

Practical Valuation

Valuation Insights from the Oil and Natural Gas Industry

Presented to the
Canadian Security Analysis Conference 2006

May 9, 2006

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Overview of Presentation

- Background of Sayer Energy Advisors
- Components of an oil industry M&A transaction
- Brief mention of components we will **not** be discussing in detail today
- Undeveloped land valuation issues
- Seismic valuation issues
- Reserves valuation issues
- Other valuation issues
- Summary and questions

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Sayer Energy Advisors

- 20 year history of oil and natural gas industry merger and acquisition (“M&A”) services
- Completely independent of the public markets – we do not get involved in financings
- Managed by individuals with varied backgrounds, each with significant related experience
 - ***Alan Tambosso***, B.A.Sc., P.Eng. P.Geol.
 - ***Brent Heinz***, B.Sc., B.Comm.
 - ***Tom Pavic***, B.Comm., CFA

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Alan W. Tambosso



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Alan W. Tambosso

- A Professional Engineer **and** a Professional Geologist, one of very few in Alberta
- Gained initial industry experience as a successful prospect generator
- Experienced in running public and private companies as President and Director
- Has been directly involved in the purchase and sale of both public and private companies as management
- For the past 5 years has provided corporate advisory services relating to M&A transactions

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Sayer Energy Advisors

Corporate Advisory Services

- Divestitures, Mergers, Acquisitions
- Valuations and Fairness Opinions
- Expert Witness Assignments

Industry Publications

- Well-known for M&A market analysis
- Publish complete Canadian oil industry M&A and financing information
- Only source for complete listing of current Canadian oil & natural gas industry asset and corporate dispositions

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Recent Divestitures

Completed by Sayer Energy Advisors

 <p>Accrete Energy Inc. <i>Asset Sale</i> \$9.55 million April 2006</p>	 <p>Vista Resources Inc. <i>Asset Sale</i> Undisclosed February 2006</p>	 <p>Eight Norrep JV companies <i>Corporate Divestitures</i> Undisclosed January 2006</p>	
 <p>Innova Exploration Ltd. <i>Asset Sale</i> <\$5.0 million December 2005</p>	 <p>Dragonheart Energy Inc. <i>Corporate Divestiture</i> \$17.7 million September 2005</p>	 <p>Eastshore Energy Ltd. <i>Joint Venture</i> \$12.0 million August 2005</p>	 <p>Innova Exploration Ltd. <i>Asset Sale</i> \$10.2 million June 2005</p>
 <p>Response Energy Corporation <i>Asset Sale</i> \$7.3 million April 2005</p>	 <p>March Resources Corporation <i>Asset Sale</i> <\$5.0 million March 2005</p>	 <p>Innova Exploration Ltd. <i>Asset Sale</i> <\$5.0 million January 2005</p>	 <p>City of Medicine Hat <i>Joint Venture</i> Undisclosed December 2004</p>
 <p>BlackRock Ventures Inc. <i>Asset Sale</i> <\$5.0 million October 2004</p>	 <p>Pocatererra Resources Ltd. <i>Corporate Divestiture</i> \$5.7 million September 2004</p>	 <p>Connacher Oil and Gas Limited <i>Asset Sale</i> \$17.8 million July 2004</p>	 <p>AltaCanada Energy Corp. <i>Asset Sale</i> \$3.2 million June 2004</p>
 <p>AltaCanada Energy Corp. <i>Asset Sale</i> <\$5.0 million February 2004</p>	 <p>Tiverton Petroleum Ltd. <i>Asset Sale</i> <\$5.0 million February 2004</p>	 <p>Herc Oil/ Zargon <i>Corporate Divestiture</i> \$25.0 million July 2001</p>	 <p>Allied/ Backer <i>Company Acquisition</i> \$12.1 million April 2000</p>

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Fairness Opinions & Valuations

Completed by
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Thunder
Energy Trust

Valuation of
"Goodwill"

Undisclosed
January 2006

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Rolling Thunder/
San Telmo

Fairness Opinion

\$29.5 million
November 2005

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Dragonheart Energy
Ltd.

Fairness Opinion

\$17.7 million
September 2005

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Private
Company

Valuation on Share
Buy-Out

\$9.1 million
August 2005

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Long View/
Wedona /Wedona II

Valuation Opinion

\$6.6 million
July 2005

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Endless/
Marauder

Fairness Opinion

\$33.6 million
May 2004

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Olympia Energy
Inc.

Review of Shareholder
Value Alternatives

>100.0 million
December 2003

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Drillcorp/
Exall

Fairness Opinion

\$11.4 million
March 2003

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Kicking Horse
Resources Inc.

Maximize Shareholder
Value

Undisclosed
February 2003

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Undisclosed Public
Company

Valuation of a Merger
Candidate

\$20.0 million
September 2003

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Undisclosed
Royalty Trust

Management Contract
Internalization

Undisclosed
December 2002

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Private
Company

Valuation on Sale

>\$70.0 million
December 2002

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ENERGY ADVISORS

NAL Oil & Gas
Trust

Management Contract
Review

Undisclosed
September 2002

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Private Service
Company

Valuation

\$4.8 million
September 2002

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NCE Petrofund/
NCE Energy Trust

Merger,
Valuation Opinion

\$706.4 million
April 2002

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Endev/NCE Limited
Partnerships

Valuation Opinion

\$44.4 million
April 2002

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Private
Company

Valuation

>\$75.0 million
November 2001

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EnerMark/
Enerplus

Merger,
Valuation Opinion

\$2.0 billion
June 2001

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Bushmills Energy
Corporation

Valuation Opinion

\$8.3 million
July 2001

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True/
Marengo

Fairness Opinion

\$16.1 million
January 2001

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Enerplus/
ERPC III

Fairness Opinion

\$109.6 million
December 2000

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Enerplus/Westrock/
Westrock II

Merger,
Valuation Opinion

\$263.6 million
April 2000

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Oil Industry M&A Transactions

Components of a corporate evaluation:

Financial

- Working capital
- Tax pools
- Ongoing obligations
 - Office lease, equipment rental, etc.

Transaction costs

- Legal, accounting, severance obligations

Operational

- Undeveloped land
- Seismic
- Oil and natural gas reserves
- Equipment

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Financial

	September 30, 2005	December 31, 2004
	(Millions of U.S. dollars, except for share amounts)	
ASSETS		
Current assets		
Cash and cash equivalents	\$ 2,920	\$ 3,607
Restricted cash and cash equivalents	73	80
Accounts receivable — net	2,929	2,800
Inventories — net	1,232	1,414
Deferred income taxes — net	371	255
Other current assets	580	355
Total current assets	8,105	8,511
Investments	166	159
Plant and equipment — net	1,571	1,646
Goodwill	2,339	2,123
Intangible assets — net	150	78
Deferred income taxes — net	3,606	3,736
Other assets	560	691
Total assets	\$ 16,497	\$ 16,944
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities		
Trade and other accounts payable	\$ 981	\$ 995
Payroll and benefit-related liabilities	534	512
Contractual liabilities	396	568
Restructuring liabilities	131	254
Other accrued liabilities	2,487	2,788
Long-term debt due within one year	1,455	15
Total current liabilities	5,984	5,132
Long-term debt	628	2,062
Deferred income taxes — net	226	143
Other liabilities	3,374	3,189
Total liabilities	10,212	10,526
Minority interests in subsidiary companies	105	94
Guarantees, commitments and contingencies (notes 10, 11 and 16)		
SHAREHOLDERS' EQUITY		
Preferred shares, without par value — Authorized shares: unlimited; Issued and outstanding shares: 30,000,000 as of September 30, 2005 and 30,000,000 as of December 31, 2004	536	536
Common shares, without par value — Authorized shares: unlimited; Issued and outstanding shares: 1,460,978,638 as of September 30, 2005 and 1,460,978,638 as of December 31, 2004	1,211	1,211
Additional paid-in capital	22,164	22,107
Accumulated deficit	(17,047)	(16,992)
Accumulated other comprehensive income (loss)	(684)	(538)
Total shareholders' equity	6,180	6,324
Total liabilities and shareholders' equity	\$ 16,497	\$ 16,944

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Transaction Costs

- In addition to legal and financial obligations, severance obligations can be significant
 - Recent management buyouts have been at significant cost
 - Are there contracts in place?
 - Is there potential litigation over severance?
 - Best to leave this to the lawyers



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Other Liabilities

- Valuation considerations include other potential items which may add value or may be liabilities
 - Lawsuits
 - Issues with joint venture partners
 - Land title issues
 - Hedging contracts
 - Supply of services contracts

People

- An intangible valuation issue is the value of people
- If they aren't terminated, will you keep them?
 - Calgary marketplace is starving for talent
 - Can you keep the key people?
 - If so, there is real value – how do you quantify this?
 - “Goodwill” might see increased value if key people are retained

Undeveloped Land

Generally accepted valuation standard is to apply “*current market rate*” to undeveloped land

- Current rate is approximately \$300/acre
- 2005 rate was approximately \$100/acre
- 2003 rate was approximately \$ 80/acre
- 1996 rate was approximately \$ 50/acre

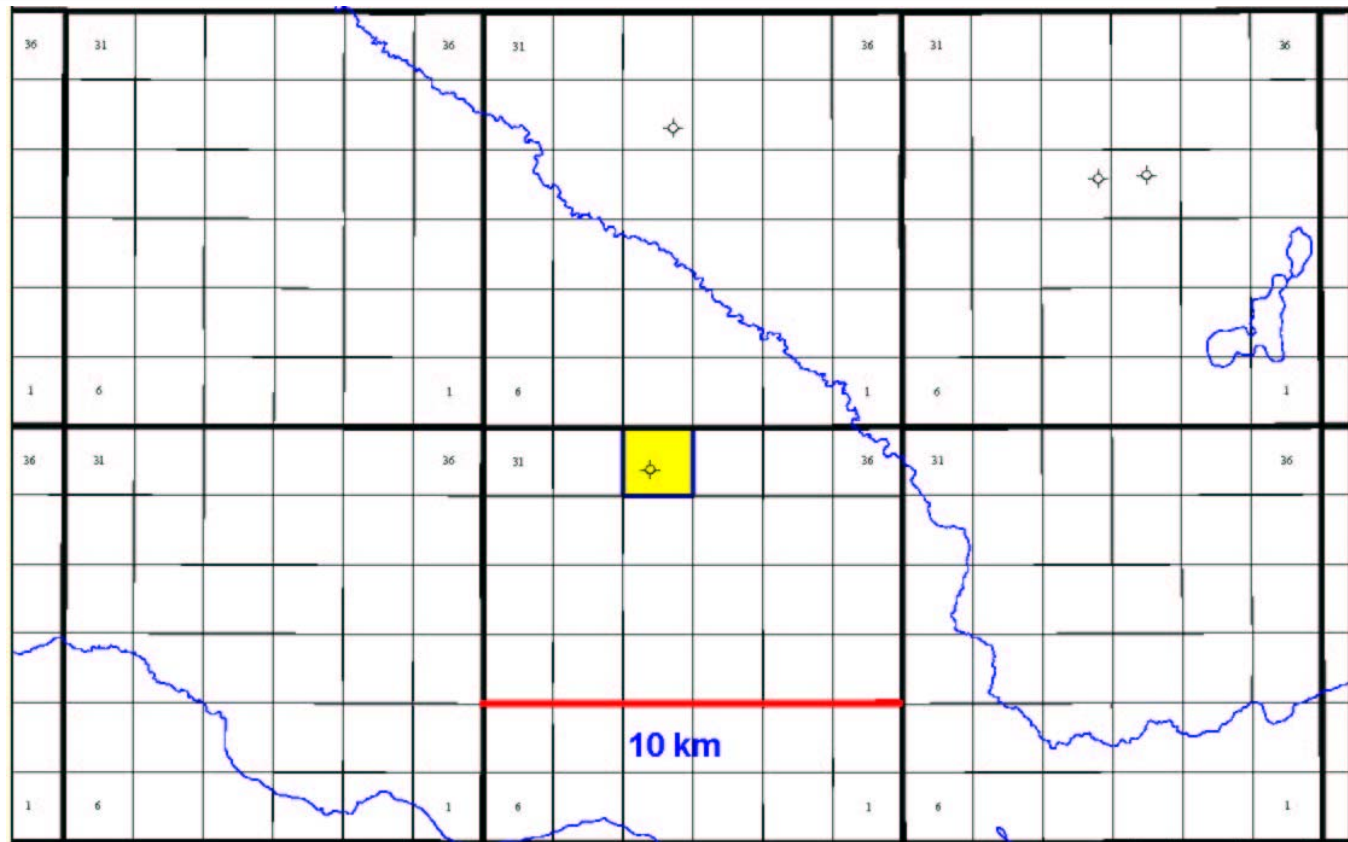
Recent Crown land sales have been at average prices in excess of \$500/acre

Undeveloped Land

- A typical junior oil company with 1,000 boepd of production would have 35,000 to 45,000 net acres of undeveloped land
- Current reserve value of 1,000 boepd is approximately \$40 to \$50 million
- At current prices, land values have become a significant part of a company's value
- Every \$100/acre change in the valuation price of the undeveloped land would cause a significant change in the corporate valuation, approximately \$4 million per \$100/acre

... however, all land is not created equal ...

Undeveloped Land



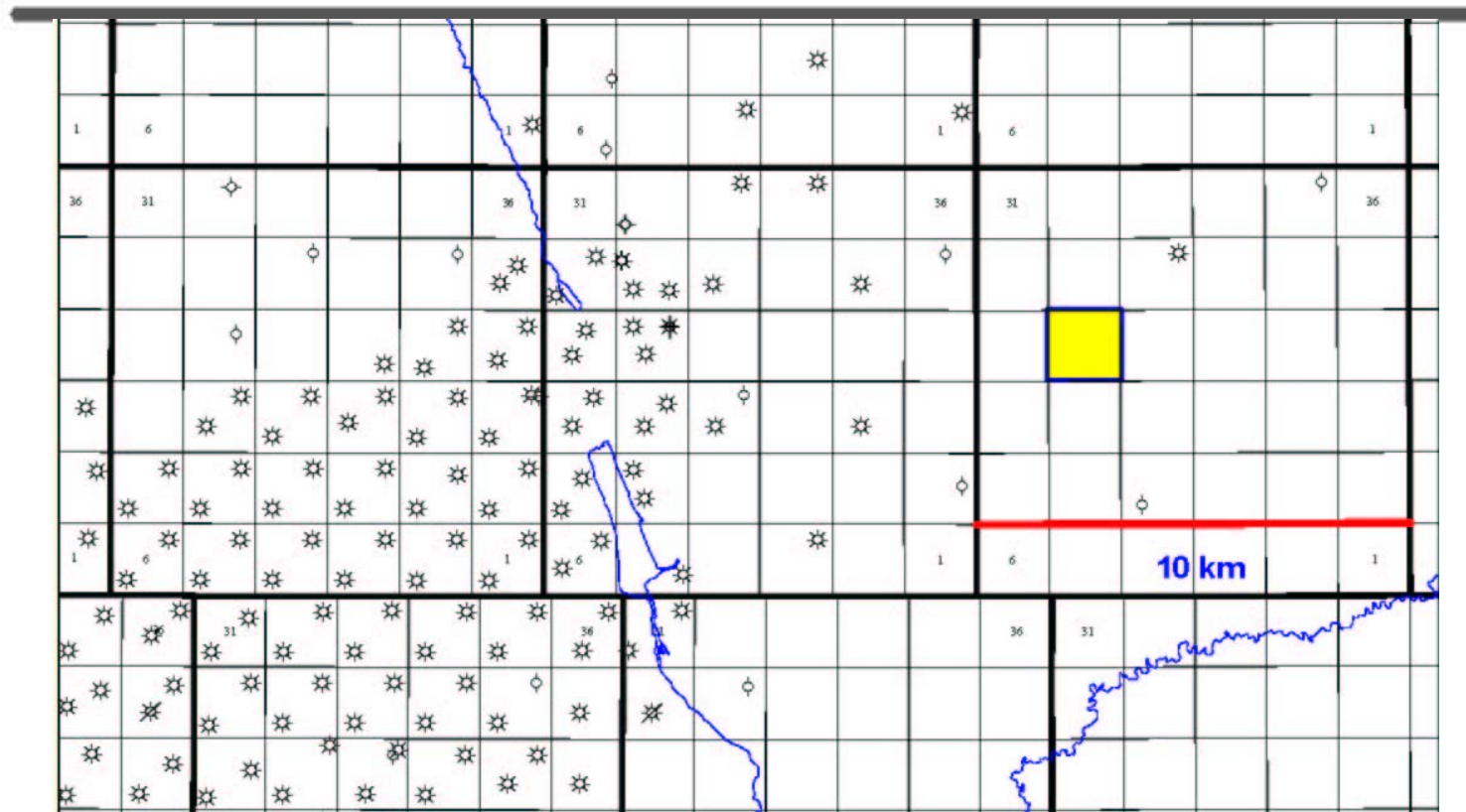
- Dry hole on land, no production for 100 km
- Nearest recent sale price \$18/acre

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Moose pasture

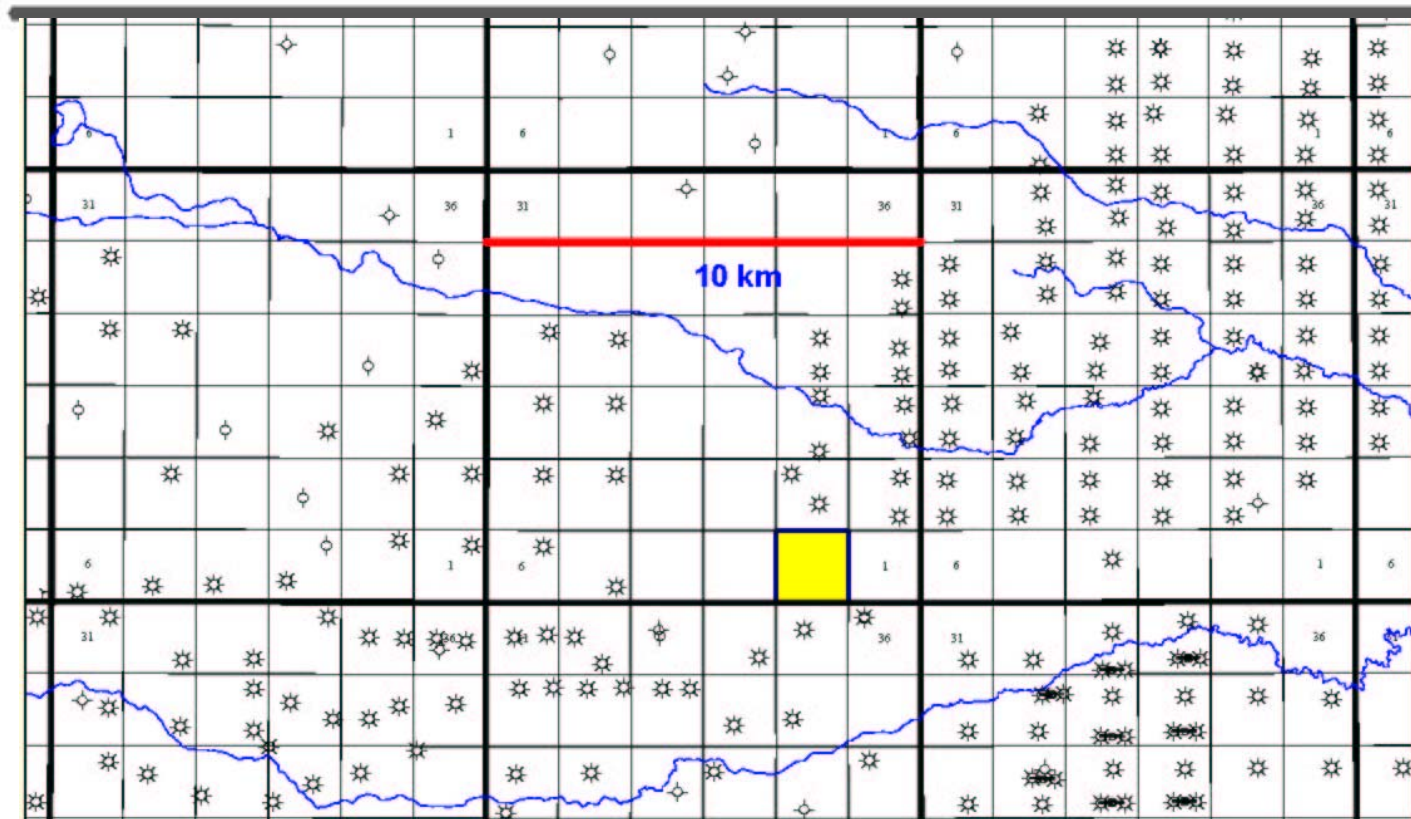
Undeveloped Land



- No wells on land; gas well offsetting land
- 8 km from major natural gas field
- Nearest recent sale price \$25/acre

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Undeveloped Land

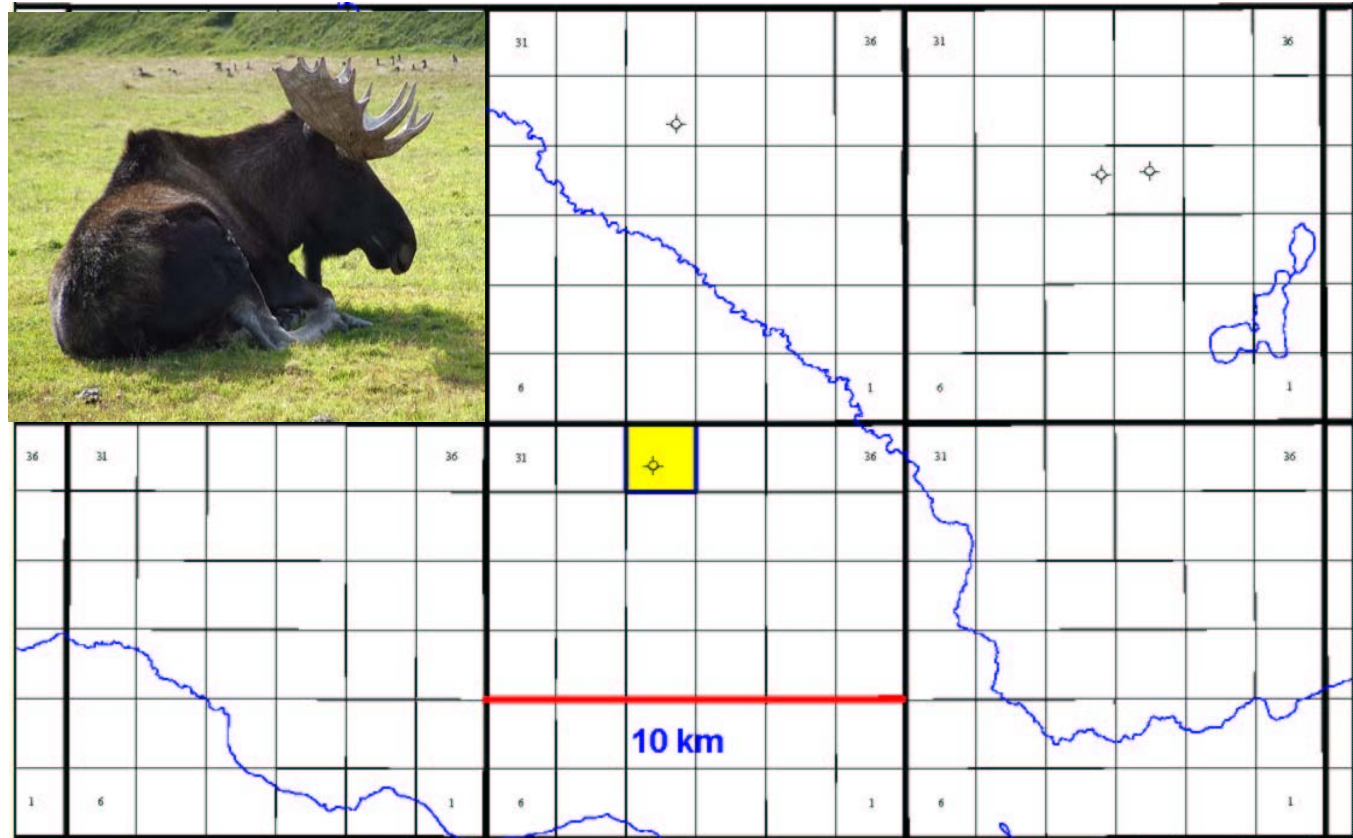


- Land offset by major natural gas development
- No recent land sales in area

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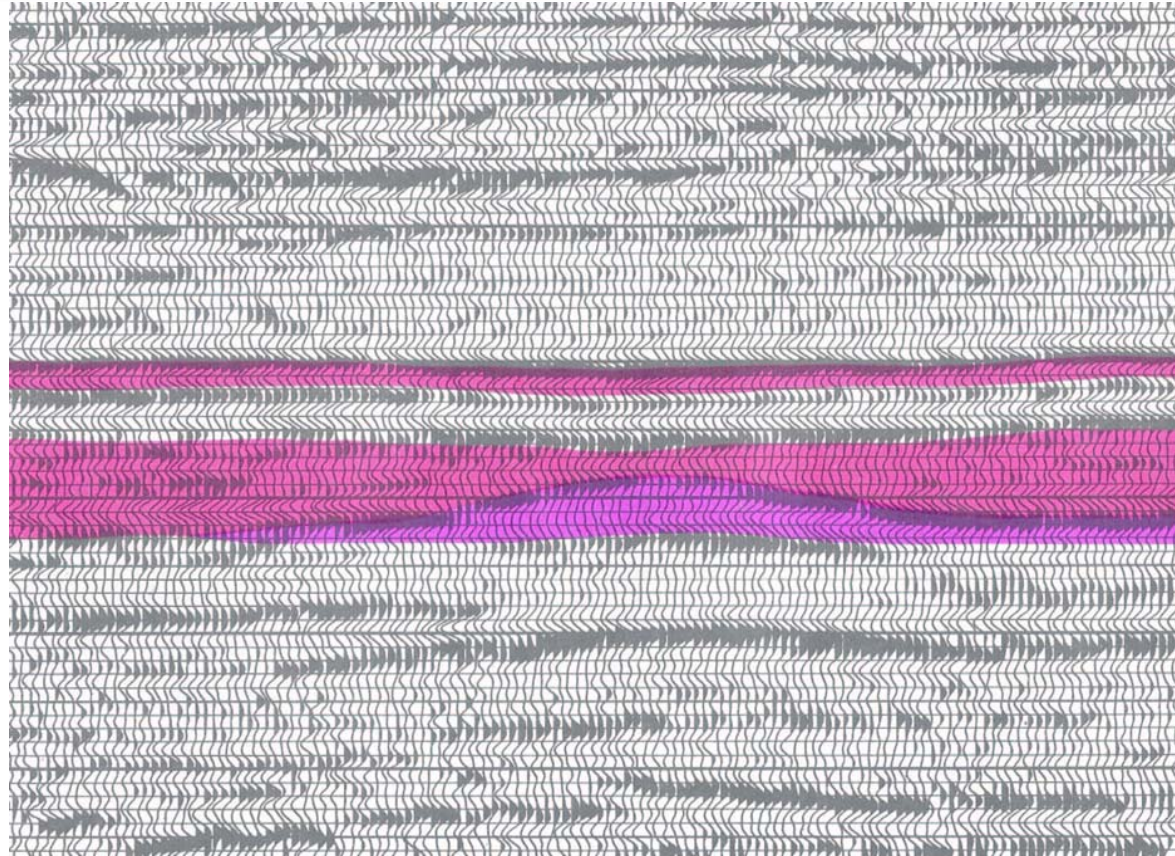
Undeveloped Land



This “moose pasture” apparently has little value,
... however ...

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Undeveloped Land



Undeveloped land with a good play indicated by seismic is worth significantly more than “*moose pasture*”

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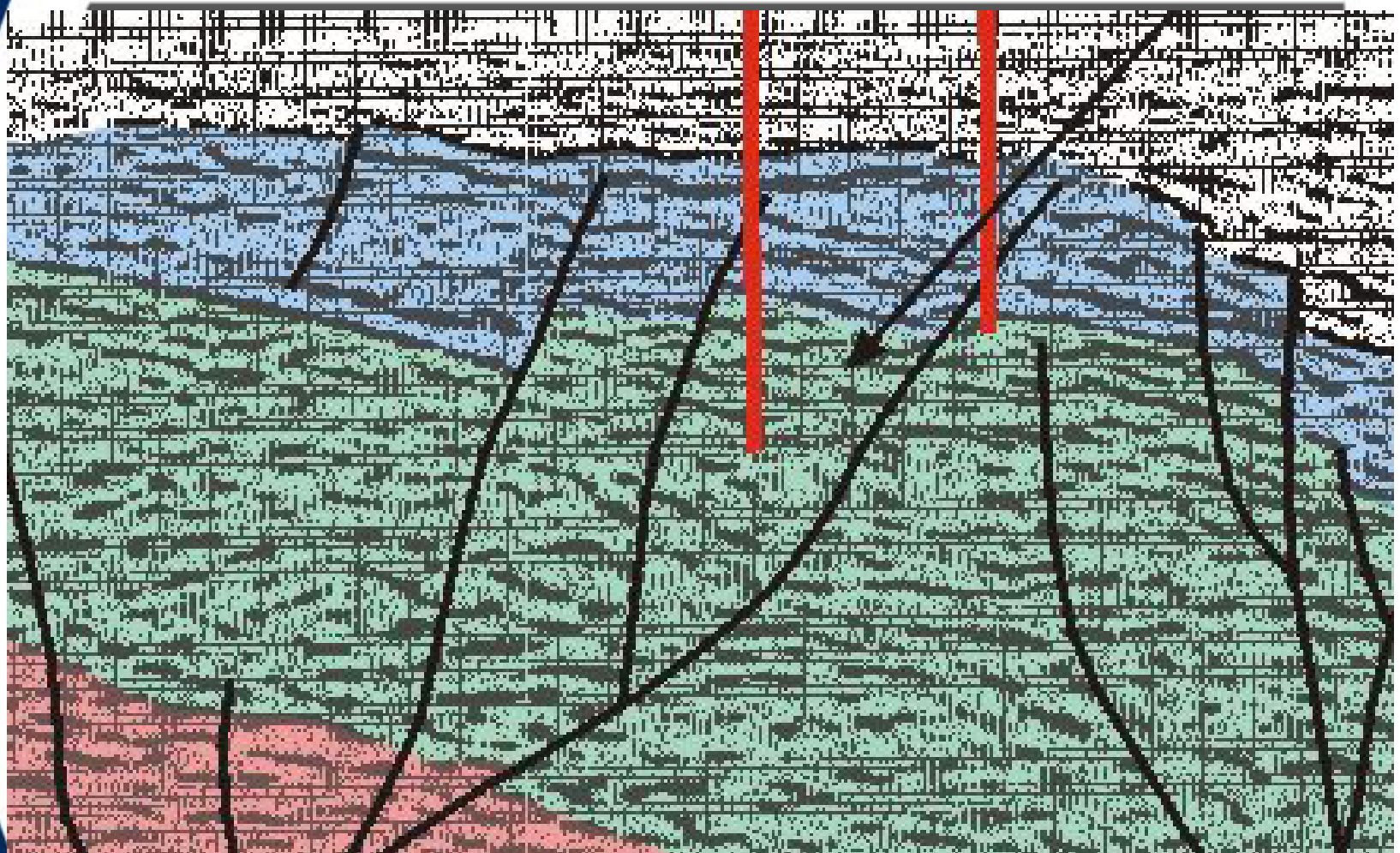
Undeveloped Land

- **To effectively value undeveloped land, each and every parcel should be reviewed in detail by independent technical specialists**
 - Technical personnel from the company owning the land should present their ideas to these specialists
 - An independent value should be placed on each and every parcel, considering the technical merit of the prospects as well as the current market for similar parcels of land

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Seismic



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Seismic

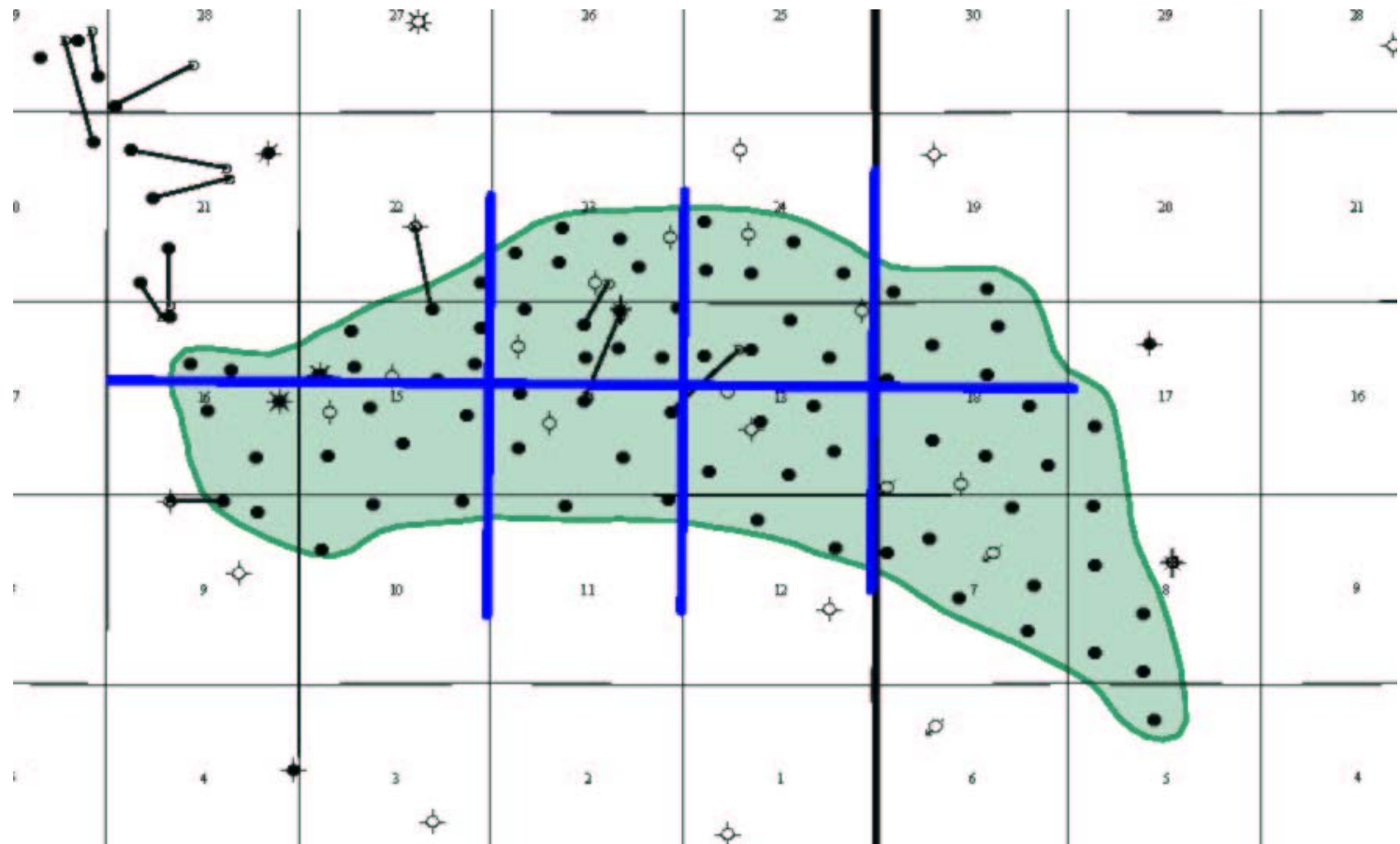
- Seismic is an asset that must be valued
- Different types of seismic (proprietary data, trade data) have different values
- Proprietary data *should* be worth more than trade data, however this is not necessarily the case
- Trade data should add some value to a transaction, however there are instances where this might actually be a negative in a valuation

Proprietary Seismic

Proprietary Seismic

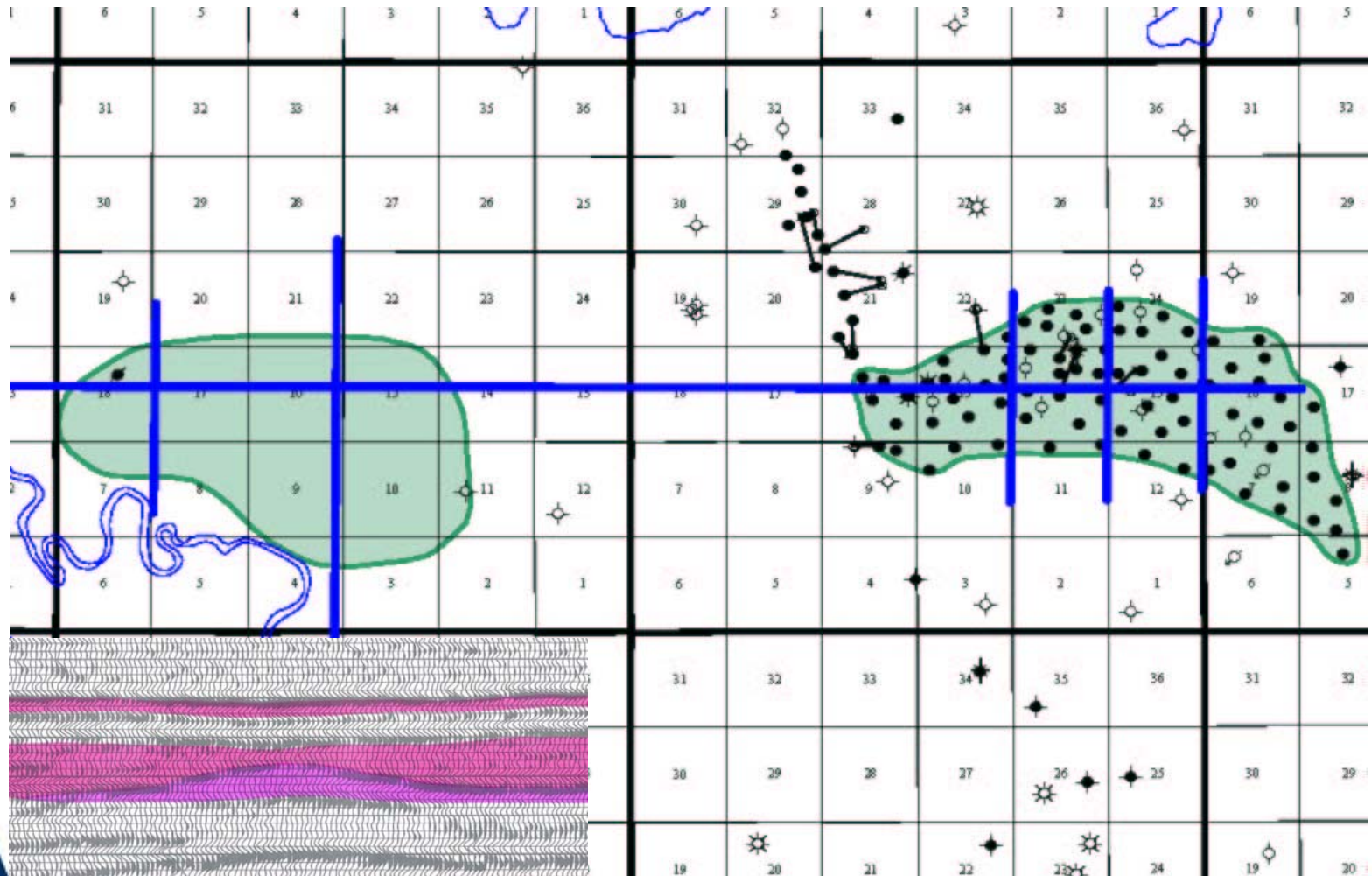
- Data that the company has paid to acquire through it's own acquisition, possibly with a partner
- Data is not necessarily available to the rest of the industry
 - Does the company have an active program to market data or does it keep all data confidential?
- Data is not necessarily useful to the rest of the industry
 - Small programs over company-interest land might not have resale value
 - Long regional lines might have tremendous value

Proprietary Seismic



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Proprietary Seismic



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Trade Seismic

Trade Seismic

- Data that the company has paid to acquire under license from industry after being shot by another party
- Data is available to the rest of the industry
- Data cannot be resold, and only has value to a party active in the areas where the licensed data is located
- Unlike software licenses and other related licenses, some seismic licensing issues may cause additional fees to be due upon change of control of the company holding the license

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Trade Seismic

Change of Control

- Some trade seismic acquisition agreements (up to 20 pages long!) contain clauses regarding additional licensing fees to be paid upon change of control
- Examples of such clauses include:
 - 25% premium to be paid if change of control occurs within 5 years of date of data purchase; reducing annually thereafter
 - **Daily** charge of 0.5% of original purchase cost for data not returned after date of change of control
 - Total charge of 150% of original data purchase cost for data not returned within 10 days of change of control

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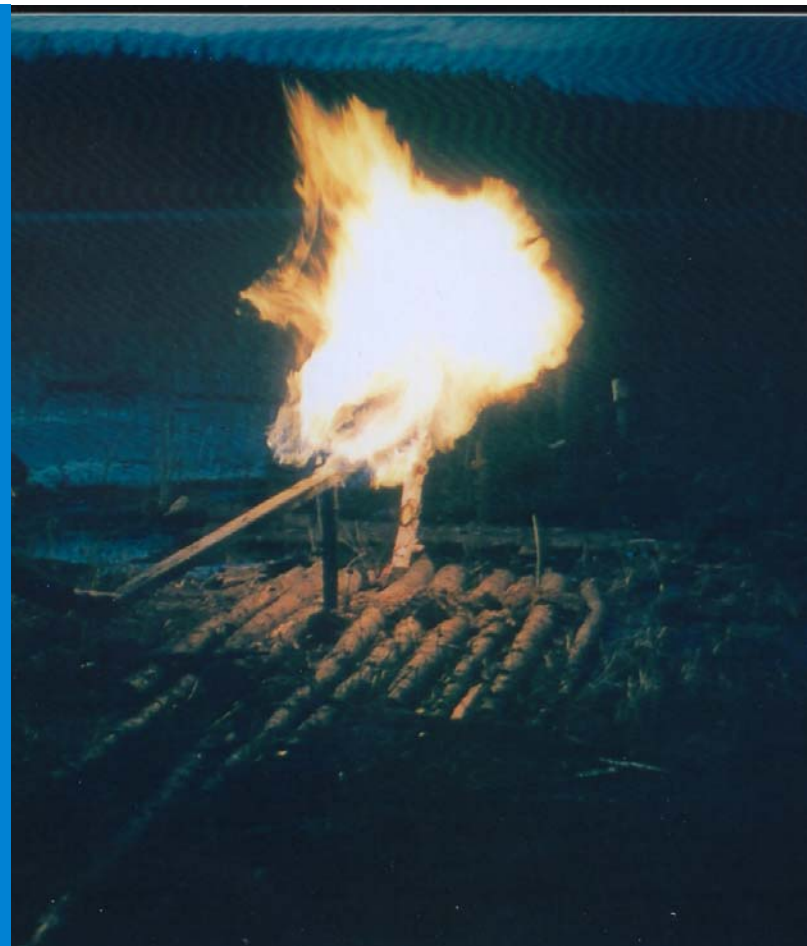
Seismic Valuation

- Like land, to effectively value seismic, each and every proprietary line should be reviewed in detail by independent technical specialists
- All trade data should be reviewed in a similar manner prior to assigning a value
 - Different parties will place different values on trade data held under license, depending upon the individual areas of expertise
 - In a corporate transaction, a trade data license can be a significant cost liability

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Oil and Natural Gas Reserves



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Oil and Natural Gas Reserves

- All reserve reports are NOT created equal
- NI 51-101 standards (implemented in September 2003) have theoretically improved the situation, however, issues remain
 - Perception of the credibility of the various independent evaluators
 - Forecast pricing
 - Assignment of reserves to new pools
 - Equipment value
 - ...

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Independent Engineers

“an engineer is one who passes as an exacting expert on the strength of being able to turn out, with prolific fortitude, strings of incomprehensible formulae calculated with micrometric precision, from extremely vague assumptions based on debatable figures obtained from inconclusive tests and quite incomplete experiments, carried out with instruments of problematic accuracy and by persons of rather dubious mentality, with the particular anticipation of disconcerting and annoying a group of hopelessly chimerical fanatics altogether too frequently described as the Company’s management”

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Independent Engineers

- **In spite of outward appearances, there are still significant differences in the perception of the various independent engineering firms**
 - There is effectively an “A” list, a “B” list and a “C” list of independent evaluators
 - “C” list reserve reports are almost always discounted in the marketplace, no matter how good they might be
 - Even amongst “A” list firms there are a variety of opinions as to the credibility in the eyes of different parties

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Forecast Pricing

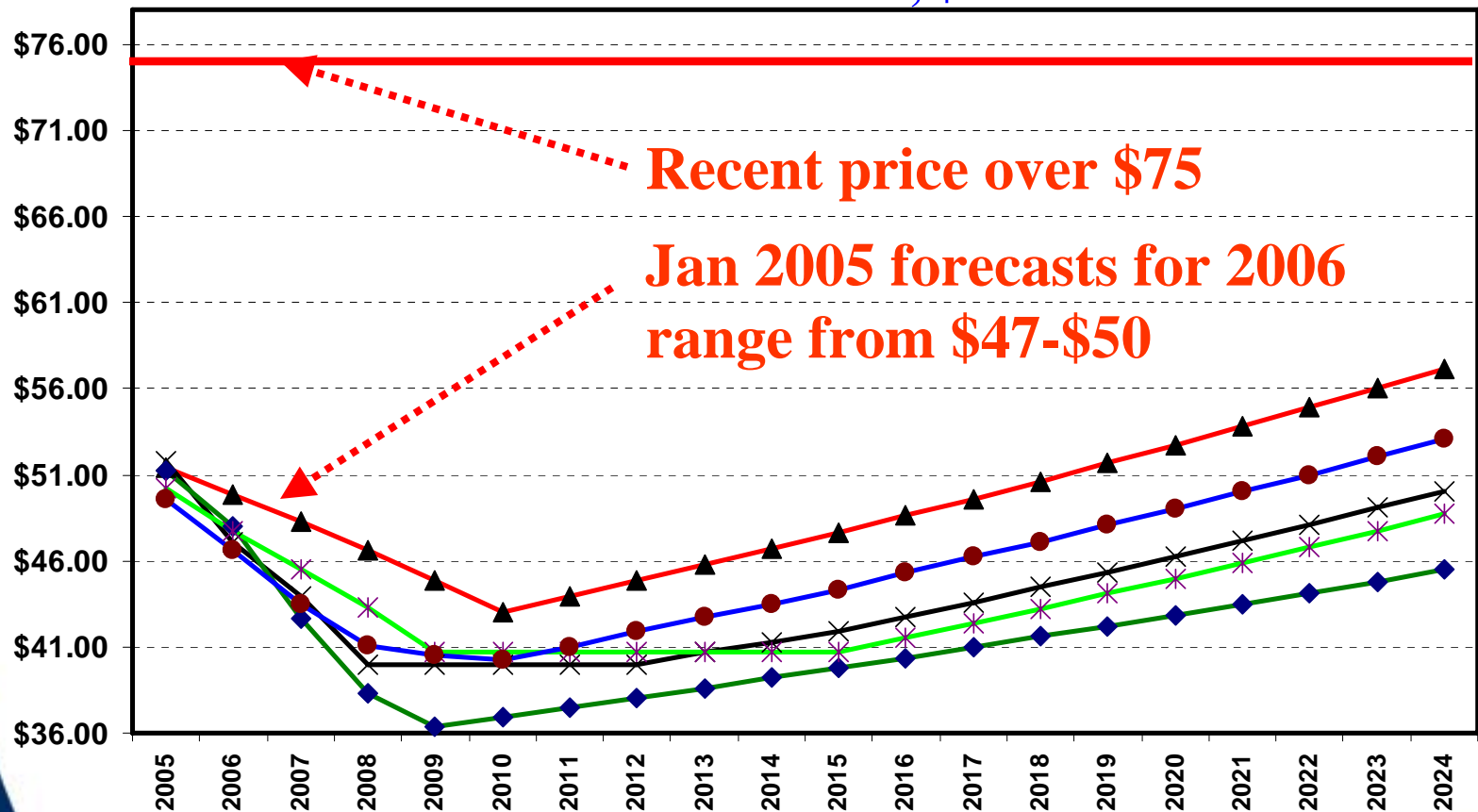
- **Every independent engineering firm has an internal price forecast for crude oil, natural gas and natural gas liquids**
 - There are significant differences amongst the various forecasters
 - Participants in an M&A transaction need to consider the effect of price variations between their independent engineer and the one that prepared the report for the assets/company being considered for purchase
 - ALL forecasts will eventually be proven to be wrong, it's just a question of degree

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Pricing – Crude Oil

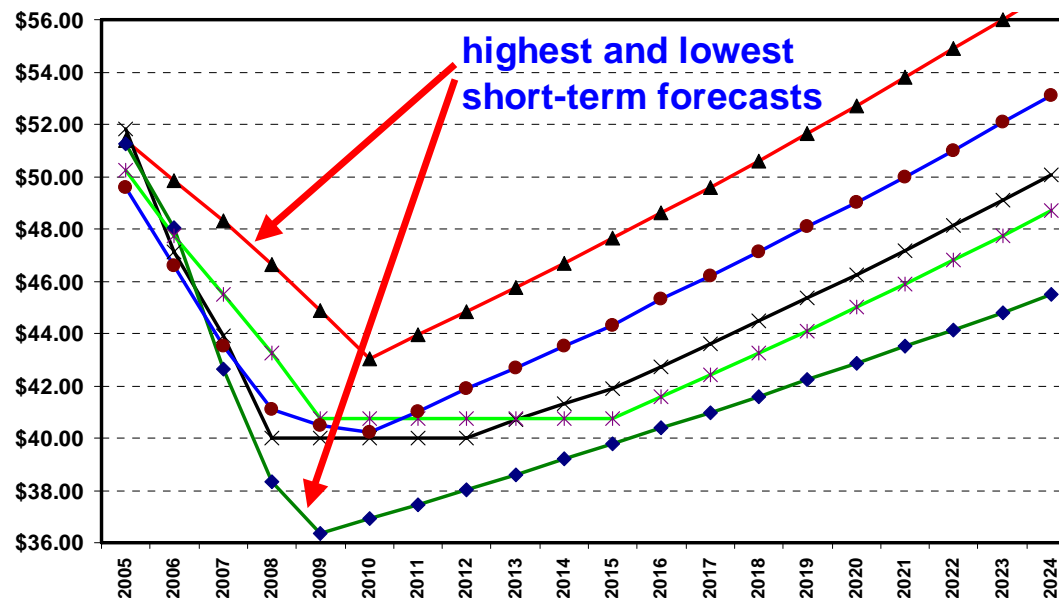
COMPARISON OF JAN. 01, 2005 CRUDE OIL FORECASTS EDMONTON PAR, \$CDN



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Pricing – Crude Oil

- In this example, there are significant differences in the short-term price expectations. Let's look at the two extremes in more detail.



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Pricing – Crude Oil

- Over the first six years of production, the price differential in these two reports averages 12%



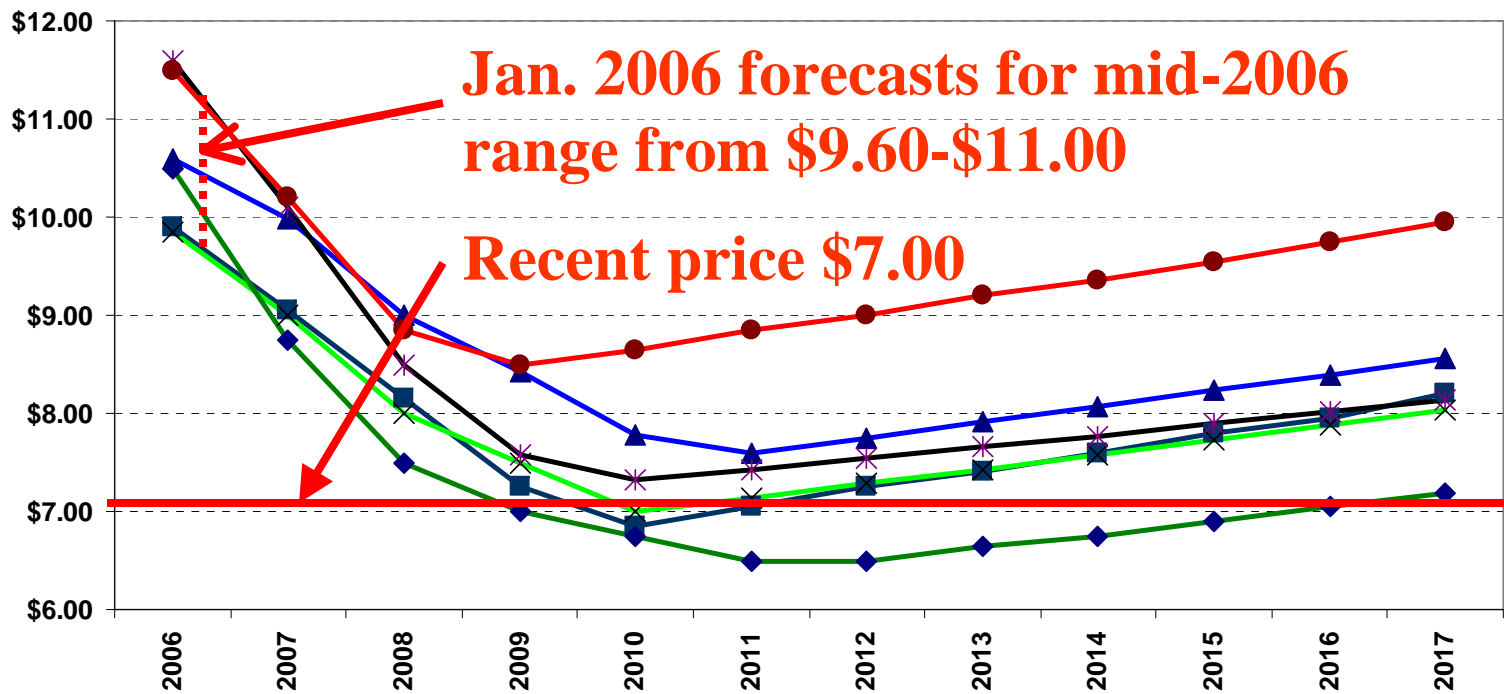
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Forecast Pricing

- **A 12% price difference over the first six years of production is VERY significant**
 - The typical average reserve life of properties ranges from 5-9 years
 - Most of the present value of an oil or natural gas property is contained in its first few years
 - The value of an asset or a company for an M&A transaction would be dramatically different depending on which price forecast was used

Pricing – Natural Gas

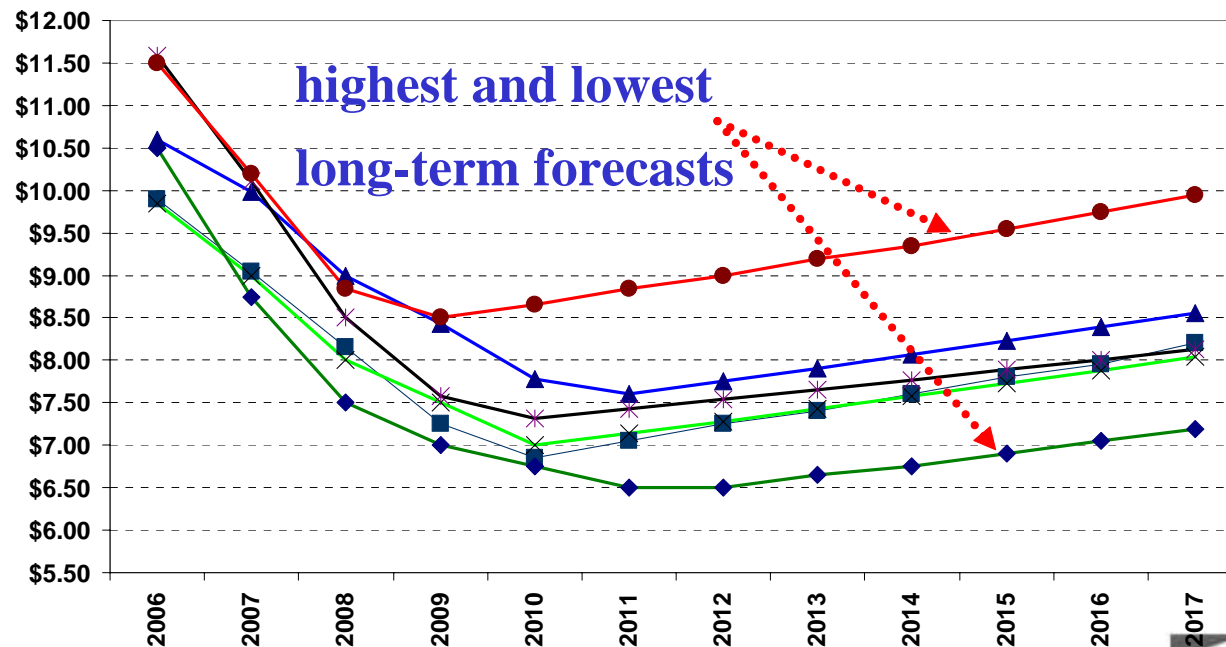
COMPARISON OF JAN. 01, 2006 NATURAL GAS PRICE FORECASTS HENRY HUB, \$US



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Pricing – Natural Gas

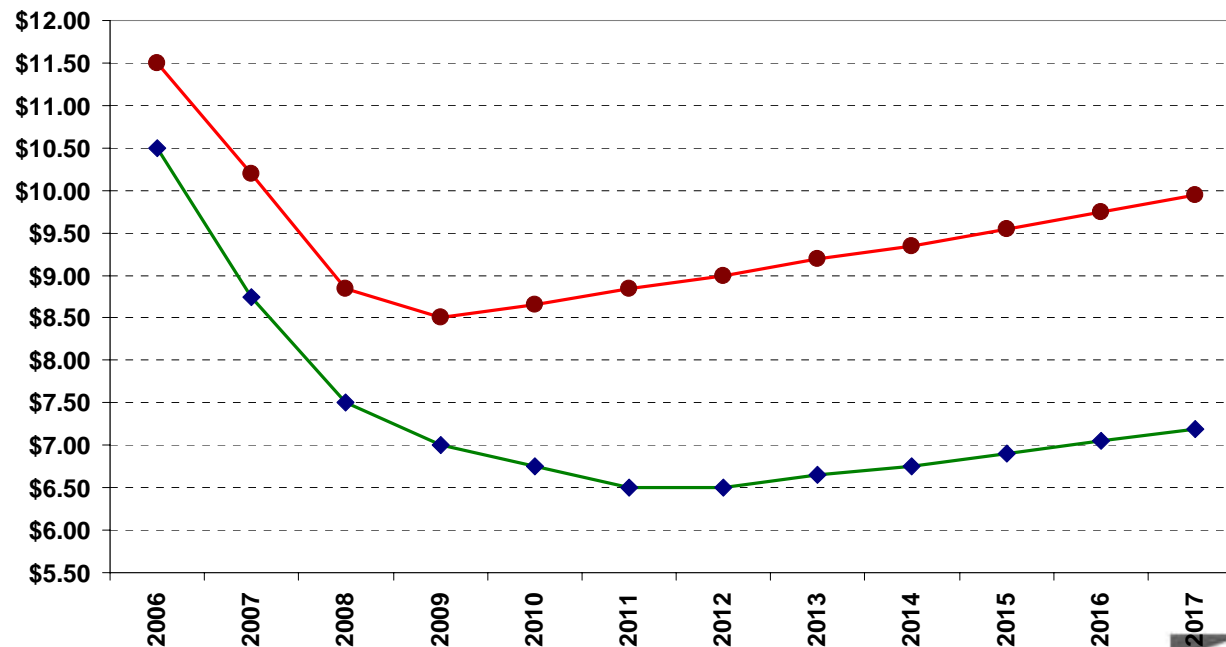
- In this example, while the near-term price forecasts are close (and VERY wrong), there are significant differences in the long-term price expectations.



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Pricing – Natural Gas

- Over the first three years these two forecasts vary by approximately 15%, **HOWEVER** in the long-term they vary by an average of 38% annually



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Forecast Pricing

- **As illustrated regarding a current price difference in crude oil, an 18% price difference in natural gas over the next few years of production is VERY significant**
- **More significant regarding natural gas pricing is a 38% long-term price difference**
 - Many natural gas properties are drilled, then wait several years for facilities
 - Much of the value of such a natural gas property might be realized several years out
 - The value of an asset or a company for an M&A transaction would be dramatically different depending on which price forecast was used

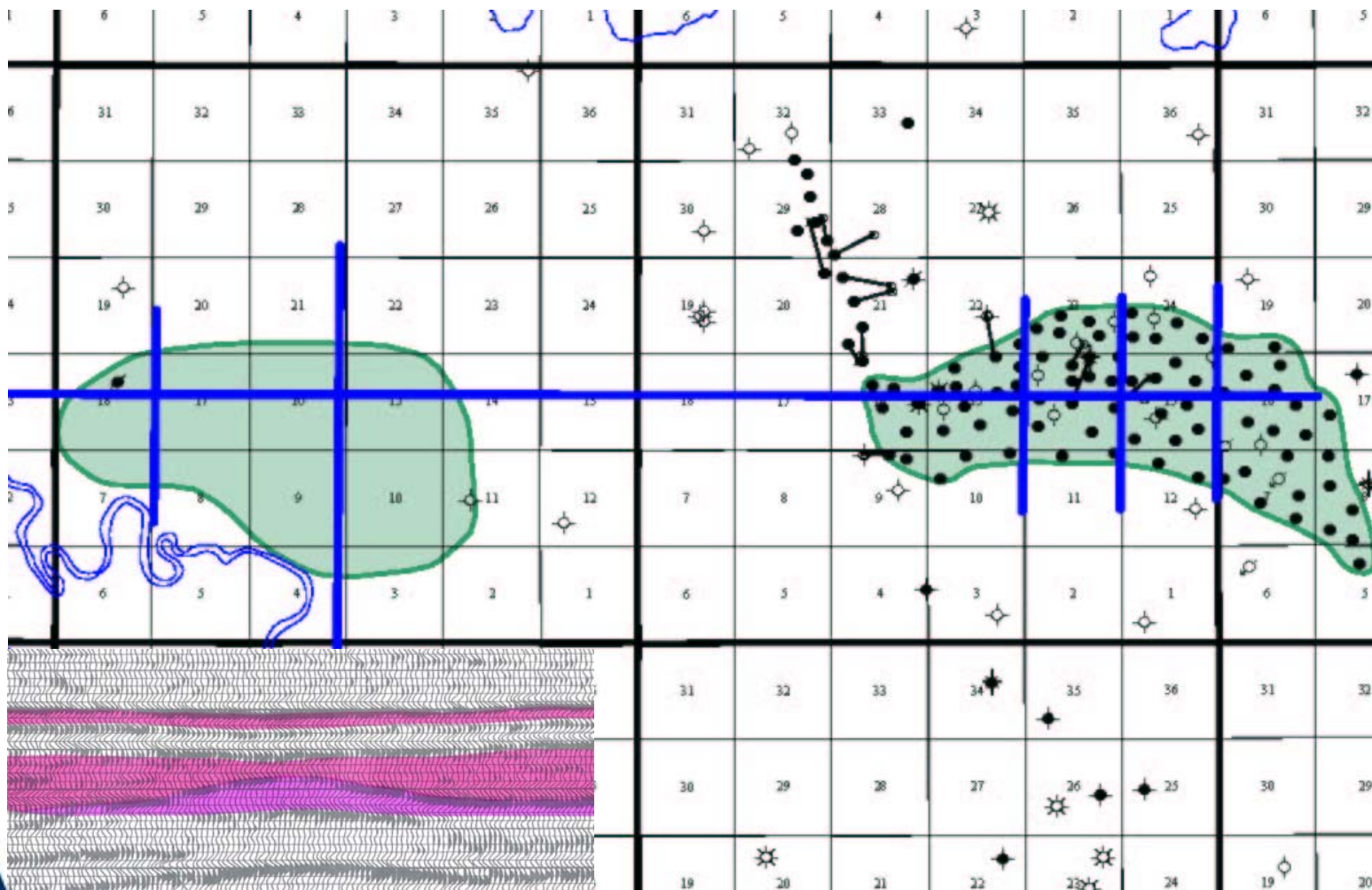
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New Reserves

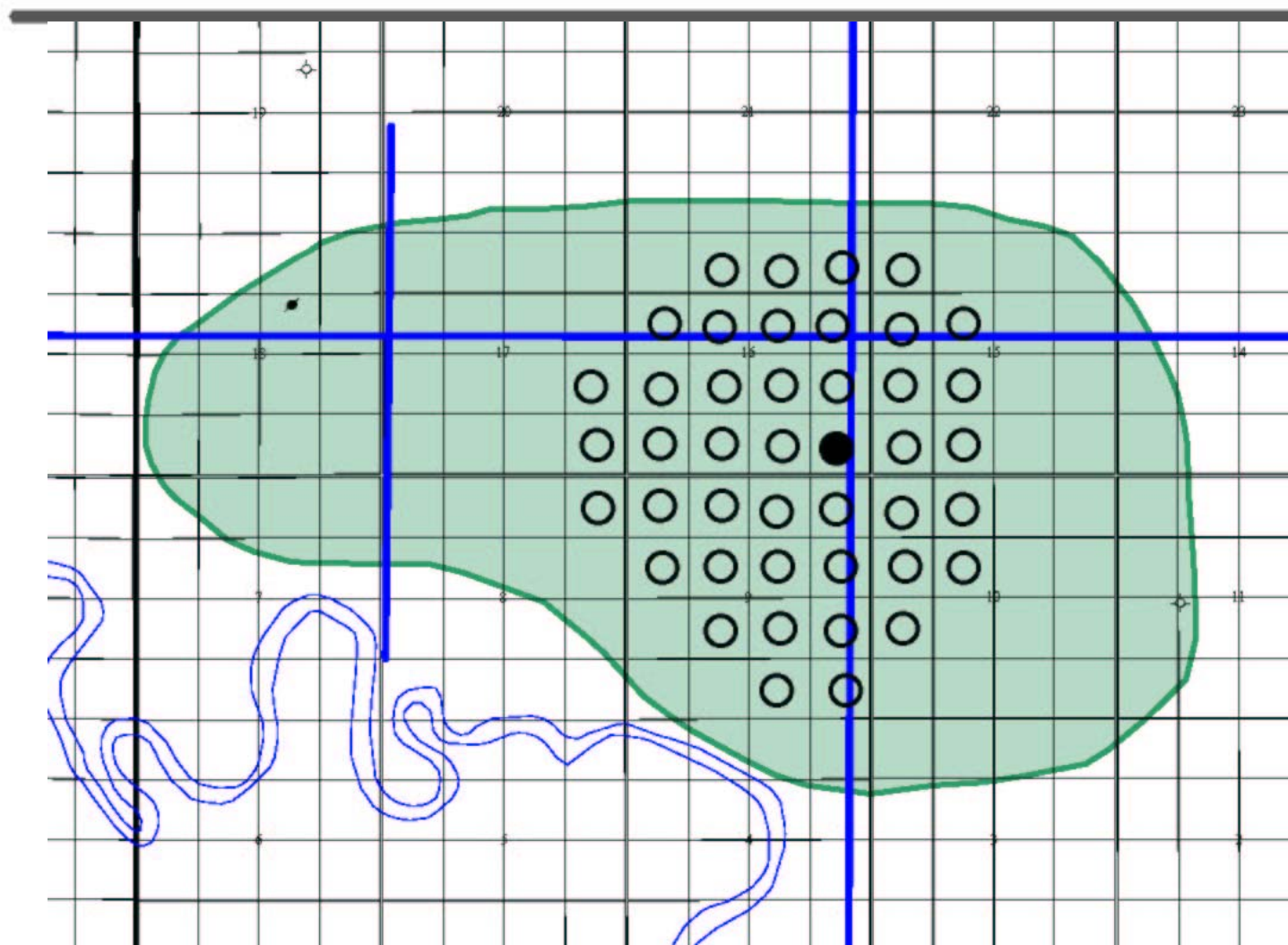
- **Reserves from recently drilled wells are in general assessed more conservatively than wells with a significant production history**
 - NI 51-101 forces the independent engineers to be cautious in their reserve assignments
 - The result is that successful explorers, having mainly “new” wells, are likely to hold more reserve upside than companies that have principally acquired “old” wells
 - The nature of the wells must be understood in valuing an M&A transaction

New Reserves



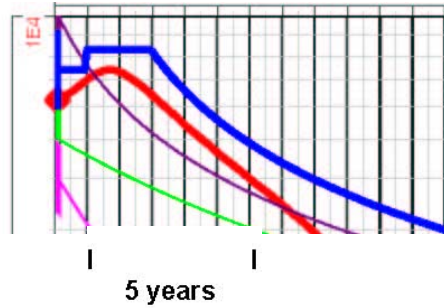
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New Reserves



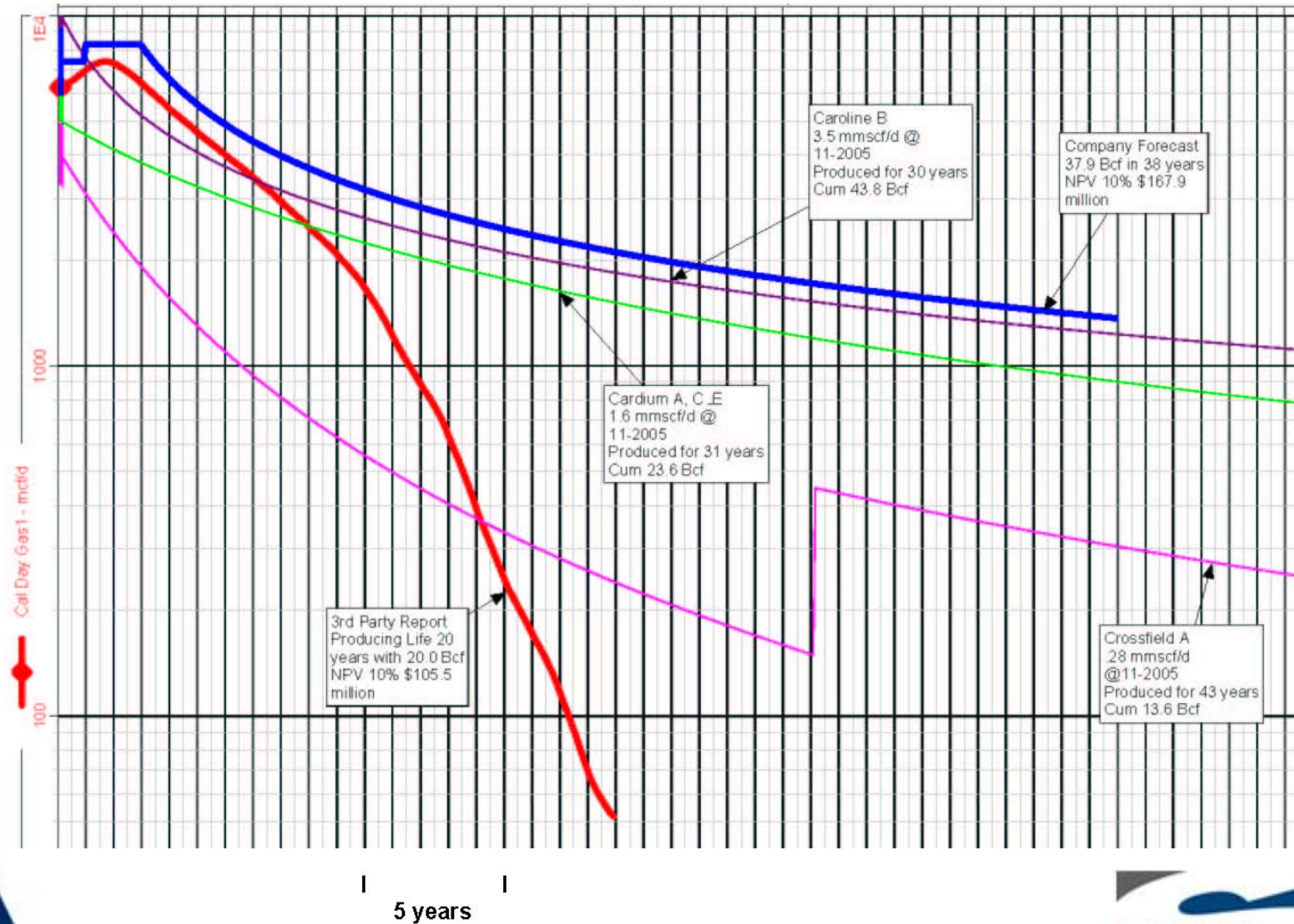
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New Reserves



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New Reserves



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Title & Capital Issues

- Title issues can affect an engineering evaluation
 - One public company had 75% of its value booked to a prospect that it did **not** have the ability to drill in the time period forecasted
 - Company was in a royalty position until payout
 - Engineering report assigned large proven non-producing value to locations to be drilled in the upcoming six months
 - Payout was not ever going to occur, meaning the company would **never** be in a position to cause the drilling of the wells
 - As well, the company did not have the cash to drill for the proven reserves

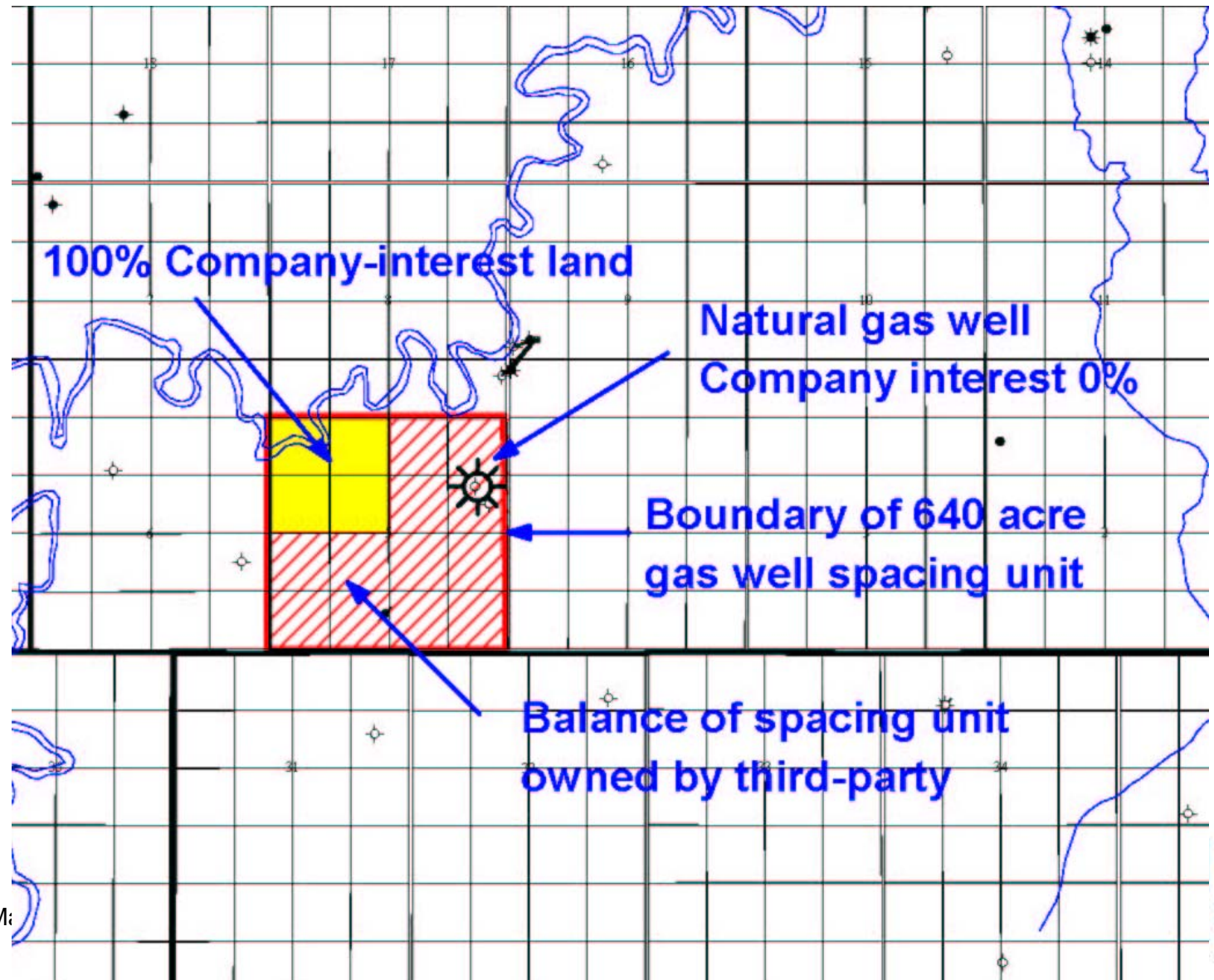
Title & Capital Issues

- In this next example, proven non-producing natural gas reserves were assigned to a 1/4 section of land held by the company, on the strength of the gas well drilled on the balance of the natural gas spacing unit by another operator
- These reserves were assigned significant value on the strength of a contemplated imminent tie-in
- There was no pooling agreement in place between the parties
- The company owning the 1/4 section had no ability to force a pooling or to cause the well to be tied in for production
- The other party controlled all facilities and did not produce any partner-interest wells

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Title & Capital Issues



Equipment



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Equipment

- Current ownership status of well site equipment could inadvertently be overlooked in a reserve report
 - Commonly, equipment that was owned by the company is later subject to a “sale and lease back” arrangement
 - If the engineers are not made aware of this there is a value change that might not be reflected in the reserve report
- Third party revenue for usage of company facilities could significantly affect the value of the asset
- Equipment **must** be reviewed in all valuations

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Furniture

- In a corporate transaction, even the small things can become huge valuation issues
- There have been battles over “who gets the furniture”, who gets the company car, etc., much like in a divorce case, in a **friendly** M&A transaction
- “Small things” like corporate boxes at the Saddledome, season tickets to sporting events, other corporate memberships, company cars, etc. should be examined to see if there are significant valuation issues

Summary

- All land is not created equal
- All seismic is not created equal
- All oil price forecasts are not created equal
- All natural gas price forecasts are not created equal
- All reserves assignments are not created equal
- Equipment value may be a valuation issue
- Detailed technical scrutiny of all assets is an absolute necessity in an oil and natural gas industry valuation
- Pay attention to who gets the furniture!
- Get an independent expert opinion

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