

Annex D

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. *Section 1.1 is amended by*

(a) deleting the paragraph numbering scheme;

(b) adding the following definitions:

"abandonment and reclamation costs" means all costs associated with the process of restoring a *reporting issuer's property* that has been disturbed by *oil and gas activities* to a standard imposed by applicable government or regulatory authorities;

"alternate reference point" means a location at which quantities and values of a *product type* are measured before the *first point of sale*;

"bitumen" means a naturally occurring solid or semi-solid *hydrocarbon*

- (a) consisting mainly of heavier *hydrocarbons*, with a viscosity greater than 10,000 millipascal-seconds (mPa·s) or 10,000 centipoise (cP) measured at the *hydrocarbon's* original temperature in the *reservoir* and at atmospheric pressure on a gas-free basis, and
- (b) that is not primarily recoverable at economic rates through a well without the implementation of enhanced recovery methods;

"by-product" means a substance that is recovered as a consequence of *producing a product type*;

"coal bed methane" means *natural gas* that

- (a) primarily consists of methane, and
- (b) is contained in a coal deposit;

(c) replacing the definition of "COGE Handbook" with the following:

"COGE Handbook" means the "Canadian Oil and Gas Evaluation Handbook" maintained by the Society of Petroleum Evaluation Engineers (Calgary Chapter), as amended from time to time;

(d) adding the following definitions:

“*contingent resources data*” means

- (a) an estimate of the volume of *contingent resources*, and
- (b) the *risked* net present value of *future net revenue of contingent resources*;

"*conventional natural gas*" means *natural gas* that has been generated elsewhere and has migrated as a result of hydrodynamic forces and is trapped in discrete *accumulations* by seals that may be formed by localized structural, depositional or erosional geological features;

"*first point of sale*" means the first point after initial *production* at which there is a transfer of ownership of a *product type*;

"*Form 51-101F5*" means Form 51-101F5 *Notice of Ceasing to Engage in Oil and Gas Activities*;

“*future net revenue*” means a forecast of revenue, estimated using *forecast prices and costs* or *constant prices and costs*, arising from the anticipated development and production of *resources*, net of the associated royalties, *operating costs*, *development costs*, and *abandonment and reclamation costs*;

"*gas hydrate*" means a naturally occurring crystalline substance composed of water and *gas* in an ice-lattice structure;

"*heavy crude oil*" means *crude oil* with a relative density greater than 10 degrees API gravity and less than or equal to 22.3 degrees API gravity;

"*hydrocarbon*" means a compound consisting of hydrogen and carbon, which, when naturally occurring, may also contain other elements such as sulphur;

"*light crude oil*" means *crude oil* with a relative density greater than 31.1 degrees API gravity;

"*medium crude oil*" means *crude oil* with a relative density greater than 22.3 degrees API gravity and less than or equal to 31.1 degrees API gravity;

"*natural gas*" means a naturally occurring mixture of *hydrocarbon* gases and other gases;

"*natural gas liquids*" means those *hydrocarbon* components that can be recovered from *natural gas* as a liquid including, but not limited to, ethane, propane, butanes, pentanes plus, and condensates;

(e) replacing the definition of “oil and gas activities” with the following:

“oil and gas activities” includes the following:

- (a) searching for a *product type* in its natural location;
- (b) acquiring *property* rights or a *property* for the purpose of exploring for or removing *product types* from their natural locations;
- (c) any activity necessary to remove *product types* from their natural locations, including construction, drilling, mining and production, and the acquisition, construction, installation and maintenance of *field* gathering and storage systems including treating, *field* processing and *field* storage;
- (d) producing or manufacturing of *synthetic crude oil* or *synthetic gas*;

but does not include any of the following:

- (e) any activity that occurs after the *first point of sale*;
- (f) any activity relating to the extraction of a substance other than a *product type* and their *by-products*;
- (g) extracting *hydrocarbons* as a consequence of the extraction of geothermal steam;

(f) adding the following definition:

“oil and gas metric” means a numerical measure of a *reporting issuer’s oil and gas activities*;

(g) repealing of the definition of “production group”;

(h) replacing the definition of “product type” with the following:

"product type" means any of the following:

- (a) *bitumen*;
- (b) *coal bed methane*;
- (c) *conventional natural gas*;
- (d) *gas hydrates*;
- (e) *heavy crude oil*;
- (f) *light crude oil* and *medium crude oil* combined;

(g) *natural gas liquids*;

(h) *shale gas*;

(i) *synthetic crude oil*;

(j) *synthetic gas*;

(k) *tight oil*;

(i) in the definition of “professional organization” replacing “Canadian jurisdiction” with “jurisdiction of Canada”;

(j) adding the following definition:

“*prospective resources data*” means

- (a) an estimate of the volume of *prospective resources*, and
- (b) the *risked* net present value of *future net revenue* of *prospective resources*;

(k) in the definition of “reserves data” replacing “; and” with “;”;

(l) adding the following definition:

“*risked*” means adjusted for the probability of loss or failure in accordance with the *COGE Handbook*;

“*shale gas*” means *natural gas*

- (a) contained in dense organic-rich rocks, including low-permeability shales, siltstones and carbonates, in which the *natural gas* is primarily adsorbed on the kerogen or clay minerals, and
- (b) that usually requires the use of hydraulic fracturing to achieve economic production rates;

(m) in the definition of “supporting filing” by replacing “.” with “;”;

(n) adding the following definitions:

“*synthetic crude oil*” means a mixture of liquid *hydrocarbons* derived by upgrading *bitumen*, *kerogen* or other substances such as coal, or derived from *gas* to liquid conversion and may contain sulphur or other compounds;

“*synthetic gas*” means a gaseous fluid

- (a) generated as a result of the application of an in-situ transformation

process to coal or other *hydrocarbon*-bearing rock; and

- (b) comprised of not less than 10% by volume of methane;

"*tight oil*" means *crude oil*

- (a) contained in dense organic-rich rocks, including low-permeability shales, siltstones and carbonates, in which the *crude oil* is primarily contained in microscopic pore spaces that are poorly connected to one another, and
- (b) that typically requires the use of hydraulic fracturing to achieve economic production rates.

3. Paragraph (b) of item 2 of section 2.1 is replaced with the following:

- (b) executed by one or more *qualified reserves evaluators or auditors* each of whom is *independent* of the *reporting issuer* and who must have,
 - (i) in the aggregate,
 - (A) *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
 - (B) *reviewed* the balance of that *future net revenue*, and
 - (ii) *evaluated or audited* the *contingent resources data or prospective resources data* reported in the statement filed or to be filed under item 1..

4. Paragraph (B) of item 3(e)(ii) of section 2.1 is replaced with the following:

- (B) if the *reporting issuer* has only three directors, two of whom are the persons referred to in subparagraph (i), all of the directors of the *reporting issuer*..

5. Subsection 2.4(1) is amended by

- (a) *deleting* “on reserves data”,
- (b) *inserting* “on reserves data, contingent resources data or prospective resources data” *after* “without reservation”, *and*
- (c) *inserting* “, contingent resources data, or prospective resources data” *after* “on the reserves data”.

6. Section 3.2 is replaced with the following:

3.2 Reporting Issuer to Appoint Independent Qualified Reserves Evaluator or Independent Qualified Reserves Auditor

- (1) A reporting issuer must appoint one or more *qualified reserves evaluators*, or *qualified reserves auditors*, each of whom is *independent* of the *reporting issuer*, and must direct each appointed evaluator or auditor to report to the board of directors of the *reporting issuer* on the *reserves data* disclosed in the statement prepared for the purpose of item 1 of section 2.1.
- (2) If a *reporting issuer* discloses *contingent resources data* or *prospective resources data* in a statement prepared for the purpose of item 1 of section 2.1, the *reporting issuer* must appoint one or more *qualified reserves evaluators* or *qualified reserves auditors* and must direct each appointed evaluator or auditor to report to the board of directors of the *reporting issuer* on all *contingent resources data* and *prospective resources data* included in the statement..

7. Section 3.4 is amended by adding “, contingent resources data or prospective resources data” after each instance of “reserves data”.

8. Section 5.2 is amended by renumbering it as subsection 5.2(1) and by adding the following subsection:

- (2) Disclosure referred to under subsection (1) must indicate whether the estimates of *reserves* or *future net revenue* were prepared by an *independent qualified reserves evaluator or qualified reserves auditor*..

9. Section 5.3 is amended by replacing “categories” with “category”.

10. Section 5.4 is replaced with the following:

5.4 Oil and Gas Resources and Sales

- (1) Disclosure of *resources* or of sales of *product types* or associated *by-products* must be made with respect to the *first point of sale*.
- (2) Despite subsection (1), a *reporting issuer* may disclose *resources* or sales of *product types* or associated *by-products* with respect to an *alternate reference point* if, to a reasonable person, the *resources*, *product types* or associated *by-products* would be marketable at the *alternate reference point*.

- (3) If a *reporting issuer* discloses *resources* or sales of *product types* or associated *by-products* with respect to an *alternate reference point*, the *reporting issuer* must
- (a) state that the disclosure is made with respect to an *alternate reference point*,
 - (b) disclose the location of the *alternate reference point*, and
 - (c) explain why disclosure is not being made with respect to the *first point of sale*..

11. Section 5.5 is replaced with the following:

5.5 Recovery of Product Types or By-Products - Disclosure of *product types* or *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 *first point of sale*, or an *alternate reference point*, as applicable..

12. Section 5.7 is repealed.

13. Section 5.9 is amended by

(a) in paragraph (2)(d), adding the following:

“(iii.1) a description of the applicable project or projects including the following:

- (A) the estimated total cost required to achieve *commercial production*;
- (B) the general timeline of the project, including the estimated date of first *commercial production*;
- (C) the recovery technology;
- (D) whether the project is based on a *conceptual or pre-development study*;

(b) in clause (2)(d)(v)(A) replacing “no certainty” with “uncertainty”,

(c) in subsection (3), replacing “(2)(c)(iii)” with “(2)(d)(iii), (iii.1)”, and

(d) adding the following:

- (4) Any disclosure made under subsection (1) or (2) must indicate whether the *anticipated results* from *resources* which are not currently classified as

reserves or the estimate of a quantity of *resources* other than *reserves* were prepared by an *independent qualified reserves evaluator or auditor*.

14. Sections 5.11, 5.12 and 5.13 are repealed.

15. Section 5.14 is replaced with the following:

5.14 Disclosure Using *Oil and Gas Metrics*

- (1) If a *reporting issuer* discloses an *oil and gas metric*, other than an estimate of the volume or value of *resources* prepared in accordance with section 5.2, 5.9 or 5.18 or a comparative or equivalency measure under Part 2, 3, 4, 5, 6 or 7 of *Form 51-101F1*, the *reporting issuer* must include disclosure that
 - (a) identifies the standard and source of the *oil and gas metric*, if any,
 - (b) provides a brief description of the method used to determine the *oil and gas metric*,
 - (c) provides an explanation of the meaning of the *oil and gas metric*, and
 - (d) cautions readers as to the reliability of the *oil and gas metric*.
- (2) If there is no identifiable standard for an *oil and gas metric*, the *reporting issuer* must also include disclosure that
 - (a) provides a brief description of the parameters used in the calculation of the *oil and gas metric*, and
 - (b) states that the *oil and gas metric* does not have any standardized meaning and should not be used to make comparisons..

16. Section 5.15 is repealed.

17. Paragraph 5.16(3)(b) is amended by replacing “5.9(2)(c)(v)(A)” with “5.9(2)(d)(v)(A)” and by replacing “5.9(2)(c)(v)(B)” with “5.9(2)(d)(v)(B)”.

18. Part 5 is amended by adding the following:

5.18 Supplementary Disclosure of *Resources* Using Evaluation Standards other than the *COGE Handbook*

- (1) A *reporting issuer* may supplement disclosure provided in accordance with section 5.2, 5.3 or 5.9 with an estimate of the volume or the value of *resources* prepared in accordance with an alternative *resources* evaluation standard that

- (a) has a comprehensive framework for the evaluation of *resources*,
 - (b) defines *resources* using terminology and categories in a manner that is consistent with the terminology and categories of the *COGE Handbook*,
 - (c) has a scientific basis, and
 - (d) requires that estimates of volume and value of *resources* be based on reasonable assumptions.
- (2) If disclosure is made under subsection (1) and that disclosure is required under the laws of or by a *foreign jurisdiction*, the *reporting issuer* must, proximate to the disclosure,
- (a) disclose the *effective date* of the estimate,
 - (b) describe any significant differences, and the reasons those differences exist, between the estimate prepared in accordance with the alternative *resources* evaluation standard and the estimate prepared in accordance with the *COGE Handbook*, and
 - (c) include a reference to the location on the *SEDAR* website of the estimate prepared
 - (i) in accordance with section 5.2, 5.3 or 5.9, as applicable, and
 - (ii) at the same effective date as the alternative disclosure.
- (3) If disclosure is made under subsection (1) and the disclosure is not required by a foreign jurisdiction, the *reporting issuer* must, proximate to the disclosure,
- (a) disclose the *effective date* of the estimate,
 - (b) provide a description of the alternative *resources* evaluation standard,
 - (c) describe any significant differences, and the reasons those differences exist, between the estimate prepared in accordance with the alternative *resources* evaluation standard and the estimate prepared in accordance with the *COGE Handbook*, and
 - (d) disclose the estimate prepared
 - (i) in accordance with section 5.2, 5.3 or 5.9, as applicable, and
 - (ii) at the same *effective date* as the disclosure provided under subsection (1).

- (4) An estimate under subsection (1) must have been prepared or *audited* by a *qualified reserves evaluator or auditor*.

19. Part 6 is amended by

- (a) **adding “AND CEASING TO ENGAGE IN OIL AND GAS ACTIVITIES” after “MATERIAL CHANGE DISCLOSURE” in the heading,**
- (b) **replacing “Part” with “section” in section 6.1, and**
- (c) **adding the following:**

6.2 Ceasing to Engage in Oil and Gas Activities - A reporting issuer must file with the *securities regulatory authority* a notice prepared in accordance with *Form 51-101F5* not later than 10 days after ceasing to be engaged, directly or indirectly, in *oil and gas activities*.

20. Section 8.1 is amended by adding the following:

- (3) Except in Ontario, an exemption referred to in subsection (1) is granted under the statute referred to in Appendix B of National Instrument 14-101 *Definitions*, opposite the name of the local jurisdiction.

21. General Instruction (2) of Form 51-101F1 is amended by replacing “its financial year then ended” with “the financial year then ended”.

22. General Instruction (5) of Form 51-101F1 is amended by adding “, and that contingent resource data and prospective resource data only appears in an appendix to Form 51-101F1” after “not omitted”.

23. Instruction (4) of Item 1.1 of Form 51-101F1 is amended by inserting “statement” after “should ensure its financial”.

24. Subsection 3(c) of Item 2.1 of Form 51-101F1 is replaced with the following:

- (c) Disclose, by *product type*, in each case with associated *by-products*, and on a unit value basis for each *product type*, in each case with associated *by-products* (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.

25. Item 2.1 of Form 51-101F1 is amended by inserting the following at the end of the item:

INSTRUCTIONS

- (1) *Disclose all of the **reserves** in respect of which the **reporting issuer** has a direct or indirect ownership, working or royalty interest. These concepts are explained in sections 5.5.4(a) “Ownership Considerations” and 7.5 “Interests” of volume 1 of the **COGE Handbook**, section 5.2 “Ownership Considerations” of volume 2 of the **COGE Handbook** and, with respect to an entitlement to share **production** under a **production** sharing agreement, section 4.0 “Fiscal Regimes” of the chapter entitled “Reserves Recognition For International Properties” of volume 3 of the **COGE Handbook**.*
- (2) *Do not include, in the **reserves data** a **product type** 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 **product type** 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 the **product type** received by the **reporting issuer** under the agreement during the year ended on the **effective date**.*
- (3) ***Future net revenue** includes the portion attributable to the **reporting issuer's** interest under an agreement referred to in Instruction (2).*
- (4) *If the **reporting issuer's** disclosure of **reserves** would, to a reasonable person, be misleading, if stated without an explanation of the **reporting issuer's** ownership of or control over those **reserves**, explain the nature of the **reporting issuer's** ownership of or control over **reserves** disclosed in the statement filed or to be filed under item 1 of section 2.1 of **NI 51-101**.*

26. Items 2.3 and 2.4 of Form 51-101F1 are repealed.

27. Item 3.2 of Form 51-101F1 is amended by repealing Instruction (3).

28. Subsections 2(b) and (c) of Item 4.1 of Form 51-101F1 are replaced with the following:

- (b) for each of the following:
 - (i) bitumen;

- (ii) *coal bed methane*;
 - (iii) *conventional natural gas*;
 - (iv) *gas hydrates*;
 - (v) *heavy crude oil*;
 - (vi) *light crude oil and medium crude oil combined*;
 - (vii) *natural gas liquids*;
 - (viii) *shale gas*;
 - (ix) *synthetic crude oil*;
 - (x) *synthetic gas*;
 - (xi) *tight oil*;
- (c) separately identifying and explaining each of the following:
- (i) extensions and improved recovery;
 - (ii) technical revisions;
 - (iii) discoveries;
 - (iv) acquisitions;
 - (v) dispositions;
 - (vi) economic factors;
 - (vii) *production..*

29. Item 5.1 of Form 51-101F1 is amended by

- (a) deleting** “and, in the aggregate, before that time” ***wherever it occurs***,
- (b) replacing** “not planning to develop particular” ***with*** “deferring the development of particular” ***wherever it occurs***,
- (c) replacing** “during the following two years” ***with*** “beyond two years” ***wherever it occurs, and***

(d) adding the following instructions:

INSTRUCTIONS

- (1) *The phrase “first attributed” refers to the initial allocation of an undeveloped volume of oil or gas reserves by a reporting issuer. Only previously unassigned undeveloped volumes of oil or gas reserves may be included in the first attributed volumes for the applicable financial year. For example, if in 2011 a reporting issuer allocated by way of acquisition, discovery, extension and improved recovery 300 MMcf of proved undeveloped conventional natural gas reserves, that would be the first attributed volume for 2011.*
- (2) *The discussion of a reporting issuer’s plans for developing undeveloped reserves, or the reporting issuer’s reasons for deferring the development of undeveloped reserves, must enable a reasonable investor to assess the efforts made by the reporting issuer to convert undeveloped reserves to developed reserves..*

30. Item 5.2 of Form 51-101F1 is replaced with the following:

Item 5.2 Significant Factors or Uncertainties Affecting Reserves Data

Identify and discuss significant economic factors or significant uncertainties that affect particular components of the reserves data.

INSTRUCTIONS

- (1) *A reporting issuer must, under this Item, include a discussion of any significant abandonment and reclamation costs, unusually high expected development costs or operating costs, 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.*
- (2) *If the information required by this Item is presented in the reporting issuer's financial statements and notes thereto for the most recent financial year ended, the reporting issuer satisfies this Item by directing the reader to that presentation..*

31. Item 6.2.1 of Form 51-101F1 is replaced with the following:

Item 6.2.1 Significant Factors or Uncertainties Relevant to *Properties with No Attributed Reserves*

Identify and discuss significant economic factors or significant uncertainties that have affected or are reasonably expected to affect the anticipated development or production activities on *properties* with no attributed *reserves*.

INSTRUCTIONS

- (1) *A reporting issuer must, under this Item, include a discussion of any significant **abandonment and reclamation costs**, unusually high expected **development costs** or **operating costs**, 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.*
- (2) *If the information required by this Item is presented in the **reporting issuer's** financial statements and notes thereto for the most recent financial year ended, the **reporting issuer** satisfies this Item by directing the reader to that presentation..*

32. Item 6.4 of Form 51-101F1 is repealed.

33. Item 6.6 of Form 51-101F1 is replaced with the following:

Item 6.6 Costs Incurred

Disclose by country for the most recent financial year ended each of the following:

- (a) *property acquisition costs, separately for *proved properties* and *unproved properties*;*
- (b) *exploration costs;*
- (c) *development costs.*

INSTRUCTION

*If the costs specified in paragraphs (a), (b) and (c) are presented in the **reporting issuer's** financial statements and the notes to those statements for the most recent financial year ended, the **reporting issuer** satisfies this Item by directing the reader to that presentation..*

34. *Item 6.9 of Form 51-101F1 is amended by replacing “To the extent not previously disclosed in financial statements by the reporting issuer, disclose” with “Disclose.”*
35. *Form 51-101F1 is amended by adding the following:*

**PART 7 OPTIONAL DISCLOSURE OF CONTINGENT RESOURCES DATA
AND PROSPECTIVE RESOURCES DATA**

INSTRUCTIONS

- (1) *A reporting issuer may disclose **contingent resources data** or **prospective resources data** in a statement of the **reserves data** and other information filed under item 1 of section 2.1 of NI 51-101, however, that data must only be disclosed as an appendix to that statement.*
- (2) *The following cautionary statement must be included in bold font and appear proximate to the **risked** net present value of **future net revenue** associated with **contingent resources** or **prospective resources**:*

An estimate of risked net present value of future net revenue of [contingent resources][and][prospective resources] is preliminary in nature and is provided to assist the reader in reaching an opinion on the merit and likelihood of the company proceeding with the required investment. It includes [contingent resources][and][prospective resources] that are considered too uncertain with respect to the [chance of development][and][chance of discovery] to be classified as reserves. There is uncertainty that the risked net present value of future net revenue will be realized.

- (3) *A reporting issuer may not rely on subsection 5.9(3) of NI 51-101 for disclosure required to be included in this Part.*
- (4) *If a reporting issuer’s disclosure of **contingent resources** or **prospective resources** would, to a reasonable person, be misleading if not accompanied by an explanation of the **reporting issuer’s** ownership of or control over those **resources**, explain the nature of the **reporting issuer’s** ownership of or control over all **contingent resources** and **prospective resources** disclosed in the statement filed or to be filed under item 1 of section 2.1 of NI 51-101.*
- (5) *A reporting issuer’s disclosure respecting the value of **prospective resources** or **contingent resources** that are not in the **development pending project maturity sub-class** must be **risked** and must include an explanation of the factors considered respecting the **chance of commerciality**, which includes both **chance of discovery** and **chance of development** in the case of **prospective resources** and **chance of development** in the case of **contingent resources**.*

GUIDANCE

- (1) A **reporting issuer** is subject to sections 5.9 and 5.17 of NI 51-101 when providing disclosure of **contingent resources data** or **prospective resources data** in this **Form**.
- (2) A **reporting issuer** providing disclosure of **contingent resources data** or **prospective resources data** in this **Form** must have an evaluation process for **contingent resources** or **prospective resources** that
 - (a) is at least as rigorous as would be the case for **reserves data**, and
 - (b) is recognized as well-established in the oil and gas industry.
- (3) An evaluation process described in subsection (2) is not needed if a reasonable **qualified evaluator or auditor** would conclude that it is not necessary in the circumstances.
- (4) All public disclosure by **reporting issuers** is subject to the general prohibition against misleading statements. The disclosure of development on-hold, development unclarified or development not viable **contingent resources**, or **prospective resources**, in the statement of **reserves data** and other oil and gas information might be misleading where there is a significant degree of uncertainty and risk associated with those estimates.

Item 7.1 Contingent Resources Data

1. If a **reporting issuer** discloses **contingent resources** in the statement filed under item 1 of section 2.1 of NI 51-101, the **reporting issuer** must disclose all of the following:
 - (a) the **risked 2C contingent resources volumes**, gross and net, for each **product type**, and classified in each applicable **project maturity sub-class**;
 - (b) if **contingent resources** in the **development pending project maturity sub-class** are disclosed, the **risked net present value of future net revenue** of the **2C contingent resources** in the **development pending project maturity sub-class**, calculated using **forecast prices and costs** for each **product type**, before deducting **future income taxes** and using discount rates of 0 percent, 5 percent, 10 percent, 15 percent and 20 percent.

2. Disclose the numeric value of the chance of development risk and describe the method of all of the following:
 - (a) quantifying the *chance of development* risk;
 - (b) estimating the *contingent resources* adjusted for *chance of development* risk and the associated *risked* net present value of *future net revenue*.

Item 7.2 Prospective Resources Data

1. If a *reporting issuer* discloses *prospective resources* in the statement filed under item 1 of section 2.1 of *NI 51-101*, disclose the best estimate *prospective resources, gross and net*, for each *product type*.
2. Disclose the numeric value of the *chance of discovery* and *chance of development* and describe the method of all of the following:
 - (a) quantifying the *chance of discovery* and *chance of development*;
 - (b) estimating the *prospective resources* adjusted for *chance of discovery* and *chance of development*.

Item 7.3 Forecast Prices Used in Estimates

1. For each *product type*, disclose the pricing assumptions used in estimating *contingent resources data* and *prospective resources data* disclosed in response to Item 7.1 for each of the five years following the most recently completed 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. The pricing assumptions included in section 1 must be the same as the pricing assumptions disclosed in response to Part 3 of this *Form 51-101F1*.

INSTRUCTIONS

- (1) *Benchmark reference prices may be obtained from sources such as public product trading exchanges or prices posted by purchasers.*
- (2) *The defined term "**forecast prices and costs**" includes 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. Such*

*contractually committed prices must be used, instead of benchmark reference prices for the purpose of estimating **contingent resources data** and **prospective resources data**, unless a reasonable investor would find the use those contractually committed prices misleading.*

Item 7.4 Supplemental Contingent Resources Data

The reporting issuer may supplement its disclosure of *contingent resources data* under Item 7.1 by also disclosing estimates of *contingent resources* together with estimates of associated *risked* net present value of *future net revenue*, determined using *constant prices and costs* rather than *forecast prices and costs* for each applicable *product type*.

36. Form 51-101F2 is replaced with the following:

FORM 51-101F2
REPORT ON [RESERVES DATA][,][CONTINGENT RESOURCES DATA][AND]
[PROSPECTIVE RESOURCES 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.
2. The report on *reserves data*, *contingent resources data* or *prospective resources data*, if applicable, 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 in the following form:

Report on [Reserves Data][,][Contingent Resources Data][and][Prospective Resources Data] by Independent Qualified Reserves Evaluator or Auditor

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

1. We have [audited][,][and][evaluated][or reviewed] the Company's [reserves data][,][contingent resources data][and][prospective resources data] as at [last day of the reporting issuer's most recently completed financial year]. ***[If the Company has reserves, include the following sentence:*** 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. ***[If the Company has disclosed contingent resources data or prospective resources data, include the following sentence:*** The [contingent resources data] [and] [prospective resources data] are

risked estimates of volume of [contingent resources][and][prospective resources] and related risked net present value of 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][,][contingent resources data][and][prospective resources data] are the responsibility of the Company's management. Our responsibility is to express an opinion on the [reserves data][,][contingent resources data][and][prospective resources data] based on our [audit][,][and][evaluation][and review].

(d) We carried out our [audit][,][and][evaluation][and review] in accordance with standards set out in the Canadian Oil and Gas Evaluation Handbook as amended from time to time (the "COGE Handbook") maintained by the Society of Petroleum Evaluation Engineers (Calgary Chapter).

3. Those standards require that we plan and perform an [audit][,][and][evaluation][and review] to obtain reasonable assurance as to whether the [reserves data][,][contingent resources data][and][prospective resources data] are free of material misstatement. An [audit][,][and][evaluation][and review] also includes assessing whether the [reserves data] [,][contingent resources data][and][prospective resources data] are in accordance with principles and definitions presented in the COGE Handbook.
4. ***[If the Company has reserves, include this paragraph:]*** The following table shows the net present value of 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][,][and][evaluated][and reviewed] for the year ended [last day of the reporting issuer's most recently completed financial year], and identifies the respective portions thereof that we have [audited][,][and][evaluated] [and reviewed] and reported on to the Company's [management/board of directors]:

Independent Qualified Reserves Evaluator or Auditor	Effective 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 ¹

1. This amount must 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*) attributed 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 ***[If the Company has disclosed contingent resources data or prospective resources data, include this paragraph and the tables:]*** The following tables set forth the risked volume and risked net present value of future net revenue of [contingent resources][and][prospective resources] (before deduction of income taxes) attributed to [contingent resources][and][prospective resources], estimated using forecast prices and costs and calculated using a discount rate of 10%, included in the Company's statement prepared in accordance with Form 51-101F1 and identifies the respective portions of the [contingent resources data][and][prospective resources data] that we have [audited][and][evaluated] and reported on to the Company's [management/board of directors]:

Classification	Independent Qualified Reserves Evaluator or Auditor	Effective Date of [Audit/ Evaluation] Report	Location of Resources Other than Reserves (Country or Foreign Geographic Area)	Risky Volume	Risky Net Present Value of Future Net Revenue (before income taxes, 10% discount rate)		
					Audited	Evaluated	Total
Development Pending Contingent Resources (2C)	Evaluator	xxx xx, 20xx	xxxx	xxx	\$xxx	\$xxx	\$xxx

Classification	Independent Qualified Reserves Evaluator or Auditor	Effective Date of [Audit/ Evaluation] Report	Location of Resources Other than Reserves (Country or Foreign Geographic Area)	Risky Volume
Prospective Resources	Evaluator	xxx xx, 20xx	xxxx	xxx
Contingent Resources	Evaluator	xxx xx, 20xx	xxxx	xxx

[project maturity sub-classes other than Development Pending]

- In our opinion, the [reserves data][,][contingent resources data][and][prospective resources data] respectively [audited][and][evaluated] by us have, in all material respects, been determined and are in accordance with the COGE Handbook, consistently applied. We express no opinion on the [reserves data][,][contingent resources data][and] [prospective resources data] that we reviewed but did not audit or evaluate.
- We have no responsibility to update our reports referred to in paragraph[s] [4][and][4.1] for events and circumstances occurring after the effective date of our reports.

7. Because the [reserves data][,][contingent resources data][and][prospective resources data] are based on judgements regarding future events, actual results will vary and the variations may be material.

Executed as to our report referred to above:

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

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

37. Form 51-101F3 is replaced with the following:

**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.
2. The report referred to in item 3 of section 2.1 of *NI 51-101* must in all *material* respects be in the following form:

**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 [and includes, if disclosed in the statement required by item 1 of section 2.1 of *NI 51-101*, other information such as contingent resources data or prospective resources data].

[Alternative A: Reserves Data to Report or Contingent Resources Data or Prospective Resources Data to Report]

[An] independent [qualified reserves evaluator[s] or qualified reserves auditor[s]] [has/have] [audited][,][and][evaluated][and reviewed] the Company's [reserves data][,][contingent resources data][and][prospective resources 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][,][contingent resources data][and][prospective resources 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][,][contingent resources data][and][prospective resources 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, contingent resources data, or prospective resources data; and
- (c) the content and filing of this report.

Because the [reserves data][,][contingent resources data][and][prospective resources data] are based on judgements regarding future events, actual results will vary and the variations may be material.

[Alternative B: No Reserves to Report and No Resources Other than Reserves to Report]

The [Reserves Committee of the] board of directors of the Company has reviewed the oil and gas activities of the Company and has determined that the Company had no reserves as of [last day of the reporting issuer's most recently completed financial year].

An independent qualified reserves evaluator or qualified reserves auditor has not been retained to evaluate the Company's reserves data. No report of an independent qualified reserves evaluator or qualified reserves auditor will be filed with securities regulatory authorities with respect to the financial year ended on [last day of the reporting issuer's most recently completed financial year].

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 information detailing the Company's oil and gas activities; and
- (b) the content and filing of this report.

[signature, name and title of chief executive officer]

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

[signature, name of a director]

[signature, name of a director]

[Date]

38. *The Instrument is amended by adding the following:*

FORM 51-101F5
NOTICE OF
CEASING TO ENGAGE IN OIL AND GAS ACTIVITIES

This is the form referred to in section 6.2 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.
2. The notice referred to in section 6.2 of NI 51-101 must in all *material* respects be in the following form:

Notice of
Ceasing to Engage in Oil and Gas Activities

Management and the board of directors of [name of reporting issuer] (the "Company") have determined that as of [date] the Company is no longer engaged, directly or indirectly, in oil and gas activities.

[signature, name and title of chief executive officer]

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

[signature, name of a director]

[signature, name of a director]

[Date]

39. *All footnotes and references to footnotes are repealed.*

40. This *Instrument* comes into force on July 1, 2015