

# ASC Breakfast Seminar: Oil & Gas Compliance

January 7<sup>th</sup> 2009

*David Elliott, Chief Petroleum Advisor*

# OUTLINE

- Securities Regulation
- Evaluation, Classification, Disclosure
- NI 51-101
- ASC Review Program:
  - Annual Filings
  - News Releases
  - Continuous Disclosures
  - Summary of Results
- New Issues
- International Activities

# OIL AND GAS MARKET IN CANADA

- About 50% of the world's public oil and gas companies are listed on Canadian exchanges

- Number of listed oil and gas companies:

|   |     |
|---|-----|
| Canadian                                  |     |
| TSX/TSXV <sup>1</sup>                     | 424 |
| CNQ <sup>2</sup>                          | 16  |
| US <sup>1</sup> (NYSE, AMEX) <sup>3</sup> | 183 |
| LSE/AIM <sup>1</sup>                      | 140 |

1. TSX website 31 Dec. 2007

2. CNO website 30 Dec. 2008

3. Plus a few on NasDaq

# NI 51-101 FILERS: PRIME JURISDICTION

485 Filers at December 31, 2008

| IN               | PERCENT |
|------------------|---------|
| ALBERTA          | 66      |
| BRITISH COLUMBIA | 22      |
| ONTARIO          | 9       |
| OTHER            | 3       |

# SECURITIES REGULATION

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- Protect the integrity of the capital market. Confidence in the ability to:
  - Raise funds
  - Trade securities
- Balance goals of:
  - Investor protection: relevant, timely, and reliable information
  - Access to capital: compliance costs not too burdensome

# BASIC PRINCIPLES OF SECURITIES DISCLOSURE

- Full
- True
- Plain
  
- Not misleading
  - Even by omission
  
- Materiality
- Continuous Disclosure

# MATERIALITY

- Information that significantly affects or could reasonably be expected to affect the market price or value of the issuer's securities:
  - Quantitative, CICA Handbook Uses a 5% Criterion
  - Qualitative
- Must be disclosed
- Trading on undisclosed material information is insider trading

# CONTINUOUS DISCLOSURE REGIME (NI 51-102)

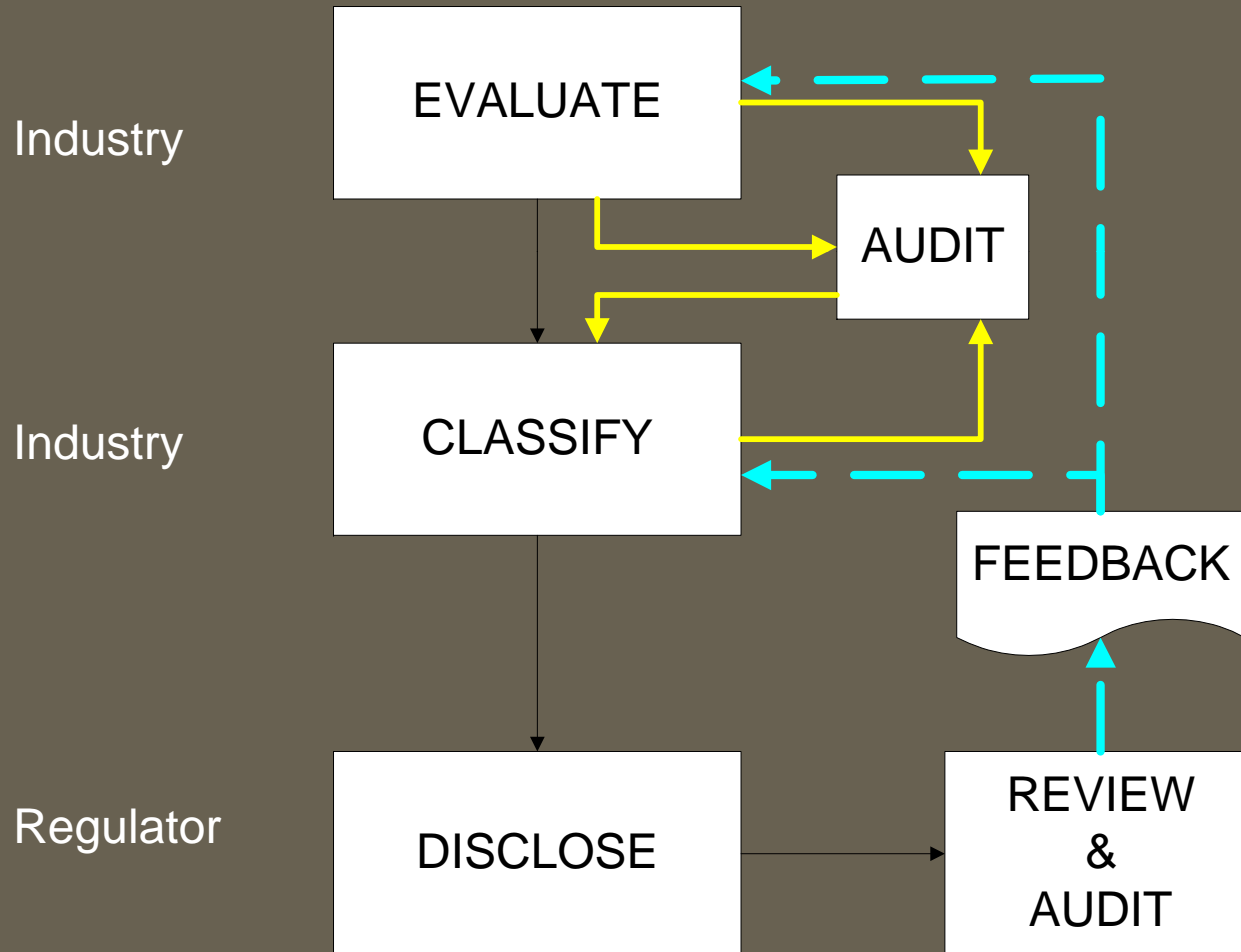
- Annual Financial Statements
- Interim Financial Statements (Quarterly)
- Management Discussion and Analysis
- Certifications
- Annual Information Forms
- Annual Oil and Gas Disclosure (NI 51-101)
- Information Circulars (e.g. Annual Meeting)
- Material Changes

# EXTRACTIVE INDUSTRIES LEGISLATION

- Large body of general securities legislation
- Because of the importance to the Canadian economy, special legislation for:
  - Oil and Gas: National Instrument 51-101
    - All Reporting Issuers
  - Mining: National Instrument 43-101
    - All Issuers

# EVALUATION CLASSIFICATION DISCLOSURE

# THE PROCESS



# EVALUATION (MEASUREMENT)

- Based on limited data:
  - Inherent uncertainty
  - Requires statistical concepts
- It's science, not art

*“Although this may seem a paradox, all science is dominated by the idea of approximation”* Bertrand Russell

It is not about being “right”, but about knowing how wrong you might be!

# UNCERTAINTY

$$\begin{aligned} \text{Estimated Reserves} = & \text{Actual Reserves} \\ & \pm \text{Measurement Error} \\ & \pm \text{Model Error} \\ & \pm \text{Bias} \end{aligned}$$

# UNCERTAINTY

- Actual Reserves                      Never known
- Measurement Error                  Unavoidable but manageable
- Model Error                              Depends on situation
- Bias:
  - Not always intentional
  - Different sources
  - Largely avoidable, but not always avoided

# CLASSIFICATION

- Provides a common language
- Key information:
  - Best Estimate of Volume:
    - Mean, P50, Proved + Probable
  - Associated Uncertainty:
    - High (P10, Proved + Probable + Possible)
    - Low (P90, Proved)
- Various systems (CIM, PRMS, UNFCS, etc.)

# EVALUATION AND CLASSIFICATION STANDARDS

- Canadian Oil and Gas Evaluation Handbook (COGEH)
- Volume 1, Reserves Definitions and Evaluation Practices and Procedures
- Volume 2. Detailed Guidelines, primarily for conventional oil and gas
- Volume 3. Coal bed methane, International properties, bitumen (in preparation)



# DISCLOSURE

- Directors and officers of the reporting issuer:
  - Responsible for proper disclosure
- Regulator:
  - Sets disclosure standards NI 51-101
  - Reviews and audits for compliance with:
    - Regulatory Disclosure Legislation
    - Industry Standards of Measurement and Classification
  - Does not “approve”

# NI 51-101 DISCLOSURE

# SCOPE OF NI 51-101

- Applies across Canada to reporting issuers:
  - Exchange listings: TSX, TSXV, CNQ
  - A BC rule brings certain OTC issuers within NI 51-101
  - Non-listed trades in Canada
- Does not apply to:
  - OTC, Pink & Green sheets, unless reporting issuer in other Canadian provinces

# NATIONAL INSTRUMENT 51-101 APPLIES TO

- “Oil and Gas Activities”:
  - Exploration (Inc. Land Purchases, Seismic, etc.)
  - Acquisition
  - Drilling, completion, production, construction
- Conventional and Unconventional Hydrocarbons:
  - Includes Bitumen (In-situ, Mined)
  - Synthetic Crude
  - Shale Gas and Oil
- All Disclosure:
  - Regulatory (annual) filings
  - Other disclosure: news releases, webcasts, etc.

- Requires independent evaluation
- Refers to Canadian Oil and Gas Evaluation Handbook (COGEH) for standards:
  - Resource definitions of CIM
  - Guidance prepared by Industry (SPEE)

# ASC REVIEW PROGRAM

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- Statutory Filing Review
- Compliance Review:
  - Annual filings
  - News releases, webcasts, etc.
- Technical Reviews/Audits of Reserves and Resources:
  - Prospectuses
  - Continuous Disclosure
  - Miscellaneous
- Communication:
  - Annual Report, papers, talks

# NUMBER OF REVIEWS

- Annual Filings 486
- News Releases 823
- Prospectuses 54
- Continuous Disclosure 115
- Other 10
- Miscellaneous Questions

# ANNUAL FILINGS

# NI 51-101 REPORTING

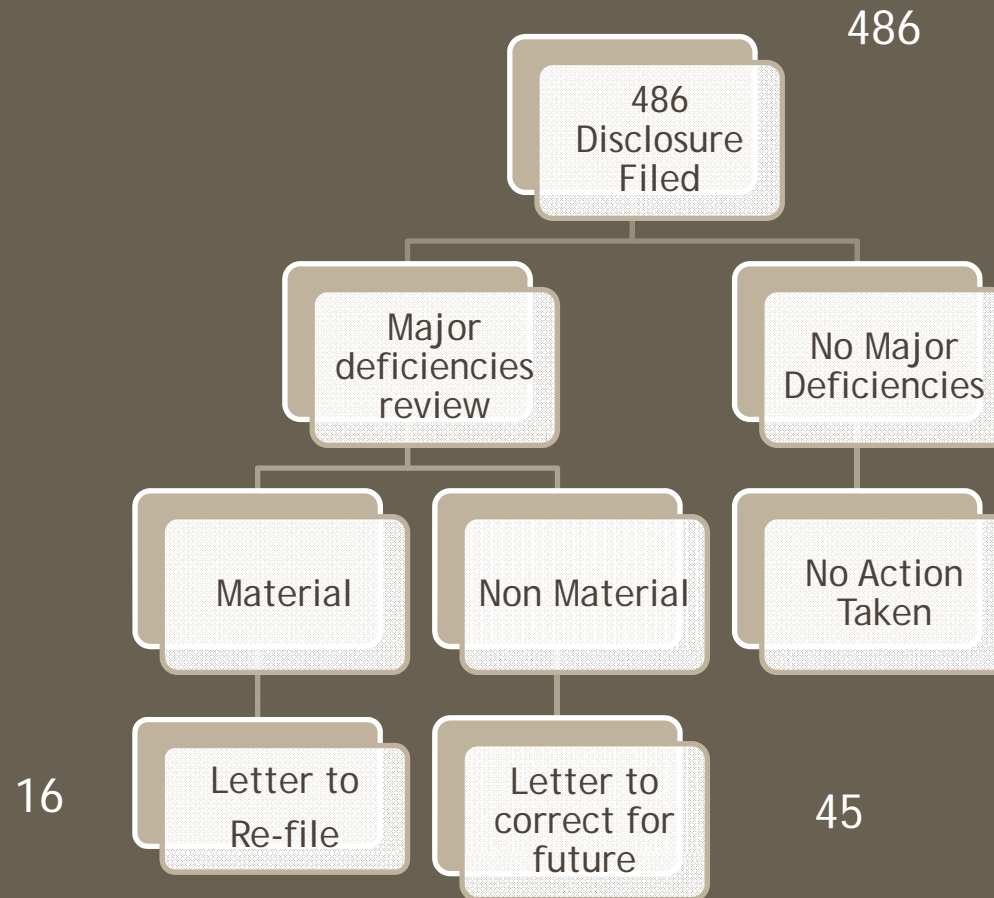
- Annual Filings:
  - F1 Statement of Reserves & Resources
  - F2 Evaluators or Auditors Report
  - F3 Management & Directors Report, Signed by:
    - Two senior officers
    - Two directors

# COMPLIANCE REVIEW: NUMBER OF ANNUAL FILINGS

## Method of filing NI 51-101 FORMS

|          |            |     |
|----------|------------|-----|
| AIF      | 141        | 29% |
| SEPARATE | 324        | 67% |
| US 10-K  | 16         | 3%  |
| US 20-F  | 5          | 1%  |
|          | <b>486</b> |     |

# REVIEW PROCESS



# FORM F1 FILING ISSUES

- More attention warranted for disclosure on sections:
  - 3.2 Forecast Price Assumptions
  - 5.1 Undeveloped reserves
  - 5.2 Significant factors and uncertainties
  - 6.8 Production estimates
  - 6.9 Production history

# ANNUAL FILINGS: RULES OF THUMB

1. Be familiar with 51-101
  - Seek legal and technical advice if needed
2. Consistency of information
3. Proportionate disclosure
  - e.g. if you have lots of PUDs, say more about them
4. Negative volumes or values need explanation
5. This is the main reference for potential investors, not just “fill in the form”. Examine for:
  - Meaningful disclosure
  - Misleading disclosure
6. Check arithmetic
7. Check unit prefixes
8. Proof-read!

# NEWS RELEASES

# COMPLIANCE REVIEW: NEWS RELEASES

- Significant trading can take place on news releases
- Second year of comprehensive review program for NI 51-101 compliance
- Includes news releases and corporate presentations
- News releases:
  - Reviewed 823
  - Issues 54

# NEWS RELEASES: MAIN ISSUES

- Non-compliant terminology:
  - Industry jargon, e.g., OOIP
  - Non-standard, e.g., Potential Reserves
- Contingent resources with boilerplate disclosure of contingencies
- Analogous information without discussion of relevance
- Failure to classify to lowest level
- Addition of different resource categories

# PROSPECTUSES

# SHORT FORM PROSPECTUS NI 44-101

- Allows reference to previous disclosure:
  - NI 51-101 filings, MD & A, etc.
  - Must apply to qualify
  - When qualified:
    - ASC to respond in three working days
    - Still may ask for reserves report
- 43 Short Form prospectuses in 2008:
  - Comments on 23 before final approval
  - Six requests for reserves report

# LONG FORM PROSPECTUS

- Must contain full information (Full, True, Plain)
- 10 Long Forms, all IPOs, in 2008
- Reserves report always requested
- Comments and requests for clarification are common

# CONTINUOUS DISCLOSURE

# CONTINUOUS DISCLOSURE

- 2008 Program:

|                          |           |
|--------------------------|-----------|
| – ASC Corporate Finance  | 80        |
| – BCSC Corporate Finance | 11        |
| – OSC Corporate Finance  | 3         |
| – ASC Oil and Gas Dept.  | <u>21</u> |
| Total                    | 115       |
- Main emphasis in 2008 on compliance
- Comments or questions on about half

# RESULTS OF REVIEWS

# MAIN DEFICIENCIES

- Many deficiencies could be avoided by:
  - Proof-reading (e.g., bbls of gas, negative volumes)
  - Checking arithmetic (e.g., columns of numbers don't add)
- Use of non-COGEH terminology
  - “Potential Reserves”
- Missing information
- Incorrect unit prefixes

# MAIN DEFICIENCIES

- Poor, often boilerplate, discussion of:
  - relevance of information
  - risks and uncertainties
  - contingencies
- Inconsistencies:
  - e.g., different values for the same parameter in different tables; within filings, website vs. filing
- Large Discovered/Undiscovered Petroleum Initially-In-Place without classification to lower level or discussion of recoverability.

# MAIN DEFICIENCIES: NEW ISSUES

- Addition of different types of estimates:
  - Reserves + Contingent resources + Prospective resource
  - Several High case or Proved estimates
- High case estimate disclosure only
- Unconventional resources

# TECHNICAL REVISIONS ANALYSIS

- A measure of uncertainty and bias
- Fifth year
- Used to select companies for technical audit



# RESERVES RECONCILIATION

- Opening balance
- Additions:
  - Discoveries
  - Improved recovery
  - Infill drilling
  - Acquisitions
- Reductions:
  - Dispositions
  - Production
- Fluctuations:
  - Economic factors
  - Technical revisions
- Closing Balance

# TECHNICAL REVISIONS

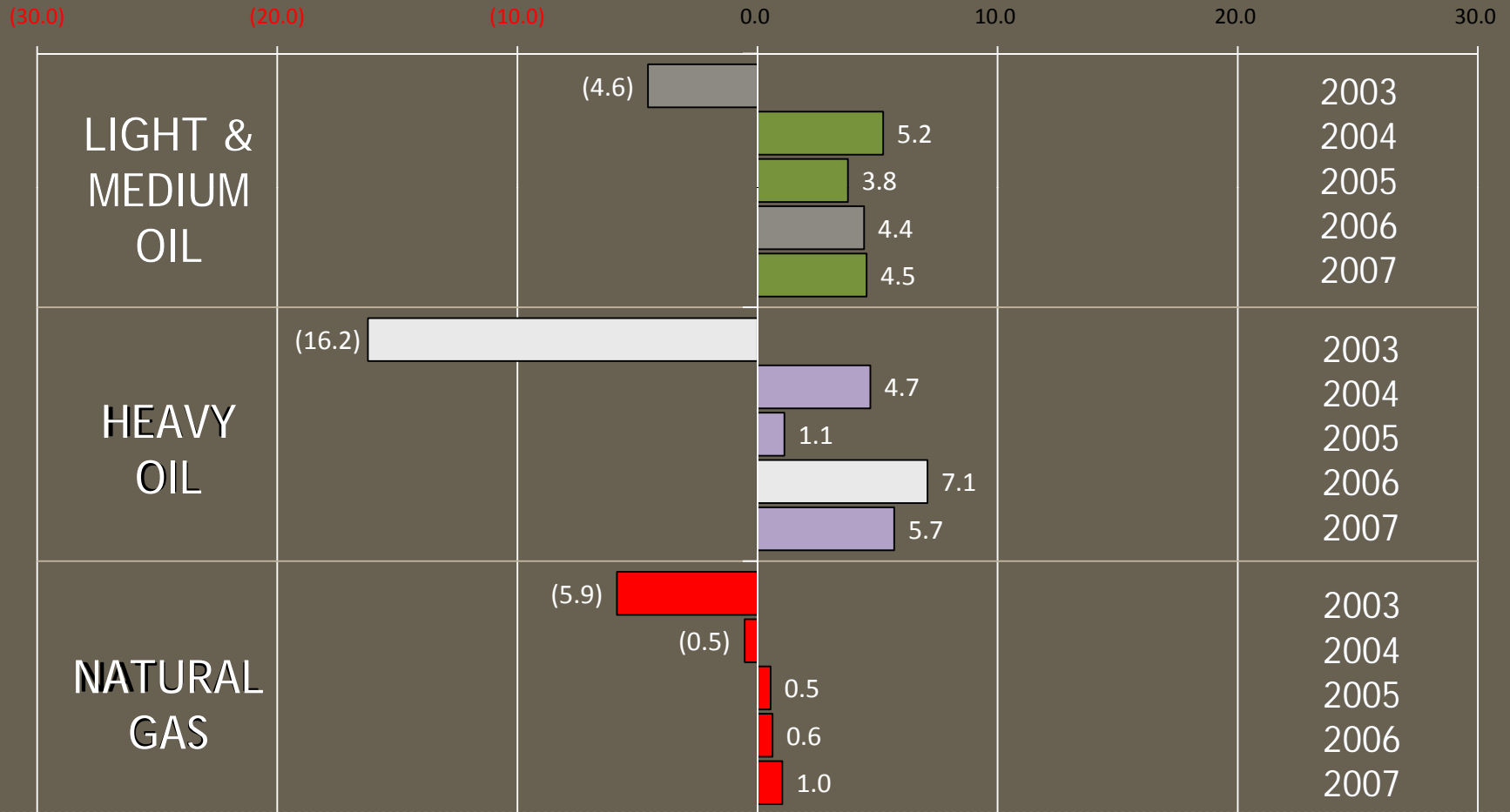
- For properties owned:
  - At the start, and
  - At the end of the Reconciliation Period
- As the result of new information:
  - e.g. production data
- Indicator of quality of the estimation

# TECHNICAL REVISIONS

- Proved Reserves:
  - Revisions should be mostly positive
  - Probability of negative revision approaches zero as the number of entities increases
- Proved + Probable Reserves:
  - Revisions should be close to zero
  - Probability of positive or negative revisions approaches zero as the number of entities increases

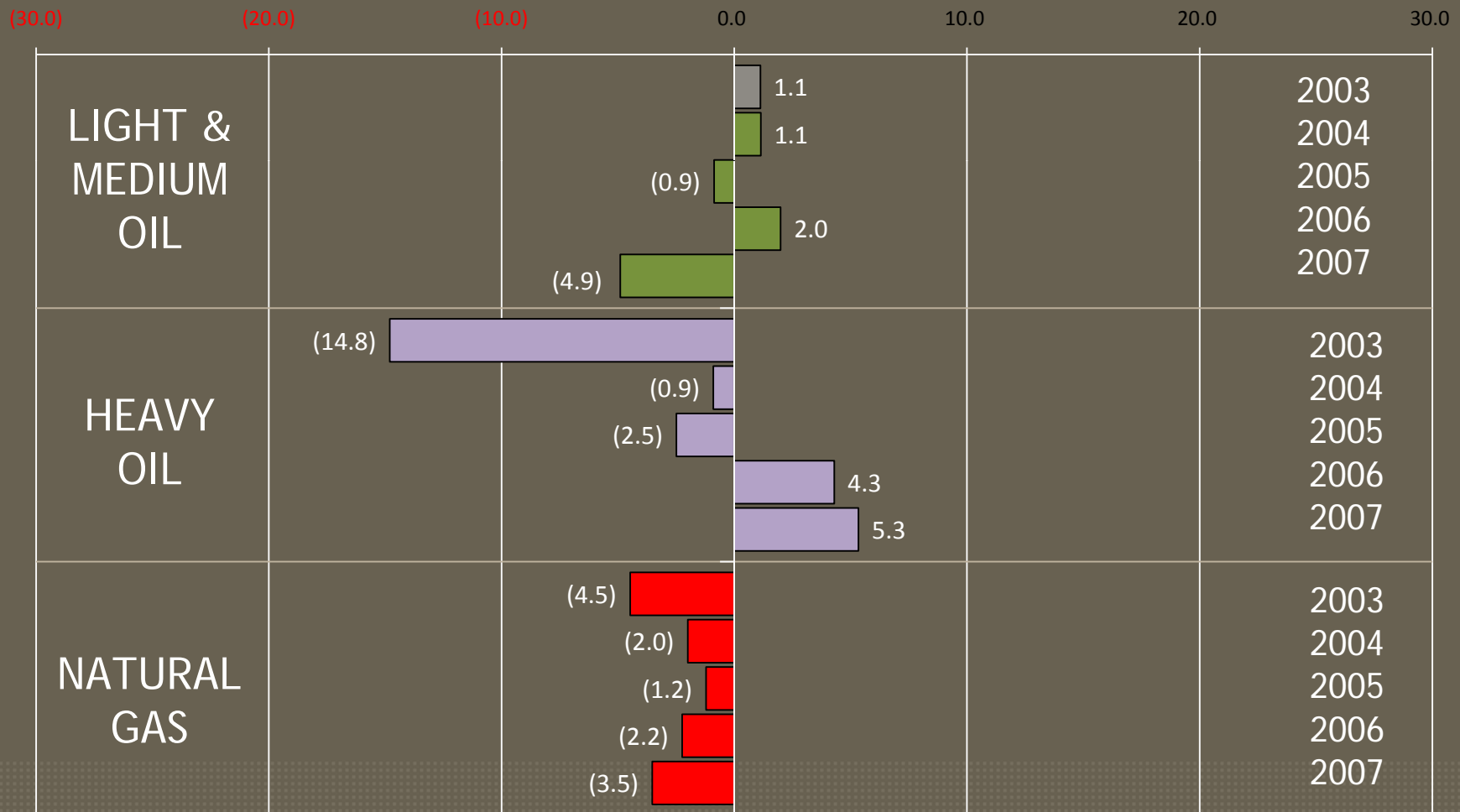
# TECHNICAL REVISIONS: PROVED RESERVES

## Percent Technical Revisions



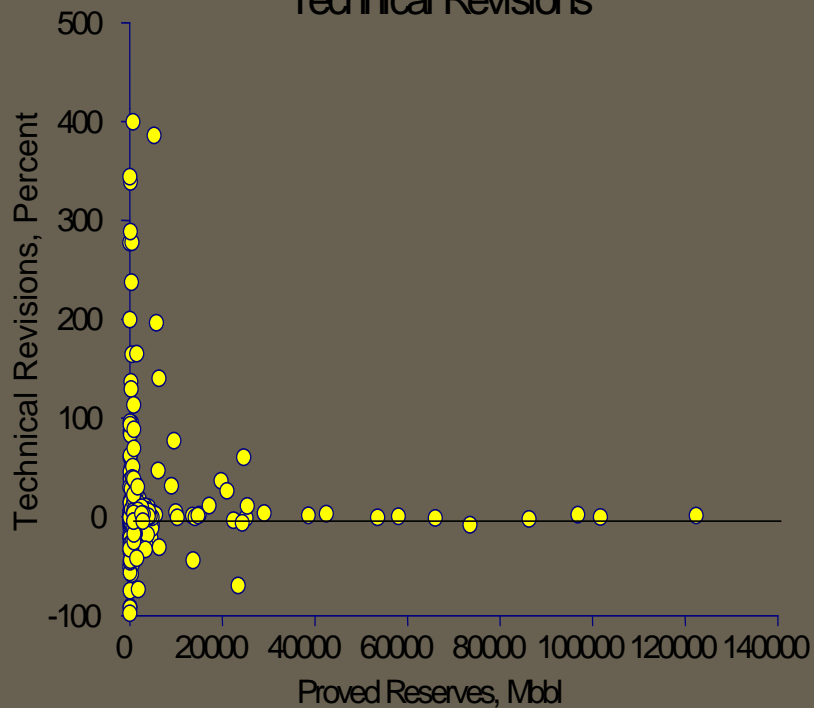
# TECHNICAL REVISIONS: PROVED + PROBABLE RESERVES

## Percent Technical Revisions

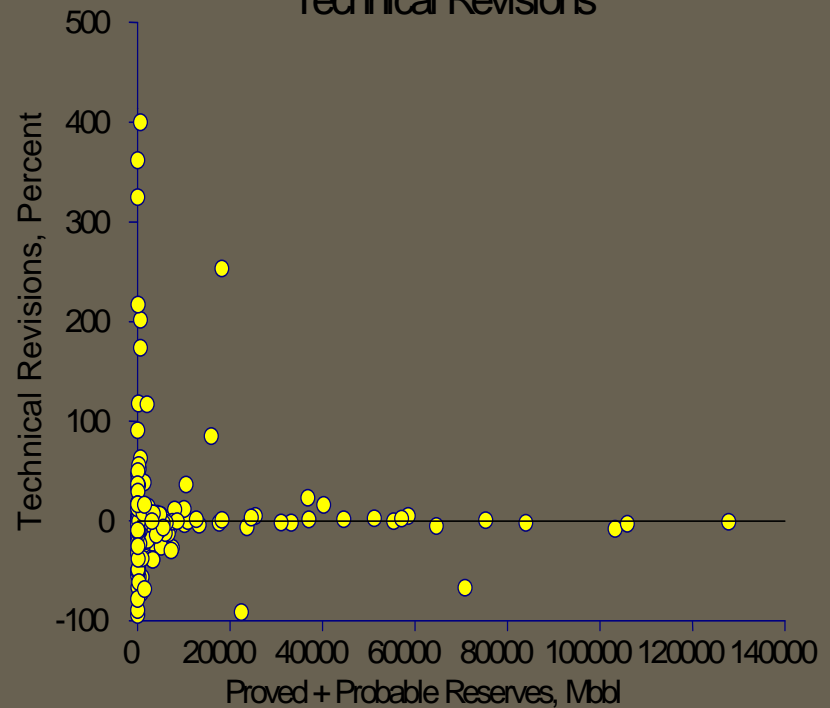


# LIGHT & MEDIUM OIL

Light and Medium Oil Proved Reserves  
Technical Revisions

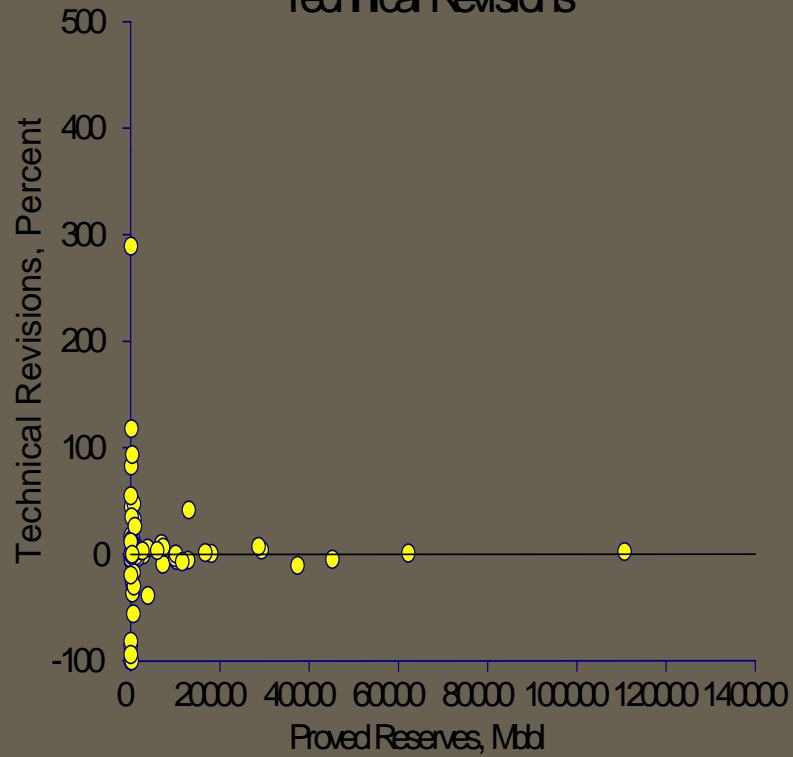


Light and Medium Oil Proved + Probable Reserves  
Technical Revisions

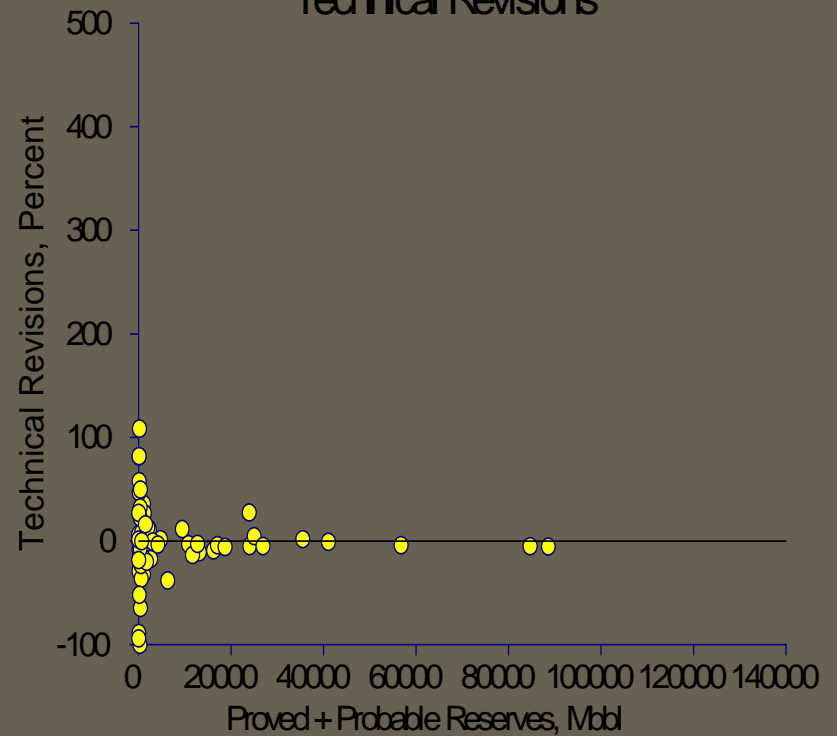


# HEAVY OIL

Heavy Oil Proved Reserves  
Technical Revisions

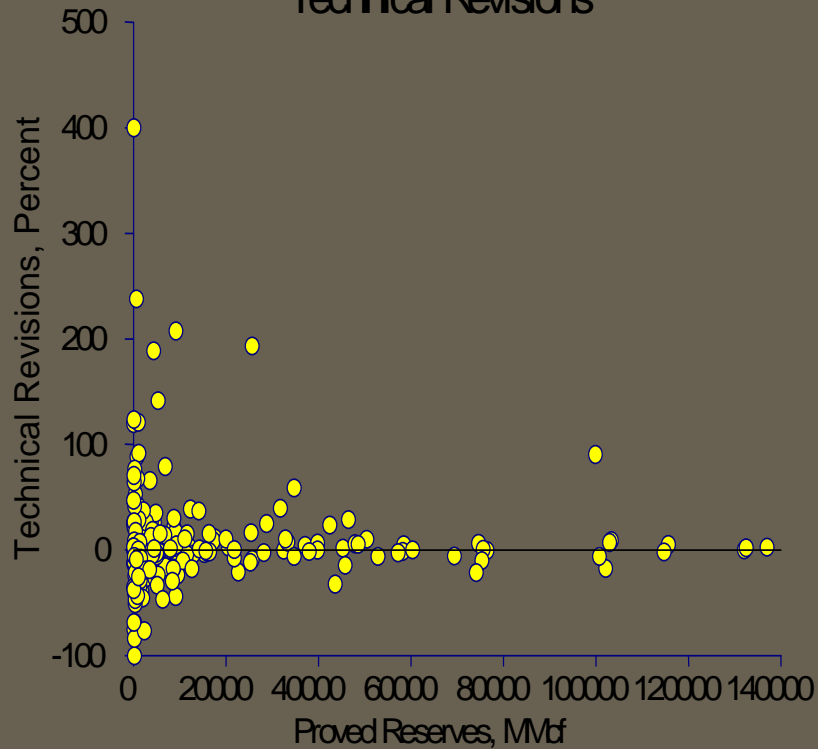


Heavy Oil Proved + Probable Reserves  
Technical Revisions

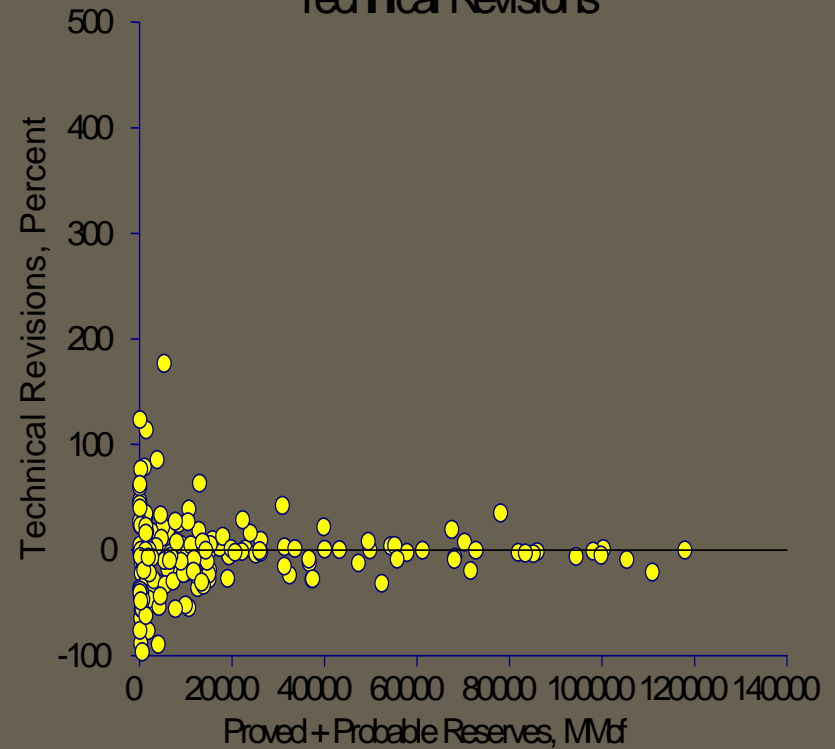


# NATURAL GAS

Natural Gas Proved Reserves  
Technical Revisions



Natural Gas Proved + Probable Reserves  
Technical Revisions



# NEW ISSUES

# RESOURCES

- NI 51-101 and COGEH focus is on conventional reserves:
  - Limited guidance on resources
- Increasing disclosure on:
  - Resources
  - Unconventional accumulations
  - Addition of different estimates
- Time for amendments at least two years

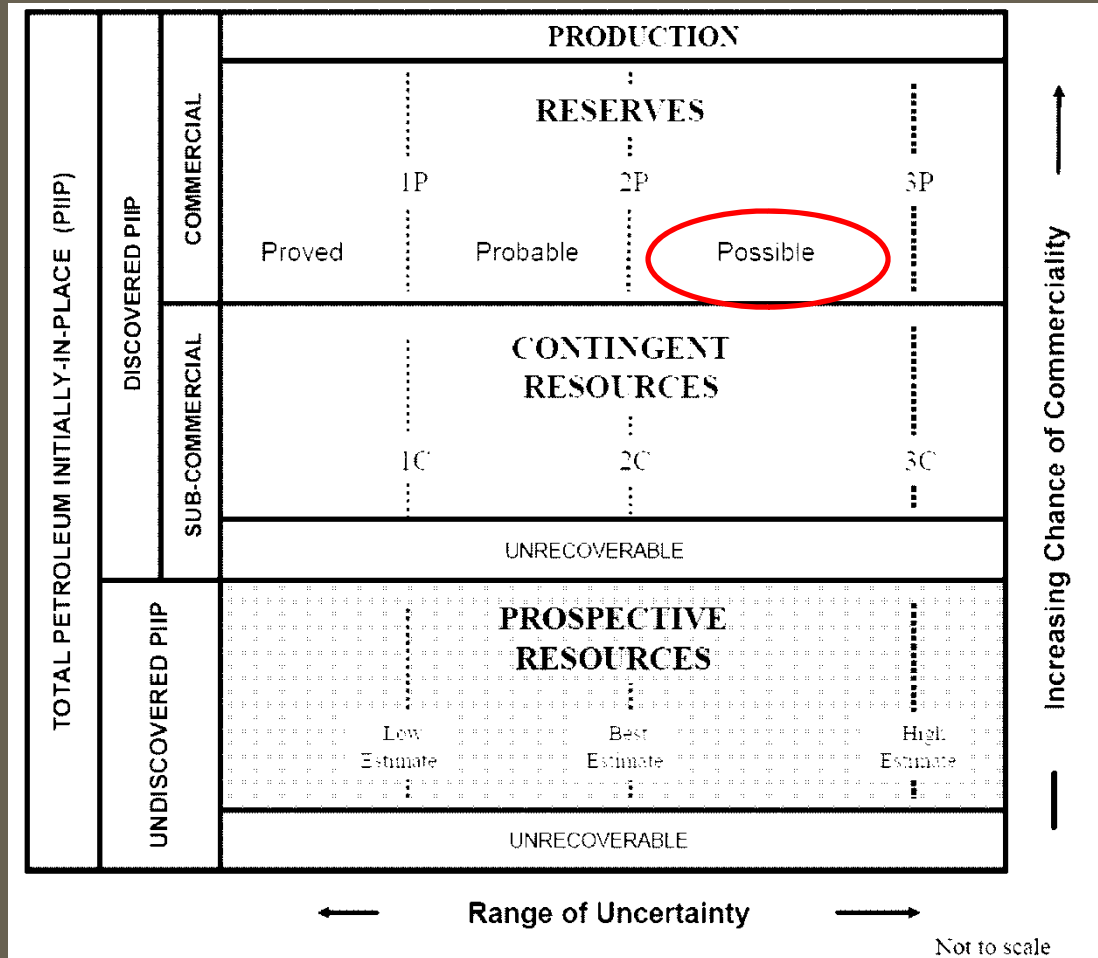
# PROPOSED CSA STAFF NOTICE 51-327

- Currently in draft
- Some discussions with industry
- Interim solution until amendments to:
  - Canadian Oil and Gas Evaluation Handbook (COGEH)
  - NI 51-101
- Issue end January - early February
- Guidance not prescriptive, but may be misleading if not followed.

# PROPOSED CSA STAFF NOTICE 51-327

- Stand-alone Possible reserves
- Disclosure only of High/P10 estimates
- Remaining Recoverable Resources: Adding across resource classes
- Partially risked Prospective Resources
- “Best estimate”
- “Technology Under Development”
- Most specific classification
- Discovered Petroleum Initially In-Place Criteria for Unconventional Resources

# STAND-ALONE POSSIBLE RESERVES



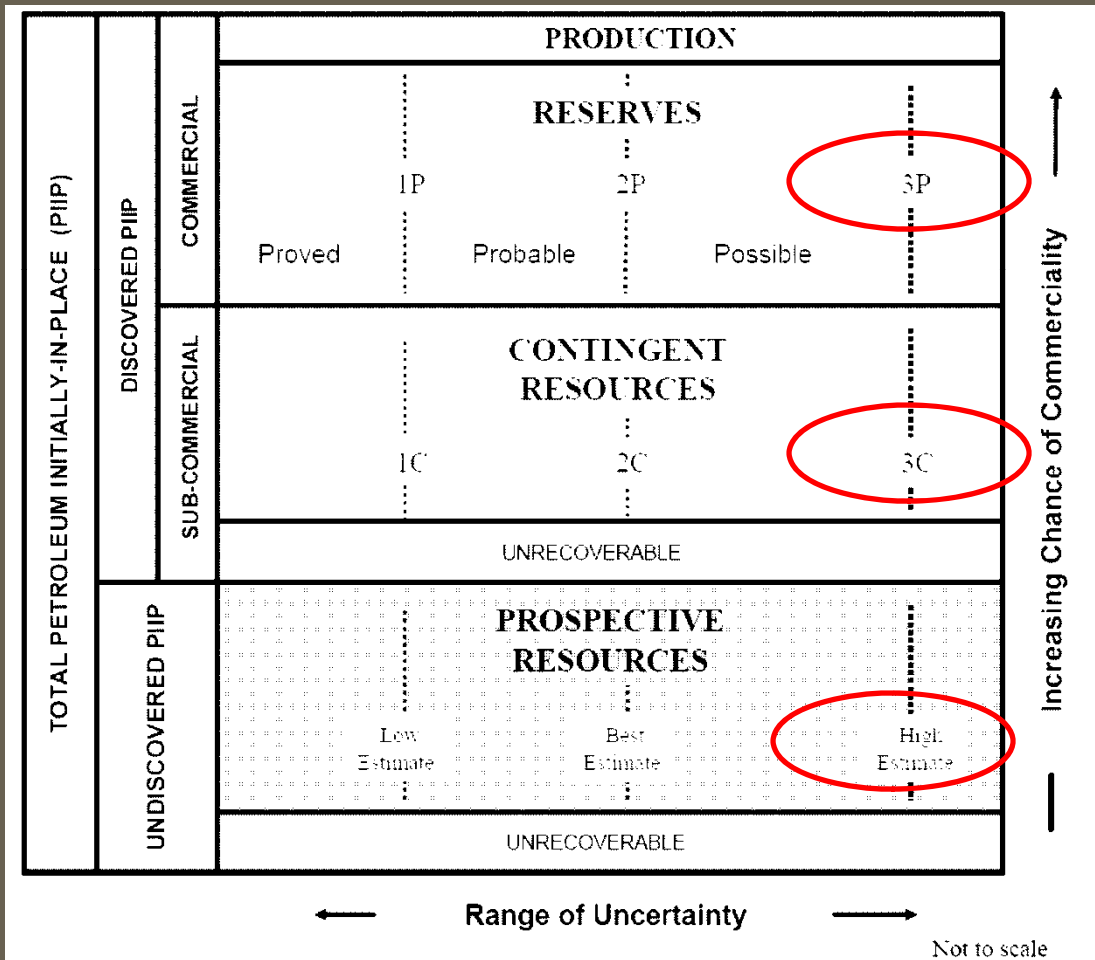
C L A S S

C A T E G O R Y

# STAND-ALONE POSSIBLE RESERVES

- Previously a minor issue
- Current disclosure of large volumes of bitumen, shale gas, stand-alone possible reserves.
- Clarification of guidance in COGEH:
  - Involves minor expenditure only
  - Going ahead with the project anyway
  - Offsetting Proved and/or Probable reserves

# HIGH AND LOW CASE CATEGORY ESTIMATES



C L A S S

C A T E G O R Y

Not to scale

# DISCLOSURE OF HIGH AND LOW CASE CATEGORY ESTIMATES

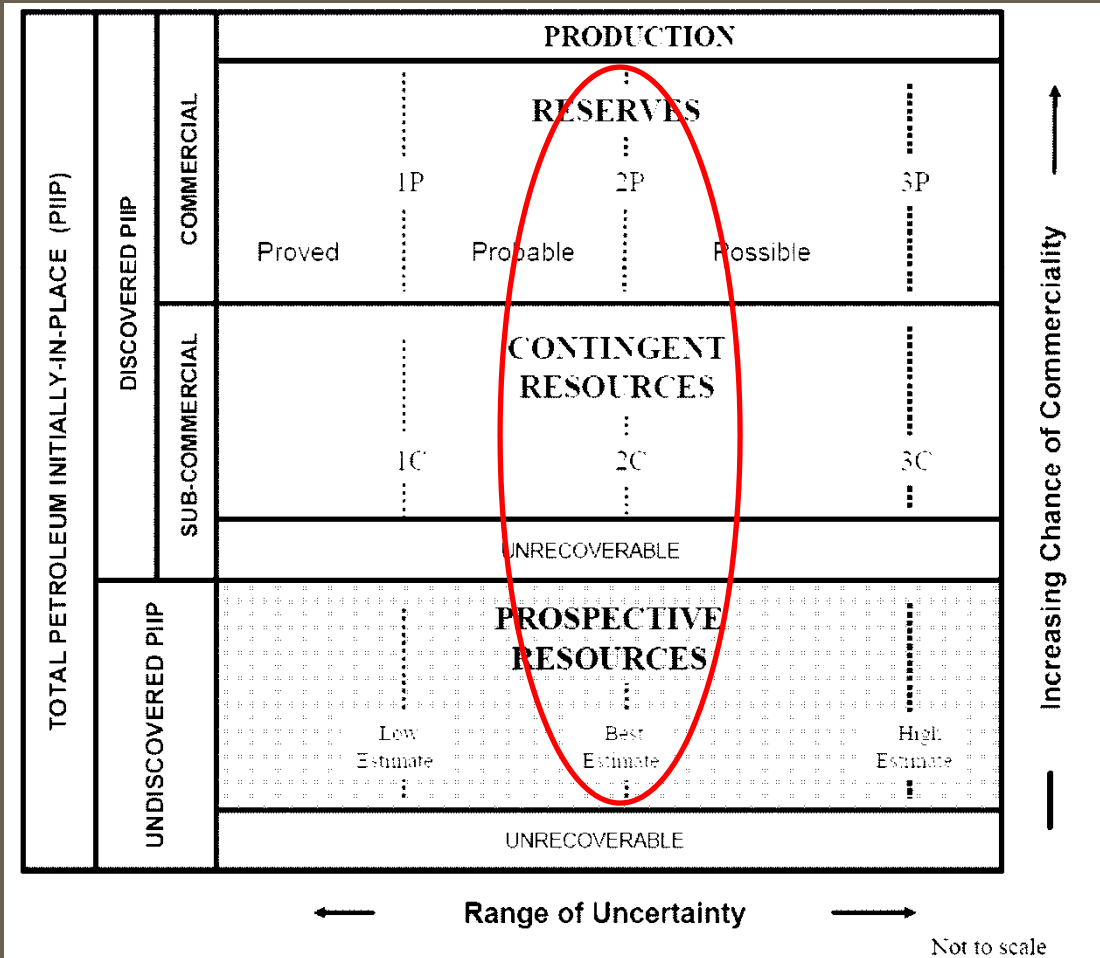
- Individual High/P10 (and Low/P90) case estimates alone can be misleading:
  - Must disclose medium and low case estimates as well as High/P90 cases

# HIGH AND LOW CASE CATEGORY ESTIMATES

- Summed high case estimates will almost always be misleading
- Drill a series of wells, each with a 10% chance of getting 100 bbls

| No. of wells | Chance of getting | Sum bbls |
|--------------|-------------------|----------|
| 1            | 10%               | 100      |
| 2            | 1%                | 200      |
| 3            | 0.1%              | 300      |
| etc          | etc.              | etc.     |

# ADDING ACROSS RESOURCE CLASSES



C A T E G O R Y

# ADDING ACROSS RESOURCE CLASSES

## COGEH “Remaining Recoverable Resources”:

- Can be misleading
- Securities law prohibits misleading statements

|                       | CHANCE OF |             |
|-----------------------|-----------|-------------|
|                       | DISCOVERY | DEVELOPMENT |
| RESERVES              | 100%      | 100%        |
| CONTINGENT RESOURCES  | 100%      | < 100%      |
| PROSPECTIVE RESOURCES | < 100%    | < 100%      |

Reserves = You have caught and cooked a fish and your are eating it

Contingent Resources = You have hooked a fish and you might be able to land it

Prospective Resources = You might go fishing and you might catch a fish

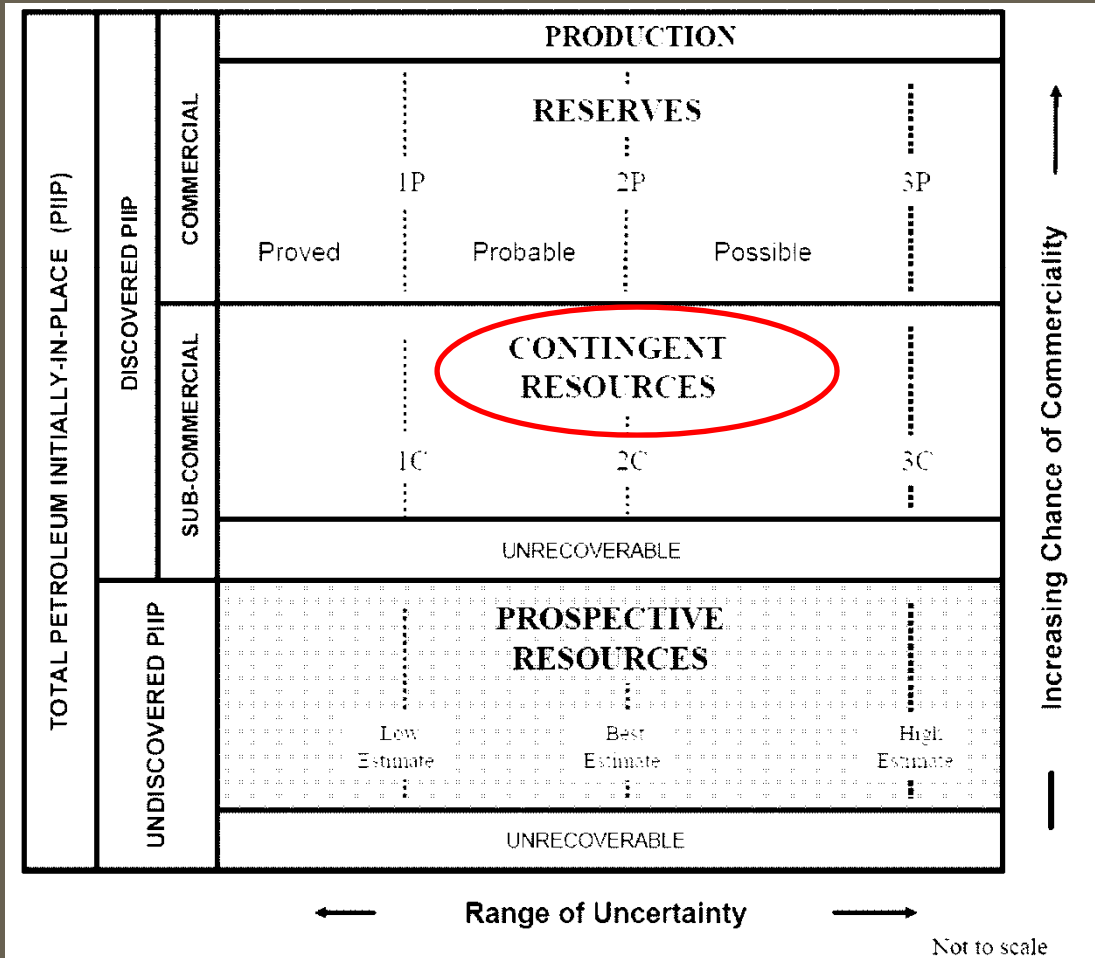
# ADDING RESOURCE CLASSES

- Not risked - Explicit cautionary statement is required in order to be not misleading:
  - Not an estimate of what you are likely to get
  - Unlikely to ever attain this volume
- Risked - Indicate risking method:
  - Deterministic, Probabilistic
  - Explain what it means

# PARTIALLY RISKED PROSPECTIVE RESOURCES

- Exploration wells sometimes risked for:
  - Chance of Discovery
  - NOT for Chance of Development
- Cautionary and explanatory statements

# CONTINGENT RESOURCES: TECHNOLOGY UNDER DEVELOPMENT



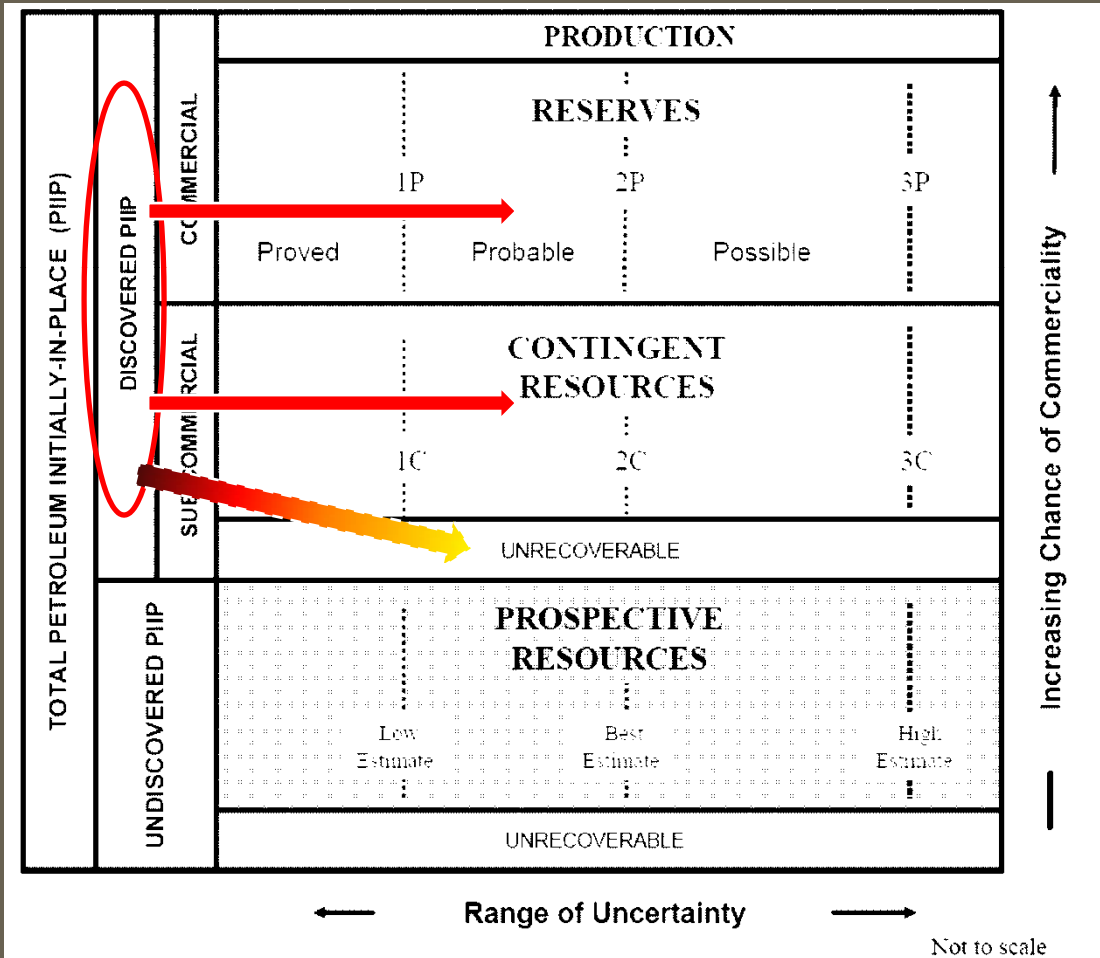
C L A S S

C A T E G O R Y

# CONTINGENT RESOURCES: TECHNOLOGY UNDER DEVELOPMENT

- COGEH requirement is quite specific but guidance is limited
- Expands on COGEH definition:
  - “Technology that has been developed”
  - “verified by testing as feasible for future commercial development”
  - “in the subject reservoir”
- Disclose timeline

# CLASSIFICATION TO THE MOST SPECIFIC CLASS OF RESOURCE



C L A S S

C A T E G O R Y

# CLASSIFICATION TO THE MOST SPECIFIC CLASS OF RESOURCE

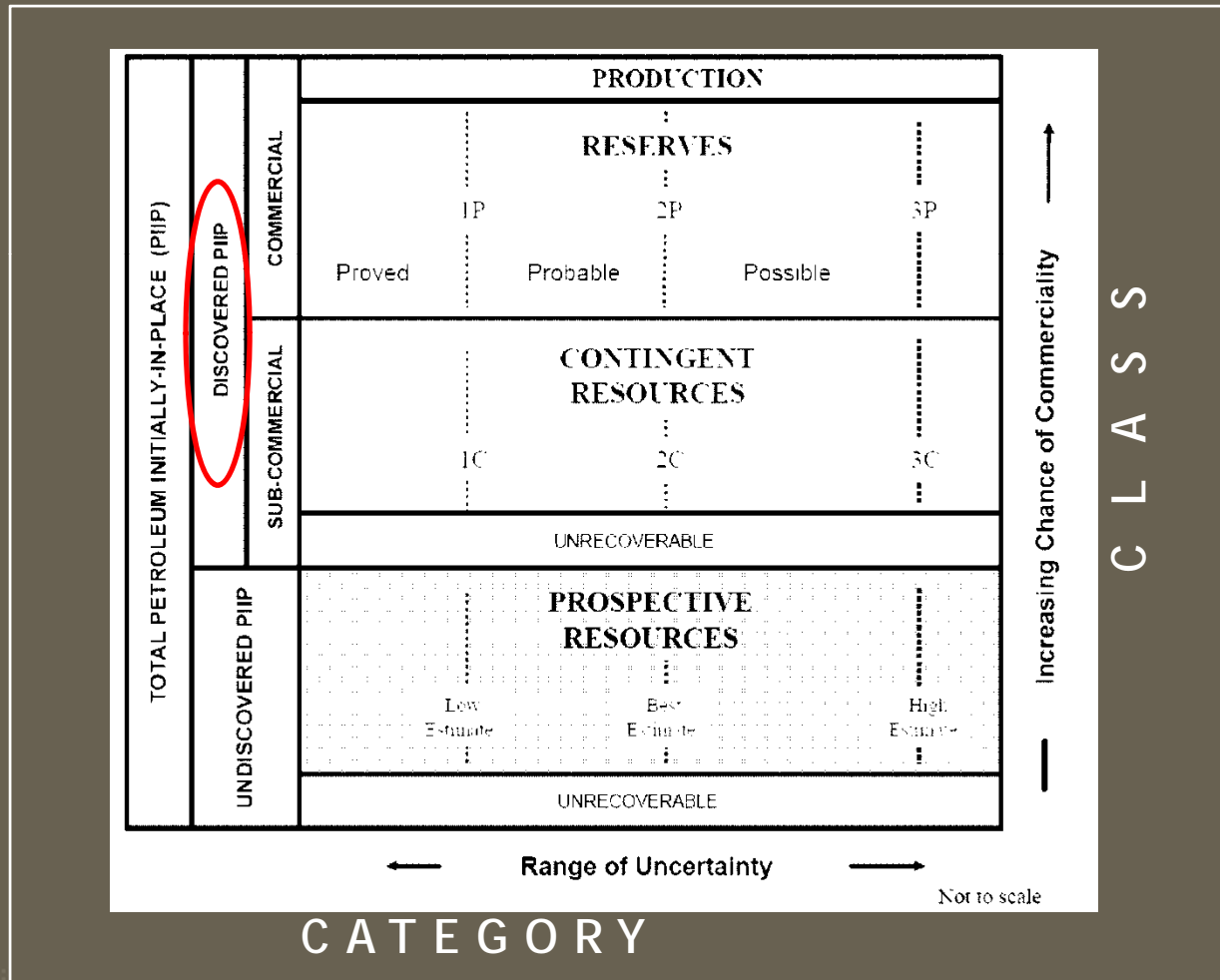
- Requirement in NI 51-101 because of disclosure of large volumes of :
  - Undiscovered Petroleum Initially-In-Place
  - Discovered Petroleum Initially-In-Place
- Likely to be misleading, without any meaningful discussion of commerciality.
- NI 51-101 Companion Policy allows for “Exceptional Circumstances”:
  - Intended to accommodate mining practice
  - Avoids classification as “Unrecoverable”
  - Avoids discussion of commerciality

# CLASSIFICATION TO THE MOST SPECIFIC CLASS OF RESOURCE

If a meaningful recovery project cannot be defined for evaluation:

- **“It is not possible to define a meaningful recovery project for this volume of Undiscovered/Discovered Petroleum Initially-In-Place at this time.”**

# UNCONVENTIONAL HYDROCARBONS: DISCOVERED PETROLEUM INITIALLY IN PLACE



# UNCONVENTIONAL HYDROCARBONS: DISCOVERED PETROLEUM INITIALLY IN PLACE

- Discovery must be in a “Known Accumulation”:
  - Penetrated by a well
  - Test or logs, core and analog
  - Written primarily for conventional accumulations
- Unconventional accumulation:
  - Often many wells have been drilled, logged, and cored
  - Lengthy pilot testing is often needed
- Guidance on what is acceptable for unconventional accumulations

# UNCONVENTIONAL HYDROCARBONS: KNOWN ACCUMULATION CRITERIA

- Acceptable for discovery:
  - Temporary stimulation
  - Laboratory tests
  - Log and core data and limited analogs
- BUT without further evidence would be unrecoverable :
  - Analog used for further classification must be for the recovery process, not just individual reservoir parameters.



# BITUMEN CONSTANT PRICE CASE

- CSA Staff Notice 51-315, January 2005
  - No posted price or wide market for bitumen
  - Use:
    - End year WTI posted price, with
    - Average previous year quality and transport adjustments
- January 2008: WCSB, bitumen market:
  - Staff Notice to be repealed

# POTENTIAL AMENDMENTS TO NI 51-101: Tentative timetable

- Q1 2009 Publish staff notice
- Potential amendments to NI 51-101
  - 2009 Analyze and prepare possible amendments
  - December 31, 2010 Implement

# INTERNATIONAL ACTIVITIES

- PRMS
- SEC Rule update
- UNECE
- IFRS for Extractive Industries



# PETROLEUM RESOURCE MANAGEMENT SYSTEM

- Issued 2006, update of older SPE system
- Many similarities to COGEH
- Jointly prepared by:
  - Society of Petroleum Engineers
  - American Association of Petroleum Geologists
  - World Petroleum Council
  - Society of Petroleum Engineers
- Evaluation and Classification System
- Not designed for Disclosure

# U.S. SEC RULE UPDATE

- Approved December 29, 2008.
- Effective December 31, 2009
- Rule not published yet. Based on press release, it will:
  - Allow use of new technologies for estimates
  - Allow disclosure of Proved and Probable reserves
  - Require reporting on independence and qualifications of evaluators
  - Use average for the year for Constant price case
- Canadian rules for constant price case will be amended accordingly.
- Expected to include unconventional hydrocarbons

# INTERNATIONAL FINANCIAL REPORTING STANDARDS (IFRS)

- Replaces Canadian GAAP effective January 1, 2011
- Must report comparative information for 2010 using IFRS
- Currently no impact expected on oil and gas evaluation practices or classification
- Revisions of NI 51-101 terminology needed to match IFRS

# EXTRACTIVE INDUSTRIES IFRS

- No Extractive Industries IFRS at present
- IASB Extractive Industries Research Project Discussion paper due early 2009
- Final Extractive Industries IFRS not expected until 2014

# UNITED NATIONS FRAMEWORK CLASSIFICATION SYSTEM

- For all fuels and minerals
- Comprehensive – not all categories relevant for oil and gas
- Currently being updated for oil and gas, and simplified
- May be used as stand-alone system, or, a reference system to which others can be mapped
- But no detailed specific guidelines – currently refers to PRMS and JORC

# REFERENCE MATERIAL

- ASC website: [www.albertasecurities.com](http://www.albertasecurities.com)
  - For companies
  - Oil and gas
- COGEH (Petroleum Society website):  
[www.petsoc.org](http://www.petsoc.org)



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# Final Thoughts

- Be familiar with disclosure requirements or seek advice.
- Proof read
- This is your information to investors:
  - Does it tell the story fully and fairly?
  - Why should they invest in you?
- The ASC:
  - Has a regular program of review of oil and gas disclosure as a contribution to maintaining confidence in the industry
  - Reviews industry trends to ensure that disclosure legislation is up to date
  - Encourages dialogue with industry

# Questions