



6200 W. Duval Mine Road • P. O. Box 527 • Green Valley, AZ 85622-0527  
(520) 648-8500

March 30, 2007

**CERTIFIED MAIL #7004 1350 0001 1197 3310  
RETURN RECEIPT REQUESTED**

Mr. Robert Casey  
Arizona Department of Environmental Quality  
Water Quality Enforcement Unit  
1110 West Washington Street  
Phoenix, Arizona 85007-2935

**Re: Groundwater Monitoring Report, First Quarter 2007  
Phelps Dodge Sierrita, Inc. – Mitigation Order on Consent, Docket No. P-50-06**

Dear Mr. Casey:

Phelps Dodge Sierrita, Inc. (“PDSI”) submits three copies of the attached Quarterly Groundwater Monitoring Report that provides the results of groundwater monitoring conducted in the first quarter of 2007 in the vicinity of the PDSI Tailing Impoundment. This document was prepared by Hydro Geo Chem, Inc. as described in Section 3.3 of the Work Plan.

Please do not hesitate to contact Mr. Stuart Brown at (503) 675-5252 or myself at (520) 648-8857 if you have any question regarding this submittal.

Very Truly Yours,

E. L. (Ned) Hall  
Chief Environmental Engineer

Attachment  
20070330-002

cc: John Brack, Phelps Dodge Sierrita, Inc.  
Chad Fretz, Phelps Dodge Sierrita, Inc.  
Ray Lazuk, Phelps Dodge Corporation  
Stuart Brown, Bridgewater Group, Inc.

**FIRST QUARTER 2007  
GROUNDWATER MONITORING REPORT  
TASKS 2.2 AND 2.3 OF AQUIFER CHARACTERIZATION PLAN  
MITIGATION ORDER ON CONSENT DOCKET NO. P-50-06  
PIMA COUNTY, ARIZONA**

Prepared for:

**PHELPS DODGE SIERRITA, INC.**  
6200 West Duval Mine Road  
Green Valley, Arizona 85614

Prepared by:

**HYDRO GEO CHEM, INC.**  
51 West Wetmore Road, Suite 101  
Tucson, Arizona 85705  
(520) 293-1500

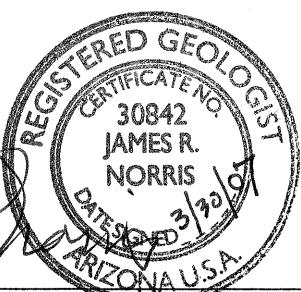
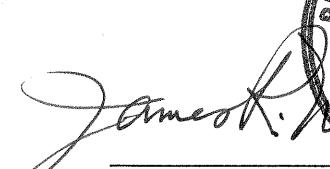
March 30, 2007

**FIRST QUARTER 2007  
GROUNDWATER MONITORING REPORT  
TASKS 2.2 AND 2.3 OF AQUIFER CHARACTERIZATION PLAN  
MITIGATION ORDER ON CONSENT DOCKET NO. P-50-06  
PIMA COUNTY, ARIZONA**

Prepared for:

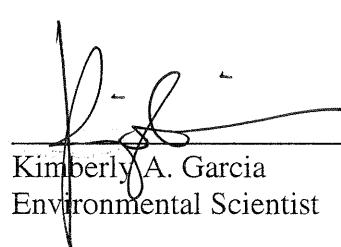
**PHELPS DODGE SIERRITA, INC.**  
6200 West Duval Mine Road  
Green Valley, Arizona 85614

Approved by:



James R. Norris  
Arizona Registered Geologist No. 30842

Prepared by:



Kimberly A. Garcia  
Environmental Scientist

March 30, 2007

## **TABLE OF CONTENTS**

1.	INTRODUCTION .....	1
1.1	Scope of Groundwater Monitoring .....	1
1.1.1	Groundwater Monitoring for Task 2.2.....	1
1.1.2	Groundwater Monitoring for Task 2.3.....	3
2.	GROUNDWATER MONITORING RESULTS .....	5
2.1	Results of Monitoring for Task 2.2.....	5
2.2	Quality Assurance/Quality Control Review .....	6
3.	DISCUSSION.....	7
3.1	Sulfate Distribution.....	8
3.2	Groundwater Elevation .....	9
4.	LIMITATIONS.....	11
5.	REFERENCES .....	13

## **TABLES**

- 1     Summary of Groundwater Monitoring for Mitigation Order Docket No. P-50-06  
for First Quarter 2007
- 2     Analytical Results for First Quarter 2007 Groundwater Monitoring
- 3     Groundwater Elevation Data for Water Levels Collected in First Quarter 2007

## **FIGURES**

- 1     Sulfate Concentrations in Groundwater Samples Collected in  
January through February 2007
- 2     Groundwater Elevations for January through February 2007

## **APPENDICES**

- A     Fourth Quarter 2006 Data Verification Report for Samples Collected by  
Phelps Dodge Sierrita, Inc.
- B     First Quarter 2007 Data Verification Report for Samples Collected by  
Hydro Geo Chem, Inc.
- C     First Quarter 2007 Data Verification Report for Samples Collected by  
Phelps Dodge Sierrita, Inc.
- D     Analytical Data Reports from ACZ
- E     Hydro Geo Chem, Inc. Groundwater Sampling Forms



## **1. INTRODUCTION**

This data report provides the results of groundwater monitoring conducted in the first quarter of 2007 in the vicinity of the Phelps Dodge Sierrita, Inc. (PDSI) Tailing Impoundment (PDSTI). Groundwater monitoring was conducted by PDSI pursuant to Tasks 2.2 and 2.3 of the Work Plan (Hydro Geo Chem, Inc. (HGC), 2006a) to characterize sulfate in the vicinity of the PDSTI. The Work Plan was submitted to and approved by the Arizona Department of Environmental Quality pursuant to the Mitigation Order on Consent Docket No. P-50-06. HGC prepared this groundwater monitoring report on behalf of PDSI.

### **1.1 Scope of Groundwater Monitoring**

The scope of the groundwater monitoring program is described in Sections 3.3.2 and 3.3.3 and Appendix G of the Work Plan (HGC, 2006a). Groundwater monitoring for Task 2.2 consists of water elevation measurement and collection of groundwater samples from wells in the vicinity of the PDSTI. Task 2.3 consists of depth-specific groundwater sampling to determine vertical variations of sulfate along the screened interval of selected wells.

#### **1.1.1 Groundwater Monitoring for Task 2.2**

The Work Plan identifies two purposes for the groundwater monitoring program required in Task 2.2: plume monitoring and regional monitoring. Plume monitoring is conducted quarterly at wells that are proximal to the sulfate plume in order to track the plume's location in

the aquifer. Regional monitoring is set on a semiannual basis to characterize regional hydrologic conditions using wells that are outside the area of the sulfate plume. The data collected as part of the groundwater monitoring program will be used to refine the conceptual model of the sulfate plume and to calibrate a numerical model for the fate and transport of sulfate. This report presents the results of plume and regional monitoring during the first quarter of 2007.

Table 1 lists all wells identified in the Work Plan for quarterly and semiannual monitoring, their availability for sampling in the first quarter of 2007, and their sampling status. As discussed in the Work Plan, Table 1 consists of wells that are under the control of PDSI and others that are not. PDSI agreed to contact owners of private wells and wells owned by water companies identified in the Work Plan for sampling in order to obtain access for sampling. The Work Plan acknowledged that access to some wells may not be permitted by well owners and that some wells may be inappropriate for sampling due to their construction characteristics. Table 1 also includes a list of alternate wells identified by the Work Plan for sampling that have been used in place of wells that were unable to be sampled.

Analytical data for wells sampled by PDSI and HGC during the first quarter of 2007 as part of Task 2.2 are included in this report. Analytical data for wells sampled by PDSI during the fourth quarter of 2006 are also included in this report as the data had not been thoroughly reviewed in time for inclusion in the previous groundwater monitoring report (HGC, 2006b).

Data for this groundwater monitoring program were obtained from four sources: PDSI, HGC, Twin Buttes Properties, Inc. (TBPI), and Farmers Investment Company (FICO). PDSI

collected groundwater samples at wells under its control in January 2007. In January and February of 2007, HGC collected groundwater samples at private wells and water companies not under the control of PDSI. TBPI provided data for groundwater samples collected from 11 wells and water level elevations at 20 wells for inclusion in this report. TBPI collected and reported these data pursuant to a Post Closure Monitoring Program (Haley & Aldrich, 2007). FICO allowed groundwater sampling at 9 wells and provided depth-to-water measurements made at 11 wells in January 2007. Analytical results for sulfate in groundwater samples collected from the FICO wells are held by FICO. FICO provided total sulfate concentrations for inclusion in this report.

Groundwater sampling and analysis methods used by PDSI and HGC are described in the Quality Assurance Project Plan (QAPP) contained in the Work Plan (Appendix E of HGC, 2006a). Groundwater data provided by TBPI were gathered using their standard sampling and analysis protocols.

### 1.1.2 Groundwater Monitoring for Task 2.3

Additional depth-specific groundwater sampling for Task 2.3 was conducted at wells ESP-4 and MH-11 from March 19 to March 23, 2007. Depth-specific samples are being analyzed for sulfate using the methods described in the QAPP (Appendix E of HGC, 2006a). Analytical results of depth-specific sampling are not yet available and will be included in the subsequent groundwater monitoring report for the second quarter of 2007 which is due for submittal to ADEQ on June 30, 2007.



## **2. GROUNDWATER MONITORING RESULTS**

### **2.1 Results of Monitoring for Task 2.2**

Analytical results and groundwater elevation data for the first quarter of 2007 are tabulated in Table 2 and Table 3, respectively. Figure 1 shows the concentrations of sulfate in the wells sampled. Dissolved sulfate concentrations are depicted on Figure 2 except at the FICO wells which are total sulfate. Comparison of dissolved and total sulfate concentrations in Table 2 indicates negligible difference between the two measurements.

Groundwater elevation data and interpreted groundwater elevation contours are shown on Figure 2. Groundwater elevations were calculated with depth to water measurements made under static (nonpumping) conditions except at the interceptor well field (IW-series) wells along the east edge of the PDSTI. Groundwater elevation contours in the vicinity of the IW-series wells were interpreted from static water level measurements at monitoring wells. Groundwater elevations for the IW-series wells are for dynamic (pumping) conditions and were not used for contouring. Wells RRQC-1, RRQC-2, and RRQC-3 on Figure 2 had uncertain survey coordinates and were not used in the contouring. The survey coordinates for these wells are being verified. Consequently, Figure 2 should be considered preliminary and will be updated when survey data are verified.

## **2.2 Quality Assurance/Quality Control Review**

Analytical data verification reviews were conducted pursuant to the QAPP for quality assurance and quality control purposes. Appendix A contains the data verification review for samples collected by PDSI in the fourth quarter of 2006. As previously mentioned, these data and the verification review were unavailable for inclusion in the previous groundwater monitoring report (HGC, 2006b). Appendices B and C provide data verification reviews for samples collected during the first quarter of 2007 by HGC and PDSI, respectively.

Analytical laboratory reports for samples collected by PDSI and HGC in the fourth quarter of 2006 and the first quarter of 2007 are provided in portable document format in the compact disc in Appendix D. Copies of groundwater sampling forms for samples collected by HGC are in Appendix E.

The data verification review determined that all analytical data generated for samples collected in the fourth quarter of 2006 and the first quarter of 2007 are of acceptable quality for use in the aquifer characterization conducted pursuant to the Work Plan.

### **3. DISCUSSION**

This data report provides the results of groundwater monitoring conducted in the vicinity of the PDSTI for the first quarter of 2007. The purpose of groundwater monitoring was twofold: (1) to delineate the location of the sulfate plume and (2) to characterize the sulfate concentrations and groundwater elevations in the regional aquifer.

The Work Plan identified 107 wells for water quality sampling and 109 wells for depth-to-water measurements for the first quarter 2007. Groundwater samples were collected from 95 wells over a geographic area of more than 50 square miles. Depth-to-water was measured at 130 wells. This report presents laboratory analytical reports for the 84 well samples collected and analyzed by PDSI and HGC. Data provided from TBPI are documented in Haley and Aldrich, Inc. (2007).

Groundwater samples were not collected from all the wells identified in the Work Plan for a variety of reasons, including delays related to ongoing access negotiations, owner limitations on access, unsuitable well construction, inability to contact the owner, inoperable pump status, or a well no longer existing. The specific reason(s) for not sampling these wells are provided in Table 1. Overall, groundwater monitoring for the first quarter of 2007 meets the objectives of the plume monitoring and regional groundwater monitoring programs in that the location of the plume is delineated sufficiently for the purpose of this project and groundwater conditions in the regional aquifer are defined.

### **3.1 Sulfate Distribution**

Figure 1 shows the regional distribution of dissolved sulfate concentrations in samples collected from wells in the basin fill aquifer. The concentration contours shown in Figure 1 are inferred assuming that sulfate concentrations in the aquifer are spatially correlated, although a strict linear interpolation was not applied. Sulfate concentration contours of 50, 100, 250, 500, 1000, and 1500 milligrams per liter (mg/L) are shown as requested by Arizona Department of Environmental Quality (ADEQ, 2006).

Comparison of the first quarter 2007 sulfate concentrations in the vicinity of the PDSTI with those shown in the Work Plan for early 2006 and with those in the groundwater monitoring report for the fourth quarter of 2006 (HGC, 2006b) indicates no substantive difference in the location of the sulfate plume from the PDSTI as defined by the 250 mg/L sulfate concentration contour. Groundwater samples from wells immediately east of the sulfate plume define a north-south zone approximately 4,000 feet wide and six miles long with concentrations less than 50 mg/L sulfate. This zone of low sulfate groundwater is centered on Green Valley and extends north of Duval Mine Road along Interstate 19. Northeast of the sulfate plume, sulfate concentrations ranged from 23.9 mg/L to 41.3 mg/L in samples collected from wells ST-5, ST-6, and ST-7 north of Duval Mine Road. Groundwater samples from wells south of the PDSTI and west of Interstate 19 contained sulfate concentrations less than 10 mg/L. Samples from wells along the channel of the Santa Cruz River had sulfate concentrations ranging between 80 mg/L and 189 mg/L. East of the Santa Cruz River channel, wells on the alluvial fan from the Santa Rita Mountains contained sulfate concentrations that were less than 100 mg/L and that decreased

in concentration in an easterly direction. Groundwater samples collected from the wells furthest east ranged from 18 to 39 mg/L sulfate.

The distribution of sulfate concentrations in basin fill aquifer wells sampled in the first quarter of 2007 is similar to the pattern of sulfate described by Laney (1972) and Pima Association of Governments (PAG) (1983). Data presented by Laney (1972) and PAG (1983), describe a regional distribution of sulfate in which concentrations are typically greater than 100 mg/L in a zone along and parallel to the channel of the Santa Cruz River and decline east and west of the channel. The results of regional groundwater monitoring in the first quarter of 2007 agree with this overall distribution of sulfate. Plume monitoring results indicate that the PDSTI sulfate plume extends northeastward from the east edge of the tailing impoundment to the west side of Green Valley and northward to the vicinity of Duval Mine Road. The sulfate plume is separated from the Santa Cruz River channel by a zone of relatively dilute sulfate concentrations.

### **3.2      Groundwater Elevation**

Groundwater elevations are shown on Figure 2. Groundwater elevations decrease from south to north across the central portion of the study area, approximately parallel in Interstate 19 and the Santa Cruz River. Groundwater elevations on the east and west sides of the study area decrease towards the central portion of the study area which is the approximate central axis of the southern portion of the Tucson groundwater basin. Based on the groundwater elevation contours, groundwater flows from the flanks of the Santa Rita and Sierrita Mountains on the east

and west sides of the study area, respectively, toward the central axis of the basin, and then northerly. This overall pattern of groundwater flow is consistent with expected regional groundwater flow patterns in the southern portion of the Tucson groundwater basin. The groundwater elevations and consequent flow directions indicated in the vicinity of the PDSTI are generally consistent with data presented in the Work Plan (HGC, 2006a), the fourth quarter 2006 groundwater monitoring report (HGC, 2006b), and observations in late 1993 and early 1994 (Errol L. Montgomery & Associates and Dames & Moore, 1994).

#### **4. LIMITATIONS**

The information and conclusions presented in this report are based upon the scope of services and information obtained through the performance of the services, as agreed upon by HGC and the party for whom this report was originally prepared. Results of any investigations, tests, or findings presented in this report apply solely to conditions existing at the time HGC's investigative work was performed and are inherently based on and limited to the available data and the extent of the investigation activities. No representation, warranty, or guarantee, express or implied, is intended or given. HGC makes no representation as to the accuracy or completeness of any information provided by other parties not under contract to HGC to the extent that HGC relied upon that information. This report is expressly for the sole and exclusive use of the party for whom this report was originally prepared and for the particular purpose that it was intended. Reuse of this report, or any portion thereof, for other than its intended purpose, or if modified, or if used by third parties, shall be at the sole risk of the user.



## **5. REFERENCES**

- Arizona Department of Environmental Quality (ADEQ). 2006. Correspondence from Robert Casey to John Brack, Regarding: Mitigation Order on Consent, Docket P-50-06 – Work Plan Response. September 22, 2006.
- Errol L. Montgomery & Associates and Dames & Moore. 1994. Aquifer Protection Permit Application Sierrita Operation, Cyprus Sierrita Corporation, Pima County, Arizona. September 7, 1994.
- Haley & Aldrich, Inc. 2007. Post Closure Groundwater Monitoring January 2007, Twin Buttes Properties, Inc. Sahuarita, Arizona. March 2007.
- Hydro Geo Chem, Inc. (HGC). 2006a. Work Plan to Characterize and Mitigate Sulfate with Respect to Drinking Water Supplies in the Vicinity of the Phelps Dodge Sierrita Tailing Impoundment, Pima County, Arizona. August 11, 2006, revised October 31, 2006.
- HGC. 2006b. Groundwater Monitoring Report, Fourth Quarter 2006, Tasks 2.2 and 2.3 of Aquifer Characterization Plan, Mitigation Order on Consent Docket No. P-50-06. December 29, 2006.
- Laney, R.L. 1972. Chemical Quality of Water in the Tucson Basin, Arizona. United States Geological Survey Water Supply Paper 1939-D.
- Pima Association of Governments. 1983. Region Wide Groundwater Quality in the Upper Santa Cruz Basin Mines Task Force Area. September 1983.



## **TABLES**

**TABLE 1**  
Summary of Groundwater Monitoring for Mitigation Order Docket No. P-50-06 for First Quarter 2007 (Sorted by ADWR Registry Number)

Well Name	ADWR 55 Registry Number	Owner	Purpose	Casing or Well Depth (feet)	Work Plan Specification		Q1-2007 Monitoring		Status	Substitute Well
					Water Level Measurement	Water Quality	Water Level Measured?	Water Quality Sample		
WELLS FOR QUARTERLY MONITORING CONTROLLED BY PDSI										
IW-22	200554	PDSI	Plume Monitoring	590		Q	Yes	Yes	Water quality sample collected in Jan-2007	
IW-23	200555	PDSI	Plume Monitoring	964		Q	Yes	Yes	Water quality sample collected in Jan-2007	
IW-24	200556	PDSI	Plume Monitoring	880		Q	No	No	Unable to sample because well has no sampling port	
MH-26A	201527	PDSI	Plume Monitoring	538	Q	Q	Yes	Yes	Water quality sample collected in Jan-2007	
MH-25A	201528	PDSI	Plume Monitoring	530	Q	Q	Yes	Yes	Water quality sample collected in Jan-2007	
MH-25C	208426	PDSI	Plume Monitoring	1101	Q	Q	Yes	Yes	Water quality sample collected in Jan-2007	
MH-26B	208427	PDSI	Plume Monitoring	735	Q	Q	Yes	Yes	Water quality sample collected in Jan-2007	
MH-26C	208428	PDSI	Plume Monitoring	900	Q	Q	Yes	Yes	Water quality sample collected in Jan-2007	
MH-25B	208429	PDSI	Plume Monitoring	680	Q	Q	Yes	Yes	Water quality sample collected in Jan-2007	
IW-11	508235	PDSI	Plume Monitoring	605		Q	Yes	Yes	Water quality sample collected in Jan-2007	
IW-8	508236	PDSI	Plume Monitoring	783		Q	Yes	No	Discharge plumbing was installed without a sampling port	
IW-10	508237	PDSI	Plume Monitoring	831		Q	Yes	Yes	Water quality sample collected in Jan-2007	
IW-9	508238	PDSI	Plume Monitoring	853		Q	Yes	Yes	Water quality sample collected in Jan-2007	
MH-15W	528093	PDSI	Plume Monitoring	466	Q		Yes	No	Well identified for water level measurement only	
MH-15E	528094	PDSI	Plume Monitoring	467	Q		Yes	No	Well identified for water level measurement only	
MH-14	528098	PDSI	Plume Monitoring	561	Q		Yes	No	Well identified for water level measurement only	
MH-16W	528099	PDSI	Plume Monitoring	460	Q		Yes	No	Well identified for water level measurement only	
MH-16E	528100	PDSI	Plume Monitoring	460	Q		Yes	No	Well identified for water level measurement only	
IW-12	545555	PDSI	Plume Monitoring	625		Q	Yes	Yes	Water quality sample collected in Jan-2007	
IW-14	545557	PDSI	Plume Monitoring	550		Q	Yes	Yes	Water quality sample collected in Jan-2007	
IW-15	545558	PDSI	Plume Monitoring	548		Q	Yes	Yes	Water quality sample collected in Jan-2007	
IW-16	545559	PDSI	Plume Monitoring	470		Q	Yes	Yes	Water quality sample collected in Jan-2007	
IW-17	545560	PDSI	Plume Monitoring	502		Q	Yes	Yes	Water quality sample collected in Jan-2007	
IW-18	545561	PDSI	Plume Monitoring	508		Q	Yes	Yes	Water quality sample collected in Jan-2007	
IW-19	545562	PDSI	Plume Monitoring	544		Q	Yes	Yes	Water quality sample collected in Jan-2007	
IW-20	545563	PDSI	Plume Monitoring	506		Q	Yes	Yes	Water quality sample collected in Jan-2007	
IW-21	545564	PDSI	Plume Monitoring	620		Q	Yes	Yes	Water quality sample collected in Jan-2007	
IW-6A	545565	PDSI	Plume Monitoring	492		Q	Yes	Yes	Water quality sample collected in Jan-2007	
PZ-9	561859	PDSI	Plume Monitoring	230	Q	Q	Yes	No	Piezometer is dry, no sample	
PZ-8	561866	PDSI	Plume Monitoring	280	Q	Q	Yes	Yes	Water quality sample collected in Jan-2007	
PZ-7	561870	PDSI	Plume Monitoring	155	Q	Q	Yes	Yes	Water quality sample collected in Jan-2007	
MH-24	563799	PDSI	Plume Monitoring	468	Q		Yes	No	Well identified for water level measurement only	
IW-1	623129	PDSI	Plume Monitoring	855		Q	Yes	Yes	Water quality sample collected in Jan-2007	
IW-2	623130	PDSI	Plume Monitoring	1035	Q	Q	Yes	Yes	Water quality sample collected in Jan-2007	
IW-3A	623131	PDSI	Plume Monitoring	1047		Q	Yes	No	Unable to sample because well pump was pulled for maintenance	
IW-4	623132	PDSI	Plume Monitoring	946		Q	Yes	Yes	Water quality sample collected in Jan-2007	
IW-5	623133	PDSI	Plume Monitoring	956		Q	No	Yes	Water quality sample collected in Jan-2007	
IW-7	623135	PDSI	Plume Monitoring	1050		Q	No	No	Well permanently out of service	
MH-1	803629	PDSI	Plume Monitoring	520	Q		Yes	No	Well identified for water level measurement only	
MH-3	803630	PDSI	Plume Monitoring	535	Q		Yes	No	Well identified for water level measurement only	
MH-4	803631	PDSI	Plume Monitoring	540	Q		No	No	Obstruction in well prevented WL measurement	
MH-5	803632	PDSI	Plume Monitoring	640	Q		Yes	No	Well identified for water level measurement only	
MH-6	803633	PDSI	Plume Monitoring	960	Q		Yes	No	Well identified for water level measurement only	
MH-7	803634	PDSI	Plume Monitoring	1100	Q		Yes	No	Well identified for water level measurement only	
MH-9	803635	PDSI	Plume Monitoring	1400	Q		Yes	No	Well identified for water level measurement only	
MH-10	803636	PDSI	Plume Monitoring	600	Q	Q1	Yes	Yes	Water quality sample collected in Jan-2007	
MH-11	803637	PDSI	Plume Monitoring	820	Q	Q1	Yes	Yes	Water quality sample collected in Jan-2007	
MH-12	803638	PDSI	Plume Monitoring	800	Q	Q1	Yes	Yes	Water quality sample collected in Jan-2007	
MH-28	903648	PDSI	Plume Monitoring	490	Q	Q	Yes	Yes	Water quality sample collected in Jan-2007	
MH-29	903649	PDSI	Plume Monitoring	475	Q	Q	Yes	Yes	Water quality sample collected in Jan-2007	
MH-30	903884	PDSI	Plume Monitoring	920	Q	Q	Yes	Yes	Water quality sample collected in Jan-2007	
MH-13A	904071	PDSI	Plume Monitoring	660	Q	Q	Yes	Yes	Water quality sample collected in Jan-2007	
MH-13B	904072	PDSI	Plume Monitoring	960	Q	Q	Yes	Yes	Water quality sample collected in Jan-2007	
MH-13C	904073	PDSI	Plume Monitoring	1360	Q	Q	Yes	Yes	Water quality sample collected in Jan-2007	
WELLS FOR QUARTERLY MONITORING NOT CONTROLLED BY PDSI										
M-6	87388	TBPI	Plume Monitoring	660	Q	Q	Yes	No	Water level measurement in Jan-2007; Unavailable for WQ monitoring	M-9, 55-501652
M-8	87390	TBPI	Plume Monitoring	660	Q	Q	Yes	Yes	Q1-2007 Data provided by TBPI	
CW-10	207982	CWC	Plume Monitoring	1140	Q	Q	Yes	Yes	Water quality sample collected in Jan-2007	
SI WELL/GV WATER	208825	GVDWID	Plume Monitoring	650	Q	Q	Yes	Yes	Water quality sample collected in Jan-2007	
M-10	501653	TBPI	Plume Monitoring	1050	Q	Q	Yes	Yes	Q1-2007 Data provided by TBPI	
CW-7	502546	CWC	Plume Monitoring	1065	Q	Q	Yes	Yes	Water quality sample collected in Jan-2007	
Haven Golf	515867	Haven Golf	Plume Monitoring	500	Q	Q	No	Yes	Sampled Jan-2007; unable to obtain water level due to obstruction	55-623106
CW-8	543600	CWC	Plume Monitoring	1200	Q	Q	Yes	Yes	Water quality sample collected in Jan-2007	
CW-9	588121	CWC	Plume Monitoring	1000	Q	Q	Yes	Yes	Water quality sample collected in Jan-2007	
GV-1-GVDWID	603428	GVDWID	Plume Monitoring	645	Q	Q	Yes	Yes	Water quality sample collected in Jan-2007	
GV-2-GVDWID	603429	GVDWID	Plume Monitoring	560	Q	Q	Yes	Yes	Water quality sample collected in Jan-2007	
NP-2	605898	CWC	Plume Monitoring	515	Q	Q	No	No	Access obtained late in quarter; well requires well head reconfiguration for development; will be sampled in Q2-2007	
I-10	608525	TBPI	Plume Monitoring	932	Q	Q	Yes	No	Q1-2007 Data provided by TBPI	
I-9	608526	TBPI	Plume Monitoring	900	Q	Q	No	No	Not operational; no power to well, unavailable for sampling	None
SCHNEIKER	611220	Schneiker	Plume Monitoring	495	Q	Q	No	No	Owner telephone unlisted and did not respond to a letter requesting access	
PC Parks	616156	Pima County	Plume Monitoring	500	Q	Q	No	No	Believed to be the same well as 55-804995; access still being negotiated with Pima County; sampling scheduled for Q2-2007	None
ESP-1	623102	PDSI	Plume Monitoring	1020	Q	Q	Yes	Yes	Water quality sample collected in Jan-2007	
ESP-2	623103	PDSI	Plume Monitoring	1044	Q	Q	Yes	Yes	Water quality sample collected in Jan-2007	
ESP-3	623104	PDSI	Plume Monitoring	1043	Q	Q	Yes	Yes	Water quality sample collected in Jan-2007	
ESP-4	623105	PDSI	Plume Monitoring	1045	Q	Q	Yes	Yes	Water quality sample collected during depth-specific sampling; analysis will be reported in Q2-2007	
CW-3	627483	CWC	Plume Monitoring	501	Q	Q	No	No	Access obtained late in quarter; well requires well head reconfiguration for development; will be sampled in Q2-2007	
C										

**TABLE 1**  
Summary of Groundwater Monitoring for Mitigation Order Docket No. P-50-06 for First Quarter 2007 (Sorted by ADWR Registry Number)

Well Name	ADWR 55 Registry Number	Owner	Purpose	Casing or Well Depth (feet)	Work Plan Specification		Q1-2007 Monitoring		Status	Substitute Well
					Water Level Measurement	Water Quality	Water Level Measured?	Water Quality Sample		
SUBSTITUTE WELLS FOR QUARTERLY MONITORING FOR WELLS NOT CONTROLLED BY PDSI										
M-9	501652	TBPI	Plume Monitoring	440	Q	Q	Yes	Yes	Q1-2007 Data provided by TBPI	55-087388
CC OF GV	501760	CC OF GV	Plume Monitoring	955	Q	Q	Yes	Yes	Water quality sample collected in Jan-2007	55-640274
ESP-5	623106	PDSI	Plume Monitoring	950	Q		Yes	No	Well identified for water level measurement only; substitute for water level only	55-515867
WELLS FOR SEMIANNUAL MONITORING										
M-2	85304	TBPI	Regional Monitoring	647	S	S	Yes	Yes	Q1-2007 Data provided by TBPI	
M-11	501654	TBPI	Regional Monitoring	635	S	S	Yes	Yes	Q1-2007 Data provided by TBPI	
M-12	504722	TBPI	Regional Monitoring	635	S	S	No	No	Well unavailable for sampling	None
GV-02-PCWW	509604	Pima County Wastewater	Regional Monitoring	230	S	S	Yes	Yes	Water quality sample collected in Jan-2007	
--	524178	Los Arboles Mobile Home Park	Regional Monitoring	603	S	S	No	No	Owner refused access to well	55-627439
MW-2	531807	ASARCO	Regional Monitoring	490	S		Yes	No	Well identified for water level measurement only	
GORECKI / STEINMAN	532595	PRIVATE-GORECKI	Regional Monitoring	296	S	S	Yes	Yes	Water quality sample collected in Jan-2007	
UA	540451	University of Arizona	Regional Monitoring	500	S	S	No	Yes	Sampled Jan-2007; water level measurement not collected due to obstruction	
--	550534	PCWASTE	Regional Monitoring	Not Available	S		No	No	Well abandoned by Pima County in 2006	55-905019 55-550533
RANCHO SAHARITA	562962	Rancho Sahuarita Water Co.	Regional Monitoring	500	S		Yes	No	Well identified for water level measurement only	
ST-7	566940	Las Quintas Serenas Water	Regional Monitoring	922	S	S	No	Yes	Sampled Jan-2007; unable to collect water level due to obstruction	
--	574700	Richard Myers	Regional Monitoring	Not Available	S	S	No	No	Unable to contact owner	55-634036
TAYLOR	577707	Marlene Taylor	Regional Monitoring	400	S		No	Yes	Sample for WQ in Jan-2007; water level measurement not collected due to obstruction	
EL TORO	599357	EL TORO	Regional Monitoring	655	S	S	No	Yes	Sampled Jan-2007; unable to obtain water level due to obstruction	
CW-11	608518	CWC	Regional Monitoring	2516	S	S	Yes	No	Well identified for water level measurement only in Q1-2007; unable to sample because discharge pipeline inoperative	
RRQC-1	608519	Quail Creek Water Co.	Regional Monitoring	2064	S	S	Yes	No	Water level measured in Feb-2007	
RRQC-2	608521	Quail Creek Water Co.	Regional Monitoring	2064	S	S	Yes	Yes	Water quality sample collected in Feb-2007	
ST-6	608530	Las Quintas Serenas Water	Regional Monitoring	837	S	S	Yes	Yes	Water quality sample collected in Feb-2007	
ST-5	608531	Las Quintas Serenas Water	Regional Monitoring	533	S	S	No	Yes	Sampled Jan-2007; unable to collect water level due to obstruction	
RRQC-3	608591	ROBSON RANCH	Regional Monitoring	253	S	S	Yes	No	Well identified for water level measurement only in Q1-2007; well not equipped for water quality (WQ) sampling	
RRQC-4	608597	ROBSON RANCH	Regional Monitoring	502	S	S	Yes	Yes	Water quality sample collected in Feb-2007	
EP-1 [AXABC04]	608604	PDSI - Eagle Pitcher	Regional Monitoring	217	S		No	No	Well unavailable for sampling	55-537958
RRQC-5 [ASLD]	616212	ASLD	Regional Monitoring	350	S	S	Yes	No	Well not equipped for WQ sampling	
--	621717	Arthur Trewitt	Regional Monitoring	365	S	S	No	No	Owner refused access to well	55-529142
S-1	623111	PDSI	Regional Monitoring	783	S	S	No	Yes	Water quality sample collected in Jan-2007	
S-2	623112	PDSI	Regional Monitoring	793	S	S	Yes	Yes	Water quality sample collected in Jan-2007	
S-3	623113	PDSI	Regional Monitoring	811	S	S	Yes	Yes	Water quality sample collected in Jan-2007	
S-4	623114	PDSI	Regional Monitoring	900	S	S	Yes	Yes	Water quality sample collected in Jan-2007	
S-5	623115	PDSI	Regional Monitoring	800	S	S	Yes	Yes	Water quality sample collected in Jan-2007	
S-6	623116	PDSI	Regional Monitoring	900	S	S	Yes	Yes	Water quality sample collected in Jan-2007	
S-19A	623982	FICO	Regional Monitoring	2280	S	S	Yes	Yes	Water level reported only; results for WQ sampling held pending negotiations	
S-46	623996	FICO	Regional Monitoring	1615	S	S	Yes	Yes	Water level reported only; results for WQ sampling held pending negotiations	
--	624005	FICO	Regional Monitoring	1504	S	S	No	No	Well unavailable for sampling	55-623991
--	624006	FICO	Regional Monitoring	398	S	S	No	No	Well unavailable for sampling	55-623994
C-1	624008	FICO	Regional Monitoring	395	S	S	No	No	Well unavailable for sampling	55-624026
C-4	624010	FICO	Regional Monitoring	1200	S	S	Yes	No	Water quality sample not collected because well down for pump maintenance	
E-5A	624012	FICO	Regional Monitoring	520	S	S	Yes	Yes	Water level reported only; results for WQ sampling held pending negotiations	
E-12	624015	FICO	Regional Monitoring	800	S	S	No	No	Well unavailable for sampling	55-624013
--	624020	MADERA HIGHLANDS	Regional Monitoring	1100	S	S	No	No	Access being negotiated	
W-9	624024	FICO	Regional Monitoring	1175	S	S	Yes	Yes	Water level reported only; results for WQ sampling held pending negotiations	
W-11	624025	FICO	Regional Monitoring	1186	S	S	Yes	Yes	Water level reported only; results for WQ sampling held pending negotiations	
--	624027	FICO	Regional Monitoring	300	S	S	No	No	Well unavailable for sampling	55-624028
CALDERON	634037	Antonio Calderon	Regional Monitoring	380	S		No	Yes	Sampled Jan-2007; unable to obtain water level due to obstruction	
1759	634393	TBPI	Regional Monitoring	650	S	S	Yes	Yes	Q1-2007 Data provided by TBPI	
1225	634394	TBPI	Regional Monitoring	650	S	S	Yes	Yes	Q1-2007 Data provided by TBPI	
SANTA RITA RANCH-2	635387	SANTA RITA RANCH	Regional Monitoring	248	S	S	Yes	No	Sampled Jan-2007; ADWR cadastral incorrect; well is actually adjacent to 55-532595; which was sampled, therefore, no WQ sample collected	
SIMPSON	639055	Ken, Suzanne Simpson	Regional Monitoring	262	S		Yes	Yes	Water quality sample collected in Jan-2007	
GIACALONE	640358	Shirley Giacalone	Regional Monitoring	350	S	S	Yes	Yes	Water quality sample collected in Jan-2007	
--	800354	SANTA RITA RANCH	Regional Monitoring	340	S	S	No	No	Owner refused access to well due to a cracked well casing	
--	800925	TBPI	Regional Monitoring	686	S	S	No	No	Well no longer exists	
--	802661	NICHOLS	Regional Monitoring	400	S	S	No	No	Rejected by HGC due to construction of private well; could not bypass the home water treatment system for sample collection	55-545349 55-206214
SUBSTITUTE WELLS FOR SEMIANNUAL MONITORING										
GRAEF	206214	Graef	Regional Monitoring	385	S	S	Yes	Yes	Water quality sample collected in Jan-2007	55-802661
SIMONS	529142	Simons-Giedzinska	Regional Monitoring	315	S	S	Yes	Yes	Water quality sample collected in Jan-2007	55-621717
AXABC03	537958	PDSI	Regional Monitoring	207	S		Yes	No	Well identified for water level measurement only	55-608604
SALVATORE	545349	Salvatore	Regional Monitoring	345	S		Yes	No	Water level measured in Jan-2007	55-802661
SAH-1	550533	PCSW	Regional Monitoring	500	S	S	Yes	Yes	Water quality sample collected in Jan-2007	55-550534
ROBERTS	599350	Roberts	Regional Monitoring	358	S		Yes	No	Water level measured in Feb-2007	55-634037
S-40	623991	FICO	Regional Monitoring	1525	S	S	Yes	Yes	Water level reported only; results for WQ sampling held pending negotiations	55-624005
S-44	623994	FICO	Regional Monitoring	1200	S	S	Yes	Yes	Water level reported only; results for WQ sampling held pending negotiations	55-624006
E-6	624013	FICO	Regional Monitoring	801	S	S	Yes	Yes	Water level reported only; results for WQ sampling held pending negotiations	55-624015
W-12	624026	FICO	Regional Monitoring	1300	S	S	Yes	No	Well identified for water level measurement only in Q1-2007; WQ sample not collected due to pump maintenance	55-624008
NP-2	624028	FICO	Regional Monitoring	375	S	S	Yes	Yes	Water level reported only; results for WQ sampling held pending negotiations	55-624027
QUIHUIS	627439	Quihuis	Regional Monitoring	320	S		Yes	Yes	Water quality sample collected in Jan-2007	55-524178
JOHNSON	634036	Johnson	Regional Monitoring	Uncertain	S	S	Yes	Yes	Water quality sample collected in Jan-2007	55-574700
SANTA RITA RANCH-1	635386	SANTA RITA RANCH	Regional Monitoring	500	S	S	Yes	Yes	Water quality sample collected in Feb-2007	55-608598 55-608597
SAH-3B	905019	PCSW	Regional Monitoring	497	S		Yes	No	Well identified for water level measurement only	55-550534

**TABLE 1**  
**Summary of Groundwater Monitoring for Mitigation Order Docket No. P-50-06 for First Quarter 2007 (Sorted by ADWR Registry Number)**

Well Name	ADWR 55 Registry Number	Owner	Purpose	Casing or Well Depth (feet)	Work Plan Specification		Q1-2007 Monitoring		Status	Substitute Well
					Water Level Measurement	Water Quality	Water Level Measured?	Water Quality Sample		
ADDITIONAL WELLS SAMPLED FOR SEMIANNUAL MONITORING THAT WERE NOT IDENTIFIED IN THE WORK PLAN										
M-1	85228	TBPI	Regional Monitoring	932	None	None	No	Yes	Q1-2007 Data provided by TBPI	
M-5	87387	TBPI	Regional Monitoring	640	None	None	Yes	Yes	Q1-2007 Data provided by TBPI	
M-7	87389	TBPI	Regional Monitoring	1100	None	None	Yes	Yes	Q1-2007 Data provided by TBPI	
RT-1	504946	TBPI	Regional Monitoring	985	None	None	Yes	Yes	Q1-2007 Data provided by TBPI	
M-13	508428	TBPI	Regional Monitoring	753	None	None	Yes	No	Q1-2007 Data provided by TBPI	
AXABC02	532628	PDSI	Regional Monitoring	230	None	None	Yes	No	Water level measured in Feb-2007	
CANOA RANCH	586729	GVDWID	Regional Monitoring	500	None	None	Yes	Yes	Water quality sample collected in Jan-2007	
KULESZA	599769	Kulesza	Regional Monitoring	500	None	None	Yes	No	Water level measured in Feb-2007	
GV-07-GVDWID	603430	GVDWID	Regional Monitoring	350	None	None	Yes	No	Water level measured in Jan-2007	
GV-06-GVDWID	603504	GVDWID	Regional Monitoring	464	None	None	Yes	No	Water level measured in Jan-2007	
I-12	608523	TBPI	Regional Monitoring	1018	None	None	Yes	No	Q1-2007 Data provided by TBPI	
I-11	608524	TBPI	Regional Monitoring	1045	None	None	Yes	No	Q1-2007 Data provided by TBPI	
1758	634392	TBPI	Regional Monitoring	650	None	None	Yes	No	Q1-2007 Data provided by TBPI	
GV-01-PCWW	509603	Pima County Wastewater	Regional Monitoring	ND	None	None	Yes	No	Water level measured in Jan-2007	
M-3	ND	TBPI	Regional Monitoring	700	None	None	Yes	No	Q1-2007 Data provided by TBPI	
M-4	ND	TBPI	Regional Monitoring	609	None	None	Yes	No	Q1-2007 Data provided by TBPI	
A-955	ND	TBPI	Regional Monitoring	1116	None	None	Yes	No	Q1-2007 Data provided by TBPI	
2125	ND	TBPI	Regional Monitoring	1225	None	None	Yes	No	Q1-2007 Data provided by TBPI	

Notes:

1= MH-11 and MH-12 added to sampling list after Work Plan approved

ND= No Data

Q= Quarterly

S= Semiannual

PDSI= PDSI

TBPI= Twin Buttes Properties, Inc.

CWC= Community Water Company

GVDWID= Green Valley Domestic Water Improvement District

WQ= water quality

PCWW= Pima County Waste Water

UA= University of Arizona

ASLD= Arizona State Land Department

FICO= Farmers Investment Company

PCSW= Pima County Solid Waste

**TABLE 2**  
**Analytical Results for First Quarter 2007 Groundwater Monitoring**

ADWR WELL REGISTRY NUMBER	Well Name	Sample Date	FIELD pH (SU)	Field EC ( $\mu\text{S}/\text{cm}$ )	Field Temp (deg C)	Sulfate, total	Sulfate, dissolved	Chloride, dissolved	Fluoride, dissolved	Nitrate as N, dissolved	Nitrite as N, dissolved	Nitrate/Nitrite as N, dissolved	Calcium, dissolved	Magnesium, dissolved	Potassium, dissolved	Sodium, dissolved	Total Alkalinity	Bicarbonate as $\text{CaCO}_3$	Carbonate as $\text{CaCO}_3$	Hydroxide as $\text{CaCO}_3$	Residue, Filterable (TDS) @ 180°C	TDS (calculated)	TDS (ratio - measured/calculated)	Sum of Anions (meq/L)	Sum of Cations (meq/L)	Cation-Anion Balance (%)
<b>WELLS FOR QUARTERLY [PLUME] MONITORING CONTROLLED BY PDSI</b>																										
200554	IW-22	01/23/2007	6.90	1253	22.1	NA	1660	136	0.70	NA	NA	0.92	530	84.8	10.7	199	147	147	< 2	< 2	2860	2710	1.06	41.6	42.5	1.1
200555	IW-23	01/23/2007	6.60	1249	22.8	NA	1640	153	0.40	NA	NA	1.18	537	102.0	9.9	174	159	159	< 2	< 2	2830	2710	1.04	41.9	43.1	1.4
201527	MH-26A	01/15/2007	7.89	316	26.2	NA	< 10	8	0.50	NA	NA	0.92	32.9	8.0	3.9	36.4	158	155	3	< 2	240	186	1.29	3.4	4.0	8.1
201528	MH-25A	01/10/2007	8.09	344	26.0	NA	10	8	0.60	NA	NA	1.04	30.8	8.1	2.9	38	161	156	5	< 2	230	197	1.17	3.6	3.9	4.0
208426	MH-25C	01/10/2007	7.46	1361	26.3	NA	1250	112	0.30	NA	NA	1.74	418	94.1	11.7	98.2	99	99	< 2	< 2	2210	2040	1.08	31.4	33.2	2.8
208427	MH-26B	01/15/2007	7.53	1310	26.4	NA	1590	126	0.20	NA	NA	1.85	495	111.0	12.1	97.2	100	100	< 2	< 2	2710	2490	1.09	38.9	38.4	-0.6
208428	MH-26C	01/15/2007	7.89	1059	24.6	NA	740	83	0.30	NA	NA	1.94	223	48.7	11.5	101	87	87	< 2	< 2	1350	1260	1.07	19.6	19.9	0.8
208429	MH-25B	01/10/2007	7.54	1440	26.1	NA	1680	117	0.20	NA	NA	1.96	533	117.0	11.6	101	101	101	< 2	< 2	2790	2620	1.06	40.6	41.0	0.5
508235	IW-11	01/16/2007	7.10	1516	21.7	NA	1700	124	0.20	NA	NA	0.74	482	93.0	9.1	215	129	129	< 2	< 2	2920	2700	1.08	41.8	41.4	-0.5
508237	IW-10	01/16/2007	7.38	1303	23.7	NA	1670	145	0.20	NA	NA	0.90	483	90.0	11.7	173	155	155	< 2	< 2	2920	2670	1.09	42.2	39.4	-3.4
508238	IW-9	01/18/2007	7.40	1690	22.6	NA	1670	128	0.30	NA	NA	0.82	501	101.0	12.7	188	124	124	< 2	< 2	2970	2680	1.11	41.1	41.9	1.0
545555	IW-12	01/16/2007	6.93	1444	22.3	NA	1620	113	0.20	NA	NA	1.10	470	95.3	8.6	188	114	114	< 2	< 2	2720	2560	1.06	39.5	39.8	0.4
545557	IW-14	01/16/2007	6.72	1484	22.4	NA	1790	122	0.30	NA	NA	1.39	524	118.0	8.1	161	125	125	< 2	< 2	3050	2800	1.09	43.5	43.2	-0.3
545557	IW-14 (DUP)	01/16/2007	6.72	1484	22.4	NA	1810	124	0.30	NA	NA	1.40	513	116.0	7.8	157	125	125	< 2	< 2	3070	2800	1.10	44.0	42.3	-2.0
545558	IW-15	01/16/2007	7.04	1420	23.9	NA	1730	84	0.30	NA	NA	1.79	522	105.0	7.3	130	128	128	< 2	< 2	2940	2660	1.11	41.3	40.6	-0.9
545559	IW-16	01/16/2007	7.18	1415	23.8	NA	1730	139	0.30	NA	NA	2.01	513	126.0	6.8	112	128	128	< 2	< 2	2970	2700	1.10	42.8	41.1	-2.0
545560	IW-17	01/16/2007	6.79	1402	21.8	NA	1600	131	0.30	NA	NA	2.21	457	121.0	7.1	134	128	128	< 2	< 2	2820	2530	1.11	39.8	38.9	-1.1
545561	IW-18	01/18/2007	7.26	1460	15.4	NA	1660	127	0.20	NA	NA	1.89	518	114.0	7.5	107	129	129	< 2	< 2	2830	2610	1.08	41.0	40.2	-1.0
545562	IW-19	01/11/2007	7.19	1802	25.1	NA	1630	135	0.30	NA	NA	2.00	486	120.0	7.6	117	145	145	< 2	< 2	2700	2580	1.05	40.9	39.5	-1.7
545563	IW-20	01/11/2007	7.23	2360	26.4	NA	1630	131	0.30	NA	NA	2.32	473	118.0	8.1	129	139	139	< 2	< 2	2370	2570	0.92	40.7	39.2	-1.9
545564	IW-21	01/11/2007	7.15	1848	27.8	NA	1620	139	0.30	NA	NA	2.45	480	119.0	10.8	141	135	135	< 2	< 2	2760	2590	1.07	40.6	40.2	-0.5
545565	IW-6a	01/16/2007	7.25	1562	22.5	NA	1800	123	0.20	NA	NA	0.73	503	89.9	7.9	228	110	110	< 2	< 2	3030	2820	1.07	43.5	42.8	-0.8
561866	PZ-8	01/10/2007	6.60	985	21.0	NA	460	60	0.90	NA	NA	2.52	233	52.4	7.4	91	173	173	< 2	< 2	990	1010	0.98	14.8	20.1	15.2
561870	PZ-7	01/12/2007	7.30	920	21.6	NA	340	73	0.30	NA	NA	1.23	139	38.1	3.3	29.1	105	105	< 2	< 2	780	686	1.14	11.3	11.4	0.4
623129	IW-1	01/10/2007	6.97	1033	25.1	NA	520	57	0.30	NA	NA	1.74	188	42.7	9.6	61.1	134	134	< 2	< 2	1000	959	1.04	15.2	15.8	1.9
623130	IW-2	01/10/2007	6.91	528	23.8	NA	110	15	0.40	NA	NA	1.31	60.6	12.9	5.5	41.3	151	151	< 2	< 2	380	336	1.13	5.7	6.0	2.6
623132	IW-4	01/18/2007	6.81	2210	22.4	NA	1590	141	0.20	NA	NA	0.76	495	88.2	10.2	165	148	148	< 2	< 2	2780	2580	1.08	40.3	39.5	-1.0
623133	IW-5	01/16/2007	7.34	1511	23.1	NA	1710	163	0.20	NA	NA	0.91														

TABLE 2  
Analytical Results for First Quarter 2007 Groundwater Monitoring

ADWR WELL REGISTRY NUMBER	Well Name	Sample Date	FIELD pH (SU)	Field EC ( $\mu\text{S}/\text{cm}$ )	Field Temp (deg C)	Sulfate, total	Sulfate, dissolved	Chloride, dissolved	Fluoride, dissolved	Nitrate as N, dissolved	Nitrite as N, dissolved	Nitrate/Nitrite as N, dissolved	Calcium, dissolved	Magnesium, dissolved	Potassium, dissolved	Sodium, dissolved	Total Alkalinity	Bicarbonate as $\text{CaCO}_3$	Carbonate as $\text{CaCO}_3$	Hydroxide as $\text{CaCO}_3$	Residue, Filterable (TDS) @ 180°C	TDS (calculated)	TDS (ratio - measured/calculated)	Sum of Anions (meq/L)	Sum of Cations (meq/L)	Cation-Anion Balance (%)
WELLS FOR SEMI-ANNUAL [REGIONAL] MONITORING																										
85228	M-1	01/17/2007	7.9 *	350 *	27.0	9.5	NA	NA	0.56	NA	NA	NA	33.0	5.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
85304	M-2	01/16/2007	7.4 *	1400 *	28.0	470.0	NA	NA	0.34	NA	NA	NA	157.0	36.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
87387	M-5	01/16/2007	7.7 *	1200 *	26.0	450.0	NA	29.0	0.37	1.10	NA	NA	134.0	38.4	7.9	58.0	NA	110	<1	NA	810	NA	NA	NA	NA	
87389	M-7	01/16/2007	7.4 *	1200 *	25.0	430.0	NA	18.0	0.32	<1	NA	NA	142.0	35.9	8.1	61.0	NA	170	<1	NA	800	NA	NA	NA	NA	
206214	GRAEF	01/08/2007	7.57	392	26.6	4.1	4.1	8	0.20	0.69	<0.01	0.69	47.7	7.3	3.1	27.5	191	189	<2	250	214	1.17	4.1	4.2	1.2	
207982	CW-10	01/24/2007	7.90	385	30.2	47.7	48.6	8	0.70	0.45	<0.01	0.45	29.8	1.8	2.7	43.3	125	122	3	<2	240	213	1.13	3.8	3.6	-2.7
501654	M-11 (DUP)	01/17/2007	7.7 *	350 *	NA	11.0	NA	NA	0.36	NA	NA	NA	36.8	6.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
501654	M-11 (SPLIT)	01/17/2007	7.74 *	380 *	NA	12.0	NA	9	0.33	0.55	NA	NA	35.0	7.0	3.2	28.0	NA	170	<5	NA	230	NA	NA	NA	NA	
501760	CC OF GV	01/15/2007	7.31	767	23.0	135	133.0	34	0.30	5.37	<0.01	5.37	93.5	15.0	4.1	43.0	191	191	<2	480	461	1.04	7.9	7.9	0.0	
504946	RT-1	01/25/2007	7.30	620	27.0	130.0	NA	NA	0.68	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
509604	GV-02-PCWW	01/18/2007	6.90	1501	20.1	140	140.0	212	<0.5	6.01	<0.01	6.01	197.0	29.4	5.3	76.8	265	265	<2	<2	920	846	1.09	14.6	15.8	3.9
529142	SIMONS	01/11/2007	7.63	437	23.7	3.5	3.6	7	0.30	0.95	<0.01	0.95	50.5	9.0	2.9	24.9	204	191	13	<2	250	230	1.09	4.4	4.4	0.0
532595	GORETCKI/STEINMAN	02/06/2007	7.77	526	26.6	94.7	94.2	14	<0.1	1.77	<0.01	1.77	71.7	10.1	2.5	26.5	137	137	<2	<2	310	309	1.00	5.2	5.6	3.7
540451	UA	01/25/2007	7.82	459	26.8	82.1	82.6	10	0.10	1.00	<0.01	1.00	49.2	9.3	1.8	26.3	122	122	<2	<2	290	257	1.13	4.5	4.4	-1.1
543600	CW-8	01/24/2007	7.67	1232	29.7	459	449.0	51	1.00	1.32	<0.01	1.32	125.0	8.9	6.3	123.0	95	95	<2	<2	880	827	1.06	12.9	12.6	-1.2
550533	SAH-1	01/25/2007	7.70	844	30.2	228	229.0	21	0.40	1.61	<0.01	1.61	80.1	23.4	4.5	46.8	126	126	<2	<2	550	488	1.13	8.0	8.1	0.6
566940	ST-7	01/10/2007	7.94	362	7.9	32.8	32.7	8	0.80	0.39	<0.01	0.39	35.1	3.5	3.0	41.4	146	142	4	<2	240	215	1.12	3.9	3.9	0.0
566940	ST-7	01/25/2007	7.60	380	27.0	33.0	NA	NA	0.93	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
577707	TAYLOR	01/23/2007	7.56	400	28.1	2.6	3.6	9	0.30	1.26	<0.01	1.26	33.0	5.7	3.8	29.1	162	161	<2	<2	200	186	1.08	3.6	3.5	-1.4
586729	CANOA RANCH	01/09/2007	7.66	589	24.2	110.0	111.0	19	0.30	1.90	<0.01	1.90	69.9	11.7	3.7	37.1	180	180	<2	<2	400	369	1.08	6.6	6.1	-3.9
599357	EL TORO	01/11/2007	7.59	733	26.9	210.0	204.0	21	0.50	1.72	<0.01	1.72	80.9	21.5	4.3	45.6	133	129	4	<2	520	467	1.11	7.6	7.9	1.9
608521	RRQC-2	02/27/2007	8.21	575	31.8	173.0	173.0	12	NA	NA	NA	NA	20.0	0.5	2.2	NA	90	90	<2	<2	390	NA	NA	NA	NA	NA
608521	RRQC-2 (DUP)	02/27/2007	8.21	575	31.8	174.0	174.0	12	NA	NA	NA	NA	20.1	0.4	2.2	NA	90	88	<2	<2	380	NA	NA	NA	NA	NA
608530	ST-6	01/10/2007	7.95	386	27.6	41.3	41.1	8	0.50	0.36	<0.01	0.36	39.6	5.3	3.2	37.9	148	144	3	<2	250	227	1.10	4.0	4.1	1.2
608530	ST-6	01/25/2007	7.6 *	370 *	27.0	33.0	NA	NA	0.61	NA	NA	NA	47.5	5.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
608531	ST-5	01/10/2007	7.64	383	27.6	23.9	23.7	9	0.30	0.56	<0.01	0.56	44.8	5.5	3.0	30.3	165	165	<2	<2	250	218	1.15	4.1	4.1	0.0
608531	ST-5	01/25/2007	7.3 *	390 *	27.0	24.0	NA	NA	0.38	NA	NA	NA	38.0	5.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
608597	RRQC-4	02/27/2007	7.53	375	25.5	56.7	56.9	9	NA	NA	NA	NA	48.2	6.4	2.2	NA	132	132	<2	<2	270	NA	NA	NA	NA	NA
608597	RRQC-4 (DUP)	02/27/2007	7.53	375	25.5	56.9	56.9	9	NA	NA	NA	NA	48.3	6.5	1.9	NA	131	131	<2	<2	260	NA	NA	NA	NA	NA
623111	S-1	01/19/2007	6.45	468	19.2	NA	180.0	52	2.00	NA	NA</															

**TABLE 3**  
**Groundwater Elevation Data for Water Levels Collected in First Quarter 2007**  
**(Sorted by ADWR Registry Number)**

ADWR WELL REGISTRY NUMBER	WELL NAME	SURVEY SOURCE	UTM NORTH	UTM EAST	GROUND SURFACE ELEVATION (ft amsl)	HEIGHT OF MEASURING POINT ABOVE GROUND (ft)	MEASURING POINT ELEVATION (ft amsl)	DATE	DEPTH TO WATER FROM MEASURING POINT (feet)	GROUNDWATER ELEVATION (ft amsl)
WELLS FOR QUARTERLY [PLUME] MONITORING CONTROLLED BY PDSI										
200554	IW-22	PDSI	3523077.138	497430.770	3124.84	3.41	3128.25	2/24/2007	433.58	2694.67
200555	IW-23	PDSI	3522774.335	497430.417	3125.03	3.50	3128.53	2/24/2007	499.20	2629.33
201527	MH-26A	PDSI	3527621.755	498913.871	3069.54	1.35	3070.89	1/15/2007	495.65	2575.24
201528	MH-25A	PDSI	3526313.992	497365.137	3055.81	0.76	3056.57	1/10/2007	453.10	2603.47
208426	MH-25C	PDSI	3526294.663	498935.843	3056.71	0.53	3057.24	1/10/2007	453.57	2603.67
208427	MH-26B	PDSI	3527617.539	498901.079	3068.68	1.82	3070.50	1/15/2007	492.85	2577.65
208428	MH-26C	PDSI	3527610.293	498926.419	3067.27	1.84	3069.11	1/15/2007	494.10	2575.01
208429	MH-25B	PDSI	3526318.775	498931.519	3056.21	2.01	3058.22	1/10/2007	454.28	2603.94
508235	IW-11	PDSI	3523232.498	497432.594	3125.00	0.79	3124.21	2/24/2007	428.05	2696.16
508236	IW-8	PDSI	3521824.074	497429.430	3115.00	4.20	3119.20	2/24/2007	434.05	2685.15
508237	IW-10	PDSI	3522925.746	497431.547	3125.00	1.65	3126.65	2/24/2007	463.40	2663.25
508238	IW-9	PDSI	3522011.192	497430.969	3100.00	0.02	3099.98	2/24/2007	405.95	2694.03
528093	MH-15W	PDSI	3523078.550	497585.246	3116.12	0.00	3116.12	2/23/2007	390.00	2726.12
528094	MH-15E	PDSI	3523077.874	497645.979	3110.12	0.00	3110.12	2/23/2007	384.07	2726.05
528098	MH-14	PDSI	3525072.873	497578.809	3150.74	0.00	3150.74	2/23/2007	426.75	2723.99
528099	MH-16W	PDSI	3521674.374	497577.250	3098.37	0.00	3098.37	2/23/2007	352.18	2746.19
528100	MH-16E	PDSI	3521673.788	497637.848	3096.66	0.00	3096.66	2/23/2007	349.39	2747.27
545555	IW-12	PDSI	3523773.410	497426.092	3131.53	1.42	3132.95	2/24/2007	456.20	2676.75
545557	IW-14	PDSI	3524176.661	497428.308	3139.35	2.20	3141.55	2/24/2007	463.35	2678.20
545558	IW-15	PDSI	3524370.798	497434.056	3145.27	1.40	3146.67	2/24/2007	429.89	2716.78
545559	IW-16	PDSI	3524586.404	497431.834	3156.54	1.73	3158.27	2/24/2007	409.95	2748.32
545560	IW-17	PDSI	3524806.403	497434.901	3154.71	1.80	3156.51	2/24/2007	429.70	2726.81
545561	IW-18	PDSI	3524973.304	497435.240	3165.79	1.50	3167.29	2/24/2007	449.55	2717.74
545562	IW-19	PDSI	3525146.924	497434.814	3148.92	1.80	3150.72	2/23/2007	444.65	2706.07
545563	IW-20	PDSI	3525372.300	497425.917	3158.90	1.80	3160.70	1/29/2007	445.30	2715.40
545564	IW-21	PDSI	3525576.796	497435.770	3166.07	1.61	3167.68	2/23/2007	449.65	2718.03
545565	IW-6a	PDSI	3523512.299	497442.407	3125.86	1.65	3127.51	2/24/2007	433.60	2693.91
561859	PZ-9	PDSI	3525372.230	493241.716	3504.18	0.48	3504.66	1/25/2007	229.50	3275.16
561866	PZ-8	PDSI	3523999.763	493033.889	3476.64	0.00	3476.64	1/10/2007	207.42	3269.22
561870	PZ-7	PDSI	3526160.990	492594.390	3545.30	0.92	3546.22	1/12/2007	139.50	3406.72
623129	IW-1	PDSI	3521081.335	496967.070	3141.00	0.70	3141.70	2/24/2007	386.70	2755.00
623130	IW-2	PDSI	3521164.111	497546.637	3098.00	0.29	3098.29	2/24/2007	406.80	2691.49
623132	IW-4	PDSI	3522269.430	497432.878	3134.00	0.07	3134.07	2/24/2007	417.70	2716.37
803629	MH-1	PDSI	3525676.440	497433.577	3176.00	1.80	3177.80	1/10/2007	444.15	2733.65
803630	MH-3	PDSI	3525073.714	497533.614	3151.91	0.47	3152.38	2/23/2007	427.31	2725.07
803632	MH-5	PDSI	3523528.883	497538.532	3122.00	0.80	3122.80	1/12/2007	390.70	2732.10
803633	MH-6	PDSI	352574.001	497497.825	3133.00	2.02	3130.98	1/9/2007	378.32	2752.66
803634	MH-7	PDSI	3521820.025	497563.652	3109.00	0.34	3108.66	1/12/2007	360.20	2748.46
803635	MH-9	PDSI	3521056.161	496499.361	3158.00	1.50	3159.50	1/9/2007	362.10	2797.40
803636	MH-10	PDSI	3521040.412	495778.954	3184.00	0.95	3184.95	1/9/2007	364.80	2820.15
803637	MH-11	PDSI	3524267.192	498810.555	3039.00	1.30	3040.30	1/11/2007	369.55	2670.75
803638	MH-12	PDSI	3525010.541	498833.336	3052.00	2.07	3054.07	1/10/2007	419.88	2634.19
903548	MH-28	PDSI	3524413.518	497532.609	3141.51	0.67	3142.18	2/19/2007	402.32	2739.86
903649	MH-29	PDSI	3522609.068	497665.504	3122.24	0.91	3123.15	2/19/2007	376.58	2746.57
903884	MH-30	PDSI	3525913.515	496750.399	3231.92	0.53	3232.45	1/9/2007	421.65	2810.80
904071	MH-13A	PDSI	3523597.287	497308.223	3025.18	1.05	3026.23	1/24/2007	326.35	2699.88
904072	MH-13B	PDSI	3523590.907	498891.053	3023.93	1.70	3025.63	1/24/2007	330.58	2695.05
904073	MH-13C	PDSI	3523596.580	498858.634	3026.81	0.00	3026.81	1/24/2007	335.45	2691.36

**TABLE 3**  
**Groundwater Elevation Data for Water Levels Collected in First Quarter 2007**  
**(Sorted by ADWR Registry Number)**

ADWR WELL REGISTRY NUMBER	WELL NAME	SURVEY SOURCE	UTM NORTH	UTM EAST	GROUND SURFACE ELEVATION (ft amsl)	HEIGHT OF MEASURING POINT ABOVE GROUND (ft)	MEASURING POINT ELEVATION (ft amsl)	DATE	DEPTH TO WATER FROM MEASURING POINT (feet)	GROUNDWATER ELEVATION (ft amsl)
WELLS FOR QUARTERLY [PLUME] MONITORING NOT CONTROLLED BY PDSI										
87390	M-8	x,y - estimated, mp - TBPI	3529495.719	499720.318	2988.00	n/a	2998.18	1/15/2007	460.92	2537.26
207982	CW-10	CWC	3523259.063	500974.523	2867.00	1.50	2868.50	1/3/2007	177.20	2691.30
208825	SI WELL/ GV WATER	HGC	3519521.000	497243.000	3040.55	2.42	3042.97	1/9/2007	237.50	2805.47
501652	M-9	x,y - estimated, mp - TBPI	3530107.382	500045.475	2971.00	n/a	2971.00	1/15/2007	445.76	2525.24
501653	M-10	x,y - estimated, mp - TBPI	3529946.617	499720.418	3004.39	n/a	3004.40	1/15/2007	473.65	2530.75
501760	CC OF GV	HGC	3527885.000	501626.000	2823.45	1.30	2824.75	1/15/2007	253.15	2571.60
502546	CW-7	CWC	3527897.679	499721.015	2986.00	1.50	2987.50	2/2/2007	425.00	2562.50
543600	CW-8	CWC	3525464.732	499859.689	2956.00	1.50	2957.50	1/3/2007	336.50	2621.00
588121	CW-9	CWC	3528544.309	501133.203	2833.00	1.30	2834.30	1/3/2007	304.20	2530.10
603428	GV-1-GVDWID	HGC	3522037.000	499916.000	2940.85	1.50	2942.35	1/9/2007	221.00	2721.35
603429	GV-2-GVDWID	HGC	3521654.000	499788.000	2929.27	1.20	2930.47	1/9/2007	185.30	2745.17
608525	I-10	x,y - estimated, mp - TBPI	3528272.206	497859.067	3203.20	n/a	3203.20	1/15/2007	655.89	2547.31
623102	ESP-1	PDSI	3526252.213	500030.855	2946.76	1.12	2947.88	1/3/2007	350.10	2597.78
623103	ESP-2	PDSI	3526728.190	500302.810	2921.22	2.39	2923.61	1/3/2007	343.10	2580.51
623104	ESP-3	PDSI	3527190.039	500234.071	2931.38	0.81	2932.19	1/3/2007	358.60	2573.59
623105	ESP-4	PDSI	3525936.573	499977.998	2955.22	0.39	2955.61	1/12/2007	348.30	2607.31
623106	ESP-5	PDSI	3526885.773	502069.049	2815.00	2.06	2817.06	2/12/2007	219.50	2597.56
627485	CW-6	CWC	3525597.784	500952.233	2866.00	1.00	2867.00	1/3/2007	245.00	2622.00
WELLS FOR SEMI-ANNUAL [REGIONAL] MONITORING										
85304	M-2	x,y - estimated, mp - TBPI	3532755.721	499583.158	n/a	n/a	2993.60	1/15/2007	489.14	2504.46
501654	M-11	x,y - estimated, mp - TBPI	3530561.182	500328.664	n/a	n/a	2937.54	1/15/2007	415.23	2522.31
206214	GRAEF	HGC	3518063.000	495828.000	3149.64	2.10	3151.74	1/8/2007	281.25	2870.49
509604	GV-02-PCWW	PIMA COUNTY	3530023.290	502739.743	2770.76	2.38	2773.13	1/18/2007	162.76	2610.37
529142	SIMONS	HGC	3516170.000	495477.000	3142.61	1.17	3143.78	1/11/2007	244.70	2899.08
531807	MW-2	ASARCO	3535481.300	500393.400	2998.90	1.00	2999.90	12/19/2006	428.28	2571.62
532595	GORETCKI / STEINMAN	HGC	3517595.000	501145.000	3010.03	2.87	3012.90	1/19/2007	186.90	2826.00
532627	AXABC0-1	HGC	3535361.000	502759.000	2732.28	3.20	2735.48	1/5/2007	177.22	2558.26
537958	AXABC0-3	HGC	3534960.000	502584.000	2743.15	2.10	2745.25	1/5/2007	181.60	2563.65
545349	SALVATORE	HGC	3517360.000	495689.000	3145.27	1.52	3146.79	1/8/2007	266.40	2880.39
550533	SAH-1-PCS	PIMA COUNTY	3534342.394	500530.888	2908.10	0.00	2908.10	1/25/2007	408.25	2499.85
562962	RANCHO SAHUARITA	HGC	3535889.000	501560.000	2817.21	1.87	2819.08	2/2/2007	342.80	2476.28
599350	ROBERTS	HGC	3514550.000	501217.000	3142.13	1.40	3143.53	2/2/2007	251.30	2892.23
608518	CW-11	HGC	3531003.354	502440.773	2789.00	1.70	2790.70	1/3/2007	258.40	2532.30
608519	RRQC-1	HGC	3527992.000	502957.000	2784.23	0.50	2784.73	2/27/2007	114.40	2670.33
608521	RRQC-2	HGC	3527591.000	502956.000	2801.67	2.75	2804.42	2/28/2007	257.44	2546.98
608530	ST-6	HGC	3531377.000	501261.000	2854.47	2.33	2856.81	2/16/2007	333.25	2523.56
608591	RRQC-3	HGC	3527848.000	502958.000	2801.22	1.83	2803.05	2/27/2007	124.80	2678.25
608597	RRQC-4	HGC	3527119.000	505882.000	2938.52	2.17	2940.69	2/27/2007	280.20	2660.49
616212	RRQC-5	HGC	3524736.000	505370.000	3003.56	0.63	3004.19	2/27/2007	294.67	2709.52
623112	S-2	PDSI	3517379.377	499023.66	2935.87	n/a	2936.16	1/16/2007	118.80	2817.36
623113	S-3	PDSI	3516092.581	498184.215	2953.09	n/a	2953.28	1/16/2007	102.30	2850.98
623114	S-4	PDSI	3514876.027	497313.042	2079.44	n/a	2979.76	1/25/2007	93.40	2886.36
623115	S-5	PDSI	3513422.954	496747.939	2990.82	n/a	2991.05	1/25/2007	82.70	2908.35
623116	S-6	PDSI	3512172.430	496324.397	3003.89	n/a	3003.15	1/25/2007	70.65	2932.50
623982	S-19A	HGC	3532046.000	504852.000	2762.68	1.58	2764.26	1/24/2007	228.00	2536.26
623991	S-40	HGC	3534955.000	504854.000	2714.90	1.33	2716.24	1/24/2007	161.00	2555.24
623994	S-44	HGC	3530990.000	503879.000	2761.57	1.08	2762.65	1/24/2007	211.00	2551.65
623996	S-46	HGC	3532490.000	502517.000	2769.72	2.12	2771.85	1/24/2007	253.00	2518.85
624010	C-4	HGC	3525187.298	501820.790	2836.19	0.00	2836.19	01/2007**	190.00	2646.19
624012	E-5A	HGC	3524383.000	502176.000	2851.34	3.10	2854.44	1/16/2007	181.00	2673.44
624013	E-6	HGC	3525167.000	502420.000	2841.15	1.08	2842.23	1/20/2007	186.00	2656.23

**TABLE 3**  
**Groundwater Elevation Data for Water Levels Collected in First Quarter 2007**  
**(Sorted by ADWR Registry Number)**

ADWR WELL REGISTRY NUMBER	WELL NAME	SURVEY SOURCE	UTM NORTH	UTM EAST	GROUND SURFACE ELEVATION (ft amsl)	HEIGHT OF MEASURING POINT ABOVE GROUND (ft)	MEASURING POINT ELEVATION (ft amsl)	DATE	DEPTH TO WATER FROM MEASURING POINT (feet)	GROUNDWATER ELEVATION (ft amsl)
624024	W-9	HGC	3524125.000	501284.000	2852.91	1.33	2854.24	1/18/2007	177.00	2677.24
624026	W-12	HGC	3521103.056	500217.248	2892.70	1.90	2894.60	01/2007**	157.00	2737.60
624028	NP-2	HGC	3520046.000	500906.000	2910.71	1.96	2912.67	1/20/2007	138.00	2774.67
627439	QUIHUIS	HGC	3533699.000	502756.000	2749.25	1.08	2750.33	1/11/2007	194.10	2556.23
634036	JOHNSON	HGC	3513531.000	499924.000	3126.89	1.06	3127.96	1/17/2006	228.30	2899.66
634393	1759	x,y - estimated, mp - TBPI	3531309.818	499727.871	n/a	n/a	2986.00	1/15/2007	469.42	2516.58
634394	1225	x,y - estimated, mp - TBPI	3530408.470	499727.179	n/a	n/a	2998.01	1/15/2007	475.40	2522.61
635386	SANTA RITA RANCH-1	HGC	3526609.000	506758.000	2995.27	0.00	2995.27	2/15/2007	316.03	2679.24
635387	SANTA RITA RANCH-2	HGC	3517988.000	501265.000	2984.26	0.25	2984.51	2/15/2007	172.80	2811.71
639055	SIMPSON	HGC	3516714.000	495458.000	3095.93	1.60	3097.53	1/4/2007	203.95	2893.58
640358	GIACALONE	HGC	3519259.000	495766.000	3123.82	1.80	3125.62	1/4/2007	285.20	2840.42
642025	W-11	HGC	3520090.000	499959.000	2893.50	1.75	2895.25	1/20/2007	136.00	2759.25
905019	SAH-3B-PCSW	PIMA COUNTY	3534809.053	500824.776	2883.35	3.62	2886.97	1/25/2007	401.45	2485.52
ADDITIONAL WELLS SAMPLED FOR SEMIANNUAL MONITORING THAT WERE NOT IDENTIFIED IN THE WORK PLAN										
87387	M-5	x,y - estimated, mp - TBPI	3530602.714	499701.814	n/a	n/a	2995.43	1/15/2007	474.01	2521.42
87388	M-6	x,y - estimated, mp - TBPI	3530105.381	499720.772	n/a	n/a	3002.54	1/15/2007	475.55	2526.99
87389	M-7	x,y - estimated, mp - TBPI	3529800.549	499720.375	n/a	n/a	3008.04	1/15/2007	474.55	2533.49
504946	RT-1	x,y - estimated, mp - TBPI	3532296.895	500185.357	n/a	n/a	2977.9	1/15/2007	457.81	2520.09
508428	M-13	x,y - estimated, mp - TBPI	3530814.15	498789.283	n/a	n/a	3074.06	1/15/2007	555.36	2518.70
532628	AXABC0-2	HGC	3535352.000	502432.000	2759.13	1.90	2761.03	1/5/2007	205.85	2555.18
586729	CANOA RANCH	HGC	3516414.000	497386.000	3014.03	1.04	3015.07	1/9/2007	146.70	2868.37
599769	KULESZA*	HGC	3529122.000	501980.000	2803.00	1.08	2804.08	3/13/2007	234.75	2569.33
603430	GV-06-GVDWID	HGC	3518835.000	498368.000	2979.05	0.50	2979.55	1/9/2007	158.00	2821.55
603504	GV-07-GVDWID	HGC	3518764.000	496817.000	3088.82	0.00	3056.00	1/9/2007	262.80	2793.20
608523	I-12	x,y - estimated, mp - TBPI	3528381.292	498171.375	n/a	n/a	3327.8	1/15/2007	772.62	2555.18
608524	I-11	x,y - estimated, mp - TBPI	3528288.808	497980.593	n/a	n/a	3325.86	1/15/2007	766.59	2559.27
634392	1758	x,y - estimated, mp - TBPI	3532098.971	499677.470	n/a	n/a	2983.50	1/15/2007	471.34	2512.16
509603	GV-01-PCWW*	PIMA COUNTY	3529728.507	502928.924	2786.06	1.10	2787.16	1/18/2007	174.11	2613.05
ND	M-3	x,y - estimated, mp - TBPI	3532375.839	497000.127	n/a	n/a	3205.00	1/15/2007	617.51	2587.49
ND	M-4	x,y - estimated, mp - TBPI	3532387.310	496423.972	n/a	n/a	3260.00	1/15/2007	293.73	2966.27
ND	A-955	x,y - estimated, mp - TBPI	3528636.457	499281.255	n/a	n/a	3039.70	1/15/2007	484.48	2555.22
ND	2125	x,y - estimated, mp - TBPI	3529396.596	497976.264	n/a	n/a	3253.90	1/15/2007	703.74	2550.16

NOTES:

PDSI CONVERSION: GEOGRAPHIC / NAD 83 TO UTM / NAD27 / ZONE 12 / METERS

ft amsl = feet above mean sea level

UTM = Universal Transverse Mercator

n/a=Not Available

\*Ground surface elevations estimated using USGS topographic map; approximation verified using Google Earth.

\*\*WL measure date was estimated