

# **GRASSY MOUNTAIN MINE PROJECT**

## **Inventory of Project Monitoring Plans**

Submitted to:

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## **ACRONYMS**

Calico Resources USA Corp.

CIL carbon-in-leach

CPA Consolidated Permit Application

IMP Inventory of Monitoring Plans

Mst million short tons

OAR Oregon Administrative Rule

ODFW Oregon Department of Fish and Wildlife

Paramount Gold Nevada Corp.

Project Grassy Mountain Mine Project

ROM Run of Mine

SPCC Spill Prevention Control and Countermeasure

stpd short tons per day

SWPCP Storm Water Pollution Control Plan

TSF Tailings Storage Facility

TWRSF Temporary Waste Rock Storage Facility

### 1. INTRODUCTION

#### 1.1 PURPOSE

This *Inventory of Monitoring Plans* (IMP) has been prepared in support of the Grassy Mountain Mine Project (Project) located in Malheur County, Oregon. The IMP contains a list of monitoring plans for the Project to address various requirements promulgated by state or federal regulations, or by conditions of facility permits..

#### 1.2 PROJECT DESCRIPTION

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 at the Project. 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), a Temporary Waste Rock Storage Facility (TWRSF), and other support facilities.

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 7.8 years; however, the 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. Calico will use hydraulic loaders to load the ore and waste into the haul trucks. The haul trucks will transport the waste rock to the TWRSF near the TSF and transport the ore to the Run of Mine (ROM) ore stockpile adjacent to the crushing and milling facilities. The ore will be leached in a carbon-in-leach (CIL) processing plant at a rate of 750 stpd, seven days per week. The leached tailings will go through a detoxification process, then be pumped in a slurry to the TSF, with supernatant solution recovered and pumped back to the Mill.

The Project will be active for approximately 10 years, which includes 2 years of preproduction and 8 years of mining and processing. Four years of closure and reclamation are estimated, with 26 years beyond anticipated for groundwater monitoring. This schedule may be modified based on the rate of mining and future commodities prices.

#### 1.3 STATE REGULATIONS

Oregon Administrative Rule (OAR) 632-037-0060(7) states that operational monitoring and reporting programs must be developed. This regulation also provides examples of the environmental aspects for which monitoring plans must be prepared, which are listed below.

- Surface and groundwater monitoring systems within and outside of the Permit Area and reporting frequency;
- Water balance of the process system and leak detection systems and reporting frequency;

- Biological monitoring and reporting procedures and frequency; and
- Fish and wildlife injury and mortality monitoring and reporting frequency developed according to standards adopted by the Oregon Department of Fish and Wildlife (ODFW).

### 1.4 MONITORING PLANS

As part of the site-wide operating plan, Calico will monitor a variety of environmental aspects as required. The major relevant permits and plans associated that have been prepared for the Project are summarized in Table 1.

**Table 1: Summary of Major Permits Requiring Periodic Monitoring** 

Permit or Requirement	Monitoring Plan Document	Aspects	Appendix Link
Facility Air Permits	N/A	Fugitive dust and process air emissions	N/A; Air quality monitoring will be conducted pursuant to conditions of pending facility air permits
Industrial Storm Water Permit	Storm Water Pollution Control Plan (SWPCP)	Storm Water	Storm Water Pollution Control Plan (CPA <u>Appendix D4</u> )
Water Pollution Control Facility Permit	Monitoring plan for groundwater and leakage detection systems	Groundwater monitoring	Monitoring Well Work Proposal (CPA Appendix D12)
Inspections of Hazardous Waste Accumulation areas	Waste Management Plan	Hazardous wastes	Waste Management Plan (CPA Appendix D3)
TSF cyanide concentrations and net neutralization potential; OAR 340-043-0130(1) and OAR 340-043-0130(1)	Tailings Chemical Monitoring Plan	Tailings	Tailings Chemical Monitoring Plan (CPA <u>Appendix D2</u> )
Spill Prevention Control and Countermeasure (SPCC) Rule 40 CFR 112	SPCC Plan	Petroleum Storage containers, to include planned diesel fuel tanks	N/A; SPCC Plan will be prepared in the future. Inspection requirements are provided in the <i>Emergency Response Plan</i> (CPA <u>Appendix D6</u> ).
Noxious Weed Control	Noxious Weed Monitoring and Control Plan	Noxious Weeds	Noxious Weed Monitoring and Control Plan (CPA Appendix D17)
Wildlife Monitoring	Wildlife Protection Plan	Wildlife	Wildlife Protection Plan (CPA Appendix D14)
Noise Monitoring	Noise Monitoring Plan	Wildlife	Noise Monitoring Plan (CPA Appendix D19)
Waste Rock Storage Facility, Tailings Storage Facility	Monitoring plan for groundwater and leakage detection systems	TSF, WRSF leak detection system monitoring	Monitoring Well Work Proposal (CPA Appendix D12)
Public Drinking Water System Permit	Public Drinking Water System Permit	Potable water system	Conditional Approval Water System ID #4195624 (CPA Appendix E8)