

Chapter 5

Rules and Policies

- 5.1.1 **NI 51-101 Standards of Disclosure for Oil and Gas Activities, Form 51-101F1 Statement of Reserves Data and Other Oil and Gas Information, Form 51-101F2 Report on Reserves Data by Independent Qualified Reserves Evaluator or Auditor, Form 51-101F3 Report of Management and Directors on Oil and Gas Disclosure, and Companion Policy 51-101CP Standards Of Disclosure For Oil And Gas Activities**

**NOTICE OF MINISTERIAL APPROVAL
OF AMENDMENTS TO
NATIONAL INSTRUMENT 51-101 STANDARDS OF DISCLOSURE FOR OIL AND GAS ACTIVITIES,
FORM 51-101F1, FORM 51-101F2 AND FORM 51-101F3**

On December 6, 2007, the Minister of Finance approved amendments to the following rule and forms (the **Instruments**):

- National Instrument 51-101 *Standards of Disclosure for Oil and Gas Activities*;
- Form 51-101F1 *Statement of Reserves Data and Other Oil and Gas Information*;
- Form 51-101F2 *Report on Reserves Data by Independent Qualified Reserves Evaluator or Auditor*; and
- Form 51-101F3 *Report of Management and Directors on Oil and Gas Disclosure*.

Previously, materials related to the amendments to the Instruments and amendments to Companion Policy 51-101CP *Standards of Disclosure for Oil and Gas Activities* (the **Companion Policy**) were published in the supplement to the Bulletin on October 12, 2007. The amendments to the Instruments and the Companion Policy came into effect on December 28, 2007.

The Commission is publishing the amendments to the Instruments and Companion Policy in Chapter 5 of this issue of the OSC Bulletin.

January 11, 2008

**AMENDMENTS TO NATIONAL INSTRUMENT 51-101
STANDARDS OF DISCLOSURE FOR OIL AND GAS ACTIVITIES**

1. **National Instrument 51-101 Standards of Disclosure for Oil and Gas Activities is amended by this Instrument.**
2. **The Notes are amended by repealing Note 1 and substituting the following:**
 - ¹ For the convenience of readers, CSA Staff Notice 51-324 *Glossary to NI 51-101 Standards of Disclosure for Oil and Gas Activities* sets out the meanings of terms, including those defined in this Part, that are printed in italics in this *Instrument, Form 51-101F1, Form 51-101F2, Form 51-101F3* or Companion Policy 51-101CP.
3. **Part 1 is amended by,**
 - a. **in paragraph 1.1(a), striking out “National Instrument 51-102 Continuous Disclosure Obligations” and substituting “NI 51-102”,**
 - b. **after paragraph 1.1(a), adding the following paragraphs:**
 - (a.1) *"analogous information"* means information about an area outside the area in which the *reporting issuer* has an interest or intends to acquire an interest, which is referenced by the *reporting issuer* for the purpose of drawing a comparison or conclusion to an area in which the *reporting issuer* has an interest or intends to acquire an interest, which comparison or conclusion is reasonable, and includes:
 - (i) historical information concerning *reserves*;
 - (ii) estimates of the volume or value of *reserves*;
 - (iii) historical information concerning *resources*;
 - (iv) estimates of the volume or value of *resources*;
 - (v) historical *production* amounts;
 - (vi) *production* estimates; or
 - (vii) information concerning a *field*, well, basin or *reservoir*;
 - (a.2) *"anticipated results"* means information that may, in the opinion of a reasonable person, indicate the potential value or quantities of *resources* in respect of the *reporting issuer's resources* or a portion of its *resources* and includes:
 - (i) estimates of volume;
 - (ii) estimates of value;
 - (iii) areal extent;
 - (iv) pay thickness;
 - (v) flow rates; or
 - (vi) hydrocarbon content;
 - c. **repealing paragraph 1.1(d) and substituting the following:**
 - (d) *"CICA Accounting Guideline 16"* means Accounting Guideline AcG-16 "Oil and gas accounting - full cost" included in the *CICA Handbook*, as amended from time to time; ,
 - d. **repealing paragraph 1.1(g),**

- e. **in paragraph 1.1(o), striking out** “qualified reserves evaluator or auditor, has the meaning set out in the *COGE Handbook*” **and substituting** “person or company, means a relationship between the *reporting issuer* and that person or company in which there is no circumstance that could, in the opinion of a reasonable person aware of all relevant facts, interfere with that person’s or company’s exercise of judgment regarding the preparation of information which is used by the *reporting issuer*”,
 - f. **after paragraph 1.1(r), adding the following paragraph:**
 - (r.1) “NI 51-102” means National Instrument 51-102 *Continuous Disclosure Obligations*;
 - g. **in subparagraph 1.1(v)(ii),**
 - i. **in clause (C) striking out the “or”,**
 - ii. **in clause (D) striking out the period and substituting a semi-colon, and**
 - iii. **after clause (D) adding the following clauses:**
 - (E) shale oil; or
 - (F) shale gas;
 - h. **in subparagraph 1.1(x)(i), adding “, resources” after “reserves data”, wherever it occurs;**
 - i. **in subparagraph 1.1(y)(i), adding “, resources” after “reserves data”, wherever it occurs;**
 - j. **after paragraph 1.1(z), adding the following:**
 - (z.1) “reserves” means *proved, probable or possible reserves*;
 - k. **repealing paragraph 1.1(aa) and substituting the following:**
 - (aa) “reserves data” means an estimate of *proved reserves and probable reserves* and related *future net revenue*, estimated using *forecast prices and costs*; and, **and**
 - l. **in subsection 1.2(2), striking out “shall apply” and substituting “applies”.**
4. **Part 4 is amended by,**
- a. **in paragraph 4.1(a), striking out “5” and substituting “16”,**
 - b. **repealing section 4.2 and substituting the following:**
 - 4.2 **Consistency in Dates** - The date or period with respect to which the effects of an event or transaction are recorded in a *reporting issuer’s* annual financial statements must be the same as the date or period with respect to which they are first reflected in the *reporting issuer’s* annual *reserves data* disclosure under Part 2.
5. **Part 5 is amended by,**
- a. **repealing section 5.2 and substituting the following:**
 - 5.2 **Disclosure of Reserves and Other Information** - If a *reporting issuer* makes disclosure of *reserves* or other information of a type that is specified in *Form 51-101F1*, the *reporting issuer* must ensure that the disclosure satisfies the following requirements:
 - (a) estimates of *reserves* or *future net revenue* must
 - (i) disclose the *effective date* of the estimate;
 - (ii) have been prepared or audited by a *qualified reserves evaluator or auditor*;

- (iii) have been prepared or audited in accordance with the *COGE Handbook*;
- (iv) have been made assuming that development of each *property* in respect of which the estimate is made will occur, without regard to the likely availability to the *reporting issuer* of funding required for that development; and
- (v) in the case of estimates of *possible reserves* or related *future net revenue* disclosed in writing, also include a cautionary statement that is proximate to the estimate to the following effect:

“Possible reserves are those additional reserves that are less certain to be recovered than probable reserves. There is a 10% probability that the quantities actually recovered will equal or exceed the sum of proved plus probable plus possible reserves.”;

- (b) for the purpose of determining whether *reserves* should be attributed to a particular undrilled *property*, reasonably estimated future abandonment and reclamation costs related to the *property* must have been taken into account;
 - (c) in disclosing aggregate *future net revenue* the disclosure must comply with the requirements for the determination of *future net revenue* specified in *Form 51-101F1*; and
 - (d) the disclosure must be consistent with the corresponding information, if any, contained in the statement most recently filed by the *reporting issuer* with the *securities regulatory authority* under item 1 of section 2.1, except to the extent that the statement has been supplemented or superseded by a report of a material change³ filed by the *reporting issuer* with the *securities regulatory authority*.
- b. in section 5.3, striking out “be consistent with” and substituting “apply” and adding “and must relate to the most specific category of reserves or resources in which the reserves or resources can be classified” after “set out in the COGE Handbook”,**
- c. in section 5.4, adding “the quantities and” after “marketable quantities, reflecting”,**
- d. in section 5.6, adding “Market” after “Not Fair”,**
- e. repealing section 5.9 and substituting the following:**

5.9 Disclosure of Resources

- (1) If a *reporting issuer* discloses *anticipated results* from *resources* which are not currently classified as *reserves*, the *reporting issuer* must also disclose in writing, in the same document or in a *supporting filing*:
 - (a) the *reporting issuer’s* interest in the *resources*;
 - (b) the location of the *resources*;
 - (c) the *product types* reasonably expected;
 - (d) the risks and the level of uncertainty associated with recovery of the *resources*; and
 - (e) in the case of *unproved property*, if its value is disclosed,
 - (i) the basis of the calculation of its value; and

³ “Material change” has the same meaning ascribed to the term under *securities legislation* of the applicable *jurisdiction*.

- (ii) whether the value was prepared by an *independent* party.
- (2) If disclosure referred to in subsection (1) includes an estimate of a quantity of *resources* in which the *reporting issuer* has an interest or intends to acquire an interest, or an estimated value attributable to an estimated quantity, the estimate must
 - (a) have been prepared or audited by a *qualified reserves evaluator or auditor*;
 - (b) relate to the most specific category of *resources* in which the *resources* can be classified, as set out in the *COGE Handbook*, and must identify what portion of the estimate is attributable to each category; and
 - (c) be accompanied by the following information:
 - (i) a definition of the *resources* category used for the estimate;
 - (ii) the *effective date* of the estimate;
 - (iii) the significant positive and negative factors relevant to the estimate;
 - (iv) in respect of *contingent resources*, the specific contingencies which prevent the classification of the *resources* as *reserves*; and
 - (v) a cautionary statement that is proximate to the estimate to the effect that:
 - (A) in the case of *discovered resources* or a subcategory of *discovered resources* other than *reserves*:

“There is no certainty that it will be commercially viable to produce any portion of the resources.”; or
 - (B) in the case of *undiscovered resources* or a subcategory of *undiscovered resources*:

“There is no certainty that any portion of the resources will be discovered. If discovered, there is no certainty that it will be commercially viable to produce any portion of the resources.”
- (3) Paragraphs 5.9(1)(d) and (e) and subparagraphs 5.9(2)(c)(iii) and (iv) do not apply if:
 - (a) the *reporting issuer* includes in the written disclosure a reference to the title and date of a previously filed document that complies with those requirements; and
 - (b) the *resources* in the written disclosure, taking into account the specific *properties* and interests reflected in the *resources* estimate or other *anticipated result*, are *materially* the same *resources* addressed in the previously filed document.,

f. repealing section 5.10 and substituting the following:

5.10 Analogous Information

- (1) Sections 5.2, 5.3 and 5.9 do not apply to the disclosure of *analogous information* provided that the *reporting issuer* discloses the following:

- (a) the source and date of the *analogous information*;
- (b) whether the source of the *analogous information* was *independent*;
- (c) if the *reporting issuer* is unable to confirm that the *analogous information* was prepared by a *qualified reserves evaluator or auditor* or in accordance with the *COGE Handbook*, a cautionary statement to that effect proximate to the disclosure of the *analogous information*; and
- (d) the relevance of the *analogous information* to the *reporting issuer's oil and gas activities*.

- (2) For greater certainty, if a *reporting issuer* discloses information that is an *anticipated result*, an estimate of a quantity of *reserves or resources*, or an estimate of value attributable to an estimated quantity of *reserves or resources* for an area in which it has an interest or intends to acquire an interest, that is based on an extrapolation from *analogous information*, sections 5.2, 5.3 and 5.9 apply to the disclosure of the information., **and**

g. in section 5.13, repealing paragraph (a).

6. Part 6 is amended by, in subsection 6.1(2),

a. striking out “shall” and substituting “must discuss the reporting issuer’s reasonable expectation of how the material change has affected its reserves data or other information.”, and

b. repealing paragraphs (a) and (b).

7. Part 8 is amended by adding the following after section 8.1:

8.2 Exemption for Certain Exchangeable Security Issuers

- (1) An exchangeable security issuer, as defined in subsection 13.3(1) of *NI 51-102*, is exempt from this *Instrument* if all of the requirements of subsection 13.3(2) of *NI 51-102* are satisfied;
- (2) For the purposes of subsection (1), the reference to “continuous disclosure documents” in clause 13.3(2)(d)(ii)(A) of *NI 51-102* includes documents filed in accordance with this *Instrument*.

8. With the exception of subsection 1.2(2), all provisions containing the word “shall” are amended by striking out “shall” and substituting “must”.

9. This amendment comes into force December 28, 2007.

**AMENDMENTS TO
FORM 51-101F1 STATEMENT OF RESERVES DATA
AND OTHER OIL AND GAS INFORMATION,
FORM 51-101F2 REPORT ON RESERVES DATA BY
INDEPENDENT QUALIFIED RESERVES EVALUATOR OR AUDITOR, AND
FORM 51-101F3 REPORT OF MANAGEMENT AND DIRECTORS
ON OIL AND GAS DISCLOSURE**

1. **Form 51-101F1 Statement of Reserves Data and Other Oil and Gas Information, Form 51-101F2 Report on Reserves Data by Independent Qualified Reserves Evaluator or Auditor, and Form 51-101F3 Report of Management and Directors on Oil and Gas Disclosure are amended by this Instrument.**

2. **Form 51-101F1 Statement of Reserves Data and Other Oil and Gas Information is amended by,**

(a) **repealing note 1 to instruction (1) of the General Instructions and substituting the following:**

¹ For the convenience of readers, CSA Staff Notice 51-324 *Glossary to NI 51-101 Standards of Disclosure for Oil and Gas Activities* sets out the meanings of terms that are printed in italics (or, in the Instructions, in bold type) in this *Form 51-101F1* or in *NI 51-101*, *Form 51-101F2*, *Form 51-101F3* or Companion Policy 51-101CP.,

(b) **repealing Item 2.1 and substituting the following:**

Item 2.1 Reserves Data (Forecast Prices and Costs)

1. Breakdown of Reserves (Forecast Case) – Disclose, by country and in the aggregate, reserves, gross and net, estimated using *forecast prices and costs*, for each *product type*, in the following categories:

- (a) *proved developed producing reserves*;
- (b) *proved developed non-producing reserves*;
- (c) *proved undeveloped reserves*;
- (d) *proved reserves* (in total);
- (e) *probable reserves* (in total);
- (f) *proved plus probable reserves* (in total); and
- (g) if the *reporting issuer* discloses an estimate of *possible reserves* in the statement:
 - (i) *possible reserves* (in total); and
 - (ii) *proved plus probable plus possible reserves* (in total).

2. Net Present Value of Future Net Revenue (Forecast Case) – Disclose, by country and in the aggregate, the net present value of *future net revenue* attributable to the reserves categories referred to in section 1 of this Item, estimated using *forecast prices and costs*, before and after deducting *future income tax expenses*, calculated without discount and using discount rates of 5 percent, 10 percent, 15 percent and 20 percent. Also disclose the same information on a unit value basis (e.g., \$/Mcf or \$/bbl using *net reserves*) using a discount rate of 10 percent and calculated before deducting *future income tax expenses*. This unit value disclosure requirement may be satisfied by including the unit value disclosure for each category of *proved reserves* and for *probable reserves* in the disclosure referred to in paragraph 3(c) of Item 2.1.

3. Additional Information Concerning Future Net Revenue (Forecast Case)

- (a) This section 3 applies to *future net revenue* attributable to each of the following reserves categories estimated using *forecast prices and costs*:

- (i) *proved reserves* (in total);
 - (ii) *proved plus probable reserves* (in total); and
 - (iii) if paragraph 1(g) of this Item applies, *proved plus probable plus possible reserves* (in total).
- (b) Disclose, by country and in the aggregate, the following elements of *future net revenue* estimated using *forecast prices and costs* and calculated without discount:
- (i) revenue;
 - (ii) royalties;
 - (iii) *operating costs*;
 - (iv) *development costs*;
 - (v) abandonment and reclamation costs;
 - (vi) *future net revenue* before deducting *future income tax expenses*;
 - (vii) *future income tax expenses*; and
 - (viii) *future net revenue* after deducting *future income tax expenses*.
- (c) Disclose, by *production group* and on a unit value basis for each production group (e.g., \$/Mcf or \$/bbl using *net reserves*), the net present value of *future net revenue* (before deducting *future income tax expenses*) estimated using *forecast prices and costs* and calculated using a discount rate of 10 percent.,

(c) **repealing Item 2.2 and substituting the following:**

Item 2.2 Supplemental Disclosure of Reserves Data (Constant Prices and Costs)

The *reporting issuer* may supplement its disclosure of *reserves data* under Item 2.1 by also disclosing the components of Item 2.1 in respect of its *proved reserves* or its *proved and probable reserves*, using *constant prices and costs* as at the last day of the *reporting issuer's* most recent financial year.,

(d) **repealing instruction (3) to Part 2 and substituting the following:**

- (3) **Constant prices and costs** are prices and costs used in an estimate that are:
- (a) the **reporting issuer's** prices and costs as at the **effective date** of the estimation, held constant throughout the estimated lives of the **properties** to which the estimate applies;
 - (b) if, and only to the extent that, there are fixed or presently determinable future prices or costs to which the **reporting issuer** is legally bound by a contractual or other obligation to supply a physical product, including those for an extension period of a contract that is likely to be extended, those prices or costs rather than the prices and costs referred to in paragraph (a).

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

(e) **in Item 3.1,**

- i. **in the heading, adding "Supplemental" after "Constant Prices Used in",**

- ii. **at the beginning of the paragraph, striking out “For” and substituting “If supplemental disclosure under Item 2.2 is made, then disclose, for”**,
 - iii. **striking out “disclose” after “each product type”, and**
 - iv. **at the end of the paragraph, striking out “2.1” and substituting “2.2”**,
- (f) **in paragraph 1.(a) of Item 3.2, striking out “2.2” and substituting “2.1”**,
- (g) **in instruction (2) to Part 3, striking out “defined terms” and substituting “term”, and adding “the defined term” after “constant prices and costs” and**,
- (h) **in the heading to Part 4, striking out “RECONCILIATIONS OF CHANGES IN RESERVES AND FUTURE NET REVENUE” and substituting “RECONCILIATION OF CHANGES IN RESERVES”**,
- (i) **in paragraph 1.(a) of Item 4.1, striking out “net” and substituting “gross”**,
- (j) **in paragraph 1.(b) of Item 4.1, striking out “net” and substituting “gross”**,
- (k) **in paragraph 1.(c) of Item 4.1, striking out “net” and substituting “gross”**,
- (l) **in paragraph 2.(b) of Item 4.1,**
 - i. **at the end of subparagraph (iii), striking out “and”**,
 - ii. **at the end of subparagraph (iv), striking out “and other products from non-conventional oil and gas activities”**,
 - iii. **adding the following subparagraphs after subparagraph (iv):**
 - (v) *bitumen*;
 - (vi) *coal bed methane*;
 - (vii) *hydrates*;
 - (viii) *shale oil*; and
 - (ix) *shale gas*;
- (m) **in paragraph 2.(c) of Item 4.1,**
 - i. **in subparagraph (i), adding “and improved recovery”**,
 - ii. **repealing subparagraph (ii); and**
 - iii. **renumbering subparagraphs (iii),(iv), (v), (vi), (vii), and (viii) as (ii), (iii), (iv), (v), (vi), and (vii), respectively**,
- (n) **in instruction (1) to Item 4.1,**
 - i. **striking out “may” and substituting “must”; and**
 - ii. **striking out “either constant prices and costs or”**,
- (o) **adding the following instruction after instruction (3) to Item 4.1:**
 - (4) **Reporting issuers must not include infill drilling reserves in the category of technical revisions specified in clause 2(c)(ii). Reserves additions from infill drilling must be included in the category of extensions and improved recovery in clause 2(c)(i) (or, alternatively, in an additional separate category under paragraph 2(c) labelled “infill drilling”).** ,
- (p) **repealing Item 4.2**,

- (q) *repealing the instructions to Part 4,*
 - (r) *in paragraph 1.(a) of Item 5.1, striking out “five” and substituting “three”, and at the end of the paragraph, striking out “or” and substituting “and”,*
 - (s) *in paragraph 2.(a) of Item 5.1, striking out “five” and substituting “three”, and at the end of the paragraph, striking out “or” and substituting “and”,*
 - (t) *in paragraph 1.(a) of Item 5.3,*
 - i. *repealing subparagraph (i), and*
 - ii. *renumbering subparagraphs (ii) and (iii) as subparagraphs (i) and (ii), respectively,*
 - (u) *in subparagraph 1.(b)(i) of Item 5.3, striking out “and using a discount rate of 10 percent”,*
 - (v) *in paragraph 2.(a) of Item 6.3, striking out “3860” and substituting “3861”,*
 - (w) *in the instruction to Item 6.4, striking out of “and clause 3(b)(v) of Item 2.2”,*
 - (x) *in section 1. of Item 6.8, striking out “future net revenue” and substituting “gross proved reserves and gross probable reserves”, and striking out “Items 2.1 and 2.2” and substituting “Item 2.1.”, and*
 - (y) *at the end of the instruction to Item 6.9, adding “Resulting netbacks may be disclosed on the basis of units of equivalency between oil and gas (e.g. BOE) but if so that must be made clear and disclosure must comply with section 5.14 of NI 51-101.”.*
3. **Form 51-101F2 Report on Reserves Data by Independent Qualified Reserves Evaluator or Auditor is amended, in the prescribed form “Report on Reserves Data” under section 2, by**
- (a) **repealing note 1 and substituting the following:**
 - ¹ For the convenience of readers, CSA Staff Notice 51-324 *Glossary to NI 51-101 Standards of Disclosure for Oil and Gas Activities* sets out the meanings of terms that are printed in italics in sections 1 and 2 of this Form or in *NI 51-101, Form 51-101F1, Form 51-101F3* or Companion Policy 51-101CP. ,
 - (b) **in section 1, striking out “consist of the following.” and substituting “are estimates of proved reserves and probable reserves and related future net revenue as at [last day of the reporting issuer’s most recently completed financial year], estimated using forecast prices and costs.”,**
 - (c) **repealing paragraphs 1(a) and (b),**
 - (d) **in note 2, striking out “2.2” and substituting “2.1”, and**
 - (e) **at the end of section 7, adding the following:**
 - “However, any variations should be consistent with the fact that reserves are categorized according to the probability of their recovery.”.
4. **Form 51-101F3 Report of Management and Directors on Oil and Gas Disclosure is amended, in the prescribed form “Report of Management and Directors on Oil and Gas Disclosure” under section 2, by**
- (a) **repealing note 1 and substituting the following:**
 - ¹ For the convenience of readers, CSA Staff Notice 51-324 *Glossary to NI 51-101 Standards of Disclosure for Oil and Gas Activities* sets out the meanings of terms that are printed in italics in sections 1 and 2 of this Form or in *NI 51-101, Form 51-101F1, Form 51-101F2* or Companion Policy 51-101CP. ,
 - (b) **in the paragraph beginning “Management of [name of reporting issuer]”, striking out “consist of the following:” and substituting “are estimates of proved reserves and probable reserves and related future net**

revenue as at [last day of the reporting issuer's most recently completed financial year], estimated using forecast prices and costs.”,

- (c) **after the paragraph beginning** “Management of [name of reporting issuer]”, **repealing subparagraphs(a) and (b)**,
 - (d) **after the paragraph beginning** “The [Reserves Committee of the] board of directors of the Company has”, **in subparagraph (b), striking out** “because of the” **and substituting** “in the event of a”,
 - (e) **after the paragraph beginning** “The [Reserves Committee of the] board of directors has reviewed”, **in subparagraph (a), striking out** “the” **after** “securities regulatory authorities of” **and substituting** “Form 51-101F1 containing”,
 - (f) **after the paragraph beginning** “The [Reserves Committee of the] board of directors has reviewed”, **in subparagraph (b), adding** “Form 51-101F2 which is” **after** “the filing of”, **and**
 - (g) **at the end of the paragraph beginning** “Because the reserves data are based on judgements” **adding** “However, any variations should be consistent with the fact that reserves are categorized according to the probability of their recovery.”.
5. **Form 51-101F1 Statement of Reserves Data and Other Oil and Gas Information, Form 51-101F2 Report on Reserves Data by Independent Qualified Reserves Evaluator or Auditor, and Form 51-101F3 Report of Management and Directors on Oil and Gas Disclosure are amended by striking out** “shall” **and substituting** “must” **wherever it appears.**
6. **This amendment comes into force December 28, 2007.**

**NATIONAL INSTRUMENT 51-101
STANDARDS OF DISCLOSURE FOR OIL AND GAS ACTIVITIES**

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NATIONAL INSTRUMENT 51-101
STANDARDS OF DISCLOSURE FOR OIL AND GAS ACTIVITIES

PART 1 APPLICATION AND TERMINOLOGY¹

1.1 Definitions² – In this *Instrument*:

- (a) "*annual information form*" has the same meaning as "AIF" in *NI 51-102*;
- (a.1) "*analogous information*" means information about an area outside the area in which the *reporting issuer* has an interest or intends to acquire an interest, which is referenced by the *reporting issuer* for the purpose of drawing a comparison or conclusion to an area in which the *reporting issuer* has an interest or intends to acquire an interest, which comparison or conclusion is reasonable, and includes:
 - (i) historical information concerning *reserves*;
 - (ii) estimates of the volume or value of *reserves*;
 - (iii) historical information concerning *resources*;
 - (iv) estimates of the volume or value of *resources*;
 - (v) historical *production* amounts;
 - (vi) *production* estimates; or
 - (vii) information concerning a *field*, well, basin or *reservoir*;
- (a.2) "*anticipated results*" means information that may, in the opinion of a reasonable person, indicate the potential value or quantities of *resources* in respect of the *reporting issuer's resources* or a portion of its *resources* and includes:
 - (i) estimates of volume;
 - (ii) estimates of value;
 - (iii) areal extent;
 - (iv) pay thickness;
 - (v) flow rates; or
 - (vi) hydrocarbon content;
- (b) "*BOEs*" means barrels of *oil* equivalent;
- (c) "*CICA*" means The Canadian Institute of Chartered Accountants;
- (d) "*CICA Accounting Guideline 16*" means Accounting Guideline AcG-16 "Oil and gas accounting – full cost" included in the *CICA Handbook*, as amended from time to time;
- (e) "*CICA Handbook*" means the Handbook of the *CICA*, as amended from time to time;

¹ For the convenience of readers, CSA Staff Notice 51-324 *Glossary to NI 51-101 Standards of Disclosure for Oil and Gas Activities* sets out the meanings of terms, including those defined in this Part, that are printed in italics in this *Instrument*, *Form 51-101F1*, *Form 51-101F2*, *Form 51-101F3* or Companion Policy 51-101CP.

² A national definition instrument has been adopted as *NI 14-101*. It contains definitions of certain terms used in more than one national or multilateral instrument. *NI 14-101* provides that a term used in a national or multilateral instrument and defined in the statute relating to securities of the applicable *jurisdiction*, the definition of which is not restricted to a specific portion of the statute, will have the meaning given to it in that statute unless the context otherwise requires. *NI 14-101* also provides that a provision or a reference within a provision of a national or multilateral instrument that specifically refers by name to a jurisdiction other than the local jurisdiction shall not have any effect in the local jurisdiction, unless otherwise stated in that national or multilateral instrument.

- (f) "COGE Handbook" means 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), as amended from time to time;
- (g) **repealed;**
- (h) "effective date", in respect of information, means the date as at which, or for the period ended on which, the information is provided;
- (i) "FAS 19" means United States Financial Accounting Standards Board Statement of Financial Accounting Standards No. 19 "Financial Accounting and Reporting by Oil and Gas Producing Companies", as amended from time to time;
- (j) "forecast prices and costs" means future prices and costs that are:
 - (i) generally accepted as being a reasonable outlook of the future;
 - (ii) if, and only to the extent that, there are fixed or presently determinable future prices or costs to which the *reporting issuer* is legally bound by a contractual or other obligation to supply a physical product, including those for an extension period of a contract that is likely to be extended, those prices or costs rather than the prices and costs referred to in subparagraph (i);
- (k) "foreign geographic area" means a geographic area outside North America within one country or including all or portions of a number of countries;
- (l) "Form 51-101F1" means Form 51-101F1 *Statement of Reserves Data and Other Oil and Gas Information*;
- (m) "Form 51-101F2" means Form 51-101F2 *Report on Reserves Data by Independent Qualified Reserves Evaluator or Auditor*;
- (n) "Form 51-101F3" means Form 51-101F3 *Report of Management and Directors on Oil and Gas Disclosure*;
- (o) "independent", in respect of the relationship between a *reporting issuer* and a person or company, means a relationship between the *reporting issuer* and that person or company in which there is no circumstance that could, in the opinion of a reasonable person aware of all relevant facts, interfere with that person's or company's exercise of judgment regarding the preparation of information which is used by the *reporting issuer*;
- (p) "McfGEs" means thousand cubic feet of gas equivalent;
- (q) "NI 14-101" means National Instrument 14-101 *Definitions*;
- (r) **repealed;**
- (r.1) "NI 51-102" means National Instrument 51-102 *Continuous Disclosure Obligations*;
- (s) "oil and gas activities"
 - (i) include:
 - (A) the search for *crude oil* or *natural gas* in their natural states and original locations;
 - (B) the acquisition of property rights or *properties* for the purpose of further exploring for or removing *oil* or *gas* from *reservoirs* on those *properties*;
 - (C) the construction, drilling and *production* activities necessary to retrieve *oil* and *gas* from their natural *reservoirs*, and the acquisition, construction, installation and maintenance of *field* gathering and storage systems including lifting the *oil* and *gas* to the surface and gathering, treating, *field* processing and *field* storage; and
 - (D) the extraction of hydrocarbons from oil sands, shale, coal or other non-conventional sources and activities similar to those referred to in clauses (A), (B) and (C) undertaken with a view to such extraction; but

- (ii) do not include:
 - (A) transporting, refining or marketing *oil* or *gas*;
 - (B) activities relating to the extraction of natural resources other than *oil* and *gas* and their by-products; or
 - (C) the extraction of geothermal steam or of hydrocarbons as a by-product of the extraction of geothermal steam or associated geothermal resources;
- (t) "*preparation date*", in respect of written disclosure, means the most recent date to which information relating to the period ending on the *effective date* was considered in the preparation of the disclosure;
- (u) "*production group*" means one of the following together, in each case, with associated by-products:
 - (i) light and medium *crude oil* (combined);
 - (ii) *heavy oil*;
 - (iii) *associated gas* and *non-associated gas* (combined); and
 - (iv) *bitumen*, *synthetic oil* or other products from non-conventional *oil and gas activities*.
- (v) "*product type*" means one of the following:
 - (i) in respect of conventional *oil and gas activities*:
 - (A) light and medium *crude oil* (combined);
 - (B) *heavy oil*;
 - (C) *natural gas* excluding *natural gas liquids*; or
 - (D) *natural gas liquids*; and
 - (ii) in respect of non-conventional *oil and gas activities*:
 - (A) *synthetic oil*;
 - (B) *bitumen*;
 - (C) coal bed methane;
 - (D) hydrates;
 - (E) shale oil; or
 - (F) shale gas;
- (w) "*professional organization*" means a self-regulatory organization of engineers, geologists, other geoscientists or other professionals whose professional practice includes *reserves evaluations* or *reserves audits*, that:
 - (i) admits members primarily on the basis of their educational qualifications;
 - (ii) 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*;
 - (iii) has disciplinary powers, including the power to suspend or expel a member; and
 - (iv) is either:
 - (A) given authority or recognition by statute in a Canadian jurisdiction; or

- (B) accepted for this purpose by the *securities regulatory authority* or the *regulator*;
- (x) "*qualified reserves auditor*" means an individual who:
 - (i) in respect of particular *reserves data, resources* or related information, possesses professional qualifications and experience appropriate for the estimation, *evaluation, review* and *audit* of the *reserves data, resources* and related information; and
 - (ii) is a member in good standing of a *professional organization*;
- (y) "*qualified reserves evaluator*" means an individual who:
 - (i) in respect of particular *reserves data, resources* or related information, possesses professional qualifications and experience appropriate for the estimation, *evaluation* and *review* of the *reserves data, resources* and related information; and
 - (ii) is a member in good standing of a *professional organization*;
- (z) "*qualified reserves evaluator or auditor*" means a *qualified reserves auditor* or a *qualified reserves evaluator*;
- (z.1) "*reserves*" means *proved, probable* or *possible reserves*;
- (aa) "*reserves data*" means an estimate of *proved reserves* and *probable reserves* and related *future net revenue*, estimated using *forecast prices and costs*; and
- (bb) "*supporting filing*" means a document filed by a *reporting issuer* with a *securities regulatory authority*.

1.2 COGE Handbook Definitions

- (1) Terms used in this *Instrument* but not defined in this *Instrument, NI 14-101* or the securities statute in the *jurisdiction*, and defined or interpreted in the *COGE Handbook*, have the meaning or interpretation ascribed to those terms in the *COGE Handbook*.
- (2) In the event of a conflict or inconsistency between the definition of a term in this *Instrument, NI 14-101* or the securities statute in the *jurisdiction* and the meaning ascribed to the term in the *COGE Handbook*, the definition in this *Instrument, NI 14-101* or the securities statute in the *jurisdiction*, as the case may be, applies.

1.3 Applies to Reporting Issuers Only – This *Instrument* applies only to *reporting issuers* engaged, directly or indirectly, in *oil and gas activities*.

1.4 Materiality Standard

- (1) This *Instrument* applies only in respect of information that is *material* in respect of a *reporting issuer*.
- (2) For the purpose of subsection (1), information is *material* in respect of a *reporting issuer* if it would be likely to influence a decision by a reasonable investor to buy, hold or sell a security of the *reporting issuer*.

PART 2 ANNUAL FILING REQUIREMENTS

2.1 Reserves Data and Other Oil and Gas Information – A *reporting issuer* must, not later than the date on which it is required by *securities legislation* to file audited financial statements for its most recent financial year, file with the *securities regulatory authority* the following:

- 1. **Statement of Reserves Data and Other Information** – a statement of the *reserves data* and other information specified in *Form 51-101F1*, as at the last day of the *reporting issuer's* most recent financial year and for the financial year then ended;
- 2. **Report of Independent Qualified Reserves Evaluator or Auditor** – a report in accordance with *Form 51-101F2* that is:
 - (a) included in, or filed concurrently with, the document filed under item 1; and

- (b) executed by one or more *qualified reserves evaluators or auditors* each of whom is *independent* of the *reporting issuer*, who must in the aggregate have:
 - (i) *evaluated* or audited at least 75 percent of the *future net revenue* (calculated using a discount rate of 10 percent) attributable to *proved plus probable reserves*, as reported in the statement filed or to be filed under item 1; and
 - (ii) *reviewed* the balance of such *future net revenue*; and

3. **Report of Management and Directors** – a report in accordance with *Form 51-101F3* that

- (a) refers to the information filed or to be filed under items 1 and 2;
- (b) confirms the responsibility of management of the *reporting issuer* for the content and filing of the statement referred to in item 1 and for the filing of the report referred to in item 2;
- (c) confirms the role of the board of directors in connection with the information referred to in paragraph (b);
- (d) is contained in, or filed concurrently with, the statement filed under item 1; and
- (e) is executed by two senior officers and two directors of the *reporting issuer*.

2.2 **News Release to Announce Filing** – A *reporting issuer* must, concurrently with filing a statement and reports under section 2.1, disseminate a news release announcing that filing and indicating where a copy of the filed information can be found for viewing by electronic means.

2.3 **Inclusion in Annual Information Form** – The requirements of section 2.1 may be satisfied by including the information specified in section 2.1 in an *annual information form* filed within the time specified in section 2.1.

2.4 **Reservation in Report of Qualified Reserves Evaluator or Auditor**

- (1) If a *qualified reserves evaluator or auditor* cannot report on *reserves data* without *reservation*, the *reporting issuer* must ensure that the report of the *qualified reserves evaluator or auditor* prepared for the purpose of item 2 of section 2.1 sets out the cause of the *reservation* and the effect, if known to the *qualified reserves evaluator or auditor*, on the *reserves data*.
- (2) A report containing a *reservation*, the cause of which can be removed by the *reporting issuer*, does not satisfy the requirements of item 2 of section 2.1.

PART 3 RESPONSIBILITIES OF REPORTING ISSUERS AND DIRECTORS

3.1 **Interpretation** – A reference to a board of directors in this Part means, for a *reporting issuer* that does not have a board of directors, those individuals whose authority and duties in respect of that *reporting issuer* are similar to those of a board of directors.

3.2 **Reporting Issuer to Appoint Independent Qualified Reserves Evaluator or Auditor** – A *reporting issuer* must appoint one or more *qualified reserves evaluators or auditors*, each of whom is *independent* of the *reporting issuer*, to report to the board of directors of the *reporting issuer* on its *reserves data*.

3.3 **Reporting Issuer to Make Information Available to Qualified Reserves Evaluator or Auditor** – A *reporting issuer* must make available to the *qualified reserves evaluators or auditors* that it appoints under section 3.2 all information reasonably necessary to enable the *qualified reserves evaluators or auditors* to provide a report that will satisfy the applicable requirements of this *Instrument*.

3.4 **Certain Responsibilities of Board of Directors** – The board of directors of a *reporting issuer* must

- (a) review, with reasonable frequency, the *reporting issuer's* procedures relating to the disclosure of information with respect to *oil and gas activities*, including its procedures for complying with the disclosure requirements and restrictions of this *Instrument*;

- (b) review each appointment under section 3.2 and, in the case of any proposed change in such appointment, determine the reasons for the proposal and whether there have been disputes between the appointed *qualified reserves evaluator or auditor* and management of the *reporting issuer*;
- (c) review, with reasonable frequency, the *reporting issuer's* procedures for providing information to the *qualified reserves evaluators or auditors* who report on *reserves data* for the purposes of this *Instrument*;
- (d) before approving the filing of *reserves data* and the report of the *qualified reserves evaluators or auditors* thereon referred to in section 2.1, meet with management and each *qualified reserves evaluator or auditor* appointed under section 3.2, to
 - (i) determine whether any restrictions affect the ability of the *qualified reserves evaluator or auditor* to report on *reserves data* without *reservation*; and
 - (ii) review the *reserves data* and the report of the *qualified reserves evaluator or auditor* thereon; and
- (e) review and approve
 - (i) the content and filing, under section 2.1, of the statement referred to in item 1 of section 2.1;
 - (ii) the filing, under section 2.1, of the report referred to in item 2 of section 2.1; and
 - (iii) the content and filing, under section 2.1, of the report referred to in item 3 of section 2.1.

3.5 Reserves Committee

- (1) The board of directors of a *reporting issuer* may, subject to subsection (2), delegate the responsibilities set out in section 3.4 to a committee of the board of directors, provided that a majority of the members of the committee
 - (a) are individuals who are not and have not been, during the preceding 12 months:
 - (i) an officer or employee of the *reporting issuer* or of an affiliate of the *reporting issuer*;
 - (ii) a person who beneficially owns 10 percent or more of the outstanding voting securities of the *reporting issuer*; or
 - (iii) a relative of a person referred to in subparagraph (a)(i) or (ii), residing in the same home as that person; and
 - (b) are free from any business or other relationship which could reasonably be seen to interfere with the exercise of their independent judgement.
- (3) Despite subsection (1), a board of directors of a *reporting issuer* must not delegate its responsibility under paragraph 3.4(e) to approve the content or the filing of information.
- (4) A board of directors that has delegated responsibility to a committee pursuant to subsection (1) must solicit the recommendation of that committee as to whether to approve the content and filing of information for the purpose of paragraph 3.4(e).

3.6 repealed

PART 4 MEASUREMENT

4.1 Accounting Methods – A *reporting issuer* engaged in *oil and gas activities* that discloses financial statements prepared in accordance with *Canadian GAAP* must use

- (a) the full cost method of accounting, applying *CICA Accounting Guideline 16*; or
- (b) the successful efforts method of accounting, applying *FAS 19*.

- 4.2 **Consistency in Dates** – The date or period with respect to which the effects of an event or transaction are recorded in a *reporting issuer's* annual financial statements must be the same as the date or period with respect to which they are first reflected in the *reporting issuer's* annual *reserves data* disclosure under Part 2.

PART 5 REQUIREMENTS APPLICABLE TO ALL DISCLOSURE

- 5.1 **Application of Part 5** – This Part applies to disclosure made by or on behalf of a *reporting issuer*

- (a) to the public;
- (b) in any document filed with a *securities regulatory authority*; or
- (c) in other circumstances in which, at the time of making the disclosure, the *reporting issuer* knows, or ought reasonably to know, that the disclosure is or will become available to the public.

- 5.2 **Disclosure of Reserves and Other Information** – If a *reporting issuer* makes disclosure of *reserves* or other information of a type that is specified in *Form 51-101F1*, the *reporting issuer* must ensure that the disclosure satisfies the following requirements:

- (a) estimates of *reserves* or *future net revenue* must
 - (i) disclose the *effective date* of the estimate;
 - (ii) have been prepared or audited by a *qualified reserves evaluator or auditor*;
 - (iii) have been prepared or audited in accordance with the *COGE Handbook*;
 - (iv) have been made assuming that development of each *property* in respect of which the estimate is made will occur, without regard to the likely availability to the *reporting issuer* of funding required for that development; and
 - (v) in the case of estimates of *possible reserves* or related *future net revenue* disclosed in writing, also include a cautionary statement that is proximate to the estimate to the following effect:

“Possible reserves are those additional reserves that are less certain to be recovered than probable reserves. There is a 10% probability that the quantities actually recovered will equal or exceed the sum of proved plus probable plus possible reserves.”;

- (b) for the purpose of determining whether *reserves* should be attributed to a particular undrilled *property*, reasonably estimated future abandonment and reclamation costs related to the *property* must have been taken into account;
- (c) in disclosing aggregate *future net revenue* the disclosure must comply with the requirements for the determination of *future net revenue* specified in *Form 51-101F1*; and
- (d) the disclosure must be consistent with the corresponding information, if any, contained in the statement most recently filed by the *reporting issuer* with the *securities regulatory authority* under item 1 of section 2.1, except to the extent that the statement has been supplemented or superseded by a report of a material change³ filed by the *reporting issuer* with the *securities regulatory authority*.

- 5.3 **Reserves and Resources Classification** – Disclosure of *reserves* or *resources* must apply the *reserves* and *resources* terminology and categories set out in the *COGE Handbook* and must relate to the most specific category of *reserves* or *resources* in which the *reserves* or *resources* can be classified.

- 5.4 **Oil and Gas Reserves and Sales** – Disclosure of *reserves* or of sales of *oil*, *gas* or associated by-products must be made only in respect of *marketable* quantities, reflecting the quantities and prices for the product in the condition (upgraded or not upgraded, processed or unprocessed) in which it is to be, or was, sold.

³ "Material change" has the meaning ascribed to the term under *securities legislation* of the applicable *jurisdiction*.

5.5 Natural Gas By-Products – Disclosure concerning *natural gas* by-products (including *natural gas liquids* and sulphur) must be made in respect only of volumes that have been or are to be recovered prior to the point at which *marketable gas* is measured.

5.6 Future Net Revenue Not Fair Market Value – Disclosure of an estimate of *future net revenue*, whether calculated without discount or using a discount rate, must include a statement to the effect that the estimated values disclosed do not represent fair market value.

5.7 Consent of Qualified Reserves Evaluator or Auditor

(1) A *reporting issuer* must not disclose a report referred to in item 2 of section 2.1 that has been delivered to the board of directors of the *reporting issuer* by a *qualified reserves evaluator or auditor* pursuant to an appointment under section 3.2, or disclose information derived from the report or the identity of the *qualified reserves evaluator or auditor*, without the written consent of that *qualified reserves evaluator or auditor*.

(2) Subsection (1) does not apply to

- (a) the filing of that report by a *reporting issuer* under section 2.1;
- (b) the use of or reference to that report in another document filed by the *reporting issuer* under section 2.1; or
- (c) the identification of the report or of the *qualified reserves evaluator or auditor* in a news release referred to in section 2.2.

5.8 Disclosure of Less Than All Reserves – If a *reporting issuer* that has more than one *property* makes written disclosure of any *reserves* attributable to a particular *property*

(a) the disclosure must include a cautionary statement to the effect that

"The estimates of reserves and future net revenue for individual properties may not reflect the same confidence level as estimates of reserves and future net revenue for all properties, due to the effects of aggregation"; and

(b) the document containing the disclosure of any *reserves* attributable to one *property* must also disclose total *reserves* of the same classification for all *properties* of the *reporting issuer* in the same country (or, if appropriate and not misleading, in the same *foreign geographic area*).

5.9 Disclosure of Resources

(1) If a *reporting issuer* discloses *anticipated results* from *resources* which are not currently classified as *reserves*, the *reporting issuer* must also disclose in writing, in the same document or in a *supporting filing*:

- (a) the *reporting issuer's* interest in the *resources*;
- (b) the location of the *resources*;
- (c) the *product types* reasonably expected;
- (d) the risks and the level of uncertainty associated with recovery of the *resources*; and
- (e) in the case of *unproved property*, if its value is disclosed,
 - (i) the basis of the calculation of its value; and
 - (ii) whether the value was prepared by an *independent* party.

(2) If disclosure referred to in subsection (1) includes an estimate of a quantity of *resources* in which the *reporting issuer* has an interest or intends to acquire an interest, or an estimated value attributable to an estimated quantity, the estimate must

(a) have been prepared or audited by a *qualified reserves evaluator or auditor*;

- (b) relate to the most specific category of *resources* in which the *resources* can be classified, as set out in the *COGE Handbook*, and must identify what portion of the estimate is attributable to each category; and
 - (c) be accompanied by the following information:
 - (i) a definition of the *resources* category used for the estimate;
 - (ii) the *effective date* of the estimate;
 - (iii) the significant positive and negative factors relevant to the estimate;
 - (iv) in respect of *contingent resources*, the specific contingencies which prevent the classification of the *resources* as *reserves*; and
 - (v) a cautionary statement that is proximate to the estimate to the effect that:
 - (A) in the case of *discovered resources* or a subcategory of *discovered resources* other than *reserves*:

“There is no certainty that it will be commercially viable to produce any portion of the resources.”; or
 - (B) in the case of *undiscovered resources* or a subcategory of *undiscovered resources*:

“There is no certainty that any portion of the resources will be discovered. If discovered, there is no certainty that it will be commercially viable to produce any portion of the resources.”
- (3) Paragraphs 5.9(1)(d) and (e) and subparagraphs 5.9(2)(c)(iii) and (iv) do not apply if:
- (a) the *reporting issuer* includes in the written disclosure a reference to the title and date of a previously filed document that complies with those requirements; and
 - (b) the *resources* in the written disclosure, taking into account the specific *properties* and interests reflected in the *resources* estimate or other *anticipated result*, are *materially* the same *resources* addressed in the previously filed document.

5.10 Analogous Information

- (1) Sections 5.2, 5.3 and 5.9 do not apply to the disclosure of *analogous information* provided that the *reporting issuer* discloses the following:
 - (a) the source and date of the *analogous information*;
 - (b) whether the source of the *analogous information* was *independent*;
 - (c) if the *reporting issuer* is unable to confirm that the *analogous information* was prepared by a *qualified reserves evaluator or auditor* or in accordance with the *COGE Handbook*, a cautionary statement to that effect proximate to the disclosure of the *analogous information*; and
 - (d) the relevance of the *analogous information* to the *reporting issuer's oil and gas activities*.
- (2) For greater certainty, if a *reporting issuer* discloses information that is an *anticipated result*, an estimate of a quantity of *reserves or resources*, or an estimate of value attributable to an estimated quantity of *reserves or resources* for an area in which it has an interest or intends to acquire an interest, that is based on an extrapolation from *analogous information*, sections 5.2, 5.3 and 5.9 apply to the disclosure of the information.

- 5.11 **Net Asset Value and Net Asset Value per Share** – Written disclosure of net asset value or net asset value per share must include a description of the methods used to value assets and liabilities and the number of shares used in the calculation.

5.12 Reserve Replacement – Written disclosure concerning *reserve* replacement must include an explanation of the method of calculation applied.

5.13 Netbacks – Written disclosure of a netback must

- (a) **repealed**
- (b) reflect netbacks calculated by subtracting royalties and *operating costs* from revenues; and
- (c) state the method of calculation.

5.14 BOEs and McfGEs – If written disclosure includes information expressed in *BOEs*, *McfGEs* or other units of equivalency between *oil* and *gas*

- (a) the information must be presented
 - (i) in the case of *BOEs*, using *BOEs* derived by converting *gas* to *oil* in the ratio of six thousand cubic feet of *gas* to one barrel of *oil* (6 *Mcf*:1 *bbf*);
 - (ii) in the case of *McfGEs*, using *McfGEs* derived by converting *oil* to *gas* in the ratio of one barrel of *oil* to six thousand cubic feet of *gas* (1 *bbf*:6 *Mcf*); and
 - (iii) with the conversion ratio stated;
- (b) if the information is also presented using *BOEs* or *McfGEs* derived using a conversion ratio other than a ratio specified in paragraph (a), the disclosure must state that other conversion ratio and explain why it has been chosen;
- (c) if the information is presented using a unit of equivalency other than *BOEs* or *McfGEs*, the disclosure must identify the unit, state the conversion ratio used and explain why it has been chosen; and
- (d) the disclosure must include a cautionary statement to the effect that:

"BOEs [or '*McfGEs*' or other applicable units of equivalency] may be misleading, particularly if used in isolation. A BOE conversion ratio of 6 *Mcf*: 1 *bbf* [or 'An *McfGE* conversion ratio of 1 *bbf*: 6 *Mcf*'] is based on an energy equivalency conversion method primarily applicable at the burner tip and does not represent a value equivalency at the wellhead".

5.15 Finding and Development Costs – If written disclosure is made of finding and *development costs*:

- (a) those costs must be calculated using the following two methods, in each case after eliminating the effects of acquisitions and dispositions:

Method 1:
$$\frac{a+b+c}{x}$$

Method 2:
$$\frac{a+b+d}{y}$$

- where
- a = *exploration costs* incurred in the most recent financial year
 - b = *development costs* incurred in the most recent financial year
 - c = the change during the most recent financial year in estimated future *development costs* relating to *proved reserves*
 - d = the change during the most recent financial year in estimated future *development costs* relating to *proved reserves* and *probable reserves*
 - x = additions to *proved reserves* during the most recent financial year, expressed in *BOEs* or other unit of equivalency
 - y = additions to *proved reserves* and *probable reserves* during the most recent financial year, expressed in *BOEs* or other unit of equivalency

- (b) the disclosure must include
 - (i) the results of both methods of calculation under paragraph (a) and a description of those methods;
 - (ii) if the disclosure also includes a result derived using any other method of calculation, a description of that method and the reason for its use;
 - (iii) for each result, comparative information for the most recent financial year, the second most recent financial year and the averages for the three most recent financial years;
 - (iv) a cautionary statement to the effect that:

"The aggregate of the exploration and development costs incurred in the most recent financial year and the change during that year in estimated future development costs generally will not reflect total finding and development costs related to reserves additions for that year"; and
 - (v) the cautionary statement required under paragraph 5.14(d).

PART 6 MATERIAL CHANGE DISCLOSURE

6.1 Material Change⁴ from Information Filed under Part 2

- (1) This Part applies in respect of a material change that, had it occurred on or before the *effective date* of information included in the statement most recently filed by a *reporting issuer* under item 1 of section 2.1, would have resulted in a significant change in the information contained in the statement.
- (2) In addition to any other requirement of *securities legislation* governing disclosure of a material change, disclosure of a material change referred to in subsection (1) must discuss the *reporting issuer's* reasonable expectation of how the material change has affected its *reserves data* or other information.

PART 7 OTHER INFORMATION

- 7.1 **Information to be Furnished on Request** – A *reporting issuer* must, on the request of the *regulator*, deliver additional information with respect to the content of a document filed under this *Instrument*.

PART 8 EXEMPTIONS

8.1 Authority to Grant Exemption

- (1) The *regulator* or the *securities regulatory authority* may grant an exemption from this *Instrument*, in whole or in part, subject to such conditions or restrictions as may be imposed in the exemption.
- (2) Despite subsection (1), in Ontario only the *regulator* may grant an exemption.

8.2 Exemption for Certain Exchangeable Security Issuers

- (1) An exchangeable security issuer, as defined in subsection 13.3(1) of *NI 51-102*, is exempt from this *Instrument* if all of the requirements of subsection 13.3(2) of *NI 51-102* are satisfied;
- (2) For the purposes of subsection (1), the reference to "continuous disclosure documents" in clause 13.3(2)(d)(ii)(A) of *NI 51-102* includes documents filed in accordance with this *Instrument*.

PART 9 INSTRUMENT IN FORCE

- 9.1 **Coming Into Force** – This *Instrument* comes into force on September 30, 2003.

- 9.2 **Transition** – Despite section 9.1, this *Instrument* does not apply to a *reporting issuer* until the earlier of:

⁴ In this Part, "material change" has the meaning ascribed to the term under *securities legislation* of the applicable *jurisdiction*.

- (a) the date by which the *reporting issuer* is required under *securities legislation* to file audited annual financial statements for its financial year that includes or ends on December 31, 2003; and
- (b) the first date on which the *reporting issuer* files with the *securities regulatory authority* the statement referred to in item 1 of section 2.1.

**FORM 51-101F1
STATEMENT OF RESERVES DATA
AND OTHER OIL AND GAS INFORMATION**

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**FORM 51-101F1
STATEMENT OF RESERVES DATA
AND OTHER OIL AND GAS INFORMATION**

This is the form referred to in item 1 of section 2.1 of National Instrument 51-101 *Standards of Disclosure for Oil and Gas Activities* ("NI 51-101").

GENERAL INSTRUCTIONS

- (1) *Terms for which a meaning is given in NI 51-101 have the same meaning in this Form 51-101F1¹.*
- (2) *Unless otherwise specified in this Form 51-101F1, information under item 1 of section 2.1 of NI 51-101 must be provided as at the last day of the reporting issuer's most recent financial year or for its financial year then ended.*
- (3) *It is not necessary to include the headings or numbering, or to follow the ordering of Items, in this Form 51-101F1. Information may be provided in tables.*
- (4) *To the extent that any Item or any component of an Item specified in this Form 51-101F1 does not apply to a reporting issuer and its activities and operations, or is not material, no reference need be made to that Item or component. It is not necessary to state that such an Item or component is "not applicable" or "not material". Materiality is discussed in NI 51-101 and Companion Policy 51-101CP.*
- (5) *This Form 51-101F1 sets out minimum requirements. A reporting issuer may provide additional information not required in this Form 51-101F1 provided that it is not misleading and not inconsistent with the requirements of NI 51-101, and provided that material information required to be disclosed is not omitted.*
- (6) *A reporting issuer may satisfy the requirement of this Form 51-101F1 for disclosure of information "by country" by instead providing information by foreign geographic area in respect of countries outside North America as may be appropriate for meaningful disclosure in the circumstances.*

¹ For the convenience of readers, CSA Staff Notice 51-324 *Glossary to NI 51-101 Standards of Disclosure for Oil and Gas Activities* sets out the meanings of terms that are printed in italics (or, in the Instructions, in bold type) in this Form 51-101F1 or in NI 51-101, Form 51-101F2, Form 51-101F3 or Companion Policy 51-101CP.

PART 1 DATE OF STATEMENT

Item 1.1 Relevant Dates

1. Date the statement.
2. Disclose the *effective date* of the information being provided.
3. Disclose the *preparation date* of the information being provided.

INSTRUCTIONS

- (1) For the purpose of Part 2 of **NI 51-101**, and consistent with the definition of **reserves data** and General Instruction (2) of this **Form 51-101F1**, the **effective date** to be disclosed under section 2 of Item 1.1 is the last day of the **reporting issuer's** most recent financial year. It is the date of the balance sheet for the **reporting issuer's** most recent financial year (for example, "as at December 31, 20xx") and the ending date of the **reporting issuer's** most recent annual statement of income (for example, "for the year ended December 31, 20xx").
- (2) The same **effective date** applies to **reserves** of each category reported and to related **future net revenue**. References to a change in an item of information, such as changes in **production** or a change in **reserves**, mean changes in respect of that item during the year ended on the **effective date**.
- (3) The **preparation date**, in respect of written disclosure, means the most recent date to which information relating to the period ending on the **effective date** was considered in the preparation of the disclosure. The **preparation date** is a date subsequent to the **effective date** because it takes time after the end of the financial year to assemble the information for that completed year that is needed to prepare the required disclosure as at the end of the financial year.
- (4) Because of the interrelationship between certain of the **reporting issuer's reserves data** and other information referred to in this **Form 51-101F1** and certain of the information included in its financial statements, the **reporting issuer** should ensure that its financial auditor and its **qualified reserves evaluators or auditors** are kept apprised of relevant events and transactions, and should facilitate communication between them.
- (5) If the **reporting issuer** provides information as at a date more recent than the **effective date**, in addition to the information required as at the **effective date**, also disclose the date as at which that additional information is provided. The provision of such additional information does not relieve the **reporting issuer** of the obligation to provide information as at the **effective date**.

PART 2 DISCLOSURE OF RESERVES DATA

Item 2.1 Reserves Data (Forecast Prices and Costs)

1. Breakdown of Reserves (Forecast Case) – Disclose, by country and in the aggregate, *reserves, gross and net*, estimated using *forecast prices and costs*, for each *product type*, in the following categories:
 - (a) *proved developed producing reserves*;
 - (b) *proved developed non-producing reserves*;
 - (c) *proved undeveloped reserves*;
 - (d) *proved reserves (in total)*;
 - (e) *probable reserves (in total)*;
 - (f) *proved plus probable reserves (in total)*; and
 - (g) if the *reporting issuer* discloses an estimate of *possible reserves* in the statement:
 - (i) *possible reserves (in total)*; and

- (ii) *proved plus probable plus possible reserves* (in total).
- 2. Net Present Value of Future Net Revenue (Forecast Case) – Disclose, by country and in the aggregate, the net present value of *future net revenue* attributable to the *reserves* categories referred to in section 1 of this Item, estimated using *forecast prices and costs*, before and after deducting *future income tax expenses*, calculated without discount and using discount rates of 5 percent, 10 percent, 15 percent and 20 percent. Also disclose the same information on a unit value basis (e.g., \$/Mcf or \$/bbl using *net reserves*) using a discount rate of 10 percent and calculated before deducting *future income tax expenses*. This unit value disclosure requirement may be satisfied by including the unit value disclosure for each category of *proved reserves* and for *probable reserves* in the disclosure referred to in paragraph 3(c) of Item 2.1.
- 3. Additional Information Concerning Future Net Revenue (Forecast Case)
 - (a) This section 3 applies to *future net revenue* attributable to each of the following *reserves* categories estimated using *forecast prices and costs*:
 - (i) *proved reserves* (in total);
 - (ii) *proved plus probable reserves* (in total); and
 - (iii) if paragraph 1(g) of this Item applies, *proved plus probable plus possible reserves* (in total).
 - (b) Disclose, by country and in the aggregate, the following elements of *future net revenue* estimated using *forecast prices and costs* and calculated without discount:
 - (i) revenue;
 - (ii) royalties;
 - (iii) *operating costs*;
 - (iv) *development costs*;
 - (v) abandonment and reclamation costs;
 - (vi) *future net revenue* before deducting *future income tax expenses*;
 - (vii) *future income tax expenses*; and
 - (viii) *future net revenue* after deducting *future income tax expenses*.
 - (c) Disclose, by *production group* and on a unit value basis for each *production group* (e.g., \$/Mcf or \$/bbl using *net reserves*), the net present value of *future net revenue* (before deducting *future income tax expenses*) estimated using *forecast prices and costs* and calculated using a discount rate of 10 percent.

Item 2.2 Supplemental Disclosure of Reserves Data (Constant Prices and Costs)

The *reporting issuer* may supplement its disclosure of *reserves data* under Item 2.1 by also disclosing the components of Item 2.1 in respect of its *proved reserves* or its *proved* and *probable reserves*, using *constant prices and costs* as at the last day of the *reporting issuer's* most recent financial year.

Item 2.3 Reserves Disclosure Varies with Accounting

In determining *reserves* to be disclosed:

- (a) Consolidated Financial Disclosure – if the *reporting issuer* files consolidated financial statements:
 - (i) include 100 percent of *reserves* attributable to the parent company and 100 percent of the *reserves* attributable to its consolidated subsidiaries (whether or not wholly-owned); and
 - (ii) if a significant portion of *reserves* referred to in clause (i) is attributable to a consolidated subsidiary in which there is a significant minority interest, disclose that fact and the approximate portion of such *reserves* attributable to the minority interest;

- (b) Proportionate Consolidation – if the *reporting issuer* files financial statements in which investments are proportionately consolidated, the *reporting issuer's* disclosed *reserves* must include the *reporting issuer's* proportionate share of investees' *oil* and *gas reserves*; and
- (c) Equity Accounting – if the *reporting issuer* files financial statements in which investments are accounted for by the equity method, do not include investees' *oil* and *gas reserves* in disclosed *reserves* of the *reporting issuer*, but disclose the *reporting issuer's* share of investees' *oil* and *gas reserves* separately.

Item 2.4 Future Net Revenue Disclosure Varies with Accounting

- 1. Consolidated Financial Disclosure – If the *reporting issuer* files consolidated financial statements, and if a significant portion of the *reporting issuer's* economic interest in *future net revenue* is attributable to a consolidated subsidiary in which there is a significant minority interest, disclose that fact and the approximate portion of the economic interest in *future net revenue* attributable to the minority interest.
- 2. Equity Accounting – If the *reporting issuer* files financial statements in which investments are accounted for by the equity method, do not include investees' *future net revenue* in disclosed *future net revenue* of the *reporting issuer*, but disclose the *reporting issuer's* share of investees' *future net revenue* separately, by country and in the aggregate.

INSTRUCTIONS

- (1) Do not include, in **reserves, oil or gas** that is subject to purchase under a long-term supply, purchase or similar agreement. However, if the **reporting issuer** is a party to such an agreement with a government or governmental authority, and participates in the operation of the **properties** in which the **oil or gas** is situated or otherwise serves as "producer" of the **reserves** (in contrast to being an independent purchaser, broker, dealer or importer), disclose separately the **reporting issuer's** interest in the **reserves** that are subject to such agreements at the **effective date** and the **net quantity of oil or gas** received by the **reporting issuer** under the agreement during the year ended on the **effective date**.
- (2) **Future net revenue** includes the portion attributable to the **reporting issuer's** interest under an agreement referred to in Instruction (1).
- (3) **Constant prices and costs** are prices and costs used in an estimate that are:
 - (a) the **reporting issuer's** prices and costs as at the **effective date** of the estimation, held constant throughout the estimated lives of the **properties** to which the estimate applies;
 - (b) if, and only to the extent that, there are fixed or presently determinable future prices or costs to which the **reporting issuer** is legally bound by a contractual or other obligation to supply a physical product, including those for an extension period of a contract that is likely to be extended, those prices or costs rather than the prices and costs referred to in paragraph (a).

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

PART 3 PRICING ASSUMPTIONS

Item 3.1 Constant Prices Used in Supplemental Estimates

If supplemental disclosure under Item 2.2 is made, then disclose, for each *product type*, the benchmark reference prices for the countries or regions in which the *reporting issuer* operates, as at the last day of the *reporting issuer's* most recent financial year, reflected in the *reserves data* disclosed in response to Item 2.2.

Item 3.2 Forecast Prices Used in Estimates

- 1. For each *product type*, disclose:
 - (a) the pricing assumptions used in estimating *reserves data* disclosed in response to Item 2.1:
 - (i) for each of at least the following five financial years; and
 - (ii) generally, for subsequent periods; and

- (b) the *reporting issuer's* weighted average historical prices for the most recent financial year.
- 2. The disclosure in response to section 1 must include the benchmark reference pricing schedules for the countries or regions in which the *reporting issuer* operates, and inflation and other forecast factors used.
- 3. If the pricing assumptions specified in response to section 1 were provided by a *qualified reserves evaluator or auditor* who is *independent* of the *reporting issuer*, disclose that fact and identify the *qualified reserves evaluator or auditor*.

INSTRUCTIONS

- (1) *Benchmark reference prices may be obtained from sources such as public product trading exchanges or prices posted by purchasers.*
- (2) *The term "**constant prices and costs**" and the defined term "**forecast prices and costs**" include any fixed or presently determinable future prices or costs to which the **reporting issuer** is legally bound by a contractual or other obligation to supply a physical product, including those for an extension period of a contract that is likely to be extended. In effect, such contractually committed prices override benchmark reference prices for the purpose of estimating **reserves data**. To ensure that disclosure under this Part is not misleading, the disclosure should reflect such contractually committed prices.*
- (3) *Under subsection 5.7(1) of **NI 51-101**, the **reporting issuer** must obtain the written consent of the **qualified reserves evaluator or auditor** to disclose his or her identity in response to section 3 of this Item.*

PART 4 RECONCILIATION OF CHANGES IN RESERVES

Item 4.1 Reserves Reconciliation

- 1. Provide the information specified in section 2 of this Item in respect of the following *reserves* categories:
 - (a) *gross proved reserves* (in total);
 - (b) *gross probable reserves* (in total); and
 - (c) *gross proved plus probable reserves* (in total).
- 2. Disclose changes between the *reserves* estimates made as at the *effective date* and the corresponding estimates ("prior-year estimates") made as at the last day of the preceding financial year of the *reporting issuer*:
 - (a) by country;
 - (b) for each of the following:
 - (i) light and medium *crude oil* (combined);
 - (ii) *heavy oil*;
 - (iii) *associated gas* and *non-associated gas* (combined);
 - (iv) *synthetic oil*;
 - (v) *bitumen*;
 - (vi) coal bed methane;
 - (vii) hydrates;
 - (viii) shale oil; and
 - (ix) shale gas;
 - (c) separately identifying and explaining:
 - (i) extensions and improved recovery;

- (ii) technical revisions;
- (iii) discoveries;
- (iv) acquisitions;
- (v) dispositions;
- (vi) economic factors; and
- (vii) *production*.

INSTRUCTIONS

- (1) *The reconciliation required under this Item 4.1 must be provided in respect of **reserves** estimated using **forecast prices and costs**, with the price and cost case indicated in the disclosure.*
- (2) *For the purpose of this Item 4.1, it is sufficient to provide the information in respect of the products specified in paragraph 2(b), excluding **solution gas, natural gas liquids** and other associated by-products.*
- (3) *The **COGE Handbook** provides guidance on the preparation of the reconciliation required under this Item 4.1.*
- (4) ***Reporting issuers** must not include infill drilling **reserves** in the category of technical revisions specified in clause 2(c)(ii). **Reserves** additions from infill drilling must be included in the category of extensions and improved recovery in clause 2(c)(i) (or, alternatively, in an additional separate category under paragraph 2(c) labelled "infill drilling").*

PART 5 ADDITIONAL INFORMATION RELATING TO RESERVES DATA

Item 5.1 Undeveloped Reserves

- 1. For *proved undeveloped reserves*:
 - (a) disclose for each *product type* the volumes of *proved undeveloped reserves* that were first attributed in each of the most recent three financial years and, in the aggregate, before that time; and
 - (b) discuss generally the basis on which the *reporting issuer* attributes *proved undeveloped reserves*, its plans (including timing) for developing the *proved undeveloped reserves* and, if applicable, its reasons for not planning to develop particular *proved undeveloped reserves* during the following two years.
- 2. For *probable undeveloped reserves*:
 - (a) disclose for each *product type* the volumes of *probable undeveloped reserves* that were first attributed in each of the most recent three financial years and, in the aggregate, before that time; and
 - (b) discuss generally the basis on which the *reporting issuer* attributes *probable undeveloped reserves*, its plans (including timing) for developing the *probable undeveloped reserves* and, if applicable, its reasons for not planning to develop particular *probable undeveloped reserves* during the following two years.

Item 5.2 Significant Factors or Uncertainties

- 1. Identify and discuss important economic factors or significant uncertainties that affect particular components of the *reserves data*.
- 2. Section 1 does not apply if the information is disclosed in the *reporting issuer's* financial statements for the financial year ended on the *effective date*.

INSTRUCTION

*Examples of information that could warrant disclosure under this Item 5.2 include unusually high expected **development costs** or **operating costs**, the need to build a major pipeline or other major facility before **production of reserves** can begin, or contractual obligations to **produce** and sell a significant portion of **production** at prices substantially below those which could be realized but for those contractual obligations.*

Item 5.3 Future *Development Costs*

1. (a) Provide the information specified in paragraph 1(b) in respect of *development costs* deducted in the estimation of *future net revenue* attributable to each of the following *reserves* categories:
 - (i) *proved reserves* (in total) estimated using *forecast prices and costs*; and
 - (ii) *proved plus probable reserves* (in total) estimated using *forecast prices and costs*.
- (b) Disclose, by country, the amount of *development costs* estimated:
 - (i) in total, calculated using no discount; and
 - (ii) by year for each of the first five years estimated.
2. Discuss the *reporting issuer's* expectations as to:
 - (a) the sources (including internally-generated cash flow, debt or equity financing, farm-outs or similar arrangements) and costs of funding for estimated future *development costs*; and
 - (b) the effect of those costs of funding on disclosed *reserves* or *future net revenue*.
3. If the *reporting issuer* expects that the costs of funding referred to in section 2, could make development of a *property* uneconomic for that *reporting issuer*, disclose that expectation and its plans for the *property*.

PART 6 OTHER OIL AND GAS INFORMATION

Item 6.1 *Oil and Gas Properties and Wells*

1. Identify and describe generally the *reporting issuer's* important *properties*, plants, facilities and installations:
 - (a) identifying their location (province, territory or state if in Canada or the United States, and country otherwise);
 - (b) indicating whether they are located onshore or offshore;
 - (c) in respect of *properties* to which *reserves* have been attributed and which are capable of *producing* but which are not *producing*, disclosing how long they have been in that condition and discussing the general proximity of pipelines or other means of transportation; and
 - (d) describing any statutory or other mandatory relinquishments, surrenders, back-ins or changes in ownership.
2. State, separately for *oil wells* and *gas wells*, the number of the *reporting issuer's* producing wells and non-producing wells, expressed in terms of both *gross wells* and *net wells*, by location (province, territory or state if in Canada or the United States, and country otherwise).

Item 6.2 *Properties With No Attributed Reserves*

1. For *unproved properties* disclose:
 - (a) the *gross area* (acres or hectares) in which the *reporting issuer* has an interest;
 - (b) the interest of the *reporting issuer* therein expressed in terms of net area (acres or hectares);
 - (c) the location, by country; and
 - (d) the existence, nature (including any bonding requirements), timing and cost (specified or estimated) of any work commitments.
2. Disclose, by country, the *net area* (acres or hectares) of *unproved property* for which the *reporting issuer* expects its rights to explore, develop and exploit to expire within one year.

Item 6.3 Forward Contracts

1. If the *reporting issuer* is bound by an agreement (including a transportation agreement), directly or through an aggregator, under which it may be precluded from fully realizing, or may be protected from the full effect of, future market prices for *oil* or *gas*, describe generally the agreement, discussing dates or time periods and summaries or ranges of volumes and contracted or reasonably estimated values.
2. Section 1 does not apply to agreements disclosed by the *reporting issuer*
 - (a) as financial instruments, in accordance with Section 3861 of the *CICA Handbook*; or
 - (b) as contractual obligations or commitments, in accordance with Section 3280 of the *CICA Handbook*.
3. If the *reporting issuer's* transportation obligations or commitments for future physical deliveries of *oil* or *gas* exceed the *reporting issuer's* expected related future *production* from its *proved reserves*, estimated using *forecast prices and costs* and disclosed under Part 2, discuss such excess, giving information about the amount of the excess, dates or time periods, volumes and reasonably estimated value.

Item 6.4 Additional Information Concerning Abandonment and Reclamation Costs

In respect of abandonment and reclamation costs for surface *leases*, wells, facilities and pipelines, disclose:

- (a) how the *reporting issuer* estimates such costs;
- (b) the number of *net* wells for which the *reporting issuer* expects to incur such costs;
- (c) the total amount of such costs, net of estimated salvage value, expected to be incurred, calculated without discount and using a discount rate of 10 percent;
- (d) the portion, if any, of the amounts disclosed under paragraph (c) of this Item 6.4 that was not deducted as abandonment and reclamation costs in estimating the *future net revenue* disclosed under Part 2; and
- (e) the portion, if any, of the amounts disclosed under paragraph (c) of this Item 6.4 that the *reporting issuer* expects to pay in the next three financial years, in total.

INSTRUCTION

*Item 6.4 supplements the information disclosed in response to clause 3(b)(v) of Item 2.1. The response to paragraph (d) of Item 6.4 should enable a reader of this statement and of the **reporting issuer's** financial statements for the financial year ending on the **effective date** to understand both the **reporting issuer's** estimated total abandonment and reclamation costs, and what portions of that total are, and are not, reflected in the disclosed **reserves data**.*

Item 6.5 Tax Horizon

If the *reporting issuer* is not required to pay income taxes for its most recently completed financial year, discuss its estimate of when income taxes may become payable.

Item 6.6 Costs Incurred

1. Disclose each of the following, by country, for the most recent financial year (irrespective of whether such costs were capitalized or charged to expense when incurred):
 - (a) *property acquisition costs*, separately for *proved properties* and *unproved properties*;
 - (b) *exploration costs*; and
 - (c) *development costs*.
2. For the purpose of this Item 6.6, if the *reporting issuer* files financial statements in which investments are accounted for by the equity method, disclose by country the *reporting issuer's* share of investees' (i) *property acquisition costs*, (ii) *exploration costs* and (iii) *development costs* incurred in the most recent financial year.

Item 6.7 Exploration and Development Activities

1. Disclose, by country and separately for *exploratory wells* and *development wells*:
 - (a) the number of *gross wells* and *net wells* completed in the *reporting issuer's* most recent financial year; and
 - (b) for each category of wells for which information is disclosed under paragraph (a), the number completed as *oil wells*, *gas wells* and *service wells* and the number that were dry holes.
2. Describe generally the *reporting issuer's* most important current and likely exploration and development activities, by country.

Item 6.8 Production Estimates

1. Disclose, by country, for each *product type*, the volume of *production* estimated for the first year reflected in the estimates of *gross proved reserves* and *gross probable reserves* disclosed under Item 2.1.
2. If one *field* accounts for 20 percent or more of the estimated *production* disclosed under section 1, identify that *field* and disclose the volume of *production* estimated for the *field* for that year.

Item 6.9 Production History

1. To the extent not previously disclosed in financial statements filed by the *reporting issuer*, disclose, for each quarter of its most recent financial year, by country for each *product type*:
 - (a) the *reporting issuer's* share of average daily *production* volume, before deduction of royalties; and
 - (b) as an average per unit of volume (for example, *\$/bbl* or *\$/Mcf*):
 - (i) the prices received;
 - (ii) royalties paid;
 - (iii) *production costs*; and
 - (iv) the resulting netback.
2. For each important *field*, and in total, disclose the *reporting issuer's production* volumes for the most recent financial year, for each *product type*.

INSTRUCTION

*In providing information for each **product type** for the purpose of Item 6.9, it is not necessary to allocate among multiple **product types** attributable to a single well, **reservoir** or other **reserves** entity. It is sufficient to provide the information in respect of the principal **product type** attributable to the well, **reservoir** or other **reserves** entity. Resulting netbacks may be disclosed on the basis of units of equivalency between **oil** and **gas** (e.g. **BOE**) but if so that must be made clear and disclosure must comply with section 5.14 of **NI 51-101**.*

**FORM 51-101F2
REPORT ON RESERVES DATA
BY
INDEPENDENT QUALIFIED RESERVES
EVALUATOR OR AUDITOR**

This is the form referred to in item 2 of section 2.1 of National Instrument 51-101 *Standards of Disclosure for Oil and Gas Activities* ("NI 51-101").

1. Terms to which a meaning is ascribed in *NI 51-101* have the same meaning in this form.⁶
2. The report on *reserves data* referred to in item 2 of section 2.1 of *NI 51-101*, to be executed by one or more *qualified reserves evaluators or auditors independent of the reporting issuer*, must in all material respects be as follows:

Report on Reserves Data

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

1. We have [audited] [evaluated] [and reviewed] the Company's reserves data as at [last day of the reporting issuer's most recently completed financial year]. The reserves data are estimates of proved reserves and probable reserves and related future net revenue as at [last day of the reporting issuer's most recently completed financial year], estimated using forecast prices and costs.
2. The reserves data are the responsibility of the Company's management. Our responsibility is to express an opinion on the reserves data based on our [audit] [evaluation] [and review].

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

3. Those standards require that we plan and perform an [audit] [evaluation] [and review] to obtain reasonable assurance as to whether the reserves data are free of material misstatement. An [audit] [evaluation] [and review] also includes assessing whether the reserves data are in accordance with principles and definitions presented in the COGE Handbook.
4. The following table sets forth the estimated future net revenue (before deduction of income taxes) attributed to proved plus probable reserves, estimated using forecast prices and costs and calculated using a discount rate of 10 percent, included in the reserves data of the Company [audited] [evaluated] [and reviewed] by us for the year ended xxx xx, 20xx, and identifies the respective portions thereof that we have [audited] [evaluated] [and reviewed] and reported on to the Company's [management/board of directors]:

Independent Qualified Reserves Evaluator or Auditor	Description and Preparation Date of [Audit/Evaluation/Review] Report	Location of Reserves (Country or Foreign Geographic Area)	Net Present Value of Future Net Revenue (before income taxes, 10% discount rate)			
			Audited	Evaluated	Reviewed	Total
Evaluator A	xxx xx, 20xx	xxxx	\$xxx	\$xxx	\$xxx	\$xxx
Evaluator B	xxx xx, 20xx	xxxx	xxx	xxx	xxx	xxx
Totals			\$xxx	\$xxx	\$xxx	\$xxx ⁷

⁶ For the convenience of readers, CSA Staff Notice 51-324 *Glossary to NI 51-101 Standards of Disclosure for Oil and Gas Activities* sets out the meanings of terms that are printed in italics in sections 1 and 2 of this Form or in *NI 51-101*, *Form 51-101F1*, *Form 51-101F3* or Companion Policy 51-101CP.

⁷ This amount should be the amount disclosed by the *reporting issuer* in its statement of *reserves data* filed under item 1 of section 2.1 of *NI 51-101*, as its *future net revenue* (before deducting *future income tax expenses*) attributable to *proved plus probable reserves*, estimated using *forecast prices and costs* and calculated using a discount rate of 10 percent (required by section 2 of Item 2.1 of *Form 51-101F1*).

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

Executed as to our report referred to above:

Evaluator A, City, Province or State / Country, Execution Date

[signed]

Evaluator B, City, Province or State / Country, Execution Date

[signed]

**FORM 51-101F3
REPORT OF
MANAGEMENT AND DIRECTORS
ON OIL AND GAS DISCLOSURE**

This is the form referred to in item 3 of section 2.1 of National Instrument 51-101 *Standards of Disclosure for Oil and Gas Activities* ("NI 51-101").

1. Terms to which a meaning is ascribed in *NI 51-101* have the same meaning in this form.¹
2. The report referred to in item 3 of section 2.1 of *NI 51-101* must in all material respects be as follows:

**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 are estimates of proved reserves and probable reserves and related future net revenue as at [last day of the reporting issuer's most recently completed financial year], estimated using forecast prices and costs.

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

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

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

The [Reserves Committee of the] board of directors has reviewed the Company's procedures for assembling and reporting other information associated with oil and gas activities and has reviewed that information with management. The board of directors has [, on the recommendation of the Reserves Committee,] approved

- (a) the content and filing with securities regulatory authorities of Form 51-101F1 containing reserves data and other oil and gas information;
- (b) the filing of Form 51-101F2 which is the report of the independent [qualified reserves evaluator[s] or qualified reserves auditor[s]] on the reserves data; and
- (c) the content and filing of this report.

Because the reserves data are based on judgements regarding future events, actual results will vary and the variations may be material. However, any variations should be consistent with the fact that reserves are categorized according to the probability of their recovery.

[signature, name and title of chief executive officer]

¹ For the convenience of readers, CSA Staff Notice 51-324 *Glossary to NI 51-101 Standards of Disclosure for Oil and Gas Activities* sets out the meanings of terms that are printed in italics in sections 1 and 2 of this Form or in *NI 51-101, Form 51-101F1, Form 51-101F2* or Companion Policy 51-101CP.

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

[signature, name of a director]

[signature, name of a director]

[Date]

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

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

This Companion Policy sets out the views of the Canadian Securities Administrators (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.

*NI 51-101*¹ supplements other continuous disclosure requirements of *securities legislation* that apply to *reporting issuers* in all business sectors.

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 registrants² 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 1 APPLICATION AND TERMINOLOGY

1.1 Definitions

- (1) **General** - Several terms relating to *oil and gas activities* are defined in section 1.1 of *NI 51-101*. If a term is not defined in *NI 51-101*, *NI 14-101* or the securities statute in the *jurisdiction*, it will have the meaning or interpretation given to it in the *COGE Handbook* if it is defined or interpreted there, pursuant to section 1.2 of *NI 51-101*.

For the convenience of readers, CSA Staff Notice 51-324 *Glossary to NI 51-101 Standards of Disclosure for Oil and Gas Activities* (the *NI 51-101 Glossary*) sets out the meaning of terms, including those defined in *NI 51-101* and several terms which are derived from the *COGE Handbook*.

- (2) **Forecast Prices and Costs** - The term *forecast prices and costs* is defined in paragraph 1.1(j) of *NI 51-101* and discussed in the *COGE Handbook*. Except to the extent that the *reporting issuer* is legally bound by fixed or presently determinable future prices or costs³, *forecast prices and costs* are future prices and costs "generally accepted as being a reasonable outlook of 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* or by other reputable sources appropriate to the evaluation.

- (3) **Independent** - The term *independent* is defined in paragraph 1.1(o) of *NI 51-101*. Applying this definition, the following are examples of circumstances in which the CSA would consider that a *qualified reserves evaluator or auditor* (or other expert) is not *independent*. We consider a *qualified reserves evaluator or auditor* is not *independent* when the *qualified reserves evaluator or auditor*:

- (a) is an employee, insider, or director of the *reporting issuer*;
- (b) is an employee, insider, or director of a related party of the *reporting issuer*;
- (c) is a partner of any person or company in paragraph (a) or (b);
- (d) holds or expects to hold securities, either directly or indirectly, of the *reporting issuer* or a related party of the *reporting issuer*;

¹ For the convenience of readers, CSA Staff Notice 51-324 *Glossary to NI 51-101 Standards of Disclosure for Oil and Gas Activities* sets out the meanings of terms that are printed in italics in *NI 51-101*, *Form 51-101F1*, *Form 51-101F2* or *Form 51-101F3*, or in this Companion Policy (other than terms italicized in titles of documents that are printed entirely in italics).

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

³ Refer to the discussion of financial instruments in subsection 2.7(5) below.

- (e) holds or expects to hold securities, either directly or indirectly, in another *reporting issuer* that has a direct or indirect interest in the property that is the subject of the technical report or an adjacent property;
- (f) has or expects to have, directly or indirectly, an ownership, royalty, or other interest in the property that is the subject of the technical report or an adjacent property; or
- (g) has received the majority of their income, either directly or indirectly, in the three years preceding the date of the technical report from the *reporting issuer* or a related party of the *reporting issuer*.

For the purpose of paragraph (d) above, "related party of the *reporting issuer*" means an affiliate, associate, subsidiary, or control person of the *reporting issuer* as those terms are defined under securities legislation.

There may be instances in which it would be reasonable to consider that the independence of a *qualified reserves evaluator or auditor* would not be compromised even though the *qualified reserves evaluator or auditor* holds an interest in the *reporting issuer's* securities. The *reporting issuer* needs to determine whether a reasonable person would consider such interest would interfere with the *qualified reserves evaluator's or auditor's* judgement regarding the preparation of the technical report.

There may be circumstances in which the *securities regulatory authorities* question the objectivity of the *qualified reserves evaluator or auditor*. In order to ensure the requirement for independence of the *qualified reserves evaluator or auditor* has been preserved, the *reporting issuer* may be asked to provide further information, additional disclosure or the opinion of another *qualified reserves evaluator or auditor* to address concerns about possible bias or partiality on the part of the *qualified reserves evaluator or auditor*.

- (4) **Product Types Arising From Oil Sands and Other Non-Conventional Activities** - The definition of *product type* in paragraph 1.1(v) includes products arising from non-conventional *oil and gas activities*. *NI 51-101* therefore 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*, the extraction of methane from coal beds and the extraction of shale gas, shale oil and hydrates.

Although *NI 51-101* and *Form 51-101F1* make few specific references to non-conventional *oil and gas activities*, the requirements of *NI 51-101* for the preparation and disclosure of *reserves data* and for the disclosure of *resources* apply to *oil and gas reserves* and *resources* 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*.

- (5) **Professional Organization**

- (a) **Recognized Professional Organizations**

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 paragraph 1.1(w) of *NI 51-101* and in the *NI 51-101 Glossary*) 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*.

As at August 1, 2007, each of the following organizations in Canada is a *professional organization*:

- 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)

(b) **Other Professional Organizations**

The CSA are willing to consider whether particular foreign professional bodies should be accepted as "professional organizations" for the 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 purposes 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 list of foreign professional organizations is updated periodically in CSA Staff Notice 51-309 *Acceptance of Certain Foreign Professional Boards as a "Professional Organization"*. As at August 1, 2007, each of the following foreign organizations has been recognized as a professional organization for the purposes of NI 51-101:

- California Board for Professional Engineers and Land Surveyors,
- State of Colorado Board of Registration for Professional Engineers and Professional Land Surveyors
- Louisiana State Board of Registration for Professional Engineers and Land Surveyors,
- Oklahoma State Board of Registration for Professional Engineers and Land Surveyors
- Texas Board of Professional Engineers
- American Association of Petroleum Geologists (AAPG) but only in respect of Certified Petroleum Geologists who are members of the AAPG's Division of Professional Affairs
- American Institute of Professional Geologists (AIPG), in respect of the AIPG's Certified Professional Geologists
- Energy Institute but only for those members of the Energy Institute who are Members and Fellows

(c) **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.

(d) **Renewal Applications Unnecessary**

A successful applicant would likely have to make an application contemplated in this subsection 1.1(5) only once, and not renew it annually.

- (6) **Qualified Reserves Evaluator or Auditor** - The definitions of *qualified reserves evaluator* and *qualified reserves auditor* are set out in paragraphs 1.1(y) and 1.1(x) of NI 51-101, respectively, and again in the NI 51-101 Glossary.

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 purpose of the *Instrument* satisfies each of the elements of the appropriate definition.

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 volume 1 of the *COGE Handbook* - "Qualifications of Evaluators and Auditors, Enforcement and Discipline".

1.2 *COGE Handbook*

Pursuant to section 1.2 of *NI 51-101*, definitions and interpretations in the *COGE Handbook* apply for the 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 *NI 51-101* Glossary set out definitions and interpretations, many of which are derived from the *COGE Handbook*. *Reserves* and *resources* definitions and categories developed by the Petroleum Society of the Canadian Institute of Mining, Metallurgy & Petroleum (CIM) are incorporated in the *COGE Handbook* and also set out, in part, in the *NI 51-101* Glossary.

Subparagraph 5.2(a)(iii) of *NI 51-101* requires that all estimates of *reserves* or *future net revenue* have been prepared or audited in accordance with the *COGE Handbook*. Under sections 5.2, 5.3 and 5.9 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*.

1.3 *Applies to Reporting Issuers Only*

NI 51-101 applies to *reporting issuers* engaged in *oil and gas activities*. The definition of *oil and gas activities* is broad. For example, a *reporting issuer* with no *reserves*, but a few *prospects*, unproved *properties* or *resources*, could still be engaged in *oil and gas activities* because such activities include exploration and development of unproved *properties*.

NI 51-101 will also apply to an issuer that is not yet a *reporting issuer* if it files a prospectus or other disclosure document that incorporates prospectus requirements. Pursuant to the long-form prospectus requirements, the issuer must disclose the information contained in *Form 51-101F1*, as well as the reports set out in *Form 51-101F2* and *Form 51-101F3*.

1.4 *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 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.

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

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*. An item that is immaterial alone may be material in the context of other information, or may be necessary to give context to other information. For example, a large number of small interests in *oil and gas properties* may be material in aggregate to a *reporting issuer*. Alternatively, a small interest in an *oil and gas property* may be material to a *reporting issuer*, depending on the size of the *reporting issuer* and its particular circumstances.

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 System for Electronic Document Analysis and Retrieval (*SEDAR*) and the current CSA "*SEDAR Filer Manual*" for information about filing documents electronically. The information required to be filed under item 1 of section 2.1 of *NI 51-101* is usually derived from a much longer and more detailed *oil* and *gas* report prepared by a *qualified reserves evaluator*. These long and detailed reports cannot be filed electronically on *SEDAR*. The filing of an oil and gas report, or a summary of an oil and gas report, does not satisfy the requirements of the annual filing under *NI 51-101*.

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 1.4 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*. Appendix 1 to this Companion Policy provides an example of how certain of the *reserves data* might be presented. While the format presented in Appendix 1 in respect of *reserves data* is not mandatory, we encourage issuers to use this format.

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*.

- (1) **Meaning of "Annual Information Form"** - *Annual information form* has the same meaning as "AIF" in National Instrument 51-102 *Continuous Disclosure Obligations*. Therefore, as set out in that definition, an *annual information form* can be a completed *Form 51-102F2 Annual Information Form* or, in the case of an *SEC* issuer (as defined in *NI 51-102*), a completed *Form 51-102F2* or an annual report or transition report under the *1934 Act* on *Form 10-K*, *Form 10-KSB* or *Form 20-F*.
- (2) **Option to Set Out Information in Annual Information Form** - *Form 51-102F2 Annual Information Form* requires the information required by section 2.1 of *NI 51-101* to be included in the *annual information form*. That information may be included either by setting out the text of the information in the *annual information form* 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 the purpose of section 2.1 in one or more separate documents. A *reporting issuer* that elects to follow this approach should file its *annual information form* in accordance with usual requirements of *securities legislation*, and at the same time file on *SEDAR*, in the category for *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*. More specifically, the notification should be filed under SEDAR Filing Type: "Oil and Gas Annual Disclosure (NI 51-101)" and Filing Subtype/Document Type: "Oil and Gas Annual Disclosure Filing (Forms 51-101F1, F2 & F3)". Alternatively, the notification could be a copy of the news release mandated by section 2.2 of NI 51-101. If this is the case, the news release should be filed under SEDAR Filing Type: "Oil and Gas Annual Disclosure (NI 51-101)" and Filing Subtype/Document Type: "News Release (section 2.2 of NI 51-101)".

This notification 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 Reporting Issuer That Has No Reserves

The requirement to make annual NI 51-101 filings is not limited to only those issuers that have *reserves* and related *future net revenue*. A *reporting issuer* with no *reserves* but with *prospects*, unproved *properties* or *resources* may be engaged in *oil and gas activities* (see section 1.3 above) and therefore subject to NI 51-101. That means the issuer must still make annual NI 51-101 filings and ensure that it complies with other NI 51-101 requirements. The following is guidance on the preparation of *Form 51-101F1*, *Form 51-101F2*, *Form 51-101F3* and other *oil and gas* disclosure if the *reporting issuer* has no *reserves*.

- (1) **Form 51-101F1** - Section 1.4 of NI 51-101 states that the *Instrument* applies only in respect of information that is material in respect of a *reporting issuer*. If indeed the *reporting issuer* has no *reserves*, we would consider that fact alone material. The *reporting issuer's* disclosure, under Part 2 of *Form 51-101F1*, should make clear that it has no *reserves* and hence no related *future net revenue*.

Supporting information regarding *reserves data* required under Part 2 (e.g., price estimates) that are not material to the issuer may be omitted. However, if the issuer had disclosed *reserves* and related *future net revenue* in the previous year, and has no *reserves* as at the end of its current financial year, the *reporting issuer* is still required to present a reconciliation to the prior-year's estimates of *reserves*, as required by Part 4 of *Form 51-101F1*.

The *reporting issuer* is also required to disclose information required under Part 6 of *Form 51-101F1*. Those requirements apply irrespective of the quantum of *reserves*, if any. This would include information about *properties* (items 6.1 and 6.2), costs (item 6.6), and exploration and development activities (item 6.7). The disclosure should make clear that the issuer had no *production*, as that fact would be material.

- (2) **Form 51-101F2** - NI 51-101 requires *reporting issuers* to retain an *independent qualified reserves evaluator* or *auditor* to evaluate or audit the company's *reserves data* and report to the board of directors. If the *reporting issuer* had no *reserves* during the year and hence did not retain an evaluator or auditor, then it would not need to retain one just to file a (nil) report of the *independent* evaluators on the *reserves data* in the form of *Form 51-101F2* and the *reporting issuer* would therefore not be required to file a *Form 51-101F2*. If, however, the issuer did retain an evaluator or auditor to evaluate *reserves*, and the evaluator or auditor concluded that they could not be so categorized, or reclassified those *reserves* to *resources*, the issuer would have to file a report of the *qualified reserves evaluator* because the evaluator has, in fact, evaluated the *reserves* and expressed an opinion.
- (3) **Form 51-101F3** - Irrespective of whether the *reporting issuer* has *reserves*, the requirement to file a report of management and directors in the form of *Form 51-101F3* applies.
- (4) **Other NI 51-101 Requirements** - NI 51-101 does not require *reporting issuers* to disclose *anticipated results* from their *resources*. However, if a *reporting issuer* chooses to disclose that type of information, section 5.9 of NI 51-101 applies to that disclosure.

2.6 Reservation 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. The CSA recommend that *qualified reserves evaluators or auditors* follow the procedures and guidance set out in both sections 4 and 12 of volume 1 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.

2.7 Disclosure in Form 51-101F1

- (1) **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*.

Form 51-101F1 requires that certain *reserves data* be provided on both a "gross" and "net" basis, the latter being adjusted for both royalty entitlements and royalty obligations. However, if a royalty is granted by a trust's subsidiary to the trust, this would not affect the computation of "*net reserves*". The typical *oil and gas* income trust structure involves the grant of a royalty by an operating subsidiary of the trust to the trust itself, the royalty being the source of the distributions to trust investors. In this case, the royalty is wholly within the combined or consolidated trust entity (the trust and its operating subsidiary). This is not the type of external entitlement or obligation for which adjustment is made in determining, for example, "*net reserves*". Viewing the trust and its consolidated entities together, the relevant *reserves* and other *oil and gas* information is that of the operating subsidiary without deduction of the internal royalty to the trust.

- (2) **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.

- (3) **Computation of Future Net Revenue**

(a) **Tax**

Form 51-101F1 requires *future net revenue* to be estimated and disclosed both before and after deduction of income taxes. However, a *reporting issuer* may not be subject to income taxes because of its royalty or income trust structure. In this instance, the issuer should use the tax rate that most appropriately reflects the income tax it reasonably expects to pay on the *future net revenue*. If the issuer is not subject to income tax because of its royalty trust structure, then the most appropriate income tax rate would be zero. In this case, the issuer could present the estimates of *future net revenue* in only one column and explain, in a note to the table, why the estimates of before-tax and after-tax *future net revenue* are the same.

Also, tax pools should be taken into account when computing *future net revenue* after income taxes. The definition of "future income tax expense" is set out in the *NI 51-101 Glossary*. Essentially, *future income tax expenses* represent estimated cash income taxes payable on the *reporting issuer's* future pre-tax cash flows. These cash income taxes payable should be computed by applying the appropriate year-end statutory tax rates, taking into account future tax rates already legislated, to future pre-tax *net* cash flows reduced by appropriate deductions of estimated unclaimed costs and losses carried forward for tax purposes and relating to *oil and gas activities* (i.e., tax pools). Such tax pools may include Canadian *oil and gas property* expense (COGPE), Canadian development expense (CDE), Canadian exploration expense (CEE), undepreciated capital cost (UCC) and unused prior year's tax losses. (Issuers should be aware of limitations on the use of certain tax pools resulting from acquisitions of *properties* in situations where provisions of the Income Tax Act concerning successor corporations apply.)

(b) Other Fiscal Regimes

Other fiscal regimes, such as those involving *production* sharing contracts, should be adequately explained with appropriate allocations made to various classes of proved *reserves* and to *probable reserves*.

- (4) **Supplemental Disclosure of Future Net Revenue Using Constant prices and costs** - Form 51-101 F1 gives *reporting issuers* the option of disclosing *future net revenue* using *constant prices and costs* in addition to disclosing *future net revenue* using *forecast prices and costs*. *Constant prices and costs* are based on the *reporting issuer's* prices and costs as at the *reporting issuer's* financial year-end. In general, these prices and costs are assumed not to change, but rather to remain constant, throughout the life of a *property*, except to the extent of certain fixed or presently determinable future prices or costs to which the *reporting issuer* is legally bound by a contractual or other obligation to supply a physical product (including those for an extension period of a contract that is likely to be extended).
- (5) **Financial Instruments** - The definition of "*forecast prices and costs*" in paragraph 1.1(j) of NI 51-101 and the term "*constant prices and costs*" as defined in the NI 51-101 Glossary refer to fixed or presently determinable future prices to which a *reporting issuer* is legally bound by a contractual or other obligation to supply a physical product. The phrase "contractual or other obligation to supply a physical product" excludes arrangements under which the *reporting issuer* can satisfy its obligations in cash and would therefore exclude an arrangement that would be a "financial instrument" as defined in Section 3855 of the *CICA Handbook*. The *CICA Handbook* discusses when a *reporting issuer's* obligation would be considered a financial instrument and sets out the requirements for presentation and disclosure of these financial instruments (including so-called financial hedges) in the *reporting issuer's* financial statements.
- (6) **Reserves Reconciliation**
- (a) If the *reporting issuer* reports *reserves*, but had no *reserves* at the start of the reconciliation period, a reconciliation of *reserves* must be carried out if any *reserves* added during the previous year are material. Such a reconciliation will have an opening balance of zero.
- (b) The reserves reconciliation is prepared on a *gross reserves*, not *net reserves*, basis. For some *reporting issuers* with significant royalty interests, such as royalty trusts, the *net reserves* may exceed the *gross reserves*. In order to provide adequate disclosure given the distinctive nature of its business, the *reporting issuer* may also disclose its *reserves* reconciliation on a *net reserves* basis. The issuer is not precluded from providing this additional information with its disclosure prescribed in *Form 51-101F1* provided that the *net reserves* basis for the reconciliation is clearly identified in the additional disclosure to avoid confusion.
- (c) Clause 2(c)(ii) of item 4.1 of *Form 51-101F1* requires reconciliations of *reserves* to separately identify and explain technical revisions. Technical revisions show changes in existing *reserves* estimates, in respect of carried-forward *properties*, over the period of the reconciliation (i.e., between estimates as at the *effective date* and the prior year's estimate) and are the result of new technical information, not the result of capital expenditure. With respect to making technical revisions, the following should be noted:
- Infill Drilling: It would not be acceptable to include infill drilling results as a technical revision. *Reserves* additions derived from infill drilling during the year are not attributable to revisions to the previous year's *reserves* estimates. Infill drilling *reserves* must either be included in the "extensions and improved recovery" category or in an additional stand-alone category in the reserves reconciliation labelled "infill drilling".
 - Acquisitions: If an acquisition is made during the year, (i.e., in the period between the *effective date* and the prior year's estimate), the *reserves* estimate to be used in the reconciliation is the estimate of *reserves* at the *effective date*, not at the acquisition date, plus any *production* since the acquisition date. This *production* must be included as *production* in the reconciliation. If there has been a change in the *reserves* estimate between the acquisition date and the *effective date* other than that due to *production*, the issuer may wish to explain this as part of the reconciliation in a footnote to the reconciliation table.
- (7) **Significant Factors or Uncertainties** - Item 5.2 of *Form 51-101F1* requires an issuer to identify and discuss important economic factors or significant uncertainties that affect particular components of the *reserves data*.

Like a "subsequent event" note in a financial statement, the issuer should discuss this type of information even if it pertains to a period subsequent to the *effective date*.

For example, if events subsequent to the *effective date* have resulted in significant changes in expected future prices, such that the forecast prices reflected in the *reserves data* differ materially from those that would be considered to be a reasonable outlook on the future around the date of the company's "statement of *reserves data* and other information", then the issuer's statement might include, pursuant to item 5.2, a discussion of that change and its effect on the disclosed *future net revenue* estimates. It may be misleading to omit this information.

- (8) **Additional Information** - As discussed in section 2.3 above and in the instructions to *Form 51-101F1*, *NI 51-101* offers 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.

- (9) **Sample Reserves Data Disclosure** - Appendix 1 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 CSA encourages *reporting issuers* to use the format presented in Appendix 1.

The sample presentation in Appendix 1 also illustrates how certain additional information not mandated under *Form 51-101F1* might be incorporated in an annual filing.

2.8 *Form 51-101F2*

- (1) **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*.

In the rare case, if any, in which there are compelling reasons for making such disclosure (e.g., a prohibition on disclosure to external parties), 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.

- (2) **Variations in Estimates** - *Form 51-101F2* (and *Form 51-101F3*) contains a statement that variations between *reserves data* and actual results may be material but that any variations should be consistent with the fact that *reserves* are categorized according to the probability of their recovery.

Reserves estimates are made at a point in time, being the *effective date*. A reconciliation of a *reserves* estimate to actual results is likely to show variations and the variations may be material. This variation may arise from factors such as exploration discoveries, acquisitions, divestments and economic factors that were not considered in the initial *reserves* estimate. Variations that occur with respect to *properties* that were included in both the *reserves* estimate and the actual results may be due to technical or economic factors. Any variations arising due to technical factors should be consistent with the fact that *reserves* are categorized according to the probability of their recovery. For example, the requirement that reported *proved reserves*

“must have at least a 90 percent probability that the quantities actually recovered will equal or exceed the estimated *proved reserves*” (section 5 of volume 1 of the *COGE Handbook*) implies that as more technical data becomes available, a positive, or upward, revision is significantly more likely than a negative, or downward, revision. Similarly, it should be equally likely that revisions to an estimate of *proved plus probable reserves* will be positive or negative.

Reporting issuers must assess the magnitude of such variation according to their own circumstances. A *reporting issuer* with a limited number of *properties* is more likely to be affected by a change in one of these *properties* than a *reporting issuer* with a greater number of *properties*. Consequently, *reporting issuers* with few *properties* are more likely to show larger variations, both positive and negative, than those with many *properties*.

Variations may result from factors that cannot be reasonably anticipated, such as the fall in the price of *bitumen* at the end of 2004 that resulted in significant negative revisions in *proved reserves*, or the unanticipated activities of a foreign government. If such variations occur, the reasons will usually be obvious. However, the assignment of a *proved reserve*, for instance, should reflect a degree of confidence in all of the relevant factors, at the *effective date*, such that the likelihood of a negative revision is low, especially for a *reporting issuer* with many *properties*. Examples of some of the factors that could have been reasonably anticipated, that have led to negative revisions of *proved* or of *proved plus probable reserves* are:

- Over-optimistic activity plans, for instance, booking reserves for *proved* or *probable undeveloped reserves* that have no reasonable likelihood of being drilled.
 - *Reserves* estimates that are based on a forecast of *production* that is inconsistent with historic performance, without solid technical justification.
 - Assignment of drainage areas that are larger than can be reasonably expected.
 - The use of inappropriate analogs.
- (3) **Effective date of Evaluation** - A *qualified reserves evaluator* or *auditor* cannot prepare an *evaluation* using information that relates to events that occurred after the *effective date*, being the financial year-end. Information that relates to events that occurred after the year-end should not be incorporated into the forecasts. For example, information about drilling results from wells drilled in January or February, or changes in *production* that occurred after year-end date of December 31, should not be used. Even though this more recent information is available, the evaluator or auditor should not go back and change the forecast information. The forecast is to be based on the evaluator's or auditor's perception of the future as of December 31, the *effective date* of the report.

Similarly, the evaluator or auditor should not use price forecasts for a date subsequent to the year-end date of, in this example, December 31. The evaluator or auditor should use the prices that he or she forecasted on or around December 31. The evaluator or auditor should also use the December forecasts for exchange rates and inflation. Revisions to price, exchange rate or inflation rate forecasts after December 31 would have resulted from events that occurred after December 31.

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 the purposes of *NI 51-101*.

PART 4 MEASUREMENT

4.1 Consistency in Dates

Section 4.2 of *NI 51-101* requires consistency in the timing of recording the effects of events or transactions for the purposes of both annual financial statements and annual *reserves data* disclosure.

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

Sections 4 and 12 of volume 1 of the *COGE Handbook* set out procedures and guidance for the conduct of *reserves evaluations* and *reserves audits*, respectively. Section 12 deals with the relationship between a *reserves auditor* and the client's financial auditor. Section 4, 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 and 12 of volume 1 of the *COGE Handbook*, whether conducting a *reserves evaluation* or a *reserves audit*.

PART 5 REQUIREMENTS APPLICABLE TO ALL DISCLOSURE

5.1 Application of Part 5

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. For example, if material distributed at a company presentation refers to *BOEs*, the material should include, near the reference to *BOEs*, the cautionary statement required by paragraph 5.14(d) of *NI 51-101*.

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 Disclosure of Reserves and Other Information

- (1) **General** - A reporting issuer must comply with the requirements of section 5.2 in its disclosure, to the public, of reserves estimates and other information of a type specified in *Form 51-101F1*. This would include, for example, disclosure of such information in a news release.
- (2) **Reserves** - *NI 51-101* does not prescribe any particular methods of estimation but it does require that a reserve estimate be prepared in accordance with the *COGE Handbook*. For example, section 5 of volume 1 of the *COGE Handbook* specifies that, in respect of an issuer's reported proved reserves, 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.

Additional guidance on particular topics is provided below.

- (3) **Possible Reserves** - A possible reserves estimate - either alone or as part of a sum - is often a relatively large number that, by definition, has a low probability of actually being produced. For this reason, the cautionary language prescribed in subparagraph 5.2(a)(v) of *NI 51-101* must accompany the written disclosure of a possible reserves estimate.
- (4) **Probabilistic and Deterministic Evaluation Methods** - Section 5 of volume 1 of the *COGE Handbook* states that "In principle, there should be no difference between estimates prepared using probabilistic or deterministic methods".

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

When probabilistic methods are used in conjunction with good engineering and geological practice, they will provide more statistical information than the conventional deterministic method. The following are a few critical criteria that an evaluator must satisfy when applying probabilistic methods:

- The evaluator must still estimate the reserves applying the definitions and using the guidelines set out in the *COGE Handbook*.
 - Entity level probabilistic reserves estimates should be aggregated arithmetically to provide reported level reserves.
 - If the evaluator also prepares aggregate reserves estimates using probabilistic methods, the evaluator should explain in the evaluation report the method used. In particular, the evaluator should specify what confidence levels were used at the entity, property, and reported (i.e., total) levels for each of proved, proved + probable and proved + probable + possible (if reported) reserves.
 - If the reporting issuer discloses the aggregate reserves that the evaluator prepared using probabilistic methods, the issuer should provide a brief explanation, near its disclosure, about the reserves definitions used for estimating the reserves, about the method that the evaluator used, and the underlying confidence levels that the evaluator applied.
- (5) **Availability of Funding** - In assigning reserves to an undeveloped property, the reporting issuer is not required to have the funding available to develop the reserves, since they may be developed by means other than the expenditure of the reporting issuer's funds (for example by a farm-out or sale). Reserves must be estimated assuming that development of the properties will occur without regard to the likely availability of funding required for that property. The reporting issuer's evaluator is not required to consider whether the reporting issuer will have the capital necessary to develop the reserves. (See section 7 of *COGE Handbook* and subparagraph 5.2(a)(iv) of *NI 51-101*.)

However, item 5.3 of *Form 51-101F1* requires a reporting issuer to discuss its expectations as to the sources and costs of funding for estimated future development costs. If the issuer expects that the costs of funding would make development of a property unlikely, then even if reserves were assigned, it must also discuss that expectation and its plans for the property.

- (6) **Proved or Probable Undeveloped Reserves** - Proved or probable undeveloped reserves must be reported in the year in which they are recognized. If the reporting issuer does not disclose the proved or probable undeveloped reserves just because it has not yet spent the capital to develop these reserves, it may be

omitting *material* information, thereby causing the *reserves* disclosure to be misleading. If the proved or probable *undeveloped reserves* are not disclosed to the public, then those who have a special relationship with the issuer and know about the existence of these *reserves* would not be permitted to purchase or sell the securities of the issuer until that information has been disclosed. If the issuer has a prospectus, the prospectus might not contain full true and plain disclosure of all *material* facts if it does not contain information about these proved or probable *undeveloped reserves*.

- (7) **Mechanical Updates** - So-called “mechanical updates” of *reserves* reports are sometimes created, often by rerunning previous *evaluations* with a new price deck. This is problematic since there may have been material changes other than price that may lead to the report being misleading. If a *reporting issuer* discloses the results of the mechanical update it should ensure that all relevant material changes are also disclosed to ensure that the information is not misleading.

5.3 Reserves and Resources Classification

Section 5.3 of *NI 51-101* requires that any disclosure of *reserves* or *resources* must be made using the categories and terminology as set out in the *COGE Handbook*. The definitions of the various reserves and resources categories, derived from the *COGE Handbook*, are provided in the *NI 51-101 Glossary*. In addition, section 5.3 of *NI 51-101* requires that disclosure of *reserves* or *resources* must relate to the most specific category of *reserves* or *resources* in which the *reserves* or *resources* can be classified. For instance, there are several subcategories of *discovered resources* including *reserves*, *contingent resources* and *discovered unrecoverable resources*. *Reporting issuers* must classify *discovered resources* into one of the subcategories of *discovered resources*. In exceptional circumstances, a *reporting issuer* may be unable to classify the *resources* in a subcategory of *discovered resources*, in which case it must provide a comprehensive explanation as to why the *resources* cannot be classified in a *subcategory*.

In addition, *reserves* can be estimated using three subcategories, namely *proved*, *probable* or *possible reserves*, according to the probability that such quantities of *reserves* will actually be produced. As described in the *COGE Handbook* *proved*, *probable* and *possible reserves* represent conservative, realistic and optimistic estimates of *reserves*, respectively. Therefore any disclosure of *reserves* must be broken down into one of the three subcategories of *reserves*, namely *proved*, *probable* or *possible reserves*. For further guidance on disclosure of *reserves* and *resources* please see sections 5.2 and 5.5 of this Companion Policy.

5.4 Written Consents

Section 5.7 of *NI 51-101* restricts a *reporting issuer's* use of a report of a *qualified reserves evaluator or auditor* without written consent. The consent requirement does not apply to the direct use of the report for the purposes of *NI 51-101* (filing *Form 51-101F1*; making direct or indirect reference to the conclusions of that report in the filed *Form 51-101F1* and *Form 51-101F3*; and identifying the report in the news release referred to in section 2.2). The *qualified reserves evaluator or auditor* retained to report to a *reporting issuer* for the purposes of *NI 51-101* is expected to anticipate these uses of the report. However, further use of the report (for example, in a securities offering document or in other news releases) would require written consent.

5.5 Disclosure of Resources

- (1) **Disclosure of Resources Generally** -The disclosure of *resources*, excluding *proved* and *probable reserves*, is not mandatory under *NI 51-101*, except that a *reporting issuer* must make disclosure concerning its unproved *properties* and *resource* activities in its annual filings as described in Part 6 of *Form 51-101F1*. Additional disclosure beyond this is voluntary and must comply with section 5.9 of *NI 51-101* if *anticipated results* from the *resources* are voluntarily disclosed.

For prospectuses, the general securities disclosure obligation of “full, true and plain” disclosure of all *material* facts would require the disclosure of *reserves* or *resources* that are *material* to the issuer, even if the disclosure is not mandated by *NI 51-101*. Any such disclosure should be based on supportable analysis.

Disclosure of *resources* may involve the use of statistical measures that may be unfamiliar to a user. It is the responsibility of the evaluator and the *reporting issuer* to be familiar with these measures and for the *reporting issuer* to be able to explain them to investors. Information on statistical measures may be found in the *COGE*

Handbook (section 9 of volume 1 and section 4 of volume 2) and in the extensive technical literature⁴ on the subject.

- (2) **Disclosure of Anticipated Results under Subsection 5.9(1) of NI 51-101** - If a *reporting issuer* voluntarily discloses *anticipated results* from *resources* that are not classified as *reserves*, it must disclose certain basic information concerning the *resources*, which is set out in subsection 5.9(1) of *NI 51-101*. Additional disclosure requirements arise if the *anticipated results* disclosed by the issuer include an estimate of a *resource* quantity or associated value, as set out below in subsection 5.5(3).

If a *reporting issuer* discloses *anticipated results* relating to numerous aggregated *properties*, *prospects* or *resources*, the issuer may, depending on the circumstances, satisfy the requirements of subsection 5.9(1) by providing summarized information in respect of each prescribed requirement. The *reporting issuer* must ensure that its disclosure is reasonable, meaningful and at a level appropriate to its size. For a *reporting issuer* with only few *properties*, it may be appropriate to make the disclosure for each *property*. Such disclosure may be unreasonably onerous for a *reporting issuer* with many *properties*, and it may be more appropriate to summarize the information by major areas or for major projects. However, if a *reporting issuer* discloses an aggregate *resource* estimate (or associated value) referred to in subsection 5.9(2) of *NI 51-101*, the issuer must ensure that any aggregation of *properties* occurs within the most specific category of *resource* classification as required by paragraph 5.9(2)(b). A *reporting issuer* cannot aggregate *properties* across different categories of *resources* if a *resource* estimate referenced in subsection 5.9(2) is disclosed.

In respect of the requirement to disclose the risk and level of uncertainty associated with the *anticipated result* under paragraph 5.9(1)(d) of *NI 51-101*, risk and uncertainty are related concepts. Section 9 of volume 1 of the *COGE Handbook* provides the following definition of risk:

“Risk refers to a likelihood of loss and ... It is less appropriate to *reserves* evaluation because economic viability is a prerequisite for defining *reserves*.”

The concept of risk may have some limited relevance in disclosure related to *reserves*, for instance, for incremental *reserves* that depend on the installation of a compressor, the likelihood that the compressor will be installed. Risk is often relevant to the disclosure of *resource* categories other than *reserves*, in particular the likelihood that an exploration well will, or will not, be successful.

Section 9 of volume 1 of the *COGE Handbook* provides the following definition of uncertainty:

“Uncertainty is used to describe the range of possible outcomes of a *reserves* estimate.”

However, the concept of uncertainty is generally applicable to any estimate, including not only *reserves*, but also to all other categories of *resource*.

In satisfying the requirement of paragraph 5.9(1)(d) of *NI 51-101*, a *reporting issuer* should ensure that their disclosure includes the risks and uncertainties that are appropriate and meaningful for their activities. This may be expressed quantitatively as probabilities or qualitatively by appropriate description. If the *reporting issuer* chooses to express the risks and level of uncertainty qualitatively, the disclosure must be meaningful and not in the nature of a general disclaimer.

If the *reporting issuer* discloses the estimated value of an *unproved property* other than a value attributable to an estimated *resource* quantity, then the issuer must disclose the basis of the calculation of the value, in accordance with paragraph 5.9(1)(e). This type of value is typically based on petroleum land management practices that consider activities and land prices in nearby areas. If done *independently*, it would be done by a valuator with petroleum land management expertise who would generally be a member of a *professional organization* such as the Canadian Association of Petroleum Landmen. This is distinguishable from the determination of a value attributable to an estimated *resource* quantity, as contemplated in subsection 5.9(2). This latter type of value estimate must be prepared by a *qualified reserves evaluator or auditor*.

The calculation of an estimated value described in paragraph 5.9(1)(e) may be based on one or more of the following factors:

⁴ For example, Determination of Oil and Gas Reserves, Monograph No. 1, Chapter 22, Petroleum Society of CIM, Second Edition 2004. (ISBN 0-9697990-2-0) Newendorp, P., & Schuyler, J., 2000, Decision Analysis for Petroleum Exploration, Planning Press, Aurora, Colorado (ISBN 0-9664401-1-0). Rose, P. R., Risk Analysis and Management of Petroleum Exploration Ventures, AAPG Methods in Exploration Series No. 12, AAPG (ISBN 0-89181-062-1)

- the acquisition cost of the *unproved property* to the *reporting issuer*, provided there have been no material changes in the *unproved property*, the surrounding *properties*, or the general *oil* and *gas* economic climate since acquisition;
- recent sales by others of interests in the same *unproved property*;
- terms and conditions, expressed in monetary terms, of recent farm-in agreements related to the *unproved property*;
- terms and conditions, expressed in monetary terms, of recent work commitments related to the *unproved property*;
- recent sales of similar *properties* in the same general area;
- recent exploration and discovery activity in the general area;
- the remaining term of the *unproved property*; or
- burdens (such as overriding royalties) that impact on the value of the *property*.

The *reporting issuer* must disclose the basis of the calculation of the value of the *unproved property*, which may include one or more of the above-noted factors.

The *reporting issuer* must also disclose whether the value was prepared by an *independent* party. In circumstances in which paragraph 5.9(1)(e) applies and where the value is prepared by an *independent* party, 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.

(3) **Disclosure of an Estimate of Quantity or Associated Value of a Resource under Subsection 5.9(2) of NI 51-101**

(a) **Overview of Subsection 5.9(2) of NI 51-101**

Pursuant to subsection 5.9(2) of *NI 51-101*, if a *reporting issuer* discloses an estimate of a *resource* quantity or an associated value, the estimate must have been prepared by a *qualified reserves evaluator or auditor*. If a *reporting issuer* obtains or carries out an evaluation of *resources* and wishes to file or disseminate a report in a format comparable to that prescribed in *Form 51-101F2*, it may do so. However, the title of such a form must not contain the term "*Form 51-101 F2*" as this form is specific to the evaluation of *reserves data*. *Reporting issuers* must modify the report on *resources* to reflect that *reserves data* is not being reported. A heading such as "Report on Resource Estimate by Independent Qualified Reserves Evaluator or Auditor" may be appropriate. Although such an evaluation is required to be carried out by a *qualified reserves evaluator or auditor*, there is no requirement that it be *independent*. If an *independent* party does not prepare the report, *reporting issuers* should consider amending the title or content of the report to make it clear that the report has not been prepared by an *independent* party and the *resource* estimate is not an independent *resource* estimate.

The *COGE Handbook* recommends the use of probabilistic *evaluation* methods for making *resource* estimates, and although it does not provide detailed guidance there is a considerable amount of technical literature on the subject.

In addition, pursuant to section 5.3 and paragraph 5.9(2)(b) of *NI 51-101*, the *reporting issuer* must ensure that the estimated *resource* relates to the most specific category of *resources* in which the *resource* can be classified. As discussed above in subsection 5.5(2) of this Companion Policy, if a *reporting issuer* wishes to disclose an aggregate *resource* estimate which involves the aggregation of numerous *properties*, *prospects* or *resources*, it must ensure that the disclosure does not result in a contravention of the requirement in paragraph 5.9(2)(b) of *NI 51-101*.

Subsection 5.9(2) requires the *reporting issuer* to disclose certain information in addition to that prescribed in subsection 5.9(1) of *NI 51-101* to assist recipients of the disclosure in understanding the nature of risks associated with the estimate. This information includes a definition of the *resource* category used for the estimate, disclosure of factors relevant to the estimate and cautionary language.

(b) Definitions of Resource Categories

For the purpose of complying with the requirement of defining the *resource* category, the *reporting issuer* must ensure that disclosure of the definition is consistent with the *resource* categories and terminology set out in the *COGE Handbook*, pursuant to section 5.3 of *NI 51-101*. Section 5 of volume 1 of the *COGE Handbook* and the *NI 51-101 Glossary* identify and define the various *resource* categories.

A *reporting issuer* may wish to report *reserves* or *resources* of *oil* or *gas* as “in-place volumes”. By definition, *reserves* of any type, *contingent resources* and *prospective resources* are estimates of volumes that are recoverable or potentially recoverable and, as such, cannot be described as being “in-place”. Terms such as “potential *reserves*”, “undiscovered *reserves*”, “*reserves* in place”, “in-place *reserves*” or similar terms must not be used because they are incorrect and misleading. The disclosure of *reserves* or *resources* must be consistent with the *reserves* and *resources* terminology and categories set out in the *COGE Handbook*, pursuant to section 5.3 of *NI 51-101*.

The *reporting issuer* can report other categories of *resources*, such as discovered and *undiscovered resources*, as in-place volumes. However, the issuer should caution the reader that this does not represent recoverable volumes.

(c) Application of Subsection 5.9(2) of NI 51-101

If the *reporting issuer* discloses an estimate of a *resource* quantity or associated value, the *reporting issuer* must additionally disclose the following:

- (i) a definition of the *resource* category used for the estimate;
- (ii) the *effective date* of the estimate;
- (iii) significant positive and negative factors relevant to the estimate;
- (iv) the contingencies which prevent the classification of a contingent *resource* as a *reserve*; and
- (v) cautionary language as prescribed by subparagraph 5.9(2)(c)(v) of *NI 51-101*.

The *resource* estimate may be disclosed as a single quantity such as a median or mean, representing the best estimate. Frequently, however, the estimate consists of three values that reflect a range of reasonable likelihoods (the low value reflecting a conservative estimate, the middle value being the best estimate, and the high value being an optimistic estimate).

Guidance concerning defining the *resource* category is provided above in section 5.3 and paragraph 5.5(3)(b) of this Companion Policy.

Reporting issuers are required to disclose significant positive and negative factors relevant to the estimate pursuant to subparagraph 5.9(2)(c)(iii). For example, if there is no infrastructure in the region to transport the resource, this may constitute a significant negative factor relevant to the estimate. Other examples would include a significant lease expiry or any legal, capital, political, technological, business or other factor that is highly relevant to the estimate. To the extent that the *reporting issuer* discloses an estimate for numerous properties that are aggregated, it may disclose significant positive and negative factors relevant to the aggregate estimate, unless discussion of a particular material *resource* or *property* is warranted in order to provide adequate disclosure to investors.

The cautionary language in subparagraph 5.9(2)(c)(v) includes a prescribed disclosure that there is no certainty that it will be commercially viable to produce any portion of the resources. The concept of commercial viability would incorporate the meaning of the word “commercial” provided in the *NI 51-101 Glossary*.

The general disclosure requirements of paragraph 5.9(2)(c) of *NI 51-101* may be illustrated by an example. If a *reporting issuer* discloses, for example, an estimate of a volume of its *bitumen* which is a *contingent resource* to the issuer, the disclosure would include information of the following nature:

The *reporting issuer* holds a [●] interest in [provide description and location of interest]. As of [●] date, it estimates that, in respect of this interest, it has [●] bbls of *bitumen*, which would be classified

as a *contingent resource*. A *contingent resource* is defined as [cite current definition in the *COGE Handbook*]. There is no certainty that it will be commercially viable to produce any portion of the *resource*. The contingencies which currently prevent the classification of the *resource* as a *reserve* are [state specific capital costs required to render *production* economic, applicable regulatory considerations, pricing, specific supply costs, technological considerations, and/or other relevant factors]. A significant factor relevant to the estimate is [e.g.] an existing legal dispute concerning title to the interest.

To the extent that this information is provided in a previously filed document, and it relates to the same interest in *resources*, the issuer can omit disclosure of significant positive and negative factors relevant to the estimate and the contingencies which prevent the classification of the *resource* as a *reserve*. However, the issuer must make reference in the current disclosure to the title and date of the previously filed document.

5.6 **Analogous Information**

A *reporting issuer* may wish to base an estimate on, or include comparative *analogous information* for their area of interest, such as *reserves*, *resources*, and *production*, from *fields* or wells, in nearby or geologically similar areas. Particular care must be taken in using and presenting this type of information. Using only the best wells or *fields* in an area, or ignoring dry holes, for instance, may be particularly misleading. It is important to present a factual and balanced view of the information being provided.

The *reporting issuer* must comply with the disclosure requirements of section 5.10 of *NI 51-101*, when it discloses *analogous information*, as that term is broadly defined in *NI 51-101*, for an area which includes an area of the *reporting issuer's* area of interest. Pursuant to subsection 5.10(2) of *NI 51-101*, if the issuer discloses an estimate of its own *reserves* or *resources* based on an extrapolation from the *analogous information*, or if the *analogous information* itself is an estimate of its own *reserves* or *resources*, the issuer must ensure the estimate is prepared in accordance with the *COGE Handbook* and disclosed in accordance with *NI 51-101* generally. For example, in respect of a *reserves* estimate, the estimate must be classified and prepared in accordance with the *COGE Handbook* by a *qualified reserves evaluator or auditor* and must otherwise comply with the requirements of section 5.2 of *NI 51-101*.

5.7 **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. Issuers should refer to Appendices B and C of volume 1 of the *COGE Handbook* for the proper reporting of units of measurement.

In all cases, in accordance with subparagraph 5.2(a)(iii) and section 5.3 of *NI 51-101*, *reporting issuers* should apply the relevant terminology and unit prefixes set out in the *COGE Handbook*.

5.8 **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.

5.9 **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*.

5.10 Prospectus Disclosure

In addition to the general disclosure requirements in *NI 51-101* which apply to prospectuses, the following commentary provides additional guidance on topics of frequent enquiry.

- (1) **Significant Acquisitions** - To the extent that an issuer engaged in *oil and gas activities* discloses a significant acquisition in its prospectus, it must disclose sufficient information for a reader to determine how the acquisition affected the *reserves data* and other information previously disclosed in the issuer's *Form 51-101F1*. This requirement stems from Part 6 of *NI 51-101* with respect to material changes. This is in addition to specific prospectus requirements for financial information satisfying significant acquisitions.
- (2) **Disclosure of Resources** - The disclosure of *resources*, excluding proved and *probable reserves*, is generally not mandatory under *NI 51-101*, except for certain disclosure concerning the issuer's unproved *properties* and *resource* activities as described in Part 6 of *Form 51-101F1*, which information would be incorporated into the prospectus. Additional disclosure beyond this is voluntary and must comply with sections 5.9 and 5.10 of *NI 51-101*, as applicable. However, the general securities disclosure obligation of "full, true, and plain" disclosure of all *material* facts in a prospectus would require the disclosure of *resources* that are *material* to the issuer, even if the disclosure is not mandated by *NI 51-101*. Any such disclosure should be based on supportable analysis.
- (3) **Proved or Probable Undeveloped reserves** - Further to the guidance provided in subsection 5.2(4) of this Companion Policy, proved or probable *undeveloped reserves* must be reported in the year in which they are recognized. If the *reporting issuer* does not disclose the proved or probable *undeveloped reserves* just because it has not yet spent the capital to develop these *reserves*, it may be omitting *material* information, thereby causing the *reserves* disclosure to be misleading. If the issuer has a prospectus, the prospectus might not contain full, true and plain disclosure of all *material* facts if it does not contain information about these proved *undeveloped reserves*.
- (4) **Reserves Reconciliation in an Initial Public Offering** - In an initial public offering, if the issuer does not have a *reserves* report as at its prior year-end, or if this report does not provide the information required to carry out a *reserves* reconciliation pursuant to item 4.1 of *Form 51-101F1*, the CSA may consider granting relief from the requirement to provide the *reserves* reconciliation. A condition of the relief may include a description in the prospectus of relevant changes in any of the categories of the *reserves* reconciliation.
- (5) **Relief to Provide More Recent Form 51-101F1 Information in a Prospectus** - If an issuer is filing a preliminary prospectus and wishes to disclose *reserves data* and other *oil and gas* information as at a more recent date than its applicable year-end date, the CSA may consider relieving the issuer of the requirement to disclose the *reserves data* and other information as at year-end.

An issuer may determine that its obligation to provide full, true and plain disclosure obliges it to include in its prospectus *reserves data* and other *oil and gas* information as at a date more recent than specified in the prospectus requirements. The prospectus requirements state that the information must be as at the issuer's most recent financial year-end in respect of which the prospectus includes financial statements. The prospectus requirements, while certainly not presenting an obstacle to such more current disclosure, would nonetheless require that the corresponding information also be provided as at that financial year-end.

We would consider granting relief on a case-by-case basis to permit an issuer in these circumstances to include in its prospectus the *oil and gas* information prepared with an *effective date* more recent than the financial year-end date, without also including the corresponding information effective as at the year-end date. A consideration for granting this relief may include disclosure of *Form 51-101F1* information with an *effective date* that coincides with the date of interim financial statements. The issuer should request such relief in the covering letter accompanying its preliminary prospectus. The grant of the relief would be evidenced by the prospectus receipt.

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 the material change has affected the issuer's *reserves data* and other information contained in its filed disclosure. This would not necessarily require that an *evaluation* be carried out. However, the *reporting issuer* should ensure it complies with the general disclosure requirements set out in Part 5, as applicable. For example, if the material change report discloses an updated *reserves* estimate, this should be prepared in accordance with the *COGE Handbook* and by a *qualified reserves evaluator or auditor*.

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.

APPENDIX 1
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* do not mandate the format of the disclosure of *reserves data* and related information by *reporting issuers*. However, the CSA encourages *reporting issuers* to use the format presented in this Appendix.

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 1.4, 2.2 and 2.3 and subsections 2.7(8) and 2.7(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*.

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
as of December 31, 2006**

CONSTANT PRICES AND COSTS [OPTIONAL SUPPLEMENTAL DISCLOSURE]

RESERVES CATEGORY	RESERVES ⁽¹⁾							
	LIGHT AND MEDIUM OIL		HEAVY OIL		NATURAL GAS ⁽²⁾		NATURAL GAS LIQUIDS	
	Gross (Mbbbl)	Net (Mbbbl)	Gross (Mbbbl)	Net (Mbbbl)	Gross (MMcf)	Net (MMcf)	Gross (Mbbbl)	Net (Mbbbl)
PROVED								
Developed Producing	xx	xx	xx	xx	xx	xx	xx	xx
Developed Non-Producing	xx	xx	xx	xx	xx	xx	xx	xx
Undeveloped	xx	xx	xx	xx	xx	xx	xx	xx
TOTAL PROVED	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
PROBABLE	xx	xx	xx	xx	xx	xx	xx	xx
TOTAL PROVED PLUS PROBABLE	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx

(1) Other product types must be added if material.

(2) Estimates of reserves of natural gas may be reported separately for (i) associated and non-associated gas (combined), (ii) solution gas and (iii) coal bed methane.

 OPTIONAL SUPPLEMENTAL

**SUMMARY OF NET PRESENT VALUES OF FUTURE NET REVENUE
as of December 31, 2006**

CONSTANT PRICES AND COSTS [OPTIONAL SUPPLEMENTAL DISCLOSURE]

RESERVES CATEGORY	NET PRESENT VALUES OF FUTURE NET REVENUE										UNIT VALUE BEFORE INCOME TAX DISCOUNTED AT 10%/year (\$/Mcf) (\$/bbl)	
	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	xx	xx
Developed Non- Producing	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx
Undeveloped	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx
TOTAL PROVED	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
PROBABLE	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx
TOTAL PROVED PLUS PROBABLE	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxx

 OPTIONAL
SUPPLEMENTAL

Reference: Item 2.2 of Form 51-101F1

**TOTAL FUTURE NET REVENUE
(UNDISCOUNTED)
as of December 31, 2006**

CONSTANT PRICES AND COSTS [OPTIONAL SUPPLEMENTAL DISCLOSURE]

RESERVES CATEGORY	REVENUE (M\$)	ROYALTIES (M\$)	OPERATING COSTS (M\$)	DEVELOP- MENT COSTS (M\$)	ABANDON- MENT AND RECLAMATION COSTS (M\$)	FUTURE NET REVENUE BEFORE INCOME TAXES (M\$)	INCOME TAXES (M\$)	FUTURE NET REVENUE AFTER INCOME TAXES (M\$)
Proved Reserves	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
Proved Plus Probable Reserves	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx

 OPTIONAL
SUPPLEMENTAL

Reference: Item 2.2 of Form 51-101F1

**FUTURE NET REVENUE
BY PRODUCTION GROUP
as of December 31, 2006**

CONSTANT PRICES AND COSTS [OPTIONAL SUPPLEMENTAL DISCLOSURE]

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

 OPTIONAL SUPPLEMENTAL

Reference: Item 2.2 of Form 51-101 F1

**SUMMARY OF OIL AND GAS RESERVES
as of December 31, 2006**

FORECAST PRICES AND COSTS

RESERVES CATEGORY	RESERVES ⁽¹⁾							
	LIGHT AND MEDIUM OIL		HEAVY OIL		NATURAL GAS ⁽²⁾		NATURAL GAS LIQUIDS	
	Gross (Mbbbl)	Net (Mbbbl)	Gross (Mbbbl)	Net (Mbbbl)	Gross (MMcf)	Net (MMcf)	Gross (Mbbbl)	Net (Mbbbl)
PROVED								
Developed Producing	xx	xx	xx	xx	xx	xx	xx	xx
Developed Non-Producing	xx	xx	xx	xx	xx	xx	xx	xx
Undeveloped	xx	xx	xx	xx	xx	xx	xx	xx
TOTAL PROVED	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
PROBABLE	xx	xx	xx	xx	xx	xx	xx	xx
TOTAL PROVED PLUS PROBABLE	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx

(1) Other product types must be added if material.

(2) Estimates of reserves of natural gas may be reported separately for (i) associated and non-associated gas (combined), (ii) solution gas and (iii) coal bed methane.

**SUMMARY OF NET PRESENT VALUES OF FUTURE NET REVENUE
as of December 31, 2006
FORECAST PRICES AND COSTS**

RESERVES CATEGORY	NET PRESENT VALUES OF FUTURE NET REVENUE										UNIT VALUE BEFORE INCOME TAX DISCOUNTED AT 10%/year (\$/Mcf) (\$/bbl)	
	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	xx	xx
Developed Non- Producing	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx
Undeveloped	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx
TOTAL PROVED	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
PROBABLE	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx
TOTAL PROVED PLUS PROBABLE	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxx

- (1) A reporting issuer may wish to satisfy its requirement to disclose these unit values by inserting this disclosure for each category of proved reserves and for probable reserves, by production group, in the chart for item 2.1(3)(c) of *Form 51-101F1* (see sample chart below entitled Future Net Revenue by Production Group).
- (2) The unit values are based on net reserve volumes.

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

**TOTAL FUTURE NET REVENUE
(UNDISCOUNTED)
as of December 31, 2006
FORECAST PRICES AND COSTS**

RESERVES CATEGORY	REVENUE (M\$)	ROYALTIES (M\$)	OPERATING COSTS (M\$)	DEVELOP- MENT COSTS (M\$)	ABANDON- MENT AND RECLAMATION COSTS (M\$)	FUTURE NET REVENUE BEFORE INCOME TAXES (M\$)	INCOME TAXES (M\$)	FUTURE NET REVENUE AFTER INCOME TAXES (M\$)
Proved Reserves	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
Proved Plus Probable Reserves	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx

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

**FUTURE NET REVENUE
BY PRODUCTION GROUP
as of December 31, 2006
FORECAST PRICES AND COSTS**

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

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

**SUMMARY OF PRICING ASSUMPTIONS
as of December 31, 2006**

CONSTANT PRICES AND COSTS⁽¹⁾

Year	OIL ⁽²⁾				NATURAL GAS ⁽²⁾ AECO Gas Price (\$Cdn/MMBtu)	NATURAL GAS LIQUIDS FOB Field Gate (\$Cdn/bbl)	EXCHANGE RATE ⁽³⁾ (\$US/\$Cdn)
	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)			
Historical (Year End)							
2003	xx	xx	xx	xx	xx	xx	xx
2004	xx	xx	xx	xx	xx	xx	xx
2005	xx	xx	xx	xx	xx	xx	xx
2006 (Year End)	xx	xx	xx	xx	xx	xx	xx

 OPTIONAL SUPPLEMENTAL

- (1) This disclosure is triggered by optional supplemental disclosure of item 2.2 of *Form 51-101F1*.
- (2) This summary table identifies benchmark reference pricing schedules that might apply to a reporting issuer.
- (3) The exchange rate used to generate the benchmark reference prices in this table.

Reference: Item 3.1 of Form 51-101 F1

**SUMMARY OF PRICING AND INFLATION RATE ASSUMPTIONS
as of December 31, 2006**

FORECAST PRICES AND COSTS

Year	OIL ⁽¹⁾				NATURAL GAS ⁽¹⁾ AECO Gas Price (\$Cdn/MMBtu)	NATURAL GAS LIQUIDS FOB Field Gate (\$Cdn/bbl)	INFLATION RATES ⁽²⁾ %/Year	EXCHANGE RATE ⁽³⁾ \$US/\$Cdn
	WTI Cushing Oklahoma \$US/bbl	Edmonton Par Price 40 ⁰ API \$Cdn/bbl	Hardisty Heavy 12 ⁰ API \$Cdn/bbl	Cromer Medium 29.3 ⁰ API \$Cdn/bbl				
Historical ⁽⁴⁾								
2003	xx	xx	xx	xx	xx	xx	xx	xx
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
Forecast								
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
Thereafter	xx	xx	xx	xx	xx	xx	xx	xx

- (1) This summary table identifies benchmark reference pricing schedules that might apply to a reporting issuer.
- (2) Inflation rates for forecasting prices and costs.
- (3) Exchange rates used to generate the benchmark reference prices in this table
- (4) Item 3.2 (1)(b) of *Form 51-101F1* also requires disclosure of the *reporting issuer's* weighted average historical prices for the most recent financial year (2006, in this example).

 OPTIONAL SUPPLEMENTAL

Reference: Item 3.2 of Form 51-101 F1

**RECONCILIATION OF
COMPANY GROSS RESERVES
BY PRODUCT TYPE⁽¹⁾**

FORECAST PRICES AND COSTS

FACTORS	LIGHT AND MEDIUM OIL			HEAVY OIL			ASSOCIATED AND NON-ASSOCIATED GAS		
	Gross Proved (Mbbbl)	Gross Probable (Mbbbl)	Gross Proved Plus Probable (Mbbbl)	Gross Proved (Mbbbl)	Gross Probable (Mbbbl)	Gross Proved Plus Probable (Mbbbl)	Gross Proved (MMcf)	Gross Probable (MMcf)	Gross Proved Plus Probable (MMcf)
December 31, 2005	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
Extensions & Improved Recovery	xx	xx	xx	xx	xx	xx	xx	xx	xx
Technical Revisions	xx	xx	xx	xx	xx	xx	xx	xx	xx
Discoveries	xx	xx	xx	xx	xx	xx	xx	xx	xx
Acquisitions	xx	xx	xx	xx	xx	xx	xx	xx	xx
Dispositions	xx	xx	xx	xx	xx	xx	xx	xx	xx
Economic Factors	xx	xx	xx	xx	xx	xx	xx	xx	xx
Production	xx	xx	xx	xx	xx	xx	xx	xx	xx
December 31, 2006	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx

(1) The reserves reconciliation must include other product types, including synthetic oil, bitumen, coal bed methane, hydrates, shale oil and shale gas, if material for the reporting issuer.

Reference: Item 4.1 of Form 51-101F1