

COMPANION POLICY 51-101CP
STANDARDS OF DISCLOSURE
FOR OIL AND GAS ACTIVITIES

TABLE OF CONTENTS

PART 1	APPLICATION AND TERMINOLOGY
1.1	Supplements Other Requirements
1.2	Materiality Standard
1.3	When Does <i>NI 51-101</i> First Apply to a <i>Reporting Issuer</i> ?
1.4	<i>COGE Handbook</i>
1.5	<i>Qualified Reserves Evaluator or Auditor</i>
1.6	Oil Sands and Other Non-Conventional Activities
1.7	Use of Information
PART 2	ANNUAL FILING REQUIREMENTS
2.1	Annual Filings on <i>SEDAR</i>
2.2	Inapplicable or Immaterial Information
2.3	Use of Forms
2.4	<i>Annual Information Form</i>
2.5	<i>Reservations</i> in Report of <i>Independent Qualified Reserves Evaluator or Auditor</i>
2.6	Negative Assurance by <i>Qualified Reserves Evaluator or Auditor</i>
2.7	Royalty Interest in <i>Reserves</i>
2.8	Government Restriction on Disclosure
2.9	Additional Information
2.10	Sample <i>Reserves Data</i> Disclosure
PART 3	RESPONSIBILITIES OF <i>REPORTING ISSUERS</i> AND DIRECTORS
3.1	Reserves Committee
3.2	Responsibility for Disclosure
PART 4	MEASUREMENT
4.1	<i>Forecast Prices and Costs</i>
4.2	<i>Constant Prices and Costs</i>
4.3	<i>Reserves</i> Estimation Methods
4.4	Consistency of Timing
PART 5	REQUIREMENTS APPLICABLE TO ALL DISCLOSURE
5.1	Scope of Part 4 of <i>NI 51-101</i>
5.2	Estimates of Fair Value
5.3	Negative Assurance
5.4	<i>Supporting Filings</i>
5.5	Consistent Use of Units of Measurement
5.6	<i>BOEs</i> and <i>McfGEs</i>
5.7	Finding and Development Costs

PART 6 MATERIAL CHANGE DISCLOSURE

6.1 Changes from Filed Information

PART 7 INDEPENDENCE OF PROFESSIONALS

7.1 *Independence of Qualified Reserves Evaluator or Auditor*

7.2 Unacceptable *Qualified Reserves Evaluator or Auditor* or Valuator

PART 8 EXEMPTIONS

8.1 Scope of Possible Exemptions

8.2 Exemption from Requirement for *Independent Qualified Reserves Evaluator or Auditor*

8.3 Exemption Permitting Substitution of *FASB Standard*

8.4 Exemption Permitting *SEC-Only* Disclosure

8.5 Stacking of Exemptions

8.6 Exemption not Conferring Immunity

APPENDIX 1 – GLOSSARY

Part 1 Definitions

Part 2 Definitions of *Reserves*

APPENDIX 2 – SAMPLE *RESERVES DATA* DISCLOSURE

COMPANION POLICY 51-101CP
STANDARDS OF DISCLOSURE
FOR OIL AND GAS ACTIVITIES

This Companion Policy sets out the views of the Canadian Securities Administrators (the "CSA") as to the interpretation and application of National Instrument 51-101 *Standards of Disclosure for Oil and Gas Activities* ("NI 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 NI 51-101¹.

PART 1 APPLICATION AND TERMINOLOGY

1.1 Supplements Other Requirements - NI 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 NI 51-101 states that NI 51-101 applies only in respect of information that is *material*.

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

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

The reference in subsection 1.4(2) of NI 51-101 to a "reasonable investor" denotes an objective test: would a notional investor, broadly representative of investors generally and guided by reason, be likely to be influenced, in making an investment decision to buy, sell or hold a security of a *reporting issuer*, by an item of information or an aggregate of items of information? If so, then that item 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 NI 51-101 First Apply to a Reporting Issuer? - Part 9 of NI 51-101 specifies both the date on which NI 51-101 comes into force (section 9.1) and the timing of its first application to a *reporting issuer* (section 9.2). The two dates differ.

¹ For the convenience of readers, the Appendix to Companion Policy 51-101CP sets out the meanings of terms that are printed in italics in NI 51-101, Form 51-101F1, 51-101F2 or Form 51-101F3, or in this Companion Policy (other than terms italicized in titles of documents, or in the texts of reports set out in Part 8, that are printed entirely in italics).

NI 51-101 comes into force on September 30, 2003. That does not, however, itself trigger any immediate filing or other requirements for *reporting issuers*.

Section 9.2 of *NI 51-101* in effect establishes a transition period after *NI 51-101* comes into force, during which *reporting issuers* are expected to prepare for compliance with *NI 51-101*. The date on which they first become subject to the requirements of *NI 51-101* will vary depending on their financial year-ends and, in some cases, on whether or not they choose to enter the *NI 51-101* disclosure system earlier than required. *Reporting issuers* may voluntarily comply with *NI 51-101* before they are required to do so.

The first mandatory annual filings under Part 2 of *NI 51-101* will be due at the same time as a *reporting issuer* is required to file its audited annual financial statements for its financial year that includes, or ends on, December 31, 2003. Those first annual *oil* and *gas* filings will include *reserves data* and other information that must be prepared as at the last day of that financial year and for that financial year. Some of this information will date back to the beginning of that financial year.

The other provisions of *NI 51-101*, including requirements relating to public disclosure generally and to material change² disclosure in particular, will apply to a *reporting issuer* only after it has filed its first annual *oil* and *gas* disclosure under Part 2, or the deadline for that filing, whichever is earlier.

A *reporting issuer* may voluntarily make its first annual filing under Part 2 of *NI 51-101* earlier than the deadlines noted below, and may do so in respect of a financial year earlier than noted below. The other provisions of *NI 51-101* would begin to apply to the *reporting issuer* at the time of that voluntary early filing.

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

- A *reporting issuer* with a financial year that coincides with the calendar year, and with an annual financial statement filing period of 140 days after year-end, will be required to make its first annual *oil* and *gas* disclosure filing under Part 2 in the first 140 days of 2004, by May 19, 2004. The *reserves data* and other information included in that filing must be prepared as at December 31, 2003 and for the year ended on that date.

The other provisions of *NI 51-101* will begin to apply to the *reporting issuer* as soon as it makes its first filing under Part 2, or on May 19, 2004, whichever occurs first.

- A *reporting issuer* with a financial year that ends on June 30 will be required to make its first annual *oil* and *gas* disclosure filing under Part 2 within 140 days after June 30, 2004, by November 17, 2004. The *reserves data* and other

² "Material change" has the meaning ascribed to the term under *securities legislation* in the *jurisdiction*.

information included in that filing must be prepared as at June 30, 2004 and for the financial year ended on that date.

The other provisions of *NI 51-101* will begin to apply to the *reporting issuer* as soon as it makes its first filing under Part 2, or on November 17, 2004, whichever occurs first.

<u>Financial Year-End</u>	<u>First Annual Filing Deadline</u>
December 31	May 19, 2004 (data for the year ended <u>December 31, 2003</u>)
June 30	November 17, 2004 (data for the year ended <u>June 30, 2004</u>)

* Note that any change in annual financial statement filing deadlines would also change the filing deadline under Part 2 of *NI 51-101*.

Because the first annual filing must include certain information from the beginning of the financial year for which disclosure is required, as well as certain information for prior periods, *reporting issuers* should familiarize themselves with *NI 51-101* and begin gathering information well before *NI 51-101* applies to them.

1.4 *COGE Handbook*

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

Section 1.1 of *NI 51-101* and the Glossary in Appendix 1 to this Companion Policy set out definitions and interpretations, many of which are derived from the *COGE Handbook*. *Reserves* definitions and classifications 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 Companion Policy.

Paragraph 4.2(1)(b) of *NI 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 *NI 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 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 *Instrument*, 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 purposes of the *Instrument* satisfies each of the elements of the appropriate definition.

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

(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*.

(b) **Professional Organization**

For the purposes of the *Instrument*, 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(v) of *NI 51-101* and in the Glossary in Appendix 1 to this Companion Policy) 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 *NI 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 (APEGGS)

- 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 purposes of NI 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 purpose of NI 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 NI 51-101 to enable a *reporting issuer* to appoint, in satisfaction of its obligation under section 3.2 of NI 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 - NI 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 *NI 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 *NI 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 *NI 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, National Instrument 43-101 *Standards of Disclosure for Mineral Projects* and Form 43-101F1 *Technical Report*.

1.7 Use of Information - The requirements under *NI 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 registrants³ 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 *NI 51-101* by the *reporting issuer* and, if they are summarizing or referring to this information, to use the applicable terminology consistent with *NI 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 *NI 51-101* must be filed electronically on *SEDAR*. Consult National Instrument 13-101 *SEDAR* and

³ "Registrant" has the meaning ascribed to the term under *securities legislation* in the *jurisdiction*.

the current CSA "SEDAR Filer Manual" for information about filing documents electronically.

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

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

- 2.3 Use of Forms** - Section 2.1 of *NI 51-101* requires the annual filing of information set out in *Form 51-101F1* and reports in accordance with *Form 51-101F2* and *Form 51-101F3*.

NI 51-101 and the instructions 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 Companion Policy 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 *NI 51-101* permits *reporting issuers* to satisfy the requirements of section 2.1 of *NI 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 National Instrument 44-101 *Short Form Prospectus Distributions*, or if it is filed for other purposes such as Ontario Securities Commission Rule 51-501 *AIF and MD&A*, section 159 of the Regulation under the *Securities Act* (Québec) or Multilateral Instrument 45-102 *Resale of Securities*. The *annual information form* can also be a current annual report on *Form 10-K* or *Form 20-F* under the *1934 Act*, if the *reporting issuer* is eligible to file such a report under *NI 44-101*.

Some or all of the current domestic forms of *annual information form* may be superseded by a new form under proposed National Instrument 51-102 *Continuous Disclosure*

Obligations. If so, such new form would likely be acceptable as an "annual information form" for purposes of NI 51-101. The CSA will give public notice of any such change.

(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 NI 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 NI 51-101 enables a *reporting issuer* to satisfy its obligations under section 2.1 of NI 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 NI 51-101 need not also file that information again for purposes 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 NI 51-101 oil and gas disclosure, a notification that the information required under section 2.1 of NI 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 NI 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 NI 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 NI 51-101 if the report contains a reservation, the cause of which can be removed by the reporting issuer (subsection 2.4(2) of NI 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

Companion Policy, 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 *NI 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 *NI 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*, *NI 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 *NI 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 Companion Policy 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 *NI 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 *NI 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 *NI 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** - *NI 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 purposes of *NI 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 purposes of the estimates to be filed under section 2.1 of *NI 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 any fixed or presently determinable future prices or costs to which the *reporting issuer* is legally bound by contract or otherwise (including those for an extension period of a contract that is likely to be extended).

4.3 *Reserves Estimation Methods* - The *COGE Handbook* sets out target levels of certainty for estimates of primary classifications 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.

4.4 *Consistency of Timing* - Subsection 4.2(2) of *NI 51-101* requires consistency in the timing of recording the effects of events or transactions for 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 NI 51-101 - Part 5 of *NI 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 *NI 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 *NI 51-101*;
- other continuous disclosure filings, including material change reports (which themselves may also be subject to Part 6 of *NI 51-101*);
- public disclosure documents, whether or not filed, including news releases;
- public disclosure made in connection with a distribution of securities, including a prospectus; and
- except in respect of provisions of Part 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 *NI 51-101* and the *COGE Handbook*, in the preparation, review or approval of all such *oil* and *gas* disclosure.

5.2 Estimates of Fair Value - Section 5.10 of *NI 51-101* sets out requirements applicable to disclosure of certain estimates of fair value -- for example, an estimate of fair value of an *oil* and *gas* prospect.

Such an estimate must, unless paragraph 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.

- 5.3 Negative Assurance** - As discussed in section 2.6, 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.

- 5.4 Supporting Filings** - Part 5 of *NI 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 *NI 51-101* does not specify any particular type of document, nor a maximum age or an expiry date for any such document. If the information in a filed document has not been rendered inaccurate or misleading by events subsequent to its filing, the document can continue to serve as a *supporting filing*.

Part 6 of *NI 51-101* requires that reports of material changes include, in certain circumstances, information concerning the effect that the material change would, but for the timing of its occurrence, have had on information in an annual filing under Part 2.

The CSA do not consider that a document filed under Part 2 of *NI 51-101* would cease to qualify as a *supporting document* merely by reason of the occurrence of a material change referred to in Part 6 of *NI 51-101*, provided that the material change disclosure satisfies applicable requirements of Part 6.

- 5.5 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 paragraph 4.2(1)(b), subsection 5.2(a) and section 5.3 of *NI 51-101*, *reporting issuers* should apply the relevant nomenclature and unit prefixes set out in the *COGE Handbook*.

- 5.6 BOEs and McfGEs** - Section 5.14 of *NI 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.

- 5.7 Finding and Development Costs** - Section 5.15 of *NI 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 *NI 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 *NI 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 *NI 51-101* is prepared as at, or for a period ended on, the *reporting issuer's* most recent financial year-end. That date is the *effective date* referred to in subsection 6.1(1) of *NI 51-101*. When a material change occurs after that date, the filed information may no longer, as a result of the material change, convey meaningful information, or the original information may have become misleading in the absence of updated information.

Part 6 of *NI 51-101* requires that the disclosure of the material change include a discussion of the *reporting issuer's* reasonable expectation of how information that had been filed under Part 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 *NI 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 *NI 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 *NI 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 *NI 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 *NI 51-101*. The relief discussed in this Part is limited to relief from the requirements of *NI 51-101*, and would not affect other requirements of *securities legislation*.

(See also section 1.5 of this Companion Policy 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.

However, the *CSA* recognize 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 *NI 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 *NI 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 *NI 51-101*.

Such an exemption would not vary the requirements of *NI 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 purposes of section 2.1 of *NI 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) **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 *NI 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 proximate to that disclosure, the fact that no *independent qualified reserves evaluator or auditor* was involved in the preparation of the *reserves data*; and
- (ii) **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 *NI 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 *NI 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 *NI 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. *Our staff and I have evaluated 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) (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)(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 evaluation.*
3. *We carried out our evaluation in accordance with standards set out in the Canadian Oil and Gas Evaluation Handbook (the “COGE Handbook”). We are not, however, independent of the Company, within the meaning of the term "independent" under those standards.*
4. *Those standards require that we plan and perform an evaluation to obtain reasonable assurance as to whether the reserves data are free of material misstatement. An evaluation also includes assessing whether the reserves data are in accordance with principles and definitions presented in the COGE Handbook.*
5. *The following sets forth the estimated future net revenue 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 evaluated for the year ended xxx xx, 20xx:*

*Location of
Reserves
(Country or
Foreign
Geographic
Area)*

<i>xxx</i>	<i>\$ xxx</i>
<i>xxx</i>	<i>xxx</i>
<i>xxx</i>	<i><u>xxx</u></i>
	<i><u>\$ xxx</u></i>

6. *In our opinion, the reserves data evaluated by us have, in all material respects, been determined in accordance with the COGE Handbook.*
7. *We have no responsibility to update our evaluation for events and circumstances occurring after the date of this report.*
8. *Because the reserves data are based on judgements regarding future events, actual results will vary and the variations may be material.*

[Internal Qualified Reserves Evaluator Name, Position, Province, 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 *NI 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) (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) (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.*

Our [title of internal qualified reserves evaluator[s]], who [is an / are] employee[s] of the Company, [has / have] evaluated the Company's reserves data. The report of the [internal qualified reserves evaluator[s]] [is presented below / will be filed with securities regulatory authorities concurrently with this report].

The [Reserves Committee of the] Board of Directors has:

- (a) *reviewed the Company's procedures for providing information to the [internal qualified reserves evaluator];*
- (b) *met with the [internal qualified reserves evaluator] to determine whether any restrictions placed by management affect the ability of the [internal qualified reserves evaluator] to report without reservation; and*
- (c) *reviewed the reserves data with management and the [internal qualified reserves evaluator].*

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

In our view, the reliability of the internally generated reserves data is not materially less than would be afforded by our involving independent qualified reserves evaluators or independent qualified reserves auditors to evaluate or audit and review the reserves data. The Company is therefore relying on an exemption, which it sought and was granted by securities regulatory authorities, from the requirement under securities legislation to involve independent qualified reserves evaluators or independent qualified reserves auditors.

The primary factors supporting the involvement of independent qualified reserves evaluators or independent qualified reserves auditors apply when (i) their knowledge of, and experience with, a reporting issuer's

reserves data are superior to that of the internal evaluators and (ii) when the independent qualified reserves evaluators or independent qualified reserves auditors are less likely to be adversely influenced by self-interest or management of the reporting issuer. In our view, neither of these factors applies in our circumstances.

Our view is based in large part on the following. Our reserves data were developed in accordance with standards set out in the Canadian Oil and Gas Evaluation Handbook. Our internal reserves evaluation staff includes [number] of persons with an average of [X] years of relevant experience in evaluating reserves, of whom [number of persons] are qualified reserves evaluators for purpose of securities regulatory requirements. Our internal reserves evaluation management personnel includes [number] of persons with an average of [Y] years of relevant experience in evaluating and managing the evaluation of reserves. Our procedures, records and controls relating to the accumulation of source data and preparation of reserves data by our internal reserves evaluation staff have been established, refined, documented, and subjected to review for [Z] years by our internal financial auditors who have reported directly to the [Reserves Committee of the] Board of Directors.

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 senior officer
other than the chief executive officer]*

[signature, name and title of director]

[signature, name and title of director]

[Date]"

8.3 Exemption Permitting Substitution of *FASB Standards*

(a) Comparable *FASB Standards*

The *reserves data* to be disclosed under *NI 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 Companion Policy, 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 Companion Policy 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 Companion Policy 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 *NI 51-101* was to enhance the comparability of *oil* and *gas* disclosure provided by *reporting issuers*. The *CSA* recognize that, in the case of some *reporting issuers* that are active in 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 5 of *NI 51-101*, a *reporting issuer* that is subject both to the disclosure requirements of the *SEC* and to *NI 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 the requirements of Part 5 of *NI 51-101* and the forms referred to in that Part.

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 *NI 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 *NI 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 *NI 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 *NI 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, 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 *NI 51-101*.

8.4 Exemption Permitting *SEC-Only* 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 *NI 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 *NI 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 *NI 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 *NI 51-101*; and
- (ii) relief from requirements of *NI 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 *NI 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* (the extraction of hydrocarbons from oil sands, shale, coal or other non-conventional sources).

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 *NI 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 *NI 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 by items 2 and 3 of section 2.1 of *NI 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, 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 *NI 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 purposes of item 1 of section 2.1 of *NI 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 *NI 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 *NI 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 classifications not required by the *SEC*:
 - (I) the disclosure will
 - a. apply the *reserves* classifications set out in the *COGE Handbook*; or
 - b. set out the *reserves* classifications being used in enough detail to make them understandable to a reader, identify the source of those *reserves* classifications, state that those *reserves* classifications differ from the *reserves* classifications 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 classification 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 *NI 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 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 purposes 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 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 *NI 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
to
COMPANION POLICY 51-101CP
STANDARDS OF DISCLOSURE
FOR OIL AND GAS ACTIVITIES

GLOSSARY

Section 1.1 of National Instrument 51-101 *Standards of Disclosure for Oil and Gas Activities* ("NI 51-101") defines a number of terms used in NI 51-101, Form 51-101F1, Form 51-101F2, Form 51-101F3 and this Companion Policy. Section 1.2 of NI 51-101 provides that terms not defined in the *Instrument*, NI 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 NI 51-101 and its accompanying documents. The explanations are drawn from a number of sources, including section 1.1 of NI 51-101, NI 14-101 and the *COGE Handbook*. The source document, if any, is indicated in square brackets after the explanation.

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*.

This Appendix is provided only as a convenience to users of NI 51-101, to assist them in better understanding its purpose and application.

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*.
- NI 14-101 can be viewed on the websites of a number of securities regulatory authorities.

PART 1 DEFINITIONS

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

Defined Term	Meaning
<i>1934 Act</i>	The Securities Exchange Act of 1934 of the United States of America, as amended from time to time. [NI 14-101]
<i>Annual information form</i>	Any of the following: <ul style="list-style-type: none">(a) a "current AIF", as defined in NI 44-101;(b) in the case of a <i>reporting issuer</i> that is eligible to file, for the purposes of Part 3 of NI 44-101, a current annual report on Form 10-K or Form 20-F under the <i>1934 Act</i>, such a current annual report so filed; or(c) a document prepared in Form 44-101F1 <i>AIF</i> and filed with the <i>securities regulatory authority</i> in the <i>jurisdiction</i> in accordance with <i>securities legislation</i> of that <i>jurisdiction</i> other than NI 44-101. [NI 51-101]

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. [*NI 51-101* and *COGE Handbook*]

Canadian GAAP

Generally accepted accounting principles determined with reference to the *CICA Handbook*. [*NI 14-101*]

CICA

The Canadian Institute of Chartered Accountants. [*NI 51-101*]

<i>CICA Accounting Guideline 5</i>	Accounting Guideline AcG-5 "Full cost accounting in the oil and gas industry" included in the <i>CICA Handbook</i> , as amended from time to time. [NI 51-101]
<i>CICA Handbook</i>	The Handbook of the <i>CICA</i> , as amended from time to time.
<i>COGE Handbook</i>	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).
<i>Constant prices and costs</i>	<p>Prices and costs used in an estimate that are:</p> <ul style="list-style-type: none">(a) the <i>reporting issuer's</i> prices and costs as at the <i>effective date</i> of the estimation, held constant throughout the estimated lives of the <i>properties</i> to which the estimate applies;(b) if, and only to the extent that, there are fixed or presently determinable future prices or costs to which the <i>reporting issuer</i> is legally bound by contract or otherwise, including those for an extension period of a contract that is likely to be extended, those prices or costs rather than the prices and costs referred to in paragraph (a). <p>For the purpose of paragraph (a), the <i>reporting issuer's</i> prices will be the posted price for <i>oil</i> and the spot price for <i>gas</i>, after historical adjustments for transportation, gravity and other factors.</p> <p>[<i>COGE Handbook</i>]</p>
<i>Crude oil</i>	<p>A mixture that consists mainly of pentanes and heavier hydrocarbons, that may contain sulphur compounds and that is recoverable at a well from an underground <i>reservoir</i> and that is liquid at the conditions under which its volume is measured or estimated, and includes all other liquid hydrocarbons so recoverable except natural gas liquids.</p> <p>[<i>COGE Handbook</i>]</p>
<i>CSA</i>	The Canadian Securities Administrators, an association consisting of the thirteen securities regulatory authorities in Canada.
<i>Developed non-producing reserves</i>	See Part 2 of this Appendix. [<i>COGE Handbook</i>]

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

[*CICA Accounting Guideline 5*]

Exploratory well A well that is not a *development well* or a *service well*.

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. [*NI 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.

<i>FASB</i>	United States Financial Accounting Standards Board.
<i>FASB Standard</i>	The following: <ul style="list-style-type: none">(a) <i>FAS 69</i>; and(b) paragraphs .103, .106, .107, .108, .112, .160 through .167, .174 through .184, and .401 through .408 of <i>FASB</i> Current Text Section Oi5, "Oil and Gas Producing Activities", which also reflects <i>FAS 69</i>.
<i>Field</i>	<p>An area consisting of a single <i>reservoir</i> or multiple <i>reservoirs</i> all grouped on or related to the same individual geological structural feature and/or stratigraphic condition.</p> <p>There may be two or more <i>reservoirs</i> in a <i>field</i> 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 <i>fields</i> may be treated as a single or common operational <i>field</i>. 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".</p> <p>[<i>FASB Standard</i> paragraph .403]</p>
<i>Forecast prices and costs</i>	Future prices and costs that are: <ul style="list-style-type: none">(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 <i>reporting issuer</i> is legally bound by contract or otherwise, including those for an extension period of a contract that is likely to be extended, those prices or costs rather than the prices and costs referred to in paragraph (a).
<i>Foreign geographic area</i>	A geographic area outside North America within one country or including all or portions of a number of countries.
<i>Form 51-101F1</i>	Form 51-101F1 <i>Statement of Reserves Data and Other Oil and Gas Information</i> .
<i>Form 51-101F2</i>	Form 51-101F2 <i>Report on Reserves Data by Independent Qualified Reserves Evaluator or Auditor</i> .

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 (*future net revenue*) relating to the issuer's *oil and gas reserves* 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 royalties obligations, costs related to the development and *production* of *reserves*, abandonment and reclamation costs and *future income tax expenses*. 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.

This definition of *future net revenue* differs from "Future Net Revenue" as defined in *CICA Accounting Guideline 5*, which is based on *proved reserves* estimated using *constant prices and costs*, deducting general and administrative expenses and financing costs and applying no 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 liquids. [*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*.
- Instrument**
(or *NI 51-101*)
- NI 51-101 *Standards of Disclosure for Oil and Gas Activities*.
- Jurisdiction**
- For the purposes of *NI 51-101*, a province or territory of Canada. [NI 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)	For the purposes of <i>NI 51-101</i> , information is <i>material</i> , in respect of a <i>reporting issuer</i> , if it would be likely to influence a decision by a reasonable investor to buy, hold or sell a security of the <i>reporting issuer</i> . 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 <i>CICA Handbook</i> . [<i>NI 51-101</i>]
Mcf	Thousand cubic feet.
McfGE	Thousand cubic feet of gas equivalent. [<i>NI 51-101</i> and <i>COGE Handbook</i>]
Natural gas	<i>Gas</i> . [<i>COGE Handbook</i>]
Net	(a) In relation to a <i>reporting issuer's</i> interest in <i>production</i> or <i>reserves</i> , the <i>reporting issuer's</i> working interest (operating or non-operating) share after deduction of royalty obligations, plus the <i>reporting issuer's</i> royalty interests in <i>production</i> or <i>reserves</i> . [<i>COGE Handbook</i>] (b) In relation to a <i>reporting issuer's</i> interest in wells, the number of wells obtained by aggregating the <i>reporting issuer's</i> working interest in each of its <i>gross</i> wells. (c) In relation to a <i>reporting issuer's</i> interest in a <i>property</i> , the total area in which the <i>reporting issuer</i> has an interest multiplied by the working interest owned by the <i>reporting issuer</i> .
NI 14-101	National Instrument 14-101 <i>Definitions</i> .
NI 44-101	National Instrument 44-101 <i>Short Form Prospectus Distributions</i> .
NI 51-101 or the Instrument	National Instrument 51-101 <i>Standards of Disclosure for Oil and Gas Activities</i> .
Oil	<i>Crude oil</i> or <i>synthetic oil</i> . [<i>COGE Handbook</i>]

- 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*;
 - (i) activities relating to the production of natural resources other than *oil* and *gas* and their by-products; or
 - (ii) the production of geothermal steam or the extraction of hydrocarbons as a by-product of the extraction of geothermal steam or associated geothermal resources.

[NI 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 on 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*]

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*;
 - (iv) natural gas liquids; or
 - (v) sulphur and other non-hydrocarbon products; and
- (b) in respect of non-conventional *oil and gas activities*:
 - (i) *synthetic oil*;
 - (ii) *bitumen*;
 - (iii) coal bed methane; or
 - (iv) hydrates.

[NI 51-101]

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.

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*.

[NI 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) a production-sharing agreement or other 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).

[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*. [COGE Handbook]

Proved property A *property* or part of a *property* to which *proved reserves* have been specifically attributed. [CICA Accounting Guideline 5]

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*.

[NI 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*.

[NI 51-101]

Qualified reserves evaluator or auditor	<p>A <i>qualified reserves auditor</i> or a <i>qualified reserves evaluator</i>.</p> <p>[NI 51-101]</p>
Regulator	<p>The <i>securities regulatory authority</i> or a person who holds a specified position with the <i>securities regulatory authority</i> (in several instances, its Executive Director or Director) in each <i>jurisdiction</i>.</p> <p>[NI 14-101]</p>
Reporting issuer	<p>(a) A "reporting issuer" as defined in <i>securities legislation</i>; or</p> <p>(b) in a <i>jurisdiction</i> in which the term is not defined in <i>securities legislation</i>, an issuer of securities that is required to file financial statements with the <i>securities regulatory authority</i>.</p>
Reservation	<p>In relation to a report on <i>reserves data</i>, a modification of the standard report of an <i>independent qualified reserves evaluator or auditor</i> on <i>reserves data</i> set out in <i>Form 51-101F2</i>, caused by a departure from the <i>COGE Handbook</i> or by a limitation in the scope of work that the <i>independent qualified reserves evaluator or auditor</i> considers necessary. A modification may take the form of a qualified or adverse opinion or a denial of opinion.</p>
Reserves	<p>See Part 2 of this Appendix. [COGE Handbook]</p>
Reserves data	<p>The following estimates, as at the last day of the <i>reporting issuer's</i> most recent financial year:</p> <p>(a) <i>proved reserves</i> and related <i>future net revenue</i> estimated:</p> <p>(i) using <i>constant prices and costs</i> as at the last day of that financial year; and</p> <p>(ii) using <i>forecast prices and costs</i>; and</p> <p>(b) <i>probable reserves</i> and related <i>future net revenue</i> estimated using <i>forecast prices and costs</i>.</p> <p>[NI 51-101]</p>
Reservoir	<p>A porous and permeable underground formation containing a natural accumulation of producible <i>oil</i> or <i>gas</i> that is confined by impermeable rock or water barriers and is individual and separate from other <i>reservoirs</i>. [CICA Accounting Guideline 5]</p>

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. [*NI 14-101*]

<i>Securities legislation</i>	<p>The statute (in most cases entitled the "Securities Act") and subordinate legislation (in most cases including regulations or rules) specified, for each <i>jurisdiction</i>, in NI 14-101.</p> <p>References in NI 51-101 to <i>securities legislation</i> are to be read as references to <i>securities legislation</i> in the particular <i>jurisdiction</i>.</p>
<i>Securities regulatory authority</i>	<p>The securities commission or comparable body specified, for each <i>jurisdiction</i>, in NI 14-101.</p> <p>References in NI 51-101 to the <i>securities regulatory authority</i> are to be read as references to the <i>securities regulatory authority</i> in the particular <i>jurisdiction</i>.</p>
<i>SEDAR</i>	<p>The System for Electronic Document Analysis and Retrieval referred to in National Instrument 13-101 <i>System for Electronic Document Analysis and Retrieval (SEDAR)</i>.</p>
<i>Senior producing issuer</i>	<p>A <i>reporting issuer</i> that:</p> <ul style="list-style-type: none">(a) demonstrates capability to estimate its <i>reserves</i> and <i>future net revenue</i> in accordance with the <i>COGE Handbook</i> (other than with respect to <i>independence</i>); and(b) produced an average of more than 100,000 <i>BOEs</i> of <i>oil</i> and <i>gas</i> (converted in the ratio 6 <i>Mcf</i>:1 <i>bbl</i>) per day throughout its most recent financial year.
<i>Service well</i>	<p>A well drilled or completed for the purpose of supporting <i>production</i> in an existing <i>field</i>. Wells in this class are drilled for the following specific purposes: <i>gas</i> injection (<i>natural gas</i>, propane, butane or flue gas), water injection, steam injection, air injection, salt-water disposal, water supply for injection, observation, or injection for combustion.</p> <p>[<i>CICA Accounting Guideline 5</i>]</p>

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*. [NI 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. [CICA Accounting Guideline 5]

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, 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.

¹ For the purposes of NI 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**.

- (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.
- (i) ***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

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

SAMPLE RESERVES DATA DISCLOSURE

Format of Disclosure

NI 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 *NI 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 *NI 51-101*, and of the instructions in *Form 51-101F1*. See also sections 1.2, 5.2, 5.3 and 5.9 of Companion Policy 51-101CP.

Sample Tables

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

RESERVE CLASSIFICATION	RESERVES									
	LIGHT AND MEDIUM OIL		HEAVY OIL		NATURAL GAS		NATURAL GAS LIQUIDS		SULPHUR	
	Gross (Mbbbl)	Net (Mbbbl)	Gross (Mbbbl)	Net (Mbbbl)	Gross (MMcf)	Net (MMcf)	Gross (Mbbbl)	Net (Mbbbl)	Gross (Mlt)	Net (Mlt)
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

RESERVE CLASSIFICATION	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	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx

OPTIONAL

**SUMMARY OF FUTURE NET REVENUE
as of December 31, 2003
PROVED RESERVES
CONSTANT PRICES AND COSTS**

YEAR	REVENUES (M\$)	ROYALTIES (M\$)	OPERATING COSTS (M\$)	DEVELOPMENT COSTS (M\$)	ABANDONMENT AND RECLAMATION COSTS (M\$)	FUTURE NET REVENUE BEFORE INCOME TAXES (M\$)	INCOME TAXES (M\$)	FUTURE NET REVENUE AFTER INCOME TAXES (M\$)
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
2009	xx	xx	xx	xx	xx	xx	xx	xx
2010	xx	xx	xx	xx	xx	xx	xx	xx
2011	xx	xx	xx	xx	xx	xx	xx	xx
2012	xx	xx	xx	xx	xx	xx	xx	xx
2013	xx	xx	xx	xx	xx	xx	xx	xx
Subtotal	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
Remaining	xx	xx	xx	xx	xx	xx	xx	xx
Total	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
DISCOUNTED AT (%/year)	NET PRESENT VALUES (M\$)							
0	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
5	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
10	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
15	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
20	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx

 OPTIONAL

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

RESERVE CLASSIFICATION	RESERVES									
	LIGHT AND MEDIUM OIL		HEAVY OIL		NATURAL GAS		NATURAL GAS LIQUIDS		SULPHUR	
	Gross (Mbbbl)	Net (Mbbbl)	Gross (Mbbbl)	Net (Mbbbl)	Gross (MMcf)	Net (MMcf)	Gross (Mbbbl)	Net (Mbbbl)	Gross (Mlt)	Net (Mlt)
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

RESERVE CLASSIFICATION	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	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx

**SUMMARY OF FUTURE NET REVENUE
as of December 31, 2003
PROVED RESERVES
FORECAST PRICES AND COSTS**

YEAR	REVENUES (M\$)	ROYALTIES (M\$)	OPERATING COSTS (M\$)	DEVELOPMENT COSTS (M\$)	ABANDONMENT AND RECLAMATION COSTS (M\$)	FUTURE NET REVENUE BEFORE INCOME TAXES (M\$)	INCOME TAXES (M\$)	FUTURE NET REVENUE AFTER INCOME TAXES (M\$)
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
2009	xx	xx	xx	xx	xx	xx	xx	xx
2010	xx	xx	xx	xx	xx	xx	xx	xx
2011	xx	xx	xx	xx	xx	xx	xx	xx
2012	xx	xx	xx	xx	xx	xx	xx	xx
2013	xx	xx	xx	xx	xx	xx	xx	xx
Subtotal	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
Remaining	xx	xx	xx	xx	xx	xx	xx	xx
Total	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
DISCOUNTED AT (%/year)	NET PRESENT VALUES (M\$)							
0	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
5	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
10	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
15	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
20	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx

 OPTIONAL

**SUMMARY OF FUTURE NET REVENUE
as of December 31, 2003
PROVED PLUS PROBABLE RESERVES
FORECAST PRICES AND COSTS**

YEAR	REVENUES (M\$)	ROYALTIES (M\$)	OPERATING COSTS (M\$)	DEVELOPMENT COSTS (M\$)	ABANDONMENT AND RECLAMATION COSTS (M\$)	FUTURE NET REVENUE BEFORE INCOME TAXES (M\$)	INCOME TAXES (M\$)	FUTURE NET REVENUE AFTER INCOME TAXES (M\$)
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
2009	xx	xx	xx	xx	xx	xx	xx	xx
2010	xx	xx	xx	xx	xx	xx	xx	xx
2011	xx	xx	xx	xx	xx	xx	xx	xx
2012	xx	xx	xx	xx	xx	xx	xx	xx
2013	xx	xx	xx	xx	xx	xx	xx	xx
Subtotal	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
Remaining	xx	xx	xx	xx	xx	xx	xx	xx
Total	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
DISCOUNTED AT (%/year)	NET PRESENT VALUES (M\$)							
0	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
5	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
10	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
15	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
20	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx

 OPTIONAL

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

CONSTANT PRICES AND COSTS

Year	OIL ⁽¹⁾				NATURAL GAS ⁽¹⁾	EXCHANGE RATE ⁽²⁾
	WTI Cushing Oklahoma (\$US/bbl)	Edmonton Par Price 40 ⁰ API (\$Cdn/bbl)	Hardisty Heavy 12 ⁰ API (\$Cdn/bbl)	Cromer Medium 29.3 ⁰ API (\$Cdn/bbl)	AECO Gas Price (\$Cdn/MMBtu)	(\$US/\$Cdn)
Historical (Year End)	xx	xx	xx	xx	xx	xx
1999	xx	xx	xx	xx	xx	xx
2000	xx	xx	xx	xx	xx	xx
2001	xx	xx	xx	xx	xx	xx
2002	xx	xx	xx	xx	xx	xx
2003 (Year End)	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 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⁾	INFLATION RATES ⁽³⁾	EXCHANGE RATE
	WTI Cushing Oklahoma \$US/bbl	Edmonton Par Price 40 ⁰ API \$Cdn/bbl	Hardisty Heavy 12 ⁰ API \$Cdn/bbl	Cromer Medium 29.3 ⁰ API \$Cdn/bbl	AECO Gas Price (\$Cdn/MMBtu)	%/Year	\$US/\$Cdn
Historical Weighted Average	xx	xx	xx	xx	xx	xx	xx
1999	xx	xx	xx	xx	xx	xx	xx
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	xx	xx	xx	xx	xx	xx	xx
Forecast							
2004	xx	xx	xx	xx	xx	xx	xx
2005	xx	xx	xx	xx	xx	xx	xx
2006	xx	xx	xx	xx	xx	xx	xx
2007	xx	xx	xx	xx	xx	xx	xx
2008	xx	xx	xx	xx	xx	xx	xx
2009	xx	xx	xx	xx	xx	xx	xx
2010	xx	xx	xx	xx	xx	xx	xx
2011	xx	xx	xx	xx	xx	xx	xx
2012	xx	xx	xx	xx	xx	xx	xx
2013							
Thereafter	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) Exchange rates used to generate the benchmark prices in this table
- (3) Inflation rates for forecasting prices and costs.

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

[FORECAST/CONSTANT] PRICES AND COSTS ⁽¹⁾

FACTORS	LIGHT & MEDIUM OIL			HEAVY OIL			ASSOCIATED AND NON-ASSOCIATED GAS		
	Net Proved (Mbbbl)	Net Probable (Mbbbl)	Net Proved Plus Probable (Mbbbl)	Net Proved (Mbbbl)	Net Probable (Mbbbl)	Net Proved Plus Probable (Mbbbl)	Net Proved (MMcf)	Net Probable (MMcf)	Net Proved Plus Probable (MMcf)
December 31, 2002	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
Economic Factors	xx	xx	xx	xx	xx	xx	xx	xx	xx
Technical Revisions	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
Extensions and Improved Recovery	xx	xx	xx	xx	xx	xx	xx	xx	xx
Discoveries	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.
2. For the purpose of illustration, the sample tables also incorporate information not mandated by *NI 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 *NI51-101*).