.9	1266.7	1267.6
3/23/06	1260.6	1260.3	1260.5	1260.5	1260.5	1259.7	1260.4	1261.4
3/30/06	1244.0	1243.2	1243.0	1243.2	1244.1	1241.2	1242.5	1245.3
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
FIRST QUARTER 2006**

Primary Sampling Activities

Quarterly compliance monitoring was conducted for the Florence Copper project on January 9 through 11, 2006 (First Quarter 2006). 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 IILB 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 First Quarter 2006 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 IIF.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 Second Quarter 2006

There were no AL exceedances verified during this quarterly sampling. No contingency sampling plan is required during the Second Quarter of 2006.

Results of Contingency Sampling Plan Implemented from Fourth Quarter 2005

There were no AL exceedances during the Fourth Quarter 2005. Therefore, no contingency sampling plan was implemented.

Issues

There were no other issues to report during the First Quarter 2006.



TABLE 1. SUMMARY OF ANALYTICAL RESULTS, QUARTERLY PARAMETERS

Well ID	Sample Date	Magnesium		Sulfate		Fluoride		Total Dissolved Solids	
		Concentration	Alert Level	Concentration	Alert Level	Concentration	Alert Level	Concentration	Alert Level
M1-GL	Jan 11 2006	19.0	31	93	109	0.83	1.3	630	1028
M2-GU	Jan 11 2006	24.0	39	120	275	0.92	1.4	830	1496
M3-GL	Jan 11 2006	16.0	36	100	187	0.8	1.3	600	1157
M4-O	Jan 11 2006	5.3	15	65	405	2.1	5.1	470	1072
M6-GU	Jan 10 2006	2.7	5.1	48	86	0.83	1.3	350	620
M7-GL	Jan 10 2006	<0.25	1	34	82	1.0	1.7	260	464
M8-O	Jan 10 2006	<0.25	1	70	122	1.9	3.6	340	609
M14-GL	Jan 10 2006	2.1	23	54	144	0.76	1.4	380	874
M15-GU	Jan 10 2006	24.0	44	73	126	0.68	1.2	700	1359
M16-GU	Jan 11 2006	28.0	52	180	248	0.71	1.1	910	1635
M16-GU (Dup)	Jan 11 2006	28.0	52	180	248	0.72	1.1	910	1635
M17-GL	Jan 11 2006	5.0	9.3	110	209	0.86	1.6	450	831
M18-GU	Jan 11 2006	17.0	36	150	288	1.0	1.6	710	1323
M19-LBF	Jan 09 2006	11.0	21	53	89	0.54	1	440	794
M20-O	Jan 09 2006	7.5	14	67	112	0.83	1.7	450	809
M21-UBF	Jan 09 2006	22.0	87	200	487	0.87	1.1	790	2867
M22-O	Jan 10 2006	5.5	8.6	49	85	0.85	1.3	390	1094
M23-UBF	Jan 10 2006	37.0	69	250	411	0.84	1.3	1300	2392
M23-UBF (Dup)	Jan 10 2006	35.0	69	250	411	0.85	1.3	1300	2392
M24-O	Jan 11 2006	9.9	19	720	1364	1.1	2.5	1300	2363
M25-UBF	Jan 11 2006	32.0	76	230	387	0.82	1.6	1100	2683
M26-O	Jan 09 2006	<0.25	1	63	105	1.6	3.4	300	556
M26-O (Dup)	Jan 09 2006	<0.25	1	62	105	1.6	3.4	310	556
M27-LBF	Jan 09 2006	27.0	51	68	179	0.51	1	920	1745
M28-LBF	Jan 09 2006	1.5	2.6	47	81	0.8	1.6	320	610
M29-UBF	Jan 09 2006	37.0	84	280	465	0.7	1.1	1200	2751
M30-O	Jan 09 2006	10.0	18	58	102	0.8	1.6	460	824
M31-LBF	Jan 09 2006	16.0	46	170	330	0.89	1.3	640	1665
O19-GL	Jan 10 2006	10.0	17	54	99	0.76	1.4	430	770
O49-GL	Jan 09 2006	8.6	18	71	159	0.63	1	510	849
P19-I-O	Jan 10 2006	6.3	12	61	107	1.5	2.8	430	767
P49-O	Jan 09 2006	3.3	6.2	100	181	1.0	2	430	801
Arizona Aquifer Water Quality Standard		-	-	-	-	4	-	-	-

All results in milligrams per liter (mg/L)
<= less than the laboratory practical quantitation limit

TABLE 2. SUMMARY OF QUARTERLY FIELD PARAMETERS

Well ID	Sample Date	Temperature (°C)	Temperature (°F)	pH	Conductivity (µmhos/cm)
M1-GL	Jan 11 2006	21.5	70.7	7.60	1034
M2-GU	Jan 11 2006	19.6	67.3	7.40	1258
M3-GL	Jan 11 2006	21.7	71.1	7.60	963
M4-O	Jan 11 2006	23.7	74.7	7.40	730
M6-GU	Jan 10 2006	24.3	75.7	8.70	671
M7-GL	Jan 10 2006	24.1	75.4	9.60	488
M8-O	Jan 10 2006	28.8	83.8	9.10	659
M14-GL	Jan 10 2006	26.8	80.2	8.70	785
M15-GU	Jan 10 2006	24.5	76.1	7.70	1283
M16-GU	Jan 11 2006	23.1	73.6	7.50	1509
M17-GL	Jan 11 2006	27.1	80.8	8.40	809
M18-GU	Jan 11 2006	19.7	67.5	7.50	1066
M19-LBF	Jan 09 2006	22.6	72.7	7.60	765
M20-O	Jan 09 2006	23.6	74.5	7.50	749
M21-UBF	Jan 09 2006	22.1	71.8	7.20	1212
M22-O	Jan 10 2006	27.4	81.3	8.40	758
M23-UBF	Jan 10 2006	21.2	70.2	7.40	1998
M24-O	Jan 11 2006	28.7	83.7	7.90	1860
M25-UBF	Jan 11 2006	30.3	86.5	7.20	1686
M26-O	Jan 09 2006	28.9	84.0	8.60	588
M27-LBF	Jan 09 2006	23.1	73.6	7.50	1555
M28-LBF	Jan 09 2006	25.8	78.4	8.30	662
M29-UBF	Jan 09 2006	22.2	72.0	7.10	1930
M30-O	Jan 09 2006	23.9	75.0	7.40	775
M31-LBF	Jan 09 2006	22.2	72.0	7.40	1007
O19-GL	Jan 10 2006	24.0	75.2	8.00	756
O49-GL	Jan 09 2006	24.8	76.6	7.70	892
P19-I-O	Jan 10 2006	23.9	75.0	7.90	723
P49-O	Jan 09 2006	27.1	80.8	7.70	782

BROWN AND CALDWELL

TRANSMITTAL MEMORANDUM

To: Nancy Rumrill
U.S. Environmental Protection Agency,
Region 9, Ground Water Office, WTR-9
75 Hawthorne Street
San Francisco, CA 94105

Date: 3/28/06	File No: 12 5529.001
Subject: Florence Copper Project	
Contract No:	
Equipment No:	
Spec. Ref:	
Submittal No:	

WE ARE SENDING TO YOU: ☒ Attached or ☐ Under separate cover via Make a selection the following items:

<input type="checkbox"/> Shop Drawings	<input type="checkbox"/> Prints	<input type="checkbox"/> Plans	<input type="checkbox"/> Samples
<input type="checkbox"/> Copy of letter	<input type="checkbox"/> Change Order	<input type="checkbox"/> Other:	<input type="checkbox"/> Specifications

THESE ARE TRANSMITTED AS CHECKED BELOW:

- ☒ For approval
- ☐ For your use
- ☐ As requested
- ☐ For review and comment
- ☐ With submittal review action noted

SUBMITTAL REVIEW ACTIONS:

- ☐ No exceptions taken
- ☐ Make revisions
- ☐ Amend and resubmit
- ☐ Rejected--see Remarks
- ☐ None

Copies	Date	No.	Description
1			Fourth Quarter 2005 Monitoring Report, U.I.C. PERMIT AZ396000001

REMARKS:

Nancy - I understand that this report may have gotten lost in the shuffle and you needed another one. I will place your name on the next report so that it will come directly to you. If you should have any questions, feel free to contact me at 602-567-3894 or Jarrell Southall at 602-567-3892.


Barbara Sylvester

Suite 500, 201 East Washington Street, Phoenix, Arizona, 85004
Phone: (602) 567-4000 | FAX: (602) 567-4001