

**MINERALS ACT**

**CHAPTER 61:03**

**Act**  
**61 of 2000**

**Current Authorised Pages**

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\* These Regulations which have been made under section 25 of the Mines, Boring and Quarries Act (Ch. 61:01) repealed by this Act shall be deemed to be made under this Act until such time as new Regulations are made under this Act. (*See* section 49(2) of this Act).

**CHAPTER 61:03**

**MINERALS ACT**

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CHAPTER 61:03

MINERALS ACT

61 of 2000. **An Act to regulate mining and to provide for matters connected therewith or incidental thereto.**

\*[ASSENTED TO 2ND NOVEMBER 2000]

Short title. **1.** This Act may be cited as the Minerals Act.

Commencement. **2.** This Act came into operation on 6th November 2000.  
[262/2000].

PART I

PRELIMINARY

Interpretation. **3.** In this Act, unless the context otherwise requires—  
“bond” means a Rehabilitation or Performance Bond;  
“deposit” means a natural concentration of minerals;  
“Director” means the Director of Minerals appointed under section 9(1);  
“environment” means all land, areas beneath the land surface, atmosphere, climate, surface water, ground water, sea, marine and coastal areas, seabed, wetlands and natural resources within the jurisdiction of Trinidad and Tobago;  
“environmentally sensitive area” means an area designated as an environmentally sensitive area under section 41 of the  
Ch. 35:05. Environmental Management Act;  
“hydrocarbon” means a naturally occurring organic chemical compound of hydrogen and carbon called petroleum;  
“licence” means a licence issued under this Act;  
“marine area” has the same meaning as defined in the Marine  
Ch. 37:02. Areas (Preservation and Enhancement) Act;  
“mine” includes any place, excavation or working in, on which operations connected with mining is carried on, together with all buildings, premises, erections and appliances belonging

\*See section 2 for date of commencement of this Act.

or appertaining thereto, above or below the ground, for the purpose of winning, treating or preparing minerals, obtaining or extracting any mineral or metal by any mode or method;

“mineral” means a naturally occurring substance that can be mined, whether in solid, liquid or gaseous form, in or below the surface of the soil; any ores containing such minerals and any product of such minerals derived by processing and includes peat and salt, but does not include hydrocarbons and water;

“mining” means excavating or quarrying in, on or, below the surface for the purpose of winning or obtaining minerals and includes any operations directly or indirectly necessary for or incidental to mining operations;

“mining zone” means any area designated as such by the Minister under section 8(1)(f);

“Minister” means the Minister to whom the responsibility for mines is assigned;

“occupant” means a legitimate occupant;

“pit-run” means all unprocessed mineral;

“pollution” has the same meaning as defined in the Environmental Management Act;

Ch. 35:05.

“private mining rights” means rights to mine that are not public mining rights;

“process” means crush, screen, wash, beneficiate, concentrate or otherwise treat minerals in a preliminary manner by a physical, chemical or other process, but does not include smelting and refining;

“public mining rights” means rights to mine in State Lands;

“regulations” means regulations made under this Act;

“rehabilitation” means to restore to previous condition or to improve on previous condition;

“seabed” means the ocean floor;

“sea sand” means sand on the seabed, shoreline or foreshore;

“stone” means limestone, igneous rock, procellanite, argillite, sand, quartzite, shale and sandstone.

Act not to affect hydrocarbon. Ch. 62:01.

**4.** This Act shall not apply to any hydrocarbons or petroleum to which the Petroleum Act applies.

Public and private mining rights.

**5.** (1) Public mining rights are hereby vested in the State and are exercisable by the President.

(2) Private mining rights are exercisable by the owner thereof, subject to this Act or any Regulations or Rules and Orders made under this Act or the regulations as relate thereto.

Categories of minerals.

**6.** (1) For the purpose of proper implementation, minerals that come under the purview of this Act shall be broadly categorised as Common Minerals and Special Minerals.

(2) Stone, clay, sea sand, gravel, tar sands, asphalt, and raw materials generally used for construction, basic manufacturing and industrial purposes and such other minerals that may be specified by Regulations shall form Common Minerals; and metallic ores, gemstones and other precious and semi-precious stones and such other minerals that may be specified by Regulations shall form Special Minerals.

## PART II

### ADMINISTRATION

Minister to be responsible for administration of the Act.

**7.** (1) Subject to this Act, the Minister shall be responsible for the general administration of this Act.

(2) The Minister may, in relation to any particular matter or class of matters, by writing, delegate to the Director, any other public officer, agency of the Government or the Tobago House of Assembly, any of his powers and functions under this Act.

General responsibilities of the Minister.

- 8.** (1) The Minister shall be responsible for—
- (a) the formulation of policy with respect to the exploration for, mining, processing and import and export of minerals, and matters incidental thereto;
  - (b) granting, renewing, revoking or suspending licences for mining, processing, import and export of minerals and other mining related activities;

- (c) approving mineral reserve blocks or mining zones for the conduct of processing operations thereon and for any mining related activities;
- (d) determining exploration, mining and processing procedures and operational guidelines in relation to minerals;
- (e) determining and collecting fees, rents, royalties, and other payments to be charged under the Act and Regulations;
- (f) declaring as a specified area, any area in which mining zones are to be established;
- (g) establishing mining blocks within any specified area; and
- (h) such other things as may be required under the Act.

(2) No licence shall be granted for mining of State lands without the written consent of the Commissioner of State Lands.

**9.** (1) Subject to section 7, the Director of Minerals, appointed by the relevant Service Commission, shall be responsible for the implementation of the Act.

Director of Minerals.

(2) The Director may, with the approval of the Minister, delegate his functions and duties to such other officers of the Division as he may deem fit.

**10.** It shall be the duty of the Director to—

Duties of the Director.

- (a) promote and facilitate the effective and efficient management and the development of mineral resources in general and the State mineral resources in particular;
- (b) conduct geological and geophysical surveys with a view to locating deposits of mineral resources;
- (c) evaluate, collect, compile, analyse and publish data pertaining to the quality and quantity of mineral resources of Trinidad and Tobago with a view to determining their economic potential and use;

- (d) prepare reports, maps and other records, provide data and maintain registers in respect of licences and provide data to the public, subject to any confidentiality;
- (e) advise licensees on proper and safe mining methods;
- (f) advise the operators of mines, in consultation with relevant Ministries, on methods of rehabilitation of lands;
- (g) enforce rehabilitation of State lands affected by mining in consultation with relevant Ministries;
- (h) submit proposals to the Committee for the establishment of mineral reserve blocks or mining zones for the proper regulation of mining activities on State and private lands in consultation with Town and Country Planning Department; and
- (i) inform the Commissioner of State Lands, every six months during the duration of a licence, of the amount of royalties due on any particular licence for mining on State lands.

Powers of the Director.

**11.** Subject to sections 7 and 8, the Director shall have the power to—

- (a) oversee exploration, mining, processing and other operations authorised by a licence issued under the Act;
- (b) enforce regulations and monitor operations of mining, processing and other mining related activities under the Act, to ensure compliance with the licence and the provision of the Act and Regulations;
- (c) regulate the importation, storage, use and disposal of explosives for use in geological and geophysical surveys in consultation with the Ministry of National Security;

- (d) conduct annual audits on licensee firms and individuals for the purpose of verifying royalties and other payments and collecting production data;
- (e) regulate the winning, transportation, processing, storage and disposal of minerals;
- (f) enter into and inspect with the consent of the owner any land, mine or other premises in respect of which a licence has been issued under this Act and carry out such investigations and surveys thereon as may be necessary to ascertain whether the terms and conditions of such licence or any provision of the Act or any Regulation are being complied with;
- (g) abate or remove, as the Director may deem appropriate, at the expense of the licensee where applicable as the Director may deem necessary, any condition resulting from the non-compliance by a licensee of any term or condition of his licence or the provisions of the Act or Regulations;
- (h) examine and take copies of any relevant books, records and other documents which are required to be maintained by a licensee under any regulations made under the Act;
- (i) to terminate illegal mining and illegal mining related activities on both State and private lands; and
- (j) do such other things that may be required or necessary to give effect to the Act and the Regulations.

### PART III

### LICENCES

**12.** (1) Subject to this Act, no person shall explore for, mine, process or import or export minerals except under the authority of a licence issued under this Act.

Prohibition of mining without licence.

(2) Except where the Minister may in special circumstances permit, no licence shall be granted to any person to operate a mine or to mine within a specified area unless such mine or mining is located within a mining zone.

Restrictions on issue of licence.

**13.** No licence to explore for, mine, process, import or export any mineral shall be issued to—

- (a) a person under the age of eighteen years;
- (b) a person who is declared a bankrupt;
- (c) any person who does not possess the financial capacity and technical qualifications necessary, in the opinion of the Director, to conduct the activities in respect of which the licence has been applied for;
- (d) any person who has failed to pay the prescribed fee for the issue of the licence;
- (e) any person who has failed to pay royalties due to the State; or
- (f) a non-national of Trinidad and Tobago or a company, firm or partnership where the shareholding by a national is less than fifty per cent.

Restriction on powers to issue licence.

**14.** (1) No licence shall be issued to any person to explore for, mine or process any minerals upon—

- (a) any burial ground or cemetery without the approval of the Minister to whom the responsibility for Local Government is assigned;
- (b) any land within such distance of a highway, road, rail track, aerodrome, power line or other public work, building or utility as may be prescribed, without the approval of the relevant Minister assigned for the relevant subject;
- (c) any land situated within such distance of a river, lake, stream, reservoir or bund, as may be prescribed, without the approval of the Minister to whom responsibility for land is assigned;

- (d) any national park, protected area or environmentally sensitive area, wildlife sanctuary or forest reserve, without the approval of the relevant Minister assigned for the relevant subject;
- (e) the foreshore, seabed or marine area without the approval of the Minister to whom the responsibility for land is assigned;
- (f) any land vested in the Defence Forces, without the approval of the Minister to whom the responsibility for National Security is assigned;
- (g) land vested in any Municipal Corporation, without the approval of the Minister to whom the responsibility for Local Government is assigned; and
- (h) any archeological sites, geological type sections and survey monuments or any area close to them which would cause destruction by any activity.

(2) In addition to the conditions that may be prescribed under the Act, the Minister referred to in subsection (1), may, in granting a licence, lay down such further conditions as may be determined by such Minister and such conditions shall be specified in the licence.

**15.** (1) There is hereby established a committee called the Minerals Advisory Committee, hereinafter called the “Committee”, for the purpose of advising the Minister on all matters relating to the exploration of, mining, processing, import or export of minerals and matters related thereto.

Minerals  
Advisory  
Committee.

- (2) The Committee shall consist of—
- (a) the Permanent Secretary of the Ministry responsible for mines;
  - (b) the Director of Minerals;
  - (c) the Commissioner of State Lands;
  - (d) the Chief Technical Officer of the Ministry of Works and Transport;
  - (e) a representative of the Town and Country Planning Department;

- (f) the Director of Forestry;
- (g) a representative of the Water and Sewerage Authority;
- (h) a representative of the Environmental Management Authority;
- (i) a legal officer of the Ministry responsible for mines;
- (j) a representative of the Factories Inspectorate;
- (k) a technical officer representing the Tobago House of Assembly;
- (l) a representative of the Ministry of Finance; and
- (m) a representative of the Ministry of Health.

(3) The Permanent Secretary of the Ministry responsible for mines shall be the Chairman and the Director of Minerals shall be the Deputy Chairman of the Committee.

Duties of the  
Committee.

**16.** The duties of the Committee shall be to—

- (a) advise the Minister on matters of general policy with respect to exploration of, mining, processing, import and export of minerals and other mineral related matters;
- (b) receive and consider applications for licences and to make recommendations thereof to the Minister;
- (c) advise the Minister on the establishment of mining zones and the establishment of mining blocks therein;
- (d) advise the Minister on the quantum of bonds;
- (e) advise the Minister on matters of the environment as they relate to mines;
- (f) review the provisions of the Act and the Regulations from time to time and make recommendations to the Minister as may be considered necessary; and
- (g) advise the Minister on all such matters that may be referred to it.

**17.** (1) No licence shall be granted under this Act in respect of State Land, except upon a competitive bidding process open to the public prescribed by Regulations and in consultation with the Minister to whom responsibility for land is assigned. Mining on State Land.

(2) Notwithstanding subsection (1), the Minister may, acting on the advice of the Committee, in the national interest and with the approval of the Cabinet, grant licences for mining and processing outside of the public competitive bidding process.

(3) The advice of the Committee given under subsection (2) shall be in writing and a report of the licences granted in the national interest shall be laid in Parliament on a quarterly basis.

**18.** (1) Subject to section 17, every application for a licence under this Act for the exploration of, mining, processing, importing or exporting of minerals shall be made to the Committee in such form and shall contain such particulars as may be prescribed, and shall be accompanied by such prescribed fee. Application for licence.

(2) In the case of an application of the mining of private lands where the applicant is not the owner of the land to which the application relates, the applicant shall, along with the application, submit sufficient proof to the satisfaction of the Committee that the owner has consented to the use of the land for the purpose to which the application relates.

**19.** (1) On receipt of an application for the exploration, mining, processing, import or export of minerals, the Committee shall make a recommendation to the Minister on the issue of licence, and the Minister may either grant or refuse the licence. Issue of licence.

(2) Where the application for a licence is for the exploration or mining of minerals the Minister may subject to subsection (2) grant or refuse the licence only with the approval of the Cabinet.

**20.** (1) The Minister shall upon the advice of the Committee refuse to issue a licence to explore for, mine or process, import or Refusal to issue a licence.

export minerals where, such operations would be against the interest of the public, taking into account but not limited to the following:

- (a) the preservation of the character of the environment including the flora and fauna;
- (b) the availability of natural environment for the enjoyment of the public;
- (c) the need, if any, for restricting excessively large total mineral output in the locality or in the country;
- (d) the traffic density on roads in the area where the mining or processing takes place;
- (e) any possible effect on the water table or surface drainage pattern;
- (f) the nature and location of other land uses that could be affected by the operations being applied for;
- (g) in the case of exploration, mining and processing applications, the character, location and size of nearby communities;
- (h) danger of pollution to the neighbourhood;
- (i) the availability of minerals locally; and
- (j) any other factors which in the opinion of the Minister would be against the public interest and contrary to the National Environmental Policy.

(2) Where the Minister refuses to issue a licence he shall give the applicant the reasons for the refusal in writing.

Form of  
Licence.

**21.** (1) Subject to this Act, every licence issued under this Act shall—

- (a) be in such form and be subject to such terms and conditions as may be prescribed;
- (b) specify the limits of the area in respect of which the licensee is authorised to explore for or mine, process, import or export minerals; and
- (c) not be transferred or assigned without the written approval of the Minister.

(2) A licence issued under this section shall, unless it is revoked earlier, be valid for such period as shall be specified in the Regulations.

(3) Every licence issued under this section shall be published in the *Gazette* and in a daily newspaper.

**22.** Every licence issued under this Act shall, include the following conditions: Conditions of licence.

- (a) the exploration, mining, processing, and import or export of minerals authorised by the licence shall not be conducted in a fraudulent, reckless, grossly negligent or wilfully improper manner;
- (b) the licensee shall notify the Director, of the discovery of the minerals in the exercise of his rights under the licence;
- (c) the licensee shall comply with all written laws relating to the protection of the environment, health, safety standards and the protection of natural resources;
- (d) the licensee on completion of the exploration or mining shall rehabilitate the land to which such licence relate and to every adjacent land that may be affected by the mining to such condition as may be specified;
- (e) the licensee shall not suspend, curtail or cease the activities authorised by the licence for a period exceeding three months per calendar year except with the prior permission of the Director obtained not less than one month prior to such suspension, curtailment or cessation;
- (f) the licensee shall comply with this Act and the Regulations and all other written laws of Trinidad and Tobago;
- (g) the licensee shall pay to the Permanent Secretary of the Ministry of Energy and Energy Industries the fees, royalties, rents, and any other payments he is required to pay in respect of such licence;

- (h) the licensee shall maintain such books, records and other documents and materials as are required by the Director, to be maintained by him and shall enter the required particulars therein;
- (i) the licensee shall afford the Director or his authorised representative access to any premises in which any activity authorised by the licence is carried on and to make available to such officer, all books, records and other documents and materials maintained as required by section 11(h) by the licensee;
- (j) the licensee shall submit to the Director such reports and give such notices as he is required to give or submit under the Act or the Regulations; and
- (k) the licensee shall deposit with the Director the required bonds.

Surrender of licence.

**23.** The licensee may, with the consent of the Minister, surrender the licence at any time subject to the payment of all outstanding royalties and other dues in respect of the licence.

Renewal of licence.

**24.** (1) A licence issued under this Act may be renewed after the expiration of the period specified in the licence on application made to the Minister not less than thirty days before the expiry of the licence.

(2) The Minister may, on the recommendation of the Committee or on his own motion either renew the licence or refuse the application for renewal.

(3) Where the Minister refuses an application for a renewal of a licence he shall inform the applicant of the reasons for refusal in writing.

Rehabilitation Bond.

**25.** (1) Every person to whom the Minister has decided to issue a licence shall, before the issue of the licence, deposit with the Director a bond in the form of a Rehabilitation Bond in such amount and form and subject to such conditions as may be prescribed for the proper rehabilitation of the land for which the licence is to be issued.

(2) The amount of the bond referred to in subsection (1) shall be determined having regard to the potential environmental impact that is likely to be caused by the mining operation for which the licence is issued.

(3) Where such rehabilitation as aforesaid is not carried out in accordance with the requirements of this Act, or of the Regulations or of the terms and conditions of the licence, the Minister may—

- (a) forfeit the bond deposited under subsection (1); and
- (b) authorise any person to enter upon the premises on which a mine is situated and perform such work as is necessary for the rehabilitation; and the cost thereof shall be recovered as a debt due by the licensee to the State, so, however, that such costs shall, in the first instance, be paid out of the monies forfeited and the balance (if any) refunded in accordance with the regulations.

(4) Where the licensee fails to deposit the bond as required under subsection (1), the Minister shall refuse to issue the licence.

**26.** (1) Every person to whom the Minister has decided to issue a licence shall, before the issue of such licence, deposit with the Director a bond in the form of a Performance Bond which shall be held as security, for the non-payment of royalties and other dues arising out of any breach of the terms and conditions of the licence, the Act or the Regulations, in such amount and form as may be prescribed.

Performance Bond.

(2) Where the licensee commits any breach of the terms and conditions mentioned in subsection (1), the Minister may forfeit the bond deposited under subsection (1) and costs and damages arising out of the breach shall be recovered as a debt due to the State.

**27.** (1) The Minister may, in writing, suspend or revoke a licence issued under the Act if he is satisfied that the licensee has—

Revocation of licence.

- (a) obtained such licence by making misleading, false or fraudulent representations or providing incorrect information;

- (b) contravened the provisions of the Act or the Regulations;
- (c) contravened any of the terms, conditions or restrictions, stipulated in such licence;
- (d) discovered within, or in close proximity to the mine any mineral not authorised by the licence; or
- (e) been convicted of an offence under this Act or the Regulations.

(2) The Minister shall, prior to the suspension or revocation of the licence, give notice in writing to the licensee of the proposed suspension or revocation specifying the reasons thereof, and shall afford an opportunity to the licensee, within a specified time, to show cause as to why the licence should not be suspended or revoked.

Termination of licence.

**28.** (1) Where the holder of a licence dies or becomes bankrupt, the licence shall be deemed to be terminated with effect from the date on which the licensee dies or becomes bankrupt, and where the licensee dies the licence may be transferred to the heirs, successors or assigns of the deceased with the written consent of the Minister.

Ch. 81:01.

(2) Where the holder of the licence being a company registered under the Companies Act becomes bankrupt, the licence shall be deemed to be terminated from the date on which the company becomes bankrupt.

(3) Where the holder of a licence being a firm or partnership is dissolved, the licence shall be deemed to be terminated with effect from the date of dissolution of the firm or partnership.

#### PART IV

#### ENFORCEMENT

Taking of samples.

**29.** The Director or his representative may, at all reasonable times and with the permission of the owner, enter upon any land whether or not a licence has been issued under the Act in

respect of such land and take samples or specimens of soil, rock, minerals or tailings found on such land, for the purpose of examination and assay.

**30.** (1) The Director or his authorised representative may, at all reasonable times, for the purpose of carrying out geological and mineral investigations—

Powers of the Director to investigate.

- (a) enter upon and occupy any State Land with such persons, machinery, equipment and materials as are necessary for such purpose;
- (b) break up the surface of any part of such land and take samples or specimens of soil, rock or minerals in, on or under such land;
- (c) excavate, bore or drill such land and fix any post or other object thereon; and
- (d) enter upon and pass through any land, with the consent of the owner or occupier of such land, which it may be necessary for the purpose of carrying out such investigation.

(2) The Director or his authorised representative may at all reasonable times and for the purposes related to the enforcement of the Act and the Regulations—

- (a) inspect and examine, any premises where mining, or processing operations are conducted or where minerals are stored or where books, records and other documents pursuant to the requirements of the Act are kept;
- (b) examine and inquire into the conditions of any mine and all matters relating to the safety, welfare and health of the persons employed therein;
- (c) inspect and examine the conditions of any machines or other equipment used in such mine; and
- (d) inspect the storage of explosives on any mine and give directions where necessary for proper storage.

(3) The powers conferred on the Director under subsection (2) shall not be exercised unless—

- (a) in the case of State Lands notice in writing of the intention to do so is given to the Commissioner of State Lands and to the occupant thereof not less than fourteen days prior to the exercise of such power; or
- (b) in the case of private land notice in writing of the intention to do so is given to the owner or occupier of such land not less than fourteen days prior to the exercise of that power; and
- (c) the owner or occupier of such land consents in writing to the exercise of such power.

(4) In the exercise of his powers under subsections (1) and (2), the Director or his representative shall ensure that—

- (a) as little damage and inconvenience as possible shall be caused in the exercise of such power and the owner or occupier is assured of compensation for any damage sustained by him in consequence of the exercise of those powers; and
- (b) before abandoning such land, all persons, machinery, equipment and materials used thereon shall be removed and all excavations and bore or drill holes made thereon shall be filled.

#### PART V

#### RIGHTS AND DUTIES OF LICENSEE

Rights of the licensee.

**31.** (1) A licence to explore for minerals shall grant the licensee the exclusive right to explore for minerals specified in the licence within the area specified in the licence.

(2) A licence to mine for any mineral shall entitle the licensee to the exclusive right to mine for minerals specified in the licence within the area specified in such licence.

(3) A licence to process any minerals shall entitle the licensee to the exclusive right to process the minerals specified in the licence within the area specified in the licence.

(4) A licence to import or export any mineral shall entitle the licensee to the right to import or export the mineral specified in the licence within the period of time specified in such licence.

**32.** The holder of a licence shall maintain in a safe place such books, records and other documents in relation to the activities authorised by the licence as may be required by the Director and shall submit to the Director such returns and information relating to such activities as the Director may from time to time require.

Licensee to maintain books.

**33.** The holder of a licence shall have the right to enter and conduct operations in any area of land specified in such licence.

Right to enter.

**34.** Where the licensee discovers during the course of the mining operations any minerals not authorised by the licence, he shall forthwith bring it to the notice and surrender the same to the Director.

Licensee to notify Director.

**35.** (1) The holder of a licence shall—

- (a) in furtherance of mining operations avoid damage to any adjoining or third party property;
- (b) have the boundaries to his property properly demarcated at all times, and shall maintain a buffer zone of ten feet from the boundaries of the said property on all sides; and
- (c) on completion of the operations authorised by the licence or on the date of expiration of his licence, whichever occurs earlier, rehabilitate and restore the land to the satisfaction of the Director.

Licensee not to damage other property.

(2) Where damage is caused to the adjacent land and the Director determines that the land has not been rehabilitated or restored to a satisfactory condition, the licensee shall be liable to pay compensation to the owner of the adjacent land in such amount as may be determined by the Director in the prescribed manner.

**36.** Subject to the provisions of any other law and to such conditions as may be prescribed, the licensee may erect or install plant, machinery and equipment and construct temporary buildings in the area specified in the licence.

Licensee may erect temporary buildings.

PART VI

HEALTH, SAFETY AND WELFARE OF WORKERS

Restriction on  
employment of  
persons.

37. (1) No person shall work or be engaged or permitted to work in a mine except as hereinafter provided.

(2) No person who has not completed the age of sixteen years shall work or be engaged or permitted to work in a mine at any time.

(3) On the application of any person who has completed the age of sixteen years and under the age of eighteen years and who wishes to work in a mine, or of a parent or guardian of such person or of the manager of the mine in which such person wishes to work, a medical practitioner nominated by the Director shall examine such person, and if satisfied that such person has completed sixteen years of age and under the age of eighteen years and is fit for a full day's work in a mine shall issue a certificate of fitness accordingly.

(4) No person over the age of sixteen years and under eighteen years of age shall work or be engaged or permitted to work in a mine unless a certificate of fitness issued in respect of such person is first deposited with the manager of the mine.

(5) At the time of engagement of a person over the age of sixteen years and under eighteen years of age as a worker, the manager of the mine shall issue to the person an identification badge bearing reference to the certificate of fitness deposited under subsection (4).

(6) No person over the age of sixteen years and under eighteen years of age shall work or be permitted to work in a mine unless he carries on his person while he is at work the identification badge issued to him under subsection (5).

(7) Any person working in a mine may, at the instance of the Director, be examined at any time by the medical practitioner, and if upon such examination he is found to be no longer fit to work in the mine, his certificate of fitness shall be revoked by the medical practitioner.

(8) Any person whose certificate of fitness is revoked under subsection (7), shall forthwith be discharged from employment by the manager of the mine.

**38.** (1) No person over the age of sixteen years and under eighteen years of age shall work or be permitted to work during the night in any mine. Hours of work for persons over sixteen and under eighteen.

(2) No person over the age of sixteen years and under eighteen years of age shall be ordered or compelled to work in a mine for more than eight consecutive hours on any one day, inclusive of one hour for meals and rest, or for more than forty hours during any five consecutive days.

(3) No person over the age of sixteen years and under eighteen years of age shall work or be permitted to work in any mine on any day on which he has already worked in any other mine for the maximum number of hours prescribed by subsection (2) for any one day.

**39.** (1) No adult worker shall be ordered or compelled to work in a mine for more than eight consecutive hours on any one day inclusive of one hour for meals and rest, or for more than forty hours during any five consecutive days. Hours of work for adults.

(2) No adult worker shall work or be permitted to work in any mine on any day on which he has already worked in any other mine for the maximum number of hours prescribed by subsection (1) for any one day.

**40.** Where the licence is for mining or processing the licensee shall provide those employees who work in, on or near the mine or processing plant with such clothing or protective gear as may be prescribed. Protective gear.

**41.** (1) There shall be provided for the use of the workers in each mine, in such manner and according to such standards and specifications as may be prescribed— Sanitary and medical equipment.

(a) a supply of water suitable for drinking and water for washing;

- (b) latrine accommodation; and
- (c) a supply of splints, bandages and other medical and first-aid equipment.

(2) On the premises of every mine in which workers are ordinarily employed there shall be provided and maintained, for the purposes of first-aid treatment in the event of an accident, a special room conforming to such standards and fitted with such equipment of stretchers, accessories and drugs as may be prescribed.

(3) A member of the permanent staff, trained in first-aid or paramedical treatment up to such standards as may be prescribed, shall be on duty at all times on the premises of every mine when any work is carried on below ground in the mine.

Interpretation.

**42.** In this Part—

“adult” means a person who has completed eighteen years of age;  
“day” means a period of twenty-four hours beginning at midnight;  
“night” means the period between seven in the evening and six in the morning.

## PART VII

### PROTECTION OF ENVIRONMENT

Environment  
Impact  
Assessment and  
Clearance.

Ch. 35:05.

**43.** (1) Every application for a licence under this Act shall be accompanied with an Environment Impact Assessment and a Certificate of Environmental Clearance issued by the Environmental Management Authority established under the Environmental Management Act.

(2) The Committee may request additional site specific and process information as it may require in determining an application for a licence.

(3) In the conduct of an Assessment under subsection (1), due consideration shall be given to, in addition to the conditions laid down by the Environmental Protection Authority—

- (a) the preservation of the character of the environment including the fauna and flora;

- (b) any possible effect on the water table or surface drainage pattern;
- (c) danger of pollution in the neighbourhood;
- (d) the nature and location of other land uses that could be affected by the operation;
- (e) the control of dust and debris on roads and in the vicinity;
- (f) the availability of natural environment for the enjoyment of the public;
- (g) the traffic density on the roads in the area where the mine is to be operated; and
- (h) any other factor which the Committee may stipulate.

(4) A licensee who by virtue of his actions, either advertently or inadvertently, causes damage to public or private property shall be liable to restore or rehabilitate the said property to its former state.

**44.** The holder of a licence issued under this Act shall, in addition to the conditions set out under this Act, carry out the operations authorised by such licence in compliance with such standards and procedures as are prescribed for the carrying out of such operations by the Environmental Management Act.

Environmental  
Management  
Act.

Ch. 35:05.

#### PART VIII

#### MISCELLANEOUS

**45.** (1) A person who—

Offences.

- (a) explores for, or mines, processes, imports or exports, any mineral without a licence issued under this Act; or
- (b) mines in an area that is not a mining zone,

commits an offence and shall, on summary conviction, be liable to a fine of two hundred thousand dollars and imprisonment for a term of two years, and in the case of a subsequent conviction for such offence, shall be liable to a fine of three hundred thousand dollars and imprisonment for a term of three years.

L.R.O. 1/2006

(2) Any minerals extracted in the commission of an offence under subsection (1) may, in the discretion of the Court, be forfeited to the State.

(3) A person who—

- (a) knowingly purchases any mineral from a person who is not the holder of a licence under this Act or trade in such mineral; or
- (b) knowingly makes a false statement or fraudulent representation in or in connection with an application of a licence under this Act,

commits an offence and shall, on summary conviction, be liable to a fine of one hundred thousand dollars and imprisonment for a term of one year.

(4) A person who being the holder of a licence issued under this Act—

- (a) fails to notify the Director of the discovery of any minerals not authorised by the licence discovered by him in carrying out the operations authorised by the licence;
- (b) fails to maintain any book, record or other document that he is required to maintain by or under this Act;
- (c) obstructs or interferes with the Director or a person authorised by the Director, in the exercise by such person of any power conferred on such person by or under this Act;
- (d) pollutes any watercourse in the exercise of his mining operations,

commits an offence and shall on summary conviction be liable to a fine of one hundred thousand dollars and imprisonment for a term of one year.

(5) A person who contravenes this Act or the Regulations, commits an offence and where no punishment is specified shall on summary conviction be liable to a fine of fifty thousand dollars and imprisonment for a term of six months.

**46.** No suit or prosecution shall lie against the State, Minister, a member of the Committee, the Director or any officer for any thing done or omitted to be done in good faith in the performance of their duties under the Act.

Immunity of the State.

**47.** (1) The issue of a licence under this Act shall not in any way dispense with the necessity to obtain planning permission where such permission is required under the Town and Country Planning Act.

Obligations under other laws.  
Ch. 35:01.

(2) Where the approval of any other entity is required under any other written law with respect to the proposed operation, the issue of a licence under this Act, shall not affect in any way the requirement to obtain such other approval before the proposed operation commences.

**48.** (1) The Minister may make Regulations subject to negative resolution of Parliament in respect of matters that are required by this Act to be prescribed or in respect of which Regulations are required or authorised to be made under this Act.

Regulations.

(2) Notwithstanding the generality of the provisions of subsection (1), the Minister may, subject to subsection (3), make Regulations—

- (a) prescribing anything required or permitted by this Act to be prescribed;
- (b) determining mining procedures and issue operational guidelines;
- (c) determining the types and duration of licences and the procedure for issuing those licences;
- (d) for the health and safety of mine workers;
- (e) for the management of the mines and the appointment of quarry managers;
- (f) the keeping of books, records and other like matters of procedure;
- (g) prescribing the fees and royalties chargeable and the bonds payable in respect of licences;
- \*(h) subject to the Explosives Act and the Factories Ordinance, for the storing of explosives, fuse or detonators and procedure for blasting;

Ch. 16:02.  
Ch. 30. No. 2.

\*See Proclamation (LN 48/2006)

- (i) for laying down the terms and conditions to be observed by the licensees;
  - (j) for the prevention of pollution of land, water or air and for compensation therefor;
  - (k) for the rehabilitation and/or restoration of mines;
  - (l) for the general regulation and safe working of mines;
  - (m) for the transportation of minerals;
  - (n) guidelines and operational procedures for the exploration, import and export of minerals; and
  - (o) for giving effect to and carrying out the objects, purposes and provisions of the Act.
- (3) In making the Regulations—
- (a) under subsections (2)(d), (2)(h) and (2)(l), the Minister shall consult the Minister with responsibility for labour; and
  - (b) under subsection (2)(j), the Minister shall consult the Minister with responsibility for environment.

Repeal and Savings.  
Ch. 61:01.

**49.** (1) The Mines, Borings and Quarries Act is repealed.

(2) Notwithstanding the repeal under subsection (1), the Regulations made under the Mines, Borings and Quarries Act shall *mutatis mutandis* remain valid as if made under this Act until such time regulations are made under this Act.

Transitional.

**50.** (1) Any approval or licence granted to mine or to operate a quarry or to conduct quarry operations and in force immediately before the commencement of this Act shall continue to be in force until such approval or licence expires or until a licence is granted under this Act or until the expiration of six months from the commencement of this Act whichever occurs earlier.

(2) A person who holds an approval or a licence referred to in subsection (1), may within six months from the commencement of this Act, apply for a licence in accordance with the requirements of this Act.

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**SUBSIDIARY LEGISLATION**

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**DRILLING REGULATIONS**

**ARRANGEMENT OF REGULATIONS**

**REGULATION**

1. Citation.
2. Interpretation.
3. Permission for drilling.
4. Supervision of drilling.
5. Exclusion of young persons.
6. Exits from derricks.
7. Safeguards.
8. Daily examination of drilling outfit.
9. Keeping of tools, etc., in a derrick.
10. Counterbalance.
11. Hook provided with latch.
12. Provision of safety belt and lifeline.
13. Prohibitions.
14. Boilers.
15. Combustion engines.
16. Use of electricity.
17. Provision of fire extinguishers and report on fire.
18. Precautions to prevent uncontrolled flow of oil or gas and waste of gas.
19. Escape of oil or gas.
20. Samples for investigation.
21. Programme of proposed work submitted to Engineer for approval.
22. Numbering of well.
23. Water-bearing formations.
24. Shutting off water.
25. Cementing of water-string.
26. Casing a satisfactory water shut-off.
27. Removal of drilling outfit or derrick.
28. Well producing water.

ARRANGEMENT OF REGULATIONS—*Continued*

**REGULATION**

- 29. Engineer to investigate complaint.
- 30. Forms I, II, III, IV and X.
- 31. Alterations or additions to forms.
- 32. Boilers or machinery.

**SCHEDULE.**

**DRILLING REGULATIONS**

G.27.7.40.  
[2.11.44  
270/1950  
45 of 1979].

*made under section 25*

**1.** These Regulations may be cited as the Drilling Regulations. Citation.

**2.** In these Regulations— Interpretation.

“approved” means approved by the Engineer;

“drainage area of a well” means a circular area of one hundred and fifty feet radius having the centre of the borehole of the well at the surface as its centre except when the well is inclined from the vertical in which case the centre of the circular area shall be at a point at the surface approved by the Engineer;

“Engineer” means Chief Petroleum Engineer;

“natural gas” or “gas” means gas obtained from borings and consisting primarily of hydrocarbons;

“petroleum oil” or “oil” means the natural produce of the wells or springs of petroleum oil before such oil has been refined or otherwise treated;

“well” includes every borehole drilled or sunk, or in the course of being drilled or sunk for the purpose of producing petroleum oil, natural gas, brine, water, or any other substance, whether solid or liquid, and where the context so admits all works connected with, adjacent to and belonging to the borehole.

**3.** (1) Without the permission of the Engineer no borehole drilled for oil or gas shall be commenced with its centre at a lesser distance than one hundred and fifty feet from any boundary line except— Permission for drilling.

- (a) when the owner of the well holds the oil rights underlying the lands on both sides of such boundary line under either the same lease or licence or as owner; or

(b) when there shall exist a reciprocal agreement or arrangement in writing between the owner of the well and all the lessors, licensees, and owners of the oil rights underlying the drainage area of the well or, where such oil rights are vested in the State between the owner of the well and the Minister, for pooling or sharing the crude oil produced from such well.

(2) Permission to commence drilling a borehole for oil or gas with its centre at a lesser distance than one hundred feet from the nearest boundary of a Public Road Reserve or State Trace Reserve will not be granted unless the owner is able to provide an alternative route for the users of such Public Road Reserve or State Trace Reserve to the satisfaction of the Minister.

Supervision of drilling.

4. All drilling operations shall be continuously supervised by a competent person appointed by the manager.

Exclusion of young persons. [45 of 1979].

5. No person under the age of sixteen years shall be allowed on a derrick floor during the time any well is being drilled or repaired.

Exits from derricks.

6. To every derrick there shall be two well-defined approaches which can also be used as exits in case of danger.

Safeguards.

7. (1) All moving parts of machinery shall be properly fenced off where possible.

(2) The sprockets and chains of rotary draw-works shall be provided with approved guards.

(3) The guard protecting the rotary table chain shall be capable of resisting the shock of a breaking chain.

(4) No person shall remove or make ineffective any safeguard while the same is in use unless for the purpose of making repairs thereto, and all such safeguards shall be properly replaced as soon as possible.

**8.** The works comprising the drilling outfit at any well shall be examined daily by the driller in charge, who shall be responsible for the condition thereof so far as general safety is concerned and shall record each day in a book kept for the purpose at the well the conditions found at the time of inspection. Such report shall be signed by the driller in charge.

Daily examination of drilling outfit.

**9.** Tools, machine parts or material of any kind shall not be kept in a derrick above the derrick floor unless required for immediate use, and adequate protection shall then be made to prevent their falling on persons below.

Keeping of tools, etc., in a derrick.

**10.** Every counterbalance shall clear the ground or derrick floor by not more than five feet unless suitable provision is made to prevent it falling on persons working below.

Counterbalance.

**11.** The hook attached to every drill pipe, casing, tubing and sucker rod shall be provided with a latch or other device to prevent the elevator links or other equipment becoming accidentally disengaged from the hook.

Hook provided with latch.

**12.** (1) A safety belt shall be provided at every derrick for the use of each employee working in the derrick above the derrick floor.

Provision of safety belt and lifeline.

(2) Every derrick shall be provided with a lifeline or lifelines securely fixed to the derrick in any place where employees are working in a derrick and to the ground at least fifty feet from the base of the derrick to afford means of escape.

(3) Where a wire lifeline is in use an approved carriage shall be provided.

**13.** (1) Smoking, the use of firearms, explosives, the ignition of any material or the use of naked lights is prohibited in an operating oilfield, except in places set aside for such purposes and notified as being safe by the manager.

Prohibitions.

(2) The drilling of a borehole for oil or gas with its centre within one hundred feet of any building in which fire or lights

other than enclosed electric lights are used is prohibited, and no such building shall be placed within one hundred feet of the centre of any borehole drilled for oil or gas which has not been securely sealed or closed to the satisfaction of the Engineer except his permission in writing has been first had and obtained.

(3) The housing of persons in dwellings, or the use of fire or lights other than enclosed electric lights, within one hundred feet of the centre of any borehole drilled for oil or gas is prohibited except such well has been securely sealed or closed to the satisfaction of the Engineer or except his permission in writing has been first had and obtained.

Boilers.

**14.** (1) No boiler shall be placed within one hundred feet of the centre of any borehole being drilled for or producing oil or gas.

(2) The controls regulating the fuel supply of boilers if placed in front of the firing aperture shall not be within twelve feet thereof unless such valves are at a minimum distance of four feet from the projected centre line of such boilers. Fire boxes of boilers within three hundred feet of the centre of any borehole being drilled for or producing oil or gas shall be fitted with a steam or water snuffer of sufficient size to cool quickly the brickwork or soot in the boiler, the snuffer valve to be operated manually by the fireman at the boiler.

Combustion engines.

**15.** (1) The use of internal combustion engines, stationary or otherwise, within one hundred feet of the centre of a borehole being drilled for or producing oil or gas is only permitted when approved precautions are taken to prevent fire or explosion.

(2) Exhaust gases from internal combustion engines shall not be released into the atmosphere within one hundred feet of the centre of any borehole being drilled for or producing oil or gas provided that this regulation shall not apply to engines of automobiles nor to other internal combustion engines the exhausts of which are fitted with approved flame-proof attachments.

Use of electricity.

**16.** (1) When electricity is used, approved precautions shall be taken as regards installation, operation and maintenance to prevent fire or explosion.

(2) All conductors, switch gear and electrical apparatus on derricks at drilling or producing wells or drilling pumps shall conform to the general regulations as to the installation and use of electricity made under the Coal Mines Act 1911, of the United Kingdom, Part I-(1 Below Ground).\*

1 & 2 Geo.V  
c.50.

(3) No bare conductors shall be used within fifty feet of the centre of any borehole being drilled for or producing oil or gas, and all other electrical apparatus within one hundred feet of the centre of any such borehole shall be so protected that open sparking (as defined under the above-mentioned Coal Mines Act 1911) is prevented.

(4) Every derrick at a well being drilled or brought into production shall be fitted with a switch installed adjacent to the driller's normal working position capable of entirely cutting off the current from the electrical installation in the derrick.

**17.** (1) The manager shall to the satisfaction of the Engineer provide and keep in readiness for immediate use some reasonable means of extinguishing fire convenient to each well under his control.

Provision of fire  
extinguishers  
and report on  
fire.

(2) Whenever a gas or oil fire occurs on a well the manager shall forward a report of the circumstances and probable cause to the Engineer within forty-eight hours of the start of such fire.

**18.** (1) When a well is being drilled, approved precautions shall be taken to prevent any uncontrolled flow of oil or gas. Such precautions shall include the provision of at least two mud pumps, except in the case of a well being drilled to low pressure horizons approved as such by the Engineer or of a geological test hole being drilled to a maximum depth of one thousand feet or of a well connected to a mud plant provided with adequate pumps and approved as such by the Engineer.

Precautions to  
prevent  
uncontrolled  
flow of oil or  
gas and waste  
of gas.

(2) The waste of petroleum products is prohibited. The manager shall use every possible precaution in accordance with the most approved methods, to stop and prevent all unreasonable waste

\*Repealed and replaced by the Mines and Quarries Act 1954 (2 & 3 Eliz.2c.70) one of the Acts comprised in the Mines and Quarries Acts 1954 to 1971.

of gas in drilling and production operations, storage or distributing and shall not wastefully utilise gas or allow such gas to leak or escape from natural reservoirs, wells, tanks, containers or pipes.

(3) The term “waste” in addition to its ordinary meaning includes the destruction or dissipation of gas without economic use where it can be shown that such gas can be put to economic use.

(4) Such approved precautions as may be required by the Engineer shall be taken during drilling, production, storage and pumping operations to prevent the pollution of land, watercourses, foreshore and sea by oil or any other fluid or substance.

Escape of oil or gas.

**19.** Any employee who notices any unusual escape of oil or gas from any well or anything that appears unsafe or likely to produce damage shall forthwith report it to the manager or person in charge.

Samples for investigation.

**20.** The Engineer shall have the power to inspect and take copies of all geological or other information obtained by drilling, to inspect any samples of oil, gas or water, cores and drillings obtained from any well, and to take a reasonable portion of the samples he requires for any investigation.

Programme of proposed work submitted to Engineer for approval Schedule. Forms VIII and IX.

**21.** (1) No person shall commence to drill, re-drill, deepen, plug, abandon any well or to alter, perforate or remove casing in it without first notifying the Engineer on the form set out as Form VIII or Form IX in the Schedule submitting a programme of the proposed work and obtaining his approval thereof. The Engineer may, in his discretion, withhold his consent to the commencement of any such work if any such person has not yet fulfilled any obligations imposed upon him by any law or regulation relating to oil mining operations.

Such notification shall also state whether the well to be drilled, re-drilled or deepened is intended to be vertical or inclined from the vertical. If the well is intended to be inclined from the vertical full information shall be furnished to the Engineer as to the proposed direction and destination of the well.

(2) Whenever any well is drilled, re-drilled or deepened, tests to determine the deviation from the vertical shall be taken at intervals of depth of not more than five hundred feet unless the permission of the Engineer to take such tests at greater intervals of depth has been previously obtained. The result of such tests shall be reported on the form set out as Form II in the Schedule, and if in the opinion of the Engineer the deviation of any well from the vertical or from its approved direction is such that any part of the well may be situated within one hundred and fifty feet of the boundary of oil rights which are not held by the owner of the well either as owner, lessee or licensee, he may order that the well be straightened or brought back to its approved direction, except when there shall exist a reciprocal agreement or arrangement in writing between the owner of the well and all the lessors, licensees and owners of the oil rights underlying the drainage area of the well for pooling or sharing the crude oil produced from such well and such order shall be complied with.

Schedule.  
Form II.

(3) No explosives shall be used in any well without the permission of the Engineer who shall have the power to impose such conditions as he may consider necessary.

(4) Whenever any well is found to be in such a condition that, in the opinion of the Engineer—

- (a) water may have access to oilsands;
- (b) seepage of oil, water, mud or pitch from either inside or outside any string of casing in the well may cause pollution to land, watercourses, foreshore or sea;
- (c) the mechanical condition of the well or any surface fitting is dangerous,

the Engineer may by notice in writing to be served on the owner, agent or manager require him to carry out such measures as he may direct to repair, partially plug or completely abandon the well within a period of time to be specified in such notice. Should the requirements of any such notice not be complied with the Engineer or any other person authorised in writing by the Minister may enter the property and take all measures necessary to carry out the requirements of such notice.

Numbering of well.

**22.** When any well is commenced it shall be described by a certain number in the owner's records, and the number shall not be changed without the consent of the Engineer.

Water-bearing formations.

**23.** When water-bearing formations have been encountered in any well or when any information has been obtained indicating that water-bearing formations have been encountered, the owner, agent or manager shall immediately notify the Engineer.

Shutting off water.

**24.** After the conductor has been landed or cemented in any well, no further casing shall be landed or cemented in the well until the owner, agent or manager has informed the Engineer of the methods he proposes to use in shutting off any water which may have been encountered or of his reasons for wishing not to do so. The owner, agent or manager shall as soon as possible furnish to the Engineer on the form set out as Form V in the Schedule all information in his possession required by that form.

Schedule. Form V.

Cementing of water-string.

**25.** When a water-string is cemented, unless the consent of the Engineer is obtained to a shorter period, not less than six days shall elapse between the completion of the cementing operations and the drilling out of the cement plug, provided however that when a rapid hardening cement or rapid hardening re-agent approved by the Engineer is used, or where the depth of the point of cementation exceeds three thousand feet, unless the consent of the Engineer is obtained to a shorter period, not less than three days shall elapse between the completion of the cementing operations and the drilling out of the cement plug.

Casing a satisfactory water shut-off.

**26.** After any string of casing other than a conductor has been landed or cemented, no further drilling shall take place until permission is obtained from the Engineer or a competent person approved by him has certified that the casing is a satisfactory water shut-off; when a person approved by the Engineer certifies the shut-off he shall forward to the Engineer a certificate in the form set out as Form VII in the Schedule, and such certificate shall be countersigned by the manager.

Schedule. Form VII.

**27.** If water at any well has been reported during drilling and has not in the opinion of the Engineer been shut off in a satisfactory manner, the manager shall not remove the drilling outfit or derrick without the permission of the Engineer.

Removal of drilling outfit or derrick.

**28.** If a well commences to produce water the manager shall forthwith report the matter to the Engineer on Form VI and shall, if ordered by him, take such steps as may be necessary to protect the oil sands.

Well producing water.  
Form VI.

**29.** The owner, agent or manager may report to the Engineer if he has any reason to believe that the operations of a neighbouring owner are being conducted in such a manner as to allow of the access of water into the oil sands, or the unwarranted waste of gas or gas energy. The Engineer shall forthwith investigate the complaint and if he considers it necessary shall call upon the neighbouring and the complaining owners, agents or managers to appear before him at any inquiry he may consider it necessary to hold. The owners, agents or managers shall at this inquiry provide all available information in connection with the operations reported upon.

Engineer to investigate complaint.

**30.** On or before the 15th day of every month there shall be delivered to the Engineer at the Ministry on Forms I, II, III, IV and X of the Schedule all information requested therein which is in the possession of the owner, agent or manager.

Forms I,II,III, IV and X.  
Schedule.

**31.** The Minister may from time to time alter or add to the forms contained in the Schedule. Notice of such alterations or additions shall be published in the *Gazette*.

Alterations or additions to forms.  
Schedule.

**32.** (1) No employee shall by default or wilful neglect cause any damage to boilers or machinery.

Boilers or machinery.

(2) No employee shall sleep when in charge of boilers or machinery.

(Regulation 30).

**SCHEDULE**

**FORM I**

Name of Company ..... Field .....

Report of all wells worked on during the month of ....., 20....., other than wells reported on Form III.

If no wells have been worked on during the month a Nil return should be made.

Well No.	Date commenced or Recommended	Date completed	Depth at end of month	Status at end of month

All depths to be given in feet. Signed .....  
*Owner, Agent or Manager*

(Regulations 21, 30).

**FORM II**

Log abstract for the month of ..... 20.....,  
 Company .....Field ..... Loc. No. .... Well No. ....  
 State Lands, Alienated Lands (State Oil), Lands Alienated prior to 30.1.02.

[Delete where not applicable.]

Condition of well at end of month ..... Depth ..... Drilling System ....  
 Mining Lease Reg'd. No. .... Elevation of derrick floor above  
 M.S.L. ....

**CASING RECORD**

CASING						PERFORATIONS OR SCREEN			REMARKS
Size	Lbs./ft. Grade	Depth	L* or C	Drums of Cement.	Estimated Cement Fill	From	To	Size or Mesh	Cement baskets Packers Liner Hangers

\*L or C- Landed or Cemented. All depths to be given in feet.

**HOLE RECORD**

Diam.	Depth	REMARKS
		Here indicate any information not indicated in Casing Record, such as sidetracked fish, Cement Plugs, etc.

**DRILLING RECORD**

Date	DEVIATIONS		C* or D	Depth of Base	REMARKS
	Depth	Degrees			
					Oil, Gas, Water. Description of Formation. General Histroy. Weight of mud, etc.

Date ..... Signed .....  
 \* C or D—Cored or Drilled. *Owner, Agent, or Manager.*  
 All depths to be given in feet.

[Subsidiary]

Drilling Regulations

**FORM III**

(Regulation 30). Name of Company ..... Field .....

Production report of individual wells for the month of ....., 20.....

All wells including fresh water wells and idle wells other than those officially abandoned, should be shown below. Reason for wells being idle should be stated under "Remarks."

Well No.	Mech. Depth	Depth of Pump or Tubing	Method of Prod.	Prod. Horizon	Size of Bean	Day of Prod.	Production of dry oil in barrels of 35 Imperial Gals. at 60° F.	
							State	Private
							Total	
							Grand Total	

G.O.R. Cu. ft. per barrel	Pressures lbs. per sq. in.	S.G. at 60° F.	Water prod. Bbls. C. Centrifuge G. Guaged	Remarks
Intake	C.H.P. T.H.P.			

UNDER METHOD OF PRODUCTION.  
 F.C. Flowing Casing. D.P. Displacement Pump.  
 F.T. Flowing Tubing. P.P. Plunger Pump.  
 G.L. Gas lift. S. Swabbing.  
 A.L. Air lift. B. Bailing.  
 P.L. Plunger lift. C. Collected from Sumps

C.I. G.O.R. C.I. Recompr.  
 C.I. Rep. C.I. Unecon.  
 C.I. Ab. Rest. Prod. C.I. Rest. Prod.  
 C.I. Eq. C.I. Unecon.

UNDER "REMARKS."  
 Closed in high G.O.R.  
 " Awaiting repairs.  
 " Awaiting abandonment.  
 " Restricted production requirements.  
 " Lack of Equipment.  
 " Uneconomic to produce.  
 " Awaiting re-completion in higher sand.

PRODUCING HORIZON.  
 M.E. Mome l'Enfer.  
 F. Forest.  
 C. Cruse.  
 O. Oligocene.  
 E. Eocene.

Fresh water wells to be segregated at end of return

20 .....

Signed .....  
 Owner, Agent or Manager.

FORM IV

ABSTRACT OF OIL PRODUCED, REFINED, CONSUMED  
 AND STORED

Abstract of Oil produced, refined, consumed and stored by .....  
 for the month of ..... 20.....

(All quantities are dry oil in barrels of 35 Imp. Gals. at 60°F.)

(1) Quantity of Crude Oil produced:

From State Lands and Lands Alienated subsequent to 29th January 1902.		From Private Lands Alienated prior to 30th January 1902.	
Field	Quantity	Field	Quantity
Total ...		Total ...	
		Grand Total ...	

(2) Total quantity of Crude Oil refined.

Quantities of Products obtained from Crude Oil refined:

Description of Products	QUANTITIES OBTAINED	
	Straight-run	Cracked
Fuel Oil ... ..		
Petrol ... ..		
Kerosene ... ..		
Gas Oil ... ..		
Diesel Distillates*		
Other Distillates ... ..		
Lubricating Oil ... ..		
Road Oil ... ..		
Other Products ... ..		
Total Quantity ...		

\*Not including "mixed" Diesel Oil.

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FORM IV—Continued

(3) Quantity of Oil used for all purposes by the Company for their operations:

Description of Oil	On State Lands and Lands alienated subsequent to 29th January 1902	On Private lands and alienated prior to 30th January 1902
Crude Oil... ..		
Fuel Oil ... ..		
Petrol ... ..		
Kerosene ... ..		
Other Distillates ... ..		
Total Quantity ...		

(4) Quantities of Crude Oil otherwise disposed of an manner of disposal:

Local Sales	Exports	Total

(5) Quantity of Oil in stock on the ..... of ..... 20.....

Description of Oil	Quantity in Stock
Crude Oil... ..	
Fuel Oil ... ..	
Petrol ... ..	
Kerosene ... ..	
Gas Oil ... ..	
Diesel Distillates ... ..	
Diesel Oil (Mixed) ... ..	
Other Distillates ... ..	
Lubricating Oil ... ..	
Road Oil ... ..	
Other Products ... ..	
Total Quantity ...	

20 .....

.....  
Signature of Owner, Agent or Manager.

**FORM V—(CABLE)**

**NOTIFICATION OF THE PRESENCE OF  
 WATER-BEARING STRATA**

Name of Company ..... Field .....

Well No. .... Drilling system .....

Water was *noticed/suspected* on ..... 20....., when at ..... ft.

Diameter of open hole .....inches ..... to .....ft.  
 .....inches ..... to .....ft.

Description of water-bearing formation and thickness .....

Estimated rate of flow or height of fluid level .....

Was reliable sample obtained. State details .....

**CASING IN WELL WHEN WATER WAS OBSERVED**

Size	DEPTH		PERFORATIONS OR SCREEN			If cemented give details
	From	To	From	To	Size or Mesh	

It is believed that water is from..... feet for the following reasons:  
 Proposed method of dealing with this water .....

..... 20 ..... Signed .....

*Owner, Agent or Manager*

All depths to be given in feet.

(Regulation 24).

**FORM V—(ROTARY)**

**NOTIFICATION OF THE PRESENCE OF WATER-BEARING STRATA**

Company ..... Field..... Loc. No. .... Well No. ....

**CASING RECORD**

CASING						PERFORATIONS OR SCREEN			REMARKS
Size	Lbs./ft. Grade	Depth	L* or C	Drums of Cement	Estimated Cement Fill	From	To	Size or Mesh	Cement basket Packers. Liner Hanger etc.

**HOLE RECORD**

Diam.	Depth	REMARKS: Here indicate only information not included in Casing Record, such as sidetracked fish, Cement Plugs, etc.

Water was located by { Core Evidence  
Electrical log on ..... 20....., when at ..... ft.  
Formation tester.

Description of Water Sands (unnecessary when Electrical log is forwarded).

From	To	Description of Formation, Salinities of sand, etc.

Proposed method of dealing with this water:—

The above information was communicated to the Ministry by telephone on ....., 20 ....., and is hereby confirmed.

20 .....

Signed .....  
*Owner, Agent or Manager*

\*L or C—Landed or Cemented.  
All depths to be given in feet.

FORM VI

(Regulation 28).

NOTIFICATION OF THE COMMENCEMENT OF WATER  
 PRODUCTION IN AN OIL-WELL

(To be sent in within 48 hours of such production of water).

Company ..... Field..... Loc. No. .... Well No. ....

CASING RECORD

Size	Lbs./ft. Grade	Depth	L* or C	Drums of Cement	Esti- mated Cement Fill	PERFORATIONS OR SCREEN			REMARKS  Cement baskets Packers Liner Hanger
						From	To	Size or Mesh	

HOLE RECORD

Diam.	Depth	REMARKS: Here indicate only information not included in Casing Record, such as Sidetracked Fish, Cement Plugs, etc.

An other information: —

Date water first noted ....., 20.....

Quantity (in Bbls. per day) water ..... bbls. oil ..... bbls.

How gauged: — .....

General remarks (give here any information as to source of water: .....

Proposed method of excluding water: —

20 .....

Signed .....

Owner, Agent or Manager

\*L or C—Landed or Cemented.  
 All depths to be given in feet.

(Regulation 26).

**FORM VII**

**CERTIFICATE OF TEST FOR WATER SHUT-OFF**

Company ..... Field..... Loc. No. .... Well No. ....

**CASING RECORD**

CASING						PERFORATIONS OR SCREEN			REMARKS
Size	Lbs./ft. Grade	Depth	L* or C	Drums of Cement	Estimated Cement Fill	From	To	Size or Mesh	Cement basket Packers Liner Hangers etc.

**HOLE RECORD**

Diam.	Depth	REMARKS: Here indicate only information not included in Casing Record, such as side tracked fish, Cement plugs, etc.

At the request of the Engineer with whom the programme for the water Shut-off Test described below was agreed, we, the undersigned, witnessed the Test and report as follows:

In our opinion the water shut-off has been shown to be satisfactory.

Signed .....  
*Witness*

20 ..... Countersigned .....  
*Manager or his Deputy*

\*L or C—Landed or Cemented.  
All depths to be given in feet.

**FORM VIII**

(Regulation 21).

**NOTICE OF INTENTION TO START DRILLING NEW WELL**

*To be forwarded at least 14 days before drilling commences.*

Name of Company .....

Location No. .... Well No. .... Field .....

Location description .....

*[State whether on State Lands, Alienated lands (State Oil) or lands alienated prior to 30.1.02].*

Mining Lease No. ....

Co-ordinates .....

Elevation of derrick floor ..... feet above mean sea level.

We expect commercial oil-bearing formations at the following depths: .....

We expect water-bearing formations at the following depths: .....

Our tentative casing programme is as follows:

Size	Weight lbs./ft.	Grade	Depth ft.	Landed or Cemented

Our proposed programme is .....

20.....

Signed .....

*Manager*

\_\_\_\_\_

(Regulation 21).

**FORM IX**

**NOTICE OF INTENTION TO DEEPEN, REDRILL, PLUG, ALTER OR PERFORATE CASING, ABANDON, USE EXPLOSIVE**

*To be forwarded at least 14 days before work commences.*

Company ..... Field..... Loc. No. .... Well No. ....

**CASING RECORD**

CASING						PERFORATIONS OR SCREEN			REMARKS
Size	Lbs./ft. Grade	Depth	L* or C	Drums of Cement	Estimated Cement Fill	From	To	Size or Mesh	Cement basket Packers Liner Hangers etc.

**HOLE RECORD**

Diam.	Depth	REMARKS: Here indicate only information not included in Casing Record, such as side tracked fish, Cement plugs, etc.

Any other information: .....

Proposed Work is as follows: .....

20 .....

Signed .....

*Owner, Agent or Manager.*

\*L or C—Landed or Cemented.  
All depths to be given in feet.

Drilling Regulations

[Subsidiary]

FORM X

(Regulation 30).

Natural Gas Return for the month of ..... 20.....

Company ..... Field .....

ESTIMATED PRODUCTION OF NATURAL GAS

From Wells produced by	Number of wells	Oil production (barrels)	Formational Gas/Oil Ratio Cu. ft. bbl.	Gas production Cu. ft.	Total Quantities of Gas Cu. ft.
Flowing* ... ..					
Pumping ... ..					
Other methods† ...					
Totals ...					
Gas produced from Gas wells or storage (Extend Total)					
GAS PURCHASED AND/OR TRANSFERRED FROM ANOTHER FIELD				Cu.ft.	
Name of vendor and/or Field					
(a)					
(b)					
(c)					
Total (Extend Total)					
Grand Total ...					
ESTIMATED DISPOSAL OF NATURAL GAS				Cu.ft.	
Gas converted to liquid at 30 Cu.ft.per imp. gallon					
Gas used as fuel					
Gas replaced in formation (Extend Total)					
GAS SOLD AND/OR TRANSFERRED TO ANOTHER FIELD				Cu.ft.	
Name of purchaser and/or Field					
(a)					
(b)					
(c) (Extend Total)					
Estimated quantity of Natural Gas vented as surplus					
Grand Total ...					
Total quantity of Natural Gas treated for liquid recovery					

Note: Gas quantities to be expressed to nearest 500,000 cu.ft.

Date .....

Signed .....

Owner, Agent or Manager.

\* To include self-operated plunger lift.

† To include Gas lift displacement pumping, and Plunger lift (except self-operated) but to exclude input gas used for lifting purposes.

## MINES REGULATIONS

### ARRANGEMENT OF REGULATIONS

#### REGULATION

1. Citation.
  2. Ventilation.
  3. Inspection and report by competent person.
  4. Examination of and report on appliances and shafts.
  5. Fencing of entrance.
  6. Inspection of and report on dangerous mine.
  7. Cases in which locked safety lamp to be used.
  8. Conditions to be observed.
  9. License to use explosive substance and circumstances in which to be used.
  10. Fencing and securing of shaft.
  11. Travelling road and working place to be made secure.
  12. Provision of guides and means of communicating signals.
  13. Machine for lowering and raising persons.  
    Brake on drum shaft.  
    Exposed and dangerous parts of machine to be fenced.
  14. Ladder for ascent and descent.
  15. Books to be provided and kept at office.
  16. Wilful damage or unauthorised removal of appliances.
  17. Directions to be observed.
-

**MINES REGULATIONS**

G.28.10.15.  
[G.13.3.30].

*made under section 25*

**1.** These Regulations may be cited as the Mines Regulations. Citation.

**2.** (1) An adequate amount of ventilation shall be constantly produced in every mine to dilute and render harmless noxious gases to such an extent that the working places of the shafts, levels and workings of the mine and the travelling roads to and from these places shall be in a fit state for working and passing therein. Ventilation.

(2) In mines where safety lamps are required to be used, or when the Senior Inspector of Factories may direct, the quantity of air shall at least once in every month be measured and entered in a book to be kept for the purpose at the mine.

**3.** (1) A competent person or competent persons appointed by the owner, agent or manager for the purpose, not being contractors for getting minerals in the mine, shall within one hour before the commencement of each shift, and in addition once during each shift, inspect every part of the mine in which workmen are to work or pass during the shift, and shall ascertain the condition thereof, so far as the presence of gas, ventilation, roof and sides and general safety are concerned. Inspection and report by competent person.

(2) No workmen shall be allowed into the mine until it has first been examined and stated to be safe by such competent person.

(3) The inspection shall be made with a locked safety lamp, except in the case of any mine in which inflammable gas has not been found within the preceding twelve months.

(4) A report of each inspection specifying where noxious or inflammable gas (if any) was found present and what defects (if any) in roof or sides and what (if any) other source of danger were or was observed, shall be recorded without delay in a book to be kept at the mine for the purpose, and accessible to the workmen, and such report shall be signed by, and so far as the same does not consist of printed matter shall be in the handwriting of, the person who made the inspection.

Examination of  
and report on  
appliances and  
shafts.

**4.** A competent person or competent persons appointed by the owner, agent or manager for the purpose, shall, once at least in every twenty-four hours, examine the state of the external parts of the machinery, the state of the guides and conductors in the shafts, and the state of the head gear, ropes, chains and other similar appliances of the mine which are in actual use both above ground and below ground, and shall once at least in every week examine the state of the shafts by which persons ascend or descend; and shall make a true report of the result of such examination; and every such report shall be recorded without delay in a book to be kept at the mine for the purpose, and shall be signed by the person who made the inspection.

Fencing of  
entrance.

**5.** Every entrance to any place which is not in actual use or course of working or extension shall be properly fenced across the whole width of the entrance, so as to prevent persons inadvertently entering the same.

Inspection of  
and report on  
dangerous mine.

**6.** If at any time it is found by the person for the time being in charge of the mine or any part thereof, that by reason of inflammable gases prevailing in the mine or in that part thereof, or of any cause whatever, the mine or that part is dangerous, every workman shall be withdrawn from the mine or part so found dangerous, and a competent person appointed for the purpose by the owner, agent or manager shall inspect the mine or part so found dangerous, and if the danger arises from inflammable gas shall inspect the mine or part with a locked safety lamp; and in every case shall make a true report of the condition of the mine or part; and a workman shall not, except in so far as is necessary for enquiring into the cause of danger or for the removal thereof, or for exploration, be re-admitted into the mine, or part so found dangerous, until the same is stated by the person appointed as aforesaid not to be dangerous. Every such report shall be recorded in a book which shall be kept at the mine for the purpose, and shall be signed by the person who made the inspection.

**7.** No lamp or light other than a locked safety lamp of approved type shall be allowed or used—

Cases in which locked safety lamp to be used.

- (a) in any mine in which there is likely to be any such quantity of inflammable gas as to render the use of naked lights dangerous;
- (b) in any mine approaching a place in which there is likely to be an accumulation of inflammable gas;
- (c) in any mine in which an explosion of gas has caused any personal injury.

**8.** In any mine in which safety lamps are required to be used the following provisions shall apply:

Conditions to be observed.

- (a) a competent person appointed by the owner, agent or manager for the purpose shall at the surface examine every safety lamp immediately before it is taken into the workings for use, and ascertain it to be in safe working order and securely locked, and such lamps shall not be used until they have been so examined and found in safe working order and securely locked;
- (b) a safety lamp shall not be unlocked in the mine, except with special permit from the Senior Inspector of Factories;
- (c) a person shall not have in his possession any lucifer match or apparatus of any kind for striking a light, nor shall he have in his possession any contrivance for opening the lock of any safety lamp, nor shall he have in his possession any pipe or tobacco or smoking appliance.

**9.** No explosive substance shall be used in a mine below ground in which the use of a locked safety lamp is required, or which is considered dangerous by nature of its dry and dusty condition, unless a licence permitting its use be obtained from the Senior Inspector of Factories.

License to use explosive substance and circumstances in which to be used.

Any explosive substance shall only be used in the mine below ground as follows:

- (a) it shall not be stored in the mine and it shall not be taken into the mine, except in cartridges in a secure case or canister containing not more than five pounds weight;
- (b) in the process of charging or stemming for blasting, a person shall not use or have in his possession any iron or steel pricker, scraper, charger, tamping rod or stemmer;
- (c) no explosive shall be forcibly pressed into a hole of insufficient size, and when a hole has been charged, the explosive shall not be unrammed, and no hole shall be bored for a charge at a distance of less than twelve inches from any hole where the charge has missed fire;
- (d) all such precautions shall be taken and directions followed as may from time to time be directed by the Senior Inspector of Factories.

Fencing and securing of shaft.

**10.** The top and all entrances between the top and bottom of every shaft shall be properly fenced.

When the natural strata are not safe, every working shaft shall be securely cased, lined or otherwise made secure.

Travelling road and working place to be made secure.

**11.** The roof and sides of every travelling road and working place shall be made secure, and a person shall not, unless appointed for the purpose of exploring or repairing, travel or work in any such travelling road or working place which is not so made secure.

Provision of guides and means of communicating signals.

**12.** Every working shaft in which persons are raised or lowered shall, if exceeding thirty yards in depth, be provided with guides and some proper means of communicating distinct and definite signals from the bottom of the shaft and from every entrance for the time being at work between the surface and the bottom of the shaft to the surface, and from the surface to the bottom of the shaft and to every entrance for the time being at work between the surface and the bottom of the shaft.

**13.** (1) There shall be attached to every machine worked by steam or mechanical power and used for lowering and raising persons, an adequate brake and a proper indicator (in addition to any marks on the rope), showing to the person who works the machine the position of the cage or bucket in the shaft.

Machine for lowering and raising persons.

(2) If the drum is not on the crank shaft, there shall be an adequate brake on the drum shaft.

Brake on drum shaft.

(3) Every fly wheel and all exposed and dangerous parts of the machinery used in and about the mine shall be kept securely fenced.

Exposed and dangerous parts of machine to be fenced.

**14.** A ladder permanently used for the ascent and descent of persons in the mine shall not be inclined at an angle less than ten degrees from the vertical or in an overhanging position, and every such ladder shall have substantial platforms at intervals of not more than twenty yards. All ladderways so used shall be securely partitioned off from the winding compartment.

Ladder for ascent and descent.

**15.** (1) The books mentioned in these Regulations shall be provided by the owner, agent or manager, and the books, or a correct copy thereof, shall be kept at the office at the mine, and the Senior Inspector of Factories and any person employed in the mine or any one having the written authority of the said Inspector or person so employed, may at all reasonable times inspect and take copies of and extracts from any such books; but nothing in these Regulations shall be construed to impose the obligation of keeping any such book or a copy thereof for more than twelve months after the book has ceased to be used for entries therein under these Regulations.

Books to be provided and kept at office.

(2) Any report required to be recorded in a book may be partly in print (including lithograph) and partly in writing.

**16.** No person shall wilfully damage or without proper authority remove or render useless any fence, place of refuge, safety lamp, guide, conductor, brake, rope, chain, signal, safety valve, steam gauge, water gauge or any other appliance or thing provided in any mine in compliance with these Regulations.

Wilful damage or unauthorised removal of appliances.

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*Minerals*

[Subsidiary]

*Mines Regulations*

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Directions to be  
observed.

**17.** Every person shall observe such directions with respect to working as may be given to him with a view to comply with these Regulations.

## **QUARRY REGULATIONS**

### **ARRANGEMENT OF REGULATIONS**

#### **REGULATION**

1. Citation.

#### **SAFETY OF THE QUARRY**

2. Prevention of dangerous falls.
3. Quarry worked in or without steps or galleries.
4. Space between outside rails of tramways and edges of galleries.
5. Top of quarry and shaft to be fenced.

#### **BLASTING**

6. Storing of explosives, fuse or detonator.
7. Tool to be used for charging or stemming a hole.
8. Hole to be charged or fired by authorised person.
9. Warnings to be given before blasting.
10. Length of fuse.
11. Number of explosions and “all safe” signal.
12. Provision of shelters.
13. Charge that has missed fire.
14. Regulations for blasting to be displayed.

#### **ACCESS TO THE QUARRY**

15. Secure means of access.

#### **MACHINERY AND PLANT**

16. Making of further regulations.
17. External inspection of appliances by competent persons.
18. Cleaning of machinery.
19. Repair.

#### **DUTIES OF OFFICIALS AND WORKMEN**

20. Implementation of regulations.
21. Inspection of working place or appliances.
22. Workman to examine his working place.
23. Warning to be given.
24. Regulations to be posted at Quarry.

[Subsidiary]

G..28.10.15.  
[13.3.30  
142/1946].

## QUARRY REGULATIONS

*made under section 25*

Citation.

1. These Regulations may be cited as the Quarry Regulations.

### SAFETY OF THE QUARRY

Prevention of dangerous falls.

2. (1) The working of the sides, tops, or overburden of the quarry shall be carried on so as to prevent dangerous falls.

(2) The overburden or tops of the quarry, and all loose ground or material, shall be cleared far enough back from the edge of the quarry to prevent danger to the persons employed.

Quarry worked in or without steps or galleries.

3. When the quarry is worked in steps or galleries, these shall be of sufficient breadth in comparison with their height to ensure safety. When the quarry is worked without steps or galleries, sufficient support to the sides shall be left to ensure safety to those employed.

Space between outside rails of tramways and edges of galleries.

4. There shall be a clear space between the outside rails of tramways and the edges of galleries, sufficient to prevent both the falling of stones from the wagons and the falling of the men themselves to galleries below. Where such a space is impracticable the edges shall be securely fenced.

Top of quarry and shaft to be fenced.

5. The top of the quarry, if dangerous, and the top of every shaft shall be securely fenced.

### BLASTING

Storing of explosives, fuse or detonator.

6. (1) No explosive and no fuse or detonator shall be stored otherwise than in a magazine constructed and situated in accordance with the requirements and subject to the approval of the Senior Inspector of Factories.

(2) Explosives, fuses and detonators required for blasting shall be conveyed from the magazine to the quarry at the time required and shall be kept till used in secure cases or canisters so made and closed as to prevent any escape of the explosives and any danger from sparks. Detonators shall be kept in separate and secure boxes.

(3) Explosives, fuses and detonators not used in any blasting operation shall be returned immediately after any such operation to the magazine.

**7.** No iron or steel tool shall be used for charging or stemming a hole when dynamite is the explosive employed, and wooden rammers only shall be used. When powder is the explosive, copper or wooden rammers shall be used. No straw fuses shall be used.

Tool to be used for charging or stemming a hole.

After firing a charge of any explosive, no further charge shall be introduced into the hole nor into any rent made until after the lapse of half an hour.

**8.** No hole shall be charged or fired by any person unless duly authorised by the owner, agent or manager.

Hole to be charged or fired by authorised person.

**9.** Due warning shall be given by an efficient system of signals before blasting may be commenced and when it is finished. In quarries where blasting occurs daily, it shall as far as possible take place only at fixed stated intervals. Where danger from blasting may arise to the public, efficient means shall be taken to give them due warning.

Warnings to be given before blasting.

**10.** The length of the fuse used shall in every case be sufficient to allow the firer to escape to a place of safety, and shall be so regulated that the charges shall explode at distinct intervals so that they may be easily counted.

Length of fuse.

**11.** The number of explosions shall be carefully counted and note taken thereof, and when the full number of explosions have been heard the signal for "all safe" shall be given by horn, bell or whistle.

Number of explosions and "all safe" signal.

**12.** A sufficient number of proper shelters shall be provided (which must be used by the persons employed) except where all leave the quarry during blasting.

Provision of shelters.

**13.** If a shot has apparently missed fire, no person shall be allowed to go near it until after a lapse of half an hour from the time the fuse was ignited. The person or persons whose shot has apparently missed fire shall immediately give warning of the same. A shot shall under no

Charge that has missed fire.

consideration be unrammed, bored or picked out and no hole shall be bored within twelve inches of the one that has missed fire. After the time specified has elapsed, another hole shall be bored for the purpose of dislodging or exploding the charge that has missed fire, and such hole shall be bored in such a direction that it will not touch at any point the hole containing the charge that has missed fire. After the shot has been fired a careful search shall be made amongst the material dislodged to recover the charge that has missed fire.

Regulations for blasting to be displayed.

**14.** The owner, agent or manager shall frame regulations as to intervals and signals for blasting, copies of which shall be kept constantly affixed in the quarry office, and in a sufficient number of places in and adjacent to the quarry.

#### **ACCESS TO THE QUARRY**

Secure means of access.

**15.** Secure means of access shall be provided by which workmen go to and from their working places.

#### **MACHINERY AND PLANT**

Making of further regulations.

**16.** Where machinery is used for raising and lowering persons, further regulations shall be made to suit the special circumstances of the case, copies of which shall be kept posted at the quarry.

External inspection of appliances by competent persons.

**17.** A competent person appointed for the purpose shall daily inspect the external parts of the plant, machinery and appliances, and shall forthwith make or cause to be made a true report, signed by himself, of the condition thereof, in a book to be kept at the quarry.

Cleaning of machinery.

**18.** Machinery shall not be cleaned while in motion.

Repair.

**19.** The machinery, appliances and permanent ways shall be kept in an efficient state of repair.

#### **DUTIES OF OFFICIALS AND WORKMEN**

Implementation of regulations.

**20.** The owner or some competent person appointed by him or his agent shall see that the provisions of the regulations relating to Quarries and any regulations hereafter made are carried out.

**21.** The owner, agent or manager or person in charge shall daily inspect every working place, and shall satisfy himself as to the safety of any rope or other appliance used by the workmen; he shall also record all dangers observed by him or notified to him by the workmen, in a book to be kept at the quarry for the purpose, which shall be duly signed.

Inspection of working place or appliances.

**22.** Each workman shall, before commencing work and during the course of it and especially after blasting, make a careful examination of his working place, and remove any loose rock, stone or ground which might be dangerous.

Workman to examine his working place.

**23.** No workman shall throw down rock, stones, ground or other material which might endanger other persons, without giving them warning and seeing that they have retired to a safe place.

Warning to be given.

Every workman who notices anything that appears unsafe or likely to produce danger shall forthwith report it to the owner, agent, manager or person in charge.

**24.** A copy of the Regulations for the time being in force shall be kept constantly posted at the Quarry in a conspicuous place, where it can be conveniently read by persons employed.

Regulations to be posted at Quarry.