

GUIDELINES to the MINING ACT

PART I

Format Requirements

Reports

1. All reports required to be submitted to the minister by the *Mining Act* or regulations shall

- (a) be bound in a folder;
- (b) be a typewritten original or a photocopy of same;
- (c) be on letter size paper;
- (d) include
 - (i) a cover page,
 - (ii) pages which are sequentially numbered,
 - (iii) a summary, which includes the purpose of the report,
 - (iv) the report body,
 - (v) an appendix with any
 - (A) drawings,
 - (B) tables,
 - (C) diamond drill hole data,
 - (D) core logs, or
 - (E) other information, data, or illustrations of the report required by the *Mining Act* and regulations.

Drawings

2 (1) All engineering or geological plans, longitudinal sections or cross sections shall satisfy the requirements of the *Mining Act* and the regulations.

(2) All drawings shall

- (a) be drawn to an appropriate scale;

- (b) be in metric units;
- (c) have a title block which includes
 - (i) the drawing title,
 - (ii) the drawing number,
 - (iii) the revision number if applicable,
 - (iv) the date of the drawing,
 - (v) the scale of the drawing,
 - (vi) the drawing numbers for reference drawings; and
- (d) where appropriate have
 - (i) an orientating grid,
 - (ii) a north arrow,
 - (iii) legends for symbols and/or codification used in the drawing, and
 - (iv) a National Topographic Series map reference.

Electronic format

3. (1) Where data, drawings or other information to be submitted to the minister has been collected in a digital format or transferred to a digital format, copies of the digital data shall be submitted in a format that is acceptable to the minister.

(2) Electronic files shall be accompanied by a documentation file which shall include a list of all data files, their type, and their format.

Part II

Records Required Under Section 12 of the *Mining Act*

Underground mines

4. Underground level plans and vertical mine sections shall show, where applicable, all
- (a) shafts;
 - (b) access and haulage ramps;
 - (c) main drifts and crosscuts; and
 - (d) active stopes, mined out stopes, and backfilled stopes.

Open pits or quarries

5. With respect to an open pit or quarry, the level plans, longitudinal sections and cross sections shall show, where applicable, all

- (a) access and haulage ramps;
- (b) roadways;
- (c) berms, tree and vegetation screening;
- (d) overburden, top soil, and waste rock stockpiles;
- (e) the pit development plans and the ultimate pit development plan based on current mineable reserves; and
- (f) any other pertinent features in close proximity to the pit or quarry.

Site boundary plan

6. A site boundary plan shall

- (a) show the entire area of the lease; and
- (b) outline all known mineral resources on the lease, projected to surface.

Site plan

7. A site plan shall show in detail all areas of project activities.

Surface plan

8. A surface plan shall show, where applicable,

- (a) all natural topographical features in the project watershed area , including
 - (i) water bodies including lakes and streams,
 - (ii) terrestrial features including hills, and forested areas; and
- (b) all man-made structures or features in the project area.

PART III

Other Plans and Reports

Development plan

9. (1) A development plan shall include
- (a) the surface plan as prescribed in section 8;
 - (b) a geological description of the mineral resource or orebody including geological drawings that
 - (i) show the geological sections and plans with all relevant diamond drill holes, collared from surface or from underground, and
 - (ii) show the outline of the orebody with all relevant diamond drill holes, collared from surface or from underground;
 - (c) a description of planned delineation and exploration drilling and other exploration work;
 - (d) an ore reserve statement detailing the tonnages and grades by category including
 - (i) definitions of each category,
 - (ii) the economic cutoff grades used,
 - (iii) the method of calculation,
 - (iv) the plans and sections used in the calculations, and
 - (v) the ore blocks shown on vertical longitudinal sections;
 - (e) with respect to an underground mine, the underground mining plans as prescribed in section 4;
 - (f) for an open pit or quarry the open-pit mining plans as prescribed in section 5;
 - (g) the planned volume, tonnage and location of waste rock to be placed underground or to a surface area;
 - (h) a description of the milling process that includes
 - (i) the mill flow sheet,
 - (ii) the mill feed rate, head grades, concentrate tonnages, metal recoveries, and tailings tonnages,
 - (iii) a description of any arrangements for mill tailings to be reintroduced to the mine for backfill, consolidated or unconsolidated, with waste rock or without waste rock, and
 - (iv) the milling method and expected operating life at the planned milling rate;
 - (i) a description of concentrate handling;
 - (j) a description of tailings disposal method and description of tailings impoundment area showing total volume available for disposal and anticipated active life of the area;

- (k) a description of all operational effluent treatment methods;
- (l) a five year plan, showing annual production, which shall include;
 - (i) the mine production tonnages and grades,
 - (ii) the mill feed tonnages and grades, and
 - (iii) the areas to be mined, and corresponding reduction in ore reserves, including plans and sections where required;
- (m) a listing, with costs and timing, of all major capital expenditures for the project; and
- (n) the planned number of employees for each department and for the total project during the operating period of the project.

Operational plan

10. (1) The operational plan shall include

- (a) an ore reserve statement detailing the tonnages and grades by category including
 - (i) definitions of each category,
 - (ii) the economic cutoff grades used, and
 - (iii) the method of calculation;
- (b) the planned diamond drilling for the year at the project; including exploration, delineation, in-filling, or other;
- (c) progressive rehabilitation work to be completed during the year with a schedule of work and cost estimates;
- (d) for an underground mine
 - (i) the tonnage and grade of all ore to be mined,
 - (ii) the tonnage of all waste to be mined,
 - (iii) the development scheduled for the year showing metres of advance, and
 - (iv) corresponding drawings to show the areas worked in (i), (ii) and (iii);
- (e) for an open pit or quarry
 - (i) tonnage and grade of ore scheduled to be mined,
 - (ii) the tonnage or volume of all waste rock scheduled to be mined,
 - (iii) the tonnage or volume of overburden scheduled to be mined, and
 - (iv) corresponding drawings to show the areas worked in (i), (ii) and (iii);
- (f) the tonnage and grades of ore to be milled with planned recoveries, and contained metals or metals produced; and

(g) the volume, tonnage, and location of tailings to be discharged.

(2) The drilling under paragraph (1)(b) shall be shown on appropriate drawings including a description of exploration work, geochemical, geophysical, or other.

(3) Progressive rehabilitation work referred to in paragraph (1)(c) shall conform in principle to the progressive rehabilitation outlined in the rehabilitation and closure plan submitted to the minister.

Annual report on operations

11. (1) The operational plan shall conform with the annual report on operations of the lessee and the development plan submitted to the minister as required by the Act and regulations.

(2) The annual operational report shall review all mining and milling activities at the project for the year and include

(a) an ore reserve statement detailing the tonnages and grades by category including

(i) definitions of each category,

(ii) the economic cutoff grades used, and

(iii) the method of calculation;

(b) the diamond drilling completed during the year; exploration, delineation, in-filling, or other;

(c) progressive rehabilitation work completed during the year with a schedule of the associated costs;

(d) for an underground mine

(i) the tonnage and grade of all ore mined,

(ii) tonnage and grade of all waste rock mined,

(iii) development for the year showing metres of advance,

(iv) corresponding drawings to show the areas worked in subparagraphs (i), (ii) and (iii);

(e) for an open pit or quarry

(i) the tonnage and grade of ore mined during the year,

(ii) the tonnage of all waste rock mined during the year,

(iii) the tonnage of overburden removed during the year,

(iv) corresponding drawings to show the areas worked in subparagraphs (i), (ii) and (iii);

(f) the tonnage and grades of ore milled with recoveries, and contained metals or metals produced; and

(g) the volume, tonnage, and location of tailings discharged.

(3) The diamond drilling referred to in paragraph (2)(b) shall be shown on appropriate drawings and a description of exploration work, geochemical, geophysical, or other carried out during the year shall be included.

(4) Progressive rehabilitation work referred to in paragraph (2)(c) completed shall conform in principle to the progressive rehabilitation outlined in the rehabilitation and closure plan submitted to the minister.

Rehabilitation and closure plan

12.(1) A rehabilitation and closure plan shall include plans to, where appropriate,

- (a) rehabilitate all tailings impoundment areas;
- (b) rehabilitate all waste rock areas and ore stockpile areas;
- (c) remove from a site all surface pipelines and buried pipelines unless approval has been given by the minister for those pipelines to remain;
- (d) remove all power transmission lines, poles, substations, transformers, and associated electrical infrastructure unless approval has been given by the minister for that electrical infrastructure to remain;
- (e) remove all buildings, headframes, and other structures including their foundations unless approval has been given by the minister for those structures to remain;
- (f) backfill all shafts, raises, portals or stopes open to surface, and other underground openings to surface;
- (g) where backfilling under paragraph (f) is impractical, the openings shall be capped with reinforced concrete;
- (h) rehabilitate all open-pits or quarries, to the satisfaction of the minister, considering the following factors
 - (i) the dimensions of the pit,
 - (ii) nature of the rock,
 - (iii) rock stability,
 - (iv) surrounding topography,
 - (v) surrounding land use,
 - (vi) proximity to residential or recreational areas,
 - (vii) the disposition of waste rock extracted from the open pit, and
 - (viii) water elevations and ground water characteristics;
- (i) assess all surface and underground workings;
- (j) stockpile all overburden, till, and topsoil for use during progressive rehabilitation or final rehabilitation and closure,

(k) reclaim all roadways, airstrips, and other civil engineering works to the satisfaction of the minister,

(l) remove all machinery, equipment, and storage tanks unless approval has been given by the minister for those items to remain,

(m) rehabilitate all landfill sites and other waste management areas, and

(n) complete any other work necessary for final rehabilitation and closure.

(2) This assessment under paragraph (1)(i) shall determine the long-term stability of the surface and underground workings.

Progressive Rehabilitation

13. (1) Progressive rehabilitation shall be laid out in a general schedule of work, with costs, for the estimated remaining life of the project.

(2) Appropriate drawings shall accompany the schedules referred to in subsection (1) where necessary.

(3) Progressive rehabilitation may include, where appropriate,

(a) re-vegetation of disturbed areas during project development and operations, re-vegetation of abandoned or filled mine waste areas including tailings impoundment areas;

(b) removal and/or disposal of any obsolete structures and materials as per the approved final rehabilitation and closure plan;

(c) backfilling of approved underground or surface excavations using mill tailings to reduce tailings impoundment areas;

(d) methods to reduce or eliminate soil erosion and stabilization of the site which will facilitate re-vegetation and reclamation; and

(e) placement of waste rock in the underground workings or open pits, or by covering the waste rock with till or topsoil and then re-vegetating in an acceptable manner.

Part IV

Small Scale Mines

Small scale mines

14. (1) A mining operation shall be considered a small scale mine where that operation

(a) excavates less than 20,000 cubic metres of ore, waste, and/or overburden per calendar year with a maximum amount of 100,000 cubic metres of ore, waste, and/or overburden being excavated from the original commencement of operations; or

(b) disturbs less than 35,000 square metres of surface area during the life of the operation.

(2) Notwithstanding subsection (1), where a mining operation which is exempt from the *Mining Act*

(a) excavates more than 100,000 cubic metres of ore, waste and/or overburden,

(b) disturbs more than 35,000 square metres of surface area, the operation will no longer be exempted from the *Mining Act*.

(3) A lessee shall have three months, from the date of exceeding

(a) the maximum volume excavated, or

(b) the maximum area disturbed,

to become in compliance with the *Mining Act*.

(4) A project which has the potential to form acid mine water may not be exempted from the *Mining Act*.

(5) A peat project may be exempted from the *Mining Act*.