

## LAC Open House

August 2, 2022

Cunningham Hill Gold Mine

### *Overview*

On August 2, community members were invited to an Open House at the Cunningham Hill Gold Mine; I attended on behalf of The San Marcos Association. Approximately 50 people attended, though some were from state agencies and the National Forest Service. Laird Graeser also attended on behalf of SMA. The Open House was hosted by Barrick Gold Corporation (<https://www.barrick.com/English/home/default.aspx>), the current owners of the mine. Barrick bought LAC in 1994 and has since taken over restoration efforts at that site. Representative from Barrick gave a presentation, which was followed by presentations from the NM Environmental Department and the NM Mining and Minerals Division. Barrick told us and showed us their point of view and took us on a tour of the mining pit and some of the reclaimed area. We were not permitted to go to these sites on our own; we travelled in Barrick-provided buses. Though we could not inspect directly, there appeared to be a diverse plant assemblage – wild flowers, conifers, and other species – supporting their claims of mostly complete restoration. Barrick gave a presentation (attached), and the state representatives did not contest any of Barrick's assertions when they gave their own presentations (also attached). If you look these presentations over and have questions, I or Laird, might be able to answer them.

### *Some bottom-line statements:*

- The San Marcos Association and other groups sued LAC in the late nineties in order to force them to agree to certain reclamation efforts and to return the mining property to a Self-Sustaining Ecosystem (SSE)
- Barrick, the current owners of the mine, have applied to the State of NM for a “pit waiver” to greatly reduce their obligation to restore portions of the property, specifically in the mining pit itself, that they thus far have not been able to complete
- Most of the area to be restored to a SSE has been reclaimed – something like 96-98%
- Tailings and chemicals from the mining operation itself that once remained on the property in the soil and debris piles have all been removed and/or mitigated
- The majority of the area yet to be reclaimed is in the mining pit itself where restoring it to its natural condition is probably not possible

- According to NMED, no state decisions concerning Barrick’s requested pit waiver would absolve the mining company from having to continue to ensure that water in the pit meets state standards for purity of an open water area like this
- The major issue at hand concerns acidification of rainwater as it flows down the sides of the pit into the pit reservoir; engineering issues concerning addressing that issue are significant
- The original Closure/Closeout Plan (CCP) used precipitation data from the latter half of the 20<sup>th</sup> century which did not reflect current precipitation trends, and has resulted in Barrick needing to find some other way to address issues that would not have appeared had precipitation been as high as projected
- Barrick asserts that neither they nor LAC have earned ‘a single penny’ from this mine; Barrick acquired it as part of a global purchase of LAC mining holdings – “the bad with the good”
- None of the ideas presented/discussed would address any legacy contamination of down-gradient ground water that might affect neighboring properties; Barrick does not monitor water on adjacent or nearby properties
- Decisions about the pit waiver request are to be made at the State level, pursuant to laws and regulations, not at the local level

### The Pit Waiver

What Barrick is asking the State to grant is a “pit waiver.” What this would mean in practice is that Barrick would not have to deal with that portion of the mining pit that LAC had agreed to restore as part of the lawsuit against it. To help visualize the situation, consider the existing mining pit as a hole in the ground shaped like an ice cream cone – narrow at the bottom and wider at the top. Originally, the CCP assumed that a significant portion of the pit would be filled over time (long before today) by precipitation that the ground water levels would stabilize at some elevation much of the way up the cone. From a somewhat casual analysis of the LAC graphics, LAC and the State predicted that the ground water level would stabilize some 55% of the way up the pit – leaving 45% of the pit wall above that level exposed to the elements. The idea was that the 55% below water level would become – with continued water purification (see below) – a SSE; and, that the 45% above the water line would be left to experience natural weathering and erosion processes. No active mitigation or restoration efforts would ever have taken place in that 45% portion according to the CCP.

However, because of climate change, precipitation levels, and perhaps unexpected porosity of the soils underlying the pit, **the level of the ground water table never rose to the**

**elevations that engineers predicted.** Nor will they ever likely rise to that level, according to climate modeling. So, instead of a ground water table at the 55% elevation, it is only at something like the 26% level. That means 29% of the ice cream cone will remain unfilled with water, with its rock walls exposed, and will not become a SSE. Barrick is in essence asking to be allowed to treat this 29% like the 45% noted above that is to have been left to the elements.

The photo below shows the pit with water in it that meets State standards. Local wildlife can access this lake and it is safe for them. The black square shows the approximate level to which engineers had originally expected to the water to rise. The current level is most likely the level at which it will remain for the foreseeable future.



This is important because precipitation that falls on the pit walls reacts with the country rock exposed during mining operations to create acidic water. This happens at a much greater level than normal because of the large surface of exposed rock and because, had there been no mining, any acidic water produced would have been neutralized as it moved through the aquifer – as opposed to going directly into an open pit. Nothing in the pit waiver would reduce Barrick’s obligation to treat the pit water so that it meets state standards; the pit waiver would, however, absolve Barrick from having to implement some sort of engineering

solution to prevent rainwater from interacting with the pit walls. Though some future technology might offer a solution, nothing exists today that would be feasible. Filling in the pit with rock from someplace else would only mean digging another pit elsewhere, with no telling what attendant problems there. Sealing off the cliff faces in some way (envision some sort of spray foam applied to all these surfaces) would almost certainly be environmentally horrific. Barrick's position is that the only solution is to treat the unexpectedly exposed surfaces like those above and leave them to natural processes. What the State will decide is yet to be determined.

What has happened or is happening to ground water down gradient from the mine, and what if any effects might be experienced in neighbors wells, is unknown. There is no systematic monitoring of those wells that I know of, so, mining-related impacts on those water sources have not been determined.

**Laird's PS:** there was some discussion at the meeting that landowners to the north of the site could submit water samples to the Environment Department periodically in order to monitor criteria pollutants from the mine site. No further information was obtained on whether NMED would perform this testing or whether there would be a fee. We should put this eventuality on the September agenda and see if we can get some information from NMED.