Operating and Reclamation Plan

For sites in sensitive locations, additional information may be required. If more space is needed, attach additional sheets or use the blank sheet provided at the end of this form.

Oregon Department of Geology and Mineral Industries
Mined Land Reclamation Program
229 Broadalbin Street SW
Albany, OR 97321-2246
(541) 967-2039
Fax (541) 967-2075
MUCH OF THE INFORMATION REQUESTED CAN BE EXPLAINED ON THE MINE PLAN MAP.
The map must be a stamped survey from a Professional Land Surveyor on a topographic base map. Surveyed coordinates must be supplied. See Guide to Surveying and Marking.

Map Requirements Include (but are not limited to)

1. Scale (1” = 100’ to 500’)
2. North arrow
3. Appropriate legal description(s) and tax lot numbers, etc.
4. Permit boundary (must be labeled)
5. Location of plant, office, and maintenance facilities
6. Locations of all intermittent water courses, perennial streams, springs, wetlands, and wells
7. Present mine areas and future mining blocks
8. Areas for topsoil and overburden storage or spoil locations, including berms
9. Location of all proposed access roads
10. All property lines within 500’ of the permit boundary
11. Location of processing and stockpile areas, plus visual and sound berms or screens
12. Setbacks from property lines, streams, etc.
13. Utility poles, gas line rights-of-way, etc.
14. Storage location of chemicals and petroleum products
15. Date of map preparation and name of the person preparing map

Pre- and post-mining cross-sections of the land surface may be required.

1. PRE-MINE CONDITIONS
   a) Current land use and zoning
   b) Average depth of topsoil
   c) Type and density of vegetation
   d) Are there any springs, seeps, intermittent or perennial streams on or near the site? yes no
      If yes, list here and locate on mine plan map.
   e) Has a wetland delineation been completed? yes no
      If yes, attach report.
   f) Has a landslide investigation been completed on this property? yes no
      If yes, attach report.

2. POST-MINING LAND USE
   a) What is the planned post-mining beneficial use of the permit area?
      □ Agriculture
      □ Range/Open Space
      □ Forestry
      □ Housing/Construction
      □ Wildlife/Wetland
      □ Recreation
      □ Other

   The post-mining use must be compatible with the local comprehensive plan or have specific land-use approval. For significant aggregate sites zoned for mining, local government must determine the post-mining land use.

3. RECLAMATION TIMING
   a) How many days after mining is completed will reclamation begin? ____________
   b) If reclamation will be concurrent with mining, explain the procedure for concurrent reclamation.

4. OPERATING PLAN
   a) Mining method(s) to be employed (mark all that apply):
      □ single bench □ multiple bench □ pond excavation
      □ placer mine □ side hill cut □ hill top removal
      □ other:
   b) Equipment to be used for mining:
   c) Will there be on-site processing? yes no
      If yes, check type of processing:
      □ wash water contained in a closed system
      □ source of water:
      □ wash water discharged off site
      □ dry processing
      □ other:
   d) Will blasting be employed? yes no
   e) Distance to closest structure not owned by permittee.
   f) Disposition of removed vegetation.

ID No. ____________________
g) Soil types which will be disturbed by mining, processing, or reclamation.

h) Average soil salvage depth

i) Overburden removal depth

j) Will soil, overburden, rock waste or crusher reject dumps or stockpiles be created during mining? □ yes □ no
If yes, list the estimated volume of each at the end of this form and locate on a mine plan map.

Additional information may be required for large dumps or those located on steep terrain.

k) Will this plan require excavating across any property lines? □ yes □ no

l) How and where will soil or subsoils be stored for reclamation? Locate storage areas on mine plan map.

m) What measures will be taken to reduce compaction and prevent water and wind erosion of the topsoil stockpiles and when will they be implemented?

n) What will be the minimum property line setback:
   - for the excavation
   - for processing or storage

5. WATER RESOURCE PROTECTION

a) Will mining occur below groundwater level? □ yes □ no

b) Will mine site dewatering be necessary? □ yes □ no
   If yes, explain procedure and estimated depth to which water will be drawn down inside of the mine and where water will be discharged.

DEQ

A permit from the Department of Environmental Quality may be required for off-site discharges and is required for any discharge into public waters, wetlands, streams or lakes. Contact DOGAMI for these permits.

f) Will any drainages/streams be relocated? □ yes □ no
   If yes, complete Section 11.

DEQ

List the name of stream(s) or drainage(s) and setback from each at the end of this form and locate on a mine plan map.

h) How will the buffer(s) be identified and protected during mining and reclamation?

i) Describe methods employed to control erosion in the permit area. Be specific, i.e., seeding and mulching, sediment basins or ponds, contour ditching, waterbars, etc.

WRD

A permit may be required from the Water Resources Department for dewatering activity.

c) Will process water be contained on site? □ yes □ no
d) Will storm water be contained on site? □ yes □ no
e) Will a pond(s) be used to contain water? □ yes □ no
   Explain containment procedures.

WRD

If a dam is higher than 10 feet, and stores more than 9.2 acre feet of water, approval from the Water Resources Dept. is required prior to construction.

l) If berms or a dam will be constructed, describe construction details and attach a sketch showing construction methods.
m) How deep will impoundment(s) be? __________

n) If the impoundment(s) are to be removed upon completion of mining, how will they be drained and/or filled?

o) Will settling ponds, wetlands, or a water impoundment be left upon final reclamation?_________________________  yes  no

6. GROUNDWATER INFORMATION

a) Proposed mine depth __________

b) Groundwater depth __________
(Under static (pre-mine) conditions)

c) What is groundwater depth estimate based on?

_________________________

d) Flow direction of groundwater, if known. __________

e) Distance to closest well outside the permit boundary. __________

Wells within permit area must be shown on mine plan map. Attach a copy of the well log(s).

7. VISUAL AND NOISE SCREENING

Screening can be very effectively employed to isolate sites from public notice and to minimize noise from operations.

a) Does a natural landform or vegetative screen currently exist along the permit boundary?_________________________  yes  no
If yes, what screen width will be maintained during mining?

_________________________

b) Will a berm and/or vegetation be established to develop a visual screen for the operation?_________________________  yes  no
If yes, describe the height and width of the berms and/or the type and density of vegetation; show location on mine map.

(Crushed rock stockpiles, although not permanent, can also be used to reduce noise from the operation.)

_________________________

c) List fertilizers and lime to be used (include amount).

_________________________

d) How will processing and stockpile sites be reclaimed? If they are to be revegetated, explain procedures which will be employed to decompact areas prior to topsoiling/seedling.

_________________________

10. REVEGETATION TECHNIQUES

a) Species to be seeded/planted by type and amount.

_________________________

b) Describe method and time of year for planned planting.

_________________________

c) List fertilizers and lime to be used (include amount).

_________________________

d) List type and amount of mulch or other erosion control techniques such as erosion netting.

_________________________

Vegetative survival comparable to the density of original ground cover will normally be considered acceptable.

8. EQUIPMENT AND STRUCTURES REMOVED

a) Upon final reclamation, will all structures, visual berms, equipment, and refuse be removed?_________________________  yes  no
If no, explain what will be left.

_________________________

9. RECLAMATION TECHNIQUES

a) What will be done with oversized rock not used during mining?

_________________________

b) What will be the average depth of soil replaced on the area to be reclaimed? __________

If less than 12” of topsoil is available, a substitute material may be required.

_________________________

c) Will additional material be utilized as a soil substitute to complete the revegetation?_________________________  yes  no
If yes, specify type(s), amount(s), and source(s).

_________________________

d) Will any waste products, such as tailings, crusher rejects, etc., be generated during mining?_________________________  yes  no
If yes, what will be done with them?

_________________________

e) A Division of State Lands’ permit is required for relocation of all perennial and some intermittent water courses.

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DSL

Yes

No

DSL

a) During reclamation, will stream channel and/or bank stabilization and rehabilitation be necessary?  Yes  No
If yes, attach plans_________________________
a/

DSL

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e) How will processing and stockpile sites be reclaimed? If they are to be revegetated, explain procedures which will be employed to decompact areas prior to topsoiling/seedling.

_________________________
b) How will surface water runoff and erosion be controlled upon completion of mining? Describe and list structures that will be used.

12. RECLAMATION PROCEDURES - IMPOUNDMENTS & POND DECOMMISSIONING

a) Will dewatering be required? ..........................  yes  no
b) Will it be necessary to backfill a water filled excavation pit or pond? ..........................  yes  no
c) How will settling ponds be stabilized and revegetated?

13. RECLAMATION PROCEDURES - LAND SHAPING

Long continuous slopes should be avoided or broken up with surface contours, ditches, or complex slope shape.

a) What will be the:
   i) -steepest above-water excavated slopes left after mining? (1½:1 is generally maximum)  
   ii) -steepest above-water fill slopes left after mining? (2:1 is generally maximum)

b) What will be done to ensure the stability of excavated slopes?

   
   
   
   c) What will be done to ensure the stability of fill slopes?

   
   
   
   

14. POST-MINING WATER IMPOUNDMENT(S)

a) Number of impoundment(s)  

b) Use of impoundment(s)  

c) Total surface area in acres  

d) Average depth  

e) How much is the water level expected to fluctuate annually?  

f) What will be the steepest and flattest in-water slopes left after mining?

Generally 3:1 in-water slopes are the steepest allowable, except off islands. To increase potential for wetland habitat establishment, 5:1 to 20:1 slopes are needed.

g) Will shallow ponds, shorelines, or other areas conducive to wetland plant development be left?  yes  no

h) What will be the impoundment water source?


15. OTHER PERMITS

In order to assist other agencies in the review of this plan and their ability to ascertain compliance with their laws, list all permits by type and number that are held (or applications filed) for this mine site or processing equipment (such as fill/removal permits, water rights, air quality and stormwater or waste water permits).

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<th>Agency/Permit Type</th>
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WRD A water right for the water source may be needed from the Water Resources Department.

i) What will be done for wildlife & fish enhancement, e.g. fish structures, islands, peninsulas, and irregular shorelines?

j) If wetlands are to be constructed, explain the methods and final configuration.
16. LANDOWNER CONSENT

As surface or mineral rights owner, I concur with the proposed subsequent use for any mining operation and with the operating and reclamation plan as submitted. I also agree to allow access to the State Department of Geology and Mineral Industries or their contractor for reclamation of the mine site if it is declared abandoned by the Department of Geology and Mineral Industries. By my signature below, I certify that I have a legal right to sign this document.

*Appropriate signatures are needed for EACH land parcel.*

I CONCUR (Surface Rights)

Name (Please Print or Type)  _________________________________

Signature  __________________________________________

Title  __________________________________________

Date  __________________________________________

I CONCUR (Mineral Rights):

Name (Please Print or Type)  _________________________________

Signature  __________________________________________

Title  __________________________________________

Date  __________________________________________

17. APPLICANT’S ACCEPTANCE

Name (Please Print or Type)  _________________________________

Signature  __________________________________________

Title  __________________________________________

Date  __________________________________________

18. PREPARED BY (IF OTHER THAN APPLICANT)

Name (Please Print or Type)  _________________________________

Signature  __________________________________________

Title  __________________________________________

Company  __________________________________________

Date  __________________________________________

ID No. __________________________
Use this page for additional space if necessary.
Number responses to correspond with question.