Solid Minerals Inspection Report

Bureau of Land Management
Tres Rios Field Office
29211 Hwy 184
Dolores, CO 81323

Type of Operation	3809 Plan of Operations	Project Name	Sunday Mines Complex West Sunday, Topaz
Serial Number	COC-53227, COC-52049	Company/Org.	PINON RIDGE MINING LLC PO BOX 825 NUCLA CO 81424-0825
Inspection Date	05/29/2019	Others Present	Lucas West, CDRMS Michael Rutter, Pinon Ridge
Inspection Time	10 AM	Inspected By	James Blair
Report Date	05/31/2019	Legal	T44N, R18W, multiple sections

Introduction

I coordinated a planned mine inspection at the Sunday Mine in advance of some planned activity at the site. Pinon Ridge (AKA Western Uranium and Vanadium) will be placing a cover on a low-grade/waste rock stockpile on the east side of the Sunday Mine using barren material from the opposite end of the mine. Additionally, they are planning on beginning an underground sampling and characterization program at the Sunday Mines Complex, with a focus on vanadium. To do this they will need to muck out the portals at the Sunday and St. Jude, turn on five fans to ventilate the mine, and engage in underground mapping and XRF characterization, and ultimately some bulk sampling to test how well the vanadium ore mills. They will be entering the site from the St. Jude portal and using the Sunday and/or Carnation portals as a secondary escape ways. The St. Jude shop will be fixed up and used, while the other buildings at the Sunday, West Sunday, and Topaz will be cleaned up, and any windows fixed, but will not be used. Mr. Rutter said that up to 30 tons of material could be sampled over the course of a few months. The ventilation fans that would need to be turned on are the Sunday #1, #3, and #7, and the St. Jude #1 and #3. Air would draw from the portals below and exit from the fans above. All activity would stay above the water table, and there would be no pumping. This inspection provides a photographic "before" record of the Sunday, Carnation, and St. Jude, as well as documentation of conditions at the West Sunday and Topaz, which will remain idle.

Description

I met Mike Rutter of Pinon Ridge Mining, LLC and Lucas West of the Colorado Division of Mining, Reclamation and Safety at the Sunday Mines at 10 AM. It was about 70 degrees farenheit, with 25% cloud cover, becoming increasingly cloudy until ~1 pm when it began to rain. Despite having been one of the wettest winters and springs on record, Gypsum Valley had yet to green-up substantially, possibly because it has been so cold, but it could have been die off from last year's drought. Very few weeds were observed at any location. All of the storm water structures appeared to be in good shape. Observations made during the inspection are summarized in the captioned photographs below.

Action Items

- Place earthen cap on low-grade stockpile on eastern end of Sunday Mine, as discussed by CDRMS.
- Fix broken windows and doors on all buildings at the Sunday Mines Complex. Consider covering windows on buildings that may be used in the near future with expanded metal. Consider boarding up broken windows and or doors on buildings that do not need to be used in the forseeable future.
- Look into spring loaded, unlocked doors, rather than locking doors to prevent activity.
- Consider tearing down any utility buildings that are not expected to be used in the future.
- Pick up all trash and junk on mine sites, particularly those identified in the captioned photos in this report.
- Consider completing reclamation at the Carnation Mine, if no longer needed for an escape way.
- Identify other areas at Sunday Mines Complex where permanent reclamation/revegetation can be implemented.
- Continue regular upkeep and maintenance of storm water structures, roadways, and weed treatments.

/X/ James Blair
James Blair
Geologist
Tres Rios Field Office

Maps

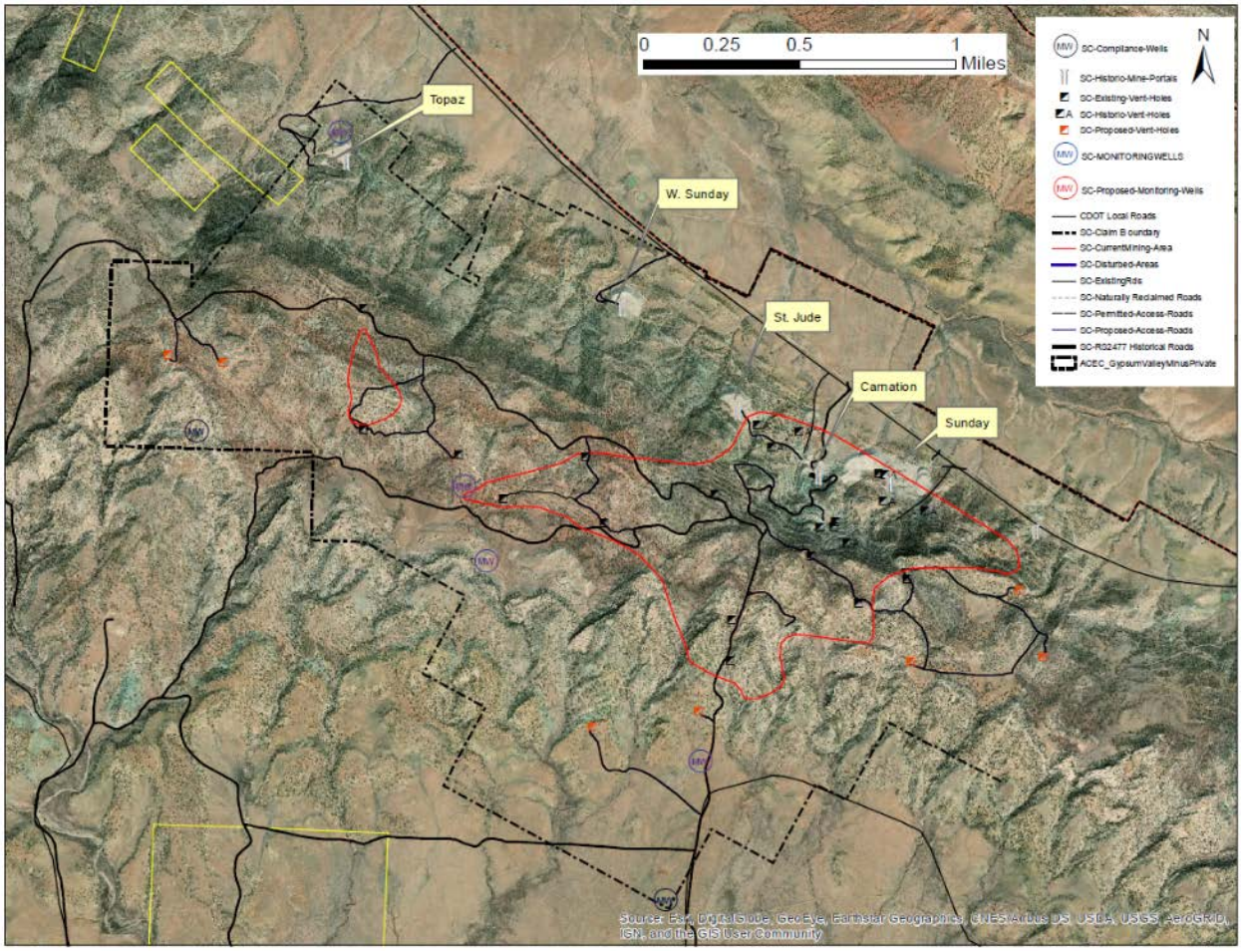

Figure 1: Aerial Photo Map Showing the Sunday Mines Complex. The Inspection was conducted in a general east to west fashion.

Photos

Figure 2: Panoramic photograph looking east from map 2 point 1 showing the low-grade stockpile on the east end of the Sunday's surface facilities that will be capped with barren waste rock. Also visible is de-energized transformer substation for the Sunday. There are no plans to re-energize the substation.

Figure 3: Looking north across the area of the low grade/waste rock stockpile that will be capped this summer.

Figure 4: The northern, lower portion of the area to be capped with clean waste rock.

Figure 5: View looking south across the portion of the waste rock stockpile that will not be capped.

Figure 6: A view looking northwest from the waste rock pile that will be capped, across the Sunday Mine surface facilities. None of these buildings is slated to be used this year. They will be making repairs to the building. It seems that several windows and doors were vandalized over the winter. Some building appear to have also sustained some wind damage. On the left is one of the large storm water control basins. There was no standing water in. In the upper left we can see the West Sunday (farthest) and St. Jude Mines. The Carnation is very small and occupies the mid-ground between the Sunday and St. Jude. It is not visible in this photo because it is obscured by the clean waste rock dump that will be used as a source for the cap material.

Figure 7: This is similar to the previous photo, except that it shows the Sunday Mine portal (red arrow), and gives a fuller view of the large stormwater impoundment structure (foreground).

Figure 8: Broken windows and door in one of the outbuildings at the Sunday mine. I believe that this building was a scale house at one time. Will check to see if a sprung door is acceptable for an empty building in lieu of a lock, alternately consider tearing building down if not needed.

Figure 9: The Sunday Mine Portal, view looking south. The portal has been backfilled with rock for approximately 20 feet, and is also gated. This portal will be opened up this summer, but it will only be used as a secondary escape way and ventilation draw point.

Figure 10: The pen cap in this photo shows where clean material from the NW end of the mine area will come from to build the cap on the SE corner. The view is looking towards the NW.

Figure 11: Looking NE across Sunday from western dump. The red circle shows some pipe that needs to be cleaned up.

Figure 12: View of the cap material source pile looking from the NW to the SE.

Figure 13: A panoramic view of the Sunday from the westernmost end looking NE.

Figure 14: A view of the Carnation Mine (portal in blue circle). The only use for this is an alternate escapeway. Everything beside the portal should be reclaimed, as should the portal if they decide that they no longer need it. The pad in the foreground was probably for scales or a hopper. The black circle is a storm water pond that I have seen brim full or breached before, but today it is bone dry inside, despite it having appeared to have rained only a few days prior. The red circle is the St. Jude Mine. The county road that goes over Gyp Ridge is in the mid-ground.

Figure 15: A view across the Carnation pad towards the portal. The Carnation mine is treated as part of the same mine BLM mine plan as the Sunday and St. Jude, but as it's own separate CDRMS plan. It has only been used as a secondary excape way for a long time, which is why there is so little development rock in front of it. Pinon Ridge should complete reclamation of the pad, if it is no longer to be used for mining purposes, and if the portal is no longer needed as and escape way, then it should be reclaimed as well. The black circle shows some old electrical transmission wire that needs to be removed from the site. There were very few weeds on site at the time of the inspection. Vegetation is relatively sparse, which is typical of these rock dumps absent any growth media or soil amendments. This site could be a good test plot for what reclamation practices can be employed a the much larger adjacent mine sites.

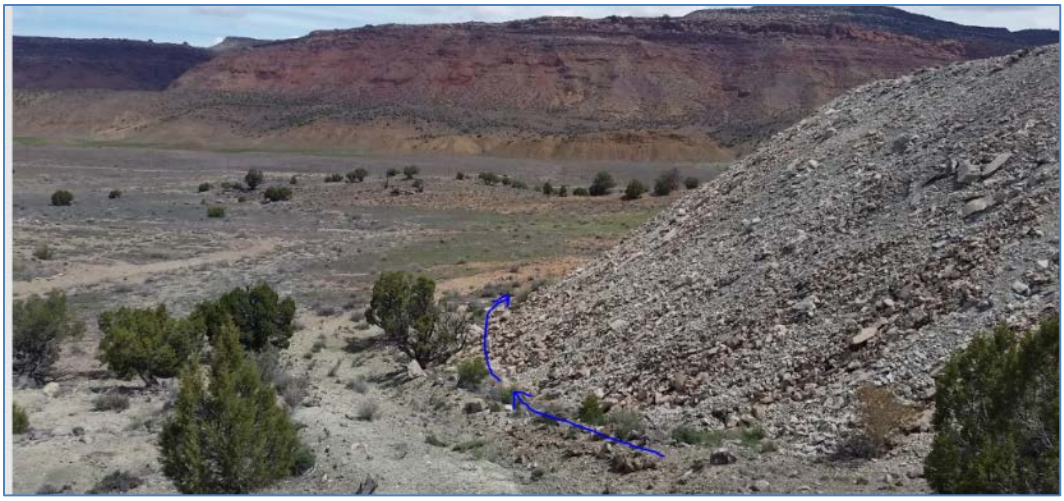

Figure 16: After inspecting the Carnation mine, we walked back along the toe of the Sunday dump. There was no sign of seeps at the toe of the dump. There was one place where there was substantial erosion that was caught by the secondary containment berm. I believe this erosion dated back to a documented storm event in 2014, caused by a breach in the berm at the top of the dump, which was subsequently fixed. I think the erosion has been arrested by repair of the berm, but will continue monitoring to see if it continues. The blue arrow shows the path we walked back to the entrance of the mines.

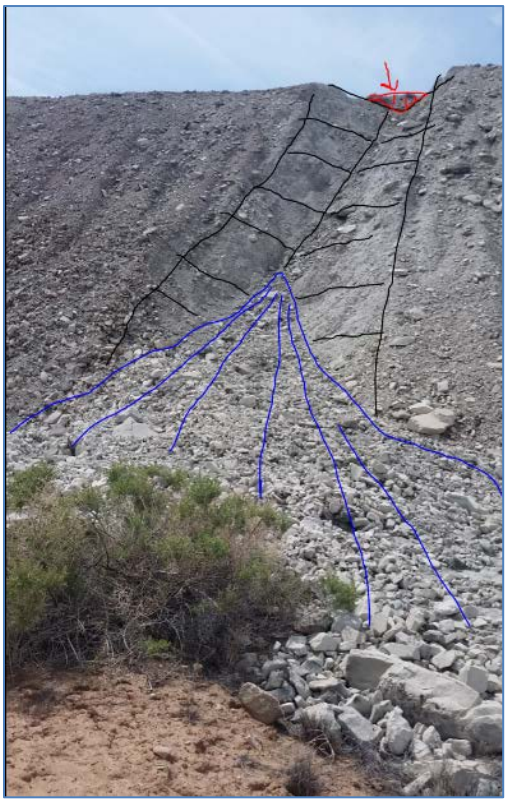

Figure 17: Erosion on the dump face caused by water flow off the top of the dump, through a breach in the top-berm during a 2014 storm water event. The black lines show the erosion excavated from the dump face. Blue lines show where the eroded material came to rest in an alluvial fan-type deposit. The red arrow at the top shows where the berm eroded and was subsequently repaired. Repairing the berm arrested any substantial subsequent erosion.

Figure 18. A view looking east along the toe of the Sunday Dump. The blue lines show the secondary containment berm at the toe. The black line circles material that eroded off the top of the dump and deposited at the bottom (see last photo). The black line shows a crushed 55 gallon drum. The drum will need to be picked up and disposed of. There was no sign of oil staining next to the drum, or indication that it contained any product.

Figure 19: View looking east from the lowermost Sunday catchment basin, towards two of the Sunday Mine shop structures. Scraps of wire, drill steel and other scrap that were dumped with run of mine waste years ago now weather out to the dump, and need to be picked up on an ongoing basis.

Figure 20 A view looking northeast at 2 shop buildings on the Sunday Mine. These building had been vandalized over the winter. The garage door on the far building was forced up, and the window on the close building was broken. A window was broken to gain access to the other door. Neither building contained much of value, so nothing was taken, according to Mr. Rutter. He said that he planned to put some game cameras up at the site to see if trespassers can be identified. The roof on the far building has been damaged by wind. Perhaps expanded metal guards can be put over the re-glazed windows, or the windows can be boarded shut rather than left exposed until such time as operations actually begin at the Sunday.

Figure 21: Inside the shop at the St. Jude Mine. This shop will be refurbished and used as the main shop/office area when the mines are reopened for sampling and characterization later this summer. The plastic tank on the left is for storing water that is hauled into the site. This will be the only source of water for upcoming sampling operations.

Figure 22: View looking northeast across the St. Jude dump. Power would be restored to the site, though it is not clear if the transformer bank would need to be reactivated. There are very few weeds on site despite the wet year. Visible vegetation is nearly all desirable grasses and forbs.

Figure 23: Looking southeast at the portal of the St. Jude Mine. Waste rock has been pushed into the portal and piled up outside of it to prevent unauthorized access inside after some theft and vandalism back in 2011. This material will be removed when the portal is opened this summer. This portal will be the main access point to the underground workings of the Sunday Mines Complex for the underground sampling and characterization activities. It will also function as a draw point for ventilation air.

Figure 24: The West Sunday Mine (COC-52049) gate, view looking towards the east. No new activity is slated for this mine. There was no sign of tampering with any of the shop buildings at the West Sunday.

Figure 25: The West Sunday Mine waste rock dump. Virtually no weeds were on site. The mine site was farily tidy.

Figure 26: The portal of the West Sunday Mine. This portal has been backfilled about 20 feet back, in addition to the gate, top prevent trespassing. It is not slated to be opened up for the exploration project this year.

Figure 27: The entrance to the Topaz Mine, looking east. No new activity is slated for this site.

Figure 28: Volunteer narrow-leaf yucca at the Topaz Mine.

Figure 29: looking Southeast across the dump towards the portal of the Topaz mine. The site was generally tidy, with few if any weeds having emerged yet this year. The portal has been backfilled. There are some fiberglass ventilation ducts (blue circles) that have blown off of a stack. They should be disposed of if they aren't to be used soon.