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**APPLICATION FOR NEW
 WATER POLLUTION CONTROL
 FACILITIES INDIVIDUAL PERMIT
 (WPCF-N)**
 (See pages [4-7](#) for detailed
 instructions)

**State of Oregon
 Department of Environmental Quality**

DEQ USE ONLY

Date Received: _____
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 Amt. Due (if any): _____
 Check #: _____
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☐ OSS Surcharge: _____

A. Reference Information

1. Legal Name of Applicant: _____
2. Is the applicant the owner of the operation or facility? ☐ Yes ☐ No
3. Legal Status of Applicant: ☐ Federal ☐ State ☐ Public ☐ Private ☐ Other: _____
4. Name of Facility (if different than legal name): _____
5. Facility SIC Code: _____ or NAICS Code: _____

B. Facility Location

1. Physical Street Address: _____
 City: _____ State: _____ Zip Code: _____ County: _____
2.

Latitude:	Deg.		Min.		Sec.	
Longitude:	Deg.		Min.		Sec.	
3. Township: _____ Section: _____ Range: _____ Tax Lot#: _____

C. Facility Contacts

1. **Responsible Official**
 Full Name: _____ Telephone #: _____
 Mailing Address: _____ City: _____ State: _____ Zip Code: _____
 Email Address: _____
2. **Facility Contact**
 Full Name: _____ Telephone #: _____
 Mailing Address: _____ City: _____ State: _____ Zip Code: _____
 Email Address: _____
3. **Invoice Contact**
 Full Name: _____ Telephone #: _____
 Billing Address: _____ City: _____ State: _____ Zip Code: _____
 Email Address: _____

D. General Information

1. Briefly describe the proposed facility, type of wastewater, and primary method of wastewater treatment and disposal:
2. Does the proposed facility include a graywater reuse and disposal system?
☐ Yes ☐ No
3. Is the proposed facility located within the service boundary of a municipal sanitary sewerage system?
☐ *Yes ☐ No
*If "Yes", explain why this discharge is not being connected to a sanitary sewer.
4. Does the proposed facility described in D.1, discharge wastewater to an Underground Injection Control (UIC) System?
☐ Yes ☐ No
5. Is there any other wash water or wastewater that will be or is being discharged to a UIC system not described in D.1?
☐ *Yes ☐ No
*If "Yes", also provide the information required in Section C, Preliminary Engineering Report / Facility Plan for each UIC.
6. Does or will stormwater at the facility be drained to a UIC system other than described by this application?
☐ *Yes ☐ No
*If "Yes", also complete UIC Registration Form: Stormwater Drainage Systems (enclosed with this application.

E. Other DEQ or Public Agency Permits

List all other DEQ or public agency permits issued to or applied for this project:

F. Preliminary Engineering Report / Facility Plan

Attach two copies of a Preliminary Engineering Report or Facility Plan Report that fully describes the proposed project using written discussion, maps, diagrams, and any other necessary materials. The report must contain the following information (see [instructions](#) for more detail):

1. Complete description of the proposal.
2. Location of the project, adjacent facilities, and waterways on a USGS topographic map. Including the location and latitude / longitude for all UIS wastewater systems on this map. Also, provide a tax lot map for this project.
3. Schedule for development, including future expansion plan if applicable.
4. Schematic diagrams of waste streams and treatment / disposal facilities. Include the source and quantity of draining water and water used for processing or manufacturing.
5. Wastewater characterization.
6. Plans for disposal of solid waste and sledges.
7. Site evaluation report prepared as outlined by OAR 340-071-0150 (on-site sewage disposal systems only).
8. Groundwater information for all areas where wastewater or sludge will be stored or disposed.

9. Evaluation of groundwater and surface water impacts and the steps that will be taken to prevent impacts from occurring
10. Operation and maintenance plan that specifies the normal operation parameters of the system.

G. Land Use Compatibility Statement

Attach a complete Land Use Compatibility Statement (LUCS) signed by the local land use authority. The application will not be processed without evidence that the proposal is approved by the local land use authority and meets statewide planning goals.

H. Underground Injection Control (UIC) Registration

Federal and state regulations require that all UIC systems be registered with DEQ. By completing this application, your wastewater UIC systems (UIC) will be registered with the DEQ and you will be sent a UIC registration conformation letter to be maintained at the facility. You will be informed by DEQ of any additional UIC regulations that are applicable to your UIC system once this application has been reviewed.

I. Signature Of Legally Authorized Representative

I hereby certify that the information contained in the application is true and correct to the best of my knowledge and belief. In addition, I agree to pay all permit fees required by Oregon Administrative rules 340-045 and/or 340-071. This includes a new application fee to obtain the permit and a compliance determination fee invoiced annually by DEQ to maintain the permit.

Name of Legally Authorized Representative (Type or Print)

Title

12/15/2021

Signature of Legally Authorized Representative

Date

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Regional WQ Permit Coordinator Route copy of application and Preliminary Engineering Report / Facility Plan to HQ UIC Coordinator.

Date Sent to HQ and Initials: _____ Date Received by HQ and Initials: _____

EPA Well Type

5A5 Electric Power Generator	5R21 Aquifer Recharge	5W20 Industrial Process Water	5X15 In Situ Fossil (fuel recover)
5A6 Geothermal Heat (open loop)	5W9 Untreated Sewage	5W31 Septic System (well disposal)	5X16 Spent Brine Return Flow
5A7 Closed Loop Heat Pump Return	5W10 Cesspool	5W32 Septic System (drain field)	5X25 Experimental Technology
5A19 Cooling Water Return	5W11 Septic System (general)	5X13 Mine Tailing Backfill	5X26 Aquifer Remediation
5G30 Special Drainage Water	5W12 Water Treatment Plant Effluent	5X14 Solution Mining	5X27 Other Wells

Application Instructions For New WPCF Individual Permit Oregon Department of Environmental Quality

- **Please answer all questions and submit with the required application fees.**
- **An incomplete application or application with incorrect fees will not be processed.**
- **If the information requested is not applicable, please indicate as such.**

A. Reference Information

1. Enter the legal name of the applicant. The permit will be issued to this entity. This is the person, business, public organization, or other entity that controls the facility described in this application and will be responsible for complying with the conditions of the permit. This must be the legal Oregon name (i.e., Acme Products, Inc.) or the legal representative of the company if it operates under an assumed business name (i.e. John Smith, dba Acme Products). The name must be a legal active name registered with the Oregon Department of Commerce, Corporation Division (503-378-4752), unless otherwise exempted by their regulations
2. Indicate if the applicant is the owner of the facility.
3. Provide the legal status of the applicant. Indicate "public" for a facility solely owned by local government.
4. Enter the common name of the facility or operation if different than the legal name of the applicant.
5. Enter the Standard Industrial Classification (SIC) four-digit code or North American Industry Classification System five or six-digit code (NAICS) for the facility. These codes are used to describe the primary activity at the facility and may be found on fire marshal reports, insurance papers, or tax forms. The NAICS codes replaced the SIC system in 1997, however, it is usually easy to convert between the two systems so either code is acceptable. SIC or NAICS information is also available from the U.S. Census Bureau at 1-888-756-2427 or at <http://www.naics.com/search.htm>.

B. Facility Location

1. Enter the physical location of the facility (street address, not mailing address), including city, state, zip code, and county.
2. Enter the latitude and longitude of the approximate center of the facility or site in degrees/minutes/seconds. Latitude and longitude can be obtained from DEQ's location finder web site at <https://www.oregon.gov/deq/wq/wqpermits/Pages/Tools-and-Data.aspx> or from United States Geological Survey (USGS) quadrangle topographic maps by calling toll-free at 1-888-ASK-USGS (1-888-275-8747). For obtaining latitude and longitude from USGS maps, instructions may be obtained from DEQ's web site at <http://www.oregon.gov/deq/FilterDocs/latlonginstr.pdf>.
3. Enter the Township, Range, Section, and Tax Lot numbers for the regulated site.

C. Facility Contacts

1. Enter the name, telephone number, and mailing address of the Responsible Official. The Responsible Official is the person that receives official correspondence from DEQ, such as renewal notices or notices of noncompliance, and may be contacted if there are questions about this application.
2. Enter the name, telephone number and mailing address of the Facility Contact if different from the Responsible Official. The Facility Contact is the person located at the facility that has specific knowledge of the facility or operation under permit (e.g., the treatment plant operator), and may be contacted if there are specific questions about this application.
3. Enter invoicing information for billing purposes if different from the Responsible Official (e.g., "Invoice To: Business Office - Accounts Payable").

Application Instructions For New WPCF Individual Permit Oregon Department of Environmental Quality

D. General Information

1. Briefly describe the proposed facility, type of wastewater (industrial, sewage or both), and primary method of wastewater treatment and disposal. For example, "2 MGD domestic sewage treatment plant consisting of non-discharging, evaporative lagoons" or "Seasonal jelly processing facility with land irrigation of process wastewater."
2. Indicate if a sanitary sewer system is available to receive this wastewater. If "yes," explain why this discharge is not being connected to sanitary sewer.
3. Indicate if the facility includes a graywater reuse disposal system.
4. Indicate if an Underground Injection Control (UIC) system will be used or is currently used to dispose of wastewater for the proposed facility described in D.1. Wastewater includes wash water, process wastewater, and/or sewage. The following wastewater disposal systems are considered UICs:

• Non-residential onsite sewage system with a design flow of 2,5000 gallons per day or designed to serve 20 or more people a day (excluding single-family residential systems)	• Multi-family residential onsite sewage systems regardless of size. • Any onsite sewage system, regardless of size, that receives industrial wastewater	• Dry wells or sumps • Infiltration trenches • French drains • Industrial wastewater drain hose • Cesspools / sewage drain holes
--	---	--
5. Indicate if there is any other wash water or wastewater at the regulated site that will be or is being discharged to a UIC system not included in the proposed facility description found in D.1. If "yes," also provide the information required in Section F, Preliminary Engineering Report/Facility Plan for each UIC.
6. Indicate if a UIC system other than the one described in this application will be used or is currently used to drain storm water. If "yes," complete the UIC Registration Form: Storm Water Drainage Systems enclosed with this application. The following storm drainage systems are considered UICs:

• Any UIC wastewater system also used form storm drain	• Dry wells or sumps • Infiltration trenches	• French drains • Storm drain holes
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E. Other DEQ or Public Agency Permits

In order for DEQ to coordinate with other DEQ divisions and public agencies, list all permits issued to or applied for this project.

F. Preliminary Engineering Report / Facility Plan

Two copies of a Preliminary Engineering Report or Facility Plan Report must accompany this application and contain the following minimum information:

[**Note:** When constructing community sewage treatment facilities, also refer to DEQ's Guidelines for Planning Community Wastewater Projects (January 1998) for assistance on developing a facility plan.]

1. A description that includes all aspects of the facility, including services to be provided and activities to be conducted.
2. A USGS topography map that shows the location and scope of the project, locations of adjacent facilities, waterways, wetlands, drainage ways, residential areas, industrial facilities, and commercial areas, including the location and latitude/longitude for all UIC wastewater systems. Also provide a tax lot map for the project.
3. The proposed development and construction schedule. Also include future expansion plans or potential plans.
4. Schematic diagrams that include each waste stream, collection facilities, treatment and control facilities, and ultimate disposal methods for each waste product or wastewater effluent. Include a water balance for each waste stream. If alternatives for treatment are also being considered, they should be included as well. Also include the source and quantity of drinking water and water used for processing or manufacturing if different from drinking water supply.
5. A characterization of the quantity and quality of each waste stream.
6. Plans for collection, storage, and disposal of any sludges generated by the treatment process, including a characterization of volume and quality.

Application Instructions For New WPCF Individual Permit Oregon Department of Environmental Quality

7. For on-site sewage systems only, a site evaluation report prepared as outlined in OAR 340-071-0150 by an Agent of the Department or qualified consultant. The report shall contain, at a minimum, a site diagram and observations of the site characteristics.
8. Groundwater information for all areas where wastewater or sludge will be stored or disposed. The following minimum information is required:
 - Climatic information
 - Topography and soil profile description
 - Flood and erosion potential
 - Ground water aquifer characteristics, including quality and gradient
 - Location of all wells and springs within a ½ mile radius
9. A description of the groundwater and surface water impacts that may occur during construction and operation of the facility. Also details the steps that will be taken to prevent such impacts from occurring.
10. An operation and maintenance plan that specifies the normal operating parameters of the system(s). Include, for example, the length and spacing of dose cycles, gallonage of a dose cycle, and calibration of flow meters or elapsed time meters. The maintenance schedule should address ALL components to be inspected and maintained, together with procedures for doing so. For each item, include the frequency for inspecting it and the maintenance procedure. If available, include the manufacturer's operation and maintenance literature for system components.

G. Land Use Compatibility Statement

A completed Land Use Compatibility Statement (LUCS) signed by the local land use authority must be submitted with this application. The application will not be processed without evidence that the proposal is approved by the local land use authority and meets statewide planning goals. A LUCS form is enclosed with this application.

H. Signature of Legally Authorized Representative

The signature of a legally authorized representative must be provided in order to process this application. See the table below for more information.

Definition of Legally Authorized Representative Please also provide the information requested in brackets []
• Corporation: President, Secretary, Treasure, Vice-President, or any person who performs principal business functions; or a manager of one or more facilities that is authorized in accordance to corporate procedure to sign such documents • Partnership: General partner [list of general partners, their addresses, telephone numbers, and email address. • City, County, State, Federal, or other Public Facility: Principal executive office or ranking elected official. • Limited Liability Company: Member [articles of organization] • Trusts: Acting trustee [list of trustees, their addresses, telephones numbers, and email address.

Fee and Application Submittal

Please see the cover letter enclosed with this application form or call the appropriate regional office below for fee information and to determine where to send this application. Send this form and fee to the following regional office. Make your check payable to the Department of Environmental Quality.

For Onsite Sewage Systems in Northwest and Western Region

	DEQ Western Region Attn: WPCF-OS 165 East 7th Avenue, Suite 100 Eugene, OR 97401-3049 541-686-7838 or 1-800-844-8467	
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For All Other Systems or Facilities

DEQ Northwest Region 700 NE Multnomah St., Suite 600 Portland, OR 97232 503-229-5263 or 1-800-452-4011	DEQ Western Region 4026 Fairview Industrial Dr. SE Salem, OR 97302 503-378-8240 or 1-800-349-7677	DEQ Eastern Region 800 SE Emigrant Avenue, Suite 330 Pendleton, OR 97801 541-276-4063 or 1-800-452-4011
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DEQ Regional and Branch Offices

Submit your Application to the Appropriate Regional Office

Northwest Region Counties

Clackamas	Clatsop	Columbia	Multnomah	Tillamook	Washington
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Western Region Counties

Benton	Coos	Curry	Douglas	Jackson	Josephine
Lane	Lincoln	Linn	Marion	Polk	Yamhill

Eastern Region Counties

Baker	Rook	Deschutes	Gilliam	Grant	Harney
Hood River	Jefferson	Klamath	Lake	Malheur	Morrow
Sherman	Umatilla	Union	Wallowa	Wasco	Wheeler

Other Permits Associated with this Project include:

1. Standard Air Contaminant Discharge Permit;
2. Chemical Mining Permit;
3. Chemical Process Mines Permit;
4. Permit to Appropriate Water;
5. Dam Safety Approval (Permit to Store Water in a Reservoir);
6. Public Drinking Water System (Non-Transient Non Community Water System) Permit;
7. Conditional Use Permit;
8. Hazardous Waste Identification Number;
9. Plan of Operations/Record of Decision;
10. Explosives Permit;
11. WPCF-Individual Onsite Permit (for domestic wastewater discharge to septic system).

Note to Reader: Use the CTRL key when clicking on links in this document to open the file in a new browser window.

GRASSY MOUNTAIN MINE PROJECT

**State of Oregon Department of Environmental Quality
Division 43 Permit Application**

Submitted to:

Department of Geology and Mineral Industries
229 Broadalbin St. SW
Albany, Oregon 97321 USA

Prepared by:

Calico Resources USA Corp.
665 Anderson Street
Winnemucca, Nevada 89445

August 2023



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STATE OF OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY DIVISION 43 PERMIT APPLICATION

This Division 43 Permit Application (Application) is submitted as part of the Department of Geology and Mineral Industries (DOGAMI) Division 37 Consolidated Permit Application (CPA) and summarizes the information required by the Department of Environmental Quality (DEQ). Oregon Administrative Rules (OAR)-632-037 make DOGAMI the umbrella agency for the permitting of metal mines, except placer mines and operations using only gravity separation to process ore.

The CPA will be delivered to DOGAMI in paper and digital formats. For ease of addressing the specific topics required by the DEQ, this Application includes references to the sections of the CPA report and appendices that address those topics. Table 1 is a summary of the CPA report organization that will be uploaded to the DOGAMI sharesite for review by all coordinating, commenting, cooperating, and permitting agencies.

Table 1. Organization of Grassy CPA on the DOGAMI Sharesite

CPA report	Grassy Mountain Mine Project, State of Oregon, DOGAMI Division 37 Consolidated Permit Application
Appendix A	A. Patented / Unpatented Mining Claims
Appendix B	Baseline Studies and Work Plans
	B1. Air Quality Resources Baseline Report B2. Aquatic Resources Baseline Report B3. Areas of Critical Environmental Concern Research Natural Areas Baseline Report B4. A Cultural Resource Inventory of 830 Acres for the Grassy Mountain Mine Project – <i>not publicly available</i> B5. Environmental Justice Baseline Report B6. Baseline Geochemical Characterization Report B7. Geology and Soils Baseline Report B8. Grazing Management Baseline Report B9. Grassy Mountain Gold Project Baseline Groundwater Reports B10. Land Use Baseline Report B11. Noise Baseline Report B12. Oregon Natural Heritage Resources Baseline Report B13. Outstanding Natural Areas Baseline Report B14. Recreation Baseline Report B15. Socioeconomics Baseline Report B16. Surface Water Baseline Report B17. Terrestrial Vegetation Baseline Report B18a. Transportation Baseline Report B18b. Transportation Baseline Traffic B18c. Transportation Baseline Trip Generation B19. Visual Resources Baseline Report B20. Wetland Delineation Report

	B21. Wild, Scenic, or Recreational Rivers Baseline Report B22. Wildlife Resources Baseline Report B23. Work Plans, Environmental Baseline Study
Appendix C	Design Reports
	C1. Road Design Report C2. Portal Design Report C3. Mill Design Report C4. Tailings Design Report C5. Well Field Design Report C6. Calico – Grassy Mountain 34.5kV Line C7. Wastewater Facilities Preliminary Engineering Report
Appendix D	Management Plans
	D1. Reclamation Plan D2. Tailings Chemical Monitoring Plan D3. Waste Management Plan D4. Stormwater Management Plan D5. Project Quality Plan - Processing D6. Emergency Response Plan D7. Toxic and Hazardous Substances Transportation and Storage Plan D8. Cyanide Management Plan D9. Petroleum-Contaminated Soil Management Plan D10. Interim Management Plan D11. Inventory of Project Monitoring Plans D12. Monitoring Proposal for Groundwater and Facilities D13. Safety Training Plan D14. Wildlife Protection Plan D15. Wildlife Mitigation Plan D16. Inadvertent Discovery Plan D17. Noxious Weed Monitoring and Control Plan D18. Spring and Seep Monitoring and Mitigation Plan D19. Noise Monitoring Plan
Appendix E	Permit Applications
	E1. Grassy Mountain Mine Standard Air Contaminant Discharge Permit E2. Malheur County Land Use Compatibility Statement (LUCS) E3. Abbreviated Operating Permit Application – Grassy Mountain Basalt Borrow Quarry E4. Abbreviated Operating Permit Application – Grassy Mountain Closure Cover Borrow Areas Quarry E5. ODEQ Storm Water Permit Application E6. Grassy Mountain Tailings Dam, Approval of the TSF Revision 0 Plans and Specification E7. Permit Application for the Water Pollution Control Facility-Onsite facility (septic tank permit) E8. Conditional Approval Water System ID #4195624 E9. OWRD Water Rights Amendment E10. ODEQ Water Pollution Control Facility Application and Division 43 Application
Appendix F	F. Grassy Mountain Cemented Rock Fill Characterization Report
Appendix G	G. Grassy Mountain Gold and Silver Project, Numerical Hydrogeologic Assessment

Appendix H	H. Ecological Risk Assessment for Proposed Tailings Storage Facility
Appendix I	I. Certificate of Liability Insurance
Appendix J	J. Alternatives Assessment Report

1. INTRODUCTION AND GENERAL INFORMATION

Calico Resources USA Corp. (Calico), a wholly-owned subsidiary of Paramount Gold Nevada Corp. (Paramount), proposes to construct, operate, reclaim, and close an underground mining and precious metal milling operation known as the Grassy Mountain Mine Project (Project). The Project is proposed in Township 21 South, Range 44 East (T21S, R44E), and T22S, R44E, Malheur County, Oregon. Additional Project description and location information is below and in the CPA report Section 1 and the CPA appendix, ODEQ Water Pollution Control Facility Application and Division 43 Application.

This application addresses the specific requirements in DEQ Division 43 (OAR-340-043). The information required is included in the CPA; therefore, this Application serves as a reference guide to the sections of the CPA report and appendices that address each topic (Table 1). The information below and in the CPA, along with the WPCF-N Permit Application (CPA appendix: ODEQ Water Pollution Control Facility Application and Division 43 Application) constitute the Division 43 permit required for chemical mining operations.

1.1 APPLICANT

Operator Name:	Calico Resources USA Corp.
Mailing Address:	665 Anderson Street Winnemucca, Nevada 89445
Phone Number:	(775) 625-3600
Taxpayer Identification Number:	45-2188867
Oregon Registry Number:	78127694

1.2 CONTACT INFORMATION

Point of Contact for this Permit Application:

Glen van Treek
665 Anderson Street
Winnemucca, Nevada 89445
Phone (775) 625-3600

Corporate Point of Contact:

Carlo Buffone
665 Anderson Street
Winnemucca, Nevada 89445
Phone (775) 625-3600

Additional information about the applicant can be found in CPA report Section 1 and in the CPA appendix, ODEQ Water Pollution Control Facility Application and Division 43 Application.

1.3 FACILITY LOCATION

The Project is located in Malheur County, Oregon, approximately 22 miles south-southwest of Vale, Oregon, and about 70 miles west of Boise, Idaho. The Project consists of two areas: the Mine and Process Plant Area and the Project Access Area (Permit Area).

The Permit Area shown in all maps and text shows and describes the boundary of the proposed Project. The Mine and Process Plant Area extends north to the Water Supply Wells where the Project Access Area extends north along the Malheur County Road named Dripping Springs Road to the Malheur County Road named Cow Hollow Road and north to the Malheur County Road named Russell Road.

Russell Road is a Malheur County Road that is used as part of the main access route from the city of Vale. Russell Road connects from U.S. 20 to Cow Hollow Road. Cow Hollow Road is part of the main access route connecting Russell Road to Twin Springs Road. Cow Hollow Road is also a Malheur County Road that crosses through undeveloped, privately owned land.

Additional information about the facility location, contact information, land status and surface ownership can be found in CPA report Section 1 and in the CPA appendix, ODEQ Water Pollution Control Facility Application and Division 43 Application.

2. GENERAL INFORMATION

The Project is an underground precious metal mining operation. Calico proposes to mine approximately 2.07 million short tons (US) (Mst) of mill-grade ore and 0.27 Mst of waste rock, for a mine life of approximately 8 years. The tailings storage facility (TSF) has been sized to contain 3.64 Mst.

Haul trucks will transport waste rock to the TWRSF and transport ore to the Run of Mine ore stockpile adjacent to the crushing and milling facilities. The ore will be crushed and leached in a carbon-in-leach (CIL) processing plant to extract the metal, leached tailings will be stored in the TSF, and waste rock will be stored in a temporary waste rock storage facility (TWRSF). Backfill for the Mine will be obtained from the Basalt Quarry while final cover material will be obtained from the Closure Cover Borrow Area.

The Plant and TSF are designed to be zero-discharge through use of stormwater diversion ditches and a collection pond near the Plant. The TSF and reclaim pond will store process water from the Plant. Domestic wastewater and backflush from the potable water treatment system will be treated through a large soil absorption system.

The mining operation, including processing and tailings management, are described in CPA report Section 3 and CPA appendices:

- [C1. Road Design Report](#),
- [C2. Portal Design Report](#),
- [C3. Mill Design Report](#),
- [C4. Tailings Design Report](#),
- [C5. Well Field Design Report](#),
- [C7. Wastewater Facilities Preliminary Engineering Report](#),
- [E3. Abbreviated Operating Permit Application – Grassy Mountain Basalt Borrow Quarry](#),
- [E4. Abbreviated Operating Permit Application – Grassy Mountain Closure Cover Borrow Areas Quarry](#),
- [E6. Grassy Mountain Tailings Dam Approval of the TSF Revision 0 Plans and Specification](#), and
- [E10. ODEQ Water Pollution Control Facility Application and Division 43 Application](#).

A complete description and a set of drawings for the planned water and wastewater facilities are in CPA [Appendix C7](#), *Wastewater Facilities Preliminary Engineering Report*.

3. LIST OF PERMITS ASSOCIATED WITH THE PROJECT

Permits/Approvals anticipated with this project are provided in Table 2.

Table 2. Permits Associated with the Project

Permit	Regulatory Agency
Standard Air Contaminant Discharge Permit	Oregon Department of Environmental Quality, Bureau of Air Pollution Control (OAR 340-216)
Chemical Mining Permit	Oregon Department of Environmental Quality (Division 43)
Chemical Process Mines Permit	Oregon Department of Geology and Mineral Industries (Division 37)
Permit to Appropriate Water	Oregon Water Resources Department
General Discharge Permit (Storm Water)	Oregon Department of Environmental Quality (Division 45)
Dam Safety Approval	Oregon Water Resources Department (Division 20, Chapter 690)
Public Drinking Water System (Non-Transient Non Community Water System)	Oregon Health Authority
Conditional Use Permit	Malheur County
Abbreviated Operating Permit Application – Grassy Mountain Basalt Borrow Quarry Aggregate Application	Oregon Department of Geology and Mineral Industries (Division 30 and 35)
Abbreviated Operating Permit Application – Grassy Mountain Closure Cover Borrow Areas Quarry Application	Oregon Department of Geology and Mineral Industries (Division 30 and 35)
Hazardous Waste Identification Number	United States Environmental Protection Agency
Plan of Operations/Record of Decision	United States Department of the Interior, Bureau of Land Management
Explosives Permit	United States Department of the Treasury, Bureau of Alcohol, Tobacco, Firearms, and Explosives

Table 3. Cross Reference Table for OAR 340-043-0030(1) and (2)

OAR 340-043-0030	Cross Reference
(1) The permit application shall fully describe the existing site and environmental conditions, with an analysis of how the proposed operation will affect the site and its environment. The application shall, at a minimum, contain the information specified for the DOGAMI (Department of Geology and Mineral Industries) consolidated application under ORS 517.971 (Consolidated application) (Section 13, Chapter 735, 1991 Oregon Laws). The Department will also use the information contained in NEPA (National Environmental Policy Act), EA (Environmental Assessment), or EIS (Environmental Impact Statement) documents, if they are required for the project, as partial fulfillment of the requirements of this section.	• This document, Section 6, Analysis of how the Proposed Operation will Affect the Site and the Environment • CPA Baseline Reports, as listed in Table 1. Organization of Grassy CPA on the DOGAMI Sharesite.
(2) The permit application shall, in addition to the information described in section (1) of this rule, include the following information, unless the information has been otherwise submitted:	<i>See below.</i>
(a) Climate/meteorology characterization, with supporting data;	• CPA Section 3.10.1 • CPA Appendix C1, Road Design Report, and Appendix C4, Detailed Design Tailings Storage Facility and Temporary Waste Rock Storage Facility (aka Tailings Design Report, Sections 3.2 and 5.3)
(b) Soils characterization, with supporting data;	• CPA Section 2.7 • CPA Appendix B7, Geology and Soils Baseline Report
(c) Surface water hydrology study, with supporting data;	• CPA Section 2.16 • CPA Appendix B16, Surface Water Baseline Report
(d) Characterization of surface water and groundwater quality;	• CPA Sections 2.9 and 2.16 • CPA Appendix B9, Groundwater Reports: – Vol. I, Groundwater Baseline Report; – Vol. II, Groundwater Characterization Report; – Vol. III, Dewatering Projections and Evaluation of Potential Pumping Impacts • CPA Appendix B16, Surface Water Baseline Report
(e) Inventory of surface water and groundwater beneficial uses;	
(f) Hydrogeologic characterization of groundwater, with supporting data;	• CPA Section 2.9 • CPA Appendix B9, Groundwater Reports: – Vol. I, Groundwater Baseline Report; – Vol. II, Groundwater Characterization Report; – Vol. III, Dewatering Projections and Evaluation of Potential Pumping Impacts
(g) Geologic engineering, hazards and geo-technical study, with supporting data;	• CPA Section 2.7, 3.6 • CPA Section 3. Operating Plans • CPA Appendix C1, Road Design Report, and Appendix C4, Detailed Design Tailings Storage Facility and Temporary Waste Rock Storage Facility (aka Tailings Design Report, Sections 3.2 and 5.3)

OAR 340-043-0030	Cross Reference
(h) Characterization of mine materials and wastes which include, for example, overburden, waste rock, stockpiled ore, leached ore and tailings. Characterization of mine materials and wastes shall include, but not be limited to the following:	• CPA Section 2.6.2 • CPA Appendix B6, <i>Baseline Geochemical Characterization Report</i> • CPA Appendix H, <i>Ecological Risk Assessment for Proposed Tailings Storage Facility</i>
(A) Chemical and mineral analysis related to toxicity;	
(B) Determination of the potential for acid water formation;	
(C) Determination of the potential for long-term leaching of toxic materials from the wastes:	
(i) Characterization of wastewater (quantity and chemical and physical quality) produced by the operation;	• CPA Sections 3.9.3 and 3.10 • CPA Appendix C3, <i>Mill Design Report</i> • CPA Appendix C5, <i>Well Field Design Report</i>
(j) Assessment of the potential for acid-water formation from waste disposal facilities, low-grade ore stockpiles, waste rock piles and for surface water or groundwater accumulation in open pits that will remain after mining is ended.	• Section 2.6 • CPA Appendix B6, <i>Baseline Geochemical Characterization Report</i> • CPA Appendix H, <i>Ecological Risk Assessment for Proposed Tailings Storage Facility</i>

4. DESCRIPTION OF THE SITE

In general, the proposed mining and precious metal processing operations will consist of an underground mine and ore processing facilities, including a conventional mill and tailings storage facility (TSF), and Temporary Waste Rock Storage Facility (TWRSF), and other support facilities. The Project will include the following major components:

- An underground mine, with Mine portal, decline, and ventilation shaft;
- TSF with Tailings Embankment, Tailings Impoundment, and Reclaim Pond;
- TWRSF;
- Process Plant area, which includes the Process Plant building, control room, crushing facilities, conveyors, ore bins, control rooms, CIL processing plant, reagent storage building (including chemical and reagent storage), gold room, and Collection Pond;
- Infrastructure and ancillary facilities that include Project site main gate and guard house, administration office and change house, assay laboratory and sample preparation area, truck workshop and warehouse, wash pads, Process Plant workshop and warehouse, meteorological station, explosive magazines, parking areas, ore stockpiles, solid and liquid hazardous waste storage, and fuel storage and dispensing area;
- Roads, including upgrades to the Twin Springs and Cow Hollow roads, and construction of the Mine access, internal access, and Mine haul roads;
- Yards and laydown areas;
- Growth Media Stockpiles;
- Water supply, including Production Wellfield, water pipeline, raw water storage tank, and Potable Water Treatment Plant;
- Power supply that includes a power substation, upgraded 14.4 kilovolt (kV) overland power transmission system, new 14.4 kV overland power transmission system, onsite power lines, and generators;
- Permanent and temporary stormwater diversion channels;
- Other areas, including the exploration areas, septic system, and perimeter fence;
- Quarry; and
- Reclamation Borrow Areas.

Calico proposes to mine approximately 2.07 million short tons (US) (Mst) of mill-grade ore and 0.27 Mst of waste rock for a Mine life of approximately 8 years; however, the Tailings Storage Facility (TSF) has been sized to contain 3.64 Mst should additional reserves be identified. The material (both ore and waste) will be extracted from an underground mine using conventional underground mining techniques, including drilling, blasting, mucking, loading, and hauling at a rate of approximately 1,200 short tons per day (stpd), four days per week.

A complete description of the site is included in the CPA report, along with detail on the specific topics in the appendices.

5. SITE CONDITIONS (BASELINE DATA REPORTS)

The Baseline Data Reports (BDRs), listed below, are included in Appendix B to the CPA:

- [B1. Air Quality Resources Baseline Report](#)
- [B2. Aquatic Resources Baseline Report](#)
- [B3. Areas of Critical Environmental Concern Research Natural Areas Baseline Report](#)
- B4. A Cultural Resource Inventory of 830 Acres for the Grassy Mountain Mine Project – *not publicly available*
- [B5. Environmental Justice Baseline Report](#)
- [B6. Baseline Geochemical Characterization Report](#)
- [B7. Geology and Soils Baseline Report](#)
- [B8. Grazing Management Baseline Report](#)
- [B9. Grassy Mountain Gold Project Baseline Groundwater Reports](#)
- [B10. Land Use Baseline Report](#)
- [B11. Noise Baseline Report](#)
- [B12. Oregon Natural Heritage Resources Baseline Report](#)
- [B13. Outstanding Natural Areas Baseline Report](#)
- [B14. Recreation Baseline Report](#)
- [B15. Socioeconomics Baseline Report](#)
- [B16. Surface Water Baseline Report](#)
- [B17. Terrestrial Vegetation Baseline Report](#)
- [B18a. Transportation Baseline Report](#)
- [B18b. Transportation Baseline Traffic](#)
- [B18c. Transportation Baseline Trip Generation](#)
- [B19. Visual Resources Baseline Report](#)
- [B20. Wetland Delineation Report](#)
- [B21. Wild, Scenic, or Recreational Rivers Baseline Report](#)
- [B22. Wildlife Resources Baseline Report](#)
- [B23. Work Plans, Environmental Baseline Study](#)

6. ANALYSIS OF HOW THE PROPOSED OPERATION WILL AFFECT THE SITE AND THE ENVIRONMENT

The TSF is designed as a zero-discharge facility capable of storing the 500-year, 24-hour storm event and an allowance for wave action and to meet the minimum requirements for a Low Hazard Dam. Permanent and temporary stormwater diversions will collect and divert a majority of the stormwater runoff around the facility to a natural drainage on the north side of the TSF. The TSF impoundment area and upstream embankment slopes will be a continuously lined with both primary and secondary containment. A network of perforated pipes will capture and convey underflow via gravity to the Reclaim Pond located downstream of the main tailings embankment. Supernatant from the Reclaim Pond will be pumped back to the mill for reuse in the process circuit. For details on the design of the TSF and Storm Water Management see CPA [Appendix C1](#), *Road Design Report* and [Appendix D3](#), *Waste Management Plan*.

The design of the Mill and Processing is also zero-discharge. The containment strategy associated with the process plant can be divided between the containment of process flows and reagents, and the collection and containment of surface contact water. Each containment area is located on a cast in-situ concrete slab, which will have curbs providing the required containment volume. Diversion ditches will be constructed above plant infrastructure where required to prevent runoff from entering the process plant areas. Precipitation that falls directly on the pad will be collected in a system of ditches and culverts and directed by gravity towards the collection pond. Details of the design of the Mill and Processing area, including the containment details and stormwater management, see CPA [Appendix C2](#), *Portal Design Report* and [Appendix D3](#), *Waste Management Plan*.

When groundwater is encountered during the mining operation, it will be collected, taken to the surface and used in the processing circuit, as needed. The mine will be backfilled as each level is mined out with material that is not acid-generating, either basalt from the borrow pit on the east side of the Permit Area, or cemented waste rock from the mining operation. For details of the mining operation and the test work that has been completed to evaluate the groundwater, waste rock and basalt, see CPA report Section 3 and [Appendix B6](#) and [Appendix B9](#) (Geochemistry and Groundwater BDRs) of the CPA.

The reclamation plan to achieve site closure is described in CPA report Section 4 and CPA [Appendix D1](#), *Reclamation Plan*, while existing conditions and environmental protection measures are described in CPA report Section 2.0. The remaining management plans and the [Ecological Risk Assessment](#) are provided in the CPA appendices. Additionally, a Post-Reclamation Topography Map is included in CPA [Appendix D1](#), *Reclamation Plan*.

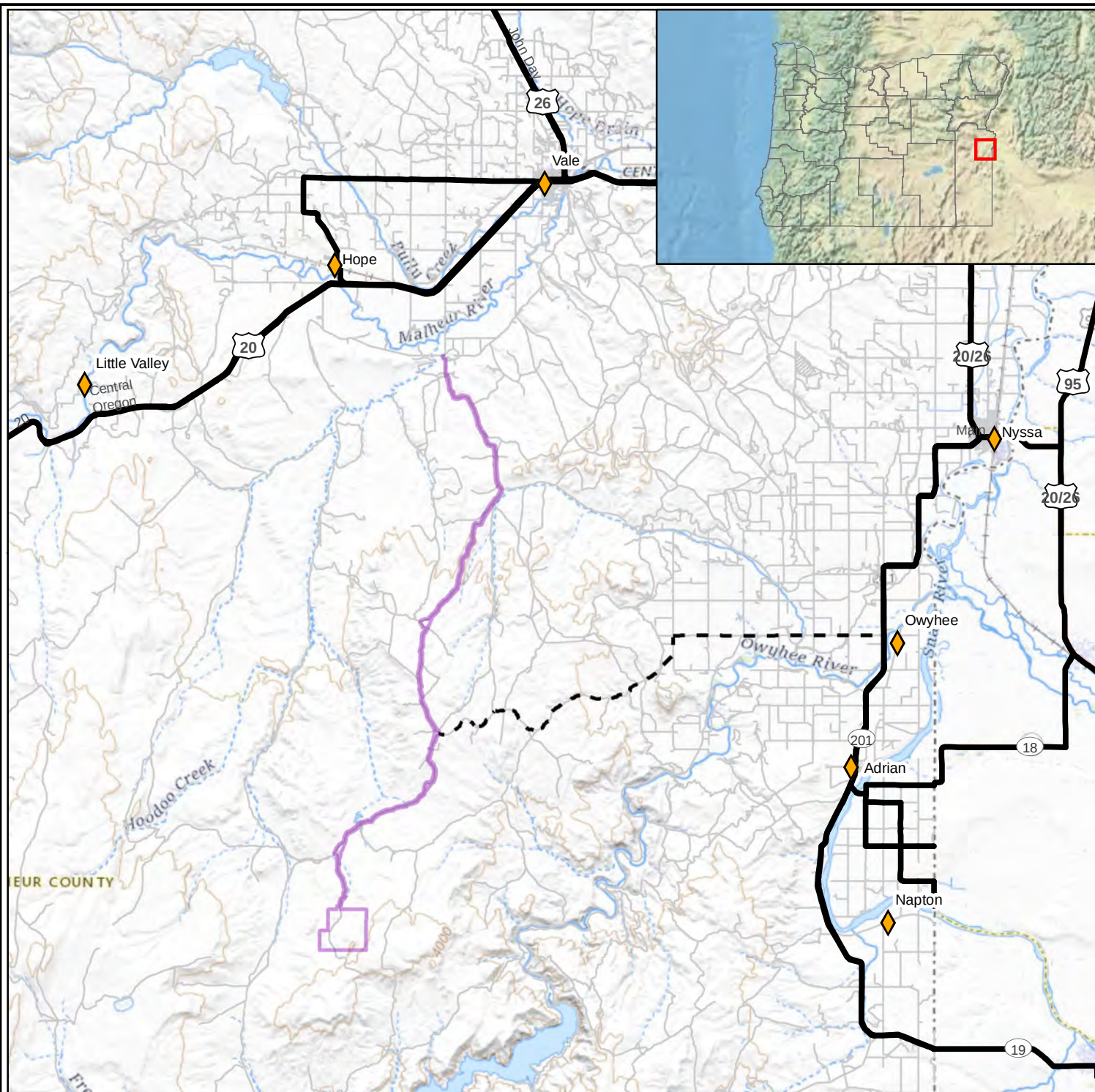
As part of the CPA process, DOGAMI will be completing an Environmental Evaluation (EE) (OAR- 632-037-0085), which will address the impacts to the environment based on the information submitted in the CPA.

7. PLANS AND SPECIFICATIONS

Per OAR 340-043-0040, the CPA must provide a description of the facilities to be constructed, including the following specific topics, which are shown with reference to the section(s) and appendices of the CPA that describe the topic in detail (CPA report Sections 3 and 4 and CPA appendices: [C1. Road Design Report](#), [C2. Portal Design Report](#), [C3. Mill Design Report](#), [C4. Tailings Design Report](#), [C5. Well Field Design Report](#), [C7. Wastewater Facilities Preliminary Engineering Report](#), [D1. Reclamation Plan](#), [D4. Stormwater Pollution Control Plan](#), [D5. Project Quality Plan - Processing](#), [D6. Emergency Response Plan](#), [D10. Interim Management Plan](#), [E5. ODEQ Storm Water Permit Application](#), [E6. Grassy Mountain Tailings Dam, Approval of the TSF Revision 0 Plans and Specification](#), and [E10. ODEQ Water Pollution Control Facility Application and Division 43 Application](#)).

- Tanks ([C2. Portal Design Report](#))
- Pipes and other storage and conveyance means for processing chemicals and solution wastewaters ([C1. Road Design Report](#) and [C2. Portal Design Report](#))
- Management plan for control of surface water ([C4. Tailings Design Report](#), [D4. Stormwater Pollution Control Plan](#), and [E5. ODEQ Storm Water Permit Application](#))
- Management for treatment of excess wastewater ([C3. Mill Design Report](#), [C4. Tailings Design Report](#), and [C7. Wastewater Facilities Preliminary Engineering Report](#))
- Facility construction plans ([C1. Road Design Report](#), [C2. Portal Design Report](#), [C3. Mill Design Report](#), [C4. Tailings Design Report](#), [C7. Wastewater Facilities Preliminary Engineering Report](#), and [C5. Well Field Design Report](#))
- Quality assurance plan for applicable phases of construction ([D5. Project Quality Plan - Processing](#))
- Preliminary closure plan (CPA report Section 4, appendices, [D1. Reclamation Plan](#) and [D4. Stormwater Pollution Control Plan](#))
- Preliminary post-closure monitoring plan (CPA report Section 3.7, appendices, [D4. Stormwater Pollution Control Plan](#) and [D10. Interim Management Plan](#))
- Preliminary post-closure maintenance plan (CPA report Section 3.7, appendices, [D4. Stormwater Pollution Control Plan](#) and [D10. Interim Management Plan](#))
- Spill containment and control plan (CPA report Section 3.11.3, appendix, [D6. Emergency Response Plan](#))

FIGURES



Legend

- PoO Boundary
- Emergency Access Road
- Roads

1"=4 Miles

0 1 2 4Miles

Scale as shown when plotted at 8.5"x11".



Notes:

1. Figure references 1983 UTM zone 11N datum.
2. Road and highway system were referenced from the Bureau of land Management.

Site/Report:

**Calico Resources USA Corp.
Grassy Mountain Mine
State of Oregon Department of
Environmental Quality
Division 43 Permit Application**

Figure:

Location Map



Date: December, 2021

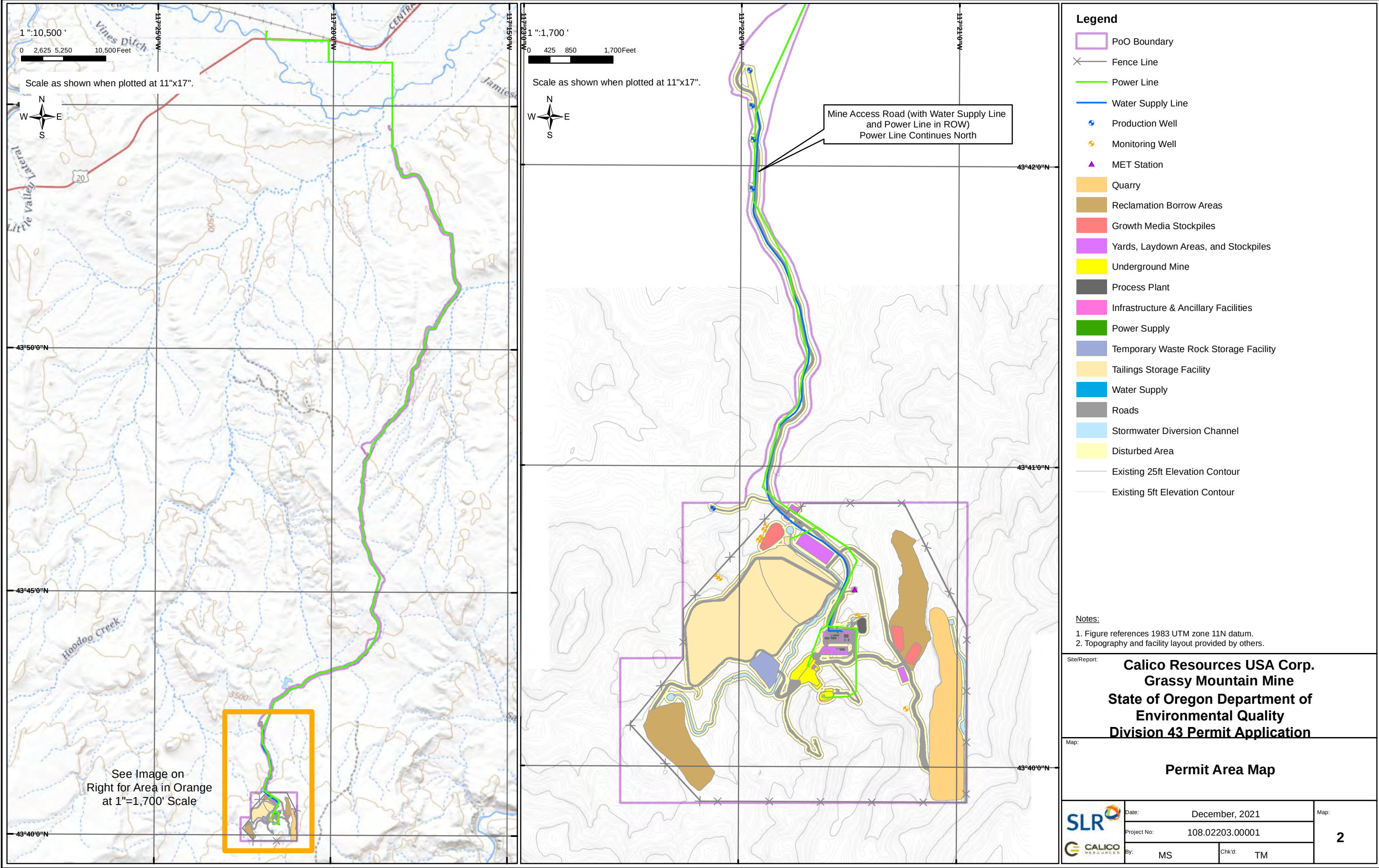
Project No: 108.02203.00001

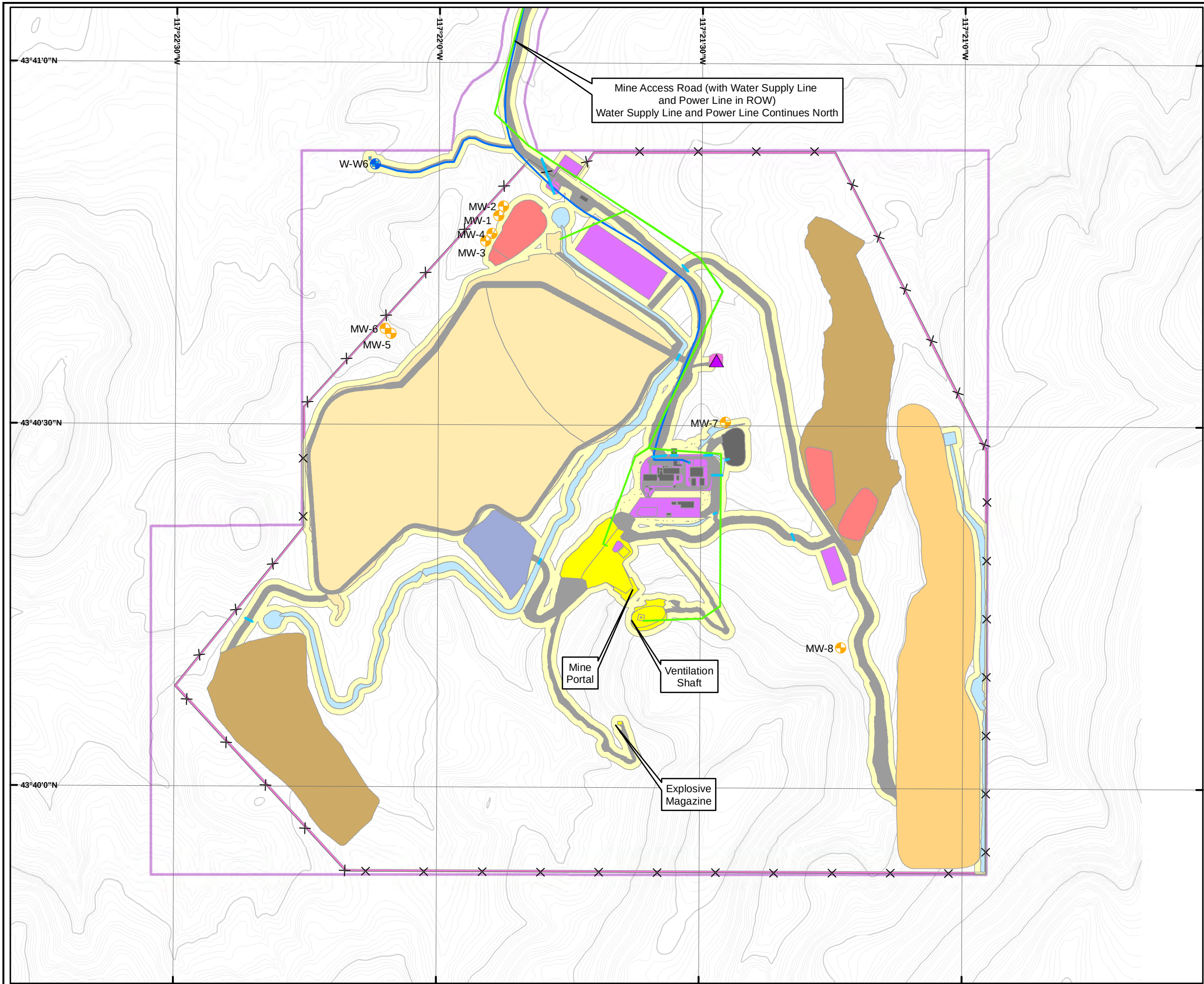
By: MS

Chk'd: TM

Figure:

1





Legend

- PoO Boundary
- Fence Line
- Culvert
- Power Line
- Water Supply Line
- Production Well
- Monitoring Well
- MET Station
- Quarry
- Reclamation Borrow Areas
- Growth Media Stockpiles
- Yards, Laydown Areas, and Stockpiles
- Underground Mine
- Process Plant
- Infrastructure & Ancillary Facilities
- Power Supply
- Temporary Waste Rock Storage Facility
- Tailings Storage Facility
- Water Supply
- Roads
- Stormwater Diversion Channel
- Disturbed Area
- Existing 25ft Elevation Contour
- Existing 5ft Elevation Contour

1"=800'
0 200 400 800 Feet
Scale as shown when plotted at 11"x17".



Notes:

- Figure references 1983 UTM zone 11N datum.
- Topography and facility layout provided by others.

Site/Report: **Calico Resources USA Corp.
Grassy Mountain Mine**
**State of Oregon Department of
Environmental Quality**
Division 43 Permit Application

Map: **General Arrangement**

 	Date: December, 2021	Map: 3
	Project No: 108.02203.00001	
	By: MS Chk'd: TM	