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Jamestown Mine

A Quasi-Abandoned Mine Closure
in the California Motherlode

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Location

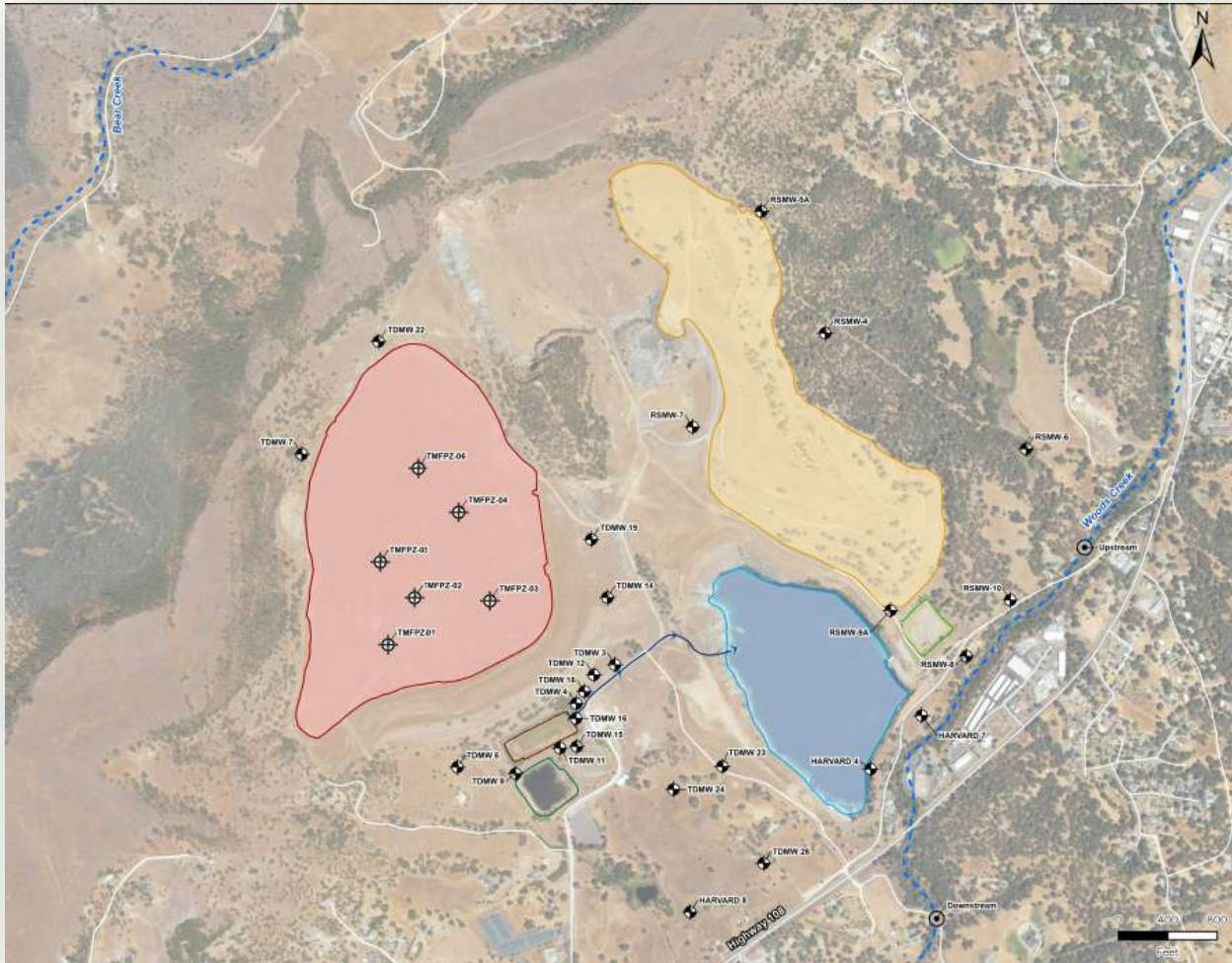


Fig. 4. Map of Major Rock Units and Gold-Belt, Central Sierra Nevada. The Mother Lode and the related East and West gold belts are shown.

Oblique Aerial



Site Map





Jamestown Mine Quick Facts

- Gold discovered in 1848 - large nugget found in creek.
- Placer and underground intermittently to World War II
- Open Pit Gold Mine: 1986 – 1994
- Closure Period: Off and on from 1994 to Present
- RSA progressively closed during and immediately following mining



Worlds largest piece of crystalline gold (16.4 kg). Currently housed at the Ironstone Vineyard, Murphys, CA



Closure Woes

- Sonora Mining struggles to meet closure and oversight commitments: 1997
- Property divestment: late 1990's
- RWQCB Enforcement Action (CAO): 1998
- Sonora Mining Co. goes out of business: 2000-2005
- Litigation and settlement: 2001-2006 (\$6M)
- Stipulated Judgement- creation of Trust: 2006





- Manage closure and post-closure for the PRP's
- Cap and close Tailings Management Facility (TMF)
- Manage the risks and threatened risks associated with the Harvard Pit;
- Close Process Water Retention Pond
- Manage stormwater at the site.
- Primary COCs for mine-impacted water (MIW):
 - TDS
 - Sulfate
 - Na, Mg, Ca
 - Arsenic





TMF Closure (Group B) - 2007

- Dewater 80-acre supernatant pond
- Cover System Installation
 - 2 ft foundation layer
 - 1 ft compacted clay ($K < 10^{-6}$ cm/sec)
 - 1 ft vegetative soil layer
- Grading
- Diversion Ditches
- MIW Draindown (2008 – 2022)
- Ongoing leachate management



TMF in 2023





Harvard Pit Lake (looking south) - 2018

Harvard Pit Closure

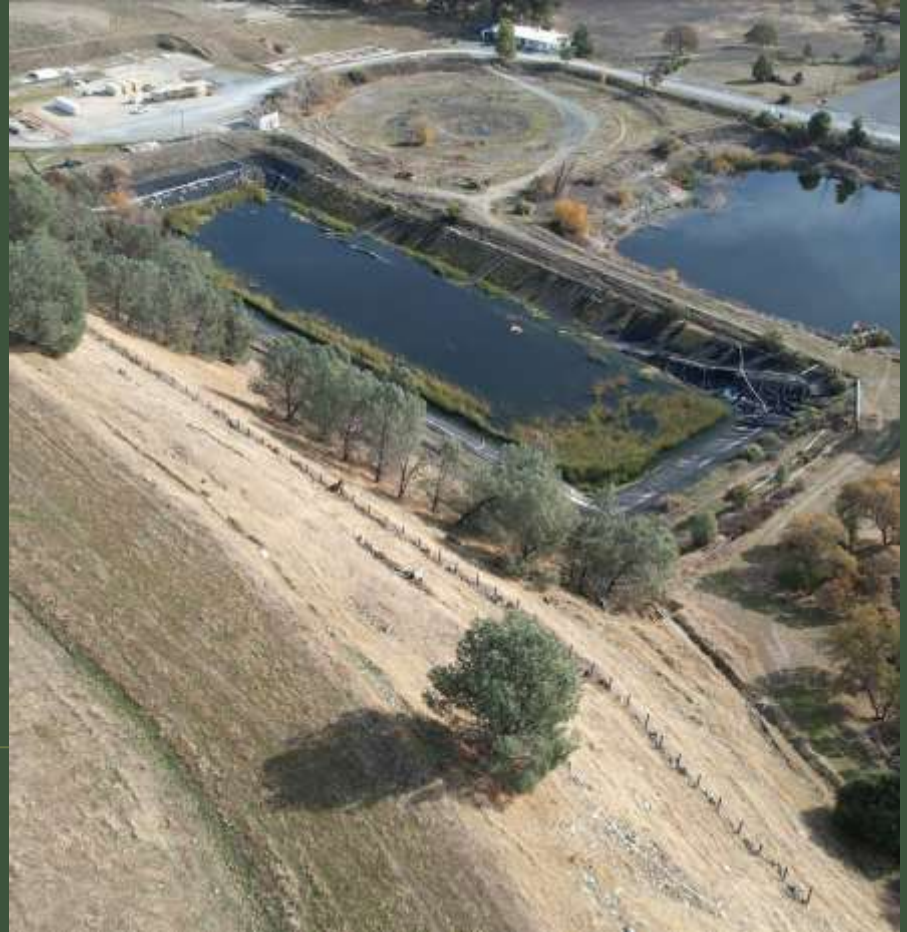
- Engineered Alternative to Title 27 Prescriptive Standards
- Groundwater Sink
- Maximum Elevation Requirement
- Group B Surface Impoundment for MIW (tailings contact water)





PWRP Closure

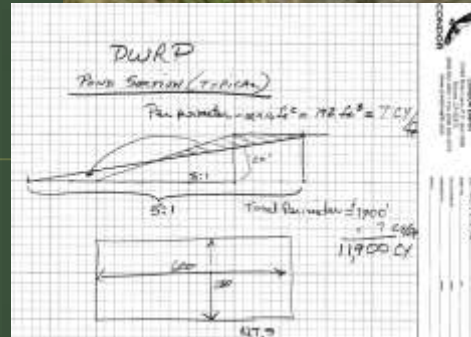
- 2007 - 2024: Group B liquid mine waste containment unit (for tailings LCRS)
- 2022: TMF sump manifold
- 2024-2025: Characterization and dewatering.
- 2026: Closure planning...(next slide)





PWRP Closure

- 2007 - 2024: Group B liquid mine waste containment unit (for tailings LCRS)
- 2022: TMF sump manifold
- 2024-2025: Characterization and dewatering.
- 2026: Closure planning
 - Remove and dispose of cover
 - Demolish sump
 - Regrade slopes
 - Vegetative soil layer and seeding
 - Post-closure land use = waterfowl habitat and stock pond





ONGOING CLOSURE & LONG-TERM OM&M*



1. Title 27 Waste Discharge Requirements
2. **Harvard Pit Lake Management**
3. TMF LCRS and Underdrain Water Management
4. Groundwater Monitoring & Sampling
5. PWRP Final Closure
6. Unreclaimed Rock Storage Closure
7. Stormwater management
8. Periodic well abandonment/maintenance
9. Current annual budget ~\$250K

*Operations, maintenance & monitoring.



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Do you have any questions?



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