

# OPEN PIT MINING



(Typical mining section, Smoky Canyon Mine, 2000)

The proposed panels would be mined similar to panels at Smoky Canyon Mine. Stormwater control facilities, such as silt fences and sediment detention basins, would be installed before and during mining to minimize potential sediment impacts. A timber inspection by the USFS would determine the value of the trees to be purchased within the footprint of the area to be mined. After the logging, crews remove the merchantable timber, and the remaining scrub is pushed into berms around the perimeter of the area to be mined. These berms serve as silt barriers, temporary animal habitat, and as eventual ground cover on the reclaimed areas. Topsoil is then salvaged and immediately spread over the mined-out, backfilled and regraded areas or temporarily stockpiled until such areas become available.

Dozers establish predetermined bench levels on the overburden above the ore zones and the overburden is drilled with a pattern of holes to the bench design depth. Each of these holes is loaded with a precisely calculated amount of explosives from a truck. The column of explosives in the hole is capped with crushed rock to minimize the air shock wave when detonation occurs and to maximize the fragmentation of the surrounding rock. These are controlled explosions that must meet the rules, regulations and requirements of Mining Safety and Health Administration and the Bureau of Alcohol, Tobacco, and Firearms. The ore itself is not blasted.

The blasted rock is dug out with shovels and loaded into trucks to be hauled to overburden disposal areas. These disposal areas are initially external to the pit. Once an area of the pit is excavated enough to allow concurrent reclamation, overburden is backfilled in the pit(s). Those zones of rock that are known to have low selenium concentrations are separated from the other rock. This low selenium rock is used for haul road construction or set aside in stockpiles to be used as capping material above the regraded backfill. The ore is loaded into trucks and hauled to the mill for processing.

Mined-out, backfilled, and regraded pits are capped with low selenium rock, as described for the proposed store and release cover system, and covered with topsoil (reference Proposed Cover Design poster). The remains of the scrub berms around the perimeter are spread over the topsoil and the reclaimed surfaces reseeded using USFS approved seed mixes. Reclamation is concurrent with mining operations.