Grassy Mountain Project

Malheur County, Oregon

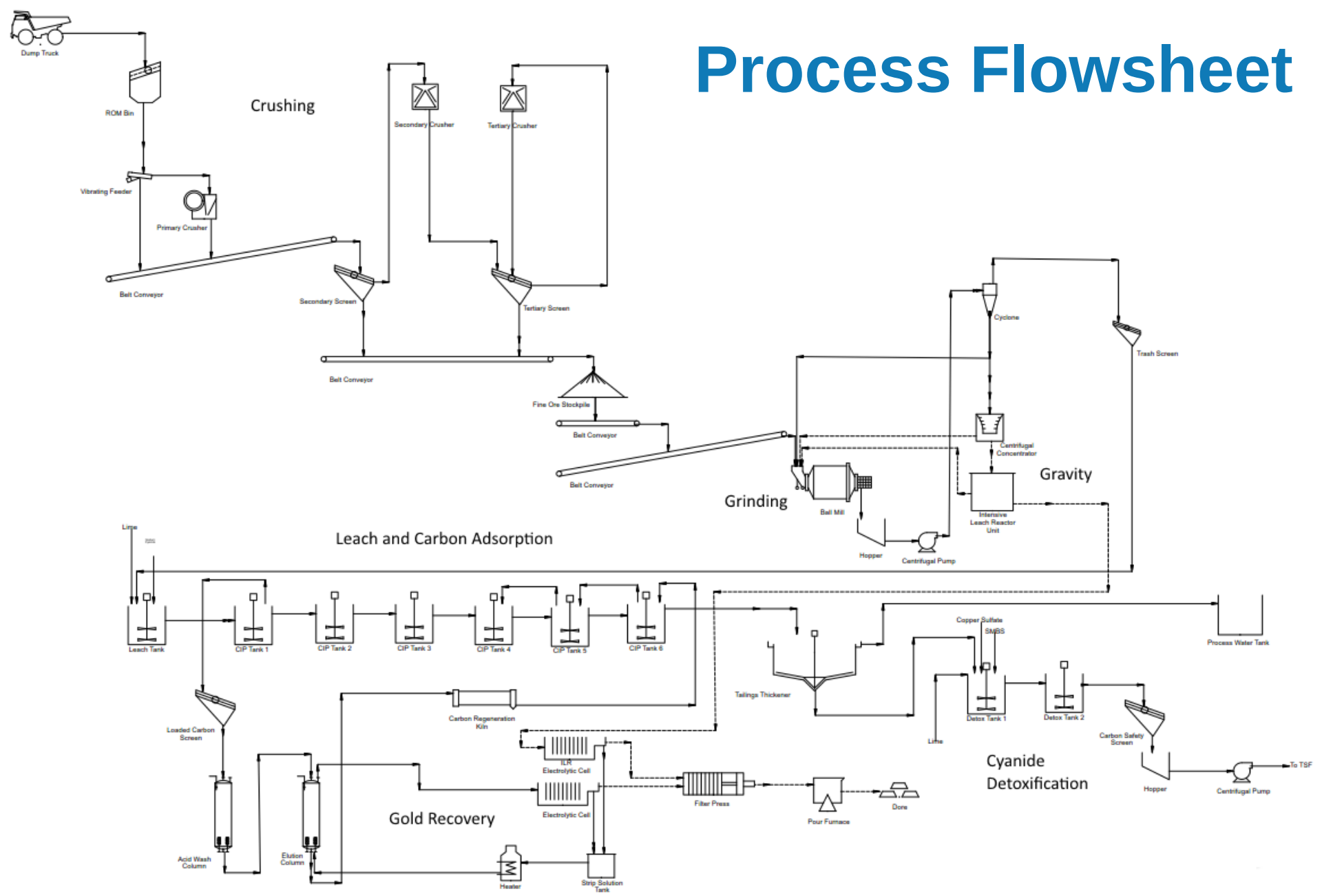
Ausenco

CALICO RESOURCES

Agenda

1. Process Flowsheet
2. Process Description
3. Preliminary Layouts of Process Plant
4. Layout Key Points

Process Flowsheet



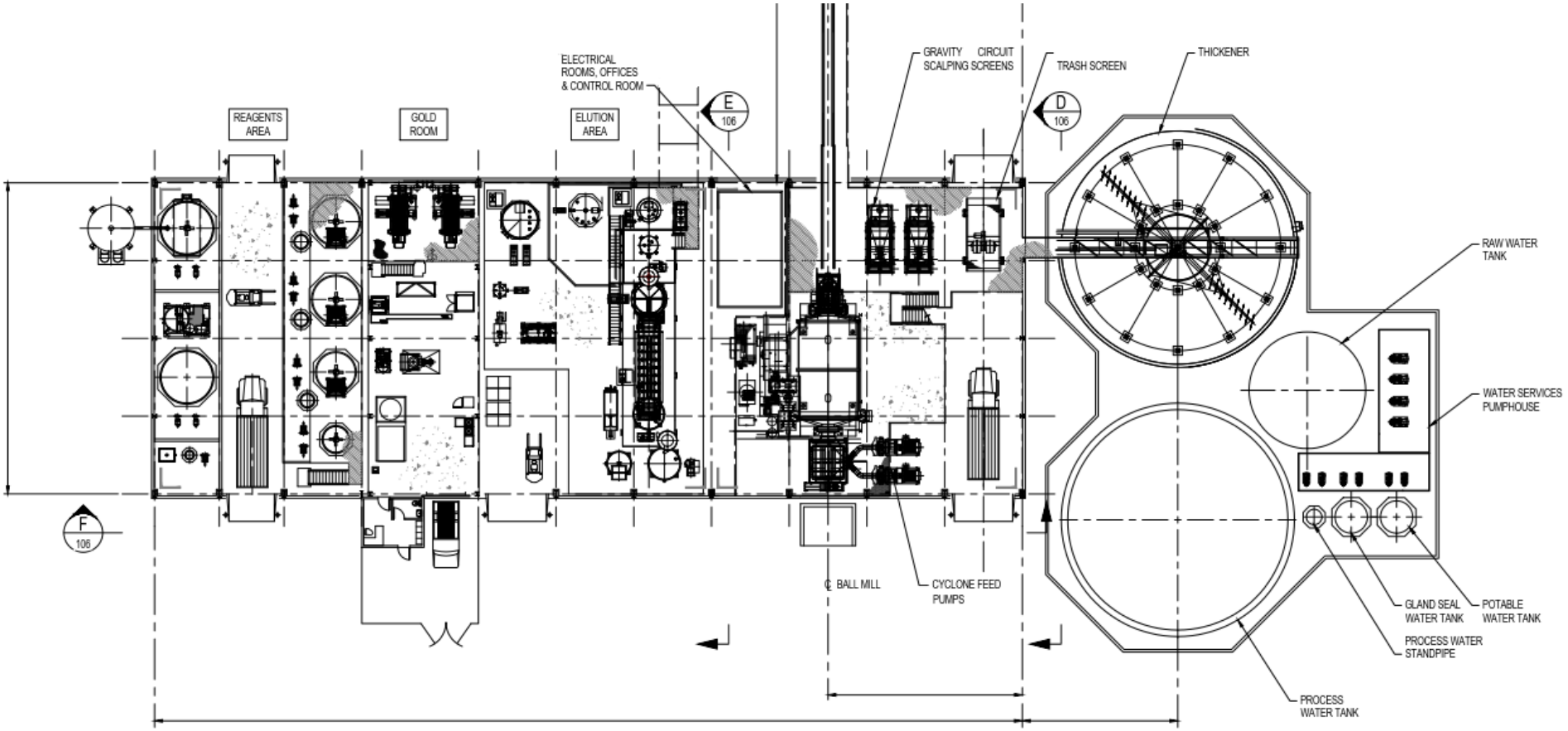
Process Description

- Plant throughput 750 tons/day
- Stage crush with ball mill
- Standard cyanide leach process with adsorption
    - Sodium cyanide for leaching and stripping
    - Lime for pH modfication
    - Air or oxygen addition through blower system
    - Activated carbon for adsorption
- Gold recovery by standard carbon stripping process
    - Sodium cyanide
    - Sodium hydroxide

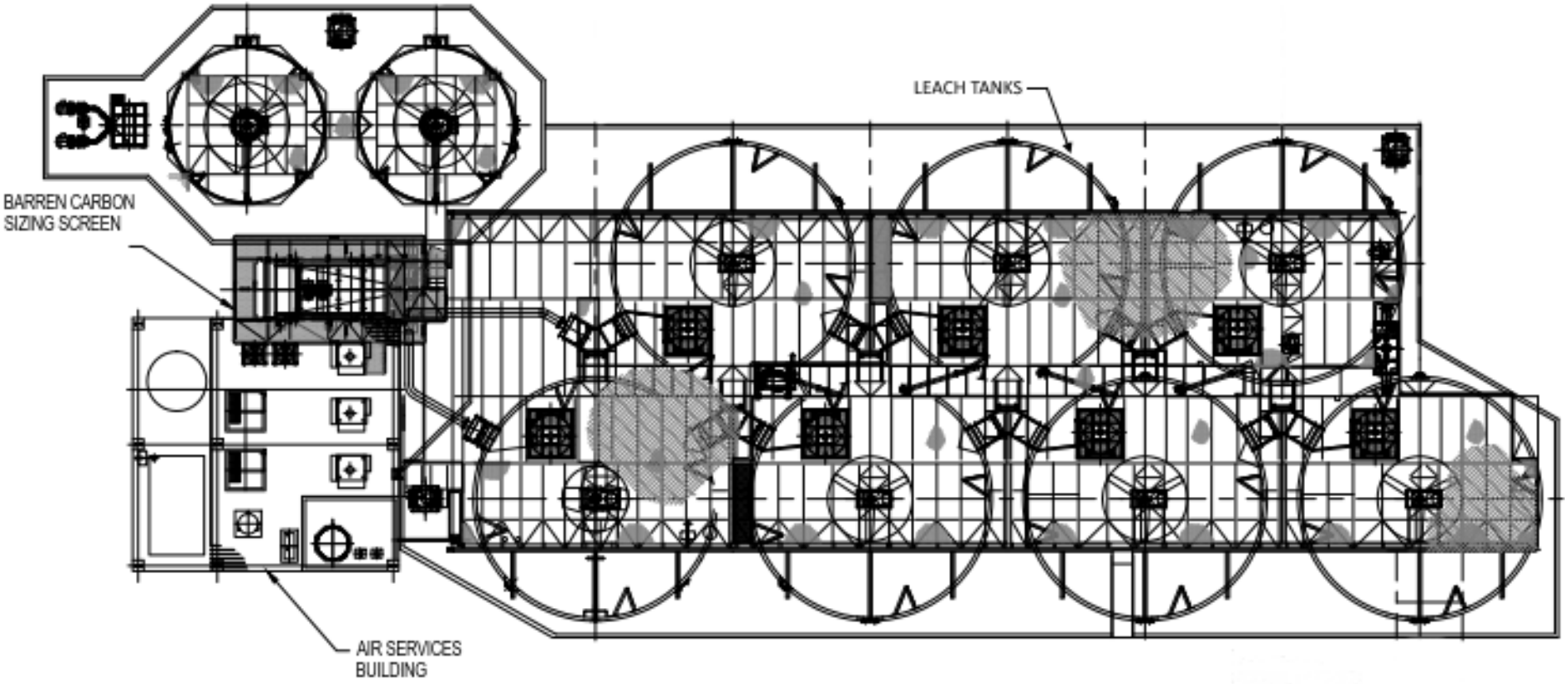
Process Description

- Thickening for water and cyanide recovery before detoxification
- Cyanide detoxification process treating tailings before disposal in TSF
    - Sodium metabisulfite as reducing agent
    - Copper sulfate as catalyst
    - Lime for pH modfication
- Detoxification process will reduce weak acid dissociable cyanide (WAD CN) to below 30 ppm

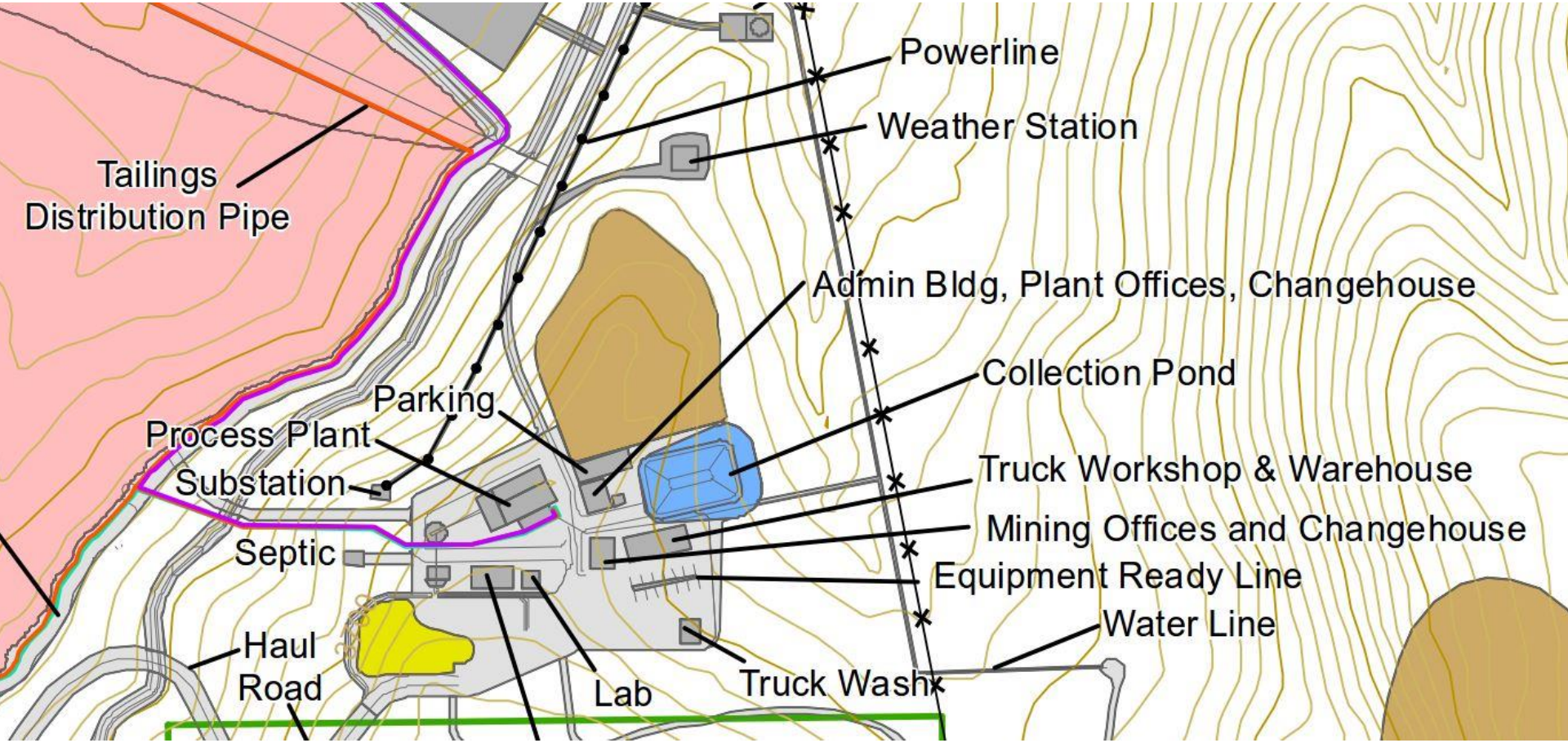
Preliminary Plant Layout



Preliminary Plant Layout



Preliminary Plant Layout



Layout Key Points

- Concrete containment of all wet areas of the plant
- Reagents mixing (e.g. sodium cyanide) in dedicated containment area
- Containment areas sized to contain 110% of largest tank volume
- Plant site run-off water is directed to a containment pond on eastern side. Water returned to the plant.
- Best practice design will be followed as per the International Cyanide Code
- Reagents stored in secure areas in close proximity to the mixing area to limit travel distance between storage and mixing.

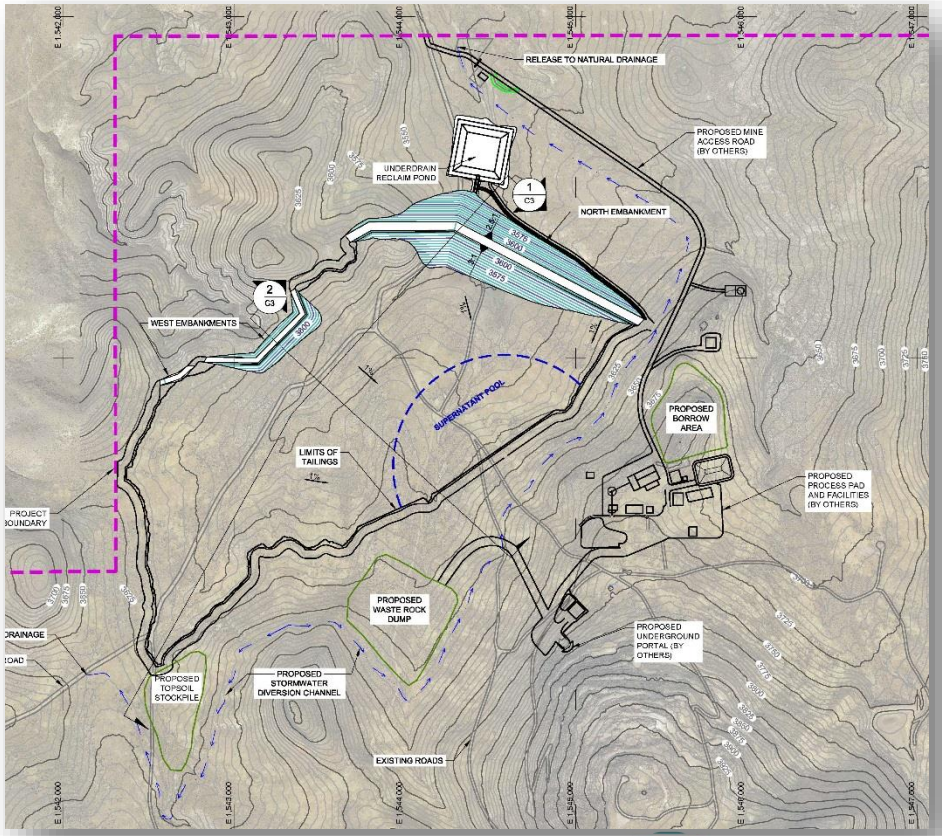
Questions?

Grassy Mountain Project
Tailings Storage Facility
Malheur County, Oregon

Chris MacMahon, PE

Golder Associates Inc.

Tailings Civil Engineer

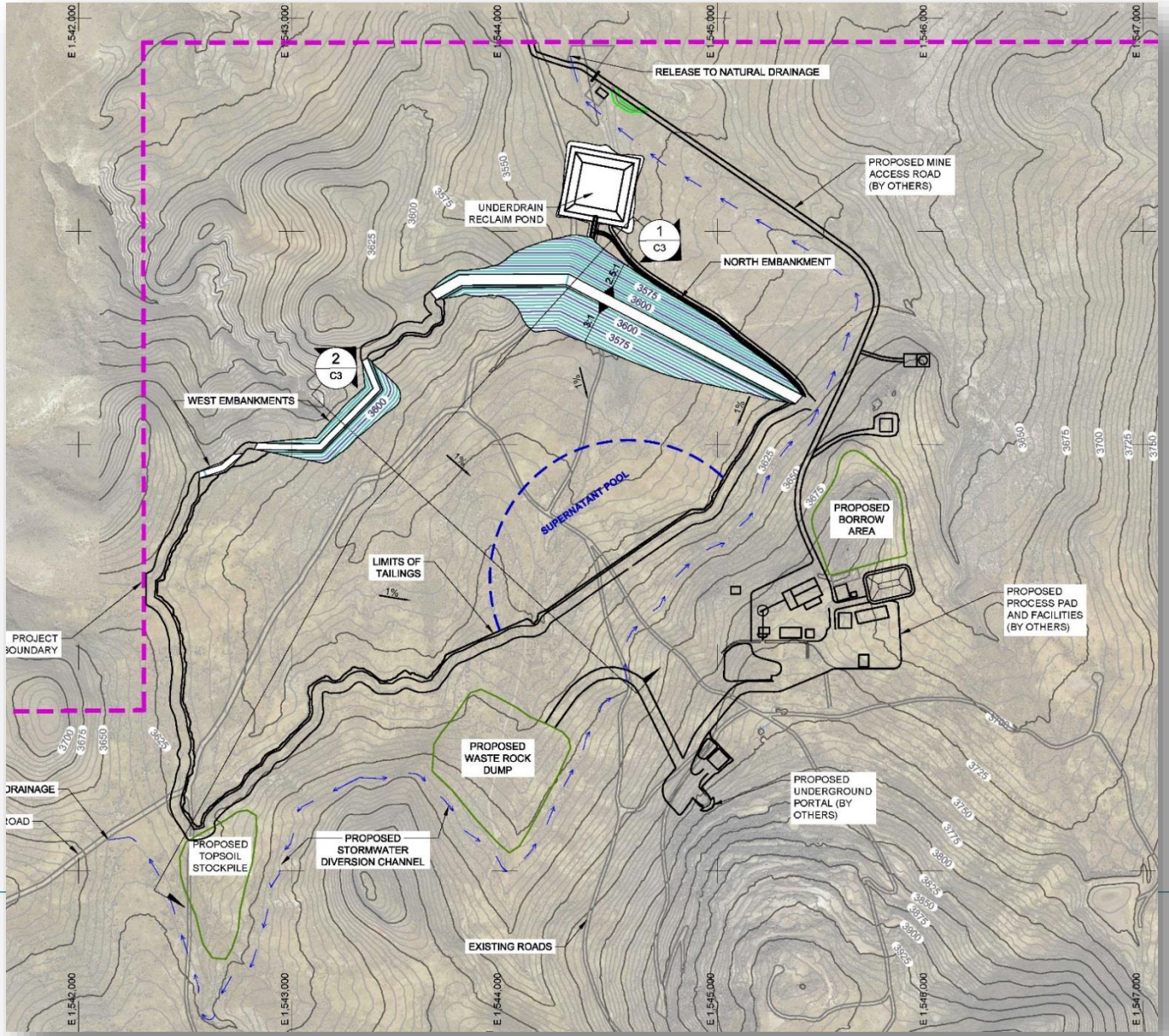


November 16, 2017

AGENDA

- Grassy Mountain Site Layout
- Oregon Administrative Rules (OAR)
- General Tailings Storage Facility (TSF) Overview
- Primary TSF Components
- Typical Operation and Fluid Management
- Questions

GRASSY MOUNTAIN SITE LAYOUT



Golder Associates

OREGON ADMINISTRATIVE RULES FOR TSFs

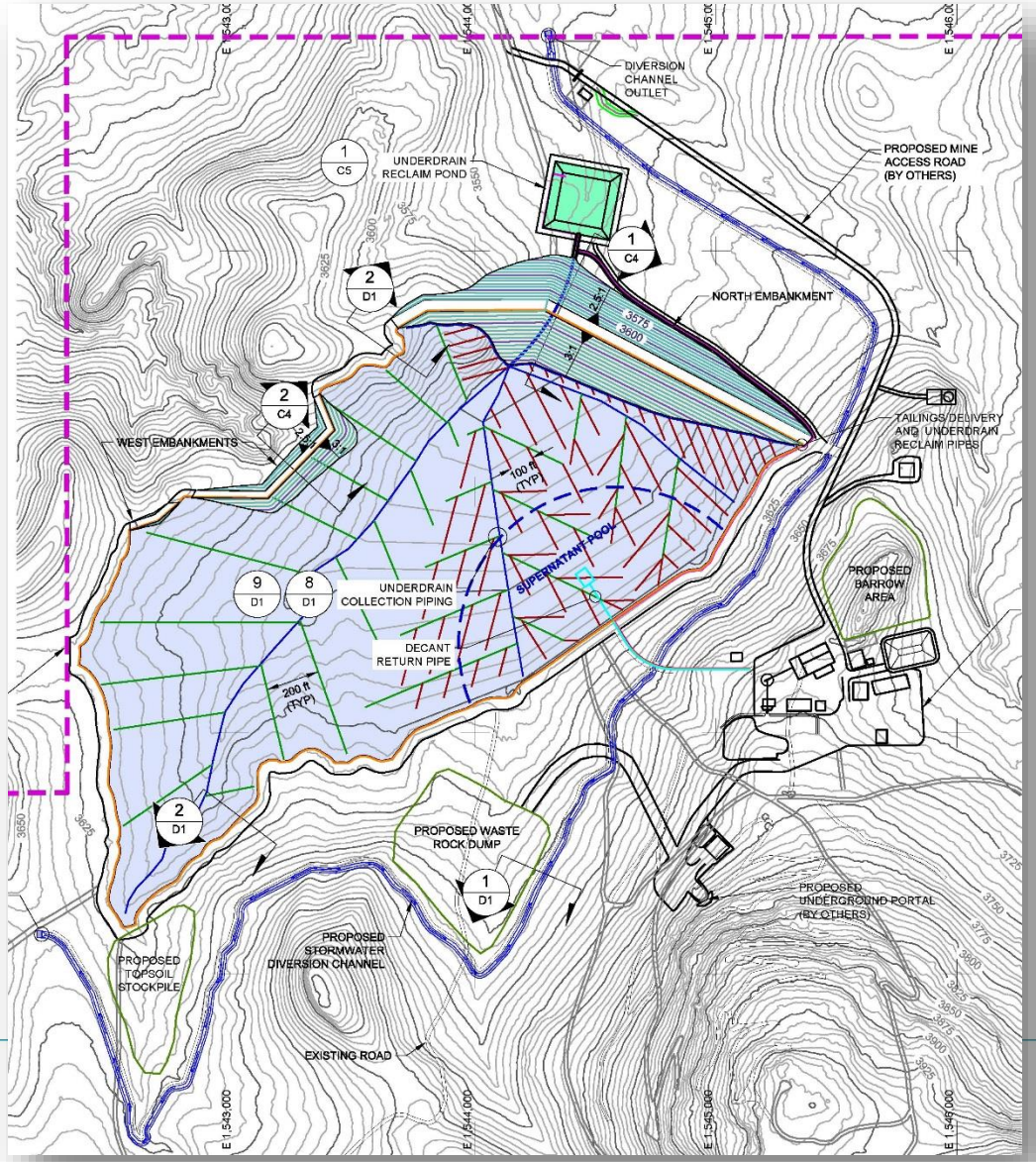
- **TSFs are mine waste containment facilities and dams**
  - **Regulated under multiple OAR Divisions**
    - **Water Pollution Control –** *OAR 340, Division 43 – Chemical Mining.* ***ODEQ***
    - **Dam Safety –** *OAR 690, Division 20 – Dam Safety.* ***OWRD***

- **Division 43** defines minimum design and construction criteria relating to water pollution control
- **Division 20** defines minimum criteria for dam embankments
  - Does not specifically address design concepts or characteristics uniquely specific to TSFs

All design concepts implemented for the Grassy Mountain TSF meet or exceed OAR Guidelines and industry standard of care

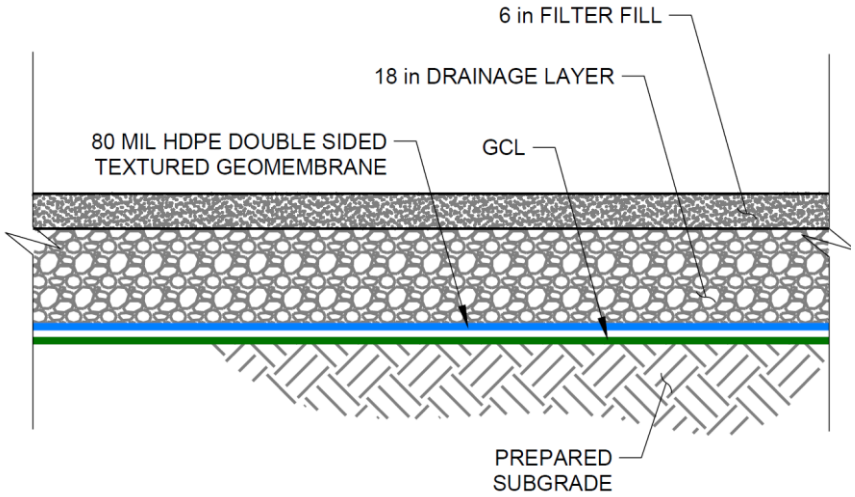
Golder Associates

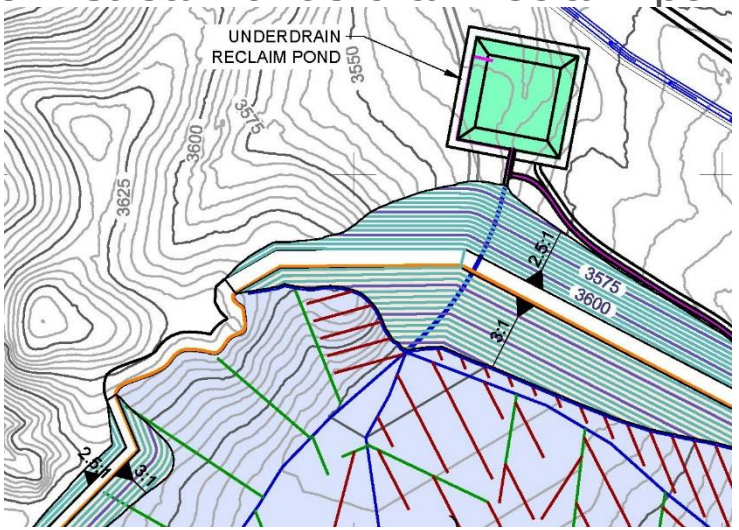
OVERALL TSF LAYOUT



PRIMARY TSF COMPONENTS

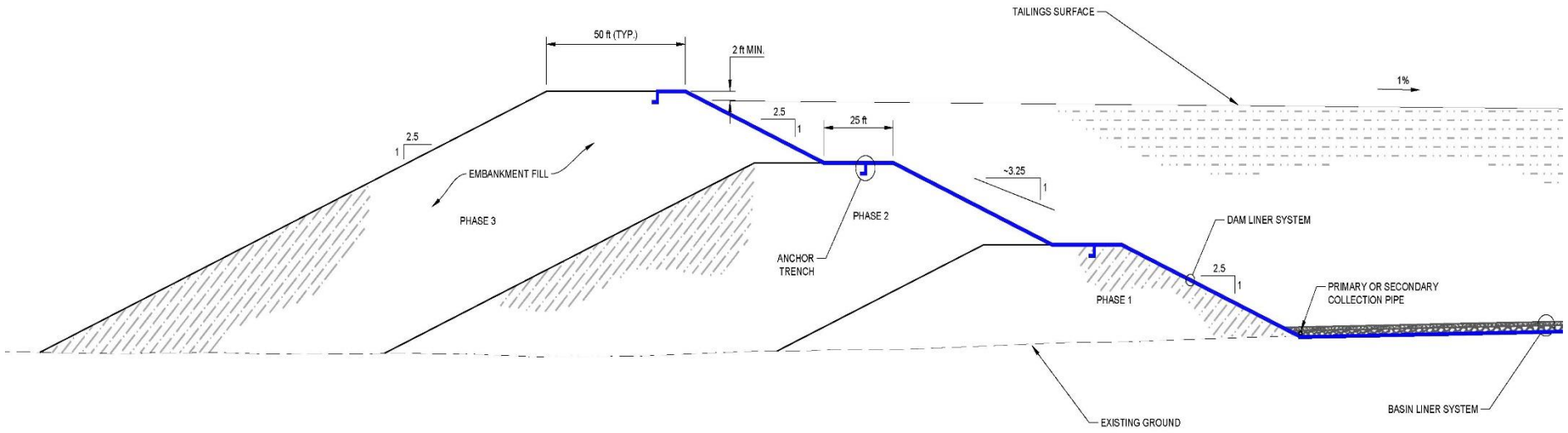
- **Containment and Drainage**
  - Impoundment and dam continuously lined with dual containment lining system.
    - HDPE geomembrane above secondary containment layer providing equivalent of 36 inches of 1 x 10^{-7} cm/sec hydraulic conductivity
  - Network of perforated pipes and drainage blanket above liner to minimum fluid pressure and drain tailings mass
  - Collected underflows are conveyed to downstream underdrain reclaim pond





PRIMARY TSF COMPONENTS

- **Geotechnical Stability**
  - Dams are constructed in phases using downstream techniques
  - Most stable dam configuration
  - Allows for continuous liner on upstream slope
  - Site specific seismic and faulting hazard assessment performed



PRIMARY TSF COMPONENTS

- Tailings delivery and deposition
  - Tailings are slurry (mixture of crushed ore and water)
  - Transported from mill in dual containment piping system
  - Deposited through evenly-spaced spigots around perimeter
- Supernatant Water Management
  - Supernatant water is pumped back to mill for recycle in a dual containment piping system
  - Freeboard (distance from highest impoundment surface and lowest dam crest elevation) is designed to account for:
    - Seasonal water level fluctuations
    - Peak design storm events (100-yr, 24-hr) and wave run-up do to wind

TYPICAL OPERATION

- Maximum mill throughput – 1,000 tons/day
- Prelim. Slurry Concentration – ~50% (w/w) solids
- Tailings are deposited from zones along the perimeter (spigots)
- As tailings are deposited, Tailings and water separate during deposition (supernatant pool)
- Impoundment surface segregates into three distinct area
  1. Wet beach (active deposition)
  2. Dry beach (area at rest)
  3. Supernatant pool
- Water released from bottom of tailings mass is collected in underdrains
- Underdrain and supernatant water are pumped back to mill for reuse
- Water lost due to evaporation and interstitial loss is made up from water well production

QUESTIONS

PARAMOUNT GOLD Nevada

CALICO RESOURCES

Calico Resources USA Corp.

Summary of Planned Environmental Compliance Activities During and Post-Mining, Grassy Mountain Mine

November 16, 2017
Portland, OR

NYSE MKT: PZG

FORWARD LOOKING STATEMENTS

This Presentation contains “forward-looking statements” within the meaning of applicable securities laws relating to Paramount Gold Nevada Corp. (“Paramount”, “we”, “us”, “our”, or the “Company”) which represent our current expectations or beliefs including, but not limited to, statements concerning our operations, performance, and financial condition. These statements by their nature involve substantial risks and uncertainties, credit losses, dependence on management and key personnel, variability of quarterly results, and our ability to continue growth. Statements in this presentation regarding planned drilling activities and any other statements about Paramount’s future expectations, beliefs, goals, plans or prospects constitute forward-looking statements. For this purpose, any statements contained in this presentation that are not statements of historical fact are forward-looking statements. Without limiting the generality of the foregoing, words such as “may”, “anticipate”, “intend”, “could”, “estimate”, or “continue” or the negative or other comparable terminology are intended to identify forward-looking statements. Other matters such as our growth strategy and competition are beyond our control. Should one or more of these risks or uncertainties materialize or should the underlying assumptions prove incorrect, actual outcomes and results could differ materially from those indicated in the forward-looking statements.

Any forward-looking statement speaks only as of the date on which such statement is made, and we undertake no obligation to update any forward-looking statement or statements to reflect events or circumstances after the date on which such statement is made or to reflect the occurrence of unanticipated events. New factors emerge from time to time and it is not possible for us to predict all of such factors, nor can we assess the impact of each such factor on the business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements.

Cautionary Note to U.S. Investors - All mineral resources have been estimated in accordance with the definition standards on mineral resources and mineral reserves of the Canadian Institute of Mining, Metallurgy and Petroleum referred to in National Instrument 43-101. U.S. reporting requirements for disclosure of mineral properties are governed by the Securities and Exchange Commission (“SEC”) Industry Guide 7. Canadian and Guide 7 standards are substantially different.

The SEC permits mining companies, in their filings, to disclose only those mineral deposits that a company can economically and legally extract or produce. We use certain terms in this document, such as "reserves," "resources," "geologic resources," "proven," "probable," "measured," "indicated," and "inferred," which are not recognized under Industry Guide 7. U.S. Investors should be aware that the issuer has no "reserves" as defined by Industry Guide 7 and are cautioned not to assume that any part or all of mineral resources will be confirmed or converted into Industry Guide 7 compliant "reserves". Disclosure of "contained ounces" in a resource is permitted disclosure under Canadian regulations; however, the SEC normally only permits issuers to report mineralization that does not constitute Industry Guide 7 "reserves" by SEC standards as in-place tonnage and grade without reference to unit measures. Mineral resources that are not mineral reserves do not have demonstrated economic viability.

INTRODUCTION AND PURPOSE

MAIN AGENCY REGULATION TO COMPLY WITH

- Bureau of Land Management – Plan of Operations
- Department of Geology and Mineral Industry – Division 37
- Department Of Environmental Quality – Chemical Mining
- Department of Environmental Quality – Air Quality
- Department of Environmental Quality – Solid Waste
- Department of Water Resources – Water Rights
- Department of Water Resources – Dam Safety
- Malheur County – Conditional Use Permit

The Project will have to construct, operate, and closure while maintaining compliance with the permits issues under the above regulatory programs.

PROJECT COMPONENTS

- One underground mine;
- One waste rock storage area;
- One carbon-in-leach processing plant;
- Three borrow pit areas;
- One tailings storage facility;
- Run-of-mine (ROM) ore stockpile;
- One tailings storage facility (TSF) and one reclaim pond;
- A water supply well field and pipeline, associated water delivery pipelines, power;
- A power substation and distribution system;
- Access and haul roads;
- Ancillary facilities that include the following: haul, secondary, and exploration roads; truck workshop; warehouse; storm water diversions; sediment control basins; reagent and fuel storage; storage and laydown yards; explosive magazines; fresh water storage; monitoring wells; meteorological station, an administration/security building; borrow areas; landfill; growth media stockpiles; and solid and hazardous waste management facilities to manage wastes; and
- Reclamation and closure, including the development of an evaporation (E) cell for potential long-term discharge from the TSF

PROJECT SUMMARY

- Calico's compliance with permit conditions will be maintained by the following:
  - Constructing, operating and closing the project in a manner that is consistent with the permit applications and the permit conditions.
  - Calico will have environmental staff at the project to monitor compliance with the permit conditions.

SUMMARY OF OPERATION PROTECTION MEASURES

- Operational Environmental Protection Measures
  - Air Emissions
  - Cultural Resources
  - Erosion and Sediment Control
  - Waters of the State
  - Hazardous Materials
  - Solid Waste
  - Monitoring
  - Growth Media and Cover Salvage and Storage
  - Wildlife and Migratory Birds
  - Protection of Survey Monuments
  - Noxious Weeds and Invasive Nonnative Species
  - Inadvertent Cultural Discoveries
  - Fire Protection Measures
  - Public Safety Measures
  - Quality Assurance Plan

SUMMARY OF RECLAMATION ACTIVITIES

- Plug to underground mine portal and vent raise
- Regrade the area used for waste rock storage
- Mill and Building dismantling and salvage
- Disaggregate foundations and bury
- Regrade all disturbed surfaces and apply growth media
  - Several roads will remain for post closure monitoring and private land access

- TSF Closure and Reclamation
  - Activity evaporate any remaining process solution in the supernatant pool
  - Place any remaining waste rock and construction fill on the tailings surface to establish the final grade
  - Place growth media on TSF surface and slopes
- Solution management
  - Use evaporators to reduce the area of the pool and allow the tails surface to dry
  - Once the pool is small enough pipe to the Reclaim Pond for continued active evaopration
  - Continue Reclaim Pond active evaporation until pool is gone and pond levels will allow passive solution management
  - Use passive evaporation until TSF drainage is eliminated.

SUMMARY OF POST-CLOSURE ACTIVITIES

- Monitoring of revegetation success conducted annual until the revegetation standards have been met
- Noxious weed monitoring and abatement
- Allow TSF drainage to evaporate in the Reclaim Pond
- Monitor TSF drainage flows and chemistry in the Reclaim Pond
- Monitor ground water quality