

Former Gibson Mine 500-foot In-situ Leach Adit
Aquifer Protection Permit No. P-101344
Place ID 22841, LTF No. 34457

I. Introduction:

The Arizona Department of Environmental Quality (ADEQ) proposes to issue an Aquifer Protection Permit (APP) for the subject facility that covers the post-closure period unless suspended or revoked pursuant to Arizona Administrative Code (A.A.C.) R18-9-A213.

II. Permittee & Facility Location:

Facility Address: Seven miles west of Miami on U.S. Highway 60, south on Forest Road 347 across from Castle Dome Road for approximately 3.5 miles
Permittee: The Franciscan Friars of California, Inc.
Permittee Address: 1500-34th Avenue
Oakland, California 94601

III. Facility Description:

Mining at this site began in the early 1900s. Early operations (pre-1960) included underground sulfide and oxide ore mining with aboveground crushing, grinding, and froth flotation methods. The underground mine continued operation sporadically until it finally ceased operation due to a drop in copper prices. From the late 1960's through 1990, a lessee and several sub-lessees conducted heap leaching with sulfuric acid. As a result of mining, a number of adits were excavated into the Pasquale and Summit veins.

In-situ leaching was conducted by Lodestar Mining, Inc. between March 1988 and January 1992. Three in-situ leaching pads were used to inject dilute sulfuric acid through the Summit Vein. Three adits were used to collect the PLS. These adits are known as the 300, 400 and 500-foot Summit adits. Of these three adits, only the 500-foot adit has been observed to discharge. Based on recent observations, the 500-foot Summit in-situ leach adit continues to discharge, as does the Pasquale adit, located upstream. The Pasquale adit was not used for the in-situ leaching operations.

The Franciscan Friars of California, Inc. completed the following closure activities for the in-situ leach adit:

1. Between February and March 1994, the injection holes were plugged, and the leach basins were graded and topped with a low permeability soil cover to minimize future infiltration.
2. Between September and November of 2008, the in-situ adit was partially filled with a mixture of concrete and limestone to approximately 12 feet within the adits (other adits that are not part of this permit were also filled).

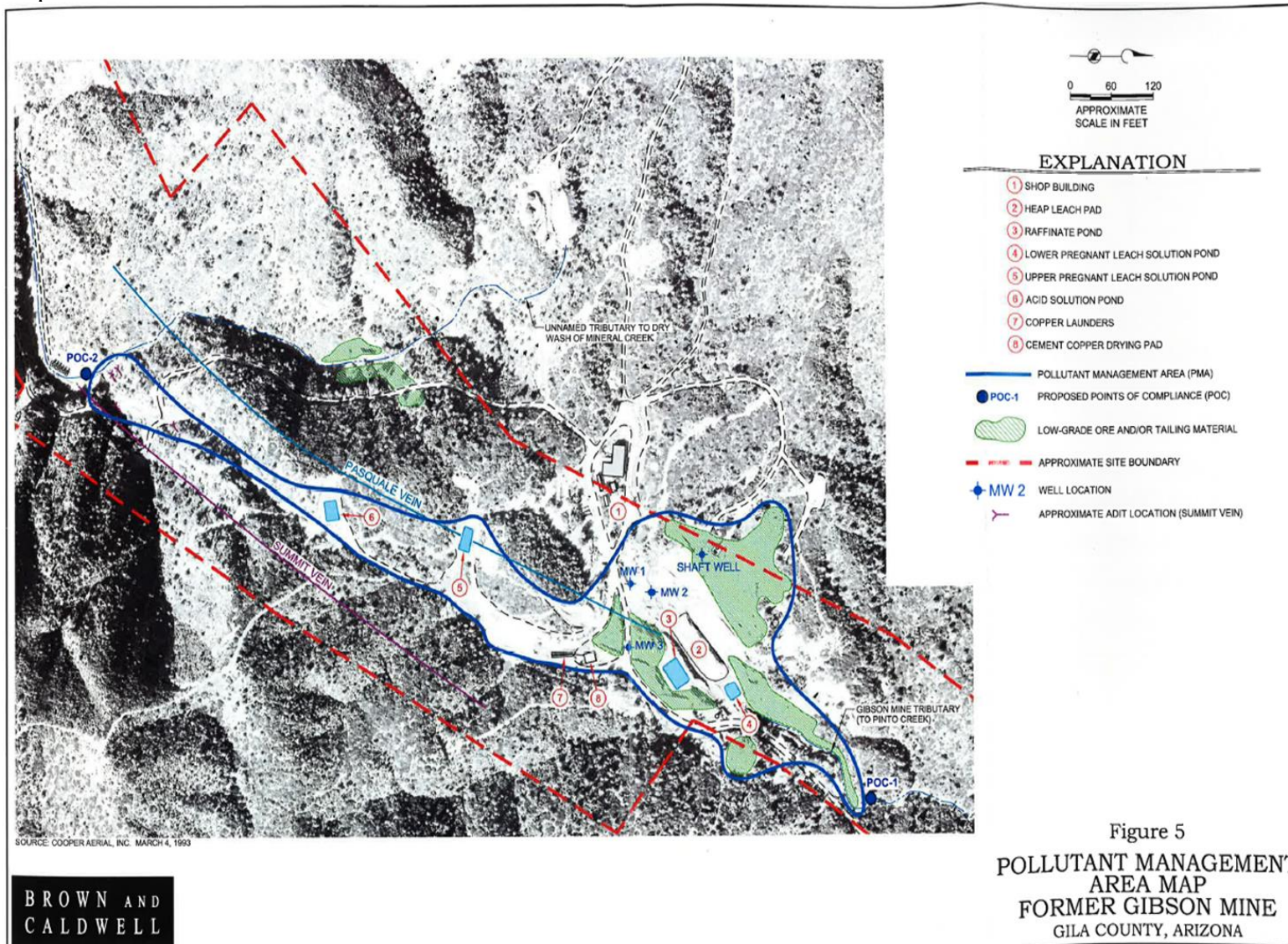
IV. Permit Description:

This permit requires the Franciscan Friars of California, Inc. to continue to monitor and maintain the closure structures for the in-situ leach adit. The permit also provides conditions for terminating the permit.

V. Compliance with Aquifer Water Quality Standards (AWQS):

POC # 2 is a conceptual location. It is located in the drywash alluvium immediately downstream from the 500 foot in-situ leach adit.

Map of PMA and POC locations



SOURCE: COOPER AERIAL, INC. MARCH 4, 1993

**BROWN AND
CALDWELL**