Table of Contents

1. Introduction and Summary ................................................. 2
   1.1 General Observations .................................................... 2

2. The ASC Review Program ................................................. 4

3. Reporting and Reserves Deficiencies and Observations .......... 5
   3.1 Disclosure of Resources other than Reserves Data ............ 5
   3.2 Requirement to use NI 51-101 Disclosure Standards for Resource Classes ........ 5
   3.3 Disclosure of Undeveloped Reserves .............................. 6
   3.4 Disclosure on Significant Factors or Uncertainties .......... 6
   3.5 Other Oil and Gas Information ...................................... 7
   3.6 Reserves Reconciliation Categories ............................... 7
   3.7 Unit Value Calculation ................................................ 8
   3.8 Product Prices .......................................................... 8
   3.9 Breakdown of Reserves Data for Reporting .................... 9
   3.10 Companies with No Reserves ....................................... 9
   3.11 Use of 51-101F2 for Disclosure other than Annual Filing .... 9
   3.12 Unit Abbreviations and Notations ................................ 10
   3.13 Other Observations .................................................. 10

4. Analysis of Technical Revisions of Reserves ....................... 12

5. International Policy Developments ..................................... 15
   5.1 United Nations Framework Classification System for Fossil Energy and Mineral Resources (UNFCS) ......................... 15
   5.2 U.S. SEC Disclosure Rules .......................................... 15

6. Going Forward and Contact Information ............................. 16
1. **Introduction and Summary**

Alberta-based reporting issuers (RIs) listed on the TSX and TSX Venture Exchange have an aggregate market capitalization of approximately $360 billion, making the Alberta Securities Commission (ASC) the regulator of the second largest capital market in Canada. Forty per cent of those Alberta-based businesses are engaged in the oil and gas industry and represent 71 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 a leader in the regulation of oil and gas disclosure, the ASC maintains a specialized team of oil and gas experts. Each year, the ASC oil and gas team reviews the disclosure of various energy companies participating in Alberta’s capital market and prepares a report summarizing its observations and findings. The report is intended to provide guidance to issuers regarding areas where the ASC notes recurring deficiencies with the goal of improving disclosure of oil and gas activities. Clear and timely disclosure is essential for a fair and efficient capital market in Alberta.

This 2008 Oil and Gas Review Report (2008 Report) is the fifth 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 related forms, 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). Reports for previous years can be found on the ASC website at www.albertasecurities.com.

This report is based on observations from the ASC oil and gas team’s review of the reserve information, required annual disclosures and news releases of Alberta’s oil and gas RIs.

1.1 **General Observations**

Similar to our finding in 2007, there continues to be an improvement in the general quality of disclosure in the annual report on reserves data as required under NI 51-101.

The disclosure of resources other than reserves, especially discovered petroleum initially-in-place, contingent resources and prospective resources, increased during the year, particularly in news releases. Although we also noted a general improvement in this type of oil and gas disclosure compared to past years, a common deficiency continues to be the misuse of terminology.
Some instances of potentially misleading or incomplete disclosure that we observed during the year included the following:

- Disclosure of high case estimates (e.g., proved + probable + possible reserves or high case contingent or prospective resources) were provided without the corresponding low and best estimates. High case estimates are optimistic estimates and, when disclosed in isolation, can be misleading as the high case estimate is greater, and often much greater, than a likely outcome.

- Different resource classes (e.g., reserves, contingent and prospective resources) were added together and reported on an aggregate basis. Each resource class has different risk characteristics and when the resource classes are disclosed without also disclosing the associated risks, it is likely to be misleading. For example, in the case of prospective resources, a risk characteristic is that it has not been “discovered”. The likelihood that the sum of the different resource classes will actually be achieved is statistically low; therefore, the disclosure of this sum is likely to be misleading without appropriate explanation. The likelihood of the disclosure being misleading increases when it is the sum of high case estimates from a number of resources that are being reported.

- When reporting contingent resources, RIs must disclose the contingencies that are specific to their activities. The description of these contingencies was generally poor and often of a general nature. More attention to relevant disclosure is warranted. Although drilling and testing are prerequisites to classification as a contingent resource, they were sometimes incorrectly cited as contingencies.

CSA Staff Notice 51-327 *Oil and Gas Disclosure: Resources other than Reserves* (51-327), described in further detail in Section 3.1 of this report, was issued on February 27, 2009 in response to these kinds of issues.
2. 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 in annual filings and prospectuses. In addition, any other document filed with the ASC or other public disclosure of oil and gas activities, whether 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. Studies on specific issues of a technical nature may also be conducted.

There are three levels of review: Statutory filing review, Compliance review and Technical review.

- **Statutory filing review**

  This preliminary review determines whether the required annual disclosure has been filed without the ASC conducting a detailed examination of the content. 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 regarding reserves (i.e., proved and proved + probable reserves). Although we do not require other resources, including possible reserves and contingent and prospective resources to be disclosed, if they are voluntarily disclosed, NI 51-101 prescribes the manner in which the voluntary disclosure must be made. From a compliance review, the ASC ascertains whether the required disclosure is present and whether or not it complies with NI 51-101 or is misleading.

  We began comprehensive compliance reviews of annual disclosure under NI 51-101 in 2006. In 2007, the ASC expanded compliance reviews to include reviews of news releases.

- **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.

  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 Canadian Oil and Gas Evaluation Handbook (COGEH).
3. Reporting and Reserves Deficiencies and Observations

Our observations from this year’s reviews are summarized in the following subsections.

3.1 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 not required under NI 51-101. Although disclosure of other resources is optional, ASC staff have seen a significant increase in the disclosure of possible reserves and other resource classes, especially for unconventional resources.

The disclosure of resources other than reserves data must be consistent with all applicable securities laws including, but not limited to, the principles and specific requirements and restrictions of NI 51-101. In addition to the specific requirements of NI 51-101, an RI is subject to the general prohibition against misleading and untrue statements, and omitting to state any fact that would prevent a statement from being misleading. It may be misleading for RIs to disclose resources other than reserves data without providing appropriate context to that data.

As mentioned above, CSA Notice 51-327 issued on February 27, 2009, provides guidance on recurring issues that we have found in our review of RIs’ disclosures of resources other than reserves data.

The Notice 51-327 provides guidance specifically on:

- disclosure of stand-alone possible reserves;
- disclosure of high and low case category estimates;
- adding together resources of different classes (e.g., reserves, contingent resources, prospective resources);
- partially risked prospective resources;
- use of the term “best estimate”;
- technology under development for contingent resources;
- classification to the most specific class and category of resource; and
- criteria for classification of unconventional hydrocarbons as discovered petroleum initially-in-place.

3.2 Requirement to use NI 51-101 Disclosure Standards for Resource Classes

RIs making disclosure of oil and gas resources under NI 51-101 are required to use the categories and terminology set out in Section 5 of COGEH, Volume 1. While the required terminology is almost invariably used in annual disclosure, it is common to see non-standard terminology used in other disclosure such as news releases. This tends to be of two types:
• Terminology that is in common use within the industry but which is not always used in a consistent manner. For instance, the widely used term “original oil initially in-place” (OOIP), does not indicate whether the volumes concerned are discovered or undiscovered; and
• Non-standard terms, such as “potential reserves” and “in-place reserves.”

RIs are not permitted to make public disclosure using such terms, even if provided on a voluntary basis. They must use the categories and terminology required by NI 51-101. Failure to do so could result in compliance action being taken, such as being required to provide corrected disclosure. Further, particularly if the use of such terms is misleading, the RI and its management could be exposed to enforcement action.

3.3 Disclosure of Undeveloped Reserves

As a general rule, one of the requirements for resources to be classified as proved and probable undeveloped reserves (PUDs) is an expectation that they will be developed promptly. ASC staff have noted a significant number of reserve write-downs arising as a result of these types of resources remaining undeveloped for several years and subsequently being removed or reclassified. This raises concerns regarding whether the initial classification of the resource as a PUD was appropriate.

NI 51-101 requires disclosure of when proved and probable undeveloped reserves are initially booked and a discussion of the current development plans (Item 5.1 51-101F1). ASC staff understand that there are circumstances where a resource may have been properly characterized as a PUD, but for valid business reasons there has been a lack of development. In such cases, there is no requirement for reclassification or removal despite the fact that the PUD remains undeveloped for a lengthy period of time provided that there is still an expectation that it will be developed promptly. The objective of the disclosure is to ensure that investors receive meaningful information on an RI’s activities regarding the development of PUDs.

Unfortunately, this disclosure is often incorrect or incomplete, and the PUD development plans are “boilerplate.” Such disclosure is inadequate as there is a specific requirement for an explanation in the annual disclosure for a discussion of development plans, including timing. With boilerplate disclosure, ASC staff typically require further explanation.

3.4 Disclosure on Significant Factors or Uncertainties

NI 51-101 requires identification and discussion of significant factors or uncertainties that affect reserves data (Item 5.2 51-101F1). This disclosure is required to provide meaningful information but it is generally poor and consists of boilerplate. The disclosure should focus on, and be tailored to, the specific significant factors and uncertainties applicable to the RI.
3.5 Other Oil and Gas Information

Part 6 of 51-101F1 requires the disclosure of a variety of non-reserves data information. The prescribed disclosure is required of all RIs engaged in oil and gas activities. Part 6 requires disclosure of the following:

- Important properties, plants, facilities and installations;
- Numbers of producing and non-producing oil and gas wells;
- Properties without reserves;
- Forward contracts;
- Abandonment and reclamation costs;
- Tax horizon;
- Costs incurred for acquisition, exploration and development, and their tax treatment;
- Exploration and development activities; and
- Production estimates and history.

As NI 51-101 only requires disclosure of material information, the extent of disclosure on these items will be a function of their importance to the RI’s activities. For RIs that do not have proved or proved + probable reserves to report, disclosure of properties without reserves can often be material. ASC staff have often found that this Part 6 disclosure is often poor and does not provide meaningful information.

3.6 Reserves Reconciliation Categories

Item 4.1 of 51-101F1 requires an RI to provide a reconciliation of changes in gross reserves for prescribed product types between the start and the end of the reporting period. Categories of change are prescribed in the form.

Issues that have arisen around this disclosure are described below:

- A reconciliation is required for the separate product types prescribed in Item 4.1.2(b) of 51-101F1 (including for example, light and medium crude oil (combined), heavy oil, bitumen, hydrates, associated gas and non-associated gas) and the product types should not be combined (e.g., light and medium oil plus heavy oil) unless the effect of combining them is not material;

- A reconciliation must be carried out for each of the categories prescribed in Item 4.1.2(c) of 51-101F1. For example, RIs are required to identify and disclose in specified categories such as discoveries, acquisitions and dispositions, technical revisions, production and economic factors. New categories should not be introduced and categories required to be shown separately by that section should not be combined;
• Technical revisions can only be made to volumes that are contained in the opening balance. It is not possible to have technical revisions for a year in which the opening balance is zero; and

• If an acquisition is made during the year, the volume reported should be the estimate made at the end of the year plus production since the date of acquisition. If there is a difference between that volume and the estimate at the time of acquisition, the RI should consider whether it is necessary to include a comment in a footnote to the table.

In addition to the required reconciliation of gross reserves, RIs may also make voluntary disclosure of a reconciliation of net reserves. As always, that disclosure must not be misleading.

3.7 Unit Value Calculation

Amendments to NI 51-101 that came into force at the end of 2007 included a requirement (Item 2.1.2 of 51-101F1) for the disclosure of unit values. 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. However, ASC staff have noted that this requirement has caused difficulties for cost allocation when a well yields more than one product type, and the alternative of presenting a unit cost/barrel of oil equivalent for the production group does not always result in meaningful information.

ASC staff will be reviewing unit value disclosure and may propose the issuance of a clarification notice or amendments to NI 51-101. In the interim, in order to provide appropriate disclosure, RIs should consider providing an explanatory statement when the calculation of a unit value is problematic.

3.8 Product Prices

Major changes in product prices occurred in 2008. Guidance on forecast prices is provided in Subsection 1.1(2) of Companion Policy 51-101CP Standards of Disclosure for Oil and Gas Activities (51-101CP), and includes the expectation that future prices should not fall outside the range of forecasts of comparable prices by major independent qualified reserves evaluators or auditors, or by other reputable sources appropriate to the evaluation.

Part 3 of 51-101F1 describes the information on prices that must be disclosed in annual disclosure. In general, the quality of price disclosure could be improved by following the specified requirements. Consequently, ASC staff may conduct an issue-oriented review of price disclosure in the next year.

CSA Staff Notice 51-315 Guidance Regarding the Determination of Constant Prices for Bitumen Reserves under National Instrument 51-101 Standards of Disclosure for Oil and Gas Activities (51-315) was issued in January 2005 when disclosure of a constant price case was mandatory under NI 51-101 and there was neither a posted price for bitumen nor a well developed market. Since that time, amendments to NI 51-101 removed the mandatory requirement for a constant price case disclosure although it may still be provided as supplementary information. Also, a market in bitumen
has developed, including the establishment of a benchmark West Canadian Select Blend and several major evaluators publish their forecasts of bitumen prices. Accordingly, the guidance in 51-315 may no longer be appropriate. Evaluations that rely on 51-315 for bitumen pricing rather than currently available information may be misleading. ASC staff proposes to withdraw 51-315 in 2009.

3.9 Breakdown of Reserves Data for Reporting

51-101F1 requires reserves to be disclosed by country and in the aggregate, as gross and net volumes. Further, net present values of the reserves are to be disclosed by product type (Items 2.1.1 and 2.1.2 of 51-101F1). Undiscounted values must be reported for production groups (Item 2.1.3 of 51-101F1). More attention needs to be paid to this requirement as the disclosure is frequently made incorrectly. For example, the reserves may not be correctly split by country, or by gross or net volumes. Sometimes there is also confusion between product types and production groups.

Product types and production groups are defined in NI 51-101. A simple description is that a production group is what is produced and a product type is what is sold. In many cases, they are the same, but a well may yield more than one product type, for instance the production group may include the product types: light and medium oil, solution gas and natural gas liquids. Costs tend to be associated with the production group, while revenue is associated with the product type.

3.10 Companies with No Reserves

An RI that is engaged in oil and gas activities but has no reserves is still required to provide annual NI 51-101 disclosure. Most of the prescribed disclosure relevant to the RI will be in Part 6 of 51-101F1, and will be limited in scope. An RI with no reserves that has not engaged an independent qualified reserves evaluator or auditor is not required to submit a 51-101F2. 51-101F3 is required, but should be modified to reflect the fact that no reserves data is being reported. An example of a suitably modified 51-101F3 is available from the ASC upon request. RIs should not continue to disclose material volumes of resources other than reserves for several years without some disclosure of the plan for their exploitation. The absence of such a discussion may be misleading and is likely to attract further review.

3.11 Use of 51-101F2 for Disclosure other than Annual Filing

RIs occasionally use 51-101F2 for disclosure other than that required by annual disclosure obligations. This form is for reporting on reserves data (i.e., only proved and probable reserves) but we have seen increasing use of it in annual disclosure and elsewhere, for reporting on other classes of resource, such as discovered and undiscovered petroleum initially-in-place or contingent and prospective resources. RIs may format disclosure of such resources in a manner similar to that required by 51-101F2, but ASC staff believe it can be misleading if the disclosure is indicated as being a 51-101F2. In order to avoid the disclosure from being misleading, the RI should appropriately modify the content and change the heading to describe the resource class being reported.
3.12 Unit Abbreviations and Notations

Standard notation and abbreviations are essential to the clear disclosure of numerical data; however, inconsistent and incorrect usage continues to be common. Technical reports are generally correct in their usage of unit abbreviations and notations but errors appear to occur during the preparation of the disclosure documents. The required notation for oil and gas reserves and resource disclosure is based on long-established international standards that can be found in Appendices B and C of COGEH, Volume 1. It should be noted that usage is not the same in the imperial and metric systems, for instance:

- in the imperial system, M indicates $10^3$, that is 1,000;
- in the metric system, M indicates $10^6$, that is 1,000,000.

Oilfield units, such as barrels, should use prefixes from the imperial system (e.g., Mbbls not mbbls - the prefix “m” stands for $10^{-3}$ in the metric system but is not defined in the imperial system).

Inconsistent usage of the notation for monetary amounts can be misleading. Although there does not appear to be a formal international standard for indicating monetary amounts, common practice is to use the imperial system, as follows:

- M indicates $10^3$, that is 1,000;
- MM indicates $10^6$, that is 1,000,000;

It is recommended that this common practice be followed when making disclosure for regulatory purposes. In conformity with the usage in other recognized standards, the “M”s should be used as a prefix, that is “M$”, not “$M” or “$ M”.

When presenting monetary amounts in a table, it is preferable that a prefix appear in the table heading, rather than in the body. A prefix that is used in the heading of a table should not be duplicated in the body of the table (e.g., MM$ in the heading and M$ in the body suggesting amounts of MMM$).

The use of Canadian dollars should be standard. If any disclosure is made using other currencies, it should be clearly stated wherever this occurs.

3.13 Other Observations

(a) Unconventional oil and gas activities

As mentioned, the last few years have seen increasing exploration and development of unconventional hydrocarbon accumulations such as coal bed methane, bitumen and, in the last year particularly, shale gas. The nature of an accumulation is controlled to a major degree by the manner in which the hydrocarbons are trapped. Hydrodynamic forces play a dominant role for conventional accumulations but have little or no role in unconventional accumulations,
in which the hydrocarbons are trapped by a variety of mechanisms. This difference has two major implications:

(i) Unconventional accumulations tend to be controlled by regional, rather than local, geology. As a result, they often cover large areas and have ill-defined boundaries;

(ii) Primary flow is uncommon in unconventional accumulations and extensive testing is often needed to establish productive capability. Development often requires techniques such as drilling horizontal wells and fracturing to a much greater extent than is usual for conventional reservoirs. In the case of bitumen, much of the current production comes from mining operations. These differences lead to differences in evaluation practices and disclosure requirements that continue to evolve to meet the changes in the Canada oil and gas industry. Historically, the assets of an oil and gas company have resided mainly in its reserves, but largely as a consequence of the growth of activity on unconventional resources, an increasing proportion of these assets may be held in resources other than reserves. We have seen a continued increase in the disclosure of other resource classes, such as contingent and prospective resources.

(b) Use of constant pricing

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. The purpose of the supplementary constant price case is to allow RIs to be compared to issuers that file under the U.S. Securities and Exchange Commission (SEC) rules, which currently require disclosure of reserves on the basis of prices and costs on the last day of the financial year. Since making the constant price case optional, our review of annual disclosure indicated that only a handful of RIs made use of the option to report their reserves under a constant price scenario. Recent revisions to the SEC oil and gas disclosure rules require the use of a constant price average that is the price on the first day of the month over the previous year. ASC staff are currently reviewing whether it would be appropriate to recommend changing the constant price case requirements in 51-101F1 to mirror those in the SEC oil and gas disclosure rules.
4. Analysis of Technical Revisions of Reserves

Technical revisions are one of the categories required to be reported under Part 4 of 51-101F1, as part of the reconciliation of previous and current financial year-end estimates. Technical revisions are an indicator of the quality of the reserves estimates. As indicated in prior reports, ASC staff continue to review the disclosure relating to these technical revisions. Provided that RIs have employed appropriate evaluation methodologies, the technical revisions generally expected on various reserves categories are as follows:

<table>
<thead>
<tr>
<th>Reserve Category</th>
<th>Expected Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proved</td>
<td>Positive</td>
</tr>
<tr>
<td>Proved + probable</td>
<td>Close to zero</td>
</tr>
<tr>
<td>Proved + probable + possible</td>
<td>Negative</td>
</tr>
</tbody>
</table>

51-101F1 disclosure provides information on the first two of these reserves categories. Statistical theory indicates that 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.

The overall reported revisions are summarized in Table 1 below for the years 2003 (2004 Consolidated Oil and Gas report) to 2007 (this Report), and are shown in the graphs in Figures 1 and 2 below. The technical revisions in this table and the graphs were calculated by dividing the totals for all RIs of the technical revisions by the reserves volumes and do not reflect individual RI’s performance. Minor differences in the values reported in previous years are the result of corrections resulting from an ongoing data quality control program, including small changes in the numbers of RIs in the analysis.

The significant negative revisions in the 2003 data are probably due to the transition to the newly adopted NI 51-101 rule in that year and are not considered to be meaningful for an analysis. The following four years, from 2004 to 2007, are a limited data set on which to draw any firm conclusions, but some general observations can be made.

- **Light and medium oil** - Technical revisions for proved reserves are positive, and close to zero for proved + probable reserves, although the -4.9 per cent revision in 2007 is perhaps on the high side of what might be expected.

- **Heavy oil** - This shows a similar pattern to light and medium oil, but with higher variance.

- **Natural gas** - Technical revisions for proved reserves are close to zero and average -2 per cent for proved + probable reserves, suggesting that there is a slight positive bias in the estimation of natural gas reserves.
In all cases, the variance is within reasonable limits, following on an initial year of adjustment. This variance suggests that on a collective basis, reserves are generally being estimated in a reasonable manner.

The analysis discussed above is for all reporting oil and gas issuers in Canada. The ASC annual oil and gas reports from 2004 to 2006 contained graphs showing the percentage technical revisions in reserves plotted against the proved, and the proved + probable reserves volumes, in which each point is an RI. As would be expected, these graphs show greater variance for RIs with smaller volumes of reserves than for RIs with large reserves. For example, a technical revision of ±25 per cent in proved + probable reserves for an RI with a small volume of reserves would not be as statistically significant as compared to that level of change for an issuer with a large volume of reserves. RIs falling outside reasonable limits for their volume of reserves on these graphs are likely to be selected for continuous disclosure review. Graphs of this information may be found in the ASC Oil and Gas Review reports for 2004, 2005 and 2006, and are available on the ASC website. Because the general pattern for the 2007 data is the same as in previous years, these graphs have not been included in this report.

<table>
<thead>
<tr>
<th>2003-2007</th>
<th>Light &amp; Medium Oil</th>
<th>Heavy Oil</th>
<th>Natural Gas</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of Reporting Issuers</td>
<td>2003</td>
<td>162</td>
<td>51</td>
</tr>
<tr>
<td></td>
<td>2004</td>
<td>198</td>
<td>65</td>
</tr>
<tr>
<td></td>
<td>2005</td>
<td>234</td>
<td>79</td>
</tr>
<tr>
<td></td>
<td>2006</td>
<td>239</td>
<td>78</td>
</tr>
<tr>
<td></td>
<td>2007</td>
<td>225</td>
<td>69</td>
</tr>
</tbody>
</table>

| Proved % Technical Revisions | 2003 | (4.5) | (16.2) | (5.9) |
| | 2004 | 5.2 | 4.7 | (0.5) |
| | 2005 | 3.8 | 1.1 | 0.5 |
| | 2006 | 4.4 | 7.1 | 0.6 |
| | 2007 | 4.5 | 5.7 | 1.0 |

| Proved + Probable % Technical Revisions | 2003 | 1.2 | (14.8) | (4.5) |
| | 2004 | 1.1 | (0.9) | (2.0) |
| | 2005 | (0.9) | (2.5) | (1.2) |
| | 2006 | 2.0 | 4.3 | (2.2) |
| | 2007 | (4.9) | 5.3 | (3.5) |

Table 1. Technical revisions. Number of RIs and technical revision as a percentage of reserves.
Figure 1. Technical revisions in proved reserves as a percentage of proved reserves.

Figure 2. Technical revisions in proved + probable reserves as a percentage of proved + probable reserves.
5. **International Policy Developments**

5.1 **United Nations Framework Classification System for Fossil Energy and Mineral Resources (UNFCS)**

The UNFCS is a classification system for oil, gas and other minerals. It provides a means of comparing different classification systems, but ASC staff do not anticipate that it will be used for securities law disclosure in the near future. The ASC continues to be represented on the Ad Hoc Group of Experts on Harmonization of Fossil Energy and Mineral Resources Terminology. In the last year, the group has been working to simplify the descriptions of the various resource classes and their presentation. Future work involves reviewing the use of the system for four types of user: Business Process Needs, Government Resource Management Needs, Energy Studies and Financial Reporting Needs.

5.2 **U.S. SEC Disclosure Rules**

In 2008, the SEC carried out a review of its oil and gas disclosure legislation. ASC staff are pleased that the SEC rule has, in many respects, converged with NI 51-101. As noted above, the final SEC rule that was published December 31, 2008 continues to make disclosure of proved reserves mandatory but now allows probable and possible reserves to be disclosed. It also requires reserves to be valued at a constant price, which is a 12-month average of the prices on the first day of each month for the previous year. NI 51-101 currently allows disclosure using a constant price on the last day of the year. As mentioned above, ASC staff are considering the impact of the SEC’s changes including whether it would be appropriate to recommend amendments to NI 51-101 to permit the constant price option to be presented in a manner that conforms to the new SEC rules.
6. Going Forward and Contact Information

The increased activity noted in prior years on unconventional resources, such as bitumen, coalbed methane, shale gas and shale oil, has continued. Much of this activity is occurring at a relatively early stage in the development and classification of the resources, before any reserves can be assigned. Consequently the disclosure being provided of volumes or values is voluntary. However, given the significant level of activity in respect of these resources, they will continue to be an area of focus for ASC staff. In addition, we expect that there will be a continued emphasis on the review of news releases. Some of the issues that we have identified in our review, in particular those arising from disclosure of unconventional resources, are under consideration and could result in ASC staff recommending amendments to NI 51-101.

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.

Alberta Securities Commission
300 - 5th Avenue SW
Calgary AB T2P 3C4
www.albertasecurities.com

Dr. David C. Elliott, P. Geol., Chief Petroleum Advisor
(403) 297-4008
david.elliott@asc.ca

Blaine Young, Associate Director
(403) 297-4220
blaine.young@asc.ca

Michael Jackson, Legal Counsel
(403) 355-3893
michael.jackson@asc.ca