

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

**October 27, 2006**

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

**HUGH NOWELL**  
**CORPORATE COUNSEL**

**October 27, 2006**

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  
THIRD 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 July 1 through September 30, 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.L.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 – Third 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 on July 23 through July 26, 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 I, Figure 2. A value above historical ranges was calculated for CH-1. This may be a temporary fluctuation as these calculations are extremely sensitive to minute changes. The conductivity will be measured again in the fourth quarter to determine if this is indicative of a physical condition of the well. During the last quarter a historically high value was calculated for OWB-1. This value returned to a normal range suggesting that the previous value was an outlier and not indicative of a physical condition of the well.

**(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.

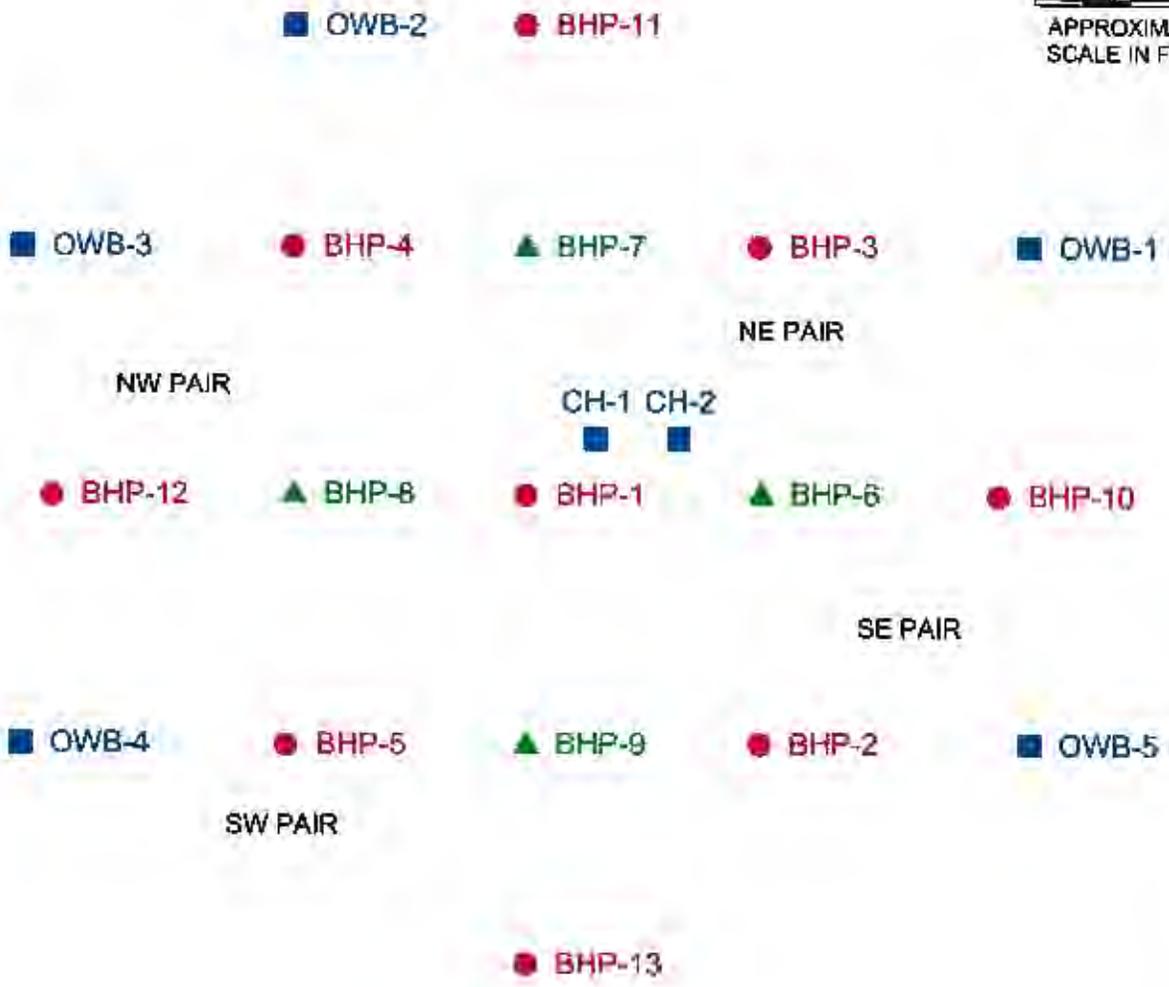
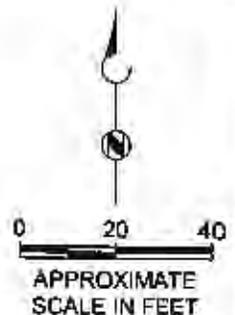
Sincerely,



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)

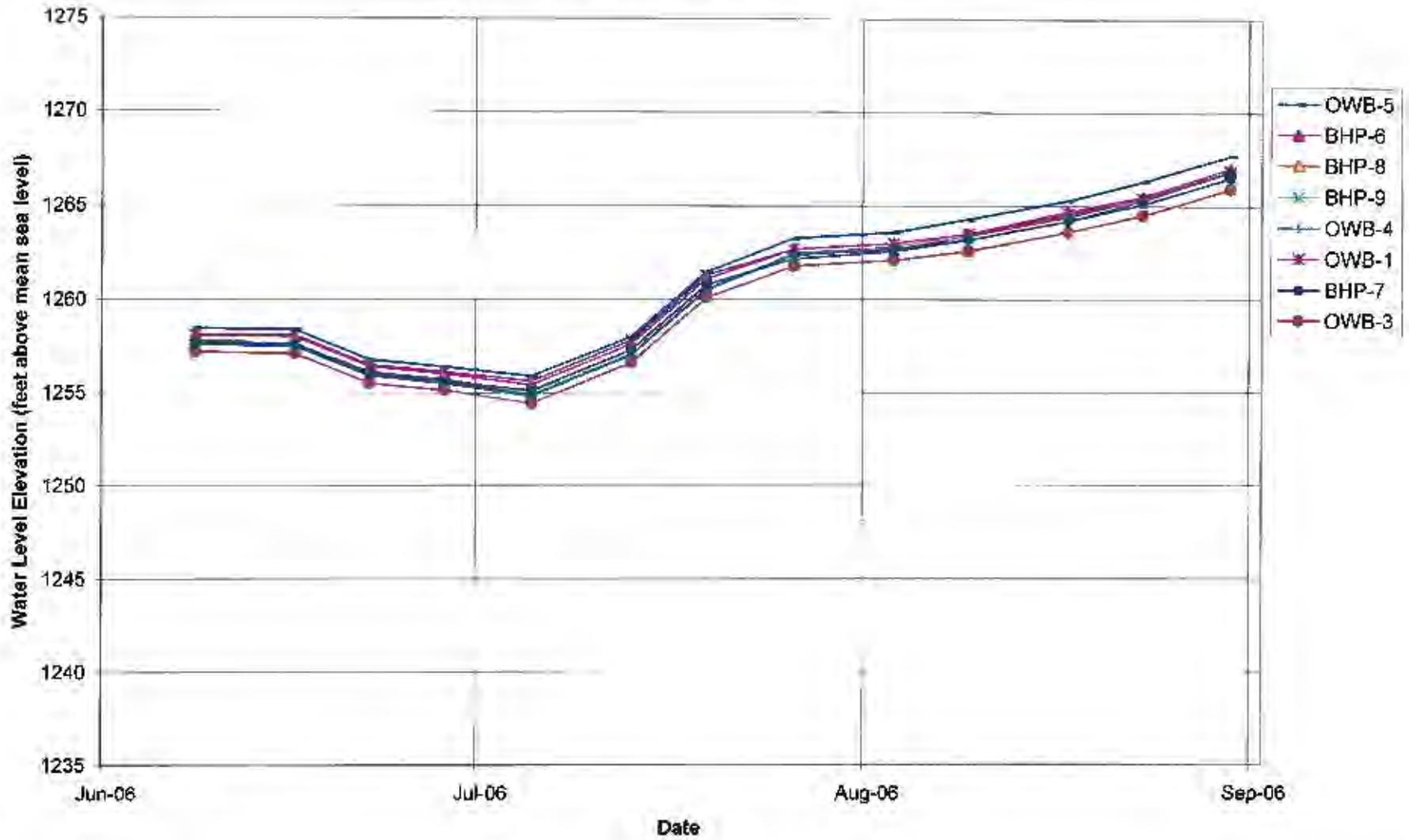


Figure 2  
**WELLFIELD LAYOUT**  
 MERRILL MINING, L.L.C.  
 FLORENCE, ARIZONA

**ATTACHMENT 1**

**MINE OPERATIONS MONITORING**

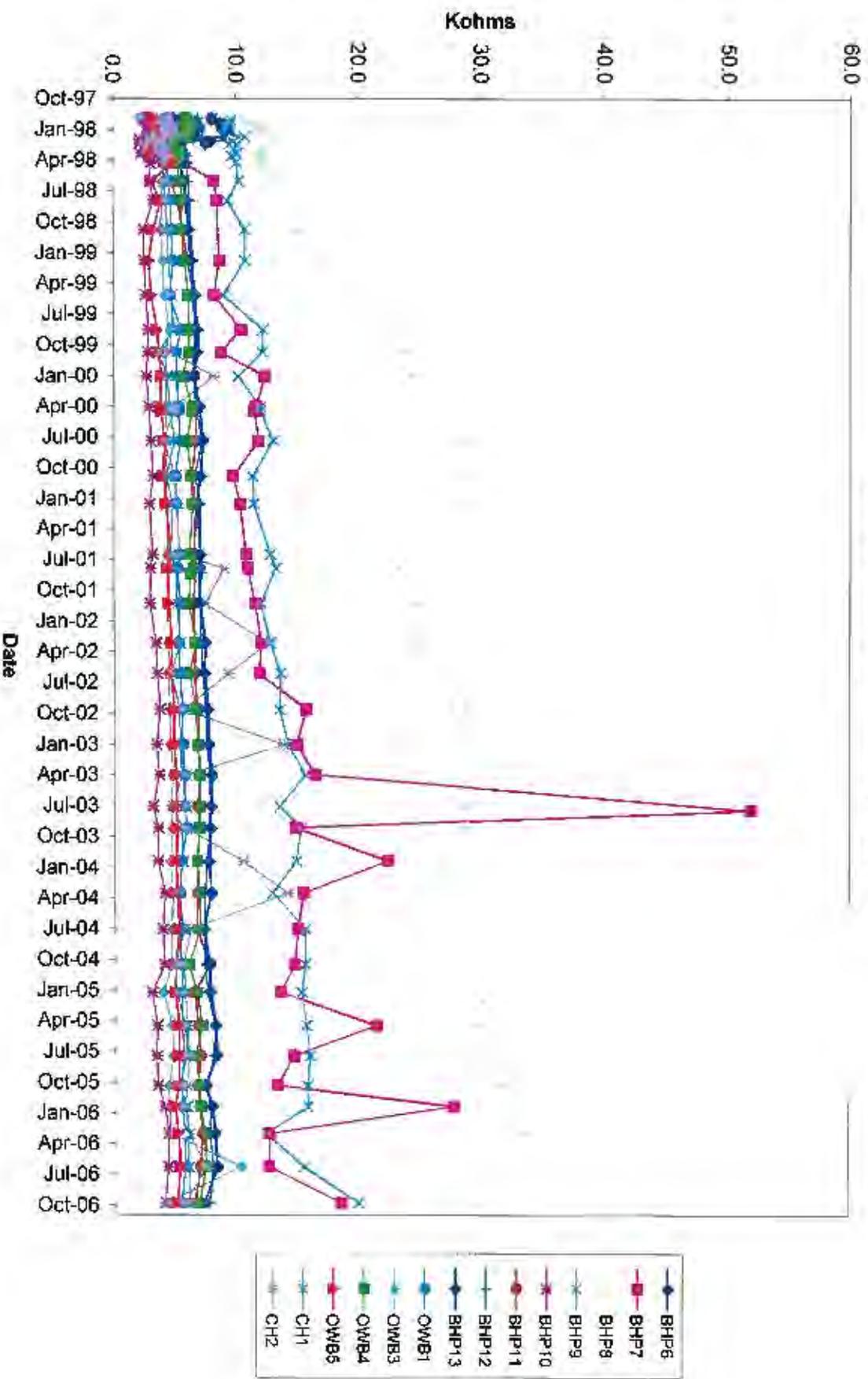
**Figure 1 - Well Field Water Elevations  
Third Quarter 2006**



**Well Field Water Elevations  
Third Quarter 2006**

Date	BHP-6	BHP-7	BHP-8	BHP-9	OWB-1	OWB-3	OWB-4	OWB-5
7/7/2006	1258.1	1257.7	1257.8	1257.7	1258.1	1257.2	1257.6	1258.5
7/15/2006	1258.0	1257.6	1257.7	1257.7	1258.1	1257.1	1257.5	1258.4
7/21/2006	1256.4	1256.0	1256.1	1256.0	1256.5	1255.5	1255.9	1256.8
7/27/2006	1256.0	1255.6	1255.7	1255.6	1256.1	1255.1	1255.5	1256.4
8/3/2006	1255.4	1255.1	1255.0	1254.9	1255.6	1254.4	1254.8	1255.9
8/11/2006	1257.6	1257.3	1257.0	1257.1	1257.8	1256.6	1257.0	1258.0
8/17/2006	1261.1	1260.8	1260.5	1260.6	1261.3	1260.1	1260.5	1261.5
8/24/2006	1262.7	1262.2	1262.5	1262.4	1262.7	1261.8	1262.4	1263.3
9/1/2006	1263.0	1262.6	1262.8	1262.7	1263.0	1262.1	1262.7	1263.6
9/7/2006	1263.5	1263.2	1263.5	1263.4	1263.5	1262.6	1263.2	1264.3
9/15/2006	1264.5	1264.2	1264.7	1264.4	1264.6	1263.6	1264.2	1265.3
9/21/2006	1265.5	1265.1	1265.5	1265.4	1265.4	1264.5	1265.3	1266.3
9/28/2006	1266.8	1266.5	1267.0	1266.9	1266.8	1265.9	1266.8	1267.7
Water Level Elevations (feet AMSL)								

Figure 2 - Annular Resistivity in Kohms



BROWN AND CALDWELL

P:\gen\lbrave\21622 (MM)\Quarterlies\Operational Monitoring\Annular Resistivity.xls:Chart1

**ATTACHMENT 2**

**POC QUARTERLY COMPLIANCE MONITORING REPORT**

**FLORENCE COPPER PROJECT  
QUARTERLY COMPLIANCE MONITORING REPORT  
THIRD QUARTER 2006**

*Primary Sampling Activities*

Quarterly compliance monitoring was conducted for the Florence Copper project on July 23 through 26, 2006 (Third Quarter 2006). Groundwater sampling and analysis was conducted in accordance with the requirements of Aquifer Protection Permit (APP) Permit Number 101704, Part II.E.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 Third 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 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 Fourth Quarter 2006*

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

*Results of Contingency Sampling Plan Implemented from Second Quarter 2006*

There were no AL exceedances during the Second Quarter 2006. Therefore, no contingency sampling plan was implemented.

*Issues*

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

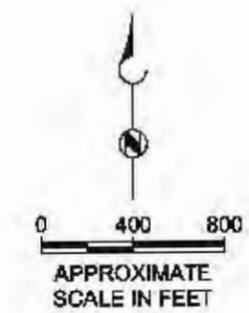
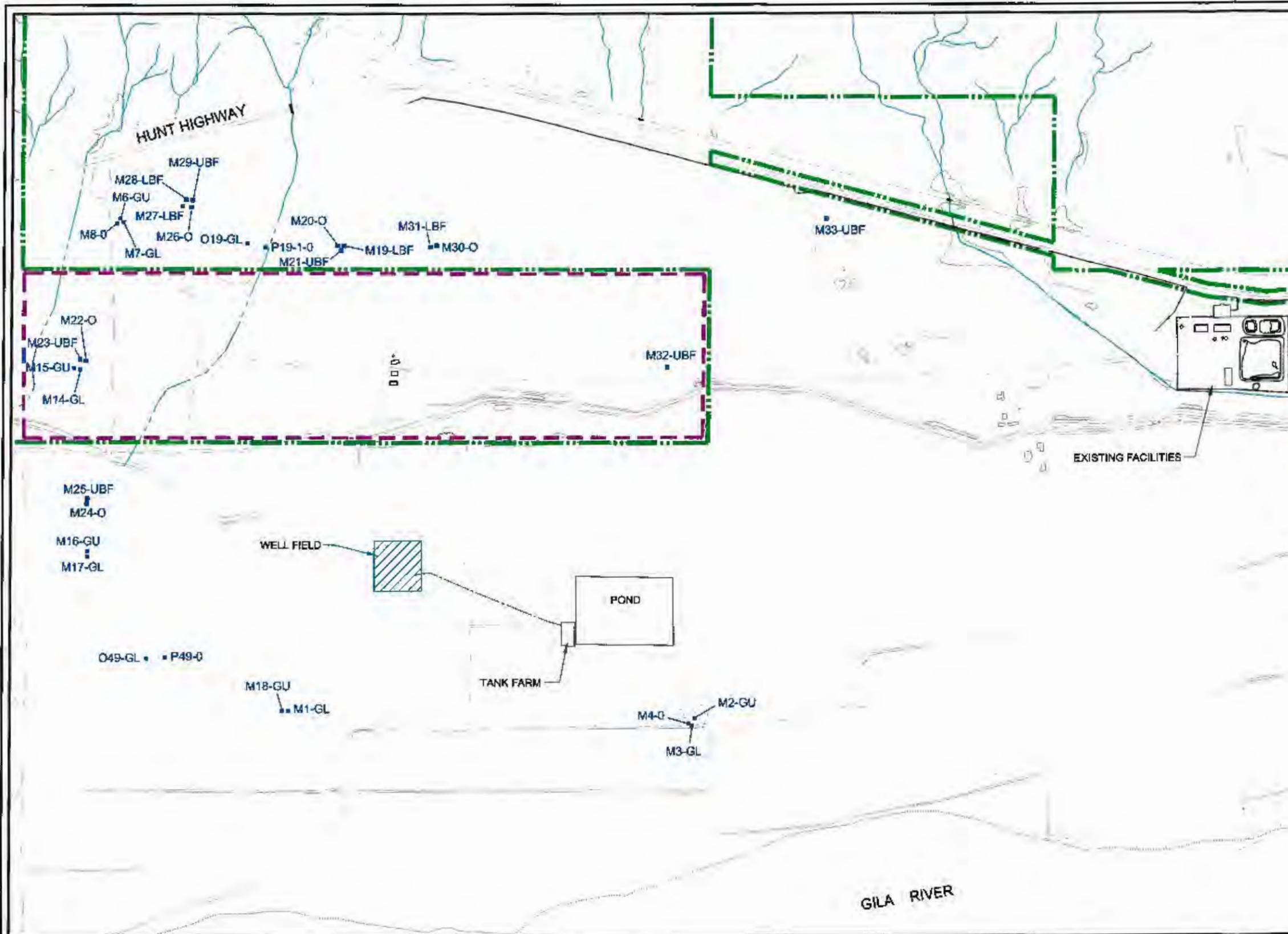


TABLE 1. SUMMARY OF ANALYTICAL RESULTS, QUARTERLY PARAMETERS

Well ID	Sample Date	Magnesium		Sulfate		Fluoride		Total Dissolved Solids	
		Concentration	Alert Level	Concentration	Alert Level	Concentration	Alert Level	Concentration	Alert Level
M1-GL	Jul 26 2006	20.0	31	100	109	0.75	1.3	620	1028
M2-GU	Jul 26 2006	24.0	39	180	275	0.86	1.4	840	1496
M3-GL	Jul 26 2006	19.0	36	180	187	0.76	1.3	650	1157
M4-O	Jul 26 2006	5.8	15	74	405	2.2	5.1	450	1072
M6-GU	Jul 25 2006	2.7	5.1	51	86	0.7	1.3	350	620
M6-GU (Dup)	Jul 25 2006	2.8	5.1	50	86	0.79	1.3	350	620
M7-GL	Jul 25 2006	<0.25	1	35	82	0.96	1.7	270	464
M8-O	Jul 25 2006	<0.25	1	74	122	1.8	3.6	370	609
M14-GL	Jul 25 2006	2.1	23	58	144	0.64	1.4	410	874
M15-GU	Jul 25 2006	23.0	44	74	126	0.54	1.2	770	1359
M16-GU	Jul 26 2006	28.0	52	170	248	0.72	1.1	910	1635
M17-GL	Jul 26 2006	5.3	9.3	110	209	0.68	1.6	450	831
M17-GL (Dup)	Jul 26 2006	5.4	9.3	110	209	0.72	1.6	450	831
M18-GU	Jul 26 2006	18.0	36	160	288	0.95	1.6	730	1323
M19-LBF	Jul 24 2006	11.0	21	52	89	0.51	1	440	794
M20-O	Jul 24 2006	8.1	14	65	112	0.81	1.7	460	809
M21-UBF	Jul 24 2006	22.0	87	180	487	0.81	1.1	780	2867
M21-UBF (Dup)	Jul 24 2006	21.0	87	180	487	0.83	1.1	780	2867
M22-O	Jul 25 2006	5.7	8.6	52	86	0.75	1.3	410	1094
M23-UBF	Jul 25 2006	36.0	69	250	411	0.72	1.3	1400	2392
M24-O	Jul 26 2006	9.4	19	780	1364	1.1	2.5	1300	2363
M25-UBF	Jul 26 2006	35.0	76	250	387	0.77	1.6	1200	2683
M26-O	Jul 24 2006	<0.25	1	60	105	1.6	3.4	300	556
M27-LBF	Jul 24 2006	30.0	51	130	179	0.42	1	1100	1745
M28-LBF	Jul 24 2006	1.6	2.6	46	81	0.8	1.6	340	610
M29-UBF	Jul 24 2006	39.0	84	280	465	0.64	1.1	1300	2751
M30-O	Jul 24 2006	11.0	15	59	102	0.85	1.6	460	824
M31-LBF	Jul 24 2006	15.0	46	150	330	0.98	1.3	620	1665
O19-GL	Jul 25 2006	9.8	17	57	99	0.63	1.4	460	770
O49-GL	Jul 24 2006	9.2	18	71	159	0.56	1	510	849
P19-L-O	Jul 25 2006	6.2	13	65	107	1.4	2.8	440	767
P49-O	Jul 24 2006	3.3	6.2	100	181	0.97	2	450	801
<b>Arizona Aquifer Water Quality Standard</b>		-		-		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	Jul 26 2006	22.0	71.6	7.44	1060
M2-GU	Jul 26 2006	19.8	67.6	7.29	1273
M3-GL	Jul 26 2006	22.0	71.6	7.43	1053
M4-O	Jul 26 2006	24.2	75.6	7.29	756
M6-GU	Jul 25 2006	25.4	77.7	8.55	685
M7-GL	Jul 25 2006	24.8	76.6	9.40	492
M8-O	Jul 25 2006	29.5	85.1	8.88	669
M14-GL	Jul 25 2006	27.8	82.0	8.51	804
M15-GU	Jul 25 2006	25.5	77.9	7.45	1254
M16-GU	Jul 26 2006	24.2	75.6	7.38	1563
M17-GL	Jul 26 2006	28.4	83.1	8.28	836
M18-GU	Jul 26 2006	20.1	68.2	7.35	1114
M19-LBF	Jul 24 2006	23.3	73.9	7.63	777
M20-O	Jul 24 2006	24.1	75.4	7.50	755
M21-UBF	Jul 24 2006	22.8	73.0	7.29	1213
M22-O	Jul 25 2006	29.2	84.6	8.01	788
M23-UBF	Jul 25 2006	22.9	73.2	7.11	2065
M24-O	Jul 26 2006	30.5	86.9	7.73	1943
M25-UBF	Jul 26 2006	22.6	72.7	7.09	1910
M26-O	Jul 24 2006	29.3	84.7	8.53	590
M27-LBF	Jul 24 2006	24.0	75.2	7.47	1586
M28-LBF	Jul 24 2006	26.7	80.1	8.31	676
M29-UBF	Jul 24 2006	22.8	73.0	7.07	1978
M30-O	Jul 24 2006	24.9	76.8	7.41	799
M31-LBF	Jul 24 2006	23.2	73.8	7.42	1009
G19-GL	Jul 25 2006	24.4	75.9	7.65	776
O49-GL	Jul 23 2006	26.5	79.7	7.86	925
P19-1-O	Jul 25 2006	25.0	77.0	7.55	732
P49-O	Jul 23 2006	28.3	82.9	7.62	798



**EXPLANATION**

- APPROXIMATE PROPERTY BOUNDARY
- STATE LEASE LAND BOUNDARY
- O19-GL POC MONITORING WELL
- ENLARGED AREA ON FIGURE 2

**Figure 1**  
**MONITORING AREA**  
MERRILL MINING, L.L.C.  
FLORENCE, ARIZONA

**BROWN AND CALDWELL**