

SUMMIT BANNER RESERVOIR
Site 5ST994
SPAULDING MINING DISTRICT, SUMMIT COUNTY, COLORADO

Feature Descriptions

South Reservoir Complex

Feature 1 Reservoir

Size: 360x360 ft, 15 ft deep

Description: Workers graded the reservoir on a natural flat area featuring several low landforms that almost form a basin. They scraped a concave excavation out of the flat area and used the backdirt to build a dam bordering the east and north sides. The low landforms serve as natural extensions of the dam along the reservoir's north and south sides. Because the backdirt exceeded the needs for the dam, workers dumped the excess material to the east, forming an irregular bench. A few pieces of lumber lie around the reservoir and on the backdirt bench.

Feature 2 Dam

Size: 540 ft long, 45 ft wide

Description: Workers used backdirt generated from scraping out the reservoir's basin to construct a dam that impounds the reservoir's east and north sides. The dam possesses an irregular footprint and is highest, up to 25 feet, at the reservoir's northeast side. Here, workers constructed a 12 foot wide spillway (Feature 3) once lined with rocks, and overflow water poured into a small drainage descending northeast from the dam's toe. Workers laid a culvert (Feature 4) through the dam adjacent to and south of the spillway, and it diverted water into a flume that emptied into a penstock. Workers excavated a trench (Feature 8) extending north through unaltered ground and it carried water into a minor drainage. Workers also armored the inside of the dam's northeast curve with rocks.

Feature 3 Spillway

Size: 12 ft wide

Description: The spillway manifests as a notch 12 feet wide and 4 feet deep in the dam's northeast portion. The spillway's mouth features the remnants of a timber gate, and the tail that descended the dam's face was armored with rocks. The spillway emptied into a minor drainage that descended northeast from the reservoir.

Feature 4 Culvert Remnant

Size: 4 ft wide

Description: Before workers built the dam, they constructed a plank culvert at the reservoir's northeast corner. As workers piled earth to form the dam, they buried the culvert, which then drew water from near the reservoir's floor. The culvert directed the water into a flume (Feature 5) that emptied into a penstock (Feature 6), which in turn diverted the water into a large pipeline. The culvert's mouth featured a gate raised by a worm gear fastened to the end of a long iron stem. The stem extended above the reservoir's surface to a plank platform where a worker could activate it by turning a hand-wheel. Two bearings, attached to timbering around the gate and to the plank platform, braced the stem. The plank platform extended from the dam over the gate and was supported by two log pilings. Currently, the culvert collapsed and manifests as an area of subsidence crossing the dam, the platform and timbering around the gate collapsed, and the log pilings and stem lie on the reservoir's floor.

Feature 5 Flume

Size: 6 ft wide

Description: Workers excavated a ditch from the culvert (Feature 4) to the penstock (Feature 6) and built a wooden flume on the ditch floor to direct water. The ditch is currently around 6 feet wide and the flume, completely collapsed and partially buried, was apparently 4 feet wide.

Feature 6 Penstock

Size: 8x8 ft

Description: A penstock stands at the east base of the dam, and it directed water into a pipeline supplied monitors at the Iowa Hill Hydraulic Placer Mine. The penstock is a square structure 8 by 8 feet in area and around 6 feet high. The walls consist of a well-built timber post-and-girt frame sided on the interior with planks. The posts stand on a foundation of cross-timbers, and their tops are tied with stringers, all of which form a rigid frame capable of retaining a high volume of water. The west wall's rim features a low notch 4 feet wide that accommodated the flume's (Feature 5) tail. A 36 inch diameter pipe leaves the penstock's east base and tapers to 30 inches. The pipe, constructed of riveted steel, fed water into the pipeline that descended to the Iowa Hill placer mine. A gate, which has been removed, shut off the pipeline. The penstock's north rim features a circular cutout for a 30 inch diameter overflow pipe that directed excess water into an adjacent drainage. The penstock stands in sound condition, although the pipeline descending from the structure was partially dismantled.

Feature 7 Pipeline Remnant

Size: 30 inch diameter

Description: A pipeline descended from the reservoir's penstock (Feature 6) to the Iowa Hill Hydraulic Placer Mine, located a considerable distance northeast. The pipeline consisted of 30 inch diameter riveted steel sections, and they carried water under pressure to hydraulic monitors at the placer mine. Currently, only several sections of pipe remain, and they lie on the ground downslope and northeast of the penstock. The rest of the pipeline was dismantled.

Feature 8 Ditch

Size: 3 ft wide

Description: Workers excavated the ditch through unaltered ground to carry overflow water northeast from the reservoir.

North Reservoir Complex

Feature 9 Reservoir

Size: 210x330 ft

Description: Workers graded the reservoir on a natural flat area featuring several low landforms that almost form a basin. They scraped a concave excavation out of the flat area and used the backdirt to build a dam bordering the northeast and northwest sides. The low landforms serve as natural extensions of the dam along the reservoir's southeast side. A few pieces of lumber lie around the reservoir.

Feature 10 Dam

Size: 330 ft long, 30 ft wide

Description: Workers used backdirt generated from scraping out the reservoir's basin to construct a dam that impounds the reservoir's northeast and northwest sides. The dam possesses an irregular footprint and is highest, up to 15 feet, at the reservoir's northeast side. There, workers constructed a 6 foot wide spillway (Feature 3), and overflow water poured into a small drainage descending northeast from the dam's toe. Workers also armored the inside of the dam's northeast curve with rocks.

Feature 11 Spillway

Size: 6 ft wide

Description: The spillway manifests as a notch 6 feet wide and 3 feet deep in the dam's northeast portion.