A gold mining operation is proposed at the Calumet and Bear Track mines in Township 22 North, Range 6 East, Sections 23 & 25 approximately three miles south of Warren, ID (Figures 1 & 2). The project would last five years and would include two separate mines. The Bear Track would be a hardrock underground mine and the Calumet would be a placer operation. Hand-sorted high grade ore from the Bear Track would be hauled to the Calumet site to be milled. The two properties will be described separately below.

Figure 1

Calumet & Bear Track Location Map
Access Road

Both mines would be accessed by a temporary road. An unauthorized route presently exists in this location and would be designated as a temporary road (as defined in the Travel Plan) for the duration of this project. The road would be signed and gated at a point near the junction with the Pony Meadows road (FS #50359) to prevent public access. Other mining claimants could be authorized by the District Ranger to use the road to access their claims in the area. The operator would be responsible for maintaining drainage and erosion control features on the road to the appropriate FS
standards. The road would also require the installation of stream crossing structures (bridges, culverts, pipe mats, corduroy, etc.) at several locations. Sediment input to live water during installation of these structures would be minimized by the use of appropriate erosion control methods (e.g. silt fence, containment of loose or perched fill material, minimal crossing of channel, etc.). Stream alteration permits would be obtained by the operator if necessary. An existing ford on Webfoot Creek would be replaced with a temporary bridge meeting Forest Service specifications. The road approaches to the ford would be abandoned and reclaimed once the bridge is in place. A portion of the existing road which passes through a wetland just above the confluence of Warren Creek and Franklin Creek would be abandoned and reclaimed due to inherent drainage problems, with an old existing, drier roadbed being reopened as a new access route. Details of this task are described in Appendix A. Upon completion of the project, the temporary bridge would be removed and the road would be decommissioned in accordance with the Travel Plan.

**Calumet**

An area of approximately 4.8 acres would be placer mined over a five-year period (Figure 3). The project would be implemented in phases, with the first year’s work focused primarily on road work and running a limited production circuit using only two sluice boxes rather than the more extensive equipment described below. Eventual peak production volume is estimated to be no more than 150 cubic yards of material per day. Approximately 1.6 acres of the proposed site has already been disturbed and reclaimed during a previous placer operation (Photo 1). The other 3.2 acres would be new disturbance.

![Photo 1](image-url)
The mining process would start with clearing the existing stand of lodgepole pine from the portion of the area that is to be worked in any given year. Small trees would be stockpiled for spreading over the area during reclamation. Larger trees would be placed in a loose deck to dry, then used to timber the Bear Track mine shaft. Topsoil would be removed and stockpiled for reclamation. In some of the previously worked areas where willow clumps have reestablished, they would be salvaged during clearing and placed in a nearby stockpile area with similarly high water table.
The subsoil and underlying alluvium (poorly-sorted, sand to small boulder size material) would be removed and run through a gravity milling system to recover the gold. A series of trenches (roughly 150’ long, 30’ wide, and 8’ deep) would be dug with a tracked excavator. Excavated material would be transported with a loader to a grizzly (a coarse screening grate). All material less than 5” diameter passing through the grizzly would then feed to a classifier (a finer screening grate). Larger material that does not pass the grizzly would fall into a reject pile. The classifier would pass material less than 1” diameter to a sluice and wilflley table (another type of gravity concentrator for fine gold). The gold-bearing concentrates from the sluice and wilflley table would be taken off-site for further processing. No chemicals would be used in the gold recovery process.

Larger material that does not pass the classifier would fall into another reject pile. If material from the classifier reject pile is determined to have economically recoverable gold that has not weathered out of the host rock, it would be moved to one of two places depending on whether it was wet or dry. If it was dry, it would be fed into a jaw crusher, then to an impact mill, then to the sluice and wilflley table. If the classifier reject material was wet, it would be moved with the loader to a bare area and spread in very low windrows to dry out. Once dry, it would be run through the circuit in the same manner as the material which is initially dry.

The sluice and wilflley table would draw water from the settling pond with a pump. If additional input water is required, it would be drawn from a nearby existing pond on Franklin Creek using 2” diameter flexible plastic pipe. The claim owner holds a water right on this stream. The reject material (a slurry of clay to sand sized material known as “tailings”) from the sluice and wilflley table would run into a settling pit where they would settle out and the decanted water would be routed to the existing settling pond in a ditch (see site layout figure).

Since milling material to a very fine particle size increases the potential for metals leaching, prior to running either placer or hard rock ore through the milling part (jaw crusher & impact mill) of the gold recovery circuit, the material would be tested for metals leaching potential and net acid generation potential. If the analysis values indicate a substantial risk of water contamination, the operator would be required to submit a supplemental plan of operations detailing how the standards would be met. If testing suggests a negligible risk, operations would proceed, with a subsequent sample of the tailings pond water taken to verify the predictions of the previous tests. If dissolved metal or pH levels are much higher than expected, milling production would be suspended until a plan to treat, contain, or dispose of the mill water is approved.

Chemical analysis of the inflow and outflow water of the existing pond shows that arsenic, zinc, and lead are currently below detectable limits. Similarly, concentrations of these metals in the existing placer tailings are low. Based on this and a number of other factors, the risk of substantial adverse water quality impacts from the operation is considered to be low. Nevertheless, the testing procedure described above would provide added assurance that chemical contamination of water near the site would be prevented.

Partial reclamation of the site would occur concurrently with mining. Rather than being a separate project element implemented at the end of the mining phase, reclamation would be closely integrated with the gold recovery process. The oversized reject material from the grizzly and the classifier, along with the tailings would be periodically backfilled into the inactive end of the working trench. It is possible that the rate of mining may at times exceed the rate of backfilling, which would be reflected in a volume increase of the
tailings, reject material, and drying stockpiles at the millsite. To ensure that this volume does not exceed what is bonded for in the final reclamation plan, the Minerals Administrator would suspend operations if the stockpile volume surpasses 200 cubic yards. No new excavation would take place until backfilling has reduced the stockpile to less than this volume.

Reclamation of all mined ground along with removal of debris and all equipment (other than the grizzly) would be completed by the end of each operating season. Stockpiled topsoil would be drifted over the backfilled material, fertilized with a slow-release fertilizer, and seeded with native grass and forb species. Weed-free straw mulch would be applied over this. Stockpiled slash and small trees would be placed over the straw. In areas with a high water table and little topsoil, willows would be replanted using the green-staking method. Final reclamation at the end of the project would include demolition and removal of the grizzly. Detailed reclamation requirements are given in the Draft Final Reclamation Plan.

In addition to the primary placer operation described above, up to twenty placer bulk sampling pits (roughly 5 cubic yards in volume) would be dug at various as yet to be determined locations on the Calumet claim. Test pits would avoid live water and known archaeological sites. Their exact locations would be reviewed and approved by the Minerals Administrator and other necessary resource specialists prior to any excavation. Pits would be backfilled and reclaimed in the same operating season.

**Bear Track**

The Bear Track mine is a collapsed / bridged shaft that would be reopened (Figure 4 & Photo 2). An excavator would be used to dig out the first twenty feet of material from the old shaft. Logs salvaged from clearing at the Calumet site would be used to timber the shaft. Timber cribbing (dimensions of 9’ by 9’) would be constructed within the excavated pit. Further sinking of the shaft through unconsolidated surface material would be done in the traditional manner of repeatedly undermining the bottom timbers and adding timbers to the top as the cribbing stack settles deeper. This process would continue until bedrock is reached. Material would be excavated by hand and winched to the surface using an engine-powered winch and a block and tackle suspended from a steel headworks frame. Up to 100 cubic yards of loose fill may need to be removed to fully reopen the shaft to its original depth. When the loose fill material has been completely excavated, mining would proceed by drilling and blasting. A trailer-mounted air compressor would be on site to run the drill and provide ventilation. Ore would be hand-sorted and periodically hauled in a pickup to be milled at the Calumet site. All waste rock and fill material would be placed on top of the existing dump and backfilled against the existing cutbank with no new material pushed over the present dump face. A powder magazine for explosives storage would be placed on an old spur road nearby (see site layout map). A few bulk samples (<5 cubic yards) would be taken from the top of the existing dump and hauled to the Calumet site for milling. Final reclamation requirements for the Bear Track mine include permanent shaft closure, equipment removal, waste rock recontouring, and revegetation. Details are given in the Draft Final Reclamation Plan.
Miscellaneous

Fuel for the generators to run the equipment would be hauled and stored in DOT-approved containers in a pickup. None would be stored on site. Spill clean-up materials, fire-fighting gear, and a spill response plan would be kept in all vehicles. An oil-absorbent boom would be floated in front of the settling pond outlet. A portable toilet and up to two small travel trailers would be kept on site. The toilet would be pumped weekly and all trash stored in bear-proof containers and removed from site periodically. All known archaeological sites in the area would be avoided and any new sites encountered during operations would be reported to the Minerals Administrator immediately. Blasting zones would be signed and public excluded when blasting.
Photo 2: Posts mark location of collapsed shaft
Appendix A
Calumet Road Reroute / Wetlands Restoration

Part of the access road work would entail rerouting a section of the road which passes through a wetland adjacent to the mine site. The wetland section would be obliterated and reclaimed with a new section of road routed around the wetland (Figures A1 & A2). The existing road section through the wetlands has been gullied by spring high water flows which overtopped the adjacent channel of Warren Creek (Photo A1). The road surface elevation throughout almost all of the wetland section is lower than the banks of Warren Creek, so the construction of effective waterbars or other drainage structures would not be possible.

There is an existing abandoned roadbed that skirts the east side of the wetland on mostly high and dry ground thus providing an inherently better route. Two short sections (200-250 feet) of new road would be constructed to tie this old roadbed into the southwest continuation of the existing road (which leads to the Bear Track mine). The northern section of new road on the reroute would be constructed to avoid an intermittent high water channel of Franklin Creek that has established on the abandoned roadbed. This new section would require the removal of several lodgepole pine trees and some blading and compaction of the old placer tailings that it would be built on. A culvert would be installed where a small intermittent stream which flows out of the wetlands during spring runoff crosses the old roadbed. The southern section of new road would connect the end of the abandoned roadbed with the existing main entry road into the previously worked placer ground. This would require simply blading a route through the recently mined and reclaimed placer tailings. A culvert would be installed where the road crosses what would be the outflow from the tailings settling pit that would be part of the active mine site.

After the reroute has been completed, the remaining road sections would be reclaimed. Different reclamation approaches would be applied to several separate sections. The section of road that passes through the wetland would be reclaimed to become part of the wetland. Most of the material eroded from the roadbed has been washed far down the road below this section leaving a gully in one of the treads roughly one foot deep (Photo 1). As can be seen in the photo, the gully in the roadbed has cut down through a layer of dark, organic rich, wetland soils to an alluvial gravel substrate. This being the low point in the wetland system now, it receives perennial seepage from the adjacent ground and is part of the floodplain of adjacent Warren Creek. Rather than simply fill the gully in with the remaining soil on the other tread of the roadbed, only short (approximately 10 foot) sections would be filled in to create a chain of narrow, shallow ponds. The infilled sections would be planted with whole willow clumps transplanted from the adjacent wetlands. The remaining sections of tread would be decompacted and planted with containerized willow stock or live stakes taken from the adjacent wetland. Natural colonization is also likely to be fairly rapid. This configuration of ponds would minimize disturbance of the remaining soil, slow spring flood waters, and capture any sediment that might be generated from the decompacted ground in the first years before vegetation fully establishes. At the north end of the reclaimed section the gully bottom is less than one foot above the adjacent channel of Warren Creek. In the fall of 2009 a broad armored berm was constructed here to direct spring runoff into Warren Creek in order to prevent further scouring of the road surface north of this point and subsequent sediment...
delivery to Warren Creek. This berm would be enlarged and improved to direct drainage from the pond chain to Warren Creek.

There is a point right where the road enters the wetlands from the southwest where substantial spring flood flow from Warren Creek is captured by the road. This is the primary source of the scouring flows that created the gully. Just below this point another berm was constructed in 2009 to return flood flows to the creek, thus partially dewatering the road. This berm would be improved if necessary. Continuing southwest from here the road leaves the wetlands and reclamation would consist of decompacting and revegetating the road surface. Native grass and forb seed, slow-release organic fertilizer, and straw mulch would be hand applied. A short segment of road would be retained next to the west end of the existing settling pond to serve as a campsite for the mine operator.

The same decompaction and revegetation treatment would be applied to the southern half of the road segment located next to Franklin Creek. The northern half would remain untreated since it receives a small amount of spring flood flow from Franklin Creek. The gradient and flow volume have not been enough to cause any more than very minor sediment movement on the revegetating road surface with none reaching the creek. Because the roadbed is at almost the same elevation as the adjacent channel there is no place to redirect this flow to the creek before its existing reentry point. Treatment would simply consist of scattering logs and a little slash (perhaps from trees cut for the adjacent reroute) in order to further reduce the spring flood flow velocities.
Existing Road Configuration at Calumet Placer

Figure A1