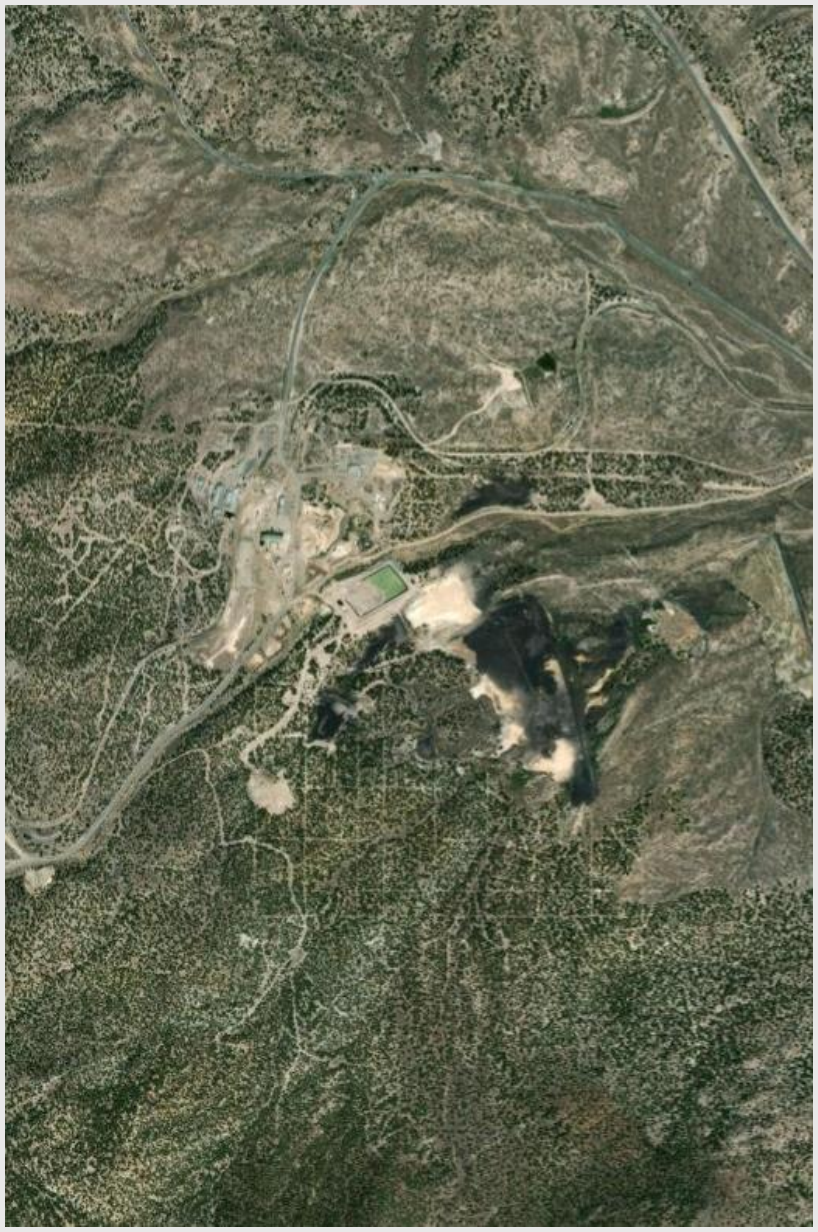
Earth Mapping Resources Initiative (Earth MRI): 2024-2026: Tintic District Mine Waste Characterization



The Utah Geological Survey (UGS) and the Energy & Geoscience Institute (EGI) will be carrying out a comprehensive mine waste characterization project in the greater Tintic mining area, Utah's second most productive mining region. This area, including the East Tintic, Main Tintic, and North Tintic mining districts, has a rich mining history dating back to 1869, with most production sourced from copper-gold-silver chimneys and lead-zinc-silver carbonate replacement deposits.

The investigation of the Burgin mill tailings has been identified as having potential economic resources in critical minerals. Subsequent sites include the Mammoth mill tailings, North Lily historic heap leach, and Swansea historic heap leach. The project will involve surface and subsurface sampling, UAV lidar surveys for volume and geomorphology assessments, and multi-scale hyperspectral analysis for mineral phase characterization.

Deliverables will include an inventory of all mine waste in the Tintic area, a detailed report on volumetric, mineralogical, and geochemical findings, and a GIS database with sampling data and UAV survey results. These outputs will be publicly accessible and will support environmental studies, economic development, mine waste remediation, and technological advancements in mine waste processing. The project aligns with federal priorities in climate and economy, renewable energy development, environmental justice, and critical mineral resource identification, benefiting a wide range of stakeholders.

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