

COMPANION POLICY 51-101CP

STANDARDS OF DISCLOSURE  
FOR OIL AND GAS ACTIVITIES

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## COMPANION POLICY 51-101CP

### STANDARDS OF DISCLOSURE FOR OIL AND GAS ACTIVITIES

This Companion Policy sets out views of the Canadian Securities Administrators (the "CSA") as to the manner in which National Instrument 51-101 *Standards of Disclosure for Oil and Gas Activities* ("NI 51-101") should be interpreted and how the *securities regulatory authorities* or *regulators* may exercise their discretion in respect of certain applications for exemptions from provisions of NI 51-101<sup>1</sup>.

#### PART 1. APPLICATION AND TERMINOLOGY

**1.1 Supplements other Requirements** - NI 51-101 supplements other continuous disclosure requirements that apply to *reporting issuers* in all business sectors.

**1.2 Materiality Standard** - Section 1.2 of NI 51-101 states that NI 51-101 applies only in respect of information that is *material*.

NI 51-101 does not require any disclosure or filing of information that is not *material*. If information is not required to be disclosed because it is not *material*, it is unnecessary to disclose that fact.

Materiality for the purposes of NI 51-101 is a matter of judgement to be made in light of the circumstances, taking into account both qualitative and quantitative factors, and assessed in respect of the *reporting issuer* as a whole.

The reference in subsection 1.2(2) of NI 51-101 to a "reasonable investor" denotes an objective test: would a notional investor, broadly representative of investors generally and guided by reason, be likely to be influenced, in making an investment decision to buy, sell or hold a security of a *reporting issuer*, by an item of information or an aggregate of items of information. If so, then that item or aggregate of items of information is "*material*" in respect of that *reporting issuer*.

This concept of materiality is consistent with the concept of materiality applied in connection with financial reporting pursuant to the Handbook of the CICA.

**1.3 When Does NI 51-101 First Apply to a Reporting Issuer?** - Part 9 of NI 51-101 specifies both the date on which NI 51-101 comes into force (section 9.1) and the timing of its first application to a *reporting issuer* (section 9.2). The two dates differ.

NI 51-101 comes into force on [January 1, 2003]. That does not, however, itself trigger any immediate filing or other requirements for *reporting issuers*.

Section 9.2 of NI 51-101 in effect establishes a transition period, after the CSA announce their adoption of NI 51-101 and for a period after NI 51-101 itself comes into force, during which *reporting issuers* are expected to prepare for compliance with NI 51-101. The date on which they first become subject to the requirements of NI 51-101 will vary depending on their

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<sup>1</sup>

For the convenience of readers, the Appendix to Companion Policy 51-101CP sets out the meanings of terms that are printed in italics in this Companion Policy (except words in italicized titles of documents, or in the forms of report set out in Part 9 which are printed entirely in italics) or in NI 51-101, Form 51-101F1, 51-101F2 or Form 51-101F3.

financial year-ends and, in some cases, on whether or not they choose to enter the *NI 51-101* disclosure system earlier than required.

The first annual filings under Part 5 of *NI 51-101* will be due at the same time as a *reporting issuer* is required to file its audited annual financial statements for its financial year that includes, or ends on, December 31, 2002. Those first annual *oil* and *gas* filings will include *reserves data* and other information that must be prepared as at the last day of that financial year and for that financial year. Some of this information will date back to the beginning of that financial year.

The other provisions of *NI 51-101*, including requirements relating to public disclosure generally and to material change<sup>2</sup> disclosure in particular, will apply to a *reporting issuer* only after it has filed its first annual oil and gas disclosure under Part 5, or the deadline for that filing, whichever is earlier.

The following examples, summarized in the table below, illustrate the effect of Part 9:

- A *reporting issuer* with a financial year that coincides with the calendar year will be required to make its first annual *oil* and *gas* disclosure filing under Part 5 in the first 140 days of 2003, by May 20, 2003. The *reserves data* and other information included in that filing must be prepared as at December 31, 2002 and for the year ended on that date.

The other provisions of *NI 51-101* will begin to apply to the *reporting issuer* as soon as it makes its first filing under Part 5, or on May 20, 2003, whichever occurs first.

- A *reporting issuer* with a financial year that ends on June 30 will be required to make its first annual oil and gas disclosure filing under Part 5 within 140 days after June 30, 2003, by November 17, 2003. The *reserves data* and other information included in that filing must be prepared as at June 30, 2003 and for the financial year ended on that date.

The other provisions of *NI 51-101* will begin to apply to the *reporting issuer* as soon as it makes its first filing under Part 5, or on November 17, 2003, whichever occurs first.

| <b><u>Financial Year-End</u></b> | <b><u>First Annual Filing Deadline</u></b>                           |
|----------------------------------|--|
| December 31                      | May 20, 2003<br>(data for the year ended <u>December 31, 2002</u> )  |
| June 30                          | November 17, 2003<br>(data for the year ended <u>June 30, 2003</u> ) |

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<sup>2</sup>

"Material change" has the meaning ascribed to the term under current *securities legislation* in the *jurisdiction*.

Because the first annual filing must include information from the beginning of the financial year that includes or ends on December 31, 2002, *reporting issuers* should familiarize themselves with *NI 51-101* and begin gathering information well before *NI 51-101* applies to them.

#### 1.4 **SPEE Standards**

- (1) Paragraph 2.2(1)(a) of *NI 51-101* mandates adherence to *SPEE standards* in estimating *reserves data* and related information. Section 4.2 of *NI 51-101* requires that public oil and gas disclosure be consistent with *SPEE standards*.
- (2) Important terminology developed by the Canadian Institute of Mining, Metallurgy & Petroleum (CIM), including *reserves* categories and related definitions, is incorporated in the *SPEE Handbook* which, pursuant to subsection 1.3(2) of *NI 51-101*, applies for purposes of *NI 51-101*. The Appendix to this Companion Policy sets out certain of these and other terms used in *NI 51-101*.
- (3) With a view to maintaining consistency between the relevant standards of *NI 51-101* and the *SPEE Handbook*, the CSA will monitor any proposal by the *SPEE* to amend the *SPEE Handbook*. The CSA will consider whether such an amendment should also apply for purposes of *NI 51-101*, which would likely be the case unless the CSA consider a proposed change to be inappropriate.

Unless and until the CSA implement a change made by the *SPEE* to the *SPEE Handbook*, such a change will not apply for purposes of *NI 51-101*.

#### 1.5 **FASB Standard and Other FASB Statements** - *NI 51-101* and the related forms refer to standards established by the *FASB*, notably *FAS 19*, *FAS 69* and the *FASB Standard*.

In accordance with the definitions of *FAS 19* and *FAS 69* in the Appendix to *NI 51-101*, references in *NI 51-101* to any of these standards include changes from time to time made to such standards by the *FASB*. Users of those standards should consult *FASB* publications.

In accordance with the definition of *FASB Standard* in the Appendix to *NI 51-101*, references in *NI 51-101* to the *FASB Standard* also include changes from time to time made by the *FASB*. The text of the *FASB Standard* as at [October 15, 2001] is reproduced in Schedule 1 to the Appendix to this Companion Policy. CSA staff will from time to time publish notice of changes made by the *FASB* to the *FASB Standard*.

#### 1.6 **Qualified Evaluator Professional Membership** - One of the elements of eligibility to act as a *qualified evaluator* for purposes of *NI 51-101* is membership in a self-regulatory organization of engineers, geologists, other geoscientists or other professionals (clause (ii) of the definition of *qualified evaluator* in the Appendix to *NI 51-101*, or clause (b) of the definition as it appears in the Appendix to this Companion Policy). Upon the coming into force of *NI 51-101*, each of the following organizations in Canada is an acceptable self-regulatory organization for this purpose:

- Association of Professional Engineers, Geologists and Geophysicists of Alberta (APEGGA)
- Association of Professional Engineers and Geoscientists of the Province of British Columbia (APEGBC)
- Association of Professional Engineers and Geoscientists of Saskatchewan (APEGS)

- Association of Professional Engineers and Geoscientists of Manitoba (APEGM)
- Professional Engineers of Ontario (PEO)
- Ordre des ingénieurs du Québec (OIQ)
- Ordre des Géologues du Québec (OGQ)
- Association of Professional Engineers of Prince Edward Island (APEPEI)
- Association of Professional Engineers and Geoscientists of New Brunswick (APEGNB)
- Association of Professional Engineers of Nova Scotia (APENS)
- Association of Professional Engineers and Geoscientists of Newfoundland (APEGN)
- Association of Professional Engineers of Yukon (APEY)
- Association of Professional Engineers, Geologists & Geophysicists of the Northwest Territories (NAPEGG) (representing the Northwest Territories and Nunavut Territory)

Membership in such a body is a precondition to being a *qualified evaluator* but is not alone sufficient for that purpose. *Reporting issuers* should ensure that any person they appoint under section 3.2 of *NI 51-101* as an *independent qualified evaluator* has, in addition to the requisite professional standing and independence, training and experience that are consistent with the *SPEE standards* and relevant to the particular *reserves data* to be reported upon.

Membership in a professional organization outside Canada does not currently satisfy the requirements of *NI 51-101*. A *reporting issuer* can apply under Part 8 of *NI 51-101* for an exemption that would enable the *reporting issuer* to treat an individual who is a member of a foreign professional organization, and who has other satisfactory qualifications and experience, as a *qualified evaluator*. The CSA are also willing to consider whether particular foreign professional organizations should be accepted for purposes of *NI 51-101* generally. In considering any such application or acceptance, the *securities regulatory authorities* or *regulators* are likely to take into account the degree to which a foreign professional organization's authority or recognition, admission criteria, standards, and disciplinary powers and practices are similar to, or differ from, those of organizations listed above.

- 1.7 Use of Information by Others** - *NI 51-101* requires that information relating to *oil and gas activities* and the extraction of hydrocarbons from shale, tar sands or coal be filed with *securities regulatory authorities* both as a source of information, and to support other disclosure concerning those activities, to assist the public and analysts in making investment decisions and recommendations.

The CSA encourage registrants<sup>3</sup> and other persons and companies that wish to make use of information concerning these activities of a *reporting issuer*, including *reserves data*, to review the information filed on SEDAR under *NI 51-101* by the *reporting issuer* and, if they are summarizing or referring to this information, to use the applicable terminology prescribed under *NI 51-101*.

## **PART 2. MEASUREMENT**

- 2.1 Proved Reserves and Proved Oil and Gas Reserve Quantities** - The CSA understand from the *SPEE* that an estimate of quantities of *proved reserves* prepared using *constant prices*

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<sup>3</sup>

"Registrant" has the meaning ascribed to the term under current *securities legislation* in the *jurisdiction*.

and costs and applying *SPEE standards* would, in all material respects, satisfy the requirements of the *FASB Standard* for the estimation of *proved oil and gas reserve quantities*.

The CSA understand, however, that the reverse might not be true in all circumstances.

- 2.2** **Forecast Prices and Costs** - *Forecast prices and costs* are defined in the *SPEE Handbook*. Except to the extent that the *reporting issuer* is legally bound by fixed or presently determinable future prices or costs, *forecast prices and costs* are future prices and costs "generally recognized as being reasonable".

The CSA do not consider that future prices or costs would satisfy this requirement if they fall outside the range of forecasts of comparable prices or costs used, as at the same date, for the same future period, by major *independent qualified evaluators*.

- 2.3** **Constant Prices and Costs** - *Constant prices and costs* are discussed in the *FASB Standard*. In general, they are prices and costs that are assumed not to change, but rather to remain constant, throughout the life of a *property*, except to the extent of any fixed or presently determinable future prices or costs to which the *reporting issuer* is legally bound by contract or otherwise, including those for an extension period of a contract that is likely to be extended.

- 2.4** **Probability of Recovery** - Paragraph 2.2(1)(g) of *NI 51-101* provides that estimates of *proved oil and gas reserve quantities* are to reflect a high degree of certainty of recovery by targeting a 90 percent probability that at least the estimated quantities will be recovered. Unless the estimation is made using the probabilistic method, this probability will be based on the *qualified evaluator's* professional judgement rather than being supported by a mathematical determination.

- 2.5** **Consistency of Timing** - Subsection 2.2(2) of *NI 51-101* requires consistency in the timing of recording the effects of events or transactions for purposes both of annual financial statements and annual *reserves data* disclosure.

The fact that the *effective date* of information (for example, "as at and for the financial year ended on December 31, 20XX") is the same for a *reporting issuer's* annual financial statements and the statement filed under item 1 of section 5.1 of *NI 51-101* does not by itself satisfy the requirement in subsection 2.2(2).

For example, an acquisition or sale of a *property* that is recorded in the *reporting issuer's* financial statements for the financial year ended on December 31, 20XX should also be given effect to in its *reserves* estimates prepared with the same *effective date*. For this purpose, something is "recorded" if it is reflected in the amounts set out in the body of the financial statements, rather than only being disclosed in a footnote to the financial statements.

However, an acquisition or sale not recorded in the financial statements for the financial year ended on December 31, 20XX, even if the acquisition or sale is disclosed in a footnote to the financial statements or has been publicly disclosed in some other fashion, should not be given effect to in the *reserves* estimates prepared as at that *effective date*.

To ensure that the effects of events or transactions are recorded, disclosed or otherwise reflected consistently (in respect of timing) in all such documents, a *reporting issuer* will wish

to ensure that both its auditors and its *qualified evaluators*, as well as its directors, are kept apprised of relevant events and transactions.

**2.6** ***Future Income Tax Expenses*** - In estimating *future net revenue* or the *standardized measure*, estimated *future income tax expenses* (computed in accordance with the *FASB Standard*) are deducted.

The CSA consider that, for this purpose, *future income tax expenses* should be estimated year-by-year:

- (a) making appropriate allocations of estimated unclaimed costs and losses carried forward for tax purposes, among *oil and gas producing activities* or the extraction of hydrocarbons from shale, tar sands or coal, and other business activities;
- (b) without deducting estimated future costs (for example, Crown royalties) that are not deductible in computing taxable income; and
- (c) taking into account estimated tax credits and allowances (for example, royalty tax credits).

### **PART 3. RESPONSIBILITIES OF *REPORTING ISSUERS* AND DIRECTORS**

**3.1** ***Reserves Committee*** - Section 3.4 of *NI 51-101* enumerates certain responsibilities of the board of directors of a *reporting issuer* in connection with *oil* and *gas* disclosure.

The CSA believe that certain of these responsibilities can in many cases be better fulfilled by a smaller group of directors who bring particular experience or abilities to the task.

Section 3.5 of *NI 51-101* permits a board of directors to delegate these responsibilities (other than the responsibility to approve the content or filing of certain documents) to a committee of directors, a majority of whose members are independent of management. Although section 3.5 is not mandatory, the CSA encourage *reporting issuers* and their directors to adopt this approach.

**3.2** ***Responsibility for Disclosure*** - *NI 51-101* requires the involvement of an *independent qualified evaluator* in preparing or reporting on certain *oil* and *gas* information disclosed by a *reporting issuer*, and in section 3.2 mandates the appointment of an *independent qualified evaluator* to report on *reserves data*.

The CSA do not intend, and do not believe, that either the requirements in *NI 51-101* for involvement of an independent qualified evaluator, or compliance with those requirements:

- (a) relieve the *reporting issuer* of responsibility for information disclosed by it, including information filed by it under Part 5 of *NI 51-101*; or
- (b) by themselves constitute or demonstrate reasonable investigation, on the part of the *reporting issuer* or its directors or officers, as to the accuracy and completeness of disclosure by the *reporting issuer*.



## **PART 4. REQUIREMENTS APPLICABLE TO ALL DISCLOSURE**

**4.1** **Scope of Part 4 of NI 51-101** - Part 4 of *NI 51-101* imposes requirements and restrictions that apply to all disclosure (or, in some cases, all written disclosure) described in section 4.1. Part 4 applies to disclosure that is either:

- filed by a *reporting issuer* with the *securities regulatory authority*; or
- if not filed, otherwise made to the public or made in circumstances in which, at the time of making the disclosure, the *reporting issuer* expects, or ought reasonably to expect, the disclosure to become available to the public.

As such, Part 4 applies to a broad range of disclosure including:

- the annual filings required under Part 5 of *NI 51-101*;
- other continuous disclosure filings, including material change reports (which themselves may also be subject to Part 6 of *NI 51-101*);
- public disclosure documents, whether or not filed, including news releases;
- public disclosure made in connection with a distribution of securities, including a prospectus; and
- except in respect of provisions of Part 4 that apply only to written disclosure, public speeches and presentations made by representatives of the *reporting issuer* on behalf of the *reporting issuer*.

For these purposes, the CSA consider written disclosure to include any writing, map or other printed representation whether produced, stored or disseminated on paper or electronically.

To ensure compliance with the requirements of Part 4, the CSA encourage *reporting issuers* to involve a *qualified evaluator*, or other professional who is familiar with *SPEE standards*, in the preparation, review or approval of all such *oil* and *gas* disclosure.

**4.2** **Estimates of Fair Value** - Section 4.9 of *NI 51-101* sets out requirements applicable to disclosure of certain estimates of fair value -- for example, an estimate of fair value of an oil and gas prospect.

Such an estimate must, unless paragraph 4.9(2)(a) applies, satisfy the requirements of paragraph 4.9(2)(b), which among other things requires that the estimate have been prepared or agreed to by a professional valuator. The CSA do not consider that such an estimate would be an appropriate basis for disclosure if it is prepared or agreed to as at a date more than 6 months before the date of the disclosure.

The three-part range of values required under subparagraph 4.9(2)(b)(ii) should consist of a reasonable low value reflecting a pessimistic estimate, a reasonable middle value reflecting the most likely estimate, and a reasonable high value reflecting an optimistic estimate, with each such value being estimated by a professional valuator in accordance with applicable professional standards based on the course of action that the valuator reasonably expects the *reporting issuer* to follow.

In circumstances in which paragraph 4.9(2)(b) applies, in order to ensure that the *reporting issuer* is not making public disclosure of misleading information, the CSA expect the *reporting issuer* to provide all relevant information to the valuator to enable the valuator to prepare the estimate and provide the report referred to in that paragraph.

- 4.3 Negative Assurance** - The CSA are of the view that a report of a *qualified evaluator* that is based on or conveys only negative assurance -- for example, a statement to the effect that "Nothing has come to my attention which would indicate the *reserves data* have not been prepared in accordance with principles and definitions established by the *SPEE*" -- can be misinterpreted as providing a higher degree of assurance than intended or warranted.

The CSA believe that *reporting issuers* should avoid making any public disclosure of, or based on, such a report. In the rare case, if any, in which there are compelling reasons for making such disclosure, the CSA believe that, to avoid providing information that could be misleading, the *reporting issuer* should include in such disclosure useful explanatory and cautionary statements. Such statements should explain the limited nature of the work undertaken by the *qualified evaluator* and the limited scope of the assurance expressed, noting that it does not amount to a positive opinion.

- 4.4 Supporting Filings** - Part 4 of *NI 51-101* requires that certain information, if disclosed publicly, must be supported by consistent information in a *supporting filing*.

The definition of "*supporting filing*" in the Appendix to *NI 51-101* does not specify any particular type of document, nor a maximum age or an expiry date for any such document. If the information in a filed document has not been rendered inaccurate or misleading by events subsequent to its filing, the document can continue to serve as a *supporting filing*.

Part 6 of *NI 51-101* requires that reports of material changes include, in certain circumstances, information concerning the effect that the material change would, but for the timing of its occurrence, have had on information in an annual filing under Part 5.

The CSA do not consider that a document filed under Part 5 of *NI 51-101* would cease to qualify as a *supporting document* merely by reason of the occurrence of a material change referred to in Part 6 of *NI 51-101*, provided that the material change disclosure required by Part 6 is filed.

## **PART 5. ANNUAL FILING REQUIREMENTS**

- 5.1 Annual Filings on SEDAR** - The information required under section 5.1 of *NI 51-101* must be filed electronically on SEDAR. Consult National Instrument 13-101 *SEDAR* and the current *CSA SEDAR Filer Manual* for information about filing documents electronically.

- 5.2 Inapplicable or Immaterial Information** - Section 5.1 of *NI 51-101* does not require the filing of any information, nor a reference to information or to a disclosure requirement, even if specified in *NI 51-101* or in a form referred to in *NI 51-101*, if that information is inapplicable or not *material* in respect of the *reporting issuer*. See section 1.2 of this Companion Policy for a discussion of materiality.

If an item of prescribed information is not disclosed because it is inapplicable or immaterial, it is also unnecessary to state that fact or to make reference to the disclosure requirement.

**5.3 Use of Forms** - Section 5.1 of *NI 51-101* requires the annual filing of information set out in *Form 51-101F1* and reports in accordance with *Form 51-101F2* and *Form 51-101F3*.

*NI 51-101*, and the instructions within each form, give the *reporting issuer* considerable flexibility in presenting this information for filing, provided that all required information is filed. It is not necessary to identify any of the information by form name or number or title, to include the headings or numbering, or to follow the ordering of items, in the forms. Information presented once in documents filed under Part 5 need not be repeated in other documents filed under Part 5 at the same time, with one exception: *reserves data* are to be disclosed together (Item 2.1 of *Form 51-101F1*) in a complete, concise presentation, even if parts of that information are also presented elsewhere.

The information specified in all three forms, or any two of the forms, can be combined in a single document. A *reporting issuer* may wish to include statements indicating the relationship between documents or parts of one document. For example, the *reporting issuer* may wish to accompany the report of the *independent qualified evaluator* (*Form 51-101F2*) with a reference to the *reporting issuer's* disclosure of *reserves data* (Item 2.1 of *Form 51-101F1*), and vice versa.

The report of management in *Form 51-101F3* may be combined with management's report on financial statements, if any, in respect of the same financial year.

**5.4 Annual Information Form** - Section 5.3 of *NI 51-101* permits *reporting issuers* to satisfy the requirements of section 5.1 of *NI 51-101* by presenting the information required under section 5.1 in an *annual information form*.

The *annual information form* can be in *Form 44-101F1 AIF* if it is a "current AIF" under National Instrument 44-101 *Short Form Prospectus Distributions*, or if it is filed for other purposes such as Ontario Securities Commission Rule 51-501 *AIF and MD&A*, section 159 of the Regulation under the Securities Act (Québec) or Multilateral Instrument 45-102 *Resale of Securities*.

The *annual information form* can also be a current annual report on *Form 10-K* or *Form 20-F* under the United States Securities and Exchange Act of 1934, if the *reporting issuer* is eligible to file such a report.

An *annual information form* containing the information required under section 5.1 need not be filed twice (that is, once as an AIF and again under section 5.1). However, as a convenience to the public, the CSA urge *reporting issuers* who rely on section 5.3 to file on SEDAR, under the category for the section 5.1 filings, a statement directing readers to the *annual information form*. This statement could be a copy of the news release mandated by section 5.2 of *NI 51-101*.

**5.5 Reservations in Independent Qualified Evaluators' Reports** - A report of an *independent qualified evaluator* on *reserves data* will not satisfy the requirements of item 2 of section 5.1 of *NI 51-101* if the report contains a *reservation*, the cause of which can be removed by the *reporting issuer* (subsection 5.4(2)).

The CSA do not generally consider time and cost considerations to be causes of a *reservation* that cannot be removed by the *reporting issuer*.

A report containing a *reservation* may, however, be acceptable if the *reservation* is caused by a limitation in the scope of the *evaluator's evaluation* or *audit* resulting from an event that clearly limits the availability of necessary records and which is beyond the control of the *reporting issuer*. This could be the case if, for example, necessary records have been inadvertently destroyed and cannot be recreated or if necessary records are in a country at war and access is not practicable.

- 5.6 Negative Assurance by Qualified Evaluator** - A *qualified evaluator* conducting a *review* may wish to express only negative assurance -- for example, in a statement such as "Nothing has come to my attention which would indicate that the *reserves data* have not been prepared in accordance with principles and definitions established by the *SPEE*".

As discussed above in section 4.3 of this Companion Policy, in respect of public disclosure generally, the CSA are of the view that such statements can be misinterpreted as providing a higher degree of assurance than intended or warranted.

The CSA believe that a statement of negative assurance would constitute so material a departure from the report prescribed in *Form 51-101F2* as to fail to satisfy the requirements of item 2 of section 5.1 of *NI 51-101*.

## **PART 6. MATERIAL CHANGE DISCLOSURE**

- 6.1 Changes from Filed Information** - Part 6 of *NI 51-101* requires the inclusion of specified information in disclosure of certain material changes.

The information to be filed each year under Part 5 of *NI 51-101* is prepared as at, or for a period ended on, the *reporting issuer's* most recent financial year-end. That date is the *effective date* referred to in subsection 6.1(1) of *NI 51-101*. When a material change occurs after that date, the filed information may no longer, as a result of the material change, convey meaningful information, or the original information may have become misleading in the absence of updated information.

Part 6 of *NI 51-101* requires that the disclosure of the material change include a discussion of the *reporting issuer's* reasonable expectation of how information that had been filed under Part 5 would differ, had the material change occurred before rather than after that original information was prepared.

This material change disclosure can reduce the likelihood of investors being misled, and maintain the usefulness of the original filed *oil* and *gas* information when the two are read together.

## **PART 7. INDEPENDENCE OF PROFESSIONALS**

- 7.1 Independence of Qualified Evaluator** - "*Independence*", in respect of the relationship between a *reporting issuer* and a *qualified evaluator* engaged to *evaluate*, *review* or *audit reserves data* or other *reserves* information, is defined in the Appendix to *NI 51-101* as having the meaning ascribed to the term in the *SPEE standards*.

Under the *SPEE standards*, a *qualified evaluator* would generally be considered to be *independent* of a client *reporting issuer* when the *qualified evaluator* neither has, nor expects to receive, a direct or indirect interest in either a *property* to be *evaluated* or reported on, or in securities of the client or of an affiliate of the client.

A *qualified evaluator* would not normally be considered to be *independent* of a client *reporting issuer* if, during the term of his or her engagement, the *qualified evaluator* among other things:

- owned or acquired a material financial interest in (i) the client or an affiliate of the client, or (ii) a *property* to be *evaluated* or reported on;
- other than in respect of advance or retainer payments or work-in-process in respect of the engagement, or trade receivables arising in the ordinary course of business, was indebted to, or had advanced credit to, the client or to an officer, director or significant shareholder of the client;
- had a financial interest in a business (other than the engagement to evaluate or report on reserves) in which the client also had a financial interest, or was party to an agreement with the client for the purchase or sale of a material asset;
- was engaged on terms such that his or her remuneration was contingent on, or would vary with, the conclusions of the *evaluation* or report; or
- would derive from the engagement an amount exceeding 50 percent of his or her total revenue in the preceding 12 months.

*Independence* would not ordinarily be considered to be lost only by reason of the fact that the *qualified evaluator*, or a petroleum engineering firm of which he or she is a partner, shareholder or employee, also provides to the client *reporting issuer*, or provides to another client in respect of a *property* to be *evaluated* or reported on, other services (including *evaluations*, *reviews* or *audits*) of a type normally rendered by the petroleum engineering profession.

## 7.2

**Unacceptable *Qualified Evaluators* or *Valuators*** - Sections 3.2 and 5.1 of *NI 51-101* require the involvement, in connection with annual *reserves data* disclosure, of a *qualified evaluator* who is *independent* (in accordance with *SPEE standards*) of the *reporting issuer*. Similarly, section 4.9 requires the involvement, in connection with certain disclosure of estimates of fair value, of a professional valuator who is not a "related party" (within the meaning of the term in the Handbook of the *CICA*) of the *reporting issuer*.

Notwithstanding that a *qualified evaluator* or a valuator may technically satisfy these requirements concerning his or her relationship with the *reporting issuer*, circumstances may, or may reasonably be seen to, deprive that individual of the freedom to exercise independent judgement that the CSA consider essential to the purposes of *NI 51-101*. In such circumstances, the *regulator* may request the *reporting issuer* to engage another *qualified evaluator* or another valuator. If a prospectus filing is involved, the *regulator* may consider that a failure to comply with such a request *materially* impairs the quality of disclosure to the extent that would lead to a refusal to issue a prospectus receipt.

## PART 8. EXEMPTIONS

**8.1 Scope of Possible Exemptions** - This Part discusses certain exemptive relief that the *securities regulatory authority* or the *regulator* may be willing to grant in appropriate circumstances, on application by a *reporting issuer* under Part 8 of *NI 51-101*. The relief discussed in this Part is limited to relief from the requirements of *NI 51-101*, and would not affect other requirements of *securities legislation*.

### **8.2 Exemption from Requirement for *Independent Qualified Evaluator***

The CSA consider that the involvement of a *qualified evaluator* who is *independent* of a *reporting issuer* will in most cases serve as an important measure of quality control for *reserves data* disclosure, which should in turn help foster and maintain confidence in *oil* and *gas* disclosure, to the benefit of all participants in Canadian capital markets.

However, the CSA recognize that there may be limited circumstances in which the quality and reliability of *reserves data* disclosure desired by the CSA may be achieved even without independent professional involvement.

*Securities regulatory authorities* or *regulators* would, in certain circumstances, likely be prepared, on application by a senior producing issuer, to grant an exemption from the requirements of *NI 51-101* for involvement of a *qualified evaluator* who is *independent* of the *reporting issuer*. Such an exemption might be without time limit but would likely be subject to conditions.

For these purposes, "senior producing issuer" means a *reporting issuer* that:

- (a) demonstrates capability to estimate its *reserves* and *future net revenue* in accordance with *SPEE standards* (other than with respect to *independence*); and
- (b) produced an average of more than 100,000 *BOEs* of *oil* and *gas* (converted in the ratio 6 *mcf*:1 *bbf*) per day throughout its most recent financial year.

Such an exemption from the requirement for *independence* of a *qualified evaluator* would likely extend to apply both in respect of requirements arising directly under *NI 51-101* (notably section 3.2 and paragraph (c) of item 2 of section 5.1) or indirectly under other *securities legislation* (such as prospectus disclosure requirements) that applies requirements of *NI 51-101*.

Such an exemption would be unlikely to vary the requirements of *NI 51-101* in respect of the involvement of a *qualified evaluator*, only his or her *independence*. Relief would likely cease to be available to a *reporting issuer* if it ceased to be a senior producing issuer or in the event of a failure to adhere to any undertaking provided as a condition of the exemption.

No such exemption would likely be provided in connection with an initial public offering of securities or a reverse take-over or similar transaction.

An application for such an exemption should demonstrate that the applicant is a senior producing issuer. In considering that aspect of an application, factors taken into account by *securities regulatory authorities* or *regulators* would likely include the background and experience of the *reporting issuer's* non-independent *qualified evaluators*, the quality of its past

*oil* and *gas* disclosure, and its internal disclosure, compliance, quality control and approval procedures. Adherence to "best practice" standards developed by the *SPEE* or relevant professional organizations would be expected. An independent *review* of internally-generated *reserves data*, with satisfactory results, could be required before an exemption is granted.

Any such exemption would likely be conditional on the *reporting issuer* undertaking:

- (a) to disclose, at least annually, its reasons for considering the reliability of internally-generated *reserves data* to be not materially less than would be afforded by strict adherence to the requirements of *NI 51-101*, including a discussion of:
  - (i) factors supporting the involvement of independent *qualified evaluators* and why such factors are not considered compelling in the case of that *reporting issuer*; and
  - (ii) the manner in which the *reporting issuer's* internally-generated *reserves data* are determined, reviewed and approved, including control procedures and the related role, responsibilities and composition of responsible management, the board of directors and (if applicable) the *reserves* committee of the board of directors;
- (b) to disclose, in each document that discloses any information derived from internally-generated *reserves data* and proximate to that disclosure, the fact that no *independent qualified evaluator* was involved in the preparation of the *reserves data*;
- (c) if, notwithstanding the exemption, the *reporting issuer* obtains a report on *reserves data* from an *independent qualified evaluator*, to disclose (at least by way of a narrative summary) the existence of that report, the identity of the *independent qualified evaluator* (after obtaining his or her consent), the scope and conclusions of that report, and a discussion of the extent to which such conclusions accord with (or differ from) corresponding internally-generated *reserves data* that the *reporting issuer* chooses to disclose in reliance on the exemption;
- (d) to file with the *regulator*, within 140 days after the end of each financial year after the date of the exemption, a certificate of a senior officer of the *reporting issuer* confirming the *reporting issuer's* compliance with the conditions of the exemption throughout that financial year; and
- (e) in respect of Part 5 of *NI 51-101*, to comply with section 5.1 except as varied by:
  - (i) deleting the words "each of whom is independent of the *reporting issuer*" from paragraph (c) of item 2 of section 5.1;
  - (ii) substituting, for the report in the form of *Form 51-101F2* referred to in item 2 of section 5.1, a report that, but for changes necessary to reflect the particular terms of an exemption on which the *reporting issuer* relies, and the deletion of inapplicable items, is in all *material* respects consistent with the following:

**Report on Reserves Data**

To the Board of Directors of [Issuer] (the "Company")

1. Our staff and I evaluated the Company's Reserves Data as at [last day of the issuer's most recently completed financial year]. The Reserves Data are:
  - (a)
    - (i) proved and probable oil and gas reserves estimated as at [last day of the issuer's most recently completed financial year] using forecast prices and costs; and
    - (ii) the related estimated future net revenue; and
  - (b)
    - (i) proved oil and gas reserve quantities, estimated as at [last day of the issuer's most recently completed financial year ] using constant prices and costs; and
    - (ii) the related standardized measure of discounted future net cash flows from oil and gas reserve quantities.
2. The Reserves Data are the responsibility of the Company's management. Our responsibility is to express an opinion on the Reserves Data based on our evaluation.
3. We carried out our evaluation in accordance with standards established by the Canadian committee of The Society of Petroleum Evaluation Engineers except that as staff [ and as shareholders, optionholders or members of the Company's reserves incentive program,] we are not independent.
4. Those standards require that we plan and perform an evaluation to obtain reasonable assurance as to whether the Reserves Data are free of material misstatement. An evaluation also includes assessing whether these Reserves Data are in accordance with principles and definitions established by the Canadian committee of The Society of Petroleum Evaluation Engineers.
5. The following sets forth the estimated proved plus probable future net revenue, estimated using forecast prices and costs, discounted at 10%, included in the Reserves Data evaluated for the year ended xxx xx, 20xx:

| <u>Country where<br/>Reserves located</u> | <u>Evaluated</u> |
|---|------------------|
| xxx                                       | \$ xxx           |
| xxx                                       | xxx              |
| xxx                                       | <u>xxx</u>       |
|   | \$ <u>xxx</u>    |





The [Reserves Committee of the] Board of Directors has reviewed the Company's procedures for assembling and reporting other information associated with oil and gas activities and has reviewed that information with management. The Board of Directors has [ , on the recommendation of the Reserves Committee, ] approved the content and filing of the Reserves Data and other oil and gas information, the filing of the report of the Internal Evaluator on the Reserves Data and the content and filing of this report.

In our view, the reliability of these internally generated estimates of Reserves Data is not materially less than would be afforded by our involving independent evaluators to evaluate and review or audit and review these Reserves Data and we have therefore applied for and obtained an exemption from the requirement under securities legislation to involve independent evaluators.

The primary factors supporting the involvement of independent evaluators apply when (i) an independent evaluator's knowledge of, and experience with, an issuer's Reserves Data is superior to that of the internal evaluators and (ii) when the independent evaluators are less likely to be adversely influenced by self interest or management of the issuer. In our view, neither of these factors applies in our circumstances.

Our view is based in large part on the following. Our estimates of Reserves Data were developed in accordance with standards established by the Canadian committee of The Society of Petroleum Evaluation Engineers and (a) our internal evaluation staff (number of persons) have an average of X years of experience in evaluating reserves, (b) our internal evaluation management staff (number of persons) have an average of Y years of experience in evaluating and managing the evaluation of reserves, (c) all our evaluation staff are independent (other than their being employees, having Company shares and options and being members of the Company's reserves incentive program), and (d) our procedures and records and controls have been established, refined, documented and internally audited for Z years with such internal auditors reporting directly to the [Reserves Committee of the] Board of Directors.

Because these Reserves Data are based on judgements regarding future events, actual results will vary and the variations may be material.

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[signature, name and titles of chief executive officer]

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[signature, name and titles of officer responsible for reserves disclosure]

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[signature, name and titles of Internal Evaluator]

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[signature, name and titles of director/member of the reserves committee]

\_\_\_\_\_  
[signature, name and titles of director/member of the reserves committee]

[Date] "

### 8.3 Exemption from Requirement for Certain Reserves Data

The *reserves data* to be prepared and reported on each year under Part 5 of *NI 51-101* has four principal components (see the definition in the Appendix to *NI 51-101*). Two of those components, *proved oil and gas reserve quantities* and the related *standardized measure*, are derived from United States requirements.

A key objective of the CSA in developing *NI 51-101* was to enhance the comparability of *oil* and *gas* disclosure provided by *reporting issuers*. The CSA recognize that, in the case of some *reporting issuers* that are active in US capital markets, the most relevant comparisons may be to *oil* and *gas* disclosure provided by US issuers.

Accordingly, *securities regulatory authorities* or *regulators* would, in certain circumstances, likely be prepared, on application by a *reporting issuer* that has securities registered in the US under the 1934 Act, to grant a limited exemption from the requirements of Part 5 of *NI 51-101* and the forms referred to in that Part.

Such an exemption could, in effect, narrow the scope of the disclosure specified in *Form 51-101F1* and referred to in *Form 51-101F2* and *Form 51-101F3*, to exclude information neither mandated by the *SEC* nor prescribed by the *FASB*. For example, the *reserves data* to be disclosed and reported on could in effect be narrowed by excluding *reserves* and related *future net revenue* estimated using *forecast prices and costs*, retaining only *proved oil and gas reserve quantities* and the related *standardized measure* estimated using *constant prices and costs*.

No such exemption would likely be provided in connection with an initial public offering of securities or a reverse take-over or similar transaction.

Such an exemption might be without time limit but would likely be subject to conditions.

Any such exemption would likely be conditional on the *reporting issuer* undertaking:

- (a) to disclose in the information filed under Part 5 of *NI 51-101* the existence of the exemption and a description of the nature of the information omitted from the filed documents pursuant to the exemption;
- (b) to provide, for the purposes of item 1 of section 5.1 of *NI 51-101*:
  - (i) the disclosure required by the *FASB Standard, FAS 69* and *SEC Industry Guide 2 "Disclosure of Oil and Gas Operations"*;
  - (ii) other disclosure, concerning matters addressed in *Form 51-101F1*, required under *FASB* statements; and

- (iii) if the *reporting issuer* is engaged in extracting, by mining, bitumen or *oil* from shale, tar sands or coal, to include the information specified in Schedule 2 to the Appendix to this Companion Policy, "Tar Sands Mining Disclosure";
- (c) to make no public disclosure of, or derived from, information excluded from the documents filed under Part 5 of *NI 51-101* in reliance on the exemption, however such information may be characterized or described by the *reporting issuer*;
- (d) to make no public disclosure of *probable* or *possible reserves*, or related *future net revenue*, estimated using *constant prices and costs*; and
- (e) to file with the *regulator*, within 140 days after the end of each financial year after the date of the exemption, a certificate of a senior officer of the *reporting issuer* confirming the *reporting issuer's* compliance with the conditions of the exemption throughout that financial year and to the date of the certificate.

Any such exemption would likely cease to apply, in whole or (in some cases) in part, in respect of information that, although not required to be included in information filed under Part 5 of *NI 51-101* by reason of the exemption, is nonetheless publicly disclosed:

- Voluntary Disclosure - If, despite such an exemption, the *reporting issuer* voluntarily discloses any information referred to in paragraph (c) above, then the exemption would cease to apply in respect of the matter voluntarily disclosed, and the *reporting issuer* would thereafter be required to comply fully with *NI 51-101* in respect of that matter (including the requirement to file, under Part 5, all information relating to that matter). If in these circumstances a *reporting issuer* ceases to be able to rely on such an exemption in any year, it would likely no longer be able to rely on the exemption subsequently.

For example, a *reporting issuer* might be exempted from the requirement to disclose estimates of *reserves* derived using *forecast prices and costs* and related *future net revenue*, in the information filed under Part 5. If the *reporting issuer* then wishes to issue a news release in which it voluntarily discloses to the public an estimate of *reserves* or *future net revenue* derived using *forecast prices and costs*, in respect of a particular project or *property*, the exemption would no longer be available to it in respect of *reserves* and *future net revenue* and related information.

In this case, section 4.7 of *NI 51-101* would require that such information be disclosed not only for that project or *property*, but also for the *reporting issuer* in total.

Section 4.2 of *NI 51-101* would also be relevant. That provision requires that all public disclosure be consistent with information filed under Part 5 or in a report of a material change. In this case, section 4.2 would require the *reporting issuer* to file the information contemplated in item 1 of section 5.1 together with the reports on that filing contemplated in items 2 and 3 of section 5.1, setting out or reporting on the relevant *reserves data* and related information relevant to, and consistent with, the voluntary disclosure. These filing requirements under section 5.1 would continue in subsequent years.

- Material Change Disclosure - Material change disclosure requirements under *securities legislation* could compel a *reporting issuer* to disclose information that it

is otherwise neither required nor permitted to disclose under the terms of an exemption contemplated in this section 8.2. This could arise, for example, when, as a result of a discovery or development activity, the *reporting issuer's probable reserves* change *materially*.

If, to satisfy its material change disclosure obligations, a *reporting issuer* discloses estimates or other information that it had undertaken not to disclose as a condition of an exemption, the *reporting issuer* would likely be required to include, in the information it files under section 5.1 of *NI 51-101* for that financial year, all information and reports relating to such estimates or other information contemplated under Part 5 (but for the exemption), at least in respect of the particular project or *property* to which the material change disclosure relates. In this case, the application of sections 4.2 and 4.7 of *NI 51-101* would likely be varied so that the additional required disclosure could be limited to the particular project or *property* rather than for all projects and *properties* of the *reporting issuer*.

The additional information and reports would likely have to be filed not later than the next filing deadline under section 5.1 of *NI 51-101* (that is, the deadline for information prepared as at the last day of the financial year during which the material change disclosure is made), and could be included in the other documents filed under Part 5 at that time. Apart from these additional one-time filing requirements, the exemption would not otherwise be affected or invalidated.

- 8.4 Stacking of Exemptions** - *Securities regulatory authorities* or *regulators* would, in certain circumstances, likely be prepared to consider granting, on application by *reporting issuers* that fall within the classes contemplated in both sections 8.2 and 8.3, exemptions that combine the elements contemplated in those sections 8.2 and 8.3.

**APPENDIX**  
**to**  
**COMPANION POLICY 51-101CP**

**STANDARDS OF DISCLOSURE**  
**FOR OIL AND GAS ACTIVITIES**

**TERMINOLOGY AND STANDARDS**

Many of the terms used in National Instrument 51-101 *Standards of Disclosure for Oil and Gas Activities* ("NI 51-101") are defined in section 1.3 of NI 51-101 as having the meanings ascribed to them in the *SPEE Handbook* or in the *FASB Standard*. Other terms used in NI 51-101 are defined in National Instrument 14-101 *Definitions* ("NI 14-101").

This Appendix consolidates many of the terms used in NI 51-101 and sets out, or explains the substance of, their meanings, as at the effective date of NI 51-101.

This Appendix is provided as a convenience to users of NI 51-101, to assist them in better understanding its purpose and application. This Appendix is not definitive, and it will not reflect changes from time to time made to the source documents. In applying NI 51-101, those source documents should be consulted.

**Organization of the Appendix**

Part 1 of this Appendix sets out, in alphabetical order, certain terms used in NI 51-101 and their meanings. Source documents, where not apparent from the meaning given, are identified in square brackets within each definition.

Part 2 explains certain of the terminology relating to *reserves* and categories of *reserves*.

This Appendix refers to a number of other source documents, certain of which are reproduced in the Schedules to this Appendix or can be obtained as follows:

- *CICA Accounting Guideline 5* is included in the Handbook of the *CICA*.
- The *FASB Standard*, as at [October 15, 2001], is set out in Schedule 1 to this Appendix. The texts of the compilation from which the *FASB Standard* is extracted, and the statements from which that compilation is derived, can be obtained from the *FASB*.
- Schedule 2 to this Appendix, *Tar Sands Mining Disclosure*, sets out certain standards for disclosure concerning tar sands (oil sands) mining, derived from *SEC Industry Guide 7 "Description of Property by Issuers Engaged or to be Engaged in Significant Mining Operations"*, as at [October 15, 2001].
- The *SPEE Handbook* can be obtained from the *SPEE*.
- NI 14-101 can be viewed on the websites of a number of securities regulatory authorities.

**PART 1. DEFINITIONS**

The terms (and plural, singular or other grammatical variants thereof) set out in the left column below have the meanings respectively set out in the right column.

| <b>Defined Term</b>            | <b>Meaning</b>   |
|--------------------------------|--|
| <b>Annual information form</b> | <p>Any of the following:</p> <ul style="list-style-type: none"> <li>• a "current AIF", as defined in <i>NI 44-101</i></li> <li>• in the case of a <i>reporting issuer</i> that is eligible to file, for the purposes of Part 3 of <i>NI 44-101</i>, a current annual report on Form 10-K or Form 20-F under the United States Securities and Exchange Act of 1934, such a current annual report so filed</li> <li>• a document prepared in the form of Form 44-101F1 <i>AIF</i> and filed with the <i>securities regulatory authority</i> in the <i>jurisdiction</i> in accordance with <i>securities legislation</i> of the <i>jurisdiction</i> other than <i>NI 44-101</i>.</li> </ul> <p>[<i>NI 51-101</i>]</p>   |
| <b>Audit</b>                   | <p>In relation to <i>reserves data</i>, the process whereby an <i>independent qualified evaluator</i> carries out procedures designed to allow the <i>independent qualified evaluator</i> to provide reasonable assurance, in the form of an opinion, that the <i>reporting issuer's reserves data</i> (or specific parts thereof) have, in all material respects, been determined and presented in accordance with <i>SPEE standards</i> and are, therefore, free of material misstatement.</p> <p>Because of</p> <ul style="list-style-type: none"> <li>(i) the nature of the subject matter (estimates of future results with many uncertainties);</li> <li>(ii) the fact that the <i>independent qualified evaluator</i> assesses the qualifications and experience of the <i>reporting issuer's</i> staff, assesses the <i>reporting issuer's</i> systems, procedures and controls and relies on the competence of the <i>reporting issuer's</i> staff and the appropriateness of the <i>reporting issuer's</i> systems, procedures and controls; and</li> <li>(iii) the fact that tests and samples (involving examination of underlying documentation supporting the determination of the <i>reserves</i> and <i>future net revenue</i>) as opposed to complete <i>evaluations</i>, are involved;</li> </ul> <p>the level of assurance is designed to be high, though not absolute.</p> <p>The level of assurance cannot be described with numeric precision. It will usually be less than, but reasonably close to, that of an <i>independent evaluation</i> and considerably higher than that of a <i>review</i>.</p> <p>[The <i>SPEE Handbook</i>]</p> |
| <b>Bitumen</b>                 | <p><i>Oil</i> with a density of less than 10 degrees API (as that term is defined by the American Petroleum Institute).</p>  |

|   |  |
|---|--|
| <b>BOEs</b>                             | Barrels of <i>oil</i> equivalent. [ <i>NI 51-101</i> and the <i>SPEE Handbook</i> ]  |
| <b>Canadian GAAP</b>                    | Generally accepted accounting principles determined with reference to the Handbook of the <i>CICA</i> . [ <i>NI 14-101</i> ]   |
| <b>Constant prices and costs</b>        | The prices and costs referred to in the definition of "proved oil and gas reserves" in the Glossary in the <i>FASB Standard</i> (currently in subparagraph .405a.).  |
| <b>CICA</b>                             | The Canadian Institute of Chartered Accountants. [ <i>NI 51-101</i> ]  |
| <b>CICA Accounting Guideline 5</b>      | Accounting Guideline AcG-5 "Full cost accounting in the oil and gas industry" included in the Handbook of the <i>CICA</i> , as from time to time amended. [ <i>NI 51-101</i> ]   |
| <b>Crude oil</b>                        | A mixture that consists mainly of pentanes and heavier hydrocarbons, that may contain sulphur compounds and that is recoverable at a well from an underground <i>reservoir</i> and that is liquid at the conditions under which its volume is measured or estimated, and includes all other liquid hydrocarbons so recoverable except natural gas liquids. [The <i>SPEE Handbook</i> ] |
| <b>Developed reserves</b>               | See Part 2 of this Appendix. [The <i>SPEE Handbook</i> ]   |
| <b>Developed non-producing reserves</b> | See Part 2 of this Appendix. [The <i>SPEE Handbook</i> ]   |
| <b>Developed producing reserves</b>     | See Part 2 of this Appendix. [The <i>SPEE Handbook</i> ]   |
| <b>Development costs</b>                | The "development costs" referred to in the <i>FASB Standard</i> (currently in paragraph .112).   |
| <b>Development well</b>                 | "Development well" as defined in the Glossary in the <i>FASB Standard</i> (currently in paragraph .401).   |
| <b>Effective date</b>                   | In respect of information, the date as at which, or for the period ending on which, the information is prepared or provided.   |
| <b>Exploration costs</b>                | The "exploration costs" referred to in the <i>FASB Standard</i> (currently in paragraphs .107 and .108).   |



|                         |  |
|-------------------------|--|
| <b>Exploratory well</b> | "Exploratory well" as defined the Glossary in the <i>FASB Standard</i> (currently in paragraph .402).  |
| <b>Evaluation</b>       | In relation to <i>reserves data</i> or related information, the process whereby an economic analysis is made of a <i>property</i> to arrive at an estimate of a value based on the estimated <i>future net revenue</i> resulting from the production of the <i>reserves</i> associated with the <i>property</i> . [The <i>SPEE Handbook</i> ]  |
| <b>Evaluator</b>        | In relation to <i>reserves data</i> or related information, the individual who performs an <i>evaluation, audit or review</i> . [The <i>SPEE Handbook</i> ]  |
| <b>FAS 19</b>           | <i>FASB</i> Statement of Financial Accounting Standards No. 19 "Financial Accounting and Reporting by Oil and Gas Producing Companies", as amended from time to time. [NI 51-101]  |
| <b>FAS 69</b>           | <i>FASB</i> Statement of Financial Accounting Standards No. 69 "Disclosures about Oil and Gas Producing Activities -- an amendment of <i>FASB</i> Statements 19, 25, 33, and 39", as amended from time to time. [NI 51-101]<br><br><i>FAS 69</i> is reflected in the <i>FASB Standard</i> .  |
| <b>FASB</b>             | The United States Financial Accounting Standards Board. [NI 51-101]  |
| <b>FASB Standard</b>    | Certain <i>FASB</i> standards and terminology relevant to disclosure concerning <i>oil and gas producing activities</i> . The standards and terminology are set out in paragraphs .103, .106, .107, .108, .112, .160 through .167, .174 through .184 and .401 through .408 of the "Financial Accounting Standards Board Current Text Section Oi5, Oil and Gas Producing Activities", as from time to time amended by the <i>FASB</i> . [NI 51-101]<br><br>The <i>FASB Standard</i> , as at [October 15, 2001], is reproduced in Schedule 1 to this Appendix. |
| <b>Field</b>            | "Field" as defined in the Glossary in the <i>FASB Standard</i> (currently in paragraph .403).  |

|                                   |  |
|-----------------------------------|--|
| <b>Forecast prices and costs</b>  | <p>Future prices and costs that are:</p> <p>(i) generally accepted as being reasonable, or</p> <p>(ii) if, and only to the extent that, there are fixed or presently determinable future prices or costs to which the <i>reporting issuer</i> is legally bound by contract or otherwise, including those for an extension period of a contract that is likely to be extended, those prices or costs rather than the prices and costs referred to in clause (i).</p> <p>[The <i>SPEE Handbook</i>]</p>  |
| <b>Form 51-101F1</b>              | Form 51-101F1 <i>Statement of Reserves Data and Other Oil and Gas Information.</i>   |
| <b>Form 51-101F2</b>              | Form 51-101F2 <i>Report on Reserves Data by Independent Qualified Evaluator.</i>   |
| <b>Form 51-101F3</b>              | Form 51-101F3 <i>Report of Management on Oil and Gas Disclosure.</i>   |
| <b>Future income tax expenses</b> | <p>"Future income tax expenses" computed in accordance with clause c. of paragraph .180 of the <i>FASB Standard</i> on a year-by-year basis.</p> <p>[The <i>SPEE Handbook</i> and the <i>FASB Standard</i>]</p>  |
| <b>Future net revenue</b>         | <p>The estimated net amount to be received with respect to the development and production of <i>reserves</i> and estimated quantities of <i>synthetic oil</i> using forecast prices and costs.</p> <p>This net amount is computed by deducting, from estimated future revenues, estimated amounts of future royalties, costs related to the development and production of <i>reserves</i>, abandonment and reclamation costs and <i>future income tax expenses</i>. Corporate general and administrative expenses and financing costs are not deducted.</p> <p>This definition of <i>future net revenue</i> differs from "Future Net Revenue" as defined in <i>CICA Accounting Guideline 5</i>, which is based on <i>proved reserves</i> estimated using <i>constant prices and costs</i>, deducting general and administrative expenses and financing costs and applying no discount.</p> <p>[The <i>SPEE Handbook</i>]</p> |
| <b>Gas (or natural gas)</b>       | <p>The lighter hydrocarbons and associated non-hydrocarbon substances occurring naturally in an underground <i>reservoir</i>, which under atmospheric conditions are essentially gases but which may contain liquids. [The <i>SPEE Handbook</i>]</p>   |

|                                     |   |
|-------------------------------------|---|
| <b>Gross</b>                        | (a) In relation to a <i>reporting issuer's</i> interest in production or <i>reserves</i> , the <i>reporting issuer's</i> interest before deduction of royalties.<br><br>(b) In relation to a <i>reporting issuer's</i> interest in a well or a <i>property</i> , the <i>reporting issuer's</i> interest before deduction of interests of others.<br><br>[The <i>SPEE Handbook</i> ]   |
| <b>Heavy oil</b>                    | Oil with a density of 10 to 20 degrees API (as that term is defined by the American Petroleum Institute). [The <i>SPEE Handbook</i> ]   |
| <b>Independent</b>                  | In respect of the relationship between a <i>qualified evaluator</i> and a <i>reporting issuer</i> , "independent" in accordance with <i>SPEE standards</i> . [NI 51-101 and the <i>SPEE Handbook</i> ]  |
| <b>Instrument</b><br>(or NI 51-101) | National Instrument 51-101 <i>Standards of Disclosure for Oil and Gas Activities</i> .  |
| <b>Jurisdiction</b>                 | For the purposes of NI 51-101, a province or territory of Canada. [NI 14-101]   |
| <b>Lease</b>                        | An agreement granting to the lessee rights to explore, develop and exploit a <i>property</i> . [The <i>SPEE Handbook</i> ]  |
| <b>Marketable oil or gas</b>        | The volume of <i>oil</i> or <i>gas</i> measured at the point of sale to a third party, or transfer to another division of the <i>reporting issuer</i> for treatment prior to sale to a third party. For <i>gas</i> , this may occur either before or after removal of <i>natural gas liquids</i> . For <i>heavy oil</i> or <i>bitumen</i> , this is before the addition of diluent. [The <i>SPEE Handbook</i> ]   |
| <b>Material</b>                     | For the purposes of NI 51-101, information is <i>material</i> , in respect of a <i>reporting issuer</i> , if it would be likely to influence a decision by a reasonable investor to buy, hold or sell a security of the <i>reporting issuer</i> .<br><br>This meaning differs from the definitions of "material change" and "material fact" in securities legislation, but is consistent with the meaning of the term as used, for accounting purposes, in the Handbook of the <i>CICA</i> .<br><br>[NI 51-101] |
| <b>Mcf</b>                          | Thousand cubic feet of gas equivalent. [NI 51-101 and the <i>SPEE Handbook</i> ]  |
| <b>Natural gas</b>                  | Gas. [The <i>SPEE Handbook</i> ]  |

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|---|---|
| <b>Net</b>                                  | <p>(a) In relation to a <i>reporting issuer's</i> interest in production or <i>reserves</i>, the <i>reporting issuer's</i> interest after deduction of royalties.</p> <p>(b) In relation to a <i>reporting issuer's</i> interest in a well or a <i>property</i>, the <i>reporting issuer's</i> interest after deduction of interests of others.</p> <p>[The <i>SPEE Handbook</i>]</p> |
| <b>NI 14-101</b>                            | National Instrument 14-101 <i>Definitions</i> .   |
| <b>NI 44-101</b>                            | National Instrument 44-101 <i>Short Form Prospectus Distributions</i> .   |
| <b>NI 51-101</b><br>(or <i>Instrument</i> ) | National Instrument 51-101 <i>Standards of Disclosure for Oil and Gas Activities</i> .  |
| <b>Oil</b>                                  | <i>Crude oil or synthetic oil</i> . [The <i>SPEE Handbook</i> ]   |
| <b>Oil and gas activities</b>               | "Oil and gas producing activities" as defined in the Glossary in the <i>FASB Standard</i> (currently in paragraph .403C).   |
| <b>Possible reserves</b>                    | See Part 2 of this Appendix.  |
| <b>Preparation date</b>                     | In respect of written disclosure, the most recent date of information considered in the preparation of the disclosure.  |
| <b>Probable reserves</b>                    | See Part 2 of this Appendix.  |
| <b>Product type</b>                         | <p>One of four types of hydrocarbon product:</p> <ul style="list-style-type: none"> <li>• light and medium <i>crude oil</i> including <i>natural gas</i> liquids (combined);</li> <li>• <i>heavy oil</i>;</li> <li>• <i>synthetic oil</i>; or</li> <li>• <i>natural gas</i>.</li> </ul> <p>[<i>NI 51-101</i> and the <i>SPEE Handbook</i>]</p>  |
| <b>Property</b>                             | The "mineral interests in properties" or "properties" referred to in the <i>FASB Standard</i> (currently in paragraph .103).  |

**Prospect** A geographic or stratigraphic area in which the *reporting issuer* owns or intends to own one or more *oil* and *gas* interests, which is geographically defined on the basis of geological data and which is reasonably anticipated to contain at least one *reservoir* or part of a *reservoir* of *oil* and *gas*. [The *SPEE Handbook*]

**Proved oil and gas reserve quantities** The "proved oil and gas reserve quantities", "proved oil and gas reserves" and "proved reserves" referred to in the *FASB Standard* (currently in paragraphs .180 and .405). [NI 51-101]

**Proved reserves** See Part 2 of this Appendix.

**Qualified evaluator** An individual *evaluator* who:

- (a) in respect of estimates of particular *reserves data* or related information, possesses professional qualifications and experience appropriate for the estimation, *evaluation*, *review* or *audit* of the *reserves data* and related information, and
- (b) is a member in good standing of a self-regulatory organization of engineers, geologists, other geoscientists or other professionals whose profession is relevant for the applicable purpose under clause (a) that:
  - (i) admits members primarily on the basis of their educational qualifications;
  - (ii) obliges its members to comply with standards of competence and ethics established by the organization;
  - (iii) has disciplinary powers, including the power to suspend or expel a member; and
  - (iv) is either:
    - (A) given authority or recognition by statute in a Canadian jurisdiction; or
    - (B) accepted for this purpose by the *securities regulatory authority* or the *regulator*.

[NI 51-101]

**Regulator** As defined in *NI 14-101*, which identifies the *securities regulatory authority* or a person who holds a specified position with the *securities regulatory authority* (in several instances, its Executive Director or Director) in each *jurisdiction*.

|                         |  |
|-------------------------|--|
| <b>Reporting issuer</b> | <p>(a) A "reporting issuer" as defined in <i>securities legislation</i>; or</p> <p>(b) In a <i>jurisdiction</i> in which the term is not defined in <i>securities legislation</i>, an issuer of securities that is required to file financial statements with the <i>securities regulatory authority</i>.</p>  |
| <b>Reservation</b>      | <p>In relation to a report on <i>reserves data</i>, a modification of the <i>independent qualified evaluator's</i> standard report on <i>reserves data</i> set out in <i>Form 41-501F2</i>, caused by a departure from <i>SPEE standards</i> or by a limitation in the scope of work that the <i>independent qualified evaluator</i> considers necessary. A modification may take the form of a qualified or adverse opinion or a denial of opinion. [The <i>SPEE Handbook</i>]</p>  |
| <b>Reserves</b>         | <p>See section 2.1 of this Appendix.</p>   |
| <b>Reserves data</b>    | <p><i>Reserves data</i> have four components, each of which is a total estimate for the <i>reporting issuer</i> (by country and for all countries):</p> <ul style="list-style-type: none"> <li>(i) <i>proved reserves</i> and <i>probable reserves</i>, each of which is a quantity estimated as at the last day of the <i>reporting issuer's</i> most recent financial year, using <i>forecast prices and costs</i>;</li> <li>(ii) <i>proved oil and gas reserve quantities</i>, estimated as at the last day of the <i>reporting issuer's</i> most recent financial year, using <i>constant prices and costs</i> as at the last day of that financial year;</li> <li>(iii) <i>future net revenue</i> attributable to <i>proved reserves</i> and <i>probable reserves</i>, estimated as at the last day of the <i>reporting issuer's</i> most recent financial year, using <i>forecast prices and costs</i>; and</li> <li>(iv) the <i>standardized measure</i>, estimated as at the last day of the <i>reporting issuer's</i> most recent financial year, using <i>constant prices and costs</i> as at the last day of that financial year.</li> </ul> <p>[NI 51-101]</p> |
| <b>Reservoir</b>        | <p>"Reservoir" as defined in the <i>FASB Standard</i> (currently in paragraph .406).</p>   |
| <b>Resources</b>        | <p>Those quantities of <i>oil</i> and <i>gas</i> which are estimated, on a given date, to be potentially recoverable from known accumulations and undiscovered accumulations and which are not <i>reserves</i>. [The <i>SPEE Handbook</i>]</p>   |

|  |   |
|--|---|
| <b>Review</b>                          | In relation to the role of an <i>independent qualified evaluator</i> in respect of <i>reserves data</i> , steps carried out by the <i>independent qualified evaluator</i> , consisting primarily of enquiry, analytical procedures and discussion related to a <i>reporting issuer's reserves data</i> , with the limited objective of assessing whether the <i>reserves data</i> are "plausible" in the sense of appearing to be worthy of belief based on the information obtained by the <i>independent qualified evaluator</i> as a result of carrying out such steps. Examination of documentation is not required unless the information does not appear to be plausible. [The <i>SPEE Handbook</i> ] |
| <b>SEC</b>                             | The Securities and Exchange Commission of the United States of America. [The <i>SPEE Handbook</i> ]   |
| <b>Securities legislation</b>          | The statute (in most cases entitled the <i>Securities Act</i> ) and subordinate legislation (in most cases including regulations or rules) specified, for each <i>jurisdiction</i> , in <i>NI 14-101</i> .<br><br>References in <i>NI 51-101</i> to <i>securities legislation</i> are to be read as references to <i>securities legislation</i> in the particular <i>jurisdiction</i> .   |
| <b>Securities regulatory authority</b> | The securities commission or comparable body specified, for each <i>jurisdiction</i> , in <i>NI 14-101</i> .<br><br>References in <i>NI 51-101</i> to the <i>securities regulatory authority</i> are to be read as references to the <i>securities regulatory authority</i> in the particular <i>jurisdiction</i> .   |
| <b>SEDAR</b>                           | The System for Electronic Document Analysis and Retrieval referred to in National Instrument 13-101 <i>SEDAR</i> .  |
| <b>Service well</b>                    | "Service well" as defined in paragraph .407 of the Glossary in the <i>FASB Standard</i> .   |
| <b>SPEE</b>                            | The Canadian committee of The Society of Petroleum Evaluation Engineers, responsible for developing the <i>SPEE Handbook</i> . [NI 51-101]  |
| <b>SPEE Handbook</b>                   | The "Canadian Oil and Gas Evaluator's Handbook" issued by the <i>SPEE</i> , as at [-----, 2002]. [NI 51-101]  |
| <b>SPEE standards</b>                  | The standards, procedures and terminology specified in the <i>SPEE Handbook</i> , to be followed by <i>oil</i> and <i>gas reserves evaluators</i> and others in estimating, <i>auditing</i> , <i>reviewing</i> and reporting on estimates of <i>oil</i> and <i>gas reserves</i> , <i>future net revenue</i> and the <i>standardized measure</i> . [NI 51-101]   |

|                             |   |
|-----------------------------|---|
| <b>Standardized measure</b> | The "standardized measure of discounted future net cash flows relating to proved oil and gas reserve quantities" referred to in paragraph .180 of the <i>FASB Standard</i> . [NI 51-101]  |
| <b>Supporting filing</b>    | A document that has been filed by the <i>reporting issuer</i> with the <i>securities regulatory authority</i> , provided that events subsequent to its filing have not rendered the information contained in the document inaccurate or misleading. [NI 51-101] |
| <b>Synthetic oil</b>        | <i>Bitumen</i> and <i>oil</i> extracted from shale, tar sands (oil sands) or coal, and then upgraded. [The <i>SPEE Handbook</i> ]   |
| <b>Undeveloped reserves</b> | See Part 2 of this Appendix. [The <i>SPEE Handbook</i> ]  |

## PART 2. RESERVES TERMINOLOGY AND CLASSIFICATIONS

This Part is derived from the *SPEE Handbook*.

**2.1 Meaning of Reserves** - "Reserves" are estimated remaining quantities of *crude oil* and *natural gas* and related substances anticipated to be recoverable from known accumulations, from a given date forward, based on:

- (a) analysis of drilling, geological, geophysical and engineering data;
- (b) the use of known technology; and
- (c) specified economic conditions, being:
  - (i) *constant prices and costs*, as at the last day of a *reporting issuer's* financial year, used to estimate *proved oil and gas reserve quantities*; and
  - (ii) *forecast prices and costs*, used to estimate *reserves* other than *proved oil and gas reserve quantities*.

## 2.2 Primary Classifications of Reserves -

- (1) *Proved reserves* are *reserves* that can be estimated with a high degree of certainty to be recoverable. It is likely that the actual volume recovered will exceed the *proved reserves* estimate.
- (2) *Probable reserves* are *reserves* additional to *proved reserves* that are less certain to be recovered than *proved reserves*. It is equally likely that the actual volume recovered will be greater or less than the sum of the *proved plus probable reserves* estimate.
- (3) *Possible reserves* are *reserves* additional to *proved plus probable reserves* that are less certain to be recovered than *probable reserves*. It is unlikely that the actual



volume recovered will exceed the *proved plus probable plus possible reserves* estimate.

**2.3 Development and Production Status** - Each of the primary *reserves* classifications, *proved, probable* and *possible*, may be divided into *developed* and *undeveloped* categories:

- (a) *Developed reserves* are those *reserves* that are expected to be recovered from existing wells and installed facilities or, if facilities have not been installed that would involve a low expenditure (when compared to the cost of drilling a well) to put the *reserves* on production.

The *developed reserves* category may be subdivided into producing and non-producing:

- (i) *Developed producing reserves* are those *reserves* that are expected to be recovered from completion intervals open at the time of the estimate. These *reserves* may be currently producing or, if shut-in, they must have previously been on production, and the date of resumption of production must be known with reasonable certainty.
- (ii) *Developed non-producing reserves* are those *reserves* that either have not been on production, or have previously been on production, but are shut-in, and the date of resumption of production is unknown.
- (b) *Undeveloped reserves* are those *reserves* expected to be recovered from known accumulations where a significant expenditure (when compared to the cost of drilling a well) is required to render them capable of production. They must fully meet the requirements of the *reserves* classification (*proved, probable, possible*) to which they are assigned.

In multi-well pools it may be appropriate to allocate total pool *reserves* between the developed and undeveloped categories or to subdivide the *developed reserves* for the pool between *developed producing* and *developed non-producing*. This allocation should be based on the estimator's assessment as to the *reserves* that will be recovered from specific wells, facilities and completion intervals in the pool and their respective development and production status.

**2.4 Levels of Certainty** - Reported total *reserves* estimated by deterministic or probabilistic methods, whether comprised of a single reserves entity or an aggregate estimate for multiple entities, should target the following levels of certainty under a specific set of economic conditions:

- (a) There is a 90% probability that at least the estimated *proved reserves* will be recovered.
- (b) There is a 50% probability that at least the sum of the estimated *proved reserves plus probable reserves* will be recovered.
- (c) There is a 10% probability that at least the sum of the estimated *proved reserves plus probable reserves plus possible reserves* will be recovered.

A quantitative measure of the probability associated with a *reserves* estimate is generated

only when a probabilistic estimate is conducted. The majority of *reserves* estimates will be performed using deterministic methods that do not provide a quantitative measure of probability. Whether deterministic or probabilistic methods are used, *evaluators* are expressing their professional judgement as to what are reasonable estimates.

**SCHEDULE 1**  
**to**  
**APPENDIX**  
**to**  
**COMPANION POLICY 51-101CP**

**STANDARDS OF DISCLOSURE**  
**FOR OIL AND GAS ACTIVITIES**

***FASB Standard***

Paragraphs .103, .106, .107, .108, .112, .160 through .167, .174 through .184 and .401 through .408 of the "Financial Accounting Standards Board Current Text Section Oi5, Oil and Gas Producing Activities", as at [October 15, 2001], are set out below, with the permission of the United States Financial Accounting Foundation. These paragraphs comprise the "*FASB Standard*".

Footnotes and references in square brackets are from the original document, except that the footnotes have been renumbered in this Schedule to follow consecutively from "1". References in square brackets are to *FASB* statements from which the *FASB Standard* is derived.

Certain of the paragraphs below contain references to other paragraphs that are not reproduced here. Those other paragraphs, not reproduced here, are derived from *FAS 19* and deal with accounting matters rather than disclosure standards.

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**Scope**

- .103 An enterprise's oil and gas producing activities involve certain special types of assets. Costs of those assets shall be capitalized when incurred. Those types of assets broadly defined are:
- a. *Mineral interests in properties* (hereinafter referred to as properties), that include fee ownership or a lease, concession, or other interest representing the right to extract

oil or gas subject to such terms as may be imposed by the conveyance of that interest. Properties also include royalty interests, production payments payable in oil or gas, and other nonoperating interests in properties operated by others. Properties include those agreements with foreign governments or authorities under which an enterprise participates in the operation of the related properties or otherwise serves as producer of the underlying reserves (refer to paragraph .163); but properties do not include other supply agreements or contracts that represent the right to purchase (as opposed to extract) oil and gas. Properties shall be classified as proved or unproved as follows:

- (1) Unproved properties—properties with no **proved reserves**.
  - (2) Proved properties—properties with proved reserves.
- b. Wells and related equipment and facilities,<sup>1</sup> the costs of which include those incurred to:
- (1) Drill and equip those **exploratory wells** and **exploratory-type stratigraphic test wells** that have found proved reserves.
  - (2) Obtain access to proved reserves and provide facilities for extracting, treating, gathering, and storing the oil and gas, including the drilling and equipping of **development wells** and **development-type stratigraphic test wells** (whether those wells are successful or unsuccessful) and **service wells**.
- c. Support equipment and facilities used in oil and gas producing activities (such as seismic equipment, drilling equipment, construction and grading equipment, vehicles, repair shops, warehouses, supply points, camps, and division, district, or field offices).
- d. Uncompleted wells, equipment, and facilities, the costs of which include those incurred to:
- (1) Drill and equip wells that are not yet completed.
  - (2) Acquire or construct equipment and facilities that are not yet completed and installed.

[FAS19, ¶11]

### Accounting at the Time Costs Are Incurred

#### Acquisition of Properties

.106 Costs incurred to purchase, lease, or otherwise acquire a property (whether unproved or proved) shall be capitalized when incurred. They include the costs of lease bonuses and options to purchase or lease properties, the portion of costs applicable to minerals when land including mineral rights is purchased in fee, brokers' fees, recording fees, legal costs, and other costs incurred in acquiring properties. [FAS19, ¶15]

#### Exploration

.107 Exploration involves (a) identifying areas that may warrant examination and (b) examining

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<sup>1</sup> Often referred to in the oil and gas industry as *lease and well equipment* even though, technically, the property may have been acquired other than by a lease. [FAS19, ¶11, fn1]

specific areas that are considered to have prospects of containing oil and gas reserves, including drilling exploratory wells and exploratory-type stratigraphic test wells. Exploration costs may be incurred both before acquiring the related property (sometimes referred to in part as prospecting costs) and after acquiring the property. [FAS19, ¶16]

.108 Principal types of exploration costs, which include depreciation and applicable operating costs of support equipment and facilities (refer to paragraph .117) and other costs of exploration activities, are:

- a. Costs of topographical, geological, and geophysical studies, rights of access to properties to conduct those studies, and salaries and other expenses of geologists, geophysical crews, and others conducting those studies. Collectively, those are sometimes referred to as geological and geophysical, or G&G, costs.
- b. Costs of carrying and retaining undeveloped properties, such as delay rentals, *ad valorem* taxes on the properties, legal costs for title defense, and the maintenance of land and lease records.
- c. Dry hole contributions and bottom hole contributions.
- d. Costs of drilling and equipping exploratory wells.
- e. Costs of drilling exploratory-type stratigraphic test wells.<sup>2</sup>

[FAS19, ¶17]

### **Development**

.112 Development costs are incurred to obtain access to proved reserves and to provide facilities for extracting, treating, gathering, and storing the oil and gas. More specifically, development costs, including depreciation and applicable operating costs of support equipment and facilities and other costs of development activities, are costs incurred to:

- a. Gain access to and prepare well locations for drilling, including surveying well locations for the purpose of determining specific development drilling sites, clearing ground, draining, road building, and relocating public roads, gas lines, and power lines, to the extent necessary in developing the proved reserves.
- b. Drill and equip development wells, development-type stratigraphic test wells, and service wells, including the costs of platforms and of well equipment such as casing, tubing, pumping equipment, and the wellhead assembly.
- c. Acquire, construct, and install production facilities such as lease flow lines, separators, treaters, heaters, manifolds, measuring devices, and production storage tanks, natural gas cycling and processing plants, and utility and waste disposal systems.
- d. Provide improved recovery systems.

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<sup>2</sup>

[Although] the costs of drilling stratigraphic test wells are sometimes considered to be geological and geophysical costs, they are accounted for separately in this section. [FAS19, ¶17, fn2]

[FAS19, ¶21]

### Disclosure of Proved Oil and Gas Reserve Quantities

.160 Net quantities of an enterprise's interests in proved reserves and proved developed reserves of (a) crude oil (including condensate and natural gas liquids)<sup>3</sup> and (b) natural gas shall be disclosed as of the beginning and the end of the year. "Net" quantities of reserves include those relating to the enterprise's operating and nonoperating interests in properties as defined in paragraph .103(a). Quantities of reserves relating to royalty interests owned shall be included in "net" quantities if the necessary information is available to the enterprise; if reserves relating to royalty interests owned are not included because the information is unavailable, that fact and the enterprise's share of oil and gas produced for those royalty interests shall be disclosed for the year. "Net" quantities shall not include reserves relating to interests of others in properties owned by the enterprise. [FAS69, ¶10]

.161 Changes in the net quantities of an enterprise's proved reserves of oil and of gas during the year shall be disclosed. Changes resulting from each of the following shall be shown separately with appropriate explanation of significant changes:

- a. Revisions of previous estimates. Revisions represent changes in previous estimates of proved reserves, either upward or downward, resulting from new information (except for an increase in proved acreage) normally obtained from development drilling and production history or resulting from a change in economic factors.
- b. *Improved recovery.* Changes in reserve estimates resulting from application of improved recovery techniques shall be shown separately, if significant. If not significant, such changes shall be included in revisions of previous estimates.
- c. *Purchases of minerals in place.*
- d. Extensions and discoveries. Additions to proved reserves that result from (1) extension of the proved acreage of previously discovered (old) reservoirs through additional drilling in periods subsequent to discovery and (2) discovery of new fields with proved reserves or of new reservoirs of proved reserves in old fields.
- e. *Production.*
- f. *Sales of minerals in place.*

[FAS69, ¶11]

.162 If an enterprise's proved reserves of oil and of gas are located entirely within its home country, that fact shall be disclosed. If some or all of its reserves are located in foreign countries, the disclosures of net quantities of reserves of oil and of gas and changes in them required by paragraphs .160 and .161 shall be separately disclosed for (a) the enterprise's home country (if significant reserves are located there) and (b) each **foreign geographic area** in which significant reserves are located. Foreign geographic areas are individual countries or groups of countries as appropriate for meaningful disclosure in the circumstances. [FAS69, ¶12]

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<sup>3</sup> If significant, the reserve quantity information shall be disclosed separately for natural gas liquids. [FAS69, ¶10, fn5]

.163 Net quantities disclosed in conformity with paragraphs .160 through .162 shall not include oil or gas subject to purchase under long-term supply, purchase, or similar agreements and contracts, including such agreements with governments or authorities. However, quantities of oil or gas subject to such agreements with governments or authorities as of the end of the year, and the net quantity of oil or gas received under the agreements during the year, shall be separately disclosed if the enterprise participates in the operation of the properties in which the oil or gas is located or otherwise serves as the "producer" of those reserves, as opposed, for example, to being an independent purchaser, broker, dealer, or importer. [FAS69, ¶13]

.164 In determining the reserve quantities to be disclosed in conformity with paragraphs .160 through .163:

- a. If the enterprise issues consolidated financial statements, 100 percent of the net reserve quantities attributable to the parent company and 100 percent of the net reserve quantities attributable to its consolidated subsidiaries (whether or not wholly owned) shall be included. If a significant portion of those reserve quantities at the end of the year is attributable to a consolidated subsidiary(ies) in which there is a significant minority interest, that fact and the approximate portion shall be disclosed.
- b. If the enterprise's financial statements include investments that are proportionately consolidated, the enterprise's reserve quantities shall include its proportionate share of the investees' net oil and gas reserves.
- c. If the enterprise's financial statements include investments that are accounted for by the equity method, the investees' net oil and gas reserve quantities shall *not* be included in the disclosures of the enterprise's reserve quantities. However, the enterprise's (investor's) share of the investees' net oil and gas reserve quantities shall be separately disclosed as of the end of the year.

[FAS69, ¶14]

.165 In reporting reserve quantities and changes in them, oil reserves and natural gas liquids reserves shall be stated in barrels, and gas reserves in cubic feet. [FAS69, ¶15]

.166 If important economic factors or significant uncertainties affect particular components of an enterprise's proved reserves, explanation shall be provided. Examples include unusually high expected development or lifting costs, the necessity to build a major pipeline or other major facilities before production of the reserves can begin, and contractual obligations to produce and sell a significant portion of reserves at prices that are substantially below those at which the oil or gas could otherwise be sold in the absence of the contractual obligation.

[FAS69, ¶16]

.167 If a government restricts the disclosure of estimated reserves for properties under its authority, or of amounts under long-term supply, purchase, or similar agreements or contracts, or if the government requires the disclosure of reserves other than proved, the enterprise shall indicate that the disclosed reserve estimates or amounts do not include figures for the named country or that reserve estimates include reserves other than proved. [FAS69, ¶17]

#### **Disclosure of the Results of Operations for Oil and Gas Producing Activities**

.174 The results of operations for oil and gas producing activities shall be disclosed for the year. That information shall be disclosed in the aggregate and for each geographic area for which

reserve quantities are disclosed (refer to paragraph .162). The following information relating to those activities shall be presented:<sup>4</sup>

- a. Revenues
- b. Production (lifting) costs
- c. Exploration expenses<sup>5</sup>
- d. Depreciation, depletion, and amortization, and valuation provisions
- e. Income tax expenses
- f. Results of operations for oil and gas producing activities (excluding corporate overhead and interest costs)

[FAS69, ¶24]

- .175 Revenues shall include sales to unaffiliated enterprises and sales or transfers to the enterprise's other operations (for example, refineries or chemical plants). Sales to unaffiliated enterprises and sales or transfers to the enterprise's other operations shall be disclosed separately. Revenues shall include sales to unaffiliated enterprises attributable to net working interests, royalty interests, oil payment interests, and net profits interests of the reporting enterprise. Sales or transfers to the enterprise's other operations shall be based on market prices determined at the point of delivery from the producing unit. Those market prices shall represent prices equivalent to those that could be obtained in an arm's-length transaction. Production or severance taxes shall not be deducted in determining gross revenues, but rather shall be included as part of production costs. Royalty payments and net profits disbursements shall be excluded from gross revenues. [FAS69, ¶25]
- .176 Income taxes shall be computed using the statutory tax rate for the period, applied to revenues less production (lifting) costs, exploration expenses, depreciation, depletion, and amortization, and valuation provisions. Calculation of income tax expenses shall reflect [FAS69, ¶26] tax deductions, [FAS109, ¶288(u)] tax credits and allowances relating to the oil and gas producing activities that are reflected in the enterprise's consolidated income tax expense for the period. [FAS69, ¶26]
- .177 Results of operations for oil and gas producing activities are defined as revenues less production (lifting) costs, exploration expenses, depreciation, depletion, and amortization, valuation provisions, and income tax expenses. General corporate overhead and interest

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<sup>4</sup> If oil and gas producing activities represent substantially all of the business activities of the reporting enterprise and those oil and gas activities are located substantially in a single geographic area, the information required by paragraphs .174 through .179 need not be disclosed if that information is provided elsewhere in the financial statements [FAS69, ¶24, fn7] If oil- and gas-producing activities constitute an operating segment, as discussed in paragraphs .109 through .123 of Section S30, "Segment Disclosures and Related Information," information about the results of operations required by paragraphs .174 through .179 of this section may be included with segment information disclosed elsewhere in the financial report. [FAS131, ¶133(c)]

<sup>5</sup> Generally, only enterprises utilizing the successful efforts accounting method will have exploration expenses to disclose, since enterprises utilizing the full cost accounting method generally capitalize all exploration costs when incurred and subsequently reflect those costs in the determination of earnings through depreciation, depletion, and amortization, and valuation provisions. [FAS69, ¶24, fn8]



costs<sup>6</sup> shall not be deducted in computing the results of operations for an enterprise's oil and gas producing activities. However, some expenses incurred at an enterprise's central administrative office may not be general corporate expenses, but rather may be operating expenses of oil and gas producing activities, and therefore should be reported as such. The nature of an expense rather than the location of its incurrence shall determine whether it is an operating expense. Only those expenses identified by their nature as operating expenses shall be allocated as operating expenses in computing the results of operations for oil and gas producing activities. [FAS69, ¶27]

.178 The amounts disclosed in conformity with paragraphs .174 through .177 shall include an enterprise's interests in proved oil and gas reserves (refer to paragraph .160) and in oil and gas subject to purchase under long-term supply, purchase, or similar agreements and contracts in which the enterprise participates in the operation of the properties on which the oil or gas is located or otherwise serves as the producer of those reserves (refer to paragraph .163).

[FAS69, ¶28]

.179 If the enterprise's financial statements include investments that are accounted for by the equity method, the investees' results of operations for oil and gas producing activities shall not be included in the enterprise's results of operations for oil and gas producing activities. However, the enterprise's share of the investees' results of operations for oil and gas producing activities shall be separately disclosed for the year, in the aggregate and by each geographic area for which reserve quantities are disclosed (refer to paragraph .162). [FAS69, ¶29]

#### **Disclosure of a Standardized Measure of Discounted Future Net Cash Flows Relating to Proved Oil and Gas Reserve Quantities**

.180 A standardized measure of discounted future net cash flows relating to an enterprise's interests in (a) proved oil and gas reserves (refer to paragraph .160) and (b) oil and gas subject to purchase under long-term supply, purchase, or similar agreements and contracts in which the enterprise participates in the operation of the properties on which the oil or gas is located or otherwise serves as the producer of those reserves (refer to paragraph .163) shall be disclosed as of the end of the year. The standardized measure of discounted future net cash flows relating to those two types of interests in reserves may be combined for reporting purposes. The following information shall be disclosed in the aggregate and for each geographic area for which reserve quantities are disclosed in accordance with paragraph .162:

- a. *Future cash inflows.* These shall be computed by applying year-end prices of oil and gas relating to the enterprise's proved reserves to the year-end quantities of those reserves. Future price changes shall be considered only to the extent provided by contractual arrangements in existence at year-end.
- b. *Future development and production costs.* These costs shall be computed by estimating the expenditures to be incurred in developing and producing the proved oil and gas reserves at the end of the year, based on year-end costs and assuming continuation of existing economic conditions. If estimated development expenditures are significant, they shall be presented separately from estimated production costs.
- c. *Future income tax expenses.* These expenses shall be computed by applying the

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<sup>6</sup> The disposition of interest costs that have been capitalized as part of the cost of acquiring qualifying assets used in oil and gas producing activities shall be the same as that of other components of those assets' costs. [FAS69, ¶27, fn9]

appropriate year-end statutory tax rates, with consideration of future tax rates already legislated, to the future pretax net cash flows relating to the enterprise's proved oil and gas reserves, less the tax basis of the properties involved. The future income tax expenses shall give effect to [FAS69, ¶30] tax deductions, [FAS109, ¶288(u)] tax credits and allowances relating to the enterprise's proved oil and gas reserves.

- d. Future net cash flows. These amounts are the result of subtracting future development and production costs and future income tax expenses from future cash inflows.
- e. Discount. This amount shall be derived from using a discount rate of 10 percent a year to reflect the timing of the future net cash flows relating to proved oil and gas reserves.
- f. Standardized measure of discounted future net cash flows. This amount is the future net cash flows less the computed discount.

[FAS69, ¶30]

.181 If a significant portion of the economic interest in the consolidated standardized measure of discounted future net cash flows reported is attributable to a consolidated subsidiary(ies) in which there is a significant minority interest, that fact and the approximate portion shall be disclosed. [FAS69, ¶31]

.182 If the financial statements include investments that are accounted for by the equity method, the investees' standardized measure of discounted future net cash flows relating to proved oil and gas reserves shall not be included in the disclosure of the enterprise's standardized measure. However, the enterprise's share of the investees' standardized measure of discounted future net cash flows shall be separately disclosed for the year, in the aggregate and by each geographic area for which quantities are disclosed (refer to paragraph .162).

[FAS69, ¶32]

.183 The aggregate change in the standardized measure of discounted future net cash flows shall be disclosed for the year. If individually significant, the following sources of change shall be presented separately:

- a. Net change in sales and transfer prices and in production (lifting) costs related to future production
- b. Changes in estimated future development costs
- c. Sales and transfers of oil and gas produced during the period
- d. Net change due to extensions, discoveries, and improved recovery
- e. Net change due to purchases and sales of minerals in place
- f. Net change due to revisions in quantity estimates
- g. Previously estimated development costs incurred during the period

- h. Accretion of discount
- i. Other — unspecified
- j. Net change in income taxes

In computing the amounts under each of the above categories, the effects of changes in prices and costs shall be computed before the effects of changes in quantities. As a result, changes in quantities shall be stated at year-end prices and costs. The change in computed income taxes shall reflect the effect of income taxes incurred during the period as well as the change in future income tax expenses. Therefore, all changes except income taxes shall be reported pretax. [FAS69, ¶33]

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Additional information necessary to prevent the disclosure of the standardized measure of discounted future net cash flows and changes therein from being misleading also shall be provided. [FAS69, ¶34]

## GLOSSARY

- .401 **Development well.** A well drilled within the **proved area** of an oil or gas reservoir to the depth of a stratigraphic horizon known to be productive. [FAS19, ¶274]
- .402 **Exploratory well.** A well that is not a development well, a service well, or a stratigraphic test well, as those terms are defined in this section. [FAS19, ¶274]
- .403 **Field.** An area consisting of a single reservoir or multiple reservoirs all grouped on or related to the same individual geological structural feature or stratigraphic condition, or both. There may be two or more reservoirs in a field which are separated vertically by intervening impervious strata, or laterally by local geologic barriers, or by both. Reservoirs that are associated by being in overlapping or adjacent fields may be treated as a single or common operational field. The geological terms *structural feature* and *stratigraphic condition* are intended to identify localized geological features as opposed to the broader terms of *basins*, *trends*, *provinces*, *plays*, *areas of interest*, etc. [FAS19, ¶272]
- .403A **Foreign geographic area.** Individual countries or groups of countries as appropriate for meaningful disclosure in the circumstances. [FAS69, ¶12]
- .403B **Industry segment.** A component of an enterprise engaged in providing a product or service or a group of related products or services primarily to external customers (that is, customers outside the enterprise) for a profit. [FAS131, ¶133(a)]
- .403C **Oil and gas producing activities.** Those activities [that] involve the acquisition of mineral interests in properties, exploration (including prospecting), development, and production of crude oil, including condensate and natural gas liquids, and natural gas. [FAS19, ¶1]
- .404 **Proved area.** The part of a property to which proved reserves have been specifically attributed. [FAS19, ¶275]
- .405 **Proved reserves:**<sup>7</sup>
- a. *Proved oil and gas reserves.* The estimated quantities of crude oil, natural gas, and natural gas liquids which geological and engineering data demonstrate with reasonable certainty to be recoverable in future years from known reservoirs under existing economic and operating conditions, that is, prices and costs as of the date the estimate is made. Prices include consideration of changes in existing prices provided only by contractual arrangements but not on escalations based upon future conditions.
- (1) Reservoirs are considered proved if economic producibility is supported by either actual production or conclusive formation test. The area of a reservoir considered proved includes (a) that portion delineated by drilling and defined by gas-oil or oil-water contacts, if any, or both, and (b) the immediately adjoining portions not yet drilled, but which can be reasonably judged as economically productive on the basis of available geological and engineering data. In the absence of information on fluid contacts, the lowest known structural occurrence of hydrocarbons controls the lower proved limit of the reservoir.

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The following definitions of proved reserves are those developed by the Department of Energy for its Financial Reporting System and adopted by the SEC on December 19, 1978 in Accounting Series Release 257. Reference should be made to the SEC's reporting requirements for revisions that may have been made since the issuance of ASR 257. [FAS25, ¶34]

- (2) Reserves that can be produced economically through application of improved recovery techniques (such as fluid injection) are included in the *proved* classification if successful testing by a pilot project, or the operation of an installed program in the reservoir, provides support for the engineering analysis on which the project or program was based.
- (3) Estimates of proved reserves do not include the following: (a) oil that may become available from known reservoirs but is classified separately as *indicated additional reserves*; (b) crude oil, natural gas, and natural gas liquids, the recovery of which is subject to reasonable doubt because of uncertainty as to geology, reservoir characteristics, or economic factors; (c) crude oil, natural gas, and natural gas liquids that may occur in undrilled prospects; and (d) crude oil, natural gas, and natural gas liquids that may be recovered from oil shales, coal, gilsonite, and other such sources.

b. *Proved developed oil and gas reserves.* Proved developed oil and gas reserves are reserves that can be expected to be recovered through existing wells with existing equipment and operating methods. Additional oil and gas expected to be obtained through the application of fluid injection or other improved recovery techniques for supplementing the natural forces and mechanisms of primary recovery should be included as *proved developed reserves* only after testing by a pilot project or after the operation of an installed program has confirmed through production response that increased recovery will be achieved.

c. *Proved undeveloped reserves.* Proved undeveloped oil and gas reserves are reserves that are expected to be recovered from new wells on undrilled acreage, or from existing wells for which a relatively major expenditure is required for recompletion. Reserves on undrilled acreage should be limited to those drilling units offsetting productive units that are reasonably certain of production when drilled. Proved reserves for other undrilled units can be claimed only if it can be demonstrated with certainty that there is continuity of production from the existing productive formation. Under no circumstances should estimates for proved undeveloped reserves be attributable to any acreage for which an application of fluid injection or other improved recovery technique is contemplated, unless such techniques have been proved effective by actual tests in the area and in the same reservoir. [FAS25, ¶34]

.405A **Publicly traded enterprise.** A business enterprise (a) whose securities are traded in a public market on a domestic stock exchange or in the domestic over-the-counter market (including securities quoted only locally or regionally) or (b) whose financial statements are filed with a regulatory agency in preparation for the sale of any class of securities in a domestic market. [FAS69, ¶1, fn2]

.406 **Reservoir.** A porous and permeable underground formation containing a natural accumulation of producible oil or gas that is confined by impermeable rock or water barriers and is individual and separate from other reservoirs. [FAS19, ¶273]

.407 **Service well.** A service well is a well drilled or completed for the purpose of supporting production in an existing field. Wells in this class are drilled for the following specific purposes: gas injection (natural gas, propane, butane, or flue gas), water injection, steam injection, air injection, salt-water disposal, water supply for injection, observation, or injection for combustion. [FAS19, ¶274]

.408 **Stratigraphic test well.** A stratigraphic test is a drilling effort, geologically directed, to obtain information pertaining to a specific geologic condition. Such wells customarily are drilled without the intention of being completed for hydrocarbon production. This classification also includes tests identified as core tests and all types of expendable holes related to

hydrocarbon exploration. For purposes of this section, stratigraphic test wells (sometimes called expendable wells) are classified as follows:

- a. *Exploratory-type stratigraphic test well.* A stratigraphic test well not drilled in a proved area.
- b. *Development-type stratigraphic test well.* A stratigraphic test well drilled in a proved area

[FAS19, ¶274]

**SCHEDULE 2**  
**to**  
**APPENDIX**  
**to**  
**COMPANION POLICY 51-101CP**  
**STANDARDS OF DISCLOSURE**  
**FOR OIL AND GAS ACTIVITIES**

**Tar Sands Mining Disclosure**

(Derived from SEC Industry Guide 7 "Description of Property by Issuers Engaged or to be Engaged in Significant Mining Operations", as at [October 15, 2001]. Differences between this document and SEC Industry Guide 7 are not substantive; they consist largely of renumbering, limited changes of terminology to conform to CSA usage, the deletion of certain instructions, and modified requirements for the furnishing of supporting documents.)

1. **Definitions.** The following definitions apply to reporting issuers engaged or to be engaged in significant tar sands (oil sands) mining operations:
  - (a) **Reserve.** That part of a mineral deposit which could be economically and legally extracted or produced at the time of the reserve determination. Note: reserves are customarily stated in terms of "ore" when dealing with metalliferous minerals; when other materials such as coal, oil, shale, tar sands or limestone are involved, an appropriate term such as "recoverable coal" may be substituted.
  - (b) **Proven Reserves.** Reserves for which (i) quantity is computed from dimensions revealed in outcrops, trenches, workings or drill holes; grade and/or quality are computed from the results of detailed sampling and (ii) the sites for inspection, sampling and measurement are spaced so closely and the geologic character is so well defined that size, shape, depth and mineral content of reserves are well-established.
  - (c) **Probable Reserves.** Reserves for which quantity and grade and/or quality are computed from information similar to that used for proven reserves, but the sites for inspection, sampling, and measurement are farther apart or are otherwise less adequately spaced. The degree of assurance, although lower than that for proven reserves, is high enough to assume continuity between points of observation.
  - (d)
    - (i) **Exploration Stage** - includes all reporting issuers engaged in the search for mineral deposits (reserves) which are not in either the development or production stage.
    - (ii) **Development Stage** - includes all reporting issuers engaged in the preparation of an established commercially mineable deposit (reserves) for its extraction which are not in the production stage.
    - (iii) **Production Stage** - includes all reporting issuers engaged in the exploitation of a mineral deposit (reserve).
2. **Mining Operations Disclosure.** Furnish the following information as to each of the mines, plants and other significant properties owned or operated, or presently intended to be owned or operated, by the reporting issuer:

- (a) The location and means of access to the property;
- (b) A brief description of the title, claim, lease or option under which the reporting issuer and its subsidiaries have or will have the right to hold or operate the property, indicating any conditions which the reporting issuer must meet in order to obtain or retain the property. If held by leases or options, the expiration dates of such leases or options should be stated. Appropriate maps may be used to portray the locations of significant properties;
- (c) A brief history of previous operations, including the names of previous operators, insofar as known;
- (d)
  - (i) A brief description of the present condition of the property, the work completed by the reporting issuer on the property, the reporting issuer's proposed program of exploration and development, and the current state of exploration and/or development of the property. Mines should be identified as either open-pit or underground. If the property is without known reserves and the proposed program is exploratory in nature, a statement to that effect shall be made;
  - (ii) The age, details as to modernization and physical condition of the plant and equipment, including subsurface improvements and equipment. Further, the total cost for each property and its associated plant and equipment should be stated. The source of power utilized with respect to each property should also be disclosed.
- (e) A brief description of the rock formations and mineralization of existing or potential economical significance on the property, including the identity of the principal metallic or other constituents insofar as known. If proven or probable reserves have been established, state (1) the estimated tonnages (barrels) and grades (or quality, where appropriate) of such classes of reserves, and (2) the name of the person making the estimates and the nature of his or her relationship to the reporting issuer.

*INSTRUCTIONS to paragraph 2(e):*

- (1) *It should be stated whether the reserve estimate is of in-place material or of recoverable material. Any in-place estimate should be qualified to show the anticipated losses resulting from mining methods and beneficiation or preparation.*
- (2) *The summation of proven and probable reserves is acceptable if the difference in degree of assurance between the two classes of reserves cannot be readily defined.*
- (3) *Estimates other than proven or probable reserves, and any estimated values of such reserves shall not be disclosed unless such information is required to be disclosed by foreign or state law; provided, however, that where such estimates previously have been provided to a person (or any of its affiliates) that is offering to acquire, merge or consolidate with, the reporting issuer or otherwise to acquire the reporting issuer's securities, such estimates may be included.*



- (f) If technical terms relating to geology, mining or related matters whose definition cannot readily be found in conventional dictionaries (as opposed to technical dictionaries or glossaries) are used, an appropriate glossary should be included in this report.
- (g) Detailed geographic maps and reports, feasibility studies and other highly technical data should not be included in the report but should be to the degree appropriate and necessary for the regulator's understanding of the reporting issuer's presentation of business and property matters, furnished as supplemental information.

**3. Supplemental Information.**

- (a) If an estimate of proven or probable reserves is set forth in the report, furnish:
  - (i) maps drawn to scale showing any mine workings and the outlines of the reserve blocks involved together with the pertinent sample-assay thereon.
  - (ii) all pertinent drill data and related maps.
  - (iii) the calculations whereby the basic sample-assay or drill data were translated into the estimates made of the grade and tonnage of reserves in each block and in the complete reserve estimate.

*INSTRUCTIONS to paragraph 3(a):*

*Maps and drawings submitted to the regulator should include:*

- (a) *A legend or explanation showing, by means of pattern or symbol, every pattern or symbol used on the map or drawing;*
  - (b) *A graphical bar scale should be included, additional representations of scale such as "one inch equals one mile" may be utilized, provided the original scale of the map has not been altered;*
  - (c) *A north arrow on the maps;*
  - (d) *An index map showing where the property is situated in relationship to the state or province, etc., in which it was located;*
  - (e) *A title of the map or drawing and the date on which it was drawn;*
  - (f) *In the event interpretive data is submitted in conjunction with any map, the identity of the geologist or engineer that prepared such data; and*
  - (g) *Any drawing should be simple enough or of sufficiently large scale to clearly show all features on the drawing.*
- (b) On the request of the regulator, furnish a complete copy of every material engineering, geological or metallurgical report concerning the reporting issuer's property, including governmental reports, which are known and available to the reporting issuer. Every such report should include the name of its author and the date of its preparation, if known to the reporting issuer.

- (c) Furnish copies of all documents, such as title documents, operating permits and easements needed to support representations made in the report, requested by the regulator.