

Site Name Gold King - Level 7

WASTE ROCK

Waste Rock on-site ☒ Y / ☐ N Waste Rock Sample Name: _____ (Continue with the section if there is waste rock, if not, go to next section)

Waste Location Coordinates: Latitude 37.894545 Longitude 107.638544 Datum WGS84 Altitude 11,455

How many distinct waste rock piles are on site: 1 Areal Extent of Waste Rock: _____ (ft²)

Estimated average waste rock depth: _____ (ft) Estimated waste rock volume: _____ (CY)

Slope of the waste rock pile (steepest sides): 42-46 (degrees) Color of waste rock yellow & white

Is the surface of the waste rock cemented: Y ☒ N ☐ Describe _____

What minerals are present in the waste rock: _____

Does mine drainage flow across waste rock: Y ☒ N ☐ Does surface water flow across waste rock: Y ☒ N ☐

Is there potential for water to start flowing onto waste rock pile: Y ☒ N ☐ Is the waste rock being undercut: Y ☒ N ☐

Describe the water flowing onto the waste pile: surface water

Is there past evidence of saturation of the waste rock, Describe: yes - previously been saturated w/ mine drainage

Are there seeps/springs at the toe of the waste rock pile: Y ☒ N ☐ Describe: _____

Is there potential to direct water off of or around the waste rock: Y ☒ N ☐ Describe: Road ditch - maintain

What is the degree of erosion of the waste rock pile (mass wasting, mass movement, undercutting, rills, gullies)

This waste pile has mass wasted twice, is consistently rilling, gullies present and undercut by the road and North Fork of Cement Creek

What is the erosion of the waste rock caused by: mine drainage, avalanches, undercutting, over steepened slopes, access road

Vegetation present on waste rock pile: Y ☒ N ☐ Kill zone below waste rock: Y ☒ N ☐ Areal size of kill zone: _____ (ft²)

Describe the kill zone: No kill zone because it dumps straight into North Fork

Is the waste rock pile in an avalanche path Y ☒ N ☐ Describe: _____

Other avalanches from above & below. Road undercuts

divert water @ switchback off the road

Whole hill slope S. facing - less infiltration less mass run-off.

less overland flow waste rock is cemented

PIPES

Pipes or culverts on-site: Y ☒ N ☐ (Continue with the section if there are pipes or culverts)

What are the pipes conveying (circle one): mine drainage, road drainage, run-on surface water, pond discharge

How many pipes are on-site: lots Length of pipes (ft) Gladstone

ID measurements of pipes (in) _____

How much scale is in each pipe (in) _____ Estimate % blockage of pipe(s) 20-30% each yr lots

What are the pipes made out of: lots

Where are the pipes located: _____

What is the estimated slope of the pipes? _____

Are there pipe access points or clean-outs: Y ☒ N ☐ Describe 6ish

Do the pipes on site need maintenance? Y ☒ N ☐ Describe: _____

Other jetting 2x's yr.

pipe on road is not buried at the corner

can't lose the road

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MINE WORKINGS

Number of adits on site: 2 Number of shafts on site: 0 Number of stopes on site: 0

How many elevational levels are associated with the mine: multiple - research

Does this site have a mine safety closure: (Y) N Does the site need a mine safety closure or maintenance: Y (N)

Does the site have an engineered bulkhead in the mine workings: (Y) N — but it is a flow control structure

Are there trespassing issue into underground workings at the site, Y (N) Describe: _____

What is the condition of the portal (circle one): open partially collapsed, totally collapsed, Describe the condition of the portal(s): _____ Areal extent of collapsed portal (ft²) N/A

How is the portal constructed (e.g.; timbered, steel sets, portal shed, culvert, other), Describe: shotcrete, bolts, steel sets.

How stable is the portal opening (stable, unstable, rock-fall roof issues, unstable colluvium/talus above portal, collapsing timbers, subsidence), Describe: The portal is very well maintained

Is the portal located in an avalanche path: Y / (N) Describe: _____

What is the opening constructed in (bedrock, colluvium, talus, and describe the stability of the materials): very friable bedrock

If the site is constructed in talus or colluvium, how thick is it? _____ (ft horizontally)

Estimated or known size of opening(s) in feet: _____

Is there any infrastructure located underground? Y / N, Describe (pipes, coffer dams): coffer dams (2) + flow control structure and instrumentation

Is an underground survey of the workings needed? Y / (N) Describe: _____

How interconnected are the mine workings, describe in detail _____

Does it appear that surface water is being captured into the mine workings: Y (N), Describe: _____

Describe the potential for drilling into the mine workings (access and degree of difficulty): Potential to drill into workings from above at No. 13 Sampson Rd.

Describe the airflow at the portal: can switch

What is the temperature of the air underground (measure if safe, degrees F): _____

%O₂ 10 feet inside the portal variable Does ice form underground: Y / (N) Would an air door be beneficial Y / N

Describe why an air door might be beneficial: _____

Other shotcrete will need maintenance in future, shotcrete should become a hazard
could extend portal shed to protect portal