

BY-LAW NO. B-1

A by-law relating generally to the transaction of the business and affairs of

ORVANA MINERALS CORP.
(hereinafter called the “Corporation”)

Amended and restated as of October 23, 2009

CONTENTS

Section One	Interpretation
Section Two	Business of the Corporation
Section Three	Borrowing and Security
Section Four	Directors
Section Five	Committees
Section Six	Officers
Section Seven	Protection of Directors, Officers and Others
Section Eight	Shares
Section Nine	Dividends and Rights
Section Ten	Meetings of Shareholders
Section Eleven	Notices
Section Twelve	Effective Date

BE IT ENACTED as a by-law of the Corporation as follows:

SECTION ONE
INTERPRETATION

1.01 Definitions. In the by-laws of the Corporation, unless the context otherwise requires:

“**Act**” means The *Business Corporations Act*, 1982 (Ontario), or any statute that may be substituted therefor, as from time to time amended;

“**appoint**” includes “elect” and vice versa;

“**board**” means the articles on which is endorsed the certificate of incorporation of the Corporation as from time to time amended or restated;

“**by-laws**” means this by-law and all other by-laws of the Corporation from time to time in force and effect;

“**cheque**” includes a draft;

“**Corporation**” means the corporation incorporated under the Act by the said certificate endorsed on the articles and named “Orvana Minerals Corp.”;

“**meeting of shareholders**” includes an annual meeting of shareholders and a special meeting of shareholders;

“**offering Corporation**” means a corporation as defined in the Act;

“**special meeting of shareholders**” includes a meeting of any class or classes of shareholders and a special meeting of all shareholders entitled to vote at an annual meeting of shareholders;

“**recorded address**” has the meaning set forth in section 11.08.

Save as aforesaid, words and expressions defined in the Act including “resident Canadian” have the same meanings when used herein. Words importing the singular number include the plural and vice versa; words importing gender include the masculine, feminine and neuter genders; and words importing a person include an individual, sole proprietorship, partnership, unincorporated association, unincorporated syndicate, unincorporated organization, trust, body corporate, and a natural person in his capacity as trustee, executor, administrator, or other legal representative.

SECTION TWO BUSINESS OF THE CORPORATION

- 2.01 Registered Office.** The registered office of the Corporation shall be at the place within Ontario from time to time specified in the articles and at such location therein initially as is specified in the articles and thereafter as the board may from time to time determine.
- 2.02 Corporate Seal.** The Corporation may, but need not have, a corporate seal and if one is adopted it shall be in a form approved from time to time by the board.
- 2.03 Financial Year.** Until changed by the board, the financial year of the Corporation shall end on the last day of December in each year.
- 2.04 Execution of Instruments.** Contracts, documents or instruments in writing requiring execution by the Corporation may be signed by two persons, one of whom holds the office of chairman of the board, president, vice-president, managing director and the other of whom holds one of the said offices or the office of secretary, treasurer, assistant secretary or assistant treasurer or any other office seated by by-law or by the board or is a director, and all contracts, documents or instruments in writing so signed shall be binding upon the Corporation without any further authorization or formality. The board is authorized from time to time by resolution to appoint any officer or officers or any other person or persons on behalf of the Corporation to sign and deliver either contracts, documents or instruments in writing generally or to sign either manually or by facsimile signature and deliver specific contracts, documents or instruments in writing. The term

“contracts, documents or instruments in writing” as used in this by-law shall include proxies, deeds, mortgages, hypothecates, pledges, discharges, releases, main-levees, charges, conveyances, powers of attorney, transfers and assignments of property of all kinds including specifically and without limitation transfers and assignments of shares, warrants, bonds, debentures or other securities and all paper writings.

- 2.05 Banking Arrangements.** The banking business of the Corporation including, without limitation, the borrowing of money and the giving of security therefor, shall be transacted with such banks, trust companies or other bodies corporate or organizations as may from time to time be designated by or under the authority of the board. Such banking business or any part thereof shall be transacted under such agreements, instructions and delegations of powers as the board may from time to time prescribe.
- 2.06 Voting Rights to Other Bodies Corporate.** The signing officers of the Corporation under section 2.04 may execute and deliver proxies and arrange for the issuance of voting certificates or other evidence of the right to exercise the voting rights attaching to any securities held by the Corporation. Such instruments shall be in favor of such persons as may be determined by the officers executing or arranging for the same. In addition, the board may from time to time direct the manner in which and the persons by whom any particular voting rights or class of voting rights may or shall be exercised.
- 2.07 Divisions.** The board may cause the business and operations of the Corporation or any part thereof to be divided into one or more divisions upon such basis, including without limitation types of business or operations, geographical territories, product lines or goods or services, as may be considered appropriate in each case. In connection with any such division the board or, subject to any direction by the board, the chief executive officer may authorized from time to time, upon such basis as may be considered appropriate in each case.
- (a) Subdivision and Consolidation - the further division of the business and operations of any such division into sub-units and the consolidation of the business and operations of any such divisions and sub-units;
 - (b) Name - the designation of any such division or sub-unit by, and the carrying on of the business and operations of any such division or sub-unit under, a name other than the name of the Corporation; provided that the Corporation shall set out its name in legible characters in all places required by law; and
 - (c) Officers - the appointment of officers for any such division or sub-unit, the determination of their powers and duties, and the removal of any of such officers so appointed, provided that any such officers shall not, as such, be officers of the Corporation.

SECTION THREE BORROWING AND SECURITY

3.01 Borrowing Power. Without limiting the borrowing powers of the Corporation as set forth in the Act, but subject to the articles the board may from time to time on behalf of the Corporation, without authorization of the shareholders:

- (a) borrow money upon the credit of the Corporation;
- (b) issue, reissue, sell or pledge bonds, debentures, notes or other evidences of indebtedness or guarantee of the Corporation, whether secured or unsecured;
- (c) to the extent permitted by the Act, give directly or indirectly financial assistance to any person by means of a loan, a guarantee on behalf of the Corporation to secure performance of any present or future indebtedness, liability or obligation or any person, or otherwise; and
- (d) mortgage, hypothecate, pledge or otherwise create a security interest in all or any currently owned or subsequently acquired real or personal, movable or immovable, property of the Corporation including book debts, rights, powers, franchises and undertakings, to secure any such bonds, debentures, notes or other evidences of indebtedness or guarantee or any other present or future indebtedness, liability or obligation of the Corporation.

Nothing in this section limits or restricts the borrowing of money by the Corporation on bills of exchange or promissory notes made, drawn, accepted or endorsed by or on behalf of the Corporation.

3.02 Delegation. Subject to the Act and the articles the board may from time to time delegate to a committee of the board, a director or an officer of the Corporation or any other person as may be designated by the board all or any of the powers conferred on the board by section 3.01 or by the Act to such extent and such manner as the board may determine at the time of such delegation.

SECTION FOUR DIRECTORS

4.01 Number of Directors. Until changed in accordance with the Act, the board shall consist of not fewer than the minimum number and not more than the maximum number of directors provided in the articles.

4.02 Qualification. No person shall be qualified for election as a director if he is less than 18 years of age; if he has been found under the *Substitute Decisions Act* (Ontario) or under the *Mental Health Act* (Ontario) to be incapable of managing property or has been found to be incapable by a court in Canada or elsewhere; if he is not an individual; or if he has the status of a bankrupt. A director need not be a shareholder. Subject to the Act, at least 25 per cent of the directors shall be resident Canadians.

- 4.03 Election and Terms.** The election of directors shall take place at each annual meeting of shareholders and all the directors then in office shall retire but, if qualified, shall be eligible for re-election. Subject to the Act, the number of directors to be elected at any such meeting shall be the number of directors determined from time to time by special resolution or, if the special resolution empowers the directors to determine the number, by resolution of the board. Where the shareholders adopt an amendment to the articles to increase the number of minimum number of directors, the shareholders may, at the meeting at which they adopt the amendment, elect the additional number of directors authorized by the amendment. The election shall be by resolution. If an election of directors is not held at the proper time, the incumbent directors shall continue in office until their successors are elected.
- 4.04 Removal of Directors.** Subject to the Act, the shareholders may by ordinary resolution passed at an annual or special meeting of shareholders remove any director from office and the vacancy created by such removal may be filled at the same meeting, failing which it may be filled by the board.
- 4.05 Vacation of Office.** A director ceases to hold office when he dies; he is removed from office by the shareholders; he ceases to be qualified for election as a director; or his written resignation is received by the Corporation, or, if a time is specified in such resignation, at the time so specified, whichever is later.
- 4.06 Vacancies.** Subject to the Act, a quorum of the board may fill a vacancy in the board, except a vacancy resulting from an increase in the number or minimum number of directors or from a failure of the shareholders to elect the number or minimum number of directors.
- 4.07 Action by the Board.** Subject to any unanimous shareholder agreement, the board shall manage or supervise the management of the business and affairs of the Corporation. The powers of the board may be exercised at a meeting (subject to sections 4.08 and 4.09) at which a quorum is present or by resolution in writing signed by all the directors entitled to vote on that resolution at a meeting of the board. Where there is a vacancy in the board, the remaining directors may exercise all the powers of the board so long as a quorum remains in office. Where the Corporation has a board consisting of only one director, that director may constitute a meeting.
- 4.08 Meeting by Telephone.** If all the directors of the corporations consent thereto generally or in respect of particular meeting, a director may participate in a meeting of the board of a committee of the board by means of such telephone, electronic or other communications facilities as permit all person participating in the meeting to communicate with each other, simultaneously and instantaneously, and a director participating in such a meeting by such means is deemed to be present at the meeting. Any such consent shall be effective whether given before or after the meeting to which it relates and may be given with respect to all meetings of the board and of committees of the board.

- 4.09 Place of Meetings.** Meetings of the board may be held at any place within or outside Ontario and in any financial year of the Corporation a majority of the meetings need not be held in Canada.
- 4.10 Calling of Meetings.** Meetings of the board shall be held from time to time at such time and at such place as the board, the chairman of the board, the managing director, the president or any two directors may determine.
- 4.11 Notice of Meeting.** Notice of the time and place of each meeting of the board shall be given in the manner provided in Section Eleven to each director not less than 48 hours before the time when the meeting is to be held. No notice of a meeting shall be necessary if all the directors in office are present or if those absent waive notice of such meeting, except where a director attends a meeting for the express purpose of objecting to the transaction of any business on the grounds that the meeting is not lawfully called. A notice of a meeting of directors need not specify the purpose of or the business to be transacted at the meeting except where the Act requires such purpose or business or the general nature thereof to be specified.
- 4.12 First Meeting of New Board.** Provided a quorum of directors is present, each newly elected board may without notice hold its first meeting immediately following the meeting of shareholders at which such board is elected.
- 4.13 Adjourned Meeting.** Notice of an adjourned meeting of the board is not required if the time and place of the adjourned meeting is announced at the original meeting.
- 4.14 Regular Meeting.** The board may appoint a day or days in any month or months for regular meetings of the board at a place and hour to be named. A copy of any resolution of the board fixing the place and time of such regular meetings shall be sent to each director forthwith after being passed, but no other notice shall be required for any such regular meeting except where the Act requires the purpose thereof or the business to be transacted thereat to be specified.
- 4.15 Chairman.** The chairman of any meeting of the board shall be the first mentioned of such of the following officers as have been appointed and who is a director and is present at the meeting; chairman of the board, managing director or president. If no such officer is present, the directors present shall choose one of their number to be chairman.
- 4.16 Quorum.** Subject to sections 4.08 and 4.18, the quorum for the transaction of business at any meeting of the board shall be two-fifths of the number of directors or minimum number of directors, as the case may be, or such greater number of directors as the board may from time to time determine.
- 4.17 Votes to Govern.** At all meetings of the board, every question shall be decided by a majority of the votes cast on the question. In case of an equality of votes the chairman of the meeting shall be entitled to a second or casting vote.

- 4.18 Conflict of Interest.** A director who is a party to, or who is a director or officer of or has a material interest in any person who is a party to, a material contract or transaction or proposed material contract or transaction with the Corporation shall disclose to the Corporation the nature and extent of that interest at the time and in the manner provided by the Act. Such a director shall not attend any part of a meeting of directors during which the contract or transaction is discussed and shall not vote on any resolution to approve the same except as provided by the Act. If no quorum exists for the purpose of voting on such a resolution only because a director is not permitted to be present at the meeting, the remaining directors shall be deemed to constitute a quorum for the purposes of voting on the resolution. Where all of the directors are required to make a disclosure under this section, the contract or transaction may only be approved by the shareholders.
- 4.19 Remuneration and Expenses.** The directors shall be paid such remuneration for their services as the board may from time to time determine. The directors shall also be entitled to be reimbursed for travelling and other expenses properly incurred by them in attending meetings of the board or any committee thereof. Nothing herein contained shall preclude any director from serving the Corporation in any other capacity and receiving remuneration thereof.
- 4.20 Submission of Contracts or Transactions.** The board of directors in its discretion may submit any contract, act or transaction for approval, confirmation or ratification at any annual meeting of the shareholders or at any special meeting of the shareholders called for the purpose of considering the same and, subject to the provisions of the Act, any such contract, act or transaction that shall be approved or ratified or confirmed by a resolution passed by a majority of the votes cast at any such meeting (unless any different or additional requirement is imposed by the Act or by the Corporation's articles or any other by-law) shall be as valid and as binding upon the Corporation and upon all the shareholders as though it had been approved, ratified or confirmed by every shareholder of the Corporation.

SECTION FIVE COMMITTEES

- 5.01 Committees of the Board.** The board may appoint from their number one or more committees of the board, however designated, and delegate to any such committee any of the powers of the board except those which pertain to items which, under the Act, a committee of the board has no authority to exercise.
- 5.02 Transaction of Business.** The powers of a committee of the board may be exercised by a meeting at which a quorum is present or by resolution in writing signed by all members of such committee who would have been entitled to vote on that resolution at a meeting of the committee. Meetings of such committee may be held at any place in or outside Ontario.
- 5.03 Audit Committees.** The board of an offering corporation shall elect annually from among its numbers an audit committee to be composed of not fewer than 3 directors of

whom- a majority shall not be officers or employees of the Corporation or its affiliates. The audit committee shall have the powers and duties provided in the Act

- 5.04 Advisory Bodies.** The board may from time to time appoint such advisory bodies as it may deem advisable.
- 5.05 Procedure.** Unless otherwise determined by the board, each committee and advisory body shall have power to fix its quorum at not less than a majority of its members, to elect its chairman and to regulate its procedure.

SECTION SIX OFFICERS

- 6.01 Appointment.** The board may from time to time appoint a president, one or more vice-presidents (to which title may be added words indicating seniority or function), a secretary, a treasurer and such other officers as the board may determine, including one or more assistants to any of the officers so appointed. One person may hold more than one office. The board may specify the duties of and, in accordance with this by-law and subject to the Act, delegate to such officers powers to manage the business and affairs of the Corporation. Subject to sections 6.02 and 6.03 an officer may but need not be a director.
- 6.02 Chairman of the Board.** The board may from time to time also appoint a chairman of the board who shall be a director. If appointed, the board may assign to him any of the powers and duties that are by any provisions of this by-law assigned to the managing director or to the president; and he shall have such other powers and duties as the board may specify.
- 6.03 Managing Director.** The board may from time to time also appoint a managing director who shall be a director. If appointed, he shall be the chief executive officer and, subject to the authority of the board, shall have general supervision of the business and affairs of the Corporation; and he shall have such other powers and duties as the board may specify. During the absence or disability of the president, or if no president has been appointed, the managing director shall also have the powers and duties of that office.
- 6.04 President.** The president shall be the chief executive officer of the Corporation unless otherwise determined by resolution of the board of directors. The president shall be vested with and may exercise all the powers and shall perform all the duties of the chairman of the board and/or vice-chairman of the board if none be appointed or if the chairman of the board and the vice-chairman of the board are absent or are unable or refuse to act; provided, however, that unless he is a director he shall not preside as chairman at any meeting of directors or of any committee of directors, if any, or, subject to section 10 of this by-law, at any meeting of shareholders.
- 6.05 Vice-President.** The vice-president or, if more than one, the vice-presidents, in order of seniority, shall be vested with all the powers and shall perform all the duties of the president in the absence of or inability or refusal to act of the president; provided

however, that a vice-president who is not a director shall not preside as chairman at any meeting of directors or of the committee of directors, if any, or, subject to section 10 of this by-law, at any meeting of shareholders.

- 6.06 Secretary.** Unless otherwise determined by the board, the secretary shall be the secretary of all meetings of the board, shareholders and committees of the board that he attends. The secretary shall enter or cause to be entered in records kept for that purpose minutes of all proceedings at meetings of the board, shareholders and committees of the board, whether or not he attends such meetings; he shall give or cause to be given, as and when instructed, all notices to shareholders, directors, officers, auditors and members of committees of the board; he shall be the custodian of the stamp or mechanical device generally used for affixing the corporate seal of the Corporation and of all books, records and instruments belonging to the Corporation, except when some other officer or agent has been appointed for that purpose; and he shall have such other powers and duties as otherwise may be specified.
- 6.07 Treasurer.** Subject to the provisions of any resolution of the board of directors, the treasurer shall have the care and custody of all the funds and securities of the Corporation and shall deposit the same in the name of the Corporation in such bank or banks or with such other depository or depositories as the board of directors may direct. He shall keep or cause to be kept the accounting records referred to in the Act. He may be required to give such bond for the faithful performance of his duties as the board of directors in its uncontrolled discretion may require but no director shall be liable for failure to require any such bond or for the insufficiency of any such bond or for any loss by reason of the failure of the Corporation to receive any indemnity thereby provided.
- 6.08 Powers and Duties of Officers.** All officers shall sign such contracts, documents or instruments in writing as require their respective signatures and shall respectively have and perform all powers and duties incident to their respective offices and such other powers and duties respectively as may from time to time be assigned to them by the board. Any of the powers and duties of an officer to whom as assistant has been appointed may be exercised and performed by such assistant, unless the board or the chief executive officer otherwise directs.
- 6.09 Remuneration and Removal.** The remuneration of all officers appointed by the board of directors shall be determined from time to time by resolution of the board of directors. The fact that any officers or employee is a director or shareholder of the Corporation shall not disqualify him from receiving such remuneration as may be determined. All officers, in the absence of agreement to the contrary, shall be subject to removal by resolution of the board of directors at any time, with or without cause.
- 6.10 Agents and Attorneys.** The Corporation, by or under the authority of the board, shall have power from time to time to appoint agents or attorneys for the Corporation in or outside Canada with such powers (including the power to subdelegate) of management, administration or otherwise as may be thought fit.

- 6.11 Conflict of Interest.** An officer shall disclose his interest in any material contract or transaction with the Corporation in the same manner as provided for in section 4.18.
- 6.12 Fidelity Bonds.** The board may require such officers, employees and agents of the Corporation as the board deems advisable to furnish bonds for the faithful discharge of their powers and duties, in such form and with such surety as the board may from time to time determine but no director shall be liable for failure to require any such bond or for the insufficiency of any such bond or for any loss by reason of the failure of the Corporation to receive any indemnity thereby provided.

**SECTION SEVEN
PROTECTION OF DIRECTORS, OFFICERS AND OTHERS**

- 7.01 Limitation of Liability.** Every director and officer of the Corporation in exercising his powers and discharging his duties to the Corporation shall act honestly and in good faith with a view to the best interests of the Corporation and exercise the care, diligence and skill that a reasonably prudent person would exercise in comparable circumstances. Subject to the foregoing, no director or officer shall be liable for the acts, receipts, neglects or defaults of any other director, officer or employee, or for joining in any receipt or other act for conformity, or for any loss, damage or expense happening to the Corporation through the insufficiency of deficiency of title to any property acquired for or on behalf of the Corporation, or for the insufficiency of deficiency of any security in or upon which any of the moneys of the Corporation shall be invested, or for any loss or damage arising from the bankruptcy, insolvency or tortious acts of any person with whom any of the moneys, securities or effects of the Corporation shall be deposited, or for any loss occasioned by any error of judgement or oversight on his part, or for any other loss, damage or misfortune which shall happen in the execution of the duties of his office or in relation thereto; provided that nothing herein shall relieve any director or officer from the duty to act in accordance with the Act and the regulations thereunder or from liability for any breach thereof.
- 7.02 Indemnity.**
- (1) Subject to the Act and Section 7.02(2), the Corporation shall:
- (a) indemnify any individual who is or was a director or officer of the Corporation and any individual who acts or acted at the Corporation's request as a director or officer (or any individual acting in a similar capacity) of another entity, against all costs, charges and expenses, including, without limitation, an amount paid to settle an action or satisfy a judgment, reasonably incurred by any such individual in respect of any civil, criminal, administrative, investigative or other proceeding in which such individual is involved because of that association with the Corporation or other entity; and
 - (b) advance moneys to a director, officer or other individual for the costs, charges, and expenses of a proceeding referred to in section 7.02(1)(a). The individual

shall repay the moneys if such individual does not fulfil the conditions of section 7.02(2).

- (2) The Corporation shall not indemnify an individual under section 7.02(1) unless such individual:
- (a) acted honestly and in good faith with a view to the best interests of the Corporation or, as the case may be, to the best interests of the other entity for which such individual acted as a director or officer (or in a similar capacity) at the Corporation's request; and
 - (b) in the case of a criminal or administrative action or proceeding that is enforced by a monetary penalty, had reasonable grounds for believing that such individual's conduct was lawful.

The Corporation shall also indemnify individuals referred to in section 7.02(1)(a) in such other circumstances as the Act or law permits or requires. Nothing in this by-law shall limit the right of any individual entitled to indemnity to claim indemnity apart from the provisions of this by-law.

7.03 Insurance. Subject to the Act, the Corporation may purchase and maintain such insurance for the benefit of any person referred to in section 7.02 hereof as the board may from time to time determine.

7.04 Material Interest. In supplement of and not by way of limitation upon any rights conferred upon directors by the Act, it is declared that no director shall be disqualified by his office from or vacate his office by reason of, holding any office or place of profit under the Corporation or under any body corporate in which the Corporation shall be a shareholder or by reason of being otherwise in any way directly or indirectly interested or contracting with the Corporation either as vendor, purchaser or otherwise or being concerned in any contract or arrangement made or proposed to be entered into with the Corporation in which he is in any way directly or indirectly interested either as vendor, purchaser or otherwise nor shall any director be liable to account to the Corporation or any of its shareholders or creditors for any profit arising from any such office or place or profit; and, subject to the provisions of the Act, no contract or arrangement entered into by or on behalf of the Corporation in which any directors shall be in any way directly or indirectly interested shall be avoided or voidable and no director shall be liable to account to the Corporation or any of its shareholders or creditors for any profit realized by or from any such contract or arrangement by reason of any fiduciary relationship.

SECTION EIGHT SHARES

8.01 Allotment of Shares. Subject to the Act and the articles the board may from time to time allot or grant options to purchase the whole or any part of the authorized and unissued shares of the Corporation at such times and to such persons and for such consideration as

the board shall determine, provided that no share shall be issued until it is fully paid as provided by the Act.

- 8.02 Commissions.** The board may from time to time authorize the Corporation to pay a reasonable commission to any person in consideration of his purchasing or agreeing to purchase shares of the Corporation, whether from the Corporation or from any other person, or procuring or agreeing to procure purchasers for any such shares.
- 8.03 Registration of Transfers.** Subject to the Act, no transfer of a share shall be registered in a securities register except upon presentation of the certificate representing such share with an endorsement which complies with the Act made thereon or delivered therewith duly executed by an appropriate person as provided by the Act, together with such reasonable assurance that the endorsement is genuine and effective as the board may from time to time prescribe and upon payment of all applicable taxes and any reasonable fees prescribed by the board and upon compliance with such restrictions on issue, transfer or ownership as are authorized by the articles.
- 8.04 Other Securities Registers.** A securities register and the register of transfers of the Corporation shall be kept at the registered office of the Corporation or at such other office or place in Ontario as may from time to time be designated by resolution of the Board and a branch securities register or registers of transfers may be kept at such office or offices of the Corporation or other place or places, either in or outside Ontario, as may from time to time be designated by resolution of the board.
- 8.05 Non-recognition of Trusts.** Subject to the Act, the Corporation may treat the registered holder of any share as the person exclusively entitled to vote, to receive notices, to receive any dividend or other payment in respect of the share, and otherwise to exercise all the rights and powers of an owner of the share.
- 8.06 Share Certificates.** Every holder of one or more shares of the Corporation shall be entitled, at his option, to a share certificate, or to a non-transferable written certificate of acknowledgement of his right to obtain a share certificate, stating the number of class or series of shares held by him as shown on the securities register. Such certificates shall be in such form as the board may from time to time approve. Any such certificate shall be signed in accordance with section 2.04 and need not be under the corporate seal.
- 8.07 Replacement of Share Certificates.** The board of any officer or agent designated by the board may in its or his discretion direct the issue of a new share or other such certificate in lieu of and upon cancellation of a certificate claimed to have been lost, apparently destroyed or wrongfully taken on payment of such reasonable fee and on such terms as to indemnity, reimbursement of expenses and evidence of loss and of title as the board may from time to time prescribe, whether generally or in any particular case.
- 8.08 Joint Shareholders.** If two or more persons are registered as joint holder of any share, the Corporation shall not be bound to issue more than one certificate in respect thereof, and delivery of such certificate to one of such persons shall be sufficient delivery to all of them. Any one of such persons may give effectual receipts for the certificate issued in

respect thereof or for any dividend, bonus, return of capital or other money payable or warrant issuable in respect of such share.

- 8.09 Deceased Shareholders.** In the event of the death of a holder, or of one of the joint holders, of any share, the Corporation shall not be required to make any entry in the securities register in respect thereof or to make any dividend or other payments in respect thereof except upon production of all such documents as may be required by law and upon compliance with the reasonable requirements of the Corporation and its transfer agents.
- 8.10 Transfer Agent and Registrar.** The directors may from time to time by resolution appoint or remove one or more transfer agents and/or branch transfer agents and/or registrars and/or branch registrars (which may or may not be the same individual or body corporate) for the securities issued by the Corporation in registered form (or for such securities of any class or classes) and may provide for the registration of transfers of such securities (or such securities of any class or classes) in one or more places and such transfer agents and/or branch transfer agents and/or registrars and/or branch registrars shall keep all necessary books and registers of the Corporation for the registering of such securities (or such securities of the class or classes in respect of which any such appointment has been made). In the event of any such appointment in respect of the shares (or the shares of any class or classes) of the Corporation, all share certificates issued by the Corporation in respect of the shares (or the shares of the class or classes in respect of which any such appointment has been made) of the Corporation shall be countersigned by or on behalf of one of the said transfer agents and/or branch transfer agents and by or on behalf of one of the said registrars and/or branch registrars, if any. One person may be designated both registrar and transfer agent.
- 8.11 Shareholder Indebted to the Corporation.** Subject to the Act, the Corporation has a lien on a share registered in the name of a shareholder or his legal representative for a debt of that shareholder to the Corporation. By way of enforcement of such lien the directors may refuse to permit the registration of a transfer of such share.

SECTION NINE DIVIDENDS AND RIGHTS

- 9.01 Dividends.** Subject to the Act, the board may from time to time declare dividends payable to the shareholders according to their respective rights and interests in the Corporation. Dividends may be paid in money or property or by issuing fully paid share of the Corporation or options or rights to acquire full paid shares of the Corporation. Any dividend unclaimed after a period of 6 years from the date on which the same has been declared to be payable shall be forfeited and shall revert to the Corporation.
- 9.02 Dividend Cheques.** A dividend payable in money shall be paid by cheque to the order of each registered holder of shares of the class or series in respect of which it has been declared and mailed by prepaid ordinary mail to such registered holder at his recorded address, unless such holder otherwise directs. In the case of joint holders the cheque shall, unless such joint holders otherwise direct, be made payable to the order of all of

such joint holders and mailed to them at their recorded address. The mailing of such cheque as aforesaid, unless the same is not paid on due presentation, shall satisfy and discharge the liability for the dividend to the extent of the sum represented thereby plus the amount of any tax which the Corporation is required to and does withhold. In the event of non-receipt of any dividend cheque by the person to whom it is sent as aforesaid, the Corporation shall issue to such person a replacement cheque for a like amount on such terms as to Indemnity, reimbursement of expenses and evidence of non-receipt and of title as the board may from time to time prescribe, whether generally or in any particular case.

- 9.03 Record Data for Dividends and Rights.** The board may fix in advance a date, preceding by not more than 50 days the date for the payment of any dividend or the date for the issue of any warrant or other evidence of the right to subscribe for securities of the Corporation, as a record date for the determination of the persons entitled to receive payment of such dividend or to exercise the right to subscribe for such securities, and notice of any such record date shall be given not less than 7 days before such record date for the determination of the persons entitled to receive payment of any dividend or to exercise the right to subscribe for securities of the Corporation shall be at the close of business on the day on which the resolution relating to such dividend or right to subscribe is passed by the board.

SECTION TEN MEETINGS OF SHAREHOLDERS

- 10.01 Annual Meetings.** The annual meeting of shareholder shall be held at such time in each year and, subject to section 10.03, at such place as the board, the chairmen of the board, the managing director or the president may from time to time determine, for the purpose of considering the financial statements and reports required by the Act to be placed before the annual meeting, electing directors, appointing auditors and for the transaction of such other business as may properly be brought before the meeting.
- 10.02 Special Meetings.** The board, the chairman of the board, the managing director or the president shall have power to call a special meeting of shareholders at any time.
- 10.03 Place of meetings.** Meetings of shareholders of the Corporation shall be held at such place in or outside Ontario as the directors determine or, in the absence of such a determination, at the place where the registered office of the Corporation is located.
- 10.04 Notice of Meetings.** A printed, written or typewritten notice stating the day, hour and place of meeting shall be given by serving such notice on each shareholder entitled to vote at such meeting, on each director and on the auditor of the Corporation in the manner specified in section 11 of this by-law, not less than ten days or if the Corporation is an offering Corporation not less than twenty-one days but in either case not more than fifty days (in each case, subject to the Act, exclusive of the day on which the notice is delivered or sent and the day for which notice is given) before the date of the meeting. Notice of a meeting at which special business is to be transacted shall state or be accompanied by a statement of (a) the nature of that business in sufficient detail to permit

the shareholder to form a reasoned judgement thereon, and (b) the text of any special resolution or by-law to be submitted to the meeting.

10.05 List of Shareholders Entitled to Notice. For every meeting of shareholders, the Corporation shall prepare a list of shareholders entitled to receive notice of the meeting, arranged in alphabetical order and showing the number of shares held by each shareholder entitled to vote at the meeting. If a record date for the meeting is fixed pursuant to section 10.06, the shareholders listed shall be those registered at the close of business on such record date. If no record date is fixed, the shareholders listed shall be those registered at the close of business on the day immediately preceding the day on which notice of the meeting is given or, where no such notice is given, on the day on which the meeting is held. The list shall be available for examination by any shareholder during usual business hours at the registered office of the Corporation or at the place where the central securities register is maintained and at the meeting for which the list was prepared. Where a separate list of shareholders has not been prepared, the names of persons appearing in the securities register at the requisite time as the holder of one or more shares carrying the right to vote at such meeting shall be deemed to be a list of shareholders.

10.06 Record Date for Notice. The board may fix in advance a date, preceding the date of any meeting of shareholders by not more than 60 days and not less than 30 days, as a record date for the determination of the shareholders entitled to notice of the meeting, and notice of any such record date shall be given not less than seven days before such record date by newspaper advertisement in the manner provided by the Act and, if any shares of the Corporation are listed for trading on a stock exchange in Canada, by written notice to each such stock exchange. If no record date is so fixed, the record date for the determination of the shareholders entitled to notice of the meeting shall be at the close of business on the day immediately preceding the day on which the notice is given or, if no notice is given, the day on which the meeting is held.

10.07 Meetings Without Notice. A meeting of shareholders may be held without notice at any time and place permitted by the Act (a) if all the shareholders entitled to vote thereat are present or duly represented or if those not present or represented waive notice of or otherwise consent to such meeting being held, and (b) if the auditors and the directors are present or waive notice of or otherwise consent to such meeting being held; so long as such shareholder, auditors or directors present are not attending for the express purpose of objecting to the transaction of any business on the grounds that the meeting is not lawfully called. At such a meeting any business may be transacted which the Corporation at a meeting of shareholders may transact.

10.08 Chairman, Secretary and Scrutineers. The chairman of any meeting of shareholders shall be the first mentioned of such of the following officers as have been appointed and who is present at the meeting; managing director, president, chairman of the board, or a vice-president who is a shareholder. If no such officer is present within 15 minutes from the time fixed for holding the meeting, the persons present and entitled to vote shall choose one of their number to be chairman. If the secretary of the Corporation is absent, the chairman shall appoint some person, who need not be a shareholder, to act as

secretary of the meeting. If desired, one or more scrutineers, who need not be shareholders, may be appointed by a resolution or by the chairman with the consent of the meeting.

- 10.09 Persons Entitled to be Present.** The only persons entitled to be present at a meeting of shareholders shall be those entitled to vote thereat, the directors and auditor of the Corporation and others who, although not entitled to vote, are entitled or required under any provision of the Act or the articles or by-laws to be present at the meeting. Any other person may be admitted only on the invitation of the chairman of the meeting or with the consent of the meeting.
- 10.10 Quorum.** Subject to the Act in respect of a majority shareholder, a quorum for the transaction of business at any meeting of shareholders shall be two persons present in person, each being a shareholder entitled to vote thereat or a duly appointed proxyholder or representative for a shareholder so entitled. If a quorum is present at the opening of any meeting of shareholders, the shareholders present or represented may proceed with the business of the meeting notwithstanding that a quorum is not present throughout the meeting. If a quorum is not present at the time appointed for the meeting or within a reasonable time thereafter as the shareholders may determine, the shareholders present or represented may adjourn the meeting to a fixed time and place but may not transact any other business.
- 10.11 Right to Vote.** Every person named in the list referred to in section 10.05 is entitled to vote the shares shown opposite such person's name at the meeting to which such list relates.
- 10.12 Proxyholders and Representative.** Every shareholder entitled to vote at a meeting of shareholders may appoint a proxyholder, or one or more alternate proxyholders, as his nominee to attend and act at the meeting in the manner and to the extent authorized and with the authority conferred by the proxy. A proxy shall be in writing executed by the shareholder or his attorney and shall conform with the requirements of the Act. Alternatively, every such shareholder which is a body corporate or association may authorize by resolution of its directors or governing body an individual to represent it at a meeting of shareholders and such individual may exercise on the shareholder's behalf all the powers it could exercise if it were an individual shareholder. The authority of such an individual shall be established by depositing with the Corporation a certified copy of such resolution, or in such other manner as may be satisfactory to the secretary of the Corporation or the chairman of the meeting. Any such proxy holder or representative need not be a shareholder.
- 10.13 Time for Deposit of Proxies.** The board may fix a time not exceeding 48 hours, excluding Saturdays and holidays, preceding any meeting or adjourned meeting of shareholders before which time proxies to be used at the meeting must be deposited with the Corporation or an agent thereof, and any period of time so fixed shall be specified in the notice calling the meeting. A proxy shall be acted upon only if, prior to the time so specified, it shall have been deposited with the Corporation or an agent thereof specified in such notice or if, no such time having been specified in such notice, it has been

received by the secretary of the Corporation or by the chairman of the meeting or any adjournment thereof prior to the time of voting.

- 10.14 Joint Shareholders.** If two or more persons hold shares jointly, any one of them present in person or duly represented at a meeting of shareholders may, in the absence of the other or others, vote the shares; but if two or more of those persons are present in person or represented and vote, they shall vote as one the shares jointly, held by them.
- 10.15 Votes to Govern.** At any meeting of shareholders every question shall, unless otherwise required by the articles or by-laws or by-law, be determined by a majority of the votes cast on the question. In case of at equality of votes either upon a show or hands or upon a poll, the chairman of the meeting shall be entitled to a second or casting vote.
- 10.16 Show of Hands.** Subject to the Act, any questions at a meeting of shareholders shall be decided by a show of hands, unless a ballot thereon is required or demanded as hereinafter provided, and upon a show of hand every person who is present and entitled to vote shall have one vote. Whenever a vote by show of hand shall have been taken upon a question, unless a ballot thereon is so required or demanded, a declaration by the chairman of the meeting that the vote upon the question has been carried or carried by a particular majority or not carried and an entry to that effect in the minutes of the meeting shall be prima facie evidence of the fact without proof of the number or proportion of the votes recorded in favor of or against any resolution or other proceeding in respect of the said question, and the results of the vote so taken shall be the decision of the shareholders upon the said question.
- 10.17 Ballots.** On any question proposed for consideration at a meeting of shareholders, and whether or not show of hands has been taken thereon, the chairman may require a ballot or any person who is present and entitled to vote on such question at the meeting may demand a ballot. A ballot so required or demanded shall be taken in such manner as the chairman shall direct. A requirement or demand for a ballot may be withdrawn at any time prior to the taking of the ballot. If a ballot is taken each person present shall be entitled in respect of the shares which he is entitled to vote at the meeting upon the question, to that number of votes provided by the Act the articles, and the result of the ballot so taken shall be the decision of the shareholders upon the said question.
- 10.18 Adjournment.** The chairman at a meeting of shareholders may, with the consent of the meeting and subject to such conditions as the meeting may decide, adjourn the meeting from time to time and from place to place. If a meeting of shareholders is adjourned for less than 30 days, it shall not be necessary to give notice of the adjourned meeting, other than by announcement at the earliest meeting that is adjourned. Subject to the Act, if a meeting of shareholders is adjourned by one or more adjournments (or an aggregate of 30 days or more, notice of the adjourned meeting shall be given as for an original meeting.
- 10.19 Action in Writing by Shareholders.** A resolution in writing signed by all the shareholders entitled to vote on that resolution at a meeting of shareholders is as valid as if it had been passed at a meeting of the shareholders unless, in accordance with the Act, (a) in the case of the resignation or removal of a director or the appointment or election or

another person to fill the place of such director, a written statement is submitted to the Corporation by the director giving the reasons for his resignation or the reasons why he opposed any proposed action or resolution for the purpose of removing him from office or the election of another person to fill the office of such a director, or (b) in the case of the removal or resignation of an auditor, or the appointment or election of another person to fill the office of auditor, representations in writing are made to the Corporation by that auditor concerning his proposed removal, the appointment or election of another person to fill the office of auditor, or his resignation.

10.20 Only One Shareholder. Where the Corporation has only one shareholder or only one holder of any class or series of shares, the shareholder present in person or duly represented constitutes a meeting.

10.21 Information to Shareholders. Except as provided by the Act, no shareholder shall be entitled to discovery of any information respecting any details or conduct of the corporation's business which in the opinion of the directors it would be inexpedient in the interests of the Corporation to communicate to the public. The directors may from time to time, subject to rights conferred by the Act, determine whether and to what extent and at what time and place and under what conditions or regulations the documents, books and registers and accounting records of the Corporation or any of them shall be open to the inspection of shareholders and no shareholders shall have any right to inspect any document or book or register or accounting record of the Corporation except as conferred by statute or authorized by the board of director or by a resolution of the shareholders.

SECTION ELEVEN NOTICES

11.01 Method of Giving Notices. Any notice (which term includes any communication or document) to be given (which term includes sent, delivered or served) pursuant to the Act, the regulations thereunder, the articles, the by-laws or otherwise to a shareholder, director, officer, auditor or member of a committee of the board shall be sufficiently given if delivered personally to the person to whom it is to be given, if mailed to him at his recorded address by prepaid mail, or if transmitted by telephone facsimile or other electronic means in accordance with the *Electronic Commerce Act* (Ontario). A notice so delivered shall be deemed to have been given when it is delivered personally or to the recorded address as aforesaid; a notice so mailed shall be deemed to have been given on the fifth day after it is deposited in a post office or public letter box; and a notice so sent by any means of transmitted or recorded communication shall be deemed to have been given when dispatched or delivered by dispatch. The secretary may change or cause to be changed the recorded address of any shareholder, director, officer, auditor or member of a committee of the board in accordance with any information believed by the secretary to be reliable.

11.02 Notice to Joint Shareholders. If two or more persons are registered as joint holders of any share, any notice may be addressed to all such joint holders, but notice addressed to one of such person shall be sufficient notice to all of them.

- 11.03 Computation of Time.** In computing the date when notice must be given under any provision requiring a specified number of days' notice of any meeting or other event, the day of giving the notice shall be excluded and the day of the meeting or other event shall be excluded.
- 11.04 Undelivered Notices.** If any notice given to a shareholder pursuant to section 11.01 is returned on three consecutive occasions because he cannot be found, the Corporation shall not be required to give any further notices to such shareholder until he informs the Corporation in writing of his new address.
- 11.05 Omissions and Errors.** The accidental omission to give any notice to any shareholder, director, officer, auditor or member of a committee of the board or the non-receipt of any notice any such person or any error in any notice not affecting the substance thereof shall not invalidate any action taken at any meeting held pursuant to such notice or otherwise founded thereon.
- 11.06 Persons Entitled by Death or Operation of Law.** Every person who, by operation of law, transfer, death of a shareholder or any other means whatsoever, shall become entitled to any share, shall be bound by every notice in respect of such share which shall have been duly given to the shareholder from whom he derives this title to such share prior to his name and address being entered on the securities register (whether such notice was given before or after the happening of the event upon which he became so entitled) and prior to his furnishing to the Corporation the proof of authority or evidence of his entitlement prescribed by the Act.
- 11.07 Waiver of Notice.** Any shareholder, proxyholder or other person entitled to attend a meeting of shareholders, director, officer, auditor or member of a committee of the board may at any time waive any notice, or waive or abridge the time for any notice, required to be given to him under the Act, the regulations thereunder, the articles, the by-laws or otherwise, and such waiver or abridgement, whether given before or after the meeting or other event of which notice is required to be given, shall cure any default in the giving or in the time of such notice, as the case may be. Any such waiver or abridgement shall be in writing except a waiver of notice of a meeting of shareholders or of the board or a committee of the board which may be given in any manner.
- 11.08 Recorded Address.** In this by-law, "recorded address" means in the case of a shareholder his address as recorded in the securities register, and in the case of joint shareholders the address appearing in the securities register in respect of such joint holding or the first address so appearing if there are more than one; in the case of an officer, auditor or member of a committee of the board, his latest address as recorded in the most recent notice filed under the *Corporations Information Act* whichever is the more current.
- 11.09 Deceased Shareholder.** Subject to the Act any notice or other document delivered or sent by post, prepaid transmitted, recorded communication or left at the address of any shareholder as the same appears in the records of the Corporation shall, notwithstanding that such shareholder be then deceased, and whether or not the Corporation has notice of

his decease, be deemed to have been duly served in respect of the shares held by such shareholder (whether held solely or with any other person or persons) until some other person be entered in his stead in the records of the Corporation as the holder or one of the holders thereof and such service shall for all purposes be deemed a sufficient service of such notice or document on his heirs, executors or administrators and on all persons, if any, interested through him or with him in such shares.

11.10 Proof of Service. A certificate of the chairman of the board (if any), the president, a vice-president, the secretary or the treasurer or of any other office of the Corporation in office at the time of the making of the certificate or of a transfer officer or any transfer agent or branch transfer agent of shares of any class of the Corporation as to the facts in relation to the mailing or delivery of any notice or other document to any shareholder, director, officer or auditor or publication of any notice or other document shall be conclusive evidence thereof and shall be binding on every shareholder, director or auditor of the Corporation as the case may be.

SECTION TWELVE EFFECTIVE DATE

12.01 Effective Date. This by-law shall come into force when made by the board in accordance with the Act.

12.02 Repeal. Upon this by-law coming into force, all prior by-laws presently in force other than by-laws relating to the borrowing powers of the Corporation are repealed provided that such repeal shall not affect the previous operation of such by-laws so repealed or affect the validity of any act done or right, privilege obligation or liability acquired or incurred or the validity of any contract or agreement made pursuant to any such by-laws prior to their repeal. All officers and persons acting under such by-laws so repealed shall continue to act as if appointed under the provisions of this by-law and all resolutions of the shareholders or board passed under such repealed by-laws shall continue to be good and valid except to the extent that they are inconsistent with this by-law or until amended or repealed.