

# **ALBERTA SECURITIES COMMISSION**

## **BREAKFAST SEMINAR: OIL AND GAS COMPLIANCE**

**Dr. David Elliott, Chief Petroleum Advisor**

**Michael Jackson, Legal Counsel**

**December 2009**

# OUTLINE

- INTRODUCTION
- DISCLOSURE REQUIREMENTS: NI 51-101
- EVALUATION-CLASSIFICATION-DISCLOSURE
- THE ASC REVIEW PROGRAM
- QUALITY OF EVALUATIONS: TECHNICAL REVISIONS ANALYSIS
- NEW ISSUES

# OIL AND GAS MARKET IN CANADA

- About 500 oil and gas reporting issuers in Canada<sup>1</sup>
- About 50% of the world's public oil and gas companies on major exchanges:

CANADIAN:		387
TSX/TSXV <sup>2</sup>	373	
CNQ <sup>3</sup>	14	
US <sup>2, 4</sup> (NYSE, AMEX)		261
LSE/AIM <sup>2</sup>		139

1. ASC files

2. TSX website 30 June 2009

3. CNQ website 16 Oct 2009

4. Plus a few on NasDaq

# 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

# MATERIALITY

- Information that Significantly Affects, or could Reasonably be Expected to Affect, the market price or value of the issuer's securities
- Must be Disclosed
- Trading on Undisclosed Material Information is **INSIDER TRADING**

# CONTINUOUS DISCLOSURE REGIME

- 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



# SECURITIES REGULATION IN CANADA

- A Provincial responsibility, with:
- National coordination through Canadian Securities Administrators (CSA).
- Alberta Securities Commission (ASC) takes the lead on oil and gas and advises the other provincial commissions.

# 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

# NI 51-101 DISCLOSURE

## NI 51-101: SOME HISTORY

- 1998 ASC Oil & Gas Securities Taskforce established
- 2001 ASC Oil & Gas Securities Taskforce report
- 2002 Canadian Oil and Gas Evaluation Handbook (COGEH) (CIM/Calgary SPEE). Updates 2005, 2007
- Sept. 2003 National Instrument 51-101 (Disclosure Legislation)
- 2007 Amendments to NI 51-101

# 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 APPLIES TO

- Reporting Issuers materially engaged in oil and gas activities
- Certain OTC Issuers with a connection to BC (BC Instrument 51-509)
- Initial Public Offerings (5.5 of 41-101F1)
- Offering Memoranda (General instruction 9 of 45-106F2 and 45-106F3)

## NI 51-101 APPLIES TO

- “Oil and Gas Activities”:
  - Exploration (Inc. Land Purchases, Seismic, etc.)
  - Acquisition
  - Drilling, Completion, Production, Construction
- Conventional and Unconventional Hydrocarbons, including:
  - Bitumen (In-situ, Mined)
  - Synthetic Crude
  - Shale Gas and Oil
- All Public Disclosure:
  - Regulatory (Annual) Filings
  - Other Disclosure: News Releases, Webcasts, etc.

## NI 51-101

- Requires Qualified Reserves Evaluator for Reserves and Resources other than Reserves estimates
- Requires Independent Evaluation for Annual Evaluation
- Refers to Canadian Oil and Gas Evaluation Handbook (COGEH) for evaluation practices, standards and classification:
  - Resource Definitions of CIM (from PRMS)
  - Guidance Prepared by Industry (SPEE)

## SOME FEATURES OF NI 51-101

- Requires annual disclosure of oil and gas activities (51-101F1, F2 and F3)
- Companion Policy 51-101CP
- Outlines the responsibilities of Board of Directors re: oil and gas activities
- Reserves estimates prepared without regard to availability of funding

## SOME FEATURES OF NI 51-101

- Requires the disclosure of sales volumes for reserves estimates and production
- Requires cautionary disclosure surrounding estimates and BOEs
- Requires additional material change disclosure re: oil and gas activities

# U.S. COMPARED TO CANADIAN OIL & GAS DISCLOSURE

- NI 51-101:
  - Forecast price case is mandatory
  - Constant price case is optional
  - Allows disclosure of classes other than reserves
- New U.S. legislation is closer to Canadian
- Canadian issuers may file NI 51-101 disclosure in the U.S. under MJDS (Multijurisdictional Disclosure System, 40-F filers)

# U.S. compared to CANADA

	RESERVES			OTHER RESOURCE CLASSES
<b>U.S.</b>				
CONSTANT PRICE	P1	P2	P3	NOT ALLOWED
SENSITIVITY CASE	P1	P2	P3	NOT ALLOWED
<b>CANADA</b>				
CONSTANT PRICE	P1	P2	P3	ALLOWED
FORECAST PRICE	P1	P2	P3	

**MANDATORY**

**ALLOWED**

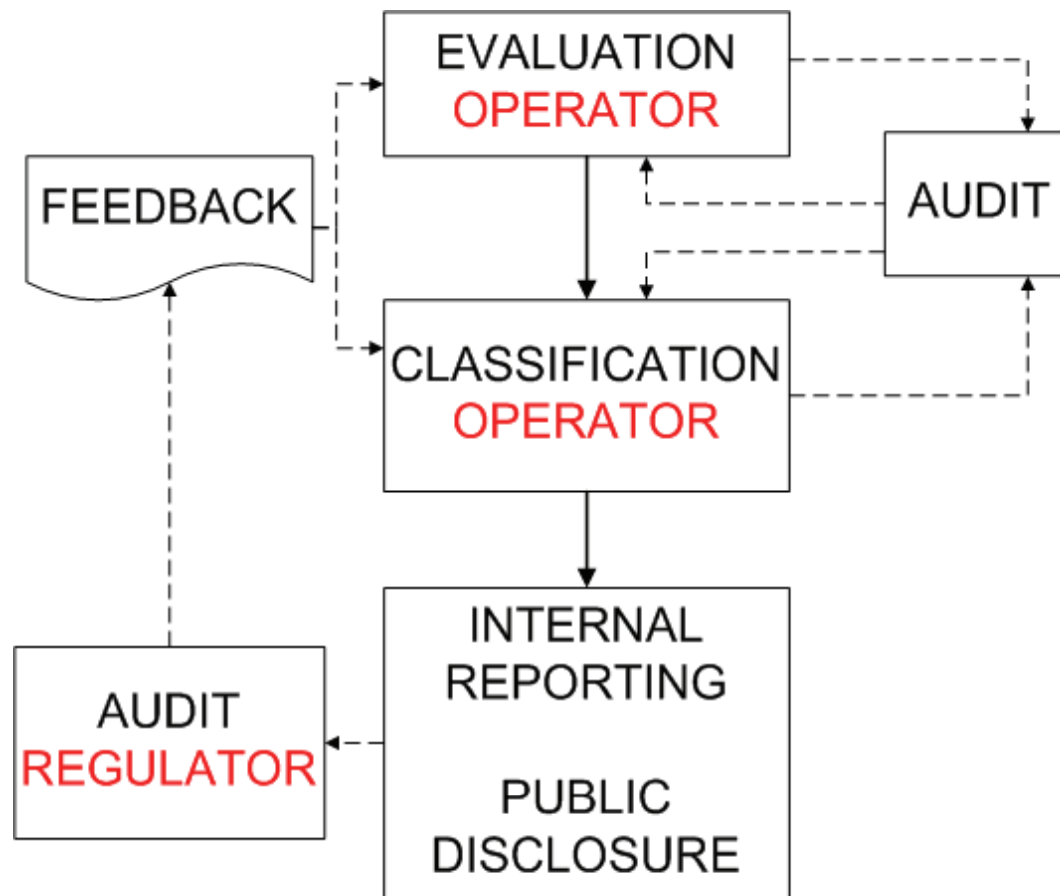
**NOT ALLOWED**

# POTENTIAL AMENDMENTS TO NI 51-101: Tentative timetable

- Potential amendments to NI 51-101:
  - 18 Dec 2009 Issue for comment
  - 31 Dec 2010 Implement
- Potential amendments are relatively minor in nature
- Many of the amendments are based on the guidance in CSA Staff Notice 51-327

# 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!

## Estimated Reserves

= Actual Reserves

Never known

± Measurement Error

Unavoidable but manageable

± Model Error

Depends on situation

± Bias

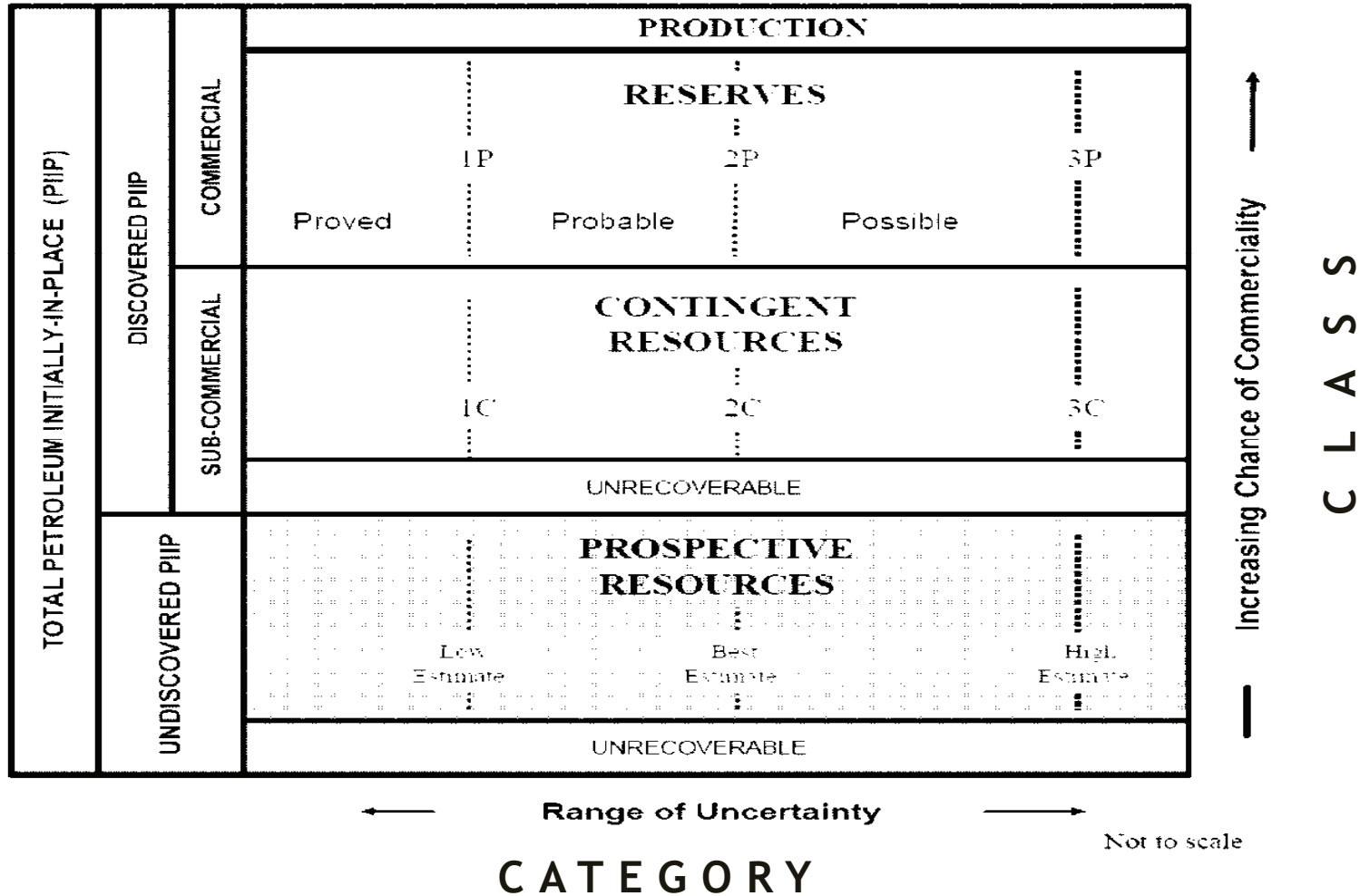
Not always intentional

- 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.)

# RESOURCE CLASSIFICATION



COGEH (NI 51-101) uses terminology from:

- Petroleum Resource Management System 2007 (PRMS),  
but:
  - COGEH Guidelines are much more extensive than in PRMS
  - There are “second order” differences
- SEC :
  - Only reserves, some limited SEC guidelines
- United Nations Framework Classification (for Oil and Gas and other minerals):
  - Currently no guidelines

# THE EVALUATION AND CLASSIFICATION STANDARD

- Canadian Oil and Gas Evaluation Handbook (COGEH)
- Volume 1, Reserves Definitions and Evaluation Practices and Procedures (2002, 2007)
- Volume 2. Detailed Guidelines, primarily for conventional oil and gas (2005)
- Volume 3. Coal bed methane, International properties (2007), bitumen (in preparation)

# ASC OIL AND GAS REVIEW PROGRAM

# THE ASC REVIEW PROGRAM

- 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



# TOTAL NUMBERS OF REVIEWS 2003 – Q3 2009

- Reserves/Resource Reports 1021
- Issuers Reviewed 487
- Countries Represented 45
- Evaluators (to Sept 2009): 65
  - Regularly seen 34
  - Occasional 31

Does not include reviews of Annual Filings or News Releases

# NUMBER OF REVIEWS (2009 Q1 – Q3)

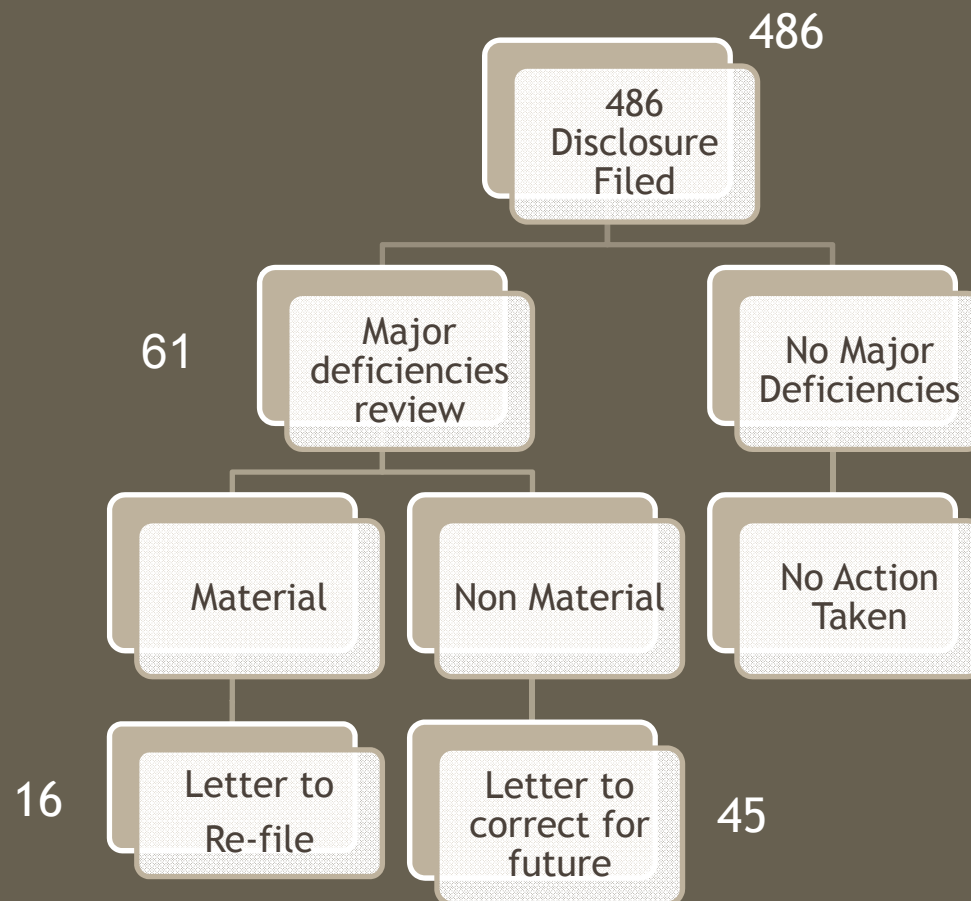
- Annual Filings 409
- News Releases 628
- Prospectuses 85
- Continuous Disclosure 57
- Other 20
  
- Miscellaneous questions Many

# 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

# REVIEW PROCESS (2008)



# NEWS RELEASES

# COMPLIANCE REVIEW: NEWS RELEASES

- Includes news releases and corporate presentations
- Significant trading can take place on news releases
- Now in third year of comprehensive review program for NI 51-101 compliance

News Releases	2008	2009 Q1-Q3
– Scanned	5463	4153
– Forwarded for review	823	571
– Number with potential issues	206	139
– Issuers contacted	54	40

# 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, but:
  - May have questions, including a review of reserves report before granting a receipt
- 81 Short Form prospectuses in Q1 – Q3 2009

# LONG FORM PROSPECTUS

- Must contain full information (FULL, TRUE, PLAIN)
- 4 Long Forms, all IPOs, in Q1 – Q3 2009
- Reserves report always requested
- Comments and requests for clarification are common

# CONTINUOUS DISCLOSURE

# CONTINUOUS DISCLOSURE

- Reporting issuers selected for review based on various criteria
- Reserves/resources review often part of a wider review (e.g., accounting also)
- Also carried out for other provincial regulators (e.g., BC, Ontario)
- Q1 – Q3 2009 Program 57 CD reviews
- Comments or questions on about half

# RESULTS OF DISCLOSURE REVIEWS

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- Need for proofreading and use of correct terminology
- Meaningful discussion on certain disclosure items
- Combination of estimates, disclosure of only high case estimates
- Product prices
- Constant price case disclosure
- Unit values
- Future development costs
- Proved Undeveloped Reserves
- Costs incurred

# PROOFREADING, ARITHMETIC

- Very few errors in engineering reports
- Errors introduced in preparation of filings could be reduced by careful proofreading:
  - Unit abbreviations (e.g. bbls of gas, confusing prefixes, etc.)
  - Arithmetic (e.g., 6.3% of Reserves Reconciliations tables had addition errors)
  - Inconsistency (e.g., Different values for the same parameter in different tables, within filings, website vs. filings)
  - Missing information
  - Outdated forms, information (e.g., ARTC!)

# TERMINOLOGY

- Use of non-COGEH terminology (mainly news releases):
  - “Potential reserves”
  - “Undiscovered Proved reserve in place” (my favourite)
  - “Technically recoverable”
  - OOIP/GIIP (don’t know if it is discovered or not)
- Large Discovered/Undiscovered Petroleum Initially-In-Place without classification to lower level or discussion of recoverability

# DISCUSSION OF ISSUES

- Several disclosure items require discussion or description, e.g.:
  - NI 51-101 Disclosure of Resources:
    - Significant Positive and Negative Factors
    - Contingencies
  - 51-101F1 5.1 Undeveloped reserves
  - 51-101F1 5.2 Significant Factors or Uncertainties
  - 51-101F1 6.7 Exploration and Development Activities
- But often limited, or uninformative boilerplate

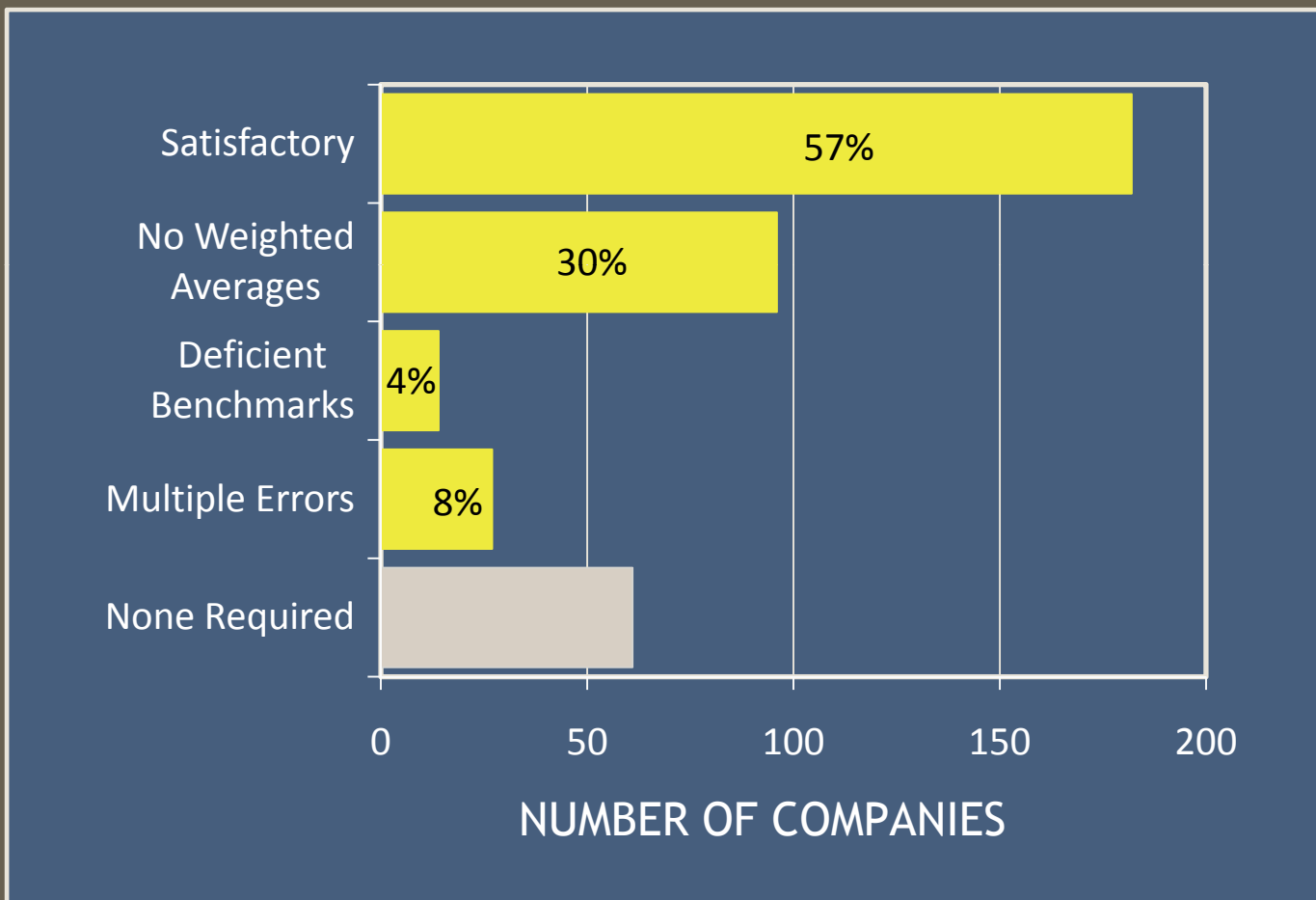
# MAIN DEFICIENCIES

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

# PRODUCT PRICING ASSUMPTIONS (51-101 F1 Part 3)

- By Product Type, country, or region
- Benchmark prices required
- Constant Price (if disclosed)
- Forecast Price:
  - For at least five years
  - Weighted average historical price for the last year
  - If provided by an independent evaluator (required for Annual filings)

# PRODUCT PRICE DISCLOSURE



Percentages are only for companies required to disclose Product Prices

# SUPPLEMENTAL CONSTANT PRICE CASE DISCLOSURE (51-101 F1 3.1)

- 12% of companies published a Constant Price Case:
- Half for obvious reasons (e.g., dually listed in the US)
- The other half had a number of deficiencies in their filings that suggest an unfamiliarity with the filing requirements

# PRODUCT TYPES AND GROUPS

- Production Group (NI 51-101 1.1 (u)):
  - What is produced (e.g., **Together** L&M oil + solution gas + NGLs)
- Product Type (NI 51-101 1.1 (v)):
  - What is sold (e.g., **Separately** L&M oil, solution gas, NGLs)

# UNIT VALUE DISCLOSURE

## 51-101 F1 2.1.2 and 2.1.3(c)

- A check for reasonable evaluation: \$/bbl, \$/Mcf
  - e.g., \$2.3/bbl oil, \$60/Mcf gas
- By Product Type:
  - Cost allocation issues when more than one Product Type from the same well (e.g., L&M oil + solution gas)
- By Production Group:
  - Cost allocation issues or report \$/boe
- Reviewing this issue

# UNIT VALUE DISCLOSURE (380 Companies)

	%	#
By Type and Group	46	143
By Type only	2	5
By Group only	43	128
Did not satisfy the requirement	10	32

# FUTURE DEVELOPMENT COSTS

## 51-101F1 5.3

- For Proved and Proved + Probable Reserves
- Forecast prices and costs, zero discount
- For five years
  
- Sources and costs of funding

# FUTURE DEVELOPMENT COSTS

- 84% companies recorded Future Development Costs
- Average development dollar per 2P reserve is \$19.10/boe
- 12 companies had FDC that exceeded their NPV of FNR  
BT @ 10%

# PROVED UNDEVELOPED RESERVES

## 51-101 F1 5.1

- For Proved and Probable Undeveloped Reserves
- “Disclose for each product type the volumes ... that were first attributed in each of the most recent three financial years and in the aggregate before that”
- “Discuss development plans and if applicable, reasons for not developing them in the next two years.”

# PROVED UNDEVELOPED RESERVES

## L&M Oil (Example)

Proved Undeveloped	1st Attributed Mbbbl	Revised Mbbbl	Dispositions Mbbbl	Developed Mbbbl	Booked Mbbbl
Prior to 2006	50				50
2006	100	0	0	(20)	130
2007	0	25	(65)	0	90
2008	0	(5)	(15)	(60)	10
<b>NET EFFECT</b>	<b>150</b>	<b>20</b>	<b>(80)</b>	<b>(80)</b>	<b>10</b>

New Addition

Reserve Summary

Acquisitions Discoveries Extensions Improved Recovery  
Economic Technical  
Dispositions Developed

**NEW**

**REVISE**

**REMOVE**

**RESULT**

**BOOKED**

## COSTS INCURRED

- Form 51-101 F1 Item 6.1 Costs Incurred:
  - Acquisition Costs for Proved and Unproved properties
  - Exploration Costs
  - Development Costs
- Some instances where total costs bear no resemblance to financial statement amounts
- Are currently reviewing and will be asking for an explanation

# RESULTS OF ANALYSIS OF TECHNICAL REVISIONS

# RESERVES RECONCILIATION

## 51-101 F1 4.1.2(c)

- OPENING BALANCE
- ADDITIONS:
  - Discoveries
  - Extensions and Improved Recovery
  - Acquisitions
- REDUCTIONS:
  - Dispositions
  - Production
- FLUCTUATIONS:
  - Economic Factors
  - **Technical Revisions**
- CLOSING BALANCE

# TECHNICAL REVISIONS ANALYSIS

- Sixth year of review
- Provides a measure of uncertainty and bias
- Currently looking at combined data for all years
- Used to select companies for technical audit

# TECHNICAL REVISIONS

- For Properties Owned:
  - at the Start, and
  - at the End of the Reconciliation Period
- The result of new technical Information:
  - E.g., Production Data
- Not the Result of:
  - Infill drilling
  - Recompletions
  - Transfers
  - Working interest adjustment
  - Royalty changes
- An indicator of Quality of the Estimation

# TECHNICAL REVISIONS

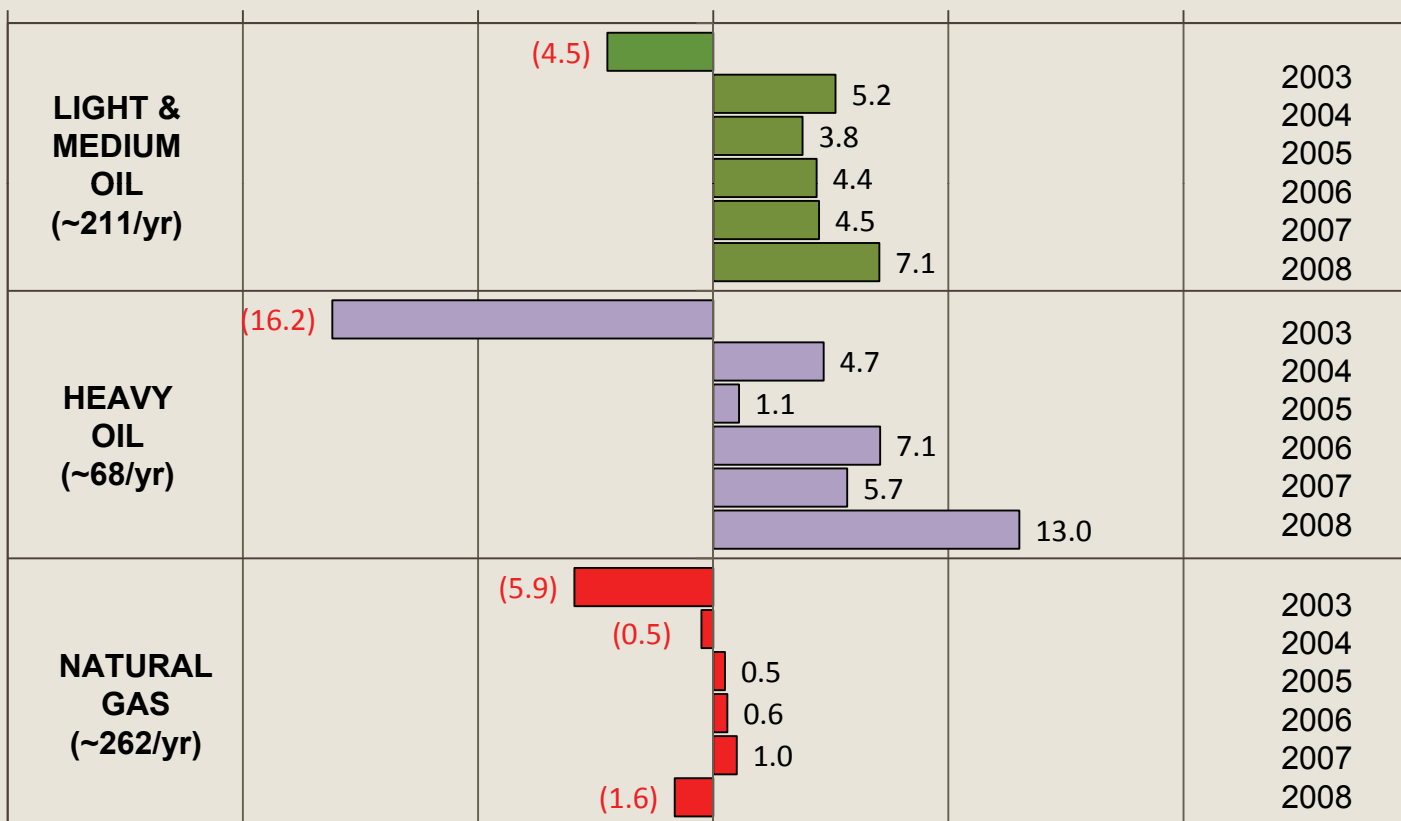
- Proved Reserves:
  - Revisions should be mostly Positive
  - Probability of negative revision approaches zero as the number of entities increases
- Proved + Probable Reserves:
  - Revisions should be close to zero
  - Probability of positive or negative revisions approaches zero as the number of entities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

# TECHNICAL REVISIONS

- Analysis does not include:
  - SEC filers because revisions of a technical nature are not reported separately
  - Data points on which we still have questions
- Major data quality control in 2009:
  - Arithmetic errors (6.3% had addition errors)
  - New categories, e.g., “Revisions”
  - Including Infill drilling
  - Product type classification errors, e.g., combined Light & Medium + Heavy Oil
  - Questionable unit of measurement
  - Revisions to zero opening balance

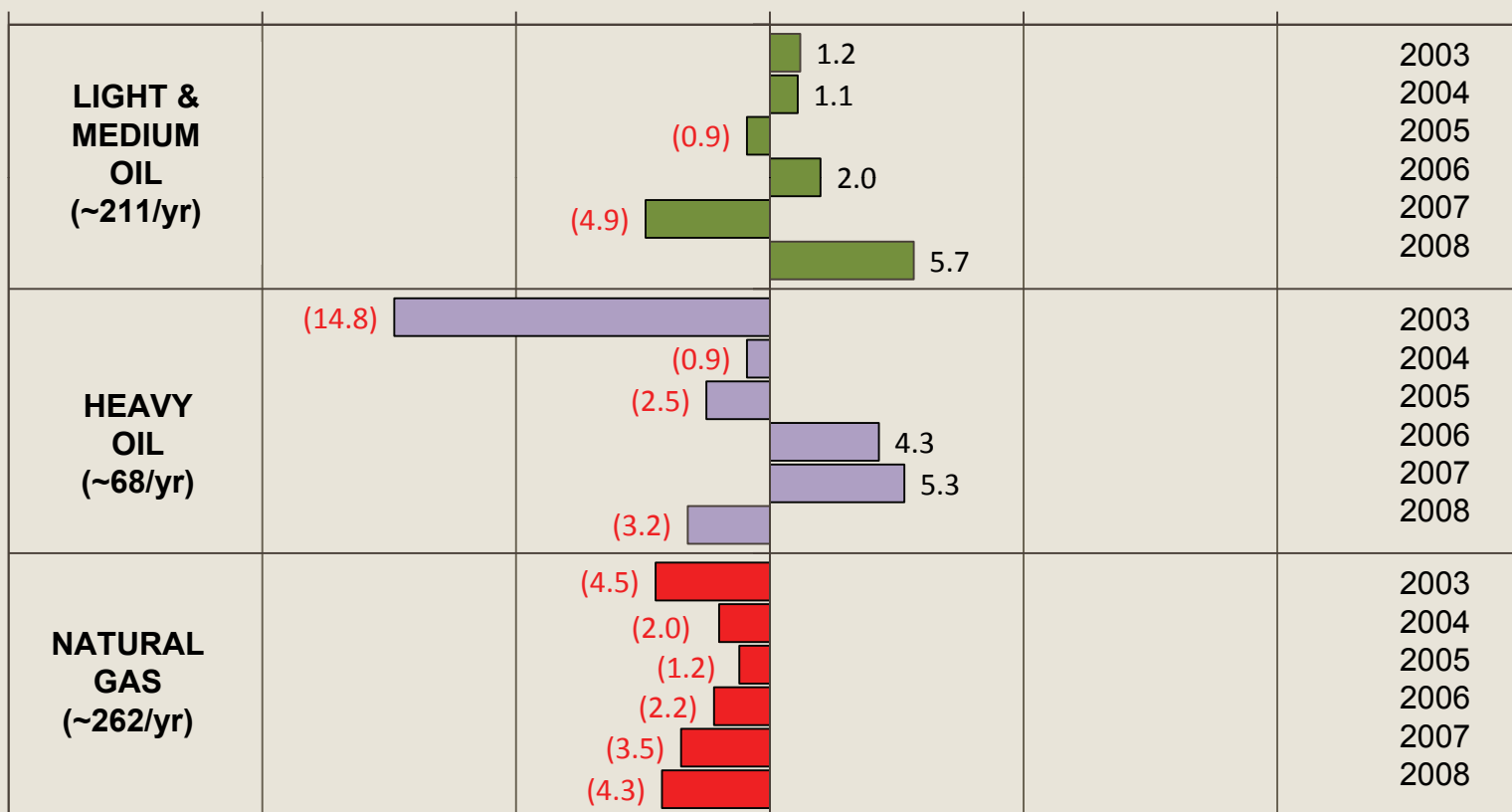
# PROVED RESERVES

(30.0)      (20.0)      (10.0)      0.0      10.0      20.0      30.0



# PROVED + PROBABLE RESERVES

(30.0)      (20.0)      (10.0)      0.0      10.0      20.0      30.0

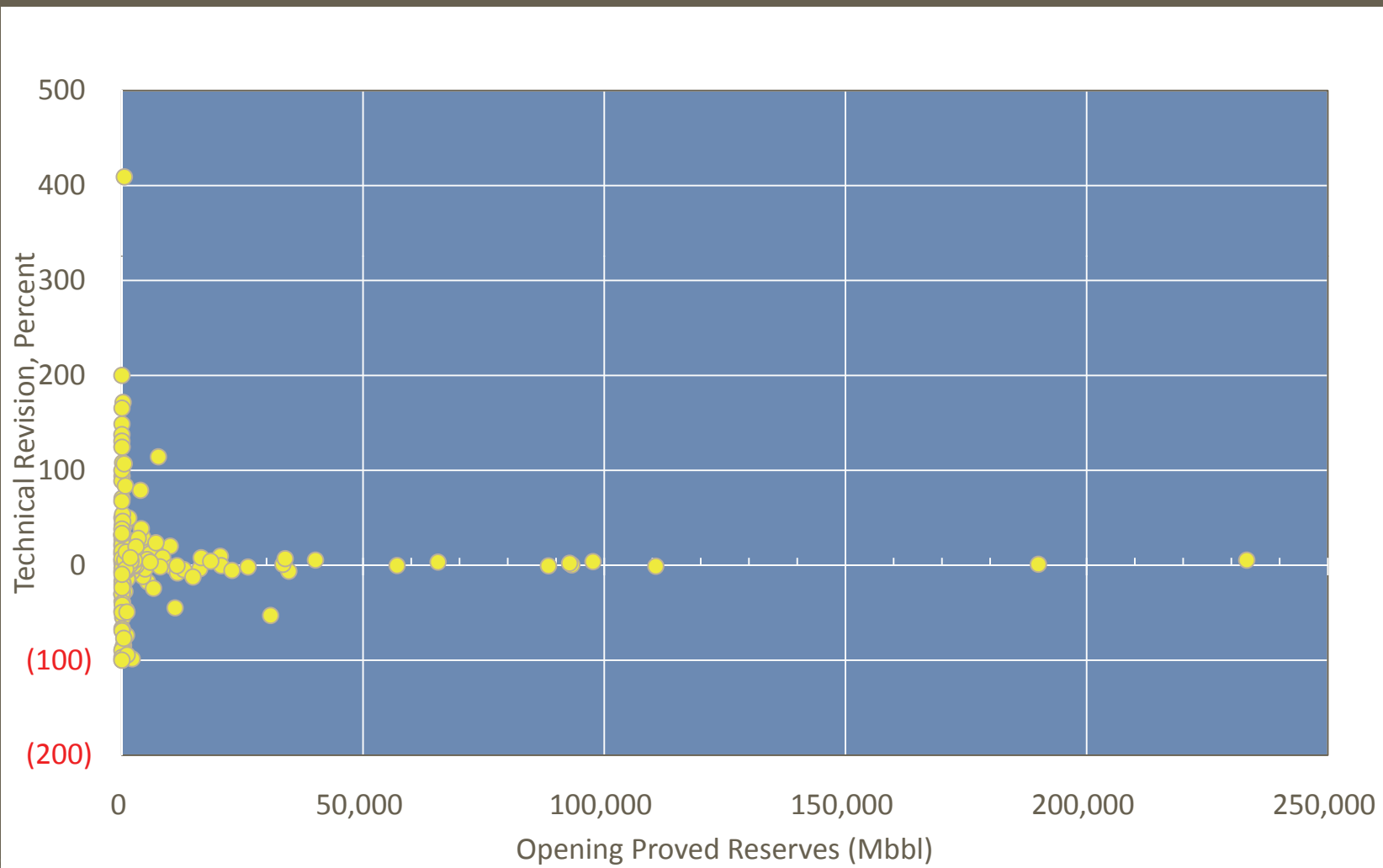


# TECHNICAL REVISIONS: CONCLUSIONS

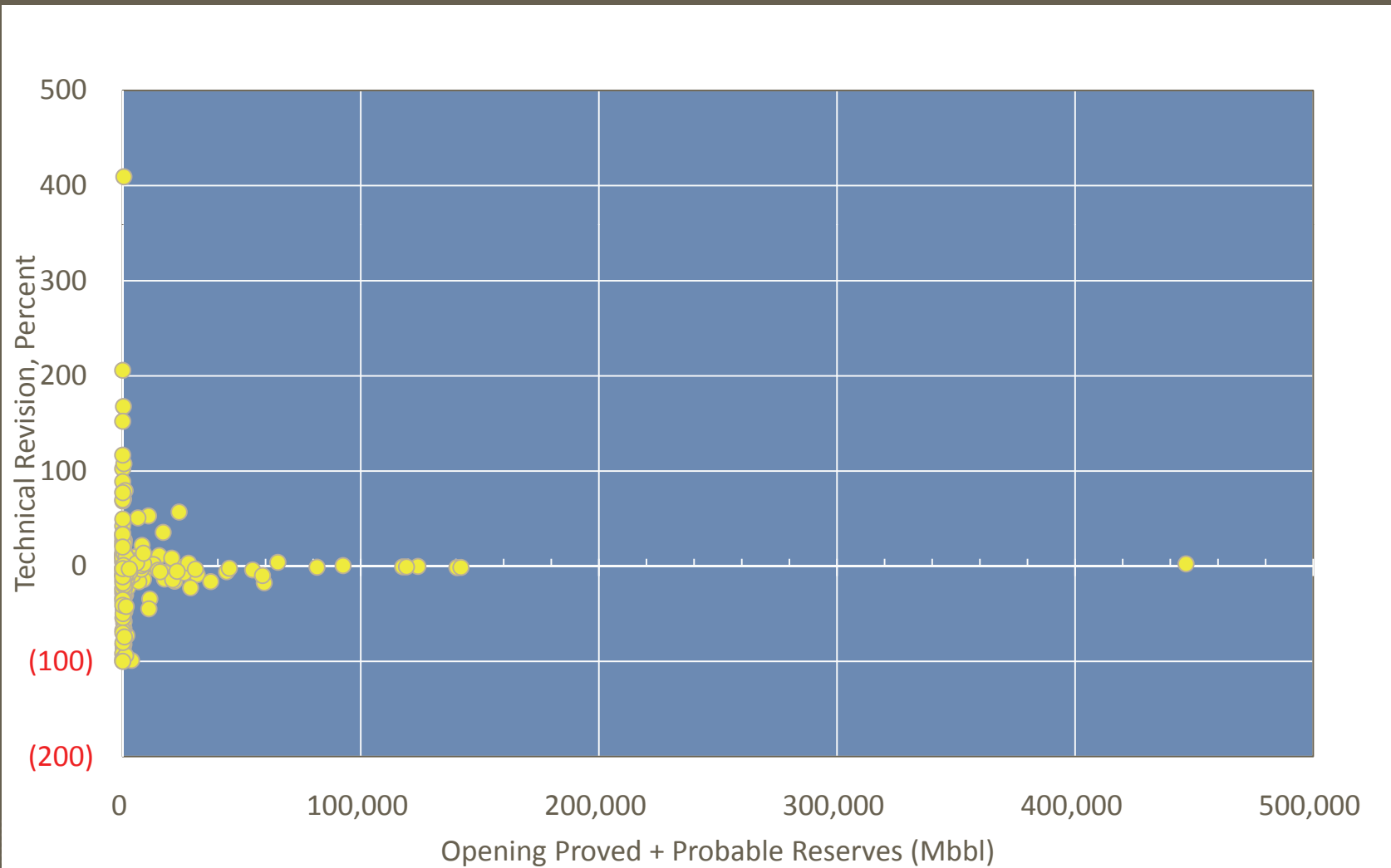
- Estimates are Reasonable
- Proved + Probable Variance  $\pm 2 - 4\%$
- TRENDS

	PROVED	PROVED + PROBABLE
LIGHT & MEDIUM	OK	OK
HEAVY	OK	OK
GAS	LOW REVISIONS	NEGATIVE
	SMALL POSITIVE BIAS	

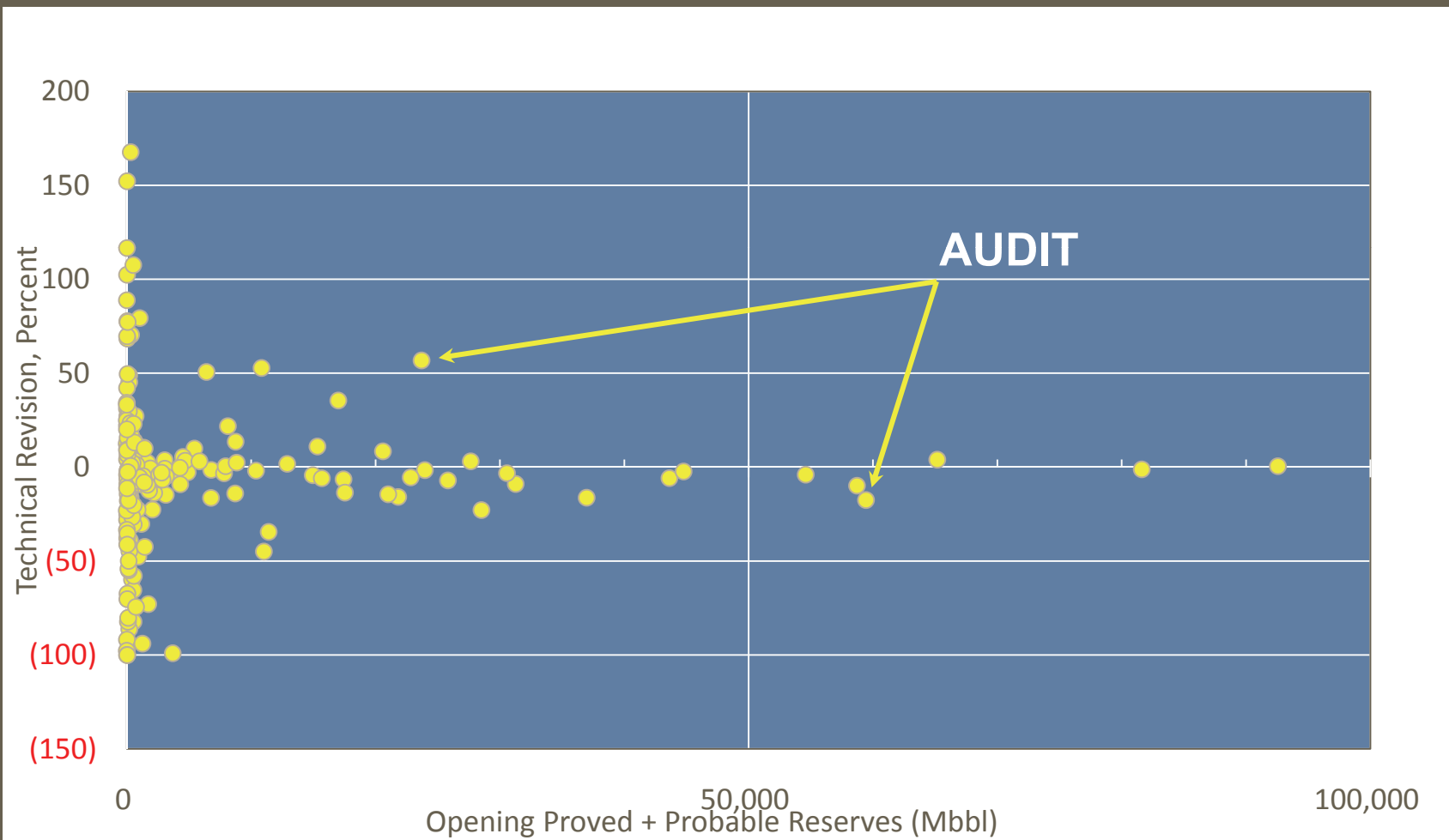
# LIGHT & MEDIUM OIL PROVED RESERVES



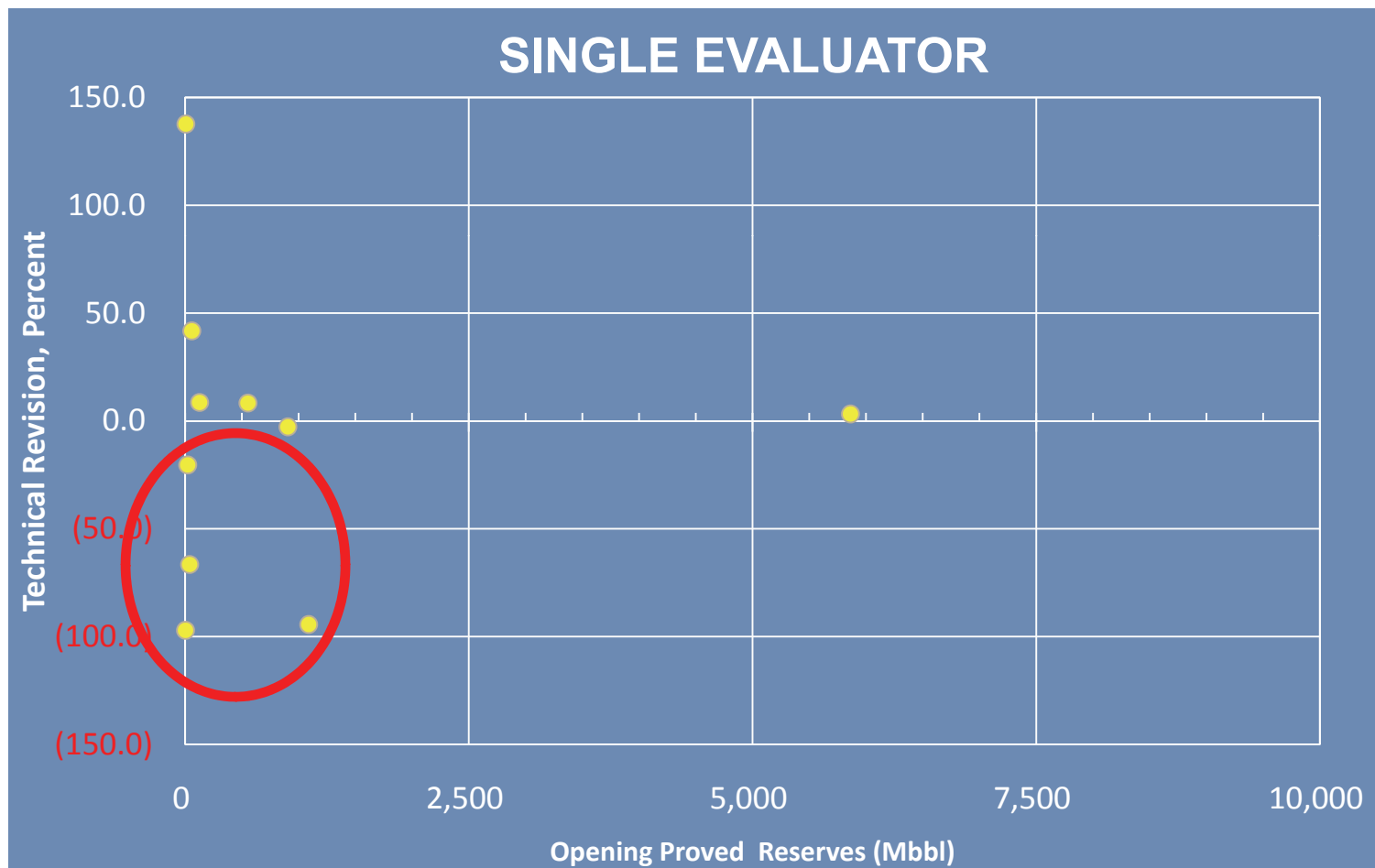
# LIGHT & MEDIUM OIL PROVED + PROBABLE RESERVES



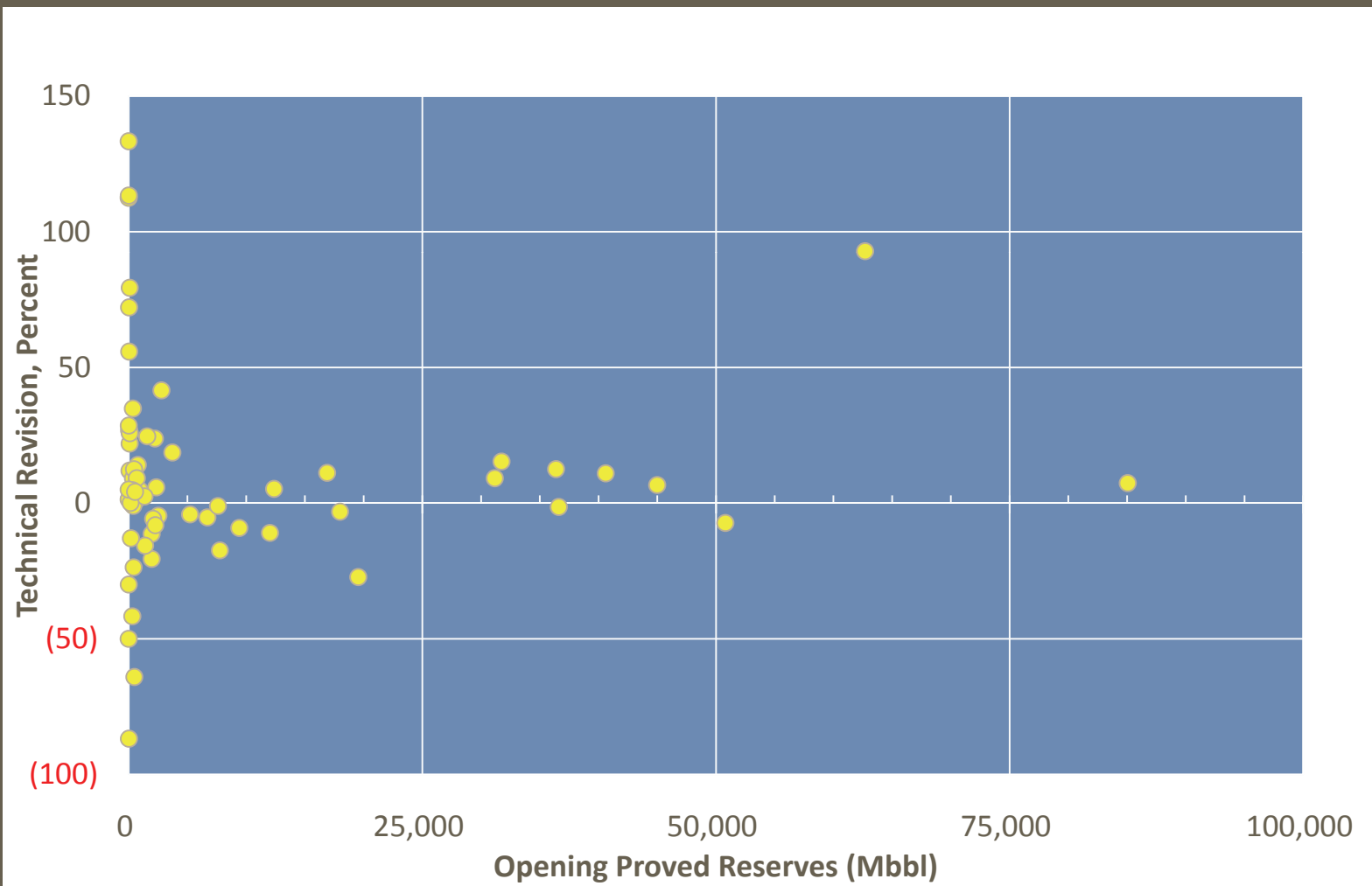
# LIGHT & MEDIUM OIL PROVED + PROBABLE RESERVES



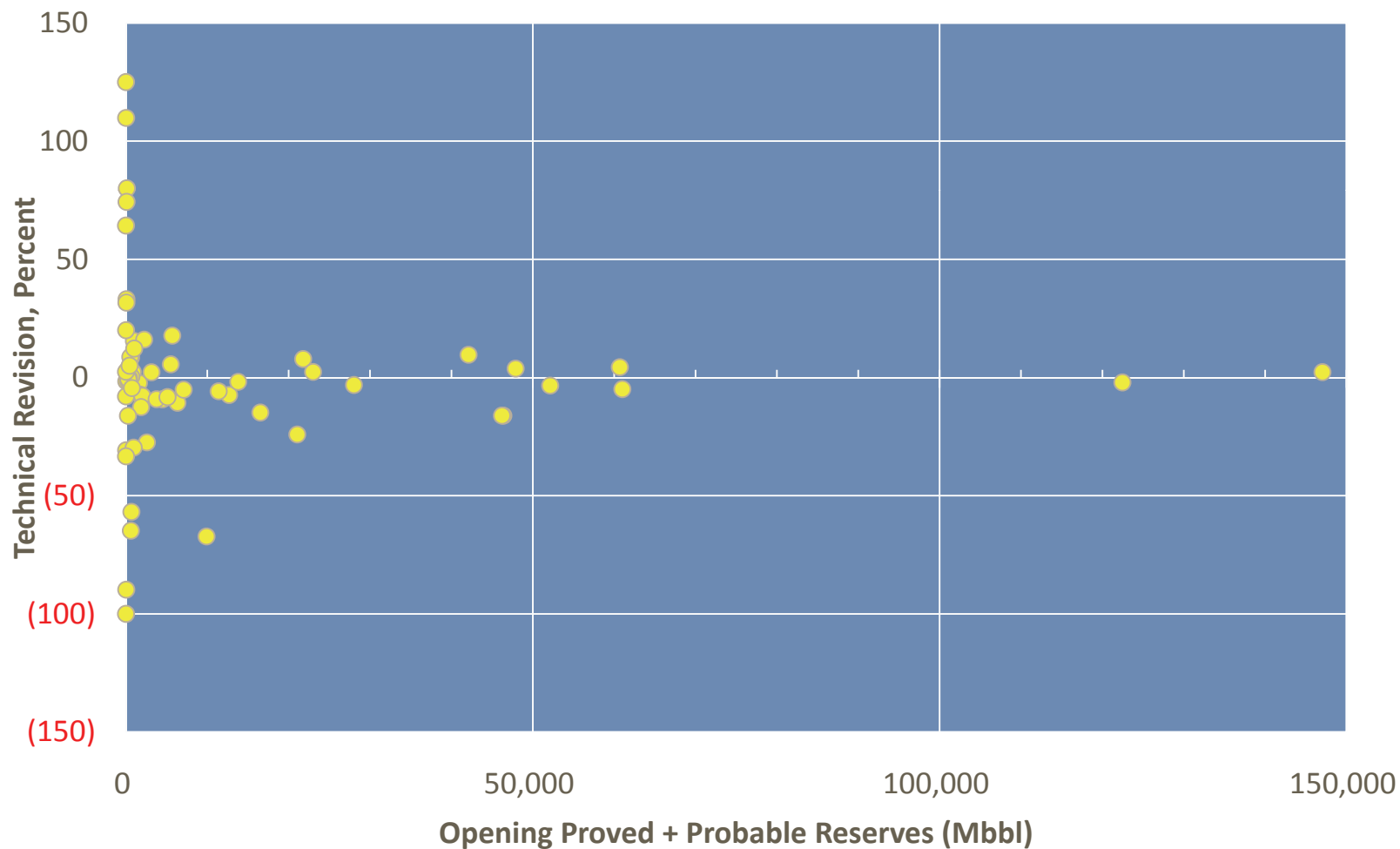
# LIGHT & MEDIUM OIL PROVED RESERVES



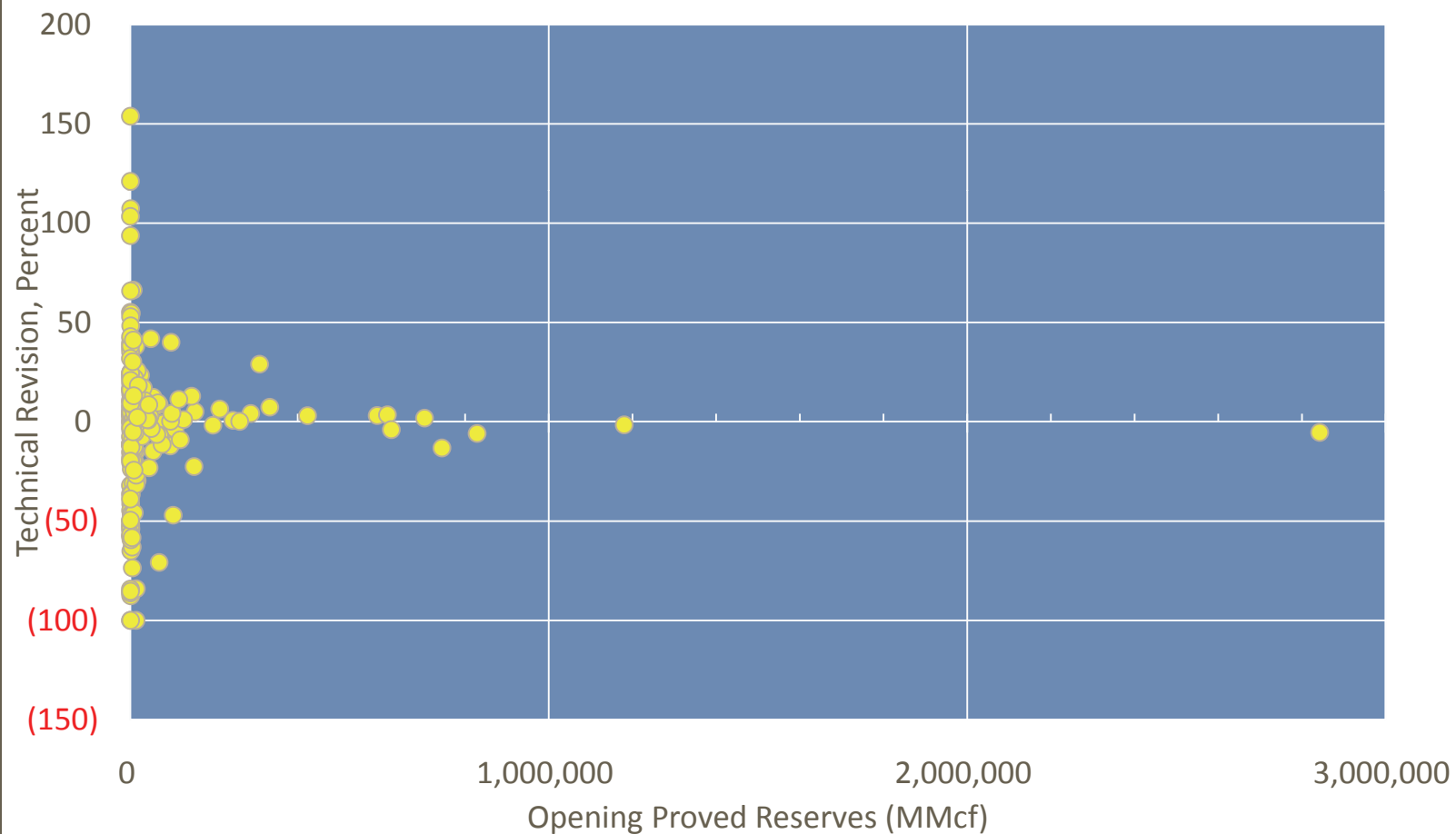
# HEAVY OIL PROVED RESERVES



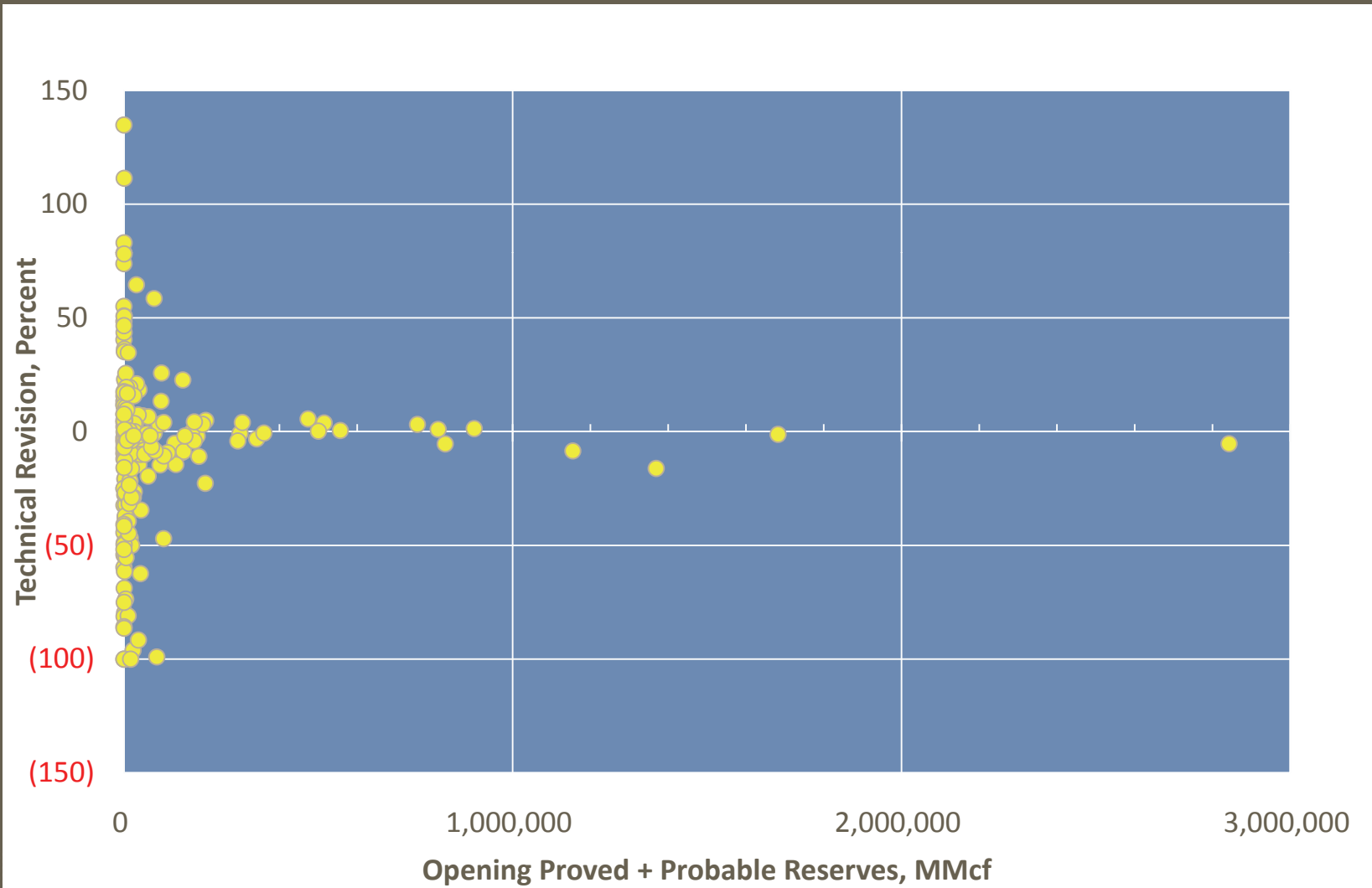
# HEAVY OIL PROVED + PROBABLE RESERVES



# NATURAL GAS PROVED RESERVES



# NATURAL GAS PROVED + PROBABLE RESERVES

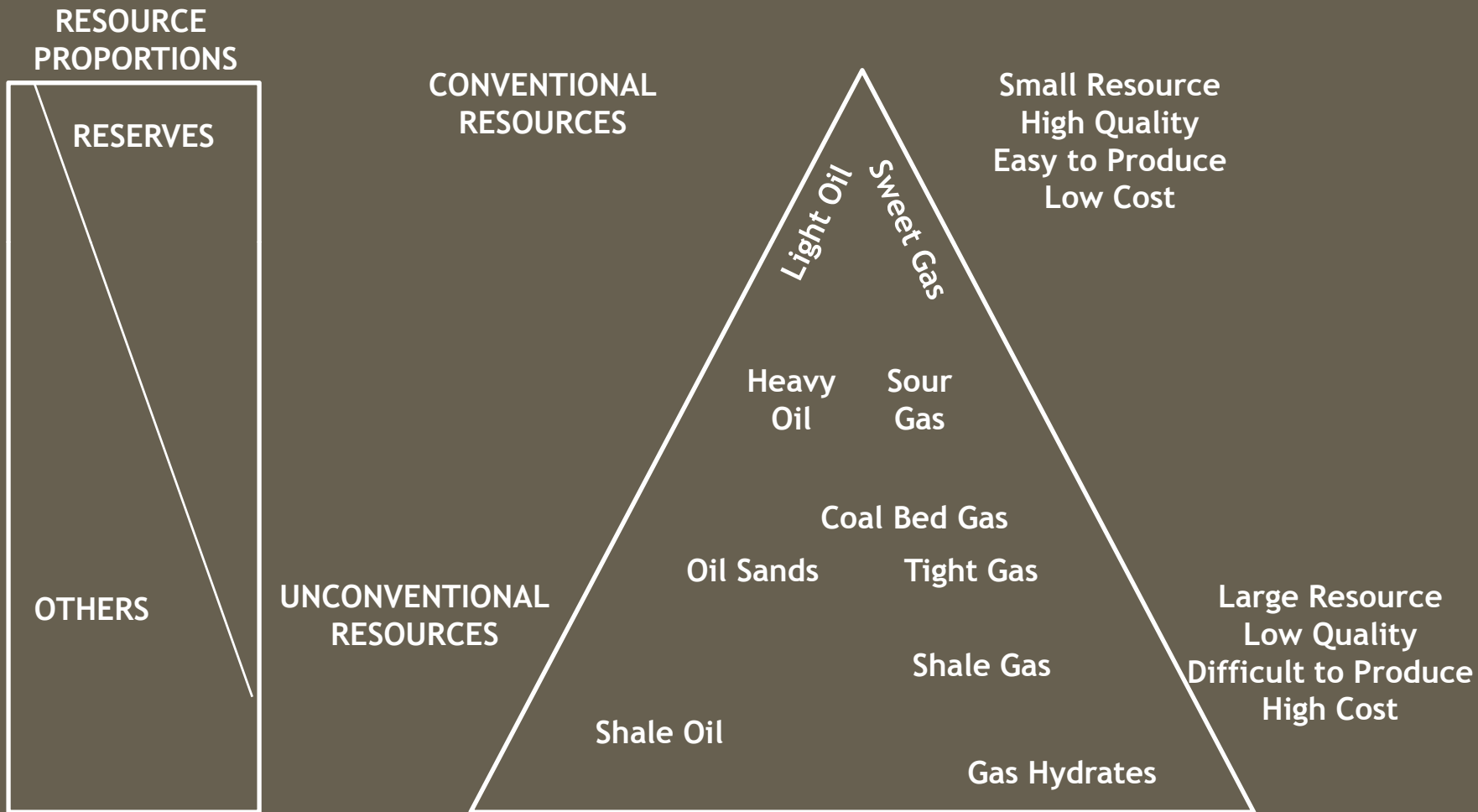


# NEW ISSUES

# RESOURCES

- Continued increase in disclosure on:
  - Resources other than reserves
  - Unconventional accumulations: recently shale gas
- NI 51-101 and COGEH original focus was on conventional reserves:
  - Some guidance on other classes of resource and unconventional hydrocarbons but limited detailed guidance

# THE RESOURCE TRIANGLE



# CSA STAFF NOTICE 51-327

## Feb 2009

- Provides guidance on some of the issues
- Guidance not prescriptive, but may be misleading if not followed.
- Interim solution until amendments to:
  - Canadian Oil and Gas Evaluation Handbook (COGEH)
  - NI 51-101
- Considering further guidance:
  - E.g., Contingent Resources, use of analogs, etc.

# CSA STAFF NOTICE 51-327

- Stand-alone Possible Reserves
- Disclosure only of High/P10 estimates
- Adding across Resource Classes (“Remaining Recoverable Resources”)
- Prospective Resources risked only for Chance of Discovery, not Chance of Development
- “Technology Under Development”
- Discovered Petroleum Initially In-Place Criteria for Unconventional Resources



# CSA STAFF NOTICE 51-327

## OIL AND GAS DISCLOSURE: RESOURCES OTHER THAN RESERVES DATA

- On ASC website at:  
[http://www.albertasecurities.com/securitiesLaw/Regulatory%20Instruments/5/51-327/3084268-v5-CSA\\_STAFF\\_NOTICE\\_51-327.pdf](http://www.albertasecurities.com/securitiesLaw/Regulatory%20Instruments/5/51-327/3084268-v5-CSA_STAFF_NOTICE_51-327.pdf)
- See also, ASC Breakfast Seminar:  
Oil and Gas Compliance, January 2009 under “Events and Presentations” 1/7/2009

# CONTINGENT RESOURCES

- Detailed guidance is limited:
  - Extrapolation from control points is an issue:
  - Often poor or no analogs
  - Often limited knowledge of specific reservoir and/or process
- Technical requirements similar to those for reserves but may not be economic:
  - Known accumulation: drilling & testing or **good** analogue is a prerequisite, not a contingency
- Contingencies are non-technical:
  - COGEH: “Economic, legal, environmental, political and regulatory matters or a lack of markets”

## REFERENCE MATERIAL

- ASC website [www.albertasecurities.com](http://www.albertasecurities.com)
  - For Companies
  - Oil and Gas
- 2009 ASC Oil and Gas Review Report
  - More detail on some of the issues discussed here
  - Publish in Q1 2010
- COGEH:
  - Now Available from the SPE Canada or SPEE Calgary



# ASC OIL AND GAS STAFF CONTACTS

## **DAVID ELLIOTT**

Chief Petroleum Advisor

403 297 4008 David.Elliott@asc.ca

## **FLOYD WILLIAMS**

Petroleum Evaluation Engineer

403 297 4145 Floyd.Williams@asc.ca

## **BILL ORR**

Petroleum Evaluation Geologist

403 297 7252 Bill.Orr@asc.ca

## **CARRIE NERMO**

Senior Petroleum Evaluation Technician 403 297 6588 Carrie.Nermo@asc.ca

## **BLAINE YOUNG**

Associate Director

403 297 4220 Blaine.Young@asc.ca

## **MICHAEL JACKSON**

Legal Counsel

403 355 3893 Michael.Jackson@asc.ca

## **JAN MAZUR**

Compliance Analyst

403 297 2091 Jan.Mazur@asc.ca