

EARTHWORK

MISSION MINE TAILING FACILITY

TUCSON, ARIZONA



1998/99
\$4.5 M
96% SELF-PERFORMED

New tailings facility that involved excavating 1.5 million cubic yards of borrow material to form starter dike. Ancillary facilities included road crossings, 7000 LF of 24" diameter prestressed concrete cylinder pipe for relocation of water, power lines, and the relocation of Mineral Hill Road. Excavation to construct storm water diversion channel around the facility. Installed 100,000 LF of HDPE pipe for mill tailings disposal.

CLEARWATER RENEWABLE RESOURCE FACILITY

TUCSON, ARIZONA



2002/03
11.7 M
95% SELF-PERFORMED

Construction of eleven recharge basins (2 million cubic yards of excavation), two miles of 54" mainline HDPE pipe with 42" HDPE laterals to each basin. 42", 30", 24" and 20" steel inlet pipe and valves, concrete distribution structures at each basin and the electrical and instrumentation for the system.

EARTHWORK

RODEN CRATER, PHASE IA-1 FLAGSTAFF, ARIZONA



1999/00
7.3 M
93% SELF-PERFORMED

Construction of a light observatory in an extinct volcano crater. The bowl was reshaped moving about 700,000 CY of cinders to create a truncated inverted cone, elliptical in shape, with the top level at a constant elevation. Tunnel excavation required moving another 400,000 CY. The three structures were connected by 1200' of underground tunnels using concrete that was produced at an onsite batch plant and placed by crane and bucket.

- Sun & Moon – 42' diameter x 18' high
- Portal – 32' x 50' elliptical with 20' ceiling
- Craters Eye – 44' diameter x 16' high

Also included was a concrete four bedroom lodge buried in the cinder cone side. Upon completion of the tunnel, the site was restored to its original appearance.

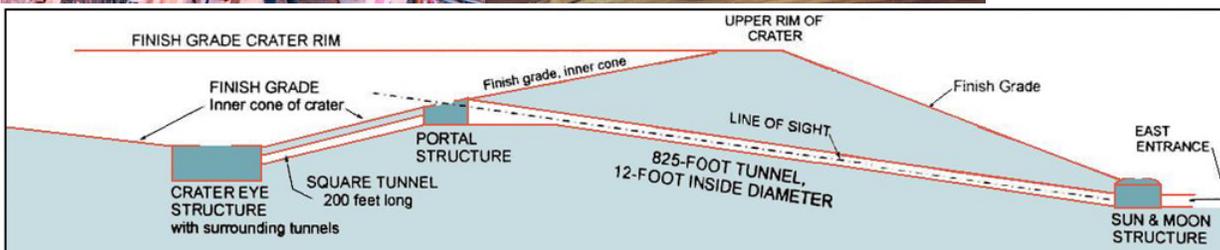


Figure 1. Cross section shows principal components of Phase I built by The Ashton Company within the volcano cone. The observer enters the Sun & Moon space (right) at the east end of the project and passes through an 825-foot tunnel leading upward to the Portal. From the Portal a second tunnel, 200 feet long, leads down to the Crater Eye structure.