# DEPARTMENT OF STATE LANDS

STAN STEPHENS, GOVERNOR

CAPITOL STATION

STATE OF MONTANA

(406) 444-2074

1625 ELEVENTH AVENUE
HELENA, MONTANA 59620



RECEIVED
MAY 26 1992
ENVIRONMENTAL
QUALITY COUNCIL


May 22, 1992

Dear Reader:

Enclosed for your review is an Environmental Assessment (EA) prepared by the Department of State Lands (DSL). The EA evaluates a proposal by Swansea Mines, Inc. for placer mining west of Wisdom, Montana. The proposal was received February 3, 1992.

Public comment on this EA will be received by the DSL until 5:00 p.m. June 5, 1992. Comments should be about the adequacy of the EA in assessing issues, new information not considered that may influence the analysis, and clarification. Comments should be specific. The DSL will use these comments, answers to these comments, and the EA to make a final decision on the permit. The decision may be to approve the proposal, or deny the proposal.

Verbal or written comments will be accepted and should be directed to:

Bob Winegar  Phone 444 2074
Montana Dept. of State Lands
Capitol Station
Helena, MT 59620

Thank you for your time and consideration. Please call Department of State Lands (444 2074) if you have any questions.

Sincerely,

Bob Winegar

Robert C. Winegar
Program Supervisor
Hard Rock Bureau
Reclamation Division

/ra

Enclosure

## ENVIRONMENTAL ASSESSMENT

APPLICANT: Swansea Gold Mines Inc.

TYPE OF OPERATION: Placer Gold Mine

LOCATION: Sec. 22, 23, 24, 25, 26, 27, & 34, T3S, R18W COUNTY: Beaverhead

PERSON PREPARING E.A.: Tom Mostad

APPLICATION COMPLETE: 4/23/92 (Date) E.A. COMPLETE: 5/22/92 (Date)

| | | | | POTENTIAL IMPACTS | | |
|---|---|---|---|---|---|---|
| | A | B | C | LONG TERM | SHORT TERM | AMPLIFICATION |
| **PHYSICAL ENVIRONMENT** | | | | | | |
| 1. TOPOGRAPHY | | | X | X | | See Topography |
| 2. GEOLOGY; Stability | | | X | | | |
| 3. SOILS; Quality, Distribution | | | X | | | |
| 4. WATER; Quality; Quantity; Distribution | | X | | | | See Water |
| 5. AIR; Quality | | | X | | | |
| 6. UNIQUE, ENDANGERED, FRAGILE, or LIMITED environmental resources | | | X | | | |
| **BIOLOGICAL ENVIRONMENT** | | | | | | |
| 1. TERRESTRIAL, AVIAN, and AQUATIC; species and habitats | | | X | | | |
| 2. VEGETATION; quantity, quality, species | | | X | | X | See Vegetation |
| 3. AGRICULTURE; grazing, crops production | | | X | | | |
| **HUMAN ENVIRONMENT** | | | | | | |
| 1. SOCIAL; structures and mores | | | X | | | |
| 2. CULTURAL uniqueness, diversity | | | X | | | |
| 3. POPULATION; quantity and diversity | | | X | | | |
| 4. HOUSING; quantity and distribution | | | X | | | |
| 5. HUMAN HEALTH & SAFETY | | | X | | | |
| 6. COMMUNITY & PERSONAL INCOME | | | X | | | |

| | | | | POTENTIAL IMPACTS | | |
|---|---|---|---|---|---|---|
| | A | B | C | LONG TERM | SHORT TERM | AMPLIFICATION |
| 7. EMPLOYMENT; quantity and distribution | | | X | | | |
| 8. TAX BASE; local and state tax revenue | | | X | | | |
| 9. GOVERNMENT SERVICES; demand | | | X | | | |
| 10. INDUSTRIAL, COMMERCIAL and AGRICULTURAL activities | | | X | | | |
| 11. HISTORICAL and ARCHAEOLOGICAL | | | X | | | See Cultural and Historical |
| 12. AESTHETICS | | | X | | X | See Aesthetics |
| 13. ENVIRONMENTAL PLANS and GOALS; local and regional | | | X | | | |
| 14. DEMANDS on ENVIRONMENTAL RESOURCES of land, water, air and energy | | | X | | | |
| 15. TRANSPORTATION; networks and traffic flows | | | X | | | |

PUBLIC INVOLVEMENT: One public comment was received by this Department from public notices that were placed in the Ravalli Republic in Hamilton, Montana and the Tribune Examiner in Dillon, Montana for three successive weeks in November and December, 1991.

ALTERNATIVES CONSIDERED: The only alternatives that are reasonable are; accept the application with the attached stipulation or; deny the application as proposed.

COMPLIANCE STATUS: The Department of State Lands has no record of any noncompliance violations by SMI.

RECOMMENDATIONS CONCERNING PREPARATION OF AN EIS: Not needed for the proposed level of activity.

OTHER GROUPS OR AGENCIES CONTACTED OR WHICH MAY HAVE OVERLAPPING JURISDICTION: Montana Department of Fish Wildlife and Parks, State Historical Preservation Office and the Beaverhead National Forest.

INDIVIDUALS OR GROUPS CONTRIBUTING TO THIS EA:

A: Significant Unavoidable Impacts
B: Insignificant as a result of conditioned mitigation
C: Insignificant as proposed

Signature

SWANSEA GOLD MINES INC.
Arcadia Placer Mine Project

Amplification of Potential Impacts to the Physical, Biological and Human Environment Sections of the Environmental Assessment

## BACKGROUND

An application for an Operating Permit was received by the Department of State Lands on November 15, 1991, from Swansea Gold Mines Inc. (SMI). SMI currently has a Small Miners Exclusion Statement (SMES) and is bonded $5,000 for 5 acres of disturbance. The Operating Permit application is to increase the production rate and disturbed acreage beyond the limits that the SMES would allow.

The area of the proposal is 17 miles WSW of Wisdom, Montana, in Beaverhead County near upper Ruby Creek drainage, a tributary of the Big Hole River in Sections 22, 23, 24, 25, 26, 27, 34 T3S, R18W. The SMI proposal involves the mining, road building and facility construction on about 500 acres of a placer bench deposit on a group of 1,078 patented mining claims. Mining and reclamation activities are proposed from May to October and would have a 17-year mine life.

The current land use in the proposal area is wildlife habitat, timber, placer mining and livestock grazing. Lodgepole pine and spruce are the predominant tree species and most trees are small with some timber suitable for post and pole material. The placer mining disturbances are a result of historic mining operations in the 1890's and placer bulk testing done by SMI under a SMES over the past two years. The proposal will include reclamation of the mining done under the SMES and some of the historic mining activity that would not be mined by SMI. SMI would return the land use to livestock grazing, wildlife habitat and timber production.

The patented claims are surrounded by Beaverhead National Forest land. The Forest Service has designated the Management Areas as MA #14, MA #15, MA #19 and MA #20. The specific goals, objectives, management standards of these Management Areas can be obtained from the Beaverhead National Forest land and Resource Management Plan (Forest Plan).

## MINING AND RECLAMATION PLANS

Swansea Gold Mines Inc. proposes to initiate a bench placer mining operation with a stationary washplant. The washplant would consist of a trommel, several screens, jigs and bowls. The capacity of the washplant is 100 - 125 loose cubic yards of ore per hour and would use approximately 60,000 gallons of water per hour. The concentrate (black sands and gold) would be taken to the office in Wisdom for gold recovery.

The mine plan would involve soil and overburden removal, ore extraction, ore hauling, processing, waste hauling and backfilling. All of these processes would be done simultaneously once the initial mining panel and facilities are constructed.

The mining sequence involves the mining of a 2.66-acre panel and, as the mining progresses, backfilling of the previously mined area would follow. The plan is to mine 11 panels a year, equal to one mining block. At the end of the mining season, the washplant would be moved to the next block and another process pond would be constructed. Then final grading, soil redistribution and seeding would be done on all of the area that was mined that year, except for the access roads that would be used the following year.

The reclamation plan is a part of the mine plan, and would be on-going with the mining process. The equipment used in the mining would likely be a loader, an excavator, a dozer and two scrapers. Scrapers returning from the washplant would carry waste back to the mine panel. In this way, reclamation would be done at the same time as the mining.

TOPOGRAPHY

SMI proposes to direct-haul the overburden and soil material from the mining area to the reclamation area. This would be done by removing overburden from the area in front of the mining pit and placing it behind the pit as mining progresses, which should provide a post-mining topography similar to the pre-mining surface.

There are some proposed activities that may change current topography. SMI proposes to reclaim some of the historically mined area with some of the overburden and soil from the first three mining panels. Also, SMI proposes to remove 2,000 loose cubic yards per year for road improvements, and the final mine pit would be reclaimed using some overburden and soil from the five previous mining panels. These activities would slightly change the topography from the pre-mining surface, creating a depression in the landscape. The landscape surface elevation would not change more than a few feet, and would still have the appearance of naturally deposited alluvial gravel when the site is reclaimed.

WATER

The surface water in the area consists of several small streams. Portions of Nugget Creek, Pioneer Creek and Cow Creek drainages are within the permit boundary, but no mining is proposed in their active channels. The proposal is to stay at least 100 feet from any stream. These streams flow into Ruby Creek just downstream from the proposed mining area. SMI has proposed to reconstruct any ephemeral drainages that would be affected by the mining activity and to use any sediment trapping devices that will be needed to prevent erosion.

Through the completeness process, the source of the process water was changed from using creek water to using only well water. This change was in response to potential impacts to the streams during low flows.

The proposal is to have one process pond which would move when the facilities move, and a permanent pond which would be used to store process water prior to use. The permanent pond would be left at the end of mining to be used for stock watering. A stipulation attached to the permit by the Department of State Lands would require the slopes of the permanent pond to be reduced to at least 3H:1V to ensure that the pond would be suitable for a stock pond or to reclaim the pond if it becomes stagnant.

These ponds would be sized to hold at least the 10-year, 24-hour flood event. Two overflow ponds would be constructed down gradient from the process pond in case a flood event would exceed the designed capacity. Also, a ditch would be constructed to carry the overflow from these ponds away from the stream to a natural or constructed depression which would allow percolation of most of the water.

The proposal does not include any designed discharges to the stream and, as a result, a MPDES Permit would not be needed from the Water Quality Bureau.

Gold recovery from the concentrate may be by amalgamation with mercury. The company would be required to have a lipped concrete floor and the water used would be sampled for dissolved mercury. The concentrate after gold recovery would be taken back to the washplant, washed and deposited with the tailing.

Groundwater and surface water monitoring would be on-going with the operation and would be reported to the Department of State Lands in the SMI annual report.

## VEGETATION

The seed mix that would be used for reclamation was recommended by the Wisdom Ranger District and approved by the Department of State Lands and is adequate to revegetate the site. SMI proposes to plant 3 acres out of every 10 acres disturbed with native lodgepole pine, fir and spruce.

SMI commits to a weed control program approved by the Beaverhead County Weed Board prior to start up of mining operations.

## CULTURAL & HISTORICAL

SMI proposes to hire a consultant to do an archeological inventory of the proposed mining area within the first year of mining in conjunction with the State Historic and Preservation Office.

## AESTHETICS

The mining proposal may be visible from the Continental Divide Hiking Trail and/or Beaverhead Forest Road 624. Reclamation would be on-going with mining and is designed to minimize the amount of disturbance at any one time, this way visual impacts would be kept to a minimum.

## ALTERNATIVES CONSIDERED

Denial of the application would mean that placer mining could still be done under a SMES as long as the company abides the law, 82-4-305 MCA, in which the Department of State Lands holds a $5,000 reclamation bond for up to 5 acres of disturbance. Denial would also mean the historically mined area would not have to be reclaimed by the company.