### CSA/ACVM

#### Notice

**Request for Comment** 

**Proposed Amendments to** 

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,

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

#### January 19, 2007

#### Background

We, the Canadian Securities Administrators (CSA), are publishing for comment proposed amendments to National Instrument 51-101 *Standards of Disclosure for Oil and Gas Activities* (NI 51-101), its related forms (the Forms) and companion policy (51-101CP) (collectively, the Instrument).<sup>1</sup>

NI 51-101 sets out the annual filing requirements for reporting issuers who are involved in oil and gas activities to report their estimates of reserves and resources. In addition, NI 51-101 sets out the general disclosure standards for reporting issuers who are reporting on their oil and gas activities. The disclosure standards apply to any disclosure made by a reporting issuer throughout the year.

Since the CSA implemented the Instrument in September 2003, we have monitored how it is working. We conducted a public consultation with representatives from various organizations representing petroleum producers, reserves evaluators and financial analysts. As a result of the consultation and CSA staff experience, we identified several areas in the Instrument which need to be amended.

We are publishing the proposed amendments to the Instrument with this Notice. You can find them on websites of CSA members, including the following:

- <u>www.bcsc.bc.ca</u>
- <u>www.albertasecurities.com</u>
- www.ssc.gov.sk.ca
- www.msc.gov.mb.ca
- <u>www.osc.gov.on.ca</u>
- <u>www.lautorite.qc.ca</u>

<sup>&</sup>lt;sup>1</sup> In Ontario, paragraphs 143(1) 22, 24 and 39 of the Securities Act provide the Ontario Securities Commission with authority to make the proposed amendments to NI 51-101.

We are publishing

- amending instruments for
  - NI 51-101
  - the Forms
- new version of 51-101CP

We are also publishing a black-lined version of NI 51-101 and the Forms that integrates the proposed changes from the amending instrument.

#### Substance and purpose of the amendments

The proposed amendments to the Instrument fall into the following four broad categories:

- 1. Amendments to clarify some provisions of the Instrument.
- 2. Amendments to remove or amend certain requirements for the annual filing requirements where such requirements were determined to be burdensome for reporting issuers and of limited utility for investors and security holders.
- 3. Amendments to certain provisions to provide new guidelines for disclosure of resources that cannot currently be classified as reserves.
- 4. Amendments to streamline requirements in the Instrument.

#### Summary of proposed amendments

We have summarized the significant proposed amendments in the Appendix. This is not a complete list of all the amendments.

We have added certain requirements for a reporting issuer which reports its resources which cannot currently be classified as reserves. These additional requirements are intended to improve disclosure of resources and to provide additional guidance to reporting issuers wishing to make meaningful and understandable disclosure of their oil and gas resources.

We have removed the requirement to report reserves and the related future net revenue using constant prices and cost. We have also removed the requirement to do a reconciliation of future net revenue. Finally, we have changed the requirement to do a reserves reconciliation using net reserves to doing the reserves reconciliation using gross reserves.

#### **Alternatives considered**

As discussed above, many of the amendments are intended to clarify the Instrument or to streamline requirements. One alternative to amending the Instrument was to issue a CSA Staff Notice to provide additional guidance on reserve and resource disclosure. However, to provide the appropriate degree of certainty, clarity and consistency among affected reporting issuers, we considered it preferable to amend, replace and add provisions to the Instrument itself. The CSA has issued CSA Staff Notice 51-321 to provide guidance to reporting issuers wishing to disclose their resources prior to these amendments coming into force.

#### Anticipated costs and benefits

We believe that the proposed amendments to the Instrument will reduce issuers' costs, as the amendments will address problems industry has had applying the Instrument. In addition, the

amendments do not impose any additional mandatory requirements but only add requirements if a reporting issuer chooses to disclose certain items. We also believe that the amendments will make reporting issuers' disclosure about oil and gas reserves and resources more meaningful and understandable to investors and security holders.

#### **Related amendments**

We propose to repeal National Policy 22 *Use of Information and Opinion Re Mining and Oil Properties by Registrants and Others* as it is outdated and been largely replaced by guidance on use of information in Part 5 of Companion Policy 43-101 *Standards of Disclosure for Mineral Projects* and Companion Policy 51-101CP *Standards of Disclosure for Oil and Gas Activities.* (Note: National Policy 22 has already been repealed in the Province of Quebec)

#### **Unpublished materials**

In proposing amendments to the Instrument, we have not relied on any significant unpublished study, report, or other written materials, except the results of the public consultation we referred to above.

#### **Request for comments**

We welcome your comments on the proposed amendments to the Instrument. In addition to any general comments you may have, we also invite comments on the following specific topic:

Section 3.2 of NI 51-101 requires that a reporting issuer appoint an independent qualified reserves evaluator or auditor and section 3.4 of NI 51-101 expressly requires that the board of directors (directly or through a reserves committee) review that appointment. The responsibility for making the appointment is not specified in the rule. Would there be a material enhancement to investor protection if the rule required the board to appoint the independent reserves evaluator or auditor in addition to the existing appointment review requirement?

Please submit your comments on the proposed amendments to the Instrument in writing on or before **April 19, 2007**. If you are not sending your comments by email, you should also forward a diskette containing the submissions (in Windows format, Word).

Address your submission to all of the CSA member commissions, as follows:

British Columbia Securities Commission Alberta Securities Commission Saskatchewan Financial Services Commission – Securities Division Manitoba Securities Commission Ontario Securities Commission Autorité des marchés financiers New Brunswick Securities Commission Registrar of Securities, Prince Edward Island Nova Scotia Securities Commission Newfoundland and Labrador Securities Commission Registrar of Securities, Northwest Territories Registrar of Securities, Yukon Territory Registrar of Securities, Nunavut

Deliver your comments **only** to the addresses that follow. Your comments will be forwarded to the other CSA member jurisdictions.

Blaine Young, Associate Director Alberta Securities Commission 4th Floor, 300-5th Avenue SW Calgary, Alberta T2P 3C4 Fax: (403) 297-4220 e-mail : blaine.young@seccom.ab.ca

Anne-Marie Beaudoin Directrice du secrétariat de l'Autorité Autorité des marchés financiers 800, square Victoria, 22 e étage C.P. 246, Tour de la Bourse Montréal (Québec) H4Z 1G3 Fax: (514) 864-6381 E-mail: <u>consultation-en-cours@lautorite.qc.ca</u>

We cannot keep submissions confidential because securities legislation in certain provinces requires publication of a summary of the written comments received during the comment period.

#### Questions

Please refer your questions to any of:

Blaine Young Associate Director, Corporate Finance Alberta Securities Commission (403) 297-4220 blaine.young@seccom.ab.ca

Alex Poole Legal Counsel, Corporate Finance Alberta Securities Commission (403) 297-4482 alex.poole@seccom.ab.ca

Dr. David Elliott Chief Petroleum Advisor Alberta Securities Commission (403) 297-4008 david.elliott@seccom.ab.ca Denise Duifhuis Senior Legal Counsel, Corporate Finance British Columbia Securities Commission (604) 899-6792 or (800) 373-6393 (if calling from B.C. or Alberta) duifhuis@bcsc.bc.ca

Gordon Smith Senior Legal Counsel, Corporate Finance British Columbia Securities Commission (604) 899-6656 or (800) 373-6393 (if calling from B.C. or Alberta) <u>gsmith@bcsc.bc.ca</u>

Deborah McCombe Chief Mining Consultant Ontario Securities Commission (416) 593-8151 dmccombe@osc.gov.on.ca

Pierre Martin Senior Legal Counsel Autorité des marchés financiers (514) 395-0558 (4375) pierre.martin@lautorite.qc.ca

Eric Boutin Analyste en valeurs mobilières Autorité des marchés financiers (514) 395-0558 (4447) eric.boutin@lautorite.qc.ca

The text of the proposed amendments follows or can be found elsewhere on a CSA member website.

#### Appendix

#### Summary of proposed amendments

#### NI 51-101

We propose to amend NI 51-101 as follows:

#### Part 1 Definitions

- by adding a definition of *analogous information* as the term is used in the to be amended section 5.10 of *NI 51-101*
- by adding a definition of *anticipated results* that includes any information indicating the potential value or quantities of *resources* to ensure that when such information is disclosed it is disclosed in accordance with section 5.9
- by deleting the definition of *constant prices and costs* as it will no longer be used in *NI* 51-101
- by changing the definition of *independent* to make it more consistent with other *securities legislation*
- by changing the definition of *reserves data* to only include estimates of *reserves* and *future net revenue* using *forecast prices and costs* and not constant prices and costs

#### Part 2 Annual Filing Requirements

• in section 2.2 by clarifying that the notice to announce filing must be filed with the *securities regulatory authority* as well as disseminated

#### Part 4 Measurement

• in section 4.2 by deleting certain requirements that did not specifically relate to measurement

#### Part 5 Requirements Applicable to all Disclosure

- in section 5.2 by including all items deleted from section 4.2 in section 5.2; in addition, by adding a requirement to provide cautionary language when making disclosure of *possible reserves*
- in section 5.3 by adding the requirement that *reserves* and *resources* must be classified in the most specific category or *reserves* or *resources* that is applicable
- in section 5.9 by changing and clarifying the requirements for *reporting issuers* who choose to make disclosure of *resources* that cannot be currently classified as *reserves*
- by deleting the old section 5.10 and by adding a new section 5.10 that allows *reporting issuers* to disclose comparative *analogous information* for an area outside of the area in which the *reporting issuer* has an interest or intends to acquire an interest even if the information does not meet all of the other requirements of *NI* 51-101

#### Part 6 Material Change Disclosure

• in section 6.2 by clarifying the requirements when making disclosure of material changes with respect to *reserves data* or other information specified in *Form 51-101F1* 

Part 8 Exemption

• by adding section 8.2 to provide an automatic exemption from the requirements of NI 51-101 to exchangeable security issuers if they meet all of the requirements of a similar exemption in *NI* 51-102

# *Form 51-101F1 Statement of Reserves Data and Other Oil and Gas Information* We propose to amend the *Form 51-101F1* as follows:

- by eliminating the requirement of providing *reserves data* estimated using *constant prices and costs*
- by adding a requirement in the calculation of *future net revenue* to provide the information on a unit value basis
- by changing the requirement of providing a *reserves* reconciliation using *net reserves* to a reconciliation using *gross reserves*
- by eliminating the requirement to provide a *future net revenue* reconciliation

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

We propose to amend *Form 51-101F2* as follows:

- by changing the statement to reflect the fact that *reporting issuers* are no longer required to report their *reserves data* estimating using *constant prices and costs*
- by adding required language stating that variations between the estimates of *reserves data* and the actual results should be consistent with the fact that *reserves* are categorized according to the probability of their recovery

# *Form 51-101F3 Report of Management and Directors on Oil and Gas Disclosure* We propose to amend *Form 51-101F3* as follows:

- by changing the statement to reflect the fact that *reporting issuers* are no longer required to report their *reserves data* estimated using *constant prices and costs*
- by adding required language stating that variations between the estimates of *reserves data* and the actual results should be consistent with the fact that *reserves* are categorized according to the probability of their recovery

#### 51-101CP

The proposed amendments to 51-101CP reflect the changes to *NI 51-101* described above and provide further guidance on how to interpret and apply *NI 51-101*. In addition, 51-101CP was reorganized. Finally, we have removed the guidance on potential exemptions from the requirements of *NI 51-101* as we believe these exemptions are not appropriate for many *reporting issuers*.

#### LIST OF COMMENTERS

#### **Proposed Amendments National Instrument 51-101**

Standards of Disclosure for Oil and Gas Activities Request for Comment April 19, 2007

	COMMENTER	NAME	DATE
1.	AJM Petroleum Consultants	Philip S. Kandel	January 25, 2007
2.	Vero Energy Inc.	Clinton T. Broughton	January 31, 2007
3.	Henry R. Lawrie	Henry R. Lawrie	February 12, 2007
4.	Norwest Corporation	Geoff Jordan	February 14, 2007
5.	SEPAC	Gary C. Leach	April 12, 2007
6.	Freehold Royalty Trust	William O. Ingram	April 17, 2007
7.	Reg Pitt	Reg Pitt	April 19, 2007
8.	Robinson Petroleum Consulting Ltd.	J. Glenn Robinson	April 19, 2007
9.	TSX Venture Exchange	Peter Varsanyi	April 29, 2007
10.	John Yu	John Yu	April 30, 2007
11.	Macleod Dixon LLP	Kevin E. Johnson	April 30, 2007
12.	Nexen Inc.	Ian McDonald	April 30, 2007
13.	The Canadian Advocacy Council of CFA Institute Canadian Societies	Blair Carey/Robert Morgan	May 1, 2007

#### AJM Petroleum Consultants 1400, 734-7th Avenue S.W. Calgary, Alberta T2P 3P8

January 25, 2007

On page 15 of Appendix 1 to the Companion Policy of the revised NI 51-101 on the ASC website, "Prospective Resources" are defined.

I believe there is a typo (other error). The word "uneconomic" should be replaced with "economic". This would be in keeping with the current definition in COGE Handbook Volume 1 Section 5 whereby Prospective Resources are both technically recoverable plus economic to recover.

Thanks for considering this.

Regards,

PHIL

Philip S. Kandel, P. Eng., P.E. Vice President

#### Memorandum

To: Alex Poole Legal Counsel Alberta Securities Commission January 31, 2007

Re: Proposed Amendments – NI 51-101

#### **Background**

On January 19, 2007, Canadian Securities Administrators ("CSA") proposed amendments to NI 51-101, Standards of Disclosure for Oil and Gas Activities, and requested comments. The amendments appear to derive from the Alberta Securities Commission ("ASC") 2006 Consultation. The following comments are provided for your consideration.

#### **Comments on the Proposed Amendments**

Removal of the requirement to report reserves and future net revenue using constant prices and costs, removal of the requirement to do a reconciliation of future net revenue and changing the requirement to do a reserves reconciliation using net reserves to doing the reserves reconciliation using gross reserves significantly enhance the usefulness of disclosure to analysts and investors while reducing the burden on the reporting issuer. All investment analyst's reports that I have encountered use gross reserves) based on forecast prices and costs to compare oil and gas companies. I had the opportunity to provide input and review responses to the 2006 ASC Consultation via several sources and am of the opinion that these particular proposed amendments address the most important improvements suggested at that time. If I have any misgivings, it is only that they were not implemented in time to be applicable to the disclosure of December 31, 2006 reserve reports.

I have not encountered any use or reporting of possible reserves or resources beyond proved and probable reserves. To the extent that any companies are using those categories, the more rigorous guidelines appear to be of merit.

The added requirement to disclose net present value of future net revenue on a unit basis (NI 51-1010F1, Part 2, Item 2.1 2. and Item 2.1 3.(c)) may have some limited value as a quick reference to the relative values of reserve categories and production groups, and its determination does not add a significant burden to the reporting issuer. Calculating unit values based on net rather than gross reserves, however, is inconsistent with Canadian analyst's and investor's common usage. To the extent that any analysts or investors use unit values, it is likely that they will re-calculate them based on gross reserves. In the

interest of disclosure utility, and with the change from net to gross reserves in conducting reconciliations, it is recommended that, if this requirement is retained, it be based on gross reserves.

#### **Response to Specific Question**

"Would there be a material enhancement to investor protection if the rule required the board to appoint the independent reserves evaluator or auditor in addition to the existing appointment review requirement?"

Practice across the industry appears to vary to a minor degree. In my experience, reserve evaluator initial selections or changes are reviewed and approved by the board of directors such that the reserve evaluator may therefore be considered to be appointed by the board. Formally contracting the reserves evaluator by signing the engagement letter, whether upon initial engagement or in subsequent years, is done by management in some companies and by the board of directors or reserve committee of the board in others.

A change in current practices would not appear to be warranted in terms of providing a material enhancement to investor protection. On the contrary, it may be desirable to increase the separation and independence of the board of directors or reserve committee in reviewing and approving the work of the reserves evaluator.

#### **Further Proposed Amendments for Consideration**

While I fully support the current proposed amendments, excepting determination of unit values based on net reserves, there are several areas where further changes could increase clarity and utility to investors.

#### Company Interest vs. Company Gross Reserves

For many companies, the difference between Company Interest reserves (inclusive of royalties received) and Company Gross reserves (working interest only) is minor. It has been argued that the use of Company Interest reserves would result in double counting of royalty reserves when adding companies together such as for provincial statistics purposes, and that royalty reserves are accounted for in the net reserves.

A problem arises in that few investment analysts or investors comprehend the difference between Company Interest and Company Gross reserves, or that there has been a change in reporting convention. Rarely, if ever, do they analyze net reserves or derive royalty reserves, instead relying on Gross reserves exclusively. As a result, companies that do have an element of royalty reserves are disadvantaged and investors are mislead by the analyst's company to company comparisons.

Eliminating unintended misrepresentation to investors should take precedence over ease in preparation of overall industry statistics. Return to use of Company Interest reserves as the primary reporting number, or at least clear identification of royalty reserves, should be adopted, with use of Company Gross reserves relegated to secondary reporting for industry wide statistics purposes. I note that some companies still refer to Company Interest reserves in certain less formal reporting, such as in press releases. If Company Gross is to be retained as the primary formal reporting number, CSA should, as a minimum, take responsibility and educate the investment community on the difference and the reporting convention change that has occurred.

#### <u>Proved Developed Producing vs. Proved plus Probable Developed Producing</u> <u>Reserves</u>

With adoption of COGEH probabilities, the best estimate for producing reserves has shifted from the Proved Producing category (now P90) to the Proved (P90) plus Probable (P50) Producing category. Proved Producing is now effectively a conservative, risked estimate, sometimes arbitrarily so.

The degree of awareness of this change is low to non-existent on the part of analysts and investors, or for that matter outside of the circle of reserve evaluators and oil and gas technical personnel responsible for reserves reporting. Industry is generally impacted negatively if Proved Producing reserves and values are relied on without adjustment to determine borrowing base or if analysts or investors make judgments based on Total Proved reserves and values. Several of the common comparative factors used by analysts, such as decline rate and RLI, relate to this issue.

This factor, along with other increased conservativeness brought about by adoption of COGEH and NI 51-101 has contributed to a disconnect between asset values as derived from reserve reports, particularly from Proved reserves, and asset values as determined by market acquisitions and dispositions. While a property is owned by a given company, a bias is created toward an increased safety factor for potential investors at the expense of current investors throughout the life of the property, not a commendable objective.

At a minimum, it is recommended that Proved plus Probable Developed Producing reserves be more prominently referred to in reserve reports and disclosure, and that CSA undertake to educate analysts and investors as to this change in reserve category convention.

Note that I have also had an opportunity to provide input on this issue to the committee of the Society of Petroleum Evaluation Engineers for consideration in the next update of COGEH.

#### **Price Forecast Consistency**

Adoption of COGEH has resulted in greater consistency between evaluation firms in categorization and technical determination of reserves. There is still more inconsistency than there needs to be between evaluation firms with respect to forecast prices, particularly for the first few years of the forecast, which have the greatest impact on net present value. In 2006, I noted to a reserve evaluator that his firm's forecast prices were in some cases materially different than those of his competitors. In response, I was advised that his firm was a "major" independent reserves evaluator and by definition its forecast prices fell within the ASC accepted range regardless of how different they were.

As there is ample price discovery for the early portion of any evaluation, there should be essentially no differences in prices forecast for that portion. It is suggested that the same prices be specified for all reserve evaluators at any point in time, with those prices based on the market strip.

Thank you for considering these comments. I would be pleased to discuss them or any additional methods of input in more detail.

Respectfully,

Clinton T. Broughton, P.Eng. Director, Chairman of the Reserves Committee, Vero Energy Inc. Henry R. Lawrie FCA #400 407 Eighth Avenue S.W. Calgary, Alberta T2P 1E5

(403) 294-6488

hlawrie@rseg.com

February 12, 2007

#### <u>Proposed Amendments to National Instrument 51-101, related forms and</u> <u>Companion Policy</u>

To all the CSA member commissions as outlined in "Request for Comment" dated January 19, 2007:

#### **Back to the Basics?**

I understand it is the responsibility of the ASC and CSA members to attempt to ensure that the market and the investors receive full, true and plain disclosure. The following steps you have taken and are about to take result in exactly the opposite. Whose side are you on?:

- (1) Eliminating the requirement for independent reserves evaluation or audit for some issuers. (One very large issuer proved being big does not guarantee being right.)
- (2) Eliminating the requirement to disclose the constant case.

# (3) Eliminating the requirement to disclose the reconciliation of changes in reported future net revenue.

#### YOUR REASONING?

I You do not appear to have presented any compelling reasoning for eliminating the requirement to disclose the **Constant Prices and Costs Case**:

Arguments <u>against</u> eliminating the requirement to disclose the Constant Case include:

- 1 Without the Constant Case, it is virtually impossible to compare issuers on a reasonably consistent, objective, basis.
- 2 Without the Constant Case, it is extremely difficult to judge the reasonableness, or otherwise, of the Forecast Case. There is no baseline.
- 3 The Taskforce's 27 expert members studied the matter and concluded overwhelmingly that both the Constant and the Forecast Cases should be presented. Knowledgeable preparers and users were appropriately represented on the Taskforce and were active in debating and coming to the conclusions. (This appears different than the method you used to come to your conclusions; try as you might you got only one side and your staff does not have the investment experience needed.)
- 4 The SEC has retained the requirement for the Constant Case notwithstanding arguments to the contrary for over 20 years.
- 5 The Constant Case is easily understood and is not subject to inappropriate estimates which may be designed to mislead.

- 6 The cost of developing the Constant Case is not material on a relative basis.
- 7 There have been no complaints (of which I'm aware) that the Constant Case is misleading. I have heard many complaints about the Forecast Case being misleading. We need both.
- 8 It has been argued that no one uses the Constant Case. My experience is the opposite. While the Constant Case is not used as a primary valuation tool, it is often used to judge the apparent worthiness of the Forecast Case.

# What are the arguments for deleting the Constant Case that overcome the above?

II You do not appear to have presented any compelling reasoning for eliminating the requirement to do a **reconciliation** of changes in the beginning and the end of the year's **Future Net Revenue**.

Arguments <u>against</u> eliminating such reconciliation include:

- 1 Without the reconciliation, the reasons for the changes are virtually impossible to identify and quantify. The reasons are very important to investors. (Eg. How much of the increase was due to prices, to volumes?)
- 2 Without the reconciliation, it is virtually impossible to compare issuers on a reasonably consistent, objective, basis.
- 3 The Taskforce's 27 expert members studied the matter and concluded on an overwhelming basis that the reconciliation should be required. These experts were appropriately represented being preparers, evaluators and users. It appears doubtful that those who you consulted were similarly represented or put as much time, care and debate into their conclusion. Many evaluators have, for some reason, been unwilling or unable to prepare such reconciliations. Yet issuers

have prepared and presented the reconciliations (done mainly by their accounting staff). I don't know how the ASC reviewed the reconciliations as I wonder whether anyone on their staff is capable of preparing them. If you don't know how they're prepared, I don't know how you can reasonably judge their value.

4 The SEC has retained the requirement for the reconciliation for over 20 years.

- 5 The cost of preparing the reconciliation is not material on a relative basis.
- 6 The reconciliation is useful to investors and is not misleading.

# What are the arguments for deleting the reconciliation that overcome the above?

III Gross Reserves-No comment; makes sense.

# IV Resources-Asking for trouble? If possible reserves have a 90% probability of being "wrong", what hope is there for "Resources"?

Respectively submitted,

Henry R. Lawrie

#### **Norwest Corporation**

February 14, 2007

To whom it may concern

The following are comments regarding the proposed amendments to NI 51-101

1) Comments on the Disclosure of Resources

51-101CP, Section 5.5(1) – Disclosure of Resources

The text for this section includes the following, "Disclosure of resources requires the use of statistical measures that may be unfamiliar to the user."

This seems to imply that estimates of resource quantities for materials addressed under 51-101 always require the use of statistical or Probabalistic Methods for estimation, but not Deterministic ones.

This is far from being the case. For example, most if not all of the resource estimates for mineable oil sand, usually reported in units of Barrels of bitumen, are made using Deterministic Methods. Such resource estimates, although modified from time to time using the same deterministic methods, are typically publicly reported by the property owner for many years before it is possible to report reserves. The same is normally true for Coalbed Methane resources. This is because, for these deposits, the distribution of coal over various depth ranges is the most important variable, and this is best estimated using deterministic methods applied to concepts of physical models. I suspect that "Shale Gas" resource estimates, oil shale resources and resources for "Gassification" projects will also be best served using a Deterministic approach for the same reasons.

In addition there does not appear to be anything in the technical literature that complement the regulatory documents that suggests that the use of Deterministic Methods are valid for use with reserve estimates but not for resources.

Perhaps the intent of the text was not to exclude the use of Deterministic Methods in resource estimation work where these methods can be validly applied. If this is the case the text should be rephrased accordingly.

Yours Sincerely

Geoff Jordan Snr. Vice President Norwest Corporation

Fax: (403) 269 3636



#### April 12, 2007

Alberta Securities Commission 4<sup>th</sup> Floor, 300 – 5<sup>th</sup> Avenue SW Calgary, Alberta T2P 3C4 Attention: Mr. Alex Poole

Dear Sir;

#### RE: Comments on proposed amendments to NI 51-101 Standards of Disclosure for Oil and Gas Activities

I'm pleased to offer SEPAC's written feedback to your request for comments on proposed amendments to NI 51-101.

The Small Explorers and Producers Association of Canada has a current membership of over 450 companies. The SEPAC membership represents approximately 125 publicly listed oil and gas companies. In addition we have as members a significant number of private companies which may consider going public at some point. SEPAC has a standing committee on securities compliance issues which has reviewed the issues surrounding NI 51-101 reporting. A submission was made in June 2006 to the ASC.

SEPAC fully supports the proposed amendments as outlined in the ASC draft. As further support we offer the following comments:

- 1. Constant price reserves and future net present value calculations are now a voluntary supplemental disclosure. SEPAC supports this change since the forecasted price case more accurately reflects the implied value of reserves. Constant price case is no longer used in the ceiling test. Making the constant price a voluntary disclosure will simplify the report without making it too confusing for the readers.
- 2. Reserve reconciliation will now be completed on a gross company basis as opposed to net "after royalty". SEPAC strongly supports this change since it ties directly to the financial disclosure of production which is reported on a gross basis before royalties. The reconciliation on a net basis is too confusing and adds little or no value to the end users. The reconciliation on a net basis also doesn't tie into key financial performance indicators like Finding and Development Costs (F&D).
- 3. Elimination of the reconciliation of changes to the net present value. SEPAC supports this change since the reconciliation was extremely complicated and time consuming with limited value. The complexity led to inconsistencies and 90% of the information can be gained from the reserve reconciliation.

4. SEPAC accepts the proposed changes or clarification to the disclosure of estimates in volume or value of future resources.

SEPAC offers the following comments for additional consideration:

- 1. SEPAC requests the ASC further simplify the reserve reconciliation by combining the categories of extensions, discoveries and improved recovery. Does it really matter if a company has made a new discovery versus an extension? When does the company actually know if it's a new discovery versus an extension? Also, revisions should include technical revisions and revisions due to economic factors. Does it really matter if the revision was due to economic factors versus technical? There are still too many categories which largely makes the reconciliation process an academic exercise. Companies could still voluntarily report the reconciliation on an expanded list of categories.
- 2. Press release announcing the filing has been changed to a notice. SEPAC does not feel this is a value added exercise since a notice gets filed on SEDAR like the report itself. Consider changing the process to allow a company to press release the filing on a future date. For example, "ABC Oil and Big Gas plans to file its NI 51-101 reserve report on March 30, 2007". Under this scenario a company could add the information in an earlier press release along with updated information. A second press release would be required only if the filing date changes.

SEPAC is a strong supporter of standardized reserve reporting. We believe the industry is best served by clear and concise guidelines for reporting. NI 51-101's greatest contribution is in the form of tighter reserves definitions which has improved consistency across the industry. All stakeholders can now read disclosure on reserve data and make better comparisons and/or investment decisions based on this data. SEPAC believes the proposed amendments still support the quality of information and will make the report easier to read.

SEPAC appreciates the opportunity to comment on these initiatives.

Sincerely,

Schear

Gary C. Leach Executive Director, SEPAC



#### Via Electronic Correspondence to Addressees Indicated in Schedule A

April 17, 2007

British Columbia Securities Commission Alberta Securities Commission Saskatchewan Financial Services Commission – Securities Division Manitoba Securities Commission Ontario Securities Commission Autorité des marchés financiers New Brunswick Securities Commission Registrar of Securities, Prince Edward Island Nova Scotia Securities Commission Newfoundland and Labrador Securities Commission Registrar of Securities, Northwest Territories Registrar of Securities, Yukon Territory Registrar of Securities, Nunavut

Dear Sirs:

# **Re:** Comments on Proposed Amendments to National Instrument 51-101 *Standards of Disclosure for Oil and Gas Activities.*

On January 19, 2007, the Canadian Securities Administrators (CSA) released Proposed Amendments to National Instrument 51-101 *Standards for Disclosure for Oil and Gas Activities*. The purpose of this letter is to provide our comments on some of the proposed amendments.

Freehold Royalty Trust (Freehold) is one of the largest holders of royalty lands in western Canada. Approximately 79% of our production comes from those royalty lands. We receive royalties on oil and gas production from wells in Alberta, British Columbia, Saskatchewan, Manitoba and Ontario. Our royalty lands are a large part of what we are today and what we will be in the future. Under current NI 51-101 regulations, gross reserves include working interests before the deduction of royalties and do not include royalty interests received. Net reserves include working interests less royalties payable plus royalties received. This results in the unique situation where our net reserves are larger than our gross reserves (see attachment).

The CSA proposes amending Form 51-101F1 *Statement of Reserves Data and Other Oil and Gas Information* by changing the requirement of providing a reserves reconciliation using net reserves to a reconciliation using gross reserves. Freehold believes that this change will be seriously misleading and put us at a distinct disadvantage relative to our peers.

- 1. A reconciliation of gross reserves will show only a small part of our oil and gas assets as it will not contain any royalty information. Our unique structure will not lend itself to a direct comparison to our peers.
- 2. In addition to the gross reconciliation, to inform the reader more completely, we would have to do a reconciliation of net reserves. This would present a more complete picture of our oil and gas holdings; however, we still believe a comparison of our net reconciliation to other issuers' gross reconciliation could potentially be misleading by understating our numbers.

The following are our proposals in regards to this matter:

- 1. Leave the requirement for a reserves reconciliation to be based on net reserves. Net reserves are consistent for all oil and gas operators and better reflect the true value of an issuer.
- 2. Permit us to quote working interest reserves plus royalty interests received as our gross number. We feel that this would permit us to be measured on a more comparable basis to our peers.

When NI 51-101 was first adopted, we believed that one of the founding principles was the establishment of a consistent way to report oil and gas activities. Consistent reporting should allow for the effective and efficient evaluation of issuers by analysts and investors. Net reserves more accurately present a company's true asset base than do gross reserves which could be a misleading representation of a company's asset value. In our opinion, the changes as proposed will put oil and gas issuers such as Freehold at a disadvantage.

We appreciate your time and consideration regarding this matter. If there are any questions, please feel free to contact the undersigned at (403) 221-0822.

Yours truly,

FREEHOLD ROYALTY TRUST

(signed) "William O. Ingram"

William O. Ingram Vice-President, Production

#### Summary of Gross Reserves Freehold Royalty Trust as of December 31, 2006 Forecast Prices and Costs

RESERVE CATEGORY	Light & Medium Oil Mbbl	Heavy Oil Mbbl	Natural Gas (Sales) MMcf	Natural Gas Liquids Mbbl	BOE Mboe
Developed Producing	2,238.9	1,470.4	6,299.1	279.5	5,038.7
Developed Non-Producing	25.0	0.0	126.3	2.3	48.3
Total Developed	2,263.9	1,470.4	6,425.4	281.7	5,087.0
Undeveloped	0.0	186.7	6.1	0.3	188.0
TOTAL PROVED	2,263.9	1,657.1	6,431.5	282.0	5,275.0
PROBABLE	686.0	623.0	2,643.8	117.4	1,867.0
TOTAL PROVED PLUS PROBABLE	2,950.0	2,280.1	9,075.3	399.4	7,142.0

#### Summary of Net Reserves Freehold Royalty Trust as of December 31, 2006 Forecast Prices and Costs

	Light &	Heavy	Natural	Natural Gas	
RESERVE	Medium Oil	Oil	Gas (Sales)	Liquids	BOE
CATEGORY	Mbbl	Mbbl	MMcf	Mbbl	Mboe
Developed Producing	4,373.4	6,213.3	41,014.8	1,029.1	18,451.6
Developed Non-Producing	19.4	0.0	96.5	1.5	37.0
Total Developed	4,392.8	6,213.3	41,111.3	1,030.6	18,488.6
Undeveloped	0.0	231.2	9.6	0.3	233.1
TOTAL PROVED	4,392.8	6,444.6	41,120.9	1,030.9	18,721.7
PROBABLE	1,813.7	3,593.7	20,898.5	399.6	9,290.1
TOTAL PROVED PLUS PROBABLE	6,206.4	10,038.3	62,019.4	1,430.5	28,011.8

#### Schedule A

Blaine Young Associate Director Alberta Securities Commission 4<sup>th</sup> Floor, 300- 5<sup>th</sup> Avenue SW Calgary, Alberta T2P 3C4 e-mail: blaine.young@seccom.ab.ca

Anne-Marie Beaudoin Directrice du secrétariat de l'Autorité Autorité des marches financiers 800, square Victoria, 22 e étage C.P. 246, Tour de la Bourse Montréal, Québec H4Z 1G3 e-mail: <u>consultation-en-cours@lautorite.qc.ca</u>

#### **From Reg Pitt**

April 19, 2007

I think it is important that a reserve's evaluation reflects the value of the oil and gas reserves as they currently exist. For this reason, I think the main emphasis of the reserves report should be on the actual revenue received for the product. Therefore, the main body of an economic analysis of a property should be based on a CONSTANT PRICING AND COST ANALYSIS of that property. The pricing and costs should be taken from the Company's financial statements for the year.

Pricing should be the average of the price received for the product for an average period such as the last quarter or the last year. This would ensure that no positive or negative price spikes skewed the results.

Costs should be those realized in the past year. Operating costs should be averaged over the past year to ensure that one time fees such as lease rentals are included. Capital costs should be those encountered in the last quarter.

All of the pricing and costs should be constant throughout the life of the reserves. No inflationary trends or similar increases should be used. This will give everybody concerned (investors, owners, etc.) a report that can be readily compared to financial statements – which are the only factual data available.

If a series of forecast results are desired they can be included in the report but the main emphasis should be on the constant pricing and cost forecasts. By introducing forecasts into the report, another source of error (or guess work if you prefer) is introduced. Pricing forecasts change monthly and so will the forecast results.

The main emphasis of a report is to provide an evaluation of the reserves at that particular time.

**Reg Pitt** 



J. GLENN ROBINSON, P. ENG. PRESIDENT

April 19, 2007

Alberta Securities Commission 4<sup>th</sup> floor, 300 - 5<sup>th</sup> Avenue S.W. Calgary, Alberta T2P 3C4

Attention: Dr. David Elliott, Chief Petroleum Advisor

Dear Dr. Elliott:

#### **Re: Comments on Proposed Amendments to:**

- NI 51-101 - NI 51-101 F1 - NI 51-101 F2 - NI 51-101 F3 - NI 51-101 CP

Enclosed are my comments on the proposed amendments to NI 51-101. My comments are inserted in red text in each specific amendment. I have also enclosed a suggested table entitled "Summary by Production Group" following NI 51-101 CP comments. Also enclosed are suggested tables for data specified in Sections 5 and 6 of NI 51-101. They are from OilExco's recent disclosure, which I prepared for OilExco. I have also attached some general comments, which may be pertinent.

I trust this information will be of value in amending the instrument. I am available to discuss any of my comments and also to assist in developing the revised set of rules.

Yours truly

J. Glenn Robinson, P. Eng.

Attachment(s)

#### Advanced Analysis of Petroleum Reserves

Site 25, Box 14, RR # 8 Calgary, Alberta, Canada T2J 2T9 Tel (Bus): (403) 850-6184 Fax (Bus):(403) 931-6757 Email: jgrobinson@platinum.ca

#### 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. 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",

#### No comment

- 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, in the opinion of a reasonable person, of drawing a comparison or conclusion to an area in which the *reporting issuer* has an interest or intends to acquire an interest and may include:
  - (i) historic information concerning *reserves*;
  - (ii) estimates of the volume or value of *reserves*;
  - (iii) historic information concerning resources;
  - (iv) estimates of the volume or value of *resources*;
  - (v) historic *production* amounts;
  - (vi) *production* estimates; or
  - (vii) information concerning a *field*, well, basin or reservoir;

#### Comment: This addition is required.

- (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* which may include:
  - (i) an estimate of volume;
  - (ii) an estimate of value;
  - (iii) areal extent;

- (iv) anticipated pay thickness;
- (v) flow rates; or
- (vi) hydrocarbon content;

Comment: This addition needs further amendments. The phrase "indicate the potential value or quantities of resources" needs to be changed to "indicate the <u>expected</u> value or <u>expected</u> quantities of resources".

A definition of "expected value" must also be included, see Definition after paragraph 1.1 (h).

- 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;

#### No comment.

d. repealing paragraph 1.1(g);

Comment: I agree with removing the requirement of "constant prices and costs".

Comment: After paragraph 1.1 (h) add the following definition: "expected value" is synonymous with the arithmetic mean. In a probabilistic analysis, the expected value is the probability - weighted value of all possible outcomes.

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",

#### Comment: This substitution is fine.

- f. after paragraph 1.1(r), adding the following paragraph:
- (r.1) "NI 51-102" means National Instrument 51-102 Continuous Disclosure Obligations;,

#### No comment.

g. in paragraph 1.1(v),

i. in clause (C) striking out the "or",

ii. in clause (D) striking out the period and substituting a semi-colon,

iii. and after clause (D) adding the following clauses:

- (E) shale oil; or
- (F) shale gas;,

Comments: The amendments should refer to paragraph 1.1(v)(ii) not paragraph 1.1(v). Item (F) shale gas should be followed by a ";" not ";,"

h. in subparagraph 1.1(x)(i), adding ", resources" after "reserves data", wherever it occurs;

Comment: The amendment should be "reserves and resources data" from "reserves data".

i. in subparagraph 1.1(y)(i), adding ", resources" after "reserves data", wherever it occurs;

Comment: See previous comment.

j. after paragraph 1.1(z), adding the following:

(z.1) "reserves" means proved, probable or possible reserves;

Comment: Perhaps should read "reserves" means individual estimates of volumes of proved, probable or possible reserves or aggregated volumes of proved plus probable reserves and proved plus probable plus 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

Comment: The substitution of paragraph 1.1 (aa) should be: "reserves data" means estimates of proved reserves and probable reserves and an aggregation of proved plus probable reserves and respective estimates of future net revenue for each category of reserves, estimated using forecast prices and costs.

Estimates of possible reserves and aggregated proved plus probable plus possible reserves and related future net revenue may also be included; however, a statement indicating that the proved plus probable reserves estimates and related future net revenue represents the Company's best

-3-

estimates of reserves to be recovered and future net revenue. To be received from the sale of the proved plus probable reserves.

I. in subsection 1.2(2), striking out "shall" and substituting "will".

#### No comment

3. Part 2 is amended by, in section 2.2, striking out "News Release" at the beginning of the section and substituting "Notice", and striking out "a news release" after "disseminate" and substituting "and file with the securities regulatory authority a notice",

No comment

4. Part 4 is amended by,

a. in paragraph 4.1(a), striking out "5" and substituting "16",

No comment

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.

Comment: I agree with this amendment; however, should the term <u>"reserves data"</u> be changed to "reserves and resources data "throughout the instrument"?

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;

- -5-
- (iv) have been estimated 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 cautionary language 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 only 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* it 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 such statement has been supplemented or superseded by a report of a material change<sup>3</sup> filed by the *reporting issuer* with the *securities regulatory authority*.

Comment: This revision is good but should be expanded as follows:

(a) (v) The cautionary statement should be expanded to include: "the proved plus probable reserves and related future net revenue represents the Company's best estimates of the reserves to be recovered and the future net revenue to be obtained from the sale of these reserves.

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",

#### Comment: I think the existing wording for this paragraph is fine.

c. in section 5.4, adding "the quantities and" after "marketable quantities, reflecting",

<sup>&</sup>lt;sup>3</sup> "Material change" has the same meaning ascribed to the term under *securities legislation* of the applicable *jurisdiction*.

#### Comment: This revision is fine.

d. in section 5.6, adding "Market" after "Not Fair",

Comment: This addition is fine.

e. in paragraph 5.7(2)(c), striking out "news release" and substituting "notice",

#### No comment

f. repealing section 5.9 and substituting the following:

#### 5.9 Disclosure of *Resources* Comment: The following comments are presented in accordance with the proposed amendments.

(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*:

#### Comment: Change "anticipated" to "expected"

- (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

#### Comment: Remove "the risks and" (risks and uncertainty are conflicting terms)

(e) in the case of unproved property, if its value is disclosed,

# Comment: Replace "in the case of unproved property, of its value is disclosed" with "if the value of a resource 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

## Comment: Change "estimated value" to "estimated expected value" and "estimated quantity" to "estimated expected quantity"

- (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;

## Comment: Change "significant positive and negative factors" to "levels of uncertainty"

- (iv) the estimated percentage probability that the issuer will
  - (A) discover hydrocarbons in sufficient quantity for them to be tested to the surface, in the case of *undiscovered resources* or a subcategory of *undiscovered resources*; or

#### Comment: Remove "or a subcategory of undiscovered resources;

 (B) commercially extract the volume disclosed, in the case of discovered resources or a subcategory of discovered resources other than reserves;

### Comment: Change "discovered resources or a subcategory of discovered resources other than reserves" to "discovered resources"

- (v) in respect of *contingent resources*, the specific contingencies which prevent the classification of the *resources* as *reserves*; and
- (vi) cautionary language proximate to the estimate to the effect that:

(A) in the case of *discovered resources* or a subcategory of *discovered resources* other than *reserves*:

## Comment: Remove "or a subcategory of discovered resources other than reserves". In the following paragraph, add "discovered" before resources.

"There is no certainty that it will be economically viable or technically feasible 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 economically viable or technically feasible to produce any portion of the resources."

Comment: Remove "or a subcategory of undiscovered resources" In the following paragraph, add "undiscovered" before resources in first and last line.

- (3) Paragraphs 5.9(1)(d) and (e) and subparagraphs 5.9(2)(c)(iii),(iv) and (v) 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.

#### No comment

g. 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*, cautionary language 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) 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 will apply to the disclosure of the information., and

## Comment: The following comments are presented in accordance with the proposed amendments.

Comment: Replace "anticipated" with "expected" and insert the word "expected before the words "quantity" and "value" in line 2 and "quantity" in line 3.

- h. in section 5.13,
  - *i. adding* "must" *after* "Written disclosure of a netback",
  - ii. repealing paragraph (a), and
  - iii. renumbering paragraphs (b) and (c) as paragraphs (a) and (b), respectively.

Comments: The following comments are presented in accordance with the proposed amendments:

- (i) Fine to add "must".
- (ii) Paragraph (a) should not be deleted, but modified as follows:
  - (a) "include separate netbacks for each major product type of each production group by country (or, if appropriate and not misleading, but foreign geographic area);
- (iii) Paragraphs (b) and (c) should remain.

Note: There is another system that is easier, simpler and more informative than "netbacks". I refer to it as "Distribution of Gross Revenues". The calculation includes each factor, royalties, operating costs, etc., expressed as a percentage of gross revenue. No need to include prices which are sometimes difficult to get and misleading and allocation of operating expenses. I would be glad to demonstrate the procedure. 6.

- Part 6 is amended by, in subsection 6.1(2),
  - *i.* 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
  - ii. repealing paragraphs (a) and (b).

#### No comment

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

#### 8.2 Exemption for Certain Exchangeable Security Issuers

- An exchangeable security issuer, as defined in subsection 13.3(1) of NI 51-102, is exempt from this *Instrument* provided that 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*.

#### No comment

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

No comment

9. This amendment comes into force •.

No comment

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### 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 51-101F2 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 Item 2.1 and substituting the following:

Comment: I am in agreement with removing "Constant Prices and Costs" reserves data.

Item 2.1 Reserves Data (Forecast Prices and Costs)

- 1. <u>Breakdown of *Reserves* (Forecast Case</u>) 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).

<u>Net Present Value of Future Net Revenue (Forecast Case)</u> – 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.

### Comment: I would like to suggest the last sentence of paragraph (2) be moved to and amalgamated with paragraph 3(c) of item 2.1. There should also be a suggested table format for this data, see attached.

- 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;

2.

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- (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.,

Comment: I would like to suggest the last sentence of paragraph (2) be moved to and amalgamated with paragraph 3(c) of item 2.1. There should also be a suggested table format for this data, see attached.

### (b) 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.,

# (c) 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; or
  - (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 posted price for oil and the spot price for gas, after historical adjustments for transportation, gravity and other factors.,

### No Comment

(d) 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 section 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"
- (e) at the end of paragraph 3.2(1)(a), striking out "2.2" and substituting "2.1",

#### No Comment

- (f) in instruction (2) to Part 3, striking out "defined terms" and substituting "term", and adding "the defined term" after "constant prices and costs" and",
- (g) in the heading to Part 4 striking out "RECONCILIATIONS OF CHANGES IN RESERVES AND FUTURE NET REVENUE" and substituting "RECONCILIATION OF CHANGES IN RESERVES",
- (b) in paragraph 4.1(1)(a) striking out "net" and substituting "gross",
- (i) in paragraph 4.1(1)(b) striking out "net" and substituting "gross",
- (j) in paragraphs 4.1(1)(c), striking out "net" and substituting "gross",

### Comments: Part 4.1

Reserves Reconciliations <u>must</u> be done on "net reserves". This is the only volume that reflects the reserves that are owned by a Company. Refer to Chapter 7.5.3 of the COGEH. Companies with only royalty interests do not have any "gross reserves".

The COGEH has finally defined the ownership of reserves and if you go back to "Gross" you will be taking a step backward. Also, to be consistent, I would like NI 51-101 to use the three classifications of reserves as defined in COGEH;

- Gross Reserves,
- Company Gross Reserves, and
- Company Net Reserves
- (k) in paragraph 4.1(2)(b),

v. at the end of subparagraph (iii), striking out "and",

vi. at the end of subparagraph (iv), striking out "and other products from non-conventional oil and gas activities",

vii. adding the following subparagraphs after subparagraph (iv):

- (v) *bitumen*;
- (vi) coal bed methane;
- (vii) hydrates;
- (viii) shale oil; and
- (ix) shale gas;,

Comment: Synthetic oil should be included in the non-conventional products.

(1) in paragraph 4.1(2)(c),

viii. in subparagraph (i), adding "and improved recovery",

ix. repealing paragraph (ii); and

x. renumbering subparagraphs (iii),(iv), (v), (vi), (vii), and (viii) as (ii), (iii), (iv), (v), (vi), and (vii), respectively,

Comments: Subparagraph (ii) <u>should not be deleted</u> but should be amended as "(ii) improved recovery and infill drilling No need to re-number.

(m) in instruction (1) to Item 4.1, striking out "either constant prices and costs or",

Comment: I agree that constant prices and costs need to be deleted.

(n) repealing Item 4.2,

Comments: Reconciliation of Future Net Revenues. This reconciliation calculation <u>should not be removed</u>; however, it should be modified as follows:

The existing reconciliation of FNR is a combination of both accounting and evaluation principles, and what I would suggest is to use an evaluation procedure only.

The steps to be followed, assuming last years effective date was 1/1/01 and this year's effective date is 1/1/02, would be:

- (1) Using last years evaluation, calculate the NPV of the FNR as of 1/1/02. To do this simply deduct the NPV of the first year from the total NPV and then appreciate the result by (1 + discount rate). You now have two comparable projects of the future (after 1/1/02) one from last year and one from this year (1/1/02).
- (2) From these two cases you easily can calculate the effect on the future cash flows from 1/1/02 for:
  - Prices
  - Production Costs
  - Royalties
  - Development Costs
  - Extensions
  - Improved Recovery and Infill Drilling
  - Discoveries
  - Acquisitions
  - Dispositions
  - Revisions in Quantity Estimates
  - Income Taxes
- (3) The deduction of the first years NPV from last years cash flow is suffice to account for the first years production.
- (4) The appreciation of last years cash flow from 1/1/01 to 1/1/02 accounts for last years accretion.
- Note: (1) I would be pleased to provide an example calculation in more detail.

(2) This is a very important calculation and provides a lot of critical information, if done properly and consistently.

- (o) repealing the instructions to Part 4,
- (p) in paragraph 5.1(1)(a), striking out "five" and substituting "three", and at the end of the paragraph, striking out "or" and substituting "and",
- (q) in paragraph 5.1(2)(a), striking out "five" and substituting "three", and at the end of the paragraph, striking out "or" and substituting "and",

Comment: I don't see the need to reduce the number of years from 5 to 3. Existing Companies should have established 5 years and now they only have to add this year and delete the 1<sup>st</sup> of the "new five years". Also it may take up to five years to develop the undeveloped reserves.

(r) in paragraph 5.3(1)(a)

xi. repealing subparagraph (i), and

xii. renumbering subparagraphs (ii) and (iii) as subparagraphs (i) and (ii), respectively,

#### Comment: Agree

(s) in subparagraph 5.3(1)(b)(i), striking out "and using a discount rate of 10 percent",

Comment: Do not take out the 10% Discount. This is the only way to illustrate the "time value of money".

- (t) in paragraph 6.3(2)(a), striking out "3860" and substituting "3861",
- (u) in the instruction to Item 6.4, striking out of "and clause 3(b)(v) of Item 2.2",

### No comment

(v) in subsection 6.8(1), striking out "future net revenue" after and substituting "gross proved reserves and gross probable reserves", and striking out "Items 2.1 and 2.2" and substituting "Item 2.1.",

# Comments: By disclosing gross reserves production, you will be forecasting some production which the Company does not own. Should remain as Company Net Reserves.

(w) 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.".

Comment: I would prefer not to use Netbacks and also BOE's. If you use my suggested "Distribution of Gross Revenue" all these problems will disappear. See Comments in NI 51-101 Amendments.

3. Form 51-101F2 Report on Reserves Data by Independent Qualified Reserves Evaluator or Auditor is amended by, in the prescribed form of the "Report on Reserves Data" under section 2,

 (a) in paragraph 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.",

### (b) repealing subparagraphs 1(a) and (b), and

### (c) at the end of paragraph 7, adding the following:

"However, any variations should be consistent with the fact that reserves are categorized according to the probability of their recovery.".

### Comment: The amendments are fine.

# 4 Form 51-101F3 Report of Management and Directors on Oil and Gas Disclosure is amended by, in the prescribed form of "Report of Management and Directors on Oil and Gas Disclosure" under section 2,

- (a) 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."
- (b) after the paragraph beginning "Management of [name of reporting issuer]" repealing subparagraphs(a) and (b),
- (c) 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",
- (d) 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",
- (e) 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
- (f) 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.".

### Comment: The amendments are fine.

# 5. This amendment comes into force.

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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 (the "CSA") as to the interpretation and application of National Instrument 51-101 Standards of Disclosure for Oil and Gas Activities (NI 51-101) and related forms.

*NI 51-101*<sup>1</sup> 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 registrants<sup>2</sup> 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

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(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, Appendix 1 of this Companion Policy 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 subsection 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

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

<sup>&</sup>quot;Registrant" has the meaning ascribed to the term under securities legislation in the jurisdiction.

determinable future prices or costs<sup>3</sup>, *forecast prices and costs* are future prices and costs "generally recognized as being a reasonable outlook on the future".

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

- (3) Independent The term independent is defined in subsection 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*;
  - (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

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<sup>&</sup>lt;sup>3</sup> Refer to the discussion of financial instruments in paragraph 2.7(5) below.

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 subsection 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 and the extraction of methane from coal beds.

### Comment: Expand to include shale gas, shale oil and hydrates.

Although NI 51-101 and Form 51-101F1 make few specific references to nonconventional 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 subsection 1.1(w) of *NI 51-101* and in the Glossary in Appendix 1 to this Companion Policy) has four elements, three of which deal with the basis on which the organization accepts members and its powers and requirements for continuing membership. The fourth element requires either authority or recognition given to the organization by a statute in Canada, or acceptance of the organization by the *securities regulatory authority* or *regulator*.

As at January 19, 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 (APEGS)
- Association of Professional Engineers and Geoscientists of Manitoba (APEGM)
- Association of Professional Geoscientists of Ontario (APGO)
- Professional Engineers of Ontario (PEO)
- Ordre des ingénieurs du Québec (OIQ)
- Ordre des Géologues du Québec (OGQ)
- Association of Professional Engineers of Prince Edward Island (APEPEI)
- Association of Professional Engineers and Geoscientists of New Brunswick (APEGNB)
- Association of Professional Engineers of Nova Scotia (APENS)
- Association of Professional Engineers and Geoscientists of Newfoundland (APEGN)
- Association of Professional Engineers of Yukon (APEY)
- Association of Professional Engineers, Geologists & Geophysicists of the Northwest Territories (NAPEGG) (representing the Northwest Territories and Nunavut Territory)

# (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 January 19, 2007, each of the following foreign organizations has been recognized as a *professional organization* for the purposes of NI 51-101:

> J. G. (Glenn Robinson) April 19, 2007

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- 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)
- American Institute of Professional Geologists (AIPG), in respect of the AIPG's Certified Professional Geologists

# (c) No Professional Organization

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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 subsections 1.1(y) and 1.1(x) of NI 51-101, respectively, and again in the Glossary contained in Appendix 1 to this Companion Policy.

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".

# Comment: Throughout the 51-101 CP capitalize the references to COGEH - ie. "Section 3 of Volume 1".

### 1.2 COGE Handbook

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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 Glossary contained in Appendix 1 of this Companion Policy set out definitions and interpretations, many of which are derived from the *COGE Handbook*. *Reserves* definitions and categories developed by the Petroleum Society of the Canadian Institute of Mining, Metallurgy & Petroleum (CIM) are incorporated in the *COGE Handbook* and also set out, in part, in the Glossary contained in Appendix 1 of this Companion Policy.

Comment: The Reserves definitions and categories were developed by a joint effort from the Calgary Chapter of the Society of Petroleum Evaluation Engineers (SPEE) and the Standing Committee on Reserves Definitions of the Canadian Institute of Mining, Metallurgy & Petroleum (CIM) (Petroleum Society).

Subparagraph 5.2(1)(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. 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

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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 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.

# 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

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Section 2.1 of *NI 51-101* requires the annual filing of information set out in *Form 51-101F1* and reports in accordance with *Form 51-101F2* and *Form 51-101F3*. *NI 51-101* and the instructions in *Form 51-101F1*, give the *reporting issuer* considerable flexibility in presenting this information, provided that all required information is filed. Appendix 3 to this Companion Policy provides an example of how certain of the *reserves data* might be presented.

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

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

# 2.4 Annual Information Form

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

(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 notice that the information required under section 2.1 of NI 51-101 is included in the reporting issuer's filed annual information form. This notice should be filed under SEDAR Filing Type: "Notice of Disclosure for Oil and Gas Activities (NI 51-101), Document Type: "Notice of Disclosure for Oil and Gas Activities (NI 51-101)".

# 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 paragraph 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 reconcilation 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 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 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 in respect of unproved properties, prospects or resources. However, if a reporting issuer chooses to disclose that type of information, sections 5.9 and 5.10 of NI 51-101 apply to that disclosure, as applicable.

# 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.

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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 4.5 and 12.6 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.

# Comment: This paragraph is confusing and appears contradictory. I would be glad to discuss this issue.

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 Appendix 1 to this Companion Policy. 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.)

# Comment: This issue of determining taxes should be moved to the NI 51-101 section.

### (b) Other Fiscal Regimes

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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 yearend. 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 subsection 1.1(j) of NI 51-101 and the term "constant prices and costs" as defined in the Glossary in Appendix 1 to this Companion Policy 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.

# Comment: There is some confusion about where "contractual prices" are used in the evaluation. If not, where is this effect present on the evaluation or financial statements?

- (6) Reserves Reconciliation Subparagraph 4.1(2)(c)(ii) 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:
  - <u>Infill Drilling</u>: 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* should be included in the "extensions and improved recovery" category.
  - <u>Acquisitions</u>: 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* should then 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.

# Comment: Refer to NI 51-101 F1 comments on Reserves Reconciliations.

(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 considerable flexibility in the use of the prescribed forms and the presentation of required information.

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

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

(9) Sample Reserves Data Disclosure - Appendix 3 to this Companion Policy sets out an example of how certain of the reserves data might be presented in a manner which the CSA consider to be consistent with NI 51-101 and Form 51-101F1.

The sample presentation in Appendix 3 also illustrates how certain additional information not mandated under *Form 51-101F1* might be incorporated in an annual filing.

The sample presentation in Appendix 3 is provided by way of illustration only, and is not mandatory. However, the *CSA* urge *reporting issuers* to review Appendix 3 and consider whether a similar presentation might be helpful for their investors.

### 2.8 Form 51-101F2

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(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) *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

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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 evaluators or auditors or auditors*.

Sections 4.5 and 12.6 of volume 1 of the *COGE Handbook* set out procedures and guidance for the conduct of *reserves evaluations* and *reserves* audits, respectively. Section 12.6 deals with the relationship between a *reserves* auditor and the client's financial auditor. Section 4.5, in connection with *reserves evaluations*, deals somewhat differently with the relationship between the *qualified reserves evaluator or auditor* and the client's financial auditor. The *CSA* recommend that *qualified reserves evaluators or auditors* carry out the procedures discussed in both sections 4.5 and 12.6 of 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

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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 5.4.3 of the *COGE Handbook* specifies that, in respect of an issuer's 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*.

Comments: Refer to NI 51-101 F1 comments on disclosing proved, proved plus probable and proved plus probable plus possible reserves and the statement that the "Proved plus Probable Reserves are the Company's best estimate of the reserves to be recovered and the related Future Net Revenue is the result of producing and selling these 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 5.4.3 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*.

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- 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 it 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 is not required to consider whether the reporting issuer will have the capital necessary to develop the reserves. (See section 7.8.2 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 estimated future development. 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*. A chart of acceptable *reserve* and *resource* categories is appended as Appendix 2 to this Companion

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Policy. 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, as illustrated in Appendix 2 there are several subcategories of discovered resources including recoverable resources, contingent resources and discovered unrecoverable resources. Although the issuer may not have the necessary information to classify the *discovered resources* as recoverable resources, contingent resources or as discovered unrecoverable resources if the reporting issuer does have the necessary information they must classify into one of the subcategories. In addition, as illustrated in Appendix 2, 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

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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 mandatory notice under 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

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.

Comment: The disclosure of resources <u>does not necessarily</u> require the use of statistical measures. I would be glad to discuss this issue.

Disclosure of *resources* requires 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 literature<sup>4</sup> on the subject.

**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 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:

- 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*;

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<sup>&</sup>lt;sup>4</sup> 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)

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- 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. 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.

### Comment: Refer to the previous comment.

In addition, pursuant to section 5.3 and subsection 5.9(2) 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.

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. A chart of the *resource* categories set out in the *COGE* Handbook, is appended as Appendix 2 to this Companion Policy for illustrative purposes. The definitions of the following *resource* categories (for *resources* that cannot be currently classified as *reserves*) are set out in the Glossary contained in Appendix 1 of this Companion Policy and in section 5 of volume 1 of the *COGE* Handbook:

- discovered resources;
- *discovered unrecoverable resources*;
- contingent resources;
- undiscovered resources;
- undiscovered unrecoverable resources; and
- prospective resources.

A reporting issuer may wish to report reserves or resources of oil or gas as "inplace 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;

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- (iv) an estimated percentage probability relating to recovery of the *resource* as prescribed by subparagraph 5.9(2)(c)(iv) of *NI* 51-101;
- (v) the contingencies which prevent the classification of a contingent *resource* as a *reserve*; and
- (vi) cautionary language as prescribed by subparagraph 5.9(2)(c)(vi) of NI 51-101.

The *resource* estimate may be disclosed as a single quantity such as a median or mean. 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 median estimate, and the high value being an optimistic estimate).

### Comment: Change the word "median" to "best".

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

With respect to disclosure of an estimated percentage probability in subparagraph 5.9(2)(c)(iv) of NI 51-101, this requirement conveys to the investor the uncertainty associated with the estimates of *resources*. It also elaborates on the requirement in paragraph 5.9(1)(d) of NI 51-101 to disclose the risks and probability of success in recovering the *resource*. In the case of a *discovered resources* or a subset of *discovered resources*, the *reporting issuer* must disclose the percentage probability of commercially extracting the *resource*. In the case of an *undiscovered resource* or a subset of this *resource*, the *reporting issuer* must disclose the percentage probability of discovering the hydrocarbons in sufficient quantity for them to be tested to the surface, i.e. the probability of the *undiscovered resource* maturing into a *contingent resource*.

# Comment: The term's "Risk" and "Uncertainty" are <u>not</u> synonymous. I believe the term "Risk" should be removed throughout the instrument.

No specific method of estimating the probabilities is prescribed, It may be acceptable to make the disclosure of probabilities as an interval (e.g., from 20 to 30%) that captures the most likely outcome. However, this interval must be meaningful and there must be adequate disclosure concerning the meaning of the interval. It would not, for example be acceptable to quote a range that, although it captures all possible outcomes, is so large that it does not provide meaningful information on the uncertainty of an estimate.

# Comment: The interval "from 20 to 30%" in most instances would not capture the most likely outcome. We must be careful to not use terms like "most likely", "median" and "mean" as synonymous terms.

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

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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 that quantity of *oil* estimated on a given date to be potentially recoverable from known accumulations but is not currently economic. There is no certainty that it will be economically viable or technically feasible to produce any portion of the resource. The probability of a commercial project proceeding is estimated to be [•%] [OR Management is unable to provide a firm estimate but the probability is estimated to lie between  $[\bullet\%]$  and  $[\bullet\%]$ . 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.

# Comment: I don't think the new COGEH definitions for a contingent resource will be "recoverable but uneconomic". I'm sure there will, and has been, contingent resources that are "economic". Let's discuss.

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 the percentage probability relating to recovery as well as 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 section 5.2 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**

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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*.

Comment: Finding and Development costs, as it is improperly used in the industry, causes significant problems book reserves, in particular when major capital costs are not currently spent on the development of these "reserves" or "contingent resources". I would be glad to discuss this.

# 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.

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### **APPENDIX 1**

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

### GLOSSARY

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

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

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

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

- *CICA Accounting Guideline 16* is included in the *CICA Handbook*, which can be obtained from the *CICA*.
- The *COGE Handbook* can be obtained from the Petroleum Society of the Canadian Institute of Mining, Metallurgy & Petroleum (Telephone (403) 237-5112; email info@petsoc.org; or www.petsoc.org).
- *FAS 19* can be obtained from *FASB*, the United States Financial Accounting Standards Board.
- *NI 14-101* can be viewed on the websites of a number of *securities regulatory authorities*.

**DEFINITIONS** 

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

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### **Defined Term**

### Meaning

Comment: There are a few definitions that I have suggested and need to be inserted in these definitions. Also, COGEH Volume 1 and COGEH Volume 2 Glossaries need to be consistent with each other and with NI 51-101.				
1934 Act	The Securities Exchange Act of 1934 of the United States of America, as amended from time to time. [ <i>NI 14-101</i> ]			
Annual information form	A completed Form 51-102F2 <i>Annual Information Form</i> , or in the case of an <i>SEC</i> issuer (as defined in National Instrument 51-102 Continuous Disclosure Obligations) 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. [NI 51-102]			
Analogous information	<ul> <li>Information about an area outside the area the <i>reporting issuer</i> has an interest or intends to acquire an interest, which is referenced by the <i>reporting issuer</i> for the purpose, in the opinion of a reasonable person, of drawing a comparison or conclusion to an area in which the <i>reporting issuer</i> has an interest or intends to acquire an interest and may include, without limitation: <ul> <li>historic information concerning reserves;</li> <li>estimates of the volume or value of reserves;</li> <li>estimates of the volume or value of resources;</li> <li>historic production amounts;</li> <li>production estimates; or</li> <li>information concerning a field, well, basin or reservoir.</li> </ul> </li> </ul>			
Anticipated results	<ul> <li>Information which may, in the opinion of a reasonable person, indicate the potential value or quantities of <i>resources</i> in respect of the <i>reporting issuer's resources</i> or a portion of its <i>resources</i> which may include, without limitation: <ul> <li>an estimate of volume;</li> <li>an estimate of value;</li> <li>areal extent;</li> <li>anticipated pay thickness;</li> <li>flow rates; or</li> <li>hydrocarbon content.</li> </ul> </li> </ul>			

[NI 51-102]

Associated gas

Audit

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

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

Because of

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

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

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

[COGE Handbook]

### Comment: Bbl should be bbl. Barrel.

Bbl

Bitumen

A highly viscous *oil* which is too thick to flow in its native state, and which cannot be produced without altering its viscosity. The density of bitumen is generally less than 10 degrees API (as that term is

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	defined by the American Petroleum Institute).		
BOEs	Barrels of oil equivalent. [NI 51-101 and COGE Handbook]		
Canadian GAAP	Generally accepted accounting principles determined with reference to the CICA Handbook. [NI 14-101]		
CICA	The Canadian Institute of Chartered Accountants. [NI 51-101]		
CICA Accounting Guideline 16	Accounting Guideline AcG-16 "Oil and gas accounting - full cost" included in the <i>CICA Handbook</i> , as amended from time to time. [ <i>NI</i> 51-101]		
CICA Handbook	The Handbook of the CICA, as amended from time to time.		
COGE Handbook	The "Canadian Oil and Gas <i>Evaluation</i> Handbook" prepared jointly by The Society of Petroleum <i>Evaluation</i> Engineers (Calgary Chapter) and the Canadian Institute of Mining, Metallurgy & Petroleum (Petroleum Society) as amended from time to time.		
Constant prices and costs	Prices and costs used in an estimate that are:		
/	(a) the <i>reporting issuer</i> 's prices and costs as at the <i>effective date</i> of the estimation, held constant throughout the estimated lives of the <i>properties</i> to which the estimate applies;		
	(b) if, and only to the extent that, there are fixed or presently determinable future prices or costs to which the <i>reporting issuer</i> is legally bound by 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 <i>reporting issuer's</i> prices will be the posted price for <i>oil</i> and the spot price for <i>gas</i> , after historical adjustments for transportation, gravity and other factors.		
	[COGE Handbook]		
Contingent resources	<i>Contingent resources</i> are defined as those quantities of <i>oil</i> and <i>gas</i> estimated on a given day to be potentially recoverable from known accumulations but are not currently economic. [ <i>COGE Handbook</i> ]		
Crude oil	A mixture that consists mainly of pentanes and heavier hydrocarbons, which may contain sulphur and other non-hydrocarbon compounds, that is recoverable at a well from an underground <i>reservoir</i> and that is		

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liquid at the conditions under which its volume is measured or estimated. It does not include solution gas or natural gas liquids. [COGE Handbook] CSA The Canadian Securities Administrators, an association consisting of the thirteen securities regulatory authorities in Canada. Developed Developed non-producing reserves are those reserves that either have non-producing not been on *production*, or have previously been on *production*, but are shut-in, and the date of resumption of *production* is unknown. reserves [COGE Handbook] Developed Developed producing reserves are those reserves that are expected to be recovered from completion intervals open at the time of the producing reserves estimate. These reserves may be currently producing or, if shut-in, they must have previously been on *production*, and the date of resumption of *production* must be known with reasonable certainty. [COGE Handbook] **Developed reserves** Developed reserves are those reserves that are expected to be recovered from existing wells and installed facilities or, if facilities have not been installed, that would involve a low expenditure (for example, when compared to the cost of drilling a well) to put the reserves on production. The developed category may be subdivided into producing and non-producing. [COGE Handbook] **Development costs** Costs incurred to obtain access to *reserves* and to provide facilities for extracting, treating, gathering and storing the *oil* and *gas* from the reserves. More specifically, *development costs*, including applicable *operating* costs of support equipment and facilities and other costs of development activities, are costs incurred to: gain access to and prepare well locations for drilling, including (a) surveying well locations for the purpose of determining specific development drilling sites, clearing ground, draining, road building, and relocating public roads, gas lines and power lines, to the extent necessary in developing the reserves; drill and equip *development wells*, development type (b) stratigraphic test wells and service wells, including the costs of platforms and of well equipment such as casing, tubing, pumping equipment and the wellhead assembly; (c) acquire, construct and install production facilities such as flow J. G. (Glenn Robinson)

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	lines, separators, treaters, heaters, manifolds, measuring devices and <i>production</i> storage tanks, <i>natural gas</i> cycling and processing plants, and central utility and waste disposal systems; and
	(d) provide improved recovery systems. [CICA Accounting Guideline 16]
Development well	A well drilled inside the established limits of an <i>oil</i> or <i>gas reservoir</i> , or in close proximity to the edge of the <i>reservoir</i> , to the depth of a stratigraphic horizon known to be productive. [ <i>CICA Accounting Guideline 16</i> ]
Discovered resources	<i>Discovered resources</i> are those quantities of <i>oil</i> and <i>gas</i> estimated on a given date to be remaining in, plus those quantities already produced from, known accumulations. <i>Discovered resources</i> are divided into economic and uneconomic categories, with the estimated future recoverable portion classified as <i>reserves</i> and <i>contingent resources</i> , respectively. [ <i>COGE Handbook</i> ]
Discovered unrecoverable resources	Discovered unrecoverable resources are those quantities of discovered resources that are neither technically possible nor economic to produce. They represent quantities of petroleum that are in the reservoir after production has ceased, and in known accumulations that are not deemed recoverable due to lack of technical and economic recovery processes. [COGE Handbook]
Effective date	In respect of information, the date as at which, or for the period ended on which, the information is provided.
Evaluation	In relation to <i>reserves data</i> , the process whereby an economic analysis is made of a <i>property</i> to arrive at an estimate of a range of <i>net</i> present values of the estimated <i>future net revenue</i> resulting from the <i>production</i> of the <i>reserves</i> associated with the <i>property</i> . [COGE Handbook]
Exploration costs	Costs incurred in identifying areas that may warrant examination and in examining specific areas that are considered to have <i>prospects</i> that may contain <i>oil</i> and <i>gas reserves</i> , including costs of drilling <i>exploratory wells</i> and exploratory type <i>stratigraphic test wells</i> .
	<i>Exploration costs</i> may be incurred both before acquiring the related <i>property</i> (sometimes referred to in part as "prospecting costs") and after acquiring the <i>property</i> . <i>Exploration costs</i> , which include applicable <i>operating costs</i> of <i>support equipment and facilities</i> and
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	other costs of exploration activities, are:		
	<ul> <li>(a) costs of topographical, geochemical, geological and geophysical studies, rights of access to <i>properties</i> to conduct those studies, and salaries and other expenses of geologists, geophysical crews and others conducting those studies (collectively sometimes referred to as "geological and geophysical costs");</li> </ul>		
	(b) costs of carrying and retaining unproved <i>properties</i> , such as delay rentals, taxes (other than income and capital taxes) on <i>properties</i> , legal costs for title defence, and the maintenance of land and <i>lease</i> records;		
	(c) dry hole contributions and bottom hole contributions;		
	(d) costs of drilling and equipping <i>exploratory wells</i> ; and		
	(e) costs of drilling exploratory type <i>stratigraphic test wells</i> .		
	[CICA Accounting Guideline 16]		
Exploratory well	A well that is not a <i>development well</i> , a <i>service well</i> or a <i>stratigraphic test well</i> . [CICA Accounting Guideline 16]		
FAS 19	<i>FASB</i> Statement of Financial Accounting Standards No. 19 "Financial Accounting and Reporting by Oil and Gas Producing Companies", as amended from time to time. [ <i>NI 51-101</i> ]		
FASB	United States Financial Accounting Standards Board.		
Field	An area consisting of a single <i>reservoir</i> or multiple <i>reservoirs</i> all grouped on or related to the same individual geological structural feature and/or stratigraphic condition.		
	There may be two or more <i>reservoirs</i> in a <i>field</i> that are separated vertically by intervening impervious strata or laterally by local geologic barriers, or both. <i>Reservoirs</i> that are associated by being in overlapping or adjacent <i>fields</i> may be treated as a single or common operational <i>field</i> . The geological terms "structural feature" and "stratigraphic condition" are intended to denote localized geological features, in contrast to broader terms such as "basin", "trend", "province", "play" or "area of interest". [COGE Handbook]		

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Forecast prices and costs	Future prices and costs that are:		
<i>CO315</i>	(a)	generally accepted as being a reasonable outlook of the future;	
	(b)	if, and only to the extent that, there are fixed or presently determinable future prices or costs to which the <i>reporting</i> <i>issuer</i> is legally bound by a contractual or other obligation to supply a physical product, including those for an extension period of a contract that is likely to be extended, those prices or costs rather than the prices and costs referred to in paragraph (a).	
Foreign geographic area	•	ographic area outside North America within one country or ding all or portions of a number of countries.	
Form 51-101F1	Form 51-101F1 Statement of Reserves Data and Other Oil and Gas Information.		
Form 51-101F2	Form 51-101F2 Report on Reserves Data by Independent Qualified Reserves Evaluator or Auditor.		
Form 51-101F3	Form 51-101F3 Report of Management and Directors on Oil and Gas Disclosure.		
Future income tax expenses	Futur	re income tax expenses estimated (generally, year-by-year):	
Future income tax expenses	Futur (a)	<i>The income tax expenses</i> estimated (generally, year-by-year): making appropriate allocations of estimated unclaimed costs and losses carried forward for tax purposes, between <i>oil and</i> <i>gas activities</i> and other business activities;	
		making appropriate allocations of estimated unclaimed costs and losses carried forward for tax purposes, between <i>oil and</i>	
	(a)	making appropriate allocations of estimated unclaimed costs and losses carried forward for tax purposes, between <i>oil and</i> <i>gas activities</i> and other business activities; without deducting estimated future costs (for example, Crown	
	(a) (b)	<ul> <li>making appropriate allocations of estimated unclaimed costs and losses carried forward for tax purposes, between <i>oil and gas activities</i> and other business activities;</li> <li>without deducting estimated future costs (for example, Crown royalties) that are not deductible in computing taxable income;</li> <li>taking into account estimated tax credits and allowances (for</li> </ul>	
	(a) (b) (c) (d) The educed	<ul> <li>making appropriate allocations of estimated unclaimed costs and losses carried forward for tax purposes, between <i>oil and gas activities</i> and other business activities;</li> <li>without deducting estimated future costs (for example, Crown royalties) that are not deductible in computing taxable income;</li> <li>taking into account estimated tax credits and allowances (for example, royalty tax credits); and</li> <li>applying to the future pre-tax <i>net</i> cash flows relating to the <i>reporting issuer's oil and gas activities</i> the appropriate year-end statutory tax rates, taking into account future tax rates</li> </ul>	

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(b) *constant prices and costs.* 

This *net* amount is computed by deducting, from estimated future revenues:

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

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

### Gas (or natural gas)

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

Gas can exist in a reservoir either

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

Non-hydrocarbon substances may include hydrogen sulphide, carbon dioxide and nitrogen. [*COGE Handbook*]

Gross

Heavy oil

- (a) In relation to a reporting issuer's interest in production or reserves, its "company gross reserves", which are the reporting issuer's working interest (operating or nonoperating) share before deduction of royalties and without including any royalty interests of the reporting issuer. [COGE Handbook]
- (b) In relation to wells, the total number of wells in which a *reporting issuer* has an interest.
- (c) In relation to *properties*, the total area of *properties* in which a *reporting issuer* has an interest.

In respect of *reserves* or *production*:

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

	<ul> <li>(b) in a <i>jurisdiction</i> that has no royalty regime specific to <i>heavy</i> oil, "<i>heavy oil</i>" is oil with a density between 10 to 22.3 degrees API (as that term is defined by the American Petroleum Institute). [COGE Handbook]</li> </ul>
Independent	In respect of the relationship between a <i>reporting issuer</i> and a <i>qualified reserves evaluator or auditor</i> , the term has the meaning set out in the <i>COGE Handbook</i> .
Instrument (or NI 51-101)	NI 51-101 Standards of Disclosure for Oil and Gas Activities.
Jurisdiction	For the purposes of NI 51-101, a province or territory of Canada. [NI 14-101]
Lease	An agreement granting to the lessee rights to explore, develop and exploit a <i>property</i> .
Marketable	In respect of <i>reserves</i> or sales of <i>oil</i> , <i>gas</i> or associated by-products, the volume of <i>oil</i> , <i>gas</i> or associated by-products measured at the point of sale to a third party, or of transfer to another division of the issuer for treatment prior to sale to a third party. For <i>gas</i> , this may occur either before or after removal of <i>natural gas</i> liquids. For heavy <i>oil</i> or <i>bitumen</i> , this is before the addition of diluent.
Material (or materiality)	For the purposes of <i>NI 51-101</i> , information is <i>material</i> , in respect of a <i>reporting issuer</i> , if it would be likely to influence a decision by a reasonable investor to buy, hold or sell a security of the <i>reporting issuer</i> .
· ·	This meaning differs from the definitions of "material change" and "material fact" in <i>securities legislation</i> , but is consistent with the meaning of the term as used, for accounting purposes, in the <i>CICA</i> Handbook.
i.	[ <i>NI 51-101</i> ]
Mcf	Thousand cubic feet.
McfGE	Thousand cubic feet of <i>gas</i> equivalent. [ <i>NI 51-101</i> and <i>COGE Handbook</i> ]
Natural gas	Gas. [COGE Handbook]

*oil*; or

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Natural gas liquids	Those hydrocarbon components that can be recovered from <i>natural</i> gas as liquids including, but not limited to, ethane, propane, butanes, pentanes plus, condensate and small quantities of non-hydrocarbons.			
	[COG	E Hand	lbook]	
Net	(a)	<i>reserv</i> non-o plus tl	ation to a <i>reporting issuer's</i> interest in <i>production</i> or <i>res</i> , the <i>reporting issuer's</i> working interest (operating or perating) share after deduction of royalty obligations, the <i>reporting issuer's</i> royalty interests in <i>production</i> or <i>res</i> . [COGE Handbook]	
	(b)	ofwel	ation to a <i>reporting issuer's</i> interest in wells, the number lls obtained by aggregating the <i>reporting issuer's</i> ng interest in each of its <i>gross</i> wells.	
	(c)	total a	ation to a <i>reporting issuer</i> 's interest in a <i>property</i> , the rea in which the <i>reporting issuer</i> has an interest olied by the working interest owned by the <i>reporting</i> .	
NI 14-101	Nation	nal Insti	rument 14-101 Definitions.	
NI 51-101 or the Instrument		nal Instr <i>ctivities</i>	rument 51-101 Standards of Disclosure for Oil and S.	
NI 51-102	Natio	National Instrument 51-102 Continuous Disclosure Obligations.		
Non-associated gas	An accumulation of <i>natural gas</i> in a <i>reservoir</i> where there is no <i>crude oil</i> . See <i>gas</i> .			
Oil	Crude oil or synthetic oil. [COGE Handbook]			
Oil and gas activities	"Oil and gas activities":			
	(a)	incluc	le:	
		(i)	the search for <i>crude oil</i> or <i>natural gas</i> in their natural states and original locations;	
		(ii)	the acquisition of <i>property</i> rights or <i>properties</i> for the purpose of further exploring for or removing <i>oil</i> or <i>gas</i> from <i>reservoirs</i> on those <i>properties</i> ;	
		(iii)	the construction, drilling and <i>production</i> activities necessary to recover <i>oil</i> and <i>gas</i> from <i>reservoirs</i> , and the acquisition, construction, installation and	
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maintenance of *field* gathering and storage systems, including lifting *oil* and *gas* to the surface and gathering, treating, *field* processing and *field* storage; and

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

### (b) do not include:

- (i) transporting, refining or marketing *oil* or *gas*;
- (ii) activities relating to the extraction of natural *resources* other than *oil* and *gas* and their by-products; or
- (iii) the extraction of geothermal steam or of hydrocarbons as a by-product of the extraction of geothermal steam or associated geothermal *resources*. [*NI 51-101*]

### **Operating costs** Production costs.

Possible reserves

*Reserves* that are less certain to be recovered than *probable reserves*. It is unlikely that the actual remaining quantities recovered will exceed the sum of the estimated proved plus *probable* plus *possible reserves*. Other criteria, including levels of certainty, that must also be met for the categorization of *possible reserves* are provided in the *COGE Handbook*. [*COGE Handbook*]

Preparation dateIn respect of written disclosure, the most recent date to which<br/>information relating to the period ending on the effective date was<br/>considered in the preparation of the disclosure.

Probable reservesReserves that are less certain to be recovered than proved reserves. It<br/>is equally likely that the actual remaining quantities recovered will be<br/>greater or less than the sum of the estimated proved plus probable<br/>reserves. Other criteria, including levels of certainty, that must also be<br/>met for the categorization of probable reserves are provided in the<br/>COGE Handbook. [COGE Handbook]

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

The *oil production* function is usually regarded as terminating at the outlet valve on the *lease* or *field production* storage tank. The gas

production function is usually regarded as terminating at the plant gate. In some circumstances, it may be more appropriate to regard the production function as terminating at the first point at which oil, gas or their by-products are delivered to a main pipeline, a common carrier, a refinery or a marine terminal.         Production costs (or Operating costs)       Costs incurred to operate and maintain wells and related equipment and facilities, including applicable operating costs of support equipment and facilities and other costs of operating and maintaining those wells and related equipment and facilities.         Lifting costs become part of the cost of oil and gas produced.       Examples of production costs are: <ul> <li>(a) costs of labour to operate the wells and related equipment and facilities;</li> <li>(b) costs of repairs and maintenance;</li> <li>(c) costs of materials, supplies and fuel consumed, and supplies utilized, in operating the wells and related equipment and facilities;</li> <li>(d) costs of workovers;</li> <li>(e) property taxes and insurance costs applicable to properties and wells and related equipment and facilities;</li> <li>(f) taxes, other than income and capital taxes.</li> </ul> <li>Production group</li> <li>One of the following together, in each case, with associated by-products:         <ul> <li>(a) light and medium crude oil (combined);</li> <li>(b) heavy oil;</li> <li>(c) associated gas and non-associated gas (combined); and</li> <li>(d) bitumen, synthetic oil or other products from non-conventional oil and gas activities.</li> </ul> </li>			15	
Operating costs)       and facilities, including applicable operating costs of support equipment and facilities and other costs of operating and maintaining those wells and related equipment and facilities.         Lifting costs become part of the cost of oil and gas produced.         Examples of production costs are:         (a)       costs of labour to operate the wells and related equipment and facilities;         (b)       costs of repairs and maintenance;         (c)       costs of materials, supplies and fuel consumed, and supplies utilized, in operating the wells and related equipment and facilities;         (d)       costs of workovers;         (e)       property taxes and insurance costs applicable to properties and wells and related equipment and facilities; and         (f)       taxes, other than income and capital taxes.         Production group       One of the following together, in each case, with associated by-products:         (a)       light and medium crude oil (combined);         (b)       heavy oil;         (c)       associated gas and non-associated gas (combined); and         (d)       bitumen, synthetic oil or other products from non-conventional oil and gas activities.         Product type       One of the following:		gate. <i>prodi</i> or the	In some circumstances, it may be more appropriate to regard the <i>action</i> function as terminating at the first point at which <i>oil</i> , <i>gas</i> is by-products are delivered to a main pipeline, a common	
Examples of production costs are:         (a)       costs of labour to operate the wells and related equipment and facilities;         (b)       costs of repairs and maintenance;         (c)       costs of materials, supplies and fuel consumed, and supplies utilized, in operating the wells and related equipment and facilities;         (d)       costs of workovers;         (e)       property taxes and insurance costs applicable to properties and wells and related equipment and facilities; and         (f)       taxes, other than income and capital taxes.         Production group       One of the following together, in each case, with associated by-products:         (a)       light and medium crude oil (combined);         (b)       heavy oil;         (c)       associated gas and non-associated gas (combined); and         (d)       bitumen, synthetic oil or other products from non-conventional oil and gas activities.         Product type       One of the following:		and facilities, including applicable <i>operating costs</i> of <i>support</i> equipment and facilities and other costs of operating and maintaining		
<ul> <li>(a) costs of labour to operate the wells and related equipment and facilities;</li> <li>(b) costs of repairs and maintenance;</li> <li>(c) costs of materials, supplies and fuel consumed, and supplies utilized, in operating the wells and related equipment and facilities;</li> <li>(d) costs of workovers;</li> <li>(e) property taxes and insurance costs applicable to properties and wells and related equipment and facilities; and</li> <li>(f) taxes, other than income and capital taxes.</li> <li>Production group</li> <li>One of the following together, in each case, with associated by-products: <ul> <li>(a) light and medium crude oil (combined);</li> <li>(b) heavy oil;</li> <li>(c) associated gas and non-associated gas (combined); and</li> <li>(d) bitumen, synthetic oil or other products from non-conventional oil and gas activities.</li> </ul> </li> <li>Product type</li> <li>One of the following:</li> </ul>		Liftin	g costs become part of the cost of <i>oil</i> and <i>gas</i> produced.	
facilities;(b)costs of repairs and maintenance;(c)costs of materials, supplies and fuel consumed, and supplies utilized, in operating the wells and related equipment and facilities;(d)costs of workovers;(e)property taxes and insurance costs applicable to properties and wells and related equipment and facilities; and(f)taxes, other than income and capital taxes.Production groupOne of the following together, in each case, with associated by- products:(a)light and medium crude oil (combined);(b)heavy oil;(c)associated gas and non-associated gas (combined); and(d)bitumen, synthetic oil or other products from non-conventional oil and gas activities.Product typeOne of the following:		Exan	aples of <i>production costs</i> are:	
<ul> <li>(c) costs of materials, supplies and fuel consumed, and supplies utilized, in operating the wells and related equipment and facilities;</li> <li>(d) costs of workovers;</li> <li>(e) property taxes and insurance costs applicable to properties and wells and related equipment and facilities; and</li> <li>(f) taxes, other than income and capital taxes.</li> <li>Production group</li> <li>One of the following together, in each case, with associated by-products: <ul> <li>(a) light and medium crude oil (combined);</li> <li>(b) heavy oil;</li> <li>(c) associated gas and non-associated gas (combined); and</li> <li>(d) bitumen, synthetic oil or other products from non-conventional oil and gas activities.</li> </ul> </li> <li>Product type</li> <li>One of the following:</li> </ul>		(a)		
utilized, in operating the wells and related equipment and facilities;(d)costs of workovers;(e)property taxes and insurance costs applicable to properties and wells and related equipment and facilities; and(f)taxes, other than income and capital taxes.Production groupOne of the following together, in each case, with associated by- products: (a)(a)light and medium crude oil (combined); (b)(b)heavy oil; (c)(c)associated gas and non-associated gas (combined); and oil and gas activities.Product typeOne of the following:		(b)	costs of repairs and maintenance;	
(e)property taxes and insurance costs applicable to properties and wells and related equipment and facilities; andProduction group(f)taxes, other than income and capital taxes.Production groupOne of the following together, in each case, with associated by- products: (a)light and medium crude oil (combined); (b)(b)heavy oil; (c)associated gas and non-associated gas (combined); and oil and gas activities.Product typeOne of the following:		(c)	utilized, in operating the wells and related equipment and	
wells and related equipment and facilities; andwells and related equipment and facilities; and(f) taxes, other than income and capital taxes.Production groupOne of the following together, in each case, with associated by- products:(a) light and medium crude oil (combined);(b) heavy oil;(c) associated gas and non-associated gas (combined); and(d) bitumen, synthetic oil or other products from non-conventional oil and gas activities.Product typeOne of the following:		(d)	costs of workovers;	
Production group       One of the following together, in each case, with associated by-products:         (a)       light and medium crude oil (combined);         (b)       heavy oil;         (c)       associated gas and non-associated gas (combined); and         (d)       bitumen, synthetic oil or other products from non-conventional oil and gas activities.         Product type       One of the following:		(e)	<i>property</i> taxes and insurance costs applicable to <i>properties</i> and wells and related equipment and facilities; and	
products:       (a)       light and medium crude oil (combined);         (b)       heavy oil;         (c)       associated gas and non-associated gas (combined); and         (d)       bitumen, synthetic oil or other products from non-conventional oil and gas activities.         Product type       One of the following:		(f)	taxes, other than income and capital taxes.	
<ul> <li>(b) heavy oil;</li> <li>(c) associated gas and non-associated gas (combined); and</li> <li>(d) bitumen, synthetic oil or other products from non-conventional oil and gas activities.</li> <li>Product type One of the following:</li> </ul>	Production group			
<ul> <li>(c) associated gas and non-associated gas (combined); and</li> <li>(d) bitumen, synthetic oil or other products from non-conventional oil and gas activities.</li> <li>Product type One of the following:</li> </ul>		(a)	light and medium crude oil (combined);	
(d) bitumen, synthetic oil or other products from non-conventional oil and gas activities.         Product type       One of the following:		(b)	heavy oil;	
oil and gas activities.Product typeOne of the following:		(c)	associated gas and non-associated gas (combined); and	
		(d)	· -	
(a) in respect of conventional <i>oil and gas activities</i> :	Product type	One	of the following:	
		(a)	in respect of conventional oil and gas activities:	

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(i) light and medium *crude oil* (combined);

(ii) heavy *oil*;

(iii) *natural gas* excluding *natural gas* liquids; or

(iv) *natural gas* liquids; and

(b) in respect of non-conventional *oil and gas activities*:

(i) *synthetic oil*;

(ii) *bitumen*;

(iii) coal bed methane;

(iv) hydrates;

(v) shale oil; or

(vi) shale gas.

### [*NI 51-101*]

Professional organization

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

- (a) admits members primarily on the basis of their educational qualifications;
- (b) requires its members to comply with the professional standards of competence and ethics prescribed by the organization that are relevant to the estimation, *evaluation*, review or *audit* of *reserves data*;
- (c) has disciplinary powers, including the power to suspend or expel a member; and

(d) is either:

- (i) given authority or recognition by statute in a Canadian *jurisdiction*; or
- (ii) accepted for this purpose by the *securities regulatory authority* or the *regulator*.

[*NI 51-101*]

A *property* includes:

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

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

[CICA Accounting Guideline 16]

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

- (a) costs of *lease* bonuses and options to purchase or *lease* a *property*;
- (b) the portion of the costs applicable to hydrocarbons when land including rights to hydrocarbons is purchased in fee;
- (c) brokers' fees, recording and registration fees, legal costs and other costs incurred in acquiring *properties*.

[CICA Accounting Guideline 16]

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

**Prospective resources** Prospective resources are defined as those quantities of *oil* and *gas* estimated on a given date to be potentially recoverable from undiscovered accumulations. They are technically viable and uneconomic to recover. [COGE Handbook]

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Property acquisition costs

**Prospect** 

		,		
Proved property	A <i>property</i> or part of a <i>property</i> to which <i>reserves</i> have been specifically attributed.			
Proved reserves	<i>Reserves</i> that can be estimated with a high degree of certainty to be recoverable. It is likely that the actual remaining quantities recovered will exceed the estimated proved <i>reserves</i> . Other criteria, including levels of certainty, that must also be met for the categorization of proved <i>reserves</i> are provided in the <i>COGE Handbook</i> . [ <i>COGE Handbook</i> ]			
Qualified reserves auditor	An individual who:			
	(a)	in respect of particular <i>reserves data</i> or related information, possesses professional qualifications and experience appropriate for the estimation, <i>evaluation</i> , review and <i>audit</i> of the <i>reserves data</i> and related information; and		
	(b)	is a member in good standing of a <i>professional organization</i> .		
	[ <i>NI 5</i>	1-101]		
Qualified reserves evaluator	An individual who:			
evaluator	(a)	in respect of particular <i>reserves data</i> or related information, possesses professional qualifications and experience appropriate for the estimation, <i>evaluation</i> and review of the <i>reserves data</i> and related information; and		
	(b)	is a member in good standing of a professional organization.		
	[NI 5	1-101]		
Qualified reserves	A qu	alified reserves auditor or a qualified reserves evaluator.		
evaluator or auditor	[ <i>NI 51-101</i> ]			
Regulator	posit	<i>Securities regulatory authority</i> or a person who holds a specified ion with the <i>securities regulatory authority</i> (in several instances, securive Director or Director) in each <i>jurisdiction</i> .		
	[ <i>NI 1</i>	4-101]		
Reporting issuer	(a)	A "reporting issuer" as defined in securities legislation; or		
	(b)	in a <i>jurisdiction</i> in which the term is not defined in <i>securities legislation</i> , an issuer of securities that is required to file financial statements with the <i>securities regulatory authority</i> .		

Reservation	In relation to a report on <i>reserves data</i> , a modification of the standard report of an <i>independent qualified reserves evaluator or auditor</i> on <i>reserves data</i> set out in <i>Form 51-101F2</i> , caused by a departure from the <i>COGE Handbook</i> or by a limitation in the scope of work that the <i>independent qualified reserves evaluator or auditor</i> considers necessary. A modification may take the form of a qualified or adverse opinion or a denial of opinion.		
Reserves	<ul> <li><i>Reserves</i> are the estimated remaining quantities of <i>oil</i> and <i>natural gas</i> and related substances anticipated to be recoverable from known accumulations, from a given date forward, based on: <ul> <li>analysis of drilling, geological, geophysical and engineering data;</li> <li>the use of established technology; and</li> <li>specified economic conditions, which are generally accepted as being reasonable, and shall be disclosed.</li> </ul> </li> <li><i>Reserves</i> are classified according to the degree of certainty associated with the estimates. [COGE Handbook]</li> </ul>		
Reserves data	Estimates of proved reserves and probable reserves and related future net revenue estimated using forecast prices and costs. [NI 51-101]		
Reservoir	A porous and permeable underground formation containing a natural accumulation of producible <i>oil</i> or <i>gas</i> that is confined by impermeable rock or water barriers and is individual and separate from other <i>reservoirs</i> . [CICA Accounting Guideline 16]		
Resources	Those quantities of <i>oil</i> and <i>gas</i> estimated to exist originally in naturally occurring accumulations.		
-	<i>Resources</i> are, therefore, those quantities estimated on a particular date to be remaining in known accumulations plus those quantities already produced from known accumulations plus those quantities i accumulations yet to be discovered.		
	Resources are divided into:		
	(a) <i>discovered resources</i> , which are limited to known accumulations; and		
	(b) <i>undiscovered resources</i> .		
	[COGE Handbook]		
Review	In relation to the role of a <i>qualified reserves evaluator or auditor</i> in respect of <i>reserves data</i> , steps carried out by the <i>qualified reserves</i>		

	<ul> <li>evaluator or auditor, consisting primarily of enquiry, analytical procedures, analysis, review of historical reserves performance and discussion with reserves management staff related to a reporting issuer's reserves data, with the limited objective of assessing whether the reserves data is "plausible" in the sense of appearing to be worthy of belief based on the information obtained by the qualified reserves evaluator or auditor as a result of carrying out such steps.</li> <li>Examination of documentation is not required unless the information does not appear to be plausible.</li> <li>A reserves review, due to the limited nature of the investigation involved, does not provide the level of assurance provided by a reserves audit. Although reserves reviews can be done for specific applications, they are not a substitute for an audit. [COGE Handbook]</li> </ul>
SEC	The Securities and Exchange Commission of the United States of America. [ <i>NI 14-101</i> ]
Securities legislation	The statute (in most cases entitled the "Securities Act") and subordinate legislation (in most cases including regulations or rules) specified, for each <i>jurisdiction</i> , in <i>NI 14-101</i> .
	References in NI 51-101 to securities legislation are to be read as references to securities legislation in the particular jurisdiction.
Securities regulatory authority	The securities commission or comparable body specified, for each <i>jurisdiction</i> , in <i>NI 14-101</i> .
	References in <i>NI 51-101</i> to the <i>securities regulatory authority</i> are to be read as references to the <i>securities regulatory authority</i> in the particular <i>jurisdiction</i> .
SEDAR	The System for Electronic Document Analysis and Retrieval referred to in National Instrument 13-101 System for Electronic Document Analysis and Retrieval ( <i>SEDAR</i> ).
Service well	A well drilled or completed for the purpose of supporting <i>production</i> in an existing <i>field</i> . Wells in this class are drilled for the following specific purposes: <i>gas</i> injection ( <i>natural gas</i> , propane, butane or flue <i>gas</i> ), water injection, steam injection, air injection, salt-water disposal, water supply for injection, observation, or injection for combustion.
	[CICA Accounting Guideline 16]
Solution gas	Gas dissolved in crude oil. See gas.

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Stratigraphic test well	A drilling effort, geologically directed, to obtain information pertaining to a specific geologic condition. Ordinarily, such wells are drilled without the intention of being completed for hydrocarbon <i>production</i> . They include wells for the purpose of core tests and all types of expendable holes related to hydrocarbon exploration. <i>Stratigraphic test wells</i> are classified as		
	(a) "exploratory type" if not drilled into a proved <i>property</i> ; or		
	<ul> <li>(b) "development type", if drilled into a proved <i>property</i>, of</li> <li>(b) Development type stratigraphic wells are also referred to as "<i>evaluation</i> wells". [<i>CICA Accounting Guideline 16</i>]</li> </ul>		
Support equipment and facilities	Equipment and facilities used in <i>oil and gas activities</i> , including seismic equipment, drilling equipment, construction and grading equipment, vehicles, repair shops, warehouses, supply points, camps, and division, district or <i>field</i> offices.		
Supporting filing	A document filed by a <i>reporting issuer</i> with a <i>securities regulatory authority</i> . [NI 51-101]		
Synthetic oil	A mixture of hydrocarbons derived by upgrading crude <i>bitumen</i> from <i>oil</i> sands or kerogen from <i>oil</i> shales or other substances such as coal. [COGE Handbook]		
Undeveloped reserves	Undeveloped reserves are those reserves expected to be recovered from known accumulations where a significant expenditure (for example, when compared to the cost of drilling a well) is required to render them capable of <i>production</i> . They must fully meet the requirements of the <i>reserves</i> classification (proved, <i>probable</i> , <i>possible</i> ) to which they are assigned. [COGE Handbook]		
Undiscovered resources	Undiscovered resources are those quantities of oil and gas estimated on a given date to be contained in accumulations yet to be discovered. The estimated potentially recoverable portion of undiscovered resources is classified as prospective resources. [COGE Handbook]		
Undiscovered unrecoverable resources	Undiscovered unrecoverable resources are those quantities of undiscovered resources that are neither technically possible nor economic to produce. They represent quantities of petroleum that are in unknown accumulations that are not deemed recoverable due to lack of technical and economic recovery processes. [COGE Handbook]		
Unproved property	A property or part of a property to which no reserves have been		

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specifically attributed.

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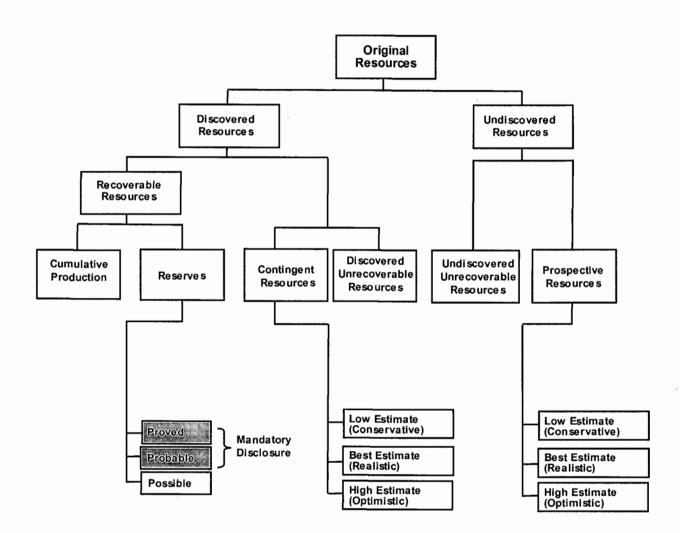
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Well abandonmentCosts of abandoning a well (net of salvage value) and of<br/>disconnecting the well from the surface gathering system. They do<br/>not include costs of abandoning the gathering system or reclaiming<br/>the wellsite.

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

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### RESERVES AND RESOURCES CLASSIFICATION AS SET OUT IN CHAPTER 5 OF VOLUME 1 OF THE COGE HANDBOOK



Comment: This graph needs to be reviewed. It is not the same as in COGEH Volume 1.

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### **APPENDIX 3**

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

### SAMPLE RESERVES DATA DISCLOSURE

### **Format of Disclosure**

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

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

Reporting issuers and their advisers are reminded of the materiality standard under section 1.4 of NI 51-101, and of the instructions in Form 51-101F1.

See also sections 1.4, 2.2 and 2.3 and subsection 2.7(8) of Companion Policy 51-101CP.

### Sample Tables

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

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

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

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# CONSTANT PRICES AND COSTS [OPTIONAL SUPPLEMENTAL DISCLOSURE]

				REN	RESERVES			
	I.I.GH MBDI	IGET AND EDIUM OIL	BIBAW7 OIL	uwr D	NATURAI GAS <sup>GI</sup>	JRAL S <sup>69</sup>	NATI'UR LLIQU	AL GAS JIDS
RESERVES CATEGORY	Gross (Mibbl)	Net (Mbbl)	Gross (Mbbil)	Nat (Mibbl)	Gross (Wiviet)	Net ((MMef))	Gross (MUM)	Gross Niet Mibbl) ((Mibbl)
PROVED Developed Producing Developed Non-Producing Undeveloped TOTAL PROVED	8 8 8 <b>8</b>						200 200 200 200 200 200 200	
PROBABILE	8	XXX	X	XXX +	×.	XXX	XXX	XXX
TOTAL PROVED PLUS PROBABLE	XXX	XXX	XXX	XXXX	XXX	XXX	t XXXX	XXXX

 Other product types must be added if material.
 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

4

# CONSTANT PRICES AND COSTS [OPTIONAL SUPPLEMENTAL DISCLOSURE]

				NET PR	A LNEISE	VALOUSS (	ANET PRASENT VALUES OF PUTIORS NET REVENUES	AL NETLE	<b>ICVIENUUE</b>		
		BIBFORUE INC	BEFORE INCOME TAXES DISCOUNTED AT (%/year)	TANTES (%/year)			AFTIER	AFTIBR INCOME TAXBS DISCOUNTIBD AT (%/year)	IAXIES (%/year)		UNUT VAILUE BERFORE INCOME TAX DISCOUNTIED AT 10%/yer
RESERVES CATEGORY	0 (IMMS)	5 (MMB)	10 (MMS)	15 (MIMS)	20 (MWS)	(SMMS)	5 (WWS)	10 (NNNS)	15 (MMS)	20 (MMS)	(SAMed) (SAMA)
PROVIED Developed Producing	×.	×	×	8	ø		8	8	×	8	Į <b>a</b>
Developed Non-Producing	8	×	X	<b>X</b>	8	X	<b>X</b>	8	ø	X	a a
Undeveloped TOTAL PROVIED	¤ <b> </b> ∦	# #	8 8	# <b> </b> #	<b>\$</b>	8 8	8 8	8 8	<b>8</b>	8 <b>8</b>	
PROBABLE	8	M	×		XX XX	×	. X	×		8	
TOTAL PROVED PLUS PROBABILE	XXXXX	XXXX	XXXXX	XXXX	XXXXX	XXXXX	XXXX	XXXX	XXXXX	XXXXX	is the second

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]

PUTURE NET REVENUE AFTER NO REXES	X	X
INCOOME TAXYER ANG	B	
TUTURE TEN NET ENCORE ENCORE ENCORE ENCORE	No. 1	and the second se
AIRANDONMENT AND RECLAMATION COSTS (MD)	a a a a a a a a a a a a a a a a a a a	
(GLA)	NOT THE REPORT OF THE REPORT O	
(gyd) Suisoo Suiterio	No.	
Rov ALTINES	1	
REVENUE	M	
RESERVES	Proved Reserves	Proved Plus Probable Reserves

OPTIONAL SUPPLEMENTAL

Reference: Item 2.2 of Form 51-101F1

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

J

# CONSTANT PRICES AND COSTS [OPTIONAL SUPPLEMENTAL DISCLOSURE]

RESERVES CATEGORY	PRODUCTION GROUP	FUTURE NET REVENUE BEFORE INCOME TAXES (discemend at 10%/year) (MS)
Proved Reserves	Light and Medium Gude Oil (makuding solution gas and other hy-products) Elevyy Oil (makuting solution gas and other hy-products) Natural Gas (makuting hy-products but excluding solution gas from all wells) Non-Conventional Oil and Gas Aedivities	
Proved Plus Probable Reserves	Light and Meditum Grude Oil (metuding solution gas and other hy-products) Elsewy Oil (metuding solution gas and other hy-products) Natural Gas (metuding by-products but excluding solution gas from oil wells) Non-Conventional Oil and Gas Activities	

OPTIONAL SUPPLEMENTAL

Reference: Item 2.2 of Form 51-101 F1

SUMMARY OF OIL AND GAS RESERVES FORECAST PRICES AND COSTS as of December 31, 2006

4 . 1

				RESEI	<b>RESERVES</b> <sup>(1)</sup>		,	
	LIGH	LIGHT AND AEDIUM OIL	HE, O	HEAVY OIL	NAT GA	NATURAL GAS <sup>(2)</sup>	NATURAL GAS LIQUIDS	TURAL GAS LIQUIDS
RESERVES CATEGORY	Gross (Mbbl)	Net (Mbbl)	Gross (Mbbl)	Net (Mbbl)	Gross (MMcf)	Net (MMcf)	Gross (Mbbl)	Net (Mbbl)
PROVED Developed Producing Developed Non-Producing Undeveloped TOTAL PROVED PROBABLE TOTAL PROVED PLUS PROBABLE	XX XX XXX XXX XXX	xx xx xx xxx xxx xx xx	XX XX XX XXX XXX	XX XX XX XXX XXX	xx xxx xxx xxx xxx xxx	XX XX XXX XXX XXX XXX	xx xx xxx xxx xxx xxx xxx	XX XX XXX XXX XXX

Other product types must be added if material.
 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

BEFOR DISCOU RESERVES CATEGORY (MM\$) (MM\$)	LE INCO	ME TAXES AT (%/year)							
0 0					AFTER DISCOUI	AFTER INCOME TAXES DISCOUNTED AT (%/year)	[AXES [%/year]		UNIT VALUE BEFORE INCOME TAX DISCOUNTED AT 10%/year
PROVED		15 (MM\$)	20 (MM\$)	0 0	5 (MM\$)	10 (MM\$)	15 (MM\$)	20 (MM\$)	(\$/Mcf) (\$/bbl)
Developed Producing xx xx Developed Non-Producing xx xx	XX	xx	XX	X X	XX XX	x x	X X	xx	XX XX
Undeveloped <u>xx xxx</u> <u>xxx</u>	xx	xx	XX XXX	xx	xx	XX	xx	xxx	XX XX
PROBABLE xx xx	xx	XX	xx	XX	xx	xx	x	xx	xx
TOTAL PROVED PLUS PROBABLE xxxx xxxx	XXXX	XXXX	XXXX	хххх	XXXX	XXXX	ХХХХ	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

COSTS
AND
PRICES
FORECAST

XXX
XXX
Proved Plus Probable Reserves

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

		<b>REVENUE BEFORE</b>	UNIT VALUE
		INCOME TAXES	(\$/Mcf)
KEDERVED CALEGURY	PRODUCTION GROUP	(discounted at 10%/year)	(\$/bbl)
		(M\$)	
Proved Reserves Lig	Light and Medium Crude Oil (including solution gas and other by-products)	XXX	XXX
He	Heavy Oil (including solution gas and other by-products)	XXX	XXX
Na	Natural Gas (including by-products but excluding solution gas and by-products from oil wells)	XXX	XXX
No	Non-Conventional Oil and Gas Activities	XXX	XXX
Total	tal	XXX	
Proved Plus Probable Reserves Lie	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
Na	Natural Gas (including by-products but excluding solution gas from oil wells)	XXX	XXX
No	Non-Conventional Oil and Gas Activities	XXX	XXX
Total	tal	XXX	

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

- 1	
SUMMARY OF PRICING ASSUMPTIONS	as of December 31, 2006

### CONSTANT PRICES AND COSTS<sup>(1)</sup>

	EXCHANGE	RATE <sup>(3)</sup>		(\$US/\$Cdn)		<u>w</u>	<u>w</u>	<u>w</u>	XX
NATURAL	GAS LIQUIDS	FOB	Field Gate	(\$Cdn/bbl)		200	×	<u>I</u>	<u>xx</u>
NATURAL	GAS <sup>(2)</sup>	AECO Gas	Price	(\$Cdn/MMBtu		<u>8</u>	XX	8	XXX
		Cromer Medium	$29.3^{\circ}$ API	(\$Cdn/bbl)		XXX	XXX	<u>xx</u>	<u>xx</u>
$L^{(2)}$		Hardisty Heavy	$12^{0}$ API	(\$Cdn/bbl)		XX	xx	XX	<u></u>
IO		Edmonton Par Price	$40^{0} \text{ API}$	(\$Cdn/bbl)		ž	XX	XXX	
		WTI Cushing	Oklahoma	(\$US/bbl)			8	×	XXX
				Year	Bitstorical (Near Bad)	2003	2004 :::::::::::::::::::::::::::::::::::	2005	2006 (Year Bad)



SUPPLEMENTAL

- This disclosure is triggered by optional supplemental disclosure of item 2.2 of *Form 51-101F1*. This summary table identifies benchmark reference pricing schedules that might apply to a reporting issuer. The exchange rate used to generate the benchmark reference prices in this table. 36E

Reference: Item 3.1 of Form 51-101 F1

J. G. (Glenn Robinson) April 19, 2007

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			EXCHANGE RATE <sup>(3)</sup>	\$US/\$Cdn		XX	XX	XX	XXX		xx	XX	XX	XX	XX	xx	06, in this example).
			INFLATION RATES <sup>(2)</sup>	%/Year		XX	XXX		XX		XX	XX	xx	хх	XX	хх	t financial year (20
		NATURAL	GAS LIQUIDS FOB	Field Gate (\$Cdn/bbl)		XX	XX	XX	XX		XX	хх	хх	XX	xx	xx	es for the most recen
2006	D COSTS	NATURAL	GAS <sup>(1)</sup> AECO Gas	Price (\$Cdn/MMBtu)		XX	XXX	XX	XX V		xx	XX	хх	хх	ХХ	xx	orting issuer. verage historical pric
as of December 31, 2006	RECAST PRICES AND COSTS		Cromer Medium 29.3 <sup>0</sup>	API \$Cdn/bbl		XoX		XOX	XXX		XX	xx	хх	xx	XX	xx	might apply to a rep ole <i>i issuer 's</i> weighted av
as o	FORECA	(1)	Hardisty Heavy	12 <sup>0</sup> API \$Cdn/bbl		XX	<u>w</u>	XX	XX		XX	XX	xx	XX	XX	XX	<ol> <li>This summary table identifies benchmark reference pricing schedules that might apply to a reporting issuer.</li> <li>Inflation rates for forecasting prices and costs.</li> <li>Exchange rates used to generate the benchmark reference prices in this table</li> <li>Item 3.2 (1)(b) of <i>Form 51-101F1</i> also requires disclosure of the <i>reporting issuer's</i> weighted average historical prices for the most recent financial year (2006, in this example)</li> </ol>
		OIL <sup>(1)</sup>	Edmonton Par	Price 40° API \$Cdn/bbl		XX	XXX	XX	XX		xx	XX	XX	XX	xx	XX	enchmark reference r rices and costs. the benchmark refer
			WTI Cushing	Oklahoma \$US/bbl		XX		XXX	XXX		xx	XX	хх	XX	XX	XX	(1) This summary table identifies benchmark refe (2) Inflation rates for forecasting prices and costs. (3) Exchange rates used to generate the benchmar (4) Item 3.2 (1)(b) of <i>Form 51-101F1</i> also require
			· · · · ·	Year	Historical <sup>(4)</sup>	2003		2005	2006	Forecast	2007	2008	2009	2010	2011	Thereafter	<ol> <li>This summ</li> <li>Inflation ra</li> <li>Exchange r</li> <li>Exchange r</li> <li>Item 3.2 (1)</li> </ol>

OPTIONAL SUPPLEMENTAL Reference: Item 3.2 of Form 51-101 F1

J. G. (Glenn Robinson) April 19, 2007

- 53 3

SUMMARY OF PRICING AND INFLATION RATE ASSUMPTIONS.

RECONCILIATION OF COMPANY GROSS RESERVES BY PRODUCT TYPE<sup>(1)</sup>

Ja- maga a

### FORECAST PRICES AND COSTS

Identified         Identified         Identified         Identified         Identified         Associated of a ssociated of a structured of a str															
LIGHT AND MEDIUM OIL         HEAVY OIL           Gross Proved         Probable         Gross Proved         Mbbl)         (Mbbl)	Ð	GAS	Gross Proved	Plus Probable	(MMcf)	ххх		xx	xx	xx	xx	xx	xx	xx	XXX
LIGHT AND MEDIUM OIL         HEAVY OIL           Gross Proved         Probable         Gross Proved         Mbbi)         (Mbbi)	SOCIATED AN ASSOCIATED	-ASSOCIATED	Gross	Probable	(MMcf)	XXX		xx	xx	xx	xx	xx	xx	xx	ххх
LIGHT AND MEDIUM OIL         HEAVY OIL           Gross Proved         Gross Proved         Gross Proved         Freed         Free         Freed         Freed	AS	NON		Gross Proved	(MMcf)	XXX		xx	xx	xx	xx	xx	xx	xx	xxx
LIGHT AND MEDIUM OIL       LIGHT AND MEDIUM OIL       Gross Proved     Gross Proved       (Mbbl)     (Mbbl)     (Mbbl)       (Mbbl)     (Mbbl)     (Mbbl)       (Mbbl)     (Mbbl)     (Mbbl)       very     xxx     xxx       xxx     xxx     xxx       very     xx     xx       xx     xx     xx       xx     xx       xx			Gross Proved	Plus Probable	(Mbbl)	ххх		xx	xx	xx	xx	xx	xx	xx	XXX
LIGHT AND MEDIUM OIL       LIGHT AND MEDIUM OIL       Gross Proved     Gross Proved       Gross Proved     Probable       (Mbbl)     (Mbbl)       (Mbbl)     (Mbbl)       (Mbbl)     (Mbbl)       (Nbbl)     (Mbbl)       (Nbbl)     (Mbbl)       very     xxx       very     xxx       xxx     xxx       very     xx       xxx     xx       very     xx       xx     xx       xxx     xx		HEAVY OIL	Gross	Probable	(Mbbl)	ХХХ		xx	xx	хх	xx	xx	xx	xx	XXX
LIGHT AND MEDIUM Gross Proved Probable (Mbbl) (Mbbl) (Mbbl) (Mbbl) (Mbbl) (Mbbl) (Mbbl) (Mbbl) (Mbbl) (Mbbl) (Mbbl) (Mbbl) (Mbbl) (Mbbl) (Mbbl) (Mbbl) (Mbbl) (Mbbl				Gross Proved	(Mbbl)	ххх		xx	xx	xx	xx	xx	xx	xx	XXX
Very XXX XXX Very XXX XXX Very XXX XXX Very XXX Very XXX XXX Very XXX XXX XXX XXX XXX XXX XXX XXX XXX X		A OIL	Gross Proved	Plus Probable	(Mbbl)	ххх		xx	xx	xx	xx	xx	xx	xx	XXX
Very XXX XXX Very XXX XXX Very XXX XXX Very XXX Very XXX XXX Very XXX XXX XXX XXX XXX XXX XXX XXX XXX X		<b>FAND MEDIUR</b>	Gross	Probable	(Mbbl)	XXX		xx	xx	xx	xx	xx	XX	xx	XXX
FACTORS December 31, 2005 Extensions & Improved Recovery Technical Revisions Discoveries Acquisitions Dispositions Economic Factors Production December 31, 2006		LIGH		Gross Proved	(Mbbl)	XXX		xx	xx	XX	xx	xx	xx	хх	XXX
					FACTORS	December 31, 2005	Extensions $\&$	Improved Recovery	Technical Revisions	Discoveries	Acquisitions	Dispositions	Economic Factors	Production	December 31, 2006

(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

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### Additional Comments

- Please change the reference to the Canadian Oil and Gas Evaluation Handbook from
   'COGE Handbook" to the proper acronym of "COGEH".
- (2) The Instrument should add more "Sample Tables" similar to those presented in Appendix (2) of NI 51-101CP. I developed the existing tables in Appendix (2) and are consistently used in the industry. I have designed additional tables for the required reservoir data as specified in Part 5 and 6 of NI 51-101F1. Examples are available in the recent NI 51-101F1 Forms submitted by Oilexco and Blue Parrot.

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# Summary by Production Groups L D L D L D L D L D L

Oil and Gas Reserves and Net Present Values by Production Group, as of December 31, 2004, Forecast Prices & Costs

			RESERVES	RVES			z	NPV of FNR	~	UNIT		
RESERVE GROUP	OIL		GAS	S	NGL	)L	BEFOR	<b>BEFORE INCOME TAXES</b>	TAXES	VALUES	BOE's	
BY CATEGORY	Gross	Net	96019	Net	Gross	Net	%0	10%	15%	1 <b>q</b> q/\$	(Value	
	Mbbi	Mbbl	MMcf	MMcf	Mbbl	Mbbi	M\$	M\$	M\$	\$/mcf	Conversion)	
Light & Medium Oil												
Proved (PV)												
PDP	1,523	1,335	273	234	4	37	22,376	13,894	12,936	10.41		
PDNP	•	'	•	•	•	'	•			'		Ň
PUD	263	227	48	39	12	80	4,303	2,157	1,909	9.50		
Total PV	1,786	1,562	321	273	56	45	26,679	16,051	14,845	10.28		
Probabie (PB)	345	305	63	52	15	=	7,273	2,564	2,171	8.41		
Total PV + PB	2,131	1,867	384	325	71	56	33,952	18,615	17,016	9.97		
Heavy Oll												
Proved (PV)												2
PDP	4,562						31,547		-		1.80	
PDNP	2,062	1,503					13,094	8,312			•	
PUD	1,516	1,252					8,775	5,988	5,188	4.78	1.99	
Total PV	8,140	6,663					53,416	36,888	30,526	5.54	1.86	
Dzehoklo (00)	002 6	100 0					10,005			90	20.0	
	000'0	120,0					0,020	207'71			2.01	
Total PV + PB	11,646	9,684					71,741	49,153	41,081	5.08	1.96	
Associated & Non-Assoc Gas												
Proved (PV)												
PDP			14,160	11,112	460	327	<u>,</u>	3	19		5.15	
PDNP			490	430	•	•	2,307		700		•	
PUD			1,650	1,190	•	'	2,648	2,178		1.83	5.19	
Total PV			16,300	12,732	460	327	57,933	25,432	22,765	2.00	4.99	
Probable (PB)			1,020	800	•	•	1,685	1,304	1,251	1.63	5.16	
Totel DV 4 DB			000 11								103	
			11/,320	13,532	400	321	28,018	20'/20	24,010	9A.T	0.0	

Notes: (1) Gas reserves included in Light and Medium Oil and Heavy Oil are Solution Gas Reserves only. (2) If material, other product type reserves

nould be included.

3) NPV of FNR is presented before income axes and only includes revenue received om the sale of reserves. Income to be aceived from processing income and other ash for services income should not be included in this table. approximation of the Market Value (in this case - 10%/year) divided by the Net Reserves of the Major Product Type from each group. (5) BOE's are calculated by dividing the unit values of Light and Medium Oil reserves by the unit values of the other major product

elected discount rate that will represent an

Unit values are calculated using a

pe reserves for each reserve classification.

his results in BOE's calculated on a value

asis.

Robinson Petroleum Constituting Liel



#### APPENDIX A

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

# PART 1 DATE OF STATEMENT

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The relative dates of the Corporation's statement of reserves data and other oil and gas information are.

#### **Relative Dates**

Date of Statement	March 26, 2007
Effective Date	December 31, 2006
Preparation Date	March 12, 2007

# PART 2 DISCLOSURE OF RESERVES DATA

Sproule International Limited ("Sproule") has evaluated the Corporation's light and medium oil and solution gas reserves located in the United Kingdom. With the disposition of the Oilexco America properties in 2006, the Corporation does not own any reserves in any other jurisdiction.

Throughout this disclosure the Reserves and Net Present Values associated with the Proved Plus Probable Reserves are highlighted to indicate that these values represent the Corporation's "Best Estimates" of the reserves that are expected to be recovered and the Future Net Revenue associated with the sale and costs associated with the production of these reserves. It is also important to note that the Corporation only has Light and Medium Oil and Solution Gas Reserves.

Forecasts of reserves and associated net production revenues are forward looking statements based on judgements regarding future events. The accuracy of reserves estimates and associated economic analysis is, in part, a function of the quality and quantity of available data and of engineering and geological interpretation and judgement. These reports should be accepted with the understanding that reservoir and financial performance subsequent to the date of the estimates may necessitate revision. These revisions may be material.

All estimates of net present values of future net revenue ("NPV of FNR") are stated prior to provision for indirect overhead and administrative costs. In the United Kingdom (UK) properties the NPV of FNR is calculated both before and after the deduction of UK income taxes but prior to subsequent taxes in Canada. Subsequent taxes in Canada are not included.

**Reserves Data (Constant Prices and Costs)** 

		i Medium Dil	Heav	y Oil	Natur (non-asso assoc	ciated &	Coalbed	Methane		ral Gas quids
Reserve Category	Gross (Mbbl)	Net (Mbbl)	Gross (Mbbl)	Net (Mbbl)	Gross (MMcf)	Net (MMcf)	Gross (MMcf)	Net (MMcf)	Gross (Mbbl)	Net (Mbbi)
Proved										
Developed Producing	177	177	0	0	0	0	0	0	0	0
Developed Non-Producing	0	0	0	0	0	0	0	0	0	0
Undeveloped	26,437	26,437	0	0	0	0	0	0	0	0
Total Proved	26,614	26,614	0	0	0	0	0	0	0	0
Probable	15,949	15,949	0	0	2,587	2,587	0	0	0	0
Possible	13,087	13,087	0	0	3,793	3,793	0	0	0	0
Total Proved Plus Probable	42,563	42,563	<b>0</b>	0	<b></b>	2,587	0		0	0
Total Proved Plus Probable Plus Possible	55,650	55,650	0	0	6,380	6,380	0	0	0	0

#### SUMMARY OF OIL AND GAS RESERVES As of December 31, 2006 CONSTANT PRICES AND COSTS

#### SUMMARY OF NET PRESENT VALUES OF FUTURE NET REVENUE As of December 31, 2006 CONSTANT PRICES AND COSTS

1

				Net Prese	ent Values of	Future Net I	levenue			
			ore Income T ounted at (%/					r Income Tax nted at (%/Y		
Reserves Category	0 (M\$US)	5 (M\$US)	10 (M\$US)	15 (M\$US)	20 (M\$US)	0 (M\$US)	5 (M\$US)	10 (M\$US)	15 (M\$US)	20 (M\$US)
Proved										
Developed Producing	1,606	2,596	3,111	3,351	3,434	1,606	2,596	3,110	3,351	3,434
Developed Non- Producing	0	0	0	0	0	0	0	0	0	0
Undeveloped	1,068,155	953,141	859,736	782,642	718,101	812,700	740,306	680,403	630,056	587,167
Total Proved	1,069,761	955,737	862,846	785,994	721,535	814,305	742,902	683,513	633,407	<b>590,6</b> 01
Probable	596,825	464,240	367,924	296,222	241,679	296,205	229,568	180,740	144,149	116,173
Possible	575,421	429,287	329,576	259,003	207,449	288,644	214,382	163,530	127,417	100,948
Total Proved Plus Probable	1,666,588	1,419,978	1,230,771	1,082,216	963,214	1,110,511	972,471	864,253	777,556	706,774
Total Proved Plus Probable Plus Possible	2,242,007	1,849,264	1,560,346	1,341,218	1,170,663	1,399,155	1,186,853	1,027,783	904,973	807,721

#### TOTAL FUTURE NET REVENUE (UNDISCOUNTED) As of December 31, 2006 CONSTANT PRICES AND COSTS

Reserves Category	Revenue (MSUS)	Royalties (MSUS)	Opera- ting Costs (MSUS)	Develop- ment Costs (M\$US)	Well Abaadon- ment / Other Costs (MSUS)	Future Net Reveuue Before Income Taxes (MSUS)	Income Taxes (MSUS)	Future Net Revenue After Income Taxes (MSUS)
Proved	1,547,078	0	365,587	102,047	9,683	1,069,761	255,456	814,305
Proved Plus Probable	2,460,042	0	572,463	206,387	14,603	1,666,588	556,076	1,110;511
Proved Plus Probable Plus Possible	3,219,922	0	717,938	243,565	16,413	2,242,007	842,852	1,399,155

#### SUMMARY OF RESERVES, NET PRESENT VALUES AND FUTURE NET REVENUE BY PRODUCTION GROUP As of December 31, 2006 CONSTANT PRICES AND COSTS

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Reserves Category	Production Group	Future Net Revenue Before Income Taxes (Discounted at 10%/Year) (M\$US)
Proved	Light and Medium Crude Oil (including solution gas and associated by-products)	862,846
	Heavy Oil (including solution gas and associated by-products)	0
	Natural Gas (including associated by-products)	0
	Coalbed Methane (including associated by-products)	0
Proved Plus		
Probable	Light and Medium Crude Oil (including solution gas and associated by-products)	1,230,771
	Heavy Oil (including solution gas and associated by-products)	0
	Natural Gas (including associated by-products)	0
	Coalbed Methane (including associated by-products)	0
Proved Plus		
Probable Plus	Light and Medium Crude Oil (including solution gas and associated by-products)	1,560,346
Possible	Heavy Oil (including solution gas and associated by-products)	0
	Natural Gas (including associated by-products)	0
	Coalbed Methane (including associated by-products)	0

# Reserves Data (Forecast Prices and Costs)

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1

#### SUMMARY OF OIL AND GAS RESERVES As of December 31, 2006 FORECAST PRICES AND COSTS

			l Medium Fil	Heav	y Oil	(non-ass	ral Gas ociated & iated)	Coalbed	Methane	Natural G	as Liquids
Reserve Ci	ttegory	Gross (Mbbl)	Net (Mbbl)	Gross (Mbbl)	Net (Mbbl)	Gross (MMcf)	Net (MMcf)	Gross (MMcf)	Net (MMcf)	Gross (Mbbl)	Net (Mbbl)
Proved											
Developed	Producing	177	177	0	0	0	0	0	0	0	0
Developed Producing		0	0	0	0	0	0	0	0	0	0
Undevelop	ed	26,437	26,437	0	0	0	0	0	0	0	0
Total Prov	/ed	26,614	26,614	0	0	0	0	0	0	0	0
Probable		15,949	15,949	0	0	2,587	2,587	0	0	0	0
Possible		13,087	13,087	0	0	3,793	3,793	0	0	0	0
Total Prov Probable	ed Plus	42,563	42,563	0	0	2,587	2,587	0	) C		0
Total Prov Probable I	ed Plus Plus Possible	55,650	55,650	0	0	6,380	6,380	. 0	0	0	0

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

1

			Net I	Present V	alues of ]	Future N	et Reven	ue		
		2000	ore Income T unted at (%/					Income Tax nted at (%/Y		
Reserves Category	0 ( M\$US)	5 (M\$US)	10 (M\$US)	15 (M\$US)	20 (M\$US)	0 (M\$US)	5 (M\$US)	10 (M\$US)	15 (M\$US)	20 (M\$US)
Proved										
Developed Producing	442	1,897	2,715	3,156	3,374	442	1,897	2,715	3,156	3,374
Developed Non- Producing	0	0	0	0	0	0	0	0	0	0
Undeveloped	1,074,218	972,184	887,339	815,886	755,022	811,812	748,344	694,493	648,298	608,277
Total Proved	1,074,660	974,081	890,054	819,042	758,396	812,254	750,242	697,208	651,454	611,652
Probable	529,814	419,864	337,636	275,028	226,550	263,138	208,440	166,910	134,967	110,063
Possible	534,702	404,882	314,318	249,167	200,992	267,471	202,112	156,119	122,827	98,091
Total Proved	1,604,472	1,393,946	1,227,690	1,094,070	984,946	1,075,390	958,682	864,117	786,422	721,715
Total Proved Plus Probable Plus Possible	2,139,177	1,7 <b>98,82</b> 7	1 <b>,542,00</b> 7	1,343,237	1,185,939	1,342,862	1,160,793	1,020,236	909,249	819,806

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

Reserves Category	Revenue (M\$US)	Royalti <del>cs</del> (M\$US)	Opera- ting Costs (M\$US)	Develop- ment Costs (M\$US)	Well Abandon- ment / Other Costs (M\$US)	Future Net Revenue Before Income Taxes (MSUS)	Income Taxes (MSUS)	Future Net Revenue After Income Taxes (M\$US)
Proved	1,599,847	0	409,973	103,187	12,024	1,074,660	262,407	812,254
Proved Plus Probable	2,501,599	0	664,835	213,005	19,286	1,604,472	529,083	1,075,390
Proved Plus Probable Plus Possible	3,264,728	0	852,007	250,899	22,646	2,139,177	796,314	1,342,863

#### SUMMARY OF RESERVES NET PRESENT VALUES AND FUTURE NET REVENUE BY PRODUCTION GROUP As of December 31, 2006 FORECAST PRICES AND COSTS

1

Reserves Category	Production Group	Future Net Revenue Before Income Taxes (Discounted at 10%/Year) (MSUS)
Proved	Light and Medium Crude Oil (including solution gas and associated by-products)	890,054
	Heavy Oil (including solution gas and associated by-products)	0
	Natural Gas (including associated by-products)	0
	Coalbed Methane (including associated by-products)	0
Proved Plus Probable	Light and Medium Crude Oil (including solution gas and associated by-products).	1,227,690
	Heavy Oil (including solution gas and associated by-products)	0
	Natural Gas (including associated by-products)	0
	Coalbed Methane (including associated by-products)	0
Proved Plus		
Probable Plus	Light and Medium Crude Oil (including solution gas and associated by-products)	1,542,007
Possible	Heavy Oil (including solution gas and associated by-products)	0
	Natural Gas (including associated by-products)	0
í l	Coalbed Methane (including associated by-products)	0

#### PART 3 PRICING ASSUMPTIONS

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#### SUMMARY OF CONSTANT PRICES. INFLATION RATES AND EXCHANGE RATES As of December 31, 2006

	0	IL	NATUR	AL GAS	Inflation Rates	Exchange Rates
Year	WTI \$US/bbi	Brent \$US/bbl	Henry Hub \$US/MMBtu	IPE \$US/MMBtu	%/YR	GBP/US
<b>Historical Year End</b>						
2002	31.23	30.21	_	3.86		
2003	32.56	30.14		5.00		
2004	44.04	40.50		5.22		
2005	61.04	57.85		9.90		
2006 Year End	61.05	58.93		5.18		

#### SUMMARY OF FORECAST PRICES, INFLATION RATE AND EXCHANGE RATE As of December 31, 2006

	OI		NATUR	AL GAS	Inflation Rates	Exchange Rates
Year	WTI <sup>(1)</sup> \$US/bbl	Brent <sup>(2)</sup> \$US/bbl	Henry Hub \$US/MMBtu	IPE <sup>(3)</sup> \$US/MMBtu	%/YR	GBP/US
Historical						
2001	25.94	24.42				
2002	26.09	25.00			2.7	1.50
2003	31.14	28.91		3.24	2.5	1.64
2004	41.42	38.30		4.70	1.3	1.83
2005	56.46	54.45		6.67	1.6	1.82
2006	66.09	65.15	-	9.14	2.0	1.84
Forecast						
2007	65.73	63.73		7.15	5.0	1.90
2008	68.82	66.78		8.25	4.0	1.90
2009	62.42	60.34		8.43	3.0	1.90
2010	58.37	56.24		8.60	2.0	1.90
2011	55.20	53.04	-	8.77	2.0	1.90
2012	56.31	54.10		8.94	2.0	1.90
2013	57.43	55.18		9.12	2.0	1.90
2014	58.58	56.29		9.30	2.0	1.90
2015	59.75	57.41		9.49	2.0	1.90
2016	60.95	58.56		9.68	2.0	1.90
2017	62.17	59.73		9.87	2.0	1.90
Thereafter	1	2.0%	۲ ۶/YR	L	2.0	

Notes

<sup>(1)</sup> West Texas Intermediate Crude Oil (40 degrees API, 0.4% sulphur)
 <sup>(2)</sup> Brent Crude Oil (38 degrees API (1.0% sulphur)
 <sup>(3)</sup> International Petroleum Exchange - British National Balancing Point

# PART 4 RECONCILIATION OF CHANGES IN RESERVES AND FUTURE NET REVENUE

#### RECONCILIATION OF CORPORATION NET RESERVES BY PRINCIPAL PRODUCT TYPE

#### CONSTANT PRICES AND COSTS

		LIGH	<b>IT AND MEDIUM</b>	OIL		
Factors	Net Proved	Net Probable	Net Proved Plus Probable	Net Possible	Net Proved Plus Probable Plus Possible	
	Mbbl	Mbbl	Mbbl	Mbbl	Mbbl	
December 31, 2005	24,575.8	12,243.5	36,819.3	14,283.8	51,103.2	
Extensions			n an anna an anna an anna an anna an anna an an			
Improved Recovery						
Discoveries			TALE AND			
Acquisitions	1,518.3	4,173.4	5,691.7	2,948.9	8,640.6	
Dispositions	(15.0)	(92.0)	(107.0)	(33.7)	(140.8)	
Economic Factors						
Technical Revisions	585.8	(376.2)	209.6	(4,112.1)	(3,902.4)	
Production (After Royalties)	(50.9)		(50.9)		(50.9)	
			Shere & mar at his reaction with			
December 31, 2006	26,614.1	15,948.7	42,562.8	13,086.9	55,649.8	

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

#### PROVED RESERVES CONSTANT PRICES AND COSTS

FACTORS	2006 M\$US
Estimates Future Net Revenue at Beginning of Year	371,189
Sales and Transfers of Oil and Gas produced,	327
Net of Production Costs and Royalties	
Net Change in Prices, Production Costs and Royalties	11,042
Related to Future Production	
Changes in Previously Estimated Development Costs	(198,010)
Incurred During the Period	
Changes in Estimated Future Development Costs	(90,192)
Extensions and Improved Recovery	
Discoveries	
Acquisitions of Reserves	92,652
Dispositions of Reserves	(595)
Net Change Resulting from Revisions in Quantity Estimates	373,639
Accretion of Discount	61,271
Net Change in Income Taxes	62,190
Estimated Future Net Revenue at End of Year	683,513

#### PART 5 ADDITIONAL INFORMATION RELATING TO RESERVES DATA

#### Undeveloped Reserves

#### PROVED UNDEVELOPED NET RESERVES MOST RECENT FIVE YEARS FORECAST PRICES AND COSTS

	Light and M	ledium Oil	Solution Gas		
	1 <sup>st</sup>	Cumulative	1 <sup>st</sup>	Cumulative	
Year	Attributed	At Year	Attributed	At Year	
	Or Reduced	End	<b>Or Reduced</b>	End	
	Mbbl	Mbbl	MMcf	MMcf	
2002		_			
2003		_	-		
2004	11,339.0	11,339.0	-		
2005	12,975.2	24,314.2			
2006	(2,123.0)	26,437.2			

#### PROBABLE UNDEVELOPED NET RESERVES MOST RECENT FIVE YEARS FORECAST PRICES AND COSTS

	Light and N	ledium Oil	Solution Gas		
Year	1 <sup>st</sup> Attributed Or Reduced	tributed At Year		Cumulative At Year End	
	Mbbl	Mbbl	MMcf	MMcf	
2002		38		24	
2003		30		19	
2004	9,183.0	9,213.0	-	13	
2005	12,228.9	12,228.9	1,075	1,088	
2006	3,719.8	15,948.7	1,499	2,587	

#### **Development Plans:**

In the UK, drilling of the horizontal wells in the Brenda and Nicol oil fields was completed during 2006. In Brenda, three horizontal wells were drilled and completed, while a fourth well was drilled to the top of the reservoir. This fourth development well will have its horizontal section drilled and completed in 2007. In Nicol, one horizontal well was drilled and completed. Plans are for a second horizontal well in Nicol either in late 2007 or in 2008. New field discovery Shelley will be further appraised and development plans will proceed during 2007. A farm-in before year-end 2006 will allow a fast track development to proceed on a known discovery at Ptarmigan.

# Significant Factors or Uncertainties

For details of important economic factors or significant uncertainties that may affect the components of the reserves data, see the "Risk Factors" portion of this Annual Information Form.

# Future Development Costs

		FUTURI	E DEVELOPMEN	T COSTS						
	Const Prices an			Forecast Prices and Costs						
Year	Proved R	eserves	Proved I	Reserves	Proved Plu Rese					
	Undiscounted	Discounted At 10%/YR	Undiscounted	Undiscounted Discounted At 10%/YR		Discounted At 10%/YR				
	M\$US	M\$US	M\$US	M\$US	M\$US	M\$US				
2007	79,247	77,359	79,247	77,337	92,881	91,569				
2008	22,800	20,334	23,940	21,239	95,631	85,708				
2009		_			24,493	19,956				
2010	-				-					
2011			-	-						
5YR Total	102,047	97,592	103,187	98,576	213,005	197,233				
Remaining										
Total	102,047	97,592	103,187	98,576	213,005	197,233				

# The costs outlined in the table above are based on certain assumptions for the cost of funding these developments by means of either debt or equity financing. Any significant changes to interest rates could have a significant affect on future development costs.

# Sources of Funding

The Corporation anticipates that its future development cost will be financed through a combination of internally generated cash flow and debt financing as described below.

# • Equity Financing

On February 20, 2007, the Corporation announced a bought deal financing that raised approximately US \$115.8 million.

# • Pre-Development Credit Facility

On February 16, 2007, the Corporation announced that a large U.K.-based bank has agreed to provide a £40 million subordinated pre-development facility (the "Pre-Development Facility") to Oilexco North

Sea as a supplement to Oilexco North Sea's existing U.S.\$275 million senior credit facility and junior U.S.\$20 million secured Brenda/Nicol development facilities (collectively, the "Existing Credit Facilities"). The Pre-Development Facility became effective on February 26, 2007 and has an initial term to January 31, 2008.

#### Hedging

On January 25, 2006, the Corporation entered into a costless collar agreement with RBS in order to secure its future cash flow and to enhance the repayment of the above Project Facility by limiting its exposure to downward fluctuations in the price of petroleum. The collar is comprised of the following component: 7.1 million barrels over 2007-2010 with a floor price of \$40 per barrel and a cap price of \$88 per barrel (oil reference price: Dated Brent as quoted in Platt's Crude Oil Marketwire).

#### **Marketing of Oil**

Oilexco has signed a one year agreement from January 1, 2007 to December 31, 2007 with BP Oil International for the purchase of all the oil produced from the Corporation's Brenda, Nicol and Balmoral Fields. The price received for the oil is based on the "Forties" benchmark as published in Platts Crude Oil Marketwire, plus a quality differential premium.

# PART 6 OTHER OIL AND GAS INFORMATION

#### **Oil and Gas Properties:**

#### **UK Central North Sea**

The Corporation has interests in the producing field of Balmoral, located in Block 16/21a in the UK Central North Sea, 200 kilometres northeast of Aberdeen Scotland. Oilexco's interests in the property are: 9.714% in Production Licence P.201, as it relates to the Balmoral Field, the Glamis Field, and the Second Residual Area within block 16/21a; 7.994% in the Unitization and Unit Operating Agreement relating to the Balmoral Field; and 7.910% in the Balmoral FPV. Development is mostly complete at Brenda (block 15/25b) and Nicol (block 15/25a). Oilexco owns 100% working interest in Brenda and 70% in Nicol.

During 2006, new field discoveries at Sheryl (block 21/23a - 65% Oilexco), and Shelley (block 22/2b - 100% Oilexco), were added to the list of properties to be developed. As a result of a farm-in deal, Bugle (block 15/23d - 41% Oilexco) was added, and the small Yeoman interest (block 15/18b) was relinquished back to the operator Nexen. As part of the same deal, Oilexco's working interest in Blackhorse (block 15/22) increased from 40% to 50%.

In total as of the end of 2006, the Corporation owns various working interests in 15 Central North Sea blocks.

#### **Oil and Gas Wells**

	Producing Wells				Non-Producing Wells				}
Location	0	IL	GAS			OIL		GAS	
	Gross	Net	Gross	Net		Gross	Net	Gross	Net
United Kingdom									
Balmoral/Glamis	7	0.55	-	_		1	0.08	_	_
Blackhorse			_	-		2	1.0	-	
Brenda			-	-		3	3	-	- 1
Bugle			-	_		1	0.41	_	-
Nicol		-		-		1	0.70	_	-
Shelley				-				_	
Sheryl									
Total UK	7	0.55	_	-		8	5.19	-	_
					1				

#### **CURRENT OIL AND GAS WELLS**

# **Oilexco North Sea Property Holdings**

Location	Current Land Holdings			ires Dne Year	Work Commitments	
	Gross Acres	Net Acres	Gross Acres	Net Acres	Gross Acres	Net Acres
United Kingdom						
Block						
14/21	26,923	14,808				
14/22	26,923	14,808				
15/22	32,322	16,161				
15/23	14,820	6,076				
15/24b	124	62				
15/25a	5,387	3,771				
15/25b	7,191	7,191				
15/25c	10,774	10,774				
15/25e	7,191	7,191				
15/26b	26,935	13,468	1			
16/21a	13,467	1,077				
21/4b	49,867	22,440				
21/6a	21,894	10,947				
21/23a	47,745	31,034				
22/2	46,951	46,951				
fotal	338,514	206,759				

# Abandonment and Reclamation Costs

Year	Well Abandonment Pipeline Reclamation and the Decommission of the Balmoral Floating Production Vessel Before Salvage Value <sup>(1)</sup> Proved Plus Probable Reserves Forecast Prices and Costs					
		Discount	Rate			
	No. of Wells	0%/YR	10%/YR			
		M\$US	M\$US			
2007		-	-			
2008	·	-	_			
2009						
3YR Total	_	_	-			
Remaining	20	19,286	6,375			
Total	20	19,286	6,375			

<sup>(1)</sup> Oilexco is of the opinion that the Abandonment Costs will be offset by the sale of the FPV. The current estimate of sale value of the FPV is 41.0 MM £, 70MM\$US

# **COSTS INCURRED DURING 2006**

		perty ion Costs	Exploration Costs	Development Costs M\$US	
Location	Proved Properties M\$US	Unproved Properties M\$US	M\$US		
United Kingdom		58	41,975	104,216	

#### **Tax Horizons**

The Corporation is subject to UK Ring Fence Corporation Tax at 30 percent of profits and a Supplementary Charge at 20 percent of profits. The Supplementary Charge is calculated on the same basis as the Ring Fence Corporation Tax, but without deduction for finance costs. The Corporation's interests are exempt from the Petroleum Revenue Tax and Royalties. The Corporation's outstanding UK tax pools, as of December 31, 2006 are 561.4 MM\$US.

#### Most Important Current and Likely Exploration and Development Activities

#### **United Kingdom**

Of primary focus to the Corporation is its production start-up of the Brenda and Nicol Fields. In addition, Oilexco will be aggressively pursuing further appraisal and development for its Shelley oil find during the year. A farm-in that was completed at year-end 2006 for Ptarmigan, will allow the Corporation to pursue a fast track development of an existing oil discovery during 2007. Oilexco will continue to pursue attractive exploration prospects in 2007 through farm-ins or new block acquisitions, leveraging its use of the Sedco 712 rig contract. and the new Ocean Guardian contract.

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# **Exploration and Development Activities**

		Number of Wells							
Location	Explo	Exploration		Appraisal		pment			
	Gross	Net	Gross	Net	Gross	Net			
Oil Wells	1	0.65	11	8.4	4	3.7			
Gas Wells	`	- 1							
Service Wells									
D & A Wells	4	2.7	9	7.6					
Total.	5	3.35	20	16		3.7			

# EXPLORATION AND DEVELOPMENT ACTIVITIES DURING 2006

# **Production Estimates**

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	Annual Production Estimates						
Reserves	Ligh	t and	Solution				
Category	Mediu	ım Oil	G	as			
	Gross Net		Gross	Net			
	Mbbl	Mbbl	MMcf	MMcf			
Proved							
Developed Producing	46.9	46.9					
Developed Non-Producing	-						
Undeveloped	6,634.2	6,634.2					
Total Proved	6681.1	6681.1					
Probable	203.2	203.2	-	-			
Total Proved Plus Probable	6884.3	6884.3	states and				
Possible	96.0	96.0		-			
Total Proved Plus Probable							
Plus Possible	6980.3	6980.3	-				

#### 2007 PRODUCTION ESTIMATES CONSTANT PRICES AND COSTS

#### 2007 PRODUCTION ESTIMATES FORECAST PRICES AND COSTS

	Annual Production Estimates						
Reserves	Light	and	Solu	tion			
Category	Mediu	m Oil	G	as			
	Gross	Net	Gross	Net			
	Mbbl	Mbbl	MMcf	MMcf			
Proved	1~25						
Developed Producing	46.9	46.9					
Developed Non-Producing							
Undeveloped	6,634.2	6,634.2	-				
Total Proved	6681.1	6681.1					
Probable	203.2	203.2					
Total Proved Plus Probable	6884.3	6884.3					
Possible	96.0	96.0					
Total Proved Plus							
<b>Probable Plus Possible</b>	6980.3	6980.3					

#### 2007 PRODUCTION ESTIMATE Brenda Field, North Sea United Kingdom 85% OF TOTAL PROVED PLUS PROBABLE RESERVES PRODUCTION FORECAST PRICES AND COSTS

	Annual Production Estimates					
Reserves	Light	t and	Solution Gas			
Category	Mediu	m Oil				
	Gross	Net	Gross	Net		
	Mbbl	Mbbl	MMcf	MMcf		
Proved						
Developed Producing		-				
Developed Non-Producing						
Undeveloped	5,676.0	5,676.0				
Total Proved	5,676.0	5,676.0	-			
Probable	196.0	196.0	-			
Total Proved Plus Probable	5872.0	5872.0	STATE:	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1		
Possible	89.3	89.3				
Total Proved Plus						
Probable Plus Possible	5,961.3	5,961.3				

#### 2007 PRODUCTION ESTIMATE Nicol Field, North Sea United Kingdom 14% OF TOTAL PROVED PLUS PROBABLE RESERVES PRODUCTION FORECAST PRICES AND COSTS

	Annual Production Estimates					
Reserves	Light	t and	Solution Gas			
Category	Mediu	m Oil				
	Gross	Net	Gross	Net		
	Mbbl	Mbbl	MMcf	MMcf		
Proved						
Developed Producing	-					
Developed Non-Producing	-					
Undeveloped	958.2	958.2				
Total Proved	958.2	958.2				
Probable	2.7	2.7				
Total Proved Plus Probable	960.9	960.9				
Possible	0.8	0.8				
Total Proved Plus						
Probable Plus Possible	961.7	961.7				

# **Production History**

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# 2006 PRODUCTION HISTORY, PRICES, ROYALTIES, COSTS AND NETBACKS

Product	Gross Average Daily	Average Per Unit of Daily Production					
Туре	Production	Price	Royalties	Costs <sup>(1)</sup>	Netbacks		
	bbl/day	\$US/bbl	\$US/bbl	\$US/bbl	\$US/bbl		
Light and Medium Oil							
1 <sup>st</sup> Quarter	101.1	67.39		105.13	(37.74)		
2 <sup>nd</sup> Quarter	129.1	72.12		87.85	(15.73)		
3 <sup>rd</sup> Quarter	123.3	72.52		75.23	(2.71)		
4 <sup>th</sup> Quarter	200.8	60.00	-	44.49	(15.51)		
Total 2006	139.5	57.11	_	77.27	(20.16)		
Solution Gas	- Solution Gas is not material						
	<ul> <li>Revenue from Solution Gas is included with Oil Revenue</li> </ul>						

<sup>(1)</sup> All costs are allocated to Light and Medium Oil and do not include Administrative Overhead Costs.

#### Notes to the Oil and Gas Reserves Evaluation Report

The following definitions form the basis of our classification of reserves and values presented in this report. They have been prepared by the Standing Committee on Reserves Definitions of the Petroleum Society of the CIM ("CIM"), incorporated in the Society of Petroleum Evaluation Engineers ("SPEE") Canadian Oil and Gas Evaluation Handbook ("COGEH") and specified by National Instrument 51-101 ("NI 51-101").

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

- analysis of drilling, geological, geophysical and engineering data;
- the use of established technology;
- specified economic conditions, which are generally accepted as being reasonable, and shall be disclosed; and
- a remaining reserve life of 50 years.

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

#### 1. **Proved Reserves**

Proved reserves are those reserves that can be estimated with a high degree of certainty to be recoverable. It is likely that the actual remaining quantities recovered will exceed the estimated proved reserves.

#### 2. Probable Reserves

Probable reserves are those additional reserves that are less certain to be recovered than proved reserves. It is equally likely that the actual remaining quantities becovered will be greater or less than the sum of the estimated proved plus probable reserves.

#### 3. Possible Reserves

Possible reserves are those additional reserves that are less certain to be recovered than probable reserves. It is unlikely that the actual remaining quantities recovered will exceed the sum of the estimated proved plus probable plus possible reserves. Other criteria that must also be met for the categorization of reserves are provided in Section 5.5 of the COGEH. Each of the reserves categories (proved, probable, and possible) may be divided into developed or undeveloped categories.

#### 4. Developed Reserves

Developed reserves are those reserves that are expected to be recovered from existing wells and installed facilities or, if facilities have not been installed, that would involve a low expenditure (e.g., when compared to the cost of drilling a well) to put the reserves on production. The developed category may be subdivided into producing and non-producing.

# 5. Developed Producing Reserves

Developed producing reserves are those reserves that are expected to be recovered from completion intervals open at the time of the estimate. These reserves may be currently producing or, if shut in, they must have previously been on production, and the date of resumption of production must be known with reasonable certainty.

# 6. Developed Non-Producing Reserves

Developed non-producing reserves are those reserves that either have not been on production, or have previously been on production, but are shut in, and the date of resumption of production is unknown.

# 7. Undeveloped Reserves

Undeveloped reserves are those reserves expected to be recovered from known accumulations where a significant expenditure (e.g., when compared to the cost of drilling a well) is required to render them capable of production. They must fully meet the requirements of the reserves classification (proved, probable, possible) to which they are assigned.

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

# 8. Levels of Certainty for Reported Reserves

The qualitative certainty levels contained in the definitions in Sections 1, 2 and 3 are applicable to individual reserves entities, which refers to the lowest level at which reserves estimates are made, and to reported reserves, which refers to the highest level sum of individual entity estimates for which reserve estimates are made.

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

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

A quantitative measure of the probability associated with a reserves estimate is generated only when a probabilistic estimate is conducted. The majority of reserves estimates will be performed using deterministic methods that do not provide a quantitative measure of probability. In principle, there should be no difference between estimates prepared using probabilistic or deterministic methods.

Additional clarification of certainty levels associated with reserves estimates and the effect of aggregation is provided in Section 5.5.3 of the COGEH. Whether deterministic or probabilistic methods are used, evaluators are expressing their professional judgment as to what are reasonable estimates.

- Pipeline Gas Reserves are gas reserves remaining after deducting surface losses due to process shrinkage and raw gas used as lease fuel.
- 10. **Remaining Recoverable Reserves** are the total remaining recoverable reserves associated with the acreage in which the Corporation has an interest.
- 11. Company Gross Reserves are the Corporation's working interest share of the remaining reserves, before deduction of any royalties.
- 12. Company Net Reserves are the gross remaining reserves of the properties in which the Corporation has an interest, less all Crown, freehold, and overriding royalties and interests owned by others.
- 13. Net Production Revenue is income derived from the sale of net reserves of oil,

pipeline gas, and gas by-products, less all capital and operating costs.

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- 14. Fair Market Value is defined as the price at which a purchaser seeking an economic and commercial return on investment would be willing to buy, and a vendor would be willing to sell, where neither is under compulsion to buy or sell and both are competent and have reasonable knowledge of the facts.
- 15. Barrels of Oil Equivalent (BOE) Reserves BOE is the sum of the oil reserves, plus the gas reserves divided by a factor of 6, plus the natural gas liquid reserves, all expressed in barrels or thousands of barrels.

#### APPENDIX B

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

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

- (a) (i) proved and proved plus probable oil and gas reserves estimated as at December 31, 2006 using forecast prices and costs; and
  - (ii) the related estimated future net revenue; and

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- (b) (i) proved and proved plus probable oil and gas reserves estimated as at December 31, 2006 using constant prices and costs; and
  - (ii) the related estimated future net revenue.

Independent qualified reserves evaluators have evaluated the Corporation's reserves data. The reports of the independent qualified reserves evaluators will be filed with securities regulatory authorities concurrently with this report.

The Reserves Committee of the Board of Directors of the Corporation has

- (a) reviewed the Corporation's procedures for providing information to the independent qualified reserves evaluators;
- (b) met with the independent qualified reserves evaluators to determine whether any restrictions affected the ability of the independent qualified reserves evaluators to report without reservation; and
- (c) reviewed the reserves data with management and the independent qualified reserves evaluators.

The Reserves Committee of the Board of Directors of the Corporation has reviewed the Corporation's procedures for assembling and reporting other information associated with oil and gas activities and has reviewed that information with management. The Board of Directors has, on the recommendation of the Reserves Committee, approved

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

Because the reserves data are based on judgments regarding future events, actual results will vary and the variations may be material.

(signed) "Arthur S. Millholland" Arthur S. Millholland Chief Executive Officer

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(signed) "Gerald Roe" Gerald Roe Chief Operating Officer

(signed) "W. Fraser Grant" W. Fraser Grant Director (signed) "John F. Cowan" John F. Cowan Director

March 23, 2007

#### **APPENDIX C**

#### Form 51-101F2

# Report on Reserves Data by Independent Qualified Reserves Evaluator or Auditor

# **Report on Reserves Data**

To the Board of Directors of Oilexco Incorporated (the "Company"):

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- 1. We have evaluated the Company's Reserves Data as at December 31, 2006. The reserves data consist of the following:
  - (i) proved, proved plus probable, and proved plus probable plus possible oil and solution gas reserves estimated as at December 31, 2006 using forecast prices and costs; and
    - (ii) the related estimated future net revenue; and
  - (b) (i) proved, proved plus probable, and proved plus probable plus possible oil and solution gas reserves quantities were estimated as at December 31, 2006 using constant prices and costs; and
    - (ii) the related estimated future net revenue.
- 2. The Reserves Data are the responsibility of the Company's management. Our responsibility is to express an opinion on the Reserves Data based on our evaluation.

We carried out our evaluation 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).

Oilexco Incorporated - 2 -

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- 3. Those standards require that we plan and perform an evaluation to obtain reasonable assurance as to whether the reserves data are free of material misstatement. An evaluation also includes assessing whether the reserves data are in accordance with principles and definitions presented in the COGE Handbook.
- 4. The following table sets forth the estimated future net revenue attributed to proved plus probable plus possible reserves, estimated using forecast prices and costs on a before tax basis and calculated using a discount rate of 10%, included in the reserves data of the Company evaluated by us as of December 31, 2006, and identifies the respective portions thereof that we have audited, evaluated and reviewed and reported on to the Company's management and Board of Directors:

Independent			Net Present Value of Future Net Revenue (10% Discount Rate)			
Qualified Reserves Evaluator or Auditor	Description and Preparation Date of Evaluation Report	Location of Reserves (Country)	Audited (M\$US)	Evaluated (M\$US)	Reviewed (M\$US)	Total (M\$US)
Sproule	Evaluation of the P&NG Reserves of Oilexco Incorporated as of December 31, 2006, prepared October 2006 to March 2007	United Kingdom				
Total			Nil	1,542,007	Nil	1,542,007

- 5. In our opinion, the reserves data evaluated by us have, in all material respects, been determined and are presented in accordance with the COGE Handbook.
- 6. We have no responsibility to update the report referred to in paragraph 4 for events and circumstances occurring after its preparation date.
- 7. Because the reserves data are based on judgments regarding future events, actual results will vary and the variations may be material.

Oilexco Incorporated Sproule International Limited

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Executed as to our report referred to above:

Sproule Associates Limited Calgary, Alberta March <u>/2</u>, 2007

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Greg D. Robinson, P.Eng., Project Leader, Vice-President, Engineering

Douglas J. Carsted, P.Geol. Vice-President, Geoscience

Barrie F. Jose, P.Geoph. Manager, Geoscience

R. Keith MacLeod

Executive Vice-President



Manager

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April 27, 2007

#### VIA E-Mail

British Columbia Securities Commission Saskatchewan Financial Services Commission – Securities Manitoba Securities Commission Ontario Securities Commission New Brunswick Securities Commission Registrar of Securities, Prince Edward Island Nova Scotia Securities Commission Newfoundland and Labrador Securities Commission Registrar of Securities, Northwest Territories Registrar of Securities, Yukon Territory Registrar of Securities, Nunavut

c/o Blaine Young, Associate Director Alberta Securities Commission 4th Floor, 300-5th Avenue SW Calgary, Alberta T2P 3C4 E-mail : blaine.young@seccom.ab.ca

c/o Anne-Marie Beaudoin Directrice du secrétariat de l'Autorité Autorité des marchés financiers 800, square Victoria, 22 e étage C.P. 246, Tour de la Bourse Montréal (Québec) H4Z 1G3 E-mail: consultation-en-cours@lautorite.qc.ca

Dear Members of the Canadian Securities Administrators:

Re: Proposed Amendments to 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, 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

We thank you for the opportunity to provide comments on the proposed amendments to National Instrument 51-101 *Standards of Disclosure for Oil and Gas Activities* (NI 51-101), its related forms, and the companion policy (the Companion Policy) (collectively the Instrument).

Overall, we support the proposed amendments to the Instrument. We believe that the amendments improve clarity and meaning to various provisions and significantly enhance the Instrument, particularly in terms of guidance to issuers with resource estimates.

As you are aware, TSX Venture Exchange (the Exchange) lists many emerging oil and gas issuers, including issuers without reserves or resources. Therefore, we are keenly interested to ensure that as much guidance as possible is provided to these issuers regarding their disclosure requirements, both through securities regulatory requirements and through Exchange requirements. We are of the view that more guidance for these issuers will likely lead to improved disclosure, with the result that members of the investing public will be better informed in making their investment decisions. A better informed public should result in more efficient capital markets.

We believe that securities regulatory authorities may be missing an opportunity to enhance the capital markets by not including sufficient guidance for certain emerging oil and gas issuers, particularly those with material undeveloped properties for which there are no resource estimates, or in respect of which there is insufficient data to prepare resource estimates. We believe that this omission can be addressed in the Instrument.

Although there is some limited guidance in sections 5.9 and 5.10 of existing NI 51-101, the elimination of those provisions will result in virtually no disclosure guidelines for issuers that have interests in material undeveloped properties with no resource estimates. We are of the view that sections 5.9 and 5.10 of existing NI 51-101 should be retained in some form, and expanded to provide enhanced guidance to those issuers.

This comment also applies to the *Statement of Reserves Data and Other Oil and Gas Information (*Form 51-101F1) and the Companion Policy. Section 6.2 of Form 51-101F1 should be amended, since the required disclosure under that section does not appear to provide sufficient guidance for issuers with material undeveloped properties without reserve estimates. At a minimum, the expanded disclosure should include current section 5.9 of NI 51-101.

Although generally, the proposed Companion Policy is a marked improvement over the current companion policy, and provides greater clarity and improved guidance for issuers with resource estimates, it provides little, if any, guidance to issuers with material properties that do not have attributed resource estimates. We believe that the proposed Companion Policy can be significantly enhanced to include that guidance. As indicated earlier, we believe that such enhanced guidance will ultimately lead to a better informed investing public, resulting in more efficient capital markets.

If you require further information or clarification, please let us know.

Yours truly,

#### **TSX VENTURE EXCHANGE**

"Peter Varsanyi"

Peter Varsanyi Manager

# Comments Relating to Proposed Changes of Form 51-101 F1, F2, F3 and CP

by John Yu, P. Eng. from Burnaby, B. C. dated April 30, 2007

It is about time to reduce the amount of disclosures as required in the current Form 51-101 F1. The replacement of NP2B (6 pages) with NI 51-101 (over 1,000 pages including the two volumes of the COGE Handbook) was supposedly cost neutral or no more than an increase of about 10%. It is positive to see that the CSA is considering these proposed changes to reduce conflicting disclosures especially disclosing both constant and forecast cases in the same document.

There are two suggestions as follows:

1. Future income tax expenses.

Under 2.1.2 Net Present Value of Future Net Revenue (Forecast Case) in the Form 51-101 F1 proposed amendment, it requires before and after *deducting future income tax expenses*.

In U. S. filings, future income tax deduction from oil and gas operations is not a requirement. For ease of disclosures, it would be beneficial to disclose the income tax from oil and gas operations paid either in the last three years or the last five years together with the current tax rate and the tax pool available to the issuer instead of the requirement to deduct future income tax expenses.

In the definition of *future income tax expenses* in Appendix 1 of the Form 51-101 CP proposed amendment (page 13/62), this definition does not cover sufficient details in the computation of expenses (i.e. interest payments to the lending institutions, general and administrative fees, legal fees, etc.) In addition, it mentioned that the issuer is to provide this calculation of future income tax expenses but failed to specify the appropriate professional person(s) to estimate the future income tax. In some cases, the independent engineer ended up doing this estimation of future income tax expenses. The practice of professional engineering precludes the estimation of income tax expenses in some of the Professional Engineers Associations in the U. S. or even in Canada. In summary, it would be beneficial if the CSA can provide more defined guidelines to address the estimation of *future income tax expenses* or alternatively, just disclose the amount of income tax paid in previous years.

2. Eliminate the disclosure of *Possible Reserve* in Form 51-101 F1. In the U. S., the disclosure of *Probable Reserve* is not allowed. The Form 51-101 F1 allows for the disclosure of Proved and Proved + Probable Reserve and that should be sufficient relating to the chance of success in obtaining production from these two categories of reserve. By extending the category to Possible Reserve, it creates speculation and imagination and should not be allowed in an annual disclosure document.



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Moscow Rio de Janeiro

April 30, 2007

British Columbia Securities Commission Alberta Securities Commission Saskatchewan Financial Services Commission – Securities Division Manitoba Securities Commission Ontario Securities Commission Autorité des marches financiers New Brunswick Securities Commission Registrar of Securities, Prince Edward Island Nova Scotia Securities Commission Newfoundland and Labrador Securities Commission Registrar of Securities, Northwest Territories Registrar of Securities, Yukon Territory Registrar of Securities, Nunavut

Dear Sirs/Mesdames:

# Re: Notice and Request for Comment dated January 19, 2007 on Proposed Amendments to National Instrument 51-101, Form 51-101F1, Form 51-101F2, Form 51-101F3 and Companion Policy 51-101CP

This letter is being written in response to the Request for Comment of the Canadian Securities Administrators (the "CSA") on proposed amendments to National Instrument 51-101 *Standards of Disclosure for Oil and Gas Activities* ("NI 51-101") and its related forms and companion policy. NI 51-101, as proposed to be amended, is referred to herein as the "Proposed Instrument".

We are submitting this response letter on behalf of the following senior Canadian oil and gas reporting issuers (the "Senior Issuers"), who collectively represent more than 50% of the market capitalization of the oil and gas producers on the S&P/TSX Energy Index: Canadian Natural Resources Limited; EnCana Corporation; Husky Energy Inc.; Imperial Oil Limited; Nexen Inc.; Petro-Canada; and Talisman Energy Inc.

In general, the Senior Issuers support the stated purposes of the proposed amendments and the underlying principle of improving the quality of the disclosure made by reporting issuers. However, the Senior Issuers have concerns with the impact that the proposed amendments would have on their existing exemptions and with certain aspects of the proposed amendments, particularly relating to the requirements applicable to the disclosure of resources.

April 30, 2007 Page 2

# **Exemption Orders**

# Impact of the Proposed Amendments on Existing Exemption Orders

Each of the Senior Issuers has been granted an MRRS Decision Document which exempts it from various requirements of NI 51-101 (collectively, the "Decisions"). All of the Senior Issuers have exemptions (the "Disclosure Exemptions") which exempt them from having to disclose information concerning their oil and gas activities in accordance with sections 2.1, 4.2(1)(a)(ii) and (iii), 4.2(1)(b) and (c), 5.3, 5.8, 5.15(a), 5.15(b)(i) and 5.15(b)(iv) of NI 51-101 (collectively, the "Canadian Disclosure Requirements") provided that they provide the disclosure contemplated by and consistent with United States disclosure requirements and practices. In addition, certain of the Senior Issuers have exemptions (the "Independent Evaluator Exemptions") which exempt them from the requirement in NI 51-101 that the qualified reserves evaluator appointed under section 3.2 of NI 51-101 be independent of the issuer (the "Independent Evaluator Requirement"). Each of the Decisions includes a provision to the effect that the Decision, as it relates to either the Canadian Disclosure Requirements or the Independent Evaluator Requirement, will terminate one year after the effective date of any substantive amendment to the Canadian Disclosure Requirements or the Independent Evaluator Requirement, respectively, unless the applicable securities regulatory authorities otherwise agree in writing (the "Sunset Provision").

The Senior Issuers realize that whenever there is any amendment to the Canadian Disclosure Requirements or the Independent Evaluator Requirement, be it through these proposed amendments or any other amendments to NI 51-101, it will be necessary to make a determination whether the Sunset Provisions are triggered. With regard to the proposed amendments to the Canadian Disclosure Requirements, there is nothing in the proposed amendments or accompanying commentary which indicates any intention on the part of the CSA that the amendments have any effect on the Senior Issuers' ability to satisfy the disclosure requirements relating to reserves and other oil and gas activities by complying with U.S. disclosure requirements and practices. We also note that the reasons for the original granting of the Decisions continue to exist. Accordingly, the Senior Issuers are approaching the proposed amendments with the expectation that the Disclosure Exemptions, at least as they relate to the Canadian Disclosure Requirements other than those relating to resources disclosure, will continue to apply and that, if required, the applicable securities regulatory authorities will provide the Senior Issuers with the agreements in writing contemplated by the Sunset Provisions. Similarly, since the proposed amendments do not contain any amendments relating to the Independent Evaluator Requirement, the Senior Issuers are approaching the proposed amendments with the expectation that the amendments will have no impact on the Independent Evaluator Exemptions.

If the foregoing is not correct, we would appreciate your advising us so that the Senior Issuers may make further submissions before any action is taken which may impact their ability to continue to satisfy their disclosure obligations in the manner currently permitted.

# **Removal of Guidance on Potential Exemptions in Companion Policy**

The proposed amendments include the removal from the companion policy to NI 51-101 of the guidance on potential exemptions from the requirements of NI 51-101. The explanation provided for the proposed removal is that the exemptions are not appropriate for many reporting issuers. While it may be unusual for a companion policy to contain guidance which is applicable to a small segment of reporting issuers and while all of the reporting issuers for whom the guidance was intended to apply have already obtained their exemptions, the Senior Issuers believe that there is still some benefit to retaining the guidance. The guidance provides valuable background to the original granting of the Decisions and, while that background would not necessarily be lost simply by virtue of its removal from the companion policy, it would be of assistance to both the Senior Issuers and the securities regulatory authorities in relation to the consideration of the continued applicability of the Decisions whenever the Sunset Provisions are triggered. The guidance would also be of benefit to reporting issuers which may in the future be eligible for the exemptions contemplated by the guidance. Conversely, the removal of the guidance may result in more applications for exemptive relief being made, as issuers looking only at the revised companion policy will not have the benefit of the guidelines which discuss, among other things, the criteria and conditions that generally would need to be satisfied before the securities regulatory authorities would be willing to grant an exemption. To the extent that the existing guidelines have resulted in applications for exemptions being made by issuers of a type for whom the securities regulatory authorities do not believe the guidance was intended and who may have misconstrued the applicability of the guidance, that could be rectified by revising the guidance to clarify its scope rather than by removing it entirely. As a result, on balance, the Senior Issuers favour the retention in the companion policy of the guidance on potential exemptions.

# **Resources Disclosure**

# **Resources Definitions and Categories**

The Senior Issuers concur with the CSA's objective of improving disclosure of resources to make the disclosure more meaningful for the investment community. However, the Senior Issuers believe that requiring reporting issuers to only use the resources definitions and categories set out in the Canadian Oil and Gas Evaluators Handbook (the "COGE Handbook") is overly restrictive.

The Society of Petroleum Engineers/American Association of Petroleum Geologists/World Petroleum Congress/Society of Petroleum Evaluation Engineers (collectively, "SPE/WPC") have recently adopted new resources categories and definitions. The SPE/WPC resources definitions and categories are similar to, but not exactly the same as, the definitions and categories in the current COGE Handbook. The Senior Issuers understand that the Calgary Chapter of the Society of Petroleum Evaluation Engineers is currently preparing revisions to the resources definitions and categories in the COGE Handbook which are very similar to the newly adopted SPE/WPC definitions. The Senior Issuers note that the SPE/WPC resources categories and definitions are internationally recognized.

While the COGE Handbook resources definitions and categories may be the same as the SPE/WPC definitions and categories at the time that the proposed amendments come into effect, there is no assurance that that will be the case and at some time in the future there may be

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differences between the COGE Handbook and SPE/WPC. Since the SPE/WPC standards would be globally recognized and widely used, the Senior Issuers believe that all Canadian reporting issuers should have the ability to use either the definitions and resources categories set out in the COGE Handbook or those adopted by SPE/WPC, provided that the issuer discloses the relevant definitions and categories being utilized. At a minimum, this option should be available for any Canadian reporting issuer which either (i) has securities traded in a market outside Canada, or (ii) has oil and gas operations outside Canada.

We also note that the reserves and resources classification chart in Appendix 2 to the proposed companion policy to the Proposed Instrument is inconsistent with the current COGE Handbook.

# Percentage Probability Disclosure

Section 5.9(2)(c)(iv) of the Proposed Instrument would require that disclosure of an estimate of a quantity of resources in which a reporting issuer has an interest or intends to acquire an interest, or an estimated value attributable to an estimated quantity, be accompanied by:

- (a) in the case of undiscovered resources, the estimated percentage probability that the issuer will discover hydrocarbons in sufficient quantity for them to be tested to the surface, or
- (b) in the case of discovered (contingent) resources, the percentage probability of commercially extracting the resource.

In the view of the Senior Issuers, there are no commonly accepted guidelines on how to estimate such probabilities. Therefore, the Senior Issuers believe that the contemplated disclosure would be misleading because it would seemingly provide an enhanced level of assurance to investors of certainty in resources estimates that is not achievable due to the very nature of the resource categories and the many uncertainties associated with them. Even if an issuer could provide a probability estimate for one property, it is not at all clear what methodology should be employed in respect of risked estimates for an issuer's global resources on an aggregated basis. The requirement to disclose probabilities of either discovering or developing the resources is also inconsistent with the cautionary language contemplated by section 5.9(2)(c)(vi) of the Proposed Instrument which states that there is no certainty that any portion of the resources will be discovered or be economically viable or technically feasible to produce.

The Senior Issuers acknowledge that it is important for investors to understand the nature of the estimate and the risks associated therewith but believe that this goal is not achieved by assigning arbitrary probabilities of discovery and commercial extraction of the resources. Instead, the Senior Issuers believe that the probability of success associated with resources is inherent in the categorization and effectively conveyed by accompanying such disclosure with the definition of the resource category used for the estimate, as would be required pursuant to section 5.9(2)(c)(i) of the Proposed Instrument, and accompanying such disclosure with appropriate cautionary language. Accordingly, the Senior Issuers recommend that section 5.9(2)(c)(i) be deleted.

# Applicability of Certain Requirements in All Circumstances

Section 5.9 of the Proposed Instrument would require all disclosure of anticipated results from resources which includes an estimate of a quantity of resources to be accompanied by certain supplemental disclosure including, without limitation, disclosure pertaining to the location of the resources, the product types reasonably expected and the level of uncertainty associated with

# Additional Comments

# NI 51-101F2 AND F3

The Senior Issuers do not agree with the proposed addition to the last paragraph of NI 51-101F2 and F3, for the reasons that (i) the qualifying language contained in the proposed addition addresses only one aspect of the preceding sentence, and (ii) the wording of the proposed addition is not accurate. The existing sentence in the F2 and F3 certificates refers to "reserves data", which includes both reserves estimates and estimates of related future net revenue. The sentence also refers to "actual results", which presumably includes both the volumes produced and the net revenue generated therefrom. Reserves estimates are based on both technical and economic factors and future net revenue estimates are obviously highly dependent upon economic assumptions. The proposed addition seems to focus only on variations due to technical revisions and disregards variations due to other factors. Further, although technical revisions should generally be upwards, there will be exceptions, certainly at the reserves entity level and perhaps the property level. To say that "any" variations do occur from time to time. Revisions need to be examined on average, over time, and not on a case by case basis.

The Senior Issuers believe that it is inappropriate to include a qualifier which addresses only one aspect of the existing sentence. To correct the qualifier would require substantially more expansive language, which may be counterproductive to the objective of clarifying the existing statement. While the Senior Issuers understand the CSA's objective in adding a qualifier to the existing sentence, it may not be possible to do so in a meaningful way for investors. Accordingly, the Senior Issuers believe that the better choice is to leave the existing sentence as is and not add any additional language.

# Section 5.2(a)(v)

Section 5.2(a)(v) of the Proposed Instrument prescribes certain cautionary language if there is written disclosure of an estimate of possible reserves or related future net revenue. We note that the first part of the second sentence of the proposed cautionary language differs from the relevant section in the COGE Handbook. Regardless, the Senior Issuers believe that the reference to percentage probability in the second sentence is out of context. The Senior Issuers suggest that the disclosure simply provide the COGE Handbook definition of possible reserves, which would result in replacing the second sentence of the proposed language with the sentence "It is unlikely that the actual remaining quantities recovered will exceed the sum of proved + probable + possible reserves."

# Board Appointment Requirement for Independent Qualified Reserves Evaluator or Auditor

In response to the CSA's specific request for comment on the responsibility for making the appointment of an independent qualified reserves evaluator or auditor, the Senior Issuers are of the view that there would be no material enhancement to investor protection, from the existing appointment review requirement, if the Board of an issuer was to approve the appointment of the

recovery of the resources. As currently proposed, the specific items would be required for resources disclosure by a reporting issuer relating to both an individual property and its global resources on an aggregated basis. The Senior Issuers believe that there may be many instances where the provision of that supplemental disclosure would be both impractical and of little or no value to investors. For example, if a large issuer with many prospect areas wished to include in its press release for its annual results an indication of the issuer's upside or potential by disclosing an aggregate resource number for the issuer's global operations, it would be required to include, either in the press release (which would be impractical) or in a supporting filing, a list of all of the properties on which the aggregate estimate was based, their location and the product types reasonably expected from each. That level of additional detail would add little to the clarity of the disclosure on the aggregate estimate. The manner of complying with the requirements of section 5.9(1)(d) (i.e. the risks and the level of uncertainty associated with the recovery of the resources) and section 5.9(2)(c)(iii) (i.e. the significant positive and negative factors relevant to the estimate) in such circumstances is also unclear, i.e. whether that information would need to be provided in relation to each individual property or in relation to the The Senior Issuers suggest that the amendments contain a provision aggregate estimate. comparable to a materiality qualifier which makes it clear that the specific items of disclosure need not be provided if, in the context in which the resource estimate is being provided, the additional information would not be significant to a reader's understanding of the estimate.

In that regard, the Senior Issuers are aware that section 1.4 of NI 51-101 (which is unchanged in the Proposed Instrument) contains a general materiality qualifier. However, it is not clear that section 1.4 applies to relieve an issuer from the obligation to disclose information which is specifically prescribed.

# **Disclosure of Proprietary Information**

The Senior Issuers believe that compliance with section 5.9 of the Proposed Instrument may result in issuers being required to publicly disclose proprietary and competitively sensitive information. If a reporting issuer discloses in a press release anticipated results from resources in which it has an interest or intends to acquire an interest, it will be required to disclose in the press release or in a supporting filing information regarding the location of the resources, the product types reasonably expected, the probabilities of either discovering or developing the particular resources and, in respect of contingent resources, the specific contingencies which prevent the classification of the resources as reserves. The disclosure requirements set forth in section 5.9 of the Proposed Instrument may result in the issuer being caught in a situation where, due to the materiality of the information, it is required to disclose resource information in order to satisfy its obligation to provide full, true and plain disclosure of all material facts but is unable to disclose the resource information without also providing disclosure of certain competitive information. Protection of proprietary information such as success rate of exploration in a new area, certainty of recovery of the resource associated with a new technology or technique and the probability of commerciality must be preserved. The Senior Issuers believe that the proposed amendments should be revised to allow for the omission of information prescribed by section 5.9 if there are reasonable grounds to believe that disclosure would be prejudicial to the interests of the reporting issuer. We note that this is the same standard applied in section 12.2 of National Instrument 51-102 Continuous Disclosure Obligations with respect to the filing of material contracts.

April 30, 2007 Page 7

independent reserves evaluator or auditor. It would simply be a change in formality and not substance. In addition, investor protection concerns are sufficiently addressed by the required participation of the Board of an issuer in the approval and execution of Form 51-101F3.

Thank you for the opportunity to make this submission. We hope that these comments will be of assistance to you and would be pleased to elaborate on them at your convenience.

Yours truly,

MACLEOD DIXON LLP

Kevin E. Johnson



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April 30th, 2007

British Columbia Securities Commission Alberta Securities Commission Saskatchewan Financial Services Commission – Securities Division Manitoba Securities Commission Ontario Securities Commission Autorité des marches financiers New Brunswick Securities Commission Registrar of Securities, Prince Edward Island Nova Scotia Securities Commission Newfoundland and Labrador Securities Commission Registrar of Securities, Northwest Territories Registrar of Securities, Yukon Territory Registrar of Securities, Nunavut

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Attention: Blaine Young, Associate Director Alberta Securities Commission e-mail: blaine.young@seccom.ab.ca

> Anne-Marie Beaudoin,, Directrice du secretariat de l'Autorite Autorité des marches financiers e-mail: <u>consultation-en-cours@lautorite.qc.ca</u>

Dear Sirs/Mesdames:

#### Subject: Comments on Proposed Amendments to National Instrument 51-101

This letter is being written in response to the Canadian Securities Administrators' (CSA) Request for Comment on proposed amendments to National Instrument 51-101 *Standards of Disclosure for Oil and Gas Activities* (NI 51-101) and the related Forms and Companion Policy. The proposed amendments relating to disclosure of resources (the "Proposed Resource Amendments" or "PRA's") and the removal of exemption guidance from the Companion Policy are the primary focus of this comments letter. We also advise that we participated in the "Senior Issuers" comment letter and supplement that submission with the comments contained herein specifically on Nexen's behalf.

Nexen Inc. is an international oil and gas exploration and development company. We currently produce in excess of 250,000 boe/d and operate in seven countries and four continents. We are also an SEC registrant and a Form 10-K filer. As such, our comments reflect the concerns of a business the size and scope of which are significantly different from companies operating solely in one jurisdiction and solely reliant on Canadian capital markets.

To put our comments in context it is most important to appreciate that at investor and analyst presentations in the United States and internationally, it is commonplace for oil and gas companies to discuss exploration opportunity in terms of resource. Canadian oil and gas producers who primarily raise capital in the U.S. must be able to provide similar disclosure of opportunity sets in order to maintain competitive comparisons with their U.S. and international peers. While of interest to investors and analysts in a comparative context regarding future opportunity sets, these estimates are typically <u>not</u> considered as material because of their inherent risk and uncertainty. Estimates of resource are provided in context and understood by those receiving such information as differentiated from reserves, having greater or lesser degrees of expected potential, or stated to be "risked" or "unrisked" in terms of estimated chance of success, all in accordance with industry parlance that these are not "reserves". In addition, the imperative of good corporate governance surrounding corporate disclosures, protection of reputation and internal sophistication of companies in developing these scenarios is clearly a factor that the recipients of the information take into account.

### **Disclosure of Resources**

### 1. Disclosure of Resources is Important to Investors and Capital Markets

Resource disclosure should adhere to the principals of transparency, materiality and competence to ensure that public reports include information that investors would reasonably require to make a balanced judgment regarding the results and estimates being reported. We understand potential concerns surrounding over-promotion of resource estimates and the desire to instill integrity and candor into such reporting. The Proposed Resources Amendments however, are problematic from a number of perspectives:

- a. From our review and understanding of NI 43-101 (mining regulation), one could reach the conclusion that the PRA are designed to align terminology, risk factor disclosure and technical rigor used in resource estimates for Canadian oil and gas to that of the Canadian mining industry, when in fact the technology and estimation techniques are <u>not</u> comparable between the two industries. This is especially true as oil and gas resources are typically more remote and "unconventional" compared to mining resources.
- b. The required resource disclosure is problematic from both competitive and confidentiality perspectives. As the vast majority of our international joint venture partners would not be subject to similar disclosure requirements the proposed mandatory disclosures would cause serious business relationship issues

with those parties in terms of harmonizing disclosures, and could potentially result in loss of business opportunities from being seen as a less desirable partner. Uniquely regulating the disclosure of resources in isolation creates a serious risk of impairing the competitiveness of Canadian oil and gas producers in the international arena.

- c. The general disclaimer set out in section 5.9 (2) (vi) we respectfully submit undermines the intentions of requiring a qualified evaluator to have prepared the resource estimate and indicates the underlying and inherent limitations to the perception of additional rigor to resource disclosure estimates. Furthermore, the cautionary language using the term "no certainty" is inconsistent with the inherent definitional contingencies estimation of either discovering or developing the resources.
- d. Historically, both Canadian and U.S. securities regulators have focused on regulating the disclosure of reserves, not resources. There are no U.S. securities regulations relating to the disclosure of resources other than the general rule that oil and gas companies in their filings with the SEC, disclose only proved reserves and the SEC staff position that oil and gas companies include cautionary language in press releases and website disclosures if they use terms other than proved reserves. This approach is worthy of note because it recognizes the absolute rigor behind reserves data which is filed and attracts full sanctions under securities laws when disclosed, and at the same time recognizes the inherent limitations of non-reserve descriptions through cautionary language while still allowing companies to describe their business prospects. We are supportive of this framework.
- e. As a 10-K filer, we cannot file resource information, or anticipated results from resources in which we have an interest or intend to acquire an interest. Under the PRA, such a reporting issuer will be required to disclose in the same document the following:
  - The reporting Issuers interests in the resources
  - The location of the resources
  - The product types reasonably expected
  - The risks and the level of uncertainty associated with recovery of the resources; and
  - A definition of the resources category used for the estimate
  - Identify what portion of the estimate is attributed to each COGEH resource category;
  - The effective date of the estimate
  - The significant positive and negative factors relevant to the estimate
  - Estimated percentage probability that the issuer will
    - Discover hydrocarbons in sufficient quantity for them to be tested to the surface, in the case of undiscovered resources or a subcategory of undiscovered resources; or
    - Commercially extract the volume disclosed, in the case of discovered resources or a subcategory of discovered resources other than reserves;
  - In respect of contingent resources, the specific contingencies which prevent the classification of the resources as reserves
    - Cautionary language proximate to the estimate:
      - There is no certainty that it will be economically viable or technically feasible to produce any portion of the discovered resources
      - There is no certainty that any portion of the undiscovered resources will be discovered. If discovered, there is no certainty that it will be economically viable or technically feasible to produce any portion of the undiscovered resource.

Firstly, we are caught between two systems – one prohibiting such filings, the other mandating same. As a result, our continued exemption to disclose to SEC requirements is very important.

Secondly, for issuers with multiple resource opportunities, providing this information is a burdensome level of disclosure, which is "disclaimed" immediately thereafter. It is also impractical as there is often 10 or more prospects underlying the anticipated results.

In summation, if these requirements result in companies being either unwilling or unable to provide the proposed resource disclosure, then such a result could be detrimental to investors and make the companies less competitive.

### 2. Recognizing the Sophistication and Internal Controls of Senior Issuers

In the development of NI 51-101 the CSA had significant discussion regarding preparing reserve disclosure rules for small to intermediate domestic issuers and those larger issuers that competed not only internationally for access to resource but access to U.S. capital markets. The results of that discussion determined that large (>100,000 boe/d) companies typically operated with a more developed level of process, review and scrutiny (a "Senior Issuer"). Such companies were generally recognized by the CSA as having competent staff and internal controls that provided satisfactory corporate governance. These competencies in corporate governance also relate to disclosure review committees which are designed to ensure rigor in the reporting and disclosure processes.

Consistent with the above we believe that rather than requiring specific information required within the proposed NI 51-101 sections 5.9(1) and 5.9(2) for every prospect, Issuers demonstrating these competencies should only be required to provide a description of their resource estimation processes in general and limitations and uncertainties associated with certain types of disclosure as is required for reserve disclosure. In addition, we believe that symmetrical filings in both Canada and the U.S. is a preferred state for companies reporting on Form 10-K. As a result, this information should be "furnished" to investors rather than filed so as to allow 10-K filers to have identical cross-border filed records as the SEC will not allow such information to be filed.

### 3. <u>Mandating Use of COGE Handbook Resources Definitions and Categories is Untimely</u> <u>and Unduly Restrictive</u>

The Proposed Resources Amendments mandate use of COGE Handbook ("COGEH") resources terminology and categories. The SPE/WPC/AAPG/SPEE (Collectively, "SPE/WPC) have drafted new reserves and resources definitions and distributed them for industry comment. We understand that the SPE/WPC finalized these definitions on March 23, 2007. The SPE/WPC resources definitions and categories are similar to, but not exactly the same as, the definitions and categories in the COGEH. Proposed Appendix 2 to the Companion Policy is inconsistent with the SPE/WPC definitions and will undoubtedly

result in confusion in the industry. Many of the Senior Issuers prefer the proposed SPE/WPC definitions to the COGEH definitions. We believe that the authors of the COGEH (SPEE) need time to consider the SPE/WPC definitions and should take all reasonable steps to harmonize definitions and not create yet another definition reference before steps are taken to mandate resources disclosure in accordance with the current COGEH definitions and categories.

An additional technical concern is that the Proposed Resources Amendments would require that disclosure of a resources estimate be accompanied by the estimated percentage probability that the issuer will discover hydrocarbons in sufficient quantity for them to be tested to the surface, in the case of undiscovered resources or that the issuer will commercially extract the volume disclosed in the case of discovered resources. It is not clear how such a probability estimate should be prepared. There is no accepted industry standard for preparing such estimated percentage probabilities, particularly in the context of deterministic estimates. Further, SPE/WPC guidelines regarding estimates of resources contemplate preparation of low, medium and high estimates, not a single probability estimate. This proposed amendment could lead to disclosure that is misleading because it would seemingly provide an enhanced level of assurance to investors on a very imprecise estimate. Having international joint venture partners agree with the PRA disclosure would also pose a difficult and most likely impossible challenge. We therefore support the position that subject to disclosure of which definition system is being applied, that sophisticated issuers be allowed to choose either the COGEH or SPE/WPC definitions as their disclosure standard (if the latter is not harmonized or adopted by the COGEH).

### 4. <u>Requiring Preparation of Resources Estimates by a Qualified Reserves Evaluator or</u> <u>Auditor</u>

Nexen believes that it is reasonable to have resource estimates prepared by a "qualified" individual – a person with 5 years of relevant experience which can be a company employee. If it is important enough for a company to disclose, it should be determined by a competent person. We continue to support the position that issuers who can demonstrate the required internal staff competencies and process be allowed to report information generated or evaluated by such qualified staff.

### 5. Companion Policy Exemption Guidance

The proposed amendments to the Companion Policy have deleted reference to exemption currently found in Part 8 of the Companion Policy.

The Senior Issuers after much consultation with the CSA (ASC) were granted exemptions from both from the requirement to engage an independent third party reserves evaluator or auditor in favour of an internally qualified evaluator or auditor, and from the requirement to report reserves following NI 51-101 in favour of allowing "SEC Style" FAS 69 disclosure. There was recognition that large sophisticated issuers (generally accepted to be described as those companies producing >100,000 boe/d) could accomplish the regulatory initiatives by meeting competency and corporate governance standards. The guidance provided in the

Companion Policy is a valuable record and reflects the policy development to which so many provided significant effort and input. Perhaps the guidance if thought to detailed could be simplified around key principles that were recognized in the original Companion Policy, and we would be pleased to consult with the CSA in that regard.

### **Additional Comments**

#### **Future Cost/Prices Determination**

Companion Policy Section 1.1(2) sets out that the CSA refers to whether an issuer has reasonably determined future prices and costs by reference to "comparable prices or costs used, as at the same date, for the same future period, by major independent qualified reserves evaluators or auditors." With respect, this is not their area of expertise, their estimates are frequently based on the work of third parties, and that there are other economists or consultants such as PIRA or CERA who are more qualified to make industry estimates in these areas. To mandate any group for reference to future price or cost is not in our view beneficial to the process, and that issuers should be able to reference estimates prepared by a party recognized as a reasonable authority in the area.

#### The Proposed Last Sentence in Form F2 is Inappropriate

We are of the view that the proposed last sentence to Form F2 is inappropriate. For Senior Issuers who report proved reserves using SEC standards, the level of certainty is "reasonable certainty". Although revisions should generally be upwards, there will be exceptions. To say that "any" variation should be consistent with the category of reserves is a non-sequitor. Revisions need to be examined on average, over time, not case by case.

#### **Possible Reserves Disclosure**

Section 5.2(a)(v) of the Proposed Resources Amendments prescribes certain cautionary language if there is written disclosure of an estimate of possible reserves or related future net revenue. We believe that the proposed cautionary language is inconsistent with the COGE Handbook definition and that the percentage probability language in the second sentence is incorrect.

Thank you for the opportunity to make this submission. We would be pleased to elaborate on these comments at your convenience.

Yours truly, Ian McDonald (P. Eng.) Internal Qualified Reserves Evaluator Nexen Inc.

May 1, 2007

Alberta Securities Commission British Columbia Securities Commission Manitoba Securities Commission New Brunswick Securities Commission Nova Scotia Securities Commission Registrar of Securities, Northwest Territories Registrar of Securities, Nunavut Registrar of Securities, Yukon Territory Saskatchewan Financial Services Commission Securities Commission of Newfoundland and Labrador Securities Office, Prince Edward Island

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Subject: Proposed Amendments to 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

Mr. Stevenson and Madame Beaudoin:

The Canadian Advocacy Council of CFA Institute Canadian Societies (CAC)<sup>1</sup> is pleased to respond to the Request for Comments dated January 19, 2007.

### General Comments

The CSA has recognized the need to create additional requirements for a reporting issuer that reports resources that cannot be currently classified as reserves. The goal of this policy initiative is to improve the disclosure of resources and to provide additional guidance to reporting issuers wishing to

<sup>&</sup>lt;sup>1</sup> The CAC represents the 12 Canadian member societies of the CFA Institute constituting over 11,000 members who are active in Canada's capital markets. Members of the CAC consist of portfolio managers, investment analysts, corporate finance professionals, and other capital markets participants. The CAC's has been charged by Canada's CFA Institute member societies to review Canadian regulatory, legislative and standard setting activities.

make meaningful and understandable disclosure of their oil and gas resources.

The Canadian Advocacy Council agrees with the broad objectives and principles of this initiative, however, we disagree with the removal of certain disclosure that is currently required within NI 51-101 for the Disclosure of Resources (Section 5.9, formerly Disclosure Concerning Prospects). Our comments in regards to this are outlined in the Specific Comments section below.

The CSA has also proposed to remove: 1) the requirement to report reserves and the related future net revenue using constant prices and cost, 2) the requirement to reconcile future net revenue, and 3) the requirement to do a reserves reconciliation using net reserves to doing the reserves reconciliation using gross reserves.

The Canadian Advocacy Council agrees with this proposal. The use of constant pricing and costs set as the effective date of reserve evaluation can create a misleading representation of economic value. This is particularly relevant for heavy oil and bitumen that tend to be priced significantly below full year averages at year-end. We note that one potential issue this may create is comparability between Canadian companies using different forecast prices and costs and also comparability to US peers that are required to use constant prices and costs as per SEC regulations.

The requirement to reconcile future net revenue and the requirement to do a reserves reconciliation using net reserves does not provide significant additional material information.

# Specific Comments

*NI* 51-101: Section 5.9, Disclosure of Resources (formerly Disclosure Concerning Prospects)

The Canadian Advocacy Council does not support the removal of 5.9 (1) c):

"in the case of undeveloped property in which the reporting issuer holds a leasehold interest, the expiry date of that interest."

The disclosure of this information can have a material impact on valuation in certain instances and does not pose significant additional costs.

The Canadian Advocacy Council recommends amending 5.9 (1) I) **from**: "reasonably expected marketing and transportation arrangements" **to** 

"whether infrastructure currently exists in the region to transport the resource."

This amendment is less onerous than the current requirement but will provide investors with material information in the evaluation of assets.

*NI* 51-101: Section 3.2, Reporting Issuer to Appoint Independent Qualified Reserves Evaluator or Auditor and Section 3.4 Certain Responsibilities of Board of Directors

The CSA has posed the question: "Would there be a material enhancement to investor protection if the rule required the board to appoint the independent reserves evaluator or auditor in addition to the existing appointment review requirement?"

The Canadian Advocacy Council does not believe there would be a material enhancement to investor protection by requiring the board to make these appointments. The current requirement of the board to review the appointment is adequate.

Additionally to ensure greater independence, the Board rather than the company management, should appoint the independent evaluator given that reserves represent significant assets for companies in the extractive industry. We think this appointment should be integrated with the overall audit of the financial statements.

### Summary

We hope the CSA will take our comments into consideration and review the proposal for NI 51-101.

We thank you for the opportunity to provide the foregoing comments, we welcome any questions you may have and we appreciate the time you are taking to consider our point of view. Please feel welcome to contact us at <u>chair@cfaadvocacy.ca</u>.

Regards,

*Blair Carey, CFA* Co-Chair

*Robert Morgan CFA* Co-Chair