

POLICY STATEMENT

TO REGULATION 51-101

RESPECTING STANDARDS OF DISCLOSURE FOR OIL AND GAS ACTIVITIES

Administrators (the "CSA") as to the interpretation and application of Regulation 51-101 respecting Standards of Disclosure for Oil and Gas Activities ("Regulation 51-101") and related forms, and how the securities regulatory authorities or regulators may exercise their discretion in respect of certain applications for exemption from provisions of Regulation 51-101.

PART 1

APPLICATION AND TERMINOLOGY

1.1 Supplements Other Requirements

Regulation 51-101 supplements other continuous disclosure requirements of securities legislation that apply to reporting issuers in all business sectors.

1.2 Materiality Standard

Section 1.4 of Regulation 51-101 states that Regulation 51-101 applies only in respect of information that is material.

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

The reference in subsection 1.4(2) of Regulation 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 of information, or aggregate of items, 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 CICA Handbook.

1.3 When Does Regulation 51-101 First Apply to a Reporting Issuer?

Part 9 of Regulation 51-101 specifies both the date on which Regulation 51-101 comes into force (section 9.1) which is August 24th, 2005 and also is the timing of its first application to a reporting issuer in Quebec.

Regulation 51-101 came into force on September 30, 2003 in the others Canadian jurisdiction. Therefore section 9.2 of the national instrument does not exist in the regulation since the transition period, as originally written, is already extinct in Québec.

1.4 COGE Handbook

Pursuant to section 1.2 of Regulation 51-101, definitions and interpretations in the COGE Handbook apply for the purposes of Regulation 51-101 if they are not defined in Regulation 51-101, National Instrument 14-101 or the securities statute in the jurisdiction (except to the extent of any conflict or inconsistency with Regulation 51-101, National Instrument 14-101 or the securities statute).

Section 1.1 of Regulation 51-101 and the Glossary in Appendix 1 to this Policy Statement set out definitions and interpretations, many of which are derived from the COGE Handbook. Reserves definitions and categories developed by the Petroleum Society of the Canadian Institute of Mining, Metallurgy & Petroleum (CIM), are incorporated in the COGE Handbook and set out, in part, in Part 2 of Appendix 1 to this Policy Statement.

Subparagraph 4.2(1)(a)(ii) of Regulation 51-101 requires that all filed estimates of reserves or future net revenue have been prepared or audited in accordance with the COGE Handbook. Under sections 5.2 and 5.3 of Regulation 51-101, all types of public oil and gas disclosure, including disclosure of reserves and resources must be consistent with the COGE Handbook.

1.5 Qualified Reserves Evaluator or Auditor

The definitions of qualified reserves evaluator and qualified reserves auditor are set out in subsections 1.1(y) and 1.1(x) of Regulation 51-101, respectively, and again in the Glossary in Appendix 1 to this Policy Statement.

The defined terms "qualified reserves evaluator" and "qualified reserves auditor" have a number of elements. A qualified reserves evaluator or qualified reserves auditor must

- possess professional qualifications and experience appropriate for the tasks contemplated in the Regulation , and
- be a member in good standing of a professional organization.

Reporting issuers should satisfy themselves that any person they appoint to perform the tasks of a qualified reserves evaluator or auditor for the purpose of the Regulation satisfies each of the elements of the appropriate definition.

(a) Relevant Professional Qualifications and Experience

In addition to having the relevant professional qualifications, a qualified reserves evaluator or auditor must also have sufficient practical experience relevant to the reserves data to be reported on. In assessing the adequacy of practical experience, reference should be made to section 3 of the COGE Handbook - "Qualifications of Evaluators and Auditors, Enforcement and Discipline".

(b) Professional Organization

For the purposes of the Regulation, a qualified reserves evaluator or auditor must also be a member in good standing with a self-regulatory professional organization of engineers, geologists, geoscientists or other professionals.

The definition of "professional organization" (in subsection 1.1(w) of Regulation 51-101 and in the Glossary in Appendix 1 to this Policy Statement) has four elements, three of which deal with the basis on which the organization accepts members and its powers and requirements for continuing membership. The fourth element requires either authority or recognition given to the organization by a statute in Canada, or acceptance of the organization by the securities regulatory authority or regulator.

Each of the following organizations in Canada is a professional organization as at the date Regulation 51-101 comes into force:

- 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)
- Association of Professional Geoscientists of Ontario (APGO)
- 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)

(i) Other Professional Organizations?

The CSA are willing to consider whether particular foreign professional bodies should be accepted as "professional organizations" for the purposes of Regulation 51-101. A reporting issuer, foreign professional body or other interested person can apply to have a self-regulatory organization that satisfies the first three elements of the definition of "professional organization" accepted for the purposes of Regulation 51-101.

In considering any such application for acceptance, the securities regulatory authority or regulator

is likely to take into account the degree to which a foreign professional body's authority or recognition, admission criteria, standards and disciplinary powers and practices are similar to, or differ from, those of organizations listed above.

The CSA may from time to time determine that it is appropriate to expand or revise the list of professional organizations and publish notice of such changes.

(ii) No Professional Organization?

A reporting issuer or other person may apply for an exemption under Part 8 of Regulation 51-101 to enable a reporting issuer to appoint, in satisfaction of its obligation under section 3.2 of Regulation 51-101, an individual who is not a member of a professional organization, but who has other satisfactory qualifications and experience. Such an application might refer to a particular individual or generally to members and employees of a particular foreign reserves evaluation firm. In considering any such application, the securities regulatory authority or regulator is likely to take into account the individual's professional education and experience or, in the case of an application relating to a firm, to the education and experience of the firm's members and employees, evidence concerning the opinion of a qualified reserves evaluator or auditor as to the quality of past work of the individual or firm, and any prior relief granted or denied in respect of the same individual or firm.

(iii) Renewal Applications Unnecessary

A successful applicant would likely have to make an application contemplated in this section 1.5 only once, and not renew it annually.

1.6 Oil Sands and Other Non-Conventional Activities

Regulation 51-101 applies not only to conventional oil and gas activities, but also to non-conventional activities such as the extraction of bitumen from oil sands with a view to the production of synthetic oil, the in situ production of bitumen and the extraction of methane from coal beds.

Although Regulation 51-101 and Form 51-101F1 make few specific references to non-conventional oil and gas activities, the CSA are of the view that the requirements of Regulation 51-101 for the preparation and disclosure of reserves data apply to oil and gas reserves relating to oil sands, shale, coal or other non-conventional sources of hydrocarbons. The CSA encourage reporting issuers that are engaged in non-conventional oil and gas activities to supplement the disclosure prescribed in Regulation 51-101 and Form 51-101F1 with information specific to those activities that can assist investors and others in understanding the business and results of the reporting issuer. In particular, the CSA encourage reporting issuers engaged in oil and gas activities that involve mining to consider the following when making disclosure about those activities:

- in respect of financial disclosure, CICA Handbook guidance for mining activities; and
- in respect of technical aspects of mine development and operations, Regulation 43-101 respecting Standards of Disclosure for Mineral Projects and Form 43-101F1, Technical Report.

1.7 Use of Information

The requirements under Regulation 51-101 for the filing with securities regulatory authorities of information relating to oil and gas activities are designed in part to assist the public and analysts in making investment decisions and recommendations.

The CSA encourage registrants¹⁽¹⁾ and other persons and companies that wish to make use of information concerning oil and gas activities of a reporting issuer, including reserves data, to review the information filed on SEDAR under Regulation 51-101 by the reporting issuer and, if they are summarizing or referring to this information, to use the applicable terminology consistent with Regulation 51-101 and the COGE Handbook.

PART 2 ANNUAL FILING REQUIREMENTS

2.1 Annual Filings on SEDAR

The information required under section 2.1 of Regulation 51-101 must be filed electronically on SEDAR. Consult Regulation 13-101 respecting System for Electronic Document Analysis and Retrieval (SEDAR) and the current CSA "SEDAR Filer Manual" for information about filing documents electronically.

2.2 Inapplicable or Immaterial Information

Section 2.1 of Regulation 51-101 does not require the filing of any information, even if specified in Regulation 51-101 or in a form referred to in Regulation 51-101, if that information is inapplicable or not material in respect of the reporting issuer. See section 1.2 of this Policy Statement for a discussion of materiality.

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

2.3 Use of Forms

Section 2.1 of Regulation 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.

Regulation 51-101 and the instructions in Form 51-101F1, give the reporting issuer considerable flexibility in presenting this information, provided that all required information is filed. It is not necessary to identify any of the information by form name, number or title, to include the headings or numbering used in a form, or to follow the ordering of items used in the forms. (Appendix 2 to this Policy Statement provides an example of how certain of the reserves data might be presented.)

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 reserves evaluator or auditor (Form 51-101F2) with a reference to the reporting issuer's disclosure of the reserves data (Form 51-101F1), and vice versa.

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

2.4 Annual Information Form

Section 2.3 of Regulation 51-101 permits reporting issuers to satisfy the requirements of section 2.1 of Regulation 51-101 by presenting the information required under section 2.1 in an annual information form.

(a) Meaning of "Annual Information Form"

The annual information form can be in Form 44-101F1 AIF if it is a "current AIF" under Regulation 44-101 respecting 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 Regulation 45-102 respecting Resale of Securities. The annual information form can also be a current annual report on Form 10-K or Form 20-F under the 1934 Act, if the reporting issuer is eligible to file such a report under Regulation 44-101.

Some or all of the current domestic forms of annual information form are superseded by a new form under proposed Regulation 51-102 respecting Continuous Disclosure Obligations. New form is acceptable as an "annual information form" for the purposes of Regulation 51-101.

(b) Option to Set Out Information in Annual Information Form

All types of domestic annual information form will likely require the inclusion of the information required under section 2.1 of Regulation 51-101, either by setting out the text of the information or by incorporating it, by reference, from separately filed documents. The option offered by section 2.3 of Regulation 51-101 enables a reporting issuer to satisfy its obligations under section 2.1 of Regulation 51-101, as well as its obligations in respect of annual information form disclosure, by setting out the information required under section 2.1 only once, in the annual information form. If the annual information form is on Form 10-K, this can be accomplished by including the information in a supplement (often referred to as a "wrapper") to the Form 10-K.

A reporting issuer that elects to set out in full in its annual information form the information required by section 2.1 of Regulation 51-101 need not also file that information again for the purpose of section 2.1 in one or more separate documents. A reporting issuer that elects to follow this approach should file its annual information form in accordance with usual requirements of securities legislation, and at the same time file on SEDAR, in the category for Regulation 51-101 oil and gas disclosure, a notification that the information required under section 2.1 of Regulation 51-101 is included in the reporting issuer's filed annual information form. This notification (which could be a copy of the news release mandated by section 2.2 of Regulation 51-101) will assist other SEDAR users in finding that information. It is not necessary to make a duplicate filing of the annual information form itself under the SEDAR Regulation 51-101 oil and gas disclosure category.

2.5 Reservations in Report of Independent Qualified Reserves Evaluator or Auditor

A report of an independent qualified reserves evaluator or auditor on reserves data will not satisfy the requirements of item 2 of section 2.1 of Regulation 51-101 if the report contains a reservation, the cause of which can be removed by the reporting issuer (subsection 2.4(2) of Regulation 51-101).

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 be acceptable if the reservation is caused by a limitation in the scope of the 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.

One potential source of reservations, which the CSA consider can and should be addressed in a different way, could be reliance by a qualified reserves evaluator or auditor on information derived or obtained from a reporting issuer's independent financial auditors or reflecting their report. As discussed in section 4.4 of this Policy Statement, the CSA recommend that qualified reserves evaluators or auditors follow the procedures and guidance set out in both sections 4.5 and 12.6 of the COGE Handbook in respect of dealings with independent financial auditors. In so doing, the CSA expect that the quality of reserves data can be enhanced and a potential source of reservations can be eliminated.

2.6 Negative Assurance by Qualified Reserves Evaluator or Auditor

A qualified reserves evaluator or auditor 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 presented in the Canadian Oil and Gas Evaluation Handbook". This can be contrasted with a positive statement such as an opinion that "The reserves data have, in all material respects, been determined and presented in accordance with the Canadian Oil and Gas Evaluation Handbook and are, therefore, free of material misstatement".

The CSA are of the view that statements of negative assurance can be misinterpreted as providing a higher degree of assurance than is 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 2.1 of Regulation 51-101.

The COGE Handbook may address the issue of negative assurance in connection with evolving standards for reviews of reserves data. The CSA will consider any such developments and may, in consequence, reassess the views expressed above.

2.7 Royalty Interest in Reserves

Net reserves (or "company net reserves") of a reporting issuer include its royalty interest in reserves.

If a reporting issuer cannot obtain the information it requires to enable it to include a royalty interest in reserves in its disclosure of net reserves, it should, proximate to its disclosure of net reserves, disclose that fact and its corresponding royalty interest share of oil and gas production for the year ended on the effective date.

2.8 Government Restriction on Disclosure

If, because of a restriction imposed by a government or governmental authority having jurisdiction over a property, a reporting issuer excludes reserves information from its reserves data disclosed under Regulation 51-101, the disclosure should include a statement that identifies the property or country for which the information is excluded and explains the exclusion.

2.9 Additional Information

As discussed in section 2.3 above and in the instructions to Form 51-101F1, Regulation 51-101 offers considerable flexibility in the use of the prescribed forms and the presentation of required information.

The disclosure specified in Form 51-101F1 is the minimum disclosure required, subject to the materiality standard. Reporting issuers are free to provide additional disclosure that is not inconsistent with Regulation 51-101.

To the extent that additional, or more detailed, disclosure can be expected to assist readers in understanding and assessing the mandatory disclosure, it is encouraged. Indeed, to the extent that additional disclosure of material facts is necessary in order to make mandated disclosure not misleading, a failure to provide that additional disclosure would amount to a misrepresentation.

2.10 Sample Reserves Data Disclosure

Appendix 2 to this Policy Statement sets out an example of how certain of the reserves data might be presented in a manner which the CSA consider to be consistent with Regulation 51-101 and Form 51-101F1.

The sample presentation in Appendix 2 also illustrates how certain additional information not mandated under Form 51-101F1 might be incorporated in an annual filing.

The sample presentation in Appendix 2 is provided by way of illustration only, and is not mandatory. However, the CSA urge reporting issuers to review Appendix 2 and consider whether a similar presentation might be helpful for their investors.

PART 3 RESPONSIBILITIES OF REPORTING ISSUERS AND DIRECTORS

3.1 Reserves Committee

Section 3.4 of Regulation 51-101 enumerates certain responsibilities of the board of directors of a reporting issuer in connection with the preparation of oil and gas disclosure.

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

Subsection 3.5(1) of Regulation 51-101 permits a board of directors to delegate 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 subsection 3.5(1) is not mandatory, the CSA encourage reporting issuers and their directors to adopt this approach.

3.2 Responsibility for Disclosure

Regulation 51-101 requires the involvement of an independent qualified reserves evaluator or auditor 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 reserves evaluator or auditor to report on reserves data.

The CSA do not intend or believe that the involvement of an independent qualified reserves evaluator or auditor relieves the reporting issuer of responsibility for information disclosed by it for the purposes of Regulation 51-101.

PART 4 MEASUREMENT

4.1 Forecast Prices and Costs

Forecast prices and costs are discussed in the COGE 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 a reasonable outlook on the future".

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 reserves evaluators or auditors.

4.2 Constant Prices and Costs

Constant prices and costs are based on the reporting issuer's prices and costs as of the effective date of the estimate being made (generally, for the purpose of the estimates to be filed under section 2.1 of Regulation 51-101, as at the reporting issuer's financial year-end). In general, these prices and costs are assumed not to change, but rather to remain constant, throughout the life of a property, except to the extent of certain fixed or presently determinable future prices or costs to which the reporting issuer is legally bound by a contractual or other obligation to supply a physical product (including those for an extension period of a contract that is likely to be extended); see also section 4.3 of this Policy Statement.

4.3 Financial Instruments

The definitions of "constant prices and costs" and "forecast prices and costs" in subsections 1.1(g) and (j) of Regulation 51-101 and in the Glossary in Appendix 1 to this Policy Statement refer to fixed or presently determinable future prices to which a reporting issuer is legally bound by a contractual or other obligation to supply a physical product. The phrase "contractual or other obligation to supply a physical product" excludes arrangements under which the reporting issuer can satisfy its obligations in cash and would therefore exclude an arrangement that would be a "financial instrument" as defined in Section 3860 of the CICA Handbook. The CICA Handbook discusses when a reporting issuer's obligation would be considered a financial instrument and sets out the requirements for presentation and disclosure of these financial instruments (including so-called financial hedges) in the reporting issuer's financial statements.

4.4 Reserves Estimation Methods

The COGE Handbook sets out target levels of certainty for estimates of primary categories of total reserves for the reporting issuer as a whole. For example, there is to be at least a 90 percent probability that the total remaining quantities of oil and gas to be recovered will equal or exceed the estimated total proved reserves. (See Part 2 of Appendix 1.)

Section 5.4.3 of the COGE Handbook states "In principle, there should be no difference between estimates prepared using probabilistic or deterministic methods".

When deterministic methods are used, because of the absence of a "mathematically derived quantitative measure of probability", the classification of reserves is based on professional judgement as to the quantitative measure of certainty attained.

4.5 Consistency of Timing

Subsection 4.2(2) of Regulation 51-101 requires consistency in the timing of recording the effects of events or transactions for the purposes of both annual financial statements and annual reserves data disclosure.

To ensure that the effects of events or transactions are recorded, disclosed or otherwise reflected consistently (in respect of timing) in all public disclosure, a reporting issuer will wish to ensure that both its financial auditors and its qualified reserves evaluators or auditors, as well as its directors, are kept apprised of relevant events and transactions, and to facilitate communication between its financial auditors and its qualified reserves evaluators or auditors.

Sections 4.5 and 12.6 of the COGE Handbook set out procedures and guidance for the conduct of reserves evaluations and reserves audits, respectively. Section 12.6 deals with the relationship between a reserves auditor and the client's financial auditor. Section 4.5, in connection with reserves evaluations, deals somewhat differently with the relationship between the qualified reserves evaluator or auditor and the client's financial auditor. The CSA recommend that qualified reserves evaluators or auditors carry out the procedures discussed in both sections 4.5 and 12.6 of the COGE Handbook, whether conducting a reserves evaluation or a reserves audit.

PART 5 REQUIREMENTS APPLICABLE TO ALL DISCLOSURE

5.1 Scope of Part 5 of Regulation 51-101

Part 5 of Regulation 51-101 imposes requirements and restrictions that apply to all "disclosure" (or, in some cases, all written disclosure) of a type described in section 5.1 of Regulation 51-101. Section 5.1 refers 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 5 applies to a broad range of disclosure including:

- the annual filings required under Part 2 of Regulation 51-101;
- other continuous disclosure filings, including material change reports (which themselves may also be subject to Part 6 of Regulation 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 5 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, plot or other printed representation whether produced, stored or disseminated on paper or electronically.

To ensure compliance with the requirements of Part 5, the CSA encourage reporting issuers to involve a qualified reserves evaluator or auditor, or other person who is familiar with Regulation 51-101 and the COGE Handbook, in the preparation, review or approval of all such oil and gas disclosure.

5.2 Written Consents

Section 5.7 of Regulation 51-101 restricts a reporting issuer's use of a report of a qualified reserves evaluator or auditor without written consent. The consent requirement does not apply to the direct use of the report for the purposes of Regulation 51-101 (filing the report under item 2 of section 2.1; making direct or indirect reference to the conclusions of that report in the statement filed under item 1 of section 2.1 and in the report of management and directors filed under item 3 of section 2.1; and identifying the report in the mandatory news release under section 2.2). The qualified reserves evaluator or auditor retained to report to a reporting issuer for the purposes of Regulation 51-101 is expected to anticipate these uses of the report. However, further use of the report (for example, in a securities offering document or in other news releases) would require written consent.

5.3 Estimates of Fair Value

Section 5.10 of Regulation 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 5.10(2)(a) applies, satisfy the requirements of paragraph 5.10(2)(b), which among other things requires that the estimate be prepared or accepted 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 accepted as at a date more than six months before the date of the disclosure.

Under subparagraph 5.10(2)(b)(ii), the estimate must consist of at least three values that reflect a range of reasonable likelihoods (the low value reflecting a conservative estimate, the middle value being the median estimate, and the high value being an optimistic estimate) such values 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 5.10(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.

5.4 Negative Assurance

As discussed in section 2.6 of this Policy Statement, the CSA are of the view that a report of a qualified reserves evaluator or auditor that is based on or conveys only negative assurance can be misinterpreted as providing a higher degree of assurance than is intended or warranted.

The CSA believe that reporting issuers should avoid making any public disclosure of, or based on, a report that conveys only negative assurance.

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 reserves evaluator or auditor and the limited scope of the assurance expressed, noting that it does not amount to a positive opinion.

The COGE Handbook may address the issue of negative assurance in connection with evolving standards for reviews of reserves data. The CSA will consider any such developments and may, in consequence, give public notice of a change in the views expressed above.

5.5 Supporting Filings

Part 5 of Regulation 51-101 requires that certain information, if disclosed publicly, be supported by consistent information in a supporting filing.

The definition of "supporting filing" in section 1.1 of Regulation 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 Regulation 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 2.

The CSA do not consider that a document filed under Part 2 of Regulation 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 Regulation 51-101, provided that the material change disclosure satisfies applicable requirements of Part 6.

5.6 Consistent Use of Units of Measurement

Reporting issuers should be consistent in their use of units of measurement within and between disclosure documents, to facilitate understanding and comparison of the disclosure. For example, reporting issuers should not, without compelling reason, switch between imperial units of measure (such as barrels) and Système International (SI) units of measurement (such as tonnes) within or between disclosure documents.

In all cases, in accordance with subparagraph 4.2(1)(a)(ii), subsection 5.2(a) and section 5.3 of Regulation 51-101, reporting issuers should apply the relevant nomenclature and unit prefixes set out in the COGE Handbook.

5.7 BOEs and McfGEs

Section 5.14 of Regulation 51-101 sets out requirements that apply if a reporting issuer chooses to make disclosure using units of equivalency such as BOEs or McfGEs. The requirements include prescribed methods of calculation and cautionary disclosure as to the possible limitations of those calculations. Section 13 of the COGE Handbook, under the heading "Barrels of Oil Equivalent", provides additional guidance.

5.8 Finding and Development Costs

Section 5.15 of Regulation 51-101 sets out requirements that apply if a reporting issuer chooses to make disclosure of finding and development costs.

Because the prescribed methods of calculation under section 5.15 involve the use of BOEs, section 5.14 of Regulation 51-101 necessarily applies to disclosure of finding and development costs under section 5.15. As such, the finding and development cost calculations must apply a conversion ratio as specified in section 5.14 and the cautionary disclosure prescribed in section 5.14 will also be required.

BOEs are based on imperial units of measurement. If the reporting issuer uses other units of measurements (such as SI or "metric" measures), any corresponding departure from the requirements of section 5.15 should reflect the use of units other than BOEs.

PART 6 MATERIAL CHANGE DISCLOSURE

6.1 Changes from Filed Information

Part 6 of Regulation 51-101 requires the inclusion of specified information in disclosure of certain material changes.

The information to be filed each year under Part 2 of Regulation 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 Regulation 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 Regulation 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 2 would differ, had the material change occurred before rather than after the effective date of that original information.

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.

6.2 Constant Case Estimates

To the extent that a material change referred to in section 6.1 involves a change in future prices and costs, the CSA do not consider that Part 6 of Regulation 51-101 would require further discussion of reserves data estimated using constant prices and costs as at the effective date.

PART 7 INDEPENDENCE OF PROFESSIONALS

7.1 Independence of Qualified Reserves Evaluator or Auditor

"Independence", in respect of the relationship between a reporting issuer and a qualified reserves evaluator or auditor engaged to evaluate, audit, or review reserves data, is to be determined in accordance with the COGE Handbook. The following guidance should be read in light of the COGE Handbook.

Under the COGE Handbook, a qualified reserves evaluator or auditor would not generally be considered to be independent of a client reporting issuer if the qualified reserves evaluator or auditor has or 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.

Independence would not ordinarily be considered to be lost only by reason of the fact that the qualified reserves evaluator or auditor, or a reserves evaluation 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, audits or reviews) of a type normally rendered by the petroleum engineering profession.

7.2 Unacceptable Qualified Reserves Evaluator or Auditor or Valuator

Sections 2.1 and 3.2 of Regulation 51-101 require the involvement, in connection with annual reserves data disclosure, of

a qualified reserves evaluator or auditor who is independent (in accordance with the COGE Handbook) of the reporting issuer. Similarly, section 5.10 of Regulation 51-101 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 CICA Handbook) of the reporting issuer.

Notwithstanding that a qualified reserves evaluator or auditor 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 the independent judgement that the CSA consider essential for the purposes of Regulation 51-101. In such circumstances, the securities regulatory authority or regulator may request the reporting issuer to engage another qualified reserves evaluator or auditor or another valuator. If a prospectus filing is involved, the securities regulatory authority or regulator may consider that a failure to comply with such a request materially impairs the quality of disclosure to an extent that could 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 regulator may be willing to grant in appropriate circumstances, on application by a reporting issuer under Part 8 of Regulation 51-101. The relief discussed in this Part is limited to relief from the requirements of Regulation 51-101, and would not affect other requirements of securities legislation.

(See also section 1.5 of this Policy Statement for a discussion of certain applications relating to professional qualifications.)

8.2 Exemption from Requirement for Independent Qualified Reserves Evaluator or Auditor

The CSA consider that the involvement of a qualified reserves evaluator or auditor 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.

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

(a) Discretionary Exemption for Senior Producing Issuer

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 Regulation 51-101 for involvement of a qualified reserves evaluator or auditor who is independent of the reporting issuer. Such an exemption would

likely be subject to conditions.

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

- (i) demonstrates capability to estimate its reserves and future net revenue in accordance with the COGE Handbook (other than with respect to independence); and
- (ii) produced an average of more than 100,000 BOEs of oil and gas (converted in the ratio 6 Mcf : 1 bbl) per day throughout its most recent financial year.

Such an exemption from the requirement for independence of a qualified reserves evaluator or auditor would likely apply in respect of requirements arising directly under Regulation 51-101 (notably paragraph (b) of item 2 of section 2.1 and section 3.2) or indirectly under other securities legislation (such as prospectus disclosure requirements) that applies requirements of Regulation 51-101.

Such an exemption would not vary the requirements of Regulation 51-101 in respect of the involvement of a qualified reserves evaluator, only his or her independence. Given the nature of the reserves audit function, it is unlikely that a non-independent professional could act as a qualified reserves auditor or usefully perform a review. Accordingly, for the purpose of section 2.1 of Regulation 51-101, the use of an audit as an alternative to an evaluation, and the use of a review of information not evaluated or audited, would not likely be alternatives available to a reporting issuer relying on such an exemption. In other words, reliance on such an exemption would likely require evaluation of all reserves data by an "in-house" qualified reserves evaluator.

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.

(b) Application

An application for an exemption referred to above 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 reserves evaluators, the quality of its past oil and gas disclosure, and its internal disclosure, compliance, quality control and approval procedures. Demonstrated adherence to "best practice" standards of the COGE Handbook and of the relevant professional body would be expected.

An independent review of internally-generated reserves data, with satisfactory results, could be required before an exemption is granted.

An exemption, if granted, might not specify an expiry date, meaning that a successful applicant need not renew the application annually.

(c) Likely Conditions to Discretionary Exemption

A discretionary exemption described in this section 8.2 would likely be conditional on the reporting issuer

furnishing and complying with the following undertakings:

- (i) **Internal procedures** - an undertaking by the reporting issuer to implement internal procedures that will permit preparation of the modified reports described below;
- (ii) **Explanatory and cautionary disclosure** - an undertaking by the reporting issuer to disclose:
 - (A) at least annually (for example, in an annual information form), 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 Regulation 51-101, including a discussion of
 - (I) factors supporting the involvement of independent qualified evaluators or auditors 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 is determined, reviewed and approved, its relevant disclosure 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; and
 - (B) in each document that discloses any information derived from internally-generated reserves data and reasonably proximate to that disclosure, the fact that no independent qualified reserves evaluator or auditor was involved in the preparation of the reserves data; and
 - (iii) Disclosure of conflicting independent reports - an undertaking by the reporting issuer to the effect that, if despite the exemption it obtains a report on reserves data from an independent qualified reserves evaluator or auditor that contains information that differs materially from corresponding information filed by the reporting issuer in reliance on the exemption or that otherwise suggests that the reporting issuer's public disclosure record in respect of reserves data may be misleading, it will promptly file a correction of its public disclosure.

(d) Modified Reports

A discretionary exemption discussed in this section 8.2 would have the effect of varying the application of section 2.1 of Regulation 51-101 as though the words "each of whom is independent of the reporting issuer" were omitted from paragraph (b) of item 2.

Such an exemption would also likely contemplate modifications to the texts of the reports required under items 2 and 3 of section 2.1 of Regulation 51-101.

- (i) **Modified Form 51-101F2** - The report of the independent qualified reserves evaluator or auditor in Form 51-101F2, required by item 2 of section 2.1 of Regulation 51-101, would likely be modified under the terms of a discretionary exemption to reflect the substance of the exemption, substituting a report consistent in all material respects with the following:

“Report on Reserves Data

To the board of directors of [name of reporting issuer] (the "Company"):

1. _____ We have [audited] [evaluated] [and reviewed] the Company's reserves data as at [last day of the reporting issuer's most recently completed financial year]. The reserves data consist of the following:

- (a) with respect to proved reserves and proved plus probable oil and gas reserves:
 - (i) proved and proved plus probable oil and gas reserves estimated as at [last day of the reporting issuer's most recently completed financial year] using forecast prices and costs; and
 - (ii) the related estimated future net revenue; and
- (b) with respect to proved oil and gas reserves:
 - (i) proved oil and gas reserves estimated as at [last day of the reporting issuer's most recently completed financial year] using constant prices and costs; and
 - (ii) the related estimated future net revenue.

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 [audit] [evaluation] [and review].

We carried out our [audit] [evaluation] [and review] in accordance with standards set out in the Canadian Oil and Gas Evaluation Handbook (the "COGE Handbook") prepared jointly by the Society of Petroleum Evaluation Engineers (Calgary Chapter) and the Canadian Institute of Mining, Metallurgy & Petroleum (Petroleum Society).

3. Those standards require that we plan and perform an [audit] [evaluation] [and review] to obtain reasonable assurance as to whether the reserves data are free of material misstatement. An [audit] [evaluation] [and review] also includes assessing whether the reserves data are in accordance with principles and definitions presented in the COGE Handbook.

4. The following table sets forth the estimated future net revenue (before deduction of income taxes) attributed to proved plus probable reserves, estimated using forecast prices and costs and calculated using a discount rate of 10 percent, included in the reserves data of the Company [audited] [evaluated] [and reviewed] by us for the year ended xxx xx, 20xx, and identifies the respective portions thereof that we have [audited] [evaluated] [and reviewed] and reported on to the Company's [management/board of directors]:

| Independent | Description and | Location |
|-------------|-----------------|----------|
|-------------|-----------------|----------|

| Qualified Reserves Evaluator or Auditor | Preparation Date of [Audit/ Evaluation/ Review] Report | of Reserves (Country or Foreign Geographic Area) | Net Present Value of Future Net Revenue (before income taxes, 10% discount rate) | | | |
|---|--|--|--|-----------|----------|--------------------|
| | | | Audited | Evaluated | Reviewed | Total |
| Evaluator A | xxx xx, 20xx | xxxx | \$xxx | \$xxx | \$xxx | \$xxx |
| Evaluator B | xxx xx, 20xx | xxxx | xxx | xxx | xxx | xxx |
| Totals | | | \$xxx | \$xxx | \$xxx | \$xxx ¹ |

¹ This amount should be the amount disclosed by the reporting issuer in its statement of reserves data filed under subparagraph 1 of section 2.1 of the Regulation, as its future net revenue (before deducting future income tax expenses) attributable to proved plus probable reserves, estimated using forecast prices and costs and calculated using a discount rate of 10 percent (required by section 2 of Item 2.2 of Form 51-101F1).

5. In our opinion, the reserves data respectively [audited] [evaluated] by us have, in all material respects, been determined and are in accordance with the COGE Handbook. We express no opinion on the reserves data that we reviewed but did not audit or evaluate.
6. We have no responsibility to update our reports referred to in paragraph 4 for events and circumstances occurring after their respective preparation dates.
7. Because the reserves data are based on judgements regarding future events, actual results will vary and the variations may be material.

Executed as to our report referred to above:

Evaluator A, City, Province or State / Country, Execution Date _____ [signed]

Evaluator B, City, Province or State / Country, Execution Date _____ [signed]"

- (ii) **Modified Form 51-101F3** - The report of the reporting issuer's management and directors in Form 51-101F3, required by item 3 of section 2.1 of Regulation 51-101, would likely be modified under the terms of a discretionary exemption to reflect the substance of the exemption, substituting a report consistent in all material respects with the following:

"Report of Management and Directors on Reserves Data and Other Information

Management of [name of reporting issuer] (the "Company") are responsible for the preparation and disclosure of information with respect to the Company's oil and gas activities in accordance with securities regulatory requirements. This information includes reserves data, which consist of the following:

- (a) with respect to proved reserves and proved plus probable oil and gas reserves:

- (i) proved and proved plus probable oil and gas reserves estimated as at [last day of the reporting issuer's most recently completed financial year] using forecast prices and costs; and
 - (ii) the related estimated future net revenue; and
- (b) with respect to proved oil and gas reserves:
- (i) proved oil and gas reserves estimated as at [last day of the reporting issuer's most recently completed financial year] using constant prices and costs; and
 - (ii) the related estimated future net revenue.

[An] independent [qualified reserves evaluator[s] or qualified reserves auditor[s]] [has / have] [audited] [evaluated] [and reviewed] the Company's reserves data. The report of the independent [qualified reserves evaluator[s] or qualified reserves auditor[s]] [is presented below / will be filed with securities regulatory authorities concurrently with this report].

The [Reserves Committee of the] board of directors of the Company has

- (a) reviewed the Company's procedures for providing information to the independent [qualified reserves evaluator[s] or qualified reserves auditor[s]];
- (b) met with the independent [qualified reserves evaluator[s] or qualified reserves auditor[s]] to determine whether any restrictions affected the ability of the independent [qualified reserves evaluator[s] or qualified reserves auditor[s]] to report without reservation [and, because of the proposal to change the independent [qualified reserves evaluator[s] or qualified reserves auditor[s]], to inquire whether there had been disputes between the previous independent [qualified reserves evaluator[s] or qualified reserves auditor[s] and management]; and
- (c) reviewed the reserves data with management and the independent [qualified reserves evaluator[s] or qualified reserves auditor[s]].

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

- (a) the content and filing with securities regulatory authorities of the reserves data and other oil and gas information;
- (b) the filing of the report of the independent [qualified reserves evaluator[s] or qualified reserves auditor[s]] on the reserves data; and
- (c) the content and filing of this report.

Because the reserves data are based on judgements regarding future events, actual results will vary and the

variations may be material.

[signature, name and title of chief executive officer]

[signature, name and title of a senior officer other than the chief executive officer]

[signature, name of a director]

[signature, name of a director]

[Date]"

8.3 Exemption Permitting Substitution of FASB Standards

(a) Comparable FASB Standards

The reserves data to be disclosed under Regulation 51-101 include proved reserves and related future net revenue estimated using constant prices and costs. The SEC requires disclosure of comparable estimates (referred to respectively as "proved oil and gas reserve quantities" and the "standardized measure of discounted future net cash flows relating to proved oil and gas reserve quantities" or, in this Policy Statement, the "standardized measure") determined in accordance with standards established by FASB. The applicable FASB terminology and disclosure standards are currently set out in the following documents (referred to in this Policy Statement as the "FASB Standard"):

- (i) FASB Statement of Financial Accounting Standards No. 69 "Disclosures about Oil and Gas Producing Activities -- an amendment of FASB Statements 19, 25, 33, and 39", as amended from time to time (referred to in this Policy Statement as "FAS 69"); and
- (ii) paragraphs .103, .106, .107, .108, .112, .160 through .167, .174 through .184, and .401 through .408 of FASB Current Text Section Oi5, "Oil and Gas Producing Activities", which also reflect FAS 69.

(b) Discretionary Exemption to Permit Substitution of FASB Standard

A key objective of the CSA in developing Regulation 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 United States capital markets, comparability of oil and gas disclosure with that provided by US issuers, as well as with that provided by other Canadian reporting issuers, may be important for investors.

In the absence of an exemption from Part 2 of Regulation 51-101, a reporting issuer that is subject both to the disclosure requirements of the SEC and to Regulation 51-101 would be required to prepare and present two sets of estimates -- proved reserves and the related future net revenue, as well as proved oil and gas reserve quantities and the related standardized measure -- that relate to very similar concepts. In many cases, the CSA believe that the

results of the two sets of estimates would not differ substantially. The CSA recognize that the requirement to prepare and disclose two similar sets of estimates could impose a burden on reporting issuers, and be confusing to investors.

In light of these considerations, securities regulatory authorities or regulators would 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 certain requirements of Part 2 (and the forms referred to in that Part) and section 5.3 of Regulation 51-101.

Such a discretionary exemption could permit a reporting issuer to substitute disclosure of "proved oil and gas reserve quantities" and the "standardized measure" for disclosure of proved reserves and related future net revenue estimated using constant prices and costs. The exemption could also permit the applicant to apply the FASB Standard (despite any indication to the contrary in the FASB Standard) to disclosure relating to non-conventional oil and gas activities (the extraction of hydrocarbons from oil sands, shale, coal or other non-conventional sources).

In the absence of a further exemption, this discretionary exemption would not otherwise affect the reporting issuer's disclosure and other obligations under Regulation 51-101. For example, requirements for the reporting of other elements of reserves data, notably proved reserves and proved plus probable reserves together with the related estimates of future net revenue estimated using forecast prices and costs, would be unchanged.

With this exemption, a reporting issuer that discloses reserves estimates and related information in both Canada and the US would be able to file, in both countries, the information required by the SEC (proved oil and gas reserve quantities and the standardized measure) in the same manner as US peer issuers, facilitating comparison with those peers. At the same time the reporting issuer would present other disclosure not required by the SEC (including estimates of proved and probable reserves and related future net revenue estimated using forecast prices and costs) in accordance with Regulation 51-101, facilitating comparison with Canadian peer issuers.

Such an exemption might not specify an expiry date so that renewal applications would not be required.

It is unlikely that any such exemption would alter the requirements of Parts 3, 4, 5 or 6 of Regulation 51-101 in respect of the role and responsibilities of directors, measurement and estimation standards, requirements relating to certain voluntary disclosure, or material change reporting. Thus, for example, in the absence of applicable SEC requirements, relevant provisions of Part 5 of Regulation 51-101 relating to the use of BOEs, or to disclosure of an estimate of fair value of a prospect, would still apply.

(c) Likely Conditions to Discretionary Exemption

A discretionary exemption described in this section 8.3 would likely be conditional on the reporting issuer furnishing and complying with an undertaking to include in all its written disclosure of proved oil and gas reserve quantities and the standardized measure (which the reporting issuer has substituted for otherwise mandatory disclosure of proved reserves and related future net revenue estimated using constant prices and costs) a statement, reasonably proximate to that disclosure

- (i) of the reporting issuer's reliance on the exemption;
- (ii) that explains generally the nature of the estimates being disclosed and the source of the underlying

standards (the FASB Standards); and

- (iii) to the effect that the disclosed estimates may differ from corresponding estimates of proved reserves and related future net revenue estimated using constant prices and costs prepared in accordance with Regulation 51-101.

8.4 Exemption Permitting US-Style Disclosure

As noted in section 8.3, the CSA recognize that for some reporting issuers that are active in US capital markets, comparability of their oil and gas disclosure with that provided by US issuers may be important for investors. In some cases, a Canadian reporting issuer may consider that comparability of disclosure to US peer issuers is of primary relevance to its investors.

The CSA acknowledge that there may be circumstances in which such an assessment is valid. At the same time, the CSA consider that the public interest requires, at minimum, clarity as to what standards are being applied in public disclosure and consistency of annual disclosure.

The CSA believe that these considerations can be addressed in appropriate cases by a discretionary exemption that builds on the exemption discussed in section 8.3. The discretionary exemption discussed in this section 8.4 could enable a reporting issuer to substitute, for much of the disclosure ordinarily required by Regulation 51-101, disclosure that is consistent with the FASB Standards and other relevant requirements of the SEC, provided that the reporting issuer makes clear in its disclosure that it is departing from Regulation 51-101 requirements and makes clear which standards are being applied.

(a) Scope of Possible Exemption

On application by a reporting issuer that has securities registered in the US under the 1934 Act, securities regulatory authorities or regulators may be prepared to grant a limited exemption from certain requirements of Regulation 51-101 to permit

- (i) the substitution, as discussed in section 8.3, of disclosure of estimates of proved oil and gas reserve quantities and the related standardized measure, for the disclosure of proved reserves and related future net revenue estimated using constant prices and costs otherwise required by Regulation 51-101; and
- (ii) relief from requirements of Regulation 51-101 for disclosure of other elements of reserves data, or other information concerning oil and gas activities contemplated in Form 51-101F1, to the extent that these elements or information exceed or differ from SEC requirements;

provided that the reporting issuer files, within the time prescribed in section 2.1 of Regulation 51-101, the information relating to its oil and gas activities contemplated by, and consistent with, the FASB Standard and relevant requirements of the SEC.

Such an exemption might not specify an expiry date so that renewal applications would not be required.

As discussed in section 8.3, the exemption could also likely permit the applicant to apply the FASB Standard (despite any indication to the contrary in the FASB Standard) to disclosure relating to non-conventional oil and

gas activities.

No such exemption would likely affect the principle that all disclosed reserves and related estimates must be prepared by a qualified reserves evaluator or auditor. A reporting issuer that wishes to substitute other evaluation or audit standards would likely have to demonstrate that such other standards are clearly identifiable and not less comprehensive than those set out in the COGE Handbook.

It is also unlikely that any such exemption would alter the requirements of Parts 3, 5 or 6 of Regulation 51-101 in respect of the role and responsibilities of directors, requirements relating to certain voluntary disclosure, or material change reporting. For example, in the absence of applicable SEC requirements, relevant provisions of Part 5 of Regulation 51-101 relating to the use of BOEs or to disclosure of an estimate of fair value of a prospect would still apply to the extra disclosure.

Such a discretionary exemption would likely contemplate modifications of the reports of the qualified reserves evaluator or auditor and of management and directors, prescribed respectively by items 2 and 3 of section 2.1 of Regulation 51-101, to the extent necessary to reflect the substance of the exemption. It is unlikely that such an exemption would waive the requirement to file these reports.

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

(b) Likely Conditions to Discretionary Exemption

An exemption contemplated in this section 8.4 would likely be conditional on the reporting issuer furnishing and adhering to undertakings substantially as follows:

- (i) Disclosure of exemption and effect** - an undertaking to include, reasonably proximate to all written disclosure that the reporting issuer makes in reliance on the exemption, a statement
 - (A) of the reporting issuer's reliance on the exemption;
 - (B) that explains generally the nature of the information being disclosed and identifies the standards and the source of the standards being applied (if it is not otherwise readily apparent); and
 - (C) to the effect that the information disclosed may differ from corresponding information prepared in accordance with Regulation 51-101 standards (if that is the case), and explains the difference (if any);
- (ii) Specified disclosure standards to be applied** - an undertaking to disclose, for the purpose of item 1 of section 2.1 of Regulation 51-101:
 - (A) the information required by the FASB Standard;
 - (B) the information required by SEC Industry Guide 2 "Disclosure of Oil and Gas Operations", as amended from time to time;
 - (C) any other information concerning matters addressed in Form 51-101F1 that is required by FASB or

by the SEC; and

- (D) if the reporting issuer is engaged in extracting, by mining, bitumen or oil from oil sands, shale or coal, the information required by SEC Industry Guide 7 "Description of Property by Issuers Engaged or to be Engaged in Significant Mining Operations", as amended from time to time;
- (iii) **Voluntary extra disclosure not required by SEC or FASB** an undertaking that, if the reporting issuer (despite its exemption) makes public disclosure of a type contemplated in Regulation 51-101 or Form 51-101F1 but not required by the SEC:
- (A) if the disclosure is of a nature and subject matter referred to in Part 5 of Regulation 51-101, and if there are no applicable SEC requirements or restrictions specific to that type of disclosure, the disclosure will be made in compliance with Part 5; and
 - (B) if the disclosure includes estimates of reserves or related future net revenue in categories not required by the SEC:
 - (I) the disclosure will
 - a. apply the reserves categories set out in the COGE Handbook; or
 - b. set out the reserves categories being used in enough detail to make them understandable to a reader, identify the source of those reserves categories, state that those reserves categories differ from the reserves categories set out in the COGE Handbook (if that is the case) and explain the differences (if any);
 - (II) if the disclosure includes an estimate of future net revenue, it will also include the corresponding estimate of reserves (although disclosure of an estimate of reserves might not have to be accompanied by an estimate of the related future net revenue).
 - (III) if the disclosure includes an estimate of reserves for a category other than proved reserves or proved oil and gas reserve quantities, it will also include an estimate of proved reserves (or proved oil and gas reserve quantities) based on the same price and cost assumptions, with the price assumptions disclosed;
 - (IV) unless the extra disclosure is made involuntarily, the reporting issuer will include disclosure of the same type in its subsequent annual filings under Part 2 of Regulation 51-101 for as long as the information is material; and
 - (V) for the purpose of clause (IV) above, if the triggering disclosure was an estimate for a particular property, unless that property is highly material for the reporting issuer its subsequent annual disclosure of that type of estimate will also include aggregate estimates for the reporting issuer and by country (or, if appropriate and not misleading, by foreign geographic area), not only estimates for that property.

Although the exemption might not require that an estimate of reserves be accompanied by an estimate of related future net revenue, the CSA would generally expect disclosure of reserves alone to be supplemented by

information such as the development and production status of the reserves and the reporting issuer's plans for the development of the reserves, so that disclosure of reserves volume alone is not misleading.

For the purpose of this undertaking, disclosure would be considered to be made involuntarily if, for example:

- it was made not by or at the instigation of the reporting issuer but instead by the operator of a joint venture of which the reporting issuer is a member but not the operator, for and on behalf of all the joint venturers; or
- it was made by the reporting issuer solely in compliance with its material change disclosure obligations under securities legislation.

Although the exemption might permit a reporting issuer to apply definitions and standards other than those presented in the COGE Handbook, the CSA would expect consistency in a reporting issuer's use and disclosure of other standards within and between reporting periods.

The conditions set out above are designed to ensure that the extra disclosure applies clearly identified standards and definitions and that, if the information is material to the reporting issuer, similar information is provided in the subsequent annual filings, to enable investors to assess and compare that information from year to year.

Consequence of Voluntary Extra Disclosure: Examples

Following are examples of key consequences that would likely follow, under such undertakings, for a reporting issuer that voluntarily makes extra disclosure.

- If the reporting issuer discloses probable reserves (without related future net revenue) estimated using constant prices and costs, its subsequent annual filings would have to include estimates of probable reserves estimated using constant prices and costs in addition to SEC-mandated disclosure of proved oil and gas reserve quantities and the standardized measure.
- If the reporting issuer discloses probable reserves and related future net revenue estimated using constant prices and costs, its subsequent annual filings would have to include estimates of probable reserves and related future net revenue using constant prices and costs in addition to the SEC-mandated disclosure.
- If the reporting issuer discloses probable reserves (with or without related future net revenue) estimated using forecast prices and costs, its subsequent annual filings would have to include such estimates as well as estimates of proved reserves and related future net revenue, estimated using forecast prices and cost, in addition to the SEC-mandated disclosure.

8.5 Stacking of Exemptions

The possible discretionary exemptions discussed in this Part are not necessarily mutually exclusive.

In appropriate circumstances, securities regulatory authorities or regulators would 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 or in both sections 8.2 and 8.4, exemptions that combine the elements contemplated in those respective sections.

8.6 Exemption not Conferring Immunity

A discretionary exemption from any part of Regulation 51-101 would not imply a lesser scope or degree of regulatory review of the reporting issuer's disclosure. The reporting issuer would still be subject to regulatory review of its filings and other disclosure, and enforcement of its disclosure obligations, whether the obligations are as set out in securities legislation or modified by the terms of an exemption.

APPENDIX 1 GLOSSARY

Section 1.1 of Regulation 51-101 respecting Standards of Disclosure for Oil and Gas Activities ("Regulation 51-101") defines a number of terms used in Regulation 51-101, Form 51-101F1, Form 51-101F2, Form 51-101F3 and Policy Statement to Regulation 51-101 respecting Standards of Disclosure for Oil and Gas Activities. Section 1.2 of Regulation 51-101 provides that terms used in the Regulation but not defined in the Regulation, National Instrument 14-101 or the securities statute in the jurisdiction have the meaning or interpretation, if any, set out in the COGE Handbook.

This Appendix explains much of the terminology used in Regulation 51-101 and its accompanying documents. It is provided only as a convenience to users of Regulation 51-101, to assist them in better understanding the purpose and application of Regulation 51-101.

Part 1 of this Appendix sets out, in alphabetical order, certain terms and their meanings. Part 2 sets out certain reserves definitions derived from the COGE Handbook.

The explanations in this Appendix are derived from a number of sources, including section 1.1 of Regulation 51-101, National Instrument 14-101 and the COGE Handbook. If the explanation is derived from another source, the source document is indicated in square brackets after the explanation (even if the explanation is not verbatim to the source document).

Background or further guidance may be found in the source documents:

- CICA Accounting Guideline 5 is included in the CICA Handbook, which can be obtained from the CICA.
- The COGE Handbook can be obtained from the Petroleum Society of the Canadian Institute of Mining, Metallurgy & Petroleum (Telephone (403) 237-5112; email info@petsoc.org; or www.petsoc.org).
- FAS 19, FAS 69 and the FASB Standard can be obtained from FASB, the United States Financial Accounting Standards Board.
- SEC Industry Guide 7 "Description of Property by Issuers Engaged or to be Engaged in Significant Mining Operations" can be obtained from the SEC.
- National Instrument 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.

| Defined Term | Meaning |
|--------------|---------|
|--------------|---------|

| | |
|----------|---|
| 1934 Act | The Securities Exchange Act of 1934 of the United States of |
|----------|---|

America, as amended from time to time. [National Instrument 14-101]

Annual information form

Any of the following:

- (a) a "current AIF", as defined in Regulation 44-101;
- (b) in the case of a reporting issuer that is eligible to file, for the purpose of Part 3 of Regulation 44-101, a current annual report on Form 10-K or Form 20-F under the 1934 Act, such a current annual report so filed; or
- (c) a document prepared in Form 44-101F1 AIF and filed with the securities regulatory authority in the jurisdiction in accordance with securities legislation of that jurisdiction other than Regulation 44-101.

[Regulation 51-101]

Associated gas

The gas cap overlying a crude oil accumulation in a reservoir. See gas.

Audit

In relation to reserves data, the process whereby an independent qualified reserves auditor carries out procedures designed to allow the independent qualified reserves auditor to provide reasonable assurance, in the form of an opinion that the reporting issuer's reserves data (or specific parts thereof) have, in all material respects, been determined and presented in accordance with the COGE Handbook and are, therefore, free of material misstatement.

Because of

- (a) the nature of the subject matter (estimates of future results with many uncertainties);
- (b) the fact that the independent qualified reserves auditor assesses the qualifications and experience of the reporting issuer's staff, assesses the reporting issuer's systems, procedures and controls and relies on the competence of the reporting issuer's staff and the appropriateness of the reporting issuer's systems, procedures and controls; and
- (c) the fact that tests and samples (involving examination of underlying documentation supporting the determination of the reserves and future net revenue) as opposed to complete evaluations, are involved;

the level of assurance is designed to be high, though not

absolute.

The level of assurance cannot be described with numeric precision. It will usually be less than, but reasonably close to, that of an independent evaluation and considerably higher than that of a review.

[COGE Handbook]

| | |
|------------------------------------|---|
| Bbl | Barrel. |
| Bitumen | A highly viscous oil which is too thick to flow in its native state, and which cannot be produced without altering its viscosity. The density of bitumen is generally less than 10 degrees API (as that term is defined by the American Petroleum Institute). |
| BOEs | Barrels of oil equivalent. [Regulation 51-101 and COGE Handbook] |
| Canadian GAAP | Generally accepted accounting principles determined with reference to the CICA Handbook. [National Instrument 14-101] |
| CICA | The Canadian Institute of Chartered Accountants. [Regulation 51-101] |
| CICA Accounting Guideline 5 | Accounting Guideline AcG-5 "Full cost accounting in the oil and gas industry" included in the CICA Handbook, as amended from time to time. [Regulation 51-101] |
| CICA Handbook | The Handbook of the CICA, as amended from time to time. |
| COGE Handbook | The "Canadian Oil and Gas Evaluation Handbook" prepared jointly by The Society of Petroleum Evaluation Engineers (Calgary Chapter) and the Canadian Institute of Mining, Metallurgy & Petroleum (Petroleum Society). |
| Constant prices and costs | <p>Prices and costs used in an estimate that are:</p> <p>(a) the reporting issuer's prices and costs as at the effective date of the estimation, held constant throughout the estimated lives of the properties to which the estimate applies;</p> <p>(b) if, and only to the extent that, there are fixed or presently determinable future prices or costs to which the reporting issuer is legally bound by a contractual or other obligation to supply a physical product, including those for an extension period of a contract that is likely to be extended, those prices or costs rather than the prices and</p> |

costs referred to in paragraph (a).

For the purpose of paragraph (a), the reporting issuer's prices will be the posted price for oil and the spot price for gas, after historical adjustments for transportation, gravity and other factors.

[COGE Handbook]

Crude oil

A mixture that consists mainly of pentanes and heavier hydrocarbons, which may contain sulphur and other non-hydrocarbon compounds, that is recoverable at a well from an underground reservoir and that is liquid at the conditions under which its volume is measured or estimated. It does not include solution gas or natural gas liquids.

[COGE Handbook]

CSA

The Canadian Securities Administrators, an association consisting of the thirteen securities regulatory authorities in Canada.

Developed non-producing reserves

See Part 2 of this Appendix. [COGE Handbook]

Developed producing reserves

See Part 2 of this Appendix. [COGE Handbook]

Developed reserves

See Part 2 of this Appendix. [COGE Handbook]

Development costs

Costs incurred to obtain access to reserves and to provide facilities for extracting, treating, gathering and storing the oil and gas from the reserves.

More specifically, development costs, including 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 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 flow lines, separators, treaters, heaters, manifolds, measuring devices and production storage tanks, natural gas cycling and processing plants, and central utility and waste disposal systems; and

(d) provide improved recovery systems. [CICA Accounting Guideline 5]

Development well

A well drilled inside the established limits of an oil or gas reservoir, or in close proximity to the edge of the reservoir, to the depth of a stratigraphic horizon known to be productive. [CICA Accounting Guideline 5]

Effective date

In respect of information, the date as at which, or for the period ended on which, the information is provided.

Evaluation

In relation to reserves data, the process whereby an economic analysis is made of a property to arrive at an estimate of a range of net present values of the estimated future net revenue resulting from the production of the reserves associated with the property. [COGE Handbook]

Exploration costs

Costs incurred in identifying areas that may warrant examination and in examining specific areas that are considered to have prospects that may contain oil and gas reserves, including costs of 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. Exploration costs, which include applicable operating costs of support equipment and facilities and other costs of exploration activities, are:

(a) costs of topographical, geochemical, 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 sometimes referred to as "geological and geophysical costs");

(b) costs of carrying and retaining unproved properties, such as delay rentals, taxes (other than income and capital taxes) on properties, legal costs for title defence, and the maintenance of land and lease records;

(c) dry hole contributions and bottom hole contributions;

- (d) costs of drilling and equipping exploratory wells; and
- (e) costs of drilling exploratory type stratigraphic test wells.

[CICA Accounting Guideline 5]

Exploratory well

A well that is not a development well, a service well or a stratigraphic test well. [CICA Accounting Guideline 5]

FAS 19

FASB Statement of Financial Accounting Standards No. 19 "Financial Accounting and Reporting by Oil and Gas Producing Companies", as amended from time to time. [Regulation 51-101]

FAS 69

FASB Statement of Financial Accounting Standards No. 69 "Disclosure about Oil and Gas Producing Activities - an amendment of FASB Statements 19, 25, 33 and 39", as amended from time to time.

FASB

United States Financial Accounting Standards Board.

FASB Standard

The following:

- (a) FAS 69; and
- (b) paragraphs .103, .106, .107, .108, .112, .160 through .167, .174 through .184, and .401 through .408 of FASB Current Text Section Oi5, "Oil and Gas Producing Activities", which also reflects FAS 69.

Field

An area consisting of a single reservoir or multiple reservoirs all grouped on or related to the same individual geological structural feature and/or stratigraphic condition.

There may be two or more reservoirs in a field that are separated vertically by intervening impervious strata or laterally by local geologic barriers, or 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 denote localized geological features, in contrast to broader terms such as "basin", "trend", "province", "play" or "area of interest".

[FASB Standard paragraph .403]

Forecast prices and costs

Future prices and costs that are:

- (a) generally accepted as being a reasonable outlook of the future;

(b) if, and only to the extent that, there are fixed or presently determinable future prices or costs to which the reporting issuer is legally bound by a contractual or other obligation to supply a physical product, 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 paragraph (a).

Foreign geographic area

A geographic area outside North America within one country or including all or portions of a number of countries.

Form 51-101F1

Form 51-101F1, Statement of Reserves Data and Other Oil and Gas Information.

Form 51-101F2

Form 51-101F2, Report on Reserves Data by Independent Qualified Reserves Evaluator or Auditor.

Form 51-101F3

Form 51-101F3, Report of Management and Directors on Oil and Gas Disclosure.

Future income tax expenses

Future income tax expenses estimated (generally, year-by-year):

- (a) making appropriate allocations of estimated unclaimed costs and losses carried forward for tax purposes, between oil and gas activities and other business activities;
- (b) without deducting estimated future costs (for example, Crown royalties) that are not deductible in computing taxable income;
- (c) taking into account estimated tax credits and allowances (for example, royalty tax credits); and
- (d) applying to the future pre-tax net cash flows relating to the reporting issuer's oil and gas activities the appropriate year-end statutory tax rates, taking into account future tax rates already legislated.

Future net revenue

The estimated net amount to be received with respect to the development and production of reserves (including synthetic oil, coal bed methane and other non-conventional reserves) estimated using:

- (a) constant prices and costs; or
- (b) forecast prices and costs.

This net amount is computed by deducting, from estimated future

revenues:

- estimated amounts of future royalty obligations;
- costs related to the development and production of reserves;
- well abandonment costs; and
- future income tax expenses, unless otherwise specified in Regulation 51-101, Form 51-101F1 or Form 51-101F2.

Corporate general and administrative expenses and financing costs are not deducted. Net present values of future net revenue may be calculated using a discount rate or without discount.

Gas (or natural gas)

The lighter hydrocarbons and associated non-hydrocarbon substances occurring naturally in an underground reservoir, which under atmospheric conditions are essentially gases but which may contain natural gas liquids.

Gas can exist in a reservoir either

- (a) dissolved in crude oil (solution gas); or
- (b) in a gaseous phase (associated gas or non-associated gas).

Non-hydrocarbon substances may include hydrogen sulphide, carbon dioxide and nitrogen.

[COGE Handbook]

Gross

(a) In relation to a reporting issuer's interest in production or reserves, its "company gross reserves", which are the reporting issuer's working interest (operating or non-operating) share before deduction of royalties and without including any royalty interests of the reporting issuer.

[COGE Handbook]

(b) In relation to wells, the total number of wells in which a reporting issuer has an interest.

(c) In relation to properties, the total area of properties in which a reporting issuer has an interest.

Heavy oil

In respect of reserves or production:

- (a) in a jurisdiction that has a royalty regime specific to heavy oil, "heavy oil" is oil that qualifies for royalties specific to heavy oil; or

(b) in a jurisdiction that has no royalty regime specific to heavy oil, "heavy oil" is oil with a density between 10 to 22.3 degrees API (as that term is defined by the American Petroleum Institute). [COGE Handbook]

| | |
|-----------------------------------|---|
| Independent | In respect of the relationship between a reporting issuer and a qualified reserves evaluator or auditor, the term has the meaning set out in the COGE Handbook. |
| Jurisdiction | For the purposes of Regulation 51-101, a province or territory of Canada. [National Instrument 14-101] |
| Lease | An agreement granting to the lessee rights to explore, develop and exploit a property. |
| Marketable | In respect of reserves or sales of oil, gas or associated by-products, the volume of oil, gas or associated by-products measured at the point of sale to a third party, or of transfer to another division of the issuer for treatment prior to sale to a third party. For gas, this may occur either before or after removal of natural gas liquids. For heavy oil or bitumen, this is before the addition of diluent. |
| Material (or materiality) | <p>For the purposes of Regulation 51-101, information is material, in respect of a reporting issuer, if it would be likely to influence a decision by a reasonable investor to buy, hold or sell a security of the reporting issuer.</p> <p>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 CICA Handbook.</p> <p>[Regulation 51-101]</p> |
| McfGE | Thousand cubic feet of gas equivalent. [Regulation 51-101 and COGE Handbook] |
| National Instrument 14-101 | National Instrument 14-101, Definitions. |
| Natural gas | Gas. [COGE Handbook] |
| Natural gas liquids | Those hydrocarbon components that can be recovered from natural gas as liquids including, but not limited to, ethane, propane, butanes, pentanes plus, condensate and small quantities of non-hydrocarbons. |

[COGE Handbook]

Net

(a) In relation to a reporting issuer's interest in production or reserves, the reporting issuer's working interest (operating or non-operating) share after deduction of royalty obligations, plus the reporting issuer's royalty interests in production or reserves. [COGE Handbook]

(b) In relation to a reporting issuer's interest in wells, the number of wells obtained by aggregating the reporting issuer's working interest in each of its gross wells.

(c) In relation to a reporting issuer's interest in a property, the total area in which the reporting issuer has an interest multiplied by the working interest owned by the reporting issuer.

Non-associated gas

An accumulation of natural gas in a reservoir where there is no crude oil. See gas.

Oil

Crude oil or synthetic oil. [COGE Handbook]

Oil and gas activities

"Oil and gas activities":

(a) include:

(i) the search for crude oil or natural gas in their natural states and original locations;

(ii) the acquisition of property rights or properties for the purpose of further exploring for or removing oil or gas from reservoirs on those properties;

(iii) the construction, drilling and production activities necessary to recover oil and gas from reservoirs, and the acquisition, construction, installation and maintenance of field gathering and storage systems, including lifting oil and gas to the surface and gathering, treating, field processing and field storage; and

(iv) the extraction of hydrocarbons from oil sands, shale, coal or other non-conventional sources and activities similar to those referred to in clauses (i), (ii) and (iii) undertaken with a view to such extraction; but

(b) do not include:

(i) transporting, refining or marketing oil or gas;

(ii) activities relating to the extraction of natural resources other

than oil and gas and their by-products; or

(iii) the extraction of geothermal steam or of hydrocarbons as a by-product of the extraction of geothermal steam or associated geothermal resources.

[Regulation 51-101]

Operating costs

Production costs.

Possible reserves

See Part 2 of this Appendix. [COGE Handbook]

Preparation date

In respect of written disclosure, the most recent date to which information relating to the period ending on the effective date was considered in the preparation of the disclosure.

Probable reserves

See Part 2 of this Appendix.[COGE Handbook]

Production

Recovering, gathering, treating, field or plant processing (for example, processing gas to extract natural gas liquids) and field storage of oil and gas.

The oil production function is usually regarded as terminating at the outlet valve on the lease or field production storage tank. The gas production function is usually regarded as terminating at the plant gate. In some circumstances, it may be more appropriate to regard the production function as terminating at the first point at which oil, gas or their by-products are delivered to a main pipeline, a common carrier, a refinery or a marine terminal.

Production costs
(or
Operating costs)

Costs incurred to operate and maintain wells and related equipment and facilities, including applicable operating costs of support equipment and facilities and other costs of operating and maintaining those wells and related equipment and facilities.

Lifting costs become part of the cost of oil and gas produced.

Examples of production costs are:

- (a) costs of labour to operate the wells and related equipment and facilities;
- (b) costs of repairs and maintenance;
- (c) costs of materials, supplies and fuel consumed, and supplies utilized, in operating the wells and related equipment and facilities;

- (d) costs of workovers;
- (e) property taxes and insurance costs applicable to properties and wells and related equipment and facilities; and
- (f) taxes, other than income and capital taxes.

Production group

One of the following together, in each case, with associated by-products:

- (a) light and medium crude oil (combined);
- (b) heavy oil;
- (c) associated gas and non-associated gas (combined); and
- (d) bitumen, synthetic oil or other products from non-conventional oil and gas activities.

Product type

One of the following:

- (a) in respect of conventional oil and gas activities:
 - (i) light and medium crude oil (combined);
 - (ii) heavy oil;
 - (iii) natural gas excluding natural gas liquids; or
 - (iv) natural gas liquids; and
- (b) in respect of non-conventional oil and gas activities:
 - (i) synthetic oil;
 - (ii) bitumen;
 - (iii) coal bed methane; or
 - (iv) hydrates.

[Regulation 51-101]

Professional organization

A self-regulatory organization of engineers, geologists, other geoscientists or other professionals whose professional practice includes reserves evaluations or reserves audits, that:

- (a) admits members primarily on the basis of their educational qualifications;
- (b) requires its members to comply with the professional standards of competence and ethics prescribed by the organization that are relevant to the estimation, evaluation, review or audit of reserves data;
- (c) has disciplinary powers, including the power to suspend or expel a member; and
- (d) is either:
 - (i) given authority or recognition by statute in a Canadian jurisdiction; or
 - (ii) accepted for this purpose by the securities regulatory authority or the regulator.

[Regulation 51-101]

Property

A property includes:

- (a) fee ownership or a lease, concession, agreement, permit, licence 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;
- (b) royalty interests, production payments payable in oil or gas, and other non-operating interests in properties operated by others; and
- (c) an agreement with a foreign government or authority under which a reporting issuer participates in the operation of properties or otherwise serves as "producer" of the underlying reserves (in contrast to being an independent purchaser, broker, dealer or importer).

A property does not include supply agreements, or contracts that represent a right to purchase, rather than extract, oil or gas.

[CICA Accounting Guideline 5]

Property acquisition costs

Costs incurred to acquire a property (directly by purchase or lease, or indirectly by acquiring another corporate entity with an interest in the property), including:

- (a) costs of lease bonuses and options to purchase or lease a property;
- (b) the portion of the costs applicable to hydrocarbons when land

including rights to hydrocarbons is purchased in fee;

(c) brokers' fees, recording and registration fees, legal costs and other costs incurred in acquiring properties.

[CICA Accounting Guideline 5]

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.

Proved property

A property or part of a property to which reserves have been specifically attributed.

Proved reserves

See Part 2 of this Appendix. [COGE Handbook]

Qualified reserves auditor

An individual who:

(a) in respect of particular reserves data or related information, possesses professional qualifications and experience appropriate for the estimation, evaluation, review and audit of the reserves data and related information; and

(b) is a member in good standing of a professional organization.

[Regulation 51-101]

Qualified reserves evaluator

An individual who:

(a) in respect of particular reserves data or related information, possesses professional qualifications and experience appropriate for the estimation, evaluation and review of the reserves data and related information; and

(b) is a member in good standing of a professional organization.

[Regulation 51-101]

Qualified reserves evaluator or auditor

A qualified reserves auditor or a qualified reserves evaluator.

[Regulation 51-101]

| | |
|--|--|
| Regulation 44-101 | Regulation 44-101 respecting Short Form Prospectus Distributions. |
| Regulation 51-101 or the Regulation | Regulation 51-101 respecting Standards of Disclosure for Oil and Gas Activities. |
| Regulator | <p>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.</p> <p>[National Instrument 14-101]</p> |
| Reporting issuer | <p>(a) A "reporting issuer" as defined in securities legislation;</p> <p>or</p> <p>(b) in a jurisdiction in which the term is not defined in securities legislation, an issuer of securities that is required to file financial statements with the securities regulatory authority.</p> |
| Reservation | In relation to a report on reserves data, a modification of the standard report of an independent qualified reserves evaluator or auditor on reserves data set out in Form 51-101F2, caused by a departure from the COGE Handbook or by a limitation in the scope of work that the independent qualified reserves evaluator or auditor considers necessary. A modification may take the form of a qualified or adverse opinion or a denial of opinion. |
| Reserves | See Part 2 of this Appendix. [COGE Handbook] |
| Reserves data | <p>The following estimates, as at the last day of the reporting issuer's most recent financial year:</p> <p>(a) proved reserves and related future net revenue estimated:</p> <p style="padding-left: 40px;">(i) using constant prices and costs as at the last day of that financial year; and</p> <p style="padding-left: 40px;">(ii) using forecast prices and costs; and</p> <p>(b) probable reserves and related future net revenue estimated using forecast prices and costs.</p> <p>[Regulation 51-101]</p> |

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. [CICA Accounting Guideline 5]

Resources

Those quantities of oil and gas estimated to exist originally in naturally occurring accumulations.

Resources are, therefore, those quantities estimated on a particular date to be remaining in known accumulations plus those quantities already produced from known accumulations plus those quantities in accumulations yet to be discovered.

Resources are divided into:

- (a) discovered resources, which are limited to known accumulations; and
- (b) undiscovered resources.

[COGE Handbook]

Review

In relation to the role of a qualified reserves evaluator or auditor in respect of reserves data, steps carried out by the qualified reserves evaluator or auditor, consisting primarily of enquiry, analytical procedures, analysis, review of historical reserves performance and discussion with reserves management staff related to a reporting issuer's reserves data, with the limited objective of assessing whether the reserves data is "plausible" in the sense of appearing to be worthy of belief based on the information obtained by the qualified reserves evaluator or auditor as a result of carrying out such steps. Examination of documentation is not required unless the information does not appear to be plausible.

A reserves review, due to the limited nature of the investigation involved, does not provide the level of assurance provided by a reserves audit. Although reserves reviews can be done for specific applications, they are not a substitute for an audit.

[COGE Handbook]

SEC

The Securities and Exchange Commission of the United States of America. [National Instrument 14-101]

Securities legislation

The statute (in most cases entitled the "Securities Act") and subordinate legislation (in most cases including regulations or rules) specified, for each jurisdiction, in National Instrument 14-101.

References in Regulation 51-101 to securities legislation are to be read as references to securities legislation in the particular jurisdiction.

Securities regulatory authority

The securities commission or comparable body specified, for each jurisdiction, in National Instrument 14-101.

References in Regulation 51-101 to the securities regulatory authority are to be read as references to the securities regulatory authority in the particular jurisdiction.

SEDAR

The System for Electronic Document Analysis and Retrieval referred to in Regulation 13-101 respecting System for Electronic Document Analysis and Retrieval (SEDAR).

Senior producing issuer

A reporting issuer that:

- (a) demonstrates capability to estimate its reserves and future net revenue in accordance with the COGE Handbook (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 bbl) per day throughout its most recent financial year.

Service well

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.

[CICA Accounting Guideline 5]

Solution gas

Gas dissolved in crude oil. See gas.

Stratigraphic test well

A drilling effort, geologically directed, to obtain information pertaining to a specific geologic condition. Ordinarily, such wells are drilled without the intention of being completed for hydrocarbon production. They include wells for the purpose of core tests and all types of expendable holes related to hydrocarbon exploration.

Stratigraphic test wells are classified as:

- (a) "exploratory type" if not drilled into a proved property; or
- (b) "development type", if drilled into a proved property. Development type stratigraphic wells are also referred to as "evaluation wells". [CICA Accounting Guideline 5]

Support equipment and facilities

Equipment and facilities used in oil and gas activities, including seismic equipment, drilling equipment, construction and grading equipment, vehicles, repair shops, warehouses, supply points, camps, and division, district or field offices.

Supporting filing

A document that has been filed by the reporting issuer with a securities regulatory authority. [Regulation 51-101]

Synthetic oil

A mixture of hydrocarbons derived by upgrading crude bitumen from oil sands or kerogen from oil shales or other substances such as coal.

[COGE Handbook]

Undeveloped reserves

See Part 2 of this Appendix. [COGE Handbook]

Unproved property

A property or part of a property to which no reserves have been specifically attributed.

Well abandonment costs

Costs of abandoning a well (net of salvage value) and of disconnecting the well from the surface gathering system. They do not include costs of abandoning the gathering system or reclaiming the wellsite.

PART 2 DEFINITIONS OF RESERVES

This Part is derived from Section 5.4 of Volume 1 of the COGE Handbook (First Edition, June 30, 2002). Consult the COGE Handbook for additional explanation and guidance.

The following definitions and guidelines have been prepared by the Standing Committee on Reserves Definitions of the CIM (Petroleum Society) after many years of consultations and deliberations. These definitions and guidelines must be used by qualified evaluators when evaluating and reporting oil and gas reserves and related substances.

The definitions and guidelines are designed to assist:

- evaluators in making reserves estimates on a reasonably consistent basis;
- users of evaluation reports in understanding what such reports contain and, if necessary, in judging whether evaluators have followed generally accepted standards.

The guidelines outline

- general criteria for classifying reserves,
- procedures and methods for estimating reserves,
- confidence levels of individual entity and aggregate reserves estimates,
- verification and testing of reserves estimates.

The determination of oil and gas reserves involves the preparation of estimates that have an inherent degree of associated uncertainty. Categories of proved, probable, and possible reserves have been established to reflect the level of these uncertainties and to provide an indication of the probability of recovery.

The estimation and classification of reserves requires the application of professional judgement combined with geological and engineering knowledge to assess whether or not specific reserves classification criteria have been satisfied. Knowledge of concepts including uncertainty and risk, probability and statistics, and deterministic and probabilistic estimation methods is required to properly use and apply reserves definitions. These concepts are presented and discussed in greater detail within the guidelines in Section 5.5 [of the COGE Handbook].

The following definitions apply to both estimates of individual reserves entities and the aggregate of reserves for multiple entities.

Reserves Categories

Reserves are estimated remaining quantities of oil and natural gas and related substances anticipated to be recoverable from known accumulations, from a given date forward, based on

- analysis of drilling, geological, geophysical and engineering data;
- the use of established technology; and
- specified economic conditions¹⁽²⁾, which are generally accepted as being reasonable, and shall be disclosed.

Reserves are classified according to the degree of certainty associated with the estimates

- (a) **Proved reserves** are those reserves that can be estimated with a high degree of certainty to be recoverable. It is likely that the actual remaining quantities recovered will exceed the estimated proved reserves.
- (b) **Probable reserves** are those additional reserves that are less certain to be recovered than proved reserves. It is equally likely that the actual remaining quantities recovered will be greater or less than the sum of the estimated proved plus probable reserves.
- (c) **Possible reserves** are those additional reserves that are less certain to be recovered than probable reserves. It is unlikely that the actual remaining quantities recovered will exceed the sum of the estimated proved plus probable plus possible reserves.

Other criteria that must also be met for the categorization of reserves are provided in [Section 5.5 of the COGE Handbook].

Development and Production Status

Each of the reserves categories (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 (for example, when compared to the cost of drilling a well) to put the reserves on production. The developed 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 (for example, 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.

Levels of Certainty for Reported Reserves

The qualitative certainty levels referred to in the definitions above are applicable to individual reserves entities (which refers to the lowest level at which reserves calculations are performed) and to reported reserves (which refers to the highest- level sum of individual entity estimates for which reserves estimates are presented). Reported reserves should target the following levels of certainty under a specific set of economic conditions:

- at least a 90 percent probability that the quantities actually recovered will equal or exceed the estimated proved reserves;
- at least a 50 percent probability that the quantities actually recovered will equal or exceed the sum of the estimated proved plus probable reserves; and
- at least a 10 percent probability that the quantities actually recovered will equal or exceed the sum of the estimated proved plus probable plus possible reserves.

A quantitative measure of the certainty levels pertaining to estimates prepared for the various reserves categories is desirable to provide a clearer understanding of the associated risks and uncertainties. However, the majority of reserves estimates will be prepared using deterministic methods that do not provide a mathematically derived quantitative measure of probability. In principle, there should be no difference between estimates prepared using probabilistic or deterministic methods.

Additional clarification of certainty levels associated with reserves estimates and the effect of aggregation is provided in Section 5.5.3 [of the COGE Handbook].

APPENDIX 2

SAMPLE RESERVES DATA DISCLOSURE

Format of Disclosure

Regulation 51-101 and Form 51-101F1 offer reporting issuers considerable flexibility in the format of their disclosure of reserves data and related information. Whatever format and level of detail a reporting issuer chooses to use in satisfying the requirements of Regulation 51-101, the objective should be to enable reasonable investors to understand and assess the information, and compare it to corresponding information presented by the reporting issuer for other reporting periods or to similar information presented by other reporting issuers, in order to be in a position to make informed investment decisions concerning securities of the reporting issuer.

A logical and legible layout of information, use of descriptive headings, and consistency in terminology and presentation from document to document and from period to period, are all likely to further that objective.

Reporting issuers and their advisers are reminded of the materiality standard under section 1.4 of Regulation 51-101, and of the instructions in Form 51-101F1. See also sections 1.2, 2.2, 2.3 and 2.9 of Policy Statement to Regulation 51-101 respecting Standards of Disclosure for Oil and Gas Activities.

Sample Tables

The following sample tables provide an example of how certain of the reserves data might be presented in a manner consistent with Regulation 51-101. Other manners of presentation may also satisfy the requirements of Regulation 51-101.

These sample tables do not reflect all of the information required by Form 51-101F1, and they have been simplified to reflect reserves in one country only. For the purpose of illustration, the sample tables also incorporate information not mandated by Regulation 51-101 but which reporting issuers might wish to include in their disclosure; shading indicates this non-mandatory information.

**SUMMARY OF OIL AND GAS RESERVES
AND NET PRESENT VALUES OF FUTURE NET REVENUE
as of December 31, 2003**

CONSTANT PRICES AND COSTS

| RESERVES CATEGORY | RESERVES | | | | | | | |
|----------------------------|----------------------|-------------|---------------|-------------|----------------------------|------------|---------------------|-------------|
| | LIGHT AND MEDIUM OIL | | HEAVY OIL | | NATURAL GAS ⁽¹⁾ | | NATURAL GAS LIQUIDS | |
| | Gross (Mbbbl) | Net (Mbbbl) | Gross (Mbbbl) | Net (Mbbbl) | Gross (MMcf) | Net (MMcf) | Gross (Mbbbl) | Net (Mbbbl) |
| PROVED | | | | | | | | |
| Developed Producing | xx | xx | xx | xx | xx | xx | xx | xx |
| Developed Non-Producing | xx | xx | xx | xx | xx | xx | xx | xx |
| Undeveloped | xx | xx | xx | xx | xx | xx | xx | xx |
| TOTAL PROVED | xxx | xxx | xxx | xxx | xxx | xxx | xxx | xxx |
| PROBABLE | xx | xx | xx | xx | xx | xx | xx | xx |
| TOTAL PROVED PLUS PROBABLE | xxx | xxx | xxx | xxx | xxx | xxx | xxx | xxx |

(1) Estimates of reserves of natural gas may be reported separately for (i) associated and non-associated gas (combined) and (ii) solution gas.

| RESERVES CATEGORY | NET PRESENT VALUES OF FUTURE NET REVENUE | | | | | | | | | |
|----------------------------|---|----------|-----------|-----------|-----------|--|----------|-----------|-----------|-----------|
| | BEFORE INCOME TAXES DISCOUNTED AT (%/year) | | | | | AFTER INCOME TAXES DISCOUNTED AT (%/year) | | | | |
| | 0 (MM\$) | 5 (MM\$) | 10 (MM\$) | 15 (MM\$) | 20 (MM\$) | 0 (MM\$) | 5 (MM\$) | 10 (MM\$) | 15 (MM\$) | 20 (MM\$) |
| PROVED | | | | | | | | | | |
| Developed Producing | xx | xx | xx | xx | xx | xx | xx | xx | xx | xx |
| Developed Non-Producing | xx | xx | xx | xx | xx | xx | xx | xx | xx | xx |
| Undeveloped | xx | xx | xx | xx | xx | xx | xx | xx | xx | xx |
| TOTAL PROVED | xxx | xxx | xxx | xxx | xxx | xxx | xxx | xxx | xxx | xxx |
| PROBABLE | xx | xx | xx | xx | xx | xx | xx | xx | xx | xx |
| TOTAL PROVED PLUS PROBABLE | xxx | xxx | xxx | xxx | xxx | xxx | xxx | xxx | xxx | xxx |

Reference: Item 2.1(1) and (2) of Form 51-101F1

OPTIONAL

**TOTAL FUTURE NET REVENUE
(UNDISCOUNTED)
as of December 31, 2003**

CONSTANT PRICES AND COSTS

| RESERVES CATEGORY | REVENUE (M\$) | ROYALTIES (M\$) | OPERATING COSTS (M\$) | DEVELOPMENT COSTS (M\$) | WELL ABANDONMENT COSTS (M\$) | FUTURE NET REVENUE BEFORE INCOME TAXES (M\$) | INCOME TAXES (M\$) | FUTURE NET REVENUE AFTER INCOME TAXES (M\$) |
|----------------------------------|------------------|--------------------|-----------------------------|-------------------------------|---------------------------------------|--|--------------------------|---|
| Proved Reserves | xxx | xxx | xxx | xxx | xxx | xxx | xxx | xxx |
| Proved Plus Probable Reserves | xxx | xxx | xxx | xxx | xxx | xxx | xxx | xxx |

Reference: Item 2.1(3)(b) of Form 51-101F1

OPTIONAL

**FUTURE NET REVENUE
BY PRODUCTION GROUP
as of December 31, 2003**

CONSTANT PRICES AND COSTS

| RESERVES CATEGORY | PRODUCTION GROUP | FUTURE NET REVENUE BEFORE INCOME TAXES (discounted at 10%/year) (M\$) |
|-------------------------------|---|---|
| Proved Reserves | Light and Medium Crude Oil (including solution gas and other by-products) | xxx |
| | Heavy Oil (including solution gas and other by-products) | xxx |
| | Natural Gas (including by-products but excluding solution gas from oil wells) | xxx |
| Proved Plus Probable Reserves | Light and Medium Crude Oil (including solution gas and other by-products) | xxx |
| | Heavy Oil (including solution gas and other by-products) | xxx |
| | Natural Gas (including by-products but excluding solution gas from oil wells) | xxx |

OPTIONAL

Reference: Item 2.1(3)(c) of Form 51-101

**SUMMARY OF OIL AND GAS RESERVES
AND NET PRESENT VALUES OF FUTURE NET REVENUE
as of December 31, 2003**

FORECAST PRICES AND COSTS

| RESERVES CATEGORY | RESERVES | | | | | | | |
|----------------------------|----------------------|-------------|---------------|-------------|----------------------------|------------|---------------------|-------------|
| | LIGHT AND MEDIUM OIL | | HEAVY OIL | | NATURAL GAS ⁽¹⁾ | | NATURAL GAS LIQUIDS | |
| | Gross (Mbbbl) | Net (Mbbbl) | Gross (Mbbbl) | Net (Mbbbl) | Gross (MMcf) | Net (MMcf) | Gross (Mbbbl) | Net (Mbbbl) |
| PROVED | | | | | | | | |
| Developed Producing | xx | xx | xx | xx | xx | xx | xx | xx |
| Developed Non-Producing | xx | xx | xx | xx | xx | xx | xx | xx |
| Undeveloped | xx | xx | xx | xx | xx | xx | xx | xx |
| TOTAL PROVED | xxx | xxx | xxx | xxx | xxx | xxx | xxx | xxx |
| PROBABLE | xx | xx | xx | xx | xx | xx | xx | xx |
| TOTAL PROVED PLUS PROBABLE | xxx | xxx | xxx | xxx | xxx | xxx | xxx | xxx |

(1) Estimates of reserves of natural gas may be reported separately for (i) associated and non-associated gas (combined) and (ii) solution gas

| RESERVES CATEGORY | NET PRESENT VALUES OF FUTURE NET REVENUE | | | | | | | | | |
|----------------------------|---|----------|-----------|-----------|-----------|--|----------|-----------|-----------|-----------|
| | BEFORE INCOME TAXES DISCOUNTED AT (%/year) | | | | | AFTER INCOME TAXES DISCOUNTED AT (%/year) | | | | |
| | 0 (MM\$) | 5 (MM\$) | 10 (MM\$) | 15 (MM\$) | 20 (MM\$) | 0 (MM\$) | 5 (MM\$) | 10 (MM\$) | 15 (MM\$) | 20 (MM\$) |
| PROVED | | | | | | | | | | |
| Developed Producing | xx | xx | xx | xx | xx | xx | xx | xx | xx | xx |
| Developed Non-Producing | xx | xx | xx | xx | xx | xx | xx | xx | xx | xx |
| Undeveloped | xx | xx | xx | xx | xx | xx | xx | xx | xx | xx |
| TOTAL PROVED | xxx | xxx | xxx | xxx | xxx | xxx | xxx | xxx | xxx | xxx |
| PROBABLE | xx | xx | xx | xx | xx | xx | xx | xx | xx | xx |
| TOTAL PROVED PLUS PROBABLE | xxx | xxx | xxx | xxx | xxx | xxx | xxx | xxx | xxx | xxx |

Reference: Item 2.2(1) and (2) of Form 51-101F1

**TOTAL FUTURE NET REVENUE
(UNDISCOUNTED)
as of December 31, 2003**

FORECAST PRICES AND COSTS

| RESERVES CATEGORY | REVENUE (M\$) | ROYALTIES (M\$) | OPERATING COSTS (M\$) | DEVELOPMENT COSTS (M\$) | WELL ABANDONMENT COSTS (M\$) | FUTURE NET REVENUE BEFORE INCOME TAXES (M\$) | INCOME TAXES (M\$) | FUTURE NET REVENUE AFTER INCOME TAXES (M\$) |
|-------------------------------|---------------|-----------------|-----------------------|-------------------------|------------------------------|--|--------------------|---|
| Proved Reserves | xxx | xxx | xxx | xxx | xxx | xxx | xxx | xxx |
| Proved Plus Probable Reserves | xxx | xxx | xxx | xxx | xxx | xxx | xxx | xxx |

Reference: Item 2.2(3)(b) of Form 51-101F1

**FUTURE NET REVENUE
BY PRODUCTION GROUP
as of December 31, 2003**

FORECAST PRICES AND COSTS

| RESERVES CATEGORY | PRODUCTION GROUP | FUTURE NET REVENUE BEFORE INCOME TAXES (discounted at 10%/year) (M\$) |
|-------------------------------|---|---|
| Proved Reserves | Light and Medium Crude Oil (including solution gas and other by-products) | xxx |
| | Heavy Oil (including solution gas and other by-products) | xxx |
| | Natural Gas (including by-products but excluding solution gas and by-products from oil wells) | xxx |
| Proved Plus Probable Reserves | Light and Medium Crude Oil (including solution gas and other by-products) | xxx |
| | Heavy Oil (including solution gas and other by-products) | xxx |
| | Natural Gas (including by-products but excluding solution gas from oil wells) | xxx |

Reference: Item 2.2(3)(c) of Form 51-101F1

**SUMMARY OF PRICING ASSUMPTIONS
as of December 31, 2003**

CONSTANT PRICES AND COSTS

| Year | OIL ⁽¹⁾ | | | | NATURAL GAS ⁽²⁾ AECO Gas Price (\$Cdn/MMBtu) | NATURAL GAS LIQUIDS FOB Field Gate (\$Cdn/bbl) | EXCHANGE RATE ⁽²⁾ (\$US/\$Cdn) |
|-----------------------|---------------------------------------|---|--|---|---|---|--|
| | WTI Cushing Oklahoma (\$US/bbl) | Edmonton Par Price 40 ^o API (\$Cdn/bbl) | Hardisty Heavy 12 ^o API (\$Cdn/bbl) | Cromer Medium 29.3 ^o API (\$Cdn/bbl) | | | |
| Historical (Year End) | | | | | | | |
| 2000 | xx | xx | xx | xx | xx | xx | xx |
| 2001 | xx | xx | xx | xx | xx | xx | xx |
| 2002 | xx | xx | xx | xx | xx | xx | xx |
| 2003 (Year End) | xx | xx | xx | xx | xx | xx | xx |

OPTIONAL

- (1) This summary table identifies benchmark reference pricing schedules that might apply to a reporting issuer.
(2) The exchange rate used to generate the benchmark reference prices in this table.

Reference: Item 3.1 of Form 51-101 F1

**SUMMARY OF PRICING AND INFLATION RATE ASSUMPTIONS
as of December 31, 2003**

FORECAST PRICES AND COSTS

| Year | OIL ⁽¹⁾ | | | | NATURAL GAS ⁽¹⁾ AECO Gas Price (\$Cdn/MMBtu) | NATURAL GAS LIQUIDS FOB Field Gate (\$Cdn/bbl) | INFLATION RATES ⁽²⁾ %/Year | EXCHANGE RATE ⁽³⁾ \$US/\$Cdn |
|---------------------------|----------------------------------|---|-------------------------------------|--------------------------------------|---|--|--|--|
| | WTI Cushing Oklahoma \$US/bbl | Edmonton Par Price 40° API \$Cdn/bbl | Hardisty Heavy 12° API \$Cdn/bbl | Cromer Medium 29.3° API \$Cdn/bbl | | | | |
| Historical ⁽⁴⁾ | | | | | | | | |
| 2000 | xx | xx | xx | xx | xx | xx | xx | xx |
| 2001 | xx | xx | xx | xx | xx | xx | xx | xx |
| 2002 | xx | xx | xx | xx | xx | xx | xx | xx |
| 2003 | xx | xx | xx | xx | xx | xx | xx | xx |
| Forecast | | | | | | | | |
| 2004 | xx | xx | xx | xx | xx | xx | xx | xx |
| 2005 | xx | xx | xx | xx | xx | xx | xx | xx |
| 2006 | xx | xx | xx | xx | xx | xx | xx | xx |
| 2007 | xx | xx | xx | xx | xx | xx | xx | xx |
| 2008 | xx | xx | xx | xx | xx | xx | xx | xx |
| Thereafter | xx | xx | xx | xx | xx | xx | xx | xx |

 OPTIONAL

- (1) This summary table identifies benchmark reference pricing schedules that might apply to a reporting issuer.
- (2) Inflation rates for forecasting prices and costs.
- (3) Exchange rates used to generate the benchmark reference prices in this table.
- (4) Item 3.2 (1)(b) of Form 51-101F1 also requires disclosure of the reporting issuer's weighted average historical prices for the most recent financial year (2003, in this example).

Reference: Item 3.2 of Form 51-101 F1

**RECONCILIATION OF COMPANY NET RESERVES
BY PRINCIPAL PRODUCT TYPE**

[FORECAST/CONSTANT] PRICES AND COSTS⁽¹⁾

| FACTORS | LIGHT AND MEDIUM OIL | | | HEAVY OIL | | | ASSOCIATED AND NON-ASSOCIATED GAS | | |
|---------------------|----------------------|------------------------|---------------------------------------|----------------------|------------------------|---------------------------------------|--------------------------------------|------------------------|---------------------------------------|
| | Net Proved (Mbbl) | Net Probable (Mbbl) | Net Proved Plus Probable (Mbbl) | Net Proved (Mbbl) | Net Probable (Mbbl) | Net Proved Plus Probable (Mbbl) | Net Proved (MMcf) | Net Probable (MMcf) | Net Proved Plus Probable (MMcf) |
| December 31, 2002 | xxx | xxx | xxx | xxx | xxx | xxx | xxx | xxx | xxx |
| Extensions | xx | xx | xx | xx | xx | xx | xx | xx | xx |
| Improved Recovery | xx | xx | xx | xx | xx | xx | xx | xx | xx |
| Technical Revisions | xx | xx | xx | xx | xx | xx | xx | xx | xx |
| Discoveries | xx | xx | xx | xx | xx | xx | xx | xx | xx |
| Acquisitions | xx | xx | xx | xx | xx | xx | xx | xx | xx |
| Dispositions | xx | xx | xx | xx | xx | xx | xx | xx | xx |
| Economic Factors | xx | xx | xx | xx | xx | xx | xx | xx | xx |
| Production | xx | xx | xx | xx | xx | xx | xx | xx | xx |
| December 31, 2003 | xxx | xxx | xxx | xxx | xxx | xxx | xxx | xxx | xxx |

(1) A reconciliation of reserves estimates may be presented using either constant prices and costs or forecast prices and costs provided that the price and cost case is indicated in the disclosure of the reserves reconciliation.

Reference: Item 4.1 of Form 51-101F1

**RECONCILIATION OF CHANGES IN
NET PRESENT VALUES OF FUTURE NET REVENUE
DISCOUNTED AT 10% PER YEAR**

PROVED RESERVES

CONSTANT PRICES AND COSTS

| PERIOD AND FACTOR | 2003 (M\$) | 2002 (M\$) |
|--|---------------|---------------|
| Estimated Future Net Revenue at Beginning of Year | xxx | xxx |
| Sales and Transfers of Oil and Gas Produced, Net of Production Costs and Royalties | xx | xx |
| Net Change in Prices, Production Costs and Royalties Related to Future Production | xx | xx |
| Changes in Previously Estimated Development Costs Incurred During the Period | xx | xx |
| Changes in Estimated Future Development Costs | xx | xx |
| Extensions and Improved Recovery | xx | xx |
| Discoveries | xx | xx |
| Acquisitions of Reserves | xx | xx |
| Dispositions of Reserves | xx | xx |
| Net Change Resulting from Revisions in Quantity Estimates | xx | xx |
| Accretion of Discount | xx | xx |
| Net Change in Income Taxes | xx | xx |
| Estimated Future Net Revenue at End of Year | xxx | xxx |

OPTIONAL

Reference: Item 4.2 of Form 51-101F1

NOTES TO SAMPLE TABLES

1. These sample tables do not reflect all of the information required by Form 51-101F1, and they have been simplified to reflect reserves in one country only, with no non-conventional oil and gas activities.
2. For the purpose of illustration, the sample tables also incorporate information not mandated by Regulation 51-101 but which reporting issuers might wish to include in their disclosure; shading indicates that this information is optional.
3. "M\$" means thousands of dollars.
4. The estimates of future net revenue presented in the sample tables do not represent fair market value. (Reference: Section 5.6 of Regulation 51-101).

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Notes

1 (Commentaire déroulant - Commentaire déroulant)

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

2 (Commentaire déroulant - Commentaire déroulant)

1 For the purposes of Regulation 51-101, the key economic assumptions will be the prices and costs used in the estimate, namely:

- (a) constant prices and costs as at the last day of a reporting issuer's financial year; or
- (b) forecast prices and costs