



# United States Department of the Interior

U. S. GEOLOGICAL SURVEY  
Arizona Water Science Center  
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John Korolsky  
Sr. Environmental Engineer  
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February 13, 2012

Dear John,

We have completed the sixth year (FY 2011) of the joint funding agreement between Freeport-McMoRan Safford Inc. (FMSI) and the United States Geological Survey (USGS). Below is a summary of the progress made by the USGS in its oversight of the Dos Pobres/San Juan Mine Water Resources Mitigation Project during the federal fiscal year ending September 30, 2011. This is followed by a list of the progress expected to be made on the project during fiscal year 2012. Allen Pump of Thatcher, Arizona, a contractor for FMSI, has been measuring water levels in the Group 2 through 5 wells of the Dos Pobres/San Juan Project Clean Water Act Section 404 Mitigation and Monitoring Plan (MMP) p. 34 and 35, plus an additional well at the San Carlos Apache Reservation boundary in Pima Gap. Allen Pump also continues to collect water level and monthly data from the six pressure transducers in the Group 1 wells.

Copies of this letter are also being sent to the Bureau of Indian Affairs, the Army Corps of Engineers, and the Arizona Department of Water Resources. It will also be made available to the public on the USGS Dos Pobres/San Juan Mine Water Resources Mitigation Project web site (<http://az.water.usgs.gov/projects/9671-BGJ/pubdocs.html>)

## **1. Progress made in Fiscal Year 2011**

a. Water levels in 39 of the 41 wells drilled by Phelps-Dodge for monitoring (Groups 2 through 5 from p. 34 and 35 MMP), plus an additional well at the San Carlos Apache Reservation boundary in Pima Gap were measured four times by Allen Pump using an electric tape. Well AP-3A remains obstructed. Well AP-12 has remained dry for all of FY2011 and is no longer being monitored. USGS personnel (Jeff Cordova and Bruce Gungle) made side-by-side measurements with FMSI personnel in March and September, 2011. The calibration of both the FMSI and the USGS electric tapes was checked at these times as well.

b. Water levels were measured monthly at the six Group 1 wells (p. 35 of the MMP) by Allen Pump. USGS personnel made side-by-side electric tape measurements with Allen Pump at the Group 1 wells in March and September, 2011. Pressure transducers deployed in these 6 wells logged measurements every 12 hours.

c. All FY2011 water level and continuous transducer data were loaded into the USGS Ground Water Site Inventory (GWSI) and Automated Data Processing System (ADAPS) data bases and are accessible from the USGS Dos Pobres/San Juan project webpage through the interactive well sites map (<http://az.water.usgs.gov/projects/9671-BGJ/samap-gmap.html>); these are directly linked to the USGS National Water Information System (NWIS).

d. In October 2011, the USGS reviewed the 2007-2011 Groundwater Monitoring reports and participated in a conference call with FMSI and their consultants regarding comments on and suggestions to the 2007-2011 Groundwater Monitoring reports.

e. In November, 2010, Allen Pump and the USGS (Jeff Cordova and Nick Paretti) sampled 12 wells for field parameters and major constituents, as outlined in the MMP, p. 43-46. The USGS took sample splits at 5 of the wells as required by the MMP, p. 47.

f. The USGS is continuing to work with Test America, Inc. (FMSI's contracted water chemistry laboratory) to keep them enrolled in the USGS lab evaluation program, as a measure to ensure the proper quality assurance and quality control.

## **2. Plans for Fiscal Year 2012**

a. USGS will continue to take water-level measurements twice yearly concurrent with the FMSI's quarterly measurements (typically spring and fall).

b. The continuous transducer data will be collected monthly by Allen Pump personnel at the LBF group wells. This monthly data will be sent to the USGS for QA/QC and to upload into the ADAPS database.

c. The fifth round of water chemistry and stable isotope well sampling will be completed early in FY 2013 (November of 2012).

d. The FY 2012 water chemistry and stable isotope data will be uploaded into NWIS.

e. The USGS will participate in EIS-required public meetings as scheduled by FMSI at which time water level data will be presented to the public.

f. The USGS will review the draft annual report when completed by FMSI.

Should you have any questions or comments with regard to this progress summary, please contact me at the address or phone number below.

Sincerely,

A handwritten signature in black ink, appearing to read 'Jeff Cordova', with a stylized, wavy horizontal line extending to the right.

Jeff Cordova, Hydrologist  
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cc: Ms. Cathy Wilson, Bureau of Indian Affairs  
Mr. Frank Corkhill, Arizona Department of Water Resources  
Ms. Marjorie Blain, United States Army Corps of Engineers