

San Rafael Rock Quarry

Name and Type of Mine: The San Rafael Rock Quarry (SRRQ) is located in the north-western San Francisco Bay Area in an unincorporated area of Marin County, near Point San Pedro.

Estimated Cost of Reclamation: \$5.75 million (2015 estimate)

Reclamation Funding Source: Dutra Materials, operator of SRRQ.

Mine History/Project Background

Mining activities occur on approximately 275 acres of the 750 acre project area, and ranges from an altitude of 250 feet above mean sea level (+250' msl) to about 250 feet below sea level (-250' msl) at the lowest point of the main quarry bowl. It is bounded on the north by Point San Pedro Road, and on the south, east, and west by San Francisco Bay. The Peacock Gap Neighborhood, consisting primarily of single family homes, townhouses, and a golf course, is located immediately across Point San Pedro Road from SRRQ. The Marin Bay Park development and McNear's Beach County Park are located adjacent to the property on its northeastern border.

The site is divided into four quadrants (Figure 2). Hard rock quarrying of the site's Franciscan sandstone is confined to the Southeast Quadrant (SE Quadrant) and the SW Quadrant. The SE Quadrant also features a processing plant and asphalt batching plant, as well as a dock to allow shipping of quarry products by barge. SRRQ's offices and a residence on South Hill are located in the SW Quadrant. The NW Quadrant is the location of McNear Brick Company and Marin Exposed Aggregate Manufacturing, which occupy these areas under lease. A substantial portion of the NW Quadrant is occupied by marshes. The NE Quadrant contains the "brick resource area" where shale and clay deposits were formerly mined for use in the brick making operation. The NE Quadrant also includes stockpiles of overburden.



Looking down on the quarry pits, with barge loading docks on water front on bay side (west perimeter) of quarry. Source: Google Earth (2015).

Quarrying has occurred on the site of the SRRQ since the 1870s, when the McNear family acquired the property and began operating a brickyard using the clay and shale deposits found there. Hard rock quarrying began on the site in the 1920s. In 1986, following several changes in ownership, San Rafael Rock Quarry, Inc. acquired the quarry property and has operated the quarry since that date.

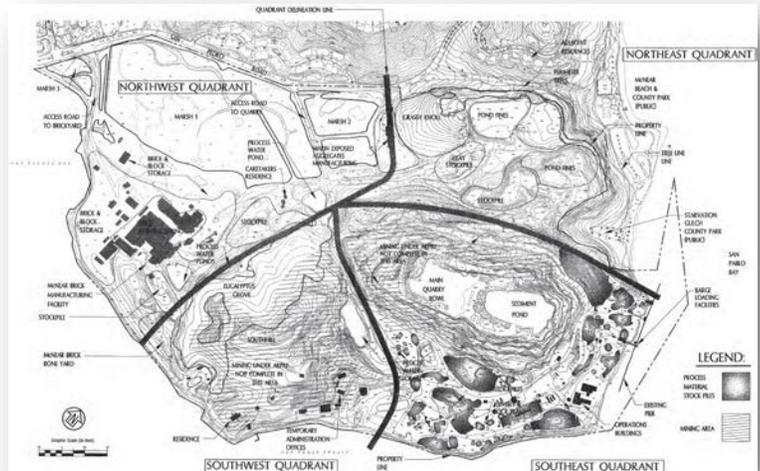
The quarry is a major supplier of materials to the levee system in the Sacramento/San Joaquin Delta. In 2006, the quarry was called upon to carry out the emergency repair of 29 levees in the Sacramento/San Joaquin Delta.

The San Rafael Rock Quarry, acknowledged as a certified State and Federal resource, is unique because:

- Water-side barge-loading equipment makes it the most cost-effective transporter of quality aggregate in the region.
- An extensive barge and towing fleet allows it to handle any-sized job within its service area — from projects West of the Rocky Mountains to the Pacific Rim.

Mineral Resources

The quarry property has been designated by the California State Department of Conservation as a deposit site for regionally significant mineral resources for the North Bay Area, and is classified under a Mineral Resource Zone, Class 2 designation (MRZ-2A), the highest category for known mineral resource deposits.



San Rafael Rock Quarry is divided into 4 operational and aggregate production quadrants. Figure adapted by OMR from Draft Environmental Impact Report (2008).



Conveyor belt used for loading aggregate onto barges in San Francisco Bay. Photo: Jim Pompy, DOC (2000).

Reclamation Approach



Model showing proposed harbor following reclamation of San Rafael Rock Quarry. Figure adapted by OMR from Draft Environmental Impact Report (2008).

Following mining, the site will be reclaimed by blasting a channel through the seaward highwall of the main quarry bowl to create a harbor surrounded by commercial and residential land as well as areas of open space.