

Oil and Gas Review

**2009  
Report**

Alberta  
Securities  
Commission

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## 1. Introduction

At 31 December 2009, Alberta-based reporting issuers (RIs) listed on the TSX and TSX Venture Exchange had an aggregate market capitalization of approximately \$486 billion, making the Alberta Securities Commission (ASC) the regulator of the second largest capital market in Canada. Thirty-eight per cent of those Alberta-based businesses are engaged in the oil and gas industry and represent 72 per cent of Alberta's aggregate market capital. Given the prominence of the oil and gas industry, the ASC is focused on providing support and guidance to this unique group of market participants. Widely recognized as an international leader in the regulation of oil and gas disclosure, the ASC maintains a specialized team of oil and gas experts. Clear and timely disclosure is essential for a fair and efficient capital market in Alberta and each year, the ASC oil and gas team prepares a report summarizing the observations and findings of reviews of the required disclosure and news releases of oil and gas RIs participating in Alberta's capital market. This report is intended to provide assistance to RIs regarding areas where the ASC notes recurring disclosure weaknesses with the goal of improving disclosure of oil and gas activities.

The 2009 Oil and Gas Review Report (2009 Report) is the sixth annual ASC publication of its review of the disclosure required by National Instrument 51-101 *Standards of Disclosure For Oil and Gas Activities* (NI 51-101) and Form 51-101F1 *Statement of Reserves Data and Other Oil and Gas Information* (51-101F1), Form 51-101F2 *Report on Reserves Data by Independent Qualified Reserves Evaluator or Auditor* (51-101F2) and Form 51-101F3 *Report of Management and Directors on Oil and Gas Disclosure* (51-101F3). Annual Oil and Gas Reports for previous years can be found on the ASC website at <http://www.albertasecurities.com/Companies/Pages/OilGas.aspx>.

## 2. General Observations

Alberta RIs' oil and gas disclosure under NI 51-101 is of a generally high standard. However, attention is still required - especially in news releases and investor presentations on resources other than reserves (discovered petroleum initially-in-place and contingent resources, undiscovered petroleum initially-in-place and prospective resources). The Canadian Securities Administrators (CSA) issued CSA Staff Notice 51-327 *Oil and Gas Disclosure: Resources other than Reserves* (51-327), on February 27, 2009, which addresses some of these issues.

Because many of the comments in the 2009 report address weaknesses that we have noted in our reviews, it would be easy to assume that there is a significant overall deficiency in oil and gas disclosure under NI 51-101. We do not consider this to be the case. Based on our reviews, the quality of evaluations and of reporting has improved noticeably over the last years. We will, however, continue to bring the attention of RIs to significant weaknesses when they occur, in an attempt to continue this improvement. These include:

- *Errors in disclosure* Errors due to inadequate quality control in the preparation of disclosure documents. In particular, errors that are seldom present in the evaluation reports and appear in the Form 51-101 F1.

- *Misuse of terminology* RIs must use the terminology defined in Section 5.1.2, Volume 1, of the Canadian Oil and Gas Evaluation Handbook (COGEH). Although use of the correct terminology has improved, misuse still occurs, particularly in news releases.
- *Contingencies* When reporting contingent resources, RIs must disclose the contingencies specific to their activities. The description of these contingencies was too often poor and only of a general nature. Although drilling and testing are prerequisites to classification as a contingent resource, RIs sometimes cited them as contingencies.

### **3. The ASC Review Program**

RIs disclose information on their oil and gas activities in a variety of ways. Under NI 51-101, they are required to make certain prescribed disclosure annually and when issuing prospectuses. In addition, any other document filed with the ASC or other public disclosure of oil and gas activities (in a news release, website, corporate presentation or otherwise) is required to comply with certain standards.

ASC staff may review this information through a number of programs that cover both compliance and technical content, and studies on specific issues, issue-oriented reviews, may also be conducted. There are three levels of review: statutory disclosure review, compliance review and technical review.

#### ***Statutory disclosure review***

This review determines whether the RIs have filed the required annual disclosure. Failure to file the required annual disclosure by the due date automatically results in an RI being placed on a default list until it files the required disclosure.

#### ***Compliance review***

NI 51-101 requires disclosure of certain specified information, including on proved and proved + probable reserves. Disclosure is not required for other resources, including possible reserves and contingent and prospective resources, but if they are voluntarily disclosed, NI 51-101 prescribes the manner in which the disclosure must be made. From a compliance review, the ASC ascertains whether the required disclosure is present, whether it complies with NI 51-101 and whether it is misleading.

The ASC carried out comprehensive compliance reviews of all annual disclosure under NI 51-101 in 2007 and 2008. In 2009, we reviewed a large sample of the disclosure, but also carried out more detailed issue-oriented reviews of specific disclosure requirements. We also continued the reviews of news releases, a process that we initiated in 2007.

#### ***Technical review***

A technical review is the most intensive level of review. It involves assessing the quality of disclosure in detail and often includes a review of the reserves or resource evaluation report that underlies public disclosure.

Since the technical review program was initiated in 2003, by the end of 2009 we had reviewed 1025 reserves or resources reports of 493 RIs, with properties in 46 different countries, prepared by 66 different evaluators. In 2009, we reviewed 208 evaluation reports.

Technical reviews were carried out for:

- Preliminary short form prospectuses, which may incorporate disclosure (e.g. NI 51-101 Annual filings) by reference rather than by verbatim repetition. If our review of these identifies material deficiencies, we require them to be corrected. If there have been material changes since the most recent annual disclosure, we require this to be disclosed. In 2009, we reviewed 97 preliminary short form prospectuses and requested supplementary or corrective information or had comments on about a quarter of them.
- Long form prospectuses, which must contain all the prescribed information and cannot merely incorporate previous disclosure by reference. In 2009 we reviewed six long form prospectuses, all initial public offerings, and had some limited comments on all of them.
- Corporate Finance continuous disclosure reviews. These are initiated by ASC staff and may also be carried out at the request of other Canadian securities commissions. A technical review of an evaluation report is often carried out as part of this type of review, and in 2009, we carried out 105 such reviews, with comments or questions on about 10 per cent of them.

The issues identified in these reviews are discussed in Section 5, Deficiencies in Reporting and General Observations.

Because evaluations of reserves and other resource categories are estimates, a technical review is primarily an assessment of whether the evaluation is consistent with basic underlying information (e.g. cores, logs and production history), and that it has been prepared in accordance with good geological and engineering practice and the evaluation standards set out in the COGEH.

## **4. General Guidance**

As a result of our reviews we have provided some general guidance and observations to assist RIs in preparing their regulatory filings.

### **4.1 Who Needs to Provide Disclosure Under NI 51-101?**

RIs for which oil and gas activities, as defined in paragraph 1.1(s) of NI 51-101, are material must file annual NI 51-101 disclosure and all their public disclosure (including news releases) must comply with the requirements of NI 51-101. The scope of NI 51-101 can encompass companies engaged either directly or indirectly in oil and gas activities. It is not necessary to have production or reserves, as activities such as acquisition of oil and gas properties or of entities that hold oil and gas assets also bring an RI within the scope of NI 51-101. ASC staff applies the following criteria to determine whether a company is required to file under NI 51-101:

- The RI is engaged in activities that fit within the scope of oil and gas activities as defined in NI 51-101;
- The RI associates itself with the oil and gas industry in its SEDAR profile;
- The predominant portion of the RI's revenue and assets are oil and gas related; and
- The RI presents itself to the investor through its public disclosure as being engaged in oil and gas activity.

Even an RI with a non-working interest will usually still be subject to NI 51-101. Item 2.7 of NI 51-101CP contains more information relevant to disclosure of non-working interests.

Since NI 51-101's inception in 2003, the CSA has expanded the scope of issuers subject to NI 51-101 to include:

- certain over-the-counter (OTC) issuers with a connection to British Columbia (BC Instrument 51-509);
- initial public offerings (5.5 of Form 41-101F1); and
- offering memoranda (General Instruction 9 of Form 45-106F2 *Offering Memorandum for Non-Qualifying Issuers* and Form 45-106F3 *Offering Memorandum for Qualifying Issuers*).

#### **4.2 Owning a Stake in Another Company**

RIs are reminded that items 2.3 and 2.4 of 51-101F1 prescribe requirements for reporting for indirectly-held reserves and future net revenue depending on the method of accounting used.

If an RI files financial statements in which it accounts for investments by the equity method, that RI is obliged to disclose its share of the investee's reserves separately from its other reserves. It is ASC staff's view that RIs satisfy the obligation to report the equity interest separately by complying with the requirements of Part 2 of the 51-101F1 in respect of the equity interest. However, ASC staff would not object were the RI to also include the disclosure contemplated by Parts 3 through 6 of the 51-101F1 for the equity interest.

#### **4.3 Unique Features of International Properties**

Oil and gas interests in other countries increasingly take the form of a production agreement, rather than the more familiar oil and gas lease. The details of these agreements can vary significantly. When an RI's reserves are based in whole or in part on such an agreement, it may be appropriate to provide additional explanatory disclosure in item 5.2 of 51-101F1 "Significant Factors or Uncertainties". For example, where the agreement contains provisions such as the termination of the right to produce at an expiry date, after a specific volume has been produced, or once a cost-recovery criterion has been reached, the provisions should be disclosed. It would be appropriate for RIs to discuss the likelihood of an extension to an expiring agreement when this is relevant.

Where an RI is subject to taxes in multiple jurisdictions, the RI should be certain that disclosure in the 51-101F1 and the 51-101F2 - in particular in respect of the net present value of future net revenue (before income taxes), 10 per cent discount rate - is consistent. It may be appropriate for the RI to provide additional explanatory disclosure on tax regimes in this case.

ASC staff consider that Item 6.5 of Form 51-101F1 applies to taxes payable in all jurisdictions, not simply the home jurisdiction.

#### **4.4 What, When and Where to Publish**

##### **4.4.1 Annual and Interim Disclosure**

NI 51-101 mandates annual disclosure but, except for the requirement to discuss the RI's reasonable expectation of how a material change has affected the reserves data and other information disclosed in the RI's annual NI 51-101 filing, there are no NI 51-101 mandated requirements to provide interim disclosure. However, in the context of a prospectus, where the standard is full, true and plain disclosure, more disclosure may be necessary.

The fact that NI 51-101 does not mandate an interim disclosure does not preclude an RI from providing interim disclosure so long as it is clear that it is, in fact, an interim disclosure. If an RI elects to make interim disclosure of information required in Form 51-101F1, NI 51-101 does not require that 51-101F2 or 51-101F3 also be provided. However, if the RI elects to use the 51-101F1, 51-101F2 and 51-101F3 as a model for interim disclosure, the RI should make any changes necessary to headings and elsewhere in its interim disclosure to distinguish it from annual disclosure. Such disclosure would still be subject to the requirements of Part 5 of NI 51-101, which requires, among other things, that a qualified reserves evaluator prepares the reserves estimates, that reserves be classified to the most specific category as set out in the COGE Handbook and that the interim disclosure be consistent with the annual disclosure the RI provides.

Voluntary disclosure does not replace the annual oil and gas filing requirement, which the RI must make within the prescribed timeframe.

##### **4.4.2 SEDAR Filing Categories**

The current relevant categories for filing oil and gas information under National Instrument *13-101 – System for Electronic Document Analysis and Retrieval* (SEDAR) are:

Filing Type: Oil and Gas Annual Disclosure (NI 51-101)

Document Types:

- Cover letter
- Letter concerning recipient agency
- Oil and gas annual disclosure filing (Forms 51-101F1, F2 & F3)
- News release (section 2.2 of NI 51-101)
- Other

NI 51-101 disclosure should not be filed in “Cover letter” or “Other” SEDAR categories.

The 51-101F1, 51-101F2 and 51-101F3 can be combined into one document and filed in the “Oil and Gas Annual Disclosure Filing (Forms 51-101F1, F2 & F3)” SEDAR category or filed separately with each form being filed in the “Oil and Gas Annual Disclosure Filing (Forms 51-101F1, F2 & F3)” SEDAR category. They may also be included in the Annual Information Form (AIF).

NI 13-101 does not permit an RI to file a full oil and gas technical report or evaluation on SEDAR. An RI may file a summary of a technical report, but it will usually be superfluous, since the summary information will probably be contained in the in the 51-101F1, F2 and F3 required to be filed on SEDAR under the “Oil and gas annual disclosure filing (Forms 51-101F1, F2 & F3)”. Should an RI wish to do so, a full technical or evaluation report may be placed on its own website, but RIs should note that doing so would normally require the prior consent of the Qualified Reserves Evaluator.

#### **4.4.3 NI 51-101 Annual Reports and the AIF**

NI 51-101 currently requires an RI to issue a news release announcing the filing of its annual NI 51-101 disclosure. This is of particular importance for RIs that incorporate such disclosure in their AIFs. The news release should be filed in the “News Release (section 2.2 of NI 51-101)” SEDAR category, which allows users to readily locate the annual NI 51-101 filings. (As noted in Section 7 of this report, the CSA is proposing to replace the requirement to issue a news release with a less costly filing under Form 51-101F4, but that proposal has not been enacted.)

An RI that provides its disclosure in the AIF need not file the annual NI 51-101 filings separately on SEDAR.

RIs can satisfy the requirement of item 5.5 of Form 51-102F2 Annual Information Form by incorporating the 51-101 disclosure by reference if the RI prefers to file the reports separately (see General Provisions (f) of Form 51-102F2).

#### **4.4.4 Use of Forms 51-101F2 and 51-101F3**

We recognize the merits of using modified versions of Forms 51-101 F2 and 51-101F3 for other than their intended purpose, which is in annual disclosure, but when doing so, RIs should use appropriately modified versions of the Forms.

Form 51-101F2 is required for annual disclosure when the RI discloses proved or proved plus probable reserves, but not for resources other than reserves. However, if an RI wishes to disclose resources other than reserves using a form of this nature, it may be done with a modified version of Form 51-101F2 in which the heading does not describe it as a Form 51-101F2 and is otherwise modified accordingly.

Although Form 51-101F3 requires that the “Report of Management and Directors” be in all material respects as is set out in the Form, in a situation where an RI does not have reserves, or has not engaged an independent qualified reserves evaluator, the RI should amend the report accordingly. Likewise, if an RI elects to use a form similar to the Form 51-101F3 for management and director sign-off on resources other

than reserves, it should not be designated as a Form 51-101F3 and the RI should amend the report appropriately to indicate that it is disclosure of resources other than reserves.

An evaluation of the future net revenue attributed to proved and probable reserves is required to be prepared by an Independent Qualified Reserves Evaluator. All other reserves and resource estimates must be prepared by a Qualified Reserves Evaluator but there is no requirement for independence. It may, however, be misleading to disclose estimates made by other than an Independent Qualified Reserves Evaluator without also disclosing this fact.

#### **4.4.5 Combining Reserves Estimates with Different Effective Dates**

We have noted a number of cases when RIs have combined reserves estimates that were made at different effective dates, most commonly when an RI has made an acquisition and the effective date of estimation of the acquired property differs from that of the RI's properties. This will generally require a re-evaluation of one or more properties so that the effective dates are the same. In some cases a mechanical update may suffice, in which case, note should be taken of the guidance provided on Mechanical Updates in subsection 51-101CP 5.2(7) of the Companion Policy *51-101CP Standards of Disclosure for Oil and Gas Activities* (51-101CP).

### **4.5 Errors in Your Published Disclosure**

Examples of the deficiencies for which the ASC may request an RI to refile corrected annual oil and gas disclosure include:

- a substantial departure from the disclosure requirements of the Form 51-101F1;
- a failure to properly execute the Form 51-101F3; and
- material evaluation, addition or disclosure errors, such as double-adding a particular reserves category.

If the information to be filed under NI 51-101 is in its AIF, the RI should consider whether the re-filing of the oil and gas disclosure would also require the RI to refile its annual certificates (see Part 6 of NI 52-109 *Certification of Disclosure in Issuers' Annual and Interim Filings*).

The ASC may not request an RI to refile documents when there are less substantial errors, such as:

- a misuse of units of measurement where context readily exposes the error;
- transposition errors where the difference between the two numbers may be immaterial; and
- a minor departure from Form 51-101F1 requirements.

### **4.6 Use of Constant Price Case**

The amendments to NI 51-101 that took effect on December 31, 2007 included the removal of mandatory requirements to report reserves data with a constant price case. Since making the constant price case

optional, our review of annual disclosure indicated that about 12 per cent of RIs made use of the option to report their reserves under a constant price scenario in the 2009 filings.

The supplementary constant price case allows RIs to be compared to issuers that file under the U.S. Securities and Exchange Commission (SEC) rules, which prior to January 1, 2010, required the disclosure of reserves on the basis of prices and costs on the last day of the financial year. Revisions to the SEC oil and gas disclosure rules that are in effect for filings in 2010 have changed the manner in which the constant price is calculated to an average of the price on the first day of the month over the previous year. It is ASC staff's view that RIs, who wish to provide supplementary disclosure of a constant price case on this basis in their annual filings may do so, provided it is clearly indicated as such.

## **5. Deficiencies in Reporting and General Observations**

Our observations from this year's disclosure reviews are summarized in the following subsections:

### **5.1 Quality Control on the Preparation of Disclosure**

Many of the deficiencies that we have noted can be attributed to inadequate quality control in the preparation of disclosure material. Many RIs would significantly improve their disclosure by better proofreading their materials to detect and correct errors (e.g., preparation of tables, arithmetic errors) and to ensure that there is no missing information. As an example, the reserves reconciliation table required by Item 4.1 of Form 51-101F1 contains eight numbers that must be summed to provide an end-of-year balance. The total should agree with the gross volumes contained in the reserves summaries required by Item 2.1 of Form 51-101F1, but a review found that six per cent of these tables contained arithmetic errors.

### **5.2 Unit Abbreviations and Notations**

RIs should conform to the prescribed usage for unit abbreviations and notations, based on international standards (refer to COGEH Volume 1 Appendices B and C). Although less common than in previous years, we continue to see incorrect usage that may be misleading. For example, it is sometimes not possible to tell whether a table is in thousands or millions of cubic feet of gas, because abbreviations, which are in the table headings, are repeated in the body of the table. We have discussed this issue at length in previous annual oil and gas reports and they are available for reference on the ASC website.

### **5.3 Unit Value Calculation**

Amendments to NI 51-101 that came into force at the end of 2007 included a requirement for the disclosure of unit values by product type (Item 2.1.2 of 51-101F1) or by production group (Item 2.1.3 of 51-101F1). This requirement provides a check on the evaluation, as a unit value that differs significantly from the netback value (reported in Item 6.9 of 51-101F1) raises a concern about the validity of the evaluation. For example, we have seen unit values of \$2.3/bbl for oil and \$60/Mcf for gas.

Although ASC staff have received positive informal feedback on the value of this requirement, we have noted that it may cause difficulties for cost allocation when a well yields significant amounts of more than one

product type. The alternative of presenting a unit cost/barrel of oil equivalent for the production group does not always result in meaningful information, especially at a time when there is a major difference between the usual energy based conversion factor of 6 Mcf:1 bbl and the current ratio of the prices of gas and oil of about 15:1. When the calculation of a unit value is problematic for this or other reasons, the RIs should consider providing an explanatory statement.

However, during our review, we noted problems in the disclosure of unit values that could be attributable to other sources such as:

- inconsistent currencies (e.g., gas in Canadian dollars and oil in U.S. dollars);
- inclusion of processing income in the Net Present Value (NPV); and
- unit values calculated using gross volumes and net values or vice versa.

We will continue to monitor this issue.

#### **5.4 Barrel of Oil Equivalent (BOE) Conversion Ratios**

Section 5.14 of NI 51-101 describes the manner in which the conversion of gas to barrels of oil equivalent and vice versa should be carried out. It prescribes the use of a conversion ratio of 6 Mcf:1 bbl and a cautionary statement to the effect that this is an energy conversion ratio that should not be relied upon as a measure of value. It also allows the use of other ratios if accompanied by appropriate explanation. At December 2009, the value ratio was closer to 15 Mcf:1 bbl. RIs who omit the required cautionary statement, should be aware that any disclosure that uses BOEs or McfGEs at a 6 Mcf:1 bbl ratio in a context that implies value may be misleading.

#### **5.5 Product Prices**

ASC staff reviewed the disclosure of product prices that is required in Part 3 of 51-101F1. In summary, RIs are required to disclose, by product type, country or region, benchmark prices, the forecast price for at least five years and the weighted average price for the last year, and the constant price, if a constant price case is disclosed. This is not required if a company has no reserves.

ASC staff noted deficiencies in this disclosure: 30 per cent of RIs failed to disclose a weighted average, five per cent did not disclose representative benchmark prices, and eight per cent had more than one deficiency. RIs should ensure that the required information on prices is included in their disclosure.

#### **5.6 Reserves Reconciliation Categories**

Part 4 of 51-101 F1 requires RIs to disclose a reserves reconciliation table for gross Proved, Probable and Proved + Probable reserves, with seven reconciliation categories. We have noted the occasional use of new categories, such as "transfers", "others" and "working interest adjustment". RIs may provide additional detail under the seven required headings if they wish to do so, but they should not introduce new categories.

RIs who wish to do so may provide a reconciliation of net reserves in addition to the reconciliation of gross reserves.

## **5.7 Information on Oil and Gas Properties and Wells**

Part 6.1 of 51-101F1 requires the identification and description of the RI's "important properties, plants, facilities, and installations". We have noticed that this information is often missing and may constitute a material deficiency.

## **5.8 Disclosure of Resources Other than Reserves Data**

NI 51-101 mandates the disclosure of "reserves data", which is defined in NI 51-101 to include "an estimate of proved reserves and probable reserves". Disclosure of resources other than reserves data is optional and not required under NI 51-101, but ASC staff have seen a significant increase in the disclosure of possible reserves and other resource classes, especially for unconventional resources.

CSA Notice 51-327 was issued on February 27, 2009, and provides guidance on recurring issues that we found in our 2008 reviews of RIs' disclosure of resources other than reserves data.

Since this notice was issued, we have seen a general improvement in the quality of disclosure of resources other than reserves. However, the increase in unconventional resource activity, notably, in the last year, shale gas, continues to raise new issues. Issues of concern include inconsistency in the estimation and disclosure of contingent resources and the use of analog information for the assessment of unconventional resources.

## **5.9 Disclosure of Undeveloped Reserves**

NI 51-101 requires disclosure of proved and probable undeveloped reserves when they are initially booked, and a discussion of the current development plans (Item 5.1 51-101F1). The objective of the disclosure is to ensure that investors receive meaningful information on an RI's activities regarding the development of proved undeveloped reserves (PUDs) and probable undeveloped reserves (PBUDs).

The extent of disclosure of development plans required by paragraphs 5.1.1(b) and 5.1.2(b) of 51-101F1 should be proportionate to the volumes of undeveloped reserves, but is often "boilerplate" language that offers no constructive information. RIs are expected to provide meaningful information on their plans, especially when there is a high proportion of undeveloped reserves in an RI's disclosure.

The concept of "first attributed" is the measurement and disclosure of previously unassigned volumes, but a number of companies appear to have interpreted this as presenting the movement of volumes into and from the undeveloped reserves category. The intent of this disclosure is to identify undeveloped reserves that are new to the RI (e.g., acquisitions and discoveries). Ordinarily the first attributed volumes do not involve adjustments to previously assigned undeveloped reserves, dispositions or volumes that an RI has developed. Ultimately the reporting period's booked volumes should have the net effect of showing all current and remaining undeveloped volumes for which a course of action has yet to be commenced.

We have provided the sample tabulation below (Table 1) as a guide to preparing this disclosure. The column headed "1st Attributed" is what Item 5.1 51-101F1 requires; the column headed "Booked" would be disclosed under Item 2.1 51-101F1 for the current and previous years.

L&M Oil (Example)									
Proved Undeveloped	1 <sup>st</sup> Attributed Mbbbl	Adjustments Mbbbl	Dispositions Mbbbl	Developed Mbbbl	Booked Mbbbl				
Prior to 2007	50				50				
2007	100	0	0	(20)	130				
2008	0	25	(65)	0	90				
2009	0	(5)	(15)	(60)	10				
NET EFFECT	150	+	20	+	(80)	+	(80)	=	10
	<b>New Addition</b>								<b>Reserve Summary</b>
	Acquisitions Discoveries	Economic Extensions Improved Rec. Technical		Dispositions	Developed				
	<b>NEW</b>	<b>REVISE</b>	<b>REMOVE</b>	<b>RESULT</b>	<b>BOOKED</b>				

Table 1. Example Showing How to Interpret Proved Undeveloped "First Attributed" Reserves

## 5.10 Reporting of Costs Incurred: NI 51-101 and Financial Reporting

Item 6.6 of Form 51-101 F1 requires the disclosure of acquisition, exploration, and development costs. ASC staff noticed in a recent review that there is often a significant difference between these and the costs reported in the financial statements. ASC staff will continue this review and may seek an explanation.

## 6. Analysis of Technical Revisions of Reserves

### 6.1 Introduction

"Technical revisions" is a category required to be reported under Part 4 of 51-101F1, as part of the reconciliation of previous and current financial year-end estimates. A technical revision is a change in reserves estimates in properties owned by the RI at the start of the reconciliation period as the result of new technical information (including from production). It does not include factors that require capital expenditure, such as infill drilling, or the consequences of royalty or ownership changes, which fall into the reconciliation categories of extensions and improved recovery, and economic revisions, respectively.

A review of technical revisions over time provides a measure of the quality of reserves estimates. Provided that RIs have employed appropriate evaluation methodologies, the technical revisions generally expected on various reported reserves categories are as follows:

Reserves Category	Expected Outcome
Proved	Positive
Proved + probable	Close to zero
Proved + probable + possible	Negative

51-101F1 disclosure provides information on the first two of these reserves categories. Statistical theory indicates that, because they are aggregations of a number of individual property estimates, greater variance of technical revisions may be expected for RIs with smaller volumes of reserves than for RIs with large reserves. This is supported by ASC staff's analysis.

We pay particular attention to this as a measure of the quality of evaluations. RIs whose technical revisions are outliers beyond the usual pattern may be asked for an explanation and are more likely to be selected for a review of their reserves information.

We have reported the results of the analysis of technical revisions for light & medium oil, heavy oil and natural gas in previous years, but caution is required in interpreting any trends on limited data. Technical revisions at the end of 2008 provide a series of six years of data and it was considered that this was sufficient to provide some degree of confidence in coming to general conclusions on the quality of reserves estimates.

We have also compiled data on other product types, such as bitumen, synthetic oil and coal bed methane but, because of the limited number of data points, it is not possible to draw meaningful conclusions and we have not reported the technical revisions for these product types at this time. We will continue to collect and analyze this data for all product types.

## 6.2 Results of Analysis

The results of our analysis of proved and of proved + probable reserves for light & medium oil, heavy oil, and natural gas are shown in Table 2 below and shown graphically in Figures 1a and b. This table and the graphs show total technical revisions as a percentage of the total reserves for the RIs in the number of companies indicated.

2003-2008		Light & Medium Oil	Heavy Oil	Natural Gas
No. of Companies	2003	166	51	206
	2004	203	65	232
	2005	232	79	251
	2006	241	78	275
	2007	237	71	285
	2008	210	68	261
	Proved % Technical Revisions	2003	1.3	(19.8)
2004		(3.2)	4.8	5.4
2005		1.5	1.0	2.1
2006		(3.2)	7.0	(2.7)
2007		9.0	5.7	2.9
2008		1.1	13.0	(0.4)
Proved + Probable Technical Revisions		2003	2.2	(17.9)
	2004	(3.7)	(0.2)	3.6
	2005	0.7	(2.4)	0.6
	2006	(3.1)	4.3	(3.8)
	2007	(1.7)	5.3	(4.6)
	2008	(1.8)	(3.2)	(4.6)

Table 2. Technical Revisions by Product Type 2003 – 2009

### Notes:

1. This data does not include:

- a) Exempt companies, paper filers and a small number of companies with deficiencies in their filings.
- b) Companies who reported negative technical revisions greater than 100 per cent.
- c) Companies who reported positive technical revisions greater than 500 per cent.

### Proved Reserves (per cent)

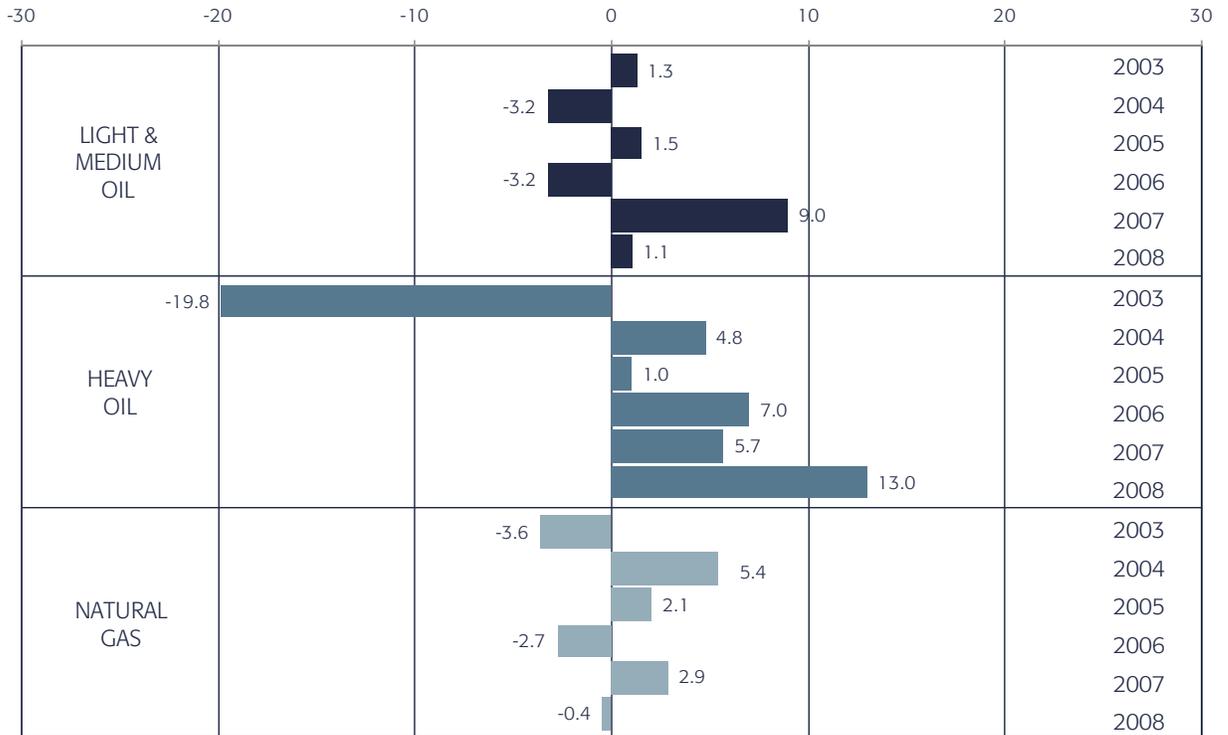


Figure 1a. Proved Reserves Technical Revisions 2003 – 2008

### Proved Plus Probable Reserves (per cent)

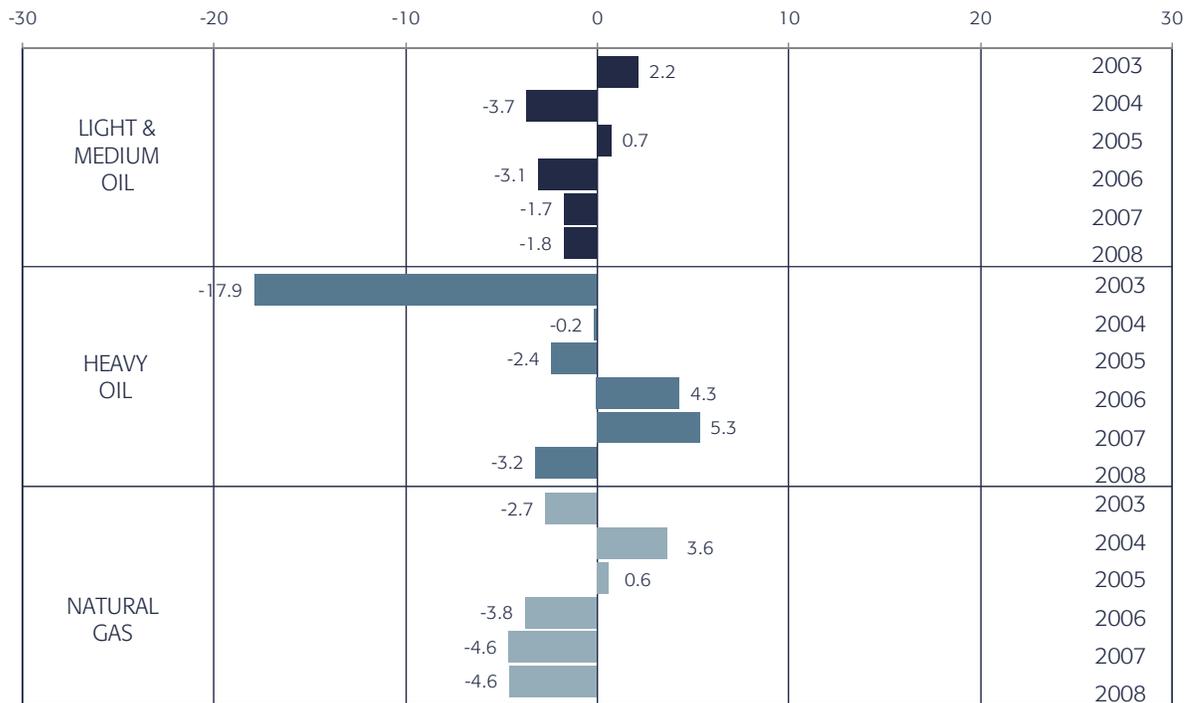


Figure 1b. Proved + Probable Reserves Technical Revisions 2003 – 2008

The graphs in Figures 1a and 1b are for all of the RIs in the database (except as footnoted). However, individual RI's estimates show greater variance. To examine this, plots of technical revisions as a percentage of reserves against the opening balance of reserves have been made in which each point is for a RI (Figures 2 to 4). They show the general pattern that one would expect from this type of data, i.e., decreased variance as reserves increase (this assumes that the volume of reserves is a function of the number of properties in an RI's aggregate volume). We select outliers from this general pattern for further review of the evaluation reports as part of our continuous disclosure review program. The first step in such a review is to understand the reason for the outlier. If it can be attributed to a bias or error and depending on the degree of materiality, we may require the RI to correct the error or bias in the current filing, or to note it for correction in future filings.

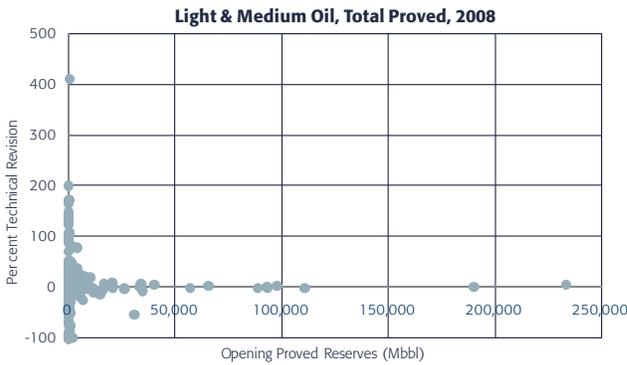


Figure 2a. Technical Revisions, Proved Reserves Light and Medium Oil 2008

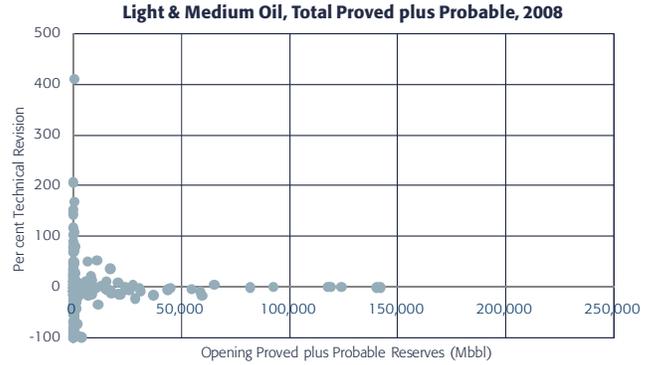


Figure 2b. Technical Revisions, Proved + Probable Reserves Light and Medium Oil 2008

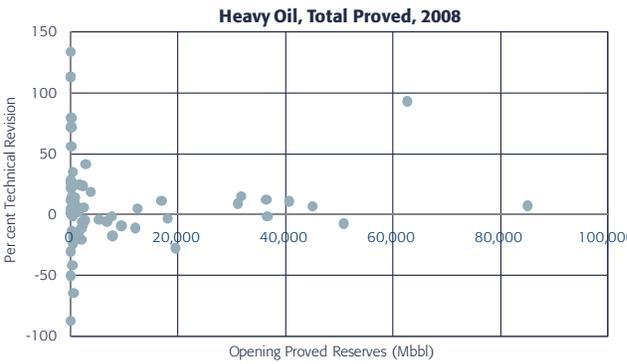


Figure 3a. Technical Revisions, Proved Reserves Heavy Oil 2008

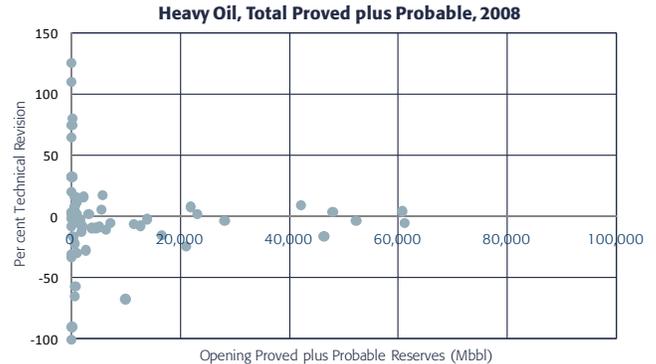


Figure 3b. Technical Revisions, Proved + Probable Reserves Heavy Oil 2008

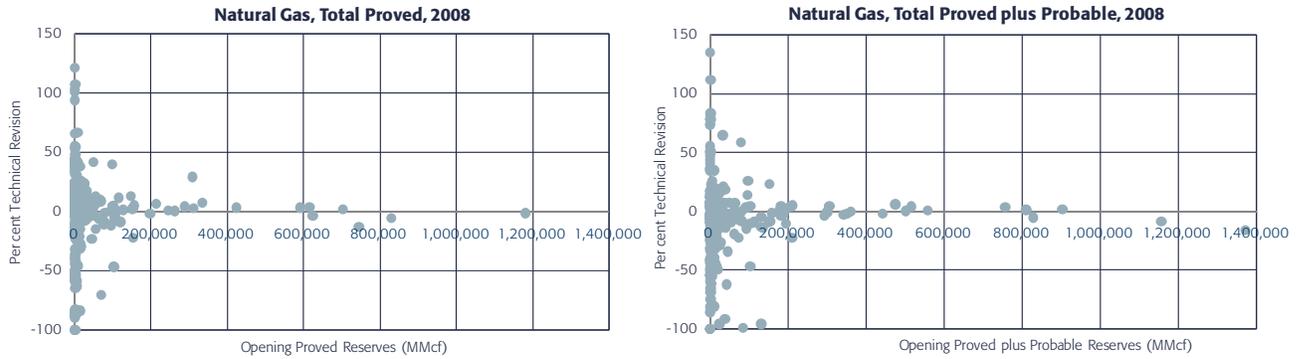


Figure 4a. Technical Revisions, Proved Reserves Natural Gas 2008

Figure 4b. Technical Revisions, Proved + Probable Reserves Natural Gas 2008

### 6.3 Conclusions

The first year of NI 51-101 reporting was a year of adjustment and should be excluded from the conclusions that can be drawn from this data. General conclusions for the years 2004 – 2008:

- For heavy oil, the technical revisions in proved and proved + probable reserves are in agreement with the criteria described above;
- For light & medium oil and for natural gas, technical revisions to proved reserves are close to zero and for proved + probable reserves are negative. This suggests that there is a slight tendency to overestimate reserves of these product types; and
- For all product types, the variations from the criteria are small, and appear to be within the limits of measurement that may be expected.

From a securities disclosure point of view, we do not consider the possible slight overestimation of light & medium oil and of natural gas for the total sample of RIs to be material, and we consider that the reserves estimates reported in NI 51-101 filings provide an investor with a reasonable assessment of oil and gas assets for the industry in general. However, this conclusion does not necessarily apply to individual RIs with major variance outside usual expectations.

### 6.4 Further Analysis

The establishment of a time series of technical revision data provides us with an ability to examine trends over this time. It will be possible to examine trends and variance in individual evaluator's and individual RI's estimates, although little of this type of analysis has been done to date. An analysis of this type will assist us in selecting RIs for continuous disclosure review.

## **7. Upcoming Amendments to NI 51-101**

On December 18, 2009, the CSA published a Notice of Amendments to NI 51-101 for comment, with the comment period ending in March 2010. We received several comment letters and are currently preparing a formal response and incorporating some of the comments into the amendments. The planned implementation date is December 2010. Information on the amendments can be found on the website of the ASC and other provincial regulators, but in summary, the main amendments the CSA has proposed are:

- clarification of the signing requirements of Form 51-101F3;
- a restriction against adding across resource categories to prevent misleading disclosure;
- a requirement to disclose the proved and proved plus probable, or proved and probable reserves, estimate of reserves when a proved plus probable plus possible estimate is disclosed, and the low and best estimates of contingent resources and prospective resources when a high estimate is disclosed;
- the provision of additional guidance to assist RIs to make meaningful and understandable disclosure of their oil and gas disclosure other than reserves;
- the addition of a requirement in the annual disclosure to discuss the significant factors and uncertainties associated with the development and production of properties without reserves;
- replacement of the requirement to disseminate the annual filings of a RI with a news release when the filings are contained in an RI's Annual Information Form, with the requirement to file a Form 51-101F4 notice on SEDAR; and
- the removal of definitions, requirements and guidance related to financial reporting to limit the scope of NI 51-101 to evaluation and disclosure practices related to reserves and resources other than reserves.

## **8. International Policy Developments**

### **8.1 U.S. Securities Exchange Commission (SEC) Disclosure Rules**

In 2009, the U.S. SEC announced new oil and gas disclosure rules that took effect for registration statements filed on or after January 1, 2010, and for annual reports on forms 10-K or 20-F for fiscal years ending on or after December 31, 2009. The new rules incorporate elements of NI 51-101. They mandate the disclosure of proved reserves, and allow the disclosure of probable and possible volumes, but not of resources other than reserves.

### **8.2 International Financial Reporting Standards (IFRS) for the Extractive Industries**

The International Accounting Standards Board (IASB) has established the Research Project on Extractive Industries to develop an International Financial Reporting Standard for this industry that, when developed, will replace IFRS 6 Exploration for and Evaluation of Mineral Resources, which has a limited scope. The IASB issued a draft discussion paper in April 2010, for comment. NI 51-101 is not directly concerned with accounting issues, but there is some overlap, such as the use of consistent reserves definitions and

guidelines. The ASC Petroleum Department will review and comment on the IASB proposals in coordination with ASC's Chief Accountant's Office.

### **8.3 United Nations Framework Classification System for Fossil Energy and Mineral Resources (UNFC)**

A function of the United Nations Economic Commission for Europe (UNECE), of which Canada is a member, is the establishment of classification standards for oil and gas and for minerals. The UNECE established the Ad Hoc Group of Experts on the Harmonization of Fossil Energy and Mineral Resources Terminology (AHGE) to develop this classification. The group, which meets annually, has published the United Nations Framework Classification System for Fossil Energy and Mineral Resources (UNFC). Dr. David Elliott of the ASC is a member of the AHGE that developed this system.

At the last meeting of the AHGE, members reached agreement on the following recommendations:

- Issue of an updated and simplified version of the UNFC (UNFC-2009);
- The establishment of a Technical Advisory Committee to examine the need for, and if needed, the types of guidelines required; and
- A renewal of the mandate of the AHGE for five years, with a name change to The Experts Group on Resource Classification (EGRC).

The AHGE is an advisory body only, and the above recommendations were subsequently confirmed by the Committee on Sustainable Energy to which the AHGE (and its successor, the EGRC) reported, and its superior body, the Executive Committee of the United Nations Economic Commission for Europe.

The UNFC will refer to the Petroleum Resource Management System (PRMS), which is maintained by the Society of Petroleum Engineers, for the classification on oil and gas resources. NI 51-101 refers to the COGEH for classification and practice standards. Although the detailed practice guidelines for COGEH and PRMS are slightly different, COGEH uses the same classification system as PRMS, so will be consistent with UNFC.

## **9. Petroleum Advisory Committee (PAC)**

The ASC maintains contact and solicits feedback from the industry, through a Petroleum Advisory Committee with representatives from industry. Its mandate is to:

- review and provide advice and opinions on issues, trends and current developments relating to oil and gas reserves and resource evaluations;
- provide comment on current and proposed Alberta securities laws and regulatory policies in this area; and
- provide advice to commission staff on an informal basis.

Members serve a three-year term and the committee meets formally four times a year. Examples of issues that the PAC has discussed include:

- disclosure of drilling results in news releases;
- adding across resource classes;
- the calculation of finding and development costs;
- the calculation of unit values; and
- disclosure of sources of funding.

The PAC has been a valuable source of advice on oil and gas issues and will continue to meet on a regular basis.

## **10. Going Forward**

Activity on conventional and unconventional resources, such as bitumen and coalbed methane, continued, albeit at a slower pace than the previous year, but there was an increase in disclosure of shale gas activities. A lot of the unconventional activity is at a relatively early stage of development, before any reserves can be assigned. Although much of the disclosure on resources other than reserves is voluntary, it raises issues around the consistency of evaluation and disclosure practices. ASC staff are considering whether additional guidance is required, particularly on the assignment of contingent resources and on the use of analog information for material prepared for public disclosure.

We will continue our reviews of oil and gas disclosure under NI 51-101 including our reviews of news releases.

## 11. Contact Information

ASC staff are committed to doing their part in the maintenance and on-going improvement of a healthy capital market for the oil and gas industry. We will continue to proactively review the disclosure of oil and gas issuers, monitor current developments and maintain contact with the industry. In addition to our regulatory reviews, we receive numerous questions and inquiries from issuers and advisers. If you have any questions regarding this report or the ASC's rules related to disclosure of oil and gas activities, please contact us for further information.

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