Additional Sheet
2023 Annual Report
Menzer Quarry
M-1976-009HR
Schmidt Construction Company
Anniversary Date: December 31

The Menzer Quarry is, in general, very similar to last year with a few exceptions. Of course as the mining has proceeded on and below the Central Backwall (see photo) the roadways have changed to adapt to the new areas that are mined. This is roughly shown on the map, but these roads change frequently. This was the configuration as of early December.

The technique in the creation of the benches has changed some. Now the backwall of each bench is created using pre-splits rather than just blasting out the bench. This provides greater stability in the wall and a more vertical configuration. The bench walls are still of the same height (around 25 feet) and the bench steps are still about 40' wide. This creates plenty of room for vegetation growth on the benches including the eventual invasion of trees, produces a large surface for precipitation capture, and also a wide bench to capture any rockfalls which will happen no matter how the walls are created. But it also maintains an even slope from the top of the mined area down to whatever elevation the benching ceases as the granite is removed. This uniform slope is very important to maintaining the large scale stability of the mined area and reduces the possibility of creating a total slope that becomes steeper toward the bottom of the mined area. That tendency can create a large scale instability of the slope because it results in a bit of top loading of the entire slope. That can result in a major collapse of the entire wall as happened on another quarry in the Colorado Springs area where limestone with a steep dip trending toward being parallel with the slope. Basically the top slid down over the bottom on clay seams or a fault zone in the deposit. Menzer is a granite quarry as therefore has no bedding planes, but it can still be subject to mass failure if the cliff is toploaded because of a convex slope rather than straight or concave slope.

Mentioned in past reports is the relocation of the plant westward into the current stockpile area, especially once the wall west of the stockpile area is reduced a good deal. The relocation of the plant will not occur for a few more years, but it is already cramped for space. To alleviate this limitation the steep slope immediately south of the plant will be mined so the bottom of that slope does not stick out so far and narrow the land useful for the plant. The area to be mined as shown on the map was already disturbed by some old roads that were cut in when the 60 foot benches on the south side of the quarry were mined many, many years ago. These were recently expanded some to explore the feasibility of mining the slope. This area shown on the map is a part of the mining plan and now is a good time to mine this area as part of the preparation for opening the base area of the quarry to a greater width. This the toe of this slope, using a similar bench configuration as is currently being used on the west side of the quarry, will then be moved southward a considerable distance. That will open the bottom of the quarry to be more like what is shown in the mining plan. (See the accompanying photo exhibit regarding this area.)

No other changes of significance occurred in the last year. The new sediment pond management plan is working well.