

# **BASELINE DATA REPORT**

## **Section 10.0**

### **Prior Mining Operations**

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Submitted To:

New Mexico Mining and Minerals Division  
&  
U.S. Forest Service (Cibola National Forest)

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## 10.0 Prior Mining Operations

### NMAC 19.10.6.602 D.(13) (h)

*Baseline data shall include, as applicable:*

*(h) A description and delineation on topographic maps of any prior mining operations which may have affected the permit area including, if known, the type of mining and processing method and a list of any processing chemicals or reagents used.*

### 10.1 Prior Mining

No previous mining operations exist on the permit area which may have affected the permit area. There were, however, more than 400 historic exploration boreholes drilled from the late 1960s to the early 1980s in various locations of the permit area as identified in Figure 10-1. The Kerr-McGee Corporation began drilling on Sections 9 and 10 in 1966; approximately 362 drill holes (839,687 ft) were completed. Most holes in 9 and 10 were drilled from 1966 to 1985. Rare Metals Corporation completed 13 drill holes of unknown footage on Section 16 in the 1950s. Western Nuclear drilled 63 exploration holes (121,164 ft) through the 1980s. Historic drilling (prior to RHR) on Sections 9, 10 and 16 was approximately 438 drill holes totaling approximately 960,851 ft. RHR drilled 4 holes in 2007. RHR has compiled information regarding the location (UTM coordinates), and depth of each hole. This information is considered confidential and is, therefore, submitted under separate cover in accordance with NMAC 19.10.6.602.B.

Figure 10-2 shows the density of drilling, particularly in Sections 9 and 10 of the permit area. Additionally, some of the property immediately surrounding the permit area contains exploration drill holes to varying degrees. However, RHR has no knowledge of particular drilling locations in those sections. Field inspections of the area conducted in conjunction with other field activities revealed occasional pipe and other markers that may identify possible drill hole locations but cannot be confirmed as such.

The USGS mapped a network of drill roads present mainly in Sections 9 and 10 that accessed the drill sites, most of which have naturally re-vegetated. The Section 17 Lee Ranch shop facilities can also be seen in Figures 10-1 and 10-2. This is the location of an uncompleted mine shaft that was constructed in the late 1970s and early 1980s by Kerr-McGee. Construction of the shaft stopped before it reached the Westwater Formation, i.e., the ore bearing formation. Few details of the particulars of shaft construction are available to RHR. It has been reported (but not confirmed) that the shaft was completed to approximately 1700 ft below ground surface. That would place the bottom of the shaft in the area of the Dakota Formation, above the Westwater Formation. As such, it cannot and does not act as a “ground water sink.”

Roca Honda Resources, LLC has no information as to the manner in which the shaft was closed. However, when it was closed, it was converted into a water well that is owned and used by the surface owner, i.e., the Lee Ranch. Roca Honda Resources, LLC believes, but cannot confirm that the well is providing water from the Westwater and Dakota Formations. Roca Honda Resources, LLC has taken water level measurements that indicate that water rises in the well to 900 ft below the surface of the ground, or 300 ft below the Gallup Formation. This indicates that the well is not communicating with the Gallup Aquifer. Roca Honda Resources, LLC has

developed some background water quality data for this well and others as described in more detail in Section 9.0 of this BDR. The data presented therein indicates that the water quality in the Lee Ranch well, i.e., the Section 17 shaft, is substantially the same as the water quality in three wells constructed by RHR in the permit area, i.e., Section 16 wells S-1, S-3 and S-4. The Section 17 well is identified as Well ID # 12 in its data set contained in Section 9.0 of this BDR. Therefore, it is unlikely that shaft construction affected water quality in the vicinity of the permit area. This well will continue to be monitored as part of the continuing baseline data gathering efforts and long term as part of its operational monitoring plans.

Additionally, as identified in Figure 10-1, approximately 3 miles southeast of the permit area is the RGRC (aka, Gulf Mt. Taylor) underground uranium mine facility. This mine has been on standby since the early 1990s. Similarly, only limited data is available from the Mt. Taylor mine. Roca Honda Resources, LLC has reviewed and has included as part of its BDR data set, much of the publicly available information to assist it in developing background, including water quality of the mine discharge water. However, mine dewatering information is not otherwise currently available for RHR's use.

Also, shown on Figure 10-1 at a location southwest of the permit area approximately four miles and across the San Mateo Creek, is the San Mateo underground uranium mine. This mine has not been in operation for many years.

None of the activities are likely to have affected the RHR permit area but have been included herein as described above for clarity.

## **10.2 References**

None

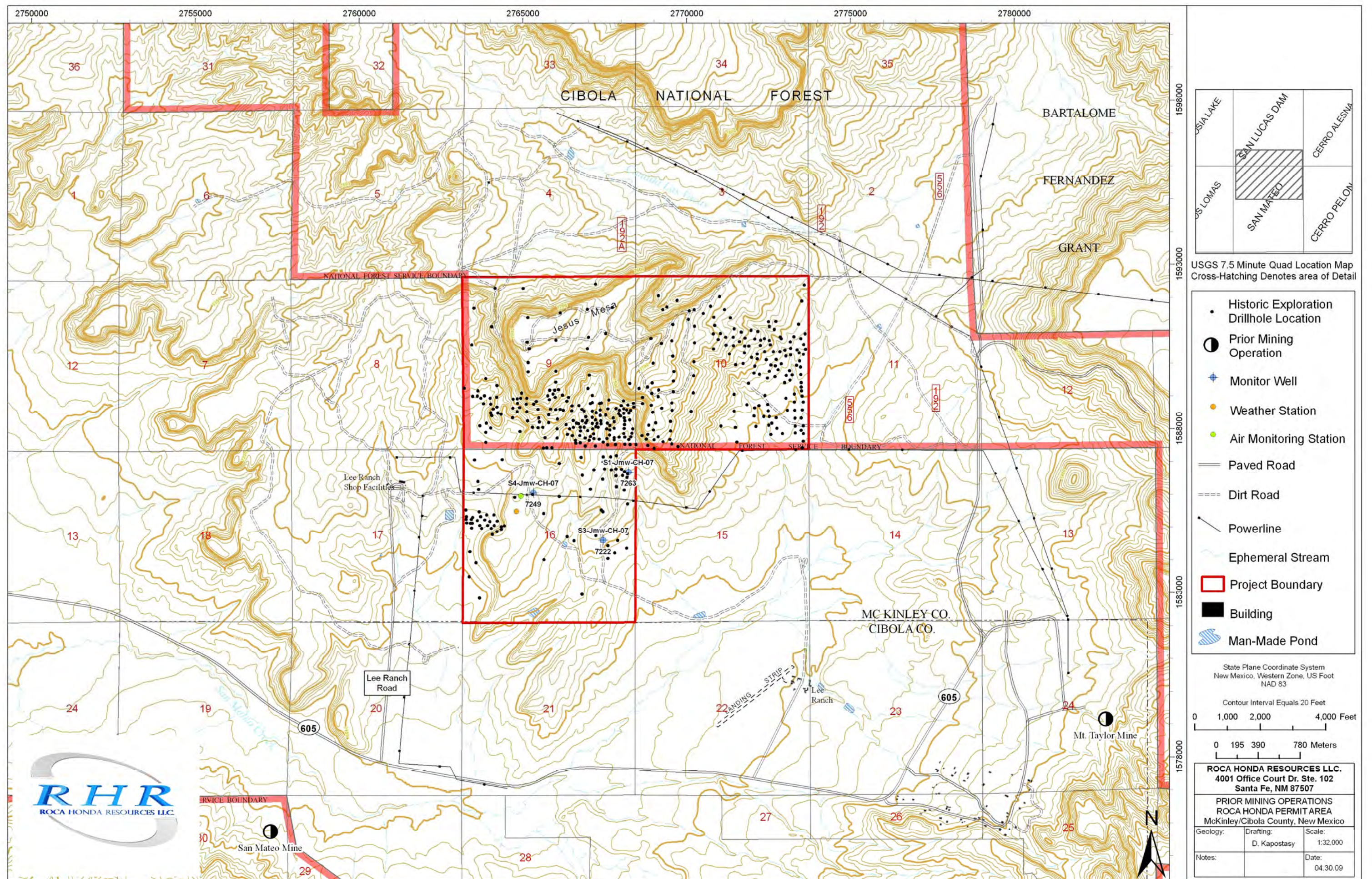


Figure 10-1. Topographic Base Map Showing Prior Mining Operations (1:32,000)

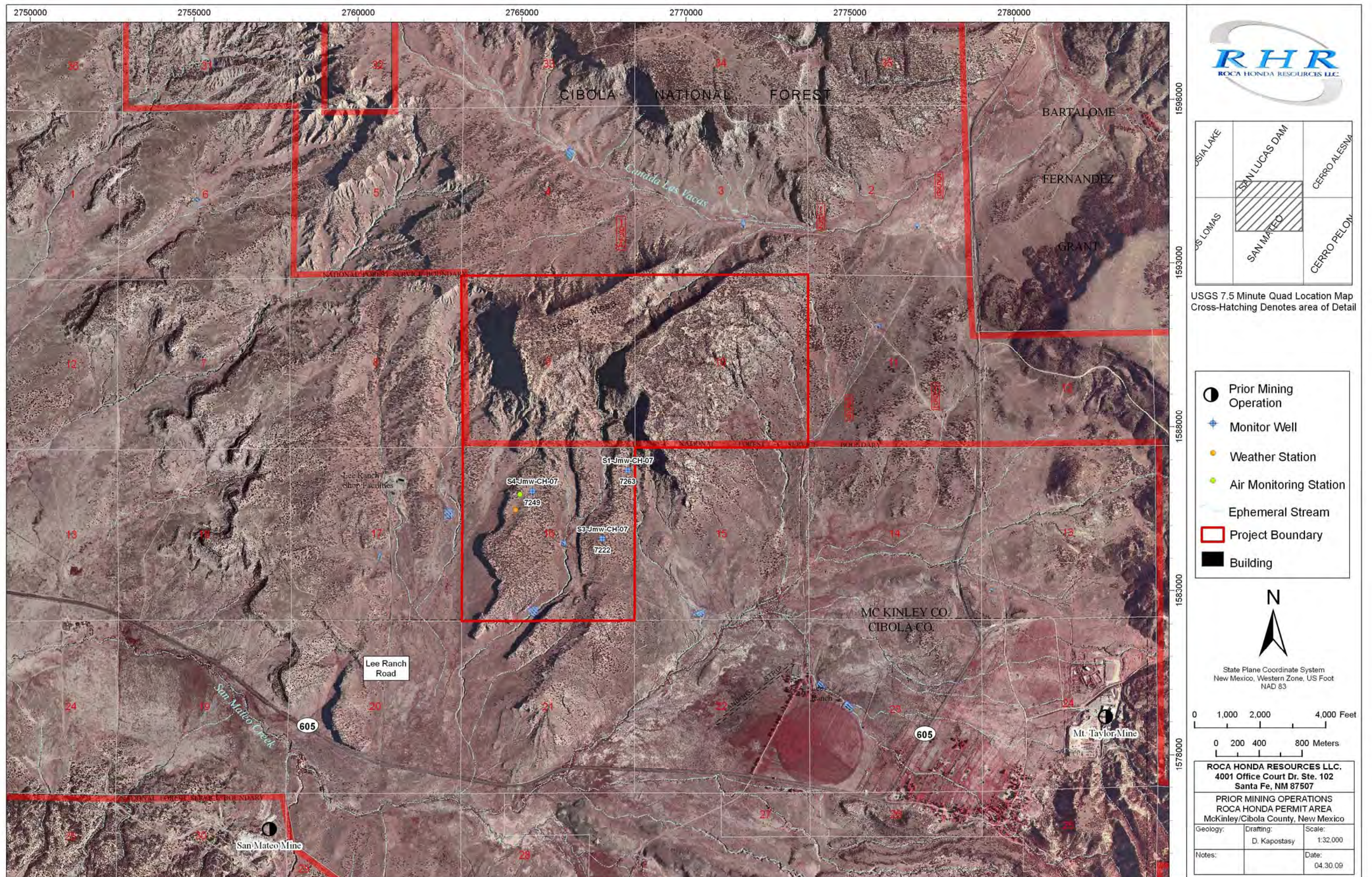


Figure 10-2. Aerial Photo Base Map Showing Prior Mining Operations (1:32,000)